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BRITISH MEDICAL JOURNAL:

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INAUGURAL LECTURE
ON
THE POSSIBILITY OF EXTIRPATING MALARIA FROM CERTAIN LOCALITIES BY A NEW METHOD.

By Major RONALD ROSS, D.P.H., M.R.C.S.,
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I CANNOT help feeling that the Liverpool School of Tropical Medicine has been founded at a most opportune moment—at a moment when science has at last opened the way for an important and interesting adventure—an adventure which is well within our power at least to attempt if not to succeed in: I refer to the experimental trial of a new method, indicated by recent discoveries, for the extirpation of malaria from certain limited areas.

That malaria can often be removed by artificial means has long been proved by actual experience. It is a familiar fact—which I need not dwell upon—that the disease often disappears as the result of drainage and cultivation. We have many examples of this in Europe and America, and, indeed, in England itself, where tracts formerly malarious have now become quite or comparatively salubrious.

Unfortunately, however, there are many malarious localities which we cannot drain and cultivate without a degree of expense which it is impossible to incur; while there are others, as I have myself experienced, where the most virulent malaria remains in spite of both cultivation and drainage. While, therefore, such successful examples as I have alluded to entitle us to admit the possibility of extirpation in some cases, we are forced to add that drainage is neither a sure nor always a practicable mode of dealing with the disease.

As a matter of fact, the efficacy of drainage of the soil as regards malaria is merely the expression of a very familiar law: that this disease, like many others, is connected in some way with humidity; when we remove humidity we often remove malaria. But, nevertheless, drainage must be looked upon as being only an empirical and somewhat gross measure which has been employed by mankind in the absence of any more precise method of extirpation. For instance, in sweeping away all the superfluous waters of a given area, it is possible that we reduce its malaria only because we have happened to remove together with those waters some small pond or puddle which was all the time the true source of the disease, and which, had we been able to detect it before, we could have removed at a hundredth part of the cost. Fortunately, we may now ask with some hope of receiving an answer whether science cannot put us in possession of a more accurate means of detecting the precise focus of malaria in such localities, and, after detection, of removing it.

Unhappily, our efforts to obtain a more scientific frontier of defence against this disease have always hitherto been defeated by our ignorance as to the exact manner in which the infection is produced. For many years, indeed, we have known that malarial fever is due to certain minute parasites of the blood; but how and where these parasites live in external Nature, and how and where they effect an entrance into our bodies we have not been able until lately to discover. Hence, in formulating our epidemiology of the disease we were compelled to fall back upon mere conjectures. Knowing little more than the fact that malaria adheres to certain tracts of country, especially to humid tracts, we assumed that the germs exist at large in the soil, air, or water of such places; that they propagate themselves in these elements; that they are carried by winds from one spot to another; that they rise in mists and exhalations from the soil; that they infect us through the air we breathe or the water which we drink. On what facts were such notions founded? on what exact reasoning? on what precise experiments? On none at all. Vague conjectures, personal impressions, imperfect evidence, were the data on which we were forced to rely—we had none better. The parasites of malaria, so easily detected in the blood of patients, could nowhere be found in external Nature; we had questioned the winds and waters vainly for them; we therefore remained ignorant of how they attack us, and lived without defences against our invisible enemy.

As in many other branches of science, so in respect to malaria, the experimental method of research now compels us to abandon notions based on less trustworthy modes of inquiry. In place of our former theories we now possess a clear knowledge of how and where the parasites of malaria live in external Nature, and how and where they enter us. They do not float free in the air or water, as we supposed; they do not rise in mists and exhalations from the soil; they live encased in the bodies of mosquitos, from which they pass into our blood at the moment when the insect inflicts her bite upon us.

It is unnecessary to dwell at greater length on this new discovery than will suffice to convince you of its authenticity. The mosquito theory of malaria has been urged by several writers, during apparently the last hundred years—among others, more recently, by Laveran and Koch; and I may add, it is held by some barbarous tribes who have only too great an experience of the disease. But the idea did not obtain scientific form until Dr. Patrick Manson expounded his famous theory, based on certain recondite changes in the parasite, that this organism requires a suctorial insect for its further development. This induction—which I hold to be one of the profoundest and most important inductions in science—not only gave substance to what was previously little but hypothesis, but showed exactly how the subject was to be attacked by the experimental method. Manson published his views in 1894, and I began the required experiments in 1895. In August, 1897, I first succeeded in cultivating the parasites of malaria in two species of mosquito; and by August, 1898, the development of one of the parasites of birds in the mosquito had been worked out, and healthy birds had been infected by the bites of infected insects—thus completing the life-cycle of these organisms.

In scientific work, however, before any new observation is accredited it must be confirmed and accepted by men of recognised scientific standing. I should therefore mention that my labours were repeated and confirmed last December by Dr. Daniels of the Malaria Commission, who was sent to me to Calcutta by the Royal Society and the Colonial Office[1]; by Professors Grassi, Bignami, and Bastianelli, of Rome[2]; and later by Dr. Koch[3]. Valuable details have been added by these observers and by Dr. MacCallum in America; and the whole researches are now accepted by those distinguished men of science: Dr. Manson[4], Professor Ray Lankester, Dr. Laveran[5], and M. Metchnikoff, and have formed the subject of admirable memoirs by Dr. Nuttall[6] and Dr. Mesnil[7]. All these gentlemen constitute a jury from whose opinion it is impossible to appeal; and the public may therefore safely accept their verdict.

Hence, instead of our vague surmises of yesterday regarding malaria we have now a large body of exact observations to depend upon for our facts. We can follow the actual parasites which cause the disease step by step in their development in the mosquito, and we can detect them in that gland of the insect which secretes the irritating poison injected into us

when she bites us. Finally, we can infect any number of healthy birds by allowing infected mosquitos to bite them; and I have heard that the Italian observers have succeeded in infecting healthy persons in the same manner. The research is therefore practically complete.

That these parasites should be able to transfer themselves from a man to a mosquito and back again may however be looked upon as being too wonderful for credence. As a matter of fact, it is nothing exceptional. We have long recognised that many parasitic animals require for their complete development to live in two hosts. Thus, for a few out of many known instances, the common tapeworm, Taenia solium, passes its earlier stage in swine, and then goes on, when swine's flesh containing it is eaten, to its adult stage in human beings. Trichina spiralis has a similar history. Filaria nocturna and Filaria medinensis divide their life between men and mosquitos, and men and Cyclops quadricornis respectively. So with the parasites of malaria, man is the intermediate host, and the mosquito is the definitive host, as it is called; and there is nothing extraordinary in these facts except that the instance is the first of a unicellular animal behaving in this manner.

Similarly the fact that the infection of malaria is produced by the bite of an Arthropod is not without analogy. We know of two important diseases of cattle—namely, Texas cattle fever and tsetse fly disease—which are inoculated, the first by the bite of a cattle tick, Boöphilus bovis, the second by the bite of the tsetse fly, Glossina morsitans.

It is now necessary to touch for a moment on some objections to the mosquito theory of malaria which one occasionally hears of. It is sometimes said that malaria exists in places where there are no mosquitos, and that people who have not been bitten by mosquitos get malarial fever, and the converse. All I can say is that no cases of the sort have yet been substantiated by adequate inquiry, and that the proof of the theory is now so absolute that we are justified in being very sceptical regarding casual statements of this kind. I have often been told that no mosquitos exist in such and such places, but have nevertheless easily found them there by looking carefully for them. Then, again, it must be remembered that certain species of gnats may possibly convey the disease—which will probably explain the former prevalence of malaria in England. Lastly, it must always be remembered that when we speak of malaria being produced by mosquitos we refer only to *malarial* fever, and not to other kinds of fever; and, more than that, we refer only to the *first infection*. Persons once infected with malaria are subject to relapses, which have nothing to do with mosquitos.

Such then are the new facts which science has placed at our disposal. It remains to ask whether they are likely to help us in the prevention of malaria, and if so, how?

Many of those who accept the mosquito theory have emphasised the value of individual precautions against the bites of the insects; I fear it must be said that such precautions will not help us much. A few intelligent people may perhaps escape infection by the scrupulous use of punkahs, mosquito-nets, and so on, and I certainly think that a good deal can be done in this line; but it is idle to suppose that entire populations of malarious areas, often barbarous or semi-barbarous people, will ever trouble themselves to adopt such methods of defence. We must seek some more practical means.

There seems to me to be a distinct possibility of our being able to check, perhaps even to extirpate, malaria in some localities by the extermination of those species of mosquito which carry the disease in that locality. Let me explain my reasons for holding this view.

In the first place, although we are not yet quite certain regarding some details of the subject—such, for instance, as whether malaria is produced only by the bites of the insects and how the parasite is handed on from mosquito to mosquito—we may still, I consider, rest assured of one thing, namely, that the existence of the definitive host of the parasite, the mosquito, is absolutely necessary to the existence of the parasite itself, and therefore to that of the disease. We do not gather this from direct experiment; we gather it from our knowledge of animal life in general and of parasitic life in particular. I have already said that the parasites of malaria, like tapeworms and some other parasites, require two hosts for their development. We are justified then in supposing that if one of these hosts (the mosquitos in the case of malaria) be exterminated, the parasite also must cease to exist. The common tapeworm lives alternately in swine and human beings; if we could ordain the general destruction of swine in a locality, the tapeworm would disappear. The mechanism of all these creatures is so accurately adjusted to their conditions of life that we cannot conceive them as continuing to exist if those conditions be abruptly altered. The parasites of malaria reach maturity in certain species of mosquito; if those species perish, the parasites of malaria must perish with them.

Admitting this, the practical question still remains. Is it at all possible to exterminate the malaria-bearing species of mosquito? Anything like general extermination is, of course, quite impossible; but it may prove possible to get rid of certain species from the more civilised malarious areas, such as towns, cantonments, and plantations. Let me try to explain how.

Needless to say we can never hope to exterminate them by catching and killing them individually. But fortunately there is a very vulnerable stage in their career, before they reach their winged condition; that is, when they are water insects—the little wriggling larvæ found in pots and tubs of water, and in stagnant puddles. These larvæ take about a week to mature in the water. When mature they rise to the surface and become the adult winged insect, and fly away. The females feed on men, cattle or birds, and can live for weeks or even months, laying eggs a few days after each meal. Now it is hopeless to attempt their destruction when they are winged, but our knowledge of their life-history leads us to suppose that if we could make arrangements to empty out once a week all the tubs of water, the ditches, puddles, and wells within a given area, we should be able to exterminate the larvæ within that area, at least for a time—and therefore also we should be able to exterminate, at least to a great extent, the adult mosquitos.

I know, from my own experiences in India, that private houses may often be kept comparatively free of mosquitos simply by banishing stagnant water from the premises. But a public measure of the same kind would be much more difficult. In many large native towns in the tropics, for instance, the pots, tubs, cisterns, wells, drains, ditches, ponds, and puddles are so innumerable that I fear it would prove a hopeless task, even to the most efficient municipality, to deal with all of these once a week. The case might be different, however, were we called upon to deal only with certain species of mosquito—say, for example, with mosquitos which do not breed in these innumerable pots and tubs of water, but which confine themselves to a few small puddles of a certain description, which can be easily found and filled up. Here we might hope to do something.

Fortunately, in order to extirpate malaria, it will not be necessary to declare war against all mosquitos in general. We already know for a fact that only certain species can carry the disease. If it prove to be the case, as I think it may prove, that these particular species can breed only in a few isolated collections of water, then we may expect to find ourselves in possession of a cheap and effective means of extirpating malaria, at least from the more civilised and therefore the more important areas.

According to my observations in India the commoner kinds of mosquito there belong to two genera of the zoological family of the Culicidæ—namely, genus Culex and genus Anopheles. The commonest species, those which swarm in almost all Indian towns and villages, appear to belong to genus Culex. They are distinguished zoologically by the females possessing short palpi, and more popularly by generally having plain unspotted wings, and by sitting against walls with their bodies hanging downward. They seem often to bite birds as well as men. Their legs and bodies may be variously striped (brindled mosquitos) or unstriped (grey mosquitos). Their eggs are laid on water; their larvæ or grubs, so far as I have observed, float head downward when resting on the surface of the water; and are generally able to breed in pots and tubs of water, cisterns, wells, and drains—that is, they seem to prefer artificial collections of water such as these to natural collections, such as rainwater, puddles, and ponds. It is

owing to this fact that they are found in such large numbers in Indian towns and houses, and, indeed, the commoner species may be described as *domestic* mosquitos in the same sense as we call the common housefly, Musca domestica. Cursory observers, when they mention mosquitos, generally talk of this genus.

Mosquitos of the other genus, Anopheles, are very different, and may be called *rural* mosquitos. So far as I have been able to observe, their larvæ are scarcely ever to be found in vessels and other artificial collections of water, but only in natural ponds and puddles; hence they are not so common in towns as genus Culex, while they may often be very plentiful in villages and plantations. To find the adults I used to search stables and cattle byres. The genus is distinguished from Culex by possessing long palpi in the female. The wings are generally spotted on the anterior edge. The body is shaped somewhat like that of the humming bird moth, and when the insects sit on a wall the body projects outward. They bite cattle as well as men, but I could not easily persuade them to bite birds. Their eggs can be affixed to hard surfaces. The larvæ do not float head downwards like those of Culex, but float flat on the surface of the water like sticks, an important difference—due to the absence of a breathing tube in Anopheles—which enables us to distinguish the grubs at a glance, and therefore the pools in which they breed.

While I have always been able to obtain the larvæ of Culex without difficulty — since they occur in numerous vessels and drains holding water—I have generally found it hard to get those of Anopheles. For example, in an area of several square miles in Secunderabad, although adult Anopheles[10] were very common, we could find the larvæ only in a single small puddle; and I experienced the same thing in Calcutta, where they occurred in a pond, and in Nowgong, Assam, where they were found in an old boat full of earth; while in Naxalbari, in the Darjeeling Terai, a very malarious place, although there were swarms of Anopheles, I could not find their grubs at all.

The reason for the scarcity of the breeding-pools of Anopheles appears to be that the puddles (*a*) must be large enough to be permanent for a few days to allow the larvæ to mature; (*b*) must not be so large as to contain minnows (which devour the larvæ with avidity); and (*c*) must not be liable to be scoured out by every shower of rain. In India minnows are found in almost all collections of water on the ground, such as running water, lakes, large ponds, tanks, and ricefields, often down to the smallest pools of rainwater; while puddles which are too high-placed or isolated for fish are apt to dry up during fine weather, or to be scoured out when there is rain. In short, the grubs of puddle-breeding mosquitos, as we may call them, are subject to so many dangers that I suppose few haunts can afford them the requisite shelter.

I give these facts as I found them in India; but should add that my studies of mosquitos were far from being formal enough to cover all the various species.

To return, then, to our original question—if I were asked whether it was possible to exterminate mosquitos, I should reply in the negative in respect to Culex, while I should think it probably possible to exterminate Anopheles in certain localities. The haunts of Culex appear to be too common to be obliterated; those of Anopheles rare enough to be dealt with by local agencies.

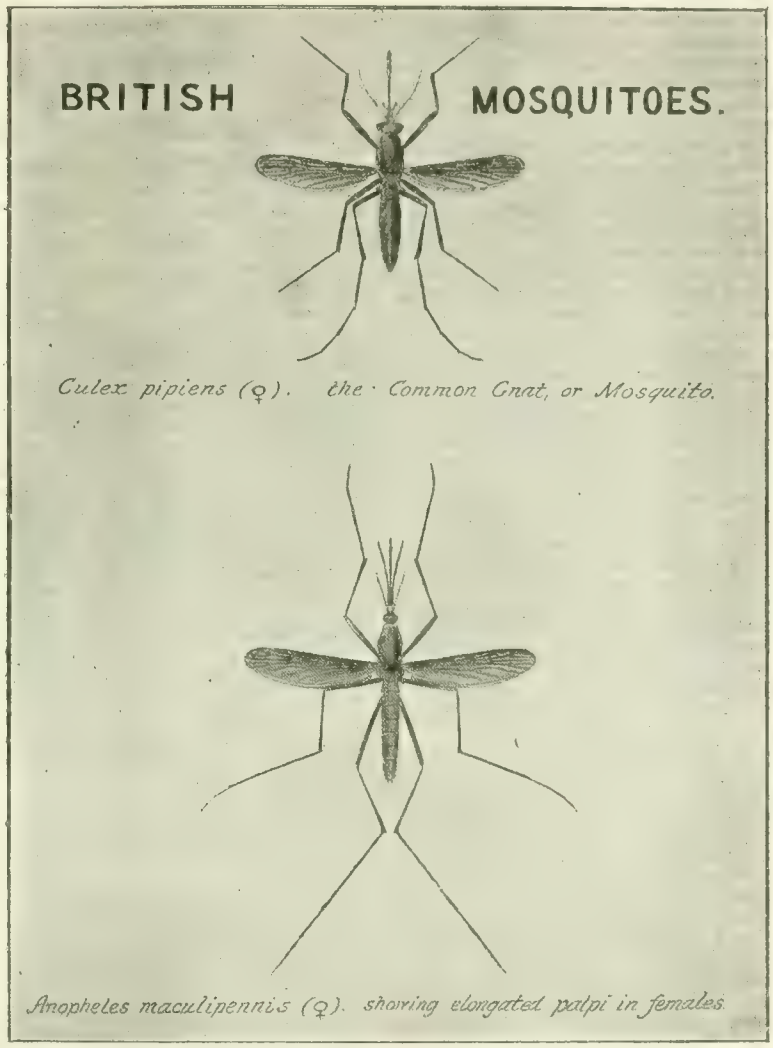
I will now direct your attention to a very important point—the significance of which you will readily be able to appreciate. There are many reasons for thinking that human malaria is not conveyed by genus Culex, which I think cannot be exterminated, but may be conveyed by genus Anopheles, which I think can be exterminated.

During several years in India I endeavoured to cultivate human malaria in many species of mosquito. I tried many species of Culex, including the commonest ones; all the experiments failed. I also tried five kinds of Anopheles. Three of these failed, but, on the contrary, two succeeded.

Unfortunately these successful experiments were the first I performed, and I was suddenly moved to another station just as I had reached success; so that I cannot give precise names to the two species of mosquito employed. Nevertheless I know for certain that both belonged to the genus Anopheles, and that both can carry human malaria.[11]

Now Grassi, Bignami, and Bastianelli have also succeeded in cultivating the germs of human malaria in mosquitos in Italy; and it is a fact well worthy of attention that the species of mosquito with which they have succeeded is a third species of Anopheles, namely, according to Grassi, Anopheles claviger (Fabr). Hence the three species of mosquito which we are sure can carry human malaria all belong to genus Anopheles. Compare Grassi[12].

But there are more general reasons for exonerating Culex, or



British mosquitos (Culex and Anopheles). From a drawing by Mr. Ernest Austen, Dipterist to the British Museum, Natural History Department.

indeed all mosquitos, which breed chiefly in artificial collections of water, from producing malaria. Such mosquitos necessarily abound in proximity to man—that is, in towns and houses; whereas malaria is notoriously rather a disease of the open country, and even of uninhabited country, thus coinciding better with the distribution of Anopheles. Again, malaria is connected with rainfall, just as Anopheles appear to be; while Culex depend for their existence rather on artificial irrigation, drains, and wells, and are often more prevalent in the dry than in the wet season. Lastly, we know that malaria can often be removed by drainage of the soil; we can understand this on the theory that the disease is produced by Anopheles or other mosquitos which breed in puddles on the ground, but not on the supposition that it is produced by insects which breed in vessels of water. Thus, whether the dangerous mosquitos are confined to genus Anopheles or not, the inference still remains that they are at any rate puddle-breeding mosquitos, and not pot-breeding ones—that is, that we may hope to be able to exterminate them in the more populous and civilised areas.

A strong argument to the same effect may be adduced from the general laws of distribution of malaria. The disease is never uniformly distributed even in small areas. Isolated spots, individual plantations or barracks or villages, even single houses, are often known to be more malarious than their surroundings. This argues not only that malaria is not due to the common mosquitos which are found almost everywhere, but that it is caused by mosquitos which have a distribution similar to that of the disease whose haunts are also comparatively rare and isolated.

Before concluding, I must add some statements having a practical bearing. (*a*) We can detect the dangerous species of mosquitos in a given locality by a perfectly certain method, namely, by ascertaining according to Manson's induction whether the parasites of malaria will live in them or not. (*b*) We can detect their breeding grounds by searching for their larvæ. If the dangerous mosquitos prove to be confined to genus Anopheles, the problem will be much simplified, and it will be advisable to declare war against the whole genus. The larvæ of this genus can be distinguished by any intelligent European by the fact that they float flat on the surface of the water, and the adults can be generally distinguished by their having spotted wings. (*c*) In order to obliterate pools which breed dangerous mosquitos, they must be filled up or drained away. As I have said, mosquitos scarcely ever breed in large bodies of water, because these contain fish. To kill larvæ in wells, some appropriate drug must be sought for, but I think it unlikely that malaria-bearing insects often inhabit wells.

To conclude, then: It will be observed that the practicability of eradicating malaria in a locality by the extermination of the dangerous mosquitos in it depends on a single question—Do these mosquitos breed in spots sufficiently isolated and rare to be dealt with by public measures of repression? I am afraid that it is impossible to give a final answer to this question as yet; we do not yet know all the dangerous species of mosquito, much less are we acquainted with all their habits. But I have addressed you at such length on this subject to-night because I am inclined towards giving an answer in the affirmative to the question. At any rate, in view of the mischief wrought by the disease in warm countries, I certainly think that we should make every effort to ascertain whether or not we can give an affirmative answer to it.

For a concrete example, suppose we were to discover by accurate investigation that all the malaria in a large town—say on the coast of Africa—arises from a few small puddles which can be obliterated at the expense of a pound or two, would not this discovery repay our exertions? and, further, if we could next extend our operations to other towns—to numerous towns—in the tropics, should we not be more than repaid for our exertions? At all events, the question can be decided only by experiment; and the experiment is well worth making.

NOTES AND REFERENCES.

[1] Daniels, *Proceedings of the Royal Society*, vol. lxiv. [2] Grassi, Bignami, and Bastianelli. *Atti d. R. Accad. dei Lincei*, etc., Dec. 22nd, 1898. [3] Koch, *Deut. med. Woch.*, 1899, No. 5. [4] Manson, BRITISH MEDICAL JOURNAL, Sept. 24th, 1898. [5] Laveran, *Bull. de l'Accad. de Med.*, Jan. 31st, 1899. [6] Nuttall, *Cent. f. Bakt.*, etc., Band xxv, 1899. [7] Mesnil, *Rev. Gén. des Sciences*, March 30th, April 15th, 1899. [8] I should add, however, that the parasites of malaria are probably capable of passing from mosquito to mosquito, as well as between mosquitos and men. [9] Mosquitos seldom fly far, and if we observe them anywhere in large numbers we may be sure that their breeding-ground is not distant. Hence the extermination of larvæ within a given area will generally imply also the extermination of the adults. [10] Of the small light brown malaria-bearing species mentioned further on. [11] One was a large dark brown species, and the other a small light brown one; both had spotted wings and the general characters of Anopheles. They had been fed on a patient containing crescents, *vide* Ross, BRITISH MEDICAL JOURNAL, December 18th, 1897, and February 26th, 1898. The "grey mosquito" (of Culex—probably C. pipiens) referred to in this paper as showing "pigmented cells" after having been caught biting a case of tertian, had probably become infected from previously biting a bird with Proteosoma Grassii (Labbé). I failed subsequently in cultivating tertian in this species, but succeeded in cultivating P. Grassi in it. My negative experiments with Culex were tried with all kinds of malaria. [12] Grassi, *Atti d. R. Accad. dei Lincei*, etc., vol. vii, 1898.

THE CROONIAN LECTURES

ON

SOME POINTS CONNECTED WITH SLEEP, SLEEPLESSNESS, AND HYPNOTICS.

Delivered before the Royal College of Physicians of London.

BY JOHN BUCKLEY BRADBURY, M.D.CANTAB.,

Fellow of the College; Downing Professor of Medicine in the University of Cambridge; and Senior Physician to Addenbrooke's Hospital.

LECTURE II.

AN ideal hypnotic is one that will produce sleep of sufficient duration, under all conditions, without ill-effects or after-effects; we know of no such remedy at present, and it is doubtful if we ever shall. The administration of hypnotic drugs produces a condition which is closely allied to, if not identical with, a pathological state. Few, if any, of these drugs possess a purely selective influence on the cerebral cells, but even if they did, depression of other organs—circulatory and respiratory—would result from an action on their centres, and the presence of disease might determine a fatal effect of an otherwise non-lethal dose. Moreover, the variability of the individual, the presence of pain and other conditions, altogether preclude us from expecting to attain a precise adjustment of the induced cerebral depression so as never to overpass the limits of safety.

But if we cannot find an absolutely harmless hypnotic, at least we can find a comparatively safe one, and it is our duty to determine which is the most reliable and the least toxic.

The classification I intend to follow is mainly a chemical one. In the present lecture I shall deal with synthetic remedies, and it will be best to start with the simplest of them—the alcohols.

THE ALCOHOLS.

Although as a hypnotic ethyl alcohol is not largely prescribed by the profession, yet with its homologues it has played an important part in the discovery of newer remedies of this class.

[After alluding to the effect of alcohol on isolated organs, on muscle, and on the circulation, the lecturer continued:]

I shall confine myself to my own experiments[1] on the comparative influence of the alcohols.

When perfused through the vessels of a water tortoise each alcohol causes a transient dilatation, followed by contraction, the higher the alcohol in the series the greater is the effect. Methyl and ethyl alcohols are not very active.

Hypnotic action and toxicity follow the same order as the effect upon simple tissues as Dujardin-Beaumetz and Audigé have shown in regard to toxicity.[2] More exact results are those obtained by Joffroy and Serveaux, who recognise two kinds of toxicity—a true toxicity and an experimental one. True toxicity they define as the smallest quantity of substance per kg. body weight, which will bring about death after a short delay. By experimental toxicity they mean the amount of alcohol necessary to cause death when the injection is continued up to the final stoppage of the respiration. The numbers in this case were found to be: Methyl alcohol, 25.25; ethyl alcohol, 11.70; propyl alcohol, 3.40; iso-butyl alcohol, 1.45; amyl alcohol, 0.53. With the exception of the relative innocuousness of methyl alcohol, this agrees on the whole with the experiments of previous

observers. The true toxicity differs in many respects from the experimental, and this is especially the case with methyl alcohol, the toxic equivalent in this case being 9.0, that of ethyl alcohol being 7.8. According to Joffroy and Serveaux, methyl alcohol is not excreted so readily as ethyl alcohol, and the great difference in the two kinds of toxicity is thus explained. Comparatively recently Picard[3] has reinvestigated the question from a different point of view. He used fish, amphibians, and birds. The relative numbers he givesare: Methyl, $\frac{1}{2}$; ethyl, 1; propyl, 2; butyl, 3; amyl alcohol, 10. My own numbers as regards the effect on fish—which are perhaps the most satisfactory animals to use in order to obtain an accurate relative toxicity—are similar, as may be seen from the following table:

Alcohol.	Strength, per Cent.	Death, Hours.
Methyl	2.00	5 to 20
Ethyl	2.00	$11\frac{1}{2}$
Propyl	0.20	24
Isopropyl	0.20	24
N. butyl	0.10	20
Tert. butyl	0.10	22
Amyl	0.05	22

Notwithstanding discrepancies in the observations of different observers the general fact remains that, within limits prescribed by solubility, increase of the molecular weight is accompanied by increase of toxicity. As the hydroxyl group remains constant this increase must be ascribed to the alkyl radicle; and this explanation is further supported by the fact that other compounds (esters, etc.) of these alkyls show the same effect provided that the acid or other radicle has no characteristic action of its own. But the question of importance to us is, Do we increase the hypnotic power in greater degree than the toxicity by increasing the molecular weight of the alcohol? For it is obvious that in this way alone we can gain any practical advantage applicable to therapeutic purposes. With the exception of the greater influence of ethyl over methyl, it cannot be said that we do. But although isopropyl alcohol is more toxic than the normal propyl alcohol, iso-secondary and tertiary butyl alcohols are much less toxic than normal butyl alcohol, as Gibbs and Reichert have shown. Schneegans and von Mering[4] found the same effect, and showed also that secondary alcohols were more hypnotic than primary and tertiary than secondary. Here then we have a fact which may be applied to therapeutic purposes. Furthermore it was found that the component radicles exercised a modifying effect; that, for example, if ethyl replace a methyl radicle in trimethyl carbinol a disproportionate increase in the hypnotic action occurs. This substance, which is tertiary amyl alcohol, is known in practice as amylene hydrate. It was introduced by von Mering (1887) as peculiarly adapted to mental cases, but although it has received a fair trial both in these and other affections, it does not appear to have upheld its reputation. The most extensive researches on this substance have been carried out by Harnach and Meyer.[5] These observers, like Mering, observed calm sleep in rabbits, but in cats and dogs this was preceded by a state of marked excitement. The blood pressure was depressed, and gradually sank until death occurred. The respirations were increased at first both in number and depth, but later they became weaker, and if a large dose had been given gradually ceased. In men the sphygmograph showed an increase in pulse tension. Many undesirable effects have been described, and it would appear, even from purely experimental observations, that amylene hydrate is not a desirable hypnotic. It is, however, comparatively safe, and may be used under certain conditions.

Triethyl carbinol, in which the remaining two ethyl groups of amylene hydrate have been replaced by ethyl, has been used in mental cases, but without good effect. Tertiary butyl alcohol has been used to produce sleep; but this, too, is of little practical value.

At this point I may mention the recent work of Albanese on the hydroxyethyl methanes. These were investigated to determine the action of the ethyl group in fatty bodies. Four possible compounds exist, but Albanese was only able to obtain dihydroxyethyl and trihydroxyethyl methanes. The latter was found to be about twice as energetic a hypnotic as the former. But it is also more toxic and less soluble. As ethyl possesses marked hypnotic properties, we should expect the union of two ethyls by some indifferent radicle or atom to be more markedly hypnotic. This we find to be the case. Ordinary ether, which is composed of two ethyl radicles united by oxygen, $C_2H_5\diagdown\!\!\diagup O$, is more powerfully depressant to nerve cells than $C_2H_5\diagdown\!\!\diagup$ ethyl alcohol, but it is also more transient in its effect. We have, therefore, evidently to deal with something more than mere chemical constitution, and probably to its volatility and greater diffusibility we must attribute its transient action.

This leads me to the important question of solubility. It is obvious, speaking generally, that the more soluble in water a body is, the more rapid, transient, and intense will be its effects on the system. But it is often found that with a diminution in the solubility increase in toxic action occurs.

A recent view of the importance of solubility is that of Meyer and Baum,[6] who point out that v. Bibra, Harless, Hermann, Pohl, and others have proved that in animals killed by chloroform and alcohol, etc., there is a disappearance of fat from the tissues containing fat-like bodies, such as lecithin in the stroma of the red corpuscles, but especially in the nerve cells of the brain. Meyer and Baum then go on to prove: (1) That all bodies nearly chemically indifferent, if they are soluble in fat, have an anæsthetic action, provided they can penetrate to the cells of the brain. (2) That the relative strength of the narcotic effect of a number of such fat-dissolving bodies, is dependent on the one hand on their mechanical affinity with the fatty substances, and on the other with the other cell constituents, especially water, consequently the narcotic effect depends on the "coefficient de partage" of the substance when shaken up in equal volumes of oil and water.

Ether is not adapted for a hypnotic, and their allied compounds, methylal and acetal, as little adapted. Although methylal seems to be one of the least depressant of hypnotics to the respiratory and circulatory systems, yet its transient effect precludes its use.

Acetal contains instead of the methyl and methylene groups, ethyl and ethidene radicles, and it is much less soluble. We should, therefore, expect it to be more active as a hypnotic and more toxic, and this we find it to be.

There seems but little experimental ground to recommend acetal as a hypnotic and in practice it has been found wanting.

THE ALDEHYDES.

Closely allied to the alcohols are their oxidation products the aldehydes, containing the group $C\langle^{O}_{H}$, from which is derived the well-known hypnotic paraldehyde. Paraldehyde $(C_2H_4O)_3$, consisting of three molecules of aldehyde, differs from its progenitor in being much more stable. It is oxidised and reduced with difficulty and it is probably to its chemical stability that its value as a hypnotic is due. Paraldehyde itself was introduced into practice by Cervello. Experimentally it produces calm sleep without much depression of the respiratory or circulatory system.

After 2 grams, which were found necessary to produce sufficient anæsthesia, had been given intravenously to a rabbit (1400 grams), the blood pressure was found near its normal, but the respiration soon failed and the blood pressure consequently fell. Artificial respiration was performed and the heart continued to beat a long time, but the pressure did not rise again. When a solution of paraldehyde was injected into the veins of an animal under chloroform a fall of blood pressure and an increase in the depth of respirations occurred. After 1 c.cm. of 10 per cent. solution the effect was very slight; after 4 c.cm. of the same solution it was very marked.

A corresponding polymerised product of formaldehyde, paraformaldehyde, or tri-oxymethylene, has recently been used as a hypnotic. Considering the greater toxicity of formaldehyde as compared with acetaldehyde we might expect the same of paraformaldehyde as compared with paraldehyde, and this is the case. In man it produces gastric disturbance—vomiting and pain—and it has nothing to recommend it as a hypnotic.

THE KETONES.

Of the ketones C = O, which are chemical allies of the aldehydes, I shall say very little. None of them are of

practical value. Acetone (diethyl-ketone), methyl-monyl-ketone, and methyl-phenyl-ketone all possess hypnotic powers,[7] varying with the size of the molecule and the contained groups. Methyl-phenyl-ketone, under the name hypnone, was introduced as a hypnotic by Dujardin-Beaumetz, but it deservedly fell into disrepute. In many cases it failed to produce sleep at all, and even in animals calm and prolonged sleep was not obtained. Di-ethyl-ketone has been recommended by Albanese and Barabini as a hypnotic, and Nosra[8] has used it in maniacal and hysterical cases, but it is not a substance which is likely to come into general use.

The Halogen Compounds.

Having determined the general influence of the alkyl radicle, the next step in the inquiry is to determine what simple changes in the molecule are capable of modifying hypnotic action. It has been found by numerous experiments that the introduction of a halogen element into an alipathic molecule almost invariably increases its depressant effect on the brain, or initiates this if not previously present. Bromine is the most active in this way, but of the three classes of halogen derivatives, the chloro-compounds possess the greatest practical importance. Both bromo-compounds and iodo-compounds have a greater toxicity and they possess other undesirable effects which render their use inadvisable.

Until recently it was thought that the hypnotic power of organic chloro-derivatives was dependent on the amount of chlorine they contained. It was found that by introducing chlorine into a simple fatty compound a more marked hypnotic effect was obtained, and that by still further increasing the chlorine the depressant effect on the brain was proportionately increased. Heymans and De Buck,[9] however, have lately controverted this view. They state that the order of increasing toxicity is not that of the proportionate number of chlorine atoms, but is independent of this. By hypodermic administration of the substances dissolved in oil they found the order of toxicity as follows: chloroform 1; methylene dichloride 2; carbon tetrachloride 14. They explain this by assuming a multivalent atomicity for chlorine, thus making chloroform an unsaturated compound. Although in many cases—for example, oxides of chlorine, chlorates and perchlorates—chlorine must be regarded as multivalent, there does not seem much reason for regarding it as such in the compounds under discussion, and even if it were multivalent it would be difficult to understand why tetrachlor-methane was so much less poisonous than dichlor-methane. The question seemed worth reinvestigating, notwithstanding the careful dosage employed by Heymans and De Buck. It seemed to me that the result obtained by them might be due to difference in absorption, a supposition supported by the fact that carbon tetrachloride is much less soluble in aqueous media than chloroform; it is also more irritant, and possesses greater power of precipitating albumen. In order to obviate as far as possible unequal absorption the toxicity of the two bodies was determined (1) on fish, which were allowed to swim in solutions of the same strength; (2) on frogs exposed to the vapour of the two compounds; (3) on rabbits by means of intravenous injection.

Fish placed in 1 in 4,000 of carbon tetrachloride were more affected than those in a similar strength of chloroform, and the symptoms were different. The chloroform produced transient excitement followed by narcosis; the carbon tetrachloride irritation and muscular rigidity, the movements becoming stiff and slow and the tail taking on a permanent curve. In both cases death occurred in about an hour. Methylene dichloride is much less active than either of these substances. A solution of 1 in 2,000 produced slight narcosis but not death.

Similar effects were obtained from frogs. When these animals were placed under a bell-jar with equal amounts of chloroform and carbon tetrachloride, the symptoms first appeared in the animal subjected to chloroform. In this case rapid narcosis and death occurred. In the frog exposed to carbon tetrachloride the narcosis was less deep and muscular rigidity was a prominent symptom. The difference in the time of onset and the severity of the symptoms was undoubtedly due to the difference in the volatility of the two substances and not to any inferior toxicity of the higher chlorinated compound. This latter was more slowly absorbed, and the symptoms it produced were more slowly dispelled than was the case with chloroform. When frogs were exposed to the vapours of the drugs and removed as soon as distinct symptoms had developed, these symptoms disappeared with rapidity in the case of the frog exposed to chloroform, in that exposed to the tetrachloride only with difficulty.

In rabbits the intravenous method was resorted to. A solution in alcohol, varying in strength up to 55 per cent., was used, and this, containing the chloroform or carbon tetrachloride in solution, was injected into the marginal vein of the ear at the rate of $\frac{1}{2}$ c.cm. per minute. In every case much less than the toxic dose of alcohol was employed. Two experiments in which a solution of 1 in 80 of chloroform and carbon tetrachloride respectively in 50 per cent. alcohol resulted as follows: 2.9 c.cm. of the tetrachloride solution quickly produced convulsions and death; 9 c.cm. of the chloroform solution did not kill for about twelve hours. With weaker solutions larger doses of carbon tetrachloride were given, but in all the experiments the greater toxicity of this drug compared with chloroform was evident. The symptoms, too, were somewhat different; carbon tetrachloride was less narcotic and much more depressant to the heart. Similar results were obtained in rats by intraperitoneal injection of emulsions of these substances; so there seems little doubt that carbon tetrachloride possesses a toxicity greater than that of chloroform.

But a comparison of these two substances is open to the criticism that the organic radicles in the two cases are not identical. In chloroform we have a hydrogen atom forming with the carbon, a methine group which is not present in the tetrachlor-methane. Moreover, as we have seen, the symptoms produced by the two compounds are somewhat different. A more logical comparison would be that of carbon tetrachloride and carbon dichloride (C_2Cl_4) or carbon trichloride (C_2Cl_6). The latter is solid and practically insoluble in water; the dichloride is a liquid, and more comparable in physical properties with carbon tetrachloride. On investigating the toxicity of these bodies on fish the tetrachloride was found to be distinctively the most active. In solutions of 1 in 10,000 of this minnows died in forty minutes; in a similar strength of carbon dichloride they survived more than three hours. It seems, therefore, that as far as the chlor-methanes and allied bodies are concerned, the introduction of chlorine increases the true toxicity, although the apparent toxicity of higher chlorinated bodies, owing to diminished solubility or other property, may be less.

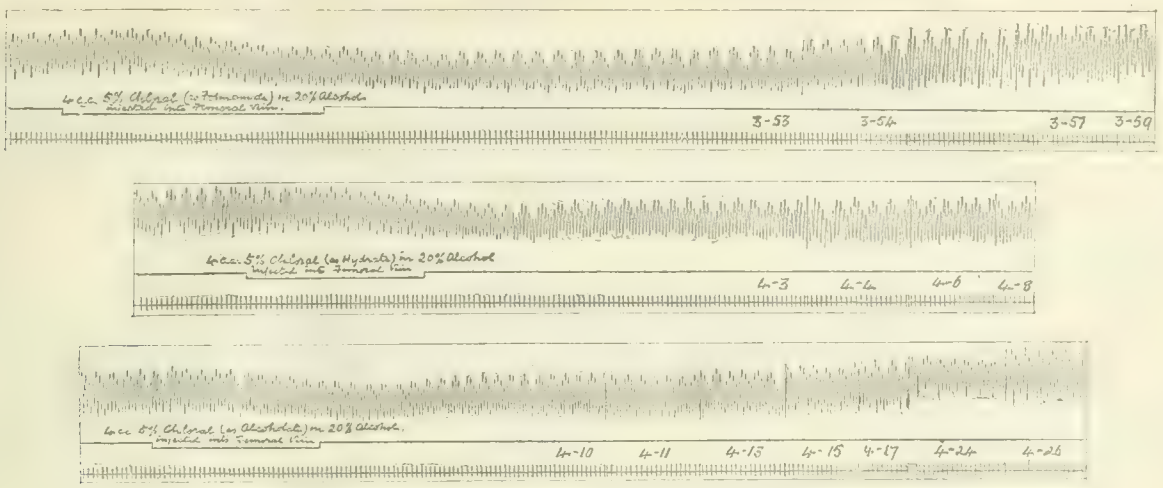
But the introduction of chlorine into a fatty compound does not appear to be invariably followed by an increase in toxicity and hypnotic power. A remarkable exception is related by Mayer;[10] he found that the introduction of chlorine into butyric acid did not increase the hypnotic effect; in other words, sodium butyrate was more hypnotic than sodium trichlor-butyrate. The introduction of chlorine into acetic acid, on the other hand, produced the usual effect, sodium trichloracetate possessing distinct hypnotic properties, sodium acetate no hypnotic power at all.

In the main I can corroborate Mayer's results. After the intravenous administration of 1 gram per kg. of butyric acid (as the sodium salt) to rabbits somnolence and paresis were almost immediately produced, but the effect was transient, and in two hours the animal was normal. A similar dose of sodium trichlor-butyrate administered in the same way produced a very slight immediate intoxication, but after an hour some depression and somnolence which lasted several hours. It appears, therefore, that the chlorine does possess some action, although a somewhat tardy one.

Whatever view of the intimate action of the halogen compounds be taken, the general law holds good, if we take into account physical properties, that the more chlorine we introduce into an alipathic molecule the greater is its hypnotic effect. Unfortunately, greater also is its toxic effect; and in the majority of cases the two effects seem to run parallel. This prevents us from utilising the hypnotic power of combined chlorine atoms to the extent we could wish in preparing new compounds. What we require in any new remedy is an increased therapeutic efficiency with relatively diminished toxicity.

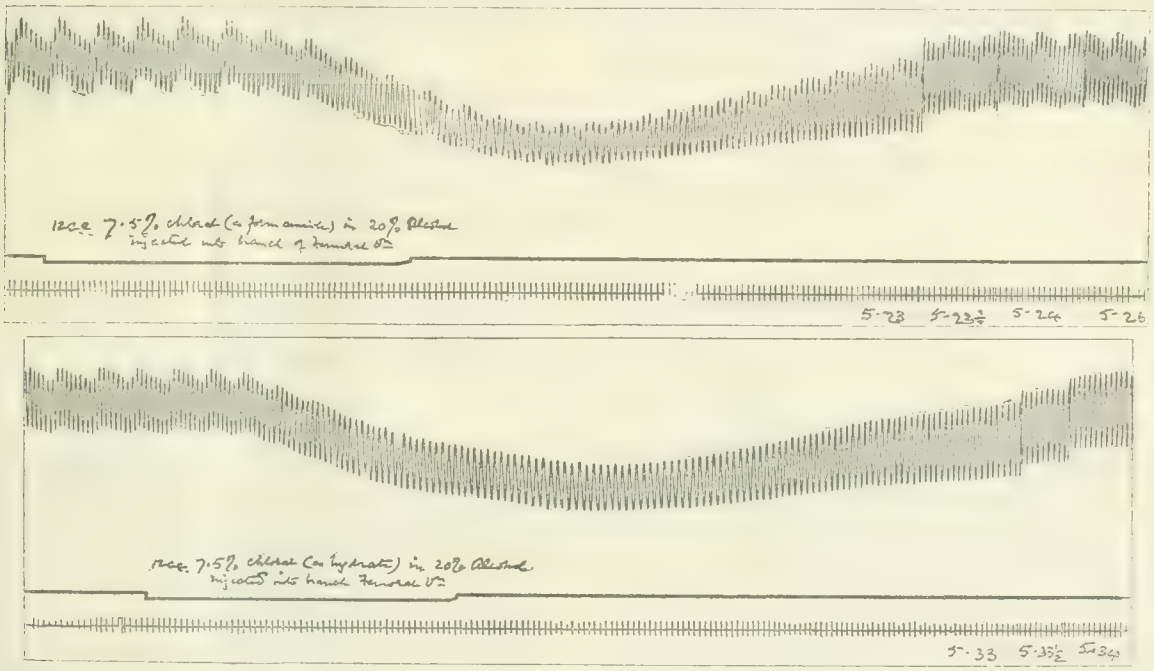
It is well known that the organic chloro-hypnotics exert a depressing influence on the circulation, and it appears that by

Fig. 1.—COMPARISON OF CHLORALAMIDE, CHLORAL HYDRATE, CHLORAL ALCOHOLATE ON BLOOD PRESSURE.



Dog 9,040 g. Morphine-chloroform. Tracing from carotid artery. Injections into femoral vein. Base line raised 40 mm.

Fig. 2.—COMPARISON OF CHLORALAMIDE AND CHLORAL HYDRATE ON BLOOD PRESSURE.



Dog 9,040 g.

ncreasing the number of chlorine atoms we also increase this depressant effect. This subject has been investigated by Marshall and Heath[11] in my laboratory. Soon after Liebreich introduced chloral hydrate as a hypnotic in 1869, it was recognised that this depressant action would prove deleterious in some conditions. Liebreich himself stated that in heart disease chloral was contraindicated.

To overcome this depressant effect of chloral on the circulation various derivatives have been advocated. Von Mering recommended chloral-formamide (chloralamide); Poppi, chloral-urethane; Nesbitt, chloral-ammonia; and Richet, chloralose. Chloral-ammonia we may dismiss, as unfortunately it is unstable.

The effect of chloralamide on the circulation has been keenly debated. It was thought that the combination of an amide radicle, which is believed to possess to some extent the stimulating effect of ammonia upon the respiratory and vasomotor centres, would diminish the depressant effect of chloral hydrate upon the circulation and respiration, but the results obtained were conflicting.

Considering the great divergence of opinion, it seemed worth while to make a few more investigations with it, particularly upon the circulation. It will be remembered that under the influence of alkalies, chloralamide breaks up into chloral and formamide (which becomes ammonium formate), and that this change is supposed to take place in the blood, and by some even in the intestines. In my experiments, having regard to Liebreich's view, the doses have been calculated as anhydrous chloral. Thus 1.3 gram of chloralamide equal 1.12 gram of chloral hydrate, which contain 1 gram of anhydrous chloral, and these proportions have been used throughout. Numerous experiments have been made, but only types of these will be

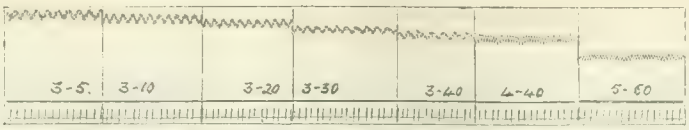


Fig. 3.—Rabbit 1,720 g. (P. 156, R. 120, T. 38.3°) 2.34 1.92 g. chloral hydrate (= 1 g. p. kg. chloral) in 20 c.cm. H_2O injected into stomach. 2.49 Well under; no corneal reflex. P. 252, R. 42. Operation commenced.

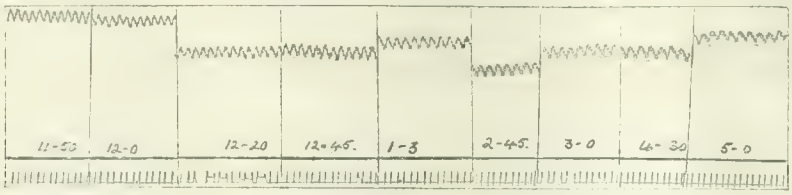
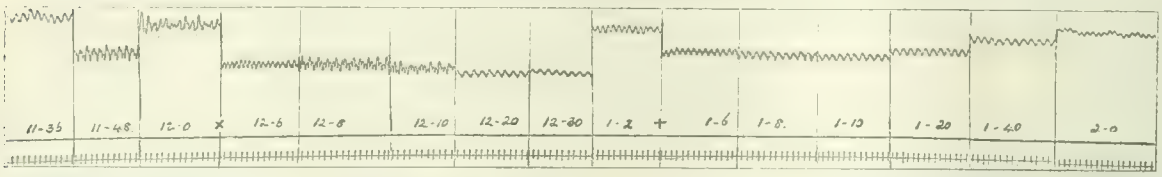


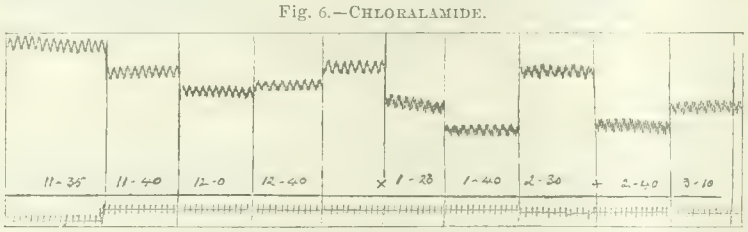
Fig. 4.—Rabbit 1,730 g. (P. 240, R. 130, T. 39.2°) 10.25 2.25 g. chloralamide (= 1 g. p. kg. chloral) in emulsion injected into stomach. 11.30 Operation commenced. P. 288, R. 60. (Not so deeply under as with hydrate.)

Fig. 5.—Chloral Hydrate.



Rabbit, 1,800 g. (P. 276, R. 36) 11.15 5 c.cm. $\frac{1}{10}$ chloral (as hydrate) injected into marginal vein of ear.
11.20 $2\frac{1}{2}$ c.cm. do.
11.23 $2\frac{1}{2}$ c.cm. do.
11.25, operation commenced.
× 12.4 to 12.6 5 c.cm. $\frac{1}{10}$ chloral (as hydrate) solution injected.
+ 1.3 to 1.5 5 c.cm. $\frac{1}{10}$ chloral (as formamide) injected.

Fig. 6.—Chloralamide.



Rabbit 1,730 g. (P. 264, R. 43) 11.15 5 c.cm. $\frac{1}{10}$ chloral (as formamide) injected into marginal vein of ear.
11.20 $2\frac{1}{2}$ c.cm. do.
11.23 $2\frac{1}{2}$ c.cm. do.
11.25, operation commenced.
× 1.22 to 1.25 5 c.cm. do. injected into jugular (ext.) vein.
+ 2.34 to 2.36 5 c.cm. do.

given. One of the most important is a perfusion experiment through the vessels of a sheep's kidney; here dilute solutions could be used as nearly as possible under normal conditions. Complete solution, and therefore equal dosage, was insured, and the chloralamide-poisoned blood was exposed for some time to a temperature slightly above that of the body.

Under these conditions chloralamide was not found to be so active as chloral hydrate and its effect was more slowly manifested.

The following is an experiment: The temperature of the ovens (39° C.) and the perfusion pressure (70 mm. Hg.) were kept constant. The numbers represent c.cm. flowing out of the renal vein per minute. Normal blood, $4\frac{1}{2}$, 4, $3\frac{1}{2}$, 3. 1-500 chloral (as formamide) 3, $3\frac{1}{2}$, $6\frac{1}{2}$, $8\frac{1}{2}$, 10. Normal blood, 12, $10\frac{1}{2}$, $7\frac{1}{2}$, 6, 6, 6. 1-500 chloral (as hydrate) $5\frac{1}{2}$, 8, 13. 20. Normal blood, $18\frac{1}{2}$, $11\frac{1}{2}$, $7\frac{1}{2}$, $5\frac{1}{2}$, $4\frac{1}{2}$. 1-500 chloral (as formamide), $4\frac{1}{2}$, 5, 7, $9\frac{1}{2}$, 11, $12\frac{1}{2}$. Normal blood, $12\frac{1}{2}$, $8\frac{1}{2}$, $6\frac{1}{2}$, $5\frac{1}{2}$, $4\frac{1}{2}$, 4. 1-500 chloral (as hydrate), 4, 7, 11, $15\frac{1}{2}$, 19. Normal blood, $17\frac{1}{2}$, $10\frac{1}{2}$, 7, 5, 4.

Experiments on the hind legs of a rabbit with a solution of gum and salt, that is, with no alkali, so that there could be no decomposition, give a similar result. In cold blooded animals (water tortoises) the action on the vessels was not so constant. Generally the effect was similar to that on warm-blooded animals, but occasionally the dilating effect of chloralamide was as marked as that of chloral hydrate, or even slightly greater.

On the blood pressure, when injected intravenously, chloralamide and chloral hydrate exert the same effect if administered in doses containing the same amount of anhydrous chloral.

Thus in Fig. 1, which represents the blood pressure tracing of a dog, 0.2 gram chloral injected into the femoral vein produced almost the same fall of pressure whether given as chloralamide or as chloral hydrate. In the case of chloralamide, however, there seems to be a better return to the original height of the blood pressure due it would appear to more forcible cardiac contractions. Larger doses (0.9gram chloral) Fig. 2, produced similar effects. In the case of chloralamide the medium pressure was reduced from 100 mm. to 58 mm. Hg. and it returned again to 98 mm. Hg. With chloral hydrate the medium pressure fell from 98 mm. to 56 mm., and the return reached 97 mm. Hg. But the fall of pressure in these cases is due in part to a heart effect, and if this is avoided as far as possible by slower injection of the drug the greater influence of chloral hydrate on blood pressure is distinctly brought out; to this I shall return in a moment. On the blood pressure of the rabbit, intravenous injection of the two drugs produced the same effect as in the dog.

But in order to compare the influence of the two drugs upon the circulation under more normal conditions, the drug itself was used as the anæsthetic; that is, chloral or chloralamide was injected into the stomach or veins, and, as soon as the animal was sufficiently under for operative purposes, the carotid artery was connected with the manometer, and the blood pressure measured. When injected into the stomach, the difference in solubility, and as a result the difference in absorption, of the two drugs leads to a variable quantity of each substance in the blood; but as the point we wish to determine is the arterial pressure when sleep is sufficiently deep to permit operation, this is not of great moment. These points are brought out in the tracings I show you (Fig. 3).

Fig. 3 represents the tracing from a rabbit to which 1 gram per kg. of chloral as hydrate was given by means of the stomach tube. In fifteen minutes the animal was well under, and the operation was commenced. The first tracing was taken half an hour after the drug had been given, and as you will see, the blood pressure is already very low—about half its usual height—and it gradually falls; but even after more than three hours a distinct pressure is still maintained, and the respiration, although shallow, is still automatic.

With the same dose of chloral as chloralamide a very different effect was obtained (Fig. 4). The operation could not be commenced until after an hour had passed, and then the animal was not so deeply under as was the case with chloral hydrate. The pressure in this case was little below the normal level when the carotid was joined to the manometer, and although it subsequently fell, it rose again and was well maintained 6½ hours after the drug had been given. The explanation of so marked a difference is undoubtedly to be found mainly in the much slower absorption of chloralamide as compared with chloral hydrate; but this is not the whole explanation. In order to obtain a result with chloral hydrate more comparable to that of chloralamide, 0.5 gram per kg. was injected into the stomach of a rabbit, but as this proved insufficient another 0.5 gram per kg. was given half an hour later. Although the animal did not seem to be more deeply narcotised than the chloralamide rabbit, the blood pressure was distinctly lower. Furthermore, in this case the respiration soon began to fail, and the animal was allowed to die.

In order to overcome the variability in absorption intravenous medication was resorted to. The tracings are shown in Figs. 5 and 6. The pressure in the chloral hydrate tracing, although of a larger rabbit, is seen to be lower than that of the chloralamide one, but the subsequent fall is not proportionately greater. The respiration in the case of the chloral hydrate is seen to be more markedly influenced than with chloralamide, and this effect seems to be constant. It bears out the view that first suggested the use of chloralamide as a hypnotic, that the amide radical would probably act as a respiratory stimulant.

We therefore conclude that although when injected rapidly into the circulation, chloralamide and chloral hydrate produce the same initial fall of blood pressure when given by the stomach or in any way in which the circulation is slowly reached, the depressing effects of chloralamide on the heart and blood vessels are less marked than those of chloral hydrate. The respiration also is not influenced to the same extent. The formamide group cannot therefore be inactive; it plays a part in counteracting the depressant action of the molecule quite apart from its influence in diminishing the solubility.

From what I have said with regard to the vascular effects and the solubility of chloralamide, we shall not be surprised to find that its toxicity is less than that of chloral hydrate. A dose of the latter corresponding to 1 gram per kg. body-weight of anhydrous chloral is invariably fatal to rabbits within twenty-four hours, but these animals always recover from a similar dose given as chloralamide.

Note and References.

[1] I speak of these as my own experiments, but I ought to mention that they were performed for me by my late assistant, Mr. C. R. Marshall, now Professor of Materia Medica in the University of St. Andrews, who has rendered me much valuable help in the preparation of these lectures. [2] *Recherches Expér. sur la Puissance Toxiques des Alcoöls*, 1879; *Bull. Gén. de Ther.*, September 30th, 1884, p. 251. [3] *Compt. Rendus*, cxxiv, p. 829, 1897. [4] *Zeit. f. Phys. Chem.*, ix. [5] *Zeit. f. klin. Med.*, xxiv, 374, 1894. [6] *Arch. f. Exp. Path. u. Pharm.*, Band xlii, 1899. [7] Paschkis and Obermayer, *Pharmacol. Unter. ueber Ketone u. Acetoxime*, Leipzig, 1892. [8] *Arch. di Farm. e Terap.*, iv, 12. 1896. [9] *Arch. de Pharmacodynamie*, I, p. 1, 1895. [10] *Arch. f. Expt. Path. u. Pharm.*, xxi, 137. [11] *Journ. of Physiol.*, xxii, p. 38.

SEQUEL TO A CASE OF ACUTE TETANUS TREATED BY INTRACEREBRAL INJECTIONS OF ANTITOXIN.

By WILLIAM F. GIBB, M.D., C.M.,
Surgeon to the Paisley Infirmary.

As the method of administering the tetanus antitoxin by intracerebral injection is at present on its trial, I communicated the above case, which appeared recently in this Journal[1] at the earliest opportunity, when convalescence was apparently well established. Unfortunately, after the disappearance of all symptoms of tetanus, the patient again became seriously ill and died on May 5th, more than eight weeks after the last intracerebral injection. The results of the *post-mortem* examination leave but little doubt that the fatal termination of the case was directly due to the particular method of injection employed. The following are the clinical notes of his fatal illness.

April 6th, 1899, the patient was obviously gaining strength, and was able to be out of bed a short time daily.

April 8th. He complained of headache, chiefly frontal, with vomiting. The temperature was normal. As it was considered that these symptoms were perhaps due to rather obstinate constipation, repeated doses of calomel, gr. iij, followed by seidlitz power, were given. In eight days there was complete relief of the headache and vomiting (April 19th). From this date he improved steadily for nine days, when he appeared again to be convalescent, and was able to be out of bed on two occasions.

On April 28th the headache and vomiting recurred, and on the 29th there was a slight rigor.

On May 3rd he seemed better. On the 4th he became for a short time collapsed and unconscious; on partially recovering he shrieked several times. There was for a brief interval spasm of the right arm and hand, and of the left leg and foot, with opisthotonos. Common sensation in the right leg varied remarkably; at one time pinching produced no response, at another the leg was withdrawn. Twitching of left fingers, hand, and arm, and of the left leg, occurred, on one occasion. Double optic neuritis was observed. A consultation was held to decide as to the advisability of operation; this was negatived. The boy remained quiet, and for the most part unconscious, and died at 8 A.M. on May 5th, 1899.

The following is an account of the *post-mortem* examination of the head made by Dr. Joshua Ferguson:

"The calvarium was easily separated. In the region of the frontal eminence, on each side, the tracks of the recent punctures, now occluded by healthy granulation tissue, were noted. On the external aspect of the dura mater, at a site corresponding on each side with the punctures, a few minute buds of healthy granulation tissue were observed, otherwise the membrane was normal in appearance. On its deep surface, it was slightly adherent throughout to the surface of the cerebrum; no visible exudation was present, the subdural space being notably dry. On the right side, at the site of puncture, the dura was attached to the brain by a minute tuft of healthy organised adhesions. On the left side it was free.

"The convexity of the hemispheres presented a normal appearance over the posterior and middle lobes. The frontal lobes on both sides, but more markedly on the left, showed distinct bulging, with flattening of the convolutions and partial obliteration of the sulci. On section of the brain substance abscess cavities were revealed on each side, situated deeply in the centre of each lobe. That on the left was about the size of a hen's egg and contained about 2 oz. of thick yellow pus. This cavity was in communication with the left lateral ventricle, into which pus had passed; it also communicated through the great transverse fissure with the cerebellar fossæ. The cerebellum was bathed in pus, which had also passed into the perimedullary spaces. The abscess cavity proper was surrounded by a zone of deeply congested cerebral tissue, which could be traced posteriorly backwards and downwards toward the internal capsule. On the right side the abscess cavity was about half the size of that on the left, and its walls showed less evidence of acute inflammation. It contained about 1 oz. of pus. The brain seemed otherwise normal.

"*Bacteriological Examination of the Pus.*—Cover-glass specimens of the pus were stained with gentian violet and Loeffler's blue, and examined microscopically. Cocci were present in considerable numbers, singly and in groups. No chain cocci, diplococci, or bacilli were seen. Gelatine plates and tubes were inoculated and kept at room temperature. Agar-agar capsules and tubes were also inoculated and kept at 37° C. In every case pure cultures were obtained possessing the characteristic appearances of staphylococcus pyogenes aureus."

Remarks.

Every care was taken to secure asepsis while drilling the skull and injecting the serum; the drill and needle were always boiled before use, and as sepsis was not at any time observed clinically, it seems to me difficult to believe that the source of infection was introduced with the serum; but whatever may have been the exciting cause of sepsis, damage to the brain from the repeated injections would unquestionably predispose to it. In this case repeated injections were risked on account of the excessive severity of the symptoms; probably, however, it is unsafe to venture a repetition of the process in any one case.

Reference.

[1] April 15th, 1899, p. 895.

The Caledonian and the North British Railway Companies have each issued a *Guide and Handbook* of seaside, farmhouse, and country lodgings, boarding-houses and hotels on their several systems. Each volume is provided with a map and is illustrated. Both are published by Messrs. Fairbairn, 10A, George Street, Edinburgh, and will be sent post free for 5d.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

POISONING BY THE TINCTURE OF NUX VOMICA: DEATH IN TWO HOURS.

THE following is, I believe, the first recorded case of poisoning by the tincture of nux vomica of the new *Pharmacopœia*. I was called in July, 1898, at 2 P.M., to see a woman who was reported to have fallen and injured her head. She was lying semi-conscious on the floor, with a large but not dangerous scalp wound.

On examination it was at once seen that the injury to her head was not the cause of her symptoms. It transpired that she had swallowed 6 drachms of the tincture of nux vomica in mistake for another drug. She quickly developed symptoms of strychnine poisoning: severe muscular twitchings developing into general tetanic spasms, and on three occasions definite general convulsions with loss of consciousness. During the intervals she was quite lucid and conscious, complaining of great thirst, dryness of the mouth and throat, a suffocating sensation and fear of impending death. Her pupils were widely dilated, her lower extremities powerless, her skin dry, respirations quick and deep at first, changing later into the Cheyne-Stokes rhythm; and the pulse was hard and incompressible. The slightest touch readily started a general spasm, and she was very intolerant of light and sound. Exactly two hours after swallowing the fatal dose, she died during the third attack of general convulsions, and was not resuscitated after half an hour's artificial respiration.

It was found quite impossible to pass the tube of the stomach pump, as any attempt to do so at once brought on tetanic spasms; and on administering chloroform she developed such dangerous symptoms of syncope that this had to be abandoned. Accordingly one-eighth of a grain of apomorphine was injected subcutaneously, but this had no effect whatever in producing vomiting, the dose being repeated in half an hour with a similar negative result. Two doses of chloral hydrate ʒj each were given by the mouth at intervals of half an hour, and during the three attacks of general convulsions a drachm of ether was injected subcutaneously, and hot flannels were applied to the præcordial region.

At the *post-mortem* examination the body was found fairly well nourished; rigor mortis was well marked, especially in the lower extremities. The scalp wound was found not to have caused any injury to the bone. The face, arms, and neck were greatly discoloured. The lungs were deeply congested; there were some old adhesions, but no other signs of organic disease. The heart was contracted and empty; the valves were quite healthy. The blood was fluid, and of a very dark bluish red colour. The stomach was greatly distended, and full of undigested food; the mucous membrane was congested, especially at the cardiac end. The intestines were apparently quite healthy, as were the liver, spleen, and kidneys. The brain showed superficial congestion of the membranes. No analysis of the contents of the stomach was made.

The chief points of interest about this case seem to be: (1) That the fatal dose was three-quarters of a grain of strychnine; (2) the comparatively rapid action of the dose; (3) that the pupils were widely dilated, and there was loss of consciousness on three occasions; (4) the failure of apomorphine to produce vomiting; and (5) the dangerous symptoms induced by the exhibition of chloroform.

LANCELOT H. D. HALE, M.R.C.S.Eng., L.R.C.P.Lond.
Southsea.

OPERATION FOR SIMPLE STRICTURE OF RECTUM.

I HAD recently under my care a patient with simple annular stricture of the rectum which caused so much trouble as to call imperatively for operative relief. It was situated about 2½ inches from the anus. Under chloroform I made an incision posteriorly through the stricture, and all the soft parts between it and the anus down to the bone. I then pulled the strictured part of the bowel down and intended to remove the stricture piece by piece, suturing the cut ends of the bowel as I went. One of my colleagues, Dr. E. M. Knott, suggested that I should pass the sutures first, as in a circumcision. I accordingly passed a number of sutures deeply below the stricture, then excised the stricture and tied the sutures. The result was perfect union with restoration of the natural lumen of the gut. I have not seen this method described anywhere, so I write to call attention to it as the easiest and simplest method of dealing with simple strictures.

WALTER S. BARNES.
Public Hospital, Georgetown, Demerara.

CASE OF IRIDEREMIA.

ABSENCE of the iris is sufficiently rare to justify the mention of the following case.

The patient is a child, aged 2 years, with rickets, well marked, both in head and long bones, badly nourished, and generally feeble. There is complete absence of the iris in both eyes, not the slightest trace being visible either to the naked eye or with illumination. The eyes have a dull black look, and the child cannot face a light in the room, but at once turns away or closes the lids. There is well-marked nystagmus in both eyes, the media are quite clear, and fundus normal.

Refraction, so far as can be tested by the ophthalmoscope, is normal, visual acuity is good, and accommodation certainly present to a considerable extent, as the child can pick up small objects, such as cotton or pins from the floor without hesitation or misdirection.

H. GOODWYN, L.R.C.P., L.R.C.S., L.M.Ed.
Bovey Tracy, S. Devon.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ST. BARTHOLOMEW'S HOSPITAL.

RETROPERITONEAL TUMOUR CONNECTED WITH THE SACRAL PLEXUS.

(Under the care of HARRISON CRIPPS, F.R.C.S.)

[Notes by Mr. HERBERT WILLIAMSON.]

V. H., an unmarried woman, aged 21, a housemaid, was sent up to the hospital by Dr. Wallace, of Colchester.

History.—She states that menstruation commenced at the age of 11, and was quite regular until she reached the age of 14. At this time she commenced to suffer from constant pain in the left iliac fossa and left lumbar region; the menstrual flow became irregular and scanty; frequently there was amenorrhœa for a period of three months—then a menstrual flow lasting only one hour, and accompanied by much pain. The constant pain was described as dull and dragging, with occasional acute exacerbations, when the pain would shoot down the front of the left leg.

Condition on Admission.—On examination by the abdomen a vague resistance was felt in the pelvic brim. By the vagina the cervix was found to be displaced forwards and to the right side; to the left and behind it was a rounded, fixed mass, reaching nearly to the middle of the pelvis. Rectal examination showed the mass was to the left side of the bowel. The bowel moved freely over it. Bimanually the uterus was felt antiflexed immediately behind and to the right of the symphysis pubis. Its cavity measured 2½ inches; it could be moved away from the mass. The swelling was regarded as probably an ovarian tumour, and operation was recommended. This was performed on June 1st.

Operation.—The patient was placed in the Trendelenburg position, and the abdomen opened by a 5-inch incision. At first the tumour was thought to be situated in the broad ligament, but these, together with the ovaries, were examined and found to be healthy. It was then found that the tumour was behind the peritoneum and lying in front of the sacrum. The peritoneum was incised, and an attempt made to shell out the tumour with the fingers. Separation from the peritoneum was easy, but behind the attachment to the anterior aspect of

the sacrum was very firm. It was found impossible to remove the tumour as a whole, so it was divided down the centre; there was very slight bleeding. Each half was now separated from the sacrum by the fingers and scalpel. Traversing the tumour was a round cord-like body which had much the appearance of the ureter; it was examined from this point of view but found to be a large nerve. Some troublesome hæmorrhage occurred, either from branches or from the main trunk of the internal iliac vein. Large nerve trunks from the lumbar and sacral plexuses were exposed, lying beneath the tumour. The posterior parietal peritoneum was sewn up and the wound closed.

Description of the Tumour.—The tumour was oval in shape, flattened, and irregular posteriorly where it was attached to the sacrum, all its other surfaces rounded and smooth. It measured transversely $4\frac{3}{4}$ inches, and from above downwards $3\frac{1}{4}$ inches. On section the knife cut with a grating sound, as though dividing fibrous tissue. The consistence varied considerably in different parts of the tumour, a narrower outer zone of soft myxomatous-looking tissue enclosed an inner central zone of firmer and more fibrous material. At the extreme left of the superior posterior surface a rounded solid cord, about the size a No. 10 catheter, passed into the tumour. It appeared to traverse the tumour, and emerged at the centre of its inferior surface. Dr. Morley Fletcher was kind enough to prepare and examine microscopically a number of sections. These showed that the tumour consisted largely of myxomatous tissue, with a smaller amount of fibrous tissue. Traversing this were large numbers of non-medullated nerve fibres, and scattered throughout large mononucleated, multipolar nerve cells. The solid cord spoken of above consisted of non-medullated fibres, with a few small medullated fibres. Dr. Fletcher suggests that the tumour was in connection with the sympathetic nervous system.

After-History.—From the operation the patient made an uninterrupted recovery. For ten days she suffered no pain, but at the end of that time complained of pain in the upper part of the left calf. There was no loss of sensation, the knee-jerk and plantar reflex were natural. The electrical reactions of the muscles were tested by Dr. Lewis Jones and no reaction of degeneration found. At the end of another fortnight, when the patient commenced to walk about, it was discovered that she held the left knee slightly flexed, resting the toes only on the ground; after a few days' gentle exercise this condition gradually improved, and when she left the hospital the only lameness was a slight limp. The reactions of the muscles were again tested and reported to be normal. Since leaving the hospital the menstrual periods have been much more regular and have lasted three days; there is now only very slight pain at these times. The patient is not in the least lame, and is in good health. There are no signs of recurrence of the tumour.

Remarks by Mr. Harrison Cripps and Mr. Williamson.—This case presents many points of interest both in its pathological and in its clinical aspect. In the first place, neuromata anything approaching this tumour in size are of extremely rare occurrence in the true pelvis. We have only been able to find two recorded cases. These are briefly as follows: (1) Case under the care of Dr. Corrigan, recorded by R. W. Smith in his *Treatise on Neuromata*, 1849, in which, at the necropsy, "the right sacral plexus (the component branches of which were much enlarged) presented an immense tumour which filled the true pelvis. It lay upon the pyriformis and front of the sacrum, behind the pelvic fascia, and had compressed the rectum and bladder; it measured 6 inches in length and 5 in breadth." (2) The second case is recorded by Genereseh in *Virchow's Archiv*, Band xlix. The case was one of multiple neuromata in a man, aged 22. "The true pelvis was filled with large subserous tumours. Tumours the size of a hen's egg were situated on the branches of the lumbar plexus, some of these were fibromatous, others myxomatous, and yet others sarcomatous. Nerves could be seen passing through the tumours." In the second place neuromata developing in connection with the sympathetic system are rare. R. W. Smith (*loc. cit.*) says: "Although neuromatous tumours are undoubtedly of much more frequent occurrence upon the nerves which originate from the brain and spinal cord than upon these which constitute the sympathetic system, yet the latter are not exempt from this remarkable disease. It is, however, to be remarked that the enlargements here noticed consist of hypertrophy of some of the elements of the ganglia much more frequently than in the development of tumours upon their branches." Thirdly, the microscopic structure of this tumour is peculiar. Bowlby, in *Injuries and Diseases of Nerves*, p. 486, says: "Neuromas composed of nerve fibres and ganglion cells are extremely rare; so much so, that some authorities doubt their very existence. I have, however, seen one for myself in connection with the pituitary body, though I have never met with such a growth on a peripheral nerve." Taking all these facts into consideration, it seems that although the tumour might be of nerve origin, it is more probable that it belongs to the class which are called sacro-coccygeal or postanal tumours. As Mr. Bland Sutton and others have pointed out, the tissue elements composing them may be extremely diverse. Langerhans, in *Pathologische Anatomie*, p. 178, mentions that structures very similar to those we have described above may occur in these tumours.

REPORTS OF SOCIETIES.

ROYAL SOCIETY.

Lord Lister, F.R.C.S., President, in the Chair.

Tuesday, June 8th, 1899.

DISCUSSION ON PREVENTIVE INOCULATION.

Mr. W. M. Haffkine, D.Sc., C.I.E. (Officer on Bacteriological Research Duty with the Government of India) introduced the subject with the following remarks:

Artificial Immunity.

The most important modern methods of prophylactic treatment are based upon the fact that an attack of disease from which an individual recovers leaves in him a condition of resistance to another attack.

The successes of Jenner and Pasteur, who utilised cultivated virus for such a treatment, have led to a general conception that there is a possibility of creating artificial immunity to diseases by treating the organism with morbid virus rendered harmless by some special means.

This definition involves a generalisation which led to a considerable amount of disappointment, as the application of the principle in a number of instances did not give the expected results.

When we cultivate a pathogenic micro-organism in a liquid medium two different elements are obtained mixed together: the bodies of the microbe and the liquid which it has modified, and into which it has secreted its own products. (1) A modification of the entire preparation, as represented by this mixture, can be first of all obtained by filtering and separating the two elements just mentioned, and considering each of them by itself; or (2) the two can be left together, while the vitality of the microbe is destroyed by some physical or chemical agent; or (3) the constitution and properties of each, or of both of these elements can be, to a desired degree, altered by the admixture of chemicals, or by subjecting them to physical processes; or else (4) the vital and pathogenic properties of the microbe can be modified by artificial breeding, and then the microbe itself, or the products of such a modified microbe, used for treatment.

The immediate effect which a given virus or its derivate produces on an animal differs with the kind of virus taken, the process of modification to which it has been subjected, and the species of animals upon which it is used.

The following instance may give an idea of these variations. The ordinary Indian grey monkey, as well as the brown, are susceptible to the plague virus, and may contract a fatal attack from being simply pricked with an infected needle. The rabbit or guinea-pig is also susceptible to the disease. The horse, on the contrary, contracts no fatal disease after being infected even with large doses of the living virus.

If, however, a plague culture be heated and the microbes killed in it, the relations between the monkey and the horse seem to become the reverse of the former, the guinea-pig remains comparable with the monkey, whilst the rabbit shares with the horse the susceptibility which it shared first with

the monkey. It will require, according to several observers, a very large dose of such treated virus to produce in the monkey or in the guinea-pig any marked rise of temperature, or any alteration of the skin at the seat of injection, while the horse answers to the injection by almost as brisk an attack of fever as if the virus were a living one, and at the seat of inoculation a tumour is produced which, if the dose be at all considerable, may lead to a complete mortification of the tissue. The rabbit similarly answers to the injection by an attack of fever and by the formation of a hard tumour at the seat of injection.

As varied as is the immediate effect of different forms of virus upon different animals, so varied is the result of the application of such virus from the point of view of immunity conferred by it. There are animals in which the inoculation leaves no lasting effect whatever. In others a very temporary immunity is created, vanishing in a few days. In others, again, a condition appears which induces the impression that after the treatment the animal has become more susceptible to a subsequent infection than a normal animal not so treated. And, lastly, there may be animals in which the same virus will produce a great and long-lasting immunity.

In general, I believe it to be admissible that in the case of every disease, and with regard to every species of animals, a form of prophylactic treatment may be found which will produce immunity against disease in that particular case; but that same method of treatment may or may not be applicable to another animal or to another disease affecting the same animal.

The failure to take this variation of circumstances into account has, I believe, more than anything else checked the success of a number of experimenters.

ANTICHOLERA INOCULATIONS.

The study of anticholera inoculation in India has revealed a new problem in prophylactic treatment. The particular character of cholera epidemics, which appear unexpectedly and do not last long, and, in places where they are permanent, are spread and scattered over large areas, makes the study of that disease and the demonstration of the effect of a preventive treatment in its case a matter of much greater difficulty than in localised contagious diseases like small-pox, or in plague. Although a large amount of material has been collected already, it is desirable that a number of observations be added confirmatory of the results obtained.

The information collected permits, however, already to point out very important features in the working of the anticholera inoculation.

The most extended and continuous observations on the subject were organised by the municipality of Calcutta upon the enlightened initiative of Dr. W. J. Simpson, and under his continuous supervision, as well as my own. These observations refer to the cholera-stricken suburbs of Calcutta, the so-called "busties" or groups of huts situated round the tanks, in which rain water is collected during the monsoon. Some 8,000 people were inoculated in those localities, and for two years observations were made and the results collected as to the occurrences of cholera in the huts inhabited by the inoculated.

In the vast majority of cases there lived in the same families members who had not been inoculated, together with others inoculated, and the possibility thus presented itself of comparing the incidence of the disease in individuals of the same households, exposed as much as it is possible to the same chances of infection.

During the time under observation cases of cholera occurred in 77 huts.

The interval which elapsed between inoculation in each particular hut and the recurrence of cholera in it was as follows:

Among *uninoculated* members of the families cholera occurred—1, 2, 3, 4, 5, 6, 9, 12, 13, 15, 17, 22, 34, 37, 44, 57, 62, 63, 71, 95, 99, 109, 114, 118, 119, 120, 129, 132, 139, 143, 162, 189, 191, 203, 240, 251, 271, 281, 284, 300, 309, 318, 319, 334, 356, 359, 362, 370, 372, 378, 383, 384, 389, 391, 393, 394, 401, 404, 408, 416, 433, 446, 448, 453, 472, 493, 498, 673, 720, 723, 724, and 738 days after the inoculation of the other members of these families.

Among *inoculated* members of the families cholera occurred—2, 3, 4, 219, 421, 459, 512, 688, 735, and 738 days after their inoculation.

Thus for a period of 738 days, cases of cholera occurred among the uninoculated at all intervals after the date of inoculation; whereas the figures referring to the inoculated show a striking variation of the incidence when compared after the lapse of various periods of time after inoculation. Cases continued to occur among the inoculated for a period of four days after the treatment, and then for 416 days the inoculated practically remained free from the disease, only 1 death having occurred among them during that time. From the 421st day up to the end of the observation 6 cases occurred among them again.

The relative immunity in the inoculated, considered separately during the three periods, shows that during the first four days the inoculated had proportionately 1.86 times fewer deaths from cholera than the uninoculated. During the period between the 5th and 420th days—that is, for a period of nearly fourteen months, the number of deaths among the inoculated was 22.62 times smaller than amongst the uninoculated; and for the rest of the time under observation the proportion in their favour fell to 1 to 1.54. The plan has since been formed of trying the effect of larger doses and of stronger vaccines, in order to produce a more lasting protection.

While thus the absolute number of deaths appeared so strikingly influenced by inoculation, the peculiarity that came out from the observations in Calcutta as well as in other places was that the proportion of deaths to cases did not appear to be changed by the treatment. Thus, in the observations made in a camp of coolies of the Assam-Burmah Railway Survey, out of 33 attacked among the uninoculated portion of the camp 29 died, and of 4 attacked among the inoculated all 4 died. In the Durbhanga prison, out of 11 uninoculated attacked all died, while of 5 inoculated 3 died. In the Gaya gaol 20 uninoculated attacked lost 10, and 8 inoculated attacked lost 5. In a group of tea plantations in Assam 154 cases in uninoculated had 60 deaths, 15 cases in inoculated had 4. In the East Lancashire Regiment in Lucknow 120 uninoculated attacked had 79 deaths, and 18 inoculated attacked had 13.

This circumstance—the non-reduction of the case-mortality by a treatment which influenced unmistakeably the case-incidence—appeared as an astonishing divergence from the result of small-pox vaccination, where both the number of attacks and their fatality are reduced by the treatment.

The new aspect of the problem of preventive inoculation which thus presented itself in the observations on human communities consisted in the possibility of a prophylactic treatment being directed separately towards the reduction of the number of attacks, leaving the fatality of the disease unchecked, and towards the mitigating of the character of the disease and the reduction of the case mortality in those who were attacked.

In analysing the nature of this particular result, the following two facts known in laboratory practice presented themselves to me as of essential significance. When recovery takes place from an infectious disease the pathogenic microbe does not disappear from the body for a considerable time after recovery. It does not do any more harm, though when transferred to another animal it may still cause a fatal attack. Similarly, in a naturally immune animal, for instance, in a guinea-pig inoculated with the bacillus of chicken cholera, microbes of an intense virulence can breed for weeks in an abscess, but the animal does not in the least suffer in its own general health.

A condition seems to set in in the convalescent patient, or to exist in naturally immune animals, whereby they do not suffer from the result of activity of a pathogenic microbe, from its morbid products; and from that time the presence of the microbe in the system, even in the tissues, becomes innocuous. Immunity against morbid effects generated by the products of microbes does not seem to imply necessarily the ridding of the system of such microbes. It is known now, since the discoveries of Behring and Kitasato, that such a resistance against the products can be originated artificially, by gradually treating the system with increased quantities of toxins. The system reacts by developing antitoxins, tending to neutralise the effect of the toxins.

On the other hand, Gamaleia first called attention to the fact that it is possible to create in an animal resistance against lethal doses of virulent microbes without that animal acquiring any resistance against a dose of the products prepared from that microbe in the laboratory.

It seems justifiable, therefore, to consider separately two kinds of immunity: One against the living microbe, which

would prevent it from entering the system and causing an attack; and another against the fatality of the symptoms of the disease produced by the products of the microbe, when the latter overcomes the initial resistance and does invade the system. In inoculation against cholera, which is done with the bodies of microbes, the first result alone is obtained.

These considerations were strengthened by a set of laboratory experiments by Pfeiffer and Kolle, intended to verify our Indian results. In the course of these they observed in the serum of men inoculated with only one dose of cholera vaccine an extremely high protective power, equal to that which, in goats for instance, could be created only after a very prolonged treatment, extended over five or six months, and including injections with gigantic doses of cholera vaccine. By analysing the properties of that serum they found that it possessed an intense power of destroying the cholera microbes, but exhibited no antitoxic properties capable of neutralising the effect of the products of those microbes.

The Plague Prophylactic.

When, in 1896, I was confronted with the problem of working out a prophylactic treatment against the plague, I determined to put to the test the ideas originated by the observations on our cholera patients, and to attempt, in the new preventive inoculation, to obtain at once a lowering of the susceptibility to the disease and a reduction of the case mortality.

This I resolved to obtain by treating the system with a combination of the bodies of the microbes and of their concentrated products.

In setting forth the above considerations, I desire that they should be considered to be temporary, subject to modification or to complete refutation. There may already exist facts unknown to me, which are opposed to the guesses implied. It was those guesses which led to the results obtained in the plague inoculation; but, in giving the reasoning which I passed through while working out the method, I am yielding only to a demand to that effect, as I consider that part of this communication unnecessary; the more so that the theoretical conjectures above enumerated are not shared by a number of experimenters, such as Pfeiffer himself, to whose results I owe some of my premisses; and the correctness of the composition of the plague prophylactic, with regard to the extracellular toxins added, is open to theoretical dispute. It is certain that no theoretical conjectures conceived by one experimenter are binding, or need even be interesting, to others. What is obligatory is the acceptance of the actual results obtained.

Preparation of the Prophylactic.

In order to accumulate for the plague prophylactic a large amount of extracellular toxins, the bacilli are cultivated on the surface of a liquid medium where they are suspended by means of drops of clarified butter or of cocoanut oil. The bacilli grow down in long threads into the depth of the liquid, and produce what we have termed a stalactite growth in broth, an appearance singularly peculiar to this microbe, and which, I hope, will be till further discovery accepted as the specific diagnostic feature of this microbe.

The products of their vital exchange—the toxins—are secreted by the stalactites into the liquid and accumulated there. The growth is periodically shaken off the drops of oil, after which a new crop appears underneath the surface of the liquid. Thus a large quantity of bodies of microbes is collected at the bottom of the cultivation vessel, and the liquid itself gets gradually permeated with increasing quantities of toxins. The process is continued for a period of five to six weeks, at the end of which time the bodies of the microbes are extremely deteriorated.

It will be seen from this that, in my eagerness to put to the test our ability to influence the case mortality I may have, perhaps paid less attention than I might have done otherwise, to the problem of reducing the number of attacks. I have now sketched out a simple plan whereby to test this, and to try to further improve our results from this point of view.

In order to render harmless the inoculation of the virus above described, I determined to kill the microbes by heating the material up to 65 to 70° C.

The Efficacy of the Prophylactic.

The virus so treated, in contrast to what is observed in some other instances, loses at once, for the animals susceptible to the disease, almost all its pathogenic power; and it was a question to determine, whether it contained the quality sought for, that is, the power of creating *in man* a useful degree of resistance to plague.

The plan has been contested by a number of experimenters who tried a material similarly prepared on different animals and failed to detect in it any immunising properties.

Among other forms of plague virus, which were tested by us, and by other experimenters, a large number were found to be too dangerous to use; in other instances the mode of application was inadmissible in the case of men; in others again the effect appeared too evanescent to be of practical use.

The immunising effect of the plague prophylactic, as above described, was worked out on domestic rabbits, and its actual efficiency on those animals has since been verified and confirmed by a number of experimenters, by trying to infect with virulent plague protected and unprotected animals. Comparing the rabbit with other laboratory animals, such as the rat, the guinea-pig, the mouse, the monkey, one may consider the rabbit as the one that perhaps required the least amount of protection, as its natural resistance to plague is relatively high. The most altered virus—that is, such as was rendered the most harmless of all—was found to confer on the rabbit a considerable degree of immunity, enabling it in a few days to resist ten or fifteen-fold lethal doses of virulent plague microbes. On the contrary, the same treatment applied to animals of a more susceptible nature may in many instances fail.

At the end of our laboratory experiments a set of questions, therefore, stood before us that were to be solved by direct experiment on human beings.

Those questions were:

1. Would man behave with regard to the prophylactic like the animal upon whom its protective power had been worked out?
2. If the answer were affirmative, what would the dose of the prophylactic, and the method of administering it be; and would not the dose required be so high, and the action to be produced so severe, or the number of inoculations to be repeated so great, as to render the treatment inapplicable to men, or impracticable?
3. How many days counting from the date of inoculation would it take to produce in man a useful degree of immunity?
4. How long would that immunity last?

Lastly, there followed two questions, to which my experience of the anticholera inoculation entitled me to give a reassuring answer, though it was necessary to demonstrate its correctness in plague again:

5. During the period of reactionary fever and all the other symptoms produced by inoculation, will the resistance of the inoculated exposed to plague be, for the time being, reduced, or remain the same, or be increased? that is, would it constitute a danger to apply the inoculation in localities actually affected with plague? and
6. When a man who happens to be incubating the plague, or to have initial symptoms of the disease already, chances to be inoculated, would it aggravate his condition, or have no effect, or, on the contrary, help him?

The perfect harmlessness of the inoculation was first of all demonstrated by the officers of the laboratory, the principal and professors of the Grant Medical College, a large number of leading European and native gentlemen of Bombay, and their families and households, being inoculated.

The Trial at the Byculla Gaol.

After that, when in the last week of January, 1897, the plague broke out in Her Majesty's House of Correction at Byculla, in Bombay, the option of inoculation was offered to the prisoners. The Byculla gaol is a long-term one. It contains no children nor very young people, as there is in Bombay a separate establishment, the Sassoon Reformatory, where minor criminals are sent. The inmates of the House of Correction present a well-fed, well-clad, regularly worked, and almost as uniform a set of people as can be seen in a regiment. Amongst them scarcely a single aged face or an infirm individual was to be seen. At the appearance of plague the prisoners numbered 346 souls.

Inoculation was commenced after 9 cases of plague had already occurred, and 5 of these subsequently ended fatally. There remained thus 337 individuals to be dealt with. Of these, 154 only volunteered for inoculation, and 183 remained uninoculated. On January 30th, in the forenoon, before the

inoculation was applied, 6 more cases occurred, and 3 of these afterwards proved fatal.

The inoculations were made in the afternoon, and afterwards it was discovered that one more prisoner had already a bubo when inoculated, while two prisoners developed buboes the same evening after inoculation. These three inoculated, attacked on the day of inoculation, also died.

After that the difference observed in the fate of the two groups, the inoculated and uninoculated, is seen from the subjoined table:

Date of Occurence.	Occurrences in Uninoculated. Number of Uninoculated Present.	Cases.	Fatal.	Occurrences in Inoculated. Number of Inoculated Present.	Cases.	Fatal.
1897. January 23rd to 29th, previous to the day of inoculation.	...	9	5			
30.1.97, the day of inoculation. Forenoon, before inoculation	...	6	3			
30.1.97, the day of inoculation. Afternoon, after inoculation	...	...	...	...	3	3
1st day after inoculation, 31.1.97	177	2	1	151	1	
2nd day after inoculation, 1.2.97...	172	1	1	150		
3rd day after inoculation, 2.2.97...	173	1	1	146		
5th day after inoculation, 4.2.97...	171	1	1	146		
6th day after inoculation, 5 2.97...	169	2	1	146		
7th day after inoculation, 6.2.97 ...	169	5	1	146	1	
Total after the day of inoculation ...	172 uninoculated, average daily strength.	12 cases.	6 deaths.	147 inoculated, average daily strength.	2 cases.	No deaths.

For seven days, except the fourth, after inoculation, cases of plague continued to occur among the inoculated group, their average daily strength throughout the week being 173; altogether 12 cases occurred among them, with 6 deaths; while in the 148 inoculated there was 1 case on the next day after inoculation which rapidly recovered, and 1 on the last day of the epidemic, which recovered also.

A glance at the above table will show the information gained by that initial experiment, and how far it carried us forward from the state of uncertainty which surrounded the question originally.

The dose of prophylactic administered to the prisoners was 3 c.cm. They all had the customary attack of fever from the operation, with the discomfort acompanying that condition—headache in many cases, nausea, loss of appetite for a couple of days, a feeling of fatigue and lassitude, reminding one of a mild attack of influenza, with swelling and pain in the inoculated side. Did, however, this indisposition make them more susceptible to the disease than were their non-inoculated fellow-inmates? It is certain that the table testified unmistakeably to an opposite result.

Further, the incubation period in plague appears to be on the average 5 days, extending, however, not infrequently to 10. Of the twelve prisoners in the uninoculated group who developed plague during the next few days after the date of inoculation a large proportion, if not all, must have been already incubating the disease on that day. Seeing the perfect similarity of conditions under which the inoculated and the uninoculated were living, it could safely be inferred that a similar group of individuals incubating plague was present among the inoculated also at the time when the inoculation was performed on them.

The inoculation, however, did not aggravate their condition, as the number of inoculated who developed plague, counting from the first 12 hours of inoculation, was proportionately five times smaller than the corresponding number among the uninoculated; and the 2 cases that appeared among the inoculated, 1 on the next morning after inoculation, both ended in recovery.

As far as that first experiment went, therefore, men behaved like the laboratory animals which derived protection from the inoculation. To communicate that protection one injection of prophylactic appeared sufficient in a dose of 3 c.cm., which dose, however, in our subsequent operations, was further reduced to 2½ c.cm.

The difference in favour of the inoculated appeared within 12 hours after the operation; but the man who was inoculated with plague on him, and the two who developed clear symptoms of plague the same evening, did not benefit by the operation.

This completed the first information gathered with regard to five of the six questions enumerated above. No answer could be given as to the duration of the effect of inoculation, except that the operation appeared useful in a localised, already existing epidemic, extending over seven days.

THE TRIAL AT THE UMERKADI GAOL.

In the next experiment the strictness of the conditions of the last was enhanced further. This was in the second Bombay Gaol, the so-called Umerkadi Common Gaol. The plague broke out there at the end of December, 1897, and by January 1st three prisoners were attacked, and all subsequently died.

In the interval between the operations in the two gaols, some 8,000 people in the free population of Bombay had already availed themselves of the inoculation, and the whole of the prisoners, numbering 401, appeared willing to undergo the preventive treatment. In view of the novelty of the operation, however, and of our responsibilities before the Government and the public, and the necessity of demonstrating clearly the effect of inoculation, the prisoners were not yet allowed to undergo the treatment in a body, and it was resolved that only one half of them should be permitted to do so.

The manner in which that half was selected guaranteed the elimination of all possible errors usually inherent to observations on human communities. The population of a gaol in India is divided into several groups, the largest being the ordinary convicts divided into simple prisoners and hard labour convicts; then there is a group of civil prisoners, debtors; a group of "under trial" prisoners, of convict warders, of cooks, bakers, men employed in the infirmary, etc.; and a separate group of female prisoners. On the morning of January 1st, in the presence of Major Collie, I.M.S., and Dr. Leon, medical officers, Mr. Mackenzie, the superintendent, and of all the officials of the gaol, the above groups were brought one after the other into the gaol yard, and asked to seat themselves in rows; and, after all had been so seated, every second man without further distinction was inoculated, excepting 2 who did not volunteer to be done. From this moment the even numbers, the inoculated ones, and the uninoculated were left to live together under as identical conditions as they were living before. They had the same food and drink, hours of work, of rest, shared with them the same yards and buildings, etc.

In this case fatal attacks continued to occur in the gaol for thirty days, during which time an almost equal number of prisoners, inoculated and uninoculated, were discharged from gaol, and thus excluded from further observation.

The average daily strength of the uninoculated who remained in the gaol up to the end exposed to the plague was 127, and of the inoculated 147. In the smaller number of uninoculated 10 cases of plague occurred, 6 of them proving fatal, while the larger number of inoculated produced 3 cases, of whom all recovered. In these 3 cases, however, in the inoculated, the character of the disease was so much mitigated that the authorities of the Government hospital at Parel, Bombay, where they were sent, hesitated to return them as plague, and the Director-General of the Indian Medical Service, who examined 2 of them, diagnosed them as mumps. They were returned as cases of plague in order that no possibility of error in favour of inoculation should be admitted.

The Trial at the Dharwar Gaol.

On the third and last occasion, when the plague broke out in a gaol, one did not feel justified in withholding the inoculation any longer from the inmates, and all were permitted to be done. This was in Dharwar, during the terrible outbreak of plague in that town and district, the news of which must have reached you even here. Five cases of plague, of which 1 was imported, and 4 in old residents of the gaol, occurred, all 5 ending fatally. The prisoners, then numbering 373, submitted in a body to inoculation, and only one case followed, in a man attacked two days after inoculation—and he recovered, the only one of the lot.

Trial in a Free Population.

The most carefully planned out and precise demonstration of the working of the prophylactic system in the free population, exposed to a greater amount of infection, was that made in the village Undhera, six miles from Baroda. The following was the mode of operation adopted:

A detailed census was made by the authorities of all the inhabitants of the place, and on February 12th, 1898, when a Committee of British and native officers arrived to carry out the inoculation, the people were paraded in the streets, in four wards, family by family.

Major Bannerman, I.M.S., and myself, accompanied by the Baroda officials, went from one household to another, and, within each, inoculated half the number of the male members, half the females, and half the children, compensating odd figures that happened to be in one family by odd figures in another. I personally, and the officers who were with me, directed special attention to distributing the few sick in the two groups of inoculated and uninoculated as equally as our judgment permitted us to do.

The plague, which had carried away before inoculation 79 victims, continued afterwards in this instance for 42 days and appeared in 28 families, in whom the aggregate number of uninoculated was 64, and of inoculated 71.

The total number of attacks in those families was 35, and was distributed as follows:

The 64 uninoculated had 27 cases with 26 deaths;
The 71 inoculated " 8 " 3 ":

thus showing 89.65 per cent. of deaths fewer in the inoculated members of the families than in the uninoculated.

There were no deaths from other causes in the inoculated of the village, while among the uninoculated there were 3 deaths attributed to other causes than plague.

The subjoined table shows the number of days which elapsed between the date of inoculation and the occurrence of a death from plague in the families. The first row of figures refers to occurrences in uninoculated members, the second to occurrences in inoculated, while the small figures show the number of deaths which occurred in each group on those days:

Deaths from plague occurred in uninoculated—
3^2 4^1 5^3 7^2 8^3—10^3 11^3 12^1——————15^1 16^1 19^1 20^1 21^1 24^1 32^1 and 42^1
In inoculated—
——————9^1—— ——12^1 and 14^1——————
days after date of inoculation.

There elapsed, therefore, 8 days, during which 11 deaths from plague occurred among the uninoculated members of the families, before the first death took place in an inoculated. The inoculation has again acted, so to say, immediately; or as we have adopted to formulate the result, has acted within the time necessary for the subsidence of the general reactionary symptoms produced by the inoculation.

The investigation in this village was carried out by Surgeon-General Harvey, the Director-General of the Indian Medical Service, and a committee of British and native officials. Every member of the family who survived was seen, his particulars verified from the documents, and every detail was confirmed from the registers kept at the time, and from the testimony of the whole village, who were present throughout the inquiry.

Experiments on a Large Scale. Average of the Results Obtained.

I have dwelt so long upon the description of the above experiments, not because they were the largest in volume, or the most striking which were made, but because they were the most precise of all, and, as far as I am aware, free from any possible loophole of mistake.

I made prolonged and detailed observations in very severely affected communities, of Lanowlie, in a population of 700 people, of the followers of the artillery at Kirkee, numbering 1,530 souls Very complete data were collected by Professors R. Koch and Gaffky, of the German Government Commission, Major Lyons, I.M.S., and myself in the Portuguese colony of Damaon, in a population of 8,230 individuals, during a frightful outbreak of plague there, extending over four months, in 1897. A most comprehensive inoculation campaign, and with widely-reaching and most satisfactory results, was carried out, under the collector of Dharwar, by Captain Leumann, I.M.S., Dr. (Miss) Corthorn, Drs. Hornabrook, Foy, Chenai, and others, in three adjacent towns of Hubli, Dharwar, and Gadag, where some 80,000 people were inoculated. This was the most magnificent piece of work done, from the point of view of practical application of the method. With the extension of the number of inoculated the exactitude and precision of observation must, however, suffer.

A number of doubts and possible objections arise which it is not always possible to answer with certainty. Such observations are required to enable us to judge whether the application of the method as a general measure answers to the expectations formed; but the exact extent of the results is to be gathered from such mathematically precise experiments, imitating the conditions of laboratory practice, as were those which I have detailed above.

The difference in the mortality from plague between inoculated and uninoculated parts of communities was estimated to average over 80 per cent., approaching often 90, the lowest proportion ever observed in the experiments which I made personally having been 77.9 per cent. (at Kirkee).

A very accurate set of data were collected in almost all the larger hospitals where inoculated plague cases were admitted, upon the fatality of the disease in the inoculated: they are to the effect that the case mortality among the inoculated is at least 50 per cent. lower than among uninoculated plague cases. A number of documents on this point have been collected by the Indian Plague Commission, and will appear, I trust, in their records.

Duration of the Protection.

As to the duration of the effect of the plague inoculation, the statement which can be made at present is that it lasts at least for the length of one epidemic, which, on the average, extends over 4 to 6 months of the year.

The Government of India have recognised the inoculation certificates, entitling the holder to exemptions from plague rules, to be valid for a period of six months; with the understanding that if accurate data are forthcoming that the effect lasts longer, the holders will be permitted to exchange their certificates for another period, without being reinoculated.

Problems for the Future.

The task which the officers of the Bombay Plague Research Laboratory have proposed to themselves in connection with the prophylactic inoculation comprises now the following problems:

The working out of processes to turn out uniformly large quantities of material, and avoid the variations due to the character of the plague microbe, and to the differences in the composition of the cultivation media.

The further investigation of the different constituents of the plague prophylactic, with a view of enforcing those which produce definite and beneficial results;

The possible mitigation of the reactionary symptoms after inoculation; and

The study of the effect of antiseptics used for preserving the prophylactic;

while their most important general problems concerning plague refer to the study of the curative treatment of plague and to the life-history of the plague microbes in nature.

Prophylaxis of Typhoid Fever by Inoculation.

Permit me now to enter a plea in favour of a new inoculation campaign, which has been inaugurated now, and which I hope will be carried out successfully for the benefit of a large number of soldiers of this country residing in India, and of white men in general in all tropical countries.

The problem of typhoid inoculation has a special interest for Europeans, as cholera has for the natives of India. Typhoid fever has proved to be a more difficult disease to eradicate from military cantonments than cholera.

It is possible that the explanation lies in what is already known of the character of the microbes of these diseases. The typhoid bacillus when subjected to different chemical and physical agents, such as acids or antiseptics, or a high temperature, or desiccation, or the admixture of other microbes, appears far more resistant than the cholera microbe. Such a character would ensure for the typhoid bacillus existence in more varied media, under more various climates, and a greater independence from seasonal or local changes, than is the case with the cholera microbe.

Outside the endemic area the cholera remains in one and the

same place for a few weeks, and in any given part of a town often for a few days only. It is rare that it visits one and the same barrack more than once in five, sometimes ten, years, and when it occurs, a temporary evacuation of the place puts a stop to the disease. The typhoid virus, on the contrary, sticks to an infected locality for years, and causes a continuous incidence of the disease, for which occasionally nothing short of a complete desertion of the station is effective.

At the same time, while the cholera infection seems to be almost exclusively confined to the water supply, in typhoid the improvement of the water seems to leave intact a large number of other sources of danger which has as yet escaped recognition.

While thus differing in their life-history in nature, the bacilli of cholera and typhoid present important common features in the manner in which they behave in the human and animal body. The chief centre of infection in both instances is the intestinal canal, the circulatory system remaining free from invasion. When inoculated into animals, both microbes admit of the same kind of transformation by passages from animal to animal; and against both immunity can be created in laboratory animals by the same preparation of virus as used in the inoculations for cholera; while, when examining the tissues of immunised animals, the same modifications are detected in them as those observed after the anticholera inoculation.

These considerations lead us to expect from the typhoid inoculation in man a similar protective effect as that observed in the inoculation against cholera; and seeing that the period of life during which the newcomers to India remain susceptible to typhoid extends only over a few years, it seems that the application of the system, when properly organised, is likely to prove of a very high practical value.

Inoculation and General Sanitation.

The anticholera inoculation, the inoculation against plague, and that against typhoid, came to associate themselves to vaccination, and represent attempts of dealing with epidemics on lines differing from measures of general sanitation. During the last few years the question was, therefore, frequently debated as to the relation in which the two stand to each other.

It is scarcely necessary to point out that inoculation cannot be substituted for a good water supply, for draining, cleansing, or improvements in the building of cities, or for the admission of a larger amount of light and air into overcrowded localities, for all those measures to which the nations owe such a wonderful improvement in health as has taken place during the present century.

Only, injustice would be done to the sanitarian by calling him in when a patient lies already on his sick bed, or when an epidemic actually breaks out in a community, and by asking him to remove the sickness, or the epidemic, to improve the health of the population, so to say, while you wait.

Epidemics, like individual diseases, require specifics—promptly administrable remedies—and measures of general sanitation can be no more advised for arresting a sharp outbreak of cholera or plague than an individual patient be directed to build for himself a new house, or to dry up the marshy lands or to cut down the jungle round his habitation when he requires a dose of quinine to arrest an attack of fever.

The part of vaccination and of preventive inoculation in combating epidemics stands in the same relation to general sanitary measures as therapeutics and the art of the healing physician does to domestic hygiene. It is certain that neither of these can be substituted for the other.

Inoculation, and the Segregation-disinfection Method.

Another comparison now actively discussed is that between the methods of combating epidemics by separation of the sick and healthy, and disinfection, on the one hand, and by preventive inoculation of the people, on the other. From this point of view the following distinction between infectious disease is to be made.

Parasitic and Saproparasitic Microbes.

When we take some affected tissue from a leper, or a pustule from a small-pox patient, or virulent saliva from a rabid animal or some syphilitic matter, and place it in milk, broth, or any organic matter, it produces no modification in the medium, and in the course of time loses its infective properties and dies out. When, on the other hand, we repeat the experiment with cholera, or plague, or typhoid products, instead of dying out, the contagion begins to grow and multiply, spreads in the medium, and soon transforms the whole into one mass of infectious matter.

It is evident that such a distinction—the strictly parasitic nature of one microbe and the capacity of the other to lead both a parasitic and saprophytic life—must impress most directly the ways in which these diseases spread and assume epidemic forms, and also the measures which are likely to be effective in combating them.

In the first instance the infection must remain confined entirely, or almost so, to the body of the patient, and the disease can be propagated only directly from individual to individual, or by means of their immediate belongings. It is the inability of a virus to grow in lifeless Nature that communicates to the disease a strictly contagious character. In the second case, provided the surrounding conditions be favourable to it, the virus spreads rapidly around the original focus, and the sources from which infection reaches fresh individuals grow in number rapidly.

From the point of view of preventive measures, in diseases like rabies, or syphilis, or small-pox, or leprosy, where infection can be found in the patient alone, precautions of isolation taken with regard to the sick and their closest surroundings, must affect directly the prevalence and propagation of the disease; whereas in typhoid fever, or cholera, or plague, where the patient is only one, and proportionately a limited, source of danger, his isolation, and the destruction of his belongings, leaves unaffected the vast cultivations of infection which are going on in Nature besides; and measures taken for circumscribing the prevalence of the epidemic by isolating and destroying the foci of infection are less likely to succeed in this category of diseases; attempts to eradicate an epidemic or to protect individuals by means which succeed in merely contagious diseases will in this case easily be eluded, and the necessity of personal protection by means of prophylactic treatment will be soon urgently felt and acknowledged.

Conclusion. The Officers who Assisted in the Bacteriological Investigations in India.

Recognition for assistance and co-operation in the investigation work in India is due to the officers of the Indian and Bombay Governments, the Director-General of the Indian Medical Service Lieutenant-Colonel Owen, Majors Bannerman, Lyons, Herbert, Captains Thorold, Hare, James, Earle, Milne, Leumann, Doctors Corthorn, Gibson, Marsh, Balfour Stewart, Ransome, as well as to Drs. W. J. Simpson, Powell, Mayr, Surveyor, Paymaster, Mr. E. H. Hankin, the Bacteriologist of the North-Western Provinces of India, His Highness the Aga Khan, and a number of other European as well as Indian gentlemen, happily too numerous to mention.

Discussion.

Dr. Rose Bradford said that as Professor Haffkine had alluded to the inoculations against typhoid which were begun in this country by Professor Wright, it would be interesting to the meeting to hear what Professor Wright had to say on the subject.

The President then called upon Professor Wright, who said that his position on the Indian Plague Commission bound him to silence until the publication of the Commission's report. All he would allow himself to say at present was that the experiments and results which Mr. Haffkine had brought before them in his speech were brilliant; whether the results were always as brilliant was a different matter. But he, in his position as a member of the Plague Commission, could hardly be expected to touch on that at the present moment. This much he could, however, say, that if the results were less brilliant the question would have to be considered whether Mr. Haffkine always used the best methods to secure the best results. Other important questions might also have to be dealt with. Mr. Haffkine's work in India had only a relative interest. He had undoubtedly saved a certain number of lives in India. But what

was of far greater importance than the question as to whether 6 inmates of the Byculla Gaol had been saved or 6 had died, was the acquisition of scientific knowledge which would render it possible to apply the inoculation method against other infectious diseases. This information had not been forthcoming. No doubt Mr. Haffkine had done a great deal of good by his inoculations, and if any harm had ever occurred it had been out-balanced and overbalanced by the good. He would have liked to have learnt what was the effect of the individual constituents of the prophylactic, and whether they were all necessary. Dr. Rose Bradford had alluded to the typhoid inoculations which he (Professor Wright) had performed, and he would say that Mr. Haffkine's work in India had popularised the inoculations and rendered his task easier, because wherever he went Mr. Haffkine had been previously. But no information had been given as to the preparation of the vaccines, the dose to be used, and the methods to be employed. This was all he felt justified in permitting himself to say at present.

Surgeon-General Harvey (Director-General of the Indian Medical Service), who was called upon by the President, said that people in England should consider that there were enormous difficulties in the way of a bacteriologist in India. There was a great difference between research in a laboratory at home and a campaign against a plague epidemic in India. Till lately there was no apparatus to sterilise corks and bottles, and with the large quantities of vaccine required there were immense difficulties in enlarging the work as rapidly as the epidemic necessitated while at the same time ensuring in its manufacture perfect asepsis. Notwithstanding these difficulties, the results were such that the medical officer in charge of the operations at Hubli, who did nearly 80,000 inoculations, had only observed some twelve abscesses. Only twelve abscesses in 80,000 inoculations showed good work. He had himself been inoculated. The effects were extremely unpleasant, but still he was able to do his work as usual. The fever disappeared in the course of a day or two, but the arm remained painful for a week. The questions raised by Professor Wright were being attended to. They all required time. Experiments were being conducted in the Bombay laboratory to standardise the prophylactic and turn out larger quantities of uniform strength. At present the laboratory was turning out 10,000 doses a day; but what was this quantity compared with the 300,000,000 inhabitants of India? The Government of India had given Mr. Haffkine the assistance he asked for, and were prepared to give him more. The Indians were a strange people. In Calcutta the mention of inoculations drove 300,000 people from the city They afterwards returned and many of them got inoculated. In another part of the country he had himself seen them coming in their hundreds to be inoculated, and paying 2 annas each for the privilege. He felt, however, that even if the whole population of India were to make up their minds to be inoculated, neither the material nor the doctors to carry out the inoculations could be provided, and what was really necessary was sanitary improvements, which prevented epidemics. As to the accuracy of Mr. Haffkine's results, he himself had investigated the experiment at Undhera, and, as far as he could judge, there was no possibility of error. The difference in the mortality was nearly 90 per cent. in favour of the inoculated. There were some interesting instances of families in whom the few that were not inoculated all died while none of the inoculated suffered. He had no doubt as to the good done by the inoculations. The difficulty chiefly lay in the application of the system; however, he was glad to say that these difficulties were being gradually overcome.

Professor W. J. Simpson, who was next called upon by the President, said that he gladly accepted the invitation, as it afforded him an opportunity of expressing the admiration which he felt for Mr. Haffkine and his work. For a considerable period he had the honour of being associated with him in a very secondary position in his earlier work on cholera inoculations in India, and that association made him familiar with the stupendous difficulties which Mr. Haffkine encountered, and which his untiring energy had overcome. It also gave him an insight into the caution and unbiassed character of the man. It often seemed to him that Mr. Haffkine was the greatest antagonist to his own results, criticising every fact in favour of the inoculations from the most adverse point of view. He mentioned this because, from personal experience, he could testify to the solidity of the basis of the earlier observations on cholera, and he knew from what he had seen at Kirkee, near Poona, in 1897, that the same rigidly careful methods of verification of facts were also applied to the plague inoculations. There was no question in his mind as to the solid foundation on which the results rested. For himself he confessed that facts and results were more attractive than theoretical considerations, and that he looked to the results obtained by the inoculations as more important than the questions raised by Professor Wright. As regards dosage and preparation of the vaccines, these were matters of history. The one main fact brought out by the investigation was that wherever inoculations of cholera or plague were carried out, and cholera or plague prevailed, the incidence on the inoculated was always less than on the uninoculated. That was the major fact connected with the inoculations, and it was not merely a small matter of a few lives here or there being saved. Of course there were other facts of minor importance that needed to be worked out. None, he knew, were more conscious of this than Mr. Haffkine, and none more anxious for improvements. Given the opportunities, Mr. Haffkine would no doubt go on improving the system which he had introduced.

The President said that the information he had collected before Mr. Haffkine's return from India had convinced him of the efficacy of the inoculations, and, if anyone present had doubts before the meeting, he was sure that after listening to what had been said all their doubts must have been removed. As to further progress in this question, no doubt in this case as in others progress was possible, and some requirements, such as those mentioned by Professor Wright, might be necessary; but, whatever progress was possible, he was convinced that the best man in the world to attend to these requirements was Mr. Haffkine himself. He was also glad to hear from Professor Wright that Mr. Haffkine's work had prepared the way for the typhoid inoculations. Mr. Haffkine had mentioned that some 80,000 inoculations had been performed in the Dharwar district. If any proof were necessary that with tact and patience the inoculations could be applied on a large scale, no better instance could be adduced than this one. The people in that district not only came forward in thousands to be inoculated when the efficacy of the method was explained to them, but they paid for the inoculations. The good done by Mr. Haffkine in India reached beyond the saving of thousands of lives, for it convinced the people of India that the Government and Europeans were trying to do their best for them, and thus his work tended to break down the barrier that existed between the British and the people of India.

Mr. Haffkine, in reply, said he was very sensible of the kind words of the President and of other speakers about his work and himself, and of the manner in which they had been received by those present at the meeting. As to the interesting questions raised by Professor Wright, some he was able to answer, others he was not. The latter would probably provide work for Professor Wright and others. As to himself he could only take the responsibility for the little he had done, and asked to be excused for what he had not done.

BRITISH GYNÆCOLOGICAL SOCIETY.

H. Macnaughton-Jones, M.D., President, in the Chair.

Thursday, June 8th, 1899.

Deciduoma Malignum.

Dr. F. W. Haultain (Edinburgh) showed a specimen and microscopical sections, and gave a lantern demonstration of microphotographs of a case. Rejecting the view that these cases were to be regarded as examples of sarcoma attacking the pregnant uterus, he held the view that the condition was one of chorio-epithelioma.

The President said the general opinion of Continental authorities coincided with that of Dr. Haultain, and the differences that were met with were explained as being due to "typical" and "atypical" forms of the disease. This was his own view also, although his opinion was based on extraneous evidence, for he had not met with a case in his own practice.

Dr. T. W. Eden thought there was grave doubt whether the

91 cases that had been recorded as deciduoma malignum could bear close examination. The theory was new and fascinating, and some extravagance had resulted from the general enthusiasm. But there was already evidence of a more sober view prevailing, and in the last volume of Veit's *Handbuch der Gynäkologie* the editor expressed the opinion that the chorionic theory was untenable, and that the disease was in reality sarcoma modified by the occurrence of pregnancy. Even Dr. Haultain himself admitted that the growth presented the broad characteristics of a sarcoma. The only structures in it that were peculiar were the long bands and loops of nucleated protoplasm; the other features might occur in any rapidly-growing sarcoma.

Dr. Herbert Snow thought that deciduoma malignum did not possess characters sufficiently different from other growths to warrant a separate nomenclature. He could not help thinking that some of Dr. Haultain's explanations were a little idealistic. Probably some of the growths described as deciduoma malignum were not malignant at all.

Dr. William Duncan deprecated making a special pathology for diseases of the uterus. This practice had kept gynæcology back many times in the past, and he hoped that the term "deciduoma malignum" would soon disappear.

General Disorders originating in Diseases of the Female Pelvic Organs.

Dr. Mendes de Leon (Amsterdam) read a paper on this subject. After dwelling on some of the reflex symptoms that were associated with diseases of the uterus and appendages, he went on to remark that the varied forms of misery liable to be brought about under the influence of a pathological condition of the sexual organs on the whole constitution of a woman could not be overrated. Nothing could be further from his mind than to insinuate that every ailing woman should be submitted to a gynæcological examination; but, in the absence of sufficient cause elsewhere, the possibility of pelvic disease should be borne in mind. It was important to remember that anomalies of the pelvic organs, although insignificant *quoad functionem* and *quoad vitam* might still be the cause of serious disturbance to the general health. It was something more than injustice to a woman if they deliberately ignored the influence that such local disease might exert in exciting morbid impulses in the central nervous system, and thus through summary diagnosis cause the patient to be branded as hysterical.

In the discussion that followed, Drs. Heywood Smith and Burleigh-Robinson, Mr. Charles Ryall and the President took part; and Dr. Mendes de Leon replied.

EDINBURGH OBSTETRICAL SOCIETY.

J. Halliday Croom, M.D., F.R.C.P.E., President, in the Chair.

Wednesday, June 14th, 1899.

Specimens.

The President showed: (1) Fœtus and Placenta from a case of complicated labour; (2) large Vesical Calculus; (3) some Ovarian Tumours.—Professor A. R. Simpson showed Fœtal Bones removed from the bladder from a case of extrauterine gestation.—Dr. Keppie Paterson showed an Intrauterine Fibroid removed by *morcellement*.—Dr. Haultain showed: (1) the separate parts of a Double Monster; and (2) Dermoid Cyst removed by suprapubic cystotomy. The tumour was a rare one—a myxo-sarcoma of the uterus, a secondary degeneration in a pre existent fibroid. (3) A Multilocular Ovarian Cyst, removed seven weeks after delivery. The milk secretion, despite a chloroform operation, was never in the least interfered with, and the patient was able to nurse her child throughout.—Dr. Foulis showed several preparations of the Wolffian Bodies in the Fœtal Deer to demonstrate the connection between the testicle and the Wolffian duct. He first pointed out that the testicle was invariably an encapsuled organ; that the tubuli seminiferi were from the earliest stage of development shut up within a peritoneal capsule, and that the seminal fluid could only escape through the Wolffian duct, afterwards the vas deferens. A comparison between the young ovary and young testicle showed that the ovary at its earliest stage was a mass of cells permeated everywhere by blood vessels and stroma, and it had no peritoneal covering at that stage of development, and certainly it was not a tubular structure in any sense as the testicle was. Dr. Foulis then showed, under the microscope, some preparations of the Testicle and Wolffian Body in order that he might point out a remarkable connection between the upper part of the Wolffian body and the testicle. This connection was invariably present, and it consisted of a bundle of small tubules—the vasa efferentia—which escaped from the upper part of the capsule of the testicle through a very minute aperture, to join the terminal part of the Wolffian duct, which could be easily traced up along the under and inner surface of the Wolffian body. When the Wolffian body in a 2-inch in length fœtal deer was cut away and so exposed under the microscope as to show its under surface, this connection of the Wolffian duct with the testicle through the medium of the bundle of vasa efferentia was always well seen. Indeed, it appeared as if the vasa efferentia were the terminal parts of the Wolffian duct. Dr. Foulis also showed several sections of the Testicle and Wolffian Duct under the microscope, to show the spot at which the vasa efferentia escaped from the testicle.

Members Lately Deceased.

Before proceeding to the papers on the billet, the President referred briefly to the loss which gynæcology and the Society had sustained since last meeting by the deaths of Dr. John Moir, Mr. Lawson Tait, and Dr. Sinclair Coghill.

Mistaken Sex in Adult Life.

The President read a paper on two cases of this kind. The mistake was due to peni-scrotal hypospadias. He discussed the difficulties attending such cases, both legal and social, pointing out by illustrative cases the complications which arise when the right sex was overlooked at birth. Dr. Croom further discussed Neugebauer's recent paper on the subject.

Dr. Berry Hart made some remarks; and the President returned thanks.

Treatment of Eclampsia by Saline Injections.

Dr. Jardine read a paper on this subject, giving notes of twelve cases. With the exception of concealed accidental hæmorrhage and rupture of the uterus eclampsia was the most fatal complication in midwifery. The fits were caused by a toxic substance retained in the blood, and which should have been excreted by the kidneys. The liver was somehow involved. The accumulation of the poison, whatever it was, caused the explosion. The poison must be got rid of by one of three channels—the bowels, the skin, the kidneys. In eclampsia the urinary system was mainly at fault. If a case were taken in hand before the onset of the convulsions, the administration of drugs to bring about these three actions (purgation, diaphoresis, and diuresis) would mostly in every case prevent the fits. After fits had come on, purgation and diaphoresis could usually be brought about. Diuresis was harder to attain. To this end Dr. Jardine used large saline injections into the subcutaneous tissues. First he tried 1 part of bicarbonate of potassium to 3 of common salt, 1 drachm to the pint of sterilised water at 100° F. The potash was added because of its diuretic action. He had never seen any indication of poisoning from the potash, though it was increased to equal amount with the common salt. Professor Stockman had advised him to try acetate of soda, which was not poisonous, but not so good a diuretic. Eclampsia patients seemed to tolerate large doses of chloral, veratrum viride, and morphine. An aspirator trocar and cannula, a few feet of tubing, a test-tube-shaped filler, and a piece of adhesive plaster were all that were needed in the way of apparatus. The whole could be sterilised. The injection might be made anywhere if the tissues were loose. Under the lax abdominal wall after delivery, or under the edge of the breast before, Dr. Jardine had run in a pint in four minutes. Absorption began at once, and the fluid would all disappear in from fifteen to twenty minutes. The various cases treated in the Glasgow Maternity Hospital by Drs. Jardine and Black were then given in detail. The conclusions from a consideration and review of these cases were: That the diuretic effect was a marked one; that there was a decided increase in the excretion of urea and uric acid; that probably other things were washed out; that

the bicarbonate might have a neutralising effect on the poison. If the precise poison were found its antidote might be devised. Dr. Jardine had lost faith in the hypodermic injection of morphine to control the fits, because he believed it interfered with the action of the kidneys. He thought chloral, bromides, and veratrum viride were better. He could not agree with those who claimed that veratrum viride was a specific. Combined with saline injections it gave better results. The obstetric treatment of each case must be judged on the merits. Reference was made to three cases of eclampsia treated by infusion of normal salt solution by Dr. L. M. Allen, of Baltimore, as given in the May number of the *American Journal of Obstetrics*. Dr. Jardine was unable to see on what grounds Dr. Allen founded his claim to the marked diuretic effect of the normal salt solution. The patients were all taking diuretics by the mouth. All Dr. Allen's cases were bled very freely. Dr. Jardine had always tried to get as free a flow as possible after delivery. The blood in these cases was very dark in colour. In one of his case the child's urine contained almost the same amount of albumen as the mother's. Of the 12 cases he had recorded 4 were fatal. The death-rate was high, but the majority of the cases came under treatment after they had been having convulsions for hours. The hospital was a convenient place to ship hopeless patients to. In 1898 scores of cases of eclampsia were treated in the Glasgow Hospital to which he was attached. Various methods were used, including large doses of morphine in one and veratrum viride in others. In 3 of the cases saline injections were used and all recovered, while the other 5 died. This might be a coincidence, but it was a very remarkable one.

The paper was spoken to by Dr. MILNE MURRAY, HAULTAIN, FOULIS, HAIG FERGUSON, FORDYCE, MACVIE, and KEPPIE PATERSON; and Dr. JARDINE replied.

KIDDERMINSTER MEDICAL SOCIETY.—At a meeting held on May 26th, Mr. E. H. ADDENBROOKE (President) in the chair, Mr. J. LIONEL STRETTON showed: (1) A girl, aged 21, upon whom he had operated ten weeks previously for Tuberculous Peritonitis. She walked about out-of-doors and expressed herself quite well, the abdomen appeared to be normal and she had gained twelve pounds in weight. A portion of the omentum was sent to the Clinical Research Association and they reported as follows: "This tissue is infiltrated with an abundance of grey and caseous tubercles. The giant cell systems are well developed." (2) The Pyloric End of the Stomach with part of the Duodenum, removed from a man aged 67. He had suffered from gastric symptoms for some months and had been an in-patient the early part of the year, during which time he was thoroughly examined under an anæsthetic with a negative result. Although somewhat relieved by treatment his symptoms soon returned when he went out. He chiefly complained of severe pain in the stomach, which was increased during the night, he stated that he had never had hæmatemesis, but that he vomited at times, though this never occurred at all while he was in the hospital, and he had lost flesh. The abdomen was opened in the middle line above the umbilicus; there was a considerable thickness of fat, and the omentum was bulky. Tucked up beneath the liver was a large mass of growth involving the pyloric end of the stomach, which was bound down by adhesions. After separating these it was found that the growth involved the whole circumference of the organ, but the larger portion was on the lesser curvature. The whole of the disease was excised, which involved the removal of one-third of the stomach and an inch and a half of the duodenum. The stomach was closed with sutures, except the lower angle, which was joined to the ducdenum with a Murphy's button. He bore the operation well and passed a comfortable night; the next day he was quite himself, and had rallied from the shock, but at 3 A.M. the following morning he had a sudden attack of cardiac failure, and died in spite of all efforts to revive him. Nothing was found *post mortem* to account for death, the stomach was securely sutured, and held water without leakage. The chief points of interest were: (1) The slight symptoms, (2) the negative results of abdominal examination due to the thickness of the wall and the position of the growth, and (3) the sudden death. Although attributed to cardiac failure there was no evidence of its cause, and everything had been done to guard against it.—Mr. OLIPHANT read notes of a case of Pyæmia treated with Antistreptococcic Serum. A man, aged 23, was admitted with stiffness and swelling in the left side of the neck, which commenced two days previously. At first it was regarded as a case of inflammation of the lymphatics, but pyæmic symptoms soon developed. On April 17th and three following days he had an injection of serum, 10 c cm. The treatment had not much effect upon his general condition, though the local symptoms were decidedly improved, and he died on April 24th. Mr. Oliphant considered that he was benefited by the treatment, and if it had been used earlier a favourable result might have been obtained.—Mr. W. MILES read a paper on Adenoid Vegetations in the Nasopharynx.

BRITISH ORTHOPÆDIC SOCIETY.—At a meeting held in the Royal Infirmary, Derby, on May 27th, Mr. GENTLES in the chair, Mr. WILLIAM THOMAS showed a patient in whom the Left Popliteal Nerve had been injured by a kick from a horse, and talipes equino-varus occurred. Neurorrhaphy having failed, he performed tarsectomy. The result appeared to be excellent. Remarks were made by Messrs. TUBBY, ROBERT JONES, BENNETT, MUIRHEAD LITTLE, and LUKE FREER.—Mr. CARWARDINE read a paper on a Case of Talipes Equino-Varus treated by Phelps's latest operation. The chief points in the operation were: (1) To thoroughly disinfect the skin; (2) constant irrigation of the wound with an antiseptic; (3) open incision on the inner side if the skin be short; (4) cut all the parts in order of their resistance; (5) when necessary linear osteotomy of the neck of the astragalus; (6) resection of a wedge of bone from the os calcis. He said the special feature of the complete operation was the alteration of the bony axis of the foot without diminution of its length, the inner border of the foot being lengthened. Messrs. LITTLE, KEETLEY, W. THOMAS, and R. JONES took part in the discussion.—Mr. CARWARDINE also read a paper on Congenital Absence of the Fibula with Intrauterine Fracture of the Tibia. Messrs. R. JONES, W. THOMAS, and FREER made remarks on the case.—Mr. CARWARDINE also read notes on three cases of the Radical Cure of Chronic Tuberculous Abscesses by scraping and irrigating the cavity.—Mr. LUKE FREER exhibited two skiagraphs: (1) Congenital Displacement of the Left Femur; (2) Right Coxa Vara associated with Lateral Curved Femora of Rachitic Origin.—Mr. TUBBY read notes of a case of Spastic Hemiplegia with flexion of elbow and wrist formation, treated by open section of flexor tendons, especially flexor carpi radialis and detachment of the pronator radii teres from its insertion. A hole was made in the interosseous membrane and the tendon passed round the back of the radius to its outer border and fixed, thus reversing the action of the muscle. The patient after six weeks could pick up a pin. He kept the wrist during this time midway between flexion and extension by splints.—Mr. KEETLEY opened a discussion on Coxa Vara. He described types of the two chief varieties which commenced in adolescence. The deformity was rachitic in origin. The partial or even total absence of rachitic changes in other parts were no disproof of this, as the older the patient the more localised did rachitic changes tend to be. The various modes of osteotomy which had been carried out or proposed, including a new method, were described. In theory the neck of the bone should be operated on; in practice the trochanteric region was more convenient. Decreased angle of the neck and shaft formed the striking feature on a first glance, but the main changes were in the neck itself especially near the head. In fact coxa vara was a rachitic deformity of the upper epiphysial region of the femur. The deforming influence sometimes extended far down the shaft. Compensatory genu valgum was common. Mr. Keetley called attention to a peculiar expansion of the facial bones, giving prominence to the eyeballs and width and flatness to the upper half of the face. Coxa vara in cases of early rickets was very common, but rare during adolescence. The commencement of the flood of modern literature on the subject dated from the speaker's own paper in the *Illustrated Medical News* of September 29th, 1888. The hip-joint was healthy in these cases. For this and for other obvious reasons excision was not justifiable. Mr. R. JONES said that he thought that a transtrochanteric osteotomy would do all that was needed in these cases. Mr. TUBBY

thought it advisable to divide the adductors, and after doing transtrochanteric osteotomy to transfer the attachment of the abductors to the lower fragment, so as to abduct the shaft instead of the neck of the femur. Mr. LITTLE found great difficulty in accepting the theory that late rickets was the cause. In none of the extremely rickety skeletons in the London museums was anything approaching the deformities depicted by Kocher and others found. It seemed to be a process *sui generis*. Charpentier had shown that osteitis might cause the deformity. Mr. KEETLEY in reply said he did not think a simple linear osteotomy enough. He thought some cases described as separation of epiphyses were really cases of coxa vara.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND. The following have been elected officers for 1899-1900:—*President:* H. Radcliffe Crocker, M.D. *Vice-Presidents:* R. L. Bowles, M.D., A. J. Harrison, M.B., J.P., Jonathan Hutchinson, F.R.S., J. F. Payne, M.D., Buxton Shillitoe, F.R.C.S., Walter G. Smith, M.D., J. H. Stowers, M.D. *Treasurer:* George Pernet, M.R.C.S. *Hon. Secretaries:* William T. Freeman, F.R.C.S., C. H. Thompson, M.D. *Council:* P. S. Abraham, M.D., H. F. Barendt, M.D., Wallace Beatty, M.D., John Cavafy, M.D., A. Eddowes, M.D., T. Colcott Fox, M.D., Hope Grant, F.R.C.S.Ed., Evan H. Hare, F.R.C.S., E. C. Perry, M.D., H. H. Phillips-Conn, M.D., Henry Waldo, M.D., Campbell Williams, F.R.C.S.

REVIEWS.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By LEWIS A. STIMSON, B.A., M.D., Professor of Surgery in Cornell University Medical College, New York; Surgeon to the New York and Hudson Street Hospitals, etc. London: Henry Kimpton. 1899. (Demy 8vo, pp. 822, 326 illustrations, and 20 plates in monotint. 25s.)

THIS work is nominally a second edition of Professor STIMSON'S well-known volumes published in 1883 and 1888. There has, of necessity, been so much modification, owing to the greater facilities in examination conferred by the Roentgen rays, that the book is to all intents a new one.

It is interesting to hear from Professor Stimson that "while the *x* rays have been of interest and value in showing details of certain fractures.....yet it cannot be fairly said that they have yielded much information of practical value which could not have been obtained by palpation." It is to be feared that the ease with which a skiagraph can be taken may lead to less care and diminished accuracy in the physical examinations of an injured limb.

On the whole this volume worthily upholds the author's reputation. The article on Colles's fracture is complete, exact, and well illustrated. Rhea Barton's fracture is very properly disallowed. In fractures of the leg the "immediate application of plaster is objectionable, because either the swelling is likely to increase and make the dressing too tight, or it will diminish and leave it loose." The application of a "stocking splint," practically identical with that known as Croft's splint, is mentioned with approval. In fracture of the patella an open operation is recommended, with the important reservation that it should be adopted only by those trained to, and in the constant practice of, strict surgical cleanliness. Barker's method, a modification of Kocher's, which has obtained some popularity in England, is rejected because "it opens a direct road for the spread to the joint of infection occurring at either puncture or small incision, and it fails to provide for the satisfactory evacuation of the joint and the adjustment of the periosteal fringes."

In treating of fractures of the skull the author abandons the old classification and divides fractures into "circumscribed fractures of the vault" and "fissured fracture with generalised brain injury," the latter including the "bursting" fracture of Messemer and the "bending" fracture of Von Wahl. Professor Stimson endeavours in this manner to emphasise the importance of the brain-injury attendant upon the fracture, but it is probably safe to say that the old and better classification never misled even a third year's student. In discussing fracture associated with hæmorrhage from the middle meningeal artery, the directions for finding that vessel are very rough and ready. The section upon head injuries as a whole does not reach the high standard maintained in the greater part of the work.

In dealing with congenital dislocations of the shoulder we believe that the author has included, under a mistaken diagnosis, some cases of traumatic birth palsy. The skiagraph of the supposed dislocation in one case is quite unconvincing, and no surgeon seeing that alone would spontaneously suggest the existence of such a lesion.

The work, then, is a little unequal. Most of the sections, are admirably and tersely written and are in the best sense authoritative. One or two, especially that upon fractures of the skull, hardly represent the standard opinions and teaching. Certain features in the book are worthy of special commendation. Such are the copious historical references, the extremely good illustrations both of *x*-ray and ordinary photography, and the terse and graphic style.

CHIRURGIE DE L'ESTOMAC. [Surgery of the Stomach.] Par F. TERRIER, Professeur à la Faculté de Médecine, Chirurgien de l'Hôpital Bichat, et H. HARTMANN, Professeur agrégé à la Faculté, Chirurgien des Hôpitaux. Paris: G. Steinheil. 1899. (Roy. 8vo, pp. 366; 139 figures. Fr.15.)

THIS work on the surgery of the stomach aims at being, in the space of 366 pages of large type, both encyclopædic and personal, and therefore to some extent fails in both. Practically all the various operations that have been performed with any measure of success are described, however briefly, and the result is that many procedures, the importance of which has been brief and fleeting, are given in as much detail, and with as formal an air, as the methods that will, so far as we can at present tell, endure the test and proof of time. The book in the hands of a surgeon of experience will not be likely to mislead, but will rather afford an especial interest, as showing the various modes that have been the fashions of a time. In the hands of a student the complete absence of perspective will render the book almost worse than useless.

In the description of the surgical treatment of gastric ulcer, with hæmatemesis, the admirable thesis of Savariaud has been extensively drawn upon, the plates given in that work being copied in full here. The methods recommended for the exposure of the ulcer are most useful.

A very full and complete account of gastro-enterostomy, both anterior and posterior, is given. Its performance is recommended in cases (to which the name of "pyloric syndroma" has been given by Hartmann and Soupault) in which there is a spasm of the pylorus, causing increasing pains and vomiting about two or three hours after food. The authors say, "In cases of dyspepsia which prove rebellious to medical treatment, whatever may be the type of chemical deficiency, the operation of gastro-enterostomy gives excellent results, both immediate and permanent, if any signs of pyloric spasm are present." Pyloroplasty is "physiologically superior to gastro-enterostomy, and should be preferred to it. It is contraindicated when there are strong adhesions to the liver, abdominal wall, or pancreas." A table of 169 cases of perforation of gastric ulcers is given; 89 cases died, 80 recovered. Thirty per cent. only of deaths occurred in patients operated upon within twelve hours of perforation. Excision of the ulcer is not advised.

There are some notable omissions in the generally accurate accounts of the history of the various methods. No credit is given to Mayo Robson for his pioneer work on the treatment of pyloric adhesions. It is not adequately recognised that it is to Howse that we are indebted for the principle of the splitting of muscular fibres, with the view to the formation of a sphincter, in several abdominal operations. An anatomist of the reputation of Hartmann should not have allowed such an inaccurate figure as Fig. 37 to appear in any work bearing his name.

As we have said, the book does not reach perfection either as an encyclopædia or as a personal expression of opinion on the many procedures which are finally established. It is, however, a book that every surgeon will read with interest and advantage.

The Inebriates Acts, 1879-1898. By George Blackwell, LL.B.Lond. London: Butterworth and Co. and Shaw and Sons. 1899. (Demy 8vo, pp. 140. 3s. 6d.)

This little book contains in a convenient form the several statutes relating to inebriates and the general regulations for the management of inebriate reformatories and retreats.

The introduction gives a clear and concise account of the legislation with reference to habitual drunkards, indicating how it has failed and why it is hoped that the Act of 1898 may succeed, and it also summarises the effect of the sections of the new Act. This method of dealing with a legal subject in an introduction is often useful as it enables a person without legal training to see almost at a glance the object and effect of the statute.

The notes to the sections of the Acts are full of cross references, but in many instances no indication is given of the particular branch of the subject dealt with in the section referred to. The result is that the reader has to look at all the sections mentioned before he can find the one dealing with the part of the subject upon which he requires information.

The index is far from complete and is lacking in arrangement: for instance, in dealing with the powers and duties of superintendents of certified reformatories, the author merely supplies the regulations themselves in a condensed form without any attempt at classification or arrangement, alphabetical or otherwise.

NOTES ON BOOKS.

If we are to judge from the number of textbooks on the subject, the importance of physical chemistry is at last being recognised. Dr. McCrae has produced an excellent translation from the French of Professor Reychler's *Outlines of Physical Chemistry* (London and New York: Whittaker and Co. 1899. Crown 8vo, pp. 276, 52 illustrations. 4s. 6d.), and has made additions which give the most recent information on the many subjects discussed. The book is divided into four parts. The first deals with the laws of chemical combinations. The second discusses critical temperature, Van der Waals's equation, boiling and melting points, optical activity, Van't Hoff's hypothesis, and the determination of the molecular weights of dissolved substances. In the third part we are introduced to thermo-chemistry, electro-chemistry, and the hypothesis concerning the existence of free ions in salt solutions. The fourth part deals with equilibrium in cases of reversible reactions, with the so-called avidity of acids, and with the velocity of reactions. There is an index of author's names, as well as a subject index. It will be seen that the range of subjects is wide, and we strongly recommend the book to anyone wishing to form some idea of the methods employed in physico-chemical researches.

Dr. L. de Bourgon, chief of the Clinique of Quinze-Vingts, has published under the title *Les Nouveaux Verres d'Optique. les Verres Isométropes* (Paris: A. Maloine, 1899. Demy 8vo, pp. 192. Fr.5) a very complete work on the question of introducing into the manufacture of spectacles an optical glass of constant known qualities. He does not enter minutely into the numerous controversies which have at times taken place regarding this question, but he takes as the foundation of his observations the comparison between isometropic and other glass employed hitherto. He has treated his subject in a very lucid manner, both from a physical and mathematical standpoint. The importance in ophthalmology of using a glass of known optical properties is clearly shown, and in support of his deductions he gives formulæ, and detailed calculations explanatory of the figures and diagrams which occur throughout the book. His most striking experiments are made by means of the Roentgen rays and the ultra-violet rays, in which he demonstrates clearly the extreme opacity of isometropic glass, while other glasses are all, to a greater or less degree, penetrated by the rays. This book may be, with profit, read by ophthalmologists who wish to study not only the properties of isometropic glass but also to become acquainted with the optical properties of the various forms of glass which are used in the manufacture of lenses.

AMERICAN MEDICAL ASSOCIATION.

(Continued from previous vol., page 1542.)

Resolutions.

Tuberculosis.—At the general session on the third day the following resolution was passed with regard to the control of tuberculosis:

Whereas..... European Governments are actively engaged in stamping out the disease, while the United States have done nothing: that the President appoint a committee of five, with power to add to their number, who shall prepare a report on the nature of tuberculosis, its communicability and prevention, the more effectual means of controlling its dissemination, the advisability of establishing National and State sanatoria, etc.; that the report be presented to the Congress of the United States and the Legislatures of the various States of the Union, urging upon them that proper measures be taken.

Vaccination.—In connection with vaccination the Association adopted unanimously, at the suggestion of the Executive Committee, the following:

That the American Medical Association strongly urges the adoption by local boards of health of laws requiring compulsory vaccination, and deprecates in the strongest way the efforts of those who are endeavouring to secure the abolition of compulsory vaccination; and that a copy of these resolutions be sent to every Health Board in the country.

Syphilis.—The Executive Committee was of opinion that the President's suggestion in reference to the spread of syphilis would be best carried out by referring the matter to the International Congress, to be held in Brussels next September.

Opticians as Practitioners of Medicine.—The special Committee appointed to consider, at the suggestion of a delegation from Philadelphia, the question of the optician as a practitioner of medicine, reported that the proper fitting of glasses requires a knowledge of ocular pathology and therapy, and so must not be left to a mechanic, and that the American Medical Association encourage by every means in its power the repression of the abuses that have crept in in this matter.

Election of Officers.

The following have been elected officers for the ensuing year: President, Dr. W. W. Keen (Philadelphia); first vice-president, Dr. Charles A. Wheaton (Minneapolis); second vice-president, Dr. E. D. Ferguson (Troy, N. Y.); third vice-president, Dr. J. M. Allen (Liberty, Mo.); fourth vice-president Dr. W. D. Middleton (Davenport, Iowa); treasurer, Dr. Henry Newman (Chicago); secretary, Dr. George A. Simmons (editor *Journal of the American Medical Association*, Chicago); librarian, Dr. George W. Webster (Chicago); chairman of committee of arrangements, Dr. Philip Marvell (Atlantic City); trustees of the *Journal of the American Medical Association*, Dr. E. E. Montgomery (Philadelphia); Dr. H. L. E. Johnson (Washington, D. C.); Dr. C. A. L. Reed (Cincinnati). Judicial council: Dr. J. W. Griffith (Kansas City); Dr. J. E. Cook (Cleveland); Dr. J. H. Baillache (Washington, D. C.); Dr. J. B. Lewis (Topeka, Kan.); Dr. F. H. Wiggin (New York City).

Next Annual Meeting.

The place of meeting next year will be Atlantic City, N. J.

THE SECTIONS.

Only the briefest summary of the work of the Sections can be given here. Fuller abstracts of the more important communications will be published in due course in the Epitome.

Medicine.

In the Section of the Practice of Medicine the first paper read was by Dr. N. S. Davis (Chicago), and was entitled What are the Physiological Processes or Functions that impart to the Living Human Body its Vital Resistance or Immunity to the Action of the Toxic Agents to which it may be Exposed, and how can that be aided in the Treatment of Disease? He strongly advocated the reinforcement of the *vis medicatrix Naturæ*.

A Comparison of the various Methods of Estimating Hæmoglobin was the title of a paper read by Dr. B. M. Linnell (Chicago, Ill.). The author considered the various colour tests, and basing his observations on a number of cases pointed out the errors of both the Fleischl and Gowers's instruments, he strongly advocated [the approximate estima-

tion by known dilution of the examined blood, and considered by far the most accurate Hammerschlag's or the specific gravity method in his experience.

Infectious Diseases in School.—Dr. LAMBERT ORR (Philadelphia) read a paper on the Spread of Disease in Schools and its Prevention. He contended that most children's diseases were obtained in the intercourse of school life, by kissing, the common use of drinking-cups, the habit of putting pencils in the mouth, etc. To prevent the spread of disease in schools he urged that children convalescent from contagious diseases should not be allowed to return until after the lapse of a definite time. For diphtheria he fixed four weeks from the inception of the disease, and with an additional week in outdoor life, and quite as long a period for scarlet fever. For measles at least two weeks should elapse from the inception of the disease, and one week in outdoor life, before the child should be permitted to return to school. Children convalescing from small-pox should not be allowed to return before the expiration of two months from the onset of the disease, and should spend also at least one week in outdoor life. So long as there was a vestige of the symptoms children convalescing from whooping-cough should be kept away from school. In all cities there should be a medical superintendent of public schools and a trained corps of assistants to trace sources of contagion, etc.

Cerebro-spinal Meningitis.—In a consideration of cerebro-spinal meningitis by T. N. MILLER (of Rochford, Ill.), the author presented the bacteriology and clinical types, the diagnosis and prognosis of this affection, and believed that it was not contagious. He considered symptomatic treatment useless, and hoped for the discovery of antitoxin. He advocated ergot and calabar in the early stages with, perhaps, bromides in children. He strongly advised against bleeding, even though it were apparently indicated. Opiates were of great use in all stages of the disease, and the continued use of iodides was advised.

Treatment of the Heart in Nephritis.—On the second day, Dr. ARTHUR R. ELLIOTT (Chicago, Ill.), read a paper on Treatment of the Heart in Chronic Interstitial Nephritis. He dwelt upon the importance of mild exercise by the Schott method to reduce blood pressure. Hygienic and dietetic treatment were of great value. Interference with the circulatory system by drugs when compensation was unbroken was vicious practice. The most important drugs in that disease were aperients and vasodilators. Nitroglycerine was especially efficient and the iodides were valuable. The vasoconstrictor properties of digitalis were especially to be guarded against.

Accidental Heart Murmurs.—A paper on a Cause and Differential Diagnosis of Accidental Heart Murmurs was read by Dr. GEORGE W. WEBSTER (Chicago). Arguments were given tending to show that no single theory accounted for all accidental murmurs; there was a probability that all accidental murmurs were like those of organic disease, due to the production of "fluid veins." This might be due to temporary dilatation of the pulmonary artery, relative insufficiency of the tricuspid or the mitral valves, and possibly other causes. The diagnosis rested on: (1) The exclusion of organic disease as shown by (*a*) absence of a history of antecedent causal disease, (*b*) absence of the results of valvular defects as evidenced by hypertrophy and dilatation, or by damaged or broken compensation. (2) By (*a*) history of such disease or conditions as acute intoxications, chorea, associated; (*b*) the characteristics of the murmur as shown by rhythm, point of maximum intensity, area of audibility, posture, exercise, etc.

Quinine in Malaria.—In an article on the Use of Quinine in Malarial Diseases, Dr. GEORGE DOCK (Ann Arbor, Mich.) said that in the United States 15 to 20 grains was usually the daily dose, and in practice it was better to give 15-grain doses at once, or 5 grains at short intervals, followed by 15-drop doses of hydrochloric acid. The best time for administration was in the stage of decline. For prophylaxis against relapses 10 grains of quinine every five or seven days should be given for several months. He believed that true malarial hæmoglobinuria was quite uncommon, and that in many cases were so diagnosed incorrectly. In an article on Hypodermic Use of Quinine in the Treatment of Malaria Dr. G. A. FACKLEY (Cincinnati), after reporting 20 cases of positive malaria in which he had tried the hypodermic medication, condemned it as being successful in only 3 cases, while in the remaining 17 cases oral administration was successful. He believed that the only indication of the hypodermic method was when the drug was rejected by the mouth or rectum.

Pneumonia.—Dr. EDWARD F. WELLS (Chicago) opened a symposium on Pneumonia. He proposed the questions: Is the pneumococcus often found in the mouth identical with that found in the lungs? How does it enter, and what measure may prevent or destroy its virulence? He considered a pulse of 140 a dangerous sign, as well as dyspnœa and the rising and falling of the trachea. He had collected 350,000 cases, in which he found the high mortality of 21 per cent. He spoke of the efficacy of venesection in plethoric persons, and considered that in these cases the procedure had no satisfactory substitute. He also advised a simultaneous subcutaneous injection in the chest of a normal saline solution, or the use of an enema of the solution to replace the quantity of blood drawn. From the beginning to the end of the disease vasomotor paresis must be met by strychnine, digitalis, and morphine. In a paper on The Blood in Pneumonia, Dr. ALFRED STENGEL (Philadelphia) called attention to the presence of a chemotactic form of leucocytosis, which had an important relation to the diagnosis.—In a paper on Systematic Infection in Pneumonia: the Complications and the Sequelæ, Dr. ROBERT A. PREBLE (Chicago) considered as complications: (1) Mechanic: Plugging of the bronchi; effect on symptoms and physical signs; dilatation of the heart; jaundice; theories of causation. (2) Infectious: Septicæmia; pleuritis, endocarditis; meningitis; pericarditis, arthritis; miscellaneous mixed infections. (3) Toxic: Delirium; renal changes. In the sequels he classed delayed resolutions, nephritis, induration, neuritis, abscess, gangrene.—In a paper on the Treatment of Pneumonia, Dr. HOBART A. HARE (Philadelphia) said he believed that the abortive treatment by venesection, aconite and veratrum viride was applicable only in a few vigorous cases and in the early stage. Heat and cold upon the chest were useful sedatives, and small doses of aconite and opium were permissible. Later in the disease, venesection should not be used on account of the prolonged after-effect. He advised cold sponging and ice-bags to the head and over the heart. Antipyretic drugs were dangerous, and rarely, if ever, serviceable. As a rule a failing pulse indicated sedatives rather than stimulants. He believed digitalis was given too often and in too large doses, and often in ineffective preparations. Belladonna was strongly recommended in vasomotor relaxation. He had little experience of suprarenal extract. He cautioned against the promiscuous use of strychnine as a stimulant. Such substances as alcohol and cocoa were better for continuous administration. Nitroglycerine was useful in the aged, and when the arterial tension was great; the value of oxygen gas was problematic.

Cataphoric Treatment of Cancer.—A further report on the cataphoric treatment of cancer was made by Dr. G. BETTON MASSEY (Philadelphia). The cataphoric insertion of nascent salts of mercury in a strength that would deluge interstitially a given tract of tissues or an organ constitutes the procedure. Besides its application in massive dose, generally in association with nascent zinc salts, in the interstitial destruction of the malignant cells or germs of cancer and sarcoma, the method was applicable to the treatment of tuberculosis of accessible portions of the body and to many other conditions where an interstitially-driven germicide would be effective. Tissues subjected to the application, whether a small dose had been used or a massive one under ether, showed the development of two distinct zones, that nearest the electrode being a zone of total necrosis around which a line of demarcation subsequently formed, beyond which appeared a zone of infiltration reaction, and within which there was evidence that stray malignant cells were killed and the physiologic resisting forces of the body roused. Details were given of cases of sarcoma and carcinoma—ten in all—that had been successfully treated by the method.

The Rest-Cure Treatment.—A Fallacy of the Rest-cure Treatment was the title of a paper read by Dr. G. M. GOULD (Philadelphia), who described three cases which he had treated, and in which the general physician or neurologist had ordered the rest-cure without any inquiry as to the existence of eye-strain. A potent and frequent cause of the neurasthenia, hysteria, denutrition, etc., of patients needing the rest-cure

was eye strain. Mydriasis in such cases continued for a time would not only prove a certain means of differential diagnosis, but as good a method of cure as the rest-cure itself.

Movable Kidney.—In an article on the Medical Treatment of Movable Kidney, Dr. Alfred Stengel (Philadelphia) considered two plans of treatment: (1) Over-feeding, to restore the necesssary perirenal fat, which, however, was usually unsatisfactory; (2) the artificial support by an abdominal belt and pad. Pads should be so constructed as to exert pressure upward, backward, and to the right, instead of directly upward as was usual. The pad he used was of kidney shape.

Surgery.

Appendicitis.—The first session of the Section of Surgery was devoted to appendicitis, eight papers being read upon that subject. In a paper on Appendicitis as a Cause of Inflammation of the Right Ovary and Tube, Dr. J. Ochsner (Chicago) expressed the opinion that appendicitis was frequently the cause of inflammatory disease of the right ovary and tube, and occasionally the left, and that such a condition was likely to give rise to a chronic invalidism, owing to the periodic exacerbation resulting from congestion due to menstruation; that in operating for chronic or recurrent appendicitis in patients suffering also from dysmenorrhœa the right ovary and tube should be examined. Complications and Sequelæ of Appendicial Abscess was the title of a paper read by Dr. John B. Deaver (Philadelphia), who concluded with the following warning: "Would that my voice were strong enough to sound the note of warning against delay in the presence of appendicial pus, its ravages, etc., from the Atlantic to the Pacific, and far beyond, and from the Everglades of Florida to the glaciers of Alaska!" Dr. Robert Morris (New York) in a paper on Bad Methods in Appendicitis, said "shame upon any member of the profession to-day, no matter who he is or where he lives, who allows an appendicitis patient to become a chronic invalid and unfit to follow any occupation." The Diagnosis and Treatment of Appendicitis, with Report of 100 Cases, was the subject of Dr. Means (Columbus), who said it had been his observation rather than his experience that when there was profound septicæmia, complete paresis of the bowel, with a pulse-rate entirely out of proportion to the temperature, an operation was useless. He did not believe that the time for operation depended altogether upon pathologic conditions as found in the patient at the time of the first visit; early operation gave the best results. The Etiology and Treatment of Appendicitis was considered by Dr. William H. Harsha (Chicago). A study of 157 cases occurring in some of the Chicago hospitals during the past year, showed an average of 26 years, the oldest patient having been 62, and the youngest a year and a half.

Prevention of Shock.—On the second day, in a paper entitled Observations on Prevention of Surgical Shock and Collapse, based on Clinical and Experimental Evidence, Dr. George W. Crile (Cleveland, Ohio) said that collapse might be produced by direct pressure on the brain and interference with respiratory centres, which it had been shown were located on the base. In operations on the brain, in the presence of abscess or hæmorrhage, or in the presence of intracranial pressure, it was necessary to give the patient a hypodermic injection of atropine. It guarded the heart against the inhibitory action of the vagi. In operations on the neck, he stated that experimentally he had been able to show that when the laryngeal mucosa had been subjected to treatment of cocaine, that drug had an absolutely inhibitory effect on reflex action; that in any case of operation on the neck, if the patient was given physiological doses of atropine before the operation was begun, and if at the same time the laryngeal mucosa was properly treated with cocaine, it was impossible, as long as these drugs had their effect, to produce collapse. In reference to opening joints, the shock produced in operations on the extremities was caused by cutting of nerve tissue.

Tuberculosis of Fascia.—In a paper entitled Tuberculosis of Fascia, Dr. J. E. Moore (Minneapolis) said he had a history of a number of cases in which there was no disease of the gland, bone, or joint, and in which there was extensive disease of the fascia. The symptoms of fascial tuberculosis were slowly-developing swelling, accompanied by little or no pus, and a local rise of temperature, which could be detected by a sensitive hand. The diagnosis was to be made largely by exclusion. In the majority of cases the disease was secondary as well as primary. The prognosis varied with the variety, the location and extent of the disease. Treatment consisted in thoroughly removing every trace of the disease with knife, curette, and scissors.

Other Papers.—Drs. W. Keen and W. S. Jones (Philadelphia) read a paper entitled Two Novel Cases of Surgery of the Trachea: (1) Stricture of the Trachea successfully removed by Operation; (2) Successful Removal of a Diaphragm in the Trachea following Cut-throat and producing Aphonia. Other papers were Longitudinal Silver Wire Suture in the Closure of Wounds, by Dr. M. L. Harris (Chicago, Ill.); Laminectomy, by Dr. J. C. Monroe (Boston); Pancreatic Cysts, by Dr. L. L. McArthur; Resection for the Cure of Knee-joint Tuberculosis, with a Plea for Earlier Operation, by Dr. A. F. Jones (Omaha); Treatment of Popliteal Aneurysm by Excision, by Dr. J. C. Oliver (Cincinnati).

Obstetrics and Diseases of Women.

In the Section of Obstetrics and Diseases of Women, Dr. A. H. Cordier (Kansas City) delivered an address, in which he commented on the progress of gynæcological surgery in the United States.

Pelvic Tuberculosis.—Dr. Augustus P. Clarke (Cambridge, Mass.) read a paper on Pelvic Tuberculosis, in which he remarked that the principal avenues of entrance of contamination were along the loins from the intestinal track. The morbid conditions resulting in adhesions of a portion of the intestine to the Fallopian tube and the subsequent ulceration or perforation of the united surfaces furnished, no doubt, one of the means by which the bacilli reached the adnexa. From the intestine to the mesentery, and from the point to the peritoneum and to the uterine appendages, the bacilli might pass uninterruptedly. In many cases, if not in most, tuberculosis of the genital tract occurred in connection with the general dissemination of the disease in the other organs. The three forms of tuberculosis of the Fallopian tubes usually mentioned might very properly be reduced to two classes, the miliary and the fibroid varieties. Miliary pelvic tuberculosis might not pass beyond the first stage, or the disease might remain latent for varying indefinite periods. It was in such cases that a mere abdominal incision might be followed by apparent recovery.

Cholecystectomy.—Dr. Clinton Cushington (Washington, D.C.), in a paper on Cholecystectomy, said the indications for surgical operations on the gall bladder, were: (1) Recurring attacks of biliary colic, with or without jaundice, whether the gall bladder was enlarged or not; (2) enlargement of the gall bladder, whether there be pain or not; (3) persistent jaundice, which was preceded or accompanied by pain in the region of the gall bladder with or without paroxysms resembling ague; (4) empyema of the gall bladder or peritonitis in the region of the gall bladder; (5) abscesses in region of gall bladder; (6) when the gall bladder was seriously diseased, as it was better than having it as a place for further accumulation of gall stones, or as a point of new inflammations.

Retroversion of Uterus.—A paper, entitled A New Method of Treatment of Retroversion of the Uterus was read by Dr. C. E. Ruth (Keokuk, Iowa). He described his operation as follows: After making a median abdominal incision the uterus was brought forward, and a large ordinary full-curved needle, armed with a full-sized kangaroo tendon, was passed under the peritoneum, directly across the anterior surface of the uterus, then along the interior of the round ligament, or when they were absent through the interior of the peritoneal fold, which presented their course. When the abdominal ring was reached the needle pierced the abdominal wall directly opposite the ring, and emerged through the skin in contact with Poupart's ligament, near its middle or one side or the other. The needle was now unthreaded, the end of the tendon split, say 2 inches, one half was again threaded into the needle and passed under Poupart's ligament to the opposite side of the same, and the ends were next tied together over the ligament. The long round ligament would be thrown in numerous folds and convolutions as it was taken up on this remaining thread. One case was reported in which

this method was used. The following points were considered: (1) It exposed no denuded or traumatised surface to contract troublesome adhesions; (2) it did not permanently introduce any foreign material; (3) it enabled the natural support to take up the work successfully; (4) it gave the desired position of the uterus; (5) it left the uterus with ample mobility; (6) it did not interfere with uterine developments in performing its normal function; (7) it was quickly performed; and (8) the disease of the appendages might be dealt with through the incision.

Alexander's Operation.—Why Vagino-fixation and Ventrifixation and Suspension of the Uterus should be avoided in Women who retain any Capacity for Conception was the subject of the paper read by Dr. Albert Goldspohn (Chicago, Ill.), who believed the operations named in the title were unnatural, unsurgical, and unscientific. He used the original Alexander operation, greatly modified and improved. He had performed it 170 times without a death. When the extended and modified Alexander operation was combined with inguinal cœliotomy by way of the temporary dilated internal inguinal ring for the removal of adhesions, for the resection or the removal or diseased appendages, and for the permanent restoration of descended ovaries to their normal location, it most nearly fulfilled the highest ideals.

Rupture of Uterus.—On the second day a paper entitled Spontaneous Rupture of the Body of the Uterus during Labour was read by Dr. Henry P. Ingraham (Buffalo). In investigating 48,000 cases of labour, 12 cases of ruptured uteri had occurred, 5 of these being traumatic and 7 spontaneous. Most of the cases occurred in the practice of midwives.

Other Papers.—Among other papers read were Uterine Fibroids, by Dr. Fitzgibbon (Milwaukee); Indications for an Operative Treatment of Post-puerperal Sepsis, by Dr. John B. Deaver (Philadelphia); The Treatment of Endometritis, by Dr. Augustin H. Goelet (New York). In a "symposium" on Vaginal *versus* Abdominal Section papers were contributed by Dr. M. V. Ball (Philadelphia), J. Riddle Goffe (New York), Dr. W. H. Walker (Louisville), and Joseph Price (Philadelphia).

IRISH MEDICAL ASSOCIATION.

The annual meeting of the Irish Medical Association was held in Queen's College, Cork, on Tuesday, June 20th, under the presidency of Sir Thornley Stoker. This was the first occasion on which the Association had met out of Dublin. The attendance of members was very good.

Dr. N. J. Hobart, Cork, was elected President of the Association, and the following gentlemen were appointed representatives of their respective provinces: Leinster, Dr. Green; Ulster, Dr. Hamilton Moorhead; Munster, Dr. Jer. Cotter; Connaught, Dr. Kincaid.

Dr. Hobart, on taking the chair, referred to the position of the medical officers in 1851, when an agitation had been on foot for their benefit. Some benefits had been derived from it, but he hoped by continuing the agitation that still further benefits would be obtained. No doubt the salary of the medical officer had been raised. He had got emoluments from various sources which were not known in his time, and also a superannuation allowance. That, however, was the weak point of the present system. Individually Poor-law guardians might be generous, but collectively they were very stingy, and they cut down the superannuation allowance to the smallest sum possible. What they now were agitating for was that superannuation allowance should be compulsory, and that it should be a proper sum; and he hoped that their efforts in that direction would meet with the success which they so well deserved.

On the motion of Mr. Moriarty (Cork) the report was adopted, and a vote of thanks was passed to the Council and Committee of the Association.

Dr. J. W. Moore, President of the Royal College of Physicians, proposed that the Council be instructed to take every advisable step to procure the passing of the Medical Officers Superannuation Bill during the next session of Parliament. He thought it a heart-rending spectacle to see in different parts of the country men overwhelmed with years, with infirmity, and with financial difficulties, unable to lay down their weapons at the end of a long life, because by doing so they came face to face with the workhouse or starvation. All the medical officers wanted was that when they reached the mature age of 65, and had served for forty-five years or thereabouts, that they should receive two-thirds of the existing salary.

The resolution was seconded by Dr. M'Namara (Kilmallock), supported by Sir Thornley Stoker and others, and adopted unanimously.

On the motion of Dr. Flynn (Glanmire), seconded by Dr. Curran (Killeagh), the following resolution was passed:

That it be urged upon the Local Government Board that the want of an allowance for the cost in dispensary duty is a grievous injustice to the sick poor as well as the medical officer.

On the motion of Dr. Swan, President of the College of Surgeons, seconded by Dr. Keatinge (Ballygarvan), it was decided:

That the Council be requested to use every effort to obtain an amendment of the Local Government rules relating to the issue of tickets, so that medical officers be protected against hardship, visiting tickets being presented at all hours of the day and night when there is no necessity for urgency.

On the motion of Dr. Cranny (Dublin), seconded by Dr. Coleman (Dublin), the thanks of the Association were tendered to the professional and general press.

On the motion of Dr. Flynn, seconded by Dr. Kidd (Dublin), the best thanks of the Association were accorded to Sir Thornley Stoker, outgoing President, for the manner in which he had filled the office during the past year.

Sir Thornley Stoker, in reply, observed that women were now eligible for Poor-law medical appointments, although he questioned whether, under the circumstances of the country, they could efficiently act as such. Still it was perfectly fair that the gate should be open to them. He considered that the rule forbidding medical officers to serve on county councils was unconstitutional, and he doubted whether it would withstand the force of public opinion of the profession. Personally he thought that a medical officer was far more likely to succeed in his professional work if he did not go to the county council, but as a citizen he had as much right to sit in the county council as to sit in the Parliament at Westminster. It was a cruel hardship on medical officers, with wretched salaries and long distances to cover, to have to find their own means of conveyance, but the grievance as to superannuation seemed to him to cause everything else to sink into significance. Every other grievance should be put aside, so that all effort should be devoted to saving some of their poorer brethren from half starvation and poverty in their old age. It was a shocking injustice that men who had given their strength in the service of the poor should be left at the mercy of uneducated, ignorant Boards of Guardians, who in many instances had refused, in the cruellest way, to give any pension to men who had earned it in the fullest way that it was possible to earn that reward.

At the conclusion of the meeting the company were entertained at luncheon by Sir Rowland Blennerhassett, President of the Council of the Queen's College.

The annual banquet of the Association was held in the evening at the Victoria Hotel. The company, which numbered about seventy, included members of the profession from many parts of Ireland and a number of prominent citizens of Cork. Dr. N. J. Hobart occupied the chair, and on his right sat the Mayor of Cork (Mr. E. Crean, M.P.), Dr. Moore (President, Royal College of Physicians), Mr. M. Healy, M.P.; City High Sheriff (Mr. M. Cole), and Mr. James Dwyer (President, Cork Incorporated Chamber of Commerce and Shipping). On his left were Sir William Thornley Stoker, Sir Rowland Blennerhassett, Dr. Swan (President of the Royal College of Surgeons), and Dr. Woods (Resident Medical Superintendent of Cork Lunatic Asylum. Loyal toasts having been honoured, the Chairman gave that of "The Mayor and Corporation of Cork," to which Mr. Crean responded. Mr. M. Healy, M.P., acknowledged the toast of "Members of Parliament," Mr. John Morrogh "The County Council," Coroner Alfred Blake "The Legal Profession," Surgeon-Colonel Reardon "The Army and Navy," and Sir Rowland Blennerhassett, Sir Thornley Stoker, Dr. Moore, and Dr. Swan "The Universities and Medical Corporations."

Other toasts were also included in the list.

PERSONAL EXPERIENCES OF PLAGUE OFFICERS IN INDIA.

THE EPIDEMIC IN POONA.

WHEN the history of plague in the nineteenth century is written, Poona will always hold a prominent position on account of the severe outbreak, beginning in October, 1896, followed by an even more terrible recrudescence in the late summer of 1897, and the efficient way in which the plague authorities coped with the terrible conditions in 1897-98.

When the native population realised early in October, 1897, that the epidemic was in their midst a wild panic ensued, and half the population fled from the district. This meant, in the first place, that a spread of the disease in all directions was thus ensured, and in the second, great difficulty in obtaining supplies of food, clothing, and labour for those left behind; many shops were closed throughout the epidemic, and prices were high in consequence.

The elaborate organisation arising by degrees to meet emergencies included:

Division of the city into wards, which were daily visited by "search parties," whose duty ended only when the sick were in the plague hospital.

"Contacts" were removed with their belongings to segregation camp, and the house disinfected and the ventilation seen to.

Railway inspection of all travellers, with detention of sick for observation.

Notification of the cause of death in all cases, and corpse inspection in doubtful cases.

Strict attention to general sanitation in the city.

The erection of a health camp, to which inhabitants of insanitary but non-infected houses were encouraged to resort while their homes were made fit for occupation.

In June, 1897, it was thought plague had exhausted itself in Poona, but each week showed an increased number of cases notified.

A PLAGUE HOSPITAL.

With hospital accommodation for 70 patients, the district was thought to be amply provided; but it was soon found necessary to add wards. November, 1897, saw no fewer than 1,421 admissions, and wards were put up with all speed. The difficulties connected with the efficient staffing of such a rapidly-growing institution are more easily imagined than described. The medical superintendent, besides being responsible for the administration of this huge place, had charge of sanitary matters in the city. As each patient was entitled to take in a friend to attend to him, and make quite sure the hospital authorities did not kill him, the number of persons to be fed and supervised was a grave consideration, no one being allowed to leave the plague camp without the medical officer's permission.

The hospital consisted of 36 matting sheds and 50 tents, holding over 500 patients; the staff of native helpers was at one time over 300, constantly changing, and of course requiring much supervision. Early in November, 1897, there were five English nurses responsible for the nursing, with native women to do the rough work. Later the nursing staff numbered 15, so that day and night nursing could be arranged for. With the ever-changing patients admission rose to 60 daily at one time—the marvel was that so much was done for the benefit of those who were there; one never went twice into an acute ward without finding changes. With so many shops closed, it was difficult to obtain a supply of blankets; but the medical officers and nurses fortunately did not think it beneath their dignity to visit the laundries to secure the rapid return of washed blankets.

Surgical cleanliness was a mystery to natives, and resulted in dressings meeting with curious resting places and uses. Any filthy rag seemed to them as suitable for applying to wounds. The ward women would mix poultices in any dirty fashion; medicine, too, was a puzzle to them. In one instance a ward woman complained of great abdominal pain, vomiting, and purging; inquiry elicited that she had mixed all the medicines together from her ward, and herself taken the product; as they were acid, alkaline, stimulating, sedative, and incompatible, the result was not surprising. We had no proof that patients were not sometimes similarly treated by their friends. When their dread of the hospital, with its many deaths, was overcome, these ward women stayed and showed admirable qualities. Although they often did stupid things, it was marvellous how much good work was got out of them.

Between June, 1897 and March 31st, 1898, 4,179 patients were admitted; of these 489 were moribund on admission: in all 2,836 died, which gives a percentage of 56.6 of those treated. In the cases seen early in the epidemic cerebral symptoms were well marked, the speech was thick, indistinct or impossible; there was much headache, delirium, great restlessness, ataxic gait, exaggerated knee-jerks, sluggish pupils, and suffusion of the eyes, and injection of the conjunctivæ. The general symptoms were fairly constant in all cases; the tongue, thickly covered with creamy fur, had red tip and edges; there was constipation (less often diarrhœa), thirst and loss of appetite. The heart was at first rapid and thumping, later the pulse was scarcely perceptible. Respiration was shallow, but not very rapid. The temperature varied greatly, from 100° F. to 105° F. in different cases. Curiously enough, those with highest temperature did not invariably do badly, unless it remained high for several days.

The commonest seat of bubo was the femoral region. As the epidemic subsided, so the cases with well-marked nervous disturbance diminished in number, and those admitted were of less severe type. With the cold nights of December and January, pneumonia as a complication was frequent. The pneumonic type of plague was quite distinct from this; in such cases a scattered broncho-pneumonia, with typical tongue and a grave general condition, were the distinguishing features from the onset. Many bacilli were present in the sputum, but not in the blood till later. Bubo was absent as a rule.

Of the complications, pregnancy was by far the gravest among women. Miscarriage with a rapidly fatal hæmorrhage often occurred, with no premonitory pains. Sedative treatment was adopted with all pregnant women. If menstruation came on during the first few days of the illness, severe abdominal pain, high temperature, and great distress were apt to ensue, and the case, previously apparently favourable, would end fatally. Worms in enormous numbers, too, gave rise to anxiety on account of severe vomiting, constipation, abdominal pain and distension; convulsions often carried off such cases.

Temporary albuminuria was present in about 50 per cent. of the cases. Suppression of urine with resulting coma was sometimes noted. Cheyne-Stokes respiration occurred in three such cases in which recovery took place.

Keratitis and suppuration of the eye took place in several cases despite the greatest care. Necrosis of bone and tissue in the region of the bubo was fairly common, especially if the patient had applied "marking nut" before admission. Bed-sores gave wonderfully little trouble on the whole; but the few patients who suffered from them were very slow to recover. Convalescence seemed always slow, often out of proportion to the severity of the attack. Small-pox, leprosy, tetanus, and scurvy coexisted with plague in several instances.

The paralytic conditions left after plague were most interesting. Several cases resembled locomotor ataxy, except that pain was absent. Hemiplegia was seen in many, and it is interesting to note that paralytic conditions were seen in women most often, men rarely, and children practically never. All tended to improve, but none were really well before leaving hospital. Of drugs, strychnine, ammonium carbonate, ether, quinine, arsenic, iron, and iodides were largely used, and rum as a stimulant in large quantities. For delirium and sleeplessness hot packs, bromides, and hyoscyamus gave the best results. Wounds were washed and dressed with strong iodine lotion. The dead were cremated or buried at the end of the plague camp in ground secured for the purpose.

In January, 1898, visitors were allowed to come twice a week and look over the ward wall at their friends, but not to touch them. This gave great satisfaction, and some 600 gaily dressed folk visited the hospital twice a week, bringing pathetic offerings to those who had befriended their sick. When patients were discharged they and their clothes were disinfected carefully; but a convalescent camp would have been a great boon in many cases. Several cases of undoubted second attacks were in hospital between November, 1897, and March, 1898.

SEGREGATION AND HEALTH CAMPS.

These camps were of similar structure, but for different

inmates. To the segregation camps "contacts" were sent for a ten days' quarantine and observation. Inoculation with Haffkine's serum was, to all intents and purposes, not used in Poona; it was at that time still on its trial. The health camp was intended for inhabitants of non-infected but insanitary areas. From this camp persons followed their daily occupation, only returning to sleep, and the system came to be regarded favourably by the people, while it rendered it possible to cleanse insanitary areas.

Despite the elaborate explanations as to why and wherefore of measures adopted, there is no doubt that to many a native it was simply "those mad English" playing pranks. They would hide their sick or their infected clothing, bury the dead under the floor of their hut if need be. What segregation meant to them may be gathered from the following: A native plague helper reported he had "found and segregated a sick rat, sahib," on his return from a search visit. "How?" said his officer. "Killed it, sahib."

That Poona has remained practically free of plague is due to rigid maintenance of better conditions in the city, careful notification of sporadic cases, and certified deaths.

The Evacuation of Infected Villages.

This is not such a difficult matter as might be supposed. In the hot weather natives gladly sleep in the open air, the more wealthy on the roofs and in the verandahs of their own houses, the poor in the streets, either on their cheap string beds or wrapped in a cotton covering on the ground. Even when it is necessary to provide some shelter, as in the rains or cold weather, or in the case of women, they are content with the merest huts of bamboo and matting, sometimes daubed with mud, and these they are all quite capable of erecting for themselves if the materials are supplied to them. Evacuation, even in the case of a village, has sometimes been limited to the area immediately round the infected house or houses. A proclamation is made by the police in the language of the district a day or two before it is proposed to evacuate the village. Wherever possible the help of one or two leading inhabitants is enlisted. Their example and advice are sure to be followed by their poorer neighbours, and they are rather flattered by the request. The village is surrounded by a cordon of police, and sometimes bullock carts are provided at the expense of the Government to remove the furniture, which mostly consists of string beds and cooking utensils. Where the women of the family are kept in seclusion every respect is paid to their prejudices; curtains are held to form a way from the door of the house to the carriage or litter (also curtained) which is to convey the lady to her temporary home. As a matter of fact, however, if she be strictly "purdah" her husband has probably taken care to remove her privately before the arrival of the police. Among the lower classes there is a good deal of weeping and woe, and much delay in leaving their houses, the women and children sitting in the carts perched on the "furniture." The landlord usually adds to the clamour, protesting against the whole proceeding, and collecting what arrears of rent he can in the short time at his disposal, though it is seldom that a family decamps altogether.

The site for the temporary shelters is chosen with regard to shade and the accessibility of water for bathing and drinking purposes. The inhabitants are inspected daily by the medical officer, who notes any absentees from the general muster and examines them, or, in the case of women, deputes a woman (more or less qualified) to do so. Provision shops are, if necessary, opened, but as a rule the "bunnia," or grain dealer, with an eye to business, is ready enough to open a temporary store. The police guard the infected village till its disinfection has been carried out by washings with corrosive sublimate or dilute sulphuric acid, limewashing, burning the floors, etc. As soon as this has been thoroughly done, the villagers are told that they can return, though the time is drawn out as long as possible.

Inspection of Railway Trains.

At Calcutta, which as the capital of the chief Presidency is in daily communication by rail with all parts of India, four large plague segregation camps in connection with inspection stations were established two years ago on the four principal lines leading into the city. One of these was at Chausa (between Allahabad and Patna), on the border between the North-West Provinces and Bengal; one mail passed daily from Bombay and another from the Punjab, besides slower passenger trains. The whole camp was (and is) in charge of an English medical officer (Indian Medical Service), who has to assist him one or more medical women or nurses, and some assistant surgeons, besides a military officer on plague duty. A number of police under a European sergeant are necessary.

When the train approaches the station, some of the police are stationed on the off side of the train with a view to preventing escape in that direction. The other police go down the train by twos with ropes to stretch across the platform at each interval between the carriages, so as to keep each party to itself and prevent confusion, which may possibly be intentionally produced by a man coming from an infected place. Special railway guards are on the camp staff, and they go down the train, making all the third-class passengers turn out; the men are marshalled in a long line at the back of the platform, the women who are not "purdah" in a line close to the train with their backs to the men. "Purdah" ladies usually travel, if at all, second class, and they are not turned out; the lady doctor gets into the carriage, the view of the curious being obstructed by curtains placed over the windows for the whole journey by the men of the family. The medical officer or one of his assistants goes down the row of men looking at their tickets, and carrying out his inspection as seems to him necessary, but using his discretion as to whether he believes that they only come from the station on the ticket. Many who come from infected places get out at junctions and take fresh tickets to avoid suspicion; in such cases cross-questioning may elicit the truth, and occasionally the women may let out what the man of the family has concealed. In other cases the dress or the dialect may betray them to an inspecting officer who knows India well. This part of the work is apt to become monotonous, but it is highly responsible. It means very practical every-day knowledge. Every morning the newspaper has to be searched for fresh announcements of infected villages, though these are also announced officially with great rapidity. The names of all the infected places and the lines of railway leading from them have to be borne in mind. Difficulties arise when passengers are found who speak a language none of the staff know. The whole inspection, both of the tickets, and of the temperature, pulse, etc., has to be quickly carried out, so as to cause no unnecessary delay on the railway, and yet it must be thorough enough to ensure that no case of illness escape detection.

As soon as Calcutta was notified as plague infected the trains from, as well as to, the city had to be inspected to prevent infection of the North-West Provinces. This entailed very hard work on the staff, especially at night. During 1898 some 6 plague cases were detained at Chausa, one from a train going to Calcutta, and the rest taken out of trains from Calcutta. The first was during the term of office of Captain Buchanan, I.M.S. The patient's own village was not infected, but on inquiring whether he went straight from it to the railway it was found that he had spent one night at an infected village with a friend. Though apparently healthy, therefore, he was detained on February 23rd and sent to the segration camp on February 26th. The native doctor who made the inspection found him well on February 27th. Captain Buchanan, at his morning inspection next day, was told he was "asleep;" on entering the hut he found the patient with a temperature of 103°. He was moved to the plague hospital with all the other Sikhs of his party. On March 6th he died of what there was little doubt was plague, though the bacteriological evidence was negative. Captain Buchanan gave full particulars of the case in the *Indian Medical Gazette* of April, 1898. The cases from Calcutta were removed from the train by Captain Gwyther, I.M.S., under circumstances which show equal care. One had a very slight rise of temperature on inspection, only 99°, yet he died in two days with a femoral bubo. Another was detained merely on suspicion, for it was noted by the officials at the previous station and telegraphed on to Chausa that he had left the train and rebooked for a station further on. He came from an infected part of Calcutta, but denied having been in contact with plague. His ticket was marked as suspicious with a private mark to inform the Chausa officials, and its number telegraphed on to them before the arrival of the train itself. The next day the patient had a rise of

temperature, the following day an inguinal bubo, and he died the day after.

European passengers and natives who were of respectable class, and could give a known address, were not detained, although they came from infected places; but their names and addresses were taken and telegraphed on to the police at Calcutta or wherever they were bound, and they were visited by some official for ten days to note any case of illness.

It was found necessary to practise inspection of the river steamers also (Chausa being on the Ganges), and to keep an eye on the road, as some passengers had a way of getting out at the station before Chausa and walking to the station after, thus hoping to avoid inspection.

The whole duty thus called for many of the qualities of Sherlock Holmes, besides the power of enduring, not only the climate—a scorching desert was Chausa in the summer, and a swamp except for the raised camping ground in the rains—but also the isolation, for the Europeans of the camp numbered very few, even counting the children. Besides the usefulness of the work, however, there was the interest of seeing representatives of the various peoples of India passing on their way to Assam plantations, to Burmah in gangs for work, to Benares and elsewhere on pilgrimage. The medical interest, besides the inspection, the care of the sick and of the sanitary arrangements of the camp, was confined to the peasant population around Chausa village, about a mile off, numbering some 2,000 people, who came for treatment for cataract and all manner of diseases at the hands of the medical men—and the medical women—of the camp.

THE INEBRIATES ACT.

DR. COLLINS, the chairman of the Special Committee of the the London County Council on the Inebriates Act, 1898, has presented the following report:

Certified Reformatories.

On February 28th last the Council, on the recommendation of the General Purposes Committee, decided to exercise the powers conferred upon it by the Inebriates Act, 1898, and referred it to us to prepare and submit a scheme as to the extent to which the Council should exercise such powers. The main features of the Act are as follow:

Persons to whom the Act applies.

Criminal Habitual Drunkards.—Section I provides that where a person is convicted on indictment of an offence punishable with imprisonment or penal servitude, if the court is satisfied that the offence was committed under the influence of drink, and the offender admits that he is, or is found to be, a habitual drunkard, the court may, in addition to or in substitution of any other sentence, order that he be detained for a term not exceeding three years in a State inebriate reformatory or certified inebriate reformatory, the managers of which are willing to receive him.

Non-criminal Habitual Drunkards.—Section II provides that any person who commits any one of the offences mentioned in Schedule I, and who within the twelve months previously has been convicted summarily at least three times of any such offence, and who is a habitual drunkard, shall be liable, upon conviction upon indictment, or, if he consents to be dealt with summarily, on summary conviction, to be detained for a term not exceeding three years in any certified inebriate reformatory, the managers of which are willing to receive him.

Inebriate Reformatories.

State Inebriate Reformatories.—Section III.—The Secretary of State may establish "State" reformatories, and (Section IV) may make regulations for the rule and management of such reformatories.

Certified Inebriate Reformatories.—The Secretary of State, on the application of a county council or of any person desirous of establishing an inebriate reformatory, may (Section V), if satisfied as to the fitness of the reformatory and of the persons proposing to maintain it, certify it as an inebriate reformatory, and make regulations prescribing conditions on which certificates are to be granted, withdrawn, etc., and (Section VI) also make regulations as to management of such reformatories, the inspection, classification, treatment, and employment of the inmates, the transfer of inmates from a "State" to a certified reformatory or *vice versâ*.

Section VIII provides that the Treasury may contribute towards the expenses of the detention of persons in certified reformatories.

Section IX provides that county councils may contribute towards, or may themselves undertake the establishment or maintenance of a certified reformatory, and may defray the whole or part of the expenses of detention of any person in and certified inebriate reformatory, and *two* or more councils may combine for any such purpose.

The Council having decided to exercise its power under the Act, we have accordingly directed our attention to

(1) Whether the Council should itself establish one or more reformatories.

(2) Whether the Council should contribute towards the cost of the establishment of one or more of such institutions.

(3) Whether the Council should combine with one or other of the county councils in establishing or maintaining certified reformatories.

There are at present only three certified reformatories. These are:

(1) The Royal Victoria Homes, Brentry, near Bristol.

(2) Lady Henry Somerset's Reformatory at Duxhurst.

(3) St. Joseph's Inebriate Reformatory at Ashford, Middlesex, for Roman Catholics.

I.—*The Royal Victoria Homes, Brentry.*

Numerous circulars have been issued with regard to the reformatories at these homes. The original proposal was that county councils should contribute £20,000 for the establishment of the reformatory which would properly accommodate 100 persons. Only about five or six county councils have up to the present, we understand, agreed to contribute, and the managers, with a view of providing for immediate cases, have offered an alternative scheme, which is briefly as follows:

The County Council—

(1) To enter into an agreement for not fewer than five cases, and for not less than five years.
(2) To pay £10 per bed per year for capital outlay.
(3) To pay 6d. per day for each case sent.

II.—*Lady Henry Somerset's Home.*

We have received proposals with regard to this home, which is at Duxhurst, near Reigate, that the Council should purchase a portion of the freehold, and that they should erect all necessary buildings, and pay 16s. a week for each case sent.

III.—*St. Joseph's Inebriate Reformatory, Ashford.*

This reformatory has been certified by the Home Secretary for about 50 persons. It is for Roman Catholic women. The terms are, in the case of each person committed under Section II:

Establishment contribution	£10 per annum
Maintenance	3s. 6d. per week.

There is also a proposal to establish a reformatory at the Training Colony at Lingfield, Surrey. The Home Secretary is prepared to certify a reformatory in accordance with plans approved by the inspector, and the Board of Management are now waiting for county councils to signify their willingness to contribute. A letter, dated April 24th, from the director of the colony, contains a proposal that if the Council contributed £500 towards establishment expenses and 4s. per man per week for maintenance, ten beds could be placed at the disposal of the Council under an agreement for 20 or 25 years, the number of beds to be increased on proportionate payment.

We have given the matter careful consideration, and our opinion as to the course the Council should take in order to put the Act into effective operation is in the direction of the Council itself establishing a reformatory rather than that it should join other county councils or the managers of private institutions for the purpose

The matter, however, requires very careful consideration before a definite scheme can be brought before the Council. In the meantime we think that some temporary arrangement, say for twelve months, should be entered into with one or other of the existing reformatories above-mentioned, to meet the cases that may arise in the immediate future. Letters have been received from some of the metropolitan police magistrates, intimating that they have cases to send to reformatories, but are unable to do so as there are no places where they can be taken in, unless the Council makes provision for their maintenance; and the magistrates inquire what steps the Council have taken or will take with a view to

putting the Act into effective operation. With a view to making some temporary arrangement we have been in communication with the Boards of Management of the existing certified reformatories. We have received communications from Lady Henry Somerset and the Superior of the St. Joseph's Inebriate Reformatory. Lady Henry Somerset agrees to take twelve cases committed under Section 11 of the Act at not less than 16s. (inclusive of Government contribution) per week per case. The Superior of the St. Joseph's Inebriate Reformatory states that they are prepared to enter into an arrangement for twelve months to receive Roman Catholic women who are fit subjects according to the rules of the reformatory at 1s. per day per person. We have not been able to come to any satisfactory arrangement with the Board of Management of the Royal Victoria Homes.

As pointed out in the report to the Council on February 28th last, the Government are prepared to make a weekly grant of 10s. 6d. for each inmate committed under Section 11 of the Act. The cost therefore to the Council would work out in the case of Lady Henry Somerset's Home to 5s. 6d. a week per case, and to 7s. in the case of the St. Joseph's Reformatory. In view of the possibility for an arrangement being entered into with other institutions, we are submitting to the Finance Committee an estimate of £2,000, which will, it is hoped, cover the cost to the Council of the maintenance of about 100 persons for twelve months. We recommend--

(*a*) That the estimate to be submitted by the Finance Committee of £2,000 as the amount of contribution by the Council towards the cost of maintenance at certified reformatories of persons committed under Section 11 of the Inebriates Act, 1898, from the London police courts be approved.

(*b*) That an arrangement be entered into for a period of 12 months with Lady Henry Somerset, to receive female inebriates up to the number of 12 at the reformatory at Duxhurst, Reigate, at 16s. (inclusive of the Government grant) per week per case.

(*c*) That an arrangement be entered into for a period of 12 months with the St. Joseph's Inebriate Reformatory at Ashford, to receive Roman Catholic women at the rate of 1s. per day per case.

(*d*) That the solicitor be instructed to prepare the necessary agreements.

These recommendations were adopted by the Council at its meeting on June 20th.

TUBERCULOSIS IN THE GERMAN ARMY.

MOST valuable statistics are furnished in the recently-published reports[1] on Pulmonary Tuberculosis by the Medical Department of the Prussian Ministry of War, and the main results of these documents have been clearly and instructively expressed by Dr. Schjerning in his paper[2] on Tuberculosis in the Army, read before the Tuberculosis Congress in Berlin this year, and noticed in our report.

Doubtless with increasing knowledge and better sanitary conditions tuberculosis is tending everywhere to diminish. Ignorance, carelessness, poverty, and general want of sanitary precautions must explain the exceptional instances of its increase. The German army is not one of these exceptional instances, for, since the year 1883 there has been no increase, excepting apparently during the years 1890-1892, at a time corresponding with much influenza, and when precision in diagnosis was greatly facilitated by the introduction of tuberculin. Recently, in fact (1897-1898), the amount of the disease has been less than it ever was before. In 29 per cent. of all the cases of tuberculosis there was a family history of that disease, and in as much as 50 per cent. there was a past history of diseases which could be brought into etiological connection with tuberculosis, and which make it probable that a latent form of the disease may already have been in existence at the commencement of military service. All this serves to show the necessity for the most careful examination of recruits and for ascertaining their past history. When there is any doubt as to fitness for military service, repeated thorough examinations and continued medical supervision are required, and the body weight must be ascertained at regular intervals, so that should tuberculosis develop, it may be recognised as early as possible. These precautions are required, as well as proper food, hygienic management of the body, suitable clothing and housing, etc., in order to keep the number of tuberculous cases at its minimum.

In the army, as elsewhere, it is amongst those who have to work in closed rooms (labourers in the commissariat department, military bakers, members of the band, etc.) that tuberculosis has most power. The disease is more frequent in the garrisons of large towns than amongst troops stationed in more sparsely populated districts; similarly, soldiers serving in places where the civil population are much affected by tuberculosis are more frequently attacked by the disease than are those serving in localities where the civilians are relatively free from phthisis.

From the medical point of view, Schjerning may well recall with pride that Germany in the war of 1870-1871 afforded the first instance of a large army losing decidedly fewer men from disease than from injuries inflicted by their enemies. On the present organisation, general management, and efficiency of the medical department of the German army, such careful reports as those concerning tuberculosis reflect the greatest credit; they seem to indicate not merely a high state of present excellence, but also a progressive improvement.

[1] *Die Lungentuberculose in der Armee. Bearbeitet in der Medicinal-Abtheilung des königlich Preussischen Kriegsministeriums* [Pulmonary Tuberculosis in the Army. Worked out in the Medical Department of the Royal Prussian Ministry of War]. Berlin: A. Hirschwald. 1899. (Demy 8vo, pp. 114, 2 maps. M. 4.)

[2] *Tuberculose in der Armee.* Berlin: A. Hirschwald. 1899. (Crown 8vo, pp. 40, 2 maps and 6 diagrams. M. 1.50.)

THE NATIONAL SOCIETY FOR THE EMPLOYMENT OF EPILEPTICS.

FRIDAY, June 23rd, was a red-letter day at the Colony for Epileptics, Chalfont St. Peter, Bucks, for it marked an important stage of development of the institution. No fewer than four new homes were formally opened by the Duke of York (President of the Association) and the Duchess of York. The afternoon was fine, and a large number of visitors were present, including the generous donors of the homes, Mr. and Mrs. Passmore Edwards, Mr. and Mrs. Frederick Greene, and Mrs. Dearmer, as well as Sir William Broadbent, Drs. Buzzard, Ferrier, Fletcher Beach, Howard Tooth, Aldren Turner, and other members of the medical staff.

The proceedings commenced with a short religious service, conducted by the Vicar of Chalfont St. Peter. Then came an introductory statement by the Chairman of the Executive Committee, Mr. E. Montefiore Micholls.

The DUKE OF YORK gave an interesting account of the growth of the system of treating epileptics in colonies, specially referring to the homes at La Force established fifty years ago by Professor Bost, and to the large establishment at Bielefeld now containing 1,400 colonists. In the United Kingdom there were probably not fewer than 40,000 epileptics, and the Chalfont Colony aimed at ameliorating the condition of some of these by providing an industrial village where young epileptics would be trained to useful occupation and adult epileptics employed (both as much as possible in the open air). Experience had shown that such a system often had a beneficial result in mitigating the malady. The colonists, withdrawn from the trials and temptations of great cities, were surrounded by wholesome hygienic and moral influences, and received appropriate medical treatment. Though the Society had been started but a few years, its work had already been attended by the happiest results. In calling upon Sir William Broadbent to propose a vote of thanks to the donors of the new homes, His Royal Highness referred to the debt of gratitude which the Society owed to him for his wise counsel.

Sir WILLIAM BROADBENT then proposed a vote of thanks to the respective donors of the several homes, remarking that so much had been done by the munificence of individual founders that the claim established on the public for the maintenance and perpetuation of this useful and necessary work, though urgent, was, after all, one of comparatively moderate dimensions. He mentioned that the Dearmer Home would be available for cases requiring special care and treatment, or for isolation purposes if required, while the Milton House would be used for the care of epileptic boys, and the Pearman House for that of girls, the inmates of both being provided with suitable education and training.

The Duke and Duchess then proceeded to Milton House, where Her Royal Highness formally declared the homes open.

Each of the Homes is complete in itself, and contains

accommodation for about 24 patients, so that the capacity of the colony will be more than doubled by these additions. A central administrative building is to be provided by the generosity of Mr. Passmore Edwards, and it may be interesting, in view of the contemplated establishment of colonies by the London County Council and certain Poor-law authorities, to notice the statement that the cost of the earlier buildings at Chalfont did not exceed £122 for each bed provided. The medical profession, who know so well the difficulties of dealing with epileptics at home, cannot but feel much sympathetic interest in the development of such colonies.

The Secretary of the Society is Mr. G. Penn Gaskell, and the offices are at 12, Buckingham Street, Strand, W.C.

THE BEDFORD COUNTY HOSPITAL.

The building, which under the name of the Bedford County Hospital is to take the place of the old Bedford General Infirmary, was opened last week by the Duke of Bedford, in the presence of a distinguished assembly representative of the county and the town.

The new hospital is of more than local interest, representing as it does the position to which hospital construction has arrived at a moment when, as seems not impossible, fashion may be on the verge of turning again towards a less scattered type of building than has lately been deemed essential in the planning of such institutions.



Administrative Block.

The site on which the hospital stands occupies about ten acres, and one side of it faces a main road. Parallel with this road, and about 360 feet from it, runs the main corridor connecting the various blocks into which the building is broken up. From this corridor, in the direction away from the road, project the three ward-pavilions and the chapel, while standing out from the centre of the corridor towards the road is the administrative block. At the extreme left is a separate building for the out-patient department, and at the extreme right another, for the nurses' home, both standing forwards towards the road, and thus, from an architectural point of view, giving a balance to the buildings, but both entirely separate from the rest of the hospital; and between the administrative block and the out-patient department is the building containing the operating room and its adjuncts. Quite separate from everything else, in the garden of the old hospital, is the isolation block, and still further away are the old laundry and mortuary, which will continue to be used.

The Administrative Block.

The administrative block contains in front the board room, the rooms for the house-surgeons and matron, the dining rooms, and on the upper floor very good accommodation for a full staff of servants. In fact there would be space in this part to accommodate a certain number of nurses if it should be necessary to increase the staff beyond the capacity of the nurses' home. In the back part of the administrative block, which is here of only one storey in height, are the kitchen, the store rooms, and the boiler house.

The chief points of interest in this block are (1) the very handsome room provided for the consultations of the medical staff, which is also to be used as a library and museum; (2) the fine board room; (3) the provision of a chairman's room, showing how personal an interest he is expected to take in the management of the institution; and (4) the glass doors to all the store rooms. This may seem a little thing, but one has only to see them to recognise at once the immense assistance which they afford in maintaining a careful supervision over the establishment.

The Pavilions.

There are three pavilions for the sick. Two of them—those for men and for women—are two storeys in height, while the one for the children is of only one storey. Each principal adult ward is 69 feet long, 27 feet wide, and 13 feet high, thus giving an air space of 1,513 cubic feet per bed.

There are also on each floor a separation ward containing one, or if necessary two beds, a ward scullery, a linen room fitted with hot pipes, and a larder; while on the ground floor of each pavilion is a capital day room which is to serve both for the surgical patients in the adjoining ward and for the medical patients upstairs. The staircase leading to the upstairs pavilion is entirely cut off by a ventilating corridor from each of the wards, and this ventilating corridor in the case of the upper ward is a sort of bridge, there being a complete air space between it and the corridor below. The room for the patients' clothes, the brush and pail closets, and the coal store are in the staircase block, quite cut off from the wards.

The baths and sanitary appliances are in separate annexes at the far end of the wards, from which they are properly cut off by cross-ventilated lobbies, and between them is an open-air verandah in which the patients can either sit or lie in the open air. The floors are laid with terrazzo, and the walls are lined with a dado of green glazed bricks to a height of 5 feet, the upper part being of Parian cement. All corners are rounded.

The wards are heated each by two double Shoreland faience ventilating stoves with descending flues and by supplemental hot-water pipes around the walls.

The ventilation is (*a*) by the windows, the bottom sashes of which rise while the top ones fall inwards, the middle sash being stationary, (*b*) by inlets on the floor level, and (*c*) by the inlets in connection with the grates; the outlets being by way of upcast shafts in the walls and by the chimneys, and of course in summer by the windows also. The baths, sinks, and lavatory apparatus, all of which are of admirable quality, are of white porcelain.

The bath rooms, closets, etc., are lined throughout with glazed bricks of that pleasant tint which is known as ivory white.

The children's ward is very striking. So far as its general arrangements go, it is very like the other wards, except that it is not quite so wide. Its peculiarity lies in the decoration of its walls, which are lined entirely with vitrified tiles arranged as pictures illustrating various well-known nursery rhymes. Nothing could be better than the general effect, and the groups themselves are very well done, not being in mere monochrome, but picked out in many colours as pictures should be if they are to appeal to children. It is a delightful ward, and, of course, like the others, is provided with a day room and an open-air verandah.

Before leaving the wards, it may be pointed out that the special points which they show are (1) the provision of a separate coal store for each pavilion, thus avoiding the nuisance and the dirt arising from dragging coal about the house; (2) the separation of the staircases from the wards; (3) the admirable day rooms which are provided; (4) the facilities for getting into the open air; (5) the free access to the garden;

(6) the very beautiful tile and brick work, as seen in the dados and lavoratories, and especially in the walls of the children's ward, the latter being the work of Messrs. W. B. Simpson and Son (London).

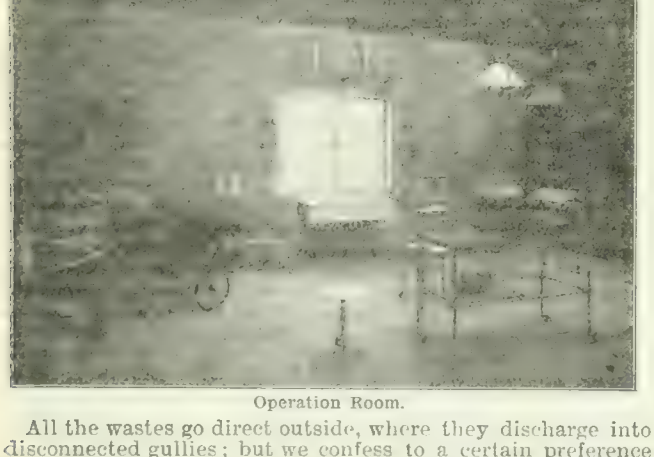


Children's Ward.

The Operating Room.

The operating block consists of the operating room, the anæsthetic room, and the surgeons' dressing room.

The theatre is nearly square, being 24 feet by 20 feet, and is lighted both from the top and the north side. All the rooms in this block are lined with tiles, the woodwork is of oak, and the iron work is enamelled white. The basins are fitted with pedal action, the working parts of which are placed in a chamber under the floor, accessible from outside. The sponge sinks have what are termed weir overflows, and one can hardly help wondering why this style of overflow is not more commonly adopted. There is a dash of the absurd in going to all the trouble of having pedal action taps and other so-called aseptic contrivances, and then having the overflow running through an irremovable grating into a dark inaccessible chamber lying between the basin and the trap. With the weir overflow everything is accessible and can be thoroughly cleaned out.



Operation Room.

All the wastes go direct outside, where they discharge into disconnected gullies; but we confess to a certain preference for the Birmingham plan, according to which everything discharges into an open gutter running along one side of the floor, which gutter discharges by means of one single trap into the open. This plan also gives the additional advantage of making it possible to swill the floor very freely, a proceeding which will probably be found difficult at Bedford. The warming of the theatre is by means of hot-water radiators, which turn on hinges for cleaning purposes.

The entire operating block is cut off from the main corridor by a cross-ventilated lobby.

The Out-patients' Block.

This block is completely isolated from the hospital, the only access to it being by a covered way open at the sides. The patients enter and depart direct from the road which it adjoins, and do not come into the hospital at all. It contains six consulting rooms, a central hall, a dispensary, and many smaller and accessory rooms, dressing rooms, etc., the lighting and arrangement of which are all that can be desired.

The chapel is a very beautiful piece of work, all the interior of which, including the organ, is the gift of the chairman, Mr. J. Frederick Nutter. The roof is of oak, as also is the high panelled dado, the benches, and the stalls. The pulpit and the altar table, also of oak, are very handsome specimens of wood carving. The side windows are filled with thick Norman glass, while at the east end is a stained window representing "The Ascension."

The Nurses' Home.

This is a very nicely fitted-up building, quite separate from the hospital, containing accommodation for 18 sisters and nurses, including separate bedrooms, a recreation room, bath rooms, etc., but no provision for meals, which are to be taken in a special mess room in the administrative block.

The General Arrangements.

No drains are laid under any part of the building. All drain pipes are laid in straight lines, the points at which the direction is changed being provided with inspection chambers. They are flushed by automatic flushing cisterns. The whole building is lighted by electricity from the borough mains. There is telephonic communication between all parts of the building, direct from point to point without the intervention of a shunt board, and between the hospital and the Town Exchange. The total cost will be £38,000. The architect is Mr. H. Percy Adams, F.R.I.B.A.

ROYAL LONDON OPHTHALMIC HOSPITAL.

Opening of the New Buildings by the Duke and Duchess of York.

On June 27th the new building, in the City Road, of the Royal London Ophthalmic Hospital (Moorfields) was opened by the Duke and Duchess of York. The royal party were received by Sir John Lubbock, the President, Mr. Sturgis, Chairman of Committee, and by the architects, Messrs. Keith Young and H. Hall. The door having been opened by the Duke with a gold key handed to him for the purpose by the architects, the surgeons of the hospital were presented to their Royal Highnesses. After an inspection of the building, the Royal party repaired to the large out-patients' hall, where a distinguished company had assembled.

The Bishop of Islington having said prayers,

Mr. Sturgis said that the hospital was known to the profession throughout the world, and to the poor throughout England. Want of space compelled them to sell the old hospital in Moorfields for £78,000. The new hospital cost about £80,000, and it would start free from debt. A fund of £50,000 was required to guarantee the large ground-rent, and an increase in annual subscriptions was hoped for to defray the cost of maintenance.

Sir John Lubbock, in asking the Duke of York to declare the buildings open, drew attention to the fact that it was not only a great hospital, but a most important school of ophthalmic science.

The Duke of York said that he had special pleasure in attending, because his father had laid the foundation stone of the building in 1897, and he was therefore completing the work which his father had inaugurated. Of late years the number of patients had increased so much that the old buildings were found inadequate, and a larger site had to be sought. He wished to congratulate the architects, Messrs. Young and Hall, on the excellent result of their labours and the staff on occupying a hospital designed and equipped according to the most modern requirements. He trusted that the public would come forward and help the hospital, and prevent it from getting into debt by their annual subscriptions.

The New Building.

The Out-patient Department.

The new hospital is built on land having frontages to City Road, Cayton Street, and Peerless Street. The greater part of the ground floor is taken up by the out-patient department, which it will be convenient to describe by itself. The entrance for out-patients is in Peerless Street. Passing through the entrance lobby, patients will find themselves opposite to the glass enclosure forming the clerk's office. Here all new patients will be registered and will receive their letters. Immediately facing the porter's office is a waiting room for new patients capable of seating some two hundred persons. Adjoining the clerk's office is an office for the official whose duty it is to make inquiries in certain cases into the circumstances of intending recipients of the charity. From here the patients pass down a corridor to a large waiting hall, where old and new patients are divided into three groups corresponding to the three surgeons on duty for the day. From here they pass by relays into the consulting room, a large hall with accommodation for three surgeons and three assistants. The light for this room is obtained from a large skylight in the adjoining room, the partition between the two rooms being almost entirely of glass. Communicating with this room is a separate room for the out-patient surgical officer, with a small waiting space attached. Next the consulting room is the refraction room, and opening out of this is a series of four small rooms for minor operations. At the side of and communicating with both consulting and refraction rooms is a large dark room for ophthalmoscope work, with compartments for eighteen patients.

The exit passage for patients is placed at the other side of the dark room, and is connected also directly both with the refraction room and the consulting room, so that patients not needing to be examined in the dark room or not wanted in the refraction room may be sent away direct from either room. On the line of route of outgoing patients is a refreshment bar with a small kitchen. Beyond this is a room for *x*-ray work, with dark room attached; and close to the dispensary and exit door is the spectacle room. Patients can either leave direct from the spectacle room, or if they have to go to the dispensary can do so by passing through a turnstile, and so to the waiting room for medicine. This waiting room is divided into two, with the dispensary placed in the middle. In the latter are three serving windows, one for in-patients the other two for out-patients. In planning the out-patient department care has been taken to prevent as far as possible the possibility of patients meeting or crossing one another, and also to render the passage from one part to another as direct as possible.

In the basement underneath the whole space occupied by dispensary and waiting rooms is a store for drugs and bottles, etc. Separate groups of waterclosets are provided for the use of out-patients in two courtyards connected with the waiting room by covered ways. The whole of the walls in this department, with the exception of the ophthalmoscope room, are lined with glazed brick, and the floors throughout with terrazzo.

In the matter of ventilation and warming the out-patient department is treated entirely separately from the other parts of the hospital. Fresh air, forced in by a large fan worked by a water motor, and passed through an air filter provided with a water spray, is conveyed by trunks to the various rooms. Provision for warming the air in cold weather is made by means of hot-water pipes placed in the air trunks. For cooling the air in summer, if found necessary, there is ample means of introducing ice into the air trunks at suitable points. The vitiated air is extracted by a separate set of trunks, and discharged at the top of a shaft above the roof of the main buildings. At the foot of the shaft is a fan for use as an auxiliary to the inlet fan when required.

The Operating Theatre.

The operating theatre is in the centre of the main front block, with anæsthetic rooms and waiting rooms at the side. Special care has been taken to avoid the accumulation of dust being possible, corners and nooks or ledges being absent. The doors consist of plain slabs of wood without any ornament, and with no break to the surface. For students watching operations two solid blocks of masonry faced with glazed bricks are placed on either side of the operating table. The stone on which these spectators stand is the extremely hard "Hopton Wood" stone. The floor is formed of terrazzo. The walls and ceiling are lined with opalite, an opaque tinted glass tile. These tiles are bedded in Keene's cement, the key for which is formed by fragments of glass fused on to the back of the tile; in other words, the back of the tile is provided with a rough surface for the purpose of causing it to adhere. The blackboard for demonstration purposes is made of ground glass, and is let in flush with the level of the opalite-surfaced wall. This is to avoid any ledge for dust, and for the same reason the mirror is inserted into the wall in like manner. The room is lighted by three windows, the centre one consisting of one single sheet of glass so as to supply the largest amount possible of direct skylight. The two side windows are for the admission of fresh air as well as light. The room has a northern aspect. The window is provided with a special blind which runs in a groove made of gunmetal, and rolls up when not required into a gunmetal case. The constant current and the interrupted current are both supplied, the use of the first being especially for the Haab's magnet, which is of large size; for removing foreign bodies from the eye the patient is approached to the instrument. The case for the instruments is a somewhat elaborate affair, standing 6 feet high, 3 feet long, and 14 inches deep. Its construction is of glass and metal painted white. Enamel is not used because of the liability to chip and the difficulty of satisfactorily repairing such damage. The theatre is warmed by a special radiator of several distinct coils of copper pipes. Each separate coil can be used by itself, and for the purpose of cleaning can be swung out clear on hinges. The steriliser is heated by electricity to avoid the fumes of gas. For washing the hands there is a trough with glass slabs at the side, provided with pedal action for turning on the water, arranged with a spray so that the hands can be washed in running water. There is a passenger lift in the well of the main staircase for the conveyance of patients to and from the operating room.

Museum and Laboratories.

A staircase placed at the junction of the main front block with the Cayton Street block leads to the museum and pathological laboratories. These rooms are immediately over the minor operation rooms and the library. The pathological department comprises a general laboratory with accommodation for six workers, a dark room for photographic work, and a private laboratory for the curator. The staircase is carried up to the second floor to afford a ready access for the curator to the operation theatre.

Adminstrative Offices.

The whole of the basement floor and the remainder of the ground floor is devoted to administrative offices. In the basement are stores of all kinds, the boiler-house, disinfecting room, and porters' room.

On the ground floor in the centre of the City Road block is the main entrance hall with porter's lodge and waiting space; to the left are the secretary's offices and board room; and to the right a room for students, one for the honorary medical staff and a lecture room. Separate lavatory accommodation is provided for (*a*) medical officers: (*b*) secretary, and (*c*) students. On this floor are two porters' bedrooms, and in the Peerless Street block the entrance for in-patients and visitors and the chapel.

The first floor of the City Road block contains a bedroom and sitting room each for two house-surgeons, the staff dining room with pantry adjoining, the matron's office, her sitting room, bedroom, and bath room.

The third floor of the main block contains in the front the kitchen, offices, servants' hall, nurses' dining room, and seven bedrooms for servants, with two bath rooms. The kitchen is fitted up with steam and gas cooking apparatus by Messrs. Slater and Co.

The intermediate block is on this floor divided into separate rooms for sixteen nurses. These rooms are all provided with hot-water ventilating radiators, and fitted with specially planned fitments designed by the architects. Ventilation is provided for by an extraction shaft formed by putting a false ceiling to the corridor, and provided with an extracting fan propelled by a water motor. In the connecting block is

another nurses' bedroom, making seventeen in all, and three bath rooms.

A fourth floor is formed over the connecting building, and contains two wards for sick nurses, with a ward kitchen and bath room.

Wards.

The Peerless Street block contains two wards for 15 beds each, with a large day room; the intermediate block contains a ward for 18 beds, one for 2 beds, a sisters' room, bath room, and linen room; and in the connecting building are the following: patients' lavatory, ward kitchen, two bed wards, and two bath rooms. Approached from the corridor connecting the three blocks by a covered bridge is the sanitary tower containing waterclosets and sink rooms.

On the second floor the arrangement of wards is similar to that on the first floor, except that a smoking room takes the place of the two bed wards in the connecting building.

The main front block has in the centre the operation theatre. At the extreme right are two wards, one for 4, the other for 2 beds; and on the left are two rooms for sisters and the nurses' common room. This room is provided with fitted furniture by Messrs. Hampton, designed specially by the architects.

The Peerless Street block contains two wards as on the floor below, one of which will be devoted to children, a large day room, and a sisters' room.

Construction.

The construction of the building throughout is what is usually known as fireproof—that is, the floors are formed of iron girders protected by terra-cotta tubes (Fawcett's patent system) and covered with coke breeze concrete, and all the partition walls are either of brick or of hollow terra-cotta tiles filled with concrete (Shepwood's patent).

The floors of the corridors throughout are finished either with terrazzo or with artificial stone, and the staircases are made of cast concrete with iron joists embedded therein. The ward floors are laid with teak boards side nailed direct to the concrete.

The fireplaces throughout are provided with grates of the now well-known Teale pattern, the invention of Mr. T. Pridgin Teale, the distinguished surgeon.

The corridors and passages, bath rooms, and lobbies to waterclosets are warmed by hot-water radiators from the same boilers as those which supply the apparatus in the out-patient department. There are four lifts, all worked by hydraulic power supplied from the Hydraulic Power Company's mains. The building is lighted throughout by electric current from the Supply Company's mains.

THE JENNER INSTITUTE OF PREVENTIVE MEDICINE.

Sir Joseph Fayrer took the chair at the annual general meeting of the Jenner Institute of Preventive Medicine last week.

The report of the Council stated that the work of the Institute continued to make satisfactory progress and that the internal fittings of the new buildings at Chelsea were, with the exception of those in the museum, now complete, so that the various departments were fully equipped and at work. The report referred to the transference of the funds collected by the Jenner Memorial Committee to the Institute and the consequent change of name from the British to the Jenner Institute of Preventive Medicine. The report further stated that the conditions attached by Lord Iveagh to his gift of a quarter of a million had been carefully considered by the Council and accepted by the members of the Institute, and it was added that Lord Lister had consented to act as Chairman of the new governing body which will in future control the affairs of the Institute.

Sir Henry Roscoe, the Honorary Secretary, in his report showed that the finances of the Institute were in a satisfactory condition.

The Director, Dr. Macfadyen, made his annual report upon the general work of the institute. The report stated that during the year the organisation of work in the main laboratories of the institute was completed, and valuable additions made to the stock of scientific apparatus. The foundations of the new wing, which will complete the original plan of the institute, were at present in course of construction. The library was now fitted up, and efforts were being made to obtain a good collection of standard works and periodicals. The photographic department was fully equipped, and the necessary illustrations to scientific papers will in future be prepared in that laboratory. A commencement had been made with a series of museum specimens intended to illustrate the work of the institute. The report stated that at no period had there been a greater body of research work in progress than at the present moment, and reference was made to the more important investigations in progress. A number of investigations by Dr. Hewlett and others had been published during the year, and a second volume of the *Transactions* of the institute was going through the press. A number of investigations of public importance had been carried out on water, milk, etc. The institute was conducting the bacteriological examination of specimens for the Fulham, Islington, St. Pancras, Holborn, Lambeth, and other London vestries, and the bacteriological diagnosis of tuberculosis had been undertaken at the request of several sanitary authorities. As regards the courses of instruction, which had been well attended, the aim had been to train the advanced student, as was done in foreign laboratories, with a view to subsequent research work. A notable addition had been made to the departments of the institute by the foundation of the Hansen Laboratory for the study of the practical application of bacteriology to industrial and technical processes. Dr. G. Harris Morris had been placed in charge of this department, which was now at work.

Dr. A. Harden presented a report dealing with the work of the Chemical and Water Laboratory during the year.

Dr. G. Dean, in his report on the Antitoxin Department, described the improved methods adopted for the preparation of diphtheria antitoxin and the researches being carried out in connection with tetanus, pneumonia, antistreptococcic serum, etc.

It was also announced that the Local Government Board had commenced the preparation of glycerinated calf lymph in the laboratories rented from the institute.

THE NEW VACCINATION ACT IN OPERATION.

Vaccination in the Pickering Union.

The three public vaccinators in the Pickering Union having failed to come to terms with the guardians, the question of fees was referred to the Local Government Board. Before any reply was received a vacancy occurred owing to the resignation of Dr. Comber, and the guardians advertised for a public vaccinator. Two applicants were at first before the guardians: Dr. Kirk, who had been acting as deputy for Dr. Comber, and had continued the work at the guardians' request pending the election, and Dr. G. V. A. Robertson. In the meantime the reply from the Local Government Board arrived and fixed a higher rate of remuneration than the guardians had been willing to offer.

On finding that the guardians still refused to offer more than the minimum, Dr Kirk withdrew from the contest, at the same time signifying his willingness to stand for the appointment if the Local Government Board rates were conceded; but he considered it undesirable to persist with his candidature in face of the almost universal opinion of the medical men in the neighbourhood that the fees were inadequate, a view which had been sustained by the Local Government Board.

Dr. G. V. A. Robertson was elected, and he nominated as his deputy his father, Dr. D. Robertson, who had formerly held the position of public vaccinator, but had resigned his appointment in consequence of his having objected to comply with the Local Government regulations in regard to the number of insertions of lymph.

On Monday, June 12th, the guardians had under their consideration a letter from the Local Government Board, calling attention to the dispute which had previously arisen with Dr. D. Robertson, and requesting the attention of the guardians to certain representations which had been made to them.

After some discussion the clerk was instructed to write to the Local Government Board to the effect that the guardians had every confidence that Dr. G. V. A. Robertson would carry out the instructions of the Local Government Board.

Dr. Enrico Bondi, Chief Physician to the Santo Spirito Hospital, Rome, was fatally stabbed on June 13th by a patient whom he had discharged as cured a few hours before. The murder was committed in the open street.

Professor Emil Zuckerkandl has been elected Dean of the Medical Faculty of the University of Vienna for the academic year 1899-1900. Professor Zuckerkandl is perhaps best known in this country by his elaborate researches on the anatomy of the nasal fossæ and the adjacent cavities.

THE METROPOLITAN ASYLUMS BOARD ANNUAL REPORT.

GENERAL REPORT.

FOR the first time since its formation in 1867, the Metropolitan Asylums Board has issued a formal report. Hitherto it has been the custom for the Chairman to issue a report, but owing to the great increase in the duties and responsibilities of the Board in recent years, it has been considered better to issue a formal annual report in two volumes, one to contain the report of the Board together with reports of the Central Committees, and the other the Statistical Committee's report with its appendices, including the reports of the Medical Superintendents at the Board's hospitals and asylums. The number of patients admitted into the hospitals of the Board was 19,574, as compared with 21,522 in 1897. The total number of cases of infectious disease notified during 1898 was 37,316. The percentage of admissions to notifications was considerably greater than in 1897, and indeed than in any year since 1890. The percentage of notified cases of scarlet fever admitted was 74.07. It is stated that the percentage of cases of mistaken diagnosis was as follows: Scarlet fever 4.7, diphtheria 8.3, enteric fever 23.3. The number of students who attended at the Board fever hospitals showed an increase. The number in 1897 was 390, and in 1898 it was 425.

The work of the Ambulance Department was not so heavy as in previous years, but the number of certificated cases of fever and diphtheria removed direct from their homes to the Board's hospitals was 20,923.

CHILDREN'S COMMITTEE.

The Children's Committee formed in June, 1897, presents its first report, covering a period of eighteen months. This Committee was appointed in accordance with an order of the Local Government Board issued in April, 1897, imposing on the Metropolitan Asylums Board the duty of providing accommodation for:

(*a*) Children suffering from ophthalmia or other contagious disease of the eye.
(*b*) Children suffering from contagious disease of the skin or scalp.
(*c*) Children requiring either special treatment during convalescence or the benefit of seaside air.
(*d*) Children who by reason of defect of intellect or physical infirmity cannot properly be trained in association with children in ordinary schools.
(*e*) Children who are ordered by two justices or a magistrate to be taken, under the Industrial Schools Act, 1866, to a workhouse or an asylum of the district.

The report contains an interesting history of various steps taken to provide proper care and training for Poor-law children in the metropolis since 1834. The Committee has, after full consideration, laid down certain general lines of policy. The first is that children while temporarily under the care of the Board for hospital treatment or medical care should nevertheless continue to receive education, or at least as much education as is compatible with the main object in view, which is their restoration to health. Hitherto the education of these children has been partially or entirely suspended. The second point of policy is that the children drawn from the Poor-law schools shall be for the most part housed in cottages constructed to hold ten or twelve children each, and that in no case where the houses are provided by the Board shall more than 25 children be placed under one roof. In this way it is believed that the policy of separating the afflicted and exceptional class of children for educational purposes from those of a normal type may best be carried out. Such a policy affords the best means of improvement for the exceptional children, while the lot of the normal child will be bettered by their withdrawal, and the schools rendered more able to carry out their legitimate work. Children under remand to the workhouse must be dealt with on a different principle, and it is proposed to provide accommodation for 150 cases in three institutions, each accommodating 50 cases in houses to be rented, purchased, or built, two on the north side of the Thames, and one on the south. It was the original intention to provide accommodation for 800 ophthalmia cases in three institutions, but it has now been decided to build two institutions to accommodate 360 each, and as greater vigilance at the Poor-law schools has tended to decrease the number of cases of ophthalmia, it is hoped that this provision will be sufficient.

For convalescent children the Board has purchased from the South Metropolitan School District Board a home at Herne Bay, which has been renamed St. Anne's Home, and will accommodate 134 children. They have also purchased a home previously maintained by the guardians of St. Pancras at Margate. This contains accommodation for 41 children, and two more houses are about to be built on the site, each to contain 25 beds. A plot of land has been purchased at Rustington, near Littlehampton, on which four houses, to accommodate 25 children each, will be erected.

MEDICAL SUPPLEMENT.

A medical supplement to the report of the Statistical Committee is edited by Dr. E. W. Goodall and Dr. F. M. Turner. It contains reports on complications coexistent with infectious diseases by Dr. Goodall, on post-scarlatinal diphtheria, and on the antitoxin treatment of diphtheria by Dr. Turner, and a series of papers and reports of cases by various medical officers of the Board.

Coexistence of Infectious Diseases.—Dr. Goodall gives a very interesting table showing the number of cases in which two separate infectious diseases were coexistent at the time of admission into the acute fever hospitals. This table shows that scarlet fever coexisted with diphtheria in 238 cases, with chicken-pox in 73 cases, with whooping-cough in 79 cases, with measles in 52 cases, and with rotheln in 17 cases. Diphtheria coexisted with measles in 68 cases, with chicken-pox in 30 cases, with whooping-cough in 30 cases, with enteric fever 1 case, and rotheln in 3 cases. In 14 cases the patient was suffering both from scarlet fever and tuberculosis, and in 11 from diphtheria and tuberculosis. Dr. Goodall points out that such facts prove the absolute necessity of affording ample accommodation in an infectious disease hospital for the separation of these mixed cases from those patients in the general wards who are suffering from one disease only, that is to say, of providing isolation within isolation.

Post-Scarlatinal Diphtheria.—Dr. Turner has compiled statistics on this head. Out of a total number of 12,771 cases of scarlatina, diphtheria occurred as a complication in 661, or 5.17 per cent. The number of deaths was 24, or 3.6 per cent., which represented a percentage mortality of 0.18 of the total number of cases of scarlet fever. It does not appear that bacteriological diagnosis has diminished the incidence of diphtheria in scarlet fever cases, but it seems clear that antitoxin, which has been used in all but the very mild cases, has reduced the mortality among those cases by 75 per cent.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

The statistics from the Board's hospitals of the results of the antitoxin treatment of diphtheria during the year 1898 have been summarised by Dr. F. M. Turner. The cases selected for treatment by antitoxin were chiefly those of a severe type, and in judging the effect of the treatment comparison should be made with the figures showing all the cases of diphtheria treated. The proportion of cases treated with antitoxin was in 1898 81.4 per cent., as compared with 80.2 per cent. in 1897.

In the statistics this year a modification had been introduced, owing to the fact that all deaths from intercurrent diseases, such as measles, have been included. As the death-rate among such cases is heavy, the case-mortality for 1898 is in all cases somewhat higher than it would have been had the figures been compiled on the plan adopted in 1895 and 1896. In 1897 some of the hospitals included such complicated cases, and others did not. The results may be summarised in the following tables:

TABLE I.—*Number of Cases, of Deaths, and Percentage Mortality, 1898.*

	Treated with Antitoxin.			All Cases.		
	Cases.	Deaths.	Mortality Per Cent.	Cases.	Deaths.	Mortality Per Cent.
All forms ...	5,186	[illegible]	17.5	6,372	[illegible]	15.6
Laryngeal ..	624	197	31.9	654	225	34.4
Tracheotomy	305	113	37.0	335	129	38.0

Table II.—*Percentage Mortality of all Cases, of Cases Treated with Antitoxin, Laryngeal Cases, and of Cases Subjected to Tracheotomy.*

Year.	Cases of Diphtheria.		Laryngeal.		Tracheotomy.	
	Treated with Antitoxin.	All.	Treated with Antitoxin.	All.	Treated with Antitoxin.	All.
1888-95	—	28.5	—	—	—	—
1894	—	29.6	—	62.0	—	70.4
1895	28.1	22.5	42.2	42.3	50.2	49.4
1896	25.9	20.8	28.8	29.6	40.6	41.0
1897	20.4	17.5	30.0	30.9	39.9	40.5
1898	17.5	15.5	31.9	34.4	37.0	38.0

It will be seen that there has been a progressive decline in the mortality during the three years among all the cases, both those treated with antitoxin and those not so treated. It is stated that the improvement is probably in part due to a slight diminution in the average severity of the cases, for while the mortality among cases subjected to tracheotomy has declined, there has been an increase to an extent which is about corresponding in the mortality of the cases of laryngeal diphtheria. The mortality for all the cases subjected to tracheotomy in 1898 is lower than ever previously recorded for all the hospitals, while at no hospital has it exceeded 50 per cent. Of the laryngeal cases 47.8 were subjected to tracheotomy as compared with 53.7 per cent. in 1897.

LITERARY NOTES.

Mr. Fisher Unwin will publish *Claude Bernard*, by Sir Michael Foster, K.C.B., in the "Masters of Medicine" series on July 3rd. *Hermann von Helmholtz*, by Professor McKendrick, is in the press.

From July 7th, when it enters upon its twenty-sixth year, the *Sanitary Record* will, it is announced, be permanently enlarged, and many new features of interest will be added.

According to the *Publishers' Circular*, Messrs. Methuen and Co. will shortly publish in their series of Little Guides *Shakespeare's Country*, by Professor Bertram Windle, M.D., F.R.S. The book describes not only Stratford-on-Avon and the adjacent villages, but also Warwick, Leamington, Kenilworth, Coventry, and Edge Hill. It will contain 14 illustrations and a map by Mr. E. H. New. Dr. Windle is Professor of Anatomy and Dean of the Medical Faculty of Mason University College, Birmingham.

The latest addition to the series of "Tudor Translations" is *Suetonius: History of Twelve Cæsars*, translated by Philemon Holland. This most indefatigable of the Elizabethan translators, Englished the whole of Livy, Pliny's *Natural History*, Plutarch's *Morals*, Xenophon's *Cyropædia*, to say nothing of such unconsidered trifles as Camden's *Britannia*, and the works of Ammianus Marcellinus. The industrious Philemon was a member of the medical profession. He was born at Chelmsford, educated at the grammar school of that town, and afterwards at Trinity College, Cambridge. Entering on the physic line, he graduated M.D. in 1595, and began waiting for patients at Coventry. But they did not come, and Philemon turned schoolmaster. The "translator-general in his age," as Fuller called him, was "translated to a better life" in 1637.

William Hunter was, it is well known, a great collector of coins, on which he spent about £23,000. He bequeathed his collection, consisting of about 30,000 coins and medals, of which 12,000 were Greek, a like number Roman, and the rest Anglo-Saxon, English, etc., to his *alma mater*, the University of Glasgow. The first volume of a scholarly catalogue of the Greek coins in the collection by Mr. George Macdonald, Lecturer in Greek to the University, has lately been issued by MacLehose and Sons.

THE PROPOSED CONSULTING INSTITUTION AT BIRMINGHAM.

A general meeting of the medical profession in Birmingham was held on Friday, June 23rd, to consider the attitude which the profession should take up with regard to the proposed "consulting institution."

As will be remembered, it has been proposed to establish in the centre of the city an institution with a medical and surgical staff at which subscribers to the Hospital Saturday Fund shall be able to obtain a medical or surgical opinion for the payment to the institution of half a guinea, instead of the guinea or two guineas now paid to consultants and specialists.

The institution was to be financed by the Hospital Saturday Committee and a wealthy manufacturer, Mr. Arthur Chamberlain, and it was expected that, after paying the two members of the staff a salary of £500 a year each, a "considerable profit" might be made. The officers of the institution were to be paid this fixed salary quite irrespective of the amount of work they did, and were to devote the whole of their time to the service of the institute.

The various consultants of the city thereupon held two meetings in which the proposed institution was discussed. As a consequence of these meetings Dr. Saundby, who had acted as chairman, issued a circular letter calling a general meeting of the profession so as to get a general expression of opinion of all branches of the profession on the subject.

This was the meeting held on June 23rd. It took place at the Medical Institute, and was attended by upwards of 100 medical men. Mr. Priestley Smith presided, and the meeting was most enthusiastic in its disapproval of the entire scheme. The chairman having explained the reasons which had made it necessary to summon the meeting called upon Dr. Thomas Wilson to read the notes of the conference which had taken place between Dr. Saundby, Mr. Priestley Smith, and Dr. Thomas Wilson and six delegates of the Hospital Saturday Fund Executive held under the presidency of the Lord Mayor on June 12th.

After a thorough discussion of the subject, the following resolutions were proposed one by one and carried, each one unanimously:

1. That this meeting of registered medical practitioners residing in or near Birmingham objects to the proposed consulting institution on the following grounds:

(*a*) That it is proposed that non-medical employers shall exploit the services of medical men; in other words, shall employ medical men to earn fees, pay them by salary, and deal with the proceeds at their own pleasure.

(*b*) That no restriction is proposed as to the class of persons to be received as patients, so that persons well able to afford the usual consultation fees would obtain a concession to which they have no claim.

(*c*) That it is proposed to incorporate the institution as a limited company to carry on the business of physicians and surgeons, and that this is contrary to the Bill which is before the House of Lords, entitled, An Act to Amend the Companies Acts, which has received the support of the General Medical Council and the British Medical Association.

(*d*) That in the event of the proposed Institution seeking to procure patients by advertising and canvassing in contravention of professional rules, any practitioner holding service in it would render himself liable to the censure of the General Medical Council.

2. That this meeting records its opinion that no registered medical practitioner should take office in an institution open to these objections.

3. That this meeting desires to remind the promoters of the scheme in question that many of the recognised consultants of Birmingham are in the habit of charging a reduced fee to those who satisfy them that the usual fee is beyond their means.

In connection with the Congress of the Royal Institute of Public Health at Blackpool, a health exhibition will be held from September 21st to October 14th. Further particulars will be found in our advertising columns.

Medical Magistrate.—Alderman G. M. Hirons, L.R.C.P., has been appointed a Justice of the Peace for the County Borough of Bournemouth.

Mr. Storer Bennett has been elected president, and Mr. Arthur S. Underwood and G. Brunton vice-presidents of the Odontological Society of Great Britain. Mr. C. F. Rilot has been elected honorary secretary.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

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British Medical Journal.

SATURDAY, JULY 1st, 1899.

PROTECTIVE INOCULATION AGAINST PLAGUE AND CHOLERA.

The speech in which Mr. Haffkine introduced the discussion on preventive inoculation at the Royal Society places us in possession of the main facts and theories which have influenced him in the prosecution of his important work. The problems which he set himself to solve were most intricate and complex, and required talents and perseverance of an exceptional order to bring them to a successful issue. No one who listened to the address[1] which Mr. Haffkine gave in February, 1893, when he came over from the Pasteur Institute in Paris to arrange for his visit to India to test on man the remarkable results he had worked out on animals in the laboratory with reference to the cholera bacillus, could fail to be struck by his enthusiasm, though perhaps some were sceptical of the results which would accrue from his mission to the East. Ferran's failure in Spain was too fresh in their minds to be forgotten, and though Mr. Haffkine explained the reason of failure, and showed that his method differed from Ferran's in securing a pure, stable, and controllable virus, yet the attitude of mind adopted was rather one of hope that he was right than of expectancy. The six years that have passed since then have been for him six years of continuously hard work and devotion to his self-appointed task. Gradually in that time a complete change has taken place in the general attitude towards preventive inoculation, and that change has been effected by the results which Mr. Haffkine has been able to show as following on his extensive experiments in India not only in cholera but also in plague.

Prophylactic inoculations are based upon the fact that an attack of infectious disease generally leaves the recovered patient more resistant to the second attack. On this foundation rested the work of Jenner and Pasteur, as well as the more recent work of Haffkine, their disciple. It is the successes of Jenner and Pasteur which gave rise to the modern conception that artificial immunity may be created against infectious diseases by the introduction into the system of specially prepared and harmless virus, but, as Mr. Haffkine points out, the conception is too general in its nature and its application when undefined is apt to lead to disappointment. The composite character and modifications of a virus, according to the way in which it is prepared, have to be taken into account. For a long time it seemed impossible to produce artificial immunity by derivatives from diphtheria or tetanus virus or from microbes in general, which cause localised infections, and do not, as a rule at least, invade the system. Similarly the different results which the same modification of a virus produces in different species of animals have to be borne in mind. While it now seems safe to assume that a form of prophylactic treatment may be found that will be useful against a particular infectious disease in a particular species of animal, yet that method may not be applicable to another animal or to another disease affecting the same animal. Professor Haffkine believes that it is inattention to variations in circumstances and conditions which have more than anything else checked the success of a number of experimenters.

The study of the anticholera inoculations in India, in which the microbes alone were used as the vaccine, brought up another problem. The Calcutta results showed that for a period of nearly fourteen months the number of deaths among the inoculated was 22.62 times smaller than amongst the uninoculated, and for the rest of the time under observation the proportion in their favour fell to 1 and 1.54; but while the absolute number of deaths appeared strikingly influenced by inoculations, the special feature observed was that the proportion of deaths to those attacked among the inoculated was not changed. The fact that case incidence was remarkably affected while the case mortality was not reduced presented a new aspect in the problem of preventive medicine, and accordingly in 1896, when confronted with the problem of working out a prophylactic treatment againt plague, Mr. Haffkine determined to obtain not only a lowering of the susceptibility to the disease which he had succeeded in obtaining in cholera, but also a reduction of the case mortality. For that purpose he determined to employ in combination with the plague microbes their extra-cellular toxins. In order to accumulate these products the bacilli were grown in broth in the ingenious manner described by Mr. Haffkine in his paper. The process is continued for five or six weeks. The microbes are then killed by heating to a temperature ranging from 65° to 70° C., after which the virus is ready for use.

Mr. Haffkine quoted the statistics of three instances. At Byculla Gaol there were 12 cases and 6 deaths among 172 uninoculated inmates, and only 2 cases with no death among 147 inoculated inmates. At Umerkadi Gaol there were 10 cases and 6 deaths among 127 uninoculated inmates, and 3 cases with no deaths among 147 inoculated. Again, at Undhera village there were 27 cases and 26 deaths among 64 uninoculated inhabitants, and 8 cases with 3 deaths among 71 inoculated inhabitants. Other observations, such as those at Lanowlie, at Kirkee, Damaon, Hubli, Dharwar, and Gadag presented the same favourable results. The facts at Hubli showed that within a short time a town of nearly 50,000 inhabitants can be inoculated. The difference in the mortality between plague among the inoculated and plague among the non-inoculated was estimated to average over 80 per cent., sometimes reaching as high as 90 per cent. The dose of the prophylactic varied from 3 c.cm. to 2½ c.cm. for an

[1] British Medical Journal, 1893, vol. i, p. 278.

adult, and the duration of the effect was, at least, a few months, the usual length of an epidemic. Some of the problems which remain to be worked to perfect the system were mentioned by Mr. Haffkine, and others were referred to by those who joined in the discussion. Though minor points, they are important to the complete success of the general application of the system, and we have no doubt that when Mr. Haffkine returns to India after a well-earned rest from labours which have been herculean, he will be granted full opportunities and the necessary trained assistance in his laboratory to enable him to solve them. The main, and most important feature, however, of his six years' work is the grand fact, which Mr. Haffkine has established, that both cholera and plague inoculations are a success, whether they are applied on a small or a large scale, and that in this method we possess a powerful prophylactic against these two most fatal diseases.

ONE-MARK VACCINATION.

It is always an unwise thing for a man to spend his time in making a rod for his own back, but we fear that many a medical man is in this undesirable position on the vaccination question.

There are two corollaries to the proposition that vaccination protects against small-pox: the first, that the degree of immunity varies directly as the thoroughness with which the operation is performed; the second, that the immunity varies inversely as the interval since vaccination.

The second point is provided for by revaccination, and its consideration need not detain us here, but it seems desirable again to emphasise the importance of thoroughness in primary vaccination, especially as we still hear of many medical men who are content to vaccinate in one or two places only.

In the final report of the Royal Commission, paragraphs 272 to 298, we have a considerable body of evidence under the heading "Fatality and severity of type of small-pox amongst vaccinated persons with marks of different quality."

The criteria of efficiency in vaccination have always been held to be the number of typical vaccine vesicles, the combined scar area, and the character as to foveation. The evidence which exists as to the result of the present standard of four-mark vaccination is decidedly in the direction establishing the proposition that the larger the typically foveated scar area, the completer the protection; or, in other words, that the greater the number of marks, other things being equal, the greater the protection. "This further indication also seems to be afforded that whilst the distinction in this respect between those with one and those with two marks is not very great, there is a very marked contrast between those with four, or even with three, marks as compared with those with either one or two" (Paragraph 294). Thus, taking 4,754 cases specially reported on in very recent years, the results were as follows:

1 mark	828 cases	63 deaths or	7.6 per cent.
2 marks	1,322 ,, ...	93	7.0 ,,
3 ,, ...	1,479 ,, ...	63 ,, ...	4.2 ,,
4 ,, ...	1,125 ,, ...	23 ,, ...	2.4 ,,

The above cases, of course, were at all ages and at various periods after vaccination; but similar results are afforded by an examination in detail according to age periods. Al experience, indeed, confirms the view that the degree of immunity will be roughly in proportion to the vesicular area. It is, therefore, a serious matter to fail to give the maximum protection from the first.

The requirement of the Local Government Board, as defined in the Order of last October, is: "In all ordinary cases of primary vaccination the public vaccinator must aim at producing four separate good-sized vesicles or groups of vesicles, not less than half an inch from one another. The total area of vesiculation resulting from the vaccination should not be less than half a square inch."

It is in the highest degree desirable that the standard should be maintained in public vaccination, and that, instead of giving way to the pressure of those who are ignorant of the true facts of the case, there should be an attempt to "level up" the vaccination of general practitioners to the official standard. A public vaccinator who habitually made only one or two insertions of lymph might, as has happened in the past, be required to give up an office which he was not properly filling.

But suppose that a private practitioner who has been in the habit of making one insertion applies for a post as public vaccinator, what is his position? It is known that he has been in the habit of vaccinating in one place, and the people will want to know why he makes a change now that he holds office; the arguments he formerly used as justifying the one-mark vaccination will be cast in his teeth when he wants to make four insertions. He will, indeed, have been making a rod for his own back. But, unfortunately, the innocent will probably suffer more than the guilty. The practice of vaccination is brought into dis repute by the spread of one-mark vaccination with its weaker protective influence, and consequently the work of every medical man who honestly tries to give the best protection he can is made so much the more difficult.

Furthermore the child so vaccinated is left wilfully or ignorantly in a less protected position, is more susceptible to death from small-pox, and the parents are lulled into a state of false security, accepting the virtual, even when not the express, testimony that one vesicle is as good as three or four.

Only one condition would justify any reduction in the present standard of primary vaccination, so far as a standard may be said to exist at all, and that is the introduction of a general system of revaccination.

In conclusion it may be said that the more thoroughly primary vaccination is performed, and the more generally revaccination is practised, the more complete is the demonstration of the protective influence which vaccination can be made to yield.

THE LOCAL DISTRIBUTION OF CANCER.

The increasing prevalence of cancer, whether it be real or as Dr. Newsholme contends only apparent, has naturally led to increased attention to the subject on the part of the medical profession. As is shown by several papers published in our columns within the last few months, investigations are being made by many skilled observers who are

working along different paths towards a common object—the elucidation of the etiology of cancer. This question is surrounded with the most serious difficulties; but there appears to be a reasonable hope that the mystery in which the origin of the most dreaded of all diseases is still enshrouded may before long be dissipated. A field of inquiry which seems likely to be fruitful of important results is the local distribution of cancer, which, as has been shown, haunts particular regions, and even, it is thought by some, particular houses. We note with special gratification that a leading part in this inquiry is being taken by some Branches of the British Medical Association.

On April 1st we published an interesting and valuable preliminary report from a Committee of the Birmingham and Midland Counties Branch on The Influence of Locality on the Prevalence of Cancer. Now the Midland Branch has determined to grapple with the question. At the annual meeting held at Derby on June 15th a discussion took place on the local distribution of cancer in the area of the Branch. Much valuable information was supplied by Dr. Milnes, Dr. Astley V. Clarke, Dr. Sympson, Dr. E. N. Nason, and the other members who took part in the discussion, and as the outcome of the debate a Committee was formed to investigate the question and report to the Branch. The Committee is composed of the following members, with the District Secretaries:—Lincoln: Dr. Harrison and Dr. R. Farrar (Stamford). Derby: Dr. Milnes and Dr. Knox. Notts: Mr. Hogarth, Dr. W. B. Ransom, and Dr. Ringrose. Leicestershire: Dr. Astley Clarke and Dr. Sevestre. The President and Treasurer are empowered jointly to add to the Committee so constituted.

We congratulate the Midland Branch on the activity which it is displaying in a matter of such importance to the public weal, and we hope its example will be followed by other Branches. The regional distribution of disease and the influence of locality on its manifestations are subjects that might profitably be studied by the Branches of an Association whose members are spread all over the world and work under every variety of climate and local conditions. There is still too much individualism in medicine. The day of the great discoverer is by no means past, but the best hope of solid progress lies in a wise and generous collectivism.

THE UNIVERSITY OF LONDON.

We learn that at the special meeting of the Senate summoned for Wednesday last a long discussion took place upon a motion submitted by the Chancellor (Lord Kimberley) accepting the proposals of the Government to transfer the University from Burlington Gardens to the Imperial Institute. The meeting was an unusually large one, and sat for two hours, but finally adjourned without coming to a decision. It is understood that great reluctance was expressed to surrendering the present buildings, but that the majority favoured the acquisition of some portion of the Institute buildings to meet the demands of increased accommodation for teaching and laboratory work, such as must speedily follow the passing into law of the statutes framed by the Royal Commission.

THE MEDICAL EXPEDITION TO THE WEST COAST OF AFRICA.

The study of tropical diseases in their native haunts has been from the first contemplated by the promoters of the Liverpool School of Tropical Medicine, and, as already announced, arrangements are now being made for an expedition which is to start for Sierra Leone in August. Sierra Leone has been chosen because, being only about twelve days' sail from Liverpool, it is the most accessible malarious colony. The expedition will be essentially a practical one, and its chief objects will be to find out what species of mosquito are concerned in the propagation of malaria in a small area such as Freetown, and to ascertain whether the breeding grounds of these species are sufficiently few and isolated to admit of their being obliterated by dumping or drainage. The following is the proposed plan of operation. The lecturer on tropical medicine, Major Ronald Ross, I.M.S., and the demonstrator, Dr. Annett, accompanied by an experienced dipterologist, will go out early in August with the intention of spending five weeks in the colony, and returning to Liverpool in time for the opening of the winter session of the school in October. They propose to repeat the visit early next year and on subsequent occasions. If funds permit they will take out two or more volunteers, who will remain in the colony and continue the investigations, and the operations will be extended to other of the more important localities with a view to ascertaining at least the principal carriers of malaria in those regions. It is thought that this plan of work, which has been advised by Major Ross as the outcome of his experience in India, will have several advantages over a more elaborate scheme, but it is obvious that the continuity of the investigations must depend largely on the funds which are available for maintaining investigators in the Colony between his successive visits. Liverpool has already done much to endow its tropical school, and it is hoped that the Government departments most directly interested will give some assistance for this expedition, especially as the work is one of general interest to the country. At any rate, a determined attempt must be made sooner or later to see whether recent researches cannot facilitate the prevention of malaria; and Liverpool proposes, at least, to commence this labour. The expedition will be conveyed to and fro in the vessels of some of the leading subscribers to the school, whose sagacious and patriotic action in the matter is much to be commended.

THE BIRMINGHAM CONSULTING SCHEME.

The report which is published in another column of a meeting of the profession held in Birmingham last week fully justifies the anticipation which we ventured to express when the scheme was first propounded. It has now been unanimously condemned by a representative meeting of over one hundred medical men in Birmingham. The grounds upon which exception must be taken to the scheme are very forcibly expressed in the resolutions adopted. Shortly stated, they are that the scheme proposes to exploit the services of medical men; that it contains no restriction as to the class to be received as patients; that it proposes to incorporate the institution as a limited company to carry on the business of physician and surgeon, contrary to the clause in the Bill to Amend the Companies Act which has received the approval of the General Medical Council and the British Medical Association and is now before the House of Lords; and that, should the institution seek to procure patients by advertising and canvassing, this would be in contravention of professional rules, and would render any practitioner holding service in the institution liable to the censure of the General Medical Council. As a corollary a resolution was adopted pointing out that no registered medical practitioner should take office in such an institution. We may hope that we have now heard the last of this ill-considered scheme, and it is indeed unfortunate that it should have been necessary for the profession to enter this very serious protest against a

scheme that was essentially absurd. Had the promoters, before publishing it to the world, taken counsel with the medical profession, they might have been saved from some ridicule: but the scheme is not only ridiculous, it is a pernicious sham. It would not give the working classes the services which it was professedly framed to render, it would create a new form of abuse, and it would involve proceedings contrary to the principles of conduct which guide the members of the medical profession in their relations to the public and to each other.

MEDICAL UNIVERSITY EXTENSION LECTURES.

A NEW departure in the matter of university extension lectures has been made by the Victoria University. The Extension Committee suggested that useful work might be done by arranging to deliver in certain local centres post-graduate courses on recent advances of an important character in medicine and the ancillary sciences. The new scheme was finally adopted about the middle of last year, and the Chester Medical Society at once embraced the proposal. After several consultations between the President of the Society, Dr. W. Henry Dobie, and Professor Sheridan Delépine of Owens College, Manchester, it was arranged that a course of six lectures should be given at the Chester General Infirmary by Professor Delépine. The course which has been concluded this week has been attended by about thirty members of the profession from Chester, Wrexham, Crewe, Whitchurch, Frodsham, and the neighbouring towns. The lectures have been thoroughly practical. The first dealt with generalities and methods, but the subsequent lectures have been devoted to special diseases, selected with a view to making clear the various ways in which bacteriology has proved useful in medicine and surgery. The diseases selected have been anthrax, typhoid fever with special reference to serum diagnosis, diphtheria with special reference to serum treatment, tuberculosis, pyæmia and gonorrhœa, and the advantages and disadvantages of various methods of sterilisation and disinfection. They have been illustrated by means of photographs shown in the lantern, and by demonstrations of methods, specimens, and experiments. Owing to the easy terms offered by the Victoria University Extension Committee, only a small subscription was necessary to pay all expenses, and those who have attended the lectures have greatly appreciated the opportunity of seeing how bacteriological work is actually carried on in the laboratory, and of becoming practically acquainted with the bacilli of various diseases. The success of this course will doubtless encourage the University to extend the system in other directions.

MALARIA IN THE SOUTHERN SUDAN.

THE report which Sir William Garstin, Under-Secretary of State for Public Works in Egypt, has addressed to Lord Cromer on his return from a journey of inspection up the White and Blue Niles contains striking testimony to the importance, for the future prosperity of the part of the Sudan watered by these rivers, of measures for the prevention of malarial diseases. The extreme unhealthiness of the climate of the southern province, he states, is a very serious factor which must greatly retard speedy progress. The whole area lying south of the fifteenth parallel of latitude becomes during the autumn and winter months a hotbed for malarial fever of a virulent type. Malaria is prevalent even in the spring, and disappears only in the early summer months. This he attributes on the one hand to the decaying and rank vegetation of the Blue Nile forests, and on the other to the pestilential swamps of the White Nile. In the month of March, one of the driest of the year, when the river was at its lowest, 280 men out of a total strength of 317 at Fashoda were suffering from fever. At Nassar, the military post on the Saubat river, the fever was reported to be equally bad in November and December. On the Blue Nile also the troops suffered heavily in October and November. At Karkauji during November no fewer than 308 men out of a total strength of 390 were laid up; and at Sennaar and Abu-Haraz things were nearly as bad. Europeans and Egyptians suffered equally, and even the blacks did not escape, especially if transported from their own country. As an example of the degree to which Egyptians suffer, Sir William Garstin states that the troopers of the Egyptian cavalry, when returning to Omdurman from the Blue Nile, were, almost to a man, incapacitated by fever, and their horses had to be brought down the river by the men of the Sudanese infantry battalions. He adds that out of 24 British officers employed in the operations on the Blue Nile last autumn, only 5 escaped fever, while 1 of those attacked died from its effects. The cases on the Blue Nile have been of a very severe type, and presented some resemblance to enteric fever. The inhabitants of the borders of the Blue Nile did not escape, and the medical officers attached to the Egyptian Army report that they are extremely anæmic from the results of chronic malarial poisoning. Sir William Garstin expresses the opinion that until there has been a wholesale clearance of the undergrowth in the forests and drainage of the great swamps, which might in time remove the causes of malaria, the country must remain one in which Europeans cannot long remain without speedily losing their health and energy. As a palliative, he suggests the erection of huts on the pattern used in Burmah and other malarial countries, that is to say, huts raised on piles with a free current of air underneath. He considers that the only chance of preserving the health of British and Egyptian officers administering these districts would be to make such arrangements as to leave that they might be ensured a yearly absence from the malarious tracts.

THE MEDICAL ASPECTS OF ADULTERATED TEXTILE GOODS.

IT has long been known that textile fabrics are often heavily laden with metallic substances, and as these weigh more than cotton, for example, the manufacturer keeps enriching himself at the expense of the consumer. The practice of adulterating goods is bad enough from a commercial point of view, but when we add to that the injurious effects sometimes produced upon the wearers of the fabrics, it assumes an importance that cannot be ignored. Sometimes lead is used as an adulterant, sometimes arsenic or other metals. Only a few months ago men of the police force in Birmingham suffered from a skin affection caused by wearing garments that contained zinc. The practice of adulterating textile fabrics has recently been engaging the attention of the Home Trade Association, and at the request of the Committee Professor Dixon Mann, of Owens College, undertook to examine samples of cotton sheets, blankets, etc., with the view of discovering how far the presence of foreign substances was likely to injure the health of those who wear fabrics thus impregnated. One sample of Oxford shirting was found to contain nearly one-third its weight of Epsom salts. Other fabrics contained zinc chloride. When textile goods adulterated with zinc chloride are worn next the skin they may induce inflammation followed by an irritable eruption. Again, some of the substances that are added to fabrics attract water and are always damp. They may be dried before a fire, but they soon become damp again. Such materials may become a cause of rheumatism, and may be an explanation of the damp sheets occasionally met with in hotels and elsewhere. Once these adulterating agencies have got thoroughly settled in the fabric it is difficult to dislodge them, even after washing. The practice of adulterating goods that have to be worn is much to be deprecated. It is upon the poorer working classes that the injustice falls. There is no reason why a draper should be

allowed to sell such goods and be beyond the reach of the law, while grocers, for example, are fined for adulterating mustard or pepper. The public in buying these textile fabrics ought to be told that they are adulterated.

A CONVERTED ANTICOMPULSIONIST.

AT a recent meeting of the Peterborough Board of Guardians, Mr. J. H. Howard, in the course of his report of a visit paid by Major T. Davey and himself to the Three Counties Asylum, announced his conversion to a belief in compulsory vaccination. They had, he said, found everything very satisfactory at the asylum—the most modern sanitary methods and appliances, an excellent water supply, and every arrangement calculated to ensure the well-being of the patients. Notwithstanding this, small-pox had suddenly appeared, and attacked about forty of the inmates. Mr. Howard, hoping to find some support for his objections to compulsion, had questioned the medical officers on the subject of the outbreak, and was told in reply that in stamping out the disease they had relied simply on revaccination. With the solitary exception of one individual, every patient, every nurse, every doctor, every servant all though the house was revaccinated. The exception was a nurse—a fine healthy young woman—and the exception proved the rule, for she was attacked by small-pox and died of it. Such was Mr. Howard's narrative to the Peterborough Guardians. Similar experiences are common in small-pox epidemics, and he could easily have made himself acquainted with them through the reports of the Royal Commission on Vaccination and other reliable sources; but, after all, there is no schoolmaster like small-pox, and the nearer a man is to such a teacher and to such facts the more likely is he to be impressed by them, so that Mr. Howard's conversion is not at all surprising in the circumstances which he related.

THE AMERICAN VOICE.

AT the Congress of the American Laryngological Association recently held in Chicago Dr. John W. Farlow (Boston), who must be a bold man, read a paper on the American Voice. Among the many natural endowments of our gifted cousins the quality of the national voice can hardly be counted. Dr. Farlow admits that it has a nasal twang, and the question he set himself to discuss is whether this is due to catarrhal or other pathological conditions of the upper air passages. There is a general impression that such conditions are relatively very frequent among the citizens of the United States. Indeed if we may judge from the text-books of the specialists of that country the average American nose must be a museum illustrating most of the diseases and deformities with which that part of the human fabric can be afflicted. But as Dr. Farlow correctly points out, the nose is not the determining factor in the formation of the nasal voice. The twang appears, like smoking, to be largely a matter of imitation. But the defect must have been fairly prevalent before it became so fashionable as to be an object of imitation. Owing to the great influx of foreigners into America the English tongue is mangled and outraged there more than anywhere else, and Dr. Farlow admits that his countrymen are quite indifferent to purity of accent or correctness of speech. He therefore urges that children should be carefully trained in the use of their organs of speech, and pains should be taken to prevent them from forming themselves vocally on an *exemplar vitiis imitabile*. Dr. G. Hudson Makuen (Philadelphia), in discussing the question, gave it as his opinion that the American voice is due to the excessive tension of modern American life. How this tension affects the vocal organs is not very clear, but as Dr. Makuen goes on to affirm that "the active anatomic factor in nasal voice is probably a low hanging palate during speech," it must be inferred that the tension of life in some way causes relaxation of the velum. The remedy which he suggests is to train the levator palati muscles by making the patient practise several times daily with open mouth before a mirror. The "patient" will be obliged to segregate himself as carefully as if he were learning to play the fiddle. Dr. Amory De Blois (Boston) thinks the voice is all a matter of race. The German has a guttural voice, the Yankee has a high-pitched voice, while the English voice, "no matter what the social rank, is always of an agreeable low pitch." Dr. De Blois has evidently never heard the newspaper' boys shriek "Winners!" or "Horful Murder!" in the Strand. It must also, we fear, be confessed that the voices of our fashionable ladies are too often remarkable for their un-Cordelia-like quality. On the whole the debate threw little light on the mechanism of the American voice, which we are inclined to regard as due to some peculiar condition of the nasal sinuses and other parts of the resonating apparatus. This may be caused by climatic influences; but, however it is produced, its effect on the voice is aggravated by a bad habit of speech which will never be corrected, because patriotic Americans look upon it as one of their national institutions.

WOMEN'S INTERNATIONAL CONGRESS.

AN interesting feature of many of the speeches at the Women's International Congress which assembled this week in London has been the generally-expressed opinion that, while associations of women were necessary in the early days of the movement of women towards equal educational and professional privileges with men, such purely feminine associations are no longer needed, and that the hope of the future lies in the co-operation of men with women as much as possible. The first profession discussed was that of medicine. Mrs. Garrett Anderson was in the chair, and after a few words of welcome to the delegates, said that she would not spend time over ancient history, but would speak of the present position of medical women in England. There were 200 students at the London School of Medicine for Women, besides many other students at various medical schools in the British Isles, open to women only, or to women as well as men. She spoke of the work, so largely surgical, at the New Hospital, officered solely by women, and of the maternity department, in which there had been, up to date, no maternal death. On the other hand, she admitted that medical women, largely through their education at a school for women only, but partly also by their exclusion from many of the medical societies, were to a great extent out of the current of professional life. She thought the male members of the profession suffered by this cleavage, as medical women were rapidly forming a body of consultants within their own ranks. Dr. Sarah Hackett Stevenson (Chicago) read a paper on The Education and Status of Medical Women in the United States. Her view was that the era of women's medical schools, though an absolute necessity at first, was nearly over. She said that New York had just opened a medical school for men and women, in favour of which the Women's Medical School had voluntarily dissolved itself. The Chicago Women's School, founded in 1869, would probably soon be merged in the Chicago University, and the Johns Hopkins University was now open to women as well as men, with a five years' course (one of general scientific training). She considered that both the highest economy and the highest ethics rendered coeducation desirable. She objected to the limitation of women to gynæcology only, urged that a fair number of professorships should be open to women, and spoke of the midwife (as distinct from a trained nurse specialising in obstetrics) as a danger not only to the public, but to the medical woman, because to the popular mind she was apt to represent woman in medicine. Among subsequent speakers was Mrs. Scharlieb, who referred to the opening to women of

Government posts in India, and of appointments in the public service, such as in Poor-law infirmaries and lunatic asylums in England. Frau Tibertius (Berlin) stated there were twelve women practitioners in Germany. Dr. Aletta Jacobs (Holland) said that there were no impediments whatever in her free country to the practice of medicine by women, and that they were admitted to all medical societies, and to municipal appointments. Dr. Mendelssohn, a Polish lady, spoke of her studies in Paris and her practice in Egypt; and Dr. Sandelin said that women were admitted to all Swedish medical associations, but had not as yet any public appointments open to them. Two interesting papers, by Dr. Poznansky-Garfield and Dr. Kasakevitch Stefanofskaia, described the work of medical women in Russia. In 1888, after twenty years' vicissitudes, medical women were placed on exactly the same footing as regards education, State appointments, and State pensions as medical men. There were 700 medical women in Russia, 87 in rural districts where the isolation of the doctor required great physical powers as well as great surgical capacity.

SURREY BENEVOLENT MEDICAL SOCIETY.

This useful society, though it has been nearly ninety years in existence, is still too little known, even to those whom it is intended to benefit. Founded in 1812 to relieve the needs of families of deceased members, the scope of its operations was gradually, as funds accumulated, extended to assistance in the education of children of living members. By an arrangement with Epsom College, the Society has the right of nomination to five scholarships at that school, from which boys with a very little help from their parents can proceed to the universities, or go direct with free medical scholarships to the metropolitan hospitals. Scholarships are now also granted to girls, who are educated at schools approved of by the trustees. Pensions are further granted to the female relatives of deceased members who may stand in need of such assistance. The Society has an accumulated capital of £12,000, yet in spite of the most active efforts of successive secretaries, it has never numbered fifty subscribing members. In view of the many and great advantages offered by the Society, this is surely a striking proof of the improvidence of the medical profession. Membership is open to all persons who regularly practise medicine, and who at the time of election reside in the county of Surrey or in those parts of adjoining counties which may be within a convenient distance of its borders. The entrance fee is £5, the annual subscription £2 2s. or a life commutation of £31 10s. The President of the Society is Dr. Holman, who has held the office for twenty-six years, and it is remarkable that his tenure, and two other lives—Mr. Peter Martin, and his father Mr. Thos. Martin—cover the whole period of eighty-seven years since the Society was founded. To Dr. Holman's judgment and business experience the present satisfactory position of the Society is largely due, and its prosperity has materially increased under the guardianship of the present treasurer, Dr. John H. Galton, who has been ably and devotedly seconded by the secretary, Dr. John Walters, of Reigate.

FATAL HÆMORRHAGE FROM VARICOSE VEINS.

Though many elderly persons suffer from varicose veins in the legs and consequent ulceration, yet dangerous hæmorrhage is a very rare event in the course of this affection. Grillot, of Paris, has recently reported a case of this rare accident to the Anatomical Society of that city. A bricklayer, aged 60, was admitted into the Hôpital Boucicaut in a state of violent excitement due to acute hæmorrhage. An hour before, when at work, he suddenly complained to his mates of a sharp pain in the left ankle, and a sensation of a hot fluid pouring out. Dark blood was seen escaping in a continuous stream, and over four pints were lost. A chemist succeeded in checking the hæmorrhage, then the man was admitted into the hospital. He died ten minutes later. He was a strong man, apparently free from any constitutional disease, but he had been subject for years to varicose veins, especially in the left leg. The special point of interest was that there was no trace of any old or new ulcer on either leg excepting at the left external malleolus, where lay a very sharp-cut ulcer deep enough to lodge a split haricot bean; it opened into a big vein with very diseased walls. The integument immediately around the vein was, as elsewhere on the legs, quite healthy. The border of the ulcer was tough, though sharp-cut. The viscera showed no changes except such as are common in an elderly subject. No doubt a small diseased area around a dilated vein, irritated by the friction of a boot, involves more danger than is likely to arise from the huge varicose ulcers so commonly seen in the lower third of the leg.

DENTAL COMPANIES IN VICTORIA.

It is interesting to note that the Colony of Victoria has taken the opportunity of an Act passed in December last, for the purpose of amending their Medical Act, so far only as the provisions relating to dentists are concerned, to deal with the question of dental companies. They have not, however, adopted quite the same method of treating the matter, but have enacted that a company may not make use of any description implying qualification, or implying that it is in fact carrying on dental practice, unless it is wholly composed of registered dentists. This will probably have the effect of stopping the formation of this sort of company, for it is difficult to conceive any motive for a body entirely composed of registered men seeking incorporation. And, inasmuch as a company which does not consist wholly of registered men must not describe itself in any way that implies that it is carrying on practice, it could hardly conduct its business, so that the provision is almost tantamount to a complete prohibition of practice. And it can hardly be doubted that when any similar opportunity of amending the purely medical clauses of this Act occurs, similar provisions will be introduced.

THE KEEPING OF GLYCERINATED CALF LYMPH.

We have had some inquiries as to the length of time during which glycerinated calf lymph may be kept after its receipt. Assuming that the inquiries relate to the lymph supplied by the Local Government Board, we may state that since this lymph in its glycerinated state is kept at the Government Laboratory for culture and other tests for several weeks before its issue, there is presumably good reason for not keeping it more than a week longer before using it. This is the more important during warm weather, when medical practitioners are unable to keep their tubes at a uniformly low temperature. It is for this reason that the forms sent out with the Government lymph have requested public vaccinators only to apply for such lymph as they "immediately" require; and the recent forms issued also ask that for such time as it is kept it may be placed in a cool and dark place. Lymphs that have not undergone the prolonged preparation with a view to the elimination of extraneous organisms, such as some supplied from abroad, may probably be kept longer before use.

LONDON AND THE NEXT CENSUS.

The Local Government and Taxation Committee of the London County Council has presented a report on the census of 1901, in which the importance of obtaining the class of information which experience has shown to be most needed is insisted upon. It is pointed out that the census, presenting as it were a photograph of the community at a given time, affords the only general indication of its development and internal redistribution.

Certain details in addition to those obtained in 1891 are needed, especially in relation to overcrowding, the mobility of the industrial and commercial classes, and the disparity between the night and day population in the greater portion of the metropolitan area. At the same time it is admitted that this information could be obtained only by the provision of an additional column requiring the place of occupation to be stated, and that there would be serious objections to making this addition, which would moreover be of comparatively small value unless prescribed for the country at large. With regard to the question of overcrowding, however, the Committee express the opinion that there would be no objection to extending the inquiry beyond the tenement of four rooms, as it is believed that the evil is not confined to the limits specified in the return of 1891. Recommendations are also made with regard to the classification of the returns in convenient areas, and it is recommended that the Council should be authorised to extract and publish for administrative purposes such statistics from the London registers. The report also deals with the necessity of taking a census every five years, as to which the following observations are made: "London is still growing rapidly, and on this account alone it is very desirable that a census should be taken at shorter intervals than ten years. But the metropolis is changing in character to an even greater degree. It draws its immigrant population from a wider area. Neighbourhoods which were formerly residential are becoming commercial, and districts which have been well-to-do are becoming poor, and *vice versâ*; the building of flats and large blocks of buildings, too, has made it impossible to arrive at any trustworthy statement of population, except by means of a census. With regard to the question of whether the intermediate census need be as full as the decennial census, it will be remembered that when the 1896 census was in contemplation the Council, along with the Royal Statistical Society, the Society of Medical Officers of Health, the British Medical Association, and the Institute of Actuaries, urged upon the Government the advisability of including in the census at least particulars as to age, sex, and the relationship to the head of the family. On legal grounds the request could not be then granted. The only particulars taken in 1896, therefore, were the two last." The Committee having considered the question afresh, now express the opinion that, so far as London government is concerned, beyond the particulars included in the quinquennial census of 1896, it is very necessary to obtain the record of age and birthplace.

UNIVERSITY COLLEGE, LONDON.

THE biennial *conversazione* of University College, London, was held on June 28th, when a large number of guests were received by Lord Reay. A great number of interesting objects were displayed. Mr. R. J. Godlee lent a number of fine etchings and Dr. W. H. Corfield a collection of bound books, among which were examples of the lost art of Oriental pierced work. In the Slade Art School, beautifully decorated with roses, was an exhibition of sketches and studies by the students. In the Physical Department Professor Callendar showed various electrical experiments, among others Hittorff's demonstration of the action of the magnet on the cathode stream. In the Chemical Department Professor Ramsay and Dr. W. M. Traver, showed the spectra of the newly recognised gases of the atmosphere. The Botanical Department showed a number of interesting objects: in the Zoological Museum Dr. G. H. Fowler showed his deep-sea vertical tow net, which can be opened and closed at any depth; in the Latin Room Mr. R. Berens exhibited a collection of vases in hard stone from Egypt, dating, it is believed, from about 5000 B.C., and made without the lathe or turning tools, Professor Flinders Petrie exhibited a collection of Egyptian photographs, and a historical collection of beads ranging in date from 5000 B.C. to 500 A.D., and Professor Ernest Gardner showed a series of photographs illustrating Greek art. Altogether the objects and experiments exhibited illustrated very well the many-sided activities of this College, which for three generations has courageously held up a high standard of culture and technical education. It may be added that satisfactory progress is being made in the work of rebuilding the hospital, and that already, as seen from the College grounds, the central cupola overtops the façade of the old hospital.

WEST LONDON HOSPITAL DINNER.

THE past and present members of the West London Hospital dined together at the Trocadero Restaurant on June 22nd. Mr. C. B. Keetley, F.R.C.S., presided. Surgeon-General R. Harvey, C.B., in replying to the toast of "The Navy, Army, and Auxiliary Forces," given by the President of the Royal College of Physicians, eulogised the Indian Service especially as affording unequalled opportunities for work, either civil, military, or political. The Chairman, in proposing "The West London Hospital," said everyone knew there were already too many small hospitals teaching a minute number of undergraduates, and it had fallen to the West London Hospital to do post-graduate teaching, and they had had an encouraging amount of success. When they had reformed their out-patient department they expected to have a still larger number of post-graduates. Dr. Drewitt responded, and Dr. Seymour Taylor gave the toast of "The Visitors," which was acknowledged by Professor Osler, who claimed that the children of Britain were her noblest heritage. A remarkable change had come over the profession in America during the last twenty-five years. Every candidate for a licence to practise had now to present himself for the State examination, whatever the degree he might possess. The large amount of money expended on the medical schools during that time was probably greater than in any other country except perhaps Germany. The chairs were now well paid. His old *alma mater*, McGill University, Montreal, was also now well provided with funds. Hospital physicians had an important position to uphold towards the rest of the profession; in them should be found culture and character, and nowhere else was character so well represented as in Great Britain. He rejoiced that the profession in this country was now aroused to the value of post-graduate culture, and in no city were there greater opportunities for teaching the practice of medicine than in London. Every man after being in practice for five years became a little stale and behindhand. He should then return to a post-graduate school for a few weeks. He would thus benefit greatly the patients entrusted to his care. Professor Anderson, of Toronto, who also replied, said that Canadians were proud to acknowledge London as the pattern for the medical schools they had established. The bond of union between the profession in Canada and this country had been greatly strengthened by the visit of the British Medical Association to Canada two years ago. He hoped that when the next visit to Canada was organised Toronto might be selected for the meeting. Other toasts having been honoured, that of "The Chairman" was proposed by Dr. J. B. Ball and acknowledged by Mr. Keetley, and that of 'The Honorary Secretary" by Mr. Bruce Clarke. Mr. Bidwell, in his reply, remarked that this was the second dinner of the hospital, and its success was so marked that it ought for the future to be an annual event.

A QUESTION OF PRIVILEGE.

THE facts, proved or admitted, in the case of Ensor *v.* Wakefield raised one of those interesting and difficult points of the law which are peculiar to libel or slander actions, namely, whether the occasion on which the slander was spoken was a privileged one. In order that

the defendant might make out his plea of privilege he had to show either that he had a duty to make the communication to his assistant or that both he and his assistant had a common interest in the subject matter of the communication. It will be seen from the report on page 60 that in this instance Mr. Justice Ridley did not consider the occasion privileged, although, apparently with a view to save both the parties the expense of a new trial, if he should be reversed on appeal, he offered to leave the question to the jury as though the occasion were privileged, and to ask them whether the defendant had not used words which were exaggerated or too highly coloured, and so destroyed the privilege. It is unfortunate, perhaps, for the medical profession generally that the case was settled, and the point was not taken before a higher tribunal to decide. The case is on the border line, and it is difficult to follow the reasoning of the learned judge. In giving his decision he at first said that he was clear that the occasion was not privileged, but almost immediately offered to let the case go to the jury upon the question of excess of privilege. These two rulings are entirely inconsistent. For this reason the decision is unsatisfactory, and one which is not likely to be cited as a precedent.

THE PREVENTION OF TUBERCULOSIS.

A public meeting will be held in the Victoria Rooms, Clifton, Bristol, on Thursday, July 6th, at 3 P.M., for the purpose of inaugurating a Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis for the Counties of Gloucestershire, Somerset, and Wiltshire. The Right Hon. the Lord Mayor of Bristol will preside, and will be supported by the Mayors of Bath, Bridgwater, Calne, Cheltenham, Chippenham, Glastonbury, Gloucester, Malmesbury, Salisbury, Tewkesbury, Thornbury, Wells, and Yeovil. Sir Herbert Maxwell, Bart., M.P., F.R.S., Chairman of the Royal Commission on Tuberculosis, will be among the speakers who will address the meeting.

EDINBURGH ROYAL INFIRMARY.

At the conclusion of the private proceedings of the managers of the Edinburgh Royal Infirmary on Monday, June 26th, the following statement was handed to the press: "Regarding the disturbance in the Royal Infirmary on June 9th, the managers, having carefully investigated the matter, find that it was confined to the overturning, at a late hour, of the furniture in five of the residents' rooms by four former residents who came into the infirmary along with some of the residents during the evening. These young men voluntarily tendered an apology to the managers, which was not at once accepted. They were summoned to the meeting to-day, and after being severely censured, their hospital tickets were suspended for a period of six months. The managers have laid down strict regulations, which will prevent the possibility of anything of the kind recurring." It was of course an act of extreme and highly reprehensible folly on the part of these four young gentlemen to indulge in this horseplay; but they were manly and honest enough to come forward with confession and apology, which, some of the more sensible of the managers thought, ought at once to have been accepted.

SECONDARY EDUCATION.

The Board of Education Bill, the scope of which has already been discussed in these columns, was read a first time in the House of Commons on June 26th, and referred to the Standing Committee on Law. Sir John Gorst, in introducing the measure, explained that the object of the Bill was to obtain statutory power and sanction for the reconstruction of that department of the State which has most to do, though not exclusively, with education in England and Wales. It would abolish the existing Committee of Council of Education, and replace it by a Board of Education consisting of the First Lord of the Treasury, the Lord Chancellor, and the Secretaries of State for various departments, with a president and a parliamentary secretary, in the same manner as the Local Government Board or the Board of Trade. The constitution of the Board was the subject of some criticism, and Sir John Gorst practically admitted that the effective Board would really consist of the president and parliamentary secretary. Professor Jebb said that the Bill was not only the first step, but a long step towards a more systematic and a more intelligent application of existing means and agencies. Sir William Anson, the new member for Oxford University, in a maiden speech, also blessed the measure, and particularly welcomed the proposal for the registration of teachers, not only because it would impress upon the teacher that he had something to learn before he began to teach, but because it would create a sense of comradeship in the teaching profession. Mr. Bryce also, whose opinion upon such a subject will have great weight, concurred in the wisdom of confining the operation of the Bill to dealing with the central authority, since the organisation of the local authority would be better dealt with in a subsequent Bill. No distinct promise was given to introduce this consequential Bill next session, but Mr. Balfour admitted that the present Bill was only an instalment of some further Bill which would place secondary education on a satisfactory basis. The need for such a reform is now admitted on all sides, and there are probably few professions which would benefit more by a reasonable organisation and control of the multitude of the secondary schools than the medical.

THE VIRCHOW MUSEUM.

On June 27th, in the presence of a number of official, academic, and scientific notabilities, Professor Virchow formally opened the new pathological museum which bears his name, and has been built under his superintendence. It has cost about 560,000 marks, and contains a collection of more than 20,000 specimens, collected almost wholly by Professor Virchow himself, and representing the history of pathology during the past half century. Professor Virchow delivered a speech in which he pointed out that while foreign countries, especially England, had long preceded Germany in anatomical researches, the Fatherland could now rival them on that ground.

THE POPE AS A PATIENT.

The Pope is evidently a patient whose gratitude does not evaporate with the sunshine of restored health. Not long ago he conferred on Dr. Gaetano Mazzoni, who successfully operated upon him, the Grand Cross of the Order of St. Gregory, with a special brief expressing his sense of the skill of his surgeon. Now it is announced that his Holiness has sent a full length portrait of himself with a dedication and signature to Dr. Mazzoni, and has appointed him his consulting surgeon. Dr. Mazzoni is a *libero docente* of surgery and surgical pathology in the University of Rome. In addition to contributions to surgical literature, he is the author of a book on the history of the Red Cross movement, for which King Umberto conferred on him the order of Saints Maurice and Lazarus.

THE PREVENTION OF COMMUNICABLE DISEASE.

A subcommittee of the Public Health Committee of Edinburgh Town Council has considered a letter from the President of the Royal College of Physicians on the subject of providing reports, in the interests of public health, on morbid products obtained from patients suspected to be labouring under communicable disease, and on materials, such as milk and water, which might be the means of communicating disease. The Committee heard the

medical officer of health, who explained that at the town's laboratory in the City Hospital there was at present provision for bacteriological examination of products, and in these circumstances they were of opinion that, in view of the establishment of a fully-equipped laboratory in the new hospital at Colinton Mains, and of what was being done in the town's laboratory, it was unnecessary to do more in the meantime than make a temporary arrangement with the College of Physicians for the examination of a limited number of morbid products.

NATIONAL SOCIETY FOR THE EMPLOYMENT OF EPILEPTICS.

At the annual meeting of this Society the Chairman, Mr. E. Montefiore Micholls, said that it was hoped that ere long School Boards would be empowered, in accordance with the recommendations of the late Departmental Committee, to send epileptic children for education to such homes as the Society had established at Chalfont (see page 28). Another new departure would take the form of a home for convalescent and other temporary cases, thanks to the liberality of a gentleman who desired to be anonymous, epileptics being rigorously excluded from all existing homes of this character. The progress of the Society had been remarkable, owing to the goodness of its cause and the awakening of the public conscience as to its duty towards epileptics. The annual reports of the Executive Committee and of the honorary medical staff were adopted. The former pointed out the need of further extension of the accommodation of the colony to meet the demand for admission and obviate the risk of deterioration in the cases of deferred candidates, who often had to wait as long as two years for admission. The latter laid stress not so much upon drug treatment as upon the importance of the removal of the epileptic from the town to the country, of regular employment under direction, and of a well-ordered and regular mode of life, with avoidance of excitement and abstinence from alcoholic liquors. The result of this *régime*, especially in the cases of youths from 15 to 18 years of age, was stated to be satisfactory; and it was added that the improvement in the condition of the female adults had been even more marked than in the case of the male colonists. No case of acute illness or death had occurred during the year.

SUPPLY OF MEDICINES BY CLUB SURGEONS.

We have received a letter from a correspondent which raises a point of considerable importance to club surgeons. The story is that a surgeon to a lodge of Oddfellows, who was attending one of the members for phthisis, suggested that improvement might be expected from the use of a certain remedy. He told his patient that he would supply this remedy (which would have to be specially procured) if the patient would pay the cost, as he could not himself afford to supply it under the club contract. This the patient agreed to do, but shortly after wrote to the lodge, asking the latter to defray the cost, which his circumstances could ill afford. The lodge at once demanded that the surgeon should himself supply the medicine, and claimed that it was included in the definition in his contract of "proper or sufficient medicine." Our correspondent asks whether a special or proprietary medicine can reasonably be included under the heading of "proper and sufficient medicine." He further says: "If this rule be rigidly enforced, it will undoubtedly have the effect of entirely preventing medical officers from recommending special and proprietary medicines. It would appear that the remedy in question would come under the category of "proper and sufficient medicine" if recommended by a club surgeon. It would be well for practitioners throughout the country to consider the lesson such episodes as these teach as to the impropriety of accepting contract appointments at inadequate rates. As medical and pharmaceutical knowledge grows, more and more active remedies are likely to be discovered. These may often be of an expensive nature, but if their value be widely recognised it will be impossible for club doctors to deny them to their patients under the present contracts. On the other hand nothing can be more shortsighted than the policy of friendly societies if they desire to provide for their members reliable medical attendance than to seek to put their doctor in such a dilemma. Instead of encouraging him to do his best for them by availing himself to the utmost of advancing knowledge, they deliberately put a penalty on him if he recommends new remedies which are necessarily often expensive. Such a policy cannot but tend to make him shut his eyes as long as possible to the virtues of a new remedy for fear he may be practically ruined by the expense of being compelled to prescribe it.

DICHOTOMY IN THE UNITED STATES.

Reference was made in a recent issue of the British Medical Journal to the existence of the practice of division of the fee between specialists and general practitioners in certain parts of the United States. In addition to the evidence then quoted, we find in the *St. Paul Medical Journal* for June an editorial statement that "a surgeon in one of the large cities of the North West" had sent the following advertisement for insertion: "Doctor, send your patients requiring operation treatment to a gynecologist that will divide the fee with you, and thereby receive some benefit from the case yourself. Best hospital facilities, with trained nurse, good medical reference." Our contemporary goes on to say that it has been informed by several prominent surgeons that they are frequently approached by practitioners who offer to send them operation cases if they will agree to divide the fee, and one or two of them have, it adds, confessed that they have been foolish enough to do so. "Foolish" is, it seems to us, scarcely the right word to characterise such conduct. It is right, however, to say that our contemporary had already condemned the system of secret commissions as "dishonest, indecent, and utterly beneath contempt." It refers to an article published in the *American Journal of Surgery and Gynecology* for April, in which the editor, Dr. Emory Lanphear, of St. Louis, declares *sans phrase* that it is his regular custom to give one-third of the fee to practitioners who send him patients. Dr. Lanphear must at least be congratulated on having the courage to follow Luther's advice, and "sin boldly." But by ceasing to be secret, the commission system does not cease to be objectionable.

THE ENANTHEM OF RUBELLA.

The appearance on the mucous membrane of the mouth of a characteristic eruption in measles has long been known. It has now been shown by Dr. Forcheimer at a meeting of the American Pediatric Society that a characteristic eruption is present in the mouth in a large majority of cases of rubella. He described it, as seen in his first patient, as a macular distinctly rose-red eruption upon the velum palati and uvula, extending to but not on to the hard palate; the spots were arranged irregularly, not crescentically, were the size of large pinheads, were very little elevated above the level of the mucous membrane, and did not seem to produce any reaction upon it; at the same time a rash characteristic of rubella made its appearance upon the lower part of the face. Two hours previously the boy had been seen, and there was then no trace either of exanthem or enanthem; in six hours from the time when it was first seen the enanthem had become much paler, the infiltration much less, and by next morning it had disappeared; the exanthem had meanwhile developed in the usual way. In all the cases—23 in number—which he studied, the enanthem made its appearance at the same time as the exanthem; it was very short-lived, was localised to the uvula and soft palate, rarely invading the hard palate and faded away within twenty-four hours. It is the same erup-

tion that is found upon the skin characterised then by the size of its efflorescence, its arrangement, the absence of great infiltration, and above all by its colour. Contrasting this enanthem with that of measles, in the latter there appear from thirty-six to forty-eight hours before the exanthem purplish or bluish papules crescentically arranged on the soft palate, and extending on to the cheeks, and they take three or four days to disappear.

THE CULTIVATION OF THE BACILLUS LEPRÆ.

At a recent meeting of the National Academy of Medicine of Bogota Dr. Carrasquilla asserted that he had successfully cultivated the bacillus lepræ on sloped solidified human serum and on beef bouillon prepared according to the method of Thoinot and Masselin.[1] The bacillus was then cultivated from serum to serum, and from bouillon to bouillon, pure cultures being always obtained. Dr. Carrasquilla further states that he observed the bacillus in motion in two stages of its development—as long, slender bacilli, which move in an undulatory manner; and as short, coarse, almost elliptic bodies, moving rapidly in a straight line. In the latter he fancies he has observed flagella, but he is not positive as to this. His results do not entirely accord with those obtained by Professor Spronck, of Utrecht, who has also claimed to have cultivated Hansen's bacillus. Professor Campana, of Rome, has also convinced himself that he has successfully cultivated the bacillus lepræ. These experiments require confirmation and extended observation before they can be accepted as absolute.

Dr. W. J. Simpson, Professor of Hygiene at King's College, London, has been elected an Honorary President of the International Medical Congress, to be held in Paris in 1900.

A meeting of the Anatomical Society of Great Britain and Ireland will be held at the Anatomical School, Cambridge, on Saturday, July 8th, at 2 P.M., when specimens will be exhibited. From 3 P.M. to 5.30 P.M. papers will be read and lantern demonstrations given.

We regret to hear that Professor Sir Thomas Grainger Stewart has been confined to the house for several days with a slight pleuritic effusion, probably the result of a chill caught when paying a visit to the country some fourteen days ago. We are glad to learn that Sir Grainger Stewart was better on Thursday morning, and that the pleural effusion had decidedly diminished.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

Carbolic Acid Poisoning has a chance of being put a stop to at last. At least, so we gather from the Home Secretary's reply to Sir John Leng, in which he admitted knowledge of a number of deaths yearly from this cause, and that it had been frequently suggested that the acid should be scheduled. When the last application was made by the Pharmaceutical Society for its inclusion in the schedule, the application was refused by the Privy Council on grounds of public convenience. Since then it has been scheduled by the Irish Government, and the objections to similar action have been lessened in England by the prescription of new regulations for keeping, dispensing, and selling poisons under the Act of 1868. The Privy Council are now open to a new application from the Pharmaceutical Society, and the hint given by the Home Secretary should be promptly taken.

Recruits under standard are, so states the Under-Secretary for War, reported on once a month for the first three months of their service. If the reports are favourable they are retained; if not, a medical board decides whether they are to be retained as likely to become efficient. They are, under such circumstances, retained in the service, although below the standard.

The London Government Bill in the Lords drew the largest attendance of the session so far, for no fewer than 250, or nearly half the Lords, voted on the question of women acting as councillors and aldermen. Lord Dunraven moved the omission of the words, inserted in the Commons, to preserve the rights women have had in the vestries in the new municipalities. The Prime Minister made a strong and gallant appeal in favour of the weaker sex, but he was deserted by his colleagues, argued against by the Lord Chancellor and the Lord President of the Council, and supported only by the two Archbishops, six Bishops, and a small section of his own supporters, and the Liberal Peers. The ladies were beaten by 182 to 68, and the announcement of a majority of 114 was received with much hilarity by the Peers and, *mirabile dictu*, with marked signs of approval from the galleries, brilliant with the presence of many peeresses.

The Sanitary Condition of Gibraltar, which has been long unsatisfactory, was the subject of a question by Mr. Stevenson last week. The Committee appointed last year has reported, and it is proposed as the leases of the Crown lands fall in, to make provision for the naval and military officers. Buildings dangerous to health can be removed by the local sanitary commissioners, and other buildings may have to be removed to prevent overcrowding. The Government, said the Colonial Secretary, are considering how this may be done. The need, many think, is a pressing one.

The Defective and Epileptic Children Bill was read a second time in the Lords on June 23rd. It is based on the report of the Departmental Committee, and it gives power to local authorities to provide for the education of these children by special methods suitable to their requirements. The State will make special grants to meet expenses on the recommendation of the Education Department, and the school age is raised to 16. The epileptics are to be taught in residential homes under medical care. It was stated in the debate that there are 8,000 of these children in London and 42,000 throughout the country. The measure is only an enabling and not a compulsory Bill. As far as it goes, it is the result of a most valuable and painstaking inquiry undertaken in the first instance among others by members of the British Medical Association. In the interests of the humane and scientific treatment of children all parties should hasten to place it on the Statute Book.

The Isolation Hospitals (Amendment) Bill has passed through Committee in the Lords, and been amended to meet the views of the Local Government Board. The amendments are mainly designed to protect the funds of local authorities and to regulate the transfer of hospitals to the county councils. The Bill will most probably pass this session, and will, when read in conjunction with the Act just passed to make notification general, do much to prevent the spread and to help in the treatment of infectious diseases.

The Poor-law Acts Amendment Bill, which Lord Harris has introduced into the Upper House, is a small but important measure. It provides most usefully for extending the control of guardians over orphans and children of persons unfit to have charge of them, provides means by which the children can under special circumstances be taken away from the guardians, and in the other direction enables young persons of 18 years to extend the control up to 21 years of age. The Bill also inflicts a penalty of £20 for assisting a child to escape from the control of the guardians, and extends the power of the Poor-law authorities to detain paupers for limited periods.

The East London Water Bill has been thrown out by the Lords. The Bill sought for new powers for the Company to take further water from the Thames, and spend £1,400,000 on new works. The rejection of the measure is a victory for the London County Council, who opposed on the ground that it was unwise to grant new powers pending the report of the Royal Commission, which cannot be long delayed.

[1] *Précis de Microbie*, 3rd edition, Paris, 1896, p. 17.

THE PLAGUE.

EGYPT.

[*From a Correspondent.*]

COURSE OF THE EPIDEMIC.

THE following table shows the progress of the disease in Alexandria:

	New Cases.	Deaths.	Cured.
May 25th to 31st	5	2	—
June 1st to 7th	6	[illegible]	4
8th to 14th	12	6	3

The first three days of the current week show 4 new cases, against 7 for the same period last week. There have been now up to date 32 cases, 10 deaths, and 8 cured.

The remarks in the BRITISH MEDICAL JOURNAL of June 10th have been republished in the local press, and naturally attracted considerable attention. It must not be forgotten that the disease has been early detected, and prompt measures adopted. If the true history of the infection of Bombay and other Indian towns were to be written, it would probably be found to be what is now happening in Alexandria.

PREVENTIVE MEASURES.

The difference in the result can neither be attributed to a mild type of disease nor to climatic influences, but to the fact that in one case absolutely nothing was done for weeks and months, in the other strict measures were at once adopted, and so far have succeeded in keeping the disease under control. Had the measures, or want of measures, in Bombay been repeated in Alexandria, there would have been to-day a general infection of the town.

In Alexandria every case is rapidly dealt with—immediate isolation, segregation of those in contact, house-to-house visitation to detect concealed cases, and thoroughly efficient disinfection of the house and its contents carried out. Had these 32 cases, 10 of which were septicæmic or pneumonic forms of the disease, been left in their houses to spread disease broadcast, the state of affairs to-day might be much more serious. Of 170 persons immediately removed and segregated, not one has contracted the disease. In 41 houses disinfected up to date, not one has a second case occurred. Such results must be attributed to the measures, not to a chance type of disease or special climatic conditions.

The permit for burial is not given until an examination of the corpse has been made, and this has resulted so far in the discovery of one death from plague out of hospital.

As regards the type of disease, the fatal cases were of the most virulent form, whilst amongst the recoveries and those under treatment there have been many serious cases. As regards climate, it must not be forgotten that the summer climate of Alexandria is very similar to the winter climate of Bombay. It is not, then, a question of mere temperature, but more probably of the habits and customs of a population as regards overcrowding and living in ill-ventilated rooms under favourable conditions for the propagation of the disease in their respective summer and winter climates.

What the future may bring forth is hard to say; the sanitary authorities are not over-sanguine, but they feel convinced that they are working on the right lines, and that the measures so energetically being carried out are producing a marked effect in keeping the disease within limits.

INCIDENCE ON NATIONALITIES.

Of the 32 cases, 12 have been Greeks, 2 Frenchmen, and 18 Egyptians. Why the incidence of the disease is so marked in the case of the Greeks is almost impossible to determine. Various theories have been put forward, none of which bear the test of careful examination. The fact, however, remains that, in proportion to population, the Greeks are suffering much more heavily than the natives, but of all nationalities they most resemble natives in their habits of life.

THE SANITARY STAFF.

The ordinary sanitary staff of the town has been increased by nine medical officers, and the Senior Inspector of the Sanitary Department at headquarters has been placed in supreme control, the question being rightly considered of general and not of municipal importance.

The disease is still confined to Alexandria.

THE RATING OF METROPOLITAN HOSPITALS.

AT the last meeting of the London County Council the following report was brought up by the Local Government and Taxation Committee:

We have had under consideration the following resolution, passed by the Council on February 28th:

"That it be referred to the Local Government and Taxation Committee to consider and report whether some of the London hospitals should not be exempted from the payment of rates, and, if so, to what institutions such exemption should apply, and the best means of accomplishing that object."

From a return which has been prepared by the statistical officer, under our instructions, giving (1) the particulars of each hospital and the amount of rates payable in 1898-99, and (2) the result of exempting hospitals from rating, it appears that the rateable value of those hospitals in the county which are more or less free amounts to £71,248, and that the amount of rates paid by them is £21,301. We think it desirable that members of the Council should be in possession of this return, and we have therefore given instructions for it to be circulated. It has been pointed out in support of the view that hospitals should be exempt from rating, that they are charitable institutions, supported for the most part by voluntary contributions, that they are more or less in want of funds, and that many beds are not occupied for this reason, and that they have stronger claims for exemption than some institutions which are now exempt by Act of Parliament. To give effect to this opinion it has been suggested that the Council should promote a Bill with a view to the exemption of hospitals from rating, such Bill to provide for the loss consequent upon such exemption being borne out of the county fund. After due consideration we are unable to concur in this view. The policy of the Council hitherto has been to bring all properties into assessment at their full value, and to do away with exemptions. The county lunatic asylums were, under the Act of 1853 (16 and 17 Vic., cap. 97, sec. XXXV) rated on an exceptional principle of valuation when under the control of the justices. This Act is now repealed, and the same asylums under the control of the Council are, under the Lunacy Act, 1890, rated at their full value. It will be remembered also that the partial exemption of the Feltham Industrial School was repealed by the Middlesex County Council Act, 1898. In our report to the Council on July 27th, 1897, on the subject of the assessment of Government property and property exempt from assessment, we stated as follows:

"We cannot but regard the present system as highly unsatisfactory, and we are of opinion that it is only fair and reasonable that Government property should be placed on the same footing as other classes of property, and become liable to assessment in the ordinary way, and we can see no reason why the Government should fix the value of their own property any more than the Council and other large ratepayers. This applies not only to Crown property, but all property which is now exempt, which is used for public purposes, such as police stations, and county property such as assize courts, all of which are kinds of property, it has been decided, are within the privilege of the Crown, and are therefore not liable to be rated under Section 1 of the Act of the 43 Elizabeth c. 2, before mentioned. There are also other kinds of property which are exempt from rating under the Scientific Societies Act, 1843. These are scientific institutions, and institutions for the purpose of literature or the fine arts, such as the London Library, the Linnæan Society, and other like societies. These societies are exempt from rating, whereas the United Service Institution is not, because it is established for the art of war and not for the fine arts. It must also be borne in mind that hospitals, dispensaries, and other charitable institutions are liable to be rated under the statute of Elizabeth. This Act, and all other Acts exempting property from rating, we submit should be repealed."

We would point out that the Royal Commission on local taxation is still sitting, and that the Council's witnesses have given evidence on the subject. Having regard to all the circumstances, we are of opinion that the Council should take no action in the matter until the Royal Commission shall have reported. We recommend

That pending the report of the Royal Commission on Local Taxation, the Council do take no steps with a view to creating any fresh exemptions from liability to rating.

As the Council occupied nearly the whole of the sitting in discussing the proposed improvement scheme at Westminster for embanking the Thames, widening Millbank Street, and removing dilapidated property around St. John's Church, the discussion on the report stood over.

We understand that there is a considerable feeling among councillors in favour of exempting hospitals from the payment of rates, thus placing them on a level with schools, chapels, volunteer drill halls, and sundry other exempted institutions. The Government has extended the principle of exemption of rating to the extent of one half of the rates to agricultural land, and now proposes to relieve the owners of tithe rent charges at the expense of the general ratepayer. In view of this principle receiving so considerable an extension, we trust that the following amendment, of which notice has been given by Mr. Porter, will be carried:

That the Council being of opinion that hospitals should be exempted from the payment of rates, the Committee be instructed to report whether

such rates should be charged on the county fund, or in what other way relief from rates should be given; and that the Committee be further instructed to prepare a list of hospitals which, having regard to their constitution, should have the benefit of exemption.

INDIA AND THE COLONIES.

MALTA.

REPORT OF THE HEALTH DEPARTMENT.—From the annual report of the Public Health Department of Malta we learn that, with an increase in the population of 2,583 persons, the death-rate was 25.77 per 1,000, a considerable decrease on that of last year. The diminished mortality was chiefly amongst infants, owing to an absence of epidemics, and fewer deaths from tubercle, enteritis, and lung disease. An analysis of the death-rate in different parts of the island shows that in the suburban areas with good drainage, though with much denser population, the number of deaths was much lower on an average than in the undrained parts; the highest mortality being in those areas of densest population with inefficient drainage The Chief Medical Officer, referring to the high mortality, points out the danger which must arise from a large amount of sewage matter being allowed to filter into the subsoil surrounding the fortified towns, and urges the pressing necessity there is for a new and efficient system of drainage, a more abundant and more general supply of pure drinking water, and for a larger supply of water for scavenging purposes. He believes that the chief hope of sanitary reform lies in the better education of school children in the rudiments of personal hygiene. An outbreak of small-pox occurred during the year, being due to infection from Tunis. Altogether 109 cases occurred with a mortality of 19.3 per cent., some of the fatal cases being very virulent. The mortality among the vaccinated was 8.8 per cent., while among the unvaccinated it was 29.8 per cent. Great difficulty was encountered in preventing the spread of the disease, since the inhabitants, in many instances, attempted to conceal patients and infected clothing in their houses, and, what is even more remarkable, the local press, almost without exception, tried every means to shake public confidence in the sanitary authorities. Among other zymotic diseases, very few cases of measles or scarlet fever were reported. Diphtheria was much less prevalent than formerly, only 14 cases being reported during the year, against 536 in 1885. Deaths attributed to tuberculous diseases numbered 477. Mediterranean fever is more prevalent than enteric, and very often is much more serious in its complications and its long period. An increase in the number of cases of enteric fever during the year is attributed to the heavy rainfall at the close of the year causing pollution of the private tanks receiving surface water. Some interesting work has been done in the bacteriological laboratory on the reaction of the serum of cases of enteric fever and of Mediterranean [undulant] fever on the specific micro-organism of the respective diseases. The importance of a definite diagnosis between these diseases, which have many symptoms in common, is evident to all medical men who have practised in Malta. In every case experimented upon, the blood serum was tested with Eberth's bacillus and Bruce's micrococcus, and the occurrence of the agglutination within the space of an hour was carefully noted. In typical cases of enteric fever Widal's reaction was always obtained, but in such cases no agglutination was observed with Bruce's micrococcus, even after the lapse of twenty-four hours. Conversely, cases of Mediterranean fever gave the reaction with the Bruce micrococcus, while with the Eberth bacillus no sign of clumping was observed. Cases of Mediterranean fever of one week's duration gave the reaction immediately, while those of longer standing or at the onset only gave it after the delay of a few minutes.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 12th day of July next, at 2 o'clock in the afternoon.

June 15th, 1899. FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BORDER COUNTIES BRANCH: COUNTIES OF ROXBURGH, BERWICK, SELKIRK, AND PEEBLES DISTRICT.

THE annual meeting was held on June 16th, at Abbey Green, Jedburgh, the residence of the President, who had invited the *élite* of the town and district to meet the members at a garden party. The entertainment was in every way sumptuous, and was much enjoyed by everyone present. After the festivities the members met under the presidency of Dr. Blair.

The late Mr. Lawson Tait.—On the motion of Dr. HADDON, seconded by Dr. MARR, it was unanimously resolved:

That the Secretary be instructed to express to Mrs. Lawson Tait the sympathy of the members on the occasion of the death of her husband.

Next Meeting.—It was agreed to meet at Newtown St. Boswells, in September.

Re-election of Officers.—Dr. MENZIES (Galashiels) proposed that Dr. Blair be elected President for next year. He had filled the office so well that he thought they could not do better than ask him to continue. He begged to thank him for the splendid hospitality of that afternoon, and expressed the pleasure it had been to the District to meet so many friends not members of the profession. This was unanimously carried.—Dr. HADDON moved, and Dr. YOUNG seconded, that the Committee and Secretary be re-elected. This was agreed to; and Dr. Fleming Kelso was added to the Committee.

BRITISH GUIANA BRANCH.

THE second quarterly meeting of this Branch was held at the Public Hospital, Georgetown, on May 4th, Dr. F. H. EDMONDS, President, in the chair. Dr. Moulton, United States Consul for the Colony, attended as a guest.

Representative on Council of Association.—The PRESIDENT announced that Dr. L. J. Veendam, at present on leave in England, had been appointed representative of the Branch on the Council of the parent Association, and also on the Parliamentary Bills Committee.

Trinidad Medical Ordinance.—The PRESIDENT read a letter from the Acting Surgeon-General in reply to one he had written him *in re* the Trinidad Medical Ordinance, 1898, and the application of some of its clauses to this Colony, in which the Acting Surgeon-General invited him and the Honorary Secretary to a personal interview on the subject, which was arranged.

Communications.—Dr. W. S. BARNES read a paper on Phthisis giving numerous statistics as to its increase in the Colony, which elicited discussion from most of the members present, and a cordial vote of thanks was passed to Dr. Barnes for his paper.—Dr. KNOTT showed two cases of recent operations for Hydrocele by complete excision of sac.—Dr. BARNES exhibited specimens of (1) Twin Monster united from sternum to umbilicus with one cord, (2) case of Spontaneous Evolution.

EDINBURGH (LOTHIANS AND FIFE) BRANCH.

THE twenty-fourth annual meeting of the above Branch was held on June 1st, in the Royal College of Physicians, Edinburgh, Dr. GEORGE W. BALFOUR, retiring President, in the chair.

Admission to Branch.—The following members of the Association were admitted to the membership of the Branch: John Aitken, M.D., Buckhaven; W. H. Bunting, M.B., C.M., Edinburgh; F. Gardiner, M.B., C.M., Stirling; J. Lamond Lackie, M.D., Edinburgh; K. N. Macdonald, M.D., Edinburgh.

Branch List.—It was reported that the Branch numbered 261. During the year five members had died, namely, Sir John Struthers, Dr. Menzies (Inverkeithing), Dr. A. Moir (Edinburgh), Dr. J. Moir (Edinburgh), and Dr. Tillie (late of Edinburgh); one resignation had been received, and five new members had been admitted.

Election of Office-Bearers.—The following officers were elected for the year 1899-1900:—*President:* Dr. Dow. *Vice-Presidents:* Sir T. Grainger Stewart and Dr. Underhill. *Treasurer:* Dr. James Ritchie. *Secretaries:* Mr. James Hodsdon and Dr. R. W. Philip. *Representative on the Council of the Association:* Dr. R. W. Philip and Dr. William Russell. *Representatives on the Parliamentary Bills Committee:* Dr. William Russell. *Branch Council:* Sir John Batty Tuke, Drs. Cotterill, G. A. Gibson, T. R. Scott (Musselburgh), Argyll Robertson, James Carmichael, Mackay (Kirkcaldy), George W. Balfour, Dendle (Dunfermline), Calder (Leith), and Graham (Leven).

Revaccination.—On the motion of Dr. JAMES RITCHIE it was unanimously resolved:

That the Edinburgh (Lothians and Fife) Branch of the British Medical Association express its opinion strongly in favour of revaccination, and request the Council of the Association to use its influence, urging the Government immediately to legislate for the attainment of compulsory revaccination.

HONG KONG AND CHINA BRANCH.

A MEETING of this Branch was held at the Government Civil Hospital on March 28th, Dr. JORDAN (Vice-President) in the chair. There were present Staff-Surgeon Barnes, R.N., Dr. Bell, Staff-Surgeon Bett, R.N., Surgeon Burniston, R.N., Dr. Chung, Dr. Harston, Staff-Surgeon Home, R.N., Fleet-Surgeon Johnston, R.N., Dr. Lowson, Surgeon Reid, R.N., Surgeon Rock, R.N., Dr. Stedman, and Dr. F. W. Clark (Secretary).

Confirmation of Minutes.—The minutes of a meeting held on February 15th were read and confirmed.

Communications.—The SECRETARY showed (for Dr. THOMSON, the President, who was unavoidably absent) *post-mortem* specimens from a recent case of Bubonic Plague.—Dr. CHUNG showed a patient upon whom he had performed Amputation through the Thigh, the first major operation performed in the native Tung Wah Hospital.—Dr. LOWSON read a paper on The Treatment of Intestinal Inflammation, which was followed by a discussion, in which Drs. STEDMAN and BELL, Staff-Surgeons BARNES and HOME, and Dr. JORDAN took part.

Vote of Thanks.—The meeting closed with a vote of thanks to the reader of the paper.

METROPOLITAN COUNTIES BRANCH.

THE forty-seventh annual meeting of this Branch was held at the Hotel Cecil on June 20th, Dr. FARQUHARSON, M.P., in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read, and after being amended at the suggestion of Mr. R. B. ANDERSON, were confirmed.

Report of Council.—The report of the retiring Council was then read and unanimously adopted.

Treasurer's Report.—The Honorary Treasurer's report was next received and adopted. Votes of thanks were duly carried to the Treasurer and auditors.

Election of Officers.—The CHAIRMAN announced that the following gentlemen had been elected officers of the Branch for the ensuing year:—*President-Elect:* Mr. George Eastes. *Vice-Presidents:* Mr. Andrew Clark, Dr. Robert Farquharson, M.P., Dr. Oswald, Mr. Frederick Wallace. *Treasurer:* Mr. George Eastes. *Secretaries:* Mr. H. Betham Robinson, Dr. Washbourn. *Council:* Mr. Robert Argles, Mr. Campbell Boyd, Mr. George Brown, Mr. Frederic Durham, Mr. George Greenwood, Dr. Major Greenwood, Dr. Heron, Mr. Brindley James, Mr. Keetley, Mr. Hugh Ker, Mr. Kiallmark, Dr. Hector Mackenzie, Mr. H. E. Powell, Dr. St. Clair Shadwell, Dr. Sansom, Dr. Knowsley Sibley, Dr. Crawford Thomson, Dr. Dawson Williams. *Representatives of the Branch on the Council:* Mr. Andrew Clark, Dr. Radcliffe Crocker, Mr. George Eastes, Dr. Isambard Owen, Dr. Leonard Sedgwick, Mr. H. Betham Robinson. *Representatives on the Parliamentary Bills Committee:* Mr. George Brown, Dr. Major Greenwood, Mr. Victor Horsley, Dr. Dawson Williams. *Members of the Ethical Committee:* Dr. Thomson Morton, Dr. Leonard Sedgwick, Dr. St. Clair Shadwell.

Votes of Thanks to the Retiring Officers.—Votes of thanks were unanimously carried to the retiring officers.

President's Address.—The new president, Mr. THOMAS BRYANT, then took the chair and delivered his address. A cordial vote of thanks was proposed, seconded, and passed to the Chairman for his address.

Illegal Certification of Unqualified Practitioners.—The SECRETARY read a letter from the East Yorks and North Lincoln Branch enclosing the resolutions passed at their annual meeting on May 31st, and already published in the BRITISH MEDICAL JOURNAL.—Dr. WASHBOURN proposed that the letter be referred to the Council of the Branch for consideration and for a special report to be presented to a meeting of the Branch.—This was seconded by Mr. R. B. ANDERSON, and duly carried.

Annual Dinner.—The annual dinner then took place, Mr. BRYANT in the chair, and among the visitors were: Surgeon-General Skey Muir, Colonel Branfoot, and Mr. Fowke. After dinner the CHAIRMAN proposed the toast of "Her Majesty the Queen and the other members of the Royal Family." "The Houses of Parliament" was proposed by Dr. DAWSON WILLIAMS and responded to by Dr. FARQUHARSON, M.P. Mr. BRYANT gave the "Army, Navy, and Reserve Forces," which was replied to by Surgeon-General SKEY MUIR and Mr. HUMPHREYS. "The Metropolitan Counties Branch of the British Medical Association" was proposed by Dr. LEONARD SEDGWICK, and replied to by the PRESIDENT. Mr. GEORGE EASTES proposed the toast of the "Visitors," and Colonel BRANFOOT replied. Between the toasts a musical programme was given. Dr. Arthur Haydon rendered two violin solos, and the "Court" Part Singers sang several quartettes.

MIDLAND BRANCH.

THE annual meeting was held at the Royal Infirmary, Derby, on Thursday, June 15th. Dr. CARLINE (President) vacated the chair, which was taken by Mr. E. M. WRENCH (Baslow), President-elect. Forty-seven members were present.

New Members.—The following were elected members of the Association and Branch:—Thomas Kenway Williams, M.R.C.S., L.R.C.P., Elm Avenue, Nottingham; Willie Eustace Merle Wright, F.R.C.S.Ed., 37, Bentinck Road, Nottingham; George A. Clarkson, F.R.C.S.Eng., 11, Southgates, Leicester; H. Pywell Daniell, M.R.C.S., L.R.C.P., Osmaston Road, Derby; W. G. McElligott, L.R.C.P. and S.I., D.P.H., The Limes, Belper; W. Wrangham, M.B.Lond., Leicester Infirmary. The following members of the Association were elected members of the Branch:—Messrs. M. Parry Jones, M.B., Derby; C. E. Dashwood, Somerby; J. D. McCrindle, Bagthorpe; R. G. Hogarth, F.R.C.S., Nottingham; Winston A. St. John, M.B., Derby; A. G. Kewley, Derby; W. J. Howarth, M.D., D.P.H., Derby; J. H. Hodson, Derby; H. Barrett, M.B., Derby; F. W. Bloomer, Long Eaton; G. Cole, Sneinton Road, Nottingham; R. Heelis, M.D., Lenton, Notts; W. A. Howitt, M.B., Nottingham; H. P. Job, Newark; E. Mitchell, M.D., Sutton-in-Ashfield; C. J. Palmer, Mansfield Woodhouse; A. W. C. Peskett, M.B., Nottingham; T. J. Pritchard, Retford; C. E. Potter, M.B., Parwich, Ashbourn; J. Watson, M.B., Nottingham; F. W. Wesley, M.D., West Bridgeford.

Vote of Thanks to Retiring President.—A vote of thanks was passed to Dr. Carline, the retiring President.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following were elected:—*Representatives on Council of Association:* Dr. Handford, Dr. Pope. *Representatives on Parliamentary Bills Committee:* Dr. Carline, Dr. Pope. *Vice-Presidents:* Lincoln, Mr. T. P. Greenwood (Stamford); Leicester, Dr. C. A. Moore (Leicester). *Council of Branch:* Lincoln, Dr. W. A. Carline, Dr. C. Harrison; Derby, Mr. C. H. Taylor, Dr. E. Vaudrey; Leicestershire, H. J. Blakesley, F.R.C.S., Dr. H. J. Davies; Notts, Dr. F. Mutch, Dr. J. Thomson. *Honorary Secretaries of Districts:* Derby, Mr. J. A. Southern; Lincoln, Dr. E. M. Sympson; Nottingham- Dr. W. G. Laws. *General Secretary and Treasurer and Secretary for Leicestershire:* Dr. Frank M. Pope.

President's Address.—The PRESIDENT read an address which dealt with his experiences in the Crimean war.

Removal of Gasserian Ganglion.—Mr. C. J. BOND showed a case in which he had removed the Gasserian ganglion by the Krause-Hartley method for Tic Douloureux. The disease appeared to be cured, some months having passed since the operation without relapse. The case will be published.

Local Distribution of Cancer.—A discussion then took place on the local distribution of cancer in the area of the Branch. A circular had been issued asking for information as to: (1) The frequency of cancer; (2) its prevalence on high or low ground; (3) whether on the increase or decrease; and (4) instances of two or more cases in the same house.—Dr. MILNES opened the discussion with a paper, in which he gave statistics with regard to the incidence of cancer in various villages in the alluvial plain of the Trent, and said he found that the death-rate there was no higher, though at an elevation of not more than 200 or 300 feet, than at places like Wirksworth, 800 or 900 feet.—Dr. ASTLEY V. CLARKE gave statistics as to Leicestershire; here the higher lands seemed not to have such a high death-rate as the lower. Dr. SYMPSON gave statistics of Lincoln City.—Dr. E. N. NASON gave his opinion on the lines on which he has already published a paper in the BRITISH MEDICAL JOURNAL.—Dr. KNOX (Bakewell) also spoke.—Communications on the subject were read from Dr. BOULTON (Horncastle),

Dr. RINGLOVE (Newark), and Dr. HOWARTH (Derby). A general opinion was expressed that much more work might be devoted to the subject, and a Committee of the Branch was formed to investigate and report. The following were elected with the district secretaries: Lincoln, Dr. Harrison, Dr. R. Farrar (Stamford); Derby, Dr. Milnes, Dr. Knox; Notts, Mr. Hogarth, Dr. W. B. Ransom, Dr. Ringrose; Leicestershire, Dr. Astley Clarke, Dr. Sevestre. The President and Treasurer to have power jointly to add to these.

Abdominal Hysterectomy.—Mr. HENDERSON POUNDS read a paper referring to 5 cases of abdominal hysterectomy. They were all successful. Three specimens of the removed uteri were shown.

Annual Dinner.—The annual dinner took place at the St. James's Hotel; twenty-seven members dined together.

NORTHERN COUNTIES OF SCOTLAND BRANCH.

THIS Branch held its annual meeting on June 14th at the Kyle of Lochalsh, when there was a fair attendance of members; Dr. MUNRO MOIR (Inverness), President, in the chair.

Election of Office-Bearers.—The following office-bearers were elected: *President:* Dr. Murray (Inverness). *President-Elect:* Dr. Mann (Nairn). *Secretary and Treasurer:* Dr. Mackay (Elgin). *Representative to Council and Parliamentary Bills Committee:* Dr. Ogilvie Grant (Inverness).

New Members.—The following new members were admitted: Dr. Bruce (Forres), Dr. Fletcher (Harris), Dr. Tregelles Fox (Strathpeffer), Dr. MacDonald (Beauly), Dr. Mowat (Burghead), Dr. MacLennan (Forres), Dr. Sutter (Nairn).

The Conciliation Board.—It was unanimously resolved to approve of the proposal of the General Medical Council that a conference should be held between representatives of the chief friendly societies and an equal number of the medical profession to discuss the terms of contract between members of probably constituted clubs and medical men holding club appointments with a view to their right adjustment.

Vote of Thanks.—A cordial vote of thanks was passed to Dr. Bruce for his generosity in defraying the travelling expenses of the members and their friends to Kyle of Lochalsh. The excursion from first to last was most enjoyable; the weather was perfect, and the scenery through which the railway passes looked its very best. The three hours' sail on Loch Duich contributed greatly to the day's pleasure: and on all hands it was recognised as having been a happy thought to make the Branch's excursion to a district so full of picturesque scenery and beauty.

SOUTHERN BRANCH.

THE annual meeting of this Branch was held at Southampton on June 22nd, under the presidency of Dr. D. E. GREEN, of Sandown, Isle of Wight.

Election of Officers.—The result of the ballot for officers for the ensuing year was announced as follows: *President:* A. B. Wade. *President-Elect:* C. B. Straton. *Vice-Presidents:* J. F. Bullar and Dr. Williamson. *Members of Council:* Dr. Blackman, Dr. Lloyd Owen, Dr. Robertson, Dr. G. F. England, L. S. Luckham, Norman Aldridge. *Secretaries of Districts:* A. B. Wade, T. C. Langdon, Dr. Claremont, Dr. Shirtliff, and J. E. Gordon. *Representative on Parliamentary Bills Committee:* C. R. Straton. *Representative on the Council of the Association:* H. J. Manning, J. Groves. *Honorary Secretary and Treasurer:* H. J. Manning.

The late Dr. Sinclair Coghill and Surgeon-General Maclean.—It was moved:

"That the members present, having heard with deep regret the news of the death of Dr. J. Sinclair Coghill, desire to record a vote of condolence and sympathy with Mrs. Coghill and family in the great loss which they and the medical profession generally have sustained.

A similar vote was recorded with reference to the death of the late Surgeon-General Maclean.

Papers.—Papers, followed by interesting discussions, were read by Dr. PURVIS (Southampton) and Mr. HARCOURT COATES (Salisbury).

President's Address.—Mr. Green resigned the chair to Mr. A. B. WADE, who read a very interesting paper, in which the Vaccination Act, the proposed midwifery legislation, and other matters of concern to the medical profession were ably discussed.—A very cordial vote of thanks to the President for his address and for his generous hospitality concluded the proceedings.

The Next Annual Meeting.—The annual meeting of 1900 will be held at Wilton, under the presidency of Mr. C. R. Straton.

SOUTHERN BRANCH: SOUTH EAST HANTS DISTRICT.

THE half-yearly meeting was held at Portsmouth on May 26th, 1899.

New Members.—The following were elected: Inspector-General A. Turnbull, R.N., Mr. L. H. D. Hale, Staff-Surgeon J. H. Thomas, R.N., Mr. A. Vernon Ford, J. Priestley, M.D., G. Archdall Reid, M.B., L. E. V. Every-Clayton, M.D., F.R.C.S., Surgeon G. A. Bell, R.N., Surgeon A. H. L. Cox, R.N., Messrs. John Kyffin, C. A. Robinson, M.B., F. C. Rundle, P. B. Spurgin, A. Bosworth Wright, F. J. Driver, M.D., M.A., H. Coates, M.D., J. D. Whittendale, and Major J. R. Mallins, R.A.M.C.

Election of Officers.—F. Lord was elected President for the ensuing year, and Surgeon-General C. McD. Cuffe, C.B., and Mr. J. McGregor were elected Vice-Presidents.

Cases.—Dr. J. G. BLACKMAN exhibited a young woman suffering from Syphilitic Lesions in the Nose and Soft Palate, apparently due to inherited disease, and accompanied by atrophic changes in the nasal and pharyngeal mucous membrane.—Dr. W. SYKES exhibited a boy presenting Symmetrical Enlargement of the Condylar Extremities of both Femora with disease of one elbow joint (tuberculous?).—Mr. E. WILLMER-PHILLIPS exhibited a specimen of Cystic Kidney.—Dr. COUSINS narrated a case of Ovariotomy in which there were extensive adhesions and considerable difficulty in forming a pedicle. Subsequently the patient became seriously ill, suffering from cystitis, while offensive urine escaped from the lower part of the wound. Ultimately a slough was passed *per urethram*, and the patient made a good recovery.—Dr. C. A. ROBINSON showed (for Mr. H. RUNDLE): (1) A man suffering from Recurrent Sarcoma, which had been treated by Coley's fluid; (2) a specimen of Periosteal Fibrifying Sarcoma of the Femur, together with a skiagraph of the same, kindly taken by Dr. H. A. Roome; and (3) a case of Ununited Fracture of Bones of the Forearm in a man.

Antistreptococcus Serum in Septicæmia.—Dr. SYKES read notes of a case of scarlatina followed by septicæmia and menacing meningeal symptoms, which appeared to be controlled by injections of antistreptococcus serum and local application of ice, with the result that the patient recovered from a very dangerous condition.—Commenting on Dr. Sykes's case, Mr. EMMETT narrated a case of tonsillitis, with extensive sloughing and a general septic condition, in which he considered the patient's life was saved by injections of antistreptococcus serum.—Dr. PRIESTLEY stated that the serum had been tried extensively in metropolitan fever hospitals for septic scarlatina, but that, as it did not appear to benefit the patients, its use had been abandoned.

SOUTH-WESTERN BRANCH.

THE annual meeting of this Branch was held at Barnstaple on June 14th.

Luncheon.—The President-Elect, Dr. MARK JACKSON (Barnstaple) hospitably entertained the members and friends present at luncheon at the Imperial Hotel; about fifty were present.

Council Meeting.—The Branch Council met in the Board Room of the North Devon Infirmary at 2.45 P.M. The President, Dr. HUGH M. MONTGOMERIE (Penzance), occupied the chair, and fifteen members of Council, with the Hon. Secretary, were present. The minutes of the last meeting were read and confirmed. Drs. P. Maury Deas (Exeter) and John Rolston (Devonport) were re-elected Representatives of the Branch on the Council of the Association and on the Parliamentary Bills Committee; a vote of thanks to them for their past services was carried by acclamation.

Report of Council.—The draft report of the Council for the year 1898-99 was then read by the HON. SECRETARY, and adopted as follows:—(1) *Strength of the Branch:* The Branch continues to grow, the present number being 361, against 334 last year. Three members have been lost by death during the year, and 13 by resignation, removal, etc. The Council would urge on members the desirability of increasing the numbers and so the importance of the Branch. (2) *Meetings:* Three inter-

mediate meetings have been held, one at Exeter in October, one at Plymouth in January, and one at St. Austell in April. All have been well attended. (3) *Election of Divisional Representatives on the Branch Council:* The following have been elected since the last annual meeting: Messrs. W. F. Thompson (Launceston), J. Gould (Tavistock), R. F. Stephens (St. Austell), G. Evans (Seaton), J. Somer (Tiverton), W. Hammond (Liskeard), F. Hichens (Redruth), A. L. Salmon (Truro), G. H. Johnson (Teignmouth), and the following local members of Council: Messrs. J. W. Cooke (Barnstaple), A. A. Mackeith (Ilfracombe), and W. J. Harper (Braunton). The organisation of the Branch according to Parliamentary divisions has proved an unqualified success. (4) *National Association for the Prevention of Tuberculosis:* At the January intermediate meeting it was resolved to co-operate with this Association. A Committee was appointed to act with the Committee of the Plymouth Medical Society, and as a result of this a public meeting was held at Plymouth on February 21st, 1899, and the Devon and Cornwall Branch of the National Association for the Prevention of Tuberculosis was founded. The Council has made a grant of £5 towards the initial expenses of the Branch, which now numbers upwards of 200 members. (5) Several ethical questions have received the attention of the Branch Council with satisfactory results. (6) *Finance:* There is a credit balance of £91 0s. 9d. The income has been £38, and the expenditure £35 5s. 4d.

New Members.—The following were then elected members of the Association and of the Branch: Messrs. E. J. Toye, M.D., Bideford; J. H. Gough, F.R.C.S.E., Torquay; W. C. Hamilton, M.B., Plymouth; Surgeon M. W. Falkner, Royal Naval Barracks, Devonport; M. R. Gooding, M.R.C.S., Bideford; C. Burt, M.R.C.S., Torrington; F. W. Kendle, M.R.C.S., South Molton; A. P. Drummond, M.D., Dolton; C. W. E. Toller, M.D., Ilfracombe; D. R. Stephens, F.R.C.S., Lynton; T. Sanders, F.R.C.S., South Molton. The following, being already members of the Association, were elected to membership of the Branch: A. Mahood, M.D., Appledore; C. Martin, M.D., Newton Abbot; E. R. Fothergill, M.B., Roche; A. Shaw, M.D., St. Austell.

Next Annual Meeting.—With regard to the place for the annual meeting for 1900, it was resolved to accept with pleasure the invitation of the members resident in Torquay, and that Mr. P. Q. Karkeek be the President-elect.

General Meeting.—The general meeting of the Branch took place at 3.30 P.M., the President (Dr. H. M. Montgomerie), being in the chair.

President's Addresss.—The minutes of the last annual meeting at Penzance having been taken as read, Dr. Montgomerie resigned the chair to Dr. MARK JACKSON, who delivered his inaugural address. After welcoming the members of the Branch to Barnstaple, and giving a brief historic summary of the town, he dealt with the present position of vaccination, tuberculosis, and cancer.

Votes of Thanks.—At the close of the address a very hearty vote of thanks to the President was proposed by Dr. STEPHENS, seconded by Dr. ROLSTON, and carried by acclamation, as was also a vote of thanks to the ex-President (Dr. Montgomerie). The Honorary Secretary (Dr. H. W. Webber) was re-elected, and the report of the Branch Council unanimously adopted. After the meeting tea and coffee were served in the North Devon Infirmary.

Annual Dinner.—The annual dinner took place at 6.15 P.M. at the Imperial Hotel. About 40 members and several guests, including the Mayor of Barnstaple, were present. The following day the local members most kindly provided an excursion to Ilfracombe, thence by coach to Wooda Bay and Lynton, and back by the Lynton-Barnstaple light railway.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE annual meeting of this Branch was held at the Royal Society's Room, Sydney, on March 24th; Dr. W. CHISHOLM, President, in the chair. There were forty-five members and two visitors present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The PRESIDENT announced the election of the following gentlemen as members: Drs. J. MacPherson, E. C. Hall, E. M. Pain, N. W. Kater, H. Stoker, W. C. Robinson, P. H. Cooley, George Goode, Thos. Davis, and C. B. Pym.

Report of Council, etc.—The HONORARY SECRETARY read the report of the Council, and the HONORARY TREASURER read the financial statements and the report of the Gazette Subcommittee. Dr. CRAGO moved the adoption of the report and balance-sheets, seconded by Dr. QUAIFE, and carried.

President's Address.—The PRESIDENT read his Presidential address.—Dr. MANNING proposed, and Dr. KNAGGS seconded:

That a vote of thanks be accorded to Dr. Chisholm for his address.

Dr. CHISHOLM acknowledged the vote.

Representation of Branch on Council.—On the motion of Dr. CRAGO it was resolved:

That Drs. Sydney Jones and Rennie be appointed representatives of the New South Wales Branch on the Council of the British Medical Association.

Election of Officers.—The PRESIDENT announced the result of the ballot for officers as follows:—*President:* Dr. E. T. Thring (unopposed). *Vice-President:* Dr. W. H. Coutie (unopposed). *Councillors:* Drs. Chisholm, Hankins, Worrall, Knaggs, Crago, MacCormick, Foreman, Brady, Clark, Clubbe, Abbott, and F. H. Quaife. Drs. Todd and Jarvie Hood were appointed auditors.—A vote of thanks to Drs. Thane and Brown, the scrutineers appointed by the President, and to Drs Samuelson and Maitland, assistants, was proposed by Mr. HANKINS, seconded by Dr. JAMIESON, and carried.

THE usual monthly meeting of this Branch was held at the Royal Society's Room on April 28th, Dr. E. T. THRING (President) in the chair. There were also forty-five members present and two visitors.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The PRESIDENT announced the election of the following gentlemen as members of the Branch: Drs. Cosh, Ludowici, Reid, and Palmer.

Communications.—The PRESIDENT stated that he had received a letter with reference to a certain editorial appearing in the April number of the *Australasian Medical Gazette*, but would first call upon Drs. Sinclair Gillies and O'Neill to exhibit a patient suffering from syringomyelitis.—Dr. SINCLAIR GILLIES and G. L. O'NEILL read some notes on two cases of Syringomyelitis, and exhibited the patient. Drs. THRING and SCOT SKIRVING made some remarks upon the cases; and Dr. O'NEILL replied.—Dr. A. MILLS read some notes on a case of Cerebral Tumour; and also exhibited a child's heart showing Patent Foramen Ovale and Deficiency of Ventricular Septum.—Drs. W. H. GOODE and ISBISTER exhibited some samples of the Serum Diagnosis of Typhoid Fever by means of the dead cultures of the bacillus typhosus; also the vaccine or inoculation fluid against typhoid. Dr. SINCLAIR GILLIES made some remarks upon the exhibits and Dr. GOODE replied.

The Australasian Medical Gazette.—Dr. ARMSTRONG said he desired as a matter of privilege to move the following resolution:

That this Branch of the British Medical Association ask the Council to entirely disavow the editorial which appeared in the April number of the *Australasian Medical Gazette*, reflecting on the graduates and teaching staff of the Sydney University, and that this disavowal be published in the columns of the *Australasian Medical Gazette*.

The PRESIDENT then took the sense of the meeting as to whether the discussion on the resolution should be taken at once or postponed for one week.—It was decided to postpone the discussion until May 5th.—Dr. ARMSTRONG then gave formal notice that he would move the above-mentioned resolution at a special meeting of the Branch to be held on May 5th.

A SPECIAL general meeting of this Branch was held at the Royal Society's Rooms, Sydney, on May 5th, Dr. E. T. THRING, President, in the chair. There were fifty-four members and two visitors present.

The Australasian Medical Gazette.—The PRESIDENT asked the Honorary Secretary to read some notes which had been prepared with reference to the relations of the editor of the *Australasian Medical Gazette* towards the Council of the Branch. — The HONORARY SECRETARY read notes on the

Articles of Association bearing upon the responsibility of the editor and the Council.—The President read the following resolution, which had been passed by the Council:

With reference to the editorial in the April number of the *Australasian Medical Gazette*, containing reflections on the teaching staff and graduates of the Sydney University, the Council wishes to state that this article does not express the opinion of the Council, and that the Council regrets its publication.

Dr. W. C. Armstrong moved:

That this Branch of the British Medical Association ask the Council to entirely disavow the editorial which appeared in the April number of the *Australasian Medical Gazette*, reflecting on the teaching staff and graduates of the Sydney University, and that this disavowal be published in the columns of the *Australasian Medical Gazette*.

This was seconded by Dr. Mills.

Dr. Fiaschi proposed as an amendment:

That this Branch of the British Medical Association, whilst reserving its rights and that of the medical press to discuss and criticise the doings of the Sydney University, ask the Council to entirely disavow the editorial which appeared in the April number of the *Australasian Medical Gazette* reflecting on the teaching staff and graduates of the Sydney University, and that this disavowal be published in the columns of the *Australasian Medical Gazette*.

Drs. Armstrong and Mills stated that they would accept Dr. Fiaschi's amendment, and withdraw the original resolution in its favour.—After discussion, Dr. Fiaschi's resolution was put to the meeting, and carried unanimously.

TRINIDAD AND TOBAGO BRANCH.

The annual meeting of this Branch took place at the Colonial Hospital on May 4th, Dr. Chas. Francis Knox, President, in the chair. There were present Dr. Henry M. Alston (President-elect), and Drs. de Wolf, Dickson, Koch, Lassalle, Macfarlane, Perez, Pollonais, Rodriguez, Stollmeyer, and Prada.

Annual Report.—The Secretary read the annual report of the Council.

President's Address.—Dr. Alston then took the presidential chair, and read his address on the Need of a Forward Movement in the Medical Profession.

Election of Officers.—The election of office-bearers resulted as follows:—*President-elect:* Dr. W. V. M. Koch. *Council:* Drs. J. A. de Wolf, C. F. Knox, J. R. Dickson, F. A. Rodriguez, and S. M. Laurence. *Honorary Secretary and Treasurer:* Dr. E. Prada.

WEST SOMERSET BRANCH.

The annual meeting of this Branch was held at Taunton, on June 23rd; twenty-four members were present.

Installation of New President.—After a lunch, Mr. R. H. F. Routh, the retiring President, introduced the President, Dr. J. A. Macdonald, of Taunton, who took the chair.

Confirmation of Minutes.—The minutes of the last meeting and a special meeting were read and confirmed.

Report of Branch Council.—The report of the Branch Council was read and adopted, showing that the Branch now numbered 76, an increase of 6 on last year, while the Treasurer's accounts showed a balance in hand of £10 11s. 2d.

Election of Officers.—Dr. W. L. Winterbotham, of Bridgwater, was re-elected as representative on General Council and Parliamentary Bills Committee. Branch Council: Messrs W. B. Winckworth (Taunton), J. P. Johnstone (Langport), and Gordon Henry (Minehead), were elected in place of Drs. Kelly, Winterbotham, and Bain, retiring in rotation. Dr. Meade-King (Taunton), was re-elected Honorary Secretary and Treasurer.

The Dinner Question.—The Honorary Secretary having drawn the attention of the meeting to the difficulty in providing a dinner after the meeting, owing to the small number of diners and notice not being sent to him, it was resolved that stamped addressed postcards be sent with the notices of meetings, that the meetings be held in the middle of the day, and that a lunch be substituted for a dinner.

President-Elect and next Annual Meeting.—Mr. G. F. Sydenham, of Dulverton, was elected President for 1900-1901 and it was resolved that the next annual meeting be held at Dulverton.

Intermediate Meetings.—The arrangements of the intermediate meetings were left to the Council.

The National Association for the Prevention of Tuberculosis.—The President, instead of the customary address, introduced a discussion on whether this Branch should accept the invitation of the Bath and Bristol Branch to join with them in forming a branch of the National Association for the Prevention of Consumption. After explaining the objects of the Association, and the state of the movement in the West of England, he proposed the following regulation, which was seconded by Dr. Meade-King:

That the West Somerset Branch join the Bath and Bristol and neighbouring Branches in originating a branch of the National Association for the Prevention of Consumption and other forms of Tuberculosis; and that we use our influence as a Branch and as individuals to make the meeting to be held at Bristol on July 6th a success.

Dr. Rutherford proposed an amendment, which was seconded by Mr. Gordon Henry:

That while sympathising with the action of the Bath and Bristol Branch, the West Somerset Branch should hold aloof until they had heard further details.

After considerable discussion, the amendment was put to the meeting and lost, and the resolution was then carried unanimously.

Dr. Macdonald and Mr. Routh were appointed to represent the Branch in the matter.

Midwives and Opticians.—After considering a circular from the East York and North Lincoln Branch on the licensing of midwives and opticians, the meeting terminated with a vote of thanks to Dr. Macdonald.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SEVENTH ANNUAL MEETING.

The sixty-seventh annual meeting of the British Medical Association will be held at Portsmouth on Tuesday, Wednesday, Thursday, and Friday, August 1st, 2nd, 3rd, and 4th, 1899.

President: Sir Thomas Grainger Stewart, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh, Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President-Elect: John Ward Cousins, M.D., F.R.C.S., Senior Surgeon, Royal Portsmouth Hospital.

President of the Council: Robert Saundby, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: Charles Parsons, M.D., Dover.

An Address in Medicine will be delivered by Sir Richard Douglas Powell, Bart., M.D., F.R.C.P., Physician Extraordinary to Her Majesty the Queen, Physician to Middlesex Hospital.

An Address in Surgery will be delivered by Professor Alexander Ogston, M.D., Surgeon in Ordinary to Her Majesty the Queen in Scotland, Regius Professor of Surgery in the University of Aberdeen.

The scientific business of the meeting will be conducted in twelve Sections, as follows, namely:

A. Medicine.

Grand Jury Room, Town Hall.

President: John Mitchell Bruce, M.D. *Vice-Presidents:* Edward James Wallace, M.D.; Robert William Burnet, M.D. *Honorary Secretaries:* William Sykes, M.D., Bury Place, Gosport; Humphry Davy Rolleston, M.D., 112, Harley Street, W.

Discussions have been arranged as follows:

1. Wednesday, August 2nd.—On the Medical Tests required at present for Admission to the Public Services. It is hoped that this will be opened by Sir J. N. Dick, K.C.B. Professor W. Osler, M.D., F.R.S., Sir Dyce Duckworth, Dr. P. Manson, Dr. J. Mitchell Bruce, Dr. R. W. Burnet, Dr. T. D. Savill, Major W. Turner, R.A.M.C. (Gibraltar), Dr. Wm. Sykes, Dr. Hill, and Dr. E. J. Wallace, have promised to take part in this discussion.

2. Thursday, August 3rd.—On the Preventive and Remedial Treatment of Tuberculosis. The discussion will be opened by Professor T. Clifford Allbutt, M.D., F.R.S. It is hoped that Sir William Broadbent, Bart., M.D., F.R.S., Sir R. Douglas Powell, Bart., M.D., Sir T. Grainger Stewart, M.D., Sir W. T. Gairdner, M.D., K.C.B., Dr. Arthur Ran-

some, F.R.S., Dr. F. W. Burton-Fanning, Dr. Heron, Dr. R. Robertson, Mr. A. G. S. Mahomed, Dr. Alex. G. Davey, Dr. J. E. Squire, Dr. Browning, Dr. H. Walsham, Dr. G. A. Reid, Dr. W. Morton Harman, Dr. S. T. Pruen, Dr. Frank M. Pope, Dr. R. W. Philip, Sir H. R. Beevor, Bart., M.D., Dr. S. Rendall, Dr. W. Vicary Snow, Dr. Wm. Calwell, Dr. R. Shingleton Smith, Dr. Williamson, Dr. A. P. Parsons, Dr. M. G. Foster, Dr. James Tyson (Philadelphia), Dr. P. B. Smith, and Mr. Colin Campbell will take part in the discussion.

The following papers have been offered:

BAIN, W., M.D. (1) The action of certain British and Foreign Mineral Waters on the Quadriurate of Sodium. (2) An Experimental Contribution to the Study of Gout.
BRISCOE, J. F., M.R.C.S. The Practice of Bloodletting.
CALWELL, W., M.D. Gastric Adhesions as a Cause of Dyspepsia.
CAMPBELL, Harry, M.D. The Enlargement of the Chest in Emphysema and its Treatment.
EWART, William, M.D. (1) On the Prebalneal Treatment of Heart Disease by Inhalations of Carbonic Acid Gas; and on the Uses of the Inhalation in Cardiac Dyspnœa and in Anginoid Pain. (2) On the Recognition of Enlargements of the Left Auricle by Percussion; and on other Clinical Uses of Dorsal Percussion, including Percussion of the Pelvis.
GARDNER, W. T., M.B. Notes on the Open-Air Treatment of Phthisis with Photographs of a new form of Kiosk.
HAIG, Alexander, M.D. Uric Acid and the Circulation; some New Methods of Estimating its Effects.
HERON, G. A., M.D. On the Results of Treatment by the New Tuberculin.
HUTCHINSON, Professor Woods. On the Form of the Chest in Tuberculosis and its Significance.
JOHNS, W. Denton, B.A., M.D. On the Open-air Treatment of Tuberculosis in England (with demonstration of cured cases).
LUFF, A. P., M.D. The Gelatinous Form of Sodium Biurate and its bearing on the Pathology of Gout.
MACLEOD, Herbert G., M.D., M.S. The Causes and Treatment of Sciatica and Neuralgia.
OSLER, Professor W., M.D., F.R.S. On Hypertrophic Cirrhosis with Bronzing of the Skin—Hæmochromatosis.
PARSONS, A. P., M.B. The Accurate Diagnosis and Successful Treatment of Perforated Gastric Ulcer.
POYNTON, F. J., M.D. The Occurrence of Arthritis in connection with Inflammation of the Appendix Vermiformis.
PRUEN, S. T., M.D. Diet and Nutrition in the Treatment of Tuberculosis.
SAMWAYS, D. W., M.D. The Defence of the Cardiac Orifices other than Valvular.
SUCKLING, C. W., M.D. On Migraine.
SYKES, William, M.D. A Suggestion for the Treatment of Phthisis Pulmonalis on the Lines of one of its Normal Terminations.

B. SURGERY.

Banqueting Room, Town Hall.

President: HENRY TRENTHAM BUTLIN, F.R.C.S. *Vice-Presidents:* Deputy-Inspector-General RICHARD SAMUEL PURNELL GRIFFITHS, R.N.; ALFRED LLOYD OWEN, M.D. *Honorary Secretaries:* HENRY RUNDLE, F.R.C.S., 13, Clarence Parade, Southsea; D'ARCY POWER, F.R.C.S., 10A, Chandos Street, Cavendish Square, W.

Special discussions will be held upon:

1. The Diagnosis and Treatment of Gunshot Wounds of the Abdomen. To be opened by Colonel Stevenson, M.Ch., R.A.M.C., Professor of Military Surgery at Netley, followed by Mr. A. Barry Blacker, Dr. A. H. Robinson, Major W. C. Beevor, R.A.M.C., Damer Harrisson, F.R.C.S.Ed., and others.

2. The Prevention and Treatment of Syphilis in the Navy and Army. To be opened by Deputy-Inspector-General E. E. Mahon R.N., C.B., and Major W. Dick, M.B., C.M., R.A.M.C., Netley, Assistant Professor of Clinical Surgery, Netley. The following gentlemen have intimated their intention of taking part in the discussion: Fleet-Surgeon A. T. Corrie, R.N., Dr. C. R. Drysdale, Major F. J. Lambkin, R.A.M.C., Mr. J. E. Lane, Dr. J. MacNamara, Major William Niven, M.D., Dr. G. Ogilvie, Dr. Shaw-Mackenzie, Mr. A. H. Ward, Colonel F. H. Welch, R.A.M.C., and Staff-Surgeon A. E. Weightman, R.N.

The following papers have been offered:

ARMSTRONG, G. E., M.D. The Surgical Treatment of Hæmorrhage from Gastric Ulcer.
BARLING, Gilbert, F.R.C.S. Analysis of 120 Operations for Appendicitis with Observations thereon.
BIDWELL, L. A., F.R.C.S. A Method of attaching the Mucous Membrane to the Skin of the Perineal Excision of the Rectum.
CARWARDINE, Thomas, M.S. On Excision of the Rectum for Cancer by a New Method and its Results.
CLARKE, J. Jackson, F.R.C.S. An Analysis of 100 Cases of Spinal Curvature and Disease.
DOWNIE, Walker, M.B. Description of two cases of Sarcoma of the Tongue. (Specimens, Sections, and Photographs will be shown.)
FREYER, P. J., M.Ch. Recent Notes on the Surgery of Stone in the Bladder.
HARRISSON, Damer, F.R.C.S. Some Cases of Cerebral Surgery (With lantern illustrations).
HUTCHINSON, J., jun., F.R.C.S. The Vermiform Appendix in Relation to Hernia and Intestinal Obstruction. Illustrated by lantern slides and diagrams.
LUCAS, R. Clement. (1) Removal of a Bullet and of a Detached Fragment from the Interior of the Skull after localisation by the *x* rays. (2) Removal of a Bullet from the Front of the 2nd Cervical Vertebra after localisation by the *x* Rays.
MACLEOD, Herbert W. G., M.D., M.S. The Treatment of Stone in the Bladder, with Notes of some Cases operated upon.
MORTON, Charles A., F.R.C.S. (1) A Successful Case of Resection of Three-quarters of the Stomach for Carcinoma. (2) A case of Excision of the Cæcum for Carcinoma.
MOYNIHAN, B. G. A., F.R.C.S. A Series of Cases of Malignant Disease of the Stomach treated Surgically.
OGILVIE, G., B.Sc., M.B., M.R.C.P. Heredo-parasyphilis.
REID, G. Archdall, M.B. The Treatment of Surface Wounds.
ROBSON, A. W. Mayo, F.R.C.S. Two Cases of Removal of Tumours of the Suprarenal Capsule.
RUNDLE, H., F.R.C.S. Notes on 375 Cases of Varicocele treated by Operation.
RYALL, Charles, F.R.C.S. Notes of a Case of Extensive Trans-Sacral Excision of the Rectum followed by Perfect Sphinteric Control.
SHEEN, W., M.D., F.R.C.S. (1) A Case of Secondary Thyroid Growth. (2) A Case of Malignant Disease in the Sac of an Umbilical Hernia.
SNOW, Herbert, M.D. The Result of Cancer Operations and of Continuous After-Treatment.
SPENCER, W. G., F.R.C.S. Two Fatal Cases of Venereal Phagedæna.
THOMAS, J. L., F.R.C.S. (1) Two Recent Operations upon the Gasserian Ganglion for Neuralgia by the Hartley Krause Route. (2) A Reliable Washing Tap for Operating Rooms, with a Demonstration of a Simple Method for Irrigating the Abdomen.
WARD, A. H., F.R.C.S. On the Rational Treatment of Syphilis.
WILLIAMS, Chisholm, F.R.C.S.Edin. A Case of Intercostal Neuralgia and Operation.
WILLIAMS, W. Roger, F.R.C.S. The Surgical Treatment of Uterine Cancer.

Mr. Jas. Mackenzie Davidson and Dr. Hugh Walsham will take part in a demonstration of X-Ray Photography in its Relation to Medicine and Surgery.

Professor Ernest Laplace, M.D., Philadelphia, will exhibit a new Forceps for Intestinal Anastomosis.

C. OBSTETRICS AND GYNÆCOLOGY.

Marie-la-bone Hall, Swan Street, Commercial Road.

President: GEORGE GRANVILLE BANTOCK, M.D. *Vice-Presidents:* JOHN ROBERT KEALY, M.D.; JOHN WM. TAYLOR, F.R.C.S. *Honorary Secretaries:* CHARLES PLUMLEY CHILDE, F.R.C.S., Cranleigh, Kent Road, Southsea; ERNEST WILMER PHILLIPS, M.R.C.S., Victoria Crescent, Victoria Road North, Southsea; WALTER WM. HUNT TATE, M.D., 57, Queen Anne Street, W.

The subjects selected for discussion are as follows:

1. Wednesday, August 2nd.—The Treatment of Fever following Delivery, with Special Reference to Serumtherapy. To be opened by Dr. Herbert Spencer.

2. Thursday, August 3rd.—The Natural Menopause compared with *(a)* the Menopause produced by Removal of the Uterine Appendages; and *(b)* the Menopause produced by Removal of the Uterus without Removal of the Appendages. To be opened by Mr. J. Bland Sutton, F.R.C.S.

The following gentlemen have signified their intention of joining in the discussions: Professor Murdoch Cameron, M.D., Dr. John Campbell, Dr. Cushing, Dr. Handfield-Jones, Dr. Shaw-Mackenzie, Mr. Christopher Martin, Dr. Newnham, and Dr. Robert Boxall, Dr. Inglis Parsons, Dr. Purslow, Professor J. W. Byers, M.D., Dr. George Elder, and Dr. More Madden.

The following papers have been offered:

BYERS, Professor J. W., M.D. The Relationship of Certain Cases of Amenorrhœa to Raynaud's Disease and Subsequent Tuberculosis.
CAMERON, Professor Murdoch, M.D. A case of Rupture of Uterus, Missed Labour, and Delivery three months later.
CAMPBELL, John, M.D. Treatment of Acute Peritonitis.
LAWRIE, Macpherson, M.D. Notes of Fifty Consecutive Cases of Cœliotomy for Diseases of the Uterus and Appendages, with Forty-eight Recoveries Performed within the last Twenty Months, with Observations.
LEA, Arnold W. W., M.D. Two Cases of Puerperal Septicæmia due to Streptococcic Injection.
MADDEN, More, M.D. On Some of the Methods employed in the Modern Treatment of Uterine Cancer.
NEWNHAM, W. H. C., M.B. A case of very unusual Suppuration in the Pelvis after Parturition.
PARSONS, J. Inglis, M.D. A New Treatment for Prolapse of the Uterus; further report of cases.
REID, G. Archdall, M.B. The Causes which render difficult the Labours of Civilised Women.
SHAW-MACKENZIE, J. A., M.D. The Syphilitic Factor in the Diseases of Women.
TURNER, P. D., M.D. Tuberculous Lesions found in the Generative Organs in 27 Consecutive *Post-mortem* Examinations on Phthisical Patients.

Warden, C., M.D. The Treatment of Puerperal Infection in the Maternity Hospitals of Paris.

It has been arranged to exhibit pathological specimens illustrative of the papers for discussion.

D. State Medicine.

Shareholders' Room, Gas Company's Offices, 87, Commercial Road.

President: George Wilson, M.D. *Vice-Presidents:* Surgeon-General Charles MacDonagh Cuffe, C.B.; Joseph Groves, M.B. *Honorary Secretaries:* Henry Richard Kenwood, M.B., Granville House, Alexandra Villas, Finsbury Park, N.; A. Mearns Fraser, M.B., Epworth, St. Edwards Road, Southsea.

It is proposed to hold discussions on the following:

1. Recent Vaccination Legislation and the Prevention of Small-pox. To be opened by Dr. E. Seaton.

2. The Personal Communication of Tuberculosis and the Measures available for its Prevention. The following gentlemen will take part in the discussion: Sir Henry Littlejohn, M.D., LL.D.; Professor Delépine, Dr. A. Newsholme, Mr. J. Niven, Dr. Sidney Davies.

3. The Efficiency of Existing Measures directed against the Spread of Infection in Elementary Schools. The following gentlemen will take part in the discussion: Dr. A. Newsholme, Mr. A. E. Harris, Dr. J. F. J. Sykes, Dr. Sidney Davies, Mr. Henry R. Kenwood, Dr. Henry May, and Dr. R. Sydney Marsden.

The following papers have been offered:

Cantlie, James, F.R.C.S. The Early Decay of Teeth in Great Britain.
Dove, J. R. B., M.B. The Hygiene of Schools and Scholars.
Kenwood, Henry, M.B., D.P.H., and Griffith, A., M.D., D.P.H. The Distribution of Erysipelas in London and its Significance.
Manby, E. Petronell, M.D., D.P.H. Meat Inspection and the Abolition of Private Slaughterhouses.
Marsden, A. Sydney, M.B., D.Sc., F.R.S.E. Overcrowding in Secondary Schools.
Marsh, T. A. P., Major, R.A.M.C. The Prevalence, Causes, and Prevention, of Enteric Fever in India and the Tropics.
Peck, Herbert, M.B., D.P.H. Sick-room Infection in Typhoid Fever.
Windle, J. W., M.B. The Mode of Spread of Diphtheria, with special reference to School Attendance, based on the experience of a local outbreak.

E. Psychology.

Swan Street Board School (Boys' School). Entrance in Swan Street, Commercial Road.

President: David Nicolson, C.B., M.D. *Vice-Presidents:* Samuel Rutherford Macphail, M.D.; Peter William Macdonald, M.D. *Honorary Secretaries:* James Neil, M.D., Warneford Asylum, Oxford; Bonner Harris Mumby, M.D., Medical Superintendent, Boro' Asylum, Portsmouth.

The subjects selected for discussion are as follows:

1. Lunacy Legislation as it Affects the Temporary Care of Incipient Cases. To be opened by Dr. Savage.

2. The Etiological Relation of Syphilis to General Paralysis. To be opened by Dr. A. W. Campbell.

3. The Treatment of Epileptics and Imbeciles. To be opened by Dr. Shuttleworth.

The following gentlemen have promised to take part in the discussions of this Section: Professor Clifford Allbutt, F.R.S., Dr. Fletcher Beach, Dr. Milne Bramwell, Dr. Chambers, Dr. Crotchley Clapham, Professor Ferrier, F.R.S., Dr. H. Campbell, Dr. W. Campbell, Dr. Hyslop, Dr. Davidson, J. F. Briscoe, M.R.C.S., Dr. H. Newington, Dr. Macphail, Dr. P. M. MacDonald, Dr. Mercier, Dr. G. W. Mould, Dr. T. Seymour Tuke, Dr. F. Lee, Dr. Spence, Dr. Shuttleworth, Dr. Savage, Dr. Telford Smith, Dr. Outterson Wood, Dr. Weatherly, and Dr. Oscar Woods.

The following papers have been offered:

Bramwell, J. Milne, M.B. On Some Points in Hypnotism.
Briscoe, J. F., M.R.C.S. The Asphyxial Problem in Convulsive Seizures.
Campbell, Harry, M.D. Morbid Self-Assurance.
Hyslop, T. B., M.D. Double Consciousness.
Macdonald, P. W., M.D., and Davidson, A., will jointly contribute a paper on Congenital General Paralysis—a preliminary contribution.
Macphail, S. R., M.D. Note on Post-operative Insanity.
Reid, G. Archdall, M.B. Alcoholism in its Relation to Heredity.
Sutherland, J. F., M.D., F.R.S.E. On Legislation affecting the Property and Person of the Well-to-do Inebriate.
Weatherly, L. A., M.D. How Can We Instil Rational Ideas Regarding Insanity into the Public Mind?

F. Anatomy and Physiology.

School Board Office, Town Hall.

President: John James Charles, M.D. *Vice-Presidents:* Aurelius Victor Maybury, M.D.; Andrew Francis Dixon, M.B. *Honorary Secretaries:* Edwin John Norris, M.R.C.S., May Villa, Cottage Grove, Southsea; Wm. Joseph Essery, M.B., Netley Lodge, South Parade, Southsea; Marcus Seymour Pembrey, M.D., Charing Cross Hospital, W.C.

The subjects selected for discussion are as follows:

1. The Interaction between the Ovaries and the Mammary Glands. To be opened by Mr. Stanley Boyd, F.R.C.S. The following gentlemen have promised to take part in the discussion: Dr. Amand Routh, Mr. W. G. Spencer, F.R.C.S., and others.

2. On the Exchange of Gases in the Lungs. To be opened by the President. The following gentlemen have promised to take part in the discussion: Dr. Washbourn, Mr. W. G. Spencer, and others.

The following papers have been offered:

Anderson, R. J., M.D. Some Points concerning Asymmetry.
Barratt, J. O. Wakelin, M.D. The Anatomical Structure of the Ninth, Tenth, Eleventh, and Twelfth Cranial Nerves.
Cantlie, James, F.R.C.S. The Lobes of the Liver.
Charles, J. J., M.D. (1) The Reaction of the Intestinal Contents. (2) The Function of the Rectum.
Charles, Havelock R., M.D. The Progress of Anatomical Teaching in Northern India.
Cunningham, D. J., M.D., F.R.S. Demonstration of some Points in the Sectional Anatomy of the Brain of the Orang and Chimpanzee.
Dixon, Francis, M.B., Sc.D.: (1) The Course of the Taste Fibres. (2) On the Grooves and Markings often found in the Human Calvaria, corresponding in position to certain Vessels or Sensory Nerves of the Scalp. (3) The Form of the Bladder and Prostate (demonstration). (4) The Mode of Ossification of the Upper End of the Femur in different Animal Groups (demonstration).
Harley, Vaughan, M.D. The Value of the Large Intestine in General Metabolism.
Hunter, William, M.D. Metabolism in Acute Yellow Atrophy of the Liver.
Thomas, J. Lynn, F.R.C.S. The Anæsthetic Areas in two Patients in whom the Second and Third Divisions of the Fifth Nerve were divided within the Cranium (demonstration).
Pembrey, M. S., M.D. Cheyne-Stokes Respiration.
Reid, G. Archdall, M.B. The Evidence for and against the Transmission of Acquired Characters.
Ross, F. W. Forbes, M.D. On Blood Corpuscles.
Russell, J. S. Risien, M.D. Experimental Observations bearing on Epilepsy.

Specimens of anatomical interest will be shown by the President and Professor A. F. Dixon.

A demonstration (microscopes and lantern slides) of the chorionic epithelium will be given by Dr. Eden.

G. Pathology.

Swan Street Board School (Infants' School), entrance in Salem Street, Commercial Road.

President: Joseph Frank Payne, M.D. *Vice-Presidents:* Frederick John Driver, M.D.; Otto Jackson Kauffmann, M.D. *Honorary Secretaries:* Edmund Fauriel Trevelyan, M.D., 40, Park Square, Leeds; William Carling, M.B., 11, Rosebery Terrace, Highland Road, Southsea.

Discussions have been arranged as follows:

Wednesday, August 2nd.—Short introductory address by the President. Discussion on the Pathology of Infective Endocarditis, introduced by Dr. Washbourn. Dr. Sansom, Mr. A. G. R. Foulerton, and Dr. F. J. Poynton will take part in the discussion.

Thursday, August 3rd.—Discussion on the Pathology of Renal Tumours, introduced by Mr. J. H. Targett and Dr. Kelynack. Dr. Morley Fletcher and Mr. Roger Williams will take part in the discussion.

Professor Hamilton (Aberdeen) and Professor Sims Woodhead (Cambridge) have also signified their intention of taking part in the discussions.

The following papers have been offered:

Brodie, T. G., M.D. The Physiological Action of Diphtheria Toxin.
Coles, A. C., M.D. The Bacillus of Influenza.
Foulerton, A. G. R., F.R.C.S. A Case of Streptothrix Infection.
Hutchinson, Professor Woods. The Distribution of Tuberculous Lesions in Man and Animals.
Reid, G. A. O'B., M.B. Influence of Heredity in Disease.
Thomson, Campbell, M.D. The Pathology of Acute Chorea.
Williams, W. Roger, F.R.C.S. On Tumours of Gigantic Size, etc.
Wohlmann, A. S., M.D. On the Bacillus of Rheumatoid Arthritis.

H. Ophthalmology.

Overseers' Board Room, St. Michael's Road.

President: Simeon Snell, F.R.C.S.Edin. *Vice-Presidents:* Lysander Maybury, M.D.; Edward Treacher Collins, F.R.C.S. *Honorary Secretaries:* Arthur Vernon Ford, M.R.C.S., South View Lodge, Kent Road, Southsea; Arnold Lawson, F.R.C.S., 12, Harley Street, W.

The subjects selected for discussion are as follows:

1. The Visual Tests employed in the Navy, Army, and Mercantile Marine, and their Efficiency. To be opened by Deputy-Surgeon General Henry Cayley, F.R.C.S., I.M.S.

2. The Pathological Significance of Sympathetic Irritation and its Connection, if any, with Sympathetic Ophthalmitis. To be opened by Mr. F. Richardson Cross, F.R.C.S.

The following gentlemen have signified their intention of taking part in the discussions: Mr. G. Anderson Critchett, Professor Malcolm McHardy, Dr. George Mackay, Mr. Devereux Marshall, Mr. A. Stanford Morton, Mr. H. E. Juler, Mr. T. H. Bickerton, and Dr. C. E. Glascott.

The following papers have been offered:

Berry, George, M.B. The Extraction of Unripe and Complicated Cataracts, with remarks on their After-treatment.
Collins, E. Treacher, F.R.C.S. Enophthalmos (with lantern illustrations).
Griffin, W. Watson, M.B. Cases illustrating the value of the Correction of Hyperphoria.
Griffith, John, F.R.C.S. A case of Primary Sarcoma of the Fornix Conjunctivæ.
Hinshelwood, James, M.D. The Use of Euphthalmin; a new Mydriatic.
Landolt, Professor Edm. The Determination of Visual Acuity: (*a*) The Principle of its Determination; (*b*) the Tests for Visual Acuity; (*c*) Practical Demonstration.
Lawson, Arnold, F.R.C.S. The Correction of Refractive Errors in the Treatment of Trachoma.
Scott, Kenneth, F.R.C.S.Ed. Destructive Ulceration of the Eyelid: Cure.
Snell, Simeon, F.R.C.S.Ed. (President). The Prevention of Eye Accidents, with lantern illustrations.

Invitations to attend the meetings of the Section have been accepted by Dr. Hermann Knapp (New York), Dr. Samuel Risley (Philadelphia), Dr. de Schweinitz (Philadelphia), Dr. Theobald (Baltimore), Dr. Ayres (Cincinnati).

I. Diseases of Children.

Shareholders' Room, Water Company's Offices, 26, Commercial Road.

President: Edmund Owen, F.R.C.S. *Vice-Presidents:* James Green, M.R.C.S.; Dawson Williams, M.D. *Honorary Secretaries:* Alfred Herbert Tubby, M.S.Lond., 25, Weymouth Street, Portland Place, W.; George Augustus Tullis, M.D., 20, Clarence Parade, Southsea.

The subjects selected for discussion are as follows:

1. Wednesday, August 2nd.—On the Treatment of Ununited Fracture in Children. To be opened by the President of the Section. With remarks on Ununited Fracture of the Tibia and Fibula; why does its Operative Treatment so often end in Amputation?

2. The Treatment of Pleuritic Effusions in Childhood. To be opened (*a*) Medical, by Dr. Robert Maguire, and (*b*) Surgical, by Mr. H. Betham Robinson. The following gentleman will join in the discussion: Mr. J. McGaw, Mr. C. H. Milburn, and Dr. E. H. Greves.

3. Thursday, August 3rd.—The Causation and Treatment of Convulsions in Infancy. To be opened (*a*) Etiology, by Drs. J. A. Coutts and A. M. Gossage; (*b*) Pathology and Treatment, by Dr. W. S. Colman; and (*c*) Public Health Aspect, by Dr. Hugh Jones. The following gentlemen will join in the discussion: Dr. Edmund Cautley.

4. Friday, August 4th.—The Treatment of Inguinal Hernia in Infancy and Childhood. To be opened by Mr. John Langton, F.R.C.S., The following gentlemen will join in the discussion: Mr. J. Macready, F.R.C.S., Mr. Fred. Eve, F.R.C.S., Mr. D'Arcy Power, F.R.C.S., Mr. Robert Campbell, F.R.C.S., Mr. Henry A. Whitelock, F.R.C.S., Mr. Geo. Heaton, F.R.C.S., and Mr. Wm. Thomson, B.S., F.R.C.S.

The following papers have been offered:

Cautley, Edmund, M.D. Abnormal Ossification of the Parietal Bone in an Infant.
Ewens, John, L.R.C.P. The Necessity of Requiring a Full Course of Lectures on Children's Diseases and Attendance at a Children's Hospital as Part of the Medical Curriculum.
Heaton, Geo., M.B., F.R.C.S. A Successful Case of Splenectomy for Rupture of the Spleen, with a Note on the Consequent Blood Changes.
Little, E. Graham, M.D. Night Terrors in Children.
Morgan, G., F.R.C.S.E. Remarks on Tuberculous Adenitis.
Parkinson, J. Porter, M.D. The Varieties and Causes of Cough in Children, with especial reference to Practical Treatment.
Priestley, J., M.D. Infantile Hemiplegia.
Still, G. F., M.D. Observations on the Morbid Anatomy of Tuberculosis in Childhood.
Sutherland, George A., M.D. On Birth Palsy with Disseminated Tremors.
Sympson, E. Mansel, M.D. The Treatment of Rickets in an Out-Patient Department.

J. Pharmacology and Therapeutics.

Small Dining Room, Freemasons' Club, 79, Commercial Road.

President: John Buckley Bradbury, M.D. *Vice-Presidents:* C. H. Watts Parkinson, M.R.C.S.; Samuel Goss, M.R.C.S. *Honorary Secretaries:* John Edward Harry Kelso, M.B., 67, Elm Grove, Southsea; William Tusting Cocking, M.D., 277, Glossop Road, Sheffield.

The subjects selected for discussion are as follows:

1. Intestinal Antiseptics and their Value. To be opened by Dr. Burney Yeo and Dr. Vaughan Harley. The following will take part in the discussion: Dr. Frank M. Pope, Dr. P. Watson Williams, Mr. J. Burdon, L.R.C.P., and Dr. George Herschell.

2. Headaches and their Treatment. To be opened by Dr. T. Lauder Brunton, F.R.S. The following will take part in the discussion: Dr. C. W. Suckling, Dr. A. Haig, Dr. J. Dundas Grant, and Dr. George Herschell.

3. The Constitutional Treatment of Skin Diseases. To be opened by Dr. Robert B. Wild. The following will take part in the discussion: Dr. George Thin, Dr. J. C. M. Given, Dr. T. Churton, and Mr. J. Burdon, L.R.C.P.

The following papers have been offered:

Scheff, Dr. E. (Vienna). *X*-Rays in the Treatment of Skin Diseases.
Sibley, W. K., M.D. The Therapeutics of Light and Heat.
Walsham, Hugh, M.D. Cases Treated by Erythol Tetranitrate.

Dr. George Herschell will exhibit a new combined Galvanic and Faradic Battery for use in general practice, and also a New Apparatus for administering the Intragastric Needle Brush, also Apparatus for Washing-out the Stomach.

K.—Laryngology and Otology.

Board Room, Guardians' Offices, St. Michael's Road.

President: E. Cresswell Baber, M.B. *Vice-Presidents:* Josiah George Blackman, M.D.; Patrick Watson Williams, M.D. *Honorary Secretaries:* Herbert Tilley, M.D., 101, Harley Street, W.; Lyster Cole-Baker, M.D., Bayfield, Kent Road, Southsea; Thomas Arthur Munro Forde, M.R.C.S., 21, Clarence Parade, Southsea.

The following subject has been selected for discussion:

The Diagnosis and Treatment of Chronic Empyema of the Frontal Sinus. To be opened by Mr. Charters Symonds (London) and Dr. E. J. Mome (Bordeaux).

The following gentlemen have promised to take part in the discussion: Ernest Waggett, M.B., Macleod Yearsley, F.R.C.S., H. Scheppegrell, M.D. (Orleans), Sargent Snow, M.D. (Syracuse, N.Y.), F. W. Milligan, M.D., W. J. Nourse, F.R.C.S., Dr. Spiess (Frankfort), Dr. Costinia (Bucharest), Dr. Posthumus Meyjes (Amsterdam), Charles Warden, M.D., and J. H. Bryan, M.D. (Washington).

The following papers have been offered:

Bar, Louis, M.D. (Nice). Intralaryngeal Tumour and Nasal Exostosis (probably Tertiary Syphilitic).
Bobone, Dr. T. (San Remo.) Title not announced.
Bronner, A., M.D. The Use of Formalin in Atrophic Rhinitis.
Downie, J. Walker, M.B., F.R.C.S. (Glasgow). On Syphilitic Ulceration of the Trachea.
Grant, Dundas, M.A., M.D., F.R.C.S. On Some Forms of Laryngitis consequent on Purulent Affections of the Nose.
Horne, Jobson, M.D. Pachydermia Laryngis.
Lacroix, P., M.D. (Paris). A new Apparatus for Inhalations: its application in the treatment of Tuberculous Laryngitis.
Lake, R., F.R.C.S., and Pollard, J., M.R.C.S. Case of Exophthalmic Goitre cured by Removal of One Lobe of Thyroid.
Malherbe, A., M.D. (Paris). Treatment of Chronic Suppuration of the Attic by scooping out (*Evidement*) of the Petro-Mastoid.
Meyjes, Posthumus, M.D. (Amsterdam). Case of Accessory Thyroid Gland at the Base of the Tongue.
Milligan, W., M.D. (1) The Operative Treatment of Post-influenzal Suppurative Mastoiditis. (2) Two Cases of Malignant-Degeneration of Originally Benign Nasal Polypi.
Moure, E. J., M.D. (Bordeaux). A Case of Acute Empyema of the Maxillary Antrum.
Newman, David, M.D. (1) Malignant Disease of the Pharynx and Œsophagus, with cases. (2) Adenoid Disease of the Vault of the Pharynx in its Relation to Tuberculosis in Children.
Rohrer, Dr. Fritz (Zurich). Anomalies of Development of the Auricle, with illustrative Photographs, Drawings, etc.
Röpke, Dr. (Solingen). Author's Method of Operation on Frontal Sinus.
Tansley, J., M.D. (New York). A new operation for the Correction of a Deviated Septum.
Thorne, Atwood, M.B. Laryngeal Vertigo, with an account of three new cases.
Waggett, E., M.B., B.C. Cerebellar Abscess secondary to Chronic Middle Ear Suppuration; Evacuation; Cure.

L.—Tropical Diseases.

Committee Room, No. 1, Town Hall.

President: George Thin, M.D. *Vice-Presidents:* Colonel Kenneth McLeod, M.D.; James Watson, M.D. *Honorary Secretaries:* Fleet-Surgeon John Tyndall, R.N., Tresco, St.

Ronan's Road, Southsea; John Robert Stevenson Robertson, M.B., 5, Western Parade, Southsea.

The subjects arranged for discussion are as follows:

1. Psilosis or Sprue; its Relations (Etiological and Pathological) to other Forms of Tropical Diarrhœa, and its Treatment.

2. On Thermic Fever (so-called Siriasis), with Special Reference to its alleged Microbic Causation.

3. The Agency of Insects in Spreading Infections.

Amongst those who have consented to take part in these discussions are Dr. Thin, who will open the first subject, and Colonel Kenneth McLeod, I.M.S., the second, Major Ross, I.M.S., will open the discussion on the third. Major John Ritchie, R.A.M.C., will take part in the discussion.

The following also intend to take part in the above discussions or send papers: Dr. Patrick Manson, LL.D., F.R.C.P., Inspector-General A. Turnbull, M.D., R.N., Dr. W. J. R. Simpson, Mr. James Cantlie, F.R.C.S., Colonel Crombie, I.M.S., Fleet-Surgeon H. M. Ellis, Royal Marine Artillery, Dr. James Watson, Surgeon Andrews, M.B., R.N., Captain Hughes, R.A.M.C., and Surgeon Stalkartt, M.D., R.N.

The following papers have been offered:

Andrews, Surgeon, O. W., R.N. Antivenene.
Childe, C. P., F.R.C.S. A Case of Bilharzia Hæmatobia with Specimens.
Hughes, Captain, M. L., R.A.M.C. The Geographical Distribution of Undulant (Malta) Fever.
Manson, Patrick, M.D. Filaria Periodicity.
Stalkartt, Dr. Blackwater Fever.
Yarr, M. T., Major, R.A.M.C. A Further Contribution to the Study of Malarial Eye Affections.

Reception Rooms.

The Lower Albert Hall, Commercial Road, will be opened on Monday from 4 P.M. to 9 P.M., July 31st, and on Tuesday, August 1st, and the following days at from 9 o'clock to 6 P.M., for the issue of tickets to members and for supplying all necessary information. It is particularly requested that all members on their arrival will at once proceed to the reception room, Lower Albert Hall, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult list of lodgings, hotels, etc.

Members should book to Portsmouth Town Station for the Reception Room and most parts of Southsea; and only book to Southsea Station when they know their destination is at East Southsea.

Clubs.

The Freemasons' Club will make honorary members of all members attending the meeting of the Association for the week.

The Royal Naval Club, the Royal Portsmouth Corinthian Yacht Club, and the Minnesingers make honorary members for the week of fifty of the members of the Association only, and these will have a special card issued to them.

As the Association meeting is held during Cowes week, no honorary members will be admitted to the Royal Albert Yacht Club, as a large number of its own members are expected that week.

Programme of Proceedings.

Tuesday, August 1st, 1899.

9.30 A.M.—Meeting of 1898-99 Council. Town Hall, Council Chamber.
11.0 A.M.—Church Service; Sermon by the Right Reverend the Lord Bishop of Winchester, at St. Mary's Portsea.
2 P.M.—First General Meeting. Town Hall, Large Hall. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2 P.M. Town Hall, Large Hall. President's Address.

Wednesday, August 2nd, 1899.

9.30 A.M.—Meeting of 1899-1900 Council, Town Hall, Council Chamber.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Second General Meeting. Town Hall, Large Hall. Address in Medicine by Sir Richard Douglas Powell, Bart., M.D.
9 P.M.—Reception by President and Reception Committee on Clarence Esplanade Pier.

Thursday, August 3rd, 1899.

9.30 A.M.—Meeting of Council. Town Hall, Council Chamber.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Third General Meeting. Upper Albert Hall, above the Reception Room, Albert Hall. Address in Surgery by Professor Alexander Ogston, M.D.
7 P.M.—Public Dinner of the Association. Town Hall, Large Hall.
9 P.M.—Reception by Ladies Committee, who will receive the guests in the Town Hall, Mayor's Reception Room.

Friday, August 4th, 1899.

10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting. Upper Albert Hall, above the Reception Room. Albert Hall.

Saturday, August 5th, 1899.

Excursions.

Honorary Local Secretaries.

C. C. Claremont, M.D., 57, Elm Grove, Southsea.
C. P. Ruel, M.R.C.S., L.R.C.P., Cromwell House, Kent Road, Southsea.

ANNUAL MUSEUM.

The Annual Museum in connection with the sixty-seventh meeting of the British Medical Association will be arranged in the following Sections:

Section A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

Section B.—Instruments comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

Section C.—Books, including diagrams, charts, etc.

Section D.—Sanitary Appliances and Ambulances.

A fine and well-lighted hall will this year be utilised for the purposes of the Museum. This room is 150 feet in length, and 60 feet in width, and is in close proximity to the Reception Room.

Exhibitors (other than members of the medical profession) will be charged for table, floor and wall space as follows: In Sections A, B, and C, from 2s. 6d. per square foot, depending on the position of the table; tables 3 feet and 3 feet 6 inches wide being provided. In Section D, 6d. per square foot for floor space (all fittings to be provided by the exhibitor). Wall space (where available) will be charged for advertisements at 6d. per square foot. Section D will be held in the Swan Street Board School, a short distance from the Drill Hall.

Advertisements in Museum Catalogue.—A catalogue will be printed, and 2,000 copies distributed gratis to members of the Association. Prepaid advertisements, to be sent before June 20th, will be inserted. Further particulars will be sent on application.

The plans of the hall and forms of applications for space will be ready early in May.

Regulations.

1. All communications on general matters connected with the Museum, and all applications for space, should be addressed to Mr. James McGregor, 9, St. Mary's Crescent, Fratton Road, Portsmouth.

2. A brief description of each exhibit for insertion in the Museum Catalogue must be in the hands of the Secretary before June 20th.

3. Space will as far as possible be allotted in the order of application, and in proportion to the amount applied for, the Committee reserving power to give preference to *bonâ fide* inventions and improvements not previously exhibited, and also to refuse any exhibit they may consider unsuitable.

4. In the event of more space being applied for than is actually available, the allotment will be made at the discretion of the Committee.

5. The Committee reserve to themselves the power to utilise any of the floor space set apart for Section D (if it is not all required for sanitary exhibits) for the erection of additional tables, or for any other purpose they may think fit.

6. All exhibits should be addressed to the Secretaries of the Museum, British Medical Association, Drill Hall, Grigg Street, Portsmouth, with the name of the Section for which they are intended, with the exception of those for Section D, which should be addressed The Board School, Swan Street, Portsmouth. Packages should not be addressed to a firm's representative at the Museum.

7. All exhibits must be delivered between July 27th and July 29th, and each package must bear a card showing the name and address of the exhibitor.

8. All exhibits must be placed in the allotted space by 2 P.M. on July 31st.

9. No signs or placards will be allowed in the hall which may interfere with neighbouring exhibits. No exhibit or placard on the central tables must reach higher than 2 feet 6 inches from the table. The arrangement of signs, placards, exhibits, etc., will in every case be subjected to the approval of the Committee.

10. Intimation of the space allotted to each exhibitor will be sent as promptly as possible, marked upon a plan. On receipt of cheque for the cost of such space, a card for the admission of the exhibit will be sent.

11. All cheques to be made payable to Mr. James McGregor, 9, St. Mary's Crescent, Fratton Road, Portsmouth.

12. No exhibits will be received except on the understanding that the above regulations are strictly complied with.

H. RUNDLE, F.R.C.S., *Chairman*,
13, Clarence Parade, Portsmouth.
R. EMMETT, M.R.C.S., L.R.C.P.,
Winton House, North End, Portsmouth.
JAMES MCGREGOR, L.R.C.P. & S.Edin.,
9, St. Mary's Crescent, Portsmouth.

PATHOLOGICAL MUSEUM.

Specimens of interest for exhibition in the Museum should be forwarded, addressed to the Secretary of the Pathological Museum, British Medical Association, Boys' School, Seaman's and Marines' Orphan Home, Portsmouth, during the last week in July; and a brief description of each exhibit will be inserted in the Museum catalogue. Secretary of the Pathological Museum, A. Bosworth Wright, M.R.C.S., L.R.C.P., 83, Kingston Road, Portsmouth. All specimens must be mounted ready for exhibition.

SPECIAL CORRESPONDENCE.

CHICAGO.

Rush Medical College.—American Surgical Association.

THE annual College commencements have all occurred. Rush Medical College, which is in affiliation with the University of Chicago, granted the degree of Doctor of Medicine this year to 167 men. This is the largest class graduated from any of Chicago medical schools. The requirements of this school, and of all our schools for that matter, are being steadily and markedly raised. The entrance demands are much harder, the course of study longer, and the examinations and study requirements are very much more severe and exacting than a few years ago. And this matter of higher demands has not stopped. The entrance into Rush Medical College will in 1901 be equivalent to the entrance requirements to the junior classes of the University of Chicago; and ultimately no candidate will be received except he can present a degree in literature, science, or the arts, from a recognised and qualified college of the first order. Rush College is to have a new building, costing upwards of $100,000, within a short time. Two full professors have been added to the faculty of this College recently—Dr. J. C. Webster, of McGill University, Montreal, to be Professor of Obstetrics in place of the late Dr. J. H. Etheridge; and Dr. Christian Fenger, to be Professor of Clinical Surgery, in place of the late Dr. J. B. Hamilton. Dr. Fenger has, for a number of years past, been Professor of Clinical Surgery at the North-Western University Medical School of this city.

The American Surgical Association held its twentieth annual meeting in Chicago, Illinois, on May 31st and June 1st and 2nd, 1899, under the presidency of Dr. W. W. Keen, of Philadelphia. President Keen selected for his annual address the Technique of Laryngectomy, and said that instead of being a very severe and dangerous operation, as it has hitherto been regarded, an improved technique placed it in the category of safe operations. A symposium on the surgery of the Spanish war was taken up, and the first paper was contributed by Dr. Nicholas Senn (Chicago) on the first-aid package in military surgery. He suggested a first-aid package for field use and emergency work. Dr. N. M. Ferebee (Medical Inspector of the United States Navy) described a modern battleship, and spoke of the preparation for and the conditions during war. He also narrated his experience with modern rifle bullets and with shells, and closed his paper by detailing interesting cases. Dr. George R. Fowler (Brooklyn) dealt with the organisation and equipment of military field hospitals; while Dr. Charles B. Nancrede (Ann Arbor, Michigan) followed with a paper on the effects of modern small-arm projectiles, as shown by the wounded of the Fifth Corps. Appendicitis received more than its share of attention in an elaborate paper by Dr. M. H. Richardson, of Boston, who stated that the most important question was not whether to operate in appendicitis, but rather when to operate. In the discussion the point was clearly brought out that uniformity of practice in the treatment of appendicitis would probably never prevail, and one of the speakers narrated two instructive cases showing the extreme difficulty in making a differential diagnosis between perforative appendicitis and perforative typhoid ulcer. Several interesting and instructive papers were read and discussed. The Association elected the following officers for the ensuing year: *President:* Dr. Robert F. Weir (New York City). *Vice-Presidents:* Dr. Charles B. Nancrede (Ann Arbor, Michigan), and Edmond Souchon (New Orleans, La.). *Secretary:* Dr. Herbert L. Burrell (Boston). *Treasurer:* Dr. George R. Fowler (Brooklyn, New York). *Recorder:* Dr. De Forest Willard (Philadelphia). The next place of meeting will be Washington, D.C., May 1st to 3rd, 1900, in conjunction with the Congress of Physicians and Surgeons.

CORRESPONDENCE.

APPOINTMENTS IN WORKHOUSE INFIRMARIES.

SIR,—There is another side to the question at issue between the profession and the Bradford Board of Guardians, and this communication will I hope be accepted as a *mémoire pour servir*, and as an attempt to lift the dispute to another level.

Boards of Guardians are accustomed to occasional abuse, often to severe criticism, for doing too little for the poor. It is rarely they receive a little modicum of praise *for doing too much*.

Let us see what the Bradford Board of Guardians have been doing, and first we must take a survey of the past:

1. The Bradford Poor-law Infirmary is still connected with the Workhouse. It is in the usual style—a growth or expansion from the old Poor Law; the lame, the halt, and the blind, the old and infirm, and the acute sick are to be found in this institution.

The number of sick under treatment varies. Seven years ago there were in the sick wards 272 patients, in the lunacy wards 115 patients; the numbers to-day are 319 and 139. Seven years ago there was one medical officer—non-resident, engaged in private practice—to look after all these patients. There were a few trained nurses, who were assisted by wardsmen and women, recruited from the inmates. The medical officer received £400 *per annum* salary.

This was the old system—unfortunately still surviving in many parts of England.

When this overtaxed medical officer was striving to do his duty to this number of sick, and when the nursing was defective, there was no meeting of the medical profession in Bradford to try to improve the condition of the sick poor by moving resolutions to the Board in favour of increasing the medical staff and the number of nurses. The profession was indifferent.

2. But the spirit of change in Poor-law matters has been abroad for some time, and the BRITISH MEDICAL JOURNAL has played its part in the crusade. The Bradford Board was caught up by the tide, and a few energetic men on the Board set themselves to work to study Poor-law medical administration. They visited other unions, they saw the work done at great centres, and the first step was taken—namely, to improve the nursing. A staff of nurses was organised about four years ago, and in due time a nursing home was built. There is now a staff of thirty-three nurses.

Then came the necessity of appointing a resident medical

officer, still keeping on the old visiting medical officer. This officer then felt, having had a long term of service, that it was a suitable occasion to retire. The guardians put five years extra on his years of service, and gave him a retiring pension of £288 per annum.

3. It was next felt that, though provision was made for the daily medical supervision of the patients by the resident medical officer, it was hardly fair to the sick, however competent their medical officer might be, to leave the treatment absolutely in his hands; and here we come to the heart of the whole question.

4. The patients who are sick or surgically in need of medical aid at the Bradford Royal Infirmary are treated in the manner followed at all our public institutions: (1) There are resident house-surgeons. (2) There are honorary visiting medical officers.

5. The guardians of the poor of the Bradford Union, recognising their responsibilities, and after visiting and inquiring into the systems followed in other towns and cities, came to the conclusion that the methods adopted at Birmingham and Manchester seemed likely to give the best results. At Birmingham (1) there are resident medical officers; (2) a consulting or visiting paid staff is also employed; Dr. Suckling is visiting physician, Mr. Jordan Lloyd, surgeon. At Manchester (1) there are also resident medical officers; (2) a consulting paid staff consisting of Dr. Reynolds, physician, Mr. Collier, surgeon. This system at once places the Poor-law infirmaries on the same plane, so far as regards the treatment of the sick, as the voluntary hospital, and it is the only one that commends itself to those who are really versed with Poor-law medical administration. It is true that at some places there is a resident medical superintendent with an assistant medical officer, but this system for its success possesses so many doubtful factors, that modern Poor-law administrators do not favour it. It may be applicable in certain places. The system of house-surgeons with a visiting staff tested at the voluntary hospitals appeared, rightly or wrongly, to the Bradford Board to be the better one. It would have been more economical to the Bradford Board to have appointed a resident medical officer at £150 per annum, and an assistant at £100 with board and residence; but the question of economy did not enter into the consideration. The question was settled on the higher ground, namely, "What system is best for the patients committed to our charge?"

6. You will note it is no longer a question of what is good for the "pauper." Anything was good enough at one time, but now there has come the newer philanthropy and the new Poor-law spirit. The sick man or woman in the Bradford Poor-law Hospital should have as effectual skill and treatment as the sick man in the Bradford Royal Infirmary. No more, no less. In the Bradford Poor-law Infirmary, as in all the Poor-law infirmaries, are to be found the usual acute diseases *plus* the chronic diseases which incapacitate, and add to the burden of the rates. The proletariat in a lower strata is particularly liable to certain trade diseases; the outdoor labourer to bronchitis, rheumatism, heart disease, to injuries, ulcer of the leg, and the whole gamut of diseases, including phthisis in all its forms. The system which will speedily hasten recovery, put the worker back in his place, was the one aimed at, and in selecting one of the physicians to the Bradford Royal Infirmary the guardians thought they were best discharging their duty, whilst in selecting a consulting surgeon their choice was based on a similar process of reasoning. They copied Manchester and Birmingham, and there was not the slightest intention of offending or slighting the general practitioner.

7. The scheme the Bradford Board of Guardians hoped to carry out was as follows:

1 Resident House-Surgeon.
1 Assistant House-Surgeon.
1 Visiting Physician.
1 Visiting Surgeon.
1 Visiting Accoucheur and Gynæcologist.

Total ... 5

The great gain to the profession would thus be that five medical men would be employed to do work which at one time was attempted by one, the one still enjoying a very handsome pension. The money value I do not care to emphasise, but I put it in this form:

New System.	£	Old System.	£
1 Senior Resident Medical Officer:		1 Medical Officer...	400
Salary	125		
Board and lodging	50		
1 Junior Resident Medical Officer:			
Salary	100		
Board and lodging	50		
1 Visiting Physician	150		
1 Visiting Surgeon	100		
1 Obstetrician	50		
1 Pensioned Medical Officer ...	288		
Total ...	£913	Total ...	£400

There has been during the past eighteen months an assistant resident medical officer at a salary of £100, and board £50, the first step towards the new system.

The Bradford Board of Guardians might have been prevented carrying out their scheme by the opposition offered, but the men who were directing the movement felt that they were acting rightly and were determined to do their duty.

When we remember the immense interest taken in Poor-law hospital administration by the Bradford Guardians, the time they give to perfect all details, the very self-sacrificing nature of their work, one cannot help drawing somewhat unfavourable comparisons—but as "comparisons are odious" I will not finish my sentence.

I have attempted to confine myself to a plain narration of facts. I would sign my name, but I am afraid that would only lead to personalities and the attention of your readers would be drawn away from principles to the man.

June 19th. VERAX.

MEDICAL AID ASSOCIATIONS AND THE GENERAL MEDICAL COUNCIL.

SIR,—Like your correspondent of last week, I believe that the "tabooing" by the General Medical Council of the medical aid societies, on account of their "touting" propensities, while they leave the friendly societies unmolested, is simply to make a distinction where no difference exists.

It must be our universal experience that touting is carried on by all clubs, whether friendly or medical aid, only in the case of the one it is carried on by interested members, and in the other by energetic and likewise interested agents. Herein it may be said lies the difference. Possibly; but at best a hair-splitting one.

The result from the medical aspect is the same. Both tend to beat down the practitioner to an unenviable position of bondage, in putting upon him the merest pittance, in place of what might be more adequate remuneration for his work, while the profits on the one hand go to the investor, and on the other hand, to swell the enormous capital of these societies.

To the profession, then, it matters very little, I think, what ultimately becomes of the accumulated sums, so long as members are in the meanwhile trampled down in the course of the race. It is about time the whole question as to club regulations was universally and summarily dealt with by the only authority available, and no exceptions made.—I am, etc.,

June 27th. A CLUB SURGEON.

CLIMATE AND THE CURE OF CONSUMPTION.

SIR,—I hasten to say that nothing was farther from my wish and thought than "to throw cold water" on the idea of open-air treatment in England. I am delighted that ample opportunity should be afforded to the many consumptives who for one reason or many are unable or unwilling to leave England. I have been personally interested in the arrangements of several of the open-air sanatoria now being established in the United Kingdom. But for two years I have been investigating and personally experiencing the various sanatoria of Europe and Northern Africa, and have come to the conclusion that, in my own case, as in that of many other people, climate has had a great deal more to do with the cure than the present wave of teaching in England would lead us to believe. By climate I mean altitude, sunshine, dryness and purity of air, absence of rain, absence of wind, etc., as well as temperature.

Other things being equal, climate has much to do with the case. But the "other things" taken together have more to do with the case than climate. Fresh air is good and desirable in every disease,

but fresh air will not cure phthisis. You cannot get fat on fresh air. Overfeeding is the secret of the success of Nordrach—overfeeding combined with the excellent judgment shown by Dr. Walther in the constant supervision of his patients, and careful graduation of their daily exercise, whereby the heart is kept strong and healthy, and is able to maintain a brisk circulation through the somewhat obstructed channels of the pulmonary vessels, and the dropsical condition of the lungs induced by too much of the recumbent position in the *Liegehalle* of sanatoria is avoided. Thus not only the lungs but all the organs, including the heart and all other muscles, are brought into the condition of that of a gently but well-trained athlete, and patients are ready to return to their work, if not absolutely cured, at any rate in such good condition that they can continue to be useful members of society, and if they have the sense to continue the high feeding and careful exercise can eventually live down their lung lesion and lose it. In too many cases it is a weakened heart that prevents their doing so. I believe that the same excellent principles of treatment, carried out in a totally different climate, will give even better results than those of Nordrach, though they are, I believe, the best yet produced; but they are produced by the system of treatment, in spite of, and not because of, the climate. Hundreds of cases have been cured at Davos without any rational system of treatment whatever.

Why has phthisis been unknown in the Engadine and Prätigau? The natives live on miserable food, shut up for months and months in the most insanitary of houses, yet they have not succumbed. They have had chances of being infected during the last thirty years! In Sicily, again, the natives live under almost worse conditions, with a very meagre diet, and yet the percentage of deaths from phthisis is one of the lowest in the world. The crofters of Scotland, the labourers of Devonshire, the peasants of Ireland, live under similar but better conditions than the natives of the Engadine and Prätigau, but they are decimated by tuberculosis in some form or other. How is this? It is climate that has to answer for it; and to take them away from their damp climate is the first essential in making a cure. The overfeeding, supervision, and graduated exercise can be carried out equally well anywhere by the right man.

I do not understand what your correspondent means by "isolation." Does he apply the word to the patient or the place? If to the patient (presumably when he has fever), this can surely be done at Davos as well as anywhere, especially when he has a private balcony. If he thinks it advisable for the place to be isolated, I can only say that I do not in the least agree with making life dull for patients. They ought not to be so cut off from the world that they become introspective and melancholic, but should be amused in every harmless way possible. I found that in the training of athletes for the University boat those who did three or four hours' brain work a day did better than those who did not. Moreover, there is truth in the old adage, "Laugh and grow fat."

In considering climate we consider altitude, the dryness of the air, the amount of sunshine, the diathermacy of the sun's rays, the absence of fog or mist, the absence of wind, etc., and we must think what effect all these may have on the blood pressure, and therefore on the secretions of skin and kidneys, the pace and depth of respiration, the secretions of the tubes and of cavities; on the hæmatopoietic tissues, on the blood itself, and on the tubercle bacilli themselves. Are all these conditions and effects the same in England as they are 6,000 feet up in the Alps?—I am, etc.,

Davos, June 1st. EDWARD H. DOUTY.

MOTOR CARS FOR MEDICAL MEN.

SIR,—Any medical man who visited, as I did, the motor-car exhibition at Richmond during the past week could not help noticing the recent improvements in these vehicles.

To a medical man the motor car will be of the utmost utility. Long journeys can be undertaken and no questions will be asked as to whether the horse will be too tired to undertake more work; all that is necessary is a supply of petrol, a very elementary knowledge of the mechanism, and an efficient car.

In a car with a long wheel base, pneumatic or solid rubber tyres, a well-upholstered seat, and a carriage properly hung so as to distribute the weight equally, there is the greatest comfort in riding twelve or fourteen miles an hour, and the actual cost of such running should not exceed one halfpenny a mile. Comparing this with a horse and carriage there must be considerable economy. I have never estimated the cost per mile travelled by a horse and trap, but I am told on good authority that it cannot be done for less than sixpence.

Whatever this may be, I am aware that I shall be met with the argument that "the initial outlay will be considerably more for the motor car." As a matter of fact, this is not the case. At the present time I can buy an English-made motor car with everything of the best workmanship, with four pneumatic tyres, capable of climbing the steepest hill with two or three people upon it, for 150 to 180 guineas. Such cars have no complicated mechanism and could in three or four days be thoroughly mastered and the necessary arrangements learnt in such a way that a doctor would be able to direct his man to remedy any faults should they occur. The engines are of the simplest type, and electrical arrangements by which the petrol is fired when once understood is perfectly reliable. The upkeep of such a car cannot cost more than a few shillings a week.

Now compare the purchase of such a car with a four-wheeled dogcart, pneumatic or cushion tyres, a horse, new harness, and the fittings necessary for a stable; the initial cost is about the same; but the horse has to be fed and he can only travel a limited number of miles a day, whereas there is no limit to the travelling capabilities of the motor car.

A holiday can be taken, and a 100 or 150 miles a day covered with the greatest ease, and the fascination of driving the self-propelled vehicle can only be appreciated by those who have travelled in this way.

By the favour of friends I have travelled many miles on motor cars and shall purchase one myself as soon as I can dispose of my pony carts and stable accessories.

I should advise intending purchasers to visit the motor-car exhibition next week at the Agricultural Hall and to make a trial of the car before completing a purchase, and to be sure that the carriage has sufficient strength, more especially as to the thickness of the chain upon which most of the wear and tear will come.

Living in Coventry as I do and having watched the evolution of the motor-car industry I am convinced that travelling in the future for professional and business purposes will be carried on almost entirely by the motor car.

Coventry. EDWARD PHILLIPS.

TRACHOMA AND RACE.

SIR,—In the BRITISH MEDICAL JOURNAL of May 6th there is an article on Trachoma and Race by Major Yarr, R.A.M.C., in which he states that the negroes of the Southern States of America enjoy an almost complete immunity from trachoma. Major Yarr will perhaps be interested to learn that the disease is remarkably common amongst the negroes in the West Indies, or, at least, in those islands of which I have had experience. So common is the disease that I should for frequency place it second only to catarrhal conjunctivitis. Trachoma, in my experience, though met with occasionally amongst the whites, does not appear to be nearly so common relatively as amongst the blacks.—I am, etc.,

F. J. FREELAND, M.D.Brux.,
June 6th. Government Medical Officer, District No. 4, Antigua, West Indies.

ORTHOFORM.

SIR,—Orthoform is rapidly displacing the older remedies as a local anæsthetic for ulcerated surfaces; but, inasmuch as the most salient clause in the credentials of the drug relates to its innocuousness, I feel bound, as one of its English sponsors, to draw attention to certain by-effects of a toxic character which this substance has been recently discovered to produce. In a paper lately published, Asam-Murnau[1] remarks that orthoform when applied to ulcers sometimes produces sloughing similar to that caused by pure carbolic acid. He has encountered this untoward symptom in 9 cases out of a "large number," a statement which, for statistical purposes, is of course useless. By-effects of this character

[1] *Münch. med. Woch.*, viii, 1899.

have also followed the application of the anæsthetic, in the practice of a medical friend of mine in two instances, after a few days' application of the hydrochloride of orthoform. As I have details of about 50 cases in which orthoform has been employed, I infer that the incidence of this complication may possibly be looked for in about 4 per cent. of all cases. The local necrosis appears to cease as soon as the drug is withheld. Further, Brocq[2] and others have pointed out that orthoform may give rise to redness, irritation, and inflammation of the skin; and Epstein (Breslau) has observed vomiting, collapse, and other unfavourable signs after the administration of the drug by the mouth.

With these premisses one naturally arrives at the conclusion that it is necessary to watch carefully the effects of this otherwise useful local anæsthetic, and to omit the designation of non-toxicity from its attributes.—I am, etc.,

Manchester, June 28th. EUGENE S. YONGE, M.D.

DIRECT REPRESENTATION.

SIR,—While sympathising with nearly everything said by "Senex" in the BRITISH MEDICAL JOURNAL for June 24th, I think it should not be forgotten that the various medical corporations have also their rights, and no one would think better of their representatives for not supporting these rights.

Medical practitioners are practically agreed that their own representatives should have at least a bare majority on the General Medical Council, and nothing short of this should satisfy them. So also are they well nigh unanimous that the one-portal system should be insisted on, leaving it to the student to take such higher or lower degree as he may think most suitable for his purpose. But how is all this to be effected? Surely by united visible action. Will "Senex" call a meeting in London?—I am, etc.,

June 25th. SENEX SECUNDUS.

HOSPITAL ABUSE IN LONDON.

SIR,—May I ask you to be good enough to give me space to announce that Drs. W. Knowsley Sibley and Ernest Snape have been requested by the Council of this Association to make an investigation into the methods adopted by the metropolitan hospitals for the purpose of discussing the circumstances of the patients who apply for medical relief? The Council will feel grateful if facilities are given to make this investigation as thorough as possible.—I am, etc.,

T. GARRETT HORDER,

Cardiff, June 24th. Honorary Secretary of the Hospital Reform Association.

DEFECTIVE DEVELOPMENT OF THE RIBS, ETC.

SIR,—Examples of arrested development of the third, fourth, and adjacent ribs are more numerous than Dr. Levy[1] seems to think. It would be easy to cite three or four dozen cases of this kind. My attention was first specially directed to these malformations when studying defects in the development of the mammary gland, with which they are often correlated. In my work on *Diseases of the Breast* (1894) I have cited instances of this kind by Froriep, Reid, Föster, etc. Similar cases have been reported by Zimmermann, Hutchinson, Kalischer, J. Thomson, Rieder, Haeckel, Freund, T. Smith, Abercombie, Vrolik, Cruveilhier, and others.

Defective development of the pectoral part of the chest is a fairly common anomaly, the structures usually affected being the pectoralis major and minor muscles, and occasionally other neighbouring muscles; the cartilages and anterior extremities of the adjacent ribs, with occasional defects in the development of the hands and upper limbs (webbing of the fingers, etc.); absence of the subcutaneous fat, hair, etc., of the affected region; and in a certain proportion of cases absence or defective development of the mamma, nipple, and areola. Several of these defects usually go together.

A short time ago I saw a female infant, 3 years old, with defects of this kind. In the right pectoral region there was a depressed soft area (2½ by 1½ inches), through which the movements of the lung could be felt and seen. Nothing appeared to intervene except the skin and pleura, which were blended over this area. Nearly two inches of the osteo-cartilaginous part of the fourth and fifth ribs were here absent; as well as the pectoralis minor muscle and the sternal part of the pectoralis major. The mammary gland and the nipple were also absent, the only representative of the mammary apparatus being a minute pink speck, surrounded by a narrow whitish area. The blunt ends of the defective ribs could be felt bordering the outer edge of the gap in the thorax, and at its inner edge the stumps of the defective cartilages could be felt attached to the sternum. The subcutaneous fat was wanting over the defective area. The left mammary rudiment was unusually large for such a young child. The mother had a congenitally stunted and retracted left nipple; and she said her mother was similarly affected. The child was in other respects well formed and healthy-looking, except that its head was rather large, with bulging forehead, and a patent anterior fontanelle.

A few years ago Professor Debierre read a paper at the eleventh International Medical Congress on The Human Thorax: Is it Regressing? As indicating an affirmative answer, he pointed to the atrophic condition of the first and the last two ribs, which occasionally abort or are otherwise defective. The first rib sometimes fails to unite with the sternum, and it may be represented only by a ligament. He believes that we have lost cervical and abdominal ribs. The occasional appearance of cervical ribs he ascribes to reversion. In the abundance of tendinous fibres in the intercostal muscles and in the other muscles overlying the ribs, he sees indications of regression. The great frequency of defects in the thoracic nerves (dorsal) points in the same direction, for certain of them were wanting in 81 out of 100 subjects examined. I was specially interested in these observations, because my studies in polymastism had led me to a somewhat similar conclusion, for I have shown that man has lost six pairs of mammæ from the front of the thorax—three from above and three from below the normal.—I am, etc.,

Clifton. W. ROGER WILLIAMS.

MEMBERS' (R.C.S.) GOWN.

SIR,—The Royal College of Surgeons of England is about to celebrate its centenary. Your valuable paper has always displayed most friendly zeal for the interests of the Members of this College. May I therefore suggest that this approaching celebration will be specially suitable for acceding to a request the Members have long been urging on the Council? At the last annual meeting a motion was made by myself, seconded by Dr. Alderson, and unanimously carried by the meeting, "that the Members of this College be granted a distinctive gown." This favour has already been conceded to the Fellows, but the motion in question was postponed *sine die*, as, indeed, has proved the case with all motions carried at the annual meetings. It is scarcely fair that every collective aspiration of the Members—the bulk of the College itself—should ever be thus overlooked. Can, therefore, a more auspicious method of commencing a new century's existence be found for the College than by the gracious concession of a favour which will be so intensely and gratefully appreciated by all its Members?—I am, etc.,

Bridge Road, W., June 23rd. J. BRINDLEY JAMES.

THE NURSE OF THE PERIOD.

SIR,—At the present time, when so much is being done to suppress unqualified practice by the General Medical Council, and when medical men are considered guilty of unprofessional conduct in employing unqualified assistants, one reads in the BRITISH MEDICAL JOURNAL with some surprise of the report of the meeting of the London School Nurses' Society, where one lady states that the admitted aim of the Society is that the nurses shall attend the minor ailments, and to the cleanliness of the children. If this attendance on the part of the nurses is not under the direct supervision of a qualified practitioner, it is conduct of which the General Medical Council should, I submit, take cognisance.

Again, the remarks of Mr. Carter, though he only compares the diagnostic powers of a nurse with those of the poor women amongst whom she works, still I think one would infer nevertheless from his remarks that one of the functions of the nurse in the ordinary course of her duties is diagnosis at an early period in the stage of disease, at a time when the most experienced practitioner finds diagnosis most difficult, and

[2] *La Presse Méd.*, April 1899.

[1] BRITISH MEDICAL JOURNAL, May 13th, 899 p[g] 1 50

therefore attributes to nurses powers which they do not possess.

Lord Reay's remarks as to the child with diphtheria corroborate my belief that the functions of the nurses of this Society are such as can hardly be distinguished from those of the qualified medical practitioner.—I am, etc.,

Hastings, June 24th. FREDERICK W. COLLINGWOOD.

THE MIDWIVES BILL.

SIR,—I shall be much obliged if you will allow me to state that the Midwives Bill now before Parliament is not promoted by the Midwives Institute, as would be inferred from Mr. Horsley's speech at West Ham.[1]

The Bill promoted by the Midwives Institute was one introduced by Mr. Fell Pease in 1890, in consequence of which the Select Committee on Midwives Registration was appointed. From that time the Bill has been in more influential and competent hands than ours, and our part has been limited to sending a representative to the committees that have drafted the various Bills.—I am, etc.,

ROSALIND PAGET,
Representative of the Incorporated Midwives Institute on the Midwives Bill Committee.

Buckingham Street, W.C., June 27th.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MEDICAL ARRANGEMENTS FOR THE MANŒUVRES.

THE medical arrangements for the manœuvres in progress on Salisbury Plain have been for some time perfected. The Principal Medical Officer is Colonel Gallwey, C.B., and his secretary is Major Babtie, C.M.G. One medical officer is attached to each brigade of cavalry and to each brigade division of artillery, and two to each infantry brigade. Three medical officers are attached to each bearer company, with 61 non-commissioned officers and men, and 5 medical officers, with 40 non-commissioned officers and men, to each field hospital. There will be two stationary hospitals of 100 beds each, one at Camp No. 1, West Down, near Tilshead, and the other, in two sections, at Camp No. 7, Perham Down, near Bulford. The station hospital at Devizes will be increased to 50 beds to accommodate any overflow from No. 1, and arrangements have been made to send sick by train to the Connaught Hospital, Aldershot, and the station hospitals at Portsmouth and Gosport. On June 26th a second divisional field hospital was established at Camp No. 10, and Bearer Company No. 17 and Field Hospital No. 11 assembled at Camp No. 7. On July 31st the field hospital will be relieved by No. 15 Field Hospital, and the bearer company and field hospital at Camp No. 7 will also be relieved by No. 1 Bearer Company and another field hospital. The medical equipment known as "1898 pattern" is issued, and a depôt for medical stores is established at West Down. The drills and manœuvres take place as follows:

—	Period.	Locality.	Force.
Cavalry drills	June 21st to July 19th	Camp No. 1, West Down	2 Cavalry Brigades (6 Regiments). 2 Battalions Royal Horse Artillery. 2 Companies Army Service Corps.
Artillery drills	July 31st to Aug. 12th	Do.	2 Battalions Royal Horse Artillery. 5 Brigade Divisions Field Artillery. 1 Company Army Service Corps.
Divisional manœuvres 1st period	June 26th to July 29th	Camp No. 7, Perham Down; Camp No. 10, near Bulford	6 Companies Army Service Corps. 8 Battalions Infantry (Regulars). 8 Battalions Infantry (Militia). 2 Squadrons Cavalry 2 Brigade Divisions Field Artillery. 1 Bearer Company. 2 Field Hospitals.
Do. 2nd period	July 31st to Sept. 2nd	Do.	Similar to last.

THE ALDERSHOT SEWAGE FARM.

ON this farm, as in many similar instances, a dairy is maintained, the produce of which is sold to the officers and men in the camp. Dr. Andrewes received instructions from the Secretary for War to inspect the sewage farm, and his report, just issued, is, on the whole, favourable. After citing other instances in which dairy produce from such farms is sold to the public, Dr. Andrewes remarked that no injurious effects had ever been traced to the consumption of butter or milk from these sources. He then epitomised the history of the farm, and showed how, during a period of mismanagement, the dairy fell into disrepute, but that since Colonel Jones had been in charge the various objections had been removed. The farm has an area of 125 acres, which assuming a population of the camp of 20,000, allows one acre for the sewage of every 160 persons. The amount of sewage daily disposed of is 1,000,000 gallons. This quantity is not largely increased by heavy rainfalls, as surface and storm water pass off by different channels from the sewage proper. The latter comes from four different outfalls, the nearest of which to any part of the dairy is distant about 100 yards. The dairy consists of two cowhouses, containing some 24 cows, the dairy proper, and a small outhouse, in which the cans are boiled. The dairy itself is managed by a lady who has had special training. The sanitary arrangements of the whole are good, and the cows in first-rate health. The milkers have orders to pay the strictest attention to personal and general cleanliness. Dr. Andrewes found the milk to be perfectly free from any disagreeable taste, and pronounced the butter, after personal trial, to be good butter. There is apparently no reason why such dairies should not be successful, provided that every attention is paid to the sanitary arrangements, and the perfect cleanliness both of utensils and milkers ensured.

[1] BRITISH MEDICAL JOURNAL, June 24th.

THE DIRECTOR-GENERAL'S TENURE OF OFFICE.

IT will be in the recollection of readers that an order was recently passed limiting the tenure of the Director-General to five years, instead of seven as was the case. The new order is thus inserted in the last pay warrant, and sets at rest all speculations as to its application to the present Director-General. The order (Article 358) runs: "The appointment of Director-General of our Army Medical Service, appointed after May 5th, 1898, shall be for five years unless the term is specially extended by our Secretary of State for a further period not exceeding two years." Paragraph 558 states that "the Director-General of our Army Medical Service appointed after May 5th, 1898, shall, unless his service is specially extended under Article 358, retire on completion of five years as such."

THE ROYAL MILITARY COLLEGE, SANDHURST.

IT was reported at the half-yearly inspection of Sandhurst College by the Adjutant-General to the Forces, Sir Evelyn Wood, that the health of the cadets, although it has not been quite so good as usual during the term, has left but little to be desired. During the last eighteen years the period covered by the service of the present medical officer of the school (Lieutenant-Colonel A. F. S. Clarke, M.D.), and possibly during a longer time, there has not been a death from sickness among the cadets. The past term has seen the first inoculation against typhoid at the College, two of the cadets who are proceeding to India having voluntarily submitted to this protective measure.

THE *MANUAL* OF THE ROYAL ARMY MEDICAL CORPS.

SURGEON-MAJOR VALENTINE MATTHEWS, V.M.S.C. (Suffolk Street, S.W.) writes: It would be interesting to know on what grounds the staff of the Volunteer Ambulance School of Instruction claims the suggestion of the method of lifting wounded adopted in the new *Manual*. This method has been frequently discussed between medical officers of regulars and volunteers for the last ten years, and is substantially also the same as that embodied in a scheme of drill which I offered to the St. John Ambulance Association in 1893.

THE SURGEON-GENERALSHIP OF MADRAS.

IT was announced some little time ago that Colonel D. Sinclair, C.S.I., lately chief medical officer of Burmah, had been appointed Surgeon-General to the Madras Government in succession to Surgeon-General Sibthorpe, who was to have retired on May 17th. We understand that the Madras Government has taken exception to this arrangement on the ground that Colonel Sinclair has spent the whole, or the greater part, of his service in Burmah. The Madras Government desire to appoint an officer who has served in that presidency. The Government of India has not acceded to this proposal and the matter has now been referred to the Secretary of State. Surgeon-General Sibthorpe's service has been extended pending the decision of the India Office.

DEPUTY-ASSISTANT DIRECTOR-GENERAL.

MAJOR E. M. WILSON, C.M.G., D.S.O., Royal Army Medical Corps, has been appointed D.A.D.G. at the Medical Division War Office, *vice* Bedford.

ROYAL NAVY MEDICAL SERVICE.

EVELYN R. H. POLLARD, Fleet-Surgeon, has been appointed to Haulbowline Hospital, June 24th.

ARMY MEDICAL STAFF.

SURGEON-GENERAL A. F. CHURCHILL, M.B., is placed on retired pay June 14th. He entered the service as Assistant Surgeon March 31st, 1862; became Surgeon March 1st, 1873; Surgeon-Major April 28th, 1876; Brigade-Surgeon June 21st, 1887; Surgeon-Colonel October 27th, 1892; and Surgeon-Major-General May 7th, 1896. During the Nile Expedition 1884-5 he had charge of the hospital at Wady Halfa, receiving a medal with clasp and the Khedive's bronze star. He vacated the appointment of Principal Medical Officer in the Bombay Command on the day of his retirement from the service.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT ALEXANDER B. MACCALLUM, M.B., has resigned his commission from June 24th. It dated from July 27th of last year.

Quartermaster T. CONNOR is placed on retired pay June 24th. He was appointed Lieutenant of Orderlies, with the honorary rank of Lieutenant, July 2nd, 1879; Quartermaster July 1st, 1881; and Honorary Captain

July 2nd, 1889. He was in the Egyptian war of 1882 (medal and Khedive's bronze star), with the Nile Expedition in 1884-5 (clasp), and in the Soudan campaign in 1885, including the engagement at the Tofrek zereba (two clasps).

Sergeant-Major GEORGE H. PAINTON is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Honorary Captain Connor, June 24th.

Colonels W. F. BURNETT and E. TOWNSEND, M.D., have been appointed Honorary Surgeons to the Governor-General of India.

ARMY MEDICAL RESERVE.

THE surname of the officer whose appointment as Surgeon-Major was announced in the *Gazette* of May 16th is HOUGH, and not as therein stated.

Surgeon-Captain C. A. MACMUNN, M.D., is promoted to be Surgeon-Major, June 24th.

Surgeon-Captain E. W. SKINNER, having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve, June 24th.

MILITIA MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL J. M. PERCIVAL, 3rd Battalion the Royal Sussex Regiment, retires under paragraph 81, Militia Regulations, 1898, June 28th. He retains his rank and uniform.

INDIAN MEDICAL SERVICE.

COLONEL C. W. CARR-CALTHROP, M.D., Bengal Establishment, is confirmed in the appointment of Principal Medical Officer and Sanitary Commissioner in Assam from May 19th.

Lieutenant-Colonels J. T. B. BOOKEY, Bengal Establishment, and W. K. HATCH, M.B., Bombay Establishment, have been appointed Honorary Surgeons to the Governor-General of India.

Major L. T. YOUNG, M.B., Bengal Establishment, has retired from the service from April 29th. He was appointed Surgeon, October 1st, 1881, and Surgeon-Major twelve years later. He was with the Akha expeditions in 1883-4.

Lieutenant-Colonel A. S. REID, M.B., Bengal Establishment, is promoted to be Colonel, May 19th. His first commission dates from March 30th, 1872. He was in the Afghan war in 1879-80 (mentioned in despatches, medal); with the Chin-Lushai Expeditionary Force in 1889-90 (medal with clasp); and in the campaign on the North-West Frontier of India under Sir William Lockhart in 1897-98 with the Malakand Field Force, with the 38th Dogras, including the relief of Chakdara, the night attack at Markhanai, the operations against the Mamunds, and the engagement at Agrah and Gat (medal with two clasps).

Surgeon-General C. SIBTHORPE, C.B., Madras Establishment, on the termination of his tenure of appointment as Surgeon-General with the Government of Madras, is permitted to reside out of India.

THE VOLUNTEERS.

MR. ARTHUR M. HICKLEY is appointed Surgeon-Lieutenant in the 4th Volunteer Battalion the Queen's (Royal West Surrey Regiment), June 28th.

Surgeon-Lieutenant P. PAGET, 2nd (the Weald of Kent) Volunteer Battalion the Buffs (East Kent Regiment), is promoted to be Surgeon-Captain, June 28th.

Surgeon-Lieutenant G. A. COHEN, M.B., from the 1st Tower Hamlets Volunteer Rifles, is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Duke of Cambridge's Own Middlesex Regiment, June 28th.

VOLUNTEER MEDICAL ASSOCIATION.

THE following volunteer medical officers having passed through the Proficiency Class of the Volunteer Medical Association, have within the last few months obtained the "certificate of proficiency" after the prescribed examination: Surgeon-Lieutenants: H. L. Wilks, 1st Wilts V.R.C., W. L. Claxton, 1st V. B. Yorks L. I., P. Paget, 2nd V. B. E. Kent. Regt., C. B. Gunn, 6th V. B. Royal Scots, J. C. Fenwick, 3rd V. B. Durham L. I., F. J. Grindon, 1st Bucks V.R.C., C. J. Beattie, 18th Middlesex V.R.C., A. Henderson, 1st Aberdeenshire V.R.E., E. McWilliam Bourke, 18th Middlesex V.R.C., F. Harvey, Vol. Med. Staff Corps, C. Godson, 18th Middlesex V.R.C., J. N. Marshall, 1st V.B. Argyle and Suth. Highlanders, D. J. Lawson, 1st Dorset V. Art., E. Farr, 2nd V. B. Middlesex Rifles, J. K. Tomory, 1st Sutherland Highlanders, R. Ardra Fegan, 2nd V. B. Royal W. Kent Regt., G. P. Barton, 1st Devon Vol. Art. The next class will commence in the middle of August. All information may be obtained from the Honorary Secretary, Surgeon-Captain Warwick, 91, Columbia Road, E.

MEDICO-LEGAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

PRINCIPAL AND ASSISTANT: A QUESTION OF PRIVILEGE.

IN the action Ensor *v.* Wakefield, heard last week before Mr. Justice Ridley and a special jury, both the plaintiff, Mr. Edwin Thomas Ensor, and the defendant, Mr. Clark Wakefield, were medical practitioners.

The action was brought to recover damages for slander imputing to plaintiff that he was drunk while attending a patient and seemed to have been in a bit of a fog as to what was the matter. The alleged words were said to have been uttered by the defendant to a Mr. G. S. Taylor. The defence was that the defendant had been called in to attend a Mr. Horsley, who had previously been attended by the plaintiff, and it was the duty of the defendant to communicate the words complained of to his assistant, Mr. G. S. Taylor, who was a duly qualified medical practitioner and who had a common interest with the defendant in the matters referred to, and the defendant spoke the said words in the honest belief that they were true and without malice, and that therefore they were privileged.

Mr. Dickens, Q.C., and Mr. S. H. Emmanuel appeared for the plaintiff, and Dr. Blake Odgers, Q.C., and Mr. Hugh Fraser, instructed by Messrs. Hempson, for the defendant. It appeared from the evidence that the plaintiff had attended Mr. Horsley from November 2nd to 5th, 1898, after which date the defendant was called in to attend Mr. Horsley.

The defendant afterwards stated to his assistant, as the reason why he was called in, that the friends of the patient had informed him that the plaintiff was drunk when he attended the patient, and seemed to have been in a bit of a fog as to what was the matter. The plaintiff afterwards requested the defendant to give him the name of his informant, but this the defendant declined to do. Evidence was also given that the plaintiff was not drunk, or intoxicated, or the worse for liquor, or anything of the sort.

At the close of the plaintiff's case, Dr. Odgers submitted that the occasion was privileged, and that no action lay, and said he did not make the slightest suggestion against Mr. Ensor. He did not suggest that Mr. Ensor had not done everything to the utmost of his skill and had not acted with the greatest propriety throughout.

Mr. Justice Ridley said he was quite clear that there was no duty upon the defendant to make a communication of this sort to his assistant. In his opinion there was no duty which entitled a doctor to tell his assistant that another doctor who had attended a patient was asked to attend no longer for a particular reason. He might tell his assistant that another doctor had been attending the patient, but not the reason why that doctor had ceased to attend; he might also inform him as to the nature of the disease and treatment; but he had no right to make statements to his assistant defamatory of another medical man. However, it might be that the communication could be divided into two parts and he was willing to let the case go to the jury upon the question as to whether the defendant had or had not exceeded privilege when he informed his assistant of the reason alleged for the former doctor ceasing to attend the patient.

A consultation then took place between counsel, and ultimately Mr. Dickens said that the sole object of the plaintiff was to make it absolutely clear that there was no foundation for the imputations and not to recover damages. That object had been obtained and in these circumstances he agreed to there being a verdict for the plaintiff for 40s. and costs to be taxed as between solicitor and client.

Dr. Odgers said the defendant had no malice against the plaintiff; he only made the statement because he thought it his duty to tell his assistant. He admitted there was no foundation for the statement and expressed regret at having made it.

Mr. Justice Ridley said it was a very satisfactory termination of the case, and there was no imputation of any kind against the plaintiff.

CLAIM FOR DAMAGES AGAINST A MEDICAL MAN: VERDICT FOR THE DEFENDANT.

ON June 23rd, at the Sunderland County Court, an action by J. Wallace Smith, a labourer, against Dr. R. J. Burns was heard. The plaintiff alleged that the defendant had assaulted and wounded him by wrongfully lancing his leg, and in the alternative that the defendant, whilst the plaintiff was weak and ill, carelessly and negligently operated on his leg by lancing an aneurysm, although the plaintiff objected and tried to prevent him from doing so. It was further alleged that, after the operation, the defendant neglected the plaintiff by leaving him for two hours with the wound undressed and the blood oozing. The plaintiff had subsequently to be chloroformed, and the leg to be cut up so as to reduce the pressure of the blood on the wound. The plaintiff had suffered much injury and pain at the time, and was still in pain, and had sustained grievous inconvenience and loss, and claimed £500 damages.

It appeared that as the result of an injury the plaintiff had suffered from a popliteal aneurysm, and had been treated in the Sunderland Infirmary by Tufnell's method. Owing to a dispute with one of the nurses he had left the infirmary and returned home. His wife had then applied to the guardians and obtained an order for medical attendance by Dr. Burns. Dr. Burns in his evidence stated that when called to the plaintiff he had examined the leg and came to the conclusion that the swelling was a chronic abscess. The plaintiff did not tell him about the treatment he had undergone at the infirmary. He made an incision but did not open the aneurysm. He admitted that he had made a mistake in diagnosis, but contended that he had shown proper care and skill.

The plaintiff said in cross-examination that he was a member of the National Amalgamated Union of Labourers, and that the society was bringing the action. It was alleged by the plaintiff and his witnesses that Dr. Burns was not sober on the occasion. This was denied by Dr. Burns, who was supported by the evidence of a solicitor and his clerks with whom he had transacted business half an hour before attending the plaintiff.

Medical evidence on behalf of the plaintiff was given by Dr. Gordon Bell, who said that there was a danger of mistaking a popliteal aneurysm for an abscess, but a careful man would not proceed to operate until he had convinced himself of the accuracy or otherwise of his diagnosis. Judging from the evidence, he was of opinion that Dr. Burns did not cut into the aneurysm, but that the incision had made it possible for the sac to burst.

Medical evidence was given for the defendant by Dr. Murphy, who said that the plaintiff was under his charge whilst in the Sunderland Infirmary. It was the easiest thing in the world to mistake a popliteal aneurysm for an abscess. The plaintiff has since been operated upon by him, and he was now recovering. As a result of the previous treatment by pressure consolidation had taken place to a great extent and the pulsation had almost ceased. The operation of ligature was necessary, and was not performed in consequence of any act of the defendant. The plaintiff had not suffered in any way from the defendant's mistake.

The Judge told the jury that a medical man was not responsible in damages for an error of judgment, and that the question for the jury was therefore whether the error was one which any reasonably-instructed surgeon using due care and skill would have made.

The jury found a verdict for the defendant.

In this case Dr. Burns made an unfortunate error in diagnosis which has been committed by many eminent surgeons. He proceeded with so much caution, however, that, having incised the skin, he at once recognised that he was dealing with an aneurysm, so that his incision, in fact, did not interfere with the subsequent treatment and cure of the diseased condition. Dr. Burns was able to clear himself completely from the allegation of intoxication and subsequent neglect of his patient. He was indeed fortunate in being able to do this so completely, for such charges are easily brought, and it is not always easy to rebut them by such conclusive evidence as he could bring.

FEES TO MEDICAL WITNESSES.

ALPHA asks what fees he is entitled to charge for attendance as medical witness at the Probate Court, London. He was eleven days from home (Ireland) on a subpœna.

*** In the absence of any express agreement as to remuneration, our correspondent would appear to be entitled to a fee varying from two guineas to three guineas a day. This fee would, strictly speaking, be inclusive of all his expenses, with the exception of railway fare. The question is not affected by the amount of the estate.

SALE OF PRACTICE.

M.R.C.S.—Our correspondent could be restrained by legal proceedings from practising before the expiration of the period mentioned in his undertaking. This is a matter on which our correspondent should have consulted his own solicitor.

UNIVERSITIES AND COLLEGES.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE Society of Members of the Royal College of Surgeons of England have prepared the following memorial to the President and Council:

GENTLEMEN,—We the undersigned Fellows and Members of the College, desire to make the following representation to you.

We have heard with satisfaction of your intention to apply for a supplementary charter in order to fittingly celebrate the centenary of the granting of the original charter in 1800. We cordially endorse the proposal that you should obtain powers to confer the Fellowship of the College on persons of distinction who are not members. We further very sincerely wish that the celebration of this centenary may be marked by the harmony and good feeling between all parts of the corporation which ought to distinguish such an occasion.

We therefore very respectfully suggest to you that an extremely favourable opportunity now presents itself for the satisfaction of that desire which has at various periods during the century, and especially during the last fifteen years, been expressed by a large number of the Members of the College—namely, that they should be represented on the Council.

We do not intend to repeat the various arguments in favour of this proposal, as these must be well known to you, but, in the words of a former petition, "we submit that it would be both equitable and politic that the Members should have a voice in the conduct of a corporation of which they are, and always have been, numerically and financially the mainstay."

We would point out that this statement has been endorsed by at least one former President, by many Fellows, by some 5,000 Members, and by the entire medical press; that it has never been seriously challenged, but that the objections to it have rested mainly on the ground of the apparent interference with the prerogative of the Fellows. We are convinced that the difficulties in the way are by no means insuperable, and we earnestly trust that the Council will make the settlement of this long-standing controversy a prominent part of the centenary celebrations.

We respectfully bring this matter under your notice at the present time, in full confidence that you will deal with it in an equitable and dispassionate manner, and in accordance with the general sense of the profession at large.

Those who desire to sign the memorial should apply to Mr. W. G. Dickinson, Hon. Secretary of the Society, 11, Adam Street, Strand, W.C.

We may remind our readers that the meeting of Fellows and Members will be held at the College on Wednesday next, July 5th, at 3 P.M., to discuss the terms of the proposed centenary charter.

UNIVERSITY OF CAMBRIDGE.

AT the congregation on June 20th the following were admitted to the M.B. degree: T. A. Mayo, B.A., of Clare, and A. G. Wilson, B.A., of Gonville and Caius.

UNIVERSITY OF GLASGOW.

THE following candidates have passed the Fourth or Final Professional Examination, those who have attained distinction having the fact indicated thus: (S., Surgery and Clinical Surgery; P., Practice of Medicine and Clinical Medicine; M., Midwifery):

M.B., C.M. (Old Regulations).—G. H. B. Harvie, A. P. Robertson, A. Waugh.

M.B., Ch.B. (New Regulations).—J. N. Baxter, W. Broad, A. Brownlie, J. R. Chalmers (P., M.), D. M. Cowan, J. Craig (P.), G. M. Crawford, W. Crerar, J. Cullen, C. C. Cumming, J. L. Davie, J. A. Dickie, H. C. Ferguson (S., M.), J. F. Findlay, G. Gardner (M.), J. Gardner (S., P., M.), H. Goodman, M.A., J. G. Green, A. Kerr, A. Love, R. Miller, H. Miller (M.), N. McL. Miller (M.), E. Mitchell, M.A. (P., M.), J. H. McDonald (P., M.), J. McGilchrist, N. F. McLeod, W. J. Maclure, J. McMillan, J. Patton, T. S. Picken, J. Reid, W. A. Riddell (M.), A. Robin (M.), D. J. Smith, W. S. Stalker, A. G. Stewart (P.), F. R. Stewart, M.A., C. P. Thomson, W. B. Thomson (P.), H. N. Turner, A. L. Watson, M.A. (S., P., M.), A. S. Wells, M.A. (S., P.), R. O. Whyte, M.A., W. Wright, J. D. Young.

Women.—A. Boyes, S. Davidson, J. D. Granger (P., M.), I. L. McNeill, C. L. Smith, E. M. S. Walker (P.), S. Whiteford.

UNIVERSITY OF ABERDEEN.

FORMATION OF AN ANATOMICAL AND ANTHROPOLOGICAL SOCIETY.—At a meeting of students and graduates held last week in the anatomical department of this University, it was resolved to form an anatomical and anthropological society for the purpose of stimulating research in human and comparative anatomy and anthropology. Professor Reid, F.R.C.S., was appointed president, and he kindly granted to the society the use of the various museums and laboratories in connection with the department. The members are very anxious that graduates both at home and abroad should support the society by sending specimens or communications that might be read at the meetings, as they are certain that graduates abroad have often considerable facilities for doing anthropological work. In connection with this it may be remarked that there has lately been added to the department an anthropological laboratory and museum. Any communications will be gratefully received and acknowledged by the Secretary, Mr. C. T. Andrew, Marischal College.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary general meeting of the Fellows was held on Monday, June 26th, the President, Dr. W. S. Church, in the chair.

Preliminary Scientific Instruction.—A report dated May 8th from the Committee of Management was received and adopted. The committee recommend that the following institutions, all of which have been visited on behalf of the committee and reported on favourably, be added to the list of institutions recognised by the Examining Board in England: (*a*) For instruction in chemistry, physics, and practical chemistry: Municipal Technical School, Oldham; St Olave's Grammar School, Tooley Street, S.E. (*b*) For instruction in chemistry, physics, practical chemistry, and biology: Harrow School.

Preliminary Education.—The committee having considered the letter from the chairman of the Education Committee of the General Medical Council on the subject of the standard of the preliminary examination of medical students, which was referred to them by the Royal Colleges for consideration and report, state that it is in their opinion desirable that the standard of examination should be raised and should be the same throughout the United Kingdom, and that a period of not less than four years should elapse between the announcement of such a change and its enforcement.

Professor Stokvis.—The President announced that an address of congratulation had been forwarded on behalf of the college to Professor Stokvis upon the occasion of the twenty fifth anniversary of his election to the Chair of Medicine in the University of Amsterdam.

Lectures.—It was announced that the following Lecturers had been appointed:—Goulstonian Lecturer, 1900: Dr. P. Horton-Smith, F.R.C.P.; Lumleian Lecturer, 1900: Dr. W. B. Cheadle; Croonian Lecturer, 1901: Professor W. D. Halliburton, M.D., F.R.S.

Gifts.—The thanks of the College were accorded to Dr. Frank for a gift of £100 to the College Endowment Fund; and to the executors of the late Dr. Thomas Blackall, for the bequest by him to the College of the portrait of his father, Dr. John Blackall, F.R.C.P., of Exeter, by R. R. Reinagle, R.A. Dr. John Blackall was the first English physician to notice the association of albuminuria with dropsy.

Correspondence.—A letter was received from the Secretary of the College of Surgeons, reporting certain proceedings of the Council of the College of Surgeons on May 11th, and enclosing a copy of the judgment of the Court dismissing the recent appeal of the College against assessment for corporation duty. Letters were also received from the Royal Institute of Public Health, inviting the College to join in urging the Government to appoint a Medical Officer to the Education Department; and from the Corporate and Medical Reform Association, Limited inviting the College to support a memorial to the General Medical Council, praying the Council not to sanction the granting of illegal certificates of proficiency in departments of medicine, surgery and midwifery. It was ordered that these letters should lie upon the table.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen, having passed the necessary Examinations, have been admitted Licentiates in Dental Surgery:

E. F. Ackery, Charing Cross and Dental Hospital of London; H. D. Apperly, Middlesex and Dental Hospital of London; J. R. S. Ash, Guy's Hospital Dental Department and School; L. W. Bennett, Middlesex and National Dental Hospital; A. H. Bowkley, University College, Royal Infirmary, and Dental Hospital, Liverpool; R. V. Britten, E. Cardwell, H. W. Cutts, Charing Cross and Dental Hospital of London; P. E. Chandler, Guy's Hospital Dental Department and School; S. S. Doran, University College, Royal Infirmary, and Dental Hospital, Liverpool; F. English, Mason College, Queen's, General, and Dental Hospital, Birmingham; H. A. T. Fairbank, M.R.C.S.Eng., L.R.C.P.Lond., Charing Cross and Dental Hospital of London; E. B. M. Frost and A. J. Gwatkin, Guy's Hospital Dental Department and School; J. W. Gibbons, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; E. J. F. Gillemand, Charing Cross and Dental Hospital of London; R. W. Griffin and C. H. Howkins, Mason College, Queen's, General, and Dental Hospital, Birmingham; A. D. Hopkins, E. R. Howlett, and A. Hughes, Guy's Hospital Dental Department and School; H. S. Huggins and J. D. D. Humby, Middlesex and National Dental Hospital; A. de B. Jepson, Charing Cross and Dental Hospital of London; S. J. Kaye, Middlesex and Dental Hospital of London; J. Mahoney, Owens College, Royal Infirmary, and Victoria Dental

Hospital, Manchester; De la H. Moores, University College, Royal Infirmary, and Dental Hospital, Liverpool; M. P. Nathan, S. H. Olver, P. H. H. Palmer, J. G. McAlpin, and H. W. Morris, Guy's Hospital Dental Department and School; F. Parlett, University College, Royal Infirmary, and General Hospital Dental Department, Bristol; W. de C. Prideaux and H. Quinton, Charing Cross and Dental Hospital of London; T. E. Regan, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; A. E. Rowlett and T. F. Ryan, Guy's Hospital Dental Department and School; R. J. Russell, University College, Royal Infirmary, and Dental Hospital, Liverpool; F. L. Shelton and E. Shrubsole, Charing Cross and Dental Hospital of London; S. C. Smith, M.R.C.S.Eng., L.R.C.P.Lond., L.S.A.Lond., Middlesex and Dental Hospital of London; L. Taylor, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; E. P. Uttley, F. Warlow, E. B. L. White, J. A. Whittington, and C. F. Witcomb, Guy's Hospital Dental Department and School; T. H. Vaughan and H. G. Williams, Charing Cross and Dental Hospital of London.

Twenty-eight gentlemen were referred for six months and 1 for twelve months.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The following gentlemen, having passed the necessary examination, have been admitted Fellows of the College: Mr. A. A. Doyle, L.R.C.P.I. and L.R.C.S.I., and Mr. J. P. Frengley, M.D. and B.Ch., Royal University.

Barker Anatomical Prizes for 1900.—A prize of £21 is offered for competition, and is open to any student whose name is on the anatomical class list of any school in the United Kingdom. The preparations entered must be placed in charge of the Curator before March 31st, 1900. The prize is offered for a dissection of the pharynx from behind, with as many as possible of the nerves, etc., to be found in that region. The preparation must be sent to the Curator of the Museums, Royal College of Surgeons. The dissections are to be mounted in vessels fitted with glass covers, but the covers must not be sealed down. Earthenware basins and plaster-of-paris settings are not compulsory if the specimens can be better displayed and preserved by other means. Those dissections for which prizes are awarded become the property of the College. Those competitors who enter dissections for which prizes are not awarded, but which show sufficient merit, may be refunded such amount of the cost of production as the examiners deem fit. The cost and risks of transport must be borne by the student. Further particulars can be obtained from Dr. J. Alfred Scott, Curator of the Museums, at the College.

SOCIETY OF APOTHECARIES OF LONDON.

Pass List, June, 1899.—The following candidates passed in:

Surgery.—F. W. Chesnaye (Section II), St. George's Hospital; S. E. Dunkin, Charing Cross Hospital; H. H. J. Edwards (Sections I and II), St. Thomas's Hospital; W. M. Hocken, Liverpool; D. V. Lowndes, (Section II), Westminster Hospital; V. S. Partridge (Section II), Charing Cross Hospital; D. O. Williams (Leeds); W. P. Williamson, McGill and Westminster Hospital.

Medicine.—S. J. H. Eastwick-Field, Royal Free Hospital; H. H. J. Edwards (Section II), St. Thomas's Hospital; T. H. Fox (Leeds); J. B. Hall (Section I), Leeds; G. B. Hobbs (Section II), St. Bartholomew's Hospital; A. Killick (Sections I and II), Cambridge and London Hospital; W. M. McLoughlin, University College Hospital; A. Orme (Section II), London Hospital; G. E. Seville, Manchester; W. C. Stanham, London Hospital.

Forensic Medicine.—S. J. H. Eastwick-Field, Royal Free Hospital; T. H. Fox, Leeds; F. Golding-Bird, Guy's Hospital; J. B. Hall, Leeds; A. Killick, Cambridge and London Hospital; W. M. McLoughlin, University College Hospital; G. E. Seville, Manchester; W. C. Stanham, London Hospital.

Midwifery.—J. R. Bentley, Middlesex Hospital; H. S. A. Davies, Michigan; J. C. S. Dunn, St. Bartholomew's Hospital; S. J. H. Eastwick-Field, Royal Free Hospital; T. H. Fox, Leeds; L. Lehmann, Strassburg and Leipzig; F. Marriott, Edinburgh; G. G. Membery, Toronto; A. Orme, London Hospital; G. E. Seville, Manchester.

The diploma of the Society was granted to Messrs. F. W. Chesnaye, S. E. Dunkin, H. H. J. Edwards, F. Golding-Bird, W. M. Hocken, G. C. Hobbs, A. Killick, D. V. Lowndes, W. M. McLoughlin, W. P. Williamson, and D. O. Williams.

Lord Rothschild, President of the Royal Hospital for Diseases of the Chest, City, has contributed £100 towards the £1,500 required to enable the charity to obtain a conditional donation of £500.

A Field Searchlight.—A portable acetylene field searchlight, invented by Lieutenant von Kries, of the German army, is described in the *Militär Wochenblatt*. It is intended to be used at night in searching for the wounded on the battlefield. The acetylene developer, which a man can easily carry on his back, is constructed to contain rather more than two pounds of calcium carbide. This is sufficient to produce a supply of gas capable of maintaining a light of from fifty to sixty candles for eight hours. A special arrangement of two concave parabolic mirrors increases the power of the light by reflection and concentration to about one hundred candles. The light, with the reflector, is placed on the top of an upright rod, which forms a pivot upon which the light can be turned in any required direction. The effective radius is about one hundred yards. A metal tube connects the light with the developer, which is automatic, and, it is said, not dangerous.

OBITUARY.

The late Mr. L. P. Metham, M.R.C.S.Eng., L.S.A., formerly occupied a prominent position in Devonport. He was the son of Mr. Cornelius Tripe, a medical practitioner in Devonport, and assumed the name of Metham on his marriage. He was born in September, 1811, and studied medicine under his father, and afterwards in London and Paris. As soon as qualified in 1835 he settled in practice in his native town. He was Chairman of the local Liberal party through four Parliamentary elections, and was repeatedly re-elected to the position. He gave lectures at the Mechanics' Institute, and in other ways devoted himself to the cause of education; and was honoured with the Chairmanship of the first School Board formed in Devonport in 1870, when the Education Act came into operation. He was, too, a member of the Managing Committee of the Royal Albert Hospital, and was present at the laying of the foundation stone of that institution. He also held a position of great prominence in Freemasonry, having been Deputy Provincial Grand Master of Devon from 1867 to 1879, and in 1867 he received a valuable presentation from the brethren of the Order in the "Three Towns." Not content with these fields for his philanthropic energies, he was for sixty years—in fact, until the day of his death—Secretary of the Royal British Female Orphan Asylum, Stoke, founded by his mother in 1839, and during that period raised over £50,000 for the institution, of which the Queen is patroness. During those three-score years he was the guiding spirit and chief supporter of the institution, and never once missed attending the annual meeting and reading the report of the year's work. Besides other zealous labours on behalf of the asylum, he scarcely ever passed a day without visiting it, and seems to have been quite revered by the inmates. His last expressed wish was that ten additional orphans should be admitted to the asylum this year to celebrate his sixtieth year as Honorary Secretary. This dying wish was laid before a meeting of the Committee and unanimously agreed to, and a letter from the chairman conveying this result was read to Mr. Metham just before he lost consciousness and died on June 2nd. At an early age he married a daughter of Admiral Curry, by whom he had four daughters, all of whom are living. His wife died about ten years ago. The funeral of Mr. Metham took place in Plymouth cemetery amidst universal signs of sympathy. The girls who are at present inmates of the Orphan Asylum attended, numbering over 200, and deputations from the other bodies with which he was connected, together with members of the medical profession in the Three Towns, were present at the ceremony.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE SANITARY INSPECTORS' EXAMINATION BOARD.

The regulations as to examinations and instruction of the Sanitary Inspectors' Examination Board have been issued.

The examination will consist of two parts: (1) Preliminary in English and arithmetic: and (2) technical in (*a*) elementary physics and chemistry, (*b*) elementary statistical methods, (*c*) municipal hygiene or hygiene of communities, (*d*) Statutes and the Orders, memoranda, and model by-laws of the Local Government Board, and the by-laws in force in the Administrative County of London.

The candidate, who must have attained the age of 21 years, will be required to produce evidence of having held for not less than three years previous to January 1st, 1900, the office of a sanitary inspector or inspector of nuisances in a sanitary district in the United Kingdom having a population of not fewer than 5,000 at the last census; or a certificate that he has attended a course of instruction approved by the Board. The fee for the preliminary examination will be one guinea, and for the technical examination 3 guineas, but an unsuccessful candidate will be admitted to a subsequent examination on payment of half the fee. The examinations will be held twice in each year, and the first will commence on the first Tuesday in December, 1899. Further particulars can be obtained from the Honorary Secretary, 1, Adelaide Buildings, London Bridge, E.C.

THE NURSING QUESTION IN WORKHOUSES.

The *Bristol Evening News* of June 16th reports the resignation of an assistant nurse at the Stapleton Workhouse because of overwork and long hours, and a subsequent inquiry into the matter by a committee. The committee found that only one assistant nurse and one probationer were on duty at night for 138 female beds, and the same number for 120 male

beds. It is surprising that the nursing question should be so little understood by guardians; they are so apt to estimate the needs of the sick by those of the healthy, multiplied by a small figure, and then to think they are acting liberally. It has always been the keynote of workhouse reformers to urge the generous treatment of the sick as tending to economy in the long run, and now that trained nurses are being introduced, it is extravagance writ large to overwork the nursing staff. Let a superintendent nurse be placed in command in all these infirmaries, let her make a report as to the number of nurses required for the efficient nursing of the patients for whom she is responsible, and we shall hear less of nurses breaking down or resigning to save the remnant of health left, or of hospital committees reporting that the hours are too long or the staff inadequate.

THE TREATMENT OF CHILDREN REMANDED TO THE WORKHOUSE.

The faith and trust of guardians in workhouse inmates are past belief. We find in the *Western Daily Press* a report on the case of two remanded boys who were ill-treated by an inmate to whose custody they were entrusted. The ill-treatment was proved, and the man sentenced to twenty-one days with hard labour. It is to be feared that for one case of brutality brought to light there must be very many of which nothing is heard. The custom of remanding juvenile offenders to the workhouse is a bad one, but if there is no better place of custody, it should at least be the duty of someone to provide a responsible officer for such important work. It may be that the guardians object to acting as gaolers to these unsentenced offenders, but as long as they sanction the employment of an inmate for this purpose they accept responsibility. By whomsoever the officer is appointed he should be responsible to some authority, and have rules of conduct which should protect these defenceless and unhappy children from bad treatment.

SUPERANNUATION FOR DISTRICT MEDICAL OFFICER.

We are glad to see that Dr. Richard Thomason, who has been district medical officer in the Hereford Union for 41 years, and has just resigned his appointment, has become entitled under the Superannuation Act, 1896, to a pension of about £70 a year.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,438 births and 3,558 deaths were registered during the week ending Saturday last, June 24th. The annual rate of mortality in these towns, which had been 16.4 and 16.5 per 1,000 in the two preceding weeks, declined again to 16.3 last week. The rates in the several towns ranged from 8.2 in Croydon, 13.1 in Blackburn, 13.2 in Derby, and 13.6 in Birkenhead, to 19.7 in Plymouth, 21.0 in Manchester, 21.9 in Liverpool, and 22.9 in Wolverhampton. In the thirty-two provincial towns the mean death-rate was 16.8 per 1,000, and exceeded by 1.3 the rate recorded in London, which was 15.5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the rate was equal to 1.7 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.7 in Birkenhead and in Halifax, 3.1 in Liverpool and in Blackburn, and 3.5 in Manchester. Measles caused a death-rate of 1.2 in Croydon, 1.3 in Liverpool, and 2.1 in Manchester; whooping-cough of 1.4 in Burnley, 1.5 in Blackburn and in Gateshead, and 2.2 in Cardiff; and "fever" of 1.0 in Huddersfield. The mortality from scarlet fever showed no marked excess in any of the large towns. The 80 deaths from diphtheria included 28 in London, 13 in Sheffield, 7 in Leeds, 4 in West Ham, 4 in Liverpool, 3 in Swansea, and 3 in Birmingham. One fatal case of small-pox was registered in Hull, but not one in London or in any other of the thirty-three large towns; and only 1 small-pox patient was under treatment last week in the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,161 to 2,280 at the end of the five preceding weeks, had further risen to 2,367 on Saturday last, June 24th; 335 new cases were admitted during the week, against 260, 278, and 262 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, July 24th, 1,018 births and 509 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 19.9 to 17.9 per 1,000 in the three preceding weeks, further fell to 16.7 last week, but slightly exceeded the mean-rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 12.2 in Paisley and 15.2 in Perth to 17.9 in Edinburgh and 19.6 in Greenock. The zymotic death-rate in these towns averaged 2.0 per 1,000, the highest rates being recorded in Greenock and Leith. The 234 deaths registered in Glasgow included 13 from measles, 5 from scarlet fever, 2 from diphtheria, 3 from whooping-cough, and 9 from diarrhœa. Three fatal cases of diphtheria and 4 of whooping-cough were recorded in Edinburgh; 4 deaths were referred to scarlet fever in Greenock, 6 to whooping-cough in Leith, and 2 to diphtheria in Dundee.

MEDICAL NEWS.

The late Mrs. Marie Magdalene Pauline Satow, of Folkestone, has bequeathed £500 to the Folkestone Victoria Hospital.

The Bureau of Health of Philadelphia has issued a notification that a supply of diphtheria antitoxin for use among the poor will be placed at the various police stations, and that practitioners may procure as much as may be requisite by giving a receipt for it.

Defective School Children.—Dr. G. E. Shuttleworth and Mrs. May Dickenson Berry, M.D., B.S.Lond., have been reappointed by the School Board for London for a second year to examine defective children and children alleged to be defective, and to perform cognate work in the centres of instruction for the blind and deaf.

The opening of the Wellcome Club and Institute, Dartford, on June 24th was the occasion of an interesting ceremony attended by the employees of Messrs. Burroughs, Wellcome, and Co., numbering more than 800. The club premises consist of an old manor house standing in extensive grounds pleasantly watered by the river Darent, and affording a charming retreat for the members of the institute.

The Midwives Bill.—We are requested to state that the first resolution proposed at the joint meeting at the West Ham Hospital on June 15th of the East Suburban Medical Protection Society and the Wood Green and District Medical Society was carried with only two dissentients, and that the second was carried unanimously. We are informed, also, that the number present was 81, and not 55 as stated in our report.

French Congress of Surgery.—The thirteenth Congress of the French Surgical Association will open in the buildings of the Paris Faculty of Medicine on Monday, October 16th, under the presidency of Professor A. Poncet, of Lyons. Two questions are proposed for discussion: (1) Total Abdominal Hysterectomy (to be introduced by M. Ricard); (2) Tumours of Bone (to be introduced by MM. Pollosson and Bérard). The General Secretary of the Congress is Dr. Picqué, 8, Rue de l'Isly, Paris.

Gonville and Caius Mission and Settlement, Battersea.—On Sunday, June 25th, many old Caians and others interested in the work of the Mission met at Caius House to keep the anniversary of the foundation of the Mission buildings. A service was held in the Mission Church close by, when the Bishop of Southwark preached the sermon. A great many of the medical graduates of the College have interested themselves in the work of the mission, and supported it in various ways, and, thanks to the arduous labours of the Warden, a great deal of very excellent work has been done in the district in the ten years that have elapsed since the Mission was founded.

The Royal Sea-bathing Hospital, Margate.—The wards which have recently been reopened at the Royal Sea-bathing Hospital, Margate, were formally named by the President of the Royal College of Physicians in the presence of Mr. Michael Biddulph, M.P., Treasurer, members of the Court of Directors, the Mayor of Margate, and other distinguished visitors last week. The first ward was called after Dr. Lettsom, who founded the hospital in 1791. General approval was expressed of the disposition of the wards, the accommodation for nurses and servants, and the sanitary arrangements of the reconstructed hospital.

The annual *conversazione* of the Society of Arts was held on June 20th at the Natural History Museum, South Kensington. The guests, who numbered about two thousand, were received by Sir J. Wolfe Barry, the chairman of the council. The Central Hall, the British Saloon, and the Bird Gallery, were thrown open to the visitors, who congregated especially in the last named department of the museum. This is most admirably arranged, and contains a series of mounted specimens of birds, their eggs and young shown under the actual conditions in which they live. In many cases the actual stones and vegetation have been brought to the museum, and the perishable parts of the plants have been reproduced in a permanent form.

Droitwich Brine Baths.—After the ceremony of opening the new station at Droitwich, the brine baths were visited by the company, which included some 80 medical men from different parts of the kingdom. It is a pity that Droitwich has not received greater attention at the hands of medical men. Many members of the profession have testified to the considerable benefit, in many cases permanent, which they have themselves received from a course of the brine baths. The sunny situation, warm climate, and baths which are obtainable there have proved efficacious in cases of

rheumatoid arthritis when combined with high feeding, open-air and judicious medicinal treatment. Many patients who are sent annually to foreign spas would receive equal benefit by being sent to Droitwich.

Charles Murchison Scholarship in Clinical Medicine.—The next examination for this scholarship will be held in the University of Edinburgh on Friday and Saturday, July 7th and 8th. The applications of intending candidates must be sent to the Dean of the Faculty of Medicine, University New Buildings, Edinburgh, not later than July 1st. The scholarship is open to any student of medicine who, during a period of not less than five nor more than seven years, has been a registered medical student in attendance at classes or hospitals, in Edinburgh or London, recognised by the Medical Faculty of the University of Edinburgh, or by the Royal College of Physicians of London, and whether holding a medical qualification or not. The scholarship is of the value of twenty guineas, and is tenable for one year.

At the annual general meeting of the North London Division of the London and Counties Medical Protection Society, Limited, held recently, by permission of the governors, at the Tottenham Training Hospital, the President, Dr. E. Hooper May, was in the chair, and there was a large attendance of members. After the ordinary business had been transacted, Dr. Hugh Woods (Honorary Secretary to the Society) gave an address on the Position and Work of the Society, which was followed by a discussion. The Council intend for the future to make their meetings more attractive, and several members have promised to read instructive papers, so that it is hoped members will attend more regularly.

The Boscombe Hospital.—The first stone of the new buildings of the Boscombe Hospital was laid by Mr. W. W. B. Beach, M.P., on June 28th. The existing building was erected twenty-three years ago, and provided accommodation for 12 beds and an out-patient department. The building has, however, been found unsuitable for its purpose, and it was considered impossible to alter or enlarge it satisfactorily. In consequence it has been determined to erect an entirely new building. At first it is only contemplated to build two wards to contain 20 beds. The wards are built on the pavilion principle, and it will be easy to add additional blocks as required. The institution is a general hospital, the only cases not admitted being phthisical patients, for whom provision is made in special hospitals in the neighbourhood.

The Zoological Distribution of Tuberculosis.—At the last meeting of the Zoological Society of London Dr. Woods Hutchinson read a paper on this subject, founded mainly on observations made in the society's gardens. Of 215 necropsies made in the prosector's room during the past six months 49, or 25.3 per cent. of the mammals and birds presented the lesions of tuberculosis. This mortality fell most heavily upon the ruminants and gallinæ, and least so upon the carnivores and raptores. Race or family appeared to exert little influence upon susceptibility, mode of housing only a small amount, and food and food habits much more. A close correspondence appeared to exist between immunity and the relative size of the heart in both birds and mammals. This meeting closed the session of the society for 1898-99. The next session will commence in November.

International Congress on Medical Ethics.—An International Congress of Professional Medicine and Medical Ethics will, as has already been announced in the British Medical Journal, be held in Paris, July 23rd to 28th, 1900. The work of the Congress will be distributed among four sections as follows: 1. The Relations of the Medical Practitioner with Public Bodies (State or other). 2. The Relations of the Practitioner with Individuals (patients, prescribing chemists, and unqualified practitioners). 3. Relations of Practitioners with Professional Brethren (Medical Ethics). 4. Professional Provident Societies, Medical Defence Unions. Reports must be in the hands of the Organising Committee before January 1st, 1900, and abstracts or summaries of the conclusions of communications before July 1st, 1900. Information on all subjects connected with the Congress may be obtained on application to the Agence Centrale de la Presse Scientifique, 93, Boulevard Saint-Germain, Paris.

Presentation.—A solid silver Georgian tea and coffee service and bowl, all engraved with the family crest, together with a beautifully illuminated address, were recently presented to Dr. John Dysart, J.P., Portglenone, county Antrim, on the occasion of his resigning all his public appointments after a long and honourable practice of fifty-one years, as a token of the great respect and sincere regard in which he is held, both as a medical practitioner and county magistrate. The presentation was made at a luncheon in the Victoria Hotel, Portglenone, where all the learned professions, as well as all creeds and classes in the surrounding neighbourhood, were fully represented. Mr. John Staples Alexander, D.L., occupied the chair, and made the presentation to Dr. Dysart, and also handed a purse of sovereigns to Mrs. Dysart. Mr. Alexander paid a high compliment to Dr. Dysart's irreproachable character in his honourable profession and in his domestic circle, to the impartiality, justice, and kindness with which as a magistrate he administered the law, and to the interest always evinced by him for old friends and all with whom he was brought in contact, both professionally and otherwise.

General Wood as House-Surgeon.—The *Philadelphia Medical Journal* tells the following story of General Leonard Wood, the hero of Santiago. In a former state of existence Dr. Wood was at one time house-surgeon of the Boston City Hospital. In one of the wards there was a little girl who had been severely burnt. With a zeal that a little outran discretion, Wood, without asking leave of parents or guardians, or taking counsel with colleagues or superior officers, took enough skin from the legs of a dozen children in the ward to cover the raw surfaces of the burnt child. The result was successful as far as the little patient was concerned, but the mothers of the children who had been "skinned alive" raised such an outcry that Wood, though a most able and popular house-surgeon, received a somewhat pressing invitation from the authorities of the hospital to transfer his exuberant energies elsewhere. The hospital appears, however, to be anxious to claim him, for he has recently been elected an honorary member of the Boston City Hospital Club. The future historian will probably see in this youthful escapade a manifestation of the General's fertility of resource and promptness in action, and a premonition of his capacity of putting conquered territory to profitable use.

MEDICAL VACANCIES.

The following vacancies are announced:—

ABERDEEN UNIVERSITY.—Additional Examiner for Graduation in (1) Zoology, (2) Medicine, including Clinical Medicine, and (3) Midwifery. Appointments for each four years. Grants of £30 per annum to Examiners in Zoology and Midwifery and £40 to the Examiner in Medicine. Applications to the Secretary by July 4th.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by July 5th.

BELFAST DISTRICT ASYLUM.—Assistant Medical Officer for few months. Salary, £3 3s. per week, with residence and attendance. Applications to the Medical Superintendent.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £50 with board, residence, and laundry. Applications to the Honorary Secretary, 26, Chapel Street, Liverpool, by July 10th.

BIRKENHEAD UNION.—Assistant Medical Officer for the Infirmary, Workhouse, and Schools. Salary, £80 per annum, with board, washing, and apartments. Applications, endorsed "Assistant Medical Officer," to the Clerk to the Guardians, 45, Hamilton Square, Birkenhead, by July 3rd.

BIRMINGHAM CITY ASYLUM.—Clinical Assistant. Appointment for three months, but renewable. No salary; board, lodging, and washing provided. Applications to the Medical Superintendent.

BOURNEMOUTH: ROYAL VICTORIA HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board. Applications to the "Chairman of the Committee," by July 15th.

BRADFORD POOR-LAW UNION.—Two Resident Assistant Medical Officers for the hospitals and workhouse: unmarried. Appointments for one year. Salary of senior, £125 and junior £110 per annum, with prescribed rations, apartments, and washing. Applications to the Clerk to the Guardians, Poor-Law Offices, 32, Manor Row, Bradford, before July 3rd.

BRIGHTON THROAT AND EAR HOSPITAL, Church Street.—Non-resident House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum. Applications to the Secretary, 10, Black Lion Street, Brighton, by July 5th.

BRISTOL: UNIVERSITY COLLEGE.—Professorship of Physiology. Applications to the Secretary by July 5th.

CANCER HOSPITAL (FREE), Brompton, S.W.—Two Honorary Assistant Surgeons. Must be F.R.C.S.Eng. Applications to the Secretary by July 8th.

CARDIFF INFIRMARY.—(1) Honorary Pathologist. (2) Assistant House-Physician. Appointment for six months, but renewable. Salary at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary by July 10th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—(1) House-Surgeon. Board and residence provided. (2) Assistant House-Surgeon. Salary at the rate of £50 per annum. Applications to the Secretary by July 10th and 11th respectively.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon; unmarried. Salary, £100 per annum, with board, washing, and residence. Applications to the Secretary by July 14th.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Demonstrator. Honorarium, £50 per annum. Applications to the Dean by July 24th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Junior Resident Medical Officer and Registrar. Salary, £50, with board and washing. Applications to the Committee of Management by July 13th.

GLASGOW: UNIVERSITY OF.—Assistant Examiner. Appointment till December 31st, 1901. Salary, £30 per annum. Applications to the Secretary of the Court, 91, West Regent Street, Glasgow, by July 8th.

GLOUCESTER: COUNTY ASYLUM.—Third Assistant Medical Officer; unmarried, not over 27 years of age. Salary, £165 per annum, with board, lodging, and washing. Applications to the Medical Superintendent by July 7th.

GLOUCESTER: GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Physician. Applications to the Secretary by July 5th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—(1) Physician to Out-patients; (2) Dental Surgeon. Applications to the Secretary by July 10th.

GREENOCK INFIRMARY.—House-Surgeon. Salary, £60 per annum, with board and residence. Applications to the Secretary, 2, Hamilton Street, Greenock, by July 3rd.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Resident House-Physicians. (2) Assistant Resident Medical Officer. Salary, £50 per annum, with board and residence. Applications to the Secretary by July 4th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Physician. (2) House-Surgeon; unmarried. (3) House-Surgeon to Out-patients. Appointments for six months. Salary for the two former, £20, with board and residence, and for the latter 25 guineas. Applications to the Secretary for the first two by July 4th and for the last by July 18th.

INVERNESS: NORTHERN INFIRMARY.—House-Surgeon and Dispenser. Salary, £70 per annum, with board, etc. Applications to the Honorary Secretary, 15, High Street, Inverness, by July 15th.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £85 per annum, with board and residence. Applications to the Secretary of Faculty by July 10th.

MANCHESTER: ANCOATS HOSPITAL.—(1) Resident Senior House-Surgeon. Salary, £80, with board and washing; (2) Resident Junior House-Surgeon. Salary, £50, with board and washing. Applications to the Secretary.

MANCHESTER COUNTY ASYLUM, Prestwich.—Junior Assistant Medical Officer; unmarried. Salary, £125 per annum, increasing to £250, with apartments, board, attendance, and washing. Applications to the Superintendent.

MANCHESTER: OWENS COLLEGE.—Senior Demonstrator in Physiology. Stipend, £150 per annum, rising to £200. Applications to the Registrar by July 3rd.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer; not less than 25 years of age and unmarried. Appointment for twelve months. Salary, £150 per annum, with board and residence. Applications to the General Superintendent and Secretary by July 6th.

NORTHAMPTON: BERRYWOOD ASYLUM.—Assistant Medical Officer; unmarried and under 30 years of age. Appointment for five years but eligible for re-election. Salary, £150, increasing to £200, with board, lodging, washing, and attendance. Applications to the Medical Superintendent by July 8th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Assistant Resident Medical Officer, eligible for election to the senior post when vacant. Salary at the rate of £50 per annum. Personal application to the Medical Committee on Thursday, July 6th, at 5 o'clock.

OLDHAM INFIRMARY.—(1) Senior House-Surgeon. Salary, £85 per annum. (2) A Junior House-Surgeon. Salary, £70 per annum. Board, residence, and washing in each case. Appointments for one year. Applications to the Honorary Secretary by July 10th.

PERTH ROYAL INFIRMARY.—House-Surgeon. Salary, £60, with board. Applications to P. Martin, 38, Tay Street, Perth, by July 10th.

PORTSMOUTH: BOROUGH ASYLUM.—Junior Assistant Medical Officer. Salary, £100, with board, lodging, and washing. Applications to the Medical Superintendent.

PORTSMOUTH: ROYAL PORTSMOUTH HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £50 per annum, with board, lodging, etc. Eligible for election as Senior House-Surgeon when vacancy occurs. Applications to the Secretary before July 6th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £40 per annum, with furnished apartments, board, and washing. Application to the Secretary by July 4th.

RYDE: ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL.—House-Surgeon. Salary, £50 per annum, with a fee of £10 10s. for lecturing to the nurses. Applications to the House-Surgeon by July 15th.

ST. BARTHOLOMEW'S HOSPITAL MEDICAL SCHOOL.—Assistant Demonstrator of Chemistry. Applications to Dr. James Calvert, Warden, by July 8th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Honorary Physician and Honorary Surgeon. Applications to the Honorary Secretary, 23, Gordon Street, Gordon Square, W.C., by July 3rd.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Physiology. Applications to the Dean by July 11th.

SALISBURY: Fisherton Asylum. Assistant Medical Officer. Salary, to commence £120 per annum, with board, lodging, and washing. Applications to Dr. Finch, The Asylum, Salisbury.

SEAMEN'S HOSPITAL SOCIETY.—Physician to Out-patients and Physician to In-patients at the Branch Hospital, Royal Victoria and Albert Docks. Appointments for twelve months, but eligible for re-election. Applications to the Secretary, Seamen's Hospital Society, Greenwich, S.E., by July 10th.

SOUTHAMPTON: ROYAL SOUTH HANTS INFIRMARY.—Surgeon in Charge of Ear and Throat Department. Applications to the Secretary before July 10th.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum; board, lodging, and washing provided in each case. Applications for the former to the Secretary by July 5th, and for the latter to the House-Surgeon at once.

SURREY COUNTY LUNATIC ASYLUM, Brookwood, near Woking.—Assistant Medical Officer for period of four months. Salary 3 guineas a week, with apartments and all found. Applications to the Medical Superintendent.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon; unmarried. Salary, £120, with furnished apartments, fire, light, and attendance. Applications to the Secretary before July 5th.

UNIVERSITY COLLEGE, London.—Jodrell Professorship of Physiology. Applications to the Secretary by July 17th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Honorarium at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by July 7th.

MEDICAL APPOINTMENTS.

BERRILL, Alfred, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Woodford District of the West Ham Union.

BROUGHTON, H. T., M.R.C.S., reappointed Honorary Surgeon to the Dewsbury Infirmary.

CAYLEY, F. P., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer at the King's Road Workhouse of the Parish of St. Pancras.

DRAKE, E. C., L.S.A., appointed Medical Officer for the Tudhoe District of the Durham Union.

FAULL, W., L.R.C.P., L.R.C.S.Edin., appointed House-Surgeon to the Dewsbury Infirmary, *vice* James Prior, M.R.C.S., L.R.C.P.Lond., resigned.

FOSTER, W. J., F.R.C.S., Q.K.C.P., appointed Assistant Surgeon to the Royal Berks Hospital, Reading.

GRIFFITH, A. H., M.D.Aberd., F.R.C.S.Edin., appointed Honorary Ophthalmic Surgeon to the Manchester Royal Infirmary.

HANLY, J. J., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Second District of the Shepton Mallet Union.

HOGAN, S., L.S.A., appointed Medical Officer for the Bromley Workhouse of the Stepney Union.

LAWRENCE, A. G., M.D.St.And., M.R.C.S., appointed Medical Officer for the Shirenewton District of the Chepstow Union, *vice* E. P. King, L.R.C.S.Edin., L.R.C.S.I., resigned.

LEAF, Cecil H., M.A., M.B.Cantab., F.R.C.S.Eng., appointed Surgeon to the Out-patients at the Gordon Hospital for Diseases of the Rectum.

MACVICKER, C. G., B.A., M.B., appointed Medical Officer and Public Vaccinator for the Fourth District Wells Union, *vice* Dr. F. J. Malden, resigned.

PITT-TAYLOR, F. S., M.B., Ch.B. Vict., appointed Assistant Medical Officer to Mill Road Infirmary, Liverpool.

REID, Arthur G., B.Sc.Lond., M.B., C.M.Edin., appointed Honorary Surgeon to the Rotherham Hospital.

REYNOLDS, E. S., M.D., F.R.C.P.Lond., appointed Honorary Assistant Physician to the Manchester Royal Infirmary.

TURNER, Geo. A., M.B., D.P.H., appointed Assistant Medical Officer to Grahamstown Asylum, South Africa, *vice* Dr. G. C. Cassidy, appointed Medical Officer to the Emjanyana Leper Asylum, Transkai, South Africa.

WALLIS, C. E., M.R.C.S., L.R.C.P., L.D.S., appointed Assistant Dental Surgeon at King's College Hospital.

WATTS, W. F., M.R.C.S., reappointed Honorary Surgeon to the Dewsbury Infirmary.

DIARY FOR NEXT WEEK.

MONDAY.

West London Post-Graduate Course, West London Hospital, W., 5 P.M.—Dr. Turner: Demonstration of Nervous Diseases.

TUESDAY.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. James Taylor: Electrical Testing.

Roentgen Society, 11, Chandos Street, Cavendish Square, W., 8 P.M.—Annual Meeting. Presidential Address by Mr. C. W. Mansell-Moullin.

WEDNESDAY.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by Drs. Lewers and Lediard, and Mr. Gifford (introduced by Mr. Targett), and there will be a demonstration by Professor Arthur Thomson on the Sexual Differences of the Foetal Pelvis. Papers: Dr. Lewers: A case of Persistent Mento-posterior Position of the Face in which the child was Delivered Alive by the Axis Traction Forceps. Dr. Savory: Notes on a case of Puerperal Eclampsia.

London Polyclinic, 22, Chenies Street, 6 to 8 P.M.—Dr. Herbert Tilley: Demonstration of Selected Cases (Diseases of Nose and Throat).

THURSDAY.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Mr. Waterhouse: Demonstration of Surgical Cases.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. A. E. Garrod: Demonstration of Selected Cases.

West London Post-Graduate Course, West London Hospital, W., 5 P.M.—Mr. H. Lloyd Williams: Lesions of the Teeth and their Treatment.

FRIDAY.

Ophthalmological Society of the United Kingdom.—Cases and Card Specimens at 8 P.M. Papers at 8.30 P.M. Major H. Herbert, I.M.S.: Changes in the Conjunctiva produced by Chronic Inflammation; with Lantern Slide Demonstration. Messrs. Rockliffe and Haunworth: Penetrating Wound of Orbit with Traumatic Meningitis: Recovery. Annual General Meeting.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

EDMONDSON.—June 20th, at 27, Prince Alfred Road, Wavertree, Liverpool, the wife of C. R. Edmondson, M.B., of a son.

YOUNG.—On May 22nd, at Sydney, New South Wales, the wife of H. C. Taylor Young, M.D., J.P., of a son.

MARRIAGES.

CANTLIE—FARQUHAR.—At the Union Church, Hong Kong, on June 23rd, by the Rev. S. H. Wainwright, M.D., of Kobe, Japan, Frank Hay Cantlie, M.B., C.M., Swatow, China, youngest son of the late William Cantlie, "Keithmore," Dufftown, to Isabella Ann (Annie), third surviving daughter of Robert Farquhar, Esq., 455, Great Western Road, Aberdeen. (By cable.) American papers please copy.

CROOK—HENEBERY.—On June 24th, at St. Mary and St. Peter's, St. Helier, Jersey, by the Rev. John Hourigan, Arthur Crook, M.R.C.S.Eng., L.R.C.P.Lond., Norwich, to Annie, fourth daughter of the late Richard Heneberv, of Waterford. No cards.

HORROCKS—FRASER.—On March 6th, at St. George's Cathedral, Perth, Western Australia, by the Rev. the Lord Bishop of Perth, assisted by the Very Rev. the Dean, Herbert Horrocks, M.D.Lond., to Ethel Marguerite, youngest daughter of the late Edward Seymour Fraser, of Gothic Lodge, Woodford Wells, Essex.

LANGDON-DOWN—BIGWOOD.—On June 22nd, at Holy Trinity Church, Twickenham, by the Rev. P. S. Drabble, Vicar of the Parish, assisted by the Rev. A. E. Beavan, and the Rev. S. T. Bridges, Percival Langdon, second son of the late John L. Haydon Langdon-Down, M.D., F.R.C.P., and Mrs. Langdon-Down, of Normansfield, Hampton Wick, and St. Harley Street, W., to Helen (Mouche), younger daughter of James Bigwood, J.P., M.P., and Mrs. Bigwood, of The Lawn, Twickenham.

LARGE—HICKS.—On June 22nd, at St. Paul's Church, Hull, by the Rev. Robert Large, M.A., assisted by the Rev. G. F. Tamplin, M.A., Vicar, Robert Emmott Large, of Flintham Lodge, Oaksey, Wilts, to K. Philippa Hicks, late Lady Superintendent of the Nurses' Co-operation, 8, New Cavendish Street, London, and youngest daughter of the Rev. Robert Hicks, late Rector of Kirk Smeaton, Yorks.

SARGENT—SARGENT.—On June 21st, at St. Mary's, Bryanston Square, W., by the Rev. G. Bray, M.A., Rector of Shadwell, assisted by the Rev. H. Russell Wakefield, Rector of the Parish, Hugh Caun Sargent, M.R.C.S.Eng., L.R.C.P.Lond., of 223, High Street, Shadwell to Emily (Phyllis), widow of the late H. W. Sargent, Esq., of Seymour Place, W.

SARJEANT—KENWICK.—On June 28th, at St. Mary's, Islington, by the Rev. T. K. Richmond, Canon of Carlisle Cathedral, assisted by the Rev. Dr. Barlow, Vicar, John Frederick Sarjeant, M.R.C.S., L.R.C.P., eldest son of John W. Sarjeant, of Wellingborough, to Jane Eleanor, elder daughter of the late James Watson Kenwick, of Carlisle. At home, 58, Parkhurst Road, N., August 1st, 2nd, and 3rd.

DEATHS.

KING.—On June 8th, at Blendon, Ayr, David King, M.D., formerly of Eltham, Kent, aged 68.

MACNAMARA.—On June 16th, at Bath, George Houseman Macnamara, M.R.C.S.Eng., L.S.A., late of Uxbridge, Middlesex, aged 74.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.
CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.
CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.
CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.
CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.
CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations,*—M., 4.
EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.
GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.
GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.
HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.
KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.
LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily. 2.
LONDON TEMPERANCE. *Attendances.*—Medical. M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.
LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily. 2.
METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.
MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.
NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.
NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.
NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.
ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.
ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.
ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.
ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.
ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.
ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2
ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.
ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.
ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2
ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.
ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.
ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Tu., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.
SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.
THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.
UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.
WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.
WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

X. Y. Z. asks for advice in the treatment of the following case: A man, aged 66, is subject to discharge of mucus and blood from the rectum; it sometimes comes away during sleep, at other times during the day; he then receives a warning, and passes perhaps a dessertspoonful of mucus and blood with wind; this may happen two or three times a day. A rectal examination has revealed nothing. He is a farmer, and, except for rheumatism, quite healthy at present.

THE MEDICAL ADVISER IN LIFE ASSURANCE.

PROGRESS asks: What books are the best authorities for the medical adviser of a life assurance office to consult?

*** Our correspondent might consult either of the following works: *Medical Handbook of Life Assurance*, by J. E. Pollock, M.D., and J. Chisholm. Fourth edition. (London: Cassell and Co. 1895. 7s. 6d.) *The Medical Adviser in Life Assurance*, by Sir Edward Sieveking, M.D. Second edition. (London: J. and A. Churchill. 1882. 6s.) *The Medical Examination for Life Assurance*, by F. de Havilland Hall, M.D. (Bristol: Wright and Co. 1898. 4s.)

HOME FOR MENTALLY-DEFICIENT MAN.

T. desires to hear of an establishment where a man, aged 20, who is mentally deficient, could be taken in at a small cost.

*** If suitable for a farm home for mentally-feeble youths (not imbecile), application should be made to the Secretary of the National Association for Promoting the Welfare of the Feeble-minded, 53, Victoria Street, S.W. If imbecile, Earlswood or the Eastern Counties Asylum would receive him on payment; Secretary of Earlswood Asylum, 36, King William Street, E.C.; Secretary of the Eastern Counties Asylum, Colchester.

OUTDOOR ASSISTANT'S HOLIDAYS.

H. M. wishes to know whether the principal or the outdoor assistant ought to find the *locum tenens* during the holiday of the latter.

*** If the assistant has been some time in the service of his principal, and intends to remain in his employment, it is customary for the principal to pay for the *locum tenens* during his assistant's holiday. An assistant, however, without special agreement cannot claim this as a right, and no principal could be expected to find a *locum tenens* for an assistant who had only been a short time with him and was not likely to remain. A service of six months would not entitle an assistant to a holiday at his principal's expense.

THE MODERN NURSE.

RIPA writes: (1) What is the difference between a cottage and a district nurse? (2) Is a nurse in order in attending—continuing to attend—cases which he is attending daily, without his knowledge? (3) Does the certificate of the Obstetrical Society give any legal right to practise, or is it merely a certificate of proficiency, and therefore a recommendation only? A visiting nurse has arrived here who says she is a lady, and that it is the doctor's place to call on her; that if called in any case of emergency, including ordinary medical cases, she will not give the case up to him on his arrival or take instructions in the case from him. She claims a right to see ordinary cases of sickness both at her house and at theirs, and to prescribe for them. She claims the right to give certificates of death. She has a certificate from the Obstetrical Society, and on this she bases her claims. The district is thinly populated.

*** 1. In answer to the first question it may be said that a cottage nurse is supposed to have only a short training (? six months) in hospital—either cottage or workhouse will do—which is practical rather than theoretical; and to be of the working-woman class, or at least to be willing to live in the cottage and do its work. Many cottage nurses are trained in monthly nursing. A district nurse should have at least a year's training in a recognised hospital, more often eighteen months or two years. She is trained in theory as well as practice. After her hospital training she should be trained in district work for six months at a central home. She may or may not be a midwife. She does not live in the cottages, but visits from house to house, and is generally assisted in menial work by a charwoman.

2. A parish, district, or cottage nurse is not allowed to act independently of the medical man; she has no right to prescribe for or treat a patient independently. A committee, when framing their rules, should have a clearly-expressed rule to the effect that the nurse should be requisitioned by the medical man, or with his sanction. Only in an emergency should she be allowed to act on her own responsibility until medical aid arrives. This safeguards the nurse from being called on to visit, by indiscreet district visitors, or benevolent but misinstructed people.

3. The certificate of the Obstetrical Society confers no legal rights whatever; it is merely a statement by a voluntary organisation of medical practitioners that the holder in their opinion possesses sufficient knowledge to attend cases of normal parturition. If the facts are properly represented to the committee by which the nurse is appointed, they will probably know how to bring her to a sense of her position, for it can hardly be supposed that they would deliberately encourage her in driving a coach-and-six through the Medical Acts, to say nothing of

the Registration Act. We are disposed to think that our correspondent would be doing a service if he sent a temperate statement of the facts to the Council of the Obstetrical Society of London.

ANSWERS.

G. B.—Registration alone confers the right to practise.

DR. A. W. GILCHRIST, M.D. (La Bourboule), writes: "Inquirer" might try the "Pile Bloc," a dry cell employed a good deal in France.

INQUIRER.—We can only refer our correspondent to the terms of the resolution adopted by the General Medical Council on June 6th and published in the BRITISH MEDICAL JOURNAL of June 10th, page 1414.

E. H. C. writes to inform "M.D." that he will find the class at King's College thoroughly satisfactory, and that it possesses certain advantages which are not to be had elsewhere. Another answer received to the question has been forwarded to our correspondent.

CHLOROFORM.—There appears to be nothing illegal in the practice described, although it is open to obvious objections. It could hardly be regarded as "covering" as the assistance rendered is under the direct supervision and within the personal responsibility of the qualified practitioner.

X. Y. Z.—It does not seem very dignified for a member of the medical profession to send a letter of application and a testimonial to every member of an Oddfellows lodge, but if they are the persons who determine the election we presume that the candidate must apply to them.

MR. E. ELCOCK (Hughenden Avenue, Belfast) writes, in answer to "I. M. S.," to state that a safety "automatic" portable acetylene generator and lamp adapted for use with the laryngoscope and ophthalmoscope has been patented and that he will supply information with regard to it.

MR. F. CLARKE, M.R.C.S.Eng. (Gerrard Street, W.C.) writes: "Verax" will find a description of the method of using the urethral instillator, and an account of the usefulness of protargol in chronic urethritis, in a small book just published by Mr. Kimpton, 82, High Holborn, *Gleet and Chronic Disease of the Urethra* (Dalton), price 1s.

J. B. W.—A Home for Epileptic Boys was formally opened last week at the Chalfont Colony for Epileptics, and such a case as described would probably be received there on moderate payment. Application should be made to the Secretary, Mr. Penn Gaskell, 12, Buckingham Street, Strand, W.C.

J. G. writes in reply to "M.D.": With regard to the hair on the lip of a young lady, I noticed a suggestion in the medical press recently to the effect that changing the colour of the hair to golden, as by using peroxide of hydrogen, will render it, in the case of dark persons, less noticeable.

X. Y. Z. does not tell us how much of his time is taken up by the appointments to which he refers. Undoubtedly the salaries are not large, but if the holder of these appointments is permitted to engage in private practice they compare not unfavourably with similar appointments held in other places.

ELECTROLYSIS OF NÆVUS.

DR. LEWIS MARSHALL (Nottingham) writes: "Bunsen" will find any ordinary continuous current battery fit for treating nævi by electrolysis. If the nævus he mentions in his letter is cutaneo-subcutaneous, as face nævi usually are, he should place his needles deeply and attack that portion first. The number of cells to be used can only be determined by the effect as judged of by colour on the particular nævus under operation. All nævi vary very much in their resistance. When the pink colour changes to a slight grey tinge the current should be withdrawn. He will find the positive pole give him the best results, but he must change the current to the negative pole for a few seconds before removing the needles. Platinum needles are best. Close the orifices with collodion, and above all things delay a second operation as long as possible—that is, two or three months.

DR. F. C. WOOD (Ripley, Derby) writes: I always use a constant current battery of twenty cells, and not more than eight or ten should be brought into use. The needle (platinum or gold) connected with the positive pole should be plunged into the nævus in several places and a rheophore connected with the negative pole should be rubbed over the skin of some other part of the body. Before removing the needle from each puncture the current should be reversed for a few seconds so as to prevent bleeding. The operation should be repeated once a week and a few whiffs of chloroform given to keep the baby quiet.

DR. W. R. SPEIRS (Haltwhistle) writes to draw "Bunsen's" attention to an article in the *Practitioner*, 1881, on a "New Method of Applying Nitric Acid as a Caustic." The case referred to in the article was a nævus of the face in an infant and the result was most satisfactory.

J. G. writes: I myself had a small traumatic nævus on the bridge of the nose completely removed by electrolysis, and without the slightest mark being left. Use a moderate current, a needle at each pole, both needles applied to the nævus, being careful not to allow a slough to occur at the negative pole by continuing the treatment in one spot too long. In my case the treatment lasted about half a minute, was very slightly painful, and although immediately after the application the spot showed distinctly and was raised around a minute pinhole, in about two weeks every vestige had disappeared.

O'CONNOR EXTENSION APPARATUS.

M.B. writes, in reply to "Member's" query, that he has worn the O'Connor extension for three years and a-half. He is 7½ inches short, yet it gives appearance of perfect feet. It enables one to get into evening shoes, and is far more comfortable than the old high boot, square irons, etc. He can easily walk ten to twelve miles, and can cycle. The initial discomfort lasted with him about ten days, but is readily compensated for by after-comfort in walking and in appearance. Much of this discomfort seemed to be due to the leather boot adapting itself to the foot in use, and to the altered position of the foot, this latter varying with the amount of shortening. He can walk double the distance with this extension than with the old high boot, and feels no bad effects.

THE UNIVERSITY OF MALTA.

T. A.—Statute 247 of the University of Malta runs as follows: "Those persons who shall have pursued their medical studies in a recognised university, or in a medical and surgical college abroad, may be admitted to the four examinations required for obtaining the degree of M.D., provided they produce certificates showing that they have studied the subjects specified in Chapter X." The subjects mentioned in Chapter X are those of the usual course of medical education. Further particulars would no doubt be supplied by the Secretary of the University.

NOTES, LETTERS, Etc.

THE SOUTH KENSINGTON FINE ART ASSOCIATION.

DR. MEREDITH YOUNG (M.O.H. Crewe) writes: A little over a month ago I received from the South Kensington Fine Art Association, Limited, a kind of photogravure, together with a letter stating that they had taken the liberty of forwarding this to me, and if I cared to keep it they would be glad if I would forward them its price, namely, 3s. 9d. On the other hand, if I did not wish to keep it, they would be glad if I would roll it up on the roller sent with it, readdress it, stamp it, and return it to them, when they would be pleased to return the postage. After taking the trouble to unpack this I found that it was a thing I did not care for, and I had to take the trouble then to wrap it up, address it, stamp it, and send it to the post-office, together with a letter saying that I did not require it, and would be glad to have the 3d. postage returned. Since then I have heard nothing whatever from them. The Association appear, like many other enterprising firms, to select medical men for the purpose of special advertisement of their goods. No doubt a large number of your readers will have received parcels in the same way as myself. My experience may lead them to adopt a different method in dealing with communications from this Association.

DISPOSAL OF THE DEAD BETWEEN DEATH AND BURIAL.

DR. J. BRINDLEY JAMES (Hammersmith, W.) writes: I read with the greatest pleasure your short article on the above subject in the BRITISH MEDICAL JOURNAL of June 3rd, as every word therein is a replica of my own sentiments. I avail myself of this opportunity to ventilate the same by informing your readers that we have a society now formed for the purpose of bringing the subject of death certification more prominently before Parliament, and obtaining the national establishment and erection of awaital mortuaries as at present in vogue abroad, and as described in your columns. The outline of an Act has already been drawn up for submission to Parliament by the Premature Burials Prevention Society, whereby the present greatly inadequate securities afforded against such a fearful contingency, as also against foul play escaping detection, will be converted into efficient realities. It is obvious that under the actual system a careless or only too good-natured practitioner may—and often does—grant a medical certificate where perhaps he has not seen the patient during his last days, and is of course unaware as to what may or may not have been done to said patient in the interim. With respect to awaital mortuaries, it is simply amazing that in a city where teeming millions are crowded together in small flats, or even single rooms, none should have given a thought to such a precaution, if for the sake of the living alone. As for the deceased, Germany for generations has employed methods—less elaborate no doubt than the latest as described at Munich, but denoting the same wise forethought. The municipal mortuary chamber wherein the corpse, with a bell-rope attached to its hand in the event of revival, remains until symptoms of decomposition appear, is mentioned in one of Balzac's novels some sixty years ago.

TREATMENT OF HYDROCELE.

Col. GEOFFRY C. HALL, I.M.S., F.R.C.S.Eng. (Off. Insp.-Gen. Civil Hosp. N.W.P. and Oudh) writes: I notice in the BRITISH MEDICAL JOURNAL of April 8th last a review on The Radical Cure of Hernia, Hydrocele and Varicocele, by C. B. Lockwood, F.R.C.S. In the review you say, "Of hydrocele and varicocele there is less that is new to be said. The usual method of excision is adopted for the former," etc. Will you allow me to call your attention and the attention of the profession to the latest operation devised by Major Pratt, I.M.S.? The operation is simplicity itself, the results most perfect. In a word, he excises the scrotum, brings out the hydrocele, lets out the fluid, then everts the sac and puts it back into the scrotum, the result being that it is afterwards quite impossible for the patient to have another hydrocele, because his sac is no longer a sac; is turned wrong side out, and cannot contain fluid. There is no bleeding, no inflammation, and there is no doubt it is the operation for hydrocele and its permanent cure. The description of the operation will be found in the *Indian Medical Gazette* of August, 1898. Major Pratt published some further notes in the *Indian Medical Gazette* of April, 1899. The radical cure does not, as a rule, confine the patient more than one week or so. I have seen a great many of Major Pratt's patients, and I can certify to the lovely results in all cases.

THE PROPOSED CONCILIATION BOARD.

MR. ARTHUR PRICE (Gloucester) writes: I wonder if the conception of the Bill for the formation of a Board of Conciliation took place last November, and I also wonder who were the old Gamps who assisted at the premature delivery of such a monster. Board of Conciliation, indeed! with the very societies that were the first to start the degradation of the profession to wage its members at a penny weekly. Is the Council really going to allow a medical man to be employed by a set of tinkers and tailors forming themselves into a friendly society, yet it does not allow a qualified man to see a case for an unqualified medical man, for at their last meeting Mr. Hollands' name was removed for seeing one of Mr. Blumenthal's patients. It is absurd to treat the friendly societies and the medical aid societies separately. The methods of the two are almost identical, the only difference being that the medical aid do house-to-

house touting: still the methods of both are humiliating and insulting to the profession, and in my opinion the men who allow themselves to be employed by friendly associations, and men who allow their names to be hawked about from door to door, deserve removal from the *Register* much more so than those men who give a helping hand to a less fortunate man who is not qualified.

I am not at all surprised at Mr. Bryant championing the friendly societies, as he has not any experience of a general practitioner's life: but I am exceedingly surprised at Mr. Brown's lauding of such societies as against the medical aid, because he has been through the humdrum life, and must have met many struggling for a living; and the prime cause of this struggle is the existence of these wretched clubs. A newcomer in a town for a time is nearly lost, for nearly every one is in some club or other, and his first patients are the chronics and dissatisfied of the club doctors.

For the sake of the men who may soon be starting practice, and for the sake of those who are struggling for a living because of the terrible array of insurance touts, and friendly clubs everywhere, it is hoped the General Medical Council will bury its monstrous fœtus, and do some practical good.

"Threatened Death under Chloroform."

Mr. Redmond Roche (Bessborough Gardens, S.W.) writes: Dr. Gunter's case of "threatened death under chloroform" ought to emphasise not, indeed, the importance of watching the pulse carefully during chloroform administration, but certainly the necessity of giving the anæsthetic in measured, and therefore in safe and non-poisonous, doses. It ought not to be a matter of surprise that death threatened, either from failure of heart or respiration, when so much as 2½ drachms was administered in the first five minutes. It is a reasonable calculation that in those five minutes seventy-five inspirations occurred, and, could we assume that all the chloroform given was inhaled, it would amount to 2 minims of chloroform per inspiration—a certainly fatal dose. No doubt by the method employed in this case much of the drug was evaporated unbreathed. But even if we suppose that only half the quantity was inhaled, it shows the very large dose of 1 minim per inspiration—a very dangerous dose, especially if maintained during seventy-five inspirations. In the first five minutes of chloroform administration under favourable circumstances (such as we might suppose to be the case with Private H. B., aged 24), 20 minims given by a method that ensures most of the chloroform being utilised ought to be a generous allowance, while 40 minims by the open method should be considered erring on the side of liberality. I never find it necessary to give more than ½ minim dose for inspiration, no matter how long or how short the operation, and I find ¼ minim the average for my last twelve cases. It is high time more care should be exercised in chloroform dosage. The danger and the dose, I am afraid, is often much increased through anxiety to get patients "under" quickly.

The Nile Voyage.

Dr. H. B. Trehane Symons (Cadenabbia) writes: In Sir Hermann Weber's paper on climate in reference to tuberculosis, note is made of the Nile, and to the disfavour thereof as a resort, etc. It is no detraction from these delightful means of spending a few weeks amidst the palms and temples of Upper Egypt to pronounce the Nile tourist steamers unsuited to the requirements of declared phthisis. From the marked absence of these latter, it may be concluded—a thing generally accepted—the way of life has much nevertheless to recommend it to those having open-air treatment under consideration. Boardship existence at its best, with a mental interest added of a new and varying nature, and an absence of many inevitable disadvantages of ocean travel; these are considerable features. Mention is made of medical ships, their utility being apparent. A medical Nile boat—I mean *dahabiyeh*—a medical *dahabiyeh*, but the word is displeasing to Sir Hermann—might be none the less so. The discomfort caused to the delicate by high wind might be combated by additional screens, or by "tying up" greatly diminished. Suitable heating appliances could also be introduced. "Private ships are expensive," but for six or eight persons the cost would be scarcely more than for a party of that number on the tourist steamers. "Colds are very often contracted on these boats." This occurs in Egypt as elsewhere with those who persistently fail to heed the exigencies of a climate diverse from their own. The sturdy Arab maintains, when not actively occupied, as heavy a wrap as he can command till the day is well advanced, while the stranger disports in thin clothing, forgetful that light and heat are of variable ratio. Camping out is a feasible—though, as generally practised, costly—means of getting desert air. It is stated on good authority that ground is already acquired for a desert establishment above Assouan.

The William F. Jenks Memorial Prize.

The Philadelphia College of Physicians announces that the fifth triennial prize of 500 dollars (£100) under the deed of trust of Mrs. William F. Jenks will be awarded to the author of the best essay on "The Various Manifestations of Lithæmia in Infancy and Childhood, with the Etiology and Treatment." The prize is open for competition to the whole world. The essay, which must be the work of a single person, must be written in English, or if in a foreign language, must be accompanied with an English translation. It must be sent to the College of Physicians of Philadelphia, Pennsylvania, U.S.A., before January 1st, 1901, addressed to Richard C. Norris, M.D., Chairman of the William F. Jenks Prize Committee. Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer.

Summer Diarrhœa of Infants.

Dr. H. S. Purdon (Belfast) writes: During the present warm weather it is probable that some infants, especially those being brought up on the "bottle," will suffer from diarrhœa, due to the milk and the curd acting as an irritant, even when every precaution is taken. I have seen one case already, and having had some experience in the matter, may I call attention to the treatment adopted by that distinguished physician the late Dr. Graves, of Dublin—namely, for three or four days cut off all milk and give in place thereof beef tea, of medium strength, either hot or cold, taken through the bottle, the same as milk. Of course all grease must be skimmed from the beef tea. A dose of castor oil to clear out any "curds" or offending matter in the bowels is desirable.

LETTERS, COMMUNICATIONS, Etc., have been received from:

A Mr. R. B. Anderson, London; Mr. E. G. Annis, Huddersfield; Alpha; Aliboron; Mr. C. T. Andrew, Aberdeen; Messrs. E. Archer and Co., London; Dr. T. M. Allison, Newcastle-on-Tyne. **B** Mr. L. A. Bidwell, London; Dr. H. P. D'A. Benson, Guernsey; Mr. W. G. Benham, Colchester; Messrs. Burroughs, Wellcome, and Co., London; Dr. W. G. Barras, Govan; B. Y.; Mr. H. T. Butlin, London; Mr. A. Berrill, Woodford; Dr. J. M. Bruce, London; Dr. O. A. Browne, London; E. C. Baber, M.B., Brighton; G. Butters, M.B., Kempston; Dr. H. Barnes, Carlisle; Mr. T. Bryant; London. **C** Dr. W. H. Calvert, Melrose; Dr. C. C. Claremont, Southsea; Mr. C. F. Cuthbert, Gloucester C. C.; Dr. L. Cane, Peterborough; Mr. F. Collingwood, Hastings; Mr. F. Clarke, London; Dr. Carrion de la Carrière, Paris; Dr. W. M. Campbell, Liverpool; Mr. A. H. Cheatle, London; Club Surgeon; Mr. W. R. E. Coles, London; Mr. H. S. Collier, London. **D** Dr. E. H. Douty, Davos Platz; Mr. W. F. Dearden, Manchester; E. E. Dyer, M.B., Alloa; Dr. C. C. Douglas, Glasgow; Dr. C. R., Drysdale, London; W. H. Dobie, M.B., Chester; Mr. W. G. Dickinson, London; Deputy. **E** Mr. F. Elvy, Eastbourne; Dr. J. Eaton, Cleator Moor; Mr. E. Elcock, Belfast; E. H. C. **F** Dr. F. J. Freeland, Antigua; Fellow; Mr. J. G. French, London; Fiat Justitia; Mr. W. J. Foster, Reading. **G** Mr. G. P. Gaskell, London; Messrs. C. Griffin and Co., London; Dr. A. W. Gilchrist, La Bourboule; G. W. R.; Mr. R. Greene, Lewes; Mr. F. Greaves, London; Dr. T. G. Garry, Liverpool; General Practitioner. **H** Mr. R. G. Hogarth, Nottingham; Mr. R. M. Hugo, Purley; Mr. G. A. Hawkins-Ambler, Liverpool; H. R. Hunt, M.B., Christchurch, Hants; Mr. M. J. Houghton, London; Mr. J. Harrold, London; Dr. W. M. Haffkine, London. **I** Dr. J. V. Ingram, Philadelphia; Ignored. **J** J. B. W.; Mr. J. B. James, London; Dr. J. S. Jameson, Manningtree; J. G. **K** Dr. J. Kerr, Bradford; J. L. Kirk, M.B., Pickering. **L** Dr. H. F. Lawrenson, London; Mr. R. Lake, London; Mr. W. G. Larkins, Blackpool; Dr. A. P. Luff, London; L.R.C.P.Ed.; C. H. Leaf, M.B., London; Miss J. M. Lysaght, Bournemouth; Dr. D. Lawson, Banwell; London Hospital, Warden of the, London. **M** Mr. C. A. Morton, Clifton; J. T. J. Morrison, M.B., Birmingham; R. C. B. Maunsell, M.B., Dublin; M.; Mr. W. Marriott, London; Dr. H. M. Murray, London; C. G. MacVicker, M.B., Street; Member; Dr. R. L. Meade-King, Taunton; Mr. H. J. Manning, Salisbury; Dr. H. Macnaughton Jones, London; Dr. L. W. Marshall, Nottingham; W. V. Morgan, M.B., Narberth; M.R.C.S.; Mr. V. Matthews, London; Dr. J. Murphy, Sunderland. **N** Mr. W. H. Netherclift, Canterbury; Dr. E. N. Nason, Nuneaton. **O** Dr. M. O'Brien, Ennistimon. **P** W. J. Prendergast, M.B., Barnt Green; Progress; Mr. A. G. Pratt, Boscombe; W. F. Phillips, M.B., Kilchattan; Dr. T. D. Poole, Wolverhampton; Dr. F. L. Phillips, Birmingham; A. Powell, M.B., Kalain; Miss R. Paget, London; Mr. F. E. Pirkis, Nutfield; Mr. T. H. Pryce, Leeds; Dr. J. Priestley, Lee-on-the-Solent; F. S. Pitt-Taylor, M.B., Birkenhead; E. Phillips, M.B., Coventry. **R** Mr. E. J. Reid, London; R.; Mr. J. Rees, Waddesdon; W. E. Rudd, M.B., Putalam; Responsibility; Mr. J. M. Reid, Perth. **S** Messrs. Street Bros., London; Messrs. Stanley, Popplewell, and Co., London; H. E. Smith, M.B., London; Dr. J. E. Squire, London; Mr. W. W. Stocker, London; W. R. Speirs, M.B., Haltwhistle. **T** Dr. E. F. Trevelyan, Leeds; Dr. J. Taylor, Chester; Dr. H. Tilley, London; Mr. J. Tyndall, Southsea; Mr. R. F. Tomlin, London; T. B.; Mr. R. B. Taylor, Santander; C. S. Thompson, M.B., Bideford. **V** Verax. **W** Mr. J. H. Watson, London; Dr. R. Willson, Oxford; Mr. V. Wood, London; Messrs. Wyleys, Ltd., Coventry W. T. G.; Dr. F. Willcocks, London; Mr. T. E. Williams, Talgarth; Mr. W. R. Williams, Clifton; Mr. F. C. Wood, Ripley. **X** X. Y. Z. **Y** Dr. M. Young, Crewe. **Z** Zephyr; etc.

BOOKS, Etc., RECEIVED.

A Manual of Organic Materia Medica. By J. M. Maisch, Ph.M., Phar. D. Seventh Edition. Revised by H. C. C. Maisch, Ph.G., Ph.D. London: H. Kimpton. 1899. 10s. 6d.

Evolution by Atrophy in Biology and Sociology. By J. Demoor, J. Massart, and E. Vandervelde. Translated by Mrs. C. Mitchell. London: Kegan Paul, Trench, Trübner and Co. 1899. 5s.

Pasteur Hydrophobia; and Serotherapy. By Dr. A. Lutaud. London: London Antivivisection Society. 1899. 6d.

Textbook of Ophthalmology. By Dr. E. Fuchs. Authorised translation by A. Duane, M.D. Second American edition. London: H. K. Lewis. 1899. 21s.

The Soluble Ferments and Fermentation. By J. R. Green, Sc.D., F.R.S. Cambridge: University Press; London: C. J. Clay. 1899.

The Diseases of Children. By G. Elder, M.D., F.R.C.P.E., and J. S. Fowler, M.B., F.R.C.P.E. London: C. Griffin and Co. 1899. 10s. 6d.

Notes on Malaria in connection with Meteorological Conditions at Sierra Leone. By Major E. M. Wilson, C.M.G., D.S.O., R.A.M.C. Third Year. London: H. K. Lewis. 1899. 1s.

The Victoria University, 1899. Dissertation on Aspergillosis. Submitted for the Degree of M.D. By T. A. Rothwell, M.B., Ch.B., M.R.C.S., L.R.C.P. Manchester: Morris and Yeaman.

A Cycling Tour in the Ardennes. By Poncho. Ipswich: S. Smith and Smith.

Aseptic Surgery. By C. B. Lockwood, F.R.C.S. Second Edition. Edinburgh and London: Young J. Pentland. 1899.

A Manual of Pharmaceutical Testing. By B. S. Proctor, F.I.C. Second Edition. London: "The Chemist and Druggist" Office. 1899. 2s. 6d.

Vorlesungen ueber Kinderkrankheiten. Von Dr. E. Henoch. Zehnte Auflage. Berlin: A. Hirschwald. 1899. M. 17.

*** In forwarding books the publishers are requested to state the selling price.

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A DESCRIPTION
OF
A NEW PATHOGENIC MICROBE OF SEWAGE: BACILLUS PYOGENES CLOACINUS.

BY E. KLEIN, M.D., F.R.S.,

OCCURRENCE.

THIS microbe was isolated in pure culture from the purulent peritoneal and pleural exudations of a guinea-pig that died 48 hours after subcutaneous injection of a small amount of the deposit of fresh sewage; also from the subcutaneous abscess of this and the companion guinea-pig injected at the same time. The above purulent exudations, as also the pus of the abscess, were crowded with the microbe, either free in the fluid or enclosed in groups within the substance of the pus cells, some of the pus cells, packed with the bacilli, being swollen and disintegrating.

Morphology.—The microbe is a minute bacillus, the average length varying between 0.6μ and 1.25μ, few are longer, cylindrical, and in chains; its thickness is about 0.4μ. The thickness of the microbe in culture is a little larger than in the purulent matter. It is a non-motile bacillus; no movement can be seen in the hanging drop, although on staining for flagella, after van Ermengem's method, here and there a bacillus is found exhibiting at one end one short spiral filament. The microbe stains slightly in Gram (1 minute in gentian violet aniline water, 4 minutes in iodine iodide of potassium).

CULTURAL CHARACTERS.

In gelatine plates kept at 20° to 21° C. the first traces of growth show themselves after forty-eight hours in the form of grey translucent round dots; these enlarge slowly, forming circular flat discs, slightly thicker in the centre than at the margin. After a fortnight, that is, when fully developed, the colonies measure only ½ to 1 mm. in width; they are grey translucent.

In gelatine streak the growth is grey translucent; when growth is complete, say, after two to three weeks, it shows under a magnifying glass a thicker knobby centre and a thin translucent margin, the breadth of the streak is not more than 1½ to 2 mm.

In gelatine stab the track of the needle becomes marked as a thin whitish line, which under a magnifying glass is seen composed of closely-placed minute droplets; on the surface of the stab a circumscribed flat grey expansion is just noticeable with the unaided eye. The gelatine is not liquefied after weeks and months. On the agar surface the colonies are translucent grey, moist, viscid discs; in agar streak translucent grey viscid bands; in agar stab (37° C.) the growth is like that in gelatine stab, except that at the surface of the stab there is a circular distinct plate-like expansion of the growth.

In alkaline beef broth kept at 37° C. the growth is rapid; the broth is slightly turbid already after twenty-four hours, but after several days the broth clears and shows numerous fine granules along the sides and a powdery precipitate at the bottom of the tube. The broth, even after growth is completed, has a distinctly alkaline reaction; no indol is produced. The microbe grows well in litmus milk and in milk without altering either the litmus or the fluid condition, reaction, and aspect of the milk.

In shake culture in ordinary gelatine or in grape sugar gelatine it produces no gas; it grows very feebly in the depth of the gelatine. On potato no growth is visible or demonstrable by microscopic specimens. The microbe does not grow on acid media, and in fluid media distinctly produces alkali. Neither the pus of the abscess nor the purulent exudations nor any of the cultures have any smell.

ACTION ON ANIMALS.

The microbe, when injected in minute doses, is pathogenic. Small doses—even a portion of one colony—cause disease in the guinea-pig. When injected subcutaneously into the groin in the majority of instances only a local abscess is the result; this commences as a small tumour a day or two after the injection; this enlarges, and soon becomes changed in the course of two or three days into an abscess, from the size of a bean to that of a hazel nut, filled with creamy thick pus. Under the microscope the fluid contains an abundance of the bacilli as single individuals, or more frequently as dumb-bells, some few are cylindrical and some in chains. Many of the pus cells contain the bacilli, occasionally their protoplasm being packed with the bacilli. Some pus cells are greatly swollen by the number of bacilli, and eventually disintegrate, so that the groups and clumps of the bacilli become free. In a large minority of instances, however, the result of subcutaneous injection is, besides the local abscess, general disease, ending fatally in three to four days; purulent peritonitis, with pyogenic membranes covering the liver, spleen, and kidney; purulent pericarditis, the pericardial cavity being filled with grumous pus; purulent pleuritis, with pyogenic membranes and solid lymph in the mediastinum, the lungs deeply coloured and partially collapsed. Under the microscope the fluid is densely crowded with the bacilli, many pus cells contain in their protoplasm smaller or larger numbers of the bacilli, some completely filled with them, swollen, and in the process of disintegration.

When the result of inoculation is a local abscess only no bacilli can be found in the blood, but when it is a general purulent inflammation of the serous membranes, the blood of the heart and of the viscera, spleen particularly, contains an abundance of the microbe.

Injection of minute doses into the peritoneal cavity of guinea-pigs leads to fatal result within twenty to twenty-four hours. On *post-mortem* examination purulent peritonitis, with pyogenic membranes on the liver, spleen, diaphragm, and kidney, and inflammation of the small intestine, occasionally pleural and pericardial exudation are also present.

In the mouse subcutaneous injection of the culture in small doses causes general septicæmic infection, the blood of the heart and of the viscera teeming with the microbe, the viscera of the abdomen and thorax being greatly congested.

In the rabbit no pathogenic effect is produced either locally or generally.

From these observations, both as to cultural characters and as to the result of animal experiments, it is clear that our microbe is distinct from Passet's bacillus pyogenes fœtidus, as also from Bolton's bacillus pyogenes soli. Culturally it resembles to a certain extent the bacillus suisepticus (German *Schweineseuche*) of Loeffler and Schütz, but the action of this latter on rodents is altogether of a different nature from that described above of our microbe. On account of its derivation from sewage and its conspicuous pyogenic action, I propose for it the name "bacillus pyogenes cloacinus."

REMARKS
ON
PLASTIC OR CROUPOUS BRONCHITIS.

BY THOMAS OLIVER, M.A., M.D., F.R.C.P.,
Physician to the Royal Infirmary, Newcastle-upon-Tyne.

PLASTIC bronchitis is an affection which comes within the observation of few medical men. So rare is the illness that many physicians holding hospital appointments pass through their term of office without seeing a case. Within the last few months it has been my fortune to see two patients suffering from this uncommon malady. At *post-mortem* examinationsof croupous pneumonia I have occasionally seen some of the bronchi occupied by firm fibrinous plugs, but in the patients whose notes are subjoined the illness is in no way associated with either pneumonia or tracheal croup. The cases are illustrations of plastic bronchitis, an illness whose pathology has yet to be written, since it falls to the lot of even the few fortunate physicians who meet with it seldom to see more than one or two cases. It is this circumstance that explains our rather scanty knowledge of the illness. From the photographs which accompany this paper an opinion can be readily formed as to the seat of formation of the casts. In neither patient was the larynx or trachea the least affected. Presumably therefore plastic bronchitis has nothing whatever to do with croupous laryngitis or diphtheria.

CASE I.—L. E., aged 47, a coal miner, was sent to me by Mr. Ingram-Johnson, of South Moor, on January 14th, 1899, suffering from recurrent

attacks of dyspnœa. Until three years ago the patient was a healthy man. At this time he had what seemed to be an ordinary but rather a severe cold on his chest. He had cough with expectoration and a certain amount of pain in his chest. The cough became paroxysmal, and was accompanied by an unpleasant choking sensation, which was always relieved by the patient expectorating a rounded mass of what seemed to be inspissated mucus. During these attacks pain was felt in the right chest, about the level of the seventh rib in front. These attacks continued off and on. As the patient kept ejecting the spherical masses already mentioned, he placed them in water, when they unrolled themselves into the dendritic forms exhibited in the photographs. In the course of an attack he might expectorate a few casts in rapid succession—say at intervals of five or six minutes—but on no occasion at this time could it be said that there was any trace of blood. Attacks of paroxysmal cough and dyspnœa with expulsion of casts have recurred at varying intervals during the last three years, and apparently without any definite relation to the season of the year or the nature of the weather. They have generally been preceded by symptoms of a "cold" and the expectoration of ordinary phlegm. His work has been interrupted from time to time by the attacks. For five months prior to Christmas he was quite well; he followed his occupation and imagined that he was cured; but the recurrence of an attack of even greater severity than before dispelled this belief.

On the whole his general health seems to be good. He is a well-built, healthy-looking man, and has never suffered from croup, diphtheria, nor syphilis. In his family history there is nothing of importance. His temperature is 98.4°, and it has never risen higher than this during the seven weeks he has been under observation. Pulse is 56 on an average; urine



Fig. 1.—From adult male.

is healthy; specific gravity 1035: no albumen, no sugar; heart is normal. Patient, who had expelled some casts on the morning of his admission, complained of pain over the front of the right chest, especially over the fifth, sixth, and seventh costal cartilages. He kept expectorating, with slight cough, large quantities of a clear gelatinous mucus containing very small portions of casts of the finer divisions of the bronchi. Immediately below the right nipple and slightly internal to it a small area of dulness is detected. The respiratory murmur here is neither so full nor so audible as elsewhere. The respiratory murmur over the front of the chest is at other places normal. Behind, at the level of the tenth right rib, about 2½ inches from the spine, is a small area over which a distinct cracked-pot sound is obtained on percussion and on auscultation small moist crepitant *râles* can be heard. The abdominal organs are healthy. Three days after this the cracked-pot sound was less discernible, and the crepitant *râles* had all but disappeared, and by the end of that week patient seemed quite well again. There was still cough, but it was no longer paroxysmal nor was it accompanied by dyspnœa.

Although at this particular time no fresh fibrinous casts were being expelled, he was still bringing up large quantities of a thin gelatinous gum-like liquid not unlike thin arrowroot made with hot water. The chest on both sides was now resonant from apex to base, with the exception of the slight area of dulness just below the right nipple, and over which the breath sounds were still feeble. At the base of right lung posteriorly there could still be heard over a limited area on percussion a *bruit de pot fêlé*. The respiratory murmur, however, was healthy. Nine days after his admission patient brought up a few small casts rather shreddy, and on the eleventh day the expectoration contained the merest trace of blood. For several days the dulness at the right base remained, the cracked-pot sound disappeared, but the breath sounds here were harsher, and were occasionally accompanied by small moist *râles*. The progress of the case from this time was uneventful; his pulse at the end of his stay in hospital was 52, and his temperature varied from 97° to 98.5° F. Cough would occasionally be present, accompanied by expectoration of a gelatinous mucus free from the presence of pus corpuscles; this, although carefully searched, never contained any tubercle bacilli.

CASE II.—A boy aged 9 years. The notes of the case were kindly placed at my disposal by Dr. William L. Walker, of the Newcastle Dispensary. A pale, delicate child, the subject of recurrent paroxysms of cough and dyspnœa. A year ago he suffered from epistaxis, which would continue for eight hours at a time. Until five years ago, when he had rheumatic fever, he was healthy. Four months ago he began to cough up what he called "worms," for he noticed that sometimes if he spat into water the masses became unravelled, and assumed that appearance. In the case of this boy the expulsion of the bronchial casts is a matter of great difficulty. It requires hard and long-continued coughing to dislodge them. Frequently he has to sit up the greater part of the night in bed, coughing almost incessantly and struggling for breath. He only expels one cast at a time, and it has been noticed that the thick end is frequently tinged with blood. Very soon afterwards another cast is expelled. The patient can generally tell ten hours before the event, owing to an increasing sense of



Fig. 2.—From adult male.

suffocation, that he is going to expectorate a bronchial cast. Although considerably distressed in his breathing at the time, his mother has not observed him to be cyanosed. After the prolonged fit of coughing and straining the patient is thoroughly exhausted and falls asleep in a semi-upright position, bent forward, his forehead resting on his hands. His pulse is usually 120. Heart: apex beat is diffused; it is felt 2½ inches below and ½ inch external to left nipple. Here a loud blowing systolic murmur is heard, also over the right ventricle; the aortic sounds are normal. Lungs: Percussion note is resonant all over; crepitant *râles* are heard over both bases. Urine is free from albumen and sugar; it is deep amber-coloured, and contains urates. When the patient was examined two weeks subsequently there were dulness over the base of the right lung behind, and tubular breathing, with bronchial and crepitant *râles*, while over the left base posteriorly a few small bronchial *râles* were detectable. He had expectorated a few casts two days previously.

The points of interest in these two cases of croupous bronchitis are: (1) The absence of a history of any previous illness that could give rise to the formation of fibrinous casts in the bronchi; (2) the recurrence of attacks that are apparently not influenced either by weather or by the season of the year

(3) sensation of an impending seizure; (4) paroxysmal character of the cough, accompanied by severe straining and a difficulty of breathing amounting almost to suffocation; (5) absence of pronounced physical signs of disease in the intervals; (6) absence of high temperature; and (7) in the case of the boy, coexisting heart disease.

As regards croupous bronchitis, neither sex is spared and no age apparently is exempted. According to Riegel,[1] plastic bronchitis occurs more frequently in males than females, mostly between the ages of 10 and 30, and it assumes a chronic rather than an acute form. There may or may not be any antecedent illness. There is an opinion that it only arises after repeated attacks of bronchitis, but in my adult patient there is no such history, and in the case of the boy there was pre-existing heart disease. In my older patient it would appear as if his first attack of bronchitis had almost at once assumed a croupous character, for the only immediately previous illness was what seemed to be an ordinary cold.

Plastic bronchitis is not, in my opinion, specially related to tuberculous disease. It is difficult to separate the two types of croupous bronchitis, acute and chronic, from each other. In the acute form the illness is said to commence with symptoms not unlike those of pneumonia. At first there is fever, followed by a dry hacking cough, pains in the side, dyspnœa, and a sense of oppression in the chest, expectoration scanty and becoming sanguinolent, occasionally hæmoptysis, and later on fibrinous casts are expelled with great relief to the patient.



Fig. 3.—From boy.

In the chronic variety there may be as in one of my own cases symptoms of an ordinary cold or of a mild form of bronchitis for a few days, but as time goes on instead of the symptoms improving the breathing becomes worse, the cough more frequent, and the dyspnœa greater, all of which almost immediately subside on the expulsion of the fibrinous casts. Although the plugs in my patients might show on their surface at the time of their ejection a trace of blood, or the expectoration become tinged a day or two afterwards, there was never anything like the hæmoptysis which some physicians have observed, and which suggested to them the possibility of plastic bronchitis being a tuberculous affection. Since it requires considerable effort and a good deal of straining to dislodge the casts, it would not be surprising if slight rupture of bronchial blood vessels occurred at the time. The process of expelling the cast is a laborious one; it brings the expiratory muscles fully into play sometimes for hours, during which there is a feeling of intense anxiety and a sense of suffocation. Each paroxysm may last the greater part of twenty-four hours. No wonder therefore after such prolonged expiratory effort and when expulsion has taken place the patient feels himself thoroughly exhausted.

When a fibrinous plug is forming in a bronchial tube, and apparently this takes place gradually, ingress and egress of air become correspondingly reduced. When the plug completely fills the tube, no air can enter. Over that particular part of the chest, therefore, no respiratory murmur will be heard. It is this circumstance, along with a normal resonant note on percussion over a limited area of one lung that suggests the existence of croupous bronchitis, and if we are dealing with a patient who has on a former occasion had a similar attack, he is sure to have had experience of that feeling of suffocation already mentioned, and he will probably say that no relief is likely to be obtained until a plug is expectorated. The illnesses that plastic bronchitis might be mistaken for are the presence of a foreign body in the bronchus, pneumothorax, and tracheal croup. The history of the case would enable us to exclude the presence of a foreign body in the bronchus that had accidentally found its way thereto; a pneumothorax to be so limited would require to be encysted, and would probably present other physical signs of phthisis, and compared with tracheal croup there would be an absence of the "inspiratory dyspnœa" that is so characteristic of obstruction in the upper part of the respiratory passages. In the case of L. E. there was detected for several weeks after the expulsion of the casts a limited area of dulness over the base of the right lung, which may have been due to pulmonary collapse.

The pathology of plastic bronchitis is obscure. Why in the two patients whose notes form the subject of this paper limited lengths of the bronchial tree in one or both lungs should have assumed the habit under certain unrecognised circumstances of forming fibrinious plugs, I am not in a position to explain. Their formation seems to become a habit, and the only near approach to a similar state of things in what



Fig. 4.—From boy.

may appear to be healthy subjects, but with some local morbid peculiarity, is the shedding of uterine casts by women during menstruation. The cast that forms in membranous croup also resembles it, but I am not aware of children who have once suffered repeating the process time after time. It is to be presumed, therefore, that there is either a peculiar condition of the blood whereby the plasma which exudes on to the bronchial mucous membrane tends to assume the solid form seen in the cast, or there is some altered condition of the epithelial lining of the bronchi whereby a chemical and physical change is induced in the inflammatory exudation poured on to its surface. From the perfectly intact shape of the mould, the comparative absence of an epithelial covering and of accompanying blood when expelled, it would seem as if the epithelial lining was only very slightly involved in the process, and therefore the term "croupous" as applied to the cast is more correct than "diphtheritic." On microscopical examination the casts, which are greyish-white in colour, are found to be composed of layers of fibrin, in the meshes of which are very few corpuscular bodies. Here and there the lamellar layers of fibrin are separated by spaces which contain mucus and air. There is no indication of organisation. Ewart, in his article on Plastic Bronchitis,[2] quoting Waldenburg and Lucas-Championnière, mentions the occasional presence of fat in the casts, an observation confirmed by Model, who found the fat as a fine granular deposit or in droplets between the layers of fibrin. I have not observed this. Fibrin itself often

assumes this granular form. None of the casts brought up by my patients were hollow. They were semisolid, firm plugs, 2 to 3 inches in length, with beautiful arborescent endings. The centre of the cast would therefore be the first to have been formed, and subsequent increase in size would be due to fresh deposition. Hence their stratified structure. It is just possible that plastic bronchitis is not always of the same kind, and that, as in a case reported by Kretschy, there may be a pretty complete shedding of the bronchial epithelium. When this occurs there will be a greater tendency to oozing out of blood. How far, too, plastic bronchitis may be due to the action of microbes it is impossible to say. There must be numerous micro-organisms in the respiratory passages, and when present in the coagulated bronchial exudate it is impossible to say what part, if any, they may have played in its causation.

Griffon,[3] in a communication to the French Anatomical Society, presented the false membranes and microscopical sections from two cases of croupous bronchitis, and gave the details of their bacteriological examination. His examinations rather suggest a different evolution for the two cases. In one the disease was acute. Streptococci were obtained from the culture. It was the only micro-organism present in the exudate. The other was a slower case and corresponded to the chronic type. The bronchial casts were highly developed, and exhibited numerous dendrites. Both sections and cultures were rich in pneumococci. Inoculations of a mouse with the cocci showed them to be very virulent. M. P. Claisse also isolated streptococci from an analogous case. It may be that the presence of these micro-organisms was simply accidental. Pneumococci are believed to live only a very short time in the lung: their presence, therefore, in the chronic case reported by Griffon would show that they were capable of living a relatively long time on the bronchial mucous membrane. No micro-organisms were found in the casts expectorated by my patients.

Treatment divides itself under two heads (1) means used to loosen and dislodge the plugs; (2) to prevent their recurrence. The employment of emetics seems rational, but unless the fibrinous casts are already lying loose, it is difficult to eject them by inducing vomiting. Besides, as we have no exact means of knowing when the plugs have become so thoroughly loosened that they can be thrown off, it is, on the whole, the wiser plan not to administer emetics. Various inhalations, medicated and otherwise, have been suggested, but in my experience I cannot say that any of them were of the slightest service. They were badly borne by my elder patient, a remark which applies equally to the use of the steam kettle. I regard the treatment of plastic bronchitis as, generally speaking, unsatisfactory. Nothing short of expulsion of the casts gives relief. Lime water or lactic acid sprays and inhalation, also solutions of the alkaline carbonates are not more reliable. The internal administration of iodide of potassium with or without expectorants gives as good results as anything. Ewart recommends the cautious intratracheal injection of oil, or a mild solvent such as lime water or trypsin. To prevent recurrence I know of nothing better than the employment of such means as will improve the general health, living in a dry bracing atmosphere, good food, the internal administration of tinct. quin. ammoniat., nux vomica, cascarilla, with or without cod-liver oil.

The photographs of the bronchial casts were made by my clinical clerk, Mr. Robert Peart, who adopted the following method. The casts without any preparation were in a non-actinic light floated on paper under water and spread out with a brush. Both were then removed together, drained, exposed, and developed in the ordinary manner.

REFERENCES.

[1] *Ziemssen's Cycl. Pract. Med.*, vol. iv, p. 442. [2] Allbutt, *System of Medicine*, vol. v., p. 30. [3] *Gaz. Hebdom. de Méd. et de Chir.*, March 30th, 1899, p. 303.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. José Lacasa, Physician to the General Hospital, Inspector of Public Health, and a leading practitioner in Madrid; and Dr. Michael Rawitzki, of Berlin, recognised as an authority on old Jewish medicine, aged 59.

THE CROONIAN LECTURES
ON
SOME POINTS CONNECTED WITH SLEEP, SLEEPLESSNESS, AND HYPNOTICS.

Delivered before the Royal College of Physicians of London.

BY JOHN BUCKLEY BRADBURY, M.D.CANTAB.,
Fellow of the College; Downing Professor of Medicine in the University of Cambridge; and Senior Physician to Addenbrooke's Hospital.

LECTURE III.

THE most important of the other derivatives of chloral is chloralose, first prepared by Heffter and introduced into therapeutics by Henriot and Richet. Like chloral hydrate it induces sleep, but instead of depressing reflex activity it markedly increases it, while its toxicity is greater. Why the combination of an inert sugar molecule with chloral should so greatly increase its toxic action and modify its effects is difficult to understand. It may be that the chloral molecule is presented to the tissues in a more readily assimilable condition. We know that chloral combines with glucose, and the product thus formed is oxidised in the system to urochloric acid, and this on hydrolysis yields glycuronic acid.

It is mainly to Richet and his pupils that we are indebted for our knowledge of the pharmacology of chloralose. They have chiefly worked with dogs. In these animals there is marked preliminary excitement followed by sleep. The muscles retain their tone, and there are increased reflexes especially to sound. Pain is said to be abolished. The respiratory movements become irregular, and finally cease, but the heart is scarcely affected, and the blood pressure is said to be raised above the normal. If artificial respiration be maintained, comparatively large doses have to be given before the heart is paralysed. Richet believes that the action of the drug is primarily upon the grey matter of the cerebrum, as he found after its administration the white matter was more sensitive to stimuli than the cortex, a condition the reverse of normal.

In man the drug is said to produce refreshing sleep without ill-effects. The blood pressure is raised, and the appetite stimulated. Muscular twitchings may occur, and in some cases even convulsions have been noticed; but Richet thinks the cases of so-called poisoning are misnamed, and that the recorded dangers are in reality advantages, as they show the activity of the medullary and spinal centres. As a result of giving chloralose, he says, the brain is asleep and the spinal cord awake or even excited.

The comparative toxicity of chloralose in dogs, cats, and birds per kg. body-weight when given by the mouth is as follows:

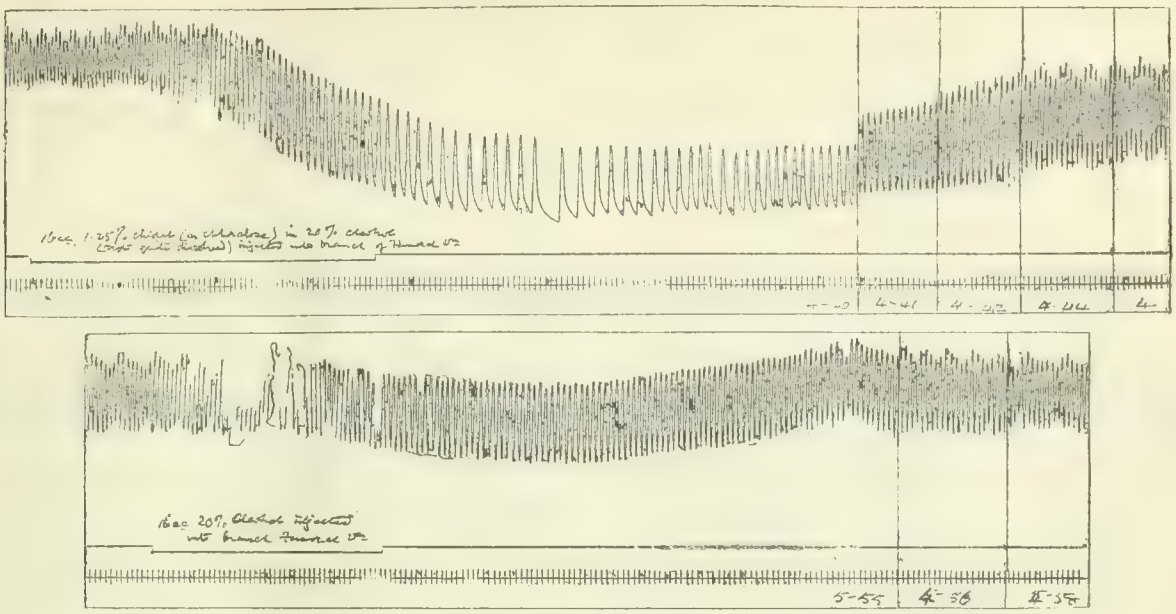
	Dogs.	Cats.	Birds.
	Gram.	Gram.	Gram.
Minimum active dose	0.15	0.005	0.010
Hypnotic dose	0.25	0.020	0.015
Lethal dose	0.60	0.100	0.050

It will be noticed that cats are extremely sensitive to this drug, but they are also sensitive to chloral and chloroform.

My experiments have been made chiefly on rabbits, which are better adapted for comparative investigations than dogs or cats. The same symptoms are seen as in dogs, with the exception of the preliminary excitement—that is, cerebral depression follows in about half an hour; the animal, on attempting to move, rolls from side to side, and subsequently sleep occurs. But even then the reflexes are increased, the corneal reflex is distinct, and there may be nystagmus. Pain, however, is not abolished, as heavy pressure on the feet will produce marked reflexes where moderate pressure has no effect. The respiration is slowed, and to a less degree the heart beat also. The temperature falls from the first. A dose of 1 gram per kg. kills in two and a half hours. Similar effects are produced in guinea-pigs and rats.

Fig. 7 distinctly shows lowering of the blood pressure by chloralose. It was taken from a dog to which small doses of

Fig. 7.—EFFECT OF CHLORALOSE ON BLOOD PRESSURE.



Dog 9,040 g. as before (Fig. 2, p. 7).
Lower tracing=effect of alcohol given without chloralose.

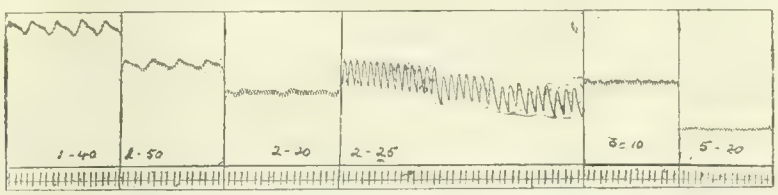


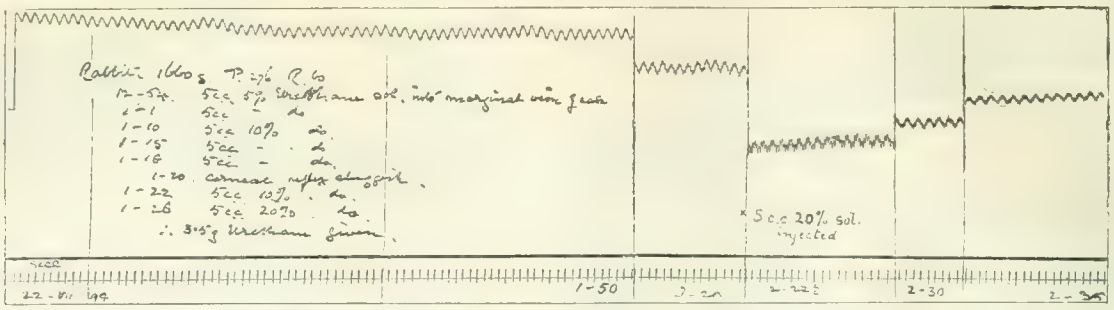
Fig. 8.—Rabbit, 1,820 g. (P. 150. R. 240, T. 38.7°).
11.37 0.96 g. chloralose (0.25 g. p. kg. chloral), suspended in water, injected into stomach.
12.27 laid on side; nystagmus.
1.25 operation commenced.
2.25 artificial respiration.

chloral in various forms had previously been given (Fig. 2), and it shows the effect of an injection of 16 c.cm. of 1.25 per cent. in 20 per cent. alcohol into the femoral vein. The blood pressure is markedly lowered, the heart beats are slowed, and respiration has ceased. The diminished frequency of the heart beats in part accounts for the lowness of the pressure. The effect is even greater than that of a similar dose of chloral hydrate or chloralamide (see Fig. 2, which shows the effect of these on the same dog subsequently), and that the influence is not due to the alcohol is shown in the succeeding tracing, which was obtained by injecting the same amount of alcohol without chloralose under exactly similar conditions. When smaller doses were used the effect was less marked, but it still remained greater than with chloral hydrate, at least when the doses administered were calculated as anhydrous chloral. This is perhaps unfair to the chloralose, as, owing to its greater molecular weight, twice as much of it must be administered as of chloral hydrate for the same amount of anhydrous chloral. But the effect is of interest as showing the influence of the chloral component. In a dog weighing 14,400 grams the injection of 5 c.cm. 1 per cent. chloral (as chloralose) in 20 per cent. alcohol produced slight increase in the respiratory movements, slight dilatation of the vessels, and increased cardiac action. The blood pressure fell very little, owing, probably to the compensating increase in the force of the heart beat. The same dose of chloral as hydrate produced no action whatever. When double the above doses were used the difference in effect of the two substances was still better shown, the excursion of the stilet after the chloralose solution increasing to a marked degree; after the chloral hydrate solution scarcely at all. The mean blood pressure after the injection of the chloralose was unaffected; after the chloral hydrate it fell to some extent. When, however, chloralose was used as the anæsthetic the influence on blood pressure at the onset of anæsthesia was found to be less than with chloral hydrate. This is seen in Fig. 8. To a rabbit weighing 1,820 grams 0.96 gram chloralose (0.5 gram per kg. body weight) suspended in water was injected through a catheter into the stomach. An hour afterwards the animal was laid on its side, but it was not ready for operation for 50 minutes more. When the blood pressure was first taken—two hours after the drug had been given—it was moderately high, but it rapidly fell. In similar experiments on dogs Richet found no lowering of blood pressure when the animal was sufficiently anæsthetised to be operated on. The fall in my case may have been due to an excessive dose, but against this view is the fact that the animal was operated on as soon as it was thought to be "ready," the point of departure in all cases, and in reality the time of greatest practical importance. That chloralose depresses the circulation considerably less than chloral hydrate there can be no doubt, but owing to its greater toxicity I am unwilling to admit its harmlessnes in cases of heart disease.

In the preparation of chloralose, a body which has been termed parachloralose is obtained. This is insoluble in water, and, according to Richet, is inactive. Mosso, on the contrary, states that it is very slightly active. I obtained a similar result. To a small rabbit weighing 710 grams I gave 2.849 grams parachloralose (4 grams per kg.) suspended in weak mucilage. Depression, slight fall in temperature, pulse-rate and respiration occurred, but no distinct hypnosis. Evidently this substance will be of no practical utility, and from this point of view whether it exerts a slight action or not is beside the question.

Besides ordinary chloralose or gluco chloralose other chloraloses exist, and these have recently been studied by

Fig. 9.—Urethane—Intravenous Injection.



Henriot and Richet.[1] These are galacto-chloralose, arabino-chloralose, xylo-chloralose, and levulo-chloralose. Probably two modifications exist in each case, but they have only been isolated in the arabinose combination. As regards their physiological action, arabino-chloralose, para-arabino-chloralose and levulo-chloralose produce calm sleep without increased reflex activity, and pharmacologically they seem better adapted for therapeutic purposes than gluco-chloralose. They have not, however, been put upon the market, and as far as I am aware have not been tried therapeutically. Xylo-chloralose is mainly convulsant; its hypnotic properties are but slightly marked. Galacto-chloralose possesses both hypnotic and convulsant actions, but these are not marked and only appear after comparatively large doses.

Of the other chloral compounds which I have investigated meta-chloral is so insoluble as to be almost inactive; and chloral-alcoholate acts in every way like the hydrate (*vide* British Medical Journal, July 1st, 1899), and appears to possess no advantages over this compound, except a slightly less toxicity, due in all probability to its being less rapidly absorbed.

Chloralamide also seems to have no claims to therapeutic consideration; it has been but little investigated. In the case of a small rabbit (960 grams), which received 2.9 grams of this substance (3 grams per kg.) slight depression was noticed after an hour, and subsequently sleepiness, but these symptoms were never very marked. There was a slight fall in the pulse-rate, and a distinct one in the respiratory frequency. The temperature remained normal. Recovery was very slow. Three days after the experiment the animal was eating very little, and distinct tremors were observed on standing. In another case in which a corresponding dose was given to a smaller animal (700 grams) slight depression, but no distinct sleepiness, was observed. The animal died in the night. The duodenum and upper part of the jejunum were found inflamed, and a small amount of serous fluid was found in the peritoneal cavity. A recent introduction is a combination of amylene hydrate and chloral to which the name of amylene-chloral has been given. According to Fuchs and Koch,[2] it is a good narcotic, and possesses no untoward effects.

Butyl-chloral hydrate, the old croton chloral, is, as Liebreich stated, an intensified chloral. It corresponds very well in its effects to what we should expect from its chemical relation to ordinary chloral. It is more toxic, more hypnotic, and more depressant to the circulation; but it is much less soluble, and this fact must be remembered in comparing the effects of the two drugs.

The bromo-derivatives are less soluble and more toxic than the corresponding chloro-compounds, and more depressant to the circulation. None of the organic bromo-compounds seems likely to prove a useful hypnotic. Bromal hydrate ($CBr_3CHO.H_2O$) is decidedly irritant, and rapidly produces toxic symptoms. Bromoform ($CHBr_3$), the co-relative of chloroform, is also extremely irritant. It has recently been used as a hypnotic, but it is mostly given in whooping-cough. Considering its toxicity and the ill-effects it is liable to produce, its use in medicine ought to be abandoned. Ethylene bromide ($C_2H_4Br_2$) is also unsuitable as a hypnotic. It is decidedly toxic, and deaths are said to have resulted from its use, especially as an anæsthetic. Bromaloses, corresponding to chloraloses, have been prepared, but do not appear to have been investigated pharmacologically. They will probably prove of no therapeutic value.

Bromalin has been employed as a hypnotic and as a remedy for epilepsy. It contains comparatively little bromine, and, consequently, is not very toxic.

In some cases the analgesics seem to act as hypnotics, and an attempt has been made to increase this action by introducing bromine. Bromo-phenacetin ($C_6H_3Br.(OC_2H_5)NHCOCH_3$) is a case in point. This substance is not, however, very active; 3 grams per kg. administered by the œsophageal tube to rabbits only produced slight depression, a fall in the pulse and respiratory rate, and in the temperature. A similar bromo-derivative of antipyrin exists, but this appears to be less efficient as a hypnotic than the phenacetin compound.

Urethanes. $CO<\begin{matrix}NH_2\\OR\end{matrix}$

Somewhat more complicated in their molecule than the simple haloid hypnotics are the urethanes, one of which ethyl-urethane, ordinarily called urethane, was introduced into therapeutics by Schmiedeberg in 1885. He found it to be a decided hypnotic, and in doses which produced sleep to have no depressing influence on the respiration or circulation. Respiration appeared to be stimulated, due probably to the presence of the amide (NH_2) group.

Urethane possesses a slightly irritant effect, and after large doses vomiting is induced in dogs. Generally, however, it produces calm sleep without ill-effects or after-effects. Its action appears to be more certain in rabbits than in cats or dogs, and I may add even than in men.

With regard to its action upon blood pressure I showed a tracing of its harmless effect when given by the stomach, in my Bradshaw Lecture of 1895. I now add one showing its action when administered intravenously (Fig. 9). In this case it was found that the large dose of 3.5 grams had to be injected into the veins of a rabbit (1,660 grams) before the animal was sufficiently under for operation, yet the blood pressure was not less than its normal height, and was maintained. Subsequently on injecting another 5 c.cm. of a 20 per cent. solution the blood pressure fell rapidly, but no further fall followed this initial one. The respiration appeared to be scarcely influenced until late in the experiment. Another effect of urethane is a diuretic one; this appears to occur both in man and animals.

Of the other urethanes investigated by Schmiedeberg, the propyl ester acted qualitatively like the ethyl compound, but more powerfully. The iso-butyl and amyl esters were not investigated. They are, however, comparatively insoluble, and are not likely to prove of use in practice. If an ethyl group is introduced into the amide radicle the compound produced reacts like ethyl-urethane, qualitatively and quantitatively. Binet[3] found both methyl- and ethylidene-urethanes active; the latter being the more active of the two. Methyl-urethane was much less active than ethyl-urethane. He also found that a hydrogen of the amide group could be replaced by acetyl without changing the character of the action; but the toxicity of the compound thus formed was decidedly diminished.

Besides ethyl- I have investigated methyl-, ethylidene-, and phenyl-urethanes. Methyl-urethane, as previous authors found, is very slightly active. The main effect appears to be diuresis. Ethylidene urethane, however, produced marked

symptoms; 1.8 gram suspended in mucilage and given to a rabbit weighing 720 grams was followed by marked weakness, depression, and sleep; the pulse-rate rose; the respiratory-rate and temperature fell. No improvement occurred and the animal died in the early part of the following morning. Blood was found in the urine and petechiæ in the bladder, but with the exception of slight congestion of the upper part of the ileum no gross lesion was seen. Phenyl-urethane was also markedly active. A condition simulating catalepsy followed by paralysis, unconsciousness, a marked fall in temperature (10.2° C. in two hours) were the chief symptoms after a dose of 2 grams per kg. to a rabbit. The phenyl radicle is here the predominant factor, and whatever may subsequently be found with regard to the hypnotic effect of complicated aromatic derivatives, the simple radicles of this series cannot be used for this purpose. Although increased hypnosis may occur after the introduction of such a radicle, this is more than counterbalanced by its increased toxicity.

Thus, of the urethanes, ethyl-urethane is the only one with any claims to therapeutic utility. Its action appears to be mainly dependent upon the ethyl group it contains, and this effect is again brought out in connection with the sulphones, which we shall notice presently. Quite recently Albanese has investigated the action of di-urethane placed at his disposal by Professor Schmiedeberg. This substance ($NH(CO.OC_2H_5)_2$) contains two oxy-ethyl groups (OC_2H_5), and, when administered in doses corresponding to its molecular weight is twice as hypnotic as urethane, an additional proof of the value of the ethyl radicle.

As urethane exerts little effect upon the circulation, it was thought that a combination of chloral and urethane would maintain the hypnotic action of the former, and at the same time diminish its circulatory depressant power. This was said to be the case by Poppi,[1] but Langgaard[2] finds that chloral-urethane ($CCl_3.CHOH.NH.CO_2.)C_2H_5$—or ural, as it is sometimes called—is less certain as a hypnotic than chloral, and possesses the same action on the vasomotor system. Its uncertain effect he attributes to its smaller solubility and slower absorption. In the main Langgaard is right, but I think he is wrong in ignoring the urethane molecule altogether. Chloral-urethane is but slightly soluble in cold water and readily in boiling. In the latter it is said to be broken up into its constituents, but I have only found this to be the case after prolonged heating. In therapeutics, at least, the supposed decomposition of this substance may be ignored.

On account of its composition and smaller solubility, chloral-urethane is a safer though a less certain hypnotic than chloral. In rabbits doses corresponding to lethal amounts of chloral produce little effect, but larger doses produce a marked action.

Thus, to take a typical case, after 3.65 grams suspended in mucilage had been injected into the stomach of a rabbit (1,120 grams), the animal rapidly became narcotised, the reflexes were almost lost, the pulse-rate fell slightly, the respiratory-rate markedly, and the temperature 5.4 C. After four hours slight improvement occurred, but even after six hours this was not marked. The next morning the animal was normal.

Thus after a dose of chloral-urethane corresponding to 2 grams per kg. of anhydrous chloral—twice the toxic dose—recovery without apparent after-effects occurred. During deep narcosis with this drug the blood pressure is distinctly lowered, but this does not appear to be so marked as after the use of chloral hydrate.

SULPHONES.

Probably none of the more recently introduced hypnotics have excited so much interest as the sulphones. Of these, three are on the market—sulphonal, trional, and tetronal. Chemically they may be regarded as methane, in which all the hydrogens are replaced by alkyl and alkyl-sulphonic radicles. The introduction of the two last drugs is due to the fact that the hypnotic influence of sulphonal appears to be dependent upon the ethyls it contains. This was determined by Baumann and Kast[6] after investigation of a large number of disulphones.

These bodies may be divided into three series:

1. $CH_2(SO_2R)_2$ = methylene disulphone.
2. $CHR'(SO_2R)_2$ = methenyl disulphone.
3. $CR'R''(SO_2R)_2$ = ketone disulphone.

(Where R. R' R'' represent monatomic radicles.)

These substances react very differently in the body; the last—the ketone disulphones—are almost wholly decomposed; the first—methylene disulphones—scarcely at all. Consequently the ketone disulphones possess the greatest physiological action, the methylene disulphones being almost inactive. Between the two, both in activity and liability to change within the organism, stand the methenyl disulphones. Of the disulphones which are decomposed in the organism, Baumann and Kast found that only those were active which contained ethyl groups, and that the intensity was dependent on the number of these groups present. The sulphone group, in fact, does not as such come into consideration. Baumann and Kast's experiments were made on dogs, but if we experiment on rabbits the order of activity is changed. Trional is the most potent, tetronal the next, and sulphonal the least.

Evidently in certain cases we have some other active factor than change merely in chemical composition, namely, change in physical properties. Trional has the lowest melting point of the three compounds and it is also the most soluble; and this is more than sufficient to counteract the increased hypnotic influence of an extra ethyl group in the case of tetronal. In dogs and men, owing to the more liquid gastric contents, more rapid absorption, and greater susceptibility to hypnotic drugs, this difference in the solubility of the substances is not so apparent. If experiments are made with complete solutions, the order of toxicity—sulphonal, trional, tetronal—is well brought out.

Thus, fish (minnows) die in about twenty-four hours when placed in sulphonal, 1 in 1,600; trional, 1 in 4,000; tetronal, 1 in 5,000. It is worth while drawing attention to this marked toxicity of sulphones to fish, especially as compared with other hypnotics. Thus 1 in 500 chloral is not fatal, and 1 in 1,000 urethane produces scarcely any effect. The symptoms also produced by chloral hydrate and the sulphones are different in their nature; the main symptom of the first is narcosis; that of the second paralysis. This suggests that sulphones have some other effect than a purely hypnotic one, and that they act on other organs of the body than the brain, and this is the case.

Recently the mode of action and toxic effects of sulphones have been investigated by several observers. Vanderlinden and de Buck put forward the view that the hypnotic action was due to a diminution in the alkalinity of the blood and a resulting accumulation of CO_2 combined with poverty of O in the nerve cells; but this view has been controverted by Mayser,[7] von Mering,[8] and Giessler.[9] Hoppe-Seyler and Ritter[10] believe that the essential feature of acute poisoning by these drugs is a destruction of red blood corpuscles, and that this accounts for the siderosis of the liver, the excessive formation of bile, and the presence of urobilin in the urine. Fatty degeneration and sometimes necrosis occur in the heart, liver, kidneys, stomach, and intestines; and secondary symptoms, for example, blood stasis in the organs from heart failure, also result. Death in warm-blooded animals is said to occur from broncho-pneumonia (aspiration pneumonia).

VEGETABLE HYPNOTICS.

It is not possible to deal with these on purely chemical lines. The active principles of some of them are unknown, and of the others but little is known of their chemical constitution. We are aware that many of them contain definite groups, and in the case of some we know the parent radicle, but the mode of combination of the various groups in these cases is still uncertain. From a pharmacological point of view this mode of combination is of importance, as drugs possessing the same empiric formula, and even in some cases similar constitutional formulæ, have very different pharmacological actions.

As opium is by far the most important of the vegetable hypnotics that we possess, I shall deal first with this substance.

The beginning of our scientific knowledge of this drug dates from the commencement of this century only, when Sertürner isolated morphine. This, the first alkaloid to be obtained, was found to possess similar effects to opium.

It was early found that all the alkaloids of opium were not possessed of similar effects. Some, such as morphine, produced cerebral depression; others, such as thebaine, excitement and convulsions. Thus within the same vegetable product were found substances having antagonistic actions. But further investigation proved that the two substances were not so antagonistic as was at first thought. Morphine was found to act differently on different animals, in the frog producing mainly convulsions and in some mammals excitement rather than depression. These mammals are said by Guinard,[11] who has recently made an important contribution to this subject, to be the horse, ass, ox, cat, sheep, pig, and goat; the dog,

rabbit, guinea-pig, white rat and mouse, on the other hand, are more or less depressed. Even in the same species of animals there is a considerable variation in the action of morphine, and men who are most susceptible to its depressant effects are sometimes markedly excited by it. Comparatively recently Amblard and Grasset have returned to the question of the convulsant action of morphine, and from researches on animals with cut spinal cords have concluded that morphine and thebaine are not diametrically opposite in action and that the effect of morphine on frogs and mammals is not dissimilar. This was known before, but these authors lay stress on the fact that the excito-motor action of opium is not exclusively dependent on the amount of so-called convulsant substances it contains, but it is also dependent on the morphine present. An amount of opium containing 5 cg. morphine is more convulsant than the amount of thebaine (about 1 mg.) present.

But whatever the effects in other animals, to man and the dog morphine is decidedly depressant, and differs markedly in its action from thebaine. And according as the other alkaloids of opium approach nearer to one or other of these in action, they may be classified. Claude Bernard, commencing with the most convulsant, obtained the following series: narceine, morphine, codeine, narcotine, papaverine, thebaine; the order of toxicity he found was narcotine, morphine, narceine, papaverine, codeine, thebaine, the last named being the most powerful.

Schröder divides the alkaloids of opium into two groups: the morphine group containing morphine and oxydimorphine, or, as it is now sometimes called, pseudo-morphine; the codeine group containing papaverine, codeine, narcotine, and thebaine. Hydrocotarnine, laudanosine, and cryptopine also belong to this group, but our knowledge of their actions, Schröder says, is not sufficient to place them. Meyer, in connection with a research on other papaveraceous alkaloids, has modified this classification. He divides them thus: 1. Morphine group, containing morphine, chelidonine, and α-homochelidonine. 2. Codeine group, containing papaverine, codeine, laudanosine, narcotine, hydrocotarnine, sanguinarine, thebaine, laudanine, hydrastine. 3. Protopine group, containing protopine, β-homochelidonine, and cryptopine. Not one of these classifications seems to me satisfactory. Claude Bernard's has been criticised by many observers, mainly in connection with the relative positions of morphine and narceine. The latter in man has not been found by the majority of observers to be more narcotic than the former, and in practice it has proved of little value. The position of papaverine in the two classifications also seems to me erroneous. In both it is given as a convulsant, and in Bernard's as a marked convulsant. In my experiments the prominent symptom has been depression.

In frogs spasmodic inco-ordinate movements may sometimes be obtained on stimulation for a short time after the administration of a lethal dose, but at no time is any tetanus or marked increased activity present. In rats 0.3 gram per kg. produced muscular weakness, slowing of the pulse and respiration, but no tetanus or distinct narcosis; the symptoms lasted four hours, and recovery occurred. Still larger and lethal doses failed to produce increased reflex excitability. In a guinea-pig 0.2 gram (0.47 gram per kg.) produced prostration and running movements of the limbs, which lasted 30 seconds, but these often occur after the administration of alcohol, and they cannot be regarded as certainly indicating a convulsant action. This animal died from paralysis of the respiration in ten minutes. A rabbit to which a similar dose (0.48 gram per kg.) was given also died in ten minutes, and in this case the heart and respiration ceased together. No sign of narcosis, rigidity, or tetanus occurred.

It seems to me that these experiments show that papaverine is not possessed of any convulsant action in any sense of the word. As far as I can see its action is mainly depressant, and as the nerves still retain their irritability after death, the effect is apparently due to an action on the central nervous system.

My experiments with the other alkaloids corroborate, on the whole, those of previous observers. Thebaine is almost a pure convulsant, and the same may be said of laudanine and laudanosine. Hydrocotarnine, protopine, and codeine also possess convulsant properties, and, in frogs and many mammals, so does morphine. Protopine produces more clonic convulsons than the other alkaloids, but this does not seem sufficient to justify its being placed in a separate division. Narcotine and cryptopine I have not found markedly convulsant, and narceine seems to possess no action whatever in this direction.

V. Schröder found it without effect when given *per os* to a rabbit; and in a kitten to which 0.1 gram per kg. was given by the mouth I obtained no action. Injected intraperitoneally into a rat, 0.5 gram per kg. (1.25 c.cm. of 2.5 per cent. solution), only produced slight and transient depression, and in a frog 0.02 gram produced after some time depression, followed in a few days by death. Previous to death the animal became slightly tetanic when touched.

The order of toxicity, according to my experiments is—narceine, narcotine, morphine, codeine, papaverine, hydrocotarnine, laudanosine, laudanine, protopine, and thebaine. As regards therapeutic utility, none of these substances except those already in use (morphine and codeine) are likely to prove of value in practice.

[The lecturer at this point discussed the chemical constitution of the opium alkaloids, and then proceeded as follows:]

The general action of morphine is well known to all of you, and I have nothing new to add as to its effects. It cannot be employed habitually as a hypnotic, mainly on account of the rapid tolerance which is produced, and also on account of its tendency to induce a habit and produce untoward effects on the system. But whenever pain is present morphine is the hypnotic *par excellence*.

With morphine we have no longer to deal so much with a depressant effect on the circulation, as in the case of chloral and its allies, as with an effect on the respiration. This comes out in nearly every tracing taken with this drug. At first there is often increase in the frequency and depth of the respirations, and sometimes this effect may last a considerable time; but during the sleep produced by the drug the respirations are almost invariably slower, and often shallower. Later they may become irregular and rapid, or may take on a periodic rhythm.

The effect of morphine on the circulation varies somewhat, Guinard says, according as the animal is narcotised or not by the drug. In animals which are narcotised, such as the dog, the blood pressure at first rises, then falls below the normal to the extent of about 20 mHg. In animals not narcotised there may be a preliminary fall, but the pressure afterwards rises and remains above the normal level until near death. The heart itself, Guinard believes, is stimulated directly, more especially in those animals which are not narcotised by morphine. After large doses in the dog the heart-beat sooner or later becomes irregular. The irregularity he is inclined to attribute to a central action, as section of the vagus caused it to disappear. This is of importance in connection with the use of morphine as a hypnotic in advanced heart disease, for although in this condition it is one of the best hypnotics we possess, it is by no means free from danger. Attempts have been made to find a less dangerous and equally effective substitute. To two such compounds I intend to draw your attention in the next lecture.

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CASES OF SEPTICÆMIC INFECTION TREATED WITH ANTISTREPTOCOCCUS SERUM: RAPID RECOVERY.

BY J. MITCHELL BRUCE, M.D., F.R.C.P.,

Physician to Charing Cross Hospital.

By the kindness of two of my professional friends I am able to submit the histories of two cases of an infectious kind which I had an opportunity of seeing with them, and in which the use of antistreptococcus serum was entirely successful.

SEPTIC ENDOCARDITIS.

(Notes by ALEXANDER T. SCOTT, M.R.C.S.)

Mr. X., 39, married, a merchant, had suffered from protracted chorea in childhood. About the age of 14 he had a neurotic attack following a blow on the abdomen at cricket. At 17 he had diphtheria. The present illness commenced about the middle of December, 1897, with "smoky" urine and a feeling of "seediness." For about twelve months previously I had noticed that his complexion, which was usually sallow, had assumed gradually a cachectic tint: indeed, I had frequently asked him how he was, but only to be told "Quite well."

On February 13th, 1898, at 10.30 P.M., he had a shiver and vomiting. This was repeated several times during the night. Next day I visited him. I found the temperature 101°, and the pulse 100. There was hæmat-

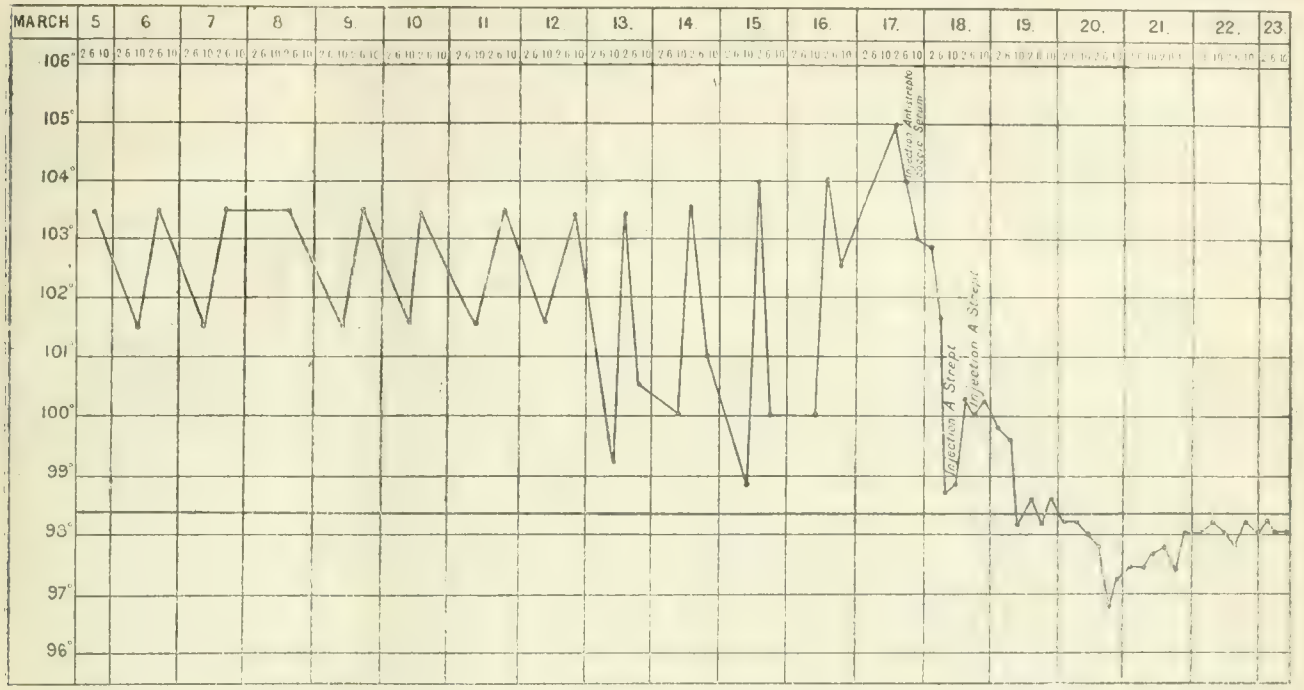


Chart I.—Mr. A. T. Scott's case.

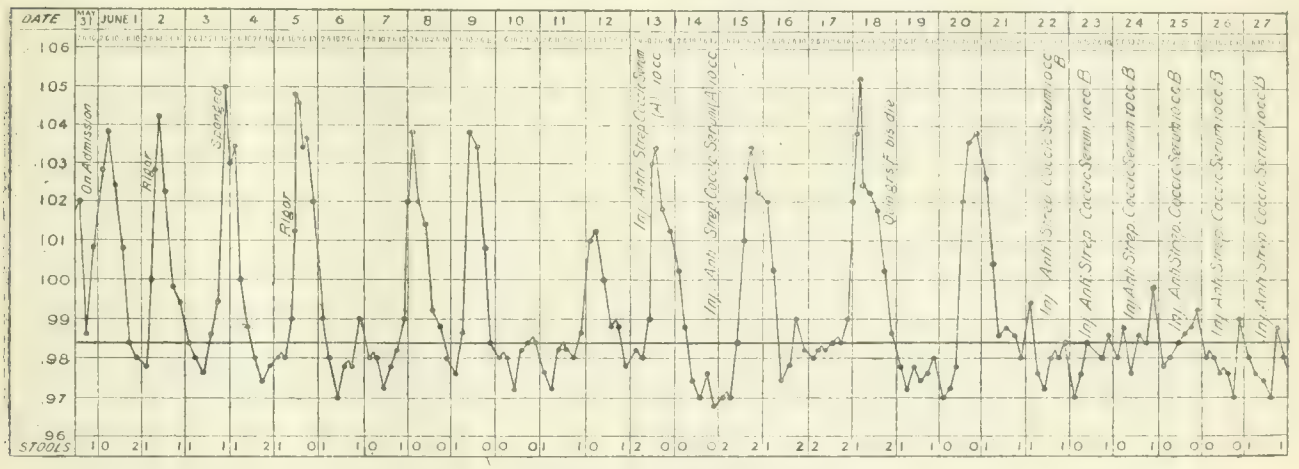


Chart II.—Dr. Abercrombie's case.

uria, and he had pain in the loins, right knee, and left forearm. He continued in this condition for about ten days, when the temperature became normal, and the pains disappeared, and he proposed to return to business. During this time he had no rash. He was now apparently approaching convalescence. The urine improved considerably, and on two occasions was found free from albumen or smokiness. However, on March 3rd, all the symptoms returned, and an eruption resembling petechiæ appeared on the hands and forearms; but in two or three instances, especially one on the back of the right wrist, looked like small furuncles with sloughy centres of minute size. At about 2 P.M. that day the temperature, which had been 100.5° in the morning, rose to 103.4°, with profuse sweating. There were no pulmonary or cardiac complications, and the pulse remained steady and not proportionately accelerated. The case was treated with 15-grain doses of sodium salicylate every four hours and cold sponging. The daily rise of temperature went on till March 9th, when an apparent defervescence set in again until March 13th, when a further rise took place, this time to 103.4°, on March 15th to 104°, and on March 16th to 105°, with increase of rash. A peculiarity in the case was a sudden rise of temperature in the afternoon with lower ranges at night. The high temperature was always preceded by an intense feeling of dry heat followed by profuse sweating.

On March 17th Dr. Mitchell Bruce saw the case in consultation. The temperature was then 104.8°; there was an eruption over the greater part of the body, partly erythematous partly resembling stigmata; hæmaturia still existed. A soft systolic murmur was audible over an area of about a square inch in the mitral region. The diagnosis was that the case was septic, with recent endocarditis.

An injection of antistreptococcus serum was given at 6.30 P.M. At 6.30 A.M. on March 18th the temperature had fallen to 98.7°, and a second injection was given. By 6.30 P.M. the rash had faded, and the murmur was only just audible; a third injection was given, the temperature being 100°. On the morning of the 19th the temperature was normal and the rash gone, leaving only minute dried-up sloughs.

The patient rapidly recovered, having no subsequent drawbacks. The temperature chart is appended. (Chart I.)

The case just related cannot be considered complete without reference to another case with which it was associated in a remarkable way, although the exact bearing of the two on each other can be only a matter of speculation in the present state of pathological knowledge. While this patient's illness was in progress, his two children (boys, aged 12 and 9) had measles; and after recovery I operated on the elder boy for post-nasal adenoids on March 9th, and he made a good recovery. The younger boy had his right tonsil removed on March 14th, and that afternoon, being fretful, was allowed to lie on his father's bed for a time. This was three days before Dr. Bruce saw Mr. X. On March 19th it was discovered that the wound on the boy's tonsil looked sloughy, and that his temperature was 103°. The case being highly suggestive of infection, an antistreptococcus injection was given on the evening of March 23rd, with no benefit either locally or constitutionally.

An injection of antidiphtheria serum was administered on the even-

ing of March 23rd, as the case seemed obviously diphtherial. (A specimen of membrane sent to the British Institute of Preventive Medicine was said to contain no diphtheria bacilli.) Next day tracheotomy was performed, followed by another injection of antidiphtherial serum. The patient made an uninterrupted recovery. A portion of membrane sent on the day of the operation to Messrs. Burroughs and Wellcome's laboratory was reported: "Much diphtheria." Until the injections were used the throat had been painted with zinc chloride and carbolic acid, and insufflations of precipitated sulphur also employed.

The lessons to be learned from the case, as far as one can reach a conclusion safely from a single case, are: (1) That antistreptococcus serum may succeed in septicæmia after ordinary measures have failed; (2) that it may act with great rapidity, all the phenomena disappearing in the course of forty-eight hours.

SEPTICÆMIA OF CEREBRO-SPINAL TYPE.

(Under the care of Dr. ABERCROMBIE).

J. R. B., aged 15, clerk, was admitted into Charing Cross Hospital on May 31st, 1898, for fever with delirium and drowsiness. The previous history was unimportant. He had been ill for twenty-six days. The first symptoms were a feeling of drowsiness which lasted for three days, then nocturnal restlessness, vomiting, and the development of the phenomena which continued prominent throughout. These were: Fever, ranging between normal or subnormal and 105°, with occasional rigor; pains in the head and down the back, and tenderness of the head, muscular spasms and a degree of opisthotonos, and bouts of restlessness, insomnia, and incoherence or active delirium.

A striking feature of the case, next to the cerebro-spinal type of the phenomena, were periods of remission, each extending over one or two days; the boy looking well and feeling well, calling for food and anxious to be permitted to read; and the sudden interruption of this condition by rigor, rise of temperature, possibly sickness, restlessness, and incoherence, all passing off again presently. The urine was found albuminous repeatedly. Epistaxis occurred on three occasions. On June 7th (thirty-third day of illness) a soft systolic murmur was heard over the apex of the heart; next day it had disappeared; on the third day it was caught again, and again it disappeared; but later on, June 18th (forty-fourth day) it was well developed and partly presystolic in time.

On June 13th (thirty-ninth day) 10 c.cm. antistreptococcus serum were injected under the integuments of the abdomen. The temperature fell steadily, but this proved to be only one of the ordinary periods of remission, for although a second injection was given next day, the temperature rose again on the third day, and two days later still the patient was as ill as ever, with a temperature of 105.2°, vomiting, delirium, severe headache, retraction of the head, and well-marked mitral murmur. Quinine was now tried (grs. v. bis die), and the temperature fell as usual, only to rise again to 104° nearly. (Chart II, p. 77.)

On June 22nd (forty-eighth day) a second course of antistreptococcus injections—the serum obtained from another source—was commenced, six in number. The temperature never again reached 100°, becoming practically normal, and therewith the patient improved steadily. The cardiac murmurs continued audible for a few days, then was heard only at intervals, and finally disappeared. All the phenomena connected with the head and spine subsided at the same time; and the boy was discharged on July 20th (seventy-sixth day) perfectly well, having gained 6 lbs. in the last sixteen days in hospital.

The conclusions to be drawn from this case are obvious: (1) As before, that in some cases of a septic kind antistreptococcus serum is successful; (2) as before, that the effect may be extremely rapid; (3) that success may be obtained after other measures failed; (4) that success may be attained with one serum after another serum has failed. This is very important. There was no suggestion of the first serum being bad. It was derived from an unimpeachable source. I regard it simply as different in some occult respect; and after all the test of difference is the result. One practical lesson to be learned from this case is not to be content with the trial of one serum if it prove unsuccessful.

TREATMENT OF A CASE OF PUERPERAL FEVER BY ANTISTREPTOCOCCUS SERUM.

BY DAVID ARTHUR, M.D., C.M., D.P.H.

MRS. P., aged 25, was confined of her first baby on August 5th, 1898. Everything was apparently normal. I first saw her about three hours after delivery, examined the placenta and found it entire, and the patient felt very comfortable. The nurse was not certificated; she was stated to be "very clever" and thought it unnecessary to send for me. All went well till the third day when the patient felt ill, complained of thirst, headache, and a sense of fulness in the lower part of the abdomen. There was no rigor; her temperature registered 103° F.

I douched the uterus with 1 in 4,000 mercury perchloride, and gave a mixture of iron perchloride and quinine. The douching of the uterus was continued for the following seven days thrice daily; between times the nurse douched out the vagina with the same lotion. On the third day of the fever intractable diarrhœa commenced, which lasted during the whole illness and was only partially controlled by the use of lead and opium pills. The patient gradually became weaker, all attempts to reduce the fever ended in failure, and the end seemed near.

Dr. Robinson was called in consultation on the eighth day of the illness. We found the patient in a very weak condition, the uterus extended above the umbilicus, and felt soft and boggy; there was only slight tenderness on pressure. The whole of the vaginal wall, the labia minora and majora were covered with a yellowish membrane, diphtherial in appearance, and the sense of touch gave the impression that the same membrane extended right up into the uterus. We both thought the patient was dying. Dr. Robinson, judging from the nature of the membrane, thought it due to a pure streptococcus infection; this I afterwards confirmed by a cover-glass preparation.

As the uterine douching and medicinal treatment had failed, we decided to stop all treatment, with the exception

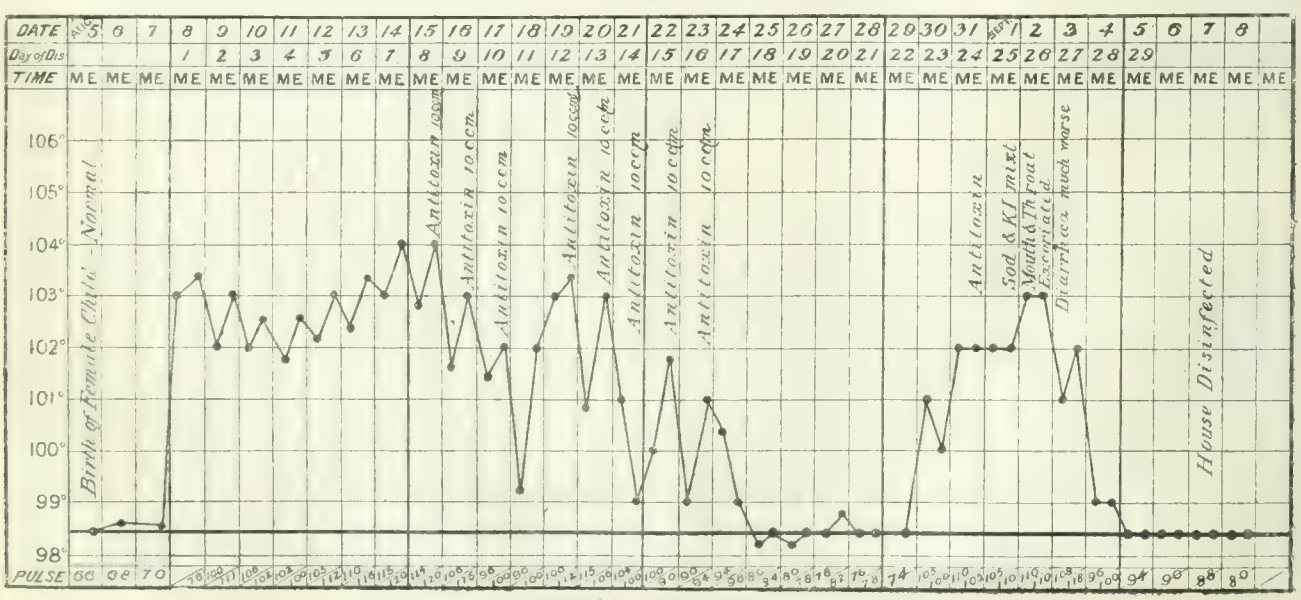


Chart of Dr. Arthur's case.

of a vaginal douche given by the nurse night and morning, and try as a last resource the antistreptococcus serum. Accordingly 10 c.cm. were injected that same evening, and at other times as seen marked on the chart. The morning following the first dose the patient felt much better, took her food well, had a cleaner tongue, and the temperature had fallen to 101.5° F.

In nine days eight injections of 10 c.cm. were given, the patient always feeling brighter after the injections, so much so that when she was feverish, on the twenty-fourth day of her illness, from what I now believe to be the after-effects of the treatment, she demanded another injection, when it caused just as much harm as it before had done good. Before, but still more after, this last injection she was very ill; her whole body and extremities were stiff and painful; there was a slight urticarial rash over the abdomen; the mouth and throat were excoriated; diarrhœa was very violent, with considerable loss of red blood from the rectum. During this period I administered a mixture containing sodium salicylate and potassium iodide, a gargle of potassium chlorate for mouth and throat, and opium suppositories. This after-effect reaction came on after the temperature had been normal for five days.

My impression is that it would have been better not to have omitted the injection of antitoxin on the eleventh day, but have kept to the rule of administration till the temperature became normal; the ninth or last injection ought not to have been given. After the patient was convalescent and going about she lost about 6 ounces of blood from the rectum. On examination I found that the lower 2 inches of the bowel were ulcerated.

An important point in the case only came to light when the patient was getting about—namely, that the nurse had a sore on her right forefinger and thumb while attending the patient.

ON SOME UNUSUAL CASES OF BLOOD POISONING.

By THOMAS HARRIS, M.D.Lond., F.R.C.P.,

Physician to the Manchester Royal Infirmary, and Lecturer on Diseases of the Respiratory Organs in Owens College.

Recently I have met with some cases of blood poisoning which appear to be worthy of record. The first case did not come under my own personal observation, and for the notes of it and for those of the second case I am indebted to the medical attendant, Dr. T. A. Goodfellow. The notes of the third case have been kindly furnished by Drs. Dearden and W. E. Fothergill, who were in frequent attendance. I regret that from a scientific point of view the cases are incomplete, as no *post-mortem* examination could be obtained in any of them, and in one alone was any bacteriological examination of the blood made.

As septic poisoning during the puerperium usually arises from absorption from the uterus, it is right that we should closely criticise any case where the absorption of septic matter is believed not to have arisen from its most common source. Cases I and III recorded below were instances of septic poisoning in women recently confined, but where the clinical history and facts of the case showed that the uterus had not been the point from whence the septic matter had been absorbed, but that in both it had probably arisen from the intestinal tract. As my colleague Dr. Donald was consulted in reference to Case I, I asked him to give me his reasons for regarding the case not as directly due to the confinement, and consequently not as an ordinary case of so-called puerperal fever, and he has kindly forwarded me the following statement:—"The sudden onset of the diarrhœa and vomiting without any previous symptom of ill-health was quite unlike the usual course of events in puerperal septicæmia, in which the diarrhœa (when it occurs) is generally not observed until the disease has been established for some days. On the other hand, the lochia and secretion of milk did not alter for a day or two after the onset of the acute symptoms. There was, when I saw her (November 4th), marked absence of the abdominal distension characteristic of acute puerperal septicæmia. The involution of the uterus was normal. There was no abnormal fulness or swelling to be made out in the pelvis on careful bimanual examination. There was no tenderness on pressure in the vaginal fornices. The surface of the small perineal tear was quite clean and healthy."

Case III was also an instance of septic poisoning in a person recently confined, but in whom we believe the uterus had not been the source whence the absorption had taken place. Dr. Fothergill, who was consulted in reference to the condition of the pelvic organs, has so clearly expressed, in his notes of the case, his reasons for not regarding it as an ordinary puerperal case, that it is unnecessary to refer more in detail to it at this point.

Case II is of special interest, because it is that of a lady who had passed the climacteric period, who had no affection of the pelvic organs, but who had been in very close attendance on Case I; and we could find no point which we could definitely fix as that of the entrance of the poison. We could not find any evidence that there had been a source of infection common to the two cases (Cases I and II). We were compelled to regard the case as one of infection from Case I, the poison having probably been absorbed through the respiratory tract. The case was an especially sad one, as the mother apparently lost her life from her devotion to her daughter.

These cases suggest certain possibilities which appear of importance in connection with the puerperal state and septic poisoning. The first is that the puerperal woman may be more susceptible to septic absorption from the intestinal tract than a non-puerperal person; and, although one must be careful not to minimise the danger of direct and indirect contagion in the spread of puerperal fever, it is possible that some cases, which are classed as true puerperal fever of uterine origin, are really due to absorption of toxic substances from the bowels. Secondly, it seems probable that those practitioners who have laid great stress upon the importance of overcoming constipation during the period of pregnancy, and especially during the puerperium, have not done so without adequate grounds. Thirdly, Case II suggests that sometimes septicæmia arising in the puerperal state is not without its dangers to those nursing the sick.

Case I (from notes by Dr. T. A. Goodfellow).—Mrs. X., aged 29, was confined of her second child on October 31st, 1897. The previous confinement two years and four months before, and was normal. Very troublesome constipation was present during the second pregnancy. Three months before delivery, after three days' constipation, she had colicky pains of great severity and profuse diarrhœa. A similar attack occurred three weeks before her confinement, and for some time previously the evacuations had been extremely foul. Ten days before her confinement she was busy clearing out the drain traps in the garden. The night previous to her confinement she had lobster for supper, which her husband (who also partook of it, but without bad result) declares to have been bad. The patient was confined early in the morning of October 31st. No doctor was present. I was there twenty minutes after the baby was born, and at the end of an hour from the birth expressed the placenta, which was a normal one. A small perineal tear (three-quarters of an inch) had been made, and was sutured with carbolised catgut. The patient progressed normally till the morning of November 2nd (two days after the confinement), when she had sudden vomiting and profuse diarrhœa, with a temperature of 102.5° F. There was no rigor. The uterus was fairly contracted, and the discharge was normal. During the day a scarlatiniform eruption developed over the trunk, thighs, and arms. Calomel and bismuth salicylate were prescribed. The temperature at night was 102°. The rash was more profuse. The breasts were becoming tense, but were not specially tender. The baby was put to the breast that evening.

On November 3rd the temperature was 100°. The bowels were moved during the night freely. The motions were foul. There was no vomiting. The lochial discharge was scanty but not foul. Milk secretion was established. The rash was still profuse. The pulse was 100 per minute. The patient took milk food and Benger's food very well. The tongue was clean and there was free perspiration.

On November 4th the temperature was 99° in the morning. The patient had a fairly good night. The lochial discharge was practically absent. I gave, however, a hot intrauterine douche of perchloride of mercury (1 in 3,000), and passed an iodoform bougie. No shreds came away with the douching. Dr. Donald saw the patient in the afternoon of this day, and reported that the uterus had normally contracted, with the usual amount of deflection to the right. The raw surface of the perineal tear (the suture having broken down during intrauterine douching) was quite clean and healthy. The rash was very profuse, there being exudation into the cutis of the parts affected, including the face. There was no tenderness on pressure anywhere. The case was regarded as one of septicæmia probably from absorption from the bowel, and certainly not of a typical puerperal form.

On November 5th the temperature was 101°. The bowels acted very freely during the night, the evacuations being extremely foul. There was considerable rapidity of breathing, with constant dry short cough, but there was no dulness or abnormal breath sounds over the chest. The patient was extremely anxious about herself. The temperature at night was 103.5° F.

On November 5th, the patient was much the same. The rash if any

thing was more profuse. The bowels had not acted again; patient was taking nourishment well. There was no vomiting, and she had fair nights after the administration of bromidia.

On November 7th, she was worse. The pulse was 110, and respirations 30. There was nothing to be heard on auscultation over the chest. The bowels acted normally, the evacuations being very foul. The temperature was 103° F.

On November 8th, she was rather better. The temperature was 100° but at 2 P.M. she had a sudden attack of diarrhœa, and profound collapse ensued. Dr. Leech saw her at 5 P.M., and though the respiration was very rapid (40) found no evidence of pneumonia.

The patient steadily grew worse towards night, passing motions unconsciously and being semi-comatose after 7 P.M. The temperature gradually rose until she died at 2 A.M. on the 9th with a temperature of 109°. From November 5th there was noticed in the room a powerful musty, sickly smell, which emanated apparently from patient's perspiration, which was very profuse. The diagnosis made was chronic constipation and septicæmia from fæcal absorption. Permission could not be obtained for a *post-mortem* examination. Recently the smoke test had been applied to the drains of the house in which the patient lived, but no defects were found.

CASE II (from notes by Dr. T. A. Goodfellow).—Mrs. Y., aged 54, was the mother of the preceding patient.

Onset of Present Illness.—The patient began to be ill on November 11th, 1897, with diarrhœa and fever, the temperature at noon being 104.5°. She had taken on the previous evening a dose of liquorice powder, as she had felt unwell after having been in close attendance on her daughter (see Case I, Mrs. X.) who had died on November 9th (two days previously).

I first saw her on November 13th. She was a stout, well-made woman, who looked older than her years; her face was flushed. Evening: Her temperature was 101°. She was perspiring slightly, and complained of soreness of the limbs, which were very tender to pressure. The tongue was dry and brown in the middle, with white fur on the posterior portion. On each side was a strip of about ½ inch in breadth which was moist and clean. The fauces were congested. There was some flatulent distension of the abdomen, but no abdominal tenderness. There had been no action of the bowels since the onset of the illness. The pulse was 100 in rate, and regular but of low tension. The cardiac first sound was somewhat muffled at the apex. The respirations were between 25 and 30 per minute. The urine was small in quantity, high-coloured, deposited urates on cooling. It contained a trace of albumen (a small quantity of albumen in the urine is stated to have been present for some years).

The patient had been taking a simple effervescing mixture with doses of compound tincture of cinchona every four hours, with milk diet and beef-tea and champagne in small quantities.

On November 14th morning temperature was 100.4° She complained of a feeling of weariness, and of pain in the wrists and ankles; both wrists were swollen, and the ankles doubtfully so. Perspiration was fairly free, but not acid in smell. The pulse was 100. The tongue was still dry, but clearing; thirst was extreme. The bowels moved naturally (small-formed brick-red motion).

On November 15th the patient had a better night. The temperature was 99.4° in the morning and 100.4° at night. The wrists were still swollen, but they and the limbs generally were less tender. The digital joints of the finger were also swollen. The knee-jerks were absent; there was plantar reflex obtained. The pulse was 100 in rate. The tongue was clearing, but there was still much dryness of the pharynx. The respirations were 35, and somewhat shallow, but there was no cough.

On November 16th the patient felt rather better. The swelling of the wrists was less, but the fingers were more swollen. The temperature was 100° in the morning. The knee-jerks and plantar reflexes were absent. There was numbness of both hands; the limbs were less tender to pressure. The pulse was very irregular at 10 A.M.; it was regular, however, at noon. Varicose veins present in both legs in knots, somewhat tender to pressure. The evening temperature was 100.4°, and the pulse 100 per minute.

On November 17th the temperature was 99.4° in the morning. There was some loss of control over the sphincter vesicæ, but the water was not decomposed. The temperature was 100.4° at night, and the pulse 100.

On November 18th the temperature was normal in the morning. A small spot of herpes had appeared in the middle line of the upper lip. The pulse was 88. The temperature at noon was 100°; the morning temperature was 101°.

On November 19th the patient felt sickly. The tongue was again dry in the middle. She was perspiring freely. Her pulse was 108.

On November 20th the patient still complained of nausea. She vomited at 7 A.M. after a dose of liquorice powder. The temperature was 101°, and the pulse 110 and of small volume. The respirations were 28 to 30. There was no abnormality in the breath sounds. The swelling of the right leg had increased. The area of thickening on the inner side and right thigh was red and tender, the knots of varix were more reddened and more tender than was the case yesterday. The perspiration had a sour, musty, and sickly odour. The dry area on the tongue was increasing, but it was still moist at the edges. There were sordes on the teeth. The mouth and throat were very dry. There was no enlargement of the liver or spleen, but there was much tympanites, and some diarrhœa. She was very flushed.

On November 21st both calves were more swollen, the right especially. The temperature in the morning was 102 8°, the pulse 110 and regular, and the respirations 40. She complained of epigastric pain, and was sick. There was much flatulent distension. There was no pericardial friction or signs of pneumonia discovered, but the bases of the lungs could not be examined. The motions were passed involuntarily, and were loose and fœtid. The patient rambled whilst dozing, but her mind was clear when she was awake. There was considerable dyspnœa and much tympanites. Oxygen was administered, but the patient died at 7.5 P.M. from cardiac failure.

CASE III (from notes supplied by Dr. Dearden and Dr. W. E. Fothergill).—Mrs. Z., aged 24, was a woman of robust appearance, but was much too stout for her age. In her family and personal history there is only one feature of interest. Some years ago she was slightly indisposed, and a medical man who saw her found that her temperature was 102° F. He kept her in bed for two weeks, and exhibited various antipyretics, but the temperature remained 102°, although she soon regained her usual health. She accordingly was allowed to get up, and no further observations were taken. This is of interest in connection with the disproportion between the symptoms and the temperature in the illness now recorded. She became pregnant for the first time early in February, 1897, and suffered during the early months from morning sickness. This passed away, and the remainder of her pregnancy was uneventful. Labour began early in the morning of November 13th, 1897. Dr. Dearden saw her at 7 A.M., and found the head presenting, the os being then the size of a shilling. At noon dilatation was progressing, and it was complete before 3 P.M. Labour ended naturally at about 4 P.M., the placenta and membranes being expelled complete soon after the birth of the child. Thus the only interference during the whole labour consisted of two or three vaginal examinations, which were conducted with complete antiseptic precautions.

During the first week of the puerperium the patient stated that she was quite well; she nursed the child, and was in good spirits. The nurse administered occasional antiseptic vaginal douches. Dr. Dearden noted that from the first the pulse was somewhat weak and rapid, and that there was a constant clammy condition of the skin. He found the temperature to be 102° F. on several occasions. On November 20th it rose to 103° F. He was sent for during the night, and found the temperature 105° F. This was maintained on November 21st.

Dr. Fothergill saw her with Dr. Dearden on November 22nd. She was then breathing rapidly, the pulse-rate was about 120 per minute, and the temperature was over 105° F. She looked much less ill than patients usually do with such a temperature, and complained of nothing beyond a buzzing in the head and deafness caused by the quinine which she had been taking. The breasts were not tender or hard, and showed no signs of inflammation. Their secretion, however, was arrested, and the child was fed artificially thereafter. The abdomen was not unduly tympanitic, and was nowhere tender on pressure. The fundus uteri was two fingers' breadths below the umbilicus, considerably higher than it should be ten days after labour. The vagina, bladder, and rectum, were free from tenderness or inflammatory thickening; indeed, there was no single tender spot to be found on bimanual examination. The uterus was large and soft; the os easily admitted a finger. The discharge was quite free from smell, and was of the usual quantity. There was, therefore, no sign of inflammation in the pelvis, abdomen, or breasts, or, indeed, in any organ. The large size of the uterus was explicable by the general febrile condition. It was therefore concluded that there must be absorption of poisonous substances from the intestinal canal, though the bowels had been kept open in the usual manner. Calomel was accordingly administered in 1 gr. doses with a little opium. The first three doses were given one every three hours, and then three more doses one every six hours. This acted quickly and well.

On November 23rd Dr. Dearden gave an intrauterine douche with a solution of iodine. The os easily admitted a finger and the douche tube. The temperature was 102° F. and improvement was marked. On the 24th the os admitted only the tube, but the intrauterine douche was given easily. On the 25th there was some difficulty in passing the tube into the uterus, which was rapidly becoming involuted. The discharge remained quite sweet. The patient, however, was not so well, and the temperature was rising again. The right elbow and wrists were red and swollen; there was also pain in the left elbow. The same evening, at 11 P.M., the temperature was 106°, the breathing rapid and shallow, and the pulse very rapid. The patient was cheerful and perfectly sensible; the tongue was furred and yellow. There were no physical signs over the front of the chest but pneumonia was suspected to be present. The breasts, abdomen, and pelvis remained perfectly free from signs. Next morning, the 26th, the temperature was 105°, the pulse very rapid, and the breathing rapid and shallow. In the afternoon Dr. Fothergill, who had again seen the patient, suggested that as pelvic and abdominal signs were absent, the case should be seen by a physician with a view to ascertaining more fully the condition of the thoracic viscera. Dr. Harris accordingly saw the patient that evening, when she was, as previously, sensible and even facetious. He found that the pulse was 144 and the respirations 44 per minute; the temperature was 105.6°. There was evidence of pneumonia of the right lower lobe and of bronchitis over both sides. There was general œdema without redness but accompanied by some pain of the right arm. There was no affection of the joints of the left arm or of those of the legs. On the 27th, however, she was more or less unconscious, and marked œdema had developed round both eyes. The temperature was 105°. No further symptom developed, and she died during the afternoon of the 29th instant.

During the course of this case Dr. Dearden was in daily attendance on several puerperal patients, not one of which showed any sign of septic infection. This is an additional reason for regarding the case as quite distinct from ordinary "puerperal" fever.

A few hours before Mrs. Z. died a small quantity of blood was withdrawn under antiseptic precautions from the finger and placed in capillary tubes, which were hermetically sealed. The blood was kindly examined for me by Professor Delépine, who reported that only some staphylococci could be found in and cultivated from the blood. No streptococci were found, and the organisms present presented no distinctive features.

Permission for a *post-mortem* examination of the body could not be obtained.

THE French Minister of the Interior has entrusted Dr. Vignes, of Paris, with a scientific mission to study the organisation and working of the ophthalmological departments of the British hospitals.

NOTES ON 215 CASES OF ENTERIC FEVER.

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ENTERIC FEVER.

BETWEEN the years 1890-98 (inclusive) there have been treated in Charing Cross Hospital 215 cases of enteric fever, those remaining under treatment at the end of the year 1898 not being counted. Of these cases, 131 were males and 84 females, the disproportion being probably due to the relative number of beds available for each sex in the hospital.

Age.—The ages of the patients may be tabulated as follows:

Age.	1 to 10.	11 to 20.	21 to 30.	31 to 40.	41 to 50.
Males	20	52	45	10	4
Females ...	11	24	37	9	3
Total ...	31	76	82	19	7

Between the ages of 1 and 5 years, 7 boys and 3 girls were admitted for enteric fever. The youngest patient was a little boy of 2 years, recently discharged from the hospital. The oldest patients were 3 men of 46, 48, and 49, and 2 women of 45 and 46 respectively. It thus appears that 158 cases, or over 73 per cent. of the whole number, occurred between the ages of 11 and 30.

Occupation.—As might be expected, no definite influence of occupation on the incidence of the disease could be traced.

Number of Attacks.—In no instance could it be definitely determined that a previous attack of this disease had occurred. The most probable instance of such an occurrence was afforded by a young woman who gave a history of a previous attack of typhoid fever from which she had suffered as a child, but the symptoms which she developed in the hospital were somewhat anomalous, being characterised by severe joint pains and subcutaneous nodules, so that a suspicion of rheumatism could not be excluded in spite of the resistance of the disease to salicylate treatment. In another instance a patient had been discharged as cured of typhoid from a fever hospital, and was admitted to this hospital about a fortnight afterwards. It was not determined for how long she had remained free from fever before she left the fever hospital, but it cannot be doubted that the illness for which she was admitted to Charing Cross Hospital was a relapse and not a fresh attack.

Season.—The distribution of the cases throughout the year was as follows:

January	9	July	9
February	9	August	9
March	5	September	35
April	6	October	47
May	7	November	43
June	11	December	25

The last four months of the year thus account for 150 cases out of 215, or nearly 70 per cent., the actual maximum being in the month of October.

SYMPTOMS, COURSE, AND COMPLICATIONS.

Onset.—A gradual onset, with headache and weakness, was noted in far the greater number of cases. A sudden attack with a definite rigor occurred in five instances, while in two others sudden vomiting was the first warning, and abdominal pain in a similar number. In one instance the attack began with all the symptoms of acute pneumonia, and only revealed its true nature after the patient had been some days in hospital. In two cases it was stated that the illness began with a fit (convulsion), but the account of this occurrence was not in either instance very clear (both males aged 24 years). Epistaxis occurred at the onset in six instances.

Abdominal.—Looseness of the bowels was the rule in this series of cases, but constipation was prominent in about one-sixth of the number. In several cases at the onset constipation had occurred, but the patients had taken aperient medicine, which was followed by a period of diarrhœa. This latter occurred to a severe extent, so as to need interference, in 22 cases in the hospital. Vomiting was troublesome in 15 instances, persisting with some degree of frequency throughout the illness. Pain in the abdomen was a prominent feature in 15 cases, apart from those in which perforation or peritonitis occurred. The spleen was recorded as being enlarged (palpable) in 42 instances; it was very rarely found of normal size in fatal cases, so that it is probable that, owing to its softness or from some other reason, it often escaped recognition. Hæmorrhage from the bowel occurred in 21 patients. In one case it occurred at the onset of the disease, being possibly due to capillary oozing or comparable to the epistaxis of this period. It was also met with in 2 cases on the seventh and ninth days respectively, and in 3 others on the fourteenth. The latest period of its occurrence was on the fifty-seventh day in one instance. Six cases of these 21 ended fatally (28.5 per cent.). Perforation of the intestine by an ulcer occurred twelve times, and was invariably fatal. Peritonitis without perforation was found in 1 fatal case. In 4 cases localised swellings occurred in the abdomen; in 2 of these the condition appeared to be due to some local distension of the intestine situated on the left side of the abdomen (1 case ended fatally). In 1 patient an indefinite mass was found in the hypogastrium, which gradually disappeared. In the fourth instance (a child aged 7) persistent dulness was found in the right iliac fossa as a sequel during convalescence. Traces of albumen in the urine were not infrequent; larger amounts suggesting actual kidney mischief were found in 20 cases. Acute nephritis occurred in 1 patient (a male aged 19) along with acute pneumonia.

Thorax.—Acute pneumonia occurred in 10 cases, and a probability of its occurrence existed in 7 others. In 1 case, however, in which all the signs of this condition were noted in the lungs during life, after death only intense congestion of the bases was found, so that it is probable that actual pneumonia may be less frequent than would seem to be the case. Well-marked pleurisy occurred as a sequel in one case, but pains in the side suggesting its occurrence, without physical signs, were found in several more.

Nervous System.—Some degree of delirium towards night was found in the great majority of cases of any severity. A greater degree than this was found in 23 patients, in 5 of whom it was of an active type, the patients getting out of bed or behaving violently. In 3 cases great irritability of temper was a prominent feature, and in another instance, not included in these statistics, the patient was exceedingly morose and sulky throughout the illness. In a recent case, still in the hospital, a considerable degree of delirium, even during the daytime, persisted for over a week after the patient's temperature had fallen to normal.

Headache as an initial symptom was not often absent. It generally ceased by the tenth day, but in at least one instance it persisted as long as the nineteenth day. It occurred in a few cases late in the disease, apparently as a result of general weakness and exhaustion. Retention of urine is recorded in 8 cases, generally at the beginning of the attack, but in 1 case it commenced on the twenty-first day of the illness, and continued for the ensuing fortnight. In 2 cases cystitis occurred, as the result (presumably) of catheterisation. Pain in the limbs or back at the beginning of the attack was not infrequently complained of. Joint pains in the course of the malady occurred in several cases; in 1 case they were improved by salicylate treatment, in another no improvement followed the use of this drug. Increase of knee-jerks and ankle clonus appear to be not uncommon in protracted cases. In a boy aged 12 a definite paralysis of the left foot occurred along with this condition (Appendix, Case III). Possibly the fibres of the pyramidal tracts share in the general failure of nutrition, and their function may be thus impaired or actually interrupted, as in the case mentioned. On the other hand, loss of knee-jerks was twice observed, accompanied in one instance by footdrop and pains in the legs, showing actual peripheral neuritis (Appendix, Case II). In another case paralysis of the right ankle-joint occurred, and was accompanied by the existence of a patch of anæsthesia over the outer malleolus, evidently due to the same cause, though the condition of the knee-jerks is not stated. In a recent case (not included), well-marked "striæ

atrophicæ" were developed on the anterior surface of the legs just above the knees, and more slightly above the ankles and above the great trochanters. The condition appears to occur in other illnesses accompanied by defective nutrition, as the same marking was seen in a boy lying in the same ward at the time, the subject of chronic tuberculosis, and also in a case of anorexia nervosa.

Temperature.—In the majority of cases the temperature did not rise to as much as 104° F., which was attained in only 96 cases. Of these 27 had a temperature of 105° or over, 106° F. being only twice reached (both fatal cases).

Cardio-vascular.—The pulse was not generally much increased in frequency, 120 beats in the minute being quite exceptional. In two cases there was bradycardia (both young males), with frequency of 40-60 throughout the illness, rising to normal in convalescence. Irregularity of rhythm was twice recorded.[2] Thrombosis of veins occurred in 7 cases, the femoral vein being the seat in 6 of these, in one case associated with blocking of the saphena, which once occurred alone. In one fatal case (male, 38 years) thrombosis of the pulmonary artery was found *post mortem*, pale decolorised clot, extending even into the medium-sized branches of the arteries in both lungs. Embolism of the right common iliac artery with consequent gangrene of the leg was the cause of death in one case (Appendix, Case IV). Epistaxis occurred in 12 cases altogether, including the 6 already mentioned, in which it marked the onset of the illness. It was met with as late as the twenty-second day. Hæmoptysis was present in 7 instances, and hæmatemesis in 4 others. A hæmatoma of the auricle occurred in 1 fatal case.

Cutaneous.—The typical typhoid rash was noted as present in 146 instances, or 68 per cent. In a few cases it was profuse, occurring even on the extremities; in one woman of 29 years the spots presented central vesicles. Irregular rashes were not uncommon, occurring in 18 cases (over 8 per cent.). They consisted generally of erythematous patches on the body or limbs, sometimes described as mottled (morbilliform) or as diffuse redness (scarlatiniform). In one case elevated wheals were the main feature, accompanied by a few vesicles, but without itching. Actual bullæ occurred in a child aged 5 years, situated over the great trochanters. These rashes were frequently followed by desquamation, and occurred at all periods of the disease, even during convalescence. It is possible that in some cases they were the result of enemata. They occurred most frequently in young patients (only 3 over 20), and more often in females than in males (11 to 7). A petechial eruption was twice observed, one case ending fatally.

Boils or carbuncles were troublesome sequelæ in six instances, three of these being members of one family who appeared to have some constitutional liability to this affection. Alveolar abscess occurred in 2 patients during convalescence, but may have been a mere accident. An axillary abscess occurred in 1 case and an abscess over the sacrum in another. A parotid bubo was observed in 1 case. Erysipelas was met with as a complication in 1 case during the early part of the illness, and appeared to be the cause of the fatal issue (Appendix, Case V). Epididymitis was a sequel in 3 cases, but cleared up satisfactorily. Tonsillitis occurred once during convalescence, probably as an accidental coincidence. Soreness of the mouth (stomatitis and gingivitis) was complained of in the early stages of the disease in 5 cases. Sore throat was a frequent early symptom, occurring in 30 cases, in 5 of which actual dysphagia was present. Otitis was also frequent (28 cases), children being, as would be expected, most liable to the trouble. Periostitis was a complication in 4 cases, 3 being women; the tibia was the seat in two cases, a rib in another, and the sternum in the fourth case. In this last case it occurred on the twenty-fourth day, in the others it was a sequela.

False membrane was formed in the throat in 2 cases, in 1 of which it was associated with offensive nasal discharge. No bacteriological examination of the membrane was made so that its nature must remain doubtful.[3] Purulent nasal discharge without the presence of membrane in the throat occurred in one instance.

Three pregnant women are included in this series of cases, all of whom recovered. In one case the child also lived. A case in which the disease originated in the puerperal period ended fatally from heart failure.

Relapse or recrudescence occurred in 59 cases. The longest period for which a patient remained free from fever before the relapse was twenty-six days. In one case, a child of 5 years, four relapses took place, and in nine other patients two relapses were experienced. Of the cases in which relapse occurred only four died, from which it appears that prognosis is at any rate not worse in these cases. It would seem, indeed, to be actually better, perhaps owing to the patient taking the disease by instalments.

Duration.—Counting from the assigned onset to the day when the fever finally ceased we find that of 162 non-fatal cases, in 25 the disease ended within twenty days, 6 of these being free from fever within a fortnight (abortive cases); 66 more patients were apyrexial within thirty days, 36 others within forty. In 24 more cases the temperature fell within fifty days; in 16 others it remained febrile to between fifty and seventy days of the onset. Five patients were not free from fever till over ten weeks had elapsed; one of these, the little girl of 5 already alluded to, who suffered from 4 relapses, being ill for a total of ninety-two days. In fatal cases pneumonia caused the most rapid termination, 1 case dying of this complication on the ninth day. One patient died of perforation of the intestine on what was believed to be the tenth day of the illness, but the usual date of this accident was from the eighteenth to the thirtieth day. In 1 case it occurred as late as the fifty-fourth day in a relapse. Cardiac failure in severe cases occurred for the most part from the twentieth to the thirtieth day. The longest duration in a fatal case was sixty-two days, the patient dying of thrombosis of the pulmonary artery.

MORBID ANATOMY.

Fatal Cases.—Forty cases ended fatally, giving a percentage mortality of rather over 18.5 per cent. *Post-mortem* records were found of 35 cases. Perforation of the intestine occurred in 14 of these cases (40 per cent.). In 3 cases multiple perforations of the small intestine had occurred (3 in each); in 1 other the large intestine was the seat of the perforating ulcer. General peritonitis occurred in all these cases except one, in which a localised pelvic abscess resulted. (Appendix, Case VI.) This case was not diagnosed during life as enteric fever. Hæmorrhage from the bowel was only the direct cause of death in 1 case. Pneumonia was found *post mortem* in 8 cases, in 4 of which it was double. It was associated in 2 cases with subpleural hæmorrhages. In 1 case acute nephritis occurred along with pneumonia. Pericarditis occurred in 1 case, and meningitis (Appendix, Case I) in 1 more. Peritonitis without perforation, thrombosis of the pulmonary artery, and embolism of an iliac artery, each caused 1 death. Erysipelas at the beginning of the disease has been already mentioned as causing the death of 1 patient. The rest of the fatal cases were due to cardiac failure from the severity of the disease. One patient (male, 46) died from exhaustion four days after his temperature had become normal. The spleen was recorded as enlarged in 27 cases; the greatest weight attained by this organ was 20 oz. Laryngeal ulcer is only recorded in 1 case; in another, in which symptoms of laryngitis had been marked during life, no actual ulceration was found. In 21 cases the large intestine was the seat of typhoid lesions, from which it appears that it is the rule rather than the exception for this portion of the bowel to be affected. In 3 of these cases the lesions extended as far as the sigmoid or rectum. In 3 cases the appendix was affected, in 2 of which actual ulceration had occurred.[4] One case of perforation of the large intestine has been already referred to. In 2 patients dying in early stages of this illness acute inflammation of the gastric mucous membrane was found; in 1 case an actual ulcer was present.

Age.—Three patients under 10 years succumbed (10 per cent.), 1 child aged 5½ years dying of actual perforation. From 11 to 20, 10 patients died (13 per cent.); from 21 to 30, 17 deaths occurred (20 per cent.); from 31 to 40 there were 6 deaths (30 per cent.); and above 40, 3 deaths were recorded (43 per cent.). It thus appears that the percentage mortality varies directly with the age of the patients.

PROGNOSIS.

Six ambulatory cases of enteric fever are included in this

list; all of these proved fatal. Violent or active delirium was also invariably fatal. Cyanosis was a sign of grave import, only 1 case of 5 in which it occurred recovering. Hiccough occurred before death in 2 fatal cases. It did not necessarily prove the presence of peritonitis. Thin watery offensive stools were observed in 1 case with similar termination. Of 27 patients with a temperature reaching 105° F., 10 died (40 per cent.); 2 in whom 106° F. was reached, both succumbed. On the other hand, a pulse of over 140 persisted for days and yet recovery took place. Among cases in which hæmorrhage from the bowel occurred the mortality, as before mentioned, was 28.5 per cent., as against a total percentage mortality of 18.5 per cent. Only 1 case was directly fatal, but this complication evidently increases the gravity of the outlook. Floccitation and carphology were not incompatible with a favourable termination, nor was pregnancy a bar to recovery. Absence of delirium was not always a good sign, at least 1 severe and fatal case being accompanied by clearness of mind throughout.

Treatment.

As a rule, treatment was expectant and consisted of liquid diet, absolute rest, and attention to symptoms. The routine medicine was dilute hydrochloric acid, with syrup of orange and water. Excessive fever was treated by tepid, cold, or iced sponging. Ice-cradling was also employed with less visible benefit. One case treated by raising the bed clothes on a cradle away from the patient died of double pneumonia. Antipyretic drugs were not frequently used, with the exception of quinine, which appeared beneficial in some cases. Of antiseptics, turpentine was most frequently relied upon, and was taken well in most instances. The same cannot be said of naphthalene, which frequently caused sickness. In at least one case the pills in which it was contained were persistently passed in the motions unaltered. Antityphoid serum was used in a few cases without visible effect. In 1 of these cases a relapse subsequently occurred.

Appendix of Cases.

Case I. *Meningitis.*—S. W., male, aged 10, admitted, under Dr. Green, May 25th, 1892. The illness had begun suddenly on May 10th, with headache, pain in the abdomen, and diarrhœa. The child's temperature on admission was 104.6° F., and fell gradually for the next ten days, reaching normal on the twenty-fourth day of the illness. The main symptoms throughout were continual vomiting and obstinate constipation. The abdomen at first was retracted, but the liver was apparently enlarged and reached nearly down to the umbilicus. Later on the abdomen became somewhat distended. The patient wandered mentally at first, but this condition gradually improved. Death took place on the forty-fifth day, three weeks after the temperature had reached normal. The diagnosis had in the first instance been typhoid fever: later a suspicion of tuberculous peritonitis was entertained.

Post mortem there were found old healing typhoid lesions of the small intestine in the neighbourhood of the ileo-cæcal valve, with simple cerebral meningitis. The spleen was normal. There was a congenital hernia through the diaphragm, accounting apparently for the displacement of the liver.

Case II. *Early Thrombosis: Peripheral Neuritis.*—E. B., female, aged 22, servant, admitted under Dr. Green, September 21st, 1895. The disease began on September 15th with shivering. On admission there was pain and tenderness in the left groin, and a distinct venous cord could be felt in the upper part of the thigh. There was œdema of the leg. The urine contained a considerable quantity of albumen. The temperature at its highest reached 104.6° F.; it fell gradually, and nearly reached normal by the twenty-fourth day. On the eleventh day the patient complained of pain in the legs, but no cause beyond the thrombosis, which was gradually clearing up, was found. On the fourteenth day she brought up blood twice in vomiting, and a slight hæmorrhage from the bowel occurred on the twenty-first day. Three days later slight desquamation was noticed on the abdomen, palms, and soles. On the twenty-ninth day a recrudescence occurred. On October 16th (thirty-first day) pain was complained of in the hands and feet, and the knee-jerks were found to be absent. On the following day a condition of partial "foot-drop" was found. This gradually passed off, and the temperature became finally normal on the forty-first day. The patient was severely ill both in the first attack and the recrudescence; in the latter the pulse for days was over 140, reaching 152 beats to the minute on one occasion.

Case III. *Paralysis of Left Foot.*—R. B., a boy aged 12, was admitted on October 14th, 1895, under Dr. Abercrombie, on the eighth day of the disease. He then suffered from headache, and was irritable but not delirious. No typical spots were then found. *Tâche cérébrale* could be obtained. Two days later he was delirious, and took his food with great reluctance. There was fairly marked bronchitis. Spots appeared on the twelfth day of the disease. On the fifteenth day he was fed by the nasal tube because of the trouble in getting him to take nourishment, and this method of feeding was continued till November 13th, the thirty-sixth day of the disease. The patient continued in a curious irritable condition, resenting all interference, and refusing to speak. On November 11th an erythematous rash appeared on the body and limbs, but passed off rapidly. On November 13th a relapse occurred, with pains in the limbs and fresh spots, and more bronchitis a few days later. The patient became much emaciated, and the mental condition continued. On December 11th it was noted that he persisted in biting holes in the sheets. On December 16th a fresh relapse occurred, after the temperature had been normal for six days, and lasted one week. On January 16th the patient complained of numbness in the left foot, and a sensation of "pins and needles." The knee-jerks were found to be increased, and ankle-clonus could be obtained. The left foot was in the "dropped" position, and the patient could not move it. A few days later there was considerable tenderness over this shin, and ankle-clonus had disappeared. The knee-jerks remained brisk till February 1st, when some movement of the toes had returned. Gradual improvement then took place. Towards the end of the illness the boy became almost completely bald.

Case IV. *Embolism of Femoral Artery.*—C. M., male, aged 19, blacksmith, was admitted on October 5th, 1897, on the eleventh day of the disease, under the care of Dr. Green. The onset had been with headache, pains in the back and vomiting. On admission he was suffering from sore throat and dysphagia, and was delirious and restless. The usual rash was seen on abdomen. Five days after admission (sixteenth day) he was seized with sudden intense pain in the right thigh; the leg was found pale, and soon became white and cold. Pulsation ceased from the first in the tibial arteries, and shortly became imperceptible in the popliteal. The patient survived the occurrence till October 4th, signs of gangrene meanwhile appearing in the leg, with a line of demarcation in the middle of the thigh.

Post-mortem there was found embolism of the right common iliac artery, with secondary thrombosis. Typhoid ulceration was well marked in both small and large intestines, and there was an infarct in the right kidney. The spleen weighed 8½ ozs.

Case V. *Erysipelas.*—F. N., male, aged 16, a packer, in October 24-31, 1898, was admitted under the care of Dr. Bruce on the twelfth day of the disease. Temperature 104° F.; typical rash. Two days later an erythematous patch appeared on the nose and neighbouring areas of cheeks. This rapidly spread to the orbital regions, and involved the whole of both cheeks. Antistreptococcus serum was injected, and the temperature, which at one time reached 105.4°, fell somewhat. A doubtful presystolic *bruit* developed over the præcordial area. Two further injections of serum were given on following days but the patient did not rally. From the severity of the inflammation surrounding the orbit, it appeared that had the patient survived, the tissues surrounding the eyes would have sloughed, an apparent line of demarcation being visible on the face.

Post-Mortem Examination.—The Peyer's patches in the small intestine were swollen but not ulcerated, and the large bowel was unaffected. The spleen was much enlarged, weighing 19½ ounces. Death at this early stage of the disease was apparently due to the erysipelas and not to the typhoid infection.

Case VI. *Perforation: Localised Abscess.*—J. T., a kitchenmaid, aged 40, was admitted on July 12th under the care of Dr. Abercrombie for swelling of abdomen and pain. At the end of June she had been seized with severe pain in the abdomen and faintness. She took to her bed, and for the next fortnight was continually sick after all food. On admission she appeared anæmic and emaciated, the abdomen was somewhat distended, and coils of intestine in movement were visible and palpable. The uterine fornices were obliterated and the uterus fixed in a hard mass, suggesting malignant disease. An ulcer was found in the rectum apparently communicating with an abscess cavity in the centre of the mass. The temperature of the patient was remittent, averaging 101° F. (103° to 98.4°). The stools were liquid and contained small quantities of pus. Operation was advised by Mr. Boyd, and while the patient was under an anæsthetic the size of the cavity was made out to be 2 to 3 inches in diameter. It was irrigated and drained. The patient gradually sank.

Post mortem there were found typical typhoid ulcers of the intestine, both large and small, some healing, some sloughing. One of these had perforated, giving rise to pelvic abscess, which had subsequently burst into the rectum. Two other points of perforation also existed in the small intestine.

Notes.

[1] In a recent case acute arthritis occurred, affecting both knees and ankles. Pain was also felt in the shoulders. One knee-joint contained a fair quantity of fluid. The patient, aged 13 years, cried out if the affected joints were touched. The condition was apparently unaffected by salicylate of soda, and some degree of ankylosis remained during convalescence. [2] In a recent case a systolic *bruit*, slightly conducted into the axilla, developed in the course of the disease. It persisted and gave the impression of being pericardial, or at all events exocardial, in nature. [3] In a case still remaining in the hospital diphtheria bacilli were found in the false membrane, which invaded the trachea. Tracheotomy was performed, and the patient now appears convalescent. [4] In a recent case actual perforation of the appendix vermiformis was found, along with two perforations of the small intestine.

AN UNUSUAL CASE OF CARDIO-PULMONARY RÂLE.

By JAMES CARSLAW, M.A., M.B., C.M.,

Assistant to Professor of Medicine, Glasgow University; Extra Dispensary Physician, Western Infirmary, Glasgow.

A patient recently under my care presented a remarkable cardio-pulmonary physical sign.

He was a young man, aged 21, a footman, and was first seen by me on April 15th, 1899. His complaint was of cough and spit, with general weakness and "a tickling sound in his throat." He had begun to have cough and spit two months earlier, also pains in the left shoulder and on the left side of the chest in front. He had had no hæmoptysis, but had been getting thinner, and had had some undue perspiration at nights. His digestion had kept good, and he could take his food well, and his bowels were regular. A week or ten days before his first visit to me he first noticed a clicking sound in his throat when he took a long breath, which

phenomenon continued and was easily demonstrated. It was first noticed when after hurrying up the stairs with some luggage he stopped to take a breath. It was still very evident when he passed from my care in the first week of May to join his friends in a different part of the country.

The patient gave no story of previous pulmonary illness, nor of diarrhœa. He had been a footman for four years, and previously had worked in the North-British Railway engine shop in Edinburgh. His family history was distinctly tuberculous. His father died at the age of 49 from "consumption," after six months' illness. His mother is alive and well at the age of 41. Of a family of seven, two died in infancy, one of "water in the head," and the other of some intestinal illness. The others are in good health.

The patient was of small stature, rather pale and thin. His expectoration was not in large quantity, but mucopurulent, and found on staining to be swarming with tubercle bacilli. Examination of the chest revealed some dulness of the left apex, where the respiratory murmur was slightly tubular, and accompanied by clicking *râles*, though there were no definite cavernous signs. Fine crepitating *râles* were found all through the left lung to the base, but the right lung was healthy. The clicking sound in the throat of which the patient complained was quite distinct, and could be easily induced. When he took a long breath and held his breath there occurred towards the end of the inspiration a clicking sound of musical quality, and synchronous with the beating of the heart. Five or six of these clicks might be got with one respiration. Each click corresponded with one beat of the heart, and could be heard at some considerable distance from the patient without the use of the stethoscope. On careful auscultation this pulsating sound was heard well at the manubrium and on either side of it, but best over the trachea, though even there as if from a distance. There was no mediastinal dulness, nor was there any pulsatile interruption of the current of air on respiration, such as is described under the name of "pulse breath." The examination of the heart revealed nothing abnormal, and the urine was normal.

The patient had been taking cod-liver oil and malt extract and to this was added creosote in capsules. He was advised to give up his situation in the city and go to the country, or if possible gain admission to a consumption hospital. During the two or three weeks he was under my observation he improved distinctly in regard to cough and spit, and had less sweating. At the same time, the percussion dulness and the other ordinary signs of phthisis remained, though the clicking sound was noticed to be getting less distinct, and not so musical. On May 2nd it was noted that on one of the preceding days it had been gone for the whole day. In a letter to me, dated May 24th, he writes that "his cough is much better, and he spits less too," while "the ticking sound in the throat is now nearly away." An attempt was made by the kindness of Dr. John McIntyre to record the sound on the phonograph; but, unfortunately, by the time this was tried the sound was becoming less distinct, and the attempt was unsuccessful.

Cardio-pulmonary murmurs are of considerable rarity, and belong usually to one of two principal groups—either murmurs exactly like cardiac murmurs in quality and rhythm, but dependent on pulmonary, not on cardiac, disease, or simply rhythmic alterations of the respiratory murmur synchronous with the heart's sounds. The former variety usually occurs in advanced cases of phthisis with a large, thin-walled cavity in the neighbourhood of the heart, and its production is somewhat akin to that of the cracked-pot sound. During the systole of the heart some of the air of the cavity is driven out through the bronchus, with which it communicates, producing a murmur, and during the diastole the air is readmitted and a fainter murmur may occur.[1] Not unlike this is the rhythmic alteration of the respiratory murmur known as "pulse breath," which is also principally associated with air-filled cavities in the lung of considerable size, or with pneumothorax.[2] However, in certain cases of aneurysm of the thoracic aorta the pulsation of the sac influences the current of air in the trachea and causes a rhythmic blowing sound, as described by Dr. Drummond, of Newcastle.[3] A certain amount of this pulsatile respiration can in certain circumstances be demonstrated in healthy persons.

In the case now described, however, there was a cardio-pulmonary sound quite distinct from those already referred to, and I have failed to find any case of the same recorded. The patient is suffering from phthisis, and probably has some excavation in the upper part of his left lung, though there were no definite cavernous signs. His illness was only of two months' duration, and there was certainly no large cavity and no sign of pneumothorax. But at least for a period of four weeks, when he took a long breath there was a series of musical clicks synchronous with the beats of the heart, and the probable explanation of the phenomenon is that there was some cavity in the upper part of the left lung impinged upon by the heart itself or by the aorta, and that the sound was produced by the impact thus received. To produce the musical sounds of cavity the principal physical conditions required are an air-filled cavity of suitable shape, with sufficiently smooth walls, and a proper degree of tension of the walls. In the present case there probably was a suitable cavity, and the necessary degree of tension was got by the patient breathing deeply and holding his breath, and the impinging force was then provided by the action of the heart. This is the view that was taken of the case by Sir William Gairdner, Dr. Finlayson, and others who saw the patient with me.

References.

[1] See a case recorded by Dr. Frederick Taylor in the *Transactions* of the Clinical Society of London, 1880, vol. xiii, p. 365. [2] Dr. Finlayson, British Medical Journal, 1883, vol. i, p. 403. [3] Report of the Proceedings of the Northumberland and Durham Medical Society, 1888-89, p. 158.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

ARTERIAL TENSION UNDER ANÆSTHETICS.

In the recent discussion at the Society of Anæsthetists reference was made to the vascular tension under various anæsthetics. Dr. Macphail, having to give gas and oxygen for a preliminary examination, and a few days later chloroform to the same patient for an operation, asked me to take pulse tracings of the case.



Fig. 1.—Normal pulse tracing of the patient.



Fig. 2.—Gas and oxygen. Ten minutes.



Fig. 3.—Chloroform. Twenty minutes.

As seen by them the patient's normal vascular condition was one of high tension. The gas and oxygen lowered this tension, apparently by dilating the peripheral vessels, since the artery at the wrist became much larger; while chloroform had no effect at all upon the arterial tension. The pulse under the gas and oxygen, owing to the enlarged artery, was more easily felt at the wrist than normally or under the chloroform. This lowering of peripheral resistance by dilating vessels should do good by preserving the heart from strain, but I should think would tend to increase the bleeding during an operation.

Brighton. Walter Broadbent, M.D., M.R.C.P.

CIRCUMCISION UNDER COCAINE.

During my last tour in India I performed circumcision over 100 times under the influence of this drug, and never gave a general anæsthetic for its performance. Since January last I have done it in this hospital 25 times and have never seen any bad effects.

In every case where there is a sore on the prepuce, or a long prepuce imprisoning a sore, I operate. One grain of cocaine in 20 minims is injected into the prepuce in two places; 4 grains in about 2 drachms of water are then injected between the prepuce and glans and kept there by the patient. Very little of this is absorbed. In about ten minutes a piece of drainage tube is tightly tied round the base of the organ and the operation commenced. After the skin and mucous membrane have been removed, the parts are thoroughly washed with 1 in 1,000 perchloride of mercury solution poured from a bottle. A continuous catgut suture then unites the skin and mucous membrane, and a dry dressing over oiled lint is firmly applied before the ligature is removed. I never tie a vessel, and have never had to remove a dressing on account of hæmorrhage. Even in cases in which a chancre is exposed on the glans I never get infection of the wound, and union by first intention is the rule.

I used eucaine recently in the same manner as cocaine. It produced extensive œdema of the penis, and when the cut surface was washed with the perchloride solution the tissues became very dark, and appeared as if washed with strong solution of permanganate of potash. The parts sloughed where the eucaine had been injected.

The great majority of my patients are quite unconcerned during the operation. If the mucous membrane be very thick, some slight pain is felt during suturing of the wound. Ingrowing toenails we also remove in this hospital under the influence of cocaine, and for teeth extraction I can bear personal testimony to the efficacy of the drug.

F. J. W. PORTER,
Captain R.A.M.C.

Station Hospital, Colchester.

HYPODERMIC INJECTION OF QUININE IN MALARIA.

I WISH to add my testimony to the efficiency of this method of treatment. I have used hypodermic injections of quinine for some time in malarial fevers, both mild and severe, and agree with the opinion of Captain Johnston[1] as to the excellent results obtainable. I have found the drug given in the form of a hypodermic injection of the soluble hydrochlorate and hydrobromate of quinine, in doses of 1 or 2 gr. daily, particularly useful in low remittent fevers in children. Under antiseptic precautions no untoward results occur, and symptoms of cinchonism are rare under this treatment.

W. YOUNG, M.B., C.M.,
Captain, I.M.S.

Hardwar, N.W.P.

ANTIPYRIN POISONING.

THE following case illustrates in a remarkable way the action of phenazone on a person who was presumably, and for a time peculiarly, susceptible to the action of that drug:

On April 21st last, my wife, aged 27, being otherwise in perfect health, complained of slight, nervous headache, unaccompanied by dyspeptic symptoms. To relieve her I gave 10 grs. of antipyrin in an ounce of water. The draught was scarcely swallowed when she began to complain of acute discomfort in the abdomen, together with a burning sensation in the mouth and throat. This was followed in about five minutes by severe emesis, with much retching. I administered hot water (about half a pint) without delay, but she found much difficulty in swallowing it, owing to the extraordinarily rapid swelling of her lips and cheeks, which quickly spread all over the face, almost closing the eyes; collapse followed the sickness, the pulse becoming imperceptible at the wrist. The patient was placed in the horizontal position and revived by the aid of ammonia inhalation, only to faint a second time, the recovery from which faint took nearly half an hour. Previous to this occasion she had never fainted. She was then put to bed, suffering from severe intestinal pain, which was relieved by brandy and hot bottles. Soon afterwards she fell asleep, and awoke fairly comfortable, except for the irritation occasioned by urticaria, that spread all over the body, and the discomfort caused by the swelling of the lips and face. The next morning the patient's condition was almost normal, except for the œdema of the face, which gradually subsided during the three following days.

Two months ago my wife had an attack of influenza, and during her convalescence she took a 7½-gr. dose of antipyrin, which produced similar but less severe results, which at the time were attributed to her illness. On several occasions previous to this my wife had taken 10-gr. doses of the same drug for headache, which always relieved, and produced no such results as the above. Mr. H. S. Shorthouse, F.C.S., Member of the Society of Public Analysts, carefully tested the stock solution of antipyrin from which the dose was taken, and obtained the following results:

Percentage of antipyrin in solution—25.48 per cent.
Melting point after crystallisation—110° C.
Solubility in water—1 in 1.
A solution in water after extraction with chloroform treated with sodium nitrite, afterwards with sulphuric acid diluted—deep green reaction.
With nitric acid—yellow colour, crimson on heating.
With ferric chloride—red colour, nearly discharged by excess of dilute sulphuric acid.
With mercuric chloride—white precipitate, soluble on boiling, reprecipitated on cooling.
With litmus paper—very slightly, alkaline.
With sulphuretted hydrogen—no reaction.
With fuming nitric acid, specific gravity 1500—green colour changed to red by boiling with more acid.
Residue on ignition—*nil*.
With sulphuric acid and Mayer's reagent—white precipitate.
With iodine in potassium iodide solution—precipitate.
Crystallised in colourless scales—odourless and slightly bitter.
From the above results it is very certain that the bottle contained phenazone (1 in 4).

The severity of the symptoms and the extraordinary rapidity of the drug's action, together with the facts that the patient was in perfect health, that she had frequently taken antipyrin before, and that the careful analysis, which Mr. Shorthouse's courtesy enabled me to obtain, proved the purity of the drug—seem to me to make this case worthy of record.

HENRY BLAKENEY, L.R.C.P.Lond., M.R.C.S.Eng.

Edgbaston.

[1] BRITISH MEDICAL JOURNAL, May 13th, 1899.

THE USE OF SUPRARENAL EXTRACT IN CONJUNCTION WITH COCAINE TO OBTAIN BLOODLESS AND PAINLESS OPERATION.

IN addition to the hæmostatic properties of suprarenal extract, which may be best obtained by the application of a pad soaked in strong solutions 50 per cent. or less (in terms of weight of dried gland), the extract is extremely useful in operation on the nose, throat, and ear. I have given it a trial for the last six months at the Golden Square Hospital, and can thoroughly recommend it.

As I shall show elsewhere, for small amounts the limit of decided physiological effect is for suprarenal extract (in terms of dried gland) ½ per cent., for cocaine ⅛ per cent. dilution. Accordingly it is well to use an amount of suprarenal extract twice as great, or equal to that of cocaine. I find the ordinary solutions of 10 per cent. suprarenal extract and cocaine useful for the nose and pharynx, while combined 20 per cent. solutions are best for the ear and larynx. These solutions are conveniently prepared from the tabloids which Messrs. Burroughs and Wellcome have prepared at my request; each tabloid contains the soluble material of 5 grains of the dried gland. Solutions containing low percentages may also be used effectively, but the strength mentioned appears to be preferable. The solution used should contain both cocaine and suprarenal extract, and should be packed in on wool for half an hour to obtain the full effect, which, in the case of the nose, is a shrunken and white mucous membrane.

I have scraped both the inferior turbinals of such a nose and sawn off a small spur without a single drop of blood escaping. Further, in acute conditions, such as are associated with nasal and aural polypus, the use of the combined solution will allow of painless and bloodless removal. This combination diminishes poisonous effects and shock, and it greatly prolongs anæsthesia.

It must be remarked, as a rule, that bleeding sets in at the end of two hours, but this may be obviated by plugging immediately after the operation with dried cyanide gauze. The combination of cocaine and suprarenal extract may be used with success in inflammatory conditions, and operations on the eye and other regions. It reduces the tension of the eye and produces constriction of the blood vessels. The local application to acute and chronically-inflamed tissues in various parts is successful in many instances.

E. A. PETERS, M.B., B.C.

Cadogan Place, S.W.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL VICTORIA HOSPITAL, NETLEY.

FAILURE OF RESPIRATION DURING ADMINISTRATION OF CHLOROFORM.

(By WILLIAM DICK, Major R.A.M.C., Assistant Professor of Clinical and Military Surgery.)

ON May 15th Sergeant D. was being operated on for the radical cure of an inguinal hernia. The administration of chloroform commenced at 11.9 A.M., and he was under its effects at 11.16 A.M.

The operation was then begun, but at 11.21, when an incision through the skin had been made, and the subcutaneous tissue divided, respiration ceased.

The patient was at once placed on the floor, the tongue pulled forward and artificial respiration performed by compression of the chest walls with the palms of the hands alternating with relaxation. This was done about sixteen times a minute. After about five minutes this was stopped to see if there was any attempt at natural breathing; as there was no sign a hypodermic injection of ether was given, the artificial respiration resumed, and the temporal artery opened. About two ounces of blood were allowed to escape, and a compress was then put on. The artificial respiration was kept up for an additional 11 minutes, that is, 16 minutes

in all: at 11.37 natural respiration was restored. Six drachms of chloroform were expended.

At about 11.40 ether administration was begun and the operation completed by 12.20 P.M. About three ounces of ether were used, the patient took it well without a bad symptom.

During the whole time that natural respiration was absent the pulse could be felt at the wrist, and the patient's colour was never very bad.

The case was evidently one of pure paralysis of the respiratory mechanism, probably due to an overdose of the anæsthetic, although the administrator had had considerable experience in chloroform administration.

In a previous case I had found the method of artificial respiration I have described very efficient; the air passing in and out of the glottis can be well heard. The temporal arteriotomy was performed in order to relieve distension of the heart, but I am not sure that any good effect resulted from it; it probably only has an effect when the heart is primarily affected; however, in these cases there is not time to analyse symptoms, and in any future case I shall certainly repeat this procedure. Both the wound in the groin and that in the temple were dressed on May 21st, and both were found to have healed by the first intention.

The patient is in excellent condition, and is a very healthy man 29 years of age. There has been no bad symptom since the operation.

LABASA HOSPITAL, FIJI.

ACUTE YELLOW ATROPHY OF LIVER IN HINDU COOLIES.

(Reported by H. NOBLE JOYNT, M.A., M.D., Government Medical Officer, Fiji.)

CASE I.—Janga, Indian, male, aged about 25, was admitted on January 9th, 1898, with jaundice, but, having no other symptom, he was soon discharged. He was readmitted eight days later with a temperature of 99.4°; he was moderately jaundiced, and his urine showed a considerable amount of bile pigment. On the evening of the 19th his temperature rose to 101° F. On the 26th he said he felt weak, and tremors of hands were noticed. On the 27th he became semicomatose. On the 28th, when I saw him again, he was lying on his back with his mouth half open, his eyes half closed, his tongue brownish, moist, and respiration stertorous, with a rate of 36. His pulse was weak and its rate 104; his temperature was 101.4°. He was found to have considerable tympanites, which extended over the lower area of liver dulness; the hepatic dulness was confined to a small area over sixth and seventh ribs; the liver could not be felt. An enema was given and some scybalous masses passed. An hour later his temperature fell to normal and his pulse to 72, with a strong pulse-beat; later he vomited milk curds and brown-stained mucus; emesis was not frequent. There was no change in his condition till death at 9.30 A.M. on January 29th. A necropsy could not be made till twenty-eight hours after death. There was great accumulation of gas in the intestines and considerable decomposition. The liver weighed 27 oz.; it was shrunken, pale, yellowish grey on surface, adherent to the diaphragm; its tissue was almost diffluent, its colour a bright golden brown, with some patches of a dark, livid colour. There were several ounces of fluid in the abdominal cavity, and numerous hæmorrhages over the peritoneum and in the intestinal walls.

CASE I.—Debi Singh, aged about 28, a well-developed man, was admitted on October 23rd, 1893, with pyrexia and jaundice. On the morning of the 28th he began to vomit blood-stained, frothy mucus, mixed with rice which he had eaten; later the vomiting was brownish. When seen by me he had lapsed into a semi-comatose condition with half-closed eyes, unequal pupils, hiccough, shallow, irregular respiration, with a rate of 32; his pulse was 80 but was not felt at the wrist; the heart's impulse was weak; the lungs were normal. He died the same night. Necropsy: The body was muscular and well-nourished; it was deeply jaundiced, and there was marked rigor mortis. The liver weighed only 23 ozs.; it was shrunken, soft, pulpy, dark red in colour, and congested; the intestines were normal but stained yellow; the lungs were congested and œdematous, and there were several hæmorrhagic infarcts; the heart was small. All the organs were stained yellow.

CASE III.—Kankai, aged 30, male, was admitted on May 12th, 1893, suffering from ascites. He had already been under treatment for eight months in another hospital. On admission he had ascites, considerable tympanites, and abdominal pain. Medical treatment having no effect, and the ascites increasing, the abdomen was tapped, and 152 ounces of fluid drawn off. The tympanites, however, increased to an excessive degree, and on June 12th he was seized with troublesome vomiting and diarrhœa, and died on June 21st. The necropsy showed extensive old general peritonitis: the stomach, intestines, omentum, liver, and abdominal walls all being glued together, and covered with a fibrous deposit of blackish lymph, which was in places a quarter of an inch thick. The intestines were greenish, and matted together. The abdomen contained about two gallons of flocculent red fluid. The liver was atrophied, soft and pulpy, and of a bright orange-yellow colour; there was universal perihepatitis. The thoracic viscera were likewise all glued together. There was old double pleurisy, with collapse and carnification of both lungs. The heart was adherent over its whole surface to the pericardium, dilated, thin-walled, and fibroid. Although there was no jaundice in this case, which was, of course, not an ordinary case of yellow atrophy, yet the naked-eye appearance of the liver was similar to that of a liver affected by acute yellow atrophy.

REPORTS OF SOCIETIES.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—At a meeting on June 28th, Dr. H. RADCLIFFE CROCKER, President, in the chair, the following cases were shown: Dr. T. D. SAVILL: Lupus Erythematosus in a female.—Dr. RUFENACHT WALTERS: Two cases of Leucodermia.—Dr. WARDE, for Dr. P. S. ABRAHAM: (1) A girl with patches of Morphœa; (2) a case of Lupus of Lobule of Ear in a woman.—Dr. DAVID WALSH: A case of Pityriasis Rubra in a man (? commencing mycosis fungoides; ? some form of exfoliative dermatitis).—Dr. ALFRED EDDOWES: (1) A case showing Melanodermia, Leucodermia, General Alopecia, Morphœa, and Sclerodermia with resulting atrophy; (2) Pruriginous Eczema of Face and Hands in a boy; (3) a case of Lupus Vulgaris in a girl, which had been treated by scraping and cautery six months ago.—The PRESIDENT brought some interesting drawings and exhibited under the microscope Mycelium and Spores from a case of Eczema Marginatum. In all the three cases of leucodermia shown it was noted that the thyroid gland could not be felt.—The following members joined in the discussion: The PRESIDENT, Dr. WALTERS, Mr. PERNET, Dr. BOWLES, and Dr. SAVILL.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on June 20th, Dr. BERRY in the chair, Dr. EURICH gave a microscopical demonstration of a series of Tuberculous Tumours which had been removed under the supposition that they were of a cancerous nature. They were from the penis, scrotum, labium majus, and skin. He also showed specimens: (1) Secondary Carcinoma of Heart; (2) the Suprarenal Bodies from two cases of Addison's Disease.—Dr. ANGUS related a case of Erysipelatous Anthrax in a woolsorter, aged 27. He had been working among Persian wools. On April 28th he noticed, while at work, an itching pimple on his left shoulder. On the night of May 1st he felt ill, shivered, and vomited. On May 3rd he was seen by Dr. Angus, when his temperature in the axilla was 100° F., pulse 120, weak. On the anterior aspect of the left shoulder was a semicircular patch, 3 inches in diameter, of blistered and reddened skin, surrounded by subcutaneous ecchymosis. The skin over the front of the chest was reddened and œdematous, while over the right side of the chest, and on both sides of the neck and face, there was œdema but no redness. Heart and lungs normal. On May 4th the temperature was 99.4° in axilla, and 100.6° in rectum, pulse not perceptible at wrist. The reddened patch increased in size; there was slight œdema of the left arm, left scapular region, and the upper part of the abdomen. On May 5th the temperature in the mouth was 97.4°; the

whole of the front of the abdomen was œdematous; the hands and feet were cold. The patient died at 11 P.M. At the necropsy across the front of the chest and neck the skin was of a dark purple colour, swollen and crepitant on pressure. The subcutaneous veins showed a dark purple through the skin. Much clear fluid escaped when the tissues were incised. The retrosternal cellular tissue was emphysematous. The right pleura contained about half a pint of fluid. The pericardium showed subserous extravasation of blood, and contained 2 ozs. of fluid. The endocardium and endothelium of the aorta were deeply stained. There were patches of extravasation on the peritoneal covering of the intestines. The spleen was soft but not enlarged. Cultivations of the bacillus anthracis were obtained from the pericardial fluid. Photographs of the case were shown.—Dr. RABAGLIATI read notes on a case of Œdematous Anthrax in a man aged 47. The illness was only of five days' duration, and the symptoms consisted in swelling of the upper and lower lips, and, subsequently, of the penis and scrotum. There was no rise of temperature or of the pulse rate. On one day only there was slight shivering. The patient recovered.—Dr. J. H. BELL read notes of a series of cases of Anthrax, of the œdematous and erysipelatous varieties. He stated that though described as occurring on the Continent such cases had not been previously described in this country.

REVIEWS.

RECENT BOOKS ON DISEASES OF CHILDREN.

THE colossal treatise edited by MM. GRANCHER, COMBY, and MARFAN,[1] to the publication of the first volume of which we called attention about two years ago, has now been for some months complete. We then ventured to say that if the whole might be judged by the first instalment the *Traité* would "form not merely one of the largest but also one of the best treatises on the department of medicine with which it deals." Careful testing of the subsequent volumes in various ways renders it possible to say that the expectation has been completely fulfilled. The treatise is, of course, not one which any person not possessed of infinite leisure could dream of reading through, but as a work of reference nothing so full and comprehensive exists among recent publications. The articles give, so far as we have been able to test them, a very trustworthy account of each subject down to the date of publication, and, with few exceptions, are provided with bibliographies which are adequate without being redundant; that is to say, they will put the inquirer on the right track. Though the editors are Parisians they have by no means confined themselves to soliciting the assistance of teachers of the Parisian school. Among the contributors to the volumes are physicians of Marseilles, Toulouse, Bordeaux, Montpellier, and Nancy, so that the treatise reflects French views and experience rather than those of Paris alone. Further, for certain articles the editors have gone outside their own country, and we find Dr. Ballantyne, of Edinburgh, writing on Diseases of the Fœtus; Professor Concetti, of Rome, on Malaria; Professor Escherich, of Graz, on Tetany; Dr. Fischl, of Prague, on Septic Diseases of the Fœtus and Infant; Dr. A. Combe, of Lausanne, on Myxœdema; Professor Epstein, of Prague, on Vulvitis; Dr. Audéoud, of Geneva, on Diseases of the Blood; Professor Filatow, of Moscow, on Intestinal Worms; Dr. Bokai, of Buda-Pesth, on Urinary Lithiasis; and Dr. Thomas Barlow, of London, on Infantile Scurvy. To the last-named article Dr. Comby adds in a footnote, "This disease is also known under the name of our collaborator, who first described it: Maladie de Barlow, Barlow's Disease, Barlowsche Krankheit." In this article Dr. Barlow repeats, and supports by some additional evidence, his well-known opinion as to the origin of the disease, which he stated very fully in his Bradshaw Lecture in the BRITISH MEDICAL JOURNAL of November 10th, 1894, opinions which have not, as it seems to us, been at all shaken by the criticism to which they have been subjected, mainly by some German writers. The treatise as a whole will be invaluable as a work of reference.

[1] *Traité des Maladies de l'Enfance.* Publié sous la direction de MM. Grancher, J. Comby, et A. B. Marfan. Paris: Masson et Cie. Tomes I–V. (Cr. 8vo, pp. 4,360. Fr.90.)

The completion of Dr. COMBY'S labours as editor of this large treatise has been followed at a short interval by the appearance of a new edition of his own work on the diseases of children.[2] The first and the second edition of this book formed small and handy volumes neatly bound in leather. This third edition has a much larger page and more pages, and a paper cover. The author explains this growth in the dimensions by the necessity of adding no fewer than 150 new articles to the present volume. In addition, he has found it necessary to rewrite many of the chapters. These statements may give the reader some idea of the extraordinary increase of interest which has recently been exhibited in the subject with which the volume deals. In one sense this subject is the most important of all the branches of medicine, for it deals with those who will be the men and women of the next generation, and with a time of life when the recuperative powers of Nature are greater than during the adult age. Dr. Comby is a safe guide, and his book will be found very useful by all practitioners who desire to refresh their memory or extend their acquaintance with a subject the literature of which has grown in recent years at a bewildering rate.

Dr. JOHN THOMSON'S book[3] is deserving of the highest praise, for it bears evidence on every page of an intimate personal clinical study of children in health and disease. It is not a systematic treatise, but to many it will be the more useful for this reason, since the author has been able to devote his space more particularly to those subjects with which his opportunities of observation have made him most familiar. That these opportunities have been very exceptional everyone who has visited the Edinburgh Hospital for Sick Children to which Dr. Thomson is physician is well aware. The general plan of the book, which is founded on lectures delivered to classes of students and graduates, is as follows: The first chapter deals with the general facts of growth and development, and contains an excellent summary of facts as to the development of the senses, and the development of the voluntary motor functions, with regard to both of which subjects a great deal of interesting systematic work has been done recently, especially in Germany and America. The second chapter is headed "On the Teeth," and we may take as an example of Dr. Thomson's method his observation on the place of dentition as a factor in the causation of disease. After observing that the diagnosis of teething as the cause of any illness has been and is popular, and pointing out that others have held that since teething is a physiological process, it therefore cannot cause disease, he says: "We shall be nearer the truth if we avoid both extremes. There can be no doubt that teething is not in itself a cause of death, and that its influence in producing and predisposing to disease has been enormously exaggerated. At the same time, it is equally certain that teething, like menstruation, pregnancy, and other natural states, is often accompanied by marked symptoms, both local and reflex, and like them may produce temporarily a tendency to disease which is not present at other times.....When we remember the amount of general disturbance of health and comfort which may occur in children at an older and less sensitive age from phimosis or adenoids or the presence of worms or scybala in the bowel, we can scarcely wonder that alarming symptoms are occasionally set up in babies by the irritation that accompanies dentition." In the next nine chapters the mode of conducting the clinical examination of children at various ages, and suffering from various forms of disease, is discussed, and incidentally all the chief disorders are mentioned, the points in their diagnosis fully described, and a short outline of the appropriate treatment given. We then have two excellent chapters, one on infant feeding, and the other on nursery hygiene, which contain a great deal of sound information very succinctly expressed. There is then a general chapter on therapeutics, including sections on baths, on the mechanical treatment of the stomach and bowels, and a series of notes on the drugs most commonly employed, and on the best methods of administering them. The concluding chapters of the book are on food disorders (food atrophy and disorders, rickets,

[2] *Traité des Maladies de l'Enfance.* Par J. Comby, Médecin à l'Hôpital des Enfants-Malades. Troisième Edition. Paris: J. Rueff. 1899. (Roy 8vo, pp. 970.)

[3] *Guide to the Clinical Examination and Treatment of Sick Children*, by John Thomson, M.D., F.R.C.P.Edin. Edinburgh: W. F. Clay. 1898. (Post 8vo, pp. 336. 52 illustrations. 9s.

and scurvy). A special chapter is devoted to the forms of mental deficiency in childhood. This is a subject of very great importance in practice; although it is one which is often very lightly passed over in books on diseases of children, yet there are few matters upon which it is more necessary for a general practitioner to be ready to express an opinion to the parents. This chapter is well illustrated, and will be found most helpful. These, as well as the numerous other illustrations, are chiefly from photographs which have been well selected as affording examples typical of conditions commonly met with.

Of the next work[4] on our list it is not thought becoming to publish any critical review, for the author since the volume was written has become Editor of this JOURNAL. It may, however, be permitted to extract from the preface the following sentences, which state the objects which the author had in view: "The object of this handbook is to give to young practitioners of medicine, and to those who have not previously paid much attention to the subject, a guide to the clinical study of disease as it occurs in infancy and childhood. No attempt has been made—nor was it, indeed, possible within the space at my disposal—to attain an ideal completeness in the enumeration of all the forms of disease which may occasionally be met with in infants and children. Pathological processes are essentially the same in children as in adults..... My object has been rather to indicate the special incidence of disease in childhood; to elucidate as far as possible the causes of this special incidence; to point out the peculiarities which the circumstances of child-life impress upon familiar diseases; and to detail the treatment rendered appropriate by the nature of the disease itself, and by the peculiar susceptibility of the growing organism."

During the four years in which it has been in circulation, Dr. STARR'S *Textbook*[5] has, in spite of its many rivals, enjoyed a large measure of well-earned popularity. It was scarcely to be expected that all its 63 authors should have exerted themselves to equally good purpose, and certainly the way in which some of the subjects were treated was disappointing. The general average of excellence of the articles, however, was high, and many of them were exceedingly good. The new edition contains several new articles, while some of the old ones have been rewritten and brought up to date. In this way some of the weakest features of the first edition have been removed, and the changes and additions seem to be nearly all for the better. Professor A. R. Leeds's admirable and frequently-quoted paper on The Chemistry of Milk and of Artificial Foods for Children is now appropriately followed by one on Modified Milk and Percentage Mixtures, by Dr. Thompson S. Westcott. In this we find information as to the methods and use of milk laboratories, and also practical instructions as to the home modification of milk. Dr. B. K. Rachford contributes an able and original article on Lithæmia in children which is well worthy of careful study. He enters more fully and practically into the clinical aspects of the subject than any other writer with whom we are acquainted. A section on orthopædics has been introduced in this edition. It deals with wry-neck, lateral curvature, tuberculous disease of the spine, hip, knee, and other joints, congenital dislocation of the hip, club-foot, and the deformities which result from paralysis and rickets. The space allotted to the consideration of these conditions is quite inadequate, and the way in which they are dealt with seems too sketchy, and not always in accordance with modern ideas. Thus, in describing congenital dislocation of the hip, Lorenz's very successful method of treating this condition is not even mentioned; the only directions given as to the treatment of rickety curvature of the spine is to the effect that "the spine should be straightened and held until the bones have become hardened by some of the appliances recommended for Pott's disease," and we are encouraged to believe that bow-legs and knock-knee can be successfully treated by a steel apparatus which allows the child to run about. The articles on typhoid fever, rubella, chicken-pox, tuberculous meningitis, hydrocephalus, and scurvy have been rewritten, and those on infant feeding, measles, diphtheria, and cretinism have been revised to a less degree. While lacking in some respects the compactness of a book written by one man, Dr. Starr's *Textbook* will compare favourably with most composite works of its kind, and may be recommended as a thoroughly trustworthy and satisfactory guide to the subject of the diseases of children.

We are not surprised that a second edition of Dr. JACOBI'S work[6] should have been called for so soon. It is not every day that we are offered, in the form of a book, the views of a man of such ripe experience as Professor Jacobi, and one whose opinion is worth having on so many subjects. This edition, the author tells us, has been thoroughly revised, and a number of details as to the dosage of drugs, and other matters which will increase its usefulness, have been added. On taking up the book for the first time some may be repelled by its colloquial language, and its dogmatic and not always very lucid statements. It certainly lacks the flowing style of such writers as West and Henoch, and some of the French authors. On the other hand, many of the important truths which it contains will be remembered all the better for the vigorous and epigrammatic language in which they are stated. It is a book suited less for continuous systematic study than for constant consultation in the emergencies of practice. Used in this way it will very often afford some fresh idea or suggest a new line of thought or action. Obviously it has not grown out of a study of former textbooks—it might, perhaps, have been a little more methodical in places if it had—but is founded on the recollection of individual cases treated in the light of a wide general knowledge of disease. Consequently, although it may, and doubtless will be, read with profit by senior students, it is by the practitioner that it will be most highly appreciated on account of the abundance of its practical information. The book has, throughout, the charm of a marked individuality as well as the weight which attaches to the work of one who, although he has ranked as an authority for more than thirty years, is still an enthusiastic worker, and, what is more, an enthusiastic appreciator of the work of younger men.

There has been such increasing confusion in the classification of the various clinical forms of hydrocephalus, and in the widely differing views held as to their pathology, that we feel sure that this work by Dr. D'ASTROS[7] will be welcomed as a book of reference. Though it might perhaps with advantage have been somewhat condensed, the book gives ample evidence of very careful research and wide clinical observation. Many interesting cases are recorded to illustrate the different varieties of the disease, and these constitute a valuable feature of the book. The illustrations, though few in number, are good. It is, however, surprising that such an excellently-written book should be unprovided with a general index. With this exception the book deserves nothing but praise. In the second chapter the author gives the results of his investigations of the physical and chemical characters of hydrocephalic fluid, and records in tabular form the variations in the fluid observed in different forms of the disease. He agrees with earlier writers that the foramen of Magendie is almost invariably present in the normal subject, though it varies considerably in size and shape. As it is not found in fœtal life he regards it as probably caused by a localised atrophy of the pia mater occurring after birth. The effects produced by the disease on the cranial bones at different periods of life are described, and illustrated with photographs and measurements of skulls. In Chapter IV is given a good description of the clinical signs and symptoms, and we note here that the author attaches importance to the early spasticity of the limbs which is so often present, a sign to which attention had been drawn by Ranke. The pathology of the disease is well discussed, but no fresh light is thrown on the subject. One of the most important chapters is that on congenital hydrocephalus. The connection between hydrocephalus and such malformations as anencephalus, encephalocele, and spina bifida is very fully

[4] *Medical Diseases of Infancy and Childhood.* By Dawson Williams, M.D. London: Cassell and Co. 1898. (Cr. 8vo, pp. 650. 10s. 6d.)

[5] *An American Textbook of the Diseases of Children.* By American Teachers. Edited by Louis Starr, M.D., assisted by Thompson S. Westcott, M.D. Second Edition. In two volumes. Philadelphia: W. B. Saunders. London: The Rebman Publishing Co., Ltd. 1898. (Imper. 8vo, pp. 1244. Illustrated. 42s.

[6] *Therapeutics of Infancy and Childhood.* By A. Jacobi, M.D., Clinical Professor of the Diseases of Children in the College of Physicians and Surgeons (Columbia University), New York, etc. Second Edition. Philadelphia: J. B. Lippincott Company. 1898. (Demy 8vo, pp. 620. 15s.)

[7] *Les Hydrocéphalies.* Par Dr. Léon d'Astros. Paris: G. Steinheil. 1898. (Roy. 8vo, pp. 346. Fr.8.)

considered, but it is pointed out that little is yet known as to fœtal pathology, and it is generally impossible to say whether a teratological or a pathological cause predominates in bringing about many of these cases of congenital hydrocephalus. He shows that a distinction may be drawn between hydrocephalus occurring in the earliest period of intrauterine life and that occurring later, and calls the first embryonal, the second fœtal, hydrocephalus. The first, he believes, is generally teratological in origin, the second pathological. The relation between rickets and hydrocephalus is fully dealt with. The view generally held in this country is, we believe, that rickets may be associated with hydrocephalus, but is not a cause of it. This view is at variance with that held by many writers of eminence quoted by Dr. d'Astros, who regards rickets as not infrequently a cause of hydrocephalus, but none of the arguments adduced appears calculated to upset the belief that so-called hydrocephalic rickets is due to an association of the two conditions. In connection with congenital syphilis, the author holds that there may be two forms, the first often present at birth, probably due to dystrophia; the second occurring about four months after birth, directly due to the specific virus. He shows also that hydrocephalus may be the first manifestation of congenital syphilis. The rare condition of external hydrocephalus is dealt with in a separate chapter, and several interesting cases are described. As regards treatment there is nothing new to notice. The author is opposed to surgical interference, except in the acute forms of the disease. The various methods of treatment are amply considered.

Prior to the publication in 1877 of a case of general paralysis occurring in a boy of 16 years, by Clouston, the condition had been regarded by other authors as one which was never present in the young adult. Since this date however numerous cases have been recorded. These have been most carefully collected by Dr. Thiry, who gives[8] a series of 69 cases of general paralysis in young people of 20 years of age or under. To these he adds three more which were under his own observation, and of which full clinical notes and the results of macroscopical and microscopical investigations are given. The author shows that there are certain points of difference between these cases occurring in youth and in the ordinary adult form. The course of the disease is longer in the young, nearly four years; there is a marked absence of grandiose delusions, while on the other hand somatic disorders are present to a greater degree. Delayed puberty, arrest of growth, increasing feebleness, and later muscular atrophy, are some of the points on which stress is laid. The chapter on etiology clearly establishes that two factors, heredity and syphilis, stand out in importance from all others. In the great majority of the cases there was either a family history of nervous disorders or the patient suffered from congenital or acquired syphilis. The author brings out these points with great clearness, and has taken great trouble in collecting the facts. He shows that the pathological changes closely resemble those found in the general paralysis of adults, both in their macroscopic and microscopic appearances. In the three cases investigated by himself the author found extensive sclerosis in the tract of Goll and in the pyramidal tracts. He draws attention to the frequency of tabetic symptoms in the cases he has collected. The microscopical drawings illustrating the changes in the meninges, brain and cord, are excellent. The early diagnosis of the condition must obviously present considerable difficulty. The author deals fully with this question. In discussing the differential diagnosis between general paralysis and chronic meningo-encephalitis of infancy he makes the bold statement that a great number at least of cases published under the latter name were in reality cases of progressive general paralysis.

Dr. Neumann's "letters to a young practitioner"[9] form a valuable addition to the rapidly-growing literature of children's diseases. They owe their usefulness both to the originality with which the subject is handled, and to the fact that the lines of treatment are recommended on the authority of the author's own experience, and not merely on that of "the books." Dr. Neumann emphasises two important facts. The first is that success in the treatment of sick children is largely dependent on attention to small details. The treatment, therefore, of most diseases is detailed minutely, the author even giving the prices of various remedies. The second is that more good is effected by external remedies than the student dreams of. The value of baths and of the application of water in various ways is, perhaps, a little exaggerated, but a great deal of exaggeration may be pardoned if it keeps the "young practitioner's" thoughts from turning lightly to drugs directly he sees a sick child. A grave defect in the book, and one which detracts seriously from its value, is that etiology receives as a rule scanty attention. By resisting a tendency to diffuseness the book might have been much improved in this direction without increasing its bulk. The section on rickets is not very satisfactory. Of non-congenital cases, says Dr. Neumann, the milder ones are caused chiefly by the want of fresh air, the severer ones most frequently by the presence, in addition, of chronic digestive disturbance or of tuberculosis. From the silence of the author on the subject no one would suppose that an insufficiency of fat in the diet had anything to do with the causation of the disease. If tuberculosis is present, the treatment of the rickets must at the same time be that of the tuberculosis, and here fats among other things are said to be useful; but fat is not mentioned in the treatment of cases uncomplicated by tubercle. The author injects antitoxin in all cases of diphtheria up to 5 years of age, above that only in severe cases. The advantage, he thinks—in the way of immunity against future attacks—gained by allowing the disease to run its course outweighs the obvious disadvantages of this procedure. The book, in spite of the faults mentioned, is well worth reading, and should prove useful to many besides the "young practitioner."

We cannot congratulate Drs. Taylor and Wells, of Philadelphia, on the result of their labours.[10] A manual may be useful without being original if the author digests the facts he has collected and presents them clearly and concisely. To expect a mass of undigested material, borrowed literally wholesale from recent textbooks, to prove a "brief but competent guide for student and practitioner," is to court disappointment. The most readable chapter is that on physical development. We hope, however, that girls—in this country at all events—will not follow the author's advice and take to expanding their lungs by "blowing on horns or using pea-shooters." The technique of intubation is well described, but it is a mistake, especially in an English edition, to say that "the operation of tracheotomy has been all but abandoned." The book is written carelessly, and in an irritating style. Retropharyngeal abscess is not only described twice, but its causation is given differently in the two places. Phosphorus, we are told, "enjoys a large reputation in overcoming with promptitude and thoroughness the defects of bone-growth in rickets." The language of the advertising cobbler is surely out of place in a medical work. No allusion is made to achondroplasia in connection with fœtal rickets. We cannot see that even the student would gain anything by reading this manual rather than one of the textbooks by Rotch, Starr, or Holt, from which it has been so largely compiled.

Dr. McCaw, in his little book,[11] has gathered together from various more or less standard sources, and arranged in a conveniently small space, those facts relating to the diagnosis and treatment of disease in childhood which he regards as of most importance for "the student and busy general practitioner." The selection of topics has been carefully made, and the book is likely to be helpful—indeed, this may be held to be proved by its having reached a second edition. In a future edition the diagnostic tables, many of which are scattered throughout the book, might be revised. Some of them—such as those on pleurisy and pneumonia and on empyema and chronic phthisis—are in their present form not sufficiently practical. In the latter of these, for example, we find no reference to the value of exploratory puncture in

[8] *De la Paralysie Générale Progressive dans le Jeune Age, (avant 20 ans).* [Progressive General Paralysis Occurring in Youth (under 20 Years).] Par Dr. Charles Thiry. Paris: Georges Carré and C. Naud. 1898. (Roy. 8vo, pp. 132. Fr. 6).

[9] *Ueber die Behandlung der Kinderkrankheiten* [Treatment of Children's Diseases]. Von Dr. Neumann. Berlin: Oscar Coblentz. 1899. (Demy 8vo, pp. 285. M.7.)

[10] *Manual of Diseases of Children.* By John Madison Taylor, A.M., M.D., and William H. Wells, M.D. London: H. Kimpton. 1899. (Demy 8vo, pp. 743; 31 illustrations. 16s.)

[11] *Aids to the Diagnosis and Treatment of Diseases of Children (Medical)* By John McCaw, M.D., L.R.C.P. Second Edition. London: Baillière, Tindall and Cox. 1899. (Fcap. 8vo, pp. 242. 3s. 6d.)

demonstrating the presence of pus. Some reference, in a book of this scope, might have been made to the fact that anal fissure is commonly met with in infancy as a cause of constipation and other symptoms. The manifestations of influenza in children might also with advantage have been alluded to. The appendix contains some important facts as to drugs, baths, and some other forms of treatment, a very little about infantile physiology, tables of the main facts regarding the infectious diseases, and a number of useful prescriptions. The index requires to be greatly enlarged; in its present form it is so short as to be of very little use.

Mr. NOBLE SMITH'S pamphlet[12] contains a considerable amount of information which will be useful not only to mothers, but to all who have to do with growing children. The author refers to what he calls "postural deformity," which he says is very common in childhood, and is due to preventable causes. The author considers that badly-shaped clothes may prevent normal physical development, and may be accountable for rounded backs, depressed chests, and crooked spines. They cause also an impediment to free expansion of the lungs, and produce a predisposition to colds and coughs. The articles of clothing are discussed in detail, and it is pointed out that the weight of the clothes should be distributed, and the chest and arms left as free as possible. The way in which the clothes should be worn, or the alterations required, are clearly described.

NOTES ON BOOKS.

THE chief facts hitherto observed in regard to repair or regeneration as it occurs in the animal kingdom are presented in a small compass by Dr. P. CARNOT in *Les Régénérations d'Organes* (Paris: J. B. Baillière et Fils. 1899. Crown 8vo, pp. 96. Fr. 1.50). The facts are excellently arranged and are accompanied by a considerable number of references to the original communications of the investigators cited. The author commences with a brief notice of the different degrees of repair in the zoological series, including echinoderms, worms and other forms to vertebrates, amongst the amphibia, of which last, as is well known, a marked power of regenerating lost parts exists. The highly interesting examples of atavism witnessed in repair are well given; in certain lizards, for example, the scales on the regenerated tail do not repeat the original characters, but reproduce those of an ancestral form. The chief part of the work, however, is devoted to details of the regeneration of the different tissues and organs, commencing with the blood, and passing to the spleen, bone marrow, vessels, and so onwards. Under the much-debated subject of connective-tissue repair, the author omits to notice the results obtained by the use of Ziegler's chambers, which results are generally now held to have shown that connective tissue is regenerated from connective tissue cells and that leucocytes take no real part in the process. A full consideration of the regeneration occurring in epithelial tissue follows, including the central and peripheral nervous system as well as the common investing epithelia. And to this succeeds a concise statement upon what is known with respect to the repair of glandular organs like the liver, pancreas, kidney, etc. Certain conclusions terminate the work, but those at present possible are of too ill-defined and general a kind to be of any high value.

An exposition of the theory and practice of De Backer in his attempts to treat tuberculosis, diphtheria, typhoid fever, and other germ diseases, furunculosis, diabetes, and cancer (which last three are regarded as due to disturbance of the glycogenic functions) by means of pure cultivations of yeast is given by Dr. HORACE MANDERS in his volume entitled *The Ferment Treatment of Cancer and Tuberculosis* (London: The Rebman Publishing Company. 1898. Demy 8vo, pp. 251. 10s. 6d.). The yeast is applied locally, or is given hypodermically or by the mouth, the theory being that it exerts a phagocytic or fermentative influence in these cases. For details it is almost necessary to consult the work itself.

[12] *Growing Children: their Clothes and Deformity.* By E. Noble Smith, F.R.S.C.S.E., L.R.C.P. London: Smith, Elder, and Co. 1899. (Small 8vo, pp. 23. 6d.)

THE PREVENTION OF TUBERCULOSIS.

DUBLIN.

ON June 30th a conference, promoted by the Royal Academy of Medicine in Ireland, was held in the Royal College of Physicians, Dublin, for the purpose of considering the question of the prevention of tuberculosis. His Excellency the Lord Lieutenant, K.G., presided, and there was a large attendance of lay and medical delegates.

The President of the Academy of Medicine (Dr. E. H. Bennett) submitted the following resolutions:

1. That the extensive prevalence of consumption and other forms of tuberculosis—as proved by the published reports of the Registrars-General—is, and has been for many years past, the most serious danger to the public health. The tuberculous diseases are the most destructive of all fatal diseases in Great Britain and Ireland, particularly at the most active periods of life, and even when not fatal they cause a vast amount of poverty and misery, especially among the artisan and labouring classes of the community.

2. That as it has been proved by scientific investigations that the disease is infective, and is communicated from affected human beings to healthy persons and from affected animals to healthy animals, and from affected human beings to animals, and from affected animals to human beings through food derived from such animals, or through association with the same—and as it has also been proved by medical experience that consumption and other forms of tuberculosis are curable diseases—it is necessary, in order to limit the spread of this most destructive malady (tuberculosis), that the public should be thoroughly made alive to its danger, and instructed in the means of avoiding the contagion.

3. In order to prevent the spread of the infection it is necessary—
   (1) To check the spread of the disease among human beings:
      (*a*) By the adoption of general sanitary measures.
      (*b*) By special sanitary measures, including the establishment of State-aided bacteriological laboratories.
      (*c*) By providing sanatoria for isolation and curative treatment.
      (*d*) By separation of tuberculous persons in all rate-aided institutions.
   (2) To prevent the spread of the disease from animals to human beings:
      (*a*) By the control of dairy cattle and milk supplies.
      (*b*) By the control of meat supplies and the inspection of slaughter-houses and all meat killed for food.

The Registrar-General (Dr. Grimshaw, C.B.) proposed:

That, with the view of promoting measures for the prevention of tuberculosis, it is desirable that a branch of the National Society for the Prevention of Consumption and other forms of Tuberculosis should be formed for Dublin and its vicinity, and that a Dublin branch be accordingly hereby formed.

Dr. Little seconded the motion.

His Excellency the Lord Lieutenant supported the resolution. He said he did not think that they should look very largely at any rate to legislative measures in the steps they might take to combat this great evil. He did not mean to say that it might not be desirable to get legal sanction for any measure, or to any effort which would tend to diminish its infectious power, but he thought it was more to volunteer effort and scientific research than to anything else that they must look for the remedies which we hope to find. They could not do anything better than form some new association with a sphere of action confined to Ireland in order to assist the work that was being carried on in England. When the subject was first mooted to him he was invited to consider the propriety of forming a purely Irish association, and he then felt that in view of what had been already accomplished, and in view of what science had already taught us, and in view of the work which had been already carried out in London, it would be desirable that any action they should take in the sense of forming an association should result in the formation of an Irish branch of the English Association rather than that of taking separate action themselves.

The other speakers were Sir C. Nixon, Sir C. Cameron, Dr. J. W. Moore (President of the Royal College of Physicians), Mr. Briscoe, Mr. Field, M.P., Colonel Gore Lindsay, Mr. Swan (President of the Royal College of Surgeons), and Sir R. Jackson, C.B.

A permanent Committee was appointed, and the Lord Mayor was invited to hold a public meeting.

BATH.

At a meeting of the Sanitary Committee on June 26th, the

medical officer of health (Dr. Symons) presented a report, in which he stated that there were last year 59 deaths from phthisis, and from other tuberculous diseases 28. In 1868 the deaths from phthisis in Bath numbered 132, and from other tuberculous diseases 70. This saving from death and from illness was probably due to sanitary and social improvement. Their death-rate from phthisis was now less than that for England and Wales, but they ought not to be satisfied as long as any persons died of phthisis. It had been decided to form a branch of the National Association for the Prevention of Consumption for the counties of Gloucestershire, Somerset, and Wilts. Other large towns were falling in with the movement, and Dr. Symons hoped Bath would not be behindhand. So far, he thought, they were doing more than was being done in many places. They disinfected after deaths from phthisis wherever they could get permission to do so, and they always visited the houses and left circulars as to the means to be adopted to avoid the disease. They had not yet got regulations under the Dairies, Cowsheds, and Milkshops Order, but these were now under consideration. As to the practical results likely to follow the new movement, it appeared to him that they might teach persons suffering from phthisis how to carry out successful treatment at home by giving them a few weeks' treatment in a public institution where every detail was under medical supervision. Recent results showed that phthisis could be cured as well in England as elsewhere.

Stoke-of-Trent.

On June 24th before a large attendance of medical gentlemen from different parts of the county, at the North Staffordshire Infirmary, Stoke-on-Trent, a paper on the open-air treatment of consumption was read by Dr. F. Rufenacht Walters. Dr. McAldowie, President of the Staffordshire Branch of the British Medical Association, who presided, stated that the physicians at the North Staffordshire Infirmary had hoped before now to show the open-air scheme in full operation there, but unfortunately the committee had not felt able to carry it out from purely financial reasons. Last year, however, they were fortunate to secure as chairman of the subcommittee, Mr. J. W. Philips, and Mr. Philips had not only given a donation of £100 towards the scheme, but he had himself guaranteed to collect the remainder, so that the open-air method might be adopted without any expense to the institution. Very shortly now they hoped to have it in operation, and the public of the district would have the satisfaction of knowing that the North Staffordshire Infirmary was the first general hospital in the country to adopt the method. They had been trying the treatment there for some time, and their experience had been that in position the infirmary was admirably adapted for it. Their scheme at present was for men only, but they would like to establish it on the women's side also if the public would subscribe to have that done.

Withernsea.

According to the *Yorkshire Daily Post* arrangements for testing the effects of the open-air treatment of phthisis at Withernsea Convalescent Home are now approaching completion. Two tents have been erected upon wooden platforms, each to accommodate 6 patients. No cases will be received unless there is some hope that they will benefit by the treatment, and they will be examined for tubercle before admission. Notes will be made of the original and existing constitution of the patients, their past and present habits. The patients in the experimental tents will be completely isolated day and night from the ordinary patients at the home, and the dietary and other arrangements will be under close observation. The Hull Infirmary medical staff are taking a keen interest in the experiment.

Westmorland.

A preliminary meeting was held in Kendal on May 24th to discuss the desirability of establishing and maintaining a sanatorium for persons in Westmorland suffering from consumption. Mrs. Bagot, wife of the Member of Parliament for South Westmorland, was in the chair.

Dr. W. S. Paget-Tomlinson gave an address on Sanatoria for Consumption, with special reference to those he had visited in the South of England, and offered £1,000 towards the £5,000 or £6,000 that would be required for erecting a sanatorium with 30 beds for the county.

Other speakers followed, some suggesting co-operation with Cumberland or Lancashire on account of the estimated cost of maintenance for even so small a sanatorium being from £1,250 to £1,500. It was eventually decided to hold a further meeting later and discuss schemes. In the meantime a circular was issued asking for donations and annual subscriptions for a purely county scheme.

Italy.

On July 1st His Excellency Professor Guido Baccelli, Minister of Public Instruction, took the chair at a meeting of the Italian National League against Tuberculosis, of which he is President. Representatives of forty Italian committees, as well as various distinguished personages, were present. Signor Baccelli and Professor Di Giovanni, the founder of the League, delivered addresses.

A District Committee of the League has been formed at Florence. The Committee held its first meeting on June 15th in the Aula Magna of the Reale Istituto Superiore.

On June 19th a meeting of the local committee of the League was held at Naples under the presidency of Professor Enrico De Renzi, Senator of Italy. The meeting was very largely attended, and the movement has the support of the Neapolitan senators and deputies, bankers, engineers, and other leading inhabitants, as well as of the medical profession.

The Sanitary Committee of the Ospedale degli Incurabili of Naples has recommended that an isolation hospital for tuberculous patients be founded in connection with that institution. The same Committee has constituted itself a special committee, with Professor Cardarelli as chairman, for the collection of funds for the establishment of a sanatorium for the treatment of curable cases of phthisis.

At Siena a permanent Committee of Defence against Tuberculosis was constituted on November 25th, 1898, being the first of the kind formed in Italy. The Committee began its campaign by arranging for a series of popular lectures on the means of preventing tuberculosis; the first of these was delivered on March 6th by Professor Guilio Bizzozzero, Senator of Italy. The Committee has also issued a leaflet of instructions as to the modes of dissemination of the disease, and the means of preventing or neutralising infection. It has further urged on the Minister of Public Instruction the importance of the subject being included in the course of hygiene given in secondary schools.

At Reggio Emilia on June 16th Dr. Arnoldo Caselli gave a popular lecture showing the necessity of an organised struggle against tuberculosis, pointing to what had been done in other countries, and urging the establishment of sanatoria. He called on all citizens to give active support to the league against tuberculosis.

Belgium.

The Permanent Deputation of Liége has decided that it is essential that the struggle against tuberculosis should be carried on by doing for the victims of that disease what has been done for the insane. With this object it has sent a Committee to Germany to study the sanatoria for working people which have been established in that country. The province of Liége is prepared to establish one or several sanatoria where patients could be received at a small cost. The Committee, which was composed of MM. Bury and Grégoire (members of the Permanent Deputation), M. Remouchamps (provincial architect), and Dr. Malvoz (Director of the Provincial Institute of Bacteriology), visited the sanatoria of Lüdenscheid, near Altena, in Westphalia; Oderberg and Sulzhayn, in the Harz Mountains; Ruppertshain, in the Taunus; and Hohenhonnef, near Bonn. They drew up a detailed report, illustrated with a number of plans, which has been circulated among the practitioners of the province of Liége.

Portugal.

On June 11th, on the invitation of the Queen of Portugal, a meeting representing all the leading elements of Portuguese society was held at Lisbon in the State Council Room to discuss a scheme for the formation of an association for the succour of sufferers from tuberculosis, to be called "Assistencia Nacional aos Tuberculosos." Her Majesty Queen Amelia herself delivered an inaugural address, in which she set forth the

objects of the association. These are briefly: (1) To construct seaside hospitals for children predisposed to the disease; (2) to found sanatoria in mountain climates for the treatment of cases of phthisis in the curable stage; (3) to establish in all chief towns of districts institutes, intended not only for the study of the disease, but for the help by food, medicines, and advice of sufferers who have to work for the support of their families. It is proposed to further establish asylums in which incurable cases can be received and kept apart from the healthy population, and from the inmates of general hospitals. Her Majesty announced her intention of making a beginning by building hospitals in the neighbourhood of the three cities of Lisbon, Oporto, and Coimbra, others being erected later as the funds available might permit. The Council of the Association was then formally constituted, the Marquis da Praia e Monforte being elected President, and Dr. Silva Jones Secretary. An administrative committee, with an advisory technical subcommittee and a propaganda committee, with an editorial subcommittee were then formed, and the proceedings were brought to a close by the collection of subscriptions to the amount of 60 contos de reis. The Government has submitted to Parliament a proposal for the creation of a benevolent fund for the purposes of sanitary defence against tuberculosis. To this fund the State will contribute an annual subsidy of 20 contos de reis.

The *Coimbra Medica* recalls the fact that on March 24th to 27th, 1895, a National Congress of Tuberculosis was held at Coimbra under the presidency of the Rector of the University and the patronage of exalted personages, and with the active co-operation of the Professors and many leading members of the profession in Portugal. This was the first organised effort made in Portugal for the prevention of tuberculosis. The *Transactions* of the Congress, which were published in due course, form a bulky volume, and contain papers dealing with the means of preventing the disease. It was arranged to hold a second congress, and Dr. Silva Amado was elected President. We gather, however, that the prospect of this second Congress being held is somewhat uncertain.

A National League against Tuberculosis, on much the same lines as our own National Association for the Prevention of Consumption, has been formed under the auspices of the Lisbon Sociedade das Sciencias Medicas, on the initiative of Dr. Miguel Bombarda, editor of *A Medicina Contemporanea*.

United States.

A society for combating tuberculosis has been organised in Chicago. It is to be known as the Illinois Society for the Prevention of Tuberculosis, and its membership will include all physicians, health officers, veterinarians, and others interested in the extermination of tuberculosis.

WOMEN'S INTERNATIONAL CONGRESS.

(Concluded.)

Nursing.

There was a noticeable tendency in all the speakers to demand a raising of the standard both of applicants for training and of candidates for certificates as trained nurses. Mrs. Neill (New Zealand) thought 24 the proper age for admission to a general hospital, and this was the opinion generally expressed by the speakers, though Mrs. Spence pointed out the loss to the nursing profession of many most suitable women, through the necessity of their earning their living immediately after leaving school; she thought that if only eight hours' work were required girls of 20 would not suffer in health or otherwise from hospital work. One speaker suggested that candidates should be admitted at a younger age than 24, but made to spend some time at a nurses' college studying hygiene, cookery, and elementary anatomy before entering hospital. There was a general feeling that a nurse's long special training tended to make her one-sided, and that, especially for patients requiring mental care, more general culture was desirable. Mrs. Bedford Fenwick could not see why nurses should expect that their profession, unlike all others, should provide free education. She thought a nurses' college was much needed, connected with the hospital training schools, but entirely self-supporting. There was a consensus of opinion as to three years' training being the minimum allowable.

Miss Stuart (St. Bartholomew's) said that a preliminary examination of candidates for nursing, in general knowledge and elementary physiology, had an excellent effect in eliminating the utterly unfit, and tended to save patients from the blunders of totally unsuitable probationers. She held that nurses should be examined by some outside body, which, however, should refuse to examine any candidate who could not produce a matron's certificate as to discipline, power of organisation, and general conduct.

Mrs. Bedford Fenwick urged that this examining body should include matrons among its members.

Miss Watkins (South Africa) spoke of registration of nurses as an accomplished fact in that colony. Only nurses with a three years' training in a hospital of over forty beds were examined. The examinations were conducted by a council of medical men, two of whom conducted the *viva-voce* examination, the papers being sent to the council. The council would register any nurse trained and certificated in another country, on certain conditions; one such condition was that her certificate must embody the statement that it was granted *after examination*. This caused annoyance to some well-trained English nurses whose certificates did not state this fact.

Miss Scovill (United States) read a paper on Trained Nurses' Associations as tending to unite certificated (or in the American phrase, graduate) nurses for mutual help and protection, and concluded her remarks with the following quotation from the ordinances of St. Vincent de Paul for his Sisters of Mercy:

"They shall have no monasteries but the house of the sick, no cloisters but the streets of the town and the wards of the hospital, no enclosure but obedience, and for convent bars only the fear of God. For a veil they shall have a holy and perfect modesty, and while they keep themselves from the infection of vice, they shall sow the seeds of virtue wherever they turn their steps."

Midwives.

The question of midwives was raised by several speakers. Miss Watkins said their examinations in South Africa were much the same as that of the Obstetrical Society of London. She hoped for a time when midwives would be compelled to present themselves for re-examination every three years, as was, she stated, the case in Germany.

Miss Dock (United States) said that except among the poor foreign population, only the doctor and the trained nurse were recognised.

Miss Breay thought a three months' training far too short.

Dr. Sarah Stevenson urged the abolition of the midwife.

Military Nursing.

Mrs. Quintard spoke of the impulse given to the employment of trained nurses in the United States Army by the recent war. A Bill was recently presented to Congress arranging a military nursing service; it was prepared by the Surgeon-General and a Committee of Nurses, and was favoured by the Secretary of War, but unfortunately failed to obtain the two-third majority necessary. It provided that candidates should be selected by a committee of women and should be presented by them to the Surgeon-General for his final selection.

This point was also touched on by Dr. Margaret Christie, who said that her experience in the Poor-law service at home and in Government service abroad had impressed her with the fact that women candidates should be selected by women, who were alone competent to perform the preliminary winnowing process, though the final selection must of course rest with the chief medical officers concerned.

Captain Norton, M.P., in an interesting speech on nursing in the English army, also emphasised this necessity. He held that the Board of Selection should consist of two medical officers and one thoroughly trained nurse. Mrs. Quintard had said that the American Bill provided for a woman inspector of nurses, either a qualified medical woman or a trained nurse of experience, and Captain Norton suggested that in England there ought to be a lady inspector of military hospitals, responsible for seeing that the nursing in all was kept up to a high standard. He spoke of the high efficiency required, instancing the fact that of 48,000 men under Osman Pacha, only 12,000 returned to their homes; while in the Crimea, for every civilian who died at home, 23 soldiers died in the war, and only 3 of the 23 died on the battlefield. He next dwelt on the deficiency of military as compared with civil nursing arrangements; he deplored the fact that the nursing sister in charge of the whole hospital had herself to nurse a definite

number of patients. He spoke of the miserably inadequate training of orderlies, half an hour a day for a month being considered sufficient. He urged that the best educated and most suitable men should be selected and sent to Netley for a three years' training. He desired to see properly equipped hospital ships and proper arrangements for night nursing, and thought the pensions of army nurses should be increased.

District Nursing.

The chief points raised in the discussion on district nursing were the three years' training; the question as to whether a long hospital training did not rather spoil a nurse for district work; and the question of providing nurses for those too poor to pay 2 guineas a week, but too proud to accept entirely gratuitous services.

Science.

Looked at from the point of view of occupations for women of leisure, the sciences of astronomy, geology, and botany were specially recommended by Mlle. Klumpke, Miss Raisin (Bedford College), and Miss Sargant. As a lucrative profession, Mrs. Ayrton said there was an opening for women in the making of electrical instruments, Mrs. Maunder noted the employment of women in the photographic department of astronomy, and Mrs. Percy Frankland referred to Mme. Metchnikoff's contributions to the study of phagocytosis, and said there was scope for women in the science of bacteriology. There was a general feeling that women were much handicapped in scientific pursuits by their exclusion from most of the societies, though great appreciation was expressed of the kindness and liberality of many individual men of science, such as Sir Charles Lyell, who twenty-five years ago left funds to the Geological Society to provide a medal for geological research, to be granted to workers of any nationality and of either sex. It may be noted that six years ago this medal was awarded to a woman.

Dinner.

On June 28th the President and Committee of the Association of Registered Medical Women entertained the foreign medical ladies attending the Congress at dinner in the Club, Royal Botanic Gardens, Regent's Park. Covers were laid for 50. Among the members and guests present were the following:—Dr. Sarah Hackett Stevenson (U.S.A), Dr. Aletta Jacob (Holland), Dr. Tiburtius (Berlin), Dr. Stefanofsky (St. Petersburg), Dr. Allen Sandelin (Sweden), Dr. Poynausky (St. Petersburg), Mrs. Scharlieb (President), Mrs. Garrett Anderson, Miss Cock, Sir Hugh and Lady Beevor, Mr. and Mrs. Stanley Boyd, Dr. and Mrs. Starling, Mr. and Mrs. Berry, Miss Walker, Miss Webb, Miss Ellaby, Professor Dunstan, the Misses Stevenson, of Edinburgh, and Miss Chadwick.

METROPOLITAN IMBECILES.

The annual report of the Metropolitan Asylums Board, to which we have already referred, contains in an appendix an account of the work of the Board in regard to imbecility, and consists of the reports (abridged) of the medical superintendents of the several asylums and of the schools for the year 1898.

From the summary of statistics attached it appears that no fewer than 5,032 patients of the imbecile class (500 more females than males) were in three asylums for adult imbeciles at Leavesden, Caterham, and Darenth at the end of 1898.

At Leavesden (containing 1,984 patients), Dr. Elkins reports that the helpless character of the admissions is still very striking, so that the asylum is rapidly becoming nothing more nor less than a workhouse hospital. There were 194 deaths, and no fewer than 55 of them were caused by consumption. The percentage of recoveries on admissions has been 10.6, and 33 patients had been transferred on account of dangerous propensities to county asylums.

At Caterham, with a population of 2,001, the deaths numbered 150, giving a percentage of 7.5 on the average number resident; 9 patients had been discharged as recovered, and 9 transferred to county asylums. No fewer than 450 patients were epileptic, and Dr. Stanley Elliot, the medical superintendent, suggests to the Board the desirability of providing a specially adapted institution for the care, treatment, and employment of the 1,000 epileptics now resident in the three metropolitan asylums.

Dr. F. R. P. Taylor reports both for the adult asylum and for the schools and pavilions at Darenth. In the former there were 1,047 patients at the end of 1898, and the report states that all those admitted during the year had come from the schools; 8 patients had been discharged as dangerous; 32 deaths only had occurred, equivalent to a percentage on the average number resident of 3.06, the lowest death-rate since the opening of the asylum. One-fourth of the deaths were due to phthisis. In the schools and pavilions the population on December 31st, 1898, was 959, 630 males and 329 females. Of 95 patients admitted, 33 proved to be epileptic; 71 were discharged during the year, 11 improved, 16 not improved; 44 were transferred to the adult asylum. The deaths numbered 42, giving a percentage of 4.32 on the average number resident; 16 were due to epilepsy and 14 to tuberculosis. An outbreak of diphtheria (in which the antitoxin treatment was most successful) occurred in November and December. The 409 children on the roll for school attendance were reported to be of a higher grade than those attending in former years. The kindergarten system had been developed amongst the older children into manual employment—rug making, cane chair seating and advanced basket work having been added to the list of employments. The helpless and hopeless cases were as far as possible accommodated separately in the pavilions, and an improved classification of the children in the main building had been undertaken, the epileptics being now under continuous supervision.

A perusal of these reports leaves the impression that each of the medical superintendents has a heavy burden of responsibility, and there are indications here and there that for more complete efficiency in grappling with this mass of metropolitan misery more paid help is required. At Leavesden there are 114 ward attendants to 1,984 patients, at Caterham the nursing staff is 126 to 2,001; while at Darenth Adult Asylum, with 1,047 patients, the nursing staff is 83. Considering the number of sick and infirm patients in these establishments, the strength of the nursing staff seems scarcely adequate. It is to be hoped that before long the more educable children will be removed from their somewhat depressing surroundings at Darenth.

THE OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Under this title a new Society has recently been formed. It will commence work during the forthcoming winter. The following are the members of the "Initiating Committee":

E. Cresswell Baber, Brighton.
J. B. Ball, London.
C. A. Ballance, London.
H. A. Ballance, Norwich.
Barclay Baron, Clifton.
Thomas Barr, Glasgow.
F. W. Bennett, Leicester.
A. H. Benson, Dublin.
J. W. Bond, London.
Adolph Bronner, Bradford.
J. Walton Browne, Belfast.
W. C. Bull, London.
Arthur H. Cheatle, London.
A. E. Cumberbatch, London.
Sir William Dalby, London.
George Field, London.
Dundas Grant, London.
G. T. Guild, Dundee.
F. G. Harvey, London.
William Hill, London.
W. Jobson Horne, London.
Mr Victor Horsley, London.
T. Mark Hovell, London.
J. M. Hunt, Liverpool.
Percy Jakins, London.
Mackenzie Johnston, Edinburgh.
Hugh E. Jones, London.
MacNaughton Jones, London.
A. Brown Kelly, Glasgow.
Richard Lake, London.
Edward Law, London.
L. A. Lawrence, London.
C. J. Lewis, Birmingham.
P. McBride, Edinburgh.
Professor Macewen, Glasgow.
F. Matheson, London.
W. Milligan, Manchester.
Stephen Paget, London.
H. Pegler, London.
Bilton Pollard, London.
Professor Urban Pritchard, London.
W. Laidlaw Purves, London.
A. W. Sandford, Cork.
J. M. E. Scatliff, Brighton.
Marmaduke Sheild, London.
Scanes Spicer, London.
W. R. H. Stewart, London.
George Stone, Liverpool.
J. B. Story, Dublin.
StClair Thomson, London.
Herbert Tilley, London.
Logan Turner, Edinburgh.
E. Waggett, London.
H. Secker Walker, Leeds.
P. Watson Williams, Bristol.
R. H. Woods, Dublin.
P. Macleod Yearsley, London.

Mr. Arthur H. Cheatle (117, Harley Street, W.) is the Provisional Honorary Secretary.

We are asked to state that University College Hospital, London, will, with the exception of the maternity department, be closed during the month of August next.

THE PLAGUE.

Egypt.

[*From a Correspondent.*]

Course of the Epidemic.

The following table shows the progress of the disease in Alexandria:

	New Cases.	Deaths. In Hospital.	Deaths. Out Hospital.	Cured.
June 8th to 14th	12	5	1	3
June 15th to 21st	6	2	2	5

There is, then, a marked decrease in the total number of cases, but, on the other hand, 2 deaths out of hospital have occurred, and it is these cases which constitute the chief danger for the spread of the disease. Total cases up to date 41, deaths 16, cured 12.

The diagnosis of cases amongst Europeans is easily made; amongst natives it is much more obscure. It is not unusual for a native to be found suffering from febrile symptoms and a bubo, which in the beginning may not even be painful, and the typical aspect of the plague patient is wanting. He gives a ready explanation for the bubo—a blow or strain—and is much surprised at being removed to hospital. A puncture of the gland and subsequent bacteriological examination shows the disease to be true plague.

The small outbreak amongst the police was limited to 5 cases. Evacuation of the barracks and placing the men under canvas promptly put an end to the disease. Unfortunately the entire population of a city of 320,000 inhabitants cannot be treated on similar lines. Still, the results obtained so far cannot be considered unsatisfactory, and it is difficult to suggest further measures.

The concealment of cases constitutes the grave danger, and that this is increasing is shown by the increase in the number of deaths out of hospital.

The figures quoted above give the cases up to June 21st, and are the official weekly returns of the Sanitary Department. From the 22nd to the 24th there have been 6 cases and 2 deaths both out of hospital. This looks as if the returns of the current week would compare unfavourably with those of last week.

Preventive Measures.

All the deaths out of hospital have been detected by the examination of the dead before the permit for burial is granted. In such cases infection may have been largely spread before the sanitary authorities have cognisance of the cases, and the ordinary measures must be expected to fail, for clothing may have been removed, and persons in contact with the deceased may have contracted infection, and cannot be traced to their houses, where they become fresh foci for the spread of the disease.

No one except those working on the spot can realise the enormous practical difficulties which arise at every moment in dealing with a mixed population, the very large majority of whom are entirely opposed to sanitary measures of any description.

The sheiks of each quarter, who are supposed to notify anything suspicious occurring in their quarters, have been doubled in number, and a reward is now offered for the notification of any case which turns out to be plague. A considerable number of suspicious cases are notified, which entails heavy work, as such cases are considered as plague until the contrary be proved.

One rat and one mouse have been brought to the laboratory, and been found to have died from plague. The mouse was brought from a house where a case of plague had occurred. These are the first cases in Alexandria in which plague has been found to exist amongst animals.

The Work of the Sanitary Department.

It is satisfactory to note that the entire power is vested in the Sanitary Department, which is being given a free hand, and the extraordinary anomaly of soldiers and civilians directing plague measures while the sanitary official was completely relegated to the background, as was to be seen in India, does not exist in Egypt.

The position of the Sanitary Department has been obtained by a steady assertion of the right of undivided sanitary authority in sanitary questions, but the Government must now be thankful that a department exists which is ready to accept full responsibility in a moment of critical danger to Egypt.

A general hospital for plague cases of all nationalities has been organised at Alexandria with a section for Europeans and another for natives, but it will not be opened unless the existing accommodation proves insufficient.

No cases of the disease have occurred in any other part of Egypt, and there is no reason why those who flock to Egypt every winter either for health or enjoyment should in any way alter their plans for the coming season.

Morocco.

The foreign and native authorities in Morocco City are in considerable alarm lest the returning pilgrims from Mecca introduce plague among the community. The only means found to deal with the matter was to insist upon a rigid quarantine, the great difficulty being to secure a site. The most expedient place was the island of Magadar opposite the city, which however is utilised as a prison. The Moorish authorities have removed the 1500 prisoners from the island, and instituted a quarantine station for returning pilgrims.

Persian Gulf.

The latest news from Bushire is that plague has disappeared from the neighbourhood, no fresh cases having been reported during the week ending July 4th.

The Indian Government have sent Captain Ramier, I.M.S., and two assistants, to the seat of plague on the Persian Gulf, to assist the local authorities in their preventive measures. A greater danger to Europe than even the presence of plague in Egypt is by way of the Persian Gulf, Mesopotamia, and Turkey. It is therefore satisfactory to note that the Indian Government are taking steps to deal with the Persian Gulf outbreak.

Hong Kong.

This week, again, a slight accession has taken place, there being 109 cases of plague in the city and 117 deaths during the week ending June 19th. This has been an exceptionally dry year in Hong Kong and thoughout Southern China, and up to the present we have heard of no satisfactory rainfall. The meteorological conditions may have nothing directly to do with plague, but foul drains unflushed for some seven or eight months cannot but help to cause an increase in a disease which is essentially one of filth and insanitation.

A telegram from Hong Kong to the Colonial Office states that during the past week 142 new cases of plague occurred, with 144 deaths. This is disappointing news after the telegram of two weeks ago, when the number of plague cases and deaths for the week fell below 100.

Straits Settlements.

A few cases of plague have occurred on the island of Penang, but the disease does not seem to have taken a hold of the community. The outbreak is attributed to the immigration of 1,500 coolies from China in the middle of May.

India.

The death-rate in Bombay has fallen to the normal, but still from 10 to 20 fresh cases of plague occur daily.

In Calcutta some half-dozen fresh cases occur daily.

Three to four fresh cases of plague occur daily in Karachi. Cholera, however, is causing still a considerable mortality.

The Punjab is now well-nigh free of plague. The Jullunder district, where the epidemic persisted with the greatest severity, has had no case for a week or two.

From the Mysore district and the goldfields a continued decrease of plague is announced, so that now only a few more or less sporadic cases occur.

According to a Dalziel's telegram plague is said to be spreading rapidly in Poona. Captain Wiseman, the plague supervisor, has been attacked by the disease.

In Belgaum and Kolhapore also a slight increase is reported.

THE NEW VACCINATION ACT IN OPERATION.

One-Mark Vaccination.

J. D. writes: *Audi et alteram partem.* So will you to permit me to say a few words on behalf of those practitioners whom you denounce in your leading article on the above subject for "making a rod to their own backs?" I may say at once that I agree with you as to the superior protection afforded by four or three vesicles over two or one, but at the same time it is hardly logical to expect private practitioners to relinquish the only means they have at present of competing against the public vaccinator. If you bear in mind that by trying to keep the public vaccinator away from their patients private practitioners do not so much care for the vaccination fees—which at their best do not amount to much—as they dislike the interference of a rival practitioner, you have the crux of the whole question. Human nature is but human nature after all, and doctors, like others, think they have a right to protect their own interests as long as they do not infringe the law. If the law is wrong, and all that we are asked by over-anxious mothers is just to give to our conscience a little of its own elasticity, why, let the law take the consequences. We are perfectly within our right when we

comply with the mother's wish to vaccinate in only one or two places; to refuse to do so is tantamount to losing, not a paltry vaccination fee, but in all probability some of our best paying patients, and medical practice nowadays hardly ever allows such over-scrupulous self-sacrifice.

The remedy is obvious. Either abolish the office of public vaccinator, or else pay the latter a sufficient salary to enable him to do without private practice. You would soon hear the last of one-mark vaccination.

VACCINATION PROSECUTIONS.

AT GLOUCESTER last week several prosecutions of defaulting parents (fathers) were dismissed on the counsel for the defence (Mr. Schultess Young) taking exception to the public vaccinator having sent the statutory notice of his intention to attend for the purpose of offering vaccination to the mother instead of to the father. Both public vaccinators and vaccination officers cannot be too careful in complying with all the minutiæ of the procedure prescribed by or involved in carrying out strictly the new Act, or they are pretty sure to be tripped up.

POWERS AND DUTIES OF DEPUTIES.

DEPUTY writes: A. is a public vaccinator, and in his contract his partner B. is appointed his deputy. Can B. legally inspect cases vaccinated by A. and *vice versâ*? If so it would be a great boon to us public vaccinators, as one of the greatest troubles we have to contend with in country districts is having to give not less than twenty-four hours' notice of our coming, and appointments made are very often very difficult to keep.

*** The deputy can perform any of the duties of the public vaccinator when the latter is unable to perform those duties in person, but if he vaccinates or inspects any case he must initial the corresponding entry in the register. No notice of the visit of inspection is required, although most public vaccinators find it convenient to call on the eighth day exactly a week after vaccination.

CONTRACT MEDICAL PRACTICE.

CLUB PRACTICE IN THE PROVINCES.

M.D., F.R.C.S., writes: "I have been in practice in a seaside town of about 12,000 inhabitants nearly 3 years. I am surgeon to a sick benefit society numbering 16 members. Each member contributes as payment for my services 2s. 6d. annually. For this I have to supply medicine, usually bottles, and I suppose splints or surgical appliances if necessary. It is fair to say that all the members are, I believe, total abstainers, and amongst them are two gentlemen who subscribe *pour encourager les autres*, and not for the sake of obtaining attendance cheaply for themselves. For the others there is one master-builder amongst them, and as for the rest, I have had nothing so far to do for their wives and families, and doubt whether I should get paid if I had to. During the half year just ended, a comparatively light one, 7 of the members have required attendance; I have paid 6 visits, been consulted at home 13 times, prescribed and dispensed 16 bottles of medicine (or their equivalent in ointments and dressings) and written 2 certificates. For this I expect to receive in a few days the sum of £1 sterling. By examining candidates for admission I have been able to exclude one young man with mitral disease, and one old pauper of nearly 70, but this does not prevent one having a case of very chronic phthisis amongst the original members of the club. Nearly everybody in the town is in a club of some sort, even publicans, master painters, master gardeners, and the ordinary rate is, I understand, 2s. 6d. a head per annum. In the case of clubs numbering 100 or more members I believe it is only 2s., in the case of clubs in the villages round for over two years I acted as surgeon to one whose headquarters were three miles distant at a remuneration of 3s. 6d. a head. Happily, I never once had to go that distance for them, and although I subscribed to the club funds and attended their Christmas dinner they, from love of change no doubt, have transferred their allegiance elsewhere. Another country club, whose members reside any distance up to three miles away, I declined to stand for as they pooh-poohed the idea of fixing any age limit whatever for admission. The practitioner who obtained the appointment agreed to do it for 3s. 6d. a head. I was offered a children's club at a halfpenny a week, but declined.

By way of comparison I may mention that the most common fee for midwifery here is (when one can get it) 10s. 6d., and that vaccination with calf lymph has to be done for 2s. 6d., although the guardians pay the public vaccinator 6s. per head for cases in the town.

I think my own professional training must have cost me well over £1,000; but in any case this tariff of fees must surely be ridiculous. I should positively lose on the 2s. 6d. club I have alluded to, only I get £3 or £4 annually from the builder for attending his wife and family, and I feel a personal interest in encouraging temperance work and thrift generally. There is a great want of it here, for nearly every other shop sells liquor in some shape, and the illegitimate births are 1 in every 7.

It is difficult for me as the junior practitioner in the place to suggest to my competitors, who are mostly natives, that rate-cutting can be carried too far. If I resign my club appointment to-day or ask for better terms, I know too well who may succeed me to-morrow.

The only workable scheme that I can suggest at present is for some central Board of ethics to sit in judgment on these and similar fees, condemn them, and circularise the general practitioners throughout the country. Perhaps then we might hold a meeting of the local profession and present a united opposition to this and similar sweating.

THE representatives of the late Colonel Cameron have set aside the sum of £20,000 for the purpose of building and endowing a hospital for West Hartlepool.

THE HUNTER FUND.

MR. RIVERS WILLSON (Treasurer) writes on behalf of the Committee of this Fund:—As the only apology given by the General Medical Council for its prosecution of the late H. Kingsley Hunter consists of statements of two of the members of the Penal Cases Committee: the first, that the action was a friendly one, and the second, that the only object of the Council was to test the propriety of the use of foreign unregistered medical degrees; the Committee of the Hunter Fund feels it only right, in justice to the deceased, to challenge the accuracy of these statements.

With regard to the second statement, as to the Council's object, nothing need be said. The charge of using a foreign unregistered medical degree was altogether dropped in the prosecution, so that it has no relevancy, and the question remains as if this case had never been. But, in answer to the suggestion that the action was fought in accordance with the wish and will of the deceased, the Committee regrets to say that they are bound to deny absolutely that statement. A careful perusal of all the letters received by the deceased from the Council's officials proves that Dr. Hunter had not the slightest intention of braving the Council. The one constant appeal through all his letters, as shown by these answers, is to know what he, a registered medical practitioner, may lawfully call himself so as to let the public know that he is entitled to practise medicine and surgery, and it no doubt seemed strange to him that a body which he had always regarded as constituted for the protection of registered practitioners should fence with him through its legal advisers, and instead of answering plain questions endeavour to drive him to seek other legal advice, a course he would not be likely to adopt unless with the object of fighting. The attitude of the Council as a litigant in this matter is intelligible, but as a body safeguarding the interests of the profession its action is not so clear. Why Dr. Hunter could not have been advised as to the alleged error of his ways, and if willing to amend them have been left in peace; why the General Medical Council, through its officials, should have used every means in its power to drive the deceased into litigation, even to the extent of finding, on its own responsibility, an entirely new charge when the original cause of complaint has failed, are simple questions which have yet to be answered.

The Committee desires to place on record its sincere thanks to Mr. Victor Horsley and to Mr. George Brown for the kind interest they have taken in this case.

The following additional donations have been received:

	£	s.	d.
Amount previously acknowledged	97	7	9
Dr. W. M. Crawford Watson, Harrogate...	1	1	0
Mr. James Waghorn, Cape Colony	1	0	0
Spiff	0	5	0
Dr. W. D. McMurtry, Jarrow-on-Tyne	1	1	0
Sir Thomas Smith, Bart., 5, Stratford Place, W.	3	3	0
Total	£103	17	9

LITERARY NOTES.

MESSRS. JOHN BALE, SONS, AND DANIELSSON, Ltd., will, we are informed, publish next week a volume entitled *Tales of Medical Students*, by Dr. Ralph Hodgson, of Sydney, New South Wales.

Messrs. Smith, Elder, and Co. will publish early in the autumn a medical handbook for travellers, to be entitled *Health Abroad*. The editor is Dr. Edmund Hobhouse, and special articles are contributed by Dr. Leigh Canney on Egypt and North Africa, by Dr. Harford Battersby on Central Africa, by Dr. Stuart Tidey and the Editor on Continental Travel, by Dr. B. J. Guillemard on South Africa, by Dr. G. H. Pennell on South America, by Dr. W. J. Simpson on India, and by the Editor on Australia, New Zealand, and North America.

The abandonment of Latin as the language of the *Pharmacopœia*, though it offended the classical susceptibilities of Dr. Paris and other scholarly physicians, was doubtless felt as a relief by the greater part of the prescribing and dispensing community. But a Latin Pharmacopœia would seem to have its uses. Lord Wolseley, when recently visiting Great Yarmouth Station Hospital, found a patient—one of the

Norfolk Artillery—who was described as a Belgian. "Oh then," said the General, "You speak French," to which the unexpected reply was, "No, but I speak a little Latin." "Latin!" exclaimed Lord Wolseley, "how do you come to speak that?" "I picked it up in the *Pharmacopœia*." The particular *Pharmacopœia* to which this erudite gunner referred is not mentioned, but whichever it may have been, it is safe to assume that his range of conversation in Latin is somewhat limited. The moral of the story, however, seems to be that knowledge, if you look for it, can be found in the most unlikely places. Perhaps we may hear next of some aspiring doctor's boy who has "picked up" Latin from his master's prescriptions. The conversational possibilities thus opened up are rather alarming.

The *Philadelphia Medical Journal* has been driven to issue an appeal to contributors not to shoot the editor. That conscientious official in the discharge of what he conceives to be his duty occasionally ventures on emendations of a contributor's style or grammar or spelling; and it is the nature of fallen mankind to be ungrateful for such acts of kindness, if not actually resentful of them. Dr. Gould has had experience of this in letters in which he is ironically—and inelegantly—asked "Why not instruct Cicero to spell Latin?" Not unacquainted with like grief, we can sympathise with our contemporary. Quite lately we received a letter all the way from Singapore from a gentleman who, after expressing gratitude for the publication of a paper goes on to say: "But I am unable to feel grateful to your grammarian who substituted '*A* useful Manœuvre' for '*An* useful Manœuvre' in the title thereof." Our "grammarian" is so unaccustomed to anything in the shape of gratitude from contributors that he will probably bear the absence of it in this case with philosophy. In justification of himself, however—though of course with the meekness becoming his position—he has called our attention to the following passage in that recondite work, Mason's *English Grammar:*

> *An* drops the *n* and becomes *a* before words beginning with a consonant, the aspirate *h* or the letter *u* when the sound of *y* is put before the *u* in pronunciation as....."a useful book."

Our correspondent will probably be as unable to feel gratitude for this information as for the "substitution" of which he complains.

In the *Guy's Hospital Gazette* of June 17th Sir Samuel Wilks contributes a most interesting note entitled Appendicitis: Not a Novelty. He recalls the fact that Bright and Addison commenced the publication of a work on medicine, only one volume of which appeared. This, which was wholly written by Addison, was published in 1836. It contains the following passage:

> The portion of the intestine which is lodged in the right iliac region is frequently the seat of inflammation. A hardness and tumefaction are soon evident, and, this continuing, general symptoms of peritonitis often take place and terminate fatally, or the inflammation may remain circumscribed and assume the form of deep-seated abscess. This may open of its own accord and ill-conditioned pus escape, which from its smell is soon discovered to be mixed with feculent matter. From numerous dissections it is found that the fæcal abscess thus formed arises in a large majority of cases from disease set up in the appendix cæci. This organ is very subject to inflammation, ulceration, and gangrene, or may become thickened and ulcerated from tuberculous deposit. This worm-like process is often detected in the midst of the abscess with a perforation at its extremity. Foreign bodies may have fallen in and irritated it, but one of the most common causes is the formation of a peculiar concretion moulded in the canal, and composed of layers of earthy phosphates with occasional portions of feculent matter.

As Sir Samuel Wilks says, it seems to have taken the medical profession a great many years to recognise the facts so clearly stated by Addison. What is new is the practice of operating before any abscess is apparent. Referring to the fact of the comparative rarity of the disease in females (though he says it is becoming fashionable among the ladies of Paris), a circumstance which he thinks must be due to some anatomical cause not apparent, Sir Samuel quotes the following dialogue from *Tristram Shandy:*

> "I beseech you, Dr. Slop," quoth my Uncle Toby, interrupting him as he mentioned the *blind gut*, in a discourse with my father, the night my mother was brought to bed with me, "I beseech you," quoth my Uncle Toby, "to tell me which is the blind gut, for, old as I am, I vow I do not know to this day where it lies."
>
> "The *blind gut*," answered Dr. Slop, "lies betwixt the ilion and colon."
>
> "In a man?" said my father.
>
> "'Tis precisely the same," cried Slop, "in a woman."
>
> "That's more than I know," quoth my father.

A contributor to the *Calcutta Review* has discovered an oriental parallel to the *Religio Medici*, "not merely as regards subject matter, but the individuality of the authors":

> Both were physicians by profession, and both left treatises on matters of faith. In either we have the confessions of an inquisitive spirit on the most essential points of religion. Browne's work was "a private exercise directed to himself what was delivered therein being rather a memorial unto him than an example or rule unto any other." Ten centuries before he wrote, Barzooyeh, the physician, was sent by Nooshirvan, King of Persia (the Kesra of the Arabians, the Chosroes of the Latins) to India to secure and translate the *Hitopodcsha*. The difficult task was completed, and the grateful monarch desired to make the learned man gifts of treasure. But Barzooyeh refused all riches, seeking rather to perpetuate his memory by prefixing to the Pehelvi translation an account of his own opinions on matters of faith; confessions which may be read in the Arabic version of Abdallah Ibn al Mukaffa with a sense of a striking resemblance especially to the commencing portions of the *Religio Medici*.

Dr. A. E. Russell has done well in reprinting the paper on Old St. Thomas's, which he read before the Medical and Physical Society of St. Thomas's Hospital on February 9th, and which was afterwards published in the *St. Thomas's Hospital Gazette*. The paper is interesting in itself, and it is illustrated with several well-executed plates of the hospital, old and new, and with portraits of Wharton, Mead, and Cheselden. The following letter, written by Oliver Cromwell to the Governors in 1649, shows that the Lord Protector could write a graceful letter of recommendation. He says he is "glad itt falls in my way to accomodate both you and soe good a friend of mine as ye bearer hereof Mr. Barth Lavender." If they accede, he continues:

> I shall be a debtor to you for ye condescention (I meane thanks). Trust me Gentlemen did not ye abilities and worth of ye man intercede with me, I should nott have moved you on his behalfe, but having a man thoroughly tried in ye service of the State and found able and faithful in his profession, I could nott reasonably denie him my best assistance in soe faire a motion as to obtain ye reversion of a Chirurgeon's place with you in your hospital, wherein if you shal please to gratifie him and me, you need not fear butt of our gratification herein will soon become your owne wich nottwithstandinge I doe nott mention or intend as a consideration for your favour.—Your very lovinge friend, O. CROMWELL.

There is a distinct contrast between the Protector's manner of "using his influence" and that of the monarch whom he sent to the block. Charles the First in 1634 "wills the appointment of Enoch Bostock as Chirurgeon, and doubts not of your readiness to give us satisfaction."

In a thesis recently presented to the University of Paris for the M.D. degree, Dr. Tiffaud gives an interesting account of the "strokers" and "healers" in Bas-Poitou. He says the cure by touch is still very largely used among the rustics in that part of France. The "toucher," like the poet, *nascitur non fit*. He is the seventh in an uninterrupted series of sons, and bears the seal of his mission in a congenital mark in the shape of a star, a cross, a flower, or what-not. His touch is believed to cure thrush, skin diseases, tumours, and rheumatism, as well as scrofula. The touching is accompanied with prayers and incantations, which the patients believe to be the active principle in the treatment. Among the touchers there are specialists who treat only one kind of disease, as boils, warts, synovitis, etc. Dr. Tiffaud gives some curious examples of the popular remedies in favour with the folk of Bas-Poitou, many of them being survivals of prescientific therapeutics of which rational medicine has purged itself. A considerable proportion of these belong to the domain of organotherapy, bones, urine, worms, etc., figuring in the materia medica. The Poitou peasants make children afflicted with worms eat the first parasite that comes away; this is believed to be an infallible means of killing the others. When a child has a sore throat, a cloth bag filled with earthworms is placed round its neck.

A *conversazione* will be given by the medical staff and lecturers of the Dental Hospital of London on Wednesday, July 19th, at 8 P.M., at the Royal Institute Galleries, Piccadilly, when the prizes to the successful students will be distributed by Sir Richard Douglas Powell, Bart.

A French Neurological Society.—A Neurological Society was formed in Paris on June 8th. Professor Joffroy is President; Professor Raymond, Vice-President; M. Pierre Marie, general secretary; M. Henry Meige, secretary of sittings; and M. Souques treasurer. The Society will issue the *Revue Neurologique*, which is to be its official organ, and which will appear on the 15th of each month. By a by-law of the Society no communication must take more than a quarter of an hour in delivery, or occupy more than one page in print.

UNIVERSITIES AND COLLEGES.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Centenary and the Representation of Members.

A meeting of Fellows and Members of the Royal College of Surgeons of England was held on July 5th at the Royal College of Surgeons, Lincoln's Inn, Sir William Mac Cormac (President) in the chair.

The President, in placing before the meeting the draft petition to the Crown for power to confer diplomas of honorary Fellowship, and the draft charter embodying the powers asked for, said that the number of proposed honorary Fellows would not at any time exceed fifty. The object of the petition and charter was to enable the Council to confer the honorary Fellowship on the occasion of the centenary next year. The Council was unanimous that it would be desirable to avoid anything which might assume a contentious character, or which might be calculated to excite opposition, therefore they only ask on this occasion for this power. Contentious questions would cause delay, and the time within which these powers were wanted would expire. They knew by experience that the College could not obtain a charter if a considerable section of the Members offered a genuine opposition, and the question of the representation of Members on the Council of the College admitted of serious contention. The Fellows had decided that they did not approve of the admission of Members to the Council, and the opinion of the Fellows would have to be sought again, so that it was not possible to obtain a charter if it contained serious contentious matter.

Mr. Joseph Smith then proposed the following resolution:

That this meeting of Fellows and Members summoned by the Council to consider the terms of a proposed new charter is of opinion that the powers asked for are inadequate, and that no charter should be granted which does not give to the Members some representation on the Council.

Mr. Smith, in the course of his remarks, said that the Members of the College had no objection to the granting of honorary Fellowships to distinguished people. He compared the condition of the Members who had been for over fifteen years denied representation on the Council to the Uitlanders in the Transvaal with Sir William Mac Cormac as Mr. Kruger and the Council as the Volksraad, though there was the important difference that the Members had no Mr. Chamberlain to exert pressure on their behalf.

Dr. Morton, in seconding the resolution, said that the Members could not be silent without its being thought that they were not in earnest.

Sir Robert Craven questioned if the Members of the College cared very much for the management of that institution, but they considered that the Council did not understand the wants of the general practitioner. He would be in some difficulty in voting after what the President had said in such a pathetic and almost imploring manner. Would it not be wise for the Members to wait a little longer and not ruin the centenary?

Mr. George Brown said that the matter had not been sprung on the College, and contended that the President's remarks contained no argument against the claim of the Members.

Dr. Snell urged that the more worthy way to celebrate the centenary would be by terminating the warfare in the College.

Surgeon-Major Ince said it would be a sad thing if there was any split in the College over the celebration of the centenary, which would be attended by the greatest men in Europe and every part of the world.

Mr. Pickering Pick said that all the Fellows of the College all over the world would have to be consulted if the Council were to attempt to carry out the resolution. There was no time to do this.

Dr. Morton pointed out that the recipients of the proposed honorary Fellowship would value the honour much more if it came from a united college.

Dr. Barker said it was inconceivable that the touting for patients by the medical aid societies would be tolerated if general practitioners were properly represented on the Council.

Mr. Horace Manders said that the Fellows had great sympathy with the Members of the College. He proposed that the Members should elect twenty-five Fellows, who would then have a right to vote, and that two of these Fellows should have seats on the Council.

Mr. Joseph Smith's resolution was carried by 40 votes against 8.

Mr. W. G. Dickinson moved the following resolution:

That this meeting requests the Council to postpone a final decision as to the terms of the new charter until a memorial which is in course of signature has been received and considered.

Dr. Danford Thomas, in seconding the resolution, said that there was no intimation that if the Members did not take advantage of this opportunity their case would be considered.

Dr. W. H. Day asked whether if Members accepted the President's advice and allowed everything to go on harmoniously, it would subsequently be urged by the Council that the Members had acquiesced in the charter.

The President said he had only stated the facts, and did not think that, however Members might choose to act in this matter, their case would be prejudiced.

Dr. Houghton asked how many of the Council knew anything of the medical aid societies and the sweating system applied to general practitioners.

Sir Thomas Smith said that the Council on the matter of enlarging the franchise had consulted the Fellows on two occasions with negative results. The Council were helping the Members to obtain representation on the Council by thus consulting the Fellows.

Mr. George Brown urged that when consulting the Fellows the Council did not put the case fairly.

Mr. Dickinson's motion was put to the meeting and carried by 38 votes.

The proceedings terminated by the President stating that it would be his duty to report what had passed to the next meeting of the Council.

Council Election.

The ballot for the election of two members of the Council of the Royal College of Surgeons of England took place on Thursday, July 6th, with the following result:

	Votes.	Plumpers.
Mr. Herbert W. Page	286	85
Mr. Thomas Richard Jessop	233	6
Mr. J. Ward Cousins	226	17
Mr. Jordan Lloyd	126	67

Altogether 496 votes were recorded, 477 Fellows voting by papers, whilst 16 only voted in person; 2 votes were received too late, and but 1 paper was found to be invalid. This is the eleventh election held under the new regulations. The President declared Mr. Page duly elected, and Mr. Jessop duly re-elected.

Council Meeting.

An Extraordinary Council was held on June 29th, 1899; Sir William MacCormac, Bart., K.C.V.O., President, in the chair. The minutes of the preceding meeting were read and confirmed.

Report of the Laboratories Committee.—The report on the work on diphtheria for the Metropolitan Asylums Board stated that since March 10th, 1899, 1,100 doses of antitoxin, each containing 4,000 units, and 4,425 doses, each containing 4,000 units, for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, had been supplied, and all the demands fully met. During this period 19,900,000 units had been supplied. During the same period 5 doses of 4,000 units each had been supplied to medical officers of health according to instructions received from the Metropolitan Asylums Board. Under the grant from the Goldsmiths' Company 459 doses of antitoxin, containing 1,134,000 units, have been supplied to the general and children's hospitals in or near London. The report concluded with a list of those engaged in research work in the laboratories.

Giambattista Morgagni.—Two medals of Morgagni were accepted by the Council from Mr. S. G. Shattock, to whom a certain number had been given for distribution by the Italian Committee which has been formed to present a marble bust of Morgagni to the Medical School of St. Thomas's Hospital.

University of London.—A report was read, dated June 15th, from the Committee of Delegates upon the draft statute No. 1, issued by the London University Commission. This report (which is at present private) was approved, adopted, and entered on the minutes.

Regulations in regard to Registration.—A letter of June 19th from the Registrar of the General Medical Council was read calling attention to a change in the regulations in regard to registration, which is to come into operation on and after January 1st, 1900. The regulations are:

"No medical student shall be registered until he has passed a preliminary examination, as required by the General Medical Council, and has produced evidence that he has commenced medical study at a university, school of medicine, or scientific institution recognised by one of the licensing bodies, and approved by the Council."

Medical Acts.—A letter of June 16th from Sir William Turner, President of the General Medical Council, forwarding a copy of two amended clauses for the purpose of altering the Medical Acts so as to give additional disciplinary powers and asking for an expression of opinion on the clauses, was referred to the Discipline Committee.

UNIVERSITY OF CAMBRIDGE.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the Examiners :—

Part I.—R. G. Abercrombie, B.A., Cai. ; W. L. Ascherson, Non-Coll. ; F. A. Bainbridge, B.A., Trin. ; H. P. Bradley, B.A., Cai.; W. P. S. Branson, B.A., Trin.; W. E. Burnand, Jes. ; J. P. Candler, B.A., Corp. Chr. ; A. E. Carver, M.A., Cla. ; H. Edmondson, B.A., Cla. ; H. St.C. Elliott, Trin. ; F. H. Ellis, B.A., Cai ; F. C. Eve, B.A., Emm. ; L. S. Gaskell, M.A., Christ's ; T. Gillespie, B.A., Joh. ; D. G. Hall, B.A., Emm. ; E. W. Hedley, M.A., King's ; A. Killick, B.A., Down. ; J. E. Linnell, B.A., H. Selw. ; T. Manners-Smith, M.A., Down. ; H. N. Matthews, B.A., Joh.; W. H. Maxwell, B.A., Trin. ; J. A. Nixon, B.A., Cai. ; S. V. Pearson, B.A., Emm.; A. C. Pearson, B.A., Sid. Suss. ; J. H. Philbrick, B.A., Trin.; J. G. Taylor, B.A., King's; B. R. B. Truman, B.A., Trin. H. ; R. A. Walker, B.A., Cla.; R. F. C. Ward, B.A., Joh.; D. P. Watson, B.A., Trin. ; L. Wilkin, M.A., Pemb. ; W. M. Willoughby, B.A., Cai.

Part II.—H. F. Bassano, M.A., Trin. ; G. Browse, M.A., Cla. ; H. N. Clarke, B.A., Trin.; S. E. Dore, B.A., Joh.; F. H. Ellis, B.A., Cai. ; J. H. Fryer, B.A., Christ's; H. A. Gaitskell, M.A., Cla. ; J. R. Garrood, B.A., Joh. ; K. R. Hay, B.A., Cai. ; J. E. Helm, B.A., Magd. ; R. J. Horton-Smith, M.A., Joh. ; E. R. Hunt, B.A., Trin. ; J. K. Kemp, B.A., Cla. ; E. K. Le Fleming, B.A., Cla. ; T. A. Mayo, B.A., Cla. ; H. F. Parker, B.A., Emm. ; S. B. Reid, M.A., Joh. ; F. A. Rose, B.A., Joh. ; C. D. Somers, M.A., Pemb.; F. G. Stacey, B.A., Joh. ; F. W. Sumner, B.A., Joh. ; J. H. Tallent, B.A., Joh.

UNIVERSITY OF LONDON.

MEETING OF CONVOCATION.

AN extraordinary meeting of Convocation was held in the University Building on Tuesday, June 27th, to consider the Draft Statute No. 1, and the Draft Regulations prepared by the London University Commission. The Chairman took the chair on the completion of the quorum.

Dr. T. B. Napier, LL.D. laid upon the table the minutes of the Special Committee reappointed on January 17th, 1898, to prepare a memorandum for presentation to the Statutory Commission.

Dr. J. Rose Bradford, M.D., presented the report of the Standing Committee on the Draft Statute No. 1, and the Draft Regulations prepared by the London University Commission, and proposed that this report be received.

Dr. H. M. Murray seconded the proposal, which was carried.

Dr. Bradford thereupon moved : "That the Standing Committee be empowered to make representations to the London University Commission on the basis of the report."

This proposition was seconded by R. A. Lehfeldt, D.Sc.

It was moved as an amendment by T. B. Napier, LL.D., and seconded by Sir W. T. Thiselton Dyer, B.Sc. : "That in view of the fact that the Special Committee appointed on May 12th, 1896, and reappointed on January 17th, 1898, has been entrusted up to the present time with the duty of representing Convocation before the London University Commission, it is expedient, and it is hereby resolved that that Committee be continued with full powers from time to time on behalf of Convocation to make representations to, and to confer with the Commissioners, the Senate, and any committee thereof, and any other bodies or persons as they may think fit."

After discussion the amendment was carried, on a show of hands, by 36 against 28.

It was moved by T. B. Napier, LL.D., and seconded by J. Piper, LL.B. : "That it be an instruction to the Committee respectfully to represent to the Royal Commission the advisability of postponing the final settlement of the Statute now before Convocation until the members of Convocation shall have had the opportunity of perusing the proposed statute."

The motion was lost.

It having been announced that there were two vacancies on the Special Committee, caused by the resignation of the Chairman of Convocation and Mr. Justice Cozens-Hardy, Dr. Mears and Dr. Bradford were added to the Special Committee.

The House then adjourned.

[The result of the amendment proposed by Dr. T. B. Napier, seconded by Sir W. T. Thiselton Dyer, and carried, is that the Special Committee of Convocation, of which Dr. Napier is Chairman, is charged with the duty of representing Convocation before the London University Commission instead of its being left to the Standing Committee of Convocation to represent Convocation. We understand that the Special Committee has already met, and agreed upon representations which it considers desirable to make.]

UNIVERSITY OF EDINBURGH.

FINAL DEGREES.

DEGREES OF M.B. AND C.M., OLD REGULATIONS.—The following candidates have passed this examination :

J. Brown, D. B. B. Hughes, Elsie M. Inglis, D. J. M'Adam, Marion B. Marshall, I. J. van der Marwe, A. L. Owen, Esther M. Stuart, Emily C. Thomson, Addie White.

DEGREES OF M.B. AND CH.B., NEW REGULATIONS.—The following candidates have passed this examination :

Ivie Aird, Tina M'Culloch Alexander (with distinction), W. J. Baird, C. A. J. A. Balck, W. J. Barclay, B.A. (with distinction), F. A. F. Barnardo, M.A., E. F. Bashford, J. G. Bell, P. J. Bodington, A. H. W. Boreham, G. A. Brogden, W. J. D. Bromley, E. A. Brown, C. H. J. Brown, R. Bruce, J. M. Buist, D. A. Callender, H. G. Carlisle, J. C. Carr, M. Carthew, Lilian Mary Chesney, C. S. Clark, H. E. Coghlan, W. J. Collinson, J. D. Comrie, M.A., B.Sc. (with distinction), B. J. Courtney, R. M. Dalziel, W. Darling, M.A., S. M. Dawkins, Y. A. Djedjizian, B.A., D. Ewart, W. Ewart, W. R. Eyton-Williams (with distinction), R. R. Fasson, H. Faulkner, D. Ferrier, E. G. Ford, A. R. Fordyce, J. J. Galbraith, A. B. George, M.A., H. A. H. Gilmer, B. K. Goldsmith, J. H. Gordon, T. B. Gornall, F. J. Gray, St L. H. Gribben, A. H. Griffeth, G. Haddow, P. W. Hampton, F. J. Hathaway, G. G. Hay, A. C. Heath, P. H. Henderson, W. E. Herbert, I. K. Hermon, H. T. Holland (with distinction), A. M. Holmes, J. Husband, Alice M. Hutchinson, J. G. Jack (with distinction), W. T. James, R. F. Jardin, J. Jeffrey, W. J. Jones, J. W. Kerr, D. B. King, M.A., G. D. Laing, L. S. Lessing, T. H. Livingstone, E. A. Loch, J. L. Louis, J. Luckhoff, G. Lyon (with distinction), Elizabeth G. Macdonald (with distinction), J. M. Macdonald, M.A., P. H. Macdonald, P. N. M. Macdonald, W. J. M'Farlan, J. Macgregor, Robina Macgregor, W. M. Mackay, M. MacKelvie, H. M. Mackenzie, T. C. Mackenzie, P. A. Maclagan, L. C. Maclagan-Wedderburn, T. D. MacLaren, G. C. M'Leavy, L. W. Macpherson, A. G. Martin, E. W. Martin, J. F. Martin, Ruth Massey, J. Masson, M.A., B.Sc. (with distinction), J. W. Mathewson, B.Sc., E. T. Melhuish, E. G. D. Menzies, F. N. Menzies, G. H. Menzies, M.A., J. Miller, B.Sc. (with distinction), J. G. Mitchell, H. A. D. Moore, J. R. Munro, J. A. Murray, B.Sc., W. A. Murray, B.A., A. W. Nankervis, A. C. Neethling, T. P. Oates, J. Orr, T. S. A. Orr, W. Park, M.A., F. M. Parry, W. M. Paul, M.A., A. S. M. Peebles, E. J. Peill, A. Preston (with distinction), T. A. Price, R. N. Pringle, S. C. Pritchard, J. M. Reid, W. Reid, M.A., C. M. Robertson, T. Rogerson, R. M. Rowe, M.A. (with distinction), A. B. Shed, S. Simpson, B.Sc., A. B. Slater, V. E. Sorapure, S. Southall, H. B. Sproat, B. Stracey, W. J. Stuart, M.A (with distinction), W. W. Thom, G. N. W. Thomas, J. A. Thompson, W. G. Thompson, G. Thomson, R. G. Thomson, A. K. Traill, R. B. Turnbull, A. Tweedie, C. S. Vartan, N. D. Walker, C. Heron Watson, M.A., C. H. J. Watson (with distinction), A. Whittome, A. Whyte, A. S. Whytock, M.A., H. D. Wilson, A. H. Wood, and E. M. Young.

UNIVERSITY OF DUBLIN.

AT the later summer commencements in Trinity term, held on Thursday, June 29th, in the Theatre of Trinity College, the following degrees were conferred :

Baccalaurei in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—P. Armstrong, A. Bond, J. F. Dixon, A. C. Falkiner, H. B. Garratt, W. M. G. Guinness, E. B. Knox, E. E. Parkes, H. Pringle, F. C. Purser, T. F. Smith, T. H. D. Townsend, H. A. Williams.

Doctores in Medicinâ.—G. Cole-Baker, J. M. Day, T. D. Good, W. M. G. Guinness, C. Gray-Edwards, H. R. L. Joy, A. C. O'Sullivan (*stip. cond.*), E. L. Perry-Edwards, R. J. Rowlette.

Doctor in Medicinâ (in absentiâ).—H. N. A. Taylor.

At the same commencements honorary degrees were conferred on Earl Cadogan, Lord Macnaghten, Sir C. S. Scott, and Professors Tiele and Forsyth.

UNIVERSITY OF BRUSSELS.

AT the June examination the following British practitioners satisfied the examiners and received the degree of M.D., namely : S. F. O. Dickins, F. C. Fosbery, Maud Langley, N. Lavers, F. Lloyd, S. Melville, H. Rubra, and J. T. Simpson. There were seventeen candidates.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen have passed the Second Examination of the Board in the subjects indicated, namely :

In Anatomy and Physiology.—F. J. Stanfield, C. W. Sharpley, Yorkshire College, Leeds ; V. G. Maitland, Mason University College, Birmingham ; S. Riley, W. Braddock, T. R. Eames, S. Spencer, W. Stansfield, Owens College, Manchester ; V. N. Ouranofski, Anderson's and St. Mungo's Colleges, Glasgow, and University College, Liverpool ; R. H. Sankey, Oxford University ; C. Corfield, University College, Bristol ; F. C. Whitmore, Royal College of Surgeons, Ireland, Guy's Hospital, and University College, Bristol ; R. P. Kennedy, St. Mungo's College, Glasgow ; J. W. Llewellyn, University College of South Wales, Cardiff ; E. C. Williams, St. Bartholomew's Hospital ; C. H. Gask, Guy's Hospital ; H. E. A. Jackson, Melbourne University ; S. B. Gadgil, Grant Medical College, Bombay ; W. Parsons, University College, London ; W. Robertson, Otago University, Dunedin, and University College, London ; F. W. Jackson, A. C. Young, C. R. Keed, and C. V. Nicoll, St. Bartholomew's Hospital ; G. M. Levick, University College and St. Bartholomew's Hospital ; J. C. Lewis, St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology ; C. E. A. Huddart, London Hospital and Mr. Cooke's School of Anatomy and Physiology ; H. R. Cran, London Hospital ; G. W. G. Hughes, King's College, London ; W. A. G. Stevens, Guy's Hospital ; R. K. G. Graves, St. George's Hospital ; D. Bridges, Charing Cross Hospital.

In Physiology only.—W. Miles, St. Mary's Hospital, University College of South Wales, Cardiff, and Middlesex Hospital.

In Anatomy only.—F. J. Russell, London Hospital ; and J. Sharples, Cambridge University and St. Mary's Hospital.

Twenty-seven gentlemen were referred in both subjects, 1 in Anatomy only and 1 in Physiology only.

THE NEW NAVAL HOSPITAL AT CHATHAM.—THE purchase of the land for the new naval hospital on the Upberry Farm Estate at New Brompton has been completed, and the Admiralty took possession and handed over the site to the authorities at Chatham. The building operations will, therefore, it is believed, be commenced at once. According to the plans, the hospital, when erected, will form an imposing block of buildings of red brick with stone dressings. It is not known at present to what purpose the Admiralty will put the present naval hospital when the new one is completed; but it is not improbable that it may be converted into barracks for the Royal Marines.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

SUBSCRIPTIONS to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, JULY 8TH, 1899.

LONDON AND THE NEXT CENSUS.

IN view of the fact that the census presents, as it were, a photograph of the community at a given time, we heartily sympathise with the desire expressed in the report of the Local Government and Taxation Committee of the London County Council, summarised in our last issue (p. 40), for additional information for the metropolis beyond what has been heretofore furnished. It would doubtless be of great advantage not only to the work of the London County Council, but also to all social and vital statisticians, could additional information be obtained as to overcrowding, the mobility of the industrial and commercial classes, and the enormous disparity between the night and the day population in the greater part of the metropolitan area. Such information would be of great value in dealing with problems as to housing of the poor, and the necessity for additional workmen's trains, and so on; but it appears to be recognised in the report that there are serious objections to the addition to the census schedule of another column such as would be required if it were required that "place of occupation" should be given as well as "profession or occupation;" and it must, we fear, be admitted it is undesirable to weight the census schedule by demanding this additional information.

With regard to the further recommendation that the demand for the statement of the number of rooms and of their occupants should not be limited as in 1891 to tenements with less than five rooms there is room for difference of opinion. Probably there is, as stated in the report, some overcrowding in tenements containing more than four rooms; but it must be less acute and less severe than in smaller tenements. The information obtained under this head in 1891 revealed some striking contrasts in different towns and counties, but it is doubtful whether the figures in every instance represent exact facts. Thus, according to the returns under this head Halifax with a low general death-rate had 21.31 per cent. of overcrowded persons, while Preston with a comparatively high death-rate had only 4.13 per cent. of overcrowded persons. Similar instances could easily be multiplied. Efforts at the next census might perhaps more usefully be devoted to securing greater exactitude of returns under this head rather than to enlarging the scope of this column of the schedule.

Another very important question is raised by the report of the committee. What should constitute the statistical unit so far as area and population are concerned? We agree that the ecclesiastical district is useless for this purpose, and that the subregistration districts, although more uniform, are too large, for in many cases they comprise more than one parish. On the other hand there are serious objections to the Committee's conclusion that "taking all things into consideration we think that the most satisfactory method would be to have the population tabulated by streets," even though the necessity is recognised of not allowing this method of enumeration to cut across the boundaries of parishes and other areas. From a public health standpoint the proposed statistical unit is not the one required. It is but rarely that the medical officer of health requires to calculate the death-rate in a particular street. He frequently wishes to ascertain—and seldom can he do so without a laborious amateur census enumeration—the population of a small area embracing a front street and a number of small back side streets, often with courts and alleys leading out of them. The main necessity appears to be that the medical officer of health of each large town or metropolitan parish should have an influential voice in determining the boundaries of the enumeration areas. At the last census these commonly cut across the boundaries of wards or other divisions; sometimes they included a single long street; at others they were most arbitrarily arranged. It will be remembered that the determination of enumeration areas rests solely with the superintendent registrar of each parish. Could not the Registrar-General issue a general instruction to all superintendent registrars that they must consult the local medical officer of health as to the boundaries of each enumeration area, and, so far as practicable, carry out his recommendations?

This naturally leads to the further suggestion that the medical officer of health should be placed in a position to ascertain the population of each enumeration area in the two or three weeks elapsing between the date of the census and the despatch of the returns to the Census Office in London. There is no insuperable difficulty on this point, as it has already been conceded in certain towns. What we ask is that in future such information should be given as a matter of course, and not of exceptional grace.

With the recommendations of the Committee of the London County Council as to the necessity for taking a census every five years all those who are engaged in public health administration and all who have paid attention to such subjects will be in hearty accord. We note with pleasure that the Committee agree with the substance of our recent remarks, that the intermediate London census authorised by the Equalisation Act of 1894 was defective in not including information as to the age of the persons enumerated.

THE SERUM TREATMENT OF LEPROSY.

THE treatment of leprosy by means of serum obtained from the horse, after injecting serum from the blood of a leper under the animal's skin, which Carrasquilla of Bogotà claimed to have given such brilliant results in his hands, has proved disappointing. Subsequent independent investigation has shown that in those cases in which improvement had taken place it was fleeting in character. It

occurred to Dehio, of Dorpat, who had given the Carrasquilla method a trial, but with negative results as far as any beneficial effect on the disease was concerned, to inquire whether the reaction observed in lepers depended on a specific antitoxin or on substances of a non-specific nature in the serum. Basing his views on the effects of Koch's tuberculin and of attacks of erysipeleas on leprous nodules, and also on the experiments of Matthes with deutero-albumoses prepared from commercial peptonum siccum e carne, Dehio came to the conclusion that proteins, albumoses, and other albumin derivatives were really responsible for the febrile symptoms. At his instigation the matter was investigated by two of his pupils, Akel and Soonetz, and the latter has now published their joint results.[1]

The first experiments were made with a watery extract of pure culture of bacillus pyocyaneus. Doses of 0.01 centigram and 0.015 of the active protein respectively gave rise to a febrile reaction in the case of phthisical and leprous patients only. Further experiments were made with the protein obtained from bacillus prodigiosus, and gave more decided results, the reaction being marked in the lepers and those suffering from tuberculosis, as compared with the absence of symptoms in non-leprous and non-tuberculous cases. With deutero-albumose prepared from Witte's peptonum siccum, tuberculous patients reacted to smaller doses than the lepers, and in the case of the non-tuberculous and non-leprous the effects of the injections were but slight. Soonetz arrives at the general conclusion that in lepers and the phthisical the foregoing substances act in a similar way to Koch's tuberculin.

These experiments can only be considered as preliminary, for they prove nothing as far as the leprous infiltrations and nodules are concerned; they show, however, that bacillary proteins and deutero-albumoses may possibly, when employed in sufficient quantities over longer periods, lead to involution of leprous lesions. In connection with Soonetz's paper, it may be mentioned that Aucké in a recent contribution to the subject of leprosy in New Caledonia,[2] gives a plate showing the improvement brought about by Carrasquilla's method in the case of a French convict. Further reports as to the value, or otherwise, of the serum treatment may be expected from this quarter. Meanwhile, Carrasquilla has modified his method. He claims to have succeeded in cultivating the bacillus and now uses serum of horses previously injected with the filtrate of his cultures. He states that this serum produces a greater reaction and more beneficial effects on the leprous infiltrations. Gallay in Pondicherry reports some encouraging results with ass's serum, obtained after inserting portions of leprous material under the animal's skin. Commenting on Gallay's paper, Kermogant pointed out at the time[3] that injection of normal serum led to the temporary involution of malignant growths.

THE MEDICAL ASPECTS OF CRIME.

AT the annual meeting of the American Medical Association Dr. Daniel R. Brower, of Chicago, who delivered the address on State Medicine, chose for his subject the medical aspects of crime. Premising that the care of the criminal was the one great question which baffled society in the United States, where he shows crime to be largely on the increase, he pointed out that failure to deal successfully with it was mainly due to the fact that criminology had not been sufficiently considered from a medical and scientific point of view. Just as a great transformation in the care of the insane had been brought about by the medical profession by means of patient and scientific treatment, so a like result was possible from the study of criminality and its causes. The statistics showing the growth of crime in the United States, which he gave, are appalling, and certainly appear to call for some sweeping reforms in American methods of dealing with crime.

There as here the habitual criminal is the despair of society. Anthropologists have proved him to be mentally and physically abnormal—in physiognomy, in various stigmata of degeneration, in anomalies of the muscular, sensory, respiratory, and circulatory systems; also in moral insensibility, lack of forethought, low grade of intelligence, vanity and egoism, and emotional instability. The reclamation or cure of such an individual has hitherto met with but scanty success under any system of treatment. Indeed, the solution of the crime problem would appear to be wrapped up in his extermination. Dr. Brower holds that the two great etiologic factors in crime are criminal parentage and environment, though he adds later on in his address that alcoholism is the direct or indirect cause of probably 75 per cent. of all crime committed. As subsidiary factors he enumerates the increase of urban populations, and the unsatisfactory legal code which is largely Roman, and did well enough in ancient Rome because, as he says, the death penalty was common, and in this way a good deal of criminal material was cut off. Further, the laws are directed rather against the crime, which is an accident, than against the criminal, who may be the product of degenerate antecedents. Gaols, he says, are schools of crime.

After enumerating some interesting signs of physical degeneracy amongst prisoners, such as flatfoot, enlarged thyroid, colour blindness, etc., he goes on to the subject of treatment. First, the propagation of crime and criminals should be stopped. With this end in view he advocates Dr. Ochsner's operation of resection of the vas deferens, as attended with little risk to life and as preferable to the more dangerous operation of castration. Both of these are undoubtedly heroic remedies, which would, we fear, in this country give rise to a new kind of "conscientious objector" who would be difficult to deal with.

Among the other remedies suggested by Dr. Brower were that the children of degenerates should be taken in charge by the State; that inebriates should be kept in prolonged confinement under treatment; that the drink traffic should be diminished; that the flow of the people to cities should be checked; that all sentences should be indeterminate pending reformation or cure; and, lastly, that there should be penitentiaries for the lifelong incarceration of those who are incapable of reformation.

Dr. Brower's address is a valuable and interesting contribution to the study of criminology; but considerable changes must take place in English public opinion before

[1] *St. Petersburger med. Woch.*, No. 16. 1899, p. 141.
[2] *Arch. de Méd. Nav. et Coloniale*, March, 1899.
[3] *Arch. de Méd. Nav.*, etc., October, 1896.

some of his more heroic proposals, such as lifelong imprisonment and the indeterminate sentence, are likely to be considered in this country.

APPOINTMENTS IN THE ROYAL NAVY MEDICAL SERVICE.

WE understand that a great deal of dissatisfaction, which will not be allayed by Mr. Goschen's answer to Captain Norton, has been caused in the Royal Navy Medical Service by the appointment of a Deputy Inspector-General to charge of Haslar Hospital. This appointment is one of the not too numerous prizes of the service, and has always hitherto been held by an Inspector-General. It is stated that in making this appointment the Board of Admiralty has acted upon its own initiative, and has either not asked the advice of the Director-General, or has overruled his recommendation. However this may be, it is most unfortunate that anything should be done which would appear to cast a slur upon the senior officers of the Royal Navy Medical Service. That service has been for a good many years in a state of contentment or relative contentment. It has always commanded more than an adequate supply of suitable candidates, and it is feared that if an impression gets abroad that the Board of Admiralty are disposed to play fast and loose with regulations and Orders in Council, this will produce a feeling of unrest and insecurity not only in the upper ranks, but throughout the whole of the service. Should the medical service become unpopular the interests of the navy as a whole must inevitably suffer.

THE UNIVERSITY OF LONDON.

AT an adjourned meeting of the Senate held last Wednesday, the question of accepting the offer of the Government to house the University of London in the Imperial Institute buildings was again under discussion. It is understood that further concessions were offered by the Treasury, such as the use of the principal entrance, the large hall, and more office accommodation. In the end the offer of the Government was accepted by a large majority, with a rider to the effect that more room would probably be required to meet the additional needs of the newly-constituted Teaching University that is to be.

THE TEETH OF THE SCHOOLBOY.

THE current number of the *Nineteenth Century* contains an article in which Mr. E. Collins, editor of the *Dentist*, deals with this important question. Mr. Collins points out the wide prevalence of early decay of the teeth, draws attention to the consequences, and earnestly advocates preventive measures. So much has been spoken and written concerning the early decay of the teeth, that there can scarcely be a parent or teacher in the land who is not aware of its prevalence. Mr. Collins refers to 766 children who had between them 3,357 unsound teeth. Mr. Sydney Spokes, in his report to the School Board of London, says, "In the course of five years I managed to get the following results: 5,812 inspections of mouths with charts; 2,261 extractions of temporary teeth or their remains; 80 stoppings of temporary teeth; 519 extractions of permanent teeth; 1,405 stoppings of permanent teeth; 269 cases of scaling, and 46 regulation cases." Many further examples of the deplorable condition of the teeth of the young might be mentioned to give emphasis to a state of things which can only be looked upon as a national calamity. Mr. Collins ascribes to decaying teeth a number of ailments, such as dyspepsia, headache, sleeplessness, irritability, and deformities of the jaws, and refers to the state of the teeth as a possible factor in the mental state of the child. He does well in endeavouring to impress upon schoolmasters and schoolmistresses the absolute necessity of having the teeth of children under their care regularly and systematically inspected by skilled dentists. It is of primary importance to the national well-being that the dentists who are appointed to schools should be allowed a free hand to deal with the matter, and that they should be thorough in the work of inspection. Mr. Collins condemns in strong language unwarrantable teeth extraction. He states "that teeth-drawing is not dentistry, and that the supply of artificial dentures should no more be regarded as the chief aim of dentistry than the supplying of wooden legs is looked upon as the ideal of surgery." Whilst agreeing with the numerous dentists who have written concerning the decay and care of the teeth, we are of opinion that it is not alone after the eruption of the teeth that care should be exercised. The future of the teeth as well as the future of the body depends for the most part on the care of the child during the early years of its existence, and it is more important to consider the subject of children's teeth during their development in the gums and before they have erupted than even to check decay when they appear or to scoop out micro-organisms from their sockets. This aspect of the hygiene of the teeth has yet to be dealt with.

THE ASSOCIATION OF BRITISH POSTAL MEDICAL OFFICERS.

THE Association of British Postal Medical Officers was formed seven years ago, with the view of bringing together those who are engaged in common work for the State, but are widely scattered. Every postal medical officer is eligible for membership, and the Association affords opportunities for consulting upon departmental matters of common interest. Postal medical officers are held responsible not only for the health of the staff in each district and the effect upon that staff of the duties allotted to the various officers composing it, but also for the sanitary and hygienic conditions under which they work. One object of the Association is, therefore, to promote uniformity in the performance of all these duties by affording an opportunity of comparing methods and maintaining a high standard of efficiency. At the same time the Association seeks to guard, and if necessary defend, the rights of postal medical officers as a body, and to secure the removal of any obstacles or annoyances which may be produced by departmental regulations. One of the matters to which attention is at present being given is the conditions under which candidates for the service are permitted to appeal against the decision of the local postal medical officer. The Association held its annual dinner at the Whitehall Rooms, Hôtel Métropole, recently, under the presidency of Dr. William Dougan, of Glasgow. Among those present were Sir Walter Foster, M.P., Sir James Crichton Browne, Sir George Kekewich, K.C.B., Sir Hugh Gilzean Reid, Sir Thomas Roe, Professor Sims Woodhead, Dr. Glover, the Postmasters of Nottingham and Glasgow, and Dr. R. Ritchie Giddings, of Nottingham, the Honorary General Secretary.

"MR. ROBERT BUCHANAN AT THE BACK OF BEYOND."

IT may be remembered that some little time ago after supping full of the horrors of antivivisectional literature Mr. Robert Buchanan had a nightmare. With this he then, like a naughty boy, tried to frighten the audience—meet, if few—who sit at the feet of the editor of the *Zoöphilist*. For this we felt it our duty to administer to him a very mild castigation. Mr. Buchanan thereupon went and wept on the sympathetic bosom of the *Star*. That paper "dwells apart," and therefore we were undisturbed by the voice of his lamentation till the echo of it reached us from the current number of the *Zoöphilist*. Though Mr. Buchanan's epistolary style can hardly be commended as an example of sweetness and light, his letter is one of the funniest things we have read for some time. In his vision of the Back of Beyond he

aid it down as a principle that human beings have no right "under any circumstances whatever" to base their happiness or security on pain wilfully inflicted on animals, and we ventured to point out that if his practice was to be consistent with his professed principle, he must look upon the life of the harmless but unnecessary mouse as sacred, treat fleas and such small deer with Buddhist tenderness, and allow a hungry carnivore to lunch off him rather than do anything to hurt its feelings. It turns out, of course, that Mr. Buchanan did not mean what he said, and he naturally is not pleased to have his absurdity exposed. We should recommend him in future to follow the excellent advice of an eminent statesman, and when he means nothing to say nothing. Mr. Buchanan is indignant that we should have accused him of a want of logic. Logic is not by any means the only thing that he wants. But while logic can be learnt, temper and taste cannot be acquired; any attempt to teach them would therefore be labour lost. We cannot honestly congratulate our antivivisectionist friends on their new ally, but we must acknowledge that he has shown good judgment in joining them. Hamlet, according to the gravedigger, because he was mad was sent into England, where it would not be seen in him since the men there were as mad as he. For the same sound reason presumably Mr. Buchanan, because he wants logic, goes among the antivivisectionists where the want of it will not be noticed. But if he wants logic, he is full of the finest of fine sentiments. He tells us he is not even as "your vivisector, your cheap scientist." He refuses "to worship in the blood-stained temples where the butchers and savages of this latter-day Rome set up their Holy of Holies." He reserves his reverence for gods whom he can respect, etc. Mr. Buchanan is mistaken in thinking that we are shocked at what he is pleased to call his "heterodoxy." We feel not the slightest interest in his "gods," more particularly as they appear to be of his own making. He is free, as far as we are concerned, to think what he likes on theology or any other subject. But when he speaks about things of which he knows nothing, and brings wanton charges of "cold-blooded cruelty" against men who sacrifice health and wealth and even ambition in their efforts to better the lot of their fellowmen he exceeds the licence of foolish speech allowed even to an excitable poetaster.

THE PLAGUE IN EGYPT.

THE interesting series of letters which we have published from the pen of an experienced correspondent in Egypt appear to show that considerable success has attended the steps taken by the Sanitary Department, which has fortunately been allowed a free hand. The chief measures adopted have been isolation of the sick in special hospitals, segregation of persons exposed to infection in separate camps, and disinfection of the emptied houses. The sanitary authorities are employing 562 agents and 15 extra doctors. They have disinfected 90 houses and limewashed nearly 6,000 poor dwellings. They inspect closely the native hotels and cafés and the Government and private latrines, and reward any one who gives information of a case of plague. They also visit the workpeople and employees absent from work in order to ascertain the cause of such absence. Persons segregated for having been in contact with the sick are lodged and fed and paid 3 piastres daily. One evidence of the success of these methods is afforded by the fact that no second case of plague occurred in any of the homes that were dealt with by the sanitary brigade, nor, curiously enough, has any case occurred amongst the people in the segregation camp. The plague returns for Alexandria since the commencement of the outbreak on May 4th to July 5th show 57 cases, with 21 deaths and 21 recoveries. The disease is still confined to Alexandria, and has attacked only the lower classes of both the natives and Europeans. The proportion of Europeans attacked in Alexandria is a matter of importance, for in no other part of the East where plague has prevailed lately has so many Europeans been attacked. In Alexandria, however, the Greeks live as and with the native fellaheen or Arabs. Many Greek families have become indigenous in Egypt, so that in habits and customs they are practically natives of Egypt. The natives have, as yet, given no sign of resistance to the preventive measures adopted, and it is to be hoped that the authorities will be left to deal with the outbreak without incurring fanatical opposition or the official interference of the Mixed Court of Appeal. The chief danger at present lies in the concealment of cases. This contingency is provided against by the examination of all dead before burial, so that deaths from plague cannot be hidden. Already 4 cases of persons dead from the disease have been found amongst those declared to have succumbed to other diseases. Annoyance has been expressed on account of what is called the "untrue and sensational" reports published in European papers, but while sympathy will be felt with residents in Egypt in regard to the matter, they must not be surprised if Europe generally is keenly anxious as to the development of plague in that country. It is hardly necessary to point out that, with the shores of the Suez Canal infected, the disease may at any moment become a widespread epidemic, and although at present it is confined to the dirtiest classes and places in Alexandria alone, it is too much to ask Europe to look on unconcernedly. The most reassuring fact is that the sanitary authorities in Egypt are acting energetically, and that every possible facility is being granted them whereby the disease may be held in check.

A LINGERING SUPERSTITION.

THE following paragraph has appeared in a Sydney newspaper:

> The enthusiastic females who rush into print and howl furiously over an allegedly-unfounded objection to lady surgeons on the part of a section of the Melbourne Women's Hospital Committee, appear to possess a profound ignorance of their subject. The objection is a tacit one, of a kind which no woman will put into words, but experience shows that it is—or should be—fatal. In all the chief European hospitals, and in several Australian institutions, stringent rules are in force to obviate the risk of septic trouble in surgical patients, arising from physiological causes in the female staff of nurses. Lister, during his earlier experiments in antiseptics, was for long at a loss to explain certain septic infections of wounds which appeared at regular intervals among his patients. By experiment and check experiment he solved the problem, and a simple arrangement of relieving nurses, at certain intervals and for certain periods, stopped the mischief. In a midwifery hospital the risk, for obvious reasons, is greater than in an ordinary surgical ward, and the records of such institutions show the danger. In an Australian instance the regularity of the outbreaks was too convincing to be disregarded, and the lady surgeon was hastily got rid of. The subject is naturally a delicate one for consideration by a mixed committee, but there is no doubt that, for the safety of surgical or obstetric cases, a woman-surgeon should be made to conform to the same rules as the nursing staff. The risk of infection in her case is far greater, and until this is done periodic septic outbreaks will occur. Medical men are strictly observant of this rule in their private practice. Therefore, the objection of the committee is a very valid one, and, by the persistent howling of partisans of the lady medicos, a few more helpless mothers are about to be made to run the risk of puerperal fever as sacrifice to the fetish of the Advanced Woman.

The allusion appears to be to the ancient superstition that women exert some malign influence while they are menstruating. The statements relating to matters of fact give information quite new to us. We know of no hospital in which "stringent rules are in force" relating to "physiological causes in the female staff of nurses." In no hospital that we know of is any inquiry made as to the menstruation of the nurses, or any alteration in their daily or weekly routine made on account of that function. Nor know we of any facts showing that the recovery of patients after operation is in the least modified by the condition as to menstruation of the nurses who attend on them. That "a woman-surgeon should be made to conform to the same

rules as the nursing staff" as to cleanliness and antisepsis goes without saying; but the higher education of the woman-surgeon makes it unnecessary for a hospital Committee to lay down rules for her guidance. We cannot conceive in what misunderstanding the reference to Lord Lister's work has arisen; but we can state on the best authority that Lord Lister has never made any experiments bearing on the question referred to in the paragraph we have quoted.

THE EXTIRPATION OF THE MOSQUITO.

AN interesting little experiment which was made in Mentone last autumn with the view of diminishing, if not of exterminating, the mosquito—one of the pests of some parts of the Riviera, especially in October and November—is related by Dr. Samways. In an article published in the BRITISH MEDICAL JOURNAL last September, an account was given of a method of using kerosene recommended by Mr. L. O. Howard, Entomologist to the United States Department of Agriculture, for this purpose. The plan depends upon the fact that kerosene, commonly called paraffin in this country, is fatal to at least some of the species which are called mosquitos. A very small quantity dropped on a pool quickly spreads itself over the surface, and, it is alleged, destroys the larvæ, while at the same time it kills any adult female which attempts to alight with the object of depositing her eggs. The efficacy of kerosene has been disputed, as it has been asserted that the immature mosquito is able to thrust the tip of its respiratory apparatus through the thin film of paraffin. The species of mosquito upon which the experiment was made does not appear to have been identified, but it was probably a culex. The larva of culex floats head downwards, while that of anopheles, which is believed to be the bearer of the malarial parasite, floats horizontally, so that there would be, *a priori*, some ground for expecting that the latter would be more easily killed than the former. It was estimated that there were as many as 400 or 500 larvæ in a bucket of water from the tank in Sir Samuel Hayes's villa, where the experiment was made. All were found to be killed within an hour or two of the addition of five drops of kerosene, and the many thousands in the tank, which was of nearly 300 cubic feet capacity, were killed by a teaspoonful in a few hours. The experiment is so simple and inexpensive that there seems no reason why it should not be tried on a more extensive scale in other places.

ON THE VALUE OF CONTINUOUS STATISTICAL RECORDS.

WE have received a copy of *A Statistical Inquiry into the Causes of Death within the Burgh of Govan for thirty-five years, 1864-98*, by Dr. W. G. Barras. This gives a continuous record of the mortality returns of the burgh of Govan since the year 1864, when it was constituted a burgh, with a population of 9,000, to 1898, when its population was nearly 73,000. During that period the general death-rate steadily fell from 27.9 to 17.0, and the zymotic death-rate from 4.6 to 1.0. The elaborate statistical tables in this report give not only the annual number of deaths from each infectious disease and the more important of other diseases, but also the monthly incidence of these diseases. The result is a most valuable series of accurate vital statistics, to which epidemiologists will be able to refer with advantage and profit. The only other series which, so far as we know, compares favourably with it in completeness and length of continuity is one by Dr. Hayward, the Medical Officer of Health of Haydock, near St. Helens, who in a special supplement to his annual report for 1897 gave the number of deaths from the chief causes of death in Haydock from the year when registration first began (1838) to the year of his report. Such series as the above are of immense value to the epidemiologist, who in inquiring into the "true inwardness" of the causation of epidemics is not contented with facts for a short series of years, and is still less satisfied with statements of average death-rates for series of years. We sincerely hope that the examples set by Drs. Barras and Hayward will be followed by other medical officers of health, and that by this means the truth as to the local incidence of various diseases may be more fully elucidated. Such local tabular statements would fill up the hiatus in the Registrar-General's returns, and, so far as epidemic diseases are concerned, would prevent the obscuration of the truth (known as "smoothing out" of curves, if the graphic method of statement is adopted) which is sometimes associated with the statistics for enormous registration districts.

SMALL-POX IN THE UNITED STATES.

THE public health authorities in the States appear to be getting anxious about the increasing spread of small-pox there, and are issuing warnings as to the need not only for infant vaccination but for revaccination of adults. According to a report of the United States Marine Hospital Service, there had been 7,418 cases of small-pox in the States during the first five months of this year, of which only 355 are said to have been fatal. This gives such an extraordinarily small fatality that we cannot help thinking there must be a mistake in the numbers. In the State of Ohio more than a thousand cases were reported during 1898 and 400 since January last. When we are told that the authorities believe that the actual number of cases was largely in excess of the numbers reported, it will be seen that they are not without reason for anxiety. In Boston the disease is reported to have broken out in three different sections since the commencement of the year, and in only one case were the health officers able to trace the origin of the infection satisfactorily. At Fall River an outbreak is supposed to have originated in cotton waste, collected in some other city and shipped to that locality. Infant vaccination is required in some States, such as Massachusetts, but it is difficult to ascertain how far it is effectively enforced. There is good reason to think that in most of the States there is a large unprotected population among whom a serious epidemic may break out at any time.

MORE CONSUMPTION CURES.

SO many infallible cures for consumption have of late years been announced to a bacillus-ridden world that still the wonder grows that there should be any tuberculosis left for the National Association to do battle with. As to most of them one need only follow the advice of the poet, and look—at the advertisements—and pass on. But as one may entertain an angel unawares one may heedlessly throw away a pearl richer than the general tribe of infallible remedies. On the chance of finding something of the kind we think it our duty to read—vicariously—all the literature sent to us, however unpromising it may look. The exiled Duke found sermons in stones, a discovery which, however interesting, might not be considered a subject for gratitude by persons of less philosophic temper. But we have found, in a dingy leaflet forwarded from Calcutta, something for which the world is evidently expected to be grateful. This is an account of "the recent discovery by Professor H. Gibson O'Neill, of No. 11 West Thirty-Ninth Street, New York, of the applicability of electricity and ozone to an effectual treatment of consumption," a discovery, we are assured, which "cannot be too highly applauded as a godsend to the suffering humanity." This secret has hitherto been "beyond the focus of Medical Science," and its discovery is all the more important since "the tuberculous disease is universally dreaded as irresistibly destructive of the vitals of life." Professor O'Neill's treatment is based on the highly original idea "of battling with the germs of the disease as a sure means of effecting a

final overthrow of the malady itself." It is, of course, clear that "an annihilation of its germs would naturally pave the way to a total extinction of the disease in its entirety," and it is equally incontrovertible that "a treatment which commences with a raid on the germs is decidedly a move in the right direction." But here we are unpleasantly reminded of a certain historic "raid" which was not altogether a success, and we cannot shut our eyes to the possibility that the Professor's raid on the germs may be equally inglorious. His plan of campaign is not described in detail. We gather, however, that "it requires a room to be specially reserved for the patient with a powerful apparatus to 'turn on high-toned electricity' to charge the air within with ozone, and an expert always at hand to manipulate the ponderous machinery," an arrangement which we can readily believe "involves an enormous expenditure of money." But let us not give way to premature despair if we cannot have high-toned electricity. There is another champion who is prepared to annihilate tuberculous germs for us. This is Dr. S. C. Paul, L.M.S., of No. 19, Doctor's Lane, Taltollah, Calcutta, whose method "has nothing to do with oxidisation or electrical discharge, but is simply an inhalation of a certain vegetable preparation." We are not told what the preparation is, but all needful information can doubtless be got from Dr. Paul himself. Our ignorance on the point unfortunately makes it impossible for us to form an opinion of the value of his treatment. The signatories of the leaflet, however, affirm that the discovery "reflects great credit on his scientific researches and on his spirit of inquisitiveness" ("acquisitiveness" suggests itself as a conjectural emendation, but we give the text as it stands). Among these signatories there is only one with a European name, and he is described as "Secretary, Christian Burial Board, Calcutta." We venture to hint to Dr. Paul, in the words of Falstaff's tailor, that he "must procure us better assurance than Bardolph." In the matter of cures we like not the security of an official having to do with burials.

THE INTERNATIONAL MEDICAL CONGRESS, 1900.

A MEETING of the National Committee for Great Britain and Ireland, which has been formed to further the purposes of this Congress, was held at the rooms of the Medical Society, 11, Chandos Street, Cavendish Square, W., on Tuesday, July 4th, Sir William Mac Cormac, Bart., K.C.V.O., President of the Royal College of Surgeons of England, in the chair. The rules, regulations, and preliminary agenda of the 13th International Congress were presented, and were ordered to be distributed amongst those likely to be interested in the meeting. It was decided after some discussion that Messrs. Thomas Cook and Co., tourist agents, be asked to arrange for the conveyance of intending members of the Congress, and, failing any satisfactory arrangements by the local Committee in Paris, that the same firm be invited to find accommodation. The Honorary Secretaries (Dr. A. E. Garrod, 9, Chandos Street, Cavendish Square, W., and Mr. D'Arcy Power, 10A, Chandos Street, Cavendish Square, W.) were authorised to receive the fee (£1) for membership, and they were directed to inform those members who wished to make a communication to the Congress that papers should be sent straight to the Sectional Secretaries in Paris.

THE INTERNATIONALITY OF SCIENCE.

DR. RAMON Y CAJAL, the distinguished Professor of Histology in the University of Madrid, has gone to the United States in response to an invitation sent by the Clark University, Worcester, Mass., in order to deliver, on the occasion of the tenth anniversary of the foundation of that seat of learning, three lectures on the structure of the brain. Professor Ramon y Cajal's splendid researches on the brain have placed him in the forefront of modern anatomists. He delivered the Croonian Lecture of the Royal Society in 1894, and it was most natural that he should be asked to describe his discoveries before a young and enterprising American University. The incident, however, derives exceptional interest from the recent warfare between the nations to which the inviters and the invited respectively belong. It is often said that science takes no account of nationality, but the relations between the German and French investigators during the greater part of the last quarter of a century do not lend reality to this Arcadian dream, although we see that M. Doyen, of Paris, received an ovation from the students in Professor von Esmarch's clinic in Kiel, when he demonstrated the kinematograph of an operation which he showed to the British Medical Association at the annual meeting at Edinburgh last year. The invitation to Professor Ramon y Cajal does honour to America as well as to Spain; and it does special honour to himself, for he goes in a sense to conquer the conquerors of his country.

THE EFFECT OF CYCLING ON DIABETES.

THE influence of cycling on the heart and kidneys has received some attention of late years, but its effect on diseases involving the general metabolism of the body such as diabetes is unknown. The difficulty in estimating the therapeutical value of cycling consists in the fact that the amount of work done cannot be measured, and therefore we are unable to say in individual cases whether cycling would be advantageous or not. Albu[1] in a recent paper reports on a mild case of diabetes in which he ordered cycling. The patient continued to employ this form of exercise whenever he felt inclined. There was no alteration in either the subjective or objective symptoms. The glycosuria remained the same, and also the body weight. A more difficult problem presented itself in the case of a man aged 20, whose father had died of phthisis. His subjective symptoms were polyphagia and polydipsia. There was some wasting of fat, but the muscles were well developed. Carbohydrates were excluded from the diet for three days, and at the end of this time the urine contained 1.8 per cent. of sugar; the amount of urine excreted in twenty-four hours was 87 grams. The presence of diacetic acid was demonstrated by the ferric chloride test. The case was therefore one of the severer forms of diabetes. With careful feeding, the daily amount of sugar excreted amounted to 4 to 7 per cent. The diet consisted of 250 grams of albumen and fat and 150 grams of carbohydrates. After two hours' cycling there was a reduction of 1 to 3 per cent. in the sugar excreted. When exercise was discontinued for a day the amount of sugar rose to its former proportion. After a purely meat diet exercise did not diminish the excretion of sugar. After seven weeks' cycling the amount of sugar never exceeded 3 per cent., even when the exercise had been discontinued, and the carbohydrate food had been increased. The degree of tolerance for the absorption of carbohydrates was now tested, and on the third day after they had been excluded from the food, the urine contained 0.3 per cent. of sugar, the daily excretion of urine had been reduced, and there was no acetone or diacetic acid. Albu points out that so favourable a condition is rarely brought about even by the strictest dietetic measures. The patient continued to improve for the six months preceding the report, and on several occasions the glycosuria had completely disappeared. In the eighteenth century treatment by exercise was very generally adopted. At the beginning of the nineteenth century it was almost given up, and the interest in the subject had to be revived by Trousseau and Bouchardat, though the work of Külz, who pointed out the necessity of selecting fit cases for the exercise treat-

[1] *Therap. Monat.*, February 18th, 1899.

ment, attracted some attention in Germany. Albu urges that when the diminution in the glycosuria is associated with disturbance in the albuminoid metabolism (a deficit in nitrogen, or the presence of diacetic acid), the amount of exercise must be very carefully regulated. Cases in which the muscles are ill-developed are unsuitable for the exercise treatment. The theoretical explanation of the treatment is far from satisfactory, as our knowledge of diseases affecting general metabolism is at present very imperfect. The muscular exercise is said to increase the combustion of glycogen, and thus diminish the quantity of sugar circulating in the blood.

THE "OPHTHALMOTRICIAN."

THE prescribing optician is already too much with us in this country, and unless the vaulting ambition of the Spectacle Makers' Company can be checked, he is likely to be with us a good deal more in the future. But he appears to be much more rampant in the United States; there is no law to stop him, nor even a General Medical Council to express an academic disapproval of him, and the remonstrances of medical societies move him not. Lately he has even pushed his audacity to the pitch of calling himself an "ophthalmotrician," an impudent outrage on etymology which can only be intended as an affront to the learned profession whose kingdom he invades. This last insult has roused the Medical Society of the State of Pennsylvania to take measures to smash, shatter, and pulverise the encroaching "ophthalmotrician." With this object they passed resolutions. They declared:

> That it is the opinion of the Medical Society of the State of Pennsylvania that opticians are not qualified by their training, nor are they legally qualified to perform the work of the oculist, and they should not be the consultants of regular physicians.

Further:

> That all physicians are requested to call their brother physicians in consultation, thus discountenancing the growing pretences and assurances of the optician and his brother, the graduate optician, or, as he is beginning now to call himself, the "ophthalmotrician."

The resolutions are such as every rightminded person will heartily agree with; but will anathema and excommunication kill the "ophthalmotrician"? We gravely doubt it. He can only be suppressed by the law. In default of this he will live, let the profession resolve and re-resolve as it will.

EXTRA RATING OF UNHEALTHY LIVES.

WHEN life assurance was first started only lives without apparent blemish were accepted. With increasing experience of the principles involved in life assurance and under the strain of competition it gradually came to be recognised that the advantages of assurance might safely be extended to other than first-class lives. Up to the present time the experience of the offices in regard to lives taken with an extra has been satisfactory, and there is consequently a tendency to open the portals still more widely. This tendency has been favoured by the very general adoption of the system of endowment assurance, under which the policy is payable at a certain fixed period or on death previously. Cases in which there is evidence of an "early breaking-down age" in the family history are particularly adapted to this kind of assurance, whereas in cases in which there is a consumptive strain in the family an endowment assurance is no protection to the office. The recognition of the difficulty of estimating the the value of damaged lives was one of the reasons which led to the formation of the Life Assurance Medical Officers' Association in order that some kind of agreement in dealing with these cases might be arrived at. Dr. Symes Thompson recently opened a discussion before this Association on the Extra Rating of Unhealthy Lives, and he brought forward examples both of loss and gain to the assurance company resulting from accepting lives which required extra rating. In the discussion which followed the reading of the paper, Sir Dyce Duckworth quoted Dr. Samuel West's Lettsomian Lectures as containing some very remarkable facts in relation to albuminuria and life assurance. He expressed the opinion that in time a much better appraisement of cases of albuminuria would be made. Considerable advance has already been made in regard to heart disease, and cases of mitral regurgitation, provided the compensation be good, are now frequently accepted. In process of time a more exact estimation of the value of lives damaged by flaws in the family or personal history will be arrived at, and much may be done to further this desirable object by carefully collating the records contained in the various assurance offices.

THE ANNUAL MEETING OF 1900.

As will be seen by a report in another column, the East Anglian Branch has resolved to invite the British Medical Association to hold its annual meeting for 1900 in Ipswich. The Association has twice met within the area of this, the oldest Branch of the Association, in 1846 and again in 1874, on both occasions in Norwich. A most successful meeting of the British Association was held in Ipswich a few years ago, and there is every reason to anticipate that, should it be found possible to accept the invitation thus cordially given, the last meeting of the British Medical Association in the nineteenth century will be equally successful.

SIR WILLIAM GAIRDNER, K.C.B.

LORD KELVIN took the chair at the dinner of Glasgow University Club, London, last week, when the guest of the evening was Sir William Gairdner. In proposing his health, Lord Kelvin said that he and their guest graduated in the same year, 1845, and then referred to the great services which Sir William Gairdner had rendered to the city of his adoption during the time he was medical officer of health of Glasgow. In that capacity he had been one of the originators and chief promoters of the Glasgow City Improvement Act, and by his study of what was being done at that time abroad had been able to give most valuable advice to the City Council. All his public work had not detracted from the excellence of his teaching as a Professor, but had rather enhanced it. What he learned was brought home and given to the students. Sir William Gairdner, who was very warmly received when he rose to reply, dwelt on his long career as teacher, and on the pleasure which he had taken in that work, a pleasure which had not abated with years. He then turned to the position of the University, which he said, though it had been most liberally supported during the last forty years, was still very far behind what it ought to be. Greater facilities were required for practical teaching, and an appeal would be made to the public. Those who were interested in the scheme were working well together, and he hoped that when the public was asked for its contributions medicine would not be allowed to fall into the cold shade. Among the other toasts was that of "The Visitors," proposed by Mr. Jonathan Hutchinson, and acknowledged by Sir Joseph Fayrer and Sir William Broadbent.

THE FUTURE OF THE WOMAN PHYSICIAN.

AT the graduation exercises of the Women's Medical College of the New York Infirmary held recently, Dr. Frederick Peterson, clinical professor of insanity, delivered an address on the future of the woman physician to the ladies about to embark on the treacherous sea of medical practice. Although he referred to the sweet girl graduates with curious infelicity as "Amazons," he was most gallant in his estimate of their professional accomplishments and highly optimistic as to their prospects. He foretold that

"with the gradual progress of civilisation, with the slow but sure evolution of society, the work of the woman physician must unfold and broaden to an extent undreamed of now." Although at present their professional work lies chiefly among women and children, he said, there are already indications of wider fields of labour. Among these indications may perhaps be counted the elaborate study of the effects of castration and excision of the vesiculæ seminales and vas deferens for tuberculosis, published not long ago in the *Révue Médicale de la Suisse Romande* by the Princess Guedroytz de Béloséroff, an abstract of which appeared in the Epitome of the British Medical Journal of June 24th. But Dr. Peterson seems to be looking rather to laboratory research. To the delicate manipulations of this kind of work, he says, women can bring such deft and skilful fingers that a man's awkward hands seem like the flippers of a seal in comparison. Centuries of fine needlework, crocheting, and embroidery have, he adds, prepared those fingers for section cutting, staining, and the innumerable synthetical and analytical processes required by modern methods of scientific research. Here we venture to interrupt the Professor to ask whether in sober sooth women are defter of hand than men are. With all respect we may hint a doubt whether even with the needle they are more skilful than seal-flippered man. In the handling of most other implements they have not hitherto shown their superiority. But Dr. Peterson claimed much more than manual superiority for his fair clients. Woman "brings to science the intuitive wit, the swift imagination, the deductive methods of knowledge which Buckle so lauded in his essay on The Influence of Women on the Progress of Knowledge." Buckle's philosophy has gone a trifle musty, but we are willing to admit that women have all the good qualities which he claimed for them. We are the more puzzled to explain why they have done so little for the progress of knowledge in the domain of medicine. Want of opportunity cannot now be pleaded, and of industry there is assuredly no lack. Let us hope that the something wanting will be evolved in the process of unfolding and broadening predicted by Dr. Peterson. One new sphere of influence which he points out for her seems to have in it a promise of fruitfulness. Let the woman (he says) who becomes a physician but extend the art of which she has such peculiar knowledge, that of making the home clean and charming, to circles reaching far beyond the home—to the streets, to the towns, and to the cities, and what vistas for well doing will open up before her! The immediate vista is indeed only that of inspectorships of public health. The pay is probably only moderate; *at tenuis non gloria!* "Our streets will be thoroughly clean, our water supplies and methods of sewage disposal perfect, our thoroughfares sprinkled (with scent?) and shaded, our pavements improved, our factories made healthful, our public baths and parks multiplied, the homes of the poor redeemed from squalor," when the lady doctor, "with all the paraphernalia of modern Amazons," will go into the darkest places to fight and conquer the pestilence that walks therein. The prospect is indeed alluring, but will it satisfy the professional ambition of the woman physician? If it does not there is, according to Dr. Peterson, another field in which she may find scope for her energies, and that is politics. The man physician is more neglectful of his civic duties than any other class of the community. Let his professional sister set him the example of studying the diseases of the body politic and devising methods of treatment for them. This work, says Dr. Peterson, the women physicians can further with hand, voice, and, it may be, votes. The voice may be said to be woman's natural weapon, and she may learn to use the vote—when she gets it. But if she is going to further the work of social regeneration with her hand, she will indeed need all the paraphernalia of the modern Amazon.

Mr. William Mitchell Banks of Liverpool, and Dr. John Sibbald, late Lunacy Commissioner in Scotland, attended at Windsor on June 30th, when the Queen formally conferred upon them the honour of knighthood.

A Civil List pension of £60 a year has been awarded to Mrs. Kanthack in consideration of the eminent services rendered to science by her late husband, Dr. A. A. Kanthack, Professor of Pathology in the University of Cambridge.

Sir John Burdon Sanderson, Bart., and Sir Michael Foster, K.C.B., will be entertained at dinner by British physiologists on July 20th to congratulate them on the honours recently conferred on them by the Queen. The dinner will take place at the Star and Garter, Richmond.

Sir Alexander Armstrong, K.C.B., M.D., who held the office of Director-General of the Royal Navy Medical Service for a long period with much distinction, died on July 4th. He entered the Royal Navy in 1842, and spent five years continuously in the Arctic regions engaged in the search for Sir John Franklin and in exploration. He saw active service in the Baltic during the Crimean war, and was appointed Director-General in 1866.

Dr. R. C. Brown, Consulting Medical Officer to the Preston and County of Lancashire Royal Infirmary, has generously offered to defray the cost of the erection of a new operating theatre and of the necessary rooms connected with it for the Infirmary. The approximate cost will be about £2,000. The Diamond Jubilee Fund will be able to contribute a further sum of about £8,000 for the purpose of improving the children's ward, and to erect a new wing to provide accommodation for nurses.

By the courtesy of the Registrar, we have received a copy of the *Minutes* of the General Medical Council and of its various Committees from January 1st to June 9th, 1899. The volume, which contains over 500 pages, comprises the minutes of the last session of the Council, of the meetings of the Executive Committee on February 27th, May 29th, and June 3rd, and of the Dental Committee, together with fifteen appendices. The first appendix contains the tables of accounts; the remainder consists of reports of committees.

The Revision of the United States "Pharmacopœia."—In accordance with the resolutions passed at the National Convention for Revision of the Pharmacopœia of the United States of America, held at Washington in 1890, Dr. H. C. Wood (Philadelphia) has issued a notice, dated May 1st, that a General Convention for the Revision of the Pharmacopœia of the United States of America will be held in Washington, beginning on the first Wednesday in May, 1900. It is requested that the several bodies represented in the Conventions of 1880 and 1890, and also such other incorporated State medical and pharmaceutical associations and incorporated colleges of medicine and pharmacy as shall have been in continuous operation for at least five years immediately preceding this notice, shall each elect delegates, not exceeding three in number, and that the Surgeon-General of the Army, the Surgeon-General of the navy, and the Surgeon-General of the Marine Hospital Service shall appoint, each not exceeding three, medical officers to attend the aforesaid Convention. It is further requested that the several medical and pharmaceutical bodies concerned, as well as the Medical Departments of the Army, Navy, and Marine Hospital Service, shall submit the present *Pharmacopœia* to a careful revision, and that their delegates shall transmit the result of their labours to Dr. Frederick A. Castle, 51, West Fifty-Eighth Street, New York City, Secretary of the Committee of Revision and Publication of the United States Pharmacopœia, at least three months before May 2nd, 1900

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

Fatal Accidents were the subject of an interesting answer last week by the Home Secretary. He told the House that during the eleven months ending last May there were 610 fatal accidents in factories, 129 in quarries, and 51 others. In the previous eleven months the numbers had been 459, 95, and 58 respectively. There has been a decrease in the proportion of accidents to persons employed on railways and mines. The increase in factories, docks, and quarries was due, the Home Secretary stated, to the improvement in trade, and he referred to the Abstract of Labour Statistics 1897-98 as showing that the number of accidents in factories regularly rises and falls according to the state of trade.

The Small Houses Acquisition Bill has passed through the report stage and been read a third time. The Bill is permissive in its character, and in places where the nature of the occupations of workmen is such that they are pretty safe from the risk of having to remove in search of work, will enable the higher-class operatives to acquire by the aid of the municipality a freehold house on reasonable terms. The question of housing is coming much to the front, and on the very day that the Bill passed, the question was raised later in the Commons in a debate on the Improvement of Lands Bill, when it was contended that any measure enabling landowners to borrow on better terms for the improvement of their estates should specifically direct that a fair proportion of the money should be spent in the erection of cottages for labourers. In the House of Lords, also, the subject was raised by Lord Hardwicke, who contended that the London School Board had not made proper provision for rehousing the tenants displaced by the erection of new school buildings. An interesting debate followed, all the speakers recognising that both housing and rehousing must be most seriously considered in the interests of the poor.

Haslar Hospital has recently had a new medical head appointed, and the choice of the First Lord has fallen on a Deputy Inspector-General. It seems that three Inspector-Generals have been passed over by this appointment, and Captain Norton, on Tuesday last, asked why this course had been followed. Mr. Goschen declared that the appointment was made irrespective of seniority or etiquette, because he was determined to select the best man he could find for the administration of the great naval hospital.

The Isolation Hospitals (Amendment) Bill has been reported as amended, and has passed its third reading in the Lords during the past week. The Bill will most probably have little or no opposition in the Commons.

The Elementary Education (Defective and Epileptic Children) Bill, which follows the lines of the Act passed in 1893 for blind children, has been very slightly amended by the Lords in Committee, and will pass on an early day. It carries out substantially the recommendations of the Departmental Committee of 1896, and applies to children not under the charge of the guardians, and not idiots or imbeciles. It even goes so far as to enable school authorities to provide guides and conveyances for children unable to find their own way to school. The Bill is permissive, and many would like to see it strengthened in this respect, so as to secure the education of these poor children throughout the country.

Small-Pox in Hull.—The President of the Local Government Board has been informed of 83 cases of small-pox at Hull. Of these 62 were vaccinated, and 21 were unvaccinated. The death-rate in the former was 9.7 per cent.; in the latter 57.1 per cent.

The Protection of Water Supplies.—There seems to be no chance this session of any measure passing to protect water supplies or to enable local authorities to deal more effectively with the water supply of the districts under their control. Mr. Chaplin does not favour the proposal to make county councils the water authority of their respective districts.

The Education of Children Bill, which ran so many risks in the House of Commons, and barely escaped wrecking, has had a much happier time in the Lords. Lord Knutsford moved its second reading in a most sympathetic speech, and the Lord President of the Council and the Leader of the Opposition supported it, and finally the two archbishops gave it their blessings. The second reading, which was passed amid this chorus of approval, resulted in an easy Committee stage, and the Bill was reported without amendment. The half-timers have scored a great success.

The Reformatory Schools Amendment Bill, in which Lord Leigh has taken so much interest, has passed all its stages in the Commons without a check. The third reading was taken on Monday, and the Bill now only awaits the Royal assent to become law. It is a matter of much congratulation that at last the risk of young children being sent to prison before they are admitted to a reformatory is finally abolished.

Dropped Bills.—The list of public Bills issued this week announces that, among many others, the following Bills have been dropped or withdrawn—namely, the Metropolitan Sewers and Drains, the Poor-law Officers' Superannuation Act (1896) Amendment, the Shop Hours Act (1892) Amendment, Shops (Early Closing), University Degrees, and Vaccination (Conscientious Objectors).

The Public Health Amendment Bill also will be dropped in consequence of the report of the Select Committee to which it was referred. This report states that the proposals of the Bill are of such magnitude and complexity that they should only be accepted in a more complete measure. The Committee, however, expresses the opinion that the provisions of the law relating to public health ought speedily to be consolidated, and recommends the subject to the consideration of the Government with the view to the introduction of a Bill at the earliest possible date in the next session of Parliament.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 12th day of July next, at 2 o'clock in the afternoon.

The following Committees will also meet:

Tuesday, July 11th, 1899.—2.30 p.m., Premises and Library Committee.—3.30 p.m., General Practitioners and Ethical Committee.—4.30 p.m., Parliamentary Bills Committee. *Wednesday, July 12th, 1899.*—10 a.m., Journal and Finance Committee.

July, 1899. Francis Fowke, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL.

Meetings of the Council will be held on July 12th and October 11th, 1899. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the latter meeting—namely, September 21st, 1899.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LANCASHIRE AND CHESHIRE BRANCH.

The sixty-third annual meeting of this Branch was held at Bolton on June 21st. The members assembled at the Town Hall at noon, where they were received by the Mayor (Alderman Nicholson), who was accompanied by the President (Dr. Berry), the President-elect (Dr. Macfie), the Hon. Secretary (Dr. Barr), and the Hon. Local Secretary (Dr. Robinson). Subsequently they were entertained at luncheon in the Mayor's dining room by the members residing in Bolton and neighbourhood. At 2 o'clock the general meeting took place in the Borough Court, and was attended by about 140 members from various parts of Lancashire and Cheshire. The chair was taken by the retiring President, Dr. BERRY (Wigan).

Confirmation of Minutes.—The minutes of the last annual and intermediate meetings were confirmed.

Report of Council and Financial Statement.—The report of the Council was read as follows: The Council of the Lancashire and Cheshire Branch of the British Medical Association has much pleasure in presenting its report for 1898-99 to the members of the Branch. Your Council has held five meetings during the year, and has kept a watchful eye on all matters appertaining to the welfare of this Branch and of the profession generally. There were two intermediate meetings of this Branch held, one in Liverpool, and the other was a joint meeting with the North Wales Branch in Chester. Both these meetings were largely attended, and, from the marked success of the one in Chester, your Council is of opinion that joint meetings with neighbouring Branches might with advantage be more frequently held. The great energy expended by this Branch on the midwives question has finally culminated in a Bill drafted by the Central Council of the Association, which was recently presented to the members of both Houses of Parliament in opposition to the very imperfect one promoted by the Midwives Registration Association. Legislation on this subject is not likely to take place this year, but when such an event seems probable your representatives will use their influence to safeguard the interests of the profession and of the public. The Parliamentary Bills Committee, under the leadership of Dr. Woodcock, drafted a Medical Acts Amendment Bill which, after considerable modification, has been adopted by the Central Council. Although such radical changes as might seem desirable to your Branch are not likely to be effected, it is hoped that some useful legislation, in the way of checking unqualified practice may soon be accomplished. Your Branch, on the motion of the Secretary, has recently agreed to pay the railway fares of your representatives when attending committee meetings in London, and no doubt this will encourage them to take a very keen interest in the executive work of the Association. The growth of this Branch in numbers and in importance still continues. There has been a large accession of 89 new members, while the number has been depleted by 14 deaths, 17 resignations, and 10 names removed on account of non-payment of subscriptions; this leaves a net gain for the year of 48, and the total number is now 1,117, which is the largest membership yet attained by this Branch. The members who have been removed by death, and whose loss the Council sincerely deplore, are Drs. Andrew, E. Bennett, J. C. Clarke, Dambrill-Davies, Luke Fisher, A. H. Guest, J. W. Lawton, J. McNicoll, J. W. Reynalds, J. Shackleton, G. Stevenson, John Wallace, A. H. Wilson, and H. Wisken. Financially the Branch is in a sound position, there being a balance at the end of last year of £509 13s. 6d., and this has been since still further enhanced. The Council regrets to announce that Dr. James Barr has resigned the office of Honorary Secretary, which he has held for seven years. It desires to put on record its sense of the valuable services rendered by Dr. Barr during this period, which has been marked by exceptional activity on the part of the Branch and of the Council—activity which has thrown an unusual amount of work on the Secretary. Questions intimately concerning the interests of the members and the profession at large were the subjects of earnest and anxious deliberation by the Branch, and your Council are of opinion that the firmness and judgment displayed by Dr. Barr contributed in no small degree to lead these deliberations to a satisfactory termination. The Council congratulates Dr. Barr on the present unexampled prosperity of the Branch in point of membership and funds—a prosperity which it attributes in no small measure to the energy and ability which he has displayed during his term of office. It considers that it would be an appropriate and graceful recognition of the services rendered by Dr. Barr to present him with a honorarium of 150 guineas, together with an address, from the funds of the Branch.

Financial Report.—The statement of account as at December 31st, 1898, was as follows:

Receipts.

1898.	£	s.	d.
Balance from 1897	438	19	10
Subscriptions...	135	14	0
Bank interest, less commission	8	16	0
	£583	9	10

Disbursements.

1898.	£	s.	d.
Printing and stationery ...	24	5	7
Postages	18	17	6
Travelling expenses (Secretary)	7	3	0
Travelling expenses of P. B. C.	12	14	0
Clerk's work	2	17	3
Medical Directory	0	10	6
Council meetings	0	15	6
Expenses of Liverpool meeting	1	0	0
Expenses of Wigan meeting	3	11	0
Expenses of Chester meeting	2	2	0
Cash in bank and in hand	509	13	6
	£583	9	10

JAMES BARR, M.D., Honorary Secretary.

Examined and found correct,
D. A. O'SULLIVAN } Honorary Auditors.
JOSEPH THORNLEY }
February 28th, 1899.

On the motion of Dr. FLITCROFT, seconded by Dr. RENSHAW, it was resolved:

That the report of the Council and the financial statement be received and adopted, and the provisions thereof carried into effect, and that a Committee, consisting of Drs. W. Berry, Brierley, Bradshaw, and T. Arthur Helme, be appointed to consider the most suitable form which the testimonial to Dr. Barr should take.

On the proposition of Dr. BRIERLEY, seconded by Dr. O'SULLIVAN, it was resolved:

That an official denial be sent to the statement of the *Times*, April 12th, 1899, that the Midwives Bill now before Parliament has been accepted by the British Medical Association.

Election of Officers.—Dr. BARR, the Honorary Secretary, announced the election of the officers and Council for 1899-1900 as follows:—*President:* Charles Macfie, M.D., Bolton. *President-Elect:* R. C. Brown, M.B., Preston. *Vice-Presidents:* James Barr, M.D., Liverpool; D. A. O'Sullivan, Southport. *Honorary Secretary:* T. Arthur Helme, M.D., Manchester. *Six Representatives in the Council of the Association:* J. Barr, M.D., Liverpool; J. Brassey Brierley, M.D., M.Ch., Old Trafford; A. Godson, M.B., Cheadle; T. Arthur Helme, M.D., Manchester; A. Brown Ritchie, M.B., Manchester; S. Woodcock, M.D., Manchester. *Four Representatives in the Parliamentary Bills Committee:* T. R. Bradshaw, M.D., Liverpool; Colin Campbell, Uppermill; A. Brown Ritchie, M.B., Manchester; S. Woodcock, M.D., Manchester. *Fifty Ordinary Members of Council:* J. P. Aitchinson, M.D., Blackburn; Wm. Armstrong, Buxton; F. H. Barendt, M.D., Liverpool; W. H. Barr, Bury; A. Bernard, M.B., Liverpool; W. Berry, F.R.C.S.I., Wigan; H. W. Boddy, M.D., Manchester; Owen Bowen, Everton; W. H. Brazil, M.D., Bolton; W. M. Campbell, M.D., Liverpool; William Carter, M.D., Liverpool; J. Nelson Cregeen, Liverpool; J. Gedley Crocker, M.D., Eccles; E. T. Davies, M.D., Liverpool; E. H. Dickenson, M.D., Liverpool; W. J. Robertson Dunn, Liverpool; E. A. Fox, M.D., Warrington; T. W. H. Garstang, Knutsford; C. R. Graham, Wigan; K. Grossmann, M.D., Liverpool; A. C. E. Harris, M.D., Birkenhead; R. Harris, M.B., Southport; R. Howard, Hyde; W. H. Hughes, Ashton-under-Lyne; J. M. Hunt, M.B., Liverpool; Horace Jefferies, Bolton; Thomas Jones, F.R.C.S., Manchester; W. E. E. Kershaw, Middleton; J. Lambert, M.D., Birkenhead; C. J. Macalister, M.D., Liverpool; B. J. Massiah, M.D., Didsbury; A. P. Mooney, M.B., Preston; J. T. Neech, Tyldesley; H. Laird Pearson, Birkenhead; C. A. Rayne, M.D., Lancaster; Edwin Rayner, M.D., Stockport; C. J. Renshaw, M.D., Ashton-under-Lyne; James Robinson, M.D., Dunscar; W. H. Irvin Sellers, M.B., Preston; D. Turnbull Smith, M.B., Preston; A. Stewart, M.D., Pendleton; James Taylor, F.R.C.S., Chester; J. Thornley, M.D., Bolton; C. W. Thorpe, Dobroyd; J. J. Tisdall, Liverpool; Francis Vacher, Birken-

head; C. V. Vereker, Woolton; J. W. Watkins, M.D., Newton-le-Willows; W. H. Williams, M.D., Fleetwood; T. M. Wills, Bootle.

Vote of Thanks to Retiring President.—Dr. BARR proposed and Dr. CARTER seconded, and it was resolved with acclamation, that a very hearty vote of thanks be accorded to the retiring President.—This was replied to by Dr. BERRY, who proceeded to introduce his successor, Dr. Charles Macfie, of Bolton.

President's Address.—Dr. MACFIE then took the chair, and delivered his inaugural address on Alcohol, a subject with which he dealt exhaustively and in a most interesting manner, discussing its action in moderation and in excess, and the duty of the profession in regard to it.—Dr. BERRY proposed and Dr. CARTER seconded that a hearty vote of thanks be accorded to the President for his address, and this was carried by acclamation.

Next Annual Meeting.—Dr. BARR proposed, Dr. ANDERSON (Poulton) seconded, and it was resolved:

That the next annual meeting be held at Preston.

Dr. R. C. BROWN (President-elect) offered the members of the Branch a hearty welcome to Preston.

Appointment of Auditors.—Dr. BARR proposed, Dr. BERRY seconded, and it was resolved that Dr. O'Sullivan and Dr. Thornley be re-elected auditors.

Votes of Thanks.—Dr. BAGLEY proposed a vote of thanks to the office-bearers, auditors, and members of the late Council, which was seconded by Dr. SMITH (Ardwick), especially mentioning the long and valuable services of the retiring Secretary, Dr. Barr, and it was carried by acclamation.—Dr. BARR replied on behalf of the Council and himself.

The Midwives Bill.—Dr. J. BRASSEY BRIERLEY proposed, Dr. ARTHUR HELME seconded, and it was resolved:

That this meeting records its appreciation of the attitude of Mr. T. P. O'Connor and Mr. W. J. Galloway towards the Midwives Bill now before Parliament, and begs to assure these gentlemen that, in the main, their objections to the proposals (as reported in the *Times*, April 13th, 1899) are shared by a large majority of the medical profession.

That this meeting disavows the statement made by Sir W. Priestley during the second reading debate upon the Midwives Bill in the House of Commons (as reported in the *Times* of April 13th, 1899) implying that a certain section of the medical profession opposes the registration of midwives from sordid motives, and regrets that he suggested to an assembly of laymen that a woman registered under this Bill may be regarded as a skilled midwife.

Amendment of Medical Acts.—Dr. BRIERLEY proposed, Dr. RITCHIE seconded, and it was resolved:

That in the opinion of this Branch no Bill for the amendment of the Medical Acts will be satisfactory or effective which does not provide for the reconstitution of the General Medical Council on the lines of greatly-increased direct representation.

Committees of Branch.—Dr. RITCHIE proposed and Dr. RAYNER seconded a resolution: "That the members of this Branch elected to serve on the Parliamentary Bills Committee and Central Council of the Association respectively shall each year be constituted Committees of this Branch. The General Secretary of the Branch for the time being shall, *ex officio*, be Convener and Secretary of both Committees, and shall convene such Committees when he deems it expedient, or on the requisition of a majority of the members of the Committee, or at the request of the Council of the Branch. The Committees shall report quarterly to the Council of the Branch, and shall issue an annual report for submission to the annual meeting of the Branch." As the meeting had dwindled owing to other items on the programme being due, Dr. RITCHIE withdrew the resolution, giving notice that he would reintroduce the question on the first opportunity.

Communications.—The following communications were taken as read:—Dr. J. ROBINSON: The Therapeutics of Cold, especially in Relation to Chest Affections.—Dr. J. HILTON THOMPSON: Cigarette Smoking and CO Poisoning.—Dr. MOTHERSOLE: The Treatment of Certain Cases of Appendicitis.—Dr. BRAZIL: The Small White Kidney.

Cases.—The following cases were exhibited: Morvan's Disease; Sporadic Cretinism, of traumatic origin; Pseudo-hypertrophic Paralysis (3 cases); Erb's Juvenile Form of Progressive Muscular Atrophy (2 cases); Congenital Dislocation of Hip; Spina Bifida of Neck; Bilateral Hemiplegia; Hodgkin's Disease; Cerebral Tumour.

Exhibits.—In the Albert Hall there was a large exhibition of surgical instruments, drugs, foods, etc., and a stand containing the latest appliances and novelties in electric lighting.

Excursion.—At 4.30 P.M. the members drove in brakes, provided by the President and members residing in and around Bolton, to Smithills Hall, where they were received by Colonel and Mrs. Ainsworth, who by their kindness in escorting the party through their ancient home and pointing out its many interesting features made the visit a memorable one. Before leaving a successful photograph of the group was taken.[1] On returning from Smithills Hall some members were driven to the infirmary and were met by the house-surgeons, while others drove to the golf links and were welcomed by the ladies, who had graciously provided a most delightful afternoon tea.

Dinner.—In the evening about 70 members sat down to dinner in the Conservative Club. Dr. CHARLES MACFIE occupied the chair. After the usual loyal toasts had been honoured, "The Clergy" was proposed by the PRESIDENT and responded to by the Vicar of Bolton (Rev. E. HOSKYNS). Sir W. M. BANKS proposed "The Lancashire and Cheshire Branch of the British Medical Association," which was responded to by Dr. BARR, who gave interesting historical reminiscences in connexion with the Branch. Dr. S. WOODCOCK proposed "The Town of Bolton," which was responded to by his Worship the Mayor (Alderman NICHOLSON). "The Local Medical Men" was proposed by Mr. WALTER WHITEHEAD, and responded to by Dr. ROBINSON and Dr. BRAZIL; "The Guests" by Dr. KERSHAW and responded to by the Rev. G. E. REES, Vicar of Harwood; and finally, "The President's Health" was given by Dr. FLITCROFT.

Owing to the lavish hospitality and the careful arrangements made by the President and the local committee, the day was enjoyable throughout, and the meeting was perhaps the most successful which this Branch has held. The thanks of the Branch are due to those gentlemen who provided so well for the comfort and enjoyment of the members.

EAST ANGLIAN BRANCH.

THE annual general meeting of this Branch was held at Colchester on June 29th. Mr. HAYNES ROBINSON in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Report of Council.—The following report was presented: The Council has the pleasure to report that since the last general meeting 22 new members have joined the Branch, and after deducting the losses by deaths and resignations the number of members amounts to 331. Amongst the losses by death we regret to record that of Mr. Richard Faircloth, one of the founders of the Branch and President of the meeting at Newmarket in 1860. The Branch also sustained a great loss by the death of Mr. R. V. Gorham (Yoxford), who was one of the earliest members of the Branch and for many years a valued member of the Council. The annual meeting was held at Norwich in June under the presidency of Mr. Haynes Robinson, and was a most successful gathering, ninety-seven members and visitors being present. The thanks of the Branch are due to Mr. and Mrs. Haynes Robinson for their abundant hospitality on that occasion. The autumnal meeting was held at Mundesley, and was a very pleasant meeting, 26 members and visitors being present. After the meeting the members and ladies were entertained at afternoon tea by the President and Mrs. Haynes Robinson. In accordance with a resolution passed at Mundesley, no spring meeting was held this year. Your Council recommend that an autumnal meeting be held at Felixstowe on the fourth Thursday in September. The Council has received with regret the resignation of Dr. Carr as Secretary for the Essex District, and Dr. Nicholson (Colchester) has been elected his successor.

New Members.—The following gentlemen were elected members of British Medical Association and of the East Anglian Branch: Robert N. Arnold-Wallinger, M.R.C.S., L.R.C.P., Writtle; T. M. Bassano, M.B., Colchester; Jno. W. Cook, M.D., Colchester; F. R. Proctor-Sims, M.R.C.S., L.R.C.P. Lond., Hollesley Bay; Thomas George Wakeling, M.R.C.S., L.R.C.P.Lond., Clacton-on-Sea. The following members of

[1] Copies may be obtained from N. S. Kay, Bolton (silver prints 5s., platinotypes, 6s. 6d.).

the British Medical Association were elected members of the East Anglian Branch: Henry Spencer Cooper, M.R.C.S., L.R.C.P.Lond., Brightlingsea; A. Butler Harris, M.A., M.B., B.Ch.Oxon., Loughton; James Bovell Johnson, M.D.Montreal, L.S.A., Lavenham; William Henry Sutcliffe, L.R.C.P.I., L.F.P.S.Glasg., Ilford; H. L. Ewens, M.D., Maldon; B. Hall, M.B., Clacton-on-Sea.

Treasurer's Report.—The Treasurer's report for the past year was read, the balance in favour of the Branch amounting to £71 8s. 10d.

Election of Officers.—The following were elected officers for the year 1899-1900: *President-Elect:* Charles Scott Kilner, M.B., Bury St. Edmunds. *Three Honorary Secretaries*: Norfolk: M. Beverley, M.D., Norwich; Suffolk: E. G. Barnes, M.D., Eye; Essex: B. H. Nicholson, M.B., Colchester. *General Secretary for Branch:* E. G. Barnes, M.D., Eye. *Two Representatives on the Council of the Association:* M. Beverley, M.D., Norwich; W. A. Elliston, M.D., Ipswich. *Two Representatives on Parliamentary Bills Committee:* A. R. Manby, M.D., East Rudham; J. C. Thresh, M.D., Chelmsford. *Seven Elected Members of Council:* S. J. Barton, M.D., Norwich; W. E. Wyllys, Great Yarmouth; C. E. Addison, Colchester; R. W. Brogden, M.B., Ipswich; G. S. Elliston, Ipswich; H. B. Walker, Lowestoft; R. H. Lucas, Bury St. Edmunds.

Invitation to British Medical Association for 1900.—Dr. BARNES proposed:

That the British Medical Association be invited to hold its annual meeting in East Anglia in 1900.

This was seconded by Dr. BEVERLEY, and after remarks from Drs. ELLISTON, FENN, KILNER, BROGDEN, HOSSACK, and VINCENT, the proposition was adopted.—Dr. VINCENT proposed that the Branch recommend Dr. W. A. Elliston (Ipswich) for the office of President-Elect, should the invitation be accepted. This was seconded by Dr. BROGDEN, and unanimously agreed to. The following gentlemen, with power to add to their number, were proposed as a deputation to convey the invitation to the Association: Dr. Elliston, Dr. Barnes, Mr. Robinson, Mr. Morse, Mr. Eades, Mr. Biden, Mr. Hossack, and Dr. Vincent.

Luncheon.—The members then adjourned for luncheon, forty-nine members and visitors being entertained by the President-elect (Dr. Fenn).

New President.—After luncheon the meeting resumed, and the retiring President (Mr. HAYNES ROBINSON) introduced the new President (Dr. FENN), who delivered a very interesting address.

Votes of Thanks.—The thanks of the Branch were cordially given to the President for his excellent address, and to the retiring President (Mr. Haynes Robinson) for the able and hospitable manner in which he had discharged the duties of his office.

Communications.—Dr. W. W. SINCLAIR (Ipswich) showed eight very interesting Ophthalmic Specimens.—Mr. EDGAR A. HUNT (Colchester) read a paper on a case of Hydronephrosis (with specimen).—Dr. THRESH (Chelmsford) read a paper on the Desirability of forming an Essex Branch of the National Society for the Prevention of Tuberculosis.—After remarks from Dr. COOK, Dr. COOPER PATTIN, Mr. EDGAR HUNT, and Mr. J. TAYLOR, it was resolved that the Essex Secretary communicate with Dr. Thresh, with the view of furthering the ideas expressed in the paper.—Dr. G. M. SCOTT (Witham) read a paper on the Increase and Geographical Distribution of Cancer in the Maldon and Chelmsford Unions.

Museum.—The Castle Museum, with its fine collection of Roman antiquities, was open to the inspection of members during the meeting, the Curator being kindly in attendance.

Exhibitions.—There was an exhibition of Pharmaceutical Products, etc., by Messrs Burroughs, Wellcome and Co. and Messrs. Parke, Davis and Co.

Garden Party.—After the meeting the President and Mrs. Fenn received the members, ladies, and other visitors, at a garden party at their residence, Grey Friars.

SOUTH MIDLAND BRANCH.

THE forty-fourth annual meeting of this Branch was held at the General Hospital, Kettering, on June 29th under the presidency of Dr. ALLISON, who kindly entertained the members and visitors to the number of nearly fifty at luncheon at the George Hotel previously to the meeting.

Confirmation of Minutes.—The report of the committee of management was read and confirmed.

New Members.—The following gentlemen were elected members of the Association and Branch, namely: Hugh Richardson (Northampton Infirmary), W. J. Watson (Wellingborough), V. C. Bensley (Peterborough Infirmary), Horace Rose (Royal Bucks Hospital, Aylesbury), A. Everson Harrison (Daventry), Richard Coates (Great Barford), John Tait (Sharnsbrook), Colonel Emerson, Indian Medical Service (Bedford). The following were elected members of the Branch only, namely: Kilham Roberts (Shillington), H. T. Newman (Iver), E. O. Turner (Great Missenden), David Stone, M.B. (Northampton), Horace Savory (Bedford).

Applications for Membership.—Dr. JONES moved, in accordance with notice:

That for the future in all applications for membership of the Branch two at least of the nominees must be themselves members.

This was seconded by Dr. BOWER, and carried.

Honorary Treasurer's Report.—The HONORARY TREASURER presented his annual report, showing a balance in hand of £32.

Death of Mr. Hemming.—The HONORARY SECRETARY related the circumstances of the sad death of Mr. Hemming, the representative of the Branch to the General Council and Parliamentary Bills Committee on the occasion of the Branch Committee meeting. He stated that Mr. Milligan and himself had attended the funeral in accordance with the express wish of the Committee. He further stated that he had sent to the widow and family the Branch's expression of its sincere regret and sympathy, and he read a letter of thanks he had received in reply.

Honorary Secretary's Report.—The HONORARY SECRETARY stated that seventeen new members had joined the Branch during the year, and twelve had either died or retired, making the number at the present time 153. The meetings during the year had been well attended, especially the autumnal one at Wellingborough.

Letters and Communications.—The SECRETARY read a circular from the General Secretary and from the Worcestershire and Herefordshire Branch containing resolutions concerning the Vaccination Act. Dr. JONES and Mr. BULL supported the resolutions, Mr. CROPLEY speaking in favour of the report of Council, and the PRESIDENT and Dr. HARDING made remarks. Ultimately a majority was in favour of the resolutions of the Worcestershire and Herefordshire Branch.—A report on tuberculosis was also received from the General Secretary, and was ordered to lie on the table, after a few remarks by Dr. JONES.—A communication was read from the East York and North Lincoln Branch, with resolutions adopting the memorial of the Corporate and Medical Reform Association, and opposing the illegal certification of unqualified practitioners (midwives and opticians), and resisting any Bill to legalise such certification. On the motion of Dr. JONES, seconded by Dr. PHILLIPS, it was unanimously resolved:

That this Branch fully endorses and supports the resolutions of the East York and North Lincoln Branch on the above subject; and that the Secretary be directed to send a reply to that effect.

Election of Officers.—Dr. W. D. Symington was appointed President-elect for 1900, and accepted the post. The Hon. Treasurer (Mr. G. H. Percival) resigned his office, and Mr. R. A. Milligan was elected in his stead. The Hon. Secretary, Mr. Evans, was re-elected.

Representatives of Branch.—Mr. EVANS proposed:

That the two offices of Representative on the General Council and on the Parliamentary Bills Committee should again be made distinct, as was formerly the case.

This proposal was seconded by Dr. BOWER, and carried unanimously.—Dr. GOLDSMITH then moved:

That Mr. R. H. Kinsey (Bedford) be elected to the office of Representative of the Branch on the General Council.

This was seconded by Mr. BULL and carried. Dr. JONES moved:

That Dr. Newman (Stamford) be appointed representative of the Branch on the Parliamentary Bills Committee.

This was seconded by Mr. PERCIVAL and also carried.

Committee of Management.—The vacancies caused by the retirement in rotation of some of the members were now filled up by the votes of those present at the meeting, and the Committee is now constituted as follows: W. E. Audland (Welling-

borough), L. W. Dryland (Kettering), W. Harding, M.D., and G. H. Percival (Northampton) for the Northamptonshire District; M. F. Cock (Turvey), W. Gifford Nash and H. Skelding, M.D. (Bedford), for the Bedfordshire District; W. H. Bull (Stony Stratford) and H. J. Wickham (Newport Pagnell) for the Buckinghamshire District.

Places of Meeting.—It was resolved that the autumnal meeting this year be held at Leighton Buzzard, the arrangements for the same to be left in the hands of the President and Secretary. It was also resolved that the annual meeting next year be held at Wolverton.

President's Address.—Mr. SWORDER, who had up to this point occupied the chair, now retired at the expiration of his year of office and introduced his successor, Dr. ALLISON, who delivered his introductory address. He took for his text The Life is the Blood, his discourse being an eloquent and earnest plea for the more thorough and general examination of the blood in disease. The subject was illustrated in an adjoining room by some very beautiful microscopic slides kindly lent by Dr. Gulland (Edinburgh).

The Natural History of Tubercle.—Mr. WATSON CHEYNE, F.R.S., next delivered an extempore address on The Natural History of Tubercle. He showed that it was an infectious disease, and that the tubercles set up chronic inflammation, and caused great thickening of surrounding tissues. He laid special stress upon the following, among other points: That tubercle is short-lived, soon undergoes caseation, and goes on to the formation of chronic abscess. This is not really abscess, however, but softened tubercle; not a cavity containing a fluid, but a tuberculous tumour with softened centre. This should not be opened, but dissected out; any sinus remaining is tuberculous also. He referred to the extreme difficulty of getting the edges of tuberculous ulcers to heal, and stated that tuberculous deposit sometimes becomes encapsuled and quiescent, surrounded by a dense wall of fibrous tissue. This, however, may become a source of danger in case of any injury, etc. The removal of glands in operation should be extremely extensive, the smaller as well as the larger ones being exterminated. Mr. Watson Cheyne's address was profusely illustrated by microphotographs exhibited on the screen, showing synovial membrane, cartilage, and bone, and other tissues infected with tubercle, the speaker pointing out on the slides the life-progress of the disease through the different tissues.

One or two other communications were held over owing to want of time.

Votes of Thanks.—The following votes of thanks were then passed: To the retiring President, Mr. Sworder, for his services during his year of office; to the retiring Treasurer, Mr. Percival, after sixteen years' service: to the President, for his excellent address and for his conduct in the chair; to the Hospital Board, for the use of their Committee Room, and for their hospitality. A special vote was cordially passed to Mr. Cheyne for his most interesting and instructive address and lantern demonstration.

Refreshments.—The company afterwards adjourned to the hospital grounds, and partook of refreshments, kindly provided by the Hospital Board.

BORDER COUNTIES BRANCH.

THE annual meeting of this Branch was held at Carlisle on June 30th. The President, Dr. MURIEL (Whitehaven) occupied the chair, and 26 members and 1 visitor were present.

Confirmation of Minutes.—The minutes of the last meeting of the Branch were read and approved.

Report of Council.—The report of Council stated that the Branch continued in a flourishing condition. During the past year 9 new members had joined the Branch; the total membership was now 207. The Council regretted to record the deaths of Dr. Balbirnie (Staveley), Dr. T. F. l'Anson (Whitehaven), and Dr. Meggitt (Kirkpatrick). The last annual meeting was held at Whitehaven on June 24th, 1898, when 21 members were present. Meetings were held during the year as follows: Dumfries, October 28th, 1898, 23 members present; Penrith, January 27th, 1899, 16 members present; St. Boswells, April 21st, 1899, 25 members present. The Council suggested that during the ensuing year meetings be held at Hawick, Moffat, and Keswick. The statement of accounts showed a balance to the credit of the Branch of £25 0s. 10d. The report was approved.

Election of Officers.—The following were elected office-bearers for the ensuing year: *President-elect:* Dr. J. Highet (Workington). *Council:* H. Barnes (Carlisle); J. E. Bowser (Penrith); W. L. Cullen (St. Boswells); J. B. Fisher (Whitehaven); J. Haddon (Denholm); R. D. Helm (Carlisle); J. Macdonald (Carlisle); J. M. Ross (Dumfries); G. Wade (Melrose). *Representatives in Council of Association:* R. Maclaren (Carlisle); R. Somerville (Galashiels). *Representative on Parliamentary Bills Committee:* R. Somerville (Galashiels). *Auditors:* J. B. Bird and G. Murphy (Carlisle). *Honorary Secretary and Treasurer:* W. F. Farquharson (Garlands, Carlisle).

Future Meetings.—It was decided to hold the autumn meeting at Keswick, the winter meeting at Hawick, and the spring meeting at Moffat. Dr. Knight (Keswick), Dr. Dixon (Hawick), and Dr. Huskie (Moffat), were unanimously appointed district secretaries to assist in making local arrangements for the meetings in their respective districts.

Berwick, Roxburgh, Selkirk, and Peebles Section.—A bill for the expenses during the past year of the section of the Branch for the counties of Berwick, Roxburgh, Selkirk, and Peebles, having been submitted, it was resolved that the bill be paid, and that the Secretary be instructed to inform the Secretary of the section that the Branch suggests that in future the section should levy a special subscription from its members to meet the expenses of the section.

Midwives and Opticians.—A circular from the East York and North Lincoln Branch of the British Medical Association, containing copies of resolutions passed at a recent meeting of that Branch with regard to the granting of certificates to midwives and opticians, was referred to the Council for report to the Branch.

Installation of New President.—Dr. Muriel then vacated the chair, which was taken by Dr. J. R. HAMILTON, of Hawick. His first duty was to propose a hearty vote of thanks to Dr. Muriel for his services in the chair during the past year, and to nominate him as a Vice-President for life; this was carried unanimously.

President's Address.—Dr. HAMILTON then delivered his presidential address on The Influence of Education on Medical Morality. He pointed out errors in the present system of medical education, and briefly reviewed various causes of shortcomings in the medical profession, touching upon hospital abuse, secret commissions, sixpenny doctors, medical aid societies, professional secrecy, advertising consultations, and quackery.

Vote of Thanks.—The President was accorded a hearty vote of thanks for his address, and a request was made that he should print it and circulate it amongst the members of the Branch.

Communications.—Dr. STEVENSON (Temple Sowerby) showed a case of Dermographism, and read a paper on the condition. This was discussed by the PRESIDENT, and Drs. EDINGTON and SOMERVILLE.—Dr. CAIRNS showed (for Dr. MACLAREN, Carlisle): (1) A Case of Perforated Gastric Ulcer: Operation: Recovery; (2) Compound Fracture-Dislocation at Elbow in a boy, successfully treated by excision.

Dinner.—After the meeting a number of the members dined together in the Hotel.

SOUTH-EASTERN BRANCH.

THE fifty-fifth annual meeting of this Branch was held at the Hotel Wampach, Folkestone, on June 28th.

Luncheon.—This was provided at the hotel by the kindness of Dr. Eastes, President-elect.

Address.—Dr. EASTES gave an interesting address on Diagnosis and Treatment in Acute Abdominal Cases.

Votes of Thanks.—For the services of the Branch officials during the past year, votes of thanks were unanimously accorded.

Report of Council.—The report of Council stated that no new matters had been brought to the notice of the Branch during the year. At the last annual meeting the report of the Committee of the Association Council on the constitution of the Association was considered clause by clause, and in every case the suggestions for alteration failed to meet with approval. In brief, the Branch expressed itself satisfied in the main with

the present arrangements for the management of Association affairs. As similar opinions were held by other Branches, this question was not likely to come before them again in the near future. The same might be said of "medical defence," which, after raising many discussions, after full consideration by by special subcommittees, and after obtaining support at the general meetings of the Association, had been once more dropped, as it failed to win a large enough majority in a general *plébiscite* to justify the very serious step of committing all the members to the work. The education of midwifery nurses was still seeking a settlement which should satisfy at once the public demand for some better training in this branch of work, and also the natural objection of qualified men and women to the setting up of a class of inferior practitioners. One large and important matter was likely soon to be brought before the Association, that is to say, the amendment of the Medical Act. This might be done in the way of repressing quackery and unqualified practitioners, and also by altering the constitution of the governing body of the profession, namely, the General Medical Council, and increasing the direct representation of the profession on this Council. Whether these changes should both be carried out, and, if so, whether at the same time and in one Bill, would need careful consideration. Among the Branch members there had been some losses by death and resignation. From the former cause they had lost two prominent members in the town where the meeting was held that day. Dr. Henry Lewis, an old and respected member of the Branch, would have acted as President of the year if his own reluctance, mainly on the score of health, had not prevented it. His death caused general regret, as did also that of Dr. C. E. Fitzgerald, Vice-President-elect. In general prosperity, financial and otherwise, the position of the Branch was entirely satisfactory, and the Council observes, in all the Districts, signs of a healthy and vigorous interest in the Association and all its work. For this a very cordial vote of thanks was tendered by the Council to the officials of the Districts.

Financial Report.—The balance in hand was £170 3s. 1d., and out of this 25 guineas was voted to the British Medical Benevolent Fund and also to the Royal Medical Benevolent College.

Annual Meeting, 1900.—An invitation having been received from Reigate, it was unanimously accepted, it being further decided that Dr. Walters should be requested to act as President, and Mr. Kelsey and Dr. Oldman as Vice-Presidents.

Officers and Council, 1899-1900.—The SCRUTINEERS reported the re-election of the gentlemen who held office in the past year. Mr. Verrall was asked to retain the post of Honorary Secretary for the coming year, the thanks of the meeting being tendered to him for his work in this capacity.

Dinner.—After various short excursions, members and friends dined at the hotel.

BATH AND BRISTOL BRANCH.

THE annual meeting of this Branch was held at the Medical Library, University College, Bristol, on June 28th; Dr. L. A. WEATHERLY, President, in the chair. Thirty-five members were present.

New Members.—The following were elected members: C. M. Phillips, M.D.Brux., M.R.C.S., L.R.C.P. (Brislington), J. E. Hickman, M.R.C.S., L.R.C.P. (Brislington).

Installation of New President.—Dr. L. A. WEATHERLY then resigned the chair to Dr. A. J. HARRISON, who delivered the Presidential Address. A vote of thanks to the President for his interesting and valuable address was moved by Mr. C. E. S. FLEMMING, seconded by Dr. J. E. SHAW, and carried by acclamation.

Report of Council.—The report of Council stated that the total number of members was 277, of whom 181 belonged to the Bristol and 96 to the Bath Section. During 1898 there were elected to the Bristol Section 15 new members, to the Bath Section 6. Three resignations had been received in the former District and 5 in the latter, due to removals from the neighbourhood. No deaths had occurred in the Bristol Section, and only one in the Bath (Mr. J. Terry). The meetings of the Branch had been well attended, and a large number of interesting papers and communications read. As an outcome of a discussion on the prevention of tuberculosis, the Branch appointed a large Committee to take steps for the formation of a branch in this district of the National Association for the Prevention of Tuberculosis, and this Committee has arranged for a public meeting to be held at the Victoria Rooms, Clifton, on July 6th. The financial account for the year showed that the total receipts for the year for both sections of the Branch amounted to £58 19s. 1d., and the expenditure to £46 5s. 11d., leaving a balance in hand of £12 13s. 2d. Of this, the Council recommended that a donation of £3 3s. each be made to the Royal Medical Benevolent Fund and to the Medical Benevolent College at Epsom. Drs. Waldo, Roxburgh, and Barclay Baron had been elected to fill the vacancies on the Bristol Council, and Messrs. Lace, Fouler, and Waugh on the Bath Council.—On the motion of Mr. LANSDOWN, seconded by Mr. ROGER WILLIAMS, it was resolved unanimously:

That the report and financial statement now read be received and adopted.

Election of Officers.—On the motion of Mr. W. C. DOBSON, seconded by Dr. CAVE, Mr. A. W. Prichard was appointed President-elect by acclamation.—Dr. AUST LAWRENCE proposed, Dr. WATSON WILLIAMS seconded, and it was carried unanimously, that Mr. R. S. Fowler and Dr. E. Markham Skerritt be the Representatives of the Bath and Bristol sections on the Council of the Association.—On the motion of Dr. WALDO, seconded by Mr. P. BUSH, Dr. A. J. Harrison was unanimously elected the Representative of the Branch on the Parliamentary Bills Committee.

Votes of Thanks.—A vote of thanks to the retiring President, Dr. L. A. Weatherly, for his able and courteous conduct in the chair during the past year was proposed by Dr. J. STEWART, seconded by Mr. F. R. Cross, and carried by acclamation, and a vote of thanks to the Council and Honorary Secretaries for their services during the year, with a request to the latter to continue in office, was proposed by Mr. S. H. SWAYNE, seconded by Mr. WIGMORE, and carried unanimously.

Annual Dinner.—The members afterwards dined together at the Clifton Down Hotel.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE forty-fifth annual meeting was held on Thursday, June 22nd.

Installation of New President.—The retiring President, Mr. VINCENT JACKSON, introduced his successor, Mr. BENNETT MAY, who then took the chair.

The late Mr. Lawson Tait.—A resolution was passed expressing the great loss the Branch and profession had sustained by the death of Mr. Lawson Tait.

Election of Officers.—The following office-bearers were elected for the ensuing session:—*President:* Mr. Bennett May. *President-elect:* Dr. Milner Moore. *Treasurer:* Dr. F. W. Underhill. *Honorary Secretaries:* Mr. W. F. Haslam and Mr. J. T. J. Morrison. *Representatives in the Council of the Association:* Mr. Langley Brown, Dr. A. H. Carter, and Mr. Jordan Lloyd. *Representatives on the Parliamentary Bills Committee:* Dr. S. H. Agar and Mr. Barling. *Chairman of the Pathological Section:* Mr. H. Eales.

President's Address.—The PRESIDENT delivered an address on a Brief Retrospect of Surgical Progress during the Past Quarter Century.

Dinner.—Forty-two members and friends dined together in the evening at the Grand Hotel.

PERTHSHIRE BRANCH.

A MEETING of the Perthshire Branch was held at Pitlochry on June 28th under the presidency of Dr. BEATTY.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Postponement of Tuberculosis Meeting.—The SECRETARY read apologies for non-attendance, and reported that the tuberculosis meeting had been postponed until autumn.

Representative on Council of Association.—Dr. Urquhart was reappointed representative member.

The President of the Association.—The Secretary was instructed to write a letter of sympathy to the President of the Association, and to express hopes of his early recovery.

Entertainment by President.—After the meeting the members present were most hospitably entertained by the PRESIDENT at Craigvar, and made suitable [recognition of his kindness and hospitality.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SEVENTH ANNUAL MEETING.

THE sixty-seventh annual meeting of the British Medical Association will be held at Portsmouth on Tuesday, Wednesday, Thursday, and Friday, August 1st, 2nd, 3rd, and 4th, 1899.

President: Sir THOMAS GRAINGER STEWART, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh, Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President-Elect: JOHN WARD COUSINS, M.D., F.R.C.S., Senior Surgeon, Royal Portsmouth Hospital.

President of the Council: ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: CHARLES PARSONS, M.D., Dover.

An Address in Medicine will be delivered by Sir RICHARD DOUGLAS POWELL, Bart., M.D., F.R.C.P., Physician Extraordinary to Her Majesty the Queen, Physician to Middlesex Hospital.

An Address in Surgery will be delivered by Professor ALEXANDER OGSTON, M.D., Surgeon in Ordinary to Her Majesty the Queen in Scotland, Regius Professor of Surgery in the University of Aberdeen.

The scientific business of the meeting will be conducted in twelve Sections, as follows, namely:

A. MEDICINE.

Grand Jury Room, Town Hall.

President: JOHN MITCHELL BRUCE, M.D. *Vice-Presidents:* EDWARD JAMES WALLACE, M.D.; ROBERT WILLIAM BURNET, M.D. *Honorary Secretaries:* WILLIAM SYKES, M.D., Bury Place, Gosport; HUMPHRY DAVY ROLLESTON, M.D., 112, Harley Street, W.

Discussions have been arranged as follows:

1. Wednesday, August 2nd.—On the Medical Tests required at present for Admission to the Public Services. It is hoped that this will be opened by Sir J. N. Dick, K.C.B. Professor W. Osler, M.D., F.R.S., Sir Dyce Duckworth, Dr. P. Manson, Dr. J. Mitchell Bruce, Dr. R. W. Burnet, Dr. T. D. Savill, Major W. Turner, R.A.M.C. (Gibraltar), Dr. Wm. Sykes, Dr. Hill, and Dr. E. J. Wallace, have promised to take part in this discussion.

2. Thursday, August 3rd.—On the Preventive and Remedial Treatment of Tuberculosis. The discussion will be opened by Professor T. Clifford Allbutt, M.D., F.R.S. It is hoped that Sir William Broadbent, Bart., M.D., F.R.S., Sir R. Douglas Powell, Bart., M.D., Sir T. Grainger Stewart, M.D., Sir W. T. Gairdner, M.D., K.C.B., Dr. Arthur Ransome, F.R.S., Dr. F. W. Burton-Fanning, Dr. Heron, Dr. R. Robertson, Mr. A. G. S. Mahomed, Dr. Alex. G. Davey, Dr. J. E. Squire, Dr. Browning, Dr. H. Walsham, Dr. G. A. Reid, Dr. W. Morton Harman, Dr. S. T. Pruen, Dr. Frank M. Pope, Dr. R. W. Philip, Sir H. R. Beevor, Bart., M.D., Dr. S. Rendall, Dr. W. Vicary Snow, Dr. Wm. Calwell, Dr. R. Shingleton Smith, Dr. Williamson, Dr. A. P. Parsons, Dr. M. G. Foster, Dr. James Tyson (Philadelphia), Dr. P. B. Smith, and Mr. Colin Campbell will take part in the discussion.

The following papers have been offered:

ARMSTRONG, William, M.R.C.S. Stimulation of Excretion in Gout.
BAIN, W., M.D. (1) The action of certain British and Foreign Mineral Waters on the Quadriurate of Sodium. (2) An Experimental Contribution to the Study of Gout.
BRISCOE, J. F., M.R.C.S. The Practice of Bloodletting.
CALWELL, W., M.D. Gastric Adhesions as a Cause of Dyspepsia.
CAMPBELL, Harry, M.D. The Enlargement of the Chest in Emphysema and its Treatment.
EWART, William, M.D. (1) On the Prebalnear Treatment of Heart Disease by Inhalations of Carbonic Acid Gas; and on the Uses of the Inhalation in Cardiac Dyspnœa and in Anginoid Pain. (2) On the Recognition of Enlargements of the Left Auricle by Percussion; and on other Clinical Uses of Dorsal Percussion, including Percussion of the Pelvis.
GARDNER, W. T., M.B. Notes on the Open-Air Treatment of Phthisis with Photographs of a new form of Kiosk.
GREEN, J. Lardner, M.R.C.S. The Inhalation of Formalin as a Preparation for, and Aid to, the Open-Air Treatment of Consumption.
HAIG, Alexander, M.D. Uric Acid and the Circulation; some New Methods of Estimating its Effects.
HERON, G. A., M.D. On the Results of Treatment by the New Tuberculin.
HUTCHINSON, Professor Woods. On the Form of the Chest in Tuberculosis and its Significance.
JOHNS, W. Denton, B.A., M.D. On the Open-air Treatment of Tuberculosis in England (with demonstration of cured cases).
LUFF, A. P., M.D. The Gelatinous Form of Sodium Biurate and its bearing on the Pathology of Gout.
MACLEOD, Herbert G., M.D., M.S. The Causes and Treatment of Sciatica and Neuralgia.
OSLER, Professor W., M.D., F.R.S. On Hypertrophic Cirrhosis with Bronzing of the Skin—Hæmochromatosis.
PARSONS, A. P., M.B. The Accurate Diagnosis and Successful Treatment of Perforated Gastric Ulcer.
POYNTON, F. J., M.D. The Occurrence of Arthritis in connection with Inflammation of the Appendix Vermiformis.
PRUEN, S. T., M.D. Diet and Nutrition in the Treatment of Tuberculosis.
SAMWAYS, D. W., M.D. The Defence of the Cardiac Orifices other than Valvular.
SUCKLING, C. W., M.D. On Migraine.
SYKES, William, M.D. A Suggestion for the Treatment of Phthisis Pulmonalis on the Lines of one of its Normal Terminations.
WALSHAM, H., M.D. The Relation of Pulmonary Tuberculosis to Pure Mitral Stenosis.
WEST, S., M.D. Forms of Albuminuric Retinitis and their Significance.

B. SURGERY.

Banqueting Room, Town Hall.

President: HENRY TRENTHAM BUTLIN, F.R.C.S. *Vice-Presidents:* Deputy-Inspector-General RICHARD SAMUEL PURNELL GRIFFITHS, R.N.; ALFRED LLOYD OWEN, M.D. *Honorary Secretaries:* HENRY RUNDLE, F.R.C.S., 13, Clarence Parade, Southsea; D'ARCY POWER, F.R.C.S., 10A, Chandos Street, Cavendish Square, W.

Special discussions will be held upon:

1. The Diagnosis and Treatment of Gunshot Wounds of the Abdomen. To be opened by Colonel Stevenson, M.Ch., R.A.M.C., Professor of Military Surgery at Netley, followed by Mr. A. Barry Blacker, Dr. A. H. Robinson, Major W. C. Beevor, R.A.M.C., Damer Harrisson, F.R.C.S.Ed., and others.

2. The Prevention and Treatment of Syphilis in the Navy and Army. To be opened by Deputy-Inspector-General E. E. Mahon, R.N., C.B., and Major W. Dick, M.B., C.M., R.A.M.C., Netley, Assistant Professor of Clinical Surgery, Netley. The following gentlemen have intimated their intention of taking part in the discussion: Fleet-Surgeon A. T. Corrie, R.N., Dr. C. R. Drysdale, Major F. J. Lambkin, R.A.M.C., Mr. J. E. Lane, Dr. J. MacNamara, Major William Niven, M.D., Dr. G. Ogilvie, Dr. Shaw-Mackenzie, Mr. A. H. Ward, Colonel F. H. Welch, R.A.M.C., and Staff-Surgeon A. E. Weightman, R.N.

The following papers have been offered:

ARMSTRONG, G. E., M.D. The Surgical Treatment of Hæmorrhage from Gastric Ulcer.
BARLING, Gilbert, F.R.C.S. Analysis of 120 Operations for Appendicitis with Observations thereon.
BERRY, James, M.B., B.S. Seventy Consecutive Cases of Goitre Treated by Operation (Extirpation or Enucleation).
BIDWELL, L. A., F.R.C.S. A Method of attaching the Mucous Membrane to the Skin of the Perineal Excision of the Rectum.
CARWARDINE, Thomas, M.S. On Excision of the Rectum for Cancer by a New Method and its Results.
CLARKE, J. Jackson, F.R.C.S. An Analysis of 100 Cases of Spinal Curvature and Disease.
DE SANTI, P., F.R.C.S. A Case of Gunshot Wound of the Leg Severing the Anterior Tibial Nerve; Secondary Suturing Two Months Later; Restoration of Function of Nerve.
DOWNIE, Walker, M.B. Description of two cases of Sarcoma of the Tongue. (Specimens, Sections, and Photographs will be shown.)
FREYER, P. J., M.Ch. Recent Notes on the Surgery of Stone in the Bladder.
HARRISSON, Damer, F.R.C.S. Some Cases of Cerebral Surgery (With lantern illustrations).
HUTCHINSON, J., jun., F.R.C.S. The Vermiform Appendix in Relation to Hernia and Intestinal Obstruction. Illustrated by lantern slides and diagrams.
LUCAS, R. Clement. (1) Removal of a Bullet and of a Detached Fragment from the Interior of the Skull after localisation by the *x* rays. (2) Removal of a Bullet from the Front of the 2nd Cervical Vertebra after localisation by the *x* Rays.
MACLEOD, Herbert W. G., M.D., M.S. The Treatment of Stone in the Bladder, with Notes of some Cases operated upon.
MORTON, Charles A., F.R.C.S. (1) A Successful Case of Resection of Three-quarters of the Stomach for Carcinoma. (2) A case of Excision of the Cæcum for Carcinoma.
MOYNIHAN, B. G. A., F.R.C.S. A Series of Cases of Malignant Disease of the Stomach treated Surgically.
NICOLL, James H., M.B. (1) Enterorrhaphy without Mechanical Aids (with illustrative cases); (2) The Treatment of Urethral Stricture.
OGILVIE, G., B.Sc., M.B., M.R.C.P. Heredo-parasyphilis.
REID, G. Archdall, M.B. The Treatment of Surface Wounds.
ROBSON, A. W. Mayo, F.R.C.S. Two Cases of Removal of Tumours of the Suprarenal Capsule.
RUNDLE, H., F.R.C.S. Notes on 375 Cases of Varicocele treated by Operation.
RYALL, Charles, F.R.C.S. Notes of a Case of Extensive Trans-Sacral Excision of the Rectum followed by Perfect Sphinteric Control.
SHEEN, W., M.D., F.R.C.S. (1) A Case of Secondary Thyroid Growth. (2) A Case of Malignant Disease in the Sac of an Umbilical Hernia.

SNOW, Herbert, M.D. The Result of Cancer Operations and of Continuous After-Treatment.
SPENCER, W. G., F.R.C.S. Two Fatal Cases of Venereal Phagedæna.
THOMAS, J. L., F.R.C.S. (1) Two Recent Operations upon the Gasserian Ganglion for Neuralgia by the Hartley-Krause Route. (2) A Reliable Washing Tap for Operating Rooms, with a Demonstration of a Simple Method for Irrigating the Abdomen.
WARD, A. H., F.R.C.S. On the Rational Treatment of Syphilis.
WILLIAMS, Chisholm, F.R.C.S.Edin. A Case of Intercostal Neuralgia and Operation.
WILLIAMS, W. Roger, F.R.C.S. The Surgical Treatment of Uterine Cancer.

Mr. Jas. Mackenzie Davidson and Dr. Hugh Walsham will take part in a demonstration of X-Ray Photography in its Relation to Medicine and Surgery.

Professor Ernest Laplace, M.D., Philadelphia, will exhibit a new Forceps for Intestinal Anastomosis.

C. OBSTETRICS AND GYNÆCOLOGY.

Marie-la-bone Hall, Swan Street, Commercial Road.

President: GEORGE GRANVILLE BANTOCK, M.D. *Vice-Presidents:* JOHN ROBERT KEALY, M.D.; JOHN WM. TAYLOR, F.R.C.S. *Honorary Secretaries:* CHARLES PLUMLEY CHILDE, F.R.C.S., Cranleigh, Kent Road, Southsea; ERNEST WILMER PHILLIPS, M.R.C.S., Victoria Crescent, Victoria Road North, Southsea; WALTER WM. HUNT TATE, M.D., 57, Queen Anne Street, W.

The subjects selected for discussion are as follows:

1. Wednesday, August 2nd.—The Treatment of Fever following Delivery, with Special Reference to Serumtherapy. To be opened by Dr. Herbert Spencer.

2. Thursday, August 3rd.—The Natural Menopause compared with *(a)* the Menopause produced by Removal of the Uterine Appendages; and *(b)* the Menopause produced by Removal of the Uterus without Removal of the Appendages. To be opened by Mr. J. Bland Sutton, F.R.C.S.

The following gentlemen have signified their intention of joining in the discussions: Professor Murdoch Cameron, M.D., Dr. John Campbell, Dr. Cushing, Dr. Handfield-Jones, Dr. Shaw-Mackenzie, Mr. Christopher Martin, Dr. Newnham, and Dr. Robert Boxall, Dr. Inglis Parsons, Dr. Purslow, Professor J. W. Byers, M.D., Dr. George Elder, Mr. Robert O'Callaghan, and Dr. More Madden.

The following papers have been offered:

BRIERLEY, James Brassey, M.D. Modern Teaching of Obstetrics in the English Medical and other Schools, and Modern Practice.
BYERS, Professor J. W., M.D. The Relationship of Certain Cases of Amenorrhœa to Raynaud's Disease and Subsequent Tuberculosis.
CAMERON, Professor Murdoch, M.D. A case of Rupture of Uterus, Missed Labour, and Delivery three months later.
CAMPBELL, John, M.D. Treatment of Acute Peritonitis.
LAWRIE, Macpherson, M.D. Notes of Fifty Consecutive Cases of Cœliotomy for Diseases of the Uterus and Appendages, with Forty-eight Recoveries Performed within the last Twenty Months, with Observations.
LEA, Arnold W. W., M.D. Two Cases of Puerperal Septicæmia due to Streptococcic Infection.
MADDEN, More, M.D. On Some of the Methods employed in the Modern Treatment of Uterine Cancer.
NEWNHAM, W. H. C., M.B. A case of very unusual Suppuration in the Pelvis after Parturition.
PARSONS, J. Inglis, M.D. A New Treatment for Prolapse of the Uterus; further report of cases.
REID, G. Archdall, M.B. The Causes which render difficult the Labours of Civilised Women.
SHAW-MACKENZIE, J. A., M.D. The Syphilitic Factor in the Diseases of Women.
TURNER, P. D., M.D. Tuberculous Lesions found in the Generative Organs in 27 Consecutive *Post-mortem* Examinations on Phthisical Patients.
WARDEN, C., M.D. The Treatment of Puerperal Infection in the Maternity Hospitals of Paris.

It has been arranged to exhibit pathological specimens illustrative of the papers for discussion.

D. STATE MEDICINE.

Shareholders' Room, Gas Company's Offices, 87, Commercial Road.

President: GEORGE WILSON, M.D. *Vice-Presidents:* Surgeon-General CHARLES MACDONAGH CUFFE, C.B.; JOSEPH GROVES, M.B. *Honorary Secretaries:* HENRY RICHARD KENWOOD, M.B., Granville House, Alexandra Villas, Finsbury Park, N.; A. MEARNS FRASER, M.B., Epworth, St. Edwards Road, Southsea.

It is proposed to hold discussions on the following:

1. Recent Vaccination Legislation and the Prevention of Small-pox. To be opened by Dr. E. Seaton.

2. The Personal Communication of Tuberculosis and the Measures available for its Prevention. The following gentlemen will take part in the discussion: Sir Henry Littlejohn, M.D., LL.D.; Professor Delépine, Dr. A. Newsholme, Mr. J. Niven, Dr. Sidney Davies.

3. The Efficiency of Existing Measures directed against the Spread of Infection in Elementary Schools. The following gentlemen will take part in the discussion: Dr. A. Newsholme, Mr. A. E. Harris, Dr. J. F. J. Sykes, Dr. Sidney Davies, Mr. Henry R. Kenwood, Dr. Henry May, and Dr. R. Sydney Marsden.

The following papers have been offered:

CANTLIE, James, F.R.C.S. The Early Decay of Teeth in Great Britain.
DOVE, J. R. B., M.B. An Investigation into the Bacteriology of the Air as found in Schools.
KENWOOD, Henry, M.B., D.P.H., and GRIFFITH, A., M.D., D.P.H. The Distribution of Erysipelas in London and its Significance.
MANBY, E. Petronell, M.D., D.P.H. Meat Inspection and the Abolition of Private Slaughterhouses.
MARSDEN, A. Sydney, M.B., D.Sc., F.R.S.E. Overcrowding in Secondary Schools.
MARSH, T. A. P., Major, R.A.M.C. The Prevalence, Causes, and Prevention, of Enteric Fever in India and the Tropics.
PECK, Herbert, M.B., D.P.H. Sick-room Infection in Typhoid Fever.
WINDLE, J. W., M.B. The Mode of Spread of Diphtheria, with special reference to School Attendance, based on the experience of a local outbreak.

E. PSYCHOLOGY.

Swan Street Board School (Boys' School). Entrance in Swan Street, Commercial Road.

President: DAVID NICOLSON, C.B., M.D. *Vice-Presidents:* SAMUEL RUTHERFORD MACPHAIL, M.D.; PETER WILLIAM MACDONALD, M.D. *Honorary Secretaries:* JAMES NEIL, M.D., Warneford Asylum, Oxford; BONNER HARRIS MUMBY, M.D., Medical Superintendent, Boro' Asylum, Portsmouth.

The subjects selected for discussion are as follows:

1. Lunacy Legislation as it Affects the Temporary Care of Incipient Cases. To be opened by Dr. Savage.

2. The Etiological Relation of Syphilis to General Paralysis. To be opened by Dr. A. W. Campbell.

3. The Treatment of Epileptics and Imbeciles. To be opened by Dr. Shuttleworth.

The following gentlemen have promised to take part in the discussions of this Section: Professor Clifford Allbutt, F.R.S., Dr. Fletcher Beach, Dr. Milne Bramwell, Dr. Chambers, Dr. Crotchley Clapham, Professor Ferrier, F.R.S., Dr. H. Campbell, Dr. W. Campbell, Dr. Hyslop, Dr. Davidson, J. F. Briscoe, M.R.C.S., Dr. H. Newington, Dr. Macphail, Dr. P. M. MacDonald, Dr. Mercier, Dr. G. W. Mould, Dr. T. Seymour Tuke, Dr. F. Lee, Dr. Spence, Dr. Shuttleworth, Dr. Savage, Dr. Telford Smith, Dr. Outterson Wood, Dr. Weatherly, Dr. Haig, Dr. Orange, C.B., and Dr. Oscar Woods.

The following papers have been offered:

ANDRIEZEN, W. L., M.D. The Bearings of Pathological Discoveries on the Treatment of Mental Diseases.
BRAMWELL, J. Milne, M.B. On Some Points in Hypnotism.
BRISCOE, J. F., M.R.C.S. The Asphyxial Problem in Convulsive Seizures.
CAMPBELL, Harry, M.D. Morbid Self-Assurance.
HARVEY, Surgeon-General C. B., D.S.O. Notes on Asylums in India.
HYSLOP, T. B., M.D. Double Consciousness.
MACDONALD, P. W., M.D., and DAVIDSON, A., will jointly contribute a paper on Congenital General Paralysis—a preliminary contribution.
MACPHAIL, S. R., M.D. Note on Post-operative Insanity.
REID, G. Archdall, M.B. Alcoholism in its Relation to Heredity.
SUTHERLAND, J. F., M.D., F.R.S.E. On Legislation affecting the Property and Person of the Well-to-do Inebriate.
WEATHERLY, L. A., M.D. How Can We Instil Rational Ideas Regarding Insanity into the Public Mind?

F. ANATOMY AND PHYSIOLOGY.

School Board Office, Town Hall.

President: JOHN JAMES CHARLES, M.D. *Vice-Presidents:* AURELIUS VICTOR MAYBURY, M.D.; ANDREW FRANCIS DIXON, M.B. *Honorary Secretaries:* EDWIN JOHN NORRIS, M.R.C.S., May Villa, Cottage Grove, Southsea; WM. JOSEPH ESSERY, M.B., Netley Lodge, South Parade, Southsea; MARCUS SEYMOUR PEMBREY, M.D., Charing Cross Hospital, W.C.

The subjects selected for discussion are as follows:

1. The Interaction between the Ovaries and the Mammary Glands. To be opened by Mr. Stanley Boyd, F.R.C.S. The following gentlemen have promised to take part in the discussion: Dr. Amand Routh, Mr. W. G. Spencer, F.R.C.S., and others.

2. On the Exchange of Gases in the Lungs. To be opened by the President. The following gentlemen have promised to take part in the discussion: Dr. Washbourn, Mr. W. G. Spencer, and others.

The following papers have been offered:

ANDERSON, R. J., M.D. Some Points concerning Asymmetry.
BARRATT, J. O. Wakelin, M.D. The Anatomical Structure of the Ninth, Tenth, Eleventh, and Twelfth Cranial Nerves.
CANTLIE, James, F.R.C.S. The Lobes of the Liver.
CHARLES, J. J., M.D. (1) The Reaction of the Intestinal Contents. (2) The Function of the Rectum.
CHARLES, Havelock R., M.D. The Progress of Anatomical Teaching in Northern India.
CUNNINGHAM, D. J., M.D., F.R.S. Demonstration of some Points in the Sectional Anatomy of the Brain of the Orang and Chimpanzee.
DIXON, Francis, M.B., Sc.D.: (1) The Course of the Taste Fibres. (2) On the Grooves and Markings often found in the Human Calvaria, corresponding in position to certain Vessels or Sensory Nerves of the Scalp. (3) The Form of the Bladder and Prostate (demonstration). (4) The Mode of Ossification of the Upper End of the Femur in different Animal Groups (demonstration).
HARLEY, Vaughan, M.D. The Value of the Large Intestine in General Metabolism.
HUNTER, William, M.D. Metabolism in Acute Yellow Atrophy of the Liver.
THOMAS, J. Lynn, F.R.C.S. The Anæsthetic Areas in two Patients in whom the Second and Third Divisions of the Fifth Nerve were divided within the Cranium (demonstration).
PEMBREY, M. S., M.D. Cheyne-Stokes Respiration.
REID, G. Archdall, M.B. The Evidence for and against the Transmission of Acquired Characters.
ROSS, F. W. Forbes, M.D. On Blood Corpuscles.
RUSSELL, J. S. Risien, M.D. Experimental Observations bearing on Epilepsy.

Specimens of anatomical interest will be shown by the President and Professor A. F. Dixon.

A demonstration (microscopes and lantern slides) of the chorionic epithelium will be given by Dr. Eden.

G. PATHOLOGY.

Swan Street Board School (Infants' School), entrance in Salem Street, Commercial Road.

President: JOSEPH FRANK PAYNE, M.D. *Vice-Presidents:* FREDERICK JOHN DRIVER, M.D.; OTTO JACKSON KAUFFMANN, M.D. *Honorary Secretaries:* EDMUND FAURIEL TREVELYAN, M.D., 40, Park Square, Leeds; WILLIAM CARLING, M.B., 11, Rosebery Terrace, Highland Road, Southsea.

Discussions have been arranged as follows:

Wednesday, August 2nd.—Short introductory address by the President. Discussion on the Pathology of Infective Endocarditis, introduced by Dr. Washbourn. Dr. Sansom, Mr. A. G. R. Foulerton, Dr. F. J. Poynton, Dr. W. C. C. Pakes, Dr. Bertram Abrahams, Dr. Lazarus-Barlow, and Professor Osler will take part in the discussion.

Thursday, August 3rd.—Discussion on the Pathology of Renal Tumours, introduced by Mr. J. H. Targett and Dr. Kelynack. Dr. Morley Fletcher, Mr. Roger Williams, and Dr. F. W. Eurich will take part in the discussion.

Professor Hamilton (Aberdeen) and Professor Sims Woodhead (Cambridge) have also signified their intention of taking part in the discussions.

The following papers have been offered:

BARRS, A. G., M.D., and TREVELYAN, E. F., M.D. Remarks on a specimen of Hydatid Disease of the Vertebral Column and Extradural Space (specimen shown).
BRODIE, T. G., M.D. The Physiological Action of Diphtheria Toxin.
COLES, A. C., M.D. The Bacillus of Influenza.
FOULERTON, A. G. R., F.R.C.S. A Case of Streptothrix Infection.
HUTCHINSON, Professor Woods. The Distribution of Tuberculous Lesions in Man and Animals.
LAZARUS-BARLOW, W. S., M.D. A Demonstration of Pathological Specimens.
POSADAS, Dr. Generalised Infectious Psorospermosis (with specimens).
REID, G. A. O'B., M.B. Influence of Heredity in Disease.
THOMSON, Campbell, M.D. The Pathology of Acute Chorea.
WHITE, C. Powell, M.B., F.R.C.S. Notes on a Carcinomatous Cyst of the Liver with Secondary Deposits in Sternum, Clavicles and Lungs (specimens shown).
WILD, Robert, M.D. Some Sources of Infection in Cutaneous Tuberculosis.
WILLIAMS, W. Roger, F.R.C.S. On Tumours of Gigantic Size, etc.
WILLIAMSON, R. T., M.D. The Pathology of Syphilitic Affections of the Spinal Cord
WOHLMANN, A. S., M.D. On the Bacillus of Rheumatoid Arthritis.

H. OPHTHALMOLOGY.

Overseers' Board Room, St. Michael's Road.

President: SIMEON SNELL, F.R.C.S.Edin. *Vice-Presidents:* LYSANDER MAYBURY, M.D.; EDWARD TREACHER COLLINS, F.R.C.S. *Honorary Secretaries:* ARTHUR VERNON FORD, M.R.C.S., South View Lodge, Kent Road, Southsea; ARNOLD LAWSON, F.R.C.S., 12, Harley Street, W.

The subjects selected for discussion are as follows:

1. The Visual Tests employed in the Navy, Army, and Mercantile Marine, and their Efficiency. To be opened by Deputy-Surgeon-General Henry Cayley, F.R.C.S., I.M.S.

2. The Pathological Significance of Sympathetic Irritation and its Connection, if any, with Sympathetic Ophthalmitis. To be opened by Mr. F. Richardson Cross, F.R.C.S.

The following gentlemen have signified their intention of taking part in the discussions: Mr. G. Anderson Critchett, Professor Malcolm McHardy, Dr. George Mackay, Mr. Devereux Marshall, Mr. A. Stanford Morton, Mr. H. E. Juler, Mr. T. H. Bickerton, Dr. John Hern, and Dr. C. E. Glascott.

The following papers have been offered:

BERRY, George, M.B. The Extraction of Unripe and Complicated Cataracts, with remarks on their After-treatment.
BRONNER, Adolph, M.D. On the Uses of Homatropine in Cases of Muscular Asthenopia.
COLLINS, E. Treacher, F.R.C.S. Enophthalmos (with lantern illustrations).
GRIFFIN, W. Watson, M.B. Cases illustrating the value of the Correction of Hyperphoria.
GRIFFITH, John, F.R.C.S. A case of Primary Sarcoma of the Fornix Conjunctivæ.
HERN, John, M.D. The Eye Symptoms in Hay Fever.
HINSHELWOOD, James, M.D. The Use of Euphthalmin; a new Mydriatic.
LANDOLT, Professor Edm. The Determination of Visual Acuity: (*a*) The Principle of its Determination; (*b*) the Tests for Visual Acuity; (*c*) Practical Demonstration.
LAWSON, Arnold, F.R.C.S. The Correction of Refractive Errors in the Treatment of Trachoma.
SCOTT, Kenneth, F.R.C.S.Ed. Destructive Ulceration of the Eyelid: Cure.
SNELL, Simeon, F.R.C.S.Ed. (President). The Prevention of Eye Accidents in various Trades and Occupations.

Invitations to attend the meetings of the Section have been accepted by Dr. Hermann Knapp (New York), Dr. Samuel Risley (Philadelphia), Dr. de Schweinitz (Philadelphia), Dr. Theobald (Baltimore), Dr. Ayres (Cincinnati).

I. DISEASES OF CHILDREN.

Shareholders' Room, Water Company's Offices, 26, Commercial Road.

President: EDMUND OWEN, F.R.C.S. *Vice-Presidents:* JAMES GREEN, M.R.C.S.; DAWSON WILLIAMS, M.D. *Honorary Secretaries:* ALFRED HERBERT TUBBY, M.S.Lond., 25, Weymouth Street, Portland Place, W.; GEORGE AUGUSTUS TULLIS, M.D., 20, Clarence Parade, Southsea.

The subjects selected for discussion are as follows:

1. Wednesday, August 2nd.—On the Treatment of Ununited Fracture in Children. To be opened by the President of the Section. With remarks on Ununited Fracture of the Tibia and Fibula; why does its Operative Treatment so often end in Amputation?

2. The Treatment of Pleuritic Effusions in Childhood. To be opened (*a*) Medical, by Dr. Robert Maguire, and (*b*) Surgical, by Mr. H. Betham Robinson. The following gentlemen will join in the discussion: Mr. J. McGaw, Mr. C. H. Milburn, and Dr. E. H. Greves.

3. Thursday, August 3rd.—The Causation and Treatment of Convulsions in Infancy. To be opened (*a*) Etiology, by Drs. J. A. Coutts and A. M. Gossage; (*b*) Pathology and Treatment, by Dr. W. S. Colman; and (*c*) Public Health Aspect, by Dr. Hugh Jones. The following gentleman will join in the discussion: Dr. Edmund Cautley.

4. Friday, August 4th.—The Treatment of Inguinal Hernia in Infancy and Childhood. To be opened by Mr. John Langton, F.R.C.S., The following gentlemen will join in the discussion: Mr. J. Macready, F.R.C.S., Mr. Fred. Eve, F.R.C.S., Mr. D'Arcy Power, F.R.C.S., Mr. Robert Campbell, F.R.C.S., Mr. Henry A. Whitelock, F.R.C.S., Mr. Geo. Heaton, F.R.C.S., and Mr. Wm. Thomson, B.S., F.R.C.S.

The following papers have been offered:

CAUTLEY, Edmund, M.D. Abnormal Ossification of the Parietal Bone in an Infant.
EWENS, John, L.R.C.P. The Necessity of Requiring a Full Course of Lectures on Children's Diseases and Attendance at a Children's Hospital as Part of the Medical Curriculum.
HEATON, Geo., M.B., F.R.C.S. A Successful Case of Splenectomy for Rupture of the Spleen, with a Note on the Consequent Blood Changes.
LITTLE, E. Graham, M.D. Night Terrors in Children.
MORGAN, G., F.R.C.S.E. Remarks on Tuberculous Adenitis.
PARKINSON, J. Porter, M.D. The Varieties and Causes of Cough in Children, with especial reference to Practical Treatment.
PRIESTLEY, J., M.D. Infantile Hemiplegia.
STILL, G. F., M.D. Observations on the Morbid Anatomy of Tuberculosis in Childhood.
SUTHERLAND, George A., M.D. On Birth Palsy with Disseminated Tremors.
SYMPSON, E. Mansel, M.D. The Treatment of Rickets in an Out-Patient Department.

J. PHARMACOLOGY AND THERAPEUTICS.

Small Dining Room, Freemasons' Club, 79, Commercial Road.

President: JOHN BUCKLEY BRADBURY, M.D. *Vice-Presi-*

dents: C. H. Watts Parkinson, M.R.C.S.; Samuel Goss, M.R.C.S. *Honorary Secretaries:* John Edward Harry Kelso, M.B., 67, Elm Grove, Southsea; William Tusting Cocking, M.D., 277, Glossop Road, Sheffield.

The subjects selected for discussion are as follows:

1. Intestinal Antiseptics and their Value. To be opened by Dr. Burney Yeo, and Dr. Vaughan Harley will follow with a paper on the subject. The following will take part in the discussion: Dr. Frank M. Pope, Dr. P. Watson Williams, Mr. J. Burdon, L.R.C.P., Professor W. Osler, M.D., F.R.S., and Dr. George Herschell.

2. Headaches and their Treatment. To be opened by Dr. T. Lauder Brunton, F.R.S. The following will take part in the discussion: Dr. C. W. Suckling, Dr. A. Haig, Dr. J. Dundas Grant, Dr. Donald MacAlister, Professor Clifford Allbutt, F.R.S., and Dr. George Herschell.

3. The Constitutional Treatment of Skin Diseases. To be opened by Dr. Robert B. Wild. The following will take part in the discussion: Dr. George Thin, Dr. J. C. M. Given, Dr. T. Churton, and Mr. J. Burdon, L.R.C.P.

The following papers have been offered:

Dixon, Dr. The Pharmacology of Cannabis Indica.
Scheff, Dr. E. (Vienna). *X*-Rays in the Treatment of Skin Diseases.
Sibley, W. K., M.D. The Therapeutics of Light and Heat.
Walsham, Hugh, M.D. Cases Treated by Erythrol Tetranitrate.

Dr. George Herschell will exhibit a new combined Galvanic and Faradic Battery for use in general practice, and also a New Apparatus for administering the Intragastric Needle-bath, also Apparatus for Washing-out the Stomach.

K.—Laryngology and Otology.

Board Room, Guardians' Offices, St. Michael's Road.

President: E. Cresswell Baber, M.B. *Vice-Presidents:* Josiah George Blackman, M.D.; Patrick Watson Williams, M.D. *Honorary Secretaries:* Herbert Tilley, M.D., 101, Harley Street, W.; Lyster Cole-Baker, M.D., Bayfield, Kent Road, Southsea; Thomas Arthur Munro Forde, M.R.C.S., 21, Clarence Parade, Southsea.

The following subject has been selected for discussion:

The Diagnosis and Treatment of Chronic Empyema of the Frontal Sinus. To be opened by Mr. Charters Symonds (London) and Dr. E. J. Moure (Bordeaux).

The following gentlemen have promised to take part in the discussion: Ernest Waggett, M.B., Macleod Yearsley, F.R.C.S., H. Scheppegrell, M.D. (Orleans), Sargent Snow, M.D. (Syracuse, N.Y.), W. Milligan, M.D., W. J. Nourse, F.R.C.S.E., Dr. Spiess (Frankfort), Dr. Costinu (Bucharest), Dr. Posthumus Meyjes (Amsterdam), Charles Warden, M.D., StClair Thomson, M.D., Mayo Collier, F.R.C.S., Guiseppe Nuvoli, M.D. (Rome), and J. H. Bryan, M.D. (Washington).

The following papers have been offered:

Bar, Louis, M.D. (Nice). Intralaryngeal Tumour and Nasal Exostosis (probably Tertiary Syphilitic).
Bobone, Dr. T. (San Remo.) Title not announced.
Bronner, A., M.D. The Use of Formalin in Atrophic Rhinitis.
Dench, E. B., M.D. (New York). The Diagnosis and Treatment of Epidural Abscess.
Downie, J. Walker, M.B., C.M. (Glasgow). On Syphilitic Ulceration of the Trachea.
Garnault, Dr. (Paris). Title not received.
Grant, Dundas, M.A., M.D., F.R.C.S. On Some Forms of Laryngitis consequent on Purulent Affections of the Nose.
Horne, Jobson, M.D. Pachydermia Laryngis.
Lacroix, P., M.D. (Paris). A new Apparatus for Inhalations: its application in the treatment of Tuberculous Laryngitis.
Lake, R., F.R.C.S., and Pollard, J., M.R.C.S. (1) Case of Exophthalmic Goitre cured by Removal of One Lobe of Thyroid. (2) Ossiculectomy for the Cure of Middle-ear suppuration.
Luc, Professor, M.D. (Paris). Observation on a Fatal Case of Frontal Sinus Empyema.
Malherbe, A., M.D. (Paris). Treatment of Chronic Suppuration of the Attic by scooping out (*Evidement*) of the Petro-Mastoid.
Melzi, Urbano, M.D. (Milan). Roentgen Ray Photograph of Needle in Subglottic Region of Child 6 years old.
Meyjes, Posthumus, M.D. (Amsterdam). Case of Accessory Thyroid Gland at the Base of the Tongue.
Milligan, W., M.D. (1) The Operative Treatment of Post-influenzal Suppurative Mastoiditis. (2) Two Cases of Malignant Degeneration of Originally Benign Nasal Polypi.
Moure, E. J., M.D. (Bordeaux). A Case of Acute Empyema of the Maxillary Antrum.
Newman, David, M.D. (1) Malignant Disease of the Pharynx and Œsophagus, with cases. (2) Adenoid Disease of the Vault of the Pharynx in its Relation to Tuberculosis in Children.
Rohrer, Dr. Fritz (Zurich). Anomalies of Development of the Auricle, with illustrative Photographs, Drawings, etc.
Röpke, Dr. (Solingen). Author's Method of Operation on Frontal Sinus.
Rosenberg, A., M.D. (Berlin). Consequences of Singers' Nodules.
Santi, P. de, F.R.C.S. Parathyroid Tumour causing Symptoms of Malignant Disease of Larynx and Œsophagus: Removal: Recovery.
Tansley, J., M.D. (New York). A new operation for the Correction of a Deviated Septum.
Thorne, Atwood, M.B. Laryngeal Vertigo, with an account of three new cases.
Waggett, E., M.B., B.C. Cerebellar Abscess secondary to Chronic Middle Ear Suppuration; Evacuation; Cure.
Yearsley, McLeod, F.R.C.S. Suprarenal Capsule in Rhinology.

L.—Tropical Diseases.

Committee Room, No. I, Town Hall.

President: George Thin, M.D. *Vice-Presidents:* Colonel Kenneth McLeod, M.D.; James Watson, M.D. *Honorary Secretaries:* Fleet-Surgeon John Tyndall, R.N., Tresco, St. Ronan's Road, Southsea; John Robert Stevenson Robertson, M.B., 5, Western Parade, Southsea.

The subjects arranged for discussion are as follows:

1. Psilosis or Sprue; its Relations (Etiological and Pathological) to other Forms of Tropical Diarrhœa, and its Treatment.

2. On Thermic Fever (so-called Siriasis), with Special Reference to its alleged Microbic Causation.

3. The Agency of Insects in Spreading Infections.

Amongst those who have consented to take part in these discussions are Dr. Thin, who will open the first subject, and Colonel Kenneth McLeod, I.M.S., the second, Major Ross, I.M.S., will open the discussion on the third. Major John Ritchie, R.A.M.C., will take part in the discussion.

The following also intend to take part in the above discussions or send papers: Dr. Patrick Manson, LL.D., F.R.C.P., Inspector-General A. Turnbull, M.D., R.N., Dr. W. J. R. Simpson, Mr. James Cantlie, F.R.C.S., Colonel Crombie, I.M.S., Fleet-Surgeon H. M. Ellis, Royal Marine Artillery, Dr. James Watson, Surgeon Andrews, M.B., R.N., Captain Hughes, R.A.M.C., and Surgeon Stalkartt, M.D., R.N.

The following papers have been offered:

Andrews, Surgeon, O. W., R.N. Antivenene.
Childe, C. P., F.R.C.S. A Case of Bilharzia Hæmatobia with Specimens.
Hughes, Captain, M. L., R.A.M.C. The Geographical Distribution of Undulant (Malta) Fever.
Manson, Patrick, M.D. Filaria Periodicity.
Stalkartt, Dr. Blackwater Fever.
Yarr, M. T., Major, R.A.M.C. A Further Contribution to the Study of Malarial Eye Affections.

Reception Rooms.

The Lower Albert Hall, Commercial Road, will be opened on Monday from 4 P.M. to 9 P.M., July 31st, and on Tuesday, August 1st, and the following days at from 9 o'clock to 6 P.M., for the issue of tickets to members and for supplying all necessary information. It is particularly requested that all members on their arrival will at once proceed to the reception room, Lower Albert Hall, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult list of lodgings, hotels, etc.

Members should book to Portsmouth Town Station for the Reception Room and most parts of Southsea; and only book to Southsea Station when they know their destination is at East Southsea.

Special Railway Arrangements.

The following railways have consented to convey members and their wives at a fare and a quarter for the return journey from July 29th to August 7th:

The London and South-Western Railway.
The London, Brighton, and South Coast Railway.

Arrangements, which are not yet completed, are being made with some of the other railway companies for a reduction of the fares for the 10 days.

Clubs.

The Freemasons' Club will make honorary members of all members attending the meeting of the Association for the week.

The Royal Naval Club, the Royal Portsmouth Corinthian Yacht Club, and the Minnesingers make honorary members for the week of fifty of the members of the Association only, and these will have a special card issued to them.

As the Association meeting is held during Cowes week, no honorary members will be admitted to the Royal Albert Yacht Club, as a large number of its own members are expected that week.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 1ST, 1899.

9.30 A.M.—Meeting of 1898-99 Council. Town Hall, Council Chamber.
11.0 A.M.—Church Service; Sermon by the Right Reverend the Lord Bishop of Winchester, at St. Mary's Portsea.
11.0 A.M.—Special service, High Mass, and sermon by the Right Rev. Monsignor Cahill, at St. John's Roman Catholic Cathedral, Edinburgh Road, Portsmouth, for the Roman Catholic members of the British Medical Association.
2 P.M.—First General Meeting. Town Hall, Large Hall. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2 P.M. Town Hall, Large Hall. President's Address.

WEDNESDAY, AUGUST 2ND, 1899.

9.30 A.M.—Meeting of 1899-1900 Council, Town Hall, Council Chamber.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Second General Meeting. Town Hall, Large Hall. Address in Medicine by Sir Richard Douglas Powell, Bart., M.D.
9 P.M.—Reception by President and Reception Committee on Clarence Esplanade Pier.

THURSDAY, AUGUST 3RD, 1899.

9.30 A.M.—Meeting of Council. Town Hall, Council Chamber.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Third General Meeting. Upper Albert Hall, above the Reception Room, Albert Hall. Address in Surgery by Professor Alexander Ogston, M.D.
7 P.M.—Public Dinner of the Association. Town Hall, Large Hall.
9 P.M.—Reception by Ladies Committee, who will receive the guests in the Town Hall, Mayor's Reception Room.

FRIDAY, AUGUST 4th, 1899.

10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting. Upper Albert Hall, above the Reception Room. Albert Hall.

SATURDAY, AUGUST 5TH, 1899.

Excursions.

Honorary Local Secretaries.

C. C. CLAREMONT, M.D., 57, Elm Grove, Southsea.
C. P. RUEL, M.R.C.S., L.R.C.P., Cromwell House, Kent Road, Southsea.

ANNUAL MUSEUM.

The Annual Museum in connection with the sixty-seventh meeting of the British Medical Association will be arranged in the following Sections:

SECTION A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

SECTION B.—Instruments comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

SECTION C.—Books, including diagrams, charts, etc.

SECTION D.—Sanitary Appliances and Ambulances.

A fine and well-lighted hall will this year be utilised for the purposes of the Museum. This room is 150 feet in length and 60 feet in width, and is in close proximity to the Reception Room. Section D will be held in the Swan Street Board School, a short distance from the Drill Hall.

H. RUNDLE, F.R.C.S., *Chairman*,
13, Clarence Parade, Portsmouth.
R. EMMETT, M.R.C.S., L.R.C.P.,
Winton House, North End, Portsmouth.
JAMES MCGREGOR, L.R.C.P. & S.Edin.,
9, St. Mary's Crescent, Portsmouth.

PATHOLOGICAL MUSEUM.

Specimens of interest for exhibition in the Museum should be forwarded, addressed to the Secretary of the Pathological Museum, British Medical Association, Boys' School, Seaman's and Marines' Orphan Home, Portsmouth, during the last week in July; and a brief description of each exhibit will be inserted in the Museum catalogue. Secretary of the Pathological Museum, A. Bosworth Wright, M.R.C.S., L.R.C.P., 83, Kingston Road, Portsmouth. All specimens must be mounted ready for exhibition.

CORRESPONDENCE.

THE ROYAL MEDICAL BENEVOLENT COLLEGE, EPSOM.

SIR,—At the annual general meeting of the members of the South-Eastern Branch held at Folkestone on June 28th, a sum of twenty-five guineas was voted to each of the two great charities of the profession, the British Medical Benevolent Fund and the Royal Medical Benevolent College. Such assistance is most valuable, not only in itself, but because the members present by their vote emphatically state that, in their opinion, the charities are doing good and most necessary work. Another good result sometimes accrues; the claims of these charities are brought home to the consciences of members, and they recollect that they themselves are not subscribing to help on such admittedly good and necessary work. I may mention that there are seventy Branches of the British Medical Association, but only sixteen of these have ever contributed to our funds, and only four out of the sixteen subscribe annually.

The large and increasing demands made by the metropolitan hospitals for pecuniary assistance are increasing very materially the difficulty experienced by the Council of the College in obtaining sufficient funds to meet the necessary expenses attendant upon the upkeep of their pensioners and foundation scholars. It has been requisite in consequence from time to time to make application to individual members of the profession.

A correspondent from one of the northern counties assigns as a reason why he should not subscribe, first, because Epsom College is so "distant"; secondly, because there are so many institutions having a claim upon the pockets of medical men nearer home.

This latter reason is an old one, very familiar to me. The first one is quite new. How is it to be answered? Perhaps I may be allowed to draw attention to the coincidence that at the last election for this "distant College" out of 58 candidates no less than 15 per cent. either lived in this northern county or had been associated with the county through the practice of either husband or father.

Far be it from me not to acknowledge most gratefully subscriptions coming from a small knot of medical men practising in this county; but in the face of the coincidence I have brought forward I would fain hope that more support to the College may be forthcoming. As I have already stated, some Branches aid us, but I hope the number of these may be augmented. Half a crown subscribed annually by every medical practitioner would place this charity in a sound position, and these constant appeals for money would no longer be necessary.

This ever-present risk of limitation of the charity has a most crippling effect on the work of the Council, the more so as they know—none better—how great the need is, not for a limitation, but for an extension, of the relief they are elected to administer.—I am, etc.,

C. HOLMAN,
Treasurer, Royal Medical Benevolent College.
37, Soho Square, W., July 2nd.

MEDICAL APPOINTMENTS IN WORKHOUSE INFIRMARIES.

SIR,—A correspondent in your last issue, styling himself "Verax," gives a very exalted account of the recent innovation of the Bradford Guardians in the appointment of medical officers to the workhouse infirmary. From him it would appear that the board is inaugurating a large and liberal reform greatly to the advantage of its pauper patients; that to do so it is spending more than twice the money it did formerly, and that the local profession show the greatest ignorance of recent Poor-law reforms and are foolishly unconscious of their own interests, seeing that by the new arrangement five medical practitioners are employed, whereas the total strength of the staff under the old was but two. There may however be another side to the question, and perhaps on looking a little more closely into the matter the public spirit of the Bradford Board may not appear quite so commendable, nor the local profession quite so blind to their own interests and the well-being of the public.

I am quite ready to admit with "Verax" that the administration of the Poor Law in the Bradford Workhouse Infirmary in the past left much to be desired. Where I join issue is as to the means taken by the Bradford Board to better that state, that is, as to the soundness of the reforms initiated. A Poor-law infirmary is not a hospital; it is a necessary adjunct to a workhouse and its object is to deal with paupers whose physical condition prevents them from being conveniently attended to in the workhouse. It widely differs both in its origin and its *raison d'être* from a hospital. The latter is supported by charity, the former by rates; to the hospital necessarily go difficult and unusual cases of disease, for only in that way can patients among the poorer classes obtain the services of the higher class of consultants. In workhouse infirmaries on the other hand, more rarely are found cases requiring special professional skill; the great majority of the patients suffer from chronic ailments of an ordinary character. Where special treatment or a difficult operation is required, a pauper can be, and usually is, transferred to a hospital for that purpose, so that there is no reason in the world to blindly copy hospital arrangements in infirmaries. It would rather appear more in accordance with common sense to differentiate them in both institutions according to the special requirements of each.

I fail to see why, if in the past the sick paupers at Bradford were not properly attended to owing to insufficiency of the resident medical staff, it is necessary to revolutionise that staff by regulating it according to the hospital system. It is by no means certain that in this way the treatment of the sick pauper will be improved. "Verax" gives no reason why it should be, except a statement that the new Bradford system has been found to work efficiently in certain midland towns. What does he mean by this: "It is true that at some places there is a medical superintendent with assistant medical officer, but this system for its success possesses so many doubtful factors that modern Poor-law administrators do not favour it"? Who are the modern Poor-law administrators who do not favour it? There may be differences of opinion, but there are a great many more large towns throughout the country where the workhouse infirmary is entirely administered by a resident staff, than in which the system of appointing an honorary visiting staff is in force.

Poor-law medical administration is as much a special department as the Army and Navy Medical Department, and it is not easy to see why a medical or surgical consultant should make a better Poor-law official than a man who, having entered as a junior, has in the course of time practically qualified himself for the post of medical superintendent. What, too, is meant by the term "honorary" surgeon or physician to a Poor-law infirmary? Such officers can be nothing more than salaried Poor-law officials, and as such subject to all the orders and regulations of the Local Government Board, and it is difficult to see how all these can be made applicable to this new order of officials

Again, "Verax" asserts that the new system is not cheaper than the old, but involves considerably greater cost. The cost has to be borne by the ratepayers, and they may well ask for a better reason to warrant the extra burden than fancied good to be derived from an assimilation of workhouse infirmaries to public hospitals—a result which, even were it desirable, could never be attained; for the superior class of physicians and surgeons to whom the high position of our hospitals is due would never consent to become underpaid Poor-law officials, and it is very questionable whether the professional ability of consultants who could be persuaded to take such posts would exceed that of the old medical superintendent.

The practical outcome of the new system will be that to deal with emergencies as they arise there will be one or more junior resident practitioners, whose duty it will be to send at all hours of the day or night for the assistance of one or other of the consultants, instead of an old and experienced resident chief, who by years of practice in this particular service has become fully competent to deal with all such emergencies on the spot. The Bradford pauper may well pray to be delivered from his friends, and it is not at all unreasonable that the local profession should manifest disapprobation at such experiments in the Poor-law Medical Service, notwithstanding the assurance of the writer that in this way occupation will be found for five practitioners where before only two were employed.—I am, etc.,

MAJOR GREENWOOD,
Member of Council of Poor-law Medical Officers' Association.
Hackney Road, N.E., July 2nd.

MEDICAL AID ASSOCIATIONS AND THE GENERAL MEDICAL COUNCIL.

SIR,—In the recent correspondence under the above heading stress is laid on the fact that the General Medical Council have, by stigmatising the medical aid societies and not the friendly societies, made a distinction where there is no difference. The wording of the resolution, "That the Council strongly disapprove of medical practitioners associating themselves with medical aid associations by which systematic canvassing and advertising for the purpose of procuring patients are practised," is probably responsible for this opinion; but a reference to the discussion, and especially to the report to the Council of the Medical Aid Associations Committee,[1] makes it evident that the Council, by the above definition, intended only those associations which were in fact commercial undertakings, and not simply mutual benefit societies. It is unfortunate that the resolution was not worded to include this more ample definition, for the objection to these associations is not only their systematic and promiscuous canvassing for members—(not "patients")—but the fact that their object in obtaining members is not to benefit the members themselves, but to enable the association to yield a pecuniary profit to its shareholders; that the medical man is made an advertisement, simply a bait for clients, the tin pot that is given away with a pound of tea. There is justification for a medical man contracting to give his services to a mutual benefit society, but none for putting himself in the false position of doctor and bonus combined.

Your correspondents also state that canvassing for members exists among friendly societies as it does among medical aid societies. The members of a friendly society naturally and very properly endeavour to increase their numbers, but they do not canvass in the "systematic" manner specified in the resolution of the Council.

The objections to both these classes of societies, that they underpay their medical officers, and admit to membership improper persons, are often mixed up with the previous objections, but they are entirely different, and should be kept apart. They constitute what is practically a commercial question between the societies and their medical officers; but the canvassing, the advertising, and the commercial objects of the medical aid societies give rise to a question of medical ethics to be decided by the profession only.

Lastly, the Council has been blamed for merely expressing a "pious opinion" by the above resolution, and for not at once taking more determined action: but surely it is more just to those who now hold these objectionable appointments that they should have some sufficient warning of what is to come, before the Council commit themselves to more decided action. Much the same course was taken with regard to unqualified assistants, and it was only after a considerable period of warning that the Council took the decided step it did, and which was even then decried as too precipitate and inconsiderate.—I am, etc.,

Freshford, July 2nd. CHAS. E. S. FLEMMING.

SIR,—I should like to make a few observations in answer to the letters of "Justitia" and "A Club Surgeon."

In the first place both your correspondents will allow that the profession have reason to be grateful to the General Medical Council for passing such a resolution as they did with respect to the medical aid associations which are connected with industrial insurance companies. Whatever our opinion may be of the industrial insurance companies, we must be all agreed that members of an honourable profession should not lend their names to companies which induce people to forsake their regular medical attendants and join the *clientèle* of the medical aid doctor. If we are not true to each other, how can we possibly expect the outside world to be true to us? The *modus operandi* of the trading medical aid associations can hardly commend itself to any self-respecting member of the medical profession. In all our large towns the income of

[1] BRITISH MEDICAL JOURNAL, i. 1899, p. 1413.

the majority of the doctors consists chiefly of contributions from members of the working classes; and those doctors who have had much experience in practising amongst that particular class will tell you that, as a rule, it is a pleasure to attend on them. They give very little trouble, and they are more anxious to discharge their liabilities than are many persons who live in grander houses and move in more superior circles. Such people remain constant to their family doctor until the insurance canvasser comes round, and points out how advantageous it would be to them to pay a few pence per week in order to ensure both medical attendance and life insurance at the same time for themselves and their families. Under the influence of the persuasive eloquence of the canvassers many persons succumb, and the family doctor hears no more of his old patients until some really serious illness occurs in the household, and then he learns to his disgust that his quondam patients have been paying their halfpence a week into the funds of the London and Manchester, or some other industrial assurance company for a year past.

This is no fanciful story, but is drawn from one's personal experience. I am willing to admit without demur that reforms are wanted in the "club" system, but what I would like to point out to the profession at the present moment is the desirability of falling in with the views of the General Medical Council and organising members so that we may present a united front when the time comes for discussing our grievances with the delegates of the friendly societies. I hope, therefore, that those gentlemen who hold office in friendly societies will lose no time in meeting together and discussing the proposal of the General Medical Council to form a Board of Conciliation.

Although I have other and pressing subjects to deal with, yet I am prepared to take the initiative in this matter if it should be considered desirable by my *confrères*.—I am, etc.,

Cardiff, July 1st. T. Garrett Horder.

THE F.F.P.S.G.

Sir,—In the letter from the Secretary of the Faculty of Physicians and Surgeons of Glasgow, published in the British Medical Journal of June 17th, he states, *inter alia*, that:

> Till a comparatively recent period the Examination in Operative Surgery was held in the Faculty Hall, an ample supply of instruments being provided there for the purpose. On the occasion referred to—of the examination of a candidate in January, 1898—it was found more convenient to hold it in one of the medical schools outside.

We beg to state, on the other hand, that on three consecutive occasions on which the examination has been held in this College during the last half-dozen years, the necessary instruments were not supplied, and the operations set for the examinations were in consequence left unfinished.—We are, etc.,

Robert T. Kent, F.R.C.S.
James Whitson, M.D.

St. Mungo's College, Glasgow, June 29th.

COLONIAL DEGREES: REGISTRATION.

Sir,—On April 29th you were kind enough to publish a letter from me, stating that the General Medical Council, acting on the advice of Mr. Muir Mackenzie, had passed a resolution confirming the action of the Registrar in refusing to register the diploma of F.R.C.S.I. as an additional qualification on the Colonial List, and I stated then that I had appealed to the Privy Council on behalf of the applicant.

The appeal, I am glad to say, has been successful, and I have just received a communication from the Privy Council Office informing me, by direction of the Lord President of the Council, that the General Medical Council have intimated to his Grace that on June 6th they resolved to accede to the application and have directed the Registrar in future to register additional or higher qualifications on the Colonial List.

I have not yet received any intimation from the Registrar of the General Medical Council, but I see in the report of the proceedings that Mr. Muir Mackenzie stated that his first opinion was given without a full knowledge of the facts before him.

In my appeal to the Privy Council I did not in any way add to the application made to the General Medical Council, which I take it should have been submitted to Mr. Muir Mackenzie when his opinion was asked, as a refusal to register a qualification might and probably has inflicted injury on an applicant legally entitled to registration.

Thanking you and the members of the General Medical Council who assisted in effecting this registration.—I am, etc.,

Edinburgh, June 29th. Charles Frederick Knight, M.D.

THE EXTIRPATION OF THE MOSQUITO.

Sir,—In the British Medical Journal of July 1st you published a lecture by Major Ronald Ross on "the possibility of extirpating malaria from certain localities by a new method." This method he states thus: "(*c*) In order to obliterate pools which breed dangerous mosquitos, they must be filled up or drained away." No allusion is anywhere made in the lecture to the use of kerosene in destroying mosquito larvæ, to which attention was called a few months ago in an interesting article in the Journal.

At Mentone we have, I think, no malaria, but we have been glad to test your suggestion in order to remove, if possible, the mosquito pest from the district, and make October and November more peaceful months. These mosquitos chiefly multiply in the large artificial tanks kept for watering the vineyards and olive yards; the district itself is very dry and free from puddles and marshes. Near a villa occupied by Sir Samuel Hayes last winter there was a small tank about 8 feet by 6 of superficies, and 6 or 8 feet deep, and adjacent to it another tank of at least 100 times its capacity. A bucket of water from the smaller would contain 400 or 500 active larvæ. By adding 5 drops of petroleum Sir Samuel found he could kill all the larvæ in an hour or two. He then poured 1 tablespoonful of petroleum on the smaller pond, and in a few hours no larvæ could be drawn from it; all were dead. The adjacent larger pond contained no larvæ, evidently because of the presence of fish in it.

Commandant Hanbury, of La Mortola, near Mentone, found that the addition of carp to the ponds in his grounds greatly reduced the number of mosquitos which visited his house.

I have little doubt that in cases where the obliteration of pools suggested by Major Ross should prove impracticable or be long delayed, they can be rendered harmless provisionally by fortnightly or even monthly additions of small quantities of petroleum, which sooner or later spreads as a thin film over them.

A small Committee, consisting of the Mayor, the medical men, and a few influential residents, has been formed at Mentone to carry out this plan, and I hope to report later that mosquitos there are little more than a memory.—I am, etc.,

Brides-les-Bains, Savoie, July 3rd. D. W. Samways.

ANTITYPHOID INOCULATION: A PERSONAL EXPLANATION.

Sir,—In view of the fact that Mr. Haffkine, after dealing with his own anticholera and antiplague inoculations, brought forward also the subject of antityphoid inoculation in his discourse in the Royal Society, and in view of the fact that I gather from various sources that Mr. Haffkine's speech and the subsequent discussion as it is printed in the British Medical Journal of July 1st, have to some conveyed the impression that the antityphoid inoculations were, like the anticholera and antiplague inoculations, introduced by Mr. Haffkine, I desire with your permission to put myself right on this matter with those of your readers who may have connected me in their minds with the antityphoid inoculations, and who may on reading your report have been led to infer that I ought to have brought Mr. Haffkine's name prominently forward in connection with these inoculations.

The facts are briefly these. Some six years ago Mr. Haffkine, who was then about to proceed to India, suggested to me in the course of conversation that it would be possible to elaborate a method of vaccination against typhoid on the lines of his anticholera inoculations. Mr. Haffkine at that time laid particular stress on the use of living as distinguished from dead cultures as vaccines.

After carefully weighing the risks of employing living cultures, I decided that they were too serious to be faced. I have since in my own person been able to learn that that decision was not an unwise one. Three years afterwards, in 1896, when

it became possible to demonstrate that the inoculation of dead typhoid cultures led to the development of protective substances in the blood of inoculated persons, I, in conjunction with Major D. Semple, R.A.M.C., on basis of that fact, elaborated a method of vaccinating by means of dead bacteria.

A few months after the publication of my first experimental antityphoid inoculations a similar proposal for vaccinating against typhoid by inoculations of dead typhoid bacteria emanated from Pfeiffer and Kolle in Germany.

Six months after the publication of my first experimental antityphoid inoculations with dead bacteria, and two or three months after the publication of Pfeiffer and Kolle's experimental inoculations with similar dead cultures, Mr. Haffkine proceeded to his first antiplague inoculations with dead bacterial cultures.

Finally, in the full description of our method of antityphoid inoculation, which Major Semple and I published in the BRITISH MEDICAL JOURNAL of January 30th, 1897, I placed it on record that Mr. Haffkine had in 1893 suggested to me that it might be possible to introduce an inoculation against typhoid. I did not place that suggestion on record with the view of acknowledging any intellectual debt, for Mr. Haffkine's suggestion, so far as it could be said to be a definite suggestion, had not borne fruit. I placed the suggestion on record as an acknowledgment of the fact that I had been influenced to seek for a method of vaccination by the zeal and tenacity of purpose which Mr. Haffkine had evinced in carrying through his anticholera inoculations. I still take up exactly that same attitude.—I am, etc.,

Netley, July 2nd. A. E. WRIGHT.

THE NOMENCLATURE OF OPERATIONS UPON THE ALIMENTARY CANAL.

SIR,—The record by Mr. W. H. Horrocks[1] of an operation upon the rectum in all respects similar to the well-recognised pyloroplasty of Heineke and Mikulicz, tempts me to plead again for some recognition of a humble effort I have made elsewhere[2] to revise the present confused nomenclature of operations upon various parts of the alimentary canal.

The general anatomy of this region, as a whole, together with the similarity existing between the many operations now performed upon its different sections, afford reasons for considering some means of simplifying the existing surgical vocabulary. In accordance with the classification I have proposed, the operation above referred to would be termed proctoplasty. We should then have a complete list of terms all practically signifying the same operation, only on different sections of the canal. Thus this class would comprise: pyloroplasty, enteroplasty (which may be subdivided into duodenoplasty, jejunoplasty, ileoplasty), coloplasty, and proctoplasty.

It would unduly lengthen my letter to introduce the scheme of complete classification, but I may add one more illustration to make clear my meaning. Take then, as an example of another class of operations, that of œsophagostomy. For all practical purposes, whenever the affix "ostomy" is used the operation should be the same, with just the difference peculiar to the region operated upon. Thus the terms gastrostomy, duodenostomy, enterostomy (comprising jejunostomy and ileostomy), colostomy, proctostomy would then come to have a practical significance similar to that already understood by the term œsophagostomy. The terms ending with otomy, ectomy, orrhaphy, pexy, etc., should also be so applied that the knowledge of one of necessity embraces a knowledge of the others.

The advantage to the student of adopting some such rational classification as here proposed would be very great. Numerous as are the terms at present in vogue, their number would in one sense be largely reduced if it were clearly understood that a certain affix carried with it the same practical force when applied either to the gullet, the stomach, or the bowel. Nothing can be more confusing than the lax way in which such terms, for instance, as "colostomy," "colotomy," and "artificial anus" are used. At a recent meeting of the London Pathological Society it was quite impossible for the reader of the report in the BRITISH MEDICAL JOURNAL to understand what the contributors meant by the two expressions, "colotomy" and "artificial anus." In one instance it appeared that the operation performed was in reality colostomy.

My scheme of classification is, I know, far from perfect; but I am led to believe that it is on the right lines. For the students' sake, not to speak of our own as practical surgeons, I trust somebody may yet be able to improve it, and give it just that impetus and prominence which it is beyond my power to do.—I am, etc.,

Glasgow, June 5th. A. ERNEST MAYLARD.

[1] BRITISH MEDICAL JOURNAL, June 3rd, 1899, p. 1331.

[2] *The Surgery of the Alimentary Canal*, p. 519; and *Annals of Surgery*, 1897, vol. xxvi, p. 289.

THE GENERAL MEDICAL COUNCIL AND GENERAL PRACTITIONERS.

SIR,—It is somewhat late in the day to point out the inconvenience which has been caused to the general practitioner by the action of the General Medical Council in the abrupt abolition of unqualified assistants. In my opinion the General Medical Council is composed of gentlemen who are ignorant of the requirements of the general practitioner. They declared it infamous conduct to employ a much-needed individual, the unqualified assistant, before the supply of that which was to take his place—namely, the qualified assistant—was sufficient to meet the demand, and, I will go so far as to say, was equal to the practical standard of the unqualified assistant.

I may say that I employed qualified assistants only, years before the General Medical Council ruled the employment of unqualified men as infamous. But at that time I could obtain the services of a qualified man who knew his work and could be trusted, whereas now, it is almost impossible to get an assistant, and when one is engaged, the principal has not only to pay him, but has to teach him nearly the whole of his practical work, and has, moreover, to allow him the privilege of learning his profession at the expense of his own private patients—a process by no means appreciated by the latter. I have had both qualified and unqualified assistants, and I have no hesitation in saying that, comparing the two, it is greatly to the disadvantage of the present recently-qualified individual. Yet even the supply of the latter—almost useless at first except as a stop-gap—is exceedingly limited.

I have advertised for an indoor qualified assistant (no bookkeeping, no dispensing, no clubs, and at a fair salary) without receiving one single application. I have written to the best medical agents in London and the provinces, their reply being in all cases that they have not one single qualified assistant on their lists. Yet the General Medical Council says that the general practitioner is to employ only a qualified man. Let the members of the General Medical Council communicate with the agents themselves, and they can easily find out whether my statement is true or not. The truth is, the demand for *locum tenens* and assistants far exceeds the supply, and the state of affairs is daily getting worse. Of the last assistants I have had, two tried to put on the midwifery forceps with the concavity towards the sacrum, one did not know what was the matter with a man suffering from an ordinary attack of hæmorrhoids, whilst another who came to me as a *locum tenens*, in dispensing a mixture, tried to measure ℥j of a solution of sodii bicarb. in the small scales by means of a ℥ij weight, but was finally non-plussed because he could not get the fluid out of the scale pan into the bottle. These statements may seem preposterous; nevertheless they are perfectly true, and are, as facts, preposterous. The old apprenticeship days were overstrained, but at least, when a man had passed his final, he was able to visit, attend midwifery, and dispense, which is more than many can do nowadays, either with satisfaction to the principal or safety to the patient. I should like the advice of the General Medical Council as to what course the general practitioner is to adopt who is not allowed to employ a practical and able unqualified man, and who although quite ready to follow regulations as to a qualified assistant is unable to obtain one. Considering that the Council is the power which adjudicates as regards practitioners and assistants, it is, I think, its duty to consider the best means of rectifying the present absolutely intolerable state of affairs which, I should think, exists in no other profession than the medical. I enclose my card.—I am, etc.,

June 27th. GENERAL PRACTITIONER.

MEMBERS' (R.C.S.) GOWN.

SIR,—Mr. Brindley James very properly calls attention to the desire on the part of Members of the Royal College of Surgeons to be granted permission to wear a distinctive gown. Doubtless such a favour would be appreciated by at least a large number of the Members. But what purpose would it serve? When could the gowns be used? Is it not well known that the great majority of university graduates in the profession seldom have occasion to appear in academic costume—so seldom, indeed, that I believe comparatively few of them possess the necessary garments, but have to hire from the makers when need be.

When the last Hunterian Oration was announced in the BRITISH MEDICAL JOURNAL, the advertisement stated that "Fellows' gowns and academic costumes *may be* worn on this occasion." When the oration was delivered not a single academic costume was to be seen, and only the President and two Vice-Presidents appeared in gowns. Surely this was a fitting occasion, with H.R.H. the Prince of Wales in the chair, for the appearance of distinctive costume amongst those entitled to wear it, and no doubt many Fellows and graduates would have appeared in such if the wording of the advertisement had been more in the nature of a request. As it was the intimation was not sufficiently powerful to overcome the modesty of Fellows and graduate Members.

By all means let us agitate for a gown; we have few enough privileges; but there ought to be some use for it.—I am, etc.,

July 1st. M.D., M.R.C.S.

THE NURSE OF THE PERIOD.

SIR,—Dr. Collingwood, I am sorry to see in the BRITISH MEDICAL JOURNAL of July 1st, throws cold water upon the efforts of certain well-meaning philanthropists who are endeavouring to help the deserving poor practitioner. In the neighbourhood of the schools which have been taken in hand by the London School Nurses' Society, a very large percentage of our work is already caused by compulsory attendance. When there is another inducement to send a child to school half dressed, unkempt, and unwashed ("wot's the bloomin nuss paid for?") we may hope to have a still further addition to our incomes. How much cheaper and easier (our East-end mother dearly loves the line of least resistance) than consulting a doctor to send off the child with a "touch of sore throat" for the nurse to diagnose and treat? Meantime, the anxious parent can spend the time and money in fortifying herself after the manner of her kind.—I am, etc.,

July 2nd. HOXTON G. P.

SHOULD DOCTORS BE ALLOWED TO DISPENSE?

SIR,—Apropos of your correspondent's letter in the BRITISH MEDICAL JOURNAL of June 24th, in which he states that it would be "impossible to pass a workable law" against practitioners dispensing their own prescriptions, I should like to point out that such a law is found perfectly workable in France, where no doctor is allowed to dispense medicines unless living more than 8 kilometres (5 miles) from the nearest chemist.

HENRY REYNOLDS BROWN, M.A., M.C., C.M.

Maldon, June 29th.

MEDICO-LEGAL.

MEDICINE IN THE EAST END.

ON June 28th, Mr. Wynne E. Baxter, coroner, held an inquest at Whitechapel Infirmary, concerning the death of Sarah Lipshitz, aged 11 months, the daughter of a restaurant keeper. The child was taken ill with measles, and Dr. Snowman prescribed, and then the mother sent for "Dr. Barnato of Russia," who also prescribed for the child.

Benjamin Barnato, of 9, Greenfield Street, Commercial Road, E., stated that he possessed no diploma qualifying him to practise medicine in England. He produced a number of documents and claimed to be entitled to practise as a doctor in Russia. Witness admitted prescribing the bottle of medicine produced, and, according to the report in the *Daily Telegraph*, he said that it contained "ferro phosphate and potass chloride."

The Coroner said: What do you mean describing this as Professor Barnato's great Russian vegetable discovery? They are minerals, both of them.

The witness replied: Oh, I write on the bottles. He is reported to have stated further that he went through "Ukah College, New York. They gave him the M.D. degree."

Dr. Jacob Snowman stated that the cause of death was asphyxia due to broncho-pneumonia supervening on measles. The medicine prescribed by Barnato had certainly not caused the child's death, but it was not suitable to the case.

The Coroner was informed by his officer that Barnato had a sign outside his house: "Dr. Barnato of Russia."

The jury, in returning a verdict of "Natural Death," requested the coroner to draw the attention of the Medical Defence Union to the facts of the case.

We are informed that the Union has communicated with Mr. Barnato, and has warned him against continuing to practise or using medical titles.

ALLEGED NEGLIGENT TREATMENT: VERDICT FOR THE DEFENDANT.

IN an action before Mr. Deputy Judge Lloyd and a jury at the Marylebone County Court on June 26th, the plaintiff, Mrs. Catherine Long, sued Dr. Walter Woodley Stocker for damages for alleged injury to three fingers of her left hand by reason of the negligence of the defendant.

From the evidence it appeared that the plaintiff on August 29th, 1898, while engaged in a laundry had her left hand squeezed in a rubber wringer. She immediately consulted the defendant, who finding no marks of bruising or crushing, but only a swelling of the metatarsophalangeal joints, applied a lotion to the hand and bandaged it. Plaintiff saw defendant on the following day and the pain and swelling were better, and he advised her to continue the lotion and bandage until the acute inflammation then present had subsided. The plaintiff did not call at defendant's house for some days after August 30th, but then called and saw Dr. Bardsley, Dr. Stocker's *locum tenens*, Dr. Stocker being absent on a holiday. After a careful examination of the hand by Dr. Bardsley he continued the course of treatment adopted by the defendant. The plaintiff saw Dr. Bardsley three times and then went to other medical men, and on the advice of one of the latter to St. Mary's Hospital.

Evidence having been given by the plaintiff, two medical witnesses were called who had treated her, one on September 13th and the other on February 16th, following the date of the accident. These witnesses agreed with the defendant's treatment, but thought that in addition splints should have been used. In cross-examination, however, they admitted that possibly splints might not have been necessary for six or seven days after such an accident as the plaintiff's.

Defendant also gave evidence and called Mr. H. Page and Dr. Bardsley, both of whom agreed with defendant's treatment.

The jury having retired to consider their verdict, subsequently found in favour of the defendant, at the same time expressing their sympathy with the plaintiff.

Judgment was accordingly given for the defendant, with costs.

Mr. Oliver appeared for the plaintiff, and Mr. H. Warburton (instructed on behalf of the London and Counties Medical Protection Society, Limited, by Messrs. Le Brasseur and Oakley) appeared for the defendant.

We have received a letter from Dr. Stocker expressing his sense of the courtesy, attention, and kindness which he received from everyone connected with the London and Counties Medical Protection Society. The case, he considers, affords another strong argument in favour of every medical man joining one of the medical defence societies.

VERDICT OF MANSLAUGHTER AGAINST AN UNQUALIFIED PRACTITIONER.

MR. BRAXTON HICKS on July 4th concluded an inquiry as to the death of Arthur Baker, aged 7, the son of a basket maker in Wandsworth, who died on June 23rd after being attended by an unqualified practitioner named Maguth, of Ferrier Street, Wandsworth. According to the report in the *Morning Post*, Dr. Charlesworth, who was called in at the last, described the medicine as irritating and useless, and stated that the boy would have recovered under proper treatment. The defendant, who described himself as a medical botanist and dietetic adviser, stated that he was a Doctor of Laws of the Cambridge University. He knew that that degree did not entitle him to practise medicine. He had had three years' experience at the London Hospital, which, however, was confined to dispensing. He had practised scientific botany for twenty-five years. In reply to the coroner he said he had not done any clinical work. He did not think that poor people would interpret the words "Dr. Maguth," which appeared on his window, to mean that he was a Doctor of Medicine. The jury, according to the report in the *Times*, found "That the deceased died from diphtheria; that he was attended by 'Dr.' Maguth; that he ('Dr.' Maguth) did not use sufficient skill to treat diphtheria; that his want of skill prevented him doing what was necessary; that he failed to recognise the case as one of diphtheria; and that his want of skill accelerated death." The Coroner said that amounted to a verdict of manslaughter against "Dr." Maguth, who was committed on the coroner's warrant, bail being allowed in one surety.

"MADAME FRAIN" AND "MRS. ADELE SMART."

AT the Worship Street Police-court on June 29th five persons—four men and one woman—were charged with having conspired together to incite divers persons—women—feloniously to administer to themselves divers noxious drugs, poisons, etc., with unlawful intent. One of the accused was described as a herbalist, and another as a medical botanist.

Mr. Muir, who prosecuted for the Treasury, according to the report in the *Times*, stated that the charge arose out of the connection of the accused with a business carried on in Hackney Road under the name of Madame Frain. Advertisements were issued through the press, or by means of pamphlets or handbills distributed by women dressed in the uniform of nurses, or sent through the post and otherwise. He submitted that the object of the bills and literature was to incite the taking by women of mixtures and drugs, pills, etc., vended at the shop in Hackney Road. It was immaterial that the drugs were not noxious, or were valueless for the purpose suggested. It might be that they would effect the purpose the women taking them intended, perhaps by causing excessive hæmorrhage, and he would be prepared to prove that death resulted in one instance. It would be no answer to say that the drugs were not calculated to have the effect the women supposed. To make the accused liable it was enough that the advertisements intended

to suggest that they were, and that the women thought so and acted so. The prisoners were remanded and admitted to bail.

At Wolverhampton on June 15th a man named Jesse Mason was charged with having sent to a single woman residing at Wolverhampton a certain drug for the purpose of bringing about an unlawful result. According to a statement made by the prisoner to Detective Martin, as reported in *Daily Chronicle*, he had purchased the business about two years ago and carried it on under the old name of Mrs. Adele Smart.

Evidence was given by Dr. Alfred Bostock Hill, public analyst, who, according to the report in the *Birmingham Argus*, stated that the dark powder supplied was powdered ergot of rye, and that the liquid also supplied was a compound.

The prisoner, who reserved his defence, was committed for trial.

FOREIGN DEGREES.

INQUIRER asks what action would be taken against a M.R.C.S.Eng., L.R.C.P.Lond., who holds the M.D.Brux., and styles himself on his name plate M.D., not adding the source of the degree.

*** We are advised that if the degree was obtained subsequently to June 25th, 1886, such a course of action would expose the user of the title to proceedings under Section XL of the Medical Act, although we regard it as most unfortunate that the law should interfere with the use of a foreign degree provided the holder of it is duly registered.

L.R.C.P.ED. asks if there is any risk of proceedings being taken against those registered medical men who, like himself, style themselves "Dr." on their plates and on their cards. Our correspondent adds that he holds the M.D.Brux., 1895, and the usual conjoint qualification.

*** Where, as in the case submitted, the practitioner holds a degree of a well-recognised university, we do not consider that there can be any objection to his styling himself "Dr. ——," even though his degree is not registrable.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 8s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

MAJOR R.A.M.C., who arrived home end of April this year, wishes to exchange with an officer who has about a year to complete his tour at the end of this year in any place. Address No. 2608, BRITISH MEDICAL JOURNAL, 429, Strand, W.C.

THE *MANUAL* OF THE ROYAL ARMY MEDICAL CORPS.

SURGEON-CAPTAIN R. R. SLEMAN (Portman Street, W.) writes: Surgeon-Major Matthews will be interested to learn that the new method of lifting wounded on stretchers was submitted by me, on behalf of the Volunteer Ambulance School of Instruction, through the usual channel in July, 1898, and was later on tested by two Boards of Army Medical Officers, approved by them, and adopted, with a minor alteration, in the present edition of the *Manual* for the Royal Army Medical Corps. It will be interesting to know why Surgeon-Major Matthews's "Scheme of Drill," which is said to be similar to that used in the new *Manual*, had never been previously adopted, although it was submitted as far back as 1893.

THE ROYAL REVIEW AT ALDERSHOT.

A CORRESPONDENT asks, very pertinently we think: Is there no Royal Army Medical Corps in Aldershot? His query is founded on the fact that in the district orders preceding the review there is not a mention of a Medical Corps, much less one bearing the title "Royal." In these orders there is a paragraph about "a medical officer, with stretchers," etc., but that is all. We suppose such a review was to demonstrate to the Sovereign the fitness of her army to take the field; if so, in all these elaborate details of divisions and brigades, are they to take the field without a medical service? Let the commandant at Aldershot explain.

THE VOTE OF THANKS.

R. writes: It has excited much surprise in Egypt and elsewhere that, while lieutenant-colonels and others were (very properly) mentioned by name in the vote of thanks accorded by Parliament to those engaged in the Omdurman campaign, the name of Surgeon-General Taylor (rank of major-general), commanding the Medical Service, was conspicuous by its absence. With all the recent clamour concerning the Army Medical Service, have we actually retrograded since Crimean days? In moving the vote of thanks in the House of Lords to the Army in the Crimea, the Duke of Newcastle, after alluding in flattering terms to the medical officers of the army, concluded as follows: "I must say, my Lords, if it had not been usual for Parliament to thank men such as these, I consider it is not wrong for a Minister of the Crown, in this House, to acknowledge their services."

Have the days of such generous recognition passed away?

*** Dr. Farquharson made a vigorous protest in the House of Commons, and Mr. Balfour a very lame defence. (BRITISH MEDICAL JOURNAL, June 17th, p. 1492.) But the protest will, we may well hope, not be without its effect.

PRESENTATION AT COURT.

MEDICUS writes: I have long wondered why, if the Director-General of the Naval Medical Service can present his officers at *levées*, the Director General of the Army Medical Service cannot do the same to his officers, but has to fall back on the Adjutant-General? Is it because he has no aide-de-camp or secretary to manage such business for him? The position of the Director-General A.M.S., as the head of a large body of officers and men requires to be improved.

THE DISTINGUISHED SERVICE ORDER.

THE Queen has appointed Captain James Willes Jennings, Royal Army Medical Corps, employed with the Egyptian army, to be a Companion of the Distinguished Service Order in recognition of services during the recent operations in the Soudan.

UNIFORM OF ROYAL ARMY MEDICAL CORPS.

IT was expected that some changes would be necessary in the uniform on the formation of the Royal Army Medical Corps; surprise is expressed that none have yet been promulgated. Medical officers are delaying getting new uniform in the prospect of such changes.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—HENRY D. STANISTREET, Deputy Inspector-General, to Haslar Hospital, in charge, July 12th; JOHN C. B. MACLEAN, M.A., M.B., Deputy Inspector-General, to the *President*, for service at the Admiralty, May 4th; CHARLES C. GODDING, Deputy Inspector-General, to the Royal Navy Hospital, July 12th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL W. E. SAUNDERS, C.B., is promoted to be Colonel to complete the establishment, June 14th. He was appointed Assistant Surgeon, April 1st, 1871; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1883; granted the rank of Lieutenant-Colonel, April 1st, 1891; and made Brigade-Surgeon-Lieutenant-Colonel, May 1st, 1895. He served in the Zulu war in 1879 (medal); in the Boer war in 1881; and in the campaign on the North-West Frontier of India in 1897-98 with the Tirah Expeditionary Force as Principal Medical Officer on the line of communication (mentioned in despatches, appointed a Companion of the Order of the Bath, and awarded a medal with two clasps).

Lieutenant-Colonel W. J. CHARLTON, officiating as Principal Medical Officer, Sirhind District, Punjab, is transferred to the home establishment.

ARMY MEDICAL RESERVE.

SURGEON-MAJOR J. DUNCAN, M.B., is promoted to be Surgeon-Lieutenant-Colonel, July 5th.

Surgeon-Captain W. K. LOVELESS, having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve, July 5th.

Surgeon-Lieutenant W. RICHARDSON, M.D., 7th Volunteer Battalion the King's Liverpool Regiment, to be Surgeon-Captain, July 5th.

INDIAN MEDICAL SERVICE.

COLONEL J. H. NEWMAN, M.D., Bengal Establishment, is appointed to officiate as Principal Medical Officer, Punjab Command, with the temporary rank of Surgeon-General, from May 21st.

Lieutenant-Colonel C. T. PETERS, M.B., Bombay Establishment, Civil Surgeon of Belgaum, and Deputy Sanitary Commissioner, Southern Registration Districts, is permitted to retire from the service from June 24th. He was appointed Assistant-Surgeon, April 1st, 1869, and became Brigade-Surgeon-Lieutenant-Colonel, February 26th, 1893. He was with the Zhob Valley Expedition in 1884, and in the Burmese campaign in 1885-7, receiving the Frontier medal, with two clasps.

Lieutenant-Colonel C. H. BEATSON, in medical charge of the 10th Bengal Lancers, is appointed Principal Medical Officer to the Kohat-Kurram Force, *vice* Lieutenant-Colonel A. S. Reid, who has been transferred to civil employment.

Brigade-Surgeon JOHN BENNETT, M.D., Bengal Establishment, died at Beau Désert, Jersey, on June 28th, aged 59. He entered the service as Assistant-Surgeon, March 31st, 1865; became Brigade-Surgeon, January 14th, 1889; and retired, September 26th, 1890.

THE VOLUNTEERS.

SURGEON-CAPTAIN I. S. JONES, West Kent (Queen's Own) Yeomanry Cavalry, has resigned his commission July 5th.

Surgeon-Lieutenant W. K. PAULL, from the 3rd Volunteer Battalion the Bedfordshire Regiment, is appointed Surgeon-Lieutenant in the 3rd Volunteer Battalion the Royal Fusiliers (City of London Regiment) July 5th.

Brigade-Surgeon-Lieutenant-Colonel S. M. HOPSON, 3rd Volunteer Battalion the Norfolk Regiment, resigns his commission July 5th. He retains his rank and uniform, vacating at the same time his appointment as Senior Medical Officer to the Norfolk Volunteer Infantry Brigade.

Surgeon-Major J. MEREDITH, M.D., 2nd Volunteer Battalion the Prince Albert's Somersetshire Light Infantry, is promoted to be Surgeon-Lieutenant-Colonel, and resigns his commission, retaining his rank and uniform July 5th.

Surgeon-Captain E. J. HUNTER, 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment, is promoted to be Surgeon-Major July 5th.

Surgeon-Lieutenant J. SHAW, M.D., 1st Bucks Rifles, is promoted to be Surgeon-Major July 5th.

Brigade-Surgeon-Lieutenant-Colonel T. L. GENTLES, 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment), resigns his commision July 5th. He is permitted to retain his rank and uniform, and at the same time vacates his appointment as Senior Medical Officer to the North Midland Volunteer Infantry Brigade.

Surgeon-Major J. DUNCAN, M.B., 3rd Volunteer Battalion the Manchester Regiment, is promoted to be Surgeon-Lieutenant-Colonel July 5th.

Mr. ALBERT E. MORISON, M.B., is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Durham Light Infantry July 5th.

OBITUARY.

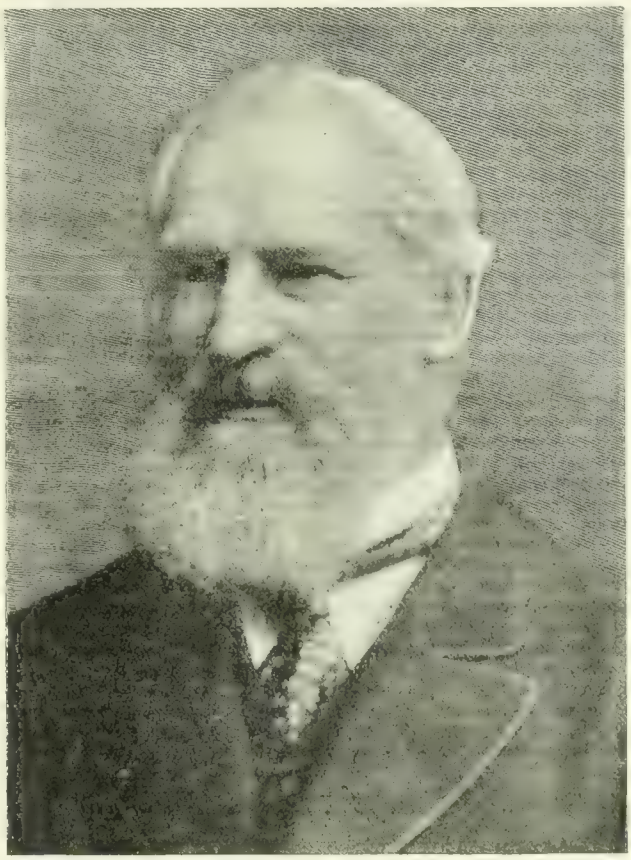
SIR WILLIAM HENRY FLOWER, K.C.B., F.R.S., F.R.C.S.,

Late Director of the Natural History Department of the British Museum.

SIR W. H. FLOWER, a member of our profession and once a hospital surgeon, but chiefly known as the great authority on the true use and management of scientific museums, died on July 1st at his residence in South Kensington. He was the son of Mr. Edward Fordham Flower, of Stratford-on-Avon, so well known to the philanthropist and to the lover of horses for his scathing condemnation of bearing reins.

Sir William was born at Stratford on November 30th, 1831. He studied medicine at University College, and qualified as M.R.C.S. in March, 1854. He then served as Assistant-Surgeon to the 63rd Foot in the Crimean War. He was in camp during the great storm of November, 1854, and suffered very severely from frost bite; on recovering, he distinguished himself for his care of the wounded, and received the medal with clasps for Alma, Inkerman, Balaclava, and Sevastopol, and the Turkish medal. He ever afterwards expressed a horror of war, and having learnt from experience that military surgery was ill-taught in the United Kingdom in those days, he wrote for the *Journal of the United Service Institution* a short essay "On the Importance of a Knowledge of the Elements of Practical Surgery to Naval and Military Officers," which attracted some attention in 1859, when it was published. One passage in this essay is sufficient to show how rudimentary were the ideas in those days about first-aid to the wounded:

> Major-General Sir Michael Creagh has informed me of a plan for carrying wounded men, which under some circumstances might be very useful. A single pole, eight or nine feet in length, branch of tree, oar, or anything of the sort that can be procured, is laid down beside him, and the man lashed firmly to it from head to foot with handkerchiefs, belts, clothes, or blankets torn in strips, etc.; it is then lifted up and carried on the shoulders of two men, or may even be dragged for some distance with one end resting on the ground by a single man.



After the war Flower became attached to the staff of the Middlesex Hospital. When Assistant Surgeon he produced a well-known surgical work of high merit, the treatise on Injuries of the Upper Extremity, in Holmes's *System of Surgery*. As were his later and purely scientific works, this paper is written in a clear literary style, and shows every sign of the most careful preparation of subject matter before it was written out for publication. In this treatise are incorporated Flower's valuable researches on the varieties of dislocation of the shoulder-joint, originally demonstrated before the Pathological Society. His diagrams of the two varieties of subcoracoid dislocation have been repeatedly copied into textbooks, so that they are familiar to every surgeon who has studied injuries to bones. The treatise was surgical as well as scientific; already, however, we see in its illustrations the natural tendency of its author to avail himself of museums.

The bias of Flower's mind was ever towards biology, even from boyhood. In 1861 he was elected Conservator of the Museum of the Royal College of Surgeons, a position which he retained till 1884. A better man could never have been selected for such an office. There were at the time, as the future was to prove, plenty of young surgeons as skilful as himself, and perhaps more fitted to teach and lecture on the subjects demanded of the medical student by qualifying bodies; but it may be confidently asserted that there was neither a doctor nor a pure scientist so suited for the management of a museum as Flower. He was orderly and business-like in his habits, virtues not always associated with high scientific attainments. Within a few years he rearranged the greater part of the collection, till the mere order of the specimens in itself instructed the visitor. The series of disarticulated skeletons of the principal genera of the Mammalia, where humerus is placed beside humerus, and pelvis beside pelvis, is one of the finest monuments of his labours as a conservator. He first arranged the annual Report of Additions to the Museum, so as to make it of real value. He thoroughly understood the tedious art of making a catalogue. In this kind of work he was aided, he admitted, by Sir James Paget, whose terse manner of describing the visible appearances in a specimen and adding a brief but intelligible clinical note has been a model to all pathologists ever since he first compiled the catalogue of the Pathological Series. That method was applied by Flower to the Comparative Anatomy Series, with necessary modifications. Great energy was also shown by the Conservator in arranging and enlarging the fine series of crania and skeletons of the different races of man, and his delight can be imagined when he succeeded in inducing the College to purchase in 1880 the splendid series of crania collected and scientifically catalogued by Dr. Barnard Davis.

No scientific chief was more liberal in his manner of utilising the labours of juniors. Younger men who worked at the College were offered every encouragement, and were allowed a free hand in developing the ample resources of the museum. By arrangement with the Zoological Society and by purchase from dealers, Flower acquired a large series not only of rare forms of vertebrate life, but also of typical forms invaluable for demonstration. These specimens were studied by himself and his juniors, or dissected or otherwise prepared by professional articulators and dissectors. Acting under his directions, Mr. James Flower, the articulator (a retired cavalry soldier, who died about twenty years ago), the highly skilled dissector, Mr. Pearson, and others, set up in the museum the fine array displaying the comparative physiology and anatomy of the animal kingdom so familiar to visitors.

Flower's original work lay to a great extent amongst the Cetacea and the Sirenia; he wrote several monographs on the osteology of the rarer species of these sea monsters. He was certainly a leading anthropologist. He played an active part in the researches on the brain of man and the higher apes which led to the famous Owen-Huxley controversy nearly forty years ago. As a teacher he worked best with his pen,

rather than "in chair with lively voice." His *Introduction to the Osteology of the Mammalia* is perfect in its way, its method being scientific, its statements accurate, and its style as light and readable as that of Mr. Luther Holden's *Human Osteology*. Of equally high merit is the *Introduction to the Study of Mammals, Living and Extinct*, which he prepared in conjunction with Mr. Lydekker.

Last year was published his *Essays on Museums*, a collection of speeches, lectures, etc., which conveniently reflect his views on the subject in which he was so experienced.

In 1884 Sir William Flower became Director of the Natural History Department in the British Museum. For several years he took an active part in enlarging, improving, and arranging the collection, with the aid, in this case, of an able staff of officers. But at length his health began to fail, and he was obliged to resign last year. On June 29th he was clearly sinking, and he passed peacefully away two days later.

Thus passed away an eminent scientist, who may justly be called the King of Conservators. We have no space to dwell on the numerous honours he received, on the Chairs which he held as President of learned societies, nor on his lectures as Hunterian Professor at the College, and his addresses at congresses, etc. He was deeply beloved by a wide circle of friends, including many of rank and fame. He could popularise science, but never vulgarised it; the justice of which criticism is demonstrated by his admirable *Fashion in Deformity*, on which we commented in the JOURNAL in May, 1880. Originally a lecture delivered at the Royal Institution, it is now included in Macmillan's *Nature* Series, and, though short, it is admitted by all competent authorities to be a standard work of reference on a highly-interesting subject.

Sir William Flower married the daughter of the astronomer, Admiral Smyth, F.R.S., a member of a gifted family distinguished in science. Lady Flower and all his family survive him.

THE death is reported of Mr. JOHN TERRY, of Bath. The deceased qualified as M.R.C.S. in 1844, and L.S.A. in 1845. Mr. John Terry was a very old member of the Bath and Bristol Branch of the Association, and for many years served on the Council. He was a constant attendant at the meetings, and took an active part in discussions relating to mental diseases in which, as proprietor of Bailbrook Asylum, he was most interested.

WE have to record the death of Mr. WALTER MAY, of Clincauns, Kilmoganny, Callan, co. Kilkenny, which occurred recently at his residence. He contracted typhus fever from some patients whom he was attending as dispensary doctor, and died after two weeks' illness. He was M.R.C.S.Eng., 1870, and L.R.C.P.I., 1871. Twenty-six years ago he was elected to the position of dispensary medical officer of his district, and he discharged his duties faithfully. He earned the respect and confidence of the people, and there is widespread sorrow for his tragic death.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE HOUSING PROBLEM IN LONDON.

AT the weekly meeting of the London County Council on July 4th a report from the Housing Committee illustrated some of the difficulties which that Committee is encountering in its endeavour to inaugurate a "forward policy" in dealing with the rehousing of persons displaced under the Act of 1890, and especially in dealing with the Government departments. It would appear that the Local Government Board is more obdurate and rigid in its requirements than the Home Office. Thus the Committee reported:

In providing accommodation for persons displaced by carrying into effect schemes under the Housing of the Working Classes Act, 1890, or in connection with street improvements, it has always been the practice of the Council and the Home Office to reckon each room as being sufficient for two persons. Recently, however, the Secretary of State informed us that he felt bound to reconsider this basis in view of the fact that a return issued in 1898 showed that each room in the Council's dwellings accommodated on an average 1.6 persons. At the same time the question of the size of the rooms was raised, as in some cases plans had been submitted to the Secretary of State, showing tenements having living rooms of less than 144 square feet of floor space, though in these cases the size of the bedrooms had been correspondingly increased. As these two questions appeared to us to be of great importance, we attended at the Home Office by deputation, and explained our views fully to Sir Kenelm Digby. The Secretary of State has now replied officially to the deputation, promising to accept a minimum size of rooms of 144 square feet for living, and 96 square feet for bedrooms, with the further understanding that minute deviations from the minimum, especially in the case of three-room tenements, which may be rendered necessary by the plan of a building or the configuration of the site upon which it is placed, will not be noticed. As regards the number of persons to be deemed to be accommodated, after hearing our arguments, and in view of the Council's resolution of November 29th, 1898, that housing accommodation should in all cases be provided for a number of persons equal to that of the working classes displaced, the Secretary of State has intimated that he is prepared to continue the basis of two persons per room heretofore in force.

On the other hand, in the case of rehousing on certain sites in Southwark, the Committee reports to the Council as follows:

On June 20th we called the attention of the Council to the fact that, although plans of dwellings proposed to be erected on the Green Street and Pocock Street, Southwark, for rehousing persons displaced under the Falcon Court scheme, had been sent to the Local Government Board so far back as February 24th, 1899, no decision upon them had then been received. The decision was received on June 22nd, when the Board intimated that the plans appeared to be objectionable by reason of the thinness of the partition walls proposed to be formed and by the omission of any equivalent for a party wall in the longer arm of the buildings. In order to avoid further delay we have given instructions for the partition walls to be thickened to 4½ inches, and for a wall in the longer arm of the building to be constructed 9 inches thick. These alterations will, we hope, meet the objections raised. The Board, however, further stipulate that the occupancy of the dwellings shall, as regards one-room tenements be restricted to a childless married couple, two girls, or two elderly persons of the same sex, and as regards two-room tenements to two adults (being a married couple) and two children under 10 years of age. We may remind the Council that the first of these restrictions is the same as that which the Board sought to impose on the East End Dwellings Company with regard to the dwellings they desired to erect on the Ann Street, Poplar, area, and to which the company attached such importance that they declined to proceed unless it were withdrawn. With regard to the second restriction, we may point out that this is far more stringent than anything that is insisted upon by the Home Office, who, it will be seen from the preceding paragraph of our report, will not object to such tenements being occupied by four adults. We report the facts of this case so that the Council may have full knowledge of the difficulties with which we have to contend in carrying out the rehousing provisions of schemes under the Housing of the Working Classes Act, 1890.

The Board is doubtless influenced by sound policy in endeavouring to secure a high standard of comfort and air space, but in view of the appalling overcrowded state existent in South and East and Central London, it is desirable that no red-tape officialism should unduly fetter the well-meaning efforts of local authorities.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,422 births and 3,427 deaths were registered during the week ending Saturday last, July 1st. The annual rate of mortality in these towns, which had been 16.5 and 16.3 per 1,000 in the two preceding weeks, further declined to 15.7 last week. The rates in the several towns ranged from 10.4 in Blackburn, 11.8 in West Ham, 12.7 in Birkenhead, and 12.8 in Halifax to 20.6 in Sheffield, 21.3 in Manchester, 21.5 in Liverpool, and 22.5 in Gateshead. In the thirty-two provincial towns the mean death-rate was 16.2 per 1,000, and exceeded by 1.3 the rate recorded in London, which was only 14.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the rate was equal to 1.6 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.3 in Hull and in Manchester, 3.6 in Salford, 4.6 in Burnley, and 4.9 in Portsmouth. Measles caused a death-rate of 1.2 in Croydon and in Salford, 1.7 in Manchester, and 1.8 in Burnley; scarlet fever of 1.4 in Burnley; whooping-cough of 1.1 in Portsmouth and in Cardiff, and 1.4 in Burnley; and "fever" of 1.3 in Brighton. The 71 deaths from diphtheria in the thirty-three towns included 25 in London, 10 in Sheffield, 7 in Portsmouth, 6 in Birmingham, 5 in Leeds, 4 in Leicester, and 3 in West Ham. Five fatal cases of small-pox were registered in Hull, but not one in London or in any other of the thirty-three large towns; and 2 small-pox patients were under treatment last week in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,161 to 2,367 at the end of the six preceding weeks, had further risen to 2,430 on Saturday last, July 1st; 302 new cases were admitted during the week, against 278, 262, and 335 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, July 1st, 971 births and 539 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 19.9 to 16.7 per 1,000 in the four preceding weeks, rose again to 17.7 last week, and exceeded by 2.0 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 12.0 in Aberdeen and 13.4 in Leith to 23.7 in Perth and 25.0 in Paisley. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Dundee and Perth. The 248 deaths registered in Glasgow included 11 from measles, 6 from scarlet fever, 2 from diphtheria, and 11 from diarrhœa. Four fatal cases of whooping-cough, 2 of measles, and 2 of "fever" were recorded in Edinburgh; and 4 deaths were referred to whooping-cough in Dundee.

MEDICAL NEWS.

Society for the Study of Inebriety.—Professor Sims Woodhead, who will take the chair at the meeting of this Society at the rooms of the Medical Society of London on Thursday next, at 4 P.M., will read a paper on Heredity. A vote of condolence on the death of the late President, Dr. Norman Korr, will be moved by Canon Barker.

We are asked to state that the Chelsea Hospital for Women will be closed to in-patients from the middle of July till the end of September in order that certain improvements may be carried out, including the enlargement and modernising of the operating theatre, a new hot-water service, and the installation of the electric light. The out-patient department will be closed during August only.

At the annual meeting of the Hospital for Epilepsy and Paralysis, Regent's Park, the Earl of Hardwicke, the newly-elected President, said that the institution must leave its present premises in April, 1900, as the lease would then expire. He specially dwelt on the fact that epileptics, unless insane, could depend only upon charity. It was proposed to erect a new hospital for fifty beds on a suitable site, and a sum of £8,000 is already in hand.

Closing of the New York Women's Medical College.—The Women's Medical College of New York will, it is announced, be closed at the end of the year, when the thirty-first annual commencement will be celebrated. When the College was established there was little or no opportunity for women to secure a medical education in the United States, but John Hopkins and Cornells Universities, having admitted women to their medical schools, it has been decided that a special medical school for women is unnecessary. The infirmary for women and children will be continued, and the buildings of the College will be used for graduate work.

Cremation in the United States.—The following statistics of the progress of cremation in the United States were given at a recent meeting of the New England Cremation Society, by Mr. John Storer Cobb, one of the founders of the Society. The first organised attempt at cremation in the United States was in New York in 1874, and the first crematory was erected, privately, in Washington, Pa., in 1876. It was not until 1885 that New York finally erected a crematory. From that time, until 1897, others were erected in different parts of the country, until the total number reached 25, of which one, in Middletown, Conn., has not been put to use, and one, in Washington, Pa., has gone out of use. More than one-half of these crematories are connected with cemeteries. Undertakers control three. From 1884 to 1898 there were 8,883 bodies cremated at these crematories. Of this number 1,699 were cremated last year. There has been a slow but steady increase.

International Psychological Congress.—The fourth International Congress of Psychology will be held in Paris, August 20th to 25th, 1900. There will be seven Sections, as follows: (1) Psychology in its relations with Anatomy and Physiology; (2) Introspective Psychology in its relations with Philosophy; (3) Experimental and Psycho-physical Psychology; (4) Pathological Psychology and Psychiatry; (5) Psychology of Hypnotism, Suggestion and associated questions; (6) Social and Criminal Psychology; (7) Animal and Comparative Psychology, Anthropology, Ethnology. The English, German, and Italian languages, as well as French, may be used in discussions. It is in contemplation to hold in connection with the Congress an exhibition of "documents" and instruments of precision relating to psychology. Persons wishing to take part in the Congress should communicate with Dr. Pierre Janet, 21, Rue Barbet de Jouy, Paris.

Charing Cross Hospital.—On July 5th, Sir Robert Finlay, Q.C., M.P., distributed the prizes gained during the past session by successful students. After expressing the regret felt by all present that the absence of Lord James of Hereford, who had looked forward to be present, was due to indisposition, Sir Robert Finlay referred to the vigorous condition of the hospital and school as shown in the report read by the Dean, and said that the new and enlarged hospital buildings which would soon appear could not fail to be a stimulus to the school and its students. He had been much interested at the time of the opening of the session, when Professor Virchow gave the Huxley Lecture. He had himself had the benefit of Professor Virchow's instruction in 1864 in Berlin, and in 1898 his teacher was so vigorous as to come and open the session at this school. Sir Robert Finlay then addressed himself to the students present, and wished them all success in the careers which lay before them. After a vote of thanks had been proposed by Sir Joseph Fayrer the proceedings terminated.

Homes for Soldiers.—Lord Pirbright has given a freehold site at Bisley towards the promotion of a scheme by which soldiers discharged from the service as invalids, or those who are permanently disabled, may find a home where they may be nursed till they so far recover their health as to obtain civil employment, or may be housed or cared for should their disablement be of a permanent nature. The plot of ground on which these "Cottage Homes of Rest for Discharged Soldiers" are to be erected is between five and six acres in extent. It is close to Pirbright Camp, and not far from Aldershot. The ground is very high, and in the pinewood district.

Tropical Medicine.—Mr. T. H. Hatton Richards, Colonial Secretary of the Gold Coast, in the course of a recent address at the Earl's Court Exhibition, observed that all those who hoped that the colony would develop in the future must take the keenest interest in the growth of Schools of Medicine of Tropical Diseases. He thoroughly approved of the plan, but thought that it would be greatly strengthened by the constitution of branch schools in each tropical British Colony and dependency. This would have the effect of bringing private practitioners in the colony into relation with the school. He thought that as far as the Gold Coast was concerned it would derive great benefit from the school at Liverpool, a port which received the worst cases in a comparatively short time.

Alcoholism in Portugal.—The attention of the Portuguese Government has recently been called by a member of the Chamber of Deputies, Senhor Lima Duque, to the increasing prevalence of alcoholism in Portugal. He showed that crime had increased in a corresponding ratio, and he quoted statistics showing that the number of crimes in Portugal had doubled within the last few years. He urged that a Government inquiry should be made on the subject, and measures taken to check the evil. The Minister of Finance, while admitting the magnitude of the evil, pointed out that the question of legislative interference with the drink traffic presented greater difficulties in Portugal than in most other countries, for its wine exports made a constant supply of good and cheap alcohol necessary for the trade.

The Medical Officers of Schools' Association.—On July 1st, upon the invitation of the Headmaster, the Rev. G. H. Rendall, D.D., about a dozen members of this Association visited Charterhouse School at Godalming, and in the course of the afternoon examined two of the boarding-houses, where the dormitories, class rooms, dining rooms, and lavatories were submitted to a minute inspection; the laundry, the museum, the carpenters' shop, the swimming bath, and the old and new sanatoria were also closely examined with much interest, whilst incidentally the chapel, hall and library, cricket fields, fives, racquets, and lawn tennis courts, and the rifle range were visited in due course. The visitors were most hospitably entertained at luncheon by Dr. and Mrs. Rendall in the music room. Dr. Rendall welcomed his guests in a humorous speech, to which Mr Howard Marsh, the President of the Association, briefly replied, and the visitors then proceeded to the serious work of the afternoon, the Headmaster most courteously accompanying the visitors on their round and affording every information at each stage. After a most instructive and interesting afternoon, Dr. C. W. Haig-Brown, the Medical Officer of the School and Vice-President of the Association, who had personally taken charge of the visitors from the first moment of their arrival, and had been indefatigable in explaining everything, and to whom, aided by Mrs. Haig-Brown, the success of the meeting was so largely due, brought a most enjoyable day to a close by entertaining his colleagues at tea at his own house.

CAMBRIDGE GRADUATES' MEDICAL CLUB.—The annual dinner of this club was held at Limmer's Hotel, London, on July 3rd. The President, Dr. Dickinson, was in the chair. There was an excellent attendance of members and their guests. The Chairman, in proposing the toast of "The Club," alluded to the great loss the club had sustained by the deaths of Professor Kanthack and of Dr. Hare, one of the oldest members of the club. Dr. Church, Sir W. Mac Cormac, and Professor Sims Woodhead were the guests of the club, and each of these gentlemen was called upon to respond to the toast of "The Guests," which was proposed by Sir Michael Foster. The Chairman's health was proposed by Dr. Ewart, and the proceedings terminated.

MEDICAL VACANCIES.

The following vacancies are announced:—

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £50, with board, residence, and laundry. Applications to the Honorary Secretary, 20, Chapel Street, Liverpool, by July 10th.

BOURNEMOUTH: ROYAL VICTORIA HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board. Applications to the "Chairman of the Committee," by July 15th.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon; unmarried. Salary, £100 per annum, with board and residence. Applications to the Secretary by July 10th.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House-Surgeon. Salary, £120 per annum, with board and residence. Applications to the Assistant Secretary, 13, Queen's Road, Brighton, by July 20th.

BRIGHTON THROAT AND EAR HOSPITAL, Church Street.—Non-resident House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum. Applications to the Secretary, 10, Black Lion Street, Brighton, by July 19th.

CARDIFF INFIRMARY.—(1) Honorary Pathologist. (2) Assistant House-Physician. Appointment for six months, but renewable. Salary at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary by July 10th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—(1) House-Surgeon. Board and residence provided. (2) Assistant House-Surgeon. Salary at the rate of £50 per annum. Applications to the Secretary by July 10th and 11th respectively.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by July 18th.

CHICHESTER WEST SUSSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried. Salary to commence £100 per annum, with furnished apartments, board, and washing. Applications to the Medical Superintendent by July 25th.

CITY OF LONDON LYING-IN HOSPITAL, City Road, E.C.—District Surgeon. Applications to the Secretary by July 8th.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon; unmarried. Salary, £100 per annum, with board, washing, and residence. Applications to the Secretary by July 14th.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Demonstrator. Honorarium, £50 per annum. Applications to the Dean by July 24th.

DERBY DERBYSHIRE ROYAL INFIRMARY.—Assistant House-Surgeon. Appointment for twelve months. Salary, £40 per annum, with board, residence, and washing. Applications to the Secretary by July 21st.

DUNMOW UNION, Essex.—(1) Medical Officer and Public Vaccinator for the Dunmow District. Salary, £68 3s. per annum, with usual fees. (2) Medical Officer for the Union Workhouse. Salary, £72 10s. per annum. Applications to the Clerk, Great Dunmow, by July 10th.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Appointment for one year, but eligible for re-election. Salary, £100 a year, with board and lodging. Applications to the Honorary Secretary, 16, South Bailey, Durham, by July 21st.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Junior Resident Medical Officer and Registrar. Salary, £50, with board and washing. Applications to the Committee of Management by July 12th.

GOVAN DISTRICT ASYLUM, Crookston, near Paisley.—Junior Assistant Medical Officer. Salary, £100 a year, with furnished rooms, board, laundry, and attendance. Applications to the Medical Superintendent by July 20th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—(1) Physician to Out-patients; (2) Dental Surgeon. Applications to the Secretary by July 10th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board and lodging. Applications to Mr. Richard F. E. Ferrier, Hon. Sec., 33, Hall Plain, Great Yarmouth, by July 26th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon to Out-patients. Appointment for six months. Salary, 25 guineas. Applications to the Secretary by July 18th.

INVERNESS: NORTHERN INFIRMARY.—House-Surgeon and Dispenser. Salary, £70 per annum, with board, etc. Applications to the Honorary Secretary, 15, High Street, Inverness, by July 15th.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £85 per annum, with board and residence. Applications to the Secretary of Faculty by July 10th.

LIVERPOOL DISPENSARIES.—Assistant Surgeon; unmarried. Salary, £100 per annum, with board and residence. Applications to the Secretary, 34, Moorfields, Liverpool, by July 18th.

LONDON COUNTY ASYLUM, Bexley, Kent.—Assistant Medical Officer, between 25 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications, on forms provided, to the Clerk to the Asylums Committee, 6, Waterloo Place, London, S.W., by July 18th.

MELROSE: ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with furnished quarters, board, washing, and attendance. Applications to the Medical Superintendent.

NOTTINGHAM LUNATIC ASYLUM, The Coppice.—Assistant Medical Officer; unmarried, and between 25 and 30 years of age. Salary, £150 a year, with apartments, board, attendance, and washing. Applications to Dr. Tate, at the Asylum, by July 15th.

OLDHAM INFIRMARY.—(1) Senior House-Surgeon. Salary, £85 per annum. (2) A Junior House-Surgeon. Salary, £70 per annum. Board, residence, and washing in each case. Appointments for one year. Applications to the Honorary Secretary by July 10th.

PERTH ROYAL INFIRMARY.—House-Surgeon. Salary, £60, with board. Applications to P. Martin, 38, Tay Street, Perth, by July 10th.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant and Second Assistant House-Surgeons. Salary, each £65 per annum, with board and residence. Applications to the House Governor by July 24th.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY.—Resident Medical Officer; unmarried. Salary, £100 per annum, with furnished apartments, board, and attendance. £10 allowed for substitute during annual holiday. Applications to the Secretary by July 17th.

ROCHDALE INFIRMARY AND DISPENSARY.—House-Surgeon; unmarried. Salary, £90 per annum, with board, residence, and laundry. Applications to Mr. R. W. Shaw, Hon. Sec., Bamford House, Rochdale by July 13th.

RYDE: ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL.—House-Surgeon. Salary, £50 per annum, with a fee of £10 10s. for lecturing to the nurses. Applications to the House-Surgeon by July 15th.

ST. LUKE'S HOSPITAL, E.C.—Clinical Assistant. Appointment for six months. Board and residence provided. Applications to the Secretary at the Hospital, Old Street, London, E.C.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Physiology. Applications to the Dean by July 11th.

SEAMEN'S HOSPITAL SOCIETY.—Physician to Out-patients and Physician to Inpatients at the Branch Hospital, Royal Victoria and Albert Docks. Appointments for twelve months, but eligible for re-election. Applications to the Secretary, Seamen's Hospital Society, Greenwich, S.E., by July 10th.

SOUTHAMPTON: ROYAL SOUTH HANTS INFIRMARY.—Surgeon in Charge of Ear and Throat Department. Applications to the Secretary before July 10th.

TOTTENHAM HOSPITAL.—Junior House-Surgeon. Honorarium at the rate of £20 per annum, with board, residence, and laundry. Applications to the Chairman, Joint Committee, by July 11th.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon; unmarried. Salary, £130, with furnished apartments, fire, light, and attendance. Applications to the Secretary.

UNIVERSITY COLLEGE, London.—Jodrell Professorship of Physiology. Applications to the Secretary by July 17th.

WESTMINSTER HOSPITAL.—(1) Surgeon, (2) Assistant Surgeon. Must be F.R.C.S. Eng. Candidates must attend House Committee on July 12th at 4.30 P.M.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Appointment for six months, but may be extended. Salary, £70 per annum, with board, rooms, and washing. Applications to the Secretary by July 20th.

MEDICAL APPOINTMENTS.

BATTEN, E. W., M.D.Lond., F.R.C.P., late Senior Physician, appointed Consulting Physician to the Gloucester Infirmary.

BLOOD, J. F., Surgeon-Major I.M.S. (retired), M.D.Dub., M.Ch., appointed Surgeon to the Birkenhead Borough Hospital.

CHILCOTT, G. S., M.R.C.S., L.R.C.P.Eng., appointed Admiralty Surgeon and Agent for Southampton, and reappointed Medical Officer of Health for the Itchen Urban District.

COLLINS, H. Beale, M.R.C.S.Eng., D.P.H., R.C.P.S.Lond., reappointed Medical Officer of Health for the Borough of Kingston-on-Thames.

DOUGLAS, Carstairs C., M.D., B.Sc.Edin., appointed Assistant Dispensing Physician to the Samaritan Hospital for Women, Glasgow.

FORSTER, Frederick C., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Royal United Hospital, Bath.

FREELAND, Ernest Harding, F.R.C.S.Eng., appointed Surgeon to the St. George's and St. James's General Dispensary.

HYNES, M. J., M.B., appointed Medical Officer of Health to the Ennistymon Union, *vice* Dr. M'Dermott.

LAWSON, T. C., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Coleford District of the Frome Union, *vice* J. Hickman, M.R.C.S., L.R.C.P., resigned.

MARKBY, Herbert, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Chester General Infirmary.

MARTIN, F. W., M.R.C.S.Eng., L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health to the Brighouse Town Council.

ROWLAND, F. M., M.D., B.C., B.A.Cantab., M.R.C.S., L.R.C.P., appointed Medical Officer to the Lichfield Workhouse.

WARDEN, Charles, F.R.C.S.Edin., late Honorary Surgeon, appointed Consulting Surgeon to the Royal Orthopædic and Spinal Hospital and the Ear and Throat Hospital, Birmingham.

DIARY FOR NEXT WEEK.

MONDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. H. P. Dunn: Wounds of the Ciliary Region and their Treatment.

TUESDAY.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. Marcus Gunn: Ocular Paralysis.

THURSDAY.

British Gynæcological Society, 8 P.M.—Specimens will be shown by Mr. Christopher Martin, Dr. H. Snow, Mr. Bowreman Jessett, Mr. Skene Keith, Mr. Charles Ryall, and Dr. Septimus Sunderland. Papers: Dr. Lapthorn Smith (Montreal): The Prevention of Hernia after Abdominal Section. Mr. C. Ward (Pietermaritzburg): Description of Transfixors.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. F. G. Penrose: Demonstration of Selected Cases.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. McAdam Eccles: The Differential Diagnosis of Scrotal Swellings.

FRIDAY.

West London Medico-Chirurgical Society, West London Hospital, W., 5 P.M.—Annual General Meeting. Election of Officers and Council. Annual report.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

ROBERTS.—On June 23rd, at Badlesmere, Eastbourne, the wife of Astley Roberts, of a son.

ROYDEN.—On July 5th, at Burgh St. Margaret, near Great Yarmouth, the wife of William Royden, M.A.Cantab., M.R.C.S., L.R.C.P., of a son.

WALTER.—On June 25th, at 382, Lytham Road, Blackpool, the wife of R. A. Walter, M.R.C.S., L.R.C.P., of a son.

MARRIAGE.

FOULDS—FOSTER.—On June 21st, at the Parish Church, Feckenham, by the Rev. W. Manning, M.A., Vicar of St. Andrew's, Leytonstone, assisted by the Rev. A. Marshall, M.A., Vicar of Feckenham, and the Rev. W. J. Holden, M.A., Rector of Kington, Francis Henry Foulds, M.R.C.S., L.R.C.P.Lond., second son of the late Dr. S. Foulds of Chesterfield, to Greta Maryanne, only surviving child of Mrs. and the late E. W. Webb Foster of Feckenham, Worcestershire.

DEATHS.

BAKER.—On June 30th, at 29, Church Street, Southport, in his 72nd year, John Wright Baker, formerly of Friargate, Derby, Surgeon, fourth son of the late William Baker of Derby.

DAVIES.—On July 3rd, suddenly, at Caswell Bay Hotel, Mumbles, Swansea, Henry Saunton Davies, J.P., Surgeon, of Glyn Rhondda House, Porth, Rhondda Valley, South Wales, in his 72nd year.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9: Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations,*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30: Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily. 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 2.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1: Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 3; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 3.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu, F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A. P., who has a patient of fair complexion with one eyebrow white and the other brown, asks what would be the best way to colour them so as to have both the same colour?

MOTOR would like to know if any brother practitioner has had experience of an "Ideal" motor car (Benz system) as manufactured by Hewetsons, Ltd.

T. L. asks for information as to "a sanatorium (seaside), convalescent home, or such institution, where a girl, aged about 16, could be sent, whose parents can pay from 15s. to 30s. a week; she may or may not occasionally require catheterisation; in the neighbourhood of Margate preferred."

ALUMNUS would be grateful for practical information respecting electrolysis as a depilatory, more especially as to: (*a*) The most suitable apparatus, and where such may be obtained; (*b*) the strength of current necessary; (*c*) the length of time the current should pass to get satisfactory results.

MOSQUITOS AND MALARIA.

MAJOR J. D. RECKITT, R.A.M.C. (Aldershot) writes: In reading over the very interesting lecture of Major Ronald Ross, I find it stated that he has known localities where, in spite of drainage and cultivation, the most virulent malaria remains. Though not in the least questioning the accuracy of the observation, I am much interested to know what particular localities are referred to, and how the ground was cultivated.

INTRODUCTION OF JUNIOR PARTNER.

A MEMBER FOR THIRTY YEARS asks for information as to the usages of the profession in introducing a young partner.

*** We are indebted to an experienced member of the Association for the following answer: Every reasonable opportunity should be taken to introduce the junior partner socially and professionally to all classes in the practice. This is necessary and just, not only to the junior, but is also conducive to the best interests of the senior partner.

ANSWERS.

I.M.S. has omitted to enclose his card.

DR. H. E. HAYNES (Evesham) writes: In answer to "A. B."s communication in the BRITISH MEDICAL JOURNAL of June 24th: I can recommend "The Home," Greenhill, Evesham, as a suitable nursing home for a case of subacute rheumatism. The house is beautifully situated in its own grounds of several acres, and the climate is very mild. "A. B." might communicate direct with Mrs. Hoddinott, the Lady Superintendent.

T. B.—The case as put by our correspondent is not quite clear. A patient is quite at liberty to change his medical attendant, and any practitioner called in after the other has been courteously dismissed is perfectly free to take charge of the case unless there have been certain relations between the two doctors which would make this an indelicate proceeding. For instance, if A. sees a case to oblige B. as his substitute during B.'s illness or absence, A. should refuse to continue in attendance even if asked to do so.

C. S. T.—We believe that the best book on the geological and climatic conditions of the southern counties of England is *Climates and Baths of Great Britain* (written by a committee of the Royal Medical and Chirurgical Society, of which the first volume was published in 1895 by Macmillan and Co.). The second volume, which is nearly finished and will probably appear next year, includes the climates of the northern, eastern, and midland portions of Great Britain. We know of no other trustworthy work on the subject. The first volume of the above work can be had separately.

ELECTROLYSIS OF NÆVUS.

MR. SHALDERS MILLER, F.R.C.S. (Slough), in reply to "Bunsen's" query in the BRITISH MEDICAL JOURNAL of June 24th, writes: He should possess himself of some book such as the late Dr. Steavenson's on the subject, which involves too much detail for your "Answers" column. His Daniell battery is not suitable; the Bunsen battery, if in good order and the nævus be small might answer, but all primary cells run down quickly in use through polarisation. Accumulators are much better.

REMOVAL OF SUPERFLUOUS HAIRS.

S. writes: Hair on the lip in women, when disfiguring, should be removed by means of epilation forceps. The patient should do it for herself before the looking glass. The hairs will grow again, but after the lip has once been cleared it will take very little time or trouble to keep it permanently free. The satisfaction felt by those who have been shown how to rid themselves of this annoying disfigurement in this easy way is very great.

RECURRENT SNEEZING AND NASAL CATARRH.

DR. T. AQUINO (Senior Inspecting Medical Officer, Bhusawal) writes: I would advise "Medical Correspondent" (BRITISH MEDICAL JOURNAL, May 20th, 1899, p. 1259) to try tincture of stramonium for his recurrent sneezing and nasal catarrh. This preparation has proved most efficacious in my hands; 15 minims of it will stop the sneezing and catarrh at once if taken at the commencement of the attack. The dose may have to be increased to 20 to 30 minims, as the patient becomes tolerant to its action, or it may have to be repeated twice or thrice every third or fourth hour. It should be taken in about an ounce of water. Brandy may be added to it if there should be weakness of the heart. I tried several medicines, both locally and internally, before I hit upon this

one. It causes dryness of the mouth and throat and thirst, which pass away soon. I wish to add that belladonna, although physiologically allied to stramonium and in many respects a more powerful drug, does not answer nearly so well as stramonium for this particular condition.

"A GUERNSEY DISPUTE."

WE have carefully read the correspondence submitted to us. On the more important of the two questions raised (apart from the fact that the subject in dispute is not one which we think should be discussed in the columns of the BRITISH MEDICAL JOURNAL), the statements on some points are too incomplete to enable us to express any positive opinion on the merits. With regard to the second question, we cannot see that there was any obligation to give the information required, even had the patient's family consented to this being done.

NOTES, LETTERS, Etc.

THE SOUTH KENSINGTON FINE ART ASSOCIATION.

DR. H. E. ROWELL (East Rudham) writes: About the same time Dr. Meredith Young received his so-called fine art picture from the South Kensington Fine Art Association I had one sent to me. I did not trouble to repack it and prepay threepence for the postage, which I thought most likely I should never see back again, but I threw it with other rubbish into the lumber room where it is likely to remain until the association calls for it, as I shall never trouble myself to pack it up even if the association sends stamps for its return. A medical man's time is too much occupied without having to receive advertisements which want repacking and postage prepaying.

DR. JOHN BROADBENT (Manchester) writes that some months ago he had a similar experience to that of Dr. Meredith Young. He at once returned the picture, postage paid, but as yet he has not received any communication from the Association.

SEPIA writes: I also have received a photogravure from the South Kensington Fine Art Association. As it was not sent at my request I did not see why I should go to expense and trouble in returning it. Consequently it remains in my consulting room until some official of the Association comes for the "kind of photogravure," when I shall be most happy to hand it over. In the meantime, to protect it from dust and accidents, I have had it framed.

ANOTHER CORRESPONDENT writes to say that he returned the gravure postage unpaid.

*** Probably the best course for unwilling recipients of such a package would be to intimate to the sender that unless removed within a reasonable time, which should be specified, the package would not be preserved.

THE LATE DR. G. F. CROOKE.

MR. GILBERT BARLING, 85, Edmund Street, Birmingham, and Mr. J. T. J. MORRISON, 3, Great Charles Street, Birmingham (Hon. Secretaries of the Fund) write: We thank you for your kindness in inserting our appeal on behalf of the widow and child of the late Dr. G. F. Crooke; and we shall feel obliged if you will add the subjoined second list of contributions. Either of the hon. secretaries, or the treasurer, Dr. Arthur Foxwell, 22, Newhall Street, Birmingham, will gladly receive donations from any who desire to express sympathy for the misfortunes of our late colleague.

	£	s.	d.		£	s.	d.
Dr. Peter Horrocks... ...	10	10	0	Dr. G. H. Melson	2	2	0
Dr. E. Clifford Beale ...	5	5	0	Dr. Hale White	2	2	0
Mr. T. F. Chavasse	5	5	0	Anonymous	1	1	0
Mr. J. H. Clayton	5	5	0	Dr. George Birt	1	1	0
Mr. R. T. Kent	5	5	0	Dr. C. P. Gallie	1	1	0
Dr. E. Malins	5	5	0	Dr. H. T. Griffiths	1	1	0
Dr. P. H. Pye-Smith, F.R.S.	5	5	0	W. M. K.	1	1	0
Dr. E. Rickards	5	5	0	Dr. E. N. Nason	1	1	0
Dr. R. M. Simon	5	5	0	Dr. G. W. Powell	1	1	0
Dr. A. H. Carter	2	2	0	Mr. H. M. Simmonds ...	1	1	0
Dr. B. Jordan	2	2	0	Mr. J. F. Williams	1	1	0

TREATMENT OF ECLAMPSIA: A CORRECTION.

DR. ROBERT JARDINE, M.D., etc., Physician to the Glasgow Maternity Hospital, writes: In the report of my paper "On Treatment of Eclampsia by Saline Injections," read before the Edinburgh Obstetrical Society, which appears in the BRITISH MEDICAL JOURNAL of July 1st, I am reported to have stated that "in 1898 scores of cases of eclampsia were treated in the Glasgow Hospital." It should read eight cases.

THE MODERN NURSE.

DONNE writes: "Ripa" has my deepest sympathy in his experiences with a "lady" nurse. Two so-called "lady" nurses were introduced into this district a little over a year ago and have made themselves such a nuisance that nearly six months ago I intimated to the Nursing Committee that I would not allow them to come to my patients, and told my patients that if they had the nurses in their houses I would not attend them. I find that this firm attitude has not caused my practice to suffer in any way, as my patients, all except a few worth absolutely nothing, have stuck loyally to me and I shall advise "Ripa" to take the same course; also, if he is not already a member, to join the Medical Defence Union. The remarks of the editor as to the committee's encouragement of the "lady" nurse show, I fear, too much faith in the common sense of the ladies and clergymen who form such committees. My experience is that a strongminded "lady" nurse leads them like a flock of sheep. It is only by medical men taking strong steps themselves and especially by union among themselves that the nursing abuse, which is not thoroughly realised by many of our number, can be combated.

TREATMENT OF PSORIASIS BY HOT BATHS.

MR. W. E. RUDD, M.B., M.R.C.S., Assistant Colonial Surgeon (Putalam, Ceylon), writes: The treatment of chronic psoriasis is often unsatisfactory, and perhaps an account of the method used in the following case may be worth recording.

R. W. E., aged 39 years, was seen in 1897, and before that for large patches of psoriasis on the outer surface and front of the left leg, and small patches on the right leg. The disorder had been present there for about four years. It came first on both legs and slightly on the knees in the year 1890, and had been present in a small patch on the elbows frequently since. The disease was cured in 1890 very easily by the application of chrysophanic acid ointment (gr. xx to 1 oz.), but this recurrence did not yield to anything applied. It was cured by hot baths daily—the water as hot as could be borne, with free use of soap (carbolic) on the affected parts. The temperature of the water was not taken, but a reliable test was its effect on the skin, which became red all over the limbs and body. After the first bath an improvement was noticed, and the cure was complete within six days of a condition which had lasted for about four years, in spite of the usual remedies.

The effect seems to be local, for it was found more difficult to cure the elbows, probably in this case because these parts were not treated so carefully, being awkward to get at in this treatment. Being easy and pleasant, it seems worth a trial.

LETTERS, COMMUNICATIONS, ETC., have been received from:
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BOOKS, ETC., RECEIVED.

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A CASE OF FRIEDREICH'S HEREDITARY ATAXIA: WITH NECROPSY,

By GEORGE E. RENNIE, M.D., M.R.C.P.Lond.,
Late Pathologist and Physician to Prince Alfred Hospital, Sydney.

The number of cases of Friedreich's hereditary ataxia, with necropsy, is still limited. Mackay, in *Brain*, Part 84, has collected the records of 18 genuine cases and 4 doubtful cases. The following case is interesting, from the fact that the duration of the disease from the time the symptoms were said to have been first noticed until the patient's death was only fifteen months. It is most probable, however, that the disease was really of much longer duration. The patient, together with his younger brother, who was suffering from the same disease, was admitted to Prince Alfred Hospital, Sydney, in May, 1895, under the care of Dr. Scot Skirving, and I am indebted to him for permission to make use of the notes and publish the case:

M. K., aged 12 years, a native of Singleton, N.S.W., was admitted to hospital complaining of inability to walk properly, and a tendency to fall when his eyes were shut. These symptoms were first noticed twelve months before admission, and had been increasing since then.

Family History.—There was no history of any nervous affection in the family, with the exception of a younger brother aged 10, who is affected in the same way as the patient. There is a history of alcoholism in the father, but nothing else of note.

Previous Health.—He had measles and whooping-cough in infancy and scarlet fever eighteen months before admission to hospital.

Condition on Admission.—He is a well-nourished lad, bright and intelligent. When sitting at rest, curious jerking movements of the head are observed, and also irregular alternate contractions of the corrugatores superciliorum, and at times slight twitchings of the lips and of shrugging of the shoulders. He has no headache or pain anywhere; no fits, no spinal curvature; but there is a tendency to stooping when he walks. His speech is slow, and the individual words are jerked out.

Special Senses are all intact. His pupils are equal, and react to light and on convergence; there is slight nystagmus on lateral movement. All other cranial nerves are normal.

Motion.—Movements at all joints in all limbs are perfect, and his grasp fairly good in both hands. He cannot co-ordinate the finer movements of the fingers, as, for example, in buttoning his coat. When about to drink he lifts the cup to his mouth with a certain amount of tremor, but the range of movement does not increase at the end of the act. He maintains the erect posture with some difficulty with the eyes open, and falls when they are closed. He walks with a staggering gait, throws out the legs, lifts his feet high and comes down on his heels. When walking the phalanx of the big toe is over-extended, and the tendons are tremulous.

Sensation.—There is no loss of sensation anywhere. Tactile, painful, and thermal stimuli can be accurately defined and localised, and there is no delay in response. There appears to be some hyperæsthesia over the lower third of both thighs and also over the trunk. Muscular sense is somewhat impaired.

Muscular System.—There is no muscular wasting and no talipes. No affection of the sphincters.

Reflexes.—Abdominal and epigastric are absent; cremasteric active; plantars are diminished. Knee-jerks are absent, and there is no ankle clonus.

The other systems were all healthy until a few days before death, when the signs of broncho-pneumonia appeared, and he died from that cause in July, 1895.

Necropsy.

Post-mortem examination was made two and a-half hours after death. The lungs presented the usual appearances of broncho-pneumonia, the other organs being all healthy.

The brain weighed 56 oz., and showed no macroscopic signs of disease. It and the spinal cord were removed and hardened in Müller's fluid. Portions of the cord at different levels were embedded in celloidin, cut and stained by Schäfer's modification of Pal's method. Some sections were counter-stained with eosin, and others were stained with aniline blue black. I cannot say that the cord as a whole appeared any smaller than normal, though on microscopical examination there is a general excess of neuralgia. As in all the recorded cases, the stress of the disease has fallen on the posterior columns. In the sacral region, while there is no marked degeneration of the posterior columns, the number of healthy fibres is diminished, and this diminution is continued round the margin of the cord to just a little external to the posterior cornua on each side. In the lumbo-sacral region, while there is distinct degeneration in Goll's columns in their posterior three-fourths, a large number of normal fibres are found in their anterior fourth, immediately adjacent to the posterior commissure, representing the cornu-commissural tract. Posteriorly, the degeneration in Goll's columns merges into that of Burdach's columns, the two columns not being differentiated at this level. The degeneration is continued through the posterior root zones, posterior roots, and round the margin of the cord for a short distance external to the posterior roots. There is no obvious degeneration in any other part of the cord at this level; the nerve cells of the anterior and posterior cornua appear normal. The pia mater is somewhat thickened, and the central canal is filled up with proliferated epithelium.

In the lumbar enlargement see Fig. 1), in both posterior columns we find almost complete degeneration extending not quite up to the posterior commissure. In Burdach's columns there are as before a small number of healthy fibres along the inner border of the posterior cornua. Posteriorly, the degeneration is still present in the root zones, and extends only for a short distance external to the posterior roots.

In the lateral columns in the region of the crossed pyramidal tract there is some wasting of nerve fibres, but no very marked degeneration. In the mid-dorsal region (see Fig. 2) there is almost complete degeneration of the whole of both Goll's and Burdach's columns, though there are still to be seen some normal fibres internal to the posterior cornua. The posterior roots are degenerated, but now the degeneration is seen to be sharply limited to the posterior columns, and does not extend round the margin of the cord beyond them. Both direct cerebellar tracts are affected, and there is a faint indication of degeneration in the region of the crossed pyramidal tracts. The cells of Clarke's column are atrophied, otherwise the grey matter is normal, and the central canal is lined by a layer of columnar epithelium.

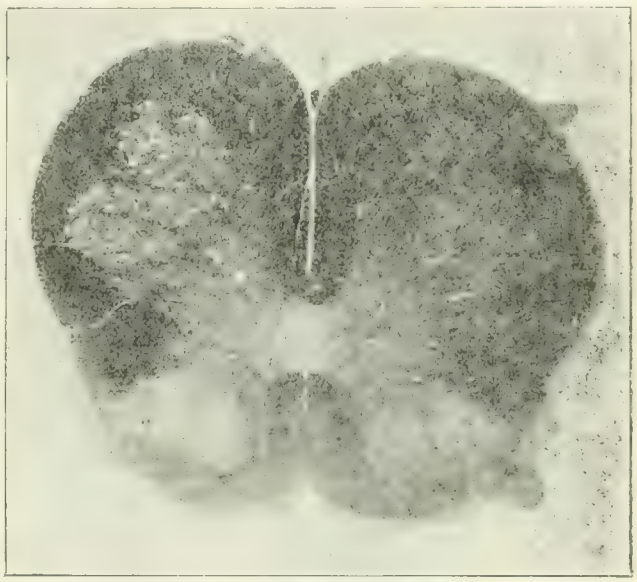


Fig. 1.—Lumbar enlargement.



Fig. 2.—Mid-dorsal region.

In the upper dorsal region (see Fig. 3) the degeneration is still well marked in both Goll's and Burdach's columns, and now there is to be seen some differentiation between the two, Goll's being more degenerated than Burdach's. A few healthy fibres are seen in the posterior roots; the direct cerebellar tract on each side is degenerated, and there are some signs of the crossed pyramidal tracts being similarly affected. In the cervical enlargement (see Fig. 4) there is a well-defined differentiation between Goll's and Burdach's columns, but the degeneration is not quite so well marked as in the dorsal region. In Goll's column the degenera-

tion extends right up to the posterior commissure, where these columns open out. In Burdach's column there are a fairly large number of healthy fibres adjacent to the posterior cornua. The posterior roots still show some degeneration, but there is an increasing number of healthy fibres. There is also to be seen some marginal degeneration in the lateral and anterior portions of the cord, and again there are indications of slight degeneration in the lateral columns, in the region of the crossed pyramidal tracts.

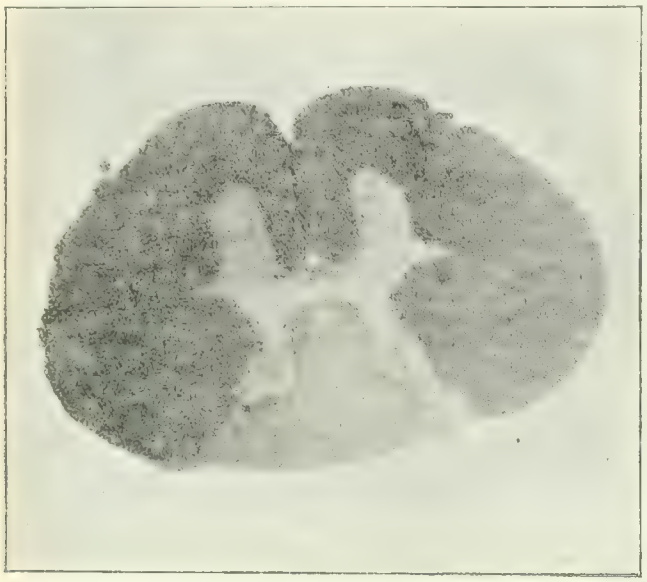


Fig. 3.—Upper dorsal region.

In the upper cervical region (see Fig. 5) the degeneration in the posterior columns becomes less marked, though it is still quite obvious. It is most marked in the posterior three-fourths of Goll's column, the anterior one-fourth showing a fairly large number of normal fibres; and in Burdach's columns it is most intense in their inner portion about the middle third, the extreme anterior portions and those immediately adjacent to the posterior cornua being much less affected. There is also now more obvious degeneration in the lateral columns, but this is somewhat diffuse, and not sharply limited to the region of the crossed

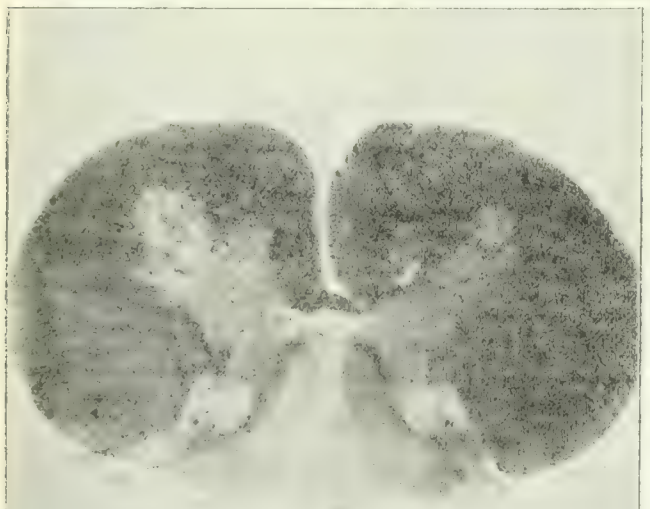


Fig. 4.—Cervical enlargement.

pyramidal tract. There is also faint indication of degeneration in the direct pyramidal tract in the anterior columns, and a marginal zone of degeneration in the region of Gowers's antero-lateral ascending tract. The other portions of the cord are normal. In the higher regions of the cord, at the decussation of the pyramids, the degeneration in the posterior columns is still well marked, and this can be traced to the termination of these tracts in the floor of the fourth ventricle. The brain and cerebellum were normal.

To sum up, we find in this case well-marked degeneration of the posterior columns throughout their whole length; of the posterior root zones, and also of a large number of posterior root fibres; much less marked degeneration in the lateral columns, in the region of the crossed pyramidal tract; some scattered marginal degenerations at different levels; distinct degeneration of the direct cerebellar tract with atrophy of Clarke's column.

These findings correspond pretty closely with those previously recorded, and are generally recognised as the typical lesions of Friedreich's ataxia. It is interesting to note how well defined the lesions were, though the duration of the disease was stated to be only about fifteen months; while in all the other necropsies reported the disease had lasted several years. The disease is apparently a primary nerve degeneration grafted upon an imperfectly developed spinal cord, such imperfect development being due to unknown hereditary influences. This view is supported by the fact, to which Newton Pitt has drawn attention, that the degenerations attack by preference the parts which are developed late. These parts have also the least important functions, and, according to Hughlings Jackson's law, these are the first to degenerate. Further, the sclerosed regions correspond to the tracts, the nerve filaments of which receive their myeline sheath after the fifth month of fœtal life.



Fig. 5.—Upper cervical region.

Three features in the clinical picture of Friedreich's ataxy are deserving of some further consideration in view of the anatomical substratum of the disease. First, in the textbook description of this affection, the rarity of sensory disturbances is noted. Gowers states that "sensibility has been quite normal in many cases; in others there has been slight anæsthesia in the legs, early in some instances, late in others. Sensibility to pain and temperature is very rarely impaired. Sense of posture of the limbs has been found normal in several cases in which it has been examined." Friedreich himself notes the absence of sensory disturbances as one of the distinguishing features of the disease; and the same thing has been observed in most recorded cases since. This is in marked contrast to what is found in tabes. There, as Gowers remarks, "sensory symptoms are prominent in most cases." In speaking of the pathology of tabes, he says: "There may be an interruption of the sensory path in one or both of two places—in the peripheral nerves, and in the posterior root fibres as they enter the cord; and an interruption of the fibres in either place will explain the loss of sensibility, which is so frequently present." In only a few of the necropsies on cases of Friedreich's ataxia have the peripheral nerves been examined. In some of these the nerves are reported to be normal, in others degenerated; but, in all, the posterior roots have been found much atrophied.

In the case reported by Mackay, in *Brain*, Part 84, the peripheral nerves appear to have been examined more extensively and carefully than in previous reported cases, and were all found extremely degenerated, yet clinically it was noted that there was no anæsthesia. In referring to this point he says: "The fact, moreover, frequently recorded, that the patient's sensibility to touch, pain, and temperature remains unimpaired throughout, suggests that it is the afferent nerves from muscles that chiefly suffer. This agrees with Guizetti's conclusions, who was of opinion that, in his own case, there existed a systematic atrophy of sensory fibres." But if this were so, we should expect to find in every case clinical evidence of the loss of sense of posture, or loss of muscular sense; but this has often been proved not to be the case. In some cases the spinal ganglia have been examined, and in all there was evidence of degeneration in the nerve cells, with hyperplasia of the connective tissue. Further complete investigation, both clinical and pathological, of cases of this disease are needed before we can explain the apparent discrepancy between the clinical signs and *post-mortem* findings.

Secondly, in the majority of cases there is no sphincter trouble: and even when such does exist, it is no more than some little delay in beginning the act of micturition. Sphincter trouble may arise either from motor or sensory disturbance. In tabes, for example, when there is affection of the sphincters, it will be found that there is some anæsthesia of the urethra, bladder, or rectum. In disseminated sclerosis, on the other hand, where there is, as a rule, no sensory disturbance, the sphincter trouble depends upon some derangement of the motor innervation of those parts. The absence of sphincter trouble in Friedreich's ataxia is probably due to the absence of anæsthesia of the excretory passages.

Thirdly, I would call attention to the condition of muscular hypotonia which is present in most cases of this disease to a greater or less extent; and this in spite of the contractures of the leg muscles which produce the deformity of the foot. The occurrence of this condition in Friedreich's ataxia is interesting, since it is now a well-recognised feature in tabes, and appears to be associated in some way or other with the degeneration of the posterior roots. It is probable that the absence of all the so-called "deep reflexes" is, in part at any rate, to be ascribed to this condition of the muscles.

A CONTRIBUTION TO THE STUDY OF THE POSTERIOR COLUMNS OF THE SPINAL CORD.*

By HAMILTON WRIGHT, M.D.,

Assistant to the Pathologist of the London County Asylums.
[From the Laboratory of the Royal Victoria Hospital, Montreal.]

The structure of the posterior columns of the spinal cord is as yet so dubious that the following result of an investigation of a case of tabes dorsalis will be of interest. In this research Pal's modification of Weigert's hæmatoxylin method was used.

I am aware of the possibility that nerve fibres may be present in patches of sclerosis and yet not be picked up by hæmatoxylin, and that Marchi's method would have been a better one upon which to base the conclusions I have come to in this case. Before I got hold of the cord and nerves, however, they had had the Muller's fluid washed out of them, and had been placed in alcohol, thus precluding the possibility of a reliable Marchi's stain. But I think I may safely claim that by having stained and examined some five hundred sections from all levels of the cord, I have obviated any error that was possible as the result of using the above-mentioned method.

As the nutritional condition of the posterior roots between their trophic centres in the posterior spinal ganglia and the cord—that is, the root trunk according to P. Marie—is an an important factor in this case, because they are so largely concerned in the structure of the posterior columns and grey matter they may be described at once.

In all root trunks below the first lumbar there is total atrophy of nerve fibres. In the first lumbar root trunks a few attenuated nerve fibres are present. Above the latter point to the upper part of the thoracic region the root trunks acquire a slightly increased number of nerve fibres. In the upper two segments of the thoracic region and in all levels of the cervical cord the fibres are numerous; many of them, however, are in a state of chronic wasting, and there is little doubt that a number of them have disappeared.

These facts were determined by examination of all the lumbo-sacral root fibres, and every second thoracic and cervical at three different parts, namely, close to the cord, close to the ganglia of origin, and midway between these parts.

Accepting in a limited sense the Wallerian orthodoxy of degeneration, it is to be expected, first, that that part of the posterior columns traversed by the central continuations of those posterior root fibres shown to be degenerated will be in a state of fibrosis; and, secondly, that all fibres not direct continuations of the roots but derived from the grey matter (that is, endogenous fibres of the comma tract, Marie's cornu-commissural zone, Fleschig's median triangle and posterior internal root zone, or, as it is named by Marie, to prevent any association of it with the afferent root fibres, the postero-internal zone; and, lastly, Gombault and Phillipe's endogenous fibres of the sacral region) will be intact unless the grey matter can be shown to be unsound.

The first expectation is justified by the present state of the posterior columns. Not so, however, is the second, for there is an anomalous state of affairs in the endogenously-derived tracts, one having almost wholly disappeared while the other three or four have persisted. This anomaly may, I think, be explained by a certain degeneration of the grey matter, which is probably the seat of origin of the affected endogenous fibres.

First of all those parts of the posterior columns now widely recognised to be composed of the centripetal continuations of the afferent roots will be disposed of. I find that the posterior columns in all planes are marked by a somewhat triangular area of absolute sclerosis roughly corresponding to the track of the lumbar and sacro-coccygeal root fibres of the normal cord. Throughout the whole length of the posterior columns this area of scar tissue contains no sign of nerve fibres whatever, except a few fibres of the lumbar region in the position of the median triangle (Figs. 1 to 4).

Thus the path of the lower thoracic, lumbo-sacral, and coccygeal fibres in the columns of Goll coincides with the state of the same fibres exterior to the cord. If the claim that Goll's columns are amplified in their whole upward extent by fibres originating in successive levels of the grey matter is allowed, this total fibrosis will appear strange. Still it is a fact, and seems to dispose of such a contention.

It may, however, be urged in favour of the above-mentioned claim, first, that the trophic centres from which the supposed endogenous fibres take origin are atrophied and along with them their extensions into the postero-median columns; or, secondly, that the pressure exerted by the scar tissue which has replaced the wasted exogenous fibres was cause enough to set up a retrogressive atrophy in the endogenous feeders of the columns as far forward as the antero-lateral limit of the scar tissue, or even to the grey matter itself.

The second contention, however, is effectually disposed of by reference to the lumbar posterior columns. In this region (see Fig. 5 *a*) there is to be seen a small group of fibres in the middle third of the posterior columns in and about the position of the median triangle. This is one of the tracts of intracordal origin, and will be referred to more fully later on. If this tract, whose fibres beyond a doubt come from the grey matter, can persist in a plane of the cord, whose posterior columns are densely fibrosed, and whose posterior horns show the greatest wasting of grey matter (see Fig. 1 *a*), it would not be too much to expect a like persistence of endogenously derived fibres in higher related parts of Goll's columns the associated grey matter of which, except Clarke's columns, is almost normal.

The first claim—namely, that the trophic centres of the fibres of endogenous origin are atrophied, and along with

* Towards this research the Scientific Grants Committee of the British Medical Association made a grant of £30.

them their extensions into Goll's column, is not so easily disposed of. On the whole the posterior grey matter of the lumbo-sacral metameres is deeply sclerosed, especially the heads of the posterior horns, as may be seen in Fig. 1 *a*. But this ceases rather abruptly in the lower thoracic segment, and from thence upward is, generally speaking, sound. It is slightly "rarefied" along the tracks of those afferent root fibres which penetrate and enter into its composition, and also in the intermediate part where the pyramidal fibres of the lateral columns pass forwards to their destination in the ventral horns. But most of the cells appear healthy, except those of Clarke's columns. So there is little warrant for supposing that in the general health of the thoracic grey matter only the cells of those parts which pass to Goll's columns are destroyed. It is possible that the supposed amplifiers of Goll's columns may spring from an isolated group of cells, and that this group is atrophied in the upper levels of the cord where a general affection of the grey matter has ceased.

But I have observed only one such group in each half of the grey matter in extreme degeneration, namely, Clarke's cylinders of cells both large and small. Fibres from some of these may, of course, pass, as was suggested by Tooth, to the median columns, as I intend to point out they probably do to the comma tract.

Taking all points into consideration, however, it appears more probable, as Déjerine and others have shown in cases of total degeneration of this same part without involvement of Clarke's cylinders, that, the median columns, having once been formed in the higher lumbar region, are in the rest of their upward extent given over to the conveyance of representative fasciculi of root fibres to the bulb, and that any fibres which pass between them and the grey matter are probably collaterals from the ascending root fibres themselves.

Now to a consideration of those fasciculi of fibres of the posterior columns whose genetic point is held to be intracordal. First, the cornu-commissural zone of Marie (Figs. 1, 2, 3, 4 *b*). I find in all levels between the upper sacral and first lumbar, where, as I have stated, there is total obliteration of all extracordal feeders of the posterior columns, that there is nevertheless a considerable number of fibres in various phases of degeneration lying in the apices of the columns closely apposed to the posterior grey commissure and median margins of the necks of the dorsal horns. In no level do they extend further posteriorly than the posterior extension of the healthy grey elements. Above the level of the second lumbar segment they begin to blend with a few vertical fibres of the cornual portion of the cornu-radicular zone, which at this plane put in their first appearance.

The fact that the above-mentioned zones are extant where they cannot possibly be considered to be continuous with root fibres, seeing that at the level of their first appearance these are absent; that they bear a relation by their position to the healthy grey elements of the dorsal horns; that they predominate in number and health on the left side corresponding to a like state of affairs in the posterior grey commissure and grey matter, all tend to prove that this collection of fibres in the position of the cornu-commissural zone is in the main of intracordal origin. And it may be reasonably assumed that throughout the rest of the posterior columns a part of the fibres in the same relative position are of similar derivation.

Next the median triangle of Flechsig which has already been alluded to (see Fig. 5 *a*). This is stated to lie in the middle and lower lumbar plane in apposition to the postero-median septum, and to extend backwards, it is claimed by some observers, to the periphery of the cord. The figure shown is of a section from the lower lumbar region. It exhibits a cluster of discreetly-laid attenuated fibres in about the position of the median triangle. Below the last lumbar and above the third lumbar segments it is not observable. Keeping in mind the abolition of all fibres from the posterior roots of this and adjacent upper and lower levels, it seems proved without further remark that this small aggregation is of intracordal origin. But the following additional facts also militate in favour of such a conclusion, and perhaps suggest the path by which they come and go:

1. They preponderate on the left side, corresponding to a like preponderance of fibres in the left half of the posterior grey commissure.

2. Some of the fibres fringing the median septum between the median triangle and grey commissure cut obliquely in accurate transverse sections. This appears to indicate that fibres from the median triangle are taking a dorsal slanting direction to reach their destination in the triangle, or that they are taking a ventral path from the triangle to the commissure.

3. The fibres stretching between the commissure and the triangle disappear at the level of the cord immediately above the level of disappearance of the triangle itself from the posterior columns. At the level of the triangle a fibre or two may be seen passing dorsally from the grey commissure towards the triangle. Although these fibres could not be traced the whole way to the median triangle, I am convinced from examination of a series of sections that they do reach and enter into it. For in such sections portions of fibres may be observed taking the same horizontal or slightly oblique direction parallel to the posterior median septum, and one or two of these actually enter the tract. By the aid of these consecutive sections a complete fibre may be synthetically built up, and apparently passes between the posterior grey commissure and the median triangle.

5. In further evidence it is to be observed that the isthmus of fibres which extends between the commissure and the tract contains all that can possibly have any association with the latter. For in all but its ventral aspect, where this isthmus is, the tract is encompassed by a dense fibrosis containing no nerve fibres whatever.

These evidences certainly support the contention that the median triangle of the normal cord is of almost purely intracordal origin, and that its fibres reach it by way of the grey commissure.

That it is not wholly of endogenous origin seems likely in view of the discrete arrangement of its fibres in this cord and the pervasion of it by sclerotic tissue, a condition due in all probability to the absolute atrophy of those fibres intermixed with it which were of extra-medullary derivation.

The aggregation of fibres shown in Figs. 3 and 4 *a* is in the position of the postero-internal zone. Marie claims that these fibres are of intracordal rather than extracordal origin. But the evidence in favour of this is not so positive as in the case of the other endogenous tracts. The research on this cord does not clear up the doubt in regard to their origin, but suggests that they are mostly endogenous fibres, and that they do not extend downwards below about the tenth thoracic segment.

Here, again, it will have to be kept in mind that below the first lumbar metamere the afferent root trunks are bared of proper fibres. And to this statement may be added that the fibres present in the first lumbar root trunk are few in number and in a very unsound state. None of them appear to proceed to the median columns, but towards the median margins of the posterior grey matter or through the substantia gelatinosa. It will be remembered that the lower five or six thoracic root trunks contain a scanty number only of root fibres.

Therefore, the rather abrupt appearance of a large mass of fibres in the posterior part of Burdach's column, that is, in the parts corresponding to the location of the postero-internal zones of the normal cord, calls for some remarks.

It appears to indicate, in view of the above-mentioned status of the root trunks, that the great majority of the said fibres are derived in a large measure from sources other than extracordal, that is, from the grey matter.

The following observations strengthen this claim:

1. The postero-internal zones are not present in the lumbar region where proper grey elements of the posterior horns are almost exclusively confined to the necks of the latter, nor do they appear until at least three levels above the first appearance of proper fibres in the afferent roots.

2. Above the lumbar region the proper grey elements begin to appear normal. Soon after there is the first evidence of fibres in the postero-internal zones.

3. The number of fibres in the zones in the level where they are first observable are out of all proportion to the number of proper fibres observable in the root trunks. And further, there are not enough fibres in the posterior columns in any level of the cord above the first appearance of the zones to warrant an assumption that the fibres of these zones are root fibres on their way to the medulla.

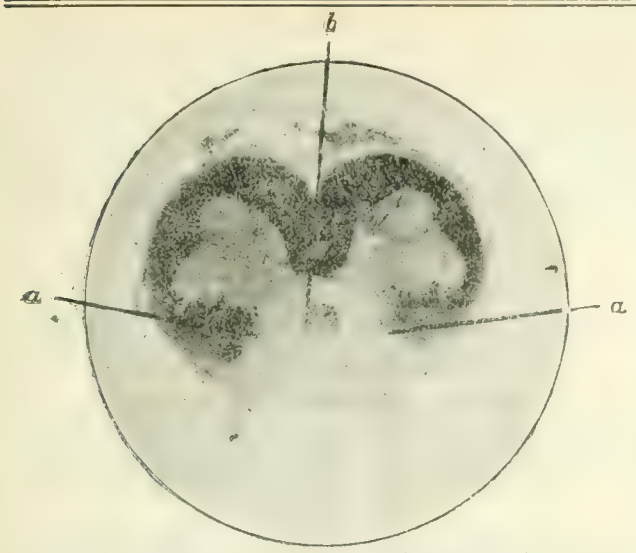


Fig. 1.—Lower lumbar region. Cornu-commissural zone of Marie at *b*. Degeneration of posterior horns at *a*.

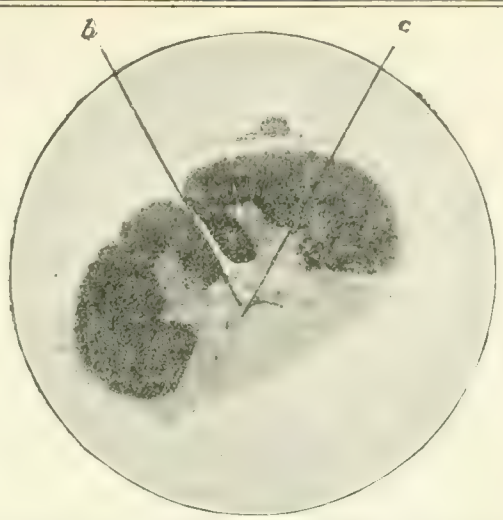
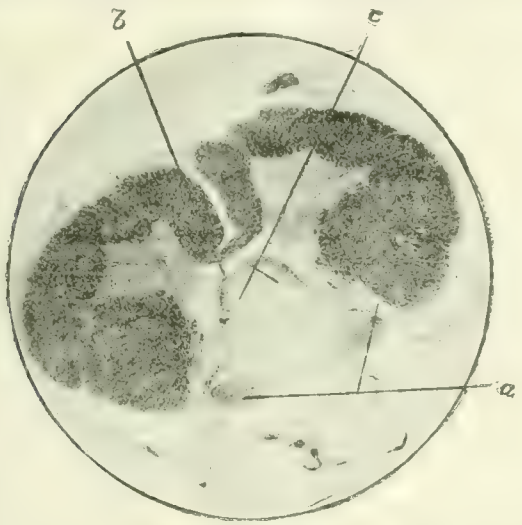
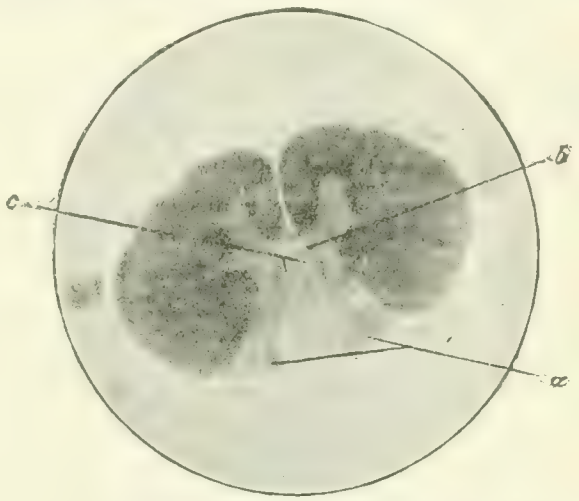


Fig. 2.—Lower thoracic region. Cornu-commissural zone at *b*. Degenerated comma tracts at *c*. Clarke's column may be seen heavily sclerosed: also area corresponding with lumbar and sacro-coccygeal fibres.





Figs. 3 and 4.—Thoracic and cervical regions. Postero-internal zone at *a*. Degenerated comma tracts at *c*. Cornu-commissural zone at *b*.



Fig. 5.—Lower lumbar region. Mass of fibres in position of cornu-commissural zone. Remnant of Flechsig's median triangle at *a*.

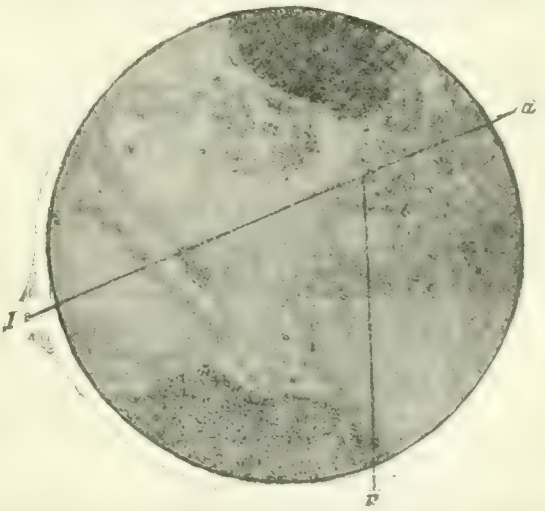


Fig. 6.—Degeneration in Clarke's vesicular cylinders at *b*. The lines have been carried through Clarke's columns.

Thus it seems probable that the majority of all postero-internal zone fibres take origin in the grey matter. And when it is remembered that the fibres do not put in an appearance until the sclerosis of the heads of the horns is in a large measure replaced by proper grey elements, it does not seem improbable that they take origin in the most dorsal portion of the grey matter.

This disposes of three of the tracts of the posterior column whose fibres are by most investigators thought to be of endogenous origin, and which persist in all lesions exclusively confined to afferent root fibres, but which are the earliest to succumb to any morbid process which primarily affects the grey matter.

The fourth and remaining one is Schultze's descending comma tract. In the normal cord, like others of intracordal origin, this tract is of mixed composition, containing fibres that degenerate when the posterior roots are severed, and others that atrophy only when the grey matter is diseased. But it is generally believed that fibres which depend for their nutritional activity on the cells situated in the grey matter largely preponderate over those whose trophic centres are in the cells of the posterior spinal ganglia.

In view of the fact that three tracts of acknowledged intramedullary origin have persisted even in the presence of considerable chronic poliomyelitis, there arises a natural desire for an explanation of the presence of degeneration in this tract (see Figs. 2, 3, and 4 *c*) whose main origin is similar. For, as already intimated, the comma tract is in a state of almost absolute fibrosis from its usually assigned upper to its lower limits. (See Figs. 2, 3, and 4 *c*).

An explanation which has presented itself is that being of more mixed origin than the other endogenous tracts it has suffered doubly as a result of a chronic degeneration its in centres in the cord and in the posterior root fibres.

Yet I have not been able to convince myself into accepting so easy an explanation. It seems to me that there must be some specific reason for this contradictory degeneration, that there must be some special groups of cells whose fibres enter into the posterior external columns and congregate as the descending comma tracts, and which in this case have been so severely affected by the atrophic process at work as to cause abolition of these fasciculi of fibres.

The only groups of cells, however, which show extreme degeneration are Clarke's (see Fig. 6 *a*). Is it possible that cells of the vesicular cylinders, besides being the authors of the direct cerebellar tracts, also give origin either directly from some of the cells themselves, or as collaterals from the cerebellar fibres to the descending comma tracts?

In a normal cord fibres may be seen passing from the grey matter mesial to Clarke's columns, where they exist, into the postero-external columns to about the position of the comma tracts. Fibres corresponding to these cannot be observed in this cord; and that these fibres, Clarke's cells both large and small, and the comma tracts are all degenerated, appears to be above coincidence, and to point to some anatomical association.

Again we know almost precisely the vertical extent of the vesicular cylinders. Day-by-day evidence is being adduced which tends to prove that the descending comma tracts are of about the same vertical extent as the cylinders, and it seems probable that before inquiry stops it will be determined that there is an exactness in the range of both structures.

It appears unlikely, in view of what we know of cell associations, that an almost continuous column of cells of the extent of Clarke's are unassociated by commissural fibres; and taking into consideration the nearness and apparent association of the vesicular cylinders with the fibres leading from their neighbourhood to the vicinity of the comma tracts, and the likeness in vertical extent of both the cylinders of cells and fasciculi of fibres, it does not appear improbable that the latter function between upper and lower levels of the former. If such an anatomical connection exists, there is at once found an explanation of the persistence of fibres in three tracts of intracordal origin and the abolition of the greater part of the fibres from others of like origin.

Note.—Since the above was read at the 1897 meeting of the British Medical Association, Dr. Bruce has published an interesting case showing the connection of Flechsig's median triangle and Gombault and Phillip's sacral fibres which together he has named the septo-marginal tract. This case is certainly strong negative evidence in favour of Bruce's contention regarding the extent of the septo-marginal tract. The disappearance of the lower and more peripheral portion of the latter in this case, which corresponds to Gombault and Phillip's fibres, while the upper portion corresponding to Flechsig's triangle persists, is no doubt due to the greater degeneration in the grey matter of the sacral posterior horns.

THE CROONIAN LECTURES
ON
SOME POINTS CONNECTED WITH SLEEP, SLEEPLESSNESS, AND HYPNOTICS.

Delivered before the Royal College of Physicians of London.

By JOHN BUCKLEY BRADBURY, M.D.Cantab.,

Fellow of the College; Downing Professor of Medicine in the University of Cambridge; and Senior Physician to Addenbrooke's Hospital.

Lecture IV.

I concluded my last lecture by stating that attempts had been made to find a less dangerous and equally effective substitute for morphine. To two such compounds I now wish to draw your attention.

In 1890, Stockman, in conjunction with Dott,[1] published experiments made on some derivatives of morphine. They introduced into the morphine molecule various alkyl and acid radicles and chlorine, and also modified it by the addition of methyl chloride. Morphine contains two hydroxyl groups, and the hydrogen of one of these, probably united to an aromatic nucleus, is more easily replaced than the other. When this is replaced by methyl, ethyl, or amyl, the morphine action still remains, but the compounds thus produced are more toxic, their narcotic power is less, their tetanising power greater, and they have a greater effect upon the motor nerves. On the whole, their experiments do not seem to give much support to Schröder's law, as they say: "Theoretically, there is possibly a difference in the actions of the three substances, but it must be entirely quantitative, not qualitative, and our methods of investigation were not sufficiently fine to detect it (if it really exists)." Von Mering's recent observations are even more convincing. From clinical observation he found propyl-morphine, isobutyl-morphine, and amyl-morphine distinctly feebler than methyl- and ethyl-morphines.[2] When acetyl and benzoyl radicles were introduced, and acetyl-morphine, di-acetyl-morphine, benzoyl-morphine, and di-benzoyl-morphine were thus produced, a similar effect was obtained. The narcotic effect, however, was present after small doses (1 mg.—$\frac{1}{24}$ gr.—of acetyl morphine in the case of rabbits), but it did not appear to increase with increase of the dose, tetanic symptoms developing instead. "The depressant action of small doses on the cord, and especially on the respiratory centre," Stockman and Dott say, "is very much greater than that of morphine." From this statement we should not expect any of these to be of value as substitutes for morphine. But the case is otherwise regarding codeine, as they say that, compared with codeine, "they (the acid derivatives) induce an equal narcotic effect with about one-tenth of the dose, while a dose about three times as large is necessary to cause tetanus. Their depressing action on motor nerves is about the same; the nausea and diarrhœa occurring in dogs is quite as great as after codeine." Thus as a substitute for codeine we might expect one of these substances to be of value. Quite recently Dreser,[3] from researches mainly on the respiration, has introduced diacetyl morphine, under the name of "heroin," into therapeutics. According to him it is more powerfully sedative, and correspondingly less toxic than codeine; it lengthens the time of inspiration, increases the gaseous exchange, and does not affect the sensibility except in diminishing any tendency to over-extension of the lungs. So far the clinical results have supported Dreser's experiments, but as yet they have been too few to decide the position this drug will hold in therapeutics.

But von Mering has found that monoacetyl-morphine—in which the acetyl replaces the hydrogen of the alcoholic

hydroxyl of morphine—is more sedative and less toxic than diacetyl-morphine, and he states that he has used this substance with success in cases of advanced pulmonary tuberculosis in which codeine and diacetyl-morphine had proved of little effect.[4]

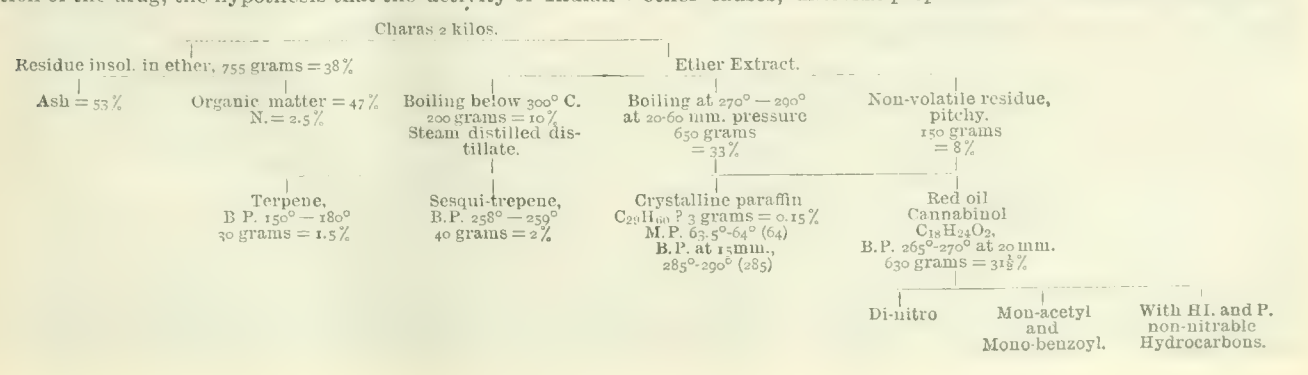
The other derivative of morphine which has been introduced as a substitute is benzyl-morphine, the hydrochloride of which—$C_{17}H_{18}NO_2.O.C_6H_5.CH_2.HCl$—is called "peronin." This was introduced into practice by von Mering, who found it slightly less active than morphine, but freer from ill-effects. According to Schröder,[5] it occupies pharmacologically a position between morphine and codeine, producing more restful sleep than the latter, and no symptoms of stimulation. Mayor's more recent investigations[6] do not, however, support this. Small doses given to rabbits produced a certain amount of torpor, but the animals reacted to the least stimulus, and if the dose was increased convulsions were produced. If artificial respiration was performed, death resulted from cardiac paralysis. The lethal dose he found smaller than codeine, being in rabbits—peronin, 0.023 to 0.025 gram, and codeine, 0.063 gram per kg. body weight. My own investigations support these results.

In a rabbit after a dose of 0.01 gram per kg. injected intravenously, convulsions occurred; in a rat (155 grams) 0.02 gram (0.13 gram per kg.) injected into the peritoneal cavity produced depression, slow deep respirations, clonic convulsions, and death in 9 minutes. Codeine 0.0143 gram given to a rat weighing 114 grams (0.125 gram per kg.) under similar conditions produced convulsions, but was not fatal; but in one case 0.15 gram per kg. caused death in 8 minutes. Fish, too, are more susceptible to peronin than codeine, minnows dying sooner in 1 to 50,000 of the former than 1 to 7,500 of the latter.

Stursberg[7] also appears to have found peronin more active than codeine and further removed from morphine pharmacologically, but, like myself, he also seems to have found it somewhat more sedative than codeine. From an experimental point of view, however, there seems little to recommend it in preference to codeine, as its increased sedative action does no more than counterbalance its increased toxic effect. But its true place in therapeutics must be settled by clinical observation, and at present this is insufficient.

The other derivatives of morphine do not possess any practical interest.

The drug next in interest to opium as a hypnotic is cannabis indica, and as the most recent researches on this substance have emanated from our Cambridge school I intend to dwell somewhat in detail upon it. Three years ago Messrs. Wood, Spivey, and Easterfield began to investigate the chemistry of this plant, and as charas was its most active product they decided to work with this. Previously various substances had been stated to be the active principle. A resinous compound was isolated by O'Shaughnessy, Robertson, T. and H. Smith, and other more recent investigators; an oily substance was obtained by Personne, alkaloids by a few experimenters, and to each of these the activity of Indian hemp was thought to be due. I will dispose of the alkaloids first. Only minute quantities of an alkaloid have been found by some of the most recent workers, and many have failed to obtain any. None was obtained by Wood, Spivey, and Easterfield from charas, although it was carefully looked for. As the alkaloid first isolated appears to have been nicotine, and as most recent investigators have failed to obtain more than traces of an alkaloid, and these not possessing the peculiar action of the drug, the hypothesis that the activity of Indian hemp is dependent upon this class of bodies must, for the present at least, fall to the ground. Personne's cannabene has been found to be an impure sesquiterpene and not the active principle, so I need say nothing more about it. We are therefore left with the resin, and all the most reliable observations point to this as the active substance. The brothers Smith appear to have obtained it in a fairly pure form more than half a century ago, and in reality little more was added to our knowledge of this substance until recently. In 1894 Leib Lapin[8] obtained by a very lengthy process a still purer substance which he termed cannabindon, and still more recently the chemists at Cambridge isolated what was thought to be a pure substance and called it cannabinol.[9] These investigators, by extraction with various solvents and subsequent distillation, obtained several substances, as will be seen in the table below taken from the *Cambridge Philosophical Transactions*, ix, p. 144.



Owing to the gradual loss of activity with age and perhaps other causes, different preparations of cannabis indica often

show marked variations in physiological activity. Even different specimens of cannabinol show a difference in physiological effect. To determine the cause of this various experiments were undertaken. Temperature in itself was found to have little influence, but the resin was found to be easily oxidised, and it is very probable that its growing inactivity is due to gradual oxidation, but this cannot at present be regarded as absolutely proved.

We now come to the question of the active principle of Indian hemp. Is cannabinol the active ingredient? Marshall is inclined to think that it is. That cannabinol is probably the active principle was arrived at by a process of exclusion. All the other products, pure or impure, isolated from charas were inactive or much less active than this, and this being the case it is difficult to come to any other conclusion. At first the substance was thought to be pure, or, if impure, it was said that "the impurity could only be due to a stereochemical isomer or a compound with closely similar composition and properties." Since this was written the compound has been found to be composed of at least two substances, one having the empiric formula $C_{21}H_{26}O.OH$ (to which the name cannabinol is now restricted),[12] the other a lower carburetted compound not yet isolated in the pure state. The former substance was isolated by means of its acetyl compound, which was obtained in a crystalline form. From this the cannabinol was obtained by deacetylising. It presented nearly all the physical properties of the original substance, but it possessed scarcely any physiological activity. Whether the residual substance possesses greater physiological action has not been determined. So far it has been impossible to free it altogether from the higher compound, but probably this will be accomplished in course of time.

At present the chemists have turned their attention mainly to the analysis of this new substance. From the old cannabinol by treatment with nitric acid they obtained a body previously isolated by Bolas and Francis, and termed oxycannabin. This substance is a nitro-body and a lactone, and Wood, Spivey, and Easterfield propose the provisional name of nitrocannabino-lactone for it. By successive conversion into the amido- and iodo- bodies, these observers have obtained cannabino-lactone, and by subsequent treatment they have obtained from this iso-phthalic acid. From their analysis they have come to the conclusion that oxycannabin is nitro-meta-tolylbutyro-lactone; and thus has been established the first step in the determination of the chemical constitution of an active cannabis product. With the further determination of the constitution of these bodies, probably more light will be thrown upon the physiological activity of cannabis preparations.

Several derivatives of the original cannabinol have been tried physiologically, but none of these are of therapeutic interest. It was hoped to obtain a more soluble active product, but experiments in this direction have not been attended with success.

Our present position, therefore, with regard to cannabis indica is this. We have obtained a more or less pure body with active physiological properties, but varying as regards these within rather wide limits. As alcoholic and oily extracts of charas are as active, if not more active, than cannabinol, there seems to be some undetermined factor, unless the difference in effect is due to difference in absorbability. It seems probable that the loss of activity is due to gradual oxidation of the active principle, and consequently all preparations should be kept as much as possible from light, heat, and air.

Other hypnotics derived from the vegetable kingdom which have aroused interest in recent years are hyoscine and pellotine and their allies. Hyoscine, as you know, belongs to the belladonna group of alkaloids, most of which are what Ladenburg termed tropeïnes. These are substances consisting of a base tropine united to an organic acid. This drug (hyoscine) has been said to be identical with scopolamine, and the question is not yet settled. A number of other tropeïnes are known, most of them having been synthetically produced, but only one of these—homatropine—is of therapeutic importance, and this mainly from an ophthalmological point of view. Hyoscine is more sedative than hyoscyamine, and more reliable as a hypnotic. Indeed, it has almost totally replaced hyoscyamine for this purpose. As a type of the comparative effect of the two drugs we may take a series of cases reported by Wetherill.[13] He used the drugs in a series of mental cases, and from 268 administrations of hyoscyamine a good night's rest was only obtained in 73; in 68 a fair night's sleep followed, and in 87 a poor one; in 40 no sleep whatever was obtained. Hyoscine, on the other hand, in much smaller doses produced a good night's rest in 246 instances out of 348, and totally failed only in 14 cases. The ill-effects also were less numerous.

For the treatment of insomnia in general hyoscine will probably never come into use, but its solubility in water, and its applicability to hypodermic medication, make it of extreme value in many conditions, particularly in the insane. In exhaustion from any cause, and in advanced heart disease, it is said to be contra-indicated.

The other drug I have mentioned is pellotine. It is an alkaloid derived from the anhalonium Williamsii, and it was suggested as a hypnotic only a few years ago. There are two species or varieties of anhalonium which have attracted attention during the last few years: Anhalonium Williamsii and anhalonium Lewinii or mescal button. These have been investigated most extensively by Heffter.[14] He isolated pellotine from the Williamsii, and mescaline, anhalonidine, anhalonine, and lophophorine from anhalonium Lewinii. Mescaline in frogs produced decided cerebral depression, lophophorine distinct stimulation. Between the two in action are arranged pellotine, anhalonidine, and anhalonine. In these a narcotic stage is followed by a tetanic one. Anhalonidine produces the most prolonged narcosis, anhalonine the shortest. In warm-blooded animals, however, these effects were not observed, and in experiments on himself no marked narcosis was produced. Anhalonidine (0.1 g. to 0.25 g., or $1\frac{1}{2}$ grain to $3\frac{3}{4}$ grains) caused some sleepiness and heaviness of the head, and anhalonine (0.1 g., or $1\frac{1}{2}$ grain) produced slight sleepiness, but neither of these seems likely to prove useful as hypnotics. Pellotine is the only one of these alkaloids which has been put to practical use, and this in only a few instances. Jolly[15] and Pilcz[16] have recorded cases treated by this drug. In 58 administrations Pilcz obtained from one-third of a grain a satisfactory night's rest in half the cases; in 21 per cent. it failed. Jolly had to use larger doses, and in excitable and delirious patients he only obtained a calming effect. Giddiness was also complained of. He gives its relative strength as, pellotine 0.06 g., trional 1 g., chloral hydrate 2 g. Wilcox[17] is inclined to believe that it may be of considerable value.

The Treatment of Insomnia.

This, notwithstanding its apparent simplicity, is one of the most difficult subjects in therapeutics. On the one hand, we have a number of drugs which, given in sufficient doses will, we know, in the majority of cases produce a desired result; on the other hand, apart from any immediate ill-effects, we may make our patient a slave to a habit which in the long run will prove more disastrous than the insomnia itself. The great principle of therapeutics—the removal of the cause—should ever be kept in mind; the relief of the symptom being regarded as secondary to this. It is, therefore, necessary to inquire first into

The Causes of Insomnia.

What is sleeplessness to one person may not be so to another. The average sleeping time of an adult is six to eight hours, but the amount of sleep required varies with the individual. It also varies with age. Babies sleep the greater part of their time. As they grow older, gradually less sleep is required until adult life is reached; with the onset of old age more sleep is again needed. The amount of sleep varies, too, with the mental constitution of the individual—idiots and persons of weak intellect often sleep excessively—and with the quality of the sleep, profound and continuous sleep being much more refreshing than superficial and broken.

Considering these variations, insomnia may perhaps be best defined as a loss of the normal amount of sleep. This loss may occur at the beginning or towards the end of the period of sleep, or it may occur through constant awakenings. Thus some people go to sleep directly after getting into bed, but awake every hour for several hours, sleeping well during the rest of the night. Others, especially the gouty, awake punctually at 3 or 4, and are unable to sleep again, or, at any rate, until it is

time to get up. Others, as I have said, find great difficulty in getting off, but once asleep do not awaken until the morning. Occasionally we even see patients who assert that they do not sleep at all, a statement which must usually be accepted with reservation.

The causes of insomnia may be classed under four heads—irritative, toxic, psychical, and those arising from change in the mode of life.

1. *Irritative Causes.*—This class includes all forms of insomnia caused by pain, and milder irritations like uneasiness. In children, teething, indigestion, worms, and so forth are frequent causes. Eye strain—as in hypermetropia and astigmatism—the irritation of an eczema, the inconveniences produced by faucial adenoids and other similar conditions, are also etiological factors of insomnia. After surgical operations, even in the absence of pain, insomnia is not infrequent; and this may be due in part to the constrained position of the patient and some irritability of the wound, in part to toxæmic and psychical causes. Cold feet, vesical affections, asthma, bronchitis, and other diseases, accompanied by troublesome if slight irritations, fall under this head; but the most important causal factor of this group is undoubtedly pain. In all diseases accompanied by pain sleeplessness is a symptom; and although other etiological factors of insomnia may be present, it is the pain which necessitates treatment.

2. *Toxic Causes.*—A large number of diseases are due to or are accompanied by the presence of some toxic agent in the blood, and such diseases are often attended by troublesome insomnia. Alcoholism and nicotism, the exanthems (measles, small-pox, scarlet fever), enteric and other continued fevers, erysipelas, diphtheria, pneumonia, hepatic disorders (the lithæmia of Murchison), dyspepia, and other gastric and intestinal disorders, rheumatism, gout, and Bright's disease, are some of the conditions which may be mentioned under this head. The insomnia accompanying heart disease and altered vascular conditions (arterio-sclerosis, etc.) may also be included in this division, as its origin appears to be a blood poison. This form of insomnia is also partly due to a deficient blood supply, and possibly to an altered cardiac action. The sleeplessness induced by certain beverages, such as tea, coffee, and cocoa, requires mention here. These, especially if taken in a strong form and late at night, are powerful preventives of sleep in most people. Strychnine and other nervine tonics, when taken regularly, often cause sleeplessness during the earlier part of the night; but in certain conditions, by improving the circulation and other functions, they prove excellent hypnotics. Insomnia is also a symptom of certain drug habits, such as opium-eating, morphinism, and cocainism.

3. *Psychical Causes.*—Grief, shock, worry, and mental anxiety are among the most frequent causes of insomnia. In many persons a predisposing factor—a nervous temperament—also exists, and among such persons insomnia may easily be established as a habit. In students overwork, especially if accompanied by irregularity in retiring to rest, and the prospect of an examination, are the most frequent causes. Women at the menopause often suffer from insomnia, partly perhaps owing to the accumulation of toxic products not eliminated by the catamenia. The various forms of insanity are accompanied by insomnia, usually as a premonitory symptom; but there can be no doubt that continued loss of sleep is also a factor in the production of mental aberrations. Cases of severe chorea and of paralysis agitans are also marked by sleeplessness.

4. *Causes arising from Change in the Mode of Life.*—Eating late dinners by those unaccustomed to them, and change of climate, especially to high altitudes, or in some individuals even to the seaside, sometimes give rise to temporary insomnia. Nurses who have been on night duty, after changing to the day frequently suffer from sleeplessness; and the same condition occurs in other people with intermittent nocturnal occupations.

It is evident from the multiplicity of these causative factors that no one line of treatment can be suitable for all cases. As I have said, the first thing to do is to "remove the cause,' therefore the treatment of insomnia resolves itself primarily into the treatment of the causative condition. If it is indigestion, acid or gouty dyspepsia, careful attention to the diet, the avoidance of tea and fruit (cooked or uncooked), and of all substances containing vegetable acids (except in so far as these may be used in treatment), are essential. Fruit, owing to the acid it contains, is, I believe, in many individuals an unsuspected cause of indigestion, gout, and sleeplessness; so are acid wines. In the gouty, much butcher's meat, especially beef, should be prohibited, and white fish, poultry, and game taken in its place. Fried fat, such as that on the outside of fried fish, should also be avoided. An alkaline bitter before meals, an occasional mercurial at bedtime, followed by a saline aperient the next morning; and in the gouty colchicum and magnesia or sodium salicylate should be prescribed. One of my patients found that a little peppermint water, taken at bedtime, gave him a better night than any hypnotic. In the insomnia of the aged and the overtired, and in that due to cardiac and vascular disease, strychnine is a valuable remedy. In cardiac disease and neurasthenics, with low arterial tension, digitalis and the other cardiac tonics may be resorted to. In anæmia iron, nux vomica, and sometimes digitalis, are required; and in a similar way other diseases which are causal factors of insomnia must be treated.

But often this method does not suffice. The removal of the cause does not bring back refreshing sleep. The reason is that the cerebral cells have assumed an irritable condition, and it is necessary to depress their activity to bring them back to a more normal state; in other words, we have to break the habit of sleeplessness, and it is here that hypnotics are of such great value. The best of these for any individual patient will vary according to his condition. There is no absolutely safe one, but experimental investigation and clinical experience show that paraldehyde stands in the first rank. Chloralamide and chloralose are safer but slower in action than chloral hydrate, and of the two I decidedly give the preference to chloralamide. The sulphones are also valuable, and in practice I have found sulphonal the most valuable of the three; but, as a whole, the bromides seem to be the least harmful, and in simple cases uncomplicated by other disease it is my practice, where I think a hypnotic is necessary, to try them before resorting to any other drug.

But, leaving these general indications and coming to the special therapeutics of insomnia, we may divide these into non-medicinal and medicinal. The first, as it is more or less common to the treatment of all insomnias, I shall deal with first. In all cases, where practicable, the bedroom ought to be in a quiet part of the house, well-ventilated, and of moderate temperature. Light should be easily excluded and the apartment scantily furnished. The bed should vary according to the custom of the individual; for young and middle-aged adults a firm mattress is the best, but for the old a softer bedding may be necessary. The covering should be light and warm, but in the use of pillows no general recommendation can be made. Some people sleep better with the head raised, others with it on a level with the body. In heart disease it will be found necessary to raise it, but as a rule this arrangement may be left to the choice of the individual. For broad-shouldered people Whitla recommends the wedge-shaped pillow used by the Germans.

Some people read themselves to sleep, some count; others, like Southey, think of some monotonous discourse. One of my patients used to hang his feet out of bed for some time and then put them in again. Walking about naked or a cold or tepid bath is often useful. Massage is sometimes advantageous. In the case of cold feet, rubbing them vigorously, or the use of a hot bottle, or a footbath with mustard in it is beneficial, or a hot sitz-bath may be used. Attention should also be given to the condition of the stomach. As a rule a light supper is the best, and for many—and especially those who awake in the middle of the night—a little hot milk or meat juice containing a small amount of alcohol is helpful.

Sleeplessness from overwork, and especially literary work, requires mental rest and change of air and scene. Temporary exposure to the cool air of the bedroom, or the wet pack, or a bath is often of use, and so is a glass of whisky and water at bed time, especially in those unaccustomed to the use of alcohol; but if the insomnia continue it is necessary to give a mild hypnotic, such as 20 gr. of sulphonal, or 30 or 40 gr. of bromide of potassium, to break the habit of sleeplessness. Capsules containing mxxx of turpentine given at bed time are sometimes beneficial in the insomnia of overwork and

worry. The drug acts as a stimulant and derivative, and is stated to act best in plethoric cases. No beverages containing caffeine should be taken after breakfast.

In nervous and hysterical women, and especially in women at the menopause, the bromides are very useful. I have long been in the habit of giving a mixture of bromide, tincture of sumbul, and tincture of hop, in camphor water at the climacteric; and it has helped to remove the insomnia as well as the mental depression and flushing heats so common at this period.

The sleeplessness of the insane requires careful management. In the early stages of acute mania, the bromides, chloral, hyoscine hydrobromide, and other sedatives are useful, but a hot bath at a temperature of 104° F., and cold water simultaneously poured upon the head, are most efficacious in inducing sleep. In melancholia, where arterial tension is usually high, paraldehyde in doses of ℥xl to ℥xc, or even more, is a valuable hypnotic. So is morphine, but a grain dose of erythrol tetranitrate, by reducing arterial tension, will frequently act better than anything else. In mild cases of delirium tremens sleep usually comes on after a time whatever treatment be adopted; in the more severe cases chloral and bromides, alone or in combination, are beneficial. Paraldehyde is recommended by some physicians. Opiates may be given, but in most cases hyoscine is probably a more efficient remedy. Among the medical officers of the American army twenty grains of powdered capsicum, in the form of a bolus, is the favourite hypnotic for this complaint. Cerebral depressants should be given as little as possible, and the treatment should be confined chiefly to feeding and tonic measures. In pneumonia sleep comes usually at the crisis; but where this has not occurred I have occasionally seen a hypnotic, such as chloralamide or paraldehyde, turn the scale in favour of the patient. In pleurisy and most other serous inflammations 5 to 10 grains of Dover's powder usually conduce to sleep, mainly by relieving the pain. A hypodermic injection of morphine may be given with the same object in view. In bronchitis chloral and chloralamide are safe hypnotics, and as a rule opiates are to be avoided, as these depress the respiratory centre as I have pointed out. The sleeplessness of asthma is relieved by remedies that cut short an attack, such as chloral hydrate, the fumes of Himrod's and other asthmatic powders, the hypodermic injection of morphine, or in some cases a 5 to 10 gr. dose of citrate of caffeine. Bromides are also useful and so is paraldehyde, which both relieves the asthma and causes sleep. A change of locality, even to another part of the same town, often succeeds. In one case the removal of a student from Downing College, Cambridge, to a house across the street brought relief, and in another of my pupils the change from Caius College to a house in another part of the town brought to an end a most troublesome attack of asthma with its attendant sleeplessness.

The insomnia of heart disease is benefited by digitalis, strophanthus, strychnine, and other cardiac tonics; but in some cases it is necessary to resort to morphine, either by the mouth or, still better, hypodermically, as first suggested by my colleague, Professor Allbutt. Paraldehyde and chloralamide are most useful in my experience. Ice to the head is recommended by Morison, where the vital forces are not too low, or the temperature subnormal. It often produces sleep rapidly, with a more regular cardiac action. Heat may possibly answer in other cases presenting a subnormal temperature.

In chronic Bright's disease insomnia is occasionally very troublesome. Eliminants, such as aperients, should be tried, and if they do not succeed chloral hydrate may be given; the drug is safer in kidney than in heart disease, the reduction of blood pressure being usually beneficial than otherwise. Morphine and hyoscine hydrobromide subcutaneously injected have been recommended in obstinate cases; but their employment requires great caution. Erythrol tetranitrate, by reducing arterial tension, often acts as a charm even when sedatives have failed; and in one of my patients thorough rubbing of the skin by means of a flesh brush induced sleep, and very materially relieved the restlessness of this complaint.

In cases of neuralgia, locomotor ataxy, and so forth, some of the synthetic analgesics—phenazonum or phenacetin—are of value. These drugs act also as hypnotics in cases where there is no pain, as I have previously stated. Calcium chloride is a valuable remedy in the insomnia due to pruritus. But when pain is the causal factor of insomnia morphine is the best general remedy, and this should be pushed until relief is obtained.

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A CASE OF OPHTHALMOPLEGIA EXTERNA AND PARALYSIS OF BOTH FACIAL NERVES.

AND A CASE OF PARALYSIS OF BOTH FACIAL NERVES WITH SOME AFFECTION OF THE LIMBS, FROM PERIPHERAL NEURITIS: RECOVERY.

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FOR permission to publish these cases I am indebted to Mr. John R. Lunn, Medical Superintendent of the infirmary. I have also to thank Dr. C. E. Beevor for his valuable help and for the remarks he has been good enough to add to the report of the cases.

CASE I.—A man, aged 49, was admitted to the infirmary on January 29th, 1898, for loss of power in the hands and feet. He had been a painter until a year before admission, when he had to give up his employment on account of intemperance. He then became a crossing-sweeper. He had dropsy in the early part of 1897. He gave no history of lead colic or palsy and denied syphilis. Three weeks before admission he had what he called cold shivers and went almost blind (this apparently was due to inability to open his eyes). The shivers lasted about a week; he kept to his work, however, until a week before admission, when he became unable to hold his broom and walked with difficulty. No definite account of pain at the onset or of muscular tenderness was elicited.

On admission he was a well-nourished man, but looked older than his years. He could be roused to answer questions, but as a rule was very drowsy. His face was immobile and mask-like; the breathing was quiet and regular. There was double ptosis and complete paralysis of all the external muscles of the eyeball on each side, the eyes being fixed with the visual axes parallel. The pupils were small, the left a little larger than the right, both reacted to light and accommodation. In the left eye there was a corneal opacity and also old iritic adhesions. When his eyelids were lifted he could see fairly well. Ophthalmoscopically there was slight blurring of the nasal side of each disc, but there was no optic neuritis.

The natural lines of the face were obliterated, and the facial muscles were totally paralysed for both voluntary and emotional movements. The orbicularis oris and orbicularis palpebrarum were equally involved; the muscles of mastication were not affected; there was no blue line on the gums; the tongue could be protruded with some slight difficulty and was not tremulous; the soft palate, though not completely paralysed, did not move well on either side; speech was thick and somewhat nasal; swallowing was not easy, as fluids, if drunk quickly, were regurgitated through the nose. He had a very feeble cough, and the pharynx and larynx contained a frothy mucus which he appeared unable to cough up. There were no symptoms of paralysis of the vocal cords, but, unfortunately, the mucus in the pharynx prevented a good view of the larynx being obtained by the laryngoscope. The diaphragm and intercostals were working. The hand grasps on both sides were very feeble, but there was no wrist-drop or obvious paralysis of the muscles of the elbows and shoulders. In the legs the extensor muscles were weak, and there was slight foot drop. He could not stand steadily but could just walk when supported; the toes did not drag and there was no inco-ordination, his gait being simply that of a very feeble man. The knee-jerks and plantar reflexes were absent, nor could the triceps and wrist reflexes be obtained. There was no loss or alteration of tactile sensation. Hearing as tested by the watch was not good, but questions were heard readily. He had complete control over the bladder and rectum. The facial muscles gave no response to faradism, but the limb muscles reacted. There were no signs of organic disease in the viscera. He said he felt well in himself except that he was conscious of being weak.

His condition remained much the same until February 14th, when slight improvement was noticed; he was not so drowsy, and his general condition was better. By February 22nd improvement was very marked. He could then raise the eyelids (the right better than the left), and there was slight up and down movement in the eyes. On February 25th he could keep both eyes open, wrinkle his forehead and screw up the eyes. Vertical movements of the eyes were good, and the internal rectus muscle acted a little on each side. The palate moved better, but was still sluggish. Coughing was performed naturally and vigorously. The hand grasps were wonderfully stronger. The arm and leg muscles reacted well to faradism, while in the face there was slight reaction in the frontales, but no response in the orbicularis oris.

By March 10th all movements of the eyeballs could be performed, but not in a perfect manner. There was nystagmus on vertical and horizontal movements; there was no squint. The right eyebrow, right angle of the

mouth and right side of the soft palate—all moved better than the left; the knee-jerk, also, could just be obtained on the right side, but not on the left. He could raise himself in bed, and walk without difficulty. From this point steady improvement was maintained, until by June the facial muscles showed no signs of weakness, and the arms and legs recovered so well that he became a fairly powerful man. The only trace left was a very slight unsteadiness of the eyeballs on extreme lateral movement of the eyes. He left the infirmary in December, 1898.

CASE II.—W. C., a clerk, aged 48, was admitted on November 23rd, 1898, complaining of weakness of the legs. He had always enjoyed good health, and was an abstemious man and a non-smoker. He had gonorrhœa when about 22, but no history of syphilis could be obtained. On November 1st, 1898, he was seized, quite suddenly, with severe burning pain in the back which confined him to his bed. He was attended by a doctor, who diagnosed influenza. Exactly two weeks later he found on awaking in the morning that he was unable to get out of bed owing to weakness of the legs, which had come on during the night. The lower limbs, from the hips downwards, were almost useless. For the next three days he had severe burning pains and tenderness in the legs. The pains then began to lessen, but the weakness of the legs remained. For a fortnight before admission he had some difficulty in starting the act of micturition.

On admission, he was a healthy-looking, intelligent man. He could not move the legs well in bed and was unable to stand, although he said he was able to walk along the floor the day before admission, but could not get up or down stairs. The muscles of the legs were tender, the knee-jerks were absent, but there was no anæsthesia. He had pain in the back, and also some tenderness on percussion of the lower lumbar spines. There was no retention or incontinence of urine, but he complained of difficulty in starting the act of micturition (this difficulty we thought was due to his confinement to bed). He was put on 20-grain doses of iodide of potassium thrice daily.

On November 27th he complained of a running from the eyes and of being unable to see to read: the iodide was therefore stopped. He found that he had difficulty in mastication, while food showed a tendency to collect in his cheeks. His speech also was thick and rendered indistinct by clumsy action of the lips.

On November 29th he was obviously worse than on admission; there was marked suffusion of the eyes with lachrymation. His face had acquired a fixed expression, and the natural lines were totally obliterated. He lay on his back with his legs drawn up, and was restless and complained of constant aching pains in the loins. He had a troublesome cough with signs of congestion of the bases of the lungs. The eyes moved freely in all directions, but he was unable to close the lids; on attempting to do so the upper lids fell a little, and the eyes rolled up. The palpebral fissure was about a quarter of an inch wide on each side. He was unable to frown, smile, wrinkle the forehead, purse the lips, or move the angles of the mouth. The muscles of the jaw acted normally, and there was no paralysis of the tongue, soft palate, or muscles of the neck. The diaphragm descended freely with inspiration. There was no weakness of the arms and hands, but there was considerable loss of power in the lower limbs, with slight foot drop. He could flex and extend the knees feebly, but was unable to flex the thighs on the abdomen; adduction and abduction of the thighs were almost completely lost. All movements of the ankles and toes were very weak. The knee-jerks were absent on both sides, and there were no wrist-, elbow-, or jaw-jerks. The pupil and palate reflexes were active. He still had difficulty in commencing micturition. There was no anæsthesia or loss of muscle sense. Sight, apart from the dimness caused by lachrymation, was good, and there were no abnormal ophthalmoscopic appearances. Smell was unaffected. Taste on the tip and sides of the tongue was not quick or certain, on the back of the tongue it was good. Hearing of the voice was good but bone conduction was deficient. The muscles of the face, legs, and arms all responded to faradic stimulation.

On November 30th there was slight anæsthesia of the toes, the muscle sense of the right foot was very uncertain, and the rectus abdominis muscles were weak. No further changes took place until December 8th, when the patient became conscious of some return of power in the right side of the face. The angle of the mouth could be drawn up a little on the right side and the eyelids were not so widely open. He had no difficulty in micturition. Three days later he could close the eyes and retract both lips when told to show his teeth. The legs, however, were not obviously stronger. By December 15th his face had improved so much that there was only slight paresis on the left side. The legs were stronger and he could lift them off the bed. On December 30th the face had quite recovered, but the legs below the knees were appreciably wasted.

The electrical reactions on January 3rd, 1899, were as follows: The facial and arm muscles all responded vigorously to faradism, but the muscles of the right leg reacted much less readily than the left; the vastus internus reacted sluggishly on both sides. The application of the current gave him a great deal of pain. With galvanism a current which was only just strong enough to produce a contraction in the left leg gave a larger and quicker contraction in the right leg; KCC greater than ACC on both sides. On January 9th the right leg was weaker and more wasted than the left, and the soles of the feet were anæsthetic. He could stand and walk with difficulty and dragging of the toes.

After this improvement of the legs was slow, but was sufficient to permit of his discharge on January 28th, although he still complained of pains in the legs and there was also considerable muscular weakness and wasting.

REMARKS BY DR. BEEVOR.

Both of these cases are of great interest from the extent of the symptoms and the complete recovery. In the first case there was complete paralysis on both sides of the following cranial nerves—third (except the pupil), fourth, sixth, seventh, and incomplete affection of the eighth, eleventh, and twelfth. In the limbs the grasp was weak, there was slight dropping of both feet, and the knee-jerks were absent. Sensation and the action of the sphincters were normal. The affected muscles reacted to faradism, with the exception of the face muscles, which did not react. In the second case, two weeks after the attack of severe pain in the back, which was diagnosed as influenza, there was almost complete loss of power in the lower limbs, with severe burning pain and tenderness three days later. On admission the knee-jerks were absent; there was difficulty in starting micturition, but there was no anæsthesia. A week after admission there was complete paralysis of both facial nerves; the upper limbs were normal, the lower limbs were almost paralysed, and there was some doubtful anæsthesia about the toes. The paralysis was followed by wasting, with diminished reaction to faradism.

The diagnosis of the seat of lesion was most important, as on it depended the prognosis. In the first case the distribution of the paralysis, and the fact that the whole of both sides of the face was paralysed not only to voluntary efforts but also to the emotional movements of laughing, and also that the reaction to faradism was lost, put the localisation either in the peripheral nerves or in the nuclei of these nerves, situated in the pons and medulla. In favour of the former place was the extensive weakness affecting all the four limbs, and the loss of the knee-jerk. It was exceedingly difficult in this case to be sure whether the case was a poliomyelitis affecting the motor cranial nuclei and the anterior cornual cells of the brachial and lumbar enlargements, or a neuritis involving the motor part only of the peripheral nerves, as there was no anæsthesia and no pain.

The mode of onset lasting three weeks was in favour of neuritis, while against it was the fact that complete ophthalmoplegia externa is usually due to a lesion of the ocular nuclei, and it is very unusual to have it as a symptom of multiple neuritis.

On the whole, the affection seemed more likely to be an affection of the peripheral nerves than of the grey matter. As to the cause, it seemed probable that alcoholic excess and exposure to cold were responsible for the neuritis, though there was not the foot and wrist drop, and the tenderness of the muscles which are so characteristic of alcoholic neuritis.

In the second case the diagnosis of neuritis was much more certain than in the former. The progressive mode of onset following on an acute illness diagnosed as influenza, and the pain and tenderness in the limbs were in favour of neuritis. There was complete paralysis of all the muscles supplied by both the facial nerves—including the orbicularis palpebrarum and orbicularis oris—but without any paralysis of the ocular muscles or of the tongue. Now this complete paralysis of all the face muscles, without the muscles of the eyes and of the tongue, was in favour of a lesion of the peripheral nerves, for it is now considered highly probable that the nerve supply of the orbicularis palpebrarum comes to the facial nerve, not from the facial nucleus but from the third nucleus, and the supply of the orbicularis oris comes to the facial nerve from the hypoglossal nucleus, so that, if the paralysis were due to the disease in the nuclei, the ocular movements and those of the tongue should also have been involved, but they were not. (In the first case this test could not be used, as the ocular muscles were completely paralysed, and those of the tongue were partially affected, a condition which might be due to the nerves involved or to their nuclei). The burning pain and tenderness in the legs with loss of the knee-jerks, and the slight anæsthesia in the toes were also in favour of neuritis, as was also the difficulty of extending the toes and dorsoflexing the ankles. As to the cause it seems probable that the attack he had was influenza, and the subsequent symptoms were those of neuritis following influenza.

In the first case the diagnosis of neuritis was not quite certain; in the second case it was definite, but in both cases it was sufficient to warrant a favourable prognosis, to the effect that, if no more muscles were affected, and especially if the diaphragm and intercostals were not involved, the patients would recover, and this proved correct.

SIR JAMES CRICHTON BROWNE will give the introductory address at Owens College, Manchester, on October 2nd.

MEMORIAL TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.—In reply to numerous inquiries the Honorary Secretary to the Society of Members of the Royal College of Surgeons begs to state that a copy of this memorial will lie for signature at 11, Adam Street, Strand.

A CASE OF SYRINGOMYELIA.

BY FRED. TRESILIAN, M.D., M.R.C.P.EDIN.,
Enfield.

MANY cases that are at first regarded as instances of progressive muscular atrophy are found on later examination to be cases of syringomyelia. This occurred in the case I wish to record; some years ago it was lectured on and exhibited at examinations as a case of progressive muscular atrophy. The exceptional features in this case are, first, the condition of the left shoulder-joint; secondly, the onset of symptoms much later in life than usually occurs; and, thirdly, a more rapid development of the disease.

W. P., aged 45, was first seen in October, 1898. He first noticed wasting in the thenar muscles of the left hand about six or seven years ago, without any previous loss of power. Within the last twelve months he has observed a similar wasting in the right thenar muscles. His left shoulder has gradually become swollen to the size it is now within the last four or five months, and the arm has swelled within the last few days. On examination there was found an enormous swelling around the left shoulder-joint, evidently containing fluid. It was not confined to the joint, but was evidently outside the synovial membrane, as it extended downwards to the insertion of the deltoid and into the axilla, backwards to the supraspinous fossa, and upwards to the clavicle and the upper part of the thorax. There was no pain. The whole of the arm was œdematous down to the knuckles. He could move the arm freely, and had worked with it up to the present. On moving the arm, which was abnormally mobile in all directions, there was distinct grating at the shoulder-joint, with clicking, as from the rubbing of bare or broken bone. There was nothing similar in either the elbow-joints or wrist-joints. Both hands were in a condition of *main en griffe*, the left being most so, with wasting of the interossei and thenar and hypothenar eminences. Sensibility to touch was normal everywhere. Sensibility to pain was lost over the left upper extremity, the shoulder, the side of the neck, and the left side of the thorax. Thermal sensibility was lost over exactly the same region. On the right side the sensations appeared to be normal, save around the shoulder-joint, where temperature sensibility was defective. There was no weakness or rigidity of the legs, and no inco-ordination. The knee-jerks were much exaggerated, and he had distinct but not prolonged ankle clonus. Nystagmus was present. Ophthalmoscopic examination showed the characteristic changes of myopia, and the fundi were otherwise normal. The laryngoscope showed weak abduction of the left vocal cord, it was not immobile, but was much less brisk in its movement than its fellow.

I made him rest from work, and in a few days the œdema of the arm went down considerably, and then I could see that the small muscles of the left hand were much more atrophied than those of the right. I aspirated the shoulder-joint, and got away about 6 ounces of gelatinous blood-stained fluid, which was only a small portion of what the joint contained, but though I moved the needle about in various directions no more would flow away. I think it must have been loculated by adhesions. The operation gave him no pain whatever, and he did not feel the introduction of the needle. He returned to his work, which he refused to give up, as he felt able to do it satisfactorily, and I have only seen him once since, when he was in exactly the same condition.

This man had noticed no symptoms in childhood. He never had any condition of whitlows, or ulcers, or chilblains, though he remarked since the onset of the disease, that if he burnt or cut his left hand it did not give him pain. The left shoulder-joint exhibited a condition exactly similar to that of advanced "Charcot's disease" as seen in tabes. There was evidently disorganisation of the joint, with destruction of the head of the humerus. This did not interfere with the power of the arm.

It will be interesting to watch if his laryngeal abductor paresis becomes absolute, and if any other signs of implication of the medulla are exhibited in the progress of the disease.

THE TREATMENT OF MALARIAL FEVERS BY THE INUNCTION OF CREOSOTE.

BY MAJOR A. O. FITZGERALD, R.A.M.C., L.R.C.P.I.,
Medical Officer in Charge of the Station Hospital, Belgaum.

MY attention was first directed to the utility of creosote inunction by a note in the BRITISH MEDICAL JOURNAL of January 4th, 1896, by Surgeon-Lieutenant Leonard Rogers, M.B., F.R.C.S. I have not strictly followed the method or dosage mentioned in his publication, but have varied them as follows: Pure beechwood creosote, 15 to 20 minims for a child of 1 year, or 30 to 60 minims for an adult, was mixed with an equal quantity, or more, of olive oil, and rubbed, for from five to ten minutes, over the chest, abdomen, axillæ, and sides. The oil was only employed to counteract the tingling and burning occasionally produced by the creosote.

The accompanying table contains cases of malarial fevers alone, as I wish to draw attention to the specific action the treatment appears to have in them. Their number, I am aware, is too limited to prove anything absolutely; but as equally good results were obtained in many more cases during the past year, notes of which it was impossible to take owing to pressure of work, I think it permissible to forward this report now.

A glance at the table will show that the results are remarkably uniform. In Class I, in the majority of cases, the usual remedies had been tried, and were continued afterwards, so the creosote may be looked on as merely an adjuvant. In Class II the Cases XIII and XVI to XXIII were treated with creosote as soon as they came into hospital, and nothing else was given, so that a secondary place cannot be given to it in these; while, in Class III the results were so striking in cutting short the disease and preventing recurrences, that I give the first four in detail as typical examples of the class of case in which the treatment may be found most useful. Before doing so I may refer briefly to a few of the cases in the other classes.

CLASS I.

CASE III.—The usual treatment had utterly failed. The temperature remained between 103° and 105° F. The patient was getting worse. At first mxv ter die were ordered first, but as the effects were not marked the dose was increased to 3ss. ter die. The husband was too energetic, and rubbed it in nine times on June 7th, 1896, but no unpleasant symptoms followed, and 3ss. ter die was continued until the temperature fell to normal. The tongue began to clean, and sleep was obtained after the first inunction, and it was very remarkable how the appetite returned, and the patient asked for food on the second day of treatment.

CASE IV.—This patient had just come down country saturated with malaria. He lived in quarters by himself, and when seen first was semi-delirious; all his servants were sick, and he had no one to look after him or administer medicine. Under these conditions the value of the treatment is well exemplified: 3ss was rubbed in twice on evening of June 10th, 1896. He fell asleep shortly after, and continued asleep well into the next day without any other treatment. On the evening of 11th he felt better than he had done for some time, and went about as usual. He remained in the station for a week, and had no recurrence during that time. He was advised to continue taking quinine, arsenic, iron, and strychnine owing to his cachectic condition.

CLASS II.

CASE XV.—An old soldier, cachectic and emaciated, had been subject to frequent bad attacks of ague, which sometimes assumed a continued form. Quinine, arsenic, iron, and strychnine were continued owing to his cachectic condition. He is now fat, strong, and with a good colour and free from attacks of ague.

CLASS III.

The dosage in this class was out of proportion larger than in the others, and to this may be due the fact that the results are more striking, the conclusion being, I think, that the dose for adults might be greatly increased with advantage. The first four I will now give in detail.

CASE I.—A. D. F., aged 1, was suffering from continued malarial fever, and had had no sleep for at least twenty-four hours. He had been previously treated with ordinary remedies. On June 6th, 1896, vomiting had commenced, and nothing could be retained on the stomach, and enemata of quinine were rejected at once. At 9 P.M. the temperature was 103° F., and the case seemed hopeless; mxv creosote, with about an equal quantity of olive oil was rubbed in over the chest and sides. The effect was practically instantaneous, the spasms became gradually less, the patient stopped crying, and dropped into an easy sleep. In half an hour the temperature had fallen to 100°, and the skin was beginning to act. The effect continued throughout the night, and the vomiting having ceased he was able to take his food. On June 7th, at 7.30 A.M., the temperature was 101° F., but none of the graver symptoms had returned. The same quantity of creosote and oil was rubbed in, after which the temperature gradually fell. The patient was quite comfortable all day, sleeping at intervals, and finally sank into a deep sleep at 7 P.M.; he scarcely stirred until the following morning, when the temperature was normal. There was no recurrence, and no further treatment was required.

CASE VI.—E. F. G., aged 4 years 11 months, was suffering from malarial fever, with bilious vomiting and purging, which prevented any medicine or food being retained. The temperature rose gradually for three days, until on the morning of June 24th, 1896, it was 104° F. Creosote mxv with an equal quantity of olive oil was rubbed in at 7.30 A.M., after which she slept an hour and a-half. The temperature continued to rise until at 6 P.M. it was 105° F.: mxxv of creosote with oil were then rubbed in. This relieved all the symptoms, and the patient slept well the whole night. The temperature gradually fell to normal on June 27th without the administration of any other remedies. Convalescence was rapid, and on July 1st she was in her usual health. There was no recurrence.

CASE IX.—E. F., aged 4, was suffering from malarial fever of an intermittent tertian type, and was taking liquor arsenicalis and quinine with diaphoretics and potassium bromide. At 2 P.M. on July 31st, 1896, she was very restless and becoming delirious. She was apparently suffering much pain. The temperature, taken in the groin, was 103.4° F., but was probably over 105° in the mouth. Creosote mxx with oil was rubbed in at once over the chest, abdomen, and sides, and as I rubbed the child gradu-

CLASS I.—*Adults treated out of Hospital.*

Station—Rangoon.

No. of Case.	Name.	Age.	Type.	Previous Duration.	No. of Applications.	Date of Application and Temperature.	Result and Date.	Remarks.
2	Assistant Surgeon C.	Ys. —	Continued	10 days	mxx twice 3ss once	8-6-96; 102° F. 9-6-96; 100° F.	Recovery 12-6-96	An obstinate case not yielding to quinine, arsenic, and strychnine. The temperature fell to 100° after the first application, and gradually to normal after the third. The improvement was continuous.
3	Mrs. R.	18	,,	5 days	mxv 3 times 3ss 27 times	6-6-96; 103° F. 7-6-96 to 13-6-96	Recovery 13-6-96	Apparently malignant malaria. She had been saturated with quinine and phenacetin. Immediate improvement from the time of the first application. 3ss ter die continued, and the temperature fell gradually to normal. Quinine gr.v ter die continued as a tonic.
4	Captain H.	—	,,	Present attack 4 or 5 days	3ss twice	10-6-96; 104° F.	Recovery 11-6-96	Contracted in Mekong Valley; in the cachectic stage. Had been treated with phenacetin and quinine without effect; was semi-delirious. Creosote at 5 P.M., repeated in 3 hours, gave immediate relief and sound sleep. Quinine, arsenic, iron, and strychnine continued.
5	Captain C.	—	,,	1 day	3ss twice	18-6-96; 103.8° F. 21-6-96; 101.4° F.	Recovery 22-6-96	Immediate relief from first application. Convalescence rapid. Could not take quinine in sufficient doses.
7	Lieut. T.	—	,,	4 days	3ss once	4-7-96; 104° F.	Recovery 6-7-96	Had been treated with quinine, diaphoretics, etc, but was getting worse. Creosote gave immediate relief. Quinine was continued. Convalescence rapid.
8	Mrs. B.	—	,,	4 days	3j once	5-7-96; 102.6° F.	Recovery 6-7-96	Creosote gave immediate relief. No other medicine given. No relapse.

CLASS II.—*Adults treated in Hospital.*

Station—Rangoon.

11	Private C.	24	Intermittent	6 days	3ss 8 times	13-6-96; 100.2° F.	Recovery 16-6-96	Ordinary tertian ague. Had been treated with quinine for six days, but the paroxysms recurred; had 3 applications of creosote on 13th, 3 on 14th, and 2 on 15th. Quinine then resumed, and there was no further recurrence.
12	Private R.	23	Continued	1 day	3ss once	14-7-96; 102° F.	Recovery 15-7-96	Had had antifebrin, but the temperature was rising again. Creosote gave immediate relief, and there was no recurrence. Quinine continued.

Station—Belgaum.

13	Private C.	—	Intermittent	?	3ss once	20-5-98: 103.4° F.	Recovery 21-5-98	Detained in hospital for the day. Temperature fell to normal in 4 hours; no recurrence; no other treatment.
14	Private H.	19	Continued	10 days	mxx once	22-5-98; 101.2° F.	Recovery 26-5-98	Severe case. Creosote gave immediate relief and sleep. Temperature rose to 104.4° on the evening of 22nd, but was normal on 23rd. Convalescence rapid and continuous. No recurrence.
15	Sergt. H.	—	Intermittent	?	3j once	26-5-98: 103.6° F.	Recovery 30-5-98	Bad case from neglect. Subject to ague for months, and had no treatment. Has had no recurrence since creosote used. Quinine, arsenic, iron, and strychnine given afterwards.
16	Private B.	—	,,	?	,,	9-11-98; 104.6° F.	Recovery 10-11-98	Detained for the day. Temperature reduced to 101° in 5 hours, and normal next morning. No recurrence. No other treatment.
17	Private R.	—	,,	?	,,	15-11-98; 105° F.	Recovery 16-11-98	Detained for the day. Temperature reduced to 101.6° in 5 hours; normal next morning. No recurrence. No other treatment.
18	Private M.	—	,,	?	,,	23-11-98; 105° F.	Recovery 24-11-98	Detained for the day. Temperature reduced to 102.4° in 4 hours. Other remarks as in last case.
19	Private S.	—	,,	?	,,	27-11-98; 105° F.	Recovery 28-11-98	Detained for the day; reduced to 100.8° in 6 hours. Other remarks the same.
20	Private T.	—	,,	?	,,	3-12-98; 104° F.	Recovery 4-12-98	Detained for the day; reduced to 101.8° in 4 hours. Other remarks the same.
21	Private B.	—	,,	?	,,	3-12-98; 105.4° F.	Recovery 4-12-98	Detained for the day. Temperature reduced to normal in 2 hours.
22	Private P.	—	,,	?	,,	3-12-98; 104° F.	Recovery 4-12-98	Detained for the day. Temperature reduced to normal in 3 hours. No recurrence. No other treatment.
23	Private D.	—	,,	?	,,	17-12-98; 104° F.	Recovery 18-12-98	Detained for the day. Temperature reduced to 99.8° in 4 hours; normal next morning. No recurrence. No other treatment.

Note.—For notes of Cases 16 to 23, I am indebted to Assistant-Surgeon E. Peacock, I.S., M.D., who kindly carried out the treatment and noted the effects at different stages. Relief was immediate in each case, and followed by 1½ to 2 hours' sleep.

CLASS III.—*Children treated out of Hospital.*

Station—Rangoon.

1	A. D. F.	1	Continued	? 4 or 5 days	mxv twice	6-6-96; 103° F. 7-6-96; 101° F.	Recovery 8-6-96	Very severe case. Previously treated with phenacetin, quinine, arsenic etc. Vomiting was severe. Creosote gave immediate relief and sound sleep. No other treatment from the time creosote was commenced. No recurrence.
6	E. F. G.	4½	,,	3 days	mxv once mxxv once	24-6-96; 104° F. 24-6-96; 105° F.	Recovery 27-6-96	Very severe case, with bilious vomiting and purging. Creosote gave immediate relief and 1½ hour sleep, but the temperature continued to rise until the second application, after which no further treatment was required. No other medicine given. No recurrence.
9	E. F.	4	Intermittent	7 days	mxx once	31-7-96: 103.4° F. (?)	Recovery 1-8-96	Had had ague for a week, culminating in a very severe attack. Temperature probably over 105°, was becoming delirious. Creosote gave immediate relief and sound sleep. Had had quinine, arsenic, diaphoretics, and bromides previously without effect. No recurrence.
10	A. H.	3½	Continued	2 days	mxx 7 or 8 times	26-8-96; 105.4° F. 27-8-96: 105° F.	Recovery 29-8-96	Very severe case. Delirious, temperature probably over 106°. Creosote gave immediate relief; temperature fell 3° in half an hour and 2 hours' sound sleep were secured, but it rose to 105° on June 27th, 1896, and the same dose repeated gave the same results. No other medicine before or after.

Station—Belgaum.

24	W. J. H. C.	5	Intermittent	4 days	mxv twice	14-10-98: 102° F. 16-10-98	Recovery 17-10-98	Ordinary ague, had been treated with diaphoretics and bromide. Creosote gave immediate relief on 14th, there was no cold stage on 16th, and no recurrence since. No other treatment.
25	A. W. C.	17	,,	3 months	3j twice	15-12-98; 103° F. 15-12-98; 101° F.	Recovery 16-12-98	Had constant recurrences of ague for three months, and tried the ordinary treatment. Creosote gave immediate relief, and since the second application no recurrence. No other treatment since then.
26	C. E. H.	Ms. 4½	,,	?	mxv	16-12-98	Recovery 17-12-98	Had had frequent recurrences of ague, unrelieved by ordinary treatment. No recurrence since creosote was used, and no other treatment given.

Note.—For notes of Cases 24 to 26 I am indebted to Assis ant Surgeon F. J. Caneck, I.M.S., M.D., who kindly carried out the treatment and kept, cases under observation.

ally ceased to cry and toss about, her expression was one of extreme relief, and before I had finished she was sound asleep. She slept soundly for two hours, and there was no return of the symptoms on waking. In the morning the temperature was normal. She was kept in bed for three days and under observation till August 11th, and had no return of the fever. The arsenic and quinine mixture which she had been taking before were continued.

CASE X.—A. H., aged 3½, was suffering from malarial fever aggravated by neglect and exposure to the sun. Her mother stated that she was subject to ague, and had had fever for two days. She had not been kept in bed, and she would not take any medicine. I was called in at 11 P.M. on August 26th, 1896, and found the child quite delirious. The temperature taken in the groin was 105.4° F., but probably nearer 107° in the mouth. I rubbed in mxx of creosote at once, and the effect was almost instantaneous; the delirium ceased rapidly, she became conscious, then was very irritable for a few minutes, and in a few minutes more was quite comfortable and quiet. In half an hour the temperature had fallen 3 degrees. She slept soundly for two hours, and fairly well for the rest of the night. On August 27th, 1896, at 7 A.M. the temperature was 100° F., but rose to 105° at 10 A.M., with internal strabismus and commencing convulsions. The inunction of creosote (mxx) repeated gave immediate relief. Some creosote and oil were prescribed in mxx doses, to be rubbed in if the temperature rose again over 103°, but the mother, becoming impatient, rubbed it in five or six times in the course of the next twenty-four hours. This indiscretion, however, was followed by no bad results. The temperature fell to normal on the morning of August 29th, without any other treament. There was no recurrence.

Though I regret that I have been unable to keep notes of other cases, I do not think it necessary that anything should be added to this record to prove the value of the treatment. My object is simply to bring it to notice, particularly in the interests of the last class of cases, which are frequently found so very difficult to treat by other means. Personally I never now answer a call to a sick child night or day without taking a small bottle of creosote with me. In this way time is saved, which perhaps could never be made up if lost.

It appears to me to be an ideal treatment for malarial fevers in children, as it combines everything that is necessary, even in very severe cases; it is easily applied; it acts rapidly and continuously, and, as far as my experience goes, with certainty; and I have never seen any bad effects, even after the excessive use of the drug. I need only allude to the possibilities of treatment of the more malignant forms of malarial fevers by the external or internal administration of this drug.

FIVE CASES OF SO-CALLED BLACKWATER FEVER.

BY H. M. DOWLER, L.R.C.P.LOND., M.R.C.S.ENG.,
Gairkatta, Dooars, Bengal.

THE following five cases have occurred in this district within the last two years. A typical case is as follows:

A European tea planter, aged 23, had felt feverish for a few days preceding April 8th, 1899, on which date he passed about 8 ounces of urine having the appearance of porter, and containing albumen. The skin and conjunctivæ were jaundiced. He had pain in the dorso-lumbar region and joints, and felt very weak. There was slight headache, and he had had bilious vomiting for a few hours. He was sweating freely. There were no other abnormal physical signs. A rigor with vomiting came on while he was being examined, so that it was not possible to take his temperature. Quinine bihydrochlorate gr. iij given hypodermically at once, with liq. hydrarg. perchlor. mx given at ten-minute intervals, soon checked the vomiting. Lithium benzoate was also given, in gr. v doses, every two hours while awake. During the following twenty-four hours two more gr. iij doses of quinine were given hypodermically, and the temperature fell from 99.4° on the second day to 99° on the third, after which it had a considerable range from subnormal to normal until the eleventh day, when it reached 100.2°, but the continued use of quinine then brought the temperature to normal. The smallest quantity of urine passed was 17 ounces on the fourth day, but by the fifth day it had increased to 43 ounces daily, when the lithium benzoate was stopped. The colour of the urine varied from that of porter through various shades of reddish brown. On the fourth day there was no trace of albumen. He sweated freely and slept well throughout. An occasional soap enema was necessary. His diet consisted of milk diluted with soda-water or lime-water in small quantities every few minutes, vermicelli, sago, and tapioca. A full bottle of champagne was taken during twenty-four hours for ten days. Animal food was given as soon as the urine was free from albumen. Quinine was given hypodermically from the eleventh to the twenty-first day. The patient was then given Easton's syrup 5iij daily, and was advised to leave this malarial place and to take a sea voyage.

Four months ago an educated Bengali had a similar attack, for the symptoms and treatment of which the preceding case will well stand as a type. He made a good recovery. For the first eight days I tested his urine, which varied from 1 ounce on the second day to an average of 1 pint during the next six. The first specimen was neutral, the remainder acid; the specific gravity varied from 1020 to 1013, and I failed to detect in it any sugar, bile pigments, or bile salts. It contained about one-fifth of albumen at first, but this was absent on the fourth day. Microscopically no blood corpuscles could be detected, but the urine (more especially the reddish-brown sediment) was full of what appeared to be pale yellow granular casts, which noticeably decreased in amount as the urine became lighter coloured. I regret to say that I had no means for the detection of blood-colouring matter.

I have also treated three other cases in Europeans which were fatal.

In the five cases the highest temperature was 103.7° and the highest pulse-rate 108; the greatest amount of albumen was one-half. There was sometimes slight diarrhœa during the attack. The prostration was marked in all, and there was a tendency to syncope on attempted movement. In all cases also there was dark grass-green bilious vomiting, with uncontrollable hiccough in one of them, slight enlargement of the spleen in one case; there was no enlargement, pain or tenderness of either the spleen or liver. Of four Europeans, one was big built and flabby, while three were muscular and strong-looking men. Three had been free from malaria for some time previously, but three had had a great deal of mental worry preceding the attack. None had taken large doses of quinine.

The hypodermic method is undoubtedly the best method of administering quinine in such cases, and lithium is retained in the stomach much better than the more usually employed diuretics. Liq. hydrarg. perchlor. appears to be the most serviceable drug to allay the vomiting, for which purpose a soap enema is usually a great aid, and a mustard plaster on the epigastrium also gives a very satisfactory result. On account of the syncopal tendency a stimulant mixture is generally needed.

From my own experience and inquiries it seems that this is a very rare complaint amongst natives, who are in the habit of stating that they pass blood in the urine when it is merely of a high colour due to malaria. On the other hand, it has been suggested with strong probability that, owing to the ignorance and carelessness of the large majority of local native practitioners in diagnosing it, the disease is not so rare amongst them as is usually supposed.

Blackwater fever differs from malaria accompanied with bilious vomiting so common in this district in (1) the character of urine; (2) the temperature not running so high, seldom above 101°; (3) the muscular weakness and prostration; and (4) the syncopal tendency. But, in spite of these differences, the two complaints have very similar symptoms, and the idea suggests itself whether the differences do not depend more on degree than character, and whether they may not both be due to very similar, if not the same, causes.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

ULCERATION OF COLON IN TYPHOID FEVER.

THE following case I think worthy of note chiefly on account of the length of time that elapsed between the probable date of perforation and that on which death took place, but also for the extensive perforations of the large intestine.

The patient, a boy aged 7 years, was admitted into the Foleshill Infectious Hospital on May 18th, 1898. The temperature on admission was 99°, and he was thought to be in the second week of typhoid from the history. The temperature next morning was 101.2° and then rose during the next five days with but three morning remissions to 104° at 5 P.M. on May 24th. It regained then the ordinary remittent type, not rising above 102°, the diarrhœa at this time having become very troublesome, eight or nine times in the twenty-four hours, was only checked by starch enemata. On May 27th a swelling with a good deal of cutaneous redness was noticed in the umbilical region, reducible on pressure; under poultices the redness disappeared and the swelling decreased in size; in two days however a great increase took place and the tissues became much inflamed; peritoneal abscess was diagnosed and about 4 ozs. of fœtid pus removed by aspiration on May 31st. The swelling reappeared however in a day or two as large as

before aspiration and burst through the site of the aspiration puncture, discharging as much as 10 ozs. during the twenty-four hours. This continued until the boy's death from exhaustion on June 19th.

At the *post-mortem* examination held the succeeding day the general peritoneal cavity was found full of fœtid pus and the whole colon, especially the transverse portion, profusely perforated, the finger being easily inserted into some of the perforations; only one small perforation was found in the small intestine, though the latter was greatly congested and ulcerated. Probably perforation took place about May 25th. If this be correct the boy survived about twenty-five days.

J. Orton, M.R.C.S., L.R.C.P., D.P.H.,
Medical Officer of the Foleshill Infectious Diseases Hospital.

Foleshill.

URETHRAL STRICTURE IN A BOY AGED 11.

A Pathan boy, aged 11 years, was admitted into Mardan Civil Hospital on July 9th, 1898, suffering from retention of urine. The father gave the following history. Two years ago the boy fell from a tree and broke his arm, but, as far as the father knew, sustained no injury to his urinary organs. Two months later he complained of pain in the perineum, and difficulty in micturition, and shortly after this urine was noticed to come from an opening which had formed in his perineum; this fistula persisted for a little over a year, urine coming from it at intervals. Since then he had always had some difficulty in micturating, and for the last twenty-four hours had passed no urine.

Patient was a weakly boy, small for his age. Above the pubes was a dull, fluctuating swelling, which extended up to the level of the umbilicus. In the perineum was a small scar, marking the mouth of the healed fistula. On rectal examination internal and external hæmorrhoids were found, and the distended bladder felt.

Under chloroform a No. 1 silver catheter was, after repeated attempts, passed into the bladder and the urine drawn off. The stricture was just in front of the bulb. As the catheter was very tightly gripped, and had been passed with some difficulty, it was tied in for twenty-four hours. Next day this catheter was found to be loose, and Nos. 1 to 4 were passed fairly easily. Before his father insisted on removing him from the hospital No. 7 was passed. There was no calculus.

The points of interest are the extreme youth of the patient, and, contrary to my expectation, the ease with which the stricture yielded to treatment.

J. H. Hugo, M.B., B.S.Lond., D.S.O.,
Lieutenant, I.M.S.

Malakand.

CASE OF RUPTURE OF THE HEART.

On May 14th, 1899, I was called to see the dead body of a woman, aged 42, by the Cardiff police. She had been left by some friends lying on a sofa in her room "helplessly drunk," about 12.30 A.M. in the early morning. I saw the body later. It was lying in the middle of the floor in a small pool of blood, with a cut 2 inches long down to the bone above the left ear, obviously not sufficient to cause death from hæmorrhage. As some suspicion attached to the husband, who had also been lying drunk in the same room, I was called on to perform a *post-mortem* examination, which I did the same evening with the assistance of Dr. Robert J. Smith. The results were as follows:

On opening the skull, which was abnormally thick, the dura mater was found adherent to the other membranes and to the convolutions at some points, and much thickened. On opening the pericardium we found the pericardial cavity almost filled with dark-coloured clots, the largest of which was about 5 inches long, 3 inches broad, and 1 inch in thickness. Midway between the base and apex of the right ventricle was a tear, about ½ inch in length, with ragged edges and communicating with the cavity of the ventricle. On examining the tissue surrounding the tear, we found it much thinned and fibrosed, pointing to a precedent myocarditis. The valves were intact, and the great vessels fairly healthy. Near the apex of the heart there was a small hæmatoma about ½ inch square just beneath the visceral layer of the pericardium. Other small patches of myocarditis were seen, as well as a good deal of fatty infiltration. The lungs were markedly emphysematous. The liver was enlarged and congested. The kidneys were congested, and showed some signs of interstitial nephritis. The stomach was full of fluid which smelt of spirits. The uterus was unimpregnated and its walls were almost entirely occupied by three interstitial fibroid growths, each slightly smaller than a pigeon's egg.

The woman had been a heavy drinker for years, and there was a strong suspicion of specific disease.

R. A. Neilson, M.B., B.Ch.,
Assistant Surgeon to the Cardiff Borough Police.

Cardiff.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

COUNTY ASYLUM, CHESTER.

TWO CASES OF ANEURYSM OF THE AORTA.

(By J. R. Ambler, M.R.C.S., L.R.C.P., Senior Assistant Medical Officer.)

A man, aged 53, died suddenly from rupture of an aneurysm of the thoracic aorta. He had suffered for six years from the present attack of mania, and had been the subject of alcoholic excess. He was noisy and restless, and prone to fly into violent passions, gesticulating wildly with closed fists. On September 1st, 1898, he took to his bed on account of severe pain in the back, which radiated towards the left side. He was impatient of examination and questioning, so that little help could be obtained from him. He rapidly became thinner and quieter, and improved a little, so that he was able to get up again.

On September 14th, 1898, he took his tea as usual at 5.30 P.M., and at 6.40 P.M., while walking about the ward, he suddenly fell down. I was called to see him immediately, and found him pale, breathless, and faint, with signs of internal hæmorrhage. He died in twenty minutes.

At the *post-mortem* examination the left pleural cavity was found full of dark blood clot which weighed 740 grams. On removing the lung a large sacculated aneurysm the size of a large orange was found opposite the eighth, ninth, and tenth dorsal vertebræ. This had ruptured at its lower part. The vertebral bodies were much eroded, especially that of the ninth, while the head of the eighth rib and neck of the ninth were almost completely eroded, the neck of the tenth was quite eaten through, and that of the eleventh was roughened. The aneurysm was lined with laminated clot, and the aorta above the aneurysm contained numerous atheromatous plaques. The heart weighed 295 grams.

The wife of a coachman, aged 63, was suffering from a fourth attack of melancholia. She suffered from delusions of persecution. Physically she was in bad health, and had been liable to attacks of difficulty of breathing for the past six years. The heart acted violently, the apex being displaced and the impulse felt in the mid-axillary line; there was a mitral systolic murmur. She gradually became weaker, and died three months after admission. At the *post-mortem* examination the aorta was found dilated and extensively atheromatous. Commencing at its first part and extending to the transverse and descending portions of the arch was found a sacculated aneurysm, somewhat constricted in the centre, and about the size of a small melon. The part to the right of the sternum contained a large organised clot weighing 285 grams. The interior of the aorta was much roughened under the clot, and there were numerous calcareous nodules present. The part to the left side of the sternum contained dark blood clot. The trachea was firmly adherent to the aorta and showed an ulcer. The heart weighed 270 grams.

LUNATIC ASYLUM, KINGSTON, JAMAICA, W.I.

TWO CASES OF CYSTICERCUS.

(Reported by D. J. Williams, M.R.C.S., L.R.C.P., Assistant Medical Officer.)

Case I.—Cysticercus of the Brain.

History.—I. G. B., a coloured man, aged 54, was admitted on June 2nd, 1897, suffering from mania. He had been insane twelve months.

Condition on Admission.—His physical condition was good, the knee-jerks were unimpaired, the pupils reacted to light and accommodation, and there were no signs of paralysis. He was talkative and incoherent, and stated that he suffered from rheumatism.

Death.—He remained in the asylum until his death on February 25th, 1899. His mental condition varied; he was frequently acutely maniacal and destructive, always deluded.

Necropsy.—A *post-mortem* examination was made three hours after death. Rigor mortis was present. The scalp and calvarium were natural. The brain, large and well developed, was free from coarse lesion; but in the occipital region of the brain were found about a dozen encapsuled bodies the size of a split pea, which proved on microscopical examination to be cysticerci. Several were in the subarachnoid space, and were removed with the pia mater; others remained exposed on the surface of the convolutions and in the sulci, whilst some were embedded in the cerebral convolutions, and one in the right corpus striatum.

Case II.—Cysticercus of the Heart and Other Organs.

History.—I. N., an African negro, aged 50, was admitted on November 26th, 1897, suffering from mania with delusions of persecution.

Condition on Admission.—He looked older than stated; the teeth were decayed and lost; the heart was enormously dilated and hypertrophied; the cardiac impulse was diffused, and felt best at the ensiform cartilage. There was retraction of intercostal spaces outside and below the nipple; there was a loud systolic mitral murmur; the arteries were in fair condition.

Death.—He died on March 6th, 1898.

Necropsy.—A *post-mortem* examination was made six hours after death. The cerebral vessels were atheromatous; the lungs practically healthy; the heart was much enlarged and the mitral valves diseased. The heart was studded with cysticerci embedded in the muscular tissue, on its surface, in the pericardium, and in the cardiac cavities attached to the columnæ carnæ and the intima generally. The subcutaneous tissue, the costal, pectoral, and abdominal muscles were full of them; they were found on the parietal pleura, the peritoneum, the intestines, and in the cortex of the kidney; there were none in the liver and spleen.

REMARKS.

In Moxon's *Pathology* it is stated that cysticercus cellulosæ, though not frequent, is far from rare in man; its more usual place is the cellular tissue of the muscles. Griesinger collected more than 50 examples of cysticercus of the brain. Cysticerci have occasionally been found in the kidneys.

REPORTS OF SOCIETIES.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

H. R. SWANZY, F.R.C.S.I., President, in the Chair.

Friday, July 7th, 1899.

CHANGES IN THE CONJUNCTIVA PRODUCED BY CHRONIC INFLAMMATION.

MAJOR H. HERBERT, I.M.S., read a paper on this subject. He said that (1) in the conjunctiva one might trace the development of normal adenoid tissue from ordinary connective tissue. The cells became more numerous, and many connective tissue cells were changed into large plasma cells diffusely scattered, and into small round cells, mostly grouped into follicles and lymph heaps. These small round cells or lymphocytes were young plasma cells, and always had among them larger plasma cells undergoing mitosis. (2) In follicular conjunctivitis and trachoma the new follicular formations might differ from normal in being deficient in supporting stroma and blood vessels. The first stage of deficiency was seen in columns of young cells lying free in lymph spaces; a more advanced stage was found in much larger collections lying in lymph vessels, encapsuled by the vessel walls. (3) In the retrogression of follicles the cells were (*a*) carried away in the lymphatics, or (*b*) became amœboid and travelled to the surface or passed directly into small blood vessels, or (*c*) underwent colliquative and hyaline degeneration. (4) Scar tissue might be formed in very chronic simple conjunctivitis. (5) Large palpebral papillæ like those of spring catarrh might develop from trachoma follicles (cases were quoted and tissues shown). (6) Conjunctival cysts in great number in the upper tarsal membrane might arise from distension of tubular epithelial downgrowths, the result of chronic, generally trachomatous, conjunctivitis (a series of cases analysed and cyst contents investigated). (7) Stellwag's brawny trachoma appeared to be due to a basophile degeneration of connective tissue fibres.

MR. SYDNEY STEPHENSON, after remarking on the value of the new methods of staining, said he had been interested to note that in trachoma the changes began in the lymphatic spaces and follicles. This explained the enlargement of the preauricular and cervical glands, and occasionally of other glands, seen in this disease. He also remarked on the unimportance of goblet cells, and of mast cells found in the conjunctiva. He asked if Major Herbert had been able to find any difference between follicular and granular conjunctivitis in his specimens.

In reply, MAJOR HERBERT said he had been unable to detect any difference.

PLASTIC OPERATION FOR CONTRACTED SOCKET.

MR. F. RICHARDSON CROSS described this operation. Last year before the Society he had described an operation for contracted socket, which consisted in a free division of the conjunctiva at the bottom of the socket and also of the tissues deeper in the orbit, and the insertion of a flap of skin from the temporal region turned on its pedicle, and placed at the deepest part of the socket. The cases on which he had done the operation was still a success, and the skin had become much like conjunctiva. He had recently modified the operation by taking a finger-shaped flap from the upper lid, and inserting in the deepest part of the socket; he had obtained more effect by this operation; the skin of the lid took on a conjunctival character sooner than the skin from the temple. In answer to the PRESIDENT he said no ectropion resulted.

A CASE OF PENETRATING WOUND OF THE ORBIT FOLLOWED BY MENINGITIS: TREPHINING: RECOVERY.

DR. ROCKLIFFE and MR. HAINWORTH reported this case. The patient was struck in the left eye in a drunken brawl by a foreign seaman, evidently with a pipe in his hand, whereby $3\frac{1}{2}$ inches of the stem, mounted by a copper band, was driven deeply into the orbit; a considerable amount of force was required to dislodge it from its firm position, and when removed the stem was plugged with some doubtful matter. The wound being thoroughly cleansed by perchloride and dressed with carbolic, all went well until the seventh day; when, preceded by frontal headache, the pulse dropped to 48, and the temperature became subnormal; followed on the eighth day by a rigor and rise of temperature to 102.2°. A localised abscess being suspected, the left temporal region was trephined; no pus was found, but a considerable amount of fluid withdrawn by a trocar from the lateral ventricles. With the exception of further rigors, accompanied by subnormal pulse, the patient made a complete recovery in one month, during which he had right partial facial paralysis, left external strabismus, and partial aphasia, due, as Mr. Hainworth surmised, to irritation of VI, and damage to Broca's convolution by the trephine, the rigors being explained by possibly some irritation set up around the seat of the operation. Cases were quoted showing the usual frequent mortality in such injuries.

CARD SPECIMENS.

The following were shown:—MR. LINDSAY JOHNSON: Macula Chromoscope.—MR. J. D. AMENABAR: Suction Apparatus for Soft Cataract.—MR. H. JULER: Sclerosing Keratitis.—MR. C. D. MARSHALL: Two specimens showing Grains of Gunpowder in the Eyeball.—MR. JOHN GRIFFITH: (1) An unusual form of Retinitis. (2) A microscopic specimen of a Perithelial Sarcoma of the Choroid.—MR. H. GRIMSDALE: Nævus of the Iris.—MR. W. T. HOLMES SPICER: Œdema of Lids.—MR. F. RICHARDSON CROSS: A Dressing Basket for Eye Work.—MR. E. C. FISCHER: Case of Detached Retina cured by Rest.—MR. DOYNE: Opacity of Cornea.—MR. ARNOLD LAWSON: Case

of Spring Catarrh.—Mr. Donald Gunn: Tuberculous Ulcer of Lid.

Election of Officers.

The annual general meeting was held afterwards for the adoption of the report. The following officers were elected for the next year:—*President:* *G. Anderson Critchett. *Vice-Presidents:* E. Nettleship, Henry Eales (Birmingham), W. A. Brailey, M.D., Priestley Smith (Birmingham), F. R. Cross (Clifton) George Cowell, *H. R. Swanzy, *P. H. Mules, M.D. (Wrexham), *Henry Juler, *S. J. Sharkey, M.D. *Treasurer:* John Abercrombie, M.D. *Secretaries:* James Taylor, M.D.; E. Treacher Collins. *Librarian:* W. Adams Frost. *Other Members of Council:* Charles J. Oldham (Brighton), Howard H. Tooth, M.D., W. A. Turner, M.D., G. E. Wherry, M.B. (Cambridge), S. H. Habershon, M.D., J. B. Lawford, W. J. Cant (Lincoln), Sydney Stephenson, *George Mackay, M.D. (Edinburgh), *Patrick Maxwell, M.D. (Dublin), *Charles Shears (Liverpool), *W. T. Holmes Spicer. *The gentlemen whose names are marked with an asterisk were not on the Council or did not hold the same office during the preceding year.

OBSTETRICAL SOCIETY OF LONDON.

Alban Doran, F.R.C.S., President, in the Chair.

Wednesday, July 5th, 1899.

The Fœtal Pelvis.

Professor Arthur Thomson (Oxford) gave a demonstration of the sexual differences of the fœtal pelvis. By means of a large number of drawings and lantern slides the author supported his opinion that during fœtal life the essentially sexual characters are as well defined as they are in adult forms, and that any differences that occur during growth between the adult and fœtal forms, due it may be to the influence of pressure or muscular traction, affect both sexes alike, and that such influences are in no way accountable for the characteristic features of the pelvis of the female as contrasted with the male.[1]

The President considered that Professor Thomson's researches were of the highest value. As sexual differences occurred in the genito-urinary tract long before birth, it was not surprising that corresponding changes in the pelvis were also established during fœtal life. According to Bouchacourt and Brindeau, the pelvic brim in the newborn infant was almost circular; their method of investigation (by radiography) seemed, however, to involve sources of fallacy.

Dr. Galabin would like to ask Professor Thomson if he had extended his observations to the infantile and child's pelvis, and what its relation was to the fœtal and adult pelvis. Professor Thomson had shown that the transverse diameter of the sacrum was less in proportion in the adult than in the fœtus; but the development of the wings was certainly greater. Did this development occur especially near the time of puberty, as generally supposed, or uniformly throughout growth? Professor Thomson had referred to Dr. Matthews Duncan's views as erroneous; but had not entered into any detail. He (Dr. Galabin) did not see anything in Professor Thomson's demonstration to contradict Matthews Duncan's views as to the mode of action of mechanical forces on the pelvis and the changes they tended to produce from infancy to adult life.

Mr. Stanley Boyd said that until recently it was believed that with the establishment of the function of the ovaries the peculiarities of the female pelvis developed, and it was supposed that the pelvic changes resulted in some way from the ovarian changes. Now Professor Thomson had shown us that we were endeavouring to account for a change which did not occur. Yet the difference between the male and female pelvis, however early they might appear, remained as striking as ever. Was the female type of pelvis secondary to the development of an ovary? Or was the form of the female pelvis a primary peculiarity—like the ovary itself—due to the cause which determined sex? What effect upon the form of the pelvis had non-development of the ovaries? and had early removal of the ovaries any effect upon the pelvic ring?

Professor Thomson replied.

[1] For full account of the author's observations see the *Journal of Anatomy and Physiology* vol. xxxiv p. 358.

Persistent Mento-Posterior Position of Face.

Dr. Lewers read a paper on a case of persistent mento-posterior position of the face in which the child was delivered alive by the axis-traction forceps. In the case recorded the patient was a primipara, and the face presented with the chin directed backwards and to the right. The os had been fully dilated, and the membranes ruptured for some time, but progress was completely arrested with the face well down in the pelvis. The ordinary forceps was applied, but slipped as soon as traction was made. On traction being made with the axis-traction forceps the head came lower and the chin rotated forwards, the chin being delivered in a very few minutes. The perineum was slightly torn, and the child suffered for some weeks from facial paralysis, which ultimately disappeared completely. The author mentioned another case similar in essential points to the above published in the *Clinical Journal* for 1892-93. He alluded to the liability of the ordinary forceps to slip in these cases. With the axis-traction forceps the position of the blades could be maintained by fixing the screw, and the position of the child was then little likely to be affected by the subsequent tractions which, by drawing the head lower, favoured rotation forwards of the chin.

Surgeon-General Harvey criticised the use of the word "persistent," seeing that in the cases described the chin did actually rotate forwards when the axis-traction forceps was applied.

Dr. Herbert Spencer agreed with the last speaker's criticism. He had met with three cases similar to those described by the author of the paper in which with the chin posterior and to one side, the os dilated, the chin low in the pelvis and progress arrested for some hours, he had easily delivered by converting the face into a vertex by means of Luke Robinson's lever, a highly ingenious instrument which he exhibited to the Society. It had the advantage of converting a difficult face (mento-posterior) into an easy vertex (occipito-anterior). He did not think the use of axis-traction forceps scientific in these cases; it was a dangerous instrument when rotation occurred, constituting then a sort of jointed lever very apt to injure the mother. The firm grip of the head could equally well be obtained with the ordinary forceps by tying the handles; he thought, however, that for cases which could not be delivered with the lever long straight forceps applied to the sides of the child's head would be preferable to the other forms.

Dr. Lewers, in reply, said that by the term "persistent" he meant that the chin had remained so long behind that the question of delivering the patient had become urgent. He thought that Dr. Spencer was discussing cases in an altogether different category. Rotation forwards of the chin was not the rule till a later stage of the labour when the chin was near the floor of the pelvis and the face deeply engaged. To interfere at an earlier stage was, in his opinion, unnecessary.

Dr. Spencer remarked that Dr. Lewers had misunderstood him if he supposed that he had interfered at an early stage; he had never done so, and strongly deprecated such interference. Out of about 30 cases of face presentation he only met with the three mentioned above and they were, like Dr. Lewers's, in an advanced stage of labour with the os dilated and progress arrested for some hours. It was to be remembered that in these cases, although the face was low, the greater part of the head remained above the brim; by pushing up the face and drawing down the occiput the conversion was easily effected.

Puerperal Eclampsia.

Dr. Horace Savory (Bedford) read some notes on a case of puerperal eclampsia. The points of interest in his case were that it was a second attack and non-fatal, though severe; that it was accompanied by hæmoglobinuria and very obstinate constipation; that loss of consciousness lasted nine days, but was suddenly regained after mechanical means had been adopted to relieve the bowels of a quantity of very dark evil-smelling fæcal matter. Dr. Savory had collected notes of 64 published cases, and quoted some to show that copræmia frequently accompanied eclamptic seizures; he also mentioned several recoveries where purgation had been the only form of treatment adopted. Not only were the bowels of his patient loaded, but the liquor amnii was full of meconium, and was of the consistence of thick jelly. He suggested that these two conditions might

be factors in the production or accumulation of the eclamptic toxin. The hæmoglobinuria he thought was comparable to that which sometimes occurs after excessive muscular exertion, and he quoted the case of a lad under his care who passed 2 pints of hæmoglobinuric urine after a run of 10 miles. He thought that the excessive muscular effort of the uterus might account for the breaking down of corpuscles and the appearance of hæmoglobin in the urine. His patient had no signs of renal disease or urinary obstruction.

The President considered that the fæcal-accumulation theory deserved more clinical investigation. Fæcal accumulation, however, occurred frequently in cases of abdominal tumour, but never in his experience caused anything like eclampsia.

Specimens.

Dr. Lewers: Three Cases of Abdominal Panhysterectomy for Fibroids.—Dr. Lediard: Fœtal Bones passed *per rectum* in a Case of Secondary Abdominal Pregnancy.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Sir John Batty Tuke, M.D., V.P.R.C.P.E., President, in the Chair.

Wednesday, July 5th, 1899.

Cases.

Mr. Stiles showed: (1) A child two months after operation for large Hydrencephalocele, with stereoscopic photographs before and after the operation by Dr. Andrew Watt; (2) a child after operation for extensive Tuberculous Osteomyelitis of the Tibia, with a skiagraph by Dr. Rainy; (3) a child after Excision of the Wrist, with a skiagraph by Dr. Rainy.

Specimens.

Mr. Stiles and Dr. Rainy showed skiagraphs of (1) Tuberculous Ankle; (2) Separation of Lower Epiphysis of Humerus; (3) Fracture at junction of Upper and Middle Thirds of Shaft of Femur, showing typical Displacement of Upper Fragment. —Dr. Harvey Littlejohn showed specimens from (1) a case of Strangulation of the Bowel; about 2 feet of the ileum had passed through a hole in the great omentum, and was in an almost gangrenous condition; the patient, a printer, was suddenly seized with pain in the abdomen and vomiting, which lasted intermittently until death occurred at the end of forty-eight hours; he continued at his work until a few hours before death; (2) a case of Intussusception, which occurred in a woman aged 35; the symptoms came on during the night, after a supper of tinned sardines, and they were at first attributed to poisoning from this cause; death occurred within forty-eight hours; *post mortem* an intussusception of the ileum just above the cæcum was found; there were comparatively slight signs of peritonitis, but great œdema of the contained end from constriction of the neck; (3) the Tongue, Fauces, Œsophagus, Stomach, and Intestines from a case of Hydrochloric Acid Poisoning; the man took two ounces of commercial spirit of salt suicidally, and was at once seized with violent vomiting; he died in an hour and a quarter; the whole alimentary tract down as far as six feet below the duodenum showed corrosion of the mucous membrane, with blackening of the surface of the stomach and upper portion of intestine; there was no perforation; (4) the Stomach of a man who took suicidally half a wineglassful of chloride of zinc ("soldering fluid"); he was found lying on the floor, vomiting yellowish-green material and purging; he complained of great pain in the abdomen, and was removed to the Royal Infirmary, where he died with symptoms of enteritis on the seventh day after taking the poison; the stomach was blackened, the mucous membrane being corroded, and the coats of the stomach softened. It presented an appearance similar to that of the case of HCl poisoning, the corrosion, however, being less intense.

Auditory Aphasia.

Dr. Alexander Bruce exhibited a patient with auditory aphasia, and showed sections of the spinal cord from cases of myotrophic lateral sclerosis and progressive muscular atrophy which he had observed clinically. In the case of progressive muscular atrophy the crossed pyramidal tracts in sections stained by Pal's method were absolutely normal, thus confirming the view that the two diseases were distinct.

Cerebellar Ataxia.

Dr. Bruce and Mr. Cotterill read a paper on a case of cerebellar tumour which had been under the care of the former. It was of interest as confirming the views expressed by Dr. Bruce at the January meeting of the Society, and published in the British Medical Journal of May 6th. The symptoms were deafness in the left ear, of sudden onset and five years' duration; giddiness of two years' duration, with staggering gait and tendency to fall to the left side; occasional cerebral vomiting; increasing failure of sight; left-sided occipital headache; defective taste on the left side of the tongue, and anæsthesia of the conjunctiva of the left eye. The objective signs were subnormal temperature, some hebetude, optic neuritis specially marked in the right eye. There was lateral nystagmus on looking to either side, but differing in character according to the side towards which the eyes were directed. When turned to the left the eyes showed slow oscillations of large range; on looking to the right the osciliations were slight and rapid, almost of the nature of a tremor. The movements of the left arm and hand showed a peculiar inco-ordination recalling that found in insular sclerosis; while the right hand when held out exhibited a slight rhythmical tremor. The left foot had a slight stamping movement while walking; and the tendency to fall to the left was increased when the attempt was made to walk along a straight line. These left-sided motor symptoms were attributed to pressure on the left nucleus of Deiters, as explained in the previous communication, and were regarded as being probably due to a tumour growing from the dura mater at the back of the petrous bone, and pressing on the auditory and adjacent nerves, as well as the side of the upper medulla. Mr. Cotterill, in operating for its removal, met with severe hæmorrhage from the emissary veins of the occipital bone, and found that, though he could reach the tumour with his finger, it was impossible to remove it. The patient died somewhat suddenly three days after the operation. At the necropsy a tumour of the size of a walnut was found in the site referred to, and adherent to the dura mater, but it had originated in the flocculus, had displaced inwards the side of the upper medulla, and had pressed upon the glosso-pharyngeal and a few fibres of the fifth nerve. There are as yet no known criteria to indicate whether a tumour in this situation has its starting point in the dura mater or in the flocculus. Could such criterion be obtained, then it might be hoped that successful removal of those which arose in the dura mater might be accomplished, as they had generally a very small pedicle. In the meantime, the main interest in the case was centred in the light which could be thrown on its symptomatology by recent anatomical and physiological researches.

The paper was spoken to by the President and others; and Dr. Bruce replied.

Development of the Testicle.

Dr. James Foulis read a paper on this subject. He said his own observations on the development of the ova and the structure of the ovary had satisfied him that the ovary was not a tubular structure in the sense in which Pflüger had described it. While all agreed that the germinal vesicles of the ova were derived from the germ epithelial cells in the embryo, it was a question how these germ cells became enclosed in the vascular stroma of the ovary. Pflüger and others had described the germ epithelial cells in the form of long columns as passing downwards into the subjacent mesoplastic stroma, and that these tubular columns of cells were broken up into Graafian follicles by the continued growth of the stroma. Dr. Foulis had failed to find any such tubular growths of germ cells dipping downwards into the subjacent stroma; but he had always found the subjacent stroma growing outwards towards the germ epithelial cells, and enclosing variously shaped and variously sized groups of such cells in its vascular network, and by the continued on-growth of this vascular stroma the cell groups were at last broken up into Graafian follicles, and the whole ovary was enclosed in a capsule of the same stroma. The tubular structures, as described by Pflüger and others, were merely macroscopic appearances seen in sections of the young ovary. On the other hand, the testicle was a tubular organ from its earliest stages of development. The ova could only escape from the ovary by the bursting of ripe Graafian follicles on its

surface, but the secretion of the seminal fluid and the living spermatozoa could only escape by means of the vas deferens, which was in direct continuity with the secreting tubules of the testicle. But the fact that the germinal vesicles of the ova were derived from the germ epithelial cells led many investigators to look for a similar origin for the cells lining the tubules of the testicle, as the spermatozoa, in some way or another, were regarded as the homologues of the germinal vesicles of the ova. Dr. Foulis then referred to an illustration in *Quain's Anatomy*, page 126, vol. i, part 1—Embryology—representing a section of the germ epithelium and subjacent stroma in a male chick embryo, in which it was attempted to show that strands of cells (the future tubules of the testicle) grew up from the Woolffian body towards the germ epithelial cells, and came in contact with certain primitive ova and enlarged cells, which ultimately become the cells lining the tubules of the testicle, and from which were derived the spermatozoa. Dr. Foulis then said that his present researches were undertaken to find out the origin of the tubules of the testicles, as well as the source of the cells lining those tubules. He then traced out the development of the germinal ridge in connection with the inner surface of the Wolffian body, and showed that it was a thickening of certain peritoneal cells; and he referred to the probable origin of the Woolffian duct from epiblastic cells. This Wolffian duct could always be seen by getting a view of the under and inner surface of the Woolffian body, where it could be seen coursing upwards to be attached to the young testicle. Dr. Foulis then showed that it was possible by means of a sharp razor to slice a very young testicle in half in such a way as to leave one half of the organ attached in its natural position to the Wolffian body. This half could then be cleaned of its contents by careful dissection with needles under water with the assistance of a low power microscope. There then remained a beautiful capsule of peritoneum. On looking into this capsule at its upper part a minute hole was invariably seen, into which a fine bristle could be passed. This hole was the point at which certain structures passed from the Wolffian body into the capsule of the testicle. This hole was always present and passed backwards through the centre of a stalk-like process of peritoneum which invariably attached the testicle to the Wolffian body, and it was the only spot at which any tubular structures passed from the Wolffian body into the capsule of the testicle. This stalk-like process of peritoneum could only be seen in the early stages of development, as when the testicle swelled out and became globular it shortened and was hidden from view behind the testicle. Dr. Foulis showed by means of many vertical and transverse microscopic sections in series that there passed from the Wolffian body into the capsule of the testicle through this minute hole a columnar mass of cells of a complex tubular nature, which coursed along in the axis of the testicle to its distal end and gave out in all directions numerous cellular outgrowths which completely filled and distended the capsule of the testicle. These cellular branches were the minute tubules of the testicle and they could be seen growing outwards in all directions as blind tubes from the central cellular column, distending the capsule of the testicle in a centrifugal manner. Each tubule was found to have a basement membrane and to be lined with a single layer of nucleated cells. The central columnar stalk could be traced almost as far as the inner surface of the testicle capsule; and in the microscopic sections it could be traced backwards in the centre of its peritoneal stalklike covering till it became continuous with certain tubules in the Wolffian body which were directly continuous with the terminal ends of the Wolffian duct which joined the testicle at this spot. After a careful study of all his preparations and microscopic sections Dr. Foulis had come to the conclusion that the testicle was a subperitoneal outgrowth at the upper part of the germinal ridge and consisted of encapsuled tubules derived directly from the terminal tubules of the Wolffian duct, and that both the tubules of the testicle and the cells lining those tubules were in direct continuity with and derived from the terminal tubules of the Wolffian duct itself, which in all probability was derived as an involution of epiblastic cells at an early stage of development of the Wolffian body.

Drs. Ballantyne and Cathcart spoke as to the beauty and value of the preparations.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

F. W. Kidd, M.D., President, in the Chair.

Friday, May 26th, 1899.

Myomatous Uterus Removed by Panhysterectomy.

Dr. Smith showed a myomatous uterus showing large abscess cavity, removed by panhysterectomy. This specimen was removed from a woman aged 40, five years married, during which she had given birth to two stillborn children and an instrumentally-delivered full term child in December, 1898. The tumour was then a little larger than a four months pregnant uterus, and had since then grown rapidly, so that in April, 1899, it filled the entire abdomen. It was diagnosed as a fibromyoma of a cystic nature. Dr. Smith attempted to do the operation of primary ligation of both the ovarian and uterine arteries, and found no difficulty in ligating the ovarian artery, but could not do so in the case of the uterine artery, owing to the weight of the tumour (2½ stone) fatiguing his assistant. He therefore decided to split the peritoneum in front high up, and to separate the bladder with a sponge. The bladder was so soft that in doing this he perforated it. He then discovered that the common iliac artery seemed to take the place of the uterine artery, and on separating it there was some hæmorrhage, which was checked by compression of the aorta. He amputated the uterus, and, while removing the tumour, damaged the ureter, which he clamped temporarily. The bladder was afterwards stitched with fine interrupted silk sutures, and the ureter treated in the same manner, the peritoneum being finally stitched over it. A large clot of blood which had collected in the bladder was washed out with a Bozeman's catheter, and the patient made a good recovery. The cystic contents of the tumour were found to be an abscess, which had started from the last confinement, the woman having then had septic troubles.

The President and Dr. Purefoy made remarks, and Dr. Smith replied.

Dr. Smyly reported a case of myomatous uterus removed by abdominal hysterectomy by Doyen's method. He said this was the first time he had resorted to this method of operation, which he believed had never before been attempted in this country. The operation was performed for pain, and on opening the abdomen he found adhesions to the omentum and small intestines, in separating which there were a large number of bleeding points to control. This portion of the operation occupied three-quarters of an hour. Doyen's part, which took seven minutes, commenced with pulling the tumour out of the abdomen over the pubes. He then opened the posterior *cul-de-sac*, reached hold of the cervix with a volsella forceps, and decorticated it with his finger, afterwards reflecting the peritoneum from the uterus, and finishing the operation in the ordinary way. He had no hesitation in saying this was by far the best method. Besides rapidity it had other advantages, for in the older method they cut the arteries where they were largest, thereby running the risk of death from embolism or hæmorrhage. As a matter of fact, he did not see a big vessel at all during the operation.

Tuberculous Ovary removed by Abdominal Section.

Dr. Smyly showed a specimen of tubercle of the ovary, and a microscopic section thereof. Until quite recently such a condition was unknown, but Martin, in his recent work on diseases of the ovaries, stated that 184 cases had been recorded in recent years, so that the disease was not so rare as had been supposed. As a primary affection, however, it was extremely rare, 3 cases only having been recorded by Edmonds, Jacobs, and v. Franke, but even these were doubtful. The patient was aged 28, and had been married two years. She enjoyed good health until shortly before marriage, when she had influenza, from which, however, she completely recovered. About Christmas, 1897, she began to feel ill, and had gradually got worse. Dr. Smyly first saw her in April, 1899. She complained of always feeling tired, and seldom left her bed before mid-day, had profuse night sweats, and had steadily lost weight—18 lbs. in the last twelve months. She was greatly emaciated, had the appearance of a person in advanced phthisis, and had not menstruated for seven months. She had no cough nor any physical signs of pulmonary diseas

The abdomen was somewhat distended, and a small tumour could be detected in the left inguinal region, which, upon bimanual examination, proved to be the uterine adnexa of that side. The uterus and right appendages appeared to be normal. The diagnosis was tuberculous disease of left uterine adnexa, probably the tube, and tuberculous peritonitis. On opening the abdomen there were dense pelvic adhesions but no visible tubercles. Both tubes were found diseased, the right being about as thick as an ordinary pencil; the left, somewhat larger, lying upon an ill-defined mass about the size of an orange. When freeing the right tube it burst, and some pus escaped, but it was removed, with the accompanying ovary, without difficulty. The tumour on the left side had developed in the meso-rectum, which was intimately connected with it, passing over it from left to right and then down behind it. The peritoneum was opened in front of the rectum, and about a quarter of an inch from it; but in attempting to detach the latter, though the greatest care and gentleness were used, the finger penetrated the gut. Keeping the finger ends in contact with the tumour, it was enucleated without difficulty, brought up out of the pelvis, and removed with the tube in the ordinary manner. Upon examining the cavity left, however, it was discovered that the entire anterior wall of the rectum was wanting as far down as the reflexion of the peritoneum. After consultation with Dr. Gordon, who assisted at the operation, it was decided that an ordinary enterorrhaphy offered small prospect of success, not only because of the extent of the injury, but also because of the condition of the surrounding structures. It was, therefore, determined to resect the injured portion of bowel, and about 2 inches having been removed, two ligatures were inserted, one on either side of the lower end of the upper portion of the bowel, and by means of these it was drawn down into the lower portion and secured there by a double row of sutures. Having sponged out the pelvic cavity and packed the sutured portion around with iodoform gauze, the ends were brought out at the lower angle of the abdominal incision, the rest of which was closed in the usual manner. The patient suffered severely from shock, but improved somewhat towards evening. Next day, however, she was not so well; the pulse was very rapid and weak, and the surface bedewed with cold, clammy sweat. During the night vomiting set in, with violent abdominal pains, and Dr. Smyly was summoned to her early in the morning. She had then violent abdominal pains, with evident peristaltic movements of the intestines, but no flatus had escaped. There was constant vomiting, no radial pulse could be felt, and her arms were cold up to the elbows. An endeavour to reach the constriction *per anum* failed. Dr. Gordon saw her in consultation at 9 A.M., but as the wound presented an unhealthy appearance and could not be used to form an artificial anus, and as it was evident that to have opened the abdomen in another position it would have proved immediately fatal, it was decided that nothing further could be attempted. During the day she gradually became worse and the vomit assumed a fæcal character. Shortly after midnight, however, she took a turn for the better, passed flatus, and shortly afterwards a fæcal motion; pains and vomiting ceased, and she took and retained nourishment. Since then she had steadily improved, took food well, and was putting on flesh. A considerable but steadily decreasing quantity of fæces escaped from the abdominal wound. The specimen under the microscope showed giant cells and caseation.

PAPILLOMATOUS CYST.

Dr. KIDD exhibited a small ovarian papillomatous cyst, with the following history: Patient, T. C., unmarried, aged 35, was admitted to the Coombe Hospital on May 5th. She had been treated about a fortnight previously in the country for obstruction of the bowels and peritonitis; this had yielded to treatment. After arrival she was examined, and a small ovarian tumour diagnosed. Operation on the 13th. The tumour was adherent to everything—omentum, peritoneum, and intestines—but the adhesions were comparatively recent, and could be separated with a little care. Part of the cyst wall looked gangrenous, and when the adhesions were all separated it was found that there was a twist on the pedicle; it required two half-turns to put the tumour in its proper place. The patient made a very rapid recovery. The temperature only on one occasion touched 99° F., and the stitches were removed on the eighth day. Union was perfect.

POLYCYSTIC OVARIAN TUMOUR.

Dr. KINKEAD read a paper on this subject.

Remarks were made by Drs. SMYLY and KNOTT and the PRESIDENT.

CÆSAREAN SECTION.

Dr. F. W. KIDD (President) read notes on a successful case. The operation was not done for contracted pelvis, but for a large growth which sprang from the posterior portion of the cervix. The patient was a primipara, aged 32. She was visited at her own house on December 3rd. Tumour was then diagnosed, and the patient brought into hospital. A thorough examination was made, and as the patient had had labour pains it was determined to operate at 1 A.M. on the morning of December 4th. Every antiseptic precaution was taken, and on Dr. Stevens devolved the duty of attending to the child when born. Dr. Kidd was assisted by Drs. Heuston, Cole-Baker, and Scully. Incision was about 2 inches above and 4 below the umbilicus. The placenta, which was huge (11 inches by 7), was on the anterior wall of the uterus, and to the right, and directly under the incision in the wall of the uterus, so that it had to be dissected off towards the left side for an inch or two. Then there was difficulty in getting the lower extremities of the child. Finally one was extracted before the other, with the result that the incision in the uterine wall was ruptured at the top end for a further 2 inches in an oblique direction. The membranes were unruptured at the time of operation. The uterus did not immediately contract, and the bleeding was very considerable. The uterus was sutured with deep, strong silk sutures, going down to but not involving the mucous membrane, with alternate superficial sutures of a finer silk drawing the peritoneum well over the line of the incision; the parietal peritoneum was drawn together with continuous suture of fine silk, and the abdominal incision was closed with silkworm-gut sutures. Convalescence was somewhat protracted on account of an attack of bronchitis and the severe hæmorrhage; however, the temperature never reached 100° F., and the patient made a remarkably good recovery. The child, which was a male, was born partly asphyxiated, but under the care of Dr. Stevens, who Schultzed him, he came to, but never cried lustily. He died on the third day; had had a slight convulsion the preceding day; his muscles had seemed continually to be tense, and he had vomited coffee-ground vomit. There was a necropsy, which only revealed some intussusceptions of small intestine, probably caused during the death agony, and some hæmorrhage at the lower end of the œsophagus. This gave rise to the interesting question as to whether this could have been done by the Schultzing, even when in experienced hands. The stitches were removed on the eighth day, when the incision was found perfectly healed. Before the patient left the hospital a careful examination of the tumour was made. It had come down into the pelvis, and seemed so near that one was tempted to remove it by *morcellement* through the vagina. However, it was found that the uterus was adherent to the anterior abdominal wall, and this procedure was thrown aside owing to the expressed opinion of Dr. Smyly that if it were done, and hæmorrhage should occur, one could not check it by drawing down the uterus due to its adhesions. The present condition of the patient was splendid, and the line of the incision was perfectly even and firm.

Dr. KIDD, in reply to Drs. SMYLY, PUREFOY, and TWEEDY, said the child was very nearly in the left occipito-anterior position, and the placenta was more over to the right of the mother. He was not opposed to Schultzing, and he thought that Sylvester's method was far more likely to cause hæmorrhages. With regard to the question of suturing, he had no guarantee that the uterus was aseptic in this case.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on July 4th in the Library, New Hospital for Women, Miss HELEN WEBB, M.B.Lond., Vice-President, in the chair, Dr. ELLEN SANDELIN (Stockholm), Dr. BARONIN POSSANNER (Vienna), and Dr. A. A. WILSON (Philadelphia) were present as guests. Miss COLEBROOK, M.D., read a paper entitled, A Pilgrimage to Some Continental Open-air Cures, describing a series of visits to St. Moritz, Davos Platz, Falkenstein, and

Hohenhoneff. She compared the life of phthisical patients at these health resorts as affected by climate, ventilation, food, rest, and exercise, and especially urged the importance of constant medical surveillance in all cases.—A paper read by Miss JANE H. WALKER, M.D., gave an account of her experience of the open-air treatment of phthisis in England, extending over a period of seven years. She gave particulars of 78 cases in her hospital and private practice, which she had treated during this time, with the best results. Miss Walker dwelt upon the importance of placing these patients in special homes, and keeping every detail of their lives under constant medical supervision.—A lively discussion followed the reading of the papers.

GLASGOW AND WEST OF SCOTLAND BRANCH.—The summer meeting of this Branch was held at Ayr on July 7th, under the Presidency of Dr. FREW (Kilmarnock). After luncheon the members enjoyed a drive to Maybole, whence they proceeded to Crossraquel Abbey, and back to Ayr by Culzean Castle. Fortunately the weather was favourable, and all enjoyed the excursion through Burns's country. In the evening dinner was served in the Ayr Station Hotel, about forty gentlemen being present; and, after the usual toasts, Dr. JAMES H. NICOLL gave a flourishing report of the continued prosperity of the Branch.

REVIEWS.

SIR BENJAMIN COLLINS BRODIE. By TIMOTHY HOLMES, M.A., F.R.C.S. ("Master of Medicine" Series). London: T. Fisher Unwin, pp. 256. 3s. 6d.

IN this work Mr. HOLMES has, to use his own words, aimed at putting his readers in possession of some idea of him who, of all English surgeons now passed away, seems to him to have brought the most acute intellect and the most powerful mind to the study of surgery after John Hunter. Mr. Holmes is exceptionally qualified for the task which he has undertaken. He had the great advantage for a biographer of having known his hero in the flesh. Moreover, he was himself a student and afterwards a teacher in the hospital where Brodie had been for more than a generation the *genius loci*. He is steeped in the traditions of St. George's, and is thus enabled to give his portrait of Brodie its true atmosphere. Himself a distinguished surgeon, he is able to appreciate Brodie's professional work, and, as a man of broad intellectual culture, he is in sympathy with one who was "versed in nearly every branch of human knowledge, in all the highest kinds of literature, and in all forms of philanthropy and social effort." To these special qualifications Mr. Holmes adds a literary gift which has enabled him to produce a really interesting book. His style has the qualities—too rare in these days of neo-euphuistic affectation—of simplicity, clearness, and precision. The book is a thoroughly sound and honest piece of work. If it is not exactly brilliant, that is not the fault of the author, but of the subject, which does not lend itself to treatment in the decorative style.

Brodie's life, like that of most eminent practitioners of the healing art, had in it nothing of romance and little of incident. It was an uneventful history of mental growth and professional expansion. Brodie did something for the scientific advance and much for the social betterment of surgery. He found his art a handicraft scarcely freed from the ignoble associations of the barber's brush; he left it a scientific pursuit ranking with the first of the liberal professions. This was not of course all Brodie's work, but the fact that surgery had in this country for thirty years as its recognised leader a man of such range of knowledge and breadth of intellectual interest as are implied in the fact that he was president of the Royal Society, of the Ethnological Society, and of the Section of Political Economy of the Social Science Association, as well as of several purely professional bodies, helped greatly to raise in the social scale the profession which he represented.

The account of his career must be read in Mr. Holmes's book; it is full of interest, and many morals can be extracted from it for the edification not only of aspiring youth but of confident manhood, and even of crabbed age. Lord Beaconsfield's cynical description of life as "youth a mistake, manhood a struggle, old age a regret," is inapplicable to the case of Brodie. He was *bene natus* and *bene vestitus*, besides being much more than *mediocriter doctus* in the school learning of his day. He was connected by consanguinity, affinity, and spiritual relationship with many persons of influence, in particular with several among the leaders of the profession which he entered. Very early in his career he was introduced to Sir Joseph Banks, then the *præsidium et dulce decus* of scientific men; at his house the young surgeon met nearly everybody of any distinction in the world of science. Brodie had the capacity, inherited from his Scottish ancestors, of making powerful friends without any sacrifice of independence. He never felt the bitter truth of Johnson's line:—

Slow rises worth by poverty deprest.

From the first he says himself that he was never in debt and always had money in hand. As Astley Cooper's sun set, his rose till it reached the highest zenith of professional fame. For many years he earned a professional income of more than £10,000 a year.

Brodie was the first in London who regularly gave clinical lectures on surgery. He ministered to the infirmities of George IV, and was Serjeant-Surgeon to William IV, to whom, however, he never rendered personal service. Later he was President of the Royal College of Surgeons, which is mainly indebted to him for its charter of 1843 and for the creation of the order of Fellows. He was President of the Royal Medical and Chirurgical Society, and from his period of office, according to Mr. Holmes, dates the prosperity of that distinguished body. He was the first President of the General Medical Council, and held office from its establishment till failing eyesight and increasing infirmity drove him into retirement in 1860. Within a week of his nomination as President of the Council, he was elected President of the Royal Society, being the first surgeon on whom that high dignity was conferred. There was even some talk of the lofty pyramid of his honours being crowned by a peerage, but he does not seem to have had any wish for that distinction.

To Brodie age could hardly have been a regret. He had all that should accompany old age—honour, love, obedience, troops of friends, the admiration of his own profession, and the universal respect of his countrymen. This truly great and good man died, after much suffering, on October 21st, 1862, his last intelligible words being, "After all, God is very good."

Brodie's chief achievement in surgery was the new light which he threw on diseases of the joints, a subject of which little was known before his time. He saved numberless limbs from amputation, and worked many "miracles" on hysterical girls who were supposed to be paralysed and hopelessly bedridden. For the operative part of surgery he had no particular liking; this may have been partly due to the fact that he was an indifferent performer with the knife.

He was in his generation a pioneer of medical reform, but his views on some subjects which closely concern the well-being of the profession would not be likely to secure his election as a direct representative at the present day. Speaking of the suppression of quackery he wrote that "the medical profession must be content to let the thing take its course; they will best consult their own own dignity and the good of the public by saying as little about it as possible. There was a time when many of the medical profession held the opinion that not only homœopathy, but all other kinds of quackery, ought to be put down by the strong hand of the law. I imagine that there are very few who hold that opinion now (1861). The fact is that the thing is impossible; and even if it were possible—as it is plain that the profession cannot do all that is wanted of them by curing all kinds of diseases and making men immortal—such an interference with the liberty of individuals to consult whom they please would be absurd and wrong." Brodie's idea was that the profession should depend solely on the skill, character, and conduct of its members, and not be "bolstered up by Act of Parliament."

We heartily commend Mr. Holmes's book as one well worth reading; it is an interesting and instructive record of a man whose career should be interesting to all members of the medical profession.

Untersuchungen über der Gaswechsel und Energicumsatz des Radfahrers [Investigations into the Changes in the Respired Air and into the Expenditure of Energy while Cycling]. Von Dr. Med. Leo Zuntz. Berlin: August Hirschwald. 1899. (Roy. 8vo, pp. 72, 10 tables, and 2 figures. M. 2.)

The author has applied physiological methods of investigation to the questions how bicycling compares with walking as an exercise, and in what class of patients it should be ordered. The method employed, made familiar to us by the author's father, Professor Zuntz, depends for its value on the assumption that the quantity of oxygen consumed, and of carbonic acid given off, is an accurate measure of the work done. The required estimations were made by means of a dry gas meter, which was fitted to the bicycle, and through which all the expired air was conducted. Considering the complicated vital phenomena involved, the carefully-compiled tables are probably sufficiently accurate to warrant the author in drawing some practical conclusions from them.

At a moderate pace the cyclist has the advantage over the pedestrian of accomplishing an equal distance with half the expenditure of energy, and in less than half the time. The amount of oxygen consumed being the same, the subjective sensations of fatigue are less marked in the cyclist than in the walker. On this account the work done in a unit of time is generally underestimated by the former. This fact may be made use of when an increase of metabolism through physical exercise is desired in an indolent patient, but is obviously liable to prove harmful by allowing the heart to be overtaxed insidiously. Work is done most economically when the saddle is at such a height that the knees can always remain to a certain extent flexed, and the feet need never be fully extended.

Finally, the influence of friction is considered. At a speed of 15 kilometres the friction of the chain and hind wheel, together with the internal friction of the legs accounts for 23 per cent. of the consumption of oxygen, the resistance of air for 16 per cent,, and the friction of the road and balancing for 61 per cent. But since the resistance offered by the air increases with the square of the velocity, at high speeds most of the rider's energy is expended in overcoming it. Some of the experiments with a small screen fitted in front of the machine show very clearly what great impediments ladies' skirts must be.

The book should prove useful to all who wish to prescribe cycling as a therapeutic agent scientifically.

Handbuch der Toxikologie. [Handbook of Toxicology.] Von Professor A. J. Kunkel, Erste Hälfte. Jena: Gustav Fischer. 1899. (Roy. 8vo, pp. 564. M. 12.)

In discussing the action of poisons, the author has adopted a chemical classification as being most satisfactory, and in this first volume he accordingly treats of all inorganic substances, and the carbon compounds of the fatty and aromatic series. The second half he intends to devote to nitrogen compounds (alkaloids), vegetable and animal substances which cannot as yet be accurately placed in any chemical system, ptomaines, and food poisons. Like most writers on the subject, Dr. Kunkel devotes considerable space to the consideration of general questions such as the definition of a poison, the nature of poisonous action, the value of experiments on animals, local and remote action, and general principles of treatment. He emphasises the importance of a thorough knowledge of poisons in relation to dangerous industries and other aspects of every-day life, a view which is somewhat overshadowed perhaps in medical teaching by too exclusive dwelling on the criminal use of poisons. Then follows an account of the actions exerted on individual organs, tissues, and secretions such as the heart, kidney, stomach, blood, and milk. The description of the effects of each poison is given simply and clearly, the clinical features being especially dwelt upon, and there is an enjoyable absence of the wearisome detail which makes most books on toxicology such dreary reading. The information is intended to be broadly biological, pathological, and clinical, rather than a detailed record of cases and chemical data, and as the result we have a valuable, and above all a readable, production.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICINAL AND DIETETIC PREPARATIONS.

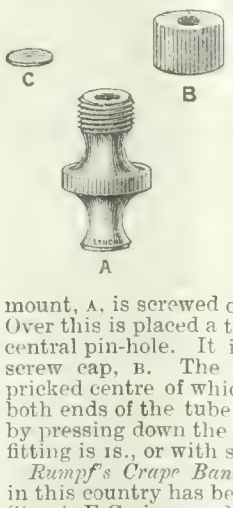
Tabloids of Pills.—Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, E.C., prepare tabloids representing in a compressed form the pills of the *British Pharmacopœia*. We have examined samples of "tabloid colocynth compound" and "tabloid aloes and iron." The latter are sugar coated, are well finished, and have a very elegant appearance. These pill tabloids, when placed in warm water, soften and break up in a short time.

Medicated Lozenges.—We have examined a specimen of chemical food lozenges made by Messrs. Squire and Sons, 413, Oxford Street, London, W., who make a speciality of several kinds of medicated lozenges. They are stated to contain in a dry form the constituents of syrup. ferri phosph. comp. The lozenges have a pleasant taste, and possess the advantage of portability and convenience of administration.

Tabloids of Effervescent Preparations.—Effervescent preparations compressed into tabloid form have recently been introduced by Messrs. Burroughs, Wellcome, and Co., Snow Buildings, E.C. The preparations of the *British Pharmacopœia*, such as caffeinæ citras effervescens, sodii sulphas effervescens, are compressed into tabloids each containing 60 grains. These effervescent preparations are usually measured by a teaspoon; considering the uncertain quantity which may be placed in a spoon, it is evident that these compressed tabloids of definite weight possess the great advantage of accuracy of dosage.

MEDICAL AND SURGICAL APPLIANCES.

Vaccine Lymph Ejectors.—A great deal of ingenuity is being exercised in the making of apparatus for ejecting lymph from the capillary tubes in which it is stored. The Vaccination Order says "under no circumstances should the mouth be applied directly to the tube in which the lymph is contained for the purpose of expelling the lymph. In the case of ordinary capillary tubes an artificial blower may properly be used for this purpose." A simple and satisfactory ejector is the solid boilable rubber appliance made by Montague, of New Bond Street. Messrs. Lynch and Co., Aldersgate Street, have introduced a little device to adapt to any hypodermic syringe. In place of the needle, a metal mount, A, is screwed or plugged on to the end of the syringe; Over this is placed a tiny disc of rubber or leather, C, with a central pin-hole. It is clamped in position by a perforated screw cap, B. The disc forms a diaphragm through the pricked centre of which the tube may be passed, and when both ends of the tube are broken the lymph is readily ejected by pressing down the piston of the syringe. The price of the fitting is 1s., or with syringe included, 2s.



Rumpf's Crape Bandage.—This bandage, the sale of which in this country has been entrusted to Mr. H. Pugh, of Friday Street, E.C., is a good form of the numerous elastic and porous bandages that have lately been devised for surgical dressings, and as substitutes for elastic stockings in cases of varicose veins. The advantages, such, for instance, as elasticity, lightness and softness, and permeability, claimed for appliances of this kind, evidently exist in the new crape bandage, which, it is stated, is less costly than other forms of light and elastic bandage. Amongst other advantages of this bandage to which our attention has been directed, is its elastic woven edge, by which fraying is prevented.

We are requested to state that King's College Hospital will be closed for two months from Friday, July 14th, in order to permit of the wards being refloored and fitted with electric light.

THE PREVENTION OF TUBERCULOSIS.

Nottingham.

A public meeting for the county and city of Nottingham, convened by the Duke of Portland as Lord Lieutenant, and by the Mayor of Nottingham, was held on June 20th in the Council Chamber of the Exchange, for the purpose of considering the question of the establishment of a sanatorium for the open-air treatment of consumption for the county and city. The Duke of Portland presided. Amongst those present were Dr. W. B. Ransom, Dr. Brown Sim, Dr. Powell, Dr. Hunter, Dr. Price (President of the Medical Society), Dr. Aplin, and others, including a large number of ladies.

The Duke of Portland, in introducing the subject, said that in Nottingham alone, out of every 1,000 deaths, over 100 were due to consumption of the lungs and other organs, and in the large country district surrounding the city, known as the Basford rural district, stretching from Annesley on the north to Gotham and Bradmore on the south, the proportion was but little less, for it was 94 per 1,000. When they considered the fact that the highest medical authorities distinctly declared that consumption, with proper and timely treatment, was a curable disease, it was their bounden duty to do what they could to further and assist the discoveries of science. He would not enter into the scientific part of the question, but before he concluded he would like very much to emphasise the fact and to make clear the point upon which he understood that some slight misunderstanding had arisen. It was the idea of some that in founding such a hospital as the one they were assembled to further, and in supporting the aims and objects of the National Association for the Prevention of Tuberculosis, they were assisting a scheme to further legislation and measures of compulsion. Nothing was further from the truth, and it was an absolutely erroneous idea, for the motto of the National Association was education, and not compulsion.

Professor Clifford Allbutt said the fact that their meeting was so well attended was a strong guarantee of two things —of the mental activity and intelligence of the people of Nottingham, and that they had made up their minds to seriously apply themselves to the important matter that they had in hand. He supposed that if in a large and representative meeting like that he were to say one-half of those present had now, or had had in the course of their lives, some personal infection of tuberculosis, he would be thought to be committing an enormous exaggeration. But it was a fact. Last March he went to Leipzig to study the pathology of the subject, and he had the benefit of pursuing the statistics compiled by the Professor of Pathology in the University of that town in regard to the causes of the deaths which took place in Leipzig during a given period of time. The result was that it was discovered that 40 per cent., or nearly one-half, of those cases, taken quite without selection and simply in the consecutive order of the occurrence of the deaths, gave indications of the existence, past or present, of tubercle in their bodies. He did not know whether the suggestion had ever been seriously advanced by men of science or of statesmanship, but he gathered from the eloquent speech of his Grace that proposals for the isolation of patients suffering from tuberculosis had been made by certain people. He regarded the proposal as a monstrous one. Personally, the only suggestion of the kind that he had heard made by responsible people was that the notification of cases of tuberculosis might be made compulsory for statistical purposes. That was the utmost limit of the suggestion, and even that could not be expected to come about in the next quarter of a century. The fact that Germany was so far ahead of us in this country in the matter of the scientific treatment of tuberculosis was largely owing to the necessity which had been imposed upon them in consequence of their compulsory system of life insurance. After referring to the belief which, with a very few exceptions, was a fallacious one, that the development of consumption was often the result of catching cold, Professor Allbutt said that the British climate was much more suitable for consumptive patients than most people were aware. The practice of ordering people to the Riviera and to warmer climes in various parts of the world was now giving place to the prescription of visits to the colder altitudes of the Higher Alps, with most successful results. But the pursuit of such a course of treatment was beyond the means of the majority of patients, and it had very happily been discovered that for the treatment of the disease, at any rate in its incipient stage, sanatoria arranged on the latest principle were almost equally effective in this country if suitable sites were selected. Professor Allbutt concluded by expressing the hope that the Nottingham Association which had been formed would become a branch of the National Society for the Prevention of Tuberculosis, and that the idea would never be lost sight of that the main principle under which they proposed to carry on their beneficent work was by education and not by compulsion.

Mr. J. E. Ellis, M.P., proposed the first resolution, as follows:

That steps be forthwith taken to establish a sanatorium for the treatment of consumptives for the county and city of Nottingham.

Sir John Turney briefly seconded the motion.

Dr. W. B. Ransom, in supporting the resolution, said that perhaps the best proof that the conviction of the curability of consumption had been carried to the minds of sober-minded people was the fact that in Germany the insurance companies had invested large sums of money in sanatoria for consumptives. There insurance against sickness and old age was compulsory on all those whose annual income was below £150. The law allowed insurance companies to devote part of their funds to treatment in lieu of sick pay. The companies found that it was worth their while to build and retain such sanatoria. In 1898 no less than £157,000 was spent in that way. Public statistics showed that, with regard to one of the companies, out of 1,541 consumptive patients 71 per cent. were restored to their working capacity, while in less than 7 per cent. of cases did the disease progress. As to the need which existed for sanatoria, he said that every year nearly 400 poor consumptives were treated at the Nottingham Dispensary, and there were some 300 as out-patients of the General Hospital, not mentioning about 50 in-patients. Most of these 700 belonged to the city alone. The number of consumptives in Nottingham without the means to pay for proper conditions of recovery would not be fewer than 1,000. There was a large industrial population between that city and Mansfield, and the inhabitants of the rural districts in the beautiful valleys of the Trent and Belvoir would be appalled at the number of those calling for help, but calling in vain. Forty per cent. of the people had consumption without ever knowing it, yet, with all but the rich, medicine and good advice seemed thrown away for want of pure air, proper food, and a course of education in healthy living by a doctor, which were the chief part of the so-called medical supervision of these sanatoria. The want of these things made the efforts of doctors wellnigh useless, and justified the despair which the word consumption engendered. Although Dr. Allbutt had said that the death-rate of this country was being immensely decreased, yet in Nottingham during the last twenty years there had been no such diminution. The death-rate from consumption to-day was rather greater than it was fifty years ago. In 1897, 437 persons died from tuberculous disease in that county, and this was owing to the want of help for the consumptives. The climate of Nottinghamshire was good, and there were many doctors, he had no doubt, who could tell of patients cured by returning to an outdoor life in this country. Numbers of places in Nottinghamshire were eminently suited for a sanatorium. They on the Committee thought of one in particular on the southern slope of the sandstone hill, with some miles of park land in front, as very suitable; but, like many things, it would be rather expensive. They should like to place there or elsewhere a sanatorium for some 50 patients—to make a modest beginning—in a small park of 50 acres. Probably more land could be got later if wanted. The East Anglian sanatorium for paying patients—a place for 30 patients—was in a park of 94 acres. A sanatorium could be built for £10,000, and possibly, though not probably, the land could be included in that sum. At least £10,000 more would be required to form a small endowment. The average cost per patient would be about 30s. a week. The larger the institution the smaller would be the proportionate cost. He thought the county and the city were already too much burdened with subscriptions to find £3,000 or £4,000 a year for such an institution for gratuitous patients, and it might be arranged that out of 50 some 20 should pay the full cost and

be styled first-class patients, while 30 might pay 15s. But these questions of detail could not be settled at a meeting such as that. The movement would not damage any of the hospitals which existed. It would rather be of assistance to those hospitals, for the pressure upon them would be relieved. Besides, institutions of the kind existed for the community, not the community for them.

Mr. G. D. Hazzledine objected to the resolution. He wished to give the gentlemen who were moving in the matter every credit for their motives. The Association avowed that its extreme intention was to have compulsory notification, and behind that there was compulsory isolation. The same thing that was said to-day was said when compulsory notification of fever was started, and it was now as much as a poor man dare to do to refuse to allow his child to go to an isolation hospital. They were stirring up public opinion, and were thereby doing a very dangerous thing. They were not justified in stamping out a disease by isolation, unless it was in the nature of an epidemic. The Association was pushing a conclusion based upon unproved premisses, and he asked the meeting not to take the responsibility of pressing an idea about which there was so much uncertainty.

The resolution was carried.

Mr. T. I. Birkin then moved:

That a Committee be formed for the promotion of such purpose, and that the Committee be empowered to join the National Association for the Prevention of Consumption as a branch thereof.

Dr. Handford seconded the resolution, which was carried unanimously.

The meeting terminated with the usual votes of thanks.

A largely-attended drawing-room meeting, called for the main purpose of hearing accounts of the open-air treatment of consumption was held on June 13th at the Circus Street Hall, under the auspices of the Nottingham Ladies' Sanitary Association. Miss Guildford (President) occupied the chair.

Mr. Fawcett moved the following resolution:

That this meeting regards with satisfaction the proposal to establish within the county a sanatorium for the open-air treatment of tuberculosis, with which movement it is in entire sympathy.

The speaker said that some people seemed to think that in a sanatorium they desired to confine people against their will, and treat them as if they were lunatics. That was absolutely a false idea. No one would be compelled to go to a sanatorium, and if they went there and did not like it, they would be permitted to go out again. All this should lead them to the conclusion that consumption was a preventable disease, and that if the rules which had been laid down were observed, it would be possible to successfully cope with this serious evil.

Dr. Jane Walker, Miss Gray, and Dr. Ransom supported the resolution.

Bristol.

On July 6th a public meeting was held at the Victoria Rooms, Clifton, for the purpose of forming a branch for the counties of Gloucestershire, Somerset, and Wiltshire of the National Association for the Prevention of Consumption and other Forms of Tuberculosis. The meeting was convened at the instance of the Lord Mayor of Bristol, the Mayors of Bath, Bridgwater, Calne, Cheltenham, Devizes, Glastonbury, Gloucester, Malmesbury, Salisbury, Tewkesbury, Thornbury, Wells, and Yeovil. The Lord Mayor presided and amongst those present on the platform were the Right Hon. Sir Herbert Maxwell, Bart., Dr. D. S. Davies, Dr. C. Theodore Williams (London), Dr. A. J. Harrison (Clifton), Mr. N. Dobson, Dr. J. A. Macdonald (Taunton), Dr. H. T. Rutherford (Taunton), Dr. P. Watson Williams (Clifton), Dr. Bertram H. Rogers (Clifton), Dr. C. King Rudge (Clifton), Dr. Frederick Parsons (medical officer of health, Frome), Dr. Edward Crossman (Hambrook), Surgeon-Lieutenant-Colonel Smith (Bristol), Dr. Campbell (Gloucester), and Dr. Campbell (Calne). After some introductory remarks from the Lord Mayor, Sir Herbert Maxwell said he trusted they would accept his presence there that day *faute de mieux* as a token of the satisfaction felt by the Council of the National Association which had been formed last December to deal with that disease, as a token of the satisfaction with which they welcomed the energy and the spirit with which the movement had been taken up in the West of England and in that important city in particular. As for his own capacity for dealing with that question, he told them frankly that his position as vice-chairman of the Council of the Association was owing purely to the accident that he was appointed chairman of the Royal Commission on Tuberculosis. He wished to say a few words as to the communicability of tuberculous disease from animals to man and the precautions which seemed to be expedient to adopt in order to prevent that transmission. Unfortunately an idea had got abroad among the farmers that the only known means of diagnosing tuberculosis in their stock was by the use of the tuberculin test and it would be followed by the destruction, the compulsory destruction, of the diseased animals. Nothing could be further from the intention of the Legislature. In only one country in Europe had that been adopted, namely, in Belgium, and there the whole system broke down and had to be given up before it had been in operation eighteen months. What they wanted their farmers to consider, and what he would urge his hearers to use their influence in, was to reassure the farmers that there was no intention whatever to use compulsory measures in regard to tuberculosis in dairy stock. Of the presence of tuberculosis in the dairy stock there could be no doubt whatever. It was undoubtedly to the interest of the agricultural community as well as the general community to get rid of the disease. It had been brought under most complete control in Denmark. He must express his profound gratitude at seeing this important work taken up so energetically as in that district. That it was an important work he thought no one could have any doubt, and yet there was doubt in the minds of the people in general as to whether it was worth all the trouble of erecting sanatoria, and taking these perpetual precautions against disease. He thought it would be their part to dissipate that doubt, and to impress upon their friends and neighbours that it was an actual danger.

Dr. D. S. Davies (Medical Officer of Bristol) said that the statutory powers for dealing with tuberculous milk needed some strengthening, while it was absolutely necessary that public bodies should deal tenderly with the interests of commerce. He was hopeful, however, that in that question which was now receiving earnest attention it might be possible to find a way by which not only would the elimination of tuberculous cattle from herds be secured, to the great protection of the public, but also the dairy farmers' interest would be rightly not allowed to suffer.

Dr. C. Theodore Williams (London) moved the following resolution:

That a branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis be formed for the counties of Gloucester, Somerset, and Wilts.

He mentioned that branches were being formed in various parts of the country, and said that the only successful way to deal with the subject was to prevent the disease or cure it rapidly. Although it was the fashion of some of their friends to say that they were behind in this country, he contended that the opposite was the case, and that England was in the van in matters connected with the prevention of consumption. What other country had reduced the mortality in the last fifty years by two-thirds? Now, however, they were at a standstill, and what was wanted, in addition to the general measures that were being taken, was to take the public into their confidence, and to adopt those precautions and sensible hints which would prevent the spread of the disease. He spoke in favour of the large increase of sanatoria where the patients might have plenty of fresh air and exercise.

Dr. E. Long Fox seconded the motion, which was adopted.

Dr. Lionel Weatherly moved:

That it is desirable to establish a sanatorium for the treatment of the consumptive poor of the counties of Gloucester, Somerset, and Wilts.

At the present moment England was behind some Continental nations in this respect that there was no sanatorium in the country for poor people. They could not expect that Government should take the first step in that matter, although it was one of national importance. When England awoke to the realisation of the fact that only by these sanatoria could she hope to cure her consumptive poor, then England would take her place in the front rank of countries that were doing this work. A sanatorium could be built for 60 patients for a sum of something under £15,000. If they built such a sanatorium,

keeping each patient about thirteen weeks, they could accommodate and do an enormous amount of good to no fewer than 240 patients from the three counties every year. They could educate the patient there in the modes of life whereby he would be able to beat away the enemy from his own door.

Canon Quirk (Bath) seconded the motion, which was agreed to.

The Mayor of Cheltenham (Alderman Norman) moved:

That the Right Hon. Sir Michael Hicks-Beach, Bart., Her Majesty's Chancellor of the Exchequer, be requested kindly to allow himself to be nominated President of this branch of the National Association; that a number of gentlemen, including the Lord Mayor of Bristol and the mayors and members of the boroughs and counties associated in this branch, be asked to become Vice-Presidents; and that the present Executive Committee be constituted the Committee of the branch, with power to add to their number representatives, both lay and medical, to represent all the districts in the area covered by the branch.

Dr. McDonald (Taunton) seconded the resolution, which was agreed to.

Kensington.

The Kensington Vestry, at a meeting on June 14th, adopted a report of the Works and Sanitary Committee setting forth the measures which had been taken in regard to the prevention of tuberculosis. The Committee had appointed a subcommittee to consider the steps to be taken for giving effect to their recommendation:

That the Vestry shall adopt means for the prevention and the cure of consumption, and tuberculous disease generally: (1) By spreading information as to the nature and cause, the preventability and curability of tuberculosis, and especially of consumption; and by inculcating the necessity of thorough cooking of meat, and the boiling of milk; (2) By disinfection of houses after the occurrence of fatal cases of consumption, and after removal of consumptives to new abodes.

The question having been referred to the Medical Officer of Health with the object of ascertaining his views as to the action which should be taken by the Vestry in the direction indicated in the recommendation, the Subcommittee received a report from that officer, in which he stated that with reference to (1) he had perused several leaflets prepared by medical officers of health and others, but had found none that appeared to him better expressed for the purpose than the one issued by the Organising Committee of the National Association of which the Prince of Wales is President and Sir William Broadbent is Chairman. He was of opinion that this leaflet might be adopted, with or without modification, for use in the parish. But he did not recommend that the distribution of whatever leaflet might be adopted should be limited to persons likely to be interested in the subject; as, for instance, consumptives and their relatives, doctors, nurses, clergymen, district visitors, and heads of schools. With regard to (2) he stated as the result of his inquiries that disinfection would be likely to be required to be done at the cost of the Vestry (if the necessary consents could be obtained) in between 200 and 300 cases annually. It was impossible to say in how many cases disinfection would be required after removals of consumptives from one abode to another. But that disinfection was requisite in such cases might be accepted as a truism. By organising a system of voluntary notification by doctors information as to many of such cases might perhaps be obtained, and he thought an attempt to obtain such information should be made. He estimated the cost of disinfection of rooms, and disinfection at the station of contents of rooms, at an average of £1 per case. In conclusion he expressed the hope that in addition to the above-described measures every effort might be made to secure what the Subcommittee recognised to be necessary, namely, "enforcement of the provisions of sanitary law for the prevention of overcrowding, and the abatement of nuisances generally, so as to secure healthy homes for the lower classes."

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[1] The Middlesex Hospital has received a donation of 1,000 guineas from Mrs. Frederick Sassoon in aid of its Cancer Fund.

Further Inoculations for Enteric Fever.—All the officers and men who are going from Aldershot to Natal with the 2nd Brigade Division Royal Field Artillery have been inoculated for enteric fever. The new treatment was specially explained to the division by Major Semple, Royal Army Medical Corps, and Professor Wright.

CONTRACT MEDICAL PRACTICE.

A PERSONAL EXPERIENCE.

[FROM A CORRESPONDENT.]

I have lately had an experience of four months' work under the rule of the managing committee of a medical institute in —— connected with a friendly society, an account of which may serve as a warning to others.

The report of 1898 gives a membership of nearly 3,500 adults and children, visits to patients over 5,010, attendances at surgery 20,000. The advertised surgery hours are 9 to 11 A.M. and 6 to 8 P.M. (on one day a week 7.30 to 8.30). "The other part of the day the surgeon must devote to visiting patients within three miles." Sunday is, except for urgent cases, a *dies non*. There is no midwifery. Private practice is barred. The salary is £262, out of which conveyances have to be found. The engagement is terminable at a month's notice. A dispenser is kept.

So much one might have learnt before taking office. Other lessons soon followed. Of these the first and last was that the committee had woefully blundered in advertising for a medical man. What they really wanted was a medical monkey on a stick, that they could "manage" as a part of the institute machinery. Rule 14 makes special provision for registration of members' "complaints against the medical and other officers" (giving the doctor a fine prominence), but none for his complaints against members. Hence I soon found that if I should in any way displease or dissatisfy, I was liable to abusive insolence pointed with curses which I could neither silence nor escape from, and for which I had no redress.

My first subjection to this unpleasantness was when a pensioner sought my signature to his identification paper—which was no part of my official duty. I observed that he had already written his own signature, which I was bound to declare I had seen him make. I pointed out his mistake, and told him on personal and public grounds that I must see him sign before I certified; upon which he raged furiously: "Call yourself a gentleman? Dr. X. *was* a gentleman. *He* made no such d——d nonsensical objections. I'll see if you don't get a lesson!" and so on.

My predecessor, who had been in office for ten years, was on terms of personal acquaintance with every member, and naturally felt and acted towards them as would, on the part of me, a complete stranger, have been offensive familiarity and sheer hypocrisy; while, in consequence of this social relationship, there had fallen into abeyance rules and usages that I had to revive—one of these being the production of contribution books at the surgery in proof of membership, and another the adoption of permanent ½d. prescription books instead of fugitive scraps of paper. These changes were regarded as innovations and nuisances, although both were provisions existing before my time. So it came about that, because a request for his contribution book—leading to disputatious grumbling that it had never been so required before—formed my first introduction to every patient at the surgery, most of them regarded me from the first with unconcealed ill-humour, that made them quick to find fault or take offence, to which attitude they were no doubt helped at times by misunderstandings arising from my northern tongue and a natural abruptness in my manner. By the end of the first month I had got quite used to blustering insolence, and felt I was let off very mildly if I was only reminded that I was no more than the patient's paid servant, and "he'd see if he couldn't have things different; he would report me to his lodge."

At the end of the month I was confronted by a deputation of the Committee with three or four complaints. Of three I was luckily able to recall the facts, and show the grumbles groundless. The fourth alleged that I had lanced a woman's finger (who never came again), had given her blood poisoning, and caused the loss of the member. I could only say that I had no clear recollection of the case, and would recommend the aggrieved one to sue me for damages. The woman's father continued to circulate the libel, to my further prejudice with the members, and I refrained from taking legal action against him only in deference to the wishes of the secretary.

About this time a respectably-dressed man presented himself at the surgery, whose manner on entering was mysteriously

hostile. When I had given him his prescription he asked, "Now, what am I to do with this, if I have no confidence in you?" "I suppose in that case you will do nothing with it." "Well, I tell you I *have* no confidence in you." "Then it was a pity to waste your time and mine in coming here." "Well you're a bit more civil to me than you were to my wife." "I don't know who your wife may be, but I am consciously uncivil to no one." "Oh! yes, you are, and you call yourself a professional *gentleman*—eh? I don't know what the Committee ever had in their heads to make them take on any d——d old fossil like you. I tell you again I have no confidence in you. I'll take my wife and children out, though I must stay in myself with my lodge; but there's *that* for your d——d prescription!"—and he tore the book in tatters and marched out. What a pity I did not know till after that this gentleman was the maimed woman's husband!

After three months' experience of the business, I wrote out a series of "suggestions" to patients for the Committee's consideration, which I knew would greatly facilitate the work and prevent much friction, besides saving to me much time spent in explanations to individual members. These I wished them to fix in the waiting-room. They had reference to the reasons for production of contribution books; to the usefulness of prescription books as permanent records of the owners' medical history, and to the consequent wisdom of preserving them; to the grounds for my absolutely discountenancing a previous regulation authorising supply of remedies direct from the dispenser on old prescriptions, without the surgeon's sanction; and to the inconvenience and the hurried perfunctory attention to their cases caused by patients' non-attendance during the first hour of each surgery session. (This custom frequently protracted the business by a half to even a whole hour beyond the nominal two; for I was not supposed in this matter to adhere to my contract, but to see every patient who turned up. I did insist on locking out those who arrived after the allotted time, but the waiting room was often fuller then than during the whole diet. The extension curtailed my time for visiting in the mornings, and robbed me of my leisure in the evenings. The number of patients in the first hour ranged from 5 to 15. In the second they would often come in shoals of from 35 to 45.) The Committee sat in conclave on my suggestions without deigning to take me into their counsels, and they solemnly determined that patients "must be left to use or neglect" their prescriptions books, "just as the sense or the temper (*sic*) of each person chooses," because, forsooth, "the books had become by purchase their own personal property"; that my requirement, that patients must get their medicines only through me, might remain in force "so long as it did not interfere with the general liberty and comfort of the members"; while my other proposals were superfluous as rules relating to them already existed. They could not see the difference between publication of a rule and a statement of its reasons and purpose. As to the supply of medicine, I rejoined that the conduct of the strictly medical department was my affair, not theirs; and that, so long as I held office, they might be very certain that no prescription of mine would be repeated without my responsible control and authorisation.

About this time I was favoured with a further set of four complaints, dating back two and even three months. I gave in writing what explanation I could, protested against the preposterous delay, and declared that in future I would give heed to no complaint not brought to my notice within a week of the event. I also inquired if they were ready in future to entertain complaints from me against patients. All complaints were, I may say, frivolous or based on hearsay, or they arose from members' breach of rules, from misunderstandings, or from the ignorance that thinks it knows. Thus one woman complained that, when I found her door after half an hour's search due to insufficient address, I expressed, as she opened it, my annoyance at the failure of the corporation to name and number streets; and, next, that when I was introduced to the patient, who was sinking from phthisis and lay on a sofa, I said at once he should be in bed (unaware that he had chosen to lie there for months). That was positively the whole complaint, as I remember it, and I was formally called upon to answer it.

In another instance, where I saw that a mother was unconsciously encouraging her child's sickness by assuring me that it could keep nothing down, I had (using counter-suggestion) given the child some drink, telling the mother she would see that the child neither would nor could be sick, if she would only wait and keep quiet. The father, who had been absent, gave the mother's version, and complained that it was a queer sort of doctoring. He also stated that I had ceased attendance when I said the child had a temperature of 100°. (This was all some two months back.) With no exact recollection of a trifling illness, what could I say but that I never do so leave a case? I offered, in fact, no reply, because the man was not speaking of his own knowledge, and any such general statement would not meet, but only seem to avoid, the specific allegation.

Another accusation was that I had ceased visiting a child in hopelessly advanced phthisis, and living three miles from my abode, whose mother did not follow my instructions, and for whom I could therefore do no good.

The Committee were pleased to inform me that two of the second series of complaints I had explained to their satisfaction, and invited me to meet them to discuss the others. I was sick of the business, and wrote that I had nothing to add, but was ready to attend a meeting of the General Committee, to whom by rule matters in dispute must be referred. This incensed them past biding. As a duly initiated member of the Order, to whose funds I had been invited to contribute half a guinea, I applied to both the Secretary and the Chairman of the General Committee for access to documents and a fair hearing before they should decide. The following letter will unfold the rest:

[COPY.]

To the General Committee.

DEAR SIRS AND BROTHERS.—In the information given me to-day by our Worthy Chief, that your Executive Committee, in prudent if somewhat cowardly manner, distinctly refuse me access to documents needful for my defence to charges they intend to lay against me to-night, a foregone conclusion is virtually declared, and the position becomes at once of the simplest.

The real head and front of my offending is that I did not promptly come to heel at the latest crack of the Executive whip, and they propose that I be drummed out, not for any alleged defaults as medical officer (which would have been let slide if I had chosen to meet the Executive), but because these high dignitaries saw fit to take offence at my sending them a courteous letter giving them my reasons for not answering in person to their demand for further explanations regarding complaints of *two and three months' standing*. For such audacious contumacy it is the vindictive purpose of my dear brothers' assembly this evening to punish me unheard, upon the *ex parte* statement of my accusers.

To save you such disgrace I hereby give you notice, under my agreement ..... to terminate my engagement with you at a month from this date. During the remainder of my service I will continue to do my duty by the Institute and its members as conscientiously as in the past, and I have the honour to subscribe myself,—Yours fraternally,

——

They accepted my "resignation" as they called it, paid me my month's salary in advance and I came out from the house of bondage.

Before applying for the vacancy I had asked medical friends in —— if the Institute was a sweating concern, and by all alike I was assured to the contrary. I discovered, however, during my servitude that its members included well-to-do business men—even wholesale dealers and manufacturers. Many of these residing in suburban villadom were furthest away, most exacting, and readiest to find fault. Of course, no committee could be without them. They were paying a whole 1s. a quarter for themselves, 9d. for wives and children over 18, and 6d. for those under that age. Reflections have been made on me in the press, and on men generally whom dire necessity and reckless, cut-throat professional under-selling upon strictly business lines have similarly driven to accept appointments of this kind. Yet, since I was flung among the ranks of the profession's casual workers, I have lived for months in semi-starvation rather than lower wages by accepting less than full standard pay, and in this particular case, though I was at the time in that very position, I stood for the post only because all suspicion was disarmed by the reports of my friends. But it is idle to expect individual members of the profession to sacrifice themselves—still more their families—when they are left to fight single-handed against the evils of a degrading commercialism, that stops at nothing, but sends the hindmost to the devil. So long as the profession as a body, through its only recognised, though very ill adapted, head—to wit, the General Medical Council—does not

set its bann, not only on all who engage themselves as wage-slaves to be exploited by laymen for laymen, but on all who bring the profession into disrepute and contempt by proffering to the public work bound to be scamped and nasty or even fraudulent, because impossibly cheap, just so long will laymen find ready to hand those among us who will rather live in bondage than starve with their families in freedom. For this state of things not the luckless casuals, but the profession at large is wholly to blame, that does not by protecting itself protect its every member. Spheres of work and methods of practice that are not barred to all are open to any, and the will to live is potent in every man. Why should he in particular be expected to refuse any chance of a livelihood that his profession does not officially or corporately denounce and forbid? That is the question to which all our comfortably circumstanced reformers and purists must find a practical answer or their counsels of perfection to the strugglers for existence will pass unheeded or be rejected with contempt.

THE MEDICAL SICKNESS AND ACCIDENT SOCIETY.

AT the usual monthly meeting of the Executive Committee of the Medical Sickness Annuity and Life Assurance Society, held at 429, Strand, W.C., on June 30th, Dr. DE HAVILLAND HALL took the chair, and there were present also: Dr. J. B. Ball, Dr. J. W. Hunt, Dr. F. R. Mutch, Mr. J. Brindley James, Dr. Francis J. Allan, Mr. F. Swinford Edwards, Dr. M. Greenwood, Dr. Walter Smith, Mr. William Thomas, and Dr. W. Knowsley Sibley.

The accounts presented showed that the somewhat heavy sickness experiences of the early part of the year still continued, but the claim list was somewhat more favourable as the cases were for the most part of a not very serious nature. When the Society was started in 1884 it was joined by some hundreds of medical men who had already reached middle age. Of these very few have died, and as during the whole of its fifteen years' experience the Society has lost an exceedingly small number of its members by lapse, it has now on its books a considerable number of those who have reached an age at which any serious illness incapacitates a man from professional work for a long period. This was, of course, foreseen and provided for when the rates of contribution were calculated and so successfully was this done that although the Society has paid over £50,000 of sickness benefit to its members and on some occasions, especially during the epidemics of influenza, has had a very long claim list, it has never had to sell out any one of its investments nor to trench in any way upon its large and growing reserves. During the half-year just ended some thousands have been added to the reserves, and in addition enough money has been saved to pay the cash bonus of 10 per cent. determined upon at the last general meeting. The money being now in hand the bonus will be sent to the members as soon as the necessary clerical work can be done, and there is every hope that the cheques will be posted by the end of this month. In addition a bonus *ad interim* at the same rate will be paid to the representatives of those members who may die during the present quinquennium and also to those members who leave the Society on attaining the age of 65.

Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

THE RATING OF METROPOLITAN HOSPITALS.

AT the meeting of the London County Council on July 11th, the question of the rating of hospitals again occasioned an animated discussion. The Local Government Committee brought up the report published in the BRITISH MEDICAL JOURNAL of July 1st, p. 45. The report concluded with the following recommendation:

That pending the report of the Royal Commission on local taxation, the Council do take no steps with a view to creating any fresh exemptions from liability to rating.

To this recommendation an amendment was moved by Mr. PORTER, and seconded by Mr. HARRY LAWSON, as follows:

That the Council being of opinion that hospitals should be exempted from the payment of rates, the Committee be instructed to report whether such rates should be charged on the County Fund, or in what other way relief from rates should be given, and that the Committee be further instructed to prepare a list of hospitals which, having regard to their constitution, should have the benefit of exemption.

Sir HARRY POLAND opposed the amendment, on the ground that exemption from rating was bad in principle, and ought not to be extended; and that it would be difficult if conceded to hospitals to exclude convalescent homes from a like privilege.

Sir ARTHUR ARNOLD supported the amendment, chiefly on the ground of the services rendered by hospitals to the public generally.

Dr. COLLINS said the question was not whether there should be exemptions from rating, but whether the Committee had made out a sufficient case against giving to hospitals such exemptions as the law already gave to less deserving institutions. If churches and chapels for the cure of souls were not rated, why should institutions for the cure of the body be mulcted of £21,000 a year? If voluntary schools were unrated, why not voluntary hospitals? Volunteer drill halls, learned and scientific societies, the Regent's Canal, and various other properties enjoyed exemption from rates. Surely it could not be argued that hospitals had not as great a claim to be on the free list as these institutions. Sir Harry Poland had not opposed the exemption of rates in the case of tithes or in the case of agricultural land, and it was idle to hope that in the immediate future all exemptions would be abolished, whether they awaited the report of the Royal Commission or not.

Mr. H. P. HARRIS, who was in charge of the report, while sympathising with the supporters of the amendment reminded the Council that they had already agreed that the Committee should urge on the Royal Commission now sitting the desirability of abolishing all exemptions. It would thus far be inconsistent to now declare in favour of extension of the principle.

Finally the amendment, which was carried by 1 on a show of hands, was defeated by 51 to 42 on a division. It is clear the Council is divided on the question, and we hope that after the Royal Commission has reported, the matter will again receive the attention which it clearly demands.

THE NEW VACCINATION ACT IN OPERATION.

THE RELATIONS OF PUBLIC VACCINATORS TO PRIVATE PRACTITIONERS.

WE have received from Dr. William Mitchell, Honorary Secretary of the Bradford and West Riding Medical Union, the following memorandum which has been drawn up by that body on this subject:

Among the many unsatisfactory provisions of the above Act there is one which is calculated to seriously prejudice the interests of private practitioners, and to disturb the harmonious relations between them and public vaccinators so essential to the successful working of the Act, namely, the duty imposed on the public vaccinator under Section 1, Subsections (2) and (3) under certain circumstances to visit the homes of unvaccinated children with reference to their being vaccinated. When it is borne in mind that all public vaccinators are also private medical practitioners, it is obvious that such visitation of persons, many of whom are the patients of other medical men, is calculated to create situations in which the greatest tact and delicacy alone can prevent friction.

The Bradford and West Riding Medical Union has had three discussions on the working of the above Act, at all of which there were present public vaccinators of Bradford and the surrounding district, as well as practitioners who were not such. During the course of the discussion it was made only too evident that the necessary tact and discretion had not always been shown by public vaccinators. A great many complaints were made of public vaccinators endeavouring to induce parents who had arranged for vaccination by their family doctor, to accept the services of the public vaccinator, by undignified laudation of their special brand of vaccine "with the Government guarantee of purity," also by speaking of the folly of spending money on vaccination which could be done gratuitously, and with the attendant advantage of free medical attendance if the operation should lead to any bad results. Complaints were also made of public vaccinators calling at houses for the purpose of vaccination before the expiration of twenty-four hours after due notice had been given, etc. At the last meeting of the above Medical Union (held on May 18th, 1899) at which eight public vaccinators were present it was resolved, after a prolonged discussion, to issue a memorandum drawing attention to the serious difficulties created by the Act, and to set forth the principles which should govern public vaccinators in the performance of their delicate duties when officially visiting the patients of other practitioners.

The following suggestions are offered by the Bradford and West Riding Medical Union for the guidance of public vaccinators in their dealing with the patients of other practitioners. If honourably adhered to they will not interfere with the official duties of the public vaccinator, and

they will protect as far as possible the interests of private families and family practitioners.

SUGGESTIONS.

(1) The public vaccinator before entering a house should ascertain whether there is in fact, as reported to him, an unvaccinated child in the house.

(2) In the event of his being informed that there is not an unvaccinated child in the house; or if there is, that arrangements have been made for its private vaccination, the public vaccinator should then at once retire.

(3) Should the public vaccinator be informed that the child is too ill to be vaccinated, he should retire without entering the house. It is not his duty to require a certificate of unfitness to be supplied; that is the duty of the vaccination officer.

(4) It is not the duty of the public vaccinator, nor is it compatible with the dignity of his profession, to endeavour to persuade the parents to let him perform the vaccination for which he is to receive a specified fee from the public funds.

(5) The public vaccinator as such should not proceed to examine any child as to its state of health unless he has been requested to vaccinate it, and unless he is *bonâ fide* under the impression that the child is fit to be vaccinated. In any other case his duty is to abstain from all interference with the child.

(6) Any reference as to the superiority of his methods or his vaccine, made with the view of being allowed to vaccinate, would be most unworthy, and could only be exceeded in this respect by any attempt to decry the methods or the vaccine employed by other practitioners.

(7) If he is required to vaccinate a child belonging to a family who are the patients of another practitioner, he is in honour and in self respect bound to avoid any act or word which might tend to prejudice the professional interests of the family medical attendant, or which could be regarded as an attempt to induce the family to employ him as their family doctor.

(8) The public vaccinator is not authorised to call, for the purpose of vaccinating a child, until after the expiration of the 24 hours' notice which he is required to give.

GRATUITOUS VACCINATION.

A.—We cannot suggest any means by which a medical man other than the public vaccinator of a district can be prevented from vaccinating gratuitously children of the poorer classes.

INSUSCEPTIBILITY TO VACCINATION.

F.W. J. writes: The certificate forms for "insusceptibility to vaccination" issued by the registrar of births state that vaccination must have been done three times. Does the Act make it compulsory to do the operation three times before certifying that the child is insusceptible to vaccination?

*** The Vaccination Act, 1867, Section XX, unrepealed, reads thus: "If any such public vaccinator or medical practitioner shall find that a child whom he has three times unsuccessfully vaccinated is insusceptible of successful vaccination, or that a child has already had the small-pox, he shall deliver to the parent or other person as aforesaid a certificate to that effect." It is therefore evident that, in order to sign the certificate, it is necessary by the Act that three unsuccessful attempts should have been made. It should be added that in the 1887 Report of the Medical Officer of the Local Government Board, Dr. Cory reports having performed 38,000 primary vaccinations, and only once to have failed twice in an attempt to vaccinate.

ONE OR TWO MARK VACCINATION.

G. writes: One of the "public vaccinators" recently called at a house; the mother declined his services on account of the four marks. He then offered to do it "privately" for less than the Government fee, and only put one or two marks on. This offer was declined as the mother wished me to do it. The same gentleman some time since called to vaccinate a baby, found it suffering from pneumonia, criticised my treatment, took charge of the case, I receiving a note that my services were no longer required. How can I insist or even suggest that I should put on more marks than the parents wish? The Act is wrong. It is better for a child to have one mark than have none at all, as "conscientious objection" will exempt them entirely.

R.S.A.—The matter is one upon which the Local Government Board alone could give any decision.

FEES IN POLICE-COURT CASES.

R.W.—The fee payable to a medical man for attendance at police court and giving evidence in vaccination cases can only be governed by the same rules as obtain in regard to any other police-court cases. There is no provision in the Vaccination Act or Order requiring him to appear or fixing any fee. It is usual for a medical witness to receive half a guinea for police-court attendance, and if his evidence is required in several cases the fee would properly be charged in each case.

A REPORT OF THE POLLUTION OF THE RIVERS LEE AND STORT.

By HERBERT ARTHUR KYNSEY, M.R.C.S., L.R.C.P., D.P.H.Lond.

THE River Lee rises some three miles north-west of the town of Luton in Bedfordshire, and flowing through Hatfield, Hertford, Ware, Broxbourne, Waltham, Ponders End, Edmonton, Tottenham, Hackney, Bow, and Stratford, enters the Thames by Blackwall, close to the Isle of Dogs. It winds somewhat sluggishly through a flat country, between very low banks, and is navigable from the Thames as far as Hertford. The country is mainly chalk and gravel, with some clay. A special officer, Major Lamrock Flower, was appointed in 1871 to the charge of the watershed, and much has been done of late years under him to prevent sewage entering the river by irrigation, and the establishment of sewage farms, but a great deal still remains to be accomplished by preventing the accumulation of refuse on the banks. Although constant complaints are made by the Lee Conservancy through their officials to the landowners on whose grounds this nuisance exists, little notice has been taken of them. Moreover, the carriage of manure is especially sanctioned by Act of Parliament.

The River Stort rises near the small village of Elsenham in Essex, and flowing through Bishop Stortford, Sawbridgeworth, Harlow, Burnt Mill, and Roydon, joins the Lee at Fields Weir, about 2 miles from Broxbourne. The Stort is a sluggish stream, with a very winding course, passing at first through chalk, and thence over a tertiary formation covered more or less with drift. The navigation of this river is not under the Lee Conservancy. It flows straight into the Lee, and contributes a great portion of the water for the East London Waterworks Company, but in common with all tributary streams is under the Lee Conservancy Board for protection of water purposes.

According to Mr. Symons, F.R.S., the mean rainfall of the Lee Valley above the water companies' intakes is 26.5 inches.

THE TRAFFIC IN MANURE.

A large part of the traffic on these rivers consists of barges laden with manure, which is used on the lands adjacent to their banks. This manure, so called, is composed of the refuse of ashpits, mud, dung, and the general filth of London, including oyster, lobster, and other shells, fish, bones, scrap iron of all sorts, old bedding, carpets, bottles, boots, and rags, paper, sacking, straw, vegetable *débris*, and dead animals.

The manure, having been brought up the river, is "dumped" in large masses, varying from 10 to 100 tons, on the banks, there to wait until it is either ploughed into the land, sifted into fine ash, or burnt. It is highly offensive, in the first place, and is rendered even more so by the putrefactive changes which it undergoes whilst awaiting removal.

Apart from what actually falls into the river in transferring the cargo from the barges, a large amount is necessarily washed in by the rainfall, owing to the position of these manure heaps, which in some cases are placed almost on the water edge; but this is contrary to the by-laws of the Conservancy Board, and the prevention of this cause of pollution is a source of everlasting trouble.

The following by-law is in force on the Lee:

Manure, gas lime, or other materials are not permitted to be landed or unloaded on single planks, but sufficient means by a platform or otherwise must be provided to prevent anything falling into the river.

All cargoes unloaded must be placed 10 feet from the water's edge.

This by-law, according to my own personal observations, is a dead letter.

When gas lime or manure has been unloaded on the towpath side, naturally the towpath must be left for traffic, the barges being towed by horses, but when unloaded on the other side of the river it is dumped down anyhow, close to the edge of the bank. On my pointing this fact out to an ancient resident in the neighbourhood, he explained the whole situation thus: "Well, yer see, guv'nor, a bargee aint a goin' to walk 10 feet when he need only walk 1."

The owners of the land adjoining the river are alleged to be responsible for this state of affairs. As they do not look after the bargees the latter do as they please, and take as little trouble as possible, which is after the nature of the bargee.

As regards the unloading of barges, I have seen single planks only used, on which the manure is carried in wheelbarrows, some part of the load invariably falling into the river, the banks themselves being in a filthy condition, the river polluted, and the stench sickening.

On the Stort there is a by-law that no gas lime or manure shall be placed within 14 feet of the river, an improvement on the by-law of the Lee theory, but in practice never carried

out. As to the unloading, the bargemen do as they please, the only care taken, I was informed, being that of not overloading the barrows.

The Condition of the Lee.

To enter more into detail, I will start from Ponders End Lock, which is some 200 yards above Kidd's Weir, the intake of the East London Waterworks Company.

The river here is very dirty and after a heavy rainfall, which as I before remarked washes some of the refuse into the river, may be absolutely filthy. I saw tin cans, bottles, straw, decayed vegetables, and dirty paper in abundance; I do not say that it is always as bad as this, but this part of the river struck me as being certainly the dirtiest.

For almost the whole length of the bank from Ponders End Lock to close upon Enfield Lock, the western bank is covered with these manure heaps close to the water's edge; much of it falls into the river and is caught amongst the weeds at the side.

I inspected two out of three wharves where manure is collected. On one the manure was only some 4 feet away from the bank of a dock adjoining the Lee. Some hundreds of tons were lying here, the banks were littered with filth, and the smell was horrible. On another wharf the refuse was placed just 10 feet from the water, but could easily be washed in by rain, the stench was also fearful, and caused great annoyance in the neighbourhood.

Above Broxbourne I saw some barges unloading, no adequate precautions being taken to prevent their contents falling into the river, and that it did fall in was evident. Above Dobbs Weir there were large collections of manure and gas lime close to the water's edge.

Below Ware Lock the water was inky-looking and very dirty; this might be accounted for by the fact that there were hundreds of tons of sifted ash, that is, sifted manure heaps on the banks, no attempt being made to comply with the regulations as to distance. Complaints were made about the smells in the neighbourhood. From here to Hertford there was no nuisance of any kind that I could discover.

Since the Lee Conservancy appointed a water bailiff about a year ago, whose duty it is specially to look after the manure traffic, things have, I hear, greatly improved, but it is impossible for him to be everywhere at once, and unless his recommendations are backed up by rigorous prosecutions against all offenders against the by-laws, affairs will go on in the same seeming happy-go-lucky fashion, as they appear to do now.

With regard to the Stort, in one place large heaps of gas lime and manure formed a shelving bank right into the river, and in many other places masses of gas lime were thrown on to the bank, and portions could be seen half in and half out of the water.

The minimum allowance of 10 and 14 feet for the Lee and Stort respectively is far too small, 20 to 25 would be barely sufficient.

This would involve a little more trouble to the bargemen, but the gain to the public would be very great. Some further means should be taken to rectify the present unsatisfactory method of unloading barges, which occurs in so many instances.

At some wharves platforms are used 3 feet broad and 12 feet long, but where these are not carried on barges, a canvas screen could be stretched from the barge to the bank, underneath the planks forming the gangway, which would catch anything that tended to fall into the river, and so prevent a very real and constant source of pollution. This is now being done to the manifest improvement of the river.

The question which is naturally forced upon us is this: Ought a navigable river to be a source of town water supply?

LITERARY NOTES.

With the July issue of the *Quarterly Medical Journal* Mr. Simeon Snell's connection with that periodical as editor, as the lawyers say, ceased and determined. Mr. Snell has been editor for the seven years the *Quarterly Medical Journal* has been in existence, and both he and the "promoters" of that publication are to be congratulated on the success of his labours. The *Quarterly Medical Journal* has by sheer merit won for itself an honourable place in the medical journalism of this country.

We are pleased to see that the *Saturday Review*, which under its former editorial *régime* was given over to Eddyism and the evil spirit of antiscience generally, is now once more on the side of the angels. Its issue of July 8th contains an excellent article on Preventive Inoculation, in which, after describing with intelligent sympathy Mr. Haffkine's work in India, it says: "We may be thankful that within the limits of the Empire there is at least one great country where scientific investigation of first-rate importance to suffering humanity is being conducted under the protection and encouragement of the Government, and unhampered by the inhumane restrictions invented by ignorant humanitarians."

Mr. Chamberlain has lately reminded M. Yves Guyot and the world at large that *les beaux esprits se rencontrent*. Now it is the good fortune of Dr. E. Berdoe to afford an interesting illustration of that piece of proverbial philosophy. A body was found in a reservoir in Lancashire the other day, and Dr. Boyce promptly gave an alarmed public the comforting assurance that this particular form of organic matter would do no harm. Whereupon Dr. Berdoe was moved to write to the *Westminster Gazette* as follows:—

> Your note on the Prescot reservoirs and the body in the water reminds me to ask a question on a matter on which I have often had my doubts. We occasionally hear of brewers' men falling into a vat of boiling beer or the stuff which is in process of becoming beer. What is done with the liquid in such cases? My reason for asking this is the fact that it sometimes happens that the corpse is not discovered till the beer has been all sold. In one such case I remember the customers demanded that their porter should be "the same as the last, as there was such a good body in it."

This personal experience will probably make Dr. Berdoe grateful to us for directing his attention to that recondite work, Marryat's *Pacha of Many Tales*, where in the Story of the Greek Slave he will find a curious anticipation of the taste in drink of the connoisseurs whom he remembers. The slave murdered an Ethiopian and concealed the body in a wine cask. The wine was greatly relished by the customers, and the ingenious Greek, after pretending to taste it, was fain to agree with them (as he conscientiously could) that it had more *body* than the rest. Thus does history repeat itself.

Nothing, says Dr. E. H. Bradford in a recent number of the *Boston Medical and Surgical Journal*, is a better measure of the work of a profession than its literature. American medical literature was for a long period thoroughly provincial, and till recently American textbooks were chiefly translations or American issues of foreign books, sometimes with annotations by the American editors. But the output of native literature has been steadily increasing for some time. The catalogue of the Harvard Medical School for the year 1875-76 gives a list of books recommended to students which includes 44 foreign books to 13 American. In the list for 1898 99 there are 85 American to 71 foreign textbooks. But the growth has been greater than would appear from these lists. At the beginning of the Revolutionary War there were only 1 book, 3 reprints and 20 pamphlets by American authors. To-day there are 7,000 books and reprints and a large number of pamphlets. There are 300 books and pamphlets written by American authors annually, and 5,000 journal articles. In 1879-1880, 10,334 books and journal articles were written in the United States, while 7,476 were written in England in the same period. The Americans are probably the greatest consumers of medical literature, and in medical libraries are foremost. The development of medical journalism has been very remarkable.

The *Medical Review* (St. Louis) gives some amusing illustrations of the strange changes suffered by names in the wanderings of paragraphs through different journals. Some years ago Dr. Prince Morrow wrote an article on drug dermatoses. This was abstracted in Germany, and subsequently in Hungary. It reappeared in American journals credited to Dr. P. A. Moroon, a distinguished Hungarian dermatologist. In 1892 an article was written by Dr. Kiernan, of Chicago, on suicide. Within a year it returned from Japan credited to an eminent Japanese alienist, Dr. Kurnau, of Tokio, Japan, who, by a remarkable coincidence, quoted extensively from Chicago statistics. Some years ago we cited some equally curious instances of the denationalisation of authors' names in their journalistic metem-

psychoses. Thus M. Tuffier was translated into "Tuffieri" in Italian, and "Tuffiero" in Spanish, journals. But perhaps the most remarkable example of what may be called the variations of names under journalisation is that of Canon Harford, who founded the St. Cecilia Guild to test the therapeutic effects of music in disease. We do not know what has become of the guild here, but its pious founder has long ago become transformed, journalistically speaking, into a place, and every now and again one reads an account of the starting of a St. Cecilia Guild at Hartford, Connecticut. This paragraph, by the way, shows an enduring vitality comparable to that announcing that the Queen of Portugal is a Doctor of Medicine. Having been the means of putting that false note in circulation, we have for years striven to stop it. We fondly hoped we had succeeded, but only a week or two ago we met with it in the *Siglo Medico*, the leading medical journal of Spain! Verily it may be called the "Wandering Jew" of medical journalism.

We announced some weeks ago that a work entitled *The Cerebro-spinal Fluid: its Spontaneous Escape from the Nose*, by Dr. StClair Thomson, would shortly be published. With reference to this announcement Dr. Thomas Logan, of Wibsey, Bradford, Yorks, informs us that in the beginning of 1895 he read to a company of professional gentlemen a paper entitled On the Physiological Nature and Import of the Actions of Yawning, Stretching, and Sneezing, etc., in which the following passage occurs:

"Sneezing" is one of the same class of acts as yawning and stretching, and is not infrequently associated with them. The stimulus to the act of sneezing is usually felt within the nasal cavities, and may be produced by the presence of an irritating particle, or as a reflex act from the optic organs, such is produced by "looking at the sun," or, *as it seems to me*, from distension of the Schneiderian membrane, due to a "vis-a-tergo," exercised by pressure from superabundant cerebro-spinal fluid, such as occurs in the course of "a cold in the head."

However caused, the act of sneezing consists in filling the chest for a supreme effort to clear the nasal cavities of the offending influence. The act in itself is often experienced as a great relief. Sometimes, however, it is attended with rather painful feelings, and may assume a pathological character. In the sneezing ushering in a cold in the head, it sometimes at once unlocks the cerebro-spinal spaces, relieving them of their pent-up contents in the shape often of copious streams of clear, somewhat saline fluid. This occurrence being so frequently attended by appreciable lightening of the sense of weight in the frontal region, and, it may be, by disappearance of the pain experienced, in such ailments as gravedo, coryza, etc., may thus be regarded as a natural curative agent.

In the light of the preceding remarks, I would conclude, that the nostrils are the natural outlets or channels by which the overplus of cerebro-spinal fluid is run off when superabundant, and that the many openings, or foramina, piercing the ethmoid bone are fulfilling the great purpose of regulating the quantity of fluid within the cerebro-spinal cavity, of maintaining the equilibrium of intracranial and intraspinal pressure, and of thus securing the integrity of the important structures contained therein.

SMALL-POX MORTALITY IN GERMANY IN 1897, AND VACCINATION IN 1896.

THE official statistics of the Imperial Health Office, Berlin, recently published, contain a chapter on the mortality from small-pox during the year 1897.[1] It appears that there were actually only 5 small-pox deaths in the whole Empire during the year, while in the previous year there were only 10; in 1895 the number was 27, and the yearly average for the decade 1886-95 is 116. The population is now 53,000,000; thus the small-pox mortality during the year 1897 is 0.1 per 1,000,000. Of the above 5 deaths only 1 occurred in a large town—Berlin. There are 270 towns and communities of the German Empire, having each a population over 15,000, and in only one of these did a death from small-pox occur. This is a very remarkable result. It is true that the one fatal case in Berlin was that of a woman, aged 35, who was certified as having been successfully revaccinated at the age of 12 years. But these exceptional individual cases do occasionally occur, and there is no report as to the number or character of vaccine cicatrices in this case. The important point is that no one else in Berlin died of the disease; in fact, all 5 deaths occurred in five separate districts of Prussia, the rest of the German Empire being without any small-pox mortality. As to the remaining 4 deaths, 2 children under 2 years old died near the Russian frontier; nothing is known as to their "vaccination condition," but it would probably be safe to assume that they were unvaccinated; 1 unvaccinated child died near the Austrian frontier (this child had been over the frontier 11 days before the attack); while the fifth case was that of a little girl 4 years old, who had been vaccinated successfully during the first year of life, but who showed only two indistinct cicatrices.

Five small-pox deaths in a population of 53,000,000! Well may the German Government point with pride to this very gratifying result of the thoroughness with which the vaccination law is put into effect year after year. This law, it will be remembered, ordains revaccination as well as primary vaccination. The German vaccination practice is the only rational consequence of the knowledge of the behaviour of small-pox with regard to vaccination, which a century of experiences has given to the world. Full statistics for the rest of Europe are not yet published, but we can compare several countries as to urban small-pox mortalities in towns, that is to say, with over 15,000 inhabitants; as already said, one town in Germany had one death. It appears that in the towns of the Netherlands the small-pox mortality was 7-fold greater, of England 16-fold, of Belgium 21-fold, of France 123-fold, and of Austria 247-fold greater.

The small-pox attacks in Prussia were 29, and the attacks in the rest of the German empire were 16, giving 45 attacks in all. Again, of these 16 attacks only 2 were severe—(1) a girl, aged 5 years, successfully vaccinated in infancy, but showing no marks; and (2) a man, aged 42, once vaccinated.

The same official volume from which the above figures are taken contains also an account of the vaccinations done in Germany during the previous year (1896). There were 1,670,598 infants due for primary vaccination, and 1,176,070 children for revaccination. After deducting 83,474 from the former and 6,497 from the latter, there remained 1,587,124 for primary, and 1,169,573 for revaccination—in all 2,756,697 children to be vaccinated or revaccinated. During the year 1,394,396 primary vaccinations were performed and 1,138,831 revaccinations; 35,595 children were illegally withdrawn from primary vaccination (2.24 per cent.), and from revaccination 6,005 were illegally withdrawn (0.51 per cent. of those due). Animal lymph was used almost exclusively—namely, in 99.83 per cent. of the primary and 99.94 of the revaccinations. The successful vaccinations were 97.52 per cent. of the primary and 92.76 per cent. of the revaccinations.

[1] *Medizinal-Statistische Mittheilungen aus dem kaiserlichen Gesundheitsamte.* Band v, Heft 3. Berlin: Julius Springer. 1899.

THE PLAGUE.

HONG KONG.

[*From a Correspondent.*]

THE number of cases of bubonic plague has been gradually increasing until now (June 1st) there is a total of 567 cases reported, with 507 deaths. Last year the epidemic reached its maximum in the week ending May 14th, when there occurred 179 cases and 157 deaths. In the week ending May 28th, 1898, there were 63 cases and 61 deaths, while this year, in the corresponding week, there are 143 cases and 134 deaths. A supply of Haffkine's lymph has been received in the colony, and is about to be offered to any willing to avail themselves of it. The rainy season has been long delayed, and an actual water famine appeared imminent, but fortunately heavy rains have now set in, and it is hoped that the increased water supply may help to clear away the epidemic. Below are the figures from the beginning of the year:

Week Ending			Cases.	Deaths.
January 21st, 1899	...	...	1	1
March 4th ,,	...	...	5	5
,, 11th ,,	...	...	6	5
,, 18th ,,	...	...	6	6
,, 25th ,,	...	...	3	3
April 1st ,,	...	...	7	7
,, 8th ,,	...	...	19	16
,, 15th ,,	...	...	10	4
,, 22nd ,,	...	...	31	31
,, 29th ,,	...	...	28	34
May 6th ,,	...	...	64	52
,, 13th ,,	...	...	89	69
,, 20th ,,	...	...	87	70
,, 27th ,,	...	...	143	134

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, JULY 15TH, 1899.

THE PROSPECTS OF FRESH FACTORY LEGISLATION.

The discussion on the vote to complete the sum of £146,868 for the expenses of the Home Office gave the opportunity a week ago to members of Parliament to raise in the House of Commons certain questions relating to the subject of dangerous trades. Public attention has of late been so frequently directed to the effects of certain employments upon the health of the workpeople that it will be difficult for any Government to postpone the introduction of regulations to improve them. Industrial legislation is at all times a problem not less serious than difficult. The cry that trade is being driven out of the country by hygienic regulations is familiar. When Lord Ashley attempted to rescue women and children from labour in the coal mines he had to meet the statement, oft repeated on public platforms, that without the women and children in the pits the coal trade of England would pass away. When the Ten Hours Bill was before Parliament the same cry of giving away our trade to the foreigner was heard on all sides. All these gloomy forebodings have been falsified, and the trade of the country has increased, and has probably never been better than it is to-day. There is therefore on this ground alone every encouragement to take steps to render dangerous industries less harmful. For our own part we can never believe that the prosperity of a trade can be jeopardised by measures which make the workers more healthy and longer-lived. It is small comfort to consumers to know that the matches they are provided with are produced at the risk of several cases of "phossy jaw" every year among the workers, and that the ware upon their tables has caused annually a certain number of deaths from lead poisoning in those who made it. If it can be shown, as the reports of Professors Thorpe and Oliver clearly indicate, that lucifer matches can be made even from white phosphorus without risk to health, and that domestic ware can be glazed without the use of raw lead, the public ought to demand that those articles shall be produced on the lines the experts have recommended. Demand under these circumstances would force supply, and once the inventive faculties of employers were stimulated, difficulties of manufacture would gradually disappear.

During the debate a good deal was made by Sir Charles Dilke and others of the fact that the Annual Report of the Chief Inspector of Factories for 1898 has not yet appeared. In the drawing out of this, as of all important annual reports, much time and labour are necessarily required. There is considerable delay in obtaining statistics, and the already overburdened officials, especially the chief inspector, are left with too little time to devote to this particular work. An earlier publication of the Factories Report, however, would do much to disarm opposition, and would be an earnest of the desire on the part of the Home Office to deal with such important questions as those raised during the debate, which centred round the recommendations made by the experts regarding lead poisoning in the potteries and phosphorus necrosis in match works. The necessity of giving effect to the recommendations at as early a date as possible was pressed upon the Government, for plumbism is still rife among potters. As many as 42 cases of lead poisoning were reported as occurring in the china and earthenware trades in May last. Seldom have members of the House of Commons had the opportunity of having placed before them a less unvarnished tale of industrial suffering than on this occasion. Speaker after speaker reiterated facts that are now common property. Sir Walter Foster did the cause good service by alluding to the insidious approach of lead poisoning compared to the sudden and painful affection of the jawbones in match-makers; to the more permanent effects of plumbism, as seen in the paralysis and blindness that unfit the individual for ever afterwards; and to the far-reaching effects of lead through female workers upon their progeny. As a nation we look with pride upon our Imperial expansion; but what avails this if, while advancing abroad, there is a canker eating at the root of our industrial supremacy at home, and if, while we boast of extending our sway over other races, our own birth-rate keeps declining? The subject of unhealthy trades has now been lifted on to a national platform. It is no longer a question simply for employer and employed, or for the medical adviser, but for the statesman as well.

The Home Secretary, in his reply, stated that it had been his intention to have introduced fresh factory legislation this session. A Bill had been prepared, but the fates had not been propitious. What this Delphic utterance may have meant we do not know, but it is encouraging to find that Sir Matthew White Ridley intends to introduce his Bill early next session, and that he is in favour of modifying, if not of abolishing, the privilege of arbitration at present enjoyed by the employers against the Home Office. Under the influence of arbitration unmistakably good regulations issued by the Home Office have had to be watered down, and but for this circumstance much of the present difficulty and public outcry against lead poisoning in potteries would have been averted. For some time past it has been known that efforts were being made to meet the deficiency in the number of factory inspectors. The Home Secretary has already made several appointments, and is prepared to make more, including that of a deputy chief inspector of factories.

Some cases of anthrax recently reported have apparently been due to woolcombing and other late processes in the manufacture of woollen materials, and it is satisfactory to find that Sir Matthew White Ridley recognised that it has

become necessary to extend protective regulations, at present applicable only to woolsorting, so as to include subsequent processes and woolcombing. In 1896 3 cases of woolsorters' disease were reported, 9 in 1897, 16 in 1898, and 13 in the first six months of the present year. In other words, whereas 1 case occurred every four months in 1896, at present there is 1 every fortnight. It is difficult to explain the increase of woolsorters' disease. Possibly medical men are more familiar with it than they were, and the increase is only apparent, being due to better diagnosis. Under any circumstances the fact is an unpleasant one, and calls for further preventive legislation.

MEDICAL LEGISLATION IN RHODESIA.

WE have received from a committee of medical practitioners in Bulawayo a letter forwarding a copy of a new "Ordinance relating to the practice and sale of medicine and practice of dentistry in Southern Rhodesia," which we are informed was framed and read a second time before its existence became known to the medical men practising in Southern Rhodesia. The medical men in the short time at their disposal have been unable to stop the adoption of this Ordinance, which they justly describe as an autocratic measure, and it only awaits the approval of the High Commissioner of South Africa, Sir Alfred Milner, to become law. Our correspondents send us at the same time a detailed criticism of the Ordinance, and the objections which they advance appear to be well-founded. The Ordinance commences by repealing the old Ordinance of the Cape of Good Hope. Whether it be or be not desirable that Rhodesia should have an Ordinance of its own is a matter upon which we are not in a position to form any judgment, but at all events if it is to have one it should be at least as good and as efficient as the law now in force in Cape Colony.

We are, of course, under some disadvantage in discussing the matter, as it is difficult to judge what provisions may be suitable under the special circumstances and conditions of a new colony. But the new Ordinance may perhaps best be compared with the law which is now in force in Cape Colony. Both commence by constituting a medical authority; in the Cape Colony this is the Colonial Medical Council, which consists of seven medical practitioners and one dentist. Three of the medical practitioners and the dentist are nominated by the Governor; the other four medical practitioners are elected by a poll of the registered medical practitioners in the Colony, conducted through the post. Four members constitute a quorum, and the dentist, unless he be also a fully-qualified medical man, is only entitled to vote upon subjects having relation to dentistry.

The clause dealing with the appointment of the Southern Rhodesia Medical Board is very open to objection from several points of view. In the first place the members of the Board are to be nominated by the Administrator with the advice of the Executive Council. No period of office is specified, and the constitution of the Board is radically wrong; the medical practitioners in Southern Rhodesia properly claim the right to elect on the Medical Board members of their own profession at least equal in number to those nominated by the Governor. Further, the Administrator is to appoint the Board "when he deems fit so to do," and as the Ordinance elsewhere authorises the Administrator to discharge the functions of the Medical Board until it is appointed, he might retain this power in his own hands for an indefinite period, during which he could give a licence to any person who satisfied him that the testimonial, diploma, licence, or other document testifying to his qualification was obtained after due examination from the university or other body granting the same; but in the meantime the Administrator would have power to recognise any diploma he thinks fit wherever obtained.

Again, the Board appointed by the Administrator must consist of not fewer than three, nor more than nine, members, of whom one may be a licensed chemist, one a licensed dentist, while the others must be "duly qualified medical practitioners." It might happen, therefore, that the Board might consist, or at any rate might consist at any particular time, of but three members, so that purely medical questions might be decided by persons who were not members of the profession.

The chief function of the Southern Rhodesian Board would be the issue of licences. Before doing so it would be the duty of the Board to inquire into the nature of the diploma or qualification of the applicant, who must satisfy the Board that it was obtained after due examination. No examination which confers a qualification is conducted either by the Cape Board or by the Southern Rhodesian Board, but the former consisting, as it does, solely of medical men, can make the inquiry into the genuineness and value of the diplomas submitted to them a reality, while the mixed Board of Rhodesia, which may at any time contain a minority of medical men, would not, or at least might not, be able to hold any real inquiry. Moreover, as any member of the Committee may be removed by the Administrator for any cause deemed by him sufficient, it is conceivable that circumstances might arise under which the Rhodesian Board would not be in a position of sufficient independence to express an unbiassed opinion.

Another objection to the regulations which may be mentioned in this place is that there is no provision for the keeping of a register. This is provided for in the Cape Act, and it is difficult to understand why this precedent was not followed. The absence of any provision for making and keeping a register is a most serious defect in the Ordinance.

As has been said, the provisions of the Ordinance with regard to pharmacy are also open to serious objection. Any person who has served an apprenticeship to a duly qualified or licensed chemist or druggist, either in Southern Rhodesia or elsewhere, may present himself for examination by the Medical Board. Whilst the special Pharmacy Board of the Cape is adapted to this end, it may be doubted whether the Joint Board of Rhodesia, upon which there cannot be more than one chemist, is fully competent. In this connection it may be noted that both the Act and Ordinance make use of the term "Apothecary" in a sense other than that which it bears in English law; that is to say, as the simple equivalent of chemist and druggist, and in no way as implying a medical practitioner, but as the Ordinance recognises the licence of the Apothecaries' Society this may lead to confusion.

It has been said that there is no form of government better than a benevolent and intelligent despotism, and this seems to have been the view entertained by the draftsman of the Rhodesian Ordinance, for the Administrator is paramount. Thus he alone would nominate the Board and its president, he would fill up vacancies, he could remove any member at will, and could appoint any subcommittees, to which he could assign any duties he pleased within the scope of the Ordinance. The delegation of so much power into his hands seems hardly in accord with the sentiments of the present day upon representation.

Both the Cape Act and the Rhodesian Ordinance contain stringent prohibitions of unqualified practice (in addition to a prohibition of the use of medical titles by unqualified and unlicensed persons) under a penalty not exceeding one hundred pounds or imprisonment with or without hard labour, not exceeding in the one six, in the other twelve months. Though it has this good point the Rhodesian Ordinance has yet another defect. It lacks any provision for the removal of practitioners who have disgraced their calling, and in this respect the precedents afforded not only by the Imperial Medical Acts, but also by the Act of the Cape Colony have been disregarded, why it is very difficult to see. The practice of dentistry is dealt with upon lines practically similar in both cases, and practically identically with medical practice. In fine the medical law existent in the Cape Colony seems to be pretty satisfactory, but the Rhodesian Ordinance seems to fall short of it in many important respects and to introduce sundry undesirable features. It has apparently been drafted by some person having very little experience in medical legislation, and we are quite in accord with our correspondents in desiring that it may be amended before it receives official confirmation by Sir Alfred Milner.

We understand that a representation will be addressed to the Secretary of State for the Colonies by the Council of the British Medical Association, requesting him to take steps to prevent this confirmation until full time has been allowed for a consideration of the Ordinance and its amendment when necessary.

THE TREATMENT OF SLEEPLESSNESS.

That the drowsy god is hard to woo is the experience of no small part of suffering humanity in this busy age, and although he may at times suffer violence those who would take him by force incur no little risk. It will have been noticed in our report of the Croonian Lectures that Dr. Bradbury prefaced his remarks with an able summary of the modern views of the physiology of sleep. He then discussed seriatim the hypnotic agents at present in use, dealing first with those belonging to the inorganic materia medica, and subsequently those from the vegetable kingdom. He applied in an illuminating way those root principles of the relation of chemical composition to physiological action, which were long ago expounded by Professor T. R. Fraser and Professor Crum Brown, and by the following out of which it is hoped to find eventually an agent having, with a maximal hypnotic efficiency, a minimal depressant action on the vital centres of circulation and respiration.

By adapting our more recent knowledge of the morphology of the neuron to the conception of the physical basis of sleep, including on the one hand variations in the size of the protoplasmic processes or dendrons, and on the other changes in the structure of the brain cells in their transition from the active to the resting phases, he advanced reasonable working hypotheses of the nature of the material processes that underlie a state which many have held to be purely psychical. Of the theories of sleep to which he alluded—the chemical, the histological, the vasomotorial, and the psychological—he laid most stress on the first, a change in cell metabolism, without, however, excluding the second, in the idea of which is implied the amœboid movement of the neuron, and particularly a protrusion and retraction of portions of contiguous dendritic processes. He even admitted the possible coexistence of the third, involving an arterial cerebral anæmia combined with venous congestion; but he maintained—and, as we think, rightly—that the fourth, according to which sleep is the resting time of consciousness, advances our real knowledge not one whit.

The experimental evidence of the hypnotic value, as distinguished from hypnotic power, of the alcohols, the aldehydes, the halogen compounds, and the vegetable soporifics, derived both from his own researches and from those of other pharmacologists, was lucidly set forth and clearly illustrated by graphic records of actual experiments. The basis of the rational treatment of insomnia is, as he well showed, the treatment of the individual patient, having regard to the special indications of each case. It consists in an attempt to remove the internal cause of the sleeplessness while endeavouring to bring about the external conditions that pertain to a healthy somnolence. In this relation it will seem to many that the lecturer did not attach sufficient importance to what he termed the synthetic analgesics. Phenazone, acetanilide, and phenacetin are, without doubt, analgesics, as is opium, but that, like opium, they are something more, namely, pure hypnotics, cannot, we think, be denied. For the insomnia associated with pain and fever they have a unique position, but for that without either they are also of great value.

As the ultimate goal of medical science is the successful treatment of patients, then we must welcome Dr. Bradbury's lectures as a direct help from the pharmacological side to that struggle of therapeutics for independence from empiricism which is of such vital interest to us all. While it would be rash to assert that a hop pillow was never of value for sleeplessness—and we may say in passing that the lecturer might well have made more of the remedial efficacy of suggestion for insomnia—yet who would not gladly exchange very many similar pieces of empiricism for one such fact as that the addition of a glucose molecule to chloral diminishes its depressing effect on the circulation without materially reducing its hypnotic power, or that the addition of the amide group to the same potent drug obviates some of its depressant action on the respiratory centre?

As was to be expected from a teacher of the Cambridge school, the hypnotic value of cannabis indica was strongly emphasised—and perhaps disproportionately so, inasmuch as charas, ganga, and hasheesh have been in use for

ages as a narcotic, but certainly not for producing a sleep that should be sound and dreamless.

We would particularly commend to careful consideration the latter part of the closing lecture as full of practical suggestions for the amelioration of one of the most distressing deprivations that can afflict mankind.

UNIVERSITY TEACHING IN LONDON.

A conference of teachers of anatomy, physiology, and materia medica in the medical schools of London has been held recently at the Examination Hall on the Embankment to consider the advisability of amalgamating the teaching of the early medical studies and to discuss the best means of carrying out such an amalgamation in connection with the reconstitution of the University of London. It is understood that the conference was summoned in response to informal representations which had been made by certain members of the Statutory Commission now sitting. As was to be expected, considerable difference of opinion was disclosed, and on the first occasion the conference was adjourned without coming to any definite decision. At the adjourned meeting two committees were appointed to embody in two separate reports the divergent opinions with regard to the advantages of centralisation which had been expressed. These reports will eventually come before the committees of the various medical schools, but it must be confessed that the prospect of bringing about any general understanding does not at the present moment appear to be very bright.

WOMEN IN LOCAL ADMINISTRATION.

As the London Government Bill left the House of Commons the second clause ran: "The Council of each borough shall consist of a mayor, aldermen, and councillors, and no person shall be disqualified by sex or marriage for being elected or being an alderman or a councillor." In the House of Lords, however, all the words after "councillors" were struck out, and for them were substituted "provided that no woman shall be eligible for any such office." When the Bill returned to the Lower House, Mr. Courtney moved to disagree with the Lords' amendment so far as it excluded women from election as councillors, but he proposed to surrender their eligibility for the office of alderman. Mr. Courtney's amendment was defeated by 246 votes to 177, Governmental pressure having, we understand, been applied to secure this result. We regret the decision of Parliament on this question, not that we desire to advocate woman suffrage or any revolution of our representative system in favour of women, but, as we have frequently had occasion to show, the presence of women on School Boards, Boards of Guardians, and sanitary authorities, is greatly to the advantage of the public. Their withdrawal from the bodies which are to supersede the metropolitan vestries must therefore be regarded as prejudicial and reactionary. The recent International Congress of Women, which has been during the last fortnight enjoying the hospitality of the capital, bears evidence alike to the expansion of woman's sphere of influence in public life, and to the favour with which Londoners regard the movement. At the very time that women are being appointed in increasing numbers as sanitary and factory inspectors and medical officers to asylums, it is surely not only retrograde but inopportune to drive them from the new district councils, from which we are told we are to expect a fresh impetus to sanitary progress. On the first county council three ladies found seats, and did good work on the Asylums, Public Health, and other committees on which they served, until their career was cruelly cut short by information laid against them by a gallant knight, now no more, who was a member of the Moderate party. Some dozen ladies have served for the last four or five years on the vestries of Marylebone, St. Pancras, Islington, Paddington, Fulham, Camberwell, and elsewhere, with great advantage to the community, and to the interest especially of their own sex. On the Asylums Board and the School Board the lady members have earned for themselves a reputation for zealous service and helpful resource in administrative detail. With this knowledge in mind it was impossible for the opponents of the ladies to argue either from precedent or experience against the continuance of women upon the glorified vestries which Lord Salisbury, in pleading their cause before the Upper House, acknowledged the new councils were to be. Resort was accordingly had to the stereotyped absurdities which have been perpetrated with wearying reiteration by those who have constituted themselves the consistent opponents of any representative rights to the weaker sex. When buffoonery replaces argument, and the party whip is relentlessly applied in obedience to what the Leader of the House of Commons described as the unanimous decision of the Cabinet "in the interests of the Bill," the student of Parliament knows what to expect, and the division list bears eloquent testimony to the ignominious abandonment of a position which some of the most influential members of the Cabinet had previously defended with all the force which comes from conviction. The abandonment is all the more strange because the Duke of Northumberland, who appeared to be accepted as the leader of the malcontents in the Lords, expressly said that they were actuated by a desire to give the Commons an opportunity of reconsidering a decision which he affected to believe had been reached as the result of a snap division. The medical profession as a whole is, we believe, convinced that good has come to our social wellbeing by the limited representation in local government which women have hitherto secured, and that a case has been fully made out for an extension of such representation; accordingly we view with concern and regret the surrender by Mr. Balfour to party expediency of a principle of which it was understood he himself was a cordial adherent.

THE WESTERN ADVANCE OF PLAGUE: EUROPE THREATENED.

The extension of plague into Persia by way of the Persian Gulf is an established fact. Last week we published a report with considerable misgiving that plague had disappeared at Bushire: but a telegram from Bombay dated July 9th, states that "Plague continues to spread among the population of Bushire," and that "the people are being instigated by the priesthood to prevent the institution of preventive measures." For the past five years we have become accustomed to the presence of plague in Central and even Southern Asia, but it has not been brought thoroughly home to us that the present epidemic commenced in the extreme east of the Asiatic littoral, and is now, after a lapse of five years, to be met with on the shores of the Mediterranean—in other words, that the disease travelled across Asia in that time and reached Northern Africa. We may well ask ourselves, Where will it be in another five years? Will Europe be in the throes of an epidemic of plague, with all its terrors to life and its dislocation of commerce? It is possible, perhaps even probable, that such will be the case. We find plague at the present moment in Madagascar, Mauritius, German Central Africa, Lower Egypt, and, if report be true, in the hinterland of West Africa, so that Africa is threatened at many points. In Europe no cases of plague have occurred, if we except the two cases reported from the Seamen's Hospital, Greenwich, some two years ago, and the outbreak in Vienna last year. Whilst rejoicing that Europe has escaped so far, it is blind folly to imagine that it is safe. With plague in Persia Europe is more immediately concerned than even with plague in Egypt. Persia borders on Turkey and Russia, and the hygienic

state of the three countries, especially where they touch, presents conditions almost equally bad in each. In no part of the world is there greater disregard shown for human life or for modern sanitation. The extreme cold of winter, the intense heat of the summer months, and the poverty of the people in these regions are calculated to foster an epidemic such as plague. The rapid communication afforded by railways favours the spread of plague, as was so markedly shown along the great Indian lines of railway. The danger to Europe is from the countries adjacent to the Black Sea, and they can hardly escape becoming plague-stricken if the disease gets a hold in Persian territory. The Indian Government have done well in sending two medical officers to investigate the outbreak in the Persian Gulf. On their arrival they were informed that a few plague cases had occurred at Bushire, but that the threatened epidemic had passed. This week, no doubt on account of the investigations of these officers, we are officially informed that plague is rife and that it is spreading. The Persian Government has neither the money, the energy, nor the sanitary knowledge or equipment to deal with the outbreak. The Turkish Government is, if possible, still less fitted to cope with inroads of the disease. Europe, however, is at the mercy of these two Powers, and it behoves the European Governments to see to it that something is done before it is too late. We would suggest that the British Government should take the initiative by asking the Great Powers to co-operate by money and men in the organisation of a fully-equipped medical staff to proceed to Persia and Asiatic Turkey to keep watch upon, to report, and to deal with outbreaks of plague in these countries. Men and money, however, are of no use without ample powers, and the Governments of Turkey and Persia should be asked to grant the necessary executive control to the members of the plague expedition whilst within their territories. Russia may be trusted to guard her own frontier; and past experience shows that what her officials lack in sanitary knowledge is to some extent made up by the drastic nature of the measures which Russia is accustomed to take in dealing with plague-stricken communities.

ANTIVIVISECTION METHODS.

THERE is a sameness about the methods of the antivivisection agitators which reveals the narrow type of mind which engages in this mischievous crusade. The history of the agitation contains many instances of attempts to appeal to the pocket of medical men in the hope of inducing them by threats or cajolery to disavow the method of experiment in medicine, human and veterinary. A good many years ago a directory was published by one of the antivivisection societies giving the names of all those members of the medical profession who at that time held or had held licences under the Act which regulates experiments on living animals. One of the uses to which this directory was put was as follows: The secretary of a hospital who had issued an appeal for subscriptions would receive a letter from a lady who said that she noticed on the staff of the hospital the name of Dr. So-and-so, who was a licensed vivisector engaged in the torture of living animals, and that that being so the lady was unable to become a subscriber to the hospital. Several such letters were sometimes received in quick succession from different ladies, but so far as we are aware in no instance could it be ascertained that these ladies had previously been supporters of hospitals. Quite recently this system has received a further development at the hands of "the Hon. Stephen Coleridge, Honorary Secretary and Treasurer of the National Antivivisection Society," who has addressed a letter to the subscribers to the West London Hospital pointing out that though "there is no laboratory licensed for vivisection attached to this hospital," two members of the medical staff "are vivisectors holding certificates enabling them to dispense with the obligation to kill their vivisected animals before they recover from such anæsthetics as may be administered to them during the initial operation of opening their bodies with the knife." Mr. Coleridge asserts that "many kind-hearted folk hold the opinion that such practices as these harden the heart and render those who do them insensible to human suffering, and accordingly they prefer to send their hospital subscriptions to such institutions (the Poplar Hospital is one) as undertake not to appoint or retain licensed vivisectors on their staffs," and he requests his correspondents to send their subscriptions to his office to be forwarded to the Poplar Hospital. We may observe that the chairman of the Poplar Hospital is the Hon. Sidney Holland, who is also chairman of the London Hospital, and we shall await with interest the comments which Mr. Holland has to make upon Mr. Coleridge's propaganda in favour of the Poplar Hospital. Another system which was pursued, and perhaps is still pursued, was to send to a medical practitioner a letter stating that the writer wished to consult him, but before doing so desired to have an assurance that the practitioner in question did not approve of vivisection. For some time past the organs of the agitation have been announcing that it was proposed to compile classified lists of doctors known to be opponents of vivisection. If we may judge from the following letter received recently by a medical practitioner in a south-coast watering-place, this plan is now being extended and carried out in a systematic way:

> The National Antivivisection Society,
> 20, Victoria Street, London, S.W.
> The 23rd of June, 1899.
>
> Dear Sir,—There are many supporters of our Society resident in —— at the present time, and we not infrequently are asked to recommend a doctor who is known to us as an opponent of vivisection as practised in this country. As we do not appear to have the name of any medical man in —— on our list of members and supporters, I should be very much obliged if you would inform me whether your views on this question are of the nature conscientiously to justify you in allowing us to say to our friends that you share our convictions.
>
> I remain, Dear Sir,
> Very faithfully yours,
> (Signed) STEPHEN COLERIDGE.
>
> P.S.—The enclosed reprint of a recent controversy between Professor Schäfer and myself may interest you. You will observe that I have reproduced verbatim all that my opponent had to say.

Mr. Stephen Coleridge is an honourable man, but we prefer not to characterise the methods which he apparently thinks it justifiable to use in the furtherance of the cause which he has at heart.

THE BRITISH UNION FOR ABOLITION OF VIVISECTION.

THE split in the ranks of the antivivisectionists is not exactly a lovers' quarrel. The preachers of the gospel of antivivisection are, as might be expected from the temper which they show in controversy, good haters, to a degree that would have satisfied even Dr. Johnson. Your "abolitionist," whose motto is *Ecrasez l'infame*, evidently looks upon those who will be content with merely controlling the "infamous" as little better than vivisectors. The British Union for Abolition of Vivisection represents what may be called the primitive church of antivivisection, of which Miss Frances Power Cobbe is the inspiring spirit. It has an organ, the *Abolitionist*, to which Mr. William Watson has already contributed some bad verses, and to which Mr. Robert Buchanan may perhaps by-and-by be moved to contribute more. Mr. Cecil Aldin has been specially retained to produce gruesome pictures that will make the subscribers' flesh creep. Mr. R. D. Blackmore has been interviewed, and while professing his hatred for vivisection, and expressing a doubt whether anything has been learned by it, is modest enough to admit that he has not knowledge enough to be certain. The interviewer appears to have been unable to supply his want of knowledge, but he tried to rouse the novelist's imagination by pointing out to him "how well such a

subject as vivisection, say, the vivisection of animals culminating in its natural consequence, the vivisection of human beings, would lend itself to treatment in fiction." Had Mr. Blackmore been better acquainted with anti-vivisection literature, he might in turn have pointed out to the interviewer that the subject had already received a very large amount of "treatment in fiction"—at the hands of writers very different from the author of *Lorna Doone*. The interviewer is by no means confident that Mr. Blackmore will help the cause with his pen; but by way of encouragement, perhaps, he gives the novelist, who is also a fruit gardener, what would be an excellent advertisement for his pears and peaches—if only the British public could be got to read the *Abolitionist*. In another issue, Dr. Gordon Stables, who is also by way of being a novelist, gives what he is pleased to call "a medical view of vivisection." He admits that "abuse is no argument," and at once proceeds to illustrate this excellent maxim by saying: "I consider I am well within the mark in averring that not 10 per cent. of the men who work or pretend to work in the bacteriological laboratory, and in those hellish observatories where animals who have as good a right to life and happiness as the men who torture them, pine and slowly die, are labouring in the cause of truth." Speaking of the "practical bacteriologist," he, with unexpected charity, says: "I do not call the man a devil." This moderation, however, appears to be inspired by no better reason than that Dr. Gordon Stables has satisfied himself that "personal spiritual devils are mere myths." But if he will not call the bacteriologist a devil, he makes no scruple about calling him a fiend, and insinuating that he is not likely to use anæsthetics with any other view save that of keeping "noble suffering beings" still under the knife. Dr. Gordon Stables is a moral man, and as a Scotsman, has doubtless read his Bible. Has he ever heard of the commandment: "Thou shalt not bear false witness against thy neighbour"? He uses words in the most random way, and his reasoning is as loose as his style. But his reference to anæsthetics, if it means anything, means that experimental biologists in this country, the inspectors under the Act, and the Home Secretary, are united in a conspiracy of deliberate lying. Dr. Gordon Stables claims to be "behind the scenes" in regard to what takes place in laboratories. Now, his statement as to anæsthetics is absolutely untrue. He can therefore be acquitted of misrepresentation only on the assumption that he boasts of knowledge which he does not possess. Dr. Gordon Stables can apparently be sentimental over the "pure love" of a tomcat, or the "innocence and virtue" of a monkey. His tenderness of heart in regard to animals is highly creditable to him. But is there no room in it for fairness to the experimenter, who, after all, is a vertebrate animal?

THE ROYAL NAVY MEDICAL SERVICE.

WE understand that a Departmental Committee consisting of Mr. Austen Chamberlain, M.P.; Admiral Moore, C.B., C.M.G., Junior Naval Lord; and Sir Henry Norbury, the Medical Director-General, with Staff-Surgeon Gipps, R.N., as Secretary, has been sitting for some time past to consider various projects of medical reform in the Royal Navy. Among other subjects which has engaged attention is that of the teaching of tropical diseases and the general teaching in the Naval Medical School at Haslar. We are confidently assured that the alterations which the Committee are likely to recommend will be such as will commend themselves to the officers of the service and to the medical profession.

HAFFKINE'S PLAGUE PROPHYLACTIC.

A LARGE number of applications have recently been received for supplies of Mr. Haffkine's plague prophylatic for use in various countries. Captain Leumann, I.M.S., has been lent to the Government of Natal to introduce inoculations into that colony, and he has taken with him 50,000 doses. Lieutenant Stephens, I.M.S., has in the same way been lent to the Government of Mauritius, to which 20,000 doses has been supplied. At the request of the Chamber of Mines of Johannesburg 10,000 doses have been sent there, and Dr. Hornibrook, one of the physicians recently employed on plague duty in India, has gone to Johannesburg to introduce the system. The Consul-General of Zanzibar has applied for 10,000 doses, the Crown Agents of the Gold Coast Colony of West Africa for 3,000 doses, 1,000 doses have been sent to Russia, the Governor of Nicosia and the Italian Government have made applications for small quantities, and a supply has been sent on private demand to Hong Kong.

THE BRAIN OF A "JACK THE RIPPER."

PROFESSOR CESARE LOMBROSO, who has had an opportunity of studying casts of the cerebral convolutions and microscopic preparations of the brain of Vacher, *l'eventreur*, guillotined at the end of last year, has satisfied himself that the French "Jack the Ripper" presented all the characters of the epileptic and congenital criminal. In both hemispheres, but particularly in the left, there was a communication between the Rolandic and Sylvian fissures; on the right side the latter also communicated with the post-Rolandic fissure. On the left side the foot of the ascending parietal convolution presented several abnormal sulci; the fissure of Rolando ended above in a bifurcation on both sides; on the left side the interparietal fissure did not communicate with the post-Rolandic fissure, and was broken by numerous folds. Histological examination by Nissl's method of a small portion of the frontal lobe revealed atrophy of both granular layers, enlargement of the pyramidal cells which were also very scanty in number, and the existence of a certain number of nerve cells in the white matter. These are the characters which have been held by Roncoroni to be peculiar to epileptics and born criminals.

THE BRITISH ASSOCIATION.

THE arrangements for the exchange of international courtesies between the British and French Associations for the Advancement of Science next September are now practically complete. The British Association, it will be remembered, meets in Dover under the presidency of Sir Michael Foster, K.C.B., and the opening ceremony will take place on September 13th. The French Association meets at the same time at Boulogne, and on Saturday, September 16th, the members of that Association will cross over to Dover, where they will be formally welcomed at the Town Hall. There will then be an adjournment to the various sections, and it is understood that most of the presidents of sections will reserve their addresses for this occasion. After lunch, which will be held in a marquee in the College grounds, parties will visit the castle and other objects of interest in Dover, while another party will proceed to Canterbury. On the following Thursday, (September 21st) the British men of science will make a return visit to Boulogne, where, after a formal reception, followed by a luncheon, the statue of Duchenne of Boulogne will be unveiled. A memorial plaque to Campbell the poet, who lived at Boulogne for some time, will also be unveiled. From Boulogne a party will start on a five days' excursion through northern France and Belgium and the municipal authorities of many of the most interesting towns in those districts have promised, at the instance of the French and Belgian Consuls in Dover, to do all in their power to make the excursion a success. For the use of members of the Association a handbook of Dover is being prepared by Dr. Sebastian Evans and among the contributors to it will be Dr. Parsons, who will write on the Climate and Meteorology of Dover, and Dr. Robinson, M.O.H., who will deal with the Public

Health administration. The central place of meeting will be the Town Hall with the adjoining Maison Dieu. Five of the sections will meet in the School of Art which adjoins and communicates with the Town Hall, while the reception rooms and offices will be established in the buildings and grounds of Dover College, an institution founded some thirty years ago. The Norman Refectory of Dover Priory in which the college is established will serve as the reception room and ticket-office.

MEMORIAL TO THE LATE PROFESSOR RUTHERFORD.

ON the afternoon of Saturday, July 8th, in the Physiology Class Room of the University of Edinburgh, there was unveiled by Principal Sir William Muir a marble bust of the late Professor William Rutherford, which had been subscribed for by past and present members of the class of physiology, all of whom were undergraduates. Among those present were Sir William Turner, Professor T. R. Fraser, Professor Annandale, Professor Crum Brown, Professor Taylor, Professor Hunter Stewart, Sheriff Æneas MacKay, Sheriff Vary Campbell, Dr. Clouston, and Dr. E. W. W. Carlier. The Lord Provost of Edinburgh and Professor Schäfer sent apologies for absence. Mr. W. MacDougall, the Chairman of the Committee who arranged for the memorial, stated that the proposal had met with a very ready response. The bust, which is by Mr. John Hutchinson, R.S.A., is in marble and is an excellent likeness. It bears the following inscription on the pedestal: "In piam memoriam Gulielmi Rutherford, M.D., F.R.S., in Universitate Academica Edinburgensi, ab anno MDCCCLXXIV. ad annum MDCCCXCIX., Physiologiae Professoris hanc effigiem posuerunt discipuli eius Universitatis huius cives. A.D. MDCCCXCIX." After the bust had been unveiled by the Principal, Sir William Turner briefly spoke giving an appreciation of his late colleague. He had now been for forty-five years a teacher in the University, and this was the first time on which the students of the University had themselves raised a monument to a former teacher. Never before had such a movement emanated from the students themselves and been carried out by the students themselves. This was unique and spoke of something remarkable in the man they thus sought to honour. They had to look at him from two points of view, as a professor who gave all his time and talents to the service of his students, and as a shy, reserved, kindly man who was always deeply interested in all that made for the wellbeing and success of his pupils. The proceedings were concluded by a vote of thanks to the Principal, moved by Professor Thomas R. Fraser.

MODERN LANGUAGES IN THE UNIVERSITY OF EDINBURGH.

IT is now five years since lectureships in modern languages (German and French) were instituted in the University of Edinburgh. Doctors and men of science had reason to congratulate themselves on the new departure. The first appointment of the lecturers was for five years at an annual salary of £400. We understand that last year the number of students in French was about fifty, and in German above twenty, surely a fairly satisfactory record for a beginning. Yet one is surprised to learn that at a recent meeting of the University Court (it must be admitted that the meeting was a small one) it was alleged that these lectureships were unsuccessful because they did not pay, and that their institution should therefore be considered as merely tentative. It was even suggested that the salaries of the lecturers should be reduced to £250 or £300. Eventually it was decided to reappoint the lecturers at the original salary, but, in view of the uncertainty of the financial means of the classes that this reappointment should be for two years instead of five. One member of the Court characterised the step as a retrograde one, and deprecated hanging the sword of Damocles over the lecturers. We are disposed to agree with this critic, and to think that his opinion will be shared by all who have at heart the best interests of the University. In view of the recent admission of women students, it is most unlikely that these lectureships will be abolished. On the contrary, in the interests of general education, and in particular of the education of medical men and men of science, we trust that the teaching classes of modern languages will be more and more fully recognised in schools and universities. Further, we see no reason why these lectureships should not, in the course of time, be raised to the full status of chairs, in spite of the alleged small number of the students at present attending the classes. The paucity of students of modern languages is easily accounted for. These studies are distinctly discouraged—indeed, they are hopelessly handicapped—by the bursary regulations of the Scotch universities. It simply does not pay the elementary or secondary schools to extend or improve the teaching of French and German. The results of the preliminary, and especially the medical preliminary, examinations are truly deplorable. Quite recently complaint was made by the Faculty of Medicine that these examinations were too difficult and the standard required too high, and that students were deterred from the study of medicine by these entrance examinations in modern languages. If one may believe those who have seen the papers of the candidates, the examiners should rather be called to account for excessive leniency. The bursary examination gives the key to the whole situation. If the universities make it worth while for the schools to teach modern languages adequately it will be done.

VIOLENCE AT THE EAST END.

IT must be confessed that it does not speak highly for police protection in the metropolis, if medical men have to consider their liability to assault when called to cases of sickness. That police arrangements are not all that could be desired in certain East-end districts is shown by reports that appear from time to time in the daily press. A short time ago, Mr. H. A. Stonham, of Commercial Road, E., a parish doctor, was assaulted at 4 P.M., and robbed of his watch; and on July 4th, at an inquest held on a child at Poplar, the mother of the deceased declared she had sent for two doctors in the night, and both had refused to come. Dr. Meadows, of Bow Common Lane, who gave evidence, said: "It is not to be wondered at that medical men in such a neighbourhood as mine refuse to go out late at night, as there have been several premeditated assaults on members of the profession lately. Unless we know the people who send for us, we won't go out at night." It is sad to think that East-end practitioners, in addition to being necessarily poorly paid for night services, should be exposed to serious bodily risks besides. The criminals who assaulted Mr. Stonham have been convicted at the Old Bailey and severely punished; but more than exemplary sentences are required to put down crimes of this nature. There must be more complete police protection. It is not much satisfaction to the injured to learn that his assailant has been punished; he would much rather know that measures were taken by those to whom the safety of the public is entrusted to make such outrages impossible.

NATIONAL ASSOCIATION FOR PROMOTING THE WELFARE OF THE FEEBLE-MINDED.

THE annual meeting of this Society was held at the St. Saviour's Homes, Hendon, on July 8th. Mr. W. H. Dickinson, L.C.C., Chairman of the Executive Committee, presided. A very interesting address was also delivered in Italian by Signorina Dottoressa Maria Montessori (Rome), on the work of the National League for the Protection of Deficient Children, which has recently been established in

Italy. She stated that up to last year the 65,000 defective children of Italy had been ignored alike by the laws, by the State, and by charity. Now a wave of sympathy with this unfortunate class had spread over the whole country, from the Alps to furthest Sicily, and already in Rome, in Milan, Genoa, Bologna, and Palermo have arisen homes for defective children. In addition, the Minister of Public Instruction, Dr. Guido Baccelli, had proposed the formation of special classes for deficient children in the public elementary schools, which would be inaugurated in the coming year. Signorina Montessori had, in a course of forty lectures, been preparing the Roman mistresses for their new work. In conclusion, she proposed an alliance for mutual help of the Italian and English societies for befriending the feeble-minded. The Chairman, in moving the adoption of the third annual report, adverted to the extending operations, and the growing need of public support, of the Society. He stated that besides acting as a co-ordinating medium for the dozen or more homes established in various parts of England, the Executive Committee had found it necessary to establish three homes of their own in the metropolitan district, one for boys from 14 to 17 years of age, who were employed in farm work; one for girls of a similar age, who were trained to laundry and domestic service; and a third congeries of cottage homes (in which they were now assembled), for small boys of school age (at present numbering 18), as well as for older girls, employed chiefly in laundry work, of whom they had 23. With an aggregate of about 70 to provide for, and subscriptions and donations amounting last year to only about £700, they urgently needed increased support, for the payments made by Poor-law guardians and others for the inmates were insufficient to cover establishment charges. The Rev. T. W. Sharpe, C.B., who seconded, referred with satisfaction to the prospects of legislation founded upon the Report of the Departmental Committee on Defective Children; and Mrs. Dickinson Berry, M.D., gave an interesting account of the various grades of mental and physical defect with which the medical staff were called upon to deal. While it was difficult to give a definition of feeble-mindedness, experience showed that there was a large class of children and young people who, though not absolutely imbecile or idiotic, were unable to take care of themselves or take independent places in the world, and it was for such that the Training and Working Homes of the National Association were proving of so much value. Dr. Shuttleworth also spoke, and after the meeting the company inspected the cottage homes, and saw in operation the methods of teaching and of industrial training. The offices of the Association are at 33, Victoria Street, S.W. (Secretary, Miss Gill).

SMALL-POX IN HULL.

The outbreak of small-pox in Hull has not yet ceased, although it is believed to be at the present time under control. It was stated at the last meeting of the City Council that 44 cases were still in hospital, and that there was one other case in the town. The Chairman of the Sanitary Committee complained that their left hand was tied by a certain section of ladies and gentlemen known as antivaccinationists, and their right by a number of wealthy people who were opposing the erection of a new small-pox hospital at Sutton. It appears that an alternative site may possibly be obtained on the river front, and as the present small-pox hospital must be given up in September next the matter seems somewhat urgent. One member of of the corporation distinguished himself by complaining that the medical members of the Sanitary Committee had trumpeted through the country that Hull was suffering from a small-pox scare, but we are glad to notice that his remarks were received with laughter, for nothing could be more conducive to the perpetuation of the disease than a policy of concealment. So far from the publicity given to the outbreak having shaken public confidence it has very much confirmed it, inasmuch as the public feel sure that the emergency is being honestly faced, and that all available measures are being taken to prevent the spread of the disease. It is a fact, however, that the outbreak has been dragging on since March 2nd, and that altogether 83 cases have occurred. Mr. Chaplin stated in the House of Commons that of these 83 cases 62 showed evidence of having been vaccinated, while 21 appeared to be unvaccinated. The death-rate among patients exhibiting evidence of vaccination was 9.7, while among those who exhibited no evidence it was 57.1.

THE IRISH DISPENSARY SERVICE.

Much has been written and a good deal has been done with the view of bringing about an improvement in the position of the medical officers of dispensary districts in Ireland. But such an incident as is stated to have occurred in connection with the Portadown Dispensary cannot fail to do more harm than the labours of many disinterested friends of the dispensary service can hope to do good. It appears that a vacancy having occurred through the resignation of the medical officer of the Portadown Dispensary, the guardians of the Union resolved to reduce the salary from £150 to £80. The Local Government Board demanded an explanation of this decision. A memorial signed by the other medical officers was presented by Dr. Moore, a member of the Board, pointing out that the salary would barely pay out-of-pocket expenses. The Chairman stated that there were six candidates for the office at the reduced salary, and that even one of the signatories of the memorial was in the field. It was ultimately agreed to adhere to the reduction. Such an incident cannot fail to confirm the guardians in the belief that the salaries paid are adequate, or, as might be assumed in this case, excessive, since there is a keen competition for the post at a very much reduced salary.

THE BELGRAVE HOSPITAL FOR CHILDREN.

The appeal for funds on behalf of this hospital, signed by the Princess Beatrice, the Dukes of Westminster and Marlborough, the Bishop of Rochester, and the Lord Mayor of London, ought to be, and we have no doubt will be, well responded to by those of the wealthy class of society who have made an intelligent study of the hospital question in London. We have so recently expressed[1] a favourable opinion on the new departure which the hospital authorities have taken that it is only necessary now to add that, as already about one-sixth of the £7,000 contributed has come from the members of our profession, we may fairly expect that the remaining £8,000 required to make up the £15,000 needed before the hospital building is commenced will be provided without much delay or difficulty by the liberality of the general public, to whom the appeal is made on the grounds of necessity, of benevolence, and of a well-considered scheme approved by the medical profession.

MEDICAL MEN AND UNQUA IFIED DISPENSERS.

A considerable amount of time was devoted to a discussion of this question at a meeting of the Council of the Pharmaceutical Society on July 5th. The General Purposes Committee had reported to the Council that the further consideration of the matter should be deferred until after the report of the General Medical Council thereon shall have been made public. This recommendation was finally adopted, but not until an amendment urging that the General Medical Council should be approached at once had been put and lost. It will be remembered that a communication upon this subject was received from the Privy Council by the General Medical Council, and that

[1] British Medical Journal, May 20th.

before fully replying the latter body referred the question to a committee, which is to report at the November meeting of the Council. In the course of the discussion several curious or interesting points were raised, notably one by the President, who pointed out that there was "a compounders clause" (xvii) in the Apothecaries Act, 1815, which made it penal for anybody to dispense or compound medicines for an apothecary without holding the assistant's qualification of the Apothecaries Society. The exact effect of the limitation in this section is at the present day open to question, and the point is perhaps more curious than important. Reference was also made to the difficulty existing in the case of apprentices, whether to medical men or to pharmaceutical chemists. On the whole, we think the Council of the Pharmaceutical Society decided wisely in adopting the recommendation to wait for the report of the General Medical Council's Committee before themselves approaching the General Medical Council, by way of a deputation or otherwise.

THE MEDICAL EXPEDITION TO SIERRA LEONE.

We are informed that the expedition of the Liverpool School of Tropical Medicine, which is about to proceed to Sierra Leone under the direction of Major Ronald Ross, I.M.S., the Director of the School, will sail from Liverpool on July 29th. Major Ross will be accompanied by Dr. Annett, the demonstrator, and by Mr. E. E. Austen, dipterist, who has been nominated by Professor Ray Lankester, director of the British Museum Natural History Department. The Council of the British Medical Association at its meeting on Wednesday voted the sum of £100 towards the expenses of the expedition. No pecuniary assistance has been given by the Government, but the Colonial Office has asked the Governor of Sierra Leone to assist the expedition in every way. The alteration in the date of departure of the expedition will unfortunately prevent Major Ross from introducing the discussion on The Agency of Insects in Spreading Infection, which is to take place in the Section of Tropical Diseases at the annual meeting at Portsmouth, but his place will be taken by Dr. Nuttall, of the Pathological Laboratory, Cambridge, who recently published an admirable history of the mosquito theory in the *Centralblatt für Bakteriologie*, and who is the author of the monograph "Die Rolle der Insekten" in the *Hygienischen Rundschau*.

TRUTH UPON MEDICAL LEGISLATION.

Truth at first showed a disposition to curse the Lord Chancellor's proposed amendment of the law relating to company practice; but our contemporary has an open mind on most subjects, and in its issue of June 22nd, speaking on fuller information than it previously was in possession of, it comes near to blessing Lord Halsbury's Bill. In regard to the existing state of medical law, Mr. Labouchere says: "I was favoured last week by a call from a gentleman who is in a position to speak authoritatively respecting the genesis of the Companies (Medical Profession) Bill. . . . . The evil at which it is aimed—that of unqualified men covering themselves under the mask of a bogus company—is as prevalent in purely medical as in dental practice. For the actual drafting of the Bill the Treasury lawyers are responsible, the professional organisations having merely placed their case before the Lord Chancellor." "There seems to be no doubt that a real evil does exist, which these Bills, so far as they apply to medical and dental companies, will do something to check. But even in this sphere they are mere pieces of legislative patchwork. Nothing could be more absurd than the present state of the law, if I understand it aright. The object at which the Acts have been aimed is not that of preventing an unqualified person from practising either as a doctor or a dentist, but merely his holding himself out as a qualified person. Any man may put up a red lamp and a brass plate bearing the inscription 'M.D., U.S.A.,' or any other equally nebulous qualification, and, provided people choose to come and consult him, there is no law to prevent him practising as a physician or surgeon. It has now been found that by means of the Companies Acts unqualified men may even get over the small difficulty about the professional title, the law being powerless to touch a company which describes itself as a firm of surgeons, dentists, midwives, or what not. The present Bill is designed to amend this defect in the law. But what is obviously required is a law which should define the qualifications which entitle a man to practise, and which should make it penal for anyone to practise without these qualifications. Everything short of this is mere tinkering." We heartily echo this last sentiment, and we value this expression of opinion on the part of *Truth* very greatly, not only because that paper is noted for the courageous expression of its own opinions, but also because its general tendency is not in the direction of advocating any form of restrictive legislation, unless there be strong and good cause shown for it. This lends special significance to the remarks of our contemporary, and the fact that *Truth* should have so written may be taken as a very good augury, since it is evidence that there is a reasonable hope that public opinion may be brought to perceive that an amendment of the Medical Acts is necessary for the public weal.

EPIDEMIC AT THE LEAVESDEN ASYLUM.

Somewhat alarmist reports have been in circulation as to the existence of a serious epidemic of typhoid fever at the Leavesden Asylum of the Metropolitan Asylums Board. The real facts are, we are informed, as follows:—For some time past diarrhœa has been prevalent in the asylum, and within the last four weeks there have been several cases of enteritis and a few cases which have exhibited some of the symptoms of typhoid fever, but about which doubt exists, more or less, as to whether they are true cases of typhoid fever. The few deaths which have occurred tend to justify the belief that the epidemic generally is one of enteritis only, with some few cases—not more than half a dozen—of suspected typhoid. The fatal cases have, for the most part, been confined to the weakest of the patients, many of whom are in an extremely feeble condition, and *post-mortem* examination has usually revealed some complication, such as pneumonia, chronic empyema, or phthisis. One of the deaths occurred among the suspected typhoid cases, and the *post-mortem* appearances confirmed the diagnosis of typhoid. In no other case was there any *post-mortem* evidence of typhoid. The numbers in isolation at the asylum last week were—officers 7, patients 54. The cause of the epidemic is being investigated by Dr. Arthur Shadwell.

THE CONGRESS ON TUBERCULOSIS AT BERLIN.

The report of Sir Herbert Maxwell, M.P., and Dr. Pye-Smith, the delegates of the British Government at the International Congress on Tuberculosis at Berlin, has been issued as a parliamentary paper. The report gives a short account of the proceedings of the Congress, and Dr. Pye-Smith adds a memorandum on the more strictly medical aspects. He refers to the fact that the main points upon which there was general agreement were: (1) That tuberculous diseases are caused by the specific bacillus; (2) that tuberculosis as a condition directly transmitted by inheritance is extremely rare; and (3) that there is little or no risk of direct infection in pulmonary tuberculosis. With regard to the means of prevention, he states that the main points inculcated by the various speakers were, first, the primary importance of free ventilation and wholesome and abundant food, and observes that improvements in the dwellings and the food of the poorer classes in this country, and their in-

creased cleanliness and sobriety have not only diminished sickness generally, but directly reduced the mortality from consumption, which is now less in London than in any other large city. In the second place, the importance of the destruction by heat of the sputa of consumptive patients—and, indeed, for practical purposes, of that of all persons affected with cough and expectoration—and of the disinfection of the vessel containing the sputa was generally recognised. In the third place, the prevention of infection by tuberculous milk was insisted on, and for this purpose the boiling of milk given as food to children and the inspection of dairies so as to prevent tuberculous milch cows from being used were especially mentioned. In the fourth place, it was held that the prevention of infection by meat could be secured by thorough inspection of the carcass and by the use of tuberculin for the early diagnosis of the disease in cattle. Dr. Pye-Smith states that a drawback to the use of tuberculin which was mentioned was, that after the effect of the first inoculation has passed, the tuberculous animal ceases to react for a time to subsequent injections, and that cattle suspected of tuberculosis have been treated with tuberculin with this object in view before being sent over the French frontier. With regard to the treatment of tuberculosis, which was a supplementary part of the work of the Congress, Dr. Pye-Smith points out, first, that it is important for the people as well as their governors to know first that tuberculosis of the bones and joints, of the glands, of the skin, and of the abdomen though dangerous, may be cured by modern surgical methods; secondly, that tuberculosis of the lungs is frequently cured, and probably more often now than formerly; thirdly, that though no drug has a direct specific influence, many, both old and new, have valuable effects upon its complications; fourthly, that abundant food, particularly of a fatty nature, and life in the open air, are no less valuable in the treatment than in the prevention of phthisis. The fact that the open-air treatment has long been known and practised in the United Kingdom was warmly acknowledged by Professor Von Leyden, and the hospitals and asylums, now numerous in Germany, and far from rare in England, Austria-Hungary, France, and the United States are of essential value. The fifth point mentioned is that while the influence of climate, altitude, temperature, dryness of the air and soil, of travel, and of sea voyages is probably exaggerated by popular opinion, each of these factors is in various degrees important. The sixth and last point made is that the prospect of improved success in the treatment of tuberculosis in general, and of consumption in particular, by the advance of pathology and the progress of surgery and medicine, is a hopeful one, almost as hopeful as that of limiting the spread of the disease by preventive measures.

AN EAS WAY WITH APPENDICITIS.

LIVINGSTONE tells a story of being lost in a trackless forest in Africa, and vainly trying for the best part of a day, with the help of all the resources of science, to extricate himself. Late in the afternoon a small native boy who was with the party declared that he was hungry and wanted to go home. On the situation being explained to him, he at once, without the slightest hesitation, led the bewildered explorers out of the wood. This incident is recalled to us by the manner in which the "osteopaths"—a sect of quacks of which some account was given in the BRITISH MEDICAL JOURNAL not long ago—claim to have solved the the problem of appendicitis. While scientific surgeons and physicians are discussing the matter with most painstaking endeavour, the osteopaths have settled the question in a *Veni, vidi, vici* fashion worthy of a medical Cæsar. The New York *Medical News* reproduces the following fairy tale of medicine from an American newspaper. "One of the most unusual operations yet recorded in surgery was performed recently on a young woman in this city, by which was effected the cure of a case of appendicitis. No knife was used, no medicine, no poultices, no ice-packs—none of the usual methods of physicians to treat this most serious of ailments. So simple was the method employed that only eight minutes elapsed from the time the physician reached the patient until he had completed his work, and, as he believes, successfully. The young woman is twenty years old, and belongs to an excellent family in Haarlem. The doctor who performed the operation thus explains the treatment: 'The method of treatment is the one used by all osteopathists, and has been in use by them for some time.' To demonstrate, the doctor placed the thumb of the reporter's left hand flatly in the palm of his right hand. Then he slapped the palm of the hand smartly against the broad of the thumb. 'The hand represents the psoas muscle,' he said, 'and the thumb the appendix. We produce a spasmodic contraction of the psoas magnus, like the slapping of the palm of the hand against the thumb. This forces the foreign substance from the appendix, and relief follows immediately. Just back of the appendix is the largest muscle in the human body, known as the psoas magnus. It is attached to the femur or big bone of the leg, and is the muscle by which one can revolve the leg as a pivot at the heel. It is this muscle which is made to do the trick of emptying the appendix. Using the fingers of one hand to hold the walls of the abdomen in place, and to prevent a rupture of the delicate internal structures, with the other hand a spasmodic contraction of the psoas magnus is brought about, which snaps it against the appendix and is said to force out of that organ whatever of foreign substances it may contain.'" Where be your triumphs of modern surgery now? Quite chapfallen! Thus is appendicitis conjured away by the magic wand of the osteopath. As Hamlet says, "'tis as easy as lying."

SCHOOL BOARD LECTURES.

A CORRESPONDENT writes to call our attention to the terms offered by the School Board for London to the lecturers in First Aid and Home Nursing during the next winter session of the Evening Continuation Schools. We believe that the universal rule hitherto has been that the fee paid for a lecture of this class was one guinea, and considering that, in addition to the lecture, the lecturer has to spend a good deal of time in giving practical instruction, the fee cannot certainly be called excessive. It is very unsatisfactory to find that a body like the School Board for London should at one swoop reduce this modest fee to one half. The fee offered is six guineas for a course of twelve lectures, each lecture with practical instruction lasting about two hours. This is at the rate of 10s. 6d. a lecture, or 5s. 3d. an hour, a rate of remuneration obviously insufficient for the services required.

SIR WILLIAM STOKES, Surgeon-in-Ordinary to the Queen in Ireland, has been appointed an Honorary President of the International Medical Congress to be held in Paris, 1900.

MR. E. A. MINCHIN, M.A., Fellow of Merton College, Oxford, has been appointed Jodrell Professor of Zoology in University College, London, in succession to Professor E. R. Weldon.

THE Treasurer of Guy's Hospital has received a donation of £1,000 from a friend, in response to the appeal of Mr. A. J. Balfour and Mr. Robert Gordon for the endowment of medical research.

FOUNDERS' Day of Epsom College will be celebrated on Saturday, July 29th, when the prizes will be distributed at

3.15 P.M. Refreshments will be served in the college grounds, and there will be choral evensong at 6 P.M. in the college chapel.

THE first of a series of clinical lectures at the Medical Graduates' College and Polyclinic was delivered by Professor Clifford Allbutt, M.D., F.R.S., on July 7th. The subject was, Some Cases of Parkinson's Disease and of Cerebral Syphilis. The lecture was illustrated by a number of cases, and was followed with keen interest by a large audience.

DR. D. J. LEECH, Professor of Materia Medica and Therapeutics at Owens College, Manchester, will deliver the address inaugurating the winter session of the Pharmaceutical Society on October 2nd. On the same occasion, the Hanbury Medal will be presented to Professor Albert Ladenburg, of Breslau, whose researches into the chemistry of the atropine alkaloids, especially his synthesis of homoatropine, have made his name well known to pharmacologists as well as to pharmacists.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

The Home Office and Dangerous Trades.—When the Vote for the Home Office came on last Friday (July 7th), a most interesting debate was raised in connection with the administration of the Factory Acts, more particularly with reference to lead and phosphorus poisoning. The very valuable reports which have been made on the serious prevalence of disease in the pottery and match trades, arising to a very great extent from preventable causes, formed the basis of most of the speeches made in the course of the evening. As regards lead poisoning, the report of Professors Thorpe and Oliver, which was deservedly praised, has made it very clear that the use of "fritted" lead would greatly lessen the occurrence of plumbism, and that the use of leadless glazes might be largely increased. The Government departments, it was urged, should insist that their purchases were made from firms by whom the use of fritted lead or leadless glazes were employed. The difficulties urged by the trade to the adoption of the harmless processes were all shown to be surmountable, and it only required decided action on the part of the Home Office to prevent much human suffering. Periodical medical inspection, so that the earliest symptoms of lead poisoning could be detected and young persons removed to less noxious processes, was advocated, and the systematic enforcement of cleanliness by the supply of adequate means of cleansing in every manufactory was also strongly insisted on. As regards the match industry a strong hope was expressed that the Home Secretary would not only require improved ventilation, but take steps to encourage the use of the less hurtful forms of phosphorus. In the division at the end of the debate, which lasted most of the evening, the Home Secretary had an easy victory on the question of his salary, but the discussion is nevertheless bound to bear fruit. One result of the interest taken in the means of lessening the dangers in the two trades was that no time was left for any criticism on the administration of the Home Office with respect to vivisection. The antivivisectionists had prepared an elaborate indictment, but it is not likely that they will now have a chance of ventilating their grievances this session.

The London University Act (1898) Amendment Bill is a measure to include Holloway College in the University. It was brought in by Sir John Gorst on behalf of the Government on Tuesday, and read a first time. The Chancellor of the Exchequer also informed the House on Monday that the University and the Imperial Institute had come to a satisfactory arrangement as regards the housing of the University, and that the result as soon as it was embodied in a Treasury Minute would be presented to the House.

The Seats for Shop Assistants (England and Ireland) Bill was read a second time in the House of Lords on Tuesday, after quite an animated debate. It will be remembered that earlier in the session the Commons passed a similar Bill for Scotland, but when it reached the House of Lords it was thrown out on the motion of Lord Shand, by the aid of a remarkable speech from the Prime Minister. The answer of the Commons has been to pass this larger Bill, and send it up to the Lords for acceptance on second thoughts. The plan has been successful so far, for although Lord Shand moved the rejection, and Lord Salisbury made a strong speech against it on the ground mainly that it would adversely affect the employment of women in shops and lead to interference with trade, which would be unpopular, the second reading was carried, amid cheers, by a majority of 45, only 28 voting against. This is a remarkable victory, and one that is largely due to the influence exerted by the medical profession some years back, when the agitation first began. When the Committee stage comes on the injustice to Scotland will be sought to be remedied by an amendment to make this Bill apply to all divisions of the United Kingdom.

The Increase of Deaths from Cancer was the subject of a question on Tuesday last by Sir Charles Cameron, who is anxious to have a Royal Commission appointed to inquire into the causes of the increase. The Local Government Board, while admitting that the matter has engaged their attention, are of opinion that in the present state of knowledge no useful purpose would be served by the appointment of a Commission.

The Dum-dum Bullet still excites the curiosity of the House. When an opportunity arises on the Estimates a debate on this interesting missile is promised, and then the public will learn all about the experiments made in this country and abroad as to the actual effects of the Dum-dum. The Mark IV, which is the service bullet now in use, is said by some to be a change for the worse as regards effectiveness. The condemnation of the Dum-dum bullet by the Hague Conference has raised the question to a position of much interest, and the Under Secretary for War has devised a delightful euphemism in describing the Mark IV bullet as constructed so "that its calibre should be greater later on than when it leaves the muzzle of the rifle."

The Sale of Food and Drugs Bill has been the subject of rumours of late, pointing to its possible withdrawal. The question of colouring margarine and of the addition of preservatives to milk and butter are exercising the agricultural mind a good deal, and by a reflex action very natural are giving the President of the Department of Agriculture occasion for a good deal of thought. The Local Government Board has, however, come to his rescue by appointing a Departmental Committee to inquire into the use of preservatives and colouring matters in the preparation of food, and to report on their effects on health, and the extent of their use. The Committee is to consist of Sir H. E. Maxwell, M.P. (Chairman), Professor Thorpe, Dr. Bulstrode, and Dr. Tunnicliffe. In the meantime it is proposed to go on with the Bill as amended in Grand Committee on Monday next. There will be a good deal of discussion on the report stage, but the opposition is not likely to be prolonged, and the Bill ought to pass if the Government acts with reasonable firmness.

The Isolation Hospitals (Amendment) Bill, which the Local Government Board helped so materially in the Lords, has found unforeseen opposition in the Commons. The non-county boroughs, many of which possess isolation hospitals of their own, are up in arms against the powers proposed to be given to the county councils under the Bill. Having hospitals of their own, they object to being made contributors to a county rate for the purpose of providing hospitals under the control of the County Council. On this ground the Bill has been blocked, and although those in charge of the Bill are anxious to insert words to meet the views of those representing non-county boroughs, the future of the Bill is so far precarious.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETINGS.

MEETINGS of the Council will be held in the Town Hall Council Chamber, Portsmouth, on Tuesday, August 1st, Wednesday, August 2nd, and Thursday, August 3rd, next, at 9.30 o'clock in the forenoon of each day.

July, 1899. FRANCIS FOWKE, *General Secretary.*

NOTICE OF THE NEXT QUARTERLY MEETING OF COUNCIL.

A MEETING of the Council will be held on October 11th, 1899. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, September 21st, 1899.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

DORSET AND WEST HANTS BRANCH.—The next meeting of this Branch will be held at Christchurch on Wednesday, July 19th. The business meeting will be held at the King's Arms Hotel at 3.15 P.M. Mr. Hartford and Mr. Watmough will be pleased to see any member or friend at their residences to luncheon before the meeting. Agenda:—Election of New Members. Place of the Autumn Meeting. Communication from the East York and North Lincoln Branch in reference to the illegal certification of unqualified practitioners (midwives and opticians). Communication from the Honorary Secretary to the Devon and Cornwall Branch of the National Association for the Prevention of Consumption and other forms of Tuberculosis, inviting the combination of the county of Dorset. Mr. Curme will move: "That in future the minutes of the last meeting be taken as read, in order to provide more time for the discussion and the reading of papers." Discussion: The Diagnosis and Treatment of Functional Disorders of the Heart. Communications: Mr. Parkinson: On Stillbirth. Dr. Arthur Ransome: On Rest and Exercise in the Open-air Treatment of Phthisis. Mr. Hartford: Case of Thoracic Aneurysm, with Specimen. No paper, except on the subject for discussion, must exceed ten minutes in length, and no subsequent speaker must exceed five minutes Dinner at the Hotel at 5.45 P.M.; charge, 6s. each, without wine. Members intending to be present are requested to inform Mr. Watmough on or before July 17th. —WILLIAM VAWDREY LUSH, M.D., Weymouth, C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

SOUTH OF IRELAND BRANCH.—The annual meeti g of the Branch will be held on Saturday, July 15th, in the Medical Rooms, 118, Patrick Street, Cork, at 4.30 P.M. Business: Election of President, President-elect, and the Council for 1899-1900; election of Representative, Parliamentary Bills Committee; election of Representative on Council of the British Medical Association; and any other necessary business. President's Address.—PHILIP G. LEE, Cork, Honorary Secretary.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The annual meeting of this Branch will be held in the Station Hotel, Larbert, on Friday, July 21st, at 4 P.M. Business: Election of office-bearers for ensuing year, etc. Any notices of motion or other communications should be addressed to Dr. MACKINTOSH, Abercromby Place, Stirling, who will lay them before the meeting.—JOHN MACPHERSON, M.D., President.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

A MEETING was held on June 27th at the West Kent Hospital, Maidstone, Mr. JOHN KNOWLES in the chair, at which thirteen members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Re-election of Secretary.—Mr. LUDFORD COOPER was re-elected Secretary of the District for the ensuing year.

Paper.—Dr. CHARLES HOAR read an interesting paper on Some Uses of Oxygen in Medicine, which was followed by a discussion.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SEVENTH ANNUAL MEETING.

THE sixty-seventh annual meeting of the British Medical Association will be held at Portsmouth on Tuesday, Wednesday, Thursday, and Friday, August 1st, 2nd, 3rd, and 4th, 1899.

President: Sir THOMAS GRAINGER STEWART, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh, Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President-Elect: JOHN WARD COUSINS, M.D., F.R.C.S., Senior Surgeon, Royal Portsmouth Hospital.

President of the Council: ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: CHARLES PARSONS, M.D., Dover.

An Address in Medicine will be delivered by Sir RICHARD DOUGLAS POWELL, Bart., M.D., F.R.C.P., Physician Extraordinary to Her Majesty the Queen, Physician to Middlesex Hospital.

An Address in Surgery will be delivered by Professor ALEXANDER OGSTON, M.D., Surgeon in Ordinary to Her Majesty the Queen in Scotland, Regius Professor of Surgery in the University of Aberdeen.

The scientific business of the meeting will be conducted in twelve Sections, as follows, namely:

A. MEDICINE.

Grand Jury Room, Town Hall.

President: JOHN MITCHELL BRUCE, M.D. *Vice-Presidents:* EDWARD JAMES WALLACE, M.D.; ROBERT WILLIAM BURNET, M.D. *Honorary Secretaries:* WILLIAM SYKES, M.D., Bury Place, Gosport; HUMPHRY DAVY ROLLESTON, M.D., 112, Harley Street, W.

Discussions have been arranged as follows:

1. Wednesday, August 2nd.—On the Medical Tests required at present for Admission to the Public Services. It is hoped that this will be opened by Sir J. N. Dick, K.C.B. Professor W. Osler, M.D., F.R.S., Sir Dyce Duckworth, Dr. P. Manson, Dr. J. Mitchell Bruce, Dr. R. W. Burnet, Dr. T. D. Savill, Major W. Turner, R.A.M.C. (Gibraltar), Dr. Wm. Sykes, Dr. Hill, and Dr. E. J. Wallace, have promised to take part in this discussion.

2. Thursday, August 3rd.—On the Preventive and Remedial Treatment of Tuberculosis. The discussion will be opened by Professor T. Clifford Allbutt, M.D., F.R.S. It is hoped that Sir William Broadbent, Bart., M.D., F.R.S., Sir R. Douglas Powell, Bart., M.D., Sir T. Grainger Stewart, M.D., Sir W. T. Gairdner, M.D., K.C.B., Dr. Arthur Ransome, F.R.S., Dr. F. W. Burton-Fanning, Dr. Heron, Dr. R. Robertson, Mr. A. G. S. Mahomed, Dr. Alex. G. Davey, Dr. J. E. Squire, Dr. Browning, Dr. H. Walsham, Dr. G. A. Reid, Dr. W. Morton Harman, Dr. S. T. Pruen, Dr. Frank M. Pope, Dr. R. W. Philip, Sir H. R. Beevor, Bart., M.D., Dr. S. Rendall, Dr. W. Vicary Snow, Dr. Wm. Calwell, Dr. R. Shingleton Smith, Dr. Williamson, Dr. A. P. Parsons, Dr. M. G. Foster, Dr. James Tyson (Philadelphia), Dr. P. B. Smith, Dr. W. T. Gardner, Dr. StClair Thomson, Dr. S. Hyde, Dr. C. Theodore Williams, Dr. A. P. Hillier, and Mr. Colin Campbell will take part in the discussion.

The following papers have been offered:

ARMSTRONG, William, M.R.C.S. Stimulation of Excretion in Gout.

BAIN, W., M.D. (1) The action of certain British and Foreign Mineral Waters on the Quadriurate of Sodium. (2) An Experimental Contribution to the Study of Gout.

BRISCOE, J. F., M.R.C.S. The Practice of Bloodletting.

CALWELL, W., M.D. Gastric Adhesions as a Cause of Dyspepsia

CAMPBELL, Harry, M.D. The Enlargement of the Chest in Emphysema and its Treatment.

EWART, William, M.D. (1) On the Prebalnear Treatment of Heart Disease by Inhalations of Carbonic Acid Gas; and on the Uses of the Inhalation in Cardiac Dyspnœa and in Anginoid Pain. (2) On the Recognition of

Enlargements of the Left Auricle by Percussion; and on other Clinical Uses of Dorsal Percussion, including Percussion of the Pelvis.

GARDNER, W. T., M.B. Notes on the Open-Air Treatment of Phthisis with Photographs of a new form of Kiosk.

GREEN, J. Lardner, M.R.C.S. The Inhalation of Formalin as a Preparation for, and Aid to, the Open-Air Treatment of Consumption.

HAIG, Alexander, M.D. Uric Acid and the Circulation; some New Methods of Estimating its Effects.

HERON, G. A., M.D. On the Results of Treatment by the New Tuberculin.

HILLIER, A. P., M.D. Prevention of Tuberculosis in Everyday Life.

HUTCHINSON, Professor Woods. On the Form of the Chest in Tuberculosis and its Significance.

JOHNS, W. Denton, B.A., M.D. On the Open-air Treatment of Tuberculosis in England (with demonstration of cured cases).

LUFF, A. P., M.D. The Gelatinous Form of Sodium Biurate and its bearing on the Pathology of Gout.

MACLEOD, Herbert G., M.D., M.S. The Causes and Treatment of Sciatica and Neuralgia.

MULLICK, Sarat K., M.D. Some Special Points connected with the Nature and Cure of Influenza.

OSLER, Professor W., M.D., F.R.S. On Hypertrophic Cirrhosis with Bronzing of the Skin—Hæmochromatosis.

PARSONS, A. P., M.B. The Accurate Diagnosis and Successful Treatment of Perforated Gastric Ulcer.

PHILLIPS, W. Fleming, M.B. Observations on Clinical Thermometry.

POYNTON, F. J., M.D. The Occurrence of Arthritis in connection with Inflammation of the Appendix Vermiformis.

PRUEN, S. T., M.D. Diet and Nutrition in the Treatment of Tuberculosis.

SAMWAYS, D. W., M.D. The Defence of the Cardiac Orifices other than Valvular.

SUCKLING, C. W., M.D. On Migraine.

SYKES, William, M.D. A Suggestion for the Treatment of Phthisis Pulmonalis on the Lines of one of its Normal Terminations.

WALSHAM, H., M.D. The Relation of Pulmonary Tuberculosis to Pure Mitral Stenosis.

WEST, S., M.D. Forms of Albuminuric Retinitis and their Significance.

B. SURGERY.

Banqueting Room, Town Hall.

President: HENRY TRENTHAM BUTLIN, F.R.C.S. *Vice-Presidents:* Deputy-Inspector-General RICHARD SAMUEL PURNELL GRIFFITHS, R.N.; ALFRED LLOYD OWEN, M.D. *Honorary Secretaries:* HENRY RUNDLE, F.R.C.S., 13, Clarence Parade, Southsea; D'ARCY POWER, F.R.C.S., 10A, Chandos Street, Cavendish Square, W.

Special discussions will be held upon:

1. The Diagnosis and Treatment of Gunshot Wounds of the Abdomen. To be opened by Colonel Stevenson, M.Ch., R.A.M.C., Professor of Military Surgery at Netley, followed by Mr. A. Barry Blacker, Dr. A. H. Robinson, Major W. C. Beevor, R.A.M.C., Damer Harrisson, F.R.C.S.Ed., R. Clement Lucas, B.S., F.R.C.S., and others.

2. The Prevention and Treatment of Syphilis in the Navy and Army. To be opened by Deputy-Inspector-General E. E. Mahon, R.N., C.B., and Major W. Dick, M.B., C.M., R.A.M.C., Netley, Assistant Professor of Clinical Surgery, Netley. The following gentlemen have intimated their intention of taking part in the discussion: Fleet-Surgeon A. T. Corrie, R.N., Dr. C. R. Drysdale, Major F. J. Lambkin, R.A.M.C., Mr. J. E. Lane, Dr. J. MacNamara, Major William Niven, M.D., Dr. G. Ogilvie, Dr. Shaw-Mackenzie, Mr. A. H. Ward, Colonel F. H. Welch, R.A.M.C., and Staff-Surgeon A. E. Weightman, R.N.

The following papers have been offered:

ARMSTRONG, G. E., M.D. The Surgical Treatment of Hæmorrhage rom Gastric Ulcer.

BARLING, Gilbert, F.R.C.S. Analysis of 120 Operations for Appendicitis with Observations thereon.

BERRY, James, M.B., B.S. Seventy Consecutive Cases of Goitre Treated by Operation (Extirpation or Enucleation).

BIDWELL, L. A., F.R.C.S. A Method of attaching the Mucous Membrane to the Skin of the Perineal Excision of the Rectum.

CARWARDINE, Thomas, M.S. On Excision of the Rectum for Cancer by a New Method and its Results.

CLARKE, J. Jackson, F.R.C.S. An Analysis of 100 Cases of Spinal Curvature and Disease.

DE SANTI, P., F.R.C.S. A Case of Gunshot Wound of the Leg Severing the Anterior Tibial Nerve; Secondary Suturing Two Months Later; Restoration of Function of Nerve.

DOWNIE, Walker, M.B. Description of two cases of Sarcoma of the Tongue. (Specimens, Sections, and Photographs will be shown.)

FREYER, P. J., M.Ch. Recent Notes on the Surgery of Stone in the Bladder.

HARRISSON, Damer, F.R.C.S. Some Cases of Cerebral Surgery (With lantern illustrations).

HUTCHINSON, J., jun., F.R.C.S. The Vermiform Appendix in Relation to Hernia and Intestinal Obstruction. Illustrated by lantern slides and diagrams.

JONES, Robert, F.R.C.S. The Operative Treatment of Spasmodic Flat Foot.

LLOYD, Jordan, F.R.C.S. (1) On the Drainage of Appendicular Suppuration through the Rectum or Vagina. (2) A Case of Ureteral Stricture treated by Ureteroplasty.

LUCAS, R. Clement, B.S., F.R.C.S. (1) Removal of a Bullet and of a Detached Fragment from the Interior of the Skull after localisation by the *x* rays. (2) Removal of a Bullet from the Front of the 2nd Cervical Vertebra after localisation by the *x* Rays.

MACLEOD, Herbert W. G., M.D., M.S. The Treatment of Stone in the Bladder, with Notes of some Cases operated upon.

MORTON, Charles A., F.R.C.S. (1) A Successful Case of Resection of Three-quarters of the Stomach for Carcinoma. (2) A case of Excision of the Cæcum for Carcinoma.

MOYNIHAN, B. G. A., F.R.C.S. A Series of Cases of Malignant Disease of the Stomach treated Surgically.

NICOLL, James H., M.B. (1) Enterorrhaphy without Mechanical Aids (with illustrative cases); (2) The Treatment of Urethral Stricture.

OGILVIE, G., B.Sc., M.B., M.R.C.P. Heredo-parasyphilis.

REID, G. Archdall, M.B. The Treatment of Surface Wounds.

ROBSON, A. W. Mayo, F.R.C.S. Two Cases of Removal of Tumours of the Suprarenal Capsule.

RUNDLE, H., F.R.C.S. Notes on 375 Cases of Varicocele treated by Operation.

RYALL, Charles, F.R.C.S. Notes of a Case of Extensive Trans-Sacral Excision of the Rectum followed by Perfect Sphinteric Control.

SHEEN, W., M.D., F.R.C.S. (1) A Case of Secondary Thyroid Growth. (2) A Case of Malignant Disease in the Sac of an Umbilical Hernia.

SNOW, Herbert, M.D. The Result of Cancer Operations and of Continuous After-Treatment.

SPENCER, W. G., F.R.C.S. Two Fatal Cases of Venereal Phagedæna.

THOMAS, J. L., F.R.C.S. (1) Two Recent Operations upon the Gasserian Ganglion for Neuralgia by the Hartley-Krause Route. (2) A Reliable Washing Tap for Operating Rooms, with a Demonstration of a Simple Method for Irrigating the Abdomen.

WARD, A. H., F.R.C.S. On the Rational Treatment of Syphilis.

WELCH, Colonel F. H., R.A.M.C. The Prevention and Treatment of Syphilis in the Navy and Army.

WILLIAMS, Chisholm, F.R.C.S.Edin. A Case of Intercostal Neuralgia and Operation.

WILLIAMS, W. Roger, F.R.C.S. The Surgical Treatment of Uterine Cancer.

Mr. Jas. Mackenzie Davidson and Dr. Hugh Walsham will take part in a demonstration of *X*-Ray Photography in its Relation to Medicine and Surgery.

Professor Ernest Laplace, M.D., Philadelphia, will exhibit a new Forceps for Intestinal Anastomosis.

C. OBSTETRICS AND GYNÆCOLOGY.

Marie-la-bone Hall, Swan Street, Commercial Road.

President: GEORGE GRANVILLE BANTOCK, M.D. *Vice-Presidents:* JOHN ROBERT KEALY, M.D.; JOHN WM. TAYLOR, F.R.C.S. *Honorary Secretaries:* CHARLES PLUMLEY CHILDE, F.R.C.S., Cranleigh, Kent Road, Southsea; ERNEST WILMER PHILLIPS, M.R.C.S., Victoria Crescent, Victoria Road North, Southsea; WALTER WM. HUNT TATE, M.D., 57, Queen Anne Street, W.

The subjects selected for discussion are as follows:

1. Wednesday, August 2nd.—The Treatment of Fever following Delivery, with Special Reference to Serumtherapy. To be opened by Dr. Herbert Spencer.

2. Thursday, August 3rd.—The Natural Menopause compared with *(a)* the Menopause produced by Removal of the Uterine Appendages; and *(b)* the Menopause produced by Removal of the Uterus without Removal of the Appendages. To be opened by Mr. J. Bland Sutton, F.R.C.S.

The following gentlemen have signified their intention of joining in the discussions: Professor Murdoch Cameron, M.D., Dr. John Campbell, Dr. Cushing, Dr. Handfield-Jones, Dr. Shaw-Mackenzie, Mr. Christopher Martin, Dr. Newnham, and Dr. Robert Boxall, Dr. Inglis Parsons, Dr. Purslow, Professor J. W. Byers, M.D., Dr. George Elder, Mr. Robert O'Callaghan, and Dr. More Madden.

The following papers have been offered:

BRIERLEY, James Brassey, M.D. Modern Teaching of Obstetrics in the English Medical and other Schools, and Modern Practice.

BYERS, Professor J. W., M.D. The Relationship of Certain Cases of Amenorrhœa to Raynaud's Disease and Subsequent Tuberculosis.

CAMERON, Professor Murdoch, M.D. A case of Rupture of Uterus, Missed Labour, and Delivery three months later.

CAMPBELL, John, M.D. Treatment of Acute Peritonitis.

LAWRIE, Macpherson, M.D. Notes of Fifty Consecutive Cases of Cœliotomy for Diseases of the Uterus and Appendages, with Forty-eight Recoveries Performed within the last Twenty Months, with Observations.

LEA, Arnold W. W., M.D. Two Cases of Puerperal Septicæmia due to Streptococcic Infection.

MADDEN, More, M.D. On Some of the Methods employed in the Modern Treatment of Uterine Cancer.

NEWNHAM, W. H. C., M.B. A case of very unusual Suppuration in the Pelvis after Parturition.

PARSONS, J. Inglis, M.D. A New Treatment for Prolapse of the Uterus; further report of cases.

REID, G. Archdall, M.B. The Causes which render difficult the Labours of Civilised Women.

SHAW-MACKENZIE, J. A., M.D. The Syphilitic Factor in the Diseases of Women.

TURNER, P. D., M.D. Tuberculous Lesions found in the Generative Organs in 27 Consecutive *Post-mortem* Examinations on Phthisical Patients.
WARDEN, C., M.D. The Treatment of Puerperal Infection in the Maternity Hospitals of Paris.

It has been arranged to exhibit pathological specimens illustrative of the papers for discussion.

D. STATE MEDICINE.

Shareholders' Room, Gas Company's Offices, 87, Commercial Road.

President: GEORGE WILSON, M.D. *Vice-Presidents:* Surgeon-General CHARLES MACDONAGH CUFFE, C.B.; JOSEPH GROVES, M.B. *Honorary Secretaries:* HENRY RICHARD KENWOOD, M.B., Granville House, Alexandra Villas, Finsbury Park, N.; A. MEARNS FRASER, M.B., Epworth, St. Edwards Road, Southsea.

It is proposed to hold discussions on the following:

1. Recent Vaccination Legislation and the Prevention of Small-pox. To be opened by Dr. E. Seaton.

2. The Personal Communication of Tuberculosis and the Measures available for its Prevention. The following gentlemen will take part in the discussion: Sir Henry Littlejohn, M.D., LL.D.; Professor Delépine, Dr. A. Newsholme, Mr. J. Niven, Dr. Sidney Davies.

3. The Efficiency of Existing Measures directed against the Spread of Infection in Elementary Schools. The following gentlemen will take part in the discussion: Dr. A. Newsholme, Mr. A. E. Harris, Dr. J. F. J. Sykes, Dr. Sidney Davies, Mr. Henry R. Kenwood, Dr. Henry May, and Dr. R. Sydney Marsden.

The following papers have been offered:

CAMPBELL, Colin, M.R.C.S., L.R.C.P. The Technique of Vaccination.
CANTLIE, James, F.R.C.S. The Early Decay of Teeth in Great Britain.
DOVE, R. Atkinson, M.B. An Investigation into the Bacteriology of the Air as found in Schools.
KENWOOD, Henry, M.B., D.P.H., and GRIFFITH, A., M.D., D.P.H. The Distribution of Erysipelas in London and its Significance.
MANBY, E. Petronell, M.D., D.P.H. Meat Inspection and the Abolition of Private Slaughterhouses.
MARSDEN, A. Sydney, M.B., D.Sc., F.R.S.E. Overcrowding in Secondary Schools.
MARSH, T. A. P., Major, R.A.M.C. The Prevalence, Causes, and Prevention, of Enteric Fever in India and the Tropics.
PECK, Herbert, M.B., D.P.H. Sick-room Infection in Typhoid Fever.
SYMONS, W. H., M.D., D.P.H. The Disinfection of Books and other Articles Injured by Steam Disinfection.
WINDLE, J. W., M.B. The Mode of Spread of Diphtheria, with special reference to School Attendance, based on the experience of a local outbreak.

E. PSYCHOLOGY.

Swan Street Board School (Boys' School). Entrance in Swan Street, Commercial Road.

President: DAVID NICOLSON, C.B., M.D. *Vice-Presidents:* SAMUEL RUTHERFORD MACPHAIL, M.D.; PETER WILLIAM MACDONALD, M.D. *Honorary Secretaries:* JAMES NEIL, M.D., Warneford Asylum, Oxford; BONNER HARRIS MUMBY, M.D., Medical Superintendent, Boro' Asylum, Portsmouth.

The subjects selected for discussion are as follows:

1. Lunacy Legislation as it Affects the Temporary Care of Incipient Cases. To be opened by Dr. Savage and Dr. Mercier.

2. The Etiological Relation of Syphilis to General Paralysis. To be opened by Dr. A. W. Campbell, with a paper on the Etiological Relation of Syphilis to General Paralysis, followed by a joint paper from Dr. P. W. Macdonald and Dr. A. Davidson on Congenital General Paralysis (a preliminary contribution).

3. The Treatment of Epileptics and Imbeciles. To be opened by Dr. Shuttleworth and Dr. Fletcher Beach.

The following gentlemen have promised to take part in the discussions of this Section: Professor Clifford Allbutt, F.R.S., Dr. Fletcher Beach, Dr. Milne Bramwell, Dr. Chambers, Dr. Crotchley Clapham, Professor Ferrier, F.R.S., Dr. H. Campbell, Dr. W. Campbell, Dr. Hyslop, Dr. Davidson, J. F. Briscoe, M.R.C.S., Dr. H. Newington, Dr. Macphail, Dr. P. M. MacDonald, Dr. Mercier, Dr. G. W. Mould, Dr. T. Seymour Tuke, Dr. F. Lee, Dr. Spence, Dr. Shuttleworth, Dr. Savage, Dr. Telford Smith, Dr. Outterson Wood, Dr. Weatherly, Dr. Haig, Dr. Orange, C.B., and Dr. Oscar Woods.

The following papers have been offered:

ANDRIEZEN, W. L., M.D. The Bearings of Pathological Discoveries on the Treatment of Mental Diseases.
BRAMWELL, J. Milne, M.B. The Mental Conditions Involved in the Post Hypnotic Appreciation of Time.
BRISCOE, J. F., M.R.C.S. The Asphyxial Problem in Convulsive Seizures.
CAMPBELL, Harry, M.D. Morbid Self-Assurance.
HARVEY, Surgeon-General C. B., D.S.O. Notes on Asylums in India.
HYSLOP, T. B., M.D. Double Consciousness.
MACPHAIL, S. R., M.D. Note on Post-operative Insanity.
REID, G. Archdall, M.B. Alcoholism in its Relation to Heredity.
SUTHERLAND, J. F., M.D., F.R.S.E. On Legislation affecting the Property and Person of the Well-to-do Inebriate.
WEATHERLY, L. A., M.D. How Can We Instil Rational Ideas Regarding Insanity into the Public Mind?

Dr. McDowall of the Morpeth Asylum will exhibit plans of Villas for Chronic Harmless Patients and Convalescents.

F. ANATOMY AND PHYSIOLOGY.

School Board Office, Town Hall.

President: JOHN JAMES CHARLES, M.D. *Vice-Presidents:* AURELIUS VICTOR MAYBURY, M.D.; ANDREW FRANCIS DIXON, M.B. *Honorary Secretaries:* EDWIN JOHN NORRIS, M.R.C.S., May Villa, Cottage Grove, Southsea; WM. JOSEPH ESSERY, M.B., Netley Lodge, South Parade, Southsea; MARCUS SEYMOUR PEMBREY, M.D., Charing Cross Hospital, W.C.

The subjects selected for discussion are as follows:

1. The Interaction between the Ovaries and the Mammary Glands. To be opened by Mr. Stanley Boyd, F.R.C.S. The following gentlemen have promised to take part in the discussion: Dr. Amand Routh, Mr. W. G. Spencer, F.R.C.S., and others.

2. On the Exchange of Gases in the Lungs. To be opened by the President. The following gentlemen have promised to take part in the discussion: Dr. Washbourn, Mr. W. G. Spencer, and others.

The following papers have been offered:

ANDERSON, R. J., M.D. Some Points concerning Asymmetry.
BARRATT, J. O. Wakelin, M.D. The Anatomical Structure of the Ninth, Tenth, Eleventh, and Twelfth Cranial Nerves.
CANTLIE, James, F.R.C.S. The Lobes of the Liver.
CHARLES, J. J., M.D. (1) The Reaction of the Intestinal Contents. (2) The Function of the Rectum.
CHARLES, Havelock R., M.D. The Progress of Anatomical Teaching in Northern India.
CUNNINGHAM, D. J., M.D., F.R.S. Demonstration of some Points in the Sectional Anatomy of the Brain of the Orang and Chimpanzee.
DIXON, Francis, M.B., Sc.D.: (1) The Course of the Taste Fibres. (2) On the Grooves and Markings often found in the Human Calvaria, corresponding in position to certain Vessels or Sensory Nerves of the Scalp. (3) The Form of the Bladder and Prostate (demonstration). (4) The Mode of Ossification of the Upper End of the Femur in different Animal Groups (demonstration).
HARLEY, Vaughan, M.D. The Value of the Large Intestine in General Metabolism.
HUNTER, William, M.D. Metabolism in Acute Yellow Atrophy of the Liver.
THOMAS, J. Lynn, F.R.C.S. The Anæsthetic Areas in two Patients in whom the Second and Third Divisions of the Fifth Nerve were divided within the Cranium (demonstration).
PEMBREY, M. S., M.D. Cheyne-Stokes Respiration.
REID, G. Archdall, M.B. The Evidence for and against the Transmission of Acquired Characters.
ROSS, F. W. Forbes, M.D. On Blood Corpuscles.
RUSSELL, J. S. Risien, M.D. Experimental Observations bearing on Epilepsy.

Specimens of anatomical interest will be shown by the President and Professor A. F. Dixon.

A demonstration (microscopes and lantern slides) of the chorionic epithelium will be given by Dr. Eden.

G. PATHOLOGY.

Swan Street Board School (Infants' School), entrance in Salem Street, Commercial Road.

President: JOSEPH FRANK PAYNE, M.D. *Vice-Presidents:* FREDERICK JOHN DRIVER, M.D.; OTTO JACKSON KAUFFMANN, M.D. *Honorary Secretaries:* EDMUND FAURIEL TREVELYAN, M.D., 40, Park Square, Leeds; WILLIAM CARLING, M.B., 11, Rosebery Terrace, Highland Road, Southsea.

Discussions have been arranged as follows:

Wednesday, August 2nd.—Short introductory address by the President. Discussion on the Pathology of Infective Endocarditis, introduced by Dr. Washbourn. Dr. Sansom, Mr. A. G. R. Foulerton, Dr. F. J. Poynton, Dr. W. C. C. Pakes, Dr. Bertram Abrahams, Dr. Lazarus-Barlow, Professor Osler, Dr. W. Bulloch, and Dr. J. H. Bryant, will take part in the discussion.

Thursday, August 3rd.—Discussion on the Pathology of Renal Tumours, introduced by Mr. J. H. Targett and Dr. Kelynack. Dr. Morley Fletcher, Mr. Roger Williams, Dr. F. W. Eurich, and Dr. Wakelin Barratt will take part in the discussion.

Professor Hamilton (Aberdeen) and Professor Sims Woodhead (Cambridge) have also signified their intention of taking part in the discussions.

The following papers have been offered:

BARRS, A. G., M.D., and TREVELYAN, E. F., M.D. Remarks on a specimen of Hydatid Disease of the Vertebral Column and Extradural Space (specimen shown).
BRODIE, T. G., M.D. The Physiological Action of Diphtheria Toxin.
COLES, A. C., M.D. The Bacillus of Influenza.
FOULERTON, A. G. R., F.R.C.S. A Case of Streptothrix Infection.
HUTCHINSON, Professor Woods. The Distribution of Tuberculous Lesions in Man and Animals.
LAZARUS-BARLOW, W. S., M.D. A Demonstration of the following specimens: (*a*) Dissecting Aneurysm of the Heart; (*b*) Syphiloma of the Heart; (*c*) Anæmic Infarct of Spleen.
PEARSE, Frederick, M.D., F.R.C.S. Some Points in the Pathology of Plague.
POSADAS, Dr. Generalised Infectious Psorospermosis (with specimens).
POYNTON, F. J., M.D. Observations on the Pathology of the Myocardium.
REID, G. A. O'B., M.B. Influence of Heredity in Disease.
SELIGMANN, C. G., M.R.C.S., L.R.C.P. Notes upon Morbid Conditions met with among the Natives of British New Guinea (lantern demonstration).
SMITH, G. Bellingham, M.B., F.R.C.S., and WASHBOURN, J. W., M.D. Infective Sarcomata in Dogs.
THOMSON, Campbell, M.D. The Pathology of Acute Chorea.
WHITE, C. Powell, M.B., F.R.C.S. Notes on a Carcinomatous Cyst of the Liver with Secondary Deposits in Sternum, Clavicles and Lungs (specimens shown).
WILD, Robert, M.D. Some Sources of Infection in Cutaneous Tuberculosis.
WILLIAMS, W. Roger, F.R.C.S. On Tumours of Gigantic Size, etc.
WILLIAMSON, R. T., M.D. The Pathology of Syphilitic Affections of the Spinal Cord
WOHLMANN, A. S., M.D. On the Bacillus of Rheumatoid Arthritis.

H. OPHTHALMOLOGY.

Overseers' Board Room, St. Michael's Road.

President: SIMEON SNELL, F.R.C.S.Edin. *Vice-Presidents:* LYSANDER MAYBURY, M.D.; EDWARD TREACHER COLLINS, F.R.C.S. *Honorary Secretaries:* ARTHUR VERNON FORD, M.R.C.S., South View Lodge, Kent Road, Southsea; ARNOLD LAWSON, F.R.C.S., 12, Harley Street, W.

The subjects selected for discussion are as follows:

Wednesday, August 2nd.—The Pathological Significance of Sympathetic Irritation and its Connection, if any, with Sympathetic Ophthalmitis. To be opened by Mr. F. Richardson Cross, F.R.C.S.

Thursday, August 3rd.—The Visual Tests employed in the Navy, Army, and Mercantile Marine, and their Efficiency. To be opened by Deputy-Surgeon-General Henry Cayley, F.R.C.S., I.M.S.

The following gentlemen have signified their intention of taking part in the discussions: Mr. G. Anderson Critchett, Professor Malcolm McHardy, Dr. George Mackay, Mr. Devereux Marshall, Mr. A. Stanford Morton, Mr. H. E. Juler, Mr. T. H. Bickerton, Dr. John Hern, and Dr. C. E. Glascott.

The following papers have been offered:

BERRY, George, M.B. The Extraction of Unripe and Complicated Cataracts, with remarks on their After-treatment.
BICKERTON, Thomas H., M.R.C.S. Eyes or no Eyes: H.M.S. *Vanguard*. A Retrospect.
BRONNER, Adolph, M.D. On the Uses of Homatropine in Cases of Muscular Asthenopia.
BULL, G. T., M.D. (Paris.) Inefficiency of the Ocular Muscles.
COLLINS, E. Treacher, F.R.C.S. Enophthalmos (with lantern illustrations).
GRIFFIN, W. Watson, M.B. Cases illustrating the value of the Correction of Hyperphoria.
GRIFFITH, A. Hill, M.D. Congenital Lachrymal Obstruction.
GRIFFITH, John, F.R.C.S. A case of Primary Sarcoma of the Fornix Conjunctivæ.
HERN, John, M.D. The Eye Symptoms in Hay Fever.
HINSHELWOOD, James, M.D. The Use of Euphthalmin; a new Mydriatic.
LANDOLT, Professor Edm. The Determination of Visual Acuity: (*a*) The Principle of its Determination; (*b*) the Tests for Visual Acuity; (*c*) Practical Demonstration.
LAWSON, Arnold, F.R.C.S. The Correction of Refractive Errors in the Treatment of Trachoma.
LODGE, Samuel, jun., M.D. A Series of Cases of Removal of Lens for High Myopia.
SCOTT, Kenneth, F.R.C.S.Ed. Destructive Ulceration of the Eyelid: Cure.
SNELL, Simeon, F.R.C.S.Ed. (President). The Prevention of Eye Accidents in various Trades and Occupations.

Invitations to attend the meetings of the Section have been accepted by Dr. Hermann Knapp (New York), Dr. Samuel Risley (Philadelphia), Dr. de Schweinitz (Philadelphia), Dr. Theobald (Baltimore), Dr. Ayres (Cincinnati).

I. DISEASES OF CHILDREN.

Shareholders' Room, Water Company's Offices, 26, Commercial Road.

President: EDMUND OWEN, F.R.C.S. *Vice-Presidents:* JAMES GREEN, M.R.C.S.; DAWSON WILLIAMS, M.D. *Honorary Secretaries:* ALFRED HERBERT TUBBY, M.S.Lond., 25, Weymouth Street, Portland Place, W.; GEORGE AUGUSTUS TULLIS, M.D., 20, Clarence Parade, Southsea.

The subjects selected for discussion are as follows:

1. Wednesday, August 2nd.—On the Treatment of Ununited Fracture in Children. To be opened by the President of the Section. With remarks on Ununited Fracture of the Tibia and Fibula; why does its Operative Treatment so often end in Amputation?

2. The Treatment of Pleuritic Effusions in Childhood. To be opened (*a*) Medical, by Dr. Robert Maguire, and (*b*) Surgical, by Mr. H. Betham Robinson. The following gentlemen will join in the discussion: Mr. J. McGaw, Mr. C. H. Milburn, and Dr. E. H. Greves.

3. Thursday, August 3rd.—The Causation and Treatment of Convulsions in Infancy. To be opened (*a*) Etiology, by Drs. J. A. Coutts and A. M. Gossage; (*b*) Pathology and Treatment, by Dr. W. S. Colman; and (*c*) Public Health Aspect, by Dr. Hugh Jones. The following gentleman will join in the discussion: Dr. Edmund Cautley.

4. Friday, August 4th.—The Treatment of Inguinal Hernia in Infancy and Childhood. To be opened by Mr. John Langton, F.R.C.S., The following gentlemen will join in the discussion: Mr. J. Macready, F.R.C.S., Mr. Fred. Eve, F.R.C.S., Mr. D'Arcy Power, F.R.C.S., Mr. Robert Campbell, F.R.C.S., Mr. Henry A. Whitelock, F.R.C.S., Mr. Geo. Heaton, F.R.C.S., and Mr. Wm. Thomson, B.S., F.R.C.S.

The following papers have been offered:

CAUTLEY, Edmund, M.D. Abnormal Ossification of the Parietal Bone in an Infant.
EWENS, John, L.R.C.P. The Necessity of Requiring a Full Course of Lectures on Children's Diseases and Attendance at a Children's Hospital as Part of the Medical Curriculum.
HEATON, Geo., M.B., F.R.C.S. A Successful Case of Splenectomy for Rupture of the Spleen, with a Note on the Consequent Blood Changes.
LITTLE, E. Graham, M.D. Night Terrors in Children.
MORGAN, G., F.R.C.S.E. Remarks on Tuberculous Adenitis.
PARKINSON, J. Porter, M.D. The Varieties and Causes of Cough in Children, with especial reference to Practical Treatment.
PRIESTLEY, J., M.D. Infantile Hemiplegia.
STILL, G. F., M.D. Observations on the Morbid Anatomy of Tuberculosis in Childhood.
SUTHERLAND, George A., M.D. On Birth Palsy with Disseminated Tremors.
SYMPSON, E. Mansel, M.D. The Treatment of Rickets in an Out-Patient Department.

J. PHARMACOLOGY AND THERAPEUTICS.

Small Dining Room, Freemasons' Club, 79, Commercial Road.

President: JOHN BUCKLEY BRADBURY, M.D. *Vice-Presidents:* C. H. WATTS PARKINSON, M.R.C.S.; SAMUEL GOSS, M.R.C.S. *Honorary Secretaries:* JOHN EDWARD HARRY KELSO, M.B., 67, Elm Grove, Southsea; WILLIAM TUSTING COCKING, M.D., 277, Glossop Road, Sheffield.

The subjects selected for discussion are as follows:

1. Intestinal Antiseptics and their Value. To be opened by Dr. Burney Yeo, and Dr. Vaughan Harley will follow with a paper on the subject. The following will take part in the discussion: Dr. Frank M. Pope, Dr. P. Watson Williams, Mr. J. Burdon, Professor W. Osler, F.R.S., Dr. George Herschell, and Dr. J. B. Yeo.

2. Headaches and their Treatment. To be opened by Dr. T. Lauder Brunton, F.R.S. The following will take part in the discussion: Dr. C. W. Suckling, Dr. A. Haig, Dr. J. Dundas Grant, Dr. Donald MacAlister, Professor Clifford Allbutt, F.R.S., Dr. W. Dixon, Dr. Murray Campbell, Dr. W. H. H. Jessop, Dr. W. J. Tyson, Dr. George Herschell, and Dr. StClair Thomson.

3. The Constitutional Treatment of Skin Diseases. To be opened by Dr. Robert B. Wild. The following will take part in the discussion: Dr. George Thin, Dr. J. C. M. Given. Dr. T. Churton, Dr. T. C. Fox, Dr. E. D. Mapother, Dr. Eliza L. W. Dunbar, and Mr. J. Burdon.

The following papers have been offered:

BRUNTON Lauder, F.R.S. Headaches and their Treatment.
DIXON, Dr. Watson. The Pharmacology of Cannabis Indica.
EDWARDS, J. Hall, L.R.C.P. The Therapeutic Effects of X Rays on Lupus.
HARLEY, Vaughan, M.D. Intestinal Antiseptics and their Value.
MCWALTER, J. C., M.D. Some Suggestions for the next Pharmacopœia.
SCHEFF, Dr. E. (Vienna). *X*-Rays in the Treatment of Skin Diseases.
SIBLEY, W. K., M.D. The Therapeutics of Light and Heat.
WALSHAM, Hugh, M.D. Cases Treated by Erythrol Tetranitrate.

Dr. George Herschell will exhibit a new combined Galvanic and Faradic Battery for use in general practice; new Apparatus for administering the Intragastric Needle-bath; also an improved Apparatus for Washing-out the Stomach.

K.—LARYNGOLOGY AND OTOLOGY.

Board Room, Guardians' Offices, St. Michael's Road.

President: E. CRESSWELL BABER, M.B. *Vice-Presidents:* JOSIAH GEORGE BLACKMAN, M.D.; PATRICK WATSON WILLIAMS, M.D. *Honorary Secretaries:* HERBERT TILLEY, M.D., 101, Harley Street, W.; LYSTER COLE-BAKER, M.D., Bayfield, Kent Road, Southsea; THOMAS ARTHUR MUNRO FORDE, M.R.C.S., 21, Clarence Parade, Southsea.

The following subject has been selected for discussion:

The Diagnosis and Treatment of Chronic Empyema of the Frontal Sinus. To be opened by Mr. Charters Symonds (London) and Dr. E. J. Moure (Bordeaux).

The following gentlemen have promised to take part in the discussion: Ernest Waggett, M.B., Macleod Yearsley, F.R.C.S., H. Scheppegrell, M.D. (Orleans), Sargent Snow, M.D. (Syracuse, N.Y.), W. Milligan, M.D., W. J. Nourse, F.R.C.S.E., Dr. Spiess (Frankfort), Dr. Costinu (Bucharest), Dr. Posthumus Meyjes (Amsterdam), Charles Warden, M.D., StClair Thomson, M.D., Mayo Collier, F.R.C.S., Guiseppe Nuvoli, M.D. (Rome), J. H. Bryan, M.D. (Washington), Dr. Dundas Grant, Dr. William Hill, Dr. Herbert Tilley, F.R.C.S., Dr. Giuseppe Gradenigo (Turin), Dr. Laubi (Zurich), and Dr. Kipp (New York).

The following papers have been offered:

BAR, Louis, M.D. (Nice). Intralaryngeal Tumour and Nasal Exostosis (probably Tertiary Syphilitic).
BOBONE, Dr. T. (San Remo.) Title not announced.
BRONNER, A., M.D. The Use of Formalin in Atrophic Rhinitis.
DENCH, E. B., M.D. (New York). The Diagnosis and Treatment of Epidural Abscess.
DOWNIE, J. Walker, M.B., C.M. (Glasgow). On Syphilitic Ulceration of the Trachea.
GARNAULT, Dr. (Paris). Les Ventriloques et les Inspirés parlants dans l'Antiquité et en particulier chez les Sémites et chez les proto-Sémites.
GRANT, Dundas, M.A., M.D., F.R.C.S. On Some Forms of Laryngitis consequent on Purulent Affections of the Nose.
HORNE, Jobson, M.D. Pachydermia Laryngis.
LACROIX, P., M.D. (Paris). A new Apparatus for Inhalations: its application in the treatment of Tuberculous Laryngitis.
LAKE, R., F.R.C.S., and POLLARD, J., M.R.C.S. (1) Case of Exophthalmic Goitre cured by Removal of One Lobe of Thyroid. (2) Ossiculectomy for the Cure of Middle-ear suppuration.
LUC, Professor, M.D. (Paris). Observation on a Fatal Case of Frontal Sinus Empyema.
MALHERBE, A., M.D. (Paris). Treatment of Chronic Suppuration of the Attic by scooping out (*Evidement*) of the Petro-Mastoid.
MELZI, Urbano, M.D. (Milan). Roentgen Ray Photograph of Needle in Subglottic Region of Child 6 years old.
MEYJES, Posthumus, M.D. (Amsterdam). Case of Accessory Thyroid Gland at the Base of the Tongue.
MILLIGAN, W., M.D. (1) The Operative Treatment of Post-influenzal Suppurative Mastoiditis. (2) Two Cases of Malignant Degeneration of Originally Benign Nasal Polypi.
MOURE, E. J., M.D. (Bordeaux). A Case of Acute Empyema of the Maxillary Antrum.
NEWMAN, David, M.D. (1) Malignant Disease of the Pharynx and Œsophagus, with cases. (2) Adenoid Disease of the Vault of the Pharynx in its Relation to Tuberculosis in Children.
ROHRER, Dr. Fritz (Zurich). Anomalies of Development of the Auricle, with illustrative Photographs, Drawings, etc.
RÖPKE, Dr. (Solingen). Author's Method of Operation on Frontal Sinus.
ROSENBERG, A., M.D. (Berlin). Consequences of Singers' Nodules.
SANTI, P. de, F.R.C.S. Parathyroid Tumour causing Symptoms of Malignant Disease of Larynx and Œsophagus: Removal: Recovery.
TANSLEY, J., M.D. (New York). A new operation for the Correction of a Deviated Septum.
THORNE, Atwood, M.B. Laryngeal Vertigo, with an account of three new cases.
TILLEY, Herbert, M.D., F.R.C.S. History of a Fatal Case of Chronic Frontal Sinus Empyema (with specimen).
WAGGETT, E., M.B., B.C. Cerebellar Abscess secondary to Chronic Middle Ear Suppuration; Evacuation; Cure.
YEARSLEY, McLeod, F.R.C.S. Suprarenal Capsule in Rhinology.

L.—TROPICAL DISEASES.

Committee Room, No. I, Town Hall.

President: GEORGE THIN, M.D. *Vice-Presidents:* Colonel KENNETH MCLEOD, M.D.; JAMES WATSON, M.D. *Honorary Secretaries:* Fleet-Surgeon JOHN TYNDALL, R.N., Tresco, St. Ronan's Road, Southsea; JOHN ROBERT STEVENSON ROBERTSON, M.B., 5, Western Parade, Southsea.

The subjects arranged for discussion are as follows:

1. Psilosis or Sprue; its Relations (Etiological and Pathological) to other Forms of Tropical Diarrhœa, and its Treatment.

2. On Thermic Fever (so-called Siriasis), with Special Reference to its alleged Microbic Causation.

3. The Agency of Insects in Spreading Infections.

Amongst those who have consented to take part in these discussions are Dr. Thin, who will open the first subject, and Colonel Kenneth McLeod, I.M.S., the second, Dr. Nuttall (Cambridge) will open the discussion on the third. Major John Ritchie, R.A.M.C., will take part in the discussion.

The following also intend to take part in the above discussions or send papers: Dr. Patrick Manson, LL.D., F.R.C.P., Inspector-General A. Turnbull, M.D., R.N., Dr. W. J. R. Simpson, Mr. James Cantlie, F.R.C.S., Colonel Crombie, I.M.S., Fleet-Surgeon H. M. Ellis, Royal Marine Artillery, Dr. James Watson, Staff-Surgeon Andrews, M.B., R.N., Captain Hughes, R.A.M.C., and Surgeon Stalkartt, M.D., R.N.

The following papers have been offered:

ANDREWS, Staff-Surgeon, O. W., R.N. Antivenene.
CANTLIE, James, F.R.C.S. Suprahepatic Abscess.
CHILDE, C. P., F.R.C.S. A Case of Bilharzia Hæmatobia with Specimens.
DUNCAN, Lieutenant-Colonel Andrew, I.M.S. The Treatment of Malarial Fever in India by different drugs.
HUGHES, Captain, M. L., R.A.M.C. The Geographical Distribution of Undulant (Malta) Fever.
MANSON, Patrick, M.D. Filaria Periodicity.
STALKARTT, Dr. Blackwater Fever.
YARR, M. T., Major, R.A.M.C. A Further Contribution to the Study of Malarial Eye Affections.

RECEPTION ROOMS.

The Lower Albert Hall, Commercial Road, will be opened on Monday from 4 P.M. to 9 P.M., July 31st, and on Tuesday, August 1st, and the following days at from 9 o'clock to 6 P.M., for the issue of tickets to members and for supplying all necessary information. It is particularly requested that all members on their arrival will at once proceed to the reception room, Lower Albert Hall, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult list of lodgings, hotels, etc.

Members should book to Portsmouth Town Station for the Reception Room and most parts of Southsea; and only book to Southsea Station when they know their destination is at East Southsea.

SPECIAL RAILWAY ARRANGEMENTS.

The following railways have consented to convey members and their wives at a fare and a quarter for the return journey from July 29th to August 7th:

The Great Western Railway.
The London and South-Western Railway.
The London, Brighton, and South Coast Railway.
The North-Eastern Railway.
The Great Central Railway.

Arrangements, which are not yet completed, are being made with some of the other railway companies for a reduction of fares.

CLUBS.

The Freemasons' Club will make honorary members of all members attending the meeting of the Association for the week.

The Royal Naval Club, the Royal Portsmouth Corinthian Yacht Club, and the Minnesingers make honorary members for the week of fifty of the members of the Association only, and these will have a special card issued to them.

As the Association meeting is held during Cowes week, no honorary members will be admitted to the Royal Albert Yacht Club, as a large number of its own members are expected that week.

Swimming Club.—Weekly tickets at 1s. 6d. each are issued to visitors by the Portsmouth Swimming Club, for the purpose of bathing from their stage during specified hours.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 1ST, 1899.

9.30 A.M.—Meeting of 1898-99 Council. Town Hall, Council Chamber.

11.0 A.M.—Church Service; Sermon by the Right Reverend the Lord Bishop of Winchester, at St. Mary's Portsea.

11.0 A.M.—Special service, High Mass, and sermon by the Right Rev. Monsignor Cahill, at St. John's Roman Catholic Cathedral, Edinburgh Road, Portsmouth, for the Roman Catholic members of the British Medical Association.

2 P.M.—First General Meeting. Town Hall, Large Hall. Report of Council. Reports of Committees; and other business.

8.30 P.M.—Adjourned General Meeting from 2 P.M. Town Hall, Large Hall. President's Address.

WEDNESDAY, AUGUST 2ND, 1899.
9.30 A.M.—Meeting of 1899-1900 Council, Town Hall, Council Chamber.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Second General Meeting. Town Hall, Large Hall. Address in Medicine by Sir Richard Douglas Powell, Bart., M.D.
9 P.M.—Reception by President and Reception Committee on Clarence Esplanade Pier.

THURSDAY, AUGUST 3RD, 1899.
9.30 A.M.—Meeting of Council. Town Hall, Council Chamber.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Third General Meeting. Upper Albert Hall, above the Reception Room, Albert Hall. Address in Surgery by Professor Alexander Ogston, M.D.
7 P.M.—Public Dinner of the Association. Town Hall, Large Hall.
9 P.M.—Reception by Ladies Committee, who will receive the guests in the Town Hall, Mayor's Reception Room.

FRIDAY, AUGUST 4th, 1899.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting. Upper Albert Hall, above the Reception Room. Albert Hall.

SATURDAY, AUGUST 5TH, 1899.
Excursions.

Honorary Local Secretaries.

C. C. CLAREMONT, M.D., 57, Elm Grove, Southsea.
C. P. RUEL, M.R.C.S., L.R.C.P., Cromwell House, Kent Road, Southsea.

ANNUAL MUSEUM.

The Annual Museum in connection with the sixty-seventh meeting of the British Medical Association will be arranged in the following Sections:

SECTION A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

SECTION B.—Instruments comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

SECTION C.—Books, including diagrams, charts, etc.

SECTION D.—Sanitary Appliances and Ambulances.

A fine and well-lighted hall will this year be utilised for the purposes of the Museum. This room is 150 feet in length and 60 feet in width, and is in close proximity to the Reception Room. Section D will be held in the Swan Street Board School, a short distance from the Drill Hall.

H. RUNDLE, F.R.C.S., *Chairman*,
13, Clarence Parade, Portsmouth.
R. EMMETT, M.R.C.S., L.R.C.P.,
Winton House, North End, Portsmouth.
JAMES MCGREGOR, L.R.C.P. & S.Edin.,
9, St. Mary's Crescent, Portsmouth.

PATHOLOGICAL MUSEUM.

Specimens of interest for exhibition in the Museum should be forwarded, addressed to the Secretary of the Pathological Museum, British Medical Association, Boys' School, Seaman's and Marines' Orphan Home, Portsmouth, during the last week in July; and a brief description of each exhibit will be inserted in the Museum catalogue. Secretary of the Pathological Museum, A. Bosworth Wright, M.R.C.S., L.R.C.P., 83, Kingston Road, Portsmouth. All specimens must be mounted ready for exhibition.

CONTINENTAL ANGLO-AMERICAN MEDICAL ASSOCIATION.—Following the precedent set last year at Edinburgh, the members of this Society present at the annual meeting of the British Medical Association at Portsmouth will lunch together on Wednesday, August 2nd, at 12.45 at the Pier Hotel. The chair will be taken by Professor Osler, M.D., F.R.S., of Baltimore. Those who desire to be present are requested to send their names to the Honorary Secretary, Dr. Bull, 4, Rue de la Paix, Paris, or to Dr. D. W. Samways, Ramleh, Crouch End, London, N.

THE Mayor and Mayoress of Eccles (Dr. W. M. and Mrs. Hamilton) have been presented with a silver cradle to commemorate the birth of a daughter to them during Dr. Hamilton's term of office.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

The Expedition for the Study of Malaria.—New Hospital for Wallasey.—Expected Resignation of Principal Glazebrook.—The Suppression of Publichouses.

THE Liverpool expedition for the study of malaria in Sierra Leone will sail on July 29th, and will be accompanied by Mr. E. E. Austen, the distinguished dipterologist to the British Museum. The School of Tropical Diseases has recently been in communication with the various Government departments concerned with regard to the forthcoming research. On July 1st the Colonial Office wrote that Mr. Chamberlain had learned with great satisfaction that the expedition of the Liverpool School was being sent, and that he appreciated the energy and public spirit shown by the Committee of the School in the matter. Mr. Chamberlain also stated that the local authorities at Sierra Leone will be instructed to give every facility to the work of the expedition. It is, however, much to be regretted that the Government have not seen their way to give any pecuniary aid.

On July 6th the foundation stone of a new Central Hospital for Wallasey was laid by Mrs. McInnes, relict of the donor of the site. The plans of the hospital provide for 40 beds, with the possibility of extension for 80 or even 120 beds, the administrative block as now planned sufficing for the future possible extension of the wards. According to the present design, the hospital will consist of one pavilion, containing one male and one female ward, with an equal number of beds in each. There are also two small wards, each with a couple of beds. All the appliances, including the arrangements for heating and lighting, are of the most approved description. The entire cost, including furniture, will be about £15,000.

Much regret will be felt in Liverpool that Principal Glazebrook, who was appointed head of University College about twelve months ago, is likely to sever his connection with that institution. It is understood that he will probably be offered the position of Director of the new National Physical Laboratory which has been recently organised by the Royal Society.

At a meeting of supporters of the temperance movement held recently, Messrs. Rowntree and Arthur Sherwell suggested that the liquor trade should be taken out of the hands of private individuals and placed in the management of the State, and that part of the profits arising from the sale of liquor should be utilised to establish and maintain people's palaces and winter parks where no intoxicating beverages should be sold. The cost of maintaining these institutions in an efficient condition was estimated at £1,000 a year for every 10,000 of the population. The profits of the liquor traffic were set down at about £18,000,000 a year, and if the sale were reduced to one-fifth of its present amount, the profits would still be sufficient to erect and maintain institutions of the kind proposed. Publichouses would be limited strictly to the sale of alcoholic drinks, so that there would be no inducement to customers to loiter in them. It was suggested that all licence holders should receive a time notice, at the close of which all vested interests should cease.

BRISTOL.

The Drainage System.—Zymotic Mortality.—Port Sanitation.—Royal Infirmary Nurses' Home.—St. John Ambulance Association.

THE annual reports of the medical officer of health for the city and for the port sanitary districts for 1898 have been distributed, and, as usual, are very satisfactory. Since the publication of the 1897 report the boundaries of the city have been considerably enlarged, and alterations in the grouping of certain districts have been made, so that until the census is taken in 1901 it is impossible to form any conclusion as to the population; it is, however, calculated at 316,900 in an acreage of 11,682. The drainage of the newly enclosed districts, some of which is into cesspools, is engaging the attention of the Sanitary Committee, but the natural outlet of the sewage from all these parts is through the valley in which the city lies. A report on the drainage by Messrs. Taylor and Crimp

has been noticed in a previous number of the BRITISH MEDICAL JOURNAL, and the medical officer of health expresses his opinion that no advantage would arise from ventilation of the present sewers. On this subject, one that exercises the minds of certain citizens, the city engineer reports that he has obtained information of 81 large towns, 76 of which ventilate their sewers. The authorities of these towns were asked whether in their opinion the system had any appreciable effect upon the health of the town, and only 9 replied in the affirmative, 5 in the negative, while 64 replied that the effect was doubtful or none; 43 stated that they received complaints from the public, presumably of smells, and 33 answered doubtfully. It is a well-established fact that workmen can without danger enter the unventilated Bristol sewers.

The city has now 300 beds for the isolation of infectious diseases. During 1898 there were 9,061 births (225 of which were returned as illegitimate), giving a birth-rate of 28.5, while there have been 5,441 deaths, a rate of 17.17 per 1,000 living. Owing partly to measles and partly to the exceptionally hot autumn the infant mortality was higher than it had been for the last twenty-one years, being 1,491, or 164.55 to every 1,000 births. Though this is very high, it is exceeded by several of the large towns. The returns for vaccination are for 1897, and show only 4,869 successful vaccinations out of 9,389 births in that year; this is a low percentage, namely, 57.85 against 67.8 for England and Wales in 1895. Only two cases of small-pox occurred in 1898, one in February (a sailor) the other in July; both had been vaccinated in infancy but not since, and recovered. Of diphtheria, 207 cases were notified, including 10 of membranous croup. With 44 deaths corresponding to a death-rate of 14 per 100,000 living, a decrease on the rate of 1897, which was 15, and for 1890, which was 16. Compared with that of the thirty-three large towns, which was 31, this is very low. The number of cases of scarlet fever notified, 382, is the smallest recorded since 1894, and is remarkable when it is remembered that the population has been increased during the year by 84,000 persons, the deaths from this disease were 14, the lowest number for 23 years. Dr. Davies's remarks on the high mortality in former years, mentioning that in 1863 there were 925 and 746 in 1870. One hundred and thirteen cases of enteric fever were notified with 26 deaths, and the medical officer of health speaks very favourably of the assistance given by Widal's reaction. Measles caused 309 deaths and phthisis 393.

The Port sanitary district report is chiefly interesting from the note it gives that three "forward notifications" were received for plague. Fortunately no result was observed.

The results of the recent carnival in aid of the furnishing the nurses' home of the Royal Infirmary have more than realised the hopes of the promoters. Fortunately the weather proved most favourable, and with a large band of voluntary workers and donations of all sorts of goods for the stalls and refreshment booths the affair has proved such a success that about £1,400 is available when all expenses are paid. The Committee will find little difficulty in disposing of this sum.

The annual distribution of medallions and certificates to successful candidates of the Bristol Branch of the St. John Ambulance Association was made by Mrs. Pigou and the Dean of Bristol on June 28th. On the whole the year showed a satisfactory record.

BEDFORD COLLEGE, LONDON, FOR WOMEN.—The College Hygiene Certificate has been awarded to Miss Mildred O. Power and to Miss Lucy M. Fryer.

PRESENTATION TO A NURSE.—Last week, at the Edinburgh Royal Infirmary, Staff-Nurse Dickson, who has just completed her thirtieth year of service in the institution, was presented with two purses of sovereigns from past and present house-surgeons and students. A concert was held in honour of the occasion in the large theatre, and Dr. P. Hume Maclaren, who presided, and who also added a handsome carriage-clock to the presentation, referred in eulogistic terms to Nurse Dickson's constant devotion to the hospital, to her skill and sympathy with her patients, and to the interest and assistance which she had always been willing to give to the students working in her wards. A very enjoyable evening was spent.

CORRESPONDENCE.

THE BRITISH MEDICAL ASSOCIATION AND ETHICAL QUESTIONS.

SIR,—In respect of all sorts of medico-political and ethical matters one frequently sees in the columns of the BRITISH MEDICAL JOURNAL a desire expressed for the formation of special associations to deal with these several questions. The last is Mr. Garrett Horder's suggestion of an association of medical officers of friendly societies. He has given so much attention to, and is such an authority on this question that I am sorry to disagree with any proposal of his; but glad as I would be to see this union of medical men, I cannot but think it a pity to add to the number of existing associations. What we rather want is more members for the associations that already exist. The British Medical Association numbers some 18,000 members, and there are 35,000 registered medical men, all of whom might join it. Less than half the men in some districts are members. I believe a reason why so many do not join is the want of interest they feel in the doings of the Society. At ordinary Branch meetings questions of ethics and politics are looked at askance (under existing circumstances perhaps rightly so). If any of these questions are raised the speakers feel—and are made to feel—that they are taking up time that should be devoted to scientific papers; consequently the subject is improperly, if at all, discussed, and members are diffident in bringing forward matters that are of great importance to, at any rate, the general practitioner.

It is not right, I admit, when members have arranged for scientific papers and discussions to take up the time with subjects in which, probably and naturally, many feel little if any interest; but as our meetings are at present arranged, this sometimes is bound to be the case. I am told that a special meeting can always be called if there is any business matter of importance to discuss, or that the annual Branch meeting is the proper time for such a debate. The latter is practically useless, as the President's address and the various formalities of the occasion leave no time for a full debate; and the former alternative is in reality a polite way of shelving the matter.

I would suggest that one Branch meeting in each session should be set aside for the discussion of such political and ethical questions as may arise. There would never be any lack of subject matter. By thus taking a real and practical interest in matters of great importance to the working general practitioner, we might draw many more members to our Association, and doing so we should the more effectually use this well-organised body as a means of bringing together the medical men in any district to give mutual counsel and support, and when necessary neighbouring Branches could join in council or such action as occasion might require. For this purpose, it is essential that the ethics and business of medical practice be recognised as part of the routine work of our Branches, even as now the science of medicine is.—I am, etc.,

Freshford, July 11th. CHAS. E. S. FLEMMING.

THE PROPOSED CONCILIATION BOARD.

SIR,—I do not think that there is a serious fear that any influential section of the profession will avail itself of Mr. Horder's or anyone else's offer to elaborate or act upon this Conciliation Board proposal, but lest anyone may feel tempted to lend his support, let me ask him to once again consider first principles. Under whatever name or disguise the medical aid association system presents itself, the fundamental principle is the same—namely, the interposition of a middleman between the doctor and his patient, a middleman who snatches an intermediate profit properly belonging to the licensed doctor, a profit either direct or indirect, either capable of being shown as a credit balance in a trading account, or not so shown though not the less real, and obtained at the expense of the profession by securing, under the specious pretence of co-operation, medical services for a fraction of their market value. The managers of medical aid associations deny, I am told, that they own a medical practice carried on by a salaried

farmed medical man, but a century of such denials cannot in any way alter the fact. The practice belongs to the association, which receives the fees; enters into the contract with the patient to supply medical attendance; pays the doctor a fixed salary; bonds him not to practise within a radius while he is their servant or after he has ceased to be such, knowing full well that if he did their practice would cease to pay. The association is the middleman and the unqualified owner of a medical practice, and to accept any other assurance shows a childlike credulity not found in men of affairs.

Such is the underlying principle, and slight modifications in detail of conducting the business do not alter the obviously unprofessional and objectionable basis. If medical aid associations are to be recognised and to be allowed to own a medical practice, the same right cannot be denied to any other unqualified person or body of persons, registered as a company or unregistered, and Mr. Arthur Chamberlain is within his right and shows his astuteness in claiming to exploit us as salaried servants to earn half-guinea fees for him and his associates.

As a forecast of the discord and confusion likely to arise if we make ourselves agreeing parties to the formation of a Conciliation Board which will control the details of a system of which we deny the principle, let it be noted that one of the largest meetings of local medical men ever held in Birmingham has, as recorded in the BRITISH MEDICAL JOURNAL, unhesitatingly and unanimously affirmed the impropriety of the modern middleman notion, and unless the signs of the times are wilfully misread this is only the reflex of general professional opinion throughout the country. What hope can there be that the dicta of a Conciliation Board will meet with any measure of professional respect or support, or diminish the complexity of the position, unless the Board itself is called into being by a general recognition by the profession of its necessity or the justness of its intended functions?

I venture to think that there is no widespread appreciation of its need and no faith in its power to find a remedy for evils which are of principle rather than of detail, while there is a general conviction that its adoption is a deliberate acknowledgment that this middleman system is capable of being accepted by the profession, and the condition of servitude entailed is capable of being erected into an honourable usage — two positions which are certainly not held by the profession in such small towns where the working of medical aid associations is plainly visible. Remember Stourport! Medical practitioners are tired of being exploited and imposed upon in all sorts of undignified and unworthy ways, and they are tired of the ridiculous underpay and overwork heaped upon them by a class whose wage earnings have for years steadily increased, while the cost of commodities has steadily diminished. They will refuse to sanction these medical aid associations by giving them the *nihil obstat* which a supported Board of Conciliation would afford, and they are determined to assert the position that if unqualified men own a practice it shall not be with the unchallenged approval and co-operation of any medical men, however exalted in position they may be.—I am, etc.,

Birmingham, July 11th. LESLIE PHILLIPS.

SIR,—I observe the relations between medical men and contract practice still drags its weary way across your pages. I only wish to draw attention to the state of matters in Scotland, and I desire to confine myself to club patients. Here the usual fee for attending club patients and supplying proper medicine—and I may add supplying them with medical certificate of inability for work and of recovery—is 2s. 6d. per member per annum. This in my experience works out at about 9d. per visit all the year round and medicine at half-price. Taking a severe winter with influenza epidemic it has fallen as low as 3d. a visit, and I am not the only club surgeon with such an experience. Further, we are obliged to visit at all hours and I have had to turn out at 3 A.M. to visit one of them.

Look at it another way: the average duration of illness per member per annum is six or seven days, and the remuneration 2s. 6d. There are members of clubs who, if they do not get some medical attendance or medicine during the year, consider their 2s. 6d. a present to the doctor or a bad investment for them. Further, by the rules of the society a surgeon can be dismissed from attendance one day and another surgeon called in, and on the following day the club surgeon can be again requested to take up the case, and he is obliged to do so, no matter how indignant he is.

If a member has a complaint, real or imaginary, against the surgeon, he has only to lodge the same, and a meeting is called to which the surgeon is summoned to defend his conduct. The temptation is to take the easiest way and "keep sweet" with the members, perhaps at the expense of the funds of the society or one's own comfort. We have often to see these patients with consultants, and while he pockets his one or two guineas, we are ashamed to feel that we have to be content with a sixpence. Perhaps the consultant cares little; but if, as in Birmingham, the people seek to apply the same principle to him he is up in arms.

Now, it is all very well to tell me I am myself to blame, and should be ashamed to have anything to do with such organisations. Well, if I resign my appointment, I resign nearly one-half of my already small income, and there are others around me less well off than I am ready to take it up. Rather than be reduced to semi-poverty I prefer to pocket my pride, considering it a non-paying quantity.

I can offer no remedy, but I believe many working men are quite unaware of the real state of matters. Could not some one call a meeting of the profession to consider the question?—I am, etc.,

July 11th. GLASGOW.

SIR,—In one of your leading articles in the BRITISH MEDICAL JOURNAL of June 17th you refer to the advertising and canvassing of private clubs and your denunciation of these. While agreeing with every word, may I point out to you that if these clubs were abandoned at the present time, the majority of the members would simply join the tyrannical public provident and friendly societies, and leave the private practitioners with little or no practices? Let us, then, encourage our General Medical Council to lay down something definite.

The Council at its recent sitting had occasion to hear how one of these societies (so-called provident) was conducted both by the lay committee and medical officer. We cannot bring these lay committees before this tribunal, but if such medical officers misconduct themselves let us by all means use every endeavour to have them punished, and that severely. Such cases will in course of time have the desired effect of forcing the hands of our General Medical Council. Let us spare no man who by his unprofessional and tyrannical methods drags down to so low a pitch an honourable profession.—I am, etc.,

July 3rd. MEDICUS.

SIR,—A week or two ago I received, in common I suppose with many others, a notice from the General Medical Council informing me that that august body approved of the formation of a Board of Conciliation, to consist of representatives of the friendly societies and the medical profession; but that the Council, owing to statutory responsibilities, could take no official part in the formation of the Board.

It seems to me they might just as well have left the matter alone. Who is to take the initiative? It is surely to everybody's advantage that a better understanding should be arrived at between the profession and the societies; but what is everybody's business is nobody's work, and things seem likely to remain very much as they are.

Personally, I think, before there can be any conciliation there must be some very sweeping reforms. First of all, we must get rid of those rampant evils—medical aid and insurance companies and slate clubs. By all means let Tom, Dick, and Harry meet at the most convenient publichouse and form a society to help one another when sick, but let the profession stand firm, and refuse to treat the members at a penny a week a head.

With regard to the recognised friendly societies, I see no reason why their members should not be attended on the same lines (but improved) as the members of the National Deposit Friendly Society. Let the societies agree to pay medical men a reasonable fee per visit—say 2s. 6d. by day and 3s. 6d. by night as a minimum—and also fair fees for

surgical operations and manipulations. This would not cost the societies more than their present arrangements, probably less, and would be fair to both sides. At the present time it frequently happens that a member of a friendly society does not wish to be attended by the gentleman appointed by his society, and in this case he has either to pay his own doctor's bill, or go to a man he does not care for. He frequently gets out of the difficulty by joining some local penny-a-week club to which his own particular doctor is medical officer.

The arrangements I suggest would leave the patients free to have any doctor who would attend them for the fees agreed upon. It would also prevent a good deal of the underselling which goes on amongst those who seek the appointments to friendly societies.

The wage limit question will, I believe, never be satisfactorily solved. When a man sees a chance of getting his medical attendance on the cheap he does not, as a rule, adhere very much to the truth.

The system of paying for work done only would be the beginning of the end of the contract system, where the lowest tender is nearly always accepted.—I am, etc.,

Merton Park, S.W., July 11th. F. DEAS.

MEDICAL APPOINTMENTS IN WORKHOUSE INFIRMARIES.

SIR,—I shall keep along the line of least resistance; or, in other words, I shall not try so much to argue with Dr. Major Greenwood, or combat his statements and opinions, but attempt to trace the evolution which has taken place in regard to our Poor-law institutions, to restate some of the principles of progress, and thereby to connect the recent action of the Bradford Board of Guardians with these principles.

1. I must first go back to 1865, when Mr. Hart, then of St. Mary's Hospital; Dr. Anstie, of the Westminster Hospital; and Dr. Carr, of Blackheath, were appointed commissioners by the *Lancet*,[1] to inquire into the condition of workhouse infirmaries, and to compare the system of hospital administration with that of the public hospitals of the metropolis. That was an epoch-making report, the full effects of which have not yet evidently been reached. I quote a few paragraphs from the report: (*a*) "The sick poor in the metropolitan workhouse infirmaries have a right to the same advantages of pure air, good baths, efficient ward arrangements, skilled nursing, sufficient and unfettered medical attendance, which are supplied to the inmates of the voluntary hospitals." (*b*) "The public hospitals of London accommodate but a small portion of the sick. The State hospitals are in workhouse wards. They are closed against observation; they pay no heed to public opinion; they pay no toll to science..... They are separate from the world of medical observation." (*c*) "It is upon the wide field—far wider than that afforded even by our noble voluntary hospitals—which is presented by the great infirmaries of our workhouses, that many a problem of deep and vital importance to the health and happiness of society must be worked out."

2. I must next refer to the very important document issued by Sir Thomas Watson, Dr. George Burrows, Sir James Clark, Sir William Jenner, Dr. Sieveking, Sir W. Fergusson, and Sir James Paget in 1866.

This document summarises "the principles which should guide any efforts to improve the State treatment of the sick poor in workhouse infirmaries." You will note the word "pauper" is abolished; the new school applies the proper words "the sick poor." I quote one paragraph, as it has some bearing upon Dr. Greenwood's letter. The document runs:

> 2. In lieu of sick wards annexed to each workhouse, consolidated infirmaries should be provided.

Then certain rules are laid down which are still of some interest and may be of use, as I regret to say there are still some Poor-law infirmaries conducted on the old lines.

It would take too much of your space to fully describe the improvements which took place—the building of the metropolitan sick asylums, the work of improvement in the provinces (took over thirty years to complete), and Mr. Hart had again to make reports on the condition of our workhouse hospitals in the BRITISH MEDICAL JOURNAL to revive interest in the nursing and medical administration of our sick poor.

3. May I now direct attention to the bearing of my quotations on Dr. Greenwood's opinions? Dr. Greenwood says:

> A Poor-law infirmary is not a hospital; it is a necessary adjunct to a workhouse, and its object is to deal with paupers whose physical condition prevents them from being conveniently attended to in the workhouse.
>
> The great majority of patients suffer from chronic ailments of an ordinary character. Where special treatment or a difficult operation is required, a pauper can be and usually is transferred to a hospital for that purpose.

We have here the old and the new views, the old represented by Dr. Greenwood. All the efforts of Mr. Hart, of the new school, were directed to try to impress the Local Government Board and guardians that the sick poor should be treated in hospitals, on hospital principles, as carried out in the public hospitals of England. And those who have been waiting for the introduction of trained nurses into our Poor-law institutions have based their appeals on the ground that there were acute sick to attend, surgical operations to be watched and attended, as well as chronic and infirm cases.

The new school aims at making the Poor-law infirmary perfect in every way. Why should the sick poor man or woman in a Poor-law hospital be sent to a local charity for surgical aid? It implies want of competency on the part of the Poor-law medical officer, and I certainly am surprised to hear of the common existence of this method of disposing of serious or surgical cases.

In the provinces, at Birmingham, Manchester, Liverpool, Cardiff (probably I omit other places), we have profited by the teaching of 1866, and our Poor-law infirmaries are veritable State hospitals. The sick poor at Birmingham, Manchester, and Liverpool are not turned out to the local charities for surgical or medical aid in serious or difficult cases.

The paid consulting staff are Poor-law officers. Subject to the Local Government Board there is no difficulty in obtaining suitable consulting medical officers.

I trust that what the provinces are doing to-day London will do in the near future: that the London Poor-law hospitals will be thrown open to students; that the resident medical officers will have at their disposal for consultative purposes the best medical and surgical skill in the metropolis; that the consulting medical officers will be paid as well as they are in the provinces; that a larger toll will be paid to science, when they are more fully brought into the world of medical observation.

The Bradford Board of Guardians caught up the spirit of the report of Mr. E. Hart of 1866. Their action is a corollary on the propositions of the very eminent men who signed the document I have alluded to.

I trust that Dr. Greenwood is not speaking as the mouthpiece of the Council of the Poor-law Medical Officers' Association. It will not do to put back the hands of the clock to 1865. The work accomplished in hospitalising our Poor-law institutions cannot be stopped. The elevation of this Poor-law service must come from the efforts of those in the service—consultants and general practitioners—to carry out the principles laid down by the *Lancet* Commissioners and the BRITISH MEDICAL JOURNAL.—I am, etc.,

July 9th. VERAX.

THE GENERAL MEDICAL COUNCIL AND GENERAL PRACTITIONERS.

SIR,—I have read the lament of "General Practitioner" in the BRITISH MEDICAL JOURNAL of this date concerning the dearth of qualified assistants. I would suggest that "General Practitioner" do his work himself: the patients pay for *his* services, not those of his assistants, and if he have more than he can do himself let him hand over some of his work to his neighbours, and so let "Lazarus eat of the crumbs that fall from the rich man's table." There is too much of the system of "Lipton Limited" in our profession; one man farming out his work amongst four or five assistants, and trying to manage a practice which should be divided into several.

If "General Practitioner" were to raise his fees slightly, he could easily reduce his work to the limit of his own individual capacity, and possibly earn as good an income as before with less exertion, besides benefiting his neighbours. If there were less of this octopus system of conducting practices there would be fewer men driven to eke out an existence by

[1] *The London Sanitary Commission.* London: The *Lancet* Office.

attending "medical aid" cases filched from the lists of other practitioners' paying patients.—I am, etc.,

July 8th. H. R.

CLIMATE AND THE CURE OF CONSUMPTION.

SIR,—For many years past the Canary Isles and Madeira have been the resort of tuberculous patients, and, with few exceptions, the effect of climate has been only to keep the patients alive, it has not cured them.

Now, therefore, there is a reaction in the minds of medical men and the public generally against sunny climates, and almost all sufferers from phthisis are advised to "stay in their own country, and to be treated in suitable sanatoria."

The object of this short paper is to suggest that if suitable hospitals were to be built in such climates as we enjoy in the Canary Islands, then, but not till then, these resorts would be superior for the treatment of consumption, to such climates as those of England, Belgium, Germany, and even France, where the variations in temperature are so great and the number of cloudy days so many.

Up to the present time patients have been treated in hotels, where the hours kept and the amusements offered are directly contraindicated in the proper management of the disease. It is proposed shortly to erect a hospital in Teneriffe where the inmates would be treated in every detail on the Nordrach principle. They would sleep in rooms built for the purpose, and spend their days on verandahs, lying in the sunlight and fresh mountain air. They would regulate their day and night in accordance with the days and nights of this subtropical land, that is to say, they would breakfast at 7.30 or even earlier, and retire for the night at 6 or 7. The proposed building will have no reception rooms whatever, the patients taking all their meals on their verandahs. When convalescent they would be allowed walks and drives, and finally be passed on to an hotel close by, where there are such amusements as billiards, lawn tennis, etc.

After nearly four years' residence in the Canaries, I have come to the conclusion that the two most suitable spots for hospitals such as I have briefly indicated are Monte in Grand Canary, and Güimar in Teneriffe. The first venture will be made in Güimar. Dr. Wharry of London writing on Güimar says:

> The Marquesa's house (El Buen Retiro), where accommodation has now been provided for a small number of English visitors, is prettily situated at an elevation at 1,200 feet above the sea. It has a very lovely shady garden, in which mangoes, custard-apples, oranges, pomegranates and apples flourish as they do nowhere on the northern side. Güimar is undoubtedly the fruit garden of Teneriffe, and has a climate which, for the treatment of chest disease, is unique. I feel sure that in the great yearly rush of health-seekers to the Canary Islands, the valley of Güimar will in the near future become one of the most favoured resorts.

In conclusion, it may be well to give a few instances of the value of breezy mountain air, as opposed to the relaxing air at the sea-level, such cases being personally known to me. In passing, it may be permissible to say in answer to the statement sometimes made, that the resorts now in use at the sea-level, such as Las Palmas, are actually unhealthy, that during the four years in which I have been resident in the town of Las Palmas, I have not had occasion to sign a single death-certificate for anyone resident in the English hotel in the town. In the Spanish hotel I have had one death from tuberculosis, and in the English hospital in the Port one.

A., now in Monte, has a normal temperature when in the mountains, but 103° to 105° when in Las Palmas.

B. has normal temperature, no hæmorrhage, and increases in weight while at Monte. Whenever he returns to Las Palmas he has high temperature and some hæmorrhage (this occurs if he stay but two days at the sea level).

C. has high fever at the sea level, normal temperature in the hills.

These cases could be multiplied indefinitely. In fact, the only cases which seem to require the lower level are the hopeless ones, and of course in their case this is only a palliative.—I am, etc.,

S. HARRIS, M.D., M.R.C.S.

Las Palmas, Grand Canary, June 9th.

THE ETIOLOGY OF CANCER.

SIR,—I trust you will be able to grant me a little space in the BRITISH MEDICAL JOURNAL, as I wish to take the earliest opportunity of disclaiming any association with the paragraphs relating to me recently appearing in the daily papers. These paragraphs are in many respects misleading, and are calculated to delude unfortunate sufferers by holding out false hopes, and bring me into discredit amongst my professional brethren. As this premature publicity has occurred, perhaps you will allow me to state briefly the real facts of the case.

I have been long impressed by the following considerations, namely, that the epithelial cells of cancer were themselves the sole infective agents, that this cancer epithelium was practically normal epithelium only out of place, and that from the very commencement of the cancer it was growing in the lymph spaces. I thought from this that if normal epithelium by some accidental means should obtain entrance into the lymph spaces it would find no barrier to its continued growth, and would produce all the phenomena of cancer. At present I have only performed a single experiment to test this view. I obtained an emulsion of the epithelial cells from the healthy ovary of a healthy rabbit, and placed them in the animal's peritoneum. The animal died fourteen months later, and on examination masses of growth were found in the abdominal and thoracic cavities having the characteristic features of typical ovarian cancer.[1] Experiments will be carried out to confirm and extend these results, and until these have been completed no general conclusions can be drawn. Apologising for the length of this communication,—I am, etc.,

Harley Street, W., July 7th. H. LAMBERT LACK.

TRACHOMA AND RACE.

SIR,—I have to thank Dr. Freeland for the interesting letter in the BRITISH MEDICAL JOURNAL of July 1st commenting on my paper on "Trachoma and Race." The fact that trachoma is common amongst West Indian negroes is exceedingly curious and in marked contrast to the state of affairs in the United States, where trachoma is almost unknown amongst the coloured population. Within the last few days I have had the opportunity of conversing with Dr. E. Oliver Belt, surgeon to two large hospitals in Washington, the patients in which are mainly negroes (Freedmen's Hospital and Episcopal Eye, Ear, and Throat Hospital); his experience bears out that of other American observers, namely, that trachoma is very rare amongst the coloured population and practically unknown in pure-blooded negroes. Cases are so rare in fact that they are shown as curiosities in the ophthalmological societies.

I have written privately to Dr. Freeland asking for further details and postpone comment until I have received his reply.—I am, etc.,

Victoria Street, S.W., July 7th. M. T. YARR, F.R.C.S.I., Major R.A.M.C.

THE UNCONSCIOUSNESS OF ANÆSTHESIA.

SIR,—My attention having been directed to your article on The Unconsciousness of Anæsthesia, I beg to forward you particulars of a curious instance of apparently complete consciousness under the influence of chloroform. I was at the time acting chaplain to a local workhouse infirmary, and a friend (whose name I can give if you wish and who can corroborate what follows) was doctor. Knowing that I was interested in surgery he kindly allowed me to be present at an operation which he performed upon an old man for cancer. While waiting for the surgeon I talked to the old man, who appeared free from anxiety and pleased at the prospect of relief. He occasionally inquired, "When's that doctor chap a-coming?" but was easily persuaded to compose himself and try to sleep. The anæsthetic was taken without difficulty, and when the patient was apparently unconscious, and while the operator was turning back the severed skin from the affected gland, I asked the old man if he were comfortable. To my surprise he opened his eyes and said, "I be all right, parson. But when's that doctor feller a-coming?" I replied, "O, he'll be here presently, you lie still. How do you feel, father?' "Well, I be dry, parson," he answered; "I could just do half a pint." "You won't get any half-pints in here, you know," I said, whereupon the old sinner tried to raise his hoary head, and with a wink of wickedness as conscious and wakeful as I ever beheld, chuckled, "Many's the pint I've a-brought into this place, but I niver know'd what become of it," and relapsed into the sleep of the just. By this time the

[1] A more complete account of this experiment will appear in the forthcoming number of the *Journal of Pathology*.

operation was nearly completed, and the gland detached. After the lapse of another five minutes I spoke to him again. He replied, rather drowsily, that he felt all right, but was getting tired of waiting for the doctor. My friend having by this time finished, I said, "Waiting? Why, he's been and gone again. It's all over." He instantly made a vigorous effort to sit up, exclaiming, "Over! Is that horrible thing gone? The Lord be praised!" and it took some time to soothe him down again.

This experience may be nothing unusual, but I have thought it worth communicating, in view of your article, because it seems to me to demonstrate that activity of memory, anticipation, and even humour, can coexist with complete insensibility to one class of physical impressions. It makes one wonder whether anæsthesia may possibly be a kind of mechanical hypnotism. Is the element of suggestion quite absent?—I am, etc.,

Edgbaston, June 30th. WALTER M. WATKINS-PITCHFORD.

THE NURSE OF THE PERIOD.

SIR,—The letter of the "Hoxton G. P." in reference to my remarks on the London School Nurses' Society certainly has the merits of being humorous, but it appears to be self-interested. I submit that his letter, however, can hardly be taken seriously by persons who have the interests of either the public or profession at heart; for, if a philanthropic society advocates unqualified diagnosis and treatment of minor ailments by their nurses, what is there to prevent similar unqualified practice being farmed out by leading nursing companies, who would, perhaps, not so readily distinguish between minor and more serious ailments? The aims of the London School Nurses' Society, though no doubt intended for the benefit of the poor, are in my opinion somewhat irregular, and liable to bring about a state of things pernicious to the best interests of the public.—I am, etc.,

Hastings, July 8th. FREDERICK W. COLLINGWOOD.

CARDIO-PULMONARY RÂLES.

SIR,—I have read with interest Dr. Carslaw's account of an unusual case of cardio-pulmonary *râle*, and I can remember hearing one very similar to that he records. I cannot, however, agree with him that cardio-respiratory murmurs are rare, though they are often misinterpreted.

The numbers of cases mentioned in my paper in the BRITISH MEDICAL JOURNAL of December 10th, 1898, shows that one form at least of such murmurs is not infrequent.—I am, etc.,

Harley Street, W., July 10th. J. EDWARD SQUIRE.

THE EFFECTS OF LEGISLATION ON TREATMENT IN DISEASE.

SIR,—It may be regarded as an axiom that legislation, however skilfully worded, cannot in any way affect the principles of the medical profession, although it can and does affect those who work by means of those principles. How far, therefore, Acts of Parliament—by which I mean those that relate more or less to general practitioners—can influence treatment in disease may ere long present itself as a question deserving more serious attention than it has hitherto received.

The time nowadays taken up in carrying out new laws and customs affords little opportunity for paying to patients that special heed suggested by the "golden rule" which is the basis of professional conduct; thus making it possible only for the heroic and free to practise medicine with anything like true ethical fidelity. Appointments and engagements must be kept at all costs; patients must be seen, be the seeing of them of value or not; and a whole system of badly-jointed, rusty machinery of law and custom must be kept in motion often simply for the personal satisfaction of coroners, Poor-law guardians, and certain sections of the general public, and more often still to the detriment of those patients whose special circumstances necessitate the practitioner's more concentrated care and attention which in these days is almost unavoidably squandered.

A change has come over the order of medical practice since the days of our forefathers. They were wont to treat their patients, but now it would seem the patients treat us instead, which shows that the day of chivalry and loyalty is fast drawing to a close. Our ancestors, with the limited means at their disposal, bled, leeched, and blistered with an enthusiasm that should make us consider. Although we recognise the utility—aye, the necessity—of these methods of treatment, yet how seldom are they resorted to? As a matter of fact, leeches are hardly now procurable. Do we blister as often as we ought in certain lung and other affections? And as regards a seton—what's a seton? To think of an institution with over 200 patients which includes neither a leech nor a blister in its pharmacopœia is indeed a lamentable spectacle.

It is not unreasonable to attribute this retrogression to a great extent to the overcrowding of Acts which are reproduced and construed in such a fashion as to bring undue pressure and responsibility on general practitioners whose time is taken up in fulfilling the requirements of the healthy rather than attending to the peculiar needs of the sick. It is to be remembered that the work of a medical man is more than duty. If, therefore, his duty is made difficult, how shall he be able to do his work?

Nevertheless, Acts of Parliament are needed, especially in regard to State Medicine, yet legislators ought to carefully avoid further increasing the pressure symptoms from which general medical practitioners already suffer too much, in order that the practice of medicine may be conducted, as it cannot be otherwise, with freedom and grace; without which there can be no virtue.—I am, etc.,

Wolverhampton, June 23rd. T. DOBSON POOLE, M.D.

THE ELECTION TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

SIR,—Will you kindly allow me through the columns of the BRITISH MEDICAL JOURNAL to thank for their support those Fellows who voted for me at the recent election? It is regrettable that the provinces should have lost another seat, and that an important medical school like the one we have here should be still unrepresented.—I am, etc.,

Edgbaston, July 8th. JORDAN LLOYD.

MEMBER'S (R.C.S.) GOWN.

SIR,—A correspondent asks when Members can wear gowns. If he were a medical officer of health he would find frequent use for such an article. At municipal functions I wear an A.K.C. gown, but I would much prefer a gown more distinctive of my calling. A M.R.C.S. gown with a distinctive hood for the D.P.H. would be very suitable.

July 8th. M.R.C.S., D.P.H., L.S.A.

THE OBSTETRIC BINDER.

SIR,—There is much nonsense talked about this useful article, both inside and outside the profession. You will hear the bland and sympathetic doctor say, "Now, my dear woman, you must have the binder tight; I don't want to spoil your figure." Nothing could savour more of quackery than such a remark. It has been conclusively shown by Dr. Herman[1] that the use of the binder makes no difference to the after-size of the abdomen. There can be no doubt that the binder gives a sense of support to the abdominal viscera, now under much less pressure. It has been noticed that in the case of young cows calf-bearing does not leave the belly larger than formerly. This is no plea for giving up the binder, but for the giving up of loose and meaningless talk.—I am, etc.,

Bootle, July 3rd. ROBERT TURNER, M.D., F.R.C.S.Edin.

[1] *Obstet. Trans.*, vol. xxxiv.

Dr. John C. Hemmeter, one of the professors in the Medical Faculty of the University of Maryland, has set the Twenty-third Psalm to music. The composition is written for full male chorus, solo, quartet, and orchestra. Professor Hemmeter is also the composer of a cantata entitled *Hygiea*, which has been produced in Germany. In medical literature he is known as the author of two works on diseases of the digestive apparatus.

OBITUARY.

Sir ALEXANDER ARMSTRONG, K.C.B., R.N., F.R.S.,

Sometime Director-General of the Royal Navy Medical Department.

Sir Alexander Armstrong, who died on July 4th at his residence, The Elms, Sutton Bonnington, near Loughborough, in his 81st year, was the son of the late Mr. Alexander Armstrong, of Crohan, county Fermanagh, Ireland. He received his early education at Trinity College, Dublin, and subsequently at Edinburgh, where he graduated M.D. in 1841. He entered the Royal Navy as Surgeon in 1842, and saw service in various parts of the world, including the Mediterranean, South America, North America, West Indies, Pacific Stations, Africa, Asia Minor, in the exploring expedition to Xanthus, in Lycia, and elsewhere. In 1849 he was promoted Fleet-Surgeon, and in the January of the following year he sailed as Naturalist to H.M.S. *Investigator*, under the command of Captain (afterwards Sir Robert) McClure, which went to the Polar Seas in search of Sir John Franklin. The history of this expedition was somewhat unfortunate; although it succeeded in discovering the existence of a North-West passage, the *Investigator* was caught in the ice in 1851, and had to be abandoned. Altogether, Sir Alexander Armstrong spent five years continuously in the Arctic regions, and was frequently mentioned in despatches. Subsequently he served in the Baltic during the Russian war, was present at the bombardment of Sveaborg, and in two night attacks with a flotilla of rocket boats, for which he was promoted Deputy Inspector-General in 1858. He afterwards served in the Mediterranean Fleet, and was subsequently in charge of the naval hospitals at Malta, Haslar, and Chatham, and was promoted Inspector-General in 1866. In 1869 he became Medical Director-General, a post which he retained until 1880. In 1871 he was appointed a K.C.B. Among the medals which he received were the Arctic, Baltic, Sir Gilbert Blane gold medal, and the Jubilee medal.

We are indebted to a naval correspondent for the following estimate of his character and services:

Sir Alexander Armstrong was chiefly known in medical science by his treatise on *Naval Hygiene and Scurvy*, as the result of his Arctic experiences. It still remains a valuable work, especially to naval men. His observations on the causes, prevention, and treatment of scurvy were mainly on the lines indicated by his great predecessors more than a century ago, namely, Lind, Trotter, and Blane, who had seen the disease as it used to devastate the British fleets in the old wars. In fact, he completed their work.

He was Director-General when Sir George Nares's expedition was fitted out for Arctic exploration, and took the most active interest in its welfare and success. It is well known that had his directions been carefully followed the disaster and failure which attended that expedition would not have occurred. He forced the Government to institute an inquiry into the matter, the results of which completely exonerated him from all blame.

Sir Alexander Armstrong was a man of striking appearance. His tall, handsome, and athletic figure, together with his bold and resolute look and carriage, indicated a man not to be trifled with by anyone. A highly combative temperament was no doubt one of the features of his character. But it is said of him that he always liked to meet his adversary in the open, and that when the fight was over he never took advantage of his official position to indulge in measures of personal resentment. As Director-General he liked to call to his assistance the ablest men he could find, and always took care to give them the credit of their work. He was ever ready to encourage men in the pursuit of professional distinction by doing good service to the State. But it must be added that he showed little mercy to those who in any way brought discredit upon their profession.

His chief claim to the grateful remembrance of those who served under him was that they felt they could always rely upon him to protect them from injustice, and that he would not tolerate anything in the nature of a job, no matter where it was hatched or from what quarter it came.

A valued Scottish correspondent writes: A well-known character has passed away from the medical world of the North in the person of Dr. Patrick Jamieson, of Peterhead, the third in honourable descent of a line of medical practitioners. He inherited in the highest degree the best and most honourable traditions of physic. The strictest rules of professional and gentlemanly conduct and character never flourished more freely than amidst the windswept, cold, and dreary wolds of the North. Here our late friend was reared, and here he grew up and passed his life a cheery, sociable, kindly citizen and soldier, as well as a trusted, skilful practitioner. In every social duty and function he was the foremost and most willing, spending his time ungrudgingly for the good of his fellow men. Nearly 40 years ago he was one of the earliest and strongest supporters of the Buchan Medical Society, by and by as was natural sinking its individuality to that of the great parent Association, the British Medical, and for a time he held the office of Secretary of the Branch. In the club of Deir he was a valued member, as he became later, I understand, in the local Field Club. He was also a highly useful public servant on the School Board, and in connection with other public bodies in Peterhead. But his whole heart was given over to his soldiering, and as an Artillery officer we doubt if a smarter officer could at one time have been found in the regular service. In his early days he was, as may be supposed from his hereditary tendencies and training, a model general practitioner, excelling chiefly in midwifery, and able and ready to give a good "tip" in that speciality to his colleagues. But he did not take to medical literature, and there are, alas! as is the case in many other skilful medical men, no records to show his undoubted capabilities. He will long, however, be remembered by those who were lucky enough to know him as one of the most social and kindly of men. As an after-dinner speaker he was inimitable, and his pawkiness, humour, and natural eloquence have helped in their time the digestion of many a sorry public dinner! Rest to his memory.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Paulo Cesar de Andrade, Senator of the Brazilian Republic, sometime President of the Municipal Chamber of Nictheroy, and a Deputy to the Provincial Assembly of Rio de Janeiro; Dr. Anastacio di Bomsuccesso of Bahia, whose name was well known in Brazilian literature; Dr. Barrault of Paris, for many years editor of the *Revue de Thérapeutique Médico-Chirurgicale*; Surgeon-General Wenzel Hoor, formerly Chief of the Medical Service of the Austrian army; and Dr. P. Gingeot, Physician to the Hotel-Dieu, Paris.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ARMY MEDICAL STAFF.

Surgeon-General T. Maunsell, C.B., is placed on retired pay, July 1st. His commissions are thus dated: Assistant-Surgeon, October 1st, 1860; Surgeon, March 1st, 1873; Surgeon-Major, June 17, 1875; Brigade-Surgeon, October 16th, 1886; Surgeon-Colonel, March 10th, 1892; and Surgeon-Major-General, November 24th, 1895. He served with the Burmese expedition in 1886-7 (mentioned in despatches, medal with clasp), and with the Chitral Relief Force under Sir Robert Low in 1895 as Principal Medical Officer to the force (mentioned in despatches, appointed a Companion of the Order of the Bath, and medal with clasp).

Colonel T. O'Farrell, M.D., Royal Army Medical Corps, is promoted to be Surgeon-General, *vice* T. Maunsell, C.B., July 1st. Surgeon-General O'Farrell entered the service as Assistant-Surgeon, March 31st, 1865; became Surgeon, March 1st, 1873; Surgeon-Major, March 31st, 1877; Brigade-Surgeon, December 10th, 1890; and Surgeon-Colonel, November 24th, 1895. He was in the Afghan war in 1878-80, receiving a medal for that campaign.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel I. B. Emerson, at present serving in the Madras Command, is appointed to officiate on the administrative medical staff of the Indian Army, with the temporary rank of Colonel, from May 31st.

Quartermaster and Honorary Lieutenant G. Merritt is granted the honorary rank of Captain, July 10th.

Sergeant-Major Henry S. Brook is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Hon. Lieutenant G. J. Lane, deceased, July 12th.

Quartermaster George James Lane died at Poole on June 14th. He was appointed Quartermaster, with the honorary rank of Lieutenant, March 16th, 1892, and served with the Nile Expedition in 1884-5, receiving the medal, with clasp, and the Khedive's bronze star.

ARMY MEDICAL RESERVE.

Surgeon-Lieutenant D. Smart, M.B., 2nd Volunteer Battalion the King's Liverpool Regiment, to be Surgeon-Captain, July 12th.

INDIAN MEDICAL SERVICE.

SURGEON-GENERAL C. COLVIN-SMITH, M.D., C.B., late Indian Medical Service, is appointed Honorary Surgeon to the Queen, *vice* Surgeon-General W. Maclean, C.B., deceased, July 5th.

THE VOLUNTEERS.

SURGEON LIEUTENANT W. P. PEAKE, 1st Volunteer Battalion the Leicestershire Regiment, is promoted to be Surgeon-Captain, July 12th.

Surgeon-Captain F. K. PIGOTT, 1st Volunteer Battalion the King's Shropshire Light Infantry, is promoted to be Surgeon-Major, July 12th.

Surgeon-Lieutenant H. IRWIN, M.B., 3rd Volunteer Battalion the Manchester Regiment, has resigned his commission, July 12th.

Surgeon-Captain J. A. WATSON, 7th Middlesex (London Scottish) Rifles, is promoted to be Surgeon-Major, July 12th. He resigns his commission from the same date, is granted the rank of Surgeon-Lieutenant-Colonel, and is permitted to retain his rank and uniform.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From	To
Surgeon-General W. S. M. Price	Egypt	Bombay.
Colonel T. O'Farrell, M.D.	London	Malta.
,, W. J. Fawcett, M.B.	Bombay	Egypt.
Lieutenant-Colonel J. A. Gormley, M.D.	—	Shorncliffe.
,, ,, E. A. Roche	Curragh	Barbadoes.
,, ,, J. Anderson, M.B.	Malta	Sheerness.
Major W. C. T. Poole, M.B.	Pembroke Dck	Beacon Range.
,, C. W. Thiele, M.B.	Shorncliffe	Canterbury.
,, B. M. Skinner	Hounslow	London.
,, J. Hickman	—	Hounslow.
,, G. T. H. Thomas	—	Woolwich.
,, C. E. Faunce	Hounslow	Malta.
,, L. R. Colledge	Southampton	Hilsea.
,, F. W. C. Jones, M.B.	Crete	Aldershot.
,, A. O. Fitzgerald	Cork	Waterford.
,, J. F. Bateson, M.B.	C. of Gd. Hope	Belfast.
,, N. C. Ferguson, M.B.	C. of Gd. Hope	Edinburgh.
,, W. H. Starr	Gravesend	Wei-hai-Wei.
,, J. G. Black, M.D.	Belfast	Holywood.
,, W. P. Squire	C. of Gd. Hope	Chatham.
,, C. H. Burtchaell, M.B.	Preston	Woolwich.
,, J. V. Savage, M.D.	Woolwich	Malta.
,, C. P. Walker, M.B.	Mauritius	South Africa.
,, E. Eckersley, M.B.	—	London.
,, H. A. Cummins, M.D.	London	Woolwich.
,, R. Caldwell	St. Helena	Cork.
,, R. C. Thacker	Dublin	Maryborough.
Captain W. Hallaran, M.B.	—	Aldershot.
,, S. H. Withers, M.B.	Dover	Lydd.
,, G. E. Hughes	Punjab	Bombay.
,, J. F. M. Kelly, M.B.	Dublin	RanmoreCamp
Lieutenant S. A. Archer	Gravesend	Wouldhm Cmp
,, P M'Kessack, M.B.	Portsmouth	Devizes.
,, M. M. Lowsley	Nwestl-on-Tyn.	Alnwick.
,, G. B. Crisp	Aldershot	Woolmer.
,, E. P. Hewitt	,,	Portsmouth.
,, L. E. L. Parker	,,	Woolwich.
,, J. G. Gill	,,	Dublin.
,, G. W. G. Jones	,,	Belfast.
,, W. B. Winkfield	,,	Dover.
,, J. W. H. Houghton	,,	Dublin.
,, D. E. Curme	,,	Dover.
,, H. S. Taylor	,,	Chester.
,, D. Harvey, M.B.	Lichfield	BrackenbrCmp
,, H. E. Haymes	Aldershot	Christchurch.
,, G. C. Phipps	,,	Cork.
,, G. J. A. Ormsby, M.D.	,,	Dublin.
,, H. D. Packer	,	Nwestl-on-Tyn.
,, R. S. Rodger, M.B.	,,	Chester.
,, W. W. Scarlett	Woolwich	Colchester.

Captain H. J. PARRY, M.B., has assumed the duties of Adjutant at the Training School, Aldershot, *vice* Major O. R. A. Julian.

Captain A. PEARSE has been appointed to command the B Company and to be Assistant-Instructor at the Training School, Aldershot, *vice* Captain H. J. Parry.

Lieutenant-Colonel J. L. PEYTON has been selected for increased pay under Article 362 of the Royal Warrant.

Lieutenant-Colonel W. HENSMAN, retired pay, has relinquished the medical charge of the troops at Taunton, and Surgeon-Lieutenant-Colonel C. M. MACQUIBBAN, M.D., Militia Medical Staff, that of those at Aberdeen.

HONOURS FOR SERVICES IN AFRICA.

THE *London Gazette* of July 7th contains the names of the officers singled out for reward for services during the recent operations in Uganda and in the protected territories adjacent to the Gold Coast and Lagos and on the Niger; but no medical officer is to be found amongst them.

THE ROYAL REVIEW AT ALDERSHOT.

A CORRESPONDENT writes: It is not surprising your correspondent remarks on the absence of the Royal Army Medical Corps from the last Royal Review at Aldershot. The explanation, I believe, is simple. There was not sufficient of the corps at Aldershot to take part in the review. It is a good illustration of the hand-to-mouth policy pursued with the Medical Service. It became necessary to send a few medical units to Salisbury Plain for the manœuvres, and to do this it was necessary to denude Aldershot and other districts of the Royal Army Medical Corps. The training of the Medical Service in field duties is most essential, but the public should know there is no margin to permit this, and when it is attempted it has to be carried out at the expense of the hospitals and the sick in them. The remedy is obvious: increase the Royal Army Medical Corps.

THE *MANUAL* OF THE ROYAL ARMY MEDICAL CORPS.

A VOLUNTEER MEDICAL OFFICER writes: That the Volunteer Ambulance School of Instruction submitted to the authorities the scheme for lifting wounded now promulgated in the Royal Army Medical Corps Manual is no doubt quite true, and our thanks are due to them for it, but I can bear out Surgeon-Major Matthews's statement that the method is no new one, and that it has been for years discussed by medical officers of volunteers. It is practically the same as that adopted by the American army as far back as 1892, and should have been known to our medical staff. This method is so obviously the most simple and straightforward, that it has been a surprise to those of us engaged in teaching stretcher drill that any other could be adopted. The late mode of lifting wounded has been generally explained as a relic of the days of petty and complicated manœuvres.

HOSPITAL STOPPAGES.

A RECENT army order lays down that in the case of soldiers (including boys) admitted into hospital on account of injuries received when in the execution of their duty, or of sickness certified by the medical officer to have been caused by military service (including such diseases as those of tropical and subtropical climates, enteric fever, and also frostbite and pneumonia, etc., due to exposure under circumstances beyond a soldier's control), one-half of the hospital stoppage may be remitted by the general officer commanding. If any injury has been received when on duty at drill or manœuvres, under circumstances beyond the soldier's own control, the whole stoppage may be remitted by the general officer commanding. The usual certificates are necessary in such cases to be attached as vouchers to the company pay lists.

DISCIPLINARY POWERS OVER PATIENTS IN MILITARY HOSPITALS.

RESPONSIBILITY writes: The medical officer in the United States army, commanding a military hospital, has full discipline and punishing power over every patient in it. Responsibility is placed on him, and he has no need of reference to outside commanders of units. We need the same thing.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF WALES.

IT is announced that for the matriculation examination there are 491 candidates, which is an increase of 61 upon last year. Fifty-three students have in addition matriculated during the year in virtue of having passed other university examinations recognised as equivalent. A considerable number of pupils of the County Intermediate Schools are seeking the senior certificate of the Central Welsh Board, which is now accepted as exempting from the matriculation examination of the University.

ROYAL UNIVERSITY OF IRELAND.

FIRST EXAMINATION IN MEDICINE.—The following candidates have passed this examination:

*S. K. Adams, Queen's College, Belfast; C. J. Boucher, Queen's College, Belfast; D. J. Boyle, University College, Dublin; *C. Burne, University College, Dublin; *D. J. Carlisle, Queen's College, Belfast; E. Clements, Queen's College, Belfast; *F. Coates, Queen's College, Belfast; P. T. Crymble, Queen's College, Belfast; J. Dee, Queen's College, Galway; *H. P. Devlin, University College, Dublin; M. F. Donovan, B.A., Queen's College, Cork; Lizzie E. Dunn, Queen's College, Belfast; M. F. Farrell, University College, Dublin; H. J. Forbes, Queen's College, Belfast; D. Forde, Queen's College, Galway; D. P. H. Gardiner, Queen's College, Cork; Mary Gibson, University College and Royal College of Science, Dublin; *J. R. Harrison, Queen's College, Cork; J. Holmes, M.A., Queen's College, Belfast; G. J. Jones, B.A., Queen's College, Belfast; *E. B. Kenny, University College, Dublin; R. L. Keown, Queen's College, Belfast; G. W. Knipe, Queen's College, Belfast; *T. D. Liddle, Queen's College, Belfast; *T. Lyle, Queen's College, Belfast; J. Macarthur, Queen's College, Belfast; *F. McDonald, University College, Dublin; *D. McGrath, Queen's College, Belfast; *J. C. McHugh, University College, Dublin; *J. C. McPherson, Queen's College, Belfast; *J. N. Meenan, University College, Dublin; *R. G. Meredith, University College, Dublin; *E. H. M. Milligan, Queen's College, Belfast; *W. Mirford, B.A., Queen's College, Belfast; *G. B. Moffatt, Queen's College, Belfast; *J. H. Moore, Queen's College, Belfast; *J. J. Keeffe, Queen's College, Cork; J. J. O'Mahony, B.A., Queen's College, Cork; *W. G. O'Malley, University College, Dublin, and Queen's College, Galway; J. W. Pitt, Queen's College, Belfast; P. Quinn, University College, Dublin; E. D. Rutherford, Queen's College, Belfast; M. V. Shanahan, Queen's College, Cork; Mary E. Sims, Queen's College, Belfast; W. A. Simpson, Queen's College, Galway; *G. W. W. Ware, Queen's College, Cork.

The candidates to whose names an asterisk (*) is affixed are qualified upon their answering to present themselves for the further examination for honours.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen have passed the Second Examination of Board in the subjects indicated, namely:

In Anatomy and Physiology.—R. A. Eastmond, C. M. Dickinson, M. R. Johnson, A. T. Moon, and G. Bevir, London Hospital; W. Martin, St. George's Hospital; G. S. Welham and F. Talbot, Charing Cross Hospital; P. M. Rivay, H. E. Stanger-Leathes, A. A. Meadens, H. H. Serpell, H. Mills, and G. F. Furley, St. Bartholomew's Hospital;

J. M. Barlet, P. G. Easton, E. L. Bartlett, St. Mary's Hospital; R. Phillips, Middlesex Hospital; R. T. Collins and J. W. Gromitt, Guy's Hospital; E. D. Parsons, St. Thomas's Hospital; G. L. Bunting, Westminster Hospital; H. R. Allingham, King's College, London; H. L. Burgess, G. P. Wilson, J. L. Goldstein, London Hospital; H. K. Ward, Mason University College, Birmingham; H. B. Butler, N. A. W. Connolly, F. W. Cheese, A. S. Petrie, E. S. Ellis, F. H. Ellis, F. Harvey, St. Bartholomew's Hospital; A. S. Hosford, University College, London; W. G. Nimmo, A. H. S. Richardson, Westminster Hospital; F. C. Robinson, E. Willan, G. Moir, Guy's Hospital; R. J. Archibald, H. Wheelwright, St. Thomas's Hospital; G. H. Boyden, St. Thomas's Hospital and Edinburgh University; R. G. E. Grote, Charing Cross Hospital; A. Cameron, Middlesex Hospital; N. R. Phillips, University College of South Wales, Cardiff, and King's College, London; B. W. Gonin, St. Mary's Hospital; J. D. Keir, Glasgow University and St. Mary's Hospital; G. F. Humphreys, A. H. Turner, E. W. Strange, Guy's Hospital; T. L. Ingram, Cambridge University and London Hospital; C. G. Seymour and O. Mills, St. Thomas's Hospital; C. Wheen, Oxford University and St. Thomas's Hospital; H. A. Kellond-Knight, St. Bartholomew's Hospital; W. B. Swete-Evans, Cambridge University and St. George's Hospital; A. L. W. Whitehouse, Westminster Hospital; J. D. Rodriguez, F. P. Vieyra, Madras Medical College.

In Anatomy only.—J. M. S. Duncan, London Hospital, and T. Morgan, Guy's Hospital.

Thirty-seven gentlemen were referred in both subjects.

CONJOINT BOARD IN IRELAND.

FIRST PROFESSIONAL EXAMINATION.—Candidates have passed this Examination as undernoted:

Completed the Examination.—Honours in order of merit: R. J. B. Buchanan, A. T. Muchall, Miss H. A. Hall (R. G. Allon, K. F. Fleury, J. J. Ryan, equal). Pass, alphabetically: R. M. Atkin, E. B. Bird, C. W. Blake, W. H. Bournes, R. W. Burkitt, C. P. O. B. Butler, E. C. Byrne, J. Casey, M. Deeny, Miss S. F. Dickson, De C. V. Fitzgerald, R. G. Griffin, S. B. Hanbury, D. J. O'C. Kelly, J. P. Lynch, J. J. M'Connell, P. M'Dermott, P. J. O'F. M. O'Keeffe, W. Ormsby, W. J. O'Sullivan, T. S. Reeves, H. R. C. Rutherford, J. W. Rutherford, M. J. Ryan, P. Sampson, T. F. Seymour, G. G. Tabuteau.

In Anatomy.—G. G. Breton, J. M. J. Carolan, J. Clarke, M. J. Dowling, P. Graham, A. E. F. Hastings, Jas. Hayes, T. Kelly, P. Kinsella, J. P. Lyster, T. B. Moriarty, P. McGorry, J. A. McKenna, D. McLaughlin, J. R. H. MacManus, V. H. MacSwiny, J. V. O. Hagan, A. L. O'Keeffe, J. O'Meara, J. H. B. Peyton, W. Roche, T. J. Ryan, R. E. J. Sheridan, L. P. Stokes.

In Biology.—J. W. Bill, J. M. J. Carolan, S. Clare, J. Clarke, M. J. Dowling, T. Kelly, P. Kinsella, J. B. Moriarty, J. J. A. McKenna, J. R. H. MacManus, A. L. O'Keeffe, J. O'Meara, J. H. B. Peyton, T. J. Ryan, R. E. J. Sheridan, L. P. Stokes.

In Chemistry and Physics.—S. Clare, A. E. F. Hastings, J. Hayes, R. Martin, J. B. Moriarty, V. H. MacSwiney.

In Pharmacy.—J. W. Bell, J. M. J. Carolan, S. Clare, J. Clarke, A. E. F. Hastings, J. Hayes, T. Kelly, P. Kinsella, J. P. Lyster, J. J. A. McKenna, J. R. H. MacManus, A. L. O'Keefe, J. O'Meara, E. J. Phillips, W. Roche, T. J. Ryan, R. E. J. Sheridan, L. P. Stokes.

SOCIETY OF APOTHECARIES OF LONDON.

PRIMARY EXAMINATION, PART II.—The following candidates have passed in:

Anatomy.—W. H. Cotton, Dublin; G. M. Crockett, Royal Free Hospital; J. C. Curtis, Guy's Hospital; K. A. Dawson, Royal Free Hospital; W. C. D'Eath, Charing Cross Hospital; S. R. Dudley, St. Bartholomew's Hospital; K. C. Edwards, Cambridge; C. D. E. Forbes, St. George's Hospital; B. H. Hirst, Leeds; A. H. Hughes, Bristol; M. E. Martin, Royal Free Hospital; T. G. Miles, Guy's Hospital; H. Morrison, Leeds; D. A. H. Moses, St. Bartholomew's Hospital; A. U. Parkhurst, Cardiff; C. M. Scott, Royal Free Hospital; L. G. Simpson, Royal Free Hospital; G. B. S. Soper, Guy's Hospital; C. J. Taylor, Bristol; C. M. Woods, Charing Cross Hospital.

Physiology.—C. H. G. Atkyns, Birmingham; J. A. Bartlett, Bristol; C. W. S. Boggs, Leeds; H. R. Coombes, Westminster Hospital; G. M. Crockett, Royal Free Hospital; J. C. Curtis, Guy's Hospital; K. A. Dawson, Royal Free Hospital; W. C. D'Eath, Charing Cross Hospital; K. C. Edwards, Cambridge; B. H. Hirst, Leeds; A. H. Hughes, Bristol; J. A. Kilpatrick King's College Hospital; J. M. King, University College Hospital; M. E. Martin, Royal Free Hospital; H. J. May, London Hospital; T. G. Miles, Guy's Hospital; A. U. Parkhurst, Cardiff; G. Raymond, St. Thomas's Hospital; L. G. Simpson, Royal Free Hospital; W. A. G. Stevens, Guy's Hospital; R. W. Taylor, Leeds.

PRIMARY EXAMINATION, PART I.—The following candidates have passed in:

Biology.—J. Cretin, Bristol; G. W. N. Stevens, Charing Cross Hospital.

Chemistry.—J. Cretin, Bristol; D. J. Lewis, London Hospital; D. A. Stepney, Royal Free Hospital; M. L. Tyler, Royal Free Hospital; G. H. Watson, St. Bartholomew's Hospital; S. H. R. Welch, Charing Cross Hospital.

Materia Medica and Pharmacy.—C. C. Bernard, Royal Free Hospital; G. A. Crowe, London Hospital; A. J. Nicholson, Edinburgh and Cork; J. R. Pooler, Birmingham; D. W. Purkis, St. Bartholomew's Hospital; Z. Rowlands, Royal Free Hospital; H. M. Serjeant, Royal Free Hospital; E. N. L. Wilson, Royal Free Hospital.

UNIVERSITY OF BRUSSELS.

BRUSSELS MEDICAL GRADUATES' ASSOCIATION.

THE nineteenth annual general meeting took place at the Café Royal, Regent Street, W., on July 5th, Dr. Charles Burland was elected president for the year, Dr. Gabe vice-president, and Drs. Achard, Snape, Naumann, Haydon, Walter Smith, F. H. Edwards, Vicars, Furness Potter, Cowburn, and Norman members of Council for 1899-1900. The honorary secretary and treasurer were re-elected, and the balance-sheet for the past year duly presented and accepted. There was a large attendance of members who dined together afterwards with their guests to the number of 63. Among the guests were Sir John Rolleston, Sir Arthur E. Vicars, Dr. Mitchell Bruce, Mr. Edmund Owen, Mr. Reginald Harrison, Mr. D. B. Balding, J.P., Rev. W. Burland, Dr. Hastings Stewart, Dr. W. J. Burrows, J.P., and Mr. H. J. Turrell. Mr. Edmund Owen proposed the "Health of the Association." In the course of his remarks he expressed a strong opinion in favour of the justice of allowing registered practitioners to register as additional titles *bonâ fide* foreign degrees, and he said that the Brussels Medical Graduates' Association had done good work in compelling the recognition of such degrees. The honorary secretary responded and gave evidence of the continued activity of the Association. The president proposed "The Guests," and Sir John Rolleston and Dr. Mitchell Bruce replied.

The "Shamrock (Ladies') Quartette" played during the evening; Miss Bectlestone sang some songs, which were much appreciated; and Miss Woolhouse gave some delightful 'cello solos, and Dr. A. G. Haydon several violin solos.

A congratulatory telegram was dispatched during the evening to His Majesty the King of the Belgians and an answer was received from his Majesty thanking the Association for their kind wishes.

GUY'S HOSPITAL MEDICAL SCHOOL.

THE medals and prizes gained during the past academic year were distributed to the successful students on July 8th by Mr. Robert Gordon. Mr. Cosmo Bonsor, M.P., presided, and a large company of ladies and gentlemen which completely filled the theatre was present. After the distribution Mr. Gordon expressed his regret that the eloquent appeal made by Mr. Arthur Balfour a year ago for a fund wherewith to endow physical research had not borne adequate fruit. All advance in science of recent times had been the outcome of patient investigation often extending over many years. Time and instruments were necessary for investigators, and instruments were expensive; and he hoped the reproach of not having properly responded to Mr. Balfour's appeal would be soon wiped out. Medicine, he thought, of all the professions afforded the chief opportunity of doing good. No student should be content to remain at the bottom of the ladder; and those who had gained prizes had already taken two or three steps upwards. Mr. Cosmo Bonsor said that Mr. Balfour's appeal had not failed of success; it had induced Mr. Gordon himself to send a handsome cheque for the endowment of physical research, and Sir F. Wills had given £5,000 to the new library. Dr. Pye-Smith's term of active service on the staff was coming to a close, in consequence of the efflux of time, and the Governors had that day made him and Dr. Goodhart consulting physicians to the hospital; whilst Dr. Perry had become a full physician, and Dr. Fawcett had been elected assistant physician. Mr. Bonsor concluded by proposing a vote of thanks to Mr. Gordon for distributing the prizes. Dr. Pye-Smith seconded the resolution, and referred to the four last Treasurers of Guy's—Mr. Harrison, who remained in office fifty years; Mr. Turner who was Treasurer for twenty years; Mr. Lushington, and now Mr. Bonsor, and spoke of the great part each had had in building up the fame of the medical school. Its prosperity was, however, in great measure due to the students themselves, especially the senior men, who had given a tone to the school that had never been better than at the present time. Dr. T. Stevenson, senior lecturer in the medical school, supported the vote of thanks to Mr. Gordon in a few happily-chosen words. The vote was carried with much applause, and was briefly acknowledged by Mr. Gordon. A garden party followed, and the new laboratories, wards, museums, and college were open for inspection by the visitors.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.

ON June 4th, Sir John Wolfe Barry distributed the scholarships, prizes, and certificates to the students of Westminster Hospital. The following were the principal awards:

Scholarships in Arts, each of the value of £50: C. Fletcher and G. W. Heron. Oxford and Cambridge Scholarships, each of the value of £40: A. R. Roche, F. P. Edward, and B. J. Dudley. Science Scholarships, each of the value of £30: C. Roper and M. J. Cromie. Dental Scholarships, value £20: L. W. Townsend. The "Chadwick" Prize, value 20 guineas: A. J. V. Betts. The President's Prize, value 20 guineas; E. C. Whitehead. The "Bird" Medal and Prize, value £14: H. D. Brice.

Sir J. W. Barry subsequently delivered an address, in the course of which he said that examinations were a guarantee that those entering a profession had an adequate acquaintance with all that is known in scientific research. But practical knowledge could never be got by any system of examination, and, in the medical profession, must be acquired by clinical study in the hospital. The position taken in the public examinations by the Westminster Hospital School was referred to as comparing favourably with that of the large medical schools. The records of old students were mentioned. Sir George Scott Robertson, the hero of Chitral, had been a student at Westminster Hospital; and Messrs. Walker, White, and Jerman were in Uganda now upholding the high quality of their Westminster School training. The cricket, football, and athletic clubs were congratulated on their successes during the year, and gentlemen were reminded that these clubs contributed largely to the maintenance of *esprit de corps* and to the promotion of the social well-being of the school. Mr. Tubby, as Dean, thanked Sir John Wolfe Barry for his kindness in presenting the prizes, for the interesting address he had given, and for the active interest he had taken in its welfare.

MASON UNIVERSITY COLLEGE, BIRMINGHAM.

DR. W. WACE CARLIER, who at present holds the appointment of Lecturer on Experimental Physiology and Histology in the University of Edinburgh, has been appointed Professor of Physiology in Mason University College, Birmingham. Dr. Carlier, who is a native of Norwich, obtained the degree of B.Sc. of the University of France in 1882. He received his medical education in Edinburgh, and took the degree of M.D. of that University in 1891, when he received the gold medal for his thesis on Hibernation. For the past thirteen years he has been connected as a teacher with the Physiological Department of the University of Edinburgh,

and is the author of a number of important scientific papers. He is a Fellow of the Royal Society of Edinburgh, and of the Royal Microscopical Society.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

IRISH DISPENSARY MEDICAL OFFICERS: PAYMENT OF *LOCUM TENENS*.

At the Limerick Board of Guardians the other day a member objected to the payment of the salary of the *locum tenens* while the medical officer was on holiday. He thought they were the officers best able to pay their substitutes. It was pointed out that the Act of Parliament required the guardians to pay, but the member persisted in his view, and handed in a notice of motion that all officers should pay their substitutes. The chairman ruled it out of order.

SUPERANNUATION IN IRELAND.

B.Y.—Poor-law medical officers who held office prior to the passing of the Local Government (Ireland) Act who were over 60 years of age, and had twenty years' service are, whenever they retire, entitled to receive a superannuation allowance.

THE OFFICIAL CONCEALMENT OF CONTAGIOUS DISEASE.

In view of an attempt of the Health Department of Philadelphia to conceal the presence of contagious diseases in that city, the State Board of Health of Pennsylvania has passed the following resolutions:

"That the State Board of Health and Vital Statistics earnestly deprecates the declared intention of the Director of Public Safety of the city of Philadelphia to conceal the presence and number of cases of small-pox, or any other communicable disease in that city, and for the following reasons:

"1. Attempts of this kind invariably end disastrously, defeating their own object. Rumour always magnifies danger, creating suspicion, anxiety, and panic. The publication of the exact truth indicates that the authorities are vigilant, possessing full knowledge of the facts of the case, and have control of the situation, thus engendering a sense of security and dispelling alarm.

"2. The policy of concealment prevents those living in the immediate neighbourhood of infected houses, or who may desire to visit such neighbourhoods, from taking necessary precautions for their own protection, and in this way facilitates the spread of the infection.

"3. This course would vitiate the vital statistics of the city and State, impairing their accuracy and value, and destroying the confidence of the national health authorities and of those of other States and cities in the trustworthiness of our returns. The latter will therefore hesitate to advise their citizens to visit a community which adopts the ostrich-like policy of burying its head in the sand in the presence of a danger, instead of frankly acknowledging and bravely facing it."

We quote these resolutions as they set forth in plain terms the dangers to the public health and other ill consequences of the official concealment of contagious diseases. As this most injudicious policy is not altogether unknown in seaside places and health resorts in this country, we commend this deliverance of the Pennsylvania State Board of Health to the particular attention of local authorities and sanitary committees.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,405 births and 3,496 deaths were registered during the week ending Saturday last, July 8th. The annual rate of mortality in these towns, which had declined from 16.5 to 15.7 per 1,000 in the three preceding weeks, rose again to 16.0 last week. The rates in the several towns ranged from 10.6 in Croydon, 10.8 in West Ham, 11.8 in Portsmouth, and 12.1 in Bradford and in Swansea, to 19.4 in Salford, 21.5 in Sheffield, 24.2 in Liverpool, and 24.8 in Manchester. In the thirty-two provincial towns the mean death-rate was 16.6 per 1,000, and exceeded by 1.6 the rate recorded in London, which was 15.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the rate was equal to 1.8 per 1,000, while it averaged 2.3 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Manchester, 4.0 in Sheffield, 4.4 in Liverpool, and 6.0 in Burnley. Measles caused a death-rate of 1.3 in Liverpool, 1.4 in Portsmouth, 1.8 in Burnley, 1.9 in Salford, and 2.2 in Manchester; scarlet fever of 1.1 in Halifax and 1.8 in Burnley; and whooping-cough of 1.1 in Portsmouth, 1.2 in Blackburn, and 1.4 in Burnley. The mortality from "fever" showed no marked excess in any of the large towns. The 81 deaths from diphtheria in the thirty-three towns included 31 in London, 7 in Leicester, 7 in Leeds, 7 in Sheffield, 6 in Liverpool, 5 in West Ham, 3 in Swansea, and 3 in Birmingham. Six fatal cases of small-pox were registered in Hull, but not one in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment at the end of last week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,161 to 2,430 at the end of the seven preceding weeks, had further risen to 2,526 on Saturday last, July 8th; 315 new cases were admitted during the week, against 262, 335, and 302 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, July 8th, 940 births and 515 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 16.7 and 17.7 per 1,000 in the two preceding weeks, declined again to 16.9 last week, but was 0.9 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 5.1 in Perth and 12.8 in Greenock to 18.1 in Glasgow and 19.1 in Dundee. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Glasgow and Leith. The 256 deaths registered in Glasgow included 21 from measles, 5 from scarlet fever, 3 from whooping-cough, and 13 from diarrhœa. Three fatal cases of whooping-cough were recorded in Leith, and 2 of measles in Edinburgh.

MEDICAL NEWS.

A Dalziel telegram from New York states that Mr. Pierpont Morgan has presented the city with a new lying-in hospital at a cost of 800,000 dollars.

Precaution against Lead Poisoning.—The Admiralty has decided to issue at Pembroke Dock nail brushes to workmen using red or white lead. Other precautions have also been latterly taken on the suggestion of Fleet-Surgeon Luther. Before his time no places were provided for the workmen to wash their hands; now proper troughs, in which the water is regularly changed, are placed in convenient positions, and copies of the regulations, emphasising the necessity of frequently washing the hands and rinsing the mouth with water, are posted in prominent places. As a further precaution, workmen using lead are required to attend at the surgery half an hour before bell-ringing at noon on Saturdays, to permit of medical inspection.

First Aid in the Mercantile Marine.—A Committee appointed by the Board of Trade to revise the medical scales for merchant vessels has reported as follows: "As regards merchant ships which carry no medical man, they are of opinion that it would be highly desirable that no ship should be allowed to proceed on a long voyage unless there be someone on board who has passed through a course of instruction in 'first aid' to the wounded. They think this might gradually be brought about if it were made compulsory on every mate who presents himself for examination for a master's certificate to produce evidence that he has passed through a course of instruction." The Committee of the Shipmasters' Society endorses this recommendation.

Glasgow and West of Scotland Co-operation for Trained Nurses.—The late Professor Joseph Coats and Dr. David Newman, the present chairman of the executive committee, took an active part in the formation of this Co-operation in 1893, and in its subsequent development, which has been extremely satisfactory. It has indeed proved a great success both in respect to the work done by the nurses and to the financial position of the institution. The qualifications of the nurses are carefully investigated by a medical committee before they are admitted, and the Co-operation now includes close upon one hundred nurses with a full hospital training. The requirements of the public are however so constantly increasing, that the executive committee have resolved to increase the staff to 150 nurses before next winter. During the last year employment has been so constant that the earnings of the nurses have ranged from £70 to £85 a year.

From the report read at the annual general meeting of the Society for Relief of Widows and Orphans of Medical men it appeared that a sum of £3,023 had been given during 1898 to the 50 widows and 12 orphans in receipt of grants, and the 6 recipients from the Copeland Fund. At Christmas presents were made of £10 to each widow and £3 to each orphan, and £5 to those on the Copeland Fund, making £551 in all. One widow had died and 1 was elected; 3 orphans had become ineligible and one had been elected. During the year 9 members had died and 9 had been elected, so that the total number remained the same, 287. The expenses of the year had been £244 10s., the total disbursements £3,267 10s., and the receipts available for payments £3,326 2s. 8d., leaving a balance of £58 12s. 8d. A grant under by-law 78 of £26 was made to a widow. A vote of thanks to the editors of the medical journals, proposed by Mr. Lynch and seconded by Sir Samuel Wilks was carried unanimously. Sir Thomas Smith was elected a vice-president in the place of Mr. Henry Lee, deceased, and Mr. Morey, Mr. King, Mr. Leigh, Mr. Gimson, Dr. West, and Dr. Whipham, directors, in the place of the six seniors who retired. The funded property had been increased by purchase of £500 Birmingham 2½ per Cent. Corporation Stock and on May 1st, 1899, amounted to £97,687 15s. 11d.

The proceedings terminated by a vote of thanks to the Chairman, Mr. Christopher Heath, proposed by Mr. Lovatt and seconded by Dr. Pollock.

PEKIN HOSPITAL.—In the thirty-seventh annual report of the Pekin Hospital, Dr. Eliot Curwen, the medical missionary of the London Missionary Society in charge, states that in 224 in-patients and 13,835 out-patients were under treatment during the year. Fifty-one patients were admitted for the cure of the opium habit, and 73 cases of opium suicide were treated; 9 cases of gunshot wound, 6 in the leg and 3 in the chest, were under treatment; 1 died of tetanus and 1 of septic pneumonia, the others all did well. During the autumn, both at Pekin and Tientsin, an epidemic of jaundice occurred, and from October 22nd to December 25th, 1898, two or three cases came to the dispensary nearly every day. The cases varied considerably in severity; some patients were not aware of any illness until their attention was drawn to the colour of the eyes; others were very seriously ill with high fever and severe temporal headache. The liver was slightly enlarged, and tender in two cases only, and the pulse was usually rapid. In 1 case only were there any symptoms of nervous complications (tenderness of muscles and bones of the arms). No etiological factors could be traced.

SEX DETECTED BY THE LARYNGOSCOPE.—Berthold, of Königsberg, relates an extraordinary case in the *Archiv für Laryngologie und Rhinologie* (Vol. ix, Part 1, February, 1899). A pale, timid, fair-haired person, about 22 years old and only 4 ft. 8 ins. in height, consulted him for hoarseness, and sore throat. The patient was dressed as a woman and had not the least idea that he was a man, though the breasts were undeveloped, and though he had to shave on account of free growth of hair on the face. Berthold's attention was turned to the shaven appearance about the chin because when using the laryngoscope he noted that the vocal cords were very well developed as in a powerful male. On the other hand the epiglottis was small and of the shape seen in children. There was slight sore throat, but the hoarseness was clearly nothing more than a normal man's voice. On examination, the genitals were found concealed by a large left inguinal hernia. On reducing it an extreme hypospadias was observed, the divided scrotum appearing like labia. The urine could not be passed in a stream as from a male urethra. The patient was astounded to learn that he was a male, though admitting that he felt no affection for men. This observation of the larynx and genitals was made in 1891. In the autumn of last year Berthold had another opportunity of examining this patient. By the Roentgen rays it was found that the thyroid cartilage was far more extensively ossified than in any female under 30. A testicle was now to be felt in the hernial sac. The psychical condition of the patient had completely changed. In 1891 he was very timid and modest, now he had become quite bold and brave, and was engaged to a young woman whom he was about to marry. Sexual desire had come on slowly after 1891, as is usual in these male hermaphrodites, but coitus was possible, and the semen contained spermatozoa. He had sought a fresh examination in 1898 for legal reasons associated with his registration as a male and his desire to marry.

THE EDUCATION OF FEEBLE-MINDED CHILDREN.—At a recent meeting of the Childhood Society, which was formed to carry on the study of the mental and physical condition of children, a discussion took place on "The education of children feebly gifted mentally under the care of guardians." Earl Egerton of Tatton presided, and in the course of his remarks said that about ten years ago a Royal Commission, over which he had the honour to preside, called attention to the question of feeble-minded children, but at that time there was not sufficient evidence to enable the Commission to prepare a report on the manner of dealing with these children. Since that time the Childhood and other societies had investigated the condition of about 150,000 children, and a report had been issued, giving an account of the condition of the mentally defective children who had been examined, and the best way of dealing with them. The Government was now considering the question, and it was hoped that the same amount of assistance in their education would be given to them as had already been given by the State to blind and deaf children. Dr. Shuttleworth opened the discussion and urged that children feebly gifted mentally under the care of guardians should be removed as much as possible from Poor-law surroundings; that they should be taught in special classes under a teacher specially trained for the purpose; that the school work at the higher ages should be a preparation for industrial employment in after-life; and that the age limit for education should not terminate at 16 years of age. He also gave some interesting particulars of the method of training feeble-minded children at the Poor-law Schools at Banstead. Mrs. Burgwin, superintendent of schools for the feeble-minded under the School Board, also strongly advocated that the age limit should be raised to at least 18 years; Mrs. Lidgett and Mrs. Warner, members of Boards of Guardians, gave their experience specially with reference to feeble-minded girls in Poor-law Institutions of 16 years of age and upwards, and advocated provision being made for them to save them from the consequences of going out into the world unprotected. The National Association for Promoting the Welfare of the Feeble-Minded makes this provision, but it was not mentioned at the meeting. The proceedings closed with a vote of thanks to the chairman, proposed by the Rev. T. W. Sharpe.

KIRKCALDY INFECTIOUS HOSPITAL.—A new hospital for infectious diseases was recently opened at Kirkcaldy. It stands on a triangular site near the town. The porter's lodge is placed between two sets of gates, an outer and an inner, and contains an inquiry room for visitors, who can thus obtain information without passing through the inner gates. The administrative block, which has accommodation for the medical officers, matrons' rooms, staff mess-rooms, dispensary, lavatory, store room, kitchen, and other offices on the ground floor is placed in a central position. The upper floors contain bedrooms for the staff. The wards, which are in two blocks, contain accommodation for 30 patients, which is equivalent to 1 per 1,000 of the population of the town. The scarlet fever block contains 6 beds for men, and 9 for women and children; the other block contains 3 sets of wards, at the south end 7 beds for enteric fever, in the middle 8 beds for measles or diphtheria, and at the north end an observation department with two wards with a single bed each. Each department has a separate entrance. The floors are on an average 4 feet above the ground level, so as to admit of free ventilation beneath; the walls are double, with an air space of 4 inches; the inside wall surfaces are faced to a height of 5 feet with Keen cement, and painted with leadless paint. For the other 8 feet of height the walls are finished in hard plaster distempered in various light tints. The floors are of wood, waxed, and all angles, cornice, and corners are rounded. Fresh air is admitted in deflected currents under each bed. The windows reach to the ceiling, and open at the upper part by a quadrant, while the lower part has double glazed sashes. The large wards are warmed by a Shorland double-fronted hot-air stove of coloured faience, and the small ones by hot-air grates. The cubic space for each bed is 2,000 feet, with 2,500 feet in the enteric wards. Each of the scarlet fever and enteric fever wards are provided with a sun room, fitted with skylights which swing open horizontally. Patients can be wheeled into these rooms, and there obtain all the benefit of the germicidal power of the sun. The laundry is arranged so that the clothes of the staff and those of the patients are kept apart. A disinfecting chamber fitted with Rick's disinfector, a mortuary, waiting room, ambulance shed, and discharge block are also provided. The sewage is treated in a septic tank, and filtered before it leaves the grounds. Rain water reaches the sewer below the septic tank. The cost of the hospital, which has been erected from plans by Messrs. Campbell, Douglas, and Morrison (of Glasgow), has been a little over £300 a bed.

MEDICAL VACANCIES.

The following vacancies are announced:—

ADELAIDE HOSPITAL, South Australia.—Two Junior Resident Medical Officers. Salary, £110 per annum, with board, etc. Particulars to be obtained of the Hon. J. A. Cockburn, M.D., Agent-General for South Australia, 1, Crosby Square, Bishopsgate Street Without, E.C.

BANBURY: HORTON INFIRMARY.—House-Surgeon and Dispenser. Salary, £60 per annum, with board and lodging. Applications to C. H. Davids, Hon. Sec., 21, Marlborough Road, Banbury, by July 26th.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £50, with board, residence, and laundry. Applications to P. R. Arrowsmith, Honorary Secretary, 20, Chapel Street, Liverpool, by July 24th.

BRADFORD POOR-LAW UNION.—Resident Assistant Medical Officer for the Hospitals and Workhouses of the Union. Appointment for one year. Salary, £100, with rations, apartments, and washing. Applications to the Clerk to the Guardians, Poor-law Offices, 32, Manor Row, Bradford, by July 31st.

BRADFORD ROYAL INFIRMARY.—(1) Junior House-Surgeon; unmarried. Salary, £50 per annum, (2) Dispensary-Surgeon; unmarried. Salary, £100 per annum, board and residence provided in each case. Applications, endorsed "Junior House-Surgeon," and "Dispensary Surgeon," to the Secretary by July 24th.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House-Surgeon. Salary, £120 per annum, with board and residence. Applications to the Assistant Secretary, 13, Queen's Road, Brighton, by July 20th.

BRIGHTON THROAT AND EAR HOSPITAL, Church Street.—Non-resident House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum. Applications to the Secretary, 10, Black Lion Street, Brighton, by July 19th.

CHESTER GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £60 per annum, with residence and maintenance. Applications to the Chairman of the Board of Management, 29, Eastgate Row, North Chester, by July 24th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by July 18th.

CHICHESTER: WEST SUSSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried. Salary to commence £100 per annum, with furnished apartments, board, and washing. Applications to the Medical Superintendent by July 25th.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Demonstrator. Honorarium, £50 per annum. Applications to the Dean by July 24th.

DERBY: DERBYSHIRE ROYAL INFIRMARY.—Assistant House-Surgeon. Appointment for twelve months. Salary, £40 per annum, with board, residence, and washing. Applications to the Secretary by July 21st.

DOWNPATRICK: COUNTY DOWN INFIRMARY.—Registrar, Compounder of Medicine, and Assistant to the Surgeon. Salary, 60 guineas, with board, fuel, and washing. Applications to Dr. T. M. Tate by August 10th.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Appointment for one year, but eligible for re-election. Salary, £100 a year, with board and lodging. Applications to the Honorary Secretary, 16, South Bailey, Durham, by July 21st.

GOVAN DISTRICT ASYLUM, Crookston, near Paisley.—Junior Assistant Medical Officer. Salary, £100 a year, with furnished rooms, board, laundry, and attendance. Applications to the Medical Superintendent by July 20th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board and lodging. Applications to Mr. Richard F. E. Ferrier, Hon. Sec., 33, Hall Plain, Great Yarmouth, by July 26th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon to Out-patients. Appointment for six months, but eligible for re-election. Salary, 25 guineas. Applications to the Secretary by July 18th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—(1) Resident House-Physicians. (2) Assistant Resident Medical Officer. Salary, £50, with board and residence. Applications to the Secretary by July 25th.

LEEDS: GENERAL INFIRMARY.—House-Physician. Appointment for six months. Board, lodging, and washing provided. Applications to the Secretary to the Faculty by July 22nd.

LIVERPOOL DISPENSARIES.—Assistant Surgeon; unmarried. Salary, £100 per annum, with board and residence. Applications to the Secretary, 34, Moorfields, Liverpool, by July 18th.

LONDON COUNTY ASYLUM, Bexley, Kent.—Assistant Medical Officer, between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications, on forms provided, to the Clerk to the Asylums Committee, 6, Waterloo Place, London, S.W., by July 18th.

LONDON LOCK HOSPITAL, Harrow Road, W.—House-Surgeon to Female Hospital. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by July 26th.

NOTTINGHAM LUNATIC HOSPITAL, The Coppice.—Assistant Medical Officer: unmarried, and between 25 and 30 years of age. Salary, £150 a year, with apartments, board, attendance, and washing. Applications to Dr. Tate at the Asylum by July 22nd.

OLDHAM INFIRMARY.—(1) Senior House-Surgeon. Salary, £85 per annum, with board, washing, and residence. (2) Locum Tenens. Applications to the Secretary.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant and Second Assistant House-Surgeons. Salary, each £65 per annum, with board and residence. Applications to the House Governor by July 24th.

PORTSMOUTH BOROUGH ASYLUM.—Junior Assistant Medical Officer. Salary, £120, increasing to £150, with board, lodging, and washing. Applications to the Medical Superintendent.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY.—Resident Medical Officer: unmarried. Salary, £100 per annum, with furnished apartments, board, and attendance. £10 allowed for substitute during annual holiday. Applications to the Secretary by July 17th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.—Honorary Physician. Applications to the Secretary by July 24th.

SCHOOL BOARD FOR LONDON.—Lecturers in First Aid and Home Nursing. Fee, 6 guineas for a course of twelve lectures. Applications to the Clerk to the Subcommittee, Evening Continuation Schools, School Board for London, Victoria Embankment, by July 15th.

SOMERSET AND BATH LUNATIC ASYLUM, Wells, Somerset.—Junior Assistant Medical Officer; unmarried and under 30 years of age. Salary, £120, rising to £140, with board, lodging, and washing. Applications to Dr. Wade, Medical Superintendent.

STAFFORDSHIRE COUNTY ASYLUM, Stafford.—Junior Assistant Medical Officer: unmarried, and under 30 years of age. Salary, £120 per annum, rising to £160, with furnished apartments, board, etc. Applications to the Medical Superintendent.

SURREY COUNTY LUNATIC ASYLUM, Brookwood, near Woking.—Assistant Medical Officer. Appointment for four months. Salary at the rate of £3 3s. per week, with apartments, and all found. Applications to the Medical Superintendent.

UNIVERSITY COLLEGE, London.—Jodrell Professorship of Physiology. Applications to the Secretary by July 17th.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and attendance. Applications to the Secretary.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Second House-Surgeon unmarried. Salary, £60 per annum, with board and residence, and 10s. a month for washing. Applications to the Honorary Secretary.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Appointment for six months, but may be extended. Salary, £70 per annum, with board, rooms, and washing. Applications to the Secretary by July 20th.

MEDICAL APPOINTMENTS.

BARROW, Geo. A., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to the Manchester Hospital for Consumption and Diseases of the Throat and Chest.

BRODIE, F. Carden, M.B., B.S., appointed Admiralty Surgeon and Agent at Sandoun.

FOSTER, P., M.R.C.S. and L.R.C.P.Lond., appointed Assistant Resident Medical Officer to the Royal National Hospital for Consumption, Ventnor, I.W.

HAIGH, Harold, M.A.Cantab., M.R.C.S., L.R.C.P., appointed Medical Officer to the Convalescent Home, Meltham Mills, near Huddersfield, *vice* T. A. Haigh, resigned.

HALL, Arthur J., B.A., M.B.Cantab., M.R.C.P., appointed Professor of Pathology in University College, Sheffield, *vice* Dr. Duncan Burgess, appointed Lecturer in Medicine.

HARRIS, H. Elwin, B.A., M.B.Cantab., F.R.C.S.Eng., L.R.C.P.Lond., appointed Surgeon to Out-patients to the Bristol Royal Hospital for Sick Children and Women, *vice* C. Wintle, resigned.

HORNE, Johnson, M.B., B.C.Cantab., appointed Honorary Surgeon to the Metropolitan Ear, Nose, and Throat Hospital.

LAKE, Richard, F.R.C.S.Eng., appointed Honorary Surgeon to the Metropolitan Ear, Nose, and Throat Hospital.

LEWIS, Cyril, M.D., appointed House-Physician to the General Hospital, Birmingham.

MCKELLAR, Geo., M.D., C.M., D.P.H., appointed temporarily an Assistant Surgeon to the British Ophthalmic Hospital, Jerusalem.

MARSH, J. Hedley, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health for the Borough of Macclesfield.

QUAIT, A. Wortley, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of the Mundesley District of the Erpingham Union.

SKELDING, Henry, M.B., B.C.Cantab., M.R.C.S., L.S.A., appointed Assistant Surgeon to the Bedford County Hospital.

GUY'S HOSPITAL (Dental Department).—The following appointments have been made: House-Surgeons.—P. H. Hayes Palmer, L.D.S.Eng.: Alfred E. Rowlett, L.D.S.Eng. S. H. Oliver, L.D.S.Eng.
Assistant House-Surgeons.—F. W. Garman; R. B. Recordon.

DIARY FOR NEXT WEEK.

MONDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. W. McAdam Eccles: The Differential Diagnosis of Scrotal Swellings.

THURSDAY.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Mr. Donald Gunn: Demonstration of Selected Cases.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

CAPES.—On July 6th, at Grove Lane, Denmark Hill, S.E., the wife of Robert Capes, of a daughter.

DENNISON.—On July 7th, at 61, Haddon Road, Leeds, the wife of Arthur Dennison, M.D., of a son.

MCVITIE.—On 2nd July, at Tetlock House, Kirkby, near Liverpool, the wife of J. W. McVitie, M.R.C.S., L.R.C.P., of a daughter.

ODELL.—On the 4th inst., at York House, Hertford, the wife of Robert Odell, M.R.C.S.Eng., L.R.C.P.Lond., of a son.

MARRIAGES.

BALLINGALL—BONNER.—On July 6th, at St. Paul's Church, St. Leonard's-on-Sea, by the Rev. Forbes E. Winslow, Rector, assisted by the Rev. F. J. Watson Smyth and the Rev. Archdall Buttenaer, George Anderson Ballingall, M.A., M.D., L.R.C.P.Lond., M.R.C.S., of St. Leonard's-on-Sea and of Altamont, Blairgowrie, N.B., to Mary Lilian Elsie, youngest daughter of the Rev. J. Tillard Bonner, of St. Leonard's-on-Sea, late Rector of Stanwick, Northants.

BOWER—WHITLEY.—On June 27th, at St. Matthew's Church, Stretton, near Warrington, by the Rev. and Hon. C. F. Cross, Vicar of the Parish, Harry Edward Bower, only son of the late Edward Bower of Little Leigh, Cheshire, to May, eldest surviving daughter of Chas. Thos. Whitley, Esq. of Wallspit House, Stretton.

HERBERT—KILLEY.—On July 13th, at St. Bede's Church, Sefton Park, Liverpool, by the Rev. Canon Spooner, assisted by the Rev. J. A. Howell, Major Herbert Herbert, Indian Medical Service, Bombay, to Margaret Agnes, daughter of the late William Killey of Liverpool.

HILL—ALFORD.—On July 5th, at the Church of St. Mary Magdalen, Taunton, by the Rev. Prebendary Askwith, Vicar of the Parish, assisted by the Rev. D. J. Pring, Vicar of Wilton (cousin of the bride), Walter James Hill, L.R.C.P.Lond., M.R.C.S., of Clevedon, to Edith Maud, daughter of H. J. Alford, Esq., M.D., and granddaughter of the late Dr. Henry Alford, of Mountlands, Taunton.

JENNINGS—TOWARD.—On July 6th, at All Saints, Margaret Street, W., by the Rev. J. H. Pugh, M.A., Richard Edward Jennings, M.R.C.S.Eng. and L.R.C.P.Lond., to Eileen Elizabeth, second daughter of the late William Edward Toward of Newcastle, and stepdaughter of James Murrey, Lowther Avenue, Toronto, Canada.

LUCKHAM—BUCKNILL.—On July 4th, at the Abbey Church, Malvern, by the Rev. R. T. Crawley, Rural Dean of Chafford and Rector of North Ockenden, Essex, assisted by the Rev. E. P. Bennett of Warwick (cousin of the bridegroom), and the Rev. R. P. Pelly, Vicar of Malvern, Levi Stephenson Luckham, M.R.C.S., L.S.A., of Winchester Street, Salisbury, second son of Alexander Minty Luckham of Salisbury, and late of Studland, Dorset, to Elizabeth Grace, fifth daughter of the late Rev. George Bucknill, Vicar of High Ercall, Salop, and Mrs. Bucknill, of Saunderton Lodge, Malvern.

PORRITT—MCKENZIE.—On Monday, May 22nd, 1899, at the Church of St. John the Evangelist, Featherston, Wairarapa, N.Z., by the Rev. A. M. Johnson, M.A., assisted by the Rev. Thos. Porritt, M.A., the father of the bridegroom, Ernest Edward Porritt, third son of the Rev. Thos. Porritt, Featherston, to Elizabeth McKenzie, only daughter of the late Dr. McKenzie, Hampstead Road, London.

PRIOR—PEILE.—On July 5th at the Friends' Meeting House, Pardshaw, Samuel Prior, M.B., C.M.Glas., of Moldgreen, Huddersfield, to Emma Peile, second daughter of the late John Peile, The Beeches, Rogerscale.

ROSS—LOWE.—On July 5th, at the Parish Church, Ecclesfield, near Sheffield, by the Rev. Alford Gatty, D.D., assisted by the Rev. J. E. Gofton, M.A., James Alexander Ross, M.B., C.M.Aberd., St. Mary's, Penistone, Yorks, eldest son of the late John Ross of Aberdeen, to Annie, third daughter of Robert Lowe, Shire Green, near Sheffield.

SARJEANT—KEKWICK.—On June 28th, at St. Mary's, Islington, by the Rev. T. K. Richmond, Canon of Carlisle, assisted by the Rev. Dr. Barlow, Vicar, John Frederic Sarjeant, M.R.C.S., L.R.C.P., eldest son of John W. Sarjeant of Wellingborough, to Jane Eleanor, elder daughter of the late James Watson Kekwick of Carlisle. At home, 58, Parkhurst Road, N., August 1st, 2nd, and 3rd.

WEEKES—HICKS.—On July 5th, at Christ Church, Streatham Hill, by the Rev. Walter Hicks, M.A., Lincoln Diocesan Missioner (brother of the bride), assisted by the Rev. G. S. Nicholl, M.A., Vicar, Henry Holman Weekes, M.D., M.R.C.S., L.R.C.P., of Mansion House, Old Brompton, Kent, son of the late Dr. Henry Weekes, J.P., C.A., to Constance, daughter of the late Sir Francis Hicks, J.P., D.L., of Oakfield, Streatham Hill, S.W.

DEATHS.

BAILEY.—On July 8th, at his residence, Kelmscott, Bromley, Kent, George Hewlett Bailey, M.R.C.S., etc., late of 38, Queen Anne Street, W., aged 71. Friends please accept this the only intimation.

BLACK.—On Sunday, January 8th, 1899, at Leeds, Walter Shaw Black, of Stockland, Honiton, Devon, aged 66. Cremated at Manchester by his own desire. (No cards.)

RICHARDS.—On July 5th, suddenly, at 47, Churnet Street, Collyhurst, Manchester, in his 37th year, Arthur Izod Richards, M.R.C.S., L.S.A., younger son of the Rev. Dr. Richards, Ealing, London. (No cards.)

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p. daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily. 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 2.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu, F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MR. W. F. B. EADON, L.R.C.P.& S.E. (Bristol) desires to hear of a maker of artificial ears.

M.B., M.R.C.S., asks whether there are any disabilities affecting English medical men intending to practise in the Canaries or Madeira.

R. M. P. L. is desirous of finding an institution or home for a decayed gentleman, aged 58, suffering from locomotor ataxia, with loss of power of the bladder. £40 a year could be paid.

CHARGE FOR SICK CERTIFICATES.

E. H. H., who is medical officer to a colliery club, asks whether it is a custom throughout the profession to supply certificates for other clubs for which the medical man is not the medical officer, free, or whether a charge of 6d. per certificate is a reasonable fee.

*** We learn on inquiry that in the Midlands it has not been customary for the colliery surgeons to make any charge for sick notes given to the colliers when those notes are for the ordinary sick societies, such as the Foresters, Free Gardeners, etc., and are the doctor's own printed forms. When any special form of certificate has to be filled up, such as are used by the Hearts of Oak and by many insurance companies—certificates giving special information for use under the Employers' Liability or Workmen's Compensation Act—it is now usual to make a small charge, varying from 6d. to 1s.; but the colliers almost always resent making any payment, and the enforcing of it is liable to produce ill-feeling.

ANSWERS.

WATER ANALYSIS.—Our correspondent will probably find the information he requires in *A Simple Method of Water Analysis, especially designed for the Use of Medical Officers of Health*, by J. C. Thresh, M.D., D.Sc., D.P.H. Second Edition. (London: J. and A. Churchill. 1898. 2s. 6d.)

FAIR PLAY.—Custom varies a great deal in different towns and cities. In some places it is rather the rule for many members of the medical profession to live in the same street, but if this is not the case in the town to which our correspondent refers we think he is entitled to some sympathy, although we cannot say that his neighbour was acting contrary to usage.

REMOVAL OF SUPERFLUOUS HAIR.

MR. BALMANNO SQUIRE (Weymouth Street) writes with reference to the note by "S." as to the removal of superfluous hair from the lip by epilation forceps that the plan is not satisfactory since it is followed by a permanent and considerable increase of the hair growth.

MEDICAL AGENTS IN AUSTRALIA.

W.H.J.H.—We are informed that Mr. L. Bruck, 15, Castlereagh Street, Sydney, is perhaps the best-known medical agent in Australia. He has agents in Melbourne and New Zealand: Mr. P. P. Wilcocks, 298, Bourke Street, Melbourne; and Sharland and Co., Loane Street, Auckland, New Zealand.

PREVENTIVE INOCULATION FOR DISTEMPER.

X.Y.Z.—So far as we are aware no reliable lymph for preventing the attack or lessening the virulence of distemper in dogs is known. The late Sir Everett Millais prepared and distributed a "vaccinating" material. This was obtained by inoculating agar tubes with discharge from the nostrils of a dog suffering from the disease. The growth was cultivated to the third generation and this culture used for preventive inoculation. This was naturally an uncertain mixture of organisms, and the results were equally uncertain. Occasionally a mild form of distemper appeared to be induced, and so protection was afforded; at other times disastrous results followed. Some French authorities, including Toussaint, regard distemper as variola of the dog, and as a preventive use ordinary vaccine lymph. This practice is somewhat largely adopted in this country and practised in precisely the same manner as vaccination of children, the skin on the inside of the thigh being the seat of the puncture. We have no evidence of distemper being the variola of the dog, but a good many "vaccinated" puppies pass successfully through distemper.

NOTES, LETTERS, Etc.

A CASE OF SELF-INDUCED INSTRUMENTAL ABORTION.

A CORRESPONDENT writes: The following case serves to emphasise the possibility of self-induced instrumental abortion, and the care necessary in dealing with such cases in private to protect oneself against, at least, the suspicion of malpractice.

A married woman with several children sent for me to visit her, and gave the following history: She knew herself pregnant, having gone several days over her time; since then (several weeks) she had been losing blood constantly. On examining her the cervix was found soft and patulous, with blood escaping from it, and the uterus irregularly contracted, apparently about the size of the pregnant uterus at four months. She had no fever, pain, nor tenderness.

On further questioning her, she at first admitted taking "herbs"; then that she had "scraped out the womb with a hairpin," showing me the pin, which was an ordinary woman's hairpin, the looped end of which she had used as a "curette," the operation being rendered easier by her suffering from slight prolapse, and pressing on the fundus through the abdominal wall. She informed me that she had done the

same thing twelve months ago, with the result that in the course of time she was delivered of what seems to have been a fleshy mole. She informed me that she had told no one but myself of the cause; and, with the possibility of complications in view, I decided to send her to hospital. Through the courtesy of the house-surgeon I am able to state that after a course of ecbolic medicine she was delivered of a fœtus of about five months' gestation, which appeared to have been some time dead, and the patient progressed satisfactorily. I am induced to chronicle the above case on the following grounds:

1. It has been frequently stated that self-induced instrumental abortion is impossible.

2. A practitioner would be placed in an awkward position if, when called to treat such a case, peritonitis and a fatal ending should supervene, he probably not knowing the actual cause.

3. If a *post-mortem* were made and a wound found, what would be the inference?

ACUTE INTESTINAL OBSTRUCTION CAUSED BY AN ADHERENT VERMIFORM APPENDIX FORMING A BAND ASSOCIATED WITH FŒTAL ARRANGEMENT OF THE PERITONEUM.

DR. F. H. HAWKINS (Reading) writes: In the report of the meeting of the Clinical Society in the BRITISH MEDICAL JOURNAL for June 3rd, the remarks made by me are somewhat inaccurately reported. I asked the writer of the paper if he regarded his case as one of appendicitis, as I did not quite gather from his paper if he did or not, and then proceeded to remark that cases of intestinal obstruction due to the adhesion of the appendix, and thus the formation of a band, are of much interest. A case of this nature was under my care not long ago. A male, aged 20, with symptoms pointing to appendicitis, who was also markedly hysterical, was about two weeks after admission, at a time when his symptoms were improved, suddenly seized with symptoms of acute intestinal obstruction—the abdomen was distended, did not move during inspiration, and somewhat later fæcal vomiting occurred. At the operation performed by my surgical colleague the small intestine was found to be obstructed by a band which was divided. Subsequently the patient died, and at the necropsy the appendix was found to be of a dark colour, slightly bound down, and had been divided. The free end was adherent at the mesenteric attachment of a loop of the small intestine. In the pelvis there were extensive adhesions between the intestines and the walls of the cavity, and there was a small collection of pus.

Although not exactly to the point, mention might also be made of obstruction, subsequent to an attack of appendicitis, due to traction and kinking of the bowel: two such cases were recently under my observation.

BROMIDE OF SODIUM IN THE TREATMENT OF THE MORPHINE HABIT.

DR. NEIL MACLEOD (Shanghai) writes: In my paper on this subject in the BRITISH MEDICAL JOURNAL of April 15th, p. 898, the directions for dosage as they stand are not intelligible. What was intended was this: The sodium bromide may be given in solution every two hours for three days, but not during the night after bedtime. The first and second doses each day should be two drachms, the third and subsequent doses one drachm. Three ounces thus given in three days will usually suffice to produce the deep sleep described in both papers.

The death of Case VI from double pneumonia was at the beginning of what turned out to be an epidemic of that disease, numbering more cases in a few months than had occurred in Shanghai during the whole of the previous twenty years.

TWO CASES OF INTRACTABLE UTERINE HÆMORRHAGE.

DR. T. GERALD GARRY (Liverpool) writes: I have read Dr. Inglis Parsons's letter in the BRITISH MEDICAL JOURNAL of June 24th, and like him can report many cases of intractable uterine hæmorrhage successfully treated by positive pole of continuous current. The effects of this pole are similar to an acid caustic, owing to the accumulation of acids, chiefly HCl, in immediate proximity to the electrode. The resulting cicatrix is hard, bloodless, and contractile. The albuminoid compounds of the blood vessels are also found to be clotted in, and also a little beyond, the region of chemical decomposition, acid albumen being formed. The positive pole of the continuous current is thus powerfully hæmostatic and anticongestive as well as caustic with higher intensities.

During the past ten years I have used the continuous current in nearly 500 cases, comprising various uterine conditions; 63 of these women had tumours, 54 of whom have been symptomatically cured. In fully 95 per cent. of the cases treated, hæmorrhage (when a prominent symptom) has been controlled, and this result has been almost invariably permanent.

I quite agree with Dr. Parsons that the uterus could be saved to many women by the judicious employment of electricity, but the tendency at the present day is to extirpate that organ where many able members of the profession recognise no real cause. It was only quite recently that at a meeting of a gynæcological society a member calmly proposed hysterectomy for *post-partum* hæmorrhage. There was no protest.

TREATMENT OF ACUTE APPENDICITIS BELONGS TO THE DOMAIN OF MEDICINE.

DR. JAMES HITCHCOCK (Fochabers, N.B.) writes: Than Mr. Maylard's paper in the *Glasgow Medical Journal* for March, 1899, on the Treatment of Acute Appendicitis, nothing could be more acceptable nor published more opportunely; and I would venture to predict that Mr. Maylard will be heartily congratulated by the profession for a rational, scientific, and timely paper on the treatment of a subject of considerable importance. The author has kindly presented a copy of his paper to his colleagues. I purposely introduce the redundancy opportunely and timely to draw attention to the fact that there is, and has been for some time past, an abnormal haste to introduce and act upon imperfectly matured ideas and crude methods in many departments of medicine and surgery; and but for this paper of Mr. Maylard's a too avaricious surgery would have appropriated yet another subject which undoubtedly belongs to the domain of medicine. Mr. Maylard probably could not have chosen a more suitable subject with which to illustrate the quagmire of doubt and difficulty into which these too precipitate changes from one line of treatment to another land the rank and file of the profession. In cities and in large medical and surgical institutions where professional consultations and free exchange of opinion are easily obtained, the doubt and difficulty may not be so manifest, but with country medical men, who have to supplement a limited experience with ideas gleaned from current medical literature, the case is quite different, and the result is that the country practitioner, often at the critical moment, is in doubt as to what is the proper line of treatment. The patient need not know of this uncertainty in the physician's mind, but it would be infinitely better that such doubt did not exist.

The treatment of acute appendicitis so precisely defined by Mr. Maylard is that which I have followed for the last twenty years, and the results have been uniformly satisfactory. In the case of a boy, aged 11, there was a subacute relapse about a fortnight after all acute symptoms had subsided. The local fulness threatened to be unusually obstinate, and I substituted poppyhead and belladonna fomentation for the poultice; I also gave the enemata in the "feet-up" position. The cure was complete. The science of medicine is being purged by enlightened criticism and scientific methods of research, and the ultimate result will be incalculable gain; but meanwhile, let enthusiastic but inexperienced workers refrain from so dogmatically asserting their views.

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REMARKS
ON
REST AND EXERCISE IN THE OPEN-AIR TREATMENT OF PHTHISIS.

BY ARTHUR RANSOME, M.D., F.R.S.,
Bournemouth.

IT is now well recognised as an axiom in both medicine and surgery that an injured organ must have as much rest as is consistent with the healthy subsequent performance of its functions.

In his now classical work on *Rest and Pain*, Mr. John Hilton takes as his text the importance of "rest—physiological as well as mechanical" in the treatment of injuries, and points out some of the methods by which it may be secured in both surgical and medical injuries. In all tuberculous diseases of the joints it is well known that the first condition of recovery is rest; and, as I have shown by observations upon the movements of the chest walls in phthisis, Nature herself points out the need for rest of the injured lung, and measures its degree by imposing upon the intercostal muscles a more or less complete cessation from action.[1] It is, indeed, probable that in the variations of the chest movements we have both a measure of the constitutional vigour of a patient and of the comparative safety with which exertion of the chest muscles may be permitted in voluntary acts.

Mr. Hilton points out the strict analogy existing between disease of the joints and certain affections of the chest. In the former class of complaints, an early sign of mischief is pain in the nerve and rigidity of the muscles, or some other effort made to secure immobility of the part; an effort often directly proportional to the gravity of the disorder. There is in fact a special arrangement of the nerves supplying joints and muscles in order to impose rest upon the injured part.

But Mr. Hilton is able to show that the same law of anatomical distribution holds good with regard to the pleura. He says (p. 256), "The same intercostal nerves which supply the intercostal muscles moving the ribs supply also the serous membrane lining the thoracic parietes, and the skin over those different but physiologically associated structures, in order to produce harmonious and concerted action during the varied states of respiration. Here, then, we have the pleura representing the synovial membrane; the intercostal muscles representing the muscular apparatus connected with and moving a joint, and the cutaneous branches of the nerves spread over the intercostal muscles, assimilated in their arrangement to the cutaneous branches which supply the skin over the insertions of the muscles moving the joint."

He adds that, in pleurisy, the "spasmodic contraction of the intercostal muscles, induced by the inflammatory condition of the pleura, is precisely analogous to what we see in joint disease."

These observations give great significance to the diminution of movement of the ribs over the site of active tuberculous disease of the lungs, and they point to the necessity of securing, as much as possible, rest to the injured organ.

The importance of rest to the injured organ in the treatment of phthisis has not been lost sight of by practical physicians; but, for the most part, the subject has been spoken of in a somewhat perfunctory fashion by most of the authors of textbooks.

More than thirty years ago, however, Dr. Horace Dobell pointed out the importance of rest in pulmonary consumption, and devised various means (amongst them the "lung splint") for keeping the injured parts at rest. At the same time he cautions the profession that such means, if not used with the greatest circumspection, may easily do more harm than good.

In his work *On the True First Stage of Consumption* (pp. 70, 71), he says: "It is a law of animal nature to save a tender part, and I see in the attempt at lessened respiration in early phthisis an example of the operation of this law."

Some of the other reasons which he gives are at least debatable, but the practical application of his principles was excellent, and his concluding remarks (*loc. cit.*, p. 46) should be noted by every practitioner: "How scrupulously new tasks should be set; how carefully watched their effects, lest even now they cannot be continued in safety. On the first sign of their being badly borne, they should be moderated or promptly stopped."

It is in the various sanatoria for the "open-air" treatment of phthisis that this subject has received the closest attention, but apparently there is still a great diversity of opinion on the question, and there is a tendency at some of these places to apply a hard-and-fast rule to all the patients. At some sanatoria the rule of reclining for the greater part of their time is enforced upon all patients with few exceptions. The method is called the *Liegekur*, and the galleries, or kiosks, are filled for many hours with patients reclining in their *chaises longues*.

At other establishments graduated exercise, as it is called, is in vogue, and it is not always pursued with complete discretion. Amongst private practitioners, also, there are great differences of opinion as to the kinds of exercise which may be enjoined upon phthisical patients, some recommending gradations of walking or hill climbing, others rinking, or tennis, or golf. It may be of service to inquire somewhat closely into the relative methods of these two methods of treatment, and to attempt to discriminate between the classes of patients upon whom they should respectively be enjoined.

A.—THE INFLUENCE OF REST.

1. Gain of weight. The first and, in many respects, the most hopeful result of repose is increase in the body-weight. When the appetite is good, and the digestive apparatus is in fairly efficient order, and food of the right kinds is taken, there is almost certain to be some addition to the textures of the body, and especially to its fatty matter, if prolonged rest in the recumbent posture is taken immediately after meals. When the body is partially horizontal the blood flows more easily from the extremities towards the heart; there are fewer demands upon this fluid from other organs, especially from the muscles; and thus the enormous quantities of fluid demanded for the digestive juices are more easily spared. It is probable that absorption and assimilation are also carried on more rapidly during repose. In any case, it is certain that in most cases in which the *Liegekur* is combined with the *Luftkur*, there is a distinct gain in the body weight. This circumstance is of no small importance, as it conduces to the ultimate cure of the patients; encouraging them at a time when they need all the good spirits they can get. It is also not without reason that such patients look upon the increase of weight as a good sign. As Dr. Weir Mitchell remarks: "Almost any grave change for the worse in health is at once betrayed in most people by loss of fat." And again: "The loss of fat, especially its rapid or steady loss, nearly always goes along with conditions which impoverish the blood; and, on the other hand, the gain in weight up to a certain point seems to go hand in hand with a rise in all other essentials of health, and notably with an improvement in the colour and amount of the red corpuscles.

2. This leads us naturally to the second benefit conferred upon the body by repose, namely, the better quality of the blood and its more ready oxygenation. Most practising physicians have had cases of anæmia or chlorosis which would not improve, in spite of any amount of Blaud's pills, until they were sent to bed for several weeks; and then they have rapidly regained their strength and their colour. It has been shown, first, I believe, by Moleschott, and afterwards by Pettenkofer and Voit, that the absorption of oxygen into the body mostly takes place during repose; and, though there is no leucocytosis in phthisis, there is usually a great deficiency of hæmoglobin. One of the results of the rest combined with the fresh-air cure is a speedy improvement in the complexion of our patients.

3. The continuous warmth of the body during exposure to the open air is better kept up in the recumbent posture than in any other. Cold is felt much more acutely sitting than lying down; the feet and the knees cool much more rapidly in the former posture. It is certain that the circulation of the

blood in the lower extremities is better carried on when the blood comes in a straight line directly from the heart to the toes, when it has not to overcome the resistance offered by the two right angles formed by the hip and knee-joints in the sitting posture; moreover, the sitting position makes it difficult properly to wrap up the lower limbs. It is of great importance in the treatment of phthisis that the extremities should be thus constantly kept warm.

4. The most important result of the lying posture, however, is the entire repose given to the bony levers overlying the injured part. In the tranquillity of repose there is scarcely any motion of the ribs. It is only in the effort of forced breathing and in the almost spasmodic actions of coughing that the ribs take part in the movements of respiration, and it is highly important that these movements should be kept as small as possible. There must be no disturbance of the underlying inflamed tissues, and no dragging upon any adhesions which may have formed between the two layers of the pleura. It behoves us, therefore, to choose the position of the body that will most completely spare the patient these efforts. The recumbent posture in all acute or non-quiescent cases is, accordingly, the best.

5. Closely allied to the last-mentioned result of the recumbent posture is its influence upon the state of fever, and generally upon all the other symptoms of the acute stages of the disease. It is a matter of common prudence to abstain from all exertion whilst the body is in a state of fever: but very few consumptives are willing, at any rate at first, to give in to this wholesome doctrine.

It seems to be almost a characteristic of this disorder that the sufferer neglects this symptom, and pursues his ordinary avocations when his evening temperature is often much above 100° F. It would seems that in many cases a restless energy seizes him, and that he resents any interference with his liberty, at any rate when it is not imposed upon him by a systematic course of treatment. All the more is it necessary, therefore, to place rest in the forefront of our disciplinary course. In the words of Dr. Delpit,[2] "When rest is applied to the treatment of chronic maladies it aids the action of remedies, opposes itself to the power of habit, facilitates the reaction of various organs against the morbific agent, and favours a healthy resolution."

Treatment of chronic maladies by rest has, however, its dangers as well as its advantages. There is probably no remedy in the whole range of medicine which may not do harm if it be pushed to an excessive extent. This is certainly true of the *Liegekur* in phthisis. It is acknowledged that in this disease our aim must be to raise the bodily powers to the highest point we can; but overmuch rest, without special precautions, may greatly endanger these powers.

By the lack of sufficient exercise it is well known that most of the functions may deteriorate; the muscles will waste and pass into a state of fatty degeneration; the nerves will lose their sensitiveness; even the special senses will become blunted and gradually fail in power. It is possible that some of the forces upon which we most rely to strengthen the body may fail us in our need, especially the appetite and the power of digestion.

We are told by the teachers of hygiene that "muscular exercise is necessary for a sufficient elimination of carbon from the body;" that "deficient exercise leads to weakening of the heart's action, and probably to dilatation and fatty degeneration;" that "it lessens both appetite and digestive power." For the attainment of full power of resistance to disease, therefore, a certain minimum of exercise is as necessary as a certain amount of rest.

Dr. Weir Mitchell, in his work *On Fat and Blood*, says (p. 49): "When we put the muscles at absolute rest we create certain difficulties, because the normal acts of repeated movement insure a certain rate of nutrition which brings blood to the active parts, and without which the currents flow more largely around than through the muscles. The lessened blood supply is a result of diminished functional movement, and we need to create a constant demand in the inactive parts. But, besides this, every active muscle is practically a throbbing heart: squeezing its vessels empty while in motion, and relaxing, so as to allow them to fill up anew. Thus, both for itself and in its relations to the rest of the body its activity is functionally of service. Then, also, the vessels, unaided by changes of posture and by motion, lose tone, and the distant local circuits, for all these reasons, cease to receive their normal supply, so that defects of nutrition occur, and, with these, defects of temperature."

It has been shown by physiologists that five times as much air is respired when walking four miles an hour as compared with that used in the lying posture, and one third more CO_2 is excreted.

The problem that we have to face is, therefore, how to secure the good which repose may be made to insure; in other words, how to keep the injured lung at rest, and yet keep the muscles and other organs in good condition. The problem is not insoluble.

In the case of neurasthenia, we know that Dr. Weir Mitchell solved it by calling to his aid massage and galvanism; and in some exceptional cases of phthisis we also may have occasion to do the same, but it is seldom that we are pushed to this extremity.

In most cases of phthisis we can attain our object (1) by insisting upon a certain amount of rest in the recumbent posture, especially after eating; and (2) by limiting the movements of the body to such degree of exercise as will not quicken the action of the muscles of forced respiration. In the more serious forms of phthisis, in which considerable exacerbations of fever are present or where the breathing powers are greatly impaired, it will undoubtedly be necessary to impose rest in bed, or at least to restrict the patient to his couch, but this rigour will not usually have to be enforced for so long a time as to endanger the efficiency of the muscular system.

When feeding is carefully attended to, supplemented, if necessary, by rectal alimentation, it is seldom that lying in bed, even for a few weeks, leads to loss of strength or loss of flesh. I have several times seen patients, worn to a great degree of emaciation, regain their full strength and go on to complete recovery even when confined to bed.

Most of our phthisical patients also are not in these extremities, and when the open-air system is boldly pursued the fever usually soon subsides, and the sufferers regain the power of gentle exercise. Then come into play our resources in the way of graduated exertion, but we have to take heed to the two conditions which I have ventured to lay down.

When the fever has gone down to a great extent, and when the body temperature does not often exceed 99°, but the patient is still somewhat feeble, it is best to persevere, for a time at least, with the lying-down treatment. "Another class of patients who are best kept at rest are the decidedly dyspeptic and those who are rapidly losing weight."[3] In some even of these cases the circulation and the tone of the muscular system may be kept up by permitting gentle walking exercise, say for ten minutes every two hours; or we may trust to the mere transit from the open-air shelter to the dining-room to keep up the muscular power and to prevent stiffening of the limbs. Under this treatment the patient will usually put on flesh, and will gain sufficient energy to extend his exercise by degrees, and if there is still no real fever he may gradually attain first to half a mile walk twice a day, then to a mile, and so on.

Other exercises than that of walking will now also be admissible—short rides on a bicycle or on a gently pacing hack, moderate games at croquet or "putting" on a green. In some cases, where there seems to be little danger of hæmorrhage, even a short game at bowls may be allowed, but in all cases the original restrictions must be observed. There must be no loss of breath and no overfatigue, and they must recline for at least an hour after the chief meals. Sledging and carriage exercise generally, including the Bath chair, may usually now be indulged in.

All exercises in which there is a possibility of these restrictions being over-passed must be strictly forbidden, and hence lawn tennis, golf, cricket, football, skating, tobogganing, and other violent games must be avoided until the patient is completely restored to health and is quite out of our hands. Even after apparent complete recovery it is doubtful whether any form of exercise, such as dancing or any other amusement in crowded rooms, should ever be indulged in, as this involves inhaling impure and dusty air, and thus lays the susceptible and injured lung open to reinfection by the

bacillus of tubercle. There are, however, plenty of other amusements usually carried on indoors which can very well be managed *en plein air*, such as concerts and variety entertainments, and photography—outside the dark room—is an admirable resource.

In many Alpine health resorts hill-climbing is a favourite mode of carrying out graduated exercise, but it is one that needs extreme caution. I have several times known hæmoptysis to result from a prescribed ascending walk. In one instance a patient was ordered to mount a hill 1,000 feet high, within three-quarters of an hour; he attempted it, and succeeded in accomplishing it in an hour and a quarter, but the result was a severe attack of hæmoptysis. Similar remarks apply to such forms of sport as rowing, fishing, shooting, and hunting.

It might be possible to restrict a patient to the milder modes of carrying on these occupations—fishing and shooting from a boat, or following the hounds at a respectful distance, and jogging along country lanes on a quiet cob; but there is always danger that the excitement of the chase will carry our charges beyond the bounds of prudence, and hence they are better prohibited entirely. These remarks point to the first objection to abuse of or indulgence in excessive exercise—namely, that it may lead to dangerous movements of the damaged lung or to overstrain of partially healed tissue. The conditions already insisted upon as to rest after meals, avoidance of fatigue, and loss of breath, will, however, usually be quite sufficient to curtail the patient's liberty with regard to allowable exercises. Even in regard to these we must recur to our first-mentioned principle—that Nature herself shows the way.

No active exercise which calls into action the muscles of forced respiration can be permitted so long as the rib movements over the parts affected are much restrained. It is not difficult for the skilled physician to form a judgment on this point. The eye and the trained hand will often be sufficient for our purpose; but, if more exactitude is required, and if it is required to have a record that can be compared from time to time, the 2-plane stethometer may be used with advantage. I should like again to lay stress upon the peculiarities in the movements of the bones situated over or in the neighbourhood of the diseased portions of the lungs. In practice we often need some indication of the extent to which the disease taxes the vital resources, and, if possible, some measure of its gravity as estimated by the system itself.

The influence of disease upon the system may often be made less obvious, owing to the natural vivacity and hopefulness of the patient, and very frequently those whose frames most resent the injury, and in whom it makes the most rapid progress, are the very persons to make light of the ailment, and to show a cheerful countenance during its attacks. It is no small gain to us, therefore, to be able to resort to the evidence of an instrument, independent of the emotions and the will, which shows in figures the estimate taken by the nervous and muscular systems of the patient of the degree to which he may be permitted to exercise the respiratory apparatus without danger.

The fact, which I often observed, that the movement records are not directly connected with the extent of the disease, may permit us to hope that they really tell us something respecting the constitutional vigour of the patient, and of the comparative safety with which the chest movements may be carried on, and thus may serve as a guide to us in our directions respecting the degree to which exercise may be sanctioned. On all these accounts, therefore, I venture to recommend the frequent use of the stethometer.[4]

Another source of danger from over-exertion in phthisis arises from the increase of the blood pressure by which it is generally accompanied. It has long been known that severe exertion may, even in healthy persons, cause rupture of blood vessels. In 1868, by means of sphygmographic tracings taken during rowing, Dr. Fraser was able to demonstrate the degree of increase in the blood pressure, and since then other observers have continued the work.

In an interesting paper by Drs. Edgecombe and Bain on the Effect of Baths, Massage, and Exercise on Blood Pressure,[5] they quote experiments by Lauder Brunton and Tunnicliffe, by G. Oliver, Marey, and Oertel, and all these observers found the blood pressure raised during severe exercise and lowered afterwards. Leonard Hill found that even moderate exertion, such as rising from the sitting posture and walking a few steps, raised the blood pressure, while hard exercise caused a considerable rise. In this he was confirmed by G. Oliver. The authors corroborate in the main these conclusions, but declare that the effects depend upon the nature and severity of the work performed.

It can readily be understood how important must be any rise of the blood pressure in a consumptive patient. Whilst softening of the infiltrated lung is going on, and when the vessels are left with imperfect support, and when they are liable to be stretched by adherent parts, there must be increased danger of effusion of blood whenever there is any rise in the blood pressure. Hence the need for extreme care in the prescription of exercise, and for constant watchfulness, lest the powers of the patient should be overtaxed.

Lastly, we must take account of the danger of nervous exhaustion and of any influences which may lower the vital powers. It is well known that over-fatigue or depression of spirits, or weakening of the bodily power from a sudden chill will render the system more open to microbic infection of any kind, whether from the bacillus of tubercle itself, or from other pathogenic organisms. Hence the necessity of avoiding all causes which may weaken the patient's power of resistance. Any excess of exercise may not only produce a dangerous condition of prostation, but it may cause sweating and subsequent chilling of the body, such as may lay it open to microbic attack.

In the open-air treatment there is, perhaps, less likelihood of the presence of micro-organisms, such as the diplococcus pneumoniæ or streptococci and staphylococci, and it is remarkable how free the inmates of such sanatoria are from all kinds of catarrhal affections, but the lungs of the more advanced consumptives are generally full of germs of various kinds, ready to spring upon the weakened frames at the first suitable opportunity. Hence the constant care of the medical officers of such establishments and of their attendants to prevent the occurrence of what is called "a chill."

Here, then, we again have a cogent reason for extreme caution in the prescription of exercise. I conclude, therefore, that both exercise and rest are needful in the open-air treatment of phthisis; but we may parody the words of Lord Bacon when, speaking of diet, he says: "both fasting and full feeding are necessary, but rather full feeding," so, in the treatment of phthisis, exercise and rest are desirable, but rather rest.

In the large proportion of our cases it will be found that most of their time will have to be spent in the semi-recumbent posture, and that only a very limited amount of exercise can be allowed.

The degree of rest that must be imposed will depend (1) upon the presence or absence of fever, and (2) upon the digestive and assimilative powers. The degree of exercise, (1) upon the muscular and bodily vigour of the patient; (2) upon the extent of movement allowed by the disease to the ribs in forced respiration, and especially to the bones over the site of the injured parts of the lungs.

In any case I would repeat what I have said before on this point. The consumptive must attempt no long walks, no great exertion. Not for him are "the wild joys of living, the leaping from rock up to rock, the strong rending of boughs from the fir tree, the cool silver shock of the plunge in a pool's living water, the hunt of the bear." Whatever exercise he does indulge in must be of the gentlest kind, and his amusements must be, for the most part, such as he can carry out while his body is in a state of partial repose—reading, drawing, music, the study of Nature, pleasant society, light manual tasks; these must fill up the bulk of the day, and only games that can be carried out without much exertion should be allowed, with long intervals of rest.

NOTES AND REFERENCES.

[1] *Prognosis in Lung Disease.* [2] *Dict. des Sciences Méd.* 1820. [3] On this point Dr. Walters remarks (*Sanatoria*, p. 38): "If the nutritional income is less than the expenditure, the latter must be as far as possible reduced. The same is true of those who are very anæmic or very feeble. In all other cases exercise is needful, according to an ascending scale. We may begin with passive motion or very gentle massage, followed by resisted movements in the recumbent position. After this, very gentle walking exercise may be tried, at first restricted to a

few yards at a time on level ground. As the invalid gets stronger the length of his walk is gradually increased; he then attempts a gentle up-hill walk, and in time he is able to take long walks up even steep hills with advantage. He is, however, never allowed to walk quickly; about two miles an hour is a very good regulation pace for most. He must never put himself out of breath by his exertions, and should stop directly he begins to feel fatigued. Prolonged fatigue, profuse perspiration from the walk, a decidedly raised pulse-rate or respiratory-rate, show that the exercise has been too much. If patients come in chilled from their walk, brisk friction with a warm towel, or a little digestive warm food, will often set them right. With a few exceptions patients should rest for half an hour or more before every important meal, and for an hour after. The most active exercise is best taken in the morning. (*Loc. cit.*) [4] I have gone more thoroughly into this subject in my work on *The Relation of the Chest Movements to Prognosis in Lung Disease*, especially pp. 64 to 68. [5] *Lancet*, June 10th, 1899, pp. 1552-56.

PRESIDENTIAL ADDRESSES

TO THE

BRANCHES OF THE BRITISH MEDICAL ASSOCIATION.

METROPOLITAN COUNTIES BRANCH.

THE ORGANISATION OF THE PROFESSION.

By Thomas Bryant, M.Ch., F.R.C.S.Eng.,

Consulting Surgeon to Guy's Hospital; Representative of the Royal College of Surgeons of England on the General Medical Council.

The Profession and the Public.

I feel now, as I have ever felt, that this great association of medical men is a pregnant fact, and that it ought to be a useful and active factor in moulding public as well as professional opinion into such lines as should be conducive to public and professional interests. For whilst with us professional interests must naturally take the first place in our thoughts, it should never be forgotten that the main purpose of our existence as a profession is for the public advantage, and that from such a point of view all our actions will be estimated by the world at large. Under these circumstances it is important that in all we do, or attempt to do, either as individuals or in combination, we should be studious to avoid, even in appearance, everything which might seem to the non-professional mind to savour of professional rather than of public advantage; and we should never forget that we are professional men and not tradesmen, so that not being wage-earners we may guard ourselves against being misled into following the methods of those who are, and who at times seem to be working for ends which appear selfish and from motives which sometimes seem unworthy.

And yet there are evils in the pursuit of our calling which want a remedy; some are connected with our public relations, others are more associated with our own body; for it is said that things are now done in daily practice which should not be done, since they degrade the men who do them in the eyes of the profession, and at the same time lower the profession in public esteem, and thus harm is brought about in both professional and public interests; for surely the interests of the profession and of the public are identical; when the profession advances in skill, knowledge, and character the public prospers with it, when the profession sleeps or lapses into bad ways the public suffers. The elevating influence of a clever and good doctor in a small town or village is fully and generally recognised, as well as the unhappy influence of what must be described as the professionally indifferent, casual, or trade doctor. It is important, therefore, for the public to be taught to understand that, since it is in its interests medical men should maintain a high tone of professional morality, so it is in the same interests that no scheme or custom which is calculated to lower the position or depreciate the value of the medical profession in the person of any one of its members should be encouraged or receive public support.

Under these circumstances no blame can be brought against those who seek for means to either relieve or cure the troubles which affect our body, and I believe it will be our best policy to amend our ways where amendment is called for before we venture to touch public interest, for by so doing we shall place ourselves in a better position to influence the public in our favour and to induce it to look at professional matters in a more friendly way. For public opinion is beginning to appreciate the value to the community of past professional scientific work in the way of the prevention and cure of disease and of the relief of pain, and under such circumstances it is less likely than it may have been to depreciate the value of our services if we be true to ourselves and to the profession of our adoption.

Some of our professional friends, to carry out these objects, would rely upon the reform of the Medical Acts and of the General Medical Council with the view of protecting duly qualified men from unfair competition from without; whilst others look to the great medical corporations for assistance, and ask them not only to employ to the full the disciplinary powers they possess to cleanse our body from within, but to obtain more powers should their present not prove efficient, and all parties seem to call for organisation, which is not only to be applied to compel the councils of the colleges and corporations to protect the so-called privileges of their own members, but organisation amongst themselves to enable them to apply such remedies to the diseases they recognise as circumstances may require.

The cries for help to the medical corporations and the General Medical Council, with the suggestions to reform the Medical Acts, have to my mind something humorous in their nature—although some improvement in the Medical Acts may reasonably be called for—for they are made without the slightest reference to the objects for which the corporations or General Medical Council were originally created and without taking into account the time which would be expended and the serious difficulties which would be encountered for these bodies to obtain fresh powers, even if they could be induced to apply for them. They forget also the insuperable difficulties which would be raised in Parliament against any laws which might interfere, in a public point of view, with the "liberty of the subject."

Indeed, these cries remind me of some sayings of Sidney Smith:—"When A. sees B. in grievous distress, his conscience always urges him to entreat C. to help him," and that the strongest test of the power of a charity sermon is made manifest when the sermon has so influenced a hearer as to induce him to put his hand into his neighbour's pocket in order that he himself might subscribe liberally to the cause advocated. In fact, gentlemen, it seems that we are all so prone to make other people do their duty, that we are apt under excitement to forget what we can do ourselves, and to throw upon such bodies as corporations and councils duties which do not rightly appertain to them.

With respect to the General Medical Council, I would ask you to recognise that it is a body which was created in 1858 in the interests of the public to regulate the qualifications of practitioners in medicine and surgery, and to enable the public to distinguish qualified from unqualified men. It has no other name than the General Council of Medical Education and Registration, and no other disciplinary powers than those required for keeping the *Register* pure, for which purpose it was given the power of striking off the *Register* or of suspending the name of any medical practitioner who has been convicted of felony, or been found guilty of what the Council considers "infamous conduct."

It has nothing whatever to do with regulating professional action or competition, except with reference to registration, and under these circumstances the Council always takes a public rather than a professional view of every case or subject that comes before it for judgment. Acting on this principle the Council, having for years set its face against the employment of unqualified assistants doing the work of qualified men, has finally pronounced in a very definite way against "covering" and the employment of unqualified assistants; this conclusion having been based upon the view that such a practice was primarily injurious to public interests and secondarily to professional. On the same principle the Council protects titles, so that the public should not be misled by any; and with a like object it has lately taken up the question of medical aid associations, and appointed a committee of its body, of which I am one, to report upon the subject, and particularly in its public aspect, and in the work of the Committee it has come out very clearly that there are two distinct classes of medical aid associations—one which is worked

by insurance or other commercial companies, while the others are developments of the great friendly societies.

COMMERCIAL MEDICAL AID ASSOCIATIONS.

With insurance and commercial companies which form and utilise a medical aid branch with the main object of furthering their own commercial ends, and of enabling their canvassers and touters to catch members, who are ever pleased to be led to believe that they will be able to obtain good medical attendance for a few pence, there can be no sympathy; and it is certain that no words which the General Medical Council can utter will have the smallest influence upon their conduct; whilst the law is in their favour they will last so long as they are successful.

We can only regret that educated medical men can be so misled as to sell themselves to such taskmasters, and to undertake professional work which they must know is not likely to be of much benefit to the public, upon terms which they must feel cannot be possibly be remunerative to themselves, but if you think over the question, you will soon understand that it would be wholly wrong for the General Medical Council to pronounce offhand all men associated with the associations as being guilty of infamous conduct and take them off the *Register*. We may pity their folly and condemn their action, and at the same time do our best to influence them to mend their ways. The following resolution, which was passed by the General Medical Council on June 6th, may help the cause:

> That the Council strongly disapproves of medical practitioners associating themselves with medical aid associations by which systematic canvassing and advertising for the purpose of procuring patients are practised.

This resolution may in the future blossom into something stronger should any special case of systematic canvassing for the purpose of procuring patients come before the notice of the Council.

THE CONCILIATION BOARD AND FRIENDLY SOCIETIES.

There is some reason to hope that much good may come from the negotiations which are still in progress between the representatives of the great friendly societies and the Committee of the Council; for the spirit which has animated both parties has been of such a healthy nature as to encourage a hope that good may be evolved out of its deliberations. Indeed, I am pleased to report that on April 13th, at the National Conference of Friendly Societies held in London, it was unanimously resolved that the suggestion of the Committee of the General Medical Council should be acted upon, and that a Conciliation Board should be formed, composed of the representatives of the friendly societies and of some members of the medical profession, to discuss all questions which may arise between the societies and the medical profession.

With this Conciliation Board at work I can well believe that much good can come, and that many if not all the difficulties which now exist between the friendly societies and their medical officers will become adjusted. If so, much benefit will be effected for both the public and the profession, and under such circumstances, if the friendly societies work harmoniously, there is reason to believe that the commercial medical aid associations to which I have drawn attention will fall into decadence.

PROFESSIONAL OPINION.

With respect to the medical corporations, the cry of the profession for help under existing difficulties is not neglected, for both Royal Colleges use to the full the ample powers they possess for purging their lists of bad men, and of censuring those on the borderland. They are now, as they have been in the past, always ready to consider any case of real or suspected malconduct when such has been rightly placed before them. But it is to be recognised that these corporations are not prosecuting bodies, and that they expect the evidence of error in any individual case to be so placed before them that they can adjudicate upon the case with safety. The evidence can only be brought under their notice by their own Members, and it is better that such should be brought together by some organisation of medical men rather than by an individual. The essential point is that the evidence should be clearly brought before the notice of the colleges.

As to organisation as a means of correcting the admitted and supposed evils which affect our profession, I may say at once that I am a believer in its value, for it means to my mind self-help, individual or combined, which is likely to be far and away more efficacious in its results than the wild cry to councils and corporations for assistance or reform of which we hear so much.

But this medical organisation must not be laid on trades union lines, and no selfish or unworthy motives should be its motor powers, for the ends to be achieved should be the good of the profession and the benefit of the public generally, since no medical service can surely be of value to the public unless it is based on mutual advantages.

The organisations of which I speak are not, however, to be of an overwhelming kind, although one of them is to be this great British Medical Association, neither are they to be endowed with prosecuting powers. Let the prosecuting powers remain in the hands of the existing defence associations which have by time and experience proved their competency to do the work provided for them, and let the profession give these associations its full support. Indeed, I should like to see every member of the profession a member of one of them.

The organisations or medical societies I am now advocating are to be of a local or district character, and should include, if possible, all the medical men of the district. Their objects should be "professional" and "social," and whilst every effort should be employed to render its medical meetings of value and interest as a medical society, its social meetings should be of no less importance, for, at such, the main purpose should be to so influence one another to give up or adopt all practices such as the society as a body has declared after full discussion and consideration to be either good or bad, and to bring into harmonious and friendly working the medical practitioners of the district. Through the influence of such meetings all vulgar methods of conducting work which injure the profession, although practised only by a few, will probably be soon given up by the offending members, and when the disposition to do so fails to show itself, the suggestion that at the next annual meeting the re-election of the recalcitrant member may have to be considered will probably bring about the desired result; should, however, the non-election of the offending member be the order of the day, let it be understood that as soon as the reprehensible practices are given up, the erring brother may expect to be re-elected, for the object of the society is to raise the profession in its district, and for this purpose everything like persecution is to be condemned.

Where Branches of this British Medical Association already exist, I would suggest that they should be used for the purposes indicated, and that each Branch institutes a "social" side. I have used the word "social" instead of "ethical" as commonly employed from the feeling that the word "ethics" has more to do with the morals and manners of the man than with his professional methods, and that the ethical laws by which a medical man is governed differ in no respect from those which are wont to govern our Christian neighbours.

When the Council of one of these Branches finds a difficulty in coming to a decision with respect to any case which has been brought before it, I can see no reason why it should not appeal for help to the Council of the Association with the view of having an assessor appointed to help it in its work, and by so doing the parent Society will be only carrying out the objects of the Association—the good of the profession. Indeed, I believe that by encouraging and acting on this suggestion the public benefit of this great Association would be much enhanced.

When a case comes before a Branch which seems to be beyond its functions or power to adjudicate, with or without an assessor, and the point to be decided appears to bring the offender into conflict with the by-laws or laws of the General Medical Council or one of the corporations—let an appeal to one of these bodies be made by the Council of the Branch, and care be taken that the case is clearly presented. When the medical defence associations can be used for this purpose, let them undertake the work.

Any differences which might spring up between rival doctors would by the Councils of these Branches be readily adjusted, and all questions of difficulty between public bodies and their professional workers be more readily solved, when

the public know that there is already in existence a professional body, with powers to call to their assistance assessors of authority to take into full consideration the subject in dispute, and to advise accordingly, the question in dispute being considered by the public and professional bodies interested before the final decision is reached.

And here I would like to put in one word of caution, and that is—however united the medical society may be in any question of dispute with laymen, let the society be sure before coming to its decision that it has looked at the matter as fully from its public as from its professional aspect, for the public have their rights, and no professional requirements will ever be allowed to override them.

The scheme I have in outline laid before you is one of self-help all round, and if carried out in a reasonable spirit must work for public and professional good, since it is a means of bringing into harmonious action the influence of every local body of practitioners upon its individual members with that of this great British Medical Association, and the General Medical Council with the corporations. By means of the local districts, worked in the manner which has been indicated, the influence of friendly association and discussion must prove beneficial to the district in which it exists; and the help the parent Association, or one of its Branches, could give by means of assessors would not only be of great value directly, but would at the same time tend to utilise in a happy way the powers of this organisation for the public good.

The General Medical Council and the great corporations would also be brought into line with the profession as a whole, for the profession would by the scheme laid down be working with them in purifying the whole body, and in so doing would be learning something more of the purposes and objects for which these bodies were originally formed, and by so doing would help the work we all have in hand, professional and public good.

I am well aware of the probability that some of my hearers may say of my remarks what has been said of others similarly delivered—that it is easy for a President to preach from his official position, and to lay down schemes which he may consider calculated to be of use, to help the great body of general practitioners in their troubles—but of what value can they be, since as consultant he knows but little about the wants of the large body of whom he talks.

This may or may not be the case under some circumstances, but I do earnestly ask you to take my remarks for what they are worth, and to consider them carefully before you brush them aside as theoretical and useless; for although a consultant and office holder to both the General Medical Council and Royal College of Surgeons, I am the son of a very successful general practitioner, and the father of another who I trust will be successful. I personally passed through the very unprofitable process of an apprenticeship to a general practitioner, and after taking my diplomas practised generally for seven years, when I passed into hospital and consulting work. I can consequently claim to be in close touch with every branch of professional activity, and have certainly not found as a consultant that my opportunities of knowing the wants and wishes of the general practitioner have in any way been diminished. I trust, therefore, that you will give my suggestions careful thought, for they are based upon a desire to encourage self-help by placing you in a position to help yourselves, and to discourage the cry for outside assistance with the professional apathy which is so inimical to all improvement.

I ask this of you under a conviction that the scheme I have placed before you will prove of benefit both to the public and profession.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The quarterly court of the directors of the Society was held on July 12th, the Treasurer, Dr. Potter in the chair. Four new members were elected and the deaths of three reported (one an honorary member). There were no fresh applications for grants, and it was resolved that a sum of £1,201 10s. be distributed as recommended at the last Court to the 49 widows, 10 orphans, and the 6 recipients from the Copeland Fund. The expenses of the quarter were £49 8s.

LANCASHIRE AND CHESHIRE BRANCH.

ON THE DUTY OF THE PROFESSION WITH REGARD TO ALCOHOL.

BY CHARLES MACFIE, M.D.Edin.,
Bolton.

[AFTER some preliminary observations on the manufacture and chemistry of alcohol, Dr. Macfie spoke as follows:]

HISTORY OF PROHIBITIVE LEGISLATION.

The crying evils arising from the use and abuse of alcohol are ever present with us, and in no diminishing quantity, and the helpless hapless victims caught in its toils are daily reaching out their hands beseechingly to us to snatch them from the overwhelming embrace of the alluring demon; therefore we, as a profession, the servants of the public, and yet the masters and teachers in all that appertains to the well-being of the body, whether in health or disease, assume a grave responsibility when we prescribe or countenance the use of alcohol. The effects of alcoholic beverages were as familiar to the B.C. period as they have been since, but we note that the aim of the philosopher and the physician was to promote a condition of body more resistant to the effect of alcohol, or else to help the individual to throw off its evil effects, rather than to encourage habits of sobriety amongst their clients. We thus have preparatory and recuperative remedies.

In ancient Anglo-Saxon times recourse was mostly had to the treatment of the symptoms of the after-effects of alcohol, such as "swelling of the eyes, unconsciousness, dimness of vision, headache, etc." The methods were mostly derived from ancient Roman practice. The ancient physician, in the treatment of the after-effects, had great faith in emetics, and a cold shower bath followed by a sleep, a shampoo, and the application of various oils or ointments to the head, and a "hair of the dog that bit you," in the shape of various aromatics and stimulants internally—such as in ancient England a small beer, or in more recent times a brandy and soda, or even a wineglassful of Worcester sauce. But governments in ancient times had recourse to repressive measures against the vice of drunkenness. The Egyptians flogged and imprisoned. Nebuchadnezzar, King of Babylon, suffered a peculiar sentence for the sin of drunkenness. In ancient Grecian laws for the wine-bibber the physiological minimum was even then prescribed: "Three cups—one for health, one for cheerfulness, and one for sleep." Amputation of the legs, and even the death sentence, have been carried out against the excessive drinker. In Turkey molten lead has been poured down the throat of the inebriate, and every form of "iniquity, cruelty, and indignity" has been tried and found wanting. But in our own country many and varied have been the restrictions placed on the lover of his cups, and the powerful arm of the Church has been used to enforce them. The law of St. Gildas, enacted at the close of the sixth century, "which sent the drunken monk supperless to bed," was probably the first liquor law in this country; gradually the laws became more severe, until at the end of the seventh century laymen were included in their scope, on whom a punishment of fifteen days' penance was imposed; no drinking was allowed in church or at wakes, and tavern drinking was prohibited to the priesthood.

In the latter half of the tenth century King Edgar instituted prohibition:

By reducing the number of the alehouses in the villages, and introduced the custom of the peg. The service of the Devil was had recourse to to keep the people sober in mediæval times. In the time of Edward III the most ordinary table comforts were treated as luxuries, even dress was regulated; but it was like stemming the advancing tide with a pitchfork. Local control was then in vogue, and corporations had recourse to all manner of prohibitive measures, such as the Newcastle jacket, the filthy hurdle, ducking in filthy water, the cucking stool, the pillory, the stocks, and the pound, in which three last the culprits were battered with all the "filthy token" of a jeering public. In the reign of Edward the First early closing was enforced, and the quality of the liquor assured by penalties for selling inferior. It was in the reign of James the First that fines were first imposed on those who "tarried long at the bar," and the innkeepers for allowing tippling. Even the use of wines was restricted to those of a certain social status. The dead bodies of drunkards were buried in the highways or else burned. It was in the middle of the seventeenth century that the most repressive measures yet enacted for the reduction of the vice of drunkenness were put in force, and at this time (1660) the excise laws were established, also that ardent spirits came more into use. "O,

thou invisible spirit of wine, if thou hast no name to be known by, let us call thee Devil!"

From this time onward to the present day there has been a steady increase in the consumption of alcoholic beverages. From the earliest periods to the present day the aim of all liquor laws has been to control drunkenness amongst the poorer classes. Amongst nations, those inhabiting the extremes of temperature are now the most sober. Dr. Archdall Reid argues that the most intemperate races are the primitive ones who have the dormant desire stirred up to uncontrollable craving after once tasting alcohol, and that the older nations are now temperate because, as he says, "those individuals who most delighted in it (alcohol) were eliminated;" and he instances the Greeks, the Italians, the French, the Spaniards, the Portuguese, as the most temperate of nations. But why not also the dwellers in Arctic regions, who have always been temperate. It is like arguing on the lines of the old Scotchman who denied that anyone ever died from drink, but he had seen many a one succumb in the training. Another author, Bannister, an American, argues much in the same vein that the supremacy of Britain has resulted "partly from her system of convict transportation and partly from her drunkenness—the moral and mental weaklings thus shortening their lives and precluding them from bringing into the world other weaklings." He forgets that the vice of alcoholism takes hold of one mostly at the period when the procreative powers are on the wane. Arguing on the lines of the above one might say why not give vice a free hand, when it would throttle the weaklings and leave the human race perfect.

My own experience of Portugal is that it is fast being educated in the vice. The wines of Greece are now much less alcoholic than in the past. In Belgium M. le Jeune has introduced a Bill in the Senate for the diminution of the increasing inebriety by enforcing a reduction of the number of places for the sale of alcoholic beverages, and poor France stands to-day at the head of the "ethylic" nations as the most drunken one. Dr. Debove, as quoted in the British Medical Journal, and supported by other officials of departments and jurymen, says that the resources and strength of the country are impoverished by this vice. Quoting figures:

The proportion of alcohol at 100 degrees drunk amounts in Paris to 14⅝ litres per head (1 litre = 35.196 ounces), in Belgium and Germany 10 litres, England 9 litres, Switzerland 8 litres, Italy 6 litres, Sweden 4 litres, Norway 3 litres, and Canada 2 litres. France drinks 838,000,000 gallons of wine, 15,787,000 in the United Kingdom, 71,412,000 gallons in Germany, and 32,141,000 gallons in the United States. As to beer, Germany comes out at the head of the list with 1,353,396,000 gallons, the United Kingdom next with 1,251,213,000 gallons, the United States with 890,705,000, and France 199,122,000 gallons a year. Of spirit we drink 40,414,000 gallons, France 71,895,000 gallons, Germany 100,364,000 gallons, and the United States 60,948,000 gallons. In the United Kingdom the consumption per head, taking the average of the alcoholic strength of the different beverages, and calculated as alcohol, was in 1892 2.392 gallons, and in 1896 2.447. Last year (1898) whisky was consumed to the amount of 33⅜ million gallons, excluding methylated spirit, and that for exportation and for fortifying wines which amount to at least 9 million gallons more; of beer there was consumed 35 million barrels, and "the summary for each man, woman, and child in the United Kingdom in 1898 was 31⅛ gallons of beer, 1.03 gallon of spirit of all kinds, and 0.41 gallon of wine—or approximately in money, 68s. to 70s. per head was spent on liquor.

What has been done in recent times to stem the tide of alcohol? Government has shortened the hours of beer houses, and the hours of being open on Sunday for licensed houses have been curtailed; but it has permitted the granting of out licenses to grocers. This last was introduced at a time when there was a feeling, supported by such men as the late Robert Lowe and Professor Fawcett, that the only way to kill excess in drinking was by having a free and unrestricted right of trading in alcoholic beverages, just as one may in bread and groceries. But the first real step on behalf of the free partaker of alcohol was the introduction by the Legislature of the Inebriates Act, 1879, followed in ten years by an Amending Act, in July, 1888, our first Act of Parliament on the subject being twenty-five years after an Act "for the Medical Treatment and Control of the Inebriate," passed in the State of of New York in 1854. Indirectly, from drink, the inebriate may bring himself or herself under the lash of the civil or criminal laws of the country. And lastly, there is the Habitual Drunkards Act of 1898, which is but yet in its long frock. The medical profession look upon it as a helpful crumb from the Legislative table which may lead to a full meal in the near future. Magistrates have suddenly, since the Westmorland case, awakened to their powers, and having become alive to the fact that a licence is but a yearly privilege, are not only more particular as to the character of the applicant for a licence, but as to whether the applicant is but the machine of a wealthy company.

In this awakening of authorities, whether Parliamentarians, the local powers, or the people, a large meed of the credit of what has been done is due to the medical profession. No one can deny that the temperance movement, originated in this country by the late Joseph Livesey of Preston, and to-day represented by the United Kingdom Alliance and a legion of similar smaller societies, has done much to further the cause of reform by suggesting to and impressing on the Legislature their best means to ameliorate the drunkard's lot. By pressing for much they have so far got little, but they wield immense and increasing power. The drunkard, no matter the degree, is anathematised by the Church, avoided by the world, and condemned by the State; but in the drunkard the medical profession recognises a state of disease. Unfortunately, law and medicine, looking at alcoholism from different standpoints, have hitherto taken up positions diametrically opposed on the responsibility of the inebriate. It is now more than a century since Dr. Rush in America first advocated legislation for the drunkard. Livesey started teetotalism more than thirty years after, and as the profession in the United States has always since taken a leading part in promoting means for the amelioration of the condition of the drunkard, I will take the liberty to mention the names of Dr. Parrish, Dr. Crothers, and Dr. Turner, who organised the first home for the special treatment of inebriates. In 1839 in this country Dr. R. B. Grindrod first set out the physical aspect of intemperance, and articles appeared from the pens of Sir Robert Christison and Dr. Peddie, but to the late Dr. Dalrymple is due the credit of introducing in 1870 in the House of Commons the first Bill dealing with the inebriate. It failed to pass. Drs. Bodington, Alfred Carpenter, and Stephen Alford, and others helped forward the movement, and, aided by the British Medical Association, the Habitual Drunkards Act of 1879 was passed, and by the same Association the Amended Act was drafted and passed into law in 1888. These Acts led to the recognition of inebriate homes that conformed to the regulations, and to-day there are about 100 inebriate homes in this country and America, but their usefulness has been checked by the many restrictions placed on the individual and the licensee by these Acts, and above all by the restraint having to be voluntarily submitted to. All honour is due to the untiring efforts in the cause of temperance of Anstie, Parkes, Richardson, and Kerr, who have done so much to guide the profession in the path of duty.

Our Duty as Members of the State.

It is our duty to help forward any movement that will improve the lot of the fallen and falling alcoholics in the hope of their again becoming useful members of society. It is calculated that 60,000 deaths occurred last year from consumption, and that as many died from the effects of alcohol—two preventable complaints. If we turn to our asylums we find about 20 per cent. of their inmates are insane from drink; to our workhouses, a majority of their inmates have led selfish, alcoholic lives in the past; to our law courts, where we find not less than 30 per cent. of the cases arise directly or indirectly from drink.

In statistics obtained from the United States we have 909 replies from prison governors, which show the proportion of crime in the licensed States due, directly or indirectly, to drink to be not less than 72 per cent., while a similar report from 108 officials in prohibition States gives a percentage of 37, and a considerable number of these latter were "bootleggers," in gaol for selling whisky. Out of 1,017 gaolers, only 181 placed their estimate below 25 per cent., and 55 of these were from empty gaols in prohibition territory.

I may here inform you that in 1898 the town of Bolton stood at the head of the list of the large towns of Lancashire for sobriety, taking the police-court record of cases as our guide, with 4.21 imprisonments from drink per 1,000 of the inhabitants, while such towns as Bootle and Salford show respectively 20.23 and 15.11 per 1,000 of inhabitants. The State should punish and confine the drunkard and not make him. The mode of admission to inebriate homes should be less

strict and should not be voluntary, but, in proper cases, under compulsion on the oath of two medical men and by the order of a J.P.; the licensee should have complete control of the inmates under sufficient Government inspection. No doubt the Act of 1898 will do great good but it only touches the outer fringe of the question. So far the home authorities have been dilatory in putting its machinery in motion, and the weakest point in the Act is that it has left the establishment of homes to the local authorities. By it a court of summary jurisdiction may order that criminal habitual drunkards may be detained in any State or certified inebriate reformatory for a period not exceeding three years. The same can be applied to persons convicted of drunkenness three times within the year, and power is granted to county and borough councils to establish inebriate homes under their own entire control. The Act does not touch the regular soaker who is never drunk; the steady drinker who swallows his week's wages in drink and starves his wife and children; the intermittent drunkard, quiet and unobtrusive but persistent—as one remarked to me—"why shouldn't I take what I enjoy"—only the noisy and the criminal. Yet when we read of London calculating to commit nearly 400 and Manchester no fewer than 200 in the year to inebriate homes, we hope for good results to the community as well as to the individual.

Our profession should closely watch the effect of this Act and when the time is opportune point out its faults and shortcomings, and use every endeavour as individuals and as a Branch to extend its scope. But Government should be stirred up to initiate laws for the proper control of the trade. It has become such a power in the land that even the Church is losing her influence with the people, and the State is in danger of being controlled by "the swollen tyranny of drink." Here again our profession, with our opportunities, can help to form opinion. We can be agents for good in convicting and convincing the public, showing it how, by abstinence, disease may be avoided and the span of life extended, for it is dishonouring to a country to have overflowing workhouses and gaols. As J. A. Stewart puts it in *The Minister of State*, "While justice is justice it is no credit to a State to have overflowing gaols." We all know that the Local Veto Bill of Sir William Harcourt died in the birth; but on the question of local veto or direct Government control I do not wish to dilate; there are smaller, but yet important, matters that we may influence. There are opportunities of exercising a limited local veto. Landed proprietors have the power of vetoing a licence for any building for the sale of intoxicants on their estates; why should not a community have a similar power of veto by a two-thirds or three-fourths' majority of the householders when a licence is asked for new premises within its borders? Limited local veto has been successfully carried out in the United States and Canada, and the Governments of Norway and Sweden have controlled the traffic, though the Russian Government has seemingly landed itself in a financial dilemma by attempting to monopolise and regulate the trade.

At the International Medical Congress in Washington, in 1887, a statement was subscribed to by many leaders of the profession, in which, amongst other recommendations the following was made: "We declare that we believe alcohol should be classed with other powerful drugs." The fetching of alcoholic beverages by children should be put a stop to. I am glad to say that the outcry against this custom has reached the trade, and the habit has been considerably curtailed, and the justices have decided to stop it; the giving of sweets is altogether stopped. There should be a stricter enforcement of the law against supplying drink to the already inebriated, and the medical magistrates have a great opportunity.

I know cases difficult of diagnosis will constantly occur, and opinions differ on what is and what is not intoxication. The Duke of Argyle remarked in the House of Lords, when a question about whisky and drunkenness was being discussed, that it was difficult to get a Highlandman to confess to his having seen a compatriot drunk. The reply usually came: "Na, but 'ave seen him aften that ye wad jist ken that he had been tastin'."

As with food, so with alcoholic beverages, the public should be assured of its quality. I would never fine for dilution with water. We should clamour for earlier closing hours and complete closing on Sunday. Magistrates should be empowered, before granting or renewing a licence, to demand evidence that the fittings of a house are plain and substantial and not garish, and that there be no side entrances. Grocers' licences should be gradually extinguished. My own opinion of the increase in the abuse of alcohol by women owing to grocers' licences applies equally to men. They have added to the opportunities. There has been a large increase in the death-rate amongst grocers since out-licences have been granted to them. The cause of the increased drunkenness in women is, in my opinion, largely owing to the increasing custom for young women to partake of red port, and married women are less shamefaced to-day than they were fifty years ago in partaking of their drop of gin or a half of Scotch in the public-house.

But we as a liberal profession, while originating and encouraging by all the means at our disposal measures for the prevention of the abuse of intoxicants, must do no injustice to "the trade," which has so lustily grown in these years, supported by our laws and pressed onwards on its progress by the habits of ourselves and our forefathers. Lord Peel's Commission is a house divided against itself, and, though it has elicited useful facts for future workers, its divided opinions will have little weight with the Government.

Alcoholism and Death Certification.

Under 2,000 death certificates have alcohol as a primary or secondary cause of death, though the Registrar-General's last report shows the death-rate from intemperance, both among males and females, to have been the highest on record. Yet it has been calculated that 60,000 deaths result annually from the abuse of alcohol, directly or indirectly. Many place the deaths from this cause at nearer 100,000 per annum. Why this nonconformity of certified deaths with actual deaths from alcoholic abuse? Because the medical man is only called upon to certify the immediate cause of death, which may have been cerebral apoplexy, without necessarily certifying alcoholism as a predisposing cause; because medical men wish to spare the family feelings, as Whiteing, in *No. 5, John Street*, says: "Half the certificates we write are mere anodynes for the public conscience;" and because medical men wish to protect the public from the industrial insurance companies, through their agents, who, in this as in other ailments, look to the death certificate as a protection from fraud (?) on the part of the insured or the friends. The forms for insurance are often filled up without consulting the party to be insured; death takes place, and the death certificate states that the deceased suffered from some chronic ailment for months or years before the date of the insurance policy. Our certificate thus often becomes the ground to the insurance company for the payment of a fraction of the original sum insured. The State has enacted that the friends of a deceased can demand a death certificate from us free of charge, and that the registrar must be paid according to fee scale for the registration of death and for each copy of the death certificate. Is it consonant with our dignity, or our sense of justice to our profession, that we act as the jackals of the industrial insurance companies, and that we, through our endeavour to protect the needy and often innocent friends of the deceased, render the Registrar-General's returns on death from alcohol or other ailment worthless? I say "No."

We must impress on the State, through our powerful Association and the General Medical Council, the need for having the death certificate treated as a confidential document, which should be transmitted direct to the registrar.

Our Duty as Individuals.

As units of society the profession can exercise great influence for good in the direction of temperance, and we are greatly helped at the present day by the steady advance in temperance views of the higher and middle classes of society; by the more enlightened working men; and by the immense strides the teetotal movement has made.

The day of the three-bottle men has gone. The opinion of the profession to-day is that a condition of health requires no alcohol, and the like opinion applies to highly-seasoned and indigestible foods. The social board still groans under its load of delicacies, and the custom of passing the wine still holds its ground at too many of our social gatherings. As Dr. Grindrod says: "The association of indulgence in the use of

intoxicating liquors with the intercourses of social life forms a strong inducement to the formation of intemperate habits." It may encourage the "feast of reason and the flow of soul," but the profession should, in their social capacity, discourage, by example, the regular use of alcohol at meals, as one glass lightly taken is apt to lead to another more lightly taken. We should abstain from "treating" with alcohol, whether amongst our social acquaintances or that ingrained custom of treating workmen to an encouraging glass. We can raise our glass much more sincerely when filled with water, as the late George Cruickshank did, than when repleted with alcohol. How many thousands owe their downfall to that habit.

The shop assistants mid-week half-day holiday is an accomplished fact, and the eight hours day for most employments is being pressed towards accomplishment by the various trades unions. Will the eight hours' rest be usefully or wastefully occupied? "Satan finds some mischief still for idle hands to do." A local secretary of the shop assistants half-day holiday told me he found there was a gravitation towards billiards and beer on the wet days especially.

The profession should encourage municipalities to give opportunity for the employment of those idle hands. We have our technical schools; we must have our public baths, our public gymnasia, our boating lake, and our ground for recreation, whether races, football, cricket, or golf. The free library system must be extended, and Bolton is well ahead in this. But each ward should have its branch library, with reading rooms and rooms for the separate sexes, where simple games may be played under strict supervision.

Speaking at the opening of a free library at Cable Street, London, Lord Russell said: "The history of the legislation by which it was possible to enable the people in their own localities to help themselves and their neighbours to improve themselves by institutions such as that.....was not altogether creditable to the intelligence of this great country." Speaking of its advantages he said: "In that way it offered a counter-attraction, on the one hand, against all excessive indulgence in sport.....and, furthermore, it afforded a counter attraction to the snug room of the public-house." Boys' brigades have resulted from a most praiseworthy effort on the part of the Church to keep the growing boy occupied and out of the gutter. The Church has even undertaken the part of Mr. Bung with a modicum of success. The first effort of this kind was made 20 years ago at Hampton Lucy, by the then rector. But if the model of the future public-house is to be on the lines of one in Birmingham, as given in evidence before the recent Royal Commission on the Liquor Laws, presided over by Lord Peel, where three quarts was the maximum allowed, and a "chucker-out" was retained on the premises, it would not have the support of the profession. Whatever in our municipal or country life will contribute to the social well-being of the community must contribute to its sobriety, and will always, as in the past, command the support of our profession.

Our Duty with Regard to Alcohol in the Practice of our Profession.

Doubtless in the first half of this century the medical profession prescribed alcohol without due discrimination; it was pleasing to the patient and friends, as it too often is at the present day. I regret to say that public bodies and leaders of public opinion do not always give the profession credit for having helped the community to form a truer opinion of the dangers of alcoholic beverages even in moderate use. I will detain you a moment to give two illustrations of my meaning. The North Bolton Church Mission issued a leaflet, dated November, 1898, in which, among other matters, it says: "May we, as clergy, be allowed to beg the doctors to warn our young mothers and our young girls against the hideous consequences of the vice of casual spirit drinking?" On their very knees they beseech us to begin what we have been preaching for more than a quarter of a century. Again, in the *Manchester Guardian* of February 15th, 1899, at the annual meeting of the Manchester and Salford Women's Christian Temperance Association and Police Court Mission, Mrs. Gamble, the honorary corresponding secretary, is reported as follows: "In the latter part of the year 600 copies of a letter, signed by the office bearers, were sent to the medical men practising in the city and neighbourhood, calling attention to the amount of inebriety, for the origin of which 'doctor's orders' was given as the reason or excuse, and urging their responsibility in this matter."

Certainly we have not thundered our views from platforms, nor trumpeted them from the house-tops, nor roused the sympathies of a re-echoing press by measured advertising; but in the silence of the sick chamber, at the couch of the dying, and in the secresy of the consulting room, we have by precept and prescription taught what we know of the good or the evil of alcohol.

The insinuation is a glaring economy of the truth, and, before such insinuations are published to the world, one would expect any fair-minded society or individual to first probe the truth about "doctor's orders." There are two sides to a ladder. No drunkard ever takes the blame for his or her degraded condition, as the profession so well knows. According to them, their own family circle and nearest friends are their direst enemies; and how often has a chimerical "doctor's order" been given as an excuse! I could understand our being urgently requested to avoid prescribing alcohol in any form on account of the moderate use of it becoming a habit and ultimately developing into a craving. The medical profession is as anxious that alcohol should not be abused and that human beings should not suffer in mind and body from its effects as any teetotaller can possibly be. Dean Hole, of Rochester, is thus reported in the *Church Gazette:* "I believe that total abstinence is a fine thing for a drunkard, but I don't believe in it for anyone else." I would remind those holding such views of the words of the Book: "If thou forbear to deliver them that are drawn unto death and those that are ready to be slain," etc.

To quote Dr. Clouston, of Edinburgh: "Primarily they (the medical profession) were scientific men—a doctor might be a religious man, he might be a teetotaller, but primarily he was in the world to do certain medical and scientific things—and from the medical and scientific point of view they read this great absolute physiological fact before them: that the first thing alcohol did, in 99 cases out of 100, was to affect the mental working of the brain of the man who imbibed.....As scientific men they had to ask what was the ultimate or the general effect—not the immediate effect."

Many of the public and temperance bodies are either ignorant of or blind to what the profession has been doing during the last few decades. Every home in these isles, I am sure, could give evidence of the trend of the opinion of the profession with regard to the prescribing of alcohol during the last fifty years, and my own experience of the profession during the nearly thirty years I have had the honour to count myself a member of it has been a steady determination to forego the employment of alcohol unless under a conscientious belief that alcohol, and alcohol only, could stay life's ebbing tide. Look at the readiness with which the profession employs the most recent remedies—substitutes for alcohol—in the hope of producing effects as beneficial as alcohol, but without the alcoholic recoil. Note the effect of the mind of the profession on our insurance companies. The scientific facts the profession has adduced have enabled the insurance companies, according to Dr. Kerr, to prove that while the death-rate in the general section amounts to 98 per cent., that in the temperance section amounts to 70.9 per cent. Many companies that have general and temperance sections accept abstaining lives at a 10 per cent. reduction on their premiums. From last year's report of the Sceptre Life Association there were 66.41 deaths amongst the moderate lives, and 51.14 amongst the abstaining, and during the past fourteen years 79.63 per cent. deaths of the former and 57.33 per cent. of the latter. Last year's report of the United Kingdom Temperance and General Provident Institution "confirms the preceding fifty-seven years' testimony" as to the general longevity of assured abstainers. In the general section the expectancy was 411 claims, and the actual claims 373; in the temperance section the expectancy was 380 claims, and the actual claims 247. Take the other side of the picture: The Associated Scottish Life Offices show the annual expected and actual mortality per cent. of males amongst beersellers, innkeepers, hotel keepers, etc., to be—Expected 1.47 per cent., actual 2.02 per cent.; and of females—expected 2.02 per cent., actual

2.25 per cent. The time was when no insurance company would accept a teetotaler.

The profession has been active in the promotion of temperance in our workhouses. Dr. Kerr says: "There has been a diminution in twenty years of nearly 60 per cent."; and yet pauperism, especially in this part of Lancashire—according to Sir John Hibbert—is on the increase. I had a certain confidence that I would be able to place before you detailed statistics of the consumption of alcohol in the chief British hospitals, but I have failed to get a reply to my request for information except in a few cases. St. Thomas's Hospital, in 1888, with an average daily number of patients amounting to 374, spent £1,063 in alcoholic beverages; and in 1898, with a daily average of 407 patients, spent £241. The Hospital for Sick Children, Great Ormond Street shows:

Year.	Number of Patients.	Cost of Alcohol.
		£ s. d.
1873	572	166 1 7
1888	1,100	23 10 8
1898	2,067	43 2 2

From the establishment of the London Temperance Hospital to December, 1897—this hospital received its first patient October 6th, 1873—alcohol had been given 25 times amongst 13,984 patients, and last year it was given 6 times amongst 1,290 in-patients. As far as I can calculate from the report, the total would only amount to a few ounces altogether, and yet the returns of the London Temperance Hospital compare favourably with those of other London general hospitals, with its 7 per cent. in twenty-four years to 10 per cent. fully in the others.

From Scotland I have two reports—one from Edinburgh and the other from Glasgow—which show a diminution in the amount consumed per patient per annum. In the Presbyterian Hospital, New York, the consumption of alcohol during 1898 was 3.67 oz. a head, the total of patients having been 20,190. One of the hospital secretaries writes me in reference to the great diminution in the amount of alcohol consumed at his hospital to-day and in the past: "Either the secretary and staff drank it, or the children must have had alcohol baths."

To go outside these islands: Surgeon-General the Hon. F. H. Lovell reports a decreased consumption of alcohol in the hospitals of Trinidad amounting to no less than 60 per cent. Dr. Dawson Burns says: "I believe it is true with regard to the hospitals in London, that the amount of alcohol given now is not more than one-half of what it was twenty-four years ago." Lord Lansdowne, Secretary of State for War, says: "In the last twenty years the number of court-martials, minor punishments, and fines for drunkenness in the army had approximately diminished by one-half."

We have, therefore, confidence in proceeding on the lines of recent years, and encouraged to prescribe alcohol in diminishing amounts.

Should alcohol in any form be prescribed in moderate doses? In health, I will quote Sir Henry Thompson:

> I may not hesitate to say that, after a long and wide experience, I am still firmly convinced that the habitual use of wine, beer, or spirits is a physiological error, say for nineteen persons out of twenty. In other words, the great majority of the human race, at any age or of either sex, will enjoy better health, both of body and mind, and will live longer, without any alcoholic drinks whatever, than with habitual indulgence in their use, even although such use be what is popularly understood as quite moderate.

Hamerton, in the *Intellectual Life*, says:

> It is possible to endure the most unhealthy labour when there are frequent intervals of invigorating exercise, accompanied by habits of strict sobriety.

Dr. Ryan, in *Under the Red Crescent*, in accounting for the speedy cures in the Turkish soldiery under the most disadvantageous conditions, during the Russo-Turkish campaign, says:

> The magnificent physique and robust constitution of the ordinary Turkish private soldiers I believe to be due mainly to two causes. In the first place, they never touch alcohol; and, in the second, the traditions of Turkish social life, and the rigid guardianship exercised over Turkish women, have effectually kept out the scrofulous taint.

It is not necessary in health, and can be looked on as a luxury with possibilities for local and far-reaching secondary effects. But in "deviation from the healthy standard," we must bear in mind the need for the utmost caution when we turn for help to alcohol. In convalescence from disease it has been proved useful by encouraging the appetite; in acute disease and threatened collapse, many have found it successful in staying the failing powers until the crisis; and, in old age, the flickering flame has been steadied by small doses of alcohol. My opinion is that we should abstain from prescribing alcohol until other and harmless remedies have failed to produce the desired effect. Even a small dose, well diluted, is sufficient to produce an inflamed appearance of the stomach, as Dr. Beaumont pointed out, while Parkes and Wollowwicz showed that one ounce increased the heart pulsations by 8,172 in 24 hours; both Richardson and Ridge, the one on the hearing and the other on the sight, showed that even a two-drachm dose well diluted impaired them, as well as muscular sensibility. Congestion of the retina with a similar dose was noted by Nicol and Mossop, and Krapelin found that the colour sense, in discrimination and speed, was impaired under moderate doses of alcohol.

Substitutes for Alcohol in Therapeutics.

In sudden emergency, and often far removed from other potent remedies, we may have to employ alcohol, as when there is threatened heart failure from loss of blood or other cause. No matter in such cases what temperance views we may hold, a serious responsibility rests on each one of us. But when there is other material and opportunity, in face of what is known of the silent and insinuating influence of alcohol, we should have recourse to them. Hot water as an aid to digestion and as a stimulant is not prescribed with that frequency it ought to be, while we are apt to forget that hot diluent drinks are much more useful than alcohol in warding off a chill, and we should strongly denounce the use of alcohol in these, pointing out how the warmth of the hot drink does the good and not the alcohol that is too frequently added. How often does a hot saline enema stir up the failing heart after severe hæmorrhage. Then properly-prepared and administered food, either given by the mouth or *per rectum*, is the most powerful stimulant to flagging energy, and it is as important to have foods carefully prescribed at the commencement of an illness as at the end, when perhaps all the resources of our art may fail if the feeding of the patient has not been carefully attended to in the first instance. In the tinctures of the various carminatives, such as of cardamoms, capsicum, etc., combined with a bitter, we have efficient and ready stimulants that will aid many a drooping appetite and encourage a sluggish stomach to overtake its duty.

But I need not weary you with too much detail, for in turning to our *Pharmacopœia* and our *Extra-Pharmacopœia* for substitutes for alcohol, we are at once impressed with the fact that most drugs have more or less stimulant properties, either local or general, for example, phosphorus, arsenic, and iron, chloroform and the ethers, and the various alkaloids—all stimulant in medicinal doses.

But we have to deal with substitutes for alcohol in those diseases where alcohol has usually been prescribed. For this we have the various preparations of ammonia, as the carbonate and the aromatic spirit; also the alkaloids—strychnine, digitalin, and strophanthin; oxygen gas and hyoscine. The use of alcohol is to "restore flagging vital actions, and check excessive or irregular movements." The stimulant action of those named is followed by no "recoil," only what is implied in the gradual cessation of their action, requiring or not a repetition of the dose according to circumstances, and the repetition of a stimulant dose does not result in any morbid craving. On the subject of carbonate of ammonia, Anstie says, in comparing it with alcohol, "that precisely similar benefits (though less in degree) may often be obtained by the use of carbonate of ammonia"; and further: "This general agreement of two such remedies as alcohol and ammonia in the effects they produce in acute disease attended with severe exhaustion is very significant." They remove coma, check delirium, arrest convulsions, and restore sound natural sleep. With the carbonate of ammonia or the aromatic spirit we may combat the effects of a disease exhausting to the nerve centres or the heart. Murchison considered large doses of carbonate of ammonia objectionable in typhus and typhoid fevers on account of its tendency in some cases to irritate the

bowels, and in the latter fever thereby increase the diarrhœa. I have not noted that effect, perhaps on account of always having prescribed carbonate of ammonia in milk and in frequently-repeated small doses. The same objection would apply to large doses of alcohol.

But there are times when that "less in degree" influence of these remedies (carbonate of ammonia and the aromatic spirit) compared with alcohol, which Anstie referred to, and the want of that "less in degree" may be disastrous to our patient. We have still other arrows in our quiver. In strychnine and digitalin, employed especially subcutaneously, we have much more powerful aids to flagging nerve power or failing heart vigour than alcohol, and both quantity and effect can be much better regulated than in the usual mode of alcoholic administration, care being taken in giving digitalin to combine it with a nitrite. Oxygen also may be employed as a helpful substitute, especially in chest affections, and I am glad the profession is again recognising its usefulness and giving it its proper place in medicine.

But alcohol has been proved a powerful soporific in febrile states with sleeplessness; yet we need not turn to it for aid, as in hyoscine, or that, with a minimum dose of morphine or heroin to counteract the first disturbing effect of the hyoscine, we have, while a cardiac stimulant, a useful calmer of disturbed cerebration, and much more powerful and certain than alcohol. Of course, in cases of immediate urgency, sulphuric ether may be subcutaneously employed.

But some may ask: What about alcohol as a food, which these remedies are not? With our present knowledge of the requirements of the body, and the most recent modes of preparing readily assimilable foods, administered *per os* or *per rectum*, and with our certain knowledge of the poor dietetic properties of alcohol—though these are denied by a few—that point need not enter into our consideration. Intravenous and subcutaneous alimentation are but in their infancy, and have not arrived at that certainty in administration that their employment can be undertaken by every medical practitioner. Though it is twenty years since Zuntz and Meering first suggested the direct injection of nutriment into the venous circulation, it is only recently that Lilienfeld has shown that alkaline solutions of grape sugar and conglutin can, in nutritive amounts, successfully be so introduced in the lower animals. According to von Leube, alkali, albumin, and syntonin "are alone suitable for subcutaneous injection." Recently alkaline solutions of the yolk of egg have been injected subcutaneously with advantage in children suffering from malnutrition. But to those of the profession who conscientiously believe that alcohol and alcohol alone is the remedy, let me impress on them the need to prescribe it on the lines that Sir B. W. Richardson did, and with a due sense of their responsibility, in measured quantities of absolute alcohol or spirit of wine as a prescription, never as a last resource, or promiscuously, because it will please the patient and friends. Our duty is to discourage its being looked on as a useful article of the household economy, on the same level as Epsom salts and castor oil, to be employed as occasion arises.

There is a form of medication much in vogue at the present time by means of wines of various remedies—such as coca, quinine, kola, beef and malt, etc., and the makers of these impose on a credulous public by their attractive advertisements and misleading recommendations. Even medical men are called in to encourage the use of these medicated wines by a judicious presentation of a sample bottle and a promise of further samples on request. Whatever may be the advantage of the medicament, one thing is certain, that few of the public who quack themselves with these proprietary articles are aware that the basis of the solvent or preservative is alcohol, often port or sherry.

Whatever malt may be capable of doing, it is certain meat extract has no sustaining effect, but when these are combined with a stimulant of doubtful composition I consider no medical man is justified in prescribing them, for should there be an imaginary success from their use as will so often happen in convalescence from any disease, the patient will prescribe it wholesale to friends. Should any one of us have a case where one or other of these medicaments may be considered useful, let it be prescribed in aqueous solution flavoured with some harmless ingredient; or if a malt let it be a standard malt extract.

But prevention is better than cure, and the medical profession has always taken the lead in that, exercising often great self-denial in initiating and encouraging means to prevent, alleviate, or cure the ills that flesh is heir to, always striving for the good of humanity, though often discouraged and harassed by the whimsical acts of a pliable Government, or the taunting sneers of a clique of fanatics.

With our present knowledge of the bacterial origin of so many diseases, we must carefully search for the cause of the disease, and when of bacterial origin we must, whether by the use of a serum or a bactericide, or the means that the surgeon can bring to his aid, act with promptitude and thoroughness when possible, and so prevent the need for any form of stimulation. To this end the profession would be much helped by an alteration in the Medical Acts which would put an end to quackery, the assumption of false medical titles, secure a one-portal system, and deal a blow to that underselling by individuals, medical aid societies, dispensaries, *et id genus omne*, that tend to sap the energies and damp the ardour of every honourable practitioner.

TREATMENT OF INEBRIETY.

But, with all precautions in the prescribing of alcohol, there will still remain a large class who will claim our help to quench the irresistible desire for stimulants. So far no remedy has been discovered that will aid us in the efficient cure of drunkenness, but many have been recommended, and it is a field from which rich harvests have been reaped by the omnipresent quack. Many of their nostrums owe their activity to alcohol or aromatics. One of the oldest and most esteemed in religious circles was a dipsomania cure, the daily allowance of which was equal to about an ounce of whisky a day; another cure contained alcohol, a mercurial salt, and sugar. It is supposed that the original mixture contained apomorphine muriate in sufficient quantity to produce a nauseating effect. Under the wing of religious institutions a third cure enjoyed much popularity, but a Government prosecution gave it its quietus. It contained 0.11 per cent. of strychnine. Various powders containing ginger, capsicum, etc., have been employed; there was Dr. D'Unger's cure, where an extract of red cinchona bark macerated in proof spirit was employed in daily diminishing doses as a certain cure in seven days. Yet we have drunkards still. Even liniments were employed, and the various wines of cinchona, coca, kola, pepsin, and quinine. Each has had its day and ceased to be. Hypnotism of course has been tried. But amongst the profession strychnine and the essences—for example, of capsicum, ginger, or cardamoms, have enjoyed the greatest reputation as aids or substitutes, not as cures. Great things were hoped for from coca and its alkaloid, but they also have been found wanting. My own experience of these was negative, except in one case, and the only one, where I was certain the treatment was carried out persistently. The wife was entrusted with the adding, surreptitiously, of a solution of the hydrochlorate of cocaine to the husband's tea, coffee, or beer. At the end of a month he complained to his wife that his desire for beer had gone.

Electricity, massage, and cold baths have all been tried, and in some cases with advantage, as an aid to other means. In my own practice I have not yet found anything of avail in the case of the confirmed drunkard except confinement in a home or asylum; but with the intermittent I have found personal influence of most account, and, by impressing on the delinquents the fearful consequences of a continuance in the same course—picturing in the darkest colours the pains and penalties that result—have brought back to light many who had entered the downward path.

A strict diet I have always enforced, with sufficiency of exercise—of which cycling is one of the best—and mental occupation, and where necessary an occasional soporific in the shape of a chloral draught. I debar meat, except tripe, sweetbreads, calf's head or sheep's head, and prescribe chiefly a milk and vegetable diet with fruit, and even these in moderation, as I consider excess in eating, by creating digestive troubles, often creates a desire for stimulation and tends indirectly to alcoholism. If a smoker, I allow tobacco in moderation, as I agree with Sir Henry Thompson that tobacco in moderation is an ally of temperance. Yet I am

aware that Dr. Talbot, of Chicago, who has made a special study of the subject, considers tobacco more toxic and productive of more serious degeneracy than alcohol or opium. In the present state of the law I have often availed myself, where there has been an element of lunacy in the case, of a lunacy certificate, and in this connection the profession in Bolton owes a debt of gratitude to our present courteous and open-minded chief magistrate for his willing readiness at all times, without infringing the law, to aid the profession in saving to future usefulness a fellow creature.

But, Government having moved to help the hapless, we look forward to great opportunities for good, both as regards drink and the drunkard, but there are but two sure measures for the cure of the inebriate: want of easy opportunity in his daily life to obtain drinks, and power to enforce complete abstinence once the craving is established.

EAST ANGLIAN BRANCH.

THE BRITISH MEDICAL ASSOCIATION AND ITS WORK FOR THE PROFESSION.

By E. LIVEING FENN, M.D.Edin., M.R.C.P.Lond.,
Physician to the Essex and Colchester Hospital.

GENTLEMEN,—I might perhaps have taken my seat in the President's chair with a mere formal acknowledgment of my promotion, and so have afforded you more time for the consideration of the several important subjects that are set down for discussion, if I had not been anxious to fulfil two very pleasant duties. The first is to express my profound sense of the honour you have conferred upon me by electing me as President, a post which I chiefly owe to the self-effacement of my friend, Mr. Addison, whom I know it would have been a pleasure to the members of the Branch to have seen in the chair. If I venture, with his consent and at your bidding, to assume the position to which he was so rightly nominated, it is only because I feel sure that I may rely upon the support of the Council and our Honorary Secretaries and upon the kindly forbearance of the members of the Branch. My second duty is to extend to all present, on my own behalf and that of my colleagues in the town, a hearty welcome to the ancient borough of Colchester, in whose interesting but ruined castle I have, by the kind permission of Mr. Round, the pleasure of receiving you to-day. Interesting as this ancient Norman keep undoubtedly is to the archæologist, I do not propose treading on these debatable grounds, and I will only say in connection with this subject that in the galleries adjoining you will find a large and valuable collection of Roman antiquities, including the famous Joslin collection. Those who are not acquainted with it will find the time occupied by a visit to this collection to be well spent. In the unavoidable absence of the Curator, my friend Mr. Laver has kindly undertaken to point out the most important objects of interest to any visitors.

There is in connection with our town certainly one other point of especial interest to medical men, for in the Church of the Holy Trinity repose the remains of the celebrated Elizabethan physician, Dr. William Gilbert, who was born here in 1540; he took his degree of Doctor of Medicine at Cambridge in 1569, and settled in London as a physician in 1573; he ultimately became physician to both Queen Elizabeth and James I, but died at the age of 63 in the year 1603. He employed his leisure hours in philosophical experiments, particularly relative to the magnet, and it is said that it was a perusal of his treatise *De Magnete* which induced Galileo to turn his mind to magnetism. This work was, says the historian Hallam, the first remarkable work in physical science produced in this country, and so he is rightly regarded as the father of experimental philosophy in this island; and he was also one of the earliest Copernicans, at any rate as to the rotation of the earth. To-day it is proposed that one of the statues to be erected on the façade of our new Town Hall should be that of this celebrated physician, and that it should be placed there by the members of his profession practising in this neighbourhood—a fitting memorial to one of Colchester's most celebrated sons.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Permit me, in the short time at my disposal, to allude to a few points of interest associated with this fast-dying century. Without staying to trace the evolution of surgery from the ancient craft of "barbers," it must always be of interest to surgeons to remember that it was in the opening year of this century that His Gracious Majesty George III, recognising that it was of great consequence to the commonweal of the kingdom that the art and science of surgery should be duly promoted, was pleased to incorporate the members of the Surgeons' Company and others by the name of the Royal College of Surgeons of London.

THE SOCIETY OF APOTHECARIES OF LONDON.

But there is a still more interesting link between the early years of this century and the mass of our general practitioners, for in the year 1815 an important Act was passed, which created a body of qualified general practitioners in England and Wales, who were entirely independent of both the Colleges; it curtailed the area of illegal practice, and secured at least a minimum qualification for the family doctor. The great mistake of the day was committed by the College of Physicians, in relegating this work to a druggists' society, instead of taking the lead itself. Previous to this Act the Apothecaries (the descendants of the "Pepperers" of the twelfth and the Grocers of the fourteenth century) had at times held a rather equivocal position; in the seventeenth century they merely supplied what the physicians prescribed, but we are told that at the time of the Great Plague in London many physicians to their eternal disgrace, fled the country, and it was then that the Apothecaries—being implored to visit the plague-stricken—left their counters, and came, for the first time, to the bedside of the sick, and, later on, the physicians endeavoured to prevent their practising, but their right to do so was established by a decision in the House of Lords in 1703, and ultimately, as I have said, a full charter was arranged for their examination and recognition in the year 1815, which continues to the present day.

THE BEGINNING AND THE END OF THE NINETEENTH CENTURY.

Though in the early years of this century physiology and chemistry were being slowly evolved by workers in France, Germany, and England, and the great gift of the stethoscope was shortly to be made to practical medicine by a French physician, yet, to all intents and purposes, it was still but an age of dim gropings after the truth. It was the age of close corporations and much pompous imbecility, of whips and chains in our lunatic asylums, and when the sick poor were too often inhumanly treated; it was the age of Burke and Hare, of Bob Sawyer and Mrs. Gamp.

THE FOUNDATION OF THE BRITISH MEDICAL ASSOCIATION.

But the dawn of brighter hopes was shortly to break. Thomas Wakley was soon to commence his beneficent, though fiery, course as a reformer; the microscope was now to be brought into daily use by the anatomist and physiologist; and a higher sense of professional dignity and responsibility was gradually to be borne into the conceptions of the medical practitioners throughout the length and breadth of the land. And it was then in July, 1832, that in the board room of the Worcester Infirmary the great Association of which we are proud to be members, and which has gradually grown into a vast organisation for scientific, social, political, and ethical purposes, first saw the light. And let me remind some of our younger members that it was in September, 1835, that an Eastern Provincial Medical and Surgical Association was formed at a meeting held at Bury St. Edmunds. The capabilities and possibilities of such a devolution of organisation throughout the English counties at once occurred to the parent Association, and the conferences which followed resulted satisfactorily two years later, when the Eastern Association became the East Anglian Branch of the British Medical Association, the first offspring and forerunner of many Branches, which now cover the face of the habitable globe; and when now we read of such Branches, not only in England, Scotland, and Ireland, but also in Manitoba and Melbourne, New Zealand and Natal, Burmah and British Guiana, we may well feel as if we had accomplished some of the poet's dream,

and in our parliament of Branches formed a federation of the world.

The Work of the British Medical Association.

In a century full of marvels, a century full of revolutions in science and social economy, such as the world has never seen before, the work of this Association may well hold our attention for a moment.

The increased harmony of action, and loftiness in aim, in aid of the scientific advancement and social dignity of our profession, which Sir Charles Hastings had in his mind when he founded the Association, has certainly found a very considerable accomplishment. One of the earliest subjects to which it turned its attention was that of vaccination, in the latest phase of the history of which neither Parliament nor people can feel any great pride. The almost unanimous judgment of the profession in favour of the beneficent gift of Edward Jenner to a plague-stricken world is as unshaken to-day and as fully received as it was seventy years ago, but the Anglo-Saxon race, in the exuberance of personal liberty which it claims for itself, is at times too tolerant of those noisy waves of morbid sentimentality which seize upon certain sections of the community at uncertain intervals, and, as in the recent so-called Vaccination Act, lays up for itself an awful Nemesis, which unfortunately strikes most heavily the young and the innocent. Indeed, when we contemplate the present position of this question, we might well despair, if it were not for the conviction that, sooner or later, the majority of our race will assert the great heritage of common sense which it possesses, and sweep away the cobwebs of ignorance and prejudice now so widely spread, and do something perhaps even to stiffen the weak backs of our legislators at Westminster.

Other subjects which soon engaged the attention of the Association were the medical relief of the sick poor, medical benevolence to its own poorer brethren and their families, and medical reform, which was again and again advocated. It is impossible to speak too highly of the important work done by the Parliamentary Bills Committee since its inception in 1864, under the guiding influence of its late Chairman Mr. Ernest Hart, whose noble work will not be forgotten when the history of medicine in the nineteenth century comes to be written, least of all here, in the chief centre of the eastern military district, are we likely to forget the good work done by him and his colleagues for the improved status and comfort of the medical officers of the British army.

Time only admits of my reminding you of the splendid position the Journal of the Association has gradually attained to, both at home and abroad, since it passed under the influence of the same remarkable man. It has, perhaps, been the greatest power at work in building up our numbers, and binding us together as a harmonious working whole. You cannot fail to see that the influence of this Association is yearly increasing; and that for the first time in the history of our profession in Great Britain has a representative body been formed out of its scattered elements, strong enough to protect its members, influence public opinion, and mould the policy of statesmen.

And, believe me, gentlemen, the time is coming when our profession will feel the full need of such a strong representative body, if it is not to be crushed between the public millstones of an ever-spreading vicarious charity, making larger and larger demands for gratuitous service, and an ever-diminishing scale of remuneration from the public bodies, who employ us and profit by our lack of unity. It is true we number in the ranks of our Association upwards of 18,000 members, but at least another 10,000 should join, and every member should join through and belong to a Branch; we must strengthen our Branches, for only so will the Central Council be able to speak with confidence and authority on behalf of the profession. Whilst not forgetting the first object we have in view—namely, the advance of scientific medicine for the public welfare—we must in the future look more and more to our Association to protect its members, maintain their rights, and forward their material interests as important units in the body politic. Without boasting, it is not unfair to say that we are becoming, if we are not already, the most broadly educated class in the community, and a proportionate responsibility rests upon us in guiding the State in all matters relating to the public health. As a body we are inclined to be too reticent in public affairs, for the fact is our daily work is so absorbing in its interest, and demands so much of our time for reflection and investigation, that we turn with something of dislike from the noise and dust of the forum.

The Prevention of Tuberculosis.

That the public, however, looks to us for guidance and lead in all matters relating to the public health is, I think, incontestable, and evidence of the truth of this is not far to seek at the present moment, when the medical profession, guided by the light of recently evolved scientific truth, is engaged in carrying a fiery cross throughout the length and breadth of the land, in its crusade against the devastating ravages of tuberculous diseases, amongst all classes of the community. It is a work so far-reaching in its operations that it behoves us to move, it is true, but we must move wisely, carrying the public intelligence with us, educating as we go ourselves as well as the public, and not being afraid to reiterate again and again the same truths until they become part of the common conscience of the community at large.

Do not let us at this moment be carried too far in our estimation of the importance of all the minutiæ and detail of a Nordrach course of treatment for consumptive patients, as if we thought we should abolish consumption by taking the doors and windows out of our houses; indeed, I greatly fear that some of these methods may be exploited by charlatans, without a due sense of proportion. We must always reways remember that we have to treat individuals, each presenting personal problems to be carefully weighed and allowed for, and therefore let us move quietly and cautiously, buoyed up, it may be, by a hopeful enthusiasm, tempered by a spirit of scientific exactness.

The record of the past may well inspire us with confidence, for—as Sir James Crichton Browne told us in his eloquent address at Ipswich last February—whereas sixty years ago out of every 10,000 persons who died, 38 died of consumption. At the present time (largely owing to the labours of those members of our profession who have devoted themselves to the public health service) consumption can now only claim 14 out of the same number of deaths. If so much has been done by sanitary science in thirty years, "is it Utopian," asks Sir James, "to hope that, with our increased knowledge, another thirty years might see the disease wellnigh exterminated? The disease is universal in this country; no county is exempt from its ravages, least of all our own three, as Sir Hugh Beevor pointed out in his recent oration before the Hunterian Society. In the campaign, to which I have already alluded, Norfolk moved early, and the open-air treatment of consumption met with considerable success in the hands of Dr. Burton-Fanning, of Norwich; and lately the work of the crusade has, I believe, been taken up by a county association. Suffolk has made a good beginning, opening the campaign with an important meeting of the medical profession at Ipswich, when an able address upon the subject was given by Dr. Elliston. This conference was soon followed by a public meeting in the Town-hall, which was largely and influentially attended, and was presided over by the Lord-Lieutenant of the county, and it was upon this occasion that Sir James Crichton Browne delivered the address, to which I have already alluded; and I understand that as far as the treatment of phthisical patients is concerned there has already been some practical outcome to that meeting. Essex, as far as I know, has not at present moved itself corporately, but doubtless we shall follow our sister counties, and take our due share in the fray before long.

I am particularly glad to see that the medical officer of health for the county, Dr. Thresh, is going to tell us something to-day as to how this question stands with us, and how, in his opinion, we can best fight the common enemy. Where large and important branches of trade and commerce, such as the meat and milk trades, are concerned, we shall recognise the wisdom of Lord Salisbury's advice to attempt nothing at present by legislation, but to be content for a time to perfect our knowledge, to educate ourselves and our neighbours, and so gradually to arouse a sound public opinion which will insist on the adoption of all due precautions with a view first to safeguard the individual, and so gradually to stamp out the disease itself. Without pursuing the subject now into further detail, I have in my mind in saying this a thorough inspec-

tion of dairies, the universal establishment of public slaughter-houses with efficient inspectors, and, as a provisional safeguard, the sterilising of all milk used in our nurseries.

THE EDUCATION OF WOMEN.

There are few developments of this nineteenth century more remarkable than the recognition on the part of society at large of the claims of women to a higher grade of education, and to a larger share of industrial activity; and the increased necessity that exists for widening the sphere of their usefulness, and we can watch the steady growth of a tendency to abolish privilege, and to throw open to all comers many new fields of remunerative employment.

At the annual meeting of our parent Association in 1886, the President of the year, Dr. Withers Moore, thought it right to enter a "caveat" in connection with the movement for the higher education of girls, referring to the great possibility of its being carried to an injurious excess, and I believe that, after making many deductions from his strong pronouncements, continued experience still leads us to recognise the aptness and wisdom of many of his remarks. All modern writers on sociology recognise that progress is a necessity of human life, and that all progress is effected in the same way as the result of selection and rejection, and that along the upward path of progress there must always be strain and stress, the prizes falling to the best stayers in the race; and, tried by this test, the question of the higher education and professional employment of women is shaping its own inexorable answer. But, whilst admitting that the era of female individualism has set in indisputably and irreversibly, I hold that, as a body of trusted advisers in matters of health, we are bound to watch and guide the movement in its development, especially so far as the health of young girls is concerned. Let me remind you that the great strain comes upon them at the most critical period of their development, it comes at a period of their lives when their bodies and constitutional temperaments are undergoing evolutionary processes, to which the boy is a complete stranger. A lady member of our profession in a recent article, says:

> Mark the evolutionary principle which determines the beautiful and wonderful evolvement of the girl into a woman. At one stage outspoken, active limbed, as much boy as girl, she becomes by nature quiet, more restrained of movement, and (if she be allowed to obey the impulse, which is the impulse of her fullest development) shier, imaginative, emotional, tenderer of thought and impulse, softer of voice, more diffident of speech, touched with new reverences, moods and aspirations; she acquires gradually the mysterious, elusive, lovely charm of woman.

Recognising the meaning of all this, and the maternal potentialities to which this evolvement refers, can we fail to see how great may be the danger to a healthy development involved in the treadmill of effort, intellectual and athletic, to which the lives of so many young girls are now devoted. I know the modern jargon, that all that is wanted to enable a young girl to pursue safely the highest paths of educational advancement is that she should cycle and play hockey and rounders like her brother, and an exhausted brain is to find its refreshment in immoderate muscular exertion. And I say to this, by all means let our girls be well educated, and let them enjoy modern methods of physical relaxation so-called, and let those who have the capacity be trained even for the walks of higher professional life; and I only hope that those who aspire to enter our profession will be embued with the same pure and lofty aims, the same womanly reserve and unblemished refinement, which characterised the methods of our former respected President, Mrs. Garrett Anderson, in the long fight that she had to wage against the prejudices of centuries, and the powerful vested interests which barred her progress at every step; but at the same time let us remember that a girl is not a boy, and never can be, and as guardians of the family health let us do our best to protect these young lives from an excessive use of either phase of activity, intellectual or physical, book or bicycle. The danger in many cases is not imaginary; we are dealing with a period of life, say from 16 to 21, when growth is very rapid, and large supplies of nutriment are required to maintain a healthy balance between those processes of destruction and renovation which our bodies are always undergoing; full of life and enthusiasm, eager to excel in the tripos and the playing field, the girl goes forward, ever active, ever enthusiastic, taking in plenty of learning, but often too little beef, and seldom in repose; and then follows, often very gradually and imperceptibly, a general impairment of nutrition, until, under the influence of some slight depressing cause, the breakdown comes to everybody's surprise; then if she falls into the hands of a doctor with plenty of common sense and determination, she may with prolonged rest and feeding, after many weary months of inactivity and mental fretting, be gradually restored to something of her former strength; whilst on the other hand, if treatment be delayed, and is then only half-hearted, and a matter of compromise, she will very likely gradually glide into the unhappy ranks of the neurasthenic and the hysterical, the slave of a Hodge's pessary.

Pray understand these thoughts apply to the abuse, and not to the rational use, of athletics for young girls. We recognise and we welcome the process of evolution through which the physical training of girls is passing, and which rightly used will, I trust, do much to abolish weak backs and anæmia in the rising generation; and amidst all the improvements and methods which have been adopted, on the whole I know of no single factor which has had such a large influence for good, and which has given such a grand impulse to the health movement in the schoolroom, as has that wonderful machine known as the bicycle, the introduction of which will form a leading feature in the story of these later days of the nineteenth century, and the reasonable use of which ought to be a blessing to generations of girls yet to come.

THE INCUBUS OF GRATUITOUS WORK.

When I try to bring my thoughts to a focus and search for a definite expression of my views upon the great question rightly comprehended in the expression medical services in relation to the hospital, club, and dispensary, I confess to being fairly appalled by the ramifications and difficulties of the subject; if ever a question illustrated the truth of the dictum *facilis descensus Averni*, it is certainly to be found here. As a profession we have allowed ourselves to be drawn step by step into a false position, until what was once a pleasure and a privilege is fast becoming a burden and a standing grievance to our members. I especially allude to this question to-day because the evil system is almost entirely the offspring of the present century; the burdensome, and to a very large extent uncalled for, out-patient department in our voluntary hospitals is entirely a growth of the nineteenth century. But the subject offers wider reflections even than this, for is it not true that the nineteenth century has witnessed an enormous development of institutions of all kinds for the relief of the sick and poor—hospitals general, special, and convalescent—hostels for individual classes, dispensaries free and provident, sick clubs and societies of all descriptions for the obtaining of medical aid for little or nothing—spring up on every side until as a profession we bid fair to be engulfed in this product of nineteenth century altruism, which is one of the products of our age.

Mr. Benjamin Kidd, in his interesting book on *Social Evolution*, has pointed out how, in the process of evolution, the ultra-rationalistic influences, summed up in the word "religion," have been shaping and influencing our lives more and more:

> In the last sixty years or so life has become more intense, and individual character has deepened and softened by being brought into close contact with the impressive altruistic ideals found in the life and acts of the Founder of Christianity, and which the revival of religious thought and influence during the present century has especially brought under our notice.

Imperceptibly and unacknowledged it is here that we find much of the real motive power which has helped to open up the fertile field of preventive medicine. Dating back to England's efforts for the abolition of slavery, there has gradually grown up an impelling desire to right the wrong; and, as one of the effects of this altruistic spirit, we may set down the great efforts which have been made to improve the dwellings, the sanitary surroundings, and food of the community at large, and it is probably largely owing to this same influence that the enormous development of cheap or gratuitous medical service owes its genesis. But a system which was beautiful in its inception and fragrant with a pleasing charity is fast becoming an intolerable incubus and injustice to the profession at large. Without venturing this afternoon amongst the rocks and pitfalls which surround this subject, I do venture to make one positive statement, which is that we, and we alone, if only we are true to ourselves, hold the key for its solution.

Individually, it is true, we may be as dust before the forces arrayed against us. Intrenched behind a barrier of misconception and self-interest, the public, whether represented by the individual or the State, will never help us in the matter. During the past forty years many spasmodic efforts have been made to bring about a reform, but, greatly owing to want of united action on our part, so far without success. I trust the coming race of doctors in the twentieth century may accomplish what those of the nineteenth have failed to do. Depend upon it, if the difficulties ever are to be solved, it will only be through the agency and with the assistance of some greatly enlarged association of medical men, foreshadowed in the British Medical Association of our own day.

Until that day arrives let us initiate changes here and there, which ought to be within our reach. For instance, I should be the last person to underrate the very valuable services rendered by many devoted laymen to our hospitals; but if they give up their time, so do we; if they give of their money, so do we, and valuable time and skill, which is more than money; and therefore in our general hospitals, which are often wrongly spoken of as "public" institutions, when they are nothing of the kind, for they are absolutely private ventures for the public good, started and supported by the money of a certain number of subscribers and donors and worked by the medical profession free of all charge. I say in these hospitals those who do the work for which the institution exists, and those who administer the housekeeping, financial, and other business departments connected with a large establishment should at least be placed upon an equal footing, and therefore, as an important recognition of this law of elementary justice, in all voluntary hospitals manned by an honorary staff, the medical officers should be equally represented with the lay governors on the Board of Management. In an institution solely maintained for the relief of the sick, to exclude as far as possible from its management those who have the greatest stake at issue in the good reputation of the place is not only unreasonable, but is a policy only to be looked for in a Gilbert-Sullivan kingdom of topsy turveydom. I ought in fairness to say that of late years this act of reasonable justice is gradually making its way amongst our hospitals both in London and the provinces. But old prejudices die hard. Another reform is that it should be understood that the doctor is the only possible person to decide as to the fitness or otherwise of an applicant for free treatment in the hospital. Poverty alone is no sufficient reason, for for this class the Poor-law medical officers exist, I will not say are paid. Governors' letters ought not to be the key either to open the portal; the points can only be justly settled by weighing a combination of circumstances, and taking into account the nature of the case in its relation to the patient's social position and competence to provide for the proper treatment of his case in his own home. Then, with regard to benefit clubs, a reform which calls for speedy accomplishment is the separation of medical aid from club benefits. Let the benefit clubs spread their most important and useful work as widely as possible (as instruments of providence they are invaluable) but the contract payment for medical services ought to be a distinct question, to be left entirely in the doctor's hands as a matter to be settled between him and the individual applicant, both as to the terms of the contract and also to the persons with whom he is willing to make such a contract. The subject is one ripe for action, and cannot much longer remain in a position often so galling to the person chiefly concerned.

When we look back on this nineteenth century and think on the one hand of the application of steam and electricity on an immense scale to machinery, the enormous extension of telegraphs, railways, and other means of rapid communication, and then, on the other hand, call to mind the great gifts made to suffering humanity in the same period by our profession, in the prevention of disease, the abolition of pain in surgical operations, and in the crowning gift of the antiseptic system by the present Lord Lister, we may without exaggeration say that hereafter the chief glories of the Victorian era will be shared by the engineer and the doctor.

These, gentlemen, are our rich heritages, and let us by the probity of our conduct, the scientific truthfulness of our observations, and the unaffected personal charity of our practice hand them on untarnished to our successors.

SOUTH-EASTERN BRANCH.

ON ACUTE ABDOMINAL LESIONS.

By THOMAS EASTES, F.R.C.S.,

Folkestone.

AFTER some words of welcome Mr. Eastes turned to the subject of his address.

Classification.—The most rapidly fatal of all cases of this class are some from internal hæmorrhage, ruptured extra-uterine pregnancy, or, much more rarely, ruptured aneurysm; next, in order of severity, perforation of the stomach, or bowels, or appendix, or bladder, whether from disease or injury. I shall not include cases resulting from taking poison. Then we have the whole series of strangulation, and volvulus, and obstruction of the bowels, which of themselves constitute such a formidable array, and the somewhat allied cases of rotation and consequent strangulation of tumours and the cases of appendicitis without actual perforation, which, although of a distinct character pathologically, may be difficult or impossible to distinguish clinically. Cases of suppurating mesenteric glands, and cases of ruptured cystic tumours, ovarian or hydatid, must be mentioned. Then less serious actually, but very difficult to distinguish clinically at first, are the various kinds of colic, intestinal, renal, and hepatic, and the less serious kinds of hæmatocele. The three great dangers to be guarded against may then be summed up as hæmorrhage, peritonitis, and distension. In rupture of an extrauterine pregnancy the first danger is from hæmorrhage; therefore, of course, the first consideration in treatment is to stop that hæmorrhage. In another large class of cases it is the presence of an irritant in the peritoneum setting up acute peritonitis. In such cases, if not contraindicated, the irritant contents should be removed, and the aperture closed from which they escaped, and frequently a drain must be left in the peritoneal cavity for a time. In another class the cause of death is great distension of the bowel, whether the so-called paralytic distension or distension from actual obstruction. The chief symptoms of acute abdominal lesion are pain, vomiting, collapse; and, where peritonitis follows, general abdominal distension and immobility, with constipation.

Abdominal Pain.—This should, I think, alway be looked upon as a danger signal. It is most remarkable how many severe abdominal cases have an early stage when there is no complaint whatever except pain. I must confess for myself that when I am sent for to a fresh case of great pain in the abdomen it is always with some dread of an impending catastrophe that I first investigate the cause and course of the symptoms. I think the first important point is to try to ascertain whether the symptoms are connected with any special viscus or any special region of the abdomen. For this purpose the seat and character and course of the pain are most valuable facts. The original seat of severe pain may indicate where the source of a general peritonitis is to be found. Pain, at first over the cæcum or at the umbilicus, will suggest the appendix, and the suggestion will be corroborated by finding a tender spot between the right anterior superior spinous process and the umbilicus, and if we have a history of similar previous attacks recurrent appendicitis is probable. If the onset of pain was referred to the upper part of the right side of the abdomen beneath the right costal margin, we shall at once think of the gall bladder, and previous attacks of pain passing backward to the right infrascapular region followed by jaundice will confirm the opinion that that viscus is the seat of the pain, and we shall have to judge as to which of the various lesions found about the gall bladder and its ducts is existing in the case before us, such as blocking and perhaps consequent ulceration of the duct or empyema of the gall bladder. Severe pain starting in the upper part of the abdomen at the pit of the stomach, with tenderness on pressure, will suggest a gastric lesion, and if there is much collapse and a history of pain after food and long-standing dyspepsia, perforated gastric ulcer will be probable. In women pain in the lower abdomen, right or left, with a referred pain in the corresponding inframammary region, will suggest the ovaries or tubes as the cause of the trouble. In localised peritonitis the pain is usually referred

to the region affected, but radiating according to the organ involved. Thus when the liver is involved in some local peritonitis there will probably be right shoulder tip pain as well as pain or tenderness over the liver itself. The character of pain is also important. The pain of colic is usually intermittent and relieved by pressure, whereas inflammatory pain is usually continuous and intensified by pressure.

General Abdominal Distension and Immobility.—These are two most important symptoms, though, of course, somewhat later in appearance. They are of grave significance as regards diagnosis, prognosis, and treatment. They may appear in from two to twenty-four hours after the onset of any acute abdominal lesion. Their presence in slight degree only has made one give a good prognosis in cases that have justified it by their recovery, when the consideration of other signs alone would have compelled one to fear the worst. Early distension is not necessarily peritonitis; it may be reflex, and due to irritation of the peritoneum or abdominal sympathetic. If not relieved it may itself be fatal, or it may go on to general peritonitis. In either of these events the termination may be painfully sudden. General distension which does not yield to a tube or turpentine enema on the second or third day indicates progressive disease, and the case will probably require operation. In suspected appendix cases, general distension without localised tumour, without dulness, and with great pain and tenderness, has a grave significance, and if the temperature be continuously raised the case is still more grave, and may require operation as soon as forty-eight hours after the onset. To observe the distension well, see that the body is lying flat, and that there is a good light on the surface of the abdomen. Kocher gives us the pathology of that form of distension, which I will call paralytic distension or pseudo-ileus:

Post mortem you will find very important lesions in the wall of the distended intestine—circumscribed necrosis of the mucous membrane going on to sharply circumscribed ulceration through the whole thickness of the wall, and giving rise eventually to perforation. The cause of these ulcerations is the over-distension of the bowel. In this state, without the slightest interference with the circulation in the mesentery, the bowel gets quite blue by venous stasis. In consequence of this ecchymoses may form in the mucous membrane, the nutrition is altered, and the protective influence of the epithelium, which has been proved to be of such importance, is destroyed, and the mischief is done; absorption of the bacteria and of the toxic products of the fæcal contents begins from that very moment, and if you do not step in in time your patient will die either from general intoxication, with symptoms of weakness of the heart and collapse, or he will die from local intoxication with necrosis of the mucous membrane, first at the places of the above-mentioned ecchymoses, going on to ulceration and perforation. There is no peritonitis without micro-organisms, and micro-organisms only go through the intestinal walls when there is interference with local circulation and nutrition.

Vomiting.—Vomiting is present in most acute cases, especially where a sudden onset occurs. It is immediate, and subsides with the pain, and is followed by repose, and this repose will continue a variable time, even till the last few hours of life. The greater the amount of sedative given the longer the delay. Vomiting is more persistent in strangulation than in perforation. In perforation vomiting occurs early, subsides rapidly, and a period of repose follows. As a symptom at the onset vomiting signifies severity or suddenness. If it recurs after careful feeding, rest, and a sedative, it is an alarming symptom, and generally demands immediate surgical interference. It is still more important if it returns when all food is withheld.

The Period of Repose.—Charters Symonds[1] has applied this term to the stage which in nearly all acute cases is reached soon after the onset. It is marked by the cessation of all acute subjective symptoms; the patient passes unaided by sedatives into a condition of repose. The relief from pain and sickness, and the general sense of comfort experienced may be interpreted as signs of improvement, and this interpretation may lead to disaster, and if deepened by the regular administration of sedatives will almost certainly do so. It is, in its early stage, a period of safety in which operation is successful. But the temperature, if the case is one of inflammation, and the pulse and the general distension will show that there is no real improvement. The importance of this cannot be exaggerated, and it is most important for all of us who are in general practice to bear it in mind. If operation is put off because of this repose until it is broken by a return of vomiting, it is almost certainly too late to operate with much chance of success, and yet that is what is constantly being done. To make the terrible announcement to the friends that an illness of only one or two days' duration may be speedily fatal unless a serious operation is performed, and perhaps in spite of it, requires much moral courage on the part of the doctor. Take, for instance, the case of a married couple come down to a seaside resort for a short holiday; the husband is taken ill with acute abdominal symptoms, a doctor is called in, and finds him suffering from acute intestinal obstruction, and the only thing that can save him is a serious operation, and even then perhaps the cause may be difficult to find or to relieve, or the operation may be apparently quite successful, and yet recovery may not follow. There is scarcely any more painful position than that of this doctor. The people are quite strangers to him, he does not know how much confidence they may have in him, and yet he is bound to tell them that the husband's life is suddenly in danger, and that they must make up their minds at once to have a serious operation performed, and must decide whom they will allow to do it, and must be prepared at once to get ready for all the preliminaries of a major operation. It requires a high degree of moral courage to take this difficult step, without loss of time, as soon as it is necessary, and that is where the stuff a doctor is made of becomes evident. We are always liable to such responsibilities; when they arise we must face them like men, for such is our duty. It is much easier to tell the friends that a patient is very ill when they can see it for themselves, but by that time the favourable opportunity for successful operation may be gone never to return.

Diagnosis.—I have already alluded to the importance of the site of early pain in all cases. The history of the onset must be carefully studied, the relation of pain to pressure whether increased or diminished, the appearance of the patient; signs of collapse, rapidity of pulse, and the blanched features from loss of blood must be looked for and have due consideration in making the diagnosis; and here I must refer to the importance of waiting in very early doubtful cases where colic or the more serious lesions are in question, because the period of repose after a few hours will generally decide the diagnosis and be the most favourable time for operating in all cases except those of obvious ruptured extrauterine pregnancy, perforated gastric ulcer, and the most acute and worst cases of perforation of appendix. In clear cases of any of these lesions no time must be lost if the patient is to be saved; all other cases may wait for the period of repose. There may be but few signs or symptoms in some very serious cases of quite early rupture of an extrauterine pregnancy. Sudden abdominal pain, vomiting and collapse, rapid small pulse, blanched features, slight dulness at the lower part of the abdomen with sometimes slight fluctuation, and on vaginal examination a boggy swelling felt in the pouch of Douglas may be all that can be detected. In such cases no time must be lost by waiting for a period of repose, or the repose will be that of death. Here is a picture of another class of case. A woman, middle-aged, has had varying signs of some kind of tumour, and, perhaps, colicky attacks now and then. Suddenly one day she has a worse attack of pain, with vomiting and collapse; local distension of the abdomen is found with dulness and tenderness, and generally evidence of a tumour which cannot be very well defined. The distension, dulness, and tenderness all increase, but the general constitutional symptoms may abate somewhat, as in other cases. Now, if the local symptoms are increasing nothing must make us put off operating, for we shall probably find a tumour of some sort, most frequently ovarian, sometimes fibroid, with a twisted pedicle and consequent strangulation going on rapidly to gangrene, and if delay occurs the local peritonitis will soon become general, and the operation may be too late to save life. I recall two typical cases, in one of which delay was answerable for the death and in another early operation saved the life of the patient. In the diagnosis of doubtful cases of colic one must look carefully for signs connected with the special organ in which the colic occurs, not forgetting the lead line on the gums in lead colic, jaundice or hæmaturia in gall stone or renal colic respectively.

Prognosis and Treatment.—The prognosis in all the acute abdominal lesions to which I have referred is serious, and there is no doubt that the tendency with eminent surgeons is to advise operation as giving the best results in all those

cases where medicinal and expectant treatment will probably lose from 50 to 95 per cent., or more. Perhaps the battle of medical *versus* surgical treatment has been fought most vigorously over cases of appendicitis. I find that surgeons are becoming more and more convinced that the mortality would be diminished if all cases were operated on as soon as the diagnosis is tolerably certain. Mayo Robson says:

It may seem somewhat radical, but I speak from conviction after considerable experience, when I say that I believe the early operation undertaken as soon as appendicitis is diagnosed, first advocated by Dr. McBurney, would lead to a far greater percentage of recoveries than the method of individualising which we in England generally adopt.

The points that we should impress upon ourselves are these: Let us try at once to make as accurate a diagnosis as possible. If the diagnosis makes it probable that the case is one of the class to which I have alluded, where the best chance for the patient is surgical interference, let a surgeon see the case without delay, and before any strong drug treatment is carried out unless the pain makes it necessary to give one-fifth or one-fourth of a grain of morphine. If that is done then the best time for the surgeon to see the case if it can wait would be about four hours after the morphine, and he should come prepared to operate, if necessary, then and there. Mayo Robson, in a paper on The Dangers of Delay, says:

Perhaps in no class of cases is delay in surgery attended with so much danger as in abdominal diseases ..... I hold that every case of intestinal obstruction is a case for consultation, and should be seen at an early stage by a surgeon, not necessarily for operation, but that he may be prepared to interfere as soon as ordinary remedies have failed, and before the system has become poisoned by the fermenting contents of the gut above the seat of obstruction. Moreover, at an early stage the diagnosis of the nature and seat of obstruction can be more easily made out.

I must again quote freely from Charters Symonds's paper:

Suppose we are called in at the period of onset and cannot decide between the perforative class and the colics, what is our best line of action? If the pain be moderate and subsiding, the best plan is to apply hot fomentations and dispense with sedatives, give no medicine of any kind, and make a second visit in four hours or less. The importance of this early second visit cannot be over-estimated. Over and over again a patient has been ordered a purge for an apparent attack of colic at the first visit, and at the second a graver diagnosis has had to be made. Having given a hypodermic injection, if necessary, we enter upon the second stage of the case. Repose follows, and everything depends upon the accurate observation of symptoms and the correct use of sedatives. No words are too strong in which to condemn the prescription of opium to be given by an attendant at regular intervals. The only safe plan, and one I would urge as a routine practice, is to give the sedative when the visit is made. We can time the second visit to see our patient free from the effects of the drug. No further sedative is required when the period of repose has set in. When a second dose is required after twelve, or still more after twenty-four, hours the case looks serious, and we can put aside many possibilities. How may we know that a case is doing well? Relief from pain in the absence of sedatives will be one of the leading signs but may be a misguiding one. The pulse is better and tenderness diminished. In appendix cases there will be diminution of distension, we can localise the swelling though it may be very tender, and the temperature will be lower. The patient does not require any further sedative, sickness has not returned, and if distension exists it yields to an enema or tube. Such cases will get well straight away, or with the formation of a local abscess, giving plenty of time to form an opinion and to direct treatment. When a case is not doing well one of the most valuable of early signs is the general distension of the abdomen, then tenderness, the absence of local swelling and of local dulness, with rise of temperature and pulse. In perforating gastric ulcer, if we cannot form an opinion at the first visit and have followed this line of treatment, the first sign of distension or renewed pain indicates the commencement of peritonitis.

Paralytic Distension.—I wish to speak now more in detail of paralytic distension, its prevention and treatment. A patient with slight peritonitis from any cause whatsoever may gradually develop general distension, and vomiting, and constipation. A patient liable to constipation may in one of his attacks be much more constipated than usual, and gradually general distension and vomiting develop. A case of abdominal section, quite simple and apparently quite successful, may, at any time from the second to the tenth day, develop the same symptoms. Now, if unrelieved, all these cases will die, the symptoms increasing, and fatal collapse coming on remarkably rapidly at the end. I know of no more disappointing termination to an apparently quite successful abdominal operation. These symptoms must, therefore, always be looked out for most carefully. They are most to be dreaded in patients who have previously been habitually constipated. I find surgeons are getting in the way of ordering an aperient as early as the first or second night after the operation. Every day, in cases where this condition may arise, feel the pit of the stomach to make sure there is no undue tympanites. At the first sign of this try to get a free action of the bowels at once; calomel is probably the most satisfactory aperient to give. Five grains in a severe case, followed by a castor-oil enema, and a long flatulence tube. As soon as vomiting sets in stop all feeding by the mouth absolutely, and feed entirely by rectal enemata 4 ounces every four hours, only allowing the patient to rinse the mouth out with water not to be swallowed. By adopting these methods promptly at the first sign of danger the patient's life may be saved.

Surgical Treatment.—There is no need for me now to go into the details of surgical treatment; but I may just allude to some guiding principles. For instance, in intraperitoneal hæmorrhage it is best to wash out the peritoneal cavity with warm saline solution, the clots being better removed by washing out than sponging. For general suppurative peritonitis use the same method or a weak solution of boracic acid. In localised septic cases do not wash out the cavity, but sponge and mop out the infected region. In great distension of the bowel do not be satisfied with simply relieving the obstruction and closing up the wound, but always incise the bowel above the obstruction and empty it as far as possible, drawing it out and passing it through the hand if necessary, as that will cause it to contract better. In all cases of abdominal operation operate quickly but carefully. Take special precautions against shock and chill. Use hot bottles between the legs, have the room warm, have an enema of brandy and hot water ready to give at once if necessary; have a hypodermic injection of strychnine ready, and if it seems advisable leave half a pint of saline solution in the peritoneal cavity.

REFERENCE.

[1] Address before the Hunterian Society.

MIDLAND BRANCH.

THE LESSONS OF THE CRIMEAN WAR.

By ED. M. WRENCH, F.R.C.S., V.D.

Surgeon Lt.-Colonel 2nd V.B. Sherwood Foresters.

THE Crimean campaign was described by the pioneer of war correspondents (Dr. Russell) as "the most ruinous, most cruel, and least justifiable of all modern campaigns." Of the vast host of over a million men that for nearly two years fought for the occupation of the beautiful harbour of Sebastopol, I possess the qualification of being one of the now comparatively few survivors, and I trust that the narrative of some of my personal experiences may be interesting, and, though egotistical, help to explain why the Crimean war has left such an indelible mark on the minds of those who were youths in the Fifties. Although the medical establishment of the army was considerably increased when war was declared in the spring of 1854, the mortality from battle (nine surgeons were killed in the campaign), and disease from overwork, was so alarming that in the autumn surgeons were hurried to the East as rapidly as possible.

I obtained my nomination on Monday, was examined on Tuesday, and started for the Crimea on Friday. I arrived there a few days after the hurricane in November to find the harbour of Balaclava strewn with the wrecks of 17 ships, and was immediately placed in charge of a ward in the hospital located in the Russian Military School, a substantial building, but quite devoid of hospital conveniences, and with every window destroyed by the recent hurricane.

I had charge of from 20 to 30 patients, wounded from Inkermann, mixed with cases of cholera, dysentery, and fever. There were no bedsteads or proper bedding. The patients lay in their clothes on the floor, which from the rain blown through the open windows, and the traffic to and from the open-air latrines, was as muddy as a country road.

There were no nurses, no washing conveniences, either personal or for clothing. Two old soldiers, called orderlies, did their ignorant best to attend to the wants of the patients, but were chiefly occupied in rude cooking and burying the dead.

There was no bread except hard ship's biscuit—of course no milk. I cannot remember if there was any tea, but I believe not, only the famous green coffee. There was certainly no beef tea. Liebig's extract, and the substitutes of the

present day, had not then been invented, and tinned meat was not procurable.

About midday a large iron witches' cauldron was carried into the middle of the ward, and the patients crowded round to dip in their tin canteens, the bedridden dependent on the generosity of their comrades for a share of the contents of the pot, which for all we knew might have been composed of the proverbial witches' broth, the cooks being so hard up that I should not like to say what they put into the stew. I remember that the sheep set aside on one occasion as suitable for the dinner of the seven surgeons was so like a skinned greyhound that we threw it on the roof, and ate salt pork (of which there was always abundance) instead.

Notwithstanding all these shortcomings of the commisariat, each surgeon had to make out a daily diet roll with the pretentious headings—Milk, Fish, or Full Diet—to satisfy the red-tape system, and prevent the purveyor being surcharged for the scanty food he was able to supply.

We were practically without medicines; the supply landed at the commencement of the campaign was exhausted, and the reserve had gone to the bottom of the sea, with the winter clothing (and several surgeons) in the wreck of the large steamer (the *Prince*) so that in November, 1854, even the base hospital at Balaclava was devoid of opium, quinine, ammonia, and indeed of all important drugs. Sanitary science was then in its infancy, and sanitary precautions were not capable of being carried out, when the living were so hard pressed to live, and dead men were floating about among the ships at Balaclava harbour like dead cats in a canal. You will not be surprised to hear that many of our patients died, but even they were more lucky than the wounded Russians in another building in the town, where hospital gangrene carried off, I believe, every one, which sad termination to his devoted labours young Hervey Ludlow — the surgeon in charge—took so deeply to heart that he died from overwork and exhaustion.



Fig. 1.—Embarkation of the sick at Balaclava.
[From a sketch by Mr. William Simpson.]

He was, however, the exception, for most of the young surgeons possessed the secret of health—light hearts and good digestion—and instead of being depressed or miserable, indulged, when off duty, in practical jokes on one another, and believed each week that Sebastopol would be captured in the next; an opinion, I may remark, shared by the rank and file all through that terrible winter. We should have had better reason for our belief had we known that the Russians (except that they had roofs over their heads) were suffering from scanty food and disease as badly as ourselves. But, as Napoleon remarked in one of his Austrian campaigns, "in war you see your own troubles; those of the enemy you cannot see."

The Russians had no special correspondents with their army, and it was many years before the sufferings and losses on their side were published, and they owned to the loss of half a million of men in the campaign. Early in December I was ordered up to "the front," as the line of camps in rear of the trenches was called. As I trudged up, carrying all my kit on my back, I met the mud-stained troopers of the 11th Hussars leading their horses, which were too weak to carry them, down to Balaclava to save them from starvation by feeding them on the hay washed out of the wrecked transports on the shore of the harbour. For the next nine months I took my share of the dangerous and laborious trench duty, which I shall presently describe.

It was the rule in most regiments to send the sick and wounded from their regimental hospital tents to Balaclava for embarkation to Scutari, whenever transport was available. The English army being, however, unprovided with ambulance train, was dependent for the removal of their sick on the loan of the French mule litters, a mode of carrying the sick which they had invented in their recent Algerian campaigns.

I had not been many days in camp when I was placed in command of one of these convoys. I was permitted to ride the hospital mule on a wooden pack saddle without stirrups, and with a bottle of rum in each holster. I was instructed to, if possible, prevent any of the 300 sick from dying during the seven-mile journey. The ground was covered with snow, the wretched patients, wounded, frost bitten, and fever stricken, and scarce clothed, many of them being without boots or stockings, were strapped in seats on either side of mules, except a few too ill to sit up, who were laid in the bottom of one of our ammunition waggons, but these never reached Balaclava, for though provided with eight horses the waggon had not gone far before one and then another of the horses fell dead, and the remainder of the team were too weak to drag the waggon, so returned to camp.

My sufferings on the wooden pack saddle were not slight, but were not to be compared to those of the wretched patients, jolted and tossed about by the mules on the mountain paths, the short road to Balaclava across the famous battlefield being then considered unsafe.

Several mules fell, and one poor soldier recovering from a bullet through his chest was thrown out and crimsoned the snow from his reopened wound. I rode from end to end of the sad procession, now curbing the hurry of the French drivers anxious to get through their unpleasant duties, and then encouraging the sick, and supplying those who looked faint and likely to die with a suck from the neck of the rum bottle.

I am happy to say I handed them all alive to the care of the surgeon in charge of the sick wharf at the head of Balaclava Harbour, and there my responsibility ended. But alas! that was not the end of my poor patients' sufferings, for, from the scarcity of boats, it is not unlikely that many of them lay for several hours on the wharf before they could be put on board the ships that were to convey them to Scutari.

The ships were often sailing ships, devoid of all convenience for the sick; the voyage was tedious and the mortality great, and it is well known that 10 per cent. of those embarked were thrown overboard before the vessels arrived at Scutari. Nor were the dangers then over, for the great hospital was infested with typhoid, and hence many finished their journey beneath the grand cypress trees in the beautiful cemetery overlooking the Bosphorus.

I do not know that I can find a better place in my story than this to tell what surprised me as much on the night after I had taken the sick convoy to Balaclava in December, 1854, as it will do you to hear it in 1899. I was called to the lines of the 28th Regiment, only a few hundred yards in rear of the trenches, and truly under fire of the Russian guns—for they occasionally sent a shot into camp—and in a bell tent, with the patient on the ground, I delivered a soldier's wife of a living child. The regiment had allowed a few of the women—chosen because they had been married several years

and had no family—to accompany the regiment to the East to do the officers' washing; a regiment was like a family in those days.

The English trenches were divided into right and left attacks, separated by the deep Woronzoff Ravine. During the winter months one assistant surgeon (the full surgeon never went on trench duty) accompanied each trench guard, which was relieved every twelve hours, in each attack. When the winter was over the guard and medical officers remained on duty twenty-four hours, and as the trenches extended the number of assistant-surgeons was increased so that instead of two there were often a dozen on duty.

Until late in the siege no shelter was provided for the surgeons; they had to brave the elements as well as the shot and shell, and to attend to the wounded under extraordinary difficulties—often in rain or snow in a muddy ditch, where at night the feeble light of a horn lantern had to be used with care lest it should draw down the Russian fire. On one occasion a round shot killed two stretcher-bearers, and took off the leg of the patient while the surgeon was dressing him for a previous wound.



Fig. 2.—Balaclava looking towards the sea in 1854.
(From a sketch by Mr. William Simpson.)

I was on duty in the right attack at both the assaults on the Malakoff and Redan. The sight of the French swarming into the Malakoff when Sebastopol fell on September 8th was one not to be forgotten. The first assault on June 18th failed all along the line. The assaulting columns were mown down by the grape and canister shot before they reached the Russian batteries, and the few survivors had to retreat leaving all their dead and many of their wounded on the ground. Most of these were gradually carried under cover, that is, out of sight of the enemy, for in the most advanced trenches there was no real protection from heavy fire. I was for eight hours engaged dressing wounded in a recently captured Russian rifle pit, occasionally running out to attend to such as were too severely injured to be moved. Some, alas, lay so completely in the line of fire of both the Russian and our own batteries that neither friends nor foes could render them any assistance, so there they lay untended for fifty-two hours. And yet, after this terrible ordeal, I found one man of my regiment still alive when I was able to approach him under a flag of truce on the third day.

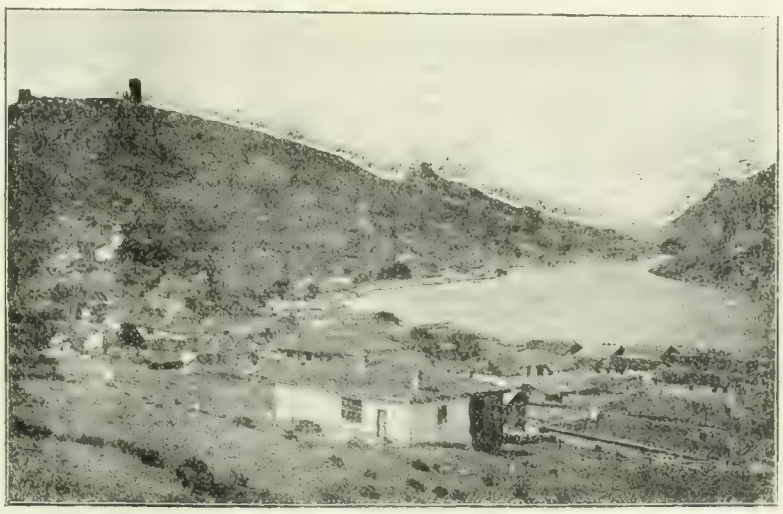


Fig. 3.—Balaclava, 1894.
(From a photograph.)

At midday up went the white flags, when the sudden silence of the cannonade, the safety as we ran through the long grass and flowers to meet the Russians, their cordial greetings, and the little civilities we exchanged with our enemies, made one ask oneself, "Am I dreaming?" Several of the Russian officers spoke English perfectly, and one chaffed me about the eccentricity of the colonel of my regiment, who having been some time before taken prisoner during a sortie, asked the Russians to demand a flag of truce to ascertain if a letter he had received from his wife, that he had not read, had been picked up after the fight. The truce did not last many minutes; we got back to our respective lines, the white flags were hauled down, and each side did their best to kill their recent friends.

The regiment in which I was assistant-surgeon—the 34th Foot—suffered so heavily during June, 1855, that every captain was rendered *hors de combat*, and five line huts were converted into hospitals. Two of the four regimental surgeons knocked up, and in consequence it was not uncommon for wounded men to be several days before they got proper examination and attention. The men however preferred being kept with the regiment, and the results were very satisfactory. Microbes were then undreamt of, and every wound was septic, and many of them swarming with maggots. The older surgeons had a great dread of (the then recently invented) chloroform, fostered by the historical memorandum from the Director-General almost forbidding its use, and adding that the cries of the patient undergoing an operation were satisfactory to the surgeon, as an indication that there was no fear of syncope, and that pain was a stimulant that aided recovery.

We therefore only used chloroform for the more serious operations, and never to facilitate examination, or for what we considered trivial operations, as cutting out bullets or setting compound fractures. The hypodermic syringe was not yet invented. Notwithstanding all these disadvantages, our wounded did remarkably well. The huts and tents were situated on a breezy upland, and the weather then being warm, they were treated almost in the open air, and though we had no nurses, we had by that time trained the orderlies and we were able to procure abundance of fresh meat, and occasionally soft bread.

I shall probably be expected to make some remarks on the breakdown of the medical arrangements. From what I have

already described you will, I think, see that it was the system, and not the men, that failed. The medical department was, like every other in the army of that date, quite unprepared for a great and prolonged war, hampered by red tape, and denied all independence of action.

Miss Nightingale justly received great praise for the improvement she effected in the larger hospitals. Had the surgeons been given her power to obtain what they required regardless of cost, much of the misery and mortality in the hospitals would have been averted before her arrival.

The old regimental system of hospitals and medical officers was, and probably is, the best in time of peace, but it must break down in time of war. It is clearly better to practise in garrison what will have to be carried out in the field, than as Abraham Lincoln remarked, "have to swop horses when fording the stream."

The Crimean was the first war in which the special newspaper correspondent kept the public informed, not only of the valour of the troops and the losses in the battles, but also of the sufferings, the starvation, and the deaths—the result of ignorance, neglect, and unpreparedness. Hence the distress of the nation, which even now looks back on that time with horror.

Wars always have been and always will be cruel. It is, however, the pride of our profession that, while sharing the fatigues and dangers of the campaign, our sole duty will always be the protection of the soldier from what after all is his most deadly enemy—disease, and the alleviation of the sufferings of the wounded.

The Crimean campaign taught a lesson that I trust will never be forgotten by the nation, that unless the medical department of the army is made efficient, and supplied with its proper complement of officers and ambulance during peace, it cannot be expected to do its duty efficiently during war.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

AN OUTBREAK OF FEVER ATTRIBUTED TO MOSQUITOS.

On my voyage home from Calcutta last March, Mr. J. F. Parker, of Messrs. Thacker, Spink, and Co., of Calcutta, and Mrs. Parker, who were travelling in the same vessel with me, volunteered the following statement regarding an outbreak of fever. I cannot answer for the facts, because I was not aware of the case at the time it occurred, and because a letter which I addressed to Calcutta on the subject appears to have miscarried; but Mr. and Mrs. Parker seemed to be so familiar with the circumstances, and to be so certain regarding those facts, that I think I may venture to record the case. If correct, it is an interesting instance of mosquito-borne malaria; if incorrect, I hope that publication will lead to the truth being known. I copy the statement just as it was written down from Mr. and Mrs. Parker's evidence in my notebook. They said:

The 1st Calcutta Company of the Boys' Brigade went out to "camp" in the month of October, 1898. They were given the use of one of the bungalows in Barrackpore Park, fourteen miles from Calcutta. Barrackpore Park is the estate round Government House at Barrackpore; the bungalow referred to is one occasionally used by the Viceroy's staff, and is a brick-built structure, soundly made, containing large rooms, and surrounded by a verandah. The water supply is the same as that of Calcutta. The kitchen is the Viceroy's kitchen. There are some ponds about the park, and the river Hoogly flows close by. The party in "camp" consisted of three officers, all young men, and thirteen boys of between 13 and 18 years of age. The officers were Mr. ——, the captain, and Mr. —— and Mr. ——, the two lieutenants. The whole party slept in the bungalow every night for one week, and also ate their meals there.

During the week the party lived in the bungalow, the boys did not sleep under mosquito nets because it was feared they would tear them, although the three officers did so. Mr. —— (the captain) informed us that mosquitos were very numerous, and that the boys were bitten by them. On the last day of the week a sister of one of the boys visited the camp, and was also bitten so much that her arm swelled; she was present only in the day.

All the boys were attacked by malarial fever within a few days after the close of the camp. One died, and several were seriously ill. Three native servants who went with the party were also, to our certain knowledge, taken ill, one, a boy, seriously. The two other servants were lent to the party by ourselves. The little girl just referred to was also attacked the day after her visit (?) The medical man attending the boys stated that the disease was malarial fever, and this was the disease entered on the death certificate of the one who died, named M. We heard that the boys had repeated attacks of shivering followed by fever. M. was the first attacked (the day after returning), and all the rest were attacked within about ten days.

The three officers (who slept in mosquito nets) remained perfectly well up to February 23rd, 1899, when Mr. and Mrs. Parker left for England. The officers slept every night in the bungalow. A friend of the captain's, Mr. ——, also slept in the bungalow one night in a mosquito net, and was not attacked. The food of the whole party was precisely the same.

The three native servants, of course, did not sleep under mosquito nets. Thus, out of twenty-one persons concerned, seventeen who did not use mosquito nets were all attacked with fever, while four who did use them all escaped.

Mr. and Mrs. Parker have authorised me to publish their names in connection with this case.

Liverpool. Ronald Ross, D.P.H., M.R.C.S.

SPONTANEOUS EVOLUTION.

Cases of spontaneous evolution are, I think, of sufficient rarity to allow me to place the following on record. I was called in consultation to see a black woman, aged 21, in her fourth pregnancy. The medical officer in attendance, Dr. Irving, had sent for me, as the right arm was presenting, and the cord was prolapsed. The woman had just been admitted, and had been in labour for about twelve hours. I had the patient put under chloroform with a view to turning, but on examination I found the right side of the chest almost at the vulvar orifice, and the trunk descending into the unusually roomy pelvis. The placenta was covering the right shoulder posteriorly. The head, face forwards, was in the right iliac fossa. Dilatation was complete. The lower limbs were extended at the knee, and flexed at the hip in front of the trunk.

There being, in my opinion, ample room, I determined to assist evolution, which I easily accomplished by traction on the lower end of the trunk. The shoulder remaining under the symphysis, the breech descended and swept along the concavity of the sacrum. Rotation of the head then took place from right to left, bringing the occiput forwards. I had to apply very little force, and I think that probably Nature would have succeeded unaided in accomplishing delivery if the case had been left. The child was a well-grown female at full term, but was, of course, dead.

Walter S. Barnes.

Public Hospital, George Town, Demerara.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

COROSAL HOSPITAL, BRITISH HONDURAS.

AN UNUSUALLY LARGE LIVER ABSCESS: OPERATION: RECOVERY.

[By P. T. Carpenter, M.R.C.S.Eng., of the Colonial Medical Service.]

W. C., a Jamaican, aged 40, was admitted into the Corosa Hospital at 6 P.M. on August 7th, 1898, complaining of a very painful swelling in the pit of the stomach. He was an old soldier, having served on the West Coast of Africa and on various stations in the West Indies. Since he left the army, ten years before, he had led a debauched life, but had never been seriously ill until last year, when he suffered from a bad attack of dysentery. From this he completely recovered, and remained well until February, 1898, when a severe pain in the lumbar region developed, which has continued. At the beginning of August, 1898, he noticed a swelling above the navel which was becoming more and more painful.

His general condition on admission a week later, except for the very painful lump in the epigastrium, was not serious, although the temperature was 102° F. There was no jaundice. The tumour was found to be about the size of a full-grown fœtal head, and projected prominently in the epigastric region, filling the space between the ensiform cartilage and the umbilicus, and extending from side to side as far as the

tips of the eighth costal cartilages. The tumour visibly pulsated, the pulsation, on further examination, being found to be not expansile, but communicated from the large vessels below. The skin over the tumour was smooth and normal in appearance; it did not feel hotter than the surrounding skin. Fluctuation was well marked over the lower half of the mass, which terminated below in a well-defined rounded edge. The upper portion was hard and smooth, and was gradually lost under the ribs, from which, however, it was quite free. On respiration, the tumour moved synchronously with the diaphragm. A state of such great discomfort as exhibited by the patient demanded prompt measures. I decided to operate at once.

The needle of a hypodermic syringe was inserted into the lower fluctuating portion of the tumour, and a bead of pus withdrawn. Then, after cleansing the skin without any anæsthetic, general or local, an incision was made an inch and a-half long in the middle line, midway between the umbilicus and xiphoid. The tissues cut through were much thickened and indurated. The scalpel entered so far without any signs of pus showing that I began to feel anxious about my diagnosis, but after another stroke of the knife a large quantity of pus, considerably over two pints, escaped. It was brownish, curdy, and mixed with blood. The peritoneal cavity was not opened, as firm adhesions had formed. The abscess cavity was then thoroughly syringed out with carbolic lotion—1 in 80—a large drainage tube 4 inches long inserted, and finally the wound dressed with wood wool and iodoform, and over everything a large pad of "marine tow." The patient bore the operation remarkably well. It was performed in bed to avoid the pain of moving him. The next morning, after an excellent night, the temperature was normal, and it did not again rise above normal. The patient made an uninterrupted recovery.

Remarks.—It seems to me that the special points of interest are: (1) The fact that no anæsthetic was given; (2) the very large size of the tumour; (3) that it was evidently intending to break its way out through the anterior abdominal wall; (4) the fortitude of the patient; and (5) the ease with which it was possible to make a diagnosis without waiting for other signs and symptoms.

REPORTS OF SOCIETIES.

EDINBURGH OBSTETRICAL SOCIETY.

N. T. Brewis, M.D., Vice-President, in the Chair.

Wednesday, July 12th, 1899.

Specimens.

Dr. Keppie Paterson showed a small Sequestrum, removed from the Bladder; it evidently came from the posterior part of the body of the os pubis; there was enlargement of the surrounding lymphatic glands, and probably, therefore, the condition was tuberculous.—Dr. Haultain showed: (1) Tuberculous Fallopian Tubes removed from a woman, aged 46; (2) Diseased Appendages, removed purely for symptoms; there was severe pain at the menstrual periods, apparently from enormous fibrous thickening of the tunica albuginea.—Dr. Haig Ferguson showed: (1) An Ovarian Tumour, with Pyosalpinx on the same side; (2) Ovarian Tumour, with special reference to the after-history (mania) of the patient; (3) a Myxoma of the Chorion.—Dr. J. W. Ballantyne showed a specimen of Fœtal Peritonitis; apparently the fœtus had died while the mother was subjected to severe strain in nursing some of her relatives who were suffering from measles.

Induction of Premature Labour in a Case of Cancer of Rectum.

Dr. McVie (Chirnside) read a paper entitled "Mother *versus* child: Notes of a case of induction of premature labour in a patient who had carcinoma of the rectum." The comparative rarity of the complication, and the important questions of treatment, made the case specially interesting. When two lives were in danger the first question was which ought to be saved? What was the relative mortality of different operative measures? What was the relative value of maternal and fœtal life? How was the question altered where the maternal life was certain to be shortened by existing incurable disease? Mrs. A, 5-para, aged 35 years, had suffered from constipation from the date of her last confinement twenty months previously. All her labours had been natural and easy. When seen on March 8th last she said she considered herself 6 months advanced in pregnancy, and she complained of severe constipation. In the evening of that day Dr. McVie was summoned to attend what was believed to be a miscarriage. The pains, however, were abnormal; there was no hæmorrhage, and no discharge of any kind. The posterior vaginal wall was found bulged forward, and hard and irregular on the surface. The hardness extended above the level of the posterior fornix. The posterior lip of the os uteri was elongated, soft, and œdematous, the anterior was very short. The os was not dilated. *Per rectum* a hard irregular tumour, about 1¼ inch above the internal anal sphincter, was found. This tumour at its lower extremity occupied the rectum as a cervix uteri does the vagina, there being about an inch of the tumour free of the rectal wall all round. Through an opening in this downward projection the finger could with some pressure be passed upwards for over 2 inches, when the opening either widened or the tumour altogether ended, it was not easy to discover which, probably the posterior portion thinned away. The tumour was rather an annular tube than a ring, the canal running through it being hard and irregular, and the sides almost, if not in some places actually, in contact. It was adherent to the sacrum. Over all it was about the size of a hen's egg, somewhat flattened from before backwards. The fact of the tumour being adherent to the sacrum, the posterior vaginal wall adherent to its anterior surface, the condition of the posterior lip of the os uteri and the probable adhesion of the cervix to the upper part foreboded an unequal and difficult dilatation in labour, as well as a risk of tearing or abrasion of the adherent vaginal mucous membrane. The diagnosis obviously was rectal obstruction due to an inoperable carcinoma. The bowels were relieved by means of tepid water enemata, and the pains ceased. There was no over-distension of the bladder. The size and situation of the tumour rendered delivery at full term *per vias naturales* impossible. Termination of the pregnancy by induced labour had increased danger. The grave risk of a Cæsarean section loomed ahead, with the health of both mother and child vitiated. There was another possibility—namely, the sudden spontaneous onset of labour prematurely after the vaginal route had become so blocked as to necessitate Cæsarean section. The sufferings of the patient were meanwhile becoming severe. It was decided to induce premature labour, and soon afterwards to have colotomy performed. At this stage came an authoritative opinion to the effect that the pregnancy ought to be allowed to go on to full term, and delivery effected by Cæsarean section, on the ground mainly that the child's was the more valuable life. Dr. McVie then discussed the data on which the relative value of the two lives of mother and child was determined. The expectancy of life of both was discussed in this relation. The life value in its personal, social, and racial elements was also discussed. Meanwhile, the sufferings of the patient increased. The straining and pain were excessive. The bowel became more difficult to unload on account of a small scybalous mass that lay on the upper opening of the tumour, and acted like a ball valve. The enemata became more difficult, more painful, and less effective. Once more the induction of premature labour was resolved on. This was done slowly. Birth occured 60 hours after the introduction of the catheter into the uterus—during the last 3 hours the patient was under chloroform. The tumour remained immovable, so that the dread of a tear was soon seen to be groundless. The placenta was removed 20 minutes after the child, and there was little bleeding. The puerperium was uneventful, the mother was out of bed in the second week, and the child was thriving. Subsequent history: To allow of colotomy, the child was placed under the care of an aunt at the end of five weeks. It died at the end of the seventh week from enteritis, caused probably by improper feeding; but doubtless its prematurity of birth was an indirectly contributory cause. At the end of the sixth week a recto-vaginal fistula was discovered in the mother, but there was no sloughing or abrasion. Probably this was due to an extension of the disease. Flatus and fæces passed more freely *per vaginam* than *per rectum*. The necessity for a colotomy no longer existed. The patient still required an aperient and a

morphine suppository, but she took food fairly well, and attended to her household duties. The advantages to the patient from the procedure adopted might be summed up as follows: (1) The relief from the mental depression caused by the dread of an impending serious operation; (2) the nervous energy thus liberated and distributed among the various functions made life more cheerful, aided digestion, and gave greater tonicity to the bowels; (3) the patient received that amount of nutrition which went to nourish the child, and her strength was more easily maintained.

The paper was discussed by Drs. BERRY HART, JAMES RITCHIE, CHURCH, J. W. BALLANTYNE, F. W. HAULTAIN, FORDYCE, and the PRESIDENT; and Dr. MCVIE replied.

A Case of Fibrous Mole.

Dr. D. BERRY HART read notes on this subject. Pathological questions in relation to what are termed "moles" were of the greatest interest and importance, and yet it must be confessed that attention had been paid to them by obstetricians only of recent years, and our knowledge was as yet of the scantiest description. The reason for this had probably been that the interest in such cases had been divided, the obstetricians being specially concerned with the clinical features, and only languidly hitherto in the pathological conditions; while the pure pathologist of course not grasping the clinical features, and not being usually an expert in normal placental anatomy, could give only a partial explanation of the conditions found. The only way to settle such points was for the teaching obstetrician and gynæcologist to make up his mind that he must study the pathology himself, and not shift it on to the shoulders of others who were already overweighted. By a "mole" was understood a "mola" or "mass" expelled from the uterus, and always the result of an abortion occurring usually in the early months of pregnancy. They possessed the common features of marked alteration of structure, asepsis, absence of distinct fœtus as a rule, and tendency to be retained in the uterus without marked symptoms, not for an indefinite time, but often for several months. The ordinary hydatid mole did not possess all these characteristics, but the fleshy and fibrous mole did markedly. The recognised varieties of mole were, first, the hydatid mole; secondly, the rarer fleshy mole; and thirdly, the still more rare fibrous mole, of which a unique example was submitted. The patient from whom it was obtained was sent to Dr. Berry Hart by Dr. Griffith (Falkirk) with the history that nine months before she had suffered from a threatened abortion at the third month. This seemed to have passed off, but while amenorrhœa varied with an occasional flooding had occurred during the nine months subsequent, she was evidently not normally pregnant. The presumption after her threatened miscarriage was that she was going on normally to full time, yet here she was, three months after her expected confinement, and no appearance of a child. On examination Dr. Berry Hart found the uterus the size of a three months' pregnancy, and came to the conclusion that the clinical features pointed to fleshy mole. Shortly after her return home she expelled the mass now shown. It was pear-shaped, and measured 4½ inches by 2½ inches (11½ cm. by 6½ cm.). It was rough externally, and on vertical mesial section was seen to be made up almost entirely of a white glistening mass coarsely granular, with a small amniotic cavity at the lower end, but no fœtus. On microscopical examination the glistening mass already described was found to be made up of hypertrophied villi, which presented the following peculiarities. The core of the villus, instead of being composed of a tissue intermediate between myxomatous tissue and ordinary connective tissue, was made up of wavy fibrous tissue, with very few corpuscular elements, and hardly any vessels. Where the villi did not touch one another, the epithelium was fairly well preserved, but at other places the villi, intervillous spaces, and decidual cells were blended. Here the villi lost their epithelium, the decidual cells were well preserved, and there was also present a homogenous brownish substance, whose nature was difficult to ascertain. It was probably fibrin. At present Dr. Berry Hart was not quite clear as to the nature of the change, and he therefore at present merely recorded the case and showed the specimens. The note was accompanied by a series of microscopical sections.

Election of an Honorary Fellow.

Dr. Ercole Pasquali, Professor of Obstetrics and Gynæcology in the University of Rome, was unanimously elected an Honorary Fellow of the Society.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Anatomy and Physiology.

D. J. COFFEY, M.B., President, in the Chair.

Friday, June 2nd, 1899.

Distribution of Glands in Human Œsophagus.

THE PRESIDENT said that the œsophagus, after fixation and hardening, was divided into twelve segments of equal length, and then sectioned. The glands appeared isolated; they were large enough to be distinctly visible to the naked eye, and lay embedded in a fairly close-textured fibrous submucosa. Each one was formed of a close cluster of alveoli, lying a short distance below a well-defined, continuous, and rather broad band of muscularis mucosæ. Sometimes a detached strip of this muscular layer extended below the gland. In the transverse sections, of which a complete set had not yet been made, the glands occurred in interrupted vertical rows. The whole arrangement contrasted remarkably with the thick almost unbroken stratum of glands which occupied the whole submucosa in the dog. The number of glands in any one vertical section through the whole length of the tube was about thirteen as a rule. They were placed in the successive segments, in the following order from above down—three in the upper four segments, four in the next two, the succeeding two segments were devoid of glands, then followed four glands, and, lastly, two in the remaining segments. The examination of the junction of the tube with the stomach was as yet unfinished. The upper half of the mucous membrane was therefore better supplied with glands than the lower half. Other features of the histological structure investigated showed that the unstriped muscle in the circular coat extended almost to the upper extremity of the tube.

Histology of Human Vermiform Appendix.

The PRESIDENT said that the general arrangement and structure of the layers of the tube corresponded with that of the large intestine. The muscular layers were, however, pretty thick for a tube of such dimensions, the external or longitudinal being complete, and containing almost as many rows of cells as the circular layer. The submucous coat was almost wholly occupied by lymphoid nodules arranged in a thick ring. Each one was conical in form, base outwards, and surrounded by a capsule lined with endothelial cells, which thus constituted a lymph sinus drained by the lymphatics. The solitary follicles, which in the intestine were mainly in the mucosa, were here crushed out into the submucosa altogether. This determined a condensation of the proper areolar constituents of this layer into a band of dense fibrous tissue, lying outside the nodules and separating them from the muscular wall. One or two thick bands, however, remained in the radial direction, and ran inwards from the muscular to the mucous coat. The lymphoid nodules varied much in size, and a few large ones appeared to be projected inwards from the ring, invading the mucous coat and reaching to the epithelial surface. These differed in shape from the submucous nodules, being pyriform, with the broad end inwards. They might be described as a sort of second ring pushed inwards from the crowded outer set. The want of uniformity in the size of the nodules was apparently associated with the irregularity of the lumen of the tube. The glands of the mucous coat were of the normal character, and were fairly numerous. The muscularis mucosæ was thin and badly defined, it was broken into strips and lay immediately internal to the apices of the conical lymphoid nodules.

Professor PURSER said that the finding of unstriped muscular tissue so high up in the œsophagus was very interesting, and a new fact to him. The distribution of lymphoid tissue in the vermiform appendix was very interesting; in the rabbit it was the rule that two or three layers of adenoid tissue were present lying over each other.

Professor BIRMINGHAM also made remarks.

Thoracic and Abdominal Organs in the Lemur.

Dr. C. J. PATTEN read a paper on the form and position of the thoracic and abdominal organs in the lemur.

Serial Sections of the Adult Human Body made without Freezing.

Professor Frazer exhibited serial sections of the entire head and neck, several from the thoracic region, and the entire lower limb, from a subject which he had cut in the transverse vertical direction, and serially at intervals of about 1 inch, from the crown of the head to the soles of the feet. The subject had been injected from the femoral artery with a modified formalin solution under a pressure of about 8 feet; it had then remained exposed to the air without covering in the preparation room, when it was removed to the dissecting room, and cut serially at the intervals stated above with an ordinary amputating knife, and a small saw without a back, the latter being applied to the bone wherever that became necessary. The sections were perfect, both as regards the hardening and the colour of the various tissues.

Formalin Specimen of the Abdomen.

Professor Birmingham exhibited a formalin specimen of the abdomen, prepared to show the lines of reflection of the peritoneum.

Section of Medicine.

Friday, May 19th, 1899.

J. W. Moore, M.D., P.R.C.P.I., President, in the Chair.

Diabetes Insipidus.

Dr. Lumsden read the notes of three cases which he regarded as genuine examples of diabetes insipidus. Case I. M. M., aged 9, was admitted to Mercer's Hospital, June, 1898; family history good; well nourished, blond, of a fresh complexion, and fairly moist skin; tongue and lips very dry, and he complained of an insatiable thirst; appetite very poor, vomited occasionally after solid food; urinated frequently, and shivered very often before micturition; physical examination revealed no abnormality; pulse intermittent at times, of low tension, its rate varying from 75 to 110; complained frequently of headache which causes him to cry out; of an excitable and emotional temperament, flushed up when spoken to; increased knee-jerk, quadriceps reflex slightly present, and an attempt at ankle clonus; temperature normal or subnormal. About six or eight months ago it was first noticed. He was drinking large quantities of fluid; it did not follow an illness or accident, although a history of a fall on head three or four years ago was to be obtained. The polydipsia first appeared. While in hospital the greatest quantity of fluid drank in one day was 860 ounces, the greatest quantity voided being 750 ounces. On two occasions when fluids were restricted he drank his own urine. The urine was of a pale greenish colour, alkaline or faintly acid; specific gravity 1001 to 1002. No albumen or glucose was ever discovered, although daily examined for a period extending over five months. Inosit was not present. Urea varied from 150 to 600 grains in twenty-four hours. Eyes normal; blood normal. Various treatments were tried, and although his general health very greatly improved, and subjective symptoms disappeared when discharged, he was passing from 300 to 400 ounces, and drinking about 300 ounces fluid in twenty-four hours. Case II. A healthy, vigorous-looking labourer, aged 64. Good family history; a violent blow on the head twenty years ago, after which the polydipsia and polyuria appeared, and has since persisted; given to alcoholic excesses all his life; skin very dry; complains of dryness of mouth and tongue, which is covered with a darkish-brown fur; appetite good, but not excessive; organs sound; no cardio-vascular evidence of granular kidney; pulse 72, regular, and of distinctly low tension; reflexes sluggish; complained of frequent occipital headache and pain in lumbar region; very easily tired, and nervous when up, preferred to lie in bed; drank from 260 to 300 ounces in twenty-four hours, and passed about 12 pints of a pale-coloured urine, faintly acid; no albumen; no sugar; density 1003; inosit present; no casts; eyes examined revealed chronic glaucoma, but no retinitis or neuritis; had somewhat improved on valerianate of zinc, but still polyuric. Case III. Girl, 17 years; fall on back of head four years ago, shortly after which polydipsia and polyuria appeared; used to drink upwards of 20 pints a day. On admission she was passing and drinking about 14 pints daily; pale urine; specific gravity 1002, neutral; no albumen; no sugar; no inosit; no casts; urea greatly diminished, organs sound; pulse tensions low, and no signs whatever of granular kidney. She was first tried on various drugs without good effect, finally on valerianate of zinc, commenced in ½-grain doses thrice daily, and increased gradually till she was taking 22 grains in twenty-four hours. The result was wonderful, the thirst disappearing and urine excretion falling to the normal. She had been under constant observation ever since (four months). Her general health had improved, she had gained in weight, and there had been no return of the polydipsia or polyuria.

The President, Dr. Walter Smith, and Dr. Little made remarks; and Dr. J. Lumsden replied.

Widal's Reaction as a Diagnostic in Typhoid Fever.

Dr. Littledale gave an account of 120 cases on which he had tried Widal's reaction. At first the blood serum and typhoid bouillon were mixed in the proportion of 1 to 10, but this was found quite useless, as cases other than typhoid gave an agglutination reaction. Later the proportion used was 1 to 40. Results were divided into positive, negative, and doubtful, but there were only a few of the latter, and these would have probably been eliminated if higher dilutions were used. Three cases of diphtheria that had received antitoxin gave an agglutination reaction, as did also antidiphtherial serum itself. Typhus and acute tuberculosis always gave negative results. The conclusion arrived at was the unquestionable value of the test when applied in the second week, as the earliest case tested was on the fifth day of illness, and when a dilution of not less than 1 in 40 was used.

Dr. M'Evoy, Dr. Finny, and the President made remarks; and Dr. Littledale replied.

Tachycardia Ending Fatally by Thrombosis of Both Femoral Arteries.

Dr. Finny read the clinical notes of three cases of tachycardia, the first two cases being examples of paroxysmal heart hurry; the third case was persistent for sixteen days, and ended fatally with gangrene of both lower extremities due to arterial thrombosis. He called attention to the rarity of the condition, the remarkable character of the pulse, its recurrent or paroxysmal features, the length of time life might be maintained, and the paucity of *post-mortem* examinations, and referred to important contributions to the subject by Drs. Bristowe, Bouveret, Herringham, and Williams. The condition might come on seemingly without cause, and might attack at any age, 5 to 70 years of age. He gave the several theories founded on the teaching of physiology, experiment, and pathology, and yet none quite suited the case of a heart suddenly beating 200 to 240, and as suddenly, after hours' or days' duration, by day or by night, falling to 70 or 80. In conclusion, he mentioned that of the six fatal cases which had been examined after death, three showed inflamation or fatty disease of the muscle of the heart, and three dilatation; and he contrasted one of his own cases in which the myocardium was perfectly healthy, and the organ not dilated. The cause of the gangrene was arterial and venous thrombosis of the iliac on one side and the femoral on the other, while the kidneys, lungs, and liver were the seat of infarcts. And yet none of these infarcts, any more than the heart itself, showed any bacteriological evidence of infective or other micro-organisms. The reading of it was probably: first, primary febrile infection, possibly influenza; secondly, cardiac weakness as its effect, tachycardia as another possible effect of the toxin on the cardiæ ganglia; and thirdly, thrombosis of the right and left auricles, and infarctions (emboli) of the pulmonary and systemic arteries.

The President, Dr. W. Langford Symes, Dr. Knott, and Dr. Little spoke; and Dr. Finny replied.

West London Medico-Chirurgical Society.—The following were elected officers and members of Council for 1899-1900 at the annual meeting held on July 14th:—*President:* Dr. J. Barry Ball.* *Vice-Presidents:* Mr. C. M. Tuke, Mr. L. A. Bidwell, Dr. Seymour Taylor,* Mr. Neville Wood.* *Council:* Dr. Andrew Elliott, Dr. F. H. Low, Dr. J. Harper, Mr. C. Andrewes, Dr. F. J. McCann, Mr. F. R. Mallard, Mr. F. Savary, Dr. L. Dobson,* Mr. E. Bartlett,* Dr. D. R. Pearson,* Mr. H. W. Chambers,* Mr. G. E. Twynam.* *Treasurer:* Mr. T. Gunton Alderton. *Secretaries:* Dr. G. D. Robinson, Dr. G.

P. Shuter.* *Librarian:* Mr. C. B. Keetley. *Editor of Journal:* Mr. H. Percy Dunn. *Editorial Secretary of Journal:* Mr. McAdam Eccles. * Those gentlemen whose names are marked with an asterisk did not hold similar office last year.

ULSTER MEDICAL SOCIETY.—The annual business meeting of this Society was held in the Museum, Belfast, on July 14th. In the absence of the PRESIDENT (Dr. Nelson) the chair was taken by the EX-PRESIDENT (Dr. J. A. Lindsay). The annual reports of the Council, the Treasurer, the Librarian, and the Pathological Secretaries were presented. From these it appeared that the Society continues in a prosperous state, and that the balance in the Treasurer's hands had been considerably augmented during the year. The election of office-bearers for the ensuing session was then proceeded with, the following being the result: *President:* Dr. James Graham. *Vice-Presidents:* Dr. Strafford Smith and Dr. Darling. *Members of Council:* Dr. McKisack, Dr. Calwell, Dr. John Campbell, Professor Byers, Dr. Dempsey, and Dr. Bigger. *Pathological Secretaries:* Dr. Lorrain Smith and Dr. Thomas Houston. *Honorary Librarian:* Dr. Cecil Shaw. *Honorary Treasurer:* Dr. McCaw. *Honorary Secretary:* Dr. James Colville.

REVIEWS.

THE USE OF LEAD COMPOUNDS IN POTTERY, FROM THE POTTER'S POINT OF VIEW. By WILLIAM BURTON, F.C.S. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1899. (Demy 8vo, pp. 90. 1s.)

THIS is "a controversial pamphlet, but none the less fair and accurate on that account," in which, while the dangers of pottery manufacture wherever lead glazes is used is acknowledged, an attempt is made to show that the dangers to health have been exaggerated by the press and public speakers. The writer of the pamphlet, who is a director of Pilkington's Tile and Pottery Company, Limited, maintains that the report of the two experts appointed by the Home Secretary is a little more sweeping in its recommendations than the conditions of the industry call for and the state of the trade will allow. Pottery manufacture is not dangerous in all its branches. The risks to health are unevenly distributed.

Mr. BURTON falls foul of the Home Office report when, for example, the work of the glost placers is attacked. It is currently believed that the less lead there is in a glaze the more fire is required for its fusion, but we are told that we must not infer from this that potters use lead in excess simply to save coal. Mr. Burton admits that in ground laying, colour dusting, and ware cleaning sufficient attention has not been hitherto paid to the removal of dust, and hence the large number of cases of plumbism in these occupations. Taking the pottery industry as a whole, it is estimated that one workmen in ten runs some risk of poisoning. Until the first quarter of 1898 there was no compulsory medical inspection, but in 1899 this examination had not been long in force, until, as the writer of the pamphlet admits, a decided improvement was observed. This is strong testimony to the wisdom of the step. An indictment is brought by the pottery manufacturers against the Home Office for the manner in which its statistics have been presented, but we see little to support the accusation. The question whether the cases of plumbism reported were of persons suffering from lead poisoning for the first or second time is of little importance, and not worth quarrelling about; they were cases of plumbism. Mr. Burton does not believe that the day of leadless glazes has yet come, but sees much in the recommendations of the Home Office to encourage manufacturers to persevere with experiments in this direction.

ZUR FRAGE: WANN SIND GALLENSTEIN-KRÄNKE ZU OPERIREN? [When shall we Operate in Patients Suffering from Gall Stones?]. Von Dr. FRANZ FINK. Primararzt am Kaiser-Franz-Josef-Hospitale in Karlsbad. Berlin: August Hirschwald. (Demy 8vo, pp. 40. M. 1.)

THE attempt to answer the question in the title of this small pamphlet is based upon an analysis of 17 operations, conducted upon 12 patients. For a surgeon living in Carlsbad, one may reasonably express surprise at the number of operations being so insignificant. But what is lacking in number is abundantly compensated for in the severity of the individual cases. The author informs us that almost all gall-stone cases are subjected to the Carlsbad "cure." The vast majority of patients are relieved of symptoms; only in the more prolonged or complicated cases has operation been practised. The reasons given as demanding operation in the several cases were in:

Case 1. Hydrops of gall bladder and adhesion to the abdominal wall.
Case 2. Ulceration of gall bladder, with a fistula near the umbilicus.
Case 3. For 3 years, pain, wasting, and fever.
Case 4. Stones filling a gall bladder which reached to the umbilicus.
Cases 5 and 6. Continued pain, jaundice, wasting and fever.
Case 7. Two years' pain, jaundice, wasting and fever.
Case 8. Five months' pain, jaundice, wasting and fever.
Case 9. Acute illness of 3 weeks' duration, preceded by jaundice pain, etc.
Case 10. Three years' pain, insomnia, wasting, etc.
Case 11. One year's jaundice, commencing cholæmia.
Case 12. Rigors: acute illness following upon gall-stone symptoms.

On these 12 patients 17 operations were performed, one patient undergoing 4 operations. Of the 12 patients 2 died; 11 of the 12 had undergone the "cure" with decided benefit in each case, but complete relief did not occur, as the pathological changes were too far advanced. All the patients were women. The ages were:

Between 20 and 30	... ...	3 patients
,, 30 and 40	... ...	1 ,,
,, 40 and 50	... ...	6 ,,
,, 50 and 60	... ...	2 ,,

It will be seen from this very brief summary that the material upon which the author has based his work is, so far as our experience in England goes, nothing short of the extraordinary, and the conclusions at which Dr. FINK has arrived are proportionately astounding. In summing up, he says: "I should perform cholecystotomy only in cases in which the gall bladder shows no marked alteration; if such alteration is present I consider the extirpation of the gall bladder necessary. I consider, also, that when stones have left the gall bladder, and the biliary passages are cleared by cysticotomy or choledochotomy, that extirpation of the gall bladder is the right procedure. The gall bladder in most of these cases is contracted, the mucous membrane altered, and its functions interfered with. Under such circumstances I do not think the bladder can return to the normal, and I therefore recommend its removal."

We think that if Dr. Franz Fink desires a reasonably accurate answer to his query, his interrogation must be put to others than himself. In England we are accustomed to operate upon our cases earlier than is the practice in Carlsbad. We do not see in 12 consecutive cases such serious havoc wrought by persistent gall-stone irritation, and our death list is consequently not so tragic. We have come to recognise that here, as elsewhere, in abdominal affections early operation is practically devoid of risk in the absence of "malignant disease, deep jaundice, or infective cholangitis." These latter, we are learning, are not improbably the results of surgical inaction.

We do not presume to say that the day has yet arrived when a definite or final answer can be given to the question Dr. Fink puts to us. The evidence which he lays before us, as the issue of his practice, differs, however, very widely from that which can be given, we venture to think, by the majority of surgeons.

THE Duke and Duchess of York opened on July 17th a new nurses' home attached to Queen Charlotte's Lying-in Hospital, Marylebone Road.

THE official notice of the annual meeting of the Italian Society of Internal Medicine has now been issued. This, the tenth, meeting will be held in Rome from October 23rd to 26th. Professor G. Bacoelli, Minister of Public Instruction, will preside. The subjects selected for discussion are: (1) Chlorosis; (2) The Pathology of the Pancreas. The former will be opened by Professors A. Riva and P. Castellino; the latter by Professors L. Devote and U. Gabbi. Reports on the progress during the year of therapeutics and diagnosis have been entrusted to Professors Boeri and Riva Rocci. Application for associate's tickets (10 francs) and notices of papers to be read may be addressed to Professor L. Lucatello, 5, Via Università Padua.

ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL.

At a meeting of the Council held in the Council Room of the Association, 429, Strand, on Wednesday, July 12th. Present:

Dr. ROBERT SAUNDBY, LL.D., President of Council, in the Chair.

Dr. JOHN WARD COUSINS, President-elect.

Dr. CHARLES PARSONS, Treasurer.

Dr. JAMES BARR, Liverpool.
Dr. MICHAEL BEVERLEY, Norwich.
Dr. THOMAS BRIDGWATER, LL.D., Harrow-on-the-Hill.
Dr. J. BRASSEY BRIERLEY, Old Trafford.
Mr. H. LANGLEY BROWNE, West Bromwich.
Mr. ANDREW CLARK, London.
Dr. H. RADCLIFFE CROCKER, London.
Dr. MAURY DEAS, Exeter.
Brigade-Surgeon-Lieutenant-Col. E. F. DRAKE-BROCKMAN, London.
Dr. W. DYSON, Sheffield.
Mr. GEORGE EASTES, M.B., London.
Dr. W. A. ELLISTON, Ipswich.
Professor DAVID W. FINLAY, Aberdeen.
Dr. JOHN H. GALTON, Upper Norwood.
Dr. ALFRED GODSON, Cheadle.
Dr. BRUCE GOFF, Bothwell.
Dr. OGILVIE GRANT, Inverness.
Dr. J. GROVES, Carisbrooke.
Dr. HENRY HANDFORD, Nottingham.
Mr. JOHN D. HARRIES, Shrewsbury.
Dr. HOLMAN, London.
Dr. T. VINCENT JACKSON, Wolverhampton.
Mr. T. R. JESSOP, Leeds.
Mr. EVAN JONES, Aberdare.
Mr. N. C. MACNAMARA, London.
Mr. H. J. MANNING, Salisbury.
Dr. J. W. MILLER, Dundee.
Dr. JOHN WILLIAM MOORE, Dublin.
Dr. C. G. DRUMMOND MORIER, London.
Mr. W. JONES MORRIS, Portmadoc.
Surgeon-General T. F. O'DWYER, Aldershot
Dr. ISAMBARD OWEN, London.
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. R. W. PHILIP, Edinburgh.
Dr. H. H. PHILLIPS-CONN, Reading.
Dr. FRANK M. POPE, Leicester.
Dr. EDWIN RAYNER, Stockport.
Dr. JOHN ROLSTON, Stoke, Devonport.
Dr. WILLIAM RUSSELL, Edinburgh.
Dr. L. W. SEDGWICK, London.
Dr. ALFRED SHEEN, Cardiff.
Dr. G. E. SHUTTLEWORTH, Richmond.
Dr. R. SOMERVILLE, Galashiels.
Mr. HENRY STEAR, Saffron Walden.
Dr. W. J. TYSON, Folkestone.
Mr. T. JENNER VERRALL, Brighton.
Dr. W. L. WINTERBOTHAM, Bridgwater.
Dr. S. WOODCOCK, Old Trafford.

The minutes of the last quarterly meeting, and the special meeting of May 12th, having been printed and circulated, were taken as read and signed as correct.

Read letters of apology for non-attendance from the President, Dr. Henry Barnes, Dr. R. W. Batten, Dr. A. H. Carter, Mr. R. S. Fowler, Dr. P. Sydney Jones, Mr. Jordan Lloyd, Dr. Roderick Maclaren, Dr. J. C. McVail, Dr. G. H. Philipson, Dr. G. E. Rennie, Mr. H. B. Robinson, Dr. E. Markham Skerritt, Dr. A. R. Urquhart, and Mr. Joseph White.

Read letter from the South Midland Branch reporting the death of Mr. J. H. Hemming.

Read letter of condolence from the President of the Council to Mrs. Hemming and reply from Mrs. Hemming.

Resolved: That the warm sympathy of the Council be offered to Mrs. Hemming and family, on the sad and sudden death of the late Mr. Hemming, whose regular attendance on the Council and Committees of the British Medical Association, genial manner, and able assistance will long be remembered by his colleagues.

Read letter of thanks for the resolution of condolence on the death of the late Dr. Jukes de Styrap from Mr. H. G. Jukes de Styrap.

Read reply from Colonial Office to communication of the President of Council in reference to Minute of Council 4464:

4464 Resolved: That the President of Council be requested to communicate with the Colonial Secretary upon this matter, and that a reply to that effect be sent to the Secretary of the Jamaica Branch.

[9928/99] Downing Street,
May 9th, 1899.

SIR,—I am directed by Mr. Secretary Chamberlain to acknowledge the receipt of your letter of the 18th ultimo inquiring on behalf of the British Medical Association as to certain changes in the medical service of Jamaica and British Guiana.

As you rightly conjecture, it is financial depression in these Colonies which has compelled their Governments to effect economies by reducing the staff of the medical as well as of other departments.

The total expenditure on medical relief for the year 1897-8 amounted in Jamaica to a little less, and in British Guiana to a little more, than 10 per cent. of the total expenditure of the Colony out of the revenue. Such a percentage appears to Mr. Chamberlain to be too high, and he thinks it not unnatural to suppose that it may have tended to pauperise the communities.

Mr. Chamberlain regrets that these necessary economies should have caused hardship to any member of the Government Medical Service, and he is always ready to consider on its merits the case of any individual officer who may consider himself to have been unfairly treated in consequence of the changes referred to.

I am, Sir, your obedient servant,
Robert Saundby, Esq. C. P. LUCAS.

Read letter of thanks from the Jamaica Branch:

Jamaica Branch, British Medical Association,
Kingston, June 6th, 1899.

DEAR SIR,—I have to acknowledge receipt of your communication with reference to the Jamaica Medical Service, together with Mr. Chamberlain's reply, and to thank the Council for the action taken. I am glad to be able to inform you that your action, combined with the energetic efforts of the local Branch, has had the desired effect—the entire scheme being abandoned to the satisfaction of the service.

I am, yours faithfully,
G. F. DA COSTA,
Acting Secretary.

Resolved: That the same be received and entered on the minutes.

Read reply from the London Chamber of Commerce to resolution of Council 4460:

4460 Resolved: That the attention of the Council has been called to grave general accusations impugning the probity of the medical profession in the matter of receiving secret commissions, and that the Council calls upon the London Chamber of Commerce to substantiate such accusations in order that the Council may be in a position, should such practices exist, emphatically to condemn them as a grave breach of professional good conduct and inconsistent with membership of the British Medical Association.

The London Chamber of Commerce,
Botolph House, Eastcheap, London, E.C.,
May 10th, 1899.

SIR,—I beg to acknowledge receipt of yours of the 13th ult. enclosing copy of resolution passed at a numerously attended meeting of the Council of the British Medical Association on the 12th ultimo.

In reply, I am instructed to say that the Secret Commissions Committee regret that they are unable to furnish you with the detailed evidence in support of the statements contained in the report to which your Council takes objection. I am to point out that it was essential for the success of such an inquiry as the Chamber of Commerce undertook that the proceedings should be private, and that, for reasons which are obvious, the names of the persons giving information should not be disclosed. (See par. 3 of the report, and note at foot of page 6.)

At the same time the Committee believe that the information received by them fully justifies the statement made in the report that the practices referred to do exist in the medical profession, but to what extent they exist it is impossible to estimate accurately.

My Committee are gratified to learn that your Council is prepared to condemn the practices referred to as grave breaches of professional good conduct, and inconsistent with the membership of the British Medical Association, and probably the public and repeated announcement of this fact will have a national influence wherever the practice exists.

I am, Sir, yours faithfully,
KENRIC B. MURRAY,
Secretary.

Francis Fowke, Esq.,
General Secretary, British Medical Association,
429, Strand, W.C.

Resolved: That having regard to the serious nature of the alleged practices, the Council of the British Medical Association is of opinion that such charges should not have been made public unless the Chamber of Commerce were in a position to substantiate them.

Resolved: That a copy of the foregoing resolution be forwarded to the London Chamber of Commerce.

Read reply from the General Medical Council in reference to resolution of Council 4485:

4485 Resolved: That this Council feels that the time has now come when the general practitioners in the United Kingdom are entitled to demand a much larger share of direct representation on the General Medical Council.

299, Oxford Street, London, W.,
June 14th, 1899.

SIR,—With further reference to your letter of April 21st, I am directed to inform you that the resolution therein on the subject of increased direct representation was considered by the Executive Committee of this Council on May 29th, and referred by it to the General Council for discussion.

Yours faithfully,
H. E. ALLEN, Registrar.

The General Secretary, British Medical Association.

The President of Council reported that a copy of the Midwives Bill had been forwarded to the President and Registrar of the Royal College of Physicians, and that formal acknowledgments had been received, also that a copy of the Midwives Bill had been sent to the General Medical Council, and the following was a copy of their reply:—

299, Oxford Street, London, W.,
June 14th, 1899.

SIR,—I have to inform you that the communication of your Association on the Midwives Bill having been referred by the President of this Council to the Midwives Bill Committee, and its report thereon having been received by the General Council, I was directed to thank the British Medical Association for its communication, and to state that the Committee, in drafting the report on the Midwives Bill which they submitted to the recent session of the Council, had regard to the principal matters embodied in the Memorandum and Draft Bill of the Association, and that the Association will find many of its suggestions find support in the report of the Committee.

Yours faithfully,
H. E. ALLEN, Registrar.

The General Secretary,
British Medical Association.

Read correspondence with Dr. Charnley respecting the non-publication of his paper in the JOURNAL.

Resolved: That the Council much regret that Dr. Charnley should still feel aggrieved that his paper on the Salisbury Treatment was not published in the BRITISH MEDICAL JOURNAL, but they cannot reopen the question, which must be regarded as settled by the resolution adopted on April 12th, 1899.

Read memorial to the Marquis of Salisbury which had been forwarded in accordance with Minute of Council 4515:

To the Most Honourable the Marquis of Salisbury, K.G., Prime Minister.

The Memorial of the British Medical Association

SHEWETH,—That on behalf and by the authority of the Council of the British Medical Association, a body numbering over 17,000 of the medical practitioners of the British Empire, we desire to impress upon Her Majesty's Government the urgent need that exists for an inquiry into the prevalence and the treatment of venereal disease among the civil population of this country, a disease which not only undermines the constitution of those who contract it in the first instance, but, by reason of the many ways in which it may be transmitted, destroys the health and happiness of countless other persons, and induces in the children of those originally infected diseases of a most formidable character.

We beg, therefore, to express our earnest desire that Her Majesty's Government will appoint a Departmental Committee to discover how great the evil now is, irrespective of its temporary increase or decrease, and to collect suggestions and express opinions as to any means that can be devised for preventing or limiting the spread of venereal disease among the civil population of this country.

To collect information as to the present arrangements for the treatment of venereal disease, the distribution of hospitals and dispensaries, and the number of beds available in different places, and to make suggestions as to more efficient provision for the treatment of the disease.

To collect evidence as to the prevalence of the various forms of venereal disease among patients attending the hospitals and dispensaries throughout the country.

And your memorialists will ever pray, etc.

ROBERT SAUNDBY, M.D., LL.D., F.R.C.P.,
President of Council
British Medical Association.

Reply from the Foreign Office to the above memorial:

Foreign Office,
May 15th, 1899.

SIR,—I am directed by Lord Salisbury to acknowledge the receipt of your letter on the 11th instant, and of the memorial which you have forwarded to him on behalf of the Council of the British Medical Association, praying for the appointment of a Departmental Committee to inquire into the prevalence and treatment of venereal disease among the civil population of this country.

In reply I have to say that the memorial will receive consideration on the part of Her Majesty's Government.

I have the honour to be, Sir,
Your obedient Servant,
S. MCDONNELL.

Read letter from Dr. Dubois-Havenith asking the Council of the Association to appoint two delegates to attend the International Congress on Syphilis to be held in Brussels.

Resolved: That the President of Council and President-elect be appointed delegates to attend the International Congress on Syphilis to be held in Brussels.

The President of Council reported that the text of the Companies (Medical Profession) Bill containing a clause prohibiting companies carrying on the business of physician or surgeon had been incorporated in the Earl of Dudley's Bill to amend the Companies Acts, which Bill had since been withdrawn and the following petition had been presented to the House of Lords in accordance with Minute 579 of the Parliamentary Bills Committee:

TO THE RIGHT HONOURABLE THE LORDS SPIRITUAL AND TEMPORAL IN PARLIAMENT ASSEMBLED.

The humble petition of the undersigned on behalf of the Council of the British Medical Association, having its offices at 429, Strand, in the County of London,

SHEWETH,—That the British Medical Association (an Association numbering over 17,000 of the medical practitioners of the British Empire), prays your Honourable House to pass into law the Companies (Medical Profession) Bill on the ground that it will prevent limited companies from carrying on the business or profession of physician, surgeon, dentist, or midwife, in evasion of those laws passed by Parliament for the due regulation of the same.

And your petitioners, as in duty bound, will ever pray, etc.

ROBERT SAUNDBY, M.D., LL.D., F.R.C.P.,
President of Council.
May 17th, 1899. British Medical Association.

Resolved: That the revised by-laws of the West Australian Branch be approved and entered upon the minutes.

Read letter from Dr. Laffan as to the eligibility of Poor-law medical officers for membership of the county council.

Resolved: That Dr. Laffan be informed that the Council are satisfied as to the legality of the action of the Local Government Board (Ireland).

Read resolution of the Edinburgh Branch, of which the following is a copy:

Motion by Dr. James Ritchie: That the Edinburgh (Lothians and Fife) Branch of the British Medical Association express its opinion strongly in favour of revaccination, and request the Council of the Association to use it influence, urging the Government to implement its promise to legislate for the attainment of compulsory revaccination.

Resolved: That this Council has decided that it is inadvisable at present to take any steps in connection with vaccination.

The election of candidates was then considered.

Resolved: That the seventy-two candidates whose names appear on the circular convening the meeting be and they are hereby elected members of the British Medical Association.

Read resolutions from the East York and North Lincoln Branch:

84, Wright Street, Hull,
June 15th, 1899.

DEAR SIR,—At the annual meeting of the East York and North Lincoln Branch of the Association, held on May 31st, 1899, the following resolutions were unanimously and enthusiastically adopted:

(1) That this Branch of the British Medical Association supports the measures, and adopts the memorial of the Corporate and Medical Reform Association, Limited, to the General Medical Council, opposing the legal certification of unqualified practitioners (midwives and opticians), and resisting any Bill to legalise such certification.

(2) That this resolution be transmitted to the Council of the Association and each Branch, and that the Council and the Branches are earnestly requested to unite in the organised resistance to this scandal to the profession and public mischief and danger, which, if legalised, will virtually repeal the Medical Acts.

May I ask you to be so kind as to bring these resolutions before the Council of the Association at its next meeting?

I am, dear Sir, yours truly,
ALFRED G. FRANCIS,
Hon. Sec.

Resolved: That the communication be laid upon the table.

Read applications for a grant of money from the Liverpool School of Tropical Diseases towards equipping a scientific expedition to Sierra Leone.

Resolved unanimously: That a grant of £100 be made towards the scientific expedition to Sierra Leone.

Read letter of thanks for the recent grant of £100 to the Jenner Society.

Read resolution passed by the North of England Branch:

That the Council of the British Medical Association be asked to formulate a code of professional ethics, and to send a copy of such code to every practitioner on the *Register*.

Resolved: That the North of England Branch be informed that the Council has had the question before it from time to time, but it has not been able to see its way to carry out the adoption of a code of ethics.

Resolved: That Deputy Inspector-General Mahon, C.B., R.N., be appointed an additional Vice-President of the Section of Surgery.

Read letter from Dr. Glover:—

25, Highbury Place, N.,
July 11th, 1899.

DEAR DR. SAUNDBY,—The Medical Council, as you are aware, has, after due inquiry, approved of a Conciliation Board for the settlement of matters in dispute between the profession and the medical aid associations, consisting of *bonâ fide* friendly societies. It looks to the profession itself and its voluntary associations to approve this action as a friendly way of removing friction and raising the whole standard of medical service; and it looks especially to your Association as the greatest in the profession.

I should be glad if you would move your Council and the Association to express such approval, and to nominate two or three of your members, acquainted with and interested in the subject, to act on the Conciliation Board, which it is proposed should contain about half-a-dozen members of the profession and as many representative of the friendly societies.

I may say that time is an object, and that the representatives of friendly societies have already appointed their representatives.

Believe me, yours very truly,
J. G. GLOVER.

Dr. Saundby, President of Council,
British Medical Association.

Resolved: That the consideration of Dr. Glover's proposal be postponed until the meeting of the new Council on Wednesday, August 2nd.

Resolved: That the Stewart Prize be awarded to Surgeon Frederick James Abercrombie Dalton, of the Royal Naval Hospital, Plymouth, for his researches into the etiology of beri-beri, and with a view to encourage a continuance of the same.

Resolved: That the Report of the Council be received, ap

proved, and published in the JOURNAL for presentation to the annual meeting in Portsmouth on August 1st. (See next column.)

Resolved: That the Report of the Parliamentary Bills Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting in Portsmouth on August 1st. (See p. 218.)

Resolved: That the Report of the Scientific Grants Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting in Portsmouth on August 1st. (See p. 219.)

Resolved: That the Report of the Committee on Legislation for Inebriates be received, approved, and published in the JOURNAL for presentation to the annual meeting in Portsmouth on August 1st. (See p. 226.)

Resolved: That the Report of the Anæsthetics Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting in Portsmouth on August 1st. (See p. 226.)

Resolved: That the Report of the Therapeutic Committee be received, approved, and published in the JOURNAL, for presentation to the annual meeting in Portsmouth on August 1st. (See p. 226.)

Resolved: That the report of the Committee on the Efficient Control of Railway Servants' and Mariners' Eyesight be received, approved, and published in the JOURNAL for presentation to the annual meeting in Portsmouth on August 1st. (See p. 227.)

Resolved: That the Report of the General Practitioners and Ethical Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting in Portsmouth on August 1st. (See p. 227.)

Resolved: That the Report of the Medical Charities Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting in Portsmouth on August 1st. (See p. 226.)

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received, approved, and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain resolutions respecting the publication of the sectional reports, the confirmation of the appointment of Mr. Guy Elliston as Assistant Secretary, and a vote of £100 towards equipping an expedition to Sierra Leone for the study of malaria; a letter was read announcing the termination with the next issue of the *Index Medicus*; the accounts for the quarter, amounting to £8,817 15s., and the Auditor's report.

Resolved: That the minutes of the Inebriates Legislation Committee of the 3rd inst. be received, approved, and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Medical Charities Committee of the 3rd inst. be received, approved, and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Scientific Grants Committee of the 7th inst. be received, approved, and the recommendations contained therein carried into effect.

The minutes of the Scientific Grants Committee contain applications for both the vacant Research Scholarship and Ernest Hart Memorial Scholarship, together with applications for renewed grants and new grants. The Committee recommended Mr. John Smyth Macdonald for election to the vacant Research Scholarship, and Dr. John W. H. Eyre for election as the first scholar to the Ernest Hart Memorial Scholarship, and allotted the sum of £350 as grants for scientific research.

Resolved: That the minutes of the Parliamentary Bills Committee of the 11th inst. be received, approved, and the recommendations contained therein carried into effect. (For report of proceedings of Parliamentary Bills Committee see p. 227.)

Resolved: That the Report of the Premises and Library Committee of the 11th inst. be received, approved, and the recommendations contained therein carried into effect.

The minutes of the Premises and Library Committee contain a report upon the proposed erection of an underground lavatory opposite the Association's premises, the Librarian's report, and the accounts of the Library for the past quarter.

Resolved: That the minutes of the General Practitioners and Ethical Committee of the 11th inst. be received, approved, and the recommendations contained therein carried into effect.

The minutes of the General Practitioners and Ethical Committee contain a communication from the Border Counties Branch relative to covering, correspondence and resolutions respecting the questions of the granting of testimonials by medical men, the proposed formation of a Conciliation Board, and a communication from Sierra Leone as to unqualified practice in the colonies.

[The following Reports of the Council and of the Committees will be presented at the Annual Meeting to be held at Portsmouth on August 1st, 2nd, 3rd, and 4th, and are published in accordance with the regulations for the conduct of Annual Meetings, which require that all Reports of the Committees of the Association shall be printed in the JOURNAL *before the Annual Meeting.]*

REPORT OF COUNCIL, 1899.

IT is with great satisfaction that your Council meets you for the first time in the important and historic borough of Portsmouth, famous as a fortress, naval port, and arsenal. Portsmouth is also important to the Association as being the headquarters of the Southern Branch, which was founded in 1874 mainly by the endeavours of Dr. Ward Cousins, your President-elect, who held the office of President of Council from 1893 to 1896. The Branch is organised on the same plan as the South-Eastern and other Branches, being divided into districts, each of which holds its own meetings, in addition to which there is an annual general meeting of the Branch, and there are occasional meetings when required.

In accordance with By-law 19, your Council begs to present the Sixty-seventh Annual Report. The Council has been very actively engaged during the year on many subjects involving the interests of the medical profession.

1899.

The number of members on the books last year was 17,746; during the year 1,128 new members have been elected, 183 have died, and 506 have resigned, leaving on the books 18,185.

REVENUE AND EXPENDITURE.

The revenue for the year ending December 31st, 1898, amounted to £42,924; the expenditure, including £500 written off for depreciation of plant, £549 for losses on subscription, and for the first time interest on mortgage £855, amounted to a total of £38,188, leaving a surplus of £4,736.

In accordance with the agreement with the trustees of the Sutton Estate that the mortgage on the freehold premises should be paid off in ten years, a first instalment of £4,000 of the debt has been paid. This will lessen the annual interest on the mortgage by £120. The purchase of the freehold may be looked upon as a safe and paying investment. The remainder of the cost of leases of 429, Strand, and 2, 3, 4, and 5, Agar Street, amounting to £8,749, has also been written off. The accumulated surplus, which includes £4,538 profit on sale of securities required for the purchase of the freehold property, amounts now to £69,721.

The Council considered it well to redeem the land tax upon the freehold property purchased from the Sutton Estate, amounting to £29 6s. 9d. annually, and this has been done at a cost of £880; this is equal to an investment at nearly 3½ per cent., and, moreover, it enhances the value of the property.

BRANCHES.

The principal feature to report to you under this head is the recognition of an important Branch at Perth, in Western Australia, which promises to be an exceedingly active and useful member of the family of Australian Branches, now numbering six, with a total membership of 1,109. The Branches in South Africa and the other Colonies are everywhere large, active, and useful. The warm thanks of the Association are due to the Honorary Secretaries and Honorary Treasurers of all home and Colonial Branches for their able and courteous assistance in the work of their Branches and of the Association. Among retiring Branch Secretaries are Dr. Anderson Springle, of the Montreal Branch, who rendered such able service, on the occasion of the annual meeting held at Montreal in 1897; Mr. G. E. Williamson, of Newcastle, who was Honorary Local Secretary at the Newcastle meeting in 1894; Dr. G. E. Rennie, Honorary Secretary to the Sydney and New South Wales Branch; Dr. Sandford Jackson, of the Brisbane and Queensland Branch; Dr. James Barr, of the Lancashire and Cheshire Branch; Dr. H. Willoughby Gardner, of the Shropshire and Mid-Wales Branch; Dr. J. McD. Troup, of the Grahamstown and Eastern Province Branch.

Dr. Thomas Beattie has been appointed Secretary of the North of England Branch, Dr. G. T. Hankins of the Sydney and New South Wales Branch, Dr. Glyn Connolly of the Brisbane Branch, Dr. J. T. Bays of the Grahamstown Branch, Dr. T. A. Helme of the Lancashire and Cheshire Branch, and Mr. Harold Macleod of the Shropshire and Mid-Wales Branch.

Thanks are due to the following members who retire from office after several years' service as Honorary Treasurers: Dr. T. Ferguson, of the Stirling Branch; Dr. W. C. Cousens, of the Ottawa Branch; Lieutenant-Colonel Maitland, of the Madras Branch; and Dr. G. H. Percival, of the South Midland Branch.

Honorary Members.

When the Association met at Montreal, the Earl of Aberdeen, K.G., Governor-General of Canada, and Lord Strathcona, G.C.M.G., High Commissioner for Canada, were nominated as honorary members of the Association for services rendered in connection with the meeting. These noblemen were unanimously elected at the Edinburgh meeting, and have been presented with diplomas of honorary membership.

Appointment of Assistant Secretary.

Mr. Guy Elliston has been appointed Assistant Secretary.

Deaths of Representatives on the Council.

Your Council has to mourn the loss of three valued members of its body. Dr. W. F. Cleveland, of the Metropolitan Counties Branch, and Mr. J. H. Hemming, of the South Midland Branch, were old members of the Council, and both died very suddenly. The third, Dr. I'Anson, was a much-respected member of the Border Counties Branch, who had quite recently joined the Council.

The Journal.

The high position of the Journal among the medical periodicals of the world has been strengthened and extended, while its circulation has shown a satisfactory increase. It is read not only in every part of the United Kingdom, but in every Colony and Dependency, while it is recognised abroad as a chief exponent of medical opinion in this country.

The prosperity of the medical profession rests primarily upon the ability of its members to keep themselves acquainted with the rapid progress of the science and art of medicine, and one of the chief services which the Journal renders to members is the publication of original papers, special articles, and an epitome of foreign medical literature, which together reflect the best opinions and the most recent observations in medicine and the ancillary sciences selected with special reference to their bearing on practice. Tropical diseases, which are of interest not only to those members who practise in India and in tropical and subtropical countries, but also, in these days of rapid travel and extending empire, to a large proportion of those who practise in the United Kingdom, which is the centre of the world's traffic, have recently demanded increased attention. By the prominence given to these subjects the Journal has contributed in no small degree to bring about the establishment of Schools of Tropical Medicine in England, an example which has been followed in Germany, and will probably soon be followed in France.

The Journal has also been able by the collection and analysis of the evidence as to the means of prevention and the curability of phthisis to take a leading part in the remarkable movement, originated by the medical profession, to enlist the assistance of the public in the endeavour to diminish the great mortality from tuberculous diseases by prophylactic means and by suitable treatment.

The evils of medical aid associations and of the canvassing and advertising which take place in connection with them, have been discussed and illustrated, and it is satisfactory to find that the condemnation of such practices, which has been so often expressed in the Journal, has been endorsed by the recent resolution of the General Medical Council.

Full reports of the valuable proceedings of the numerous Sections of the large annual meeting at Edinburgh appeared in the Journal at an early date. It is believed that there is no other Medical Congress whose transactions are published so speedily and so completely, nor any to which so wide a circulation is given. The increased interest to general practitioners of much of the business of the General Medical Council has led to the devotion of a greater amount of space to the reports of its sessions and to the analysis and discussion of its debates. A system of giving in compendious form the main points of Parliamentary business as it affects medical interests has been introduced, while an effort to develop the literary side of the Journal has met with the warmly expressed approval of many members.

The Library.

During the past year there have been 4,856 attendances recorded in the Library, making a total of nearly 37,000 since its foundation. There have been 594 volumes added to the Library, in addition to some hundreds of theses and various medical papers. The series of the London and Provincial Medical Officers of Health Reports, the *Thèses de Lyon*, and the *Thèses de Paris* are all being brought up to date and "subject and author" indices to them may now be consulted. Members are also reminded that current numbers of over 300 medical periodicals are kept in order available for reference; also bound volumes of many of the more important English and Continental Medical Journals for some years past may be found on the Library shelves.

Instruction in Tropical Diseases.

In accordance with a resolution of the Council, the President of the Council wrote to the First Lord of the Admiralty to call attention to the fact that there is no provision at Haslar for medical instruction in tropical diseases. To this a very favourable reply was received from Mr. Goschen, to the effect that it was the intention of the Admiralty to appoint a small Departmental Committee of Inquiry, and to take steps to provide the desired instruction, as they are quite alive to the importance of giving surgeons of the Navy every facility for acquiring, as far as possible, the latest knowledge obtainable on the nature of the diseases in question, and the progress of scientific inquiry into the methods of treatment. The reply at the same time pointed out that the difficulties to be overcome were mainly of an administrative character.

Tuberculosis.

It may be remembered that in 1896, during the annual meeting at Carlisle a resolution was carried, on the motion of Dr. Grimshaw, C.B., Registrar-General for Ireland, that provision should be made at the public expense for the prevention and treatment of tuberculosis. A report was drawn up by a Subcommittee of the Parliamentary Bills Committee, containing recommendations upon (1) general sanitation, (2) mortality from tuberculosis in childhood, (3) control of the milk supply, (4) tubercle-free milk and meat, (5) bacteriological diagnosis, (6) treatment of tuberculosis, (7) notification and disinfection, and was forwarded to all Branches of this Association, members of Parliament, county councils, rural and urban sanitary authorities, and the press. Many additional copies were applied for by the various authorities, and altogether about 6,000 copies have been sent out or sold.

London Chamber of Commerce.

In consequence of charges made in a report of the London Chamber of Commerce against members of the medical profession, the following resolution was passed:

Resolved: That the attention of the Council has been called to grave general accusations impugning the probity of the medical profession in the matter of receiving secret commissions, and the Council calls upon the London Chamber of Commerce to substantiate such accusations, in order that the Council may be in a position, should such practices exist, emphatically to condemn them as a grave breach of professional good conduct, and inconsistent with membership of the British Medical Association.

This resolution was sent to the London Chamber of Commerce, the reply being as follows:

Francis Fowke, Esq., General Secretary, British Medical Association. Botolph House, Eastcheap, E.C., May 10th, 1899.

Sir,—I beg to acknowledge receipt of yours of the 13th ult., enclosing copy of resolution passed at a numerously attended meeting of the Council of the British Medical Association on the 12th ult.

In reply I am instructed to say that the Secret Commissions Committee regret that it is unable to furnish you with the detailed evidence in support of the statements contained in the report to which your Council takes objection.

I am to point out that it was essential for the success of such an inquiry as the Chamber of Commerce undertook that the proceedings should be

private, and that for reasons which are obvious the names of persons giving information should not be disclosed (see paragraph 3 of the Report and "Note" at foot of page 6). At the same time the Committee believe that the information received by them fully justifies the statement made in the report that the practices referred to do exist in the medical profession, but to what extent they exist it is impossible to estimate accurately.

My Committee are gratified to learn that your Council is prepared to condemn the practices referred to as grave breaches of professional good conduct, and inconsistent with the membership of the British Medical Association, and probably the public and repeated announcement of this fact will have a national influence wherever the practice exists.

I am, Sir,
Yours faithfully,
KENRIC B. MURRAY,
Secretary.

Having regard to the serious nature of the alleged practices, your Council is of opinion that such charges should not have been made public unless the Chamber of Commerce was in a position to substantiate them.

REGISTRATION IN THE COLONIES.

In consequence of representations made to the Council from several of the Colonial Branches, applications were made to the India and Colonial Offices to inquire into the system of registration of medical qualifications in the various dependencies of the Empire. The India Office replied that there is no system of registration of medical practitioners in India. A reply was received from the Colonial Office offering, if the Association would specify more precisely the particular information required, that the Colonial Secretary would address a circular despatch to the Governors of all the Colonies, requesting them to supply it. This was done, and when the anticipated information is received your Council hopes to report further on the matter.

PAYMENT OF FEES FOR NOTIFICATION IN JAMAICA.

A complaint having been received from the Jamaica Branch that the Legislature in that Colony had passed a law which compelled medical practitioners to notify infectious diseases under a penalty of 40s., but had failed to provide any payment for the duty thus imposed, the President of Council wrote to the Colonial Office, and received a reply from the Right Honourable J. Chamberlain, stating that the Governor of Jamaica had been instructed to introduce a law to provide for the payment of fees to medical practitioners for notifying infectious diseases and to protect them from any legal consequences of such notification.

FEES TO MEDICAL WITNESSES.

In the last annual report your Council stated that the question of the inadequacy of fees paid to medical witnesses was under the consideration of the Parliamentary Bills Committee. A memorial upon the subject has since been drawn up and forwarded to the Home Secretary, pointing out that there exists a great need for reform in the scale of allowances to medical witnesses, and requesting him to receive a deputation of the British Medical Association on this important subject. To this memorial the Home Secretary replied, stating that he could not see his way to accede to the application of the British Medical Association, nor did he think any useful purpose would be served by receiving a deputation. It is much to be regretted that the responsible Minister assumed this position.

FEES TO POOR-LAW MEDICAL OFFICERS FOR OPERATIONS.

A small Committee was appointed to consider the question of fees payable to Poor-law medical officers, with a view to the amendment of the schedule of payment for operations. The Committee has asked for particulars of cases in which Poor-law guardians have refused to pay for operations performed, on the ground that payment for the particular operation is not included in the schedule of the orders of the Local Government Board.

"ERNEST HART" MEMORIAL SCHOLARSHIP.

A new Research Scholarship of the annual value of £200 per annum has been founded in memory of the late Editor, Mr. Ernest Hart. The scholar appointed to it must devote himself to the study of some subject in the department of State Medicine, and may be annually re-elected for a term not exceeding three years. Dr. John W. H. Eyre has been appointed the first scholar.

CONTAGIOUS DISEASES.

An important memorial was received by the Council asking the Government to support an inquiry by a competent body into the subject of venereal diseases, and pointing out that a dangerous ignorance exists in the community at large which tended to increase the spread of the evil. A Committee was appointed to consider the subject, and a memorial has been sent to the Government on behalf of the Association, urging the appointment of a Departmental Committee to discover how great the evil now is, irrespective of its temporary increase or decrease, and to express opinions as to any means that can be devised for preventing or limiting the spread of venereal disease among the civil population of this country.

MIDWIVES BILL.

On March 10th last your Council held a special meeting to consider the Midwives Bill as drafted by the Parliamentary Bills Committee, and passed a resolution of which the following is a copy:

That should a Midwifery Bill be introduced into Parliament, the Council authorises the President of the Council and the Chairman of the Parliamentary Bills Committee to take such action as may be necessary to promote legislation upon the lines indicated by the Bill approved by the Parliamentary Bills Committee and as now amended.

The thanks of the Council were given to Dr. Woodcock, the Chairman of the Subcommittee, for drafting the Midwives Bill, for the enormous pains and trouble he has bestowed on the Bill. A copy of the Bill was subsequently sent to the General Medical Council, to each member of the House of Commons, and to the principal newspapers in London and the provinces. Your Council has since learned that the Midwives Bill has been abandoned for this session.

AMENDMENT OF THE MEDICAL ACTS.

A special meeting of the Council was held on May 12th last to consider a draft Medical Acts Amendment Bill, which had been prepared by a Subcommittee of the Parliamentary Bills Committee and referred to the Council by the latter Committee. After careful consideration and amendment it was referred back to the Parliamentary Bills Committee with a request that the Bill be redrafted and submitted to a future meeting of the Council.

PARLIAMENTARY BILLS COMMITTEE.

The Parliamentary Bills Committee has considered many questions of growing importance to the medical profession—namely, the Midwives Bill, the Medical Acts Amendment Bill, the Lunacy Laws, and the Vaccination Act. It is also endeavouring to promote a Bill in Parliament on the basis of "A Bill to Amend the Local Government (Scotland) Act, 1894," having for its object the granting to Scottish Poor-law medical officers the same status as to tenure of office which is held by the Poor-law medical officers in England and in Ireland. Your thanks are due to Sir Walter Foster, M.P., Dr. Farquharson, M.P., Mr. Alexander Cross, M.P., and other members of Parliament for their assistance and support in the House of Commons.

COMPANIES (MEDICAL PROFESSION) BILL.

Your Council has to report that in accordance with a resolution passed by the Parliamentary Bills Committee it petitioned the House of Lords in favour of the Companies (Medical Profession) Bill, but the text of the Bill has since been incorporated in the Earl of Dudley's Bill to amend the Companies Acts.

INEBRIATES LEGISLATION COMMITTEE.

The Inebriates Act, 1898, provides for the committal of convicted habitual drunkards to an inebriate reformatory for a period not exceeding three years, and under its provisions various committals have been made. Unfortunately no reformatory for male habitual drunkards has been established, and persons so committed have had to be discharged. It is hoped that in various localities county and burgh councils may avail themselves of their powers to establish such reformatories for men. Three reformatories have been licensed for criminal female inebriates. The Government is collecting information to be laid before councils to stimulate the foundation of certified inebriate reformatories for males, and of ad

ditional reformatories for females. Your Council deeply regrets to report the death of the Chairman of this Committee, Dr. Norman Kerr, who laboured for many years to obtain satisfactory legislation for habitual drunkards, and with such success that the Act allowing of the committal to inebriate homes for lengthened periods has come into operation this year.

Medical Charities Committee.

The Medical Charities Committee has during the past year held four meetings. The Committee proposes its reconstruction in the hope that it will be able to effect further reforms in the course of the next year.

General Practitioners and Ethical Committee.

The General Practitioners and Ethical Committee has held three meetings during the past year, and has considered many medico-ethical matters, including the questions of advertising the names of medical men in connection with proprietary articles, and of holding office in medical aid associations.

Special Committees.

The Scientific Grants Committee has allotted £366 for scientific grants and £450 for research scholarships and will present a report. The total amount which has been spent in scientific research through this Committee since its institution in 1874 is £13,998, and this is independent of £1,350 granted to societies and bodies outside of the Association. There was also a vote of £100 made to the Jenner Society.

The report of the Anæsthetics Committee is in an advanced stage towards completion, and the Committee is doing its best to finish the work by the earliest possible date.

During the past year the Therapeutic Committee has continued its pharmacological and therapeutic researches in connection with senecio. Much evidence has been accumulated, and is being carefully sifted, and the results will be embodied in a report which will indicate the clinical value of senecio.

The Railway Servants' and Mariners' Eyesight Committee has again communicated with all the railway managers in Great Britain and Ireland for the purpose of ascertaining precisely what progress had been made in the methods of testing the eyesight of railway servants, but as yet all the replies had not been received. The Committee hopes by continual representations that its recommendations will be adopted by the railway companies.

Obituary.

During the past year the following among other members of the Association have died:—

Dr. William Savage Spear, Surgeon Wm. Godfrey Peck, Dr. Frank Shearar, Fleet-Surgeon C. A. Macaulay, M.D., Dr. John Murray, Mr. M. A. Wood, Dr. T. F. Anson, Major E. F. Smith, R.A.M.C., the Hon. W. G. Atherstone, M.D., late President of the Grahamstown Branch; Mr. Frederick John Hawthorn, Mr. James Shackleton, Mr. Septimus B. Farr, Surgeon-Major George S. Cardew, M.B., Dr. John Wallace, Brigade-Surgeon-Lieutenant-Colonel P. N. Mookerjee, Mr. R. Ellis, late Vice-President of Otological Section in 1893; Dr. Edward Skipper, Dr. Maurice Davis, J.P., Dr. Henry Lewis, Staff-Surgeon O. S. Fisher, Dr. K. N. Bahadurjee, Dr. David Edgar Jones, Mr. Charles Francis Lewis, M.R.C.S. Eng., Mr. Thomas Henry Moxon, Lieutenant-Colonel James Ring, M.D., R.A.M.C., Dr. J. M. Vincent Prendergast, Mr. Sidney Woodhams, Mr. Walter Edward Hacon, Dr. J. W. Reynolds, Surgeon-General Wm. Campbell Maclean, M.D., LL.D., C.B., Q H S., Mr. James W. Simpson Young, Dr. A. Andrew, Mr. Robert John Willis, Dr. W. F. Cleveland, late President Metropolitan Counties Branch, 1890, and President Ethical Section, 1895; Dr. Charles John Hare, Staff-Surgeon E. D. Minter, R.N.; Dr. Alfred Antunes Kanthack, Dr. Donald Campbell Black, Mr. James Doubleday, Dr. Joseph Tillie, Dr. Charles Fitzgerald, Major W. Kelly, R.A.M.C.; Sir James Mouat, K.C.B., V.C.; Dr. John B. Hamilton, Mr. Alfred Kebbell, Mr. Arthur Henry Wilson, Mr. Edmund Joseph Furner, Brigade-Surgeon-Lieutenant-Colonel Robert Pringle, I.M.S., who was a member of the Inebriates Legislation Committee of the Association; Mr. G. F. Farr, Dr. William H. Murray, Mr. Henry Evans, Deputy Inspector-General Mark A. Harte, R.N.; Mr. W. F. Jones, Sir Alfred Roberts, Dr. James Calpie, Dr. Thomas Cole, Dr. J. M. Bright, Dr. Joseph Coats, Vice-President of Section of Pathology and Bacteriology, 1883 and 1888, and President of the same Section, 1889; Mr. William Forsyth, Dr. Humphry Davy, Dr. William Tasker Lundie, Dr. John Hayball Pank, Dr. Luke Fisher, Dr. Alexander Walker, Mr. Thomas Cooke, Mr. Charles Arthur Dixon, Mr. James Armstrong McDonagh, Staff-Surgeon Henry S. Jackson, R.N.; Dr. Gifford Ransford, Dr. J. B. Dickinson, Dr. John Williams, Major R. Barefoot, R.A.M.C.; Professor William Rutherford, M.D., F.R.S., President of the Section of Physiology at the meeting held in Edinburgh last year; Professor Emeritus Sir John Struthers, M.D., LL.D., President of the Anatomy Section at the Edinburgh meeting; Dr. Charles Arkle, Dr. J. Y. Totherick, Dr. Michael Austin Boyd, Dr. John Rose, Mr. William Stokes Griffith, Mr. Richard Faircloth, Mr. W. R. Dambrill-Davies, Mr. Henry John Knight, Mr. H. J. Butler, Dr. M. C. Hatton, Dr. Samuel Leonard Crane, C.M.G., Surgeon-Major-General Wm. M. Webb, Dr. Heinrich Port, Mr. J. T. O'Connell Hynes, Mr. John Benson, Dr. Alfred Thomas Gibbings, Dr. John Brunton, Mr. James Rowlands, Dr. Jukes de Styrap, author of the well-known *Code of Medical Ethics*, and for many years Honorary Secretary to the Shropshire Ethical Branch; Mr. William Frazer, Mr. Ernest S. Medcalf, Dr. William Hopkin Thomas, J.P., Mr. T. Theodore Ormerod, Sir William Roberts, M.D., F.R.S., who was Secretary to the Section of Medicine in 1868, gave the address in Medicine in 1877, and was President of the Section of Pharmacology and Therapeutics when the annual meeting was held in London in 1895; Mr. J. H. Hemming, Vice-President of the Section of Ethics, 1895; Mr. Frederick Fawson Lee, Mr. Clement Pound, Mr. Kenneth Lawson, Surgeon-General Robert Cockburn, Dr. Octavius Jepson, Dr. John Eadie, Dr. Dennis Augustus MacCarthy, Mr. Henry B. Stevenson, Dr. John Moir, Mr. G. J. Hinnell, Mr. William Thorn, Mr. Joseph Thomas Cooke, Mr. J. W. H. Mackenzie, Dr. Norman Kerr, Chairman of the Inebriates Legislation Committee; Mr. Walter May, Dr. J. G. Sinclair Coghill, Vice-President of the Section of Obstetrics in 1882; and Mr. Lawson Tait, F.R.C.S., who was Secretary of the Section of Obstetric Medicine in 1872, and gave the address in Surgery in 1890. He was also at one time a representative of the Birmingham and Midland Counties Branch on the Council of the Association.

Robert Saundby, President of Council.

REPORT OF THE PARLIAMENTARY BILLS COMMITTEE.

The Parliamentary Bills Committee has had an unusually active and important year. It has held four quarterly meetings and two special meetings, and had for consideration, amongst other important matters, the Lunacy Bill brought in by the Lord Chancellor, the Registration of Midwives Bill, a draft Medical Acts Amendment Bill, besides many other matters, such as the superannuation of medical officers of health, the superannuation of Poor-law medical officers, and the establishment of a central fund in connection therewith; enlargement of Article 177 of the Consolidated Orders of the Local Government Board dealing with operations in union infirmaries for which fees are payable; the consideration of a clause to be inserted in the present Act providing for revaccination; the fixity of tenure of office of Scottish Poor-law medical officers; the consideration of a report on the prevention and cure of tuberculosis; the adulteration of food and drugs.

Lunacy Bill.

One of the principal points of the Lunacy Acts Amendment Bill under consideration was a clause for the temporary treatment of incipient insanity. In this your Committee co-operated with the Medico-Psychological Association, and, the Lord Chancellor having replied favourably to an application for a deputation, combined representatives of the British Medical and Medico-Psychological Associations waited upon his lordship, and the result was the introduction into the Bill of a clause similar to that which has been found to work so well in Scotland. The next important point in the Bill was the shortening of the time during which an urgency order is

valid from seven to four days. This appears to be most undesirable. With regard to pensions to asylum officers, the joint Committee desires to see the clause in last year's Bill reintroduced. This ensured a minimum of one-sixtieth for each year served, while maintaining the maximum as at present—namely, two-thirds of salary and emoluments.

MIDWIVES BILL.

The Midwives Bill as approved by the Parliamentary Bills Committee was sent on to the Council of the Association for consideration and action. Copies of the proposed Midwives Bill of the Association were sent to the General Medical Council, the members of the House of Commons, and to the press. A courteous reply has been received from the General Medical Council thanking the Association for its communication, and stating that the Committee of the General Medical Council, in drafting the report on the Midwives Bill, which they submitted to the recent session of the Council, had regard to the principal matters embodied in the Memorandum and Draft Bill of the Association, and that the Association will find many of its suggestions supported in the report of the Committee. The Midwives Bill, brought into the House of Commons by Mr. J. B. Balfour, M.P., has since been withdrawn.

MEDICAL ACTS AMENDMENT BILL.

The Medical Acts Amendment Bill, as drawn up by the Parliamentary Bills Committee, was considered at a special meeting of the Council, when the following resolution was passed:

Resolved: That the Medical Acts Amendment Bill as amended be referred back to the Parliamentary Bills Committee, with a request that they redraft the Bill, and submit it to a future meeting of the Council.

The matter was reconsidered by the Committee and the following resolution passed:

That the Subcommittee on the Medical Acts Amendment Bill be appointed to reconsider and amend if necessary the draft Bill of the Parliamentary Bills Committee.

SUPERANNUATION OF MEDICAL OFFICERS OF HEALTH.

In regard to the question of the superannuation of medical officers of health, a Bill has been drawn up which has been referred to the Municipal Officers' Association and three representatives of the Parliamentary Bills Committee have been appointed to confer with it on the subject.

REVACCINATION.

In the debate on the Vaccination Bill in the House of Lords on August 4th, 1898, Lord Lister spoke as follows: "Personally, I should like if the Bill could be withdrawn this year, and brought in again next year, with this question of revaccination attended to. ..... But I fear that is a hopeless suggestion. However, as regards revaccination, the members of the Government who have been approached on the subject have given us good reason to hope that a Bill dealing with revaccination may be brought in next session. Such a Bill would, I think, be sure to pass the House of Commons, the great majority of whom, however they may differ on other questions, are at one as regards the importance of revaccination. The medical members of Parliament are certainly at one on this point. The Bill would therefore readily pass and by introducing it the Government would do untold benefit to the community. The confident hope that the Government will see their way to take this course next session makes me the more readily acquiesce in what I confess is a tremendous experiment." This "confident hope" was immediately strengthened by a speech by Lord Harris on behalf of the Government. He said "Lord Lister had referred to the fact that the Government would consider the possibility of introducing a Bill next year with the object of encouraging revaccination. If the noble lord had not indicated that fact, he had authority to state that the Government were prepared to consider during the recess whether it would not be possible to bring in such a Bill next session."

The Committee greatly regrets to have to report that notwithstanding the statements above quoted, the Government did not introduce a Revaccination Bill in the session of 1898-99, and made no reference whatever to the subject in the Queen's Speech, or subsequently. The Committee recommends that the Council of the Association calls the special attention of the Branches to the facts, and requests the Branches to do all in their power to influence members of Parliament in favour of a Revaccination Bill.

AMENDMENT OF THE LOCAL GOVERNMENT (SCOTLAND) ACT, 1894.

It was decided to ask Mr. Alexander Cross, M.P., to introduce a Bill into the House of Commons on the basis of "a Bill to amend the Local Government (Scotland) Act, 1894," conferring upon Scottish Poor-law officers more secure tenure of office, the same as that at present possessed by the Poor-law medical officers in England and Ireland. A petition on the same subject was also signed by the Chairman of the Parliamentary Bills Committee and presented to Lord Balfour of Burleigh, who replied that the matter should receive his careful consideration. Mr. Cross's Bill is still before the House.

ADULTERATION (FOOD PRODUCTS) BILL.

This Bill was introduced by Mr. Kearley, M.P., and the Committee requested that the Council should petition in its favour. A petition signed by the President of Council was accordingly presented. The Bill, however, has been withdrawn.

CENTRAL FUND FOR THE PAYMENT OF SUPERANNUATION ALLOWANCE TO POOR-LAW OFFICERS.

A Subcommittee was appointed to consider this question, which reported as follows:

"Your Subcommittee begs to report that it has carefully considered the question of the formation of a central fund for the payment of superannuation allowances to Poor-law officers. It has also communicated with the National Association of Poor-law Officers through Mr. H. List, the President, but that body does not seem inclined at present to move in the matter, deeming it unwise at so early a period to take any steps to amend the recent enactment. Your Subcommittee, however, is strongly of opinion that no time should be lost in drawing public attention to this great blemish in the Superannuation Act of 1896, which threatens to render nugatory so much of the good that might be naturally expected to follow from this enactment, and therefore recommends the Parliamentary Bills Committee to urge on the Council of the Association the desirability of bringing this matter to the notice of the Local Government Board with the least possible delay, and to use its best endeavours to promote an amendment of the present Act."

Your Committee forwarded a communication to the Local Government Board, signed by the President of Council, in favour of the formation of a central fund, and the following is the reply:

Local Government Board,
Whitehall, S.W.
5th July, 1899.

SIR,—I am directed by the Local Government Board to acknowledge the receipt of your letter of 20th ultimo with reference to the representations made by the Council of the British Medical Association for an amendment of the Poor-law Officers' Superannuation Act, 1896, and in reply to state that the Board could not undertake to promote legislation for the purposes suggested by the Association.

I am, sir, your obedient servant,
H. C. MONRO, Assistant Secretary.

F. Fowke, Esq., General Secretary to the
British Medical Association.

TUBERCULOSIS.

The report on Tuberculosis drawn up by a Subcommittee of the Parliamentary Bills Committee was referred to the Council to take action. The Council adopted this report, which was subsequently published *in extenso* in the BRITISH MEDICAL JOURNAL and extensively circulated.

R. FARQUHARSON, Chairman.

REPORT OF THE SCIENTIFIC GRANTS COMMITTEE.

THE Scientific Grants Committee begs to report that during the past year 1898-99 the sum of £741 allotted by the Council for the promotion of scientific investigation by means of scholarships and separate grants was distributed as follows:

THREE SCHOLARSHIPS

(each of the value of £150 a year; tenable for two years).

No.	Scholar's Name.	Subject of Investigation.
1.	Mr. SYDNEY ROWLAND ...	The Effects of Pressure on the Life-Activities of Micro-organisms.
2.	Dr. J. L. BUNCH	The Vaso-motor Nerves of the Small Intestine.
3.	Dr. ELLIOT SMITH ...	(1) Changes in Brain after Hæmorrhage which practically destroyed the Right Optic Thalamus. (2) Changes following Old Hæmorrhage into the Right Hippocampus and Fascia Dentata. (3) Changes in General Paralysis.

	£	s.	d.
BARRATT, J. O. W., M.D., 26, Upper Wimpole Street, W.—For an experimental investigation into phloridzin diabetes, with the object of studying still further the alterations which this glucoside produces in the amount of sugar in the blood, and of ascertaining whether the glycosuria is really due to changes in the kidney differing from those occurring in the ordinary forms of diabetes from other causes [such as alterations in the nervous system (puncture of the fourth ventricle) or pancreatic diabetes], where in reality the quantity of sugar in the blood is increased, since it is now supposed that in phloridzin diabetes there is no increase in the quantity of sugar in the blood	10	0	0
BEDDARD, A. P., M.A., M.B., Physiological Department, Guy's Hospital, S.E.—For experiments (1) to ascertain in dogs the exact action of alcohol on the heart both when introduced direct into the circulation and into the stomach. (2) To investigate in dogs the mode of action of various diuretic substances to ascertain whether their action is upon kidney itself primarily or primarily on the vascular system, and consequently what is to be expected of these substances when given medicinally; the method used is by Roy's oncometer. (3) To repeat Nussbaum's experiments on the kidney of the frog, etc.	12	0	0
BEEVOR, CHARLES E., M.D., 33, Harley Street, W.—For an investigation which he is prosecuting with Mr. Victor Horsley at University College on the minute analyses by electrical stimulation of the motor fibres of the crus cerebri in the monkey	15	0	0
CORLETTE, CYRIL E., M.D., 18, Selwood Place, Onslow Gardens, S.W.—For an experimental research into the excretion of the small intestine. The research to be carried out in Professor Vaughan Harley's laboratory at University College ...	12	0	0
FAGGE, C. H., M.R.C.S., L.R.C.P., Guy's Hospital, S.E.—For an investigation into (1) the mechanics of intrapleural tension. (2) The nervous mechanism of micturition especially in relation to morbid conditions resulting from cerebral injury ...	12	0	0
FAWCETT, EDWARD, M.B., Professor of Anatomy, University College, Bristol.—For a research into the segmentation of the nucleus of the third cranial nerve, and the relationship which the various segments of that nucleus bear to the various muscles innervated by it	8	0	0
GOADBY, KENNETH, W., L.D.S.Eng., Bacteriological Department, Guy's Hospital.—To continue investigations of the bacilli of the mouth and especially the spirilla hitherto uncultivated by all observers, and which organisms he has succeeded in obtaining; a method of culture is set forth in his report ...	5	0	0
GOODBODY, FRANCIS, M.D., Department of Pathological Chemistry, University College, W.C.—For a research on the influence of the central nervous system on general metabolism. It is proposed to remove portions of the brain in animals in nitrogen equilibrium in order to study what changes are produced in the absorption of proteids and fats and the general metabolism, so as to find, if possible, the cause of the wasting in severe nervous lesions	20	0	0
GRUNBAUM, A. S., M.D., University College, Liverpool.—For preparing or attempting to prepare an influenza antitoxin serum	10	0	0
HARLEY, VAUGHAN, M.D., 25, Harley Street, W.—(1) For an experimental investigation into the causation of cirrhosis of the liver, and its influence on metabolism; (2) experiments into the formation of gall stones by artificial means ...	16	0	0
HARRIS, DAVID FRASER, M.D., Physiological Department, Glasgow University.—For a research into the condition of the the blood entering, circulating in, and leaving the spleen, and to investigate the condition of its hæmoglobin and red blood corpuscles	5	0	0
HARRIS, WILFRED J., M.D., 7, Craven Mansions, Craven Terrace, Lancaster Gate, W.—To determine the path of the pupil reflex fibres between the optic tract and the third nucleus, and their connection with the pathology of Argyll-Robertson pupil	8	0	0
HORTON-SMITH, P., M.A., M.D., 15, Upper Brook Street, W.—For a research on the quantitative variations of the serum reaction in patients suffering from typhoid fever, and if possible to investigate the cause of the remarkable variations so found	5	0	0
Total	£138	0	0
Brought forward	£138	0	0
KANTHACK, A. A., M.A., M.D., [dead], 2, Huntingdon Road, Cambridge.—To continue a research on tetanus, and defray the cost of animals	16	0	0
KIRK, T. S., M.B., Queen's College, Belfast.—For an investigation in live animals into the effects of pressure on the conduction of nervous impulses in the spinal cord	12	0	0
LEVY, ALFRED G., M.D., 124, Barons Court Road, Kensington, W.—In aid of a research into the condition of the blood of animals after thyroidectomy	10	0	0
LUFF, ARTHUR P., M.D., 31, Weymouth Street, W.—(1) To investigate the properties of the gelatinous modification of sodium biurate and its bearing on the gouty process. (2) To investigate the influence of synovial fluid on the deposition of sodium biurate in cartilage. (3) To investigate the action of various drugs with reference to their influence on the rate of decomposition of sodium quadriurate and their solvent powers on sodium biurate	5	0	0
MACDONALD, J. S., Demonstrator of Physiology, University College, Dundee.—To continue experiments made upon the electromotive changes in phrenic nerves as a means of examining work of the respiratory centre, which preliminary experiments are embodied in a paper under this heading in the *Journal of Physiology*. The grant would be used to defray the cost of apparatus and material	16	0	0
MANNERS-SMITH, T., M.A., M.R.C.S., Mason College, Birmingham.—For an investigation upon the anatomy of the vascular system of mammals	5	0	0
MANSON, PATRICK, M.D., 21, Queen Anne Street, W.—For investigations bearing on the extracorporeal life of the malaria parasite	15	0	0
PATON, D. NOEL, M.D., 2, Forest Road, Edinburgh.—To enable Dr. J. C. Dunlop and himself to investigate the influence of fever on metabolism, and more especially on the distribution of nitrogen in the urine. Two experiments have already been performed and results of interest obtained	10	0	0
PEMBREY, M. S., M.A., M.D., Charing Cross Hospital, W.C.—For a research on the regulation of temperature in man and animals during health and fever	10	0	0
REID, Professor E. WAYMOUTH, M.B., F.R.S., University College, Dundee.—For a research on intestinal absorption, with a study of the mode of action of the epithelial cells of the intestine during absorption, and of the action of drugs ...	16	0	0
RUSSELL, J. S. RISIEN, M.D., 4, Queen Anne Street, W.—To carry out an investigation with regard to the influences which evoke, modify, or arrest epileptic convulsions	16	0	0
SHAW, C. E., M.A., M.D., 14, College Square East, Belfast.—For a research on sympathetic ophthalmia, necessitating the purchase of monkeys and dogs and apparatus	12	0	0
SMITH, J. LORRAIN, M.D., Pathological Department, Queen's College, Belfast.—For a research into (1) the relation of changes in the lungs to caisson disease; (2) the effect of oxygen on bacteria, and especially on pathogenic varieties. The grant is required principally for apparatus	12	0	0
STOCKMAN, Professor R., M.D., Glasgow University.—For carrying out a research on the toleration of the organisms to poisons	10	0	0
STODDART, W. H. B., M.B., County Asylum, Prestwich, Manchester.—To pursue investigations on the influence of the cortex cerebri on the movements of the pupil. He proposes to repeat his experiments, if possible, on monkeys, since the type of their brain more closely resembles that of man	3	0	0
VINCENT, SWALE, M.B., Physiological Laboratory, University College, W.C.—(1) For continuation of researches upon comparative physiology of suprarenal capsules and other ductless glands. (2) Removal of spleen and investigation of changes in hæmal lymphatic glands. (3) Administration of suprarenals to normal human subject by mouth, and noting effects on blood pressure and muscular tone	20	0	0
WARRINGTON, W. H. B., M.D., Pathological Laboratory, University College, Liverpool.—For neurological investigations contained in his application for the Research Scholarship ...	12	0	0
WASHBOURN, J. W., M.D., 6, Cavendish Place, W., and G. B. SMITH, M.B., B.S.—For the study of infective venereal tumours in dogs	10	0	0
WELSH, D. A., M.D., 82, Marchmont Crescent, Edinburgh.—(1) For the removal of the parathyroid or thyroid glands in animals or feeding with these glands with the view of determining their functional significance and of investigating their pathology; (2) For a bacteriological investigation of the organisms of meningitis and of pneumonia, tubercle, and allied diseases in children, with the view of determining the organisms present, and their relation to the disease. £5 is asked for the first investigation, and £2 for the second	5	0	0
YOUNG, R. A., M.D., 37, Trevor Square, Knightsbridge, S.W.—(1) To complete the investigation of the precipitation of carbohydrates by neutral salts. (2) To investigate the action of bile salts on the heart and circulation, with a view to elucidating certain of the symptoms of jaundice	8	0	0
Total ...	£366	0	0

Of the foregoing grants the following sums have been returned as unused:

	£	s.	d.
Dr. A. P. Beddard	12	0	0
Mr. C. H. Fagge	12	0	0
Dr. E. Fawcett	8	0	0
Dr. D. F. Harris	5	0	0
Dr. P. Horton-Smith...	5	0	0
Mr. T. Manners-Smith	5	0	0
Dr. D. A. Welsh	5	0	0
	£52	0	0

Notes respecting Returned Grants.

Mr. T. Manners-Smith has returned his grant of £5, though he sends a report of his work. (*See* Anatomy, p. 227.)

Dr. A. P. Beddard returns his grant, and has not carried out his research as the amount was insufficient.

Mr. C. H. Fagge has been unable to carry out his investigation into the mechanics of intrapleural tensions, etc.

Professor Edward Fawcett has been unable to prosecute his research on the nucleus of the third cranial nerve, as his licence to perform vivisection arrived too late.

Dr. D. F. Harris has been unable to prosecute his research through an insufficiently-equipped laboratory, and returns his grant.

Dr. Horton-Smith has returned his grant, not having carried out the research for which the money was voted.

Professor A. A. Kanthack received a grant of £16 to continue his research on tetanus, but death prevented him from carrying out his intention.

Dr. D. A. Welsh has been unable to carry out his research, and therefore returns his grant.

The Committee have received the following interim reports from the investigators to whom grants were made according to the foregoing lists.

The reports are grouped together under the following arrangement:

I. Physiological and Pathological Investigations.
- (*a*) Nervous System.
- (*b*) Alimentary Canal.
- (*c*) Internal Secretion.
- (*d*) General and Special Metabolism.
- (*e*) Respiratory System.
- (*f*) Vascular System.
- (*g*) Anatomy.
- (*h*) General Physiology.

II. Bacteriological Investigations.
- (*a*) General.
- (*b*) Morphology.
- (*c*) Biology.

III. Therapeutical Investigations.

I. Physiological and Pathological Investigations.

(*a*) Nervous System.

Dr. C. E. Beevor states that during the past year he has been engaged with Mr. Victor Horsley, F.R.S., in an experimental investigation by electrical stimulation, under ether, of the crus cerebri of the monkey. In all fifteen experiments have been performed, and they have obtained very definite observations of the movements produced by this stimulation, but at present they have not included their analysis of the results, but they will send in a fuller report later.

Dr. W. J. Harris has nearly completed his research, and has operated on a number of cats, producing hemianopia by dividing the optic tract, keeping the animals alive for three weeks, and then tracing the course of the degenerated fibres by cutting sections and staining by Marchi's method. The experimental work was conducted in the Laboratory of Pathological Chemistry, University College, and the histological part in the laboratory at the National Hospital, Queen Square.

Dr. T. S. Kirk reports that in his research seven experiments were performed. In the first four attempts were made unsuccessfully to obtain tracings of the movements of the membranes of the cord. In all the experiments pressure paraplegia was produced, and the paralysis was demonstrated by the application of an interrupted current above and below the seat of pressure. It was noticed that when the spinal canal and the membranes were opened, and a very weak interrupted current—one which could just be felt on the tongue—was applied directly to the cord, impulses were generated which passed both upwards and downwards along the cord, producing contractions of the voluntary muscles. These impulses were readily stopped by slight pressure applied either directly to the cord or to its coverings. When the pressure was slight and applied for a few minutes only and then removed, it was found that the cord quickly recovered and the impulses were again readily transmitted. When, however, the pressure was more severe and applied for a longer time, it was found that the cord did not recover rapidly; in fact, in one case the paraplegia did not disappear till the next day. Attempts were made in the last few experiments to estimate the amount of pressure necessary to produce paraplegia and the length of time necessary for recovery from different pressures, but a sufficient number of experiments have not been made with regard to these points.

Mr. J. S. Macdonald has, in reference to his research, which had for its general object the systematic observation of (and, whenever possible, recording) electromotive changes taking place in mammalian nerve during life of the animal, and the study of the relation of such changes to the various functional events of the living tissues with which the nerve is still connected, reported that, having at first begun with the central ends of cut phrenic nerves and found it possible to demonstrate in these the presence of changes synchronous with and proportional to the respiratory effects, it was seen to be essential that comparisons should be made between such electromotive changes and the existing state of the blood pressure. It was conceivable that some of the recorded changes might be due to variations in the state of the blood vessels contained in and separated out with the nerve experimented upon. The peripheral end of cut vagus nerve was selected as the best nerve for the purpose, it being possible by taking up with it a portion of the carotid artery to have the largest possible error due to such causes, and also the largest possible variations in such error to experiment upon. The results of such a class of experiment have been reported to the Physiological Society, March 18th, 1899, and are in the main as follows: (1) Changes observed in the peripheral end of vagus nerve alone which are proportional to blood pressure; (2) changes observed in the carotid artery alone which are of a similar nature and proportional to blood pressure; (3) a summation of these changes when the artery and nerve are taken up together. The research has had to be broken off at this point, although the whole of the grant has not been expended, as its procedure necessitates a further and larger sum for expenses in apparatus, etc., than is at command. Should it be possible by further experiment to connect such phenomena as have been recorded in the nerve with either (*a*) a variation in the excitability of the nerve proportional to changes of blood pressure; or (*b*) impulses in nerve passing to the centre and proportional to the blood pressure, it would seem to be a matter of considerable importance. There is a sufficient probability in such hypotheses to warrant the continuance of the experiments, and to justify their conduction in the best manner possible.

Dr. J. S. Risien Russell, in reference to the research which he has undertaken, states that attention has been paid chiefly to the mode of behaviour of different groups of muscles of the limbs during epileptic convulsions artificially induced, and especially to the behaviour of antagonists during such discharges. In addition to this, the way in which the contractions of different groups of muscles are modified by section of afferent paths from the limbs to the cerebrum and cerebellum has formed an important part of the investigation, and has yielded interesting results in many cases; broadly speaking, it may be said that the general tendency is for such procedures to diminish the degree of discharge of the nerve centres as evidenced by the amount of muscular contraction observed, there being, however, notable exceptions in which the reverse obtains. One of the most striking points observed as regards the mode of behaviour of antagonists is in connection with the gastrocnemius and soleus on the one hand, and the anterior tibial group on the other; for whereas during an epileptic fit the most powerful contractions with marked shortening of the muscles occur in the anterior tibial groups, there is the most remarkable absence of action on the part of the mass of muscle of much greater volume composed of the gastrocnemius and soleus. It is not quite correct to say that there is no action of these muscles, for they are obviously in a state of activity of some kind, but that activity, whatever it may be, does not result in shortening of the muscle. After a fit a tonic after-contraction is commonly observed in these muscles that did not shorten during the fit; but if another fit happens to occur before this tonus has yielded, an immediate relaxation results concomitantly with the contraction observed in the anterior tibial groups of muscles. Certain minor differences observed in the mode of behaviour of different muscles are possibly to be accounted for by their difference in structure, but there is evidence that the re-

markable behaviour of certain antagonists is not to be explained in this way.

Dr. G. ELLIOT SMITH (Research Scholar) reports that since being awarded a research scholarship by the British Medical Association he has devoted his time to (1) the changes which had taken place in the brain after a hæmorrhage which practically destroyed the right optic thalamus and invaded the adjoining tegmentum, injuring the red nucleus and causing degeneration in the lateral emerging fibres of the oculomotor nerve. Unfortunately the lesion was too diffuse to throw much light upon the distribution of all the scattered ascending fibres which proceeded through the internal capsule to the cerebral cortex. Such being the case, the fact that degenerated fibres were found in the superior cerebellar peduncle without the existence of any cerebellar lesion is probably the most important fact elucidated by this study. For in view of the difference of opinion on this point, the fact that *some* fibres of the superior peduncle degenerate downwards after a lesion of the red nucleus and optic thalamus is of some interest. (2) The changes following an old hæmorrhage into the right hippocampus and fascia dentata have been studied. Unfortunately this lesion was of too long standing to give the Marchi reaction, and the imperfect evidence afforded by the study of the resulting degeneration in the fornix by the Weigert method confirmed (so far as it went) Déjerine's study of a similar instance of this rare lesion (*Comptes Rendus*, 1896). (3) Anatomical studies preparatory to the investigation of the changes in general paralysis have been made.

Dr. W. H. B. STODDART reports that he has continued his research on the influence exercised by the cortex cerebri on the movements of the iris, but has been unable to perform more than a few experiments. He has confirmed the observations which he reported last year—namely, that the iris dilates on stimulation of the opposite crucial sulcus. Experiments have been made in search of a centre influencing the movement of contraction of the iris. The vago-sympathetic was cut in the neck so as to divide the dilating fibres. It was found necessary to cut it on both sides, since dilating fibres travelled up each sympathetic trunk to both irides. The cortex was then stimulated faradically in the usual way, and a spot was found on the under surface of the occipital lobe which caused contraction of the pupil.

Dr. W. B. WARRINGTON reports that the preparation of the new Thompson-Yates laboratories caused considerable delay in proceeding with research work. The earlier part of the time was devoted to completing the investigation carried on in conjunction with Professor Boyce on the nervous system in the bird. A paper on this subject has been accepted for publication in the *Philosophical Transactions*. On the subject of the relation existing between the structure and function of nerve cells, observations have been made in continuation of those described in the *Journal of Physiology*. Seventeen successful experiments have been performed, and the material in nearly all the cases examined, so that the results will be shortly ready for publication. Observations have been made on the following points: (1) The ultimate fate of cells in the ventral horn of the spinal cord which have undergone structural alteration in consequence of the section of the anterior root. The result arrived at is that, whilst obvious changes can be detected forty days after the lesion, if a hundred days be allowed to elapse the cells undergo a further change which appears to be of the nature of a return to the normal structure. Certain cells, however, show entire disintegration. (2) The ultimate fate of cells in the ventral horn which have undergone alteration in consequence of the section of afferent roots. The result arrived at is that some return to the normal, but that others show profound change as long as seventy-four days after the lesions, and that others have totally disappeared. Further, it appears that the alteration in certain of the cells is sufficient to cause Wallerian degeneration in some fibres of the anterior roots. (3) Additional experiments have been made on the effect of sectioning the afferent roots in the cervical region. (4) In observations of the result of section of both anterior and posterior roots, the examination of the cord shows that while nearly all the cells show a distinct alteration, certain groups of cells are more affected than others, a condition which does not occur when the anterior roots only are cut. (5) Hemisections and complete section of the cord have been made, and the condition of the cells below the site of the lesion examined. (6) Observations on the condition of cells in the spinal cord which have been rendered functionally isolated by dividing both the pyramidal tracts and the afferent roots have been made.

(*b*) ALIMENTARY CANAL.

Dr. J. L. BUNCH (Research Scholar) has carried out a research on the vasomotor nerves of the small intestine. A plethysmograph was employed, which enabled the segment of intestine to be directly observed and the flushing or pallor of the gut to be accurately noted. The mesenteric vessels entered the box on one side through an opening sufficiently large to prevent any pressure being exercised on them, the rest of the aperture being closed by cotton-wool and thick vaseline, and the apparatus was then connected with a piston recorder. The conclusions arrived at were: (1) The vessels of the small intestine are supplied both by vaso-constrictor and by vaso-dilator fibres, which reach the intestine chiefly, if not entirely, by the splanchnic nerves. (2) Variations in calibre of the intestinal vessels may occur during asphyxia which do not correspond to changes in the general arterial system. (3) Nicotine causes great constriction of the intestinal area, synchronous with the rise of general blood pressure; this is gradually recovered from, and is followed by a less marked dilatation. In large doses, nicotine causes an enormous effect of the same character, the after-dilatation amounting to temporary vasomotor paralysis. (4) Conine and piperidine have an action on the intestine similar to that of nicotine, but piperidine causes intestinal vaso-dilatation. (5) Stimulation of the peripheral end of the cut splanchnic causes vaso-constriction of the intestinal area, which is followed by more or less well-defined dilatation. When excited with weak and slowly-repeated stimuli, dilatation only may be produced. (6) The splanchnic, therefore, contains both vaso-constrictor and vaso-dilator fibres for the small intestine, the vaso-constrictor fibres being probably the more numerous. (7) Stimulation of the peripheral end of the cut vagus, whether in the thorax without atropine, or in the neck after the administration of small doses of atropine, causes no vasomotor effect on the vessels of the small intestine. (8) Vasomotor fibres for the small intestine of the dog leave the spinal cord by the anterior roots of the second to the sixteenth post-cervical nerves. The higher roots contain more dilator, the lower more constrictor fibres. (9) The vasomotor fibres passing to the small intestine have a cell station between the ganglia of the sympathetic chain and the mesenteric nerves.

Dr. C. E. CORLETTE states with regard to his experimental research on excretion in the small intestine, that it was considered that the most satisfactory results would be obtained by experimenting with closed exclusion segments of intestine, on the principle of Hermann's "loops," and feeding with differing diets. In this research dogs have been employed. Under an anæsthetic and with strict antiseptic precautions 36 cm. of ileum were isolated 18 cm. above the cæcum, and the two ends sealed up by suturing. The upper free end of the ileum was then connected with the lower by direct approximation so as to restore continuity of channel. After the operation the animals were fed some few days on milk, and then either on a diet rich in proteid or on one rich in carbohydrate. After about a month on this diet the animal was killed by chloroform and the contents of the isolated segment collected, weighed, and analysed. The contents were found to be a more or less copious, thick, yellowish-brown material, of a distinct and characteristic but non-fæcal smell. The colouring matter had not so far been identified, but there was no trace of hæmoglobin or urobilin. The material contained from 70 to over 90 per cent. water, and the percentage of nitrogen in the dried solids varied from 8 to 12. The total fat reached about 16 per cent. of dried solids, and the ash 9 to 11 per cent. The fatty substances have been found to consist of free fatty acids, fatty acids present as soaps, neutral fats, and cholesterin, and quantitative analysis has shown them to be present in varying relative amounts. So far no sufficient data have accumulated to allow any definite conclusions to be drawn as to the influence of diet in altering the chemical constitution of the contents found in the exclusion segment. The results of the experiments have yielded some very interesting material for consideration, and the research is still in progress. The work is

being carried out in Professor Vaughan Harley's laboratory, University College.

Dr. VAUGHAN HARLEY and Dr. J. O. W. BARRATT, in reference to their research on experimental cirrhosis of the liver, report that interstitial hepatitis has clinically been divided into different groups, and amongst these they have investigated the cirrhosis of the liver which results from a chronic obstruction of the bile ducts. Various experimenters, after ligature of the bile duct in animals, have found in some cases an interstitial hepatitis, in others none at all. It has been their endeavour to try to find out which view is correct, and for this purpose they have employed dogs and cats. In order that the animals should survive the operation of ligature of the bile duct, and at the same time that their general nutrition should be as little altered as possible, in all cases only one of the branches of the hepatic duct has been ligatured, and for the sake of convenience it has always been the duct going to the left lobe of the liver. By this means normal liver of the same animal to compare with the pathological specimen has been available. As some of the instances of cirrhosis were found in pre-antiseptic days, it was considered due to sepsis, and not really to the operative procedure. In all their cases they have had no signs of sepsis whatsoever, so that that factor may be left out of the question. After the animals were operated upon in the ordinary manner they were well fed, and some three to fourteen months later were killed by means of chloroform. The animals could be divided into two groups—(1) successful, in which the left duct was found at the *post-mortem* examination to have been properly ligatured; and (2) those in which it was doubtful if the left duct had been properly ligatured, and the possibilities of obstruction to some of the other ducts could not be left out of account. In the successful cases there was some slight shrinking of the left lobe of the liver, and even to the naked eye the individual lobules appeared smaller than those on the right side. The bile duct going to the left lobe was found above the ligature markedly dilated, and containing in most cases pale, watery bile. The microscopical sections showed that in the left lobe of the liver there were more or less marked interlobular changes; these were in the direction of the formation of new connective tissue, and consists principally, when carefully examined, in an enlargement of the biliary passage; whether they were more numerous than normal it is difficult to say. The epithelium lining them had undergone proliferation, and surrounding the biliary passages there was a marked production of fibrous tissue, the hepatic lobules in some cases being mapped out distinctly by the increase of fibrous tissue; the lobules had in all cases undergone considerable atrophy. On comparing this condition of the lobe of the liver in which the duct had been previously ligatured, with that of the normal right lobe, it was possible to see that this change was due to the operation, and not to any other accidental cause. On the other hand, in the unsuccessful cases some interlobular increase of fibrous tissue was in some cases found on both sides of the liver. It might have been due to a partial obstruction of the duct on both sides, or to some factor in the operative procedure as yet unknown. In one case in which the left lobe was undoubtedly not ligatured, no change whatsoever was noticed in either lobes of the liver. It would appear from these results that complete obstruction of the hepatic duct does undoubtedly cause an interstitial hepatitis, but that under certain circumstances other factors come into play which may vitiate the result.

Professor WAYMOUTH REID, F.R.S., has carried out a research on intestinal absorption, and the conclusions arrived at are as follow: (1) A physiological activity of the intestinal epithelium in the act of absorption is demonstrated by (*a*) the absorption by an animal of his own serum (or even plasma) under conditions in which filtration into blood capillaries or lacteals, osmosis, and absorption are excluded; (*b*) by the cessation or diminution of the absorption of serum when the epithelium is removed, injured, or poisoned, in spite of the fact that removal, at any rate, must increase the facilities for osmosis and filtration. (2) The activity of the cells is characterised by a slower uptake of the organic solids of the serum than of the water and rather quicker uptake of the salts than of the water. The relations to one another of the absorptions of these various constituents is variable in different regions of the intestinal canal (upper ileum, lower ileum, and colon). (3) No evidence can be obtained of specific absorptive fibres in the mesenteric nerves. (4) The state of nutrition of the cells is the main factor in their activity, and this is intimately associated with the blood supply. (5) In reduction of the rate of absorption, without detachment of epithelium, the absorption of the various constituents of serum is reduced in the proportion in which they exist in the original fluid. (6) The activity of the cells may be raised by stimulation with weak alcohol, without evidence of concomitant increase of blood supply. (7) The bile has no stimulant action on the cells. (8) The cells exhibit an orienting action upon salts in solution (sodic chloride especially). In a loop of gut with injured cells sodic chloride enters the lumen from the blood, at a time when it is being actively absorbed from a normal control loop in the same animal. (This fact was first noted by O. Cohnheim.) (9) The absorption of water from solutions introduced into the gut is dependent upon two factors: (*a*) the physical relation of the osmotic pressure of the solution in the gut to the osmotic pressure of the blood plasma; (*b*) the physiological regulation of the difference of osmotic pressure by the orienting mechanism of the cells. (10) The chief factor in the absorption of peptone is an assimilation (or absorption) by the cells, while in the absorption of glucose, diffusion, variable by the permeability of the cells (and so probably related to their physiological condition), is the main factor. (11) By removal of the epithelium, the normal ratio of peptone to glucose absorption is upset, and the value tends to approach that of diffusion of these substances through parchment paper into serum. (12) Absorption in the lower ileum is greater for the organic solids of serum and less for peptone and glucose than in the upper ileum. The relative absorption of water in the upper and lower ileum is variable. (13) The relative impermeability of the lower ileum to glucose disappears with the removal of the epithelium. (14) Absorption in the colon is for all constituents of serum, and for peptone and glucose, far less per unit of measured surface than in the middle region of the ileum. (15) The normal relative excess of salt absorption from serum over water absorption observed throughout the intestine is most marked in the colon, and more marked in the lower than in the upper ileum. (16) Finally, it is suggested that the cell activity which causes serum to pass over to the blood is of the same nature as that involved in the orienting action of the cells upon salts in solution.

(*c*) INTERNAL SECRETION.

Dr. A. G. LEVY has published a paper embodying the results of a research into the blood changes in dogs following thyroidectomy in the October number of the *Journal of Pathology and Bacteriology*. Experiments upon eight animals were reported, each experiment comprising a quantitative comparison between the constituents of normal blood and of blood after the removal of the gland, which latter was extirpated together with its adherent parathyroids. The phenomena of decrease in the amount of hæmoglobin and of the number of red corpuscles and increase of white corpuscular elements were considered afresh, and observations were also made upon the total solids, proteids, ash, specific gravity, and fibrin, all of which were found to diminish in quantity, with the exception of the last-named, which increased. Considerable interest is attached to the ratio of the changes one to another.

Dr. SWALE VINCENT, since the expiration of his tenure of the Research Scholarship, has been continuing his investigations upon the comparative histology of the suprarenal capsules. Previous work was confined almost exclusively to these organs in the lowest vertebrate animals. The subject has now been carried on to birds and mammals. The chief conclusions arrived at are as follows: (1) In mammals the cortex and medulla, although anatomically united into one organ, are still quite distinguishable from one another. (2) The totally distinct origin and structure of cortex and medulla render it probable that their functions have no relation to one another. (3) The cortex, from a morphological standpoint, would seem to be the more important or essential element of the suprarenal gland, while in the present state of our knowledge the medulla must undoubtedly be considered as the more important from a physiological standpoint. Some recent authors have carried the importance of the cortex so far as to

put the medulla almost entirely out of the question, looking upon this latter as nothing more than a portion of the sympathetic nervous system. In Dr. Vincent's opinion these writers overlook two most important factors: (1) That the medulla of the mammalian suprarenal has no longer the structure of nervous tissue; (2) that it secretes, or at any rate contains, an active principle not common to nervous tissues. The results of these investigations are contained in the *Internationals Monatsschrift f. Anatomie u. Physiologie*, 1898, Bd. xv, Heft 10 u. 11.

(*d*) General and Special Metabolism.

Dr. J. O. W. Barratt's research has been made jointly by Professor Vaughan Harley and himself. Small quantities of phloridzin were injected into dogs, the percentage of sugar in the blood being determined before injection, immediately after injection, and subsequently at intervals of five and fifteen minutes. The quantity of sugar present in the blood after injection varied in different cases, being sometimes increased, sometimes undergoing a diminution. The urine was found to contain sugar within five minutes of the administration of phloridzin, and the disappearance of the fluid swelling caused in the subcutaneous tissue by the injection was very rapid. Experiments were also attempted in which the elimination of sugar by the urine was prevented—first, by ligature of the ureters, and, secondly, by extirpation of the kidneys. In the former case the sugar in the blood was found to undergo a slight but distinct increase preceded by a slight fall shortly after injection. In the second case only a single experiment has up to the present been performed; analysis of the blood before and after injection of phloridzin gave results agreeing with the previous experiments. These experiments tend to prove that when there is an increase in the sugar in the blood after phloridzin injection it is extremely small. It is necessary to continue the research in order to find out if there is any considerable formation of sugar in the organism itself outside the kidneys caused by the subcutaneous injection of phloridzin. It is proposed, as phloridzin is a glucoside and therefore capable of giving up a certain amount of glucose, to perform further experiments with a view of ascertaining the effects of such small quantities of glucose on the organism.

Dr. Francis W. Goodbody, in reference to his investigation on the effect of the removal of one cerebral hemisphere on metabolism, points out that one of the chief difficulties to be overcome is the fact that subsequent to the operation it is hard to ensure that the animals eat the same quantity of food daily. As regards the quantity of water taken per diem, this can be regulated by giving a definite quantity by the stomach tube, and after a very few days the animals become quite as accustomed to the tube as human beings who are washed out daily. In the experiments which were undertaken with a view of studying the above question the animals were fed daily with 150 grams of sterilised meat, 60 grams of biscuit, 10 grams of lard, and 450 c.cm. of water. A large quantity of beefsteak was obtained and divided into portions of 150 grams each, and sterilised by exposure to a temperature of 120° C. for twenty minutes in an autoclave. At least two control analyses of the amount of nitrogen and fat were made whenever it was necessary to get in a fresh supply of meat. In order to ensure that the biscuits were of uniform composition a large quantity of "Spratt's dog biscuits" were ground up, mixed, and the necessary quantity weighed out daily. The animals were kept on the above diet till they attained a constant weight, and were on nitrogen equilibrium. Then the following operation was performed: The animal having been put under ether, the carotid arteries were tied at the level of the crico-thyroid cartilage so as to diminish the amount of hæmorrhage as far as possible. Next an incision reaching to the bone was made in the median line, extending from the frontal region to the occipital protuberance, and the muscles on the left side reflected. A trephine hole was then made and the bone over the left cerebral hemisphere removed, care being taken to avoid opening the frontal sinus. After all hæmorrhage had ceased the left hemisphere was removed, with the exception of a small portion of the optic thalamus, the knife being entered as close as possible to the longitudinal sinus, and a single incision reaching to the bone being made backwards. When all hæmorrhage had ceased the skin was united by divided sutures, the wound sealed with collodion and a pad of wool, and a bandage applied. Immediately after the operation 0.032 gram of morphine was injected subcutaneously. During the following three days 400 c.cm. of milk were given per diem by the stomach tube, and then increasing quantities of meat, biscuit, and fat, until at the end of ten days the animals were given the same diet as before the operation. The animals which recovered from the immediate effects of the operation rarely showed much fever, the highest temperature (rectal) registered being 41° C., and that in only one dog and on one day. For the first few days the animals showed complete hemiplegia on the side opposite to the lesion; then the hind limb recovered rapidly, and after about ten days the only paralytic symptom was a weakness and slight want of control of the fore limb, which never quite disappeared. Out of six animals operated on, three died during the night following the operation from pressure on the fourth ventricle following hæmorrhage, the latter probably occurring from vessels which did not bleed at the time of operation, but enlarged with the commencement of the collateral circulation. The results so far obtained show that the animals lost weight for three to four weeks after the operation, notwithstanding that they were on full diet during most of the period, and that the percentage amount of nitrogen and fat absorbed were approximately the same, or even increased after the operation. Owing to the length of time necessary to carry out each experiment, and to the fact that three animals died after the experiment had commenced, but previous to operation, with symptoms corresponding to those described by Professor McFadyean in the early part of this year, the research is still in a very incomplete condition, and no conclusions can as yet be drawn from the results obtained.

Dr. A. P. Luff states in regard to his investigation of the gelatinous modification of sodium biurate and its bearing on the gouty process, that he has prepared the gelatinous or hydrated form in various ways and has studied its physical properties and the various conditions influencing its conversion into the crystalline form, with the object of ascertaining the conditions or factors which affect the formation of gouty uratic deposits. By preparing the gelatinous form of sodium biurate in different ways he has produced several physical modifications of the substance. If it is prepared in the solid form by precipitation from its saturated aqueous solution with solution of sodium chloride or of ammonium chloride of varying strengths it is obtained in the spheroidal form, the size and density of the spheres bearing a direct ratio to the strength of the precipitating solution. As the result of a series of experiments he finds that the larger and denser the spheres the slower is their conversion into the crystalline biurate. The gelatinous form of sodium biurate is much more soluble than the crystalline variety. A saturated solution of the former in distilled water contains 5.52 parts per 1,000, whereas distilled water only dissolves 1.10 parts per 1,000 of the crystalline form, so that the gelatinous variety is five times as soluble in distilled water as the crystalline variety. The same ratio holds good for the solubility of the two forms in blood serum, though both of them are much less soluble in that medium than in distilled water. Blood serum dissolves at blood heat 0.24 part per 1,000 of gelatinous biurate and 0.05 part per 1,000 of crystalline biurate. He has studied the influence of artificial blood serum of varying degrees of alkalinity on the conversion of the gelatinous biurate into the crystalline form. This phase of the subject has a very important bearing on the treatment of gout by alkalies, and he is at present conducting a series of experiments to elucidate further the matter. The results of these experiments he hopes to place before the Section of Medicine at the annual meeting of the British Medical Association.

(*e*) Respiratory System.

Dr. Cecil Shaw has, owing to circumstances, had to abandon for the present the research for which he received the grant, and has carried out a research (for which he received the sanction of the President of Council) for the past three months, namely, he has procured from Germany certain differential stains which seem to be quite unknown in this country. He has made some 800 sections of the larynx (human and various mammalian); but the comparative examination of these has not yet been entered upon, and can-

not be until a much larger number have been made. Dr. Shaw has not, however, had time to report more fully upon this research.

(*f*) Vascular System.

Dr. J. Lorrain Smith reports that the investigation on the pathology of caisson disease has not been carried sufficiently far to permit of a report on the results. The apparatus has been obtained, and some experiments on the effect of high-pressure atmospheres on the oxygen tension of arterial blood have been carried out. This research had to be suspended during investigations in relation to an outbreak of typhoid fever. These have fully occupied his time up to the present date.

(*g*) Anatomy.

Mr. T. Manners-Smith reports, in reference to his progress with the research upon the arterial system, that dissections of the limb arteries of the following animals have been made so far: Semnopithecus bucops, cercopithecus ruber (two specimens), cercopithecus Diana, cynocephalus babouin (two specimens), cynocephalus annubis, cynocephalus porcarius, cynocephalus mormon, macacus radiatus (three specimens), macacus lasiotus (three specimens), macacus rhesus (three specimens), macacus St. Johannis, macacus eryth. (four specimens). Many interesting points have been elucidated in connection with the morphology of arterial systems, and also in connexion with the azygos system of veins.

(*h*) General Physiology.

Dr. M. S. Pembrey reports that the results of his experiments upon the deep and surface temperature of the human body have been published in a joint paper with his pupil, Mr. B. A. Nicol, in the *Journal of Physiology*, vol. xxiii, 1898, p. 386. Further experiments upon the respiratory exchange and the regulation of temperature in animals are in progress. The results of some work in Cheyne-Stokes respiration will be given at the annual meeting of the Association.

Dr. R. A. Young states that with regard to his research on the action of bile salts on the circulation, his experiments are still in progress, and he is not yet in a position to make any definite statement as to results obtained, no very constant one having been so far observed other than a slight effect on blood pressure.

II. Bacteriological Investigations.

(*a*) General.

Dr. Patrick Manson has had many sections cut of mosquitos fed on malarial blood of man, and of mosquitos fed on the blood of birds affected with proteosoma, but the results have been very unsatisfactory. Apparently the delicacy of the tissues of the insect and the delicacy of the parasites will not permit of successful sectioning by ordinary methods.

Dr. J. W. Washbourn and Mr. Bellingham Smith have continued their investigations upon infective sarcomata in dogs. The main results of the work are embodied in a paper which appeared in the British Medical Journal on December 17th, 1898. The conclusions arrived at were as follows: (1) The tumours in question are round-celled sarcomata occurring in dogs. (2) The tumours can be transplanted from the genitals, where they naturally occur, to the subcutaneous tissues of other dogs. (3) The tumours can be transplanted from subcutaneous tissue to subcutaneous tissue through a series of dogs. (4) The tumours, after reaching the maximum of growth, may disappear spontaneously with or without ulceration. (5) The tumour may continue to increase, and may cause death by secondary deposits forming in the viscera. (6) If the tumour should disappear the animal is then immune to subsequent inoculation. The investigation is still in progress.

(*b*) Morphology.

Mr. Kenneth W. Goadby (1) has found and isolated from the mouth an organism belonging to a species not heretofore described as inhabiting the buccal cavity, that is, a cladothrix, which, moreover, is fairly constant in healthy as well as unhealthy conditions of the mouth; it has well-marked characters, and is extremely pleomorphic. It may be cultivated upon the ordinary laboratory media. He suggests the name cladothrix buccalis. (2) He has worked out still further a considerable number of micro-organisms which are found fairly constantly in the mouth, and which have a distinct relation to dental caries. Two of these organisms have been found pathogenic for guinea-pigs. (Spirillum sputugenum, B. maximus buccalis). (3) He has also isolated from dental caries, after observing the usual precautions, two organisms that are of constant occurrence: (*a*) Streptococcus brevis of Lingelsheim; (*b*) B. necrodentalis (Goadby), an organism with cultural and morphological characters, which are different from other known organisms. (4) He has also isolated from the mouth certain organisms which are liquefiers of blood serum, and which are able to liquefy entirely decalcified tooth cartilage. (5) He has also found that in the process of dental decay the deep organisms are for the most part anaërobic, but facultative aërobic, and also for the most part acid producers; the surface organisms are often liquefiers (aërobic) rarely acid producers, from which it follows that the process of dental caries is originated by acid-forming organisms, which are capable of anaërobic existence, and that the solution of the lime salt allows the liquefying organisms to complete the destruction of the tooth.

(*c*) Biology.

Dr. A. S. Grünbaum has injected goats and guinea-pigs with cultures of influenza, but it is not probable that the serum, which will have to be tested on monkeys, is yet potent. Delay has been experienced by the liability of influenza cultures to die out.

Dr. D. Noël Paton and Dr. J. Crauford Dunlop, with reference to their research on the changes in the metabolism in dogs induced by the administration of diphtheria toxins, report that the influence of diphtheria toxin on the metabolism has been studied in four experiments on dogs. The method of procedure was to bring the animal into a state of nitrogenous equilibrium, then allow it to fast for one day, and after three days to administer a sufficient quantity of diphtheria toxin to produce a short, sharp attack of pyrexia. This was controlled by the administration of antitoxin. It was first ascertained that the antitoxin had no marked effect on the metabolism. The metabolism in fever with fasting was then compared with the metabolism of fasting alone. The changes in the following urinary constituents was investigated. The total nitrogen, nitrogen as urea, nitrogen nct as urea, ammonia nitrogen, uric acid nitrogen (in one experiment), total sulphur, sulphur as sulphuric acid, phosphoric acid, hydrochloric acid, sodium, aud potassium. The absorption of proteids was also studied. The results of the experiments and analyses were recorded in a series of tables. The following are some of the more important conclusions as regards the action on the metabolism of diphtheria toxin: (1) In moderate doses it does not interfere with the absorption of proteids; (2) the proteid metabolism is markedly increased; (3) the proportion of nitrogen in urea is diminished, while that not in urea is increased; (4) the proportion of nitrogen in ammonia is not increased; (5) the excretion of total sulphur is proportionate to the excretion of nitrogen, but the proportion of sulphur in neutral compounds is very markedly increased; (6) the excretion of phosphoric acid is not increased; (7) the excretion of chlorine is very markedly diminished; (8) the proportion of sodium and potassium to one another is not altered in the manner described by Salkowski in fever in man; (9) the fall in the chlorine is so marked that it is totally insufficient to combine with the bases present. A number of questions arising from these conclusions are discussed in the paper.

Mr. Sydney Rowland (Research Scholar) states that (1) his research into the effects of pressure on the life-activities of micro-organisms is still in progress. The field opened up has become so large that some years must yet elapse before definite or generalised data can be given. Briefly, it may be stated that at a certain point all organisms succumb to the effects of a certain pressure. Below this limit certain peculiarities and modifications of normal activity are effected. Thus in the case of the gas production by the B. coli modifications both in the amount and quality of the gases evolved are noticeable. This work is now in progress, in conjunction with Dr. Harden, chemist to the Jenner Institute of Preventive Medicine, and the results as they appear will be published in the *Transactions* of the Institute, and copies will be forwarded to the Scientific Grants Committee for inspection. (2) His research into a method of mechanically disintegrating micro-organisms has

resulted in the elaboration of a method, and also the construction of a mechanism whereby complete disintegration may be effected of any organisms in the space of from 10 to 60 minutes. By a continuance of this process, it has been found possible to prepare in quantities the separate constituents of the bacterial cell, and to investigate their toxic or antitoxic effects, as well as to search for toxic ferments. This work has been carried on in conjunction with Dr. Allan Macfadyen, and the results, when more complete, will be published in the *Transactions* of the Institute. (3) His research into the ultimate structure of the bacterial cell has resulted in the elaboration of a method whereby minute structure and morphology can be investigated in the living cell, thereby avoiding false conclusions from artefacts. The first results of this work are now in the printer's hands, and will appear shortly. A copy will be sent to the Committee. He has to add that great delay in commencing the investigations with preasure effects was caused by the inefficiency of the existing methods of experimentally using great pressure, and for fully a year a separate investigation had to be undertaken (in conjunction with an engineer) in order to construct the necessary machinery. This has but recently reached its final form. He states that with the apparatus as at present constructed pressures as high as 50 tons on the square inch may be manipulated with ease.

III. THERAPEUTICAL INVESTIGATIONS.

Dr. R. STOCKMAN's experiments have been made on animals regarding their toleration to gradually increasing doses of morphine and nicotine. It has been found that a certain degree of tolerance is established, but that the limit is soon reached, and that the animals are always affected when a certain fixed dose is given. No antitoxin bodies are developed in the blood serum or corpuscles.

ROBERT SAUNDBY (President of Council), Chairman.

REPORT OF INEBRIATES LEGISLATION COMMITTEE.

YOUR Committee warmly congratulates the Association on the passage through the Legislature of the Inebriates Act of 1898, and on the fact that the Act is now in operation.

Various amendments of the Inebriates Acts, 1879 and 1888, more especially the attestation of applications for therapeutic detention in a licensed retreat by one justice instead of by two justices as formerly, are contributing to the better working of the original Habitual Drunkards Acts, and will undoubtedly increase the usefulness of that measure.

Three certified inebriate reformatories have been licensed by the Secretary of State for the reception of habitual female inebriates committed under the Act; but your Committee regrets that there has been no similar reformatory licensed for male habitual drunkards, an omission which necessitates the discharge of men who have been committed under the Act to an inebriate reformatory.

Your Committee, however, is glad to know of at least one effort to provide such a reformatory for males, with a fair prospect of success.

Your Committee is also informed that various local authorities propose to provide reformatories under the provisions of the new Act. It is therefore hoped that ere the expiry of another year accommodation will be available for both sexes, in order to give the Act a fair trail.

Your Committee desires to place on record its feeling of deep regret at the loss which it and the Association generally have sustained by the death of the Committee's Chairman, Dr. Norman Kerr. He had held the post of Chairman for 15 years, and during that time had placed his extensive knowledge of the subject of inebriety and his time unreservedly at the service of the Association, with the result that all legislation affecting inebriates in recent years has been framed largely on lines which he considered essential for the purpose.

The Committee recommends its re-election as follows: The President and the President-elect, President of Council and Treasurer, *ex-officio*: Mr. D. B. Balding, Dr. T. Bridgwater, LL.D., Sir C. Cameron, M.P., Mr. George Eastes, Dr. R. Farquharson, M.P., Sir Walter Foster, M.D., M.P., Dr. E. Long Fox, Sir W. T. Gairdner, K.C.B., M.D., F.R.S., Dr. Alexander Grant, Mr. F. J. Gray, Dr. F. S. D. Hogg, Dr. A. A. Jamison, Mr. H. R. Ker, Dr. A. E. T. Longhurst, Dr. T. Morton, Dr. A. E. Neale, Surgeon-Major G. K. Poole, M.D., Fleet-Surgeon G. Robertson, M.D., R.N., Dr. G. E. Shuttleworth, Dr. Danford Thomas, Dr. W. J. Tyson, Dr. Wynn Westcott, Dr. H. W. Williams, and Dr. Yellowless.

GEORGE EASTES, Chairman.

REPORT OF THE MEDICAL CHARITIES COMMITTEE.

YOUR Committee has to report that during the past year it has lost, to its great regret, the services of Dr. Bridgwater as Chairman of the Committee, and those of Dr. de Havilland Hall and Dr. Alderson as members.

Your Committee has been engaged rather in considering what in its opinion should be the future lines of action of the Association in the matter of medical charities than in prosecuting any fresh active work.

It is of opinion that it would be inadvisable for the Council of the Association to relinquish the task of keeping the administration of medical charities in this country under its observation as long as it is associated with evils so generally admitted and so disadvantageous to the efficiency of the medical profession in its entirety as is the case at present, and it believes that the cause of reform will be most usefully served if the efforts of the Council through its Committee are concentrated upon certain salient points, for example, the wholesale and indiscriminate administration of casualty relief, as especially exemplified in the hospitals of the metropolis.

With this object your Committee would recommend the reconstitution of its body in the following manner, retaining the membership of those members who have been able to give the most continuous attention to its work, and adding others who in the opinion of the Committee are likely to be of substantial service, namely, the President and President-elect, President of Council, and the Treasurer, *ex-officio*; Mr. George Brown, Dr. Major Greenwood, Dr. R. G. Hebb, Mr. J. Brindley James, Mr. H. W. Kiallmark, Mr. Evan Jones, Dr. Hector Mackenzie, Dr. J. W. J. Oswald, Dr. Isambard Owen, Mr. W. J. Stephens (Brighton), Dr. Seymour Taylor, Dr. Symes Thompson, Dr. Hugh Woods.

J. W. J. OSWALD, in the Chair.

REPORT OF THE THERAPEUTIC COMMITTEE.

DURING the past year the Therapeutic Committee has continued its pharmacological and therapeutic researches in connection with senecio. The difficulties incidental to this inquiry have been found to be greater than had been anticipated, the clinical investigations being pervaded by much uncertainty, since they depend so largely upon statements made by patients, and these statements are not always capable of verification. Much evidence has, however, been accumulated, and it is being carefully sifted, so that it is hoped before long to embody the results of this research in a report which will indicate the clinical value of senecio.

During the past year Dr. Leech resigned his position as Chairman of this Committee, and at one of the meetings Dr. Donald MacAlister was unanimously elected to succeed him.

NESTOR TIRARD, M.D., F.R.C.P., Hon. Sec.

REPORT OF THE ANÆSTHETICS COMMITTEE.

THE Anæsthetics Committee begs to state that its Analytical Subcommittee has carried the report as far as the time at its disposal has permitted. In addition to the work which has been done by individual members of the Subcommittee, twenty-seven meetings have been held since the first of last August. At the present time the report is in an advanced stage towards completion, and the Subcommittee is doing its best to finish its work by the earliest possible date.

The Anæsthetics Committee begs to submit to the Council the following resolution, which was unanimously adopted at a meeting of the Committee on June 1st:

"That the Anæsthetics Committee recommends to the Council of the British Medical Association: (1) That the report of the Analytical Subcommittee when completed be

printed *in extenso*, and that such a number of copies be struck off as are likely to be needed when the final report is published; (2) That a copy of this printed report be sent to each member of the General Committee, not for alteration, but to enable him to send such comment, criticism, or dissent from it as he may judge to be right; (3) That any such comments or criticisms be separately printed in the final publication of the report of the Anæsthetics Committee."

JONATHAN HUTCHINSON, Chairman.
CHRISTOPHER CHILDS, Honorary Secretary.
GEORGE ROWELL, Honorary Assistant Secretary.

REPORT OF THE GENERAL PRACTITIONERS AND ETHICAL COMMITTEE.

DURING the past year your Committee has held three meetings, and dealt with many subjects.

REGISTRATION IN THE COLONIES.

The question of unqualified practice in the Colonies has been considered, and several cases have been brought under the notice of your Committee by Colonial members. The question has been placed before the Colonial Secretary, who has promised to obtain information for the Council respecting registration in the Colonies.

COPYRIGHT.

With reference to the question of reprinting articles which have appeared in the JOURNAL, about a year ago the JOURNAL was registered in the Copyright Office for the purpose of preventing articles being abstracted and printed for advertising purposes. The Council has now decided that before reprinting any article permission must in each case be obtained.

GENERAL.

Many medico-ethical questions between members of the Association have arisen, and have been submitted to your Committee, which has adjudicated upon them, and in each case with satisfactory results.

ADVERTISING THE NAMES OF MEDICAL MEN IN CONNECTION WITH PROPRIETARY ARTICLES.

With regard to the question of the names of medical men being advertised in connection with proprietary articles, your Committee communicated with the members of the Association whose names were being advertised, forwarding a copy of a recent resolution of the Council:

Resolved: That in the opinion of this Council the granting of testimonials which are used for the purpose of advertising proprietary drugs and similar articles is inconsistent with the dignity of the profession and opposed to its best interests.

PROVIDENT SICKNESS SOCIETIES.

The attention of the Committee was called to the objectionable canvassing resorted to by a provident medical society. The medical men whose names were advertised in connection with the society were communicated with, and your Committee is glad to report that the advertising and canvassing of this provident society has been stopped.

J. WARD COUSINS, Chairman.

REPORT OF THE COMMITTEE FOR THE CONTROL OF RAILWAY SERVANTS' AND MARINERS' EYESIGHT.

DURING the past year a circular has again been addressed to every railway manager in Great Britain and Ireland, for the purpose of ascertaining precisely what progress has been made in the methods of testing and controlling the eyesight of railway servants since the publication of the Committee's recommendations in 1892. All the replies have not yet been received, but a sufficient number have already come to hand to justify the assertion that many companies still cling to unscientific and inexact methods, which call for continued criticism.

Though the conjoint representations of the British Medical Association and the Ophthalmological Society of the United Kingdom have failed to arouse the Board of Trade to initiate the measures of reform urged by the deputation which waited on Mr. Bryce in February, 1895, the Committee is not without hope that courteous admonitions addressed to managers and directors of railway companies will gradually bring about the desired changes, and this policy it continues to pursue.

With regard to the Mercantile Marine the Committee recommends that a representation should again be made to the Board of Trade, urging it (1) to entrust its eyesight examinations to medical men holding a certificate of ophthalmic proficiency, and (2) to insist on every apprentice passing an eyesight examination at the outset of his career. The Committee is prepared to support both of these requests with evidence showing the practical necessity for them. Further evidence may be forthcoming shortly, as the subject of visual tests in the Mercantile Marine is to be discussed at the Portsmouth meeting of the Association.

N. C. MACNAMARA, F.R.C.S., Chairman.
GEORGE MACKAY, M.D., Hon. Sec.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at the office of the Association, 429, Strand, W.C., on Tuesday, July 11th, 1899. Present:

DR. R. FARQUHARSON, M.P., Chairman, in the chair.
DR. WARD COUSINS, President-elect.
DR. R. SAUNDBY, President of the Council.
DR. C. PARSONS, Treasurer.

MR. D. B. BALDING, Royston.
DR. R. L. BOWLES, London.
DR. T. R. BRADSHAW, Liverpool.
DR. T. BRIDGWATER, Harrow-on-the-Hill.
MR. GEORGE BROWN, London.
DR. P. MAURY DEAS, Exeter.
DR. W. DOUGLAS, London.
Brigade-Surgeon-Lieutenant-Colonel E. F. DRAKE-BROCKMAN, London.
MR. GEORGE EASTES, London.
DR. R. ESLER, London.
MR. A. GODSON, Cheadle.
DR. BRUCE GOFF, Bothwell.
DR. OGILVIE GRANT, Inverness.
DR. J. GROVES, Carisbrooke.
MR. J. D. HARRIES, Shrewsbury.
DR. A. J. HARRISON, Clifton.
DR. HOLMAN, London.
MR. VICTOR HORSLEY, F.R.S., London.
MR. EVAN JONES, Aberdare.
DR. A. R. MANBY, East Rudham.
DR. J. W. MILLER, Dundee.
DR. JOHN W. MOORE, Dublin.
MR. W. JONES MORRIS, Portmadoc.
DR. JAMES MURPHY, Sunderland.
MR. C. H. W. PARKINSON, Wimborne Minster.
MR. A. BROWN RITCHIE, Hulme.
DR. G. E. SHUTTLEWORTH, Richmond.
DR. R. SOMERVILLE, Galashiels.
MR. C. R. STRATON, Wilton.
Inspector-General ALEX. TURNBULL, R.N., Emsworth.
MR. T. JENNER VERRALL, Brighton.
DR. DAWSON WILLIAMS, London.
DR. W. L. WINTERBOTHAM, Bridgwater.

The minutes of the last meeting having been printed and circulated were taken as read and signed as correct.

Letters of apology for non-attendance were read from Dr. W. A. Carline, Dr. Major Greenwood, Dr. A. R. Urquhart, Surgeon-General T. F. O'Dwyer, Dr. R. W. Batten, Dr. J. C. McVail, and Dr. C. G. Gooding.

VACCINATION.

A communication from the Incorporated Society of Medical Officers of Health, enclosing a copy of a resolution which had been unanimously adopted by that body, was considered. The matter had been referred to the Committee by the Council of the Association. The resolution forwarded suggested that the President of the Local Government Board should be communicated with urging that a description of successful vaccination as set out in Clause 7 of the Instructions to Vaccinators under Schedule 3 of the General Order of October, 1898, should be inserted in and form part of the medical certificates of successful vaccination, and recommending that the medical certificate should be amended in such a manner as to state the number of separate vesicles or groups of vesicles and the total area of vesiculation produced.

It was proposed by Dr. GROVES, seconded by Mr. JONES MORRIS, and resolved:

That it be recommended to the Council that a communication be sent to the President of the Local Government Board supporting the resolution of the Incorporated Society of Medical Officers of Health.

SCOTTISH POOR-LAW MEDICAL OFFICERS.

The CHAIRMAN stated that the petition from the British Medical Association respecting the tenure of office of Poor-law medical officers in Scotland had been presented by him to Lord Balfour of Burleigh, who, in acknowledging the receipt thereof, stated that the matter would receive careful consideration.

SUPERANNUATION OF MEDICAL OFFICERS OF HEALTH.

A communication was read from Dr. Thresh stating that he had submitted the draft Bill of the Subcommittee of the Parliamentary Bills Committee on this question to the Municipal Officers' Association, and asking that the Parliamentary Bills Committee should nominate three of its members to attend any conference which might be held to further the passing of the Municipal Officers' Bill.

It was proposed by Dr. GROVES, seconded by Mr. EASTES, and resolved:

That Mr. Balding, Dr. Groves, and Dr. Ward Cousins be appointed to represent this Committee at any conference which may be held to consider the matter.

HOSPITAL SHIPS FOR THE CONVEYANCE OF THE SICK AND WOUNDED.

The CHAIRMAN reported that in accordance with a resolution of the Committee he had asked a question in the House of Commons on the subject of ships for the conveyance of the sick and wounded. The reply he had received was to the effect that the provision of hospital ships for the conveyance of sick and wounded soldiers from India to this country rested with the Indian Government, that the Secretary of State for War was unable to press the adoption of such a system upon that Government, and that the balance of advantage was not by any means entirely on the side of hospital ships as compared with transports, in the equipment of which great improvements had recently taken place.

POOR-LAW OFFICERS' SUPERANNUATION.

The CHAIRMAN reported that in accordance with the recommendation of the Subcommittee, which considered the question of the formation of a central fund for the purpose of superannuation, a communication from the Council of the Association had been forwarded to Mr. Chaplin, M.P., the president of the Local Government Board, asking him to amend the Poor-law Officers' Superannuation Act, 1896, so as to include the payment of contributions for superannuation into a central fund. A reply had been received stating that the Board could not undertake to promote legislation for the purpose suggested.

RETIRED MEDICAL OFFICERS AND ARMY TITLES.

Dr. WARD COUSINS read a communication which he had received referring to the question of granting military titles to retired medical officers similar to those granted to medical officers on active service, and suggesting that the military title, corresponding to the rank which they held on retirement, should be inserted against each name in the *Army List*.

The CHAIRMAN said that he held a strong opinion upon the question and he knew that the President of Council agreed with him. The deputation which waited upon Lord Lansdowne placed before his lordship very strongly that the titles were needed for purely administrative purposes and not for social purposes. If they were now to ask that the titles should be given to retired medical officers, they would be stultifying the position they took up before the Minister of War. These retired medical officers were no longer serving, and could not be called upon to serve. He had been in communication with the Director-General, who was strongly opposed to the granting of military titles to retired medical officers, and the military authorities would not entertain the idea for one moment. It would be a pity if they were to begin to agitate for some further concessions, as the authorities would say that the doctors were a set of worrying creatures who were never satisfied. He did not think it was any use stirring up the question.

After some discussion it was proposed by Dr. HOLMAN, seconded by Dr. DOUGLAS, and resolved:

That the question of the extension of the present military titles to retired army medical officers be left in the hands of the Chairman and the General Secretary to draft a reply to the communication embodying the views of the Committee.

MEDICAL ACTS AMENDMENT BILL.

The CHAIRMAN said that the draft Bill of the Committee to amend the Medical Acts had been amended by the Council and referred back to the Committee.

Mr. HORSLEY said that the Draft Bill which had been prepared by the Subcommittee, and approved of by the Committee, had been submitted to the Council, which had held a special meeting to consider the matter fully, but not a line of any report of that meeting had been published in the BRITISH MEDICAL JOURNAL. There were reasons why the Bill should be referred back to the Subcommittee. During the last session of the General Medical Council it came to the notice of the Council that the Irish Branch Council was now bankrupt. It was bankrupt because the financial system of the General Medical Council established in 1858 was constructed on a mistaken idea. It was believed that justice was equally meted out to all parts of the United Kingdom, but in fact Ireland was badly treated. Irish medical students, having the natural quickness of their nation, had perceived that in Scotland a degree or diploma could be obtained somewhat more cheaply and quickly. Therefore, they paid their registration fee in Scotland, and the Branch Council in Ireland did not get the income which it was expected to receive under the Act. Any Medical Acts Amendment Bill which the Committee put forward seriously must therefore contain a reform of the financial system of the General Medical Council.

Mr. BROWN said that the Subcommittee had spent a great deal of time in considering the Medical Acts Amendment Bill. If the Council of the Association did not intend to proceed with medical reform it ought to say so decisively, and not refer the Bill back to the Committee. He hoped when the Bill came before the Council again it would meet with more respect.

Dr. PARSONS said he was present at the Council meeting when the Bill was discussed very fully. The two proposals which were left out were considered to be beyond the range of practical politics. As far as the Council was concerned, he could vouch that it gave the most earnest consideration to the Bill.

Dr. J. W. MOORE said that the deliberate opinion of the Council was that the proposals of the Parliamentary Bills Committee were unworkable at present as regards three of the points in the draft, namely, the reconstitution of the General Medical Council, the one-portal system, and increased representation on the General Medical Council.

Dr. BRADSHAW said it was unfortunate that the Parliamentary Bills Committee should appear to be directly opposed to the opinion of the Council on such a vital question. At the meeting of the Parliamentary Bills Committee, when the Bill was thoroughly considered and gone over clause by clause, the members present were practically unanimous. It was unfortunate that the gentlemen opposed to the Bill did not give the Committee the benefit of their opinion while the matter was being discussed by the Committee.

After some observations by Dr. BROWN RITCHIE,

Mr. VICTOR HORSLEY replied, and moved the following resolution, which was seconded by Mr. GEORGE BROWN, and carried:

That the Subcommittee on the Medical Acts Amendment Bill be reappointed to reconsider and amend, if necessary, the draft Bill of the Parliamentary Bills Committee.

MEDICAL OFFICER TO THE EDUCATION DEPARTMENT.

The CHAIRMAN reported that a communication had been received relative to the appointment of a medical officer by the Education Department. He had asked a question on the subject in the House of Commons, and had been informed that the Committee of Council had no present intention of appointing such an officer. The schools for blind and deaf children, and for defective children, were under the supervision of an inspector who was a duly qualified medical man.

Dr. SHUTTLEWORTH said that after the statement of the Chairman with regard to the Board of Education Bill, it would be quite unnecessary for him to say anything. The Board of Education had power to appoint such officers. With regard to the Elementary Education (Defective and Epileptic Children) Bill, he had received from Lord Egerton of Tatton a verbatim report of the discussion which removed his fears and doubts to a considerable extent, and he did not think it necessary to go into the matter further.

THE MIDWIVES BILL.

Resolutions passed by the Dorset and West Hants and Southern Branches of the British Medical Association, in opposition to the Midwives Bill, were read.

The CHAIRMAN stated that nothing further could be done now, as the Bill had been withdrawn.

DIRECT REPRESENTATION.

A resolution was also read from the Southern Branch, expressing the opinion that general practitioners should have a much larger share of direct representation in the General Medical Council.

NEW MEDICAL ORDINANCE IN SOUTHERN RHODESIA.

Mr. VICTOR HORSLEY called attention to a communication he had received from Bulawayo with reference to a new medical ordinance which the administrative Government of Southern Rhodesia had drafted and passed, and proposed the following resolution, which was seconded by Dr. DOUGLAS, and carried:

That the matter be referred to the Council as a matter of urgency, and that the Council be requested to communicate with the Colonial Office on the subject.

THE ANNUAL REPORT.

The draft annual report of the Committee was considered paragraph by paragraph, and on the motion of Dr. JAMES MURPHY, seconded by Dr. WARD COUSINS, it was resolved:

That the draft annual report as amended be approved and adopted and placed before the Council of July 12th.

COUNCIL.

NOTICE OF MEETINGS.

MEETINGS of the Council will be held in the Town Hall Council Chamber, Portsmouth, on Tuesday, August 1st, Wednesday, August 2nd, and Thursday, August 3rd, next, at 9.30 o'clock in the forenoon of each day.

July, 1899. FRANCIS FOWKE, *General Secretary.*

NOTICE OF THE NEXT QUARTERLY MEETING OF COUNCIL.

A MEETING of the Council will be held on October 11th, 1899. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, September 21st, 1899.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.

THE annual meeting of this Branch was held at Malvern on June 29th.

Election of Officers.—Dr. H. E Dixey, of Malvern, was elected President for the ensuing year, and Mr. Averay-Jones, Fownehope, Hereford, President-elect. *Honorary Secretaries:* Dr. G. W. Crowe and Mr. E. Du Buisson. *Representative on Council of the Association and on the Parliamentary Bills Committee:* Dr. G. W. Crowe.

President's Address.—The PRESIDENT gave an address on The Necessity for Co-operation Amongst Medical Men, and the Advisability of the Creation of a Ministry of Public Health.

Communications.—Dr. CHAPMAN showed a New Sphygmograph, invented by Dr. Waller.—Mr. DU BUIS-ON showed Pathological Specimens: Sarcoma of Choroid, and Cast of Uterus from a Case of Tubal Pregnancy.

GLASGOW AND WEST OF SCOTLAND BRANCH.

THE summer meeting of this Branch was held on July 7th in Ayr, under the Presidency of Dr. FREW (Kilmarnock), There was a large attendance of members.

Drive.—After luncheon in the Station Hotel, Ayr, members drove to Maybole *viâ* Crosragruel Abbey, returning *viâ* Culzean Castle.

Dinner.—Dinner was served in the Station Hotel, Ayr.

Increase in Membership of Branch.—In reading the minutes of the last meeting of the Branch, Dr. NICOLL, the Senior Secretary, drew attention to the steady and large increase in the membership of the Branch during the past two years, and to the work done in matters concerning the professional interests of the members.—Dr. D. C. MCVAIL, President-elect, in proposing the toast of "The Branch," impressed upon the meeting the importance of the work done by the Council of the British Medical Association in the administrative affairs of the medical profession, and urged on members the desirability of a further increase in the membership of the Branch in order that a third representative member of Council might be sent up by the Branch.—Dr. FREW, the President, in replying, also spoke strongly on the possibilities of even better work being done by the Branch, which an increased membership offered, and pointed out that, while during the past two years there had been a very large increase in membership, the Branch still occupied a unique position amongst the Branches of the Association in the peculiarly large number of "unattached members" of the Association in its area, and expressed the hope that many of these members would send their names to the honorary secretaries of the Branch.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SEVENTH ANNUAL MEETING.

THE sixty-seventh annual meeting of the British Medical Association will be held at Portsmouth on Tuesday, Wednesday, Thursday, and Friday, August 1st, 2nd, 3rd, and 4th, 1899.

President: Sir THOMAS GRAINGER STEWART, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh, Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President-Elect: JOHN WARD COUSINS, M.D., F.R.C.S., Senior Surgeon, Royal Portsmouth Hospital.

President of the Council: ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: CHARLES PARSONS, M.D., Dover.

An Address in Medicine will be delivered by Sir RICHARD DOUGLAS POWELL, Bart., M.D., F.R.C.P., Physician Extraordinary to Her Majesty the Queen, Physician to Middlesex Hospital.

An Address in Surgery will be delivered by Professor ALEXANDER OGSTON, M.D., Surgeon in Ordinary to Her Majesty the Queen in Scotland, Regius Professor of Surgery in the University of Aberdeen.

The scientific business of the meeting will be conducted in twelve Sections, as follows, namely:

A. MEDICINE.

Grand Jury Room, Town Hall.

President: JOHN MITCHELL BRUCE, M.D. *Vice-Presidents:* EDWARD JAMES WALLACE, M.D.; ROBERT WILLIAM BURNET, M.D. *Honorary Secretaries:* WILLIAM SYKES, M.D., Bury Place, Gosport; HUMPHRY DAVY ROLLESTON, M.D., 112, Harley Street, W.

Discussions have been arranged as follows:

1. Wednesday, August 2nd.—On the Medical Tests required at present for Admission to the Public Services. It is hoped that this will be opened by Sir J. N. Dick, K.C.B. Professor W. Osler, M.D., F.R.S., Sir Dyce Duckworth, Dr. P. Manson, Dr. J. Mitchell Bruce, Dr. R. W. Burnet, Dr. T. D. Savill,

Major W. Turner, R.A.M.C. (Gibraltar), Dr. Wm. Sykes, Dr. Hill, Mr. J. Paul Bush, and Dr. E. J. Wallace, have promised to take part in this discussion.

2. Thursday, August 3rd.—On the Preventive and Remedial Treatment of Tuberculosis. The discussion will be opened by Professor T. Clifford Allbutt, M.D., F.R.S. It is hoped that Sir William Broadbent, Bart., M.D., F.R.S., Sir R. Douglas Powell, Bart., M.D., Sir T. Grainger Stewart, M.D., Sir W. T. Gairdner, M.D., K.C.B., Dr. Arthur Ransome, F.R.S., Dr. F. W. Burton-Fanning, Dr. Heron, Dr. R. Robertson, Mr. A. G. S. Mahomed, Dr. Alex. G. Davey, Dr. J. E. Squire, Dr. Browning, Dr. H. Walsham, Dr. G. A. Reid, Dr. W. Morton Harman, Dr. S. T. Pruen, Dr. Frank M. Pope, Dr. R. W. Philip, Sir H. R. Beevor, Bart., M.D., Dr. S. Rendall, Dr. W. Vicary Snow, Dr. Wm. Calwell, Dr. R. Shingleton Smith, Dr. Williamson, Dr. A. P. Parsons, Dr. M. G. Foster, Dr. James Tyson (Philadelphia), Dr. P. B. Smith, Dr. W. T. Gardner, Dr. StClair Thomson, Dr. S. Hyde, Dr. C. Theodore Williams, Dr. A. P. Hillier, Mr. Colin Campbell, and Dr. L. A. Weatherly will take part in the discussion.

The following papers have been offered:

ARMSTRONG, William, M.R.C.S. Stimulation of Excretion in Gout.
BAIN, W., M.D. (1) The action of certain British and Foreign Mineral Waters on the Quadriurate of Sodium. (2) An Experimental Contribution to the Study of Gout.
BRISCOE, J. F., M.R.C.S. The Practice of Bloodletting.
CALWELL, W., M.D. Gastric Adhesions as a Cause of Dyspepsia
CAMPBELL, Harry, M.D. The Enlargement of the Chest in Emphysema and its Treatment.
EWART, William, M.D. (1) On the Prebalnear Treatment of Heart Disease by Inhalations of Carbonic Acid Gas; and on the Uses of the Inhalation in Cardiac Dyspnœa and in Anginoid Pain. (2) On the Recognition of Enlargements of the Left Auricle by Percussion; and on other Clinical Uses of Dorsal Percussion, including Percussion of the Pelvis.
GARDNER, W. T., M.B. Notes on the Open-Air Treatment of Phthisis with Photographs of a new form of Kiosk.
GREEN, J. Lardner, M.R.C.S., L.S.A. The Inhalation of Formalin as a Preparation for, and Aid to, the Open-Air Treatment of Consumption.
HAIG, Alexander, M.D. Uric Acid and the Circulation; some New Methods of Estimating its Effects.
HERON, G. A., M.D. On the Results of Treatment by the New Tuberculin.
HILLIER, A. P., M.D. Prevention of Tuberculosis in Everyday Life.
HUTCHINSON, Professor Woods. On the Form of the Chest in Tuberculosis and its Significance.
JOHNS, W. Denton, B.A., M.D. On the Open-air Treatment of Tuberculosis in England (with demonstration of cured cases).
LUFF, A. P., M.D. The Gelatinous Form of Sodium Biurate and its bearing on the Pathology of Gout.
MACLEOD, Herbert G., M.D., M.S. The Causes and Treatment of Sciatica and Neuralgia.
MULLICK, Sarat K., M.D. Some Special Points connected with the Nature and Cure of Influenza.
OSLER, Professor W., M.D., F.R.S. On Hypertrophic Cirrhosis with Bronzing of the Skin—Hæmochromatosis.
PARSONS, A. P., M.B. The Accurate Diagnosis and Successful Treatment of Perforated Gastric Ulcer.
PHILLIPS, W. Fleming, M.B. Observations on Clinical Thermometry.
POYNTON, F. J., M.D. The Occurrence of Arthritis in connection with Inflammation of the Appendix Vermiformis.
PRUEN, S. T., M.D. Diet and Nutrition in the Treatment of Tuberculosis.
SAMWAYS, D. W., M.D. The Defence of the Cardiac Orifices other than Valvular.
SUCKLING, C. W., M.D. On Migraine.
SYKES, William, M.D. A Suggestion for the Treatment of Phthisis Pulmonalis on the Lines of one of its Normal Terminations.
WALSHAM, H., M.D. The Relation of Pulmonary Tuberculosis to Pure Mitral Stenosis.
WEST, S., M.D. Forms of Albuminuric Retinitis and their Significance.

B. SURGERY.

Banqueting Room, Town Hall.

President: HENRY TRENTHAM BUTLIN, F.R.C.S. *Vice-Presidents:* Deputy-Inspector-General RICHARD SAMUEL PURNELL GRIFFITHS, R.N.; ALFRED LLOYD OWEN, M.D.; Deputy-Inspector-General EDWARD ELPHINSTONE MAHON, C.B., R.N. *Honorary Secretaries:* HENRY RUNDLE, F.R.C.S., 13, Clarence Parade, Southsea; D'ARCY POWER, F.R.C.S., 10A, Chandos Street, Cavendish Square, W.

Special discussions will be held upon:

1. The Diagnosis and Treatment of Gunshot Wounds of the Abdomen. To be opened by Colonel Stevenson, M.Ch., R.A.M.C., Professor of Military Surgery at Netley, followed by Mr. A. Barry Blacker, Dr. A. H. Robinson, Major W. C. Beevor, R.A.M.C., Damer Harrisson, F.R.C.S.Ed., R. Clement Lucas, B.S., F.R.C.S., and others.

2. The Prevention and Treatment of Syphilis in the Navy and Army. To be opened by Deputy-Inspector-General E. E. Mahon, R.N., C.B., and Major W. Dick, M.B., C.M., R.A.M.C., Netley, Assistant Professor of Clinical Surgery, Netley. The following gentlemen have intimated their intention of taking part in the discussion: Fleet-Surgeon A. T. Corrie, R.N., Dr. C. R. Drysdale, Major F. J. Lambkin, R.A.M.C., Mr. J. E. Lane, Dr. J. MacNamara, Major William Niven, M.D., Dr. G. Ogilvie, Dr. Shaw-Mackenzie, Mr. A. H. Ward, Colonel F. H. Welch, R.A.M.C., and Staff-Surgeon A. E. Weightman, R.N.

The following papers have been offered:

ARMSTRONG, G. E., M.D. The Surgical Treatment of Hæmorrhage from Gastric Ulcer.
BAMPTON, A. H., M.D., M.Ch. A Bullet in the Brain for Six Months: Abscess, Removal, and Recovery.
BARLING, Gilbert, F.R.C.S. Analysis of 120 Operations for Appendicitis with Observations thereon.
BERRY, James, M.B., B.S. Seventy Consecutive Cases of Goitre Treated by Operation (Extirpation or Enucleation). (Illustrated with Photographs and Specimens).
BIDWELL, L. A., F.R.C.S. A Method of attaching the Mucous Membrane to the Skin of the Perineal Excision of the Rectum.
BUSH, J. Paul, M.R.C.S. Some Operations on the Jaws for Extensive Malignant Disease.
CARWARDINE, Thomas, M.S. On Excision of the Rectum for Cancer by a New Method and its Results.
CLARKE, J. Jackson, F.R.C.S. An Analysis of 100 Cases of Spinal Curvature and Disease.
DE SANTI, P., F.R.C.S. A Case of Gunshot Wound of the Leg Severing the Anterior Tibial Nerve; Secondary Suturing Two Months Later; Restoration of Function of Nerve.
DOUGLAS, A. R. J. Four Cases of Bullet Wound of the Chest. With remarks.
DOWNIE, Walker, M.B. Description of two cases of Sarcoma of the Tongue. (Specimens, Sections, and Photographs will be shown.)
ERDINGTON, G. H., M.D. A Short Account of a Case of Periostitis Albuminosa.
FREYER, P. J., M.Ch. Recent Notes on the Surgery of Stone in the Bladder.
HARRISSON, Damer, F.R.C.S. Some Cases of Cerebral Surgery (With lantern illustrations).
HUTCHINSON, J., jun., F.R.C.S. The Vermiform Appendix in Relation to Hernia and Intestinal Obstruction. Illustrated by lantern slides and diagrams.
JONES, Robert, F.R.C.S. The Operative Treatment of Spasmodic Flat Foot.
LLOYD, Jordan, F.R.C.S. (1) On the Drainage of Appendicular Suppuration through the Rectum or Vagina. (2) A Case of Ureteral Stricture treated by Ureteroplasty.
LUCAS, R. Clement, B.S., F.R.C.S. (1) Removal of a Bullet and of a Detached Fragment from the Interior of the Skull after localisation by the *x* rays. (2) Removal of a Bullet from the Front of the 2nd Cervical Vertebra after localisation by the *x* Rays.
MACLEOD, Herbert W. G., M.D., M.S. The Treatment of Stone in the Bladder, with Notes of some Cases operated upon.
MORTON, Charles A., F.R.C.S. (1) A Successful Case of Resection of Three-quarters of the Stomach for Carcinoma. (2) A case of Excision of the Cæcum for Carcinoma.
MOYNIHAN, B. G. A., F.R.C.S. A Series of Cases of Malignant Disease of the Stomach treated Surgically.
NICOLL, James H., M.B. (1) Enterorrhaphy without Mechanical Aids (with illustrative cases); (2) The Treatment of Urethral Stricture.
OGILVIE, G., B.Sc., M.B., M.R.C.P. Heredo-parasyphilis.
REID, G. Archdall, M.B. The Treatment of Surface Wounds.
ROBSON, A. W. Mayo, F.R.C.S. Two Cases of Removal of Tumours of the Suprarenal Capsule.
RUNDLE, H., F.R.C.S. Notes on 375 Cases of Varicocele treated by Operation.
RYALL, Charles, F.R.C.S. Notes of a Case of Extensive Trans-Sacral Excision of the Rectum followed by Perfect Sphinteric Control.
SHEEN, W., M.D., F.R.C.S. (1) A Case of Secondary Thyroid Growth. (2) A Case of Malignant Disease in the Sac of an Umbilical Hernia.
SNOW, Herbert, M.D. The Result of Cancer Operations and of Continuous After-Treatment.
SPENCER, W. G., F.R.C.S. Two Fatal Cases of Venereal Phagedæna.
THOMAS, J. L., F.R.C.S. (1) Two Recent Operations upon the Gasserian Ganglion for Neuralgia by the Hartley-Krause Route. (2) A Reliable Washing Tap for Operating Rooms, with a Demonstration of a Simple Method for Irrigating the Abdomen.
WARD, A. H., F.R.C.S. On the Rational Treatment of Syphilis.
WELCH, Colonel F. H., R.A.M.C. The Prevention and Treatment of Syphilis in the Navy and Army.
WILLIAMS, Chisholm, F.R.C.S.Edin. A Case of Intercostal Neuralgia and Operation.
WILLIAMS, W. Roger, F.R.C.S. The Surgical Treatment of Uterine Cancer.

Mr. Jas. Mackenzie Davidson and Dr. Hugh Walsham will take part in a demonstration of *X*-Ray Photography in its Relation to Medicine and Surgery.

Professor Ernest Laplace, M.D., Philadelphia, will exhibit a new Forceps for Intestinal Anastomosis.

C. OBSTETRICS AND GYNÆCOLOGY.

Marie-la-bone Hall, Swan Street, Commercial Road.

President: GEORGE GRANVILLE BANTOCK, M.D. *Vice-Presidents:* JOHN ROBERT KEALY, M.D.; JOHN WM. TAYLOR, F.R.C.S. *Honorary Secretaries:* CHARLES PLUMLEY CHILDE, F.R.C.S., Cranleigh, Kent Road, Southsea; ERNEST WILMER

PHILLIPS, M.R.C.S., Victoria Crescent, Victoria Road North, Southsea; WALTER WM. HUNT TATE, M.D., 57, Queen Anne Street, W.

The subjects selected for discussion are as follows:

1. Wednesday, August 2nd.—The Treatment of Fever following Delivery, with Special Reference to Serumtherapy. To be opened by Dr. Herbert Spencer.

2. Thursday, August 3rd.—The Natural Menopause compared with *(a)* the Menopause produced by Removal of the Uterine Appendages; and *(b)* the Menopause produced by Removal of the Uterus without Removal of the Appendages. To be opened by Mr. J. Bland Sutton, F.R.C.S.

The following gentlemen have signified their intention of joining in the discussions: Professor Murdoch Cameron, M.D., Dr. John Campbell, Dr. Cushing, Dr. Handfield-Jones, Dr. Shaw-Mackenzie, Mr. Christopher Martin, Dr. Newnham, and Dr. Robert Boxall, Dr. Inglis Parsons, Dr. Purslow, Professor J. W. Byers, M.D., Dr. George Elder, Mr. Robert O'Callaghan, Dr. More Madden, and Dr. J. Stuart Nairne.

The following papers have been offered:

BRIERLEY, James Brassey, M.D. Modern Teaching of Obstetrics in the English Medical and other Schools, and Modern Practice.
BYERS, Professor J. W., M.D. The Relationship of Certain Cases of Amenorrhœa to Raynaud's Disease and Subsequent Tuberculosis.
CAMERON, Professor Murdoch, M.D. A case of Rupture of Uterus, Missed Labour, and Delivery three months later.
CAMPBELL, John, M.D. Treatment of Acute Peritonitis.
LAWRIE, Macpherson, M.D. Notes of Fifty Consecutive Cases of Cœliotomy for Diseases of the Uterus and Appendages, with Forty-eight Recoveries Performed within the last Twenty Months, with Observations.
LEA, Arnold W. W., M.D. Two Cases of Puerperal Septicæmia due to Streptococcic Infection.
LOW, William J., M.D. On Subinvolution of the Vagina.
MADDEN, More, M.D. On Some of the Methods employed in the Modern Treatment of Uterine Cancer.
NAIRNE, J. Stuart, F.R.C.S. A New and More Complete Method of Colporrhaphy.
NEWNHAM, W. H. C., M.B. A case of very unusual Suppuration in the Pelvis after Parturition.
PARSONS, J. Inglis, M.D. A New Treatment for Prolapse of the Uterus; further report of cases.
REID, G. Archdall, M.B. The Causes which render difficult the Labours of Civilised Women.
SHAW-MACKENZIE, J. A., M.D. The Syphilitic Factor in the Diseases of Women.
TURNER, P. D., M.D. Tuberculous Lesions found in the Generative Organs in 27 Consecutive *Post-mortem* Examinations on Phthisical Patients.
WARDEN, C., M.D. The Treatment of Puerperal Infection in the Maternity Hospitals of Paris.

It has been arranged to exhibit pathological specimens illustrative of the papers for discussion.

D. STATE MEDICINE.

Shareholders' Room, Gas Company's Offices, 87, Commercial Road.

President: GEORGE WILSON, M.D. *Vice-Presidents:* Surgeon-General CHARLES MACDONAGH CUFFE, C.B.; JOSEPH GROVES, M.B. *Honorary Secretaries:* HENRY RICHARD KENWOOD, M.B., Granville House, Alexandra Villas, Finsbury Park, N.; A. MEARNS FRASER, M.B., Epworth, St. Edwards Road, Southsea.

It is proposed to hold discussions on the following:

1. Recent Vaccination Legislation and the Prevention of Small-pox. To be opened by Dr. E. Seaton. The following gentleman will take part in the discussion: Dr. C. R. Drysdale.

2. The Personal Communication of Tuberculosis and the Measures available for its Prevention. The following gentlemen will take part in the discussion: Sir Henry Littlejohn, M.D., LL.D.; Professor Delépine, Dr. A. Newsholme, Mr. J. Niven, Dr. Sidney Davies, and Dr. C. R. Drysdale.

3. The Efficiency of Existing Measures directed against the Spread of Infection in Elementary Schools. The following gentlemen will take part in the discussion: Dr. A. Newsholme, Mr. A. E. Harris, Dr. J. F. J. Sykes, Dr. Sidney Davies, Mr. Henry R. Kenwood, Dr. Henry May, and Dr. R. Sydney Marsden.

The following papers have been offered:

CAMPBELL, Colin, M.R.C.S., L.R.C.P. The Technique of Vaccination.
CANTLIE, James, F.R.C.S. The Early Decay of Teeth in Great Britain.
DOVE, R. Atkinson, M.B. An Investigation into the Bacteriology of the Air as found in Schools.
KENWOOD, Henry, M.B., D.P.H., and GRIFFITH, A., M.D., D.P.H. The Distribution of Erysipelas in London and its Significance.
MANBY, E. Petronell, M.D., D.P.H. Meat Inspection and the Abolition of Private Slaughterhouses.
MARSDEN, R. Sydney, M.B., D.Sc., F.R.S.E. Overcrowding in Secondary Schools.
MARSH, T. A. P., Major, R.A.M.C. The Prevalence, Causes, and Prevention, of Enteric Fever in India and the Tropics.
PECK, Herbert, M.B., D.P.H. Sick-room Infection in Typhoid Fever.
SYMONS, W. H., M.D., D.P.H. The Disinfection of Books and other Articles Injured by Steam Disinfection.
WINDLE, J. D., M.B. The Mode of Spread of Diphtheria, with special reference to School Attendance, based on the experience of a local outbreak.

E. PSYCHOLOGY.

Swan Street Board School (Boys' School). Entrance in Swan Street, Commercial Road.

President: DAVID NICOLSON, C.B., M.D. *Vice-Presidents:* SAMUEL RUTHERFORD MACPHAIL, M.D.; PETER WILLIAM MACDONALD, M.D. *Honorary Secretaries:* JAMES NEIL, M.D., Warneford Asylum, Oxford; BONNER HARRIS MUMBY, M.D., Medical Superintendent, Boro' Asylum, Portsmouth.

The subjects selected for discussion are as follows:

1. Lunacy Legislation as it Affects the Temporary Care of Incipient Cases. To be opened by Dr. Savage and Dr. Mercier.

2. The Etiological Relation of Syphilis to General Paralysis. To be opened by Dr. A. W. Campbell, with a paper on the Etiological Relation of Syphilis to General Paralysis, followed by a joint paper from Dr. P. W. Macdonald and Dr. A. Davidson on Congenital General Paralysis (a preliminary contribution).

3. The Treatment of Epileptics and Imbeciles. To be opened by Dr. Shuttleworth and Dr. Fletcher Beach.

The following gentlemen have promised to take part in the discussions of this Section: Professor Clifford Allbutt, F.R.S., Dr. Fletcher Beach, Dr. Milne Bramwell, Dr. Chambers, Dr. Crotchley Clapham, Professor Ferrier, F.R.S., Dr. H. Campbell, Dr. W. Campbell, Dr. Hyslop, Dr. Davidson, J. F. Briscoe, M.R.C.S., Dr. H. Newington, Dr. Macphail, Dr. P. M. MacDonald, Dr. Mercier, Dr. G. W. Mould, Dr. T. Seymour Tuke, Dr. F. Lee, Dr. Spence, Dr. Shuttleworth, Dr. Savage, Dr. Telford Smith, Dr. Outterson Wood, Dr. Weatherly, Dr. Haig, Dr. Orange, C.B., and Dr. Oscar Woods.

The following papers have been offered:

ANDRIEZEN, W. L., M.D. The Bearings of Pathological Discoveries on the Treatment of Mental Diseases.
BRAMWELL, J. Milne, M.B. The Mental Conditions Involved in the Post Hypnotic Appreciation of Time.
BRISCOE, J. F., M.R.C.S. The Asphyxial Problem in Convulsive Seizures.
CAMPBELL, Harry, M.D. Morbid Self-Assurance.
HARVEY, Surgeon-General C. B., D.S.O. Notes on Asylums in India.
HYSLOP, T. B., M.D. Double Consciousness.
MACPHAIL, S. R., M.D. Note on Post-operative Insanity.
REID, G. Archdall, M.B. Alcoholism in its Relation to Heredity.
SUTHERLAND, J. F., M.D., F.R.S.E. On Legislation affecting the Property and Person of the Well-to-do Inebriate.
WEATHERLY, L. A., M.D. How Can We Instil Rational Ideas Regarding Insanity into the Public Mind?

Dr. McDowall of the Morpeth Asylum will exhibit plans of Villas for Chronic Harmless Patients and Convalescents.

F. ANATOMY AND PHYSIOLOGY.

School Board Office, Town Hall.

President: JOHN JAMES CHARLES, M.D. *Vice-Presidents:* AURELIUS VICTOR MAYBURY, M.D.; ANDREW FRANCIS DIXON, M.B. *Honorary Secretaries:* EDWIN JOHN NORRIS, M.R.C.S., May Villa, Cottage Grove, Southsea; WM. JOSEPH ESSERY, M.B., Netley Lodge, South Parade, Southsea; MARCUS SEYMOUR PEMBREY, M.D., Charing Cross Hospital, W.C.

The subjects selected for discussion are as follows:

1. The Interaction between the Ovaries and the Mammary Glands. To be opened by Mr. Stanley Boyd, F.R.C.S. The following gentlemen have promised to take part in the discussion: Dr. Amand Routh, Mr. W. G. Spencer, F.R.C.S., and others.

2. On the Exchange of Gases in the Lungs. To be opened by the President. The following gentlemen have promised to take part in the discussion: Dr. Washbourn, Mr. W. G. Spencer, and others.

The following papers have been offered:

ANDERSON, R. J., M.D. Some Points concerning Asymmetry.
BARRATT, J. O. Wakelin, M.D. The Anatomical Structure of the Ninth, Tenth, Eleventh, and Twelfth Cranial Nerves.
CANTLIE, James, F.R.C.S. The Lobes of the Liver.
CHARLES, J. J., M.D. (1) The Reaction of the Intestinal Contents. (2) The Function of the Rectum.
CHARLES, Havelock R., M.D. The Progress of Anatomical Teaching in Northern India.
CUNNINGHAM, D. J., M.D., F.R.S. Demonstration of some Points in the Sectional Anatomy of the Brain of the Orang and Chimpanzee.

DIXON, Francis, M.B., Sc.D.: (1) The Course of the Taste Fibres. (2) On the Grooves and Markings often found in the Human Calvaria, corresponding in position to certain Vessels or Sensory Nerves of the Scalp. (3) The Form of the Bladder and Prostate (demonstration). (4) The Mode of Ossification of the Upper End of the Femur in different Animal Groups (demonstration).
HARLEY, Vaughan, M.D. The Value of the Large Intestine in General Metabolism.
HUNTER, William, M.D. Metabolism in Acute Yellow Atrophy of the Liver.
THOMAS, J. Lynn, F.R.C.S. The Anæsthetic Areas in two Patients in whom the Second and Third Divisions of the Fifth Nerve were divided within the Cranium (demonstration).
PEMBREY, M. S., M.D. Cheyne-Stokes Respiration.
REID, G. Archdall, M.B. The Evidence for and against the Transmission of Acquired Characters.
ROSS, F. W. Forbes, M.D. On Blood Corpuscles.
RUSSELL, J. S. Risien, M.D. Experimental Observations bearing on Epilepsy.

Specimens of anatomical interest will be shown by the President and Professor A. F. Dixon.

A demonstration (microscopes and lantern slides) of the chorionic epithelium will be given by Dr. Eden.

G. PATHOLOGY.

Swan Street Board School (Infants' School), entrance in Salem Street, Commercial Road.

President: JOSEPH FRANK PAYNE, M.D. *Vice-Presidents:* FREDERICK JOHN DRIVER, M.D.; OTTO JACKSON KAUFFMANN, M.D. *Honorary Secretaries:* EDMUND FAURIEL TREVELYAN M.D., 40, Park Square, Leeds; WILLIAM CARLING, M.B., 11, Rosebery Terrace, Highland Road, Southsea.

Discussions have been arranged as follows:

Wednesday, August 2nd.—Short introductory address by the President. Discussion on the Pathology of Infective Endocarditis, introduced by Dr. Washbourn. Dr. Sansom, Mr. A. G. R. Foulerton, Dr. F. J. Poynton, Dr. W. C. C. Pakes, Dr. Bertram Abrahams, Dr. Lazarus-Barlow, Professor Osler, Dr. W. Bulloch, Dr. J. H. Bryant, and Dr. H. M. Tickell will take part in the discussion.

Thursday, August 3rd.—Discussion on the Pathology of Renal Tumours, introduced by Mr. J. H. Targett and Dr. Kelynack. Dr. Morley Fletcher, Mr. Roger Williams, Dr. F. W. Eurich, Dr. Wakelin Barratt, and Dr. David Newman will take part in the discussion.

Professor Hamilton (Aberdeen), Professor Sims Woodhead (Cambridge), and M. Netter (Paris) have also signified their intention of taking part in the discussions.

The following papers have been offered:

ABRAHAMS, Bertram M.D. (Title not yet announced.)
BARRS, A. G., M.D., and TREVELYAN, E. F., M.D. Remarks on a specimen of Hydatid Disease of the Vertebral Column and Extradural Space (specimen shown).
BRODIE, T. G., M.D. The Physiological Action of Diphtheria Toxin.
COLES, A. C., M.D. The Bacillus of Influenza.
FOULERTON, A. G. R., F.R.C.S. A Case of Streptothrix Infection.
HUTCHINSON, Professor Woods. The Distribution of Tuberculous Lesions in Man and Animals.
LAZARUS-BARLOW, W. S., M.D. (1) Dissecting Aneurysm of the Heart; (2) Syphiloma of the Heart; (3) Anæmic Infarct of Liver. (Specimens shown.)
PEARSE, Frederick, M.D., F.R.C.S. Some Points in the Pathology of Plague.
POSADAS, Dr. Generalised Infectious Psorospermosis (with specimens).
POYNTON, F. J., M.D. Observations on the Pathology of the Myocardium.
REID, G. A. O'B., M.B. Influence of Heredity in Disease.
SELIGMANN, C. G., M.R.C.S., L.R.C.P. Notes upon Morbid Conditions met with among the Natives of British New Guinea (lantern demonstration).
SMITH, G. Bellingham, M.B., F.R.C.S., and WASHBOURN, J. W., M.D. Infective Sarcomata in Dogs.
THOMSON, Campbell, M.D. The Pathology of Acute Chorea.
WHITE, C. Powell, M.B., F.R.C.S. Notes on a Carcinomatous Cyst of the Liver with Secondary Deposits in Sternum, Clavicles and Lungs (specimens shown).
WILD, Robert, M.D. Some Sources of Infection in Cutaneous Tuberculosis.
WILLIAMS, W. Roger, F.R.C.S. On Tumours of Gigantic Size, etc.
WILLIAMSON, R. T., M.D. The Pathology of Syphilitic Affections of the Spinal Cord
WOHLMANN, A. S., M.D. On the Bacillus of Rheumatoid Arthritis.

H. OPHTHALMOLOGY.

Overseers' Board Room, St. Michael's Road.

President: SIMEON SNELL, F.R.C.S.Edin. *Vice-Presidents:* LYSANDER MAYBURY, M.D.; EDWARD TREACHER COLLINS, F.R.C.S. *Honorary Secretaries:* ARTHUR VERNON FORD, M.R.C.S., South View Lodge, Kent Road, Southsea; ARNOLD LAWSON, F.R.C.S., 12, Harley Street, W.

The subjects selected for discussion are as follows:

Wednesday, August 2nd.—The Pathological Significance of Sympathetic Irritation and its Connection, if any, with Sympathetic Ophthalmitis. To be opened by Mr. F. Richardson Cross, F.R.C.S.

Thursday, August 3rd.—The Visual Tests employed in the Navy, Army, and Mercantile Marine, and their Efficiency. To be opened by Deputy-Surgeon-General Henry Cayley, F.R.C.S., I.M.S.

The following gentlemen have signified their intention of taking part in the discussions: Mr. G. Anderson Critchett, Professor Malcolm McHardy, Dr. George Mackay, Mr. Devereux Marshall, Mr. A. Stanford Morton, Mr. H. E. Juler, Mr. T. H. Bickerton, Dr. John Hern, and Dr. C. E. Glascott.

The following papers have been offered:

BERRY, George, M.B. The Extraction of Unripe and Complicated Cataracts, with remarks on their After-treatment.
BICKERTON, Thomas H., M.R.C.S. Eyes or no Eyes: H.M.S. *Vanguard*. A Retrospect.
BRONNER, Adolph, M.D. On the Uses of Homatropine in Cases of Muscular Asthenopia.
BULL, G. T., M.D. (Paris.) Inefficiency of the Ocular Muscles.
COLLINS, E. Treacher, F.R.C.S. Enophthalmos (with lantern illustrations).
GRIFFIN, W. Watson, M.B. Cases illustrating the value of the Correction of Hyperphoria.
GRIFFITH, A. Hill, M.D. Congenital Lachrymal Obstruction.
GRIFFITH, John, F.R.C.S. A case of Primary Sarcoma of the Fornix Conjunctivæ.
HERN, John, M.D. The Eye Symptoms in Hay Fever.
HINSHELWOOD, James, M.D. The Use of Euphthalmin; a new Mydriatic.
LANDOLT, Professor Edm. The Determination of Visual Acuity: (*a*) The Principle of its Determination; (*b*) the Tests for Visual Acuity; (*c*) Practical Demonstration.
LAWSON, Arnold, F.R.C.S. The Correction of Refractive Errors in the Treatment of Trachoma.
LODGE, Samuel, jun., M.D. A Series of Cases of Removal of Lens for High Myopia.
SCOTT, Kenneth, F.R.C.S.Ed. Destructive Ulceration of the Eyelid: Cure.
SNELL, Simeon, F.R.C.S.Ed. (President). The Prevention of Eye Accidents in various Trades and Occupations.

Invitations to attend the meetings of the Section have been accepted by Dr. Hermann Knapp (New York), Dr. Samuel Risley (Philadelphia), Dr. de Schweinitz (Philadelphia), Dr. Theobald (Baltimore), Dr. Ayres (Cincinnati).

I. DISEASES OF CHILDREN.

Shareholders' Room, Water Company's Offices, 26, Commercial Road.

President: EDMUND OWEN, F.R.C.S. *Vice-Presidents:* JAMES GREEN, M.R.C.S.; DAWSON WILLIAMS, M.D. *Honorary Secretaries:* ALFRED HERBERT TUBBY, M.S.Lond., 25, Weymouth Street, Portland Place, W.; GEORGE AUGUSTUS TULLIS, M.D., 20, Clarence Parade, Southsea.

The subjects selected for discussion are as follows:

1. Wednesday, August 2nd.—On the Treatment of Ununited Fracture in Children. To be opened by the President of the Section. With remarks on Ununited Fracture of the Tibia and Fibula; why does its Operative Treatment so often end in Amputation?

2. The Treatment of Pleuritic Effusions in Childhood. To be opened (*a*) Medical, by Dr. Robert Maguire, and (*b*) Surgical, by Mr. H. Betham Robinson. The following gentlemen will join in the discussion: Mr. J. McGaw, Mr. C. H. Milburn, and Dr. E. H. Greves.

3. Thursday, August 3rd.—The Causation and Treatment of Convulsions in Infancy. To be opened (*a*) Etiology, by Drs. J. A. Coutts and A. M. Gossage; (*b*) Pathology and Treatment, by Dr. W. S. Colman; and (*c*) Public Health Aspect, by Dr. Hugh Jones. The following gentleman will join in the discussion: Dr. Edmund Cautley.

4. Friday, August 4th.—The Treatment of Inguinal Hernia in Infancy and Childhood. To be opened by Mr. John Langton, F.R.C.S., The following gentlemen will join in the discussion: Mr. J. Macready, F.R.C.S., Mr. Fred. Eve, F.R.C.S., Mr. D'Arcy Power, F.R.C.S., Mr. Robert Campbell, F.R.C.S., Mr. Henry A. Whitelock, F.R.C.S., Mr. Geo. Heaton, F.R.C.S., and Mr. Wm. Thomson, B.S., F.R.C.S.

The following papers have been offered:

CAUTLEY, Edmund, M.D. Abnormal Ossification of the Parietal Bone in an Infant.
EWENS, John, L.R.C.P. The Necessity of Requiring a Full Course of Lectures on Children's Diseases and Attendance at a Children's Hospital as Part of the Medical Curriculum.
HEATON, Geo., M.B., F.R.C.S. A Successful Case of Splenectomy for Rupture of the Spleen, with a Note on the Consequent Blood Changes.
LITTLE, E. Graham, M.D. Night Terrors in Children.
MORGAN, G. F.R.C.S.E. Remarks on Tuberculous Adenitis.
PARKINSON, J. Porter, M.D. The Varieties and Causes of Cough in Children, with especial reference to Practical Treatment.

PRIESTLEY, J., M.D. Infantile Hemiplegia.
STILL, G. F., M.D. Observations on the Morbid Anatomy of Tuberculosis in Childhood.
SUTHERLAND, George A., M.D. On Birth Palsy with Disseminated Tremors.
SYMPSON, E. Mansel, M.D. The Treatment of Rickets in an Out-Patient Department.
TUBBY, A. H., M.S.Lond. An Operation for the Relief of Contracted Arm and Hand after Infantile Hemiplegia.

J. PHARMACOLOGY AND THERAPEUTICS.

Small Dining Room, Freemasons' Club, 79, Commercial Road.

President: JOHN BUCKLEY BRADBURY, M.D. *Vice-Presidents:* C. H. WATTS PARKINSON, M.R.C.S.; SAMUEL GOSS, M.R.C.S. *Honorary Secretaries:* JOHN EDWARD HARRY KELSO, M.B., 67, Elm Grove, Southsea; WILLIAM TUSTING COCKING, M.D., 277, Glossop Road, Sheffield.

The subjects selected for discussion are as follows:

1. Intestinal Antiseptics and their Value. To be opened by Dr. Burney Yeo, and Dr. Vaughan Harley will follow with a paper on the subject. The following will take part in the discussion: Dr. Frank M. Pope, Dr. P. Watson Williams, Mr. J. Burdon, Professor W. Osler, F.R.S., Dr. George Herschell, and Dr. J. B. Yeo.

2. Headaches and their Treatment. To be opened by Dr. T. Lauder Brunton, F.R.S. The following will take part in the discussion: Dr. C. W. Suckling, Dr. A. Haig, Dr. J. Dundas Grant, Dr. Donald MacAlister, Professor Clifford Allbutt, F.R.S., Dr. W. Dixon, Dr. Harry Campbell, Dr. W. H. H. Jessop, Dr. W. J. Tyson, Dr. George Herschell, and Dr. StClair Thomson.

3. The Constitutional Treatment of Skin Diseases. To be opened by Dr. Robert B. Wild. The following will take part in the discussion: Dr. George Thin, Dr. J. C. M. Given, Dr. T. Churton, Dr. T. C. Fox, Dr. E. D. Mapother, Dr. Eliza L. W. Dunbar, Dr. Cave, and Mr. J. Burdon.

The following papers have been offered:

BRUNTON, Lauder, F.R.S. Headaches and their Treatment.
DIXON, Dr. Watson. The Pharmacology of Cannabis Indica.
EDWARDS, J. Hall, L.R.C.P. The Therapeutic Effects of X Rays on Lupus
HARLEY, Vaughan, M.D. Intestinal Antiseptics and their Value.
MARSHALL, Professor C. C., and TAYLOR, Dr. J. T. An Experimental Investigation into the Treatment of Acute Digitalis Poisoning.
MCWALTER, J. C., M.D. Some Suggestions for the next Pharmacopœia.
SCHEFF, Dr. E. (Vienna). X-Rays in the Treatment of Skin Diseases.
SIBLEY, W. K., M.D. The Therapeutics of Light and Heat.
WALSHAM, Hugh, M.D. Cases Treated by Erythrol Tetranitrate.

Dr. George Herschell will exhibit a new combined Galvanic and Faradic Battery for use in general practice; new Apparatus for administering the Intragastric Needle-bath; also an improved Apparatus for Washing-out the Stomach.

K.—LARYNGOLOGY AND OTOLOGY.

Board Room, Guardians' Offices, St. Michael's Road.

President: E. CRESSWELL BABER, M.B. *Vice-Presidents:* JOSIAH GEORGE BLACKMAN, M.D.; PATRICK WATSON WILLIAMS, M.D. *Honorary Secretaries:* HERBERT TILLEY, M.D., 101, Harley Street, W.; LYSTER COLE-BAKER, M.D., Bayfield, Kent Road, Southsea; THOMAS ARTHUR MUNRO FORDE, M.R.C.S., 21, Clarence Parade, Southsea.

The following subject has been selected for discussion:

The Diagnosis and Treatment of Chronic Empyema of the Frontal Sinus. To be opened by Mr. Charters Symonds (London) and Dr. E. J. Moure (Bordeaux).

The following gentlemen have promised to take part in the discussion: Ernest Waggett, M.B., Macleod Yearsley, F.R.C.S., H. Scheppegrell, M.D. (Orleans), Sargent Snow, M.D. (Syracuse, N.Y.), W. Milligan, M.D., W. J. Nourse, F.R.C.S.E., Dr. Spiess (Frankfort), Dr. Costinu (Bucharest), Dr. Posthumus Meyjes (Amsterdam), Charles Warden, M.D., StClair Thomson, M.D., Mayo Collier, F.R.C.S., Guiseppe Nuvoli, M.D. (Rome), J. H. Bryan, M.D. (Washington), Dr. Dundas Grant, Dr. William Hill, Dr. Herbert Tilley, F.R.C.S., Dr. Giuseppe Gradenigo (Turin), Dr. Laubi (Zurich), and Dr. Kipp (New York).

The following papers have been offered:

BAR, Louis, M.D. (Nice). Intralaryngeal Tumour and Nasal Exostosis (probably Tertiary Syphilitic).
BOBONE, Dr. T. (San Remo.) Title not announced.
BRONNER, A., M.D. The Use of Formalin in Atrophic Rhinitis.
DENCH, E. B., M.D. (New York). The Diagnosis and Treatment of Epidural Abscess.
DOWNIE, J. Walker, M.B., C.M. (Glasgow). On Syphilitic Ulceration of the Trachea.
GARNAULT, Dr. (Paris). Les Ventriloques et les Inspirés parlants dans l'Antiquité et en particulier chez les Sémites et chez les proto-Sémites.
GRANT, Dundas, M.A., M.D., F.R.C.S. On Some Forms of Laryngitis consequent on Purulent Affections of the Nose.
HORNE, Jobson, M.D. Pachydermia Laryngis.
LACROIX, P., M.D. (Paris). A new Apparatus for Inhalations: its application in the treatment of Tuberculous Laryngitis.
LAKE, R., F.R.C.S., and POLLARD, J., M.R.C.S. (1) Case of Exophthalmic Goître cured by Removal of One Lobe of Thyroid. (2) Ossiculectomy for the Cure of Middle-ear suppuration.
LUC, Professor, M.D. (Paris). Observation on a Fatal Case of Frontal Sinus Empyema.
MALHERBE, A., M.D. (Paris). Treatment of Chronic Suppuration of the Attic by scooping out (*Evidement*) of the Petro-Mastoid.
MELZI, Urbano, M.D. (Milan). Roentgen Ray Photograph of Needle in Subglottic Region of Child 6 years old.
MEYJES, Posthumus, M.D. (Amsterdam). Case of Accessory Thyroid Gland at the Base of the Tongue.
MILLIGAN, W., M.D. (1) The Operative Treatment of Post-influenzal Suppurative Mastoiditis. (2) Two Cases of Malignant Degeneration of Originally Benign Nasal Polypi.
MOURE, E. J., M.D. (Bordeaux). A Case of Acute Empyema of the Maxillary Antrum.
NEWMAN, David, M.D. (1) Malignant Disease of the Pharynx and Œsophagus, with cases. (2) Adenoid Disease of the Vault of the Pharynx in its Relation to Tuberculosis in Children.
ROHRER, Dr. Fritz (Zurich). Anomalies of Development of the Auricle, with illustrative Photographs, Drawings, etc.
RÖPKE, Dr. (Solingen). Author's Method of Operation on Frontal Sinus.
ROSENBERG, A., M.D. (Berlin). Consequences of Singers' Nodules.
SANTI, P. de, F.R.C.S. Parathyroid Tumour causing Symptoms of Malignant Disease of Larynx and Œsophagus: Removal: Recovery.
TANSLEY, J., M.D. (New York). A new operation for the Correction of a Deviated Septum.
THORNE, Atwood, M.B. Laryngeal Vertigo, with an account of three new cases.
TILLEY, Herbert, M.D., F.R.C.S. History of a Fatal Case of Chronic Frontal Sinus Empyema (with specimen).
WAGGETT, E., M.B., B.C. Cerebellar Abscess secondary to Chronic Middle Ear Suppuration; Evacuation; Cure.
YEARSLEY, McLeod, F.R.C.S. Suprarenal Capsule in Rhinology.

L.—TROPICAL DISEASES.

Committee Room, No. I, Town Hall.

President: GEORGE THIN, M.D. *Vice-Presidents:* Colonel KENNETH MCLEOD, M.D.; JAMES WATSON, M.D. *Honorary Secretaries:* Fleet-Surgeon JOHN TYNDALL, R.N., Tresco, St. Ronan's Road, Southsea; JOHN ROBERT STEVENSON ROBERTSON, M.B., 5, Western Parade, Southsea.

The subjects arranged for discussion are as follows:

1. Psilosis or Sprue; its Relations (Etiological and Pathological) to other Forms of Tropical Diarrhœa, and its Treatment.

2. On Thermic Fever (so-called Siriasis), with Special Reference to its alleged Microbic Causation.

3. The Agency of Insects in Spreading Infections.

Amongst those who have consented to take part in these discussions are Dr. Thin, who will open the first subject, and Colonel Kenneth McLeod, I.M.S., the second, Dr. Nuttall (Cambridge) will open the discussion on the third. Major John Ritchie, R.A.M.C., will take part in the discussion.

The following also intend to take part in the above discussions or send papers: Dr. Patrick Manson, LL.D., F.R.C.P., Inspector-General A. Turnbull, M.D., R.N., Dr. W. J. R. Simpson, Mr. James Cantlie, F.R.C.S., Colonel Crombie, I.M.S., Fleet-Surgeon H. M. Ellis, Royal Marine Artillery, Dr. James Watson, Staff-Surgeon Andrews, M.B., R.N., Captain Hughes, R.A.M.C., and Surgeon Stalkartt, M.D., R.N.

The following papers have been offered:

ANDREWS, Staff-Surgeon, O. W., R.N. Antivenene.
CANTLIE, James, F.R.C.S. Suprahepatic Abscess.
CHILDE, C. P., F.R.C.S. A Case of Bilharzia Hæmatobia with Specimens.
DUNCAN, Lieutenant-Colonel Andrew, I.M.S. The Treatment of Malarial Fever in India by different drugs.
FAULKENER, Alex. S., F.R.C.S.Ed., I.M.S. (ret.). Malarial and Climatic Neuralgia and its Treatment.
HUGHES, Captain, M. L., R.A.M.C. The Geographical Distribution of Undulant (Malta) Fever.
MANSON, Patrick, M.D. Filaria Periodicity.
MULLICK, Sarat K., M.B. The Common Form of Tropical Diseases met with in General Practice in England.
STALKARTT, Dr. Blackwater Fever.
YARR, M. T., Major, R.A.M.C. A Further Contribution to the Study of Malarial Eye Affections.

RECEPTION ROOMS.

The Lower Albert Hall, Commercial Road, will be opened on Monday from 4 P.M. to 9 P.M., July 31st, and on Tuesday, August 1st, and the following days at from 9 o'clock to 6 P.M., for the issue of tickets to members and for supplying all necessary information. It is particularly requested that all members on their arrival will at once proceed to the reception

room, Lower Albert Hall, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult list of lodgings, hotels, etc.

Members should book to Portsmouth Town Station for the Reception Room and most parts of Southsea; and only book to Southsea Station when they know their destination is at East Southsea.

SPECIAL RAILWAY ARRANGEMENTS.

The following railways have consented to convey members and their wives at a fare and a quarter for the return journey from July 29th to August 7th:

The Great Central Railway.
The Great Northern Railway.
The Great Western Railway.
The Lancashire and Yorkshire Railway.
The London, Brighton, and South Coast Railway.
The London and North-Western Railway.
The London and South-Western Railway.
The Midland Railway.
The North-Eastern Railway.

This arrangement for the issue of cheap tickets in connection with large gatherings has been made by the various railway companies as an experiment for this year only, and the question of its continuance another year will be largely determined by the smoothness of working of the Portsmouth bookings.

CLUBS.

The Freemasons' Club will make honorary members of all members attending the meeting of the Association for the week.

The Royal Naval Club, the Royal Portsmouth Corinthian Yacht Club, and the Minnesingers make honorary members for the week of fifty of the members of the Association only, and these will have a special card issued to them.

As the Association meeting is held during Cowes week, no honorary members will be admitted to the Royal Albert Yacht Club, as a large number of its own members are expected that week.

Swimming Club.—Weekly tickets at 1s. 6d. each are issued to visitors by the Portsmouth Swimming Club, for the purpose of bathing from their stage during specified hours.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 1ST, 1899.

9.30 A.M.—Meeting of 1898-99 Council. Town Hall, Council Chamber.
11.0 A.M.—Church Service; Sermon by the Right Reverend the Lord Bishop of Winchester, at St. Mary's Portsea.
11.0 A.M.—Special service, High Mass, and sermon by the Right Rev. Monsignor Cahill, at St. John's Roman Catholic Cathedral, Edinburgh Road, Portsmouth, for the Roman Catholic members of the British Medical Association.
2 P.M.—First General Meeting. Town Hall, Large Hall. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2 P.M. Town Hall, Large Hall. President's Address.

WEDNESDAY, AUGUST 2ND, 1899.

9.30 A.M.—Meeting of 1899-1900 Council, Town Hall, Council Chamber.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Second General Meeting. Town Hall, Large Hall. Address in Medicine by Sir Richard Douglas Powell, Bart., M.D.
3.30 to 6.30 P.M.—Garden Party by Mayor of Portsmouth at Portsmouth Borough Asylum, Milton (number unlimited). Conveyances will be provided at the Town Hall to convey guests to Asylum.
9 P.M.—Reception by President and Reception Committee on Clarence Esplanade Pier.

THURSDAY, AUGUST 3RD, 1899.

9.30 A.M.—Meeting of Council. Town Hall, Council Chamber.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Third General Meeting. Upper Albert Hall, above the Reception Room, Albert Hall. Address in Surgery by Professor Alexander Ogston, M.D. Presentation of Stewart Prize to Surgeon Frederick James Abercrombie Dalton, R.N.
3.30 to 6.30 P.M.—Garden Party by Inspector Macdonald and Medical Officers of R.N. (active and retired), limited to 150. Launch from Point, Broad Street, Portsmouth, to Haslar Pontoon from 3.15 P.M.
3.30 to 6.30 P.M.—Garden Party by Colonel Commandant Poore and officers Royal Marine Artillery at Eastney (limited to 150).
4 to 6 P.M.—Mr. Benjamin Barrow, St. John's Lodge, Ryde, will be pleased to receive guests.
7 P.M.—Public Dinner of the Association. Town Hall, Large Hall.
9 P.M.—Reception by Ladies Committee, who will receive the guests in the Mayor's Reception Room, Town Hall.

FRIDAY, AUGUST 4th, 1899.

10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting. Upper Albert Hall, above the Reception Room. Albert Hall.
3.30 to 6.30 P.M.—Garden Party by Mr. Montagu Foster at Shibbington. Conveyances from Gosport *via* Alverstoke and Lee-on-Solent.
3.30 to 6.30 P.M.—Garden Party by Director-General Nash and Officers R.A.M.C., Netley. Limited to 200. Return fare, 1s. 3d.; cab fare from station, 1s. 6d. Trains leave Portsmouth Town Station 2.40 and 3.35, arriving at Netley 3.14 and 4.25; returning from Netley 6.16, arriving at Portsmouth Town 7.7 P.M.
9 P.M.—Ball to the Association by his Worship the Mayor of Portsmouth.

SATURDAY, AUGUST 5TH, 1899.

Excursions.
2 to 7 P.M.—Surgeon-General Cuffe, C.B., and Officers, R.A.M.C., will entertain a party (of 200) on board ss. *Dandie Dinmont*, for an Excursion in the Solent. (See Military Entertainments.)
9 P.M.—Grand Military Tattoo by Massed Bands of the Garrison (Military Spectacle, Torchlight Procession, Grand Display of Fireworks by C. T. Brock and Co.), at Men's Recreation Ground, Portsmouth. Gates open 7.30 P.M., commencing 9 P.M. Members will be admitted to enclosure on presenting cards of membership.

Honorary Local Secretaries.

C. C. CLAREMONT, M.D., 57, Elm Grove, Southsea.
C. P. RUEL, M.R.C.S., L.R.C.P., Cromwell House, Kent Road, Southsea.

ANNUAL MUSEUM.

The Annual Museum in connection with the sixty-seventh meeting of the British Medical Association will be arranged in the following Sections:

SECTION A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

SECTION B.—Instruments comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

SECTION C.—Books, including diagrams, charts, etc.

SECTION D.—Sanitary Appliances and Ambulances.

A fine and well-lighted hall will this year be utilised for the purposes of the Museum. This room is 150 feet in length and 60 feet in width, and is in close proximity to the Reception Room. Section D will be held in the Swan Street Board School, a short distance from the Drill Hall.

H. RUNDLE, F.R.C.S., *Chairman*,
13, Clarence Parade, Portsmouth.
R. EMMETT, M.R.C.S., L.R.C.P.,
Winton House, North End, Portsmouth.
JAMES MCGREGOR, L.R.C.P. & S.Edin.,
9, St. Mary's Crescent, Portsmouth.

PATHOLOGICAL MUSEUM.

Specimens of interest for exhibition in the Museum should be forwarded, addressed to the Secretary of the Pathological Museum, British Medical Association, Boys' School, Seaman's and Marines' Orphan Home, Portsmouth, during the last week in July; and a brief description of each exhibit will be inserted in the Museum catalogue. Secretary of the Pathological Museum, A. Bosworth Wright, M.R.C.S., L.R.C.P., 83, Kingston Road, Portsmouth. All specimens must be mounted ready for exhibition.

EXCURSIONS.

Railway Arrangements.—The London and South-Western Railway Company and the London, Brighton, and South Coast Railway Company have promised to issue return tickets at single fares, available for day of issue or following day, from Portsmouth to all places within fifty miles, during the week of the meeting, and fare and a-quarter from London and other places for whole meeting, to members on showing their card

of identification. Applications for particulars may be made at the booking office, Portsmouth. The following are the excursions (as at present arranged). All the excursions start and finish at Portsmouth, but from most it will be possible to catch evening connections to London and other towns.

Isle of Wight Excursion.—This excursion leaves Clarence Pier, and proceeds by boat *viâ* Ryde to Cowes, passing by Osborne, the marine residence of the Queen, who will be there during the early part of August. From Cowes the route is by rail to Newport, where (the) coaches will meet the party and drive to Carisbrooke Castle. Here the Isle of Wight members of the Association will kindly entertain the party at lunch; and after viewing the grounds and "donkey," by kind permission of the Deputy Governor, the party will again start for Ventnor, passing by way of Chale, Blackgang, and Niton along the Undercliff. At Ventnor the party will be entertained to tea by the local practitioners, and will (if there be time) be shown over the National Hospital for Consumption. From Ventnor the party will start through Bonchurch to Shanklin, where an opportunity of viewing Shanklin Chine will be given if time allows. From thence the party will go to Sandown, where the party will entrain for Ryde to catch the special boat, which arrives at Portsmouth Harbour in time for the London train. This is really a splendid excursion, and none better could be devised to show so much of the island in so short a time.

Southampton and New Forest Excursion.—This excursion leaves Clarence Pier by the same boat as the Isle of Wight excursion. Passing by Ryde and Cowes the excursionists proceed up Southampton Water, having on the right hand Netley Hospital and on the left Calshot Castle and Hythe. Having arrived at Southampton, the party is met by char-a-bancs and driven by way of Totton to Rufus's Stone, and then on to Lyndhurst. At the Crown Hotel lunch is kindly supplied by the Southampton members of the Association. Sufficient time will be allowed to wander through the Forest in the immediate neighbourhood. The return journey will be straight from Lyndhurst to Southampton.

The Winchester Excursion.—This excursion leaves Portsmouth Town station. On arriving at Winchester the party will be met and shown over the Cathedral and Westgate, also the Castle before lunch. Lunch will be provided at the Banqueting Hall through the kind hospitality of the Winchester members of the Association. After lunch cars will be supplied to take the members by way of St. Giles's Hill to visit Winchester College and St. Cross. On returning the Winchester members again kindly supply tea in the Banqueting Hall.

The Salisbury Excursion.—The members of this excursion leave Portsmouth Town station for Salisbury. Before lunch they will view the Cathedral and town. Here, again, the local practitioners supply lunch. Afterwards the party drive a distance of eight miles to view Stonehenge, and on the way back Dr. Pritchard, of Amesbury, has most hospitably offered them tea at his house, which is only half a mile distant. The carriages will return to Salisbury in time to catch the various trains.

The Haslemere Excursion.—Mr. Jonathan Hutchinson, senior, has kindly invited a party to Haslemere to view his educational museum. This party leaves Portsmouth Town station. On arrival the party will view the museum. Mr. Hutchinson has also invited the members to a picnic lunch and offers to show members the beauties of this really charming locality. Later on tea will also be supplied by their hospitable host in time for the members to catch their trains.

MINOR EXCURSIONS.

The following excursions, etc., have also been arranged. On Tuesday at 3.30 P.M., a party limited to 120 will leave by launch for Porchester Castle, where a substantial tea will be provided. Mr. A. E. Summers, M.A., will lecture.

On Wednesday, Thursday, and Friday, H.M.S. *Excellent* and *Vernon* can be visited. On Wednesday and Friday the Royal Naval Hospital, Haslar, can be inspected. Members will proceed by steam launch from Portsea Hard, or by floating bridge, or by steam launch, by Point Portsmouth to Gosport. The hospital is a mile and a-half from Gosport landing stage.

On Thursday Dr. Kidd (Medical Superintendent, West Sussex Asylum) invites members of the Psychological Section to visit Chichester and Goodwood (50 tickets). Train 1.55 P.M. from Portsmouth Town Station, returning 6.7 P.M. and 6.29 P.M.

On Friday the Royal Clarence Victualling Yard can be visited at 10 A.M. and 2 P.M. Each party limited to 150. On the same day the directors of the Borough of Portsmouth Waterworks Company invite a party of 60 to visit their works at Emsworth, and to afternoon tea. Trains leave Portsmouth Town Station for Havant at 2.30, 3.2, 3.10, 3.25 P.M., returning 5.11, 5.25, 5.28, 6.19 P.M. On Friday also the Superintendent of the Isle of Wight County Asylum, Newport (Dr. Shaw), will arrange for a party to visit Carisbrooke Castle, and will entertain them to tea (50). The party will go by boat to Ventnor, thence by coach to Carisbrooke; then from Newport by train to Cowes or Ryde. On the same day Dr. A. Means Fraser, M.O.H., will arrange for visitors to view the Portsmouth Drainage Works. For further particulars apply to Secretary, Section of State Medicine; and a party (30 or 40) will visit Stallard's Parchment Works at Havant, and will be entertained to tea by Mr. A. S. Norman, of Havant.

NOTICES OF MOTION.

Dr. T. M. NAIR (Madras) gives notice that he will move:

That the present constitution of the Civil Medical Service of India, whereby all important educational, scientific, and sanitary appointments are exclusively reserved for members of a military medical service—namely, the Indian Medical Service, who are only lent for civil work till required for war purposes—is wrong in principle, prejudicial to the interests of medical education, science, and sanitation, and unsuited to existing conditions and requirements; and that in the interests of medical education and sanitation in India, and for the general advancement of medical science, the Civil Medical Department should cease to be an appendage of, or a close reserve for, a military service, and all educational, scientific, and sanitary appointments in the department should be thrown open to the best talent available from the open profession of medicine.

Mr. MACNAMARA gives notice that he will move:

That the British Medical Association begs to urge on Her Majesty's Government the necessity for appointing a departmental committee to inquire

(1) As to the extent to which venereal disease prevails among the civil population of Great Britain irrespective of its temporary increase or decrease.

(2) To collect information as to the present arrangements for the treatment of venereal disease, the distribution of hospitals and the number of beds available in different places, and to make suggestions as to the more efficient provision for the treatment of the disease.

(3) To collect suggestions and to express opinions as to the means that can be advised for preventing or limiting the spread of venereal disease among the civil population of this country.

That the above resolutions (if carried) should be forwarded to the President of the International Congress on Venereal Disease which meets at Brussels in October, 1899, urging the Congress to support these views in order that a uniform plan of action may be followed to mitigate the spread of this terrible disease among the people of Europe.

Dr. J. BRASSEY BRIERLEY gives notice that he will move:

That this meeting records its appreciation of the attitude of Mr. T. P. O'Connor and Mr. W. J. Galloway towards the Midwives Bill recently before Parliament, and begs to assure these gentlemen that, in the main, their objections to the proposals (as reported in the *Times*, April 13th, 1899) are shared by a large majority of the medical profession.

That this meeting regrets the course adopted by Sir William Priestley during the second reading debate upon the Midwives Bill recently before Parliament (as reported in the *Times* of April 13th, 1899) in stating that "it was quite true that there was a certain amount of opposition to the Bill among a certain section of the medical profession, but the danger likely to arise to the interests of medical practitioners had been greatly exaggerated. The object of the Bill was to secure that women of the poorer classes should have the assistance of properly skilled midwives."

Dr. J. BRASSEY BRIERLEY gives notice that he will also move:

That this meeting condemns the action of those members of the British Medical Association who continue to lecture to persons other than duly-recognised medical students—upon midwifery and the diseases of women and children—and records its displeasure at the free distribution, by certain unauthorised examining bodies, of certificates and diplomas to these irregular persons, asserting that the holders of such documents are "skilled" in the practice of midwifery.

Dr. SARAT K. MULLICK gives notice that he will move:

That having regard to the fact that persons possessing no knowledge of medicine are by law allowed the same right to practise in India as fully qualified practitioners, this Association considers it advisable that there should be a system of registration to protect the public from the mischievous machinations of charlatans; it further undertakes to do all in its power to carry this resolution into effect.

Mr. GEORGE JACKSON gives notice that he will move:

That the Council be requested to ascertain from the Council of the Birmingham and Midland Counties Branch of the Association whether

any of the present medical officers of the Coventry Provident Dispensary are members of the British Medical Association, and, if so, that they be called upon to explain why they still continue to give their services to that institution.

Francis Fowke, *General Secretary.*

429, Strand, July 19th, 1899.

THE PLAGUE.

Alexandria.

During the week ending July 12th, 11 new cases of plague were reported in Alexandria, and 6 in the week ending July 19th. Two of the patients resided in Damanhur, a town situated about an hour's journey inland by rail from Alexandria. There seems no doubt, however, that the persons affected fled from Alexandria. For some days it was believed that the plague had died out in Alexandria, no fresh cases having been met with for five days. Then, as so often happens, one or two bodies dead from plague were discovered, the patients having been hidden away by their friends. So thorough is the search, however, after plague-infected persons, and so efficient the sanitary service, that but few patients can be overlooked. Sir J. G. Rogers, in an official report, states that the low mortality is due to the mildness of the disease, and attributes the failure of the disease to spread in a more epidemic form to the efficacy of the measures employed. Many residents still disbelieve in the disease being plague, and the Anglophobe press, chiefly French and native, publishing this misstatement incites the ignorant against the sanitary authorities. Up to the present some 70 cases of plague have occurred since the commencement of the outbreak, and wellnigh half the cases have recovered.

The services of Dr. Laing and Dr. Mackenzie have been placed at the disposal of the authorities in Alexandria for dealing with the prevention of plague. Miss Kate Marion Hunter, L.S.A., who was one of the special plague officers in India has also arrived, and is employed in visiting the women's quarters.

Mauritius.

Information has reached the Colonial Office that 30 cases of plague had occurred in Mauritius during the first week of July, of which number 24 proved fatal. In the preceding week 13 fresh cases occurred, with 12 deaths.

Hong Kong.

A slight abatement in the number of plague cases is reported from Hong Kong since the heavy rains set in, but the official returns give more than 100 a week.

LITERARY NOTES.

Messrs. Macmillan and Co. will publish on Tuesday, July 25th, the seventh volume of Professor Clifford Allbutt's *System of Medicine*, containing the continuation of Diseases of the Nervous System.

Dr. H. B. Trehane Symons has, we understand, in preparation a volume entitled *The Piemonte and its Sanctuaries*, which he hopes to have brought out soon. The book will be fully illustrated.

The first number of the *Archives of Neurology of the Pathological Laboratory of the London County Asylums* will be published in September. It will consist of 500 octavo pages of printed matter, with 100 illustrations, and 17 chromolithographs. The editor is Dr. F. W. Mott, F.R.S., and the publishers Messrs. Macmillan and Co. It is intended that the *Archives* shall appear yearly.

Sir H. Thompson has rearranged and rewritten much of the material of his work *Modern Cremation*, and a third edition of the book—bringing the history of the practice of cremation and of the work of the Cremation Society of England up to the present time—will be published immediately by Smith, Elder and Co.

The *Glasgow Medical Journal* for July contains an interesting lecture by Dr. John H. Teacher, underkeeper in the Hunterian Museum, Glasgow, on "William Hunter, anatomist." The following passages which he quotes from some MS. lectures of Hunter on midwifery, now in the Royal College of Surgeons of England, are interesting as showing the views of the great obstetrician of last century on the forceps question:

> We who are in great business see what Nature will do for herself. On some occasions, however, it may be necessary and right to use the forceps, but taking all the cases together wherein they have been used, my opinion is in nineteen out of twenty they had better been left alone. For my own practice I have not taken with me a pair of forceps for these ten years, nor anything of that kind, and if they cannot give me a pair of scissors I must bite the membranes through with my teeth. Such a thing as once in a twelvemonth, or now and then in two years, I have a case where I think it is right to use the forceps, but not before I see what Nature can do. Sometimes when the child's head is large it comes down slowly, the woman is weak and exhausted, and the pains are become trifling, so that in such a case, where Nature is ineffectual, the forceps may be applied, but I use them with great caution and the utmost delicacy in the world.

Elsewhere he says:

> Never wish, gentlemen, to gain reputation by doing business quick; always take time, particularly in applying the forceps; and when the pain is off unlock them that you may not squeeze the child's head; and when the head is delivered I often take away the forceps that I may have my hand more at liberty to support the woman. In a few cases I think the forceps an useful instrument; to a poor woman that is exhausted they may be of considerable service, but I wish to God they had never been contrived. I am convinced the forceps has killed three, I may say ten, women to one that it has saved, and therefore we should never use it on any occasion but where it is absolutely necessary.

Whenever the river Lee comes before the public—and its appearances are not infrequent, especially in summer—a side issue is pretty sure to be raised as to the proper spelling of its name. We ourselves have more than once been taken to task for spelling it "Lee," not "Lea." We may say that we use the former spelling on the authority of Major Lamrock Flower, who having been sanitary engineer of the Conservancy Board for more than a quarter of a century, may almost be regarded as the tutelary deity of the stream. In an interesting pamphlet based on a paper read by him at the Sanitary Institute some years ago, Major Flower says that in Saxon times the river was called "Lyzan," and later "Luy," "Lyge," "Leye," and "Ley." In the reign of Edward II the name is given in various documents as "Luye," "Leye," and "Ley." Somewhere about the time of the reign of Queen Elizabeth the name became changed into "Lee," and to this spelling the Conservancy Board have ever since loyally adhered. But there is plenty of official authority for "Lea," which is found in the Ordnance Survey maps, and is adopted in the report of the Royal Commission on the Metropolitan Water Supply. There is also the authority of the poets for it, if they counted for anything in matters orthographical. Edmund Spenser in the *Faerie Queene* sings of "the wanton Lea that oft doth lose its way"; and Pope mentions "the gulfy Lea with sedgy tresses." We do not know if any modern bard has celebrated the stream, but we hardly think it would now be a source of inspiration even to a poet born on its banks.

The second edition of Graefe-Saemisch's treatise on ophthalmology contains a very interesting essay on the study of eye diseases in antiquity by Professor Hirschberg. The oldest document bearing on the subject is a papyrus discovered at Thebes in 1872 by Ebers, who assigned it to a date about 1500 B.C., a thousand years before Hippocrates. From it we learn that there were at that time three kinds of medical practitioners in Egypt—namely, physicians, surgeons, and "thaumaturgists," whose memory we shall probably not calumniate by regarding them as the prototypes of our own faithhealers and miscellaneous quacks. The papyrus describes the three most important symptoms of eye diseases as excessive secretion, redness, and swelling. Among the remedies advised are myrrh, frankincense, acetate of lead, onion, verdigris, the dung of crocodiles and gazelles, brain of tortoise mixed with honey, woman's milk, but especially antimony. All Egyptians, as is shown by the boxes found with mummies, used ointments to blacken their eyebrows and eyelashes. Virchow, who analysed the contents of one of these boxes, found that the collyrium consisted not of antimony, but of sulphate of lead. This circumstance appears to show either that the relatives of the deceased thought a cheap article good enough for the "corpse," that the undertaker swindled them, or that someone else got a secret commission on the little job.

The London School of Dental Surgery.—The *conversazione* of the Dental Hospital of London, held at the Royal Institute Galleries, Prince's Hall, Piccadilly, on July 19th, was the occasion of a pleasant gathering of the friends and students of that institution. Mr. Morton Smale, the Dean, gave to the enthusiastic audience a very successful report of the progress of the school. Sir Richard Douglas Powell distributed the prizes to the successful students, and after complimenting the staff and students on the excellence of their work, proceeded in the course of his remarks to say that modern dentistry required three important things—perfection of mechanism, manual dexterity, and a perfect knowledge of antiseptics. Antiseptics were a comparatively modern feature in dentistry, but at the present moment they were absolutely indispensable in dental surgery. By antiseptics they were learning to avoid the dental troubles arising from micro-organisms. A cordial vote of thanks to Sir Richard Douglas Powell was proposed by Mr. Tomes, and seconded by Mr. Matheson. A varied selection of music, under the direction of Mr. Herbert Schartau, concluded a most enjoyable entertainment.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

SUBSCRIPTIONS to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, JULY 22ND, 1899.

THE POOR-LAW MEDICAL SERVICE IN SCOTLAND.

DURING the debate which was raised by Sir Charles Cameron in the House of Commons on July 14th, Mr. Balfour, as Leader of the House, expressed his regret that "under the law of Scotland a medical officer had no protection against the arbitrary action of the local authorities," and this admission was received by the House with cries of "Shame!" He went on to say that though perhaps 99 out of 100 local authorities in Scotland would use their power equitably, yet the Government ought to have the power to protect medical officers whose duties must occasionally bring them into collision with, and subject them to the arbitrary action of, those who were their employers, and against whom it might at the same time be their duty to proceed. This is precisely the view which we have again and again urged, and it is satisfactory to find that on the very first occasion on which the issue has been placed fairly and squarely before the House of Commons it has been so admirably expressed by the First Lord of the Treasury, and endorsed with absolute unanimity by the House of Commons.

Mr. Balfour went on to protest the helplessness of Parliament to remedy the present unfortunate state of the law at once, and seemed to be unaware of the existence of the Bill to amend the law in this respect, which has been for two sessions before the House. This Bill, which has been drafted by the Scottish Poor-law Medical Officers' Association, has the cordial support of the British Medical Association, acting upon the favourable report of its Parliamentary Bills Committee. It is a very short and very simple Bill; it would provide that a medical officer shall be removable from office only by or with the consent of the Local Government Board. This would do no more than assimilate the law in Scotland to that which is in force in England and Ireland. The Bill is in charge of Mr. Alexander Cross, the member for Glasgow (Camlachie), who introduced it last session, and again this session, but the chances of the ballot have been against it, and no opportunity has been found for its second reading. Now that the principle which it would establish has been so clearly expressed by the Leader of the House of Commons, and so unmistakably approved by the House itself, it is only reasonable to expect that the Government will either make the Bill a Government measure, or at least give such facilities to Mr. Cross as may ensure its early passage into law.

The facts of the case of Dr. Lamont, which led to the debate, are already known to our readers. He was medical officer for the island of South Uist. When he took up the duties of his office an epidemic of typhus fever was raging. He fought the epidemic with so much courage and devotion that he was specially thanked by the Local Government Board for Scotland, and as Admiral Field said during the debate, showed himself a man who, if there were such an order, ought to receive the Civil Order of the Victoria Cross. The measures which he took to check the spread of this epidemic, as well as his action in closing schools in consequence of an outbreak of scarlet fever, raised the ire of the members of the local authorities, and the fact that that authority was officially censured, while the medical officer was officially praised, did not tend to diminish this feeling against Dr. Lamont. He was dismissed, and not only dismissed but made the subject of a course of conduct which was described in the course of the debate as "vindictive spite." A criminal charge of breach of certain regulations framed under the Vaccination Act, regulations which it appears he had never seen, was brought against him. He was allowed to leave the island, and then arrested on a warrant in Glasgow, and taken back to South Uist. After being several days in custody he was liberated on bail, which the Lord Advocate admitted ought to have been granted in Glasgow. He then went to London to take up the duties of assistant medical officer to the Poplar Workhouse, to which he had been appointed. A fresh warrant was issued, but the Crown Office at length interfered, and the charges were eventually heard at Inverness. Dr. Lamont was acquitted on every one. We need not enlarge on the practical injustice of which Dr. Lamont was the victim, for the Lord Advocate has expressed his opinion that the arrest should not have been ordered, and has promised to censure the Procurator Fiscal (he had not, he said, power to dismiss him), while the first Lord of the Treasury has promised to consider the case with a view to giving Dr. Lamont compensation for the expenses to which he was put. The change, indeed, which came over the attitude of the Government in the course of the discussion was most gratifying. Dr. Lamont is to be heartily congratulated on the veritable triumph which his cause achieved, although we see that the South Uist Parish Council are impenitent and express great indignation at the attitude assumed upon the matter by members of Parliament, including the Leader of the House of Commons himself. The thanks of the profession are due to all the members of Parliament, lay and medical, who fought for him, but in particular to Sir Charles Cameron, who has for months conducted with so much perseverance and to so successful an issue what may be called the Lamont campaign in the House of Commons.

So far as this particular case goes, a kind of rough justice will be done. But that such things should happen is a scandal to the law of Scotland, which will no doubt be felt as keenly by Scotsmen in general as it was by their representatives in the House of Commons. We

are fain to believe that Dr. Lamont has not suffered in vain, and that the object lesson which he has given will impel the Government to give facilities for pushing forward Mr. Cross's Bill this session.

THE PROPOSED CONCILIATION BOARD.

THE report of the Committee of the General Medical Council on medical aid associations and the action of the Council thereon have led to a correspondence in our columns which has disclosed the fact that some members of the profession regard both the one and the other as either useless or mischievous. It would appear also that some confusion exists as to what the Council has and has not done, and as the publication of the report has undoubtedly brought matters to a somewhat critical stage, it appears advisable to examine the present position of things as dispassionately as possible.

The report consisted of two parts, and made two distinct recommendations, which were the subjects of two separate resolutions by the General Medical Council.[1] A sharp distinction was made between the system pursued by the friendly societies in contracting to obtain medical aid for their members, and the system of trading in medical services pursued by commercial medical aid companies, which usually offer medical attendance as a kind of bribe to induce persons to insure with them. The system pursued by these companies leads to many abuses, which have been so fully and so repeatedly exposed in our columns that we need not pause to enumerate them. With regard to them the Council adopted a resolution which is of the nature of a warning, and must be so understood by those who are at present in the service of these companies. In issuing this warning the Council has followed the precedent it established when it recognised the offence of "covering," and defined the conditions under which alone unqualified assistants may be employed. Though it is under no statutory obligation to issue such warning, yet it is only equitable that it should do so.

Mr. Bryant in his address to the Metropolitan Counties Branch, which is published in another column, assumes that "this resolution may in the future blossom into something stronger." Now the Council has only one way of giving effect to the disapproval which it has formally expressed, and the "something stronger" must be the extreme penalty of erasure from the *Register*. It must be assumed that after giving this warning the Council will be prepared to inflict this penalty in any case in which it may be proved that a registered practitioner has continued in the service of a medical aid association "by which systematic canvassing and advertising for the purpose of procuring patients" is practised.

In the case of the friendly societies the Committee recommended that a Conciliation Board should be established, and the Council adopted the recommendation without a dissentient, although a large number of members refrained from voting at all. The National Conference of Friendly Societies had already accepted the suggestion and nominated delegates.

The position would thus appear to be that the General Medical Council and the friendly societies both recognise that evils exist in connection with the administration of the medical department of the friendly societies, and that the friendly societies are willing to take their part in the formation of a Board which would investigate these evils and, after the examination of specific instances, reform existing abuses, and so eventually bring about a more equitable system. We say that this appears to be the position, for we cannot affirm that that is how matters now stand. Mr. Bryant tells us that negotiations "are still in progress between the representatives of the great friendly societies and the Committee of the Council." Since the profession is now asked to take steps to appoint representatives on the Conciliation Board, it has a right to know what these negotiations are about. All along the Committee would seem to have been a good deal more frank with the friendly societies than with the profession. The project of a Conciliation Board was first made public in the reports of the National Conference of Friendly Societies, published in the newspapers last April, but no communication was made by the Committee to the medical profession until June. The profession looked to the Committee, if not for guidance, at least for full information. It expected a report embodying the main details of a working scheme. It has received a report which does not contain any scheme at all. While recognising to the full that the members of the Committee have been actuated by the very best intentions, and that the profession is indebted to them for the time and labour they have devoted to a very thorny subject, it must yet be added that their report is incomplete, and that in fact they have not half finished their work. We say this in no captious spirit, but because it seems clear that if the proposal falls through the profession will be in a worse position than before, since it will be said that it has failed to take advantage of an opportunity of arranging a working scheme for the adjustment of difficulties and the removal of abuses of which it has long and loudly complained.

We miss from the report any discussion of questions which ought not only to have been discussed, but to which explicit answers ought to have been returned.

To what friendly societies does the report refer? We submit that it ought to have contained a list of such societies, showing in the case of each the number of its members and branches, and the rates paid to its medical officers. As to the mode in which the medical members of the proposed Conciliation Board are to be chosen the report contains no hint whatever. All the information vouchsafed is that the Council will not itself nominate them, and that no member of the Council will sit upon the Board. Again, there is no hint as to the number of medical members to be chosen. Is it intended that they should be chosen by the profession generally, or are the medical officers of each friendly society to choose their own representative or representatives, so that the Board might consist of an equal number of representatives of the members and of the medical officers of the friendly societies? If the Board is not unanimous, how is a decision to be reached? When a decision is reached how is it to be enforced? These and many other fundamental questions arise. For example, to descend to a very prosaic side of the question, how are the necessary although pos-

[1] BRITISH MEDICAL JOURNAL, June 10th, p. 1412.

sibly very moderate expenses of the proposed Board to be defrayed? It will require a place of meeting and a Secretary, while there will be a certain amount of printing, postage, etc., to be paid for. Is it too much to ask Dr. Glover, the Chairman of the Committee, to indicate the sources of income of the Board among the other details of his plan for which the profession is waiting with interest?

POOR-LAW GUARDIANS AND THE VACCINATION ACTS.

A conference of Poor-law delegates, convened by the St. Pancras Board of Guardians, was held at the St. Pancras Vestry Hall, on July 17th, "to consider the anomalous position of guardians of the poor in relation to their vaccination officers under the new Vaccination Order of October last, with its accompanying circular letter thereon." The Chairman stated that the meeting was in no sense an antivaccination conference, and that they did not wish the business to turn on the question of the advisability of vaccination. Nevertheless, when it appears that the principal resolutions were moved by Mr. Alexander Paul and discussed by Mr. W. G. Parris, the suspicion is apt to arise that antivaccination played no inconsiderable part in the proceedings. This suspicion is not lessened when the terms of the resolutions themselves are noted. In the first of them the Conference "emphatically protests against the assumption of the Department that the power and the duty of taking proceedings against defaulters under the Vaccination Acts are vested in the vaccination officer." Another resolution moved by Mr. Paul begins with the hypothesis that "the Local Government Board is prepared to take the responsibility of overriding the local authority in the matter of prosecutions under the Vaccination Acts, after the policy of persuasion and co-operation with the guardians declared in Parliament last session." The coupling of Mr. Paul's name with a resolution not unfavourable to persuasion and co-operation towards vaccination is surely a joke. But in the face of known facts it is obviously absurd to talk of any "assumption" on the part of the Local Government Board, or of the Board's being prepared to take the responsibility of "overriding" the local authority in this matter. The present position is the result not of the views of the Local Government Board, but of a decision of the Law Courts; and this decision, as it happens, coincides with the opinion of the Law Officers of two successive Governments. The attempt to make the public believe by means of these resolutions, as reported in the newspapers, that it is a matter of choice on the part of the Board, is just such as might be expected to be of antivaccination origin. If the relationship of vaccination officers is to be altered it must be by legislation, as the Whitehall authority has no power to issue orders or take proceedings contrary to the law as interpreted in the Law Courts.

Still another item in the resolutions adopted is that, "where ratepayers claim, under Clause 29 of the Act of 1867, to make a reasonable excuse to the guardians for neglect of vaccination, the guardians should hear them until it has been authoritatively decided that it is not within their right to do so." In view of last year's conscience clause, this is a very extraordinary proposal. At present, any ratepayer can go before a bench of magistrates and claim exemption, and it would be simply ridiculous to set up an additional court of appeal, and especially a court elected by the very persons who might become appellants. The doctrine of the liberty of the subject has not yet, even in this country, got the length of including the tenet that a man shall have the right to appoint his own judge and jury.

We confess that we are surprised at the smallness of the attendance at the Conference. Of the 646 Boards of Guardians in England and Wales, only 46 or 48 (the reports differ) appear to have sent delegates. Apart from vaccination the question raised really does bear on the principles of local government, and if last session's Vaccination Act had been anything else than a makeshift, it would have dealt with the difficulty in such a manner as to prevent the practice of vaccination being handicapped by any such difficulty. The small attendance at the Conference goes a long way to suggest that many Boards of Guardians quite recognised the risk that the question of the Local Government Board's power to control the action of officers to whose salary it makes no contribution, might not be discussed on its own merits, but might serve only as an excuse for an antivaccination demonstration.

THE ANNUAL MEETING AT PORTSMOUTH.

We are requested to draw the attention of members who propose to be present at the annual meeting at Portsmouth, which commences on August 1st, to the desirability of their giving notice of their intention without delay. As will be seen from the programme of the business of the Sections, which has been published in recent numbers of the Journal, and appears again in the present issue, a large number of interesting topics have been selected for discussion. Full particulars are also published this week of the excursions arranged by the Local Committee, the members of the Southern Branch of the Association, and the entertainments and facilities most generously and liberally offered by the naval and military authorities in Portsmouth. Admiral Sir Michael Culme-Seymour, G.C.B., the Commander-in-Chief at Portsmouth, has issued orders giving special facilities to members to visit under the most favourable conditions all the most interesting parts of the great naval station of Portsmouth. Special arrangements have been made for parties to visit the Gunnery and Torpedo Schools, and the Royal Clarence Victualling Yard, to which they will be taken in gunboats or gunboat-tenders, while a steam launch will be provided to take parties to the Royal Naval Hospital, Haslar. The *Vincent* training ship for boys, and the *Victory*, Nelson's flag ship, will also be open to inspection. The military authorities will also extend hospitality to the Association. On August 3rd Colonel Commandant F. H. Poore and the officers of the Royal Marine Artillery will give a garden party at Eastney. On August 4th Surgeon-General Nash and the officers of the Royal Army Medical Corps, Netley, will give a garden party in the beautiful grounds of the Royal Victoria Hospital, Netley; and on August 5th there will be a steamboat trip to Spithead, the Solent, Cowes, and the Needles, by invitation of Surgeon-General Cuffe, C.B., and the officers of the Royal Army Medical Corps. A torchlight tattoo on the same evening has been arranged by Captain Davies, of the Grenadier Guards. We are also enabled to publish fuller particulars of the longer excursions. That to the Isle of Wight will include visits to Ryde, Cowes, Newport, Carisbrooke Castle, Ventnor, Blackgang, and the Undercliff. At Ventnor the

party will be entertained by the local practitioners, and will return by way of Sandown and Ryde. The excursion to Southampton and the New Forest will include a visit to Lyndhurst, where the party will be entertained by the Southampton members of the Association. Those who join the Winchester excursion will be met on arrival and shown over the Cathedral, and afterwards entertained at the Castle at lunch by the Winchester members of the Association. The party for Salisbury will visit the Cathedral, and will be entertained at lunch by the local practitioners, after which the excursion will be extended to Stonehenge, and the members will be entertained to tea by Dr. Pritchard, of Amesbury. Mr. Jonathan Hutchinson, F.R.S., has also invited a party to Haslemere to view his educational museum, and he will entertain the members at a picnic lunch. Members who have not sent in their names as proposing to attend the annual meeting are requested to fill up the form in the centre of the JOURNAL and post it without delay in order that the arrangements may be completed.

THE ROYAL NAVY MEDICAL SERVICE.

WE continue to receive evidence of the deepseated feeling of unrest and distrust which has been created in the Royal Navy Medical Service by the recent appointment of a Deputy Inspector-General, contrary to the advice of the Director-General of the Navy, to the charge of Haslar Hospital. We learn that in 1880 arrangements had been actually made for the appointment of a Captain-Superintendent for the Royal Naval Hospitals both at Haslar and at Plymouth, and that these arrangements were not carried out owing, as it was thought, only to the change of Government at that time. Some doubt is felt whether a change in this direction may not be contemplated by the Admiralty at the present time. Confirmation of the view is thought to be afforded by a paragraph which appeared in the *Naval and Military Record* of July 6th, in which it is stated that there has been for some time past "a vague understanding" at Haslar that sooner or later the hospital would be placed under a captain-superintendent. It is stated that the present system is not quite satisfactory, as the medical officer in charge of the whole hospital has not been granted executive authority. This is a difficulty which could be easily removed, and if this is really the direction in which the Admiralty is moving we can only again say that a very grave mistake will be committed. It is certain that the slight already placed on the medical service by the disregard of the opinion of the Director-General is strongly felt not only by the senior officers who have been passed over, but also by deputy-inspectors and fleet-surgeons who feel that their careers are compromised. We believe that Mr. Goschen has been misled in some way, and we trust that he will reconsider his decision, and restore to the service the peace with which it has been blessed in recent history.

ANTIVACCINATION AT PARLIAMENTARY ELECTIONS.

THE Honorary Secretary to the National Antivaccination League has written to the newspapers claiming the result of the Oldham election as an antivaccination victory. He says that "the various Tory newspapers told the same tale," and that is very likely true, as it is a recognised duty of political journals to explain away their party's defeats. Nor need we deny that in an antivaccination centre votes may be gained and lost by candidates who choose to engage in such trafficking. What the ultimate result of such a line of action may be on the fortunes of any self-respecting party is quite another question. But the Secretary overestimates his own case so wildly as to raise a doubt whether there is anything at all behind his contention. The town, he says, was declared to contain 97½ per cent. of antivaccinators, and, he adds, "We put all our force into the Liberal scale, and urged all voters, irrespective of their politics, to vote for the candidates pledged to support our cause." What then were the voting figures? Did the Liberals receive 97½ per cent. and the Conservatives only 2½ per cent.? Not by a very long way. The proportions were something like 12 to 11.[1] Surely that is a ridiculous result to be achieved by a town alleged to be antivaccinationist to within 3 per cent. of its total population. Moreover, as everyone knows, Oldham has consistently see-sawed in its politics, and has taken every opportunity afforded it in the last ten or fifteen years of reversing its last decision, whatever that decision chanced to be. Mr. Gane's efforts to engage either one or the other side on behalf of his craze are not likely to meet with much success unless he can produce something more convincing than his Oldham argument. As a political arithmetician, indeed, he is far from brilliant, and Tories and Radicals alike ought to take to heart, not his opinion, but that of Mr. Herbert Gladstone, who holds that the moral of the Oldham election is to sink individual fads. That certainly ought to be the moral of every election and every politician, and the reverse course has in the past caused the overthrow alike of persons and of parties.

HARVEY AND THE ANTIVIVISECTIONISTS.

A FAVOURITE and stereotyped paragraph of the antivivisectionists is the one which relates to the circulation of the blood. In a leaflet issued by the Victoria Street Society, the following statement occurs: "It is quite untrue that Harvey discovered the circulation by means of vivisection. His experiments did nothing but confuse him. Even to-day it would be impossible to discover the circulation by any experiments on living animals. On the dead body the fact can be demonstrated easily." The falsehood and absurdity of this statement can easily be shown. In the last paragraph of the introduction to his immortal dissertation on the movement of the heart and blood in animals, Harvey refers to the value of vivisection. Further, in the very first chapter of his book, Harvey distinctly states that it was by means of vivisections he made his great discovery. He says: "When I first gave my mind to vivisections as a means of discovering the motions and use of the heart, and sought to discover these from actual inspection, and not from the writings of others, I found the task so truly arduous, so full of difficulties, that I was almost tempted to think with Fracastorius that the motion of the heart was only to be comprehended by God. For I could neither rightly perceive at first when the systole and when the diastole took place, nor when and where dilatation and contraction occurred by reason of the rapidity of the motion, which in many animals is accomplished in the twinkling of an eye, coming and going like a flash of tightning; so that the systole presented itself to me now from this point, now from that; the diastole the same; and then everything was reversed, the motions occurring, as it seemed, variously and confusedly together. My mind was, therefore, greatly unsettled, nor did I know what I should myself conclude, nor what believe from others; I was not surprised that Andreas Laurentius should have said that the motion of the heart was as perplexing as the flux and reflux of Euripus had appeared to Aristotle." Harvey admits that at first he was confused, but the great experimental physiologist goes on to say in the next paragraph: "At length, and by using greater and daily diligence, having frequent recourse to vivisections, employing a variety of animals for the purpose, and collating numerous observations, I thought I had attained to the truth, that I should extricate myself and escape from this labyrinth, and that I had discovered what I so much desired, both the motion and use of the heart and arteries; since which time I have not hesitated to expose my views upon these subjects, not only

[1] The Radical candidates polled 12,976 and 12,770 votes respectively, the Conservatives 11,477 and 11,449.

in private to my friends, but also in public, in my anatomical lectures, after the manner of the Academy of old.[1] These are Harvey's words, yet the antivivisectionist writer calmly says: "It is quite untrue that Harvey discovered the circulation by means of vivisection." Further, Harvey's Chapter ii is entitled Of the Movements of the Heart as seen in the Dissection of Living Animals; Chapter iii: Of the Movements of the Arteries as seen in the Dissection of Living Animals; and Chapter iv: Of the Movements of the Heart and its Auricles as seen in the Bodies of Living Animals. As to the statements that "even to-day it would be impossible to discover the circulation by any experiments on living animals" and "on the dead body the fact can be demonstrated easily," the former may be left to the reader's common sense. With regard to the latter, apart from its obvious absurdity, it need only be pointed out that such skilled anatomists as Vesalius, the father of modern anatomy, and Sylvius, to name but two, did not find it so easy to make the discovery; they left it to Harvey. Moreover anatomists like Riolan, Primerose, and Plempius were the bitter opponents of Harvey's views. To the credit of Plempius be it said that he was manly enough to retract his objections "after he had opened the bodies of a few living dogs."[2]

THE NORTH WALES BRANCH.

THE jubilee of the North Wales Branch of the British Medical Association will be celebrated at the annual meeting which will be held at Bangor on Wednesday, August 16th. After a service at the Cathedral and a sermon by the Bishop of the Diocese, the annual meeting will be held at the University College of North Wales, when Mr. Jones Morris of Portmadoc will take the chair as President, and deliver an address. He will afterwards give a garden party in the grounds of the College. The annual dinner—to which members of both Houses of Parliament connected with North Wales, the Lord-Lieutenants, the Chairmen of the County Councils, and the Mayors of North Wales, together with other distinguished lay and medical guests, will be invited—will take place at the George Hotel at 6 P.M.

THE FATIGUING EFFECT OF LESSONS.

IN the issue of *Science* for June 23rd Mr. Thorndike brings forward evidence against what we suppose to be the usual opinion, that by the end of the afternoon school children show a certain amount of mental exhaustion which lessens their power to work. He devised four tests: (1) A set of multiplication examples to be done in a given time; (2) a page of printed matter full of misspelled words which were to be marked in a given time; (3) sets of nonsense syllables to be written from memory after a ten-seconds' look at them; (4) two sets of figures and one set of simple forms to be written from memory in the same way. The first and third were to be given to one set of children early and to another set late; the second and fourth were given to the first set early and to the second set late. The experiment was made in two towns on 594 children altogether, and precautions were taken to discount excitement from novelty on the one hand, while since the tests were never twice the same for the same child, there was no error from practice. The results were so nearly even as to lead to the conclusion that "the mental work of the school day does not produce any decrease in the ability to do mental work." In the JOURNAL of January 29th and February 12th, 1898, were given the results obtained by Dr. Kemsies, a German headmaster. He used Mosso's ergograph, which is a muscular test, but is supposed to represent the state of the brain as affected by the general state of bodily nutrition at the time. A good deal might be urged against the accuracy of this test, but more strictly mental standards which were used by other German observers gave similar evidence as to the production of fatigue during school hours. The inference to be drawn from this conflict of opinion is probably that the American system of teaching is superior to the German. No details are given by Mr. Thorndike either as to the total hours of the school day, or to the way they are apportioned. In these probably lies the key to the difference in the results. It is very remarkable that Dr. Kemsies found that of all the lessons the most fatiguing was the gymnastic. If, instead of testing muscular fatigue, he had used some direct test of mental power, the results would have been perhaps more valuable on this point. But we are reminded of the severe criticism which a French writer on education, M. Desmolins,[1] passes on the gymnastic lesson in vogue at French schools. M. Desmolins is never tired of praising the English system of education at the expense of the French, and still more of the German. The games which are an essential feature of our schools come in for his heartiest approval; and though he has taken the exceptional school from which he draws his chief illustrations to be an example of English schools, which it is not, yet he is not far wrong in his general account. Those who are in the habit of decrying our system, and comparing it unfavourably with the German, would do well to study this interesting and able work. But there are a great many fallacies in the estimation of lesson fatigue. The child may be not fatigued, but only bored and inattentive; the nature of the test given may be unsuitable for the purpose; the circumstances under which it is given may be such as to vitiate its results; lastly, the fatigue, if fatigue be shown, may be due to causes, such as the natural effects of digestion or of hunger, quite outside the work done in school.

THE SANITARY ARRANGEMENTS AT THE LEAVESDEN ASYLUM.

THE Asylums Committee of the Metropolitan Asylums Board has reported that the subject of the sanitary arrangements had been considered along with that of the recent outbreak of "enteritis," in the Asylum. A copy of the report of the surveyor in regard to the drainage of the institution was also presented. From this report it appeared that, although there were no defects in the drains themselves, some of the sanitary arrangements were not all that could be desired. This had been obvious for a long time, but the Committee did not wish it to be assumed that the recent outbreak was in any way attributable to these deficiencies. In regard to this it may be suggested that even committees cannot expect always to get exactly what they wish, especially in a case like this in which there was sufficient doubt in their minds to lead them straightway to resolve on an expenditure of over £3,000 for effecting improvements in the sanitary arrangements at the asylum.

LEAD POISONING IN POTTERY WORKS.

A CONFERENCE was held at the Home Office on July 18th between representatives of the principal pottery manufacturers and Sir Kenelm Digby, Permanent Under Secretary, who was accompanied by Mr. H. H. S. Cunynghame, Dr. Whitelegge, Chief Inspectors of Factories, Dr. T. M. Legge and Mr. G. A. Aitken. Mr. W. Burton, of Pilkington's Pottery Works, said that the manufacturers had agreed to abolish entirely the use of raw lead in glazes for majolica china and earthenware, but pointed out that the colours for enamels were not made by the pottery manufacturer but by the colour manufacturer, who was not affected by the Home Office rules. Lithographic transfers also were as a rule not made by the potters. The pottery manu-

[1] *The Works of William Harvey, M.D.* Translated from the Latin, etc., by Robert Willis, M.D., London, 1857, p. 19, *et seq.* Also Harvey's *De Motu Cordis et Sanguinis in Animalibus*, Francofurti, 1628. Cap. I.

[2] *Encyclop. Brit.*, article Harvey.

[1] *La Superiorité des Anglo-Saxons.*

facturers, he said, were willing to see the present rule with regard to medical inspection, which applied to women and children only, extended to all workers; but he protested that it was impossible that the trade should be tied down to one compound silicate, adding that the manufacturers were anxious that Professor Thorpe and Professor Oliver should be authorised to proceed with their researches, and, after conference with the manufacturers, indicate a certain number of compound silicates of lead which in their opinion were tolerably harmless. Other speakers said that the alterations suggested in consequence of the report would seriously interfere with trade, and urged that the rules issued last year should be given a little longer time to work, although they admitted that they needed to be supplemented. Sir Kenelm Digby, in reply, said the suggestion for a conference between the experts and the manufacturers would be carefully considered, and added that it was not the desire of the Home Office to force rules upon the trade without having taken every possible means of ascertaining the views both of employers and the employed. The deputation, it was stated, represented fully half the trade, and the attitude assumed proves that great progress has been made in convincing those engaged in the manufacture of pottery that additional precautions must be taken in the directions indicated by the now historical report of Professors Thorpe and Oliver.

FOOD PRESERVATIVES.

THE Committee appointed to inquire into the use of preservatives and colouring matter in food held its first meeting on July 17th, when there were present the Right Honourable Sir Herbert Maxwell, Bart., M.P., F.R.S., in the chair, Dr. Timbrell Bulstrode, Dr. Tunnicliffe, and Mr. C. J. Huddart (Secretary). The terms of reference to the Committee were under discussion, and certain preliminary matters disposed of, a second meeting being fixed for early in August, to complete arrangements for the carrying out during the hot weather of necessary experiments in relation with the use of preservatives and colouring matters in one and another class of food, and to settle the scope of the evidence to be taken when the Committee reassembles in October next.

THE NEW MEDICAL CURRICULUM AT HARVARD.

WE have seen several changes introduced of late years into the medical curriculum in England, and therefore view with the more interest the new departure which Harvard University is announced to be about to make in the coming academical year. If we rightly understand the *Boston Medical and Surgical Journal* (June 8th, 1899), the student who goes to Harvard next October will study anatomy all the mornings of October, November, and December, and both morning and afternoon throughout January, histology and embryology occupying the afternoons of October, November, and December. After January he will take up physiology and physiological chemistry, and will learn them alone in February, March, April, and May. In his second year he will study pathology and bacteriology till the end of January, and from then till May he will take up studies preliminary to clinical work such as auscultation, therapeutics, bandaging, clinical medicine, clinical chemistry, and surgical pathology. The aim is to study one subject at a time, and thus by concentration to avoid waste of labour. While we have no wish to prejudge the subject, it seems to us impossible to believe that anatomy and physiology can each be learnt in four months. The mere dissection of the body would, we should have thought, be impossible in the time, and anatomy cannot be learnt—at least as we learn it here—without much reading, nor remembered without repeated observation. We cannot but wonder how much anatomy the student, who has not thought of it for a year and a half previously, will command when he goes into the wards. We have often urged that for the proper study of anatomy and physiology it is desirable that nothing else should be studied during the first year and a-half, and here is a proposal that the whole of these vast subjects should be finished in two periods of four months each. There will be no means of testing or comparing the results, for the examinations must of necessity adapt themselves to the new level, and the abiding knowledge to be employed in practice, which is the thing of real importance, can hardly be tested at all. Even though a student be able to pass fairly at the end of January, when it appears the examination in anatomy will be held, it is most unlikely that learning so hastily crammed can be properly assimilated, or form a sound and permanent acquirement.

LORD KELVIN.

LORD KELVIN has resigned his position as Professor of Natural Philosophy in the University of Glasgow, and by this step he brings to a close his long official connection with that University. He has served the University long and well, and it will be one of her proudest memories that his name appeared for more than half a century on the roll of her professors. It is now three years since his jubilee as a professor was most enthusiastically celebrated, he having been appointed to the Chair of Natural Philosophy in 1846, when but 22 years of age. His early college training was received in Glasgow, where his father was Professor of Mathematics, but after that he went to Cambridge, where he had a most distinguished career, being both Second Wrangler and Smith's Prizeman at 21. Even at that early age he had earned for himself a high reputation among men of science both at home and on the Continent. All through a long and successful career he has devoted himself with zeal to the great problems of physical science, and has been particularly brilliant in the practical application of his scientific discoveries to the needs of mankind. From all parts of the world he has received numerous distinctions, and his name is inscribed on the roll of every learned society of note. Early in his career he received the honour of knighthood, and a few years ago his distinguished scientific services were still further recognised by Her Majesty raising him to the rank of a peer of the realm. Lord Kelvin's resignation is a great loss to his University, but it is the earnest wish of all that he may be long spared to enjoy the comparative rest which retirement from the duties of the profession will bring.

ANTIRABIC VACCINATIONS AT THE INSTITUT PASTEUR.

THE number of persons who underwent treatment at the Paris Pasteur Institute during the year 1898, as given by Dr. Pottevin in the last number of the *Annales de l'Institut Pasteur*, was 1,465. Of these, 4 died of hydrophobia, one of them ten days after the completion of the treatment. Two others were attacked by the disease whilst actually under treatment; these are not included in the statistics. The figures, then, are: Treated, 1,465; deaths, 3; death-rate, 0.20 per cent. The death-rate in former years was as follows: 1886, 0.94 per cent.; 1887, 0.79; 1888, 0.55; 1889, 0.38; 1890, 0.32; 1891, 0.25; 1892, 0.22; 1893, 0.36; 1894, 0.50; 1895, 0.33; 1896, 0.30; 1897, 0.39. The following details are given as to the patients who died after the treatment. Louis Hursaint, aged 39, a policeman, was bitten on March 19th on the right wrist by a stray dog, which was immediately killed, and after *post-mortem* examination pronounced by a veterinarian to be rabid. The bites—three in number, and deep—were not cauterised. The man was treated at the Institute from March 20th to April 6th. The first symptoms of hydrophobia manifested themselves on May 7th, and death occurred on May 10th. Henry Hesteau, aged 68, was bitten on the back of the right hand by a dog which

had been declared by a veterinarian to be under strong suspicion of rabies. The wound was not cauterised. The treatment was applied from April 27th to May 14th. The first symptoms of hydrophobia showed themselves on September 2nd, and the man died on the 4th. Albert O'Leary, aged 22, clerk in the military works department at Lahore, was bitten on August 22nd on the antero-external aspect of the right thigh by a stray dog which could not afterwards be found. The bites, three in number, were inflicted through the trousers and were cauterised with nitrate of silver within forty minutes. The man was treated in Paris from September 12th to October 26th and died of hydrophobia on November 22nd. The case became the subject of a controversy in the Anglo-Indian press, and the *Englishman* published a statement to the effect that the dog was alive and in good health. Dr. Henry Pottevin, however, quotes a letter from O'Leary's brother, dated April 20th, in which he says the dog which inflicted the bite had never been found. The cases in which the disease developed during the treatment was as follows: Jean Marie Lerang, aged 48, was bitten on January 27th by a dog pronounced by a veterinarian after *post-mortem* examination to be rabid. The bites, thirteen in number, were on the nose and the backs of both hands; they were not cauterised. Treatment was begun on February 4th; on the 20th the man began to complain of loss of appetite, sleeplessness, and violent pain in the head and chest; the characteristic symptoms (aërophobia, typical spasms) manifested themselves, and the patient died in the Necker Hospital on February 22nd. Three other persons bitten by the same dog and treated at the Institute are in perfect health. Terence MacQuillan, of Blarney Castle, Ireland, aged 3, was bitten on August 10th by a dog which the mother said had been declared by a veterinarian to be rabid. There was one bite 8 cm. in length extending from the middle of the forehead to above the left ear, and another, very deep, below the left malar bone. It was stated that the wounds had been cauterised within half an hour, but this was somewhat doubtful. The child was in a bad state when brought to the Institute. Treatment was begun on August 14th. Symptoms of hydrophobia showed themselves on August 29th, and it died in the Hôpital des Enfants Malades on August 31st. The brother of the last patient, John MacQuillan, aged 7, was bitten by the same dog on the same day on the right superciliary ridge, the right cheek, the right forearm (three deep wounds), and the third phalanges of the four fingers of the right hand (five deep wounds). All the wounds were said to have been cauterised. The boy was in a bad state when brought to the Institute. Treatment was begun on August 14th, and completed on September 3rd. The child, however, died of hydrophobia on September 13th, within 15 days of the conclusion of the treatment.

SCHOOL SANATORIA.

One of the difficulties in the general management of cases of chronic illness in children, especially cases of tuberculous disease of bones, joints, or glands, has been to provide for their education while under treatment in suitable localities often for long periods. The difficulty has been no doubt met to a large extent in the country by private enterprise, which has provided schools in various favourite resorts. In France the task of making suitable provision for the children of the working classes has been undertaken in a very liberal spirit by the municipality of Paris, and more recently an undertaking has been organised, under the general title of the "Institut Verneuil," to make similar provision for the middle and wealthier classes. A sanatorium has been established at La Baule, a small seaside resort on the south-western coast of Brittany. The building, which is surrounded on three sides by pine forests, looks due south from the centre of a beautiful bay which sweeps in a semicircle between Pornichet and La Pouliguen. The soil is sandy, the rainfall is small, and sunshine is the characteristic feature of the district as evidenced by the surrounding country being the most favourable locality for obtaining salt by the natural evaporation of sea water. The difference between day and night temperature is much less marked than on the Riviera, and mists are said to be unknown. The establishment comprises a main building and four detached houses besides a farm, laundry, and electrical station. The institution is lighted by electricity and heated by hot water. Attention has been given to ensure good drainage and a supply of good drinking water. For the medical treatment a staff of physicians and surgeons are responsible, and it is interesting to note that in the arrangement of the operating room and pharmacy there is plain evidence of the influence of the best English methods. The arrangements for hydropathic treatment are very extensive and complete. The thickly-wooded grounds cover nearly one hundred acres and lawn tennis is provided for. The beach, five miles in extent, is well adapted for bathing and there is excellent sailing, fishing, and shooting. For cyclists the roads are good and the neighbourhood interesting. La Baule is reached by an easy journey from Paris. The London agent of the institution is Mr. R. C. Leach, of 10, Serjeant's Inn, E.C.

THE ASSOCIATION GOLF MATCH.

The golf match in connection with the Portsmouth meeting will take place on Friday, August 4th, instead of Saturday, August 5th, as previously announced. So far the English entries are greatly in excess of the Scottish. It may therefore be necessary to draw the line of division further south than the Border and play North *v.* South. This point will be decided later on when the entries are all in. It has also been resolved to award the gold medal upon the player who does best against "Colonel Bogey" without any stroke allowance. Detailed information as to the arrangements made for the golfing members will be found in the reception hall during the meeting. Meantime it is requested that any further entries may be sent as soon as possible to Dr. Walter Reid, R.N., Alverstoke, Hants.

THE MEDICAL GOVERNOR OF SANTIAGO.

General Leonard Wood, who has won so splendid a reputation as Governor of Santiago, has been at home for a brief furlough, and the American papers state that he has refused the offer of the presidency of a large company in Washington with a salary of £6,000 a year, and returns to his post to grapple with a threatened outbreak of yellow fever. It is rumoured that he will be appointed Governor-General of Cuba. We need hardly remind our readers that General Wood is a member of the medical profession.

THE LONDON COUNTY COUNCIL.

At the weekly meeting of the London County Council last Tuesday, Lord Welby presiding, a long discussion took place on a recommendation of the Asylums Committee to pass an excess vote of £70,000 for the erection of the Bexley Heath Asylum. It seems that when the construction of this new (sixth) asylum for London was resolved upon in 1894, the Council decided that the cost must not exceed £300,000, in spite of the warning of the Asylums Committee that this was demanding the impossible. It was finally agreed that the General Purposes Committee should inquire into the excess of cost. There were also on the agenda paper proposals for instituting receiving houses for the insane or those deemed to be insane, which would obviate the usual procedure whereby the stigma of pauperism is added to the stigma of insanity in the process of certification through the workhouse. The discussion of this ques-

tion was postponed to next meeting. A serious report was presented by the Public Health Committee upon the insanitary condition of St. Pancras. Grave defects in respect to overcrowding, dilapidation, etc., occurring in groups of houses under the same ownerships have been pointed out, but the sanitary staff is admittedly insufficient to cope with the arrears of work that have accumulated, and, the vestry being indisposed to make the necessary addition of sanitary inspectors, the Council is recommended to make a representation to the Local Government Board accordingly.

THE LATE DR. NORMAN KERR.

AT the meeting of the Society for the Study of Inebriety on July 13th, Canon Barker, in moving that a vote of sympathy be sent from the Society to the widow and daughter of the late Dr. Norman Kerr, referred in terms of the warmest admiration to the great work that had been initiated and carried on by the late President of the Society. Few men, he said, had entered with such ardour, and carried on with such determination and ability the study of the conditions under which inebriety became a disease, and the best means of treating it. During a long and active life he had devoted his best energies and powers to the improvement of the condition of those suffering from various forms of alcoholic poisoning. His whole heart was in his work, with the result that he had left a great mark on this great evil. Canon Duckworth also spoke most sympathetically of Dr. Norman Kerr and his work, and the Chairman (Prof. Sims Woodhead) was asked to forward to Mrs. Norman Kerr and her daughter a vote of sympathy from the Society. As the outcome of the meeting that followed a Committee, of which Dr. Kerr would have been one of the most active workers had he been alive, was formed to study the question of the agency of heredity in the production of drunkenness. It may be anticipated that with such a Committee as was formed some light may be thrown on the question. Dr. Archdall Reid, Dr. Morton, and Dr. Woodhead, who are among the members, look at the matter from such different points of view that a full consideration of the question in no narrow or specialised fashion seems to be ensured, though, as in most Committees of this kind where such divergent views are represented, more than one report may probably be presented.

PURSER TESTIMONIAL FUND.

FOR some past a movement has been on foot among the former pupils of Professor Purser of Trinity College, Dublin, to commemorate in some appropriate manner the completion of his twenty-five years of active work as a teacher of physiology. Besides the eminent services rendered by Professor Purser in the teaching of his own particular branches of science, students of Trinity College will readily remember the debt imposed upon them when he voluntary undertook for many years a course of instruction in pathology before the foundation of a special chair in this subject. The effort of the committee which is organising the fund has met with a large measure of response, but owing to the dispersion of many past students in various parts of the world it has been found impossible to communicate directly with them all. It is proposed that the memorial should take the form of a "Purser Medal," to be awarded annually at the half M.B. examination to the candidate who shows the highest proficiency in physiology and histology. Subscriptions, not exceeding 1 guinea, may be forwarded to the Honorary Treasurer, Dr. W. S. Haughton, 30, Lower Fitzwilliam Street, Dublin.

THE HANDWRITING OF DOCTORS.

AMONG the many things that Napoleon has to answer for is the popular notion that an illegible handwriting is mark of intellectual superiority. How far this may serv to explain the fortuitous concourse of scratches, dashes, and blots which is too often handed to anxious sufferers as a prescription by medical oracles we are not prepared to say, but the fact is notorious that the writing of many doctors is of such a character that, like palæographic scripts, it can be read only by adepts. We have seen prescriptions which could be interpreted only by those who had undergone a special initiation. This obscurity may of course have its advantages from certain points of view, but there is always the risk that the adept may not be at hand in some critical emergency, or that expert himself being human may sometimes be at fault. A famous counsel, learned in law, it is said, had three handwritings: one which he and his clerk could read, another which only his clerk could read, and a third which neither of them could read. If neither the doctor himself nor the chemist can read the prescription, what is to become of the patient? Doubtless he gets something, but is it what was intended? Nor is it only in prescriptions that the doctor's bad handwriting causes trouble. The Connecticut State Board of Health has lately felt itself obliged to call attention to "the inaccuracies in the tabulation of death certificates which result from the faulty handwriting of the physicians who fill them out." These certificates are said to present astonishing additions to the nomenclature of diseases, such as are not to be found in any recognised system of nosology. As specimens may be given such causes of death as "cardius hypohophy," meaning probably cardiac hypertrophy, "corrhasis of liver," for cirrhosis, "utrim fibride" for uterine fibroid, "lineape" for syncope, "neaesini" for uremia, "gortuitis" for gastritis. Clearly it would be to the benefit of mankind if doctors took a little more trouble to write plainly.

OWING to the pressure on space caused by the reports of the Council and Committees of the Association, it has been necessary to omit a number of communications intended for insertion.

MR. ROBERT O'CALLAGHAN has been appointed Surgeon and Gynæcologist to the French Hospital, Shaftesbury Avenue, London.

DR. FRANCIS D. BOYD, F.R.C.P.E., has been appointed Assistant Physician to the Edinburgh Royal Infirmary for the term of five years, *vice* R. F. C. Leith, resigned. There were six applicants for the post.

WE learn that a very large number of entries has been received for the Long Vacation course in pathology at Cambridge. The class is the largest on record, and it has been necessary to borrow space from the physiological department.

FORMAL notice is given in the *Gazette* that the petitions from Mason University College, the Corporation of Birmingham, the Governors of King Edward VI School, and the School Board for Birmingham, praying for the grant of a charter of incorporation for the University of Birmingham, have been referred to a Committee of the Lords of the Council. All petitions for or against the grant must be sent to the Privy Council Office on or before August 26th.

WE are happy to be able to state that Sir Thomas Grainger Stewart's condition has considerably improved since our last report. At the commencement of his illness it was hoped that he would be able to undertake his remaining duties as President of the Association, but his medical advisers have reluctantly decided that he should not subject himself to the fatigue which a visit to Portsmouth would involve, and this course Sir Thomas has agreed to with great regret.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

The Case of Dr. Lamont was brought up on the Scotch Estimates last Friday by Sir Charles Cameron, and, as we anticipated in our issue of June 24th, attracted very general interest. The case was put clearly and fully before the House by the hon. baronet on a motion to reduce the salary of the Secretary for Scotland. In his reply the Lord Advocate, while expressing regret at the treatment suffered by Dr. Lamont, dwelt at length on technical points in connection with the legal procedure. This, however, failed to satisfy the House, and a series of strong speeches followed from both sides insisting on the gross indignity to which this gentleman had been subjected in being arrested and put into a police cell for three nights, and also taken some hundreds of miles in care of a police officer, on a charge of issuing false vaccination certificates. The charge, it must be remembered, utterly broke down at the trial at Inverness, for the jury absolutely acquitted Dr. Lamont and recommended that he should be allowed his expenses. These facts, which the House learned not only from speeches, but from the pamphlet issued by Sir Charles Cameron, were too serious to be ignored, and after they had been strongly urged by Mr. Asquith, Sir Walter Foster, Sir William Priestley, Dr. Clark, Admiral Field, Dr. Farquharson, and others, the First Lord of the Treasury intervened, and in a speech marked by a generous sympathy with the victim of these proceedings, agreed to censure the official mainly responsible for this arbitrary and unjustifiable administration of the law, and to consider the question of compensation for Dr. Lamont. The debate is especially worth reading as an example of a striking and exceptional victory obtained in the House by a knot of earnest men, who, having discovered an injustice, pressed successfully for its remedy. It was also a remarkable instance of the influence which medical men in the House can exert on a question of this kind when they act irrespective of party considerations.

The Plague was the subject of an interesting statement by the Under Secretary for Foreign Affairs last Monday, who in reply to Sir Walter Foster said that the Government rely upon the principles of the Venice Plague Convention of 1897 as a sufficient protection for any country against the invasion of this disease. The Convention would have every country organise its sanitary service so as to deal at once with every case of plague imported or arising in its territory. The Government would be glad to see Turkey and Persia organised on these lines, and they have in concert with other Powers taken steps to make their views known to the countries named. The real question remains, Has either Persia or Turkey any adequate sanitary organisation to make the principles of Venice Convention effective, and, if not, are they likely to organise it without very strong representations from the Western nations, who are practically at the mercy of a breakdown in the sanitary defence of the East?

The Massacre of the Innocents began on Monday, and at the close of the sitting the following Bills were dropped—namely, Trout-fishing Annual Close Time (Scotland) Bill, Metropolitan Streets Act (1867) Amendment Bill, Money Lending Bill, Universities (Scotland) Acts Amendment Bill, Undersized Fish Bill, Tithe Rent Charge (Ireland) Bill, Parish Churches (Scotland) Bill, and the Licensing Exemption (Houses of Parliament) Bill. Among other Bills likely to be sacrificed, the Lunacy Bill, it is feared, will be one, unless the Government find that they can pass so much of it as will remedy some administrative inconveniences. The Inebriates Act (1898) Amendment Bill, and the Bill for the Education of Defective and Epileptic Children will be passed. All the private members' Bills, such as the Isolation Hospitals (Amendment) Bill, are practically dead.

The Conscientious Objector in Scotland does not exist in law, and the Lord Advocate has told Mr. Colville that the Government have no intention of amending the law as regards Scotland so as to give objectors to vaccination the same relief as in England.

The Black Smoke Nuisance has penetrated the House of Commons. One day last week the terrace, the committee rooms, and dining rooms were filled for hours with most unpleasant fumes, and so a question was asked as to the remedy. The President of the Local Government Board says he has no direct control, but he has set the Lambeth Vestry to work to restrain the nuisance emitted by the pottery firms on the Albert Embankment. The feeling is very general that it is high time the smoke and fumes were lessened in the interests of health and general comfort.

The Local Government Scotland Act (1894) Amendment Bill, which seeks to protect medical officers from arbitrary dismissal by parish councils by giving them the right of appeal to the Local Government Board, as is the case in England, was brought into prominence during the debate on Scotch Estimates. Sir Walter Foster said there could be no better illustration of the necessity of such an amendment of the law than the treatment suffered by Dr. Lamont. Mr. Alexander Cross, who is in charge of the Bill, has since endeavoured to get the Government to take the Bill up, but so far without success. He is nevertheless getting up a petition to the Leaders of the House asking that facilities should be given for passing the Bill.

The London University Act (1898) Amendment Bill, which was introduced last week, has had a rapid course through the Commons. It was read a second time on Monday night, and in the early hours of Wednesday morning passed through Committee without amendment, and by consent of the House was read a third time. Holloway College will now, if the Lords consent, be included in the University.

Medical Witnesses' Fees.—In consequence of a paragraph which appeared in a daily contemporary, there was a rumour that the Treasury had appointed a Committee to consider the fees of professional witnesses. The medical members of the House were much interested in the suggested inquiry, but we are sorry to find that there is no ground for the statement that such a Committee had been appointed by the Treasury. The question is, however, sure not to be lost sight of during the recess and next session.

The Sale of Food and Drugs Bill began its report stage soon after 5 o'clock on Monday, and was still under discussion in the early hours of Wednesday, and, after an interval devoted to the Niger Bill, occupied the House till 6.30 on Wednesday evening. The details of the measure have provoked unexpected criticism, and as the 8th clause has not been passed, it is pretty sure to require another day next week. The proposal to reject the Bill on the ground that it did not sufficiently protect either consumers or producers, and only slightly prevented fraud, obtained support from both agricultural representatives and town members, but was negatived without a division. The real work then began with new clauses moved by Sir Charles Cameron. The first, which sought to make employees liable to penalties in certain cases, was rejected, but a division took place on the question of putting the wholesale dealer in the same position as the retailer, and the Government successfully resisted the proposal by a majority of 100. The next new clause for setting up a committee of reference, as suggested by the Select Committee on Food Products, for the purpose of fixing food standards, led to a very interesting debate, but was defeated by a still larger majority. Then it was proposed to inspect factories and wholesale warehouses, but the Government would have none of this. And so the first day ended. On Tuesday the burning question of colouring margarine began the fray. The agriculturists sought to forbid colouring altogether, and for nearly three hours they fought a sturdy fight, to be beaten in the end by the huge majority of 297 to 68. Then the point was changed to the colouring of milk, cream, and condensed and separated milk, as it was contended that in this case great injury was done in making some relatively worthless foods look rich. A pathetic picture was drawn of the evils of feeding infants on condensed separated milks, and although the Government consistently rejected the clause, they afterwards agreed to see if something could not be done

at a later stage to meet this serious and recognised fraud. Then the vexed question of the use of preservatives was raised, and the House grew quite learned with reference to boracic acid, formalin, bisulphate of lime, and salicylic acid, but as the Local Government Board has recently appointed a Departmental Committee to consider this subject, the proposed new clause was not pressed. Then began the amendments, the chief of which were two moved from the front Opposition bench to retain the administration of the Adulteration Acts in the hands of the Local Government Board instead of associating with it the Board of Agriculture. It was urged that in a matter so closely connected with public health the Agricultural Board was out of place. These and other amendments were defeated, and then the clause authorising the Board of Agriculture to institute inquires for the purpose of setting up food standards was fiercely attacked on the ground that this new department had no experience and no proper staff except for veterinary purposes. The Government, however, would not give way and the clause was maintained by a majority of 97, and so after nearly nine hours' debate ended the second day. On Wednesday afternoon the Bill came on again and the chief controversy raged round Clause 8 which limits the amount of butter fat allowed in margarine to 10 per cent. It was moved to reject the clause on the ground that it was arbitrary and unscientific to limit the ingredients in any wholesome food, but the protest failed and the sitting ended with the limit still under consideration. The Bill will come on again on Monday.

PROPOSED LEGISLATION FOR MIDWIVES.

The Duke of Devonshire, who was accompanied by Sir Richard Thorne, received a deputation at the Privy Council Office on the question of legislation for midwives on July 18th. The deputation included representatives of various nursing and other bodies.

Mr. J. Heywood Johnstone, M.P., in introducing the deputation, said they wished to convey to his Grace a resolution which was recently passed at the conference of persons interested in the matter, held in the House of Commons, to the effect that the Government should be asked to undertake legislation dealing with the question. The need of some legislative provision for the training of midwives and for the regulation of their practice had been recognised for a good many years past. It was recognised again and again in the reports presented by the General Medical Council, and in one laid before his Grace as Lord President in April last it was stated that the Council adhered to its previous resolution that it was desirable that measures should be taken to protect women of the poorer classes. The matter had also been the subject of Parliamentary inquiry by a Select Committee of the House of Commons, and the report which was presented in 1893 called attention to the need which existed for legislation. The state of the law still remained the same, and any person, however unqualified and ignorant, could still practise as a midwife. The proposals had been greatly benefited by the qualified process of criticism which they had been subjected to. When a deputation waited upon his Grace last year, he gave them some very helpful advice. Three points were mentioned: one was that they should ascertain the views and the wishes of the General Medical Council, and act in accordance with those wishes; another that they should ascertain the views of the local authorities through whom any measure which should pass through Parliament would ultimately have to be administered; and the third was that they would have to consider the question of cost. Acting on his Grace's advice they approached the General Medical Council, and had the advantage of having a conference with a committee of the General Medical Council, and the result was the Bill which was brought into the House of Commons in the present session. This Bill which, owing to its not being in a very good place in the list of bills it had finally to be dropped, practically embodied all the recommendations they had received, with the exception of certain minor details, and it showed a general agreement on the main lines on which legislation should proceed. The Bill had also been submitted to the County Councils Association, which practically approved of the general principle though it wished for minor amendments. The deputation asked his Grace to lay the matter before the Cabinet in the course of the autumn, with a view to its being dealt with in the next session of Parliament.

The Duke of Devonshire said he would like an explanation on a point. He understood that they had been in communication with the General Medical Council. He gathered from what Mr. Johnstone had said that they had come to an agreement. In the report of the General Medical Council the committee made a great many criticisms upon the Bill, and stated that the committee had recommended the Council to inform the Lord President that they are unable to approve of the Bill.

Mr. Johnstone said that the General Medical Council referred merely to matters of detail, which did not in the least affect the principles of the Bill. The only reason they had not recast the Bill was that they thought such matters of detail should be settled by the Government.

Dr. Cullingworth said it had been quite hoped by the promoters of the Bill that the wishes of the General Medical Council had been met. He thought that the form of words of the General Medical Council was a little unfortunate, and scarcely conveyed the attitude of the Council. He thought that there was nothing at all in the recommendations of the General Medical Council that need hinder legislation for one moment. With regard to the opposition which had been offered on the part of a section of the medical profession, he thought it was very clear that there had been some misunderstanding in the matter. Some had jumped to the conclusion that the promoters of midwives legislation were endeavouring to create a new class of midwifery practitioners; but it was not so: they simply wished to deal with what already existed, and to render safe what was now unsafe. They wished the Government to take the matter up as they felt that as long as it remained in the hands of private members it was practically hopeless to obtain legislation.

Mrs. Wallace Bruce said the deputation represented the strong feeling of all the women in the country who had considered the matter. She appealed to his Grace to put a stop to the long delay in having the matter dealt with.

Mr. Roumieu, who spoke on behalf of the coroners of England and Wales, said he had on several occasions been called upon to hold inquests for the express purpose of restraining midwives practising where puerperal fever had been spread by the unscrupulous way in which they had carried on their work. These women generally attended these cases more or less in a state of intoxication. He considered it the duty of the Government to bring in a Bill which would put a stop to these practices.

The Duke of Devonshire said that the important and weighty statements which had been made would receive, as they were entitled to receive, his most careful consideration and attention. He congratulated the deputation on the progress which the question appeared to have made since a deputation on the subject waited on him last year. He was afraid that some of them thought that he gave that deputation a somewhat unsympathetic reception, and he must admit that, on looking over the report of those proceedings, he found that the bulk of his remarks were directed to calling their attention to difficulties that appeared to him to stand in the way of any successful attempt at legislation. But he thought from what had been said that those observations had not been altogether without some good result, because the promoters had been in more complete communication with those who were interested in the question, the General Medical Council as the representatives of the medical profession, and also to some extent with those local authorities who would necessarily be called upon to take a very important part in the administration of any measure which might be passed. He hoped they had arrived at a complete and practical agreement with these two parties, as they appeared to be convinced that they had. He was sorry to say, however, that his Parliamentary experience rather led him to apprehend that difficulties were apt to crop up when a measure was once introduced into Parliament which had not been clearly foreseen. He understood that they wished to represent that the question had now reached a stage at which it might properly be taken up by the Government, and he was bound to admit that representations so made, and presented by so much authority as they had been

able to bring to bear upon it, were deserving of the most serious consideration. It would be his duty to bring this matter before his colleagues in the course of the autumn. Of course, he had no authority at present to say what the decision of the Cabinet might be. It must depend not only on the importance of the question itself, but also on their other political engagements and liabilities. He could only promise to bring the matter before his colleagues as fully and fairly as he could, with the hope of inducing them to take the matter in hand. He could not commit the Government, which was already tolerably deeply committed to legislation for next session, and if, unfortunately, it should happen that they were not able to devote the necessary time to this matter he did not think that the deputation need absolutely despair of proceeding by other means. It was no doubt somewhat difficult for a private member to pass a Bill, though Parliament had this year afforded a conspicuous example of the success with which a measure, formerly of an extremely controversial character, that raising the age of school attendance, had been passed through by a private member. He would suggest that they should not in any degree relax their own efforts to deal with the question, and that they should again prepare a measure in consultation with those with whom they had already been in communication, meeting, as far as possible, the representations which they considered reasonable which had been made on the subject. Whether the Government was able to deal with the matter or not next session, he would suggest that they should make use of that department as a means of communication with those authorities whose support it was necessary for them to enlist —namely, the medical profession and the county authorities. Any assistance which his department could give in arriving at a complete and perfect understanding it would be very happy to render.

The deputation having expressed their thanks withdrew.

THE PREVENTION OF TUBERCULOSIS.

POPLAR.

AT their last meeting the Poplar Board of Guardians received a letter from the Local Government Board stating that without further legislation the metropolitan Boards of Guardians could establish a workhouse for the treatment of paupers suffering from phthisis, and that a charge of 5d. per patient per day could be made in regard to each person on the Metropolitan Common Poor Fund.

NOTTINGHAM.

A meeting of the committee appointed on June 20th to promote a sanatorium for consumption for the city and county of Nottingham was held on July 13th at the Exchange Hall. The following resolutions were passed:

1. That this committee (appointed at a public meeting presided over by his Grace the Duke of Portland, on June 20th, 1899, to promote a sanitorium for the treatment of persons suffering from consumption in the county of Nottingham) do hereby form the Nottingham and Nottinghamshire Association for the Prevention of Consumption and other forms of Tuberculosis.

2. That the objects of the association be as follows: (*a*) To establish in the county of Nottingham (where 10 per cent. of the deaths are due to tuberculosis) a sanatorium for the treatment of consumption in persons of limited means; (*b*) to spread a knowledge of the laws of health and to encourage voluntary measures tending to reduce the causes of tuberculosis; (*c*) to co-operate in such educational and voluntary measures with the National Association for the Prevention of Consumption and other forms of Tuberculosis and with its local branches.

3. That the present Committee do form the Council of the said Association, with the following officers: President, His Grace the Duke of Portland; Vice-Presidents, the High Sheriff of Notts, the Mayor of Nottingham, the Bishop of Southwell, Viscount Newark, M.P., Sir Charles Seely, Sir S. G. Johnson, Mr. T. I. Birkin, and Mr. Philo L. Mills; Executive Committee, Mr. W. P. J. Allsebrook, Rev. H. S. Arkwright, Mr. J. Billyeald, Mr. A. W. Black, Mr. Joseph Bright, Mr. Joseph Burton, Mr. F. N. Ellis, Mr. Ernest Enfield, the Rev. Canon Ferris, Mr. J. A. H. Green, Mr. H. Ernest Hollins, Mr. J. H. Hardy, Mr. William Hodges, Miss H. Guilford, Mr. Francis Ley, Mr. Philo L. Mills, the Rev. J. A. Mitchell, the Rev. H. C. Russell, Mr. John Robinson, Mr. C. Tylden Wright, Mr. J. Kentish Wright, Dr. Boobbyer, Dr. Brookhouse, Dr. Cattle, Dr. Handford, Dr. Mutch, Dr. Pryce, Dr. Peskett, Dr. W. B. Ransom, Dr. C. V. Taylor, Dr. Littlewood (Mansfield), and Dr. Ringrose (Newark). Mr. Ernest Enfield and Dr. W. B. Ransom were appointed Honorary Secretaries, and Mr. William Hodges (Hamilton Road, Sherwood Rise), Honorary Treasurer.

4. That any person may become a member of the Association on payment of a subscription of 5s. a year.

A letter was received from Dr. Handford stating that Professor Sims Woodhead, of Cambridge, who had been unavoidably prevented from coming to address the public meeting on June 20th, had sent a donation of 10 guineas towards the proposed sanatorium. A cordial vote of thanks to Professor Sims Woodhead for his generous gift was unanimously passed.

ITALY.

The delegates of the various committees of the League against Tuberculosis held, as already mentioned in the JOURNAL, a meeting in the Academy of Medicine, Rome, on July 2nd, under the presidency of Professor Baccelli, the Minister of Public Instruction. Among the delegates present from all parts of Italy were: Professor De Giovanni, the founder of the League (Padua); Professor Castellino (Naples); Professor Lucatello (Venice); Dr. Gossio (Turin); Professor Giuffrè (Palermo); Professor Mariani (Geneva); Dr. Iona (Milan); Dr. Zoia (Pavia); Dr. Simonetta (Siena); Professor Riva (Parma); Dr. Bettoni (Brescia); Professor Sanarelli, the discoverer of the yellow fever microbe (Bologna); and many others.

After an introductory address by Professor Baccelli,

Professor De Giovanni addressed the meeting, setting forth his ideas in relation to the League for the foundation of the sanatoria in which the germ of contagion has to be extinguished. The task, he said, is not easy, inasmuch as, besides the contagion, there exists the individual disposition to contract the disease. It is necessary, therefore, not only to erect sanatoria, but also to increase the resistance of the constitution against the terrible parasite. The League consequently must have both a medical and a social scope. It intends to promote and encourage the study of tuberculosis and the organisation of the defence against this infection, diffusing the knowledge concerning its contagiousness and the means of defending oneself from it, and circumscribing the injuries produced by it, and promoting the institution of dispensaries, special wards in hospitals and sanatoria; promoting the most active surveillance in the preventive treatment of tuberculosis in man and in animals by the governmental and local authorities. All citizens, charitable bodies, and associations who adhere to and cooperate in the objects of the League will have the title of effective members, and they will be obliged to pay to the Committee an annual contribution of 12 francs. Those who pay a sum corresponding to the capital of the income of 12 francs per annum, or who pay 60 francs per annum, will be meritorious (*benemeriti*) members. Those who pay a yearly sum of less than 12 francs will be associate members. The Committee will be divided into four sections, each of which respectively will occupy themselves with the preventive treatment of tuberculosis, its treatment, the propagation of the objects of the League, and of the benefits to be derived from the society. Professor De Giovanni having given details as to the rules of the local committees, etc., the statute of the League was unanimously agreed to.

On the proposal of Professor Queirolo, Professor Baccelli was elected President of the League; Professor De Giovanni was elected Vice-President, and Professors Durante, De Renzi, Ballai, Maragliano, Marchiafava, Celli, and Queirolo members of the Council.

UNITED STATES.

The following law came into force in the State of Washington on June 10th:

Section I.—All practising physicians in cities of the first and second class in this State are hereby required to report to the local Boards of Health of such cities, in writing, the name, age, sex, occupation and residence of every person having tuberculosis who has been attended by, or who has come under the observation of, such physician for the first time, within five days of such time.

Section II.—All local Boards of Health of cities of the first and second class in this State are hereby required to receive and keep a permanent record of the reports required by the first section of this Act to be made to them. Such records shall not be opened to public inspection, but shall be submitted to the proper inspection of other local and State Boards of Health alone, and such records shall not be published or made public.

Section III.—It shall be the duty of such local Boards of Health, unless requested by the attending physician not to do so, to furnish to each patient, or to the head of the family where such patient resides, printed instructions for the prevention of the communication of such disease to

other persons; to enforce compliance with Section 1 of this Act; to see that the premises occupied by any such patient are kept in good sanitary condition; and within five days after the death or removal of any such patient to see that such premises are thoroughly and properly disinfected. The expense of such disinfection shall be a charge against the owner of such premises; and on the failure of such owner to properly disinfect such premises within five days after notice to do so given him by such Board of Health, it shall be the duty of such Board to have such disinfecting done at the expense of such city, and the costs thereof shall be a lien on said premises in favour of such city, and may be enforced by the city by proper action.

Section IV.—Any practising physician who shall wilfully fail to comply with the provisions of Section 1 of this Act shall be guilty of a misdemeanour, and on conviction thereof may be fined for the first offence not exceeding $5, and for any subsequent offence not exceeding $100.

Section V.—It is hereby made the duty of every person having tuberculosis, and of everyone attending such person, and of the authorities of public and private institutions, hospitals, or dispensaries, to observe and enforce the sanitary rules and regulations prescribed from time to time by the Boards of Health of such cities, and of the State for the prevention of the spread of pulmonary tuberculosis.

Buffalo has had a similar law in force for the last five years, and New York City for nearly that length of time. Other communities have made various efforts towards restricting the spread of this disease, but, according to the *Philadelphia Medical Journal*, this is the first effort made by any State of the American Union.

LONDON HOSPITAL MEDICAL COLLEGE.

NEW COLLEGE BUILDINGS.

THE new College buildings of the London Hospital were formally opened by Viscount Knutsford, G.C.M.G., on July 18th, Viscountess Knutsford also presenting prizes and certificates to the lady probationers. The proceedings opened with a reception in the Board Room of the College of Lord and Lady Knutsford by the Chairman of the College Board, the Chairman of the Hospital, and the members of the House Committee and the Staff. The new buildings having been inspected, Lord and Lady Knutsford repaired to the library, where before a distinguished company Mr. Douro Hoare, Chairman of the College Board, invited Lord Knutsford to declare the new buildings open.

Lord KNUTSFORD in the course of his address said that the new buildings of the medical school were essential to the working of the London Hospital, and therefore to the welfare of the working classes of the East End. After referring to the crowded conditions of life obtaining in that neighbourhood, he went on to explain how closely connected with the work of the hospital was the work of the Medical College, whereby the hospital was supplied with house-physicians, house-surgeons, and other qualified officers. The completion of the new buildings made it perhaps the best equipped medical school in London, and it now enjoyed the proud distinction of containing the most perfectly equipped department for bacteriological and allied scientific research in London. Much had been done for determining the causes of pain and disease, and a debt of gratitude was due to those who studied with this object. He rejoiced to think that the abilities and powers of investigators in research work would be largely increased by the new building. All this, however, meant expenditure of money, and those who knew and appreciated the enormous advantage that had been gained not only to the hospitals in London, but also to the country at large, by the advances made in research work, must agree that the State ought to relieve them of part of this cost.

At the close of his address Lord KNUTSFORD presented the prizes and certificates to the successful students.

The Hon. SYDNEY HOLLAND, Chairman of the Hospital, said that now the new school buildings were finished they had embarked on an effort to bring the London Hospital up to date. This would involve an expenditure of £200,000. Towards this sum four gentlemen had given £72,000.

Lady KNUTSFORD having presented the prizes and certificates to the nursing probationers, a vote of thanks was proposed by Mr. TREVES, seconded by Sir FOWELL BUXTON, and supported by Sir FREDERICK YOUNG, to which Lord KNUTSFORD suitably replied.

THE NEW BUILDINGS.

The site of the old laboratory and chemical theatre has been utilised for the erection of the new block of buildings, which with their fittings are estimated to cost not less than £10,000. The third floor is devoted to accommodation for the bacteriological department, where besides the general laboratory and research laboratories space has been found for well-fitted class rooms for public health work and sterilising room. The operative surgery room and a class room for anatomy are on the second floor, where also are located the chemical laboratory used for classes for the diploma in public health and the physics laboratory. The chemical theatre and chemical laboratories, together with the balance room, take up the space on the first floor, and the well-lighted ground floor is occupied by different class rooms, a well-arranged materia medica museum, and the biological laboratory. The basement is given up to the department of public health, and comprises an interesting museum and accommodation for lecturers, besides more class rooms and a dark room for photography. It has been also possible to provide for the use of students preparing for the higher examinations special class rooms. Rooms also for original research in the physiological department have been supplied, with house room as well for special classes for the London examinations. The details of the new buildings are well finished, the flooring, where necessary, being terrazzo, and the walls finished with alabastine.

THE NEW VACCINATION ACT IN OPERATION.

VACCINATION IN OLDHAM.

DR. GEORGE THOMSON (Public Vaccinator, Oldham) writes: No doubt you will be interested in the further progress of vaccination in the antivaccinating town of Oldham. I append a few facts just obtained from our vaccination officer:

Total vaccinations, first half, 1898... 49
" " 1899... 1,507

Exemptions being applied for in 17 per cent. of the births. This is the proportion in June, which is the highest month so far.

Confidence in vaccination is, in my opinion, increasing, and exempt children continue to be vaccinated at the request of the parents in fair numbers, in one case the mother taking the opportunity to be revaccinated along with her exempt children (ages 4 and 8 years).

"SUCCESSFUL VACCINATION."

PUBLIC VACCINATOR puts on four marks; one vesicle results. Must guardians and Local Government Board acknowledge vaccination as successful?

*** Yes. There is no definition of "successful vaccination" in Act or Order. "The public vaccinator must aim at producing four separate, good-sized vesicles, or groups of vesicles, not less than half an inch from one another," but if only one typical vesicle results, the operation is successful, though the result is not satisfactory.

THE RELATIONS OF PUBLIC VACCINATORS TO PRIVATE PRACTITIONERS.

CORNWALL writes: As one of the public vaccinators legislated for by the Bradford Medical Union in your issue of July 15th, I would like to make one or two comments.

The whole tone seems to me as if the suggestions had been drawn up to control the actions of ill-mannered, uncultured pirates rather than fellow medical men, presumed to be gentlemen, who any day may be succeeded through death by one of these very dictatorial censors. Now I would suggest that if the neighbouring medical men will comply with the following suggested rules they will find the public vaccinators whose transgressions on many occasions I cannot defend, would be likely to think more broadly of the whole subject and act with more dignity towards the profession they are members of. These suggestions carry their own comments, and the facts are also indisputable.

1. The medical man called in to vaccinate a child unknown to him should, before entering the house, ascertain whether the family are the private or club patients of a public vaccinator, and if the reply is in the affirmative, he should then at once retire and decline all suggestions.

2. It is not the duty of the medical attendant, nor is it compatible with the dignity of his profession, to laud the perfect security obtained by one-mark vaccination when he knows it is not the truth, and so lull into false security the mother, taking advantage of her ignorance.

3. Any references made to parents that can be taken as being attempts to cast a slur on the repute or mode of vaccination of a public vaccinator, accidentally mentioned to him, must be considered most reprehensible.

4. Before vaccinating in one or two places, every honourable medical man should clearly lay the true case before the parent or guardian, and leave the responsibility of the insecurity such vaccination carries in the right quarter.

I think it is ignored that public vaccinators can, as private men, vaccinate in one or two places their own private or club patients when calling to do it as public vaccinators.

THE PROPOSED BOARD OF CONCILIATION.

AT a meeting of medical officers of friendly societies in the district of Cardiff held on July 17th, the following resolutions were passed:

1. That this meeting is of opinion that the profession should take the necessary steps to carry into effect, in conjunction with the representatives of the friendly societies, the proposal of the General Medical Council to form a Board of Conciliation.

2. That this meeting is of opinion that it is very desirable to form an association of medical officers of friendly societies in the Poor-law district of Cardiff.

A Provisional Committee was appointed, and Mr. T. Garrett Horder was requested to act as Honorary Secretary *pro tem.*

SMALL-POX AMONGST THE UNITED STATES TROOPS.

IN view of the use which has been recently made by the opponents of vaccination of the prevalence of small-pox amongst the United States troops in the Philippines, accompanied by the assertion that, these troops being all "well vaccinated," this fact proves the uselessness of vaccination, the Jenner Society has made inquiry on the subject through Her Majesty's Ambassador at Washington, and has through his courtesy received the following interesting and instructive report, which not only shows that the statements in question are devoid of truth, but confirms in a striking way our previous experience of the value of vaccination both at home and abroad:

War Department,
Surgeon-General's Office,
Washington, June 15th, 1899.

The Honourable
The Secretary of War.

SIR,—In reply to the inquiry of Mr. Reginald Tower, dated at the British Embassy, Washington, D.C., June 5th, 1899, and transmitted by the Honourable Secretary of State to your office in his communication dated June 10th, 1899, I have the honour to state as follows concerning vaccination and small-pox in the United States Army:

The intention of the United States regulations is to afford protection against small-pox to every enlisted man by a careful vaccination at the time of his entry into service. Paragraph 843 requires that: "As soon as a recruit joins any rendezvous, regiment, or post, he will be examined by the medical officer to ascertain whether vaccination is required. In all cases where there is not unmistakable evidence of successful vaccination within a reasonable period, the operation will be performed immediately." Paragraph 846 provides that before recruits are forwarded from a rendezvous to regiments the commanding officer will cause the date and result of last vaccination to be entered on the descriptive and assignment card. Under these regulations, which have been faithfully carried out, the soldiers of the United States Army have received efficient protection from small-pox. Although this disease has prevailed in many parts of the country during the past fifteen years —1883-97—and frequently with epidemic violence among the civil population in the immediate vicinity of military posts, there have occurred only 20 cases, of which 4 were fatal, in a mean strength of 25,000 men.

At the outbreak of the Spanish-American war a large volunteer force was hastily organised, and the regiments of the regular army were as hastily recruited to their strength on a war footing. The army was in a few weeks increased from 25,000 to 280,000 men. Under these conditions it is possible that the requirements of the regulations as to vaccination were not as carefully fulfilled as in time of peace. It will be observed that the necessity for vaccination is left by the regulation to the discretion of the medical officer. In May, 1898, small-pox prevailed to a considerable extent among the coloured people in many parts of the Southern States. Small-pox was known to be common also in Cuba. The medical officers who were present at the mustering of regiments raised in the Eastern States and who expected to be camped in the south and to see active service in Cuba and Port Rico were probably more careful in carrying out the provisions of paragraph 843 of army regulations than the medical officers of western regiments who did not have in anticipation immediate exposure to infection. At all events scarcely a case occurred among the troops in Cuba or Port Rico. The regiment which occupied the Holguin district during the stamping out of the disease, which at the time was decimating the native population, did not have a single case, although its members were constantly exposed to infection during the aggregation of the sick in extemporised pest houses and the disinfection or destruction by fire of vacated houses.

On the other hand, a number of cases appeared among certain regiments shortly after their arrival at Manila, P.I., from San Francisco, Cal. These cases occurred mostly among men who had been visiting the huts of the natives, in many of which small-pox of a very malignant character was prevailing. On the recommendation of Chief-Surgeon Henry Lippincott, Major-General Otis, November 19th, 1898, issued orders requiring commanding officers of regiments, battalions, companies, and detachments, and surgeons in charge of hospitals, to take immediate steps to secure the vaccination or revaccination of all enlisted men under their supervision. Every enlisted man of the command who had not been successfully vaccinated within the past six months, as shown by company records or within the personal knowledge of his officers, was required to be vaccinated at once (provided he was in physical condition to endure it) and should the operation not prove successful it was to be repeated, at intervals of two weeks, as often as in the judgment of the surgeon in charge of the organisation it was deemed necessary to fully protect against small-pox; but not less than three unsuccessful vaccinations from date of this order would be recognised as sufficient protection. These orders were promptly carried into effect, but the vaccine received from San Francisco, Cal., appeared to be inert in so many cases owing probably to the heat and length of time occupied by the voyage, that other sources of supply had to be discovered. The Chief Surgeon succeeded in procuring some from Japan, but the best results were obtained ultimately from vaccine prepared by the Board of Health of the City of Manila. Meanwhile, a knowledge of the danger to which new troops were to be exposed on their arrival in the Philippines led to a careful examination and vaccination of the men prior to their embarkation at San Francisco, Cal.; and the army medical authorities at Manila have reported that the troops on reaching the place are again inspected, and all doubtful cases vaccinated with fresh lymph before or immediately after leaving the ship.

The Eighth Corps of the Army, now operating in the Philippines, may now be considered to be well protected, and the outbreak of small-pox among them to be at an end. From September, 1898, to March 31st, 1899, there were reported in this command of nearly 30,000 men 151 cases of variola, 77 of which were fatal and 85 cases varioloid with no death.

Respectfully,
C. H. ALDEN,
Assistant Surgeon-General, U.S. Army,
Acting Surgeon-General.

SPECIAL CORRESPONDENCE.

ROME.

"A Mysterious Disease in the Alps."—The Murder of a Roman Physician in Rome.

THE accounts which recently appeared in a London evening paper of a "mysterious disease" which had broken out in the Alpine villages of Soriso and Gargallo, near Novara, were greatly exaggerated. The description given of the disease was as follows: "The illness begins with fever, dilatation of the pupils, low temperature, blood splitting, inflammation of the glands, and death in two or three days." The report says "the terror of the peasants is so great that they cannot be induced to help the authorities in any way, and the Mayor, the parish priest, and the doctor are obliged to carry the patients.....to the hospital." But this is not enough. The report then says "the ignorance of the peasants is almost incredible. The doctor, for instance, who has really given proof of the greatest courage and abnegation, has to be protected every moment by carabineers, so great is the fury of the people, who declare that he has been ordered by the Government to poison all who are attacked by the mysterious illness." The writer finally concluded by stating that the epidemic was first supposed to be a kind of carbuncle, then it was supposed that it might be a variation of plague. But neither of these hypotheses had received confirmation, as the doctors were still working in the dark. Now to come to facts which I have received from Dr. Santoliquido, the Director of the Department of Public Health under the Ministry of the Interior. This "mysterious disease" is simply typhoid fever complicated with pneumonia in many cases. The first cases appeared in the above villages in March last, and between thirty and forty persons have been attacked in a population of over 3,000 in both villages. The number of deaths up to July 12th has been four or five, mostly in persons over 60 years of age, and no fresh case of the disease has been notified since the end of May in either village. The cause of the outbreak is believed to be contaminated water obtained from wells. The villages are very insanitary, and there is much overcrowding; in spite of this, no two cases have occurred in the same family, probably owing to the precautions taken by the local authorities in having the cases removed to a temporary hospital. The local doctors have had no difficulty in diagnosing the disease from the beginning, and their diagnosis has been fully confirmed by the medical inspector sent from Rome to investigate the epidemic. It is true the villagers were alarmed at first, and objected to having the patients removed to the hospital, but they soon got over this.

On June 13th Dr. Bondi, one of the physicians of the Santo Spirito Hospital of Rome, while passing over the iron bridge crossing the Tiber, close to the hospital, was stabbed by a man named Caioni in the right parotid region immediately below the mastoid process. He was immediately taken to the Santo Spirito Hospital, where he died from internal hæmor-

rhage a quarter of an hour afterwards, in spite of the attempts made by the hospital staff to check the hæmorrhage, ligaturing the common carotid artery, etc. At the *post-mortem* examination made the following day it was found that the weapon (a very long nail) used had lacerated the internal jugular vein and penetrated the wall of the pharynx. The stomach contained more than 2 litres of blood. The murderer, who was arrested immediately after the deed, is phthisical, and since 1892 he has been admitted 32 times as an in-patient to the hospital. While there he was always very troublesome and unruly. He left the hospital by his own desire at the end of last month, but having no means and being unable to work he presented himself for readmission on the morning of the fatal deed. Dr. Bondi, however, declined to admit him as he had not the necessary certificate. Caioni persisted, but he finally left threatening vengeance against Dr. Bondi. He then purchased the nail at an old iron shop close by, and lay in wait for the doctor on the bridge. The rest is described above. Dr. Bondi was 42 years of age, and leaves a wife and a son 12 years old to mourn his sad fate. His murder has caused the greatest indignation and horror in Rome, particularly as two or three years ago one of the nuns, Sister Agostina, who nursed the patients in the Santo Spirito Hospital, was also murdered by a male patient, likewise a consumptive in the hospital itself. The funeral took place on June 16th at the expense of the Hospital Administration of Rome, and was attended by a representative of the Minister of the Interior, Professor Baccelli, Minister of Public Instruction, the communal and provincial authorities, several hundreds of the Roman doctors, numerous religious, aid, and charitable societies, etc. Most of the shops along the route were closed, and the streets were crowded with people.

CORRESPONDENCE.

THE PROPOSED CONCILIATION BOARD.

SIR,—I am bold enough to assert that the letters of all your correspondents (even including that of Dr. Leslie Phillips) prove beyond any doubt whatever that we should be acting wisely and well if we organised ourselves, and, as a united body, threshed out the many knotty points that have arisen in connection with the making of friendly societies. As I have stated before, the proposed Board of Conciliation may not be able to effect a solution of the problems of contract work, but what I wish more particularly to emphasise is that by bringing together all those members who have official connection with friendly societies, we shall be able not only to state our grievances but to propose remedies for these grievances. At first sight it may appear undesirable to add to the list of associations connected with the medical profession, but I feel confident that on further reflection your correspondents will admit the absolute necessity of having an organisation which will be able to meet the representatives of the friendly societies on equal terms. If it has been found necessary to form associations of medical men connected with the post office, with the railway companies, and with the public schools, it must be much more necessary to form an association which shall deal with the medical work of friendly societies. I am not a great advocate for the extension of specialism, but it must be apparent to most men that it would be a very difficult matter indeed to get the Branches of the British Medical Association to deal in a satisfactory manner with the grievances of the medical officers of friendly societies.

Let me point out to Dr. Leslie Phillips that if we decline to act on the suggestions of the General Medical Council, we shall have no possible chance of getting that Council to take up the question again. If, on the other hand, we decide to make an honest endeavour to meet their wishes and form a Board of Conciliation, we shall be in a position—if that Board is not successful in accomplishing its work—to go to the Council again and ask for further measures.

To sum up: We as a profession are weak because we are not organised; the friendly societies are strong because they are well organised. There can, therefore, be no doubt whatever that we should proceed without delay to band ourselves together and elect men who will be able to represent our views on this great question of friendly societies' work.—I am, etc.,

T. GARRETT HORDER.

Cardiff, July 15th.

P.S.—I may add that the medical men of Cardiff and the district will meet shortly to discuss the whole question. I hope the medical men of other large towns will do likewise.

ANTITYPHOID INOCULATIONS.

SIR,—The credit which is so genuinely due to Professor Wright for his good work on typhoid inoculations will, I fear, not be enhanced by his letter dated July 2nd, entitled, "Antityphoid Inoculations: a Personal Explanation," published in the BRITISH MEDICAL JOURNAL of July 8th, for it seems to imply the absurd view that the plague inoculations are an imitation of Professor Wright's plan of dead typhoid vaccines instead of the typhoid inoculations being, as they really are, a development of the carbolised and dead vaccines of cholera which are described by Professor Wright and Surgeon-Major Bruce in the BRITISH MEDICAL JOURNAL of February 4th, 1893, as having been demonstrated to them at Netley by Mr. Haffkine in 1892, and which were used by Mr. Haffkine in his earlier experiments. The conversation of six years ago which Professor Wright mentions must have taken place before the investigation into anticholera inoculations were made, and was evidently supplemented by a further conversation in the early part of 1896, for a reference to Professor Wright's and Surgeon-Major Semple's paper in the BRITISH MEDICAL JOURNAL of January 30th, 1897, shows it to be there stated that "Mr. Haffkine suggested more than twelve months ago to one of us (that is, about the beginning of 1896) that the method of vaccination which has proved so effectual in combating cholera epidemics in India might *mutatis mutandis* be applied also to the prophylaxis of typhoid fever." And, referring to Pfeiffer and Kolle's paper on inoculations against typhoid, the authors write: "Like our own method, it was based on the methods which have been so successfully employed by Mr. Haffkine in his anticholera inoculations."

Pfeiffer and Kolle, in their paper on typhoid inoculations quoted by Professor Wright in his letter,[1] state that: "As the experiments on artificial immunisation of man against cholera have given such unexpectedly favourable results, the problem appeared obvious to test the effect on man of small doses of sterilised typhoid bacilli."—I am, etc.,

July 11th. M.D.

MR. STEPHEN COLERIDGE AND THE POPLAR HOSPITAL.

SIR,—As you say that you await with interest my comments on the circular letter addressed by Mr. Coleridge to the subscribers to the West London Hospital, I will state at once that it is a matter of great regret to me that a resolution passed by the Poplar Hospital Committee should have been used by Mr. Coleridge to attempt to damage another hospital, and to divert subscriptions from the West London Hospital to the Poplar Hospital. And, at the earliest possible moment that resolution will have to be reconsidered. The facts are as follows. In the course of a somewhat heated correspondence between myself and Mr. Coleridge *re* a grant of £2,000 a year given by the London Hospital Committee to its medical school, Mr. Coleridge wrote (I do not pretend to quote his words, but only their sense) that if vivisection were abolished at the College he could get a very large sum of money for the hospital from people who objected to vivisection. I replied in polite language that I did not believe there was a cent in them, but that if they were only withholding their subscriptions because of their dislike for vivisection, why did they not subscribe to the Poplar Hospital for Accidents, where there was no vivisection, and where there could be none? He replied that if the Committee of that hospital would pass a resolution undertaking to return to his Society all moneys received through that Society in the event of vivisection ever taking place, or in the event of a man holding a licence being elected on to the staff, he would do his best to get subscriptions for the Poplar Hospital. This resolution we passed. Mr. Coleridge knows quite well

[1] *Vide Deutsche medicinische Wochenschrift*, 1896, No. 46.

that I am against the total abolition of vivisection, but am, as his Society professes to be, in favour of placing it under proper restrictions. But in connection with the Poplar Hospital the question can never arise except in the very unlikely event of our wanting to elect on to the staff a gentleman holding a licence to vivisect, in which case we should have to weigh in the balance the money sent through Mr. Coleridge's Society and the advantages of electing this gentleman. But it may have been stupid of me, and I am ready to accept the whole blame, I never dreamt of this resolution being made to divert subscriptions from any other hospital to Poplar. I hoped to tap the new source of people who had hitherto, with great grief, withheld their help under the mistaken belief that at all hospitals vivisection took place, and I wished to give them the chance of doing a little good before they died. I am quite sure my Committee will not accept any subscriptions which they can trace as being so diverted, and the quite probable result of Mr. Coleridge's circular to the subscribers of the West London Hospital will be that the resolution will be rescinded. I confess I do not understand Mr. Coleridge's position if he is to carry out the policy of his Society, which the Duke of Portland declared to be *not* total abolition, but "proper and effective control." Why, therefore, should he, as the mouthpiece of that Society, try to damage a hospital because it has on its staff two gentlemen who hold a licence to vivisect under the only control known to the law? If the control be not effective he should agitate to get it made effective, and not attack the hospital. However, I can assure the West London Hospital that, if I may judge from my own experience, his attempt to damage the hospital will have no effect. I have, I fear, written at too great length, but you invited my comments.—I am, etc.,

SYDNEY HOLLAND,
July 10th. Chairman, London and Poplar Hospitals.

INCREASE OF DIRECT REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

SIR,—For years the general practitioner has recognised the necessity for an increase in the number of direct representatives on the General Medical Council.

Notwithstanding the General Medical Council having been made aware of this, both directly and indirectly, yet we see at the present time that want still unsupplied, and no attempt made to meet the wishes of that branch, the general practitioner, which constitutes 99 per cent. of the profession.

If we examine the names of those who constitute the General Medical Council, what do we find? Men whose names are known for their ability and knowledge in some special branch of medical or surgical science, men from whom we learn and whose teaching we follow.

It may be asked why, if the Council is composed of such as these, should there be a desire to alter its present constitution? The answer is this. Not for one moment do the general practitioners wish to remove any from the Council, for it would not be complete without them, but because they, occupying that high position which they do in the profession, cannot possibly understand the disadvantages under which the general practitioners practise.

What can a consultant know, other than by hearsay, of the losses caused by bonesetters, prescribing chemists, surgeries kept by unqualified men, oculists and aurists (so called), patent medicine and pill vendors, abortionists, and many others too numerous to mention, and lastly—but not least—that man who, though registered, will for a few pence give advice and medicine (?), to the degradation of the whole profession in the eyes of the general public?

Is it not, Sir, a proof that there is something very radically wrong with the constitution of the General Medical Council when we see the number of associations for medical defence, whose sole object is to assist and protect the general practitioner in his struggle to obtain a living by fair means?

Were the general practitioners adequately represented on the General Medical Council these associations would soon become extinct as there would no longer be work for them to do and we should receive that which is our right, but which to obtain now has to be paid for.

This subject has been written about and spoken upon for years with practically no result and the time has come when we should act, and in order for us to succeed we must act together and not individually or in a half-hearted manner.

To be adequately represented we should have a direct representative for every 750 practitioners and, assuming there be 35,000 on the *Register*, this would mean 46. We are much in the position of the Uitlanders in the Transvaal at the present time, for although we outnumber the specialists who compose the General Medical Council by 99 to 1 yet we, for all practical purposes, are unrepresented.

It is no use our attempting to deal with the numerous things which require altering, for until we have a voice in the matter very little is likely to be done.

I am writing to our direct representatives to ask them to bring the subject of increased representation before the next meeting of the General Medical Council in order to give it one more opportunity of increasing the number, and if this be not acceded to I would suggest that each practitioner be asked to subscribe to a fund which has for its object the obtaining of parliamentary powers to compel the General Medical Council to accede to the request.—I am, etc.,

Rotherham, July 8th. W. H. ROWTHORN, L.R.C.P.

THE MIDWIVES BILL.

SIR,—I notice that Mr. Victor Horsley, in defending himself against a charge of change of front with regard to the necessity for legislation on the registration of midwives, has delivered an interesting speech, in which he advocates the passing of a Bill conferring the title of "midwifery nurse" instead of "midwife." I think it is unfortunate that a man of Mr. Victor Horsley's force of character and widespread renown should have given his countenance to a measure which is obnoxious to the majority of the profession, and which I believe to be regarded by that majority as likely to be productive of harm rather than good, both to the public and the medical profession. He, like most other advocates, attempts to insert protective clauses or safeguards; but I venture to submit that these safeguards more often than not only produce another complication of the subject, which ends in being another difficulty if not actually a danger.

It was suggested by Mr. Horsley that, in the event of an abnormality arising in a midwifery case, the midwife should call in a medical man, and a point was raised, Would the medical man so called in be guilty of covering? The answer given to this question by Mr. Horsley "as a private individual" was the common-sense one that "no charge would lie against the practitioner." But in expressing this opinion he is reported to have said, "Of course such a matter would come before the General Medical Council."

Now this latter statement, in my opinion, raises another question—Would the medical man so called upon undertake the case? I think no self-respecting man would be so foolish (if he really ran the risk of being hauled up before the General Medical Council, no matter how small his chance of being convicted), merely to assist a woman of whose class he probably disapproved *in toto*. Nor do I consider it fair that the shortcomings both of the midwife and the Legislature should have one common ending—the overtaxed generosity of the harassed and badly-paid general practitioner. Apart from these considerations, there is also another one that the doctor who habitually assisted a midwife in her abnormal cases would soon become a local advertisement for that midwife—a fact that she, with true feminine loquacity, would not fail to avail herself of; and the more skilful the doctor the more would this be so.

If the promoters of a Midwives Registration Bill cannot produce a midwife who is capable not only of recognising an abnormal case but also of dealing with it successfully, let them not fall back upon the unrequited services of persons they have no claim whatever upon, but let them appoint certain paid medical officers to undertake the patching up of their incompetent and partially-educated *protégées*. The providing of these medical officers would probably limit the operation of any Bill to towns and populous centres, and if the clause making this provision raised such difficulties as prevented the operation of such a Bill altogether, it would, in the opinion of many, be the most felicitous clause in the whole affair.

I do not wish to appear hypercritical or captious, but in Mr. Horsley's speech I see several things which appear to be

inconsistent. Thus he objects to the term "midwife" but would call them "midwifery nurses." This is merely a distinction without a difference—"a rose by any other name would smell as sweet." Again, he objects to the Obstetrical Society because they grant a diploma, but approves of registration, and consequently of a certificate of registration. I always understood the word diploma to mean a document which conferred some privilege or advantage on the recipient, and I believe the certificate of registration would to all practically-minded persons be as much a diploma as the diploma of the Obstetrical Society or any other body which grants one. Indeed, the registration being a matter authorised by Parliament would be giving the midwife a legal status she does not now possess, and which no merely technical body could bestow, and would probably encourage her to increase rather than diminish her efforts to practise the other branches of medicine. In short, there are so many objections to legislation on this subject and so few arguments in its favour, that it is to be hoped that the medical profession, and especially those members of it who represent their professional brethren, will not lend their aid to the passing of a Bill which is so strongly objected to.—I am, etc.,

FRANK GREAVES, M.R.C.S., L.S.A.

Junction Road, N., June 26th.

SHOULD DOCTORS BE ALLOWED TO DISPENSE?

SIR,—*Apropos* of your correspondents' letters in the BRITISH MEDICAL JOURNAL of June 24th and July 8th, I would point out that medical men are not allowed to dispense in the Argentine Republic if practising within reach of a qualified chemist, one result being that the doctor is regarded as an intellectual leader of society, and however young he may be invariably takes the hostess into dinner unless an older doctor, or a more highly titled personage—this latter a rare occurrence in a South American Republic—happens to be present.

How different this from what obtains in this country, where the general practitioner, too often justly, appears to be regarded as an upper servant or a shopkeeper, and is sometimes confounded with a penny-in-the-slot machine.—I am, etc.,

Reigate, July 14th. F. WYATT-SMITH, M.A., M.B., B.C.

MEMBERS' (R.C.S.) GOWN.

SIR,—In the various letters which have lately appeared concerning whether Members of the College should or should not have a distinctive garb, the question has been raised whether there would or would not be occasions to wear the same.

In my opinion this is a matter of secondary consideration. That there are, however, such occasions is shown by the Council granting permission to the Fellows to use such a distinctive dress.

The question is one rather of sentiment, which plays an important part amongst Members. They feel—and rightly feel, I submit—that they have been slighted; their collective desires, like many other unanimous wishes, have been ignored or inconsiderately thrown aside; and, after fifteen years of this treatment, feel that they are being treated as mere licentiates, and that their Membership is unreal and shadowy.

I submit that it was not the intention of the Legislature when placing the election of the Council in the hands of the Fellows that the greater bulk of the body corporate should be thus utterly ignored. I submit, also, that the Council as trustees of the interests of the Members should so act as to do away with the state of unrest and dissatisfaction that exists in the College. Though the Council may have conscientious doubts as to the benefit of extending the franchise, the withholding of permission to Members to wear a gown would appear to have somewhat of an arbitrary character about it.—I am, etc.,

Hastings, July 15th. FREDERICK W. COLLINGWOOD.

SIR,—As a physician I am called upon to investigate many complaints; some I understand, some I do not. I fail, for instance, to understand the complaint of the learned gentlemen who, although as of much learning as any graduate, sigh in pain for some distinctive emblem of their learning. I have a gown which I never wear because I have it, and I feel sure if the majority of gentlemen who are agitating for gowns could say the same their gowns would be as much use to them as mine is to me.

If the disease is so virulent as to require some form of treatment, let us all have gowns, long flowing scarlet gowns, and then we'll all be doctors. Then at least the gentleman who signs himself "Member, Diplomate, and Licentiate" can dispense with his A.K.C. gown and don something a little more intelligible to his Council and to the profession in general.—I am, etc.,

July 14th. M.B., L.R.C.P.

THE MEDICAL SERVICE OF CROWN COLONIES.

SIR,—With reference to your leading article on the Medical Service of Crown Colonies in the BRITISH MEDICAL JOURNAL of March 25th, p. 744, will you allow me to explain that the medical service of this Colony (which is not yet a Crown Colony) cannot be compared with that of any other, except perhaps Trinidad?

This service was created to supply, under Government control, medical aid and supervision to the large number of Eastern immigrants introduced under indent for the assistance of the planters. Nearly one-half of the Government medical officers (nineteen, the senior men who have gone through the other stages of the service) are in charge of districts in which they have to treat all labourers at the estates' hospitals either as in-patients or out-patients, and have to inspect the "new coolies" once a month and to inspect the hygienic state of the ranges, and to report on all matters connected with these labourers when called on as well as at the regular inspections.

The report of the Immigration Agent-General for 1897-8 has some interesting statistics furnished by the medical inspector, which show that during that year there were treated in the estates' hospitals by the Government medical officers 76,332 in-patients and 29,049 out-patients. The medical districts probably average 10 miles in length, having each from one to six estates' hospitals. The largest districts are in the hands of senior men drawing the maximum salary, as for example:

District.	In-patients.	Out-patients.	Total.
Canje	[illegible]	894	5,710
Enmore	8,857	2,447	11,304
Buxton	6,124	1,528	7,652
Peter's Hall ...	10,408	3,051	13,459

That this is efficiently done is, I think, proved by the rate of mortality returned as 1.9 per cent. in the estates' hospitals for the whole colony under the Immigration Department. The Suddie District has only the comparatively small number of 1,944 in-patients and out-patients, but the Government medical officer also has charge of the Essequeto public hospital, jail, and boys' reformatory. In addition, police, families, calls, and paupers have to be attended.

Taking into account the age these officers attain before getting the maximum salary, the climate they have to live in, and the expense of living where a house can seldom be got for less than £100 a year, can it be said that a salary of £900 a year is over-payment? Private practice and inquest fees are not in the question, which should be, Are the salaries too much for the work done? The mere clerical work of writing reports, returns, minutes, etc., is as much as many clerks get £80 to £100 a year for.

In the Blue Book for 1898 I find it stated that fifteen Government medical officers were absent from the Colony during the year; of these seven were on long leave and eight short leave, that is, under three months.

The Secretary of State has notified that in making appointments to the Colonial Medical Services preference will be given to those who have gone through a course of bacteriology, and no doubt the School of Tropical Medicine will be made an essential. Does he think that men who after full qualification have gone through two such severe extra courses are likely to

be content to come to malarial countries to do routine and clerical work for the proposed reduced salaries?

The London School of Tropical Medicine is no doubt an excellent thing, but if the Colonial Office have it at heart to advance our knowledge of tropical diseases I submit they could do no better than select a competent man to be attached to the public hospital of this city, freed from routine work, but having all encouragement to study tropical diseases in their acute as well as chronic forms, both clinically and pathologically; that the material is there is, I think, proved by the contents of the British Guiana *Medical Annual*, which is not infrequently referred to by Dr. Manson in his excellent work on *Tropical Diseases*. The work recorded in the British Guiana *Medical Annual* was voluntary and extra work.—I am, etc.,

Georgetown, B.G., April 27th. F. H. EDMONDS.

THE INTERNATIONAL CONFERENCE ON SYPHILIS AND VENEREAL DISEASES AT BRUSSELS IN SEPTEMBER.

SIR,—I have just received from Dr. Dubois-Havenith, Secretary of the Congress on Venereal Diseases to be held in Brussels, September 4th to 8th, a letter asking me to write to the medical journals to enlist their sympathy in making that Congress a success. The medical men who are at the head of this Congress, namely, Professor De Smet, Dr. Janssens, and Dr. Bayet, are well known to many of your readers, and are a guarantee that the discussions are likely to prove of service. Medical men, lawyers, and public functionaries are invited to take part in this Congress, and I have but little doubt that many British medical practitioners will be anxious to give their opinion as to how syphilis might be prevented. It is hoped that all shades of opinion may be expressed, and all difficulties candidly discussed, for it is lamentable that such an amount of preventable contagions should exist in civilised countries.—I am, etc.,

CHARLES R. DRYSDALE, M.D.,
Consulting Physician to the Metropolitan Hospital, formerly Physician to the Rescue Society's Lock Hospital.

London, July 14th.

F.R.C.S.ENG.(HON.)

SIR,—I expected to see some protests in last week's BRITISH MEDICAL JOURNAL against conferring the honorary F.R.C.S. Eng. As I do not, I wish to express my own humble disapproval of the honour being bestowed upon other than distinguished members of the medical profession. I consider that the title would form an awkward and ugly badge for one who had undergone no medical training, and would detract, I feel, from the honour of those who had professionally gained it.—I am, etc.,

July 17th. M.R.C.S.Eng.

MEDICAL APPOINTMENTS IN WORKHOUSE INFIRMARIES.

SIR,—Whatever "Verax" may mean by "keeping down the line of least resistance," he has not propounded a single argument in favour of the action of the Bradford Board. His enumeration of Poor-law reforms during the last generation may be interesting, but has nothing really to do with the present discussion, or my letter of last week. It is quite possible for the sick poor to be treated in parish infirmaries on hospital principles without having recourse to the Bradford scheme, and the Poor-law Service throughout the country will treat as it deserves the suggestion that patients do not receive as efficient hospital treatment in the splendid infirmaries of the metropolis as in those of the large provincial towns.

"Verax" classes me as a representative of the "old views." He may be right, but if so the "old views" include all the reforms he has specified in his letter with the exception of the absurd corollary he would seem to deduce from them. If he means to imply that the late Mr. Ernest Hart would have approved of the recent doings at Bradford, I can only say I do not agree with him; and although I do not pretend to speak officially for the Council of the Poor-Law Medical Officers' Association, I believe my views are pretty representative of those held by the Council, and, at any rate, they are shared by the gentleman who for many years has been chairman of that body. I allude to Mr. D. Balding, who is no mean authority on Poor-law matters, and is quite as well acquainted with the late Mr. Hart's opinion on this subject as "Verax." It seems to me a great pity "Verax" should have written under a *nom de plume*. I cannot help thinking his name might have had more weight with the profession than his arguments.—I am, etc.,

Hackney Road, N.E., July 15th. MAJOR GREENWOOD.

DEFECTIVE DEVELOPMENT OF THE RIBS.

SIR,—In connection with Dr. Levy's contribution to the BRITISH MEDICAL JOURNAL of May 13th, and with Mr. Williams's letter in the issue of July 1st, 1899, perhaps you may allow me to record the following case.

Jane H., aged 3 years and 7 months, was seen by me on November 26th last, through the kindness of Dr. W. K. Hunter. On inspiration a distinct hollow appeared in the right side of the chest, but there was little or no bulging on expiratory efforts.

Examination showed that the sixth rib on the right side terminated in the nipple line, while at the margin of the sternum a prominence was felt, situated just above the costal cartilage of the seventh rib. This prominence probably represented the sternal portion of the sixth cartilage, and the fingers could be pressed into the gap caused by the deficiency. The nipple was present, but I have no notes as to any defect in the soft tissues of the pectoral region.

When seen by Dr. Hunter the child was suffering from bronchial catarrh.—I am, etc.,

Glasgow, July 16th. GEO. HENRY EDINGTON.

ANTISTREPTOCOCCIN INJECTIONS IN SEPTICÆMIA.

SIR,—The BRITISH MEDICAL JOURNAL for July 8th contained accounts of seven cases of septicæmia, in only one of which was a bacteriological examination of the blood undertaken. In four of these, in which no such investigation was instituted, antistreptococcin was administered, and, apparently rather to the surprise of the "experimenters," with beneficial results. Nor can others but feel surprise also that a remedy which is still on its trial should be used in such haphazard fashion. The bacteriological diagnosis of septicæmia is comparatively easy, at any rate with regard to the streptococcus. It is not usual in other diseases to commence treatment till as accurate a diagnosis as possible has been arrived at. How would those cases have fared had they been due to any other micro-organism than the streptococcus? and would not antistreptococcin have been discredited in such case? One might as well administer antidiphtherin for a syphilitic ulceration of the tonsils or fauces as antistreptococcin for an infection due to the B. coli or staphylococcus aureus.—I am, etc.,

Southwark Street, S.E., July 12th. G. LESLIE EASTES.

MOTORS FOR MEDICAL MEN.

SIR,—A short time back a correspondent on the above subject asserted his intention of starting a motor as soon as he had got rid of his stable equipment. As I have had a motor for about six months I know more on the subject than I did, and I would strongly urge anyone having a horse and carriage not to dispose of them and buy a car. Buy a motor by all means, and when you have had it long enough to know how much and how little you can rely on it, sell your horse, etc., if you like. In my case it was not a question of selling anything, but only buying, and having no stable I bought a petrol motor. I am not a busy man, and if I cannot drive there are ample facilities in my neighbourhood for getting about, and since I procured my car on an average it has only been available half the time. It is surprising what a number of trifles throw your car out of use just when you want it, and if you are in a hurry this loss of service is a great worry. Increased knowledge lessens the number of these stoppages, but even increased knowledge does not altogether eliminate them.

A motor is not so convenient in making a number of visits close together, as the starting is often a little difficult and always more noisy than when running. It is very good for a long journey, which it does more quickly than a horse. It is

much more interesting than a horse driver would think, and, taking everything into consideration, I think it suits me better than a horse, though many times I have wished for the old-fashioned "gee-gee." One thing may be added—that is, if something goes wrong and you are alone and have to put things right yourself, you will need a good wash before you will be presentable in the sick room.—I am, etc.,

July 12th. E. H. R.

THE POLLUTION OF THE RIVERS LEE AND STORT.

SIR,—I have read with interest in the BRITISH MEDICAL JOURNAL of July 15th Dr. Kynsey's report on the above, and, as a resident in Ware, think I can write with some authority on the subject. As to the pollution by bargeloads of manure of the most offensive description, dumped on the bank of the river, I agree with all that Dr. Kynsey has said. It is a shame that such pollution of air and water should be permitted. But Dr. Kynsey has failed to observe what to my mind is the greatest pollution of the River Lee above the intake of the East London Waterworks—namely, the Hertford sewage—which flows into the river by the Manifold Ditch immediately below the Ware Lock, and gives to the water in this part the inky-looking and very dirty appearance described in the report. The hundreds of tons of sifted ash—that is, sifted manure heaps—do not pollute the water to any very great extent. They are simply heaps of ashes used for burning and brickmaking in the extensive brickfield in this neighbourhood. With regard to the pollution of the River Lee by Hertford sewage above the town of Ware, an action was taken some years ago by the Lee Conservancy against the Hertford Corporation to prevent this pollution, but was lost on a legal technicality. It is high time that the matter was taken in hand by some authority, or, failing that, by the consumers of this contaminated supply.—I am, etc.,

ALEX. J. BOYD, B.A., M.D.

The Manor House, Ware, July 18th.

ON THE VALUE OF CONTINUOUS STATISTICAL RECORDS.

SIR,—I have just noted some remarks in the BRITISH MEDICAL JOURNAL for July 8th, p. 103, under this heading. I think that the statistical table at the beginning of the borough of Kendal annual reports, and the notes thereon, might fairly be considered as a record of value. It was begun by Dr. David Page, and completed by him to the year 1880, continued by me from that year to 1889, and kept up since by the present medical officer of health for the borough.—I am, etc.,

Northampton, July 18th. CHARLES E. PAGET.

OBITUARY.

GEORGE HEWLETT BAILEY, M.R.C.S.

GEORGE HEWLETT BAILEY, whose death on July 8th closed a long and useful life, was born at Bath on September 16th, 1827. He received his early education at private schools at Bognor and Barnet, and pursued his professional studies at University College and Hospital. According to the custom then in vogue he became apprenticed to Mr. Redford, the surgeon, who practised in Golden Square. Mr. Redford was perhaps better known for his artistic proclivities and the work he did at the British Museum. It was under the influence of the art criticism of Mr. Redford, and in the atmosphere of his teaching, that George Bailey learnt to love things of beauty in art and Nature, and acquired those tastes which solaced his manhood and declining years. Mr. Bailey, after entering upon general practice early, became associated with the late Mr. Clover, with whom for many years he worked at anæsthetics. As this line of practice became more engrossing he gave up general work, and soon became recognised as one of the leaders in his speciality.

Mr. Bailey held appointments as anæsthetist at Charing Cross Hospital, at the Cancer Hospital at Brompton, and for many years was associated with the Dental Hospital of London. He was also attached as chloroformist to the London Throat Hospital and the St. John and St. Elizabeth's Hospital in Great Ormond Street. Mr. Bailey, collaborating with Mr. Clover, contributed the article on Anæsthetics in *Quain's Dictionary of Medicine*. Although a busy man Mr. Bailey always found time to pursue his favourite studies. An omnivorous reader, he loved poetry, painting, and archæology, devoted much attention to architecture, and found in geology a holiday occupation.

At the inception of the Society of Anæsthetists Mr. Bailey was an original member, and was elected its President in 1895, an honour which again fell to him in 1896. All who saw Mr. Bailey at work recognised him as a master in his art, but his claim upon the suffrages of the men of his day and generation lies even more in his unvarying good nature and kindliness. To be his pupil, his patient, or his colleague, was to love him; to say that a man has gone to his grave beloved of those with whom a long life had brought him into contact is perhaps the best epitaph any man can have. Of Mr. Bailey this was literally true.

Mr. Bailey formally retired from the exercise of his profession only in March of this year, when his friends presented him with a handsome memorial set of antique silver, little knowing for how brief a time he would enjoy the token of his fellows' goodwill.

WILLIAM HARGREAVES MANIFOLD, M.R.C.S.ENG.,

Consulting Surgeon to the Northern Hospital, Liverpool.

WE regret to announce the death of Mr. W. H. Manifold, which took place at his residence, 49, Carrington Street, Liverpool, on July 11th. The deceased gentleman was born in Liverpool in 1826, his father being a well-known practitioner in that town. After leaving school Mr. Manifold studied medicine in London, Paris, and Zurich, and obtained his qualification to practise in 1849. Soon after settling in Liverpool he was appointed Surgeon to the North Dispensary, and eleven years later Surgeon to the Northern Hospital. The latter appointment he held for twenty-five years, and was then appointed Consulting Surgeon. Mr. Manifold exercised considerable influence in stimulating the spread of gymnastic exercises at a time when they were less valued than they are at present. He was for many years Surgeon-Major to the 2nd Lancashire Militia. His health was failing for some years, and he had of late retired from practice. His funeral took place on July 14th, in St. James's Cemetery, and was attended by some of his old friends and colleagues, including Dr. A. T. H. Waters, Mr. C. Puzey, Dr. Macfie Campbell (President of the Medical Institution), and Mr. G. E. Walker. He leaves two sons and one daughter.

UNIVERSITIES AND COLLEGES.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

COUNCIL MEETING.

A QUARTERLY Council was held on July 13th, Sir WILLIAM MAC CORMAC, Bart., K.C.V.O., President, in the chair.

Mr. Herbert William Page and Mr. Thomas Richard Jessop took their seats as members of the Council.

The late Sir William Henry Flower.—The Council expressed their deep regret at the death of Sir William Henry Flower, K.C.B., F.R.S., and their sincere sympathy with Lady Flower and the members of his family.

Amendment of the Medical Acts.—The Council approved the amended clauses as suggested by the General Medical Council, these amendments being made with the object of providing additional disciplinary powers in the cases of persons whose names have been erased from the *Medical Register* for criminal or professioual offences.

Meeting of Fellows and Members.—The resolutions passed at the above meeting on July 5th were answered as follows:

That the memorialists be informed that the Council is introducing only one matter in the application for an alteration of charter—namely, the institution of an honorary Fellowship, and that in their opinion it would be inopportune to introduce any other on the present occasion; that the Council notes with satisfaction that the memorialists endorse the proposal that power be obtained to confer the Fellowship of the College upon persons of distinction, and that in view of the first decision the Council is not prepared to receive a deputation in reference to the memorial proposed by the Members of the College, to the effect that the Members should be represented on the Council.

Matabeleland.—A letter of June 17th from nine medical practitioners residing in Matabeleland calling attention to

a recently-enacted medical ordinance and to their objections to the same, and appealing to the representative of the College on the General Medical Council to urge that Council to approach the Secretary of State for the Colonies with the view of having the ordinance repealed, was referred to Mr. Bryant.

Appointment of Professors and Lecturers.—The following appointments were made: Hunterian Professors: Mr. Mayo Robson, Mr. Charles Stewart, Mr. Arthur Keith. Arris and Gale Lecturer: Mr. B. G. A. Moynihan. Erasmus Wilson Lecturer: Mr. E. Treacher Collins. Sir William Mac Cormac, Bart., K.C.V.O., was re-elected President for the ensuing year. Mr. H. G. Howse and Mr. J. Tweedy were elected Vice-Presidents.

ADDITIONS TO MUSEUM.

The pathological and physiological preparations added during the past year were exhibited in the Council room of the College on the 6th, 7th, 8th inst. Amongst the more interesting of the pathological series may be noticed the following: The humerus of an infant affected with highly-pronounced congenital rickets. The disease in this case was general, the bones being quite pliable, and exhibiting in section both the epiphysial and diaphysial changes pathognomonic of the disease. (Mr. F. C. Abbott)

Pachydermia laryngis. (Mr. R. Lake)

The cervical portion of a spinal column which was extensively crushed many years before death without the production of any permanent nerve symptoms. (Dr. H. P. Potter)

The prostate glands from two patients, upon one of whom double castration had been performed, upon the other, division of the vasa deferentia, for the treatment of prostatic enlargement. (Mr. J. R. Lunn)

Pieces of the small intestine from two dogs in which experimental end-to-end union had been effected. (Mr. W. Edmunds)

An internal saphenous vein, showing physiological shrinkage in a bed-ridden subject. (Dr. Parkes Weber)

An unusually marked example of tropical elephantiasis affecting the foot. (Dr. H. G. Turney)

Alcoholic solution of hæmatoporphyrin. (Dr. A. E. Garrod)

A large series of plaster casts showing abnormal conditions and irregularities of the teeth. These were collected and presented by Mr. Alfred Coleman; a certain number are duplicates of casts in the Museum of the Odontological Society, the rest are from cases observed by the donor.

Tuberculosis of the udder in a cow, from the Royal Veterinary College; and from the same institution portions of the spleen and liver of a calf affected with congenital tuberculosis. (Prof. John MacFadyean)

A vesical calculus which was drilled by Civiale. (Mr. Norris F. Davey)

A specimen of Tsetse-fly or Nagana disease in a white rat, which was experimentally infected by the subcutaneous injection of blood taken from a bird suffering from the disease; the preparation exhibits the enlargements of the lymphatic glands and of the spleen, the latter especially marked in the rat. (Dr. H. E. Durham)

Of the series of bacteriological cultures in course of preparation by Mr. S. G. Shattock, three cases are complete. The cultures, which are rendered permanent by means of formalin vapour, comprise the micro-organisms of plague, influenza, glanders, diphtheria, cholera of Finkler and Prior, of Metchnikoff; typhoid, rhinoscleroma; the colon bacillus (Escherich's strain); bacillus capsulatus septicus; saccharomyces albicans, streptothrix actinomyces, streptothrix Maduræ, staphylococcus pyogenes aureus and albus, streptococcus pyogenes. Above the cultures is a complete set of coloured drawings showing the microscopic characters of the bacteria themselves, the drawings having been made from microscopic specimens especially prepared for the purpose.

To the general series of drawings a valuable addition has been made. This consists of a large number of original water-colour drawings illustrating diseases of the rectum and anus, which were executed by the late Mr. Peter Y. Gowland, and which, on coming into Mr. Bryant's possession, were presented by him to the College.

UNIVERSITY OF EDINBURGH.

THE University and Extra-Academical medical classes rose for the summer and autumn recess on Friday, July 14th. The laboratory courses will be resumed on October 2nd and 3rd, and the new session opens on Tuesday, October 17th.

UNIVERSITY OF ABERDEEN.

EXAMINERS.—The following additional examiners for degrees have been appointed: *Botany:* Alexander W. Brown, M.A., M.B., D.Sc.Aberd., Aberdeen. *Medicine:* Arthur Fras. Voelcker, M.D.Lond., London. *Midwifery:* Fras. W. N. Haultain, M.B.Edin., Edinburgh.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following is a list of the prizes and scholarships awarded in the summer session, 1899: Carmichael Scholarship, Miss M. J. Shire, £15. Mayne Scholarship, D. A. Fitzgerald, £15. Gold and Silver Medals in Operative Surgery, C. R. Boyce, Gold Medal; C. Miles and J. F. Peart (equal), Silver Medal. Practical Histology: E. Evatt, First Prize (£3) and Medal; A. Charles, Second Prize (£1) and Certificate. Practical Chemistry, E. C. Byrne and J. R. H. M'Manus (equal), First Prize (£2) and Medal. Public Health and Forensic Medicine, J. P. Byrne, First Prize (£3) and Medal; E. Evatt, Second Prize (£1) and Certificate. Materia Medica, J. S. Ashe, First Prize (£3) and Medal; T. A. Dillon, Second Prize (£1) and Certificate. Practical Pharmacy, Miss J. C. Hargrave, First Prize (£3) and Medal; W. Ormsby, Second Prize (£1) and Certificate. Biology, J. R. B. Buchanan and Miss J. C. Hargrave (equal) First Prize (£2) and Medal.

The Preliminary Examination for the commencement of medical study will be held on Wednesday and Thursday, September 27th and 28th.

SCHOOL OF MEDICINE OF THE ROYAL COLLEGES, EDINBURGH.

AT a meeting of the Governing Board of the School, the Secretary, Mr. R. P. Ramsay, reported that the number of students so far as ascertained attending the school during the summer session recently closed was 1,205. This shows how much extramural teaching is taken advantage of by students looking forward to a diploma in medicine.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL A. L. BROWNE, M.D., retires on retired pay. He was appointed Assistant-Surgeon, March 30th, 1872; Surgeon, March 1st, 1873; Surgeon-Major, March 30th, 1884; granted the rank of Lieutenant-Colonel, March 30th, 1892; and made Brigade-Surgeon-Lieutenant-Colonel, July 6th, 1896. He has no war record in the *Army Lists*.

Colonel W. E. SAUNDERS has been appointed Principal Medical Officer of the North-Eastern District.

Colonel W. J. FAWCETT, at present serving in the Bombay Command, has been ordered to Egypt.

ARMY MEDICAL RESERVE.

SURGEON-MAJOR W. DRAPER is promoted to be Surgeon-Lieutenant-Colonel, July 19th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL C. W. CARR-CALTHROP, M.D., Bengal Establishment, is promoted to be Colonel, April 2nd. He was appointed Assistant-Surgeon, April 1st, 1869, and became Brigade-Surgeon-Lieutenant-Colonel, March 29th, 1895. He was in the Afghan war in 1879-80, and was in the engagement at Ali Kheyl and in the operations round Cabul in December, 1879, including the investment of Sherpore (medal with clasp).

Lieutenant-Colonel W. R. MURPHY, D.S.O., Bengal Establishment, has retired from the Service, July 15th. His first commission dates from March 30th, 1872, that of Brigade-Surgeon-Lieutenant-Colonel, September 1st, 1896. His war services are thus summarised: Afghan war, 1878-80, action of Saif-u-deen and Occupation of Kandahar; battle of Ahmed Khel; actions of Urzoo and Patkao Shana (despatches, *London Gazette*, October 22nd, 1880; medal with clasp). Hazara expedition, 1888 (despatches; G.G.O., 978 of 1888; medal with clasp). Lushai expedition, 1889 (clasp). Chin-Lushai expedition, 1889-90 (mentioned by Government of India; despatches, *London Gazette*, September 12th, 1890; clasp; D.S.O). Operations in Chitral, 1895; with the Relief Force (medal with clasp). Operations on North-West Frontier of India, 1897; served with the Kurrum-Kohat Force (despatches, *London Gazette*, February 11th, 1898); also with Tirah Expedition Force as Principal Medical Officer, Kurram Movable Column (despatches, *London Gazette*, April 5th, 1898; medal with two clasps).

THE VOLUNTEERS.

MR. ALFRED B. WRIGHT is appointed Surgeon-Lieutenant in the 1st Hampshire Engineers, July 19th.

Mr. JOHN A. ANGUS is appointed Surgeon-Lieutenant in the 3rd Volunteer Battalion the Royal Fusiliers (City of London Regiment), July 19th.

ROYAL ARMY MEDICAL CORPS: OPERATIONS ON SALISBURY PLAIN.

THE following report for carrying out a complete medical scheme for No. 17 Bearer Company and the 11th Field Hospital serving with the 1st Infantry Division is given by a correspondent of the *Times*:

At Perham Down a day was set apart for the carrying out of a complete medical scheme for the No. 17 Bearer Company and the 11th Field Hospital, serving with the First Infantry Division. For this purpose a general idea was drawn up setting forth that a divisional force had taken up a position to cover Andover and oppose the advance of a hostile army advancing from Devizes through Everley, the right of the division resting upon Windmill Hill and the left at Andover Clump. The imaginary forces consisted of two brigades, with four battalions in each, and the disposition of the units was denoted. A fatigue party of unknown strength was told off to represent the wounded and distributed over the area of the supposed action, and the medical scheme was to make all medical arrangements suitable to the situation described prior to the attack, and remove the wounded from the position during the engagement. The medical officers who were in charge of the several branches for working out the scheme

were Major Battersby, Captain Martin, Captain Lawson, Major Freyer, Lieutenant Hewett, Major Irving, Major Tate, and Lieutenant Palmer; while Captain Porter was attached to the general staff for the day. Eleven ambulance wagons were utilised together with the services of the 4th Column Field Hospital, and in all 76 casualties were dealt with. The work was carried out most expeditiously, and no hitch occurred from the time the wounded were picked up and received first aid. They were then transferred to the temporary hospital for surgical treatment, and after that conveyed to the stationary hospital at the base, where everything was in readiness to receive each individual case, both in the matter of comfort and diet. Every detail was so well arranged that the whole scheme as to the proper care and treatment of the wounded in the stationary hospital was completed in the short space of an hour and a half. Major-General Sir H. M. L. Rundle and staff, with Colonel Gallwey, minutely inspected the carrying out of every stage of the scheme, and at the close General Rundle complimented the medical staff on the excellent way all had performed their duties, remarking that he was greatly impressed with the absence of noise or disorder of any kind, and nothing could have been more perfect than the arrangements made both for the reception and treatment of the wounded.

THE AMBULANCE CHALLENGE SHIELD.

THE annual competition for the Ambulance Challenge Shield, presented by the Volunteer Medical Association to encourage proficiency in ambulance work among certificated regimental stretcher bearers, takes place on Saturday, July 22nd, at 4 P.M., at Wellington Barracks. Major-General Trotter, commanding the Home District, has promised to attend, and to present the badges to the winning and second squads.

MEDICO-LEGAL.

MIDWIFERY ENGAGEMENTS.

G.H.O.—There appears to have been a breach of contract on the part of the husband. A solicitor should be consulted.

CONSULTATIONS AFTER ACCIDENTS.

JUSTITIA wishes to know who is responsible for the medical attendant's fee under the following circumstances: A practitioner is attending a patient after an injury, and in the course of his attendance the parties responsible for the accident wish him to meet their medical representative. To whom is he to look for a fee?

*** It is customary for this fee to be added to the other charges for attendance after the accident, and when a final settlement is arrived at, these charges will have to be paid by the parties responsible for the accident.

FAILURE TO APPOINT A VACCINATION OFFICER AT LEICESTER.

ON July 11th the Local Government Board applied to the Queen's Bench Division before Mr. Justice Ridley and Mr. Justice Darling for a rule *nisi* for a mandamus to the guardians of the poor of the parish of Leicester commanding them to appoint a vaccination officer. It appeared that the vaccination officer had resigned on December 31st, 1898. The Local Government Board had pointed out to the guardians that it was their duty under the Vaccination Act of 1871 and the Vaccination Order 1898 to make a fresh appointment without delay. The guardians replied that, in their opinion, they were "charged by their appointment with the responsibility of a definite mandate against the compulsory enforcement of vaccination," and that they were unable to betray the trust reposed in them by the electorate by appointing an officer who by his will could institute prosecutions and who, under these circumstances and the special circumstances of Leicester, would be either the instrument of compulsion or nothing.

The court granted the rule *nisi* making it returnable on July 28th.

A representative of the solicitors of the Local Government Board proceeded to Leicester on July 18th, and was admitted to a meeting of the guardians, when all the members of the Board, with the exception of the three members who voted against the resolution declining to appoint a vaccination officer, were served with a copy of the Order made by the court.

FOREIGN DEGREES.

M.A.CANTAB., writing in reference to an answer which appeared under the head of "Medical Titles" in the BRITISH MEDICAL JOURNAL of June 10th last, and to two other answers which appeared in the JOURNAL of July 8th under the heading of "Foreign Degrees," states that if the advice there given were followed, the result would be that the title "Dr." would be reserved for the practitioner who, in addition to a registrable qualification other than M.D., had a non-registrable M.D. He goes on to ask how a graduate can call himself "Dr." by virtue of a M.D. in a community in which he is not allowed to use his title of M.D.

*** We think that the answers referred to scarcely justify the conclusions arrived at by our correspondent. If the holder of a non-registrable M.D. degree may style himself "Dr.," as we stated we considered he was justified in doing, *a fortiori* the holder of a registrable M.D. is entitled to do so. The latter part of our correspondent's question does not state the facts quite correctly. It is not accurate to say that the holder of a non-registrable degree "is not allowed to use his title of M.D." He is not indeed allowed to use it in such a way as to induce the belief that it is a registered qualification, as might be inferred from the user of the letters M.D. simply (against which practice one of the answers referred to is directed), but he is certainly entitled to use it in a way that cannot possibly be misleading—that is, adding to the title the name of the university. The fact that such a degree is not recognised by law as registrable does not invalidate it in this country, or disentitle the holder from using it within the limits above pointed out, and we therefore venture to repeat our previous opinion that a medical man holding in addition to his registrable qualifications the M.D. degree of any well recognised foreign university, is justified in styling himself "Dr."

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

INCREASED ACCOMMODATION FOR INFECTIOUS CASES IN LONDON.

AT the last meeting of the Managers of the Metropolitan Asylums Board the returns of patients suffering from fevers showed that 4,054 such remained under treatment, as compared with 3,749 a fortnight ago, an increase of 305. Of this number 2,558 were suffering from scarlet fever, 1,397 from diphtheria, and 98 from enteric fever.

Mr. Scovell brought up a report from the Hospitals Committee recommending that the accommodation for infectious cases should be forthwith increased by opening the new Grove Hospital at as early a date as possible. The fluctuations in the amount of fever in the metropolis prevented an accurate forecast being made of the number of beds that would be required, but he said that a return prepared for their consideration by the ambulance department indicated that it would be prudent to make available the 520 beds which their new hospital would afford them. On this report it was resolved that the necessary steps should be taken, and that Dr. F. Caiger should be transferred from his present post at the South-Western Hospital, and be appointed Superintendent of the Grove Hospital for a period of about six months.

MEDICAL OFFICER OF HEALTH FOR BATH.

AT the last meeting of the Bath City Council it was resolved to increase the salary of the medical officer of health from £200 a year and expenses to £425 inclusive, with the proviso that he should in future give his whole time to the duties. The proposal met with the usual opposition on the usual grounds, but we are glad to note that it was finally carried by a majority of 20 to 10.

STERILISATION OF MILK.

THE Council of the National Association for the Prevention of Consumption and other Forms of Tuberculosis has adopted the following resolution, drafted by a Committee, of which Sir Herbert Maxwell, Bart., M.P., is Chairman: "The Committee, while adhering to the recommendation to boil milk as a precaution against the presence of tubercle bacilli, awaits the conclusion of experiments now in progress before recommending a preferable mode of sterilisation."

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,160 births and 3,690 deaths were registered during the week ending Saturday last, July 15th. The annual rate of mortality in these towns, which had been 15.7 and 16.0 per 1,000 in the two preceding weeks, further rose to 16.9 last week. The rates in the several towns ranged from 11.0 in Croydon, 11.1 in Huddersfield, 11.8 in Cardiff, and 12.0 in Portsmouth and in West Ham, to 21.5 in Manchester, 23.3 in Liverpool, 24.1 in Sheffield, and 24.6 in Salford. In the thirty-two provincial towns the mean death-rate was 17.5 per 1,000, and exceeded by 1.6 the rate recorded in London, which was 15.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.5 per 1,000; in London the death-rate was equal to 2.3 per 1,000, while it averaged 2.7 in the thirty-two provincial towns, among which the highest zymotic death-rates were 5.1 in Liverpool and in Burnley, 5.6 in Sheffield, and 6.7 in Salford. Measles caused a death-rate of 1.1 in Nottingham, 1.3 in Sheffield, 1.8 in Manchester, 2.2 in Salford, and 2.3 in Burnley; whooping-cough of 1.0 in Salford and in Huddersfield, and 1.1 in Sunderland; scarlet fever of 1.0 in Oldham, and 1.4 in Burnley; and diarrhœa of 2.3 in Norwich, 2.4 in Liverpool, 2.6 in Salford, and 3.3 in Nottingham. The mortality from "fever" showed no marked excess in any of the large towns. The 91 deaths from diphtheria in the thirty-three towns included 37 in London, 10 in Sheffield, 7 in Swansea, 6 in Liverpool, 4 in West Ham, and 4 in Leicester. One death from small-pox was registered in London, and one in Hull, but not one in any other of the thirty-three towns. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had risen from 2,367 to 2,526 at the end of the three preceding weeks, further rose to 2,601 on Saturday last, July 15th; 299 new cases were admitted during the week, against 335, 302, and 315 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, July 15th, 933 births and 510 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 17.7 to 16.9 per 1,000 in the two preceding weeks, further declined to 16.7 last week, and was 0.2 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 11.4 in Leith and 12.4 in Aberdeen, to 20.3 in Perth and 21.6 in Paisley. The zymotic death-rate in these towns averaged 2.3 per 1,000, the highest rates being recorded in Dundee and Greenock. The 242 deaths registered in Glasgow included 8 from measles, 2 from whooping-cough, 2 from fever, and 15 from diarrhœa. Five fatal cases of whooping-cough, 2 of "fever," and 5 of diarrhœa were recorded in Edinburgh; 2 deaths from whooping-cough and 8 from diarrhœa occurred in Dundee; and 2 from "fever" in Paisley.

VITAL STATISTICS OF LONDON SANITARY DISTRICTS DURING THE SECOND QUARTER OF 1899.

[SPECIALLY REPORTED TO THE BRITISH MEDICAL JOURNAL.]

IN the accompanying table will be found summarised the vital statistics of the forty-three sanitary areas of the metropolis based upon the

Registrar-General's returns for the second or spring quarter of the current year. The mortality figures in the table relate to the deaths of persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the public institutions of London among the various sanitary areas in which the patients had previously resided.

The 33,539 births registered in London during the three months ending June last were equal to an annual rate of 29.6 per 1,000 of the population, estimated at 4,546,752 persons in the middle of this year; in the corresponding periods of the three preceding years, the birth-rates were 30.3, 29.1, and 28.8 per 1,000 respectively. In the second quarters of the ten preceding years, 1889-98, the birth-rate in the metropolis averaged 30.5 per 1,000. The birth-rate during the period under notice in the various sanitary areas showed, as usual, wide variations, owing principally to the differences in the sex and age distribution of the population. In Kensington, St. George Hanover Square, Hampstead, St. Martin-in-the-Fields, Strand, and London City the birth-rates were considerably below the average; while they showed the largest excess in St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, and St. George Southwark.

The 18,317 deaths of persons belonging to London registered during the three months ending June last were equal to an annual rate of 16.2 per 1,000, against 17.4, 15.1, and 16.0 in the corresponding periods of the three preceding years; in the second quarters of the ten preceding years the death-rate in London averaged 17.7 per 1,000. The lowest death-rates in the various sanitary areas were 11.2 in Hampstead 11.9in Stoke Newington, 12.2 in Battersea and in Lee, 12.4 in Plumstead, 12.5 in St. George Hanover Square, and 12.8 in Wandsworth; the highest rates were 20.0 in Strand and in Bermondsey, 20.6 in St. Saviour Southwark, 22.5 in St. George Southwark, 24.1 in Limehouse, 24.4 in St. George-in-the-East, and 25.3 in St. Luke. During the quarter under notice 1,883 deaths resulted from the principal zymotic diseases in London; of these, 1 was referred to small-pox, 694 to measles, 84 to scarlet fever, 353 to diphtheria, 526 to whooping-cough, 84 to enteric fever, and 141 to diarrhœa. These 1,883 deaths were equal to an annual rate of 1.64 per 1,000, against an average rate of 2.24 in the corresponding periods of the ten preceding years, 1889-98. In the second quarter of the three preceding years the zymotic death-rate was 3.55, 1.45, and 2.24 per 1,000 respectively. In the various sanitary areas the lowest zymotic zymotic death-rates were 0.36 in St. James Westminster, 0.51 in Plumstead, 0.71 in Paddington, 0.75 in St. Giles, 0.85 in Wandsworth, and 0.89 in Rotherhithe; the highest rates were 2.30 in Poplar, 2.44 in Holborn, 2.58 in Newington, 2.91 in St. George Southwark, 3.39 in St. George-in-the-East, and 4.50 in Limehouse. Measles showed the highest proportional fatality in Hackney, St. Luke, Shoreditch, St. George-in-the-East, Limehouse, Poplar, Lambeth, and Greenwich; scarlet fever in Fulham, Westminster, Bermondsey, and Woolwich; diphtheria in St. Pancras, Strand, City of London, Limehouse, St. George Southwark, Newington, Bermondsey, and Lewisham; whooping-cough in Holborn, Limehouse, Mile End Old Town, Poplar, St. George Southwark, Newington, and Bermondsey; and "fever" in Holborn, Clerkenwell, and St. George-in-the-East. The fatal case of small-pox was of a person belonging to St. Marylebone sanitary area.

During the second quarter of this year 1,925 deaths from phthisis were registered in London, equal to an annual rate of 1.70 per 1,000, against 1.61 and 1.65 in the corresponding periods of the two preceding years. Among the various sanitary areas the lowest phthisis death-rates last quarter were recorded in Paddington, Hampstead, Stoke Newington, Rotherhithe, Lewisham, and Plumstead; and the highest rates in St. James Westminster, St. Giles, Holborn, St. Luke, St. Saviour Southwark, and St. George Southwark.

Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 113 per 1,000 last quarter, against 137, 111, and 126 in the corresponding periods of the three preceding years. Among the various sanitary areas the rates of infant mortality were lowest in Marylebone, Stoke Newington, St. Olave Southwark, Lee, Lewisham, and Plumstead; while they showed the largest excess in St. Martin-in-the-Fields, Holborn, Shoreditch, St. George-in-the-East, St. George Southwark, and Bermondsey.

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions during the Second Quarter of 1899.

SANITARY AREAS.	Estimated Population middle of 1899.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Phthisis.	Deaths of Children under 1 year of age to 1,000 Births.
				Births.	Deaths.	Principal Zymotic Diseases.												
LONDON	4,546,752	33,539	18,317	29.6	16.2	1.64	1,883	1	694	84	353	526	—	84	—	141	1,925	113
West Districts.																		
Paddington	128,794	728	456	22.7	14.2	0.71	23	—	2	—	6	11	—	—	—	4	32	99
Kensington	172,899	888	647	20.6	15.0	1.00	43	—	3	2	3	29	—	4	—	2	47	124
Hammersmith	108,785	775	459	28.6	16.9	1.70	46	—	14	3	7	17	—	2	—	3	52	119
Fulham	130,720	1,105	503	33.9	15.4	1.65	54	—	11	7	9	18	—	2	—	7	52	129
Chelsea	96,721	609	410	25.3	17.0	0.95	23	—	1	4	7	10	—	1	—	—	45	90
St. George Hanover Sq.	80,876	326	253	16.2	12.5	1.05	21	—	9	2	3	2	—	4	—	1	27	107
Westminster	52,117	296	241	22.8	18.5	1.00	13	—	6	3	2	1	—	1	—	—	29	132
St. James Westminster	21,827	120	77	22.1	14.1	0.36	2	—	—	—	—	1	—	—	—	1	15	108
North Districts.																		
Marylebone	140,130	1,015	571	29.1	16.3	1.06	37	1	7	3	6	10	—	4	—	6	62	89
Hampstead	80,252	432	225	21.6	11.2	0.95	19	—	12	1	3	3	—	—	—	—	16	93
St. Pancras	244,548	1,739	1,036	28.5	17.0	2.01	122	—	37	6	29	38	—	4	—	8	114	116
Islington...	348,085	2,425	1,281	27.9	14.8	1.66	143	—	56	5	13	55	—	4	—	10	132	106
Stoke Newington ...	35,187	198	104	22.6	11.9	1.24	11	—	5	1	1	2	—	1	—	1	7	81
Hackney	222,571	1,651	868	29.8	15.6	1.80	100	—	61	5	16	9	—	3	—	6	81	111
Central Districts.																		
St. Giles	37,196	274	174	29.5	18.8	0.75	7	—	3	—	1	—	—	—	—	3	30	99
St. Martin-in-the-Fields	12,142	26	43	8.6	14.2	0.99	3	—	2	—	1	—	—	—	—	—	4	346
Strand	23,016	123	115	21.4	20.0	1.21	7	—	1	1	4	—	—	—	—	1	10	122
Holborn	29,621	192	183	26.0	24.8	2.44	18	—	6	1	1	6	—	2	—	2	22	208
Clerkenwell	66,068	501	280	30.4	17.0	1.93	32	—	12	1	4	7	—	4	—	4	31	122
St. Luke	40,868	420	258	41.2	25.3	1.77	18	—	9	1	—	6	—	—	—	—	30	107
London City	27,986	130	121	18.6	17.3	1.43	10	—	3	1	3	2	—	1	—	—	16	123
East Districts.																		
Shoreditch	121,071	1,001	561	33.2	18.6	2.02	61	—	28	2	12	11	—	1	—	7	53	139
Bethnal Green	128,938	1,171	590	36.4	18.4	2.11	68	—	24	1	9	12	—	3	—	19	80	114
Whitechapel	81,391	860	371	42.4	18.3	1.58	32	—	16	—	4	7	—	2	—	3	54	114
St. George-in-the-East	48,560	598	296	49.4	24.4	3.39	41	—	25	1	3	7	—	2	—	3	27	142
Limehouse	58,807	486	354	33.1	24.1	4.50	66	—	39	1	9	11	—	2	—	4	30	160
Mile End Old Town ...	113,161	1,117	509	39.6	18.0	1.71	48	—	14	—	7	21	—	3	—	3	51	96
Poplar	170,606	1,438	745	33.8	17.5	2.30	98	—	38	3	15	31	—	6	—	5	90	121
South Districts.																		
St. Saviour Southwark	24,207	171	124	28.3	20.6	1.49	9	—	2	—	2	4	—	—	—	1	20	105
St. George Southwark	60,536	529	339	35.0	22.5	2.91	44	—	8	—	16	15	—	2	—	3	48	168
Newington	124,166	1,028	581	33.2	18.8	2.58	80	—	12	5	26	28	—	4	—	5	64	127
St. Olave Southwark...	11,098	79	37	28.6	13.4	1.08	3	—	1	—	—	—	—	—	—	2	4	63
Bermondsey	85,835	727	428	34.0	20.0	2.14	46	—	8	5	14	15	—	3	—	1	42	133
Rotherhithe	41,050	311	184	30.4	18.0	0.89	9	—	1	1	■	4	—	1	—	—	11	132
Lambeth	308,108	2,402	1,215	31.3	15.8	2.09	161	—	73	4	31	43	—	7	—	3	119	108
Battersea	174,996	1,254	531	28.7	12.2	1.05	46	—	10	3	9	22	—	1	—	1	69	110
Wandsworth	209,655	1,439	671	27.5	12.8	0.85	44	—	8	—	13	16	—	3	—	4	68	104
Camberwell	264,817	1,828	940	27.7	14.2	1.66	110	—	51	2	24	29	—	—	—	4	92	116
Greenwich	182,513	1,344	698	29.5	15.3	2.11	96	—	54	6	17	12	—	4	—	3	74	101
Lee...	40,219	270	122	26.9	12.2	1.70	17	—	8	—	4	3	—	1	—	1	15	70
Lewisham	91,027	674	323	29.7	14.2	1.39	32	—	11	1	13	5	—	1	—	1	21	79
Woolwich	41,542	322	195	31.1	18.8	1.16	12	—	2	2	2	1	—	1	—	4	24	124
Plumstead	64,031	517	198	32.4	12.4	0.51	8	—	1	—	■	2	—	—	—	3	15	83

MEDICAL NEWS.

THE total amount of the Centres' Collection and the Streets and Squares' Bazaar in aid of St. Mary's Hospital, Paddington, was £22,023 9s. 7d. An anonymous friend of the hospital has paid the whole of the expenses—£584—so that each stall should be credited with the full proceeds of its exertions.

THE REGISTRATION OF PLUMBERS.—Twenty-four master and operative plumbers applying for registration under the National Registration of Plumbers attended at King's College on July 15th for examination by the Worshipful Company of Plumbers. The practical tests included lead bossing, pipe bending, and joint making, and the examination questions included the subjects of roof covering, contamination of drinking water from faulty connections, arrangement of bath, sink, and closet wastes, drainage of town houses, and disconnection with sewers. Seven candidates passed the practical examination.

THE CORK MEDICAL BENEFIT ASSOCIATION.—At a recent half-yearly meeting of this Association the Chairman, Mr. W. Eager, said that steady progress was being made, and added that those who belonged to the Association could congratulate themselves upon having acted in a spirit of common justice towards their doctors. The doctors of Cork had not, and never had, a dispute with the working men, but they simply contended that it was a gross abuse of the medical club system to have gentlemen with incomes ranging from £300 to £800 a year—who could afford to live in costly suburban villas, and drive in their carriages—obtaining medical attendance and medicine at a rate that was originally intended for working men and others of moderate income. With the view of doing away with this shameful injustice the Association had made the rule that no person whose income exceeded £200 a year was eligible for membership.

MEDICAL VACANCIES.

The following vacancies are announced :—

BANBURY: HORTON INFIRMARY.—House-Surgeon and Dispenser. Salary, £60 per annum, with board and lodging. Applications to C. H. Davids, Hon. Sec., 21, Marlborough Road, Banbury, by July 26th.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £50, with board, residence, and laundry. Applications to P. E. Arrowsmith, Honorary Secretary, 20, Chapel Street, Liverpool, by July 24th.

BRADFORD POOR-LAW UNION.—Resident Assistant Medical Officer for the Hospitals and Workhouses of the Union. Appointment for one year. Salary, £100, with rations, apartments, and washing. Applications to the Clerk to the Guardians, Poor-law Offices, 22, Manor Row, Bradford, by July 31st.

BRADFORD ROYAL INFIRMARY.—(1) Junior House-Surgeon; unmarried. Salary, £50 per annum, (2) Dispensary-Surgeon; unmarried. Salary, £100 per annum, board and residence provided in each case. Applications, endorsed "Junior House-Surgeon," and "Dispensary Surgeon," to the Secretary by July 24th.

CARDIFF INFIRMARY.—Assistant House-Physician. Appointment for six months, but renewable. Salary at the rate of £150 per annum, with board, washing, and apartments. Applications to the Secretary by July 25th.

CHESTER GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £60 per annum, with residence and maintenance. Applications to the Chairman of the Board of Management, 29, Eastgate Row, North Chester, by July 24th.

CHICHESTER: WEST SUSSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried. Salary to commence £100 per annum, with furnished apartments, board, and washing. Applications to the Medical Superintendent by July 25th.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary, £80 per annum, with board, residence, and washing. Applications to the Secretary by August 2nd.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Demonstrator. Honorarium, £50 per annum. Applications to the Dean by July 24th.

DOWNPATRICK: COUNTY DOWN INFIRMARY.—Registrar, Compounder of Medicine, and Assistant to the Surgeon. Salary, 60 guineas, with board, fuel, and washing. Applications to Dr. T. M. Tate by August 10th.

GALWAY HOSPITAL.—House-Surgeon. Appointment for twelve months. Honorarium £30, with residence, board, washing, fire, light, and attendance. Applications to the Clerk.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board and lodging. Applications to Mr. Richard F. E. Ferrier, Hon. Sec., 33, Hall Plain, Great Yarmouth, by July 26th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Resident House-Surgeon. Salary £80, with board, residence, and washing. Applications to the Honorary Secretary.

HERTFORD UNION.—District Medical Officer for Second and Third Districts. Salaries for No. 2 District, £29 16s.; for No. 3 District £50 per annum, together with usual remuneration for all extra cases, provided for by the General Consolidated Order. Applications to the Clerk by July 24th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—(1) Resident House-Physicians. (2) Assistant Resident Medical Officer. Salary, £50, with board and residence. Applications to the Secretary by July 25th.

LONDON LOCK HOSPITAL, Harrow Road, W.—House-Surgeon to Female Hospital. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by July 28th.

LONDON THROAT HOSPITAL, 204, Great Portland Street, W.—Non-resident House-Surgeon, for six months. Honorarium at the rate of £25 a year. Applications to the Honorary Secretary.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park Place, Cheetham Hill Road.—Honorary Assistant Physician. Applications to the Secretary, 33, Barton Arcade, Manchester, by July 29th.

MANCHESTER CORPORATION.—Medical Assistant. Salary, £200 per annum. Applications, endorsed "Appointment of Medical Assistant," to the Chairman of the Sanitary Committee, Public Health Office, Town Hall, Manchester, by August 5th.

MANCHESTER ROYAL INFIRMARY.—Clinical Assistant to the Barnes Convalescent Hospital, Cheadle. Appointment for six months. Honorarium of £25, with board and residence. Applications to the Chairman of the Medical Board, Royal Infirmary, Manchester, by July 28th.

MELROSE: ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with furnished quarters, board, washing, and attendance. Applications to the Medical Superintendent.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Salary, £40 per annum, with board, attendance, and washing. Appointment for six months, with prospect of re-election as senior (salary, £60). Applications to the Secretary by July 26th.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Clinical Assistant to Out-patient Department, Fitzroy Square. Appointment for six months. Honorarium at the rate of £35 per annum. Applications to the Secretary, 41, Fitzroy Square, by July 29th.

NOTTINGHAM LUNATIC HOSPITAL, The Coppice.—Assistant Medical Officer: unmarried, and under 30 years of age. Salary, £150 a year, with apartments, board, attendance, and washing. Applications to the Medical Superintendent.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant and Second Assistant House-Surgeons. Salary, each £65 per annum, with board and residence. Applications to the House Governor by July 24th.

READING: ROYAL BERKS HOSPITAL—Assistant House-Surgeon. Appointment for six months, but eligible for senior post when vacancy occurs. Salary, £30 per annum, with board, lodging, and washing. Appointment for six months. Applications to the Secretary.

ROYAL EYE HOSPITAL, Southwark, S.E.—House-Surgeon. Remuneration, £50 per annum, with full board and lodging. Applications to the Secretary by August 5th.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Junior Out-patient Surgical Officer. Salary, £50. Applications to the Secretary by August 10th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.—Honorary Physician. Applications to the Secretary by July 24th.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Assistant Resident Medical Officer. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by August 2nd.

TORQUAY: TORBAY HOSPITAL.—House-Surgeon. Salary, £80 per annum, and £5 5s. for the nurses' lectures, with board, lodging, washing, and attendance. Application to the Secretary by August 14th.

WESTERN GENERAL DISPENSARY, Marylebone Road.—Second House-Surgeon: unmarried. Salary, £60 per annum, with board and residence, and 10s. a month for washing. Applications to the Honorary Secretary.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Appointment for six months, but may be extended. Salary, £70 per annum, with board, rooms, and washing. Applications to the Secretary by July 29th.

MEDICAL APPOINTMENTS.

BAKER, J. E., M.B., B.S. Durh., appointed House-Surgeon to the North Shields and Tynemouth Dispensary, *vice* D. H. Stephens, L.R.C.P., L.R.C.S Edin., resigned.

BERRY, James, B.S., F.R.C.S., appointed Surgeon to the North London Hospital for Consumption and Diseases of the Chest, *vice* W. Watson Cheyne, C.M., F.R.C.S., resigned.

BROWN, A. W., M.A., M.B, D.Sc.Aberd., appointed an additional Examiner in Botany at the University of Aberdeen.

CONNON, Middleton, M.B., C.M., D.P.H., M.O.H. Montrose, appointed Police Surgeon to the Burgh.

DUNCAN, Andrew, M.D., B.S. Lond., F.R.C.S., appointed a Physician to In-patients, Branch Hospital Seamen's Hospital Society.

FREEMAN, W. T., M.D. Durh., F.R.C.S. Eng., appointed Surgeon in Charge of Department for Diseases of the Skin at the Reading Dispensary.

HARRIS, H. Elwin, M.B., F.R.C.S Eng., appointed Surgeon to the Out-patient Department of the Bristol Royal Hospital for Sick Children and Women.

HAULTAIN, F. W. N., M.B. Edin., appointed an additional Examiner at the University of Aberdeen.

HOUSTON, A. C., M.D., D.Sc., appointed Lecturer in Bacteriology at the Bedford College, London.

LANSDOWN, C. E., M.R.C.S., L.R.C.P. Lond., appointed Surgeon to the Hospital for Sick Children, Cheltenham.

LEAF, Cecil H., M.A., M.B Cantab., F.R.C.S. Eng., appointed Assistant Surgeon to the Cancer Hospital, Fulham Road, Brompton.

MACLAGAN, D. W., M.B. Ch.B., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

MCLAREN, J. B., M.A., M.B., B.Ch., appointed Medical Officer to the Workhouse of the Salford Union, *vice* A. W. Stocks, M.R.C.S. Eng., L.S.A.

ROSE, Frank H., M.R.C.S. Eng., L.R.C.P. Lond., appointed Anæsthetist to the Bristol Royal Hospital for Sick Children and Women.

SIMPSON, Francis O., L.R.C.P. Lond., M.R.C.S. Eng., appointed Senior Assistant Medical Officer to the County Asylum, Rainhill, near Liverpool.

SYMONS, W. H., M.D., D.P.H., F.I.C., appointed Medical Officer of Health for the City and County of Bath. Whole time, £435 per annum.

VOELCKER, Arthur F., M.D. Lond., appointed an additional Examiner in Medicine at the University of Aberdeen.

WEDDERBURN, Maclagan, M.B., Ch.B., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

DIARY FOR NEXT WEEK.

FRIDAY.

British Laryngological, Rhinological, and Otological Association. 11, Chandos Street, Cavendish Square, W., 3 P.M.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

GROSVENOR.—On July 11th, at Stanley House, Old Trafford, Manchester, to Dr. and Mrs. W. Clayton Grosvenor, a son.

HOUSEMAN.—Houghton le Spring, Durham, at the Manor House, on the 14th inst., the wife of James Gilpin Houseman, M.D., of twins, boy and girl.

MARRIAGE.

COPEMAN—BOORD.—On July 12th, 1899, at the Parish Church, Ardingly, by the Ven. Archdeacon Mount, assisted by the Rev. A. G. Copeman (brother of the bridegroom), the Rev. J. Bowden (Rector of the Parish), the Rev. Sir Borradaile Savory, Bart., and Rev. J. M. Merton, Chaplain, Sydney Arthur Monckton Copeman, M.D., F.R.C.P., eldest son of the late Canon Copeman, of Norwich, to Ethel Margaret, younger daughter of Sir William Boord, Bart., of Wakehurst, Hayward's Heath.

DEATHS.

HOUSEMAN.—Houghton le Spring, Durham, at the Manor House, on the 15th inst., Mary Isabel, the infant daughter of James Gilpin Houseman, M.D., and Isabel Houseman.

NESHAM.—At 12, Ellison Place, Newcastle-on-Tyne, on the 16th inst., Thomas Cargill Nesham, M.D. (Edinburgh and Durham), M.R.C.S. Eng., L.S.A., Lecturer on Midwifery Durham University College of Medicine, Physician-Accoucheur, Lying-in Hospital Newcastle-on-Tyne, aged 57.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.
CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.
CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.
CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.
CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.
CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations,*—M., 4.
EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.
GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.
GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.
HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.
KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W Th. F., 2.
LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily. 2.
LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.
LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 2.
METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.
MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.
NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.
NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.
NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.
ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.
ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.
ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.
ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.
ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.
ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2
ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.
ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.
ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2
ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.
ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2
ST THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.
SAMARITAN FREE FOR WOMEN AND CHILDREN, *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.
THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu, F., 6.30. *Operations.*—Daily, exc. M., 10.
UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.
WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.
WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

DR. G. A. H. BARTON (Morchard Bishop, N. Devon) asks if any reader can recommend from practical experience a small motor to carry two persons over rough roads in a hilly country.

IOTA would be glad of information on the following point: Under the Workmen's Compensation Act, is the employer liable for the surgeon's fee, to whom the patient came at the time of the accident, and for subsequent attendance, or does the patient pay the surgeon's fee?

A MEMBER would be obliged for information regarding chinosol as an antiseptic. Is it a reliable one, and suitable for washing wounds, ulcers, and midwifery purposes? He requires a soluble antiseptic to use as a change from boric acid, and less irritable than mercuric or carbolic lotions.

DR. JAMES MCGLASHAN (Nuneaton) writes: Can any reader inform me if, in extensive superficial burns of the arms, one may get as one of the sequelæ musculo-spiral neuritis? I have a case in which this condition has followed a burn, and have searched the textbooks, but can find no mention of neuritis as a sequel to burns.

W. TIBBLES, M.R.C.S., L.R.C.P. (Nottingham) writes: I should be obliged to any member of the Association for a little accurate information about oleander or rose-bay (*Nerium oleander*). A patient of mine possesses one, which at the present time is covered with most lovely pinkish-white blossoms. The patient, however, has been long in ill-health from neurasthenia, etc., and I have been asked whether the plant may have any unpleasant influence upon her or others of the family, although the plant is not in the house. It has been related to my patient that people who live near this plant, or who attend to it as plants require attendance, are made ill by it, and that the sap is so poisonous that if when cutting the blooms it should get into a crack or sore or cut on the fingers the effect is certain death, instances being named. Robert Hogg, in his *Vegetable Kingdom*, says: "The poisonous principle is so subtle that its exhalations alone are sufficient to cause serious accidents ..... and even death to those who are exposed to its influence." I should like to know for my patient's sake, as well as for curiosity, if the influence imputed to it is genuine or mythical. It would be a pity to destroy so beautiful a plant or shrub if it is innocent of the noxious effects it is said to possess.

OPEN-AIR TREATMENT OF PHTHISIS.

X.Y.Z. asks where a lady suffering from phthisis, in poor circumstances, could receive open-air treatment. She could pay a small amount, say, 10s. to 15s. per week.

TREATMENT OF ALOPECIA.

J. J. asks for advice as to the best treatment for complete alopecia of the head. The boy is 17 years of age, and has been bald since he was 10. He is quite healthy, and never had a day's illness in his life. The hair follicles appear healthy and distinct. His eyelashes and hairs on his body are quite normal. Stimulating liniments, as ammonia and cantharides, along with administration of thyroid extract, have had no effect.

ANSWERS.

MEMBER.—We think in the circumstances described by our correspondent, twenty guineas would be a reasonable fee for an operation for hæmorrhoids.

LIEUTENANT-COLONEL I.M.S.—On May 26th, 1868, the General Medical Council adjudged Mr. Joshua Hamilton Hart to have been guilty of infamous conduct in a professional respect, and directed the Registrar to remove the name from the *Medical Register*.

E. H.—The chief diseases to which the European is liable on the Gold Coast and Niger Coast Protectorate are malarial fever, blackwater fever, dysentery, and their sequelæ—anæmia, enlargement of the spleen, congestion, and abscess of the liver. Although there are many parts of the hinterland which are healthy enough, the littoral, both of the Gold Coast and of the Niger Coast Protectorate, in common with that of the entire west coast of tropical Africa, is very unhealthy.

THE M.D. BRUX.

M.D. (Southsea) can obtain full information from Dr. Major Greenwood, 243, Hackney Road, London, N.E., Honorary Secretary of the Brussels Medical Graduates' Association.

SHIP-SURGEONS AND THE PROFESSIONAL SECRET.

M. A. P.—In Clarke and Tidy's *Manual* it is stated that "as the relationship of a medical man to his patient is of a confidential description, the law visits heavily any abuse of confidence," and although in the event of litigation a court of justice or of equity would probably exonerate the surgeon from any blame or pecuniary liability on account of his having in this respect acted merely as a tool or instrument of the master or owner of the vessel, it would be better for him to erase the record as to the primary cause of the malady in each case, and to explain matters verbally to the manager on his return home. He must, however, have known that it would be his duty to submit his log to the master every week, and he should certainly, in the case of the cabin passenger at least, have omitted any reference to it, and have only recorded the symptoms of the disease. In the best lines the surgeon is either openly or tacitly allowed to regard such cases as private patients, and to charge accordingly; but, of course, the seaman would be treated gratuitously. In our own opinion, the manager of no respectable firm would cease to employ him on account of his suppressing such information, as it would be very much against their interest for him to give it. If the surgeon has a time contract, he can insist on its being

carried out; if not, his only remedy in the event of his losing his appointment would be to appeal to the directors of the line either individually or collectively.

REMUNERATION OF "LOCUMS."

SUBSTITUTE wishes to know what would be fair remuneration for a *locum tenens* (1) for a short period up to a month, (2) a long period of six months, and whether there would be any difference in the rate where the value of practice averaged £500, £800, or £1,000 per annum.

*** The customary remuneration for a *locum tenens* is from 3 to 4 guineas a week, but may be varied by mutual agreement. A *locum tenens* for a short period would probably be paid at a somewhat higher rate than in cases where his services might be required for a longer period, but the value of the principal's practice has no direct relation to the remuneration of the *locum tenens*.

NOTES, LETTERS, Etc.

THE HUNTER FUND.

MR. RIVERS WILLSON (Treasurer), 42, Wellington Square, Oxford, writes: Permit me to acknowledge the receipt of the following subscriptions to this fund:

	£	s.	d.
Sum previously acknowledged	103	17	9
Dr. T. Carlyle Beatty, Clacton-on-Sea	0	10	0
Dr. Chas. R. Elgood, Windsor	0	10	6
Mr. Gideon W. B. Marsh, 40, Tachbrook Street, S.W. ...	0	5	0
Dr. Lyne Stivens, 107, Park St., W.	0	10	6
Total	£105	13	9

THE LATE DR. G. F. CROOKE.

MR. GILBERT BARLING, 85, Edmund Street, Birmingham, and Mr. J. T. J. MORRISON, 3, Great Charles Street, Birmingham (Hon. Secretaries of the Fund) write: Will you be good enough to insert the subjoined additional subscriptions to the Crooke Fund of which Dr. Arthur Foxwell, 22, Newhall Street, Birmingham, is the treasurer:

	£	s.	d.		£	s.	d.
Mr. W. M. Brown	5	5	0	Mr. J. F. Blurton	2	2	0
Dr. J. F. Goodhart ...	5	5	0	Mr. W. H. Hallam	1	1	0
Dr. J. C. Uhthoff	5	5	0	Dr. A. J. Irvine	1	1	0
Mr. R. S. Wainwright ...	5	5	0	O. J.	1	1	0
Mr. N. Davies-Colley ...	3	3	0	Dr. Geo. St. Johnston ...	1	1	0
Mr. H. G. Howse	3	3	0	Mr. A. D. Melson	1	1	0
Sir Thomas Smith, Bart..	3	3	0	Mr. R. F. Newton	1	1	0
Mr. C. H. Golding-Bird ...	2	2	0	Mr. J. B. Pogson	1	1	0
Dr. Harold Mason ...	2	2	0	Mr. Robert Smailes... ...	1	1	0
Mr. G. A. Panton	2	2	0	Mr. G. J. Dudley	0	10	6
Dr. Martin Young... ...	2	2	0	Miss E. Melson	0	10	6
A. B.	1	1	0	Mr. Gilbert Smith	0	10	6

THE TREATMENT OF PHTHISIS BY INHALATION.

DR. J. MACLAGAN REID (Perth) writes: With regard to Dr. Evans's remarks in the BRITISH MEDICAL JOURNAL of June 24th on this subject, I have found very satisfactory results from the use of antiseptic inhalations in phthisis. Though unable to speak as to the value of the late Dr. Cegbill's formula inhaled by means of his oral inhaler, I have for a good many years past employed in nearly all my cases of phthisis the inhalation of creosote by means of Dr. Burney Yeo's well-known oro-nasal inhaler of perforated zinc. I have had such good results with creosote, that I have never been tempted to change it for the more expensive volatile oils such as oil of cinnamon lately so strongly recommended. I consider that the essential properties of a volatile oil, antiseptic, anæsthetic, and astringent are well enough represented in creosote. My experience has been that these inhalations alleviate the cough of phthisis very much, and the use of morphine for this purpose is largely obviated.

I have noticed in many cases the temperature come down, moist crepitations dry up and disappear, and all active mischief become arrested under their use. The cases where its beneficial action are best seen are those of a catarrhal pneumonic origin, for instance, after influenza. It is held by some that we are unable to destroy the tubercle bacilli by means of these inhalations, and they have accordingly discarded the method as not a rational one. But, having regard to the morbid anatomy of pulmonary tuberculosis, the use of antiseptic inhalations appears to me to be rational treatment.

It is surely reasonable enough to suppose that, in virtue of their antiseptic action, these inhalations will help to arrest the mixed infection which is present, and so aid in the healing of the alveolar walls, and in preventing the lighting up of other tubercle foci in the lung. For the same reason I think they may act as a prophylactic against tuberculous ulceration of the larynx.

The method, I think, may well have its place as a valuable adjuvant to the open-air treatment of phthisis.

MEDICAL APPOINTMENTS IN WORKHOUSE INFIRMARIES.

H. B. S. writes: "Verax" in the BRITISH MEDICAL JOURNAL of July 15th certainly adopts a puerile line in his attempt to justify the action of the Bradford Board of Guardians. Neither in this nor in his previous communication has he advanced a single premiss to justify the action of the Board. To say that the appointment of a consulting physician to the workhouse as medical officer at a salary that practically amounts to an honorarium is progress is a tax upon our intelligence. The medical practitioners of Bradford have no desire to prevent the sick poor having the best possible medical and surgical skill. Does he desire us to infer that the cream of medical and surgical skill is possessed by consultants? What the medical practitioners did protest against was the arbitrary manner in which the appointments were made, and the introduction of honorariums into State appointments.

There may have been a surgical case sent to the infirmary for a major operation—even that I question—but I am certain "Verax" could not give us an instance in which a medical case has been so treated. Surgical cases requiring major operations are sent from the workhouse to the local charity for the following reasons. (1) A workhouse does not possess a surgical staff for a major operation. That does not indicate incompetence of the staff, but insufficiency. (2) What workhouse infirmary is provided with an operating theatre suitable for such operations? (3) The guardians have always refused to pay for assistance to the medical officer when he has desired to do such operations. "Verax" will not find in the history of Poor-law Reform anyone who has ever by word or action advocated the introduction of medical charity into our State hospitals.

LETTERS, COMMUNICATIONS, ETC., have been received from:
A Mr. F. W. Alexander, London. **B** Professor J. B. Bradbury, Cambridge; Messrs. Burroughs, Wellcome and Co., London; Mrs. W. Bruce, London; Mr. G. H. Broadbent, Manchester; Mr. J. B. Blackett, London; Dr. J. T. Bays, Grahamstown; Dr. G. C. Bantock, London; Mr. R. H. Beardsley, Grange-over-Sands; Mr. G. A. H. Barton, Morchard Bishop; E. C. Baber, M.B., Brighton; Dr. H. P. D'A. Benson, Guernsey; Dr. A. J. Boyd, Ware; J. Berry, M.B., London. **C** Dr. G. W. Crowe, Worcester; Dr. J. J. Charles, Kilkee; Clinical; Mr. C. Campbell, Saddleworth; Mr. F. W. Collingwood, Hastings; Mr. K. Campbell, Edinburgh; Messrs. Cuxson, Gerrard and Co., Oldbury; Mr. W. R. E. Coles, London; Cornwall; Dr. J. Craig, Dublin; M. Connon, M.B., Montrose. **D** Mr. F. Deas, London; Sir D. Duckworth, London; Dr. C. R. Drysdale, London; Mr. D. J. Drake, Keswick, Cal. **E** Enquirer; Dr. G. B. Edington, Glasgow; Dr. F. Edge, Wolverhampton. **F** Fairplay; Mr. S. C. C. Fenwick, London. **G** Mr. W. T. Greenfell, Dartmouth; Dr. H. Gladstone, Belgrave; Mr. A. Goodere, Dewsbury. **H** Miss C. S. Hogg, London; Mr. C. H. Higginson, Manchester; C. D. Henry, M.B., Wellington, N.Z.; Dr. T. T. S. Harrison, Selkirk, Ont.; Dr. W. M. Haffkine, Liverpool; Mr. T. G. Horder, Cardiff; Mr. C. Harvey, Eltham; Mr. W. B. Hall, Frant. **I** Iota. **J** Dr. R. Jones, Claybury; Mr. H. P. Joseph, Rajama, Ceylon. **K** J. E. H. Kelso, M.B., Southsea; H. R. Kenwood, M.B., London. **L** C. H. Leaf, M.B., London; Rev. F. Lawrence, York; Mr. R. R. W. Logan, Ashby-de-la Zouch; Dr. A. G. Lawrence, Chepstow; L.R.C.P.E.; Mr. C. S. Leadbetter, Didsbury. **M** Dr. J. McG. MacCormac, Belfast; Member; A. Manknell, M.B., Bradford; Dr. W. T. Morgan, Carnarvon; Dr. T. Mackenzie, Douglas, I. of M.; M.D.; M.B., L.R.C.P.; S. K. B. Mullick, M.B., London; Messrs. Macmillan and Co., London; M.R.C.S. Eng.; C. McVicar, M.B., Dundee; J. McGlashan, M.B., Bedworth; J. T. J. Morrison, M.B., Birmingham. **N** J. H. Nicoll, M.B., Glasgow; Dr. J. Neil, Oxford; Dr. D. Newman, Glasgow. **O** E. Owen, M.B., London; Dr. J. Oliver, London. **P** Mr. H. E. B. Porter, Windsor; Mr. W. Poppelreuter, Manchester; Practitioner; Dr. H. Peck, Chesterfield; Mr. C. E. Paget, Northampton. **R** Mr. E. H. Roe, London; Dr. G. D. Robinson, London; R.A.M.C.; Dr. W. B. Ransom, Nottingham; Mr. T. Richmond, Glasgow. **S** Messrs. Stanley, Popplewell and Co., London; Mr. H. B. T. Symons, Andorno-Biella; Mr. A. A. C. Swinton, London; Mr. H. C. Smith, Southend; Dr. W. Sykes, Gosport; H. B. Smith, M.B., Bradford; Spero; Dr. W. H. Symons, Bath. **T** Dr. E. S. Thompson, London; Dr. G. Thomson, Oldham; Mr. W. Tibbles, Nottingham; J. Turner, M.B., Brentwood; G. H. Temple, M.B., Weston-super-Mare; Dr. R. Thomson, Margate. **W** Mr. R. Walker, Aberdeen; Dr. R. T. Williamson, Manchester; F. Wyatt-smith, M.B., Reigate; Dr. W. Williams, Liverpool; Dr. R. Willson, Oxford; Mr. W. A. Wright, Llanddeusant; Mr. O. Williams, Liverpool; W. B.; Mr. A. Woods, London. **X** X. Y. Z.

BOOKS, ETC., RECEIVED.

Handbuch der Krankenversorgung und Krankenpflege. Herausgegeben von Dr. G. Liebe, Dr. P. Jacobsohn, und Dr. G. Meyer. Erster Band, ii Abtheilung, 2 Lieferung. Berlin: A. Hirschwald. 1899.

Zur Beurtheilung des Schmerzes in der Gynäkologie. Von Dr R. Lomer. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1899. 2s. 3d.

Handbuch der Gynäkologie. Herausgegeben von J. Veit. Dritter Band, ii Haelfter, Zweite Abtheilung. Wiesbaden: J. F. Bergmann, and Glasgow: F. Bauermeister. 1899. 7s.

Die therapeutischen Leistungen des Jahres 1898. Herausgegeben von Dr. A. Pollatschek. x Jaargang. Wiesbaden: J. F. Bergmann, and Glasgow: F. Bauermeister. 1899. 7s.

Die Symptomatologie der Kleinhirn-Erkrankungen. Von Dr. A. Adler. Wiesbaden: J. F. Bergmann, and Glasgow: F. Bauermeister. 1899. 2s 3d.

Die eitrigen Erkrankungen des Schläfenbeins. Von Dr. O. Körner. Wiesbaden: J. F. Bergmann, and Glasgow: F. Bauermeister. 1899.

Pulmonary Tuberculosis. By S. A. Knopf, M.D. Philadelphia: P. Blakiston's Son and Co. 1899. 3 dols.

A Textbook of Anatomy. Edited by F. H. Gerrish, M.D. London: Henry Kimpton. 1899. 27s.

The Mineral Waters of the United States and their Therapeutic Uses. By J. K. Crook, A.M., M.D. New York and Philadelphia: Lea Brothers and Co. 1899. 3 50 dols.

Manual of Human Physiology. By L. Hill, M.B. London: Edward Arnold. 1899. 6s.

I Tumori della Lingua e la loro Cura. Per Dr. G. Parlavecchio. Rome: Tipographia Innocenzo Artero. 1899.

The Cerebro-Spinal Fluid: its Spontaneous Escape from the Nose. By StC Thomson, M.D., M.R.C.P., F.R.C.S. London: Cassell and Co. 1899. 5s.

Manual for the Church Lads' Brigade Medical Corps. Second Edition. London: The Church Lads' Brigade. 6d.

Royal London Ophthalmic Hospital Reports. Edited by W. Lang, F.R.C.S. Vol. xv, Part 1. London: J. and A. Churchill. 5s.

*** In forwarding books the publishers are requested to state the selling price.

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REMARKS
ON
THE OPERATIVE TREATMENT OF VARIOUS INTERNAL DERANGEMENTS OF THE KNEE-JOINT.

Read before the South-Eastern Branch of the British Medical Association.

BY W. J. WALSHAM, F.R.C.S.,
Surgeon and Lecturer on Surgery at St. Bartholomew's Hospital.

I HAVE chosen this subject because the derangements of the knee-joint to which I am about to refer are, comparatively speaking, common, and are therefore conditions with which, whether we devote ourselves to surgery or to general practice, we are constantly brought in contact.

These derangements may be classed as: (1) Loose bodies; (2) detachment or displacement of the semilunar cartilages; (3) enlargement with nipping of hypertrophied synovial fringes; and (4) elongation of the ligamentum patellæ.

All of these conditions may be attended with somewhat similar symptoms, namely, effusion into the synovial membrane, a feeling of weakness or disability in the joint, some limitation in the range of flexion and extension, pain, often sudden, and even excruciating during certain movements, and at times a sensation of something slipping in or round the joint. There is further generally a history of some injury more or less severe, such as a fall or blow on the knee, or a sudden sprain or twist of the joint.

The most obvious sign, perhaps, attending the various derangements I have above enumerated is the synovial effusion, and the case is probably diagnosed, and correctly, as one of synovitis; but it is synovitis and something more, and unless this additional something is made out, except it consists in a mere rupture of some ligamentous fibres, the routine treatment of synovitis will not as a rule cure the patient. The progress of such cases, in my experience, is this: after treatment by rest, evaporating lotions, bandaging, perhaps a splint, the synovitis subsides, but recurs as soon as the patient begins to get about, recurrence being then often attributed to a fresh twist or strain. It is usually after there have been several such recurrences that these cases have come under my notice.

Where a loose body is the cause of the trouble the diagnosis is usually easy. It can be felt as a rule, as we all know, to slip about in the joint, not only by the surgeon but by the patient himself. The diagnosis is not, however, always obvious. I have lately seen two cases in which the loose body was only discovered with difficulty. In one of these it was not found until it had been searched for by the *x* rays, although a most careful examination had been made on more than one occasion, both by myself and by my house-surgeons. In the second case it was not till the joint had been explored by dividing the patella that the loose body was found stowed away in the intercondyloid notch between the crucial ligaments. As far as I know, this is the first case in which a joint has been freely explored for the discovery of a loose body not previously felt and only merely inferred to be present from the symptoms. I will therefore briefly relate it:

The patient, aged 27, was sent to me by Dr. Pritchard, of Retford, in October, 1896. Three months previously she had wrenched her knee at tennis. She suffered great pain at the time, but felt nothing snap or give way. A subacute synovitis ensued, but subsided under appropriate treatment. Pain still however continued. It was referred to the back of the joint, and was increased on flexion and extension, both of which movements were considerably limited. I could observe nothing wrong in the joint, and as the patient thought the pain was increased on any sudden lateral movement during semiflexion, I ordered the well-known instrument for preventing rotation. After eight months she again came to see me. She thought the instrument had somewhat improved matters, but she still continued to limp and to suffer much pain at the back of the joint, especially on first rising from the sitting posture.

I now advised that the joint should be explored, as I felt pretty sure that the symptoms must be due either to a loose body or detached semilunar cartilage situated in the intercondyloid notch and interfering with the free action of the crucial ligaments. Before consenting to the operation the friends sought an independent opinion of my colleague, Mr. Howard Marsh, and he also advised that the joint should be explored. A week or so later, therefore, I freely opened the joint by sawing across the patella. A flattened piece of cartilage, the size of half a walnut, was seen in the intercondyloid notch wedged between the crucial ligaments, whilst on the condyle there was an excavation corresponding to the size of the loose portion of cartilage, thus making the source of the body quite evident. The joint was washed out, the patella was wired, the synovial membrane and fibrous structures were accurately adjusted and sutured, and the limb was placed on a back splint. The wound ran an aseptic course, and at the end of three weeks, as the patient was of a highly nervous disposition, the joint was moved for the first time under gas. Twelve months after the operation she wrote to tell me that she had been to a ball, and had danced all the evening without the slightest inconvenience. Encouraged by this case, I repeated last year at St. Bartholomew's Hospital the operation on a soldier who had been discharged from the army on account of a wrench of the joint followed by synovitis and subsequent lameness, with pain and limitation of flexion and extension. He had been subjected to various forms of treatment for upwards of nine months, and then dismissed the service.

In this case, on sawing transversely across the patella a portion of the internal semilunar cartilage was found detached quite at the back of the joint. It was removed, and the wound treated in the same way as in the former case. The man made a satisfactory recovery. I regret to say I cannot give his subsequent history, as since he left the hospital I have had no means of discovering his whereabouts. In neither of these cases would it have been possible to find the cause of the trouble without the free exposure that was made.

The diagnosis between a detached semilunar cartilage and a hypertrophied synovial fringe is sometimes far from easy. The characteristic signs of a detached semilunar cartilage as given in our textbooks—namely, a sudden locking of the joint and evident projection of the displaced cartilage—is, in my experience, not common. Indeed, I have only met with a few cases of the kind. In one of these a young adult male, by semiflexing his knee and then rotating it, was able to drive the detached cartilage from between the articular surfaces, so that it projected visibly beneath the skin, the joint at the same time becoming fixed till he drove the cartilage back into place by a sudden blow upon it with the palm of his hand. In such a case the trouble is of course obvious; more often I have not met with an actual projection of the cartilage, and the diagnosis has been based on a peculiar creaking or sudden click or snap over the inner portion of the joint combined with a partial locking and some limitation of movement, and perhaps slight swelling or pain on pressure over the situation of the cartilage.

The cause of this click or snap was seen in a case on which I operated last May. The patient had received a blow the previous October on the outer side of his left knee, and soon afterwards noticed the peculiar sensation above mentioned on flexing the joint. At the operation the internal semilunar cartilage was found bent on itself, and was seen during the operation to fly back like a spring each time the joint was flexed. The cartilage was removed and the patient made an uninterrupted recovery. In a second case—that of a printer's boy, aged 14, admitted under my care last November on account of pain and continual giving way of the right knee—a slight creaking sensation, which was the salient sign, was found to be due also to a doubling of the semilunar cartilage on itself; but the contiguous surfaces were becoming adherent, so that it did not spring back on flexion, as in the former case, and hence by the rubbing of the folded surfaces on each other produced a grating sound instead of the snap.

The signs of a hypertrophied synovial fringe are very similar, but there is not as a rule any locking of the joint nor much, if any, limitation of movement, and the fringe may frequently be felt to roll like a soft pad under the finger when applied over the line of the articulation. The disability, however, is at times quite equal to that produced by a displaced cartilage; but it will be found on careful questioning that the pain only occurs when the joint is semiflexed, and then not unless the semiflexion is combined with some slight lateral twisting of the tibia on the femur—that is, the semiflexion separates the articular surfaces and the

twisting movement carries the hypertrophied fringe between them, where it becomes nipped when the limb is again straightened. I have met with fringes that have attained the size of a small walnut as a result of this continued irritation.

More than one fringe, it is well to remember, may be present. Indeed, at times a series of fringes extending from the articular surface along the margin of the alar ligament may exist. In the case of a young man on whom I operated at St. Bartholomew's Hospital last year, after removing a hypertrophied fringe through a longitudinal incision parallel to the edge of the patella, I introduced my finger into the joint, as his symptoms were somewhat anomalous in that he had pain on the outer as well as on the inner side of the joint, and discovered a similar hypertrophied fringe on the outer side as well. This could only be removed by a second longitudinal incision parallel to the outer side of the patella. The synovial membrane and capsule were accurately sutured with kangaroo-tail tendon, and although the joint had been opened on both sides and its interior freely manipulated with the finger, an excellent result ensued.

An elongation of the ligamentum patellæ is less common, but as it gives rise to symptoms similar to those of the other conditions I have mentioned, it may be readily confounded with them. As in the case of a loose body, a detached semilunar cartilage, or nipped synovial fringe, the patient may fall to the ground with sudden pain, the joint becoming momentarily locked. It will be found on careful inquiry that what really happens here is that the patella, consequent upon its elongated ligament, momentarily slips over the external condyle, allowing the patient to fall. On measuring the ligament it will be found half an inch to an inch longer than that of the opposite limb; and when the patient sits with the knee flexed at a right angle the patella rests on the front surface of the condyle, so that its anterior surface, instead of being directed forwards and slightly upwards as in the normal knee, will be found to look directly upwards.

For all of these conditions excepting the last, it may sooner or later become necessary to open the knee-joint if a radical cure is to be obtained. If a loose body is present its removal is practically the only reliable method of giving relief. I wish it to be clearly understood that I am far from advocating the immediate opening of a joint in all cases of detached semilunar cartilages or hypertrophied synovial fringes. No doubt in some cases an apparatus limiting the movements of the knee to flexion and extension will suffice, but when an apparatus has failed, when a patient is unwilling to give up athletic exercises, or is a candidate for the services, or is going abroad where apparatus could not be readily mended, or is engaged in such occupation as necessitate mounting ladders, scaffoldings, etc., where the breaking of his instrument might subject him to sudden locking of the joint and to a consequent serious fall, the joint in my opinion should be opened without delay. It is more especially for the purpose of calling attention to the safety with which the synovial membrane of the knee may be freely opened and explored, and the very satisfactory results that may be obtained by thus radically treating the affections I have alluded to, that these few notes have been put together. No one now hesitates for a moment to open the peritoneal cavity for the purpose either of treatment or exploration, but there is still apparently some hesitancy in applying like treatment to the joints. When we consider, however, how alike the peritoneum and the synovial membranes are to each other both in structure and in physiological functions, we should expect they would react in a similar manner when subjected to injury, and possess the same power of rapid physiological repair. Such is no doubt the case, and when proper precautions are taken a healthy synovial membrane may be treated as fearlessly as may the peritoneum, and with as great a certainty of success. In preantiseptic days we no doubt all remember how serious an operation the removal of a loose body from the knee was regarded, and how many ingenious, but as a rule unsatisfactory, methods were employed for extracting the body subcutaneously. Now however, with proper precautions, the knee may be freely exposed and explored with a reasonable degree of certainty that no harm will result. I find that within the last few years I have freely opened the knee-joint upwards of twenty times and have never had a moment of anxiety. But whether a mere puncture or a full exposure of the joint is to be made the most rigid precautions are, of course, essential; for although when properly deal with success can be almost absolutely assured, any slip in our methods of procedure may be attended with serious, or even disastrous, consequences. The precautions to which I would more particularly call attention are the five following:

1. *Preparation of Patient.*—This I hold to be most essential. He should be confined to his bed or couch for three or four days to a week, the secretions and diet regulated, the limb firmly secured to a Macintyre or such other back splint as it is intended he should wear after the operation, and the skin in the region of the incision rendered thoroughly aseptic. Neglect of these precautions may lead to most serious consequences. If any synovial effusion is present, this should be got rid of by appropriate treatment before the joint is opened. If this is not done there is considerable risk of septic trouble spreading to the interior of the joint should any superficial stitch-suppuration accidentally occur.

The asepticising of the skin, it goes without saying in these days, is of the highest importance, especially in hospital patients in whom the skin of the knee is often thickened and begrimed. and many washings and purifications are necessary to get rid of the excessive epithelium. The following exact directions are posted in my wards for the instruction of my house-surgeons and dressers for asepticising the skin for every operation, whether great or small: (1) Shave the surface to be prepared (if necessary); (2) scrub well with soap and water and rub in ether; (3) wash your hands, and sterilise them in biniodide of mercury lotion (1 in 1,000); (4) wash surface with biniodide of mercury lotion (1 in 5,000) for two minutes; (5) wash this off with biniodide of mercury lotion (1 in 2,000); (6) apply (*a*) sterilised carbolic gauze wrung out in biniodide of mercury lotion (1 in 4,000), (*b*) protective india-rubber tissue wrung out in carbolic acid (1 in 20); (*c*) absorbent or boracic wool, (*d*) bandage.

2. *Arrest of all hæmorrhage* before the capsule is opened by forcipressure, torsion, or ligature, if necessary, and the thorough cleansing of the joint after the operation from all blood clot by thoroughly flushing out the cavity with a warm mild antiseptic lotion, such as boracic acid.

3. *Accurate Suture of the Synovial Membrane and Capsule.*—For this I prefer fine strands of kangaroo-tail tendon, but silk may be used with safety if kangaroo tendon is not available. The serous surfaces of the synovial membrane should of course be placed in contact, and the capsule drawn together by the continuous method of suture.

4. *Absolute rest* on a well-fitting back splint till the skin wound is soundly healed, firm pressure being applied by a bandage over the joint to prevent oozing.

5. *Early Passive Movements and Massage.*—These I have usually begun on the fourteenth day, the patient being up and walking about on the twenty-first day. The early movement is most essential to success. It prevents the formation of adhesions, whilst the massage promotes absorption of any excess of inflammatory products in the healing of the wound.

I may perhaps mention here that I have found this early movement and massage particularly serviceable after wiring patellæ for fracture. By beginning at the end of the second week I am usually able to have the patients walking about with free movement of the joint at the end of the third week, at which date they are usually discharged from the hospital.

I will conclude with a few words on the treatment of the elongation of the patella ligament. If an attempt is made to shorten the ligament by removing a portion and then suturing the ends, it is found that the fibres fray out when the sutures are tightened. It is better, therefore, to cut off the tubercle of the tibia and transplant it the required distance lower down the tibia, where it is fixed by the insertion of an ivory peg. I have treated three or four cases in this way, and can strongly recommend the method to those who may have to deal with this condition. Time does not permit me to enter into the technique of the procedure; but an account of it may be found in a paper I read before the Royal Medical and Chirurgical Society, now published in the 76th volume of its *Transactions.*

AN EFFECTIVE TREATMENT OF VESICAL HÆMORRHAGE WHEN CAUSED BY PAPILLOMATOUS GROWTHS.

By HERBERT T. HERRING, M.B., B.S.

Numerous cases were formerly met with in practice of severe and persistent hæmaturia, which gradually increased, and at length ended fatally through extreme loss of blood. The cause was usually regarded during life as a renal one. *Post-mortem* examination, however, often revealed growth of flocculent matter involving sometimes large tracts of the vesical surface, sometimes single growths with either wide base or a single pedicle. Finding a marked example of the last-named by necropsy one day, my friend Sir Henry Thompson resolved that in the next case with these symptoms well marked he would make an exploratory incision on a grooved staff into the membranous part of the urethra, sufficient to admit his finger to enter the bladder, and if he found a pedunculated growth would enlarge the opening a little and remove it. An opportunity occurred in November, 1880. He carried out the plan literally, and curiously enough found a typical specimen of pedunculated growth, which he removed without any difficulty. The man recovered quickly, had no occurrence, and was living and well ten years later.

After many subsequent similar operations, Sir Henry Thompson found that the broad-based tumours and the multiple growths formed the larger proportion of these cases, rendering nothing short of a suprapubic operation feasible, and then by no means always adequate to the removal of the growth. It thus occurred to him to try the effect of continued and frequent injections of nitrate of silver to repress or destroy the growth, and he met with two or three notable successes. These I conducted for him, and have since carried out in my own practice at his special request, with a result which enables me to say that we have found for most if not for all of these cases a real cure—at least a powerful agent for checking the increase of the growth.

The diagnosis of every case here recorded has been verified by removing a portion of tumour and subjecting it while quite fresh, without staining or hardening, to microscopic examination. Such specimens may be usually obtained by washing out the bladder freely with warm sterile water, examining the *débris* brought away for shreds of tissue and mounting them at once for microscopic investigation. Unless this is done immediately, typical specimens are not easy to find; they readily break up and decompose if left to macerate.[1] No case has been accepted without this test.

The instruments used are a No. 7, soft, polished, slightly *coudée* catheter with the eye situated near the end, and a 4-oz. india-rubber bottle furnished with a brass taper nozzle and stopcock, together with a standard solution of 1 gr. of nitrate of silver to 1 drachm of distilled water, acidulated with a small quantity of free nitric acid.

The injections have been commenced by adding half a drachm of the standard solution (that is, half a grain of the nitrate) to four ounces of warm water (99° F.), and the strength gradually increased every day or two until one, or even sometimes two drachms, has been added. The maximum strength varies very much in individuals. I have never found it exceed two drachms, and it very often falls far short; but it is of the greatest importance so to regulate the strength of the nitrate of silver that no pain, increased frequency of micturition, or straining should follow the injection: and the only knowledge the patient may have of the operation is a certain feeling of warmth in the region of the bladder, which should entirely subside within half an hour. By thus very gradually increasing the quantity of nitrate of silver, the bladder becomes more tolerant, and a stronger solution can be injected without producing any of the above-mentioned symptoms than would be possible if the full dose were resorted to at once. Occasionally, when the maximum strength has been in daily use for a considerable period, the bladder becomes irritable and the strength must be reduced, but the treatment should not be stopped.

As soon as the patient has learned to inject himself efficiently—throwing into the bladder half the contents of the bottle, retaining the solution for a few seconds and then letting it run off, and repeating the same process with the second half—he should do so daily; at night, perhaps, is the best time, for it is always advisable to rest afterwards. Before a patient can be trusted to make the injection himself, it is necessary to give him a few lessons in a uniform and systematic way of doing it, so as to ensure perfect aseptic conditions, absence of injury or irritation to the organs, and the desired effect of the nitrate in the bladder. He should continue this without intermission for four, five, or six months, reaching his maximum strength of solution some five, six, or more weeks from the commencement of the treatment. If then bleeding has ceased, as it should have done, he may inject every other day for six months longer, and afterwards every third day for a variable period. A patient having been subjected to this long course of treatment may discontinue the application, even for a year, without any symptoms recurring; but he should return to daily injections—commencing with the minimum strength and gradually increasing—immediately blood reappears in the urine. In this way hæmaturia, and also the growth, may be permanently controlled, and the patient may live in comfort for many years (Cases II, III, V, VI, VII).

The treatment at the start may occasionally increase the hæmorrhage, but after several applications the blood lessens in quantity and finally disappears (Cases I, II, III, IX, XII). In a few cases it never entirely ceases throughout the treatment (Cases VIII, IX), and is especially noticeable in small quantities at the time of catheterisation, though every precaution may have been taken to introduce the instrument with care. It is apparently caused by the catheter damaging a growth situated near the neck of the bladder. In such a case, when the treatment is discontinued the hæmorrhage ceases and the after-effect may be quite satisfactory.

Antiseptic precautions are, of course, of the utmost importance. The catheter should be well washed with soap and water, rinsed and plunged into water at 150°F.[2] To lubricate the instrument I prefer plain olive oil or "liquid paraffin," which has been previously heated in small quantity in a test tube to 212°F. or more. The latter is perhaps the better as it is not easily decomposed by heat, and is an excellent lubricant. Carbolic oil, so generally used, is not antiseptic, unless in very strong solutions and freshly prepared, and is always liable to cause irritation, for it parts with its carbolic acid in the presence of moisture forming an aqueous solution. I never allow the patient to smear the oil over the instrument with his fingers, but tell him after thoroughly washing his hand to dip the catheter into the oil and then, by holding the point up, allow the oil to run over it. The end of the penis should be well cleansed with a plug of moist antiseptic wool before commencing.

It should never be forgotten that septic cystitis in a patient with papilloma of the bladder is an unfortunate complication (Cases I, VI, VIII, IX, XI). It gives rise to considerable pain, and generally increases the hæmorrhage by disturbing the bladder. The deposit of earthy phosphates on the tumour may then occasionally follow and add greatly to the patient's distress (Cases I, VI, VIII).

During the treatment shreds of tumour may often be found in the urine, differing very much from the characteristic papilloma. To the unaided eye the firm pinkish, semi-transparent tissue, composed of numerous rounded villi, has given place to a soft, white, opaque, and irregular mass. Microscopically the distinct villi, composed of easily distinguished translucent cells, arranged in irregular layers around central blood vessels filled with corpuscles, have disappeared, and it is difficult to make out either villi or cells; the cell substance is cloudy and granular, and the blood vessels have shrunk, effects produced, doubtless, by the continued local applications.

With the exception of Case VIII, in which Dr. Blackmore, of Salisbury, tried a solution of sulphur of copper (10 grs. to the ounce), no other agent than Ag NO_3 has been tried, though possibly others may be efficacious. I would also suggest that the treatment by continuous injections should be adopted after cutting, or when large portions of the tumour have been removed piecemeal through the urethra by instrumentation.

The best results from this treatment have been obtained in those cases which have remained free from cystitis when the treatment has been persevered with continuously for many months, and where the papilloma has been detected early, and the tumour composed to a large extent of papillomatous tissue. Sessile papilloma with thickened base, which gradually invade the bladder walls, are not apparently so satisfactorily dealt with, for though the bleeding may be checked by the applications the growth is not so thoroughly controlled (Nos. VIII, XI).

CASE I.

1891, January 23rd.—I saw this patient (aged 73) with Sir Henry Thompson, meeting Dr. Norris Wolfenden, each of us identifying a typical specimen of papilloma under the microscope. He was a heavy man, and complained of frequency of micturition, which had troubled him for some few weeks, and blood in the urine on several occasions after driving; but he experienced no pain of any kind. The urine was clear and healthy. After a short time he was taught to inject himself, commencing with the weak solution named, gradually increasing to 1 grain to the bottle of 4 ounces. At the commencement the bleeding was rather increased, but it gradually subsided after a week's treatment.

1892, November 16th.—He had followed the instructions suggested, having injected himself every day until March 20th, 1891, every other day until June 18th, 1891, and since then every third day. Blood seen to-day on one occasion, after an interval of twenty-one months. All other urinary symptoms have long subsided. The injections of 1 grain daily were to be resumed.

1893, June 25th.—The patient had been free from all symptoms for eight months, but has an acute attack of septic cystitis, with the usual increase of hæmorrhage. He was advised to rest and persevere with daily injections.

1893, August 10th.—The hæmorrhage had passed off under treatment by the end of June; but the urine was still cloudy and offensive. As the injection of 1 gr. caused pain, the strength was reduced to ½ gr. once a day.

1893, September 3rd.—Ten days after the last report he was laid up with a cold. Severe throat symptoms followed, which rendered him very weak, and he died of cardiac failure on September 3rd. All local treatment during this illness had been suspended, and the hæmaturia towards the end of the time had become almost constant, though not severe.

CASE II.

1891, June 23rd.—I saw this gentleman, aged 43, with Sir Henry Thompson. He had been sent to London by Dr. Duan of Costa Rica for operation, as he had diagnosed papilloma. The patient first noticed blood in October, 1890, again in the following month, and more frequently in February, 1891, when hæmorrhage was severe, and from that date it had been more or less continuous. He had no other symptoms. A specimen of papilloma was washed out and microscoped. He commenced to inject with half a grain, gradually advancing day by day till 1¼ grain was used.

1894, June 28th.—He had made daily injections, using 1½ grain without intermission from the last date until May 13th, 1893, and for the following four months every other day, when he discontinued treatment. For the first few days of the course blood was seen frequently, but it gradually decreased, and disappeared after ten days. During the whole of this time he had led an extremely active life, often being in the saddle many hours, and had enjoyed excellent health. This was the first time he had seen his urine "dark," and Dr. Duan who examined it found a small quantity of blood. He had been therefore thirty-seven months without any urinary symptoms and ten months without treatment. He now began the injections again, using three-quarters of a grain.

1896, April 5th.—The patient had gradually increased to 1½ grain, and persevered with it for a year, and since then (June, 1895) he had done nothing. To-day he saw a trace of blood, and at once resumed the injections, having been hitherto free for eighteen months.

1897, January 4th and 5th.—He continued the last course until May, 1896, using as much as 2 grains without inconvenience. After a month slight traces of blood were seen on both these days. He writes, "I immediately recurred to the injection with perfect success."

1898, May.—After many months without treatment, blood appeared in larger quantities than usual, though not so large as in the beginning of 1891. The same plan was adopted as before.

1899, June 14th.—Traces of blood were noticed once or twice a week until the beginning of November, when he passed a large "particle," which was pronounced by Dr. Duan to be papillomatous. Shortly after this the blood ceased, and there has been very little since. In every way he is in very good health, and exceedingly active.

CASE III.

1891, July 15th.—Aged 60. Came with Dr. Statham, of Cheddar. Six months ago he had noticed the urine dark, and it has been rarely quite clear since then. Four days ago he passed much florid blood on one occasion only. There have been no other urinary symptoms, with the exception of slowness and feebleness of stream. No shreds of tissue could be obtained from the bladder in the usual way then, but later, while the patient was under an anæsthetic for a small operation, a specimen of papilloma was removed by the lithotrite. He commenced to learn the treatment at once, using half a grain of nitrate of silver to 4 ounces of water.

1892, February 18th.—Notwithstanding the daily injection of 1½ gr. the bleeding had continued in small quantities, though intermittently, until November 6th, 1891, but from this date until now he has only seen blood once.

1892, December 26th.—Traces of blood have been seen on five or six occasions, including to-day, and he has increased the injection to 1¾ gr.

1893, May 5th.—He has had an interval of four months without symptoms, and has left off the treatment for three months. Lately the blood has been more frequent, and in large quantities.

1896, October.—Dr. Statham reported that the patient had injected himself, using 1¾ grain during this period. "About every four months he had a return of the hæmorrhage, which quickly yielded to treatment."

1898, July 26th.—Dr. Statham writes that he has been well, taking a good deal of exercise, and free from symptoms with the exception of slightly smoky urine once following influenza.

1899, May 28th.—In November, 1898, he had a slight attack of hæmorrhage, which lasted five days. He at once began the injections, and continued them until February 13th, 1899, and has seen no blood during that period. He now has an attack of cystitis, accompanied by hæmorrhage, from which he is recovering.

CASE IV.

1892, January 26th.—Aged 42. Came to consult Sir Henry Thompson with Dr. Douglas of Newbury. During the last three or four years he had experienced a tickling sensation in the urethra, increased frequency of micturition, and occasional incontinence. Four days previously he had seen a considerable quantity of blood in the urine, which had recurred daily since. A fine specimen of papilloma was removed and examined.

1893, July 18th.—He had made a daily injection, at first under the guidance of Dr. Douglas and then by himself until August, 1892, when, as all the urinary troubles had subsided, no further treatment was adopted. Dr. Douglas reported that he had never had any hæmorrhage up to the time of his death, which occurred in the spring of this year from pneumonia.

CASE V.

1892, February 12th.—Aged 40. Sent by Dr. Smyth of Brockley. He complained of frequency of micturition, a little tickling pain at the end of the penis after the act, and since November, 1891, he has had excessive hæmaturia, which kept him in bed on two occasions for a fortnight. The urine was offensive. A shred of papilloma was obtained in the usual way.

1985, July.—Dr. Smyth had taught him to inject, beginning with a weak solution, and he had continued to do so, at first every day and then irregularly to this time, but all urinary troubles had subsided by September, 1892. He has seen blood lately and has used the injection more freely.

1898, July 25th.—He reports that he has seen no blood for eighteen months and has ceased treatment for a year, and now has no urinary troubles whatever. Previous to this he had some attacks of slight hæmorrhage, he cannot say how many, but they were always overcome by the injection. He is in good health and takes much exercise, lawn tennis and dancing.

CASE VI.

1893, October 29th.—Aged 64. The patient came with retention, caused by a large blood-clot in the bladder. He had experienced difficulty in passing urine once before, in November, 1891, but had seen no blood, and complained occasionally of smarting along the urethra. A specimen of papilloma was secured while relieving the retention. I taught him to inject with the nitrate of silver solution, commencing with one-half grain to the 4-ounce bottle. In ten days' time the bladder had recovered its expulsive power, and the hæmaturia had ceased. The urine was healthy.

1893, December 19th.—He had injected the solution, using 1½ gr. daily until May 23rd, every other day until July 21st, and had discontinued it on September 21st. To-day he noticed blood in the urine for the first time since November, 1892, an interval of fourteen months, and at once began to inject.

1894, August 4th.—All traces of blood had disappeared by the end of December, and he left off the treatment on June 23rd. To-day a very small quantity of blood was seen after an interval of seven months.

1896, January 18th.—No treatment had been adopted since October, 1894, and he had only seen very slight indication of blood thirty-six times during this period of fourteen months. As the hæmorrhage had now increased both in frequency and amount he commenced to inject again.

1897, May 18th.—The hæmaturia ceased in March, 1896, and the following month the injections were stopped, and for the last thirteen months he had observed blood only on a few occasions. During the latter half of the time injections of 1 gr. had been made twice a week. He was now suffering from an acute attack of septic cystitis accompanied with severe and continuous hæmorrhage. It lasted for ten days, and was followed by phosphatic deposit in the bladder. I removed some half dozen concretions, the largest the size of a bean. After this, and with the aid of daily injections, he rapidly improved, the urine becoming quite clear and healthy again.

1899, January 7th.—He had continued the treatment for three months, using 1 gr., and then left off. Blood had been seen during the nineteen months, a few times in very small quantities, but had always been completely controlled when the solution had been used with any regularity. The patient is now over 70 years of age and enjoys good health, and is fairly active, complaining in no way of the urinary trouble.

1899, April 8th.—Blood had been seen on a few occasions, and he is now going to undertake a regular course of daily injections for six months at least.

CASE VII.

1892, November 8th.—Aged 38. For two years he had been passing blood every few days, often in large quantities, but had no other symptoms. A fine specimen of papilloma was easily found and examined. He learned to inject himself, finally using 1½ gr. The urine was clear.

1893, October 18th.—He reported himself "much better," though he had passed blood in small quantities on 11 occasions. He had injected daily without intermission.

1894, November.—During the past thirteen months he had injected with more or less regularity, but blood has been seen on 27 occasions in small quantities.

1895, September 1st.—There has been no blood since the last report, and he had made no application. To-day again slight indication, and the injection started afresh.

1899, May 2nd.—He had continued the injections for two months, but had never undertaken any treatment since. Sometimes months were passed without seeing any hæmorrhage, then blood has appeared on two or three following days in small quantities, but only when straining at stool, rarely at other times. He is exceedingly active, hunting, etc., and enjoys good health.

CASE VIII.

1894, June 23rd.—Aged 64. A year ago she first saw blood in the urine,

and now complained of increased frequency of micturition, both by day and by night, urgency, severe pain always after the act, increased by movement, and frequent attacks of severe hæmaturia. The urine was offensive and contained blood. As no characteristic fragment of tissue could be obtained in the usual manner, she was anæsthetised, placed in the lithotomy position, and a speculum introduced through the urethra into the bladder after dilatation. Dr. Spencer was present, and kindly gave me his advice as to this method of examination. A sessile tumour, extending over an area of 1.75 sq. in. and 0.75 in. in thickness, was easily seen. The small portion of tissue removed for microscopic examination proved to be papilloma, the surface being coated with phosphates, but the base of the tumour was most probably of a malignant character.

1894, August 9th.—She had injected twice daily, using ½ gr., never stronger, as even this caused discomfort sometimes. She still had some pain after micturition, but the frequency had decreased, and there had been intervals of five or six days without hæmaturia. The urine was still offensive. She returned to Salisbury under the care of Dr. Blackmore.

1896, June 27th.—She had carried out the injection with 1 gr. intermittently, using it twice a day, but had never been quite free from pain nor hæmorrhage. On one occasion only had it been severe and lasted two days. The other urinary symptoms were present but not so urgent.

1897, October.—Dr. Blackmore reported that she had been fairly well till now, all the urinary symptoms had improved, but she had never been entirely free from them though the hæmorrhage had never been severe. During this period Dr. Blackmore had tried weak solutions of copper sulphate with success, but the silver had been far more frequently applied.

1898, April.—Dr. Blackmore reported her death from exhaustion. The cystitis had gradually increased from October, 1897, and she had suffered much pain lately only relieved by narcotics. The tumour, which could be felt bimanually, had increased to the size of a tennis ball.

CASE IX.

1896, July 18th.—Aged 37. This patient was sent by Dr. Smyth of Brockley. He had first noticed blood nine months ago, when it had continued for three weeks every time water was passed. Since that time he had never been free from it for longer than a fortnight, and, in addition, he complained of a slight tickling along the urethra towards the end of the act of micturition. Dr. Smyth taught him to inject himself with 1 gr.

1897, May.—He had made daily injections till January 31st, 1897, and had then ceased, and had had no hæmaturia since the middle of December, but to-day slight indications of blood were seen.

1897, September 30th.—Blood had been seen frequently, sometimes every day, and he had consequently commenced the injections in June, continuing them until now. He now has an attack of acute cystitis, with severe hæmorrhage, every time he micturates.

1898, February.—The cystitis has subsided, but slight hæmaturia is constantly present though the urine is in other respects clear and healthy. He is to continue the treatment.

1898, November 5th.—He had injected intermittently since his last report, sometimes every day for a fortnight, and had then left off for three weeks. The hæmorrhage has always ceased for a considerable time immediately after a course of injections, though while using them a drop or two of blood had been generally noticed daily at the time of catherisation.

1899, April 28th.—The patient had commenced a systematic course of treatment from the last date, beginning with 1 gr., and reaching a maximum strength of 2 gr. towards the end of that month. Hæmorrhage in small quantities had occurred almost daily at the time of catheterisation until January 11th, 1899. From this date until the present time the bleeding has been much more intermittent, and seven or eight days have elapsed without any blood being seen. He intends continuing the treatment for another six months.

CASE X.

1897, April 6th.—Aged 43. The patient passed blood for the the first time early in January, 1897. The hæmorrhage lasted two or three days. It recurred two weeks later, and had continued almost daily, and on every act of micturition, ever since, sometimes in considerable quantities. He complained of slight pain in the urethra both during and after micturition. He had been for some weeks in hospital, and an operation on the kidney was contemplated, as it was thought the hæmorrhage arose from that organ. I did not think the treatment by injection was suitable for his case, as his occupation—that of a yacht's seaman—would seriously interfere with it being carried out properly. He, however, declined operation, and I taught him to inject.

1898, November 2nd.—He reports, in reply to a letter, as follows: "I injected daily until July, 1897, and then once a week until November, 1897. Once a month till July, 1898, and not since. I have not seen any blood since June, 1897, and the water keeps good. I have no pain at all. I was at work in the English Channel from December, 1897, until February, then I found the yacht, March 1st, 1898, and am still at work on board of it, laying up at Southwick. I have my health good."

1899, May 5th.—He writes he had no hæmorrhage until March 15th, 1899, an interval of 20 months, when he had passed a quantity of dark blood with great pain. Injections were at once resorted to, and the bleeding ceased. He is now without pain, and quite well.

CASE XI.

1897, November 9th.—Aged 48. Sent by Dr. Menzies, of Worksop. He first saw blood in his urine in February, 1895, a few drops after micturition. In December, 1896, he had daily bleeding from the penis for 14 days, independent of micturition. October 19th, 1897, he had severe and continuous hæmorrhage, which caused retention on October 21st, and was relieved by the aspirator. There was a little blood in the urine when he called, but he had no other symptom. Several specimens of papilloma were found and examined.

1898, May 19th.—Dr. Menzies taught him to inject daily, commencing with ½ grain, and increasing to 2 grains, until February 14th, when he did so every other day. Blood had ceased on November 17th, and none was seen until January 2nd, again on February 2nd and 4th, frequently during April, and he now sees it once or twice a week.

1899, February 28th.—He had made injections very irregularly, and the blood had never ceased. For three weeks or more he has had much pain, frequency of micturition, increased hæmorrhage, and septic urine. His condition was very unsatisfactory.

1899, May 4th.—Dr. Menzies reported that "owing to cystitis and increasing obstruction, suprapubic cystotomy was performed on March 25th, and a permanent opening established for drainage. A large growth was found at the base of the bladder, widely infiltrating the muscular coat." The portion of the tumour removed, and which Dr. Menzies kindly sent up, was examined by Dr. Sidney Martin and proved to be a so-called squamous epithelioma, with a fibre cellular matrix, the surface being covered with papillomatous tissue. The patient died on this day from congestion of the lungs.

CASE XII.

1898, June 2nd.—Aged 69. Three months ago he had continuous hæmaturia for three weeks. This recurred in May, and has persisted since. He had no other urinary symptom. His condition was unsatisfactory for he was weak and blanched from loss of blood; and large shreds of papilloma were passed. I kept him in bed, injecting him myself with the silver solution, but only with 1 gr. to the 4 ounces of water. No improvement whatever was noticed in the urine for the first week. It was always thick with blood, and as he was evidently losing ground, I proposed to do suprapubic operation for the removal of the tumour, still continuing the injections, but three days later—the day fixed for the operation—the hæmorrhage ceased, and surgical interference was postponed. I kept him under personal observation for a fortnight longer, injecting him daily, and as no blood was seen he returned home with a nurse to continue the injection treatment there.

1899, January 12th.—I heard that he had continued the injection, using 1 gr. of nitrate of silver daily, until October 23rd, since which he had made no application at all, and that he had never seen any blood. He was in good health and was much stronger.

1899, May 9th.—He reports himself quite well and free from all symptoms.

NOTES.

[1] A solution of 1 in 12,000 perchloride of mercury is a good preservative fluid for a short time. [2] I am indebted to Dr. William G. Savage, assistant to the Professor of Pathology at University College, for a series of experiments on this point. He writes: "Water at 150° F., even for half a minute, is a reliable steriliser of catheters for ordinary work."

NOTE ON THE BLOOD IN A CASE OF BERI-BERI.

BY

F. W. MOTT, M.D., F.R.S., and W. D. HALLIBURTON, M.D., F.R.S.

(From the Physiological Laboratory, King's College, London.)

DURING the last few years we have been investigating the physiological action of choline and neurine, with special reference to the pathology of general paralysis of the insane. Our results will be fully published with illustrative tracings in the *Philosophical Transactions* of the Royal Society.[1] One conclusion we arrived at may be however briefly mentioned, namely, that the cerebro-spinal fluid of these patients produces when injected into the vascular system of animals (cats, dogs, rabbits) a considerable fall of blood pressure; and this is due to the presence of choline. This alkaloid doubtless originates from the lecithin of the disintegrating nervous tissues. The nearly related alkaloid neurine is not present; it is more toxic, and its most marked effect on the circulation is a preliminary fall of blood pressure (mainly cardiac in origin), followed by a great rise of pressure due to constriction of peripheral blood vessels. The fall of arterial pressure produced by choline is partly of cardiac origin, and partly due to the dilatation of the peripheral vessels, especially in the intestinal area. It may also be mentioned that the blood of these patients, removed by venesection during the epileptiform seizures, which form a prominent symptom of the disease, contains the same alkaloid; our proof that the toxic material both from blood and cerebro-spinal fluid is choline were partly chemical and partly physiological, that is, the effects of the material were exactly the same as those of minute doses of choline or of choline hydrochloride.

In the course of this investigation we had occasionally opportunities of testing the action of other fluids; thus we found that the alcoholic extracts[2] of normal blood, normal cerebro-spinal fluid, and ordinary serous effusions contain no choline and produce no results on blood pressure.

It is, however, to a specimen of blood from a case of beriberi that we wish, in this note, to draw particular attention. We are indebted for the specimen to Dr. Patrick Manson. The blood was removed from the patient by venesection, undertaken with a view to relieve right heart distension, was immediately mixed with alcohol, and it was this mixture which Dr. Manson kindly forwarded to us.

Before we injected the material, the mixture was filtered, the filtrate was evaporated to dryness at 40° C., and the

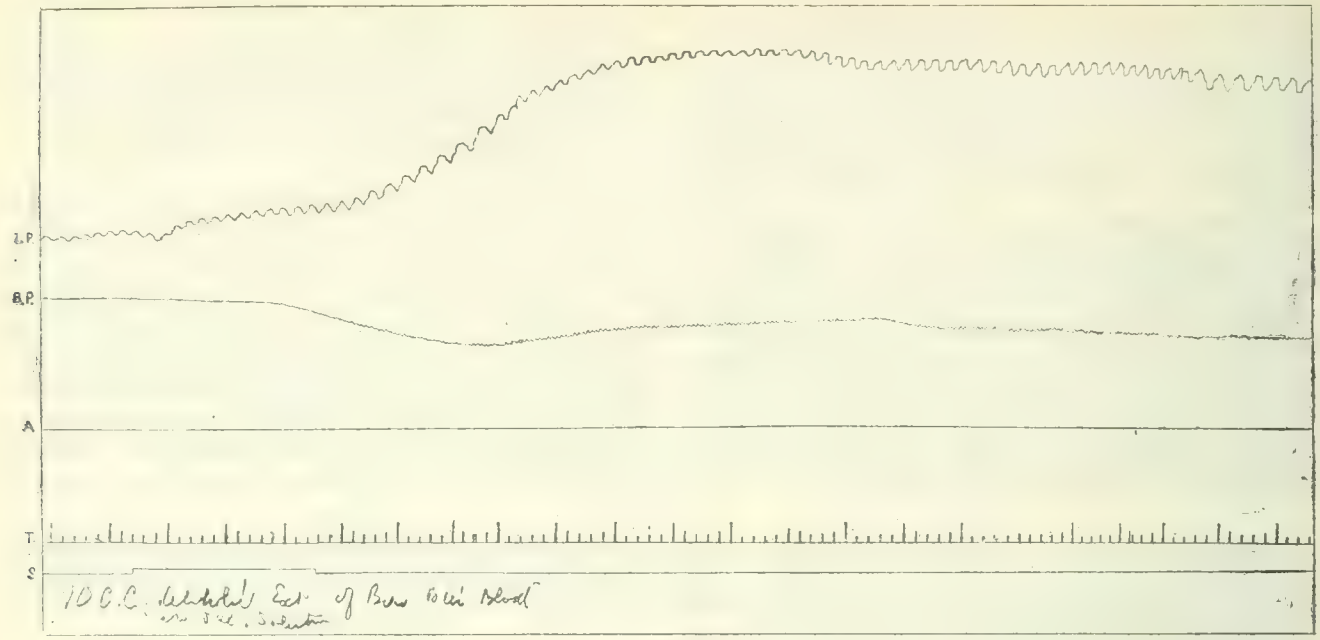


Fig. 1.

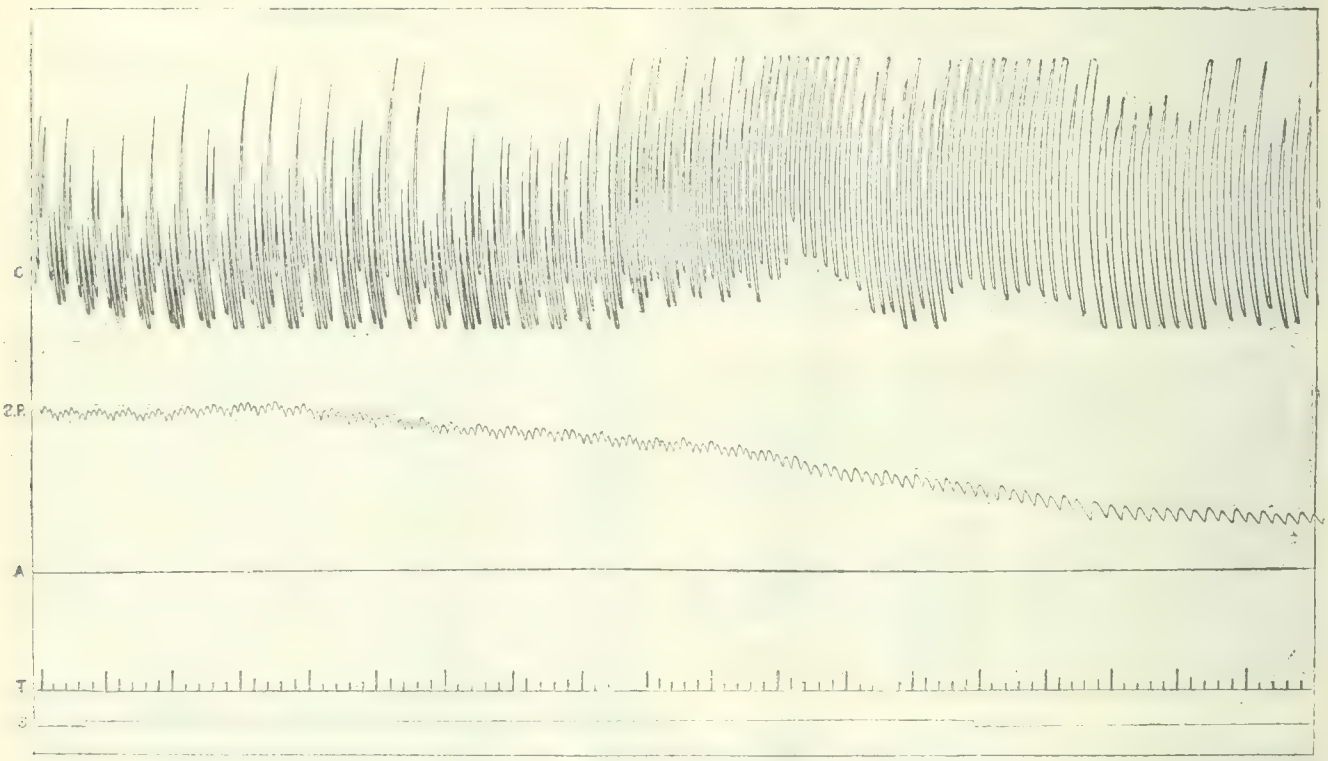


Fig. 2.

residue was dissolved in physiological saline solution, and injected into the external jugular vein of cats anæsthetised with alcohol and ether. The amount of material injected was 10 c.cm., which corresponded roughly to about twice that quantity of the original blood.

The amount of material at our disposal did not enable us to perform as many experiments as we were able to do with cerebro-spinal fluid in general paralysis.

The two accompanying tracings show, however, that the blood contains a substance which, like choline, produces a fall of arterial pressure. In Fig. 1 the lowermost line (s) shows by a difference of level the period when the injection was performed; T, is the time in seconds; A. is the abscissa of the blood pressure; B. P., the blood-pressure tracing taken with a mercurial manometer; and I. P., a tracing with Edmunds's intestinal plethysmograph. The fall of blood pressure is seen to be accompanied by a dilatation of the vessels of the intestinal area; the heart is also slowed.

The effect on the heart is much more clearly shown in the next tracing (Fig. 2). In this cat we used, in place of the intestinal plethysmograph, Barnard's cardiometer attached to a Hürthle's piston recorder (c); the downstrokes represent systole; here the fall of arterial pressure was greatly prolonged; the heart is slowed; its output is increased, and there is considerable dilatation of the heart.

It is difficult to be certain of the dose of toxic material injected; so far as we were able to judge, the effect is more pronounced than what one usually obtains with choline. We made a chemical examination of the blood, and attempted to identify choline by the characteristic crystalline form of its platinum double salt. We only obtained some ill-formed crystals of a light yellow tint. The amount of material at our disposal did not enable us to do more than this. We thus obtained no positive chemical evidence of the presence of choline.

Specimens of beri-beri blood are, however, so rarely obtained, that we think it not altogether devoid of interest to record our imperfect observations; no doubt the subject will



Photomicrograph of section of heart after staining in Marchi fluid. Magnification 280 diameters.

be taken up by others whose opportunities of seeing such patients are more extensive. The disease is a nervous one, accompanied by great cardiac failure, vascular depression, and œdema. Later on, in the present case, when the patient died, a *post-mortem* microscopical examination of the tissues performed by one of us (F. W. M.) showed extensive degeneration of peripheral nerves and fatty degeneration of the muscles, including the heart. It is therefore not to be wondered at that the blood should contain a toxic material producing vascular depression, nor (remembering the nerve degeneration) that the toxic substance should be similar in its action to choline.

The accompanying photomicrograph shows the fatty degeneration of the heart in beri-beri. This specimen was obtained from the heart of a Chinaman who died of the disease. At the *post-mortem* examination there was great venous congestion and distension of the right side of the heart with dark blood. The liver, stomach, and intestines were greatly congested, and numerous hæmorrhages throughout the substance of the liver were found microscopically.

NOTES.

[1] An abstract has already appeared in the *Proceedings* of the Society, 1899. [2] Naturally the alcohol was evaporated off, and the residue, dissolved in normal saline solution, was then injected.

PRESENTATION.—Dr. D. P. Fitzgerald was on July 3rd presented with an illuminated address and a travelling dressing case by the students of the Anatomy Classes of the Queen's College, Cork, with whom he had been identified for the past two years as Demonstrator. Dr. Fitzgerald has been reappointed Demonstrator of Anatomy for the coming session.

REMARKS ON THE TREATMENT OF IMPERMEABLE STRICTURE OF THE URETHRA BY EXCISION OF THE STRICTURED SEGMENT AND SUTURE OF THE DIVIDED ENDS.*

BY EDWARD DEANESLY, M.D., B.Sc.LOND., F.R.C.S.Eng.

Honorary Assistant Surgeon and Honorary Casualty Surgeon, Wolverhampton and Staffordshire General Hospital.

THE treatment of impenetrable stricture of the urethra is one of the oldest of surgical problems, for the condition to which it gives rise is grave and urgent, and the impotence of internal medication to relieve it is sufficiently obvious. The most reluctant of patients and the most sanguine of physicians are equally driven to adopt surgical measures of some kind. The object of the present remarks is to criticise the measures usually adopted, and to describe a method of treatment practised with the most satisfactory results in a case recently exhibited before the Staffordshire Branch of the British Medical Association at Wolverhampton. Although the principle of the operation is not absolutely novel, for it has already been carried out frequently on the Continent and a few times in this country, it is sufficiently little known to make it worth while to call the attention of surgeons to what is undoubtedly a more perfect and satisfactory treatment of certain cases of stricture than the operations generally practised.

Whether any stricture of the urethra is ever completely impervious to fine instruments in skilful and experienced hands is, perhaps, doubtful, although in the case related below this certainly seemed to be the case. At any rate it is a good working maxim that when urine still continues to issue through the urethra, however small the stream, given time patience, and skill, a catheter can always be passed into the bladder. For many cases, however, the element of time is lacking, for, if there is complete retention of urine, it must be speedily relieved, or the uncontrollable expulsive efforts of the bladder will burst the dilated urethra behind the stricture, and urine will become extravasated into the loose tissues of the scrotum and abdomen.

Temporary relief of the bladder may be effected by suprapubic puncture—sometimes called suprapubic aspiration, although the use of an aspirator to relieve a violent positive pressure is absurd—or by incising the membranous urethra in the perineum behind the stricture by what is known as Cock's operation. The latter operation is now little practised, and suprapubic puncture, on account of its greater ease and certainty, is certainly to be preferred. Both these procedures are, of course, merely designed to give temporary relief.

Wheelhouse's operation, which not merely relieves the retention but deals with the stricture as well, is the operation most generally recommended and practised. It consists of an external urethrotomy, passing through the stricture from before backwards. The urethra is opened on a staff immediately on the distal side of the stricture, and a fine probe is then passed through the latter under the direct guidance of vision. The stricture is then split open backwards along the probe into the dilated urethra behind, and a full-sized catheter is then passed into the bladder and tied in.

Wheelhouse's operation is as simple in principle as it is difficult and unsatisfactory in practice. It is no easier to find the orifice of the stricture by vision than it is by touch, and cases in which the probe is easily passed could certainly be catheterised in the ordinary way. Generally the operation ends by tunnelling or cutting a passage through dense tissue until the proximal end of the urethra is reached. Even when the operation is successfully accomplished it merely leaves an artificial passage through dense cicatricial tissue, which has to be kept open by the frequent passage of dilating instruments as long as the patient lives.

For these reasons it is far better, wherever practicable, to per-

* Read before the Staffordshire Branch of the British Medical Association.

form a radical curative operation by excising the whole segment of the urethra involved by the contracting process, and to bring together and suture the normal-calibred healthy ends which are left, just as is now done in enterectomy for stricture followed by end-to-end union of the bowel. This procedure was carried out without difficulty, and with the best results in the following case.

W. G., gasfitter, aged 52, had suffered from a tight stricture for many years. About 20 years ago he underwent external urethrotomy in the Wolverhampton and Staffordshire General Hospital, and had subsequently passed catheters himself. On May 18th, 1898, he was again admitted to the hospital, having passed no urine by the urethra for 48 hours, but two pints had been drawn off by suprapubic puncture the previous day, after which the state of his tongue and pulse had improved. On admission his pulse was good, and general condition pretty fair. The finest urethra instruments, both soft and metallic, were tried, but could not be made to even enter the stricture, which began abruptly at the bulbous portion. Under ether a median incision was made from the root of the scrotum nearly to the anus, and the bulb exposed after splitting and drawing to each side the bulbo-cavernosus muscle. The stricture could then be easily felt between the finger and thumb, as a hard gristly mass about half an inch in length. The urethra was now separated from its attachment on each side, and traced back between the layers of the triangular ligament. As the membranous portion was considerably dilated and thickened behind the stricture it was easily isolated and followed back. Rather smart hæmorrhage was controlled by forceps. It was now easy to make a small longitudinal cut into the membranous urethra immediately behind the stricture, and through this a soft rubber catheter, No. 8 English size, passed at once into the bladder, and evacuated over a pint of fairly clear urine.

A second opening was now made into the urethra just in front of the stricture, and attempts were made to pass a fine probe through the stricture, but although the strictured portion was held between the finger and thumb while this was being done, it was quite impossible to find any passage. The contracted part of the urethra and about a quarter of an inch of healthy urethra at each end of it was now dissected off the triangular ligament and bodily excised with scissors, the hinder cut passing through the longitudinal cut in the membranous part. The soft catheter was then passed through the whole urethra into the bladder, and the divided ends accurately brought together by about six silkworm gut sutures, the first passing through all the coats of each end in the median dorsal line and being cut short; the remaining sutures were passed through the fibrous and spongy coats, without including the mucous membrane, and the ends were left long and brought out through the perineal wound. The bulbo-cavernosus muscle was sutured, but the skin left partly open. A Cathcart's exhausting apparatus was rigged up by the patient's bedside and attached to the end of the rubber catheter. By this means not a drop of urine escaped through the perineum for ten days, when the catheter was left out, and the patient taught to pass it himself every time he wished to relieve himself.

Convalescence was uninterrupted and free from pyrexia. The sutures gradually came away, but some only after several months, when the wound had healed all but a small sinus. A single suture still remains and keeps open a small sinus, but gives rise to no trouble, and there has never been any leakage of urine. The remaining suture is probably that which was first inserted, and cut short inside the urethra; and in any future case it would be wiser to leave all the ends long. The most satisfactory feature of the case is the complete absence of any stricture. Although there has been no passage of dilating instruments since the operation, at the present date—over twelve months since the operation—a full-sized urethral sound passes into the bladder with perfect ease.

The segment of urethra removed was preserved and exhibited. Allowing for shrinkage due to the preservative fluid, it consists of nearly an inch of the urethra at the junction of the bulbous and membranous parts. Even with the specimen in the hand, it is only with difficulty that a fine probe can be passed through the dense fibrous mass which represents what should be a tube of nearly a-quarter inch calibre.

Admitting the superiority of this operation over that of Wheelhouse or any other mode of external or internal urethrotomy, is it always practicable? I am inclined to think that there are few cases of single stricture which cannot be treated in this way, but multiple strictures situated at some distance from each other are obviously unsuited to this treatment, and the same may be said of cases in which the strictured portion of the urethral tube exceeds 2 inches in length. Such cases are, however, rare. When multiple strictures exist the actual obstruction is always at the most posterior one, which seldom involves the membranous part, or at any rate more than the anterior half inch of the latter. The membranous part is fixed by the triangular ligament, and cannot be mobilised or stretched except to a slight extent; but any part of the urethra anterior to the triangular ligament can be freed from its attachments and carried backwards sufficiently to close a gap of at least 2 inches or even more.

Even if excision of the urethra be found impracticable, it is better to seek the urethra behind the stricture by deliberate dissection and tracing back of the unopened urethral tube (a sufficiently large and recognisable anatomical structure) rather than by following a probe or sound passed through what may be, and often is, a false passage, or by trusting simply to the direction of the knife, as in Cock's operation. It is very desirable to have the whole length of the stricture and part of the urethra behind it accurately exposed before traversing or dealing with the stricture itself. In the case related above a soft rubber catheter was passed with ease from the perineum into the bladder without any guide but moderately good eyesight and an elementary knowledge of anatomy.

NOTE ON A CASE OF OBLITERATION OF THE MALE URETHRA.

By RICHARD H. KENNAN, M.D.Dub.,

Assistant Surgeon, Sir Patrick Dun's Hospital, Dublin; late Resident Medical Officer, Park Hill City Hospital, Liverpool.

"Obliteration," Sir Henry Thompson says in his work on *Stricture*, "is a different condition occasioned by different causes to that of stricture, usually, indeed, by some severe traumatic lesion. It is not common, but it is not so rare as some writers seem to have supposed who have quoted single cases by Chopart, and another by Cruveilhier, to illustrate the observation." And again he observes: "But you may have complete obliteration of the urethra, which, as before said, is not stricture. This is a very unusual condition, but it occasionally happens, and chiefly after injury in the perineum, as by perforation or severe bruise, or any wound dividing or lacerating the urethra. If the opening remains pervious, and gives exit to all the urine, a cicatrix may follow, sealing the anterior opening of the divided urethra, and obliterating the canal for a short distance in front of the fistula." This very clearly indicates the distinction which is to be drawn between the so-called impassable or impermeable strictures and the condition of obliteration.

Liston's opinion on the subject of "impermeable" stricture is too well known to need repetition. He seems to me to assume that complete obliteration results only from traumatism. As has already been stated, before obliteration can take place a fistula must have been established; nevertheless, fistulæ may exist for long without the urethra becoming completely obliterated. A case is quoted by Sir H. Thompson in which no urine had passed "for years" except by numerous fistulæ, yet in which the obliteration of the urethra was not complete. Erichsen cites that of a man with a very tight stricture and extravasation, on whom no catheter had been passed for eight years, and yet at the *post-mortem* examination a very minute urethral canal was found.

I use these cases to illustrate the point that the urethra stoutly and for long resists obliteration rather than to show the extent to which its resistance may be overcome, which would appear to have been the principal object of the authors.

The patient, J. W., aged 48 years, from whom I obtained the genital organs represented in the sketch, was admitted to the Park Hill, Hospital, Liverpool, on December 26th, 1897, suffering from dysentery.

Condition on Admission.—He was a sailor on a steamer trading with the Southern States, and was accompanied by three shipmates all "in the same boat" as regards the dysentery. He was received in the afternoon. He made no complaint of trouble or difficulty in micturition. The day following his admission I was told that no specimen of urine could be got from him; that he was passing his water in bed. On examining him I found his penis was œdematous and swollen; there was brawny infiltration of the perineum, and on the left side of the penis an inflamed area with a dark centre, which had given way and was oozing. He said he had suffered for many years, and had been treated for stricture the result of gonorrhœa. There were some scars in the perineum, but he denied ever having had fistula, or any operation performed on him. He stated that while leaving the ship he slipped, and though he did not fall, felt a severe pain in the perineum. No instrument could be passed. The dark slough increased rapidly, and the amount of oozing increased, while fœtor became marked.

Operation.—The same afternoon an incision was made in the middle line of the perineum. A sound passed down to the stricture was made protrude through the perineal wound. The proximal portion of the urethra could not be found, the difficulty of its identification being aggravated by the condition of the tissues, and by the fact of its being no longer distended. Several incisions were then made on both sides of the first, and the patient was put back to bed. He expressed himself as much relieved.

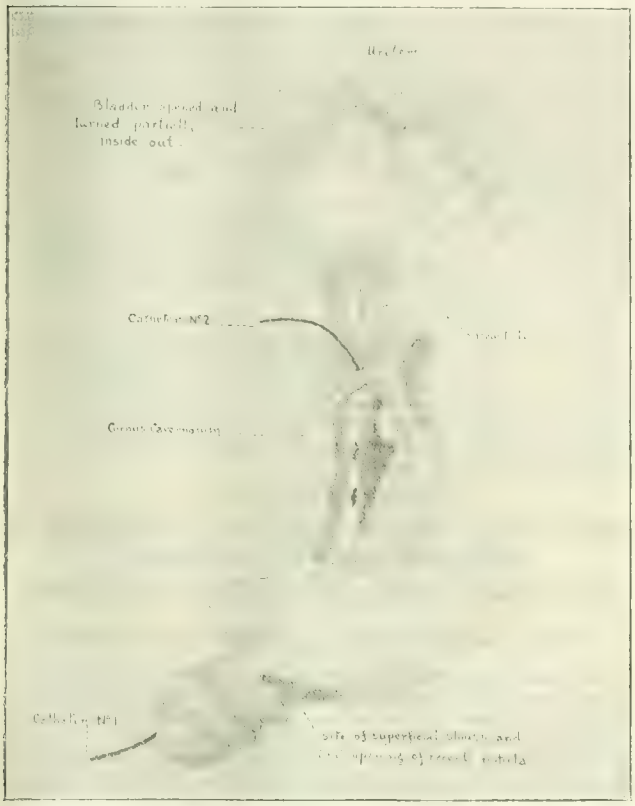
Death.—The combination of dysentery with urinary extravasation was, however, too great a strain on his vital forces, and he died on January 6th, 1898.

On removing the lower urinary tract I was able to pass a catheter down to the stricture and out through the opening which had been made at the operation, and with some difficulty to pass another through the proximal portion of the urethra from the bladder out through the rupture. Anxious to see what the lumen of the urethra was like at the stricture, I cut the corpus spongiosum across in front of the proximal

rupture in the urethra and also behind the distal end of the stricture. I was unable to trace any sign of a canal on the surface of the sections.

Dr. Earl, to whom I sent the piece, very kindly examined it for me, making sections from the middle and both ends. The normal tissue of the corpus spongiosum was found to have been completely replaced by fibrous tissue. Dr. Earl was unable to do more than suggest a possible site for the location of the absent canal, so completely had traces of it disappeared.

It was very difficult to get details and a history from the patient. His statements were sometimes contradictory and impossible of belief. It is hard to believe that during the interval between the time at which extravasation and the establishment of the fistula took place and death—that is, about sixteen days—would have been sufficient to allow of the changes which led to such complete obliteration of the



urethra and disappearance of its constituents at the site of stricture. It would appear much more probable—the patient's statement to the contrary notwithstanding—that one of the scars observed in the perineum represented the obliterated remains of a fistula which had been open for a considerable time, during which these changes occurred, and that before admission this fistula became blocked, leading to a second extravasation. The orifices of a perineal fistula, it is well known, are frequently so minute as to be difficult of discovery, the time between the occurrence of the recent extravasation and death allowing for the final obliteration of the original fistula. This seems to be a solution of the difficulty "in the line of least resistance." It is not one against which objection cannot be raised.

[For permission to use the notes on this case I am indebted to the kindness of Dr. N. Roberts, Visiting Physician to the Park Hill City Hospital, Liverpool.]

HARVARD MEDICAL SCHOOL.—The late Dr. Calvin Ellis, some time Dean of the Harvard Medical School, has bequeathed his estate, amounting to about £80,000, for the advancement of the department of anatomy, physiology, and pathology in the school.

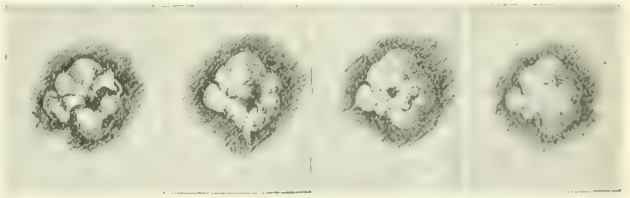
EXTRACTION OF LIGATURES FROM THE BLADDER.

BY MURRAY MACLAREN, M.D., M.R.C.S.,
St. John, New Brunswick.

MRS. J. A., aged 24, was operated on by me for pyosalpinx on November 6th, 1895. There was a history of attacks of pelvic inflammation for several years. The mass, which was considerable in size and consisted of abscess of the right Fallopian tube and ovary, could not be raised up from the pelvis; numerous ligatures of silk, therefore, were required to be applied across the broad ligament. Recovery from the operation was prompt and satisfactory. The temperature on the evening of the day of operation reached 100.2° F., but after that, up to the time of leaving hospital on November 28th, 1895, it was normal, with a pulse of about 73.

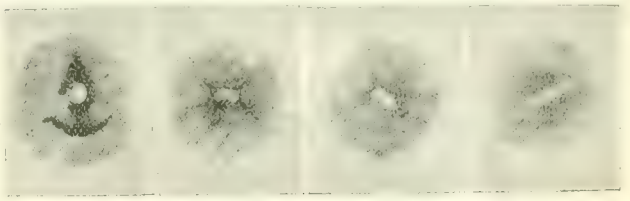
In July, 1897, one year and eight months after operation, symptoms of cystitis appeared. There was pus in the urine with frequent and painful micturition. A cystoscopic examination detected merely some vascular injection of the bladder wall.

On August 10th, 1897, a silk ligature was passed by the urethra. The knot was encrusted with calcareous salts. On November 20th a red swelling was observed by the cystoscope on the right side of the bladder wall. Across the centre of the swelling was a greyish mass, having the appearance of a slough. It was somewhat movable, but moderate traction with forceps did not detach the mass, although it separated some of the calcareous coating (Fig. *a*). The ligature with encrusted



a *b.* *c.* *d.*

a November 20th, 1897, calcareous deposit on knot of ligature. *b* November 27th, 1897, calcareous deposit on knot of ligature. *c* December 21st, ligature. *d* January 6th, 1898, no ligature.



e. *f.* *g.* *h.*

e January 21st, prominent granulation in depression. *f* February 25th, ligature. *g* March 3rd, ligature. *h* March 19th, no ligature.

knot was passed by the urethra on November 25th; it was being protruded through the bladder wall when seen on November 20th.

On November 27th another ligature was found to occupy about the same position (Fig. *b*), and was pulled out with forceps. The knot was somewhat encrusted. On December 21st a further ligature was seen (Fig. *c*) and removed. Fig. *d* shows the red swelling as seen on January 6th, 1898. No ligature was then evident. On January 21st the swelling had largely subsided, leaving a prominent granulation situated in a depression (Fig. *e*).

On February 25th (Fig. *f*) and March 3rd (Fig. *g*) further ligatures were removed. The last three specimens showed hardly any calcareous deposit. Fig. *h* shows the appearances on March 19th, when no ligature was present. The forceps used in extracting the ligature were Turck's laryngeal forceps.

It will be observed that in the case of the earlier ligatures there was a distinct swelling about the point of exit, and that later after passage of several ligatures (which were the largest) the swelling was followed by a depression with a prominent granulation in the centre, from which the remaining ligatures were protruded.

I am much indebted to Dr. W. L. Ellis for his kindness in making the drawings. They are excellent representations of the various conditions.

The bladder symptoms largely disappeared with the removal of the ligatures. A final ligature, however, was passed by the urethra on May 6th, 1898.

During the past year the condition has been fairly satisfactory; the urine has been free from pus, and the frequent and painful micturition has subsided.

A CASE OF ABDOMINAL NEPHRECTOMY FOR RENAL CALCULUS.

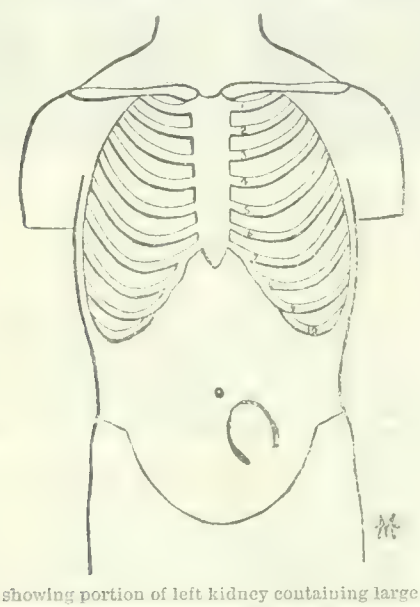
By WALTER L. BELL, M.D.,
Surgeon to the Lowestoft Hospital.

THE diagnosis of renal calculus is admittedly uncertain. Symptoms may point so decidedly to the presence of a stone in the kidney that an operation is undertaken, and yet the most careful search may fail to reveal the existence of a calculus. On the other hand, a renal calculus may for a lengthened period give rise to such slight symptoms that its presence may be totally unsuspected; or the symptoms may suggest an entirely different condition either of the kidney itself or of some other abdominal organ.

The following case is interesting, first, because of the unusually large size of the calculi, and, secondly, because the diagnosis was obscure, as the history, signs, and symptoms were not those characteristic of renal calculus:

History.—A. G., aged 27, wife of a fisherman, was admitted to the Lowestoft Hospital on February 8th, 1899, with the history that for seven years she had suffered from pain in the left iliac region. This pain was of a constant aching and bearing-down character, always much aggravated at the monthly periods (which were regular and apparently normal), and made worse also by full extension and flexion of the thigh on the abdomen. There was no lumbar pain, no exacerbations, no renal colic, no history of hæmaturia, or passage of gravel. Her labours had always been severe and prolonged. Her last full-term labour, two years ago, was instrumental. In November last, when six months pregnant, she suffered from severe accidental hæmorrhage, necessitating the induction of labour. During this last pregnancy she was never well, and suffered much from pain in the left iliac region. Since getting up after delivery this pain had been severe. She first noticed that she had a swelling within the abdomen about a year ago; it lay in the left iliac region, and was tender, hard, and somewhat movable.

Condition on Admission.—I found a densely hard, tender, slightly movable, oval swelling in the lower half of the abdomen to the left of the middle line, extending from the region of the pelvic brim to within 2 inches of the umbilicus (see diagram). The uterus was retroflexed and



A. G., showing portion of left kidney containing large calculi.

freely movable, and the sound entered readily for the normal distance. The tumour lay above and to the left of the uterus, and was apparently connected with it, as some degree of movement could be communicated from one to the other. The right ovary and tube were felt, but I could not make out the position of these structures on the left side.

Diagnosis.—The history and results of physical examination were, therefore, not at all suggestive of renal calculus, but pointed rather in the direction of a tumour connected with the uterus or left broad ligament, and this, in fact, was the view taken of the case by all who saw it.

Operation.—On February 16th, with the assistance of Mr. W. A. Shann, I opened the abdomen in the linea alba, and found uterus, ovaries, and broad ligaments healthy. It was apparent that the tumour was retroperitoneal, so I tore through the layer of the mesocolon, and dissected down to its surface. It then became evident that one had to deal with an enlarged misplaced kidney containing large calculi. The question then arose whether one should incise the kidney and remove the calculi, or should extirpate the entire organ—that is, nephrolithotomy or nephrectomy. After making sure that there was a right kidney, which so far as could be ascertained felt normal, I chose the latter course, and decided on nephrectomy; because, first, with an organ so full of calculous masses, it was improbable that much functional kidney substance should remain; secondly, these large calculi evidently could not be extracted without the most extensive incision and laceration of the renal tissue; thirdly, if, as was likely, there was pyelitis, one ran very considerable risk of fouling the peritoneum with septic material. I therefore separated the numerous adhesions, dividing each between catgut ligatures. The renal vessels were tied and divided without difficulty, leaving the ureter to the last. This was ligatured with medium-sized silk and cut across, the cut end being cauterised with pure carbolic acid and inverted. To render it additionally secure I passed some fine catgut sutures through the fibrous coat, drawing it together over the end of the stump. Very little oozing followed the enucleation of the kidney, and the tissues fell together so well that I did not suture the divided edges of the mesocolon. The abdomen was sutured in layers without drainage.

Description of the Kidney.—The kidney after removal weighed a little over 11 ozs., the kidney itself being 7 ozs. 2 drms., and the calculi nearly 4 ozs. They were four in number: one large calculus, the size of a hen's egg, with processes fitting into the calyces, weighed 1,330 grs., and three small stones together weighed 280 grs., making a total of 1,610 grs. They were composed of uric acid.

After-History.—The after-progress of the case was uneventful. There was considerable pain for the first two days, but by February 19th this had ceased. The temperature never rose above 99.6° F. The sutures were removed on the tenth day, when the wound was found healed throughout. The patient got on to the sofa on the twenty-fifth day, and into the garden about a month later, quite free from pain, and feeling better than she had done for several years.

The only further point requiring mention is the excretion of urine after the operation. This was carefully measured for a period of eight weeks. During the first twenty-four hours 14 ounces of highly albuminous urine were excreted, but after this it remained free from albumen. During the second twenty-four hours there were 15 ounces, next three days 28 ounces each day, after which the amount passed generally varied from 35 to 45 ounces.

FRAGILITAS OSSIUM AMONGST WORKERS IN LUCIFER MATCH FACTORIES.

By W. F. DEARDEN, M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Vic.,
Certifying Factory Surgeon, Harpurhey District of Manchester

WHEN considering the dangers arising from the use of yellow phosphorus in the manufacture of lucifer matches, prominence has always been given to the liability amongst "dippers," "mixers," and "boxers" to necrosis of the jaw. The so-called "phossy jaw" is a very serious disease, but that it is the sole important pathological condition incidental to this trade is open to strong doubt. There are grounds for believing that a certain condition is brought about in the bone tissue of the body through constant exposure of the individual for a lengthy period to the action of phosphorus and its oxides, as a result of which fractures of the long bones may very easily be produced.

I have come across two "dippers" working at the same place under exactly similar conditions for about an equal number of years, each of whom has had separately and at different times both thighbones broken in a ridiculously simple fashion.

CASE I.—J. S., a man, aged 46, had been in constant work as a mixer and dipper for thirty years, and had spent the last ten years at a works in my immediate neighbourhood. On January 1st, 1896, he fractured his right thigh, in its upper third, through stumbling down a single step. There was evidence of old fracture of the upper third of the left femur, and I learned that such had taken place nine years previously in just as simple a manner. This man, I may state, never had any symptom of necrosis of the jaw.

CASE II.—J. R., a man aged 39, had worked as a "dipper" and "mixer" for over twenty years, the last eleven being spent at the works previously alluded to. He fractured his right femur at the junction of its middle and upper third in January 1898 through catching the tip of his right foot on a piece of thin planking lying loose in the works yard and being thrown to the ground. I ascertained that the left thigh had been fractured in an exactly similar manner two years before, the offending obstruction on that occasion being the sunken board at the edge of a

bowling green. As in the former case, this man has never had symptoms of necrosis of the jaw.

That these two men, doing exactly the same work, should suffer in this singular manner I could not regard as purely accidental. I found corroboration of this view in the report to the Home Secretary on the Use of Phosphorus in the Manufacture of Lucifer Matches, which has recently been issued. Dr. Oliver there states that Dr. Magitot, of Paris, was the first to draw attention to the ease with which long bones could be fractured among workers in phosphorus, and a special note is made of the experience of Dr. Boocoorens, of Grammont, in Belgium, who "met with and treated in twenty-three years 30 cases of spontaneous fracture of the long bones caused by muscular effort effecting exclusively the lower limbs of workmen who had been employed for years in dangerous departments and who had also suffered from necrosis of the jaw." Dr. Kocher, of Berne, is mentioned as having experience of a matchmaker who broke his thigh-bone five times. In this country Dr. Garman, of Bow Road, is reported to have come across nine cases of fracture of the long bones of the arm or leg occurring amongst workers at this trade.

I think it may be concluded that we have sufficient presumptive evidence to show that the osseous tissues of the body generally can be so altered by the prolonged action of phosphorus or its compounds as to render them less resistent to the application of external violence.

Six months after his second fracture, my younger patient had the further ill-luck, through the agency of a wood shaving machine, to lose the distal phalanx of his right forefinger. Being fortunate enough to secure the bone, I submitted it, along with a corresponding one of the same age, which I obtained, for purposes of comparison, from a dissecting-room subject, to Mr. John Allan, of the Manchester Technical School, for chemical examination. In the following table I show Mr. Allan's results, along with the old standard analysis of Berzelius, and the more modern one of Landois and Stirling. The component parts in the latter analysis are given in the textbooks, in terms of their probable combinations, so in order to show a proper comparison, I have, by recalculation, reduced them to the primitive state in which they come out in actual estimation. It should be stated that Mr. Allan did not find any metallic phosphorus whatever in either of the samples which he analysed, also that it was only thought necessary to estimate the earthy constituents of the bones.

	Match-makers' Bone (J. Allan).	Healthy Bone.		
		J. Allan.	Landois and Stirling.	Berzelius.
Lime	53.67	54.03	53.66	53.11
Magnesia	0.73	0.82	0.88	0.80
Phosphoric acid ...	40.01	39.51	39.70	36.00
Carbonic acid ...	5.24	5.07	4.67	7.45
Chlorine, fluorine, etc.	0.35	0.57	—	—
Fluorine	—	—	0.52	0.78
Soda and sodium chloride	—	—	—	1.80
Sodium chloride ...	—	—	1.00	—
	100.00	100.00	99.94	99.94

From this table it is seen that the relative proportion of phosphoric acid to lime, according to Mr. Allan's analyses, is distinctly greater in the "dipper's" bone than in the healthy one, the difference amounting to nearly 1 per cent. This is not quite so well marked when we compare with Landois and Stirling; but when it is noted that this column shows more magnesia, which is generally assigned to the phosphoric acid in combination, and less carbonic acid, which is supposed to combine with the lime, we find the difference more real than apparent. The same deductions are arrived at in comparing the first with the last column. The conclusion I prefer to adopt at is that this excess of phosphoric acid combines with the pre-existing neutral phosphate of lime to form a slightly acid salt.

Though I am of opinion that the formation of a compound of phosphorus, most probably acid phosphate of calcium, in bone is a most reasonable explanation of this peculiar condition of fragilitas ossium, before my deductions can be accepted more analyses may be required. The chemical examination of a necrotic sequestrum from a "phossy jaw" would, I think, if carefully executed, yield important results. As I know from experience, the requisite material is difficult to obtain, but I trust when the opportunity does present itself to anyone it will not be lost.

The importance of investigation in this direction can readily be appreciated when it is pointed out that this chemical alteration of the bone tissue, even if it be not a necessary adjunct, must have an important bearing upon the causation of necrosis of the jaw. It can easily be understood that bone interfered with in the manner described would be less able to resist local irritation, less prone to repair after inflammation, and thus more ready to take on necrotic changes.

There is a strong modern tendency to ignore the share which constitutional changes might have in bringing about this condition in favour of the purely local action of phosphorus or phosphoric acid through the medium of a carious tooth or exposure of bone after an extraction. The recognised course of events is irritation followed by periostitis, suppuration, and ultimate necrosis. I would point out that in certain trades workpeople are exposed a great deal to the action of hydrochloric acid fumes, and their teeth suffer much in consequence. I have seen men who are under the influence of this kind of local irritation affected with the same train of symptoms, excepting the ultimate result, which would follow if the acid were phosphoric instead of hydrochloric.

Again, if we except the tuberculous theory, which I think we may with safety, we get not the slightest support of the solely local causation from bacteriological examination of the pus of affected subjects. The bacteria, streptococci and staphylococci found are the ordinary micro-organisms associated with suppuration. Granting this general alteration in the osseous tissue of workers amongst phosphorus, it would be the only condition not common to both classes mentioned, and would thus supply the missing link in explaining the cause of what could properly be termed a severe scourge to an important industry.

THE MECHANICAL FACTOR IN SURGERY.*

By C. HAMILTON WHITEFORD, M.R.C.S., L.R.C.P.,
Medical Officer to the Provident Branch of the Plymouth Public Dispensary.

AT the present time, when bacteriology and the nervous system are being so freely invoked to explain the manifestations of disease, there is a great tendency to overlook the action of simple mechanical causes. Without for a moment wishing to minimise the importance of bacteria or the nervous system, I propose briefly to discuss the action of what I have termed, for want of a better name, the mechanical factor.

Ununited Fracture of Long Bones.—Every now and again the surgeon has a case of apparently simple fracture in a long bone, which, after a prolonged period of rest and splinting, fails to unite. Various explanations for the non-union are given—such as restlessness or ill-health of the patient, idiosyncrasy, deficient formation of callus, etc.—nearly always erroneous, as, on cutting down on the fracture, the usual thing is to find a pad of muscle, with sometimes a splinter of bone, interposed between the two ends, due to one end of the bone having perforated an adjacent muscle at the time of the original injury. On refreshing the ends of the bone and placing them in apposition union usually takes place, in spite of any idiosyncrasy or ill-health, which, in the case of the lower extremity, has certainly not been improved by a long confinement to bed.

Mechanical Obstruction of Respiration during the Administration of Chloroform.—Obstruction of the air passages by foreign bodies or the base of the tongue is well recognised; the valve-like action of deep and flabby lips in edentulous patients is sometimes overlooked. I have seen a patient getting black

* Read before the South-Western Branch of the British Medical Association.

in the face, with the chin held well away from the sternum and the anæsthetist wondering what on earth is happening. At last, quite empirically, he pulls the tongue forward with forceps; the cyanosis disappears and the patient is said to have been "swallowing his tongue." What really happened was that the flabby lips permitted expiration, but on inspiration were sucked in and, meeting at their edges, acted as valves, effectually stopping all entry of air by the mouth. Pulling forward the tongue acts in this case by separating the lips; but a finger between the lips is equally efficacious and saves the patient a sore tongue.

Treatment of Simple Ulcers with Ointment spread on Lint.—How often is a circular ulcer seen dressed with a square piece of lint, instead of the lint being cut to exactly fit the ulcer, the dresser forgetting that the continued application of strong ointment to intact epithelium does not improve its power of healthy growth. Even when the lint is cut to fit the ulcer, how often are holes made in the lint to allow of the direct escape from the granulating surface of the inevitable discharges which, mechanically obstructed by the greased surface, are at first pounded up on the ulcer, and ultimately escaping at the edge of the lint, damage and render sodden the ingrowing epithelium, on which depends the ultimate healing of the wound.

The Permanent Suture (Silk) Buried in Muscular Tissues.—The adjective permanent is frequently applied to unabsorbable buried sutures which are expected to hold soft parts, such as muscle and fascia, together indefinitely. My own conviction is that they do nothing of the kind. Their action is very similar to that of superficial sutures. No one thinks of leaving skin sutures indefinitely. At the end of a fortnight or three weeks the tissues have grown together, and remain united perfectly well without the further aid of sutures, which are then removed. If there has been tension on these sutures they have gradually cut through the tissues, and either lie loose among them or come away on their own account. Exactly the same process occurs with the buried sutures, such as are often employed in the cure of a ventral hernia. An unabsorbable suture lying loose among the tissues, although it is supposed to be encapsuled, is always liable to wander, and months or years afterwards make its reappearance to the disgust of everyone concerned. In other words, the "permanent buried suture," after a short time, fails to act as a suture, and not infrequently declines to remain permanently buried. The moral is obvious—dispense with buried sutures as far as possible, and, where they are a *sine quâ non*, employ material capable of being absorbed.

Solution of Chemical Antiseptics for Wound Irrigation.—The use of chemical solutions, such as carbolic acid and corrosive sublimate for the irrigation of wounds, is illogical. For several years I have used simply boiled water. To be strictly physiological, a 1 per cent. solution of sodium chloride should be used, and lately I have used this with most satisfactory results. The effects of irrigating a wound with perchloride of mercury 1 in 2,000 is, as far as bacteria are concerned, mainly mechanical. The antiseptic damages the cut tissue without destroying the bacteria, which are washed out together with the blood clots by the solution. Halsted has shown that irrigation of fresh wounds with a corrosive sublimate solution as weak as 1 in 10,000 is followed by a distinct necrosis demonstrable under the microscope. This necrotic material may retard the healing process and act as a culture medium for any bacteria deposited in the wound subsequently. The surgeon is apt to dwell too much on the supposed germicidal power of the one part of antiseptic, and too little on the mechanical effect of the 1,999 parts of water. He also underrates the germicidal powers of the body cells, which are far superior to any dilute chemical antiseptic.

Strangulated Hernia and Peritonitis.—In an ordinary case of strangulated hernia it is often impossible to tell from the symptoms whether only omentum or intestine is involved. We used to be told that the symptoms of obstruction caused by strangulated omentum were due to the omentum and intestine having a common nerve supply. But the fact that strangulation of omentum by a ligature failed to produce obstruction remained unexplained. Surgeons now recognise that traction on the omentum produces kinking of the colon, and in exceptional cases even of the stomach. Sometimes also small intestine becomes strangulated by slipping beneath the tight band of omentum. In cases of general peritonitis with distension of the intestines, it is not always recognised that there is a real obstruction to the passage of bowel contents caused by a succession of partial kinks, due to the intestines becoming distended in a closed cavity, and having a mesentery attached to one border. The disordered action of the thoracic viscera is also not solely due to the effects of absorbed toxins, but is partly caused by the distended intestines pushing up the diaphragm.

Another factor in acute peritonitis and intestinal obstruction, and one which I do not remember to have seen in the textbooks, is that the patient, in addition to being poisoned, is suffering from a large loss of fluid by diarrhœa and vomiting. One cause of the cardiac failure is the absence of sufficient fluid in the circulation for the heart to contract upon. By large intravenous injections of hot saline solution this want is supplied, and the excretory organs, especially the kidneys, get a chance of acting freely, and so excreting the poisons absorbed from the intestines and peritoneum. I have recently had two cases of this nature in which, after operation, this treatment by intravenous injection saved the patients.

AN INOPERABLE CASE OF EPITHELIOMA OF THE LARYNX AND NECK TREATED WITH FORMALIN INJECTIONS.

BY J. D. McFEELY, F.R.C.S.,
Surgeon to the Mercer's Hospital, Dublin.

FOR some years I have been so much impressed with the remarkable effects of formalin on the tissues, that it has seemed to me, if its action on the living tissues could be demonstrated to be non-toxic, it might prove useful in treating malignant growths, those which are inoperable, and in preventing or retarding the local recurrence after removal of such as could be removed, and in addition from its styptic action in treating non-malignant vascular tumours such as nævi and uterine fibroids.

That formalin is practically non-toxic in convenient doses the following case demonstrates:

T. M., aged 53, plumber, was admitted into hospital on December 13th, 1898, presenting a tumour on left side of neck, growing beneath the sterno-mastoid, nearly opposite the thyroid cartilage, extending in front to within half an inch of the trachea, and posteriorly to near anterior border of the trapezius. On the right side there was a smaller tumour, rather less than a tangerine orange, and situated somewhat higher in the neck. Both growths were firm in consistence, the larger one adherent to the subjacent structures, although the skin over in was quite movable. There was also well-marked aphonia, occasionally an inspiratory stridor, and marked dysphagia. Four months previously he noticed the swelling on the neck, and soon after observed that he was getting thin. About a week before admission he noticed his "voice had changed," and was "getting hoarse." The patient was sent to Dr. Woods, Laryngologist to the Richmond and Whitworth Hospitals, who diagnosed a carcinoma involving the larynx, and thought it inoperable, but suggested syphilis as possible.

The patient had well-marked arcus senilis. His arteries were atheromatous and cord-like. The urine had a specific gravity of 1010, and contained a trace of albumen. Mercury and potassium iodide were given for ten days without any beneficial result.

Acting on Dr. Woods's suggestion, I decided not to operate, but as his breathing was becoming daily more embarrassed, on December 21st I performed tracheotomy. The tumour on the left side continued to grow with great rapidity. He frequently begged to have something done, and wished to know when I intended to remove it. About the first week in February he was almost asphyxiated. It was found on removing the tube that the trachea was almost blocked up by some foreign body; this turned out to be a mass of necrosed tissue about the size of a florin which must have sloughed from the primary growth in the larynx. The rate of growth in the smaller tumour was slower.

As it seemed hopeless to attempt removal of the tumour, I had frequently thought of tying the common carotid with the hope of lessening the very rapid rate of growth. It was now evident that in a short time the tumour must displace if not overgrow the tracheal tube. I finally determined to inject either absolute alcohol or formalin. Of the toxic action of the latter I could find no reliable statistics until I saw in the BRITISH MEDICAL JOURNAL of February 11th a valuable paper by Dr. Mitchell on Formalin in the Treatment and Removal of Malignant Growths. Up to this time the skin had not broken, but the tumour looked so excessively vascular that, should it have burst, the hæmorrhage must have been appalling. Accordingly on February 18th I injected into the most vascular part of the tumour 5 minims of a 25 per cent. solution of formalin, having first rendered the part anæsthetic

by injecting subcutaneously and into the tumour one of Burroughs and Wellcome's No. 72 anæsthetic tabloids together with 3 minims of a 10 per cent. solution of eucaine. The pain continued for only a few minutes, and in less than 20 minutes the patient was asleep. This was followed in about 3 hours by slight œdema of the glottis, and he wrote down on a slip of paper that he felt some shooting pains through the tumour, but was otherwise as usual.

On February 19th 10 minims of a 30 per cent. solution were injected as before; the pain did not seem to be increased.

On February 21st 15 minims of pure formalin in 15 minims of water were injected, without producing any more unpleasant effects than a painful sensation, which lasted only about five minutes, and a slight increase in the dyspnœa and dysphagia. The tumour now seemed to become less vascular, and only a single drop of blood escaped at the puncture, whereas on the first occasion of injecting the anæsthetic the hæmorrhage was somewhat difficult to control until the formalin had been injected. A little orthoform on a gauze bandage was put over the site of the injection on each occasion and retained until the following day, which seemed to prevent the skin from breaking down and produced some local anæsthesia.

On February 23rd 15 minims of formalin in 10 minims of water were again injected into the same area, using the same local anæsthetic in each case. I now decided to await results. There certainly seemed to be little or no hardening produced, but the growth in and around the part injected was distinctly less vascular; the skin was now becoming livid, and could easily be pinched up, showing shrinkage of the underlying tumour, which was obviously becoming softer, and displayed signs of deep-seated disintegration.

Owing to my unavoidable absence from hospital until March 5th no injections were given in the meantime, but, seeing the apparently good results, on my return I decided to try gradually increased quantities in the lower and most vascular portion, which was threatening to occlude the tracheal tube. Using the same anæsthetic and, in addition, freezing a small portion of the skin with anastile, 20 minims of formalin in 10 minims of water were injected. The acute pain, as on previous occasions, lasted about five minutes, and there was a little more cough, with dyspnœa and œdema of the glottis. After half an hour's interval ½ gr. of morphine was injected into the arm, and he immediately went to sleep.

On March 7th 25 minims of formalin, with 5 minims of water, were injected, the same anæsthetic being used as before, but without anastile. On this occasion the pain was distinctly less acute, and only lasted a few seconds, which may, I think, be ascribed to the formalin coming in contact only with the part previously rendered anæsthetic, and to the longer interval—five minutes—between the two injections.

On March 9th 25 minims of formalin, without water, were injected as before. The pain did not seem more acute or prolonged than when the first injections were given. The skin over the first portion injected on March 12th began to slough, exposing a raw surface about 2 inches in area. This was dressed with orthoform powder on gauze covered with absorbent cotton, the dressings soon became soaked with a watery, sanious discharge, without the slightest offensive smell. This continued for the next twenty-four hours, after which it gradually diminished, and although this portion of the tumour seemed to get smaller daily until his death, I could not tell where the discharge was finding an exit, but fancied it had forced its way into the mediastinum, or possibly into the bronchi through the opening in the trachea.

On March 13th I tried Dr. Mitchell's plan of dressing the raw surface with pads soaked in formalin, rendering the part anæsthetic with eucaine solution painted over the surface; but the patient would not allow this mode of treatment to be continued, as he said he could not bear the pain; even after injecting an anæsthetic tabloid he said the pain was very much worse than when the formalin was injected. The circumference of the neck, which on March 5th measured 19½ inches, was on the 8th 18¾ inches. This was prior to the sloughing and discharge from the tumour.

Although 60 minims formalin had been injected into the space of about 3 square inches between March 6th and 9th, there seemed not the least sign of hardening. On the contrary, from March 10th till 16th, this portion showed distinct signs of becoming daily softer. From the date of his admission he could not obtain sleep unless by taking morphine either by the mouth or hypodermically. At the time of his death he was taking 1 gr. daily. The pulse was nearly normal throughout until March 13th, but it was generally slower for an hour after each injection.

On March 14th the tracheal tube was becoming frequently blocked by fluid, and the breathing thereby embarrassed. The temperature kept gradually rising till it reached 103° a few hours before death, which occurred on March 16th from collapse and asphyxia.

The necropsy was limited to the neck. The tumour occupied the entire left side of the neck from near the jaw to the clavicle and sternum, and was with the greatest difficulty separated from the deep muscles. The prevertebral fascia had disappeared, as also most of the sterno-mastoid muscle, which, together with the great vessels, was embedded in the cancerous mass. Two centres or foci of degeneration, corresponding to the sites of injection, appeared deep in the substance of the tumour. On drawing up the trachea previous to division, so as to divide it as low down as possible, it was noticed that the tube was filled with fluid. On section about half a pint of fluid poured out, which in consistence and colour resembled the broken-down *débris* which was discharged after the posterior portion of the tumour sloughed. The asphyxia to which death was immediately due was thus accounted for.

The tumour, together with the surrounding parts, was sent to Dr. McWeeny for examination, who reported that the tumour was an epithelioma of the larynx, apparently starting from the left aryepiglottic fold, and involving the interior of the larynx and the anterior wall of the pharynx.

The following conclusions seem to follow from this case:

1. Up to half a drachm of pure formalin can be injected into the body without producing toxic symptoms.
2. Although a powerful styptic, it does not seem so liable as other styptics to produce clotting or embolism.
3. It is probably as safe to use formalin undiluted as diluted with water.
4. When used undiluted it seems to produce an anæsthetic effect more quickly.
5. Unlike most other powerful antiseptics or irritants, it does not stimulate, but retards cell multiplication or growth in malignant tumours.

In conclusion one may, I think, hazard the opinion that formalin, being such a powerful antiseptic and exercising, as it undoubtedly does, such destructive influence on all low forms of organic life, if any of the neoplasms or malignant growths owe their malignancy, as some believe, to any form of organism, not only palliative but also curative effects may reasonably be expected to follow its judicious application.

I have to thank Dr. Woods for having so kindly examined the patient. To Professor McWeeny, in particular, I am greatly indebted not only for his examination and report of the tumour, but also for valuable hints and suggestions. I wish also to thank Dr. Taylor, our late house-surgeon, and Dr. Copley, our present house-surgeon for their assistance and attention to the patient during my absence.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A RARE ABNORMALITY OF THE MOUTH.

ON May 19th I was called to attend Mrs. S. in her sixth confinement. Before my arrival the child (seemingly a healthy male) was born; it was at about the eighth month of gestation, and cried in an apparently natural manner. In the evening I was asked to see the child again, as neither mother nor nurse could make him swallow anything. On examination, the gums were found to be completely adherent to each other, and the cheeks to the gums posterior to the position of the future canine teeth. With some difficulty the adhesions between the gums in front were broken down by the finger sufficiently to enable him to swallow diluted milk slowly administered with a spoon. He refused the breast, but sucked strongly at a finger introduced pretty far back into the mouth. A cleft, apparently confined to the hard palate, was also discovered, from the sides of which two small fleshy ridges hung vertically downwards. Next evening I had again to visit the child, and found him cyanosed, but artificial respiration with elevation of the angles of the jaws soon restored him. The heart was examined, and found normal. A second time cyanosis supervened, but the nurse, following my instructions, treated it in the same manner with a like result. A third attack, however, proved fatal during the night.

A *post-mortem* examination was not made, but permission to explore the mouth thoroughly was given. A gag having been introduced, the exertion of a pretty considerable force was found necessary to separate the jaws sufficiently; motion took place at the joint, there being no evidence of ankylosis. Only the posterior half of the tongue was developed, that organ looking like the stump after excision of the anterior portion; there was no frænum linguæ; the stump of tongue was found closely applied to the cleft in the hard palate. The soft palate was continuous with the posterior wall of the pharynx; there was no opening of the posterior nares and no uvula. As far as could be ascertained by the touch, the epiglottis and larynx were normal. Evidently death was due to the tongue obstructing respiration through nose and mouth at the same time.

The points of special interest in the case are:

1. The fact that the child cried loudly and naturally immediately after birth, notwithstanding the great abnormality of the buccal and nasal cavities.
2. The unusual nature of the deformity.
3. The embryological point of view. Are the adhesions found to be considered as originating in an arrest of development (as the cleft in the palate presumably did), or in a process due to inflammation or the like taking place subse-

quently to normal development? I may add, in connection with this point, that there was no evidence of syphilis, and the five elder children are alive and healthy.

Fulham, S.W. GEORGE W. GRIFFITHS, M.A., M.B.

TWO CASES OF ACUTE NEPHRITIS DUE TO INFLUENZA.

IN December, 1897, I saw a young lady suffering from diarrhœa, vomiting, and fever, with pain in the back and abdomen; the skin was anæmic and icteroid, and the face puffy. The urine was scanty, porter-coloured, and deposited an abundant sediment consisting of an enormous quantity of casts and a very few red blood corpuscles. The casts were partly epithelial, but mostly containing hæmoglobin or masses of blood cells out of shape (I do not feel certain on this point). It is noteworthy that the patient gave a history of passing porter-coloured urine on one or two previous occasions, so paroxysmal hæmoglobinuria is possible. In a few days the urine became clearer and the casts nearly all epithelial. The albumen was abundant, but eventually disappeared along with the casts. In the same room was another patient similarly affected, but without the nephritis. In both cases the pulse was slow in proportion to the fever, which only lasted about 48 hours, and I think they were both cases of influenza.

The second case I saw on March 21st, 1899. It was that of a young woman who was suffering from severe sore throat. The temperature was 107.7°, and the skin was perspiring freely. The urine was scanty, and looked like pure blood. It contained many casts filled with red blood corpuscles, as well as free blood cells. There was extreme cardiac weakness and vomiting. The pulse-rate was about 80 per minute. The face was flushed, but there was no rash except labial herpes. The menses were present. The fever fell to normal in a few days, epithelial replaced blood casts, and recovery was complete in a few weeks except for a little albumen in the urine.

Colwyn Bay. W. B. RUSSELL, M.A., M.B.Camb.

HYDROBROMATE OF HYOSCINE IN CHOREA.

ON February 11th, a Eurasian, aged 16, a stoker, was admitted into hospital. He was thin and anæmic; the temperature was slightly raised; the tongue was dry and coated with a brownish fur; the pulse was weak and the respiration irregular, the patient frequently taking deep breaths as if suffering from air-hunger. He had constant involuntary movement of all parts of the body and frequent twitching of the muscles of the face and upper limbs. He had bitten his tongue and had much pain in the mouth and jaws; he had also sores on the back of the head, elbows, and heels caused by his involuntary movements. Albumen was present in the urine. His illness was attributed to a fright received a few days previously.

Bromide of potassium, chloral hydrate, and increasing doses of liquor arsenicalis gave no relief. He was very restless and sleepless at night, and morphine eased him slightly.

On February 16th he was considerably weaker and in an apparently hopeless condition. Hydrobromate of hyoscine ($\frac{1}{200}$ of a grain) was injected hypodermically twice a day. On the following day there was a marked improvement in the choreic movements. Hydrobromate of hyoscine ($\frac{1}{100}$ of a grain) was ordered three times daily. On February 23rd the choreic movements have almost ceased, and the hydrobromate of hyoscine was discontinued. He was subsequently treated with liquor arsenicalis, and although the mind was temporarily deranged he made an excellent recovery.

I believe his recovery was entirely due to the hydrobromate of hyoscine, which certainly produced a wonderful effect when other drugs had failed. Chorea, though rare, is an extremely fatal disease in India.

Madras. A. C. RENDLE, M.B.Camb.

A "LATIN-AMERICAN" Medical Congress is to be held in Santiago at the end of 1900. All the Governments, medical faculties, and medical societies of South and Central America, including Mexico, are invited to take part in the Congress. An international exhibition of hygiene is to be held in connection with the Congress.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

EDINBURGH ROYAL INFIRMARY.

NOTE ON A CASE OF COMMUNICATING PLEURAL AND PERITONEAL EFFUSIONS.

(By ALEX. JAMES, M.D., Physician to the Infirmary.)

CASES in which purulent collections have found their way through the diaphragm, either from the abdominal cavity below to the pleural above or *vice versâ*, are not very infrequent. Openings of communication, however, the result apparently of pressure by serous fluid, must be very rare. The following case, nevertheless, seems to be an example of this:

J. M., aged 48, a labourer, was admitted to the Royal Infirmary on December 2nd, 1898, complaining of swelling of the abdomen and legs, of weakness and cough. The duration of his illness he stated to be two months. His family history was fairly good. At work he was much exposed to cold and wet. At home he was comfortable, but for years he has been in the habit of taking seven or eight glasses of whisky daily. He seems to have had gonorrhœa seven or eight years ago. Twelve months ago he had been ill with jaundice for three weeks. Before this jaundice he had been drinking more than usual. Two months before admission he noticed failure of appetite, flatulence, and shortness of breath, followed by pain and swelling in the abdomen, while chest pain and cough added to his distress.

On admission he was found to be very thin and his muscles small and flabby. His face was slightly jaundiced and cyanotic. His temperature varied on admission between 100° and 102°, the pulse was about 120, and the respirations 36. The abdomen was greatly distended, measuring at the umbilicus over 40 inches. The superficial veins of the abdomen were all markedly prominent. The umbilicus, however, was quite flat. On examination by palpation and percussion, tympanites and ascites could be made out. The ascitic fluid caused dulness in the flanks and more than half way up to the umbilicus in front. There was also some œdema of the legs, genitals, and back. The liver dulness began above about the fourth rib, below its border could not be made out owing to the tympanites. The size of the spleen could not well be defined owing to the ascites. The circulatory system appeared normal, but the radial arteries were slightly thickened. There was evidence of emphysema, slight bronchitis, and a slight amount of fluid in the right pleural cavity. The quantity of urine passed on admission was about 25 ozs., it was dark amber in colour, specific gravity 1015, and showed a trace of albumen and also of bile.

On admission this patient was put on light diet, and laxatives and small doses of mercury and digitalis were administered. In the course of three weeks the feverishness left him, but the dyspnœa and general distress remained. On December 21st the abdomen had become larger, and there was evidence also of an increase of fluid in the right pleural cavity. The abdomen was therefore tapped and 164 ozs. of slightly greenish and slightly milky fluid removed. Although very considerable tympanitic distension remained the patient felt much relieved. Then for the first time the liver could be felt. It seemed to be about normal in size, but was very hard, with a somewhat sharp though uneven edge and a rather uneven surface. The spleen could also be percussed out and measured 9 inches in its long diameter. On December 28th the distress had again become great. Although the amount of fluid in the abdominal cavity did not seem to be so very great, the right pleura was found to be dull up to the third rib in front. The pleura was therefore tapped in the fifth interspace laterally and 155 ozs. of fluid, presenting the same characters as the ascitic fluid, were removed. The patient was again relieved, but ere long distress supervened. During the next four months the abdomen was tapped nine times, at each tapping an average quantity of 245 ozs. of fluid being removed; and the pleura twelve times, the average quantity removed at each tapping being 250 ozs. The largest pleural tapping was 446 ozs.

The very large quantities of fluid removed from the right pleural cavity, even by the earlier tappings, caused much comment, and soon it was evident that the removal of fluid from the pleural cavity caused diminution in the size of the abdomen. At the pleural tappings on March 27th, and subsequently the abdominal cavity was very completely emptied. Indeed, it seemed to be the case that the abdominal cavity could be more thoroughly emptied through the pleural cavity than directly. The appearance and composition of the pleural and peritoneal fluids were the same. At first only slightly milky and of a slightly greenish colour, with a specific gravity of

1006 or 1007; afterwards the fluid became more milky, owing to a greater proportion of leucocytes, and had a specific gravity of 1010. At the last few tappings it has become again less milky. At the tappings of March 27th, April 3rd, and April 7th, I made some observations on the tension of the pleural and peritoneal fluids. I connected the trocars, thoracic and abdominal, with long upright tubes acting as manometers, so that I was able to ascertain the pressure in the two cavities, and to note the effect on the manometers of draining away quantities of fluid from the thorax or abdomen. I found that the pressure in both cavities was the same, reaching at first to about 6 inches, and that the level fell equally in both tubes whether the fluid was withdrawn from the thorax or abdomen. But the respiratory oscillations which the fluid in the tubes showed were interesting. These oscillations varied much in amplitude during the drainage, from ¾ inch downwards. In the tubes they were sometimes equal in amplitude, sometimes greater in the thoracic, and sometimes in the abdominal. But it was always the case that the rise in the tubes corresponded with inspiration, and the fall with expiration. When the patient was asked to take a long breath and hold it, the levels rose about 7 or 8 inches in both tubes, and remained there. On coughing, much more sudden and extensive rises occurred.

This inspiratory rise in the thoracic pressure is, of course, the opposite of what one gets normally in thoracic fluids. It is no doubt due to the fact that in this patient there is an opening of communication between the two cavities. Thus, the inspiratory descent of the diaphragm, increasing the abdominal pressure, at once also through the opening, increases the thoracic.

The patient is improving gradually in condition. Except for the day or two preceding a tapping he is out of bed and moving quietly about the ward. We have tried on him diuretin and other diuretics in the hope of draining off the fluid through the kidneys, but the tappings seem to suit him best.

And now comes the question, What is the nature and locality of the communication? During the earlier pleural tappings, when the quantities removed were not so very excessive, I was inclined to imagine that during the tapping period fluid from the abdomen might be, as it were, pumped through the diaphragmatic lymphatics by the respiratory movements in the manner of the well-known experiment of Ludwig. But it was soon evident that the opening or openings must be much more free than could be the case on this hypothesis. I have not been able to find a record of a similar case in literature. But when one reads of quantities of non-purulent fluid exceeding 150 oz. having been removed from the pleural cavity, one cannot help thinking that possibly some such communications have been met with before.[1] I have to thank Dr. Richard Berry for the information that anatomists have indicated a locality where an opening of communication between the abdominal and thoracic cavities might readily be made. This is the *hiatus diaphragmatique* of the French writers,[2] at which part the upper and posterior part of the kidney is practically in contact with the inferior *cul-de-sac* of the pleura. Whether or not the communication in our patient is existent at this point, it is of course impossible to say.

REPORTS OF SOCIETIES.

BRITISH GYNÆCOLOGICAL SOCIETY.

H. MACNAUGHTON-JONES, M.D., President, in the Chair.

Thursday, July 13th, 1899.

SPECIMENS.

DR. HERBERT SNOW showed a Uterine Myoma removed by abdominal hysterectomy.—MR. BOWREMAN JESSETT showed: (1) A large Dermoid Ovarian Cyst removed from a patient aged 73: recovery; (2) a case of Fibromyoma of the Uterus taking on malignant action: panhysterectomy: recovery; (3) a case of Malignant Disease of the Fundus: vaginal hysterectomy: recovery.—DR. GEORGE KEITH showed, for MR. SKENE KEITH, Ovaries removed for a bleeding fibroid, and a Diseased Appendix from the same case.—MR. CHARLES RYALL showed a specimen of Vagina and Rectum removed for malignant disease.—DR. SEPTIMUS SUNDERLAND showed: (1) Large Cyst of Kidney, which simulated an ovarian cyst, removed by abdominal section; (2) Subserous Fibroid removed by abdominal myomectomy.—THE PRESIDENT showed a specimen of Primary Tuberculosis of the Fallopian tubes.—In the discussion on these specimens the following speakers took part: DR. HEYWOOD SMITH, DR. C. H. F. ROUTH, MR. JESSETT, MR. RYALL, MR. J. FURNEAUX JORDAN, DR. ARTHUR GILES, DR. F. A. PURCELL, DR. R. HODGSON, DR. POWELL, and the PRESIDENT.

VENTRAL HERNIA.

DR. A. LAPTHORN SMITH (Montreal) contributed a paper on the prevention and cure of ventral hernia, in which he pointed out that hernia following abdominal section was a frequent complication, and sometimes caused more suffering than the disease for which the laparotomy was performed. Moreover it discouraged other women who needed a cœliotomy from having it done because they dreaded a second operation more than they did the first. This accident was quite preventable (*a*) by leaving in the stitches a month if the woman was thin enough to allow the use of through-and-through sutures; or (*b*) by using non-absorbable buried sutures when the woman was fat enough to require two layers of ligatures—the writer prepared his silkworm gut by placing it in glass tubes and boiling it, a cut with a file was made in the middle, and just when it was required for use the tube was snapped across; (*c*) by discarding the abdominal drainage tube, and when drainage was necessary, which it rarely was, draining the vagina; (*d*) by securing accurate coaptation of the cut edges by marking the places where the stitches were to go before the incision was made; (*e*) by taking care that no peritoneum was curved up so as to come between the muscle and fascia of opposite sides. Hernia was easily cured in small cases with a single buried silkworm-gut purse-string suture, and in larger cases by splitting the edges of the ring until the recti muscles were exposed from top to bottom, and suturing them with buried silkworm gut. Patients with buried silkworm gut stitches need not stay in bed more than two weeks, and in some cases less, and they need not wear an abdominal belt. Patients with through-and-through silkworm gut stitches left in for a month could, in cases of necessity, go home in twelve or fifteen days, and return at the end of four weeks to have their stitches removed. They need not wear any support until the stitches were removed, and even then it was much less necessary than in patients whose stitches had been removed early.

MR. BOWREMAN JESSETT said that in England two weeks was considered a long enough time to leave stitches in. He had used silk for ventrifixation, but had always regretted it, for it so often gave rise to abscess.

MR. FURNEAUX JORDAN said the way to prevent ventral hernia was to obtain primary union; and the secret of this was asepsis. The length of time the stitches were left in did not much matter. As regarded the suture material, he did not like to bury silkworm-gut, because it had hard ends, which were apt to hurt. Boiled silk answered very well as long as it was aseptic.

DR. HEYWOOD SMITH said that by sewing up in three stages there was very little fear of hernia. The wound healed better if the incision were made through the recti muscles, instead of through the linea alba.

THE PRESIDENT said that he did not think that on this side there was such an appalling number of cases of ventral hernia. He had had only one case, and that was due to the patient herself, who was insane; she did what she could to tear open the wound. He took exception to the statement that this kind of hernia was easily cured. He had no doubt that drainage was responsible for many of the cases of hernia that used to occur. His own practice was to sew up in three layers.

PAPER.

A short paper by Mr. Charles Ward, Pietermaritzburg, entitled, A Description of Transfixors for Securing the Abdominal Wound, was read.

[1] For a list of large effusions see Wilson Fox, *Treatise on Diseases of the Lungs and Pleura*, 1891, p. 967.
[2] Testut, *Traité d'Anatomie Humaine*, III, p. 357.

REVIEWS.

A SYSTEM OF MEDICINE. By many writers. Edited by T. CLIFFORD ALLBUTT, M.D., LL.D., D.Sc., F.R.S., Regius Professor of Physic in the University of Cambridge. Vol. vii. London: Macmillan and Co. 1899. (Demy 8vo, pp. 937, illustrations 34, plates iii. 25s.)

THE last volume but one of this successful *System* has come into our hands with praiseworthy promptness, for it is little more than three months ago since its predecessor issued from the publishers' hands. The first volume came out in the middle of 1896, so that the editor has ushered into the medical world seven instalments in 3 years, a success on which he must be congratulated, but a labour which few will envy him. The present volume continues the diseases of the nervous system, beginning with those of the substance of the spinal cord, and then goes on to the affections of the brain. The conclusion of the latter will come in the eighth and last volume, which the editor tells us is even now on the way.

The first article by Dr. Frederic Taylor deals systematically with the different kinds of acute myelitis, and contains an account of chronic myelitis.

Dr. Andrew Smith, of New York, gives his experience of caisson disease, which leads him to believe that it is not due to liberation of gas from the blood, and so to air-embolism, but depends on a disturbance of the circulation. Ergot has therefore been tried, and with considerable success; immediate return to the caisson when premonitory symptoms appear has also been followed by relief.

Hæmatomyelia is well described by Dr. F. E. Batten, and is an admirable summary of our knowledge of this interesting lesion. The author, while fully recognising the rarity of hæmorrhage into the cord apart from myelitis, gives a careful account of the causes and clinical features of primary hæmorrhage into the spinal cord.

A full and entirely modern account of disseminate sclerosis is contributed by Dr. Risien Russell, who, while paying full attention to the original type described by Charcot, lays stress on the fact that the earlier stages of the disease present a different clinical picture, and are, as Dr. Buzzard has insisted, especially likely to be regarded as hysterical. In the section on morbid anatomy, Dr. Risien Russell has introduced some original observations of his own, and his critical discussion of the views of other writers, which is everywhere exact and generous, renders this article one of a high order of merit and of great value as a source of reference.

Locomotor ataxy is lucidly described by Dr. Ormerod from its clinical standpoint, while the section on pathology is written by Dr. Mott, from whose observations it appears that the ganglion cell is the last part of the neuron to die, and that degeneration begins in the terminal processes, and spreads back to the body of the cell. Dr. Mott's valuable contribution is illustrated by photomicrographs of a high order of merit. Spastic paraplegia, together with hereditary ataxia and hereditary cerebellar ataxy, have been admirably discussed by Sir T. Grainger Stewart in articles which, while brief, yet reflect the present state of knowledge of these anomalous disorders.

The editor has been fortunate in gaining the collaboration of Dr. Allen Starr, of New York, and has thus secured two capital and well-illustrated articles on syringomyelia and on acute anterior poliomyelitis. The former article is an exhaustive account of this interesting disease, and is accompanied by successful illustrations of the spinal cord lesions and diagrams of the areas of altered cutaneous sensation. In acute anterior poliomyelitis the selection and picking out of certain muscles by paralysis is explained by an original and valuable table showing the representation of the muscles in the segments of the cord. The section on treatment is full of practical suggestions of great value.

In his admirable and complete article on progressive muscular atrophy or poliomyelitis anterior chronica, Dr. C. E. Beevor argues for the recognition of pure cases of lesion of the cells in the anterior cornua of the spinal cord, and dissents from Sir W. R. Gowers's view that the pyramidal tracts are affected at the same time. The article on amyotrophic lateral sclerosis has wisely been entrusted to the same writer, who has furnished a very thoughtful and practical account of its essential features. Under bulbar paralysis pseudo-bulbar paralysis is dealt with, while the true bulbar disease is divided into the acute and chronic forms. A clear distinction is drawn between supranuclear, nuclear, and infranuclear disease.

In a clear and authoritative article on the experimental pathology of the cerebral circulation, Mr. Leonard Hill describes the normal conditions of tension inside the cranium, and lays stress on the small amount of cerebro-spinal fluid that is present normally. At the same the cause of the excessive amount that may drain away under abnormal conditions, such as fracture, is clearly explained. A detailed account of the effect of posture on the circulation, a subject exhaustively investigated by the author, follows, in which the important influence of the splanchnic vasomotor mechanism on the cerebral circulation is clearly shown. Simple hyperæmia as a pathological state probably does not exist; the effect of venous congestion in producing cerebral anæmia is referred to, and a good account of that condition is given. The value of the article is enhanced by frequent summaries.

In the regional diagnosis of cerebral disease, most appropriately undertaken by Dr. Ferrier, there is an interesting discussion as to the representation of sensation in the motor cortex, pointing to the conclusions that any disturbance of sensation following lesions localised to the Rolandic cortex are only dynamical, or due to implications of the sensory centres or tracts proper. Another interesting question which is fully treated is the relation of vision to the cortex of the parietal and occipital lobes. After describing the effects of lesions in the temporo-sphenoidal lobes and corpus callosum, the localisation of the disease in the central ganglia and tracts is fully dealt with. The section on diseases of the cerebellum forms a valuable addition to our knowledge, and contains exhaustive analyses from collected cases. The whole article is a storehouse of facts, and should be read in conjunction with the various diseases of the brain. The next article, on aphasia and other speech defects, is a masterly discussion of an abstruse subject by Dr. Bastian, the authority on these complicated problems.

Under the head of impediments of speech, Dr. Colman gives an interesting description of stuttering, lisping, and the severe form of lisping described by the late Dr. Haddon as idioglossia. Of this last affection Dr. Colman has seen 15 cases; as with stuttering two-thirds of the cases occur in males.

Mr. W. H. Bennett gives a concise and thoroughly practical description of the minor forms of concussion of the brain; these cases are more likely to come under the notice of the physician than of the surgeon, inasmuch as the patients, and indeed sometimes the medical attendant even, do not associate the symptoms with the injury. They may be referred to "biliousness," an error which makes a difference in the treatment, and so in the patient's chance of recovery.

Tuberculous meningitis is treated with the authority of great experience by Dr. T. Barlow, who has utilised the statistics of 100 cases of that disease from the Hospital for Sick Children, Great Ormond Street, drawn up by Dr. Still. While its occurrence in children is naturally chiefly dealt with, the difficulties in the diagnosis of this disease in adult life are dwelt on, and a special caution is thrown out not to mistake it for hysteria.

Twenty years ago Dr. Barlow described with Dr. Gee, in a well-known paper in *St. Bartholomew's Hospital Reports*, the cases now known as posterior basic meningitis. His present article on this subject, in which he is associated with Dr. Lees, is a further expansion of the subject, and is based on no fewer than fifty *post-mortem* examinations. The data thus accumulated are of very great value, and have been exhaustively drawn upon. The bacteriological section contains much of Dr. Still's work, and, in a word, this article is an original and valuable monograph.

Under the heading of occlusion of cerebral vessels, Dr. James Taylor gives an admirable summary of embolism and thrombosis of the cerebral arteries, and of thrombosis of the cerebral sinuses and veins.

An article dealing with the bearing of aural disease on general medicine, and especially on the intracranial com-

plications of otitis is contributed by Mr. Ballance. It strikes out a new line that could not be successfully taken by anyone except an accomplished neurologist and aural surgeon. It is illustrated by a number of cases which, contrary to what is often the experience of readers, are very much to the point, succinctly put, and are made the occasion of introducing valuable hints as to what to do and what to avoid in the treatment. In his carefully-considered article on cerebral hæmorrhage Dr. Tooth has introduced valuable statistics from St. Bartholomew's Hospital on the morbid anatomy of this lesion.

Writing on the important subject of intracranial tumours, Dr. Byrom Bramwell first enters into the pathological physiology of the subject and describes the effects, local and general, of a tumour in the brain and brings them into relation with the clinical symptoms. In the treatment of syphilitic tumour stress is rightly laid on the importance of giving large doses of potassium iodide, 30 gr. three times a day, smaller doses often having no effect. Gummata, the author considers, probably require surgical interference to a greater extent than is generally recognised. While adopting a very broad view of operative treatment he concludes that cases where intracranial tumours can be completely and successfully removed are very rare. The same authority gives a systematic account of cerebral abscess.

The important subject of intracranial syphilis receives due attention from Dr. W. Aldren Turner, who in his detailed clinical description supports his contentions by well-chosen statistics. Reference is made to parasyphilitic affections, but the scope of this article of course does not include a special description of them. The morbid anatomy of intracranial syphilis has been entrusted to Dr. W. Bulloch of the London Hospital. A most interesting description of general paralysis of the insane, which is remarkable for its easy and attractive style, has been provided by Dr. Savage. He believes that in at least 70 per cent. of the cases syphilis is present, and gives a table of 200 cases seen in private in which it was admittedly so in no fewer than 95. It is noteworthy that he has never seen a case of adolescent general paralysis without evidence of parental syphilis. The resemblances and differences between general paralysis and chronic alcoholism are well indicated. The morbid anatomy and pathogeny of the disease are careful and detailed contributions by Dr. E. Goodall.

Drs. Risien Russell and Kingdon give an account of infantile cerebral degeneration, a disease previously discribed by them at the Royal Medical and Chirurgical Society. At present it is rarely recognised, only 26 cases having been recorded, but it is possible that more cases exist in asylums. Dr. James Taylor gives a well-written account of the cerebral palsies of children: he divides them into birth palsies which are generally paraplegic and hemiplegic coming on within the first six months of life.

The next section of the work is entitled "Other Diseases of the Nervous System," and begins with an article by Professor Bradbury entitled "On the Disorders of Sleep."

In his excellent monograph, Sir W. Gowers deals in masterly detail with epilepsy. The discharge of energy takes place not in the cells, but in the spongy grey matter composed of the branching processes of the nerve cells. Speaking of reflex epilepsy, Sir W. Gowers says: "Of epilepsy due to disease of the uterus or ovaries, nothing is seen except by gynæcologists." The incidental remarks on remedies other than bromides are interesting, and throw a sidelight on the enormous amount of the writer's clinical observation. The next article is on puerperal eclampsia from the pen of Dr. Herman. He begins by describing two forms of kidney disease peculiar to pregnancy, the chronic and the acute, and then discusses fully the theories as to the causation of eclampsia in a very complete and philosophic manner.

The remaining articles in this volume are all by Dr. Risien Russell, and are complete, critical, and in every way admirable contributions. In the important article on chorea, the relation of rheumatic fever to this disease is fully discussed, and the conclusion is reached that it is not at all necessary to consider that they are due to the same cause. He is, moreover, inclined to discount to some extent the influence of fright in inducing chorea. The remarks on the treatment are practical, and indicate not only what to do, but what to avoid. Descriptions of Huntington's chorea, senile, congenital, and electric chorea, bring this valuable monograph to a close. In the article on the tics, simple tic or habit spasm, convulsive tics, co-ordinated, and psychical tics are dealt with in a philosophic manner. In the section on convulsive tics, or Gilles de la Tourette's disease, Dr. Russell gives an account of the psychical symptoms and explosive utterances that may be combined with it, and discusses fully the differential diagnosis from other allied conditions. A clear account of paramyoclonus multiplex follows, and then a succinct outline of the rare condition, saltatory spasm, is given. Finally, Dr. Risien Russell epitomises the closely allied subjects of head nodding and eclampsia nutans, and while admitting that no hard-and-fast line can be drawn between them, points out that the latter is the more aggravated and serious affection, as shown by the tendency to mental changes.

This brings to a close the seventh volume, which, inasmuch as its very high standard of excellence is so uniformly maintained, is probably the most valuable of this justly successful *System of Medicine*.

NOTES ON BOOKS.

DR. ROBERT TURNER'S *Lord Lister and Surgery* (London: Henry J. Glaisher. 1899. Crown 8vo, pp. 28. 1s.) is intended to provide half an hour's pleasant reading for the general practitioner, and certainly affords within its very restricted limits a fair idea of the antiseptic method in surgical treatment. It is difficult however to imagine to what class of professional men such a work as this is likely to be useful at the present time. It is but the repetition of an old story which must now be well known not only to younger men, but also to all those who are engaged in active practice. The development of Listerism in modern surgery will always be an important subject in any review of surgical progress, but such subject, to be dealt with adequately, must be discussed at full length and with full reference to the scientific principles on which the antiseptic method has been founded.

We have received the first part of a work entitled *Die Traumen der männlichen Harnröhre* (Berlin: August Hirschwald. 1899. Demy 8vo, pp. 145, 9 illustrations. M.4.), by Dr. M. A. WASILIEW, Professor of Surgery at the Imperial University of Warsaw, which apparently will eventually form a treatise on those injuries of the male urethra which, from their tendency to result in stricture, must necessarily be interesting to every practical surgeon. This first part cannot be regarded as being in itself of much importance. It is made up for the most part by a lengthy historical review of the subject of urethral injuries, and by chapters on the anatomy and physiology of the urinary organs of the male. The author thus far deals only with incised and punctured wounds of the urethra, and most of his information on those relatively rare lesions is based on cases collected from many different sources.

Dr. C. A. OLIVER, of Philadelphia, has published under the title *Ocular Therapeutics for Physicians and Students* (London: H. Kimpton. 1899. Demy 8vo, pp. 274. 7s. 6d.) a translation of a small book by Dr. F. W. MAX OHLEMANN, of Minden, Germany. It is divided into two parts. The first or general part consists of five chapters, and is devoted to a classification and description of the agents in common use in treatment—that is, mechanical, thermal, chemical, electrical, etc., while the second part is devoted to the special treatment of diseases of the eye and its appendages. The aim of the book is to afford a ready reference to the remedies in general use, and, as may be expected, many useful formulæ can at once be turned up without the trouble of searching the larger textbooks when a known condition has to be treated. The metric system is used in the original, and this is also reproduced in the translation; but for the sake of those who are more used to the weights and measures in common use in England these are given in each case in brackets by the side of the others. The book will be useful for reference.

"CHRISTIAN SCIENCE" AS A CAUSE OF DEATH.—In the case of a woman who died recently at Mount Vernon, New York, the coroner endorsed on the death certificate that she died "of neglect, dropsy, and Christian Science treatment."

THE PEACE CONFERENCE AND THE DUM-DUM BULLET.

[*With Special Plates of Illustrations.*]

THE ANTI-BRITISH AGITATION.

As was foreseen for some time, England has virtually been censured, in the Peace Conference at the Hague, by the representatives of the assembled Powers, with the single exception of the United States, for her use of rifle bullets open in front. The Russian military delegate, Colonel Jilinsky, as we learn from the *Times* correspondent, used no circumlocutions, but plainly said that the report submitted for approval was intended as a condemnation of the Dum-dum bullet, which was "inutilement cruel:" and as a final result all the delegates voted with the majority for the report, England and the United States being alone in the minority against it. Portugal abstained from voting. England and America are therefore branded as anti-humanitarian and barbarous by Germany, Russia, France, Turkey, Bulgaria, and so on. All this can hardly be accepted as very serious if we take the trouble to penetrate below the surface so as to ascertain what it really means, and how it has been brought about. This triumph of the Powers representing humanity and civilisation over cruelty and barbarism at a Peace Conference where the world was represented, and where, if anywhere, the highest motives and most clean-handed fair dealing might have been expected, has come to pass in the following way.

The world has lately been re-arming its troops with small-bore magazine rifles, and the process is now nearly completed. The rifles adopted by the different States vary, each possessing certain advantages and certain defects, but nearly all agreeing in having the projectile they discharge composed of a hard metallic skin or mantle enveloping a leaden core. The mantle is required to prevent the bullet becoming deformed, and compel it to take the spin conferred upon it by the spiral grooves lining the interior of the barrel. The spiral twist is shorter and the propelling force greater than in the older weapons, and it was solely because lead is too soft to withstand the consequent friction that the mantle—the present bone of contention at the Peace Conference—was adopted. Questions of humanity had nothing whatever to do with its introduction. Quite the reverse. It was employed to make the bullet kill and wound more surely, more deeply, and at a longer range. It is important to remember this.

The new weapons having been obtained, it was naturally desired next to test their powers of killing and injuring men, and accordingly, to supplement the information obtained in the few and minor campaigns going on, experiments for this purpose were made; many of them by medical men, among whom Kocher, Kohler, and Von Bruns in Germany were prominent. These scientific observations proved that the new weapons were most deadly. They could send their bullets through banks of earth, walls, wooden shelters, trees, a yard of timber, and so on, with force enough to kill or damage a man beyond. They could break and splinter his bones so as to rend them up into the joints, and of men in a row they could pierce one after another until four or more were killed by the same bullet. All this caused no shudder of dismay or thrill of horror to run through the world; from end to end of the globe not one voice was uplifted nor whisper breathed against the use of such awful implements by man against man, and in all the European capitals and among the writers of all the civilised States, not a solitary individual was found to raise any save the voice of approval of all these things.

But, though they were all pronounced very good, each of the various kinds of rifle had its own peculiarities and possessed certain excellences and defects. Thus Austria, Germany, France, Sweden, Portugal, Denmark, Japan, and Peru had larger bullets than England, while Belgium, Turkey, Russia, the United States, Spain, Italy, etc., had smaller. The English bullet proved the slowest of all, with 574 metres velocity per second, against more than 600 in all the others; Germany, France, and Russia having 640; and Holland, Italy, Norway, and Roumania 700 and over. This was at short ranges. But at long ranges, even the longest that are really trusted to—say 1,800 metres—the big bullets of Germany and France still maintained their superiority in speed, and even the smaller Russian bullet was ahead of the English. The French ball hit the hardest of all the four at short ranges, but was beaten by the German in this respect at long ranges. And many other peculiarities might be named.

So far as war enabled the new weapons to be tested against living enemies, unexpected faults were discovered in some of them. So long as the bullet struck a bone or vital part it was effectual enough, but, when only flesh was wounded, it was said that some pierced (like a needle or rapier) a minute canal, and passed on, leaving the individual in many instances not much injured, and quite able to come on or to run away. In fact, it did not stop an enemy, although it hit him. The French observed this in their campaign in Dahomey, and there seems little doubt that the same defect caused the loss of their province of Erythrea to the Italians. The Italian ball (6.5 mm.) is smaller than the English (7.7 mm.), and both are smaller than either the German (7.9 mm.) or the French (8 mm.). England fortunately discovered this defect in its weapon in good time in Chitral, where our soldiers had the same experience of their bullets failing to stop the foe, and it was promptly remedied in the way already narrated in this JOURNAL,[1] by the adoption of a modified bullet named the Dum-dum, whose mantle was open at the apex, so that the bullet spread out when it struck, and ceased to make ineffectual, seton-like wounds. This, at any rate, was the information that we received from India.

PROFESSOR VON BRUNS'S EXPERIMENTS WITH GERMAN BIG-GAME BULLETS.

Professor von Bruns, of Tübingen, an experimenter with the new rifles, heard of these English bullets, and wished to try them. Had they been manufactured by firms in this country, he could no doubt have easily obtained a supply of them, but as they were made in the Government factory at Dum Dum, near Calcutta, they were not to be had by him. From newspaper descriptions, however, he inferred that they were the same as the half-naked bullets, from whose apex there projects a centimetre or thereby of lead, which are employed by sportsmen to kill the deer, chamois, and wild boar in Germany, and to shoot elephants, rhinosceros, lions, and big game generally in the German Protectorate in East Africa. Fired from the German small-bore army rifle, the Mauser, these bullets are immensely powerful and destructive, and are at present displacing the elephant gun, expresses, and all older means of killing dangerous big game in the German possessions. Von Bruns accordingly procured from a German manufactory a supply of these, identical with the German military Mauser bullet in weight, calibre, etc., save for wanting the mantle in front, and in his experiments fired them from the Mauser rifle, believing he was using projectiles and weapons practically identical with the English Dum-dum bullets and Lee-Enfield rifles. When his observations were finished he embodied them in a communication to a meeting of the Congress of German Surgeons in Berlin on April 16th, 1898. He exhibited the bullet he used, and showed photographs, skiagraphs, and the actual preparation of limbs of cadavera against which it had been fired, and demonstrated conclusively that his missile, which is used to kill elephants, produced in men injuries which he very reasonably characterised as "inhumane." Most of the leading surgeons of Germany, who are all more or less military surgeons, and many of the chief German army surgeons, were present at the meeting where his communication was given, and it made a deep impression, as was to be expected; but no one was quite prepared for it, and as none were in a position, from knowing the facts, to criticise his remarks or to contribute anything to the subject, there was not a single word of discussion. A warm-hearted surgeon from Hamburg, however, who had seen much service and distinguished himself in the Franco-German war, sprang upon the platform and proposed that the meeting should adopt the conclusion with which von Bruns had wound up his communication—namely, that the German military authorities should take steps to secure, by an agreement of the leading nations, that no bullets should be sanctioned in war save such as were completely encased in a hard mantle, or at least were so at their points. This was agreed to without any deliberation, and so became the finding of the meeting. So far nothing

[1] BRITISH MEDICAL JOURNAL, September 17th, 1898, p. 814.

had occurred calling for any very strong objection or protest. It was but an instance of jumping to erroneous conclusions, and a verdict obtained by surprise from a scientific society, neither of them processes unknown among German or English men of science.

But what followed is remarkable. In spite of the well-known fact that England had never used these bullets save against barbarous and absolutely ruthless enemies, and although this Journal of September 17th, 1898, p. 815, showed the flaws in von Bruns's experiments, and that they did not refer to Dum-dum bullets at all, Continental writers busied themselves in fulminating against our country for introducing the use of missiles that were intolerably cruel, and under the pretext of humanity denied us by implication the right of judging of what was necessary to remedy the defects of the deadly weapons which their own example had compelled us to supply to our own troops.

Professor von Esmarch's Letter.

Immediately after his communication had been read to the Congress in Berlin, the German War Office interviewed von Bruns, and an agitation was initiated based on his erroneous experiments, and on these solely. The famous Professor Friedrich von Esmarch, of Kiel, was approached, his opinion being one that would carry the greatest weight, and he was induced to write a letter to the *Deutsche Revue*, January, 1899, in condemnation of such bullets as the Dum-dum, and directing the attention of the then forthcoming Peace Conference to the subject. A critical reader of Esmarch's letter cannot but arrive at the conclusion that this how it was obtained. Deeply imbued as he is with humanitarian motives, his pervading desire, as expressed in it, is evidently to secure a more perfect operation and more thorough adoption of the principles of rendering warfare more humane through the agency of the Red Cross, which actuated the St. Petersburg Congress of 1868. But he introduces von Bruns's experiments in such a way in his letter as to show, I think, that his attention had been directed to them for the purpose of his influencing the deliberation of the Peace Conference; and this effect was produced.

Swiss and Portuguese Expanding Bullets.

Another matter is here worthy of remark. From anything that took place before or at the meetings of the Peace Conference, any person who did not know the truth would have been led to infer that England was the exclusive possessor, for military purposes, of the bullets of the type objected to. But this, as must have been well known to those directing the agitation, is not the case.

The Swiss bullet, for example, is covered at its point by a



Fig. 1.—Swiss bullet.



Fig. 2.—Portuguese bullet.

thimble of steel extending over only its anterior third, and leaving the rest of the cylindrical part of the leaden core exposed. Its middle third is wrapped round by a paper envelope.

And the Portuguese bullet likewise, in place of the fixed mantle of other nations, has its posterior two-thirds encased in a sheet of copper, which is folded round it, and twisted firmly into a hollow at the base of the core, so that the lead is exposed at the anterior third. This explains why the Portuguese delegate at the Conference was so magnanimous as not actually to join in the censure on Great Britain. It would be interesting to know exactly how the Swiss delegate behaved. These two bullets are decidedly more objectionable than any that has ever been used by British troops; that of Portugal is almost an exact parallel to, or if anything is even worse than von Bruns's elephant bullets; yet neither before the Conference, nor (so far as can be gathered from the reports of its transactions) at its meetings was any notice taken of them; England alone was animadverted on.

There are other points that might be taken up, were they not beyond the limits of such an article as this. For instance, in the German, French, and Russian bullets, their weight, or their velocity, or both of these, are so much greater than in the English bullets, that the heat generated in them on impact at short ranges will be also greater, and the plasticity of the leaden core will consequently be so increased as, in the event of a hard bone being struck and the mantle rent, to cause the lead more certainly to break up into fragments. It might in fact be a task of no very great difficulty to turn the tables on these Powers by formulating an indictment against them that theirs are the bullets which are really "inutilement cruel," as being beyond the requirements of warfare.

The Attempt to Place Great Britain at a Disadvantage.

Until the protocol of the Conference is before us, it is difficult to be absolutely sure exactly of what occurred at its meetings; but there seems no room to doubt that, upon the loose grounds we have just detailed, and with a want of fair and impartial dealing that shakes our confidence in the good faith of the Conference upon other points, an attempt was made to exhibit England as introducing a bullet too cruel for any other nation to employ. Under the name of humanity, Continental Powers, whose official organs, as was pointed out by a correspondent in the *Times*, were recently advocating, openly and unrebuked, a general coalition against England, have made an endeavour to coerce her into an undertaking to make no attempt to render her military rifle equal to theirs. Whether or not this was their real motive, things have been so injudiciously handled as to give rise to the suspicion, and if they are wronged by it, the Powers so acting have themselves alone to blame. Their conduct has produced in our country a distrust of the Conference as a whole. But however the truth may have been, it is right that there should now be put on record, as has here been done, the true history of the early stages of the agitation against the Dum-dum bullet.

The Mark IV or Woolwich Bullet.

Great Britain, as is well known to British readers, subsequently introduced a bullet different from the Dum-dum, known as the Mark IV or Woolwich bullet. It was tested and objected to[2] by von Bruns, and was, like the Dum-dum, included in the condemnation of the Conference.

Continental Errors.

Those aware of the effects which all modern military bullets produce read with a mixture of amusement and sorrow the speeches and articles of those who employ von Bruns's experiments as a handle against England for using her hollow-fronted bullets. Many of them are plainly quite ignorant of the subject, and use it only for polemical purposes. Even those who should know better have themselves, and seek to convey to others, the impression that the fully-mantled bullet used by most of the Powers is a missile which lets the life out of a man by the smallest opening possible and in the gentlest way—a utopian sort of bullet; while the Dum-dum and allied bullets are supposed to tear his nerves and sinews asunder, and leave a gigantic and painful rent through which the spirit issues in agony. They are responsible for the idea which has become prevalent that one who has a limb injured by a fully-mantled bullet has before him but a few weeks of pleasant sojourn in bed, while the open-fronted bullets will cost him his limb by amputation, if not worse. On the basis of von Bruns's experiments which, even had they not been discredited by a fundamental and glaring inaccuracy, would have been accepted by no scientific body as convincing evidence till they had at least been corroborated by others, these persons have been successful in persuading Europe that we use elephant bullets against men. Even the latest French work on projectiles[3] has a woodcut of such a bullet, with a nose of

[2] British Medical Journal, March 25th, 1899, p. 752.

[3] Nimier et Laval, *Projectiles des Armes de Guerre*, Alcan, 1899, pp. 61.

soft lead half an inch long, given as "la balle de Dum-Dum," though it has been shown in this Journal[1] that the lead exposed in the apex of the Dum-dum bullet is so small as to be scarcely visible; indeed, even the drawing of the true bullet given at page 813 had to be exaggerated so as to show in profile that any lead is exposed at all. And the same French work states that in the Dum-dum bullet "l'enveloppe de cuivre-nickel, à l'inverse des chemises ordinaires, diminue d'épaisseur depuis le culot de la balle jusque à son sommet, où le plomb est à nu," which is quite inaccurate. It is one more instance of the saying that a twenty-four hours' start puts a misstatement beyond being overtaken, and the way Dum-dum is spelt in the French work shows that the misstatement had its origin in Germany. It is almost beyond belief that, at a Peace Conference composed of States who have a regard for their own reputation for fairness and good sense, an indictment, which began in error and was sustained by such misstatements, should have been advanced against Great Britain, and that all their delegates should have consented to support it, save those of the United States alone; even Portugal and Switzerland stood aside as holier than we.

All Modern Bullets Can Produce Severe Wounds.

But the subject is not without a pathetic side. Were the assembled world to be shown the destructive effects all modern military rifles produce, the fearful rending of viscera, the cruel powdering and splintering of bones, the tearing of the flesh, and the lacerated, open deadspaces beneath the fasciæ and skin; it would, we think, be shocked to find that every one of its rifles is a most murderous weapon, and that all its bullets produce, as a rule, ghastly wounds. It is, indeed, out of place to apply the term "humane," even in a relative sense, to any of them. They are all, as used by man against man, a disgrace to our species, and their unalloyed cruelty makes it, in truth, a matter of comparatively little moment, where all are so bad, whether the bullet of one breaks up a little more or less than another. It is not only the number of fragments a bullet may break into that makes it destructive. The velocity and weight of the ball are its main destroying forces; upon these depend its effects; and in proportion as it possesses these, even a mantled bullet when striking, especially if it strike a bone, whether itself breaks up or not, communicates its force to a number of the fragments it produces and hurls them forward in a devastating shower, nearly as destructive of all that stands in their path as are fragments of the bullet itself. The States who can look with equanimity on the dreadful injuries modern small arms produce need hardly have been in such indecent haste to bring on insufficient evidence a charge of useless cruelty against a nation which has furnished many more historical proofs of being actuated by the most humane motives than any of themselves has ever given.

The Difficulties of Experiment.

The difference between any military bullets is simply one of degree. Very slight differences in the conditions constantly produce unexpected results, rendering experiments by no means a simple or easy task, and necessitating the greatest care and vigilance in drawing conclusions from them. For example, a bullet entering at the tibial and emerging at the fibular side of the leg will, if the bones are struck, often produce a greater destruction than if the direction be reversed. In Fig. 3 (see plate) this is well shown. On the right hand side may be seen the minute entrance wound and large exit wound (3¼ in. by 2 in.) of a Mark IV (Woolwich) bullet; the bullet struck the tibia just before emerging, and forced a shower of bony fragments through the skin, causing the large rent. On the left hand is a leg struck by a fully-mantled Lee-Enfield bullet, where the ball struck the tibia on entering, and the mitraille of bony fragments tore along with the bullet through the leg to the fibular side, causing one large wound (4 in. by 3 in.) from the entrance and exit wounds being combined into one. The result is that, judged from these two parallel experiments alone, the mantled bullet would seem to make a much severer wound than the Woolwich bullet. Such peculiarities in the effects of bullets must be taken into account in estimating the value of von Bruns's experiments, as in most of his illustrations in his work on the Dum-dum, and in all that on Mark IV bullets, the great destruction produced is owing, not so much to the fragments of the bullets, as to the fragments of the bones. Parallel experiments, so arranged as to enable an exact comparison to be made, are absolutely essential where it is desired to draw correct inferences; but in no case has von Bruns given any such control experiments.

[1] BRITISH MEDICAL JOURNAL, September 17th, 1898, pp. 813.

It is, it must be admitted, very difficult to arrange them. But the following, selected from a series, will convey, I think, a fairly just idea of the effects of the bullets that have been the subject of so much debate. The first is a comparison of the flesh wounds produced by the three English bullets, the fully mantled, the Dum-dum, and the Mark IV (Woolwich). Three thighs of about equal thickness were selected, and through their adductor regions, so as not to strike bone, but produce only a flesh wound, bullets of full velocity were fired, a mantled bullet through the first, a Mark IV bullet through the second, and a Dum-dum through the third. The following are the sizes of the entrance and exit wounds produced:

Wounds.	Mantled.	Mark IV.	Dum-dum.
Entrance....	5/16 in. by 1 in.	1/16 in. by 1/16 in.	1/8 in. by 1/16 in.
Exit	3/16 in. by 1/16 in.	1 in. by 7/16 in.	1½ in. by ¾ in.

The tracks of the bullets were next carefully injected with melted paraffin coloured with red lead, care being taken that the injecting pressure should be slight, and equal in all. The result is seen in the photographs of the casts (see plate), carefully removed by cutting away the flesh. Fig. 9 shows them as seen from below upwards; Fig. 10 from right to left—that is, from two directions at right angles to one another. This parallel experiment shows that in flesh wounds the three bullets do not produce such marked differences either in openings or tracks as has been asserted, and also that, though the Dum-dum gave the largest exit wound, the mantled (it is admitted, however, that this is exceptional) gave much the largest entrance wound. The three observations would have been more complete if a fourth one, showing the comparative effect of von Bruns's big game Mauser bullet could have been added. But hitherto I have failed to obtain a wound from it where it was possible to take a satisfactory cast of the gaping crater-like rents it produces.

In such an article as this it is not possible to give illustrations of a whole series of experiments so as to convey a perfectly true conception of the comparative effects of bullets; it would require a special treatise to do so. But I may in the next place give some typical illustrations of the effects of the Dum-dum and Mark IV (Woolwich), as compared in wounds involving bone with von Bruns's big-game Mauser bullets. Figure 4 shows the exit wounds of the three, fired against the arms of three cadavera, from a range of 6 feet, with full velocity, so as to give results that may be fairly contrasted with one another. The measurements of the exit wounds were:

Woolwich.	Dum-dum.	Mauser Game.
2 in by 1½ in.	2¾ in by 1⅝ in.	4½ in. by 2½ in.

In all of the above cases the bullet struck bone, the Woolwich and Dum-dum striking the humerus, and the Mauser game the forearm bones. Fig. 5 shows the resulting skiagraphs.

For further comparison all the fragments of bone were in each case collected and laid upon a black plate, the larger fragments, which might have preserved their vitality from being still connected with the periosteum, being placed on one side, and the smaller loose fragments on the other. The results are seen in Figs. 6 (Woolwich), 7 (Dum-dum), and 8 (Mauser game). The greater destruction produced by the last-named bullet is apparent both in the figures and in the skiagraphs.

These illustrations are fair types of the results obtained in a large number of experiments, and though it is difficult to judge correctly in such a question without seeing the aggregate results of a large number of observations, where the possibly misleading results of single ones are corrected by the whole, they will be enough, I think, to show the readers of the BRITISH MEDICAL JOURNAL that the matter is by no means so plain and simple as has been represented, and how mis-

leading and injudicious was the conduct of the Russian delegate at the Peace Conference in transferring the results of von Bruns's observations with bullets that were not the Dum-dum to the account of the real Dum-dum bullet. It was illogical and unscientific, to say the least of it.

THE PROPOSAL OF THE RUSSIAN DELEGATE.

I am not pleading the cause of either the Dum-dum or the Mark IV bullet; like most persons in this country I have an open mind on the question. But no one can have experimented upon gunshot injuries without becoming aware that insignificant and sometimes even unaccountable causes give rise to most unexpected results, so that variation and repetition of the experiments are necessary for forming anything like a correct judgment regarding the subject, and that the greatest caution and care are at all times needed to avoid error. Hence it was, I think, only proper and reasonable that the delegates to the Conference from this country refused to give their sanction to the report of its Committee on Dum-dum bullets. The subject is not ripe for such a decision as was proposed. Our representatives would have made themselves ridiculous had they agreed to it.

This would certainly be the case if it be true as is reported that the proposal submitted was to forbid "les balles à enveloppe dure, dont l'enveloppe ne couvrirait pas entièrement le noyau ou serait pourvue d'incisions." "Forbid all bullets whose mantle does not completely cover the leaden core"! Did any delegate to the Congress or any other person ever see such a missile? None of the Powers represented has ever used or proposed to use such a bullet as the report demands, *completely* covered with a mantle, and it is greatly to be doubted if such could be manufactured. There must always, wherever it be placed, be an opening in the mantle through which the leaden core can be introduced. The proposal is an absurdity, condemning the fully-mantled bullets used by the Powers who drew up the report quite as much as it does the Mark IV or the Dum-dum bullets. Not one of the English, French, German, or Russian bullets lying before us as we write conforms to the above requirement.

It was, besides, formerly pointed out that if it be desired to make a mantled ball expand to increase its stopping power, there is no need to perforate its apex in any way. If the mantle be made thin in front, it will expand and break up quite as well as any elephant ball, and yet be within the requirements of the report of the Conference.

But it is needless to dilate further on the matter. Reasonable people who know the subject must admit that our delegates acted wisely—indeed had no other alternative than—to refuse to agree with the majority on this Dum-dum question; and those who are unreasonable will not be convinced by anything further that can be said.

Whatever course our country adopts regarding its military bullets must be determined by other considerations than those adduced by our Continental friends, who have, by their conduct in this matter, given us some reason to question either their good sense or the sincerity of their motives.

ALEX. OGSTON.

NOTES ON HEALTH RESORTS.

Penzance and Cornwall.—Dr. H. M. Montgomerie has printed the address which he gave to the South-Western Branch of the British Medical Association last year in a small pamphlet for private circulation. Speaking of the open-air treatment of phthisical patients, he thinks that localities should be selected for this purpose in Great Britain where the air is pure (the essential requisite), where there is a certain amount of sunshine, with conditions which favour the spending of the greater part of the day out-of-doors. A spot is to be preferred where the temperature is fairly equable, and the difference between day and night small. The rainfall need not be much regarded, he thinks, provided that the soil is porous, so as to allow the water to quickly disappear. The patient is to live really out-of-doors, warmly clad, and if acutely ill, resting on couches protected from wind by glass screens. He thinks that if this method shows success near Cromer on the east coast, where Dr. Burton-Fanning has been trying it, the climate of West Penwith should be even better. The annual mean temperature at West Penwith last year during the winter months was 53.5° F., and that in Lowestoft 39.4° F. The daily variation between night and day temperatures at West Penwith averaged only 4.3° F. during the winter months. Penzance is relaxing, but in the uplands and the north coast a very bracing and mild climate may be obtained (for instance, Zennor), where the air, too, is pure and well charged with ozone. Dr. Montgomerie feels sure that if means could be arranged to found and carry on a sanatorium for phthisis on the north coast of Cornwall, benefit would result.

Eastbourne.—Amongst the advantages claimed by Mr. C. Roberts[1] for Eastbourne as a seaside health resort are the absence of any cramped, badly-drained, and unhygienic old fishing village, such as constitutes the nucleus from which many of our popular localities on the coast have developed; (2) dry soil, good drainage, and low death-rate; and (3) the position of the town on a projecting portion of the coast, which increases the marine influence of a stay there. The mean summer temperature is given as 60° F., the mean winter temperature as 40.5°, the mean daily range as 10°. The average rainfall is 30.75 inches, falling on an average of 155 days, nearly two-thirds falling during the night. The mean annual amount of "bright sunshine" is 1718.8 hours (sunless days averaging 69). In spite of the hardness of the water chronic gout is said to do well. The establishment of sanatoria for the open-air treatment of phthisis is advocated by the author.

Bath.—The first chapter of Dr. Bannatyne's book[2] gives a summary of the history, situation, climate, and death-rate of Bath. In the next three chapters the thermal waters, the bathing establishment, and the methods of application of the waters are considered. The fifth (last) chapter deals with the action of the various modes of treatment in their application to different classes of cases which present themselves at Bath. The scale of charges at the baths constitutes an appendix. From the nature of the subject medical accounts of the resources of much-visited health resorts are always in request. Dr. Bannatyne, well known as the author of one of the most recent treatises on rheumatoid arthritis, has succeeded in compressing much information into a small space, and we believe that his little book will be found useful.

Leamington is known as an agreeable place of residence, perhaps, more than as a simple mineral water spa. The facility for excursions to Warwick, Kenilworth, Stratford-on-Avon, etc., contributes greatly to its popularity amongst tourists. A little book[3] on Leamington as a health resort gives details as to its mineral waters, climate, educational arrangements, etc., and is illustrated with capital views of the place itself and the objects of interest in the neighbourhood. The meteorological table for the last ten years (including 1897) gives the mean temperature as 47.6° F., the daily range of temperature as 14.9° F., the mean humidity as 80, and the rainfall as 21.8 inches spread over 160 days of the year. The death-rate of the borough last year was 14.0 per 1,000, whilst the average death-rate of England is 17.1 and that of Warwickshire 19.0. The zymotic death-rate in Leamington last year was 0.4 per 1,000; in most years it is stated to be practically *nil*.

South Africa.—Dr. Fuller[4] gives a brief sketch of the principal localities of South Africa in respect of their claims to be regarded as health resorts. Doubtless much remains to be done before many of the places mentioned can be considered as affording suitable accommodation, comfort, and medical treatment for the relatively serious classes of invalids. We may soon expect to hear of arrangements for the more extensive sanatorium treatment of phthisical cases being introduced at some of the elevated localities, which in other respects are suitable health resorts. The country is in a rapid state of development, and medical improvements will accom-

[1] *Eastbourne as a Health Resort.* By C. Roberts, F.R.C.S. Eastbourne: J. Pulsford. London: Bale, Sons, and Danielsson. 1899. (Crown 8vo. Pp. 31. 1s.)

[2] *The Thermal Waters of Bath.* By G. A. Bannatyne, M.D., M.R.C.P. Bristol: J. Wright and Co. London: Simpkin, Marshall, Hamilton, Kent and Co. 1899. (Cr. 8vo, pp. 87. 2s.)

[3] *Royal Leamington Spa: the Midland Health Resort.* 1898.

[4] *South Africa as a Health Resort.* By A. Fuller, M.B., C.M., M.R.C.S. Sixth edition. London: Union Steamship Company. 1898. (Crown 8vo, pp. 77, with map of South Africa and illustrations. 1s.).

pany general development, so that many additions and alterations will probably be required in future editions of Dr. Fuller's useful book. The fifth edition of *The Guide to South Africa*[5] was reviewed at length in the BRITISH MEDICAL JOURNAL of January 15th, 1898. To this favourable notice there is little to add. The new edition amply deserves the good reputation which former ones have obtained. The pages devoted to the climate and to South Africa as a health resort will be useful to medical men, whether able themselves to visit any of the localities or not. To invalids and those who propose to settle in South Africa the book must be invaluable.

Offenbach.[6]—Offenbach-on-the-Main, four miles from Frankfurt, possesses in the Kaiser Frederich Spring a muriated alkaline mineral water, which, according to the published analysis, contains in 1,000 parts by weight about 2.4 parts bicarbonate of soda, 1.2 sodium chloride, 0.4 sodium sulphate, and 0.019 bicarbonate of lithium. The total of its solid constituents reaches 4.2 per mille. The water, which is naturally poor in free CO_2, can likewise be had artificially aërated. In many cases this artificial addition of carbonic acid gas is advisable, not only on account of the pleasant taste thereby imparted, but because of the beneficial stimulant action on the stomach, and, according to Ebstein, because of the diuretic effect due to the quicker absorption if the water is aërated. Drs. Schreiber and Zaudy have made experiments on two healthy men, and have compared the action of the Offenbach water with that of Fachingen water (the best known simple alkaline mineral water in Germany), with that of simple bicarbonate of sodium, and with that of the ordinary water supplied at Goettingen. The ordinary water increased the total amount of urine most, then came Fachingen water and the Offenbach water, and then the bicarbonate of sodium. The effect of the mineral waters on the general metabolism appears to be only slight, and less than that of drinking ordinary water. The solvent action of the men's urine on uric acid was estimated by adding uric acid to urine passed, and ascertaining how much of the uric acid thus added was dissolved; this is a method similar to those of Pfeiffer, Frickhinger, etc. It was found that the urine passed under treatment with Fachingen water and Offenbach water was capable of dissolving much more uric acid than the urine passed when the ordinary Goettingen water only was used. The treatment with sodium bicarbonate as a drug did not increase this solvent power of the urine quite to the same extent as treatment with the two mineral waters did. These statements apply not only to the solvent action of a given quantity of the urine, but also the total solvent power of the quantity of urine passed during twenty-four hours. Drs. Schreiber and Zaudy point out that in some cases Offenbach water has an advantage over Fachingen water—namely, that the former not only exercises nearly as great a solvent action on uric acid as the latter, but it contains less bicarbonate of sodium, and can be employed for a longer period at a time.

Dr. Friedrich Engelmann, in a pamphlet entitled *Of the Effects of the Creuznach Waters on the Diseases of Women*, tells us that the baths, "on account of their powerful different saline properties have a peculiar irritating effect on the skin," and also that the "animating influence of the waters plays a part in the digestion;" while he admits that if "it is a case of endometritis of long standing, and if there are growths, thickenings of the mucous membrane, hæmorrhage, or mattery discharges the right treatment will be trough operation," yet in many cases of chronic pelvic inflammation in which the exudation "organises itself into plexus and scarred fibres . . . a cure at Creuznach may often be of the greatest use," for "there exist, as a rule (and especially after a long grievous inflammation) inflammatory substances which are certainly influenced by a treatment of trough baths." What exactly "trough baths" are is not explained. With regard to "fibrous tumours of the uterus," Dr. Engelmann thinks that "it is indeed very peculiar how the nutrition of the tumour is brought about," but he considers that the "principal condition" which favours a softening of the tumour is "an increased congestion of blood which renders a soaking of the tumour possible." He explains how in his opinion "a retrograte formation" may be produced "through the internal as well as external use of our waters." Unfortunately patients with these "fibrous tumours of the uterus" are apt not to be sufficiently persevering, for he tells us that, "unless the point in question be a large-sized tumour, the patient is generally contented when he has got rid of these symptoms, and he cares little about his complaint." He, therefore, who suffers from a fibrous tumour of his uterus, and goes to Creuznach, should be careful to stay there long enough. As to "the electrolyse according to Apostoli," we are told that "such an extraordinary treatment should only be applied exceptionally, and not without a consultation with the treating physician." There are other gems in Dr. Engelmann's pamphlet, but enough has been said to prove that his confidence in the powers of Creuznach waters is as strong as in his own power to write English, and it is to be hoped better grounded.

Nauheim.—So much has been written in the English language on the Nauheim springs and the methods of their employment in the treatment of cardiac affections, that it is sufficient to say that Dr. Groedel, whose studies on affections of the circulatory organs are already well known in England, has in the present book[7] given a short summary of this subject, and has likewise duly considered the other affections which may be benefited by the judicious use of the mineral waters and the pure air of the place. The employment in various cases of graduated gymnastics and walking exercise is also spoken of. For the guidance of visitors, the local information about Nauheim and the excursions which can be made in the neighbourhood will be found useful.

The special features of Mr. Reynolds-Ball's volume[8] are the notes on the various Mediterranean health resorts from the pens of resident English physicians. Amongst the medical men who have contributed short articles are Drs. W. P. Biden, H. Blanc, Ashmore-Noakes, Johnston-Lavis, Pryce Mitchell, S. M. Rendall, G. A. Goodchild, A. J. Freeman, M. G. Foster, S. Tidey, W. Turner, W. C. Greig, L. Kidd, F. M. Sandwith, Page May, and Leigh Canney. A list of members of the Anglo-Continental Medical Society is likewise included. This, the fourth edition, has been enlarged by over 100 pages and is in great part rewritten. Some of the winter stations, such as Biskra, which have come into favour only during the last few years, will be found fully dealt with. From the medical point of view therefore the book deserves a specially good reception.

Dr. G. Morice, editor of the *Gazette des Eaux* presents us with the forty-first annual edition of this useful guide to mineral waters and climatic stations.[9] Descriptions of the various waters, the affections treated at the various spas, the routes from Paris, and the names of the physicians practising at French thermal stations can all be quickly "looked up" in Dr. Morice's annual. A great deal of other information is given, such as notes of French seaside health resorts, winter climatic stations, marine sanatoria for scrofulous and weakly children, foreign spas and mineral waters, etc.

[5] *The Guide to South Africa.* 1898-99 edition. Edited annually by A Sammler Brown and G. Gordon Brown. London: Sampson Low, Marston and Co. 1898. (Demy 8vo, pp. 420, coloured maps, plans, and diagrams. 2s. 6d.)

[6] Zur Wirkung der Offenbacher Kaiser Frederich-Quelle. By Drs. Schreiber and Zaudy. *Zeitschr. für diät. und phys. Therapie.* 1898. (Vol. ii, p. 186).

[7] *Bad Nauheim: Its Springs and their Uses.* Second Edition. Friedberg and Bad Nauheim: C. Bindernagel. 1899. (Crown 8vo, pp. 176.)

[8] *Mediterranean Winter Resorts.* By E. A. Reynolds-Ball. Fourth edition. London: Kegan Paul, Trench, Trübner and Co. 1899. (Cr. 8vo, pp. 537, with a map of the Mediterranean and several diagrams. 6s.)

[9] *Annuaire des Eaux Minérales, Stations Climatiques et Sanatoria de la France et de l'Etranger.* Par Dr. G. Morice. Paris: Librairie Maloine et Bureau de la *Gazette des Eaux.* 1899. (Fcap. 8vo, pp. 287. Fr. 1.50).

THE ALEXANDRA HOSPITAL FOR HIP DISEASE.—This hospital, which is situated in Queen Square, Bloomsbury, was established thirty-two years ago to provide ten beds for children suffering from hip disease requiring prolonged treatment. It had increased gradually until it contained sixty. The building was, however, unsuitable, and the friends of the hospital provided £20,000 to purchase the site and erect new buildings. The work has been completed, and on July 20th the Princess of Wales, after whom the hospital is named, declared the new buildings open. The Prince of Wales, who accompanied the Princess, congratulated the Board of Management on being able to open the hospital free of debt.

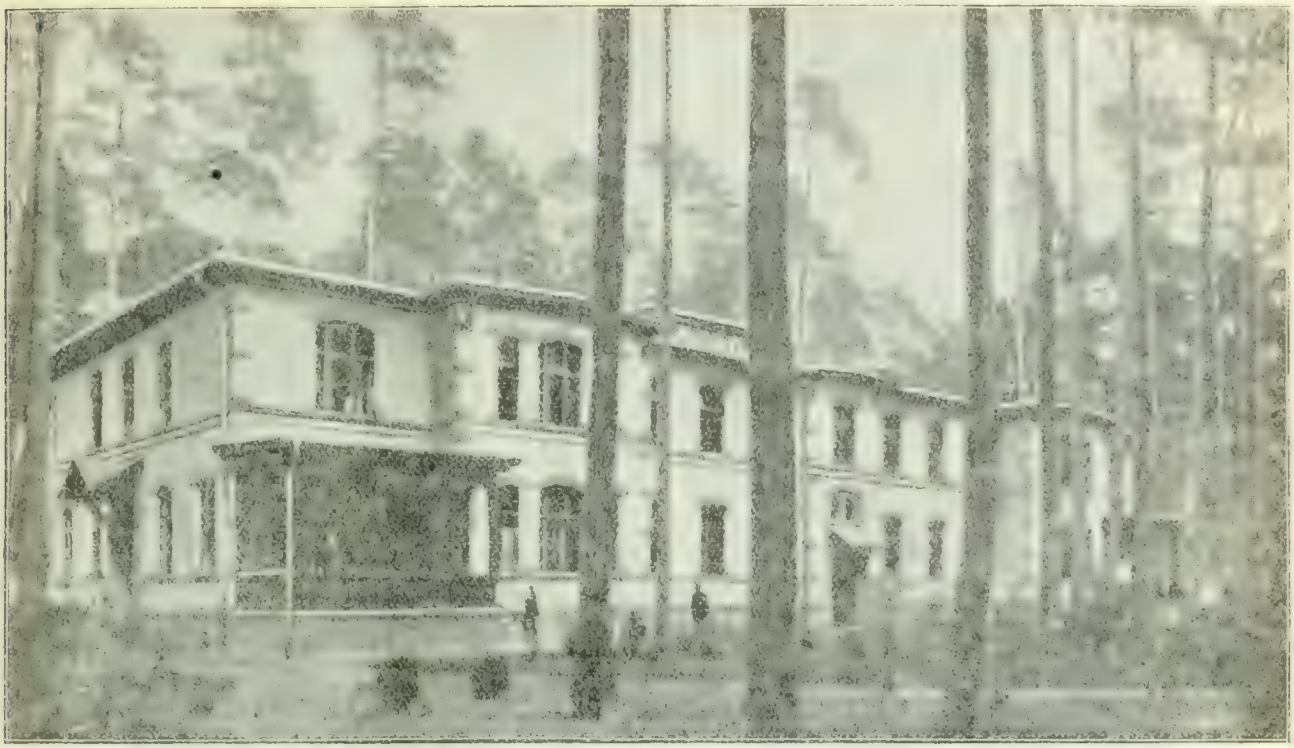


Fig. 1.—Grabowsee: the New Pavilion.

NOTES ON SANATORIA FOR CONSUMPTION.

THE RED CROSS SANATORIUM FOR THE WORKING CLASS ON THE GRABOWSEE.

[FROM OUR SPECIAL REPRESENTATIVE AT THE INTERNATIONAL CONGRESS OF TUBERCULOSIS AT BERLIN.]

AMONG the practical results of the Tuberculosis Congress held in Berlin perhaps the most interesting and useful were the papers read on the Treatment of Consumption in Sanatoria, and the visits which members of the Congress were enabled to pay to various sanatoria actually established in the vicinity of Berlin.

The widespread character of the sanatorium movement in Germany is remarkable, and it must be borne in mind that the Congress itself owed its promotion to the Central German Committee for the Establishment of Sanatoria for Pulmonary Diseases.

Among the English visitors to the Berlin Congress Sir Hermann Weber, Professor Trevelyan (Leeds), Dr. Sinclair Coghill, Brigade-Surgeon Crombie, Mr. Rube (Chairman of the London Open-Air Sanatorium), Mr. Malcolm Morris, Dr. Walters, and Dr. Hillier all availed themselves of the opportunities offered for visiting some of these sanatoria. On the very last occasion of seeing Dr. Sinclair Coghill I had the pleasure of breakfasting with him, and found him full of enthusiasm with regard to open-air treatment. I little thought then that one so keen and apparently vigorous would be so shortly taken from our midst; and his bright, genial personality will long remain one of the pleasant recollections of the Congress in my mind. When I last saw him he had in contemplation an article on the whole sanatorium question for the new *Local Government Board Review* in England, and he was full of information on the subject. Some notes which I took of his remarks at the time have to-day more than common interest. He had been very much impressed with the development of the sanatorium system in Germany, which he said "was primarily an economical movement." Thus, as the outcome of an insurance law passed in 1889, compelling every German with an income of £150 or less to insure themselves against sickness and old age, the number of Germans actually insured amounted last year to 11,200,000. The insurance companies found that among this vast number of policy-holders half of the applications for relief were made by people suffering from pulmonary tuberculosis, and the companies further found that the most economical way to meet the demands was by providing sanatoria for these consumptives. There were, he said, no fewer than thirty-seven insurance companies which have started specially to meet the demands of the new Act, and provisions have been made by these companies whereby they can put aside a certain portion of their premiums for sanatoria.

The sanatorium situated on the Grabowsee, near Oranienberg, some 30 kilometres from Berlin, is a sanatorium of this character; and on the Friday afternoon of the Congress excellent arrangements were made for taking visitors to view the sanatorium and the district in which it was placed. In spite of the weather being rather rainy a very large number of visitors took seats in the special train provided and proceeded to Oranienberg, where they were met by innumerable vehicles under the charge of semi-military officials in the picturesque garb of the German forester. For the information which I append with reference to this sanatorium I am indebted to some notes supplied me by Brigade-Surgeon Crombie; the official account of the institution; and notes made by myself on the spot.

The sanatorium is situated on a sandy soil in the midst of pine forests, which extend for several miles on the eastern shores of the Grabow Lake. It is 6 kilometres from Oranienberg Station, which is readily reached from Berlin by suburban trains. The Grabowsee is at no great height above sea level, and the sanatorium itself is only some 18 feet above the lake, so that in selecting this site no great importance has been attached to altitude.

The institution consists of a combination of permanent buildings and movable war tents, known as Döcker's huts. In 1895 twenty-seven of these huts were erected as an experiment during the summer, and when in the autumn the experiment was considered to have succeeded, arrangements were made for the erection of the necessary permanent quarters. At the present time 160 patients can be provided for in the summer and 90 in the winter, and the official report states that



Fig. 2.—Grabowsee: the Portable Döcker's Barracks.

"with the experience gained with many years, the Döcker huts are quite suitable for housing purposes in the winter and are preferred by many patients."

During the present summer a new dwelling pavilion for 50 patients is to be erected, which will complete the institution, so that from 140 to 150 beds in permanent quarters will be available for the housing of patients. The illustrations show the natural character of the district, and the structure and accommodation of both permanent and movable huts and Liegehalle.

At the present time there are in use two dwelling pavilions for patients, staff building, staff shed, washhouse, and acetylene gas works with gasometer, and the central steam-station.

The long axis of the newer dwelling pavilion (Fig. 1) is from east to west, and under one portion of it are cellars, while on other portions of the ground-floor are the rooms for consultation and laboratory purposes. There is also a large room with a billiard table and piano, and a verandah added to an annex. On the north side are roomy bath-rooms and lavatories of modern construction, which are separated from the corridor by a hall with windows on both sides. It is at the same time arranged as a common washing-room. All the rooms facing south are used as bedrooms for the patients. They are reached by the long corridor on the north side. On the upper floor is a smaller long corridor and a series of bedrooms.

The floors of the lower corridors are executed in terrazzo, the staircase and the upper corridor are covered with linoleum; the floors of the dwelling apartments are closely joined and painted in oil, and the walls are painted with enamel up to the height of about 5 feet 6 inches. Everywhere care has been taken that thorough disinfection by liquid disinfectants may be applied.

The latter and smaller enclosed pavilion is arranged for about thirty patients. It has no cellars; all rooms face south, while on the north side on a long corridor are lavatories with a well-ventilated hall as well as some storerooms. Here the floors are covered with linoleum and the walls enamelled. In both pavilions the windows have movable upper frames. Both pavilions have a low pressure steam warming installation which warms all stairs, rooms, and corridors equably. For dwelling and also for open air resting purposes there are at the present time twenty Döcker's huts. These economical little structures, placed here and there among the pine trees are well shown in the accompanying illustration. (Fig. 2.) They are so light as to be readily movable, and the chief objection to them as permanent residences is that they are apt to be a little too hot in hot weather and too cold in cold weather, but neither of these objections is an insuperable one to the consumptive who, by arranging his clothing, can protect himself against variations in temperature, and to whom the one absolute essential is pure air.

The staff building, which was the only permanent portion during the experimental period, is built in brick, and contains in the middle a large dining-room, with windows on both sides, and a serving room. On both wings there is an upper storey. In the east wing are the offices and residences of the doctor, and in the west wing are the kitchen, sinks, pantry, cellars, as well as quarters for three sisters and the women of the staff; that is, those dwelling on the premises.

Next the staff building, bounded by a railing and trees, towards the east, is a yard, on the north side of which are large stables, coach-houses, storerooms, and in an annex w.c's. for the staff. Rubbish and ashes are collected in closed boxes. The washing establishment still further to the east contains rooms for laundry purposes—a receiving room for dirty linen, washhouse, ironing and mending rooms, and a room for storing the clean linen, whence it is issued through a trap-door. Next door is the disinfecting establishment, with a receiving room for the infected linen, where the steam disinfector is managed, and on the other side is a storeroom

for the disinfected articles. For the servant in charge of the disinfector a bath-room is specially arranged in a side corridor between the two rooms.

The acetylene gas installation with which the institution is lighted was presented to the establishment by Commerce Councillor Julius Pintsch, one of the Committee of the People's Sanatoria Society. The plant is installed in a massively-constructed building north of the washhouse, and contains an apparatus for making and purifying the gas. Next to it is the gasometer. The water supply of the institution is obtained by pumping from a well, whence by steam it is driven to the cisterns on the roof. For the removal of waste as well as fæcal matter, there is a subterranean irrigation scheme, for which there is provided beyond the institution an artificial irrigation ground. This, however, on completion of the new settling ground on the Dyptim system (also gratuitously installed by an enterprising Berlin firm), is only to be used as a reserve. The settling ground is situated on a sand dune, south of the establishment, from which the clear water reaches the drains, and as the soil is very sandy, the water sinks into it before reaching the lake. All waste products of the institution, as well as fæcal matter, are carried by a collecting station placed between the institution and the settling ground, and from here these products are forced by pneumatic pressure under the Merten system on to the settling ground. The motor power is derived from the central steam station. The engine house with a high chimney is to the east of the washhouse. It is intended to further use this steam power for heating the new pavilion, which has still to be erected, to connect therewith the washing machines, at present driven by hand, and also to provide the kitchen with steam power.

The medical officer at the institution stated that the whole number of patients treated since its foundation three years ago was 1,686. Of that number 70 were absolutely cured of their disease, and have shown no sign whatever of a recurrence of their malady since their discharge. Of the whole number 96 per cent. were discharged qualified, or almost qualified, to earn their own livelihood, and 50 per cent. of these have been discharged as cured, but sufficient time has not yet elapsed to determine the number permanently cured. The average cost is 3 marks (3s.) daily, inclusive of everything. If they are able to do so, the patients contribute towards their support according to their ability. They are encouraged to work in the garden or elsewhere, but this is voluntary, and at first they are not allowed to do anything but lie in the shelters until they are sufficiently recovered to have gentle gymnastic exercises prescribed for them by the medical officer. The clothing and bedding are disinfected every week in the steam disinfector, which is large enough to admit the whole bed. Each patient has therefore two changes of bedding and clothing. The furniture of the Döcker's shelters consists of long deck chairs placed two deep, though for the more severe cases cots with mattresses are provided. Those visited appeared to be, if anything, somewhat overcrowded. Both sleeping and dining rooms are provided with windows and with means for ample ventilation above.

We all left impressed with the simplicity of the sanatorium arrangements, the bright and cheery hope of the patients, and the natural charm and beauty of the wide forests of pine.

THE SANATORIA FOR THE WORKING CLASS AT BELZIG AND MALCHOW.

[FROM OUR BERLIN CORRESPONDENT.]

The sanatorium at Belzig (a good hour by rail from Berlin) is still in course of erection, but the visitors, who were personally conducted by Professor B. Fraenkel and Herr Goldberger, were able to judge of the advantages of the site. The ground is sandy, the water pure, the country round about is well wooded and protected against north winds by hills; there are no factories near to disturb the quiet or send smoke into the air; in fact, the Berlin-Brandenburg Sanatoria Society has been exceptionally lucky in its choice. And it has been lucky, too, in being able to induce the trustees of the Bleichröder Fund to build their sanatoriums for 25 beds on the same ground at Belzig, joining them in their kitchen and washhouse buildings.

The Belzig building plan is distinguished by its large number of double-bedded and even single-bedded rooms—a deviation from the usual plan thought desirable, as this sanatorium is intended chiefly for persons of the educated classes, clerks, teachers, etc. Both sexes are to find admittance. As the building is exactly bilateral, one wing could be allotted to males, the other to females.



Fig. 3.—Belzig: General view.



Fig. 4.—Belzig: Plan of ground floor.



Fig. 5.—Belzig: Plan of first storey.

The sanatorium for male consumptives at Malchow (near Berlin) is a municipal foundation, and members of the Congress visited it under the guidance of two town councillors. Since the autumn of 1892, when the sanatorium was first opened, 2,880 patients have been inmates from a fortnight upwards, the average length of stay being 46.8 days. The statistical list shows the average weight gained at 4.15 lbs.

HOHENHONNEF: A SANATORIUM FOR PAYING PATIENTS.

By Lionel A. Weatherly, M.D.,

President of the Bath and Bristol Branch of the British Medical Association, 1898-1899.

The Modern Treatment of Consumption.

No subject has excited more general interest during the last few months in England than the modern treatment of consumption, a treatment which can for all practical purposes be summed up in three words—air, food, rest.

The moment it is recognised that this battle has to be fought, the all-important question—What shall be done to place the patient under the most advantageous circumstances, and thus enhance the chance of victory?—becomes the dominant idea in the minds of the anxious relatives.



Fig. 6.—Hohenhonnef: General view.

From my own practical experience, I unhesitatingly say that the answer to this question is: Remove the patient as soon as possible from home surroundings, and place him or her in one of those sanatoria which during the last few years have been built, and in which is to be found every advantage science can think of towards the carrying out to the minutest detail the right and proper treatment of consumption. My reasons are absolutely devoid of any theoretical ideas, and are based on observation of many cases and on chats with many patients.

It has been said that to be surrounded by those afflicted with the same disease, to have but one topic of conversation, their temperature and their symptoms, and a general more or less rigid discipline, must have a depressing effect upon each patient. I say emphatically that no such effect is produced in the very large percentage of patients resident in a well-managed sanatorium. I will go further, and declare that in very many cases the reverse happens, and that the patient, who at home or in an hotel has been irritated by the restrictions placed upon him, and the ever-patent fact that he cannot do as those about him are doing, and who has been made discontented by having to listen to the details of pleasures that have fallen to the lot of his more fortunate companions, becomes reconciled to his position, realises the urgent necessity of the observance of all rules and regulations, and slides easily into the "general discipline" of the institution.

Let me beseech my readers not to fall into the common mistake of looking upon a sanatorium as a place to go to for a few months, with an almost certain hope of complete recovery. That some cases, taken in their very earliest stage, do get completely well, and in a short time, I have evidence to prove, but in the large majority of cases I consider the sojourn in a sanatorium as a means of educating the patient into those rules, regulations, and habits of living by which alone he can expect in time to drive the dreaded enemy entirely from him. It may take months to do this, it may take years.

I fear some isolated wonderful cases of rapid recovery, of which we have heard so much, especially from lay writers, have created an entirely wrong impression in the minds of many, and have instilled hopes, destined to be shattered. They have made the public expect far more from this new treatment than the thoughtful scientific advocates of it ever intended; and to my mind are much on a par with the marvellous stories of the advertising quack, and must assuredly cause bitter disappointment and in the end do great harm.

Unfortunately, so far, the demand for vacancies in these institutions in England and on the Continent is far greater than the supply, and consequently it often happens that though the family doctor urges the vital importance of immediate sanatorium treatment, no vacancy can be obtained for weeks or even months, time is lost, and the chances of betterment are greatly minimised.

In looking out for a suitable sanatorium no doubt relatives and medical men will be guided, first, by personal experience, if possible; secondly, by statistics; and, thirdly, by cost and distance.

With regard to the first of these, I am glad to be able to record the impression made upon me by a sojourn of some days in one of the most modern and luxurious of the existing institutions.

As to the second, I would at once say that I take no notice whatever of statistics of different sanatoria, as I am satisfied they are not to be relied on as a basis for conclusions. I know as a fact that, whereas one such place will quickly get rid of an unsatisfactory case, another will retain such a one if the relatives and the patient wish, and do all in their power to at least mitigate the dire results of the enemy's invasion. Of what comparative value can statistics be of any such two institutions? While deprecating the value of statistics of individual sanatoria, let me make the definite statement that, generally, no treatment of consumption yet devised has ever met with the success approaching to that of which any well-managed open-air sanatorium can boast.

As to cost, I fancy there is not much difference when all things are considered, but distance must of necessity be an element in the choice in many cases.

The Site of the Sanatorium.

Dr. Meissen chose the site for this sanatorium well.



Fig. 7.—A Liegehalle.

Honnef, Rolandseck, and Mülheim are in front, to the right towers the romantic Drachenfels, whilst behind and to the left stretch the pretty woods of the Siebengebirge. The Rhine, with its constant steamboat, tug, and barge traffic, the railways on the right and left banks of the river, help to make up a moving, living scene, always lovely, always full of interest.

The building cost some £90,000, and is replete with every modern comfort, and accommodates over 100 patients. It is possible to walk through it in an hour, but to realise all the care that has been bestowed upon it a residence of some days is necessary.

The 5.35 evening train from Charing Cross enables the traveller to catch the Ostend boat, and the express with its sleeping cars reaches Cologne the next morning at 7.51; plenty of time is given for breakfast, and at 9 the train starts for Honnef. Here a carriage is waiting for you, and you reach the sanatorium before 11 A.M. The journey from London can thus be done in less than eighteen hours.

The Building.

The photograph (Fig. 6) gives a capital idea of the building, but does not give a true idea of its beautiful position. We enter at the north of the institution, under the bridge which connects the fine dining-hall with the main block. On this floor we have the large waiting-room, the drawing-room, music, reading, and billiard-rooms. Here also are Dr. Meissen's consulting-rooms, the laboratory, dispensary, and the rooms occupied by the two assistant medical officers, Drs. Schroeder and Nagelbach. Adjoining the porter's lodge on the one side are the offices of the institution, while on the other is the post and telegraph department.

The two other storeys, almost all the rooms of which face southwards, are reached by a fine main staircase, as well as by a lift. All are simply but well furnished, and ventilated to perfection, whilst the heating apparatus enables one to regulate the temperature to a degree. The floors are covered with polished linoleum: the double French windows opening into the room and have double top flaps, which when open admit plenty of fresh air without draught, and most of them have balconies. There are electric lights and electric bells, and the number of pleasant and willing female servants on each landing secures almost immediate attention, while double doors make the rooms very quiet.

The rooms vary in size, and consequently in price (2 to 8 marks a day). The 8-mark rooms are very fine, and have two beds, and in no hotel that I have been in could I have been more comfortable. Even on the top floor the rooms are capital; and here are double-bedded rooms with lovely views at 3½ marks a day. For board, attendance, and medical care the invalid is charged 8 marks a day; while the relative or friend pays 7½.

The food and cooking in this sanatorium is of the best. During the past few months it has been my lot to stay in many of the principal hotels of the Continent, and in not one could I truthfully say that the food was better, and in many had I to admit that it fell far short of that I had during my stay at Hohenhonnef.

Under the floor first entered are situated the Liegehallen (Fig. 7), and the picture of one of these gives a good idea of their general appearance. The Hohenhonnef reclining chair is most comfortable, and with the little table by its side, the electric light behind, the electric bell fastened to it, and a writing table when wanted, the invalid's open-air dwelling-place is replete with comfort. These halles can be kept cool in the summer by streams of water on the roof. In the woods we have others, and a pretty picture of one I was able to get from a patient (Fig. 8), and the happy faces in this Liegehalle remind me of many pleasant hours spent in their company. Photography is a great amusement here, and the institution has a capital dark room. There is a library of German, French, and English books, and a shop at which almost everything the invalid may want can be obtained.



Fig. 3.—A Liegehalle in the woods.

The water comes direct from a deep well in the Asbach Valley: and here are situated the steam laundry and the engines which pump up the water and work the electric light. The drainage of the building is perfect; the closets are large and splendidly ventilated by windows with upper flaps.

Classification of Patients.

The patients may be divided into three classes:

1. Those who have to keep entirely to their own rooms.
2. Those who are allowed to get up after breakfast and go to bed before supper.
3. Those who are up and out all the day long.

1.—The patients who are allowed to keep their rooms are visited by Dr. Meissen and his resident officers three times a day, and the greatest grumbler could not find cause for complaint with the quality of the food or the way in which it is served. If a patient has any idiosyncrasies with regard to his food they are taken notice of and orders are immediately sent by the medical man to the kitchen department. Maybe the invalid cannot eat meat too underdone, or perhaps certain vegetables are not cared for, or again the uncooked ham is objected to; the doctors have only to be informed and the wishes are attended to. Eat, eat, you must, but eat this or that whether you like it or not is a rule conspicuous by its absence at Hohenhonnef. The size of the institution and the admirably organised kitchen department allow a latitude which must be beneficial to the patient and a great help to the doctors. The dining hall has three long tables and smaller ones at the sides. Complaints have been made by medical visitors that they have found the windows closed during meal times, and comparison has been made between this plan and the open windows of the dining halls of other institutions. It is only fair I should draw attention to the fact that in these places if the windows were not open the ventilation possibly would be *nil*, whereas at Hohenhonnef the numerous ventilating shafts in the roof and pillars prevent the hall from getting hot or stuffy, and I have found that with the full number in the room the thermometer has hardly moved. Immediately the meal is over all windows on each side are opened to their full extent.

II.—The usual day's routine of the invalid able to lead an outdoor life is as follows: At seven or soon after he gets up, is rubbed down with the wet sheet or the gloved hand and spirit, dresses and adjourns to the dining hall for his "first breakfast," from 8 to 8.30. His seat has been apportioned to him by the speisesaal matron, and directly he comes in his breakfast is brought to him; coffee, tea, or cocoa, plenty of milk, rolls, white and brown bread, rusks, eggs, or ham if he wishes, butter and honey. After this meal the patient goes to his Liegehalle, perhaps *en route* looking into the reading-room for a glimpse at the German, Italian, French, Russian, and English papers to be found here. By 8.30 each morning he will find the *Standard* of the day before. Maybe, he now takes a short walk through the woods or round the gravel paths of the garden, and from 10 to 10.30 a second breakfast has to be got through, consisting of milk, rolls, bread, rusks, and butter. Back again to his Liegehalle, and about 12 o'clock a walk or a game of croquet is indulged in. At a quarter to one the big electric bell in the garden rings for dinner, which meal commences punctually at 1 P.M., and I cannot do better than give the menu of one of the daily dinners:

Soup. Rhine salmon, with melted butter, caper sauce, and potatoes. Venison, with cream sauce, potatoes and beetroot salad. Asparagus and ham. Boiled turkey, with fruit salad. Roman punch pudding. Dessert.

After this he lies down in his Liegehalle, and has an afternoon nap. Tea, at 4 P.M., consists of tea and coffee, and the usual rolls, bread, and butter. Until 6.45 he occupies his time in his chair, or with a walk, croquet, etc. Supper, which commences punctually at 7, consists of soup, hot roast or boiled meat and vegetables, cold veal, beef, ham and salad, and rice and milk, with stewed fruits. After this back again to the Liegehalle, and to bed by 10. In the summer the supper is half an hour later, and the call to bed varies from 10.30 to 10.45.

The invalid takes his temperature by the mouth four times a day, and records it on his chart, and the slightest rise above normal should be reported to the medical man. The amount of exercise is laid down by Dr. Meissen, and as progress towards recovery is established the patient is allowed to do more. Perhaps he may have a drive or walk down to Honnef, a trip to Rolandseck, the Drachenfels, or the Petersberg; but the doctrine of avoiding fatigue is especially preached. The walks in the woods are many and very beautiful, and to my mind very cleverly graduated, with plenty of seats at short intervals.

To the healthy and strong man such a life seems no doubt terribly monotonous, but I do not believe the invalid finds it so. The day passes wonderfully quickly. He is sure to find genial and kind companions; the floating population of such a place is always a source of interest, and the feeling that he is himself helping forward his betterment is an important factor in his contentment. To me the brightness of a large majority of the patients was a grand testimonial for the treatment, and the hum of conversation at meal times an ever-striking contrast to the semi-silence of many hotel dining-rooms. The different nationalities to be met with in an institution of this size is of special interest, and the learning of a foreign language becomes a pleasant pastime for many.

Of Dr. Meissen, what can I say that has not already been said? A pupil of Dr. Brehmer, an assistant of Dr. Dettweiler, he has been all his professional life a student of consumption of the most scientific treatment, and one cannot help being struck with his learning, his practical experience, his sound common sense, and his utter hatred of anything appertaining to quackery. His kind and tender heart is well known and appreciated by all his patients, and if he has a fault it is that perhaps he takes a rather too pessimistic view of his patients' condition. I have had frequent conversations with him, and I have learnt to value his knowledge and to admire the honesty of his opinion. Both Dr. Meissen and Dr. Schroeder speak English, and when I left Dr. Nagelbach was struggling bravely with our language.

SUGGESTIONS.

Two criticisms on this splendid sanatorium I am bound to make, and I feel quite justified in doing this, as I have already stated my views to Dr. Meissen:

First, I strongly advise the appointment of a lady superintendent over all the female servants, having under her trained hospital nurses (one to each storey would suffice), and I think she should be able to speak German, French, and English. To those patients confined to their rooms, and especially to those who are alone at Hohenhonnef, such a person would, I know, be the greatest comfort, and I sincerely trust that the management will do their utmost at an early period to make such appointment.

Secondly: While admitting Dr. Meissen's contention that his patients come to Hohenhonnef with the one great idea of doing all in their power to get well, and therefore should not require constant supervision, I am sure that a little more of this would be beneficial, if only from a sentimental point of view. The work at the sanatorium is very heavy, as so many patients come there who have for weeks to keep their rooms, but there can be no reason why one of the medical staff should not make a point of visiting all the Liegehallen once a day, and so keep in touch, as it were, with each individual patient. I know that anyone can see the doctors any day if they wish, but I am certain that a daily visit, a shake of the hand and a word of encouragement or of advice would be much appreciated by many of the patients.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.—The African Sectional Committee of the Manchester Chamber of Commerce, recognising that the study of tropical diseases ought to be of practical interest to merchants having business relations with tropical countries, have adopted a resolution requesting the Board of Directors to draw the attention of the medical authorities of the Owens College and of the Royal Infirmary to the advisability of forming a Manchester committee to co-operate with the Liverpool committee in the establishment and support of the Liverpool School for the Study of Tropical Diseases. The Board agreed that the proposed action should be taken.

SIR JOHN BURDON SANDERSON AND SIR MICHAEL FOSTER.

COMPLIMENTARY DINNER BY THE PHYSIOLOGICAL SOCIETY.

ON July 20th Professor Sir John Burdon Sanderson, Bart., and Professor Sir Michael Foster, K.C.B., were entertained at dinner at the Star and Garter Hotel, Richmond, by the members of the Physiological Society. The chair was taken by Professor SCHÄFER, and among those present were the President of the Royal College of Physicians of London (Dr. W. S. Church), Sir Samuel Wilks, Professor Clifford Allbutt, Dr. Alex Hill, Dr. Bastian, Dr. Pavy, Mr. Langley, Dr. W. H. Gaskell, Dr. W. M. Ord, and Professor Hamilton, of Aberdeen.

The occasion is hardly one which calls for a formal report of the speeches delivered; the proceedings were throughout of an intimate and cordial nature, and testified to the affection and respect with which both the new baronet and the new knight are regarded by their brother physiologists.

After the toast of "The Queen" had been duly honoured, Professor SCHÄFER gave the toast of the evening, "Congratulations to Sir John Burdon Sanderson and Sir Michael Foster. Floreat Physiologia." He commenced by reading a number of telegrams and letters of regret, among others one from Lord Lister, who stated that he was only prevented from presiding owing to the fact that he had not yet completely recovered from a recent indisposition. Professor McKendrick (Glasgow) wrote a most sympathetic letter referring to the guests of the evening, in the course of which he said: "We know that both have largely contributed to scientific progress, more especially in our own science, and it is therefore fitting that physiologists should assemble to do them honour and to offer their congratulations. Physiology in this country has during the last twenty-five years advanced to her proper place among the sister sciences, mainly owing to the example and the labours of these two men. They have each shown us an example of courage in times of distress when the enemy seemed likely to overwhelm the small band of physiologists; and they have each become the founders of a school of younger physiologists, whom they have guided by wise counsel and stimulated by their own devotion to science. Many of us have had experience of their kindness and sympathy, and we have had words of encouragement that have helped us in the struggle in which we are all more or less engaged. I wish I were with you to join in the acclamations with which you will greet them, when you pledge them in a bumper, long life, happiness, and continued usefulness in the cause of physiology, with three times three!" Professor Schäfer said that he possessed one qualification to preside on that occasion, and that was that he had known both of their guests intimately and well both as men and as physiologists and teachers from the early days of his student career. He referred to the imperfect means for physiological teaching which existed even in University College when he entered, and recalled that Michael Foster at that time, as Professor of Practical Physiology—a most appropriate title—gave the only course which could be at all described as practical. He recalled too how he first met Burdon Sanderson when he went with a brief note of introduction to a small house in a small street off Tottenham Court Road to receive a cordial welcome and the warmest encouragement. Indeed, it might be said of their two guests that they, as leaders of physiology in this country, presented a contrast to the system which prevailed, or had prevailed, in Germany. In Germany the professor directed everything, and the man who worked in his laboratory was his pupil who carried out his instructions, whereas their two guests had established in this country a system under which the worker in the laboratory was recognised as a co-worker, his independence and originality stimulated, the professor co-operating and advising rather than giving instructions. In consequence, both Sanderson and Foster had surrounded themselves with a set of men, who from pupils had become co-workers and fellow teachers. On looking round the audience which he was addressing he felt that it was unnecessary to give any enumeration of the scientific work of

their guests, because it might truly be said of them *si monumentum requiris circumspice*. The toast was drunk with much enthusiasm.

Sir JOHN BURDON SANDERSON, who was loudly cheered when he rose to reply, said that he was deeply touched by the compliments which had been paid to him, and by the manner in which the toast had been received. He was compelled to confess that the honour conferred upon him by the Queen had been the source of much gratification. When he received Lord Salisbury's letter making the announcement, he received an instantaneous stimulus, and subsequently a prolonged tetanisation by telegrams, continued by many letters expressing most cordial sentiments. The gratification which he experienced was perhaps not diminished by the knowledge that the honour conferred was not satisfactory to some persons by whom he had been for many years attacked because he was a physiologist, and because he defended the right of physiologists to experiment. Looking back on the progress of physiology in this country during the last half a century it might be divided into two periods. The first period extended from about 1850 to 1870. It was a period when Helmholtz, Ludwig, and Donders were calling into existence the modern science of physiology. During this period progress was rapid, perhaps more rapid than at any other period of the century, but in that progress this country took little or no part. An examination of the *Philosophical Transactions* showed that during that period only some eight persons contributed papers on experimental physiology and experimental pathology. Of these eight persons three or four still survived, among them Lord Lister. A new period began in 1870. Professor Schäfer had referred to his laboratory in the stable in Howland Street, where much work was done, and where he had the co-operation of Brunton and of Ferrier. Then came the foundation of the Brown Institute, which had been a kind of refuge and home for physiologists and pathologists. Then came the establishment in this country of Dr. Klein, who became the teacher in histology to all the younger men; then came the migration of Michael Foster to Cambridge, where he collected around him men who had made the school of Cambridge what it was, and who had also sent out teachers and investigators to other centres and to other countries. The publication of the *Handbook of Physiology* was followed by a storm in which he and those who had contributed to the volume were savagely attacked. Out of that storm had arisen the Physiological Society. At first, it had been a social rather than a scientific body, but its members had from the beginning taken to heart the advice which Harvey gave to the College of Physicians—to search out the secrets of Nature. Gradually the amount of work brought before the Society had changed the character of its meetings, in which the scientific was now more prominent than the social side. He trusted that it would long continue to bring together British physiologists, to place them in relation with physiologists abroad, and to consolidate and encourage genuine work in science.

Sir MICHAEL FOSTER, who was also most cordially received, said that the honour which had been paid him presented itself to him from two points of view, the lesser and personal point of view and the general or physiological point of view. Of the lesser and personal point of view he would say that he wished still to be known to them all as Michael Foster without the handle, and that the handle might be looked upon by his friends as affording something which might more easily be taken hold of. From the general point of view, he admitted that he had been greatly gratified by the honour. Physiologists had been under a cloud, but "when men shall revile you and persecute you, and shall say all manner of evil against you falsely," then the accused was not in so bad a position. No man had ever been more hotly abused than himself, except Burdon Sanderson. Yet the two chief sinners had been chosen for honour, and this had shown that the English nation understood that the future of the nation and the world depended upon the free development of all science, and not least the science of living things. He was proud to think also that both he and Sir John Burdon Sanderson belonged to the medical profession, and that it had also received honour in the honour given to physiology. He felt that an honour's crown of honour was the approbation of one's peers.

CONTRACT MEDICAL PRACTICE.

PORTSMOUTH MEDICAL UNION.

THE annual meeting of the Portsmouth Medical Union was held on June 29th. The report stated that a difference had arisen with one of the friendly societies as to the rates to be paid for infants when admitted members of the club. A medical practitioner in the borough was found willing, having resigned his membership, to take the club below the union rates. After his election a general meeting of all the members of the Union decided that they could not in future have any professional relations with him. Owing to the sudden death of this gentleman about six months after his election a vacancy again occurred. The friendly society this time sought to appoint three officers, as was formerly the case, instead of one. Three members of the Medical Union were elected at the union rates.

A misunderstanding having occurred between some members of the friendly society and one of the newly-elected medical officers as to the exact terms proposed by the Union, the friendly society sent a deputation to confer with the Committee of the Medical Union. After a lengthy discussion satisfactory terms were arranged. Canvassing, especially in connection with medical aid societies, has also occupied a good deal of attention. An affidavit in proof of this house-to-house touting has been sworn and sent to the proper authorities.

The formation of women's lodges in connection with friendly societies has again come under consideration, and the Committee have strongly advised practitioners not to become medical officers to these clubs.

It was reported that some practitioners were using bottles and labels with their names and addresses printed thereon. All except one gentleman have given a guarantee that this objectionable practice should cease.

Certain testimonials given by some local practitioners with their names, qualifications, and addresses in full were at once withdrawn from circulation as soon as the matter was brought to the notice of the gentlemen concerned.

The Watch Committee have decided to pay the fees recommended by the Union.

The doctors still decline to grant School Board certificates unless paid for by that authority. The Chairman has promised to bring the matter of payment for medical certificates before the School Board.

During the year three members resigned (one has since died); five new members have joined. Nearly every practitioner in the borough belongs to the Union. The finances are satisfactory, and show a good balance. At this meeting the new officers for the present year were elected.

THE UNPROFITABLE NATURE OF CLUB PRACTICES.

CLINICAL writes: There is a story current of a clergyman who sent to a local horsedealer particulars of the sort of animal he wanted, and the price he was prepared to pay. The reply was as follows:

"Rev. Sir,—You wants a £50 horse for £30. So do I: and I hopes you may get one, and me another.—Yours truly, A. B."

Now, Sir, what club patients want is the very best advice and attendance for half the price at which it can possibly be procured. What club surgeons want is the rank, position, and pay of the highest kind of practitioners, while they are working under conditions which they know themselves to be unworthy and unremunerative. Unhappily, both patients and surgeons are like the horsedealer's clerical customer: they want what cannot be given. Both have made impossible bargains, and neither can be satisfied. Long experience as a clinical assistant has led me to think that the clubs run at ridiculously low rates have been great feeders of our swollen out-patient departments, and if their officers could hear what patients said of their surgeons in out-patient rooms, I do not think club managers and committees would feel much satisfaction in the system they are engaged in trying to work.

The whole thing is unbusiness-like to the last degree. It is an attempt to combine business with charity. The result is neither one thing nor the other, for from the product both have disappeared. My own opinion has long been that the working classes are simply wasting the money they put into clubs, and that most surgeons gain from them nothing but experience, which is valuable only if they have many private patients.

Common sense on the part of the patients, and common action on the part of the surgeons, can alone cure the disease.

1. Sooner or later the former must realise that they are not getting value for their money, and that they must halve the work and double the pay before they can expect a good article for their money; and this they will do when they find that an overworked and underpaid surgeon cannot give advice that is worth even the paltry sums they pay. A bad article is never cheap, however low priced it may be.

2. How long it will be before club surgeons honestly balance up their accounts and charge to expenses everything that would so be charged by a commercial firm I do not know, but I feel sure that if they did they would be so surprised at the balance of profit that they would relinquish the business when once they realised that it was never likely to improve. Sooner or later every unprofitable business is abandoned, for its capital must in time vanish.

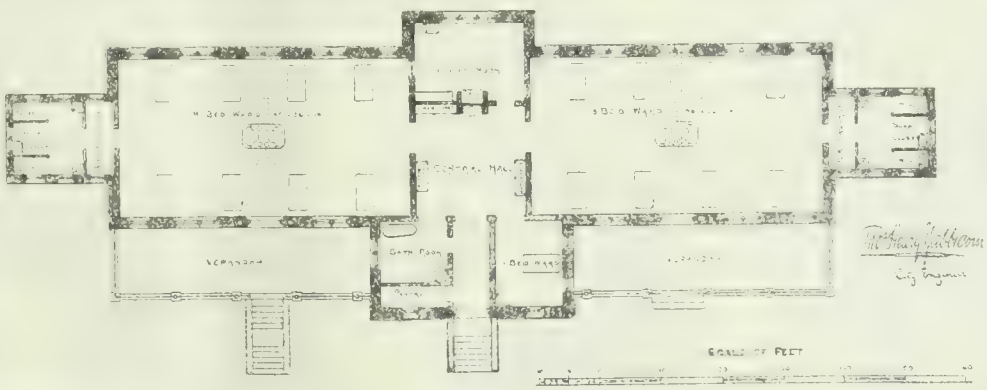
THE NEW INFECTIOUS HOSPITAL OF THE BRISTOL CORPORATION.

THE formal opening of the new Corporation hospital at Ham Green for infectious diseases was performed by the Lord Mayor on July 12th. His lordship was received by the Health Committee at the entrance to the administration block; and, after Mr. Yabbicom, the city engineer, and Dr. D. S. Davies, the medical officer of health, had shortly described the work done, the Lord Mayor proceeded to one of the pavilions, and unlocked the door with a gold presentation key. After the inspection of the pavilion, the isolation laundry block, and administration blocks, the Lord Mayor in a few words expressed his admiration of the excellence of the buildings, and the advantageous position the city was now placed in for the treatment of infectious diseases. A large number of the members of the Corporation with their ladies were present, and the beautiful grounds, magnificent trees, and the splendid weather all combined, with the light refreshments provided, to make the afternoon a most enjoyable one.



Ward Pavilion.

The Ham Green Estate, which was formerly in possession of Mr. W. H. Miles, consists of 99 acres, and was bought by Sir George Edwards for £8,695 in 1893, and resold by him to the Corporation in 1894 for the same sum. At present 38 acres are devoted to hospital purposes. The estate is situated on the Somersetshire side of the Avon, about five miles from the centre of the city, and can be approached by road or by river. The whole of the plans and construction have been carried out by Mr. Yabbicom and Dr. Davies, who made themselves acquainted with similar buildings in other towns, and the result has been that the present structure is fully up to the most modern ideas of what hospitals should be, besides being well built and not unhandsome in appearance.



Ground Plan.

On entering the premises there is seen a porter's lodge near the gate and the laundry block. This latter, in addition to containing all the laundry appliances, has dynamo and battery rooms, *post-mortem* room, mortuary and disinfecting room, and a boiler house. The laundry appliances, consisting of washing machines, boiling tanks, rinsing tubs, and hydro-extractor were supplied by Williamson and Co., Hackney. Provision is made for removing the steam by an extracting fan. There is also a finishing room and despatching room. The dynamo room, containing the necessary plant for supplying the whole of the hospital with electric light, has two steam dynamos, and the battery room 54 D 8 accumulator cell batteries. The mortuary has two slabs, and adjoining is a small inspection room for friends to view bodies without fear of infection; the *post-mortem* room has the usual appliances. In the disinfecting department is a Washington-Lyons steam disinfector and an incinerator. In the administration block are the rooms for the resident surgeon, matron, nurses, and servants, with a dispensary, kitchens, sculleries, etc.

The ward pavilions are four in number, and there is also an isolation block for doubtful cases. The pavilions are placed 60 feet apart, and each contains two wards 48 feet long, 26 feet wide, and 14 feet in height, and have 8 beds in each ward, as well as a single ward bed, bath room, nurses' room with small range and the necessary offices. These latter are placed at each end, and are disconnected from the ward by a ventilated passage. On the west side of each pavilion is a glass-covered verandah 10 feet wide, so arranged that the beds can be wheeled out directly on to it. The internal walls and ceilings are plastered with Keen's cement and painted green with cream filling. The floors are polished pitch pine laid in mastic on 6 inches of concrete. All the corners and angles are rounded off, and the doors made with flush panels. Ventilators are placed under each bed, and the windows made to admit air on the Hinches-Bird principle. Warming is done by Shorland's ventilating double-fronted Manchester grate, the flues passing under the floor. The central hall has a ventilating turret fitted with louvred glass and sidelights. In this part is placed a hot-water circulating boiler for supplying hot water in the wards and lavatories. The drains are constructed of glazed tiles ventilated throughout, and each block is disconnected from the main drain. Inspection holes

are placed at each bend, and manholes for each ward. At the head of each block a Doulton's automatic flushing tank is constructed to discharge 200 gallons periodically. The offices are lined with glazed bricks, and have a concrete floor.

The isolation block contains four wards arranged in pairs, one pair with the nurses' room facing east, the other west. Each patient is allowed 2,000 cubic feet of air. The water supply is from the Portishead Water Company reservoir, and the appliances in case of fire are placed in every pavilion, the isolation block on each floor of the administration block, in the kitchen, and certain other places on the grounds.

The drainage system is double, storm water being kept apart from sewage, the former being allowed to run direct into the Avon. The sewage from the four pavilions and isolation block is received into the low level sewer, while the high level sewer takes that of the administration, laundry, lodge, and stables. The sewage, after passing through a gauging chamber, then a screening chamber to a mixing chamber, where the precipitant is added, flows thence into one of two precipitation tanks of Dortmund type of 1,750 gallons capacity. From this the sludge is removed by a chain pipe to the sludge pits. The sewage passes to the filter beds 8 ft. by 6 ft., and finally into the river. The above brief description of the main points in the construction of the new hospital will show how well equipped Bristol is.

On the day following the opening by the Lord Mayor a large number of the medical men of Bristol visited by invitation the new buildings, and after their tour round heartily congratulated Mr. Yabbicom, Dr. Davies, and Mr. J. Hancocke Wathen, the latter of whom acted as chairman of the hospital subcommittee of the Health Committee, on the completeness of the hospital in every detail from a builder's, sanitarian's, and medical man's point of view.

THE NEW VACCINATION ACT IN OPERATION.

FEES TO MEDICAL WITNESSES.

MR. A. H. MARTIN, public vaccinator, Evesham Union, writes: At the county sessions held here on July 17th the first summons for non-compliance with the Vaccination Act of last year came on for hearing. The vaccination officer subpœnaed me to prove that I had given the customary twenty-four hours' notice to call and vaccinate with glycerinated calf lymph, and the Bench awarded me 10s. 6d. for my evidence. At the borough sessions held on July 18th four persons were summoned for a similar offence, and I was allowed a fee of £1 1s. for my evidence. In three of the cases I was not called, as the defendants admitted that I had sent the customary notices in accordance with the Act. Although there are many antivaccinators in this neighbourhood, there has been a great increase in the number vaccinated during the last half year.

LITERARY NOTES.

MEDICAL matters have a place in each of the great quarterlies this month. The *Edinburgh Review* contains a sensible and timely article on the Ethics of Vivisection; and the *Quarterly Review* has an interesting contribution on Climate and Colonisation, which, we understand, is from the pen of Dr. L. W. Sambon.

Professor J. Pagel, who is one of the foremost living authorities on the history and literature of medicine, has undertaken to edit a Biographical Lexicon of Eminent Medical Men of the Nineteenth Century, which will be published by Urban and Schwarzenberg of Berlin and Vienna. The work is intended to be a supplement to the *Biographische Lexikon der hervorragenden Aerzte aller Zeiten und Völker* of Hirsch and Gurlt, which was completed in 1888.

Dr. Ferdinand Kemsies, the German headmaster whose observations on the fatigue produced in school children by lessons in different subjects, recently founded a periodical the title of which—*Zeitschrift für pädagogische Psychologie*—sufficiently indicates its scope and purpose. It is published by Hermann Walther of Berlin. The fourth number, which appeared in this present month of July, contains a report of the meeting of the Psychological Association held in Berlin in May, which was attended by a large number of schoolmasters and by not a few representatives of the medical profession, among whom were Professor Eulenburg and Dr. Theodor Flatau. The question of educational over-pressure was fully discussed from various points of view.

The *Young Woman* for August contains an article on Women as Doctors, in which the curiously inaccurate statement is made that "no London degrees of full medical qualification are at present conferred on women." The fact that in the pass lists of the medical examinations of the University of London issued this week there are no fewer than nineteen names of women in a total of a hundred and thirty-one shows that at least one London degree of exceptionally "full medical qualification" is conferred on women. Another statement which is not quite correct is that "the first lady doctor in the world.....was an American woman, Miss Elizabeth Blackwell." Miss Blackwell's claim might, we think, be successfully disputed by Agnodice, an Athenian lady who practised medicine some three centuries before Christ. It is recorded that in order to get opportunities of learning the art of healing, and later, in order to gain the confidence of sufferers—though, be it observed, she confined her practice to her own sex—she was driven to clothe herself as a man. Miss Blackwell and the other pioneers in the movement in our own day had many difficulties to overcome, but they were not driven to such extreme measures as Agnodice. Again, many female doctors were trained at the famous old medical university of Salerno; the prescriptions of the "mulieres Salernitanæ" are often quoted by mediæval writers. Several of them occupied chairs in the school. The most famous of these female professors was Trotula dē Ruggiero, who in the eleventh century had a European reputation. In the fourteenth century Dorothea Bocchi was one of the professors of the medical faculty at Bologna, and at a later date medical chairs in the same university were occupied by Anna Mangolini and Maria delle Donne. The former was professor of anatomy, the latter of midwifery. The appointment of Maria delle Donne bears date so comparatively recently as 1799.

THE PLAGUE.

ALEXANDRIA.

No new cases of plague have occurred since July 19th; the total, since the commencement of the outbreak, is 74. Of this number 32 have proved fatal, 33 have recovered, and some 9 persons only remain under treatment. It is to be hoped that Alexandria, like Calcutta, will prove that either the soil or the environment of the city is inimical to a virulent outbreak of plague, and that it is not merely the heat of summer which is postponing an epidemic. All confidence, however, may be placed in the administration of the sanitary authorities who have charge of the health of Egypt.

INDIA.

The only unfavourable report from India is from the city and cantonments of Poona. On July 23rd, according to a Reuter's telegram, 110 cases and 82 deaths occurred. There is a general exodus of the inhabitants, and seeing that Poona is situated on the main line of the railway, and the centre of a great district the news is unwelcome and alarming. The date of the present recrudescence of plague in Poona is rather against the doctrine that the heat of summer is inimical to the presence of plague. Poona is situated somewhat to the south of Bombay, and although the city occupies high ground the heat is extreme.

HONG KONG.

During the week ending July 24th, 30 cases of plague occurred in the island and 32 deaths. This is a great drop in the numbers, as it is only a week or two ago since we recorded over 100 cases per week. A sure sign that plague is declining is furnished by the fact that the number of deaths exceed the fresh cases.

MAURITIUS.

The Colonial Office has received telegraphic intelligence that during the week ending July 20th there occurred 36 cases and 29 deaths from plague in the island of Mauritius.

RÉUNION.

Plague is officially reported by the French authorities as existing in the island of Réunion (Bourbon). The island is adjacent to Mauritius, but it must be remembered that Madagascar is also affected by plague. As yet only 2 deaths are reported, and the French authorities state that an adequate supply of plague serum—Yersin's in all probability—is to be had in the Colony.

GERMAN EAST AFRICA.

The German Imperial Board of Health announce that in the districts around Bukoba and Kitengule plague is endemic. In Bukoba the Sultan declares that 467 deaths from plague occurred during the past year out of a population of 715. In the Kitengule district 60 persons died of plague during the last four months of 1898

SPAIN.

Considerable anxiety and alarm have been aroused in the city of Oporto by the fact that in the beginning of July 9 Spanish sailors were landed in the port and conveyed to hospital, where 7 died. According to newspaper accounts many doctors pronounce the disease to be bubonic plague, but the Spanish authorities have requested the local newspapers to refrain from comment in the matter.

LEPROSY IN CUBA.—Energetic measures are being taken to segregate all lepers in Cuba and Porto Rico. The San Lazaro Hospital in Havana now contains 370 cases of leprosy, although four months ago there were only 80.

TO ILLUSTRATE THE ARTICLE ON THE PEACE CONFERENCE AND THE DUM-DUM BULLET.



Fig. 4.—Exit wounds (arm).



Fig. 5.—Skiagraphs of the limbs shown in Fig. 4.

TO ILLUSTRATE THE ARTICLE ON THE PEACE CONFERENCE AND THE DUM-DUM BULLET.



Fig. 6.—Fragments of bone from injury (see Fig. 4) produced by Mark IV (Woolwich) bullet; the larger, attached, and the smaller, completely detached, fragments are collected separately.



Fig. 9.—Cast of bullet tracks (seen from below).

TO ILLUSTRATE THE ARTICLE ON THE PEACE CONFERENCE AND THE DUM-DUM BULLET.



Fig. 7.—Fragments of bone from injury (see Fig. 4) produced by Dum-dum bullet; the larger, attached, and the smaller, completely detached, fragments are collected separately.



Fig. 10.—Casts of bullet tracks (seen from the side).

TO ILLUSTRATE THE ARTICLE ON THE PEACE CONFERENCE AND THE DUM-DUM BULLET.



Fig. 8.—Fragments of bone from injury (see Fig. 4) produced by Mauser (game) bullet; the larger, attached, and the smaller, completely detached, fragments are collected separately.



Fig 9.—Wounds produced by the Mark IV and Lee-Enfield (fully-mantled) bullets, showing differences due to the parts first struck.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

SUBSCRIPTIONS to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, JULY 29TH, 1899.

STATISTICAL ERRORS AS TO CANCER.

THIS subject has repeatedly been discussed in our columns, and the more important errors arising from the incautious use of the official statistics have been at various times exposed. It is refreshing to see the same subject approached from an American standpoint, as it is in an article by Dr. E. Andrews in a recent number of the *Journal of the American Medical Association*. He commences with the incontrovertible statement that the correct handling of vital statistics is a very difficult art, and adds that reputable authors on both sides of the ocean "are making mathematic mistakes." He adds with admirable candour: "I make this statement with regret and some shame, for I have myself committed more errors than I like to remember, and I sympathise with others who stumble into similar statistic pitfalls."

Dr. Andrews next proceeds, with great cogency, to expose the absurdity of concluding, on the strength of such imperfect statistics as the United States possess, that cancer is really increasing. In the greater part of the States death statistics are only obtainable in conjunction with the decennial information as to population, and Dr. Billings has stated that "the enumerators' returns for the whole country were in 1880 deficient about 30 per cent. in the number of deaths." Yet these self-condemned records have been appealed to with the utmost confidence to prove the supposed increase of cancer. It is clear that they cannot be trusted for this purpose. There remains the method of stating the proportion of deaths from cancer to deaths from all causes; and in cities like Chicago, with a complete and accurate record of deaths, this can be done. But, as Dr. Andrews clearly shows, it does not necessarily follow that when the ratio of cancer deaths to deaths from all causes increases, cancer itself increases, even though it be assumed that deaths from cancer are equally accurately certified throughout the period under observation. Thus, if in 1860, 1 death from cancer occurred to 100 deaths from all causes, and in 1890 2 deaths from cancer to 100 deaths from all causes, we cannot conclude that cancer has doubled during the thirty years. The above two ratios may also be stated as 1 in 100 and 1 in 50—that is, instead of cancer having increased, deaths from all causes may have diminished; or it may be that there has been a smaller increase of cancer than the figures at first suggest, along with some decrease in deaths from all causes.

Up to this point we can commend the lucidity with which Dr. Andrews states his argument; but at the next stage we must quote against him the words which he very properly and appositely employs in exposing the above error: "It is mortifying to find able men snared and tripped up by a trifling problem in arithmetic." Dr. Andrews and the statisticians of the Chicago Department of Health evidently think—and erroneously so—that the mean age of the persons dying in Chicago is a trustworthy indication of the duration of life in that city; and as the mean age at death has increased from 15 years, 2 months, 10 days in 1872, to 29 years, 4 months, 16 days in 1898, we are asked by Dr. Andrews to notice that "the diminished mortality shown by the Department of Health in the doubled length of life is not very far from equal to the alleged increase of cancer, and to that extent tends to show that cancer has not itself materially increased." The fallacy of accepting the mean age at death as a test of duration of life has been repeatedly exposed in textbooks on hygiene and vital statistics; and it cannot now be rehabilitated for the purpose of showing that cancer mortality has not increased. The above is simply a variant of the fallacy involved in not carefully distinguishing between the death-rate from cancer per 1,000 living at all ages, and the death-rate from cancer at a particular age-group per 1,000 living at that particular age-group. Thus, Dr. Vivian Poore stated in a discussion on this subject:[1] "The cause of the increase of cancer seems to me to arise from the fact that there is a great saving of life in the early periods of life and more people live to what one may call the cancerous age." Dr. Woods Hutchinson, in an article in the *Contemporary Review* for July of this year, expresses the same erroneous idea in the following words: "To use a Hibernicism, cancer is increasing because more people are living long enough to die of it. . . . . Cancer is the price paid for longer life."

The error contained in the two above statements and in Dr. Andrews's contention, which is but a slight variant from them, was clearly exposed in an article by Dr. Newsholme in the BRITISH MEDICAL JOURNAL, 1898, vol. i, p. 74. The official statistics quoted in that article demonstrate that the larger number of survivors to higher ages at the present time, as compared with twenty or thirty years ago only account for a very minute proportion of the total increase in registered mortality from cancer. It is further pointed out that the necessity for introducing this element of error into the discussion may be entirely avoided by stating the registered mortality from cancer at different age-groups, 25-35, 35-45, and so on, per 1,000 of population living at each of these age-groups. When this is done there is seen to be still an enormous increase of registered mortality from cancer; and the only question in dispute is whether the whole of this registered increase is real—which nobody believes—or whether a part is real and the remainder is due to improved diagnosis, and still more improved certification of deaths; or whether the whole of the registered increase is not explicable on the basis of the

[1] *Proceedings of the Life Assurance Medical Officers' Association*, May, 1897.

improved diagnosis and certification of deaths which are known to have occurred.

It would carry us too far afield to discuss these alternatives. We must content ourselves for the present with the above plea for correct arithmetical methods, in the absence of which valid conclusions cannot be expected to be attained.

AMENDMENTS IN THE OYSTERS BILL.

THE Bill for the protection of oysters against pollution by reason of sewage has been sent to a Committee of the House of Lords, and that Committee has been taking evidence on the various proposals which it embodies, the witnesses having been essentially representatives of the Local Government Board under whose auspices the Bill was prepared, and representatives of the oyster industry. As far as can be judged from the reports published of the proceedings before the Committee, the main point which came under discussion was the question whether the riparian boroughs and the county councils were to constitute the local authority who should primarily administer the Act, or whether this duty should be conferred on the Sea Fisheries Committees. The Local Government Board, as represented by Sir Richard Thorne, Mr. Provis (the Permanent Secretary), and Dr. Bulstrode, were clearly of opinion that the duty should devolve on authorities having public health duties rather than on committees appointed essentially for the protection of a trade or industry. Representatives of some of the Sea Fisheries Committees, on the other hand, claimed that their Committees should be appointed to this duty, and this notwithstanding the fact that it was pointed out that a large number of oyster fisheries are altogether outside the jurisdiction of the Fisheries Committees as now constituted under the Board of Trade.

The Bill amended as proposed by the Lords' Committee is now issued and it substitutes the sea fisheries districts committees for the riparian boroughs and county councils. The point may turn out to be one of vital importance. It may be that the districts of these Sea Fisheries Committees can be so modified that they shall include the many rivers and river mouths where oysters are laid, which are at present not within their jurisdiction. This is a point as to which the sanitary authorities who have petitioned for an Oysters Bill on public health grounds should take care to satisfy themselves, otherwise many oyster layings which need to be protected against sewage pollution will remain as uncontrolled as heretofore. But even if this be arranged, the fact will remain that a body which has heretofore worked in the interests of persons engaged in the oyster trade, and who have had direct association with the Board of Trade, the Government department which protects commercial interests, will have duties imposed upon it which, being in the interests of public health, will often be found to be altogether antagonistic to the immediate pecuniary interests of those who are engaged in the oyster trade. How far difficulties of this sort may be got rid of by means of amendments to the Bill as it now stands remains to be seen; but the alterations which the Lords' Committee have made in this respect call for the serious consideration of the sanitary authorities of the kingdom whose primary object is to prevent injury to public health, such as the recurrence of cholera and of typhoid fever, by reason of the conditions under which oysters have for so long a period been—and in many instances still are—cultivated and fattened for the market. It has been suggested that county councils are averse from undertaking the duty of acting as oyster authority for those parts of the coast line and for those river mouths which do not abut on municipal boroughs. If this be so, we are somewhat astonished, for county councils have hitherto had some reason to complain that the sanitary duties which it was originally intended to confer upon them have never been allotted to them. Hitherto they have welcomed rather than otherwise the delegation to them of functions which properly attach to a supervising sanitary authority such as county councils were intended to be.

In several other respects the Bill has undergone change as well as some improvement. Thus, the oyster authority which could, under the former Bill, only take water for analysis, is now to be allowed to take water, and any deposit therefrom, and also oysters for this purpose. This change is one which was obviously necessary if the purposes of the Bill were to be effected. The Bill as redrafted is now on sale, and it is to be hoped that it will be carefully studied by all who are interested in the subject before it again comes under discussion, whether in the House of Lords or in the Commons.

PROFESSOR KARL PEARSON ON GENETIC SELECTION.

IN the latest published of his Mathematical Contributions to the Theory of Evolution,[1] Professor Karl Pearson, ably assisted by Miss Alice Lee and Mr. Leslie Bramley-Moore, has undertaken the investigation of a subject which is of great interest to all students of evolution: namely, the question of the hereditary character of fertility. That fertility should be one of those qualities which are capable of transmission by inheritance seems antecedently probable, and the opinion that it is so has, no doubt, long been held by breeders of stock; but as Professor Pearson well remarks, "to demonstrate the existence of such a factor (of evolution) we require to show more than the plausibility of its effectiveness; we need that a numerical measure of the changes in the organic constants shall be obtained from actual statistical data. These data must be of sufficient extent to render the numerical determinations large as compared with their probable errors."

In pursuance of this object, Professor Pearson has occupied himself for some three years past in the collection and investigation of data as to fertility and fecundity in man and in thoroughbred horses. By the "fertility" of an individual, the author understands the total number of actual offspring: by "fecundity," the ratio of the total number of actual offspring to the total number which might have resulted under the circumstances. These definitions are, of course, theoretical; it is obvious that

[1] *Genetic (Reproductive) Selection: Inheritance of Fertility in Man, and of Fecundity in Thoroughbred Racehorses.* By Karl Pearson, F.R.S., Alice Lee, B.A., B.Sc., and Leslie Bramley-Moore. *Phil. Trans. Roy. Soc.* Series A, vol. 192, pp. 257-330. London: Published for the Royal Society by Dulau and Co. 1899. 3s. 6d.

there will exist individual and environmental conditions which must be allowed for before numerical measures can be applied in any special case.

The difficulties inseparable from any attempt at extracting definite results from the available data are naturally serious, and Professor Pearson has shown much ingenuity in so manipulating the great mass of material brought together by himself and his assistants as to reduce the sources of possible error to a minimum. It is satisfactory to find that from the elaborate computations founded on the facts observed, consisting of no fewer than 23,000 separate instances, the definite conclusions emerge that not only are both fertility and fecundity hereditarily transmissible, but also that they follow in all probability the same law of transmission that has been shown to hold good in the inheritance of other physical characters. Hence there may have been justice after all in the complaint of the legendary Irishman that "sterility was hereditary in his family," though the fact he intended to convey is no doubt capable of a less absurd mode of expression.

The principle thus established is of more importance to evolutionary theory than may appear at first sight. It is well known that many firm believers in the truth of evolution do not accept natural selection as an adequate explanation of the phenomena of organic development. Various attempts have been made, both in this country and abroad, to supplement or even to replace the supposed action of natural selection by the operation of other factors, such as the transmission of acquired characters, or the inherent tendency of organisms to vary in a definite direction. To many advocates of natural selection as a true cause, it has generally seemed that these alternative or supplementary hypotheses are vague assumptions, unsupported by sufficient evidence. At the same time it has always been recognised that amidst numerous phenomena of which natural selection supplies the only satisfactory explanation at present offered, there exist certain facts which it is at present difficult to bring under that head. Some of these cases of doubt will probably disappear in the light of further knowledge, but it is quite conceivable that there may be a residuum of problems which will need the introduction of a fresh set of considerations for their proper solution. Should this be so, the principle of genetic selection, or the inheritance of fertility, alone or in conjunction with others, may very possibly turn out to be the missing factor.

For the demonstration of its species-forming tendency we must be content to refer the reader to Professor Pearson himself, as space would fail us for a discussion of the subject in these columns. We may, however, point out that the objections brought against the conception of more or less mysterious "forces" and "laws of growth" which has found favour with many authorities, especially in Germany and America, do not apply in the present instance; since the tendency here referred to is, as the author puts it, "simply a part of the physical organisation of the individual." For the complete demonstration of the actual as well as the potential value of Professor Pearson's principle, it will be necessary to have clear evidence of the definite correlation of other physical characters with that of fertility. This, although probable, cannot be said to be established. But should it turn out to be true and demonstrable, the rest will follow: for a moment's consideration will show that fertility, being inheritable, will not only tend to its own increase, but will carry with it a corresponding increase of the correlated characters, until checked by the operation of natural or artificial selection. The interest in an evolutionary sense of the view thus briefly indicated can scarcely be denied.

Of other noteworthy matters incidentally dealt with by the author, we can do no more than glance at one—the quantitative proof of Darwin's conclusion that a character peculiar to one sex may be transmitted through the other. We regret that exigencies of space have prevented us from discussing the present treatise with the fulness it deserves. It certainly takes rank as one of the most important of Professor Pearson's studies in evolutionary theory.

THE RISK OF THE IMPORTATION OF PLAGUE.

In the *Times* of July 24th Mr. Edwin Freshfield points out the danger of plague gaining a footing in Europe. Mr. Freshfield contends that while, judging from past experience, there is little to fear of Northern Europe being invaded by plague from Arabia or Egypt—the southern route—yet there is great danger of infection by Persia, Asia Minor, and Turkey—the northern route. Mr. Freshfield dates his letter from Smyrna, and states that Constantinople was usually attacked by way of Trebizond through Persia. He further remarks that previous experience in Smyrna has been that when plague reached the city from Constantinople it was sporadic, but when it came from Alexandria it became epidemic. He thinks that, judging from the time of year, the plague which has now travelled to Alexandria may probably become next year epidemic there, as it has become in Hong Kong, Bombay, and Karachi; but that it will not spread over the basin of the Mediterranean for another year or two, so that for the moment there is no immediate danger. We may point out, however, that there is a direct trade in cotton between Alexandria and Manchester. Having regard to this, the Port Sanitary Authority of Manchester has approved of the distribution of a leaflet drawn up by Dr. J. H. Crocker, Port Medical Officer. The leaflet commences by pointing out that cases of plague have been occurring in Alexandria since May 4th. It is added that as the incubation stage of plague is five days, and that at the longest probably ten, and as a steamer takes a fortnight to reach Manchester from Alexandria, there is little fear of the disease being imported by any human being without it being recognised. Dr. Crocker then goes on to point out that there is an abundance of evidence to show that many varieties of animals may become infected with it, and that rats and mice are particularly susceptible. Instances in support of this assertion are quoted, and as a precautionary measure it is suggested that efforts should be made to exterminate as far as possible the rats in and about the various warehouses and buildings connected with the port of Manchester. The attention of shipowners is also directed to the possibility of infected rats being introduced from infected ports, and that steps should be taken to exterminate rats on board ships, particularly those trading between Manchester and Egypt and India. It appears that a few years ago a Manchester newspaper offered a prize for the most practical method of exterminating rats from warehouses, and it was awarded to a person who suggested the introduction of the mongoose. The animal, it is stated, has been tried in many warehouses in Manchester, and found most serviceable in exterminating rats. The Port Sanitary Authority ordered the leaflet to be distributed among owners and captains of vessels bound for the East, as well as to certain

officials of the Ship Canal. Mr. Freshfield, in the letter from which we have already quoted, points out that, with the exception of one outbreak at the end of the sixteenth century, plague has always reached England by the northern route, and not from Alexandria and the south. It is, however, not safe to place too much reliance upon the behaviour of plague at a time when communications were much less easy, speedy, and frequent than at the present moment.

THE COMPANIES AMENDMENT BILL.

AN article which appears in the last number of the *Pharmaceutical Journal* sounds rather a despairing note upon the subject of future pharmaceutical legislation. It appears that unanimity has not yet been attained. Many chemists are very reluctant to give up the so-called widows' clause, which permits a business to be carried on by the executors of a deceased chemist: that is to say, by unqualified masters. The abandonment of this clause must be a necessary antecedent to the imposition of further restrictions. Opinion seems to be becoming more favourable to the Lord Chancellor's proposition, namely, that a company might conduct the business so long as it employs qualified assistants, though it may be presumed that the chemist will as strenuously as ever contest the unjust assumption of title. The article goes so far as to say that, although there is ample opportunity for seeking amended legislation, "with many others disinclination to accept the other consequences of such an amendment has prevailed to such an extent as to prove an insuperable obstacle," and "the prospect of obtaining practically unanimous support from all registered persons seems to be at least as remote as that of securing the equally indispensable support from the Government." These remarks are obviously intended to have a wider application than to the pharmacy clause of the Companies Bill. Without straining their meaning, they may be fairly read as bearing upon this, and as marking a material change of front so far as practical action is concerned. The Companies Bill has passed the stage of committee in the House of Lords without amendment, and we may confidently look forward to its being introduced into the House of Commons at an early period of the next session. If the pharmaceutical chemists will let the medical clause alone—and the opinion of the *Pharmaceutical Journal* appears to be tending in that direction—then and only then can we cordially promise them all the support we are able to offer in enabling them to get passed such a pharmacy clause as shall be found acceptable. This is the position we have taken all along, and it is gratifying to see that some who were at first inclined to deny that any difficulties existed in their case from which the proposed medical legislation was free, have now modified their views upon this question.

PUBLIC HEALTH ADMINISTRATION IN LONDON.

LAST Tuesday the London County Council held its penultimate session before the long vacation. Its agenda paper of 80 pages covered a great variety of work, and the sitting was continued for nearly five hours. The Chairman (Lord Welby) gave the usual review of the work of the past year. He alluded to the need for more rapid progress in the housing of the poor, and urged the desirability for inquiry into the increase of lunacy. He commented with satisfaction upon the extinction of rabies in London, and upon the fact that among some 7,000 inquests, only 9 were last year held amid the desecrating surroundings of the publichouse. Important extensions of the tramway system, in which London is so far behind other large towns, were approved by the Council, many of the new routes being proposed with a view to relieve congestion of population, and to facilitate the residence of artisans in the periphery of the county at a distance from their work. A proposal to increase the salary of the coroner of the north-east district, Mr. Wynn Westcott, to £1,535 14s. 8d. was approved on a basis of £1 6s. 8d. per inquest plus £100 for travelling expenses. The chairman of the Public Health Committee was severely questioned as to the prosecution of Lord Radstock and others for the non-registration of their lodging-houses as "common lodging-houses." It appeared to be the opinion of the Council that such actions should not be brought without the full knowledge and approval of the Council. Mr. Leon, the chairman of the Committee, cited reports of inspectors on the condition of some of the Salvation Army shelters which indicated the need of stricter sanitary supervision. Some additional by-laws in regard to the drainage of buildings were approved and the City was informed that the Council had declined to specially exclude its area from the operation of such by-laws whose purview was determined by the Metropolis Management Act of 1855.

"FOOD POISONING" AT A SCHOOL TREAT.

WE are indebted to Dr. Charles H. Hartt, M.O.H. Greenwich, for the following special report on a remarkable outbreak of illness which occurred on the evening of July 22nd amongst the teachers and children of the Greenwich Ragged School Sunday School: "It appears that they were invited to hold their annual 'treat' in the grounds of the Knoll, Lewisham Hill, and about 100 children attended. At half-past 3 P.M. the children, in their usual health, left their head-quarters in Bridge Street in two large conveyances, and arrived at the Knoll about 4 P.M. There they were entertained to a meal consisting of currant and Madeira cake and milk, the former being obtained from a well-known confectioner in the town, and the latter from a highly respectable dairy. They also had a few sound cherries. Within half an hour a large number of the children and teachers were seized with pain in the stomach, accompanied with vomiting and diarrhœa. Medical aid was obtained, and they were despatched to their several homes. They rapidly became worse, and so alarmed were their parents that they took them to the Seamen's and Miller Hospitals, where over 60 cases were treated. Most of them were in a state of collapse, and had not energetic measures been adopted many must have died. After a time the cases rallied, and were sufficiently well to be sent home, and I am happy to say no death has been reported. I visited the Knoll, and took samples of milk, water, cake, etc., that remained. These samples I have forwarded to the analyst, Mr. Harland, for examination. I have also communicated with the Medical Officer to the Local Government Board and the Medical Officer to the London County Council, and the latter has consented to make the bacteriological examination. I am unable to throw any further light upon the subject at present." Mr. Harold H. Cotman, House-surgeon to the Dreadnought Hospital, has been good enough to inform us that he was called at 7.45 P.M. to see four of the children. They were very collapsed and cold with vomiting and diarrhœa, two of them being almost pulseless. An emetic of ipecacuanha wine was given to all and to those that were very collapsed strychnine hypodermically. Later on cases poured in, and the surgery floor was covered with blankets for them to lie on. The vomiting was of a very gushing pumping character, and seemed to come on without any warning. Many of the children seemed also to have lost complete control of the sphincters. The vomit was entirely fluid, containing no solid matter at all. In all forty-eight children and two adults were treated. All were more or less collapsed, but eight were really alarmingly so. They improved wonderfully under strychnine, and by 10.30 P.M. all had left the hospital.

THE HOT WEATHER AND DIARRHŒA.

THE warm weather which those of us not in populous cities pent have so much enjoyed during the last few weeks has been attended by the usual increase in the deaths from diarrhœa. Our respected contemporary, the *Spectator*, has been thrown into a kind of ecstasy by the brilliancy of the weather and the constancy of the westerly breezes, which it asserts have kept the sky blue and the nights cool. The personal sensations even of some of those who find in the perusal of the *Spectator* "a kind of religion," must have disposed them to doubt their oracle for once; and as a matter of fact there have been two nights during the last three weeks when the thermometer in London reached a level as high, or even a little higher, than on any night since Mr. Symons commenced his observations more than forty years ago. Moreover, the observations made at the Royal Observatory, Greenwich, under the superintendence of the Astronomer-Royal, prove that the temperature of the ground, the most certain evidence of the constancy of high temperature of the air, after creeping up from 52.20° F. at the beginning of June to 60.30° F. at the end of that month, rose rapidly in the two middle weeks of June to 64.09°. The diarrhœa mortality showed a sudden rise when the temperature of the earth at the depth of 3 feet rose above 61° F. With earth temperatures of 60.30° and 60.40° F., the deaths from diarrhœa in two successive weeks were in London 20 and 28, and in the thirty-three great towns 80 and 98. In the week ending July 15th, when the earth temperature reached 62.10° F., the deaths from diarrhœa rose to 75 in London and to 204 in the great towns. Last week, when the earth temperature rose to 64.09° F., the fatality of diarrhœa increased rapidly, the number of deaths in the great towns being 466, and in London alone 185. Of the 75 deaths in London during the week before last, 70 were those of children under 5 years of age, and, of the 185 last week, 176 were of children under that age. In order to see the full effect of the hot weather, there should be added to the deaths attributed to diarrhœa those of 57 children which were ascribed last week to gastro-enteritis. In spite of this great rise, however, the deaths from diarrhœa in London are still 47 below the corrected average for this week of the year.

RAILWAY SERVANTS' EYESIGHT.

IN answer to an inquiry as to whether the control of railway servants' eyesight comes within the scope of the investigation at present being conducted by the Royal Commission on Accidents to Railway Servants, the Honorary Secretary of the British Medical Association Committee has been officially informed that the "Commissioners have not lost sight of this important question, and have already taken it into consideration, but they do not at present propose taking any evidence on the subject."

"THE UNITED PRACTITIONERS."

THE medical profession has more friends than it wots of. A small and uninfluential meeting of dentists in Manchester, consisting mainly—perhaps entirely—of those who have come upon the *Dentists Register* without qualification in virtue of having been in practice prior to 1878, has drafted a truly wonderful "United Practitioners' Bill," which they have sent to each member of the Government and to certain members of Parliament, with the request that they will introduce it without delay. It contains 67 clauses, and a multitude of schedules. It would repeal all existing Medical and Dental Acts, and would abolish the General Medical Council, which the promoters are kind enough to say is now technically in liquidation, they having made some application to this effect. It contains 11 clauses devoted to prescribing the proper manner of administering anæsthetics. Whether from want of space or from want of knowledge, it refrains from laying down the proper treatment of disease or the manner of performing surgical operations. It defines certain things in regard to inventions, proprietary drugs, etc., which a registered practitioner may have in hand "without loss of caste," and amongst other quaint provisions lays down that a person rendering first aid in accidents, in confinements, etc., shall receive as of right half the fee charged by the medical attendant who takes up the case. It is difficult to suppose that the framers of this precious document are possessed even of that minimum of humour needed for the equipment of a practical joker, and we are further debarred from regarding it as a foolish jest by the fact that they have spent their money in printing and circulating it. The thing is too absurd upon the face of it to have any effect, although the ignorance of lay politicians upon medical matters, and the apathy which they display render it a matter for regret that they should be asked even to read the document, for some of them may take it more or less seriously, being unable to perceive its extreme crudity.

THE LATE SURGEON-GENERAL W. C. MACLEAN.

A HANDSOME tablet has been placed in the Chapel of the Royal Victoria Hospital, Netley, in commemoration of Surgeon-General Maclean, C.B., M.D., LL.D., Q.H.S. It bears the following inscription: "In memory of Surgeon-General William Campbell Maclean, C.B., M.D., LL.D., Q.H.S., Indian Medical Service, who occupied the chair of military medicine in the Army Medical School at Fort Pitt, Chatham, and Netley, from its foundation in 1860 until his retirement in 1885. He served with distinction in the China war of 1840-42, and organised the Hyderabad Medical School, the first institution of the kind in India. This tablet is erected by his colleagues and brother officers as a tribute to his sterling personal qualities, great intellectual gifts, and high professional attainments. Born November 29th, 1811; died November 10th, 1898."

CORPORATION METEOROLOGISTS.[1]

THE receipt of a report by Mr. Joseph Baxendell, meteorologist to the Southport Corporation, and of other similar reports, appears to show that a new profession has come into existence. Sometimes the duties are discharged by the medical officer of health or by his chief inspector, but in several towns gentlemen have been appointed with more or less respectable *honoraria*—they can scarcely be called salaries—to act as "borough meteorologists." To show what a footing this profession has established, we may mention, in no sort of order, some of the towns which possess such a functionary: Torquay, Southport, Eastbourne, Plymouth, Cheltenham, Margate, Bolton, Scarborough, Lowestoft. The appointment is a difficult one to fill, because an obvious, but unwritten, part of the duty of such an officer is to advocate the charms of his own town; one has only to read the reports of the meetings of the town councils and the discussions as to telegrams to London newspapers, etc., to read between the lines what the borough meteorologist is expected to do. We have at present no evidence that any one of these gentlemen has in the slightest degree yielded to the temptation to make things pleasant, but, knowing what has been done on behalf of some watering places in years long past, we shall watch the publications very closely. One local observer (not a borough meteorologist) was caught not long since, and his records have disappeared. The officials, their equipment and their publications are very unequal; perhaps the one before us is in all three respects the best. The observer is the son of one of Manchester's distinguished scientific men, and himself an

[1] Borough of Southport Meteorological Department. *Reports and Results of Observations for 1898.* By J. Baxendell, F.R.Met.Soc. Southport: R Johnson and Co. 1899. 4to.

experienced meteorologist. Southport seems to be possessed of a body called the Fernley Residuary Trustees, who find money for all necessary instruments. Southport has a nice park, and has the common sense to recognise that if it be worth while to retain the services of a borough meteorologist it is imperative that his instruments should be properly placed, and that they should not be crowded into a fenced-in enclosure, scarcely 6 feet in diameter, as at another Lancashire town which we could name. The publication is in every respect creditable to the borough and to the author, but we think that it would add to its interest if a map were inserted showing the positions of the various stations, and also if some engravings were given to illustrate the environment of all the instruments; they would be useful to other towns as lessons of how to do it.

PATHOLOGY IN THE CONGO STATE.

SOME time ago a sum of £2,000 was handed to General Donny by a donor who wishes to remain anonymous to be applied in furtherance of the study of "colonial pathology." A Committee appointed to consider the best manner of utilising the gift decided to employ the money in equipping a scientific mission to proceed to the Congo State and study the diseases of hot countries in that region. Dr. Van Campenhout, an army medical officer who had already been twice on duty in the Congo, and Dr. Reding were selected for the service. After long preparation they embarked on June 29th. The Congo State has established at Leopoldsville a physiological and bacteriological laboratory, in which the work will be carried out. The same Committee had previously offered two prizes, each of the value of £100, to be awarded (1) to anyone who shall considerably advance any knowledge of Laveran's hæmatozoon within and without the human body; and (2) to anyone who shall determine the real origin of hæmoglobinuric bilious fever. Essays in competition for these prizes should be sent to the Société d'Etudes Coloniales, 11, Rue Ravenstein, Brussels, before January 1st, 1901.

SIR JOSEPH FAYRER, BART., K.C.S.I.

UPON the recommendation of the Governor-General of India in Council, Her Majesty's Government has conferred upon Surgeon-General Sir J. Fayrer, Bart., M.D., K.C.S.I., Indian Medical Service, as a reward for distinguished and meritorious service, a good service pension of £100 per annum. With a view to make this mark of Her Majesty's approbation as public as possible, the Government of India has caused the nomination to appear in the *Gazette of India*, and has conveyed to Sir Joseph Fayrer the satisfaction with which the Government of India views Her Majesty's gracious recognition of his good services to the State.

LONDON OPERATING THEATRES.

IN an article on Preparing for the Knife in European Hospitals (*Medical Record*, July 15th), Dr. Preston Miller speaks very disparagingly of the operation-room in London hospitals. Germany is his ideal; French operating is less to his taste. He finds the room too cold in a Paris hospital, whilst the surgeons talk too much, smoke cigarettes, and perspire into the wound. In London, he writes, "operating rooms here are yet colder than at Paris, and some of them with open grates burning soft coal fill the operating room (*sic*) with suffocating smoke and no perceptible heat. Floors of wide boards and soft wood, with dirt-filled joints, and picture-frames everywhere on the walls containing biblical mottoes, are further adornments of some of the best-known operating rooms. On cool mornings it was interesting to watch steam rise from the hands of the operator as he turned from the washbowl, and the next moment the same emanation from his incision, and again from neoplasms as they were placed about in vessels . . . . Old operating tables are the rule; the Trendelenburg position is not believed in. Finger nails are worn long, and less pains taken to clean them than at Paris. The surgeon generally removes his coat, often his vest, and sometimes even his shirt before putting on his apron. But asepsis, as practised on the Continent, is practically disregarded in London." Possibly some of this censure is not entirely undeserved, especially as to the wide boards and the picture frames, though Dr. Miller seems to imply that a scriptural text is septic. We doubt very much the high septicity of an English gentleman's finger nails. Dr. Preston Miller, it is fair to add, wrote enthusiastically a year ago in the same periodical about the liberality of the British public towards the metropolitan hospitals. Other visitors to the United Kingdom have admitted that, particularly in certain specialities, British surgeons, seldom fall into the error, so flagrant elsewhere, of mistaking successful operating for good surgery.

THE NATURAL FLOW OF THE THAMES.

AT the last meeting of the London County Council the Water Committee presented the following figures in regard to the "natural flow" of the Thames in gallons during the months of May and June of this year:

	May.	June.
Average natural daily flow taken over a period of 16 years prior to 1899	926,100,000	682,800,000
Natural daily flow, 1898	957,700,000	549,000,000
Natural daily flow, 1899	666,600,000	368,700,000

These figures have falsified the anticipations of the companies and of the Royal Commissioners alike, and, as Lord Welby seriously urged, constitute a warning to those whose action has prevented the securing of Welsh areas with which to augment the not unlimited water supply of London.

INEBRIATE LEGISLATION IN NEW SOUTH WALES.

A BILL to provide for the care, control, and treatment of inebriates has recently been before the Legislature of New South Wales. The first clause would provide that an inebriate, or any person authorised by him when sober, the husband, wife, parent, brother, sister, son, daughter, or partner in business of an inebriate, or a sub-inspector of police on the request of a duly qualified medical practitioner in professional attendance on an inebriate, or of a relative, or of a justice of the peace, may make an application to a judge, master in lunacy, or a stipendiary or police magistrate, that the inebriate may be placed under control in a licensed institution for twelve months or less, or in the charge of some person nominated by the Court for a like period. The Court must not grant the application except on the certificate of a legally qualified medical practitioner, and after inspection of the inebriate. Discretion is left to the judge or magistrate to see the inebriate either in court or in chambers. Clause 3 gives a court of petty sessions power to order an inebriate "convicted for an offence of which drunkenness is a necessary ingredient" to be detained for a period of not less than six nor more than twelve months in a Government institution for the reception of such person. The period may be extended by a judge or master in lunacy for further periods not exceeding twelve months each. Other clauses provide that a judge or magistrate may make an order as to the property and treatment of an inebriate, that an inebriate who escapes may be arrested and returned to his former custody, that a person supplying an inebriate with an intoxicant shall be liable to a penalty not exceeding £10, and that no report of the proceedings in any inquiry under the Act should be published without permission of the

Court. The Chief Secretary of New South Wales, in forwarding a copy of the Bill, invited criticism, and we have the advantage of publishing the following observation by Sir Charles Cameron, M.P., whose authority to speak on the subject is well known: The Bill appears to me a very satisfactory measure, largely in advance of legislation in this country. The only criticisms which I think it necessary to make upon it refer to Clause 3: (1) According to that clause, "where an inebriate has thrice within the preceding twelve months been convicted of an offence of which drunkenness is a necessary ingredient," etc. I am not aware of any crime of which drunkenness is a "necessary ingredient." On the other hand, the Departmental Committee on Habitual Offenders (Scotland) of 1894, of which I was Chairman, and which went carefully into the question of the connection of drink and crime, found (see page 46 of Report) that, putting aside cases of drunk and incapable, over 80 per cent. of the adult offenders charged before police magistrates in Scotland with offences other than contraventions of local police regulations, were under the influence of drink at the time when the offences were committed. We found, further, that habitual drunkards are sent to gaol under constantly varying charges, the drunk and disorderly charge constantly merging into charges of assault, obscene language, indecency, petty theft, and, in the case of women, solicitation, etc. I would suggest, therefore, for the words referred to there should be substituted "convicted of offences committed while under the influence of drink, or to the commission of which habitual inebriety can be shown to have conduced." (2) The period of six months mentioned in Clause 3 as the minimum period of committal is too short to do much good, but its retention may possibly be prudent as a matter of policy.

THE COLONIAL NURSING ASSOCIATION.

THE annual meeting of this Association was held at Stafford House on July 25th. Lord Loch occupied the chair, and explained that although the Association had been established only three years and a-half, forty nurses had already been sent to different parts of the empire. Mr. Chamberlain, Secretary of State for the Colonies, in moving the adoption of the annual report, pointed out in eloquent terms the great benefit already conferred, and likely to accrue, by the development of the scheme. He said that the Colonial Office was willing to co-operate and in every way to support the work of the Association, and hoped "that every hospital in our colonies and dependencies which was either supported or assisted by Government funds should have one or more of these nurses attached to it." Proceeding to quote several testimonies he had received from various parts of the empire as to the benefits conferred upon the communities by the nurses sent out by the Association, Mr. Chamberlain said that if it was necessary to have trained nurses at home, "how much more was it desirable and essential in those tropical colonies where disease was more prevalent and more serious, and where hitherto our sick fellow-countrymen had been left almost entirely to the tender mercies of dirty, ignorant, and of course indifferent men. The field for the operations of the Association was a very large one. The harvest was ripe, and in this case the labourers were many, for it was, he thought, a testimony to the courage and devotion of British women that they found any number willing and eager to take the posts in climates which were reputed to be the most unhealthy, and the applications for such positions were as numerous as those in countries which were more favourably situated. All that was wanted was a very modest addition to the funds." In conclusion Mr. Chamberlain appealed on behalf of our brethren across the seas: "We owed it to them," he said, "and to ourselves to do all in our power to preserve them, and to see that when they were struck down, as unfortunately they often were, in the course of their duty, by sickness, at least they should not want the attention of skilful and kindly hands, and that sympathy, that womanly attention which would be found to be the best anodyne for their pain, and perhaps the most effective cure for their disease." Mr. Asquith, M.P., seconded the resolution, and whilst doing so expressed his hearty admiration of an enterprise so admirably conceived and so wisely conducted as that of the Colonial Nursing Association.

THE WEST RIDING MEDICAL CHARITABLE SOCIETY.

THE annual meeting of the Medical Charitable Society for the West Riding of the County of York was held at Huddersfield on July 20th, under the presidency of Dr. T. Kilner Clarke, and was very largely attended by members. Thirty-six applications for relief were considered; thirty-five were entertained; and grants ranging from £10 to £60 were made, amounting in all to £1,165. At the dinner after the business meeting great satisfaction was expressed at the prosperity of the Society and at the good work it was able to do. Since its institution seventy-one years ago the charity has distributed to distressed members, and to the widows and orphans of those who have died in indigent circumstances a sum of £33,175, and has thereby tended very greatly to lessen the amount of suffering which would otherwise have fallen upon the families of those of its members who, from one cause or another, had failed in their efforts to secure a competence for those dependent upon them, or had themselves fallen into poverty. The operations of the Society are confined to practitioners in the West Riding who have become members, either on a composition fee of £25 or by continuous subscription of one guinea a year for five years and upwards. It affords an opportunity to young members of the profession in the Riding to secure the assurance of help in case of urgent need, and gives those more successful and of more assured means a channel by which they may, with absolute certainty, devote a sum, which they never miss, to the relief of their less successful brethren. We called attention recently to the good work done by the Surrey Medical Benevolent Society and to its flourishing financial condition. Such charities are surely well worthy of imitation in every county.

THE WHIPPING POST AND THE PILLORY.

WE hear much of the brutalising effects of the lash, and one of the ablest judges on the Bench has lately condemned in strong terms its use as a means of punishment. Lord Brampton, who certainly cannot be accused of flabby sentimentalism, has also spoken against it. On the other hand, Mr. Justice Day has found it the most powerful deterrent for crimes of violence and assaults on women. In view of this difference of judicial opinion on the subject in this country, it is interesting to note that there appears to be a growing body of opinion among judges, lawyers, and the general public in America in favour of a revival of the whipping post. The subject was discussed by the New York Medico-Legal Society not long ago, and nearly all who took part in the debate were in favour of the lash for the punishment of certain offences. Judge Simeon E. Baldwin, of New Haven, expressed the opinion that flogging would often be a more appropriate punishment for minor offences than fine or imprisonment, and he argued that, accepting that the humanitarian position rests on the duty to educate the ignorant and reform the vicious, the whipping post is for many cases the best incentive to education and reform. Chief Justice Charles B. Lore, of the Supreme Court of Delaware, wrote that the efficacy of the whipping post lies in the public disgrace and ignominy attending it, adding that his State had always found this form of punishment the best preventive of crime. Mr. Frank

Moss had no doubt that whipping was the proper method of punishment for offences such as wife-beating and cruelty to children, in which manhood was degraded. Similar opinions were expressed by Mr. Clark Bell, the secretary of the Society, Judge C. W. Meade, of the Court of City Magistrates, Mr. John C. Shortall, President of the Humanitarian Society of Chicago, and others. Governor Roosevelt, of New York, and Judge Wilson, of Philadelphia, have delivered themselves to the same effect. Several leading newspapers in the United States are urging the revival of the whipping post. The Washington *Post* has for years persistently advocated this measure, insisting that in it will be found the only practicable solution of a certain class of criminal problems. The Philadelphia *Inquirer* and the Brooklyn *Eagle* take the same view, pointing to the example of Delaware which, owing to the deterrent effect of the whipping post is said to have fewer crimes and criminals than any other State in the Union. Quite recently the Connecticut State Legislature has been urged to re-establish the whipping post for the punishment of criminal assaults on women; it is certainly more humane and less degrading than lynching. In France a revival of the pillory has been proposed by Dr. Prosper Lemaistre. The growth of humanitarian sentiment in that country has abolished one punishment after another, till now practically nothing is left that acts as an effective deterrent. As Chief Justice Lore holds that the efficacy of the whipping post lies in the public ignominy attached to it, Dr. Lemaistre thinks that the pillory would be effective, although it causes no bodily pain, from its being "the most poignant moral suffering which can be inflicted on a convict." He asked sixty prisoners which they would choose—an hour of the pillory or three months' imprisonment, and all but two replied that they would prefer the prison. Dr. Lemaistre thinks that besides its value as a punishment, the pillory would have a good effect as an example to the young, and he seriously proposes that on great occasions, such as an exhibition, all the school children in the town should be taken to look at the criminal in the pillory. In short, he sees in the pillory the salvation of society. But in this age of feverish desire of notoriety is it not possible that some might see in the pillory an opportunity of exciting public attention that could not be so cheaply purchased in any other way? On the other hand, the Chancellor of the Exchequer would doubtless find in it a profitable means of revenue by renting some of its space to advertisers.

KALA-AZAR.

A very valuable report on the nature of kala-azar has been presented to the Indian Government by Major Ross, I.M.S. This is the third report which the Indian Government has received on the subject. The first was by Major Giles, who came to the conclusion, as a result of his investigation, that the chief characteristics of the disease were anæmia and dropsy, and that the cause was the presence of large numbers of ankylostomes in the intestine. In this connection Major Giles worked out the life-history of the intestinal parasite, and showed that mud rather than water was the chief medium for its propagation and spread. The next report was made by Captain Rogers, whose researches led him to disagree with the conclusions arrived at by Major Giles, and to consider kala-azar as essentially a malarial disease which had acquired infectious properties. With these two opposing and somewhat confusing opinions on record, the Government of India evidently thought it best to institute a further investigation, and for this purpose employed Major Ross, whose work on malaria rendered him peculiarly fitted to work out this problem. Unfortunately the time at Major Ross's disposal was far too short. It extended over only six weeks, so that he was unable to enter into the subject in the thorough manner that it deserves. Notwithstanding these disadvantages, his observations have been sufficient to lead him to concur with the views of Captain Rogers. He shows that kala-azar may be divided into three stages, the characteristics of which are: (1) Recurrent attacks of high fever with rapid enlargement of the spleen, and generally also of the liver in the first stage; (2) great tumefaction of the organs, with low fever in the second stage; (3) cachexia, with gradual decrease of the organs, disappearance of the fever, and frequently intercurrent attacks of pneumonia or dysentery in the third stage. The first stage, Major Ross believes, is chiefly that of the parasitic invasion; the second stage, that of the secondary effects of the invasion; the third stage, that of the tertiary effects—namely, the result of the secondary effects. He was not able in the time at his disposal to assure himself regarding the species of the malarial parasite which causes kala-azar. Whatever species it may be due to, he conceives the disease to be a form of paludism in which the infection falls with a very heavy incidence on the spleen and the liver, especially the latter. He considers that the enlargement of these organs and the low fever are the chief cause of the exceptional mortality. As regards the power of communicability and epidemicity of kala-azar, he does not agree with Captain Rogers's view that this is due to an intensification of the virulence of the malarial parasite, but holds that it may be explained in the same way as the communicability of ordinary malarial fever. Recent researches have shown that malarial fever is communicable by the agency of insects, and Major Ross thinks that this is sufficient also for kala-azar. It must be confessed that, although the report is a remarkably able one and carries the reader along from the first to the last page, yet the gaps are still so wide that it is a matter of regret that Major Ross was not able to spend a year instead of six weeks on this investigation. In this respect the conclusions are unsatisfactory, and were they not confirmatory of a longer investigation by Captain Rogers, there would be justification for the criticism that though the arguments from analogy are fascinating, yet there is not sufficient material to establish the view so ingeniously set forward.

METROPOLITAN HOSPITAL SUNDAY FUND.

At a meeting of the council of the Metropolitan Hospital Sunday Fund on June 26th, the report of the distribution committee was received. It was stated that the amount available is larger than last year, owing to Mr. George Herring's donation of £10,000. In addition, the collections on Hospital Sunday were generally larger than last year. The institutions which applied for grants numbered 195, but it was found necessary to invite the attendance of deputations from the governing bodies of 18. In the case of 12 hospitals and 2 dispensaries, the committee after the conference were able to recommend awards; in 3 cases they were not able to recommend any award. The total amount distributed among the hospitals, dispensaries, and other institutions was £50,500, and, in addition, the sum of £2,500 is, as usual, set apart to purchase surgical appliances in monthly instalments during the ensuing year. The awards are made to 30 general hospitals, 4 chest hospitals, 17 children's hospitals, 5 lying-in hospitals, 6 hospitals for women, 26 other special hospitals, 29 convalescent hospitals, 14 cottage hospitals, 7 homes—convalescent or other—and 54 dispensaries.

WAS COLUMBUS MORALLY IRRESPONSIBLE?

Professor Lombroso is implacable. In ruthless pursuit of his theory that genius is a form of insanity, he lays sacrilegious hands on one after another of the men whose names are blazoned on the scroll of immortal fame, and labels them all as mad. His latest victim is Christopher Columbus, who in the current number of the *Forum* is pronounced to have been a "paranœic." Not, indeed, "a

vulgar paranœic," an admission which in a spirit of thankfulness for small mercies we hasten to make a note of. The "paranœa" of Columbus, we are assured, "served as a ferment, supplemented his lack of culture, stripped him of any fear of novelty, thereby preventing him from seeing real obstacles in the way of his enterprise." If "paranœa" does all this, we can only say we wish it were a little more common among rulers and statesmen who are too ready to see obstacles in every enterprise. De Lollis is quoted to prove that "contemporaries, whether learned or unlearned, never succeeded in finding a satisfactory reason for the process whereby Columbus arrived at the divination of truth." To this a more intelligent contemporary might have answered, "Don't they wish they could?" as Turner said when some critic said he could not see in Nature what was revealed to "the vision and the faculty divine" of the painter. As regards the physical characteristics of Columbus, Professor Lombroso says there is no authentic portrait of the discoverer extant. But your criminal anthropologist has something of the "paranœic" faculty of seeing no real obstacle in the want of a "document." Does not somebody say that Columbus's hair was prematurely grizzled, and is there not a "portrait of a gentleman" who might possibly be Columbus, in which "we notice a large upper jaw, the absence of beard, and a retreating forehead?" Was there ever a clearer case of degenerate stigmata? We might perhaps plead the possibility of a razor in mitigation of the "absence of beard." But the professor might retort with the handwriting of the unfortunate great man, which was "characteristic of a disturbed mind." Most people will think that Columbus had enough to disturb his mind. Mark Twain, in *The New Pilgrim's Progress*, anticipated Lombroso's unfavourable opinion of the discoverer's handwriting when he said almost any boy of 14 in the United States could write as well. Columbus made an indifferent pun on his own name; therefore we are to conclude that he was a megalomaniac. Then he made blunders in writing Latin; if this be a proof of "paranœa," it is indeed a mad world, my masters! He also made statements about geographical matters which may have been blunders, but were more probably fibs; *argal*, he had "an unbalanced mind." Then he ill-treated savages, possibly like some *auctores imperii* of a later day, caring less for "niggers" than for land or gold. He got his inspiration from the Florentine Toscanelli, who, by the way, was a doctor, but forgot to acknowledge his indebtedness. Alas and alack! if to be thus forgetful is to be "paranœic," there are many unsuspected lunatics at large. "In his official correspondence he lied continually." This was most reprehensible from a moral point of view, but it is a melancholy fact that truth is not always to be found in official correspondence. A point on which Lombroso lays great stress is that Columbus ransacked the Bible for texts which could be twisted into allusions to far-off islands to be discovered, and to himself as the man chosen by God to discover them. If such "wresting" of Holy Writ is to be accounted a sign of "paranœa," John Knox, Oliver Cromwell, and many others of our British heroes must be classed among madmen. Sir James Simpson, who proved the lawfulness of anæsthesia from the Bible, was a particularly bad case. But surely the oddest of all the signs of "paranœa" is that Columbus should have tried to have made some reparation to a cast-off mistress by whom he had had an illegitimate son; in his will he directed this son to put his mother in a position where she might live honourably, adding "to lighten my conscience; for this weighs heavily upon my soul." The poor sinner who repents is thus, it seems to be implied, a "paranœic." This, however, passes the measure of absurdity which can be allowed, even to a criminal anthropologist. It may be true that "great wits are sure to madness near allied;" but to argue that a great man is mad because he had red hair which turned grey somewhat prematurely, because his handwriting was sprawling and irregular, and because he broke certain commandments and afterwards repented of his misdeeds, would seem to us to be a proof of "paranœa" if we had not learned from that admirable philosopher, Walter Shandy, that the shrewdest of men may be run away with when mounted on an untamed hobby horse. Most people would doubtless prefer to be mad with Dante, Shakespeare, and Columbus to being sane with the ideal man of the criminal anthropologist, who writes like copper-plate, and has everything smug and symmetrical about him.

MEDICAL STRIKES ABROAD.

THE German papers state that a strike of doctors has occurred at Cassel. The ophthalmic surgeons of the General District Sick Fund of that place have, in consequence of a proposed lowering of their tariff of fees, declined to continue the treatment of the cases under their charge. The other medical officers of the Society have decided to stand by their brethren. At Constanz a similar strike appears to be impending. The doctors of the Municipal Sick Fund and the Poor-law medical officers lately intimated to the Town Council that unless a higher scale of fees were conceded by July 15th they would resign their posts. The Council has refused the demand, and proposes to engage other medical officers.

TUBERCULOSIS IN CATTLE IN VICTORIA.

MR. S. S. CAMERON, Veterinary Inspector to the Board of Health in Victoria, has issued a report on his results with the use of tuberculin as a test for tuberculosis in cattle, and appends some interesting information as to the frequency of the occurrence of tuberculosis in dairy herds in Victoria, and also on the distribution of the disease in the different organs of the body. Nine herds, including 267 cattle, were tested, and of these 23 gave the reaction and were slaughtered. *Post-mortem* examinations were made in every case, and tuberculosis was found invariably to be present. These results confirm Professor McFadyean's opinion that the tuberculin test is practically infallible when carried out with due care and precaution. The most striking feature in connection with these results was the very large percentage of cases in which the udder was affected: 21.7 of the animals slaughtered, and actually 1.87 of the whole number of milking cows tested. Another interesting feature was the free distribution of the disease among the different organs of the body, the uterus and spleen being the only important abdominal organs free from tuberculosis in the 23 animals killed.

WE are asked to state that the library of the Royal Medical and Chirurgical Society will be closed for cleaning during the whole of August.

ALTHOUGH the Queen's Prize was won by a Guernsey man, the competitor who showed the most consistently good shooting throughout the Bisley meeting was Surgeon-Lieutenant Bertram of the Canadian team. Lieutenant Bertram won the Grand Aggregate, which is awarded on the scores made with the service rifle, and will take back with him to Canada the prizes for this; they are the Dominion of Canada Challenge Trophy and the National Rifle Association Gold Medal and £20. These he has won against all comers, but he also takes the Corporation of the City of London Prize, for which the competition is of a more limited and colonial character. He also took the Volunteer Aggregate and other prizes. The success of Surgeon-Lieutenant Bertram was very popular, for the Canadian team has been most faithful to the meeting, and its members are much liked.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

The Army Medical Service Examinations were the subject of a question last week by Captain Greville, who pointed out that the dates fixed for entry and examination, namely, July 17th and 28th, had the effect of excluding from competition young men who would have obtained their diplomas at the Victoria University and other examining bodies during the month of July. The Under-Secretary said the first intimation of the effects of the dates fixed reached the War Office too late to alter the arrangements. It is to be hoped now attention has been called to the matter that the dates of the army examinations will in future be so fixed as to secure the largest possible choice of candidates for the public service. The delay of several months after taking his degree before he can compete for the army causes many a valuable medical officer to be lost to the public service.

Army Chiropodists.—The military authorities are carefully considering how to save the soldier's feet, recollecting that after all the marching power of an army is the real test of its efficiency. Some of the non-commissioned officers of the Army Medical Corps have been instructed in chiropody, and so far the experiment has proved successful. The troops at the manœuvres this year will not all have the advantage of trained men, as it has been impossible to teach a sufficient number, but it is thought probable that a permanent system of trained chiropodists will be established for the infantry battalions.

The Shop Assistants' Seats Bill was read a third time and passed by the House of Lords on Friday, July 21st. The Earl of Wemyss was its only opponent, and he proposed its rejection, but without avail. He however indulged in some very exaggerated condemnation of the Bill, and predicted that if Parliament indulged in petty legislation of this kind, it would come to the introduction of a "Shop Girls' Dry Shoes and Stockings Bill" to provide against the accidents of wet weather by the grandmotherly care of the Duke of Westminster and others. The noble earl's denunciations did not seem to affect the peers, for they at once negatived his proposal and passed the Bill.

The Sale of Food and Drugs Bill has finished its course in the Commons, having been read a third time on Tuesday. The Bill has emerged from a trying ordeal a good deal altered, and has lost the clause which made an invoice a warranty. In the third reading debate, however, the Minister in charge of the Bill (Mr. Long) referred to amendments which he proposed to have inserted in the Upper House, and these will improve the warranty clause as it now stands, and enable the small trader to shift the responsibility more easily on to the wholesale dealer or manufacturer. Words are also to be introduced which will deal with the condensed separated milk used for infants in such a way as to warn the public of the risk of using such nourishment for very young children. The general feeling was that the Bill falls short of the expectations raised by the report of the Select Committee, but is, nevertheless, a step in advance, and as such should have a fair trial. The central authorities will have more power, and the local authorities generally will be stimulated to a more energetic administration of the Adulteration Acts.

The Mental Condition of Convicts was the subject of a question by Mr. Yoxall to the Home Secretary last week. The Home Secretary said the discretion of the medical men consulted in such cases was not restricted by any form of questions, but regulated by Section 11 of the Criminal Lunatics Act of 1884, which says that the doctors when appointed "shall forthwith examine such prisoner and inquire as to his sanity" and report in writing. Any medical man before forming an opinion must take into consideration a convict's family history, and all available evidence on this point is always placed before them. The report is required to deal with all the aspects of the case, including the past mental history of the convict, as well as his state of mind when the crime was committed and at the trial.

Anæsthetics in Vivisection formed the subject of a long question by Mr. Paulton last Monday. The Home Secretary in reply stated that all the conditions attached to the signing of certificates dispensing with the use of anæsthetics are laid down in Sections XI and XII of the Act of 1876; that there is no limit to the number of certificates which an authorised person may sign; and that the law places no limit on the number of experiments which may be performed under one certificate. In practice the Home Office limits the number, and this is always done in the case of serious experiments made wholly or partly without anæsthetics. It further appeared in the reply that Dr. Poore had not signed certificates in his capacity of Professor of Medical Jurisprudence, and that there was no regulation requiring that the dates of experiments without anæsthetics should be specified for the information of the inspector.

The Temperature of the House has engaged the attention of the First Commissioner of Works during the recent hot weather, and he stated on Tuesday that on one of the extremely hot days last week the temperature in the chamber rose to 75° F. On two days in 1896 and 1897 the temperature reached 74° F. Generally speaking, during the summer the temperature of the House has been uniformly several degrees lower than the shade temperature out of doors. As all the air admitted is cooled by being passed over ice, the legislators really enjoy in hot weather the coolest atmosphere in London.

The Leicester Guardians and Vaccination.—Mr. Hazell, as member for Leicester, is naturally anxious about the prison prospects of his Board of Guardians. It appears that forty-five of them have determined to go to prison rather than obey the mandamus ordering them to appoint a vaccination officer, and as six of these are ladies their representative in Parliament very properly desires that their prison experience should be "as little irksome as possible." The Home Secretary cannot contemplate that the occasion for his interference will arise, but in accordance with his duty he will see that proper accommodation is provided for any offenders that may be sent to prison. So the matter stands, and the House awaits further developments.

The Inebriates Act (1898) Amendment Bill, which seeks to remedy omissions in last year's Act, and so facilitate the more general adoption of the reforms carried last year, passed its second reading in the Commons on Wednesday, and will now probably find its way into the Statute Book this year.

The Oysters Bill, which has been under consideration in the House of Lords, is likely after all to come down to the Lower House in an acceptable shape. The difficulty, which arose from the unwillingness of county councils to undertake the administrative duties proposed to be thrown upon them, has, we understand, been overcome by giving the duties of supervising oyster beds to the Fishery Boards. This is thought by some to be an improvement on the Bill as originally drawn, and it is hoped will make a workable scheme for the protection of the public health and the preservation of clean oyster beds.

Bills to be Passed.—Mr. Balfour has stated that he hopes to pass the Shop Assistants (Seats) Bill, and the Bill for the Education of Defective and Epileptic Children. The latter measure was read a second time on Wednesday, but some amendments are threatened which may delay its progress. The Poor-law Acts Amendment Bill, which has come down from the Lords, and which gives guardians larger powers over children, is likely to pass; as is the Lunacy Bill as regards some of its administrative classes. There are even some private members' Bills which may yet by favour of the Government get a chance, such as the Isolation Hospitals (Amendment) Bill, and Mr. Cross's Bill to give parochial medical officers in Scotland a right of appeal on dismissal to the Local Government Board.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETINGS.

MEETINGS of the Council will be held in the Town Hall Council Chamber, Portsmouth, on Tuesday, August 1st, Wednesday, August 2nd, and Thursday, August 3rd, next, at 9.30 o'clock in the forenoon of each day.

July, 1899. FRANCIS FOWKE, *General Secretary.*

NOTICE OF THE NEXT QUARTERLY MEETING OF COUNCIL.

A MEETING of the Council will be held on October 11th, 1899. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, September 21st, 1899.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

DORSET AND WEST HANTS BRANCH.

THE summer meeting was held at Christchurch, on July 19th, under the presidency of Mr. GEORGE WILLIAM GRAHAM. Nineteen other members were present.

New Members.—Frederick Henry Alderson, M.D., and William Johnson Smyth, M.D., of Bournemouth, were elected members of the Branch.

Autumn Meeting.—It was decided that the autumn meeting should be held at Sherborne.

Midwives and Opticians.—A communication from the East York and North Lincoln Branch in reference to the illegal certification of unqualified practitioners (midwives and opticians) was read, and it was resolved that a letter should be written to the Council of the Association, informing them that the meeting endorsed the resolutions of the East York and North Lincoln Branch.

The Prevention of Tuberculosis.—A communication was read from the Honorary Secretary to the Devon and Cornwall Branch of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis, inviting the combination of the county of Dorset, and it was resolved that the Bournemouth Association be communicated with, and that the matter be considered at the next Branch meeting.

Discussion.—A discussion on the Diagnosis and Treatment of Functional Disorders of the Heart was opened by Dr. GREVES, Vice-President, and taken part in by Mr. MAHOMED, Dr. RANSOME, Mr. PARKINSON, Dr. ALDERSON, and the PRESIDENT.

Communications.—The following communications were presented:—Mr. PARKINSON: On Stillbirth.—Dr. RANSOME: On Rest and Exercise in the Open-air Treatment of Phthisis (published in the BRITISH MEDICAL JOURNAL of July 22nd).—Mr. HERTFORD: Case of Thoracic Aneurysm, with specimen.

Dinner.—The members subsequently dined together at the King's Arms Hotel

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.

THE annual general meeting of the Stirling, Kinross, and Clackmannan Branch was held at Larbert, on July 21st, 1899. Dr. MACPHERSON, President, in the chair.

New Members.—Dr. Morrison (Bannockburn), Dr. Robertson (Stirling District Asylum), and Dr. Whytt (Stirling) were admitted members of the Branch.

Election of Office-bearers.—The following office-bearers were appointed for the ensuing year—*President:* Dr. W. A. Mackintosh (Stirling). *Vice-President:* Dr. Cribbes (Bothkennar). *Honorary Treasurer:* Dr. Ronald (Stenhousemuir). *Honorary Secretary:* Dr. Moorhouse (Stirling). *Representative on the Council of the Association and on Parliamentary Bills Committee:* Dr. McVail (Partick). *Members of Council:* Dr. Fergusson (Alloa), Dr. A. Mackintosh (Bridge of Allan), Dr. Robertson (Stirling District Asylum), Dr. Young (Bonnybridge).

Vote of Thanks.—On the motion of Dr. MCVAIL, the unanimous thanks of the members were given to Dr. Macpherson for the sympathetic and active interest he had always taken in the affairs of the Branch as Treasurer, Vice-President, and President, and their congratulations on his appointment as Commissioner in Lunacy for Scotland.

Vote of Condolence.—On the motion of Dr. LINTON, a motion was unanimously agreed to expressing regret at the loss the Branch had sustained in the death of Dr. Milne of Alloa. The Secretary was instructed to convey to the relatives of Dr. Milne the sympathy and condolence of the members of the Branch.

NORTH OF IRELAND BRANCH.

THE twenty-first annual meeting of this Branch was held at the Museum, College Square North, Belfast, on July 20th. Light luncheon was kindly provided by Dr. HENRY O'NEILL (President). The chair was taken by the PRESIDENT, and subsequently by Dr. DEMPSEY (ex-President). Thirty-one members were present and one visitor.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Report of Council and Balance-sheet of Honorary Treasurer.—The report of Council stated that the Branch continued to prosper. There were now 114 city members and 151 country members, making a total of 265. The Council record with deep regret the deaths of Dr. W. S. Speer (Belfast) and Dr. O'Hara (Ballymena). The Council had met seven times during the year. The financial statement showed a balance in favour of the Branch of £24 10s. 5½d.

Election of Officers.—The following were elected officers for the year 1899-1900. *President-Elect:* Dr. J. C. Martin, Portrush. *Vice-Presidents:* Dr. J. Lorrain Smith, Belfast, and Dr. D. P. Gaussen, Dunmurry. *Council* (Town members): Professor Sinclair, Professor Byers, Dr. Lindsay, Dr. McKisack, Professor Whitla, Dr. M'Caw, Professor Symington, Dr. Mitchell; Country Members: Dr. Hall, Monaghan; Dr. Darling, Lurgan; Dr. J. C. Stuart, Ballymena; Dr. E. C. Thompson, Omagh; Dr. St. George, Lisburn; Dr. R. Gray, Armagh; Dr. Agnew, Lurgan; Dr. Tate, Downpatrick. *Representatives on the Council of the Association:* Drs. J. Campbell and W. Calwell, Belfast. *Representative on the Parliamentary Bills Committee:* Dr. Dempsey, Belfast. *Honorary Treasurer:* Dr. Gray, Newcastle. *Honorary Secretary:* Dr. William Calwell.

Vote of Thanks.—A hearty vote of thanks was passed to Dr. John Campbell for his valuable services as Secretary during the last six years.

Re-election of Committees.—The Ethical and Journalistic Committees were re-elected.

Irish Medical Association and Poor-law Medical Officers.—Dr. Kidd, Enniskillen, by permission of the President and meeting, put forward a statement regarding the present relation of the Irish Medical Association to the Irish Poor-law medical officers, and suggested the establishment of provincial branches of that Association. The matter was referred to the Council.

Communications.—Dr. CALWELL read a paper: Notes on the Value and Safety of Repeated Tappings of Ascites in Advanced Cardiac Disease.—Dr. CECIL read notes and showed a Case of Circumcorneal Hypertrophy (Spring Catarrh).—Professor SINCLAIR showed specimens of Sarcoma of the Thigh;

and of Chronic Suppurative Arthritis and Osteitis of the Lower Extremity treated by Amputation of the Hip Joint.—Professor BYERS gave an account of (1) A Rare Malformation of the Uterus—Uterus Didelphys; (2) a Case of Congenital Gynatresia, with Retained Menstrual Fluid, with method of operation performed; and (3) a short summary of Twelve Abdominal Sections.—Dr. HOWARD SINCLAIR showed a case of Pulmonary Tuberculosis after three months' Hygienic Treatment, with chart of case. The patient appeared in excellent condition and was examined by several members.—Dr. MACCORMAC showed a case of Narcolepsy, with notes and brief review of the nature of the affection.—Dr. ROBERT CAMPBELL read notes of a case of Craniectomy for Idiocy, in which there was manifest improvement.

SOUTH OF IRELAND BRANCH.

THE annual general meeting of this Branch was held on July 15th in the rooms of the Medical and Surgical Society, Cork, Professor S. O'SULLIVAN, M.D., in the chair. The following members were present: Professor H. Corby, M.D.; Professor W. Ashley Cummins, M.D.; Drs. O. T. Woods, H. R. Townsend, E. W. Allsom, N. J. Townsend, Moriarty, Lee, Honorary Secretary.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Office-bearers.—The following were elected office-bearers for 1899-1900: *President:* Dr. T. B. Moriarty (who then took the chair). *President-elect:* Professor S. O'Sullivan, M.D., J.P. *Vice-President:* Dr. J. Guisani. *Hon. Secretary and Treasurer:* Dr. Philip G. Lee. *Representative on Association Council:* Dr. A. W. Sandford, St. Patrick's Place, Cork. *Representative on Parliamentary Bills Committee:* Dr. A. W. Sandford. *Council:* T. Gelston Atkins, M.D.; R. I. Burke, M.D., (Douglas); Professor H. Corby, M.D.; P. T. Cremin, M.D.; Professor W. E. Ashley Cummins, M.D.; P. I. Macnamara, M.D. (Kilmallock); J. J. Curran, M.D. (Killeagh); D. B. O'Flynn, M.D. (Glanmire); A. W. Sandford, M.D.; H. R. Townsend, M.D.; O. T. Woods, M.D.

President's Address.—Dr. MORIARTY delivered his presidential address, taking for his subject Typhoid Fever. Professor ASHLEY CUMMINS proposed and Dr. O. T. WOODS seconded a warm vote of thanks to the President for his interesting address, which was carried unanimously. The meeting then adjourned after some general discussion.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SEVENTH ANNUAL MEETING.

THE sixty-seventh annual meeting of the British Medical Association will be held at Portsmouth on Tuesday, Wednesday, Thursday, and Friday, August 1st, 2nd, 3rd, and 4th, 1899.

President: Sir THOMAS GRAINGER STEWART, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh, Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President-Elect: JOHN WARD COUSINS, M.D., F.R.C.S., Senior Surgeon, Royal Portsmouth Hospital.

President of the Council: ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: CHARLES PARSONS, M.D., Dover.

An Address in Medicine will be delivered by Sir RICHARD DOUGLAS POWELL, Bart., M.D., F.R.C.P., Physician Extraordinary to Her Majesty the Queen, Physician to Middlesex Hospital.

An Address in Surgery will be delivered by Professor ALEXANDER OGSTON, M.D., Surgeon in Ordinary to Her Majesty the Queen in Scotland, Regius Professor of Surgery in the University of Aberdeen.

The scientific business of the meeting will be conducted in twelve Sections, as follows, namely:

A. MEDICINE.

Grand Jury Room, Town Hall.

President: JOHN MITCHELL BRUCE, M.D. *Vice-Presidents:* EDWARD JAMES WALLACE, M.D.; ROBERT WILLIAM BURNET, M.D. *Honorary Secretaries:* WILLIAM SYKES, M.D., Bury Place, Gosport; HUMPHRY DAVY ROLLESTON, M.D., 112, Harley Street, W.

Discussions have been arranged as follows:

1. Wednesday, August 2nd.—On the Medical Tests required at present for Admission to the Public Services. It is hoped that this will be opened by Professor W. Osler, M.D., F.R.S., Sir Dyce Duckworth, Dr. P. Manson, Dr. J. Mitchell Bruce, Dr. R. W. Burnet, Dr. T. D. Savill, Major W. Turner, R.A.M.C. (Gibraltar), Dr. Wm. Sykes, Dr. Hill, Mr. J. Paul Bush, and Dr. E. J. Wallace, have promised to take part in this discussion.

2. Thursday, August 3rd.—On the Preventive and Remedial Treatment of Tuberculosis. The discussion will be opened by Professor T. Clifford Allbutt, M.D., F.R.S. It is hoped that Sir William Broadbent, Bart., M.D., F.R.S., Sir R. Douglas Powell, Bart., M.D., Sir T. Grainger Stewart, M.D., Sir W. T. Gairdner, M.D., K.C.B., Dr. Arthur Ransome, F.R.S., Dr. F. W. Burton-Fanning, Dr. Heron, Dr. R. Robertson, Mr. A. G. S. Mahomed, Dr. Alex. G. Davey, Dr. J. E. Squire, Dr. Browning, Dr. H. Walsham, Dr. G. A. Reid, Dr. W. Morton Harman, Dr. S. T. Pruen, Dr. Frank M. Pope, Dr. R. W. Philip, Sir H. R. Beevor, Bart., M.D., Dr. S. Rendall, Dr. W. Vicary Snow, Dr. Wm. Calwell, Dr. R. Shingleton Smith, Dr. Williamson, Dr. A. P. Parsons, Dr. M. G. Foster, Dr. James Tyson (Philadelphia), Dr. P. B. Smith, Dr. W. T. Gardner, Dr. StClair Thomson, Dr. S. Hyde, Dr. C. Theodore Williams, Dr. A. P. Hillier, Mr. Colin Campbell, and Dr. L. A. Weatherly will take part in the discussion.

The following papers have been offered:

ARMSTRONG, William, M.R.C.S. Stimulation of Excretion in Gout.
BAIN, W., M.D. (1) The action of certain British and Foreign Mineral Waters on the Quadriurate of Sodium. (2) An Experimental Contribution to the Study of Gout.
BRISCOE, J. F., M.R.C.S. The Practice of Bloodletting.
CALWELL, W., M.D. Gastric Adhesions as a Cause of Dyspepsia
CAMPBELL, Harry, M.D. The Enlargement of the Chest in Emphysema and its Treatment.
EWART, William, M.D. (1) On the Prebalnear Treatment of Heart Disease by Inhalations of Carbonic Acid Gas; and on the Uses of the Inhalation in Cardiac Dyspnœa and in Anginoid Pain. (2) On the Recognition of Enlargements of the Left Auricle by Percussion; and on other Clinical Uses of Dorsal Percussion, including Percussion of the Pelvis.
GARDNER, W. T., M.B. Notes on the Open-Air Treatment of Phthisis with Photographs of a new form of Kiosk.
GREEN, J. Lardner, M.R.C.S., L.S.A. The Inhalation of Formalin as a Preparation for, and Aid to, the Open-Air Treatment of Phthisis.
HAIG, Alexander, M.D. Uric Acid and the Circulation; some New Methods of Estimating its Effects.
HERON, G. A., M.D. On the Results of Treatment by the New Tuberculin.
HILLIER, A. P., M.D. Prevention of Tuberculosis in Everyday Life.
HUTCHINSON, Professor Woods. On the Form of the Chest in Tuberculosis and its Significance.
JOHNS, W. Denton, B.A., M.D. On the Open-air Treatment of Tuberculosis in England (with demonstration of cured cases).
LUFF, A. P., M.D. The Gelatinous Form of Sodium Biurate and its bearing on the Pathology of Gout.
MACLEOD, Herbert G., M.D., M.S. The Causes and Treatment of Sciatica and Neuralgia.
MULLICK, Sarat K., M.D. Some Special Points connected with the Nature and Cure of Influenza.
OSLER, Professor W., M.D., F.R.S. On Hypertrophic Cirrhosis with Bronzing of the Skin—Hæmochromatosis.
PARSONS, A. P., M.B. The Accurate Diagnosis and Successful Treatment of Perforated Gastric Ulcer.
PHILLIPS, W. Fleming, M.B. Observations on Clinical Thermometry.
POYNTON, F. J., M.D. The Occurrence of Arthritis in connection with Inflammation of the Appendix Vermiformis.
PRUEN, S. T., M.D. Diet and Nutrition in the Treatment of Tuberculosis.
SAMWAYS, D. W., M.D. The Defence of the Cardiac Orifices other than Valvular.
SUCKLING, C. W., M.D. On Migraine.
SYKES, William, M.D. A Suggestion for the Treatment of Phthisis Pulmonalis on the Lines of one of its Normal Terminations.
WALSHAM, H., M.D. The Relation of Pulmonary Tuberculosis to Pure Mitral Stenosis.
WEST, S., M.D. Forms of Albuminuric Retinitis and their Significance.

B. SURGERY.

Banqueting Room, Town Hall.

President: HENRY TRENTHAM BUTLIN, F.R.C.S. *Vice-Presidents:* Deputy-Inspector-General RICHARD SAMUEL PURNELL GRIFFITHS, R.N.; ALFRED LLOYD OWEN, M.D.; Deputy-Inspector-General EDWARD ELPHINSTONE MAHON, C.B., R.N. *Honorary Secretaries:* HENRY RUNDLE, F.R.C.S., 13, Clarence Parade, Southsea; D'ARCY POWER, F.R.C.S., 10A, Chandos Street, Cavendish Square, W.

Special discussions will be held upon:

Wednesday morning, August 2nd.—1. The Diagnosis and Treatment of Gunshot Wounds of the Abdomen. To be opened by Colonel Stevenson, M.Ch., R.A.M.C., Professor of Military Surgery at Netley, followed by Mr. A. Barry Blacker,

Dr. A. H. Robinson, Major W. C. Beevor, R.A.M.C., Damer Harrisson, F.R.C.S.Ed., R. Clement Lucas, B.S., F.R.C.S.' Dr. James Murphy and others.

Thursday morning, August 3rd.—2. The Prevention and Treatment of Syphilis in the Navy and Army. To be opened by Deputy-Inspector-General E. E. Mahon, R.N., C.B., and Major W. Dick, M.B., C.M., R.A.M.C., Netley, Assistant Professor of Clinical Surgery, Netley. The following gentlemen have intimated their intention of taking part in the discussion: Fleet-Surgeon A. T. Corrie, R.N., Dr. C. R. Drysdale, Major F. J. Lambkin, R.A.M.C., Dr. J. MacNamara, Major William Niven, M.D., Dr. G. Ogilvie, Dr. Shaw-Mackenzie, Mr. A. H. Ward, Colonel F. H. Welch, R.A.M.C., Staff-Surgeon A. E. Weightman, R.N., Dr. Charles Bell Taylor, and Lieutenant-Colonel H. Grier, R.A.M.C.

The following papers have been offered:

ARMSTRONG, G. E., M.D. The Surgical Treatment of Hæmorrhage from Gastric Ulcer.
BAMPTON, A. H., M.D., M.Ch. A Bullet in the Brain for Six Months: Abscess, Removal, and Recovery.
BARLING, Gilbert, F.R.C.S. Analysis of 120 Operations for Appendicitis with Observations thereon.
BERRY, James, M.B., B.S. Seventy Consecutive Cases of Goitre Treated by Operation (Extirpation or Enucleation). (Illustrated with Photographs and Specimens).
BIDWELL, L. A., F.R.C.S. A Method of attaching the Mucous Membrane to the Skin of the Perincal Excision of the Rectum.
BUSH, J. Paul, M.R.C.S. Some Operations on the Jaws for Extensive Malignant Disease.
CARWARDINE, Thomas, M.S. On Excision of the Rectum for Cancer by a New Method and its Results.
CLARKE, J. Jackson, F.R.C.S. An Analysis of 100 Cases of Spinal Curvature and Disease.
DAY, J. D., Major R.A.M.C. A New Form of Truss.
DE SANTI, P., F.R.C.S. A Case of Gunshot Wound of the Leg Severing the Anterior Tibial Nerve; Secondary Suturing Two Months Later; Restoration of Function of Nerve.
DOUGLAS, A. R. J. Four Cases of Bullet Wound of the Chest. With remarks.
DOWNIE, Walker, M.B. Description of two cases of Sarcoma of the Tongue. (Specimens, Sections, and Photographs will be shown.)
ERDINGTON, G. H., M.D. A Short Account of a Case of Periostitis Albuminosa.
FREYER, P. J., M.Ch. Recent Notes on the Surgery of Stone in the Bladder.
HARRISSON, Damer, F.R.C.S. Some Cases of Cerebral Surgery (With lantern illustrations).
HUTCHINSON, J., jun., F.R.C.S. The Vermiform Appendix in Relation to Hernia and Intestinal Obstruction. Illustrated by lantern slides and diagrams.
JONES, Robert, F.R.C.S. The Operative Treatment of Spasmodic Flat Foot.
LLOYD, Jordan, F.R.C.S. (1) On the Drainage of Appendicular Suppuration through the Rectum or Vagina. (2) A Case of Ureteral Stricture treated by Ureteroplasty.
LUCAS, R. Clement, B.S., F.R.C.S. (1) Removal of a Bullet and of a Detached Fragment from the Interior of the Skull after localisation by the *x* rays. (2) Removal of a Bullet from the Front of the 2nd Cervical Vertebra after localisation by the *x* Rays.
MACLEOD, Herbert W. G., M.D., M.S. The Treatment of Stone in the Bladder, with Notes of some Cases operated upon.
MORTON, Charles A., F.R.C.S. (1) A Successful Case of Resection of Three-quarters of the Stomach for Carcinoma. (2) A case of Excision of the Cæcum for Carcinoma.
MOYNIHAN, B. G. A., F.R.C.S. A Series of Cases of Malignant Disease of the Stomach treated Surgically.
NICOLL, James H., M.B. (1) Enterorrhaphy without Mechanical Aids (with illustrative cases); (2) The Treatment of Urethral Stricture.
REID, G. Archdall, M.B. The Treatment of Surface Wounds.
ROBSON, A. W. Mayo, F.R.C.S. Two Cases of Removal of Tumours of the Suprarenal Capsule.
RUNDLE, H., F.R.C.S. Notes on 375 Cases of Varicocele treated by Operation.
RYALL, Charles, F.R.C.S. Notes of a Case of Extensive Trans-Sacral Excision of the Rectum followed by Perfect Sphinteric Control.
SHEEN, W., M.D., F.R.C.S. (1) A Case of Secondary Thyroid Growth. (2) A Case of Malignant Disease in the Sac of an Umbilical Hernia.
SNOW, Herbert, M.D. The Result of Cancer Operations and of Continuous After-Treatment.
SPENCER, W. G., F.R.C.S. Two Fatal Cases of Venereal Phagedæna.
THOMAS, J. L., F.R.C.S. (1) Two Recent Operations upon the Gasserian Ganglion for Neuralgia by the Hartley-Krause Route. (2) A Reliable Washing Tap for Operating Rooms, with a Demonstration of a Simple Method for Irrigating the Abdomen.
WARD, A. H., F.R.C.S. On the Rational Treatment of Syphilis.
WELCH, Colonel F. H., R.A.M.C. The Prevention and Treatment of Syphilis in the Navy and Army.
WILLIAMS, Chisholm, F.R.C.S.Edin. A Case of Intercostal Neuralgia and Operation.
WILLIAMS, W. Roger, F.R.C.S. The Surgical Treatment of Uterine Cancer.

Mr. Jas. Mackenzie Davidson and Dr. Hugh Walsham will take part in a demonstration of X-Ray Photography in its Relation to Medicine and Surgery.

Professor Ernest Laplace, M.D., Philadelphia, will exhibit a new Forceps for Intestinal Anastomosis.

C. OBSTETRICS AND GYNÆCOLOGY.

Marie-la-bone Hall, Swan Street, Commercial Road.

President: GEORGE GRANVILLE BANTOCK, M.D. *Vice-Presidents:* JOHN ROBERT KEALY, M.D.; JOHN WM. TAYLOR, F.R.C.S. *Honorary Secretaries:* CHARLES PLUMLEY CHILDE, F.R.C.S., Cranleigh, Kent Road, Southsea; ERNEST WILMER PHILLIPS, M.R.C.S., Victoria Crescent, Victoria Road North, Southsea; WALTER WM. HUNT TATE, M.D., 57, Queen Anne Street, W.

The subjects selected for discussion are as follows:

1. Wednesday, August 2nd.—The Treatment of Fever following Delivery, with Special Reference to Serumtherapy. To be opened by Dr. Herbert Spencer.

2. Thursday, August 3rd.—The Natural Menopause compared with *(a)* the Menopause produced by Removal of the Uterine Appendages; and *(b)* the Menopause produced by Removal of the Uterus without Removal of the Appendages. To be opened by Mr. J. Bland Sutton, F.R.C.S.

The following gentlemen have signified their intention of joining in the discussions: Professor Murdoch Cameron, M.D., Dr. John Campbell, Dr. Cushing, Dr. Handfield-Jones, Dr. Shaw-Mackenzie, Mr. Christopher Martin, Dr. Newnham, and Dr. Robert Boxall, Dr. Inglis Parsons, Dr. Purslow, Professor J. W. Byers, M.D., Dr. George Elder, Mr. Robert O'Callaghan, Dr. More Madden, Dr. James Murphy, and Dr. J. Stuart Nairne.

The following papers have been offered:

BYERS, Professor J. W., M.D. The Relationship of Certain Cases of Amenorrhœa to Raynaud's Disease and Subsequent Tuberculosis.
CAMERON, Professor Murdoch, M.D. A case of Rupture of Uterus, Missed Labour, and Delivery three months later.
CAMPBELL, John, M.D. Treatment of Acute Peritonitis.
GOW, William J., M.D. On Subinvolution of the Vagina.
LAWRIE, Macpherson, M.D. Notes of Fifty Consecutive Cases of Cœliotomy for Diseases of the Uterus and Appendages, with Forty-eight Recoveries Performed within the last Twenty Months, with Observations.
LEA, Arnold W. W., M.D. Two Cases of Puerperal Septicæmia due to Streptococcic Infection.
MADDEN, More, M.D. On Some of the Methods employed in the Modern Treatment of Uterine Cancer.
NAIRNE, J. Stuart, F.R.C.S. A New and More Complete Method of Colporrhaphy.
NEWNHAM, W. H. C., M.B. A case of very unusual Suppuration in the Pelvis after Parturition.
PARSONS, J. Inglis, M.D. A New Treatment for Prolapse of the Uterus; further report of cases.
REID, G. Archdall, M.B. The Causes which render difficult the Labours of Civilised Women.
SHAW-MACKENZIE, J. A., M.D. The Syphilitic Factor in the Diseases of Women.
TURNER, P. D., M.D. Tuberculous Lesions found in the Generative Organs in 27 Consecutive *Post-mortem* Examinations on Phthisical Patients.
WARDEN, C., M.D. The Treatment of Puerperal Infection in the Maternity Hospitals of Paris.

It has been arranged to exhibit pathological specimens illustrative of the papers for discussion.

D. STATE MEDICINE.

Shareholders' Room, Gas Company's Offices, 87, Commercial Road.

President: GEORGE WILSON, M.D. *Vice-Presidents:* Surgeon-General CHARLES MACDONAGH CUFFE, C.B.; JOSEPH GROVES, M.B. *Honorary Secretaries:* HENRY RICHARD KENWOOD, M.B., Granville House, Alexandra Villas, Finsbury Park, N.; A. MEARNS FRASER, M.B., Epworth, St. Edwards Road, Southsea.

It is proposed to hold discussions on the following:

1. Recent Vaccination Legislation and the Prevention of Small-pox. To be opened by Dr. E. Seaton. The following gentlemen will take part in the discussion: Drs. C. R. Drysdale, E. T. Wilson, A. Newsholme, J. Groves, and A. Ashby.

2. The Personal Communication of Tuberculosis and the Measures available for its Prevention. The following gentlemen will take part in the discussion: Sir Henry Littlejohn, M.D., LL.D.; Professor Delépine, Dr. A. Newsholme, Mr. J. Niven, Dr. Sidney Davies, and Dr. C. R. Drysdale.

3. The Efficiency of Existing Measures directed against the Spread of Infection in Elementary Schools. The following gentlemen will take part in the discussion: Dr. A. Newsholme, Mr. A. E. Harris, Dr. J. F. J. Sykes, Dr. Sidney Davies, Mr. Henry R. Kenwood, Dr. Henry May, and Dr. R. Sydney Marsden.

The following papers have been offered:

CAMPBELL, Colin, M.R.C.S., L.R.C.P. The Technique of Vaccination.
CANTLIE, James, F.R.C.S. The Early Decay of Teeth in Great Britain.

Dove, R. Atkinson, M.B. An Investigation into the Bacteriology of the Air as found in Schools.
Eyre, J. W. H., M.D. Diphtheria Bacilli in Milk.
James, J. Brindley, M.R.C.S., L.R.C.P. (1) A Minister of Public Health; (2) Death Certification.
Kenwood, Henry, M.B., D.P.H., and Griffith, A., M.D., D.P.H. The Distribution of Erysipelas in London and its Significance.
Manby, E. Petronell, M.D., D.P.H. Meat Inspection and the Abolition of Private Slaughterhouses.
Marsden, R. Sydney, M.B., D.Sc., F.R.S.E. Overcrowding in Secondary Schools.
Peck, Herbert, M.B., D.P.H. Sick-room Infection in Typhoid Fever.
Symons, W. H., M.D., D.P.H. The Disinfection of Books and other Articles Injured by Steam Disinfection.
Windle, J. D., M.B. The Mode of Spread of Diphtheria, with special reference to School Attendance, based on the experience of a local outbreak.

E. Psychology.

Swan Street Board School (Boys' School). Entrance in Swan Street, Commercial Road.

President: David Nicolson, C.B., M.D. *Vice-Presidents:* Samuel Rutherford Macphail, M.D.; Peter William Macdonald, M.D. *Honorary Secretaries:* James Neil, M.D., Warneford Asylum, Oxford; Bonner Harris Mumby, M.D., Medical Superintendent, Boro' Asylum, Portsmouth.

The subjects selected for discussion are as follows:

Wednesday, August 2nd.—1. Lunacy Legislation as it Affects the Temporary Care of Incipient Cases. To be opened by Dr. Savage and Dr. Mercier. Professor Clifford Allbutt, Dr. Sutherland and others will take part in the discussion.

Thursday, August 3rd.—2. General Paralysis. To be opened by Dr. A. W. Campbell, with a paper on the Etiological Relation of Syphilis to General Paralysis, and a joint paper by Dr. P. W. Macdonald and Dr. A. Davidson on Congenital General Paralysis (a preliminary contribution).

Friday, August 4th.—3. The Treatment of Epileptics and Imbeciles. To be opened by Dr. Shuttleworth and Dr. Fletcher Beach. Dr. Bower and Dr. Sutherland will take part in the discussion.

The following gentlemen have promised to take part in the discussions of this Section: Professor Clifford Allbutt, F.R.S., Dr. Fletcher Beach, Dr. Milne Bramwell, Dr. Chambers, Dr. Crotchley Clapham, Professor Ferrier, F.R.S., Dr. H. Campbell, Dr. W. Campbell, Dr. Hyslop, Dr. Davidson, J. F. Briscoe, M.R.C.S., Dr. H. Newington, Dr. Macphail, Dr. P. M. MacDonald, Dr. Mercier, Dr. G. W. Mould, Dr. T. Seymour Tuke, Dr. F. Lee, Dr. Spence, Dr. Shuttleworth, Dr. Savage, Dr. Telford Smith, Dr. Outterson Wood, Dr. Weatherly, Dr. Haig, Dr. Orange, C.B., Dr. Oscar Woods, Professor Hughes (St. Louis), and Dr. A. Eddowes.

The following papers have been offered:

Andriezen, W. L., M.D. The Bearings of Pathological Discoveries on the Treatment of Mental Diseases.
Bramwell, J. Milne, M.B. The Mental Conditions Involved in the Post Hypnotic Appreciation of Time.
Briscoe, J. F., M.R.C.S. The Asphyxial Problem in Convulsive Seizures.
Campbell, Harry, M.D. Morbid Self-Assurance.
Harvey, Surgeon-General C. B., D.S.O. Notes on Asylums in India.
Hughes, Professor (St. Louis). Evolution of a Christopath from a Psychiatric Standpoint.
Hyslop, T. B., M.D. Double Consciousness.
Macphail, S. R., M.D. Note on Post-operative Insanity.
Reid, G. Archdall, M.B. Alcoholism in its Relation to Heredity.
Sutherland, J. F., M.D., F.R.S.E. On Legislation affecting the Property and Person of the Well-to-do Inebriate.
Weatherly, L. A., M.D. How Can We Instil Rational Ideas Regarding Insanity into the Public Mind?

Dr. McDowall of the Morpeth Asylum will exhibit plans of Villas for Chronic Harmless Patients and Convalescents.

F. Anatomy and Physiology.

School Board Office, Town Hall.

President: John James Charles, M.D. *Vice-Presidents:* Aurelius Victor Maybury, M.D.; Andrew Francis Dixon, M.B. *Honorary Secretaries:* Edwin John Norris, M.R.C.S., May Villa, Cottage Grove, Southsea; Wm. Joseph Essery, M.B., Netley Lodge, South Parade, Southsea; Marcus Seymour Pembrey, M.D., Charing Cross Hospital, W.C.

The subjects selected for discussion are as follows:

1. The Interaction between the Ovaries and the Mammary Glands. To be opened by Mr. Stanley Boyd, F.R.C.S. The following gentlemen have promised to take part in the discussion: Dr. Amand Routh, Mr. W. G. Spencer, F.R.C.S., Mr. Hopkins Walters, Dr. Eden, Dr. Beatson, and others.

2. Causes of the Entrance of Oxygen into the Blood in the Lungs. To be opened by the President. The following gentlemen have promised to take part in the discussion: Dr. Washbourn, Mr. W. G. Spencer, Dr. T. G. Brodie, and others.

The following papers have been offered:

Anderson, R. J., M.D. Some Points concerning Asymmetry.
Barratt, J. O. Wakelin, M.D. The Anatomical Structure of the Ninth, Tenth, Eleventh, and Twelfth Cranial Nerves.
Cantlie, James, F.R.C.S. The Lobes of the Liver.
Charles, J. J., M.D. (1) The Reaction of the Intestinal Contents. (2) The Function of the Rectum.
Charles, Havelock R., M.D. The Progress of Anatomical Teaching in Northern India.
Cunningham, D. J., M.D., F.R.S. Demonstration of some Points in the Sectional Anatomy of the Brain of the Orang and Chimpanzee.
Dixon, Francis, M.B., Sc.D.: (1) The Course of the Taste Fibres. (2) On the Grooves and Markings often found in the Human Calvaria, corresponding in position to certain Vessels or Sensory Nerves of the Scalp. (3) The Form of the Bladder and Prostate (demonstration). (4) The Mode of Ossification of the Upper End of the Femur in different Animal Groups (demonstration).
Harley, Vaughan, M.D. The Value of the Large Intestine in General Metabolism.
Hunter, William, M.D. Metabolism in Acute Yellow Atrophy of the Liver.
Thomas, J. Lynn, F.R.C.S. The Anæsthetic Areas in two Patients in whom the Second and Third Divisions of the Fifth Nerve were divided within the Cranium (demonstration).
Pembrey, M. S., M.D. Cheyne-Stokes Respiration.
Reid, G. Archdall, M.B. The Evidence for and against the Transmission of Acquired Characters.
Ross, F. W. Forbes, M.D. On Blood Corpuscles.
Russell, J. S. Risien, M.D. Experimental Observations bearing on Epilepsy.

Specimens of anatomical interest will be shown by the President and Professor A. F. Dixon.

A demonstration (microscopes and lantern slides) of the chorionic epithelium will be given by Dr. Eden.

G. Pathology.

Swan Street Board School (Infants' School), entrance in Salem Street, Commercial Road.

President: Joseph Frank Payne, M.D. *Vice-Presidents:* Frederick John Driver, M.D.; Otto Jackson Kauffmann, M.D. *Honorary Secretaries:* Edmund Fauriel Trevelyan, M.D., 40, Park Square, Leeds; William Carling, M.B., 11, Rosebery Terrace, Highland Road, Southsea.

Discussions have been arranged as follows:

Wednesday, August 2nd.—Short introductory address by the President. Discussion on the Pathology of Infective Endocarditis, introduced by Dr. Washbourn. Dr. Sansom, Mr. A. G. R. Foulerton, Dr. F. J. Poynton, Dr. W. C. C. Pakes, Dr. Bertram Abrahams, Dr. Lazarus-Barlow, Professor Osler, Dr. W. Bulloch, Dr. J. H. Bryant, and Dr. H. M. Tickell will take part in the discussion.

Thursday, August 3rd.—Discussion on the Pathology of Renal Tumours, introduced by Mr. J. H. Targett and Dr. Kelynack. Mr. Roger Williams, Dr. F. W. Eurich, Dr. Wakelin Barratt, and Dr. David Newman will take part in the discussion.

Professor Hamilton (Aberdeen) and Professor Sims Woodhead (Cambridge) have also signified their intention of taking part in the discussions.

Professor A. E. Wright, Professor of Pathology, Army Medical School, Netley, will give a demonstration on Serum Inoculation for Plague, Malaria, and Cholera on Friday.

The following papers have been offered:

Abrahams, Bertram, M.B. Hypertrophy of the Brain.
Barrs, A. G., M.D., and Trevelyan, E. F., M.D. Remarks on a specimen of Hydatid Disease of the Vertebral Column and Extradural Space (specimen shown).
Brodie, T. G., M.D. The Physiological Action of Diphtheria Toxin.
Coles, A. C., M.D. The Bacillus of Influenza.
Eastes, G. Leslie, M.B. (1) The Pathology of Milk; (2) a Few Unusual Bacteriological Specimens.
Edington, G. H., M.D. The Pathology of the Penile Raphe.
Foulerton, A. G. R., F.R.C.S. A Case of Streptothrix Infection.
Hutchinson, Professor Woods. The Distribution of Tuberculous Lesions in Man and Animals.
Lazarus-Barlow, W. S., M.D. (1) Dissecting Aneurysm of the Heart: (2) Syphiloma of the Heart; (3) Anæmic Infarct of Liver. (Specimens shown.)
Pearse, Frederick, M.D., F.R.C.S. Some Points in the Pathology of Plague.
Posadas, Dr. Generalised Infectious Psorospermosis (with specimens).
Poynton, F. J., M.D. Observations on the Pathology of the Myocardium.
Reid, G. Archdall, M.B. Influence of Heredity in Disease.
Seligmann, C. G., M.R.C.S., L.R.C.P. Notes upon Morbid Conditions met with among the Natives of British New Guinea (lantern demonstration).
Smith, G. Bellingham, M.B., F.R.C.S., and Washbourn, J. W., M.B. Infective Sarcomata in Dogs.

THOMSON, Campbell, M.D. The Pathology of Acute Chorea.
WHITE, C. Powell, M.B., F.R.C.S. Notes on a Carcinomatous Cyst of the Liver with Secondary Deposits in Sternum, Clavicles and Lungs (specimens shown).
WILD, Robert, M.D. Some Sources of Infection in Cutaneous Tuberculosis.
WILLIAMS, W. Roger, F.R.C.S. On Tumours of Gigantic Size, etc.
WILLIAMSON, R. T., M.D. The Pathology of Syphilitic Affections of the Spinal Cord
WOHLMANN, A. S., M.D. On the Bacillus of Rheumatoid Arthritis.

H. OPHTHALMOLOGY.

Overseers' Board Room, St. Michael's Road.

President: SIMEON SNELL, F.R.C.S.Edin. *Vice-Presidents:* LYSANDER MAYBURY, M.D.; EDWARD TREACHER COLLINS, F.R.C.S. *Honorary Secretaries:* ARTHUR VERNON FORD, M.R.C.S., South View Lodge, Kent Road, Southsea; ARNOLD LAWSON, F.R.C.S., 12, Harley Street, W.

The subjects selected for discussion are as follows:

Wednesday, August 2nd.—The Pathological Significance of Sympathetic Irritation and its Connection, if any, with Sympathetic Ophthalmitis. To be opened by Mr. F. Richardson Cross, F.R.C.S.

Thursday, August 3rd.—The Visual Tests employed in the Navy, Army, and Mercantile Marine, and their Efficiency. To be opened by Deputy-Surgeon-General Henry Cayley, F.R.C.S., I.M.S.

The following gentlemen have signified their intention of taking part in the discussions: Mr. G. Andereon Critchett, Professor Malcolm McHardy, Dr. George Mackay, Mr. Devereux Marshall, Mr. A. Stanford Morton, Mr. H. E. Juler, Mr. T. H. Bickerton, Dr. John Hern, and Dr. C. E. Glascott.

The following papers have been offered:

BERRY, George, M.B. The Extraction of Unripe and Complicated Cataracts, with remarks on their After-treatment.
BICKERTON, Thomas H., M.R.C.S. Eyes or no Eyes: H.M.S. *Vanguard.* A Retrospect.
BRONNER, Adolph, M.D. On the Uses of Homatropine in Cases of Muscular Asthenopia
BULL, G. T., M.D. (Paris.) Inefficiency of the Ocular Muscles.
COLLINS, E. Treacher, F.R.C.S. Enophthalmos (with lantern illustrations).
GRIFFIN, W. Watson, M.B. Cases illustrating the value of the Correction of Hyperphoria.
GRIFFITH, A. Hill, M.D. Congenital Lachrymal Obstruction.
GRIFFITH, John, F.R.C.S. A case of Primary Sarcoma of the Fornix Conjunctivæ.
HERN, John, M.D. The Eye Symptoms in Hay Fever.
HINSHELWOOD, James, M.D. The Use of Euphthalmin: a new Mydriatic.
LANDOLT, Professor Edm. The Determination of Visual Acuity: (*a*) The Principle of its Determination; (*b*) the Tests for Visual Acuity; (*c*) Practical Demonstration.
LAWSON, Arnold, F.R.C.S. The Correction of Refractive Errors in the Treatment of Trachoma.
LODGE, Samuel, jun., M.D. A Series of Cases of Removal of Lens for High Myopia.
SCOTT, Kenneth, F.R.C.S.Ed. Destructive Ulceration of the Eyelid: Cure.
SNELL, Simeon, F.R.C.S.Ed. (President). The Prevention of Eye Accidents in various Trades and Occupations.

Invitations to attend the meetings of the Section have been accepted by Dr. Hermann Knapp (New York), Dr. Samuel Risley (Philadelphia), Dr. de Schweinitz (Philadelphia), Dr. Theobald (Baltimore), Dr. Ayres (Cincinnati).

I. DISEASES OF CHILDREN.

Shareholders' Room, Water Company's Offices, 26, Commercial Road.

President: EDMUND OWEN, F.R.C.S. *Vice-Presidents:* JAMES GREEN, M.R.C.S.; DAWSON WILLIAMS, M.D. *Honorary Secretaries:* ALFRED HERBERT TUBBY, M.S.Lond., 25, Weymouth Street, Portland Place, W.; GEORGE AUGUSTUS TULLIS, M.D., 20, Clarence Parade, Southsea.

The subjects selected for discussion are as follows:

1. Wednesday, August 2nd.—On the Treatment of Ununited Fracture in Children. To be opened by the President of the Section. With remarks on Ununited Fracture of the Tibia and Fibula; why does its Operative Treatment so often end in Amputation? Mr. Damer Harrisson will take part in the discussion.

2. The Treatment of Pleuritic Effusions in Childhood. To be opened *(a)* Medical, by Dr. Robert Maguire, and *(b)* Surgical, by Mr. H. Betham Robinson. The following gentlemen will join in the discussion: Mr. J. McGaw, Mr. C. H. Milburn, and Dr. E. H. Greves.

3. Thursday, August 3rd.—The Causation and Treatment of Convulsions in Infancy. Etiology Pathology and Treatment, by Drs. J. A. Coutts and A. M. Gossage; and Public Health Aspect, by Dr. Hugh Jones. The following gentleman will join in the discussion: Dr. Edmund Cautley.

4. Friday, August 4th.—The Treatment of Inguinal Hernia in Infancy and Childhood. To be opened by Mr. John Langton. The following gentlemen will join in the discussion: Mr. J. Macready, Mr. Fred. Eve, Mr. D'Arcy Power, Mr. Robert Campbell, Mr. Henry A. Whitelock, Mr. Geo. Heaton, Mr. Wm. Thomson, Mr. Damer Harrisson, and Mr. J. Paul Bush.

The following papers have been offered:

CAUTLEY, Edmund, M.D. Abnormal Ossification of the Parietal Bone in an Infant.
EWENS, John, L.R.C.P. The Necessity of Requiring a Full Course of Lectures on Children's Diseases and Attendance at a Children's Hospital as Part of the Medical Curriculum.
HEATON, Geo., M.B., F.R.C.S. A Successful Case of Splenectomy for Rupture of the Spleen, with a Note on the Consequent Blood Changes.
LITTLE, E. Graham, M.D. Night Terrors in Children.
MORGAN, G. F.R.C.S.E. Remarks on Tuberculous Adenitis.
PARKINSON, J. Porter, M.D. The Varieties and Causes of Cough in Children, with especial reference to Practical Treatment.
POYNTON, F. J., M.D. A Contribution to the Study of Cardiac Overstrain in the Young.
PRIESTLEY, J., M.D. Infantile Hemiplegia.
STILL, G. F., M.D. Observations on the Morbid Anatomy of Tuberculosis in Childhood.
SUTHERLAND, George A., M.D. On Birth Palsy with Disseminated Tremors.
SYMPSON, E. Mansel, M.D. The Treatment of Rickets in an Out-Patient Department.
TUBBY, A. H., M.S.Lond. An Operation for the Relief of Contracted Arm and Hand after Infantile Hemiplegia.

J. PHARMACOLOGY AND THERAPEUTICS.

Small Dining Room, Freemasons' Club, 79, Commercial Road.

President: JOHN BUCKLEY BRADBURY, M.D. *Vice-Presidents:* C. H. WATTS PARKINSON, M.R.C.S.; SAMUEL GOSS, M.R.C.S. *Honorary Secretaries:* JOHN EDWARD HARRY KELSO, M.B., 67, Elm Grove, Southsea; WILLIAM TUSTING COCKING, M.D., 277, Glossop Road, Sheffield.

The subjects selected for discussion are as follows:

1. Intestinal Antiseptics and their Value. To be opened by Dr. Burney Yeo, and Dr. Vaughan Harley will follow with a paper on the subject. The following will take part in the discussion: Dr. Frank M. Pope, Dr. P. Watson Williams, Mr. J. Burdon, Professor W. Osler, F.R.S., Dr. George Herschell, Dr. Alfred Eddowes, and Dr. J. B. Yeo.

2. Headaches and their Treatment. To be opened by Dr. T. Lauder Brunton, F.R.S. The following will take part in the discussion: Dr. C. W. Suckling, Dr. A. Haig, Dr. J. Dundas Grant, Dr. Donald MacAlister, Professor Clifford Allbutt, F.R.S., Dr. W. Dixon, Dr. Harry Campbell, Dr. W. H. H. Jessop, Dr. W. J. Tyson, Dr. George Herschell, Dr. H. Tilley, and Dr. StClair Thomson.

3. The Constitutional Treatment of Skin Diseases. To be opened by Dr. Robert B. Wild. The following will take part in the discussion: Dr. George Thin, Dr. J. C. M. Given, Dr. T. Churton, Dr. T. C. Fox, Dr. E. D. Mapother, Dr. Eliza L. W. Dunbar, Dr. Cave, and Mr. J. Burdon.

The following papers have been offered:

BRUNTON, Lauder, F.R.S. Headaches and their Treatment.
DIXON, Dr. Watson. The Pharmacology of Cannabis Indica.
EDWARDS, J. Hall, L.R.C.P. The Therapeutic Effects of X Rays on Lupus.
EYRE, J. W. H., and WASHBOURN, J. W. Further Experiments with Pane's Antipneumococcic Serum.
HARLEY, Vaughan, M.D. Intestinal Antiseptics and their Value.
MARSHALL, Professor C. C., and TAYLOR, Dr. J. T. An Experimental Investigation into the Treatment of Acute Digitalis Poisoning.
MCWALTER, J. C., M.D. Some Suggestions for the next Pharmacopœia.
SCHEFF, Dr. E. (Vienna). *X*-Rays in the Treatment of Skin Diseases.
SIBLEY, W. K., M.D. The Therapeutics of Light and Heat.
WALSHAM, Hugh, M.D. Cases Treated by Erythrol Tetranitrate.

Dr. George Herschell will exhibit a new combined Galvanic and Faradic Battery for use in general practice; new Apparatus for administering the Intragastric Needle-bath; also an improved Apparatus for Washing-out the Stomach.

K.—LARYNGOLOGY AND OTOLOGY.

Board Room, Guardians' Offices, St. Michael's Road.

President: E. CRESSWELL BABER, M.B. *Vice-Presidents:* JOSIAH GEORGE BLACKMAN, M.D.; PATRICK WATSON WILLIAMS, M.D. *Honorary Secretaries:* HERBERT TILLEY, M.D., 101, Harley Street, W.; LYSTER COLE-BAKER, M.D., Bayfield, Kent Road, Southsea; THOMAS ARTHUR MUNRO FORDE, M.R.C.S., 21, Clarence Parade, Southsea.

The following subject has been selected for discussion:

Thursday, August 3rd.—The Diagnosis and Treatment of Chronic Empyema of the Frontal Sinus. To be opened by Mr. Charters Symonds (London) and Dr. E. J. Moure (Bordeaux).

The following gentlemen have promised to take part in the discussion: Ernest Waggett, M.B., Macleod Yearsley, F.R.C.S., H. Scheppegrell, M.D. (Orleans), Sargent Snow, M.D. (Syracuse, N.Y.), W. Milligan, M.D., W. J. Nourse, F.R.C.S.E., Dr. Spiess (Frankfort), Dr. Costinu (Bucharest), Dr. Posthumus Meyjes (Amsterdam), Charles Warden, M.D., StClair Thomson, M.D., Mayo Collier, F.R.C.S., Guiseppe Nuvoli, M.D. (Rome), J. H. Bryan, M.D. (Washington), Dr. Dundas Grant, Dr. William Hill, Dr. Herbert Tilley, F.R.C.S., Dr. Giuseppe Gradenigo (Turin), Dr. Laubi (Zurich), Dr. Scanes Spicer, Dr. Goldstein (St. Louis), Dr. Kipp (New York), and Dr. Rudolf (Wiesbaden).

The following papers have been offered:

BAR, Louis, M.D. (Nice). Intralaryngeal Tumour and Nasal Exostosis (probably Tertiary Syphilitic).
BOBONE, Dr. T. (San Remo.) Title not announced.
BRONNER, A., M.D. The Use of Formalin in Atrophic Rhinitis.
DENCH, E. B., M.D. (New York). The Diagnosis and Treatment of Epidural Abscess.
DOWNIE, J. Walker, M.B., C.M. (Glasgow). On Syphilitic Ulceration of the Trachea.
GARNAULT, Dr. (Paris). Les Ventriloques et les Inspirés parlants dans l'Antiquité et en particulier chez les Sémites et chez les proto-Sémites.
GRANT, Dundas, M.A., M.D., F.R.C.S. On Some Forms of Laryngitis consequent on Purulent Affections of the Nose.
HORNE, Jobson, M.D. Pachydermia Laryngis: Some Points in its Pathogenesis and Clinical Features, with a Lantern Demonstration of Cases, Specimens, and Sections.
LACROIX, P., M.D. (Paris). A new Apparatus for Inhalations: its application in the treatment of Tuberculous Laryngitis.
LAKE, R., F.R.C.S., and POLLARD, J., M.R.C.S. (1) Case of Exophthalmic Goitre cured by Removal of One Lobe of Thyroid. (2) Ossiculectomy for the Cure of Middle-ear suppuration.
LUC, Professor, M.D. (Paris). Observation on a Fatal Case of Frontal Sinus Empyema.
MALHERBE, A., M.D. (Paris). Treatment of Chronic Suppuration of the Attic by scooping out (*Evidement*) of the Petro-Mastoid.
MELZI, Urbano, M.D. (Milan). Roentgen Ray Photograph of Needle in Subglottic Region of Child 6 years old.
MEYJES, Posthumus, M.D. (Amsterdam). Case of Accessory Thyroid Gland at the Base of the Tongue.
MILLIGAN, W., M.D. (1) The Operative Treatment of Post-influenzal Suppurative Mastoiditis. (2) Two Cases of Malignant Degeneration of Originally Benign Nasal Polypi.
MOURE, E. J., M.D. (Bordeaux). A Case of Acute Empyema of the Maxillary Antrum.
NEWMAN, David, M.D. (1) Malignant Disease of the Pharynx and Œsophagus, with cases. (2) Adenoid Disease of the Vault of the Pharynx in its Relation to Tuberculosis in Children.
ROHRER, Dr. Fritz (Zurich). Anomalies of Development of the Auricle, with illustrative Photographs, Drawings, etc.
RÖPKE, Dr. (Solingen). Author's Method of Operation on Frontal Sinus.
ROSENBERG, A., M.D. (Berlin). Consequences of Singers' Nodules.
SANTI, P. de, F.R.C.S. Parathyroid Tumour causing Symptoms of Malignant Disease of Larynx and Œsophagus: Removal: Recovery.
SPICER, Scanes, M.D. Two Cases of Chronic Maxillary Empyema: (1) Large Alveolar Opening, Curettement, Irrigation, etc; (2) Trephining from the Nose, Curettement and Irrigation after Partial Inferior Turbinectomy.
TANSLEY, J., M.D. (New York). A new operation for the Correction of a Deviated Septum.
THORNE, Atwood, M.B. Laryngeal Vertigo, with an account of three new cases.
TILLEY, Herbert, M.D., F.R.C.S. History of a Fatal Case of Chronic Frontal Sinus Empyema (with specimen).
WAGGETT, E., M.B., B.C. Cerebellar Abscess secondary to Chronic Middle Ear Suppuration; Evacuation; Cure.
YEARSLEY, McLeod, F.R.C.S. Suprarenal Capsule in Rhinology.

L.—Tropical Diseases.

Committee Room, No. I, Town Hall.

President: GEORGE THIN, M.D. *Vice-Presidents:* Colonel KENNETH McLEOD, M.D.; JAMES WATSON, M.D. *Honorary Secretaries:* Fleet-Surgeon JOHN TYNDALL, R.N., Tresco, St. Ronan's Road, Southsea; JOHN ROBERT STEVENSON ROBERTSON, M.B., 5, Western Parade, Southsea.

The subjects arranged for discussion are as follows:

1. Psilosis or Sprue; its Relations (Etiological and Pathological) to other Forms of Tropical Diarrhœa, and its Treatment.

2. On Thermic Fever (so-called Siriasis), with Special Reference to its alleged Microbic Causation.

3. The Agency of Insects in Spreading Infections.

Amongst those who have consented to take part in these discussions are Dr. Thin, who will open the first subject, and Colonel Kenneth McLeod, I.M.S., the second, Dr. Nuttall (Cambridge) will open the discussion on the third. Major John Ritchie, R.A.M.C., will take part in the discussion.

The following also intend to take part in the above discussions or send papers: Dr. Patrick Manson, LL.D., F.R.C.P., Inspector-General A. Turnbull, M.D., R.N., Dr. W. J. R. Simpson, Mr. James Cantlie, F.R.C.S., Colonel Crombie, I.M.S., Fleet-Surgeon H. M. Ellis, Royal Marine Artillery, Dr. James Watson, Staff-Surgeon Andrews, M.B., R.N., Captain Hughes, R.A.M.C., and Surgeon Stalkartt, M.D., R.N.

The following papers have been offered:

ANDREWS, Staff-Surgeon, O. W., R.N. Antivenene.
CANTLIE, James, F.R.C.S. Suprahepatic Abscess.
CHILDE, C. P., F.R.C.S. A Case of Bilharzia Hæmatobia with Specimens.
DUNCAN, Lieutenant-Colonel Andrew, I.M.S. The Treatment of Malarial Fever in India by different drugs.
FAULKENER, Alex. S., F.R.C.S.Ed., I.M.S. (ret.). Malarial and Climatic Neuralgia and its Treatment.
HUGHES, Captain, M. L., R.A.M.C. The Geographical Distribution of Undulant (Malta) Fever.
MANSON, Patrick, M.D. Filaria Periodicity.
MULLICK, Sarat K., M.B. The Common Form of Tropical Diseases met with in General Practice in England.
STALKARTT, Dr. Blackwater Fever.
YARR, M. T., Major, R.A.M.C. A Further Contribution to the Study of Malarial Eye Affections.

Reception Rooms.

The Lower Albert Hall, Commercial Road, will be opened on Monday from 4 P.M. to 9 P.M., July 31st, and on Tuesday, August 1st, and the following days at from 9 o'clock to 6 P.M., for the issue of tickets to members and for supplying all necessary information. It is particularly requested that all members on their arrival will at once proceed to the reception room, Lower Albert Hall, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult list of lodgings, hotels, etc.

Members should book to Portsmouth Town Station for the Reception Room and most parts of Southsea; and only book to Southsea Station when they know their destination is at East Southsea.

Special Railway Arrangements.

The following railways have consented to convey members and their wives at a fare and a quarter for the return journey from July 29th to August 7th:

The Great Central Railway.
The Great Eastern Railway.
The Great Northern Railway.
The Great Western Railway.
The Lancashire and Yorkshire Railway.
The London, Brighton, and South Coast Railway.
The London and North-Western Railway.
The London and South-Western Railway.
The Midland Railway.
The North-Eastern Railway.

This arrangement for the issue of cheap tickets in connection with large gatherings has been made by the various railway companies as an experiment for this year only, and the question of its continuance another year will be largely determined by the smoothness of working of the Portsmouth bookings.

There will be a late boat train leaving Portsmouth on August 1st, 2nd, 3rd a little after 11 P.M., and a late train in connection will leave Ryde Pier Head at 12 o'clock to Brading, Sandown, Shanklin, Wroxall, and Ventnor.

Clubs.

The Freemasons' Club will make honorary members of all members attending the meeting of the Association for the week.

The Royal Naval Club, the Royal Portsmouth Corinthian Yacht Club, and the Minnesingers make honorary members for the week of fifty of the members of the Association only, and these will have a special card issued to them.

As the Association meeting is held during Cowes week, no honorary members will be admitted to the Royal Albert Yacht Club, as a large number of its own members are expected that week.

Swimming Club.—Weekly tickets at 1s. 6d. each are issued to visitors by the Portsmouth Swimming Club, for the purpose of bathing from their stage during specified hours.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 1ST, 1899.

9.30 A.M.—Meeting of 1898-99 Council. Town Hall, Council Chamber.
11.0 A.M.—Church Service; Sermon by the Right Reverend the Lord Bishop of Winchester, at St. Mary' Portsea.
11.0 A.M.—Special service, High Mass, and sermon by the Right Rev. Monsignor Cahill, at St. John's Roman Catholic Cathedral, Edinburgh Road, Portsmouth, for the Roman Catholic members of the British Medical Association.
2 P.M.—First General Meeting. Town Hall, Large Hall. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2 P.M. Town Hall, Large Hall. President's Address.

WEDNESDAY, AUGUST 2ND, 1899.

9.30 A.M.—Meeting of 1899-1900 Council, Town Hall, Council Chamber.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Second General Meeting. Town Hall, Large Hall. Address in Medicine by Sir Richard Douglas Powell, Bart., M.D.
3.30 to 6.30 P.M.—Garden Party by Mayor of Portsmouth at Portsmouth Borough Asylum, Milton (number unlimited). Conveyances will be provided at the Town Hall to convey guests to Asylum.
9 P.M.—Reception by President and Reception Committee on Clarence Esplanade Pier.

THURSDAY, AUGUST 3RD, 1899.

9.30 A.M.—Meeting of Council. Town Hall, Council Chamber.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Third General Meeting. Upper Albert Hall, above the Reception Room, Albert Hall. Address in Surgery by Professor Alexander Ogston, M.D. Presentation of Stewart Prize to Surgeon Frederick James Abercrombie Dalton, R.N.
3.30 to 6.30 P.M.—Garden Party by Inspector-General Macdonald, C.B., and Medical Officers of R.N. (active and retired), limited to 250. Launch from Point, Broad Street, Portsmouth, to Haslar Pontoon from 3.15 P.M.
3.30 to 6.30 P.M.—Garden Party by Colonel Commandant Poore and officers Royal Marine Artillery at Eastney Barracks (limited to 200).
4 to 6 P.M.—Mr. Benjamin Barrow, St. John's Lodge, Ryde, will be pleased to receive guests.
7 P.M.—Public Dinner of the Association. Town Hall, Large Hall.
9 P.M.—Reception by Ladies Committee, the Mayoress and Mrs. Lloyd Owen will receive the guests in the Mayor's Reception Room, Town Hall.

FRIDAY, AUGUST 4th, 1899.

10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting. Upper Albert Hall, above the Reception Room. Albert Hall.
3.30 to 6.30 P.M.—Garden Party by Mr. Montagu Foster at Shibbington. Conveyances from Gosport *via* Alverstoke and Lee-on-Solent.
3.30 to 6.30 P.M.—Garden Party by Director-General Nash and Officers R.A.M.C., Netley. Limited to 200. Return fare, 1s. 3d.; cab fare from station, 1s. 6d. Trains leave Portsmouth Town Station 2.40 and 3.35, arriving at Netley 3.14 and 4.25; returning from Netley 6.16, arriving at Portsmouth Town 7.7 P.M.
9 P.M.—Ball to the Association by his Worship the Mayor of Portsmouth.

SATURDAY, AUGUST 5TH, 1899.

Excursions.
2 to 7 P.M.—Surgeon-General Cuffe, C.B., and Officers, R.A.M.C., will entertain a party (of 200) on board ss. *Dandie Dinmont*, for an Excursion which will start from the Clarence Pier at 2 P.M. for Solent, Cowes, and if time permits, round Isle of Wight.
P.M.—Grand Military Tattoo by Massed Bands of the Garrison (Military Spectacle, Torchlight Procession, Grand Display of Fireworks by C. T. Brock and Co.), at Men's Recreation Ground, Portsmouth. Gates open 7.30 P.M., commencing 9 P.M. Members will be admitted to enclosure on presenting cards of membership.

Honorary Local Secretaries.

C. C. CLAREMONT, M.D., 57, Elm Grove, Southsea.
C. P. RUEL, M.R.C.S., L.R.C.P., Cromwell House, Kent Road, Southsea.

ANNUAL MUSEUM.

The Annual Museum in connection with the sixty-seventh meeting of the British Medical Association will be arranged in the following Sections:

SECTION A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

SECTION B.—Instruments comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

SECTION C.—Books, including diagrams, charts, etc.

SECTION D.—Sanitary Appliances and Ambulances.

A fine and well-lighted hall will this year be utilised for the purposes of the Museum. This room is 150 feet in length and 60 feet in width, and is in close proximity to the Reception Room. Section D will be held in the Swan Street Board School, a short distance from the Drill Hall.

H. RUNDLE, F.R.C.S., *Chairman*,
13, Clarence Parade, Portsmouth.
R. EMMETT, M.R.C.S., L.R.C.P.,
Winton House, North End, Portsmouth.
JAMES MCGREGOR, L.R.C.P. & S.Edin.,
9, St. Mary's Crescent, Portsmouth.

PATHOLOGICAL MUSEUM.

Specimens of interest for exhibition in the Museum should be forwarded, addressed to the Secretary of the Pathological Museum, British Medical Association, Boys' School, Seaman's and Marines' Orphan Home, Portsmouth, during the last week in July; and a brief description of each exhibit will be inserted in the Museum catalogue. Secretary of the Pathological Museum, A. Bosworth Wright, M.R.C.S., L.R.C.P., 83, Kingston Road, Portsmouth. All specimens must be mounted ready for exhibition.

EXCURSIONS.

Railway Arrangements.—The London and South-Western Railway Company and the London, Brighton, and South Coast Railway Company have promised to issue return tickets at single fares, available for day of issue or following day, from Portsmouth to all places within fifty miles, during the week of the meeting, and fare and a-quarter from London and other places for whole meeting, to members on showing their card of identification. Applications for particulars may be made at the booking office, Portsmouth. All the excursions start and finish at Portsmouth, but from most it will be possible to catch evening connections to London and other towns. The following are the excursions (as at present arranged).

Isle of Wight Excursion.—This excursion leaves Clarence Pier, and proceeds by boat *via* Ryde to Cowes, passing by Osborne, the marine residence of the Queen, who will be there during the early part of August. From Cowes the route is by rail to Newport, where coaches will meet the party and drive to Carisbrooke Castle. Here the Isle of Wight members of the Association will kindly entertain the party to the number of 120 at lunch; and after viewing the grounds and "donkey," by kind permission of the Deputy Governor, the party will again start for Ventnor, passing by way of Chale, Blackgang, and Niton along the Undercliff. At Ventnor the party will (if there be time) be shown over the National Hospital for Consumption. From Ventnor the party will start through Bonchurch to Shanklin, where an opportunity of viewing Shanklin Chine will be given if time allows. From thence the party will go to Sandown, where the party will entrain for Ryde to catch the special boat, which arrives at Portsmouth Harbour in time for the London train. This is really a splendid excursion, and none better could be devised to show so much of the island in so short a time.

Southampton and New Forest Excursion.—This excursion leaves Clarence Pier by the same boat as the Isle of Wight excursion. Passing by Ryde and Cowes the excursionists proceed up Southampton Water, having on the right hand Netley Hospital and on the left Calshot Castle and Hythe. Having arrived at Southampton, the party is met by char-a-bancs and driven by way of Totton to Rufus's Stone, and then on to Lyndhurst. At the Crown Hotel lunch is kindly supplied by the Southampton members of the Association. Sufficient time will be allowed to wander through the Forest in the immediate neighbourhood. The return journey will be straight from Lyndhurst to Southampton.

The Winchester Excursion.—This excursion leaves Portsmouth Town station. On arriving at Winchester the party will be met and shown over the Cathedral and Westgate, also the Castle before lunch. Lunch will be provided at the Banqueting Hall through the kind hospitality of the Win-

chester members of the Association. After lunch carriages will be supplied to take the members by way of St. Giles's Hill to visit Winchester College and St. Cross. On returning the Winchester members again kindly supply tea in the Banqueting Hall.

The Salisbury Excursion.—The members of this excursion leave Portsmouth Town station for Salisbury. Before lunch they will view the Cathedral and town. Here, again, the local practitioners supply lunch. Afterwards the party drive a distance of eight miles to view Stonehenge, and on the way back Dr. Barcroft, of Amesbury, has most hospitably offered them tea at his house, which is only half a mile distant. The carriages will return to Salisbury in time to catch the various trains.

The Haslemere Excursion.—Mr. Jonathan Hutchinson, senior, has kindly invited a party to Haslemere to view his educational museum. This party leaves Portsmouth Town station. On arrival the party will view the museum. Mr. Hutchinson has also invited the members to a picnic lunch and offers to show members the beauties of this really charming locality. Later on tea will also be supplied by their hospitable host in time for the members to catch their trains.

MINOR EXCURSIONS.

The following excursions, etc., have also been arranged. On Tuesday at 3.30 P.M., a party limited to 120 will leave by launch for Porchester Castle, where a substantial tea will be provided. Mr. A. E. Summers, M.A., will lecture.

On Wednesday, Thursday, and Friday, H.M.S. *Excellent* and *Vernon* can be visited. On Wednesday and Friday the Royal Naval Hospital, Haslar, can be inspected. Members will proceed by steam launch from Portsea Hard, or by floating bridge, or by steam launch, by Point Portsmouth to Gosport. The hospital is a mile and a-half from Gosport landing stage.

On Thursday Dr. Kidd (Medical Superintendent, West Sussex Asylum) invites members of the Psychological Section to visit Chichester and Goodwood (50 tickets). Train 1.55 P.M. from Portsmouth Town Station, returning 6.7 P.M. and 6.29 P.M.

On Friday the Royal Clarence Victualling Yard can be visited at 10 A.M. and 2 P.M. Each party limited to 150. On the same day the directors of the Borough of Portsmouth Waterworks Company invite a party of 60 to visit their works at Emsworth, and to afternoon tea. Trains leave Portsmouth Town Station for Havant at 2.30, 3.2, 3.10, 3.25 P.M., returning 5.11, 5.25, 5.28, 6.19 P.M. On Friday also the Superintendent of the Isle of Wight County Asylum, Newport (Dr. Shaw), will arrange for a party to visit Carisbrooke Castle, and will entertain them to tea (50). The party will go by boat to Ventnor, thence by coach to Carisbrooke; then from Newport by train to Cowes or Ryde. On the same day Dr. A. Means Fraser, M.O.H., will arrange for visitors to view the Portsmouth Drainage Works. For further particulars apply to Secretary, Section of State Medicine; and a party (30 or 40) will visit Stallard's Parchment Works at Havant.

NOTICES OF MOTION.

Dr. T. M. NAIR (Madras) gives notice that he will move:

That the present constitution of the Civil Medical Service of India, whereby all important educational, scientific, and sanitary appointments are exclusively reserved for members of a military medical service—namely, the Indian Medical Service, who are only lent for civil work till required for war purposes—is wrong in principle, prejudicial to the interests of medical education, science, and sanitation, and unsuited to existing conditions and requirements; and that in the interests of medical education and sanitation in India, and for the general advancement of medical science, the Civil Medical Department should cease to be an appendage of, or a close reserve for, a military service, and all educational, scientific, and sanitary appointments in the department should be thrown open to the best talent available from the open profession of medicine.

Mr. MACNAMARA gives notice that he will move:

That the British Medical Association begs to urge on Her Majesty's Government the necessity for appointing a departmental committee to inquire

(1) As to the extent to which venereal disease prevails among the civil population of Great Britain irrespective of its temporary increase or decrease.

(2) To collect information as to the present arrangements for the treatment of venereal disease, the distribution of hospitals and the number of beds available in different places, and to make suggestions as to the more efficient provision for the treatment of the disease.

(3) To collect suggestions and to express opinions as to the means that can be advised for preventing or limiting the spread of venereal disease among the civil population of this country.

That the above resolutions (if carried) should be forwarded to the President of the International Congress on Venereal Disease which meets at Brussels in October, 1899, urging the Congress to support these views in order that a uniform plan of action may be followed to mitigate the spread of this terrible disease among the people of Europe.

Dr. J. BRASSEY BRIERLEY gives notice that he will move:

That this meeting records its appreciation of the attitude of Mr. T. P. O'Connor and Mr. W. J. Galloway towards the Midwives Bill recently before Parliament, and begs to assure these gentlemen that, in the main, their objections to the proposals (as reported in the *Times*, April 13th, 1899) are shared by a large majority of the medical profession.

That this meeting regrets the course adopted by Sir William Priestley during the second reading debate upon the Midwives Bill recently before Parliament (as reported in the *Times* of April 13th, 1899) in stating that "it was quite true that there was a certain amount of opposition to the Bill among a certain section of the medical profession, but the danger likely to arise to the interests of medical practitioners had been greatly exaggerated. The object of the Bill was to secure that women of the poorer classes should have the assistance of properly skilled midwives."

Dr. J. BRASSEY BRIERLEY gives notice that he will also move:

That this meeting condemns the action of those members of the British Medical Association who continue to lecture to persons other than duly-recognised medical students—upon midwifery and the diseases of women and children—and records its displeasure at the free distribution, by certain unauthorised examining bodies, of certificates and diplomas to these irregular persons, asserting that the holders of such documents are "skilled" in the practice of midwifery.

Dr. SARAT K. MULLICK gives notice that he will move:

That having regard to the fact that persons possessing no knowledge of medicine are by law allowed the same right to practise in India as fully qualified practitioners, this Association considers it advisable that there should be a system of registration to protect the public from the mischievous machinations of charlatans; it further undertakes to do all in its power to carry this resolution into effect.

Mr. GEORGE JACKSON gives notice that he will move:

That the Council be requested to ascertain from the Council of the Birmingham and Midland Counties Branch of the Association whether any of the present medical officers of the Coventry Provident Dispensary are members of the British Medical Association, and, if so, that they be called upon to explain why they still continue to give their services to that institution.

Mr. GEORGE BROWN gives notice that he will move:

That this meeting requests the Council to take such action as they may find expedient to facilitate the formation of a Conciliation Board in reference to medical attendance on members of clubs and friendly societies.

Mr. R. F. TOMLIN gives notice that he will move:

That this meeting requests the Council to take measures to support in every lawful manner the rightful claims of the constituents of the several medical corporations to choose, as they are by law entitled, the corporate members of the General Medical Council: and also to assist and support the members of the Royal College of Surgeons of England in securing (as constituting the body corporate of the College) a rightful and satisfactory voice in the conduct of its affairs.

Dr. F. LORIMER HART gives notice that he will move:

That the Council be requested to appoint a Committee for the purpose of formulating, and at an early date reporting upon, a scheme of collective defence of the interests and consistent maintenance of the honour of the medical profession, in accordance with the provisions of Paragraph 3 of the Memorandum of Association.

Mr. R. B. ANDERSON gives notice that he will move:

Whereas by Article No. 25 it is provided that "the constitution, duties, powers, and mode of procedure of the Council shall be determined on from time to time by the Association in general meeting"; and by By-law 17 the Association in general meeting has determined that the Branches shall be entitled to elect representatives on the Council, but that in default of such election by any Branch, all the powers conferred on the Council shall belong to, or be exercised by, the *ex-officio* members thereof; but the representatives of Branches, being a great majority of the Council not elected by the Association in general meeting, repudiate not only their individual responsibility, but that of the Council to the Association in general meeting, and the Association in general meeting is without means of giving effect to its "determinations," that the Council be requested to bring forward by-laws providing for the election of ten ordinary members of Council by the Association at the annual meeting, to constitute, with the officers of the Association, an Executive Committee of the Council.

Mr. VICTOR HORSLEY gives notice that he will move:

That any draft Bill for the amendment of the Medical Acts shall contain, *inter alia*, provision for further direct representation of the profession on the General Medical Council, and for the establishment of a one-portal system of qualifying examination.

FRANCIS FOWKE, *General Secretary*.

429, Strand, July, 1899.

AN asylum for lepers was opened at Memel on July 18th in the presence of the Prussian Cultus-Minister.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

The Samaritan Hospital for Women.—The Hayden Cure for Inebriety.—Failure to Notify Yellow Fever on Board Ship.—The Cancer and Skin Hospital.—The Hospital Sunday and Saturday Fund.

Of the four general hospitals in Liverpool the Royal Infirmary alone has a special department for diseases peculiar to women, and the great majority of cases of this class, requiring gratuitous relief, have for many years applied either there or at the Hospital for Women in Shaw Street. During the last few years the city has been rapidly extending in area, and a large district, stretching about two or three miles to the south, formerly rural, has become the seat of a large industrial population. About two years ago a Committee was formed, and a dispensary, with a small number of beds attached, was opened in St. James Street, at the south end of the city. The institution, which is known as the Samaritan Hospital for Women, has steadily progressed as regards both the number of attendances and the amount of financial support it has received, and it bids fair to become in time one of the most important special hospitals in the city. About 700 patients have attended since the hospital was opened, and the numbers are increasing rapidly, as is clear from the fact that the attendance during the last six months is equal to that during the whole of 1898. At first the medical staff consisted of Dr. Mary B. Lee, physician, and Mr. G. A. Hawkins-Ambler, surgeon, the late Mr. Lawson Tait being consulting surgeon; but it was speedily augmented by the appointment of Dr. E. T. Davies, formerly of the Hospital for Women, as surgeon. At the last annual meeting it was decided to appoint an assistant-surgeon, an office which has been accepted by Dr. Alexander Stookes, medical officer to the Ladies' Charity. The report shows that the finances are in a satisfactory state, and it has been decided to place the arrangements for in-patients on a permanent footing.

A scheme has lately been started in Liverpool for the cure of intemperance by what is known as the Hayden treatment. It is stated that a cure is effected by the administration of a certain drug which was discovered some years ago by an Irish-Canadian named Hayden, and an institution has been established and is carried on by a company known as the Hayden Cure for Intemperance Syndicate, Limited, for the purpose of treating persons who are the victims of intemperance. It is considered necessary to keep the nature of the medicine employed a profound secret, and even the locality of the institution is known to a few only. Patients are allowed to enter under assumed names, and are not subjected to any kind of restraint. They are provided with various healthy recreations, a good table is kept, and for those who have a mind to a hair of the dog that bit them alcoholic drinks are supplied. It is stated that the cure is usually complete in three weeks, and that it is permanent in 75 per cent. of the cases. It is also said that the morphine habit can be cured by the same means, but in a longer time. Some of the statements are scarcely consistent with each other. On the one hand, we are told that the remarkable recoveries are due to the medicines administered, while on the other hand we are assured that the drugs employed are for the most part not more powerful than those employed in the treatment of an ordinary cough or cold. It is also stated that it is necessary to keep the nature of the remedy a secret. Considering the immense moral influence claimed for it, the necessity of keeping it secret must be painful to those who are supporting the institution from purely philanthropic motives. Amongst those who have given their names in support of the scheme are Cardinal Vaughan, Archdeacon Madden, Mr. A. L. Jones, and many others well known in philanthropy and commerce. So long as the nature of the drugs used is kept a secret, the medical profession will look upon the scheme with great suspicion.

At the City Police-court the surgeon of the ss. *Sobralense*, which arrived here from Brazil on July 10th, was summoned for having neglected to comply with the regulation of the Local Government Board, which requires the medical officer to inform the Customs officer who visits the ship on her arrival from foreign ports whether any case or suspected case of cholera, yellow fever, or plague has occurred on board in the course of the voyage. It appears from the evidence that the surgeon informed the Customs officer that a death had taken place during the voyage from "relapse," and subsequently filled up a form stating that there had been no case or suspected case of yellow fever cholera or plague on board. When the vessel was visited later by Dr. N. E. Roberts, the Assistant Port Medical Officer, he was informed by the surgeon that the death was due to yellow fever. The deceased was an Armenian priest who became ill on leaving Para and the surgeon, who had had no previous experience of such cases, believed that he was suffering from yellow fever. On reaching Madeira he was convalescent. The surgeon informed the authorities of the case, and the vessel was placed in quarantine. The owners were also notified by telegram that there was a case of yellow fever on board. Before the vessel reached Lisbon the priest had a relapse, and died from exhaustion. The Lisbon authorities were informed, the body was buried, and the vessel was disinfected. It seems obvious that there was no intention on the part of the surgeon to conceal the matter, otherwise he would not have spoken as he did to Dr. Roberts, and it is difficult to avoid the conclusion that he filled in the form stating that there had been no case of any of the diseases specified without fully comprehending its purport. The magistrate considered that a serious offence had been committed, and fined the surgeon £3 and costs.

The difficulties at the Cancer and Skin Hospital have entered upon a new phase. Some time ago the Committee advertised for three medical officers to take the place of the late members of the staff, of whom two had been dismissed and one had resigned. Of those who applied, the Committee selected three names on the recommendation of a medical gentleman who holds a high position in University College, and whose assistance was invoked in order to form a staff. The Committee issued a circular to the subscribers of the hospital asking them to elect their nominees, and stating that unless these gentlemen were elected they (the Committee) would resign. The special meeting of the subscribers, however, declined to support the Committee, and elected three of the other candidates by an overwhelming majority. The successful candidates are Dr. H. Lyle, Dr. M. T. Mahony, and Dr. F. McCracken. Dr. Lyle has been Assistant Surgeon to the hospital for some years, and although he was not one of the Committee's nominees, possesses an excellent testimonial from that body. In consequence of their recommendations having been rejected by the subscribers, the Committee have announced their intention of calling a special meeting and tendering their resignation.

The annual distribution of the Hospital Sunday and Saturday Fund has just been made. The total amount available for distribution is £13,070, which is the largest on record, and exceeds last year's amount by £600. The proportion given to each of the charities is the same as last year, but a special grant of £200 has been made to the Stanley Hospital, in recognition of the recent extension of that institution, which has involved a large outlay. The grant to the Cancer and Skin Hospital, which last year amounted to £180, has been withheld.

SHEFFIELD.

Epidemic Disease.—The Sewage Difficulty.—The Coroner on Post-mortem Examinations.—The Hospital Saturday Fund.

SANITARY matters are making a considerable stir at the present time. The prevalence of diphtheria was mentioned in a former letter. The medical officer of health has now directed the closing of certain schools, and in others the usual holiday at this time of the year has been prolonged. In the report of the medical officer of health to his Committee, he says that in June there were 232 cases of diphtheria as compared with only 9 in the corresponding month of 1898, while scarlet fever was 176 against 101. In typhoid fever the number of cases had just doubled—30 as against 15 in June last year. Altogether, of notifiable diseases there were 472 this year, as compared with 169 last year.

Great complaint has been made in one quarter of the town as to the continued use of a "tip" for night soil at the Bole

Hills, but this, it has been decided, is to be dispensed with as speedily as possible, and destructors are to be provided for different parts of the city. A more serious matter, however, is that of the sewage disposal. The determined attitude of the Local Government Board has brought matters to a crisis, and the difficulties will now have to be seriously met. The Highways and Sewerage Committee have obtained the opinion of Mr. James Mansergh, C.E., as to the efficiency of the sewage disposal works at Blackburn Meadows. He reports that the works which were constructed not a great many years ago, and which at the time were thought to be well in advance of the times, are now to be regarded as obsolete, and that to put the sewerage disposal system into proper condition would involve an outlay of not less than £250,000.

At an inquest a short time since the City Coroner gave a friendly word of advice to a house-surgeon at one of the hospitals, who had made a *post-mortem* examination on a child without his order. The child had tripped over a mat, fallen with her head against a sofa, received a wound on the right temple, and had died later on after admission to the hospital. The medical evidence was to the effect that the cause of death was inflammation of the coverings of the brain arising from tuberculosis; and the remark of the coroner was called forth in consequence of the witness saying that at the time he obtained permission from the mother to make a *post-mortem* examination he was of opinion that the child had died from violence. The coroner pointed out that in this particular instance it did not matter, but such a proceeding in some circumstances might lead to very grave consequences.

The full returns of the Hospital Saturday Fund show the total sum collected to be £1,582 19s. 7d., an increase of £107 3s. 10d. over the amount last year. Since the inauguration of the movement in 1877 the amount distributed has been £28,218.

CORRESPONDENCE.

THE PROPOSED CONCILIATION BOARD.

SIR,—In answer to your request for information as to the friendly societies whose representatives have accepted the scheme for a conjoint Board, I forward you the following official statistics. The adult membership of the societies numbers 2,989,223; the number of juvenile members is 492,449; the total capital of these societies is £23,699,709. The female membership is a comparatively new departure, and its members are estimated at 15,000. The Conciliation Board contemplated by the General Medical Council and accepted by the friendly societies is one to consist of ten members, five to represent the friendly societies and five the medical profession. Doubtless the Board will elect a chairman, possibly from the outside, who will command the respect of both sides. The General Medical Council cannot, for obvious reasons, take part in the formation of such a Board, but trusts that the profession, through its voluntary associations, will accept the principle and make suggestions for the election of its medical members, some of whom obviously should, as Mr. Horder suggests, be connected with friendly societies.

I am afraid that I have no authority to discuss further details; but if the British Medical Association adopts the principle of a Conciliation Board, and expresses its willingness to take part in the nomination of its medical members, I shall be glad to give it any help in my power.—I am, etc.,

Highbury Place, N., July 26th. J. G. GLOVER.

SIR,—As one well acquainted with friendly societies and not ill-acquainted with the medical profession, I venture to ask you to permit me to offer a word of warning to the latter. As the proposed plan of a Conciliation Board at which members of the medical profession "will be able to meet the representatives of the friendly societies on equal terms," cannot get beyond the plan stage until the members of the medical profession had gone such a long way below, and the representatives of the friendly societies have come such a long way above, their present respective moral planes, we need not, perhaps, treat it as very serious. But the idea of discussion on equal terms with these representatives seems already to have had the effect of hurrying some of your correspondents perilously near to the mental standpoint of trades-unionism, and in their letters are found traces of the idea that if only the members of the medical profession could be got to combine and force the General Medical Council to do this or that, something in the nature of a medical living wage could be established. Thus Mr. T. Garrett Horder says: "We as a profession are weak because we are not organised; the friendly societies are strong because they are well organised." But is he not overlooking the fact that the reason why the medical profession is not "organised" is that the normal doctor is a cultivated man who cares much more about the result of his work on his patient than about the amount of his fee for doing it, while the ordinary member of a friendly society takes quite a different view of the matter? The trades-unionist wants to raise his pay. He knows that he can only do this by increasing the demand for his labour or by lessening the number of labourers. He cannot increase the demand beyond a small extent. By his apprenticeship system he can and does limit the number of the members of his profession, causing thereby a great amount of loss and suffering to his fellows. Is this to be the ideal of the doctor?

It may be objected that this is mere sentiment, and that practical men want something to be done. Yes, but in doing that something, let the practical men remember that the public is also practical, very, and that the most probable result of any attempt on the part of the General Medical Council to prevent medical men from selling their services in any way or at any price produced by the haggling of the market would be the relieving of that body of its public functions. Its powers were not granted to it with the view of keeping up the price of medical attendance.—I am, etc.,

July 25th. ION.

SIR,—"The matters in dispute resolve themselves very much into questions of remuneration" (quotation from report of Medical Aid Associations Committee of General Medical Council, May, 1899). If this were true an Association of Friendly Societies' Medical Officers might be competent to come to an agreement with their employers, but as a matter of fact it is not true. The Conciliation Board is recommended as a remedy to cure what the bulk of the profession see is incurable except by eradication, namely, the middleman system. It is clear that an Association of Friendly Societies' Medical Officers cannot legislate or conciliate on the principles of a system which is injurious to, and condemned by, the majority of the profession. It is much more for those members of the profession outside medical aid associations than for the medical officers of the associations to say what is right and proper, and the suggestion that mere increase in payment will settle this question is not worthy of serious consideration.—I am, etc.,

Birmingham, July 25th. LESLIE PHILLIPS.

SIR,—On behalf of the newly-constructed Association o Friendly Societies' Medical Officers I have been instructed to write the Council of the British Medical Association and to point out the extreme necessity of electing on the Board of Conciliation men who have a practical acquaintance with the working of such societies. In the opinion of my Association an opportunity should be afforded by the Council either to hold a meeting or to attend as a deputation before any decision is come to by the Council.

Unless opportunities are afforded of threshing out the scheme propounded by the General Medical Council I am sadly afraid that that scheme will not have the effect intended.—I am, etc.,

Cardiff, July 25th. T. GARRETT HORDER.

SIR,—I entirely concur in Mr. Garrett Horder's argumen in favour of better organisation amongst medical practitioner but I am not convinced of the desirability of establishing Conciliation Board for the purpose of settling the question o club and medical aid work for the whole of the country. This can only be done satisfactorily, in my opinion, by the direct action of the General Medical Council, after a full consideration of the evidence which practitioners engaged in suc work could give. Failing this, the next best course is to try to get local union and to take local action. If, however, the profession is called upon to agree to a Conciliation Board, it is

at least entitled to know the opinions of those whom it is desired to conciliate. Fortunately, this is easily supplied by a reference to the utterances of men representative of the friendly societies.

I venture to offer you a few examples. "The fight was not a new one, and the friendly societies had always been successful; they had fought the question before the General Medical Council, who had refused to censure medical men who took the position of medical officers to them."[1]

At the Bristol meeting of Oddfellows in 1896 it was suggested "that Parliament should be invoked on the side of the medical aid associations;" it was hoped "that the meeting would support them in fighting the medical profession on the question whether people living in £20 houses and earning £2 a week ought to be allowed to claim medical benefit;" and it was "believed that if they dealt with the matter in a thorough spirit the day was not far distant when they would set the medical men on their knees."

At Leamington in 1899 the President of the Conference said that "the medical profession would have to concede the right of friendly societies combining for medical aid apart from their social position. As members of friendly societies they had always resisted any claims put forward by the medical profession to impose any wage or other limit to membership of such associations."

Mr. Lister Stead, one of the five representatives already appointed by the friendly societies to act on the Conciliation Board, has stated "that the medical profession had dropped their claim to impose a wage limit on membership of medical aid associations."

The friendly societies have also very definite ideas with regard to the proposed Conciliation Board. They have passed a resolution to the effect that five representatives should be appointed by themselves and five by the General Medical Council. That these should elect an "independent chairman," and "that no case of dispute be referred to the Conciliation Board, unless the parties concerned express in writing their willingness to abide by the decision of the Board."

It appears to me that the profession would do well to think twice before it attempts to conciliate people who have so clear an idea of what they want, but no idea at all of what others require. Perhaps if they were allowed to be their own doctors for a year or two the members of friendly societies might learn to set a higher value on professional services.—I am, etc.,

R. HANSON WOLSTENHOLME, M.R.C.S., L.R.C.P.Ed.

Salford, July 22nd.

THE MIDWIVES BILL.

SIR,—Mr. Greaves, like many practitioners, has evidently not had the opportunity of considering the midwife question closely, nor has he been able to grasp from the report of my speech at West Ham the facts of the points he discusses. But he makes quite clear that his view of the subject is that which I dealt with fully in the speech he refers to—namely, that the medical profession must follow one of two courses in regard to the midwifery question: either they must oppose all midwifery legislation with a blank negative, or they must take care that any midwifery legislation which is passed for the benefit of the public shall not injure the medical profession. If Mr. Greaves considers it is possible for the profession to stop all midwifery legislation by blank negatives, then I think the Association is entitled to hear from him how this is to be done. If Mr. Greaves had been present at the meeting at West Ham to which I have referred above he would have heard his colleague on the Council of the Incorporate Practitioners' Society, Mr. George Brown, agree with me that the blank negative method was absurd.

The points which Mr. Greaves raises against me and (*in absentiâ*) against Mr. Brown I must briefly allude to. As regards the first point, I have never changed front on this subject, for I have never altered my attitude in regard to it. With reference to the second, I consider that the clauses protecting the profession are adequate. If Mr. Greaves thinks they are not, then let him show how they are not, and it will be for the Parliamentary Bills Committee to take care that his amendments (if they are useful and practicable) shall find a place in any measure that comes before the House of Commons. Referring to the point concerning "covering" a midwife, Mr. Greaves has left out the essentials of this matter by reason of the fact that he has evidently not read the form of Bill approved by the British Medical Association. When he does so I shall be happy to discuss this point.

As regards the term "midwifery nurse" or "midwife," etc., here again Mr. Greaves has not read what has appeared in the last three years in the pages of the BRITISH MEDICAL JOURNAL, otherwise he would not misrepresent what I said at West Ham. Lastly, as to the diploma of the Obstetrical Society, he is apparently not aware of the form of that diploma, nor the fact that the term "midwifery" is used upon it in an unrestricted sense; whereas, even in the Bill now before the House of Commons, which is so hostile to the interests of our profession, there is now contained (in consequence of the recent action of General Medical Council) express limitation of the work of midwives to normal labour alone. Further, no certificate of registration will be issued at all, so that a midwife will have nothing to frame and hang up, as she does now with the diploma of the Obstetrical Society. It is very useful for those who have the responsibility of these matters on their shoulders to receive notes and criticisms, especially by way of correspondence in our JOURNAL, but I think they are entitled to ask of Mr. Greaves that before he writes again he should read the papers on this subject, and which you, Sir, have, so far as I remember, fully published.—I am, etc.,

Cavendish Square, July 21st. VICTOR HORSLEY.

SIR,—Your correspondent Mr. F. Greaves has raised a most important question in asking "Would the medical man undertake the case?" in the event of being sent for by a midwife in a difficult case. The promoters of the Midwives Bill make a great deal of the rule that in an unnatural labour the midwife must send for the medical man, but surely this is asking a great deal of the hard-worked general practitioner, especially if he is to be deprived of all the easy cases which alone enable him to charge small fees. But without dwelling upon this point, I contend that this is placing too much reliance upon so-called midwifery nurses, and must become a source of great danger to the public, especially when we remember that the class of people affected is just that which requires the greatest protection.

I have lately had some trouble with a Nursing Committee which have allowed the district nurse to act as midwife without the doctor, taking it for granted that, should anything go wrong, the medical man would at once come to their assistance, and take over all responsibility. It seems to me that this is exactly what will happen should the Midwives Bill become law, and this is another reason for increasing the number of direct representatives on the General Medical Council.—I am, etc.,

Stradbroke, July 24th. A. H. FRERE.

THE BRITISH MEDICAL ASSOCIATION AND ETHICAL QUESTIONS.

SIR,—I have read the letter of Dr. C. E. S. Flemming in the BRITISH MEDICAL JOURNAL of July 15th with very great interest. He may not be aware that Dr. Garrett Horder was the energetic Honorary Secretary of the Ethical Section of the British Medical Association, and that such subjects as are mentioned in his letter were dealt with at the London and Carlisle meetings. This Section was discontinued at Edinburgh, and there is no evidence that there is to be such a Section at Portsmouth. What, then, is Dr. Horder to do? What more practical suggestion can be made than his—namely, to have a union of club doctors? Now that the suggestion has been made the sooner it can be carried out the better, and I trust that Dr. Flemming will at once give it his support. There will be no need for his relaxing his efforts in his own Branch of the British Medical Association. If the Union goes on it will bind all the club surgeons in the country together. If the Branches take it up it will give impetus to the National Union. Let us organise in all manner of ways and strengthen the profession in all parts of the country.

I am certain many members will regret that there is to be no Ethical Section at Portsmouth. Never was there a time more ripe for the discussion of ethical questions than the

[1] BRITISH MEDICAL JOURNAL, January 23th, 1896.

present, especially the manner in which the General Medical Council has at the recent session dealt with the resolution of the Council of our Association respecting increasing the number of direct representatives, as well as the recent declaration of Mr. Brudenell Carter that the recent disapproval of the General Medical Council of touting and canvassing is only a "pious opinion!"—I am, etc.,

Manchester, July 15th. G. H. BROADBENT.

THE ORGANISATION OF THE PROFESSION AND THE GENERAL MEDICAL COUNCIL.

SIR,—I am sure that your readers feel indebted to Mr. Thomas Bryant, F.R.C.S.Eng., etc., for his address, but to my mind both he and others of his standing in the profession, whilst prone to theorise and lecture their lesser fortunate brethren, never even hint at the cruel injury which the majority of the visiting hospital surgeons and physicians inflict on the profession at large by reason of their sustaining one of the greatest evils the profession is suffering from—namely, hospital abuse, by which thousands of general practitioners are defrauded annually and subscribers to hospitals deceived.

I was astounded to find that the meeting of the General Medical Council closed without any reference whatever being made to this monstrous injustice perpetrated upon the bulk of the profession.

I think whilst the various hospital surgeons and physicians before referred to are themselves guilty of what I consider is "professional infamous conduct" in its true sense, it is absurd and unjust to make it "infamous conduct" for a general practitioner to offer his services at a price which he is compelled to do solely in order to prevent his patients from attending hospital where they can obtain advice from the leaders of our profession free, as also medicine.

Then again the subject of the "consulting chemist" should be taken up. Every chemist nowadays advises and prescribes continually daily. The compressed drug manufacturer supplies retail drapers, etc., with his dangerous drugs, which are sold direct to the public, whilst the unfortunate general practitioner cannot even think of employing an experienced unqualified assistant, even under supervision.

These and other undoubted grievances will, to my mind, never be attended to successfully or fairly unless and until the general practitioners take definite energetic measures to protect their interests, applying, if necessary, to Parliament for special powers to manage their own affairs, independently of the General Medical Council.—I am, etc.,

July 24th. R. B. W.

P.S.—I may mention that I hold no medical aid or club, or any other appointment whatever.

THE DUTY OF THE PROFESSION WITH REGARD TO ALCOHOL.

SIR,—After stating in his address, published in the BRITISH MEDICAL JOURNAL of July 22nd, that "Amongst nations, those inhabiting the extremes of temperature are now the most sober," Dr. Macfie continues: "Dr. Archdall Reid argues that the most intemperate races are the primitive ones, who have the dormant desire stirred up to uncontrollable craving after once tasting alcohol, and that the older nations are now temperate because, as he says, 'those individuals who most delighted in it (alcohol) were eliminated,' and he instances the Greeks, the Italians, the French, the Spaniards, the Portuguese, as the most temperate of nations. But why not also the dwellers in Arctic regions, who have always been temperate?" For the good and sufficient reason, as it seems to me, that the races of the entire Arctic circle, so far from being sober, are, when they have the opportunity, amongst the most intemperate on earth—so intemperate that, given sufficient alcohol, they drink to extinction. If Dr. Macfie desires, I shall be delighted to supply chapter and verse in proof. As regards the torrid zone, it is true that certain non-savage races of Africa and Asia are sober; but in every instance these races are protected by a religion so fanatical as to render them barbarous, or by the prevalent use of another powerful narcotic, or because they have been weeded out for ages by alcohol, or by two or more of these causes combined. But in the rest of the torrid zone where alcohol has been used little or not at all, America, Australia, Polynesia, Micronesia, the Papuan Archipelago, the aborigines, like the Esquimaux, drink to extinction when afforded the opportunity. Here, again, I am prepared to offer chapter and verse. As Dr. Macfie states, I have attributed the sobriety of all races which are temperate notwithstanding the presence of an abundant supply of drink to alcoholic selection. Will he disprove that proposition in a single instance? He has only to tell us of one race which was moderate in its desires when first introduced to alcohol, or of a race, long afflicted by abundant supplies of alcohol, which has not become more sober during the lapse of ages. He has the history of the whole world to delve in. I propose to bring this question before the Psychological Section of the Association at the forthcoming meeting, when Dr. Macfie and those who think with him will have ample opportunity of controverting me.

According to Dr. Macfie, "there are but two sure measures for the cure of the inebriate—want of easy opportunity in his daily life to obtain drinks, and power to enforce complete abstinence once the craving is established." I have seen the first of these "sure measures" in actual operation. The colonial bushman or shepherd often works many miles from a publichouse, and, as a consequence, is sober for six months or more at a stretch. Afterwards he departs to regions alcoholic to "knock down his cheque," a process exciting no doubt, but not one which temperance reformers who have seen it prefer to the regular week-end drunkenness of some British workmen. As to the other "sure measure," how would Dr. Macfie enforce it? By locking up the enormous army of poverty-stricken drunkards? Where does he suppose the nation would obtain the necessary funds?

Southsea, July 24th. G. ARCHDALL REID.

THE EXTIRPATION OF THE MOSQUITO.

SIR,—With reference to Dr. Samways's letter in the BRITISH MEDICAL JOURNAL, July 8th, on the destruction of mosquito larvæ by kerosene oil, I may remark that the evidence on the question is very conflicting. Three years ago I tried this method in my own house in India by pouring oil into the tins of water placed under the feet of tables to keep away ants—a favourite haunt for the larvæ of culex—entirely without success. A gentleman from America informs me that he has known the method employed in America, also without success. Another gentleman tells me, however, that a friend of his has been in the habit of pouring ten gallons of crude kerosine on a marsh with good results, also in the States. Evidently exact experiments are required. Nuttall[1] gives a list of methods for destroying mosquitos, among which he mentions petroleum. Celli and Casagrandi have just published an elaborate series of experiments with various poisons (Società Italiana per gli studi della malaria—Rome, 1899).

The method of eradicating malaria which I proposed in my lecture does not exactly consist merely in filling up or draining away mosquito-breeding pools. It consists first in ascertaining which species of mosquitos are dangerous; secondly, in finding where these species breed; and, thirdly, in destroying the larvæ, no matter how. The difficulty lies in the first and second items. Except in the case of collections of water which are required for use (such as wells) or which cannot be drained away without excessive expenditure, there will be little difficulty in destroying larvæ, namely, by simply emptying out the water. In the case of pools definitely known to originate dangerous mosquitos, complete obliteration will be demanded; it may not be safe to trust to poisoning, especially when confided to the hands of ignorant persons. Fortunately, as I have endeavoured to argue, such pools are likely to be small collections of waste water. Of course the simplest and by far the best way would be to destroy all the mosquitos in a locality together. I believe it could be done in many places; my only doubt is whether people are often likely to do it. Most persons, including Europeans, in the tropics breed their own mosquitos in their own houses, but are too lazy or ignorant to destroy them. I have known people actually refuse to empty out tubs of putrid water in which mosquito larvæ were pointed out to them. Such people prefer to imagine that the insects arise by spontaneous generation from grass or trees; this view saves them trouble, and gives them an excuse for grumbling at the climate. I have never met anyone in India,

[1] *Centralblatt für Bakteriologie*, XXV Band, 1899, p. 293, *et seq.*

for example, who has been sufficiently enlightened to keep his own premises free of mosquito larvæ, although this can easily be done. The principal ally of mosquitos is the stupidity of their victims.

I hope Mentone will show the way to a better state of things.—I am, etc.,

Liverpool, July 20th. RONALD ROSS.

MEDICAL AID ASSOCIATIONS AND THE MEDICAL DEFENCE UNION.

SIR,—In consequence of the resolution passed by the General Medical Council on June 6th *in re* medical aid and other associations, the Council of the Medical Defence Union has decided in future to require intending candidates for membership of the Union to sign the enclosed declaration in addition to the usual application form. As a matter of interest to the profession, may I ask you to kindly afford space in your columns both for the letter and the declaration itself?—I am, etc.,

A. G. BATEMAN,
Trafalgar Square, W.C., July 21st. General Secretary.

DECLARATION.

I hereby declare that I do not at the present time hold any office in connection with any medical aid or other institution in which systematic canvassing is practised as a means of procuring patients; and that, in the event of my being elected a member of the Medical Defence Union, I will not during the continuation of my membership thereof accept any office whatsoever in, or be otherwise associated with, any society, association, provident dispensary, or medical institution where canvassing for the purpose of procuring patients is practised; and I further declare that I will not engage in any practice either as principal, partner, or assistant, in which canvassing for the purpose of procuring patients is adopted.

THE POLLUTION OF THE RIVER LEE.

SIR,—Some of the statements made by Dr. Boyd on this subject in the BRITISH MEDICAL JOURNAL of July 22nd may be made to bear a sinister interpretation. I have no wish to debate the matter in dispute, but hope that you will allow me to correct certain assertions which are, no doubt unintentionally, misleading. To say that the Hertford sewage flows into the Lee is obviously to beg the question; the sewage of the borough is (1) screened, (2) mixed and agitated with chemical agents, (3) the resulting sludge deposited by subsidence in tanks prior to its removal, drying, and sale, (4) the supernatant fluid subjected to aëration and filtration. While the sewage proper does not exceed 300,000 gallons per day, the effluent contains not only some 2 million to 2½ million gallons of subsoil water in addition, but is still further diluted by numerous springs as it flows through the open culvert below the works into the Manifold Ditch. This tortuous brooklet is one of the old natural marsh drains; the soil is peaty, and its dark-brown water had earned for this stream the name of the "Black Ditch" in the days of Charles II, certainly more than a century before any of the town sewage mingled with its waters. As the present sewage effluent enters it, it becomes blackened, in consequence of the action of the iron salts in solution in the effluent on the natural peaty colouring matter of the water. It is unfortunate that this stream enters a stagnant reach of the Lee, where the dead water between the foot of the lock and the entrance of the weir and mill-streams is only now and again churned by the occasional passage of a barge through this, the last lock but one on the river.

In one sense it is true that every case at law is won or lost "on a legal technicality." But this phrase is an inadequate presentment of the fact that in the case of the Lee Conservancy *v.* the Corporation of Hertford, Mr. Justice Williams, after dealing carefully with the evidence and the legal positions of the parties, gave judgment in favour of the Corporation as follows:

I find clearly that there is no traceable pollution or real injury, and nothing approaching a nuisance at Common Law. I find that so long as the Corporation thoroughly and effectively treat the sewage they are not liable to an action. I find that they have and are still so treating it. I find that the plaintiff's complaint as to the accumulation of mud entirely fails. I find that there is no injury or pollution. Judgment for the defendants with costs, etc.

Dr. Boyd may not be familiar with all the above facts, but they have been public property for sixteen years, and are accessible to anyone. On the other hand, if Dr. Boyd will, as I have done, carefully examine the soil from which one of the heaps of "hundreds of tons of sifted manure" has been recently removed, and the state of the adjacent water, and will, finally, take an involuntary, but not the less instructive, mud bath just opposite or below them, I believe that he would modify his assertion that they "do not pollute the water to any very great extent."—I am, etc.,

Hertford, July 25th. C. E. SHELLY.

A CENTRAL FUND FOR THE SUPERANNUATION OF POOR-LAW MEDICAL OFFICERS.

SIR,—The medical officers of the Poor Law are deeply obliged to the British Medical Association for the hearty and active support which the Association, through its Parliamentary Committee, has given to the promotion of a central fund for superannuation purposes. Unfortunately the Local Government Board has not seen fit at present to promote further legislation, but the time is rapidly coming when membership of the Superannuation Fund will not act as a barrier to promotion.

The results of the first year's working of the Superannuation Fund are now known, and after payment of all claims there remains a surplus of £17,000, going to the relief of the rates of England and Wales, and it passes the comprehension of most minds why so successful a scheme should still be allowed to contain provisions injuriously affecting its members.

The fund is more than self-supporting, and the soundness of the views of those who advocated the establishment of a Central Superannuation Fund are triumphantly vindicated.—I am, etc.,

July 25th, 1899. POOR-LAW MEMBER.

CATERPILLAR RASH.

SIR,—Whilst paying a call at a house in Hertfordshire I was asked by my hostess to look at one of her children who had suddenly developed a rash. The girl, aged 5, had a bright red rash on her face, the brows and cheeks being mostly affected, the conjunctivæ were slightly suffused, and the eyelids puffy. The child talked excitedly and the thermometer registered 100.4°. There was marked itching. Whilst examining the child, her sister, aged 8, who was standing near began to scratch her neck and chin, and in a few minutes a similar rose-red, erythematous-looking rash appeared on neck, chin, and cheeks. Again was my attention diverted to the nurse, who developed a large red patch itching markedly on one cheek. A boy who had come to play with the children developed intolerable itching of one ear and meatus. They had all just been handling caterpillars which they kept in a box. The caterpillars were of the "woolly-bear" variety, and repute has it that they are apt to excite an erythema of this nature. Simple remedies served to allay the irritation, and in twenty-four hours all appearance of the affection had passed off. I fortunately had the advantage of consulting with Dr. Reid, of Canonbury, who happened to be with me at the time.—I am, etc.,

July 19th. JAMES CANTLIE, M.B., F.R.C.S.

A DESERVING CASE.

SIR,—Being in the position to know the facts and circumstances concerning the regretted and unexpected death of Dr. W. B. Lauria on July 8th, I write to you on behalf of his wife and family in the hope that this appeal may not only reach the friends of Dr. Lauria, but also the charitable members of the profession. Dr. Lauria through the effects of a severe accident had been for nearly two years prevented from practising his profession. Directly his health permitted he secured an appointment at Lagos, but shortly after taking up his work there he succumbed to the deadly nature of the climate. Dr. Lauria leaves a widow and three children quite unprovided for. All subscriptions to the Dr. Lauria Fund should be sent to Dr. Barrs, 6, Wandsworth Bridge Road, S.W., or to Dr. Hartnell, 1, Ryecroft Street, Fulham, S.W.—I am, etc.,

Cavendish Square, W., July 26th. VICTOR HORSLEY.

THE UNCONSCIOUSNESS OF ANÆSTHESIA.

SIR,—I was much interested in the letter in the BRITISH MEDICAL JOURNAL of July 15th on this subject. In my experience many cases can only be accounted for by the theory of hypnotic suggestion—the amount of chloroform inhaled both

being insufficient and the quickness of recovery being against the supposition that the anæsthesia is due to the chloroform.

I have a patient at present suffering from cancer, and when the paroxysms of pain are very severe, until the hypodermic injection or other anodyne takes effect, I have sometimes allowed the inhalation of chloroform. After a few inspirations there is complete anæsthesia, and yet conversation can be carried on quite rationally, and the patient can be easily aroused, the total amount of chloroform given not being more than 30 minims.—I am, etc.,

Ashton-under-Lyne, July 15th. ALEXANDER WALLACE.

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

SIR,—We have received complaints from annual subscribers to this Fund that they do not know to whom to send their subscriptions. As it is impossible for us to send reminders to those who have given indirectly, may we ask you to make known through your paper that all subscriptions should be sent to the Honorary Secretaries, Prince of Wales's Hospital Fund, Bank of England, London, E.C., by whom they will be acknowledged?—I am, etc., SAVILE CROSSLEY,

Bank of England, E.C., July 20th. Honorary Secretary.

THE OBSTETRIC BINDER.

SIR,—Your correspondent, Dr. Turner, makes out a fairly good case for the cow, though his adjective "young" somewhat spoils it. His case for women is not quite so good. If the cow should take it into her head, after delivery, to walk about on her hind legs, what then? Under the present conditions I fear, even to Dr. Herman, the comparison would be odious.

Your correspondent says: "The binder gives a sense of support to the abdominal viscera." Is this true? Is it not a real support, not to the viscera, but to the blood vessels?—I am, etc.,

July 17th. L.R.C.P.E.

MEMBERS' (R.C.S.) GOWN.

SIR,—As the seconder of the resolution proposed by Dr. Brindley James at the last annual meeting of the Fellows and Members of the Royal College of Surgeons last November, that the Members of the College should be authorised to wear an academic gown, I would desire to reply to one or two of your correspondents who ask with your correspondent Dr. Collingwood, as to "when this gown should be worn."

First, whenever we meet collectively or professionally, and more particularly on State or public occasions; and I think at no time would it be more appropriate than at the annual meeting of the British Medical Association, when it is our good old custom in more or less procession to attend the cathedral or church of the city or town in which we meet. Very frequently the public turn out in large numbers to welcome or to see the many doctors that have assembled in their city or town. I remember this was notably the case when we met in this town of Bournemouth some years ago; a large crowd was outside the church doors as well as in the street; and also when by invitation of the Mayor of Bath, the late Mr. Freeman, a great number of the leading medical men from London and other large cities went round the city of Bath previous to the ceremony of opening the new baths and dining at the Guildhall.

I aver that the profession would gain somewhat both in dignity and in public estimation did we on these festive and red-letter days attend clad in "academic costume," and with our various hoods and decorations indicative of our degree and *locus standi* that merit or good fortune has won for us.

In my speech at the College I suggested that the gown might, too, be appropriately worn in our consulting rooms; and would probably gradually inspire more respect, and even possibly extract a more willing and larger fee from the patient, and the advice correspondingly more appreciated and more exactly followed.

This call on the part of the Members of the Royal College of Surgeons for a distinctive robe is not an unreasonable one, and will have its uses, although, in the opinion of some, it may appear mere sentiment; but there is a dignity of its own in appropriate dress, and more especially—all ages have allowed—in academic costume; but even sentiment, we learn from so able a man and so successful a ruler of men as the late Sir George Grey,[1] "Sentiment is the greatest of human powers that governs the world."—I am, etc.,

FREDERICK H. ALDERSON, M.D.

Bournemouth West, July 24th.

P.S.—I hope at our annual meeting in 1900 every member of the British Medical Association will be requested to wear gowns, and there should be a State or some special distinctive mark or badge as a member of the Association, to which greatest of all medical associations he has the privilege and honour to belong, expulsion from which should be esteemed the greatest of penal punishments.

MR. STEPHEN COLERIDGE AND THE POPLAR HOSPITAL.

SIR,—I have read your article and Mr. Sydney Holland's letter, which both attack me in the matter of the West London Hospital, and I hope I may be permitted a few words of explanation.

Mr. William Bird, the Chairman of the West London Hospital, wrote to the *Times* and other papers claiming the support of the humane on the specific ground that his hospital had no connection with vivisection. I therefore took immediate steps to point out that two licensed vivisectors had posts on his staff, and incidentally drew attention to the fact that the Poplar Hospital was free from any such stigma in the eyes of antivivisectionists.

Mr. Bird clearly is of opinion that acknowledged connection between vivisection and hospitals tends to check the subscriptions to the latter. In that I entirely agree with him, but I think he should not claim subscriptions on the ground of his hospital being disconnected from vivisection while two licensed vivisectors remain on his staff.

Vivisection either is a proper or an improper adjunct to a hospital.

Mr. Sydney Holland at the London Hospital openly subsidises the school attached to it which is a place licensed for vivisection. If this policy attracts support Mr. Holland is within his rights to adopt it. The same gentleman appears to think the opposite policy best at the Poplar Hospital, where he has invited the support of antivivisectors by giving an undertaking to return their subscriptions if vivisectors are ever received on the staff.

The admired confusion into which Mr. Holland's inconsistencies have landed him affords genuine diversion to the National Antivivisection Society, which at least knows what it wants and how to fight for it.

In conclusion let me say that our efforts to purge hospitals from the deadly contact of vivisection no more deserve to be described as "attacks" upon them than the beneficent excision of a malignant growth from an otherwise healthy body by the surgeon's knife.—I am, etc.,

STEPHEN COLERIDGE.

The National Antivivisection Society, 20, Victoria Street, London, S.W., July 24th.

[1] *Romance of a Pro-Consul*, by James Milne.

AN INTERNATIONAL PHARMACOPŒIA.—Dr. Rommelaere has submitted to the Belgian Academy of Medicine a proposal that it should take steps to promote the adoption of an International Pharmacopœia. He suggests that the Academy should ask the Belgian Government to invite the co-operation of other governments in the furtherance of the scheme.

DEATH CERTIFICATION AND BURIAL REFORM.—The Burial, Funeral, and Mourning Association, which held its annual meeting on July 20th, under the presidency of Sir Dyce Duckworth, passed a resolution urging the Government to formulate into a Bill the recommendations of the Committee of Inquiry on Death Certification, and inviting the members of both Houses of Parliament to consider the desirability of introducing a Bill for amending, simplifying, and consolidating the burial laws. The main aims of the Association are the simplification of funeral ceremonies and the encouragement of the system of earth to earth burial, and Dr. Poore spoke strongly at the meeting in favour of the latter system.

OBITUARY.

JAMES E. GRAHAM, M.D., M.R.C.P.Lond.

Professor of Medicine in the University of Toronto.

The death of Dr. Graham removes one of the best known and most prominent members of the profession in Canada.

Dr. Graham was born in Western Canada about fifty-four years ago, and received his medical education at the Toronto School of Medicine, graduating at the University of Toronto in 1869. After spending a year as House-Physician at the Long Island Hospital, Brooklyn, he went to Germany for a further period of study. While there the Franco-Prussian war broke out, and he served for some time in one of the military hospitals. Returning to Toronto in 1872, he at once gained the confidence of the profession, and entered upon a most successful career. He was soon placed on the staff of the General Hospital, and on the resignation of Dr. H. H. Wright he was appointed to the Chair of Medicine in his old school. While in Germany he paid a great deal of attention to diseases of the skin. He was elected a member of the American Dermatological Society, of which he subsequently became the President.

About ten years ago the cares of practice became so irksome that Dr. Graham decided to give up general work. For a comparatively young man this seemed a bold, as it was in Toronto a novel, undertaking, but so fully had he won the ear of the profession throughout Canada that he quickly had a very large and lucrative consulting practice. In the reorganisation of the medical department of Toronto University he took a prominent part, and was for many years a member of the Senate. Of the Canada Medical Association, the Ontario Medical Society, the Toronto Medical Society, and the Pathological Society, he was an active member, and of each had been President. The Ontario Medical Library Association owes very much to his constant interest in its work.

Dr. Graham was a good teacher, both in the lecture room and in the wards. In spite of ever-increasing demands upon his time, he had of late years devoted himself with renewed energy to his work at the Toronto General Hospital. For several years past he had taken long holidays in Europe, and had visited the important medical clinics.

As a writer, he was at first best known by his contributions to dermatology; then came a period when the cares of a large practice did not permit of much literary work. For the past ten years, however, many and valuable articles have appeared from his pen, chiefly in the *Transactions of the Association of American Physicians* and in the *American Journal of the Medical Sciences*. He was the first to report cases of acromegaly in America, and his papers on diseases of the liver have attracted much attention. The subject of tuberculosis had specially engaged his interest, and one of his best contributions of late was that on the cardiac relations of phthisis. In the organisation of national sanatoria for consumption he took a very active part.

Dr. Osler writes: "Dr. Graham was one of my oldest friends in the profession. During the session of 1868-69 he was a senior student in the Toronto school when I was a freshman, and every Saturday morning throughout the session we met at Dr. Bovell's to work with the microscope. To both of us the memory of those happy days was ever dear. It was a great privilege, after the dry programme of the week, to be brought into contact with a genuine enthusiast who loved to work at as well as to think about the problems of disease. On these occasions the only annoyance to Dr. Bovell was the 'damned guinea' in Hunter's phrase, and how often have we laughed at the involuntary anathema which would escape the lips of the good pious man when the maid announced a patient! With the exception of the four or five succeeding years my associations with Dr. Graham have been very intimate, and my regard for his personal and professional worth have deepened with the passing years. In 1881 or 1884 he told me that he had glycosuria, but with diet the condition was readily kept in check until a few months ago. He spent the latter part of the winter and spring in the South, and when I saw him last in Toronto in May he seemed much better. He moved to Gravenhurst with his family, and there died in coma July 7th. His death is a sad loss to a wide circle of personal and professional friends and to the city of Toronto. Devoted to his work, with high ideals, he represented the type of physician whose influence for good in a community cannot be overestimated."

THOMAS CARGILL NESHAM, M.D.Edin. & Durh., Etc.,

Lecturer on Midwifery, University of Durham College of Medicine, Newcastle.

By the death of Dr. T. C. Nesham, which occurred at his residence, Ellison Place, Newcastle-on-Tyne, on the 16th inst., Newcastle has lost one of the most prominent and leading members of the medical profession in that city and the University of Durham one of her ablest and most excellent lecturers in the College of Medicine.

Dr. Nesham was born on Christmas day, 1841, and was educated first at Bury St. Edmunds, and subsequently at Merchiston Castle School, Edinburgh. In 1857 he entered as a student the College of Medicine of Newcastle-upon-Tyne, and went through the full curriculum there and at the hospital. He then spent two years at Edinburgh University, after which he went to the Rotunda Hospital at Dublin. He became a member of the Royal College of Surgeons of England and M.D. of the University of Edinburgh in 1863.

In 1862 he was appointed Medical Tutor to the Newcastle College of Medicine; in this post he gave such satisfaction that in three years afterwards he was made lecturer on anatomy, and in 1875 he was appointed lecturer in midwifery in what had then become "The University of Durham College of Medicine;" this post he most ably filled till his lamented death. In 1872 he received the honorary degree of M.D. from the University of Durham.

Dr. Nesham was a thorough master of his subject and a brilliant lecturer. He was a most excellent teacher, and impressed a subject on the students in such a manner that they could remember and rely upon his advice in after-life. He was loved and respected by the students, who found in him not only a valued teacher and kind friend, but also a patron of every form of manly sport. In him, indeed, there was a happy combination of the qualities of a country squire and of a university professor. In early years he was a good cricketer, was one of the originators of the Northumberland Cricket Club, and frequently played in county matches. Only last year the club presented him with a handsome testimonial. In later years he became a keen angler, and it was during his absence in Sutherlandshire on a holiday that he began to suffer from septic pneumonia, which resulted in his death.

One who knew him well writes: Nesham was one of those few men whom everyone who knew him loved and respected for his master mind, his ability, and for his genial companionship, but one could not help thinking that if he had had to work for his living, as most of us have to do, the science of midwifery would have been enriched by his words, as upon one of the few occasions that he came to the meetings of the Northumberland and Durham Medical Society he opened a discussion on the use of the midwifery forceps, which was a masterpiece. The respect that he was held in by his colleagues was evidenced by every one of his co-lecturers, all the students at the College, and all the leading people at Newcastle being present at his funeral.

Dr. Nesham was twice married, and leaves a widow to mourn his loss.

Mr. John Cuthbert Whaley, M.R.C.S.Eng., L.S.A., who died on June 25th, aged 79 years, at his residence, West Witton, Leyburn, Yorkshire, was at one time a well-known practitioner at Kilburn. He was born at Hawes, Yorkshire, of which parish his father, the Rev. John Whaley, was incumbent, besides being also a considerable landed proprietor in Wensleydale. Young J. C. Whaley was educated at Hawes Grammar School and Kendal, and received his medical training at Westminster Hospital. He became M.R.C.S. in 1842, and L.S.A. in 1852. He first entered into partnership with Mr. Kirkman, of Waterlooville, Hants, and in 1850 succeeded Mr. W. H. Furnival at Kilburn. He took a leading part in founding the Kilburn Dispensary, of which he was for many years a medical officer. On leaving Waterlooville he was presented with a silver salver, with an inscription expressive of the esteem in which he was held; and on his retirement from practice in 1885 he received another testimonial signed by his numerous patients at Kilburn, together

with a massive service of silver plate. After retirement from practice he spent fourteen peaceful years in his own county, and for the most part in his native dale. He passed much of his time in gardening, of which he was very fond. He was also a first-rate amateur carpenter. In earlier life he was a keen sportsman, being a good shot and a clever fisherman. He had simple tastes, and a quiet unassuming manner; with keen native wit, and abundant industry, and was beloved and respected by all who knew him. He married Miss Marianne Blomfield many years ago, and this lady and a large family of sons and daughters survive him. His health began to fail about a year ago, and he bore his illness with Christian fortitude and patience.

Mr. John Wright Baker, M.R.C.S.Eng., L.S.A., J.P. for Derby, was widely known and deeply respected in Derby, where he practised thirty-three years. He died at Southport on July 7th, aged 71. He was the fourth son of Mr. William Baker, silk manufacturer, of Derby, was educated at Derby and Southwell Grammar Schools, and received his medical training at the Royal Manchester Infirmary and St. Thomas's Hospital, and became qualified in 1850. He then worked in Paris for a short time, became House Surgeon to the Manchester Infirmary, and went to the Rotunda Hospital, Dublin. In 1854 he settled in practice at Derby, and in the following year married the second daughter of Mr. W. J. Wilson, surgeon, of Manchester. Mrs. Baker and one of her two daughters still survive. In 1863 he was appointed one of the Surgeons to the Derbyshire Infirmary, and held the post until 1884, when he retired, and was appointed Consulting Surgeon. He retired from practice altogether in 1887, when he was presented with a handsome album and was entertained at dinner by the members of his profession in Derby and the county. His last illness commenced at Christmas last, and he was unconscious for several days before his death. At the Derby Borough Police-court the event called forth expressions of deep regret from the presiding magistrate and the clerk. The funeral at the Old Cemetery, Derby, was attended by a large number of members of the medical profession. Mr. J. W. Baker was not only a busy surgeon but also a delightful companion, a good *raconteur*, and capable of keen enjoyment and appreciation of the social side of life. He was until quite lately a constant attendant at the annual meetings of the British Medical Association.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Woldemar Stolz, sometime President of the St. Petersburg Medical Society, and in recent years editor of the *Jeshenedelnik*; Dr. Max Sandreczky, Director of the "Marienstift" Children's Hospital in Jerusalem, aged 60; Dr. Geza Mihalkovics, Professor of Anatomy and Embryology in the University of Buda-Pesth, aged 55; Dr. Herpin, Professor of Surgical Pathology in the Medical School of Tours; Dr. Campos da Paz, Professor of Organic and Biological Chemistry in the Medical School of Rio de Janeiro; Dr. José Casan y Alegre, Director of the State Vaccination Institute of Madrid; Dr. G. Sandmann, a rising laryngologist of Berlin, aged 37; and Dr. Max Dolega, *Privat-docent* and Lecturer on the History of Medicine in the University of Leipzig, aged 35.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF GLASGOW.

Graduation Ceremony.

The summer graduation ceremony of the Glasgow University took place in the Bute Hall on Thursday, July 20th, Principal Story presiding. It is usually confined to graduates of the Faculty of Medicine, but on this occasion a number of honorary degrees were conferred, and thus additional interest attached to the function. There was a crowded attendance of ladies and gentlemen, and the new LL.D.'s, among others, were Sir Henry Irving and Colonel Hector Macdonald of Omdurman fame, who were greeted with loud cheering.

After the "capping," Professor Glaister delivered the customary valedictory address. After congratulating the graduates on having achieved the primary goal of their ambition by receiving their sought-for degrees, he advised them to keep up their habits of study, and especially to keep up the study of the particular branch of medical science to which they were attracted. There were many problems awaiting solution, though year by year the task became increasingly difficult. Attention was directed to the progress that is being made in the study of preventive medicine, both in the tropics and at home, and the importance of this branch of medicine insisted upon.

The following medical degrees were conferred:

Doctors of Medicine (M.D.) —With Honours: *C. O. Hawthorne, M.B., C.M. (thesis: Studies in Clinical Medicine).—With commendation: D. Blair, M.A., M.B., C.M. (thesis: Acromegaly with Insanity); J. Gordon, M.B., C.M. (thesis: Tuberculin as a Remedy for Lupus, and its Position as a Therapeutic Agent in the Treatment of Phthisis Pulmonalis); H. Kerr, M.A., M.B., C.M. (thesis: Recurrent Insanity); R. Scott, M.B., C.M. (thesis: A Review of Hydatid Disease in Australasia during the Decennial Period, 1888-97).—Ordinary Degree: R. W. Jones, M.B., C.M. (thesis: The Sanitary Condition of a District in Glamorganshire, with special reference to an Epidemic of Enteric Fever Therein); A. Mason, M.B., C.M. (thesis: Pyrexial Conditions of Childbed); G. B. Murdoch, M.B., C.M. (thesis: A Case of Multiple Neuritis and Its Treatment); A. M'Call, M.B., C.M. (thesis: Some Observations on the Microscopic Examination of the Blood, with special reference to the Clinical Significance of the Leucocytes); N. Macnair, B.Sc., M.B., C.M. (thesis: Some Types of Disseminated Sclerosis); W. Park, M.B., C.M. (thesis: Chronic Lead Poisoning, with special reference to Symptoms and Pathology); A. Roxburgh, M.B., C.M. (thesis; Sarcoma Ovarii).

Bachelors of Medicine and Masters in Surgery (M.B., C.M.).—G. H. B. Harvie, A. P. Robertson, A. Waugh.

Bachelors of Medicine and Bachelors in Surgery (M.B., B.Ch.).—Honours; †A. L. Watson, M.A.—With commendation: H. C. Ferguson, D. M. Cowan, A. G. Stewart, J. R. Chalmers, Edythe M. S. Walker, A. S. Wells, M.A., E. Mitchell, M.A., J. Garden.—Ordinary Degree: J. N. Baxter, A. Boyes, W. Broad, A. Brownlie, J. Craig, G. M. Crawford, W. Crerar, J. Cullen, C. C. Cumming, Sarah Davidson, J. L. Davie, J. A. Dickie, J. F. Findlay, G. Gardner, H. Goodman, M.A., Jessie Granger, J. G. Green, A. Kerr, A. Love, R. Millar, H. Miller, N. M. Miller, J. H. MacDonald, N. F. MacLeod, W. J. Maclure, J. M'Millan, Ina L. M'Neill, J. Patton, T. S. Picken, J. Reid, W. A. Riddell, A. Robin, Catherine L. Smith, D. J. Smith, W. S. Stalker, F. R. Stewart, M.A., W. B. Thomson, H. N. Turner, Sarah Whiteford, R. O. Whyte, M.A., W. Wright, J. D. Young.

* Gold Medal.

†Mr. Watson gains the Brunton Memorial Prize of £10, awarded to the most distinguished Graduate in Medicine of the year.

UNIVERSITY OF EDINBURGH.

First Professional Examination for the Degrees of M.B., Ch.B.—The following candidates have passed this examination in the subjects undernoted:

Chemistry.—T. C. Blackwell, F. H. Borthwick, J. Brennan, J. C. G. Carmichael, T. P. Caverhill, W. P. Chrystall, G. M. Coughtrey, M. C. Cowper, W. B. Cullen, G. A. Davies, M. Davies, N. C. Forsyth, R. H. Fothergill, D. Golding, P. Gosnold, J. O. Heyns, A. O. Hooper, C. I. McFarlane, J. A. Mathers, Agnes E. Melville, Helen Morison, J. Newall, D. E. C. Pottinger, Julia Pringle, A. M. Pryce, Mabel Ross, M. C. Rutherford, W. M. Selby, H. J. Stewart, Effie Stuart, J. H. D. Webster, L. West, R. W. M. White, H. S. Winterbotham, E. E. Wood.

Zoology.—J. Allan, E. A. W. Alleyne, D. Allison, J. A. Anderson, G. W. Armstrong, M. Ashkenazie, Agnes Balfour, T. C. Blackwell, R. Bladworth, G. M. Brunton, A. Buchanan, C. W. Burrows, W. C. Burton, H. Caird, R. B. Calwell, T. F. Campbell, R. A. Chambers, H. S. Coghill, A. G. Coullie, C. K. Coutts, J. M. Darling, J. Davidson, G. A. Davies, M. Davies, A. M. Dryden, C. E. Dumanoire, A. M. Ebden, A. E. Elder, G. J. Fairie, J. J. H. Ferguson, G. H. L. Fitzwilliams, J. Fortune, A. N. Fraser, A. J. Gardner, J. George, C. R. Gibson, L. Gibson, J. D. Giles, J. A. Glover, M. C. R. Grahame, J. Grieve, E. Henderson, R. W. D. Hewson, A. E. Hodgson, A. F. Hughes, G. S. Husband, J. M. Johnston, S. A. Johnston, J. W. Keay, J. Kirk, A. G. Leitch, J. M. Lovett, J. MacDonald, G. S. Mackay, W. MacLaren, E. M. Macmillan, J. B. M'Neill, P. W. Mason, J. B. Mears, A. G. M. Middleton, G. H. S. Milln, O. M. Mirylees, V. Moralejo, W. C. Morton, D. M. Newton, T. Nicol, W. H. Nutt, E. H. Price, F. M. S. Price, K. A. O. Quainoo, W. Readman, E. A. Robertson, W. S. Robertson, Amy Robinson, S. M. Ross, C. Rutherford, F. G. Saleeby, W. Sanderson, J. R. Simson, G. H. Skinner, W. A. W. Smith, E. M. Snowball, R. A. L. van Someren, H. Speirs, H. A. Stewart, A. C. Strain, Effie Stuart, J. Tait, A. F. Theobalds, T. T. Thomson, E. A. Turpin, H. R. Vickers, R. M. Walker, L. West, W. B. Wishart, E. E. Wood, A. C. T. Woodward, M. C. W. Young.

Physics.—G. L. Baker, Agnes Balfour, W. P. Beattie, W. Beggs, C. A. Bennet, A. R. Berrie, J. M. Beyers, A. S. L. Biggart, T. C. Blackwell, R. Bladworth, R. Blair, F. H. Borthwick, D. W. Boswell, F. S. Brennan, J. Brennan, J. Brennan, W. S. M. Brown, L. G. Bruce, W. P. Chrystall, C. K. Coutts, R. W. Craig, F. D. Crosthwaite, W. B. Cullen, W. H. Cusack, W. H. Davison, A. C. Devereux, J. M. Dewar, T. H. Easton, C. L. Eyles, H. Ferguson, T. Gardner, L. Gavin, H. M. Gillespie, W. Godfrey, A. S. Gordon, P. Gosnold, T. Gowans, M. C. P. Grahame, J. Halley, J. O. Heyns, A. W. Hogg, M. A. Huk, W. Hume, J. H. Kay, L. A. H. Lack, R. H. S. Langeveldt, J. Lauder, S. W. S. Leary, C. D. Lochrane, J. B. Lockerbie, J. R. M'Gregor, D. P. Marais, J. A. Mathers, C. R. P. Mitchell, T. B. Mouat, H. L. Munro, P. E. Neumann, A. Oliver, F. O'Neill, J. L. Pearce, J. B. P. Perrier, B. Pickering, J. J. N. Pierre, D. E. C. Pottinger, L. Ram, D. G. Reid, A. O. P. Reynolds, G. Ritchie, W. H. Robertson, W. S. J. Robertson, L. C. Robinson, J. A. Roux, J. Saffley, J. H. Smith, O

Smith, M. S. Sodhi, H. J. Stewart, A. W. K. Straton, H. R. Vickers, R. F. Vinen, W. R. S. Watkins, D. H. Wessels, D. P. D. Wilkie, D. W. Wilton, and G. W. Young.

UNIVERSITY OF ABERDEEN.

AT the graduation ceremony on July 20th the following degrees were conferred:

Doctor of Medicine (M.D.).—R. Bruce, M.A., M.B., Ch.B.—Thesis: Multiple Neuritis: Under New Regulations; A. Davidson, M.B., C.M.—Thesis: Neurological Fragments, Clinical and Pathological; R. Ferguson, M.A., M.B., C.M.—Thesis: Acute Rheumatism; A. Fraser, M.B., C.M.—Thesis: The Success Attendant on the Administration of Oxygen in Cancer; J. G. Jones, M.B., C.M.—Thesis: Gout; C. E. Maguire, M.B., C.M.—Thesis: Hæmoglobinuric Fever, as Observed in West Africa; *W. Murray, M.A., M.B., C.M.—Thesis: Chronic Rheumatoid Arthritis—A Clinical and Etiological Review; H. E. Smith, M.A., M.B., C.M.—Thesis: A Contribution to the Study of Friedreich's Disease; With a Description of Four Hitherto Unrecorded Cases; G. A. Williamson, M.A., M.B., C.M.—Thesis: Observations on an Outbreak of Small-pox.

* Worthy of commendation.

Bachelor of Medicine (M.B.) and Master in Surgery (C.M.) (Old Ordinances).—T. B. Anderson; A. McP. Fiddes; W. H. Macdonald; R. B. Scott.

Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) (New Ordinances).—E. Bisset, R. D. Clark, N. Davidson, D. Dewar, A. I. Esslemont, C. E. Forsyth, J. Gordon, G. T. Gunn, M.A.; E. W. Hannah, J. Low, C. G. Munnik, W. D. Ritchie, H. P. Sleigh, J. Smart, M.A.; A. W. M. Sutherland, J. A. Watt.

Mr. A. W. M. Sutherland has passed with "honourable distinction," and has been awarded the John Murray Medal and Scholarship, as the most distinguished graduate (M.B.) of the year.

Mr. A. M. Rose has passed all the examinations for the degrees of M.B. and Ch.B., but will not graduate until he has attained the necessary age.

At the same meeting a Diploma in Public Health was conferred on R. F. Hutchison, M.B. (with credit); A. R. Laing, M.B.; J. S. Laing, M.B.; H. J. McGrigor, M.B.; J. G. McWillie, M.B.; R. Smith, M.B.; A. W. C. Young, M.B.

UNIVERSITY OF LONDON.

INTERMEDIATE EXAMINATION IN MEDICINE (HONOURS).—The following candidates have passed this examination in the subjects undernoted:

Anatomy.—First Class: W. P. Gowland (gold medal), Owens College; C. S. Parker (exhibition and gold medal), University College. Second Class: J. A. Coupland, Yorkshire College; R. C. Elmslie, St. Bartholomew's Hospital; G. E. Malcolmson, Owens College. Third Class: W. H. Bowen, Guy's Hospital; J. Cameron, Edinburgh University and School of Royal Colleges; W. T. Crawford, University College; E. N. Cunliffe, Owens College; C. E. Ham, London Hospital; Anna Maude Smith, London School of Medicine for Women.

Physiology and Histology.—Second Class: M. Coplans, Guy's Hospital; H. E. Ridewood, London Hospital. Third Class: W. H. Bowen, Guy's Hospital; W. H. Harwood-Yarred, B.Sc., St. Thomas's Hospital; A. E. H. Pakes, B.Sc., Guy's Hospital; L. E. Stamm, B.A., B.Sc., Guy's Hospital; J. E. Stratton, University College; G. E. Waugh, Cambridge University and University College; O. T. Williams, University College, Liverpool.

Organic Chemistry.—First Class: R. C. Elmslie (exhibition and gold medal), St. Bartholomew's Hospital; *W. H. Harwood-Yarred, St. Thomas's Hospital; *H. E. Ridewood, London Hospital. Third Class: Agnes Catharine Scott, London School of Medicine for Women.

Materia Medica and Pharmaceutical Chemistry.—First Class: E. R. Carling (exhibition and gold medal), Westminster Hospital, King's College, and Birkbeck Institute; R. C. Elmslie, St. Bartholomew's Hospital. Second Class: E. N. Cunliffe, Owens College; G. E. Malcolmson, Owens College; E. E. Young, St. Bartholomew's Hospital. Third Class: A. C. Begg, Edinburgh University and School of Medicine; W. H. Bowen, Guy's Hospital; J. Cameron, Edinburgh University and School of Royal Colleges; C. E. Ham, London Hospital; Anna Maude Smith, London School of Medicine for Women.

* Obtained the number of marks qualifying for the Exhibition.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.

THE following gentlemen having passed the requisite examinations, were on July 20th duly elected ordinary Fellows of the College: J. C. W. Halliday, M.B., C.M.Univ.Syd., L.R.C.S.E.; T. R. MacDonald, L.R.C.S.E., M.B., C.M.Edin.; H. Robertson, M.B., C.M.Glasg.; W. A. Sharpin, M.R.C.S.Eng., L.R.C.P.Lond.; J. W. Steven, M.B., C.M.Edin., L.R.C.S.E.; J. Stevenson, M.B., C.M.Edin.; W. M. Taylor, M.B., C.M.Edin.; F. P. Trench, M.B., C.M.Edin.; and P. G. Williams, M.R.C.S.Eng., L.R.C.P. Lond.

William G. Hanna was admitted a Licentiate.

CONJOINT BOARD IN SCOTLAND.

THE quarterly examinations for the Triple Qualification in Edinburgh were concluded on July 20th, with the following results:

First Examination (four years' course).—G. E. Aitken, N. Philipson, W. H. Burnhill, and J. Wilson.

There were 6 candidates; 1 passed in Elementary Anatomy and 1 in Chemistry.

First Examination (five years' course).—Minnie Green, J. S. Burton, L. Levi, R. H. Brierley, Evelyn Morris Franklin, T. Bragg, J. M. Gerety, R. W. J. Pearson, J. Dick, J. D. Jones, M. B. Conroy, W. P. Cowper, and S. E. Mangénié.

There were 32 candidates: 8 passed in Physics, 8 in Biology, and 1 in Chemistry.

Second Examination (four years' course).—N. Philipson, S. W. Morton, W. Smith, T. E. F. Tovey, and T. W. Rhoades.

There were 8 candidates; 1 passed in Physiology and 1 in Materia Medica.

Second Examination (five years' course).—T. L. Ashforth, M. F. Cusack, F. J. Scrimgeour, R. D. A. Douglas, E. W. Kemp, T. S. Pearse, Anne L. Venters, A. Young (with distinction), May Thomson, R. Chisholm, C. W. Coghlan, T. Huston, P. Howe, J. W. Wood, C. S. Hunter, R. B. Johnston (with distinction), W. J. N. Todd, R. S. Stephens, P. C. Watt, R. S. Mackintosh, and J. O'Connor.

There were 31 candidates; 2 passed in Anatomy and 1 in Physiology.

Third Examination (five years' course).—Edith M. L. Scull, W. C. Bentall, A. A. Beeks, F. A. Georgeson, R. F. de Boissiere (with distinction), F. C. Willmot, W. S. Cowin, D. P. Johnstone, B. Flood, N. L. Stevenson, Agnes M. R. McNab, N. M. Gavin, A. Macqueen, A. E. Whitehead, Mary B. Carr, J. C. Nicholson, T. A. B. Harris, W. G. Edwards, J. H. Rooney, and K. P. Chatterjee.

There were 25 candidates; 2 passed in Materia Medica.

Final Examination.—Annie M. Watson (with honours), G. F. Stooke, H. A. Tillman, J. Scarr, L. A. Clutterbuck, R. H. R. McKean, J. Brangan, G. W. Hardie, F. R. Seager, J. Freeman, R. W. Devey, H. G. Lewer, J. C. C. Ford, R. B. Sandiford, G. V. Fletcher, D. Coffey, P. Coffey, H. H. McWilliams, J. P. Lavery, E. A. Boxer, J. G. Sheahan, Winifred Mairhead, Euphemia Stoker, P. Heffernan, J. E. H. Gentil, Mary B. Davies, J. N. Meade, N. Philipson, Jeannie H. Traill, J. Dalrymple, J. G. Grant, E. P. Kelly, A. J. B. Albertyn, Rosalie Berthon, F. R. Paterson, D. Mittra, P. R. Roy, M. J. Lobo, G. M. A. de Souza, T. E. Frazer, B. S. Patkar, J. McMurray, W. F. Campbell.

There were 87 candidates: 5 passed in the division of Medicine and Therapeutics, 1 passed in the division of Surgery and Surgical Anatomy, 11 in the division of Midwifery, and 11 in the division of Medical Jurisprudence.

CONJOINT BOARD IN IRELAND.

FINAL EXAMINATION FOR THE LICENCES IN MEDICINE, SURGERY, AND MIDWIFERY.—Candidates have passed this examination as undernoted:

In all Subjects.—Honours: D. A. Fitzgerald, L. R. More O'Ferrall (equal); J. A. Neilan. Pass: E. Bennett, J. M. M. Crawford, J. Foley, S. R. Godkin, G. C. L. Kerans, G. W. Little, W. McLorinan, C. B. Pasley, A. T. Thurston, J. F. Treston, H. J. C. Wallace.

Completed the Examination.—J. F. Cormack, C. G. Jones, J. A. Martin, J. F. C. Meyler, A. F. Studdert.

In Medicine.—R. J. Franklin, J. F. Loughrey, G. L. N. Miles, W. Patterson.

In Surgery.—R. J. Cane, S. W. T. Clarke, W. A. Cooke, R. B. Daly, A. Gill, M. F. Hession, A. H. Jacob, G. L. N. Miles, R. H. Moffit, J. F. Smyth, J. Verdon, J. Whelan.

In Mental Disease.—R. J. Cane, J. W. Clarke-Bayliss, W. A. Cooke, R. B. Daly, R. J. Franklin, A. H. Jacob, G. L. N. Miles, W. Patterson, J. Verdon, J. Whelan.

In Ophthalmology.—J. W. Clarke-Bayliss, W. A. Cooke, R. B. Daly, R. J. Franklin, A. Gill, M. F. Hession, A. H. Jacob, J. F. Loughrey, G. L. N. Miles, J. F. Smyth, J. Verdon, J. Whelan.

In Midwifery.—J. W. Clarke-Bayliss, R. B. Daly, R. J. Franklin, W. Patterson, J. Verdon, J. Whelan.

In Forensic Medicine, etc.—L. A. Hare.

THIRD PROFESSIONAL EXAMINATION.—Candidates have passed this examination as undernoted:

In all Subjects.—Honours: Miss E. A. B. Marks, H. Graff. Pass: M. Ballesty, W. N. L. Cherry, J. F. Cleary, A. la T. Darley, W. Davis, J. E. Hannigan, Mrs. H. L. Hennessy, C. W. Holden, D. J. O'Donoghue, C. J. Sullivan, H. H. Swanzy.

Completed the Examination.—W. S. D. Bird, F. C. Fowles, D. L. Harding, R. A. Johnston, N. P. Kirby, D. Power.

In Medicine.—G. F. Alderdice, G. R. Barton, A. D. Dunwoody, C. H. Falvey, D. A. Faris, M. Gavin, J. H. O'Connell, J. J. B. O'Halloran, A. E. O'Reilly, T. D. Sullivan, H. H. Swanzy.

In Surgery.—J. F. Allen, G. R. Barton, S. Brown, G. Canilla, A. D. Dunwoody, D. A. Faris, M. M. Goldfoot, J. Hutch, J. H. O'Connell, J. J. B. O'Halloran, A. E. O'Reilly, T. D. Sullivan, H. H. Swanzy, E. R. Townsend.

In Pathology.—G. F. Alderdice, W. H. Dodd, G. H. Enright, T. D. Sullivan, E. R. Townsend.

In Therapeutics.—G. F. Alderdice, S. W. Cumming, W. H. Dodd, A. D. Dunwoody, C. H. Falvey, M. M. Goldfoot, J. J. B. O'Halloran, A. E. O'Reilly, T. D. Sullivan, H. H. Swanzy, E. R. Townsend.

In Forensic Medicine.—G. F. Alderdice, P. N. Creagh, S. W. Cumming, W. H. Dodd, A. D. Dunwood, G. H. Enright, D. A. Faris, C. H. Falvey, M. M. Goldfoot, J. Hutch, A. E. O'Reilly, L. G. de Rosario, H. H. Swanzy.

In Physiology (4th year).—J. F. Allen.

SECOND PROFESSIONAL EXAMINATION.—Candidates have passed this examination as undernoted:

In all Subjects.—A. Charles, W. F. Delany, T. O. Dillon, A. Ellenbogen, J. J. Moore, W. B. A. Moore, C. E. O'Keeffe, G. C. Robinson.

Completed the Examination.—C. W. Conry, H. T. Cookmann, J. Cuffe, Miss H. A. Driver, W. N. Eustace, G. W. Knight, M. J. Loughrey, W. R. Meredith, D. J. O'Reilly, J. White, J. H. White.

In Anatomy.—Miss L. H. Alexander, T. W. Allen, W. H. Anderson, J. E. Brereton, C. H. Bryan, C. D. Downing, J. P. Falls, T. J. Galligan, W. J. Greehy, R. E. Humfrey, T. E. Johnston, J. Murphy, J. Munay, M. A. A. O'Brien, J. O'Doherty, E. O'Grady, M. J. O'Meara, P. W. Power, S. H. Raverty, P. M. Sheridan, J. Stuart, C. Waters.

In Physiology.—F. J. Cahill, H. A. Cecil, W. J. Greehy, J. Hennessy, R. E. Humfrey, Miss M. E. M. Logan, C. R. Millar, M. A. A. O'Brien, M. J. O'Brien, P. W. Power, C. Waters.

In Histology.—Miss Alexander, C. H. Bryan, H. A. Cecil, P. Donnedon, J. P. Falls, R. E. Humfrey, T. E. Johnston, L. C. E. Murphy, J. Nash, M. A. A. O'Brien, J. O'Doherty, M. J. O'Meara, R. H. G. Oulton, S. H. Raverty, C. Waters.

In Materia Medica.—Miss Alexander, W. H. Anderson, A. S. Cospam, M. T. Donovan, C. T. Downing, T. E. Johnston, Miss Logan, R. H. G. Oulton.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, July, 1899.—The following candidates passed in:

Surgery.—R. P. N. B. Bluett, Glasgow; H. R. Cross, Leeds; A. B. Dunne (Sections I and II), Leeds; A. D. Evans, Edinburgh; F. R. Featherstone (Sections I and II), Guy's Hospital; C. Fisher (Sections I and II), St. Bartholomew's Hospital; J. E. Griffith, St. Bartholomew's Hospital; E. S. Johnson, St. Mary's Hospital; F. S. Leech (Section I), University College Hospital; G. S. Moore, London Hospital; O. H. Rogerson (Section I), Leeds; A. F. Weston (Section I), St. George's Hospital; C. C. Worts, Guy's Hospital; T. H. B. Yorath, Guy's Hospital.

Medicine.—F. G. Aldrich (Section I), Charing Cross Hospital; R. P. N. B. Bluett, Glasgow; T. S. Elliot (Section I), London Hospital; H. Fawcett, Cambridge and London Hospital; E. L. Gowlland (Sections I and II), St. Mary's Hospital; H. M. Hardy, Guy's Hospital; O. E. Lemin (Section I), London Hospital; R. A. Lyster, Birmingham; V. S. Partridge (Section II), Charing Cross Hospital; J. W. Robertson, Kingston, Ontario; F. C. Torbitt, Manchester; L. E. Whitaker (Section I), St. Bartholomew's Hospital; W. H. Willcox, St. Mary's Hospital; E. D. Wortley (Section I), St. Bartholomew's Hospital; T. Young (Section I), St. Bartholomew's Hospital.

Forensic Medicine.—R. P. N. B. Bluett, Glasgow; T. S. Elliot, London Hospital; E. L. Gowlland, St. Mary's Hospital; H. M. Hardy, Guy's pital; O. E. Lemin, London Hospital; R. A. Lyster, Birmingham; W. P. R. Newth, St. Thomas's Hospital; E. S. Pushong, Calcutta; L. K. Tickner, Durham; F. C. Torbitt, Manchester; W. H. Willcox, St. Mary's Hospital.

Midwifery.—M. A. Alabone, Guy's Hospital; R. P. N. B. Bluett, Glasgow; A. M. Davis, Birmingham; C. A. W. Egan, Dublin and Charing Cross Hospital; H. C. Holden, Guy's Hospital; H. R. Miller, Guy's Hospital; A. C. Oliver, Charing Cross Hospital; E. S. Pushong, Calcutta; G. M. Smith, St. Thomas's Hospital; L. K. Tickner, Durham; S. J. Welch, London Hospital; L. E. Whitaker, St. Bartholomew's Hospital; W. H. Willcox, St. Mary's Hospital.

The Diploma of the Society was granted to R. P. N. B. Bluett, H. R. Cross, A. D. Evans, E. L. Gowlland, J. E. Griffith, E. S. Johnson, G. S. Moore, V. S. Partridge, J. W. Robertson, L. K. Tickner, W. H. Willcox, and T. H. B. Yorath.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT a special business meeting of the College, held on Tuesday, July 25th, the President admitted to the Licences in Medicine and Midwifery eighteen candidates who had been successful at the Final Conjoint Examination, held in July, 1899. At the same meeting, W. J. Fleetwood, M.D.St.And., L.R.C.P.I., was duly admitted to the Membership.

UNIVERSITY COLLEGE, BRISTOL.

MR. A. F. STANLEY KENT, M.A.Oxon., F.L.S., F.G.S., has been appointed Professor of Physiology in University College, Bristol.

SURGEONS' HALL, EDINBURGH.

MR. T. SHENNAN, M.D., F.R.C.S.Edin., Pathologist to the Royal Hospital for Sick Children, Edinburgh, and to the Leith Hospital, and late assistant to Dr. Bruce, has been appointed Lecturer on Pathology at Surgeons' Hall, Edinburgh, in room of Dr. Bruce resigned.

ST. BARTHOLOMEW'S HOSPITAL MEDICAL SCHOOL.

THE following Scholarships and Prizes have been awarded:—*Entrance Scholarships:* £75, in Biology and Physiology, L. J. Picton; £150, in Chemistry, Physics, and Biology, C. C. Robinson and J. Burfield, equal; £50, Preliminary Scientific Exhibition, A. F. Forster; £20, Jeaffreson Exhibition, T. Jeff Faulder; £50, Shuter Scholarship, H. W. Atkinson; £50, Junior Scholarships in Anatomy and Biology, A. Hamilton, T. H. Harker, and C. C. Robinson, equal; £40, Junior Scholarships in Chemistry, Physics, and Histology, H. V. Wenham and E. C. Williams; Treasurer's Prize in Practical Anatomy, £5, C. C. Robinson; Certificates, A. Hamilton, J. Burfield, W. S. Aldred, F. W. Chaff, J. W. Cleveland, A. J. Forster, T. H. Harker, and H. V. Wenham; £50, Senior Scholarships in Anatomy, Physics, and Chemistry, F. Grone; Foster Prize in Practical Anatomy, £6, N. E. Waterfield; Certificates, W. P. Yetts, H. E. Stanger-Leathes, H. R. Kidner, J. Corbin, F. H. Noke, T. C. Neville, and E. B. Smith; Harvey Prize in Practical Physiology, £6 6s., N. E. Waterfield; Prox. Acc., H. R. Kidner; Wix Prize for an Essay on the Life and Works of Matthew Baillie, £5, E. C. Williams; Hitchin's Prize in Butler's Analogy, £6 10s., S. G. Mostyn; Sir George Burrows's Prize in Pathology, £10 10s., G. V. Bull; Skynner Prize in Regional and Morbid Anatomy, including their Reference to Scarlet Fever, etc., £13 13s., Howell Davies; Matthews Duncan Prize in Obstetric Medicine, £20, £30 and Gold Medal, Kirke's Scholarship and Gold Medal in Clinical Medicine, and £39 Brackenbury Scholarship in Medicine, C. J. Thomas; £39, Brackenbury Scholarship in Surgery, F. C. Borrow.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

SELECTION IN THE INDIAN MEDICAL SERVICE.

THE *Times* publishes the following statement: "A ruling has been made by the Government of India which will have the effect of increasing the reality of the present system of selection in the case of officers of the Indian Medical Service. It has now been laid down that the selection of an officer for promotion shall be influenced by merit only—in other words, that the practice of giving higher rank to officers who are merely in the position of having done nothing to merit supersession is inadmissible. Every selection is intended, it is pointed out, to establish the fact beyond dispute that the officer so favoured has earned the higher rank, pay, and privileges by ability and merit. At the same time the Secretary of State has been in communication with the Government of India on the subject of the great increase which has taken place of recent years in the establishment of the Indian Medical Service owing to the larger number of civil charges at present held by members of that service. An inquiry has disclosed the fact that at the present time three-fifths of the Indian medical officers are employed on civil duty. The Secretary of State for India considers this state of things open to serious objection, and a proposal is therefore under consideration further to extend the system of filling civil medical charges by unconvenanted medical officers and employing where possible the senior members of the Subordinate Medical Department. The object is to restrict the growth of the Indian Medical Service and, at the same time, to secure a larger proportion of officers trained to military duties, the number now available being too small for the requirements of the Army, while the system is thought to be extravagant."

ROYAL NAVY MEDICAL SERVICE.

FLEET-SURGEON JAMES L. SWEETNAM, M.D., has been placed on the retired list, with the rank of Deputy-Inspector-General, July 18th. His commissions are thus dated: Surgeon, February 16th, 1870; Staff-Surgeon, June 21st, 1880; and Fleet-Surgeon, February 27th, 1891.

ARMY MEDICAL SERVICE.

SURGEON-GENERAL JOHN ALEXANDER WILLIAM THOMPSON, M.D., died recently at his residence, Drumholm, Cheltenham, at the age of 77. He was appointed Assistant-Surgeon, November 19th, 1844; became Surgeon, February 26th, 1856; Surgeon-Major, November 19th, 1864; Deputy-Surgeon-General, November 23rd, 1872; and Surgeon-General, January 27th, 1880. He retired from the service November 13th, 1881. He had no war record in the Army Lists.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANTS W. P. PEAKE and S. J. J. KIRBY are promoted to be Surgeon-Captains, July 26th.

Surgeon-Lieutenant W. H. VICKERY, 3rd Volunteer Battalion the Northumberland Fusiliers, is appointed Surgeon-Lieutenant, July 26th.

THE VOLUNTEERS.

MR. WILLIAM A. TAYLOR, M.B., is appointed Surgeon-Lieutenant in the 1st Forfarshire Artillery, July 26th.

Surgeon-Major J. A. ADAMS, M.D., 1st Lanarkshire Rifles, is promoted to be Surgeon-Lieutenant-Colonel, July 26th.

Surgeon-Lieutenants R. H. LUCE, 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment), and D. R. OSWALD, M.B., 7th (Clackmannan and Kinross) Volunteer Battalion the Princess Louise's Argyll and Sutherland Highlanders, are promoted to be Surgeon-Captains, July 26th.

VOLUNTEER AMBULANCE CHALLENGE SHIELD.

THE competition for this shield took place on Saturday last at Wellington Barracks, and resulted in the 3rd Volunteer Battalion the Queen's gaining it this year; the Westmorland and Cumberland Hussars came second, and were very closely followed by the 2nd Volunteer Battalion Royal Fusiliers, who had already held the shield on two occasions. Twelve teams entered, and seven of these showed very high merit. The event created considerable interest, and was watched by a large number of spectators. Major-General Trotter, commanding the Home District, was present for some time, and had intended presenting the badges to the members of the winning and the second teams, but had to leave the ground to attend an official inspection before the result could be declared.

Thanks to the excellent arrangements made by Surgeon-Captains Harper and Warwick, the honorary secretaries of the Volunteer Medical Association, everything went off very smoothly and without any loss of time. We are informed that the winning team had recently been through a course at the Volunteer Ambulance School of Instruction.

MEDICAL OFFICERS AND THE VICTORIA CROSS.

JUSTITIA writes: With reference to the narrowminded indisposition to grant the Victoria Cross to medical officers recently shown by the War Office, will you please afford space for the following excerpt from Dr. Busch's *Bismarck*, 1898, vol. i. p. 336:

"While the Franco-Prussian war was still being waged, with regard to the distribution of the Iron Cross Bismarck observed: 'The army doctors should receive the black and white ribbon. They are under fire, and it requires much more courage and determination to quietly allow one's self to be shot at than to rush forward to the attack.'"

AMBULANCE IN HILL WARFARE.

ON May 6th we alluded to an article on this subject in the *Journal of the United Services of India*. A second half of this paper has appeared in which the writer, an army surgeon, deals with the general rules and principles which regulate—or ought to regulate—the management of hospitals and ambulances in the field, and the distribution, employment, and control of medical officers on the march and in action. The author proposes that armed escorts should be permanently detached for all hospitals and ambulances just as they are for baggage, transport, convoys, etc. Such a proposal requires very careful consideration, for if forty or fifty disciplined soldiers (estimated by the author of the paper to be necessary) are put on escort for each hospital a large number of soldiers would be required for the hospitals and ambulances of a force of the strength such as was, for example, the Tirah field force, about 30,000. Two important points are dealt with by the writer of the articles, namely, the knotty one of removal of the wounded from the fighting line in warfare with the frontier tribes and the second line of transport for the wounded, for example, dandies, mules, ponies, transport carts, pack saddles.

PRESENTATION AT COURT.

BRIGADE-SURGEON-LIEUTENANT-COLONEL V.M.S., writes: Surely the Director-General, having himself been presented, has the same privilege as any other officer in presenting a junior on the occasion of a *levée*? He says he himself having been presented has the right to present others; therefore the Director-General must be in a similar position.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE SECOND QUARTER OF 1899.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE vital statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending June last, 87,526 births were registered in these thirty-three towns, equal to an annual rate of 30.8 per 1,000 of their aggregate population, estimated at 11,404,408 persons in the middle of this year. In the corresponding periods of the three preceding years the birth-rates in these towns were 31.1, 30.0, and 30.0 per 1,000 respectively. In London the birth-rate last quarter was 29.6 per 1,000, while it averaged 31.6 in the thirty-two provincial towns, among which it ranged from 23.2 in Halifax, 24.1 in Bradford, 24.5 in Huddersfield, and 24.9 in Oldham, to 35.5 in Birmingham, 35.6 in Liverpool, 36.5 in Sunderland, and 39.4 in Gateshead.

During the quarter under notice 49,763 deaths were registered in the thirty-three towns, corresponding to an annual rate of 17.5 per 1,000, against 18.2, 16.9 and 17.1 in the second quarters of the three preceding years. In London the rate of mortality was 16.6 per 1,000, while it averaged 18.1 in the thirty-two large provincial towns, among which it ranged from 12.8 in Cardiff, 12.9 in West Ham, 13.3 in Croydon, and 15.4 in Leicester to 20.6 in Salford, 22.0 in Wolverhampton, 22.7 in Liverpool, and 23.6 in Manchester. The 49,763 deaths registered in the thirty-three towns last quarter included 4,945, which were referred to the principal zymotic diseases, equal to an annual rate of 1.74 per 1,000, against 2.91, 1.70, and 2.88 in the corresponding periods of the three preceding years. In London the zymotic death-rate last quarter was equal to 1.66 per 1,000, while it averaged 1.79 in the thirty-two provincial towns, among which it ranged from 0.75 in Croydon, 0.83 in Brighton, 0.87 in Derby, 0.94 in Bristol, and 0.95 in Halifax to 2.11 in Sheffield, 2.19 in Leicester, 2.77 in Salford, 3.36 in Burnley, and 3.61 in Manchester. The 4,945 deaths referred to the principal zymotic diseases in the thirty-three towns during the quarter under notice included 21 which resulted from small-pox, 1,529 from measles, 337 from scarlet fever, 888 from diphtheria, 1,289 from whooping-cough, 352 from "fever" (principally enteric), and 529 from diarrhœa. Of the 21 deaths from small-pox, 19 occurred in Hull, 1 in London, and 1 in Liverpool. The fatal cases of measles, which had been 662, 947, and 1,109 in the three preceding quarters, further rose to 1,529 during the three months ending June last, and were equal to an annual rate of 0.54 per 1,000; in London the death-rate from this disease was equal to 0.61 per 1,000, while it averaged 0.49 in the thirty-two provincial towns, among which measles was proportionally most fatal in West Ham, Nottingham, Liverpool, Bolton, Manchester, and Salford. The deaths from scarlet fever, which had been 415 and 366 in the two preceding quarters, further declined to 337 during the three months under notice, and were equal to an annual rate of 0.12 per 1,000; in London the scarlet fever death-rate was only 0.07 per 1,000, while it averaged 0.15 in the thirty-two provincial towns, among which this disease showed the highest proportional mortality in Norwich, Nottingham, Liverpool, Bolton, Burnley, Halifax, and Bradford. The fatal cases of diphtheria, which had been 1,140 and 1,128 in the two preceding quarters, further declined to 888 during the three months ending June last, and were equal to an annual rate of 0.31 per 1,000; in London the death-rate from this disease was 0.31 per 1,000, and corresponded with the average rate in the thirty-two provincial towns, among which diphtheria was proportionally most fatal in West Ham, Portsmouth, Swansea, Leicester, Leeds, and Sheffield. The deaths from whooping-cough, which had been 622 and 1,417 in the two preceding quarters, declined again to 1,289 during the three months under notice, and were equal to an annual rate of 0.45 per 1,000; in London the death-rate from whooping-cough was 0.47 per 1,000, while it averaged 0.45 in the thirty-two provincial towns, among which this disease showed the highest proportional mortality in Plymouth, Cardiff, Birkenhead, Burnley, Preston, Huddersfield and Hull. The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of fever), which had been 1,004 and 499 in the two preceding quarters, further declined to 352 during the three months ending June last, and were equal to an annual rate of 0.12 per 1,000; in London the "fever" death-rate was 0.08 per 1,000, while it averaged 0.15 in the thirty-two provincial towns, and was highest in Portsmouth, Wolverhampton, Birkenhead, Liverpool, Salford, and Sunderland. The 529 fatal cases of diarrhœa were equal to an annual rate of 0.19 per 1,000; in London the rate of mortality from this disease was 0.12 per 1,000, while it averaged 0.23 in the thirty-two provincial towns, among which diarrhœa showed the highest proportional fatality in Wolverhampton, Manchester, Salford, Burnley, Blackburn, and Preston.

Infant mortality in the thirty-three towns, measured by the proportion of deaths under one year of age to registered births was equal to 124 per 1,000 during the three months ending June last, against 141, 128, and 133 in the corresponding quarters of the three preceding years. In London the rate of infant mortality was equal to 114 per 1,000, while it averaged 131 in the thirty-two provincial towns, among which it ranged from 96 in Halifax, 100 in Croydon, 105 in Swansea, and 106 in Huddersfield to 146 in Cardiff and in Blackburn, 147 in Salford, 154 in Manchester, 161 in Preston, 171 in Oldham, and 193 in Burnley.

The causes of 611, or 1.2 per cent., of the deaths in the thirty-three towns during the three months ending June last were not certified, either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths in London was only 0.7 per cent., while it averaged 1.6 in the thirty-two provincial towns. The causes of all the

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Second Quarter of 1899.

Towns.	Estimated Population middle of 1899.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
33 Towns	11,404,408	87,526	49,763	30.8	17.5	1.74	4,945	21	1,529	337	888	1,289	352	529	124	1.2
32 Provincial Towns	6,857,656	53,987	30,920	31.6	18.1	1.79	3,050	20	833	253	531	761	204	388	131	1.6
London	4,546,732	33,539	18,843	29.6	16.6	1.66	1,895	1	696	84	357	528	88	141	114	0.7
West Ham	300,241	2,204	968	30.6	12.9	1.86	140	—	43	4	37	32	12	12	110	2.6
Croydon	127,759	811	425	25.5	13.3	0.75	24	—	8	1	5	7	—	3	100	—
Brighton	123,226	800	520	26.3	16.9	0.83	25	—	—	3	6	6	6	4	110	0.2
Portsmouth	190,741	1,233	769	25.9	16.2	1.85	88	—	17	6	27	14	11	13	127	0.5
Plymouth	100,637	783	491	31.2	19.6	1.40	35	—	2	—	5	25	1	2	119	—
Bristol	320,911	2,403	1,260	30.0	15.7	0.94	76	—	11	2	3	28	6	26	114	1.6
Cardiff	185,826	1,339	592	28.9	12.8	1.23	57	—	—	—	6	43	2	6	146	0.8
Swansea	103,722	764	401	29.5	15.5	2.06	53	—	—	3	39	7	2	2	105	1.0
Wolverhampton	88,821	783	487	35.4	22.0	1.41	31	—	—	1	3	6	12	9	144	0.8
Birmingham	514,956	4,553	2,374	35.5	18.5	1.20	154	—	39	2	28	40	22	23	128	2.1
Norwich	113,266	823	444	29.1	15.7	1.06	30	—	1	6	6	10	4	3	128	0.9
Leicester	213,851	1,659	819	31.1	15.4	2.19	110	—	4	9	68	23	—	12	128	1.7
Nottingham	239,384	1,841	1,039	30.9	17.4	1.44	85	—	38	13	4	13	7	10	135	0.6
Derby	106,401	735	425	27.7	16.0	0.87	23	—	3	5	5	1	3	6	118	—
Birkenhead	115,162	936	476	32.6	16.6	1.87	54	—	2	1	6	34	7	4	118	1.1
Liverpool	634,212	5,633	3,583	35.6	22.7	2.01	318	1	104	33	36	49	53	42	126	3.9
Bolton	162,221	1,227	688	30.3	17.0	1.95	79	—	41	14	4	6	5	9	116	0.6
Manchester	543,902	4,657	3,207	34.3	23.6	3.62	491	—	315	10	16	87	11	52	154	0.8
Salford	218,244	1,868	1,119	34.3	20.6	2.77	151	—	61	6	16	24	13	31	147	1.0
Oldham	150,772	935	747	24.9	19.9	1.47	55	—	8	6	7	25	5	4	171	0.1
Burnley	113,081	752	506	26.7	17.9	3.36	95	—	11	22	9	44	2	10	193	1.6
Blackburn	135,154	913	590	27.1	17.5	1.91	64	—	10	6	11	18	7	12	146	3.2
Preston	117,022	907	544	30.9	18.5	1.59	47	—	1	1	5	22	5	13	161	3.1
Huddersfield	103,464	631	416	24.5	16.1	1.17	30	—	1	2	1	18	5	2	106	1.0
Halifax	97,721	565	430	23.2	17.6	0.95	23	—	2	8	5	3	5	—	96	3.7
Bradford	236,241	1,420	1,018	24.1	17.3	1.41	83	—	8	36	6	18	10	5	126	0.5
Leeds	423,889	3,388	1,804	32.1	17.1	1.60	170	—	40	16	54	29	13	18	128	0.3
Sheffield	361,169	3,097	1,637	34.4	18.2	2.11	190	—	22	16	98	18	16	20	131	3.2
Hull	234,270	2,067	1,016	35.4	17.4	2.08	121	19	11	9	5	60	3	14	123	1.7
Sunderland	145,613	1,326	718	36.5	19.8	1.49	54	—	15	6	—	14	12	7	137	1.5
Gateshead	106,552	1,047	421	39.4	15.8	1.20	32	—	3	1	4	16	3	5	128	1.4
Newcastle-on-Tyne	228,625	1,788	986	31.4	17.3	0.99	56	—	12	5	5	24	1	9	135	0.7

deaths during the quarter were duly certified in Croydon, Plymouth, and Derby, and only one was uncertified in Brighton and in Oldham; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Blackburn, Preston, Halifax, and Sheffield.

DUTIES OF RELIEVING OFFICERS.

F.R.C.S.E. writes, asking a long series of questions in reference to the duties of relieving officers when application is made for medical orders. If he will state briefly the information he requires, we will endeavour to frame an answer.

BY-LAWS AS TO INFECTIOUS CASES.

Mr. E. V. Phillips, D.P.H. (Kibworth, Leicester), Medical Officer of Health, Market Harborough Rural District, population 6,800, will be very grateful to any medical officer of health of a similar rural district who will forward him a copy of by-laws which have been found effective in removal, etc., of infectious cases.

The salary of Mr. Garry Simpson, medical officer of health to the Acton District Council, has been increased from £100 to £125 per annum.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,305 births and 4,028 deaths were registered during the week ending Saturday last, July 22nd. The annual rate of mortality in these towns, which had increased from 15.7 to 16.9 per 1,000 in the three preceding weeks, further rose last week to 18.4. The rates in the several towns ranged from 7.6 in Brighton, 10.6 in Burnley and in Huddersfield, and 14.7 in Wolverhampton, to 23.1 in Birkenhead, 26.6 in Liverpool, 26.7 in Sheffield, and 29.4 in Salford. In the thirty-two provincial towns the mean death-rate was 18.5 per 1,000, and exceeded by 0.3 the rate recorded in London, which was 18.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.6 per 1,000; in London the death-rate was equal to 3.5 per 1,000, while it averaged 3.7 in the thirty-two provincial towns, among which the highest zymotic death-rates were 5.7 in Nottingham, 5.9 in Birkenhead, 6.7 in Salford, 6.8 in Liverpool, and 7.7 in Sheffield. Measles caused a death-rate of 1.0 in Oldham, 1.5 in Liverpool, 1.6 in Manchester, and 2.6 in Salford; scarlet fever of 1.1 in Halifax; whooping-cough of 1.5 in Huddersfield; and diarrhœa of 3.3 in Portsmouth, 3.9 in Liverpool, 4.1 in Nottingham, 5.0 in Birkenhead, and 5.2 in Sheffield. The mortality from "fever" showed no marked excess in any of the large towns. The 83 deaths from diphtheria included 42 in London, 12 in Leeds, 7 in Sheffield, 4 in Cardiff, and 3 in Salford. No fatal case of small-pox was registered last week, either in London or in any of the thirty-two large provincial towns; and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, July 22nd. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had risen from 2,161 to 2,602 at the end of the nine preceding weeks, had further risen to 2,653 on Saturday last; 292 new cases were admitted during the week, against 302, 315, and 299 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, July 22nd, 1,023 births and 505 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 17.7 to 16.7 per 1,000 in the three preceding weeks, further declined to 16.5 last week, and was 1.9 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 11.5 in Paisley, and 13.5 in Aberdeen and in Perth, to 18.5 in Glasgow and 21.3 in Greenock. The zymotic death-rate in these towns averaged 2.7 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 261 deaths registered in Glasgow included 15 from measles, 6 from scarlet fever, 3 from whooping-cough, and 26 from diarrhœa. Two fatal cases of diphtheria, 3 of "fever," and 6 of diarrhœa were recorded in Edinburgh; and 5 deaths from diarrhœa occurred in Dundee.

MEDICAL NEWS.

The Prince of Wales, who recently paid a visit to the Princess Alice Memorial Hospital, Eastbourne, has promised to give a new operating table to the hospital.

The Poplar District Board of Works at its meeting on July 4th adopted the system of providing diagnosis boxes for bacteriological examination of doubtful cases of diphtheria and typhoid fever.

The Royal Orthopædic Hospital has been closed with the view to extensive sanitary work and other improvements in the wards. It is hoped that the out-patient department may be opened early in September, and that it will be possible to admit in-patients in October.

The late Mr. Thomas Brandreth has by his will bequeathed £1,000 to Guy's Hospital; £500 each to the East London Hospital for Children, the Seamen's Hospital Society, St. Mary's Hospital, Middlesex Hospital, and the London Fever Hospital; £200 to the Royal Free Hospital; and £100 each to the Stanley Hospital, Bootle, the Liverpool Royal Infirmary, and the Liverpool Southern Hospital.

The Emigration of Poor-law Children.—The State Children's Aid Association has addressed a memorial to the President of the Local Government Board urging upon the Board the necessity of helping in every way possible the emigration of orphan and deserted children. It appears that the number of emigrated pauper children has during the last two years dropped from 288 to 75. The State Children's Aid Association suggested that Poor-law guardians should be encouraged to use the small voluntary training homes where the children are taught the elements of farming and ordinary domestic work in this country; that the emigration societies recognised by the Local Government Board should receive an annual Treasury grant in proportion to the number of children dealt with; that the costs of child emigration should fall in London on the Metropolitan Poor Fund, and in other cases on the county rate; and that the present rule which forbids the emigration of girls over 12 years of age should be relaxed, as experience has shown that such girls, with habits and minds formed in an English training home, do very well in Canada. An investigation of the results of the work of voluntary societies has convinced the Association that emigration, if carefully carried out, is one of the most wholesome and economical ways of dealing with State-dependent children.

Sixth International Otological Congress.—An interesting programme has been issued for this Congress, which will be held at the Examination Hall, Victoria Embankment, London, from August 8th to 12th. Over 70 papers are announced for reading, besides a general discussion on "Indications for Opening the Mastoid in Chronic Suppurative Otitis Media," to be opened by Professors Macewen and Politzer and Drs. Knapp and Luc. The Museum to be held in connection with the Congress in the same building promises to be of great interest. There will be a large collection of specimens relating to diseases of the ear and nose, not only from this country, but also from France, Germany, Austria, Holland, and other countries. Amongst others, Professor Politzer (Vienna) is bringing over many valuable specimens. Members of the profession will be admitted to the Museum on presentation of their visiting cards on Wednesday, August 9th, and Thursday, August 10th, from 2 to 4 P.M., and on Saturday, August 12th, from 10 A.M. to 5 P.M. Further particulars of the Congress may be obtained from the Honorary Secretary-General, Mr. Cresswell Baber, 46, Brunswick Square, Brighton.

MEDICAL VACANCIES.

The following vacancies are announced:—

BIRKENHEAD UNION.—Assistant Medical Officer for the Infirmary, Workhouse, and Schools. Salary £80 per annum, with board, washing, and apartments. Applications, endorsed "Assistant Medical Officer," to the Clerk to the Guardians, 45, Hamilton Square, Birkenhead, by August 7th.

BRADFORD POOR-LAW UNION.—Resident Assistant Medical Officer for the Hospitals and Workhouses of the Union. Appointment for one year. Salary, £100, with rations, apartments, and washing. Applications to the Clerk to the Guardians, Poor-law Offices, 22, Manor Row, Bradford, by July 31st.

CHELTENHAM GENERAL HOSPITAL.—Assistant House-Surgeon; unmarried. Appointment for two years. Salary £100 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by August 12th.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon. Salary, £80 per annum, with board, residence, and washing. Applications to the Secretary by August 2nd.

DOWNPATRICK: COUNTY DOWN INFIRMARY.—Registrar, Compounder of Medicine, and Assistant to the Surgeon. Salary, 60 guineas, with board, fuel, and washing. Applications to Dr. T. M. Tate by August 10th.

DUNDEE ROYAL LUNATIC ASYLUM.—Medical Assistant. Must be qualified. Salary, £100 per annum, with rooms, board, and laundry. Applications to Dr. Rorie by August 19th.

GLOUCESTER: COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried and not over 30 years of age. Salary, £120 per annum, rising to £150, with board, lodging, and washing. Applications to the Medical Superintendent.

GUY'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Biology. Applications to the Treasurer, Superintendent's office, Guy's Hospital, S.E., by September 1st.

HALIFAX: ROYAL INFIRMARY.—House-Surgeon. Salary, £80 per annum, advancing to £100, with extra allowance of £9 2s. 6d. per annum, with residence, board, and washing. Applications to the Secretary by August 8th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Assistant Resident Medical Officer. Salary, £100 per annum, with board and residence. (2) Resident House-Physicians. Appointments for six months. Honorarium, £25 each. Applications to the Secretary by August 8th.

LAGOS RAILWAY, West Africa.—Two Junior Assistant Medical Officers for the Medical Staff, aged 25. Salary, £20 per month, first-class passage out and home, free quarters, and four months' leave after eight months' residential service. Applications, endorsed "Junior Assistant Medical Officer," to Mr. W. Shelford, 25A, Great George Street, Westminster, S.W.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary, £100 per annum, with board and residence. Applications to the Secretary, 34, Moorfields, Liverpool.

LONDON COUNTY ASYLUM, Cane Hill, Purley.—Junior Assistant Medical Officer between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications on forms provided to the Secretary of the Asylums Committee, 6, Waterloo Place, S.W., by August 1st.

MANCHESTER CORPORATION.—Medical Assistant. Salary, £200 per annum. Applications, endorsed "Appointment of Medical Assistant," to the Chairman of the Sanitary Committee, Public Health Office, Town Hall, Manchester, by August 5th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer for In-patient Department, Bowdon. Salary, £60 per annum, with board, apartments, and washing. Applications to the Secretary by August 8th.

MANCHESTER: OWENS COLLEGE.—Demonstrator in Anatomy for the winter session. Applications to the Registrar by August 11th.

MELROSE: ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with furnished quarters, board, washing, and attendance. Applications to the Medical Superintendent.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Appointment for twelve months. Salary, £50 with board, lodging, and washing. Applications to the Secretary by August 12th.

NOTTINGHAM LUNATIC ASYLUM, The Coppice.—Assistant Medical Officer; unmarried, and under 30 years of age. Salary, £150 a year, with apartments, board, attendance, and washing. Applications to the Medical Superintendent.

OLDHAM INFIRMARY.—Senior House-Surgeon. Salary, £85 per annum, with board, washing, and residence. Applications to the Hon. Secretary by July 31st.

ROCHDALE INFIRMARY AND DISPENSARY.—House-Surgeon; unmarried. Salary, £90 per annum, with board residence, and laundry. Applications to Mr. R. W. Shaw, Hon Sec., Buersil House, Rochdale, by August 3rd.

ROYAL EYE HOSPITAL, Southwark, S.E.—House-Surgeon. Remuneration, £50 per annum, with full board and lodging. Applications to the Secretary by August 5th.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Junior Out-patient Surgical Officer. Salary, £50. Applications to the Secretary by August 10th.

ST. LUKE'S HOSPITAL, E.C.—Clinical Assistant. Appointment for six months. Board and residence provided. Applications to the Secretary.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Assistant Resident Medical Officer. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by August 2nd.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant Resident House-Surgeon. Appointment for six months. Salary at rate of £50 per annum, with board and lodging. Applications to the Honorary Secretary by August 5th.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought).—Senior House-Surgeon at the Branch Hospital, Royal Victoria and Albert Docks, E. Salary, £75 per annum, with board and residence, and £25 additional if certain clinical work is performed satisfactorily. Applications to the Secretary at the Hospital, Greenwich, by August 7th.

TORQUAY: TORBAY HOSPITAL.—House-Surgeon. Salary, £80 per annum, and £5 5s. for the nurses' lectures, with board, lodging, washing, and attendance. Applications to the Secretary by August 14th.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, Chelsea, S.W.—House-Surgeon. Appointment for six months from September 1st. Honorarium at the rate of £50 per annum, with board and lodging. Applications to the Secretary by August 12th.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and attendance. Applications to the Secretary.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—House-Surgeon; unmarried and reside on the premises. Salary, £60 per annum, with board and residence and 10s. a month for washing. Applications to the Secretary.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—House-Surgeon; unmarried. Salary, £65 per annum, rising to £75, with board, residence, etc. Applications to the Secretary by August 10th.

MEDICAL APPOINTMENTS.

ARMSTRONG, Hubert, M.B., Ch.B.Vict., appointed Honorary Assistant-Physician to the Infirmary for Children, Liverpool, *vice* J. Towse Nisbet, M.D., resigned.

BAKER, Oswald, L.R.C.S., L.R.C.P., appointed Physician to Out-patients at the Hospital, Royal Victoria and Albert Docks, of the Seamen's Hospital Society.

BENNETT, Robert A. M.D.Lond., M.R.C.S., L.R.C.P.Eng., appointed District Medical Officer in the Niger Coast Protectorate, West Africa.

COLLIS, Edgar L., B.A., M.B., B.Ch., M.R.C.S., L.R.C.P., appointed Surgeon to Corbett Hospital, *vice* H. Hammond-Smith, M.R.C.S., L.R.C.P., resigned.

DUNCAN, Andrew, M.D., F.R.C.S., appointed Physician to In-patients at the Branch Hospital (Royal Victoria and Albert Docks) of the Seamen's Hospital Society.

HATFIELD, Ronald, M.B.Lond., M.R.C.S., appointed Senior Resident Assistant Medical Officer to the Workhouse of the Bradford Union.

PATON, E. Percy, M.S., F.R.C.S., appointed Assistant Surgeon to the Westminster Hospital.

PRIDMORE, John Walter, M.R.C.S., L.R.C.P Lond., appointed Assistant Medical Officer to the St. Saviour's Infirmary, East Dulwich Grove, London, S.E.

RATTRAY, John Moysey, A.M., M.D., appointed Medical Officer to the Frome Workhouse, *vice* Edmund Cockey, M.R.C.S., resigned.

RICE, David, M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Officer at the Staffordshire County Asylum, Cheddleton, Leek.

ROBERTSON, William, M.D., D.P.H., appointed Medical Officer of Health for Paisley.

SKEEN, Wm. St. John, M.B., C.M., appointed Medical Superintendent to the Durham County Asylum, *vice* Robert Smith, M.D., resigned.

STILL, George F., M.D., appointed Assistant Physician for Diseases of Children to King's College Hospital.

TENCH, M., M.D.Brux., L.R.C.P.Lond., M.R.C.S Eng., appointed Medical Officer for the Workhouse of the Dunmow Union, *vice* R. C. Lyle, L.R.C.P., L.R.C.S.I., deceased.

THOMSON, H. Campbell, M.D., M.R.C.P., appointed Officer-in-Charge of the Electrical Department at the Middlesex Hospital, *vice* Dr. W. Essex Wynter, resigned.

TUBBY, Alfred H., M.S., F.R.C.S., appointed Surgeon to In-patients to the Westminster Hospital, *vice* Thomas Bond, B.S., F.R.C.S., appointed Consulting Surgeon.

WAY, Montague H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon Royal Portsmouth Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

FRASER.—On July 22nd at "Epworth," St. Edward's Road, Southsea, the wife of A. Mearns Fraser, M.D., of a daughter.

HOBHOUSE.—On July 15th, at 36, Brunswick Place, Brighton, the wife of Edmund Hobhouse, M.D.Oxon., of a son.

MARRIAGES.

FAWCETT—FLEMING-BAXTER.—On July 15th, at St. Paul's Church, Avenue Road, N.W., John Fawcett, M.D., M.R.C.P.Lond., of 24, St. Thomas's Street, S.E., eldest son of the late John Bisdee Fawcett, to Mary Fleming, younger daughter of H. Fleming-Baxter, of The Tower, Fitzjohn's Avenue, N.W.

KIRKPATRICK-PICARD - ELLIS.—On July 20th, at St. Clement's Church, Outwell, by the Rev. H. Venn Ellis, father of the bride, and the Rev. R. E. R. Watts, Vicar of Wisbech, and the Rev. E. R. Wilford, Rector of Welney, Arthur W. Kirkpatrick-Picard, M.D.Lond., son of P. Kirkpatrick-Picard, M.D., of St. John's Wood, N.W., to Florence Jessie, younger daughter of the Rev. H. Venn Ellis, Rector of Outwell, Wisbech, Cambs.

SMITH—THORPE.—On the 20th inst. at Trinity Church, Lenton, by Rev. L. B. Lee, M.A., of Mansfield Woodhouse, assisted by Rev. A. H. Watts, Vicar of the Parish, and Rev. Arthur Hopkinson, William Robert Smith, M.D., F.R.C.S., of Beeston, Notts, son of Henry Smith, Esq., of Barton Hall, Norfolk, to Ethel, fifth daughter of W. B. Thorpe, Esq., of Lenton House, Nottingham.

DEATH.

STEVENSON.—On July 12th, at 105, Gordon Road, Ealing, W., James Stevenson, M.D., late Medical Officer of Health for Paddington, aged 74 years.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9: Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations,*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 2.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Tu., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu, F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 3.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

J. C. E. asks for a list of places in the North of England where the outdoor or fresh air treatment of consumption is carried on.

W. asks for particulars of administration of formalin by inhalation in cases of pulmonary tuberculosis, and whether the results, so far, have been satisfactory or not?

DR. J. T. GREY (Lenham) asks to be recommended a home or institution where a young woman suffering from epilepsy could be received on payment of about £1 a week. Preferably the home should be somewhere in the south or south-east of England.

A CORRESPONDENT asks whether a moderate amount of varicocele would be objected to in a successful candidate for a Civil Service appointment when physically examined?

*** A moderate amount without symptoms probably would not disqualify, but the term "moderate" is very vague.

FORCIBLE STRAIGHTENING OF SPINAL DEFORMITY.

ENQUIRER asks where he can obtain reliable statistics of the operation for the straightening of backs with spinal ankylosis by tension—that is, how the cases have turned out since being operated upon. He is at present attending a children's home with several cases which seem to him to be suitable for such treatment.

ATTENDANCE ON RAILWAY COMPANY'S SERVANTS.

A CORRESPONDENT asks what would be a reasonable fee to charge for attendance on the servants of a railway company, where the latter only admits liability for the first 24 hours. (1) Should the charge vary with the severity of the injury? (2) Should double be charged for attendance between 8 P.M. and 8 A.M.? (3) Should the charge for attendance on the company's premises (a few minutes' walk from his surgery) exceed that for treatment at his own house?

*** The fee should be what our correspondent is in the habit of charging to other patients for similar attendance. (1) The charge should vary according to the time and work required of the surgeon, and not necessarily in proportion to the severity of the injury. (2) A larger fee might reasonably be charged for attendance between 8 P.M. and 8 A.M. (3) It is usual for a surgeon to charge less for services rendered at his own house than when required to visit his patient.

ANSWERS.

L.R.C.P.&S.E.—Announcements like that referred to by our correspondent, and others of a similar kind, have the sanction of custom; though, from a professional point of view, the custom is more honoured in the breach than in the observance.

RETREAT.—A medical man should be careful not to be the tool of spurious philanthropy which, under the guise of the public advantage, may be seeking selfish ends. Speaking generally, we think that he may assume the position of superintendent, and hold shares in an inebriate home and permit his name to be published in a list of the promoters of such an enterprise without necessarily doing anything to incur the disapproval of his medical brethren.

H. E. B. P.—Such a report is exceedingly annoying, but as it in nowise affects our correspondent's character or reputation, it is not one about which he would be justified in writing to the lay press. He must content himself by speaking to his friends and asking them to take every opportunity of contradicting the impression. We have no doubt that in a few days he will effect his purpose.

A MEMBER.—We assume that C. is not practising as a consultant, but considering that his introduction to A. was by being called in consultation with B., we think he should absolutely decline to attend A. The reason for this is that every practitioner who calls in another in consultation ought to be able to feel that in doing so he runs no possible danger of losing his patient to the consultant.

MR. GEDDES SCOTT, M.R.C.S., M.R.C.P. (Funchal, Madeira), in answer to "M.B., M.R.C.S.," who inquired in the BRITISH MEDICAL JOURNAL of July 15th as to English medical men intending to practise in the Canaries or in Madeira, writes: There are no fewer than five English doctors in Madeira already, although the work could easily be done by two. To practise in Madeira, a good knowledge of Portuguese is essential, and a knowledge of other languages, especially German, is highly desirable. All the English doctors speak Portuguese fluently, and most of them speak German as well. Most of the practice out here being of a cosmopolitan character, a doctor must be an exceptionally good linguist. During the last few years several medical men have tried to settle in Madeira, but finding the profession already too well represented, have invariably sought "fresh fields and pastures new."

DISTRICT NURSES.

G. P.—In the BRITISH MEDICAL JOURNAL of January 15th, 1898, p. 195, it was stated that the sum of £100 should suffice to establish a district nurse. Where the population is scattered, one of the greatest difficulties—that of locomotion—has been to a great extent solved by the introduction of the cycle, and the expenses considerably reduced in consequence. Detailed information as to the best means of carrying out a scheme of district nursing may be obtained from *District Nursing on a Provident Basis*, by J. B. Hurry, M.A., M.D. (London: Scientific Press. 1898. 2s.) Correspondence on this subject will also be found in the BRITISH MEDICAL JOURNAL of March 4th, 1899, p. 554; March 25th, 1899, p. 762; April 15th, 1899, p. 942; April 29th, 1899, p. 1061.

INSURANCE REPORTS AND PROFESSIONAL SECRESY.

W.M.—It seems to us that the proper course to adopt would be to obtain in writing the consent of the legal representative of the deceased to answer any question asked by the insurance company; and having done this, to obtain the fee from the company, and then to give a straightforward answer. In the event of the representative of the deceased refusing to give permission, the medical attendant should decline to answer any questions, unless commanded to do so by the judge should the case be brought to trial.

STAINS FOR GONOCOCCUS.

MEMBER.—The best stains for gonococcus are fuchsin, methyl-violet and methylene blue. The specimens should also be stained by Gram's method to distinguish them from ordinary pus organisms (gonococci are not stained by Gram's method); 1/12 oil immersion is the best lens to use—substage condenser with wide diaphragm for illumination. Swift's challenge microscope with condenser and 1/12 oil immersion is admirable for the purpose.

NOTES, LETTERS, Etc.

MOSQUITOS AND MALARIA.

DR. JAMES SHAW (Liverpool) writes: Twenty-five years ago certain officers of a line of steamers in which I was surgeon slept under "mosquito bars," not only to protect themselves from mosquitos, but also—so they said—to exclude malaria. They escaped fever, whilst many—including the writer; though it is only fair to say not all, nor even the majority—of those who did not use nets were attacked.

B. G. writes: What about the people who are bitten by mosquitos and yet do not suffer from malaria? I know one such case—a chemist, who was for many years in India (lived chiefly in Bombay and Poona), was bitten freely by the winged pests, and yet has never suffered from the effects of the paludal poison in any form.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A H. Armstrong, M.B., Liverpool; Dr. F. H. Alderson, London. **B** Dr. W. Bain, Harrogate; Dr. W. G. Barras, Glasgow; B. G.; Mrs. J. W. Baker, Malvern. **C** Dr. J. J. Charles, Kilkee; Sir S. Crossley, Bart., London: Dr. J. H. Crocker, Eccles; Mr. E. Caudwell, Harleston; Hon. Stephen Coleridge, London; W. Carling, M.B., Southsea Cautious; Mr. C. Campbell, Saddleworth. **D** Disappointed; Mr. W. Downing, Birmingham; Dublinlensis; E. C. Daniel, M.B., Epsom; Mr. G. H. De'Ath, Buckingham. **E** Dr. J. C. Eames, Manchester; Enquirer. **F** Mr. G. S. Fort, London; D. P. Fitz-Gerald, M.B., Cork; Mr. G. Fowler, London; A. H. Frere, M.B., Stradbroke. **G** General Practitioner; Mr. J. T. Grey, Lenham; Mr. W. Galbraith, Gosforth; Dr. J. R. Goffe, New York; Mr. J. D. Gimlette, Ulu Pahang; G. P.; Dr. H. L. Gordon, London; Dr. J. G. Glover, London. **H** Heron: Dr. T. W. Hime, Bradford; Dr. G. G. Hopkins, Brooklyn; G. Hamilton, M.B., Liverpool; Dr. E. Hawkins, Dudley; Dr. D. P. Hickling, Washington: Mr. C. E. Hooper, London; Mr. T. G. Horder, Cardiff. **I** Income Tax Adjustment Agency, London. **J** Miss G. B. Jacobi, London; Justitia. **K** J. E. H. Kelso, M.B., Southsea; D. N. Knox, M.B., Glasgow; Mr. A. F. S. Kent, London; Mr. C. W. Krohne, London. **L** Mr. R. J. Lofthouse, Cheltenham; Dr. W. G. V. Lush, Weymouth; Mr. P. Lee, Cork. **M** Member; Dr. E. P. Manby, Liverpool; R. S. Marsden, M.B., Birkenhead; W. Mitchell, M.B., Bradford; Dr. A. Marsden, London; Dr. J. E. Moorhouse, Stirling; S. Mallannah, M.B., Hyderabad; Member B. M. A.; Mr. J. Y. W. MacAlister, London; Mr. A. H. Martin, Evesham; Mrs. Mullikin, Rohais, Guernsey Mr. P. Michelli, London. **P** Dr. J. F. Payne, London; Physician and Surgeon; Mr. J. W. Pridmore, London; Mr. E. V. Phillips, Kibworth; "Pharmaceutical Journal," Editor of the, London; Poor law Member; Dr. F. L. Phillips, Birmingham. **Q** Quack. **R** Mr. T. Ryan, London; Dr. H. D. Rolleston, London; G. A. Reid, M.B., Southsea R. B. W. **S** Dr. G. F. Still, London; Dr. J. Shaw, Liverpool; Mr. W. R. H. Stewart, London; Messrs. Street Bros., London; Mr. J. E. R. Stephens, London; Mr. H. W. Scriven, London; A. E. Stevens, M.B., London; Shorthanded; Mr. R. R. Sleman, London; Mr. J. G. Scott, Funchal; Dr. C. E. Stokes, Chard; Dr. C. E. Shelly, Hertford; Dr. W. H. Symons, Bath. **T** Dr. H. C. Thomson, London; Messrs. Taylor, Garnett, Evans, and Co., Manchester; G. Turner, M.B., Cape Town; A. H. Tubby, M.B., London; Miss G. Thompson, London; Dr. E. F. Trevelyan, Leeds. **U** Mr. J. Unsworth, Liverpool. **V** Mr. J. W. Vickers, London. **W** J. A. Waring, M.B., Nottingham; J. D. Windle, M.B., Southall; Dr. G. Wilson, Warwick; Mr. J. D. Walker, Teneriffe; Mr. R. H. Wolstenholme, Salford; Mr. C. G. Wheelhouse, Filey; Mr. J. R. Whitwell, Edinburgh. **X** X. Y. **Y** Dr. R. Young, London.

BOOKS, ETC., RECEIVED.

Sexualleben und Nervenleiden. Die nervösen Störungen sexuellen Ursprungs. Nebst einen Anhang über Prophylaxie und Behandlung der sexuellen Neurasthenie. Von Dr. L. Löwenfeld. Zweite Auflage. Wiesbaden: J. F. Bergmann, and Glasgow: F. Bauermeister. 1899. 5s.

Encyclopædia Medica. Under the General Editorship of Chalmers Watson, M.B., M.R.C.P.E. Vol. I. Edinburgh: Wm. Green and Sons. 1899.

On the Wasting Diseases of Infants and Children. By E. Smith, M.D. Sixth Edition. London: J. and A. Churchill. 1899. 6s.

*** In forwarding books the publishers are requested to state the selling price.

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PRESIDENT'S ADDRESS

DELIVERED AT THE

SIXTY-SEVENTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION

BY

J. WARD COUSINS, M.D., F.R.C.S.,

Senior Surgeon to the Royal Portsmouth Hospital.

A SKETCH OF THE CENTURY'S PROGRESS IN MEDICINE AND SURGERY.

I THANK you for the great honour you have conferred upon me by placing me in the distinguished position of President of the British Medical Association, and I can assure you that I feel the great responsibility I have incurred in venturing to follow the eminent men who have year after year occupied this chair, and particularly my able predecessor, Sir Thomas Grainger Stewart—so famous for his great professional attainments and culture. Nevertheless, I am encouraged to undertake the responsibilities of the position, feeling sure that I shall receive your kind assistance, and that you will deal gently with all my shortcomings. I trust you will accept the expression of my great appreciation of the distinction. Permit me now to offer the members of the Association a very hearty welcome, and, on behalf of my colleagues, to express the hope that your short sojourn at this ancient port may prove both profitable and enjoyable. I desire also to welcome the distinguished physicians and surgeons from foreign countries who have travelled long distances by land and sea to take part in our proceedings.

State of Medical Science at the Beginning of the Century.

We meet to inaugurate the 67th Annual Meeting of the British Medical Association. Kindly go back with me to the dawn of the present century, and take a hasty survey of the general condition of medical science at that period. It was a time when gradual development was proceeding, and experimental inquiry was entering upon a new epoch. The great characteristic of the period was the growing influence of new methods of research, and the declining power of theoretical speculation and abstract reasoning. The English school had been aroused by the brilliant researches of John Hunter, and the results of his extraordinary industry and patient study had made a marked impression. He died in 1793, but his labours had given a great impulse to the study of anatomy and pathology—an impulse which grew stronger and stronger in the early years of the century, and now at its close his name is held in admiration by surgeons throughout the civilised world, and his teachings are recognised to-day as the foundation of British surgery.

We must not forget that at this time Scotland had aided in the evolution of the healing art, and that the medical faculty of Edinburgh had been elevated into a condition of prosperity by the labours of many famous men. The northern university enjoyed a position of prosperity promoted by the influence of its distinguished professors of medicine, James Gregory and Cullen. The fame of Cullen extended far beyond the British Islands. His soundness of judgment and clearness of expression made him pre-eminently a leader in his day, and by the wisdom of his writings and the ingenuity of his system of therapeutics, as derived from his physiology, he captivated the medical mind of Europe. In 1828 John Abercrombie published his famous work on the diseases of the brain and spinal cord. Ireland, too, helped in the progress of our science by the work and genius of men of great distinction. Robert Graves was an eminent clinical teacher and expounder of the phenomena of disease. William Stokes will ever be renowned for his researches and writings on diseases of the heart and chest.

At this period British medicine was powerfully influenced by the French school. An intellectual awakening followed the Revolution in France, and medical science was roused by the researches of Bichat in anatomy and physiology. Soon after the medical world was startled by the new methods of physical diagnosis introduced by Laënnec, and the result of his discoveries was a revolution in the knowledge of chest diseases. About 1815 the Continent was again open to travellers, and many English doctors went to Paris to study the new method of auscultation, and the value of the stethoscope soon became widely appreciated in this country. Chemistry was early in the century recognised as an important branch of medical science, and the combination of chemical research with the study of physiology led to many important discoveries. In 1840 Bright described the disease of the kidney which is still known by his name; and not long after Bell and Marshall Hall made it possible by their labours to discriminate diseases of the spinal cord.

In the early years of the nineteenth century we can trace the birth of the modern school of medicine, and also the silent influence of many collateral sciences which helped forward its development. At this time the steam engine was rapidly making progress, telegraphy was advancing towards completion, and machinery began to take the place of labour. Science thus began to throw broadcast her precious gifts, and on every side social freedom and education were improving the condition of the people. Doctors, too, began to mend their ways, and to leave undone many things long associated with the strange reasonings of the age. They found that the blood, after all, was not so full of acrimony, that the veins were not so gorged, and the stomach not so foul; and so their drastic remedies were not so strong, and the lancet was not so trusted, and thus the unhappy invalids became slowly liberated from the dreadful tyranny of nauseous drugs.

Edward Jenner.

Let me remind you that the first years of the century were marked by the rapid and complete triumph of vaccination. Jenner made known to John Hunter his confidence in vaccination in 1770, but it was not until thirty years after this that he published anything about it; this was a long period for quiet labour and research. His first treatise appeared about 1799 or 1800, but it contains no reference to the obstructions and discouragements he had encountered. In 1802 the question of vaccination as a preventive remedy for small-pox was brought before Parliament and was referred to a committee. The report was presented to the House on June 2nd, and after a hot discussion the discoverer of vaccination was voted a grant of £4,000, and this sum was increased by another and larger sum a short time after.

The new method spread rapidly over England, then to Germany, France, Italy, America, and the whole civilised world. It is a well-known fact, however, that this remarkable acceptance of vaccination at this time was due to the efforts of public-spirited men rather than to the members of the medical profession. Many of the doctors of that day considered the practice as medical quackery, and even charged the vaccinators with flying in the face of heaven. Some opponents went so far as to denounce the innovation as the veritable Antichrist which was to come in the latter days. Even the Royal College of Physicians shook its venerable head; yet at this period small-pox was a frightful scourge. History tells us that almost throughout the eighteenth century nearly every human being suffered from the disease, and that the mortality from the foul disorder was often appalling.

Jenner died in 1823, still doing battle with the foes of progress, and in the hour of victory. We can now look back upon the experience of 100 years and accurately estimate the value of his great discovery. Since the introduction of vaccination there has been a steady diminution in the death-rate caused by small-pox. During recent years the disease has been almost exterminated by infant vaccination and revaccination in the later periods of life. Among all classes, and in every country where vaccination is practised, there is very little small-pox. Wherever an outbreak has occurred, the unvaccinated are attacked in much greater proportion than the vaccinated; and the mortality among the unprotected is much higher than among those who have submitted to this safe and protective remedy.

The recent modification of the vaccination laws is regarded almost universally as a very unsafe and retrograde change, and there is reason to fear that sooner or later there may be

another outbreak of the disease. It is difficult to realise, with all the accumulated evidence of a century, gathered from all the great European countries and the centres of America, that we as a profession should have to do combat with such dangerous legislation. The steady progress of protective medicine, the remarkable disappearance of the disease from this country, and the freedom of marks and pits from the faces of the present generation, ought to suppress the clamour of the selfish and the ignorant, and render it impossible that the people should be exposed to the risk of another sacrifice on the foul altar of small-pox. I am, however, confident that the voice of the medical profession will never cease to sound the alarm, and that our great Association will never hesitate to put forth all its influence and strength until the adversaries of sanitary progress have been defeated, and the old enemy slain again at our gates.

PROGRESS OF SANITARY SCIENCE AND PREVENTIVE MEDICINE

The labours of the past century have done much to hasten on the grand consummation of our art, not only in the direction of cure, but in the still higher way of prevention. During its early years the population of the provincial centres rapidly increased, and important changes occurred in the social condition of the working classes. Few provincial towns contained more than 50,000 inhabitants, and not one had a population of 100,000; but the development of the various industries rapidly caused a migration from the country towards these centres, and for this increase of their inhabitants there was very little accommodation. I need not remind you of the wretched state of the houses of the working population in those days—the narrow courts, the stifling slums, the unwholesome factories, the neglect of cleanliness, and the total absence of any rudiment of sanitation. It is not surprising that, under these conditions, disease, deformity, moral and physical degeneration were the results. The bills of mortality of London at this period indicated a very high mortality, and sometimes reached 50 to 60 per 1,000 living, though these calculations cannot be considered altogether reliable, as they were made from the old system of parish registrations.

It was not until 1834 that the Legislature commenced action in the sanitary interests of the people. Soon after a national system of registration was introduced, and the causes of death were certified by medical men. Acts of Parliament were also passed to give power to town authorities to provide water supply and drainage. I do not intend to weary you with an account of the long series of legislative changes which have issued in the protective regulations of modern times. Many of these legislative efforts were the outcome of critical events which occurred in the course of the last seventy years. The early publication of the Registrar-General's reports and the splendid labours of the late Dr. Farr made a great impression upon the leaders of the medical profession of that day, and aroused public attention upon the grave questions connected with public health. Soon commissions were appointed, and pioneers in sanitary reform arose on every side; at the same time fresh revelations of neglect startled the intelligent people, and a loud demand arose for increased legislative control. But there was an outcry from the defenders of the rights of the people, from the grasping holders of vested interests, and from the prejudiced of every class of the community, against the growing power of sanitary reform and every earnest effort to cast out preventable disease.

In 1848 another crisis occurred. The report of the high mortality from the dreadful epidemic of cholera burst upon the land like a warning from heaven itself, and then followed more legislation. In 1855 the people were again aroused by the horrors and sufferings of the army in the Crimea. The country sustained dreadful losses which were in a measure the result of departmental inefficiency. A Royal Commission exposed the terrible mortality, but the great sanitary reformer of the period was the late lamented Parkes, of Netley, and, although he has long since ceased to be a labourer in the field, his splendid efforts will be ever held in grateful remembrance.

FLORENCE NIGHTINGALE.

I cannot omit to mention here the self-sacrificing labours of many noble women at this period in the hospitals of the East, which gave a powerful impulse to improved hospital administration and sanitary progress. The name of Florence Nightingale will ever be associated with the evolution of hospital reformation in this country. In 1844 she visited the civil and military hospitals of Europe, and worked with the Sisters of Charity in Paris. In 1855, during the war with Russia, she went out and organised a nursing department at Scutari. On November 4th she arrived at Constantinople with her band of followers, just in time to receive her bleeding countrymen from the field of Inkerman. I believe that the reformations of the present day are greatly due to her noble life and labours. She roused not only the civilised world, but also the professors of the healing art, and the loud demand for hospital reform which has extended through the length and breadth of the land can be fairly traced to the mental power and splendid devotion of Florence Nightingale.

In the year 1860 important inquiries took place with reference to the adulteration of food, polluted water, overcrowding in unhealthy houses, milk contamination, and unwholesome trades. Then followed the great administration changes of 1871 and 1875, when England was divided into urban and sanitary districts, and medical officers of health and sanitary inspectors were appointed throughout the country. We can safely assert that from this period the power of sanitary science has been steadily advancing. The pathway of progress has been hampered with many obstructions which have arisen from the indifference of local authorities and the dislike of sanitary reform.

ERNEST HART.

I cannot close my reference to the progress of sanitary science without mentioning the lifework of our late editor, Mr. Ernest Hart. He was a devoted pioneer in preventive medicine and laboured with enthusiasm in the great questions of epidemic cholera, waterborne disease, vaccination, and many other topics. He rendered invaluable help to the children of the land, and made plain the necessity for reform in the Poor-law infirmaries of the United Kingdom. He threw all his energy into his editorial labours and speedily raised the JOURNAL of the Association into the commanding position it now occupies. His name and work will for ever be intimately associated with the history and growth of our great and world-wide organisation.

PATHOLOGY.

The early part of the century will ever be recognised as the birthtime of modern pathology—the period when the huge chasm between dead morbid anatomy and living pathology began to be bridged over. The teachings of John Hunter had long exploded the old humoral theories of disease. The leading minds in those days no longer considered that disease depended upon an excess of bile, or blood, or phlegm, and the other fluids of the body, and that it could be cured by getting rid of these faulty elements. The principles formulated by Hunter were maintained by succeeding writers in the same field for many years. His pathology was a long way in advance of his predecessors and he was the first to recognise that all the processes of the organism belonged to biological science. He saw that disease was only a deviation from health and that both conditions were regulated by the same vital laws. He regarded the blood as possessed of life like the solid parts of the body and its plastic materials as the elements of all growth and structural repair, and taught that exudations composed of homogenous and transparent fluids containing within them no visible form sweated through the walls of the blood vessels, and then became changed into living tissue by a process of vital crystallisation.

About the year 1830 great improvement took place in the manufacture of the achromatic compound microscope, and this gave a great impetus both to physiology and pathology, and the value of microscopic examination began to be generally appreciated. Moreover, the Council of the Royal College of Surgeons of that day was so impressed with the utility and importance of the facts revealed by the minute dissection and examination of elementary structures that in 1841 they determined to establish a Professorship of Histology, and to form a collection of preparations both of the healthy and morbid tissues of plants and animals which should elucidate the value of microscopic investigation.

We can now look back upon the time when the progress of physiology was everywhere recognised as the true basis of all pathological science. In 1838 Schleiden made his

brilliant discoveries in vegetable tissues, and soon after Schwann investigated the cellular structure of animal bodies. He followed Hunter in believing that vital centres of new growth were spontaneously developed in semi-solid exudations, and that constructive elements could actually be formed within amorphous substances. But, although the progress of the century has been the outcome of the labours of many able workers, still I venture to think we can justly give the first place to Rudolph Virchow. We are indebted to him for exhibiting histology as the real instrument for unfolding the deep mysteries of disease. He practically gave the medical world a new pathology founded upon laborious observation and experiment. Every kind of organic structure and every new formation, he announced, could be traced to a vital source. There never has been and there never will be such an erratic phenomenon as spontaneous generation in either physiology or pathology. He recognised that every plastic exudation, which had been called amorphous material, had wrapped up within it living cells, and that these had come from living structures, and thus every new formation must be the offspring of some living tissue in which its living germs arose.

To-day we are able to appreciate the fact that the evolution of our new pathology has progressed side by side with the evolution of biology, and that, in its broadest sense, pathology is an outgrowth of biology. The work of the last fifty years may be rightly defined as the great unravelling of the deep relations between the healthy phenomena of life and the variations which are outside the normal cycle of these vital phenomena. Through many years biology and pathology have been mutual helps in their onward and remarkable evolution, and we may rest assured that in the coming century their healthy reaction on each other will still go on. Pathology will still advance, and the new discoveries of biology will serve as starting points of new pathological truths; at the same time, the ordeal of biological criticism will be accepted as the test of every new pathological development.

Pathology is growing more and more a very practical science. It is a matter of interest that during the last few years a great expansion in this direction has set in, so that by the help of an intermediate class of workers the results of pathological investigation can be speedily applied to every-day practice. In this way the busy physician and surgeon are brought into contact with scientific research as an indispensable aid to the diagnosis and treatment of diseases.

Bacteriology.

An inquiry into the early history of many branches of science clearly indicates that old speculations concerning obscure phenomena have often in the long run proved to be real anticipations of future progress. Sometimes the explanations regarding the abstruse problems have appeared strange and fanciful; yet in the course of time, by actual scientific demonstration, they have been changed into far-reaching truths. The history of the science of medicine, like that of all other branches of science, has been one of gradual evolution. The leaders in the past were not intellectually inferior to the leaders of the present day. Our forefathers in medicine had only small and confused accumulations of knowledge to build upon, but upon their foundation—laid amid so many shadows and perplexities—the modern temple has been erected by a great army of workers scattered in every part of the civilised world.

To-day we recognise some old theories as scientific facts. Long before the beginning of this century the phenomena of many diseases were explained by the assumption that minute particles endowed with life were developed in certain states of the atmosphere, and were carried hither and thither by the winds of heaven. In more recent times the latency of many diseases after infection, the spread of epidemics, and the reproduction of a specific material within the infected organism gave force to the conjecture that the essential part of the morbid poison might be a living thing—a contagium animatum—and that all fevers and the allied disorders might be the result of a parasitic development within the body. About 1840 Watson explained the wide diffusion of influenza and other infectious fevers to the presence of minute substances: "Myriads of animalcules may come in contact with the mucous membrane, and exercise a poisonous influence on the system. The gaseous fluid which surrounds this planet teems with living atoms, and these atmospheric infusoria probably congregate in masses sufficient to render noxious the very air." The theory of fermentation enunciated by Professor Liebig tended at this period strongly to confirm the parasitic theory, which was that the morbid poison acted as a ferment, and excited a transformation in the blood similar to that produced by the action of yeast upon an infusion of malt. It possessed, too, the singular power of multiplying itself in the human body, and this multiplying process was the real explanation of all infectious fevers.

These were the speculative opinions of the leaders of the medical profession up to five-and-thirty years ago, and now by development of a new branch of biology, they are numbered among scientific realities. I cannot pretend to sketch the evolution of this young science, but only to mention that this fresh light has arisen from France, Germany, and England, and that it is mainly due to the brilliant labours of Lister, Pasteur, and Koch. Lord Lister has generously expressed his indebtedness to Pasteur for his original researches; Koch has by his splendid ingenuity made the most important improvements in bacteriological technique. No doubt they are all indebted to each other, and the world of science will be for ever indebted to them all.

During recent years, then, we have grown certain that the world is full of tiny organisms, and, while in their individuality they are very simple and obscure, in the aggregate they are a mighty host, developing mighty forces, and directly exercising in Nature a power over all living forms. We know, too, that these living atoms are ever multiplying around us and within us by simple division or spore formation; and that these lives are very short, for in a few brief hours fifty or sixty generations can be produced. The various forms are now classified according to their functions and structure, and it is very probable that future investigations may prove the transformation of many species, so that the life-history of these tiny particles may confirm afresh the great doctrine of evolution. Moreover, their germs are universal; they are found in earth, air, and water, in the dust which floats in the sunbeam, on the clean walls of our dwellings, in our clothing, in our food, our milk, and in the very dainties which we swallow from the hands of our accomplished cooks. Surely it is a marvellous thing that any of us are left to tell the tale; still it is a fact that the world contains many healthy people, and that a fair proportion live to a good old age.

We must take courage from the advance of science. After all we have not so much to fear as those who have gone before us. It is a good thing for us to know that many living atoms are our deadly foes; but, on the other hand, many of them are our secret friends. The wheels of Nature would soon be stopped without their benign assistance, and the flora and fauna of the world with man himself would pass away.

Relation between the Disorders of Mankind and those of the Lower Animals.

For many years the investigation of the modern school were limited to the disorders of mankind, but this narrowness had disappeared during the latter half of the present century, and the great value of the study of the diseases of plants and animals has been fully recognised. We are greatly indebted to our distinguished member, Sir James Paget, for his brilliant labours in this department, and for his efforts to promote research in comparative pathology. He demonstrated many important problems in cellular pathology, and explained the vital processes common to organisms which possess and do not possess a nervous system and circulation.

Recent investigations in bacteriology have proved a great stimulus to the study of the relations between the diseases of mankind and those of the lower animals, and this relationship will form an important part of future researches. It is only a few years ago that the real nature of that dreadful scourge of the human race, tuberculosis, was discovered, and its intimate association with the same disorder in domestic animals clearly brought to light. Laënnec was the first observer who described tuberculous nodules, and traced their development from miliary tubercles. In 1865 the inoculation of animals with caseous material was found to produce tiny masses in their bodies which were in all respects similar to the disease in man.

Some physicians were bold enough to assert that the phenomena suggested the probability of contagion, but the notion only excited the ridicule of the profession at that period. Tuberculous disease was generally regarded as an hereditary disorder transmissible in various degrees of intensity. At the same time external influences were looked upon as powerful factors which could kindle the smouldering flame into activity. From the very dawn of modern pathology tuberculous disease received profound investigation, and the researches only corroborated the time-honoured theory. The microscope failed to detect in the diseased parts any specific elements, and in vain cells and granules, and cells of giant form were searched for some characteristic quality. Tubercle was examined by the best observers in the civilised world; thousands of clever eyes had gazed at it with intense devotion, and with a remarkable unanimity they pronounced the opinion that it was so indefinite in structure that it could be recognised as much by negative as positive qualities.

In 1882 the whole pathology underwent a great revolution by the demonstration of the life-history of the tubercle bacillus. The disease occurring in any tissue or organ is now universally regarded as a specific disorder, the bacillus the absolute proof of its invasion, and the cause of the morbid changes. The long accepted causes are now dislodged from their position, and are now rightly grouped as morbid tendencies. The inheritance of constitutional peculiarities, the liability to chronic inflammations, and the susceptibility to external influences, are now regarded as conditions which help the microbe to establish itself within the body. Still these factors are not less potent because the specific characters of tuberculosis have been revealed.

This pathological transformation has around it still many unsettled problems. It is, however, a fact of history that Koch, by his own researches, brought to light from the microscopic elements of tubercle a living atom which no human eye had seen before. I believe one may anticipate that this great discovery will be of priceless benefit to mankind.

Bacteriological investigation has already unfolded many of the problems connected with diphtheria. The researches began in Germany in 1882. The chief experimenters were Drs. Behring and Kitasato, and they were soon followed by Dr. Roux, of the Pasteur Institute in Paris. We now know that many animals are liable to its attacks. It is communicable to the horse, rabbit, guinea-pig, and fowl, and some species seem to suffer from a chronic form of the disease. Horses when attacked develop similar symptoms to those which follow inoculation of diphtherial toxin.

The deadly bubonic plague which was epidemic throughout Europe during the Middle Ages, has unfortunately proved a dreadful scourge in India and the East during the last three years. Many earnest workers have made the disease the subject of an elaborate inquiry. In 1894 a specific bacillus was discovered in the blood of a patient suffering from epidemic plague. There is much reason to believe that domestic animals and rats are responsible for spreading the infection, and squirrels and cats have been known to die of the disease. It has recently been stated by a French observer that fleas are dangerous disseminators of the disease. As the result of a series of experiments, he affirms that fleas taken from rats suffering from plague can communicate the disease to healthy rats, which in their turn become centres of infection.

Professor Ogston in 1881 detected micro-organisms in acute abscesses, and this important discovery has been followed by many elaborate inquiries which have proved the direct connection between suppuration and pathogenic organisms. It is certain that the staphylococcus, the streptococcus, and the bacillus coli communis, and other species also, may be the exciting cause of septic conditions in man and the lower animals. Around septicæmia to-day there are many unsolved problems. Are the micro-organisms the direct cause of the disease, or is it produced by the chemical substances which they elaborate? All animals appear to be liable to blood poisoning. Dr. Hewlett says that poultry, pigeons, pheasants, and sparrows are susceptible of a disease, which Pasteur proved to be excited by a bacillus identical with the bacillus of rabbit septicæmia. Even the mouse has its specific septic disturbance, and the organisms which are present in its blood appear to be identical with those discovered in the septic disorders of swine.

Malaria.

Investigators have recently been endeavouring to unravel the secrets of malaria poisoning. The disease has been traced by Surgeon-Major Ross and Dr. Manson to a parasite which has the power of assuming a latent condition within the human body. It actually lives in the interior of the red corpuscles of the blood. Dr. Manson thinks that it is removed from the blood by some suctorial insect, and that this insect is a species of mosquito. The parasite is propagated outside the human body. The insects are capable of infecting their larvæ, and man is in turn infected by drinking the water contaminated by the mosquito, or by inhaling the dust of the dry mud of the pools in which mosquitos have perished.

I refer to these facts only to show the great impulse bacteriology has given to the study of the intimate connection between the diseases of mankind and the diseases of animals. It is certain that the latter are far more often the agents by which diseases are distributed than we are at present able to detect. The same disorder in different animals produces very different manifestations, and the symptoms may be so variable that the recognition of a common specific cause is almost impossible.

What may we expect from this young science in the future? We are only touching the fringe of its possible revelations. Much that has been done will have to be done over again, and much that has been written will have to be rewritten. How many questions have yet to be solved? Will the further evolution of bacteriology solve the great problem concerning immunity? The striking differences in the susceptibility to disease in individuals are still unfathomed. Some seem to possess a natural insusceptibility to infectious disorders while others are susceptible on the smallest exposure. I do not believe that any individual can inherit or acquire a resisting power for all forms of disease; some races appear to acquire immunity, and native population in some parts of the world exhibit very little susceptibility to yellow fever and malaria. Race immunity is generally explained by natural selection and protection by inheritance. During long periods susceptible persons were weeded out and those that remain are capable of transmitting their insusceptibility. But we learn from experience the resisting power to infectious diseases is very variable and that there is no such thing in the world as absolute immunity. On the other hand, bacteriology offers us the comforting doctrine of phagocytosis. The cells of the blood are ever ready to engulf and destroy living bacteria and to cast them out as unwelcome guests. The leucocytes may be compared to a great army of invisible warriors. They send out their scouts, and as soon as an enemy is in sight myriads appear at the very seat of infection and are drawn up to open the attack upon the intruding bacterial forces, all ends well when the battle of the cells terminates in the destruction of the enemy, but unfortunately sometimes the leucocytes are beaten back and the bacteria are victorious; then they can multiply without hindrance, and general infection is the result of the defeat.

Pasteur explained acquired immunity by the assumption that the growth of an organism exhausted a specific pabulum which was essential for its development, so that nothing was left in the body to sustain its vitality. If this theory be correct there must be a nutrient material necessary for the growth of each species of contagion. After all, if we cannot explain immunity we can at least be certain that the blood and other fluids of the body exercise a germicidal and protective power against the action of bacteria.

There can be no doubt that pathogenic organisms are a huge factor throughout our world in the causation of disease and that we must never cease to combat the conditions in which specific organisms can grow. Still we must not forget there is always another factor which we may call feeble resisting power or impaired vitality. Depend upon it the susceptibility to disease bears a direct relation to the vigour of the body, that the health of every individual is the real measure of the power to resist infection, and that personal immunity almost can be acquired by the daily practice of temperance, cleanliness, and periodic repose.

The Discovery of Surgical Anæsthesia.

I must now ask you to return again with me to the early part of the century and glance at the relation which then

existed between medicine and surgery. A hundred years ago the physician enjoyed both professionally and socially a far higher position than the surgeon. Medicine was regarded as a science, but surgery only occupied the position of a useful craft, which could be employed as a last resource when all other remedies had failed. Surgery was considered quite an inferior branch, and the leaders of that day looked down upon operative surgery as a reproach to the healing art. John Hunter spoke of operations as only humiliating examples of the shortcomings of the medical science. Abernethy had a great reputation as an operator in his day, but he considered surgical operations had no place in surgery as a science. As late as 1844 Liston said in a lecture at University College: "Operations are an inferior part of our professional duties. The field of operative surgery, although happily narrowed, is still extensive." It is not surprising that the knife as a remedy was greatly dreaded, and the prospect of an operation caused in many patients great mental depression. It is stated that Sir James Simpson, when a student, was so affected by the agony of patients undergoing operations, that he was almost compelled to abandon the medical profession. The after-treatment, too, was often extremely painful and very roughly carried out. There was very little attempt to obtain union of the divided parts by the first intention, and wounds were generally plugged with tents to keep them open, and dressed with plasters and ointments. Surely we cannot wonder that the art of surgery languished in those days.

The idea that some agent might be found to render operations painless appears to have engaged the attention of surgeons from the earliest times. Mechanical means were employed for compressing the blood vessels and nerves, and tourniquets were tightly applied to relieve pain. At the early part of the century hypnotic anæsthesia was employed by some surgeons, but it soon fell into general discredit. About 1821 it appears to have been tried in many parts of France. In 1836 it was successfully used in Boston for dental operations. Not long before the time of the great discovery opium and alcohol were freely administered to relieve the distress of very painful operations, but the results were often very unsatisfactory and dangerous.

It is recorded that, during the early years of the century, Sir Humphry Davy studied the effects caused by the inhalations of different gases, and at length published some researches concerning nitrous oxide. At that time frequent exhibitions of the peculiar qualities of this gas took place, and these experiments no doubt suggested the employment of ether and other agents. Ether had been used in medicine for many years, and it enjoyed a great reputation for chest diseases. In 1820 the vapour of ether was applied over the mouth to relieve dyspnœa, and it was discovered that when inhaled it produced the same stimulating effect as that excited by laughing gas. Dr. Crawford Long, of Pennsylvania, tried the vapour in some minor operations about 1840, but his patients were never carried beyond the stage of exhilaration. He never continued the inhalation long enough to establish complete insensibility, but he went very near success.

Horace Wells, a dentist of Hartford, Connecticut, and William Morton, a dentist of Boston, employed ether locally for toothache, and also to relieve the pain of extraction. Subsequently Morton experimented with ether on animals, afterwards upon some students in his class, and then upon himself. He administered it to his patients at length, and, after many careful and anxious trials with various kinds of inhalers, he privately communicated his experiences to Dr. John Collins Warren, and requested that he might be permitted to administer ether during an operation.

On October 16th, 1846, Dr. Warren consented to make the trial of ether anæsthesia, and this critical operation will ever be memorable in the history of our science. Many eminent physicians and surgeons were present in the old theatre of Massachusetts General Hospital, and, from the short introductory remarks which fell from Dr. Warren when the patient was placed upon the table, it is certain that he was in a very doubtful state of mind as to the possibility of surgical anæsthesia: "To-day we are to test some preparation for which the astonishing claim has been made that it would render the patient operated upon free from pain." Now these words clearly indicated a very doubtful state of mind, and this incredulity was again manifested when William Morton did not arrive at the appointed hour, for then Dr. Warren turned to his friends and said with a smile, "I presumed he is otherwise engaged." Of course this was followed by a laugh all round, and the doctor, irritated by the delay, took the knife in his hand, and was just about to proceed with the operation, when William Morton entered the theatre. Dr. Warren immediately turned to him and said, "Your patient is ready." The patient was a young man with a tumour in his neck, and after inhaling the ether a few minutes he was rendered completely insensible. Morton then turned to the doctor and said, in a calm and confident voice, "Now, sir, your patient is ready." In a short time this ever-memorable operation was performed, and on recovering consciousness the patient gratefully remarked that he had suffered no pain, and had been completely insensible. Dr. Warren at once expressed his hearty congratulations to William Morton, and, addressing the visitors present, said, "Gentlemen, this is no humbug."

The next day Morton gave ether again for the removal of a tumour from a patient's arm, and the anæsthetic was continued through the whole operation. On November 7th two more important operations were done by Dr. Warren under ether anæsthesia—amputation of the leg and excision of the jaw.

The discovery was now carried with great rapidity to all parts of America and to the central cities of Europe. On December 24th, 1846, Liston in London performed amputation of the thigh under ether anæsthesia with complete success. Sir James Simpson, of Edinburgh, (then Dr. Simpson) took up the question with great enthusiasm. He had been earnestly seeking for years to develop means to soothe the pain of obstetrical operations, and the first case he selected for trial of ether was one of deformed pelvis, and the result was very satisfactory. Simpson, however, after considerable experience, considered that ether was not free from objection because of the large quantity required to establish insensibility, and he commenced to investigate the effects of other volatile fluids. After consulting many professional friends and chemists, he made experiments with various liquids more fragrant than ether, and he had the assistance of Drs. George Keith and William Duncan and many other professional friends. Simpson at length tried chloroform on himself, and afterwards made many successful experiments at the University of Edinburgh. On November 10th, 1847, thirteen months after the announcement of the great discovery of William Morton, he formally communicated to the Medico-Chirurgical Society of Edinburgh that he had exhibited chloroform to 50 patients without the slightest mishap of any kind.

Now I need not remind you that this splendid discovery was not immediately accepted in every quarter. Many had strong doubts as to the safety of surgical anæsthesia, and progress was for a time hindered by the prejudices and jealousies of that day. Opponents rose on many sides, and, of course, the most obstinate were members of the medical profession. They declared that anæsthesia would increase the mortality of surgical operations, and add to them the dangers of convulsions, paralysis, and fever. Experience, however, soon dislodged all these prejudices. How often obstruction proves the secret friend of progress!

After a lapse of more than fifty years we are now able to look back and trace the gradual evolution of this beneficent discovery. Dreams of soothing the pain of surgical operations had passed through many minds. The exhilarating power of nitrous oxide gas and ether had been slowly brought to light. In 1840 Dr. Crawford Long almost reached success. Horace Wells and William Morton applied ether locally in dental operations, and two years later William Morton introduced the inhalation of ether and discovered the possibility of maintaining continuous anæsthesia. It was a bold and daring adventure to suspend vitality in a balance—an unknown distance from fatal insensibility. We can imagine the anxiety of Morton in his first administration. He was the first man who clearly discerned the possibility of suspending conscious life, and with profound courage and determination he then proved its practical application for the relief of human suffering. It must have been a great help to Morton when Dr. John Collins Warren, the most eminent surgeon in New England at that time, consented to share the responsibility of

his first experiment. No doubt Warren had learned something about inhalation of ether, and stimulated by life-long devotion to the progess of medical science he willingly accepted the position.

In the noontime of this Victorian era surgical anæsthesia was the brilliant gift to the civilised world by our brethren and kinsmen across the great Atlantic, and at the last annual meeting but one of this the greatest of the centuries we desire to record our admiration of the courage and genius of William Morton and the wisdom and surgical skill of John Collins Warren, and again to crown their memories with enduring fame as great benefactors of the human race.

It is an interesting fact that the original anæsthetic agents still hold the confidence of the medical world. There are many differences of opinion upon their essential virtues and a widespread hope that soon safer remedies may be discovered. Sir James Simpson entertained this hope until the end of his career, and Dr. Snow, who did so much during his life to perfect anæsthesia administration, believed that better agents would be found. It is my opinion that surgical anæsthesia can never be wholly stripped of risk, and that to-day the risk is greatly reduced by our modern safeguards and improved methods of administration. It is certain that we have not reached finality in the matter of surgical anæsthesia, but that by experience and the skilful adjustment of the dose we are entitled to regard the inhalation of our present agents as practically safe.

IMMEDIATE RESULTS OF SURGICAL ANÆSTHESIA.

During the pre-anæsthetic age, operations were confined to cases in which surgical interference was absolutely necessary, and both patient and surgeon had to be brave and determined—one to suffer pain, and the other to perform delicate manipulations with rapidity and dexterity. The introduction of surgical anæsthesia exercised at once a great influence on the practice of surgery, and the number of operations increased in all directions. Within six months the surgical work of the London hospitals was actually doubled, and in every department the domain of surgery rapidly extended.

Unfortunately, the surgical world was quite unprepared for the sudden outburst of enthusiasm which followed the great discovery. At this period surgical instruments were few in number, and very different from what they are to-day. The microscope was only just adopted as an instrument of pathological research, and many ingenious aids to diagnosis now universal were not then in existence. The hospitals were for the most part wretched receptacles for the sick. They were constructed regardless of all sanitary precautions, and without any means for securing adequate light and fresh air for the safe treatment of urgent surgical cases and acute diseases. The nursing system, too, was rotten to the core. Nursing then meant nothing more than the attendance of a parcel of ignorant women who possessed no qualification for their high and self-sacrificing duties, and who had never received a moment's training. It is a fact that in those days thousands of lives were extinguished at the shrine of ignorance and superstition, and thousands more for the want of sobriety and cleanliness. Under such conditions it is not surprising that suppuration followed almost every wound, and that septic processes were started by every operation.

The high mortality which occurred both in the institutions of this country and the Continent excited great anxiety, and roused the profession to earnest investigation. The great increase in the work of the hospitals soon revealed their insanitary condition, and many structural defects. Again and again gangrene, pyæmia, and erysipelas ran through the wards of these old buildings, and the medical officers saw clearly that these outbreaks were infective disorders, and were carried from one patient to another.

We have now reached the dawn of another important epoch in the medical history of the century. The terrible ravages of sepsis, which appeared to have got almost beyond control, helped to bring about better ward ventilation, and improved sanitary arrangements in many of the old buildings. The evil of overcrowding was checked, and increased cubic space provided for patients. Many reforms soon followed in the administrative and nursing departments, as well as an improved technique in operative surgery. Some treated their cases with water dressing or irrigation; some, having discarded greasy compounds, closed all their wounds with friar's balsam; and others, after bringing together the cut integuments with strapping, used dry wool and pressure. There can be no doubt that greater cleanliness and new methods of treatment were introduced at this period with success, and these advances helped to prepare the surgical world for the coming of the great crisis when the doctrines of Lister shook the foundation and revolutionised the practice of surgery. Lord Lister demonstrated to the world the part that living organisms play in the production of septic diseases, and then exhibited the simple means by which their growth and development could be prevented. He proved that wounds could be made to heal by first intention, that the process of suppuration could be controlled, and that precautions easy of application would stop the development of septic disorders.

During the last quarter of the century surgeons have carried out the aseptic system in every land and in every clime, and it has given a surprising impulse to successful practice, and has developed into a world-wide blessing. The methods employed have varied in detail, but in them all we may observe the same great principles which have brought forth such a complete reformation. The remarkable change for the better started in the wound, then extended to the whole body of the patient, then to his bed, then to the surgeon, the nurse, the whole ward, and at length to the whole hospital.

The progress of medicine and surgery has now exploded all the old notions concerning hospital construction, and proved the absolute necessity for radical and extensive changes. To-day a modern ward is a perfect little hospital in itself. Well-ventilated corridors are the only channels of communication between it and the other parts of the building. Every detail is arranged to obtain perfect ward isolation so that the suffering inmates may be protected against the inroads of preventable disease and external contamination. These structural precautions are invaluable aids to successful treatment and the means by which a group of deadly disorders have now been effectually stamped out.

The Royal Portsmouth Hospital consists of a remarkable combination of the old and the new in hospital architecture, and these interesting specimens are to be seen standing side by side. I am confident there is no part of the country which can show more clearly the contrast between the notions in hospital construction which prevailed fifty years ago and the latest scientific developments. I trust that all who are specially interested in this science will not fail to visit the institution during the meeting, for it is our earnest hope that this remarkable contrast will soon be lost for ever in the expansion and development of our new hospital.

Some good people have bewailed the fact that Lord Lister did not appear on this mundane scene some years before William Morton. They believe it would have been better if asepsis had been the precursor of surgical anæsthesia, for then the surgical world would have been prepared for the sudden increase of operative work and the rapid progress of surgery. I am unable to accept this criticism of the evolution of our science. I believe that anæsthesia was the true antecedent of asepsis. Surely, if the order of these great discoveries had been changed, the brilliant developments of our science in many departments would have been impossible. On the other hand, there is a humane and benevolent aspect of the question. The suspension of human pain by a dreamless sleep almost banished at once the dread of the surgeon's knife, and helped the sufferer to look forward to relief with hope and confidence. Let us rest assured that these providential gifts lavished at the right time and the right order their enduring blessings upon the world.

RECENT PROGRESS AND THE WORK OF THE FUTURE.

I shall now conclude my remarks with a brief reference to recent progress and the work of the future. The medical profession was never so earnest in its efforts to prevent disease as it is to-day, and it is really a fortunate thing for the world that our ranks are not getting thinner. On the other hand, the people of this country, especially the educated classes, are more anxious than ever to obtain professional assistance in the early stage of their disorders, because they are beginning to appreciate the fact that this is the best time for cure. It is my opinion that in the near future there will be far less medicine taken than formerly—not that I think

there will be much reduction in the quantity prescribed by the faculty, but rather that people generally are growing wiser, and will trust less to mysterious and puffed-up remedies. I hope the day will come when every vaunted specific protected by a Government stamp will carry a label revealing the exact nature of its composition.

Recent Advances in Medicine.

Bacteriology has already provided the physician with a new set of remedies; in diphtheria antitoxin has proved of marked utility; the treatment of tetanus, both subcutaneous and intracerebral, appears to have been successful in some cases. As regards tuberculosis, enteric fever, and cholera, we must wait the test of experience. The remedies have a scientific basis, and I believe we may anticipate great progress.

The inoculation with the serum of animals, immunised by bacteria and bacterial products, is one of the most hopeful developments of medicine. One hundred years ago Jenner succeeded with this treatment, and almost destroyed one of the most deadly infectious disorders. Pasteur worked in the same direction with chicken cholera and splenic fever. Inoculation as a protection against cattle plague is steadily gaining ground. Recently very successful results have been obtained at Cape Colony, and the farmers are anxious to have their cattle treated with the protective serum. Similar treatment has been employed in India as a preventive measure against plague, and Professor Haffkine has reported very favourably on his results. If it fail to prevent the disease it renders the attack less virulent. Already the mortality has been proved to be greatly lowered among the inoculated as compared with the uninoculated.

The serum treatment of specific disorders has only reached the initial stage, still it is full of promise. It has for its object the development within the body of a capacity for resistance, and invisibly fortifies it against the growth of a particular pathogenic organism. It is essentially a treatment for strengthening the defensive cells of the blood and tissues and promoting the natural means of defence.

Another step forward is the discovery of the great value of the products obtained from healthy glands in the treatment of certain disorders. The special utility of thyroid gland substance has been well established, and the most marked results have been achieved by its administration. The importance of the normal activity of this gland has been proved by clinical evidence, as well as by chemical and pathological investigation. At the same time, we really know nothing about the nature of its secretion, which appears so essential to the nutrition of the tissues. One very remarkable feature is the benefit which sometimes follows the use of the remedy in disorders not suspected to have any connection with thyroid secretion. Many other glandular substances have been tried as remedial agents, but up to the present the results have been very indistinct.

The close of the nineteenth century will be for ever memorable for the great efforts which have been initiated for the prevention and cure of tuberculosis, not only in this country but in all civilised lands, and we sincerely hope that this united attack upon our deadly and widespread enemy will be followed by enduring benefits to the race. It is a matter of great congratulation that H.R.H. the Prince of Wales is the head of a great national association which has been formed for the purpose of arresting as far as possible this dreadful scourge, and that in all the leading centres men of every class are cordially co-operating in this important movement. As a profession we are anxious to teach the people what science has already accomplished, and the great value of sanitary precautions in their homes. We seek to inspire them with confidence in the wide application of simple and effective treatment which will arrest the disorder in the early stage, and help to reduce the death-rate from tuberculosis in future years. It is a fact that we have no specific remedy for the disease; the mineral and vegetable kingdom have been ransacked in vain. The tubercle bacillus does not seem to care for all the physic in the world; but we believe that in a germ-free atmosphere and pure surroundings it may be made to die.

Recent Advances in Surgery.

Notwithstanding the great progress of medicine during recent years, the results have been less manifest than the brilliant advances of modern surgery. There is no organ or region of the body which has not been investigated by the surgeon; year by year the science has gained wider application, and reached a higher state of perfection by new methods of diagnosis and improvements in surgical technique. Only three and a-half years ago the remarkable discovery of Professor Roentgen was communicated to the scientific world, and it has already proved of great value in surgical practice. It has revolutionised the old methods of military surgery, and rendered easy the location of metallic substances impacted in the body. It has given a fresh impulse to the study of diseases and deformities of the skeleton, and is an invaluable guide to the treatment of injuries and diseases of the epiphyses and joints. We can anticipate with confidence that the treatment of this large group of disorders will steadily improve.

The time is coming when there will be a considerable reduction in the number of adults suffering from hernial troubles, and this important result will be due to the latest improvements in radical operations. There will be a great reduction in the number of persons afflicted with loss of sight, the issue of the modern treatment of infantile ophthalmia and the corneal diseases of children, and also the early correction of errors of refraction.

Hans Wilhelm Meyer.

During the last twenty-five years great advances have been made in aural surgery, and the number of deaf persons in this and other countries have been greatly lowered. The celebrated Danish physician, Dr. Hans Wilhelm Meyer, was the first to put his finger into the little space between the nose and the throat for the purpose of removing "pharyngeal vegetations." It took him some years to convince the profession that these outgrowths were a common cause not only of loss of hearing and obstructed nasal respiration, but also of defective articulation and impaired mental and bodily development. It is no exaggeration to assert that the number of young persons who have been saved from life-long deafness by the removal of these obstructing glands amounts already to hundreds of thousands, and that hundreds of thousands more will be delivered from this terrible affliction in future times. Dr. Meyer lived just long enough to know that the medical world recognise the great value of his discovery, and to-night we desire to honour his memory and to record our admiration of his splendid labours.

Septicæmia.

The experimental investigation of the causation of human septic disease is still far from complete. Up to the present time the virus of septicæmia has not been isolated, although the bodies of infected animals must contain a very powerful poison. The filtrates of streptococcus cultures have exhibited very little toxic action, and there is no very satisfactory evidence of their value in the complex disorders included in the term "blood poisoning." The prevention of inoculation through a wounded surface is now possible, but when the disorder is once fully established we are practically powerless to overcome the widespread disturbance. I have no doubt that some of the surgical victories of the future will be won by bacteriological science. At the present time we have no cure for sepsis when it has entered the body; still we have much reason to hope that a remedy will be found, and that the destruction of sepsis-producing organisms within the blood and tissues may be at length accomplished.

Cancer.

The treatment of cancer and its manifold complications is another great field for inquiry in coming years. For some time a growing impression has prevailed that the disease has been steadily on the increase. Cancer causes about 6 or 7 per cent. of the total deaths of both sexes over 45 years, but these figures are probably rather under than over the real number. No doubt during the next few years the question of increase will be settled. Recently some investigations have been published suggesting that the disease is due to a parasite, and Mr. Plimmer states that he has discovered parasitic bodies in 1,130 cases out of 1,278. Local irritation is certainly a great factor in the development of cancer, and this may possibly be the channel for the entrance of the parasite. Other observers have suggested that the disorder is liable

to recur in particular places, and if this statement is corroborated by further investigation, it will certainly form a presumption in favour of cancer being an infective disease. A curative serum for carcinoma has not yet been discovered. Up to the present time surgical treatment yields the best results, and the earlier it is adopted the better. We look forward to the development of new methods of diagnosis, so that the surgeon may be able to recognise the seat and character of the disease in the incipient stage. The pathology and treatment of cancer still bristle with difficulties. We are anxiously waiting for more light, and we are ready to receive it from whatever quarter it may fall upon us. It is at least some satisfaction to know that many of the best pathologists and surgeons are diligently labouring in all parts of the world to unfold the mysteries which still surround this terrible disease.

Future Progress of Preventive Medicine.

During the last fifty years there has been a steady increase in the value of human life, and we can confidently hope that the health of the people of Great Britain will continue to improve. In the coming century a stronger and broader warfare will be carried on against preventable disease; sanitary authorities will grow in wisdom and will more graciously accept their responsibilities; the public health service will be better organised; the medical officers of health will be better paid, and wholly devoted to their duties; hospital accommodation for contagious disorders will be considerably increased; and the houses of the working classes transformed and reconstructed on modern lines. I believe there is every reason to anticipate that the death-rate of the country may still be greatly reduced, and that 10 to 12 per 1,000 may be the figures of the coming century.

The great hindrance to the progress of preventive medicine which we have to overcome is the overcrowded and insanitary condition of the dwellings of the working classes. This is the field on which the great battle with infectious disorders will have to be fought out. Our warfare will not be directly with microbic life, but rather with the conditions in which specific organisms are grown. We want to see more progress in getting rid of the crowded and dirty courts in every city. We want to behold fewer of these revolting pictures of impurity and wretchedness herding together in the narrow avenues where the light of heaven strives in vain to pierce the patched and broken windows, and where the meridian beams struggle in vain to penetrate through the gloom and corruption of these denlike homes. These denlike homes are the arch-enemies of sanitary progress in all our great centres. Philanthropy has long pleaded for the removal of these great social evils; the voice of the medical profession has long sounded the alarm; but we are still waiting for the educated and wealthy classes of the community to catch the same inspiration, and to join in demanding more sweeping measures by which these nurseries of disease may be exterminated.

But the battle against disease and death will only end in disappointment unless we have something more than the force of legislation and the unceasing watchfulness of a complete sanitary system. The great mass of the people must become willing and active helpers; the fathers and mothers of our land must learn how to maintain the healthfulness of their homes, and the blinding forces of selfishness and ignorance must be replaced by the best and purest aspirations.

If we had the power of transforming the dwelling houses throughout the land, and of establishing everywhere a perfect system of drainage, and of securing for all an abundant supply of pure water, we should accomplish but little without the help of the people themselves. Depend upon it, the basis of national health is the personal cultivation of health. We want the fathers of England to be the enlightened sanitary officers of their own households. We desire to see a wider knowledge of the laws of health, and I hope the day is not far distant when they will be zealously taught in every school in the kingdom.

How little the working classes and operatives in our large cities appreciate the fact that the prevention of human suffering and the preservation of health are in a great measure within their reach. They have to learn that they lose both in physical development and vigour by too much toil and too little rest. They have to learn that rest is essential to overcome the strain of daily labour, and that personal cleanliness and temperance, and domestic sanitation lead the way to higher blessings. The weekly rest when rightly used gives another impulse to sanitary progress. It promotes purification of the body and cleansing of the dwelling. What washings and scourings, what polishings and decorations herald its near approach! What an army of buckets and brushes and dust disturbers are called out at its coming; what floods of clean water are made to remove the accumulations of the week! Yes; the weekly rest falls like a reviving dew on the hot brow of industry; it stops the wheels of labour; it soothes the brain, gives rest to the hands, and calls forth the highest aspirations of human nature.

ADDRESS IN MEDICINE

BY

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At the Annual Meeting of the British Medical Association, held at Portsmouth, August, 1899.

RECENT ADVANCES IN PRACTICAL MEDICINE.

Thinking over the best way in which to fulfil the task which I am honoured by the request of the Council to perform to-day, it occurred to me that a few remarks on the developments of medicine from one in the current of practical work might be more interesting and appropriate than any more exhaustive discussion upon some one topic. Such remarks must necessarily be incomplete and fragmentary, reminding the hearers of what they already know in detail, suggestive of the trend of medical opinion to-day, and perhaps reviewing some of the changes in doctrine and practice within recent times.

In the brilliant, interesting, and inspiriting address with which you, Mr. President, favoured us last night you sketched with a master hand the history of medicine in the last hundred years. A glorious history too, full of triumphs in the uphill fight against misery and disease. The masters in medical science are well known to us, their deeds are all recorded for our example; their lives were lived in the interest and satisfaction of an all-absorbing pursuit which rewards labour and salves or subdues its disappointments.

As in the past so in the future, medicine, whether as a philosophy or a science or a beneficent calling, promises ever to find employment for the most cultivated, the most practical, and the best ordered intellects of the time; and perhaps of no other profession can it be said that in the pursuit of it all its members of all degrees, by directly or indirectly ministering to the relief of human suffering, enjoy the same range and intensity of interest and satisfaction. At no time has medicine been better adapted for study as a philosophy or a pure science than at the present. At no previous period in its history could its branches and offshoots give better promise of bearing fruit for the good of humanity to those who with leisure and sufficient wealth should cultivate them with industry and scientific zeal. The roll of the Royal College of Physicians includes the names of several Fellows who may be regarded as philosophers rather than as practising physicians; others are directors of State or research medicine, and by no one Fellow have the highest practical interests and philanthropic aspects of the medicine of to-day been more stimulated, encouraged, and promoted than by H.R.H. the Prince of Wales, who has recently honoured the College by allowing his illustrious name to be placed upon the roll.

We are certainly better equipped for exact diagnosis now than ever before, and possess a larger and a more precise knowledge of a greater number of diseases. It would be shameful if this were not so, but it must be conceded that medicine has shown no lack of industry in utilising every advance in science and art available to the purpose. There are still some members of this Association who may remember the introduction of the stethoscope into practical use. Are there any now living who will witness its substitution by other instruments? That the stethoscope has passed the zenith of its popularity I do not doubt, and it may, in part at least, come to be replaced by other methods of diagnosis.

It is probable that the introduction of photography into

clinical medicine, and the more general use of bacteriological examination and surgical exploration, may, for a time at least, dim the prestige of auscultation and palpation in diagnosis. It should not be so. A great responsibility rests upon the teachers of medicine of to-day to keep up the refinements of auscultatory and tactile diagnosis with all the additional precision that instrumental education by graphic methods and surgical introspection will afford. The flexible stethoscope which has come almost exclusively into use within the last twenty years, although a valuable and convenient instrument, is not one calculated to advance the refinements of auscultation. Whilst it intensifies sounds it practically obscures impulses. The delicate mechanism of the ear can appreciate through the medium of the rigid stethoscope shocks and impulses not to be recognised by the hand, and which are lost in transit through an elastic medium. Thus the sense of touch in auscultation is, if I may use the phrase, in a certain degree becoming lost to us. I have known the diagnosis of an aneurysm missed in this way, and many of the points in cardiac conditions, especially exaggeration or otherwise of beat, shock, and accentuation sounds, estimation of force, etc., are better recognisable with the rigid stethoscope. It is all-important, of course, to maintain our sense of proportion and comparison by adhering mainly to one instrument, but the tactile element in auscultation cannot be replaced by any equivalent means of diagnosis.

Happily we already see a revival of the appreciation of the pulse in practical medicine, an appreciation increased, not obscured, by the careful and detailed study and comparisons rendered possible by graphic recording methods, which very methods for a time threatened to discourage direct tactile observations. Except in the clinical wards and the physiological laboratory the day of the sphygmograph may be said to be already past, but for the purposes of exact instruction with regard to the palpable features of the pulse it and all allied instruments must ever remain invaluable. It is an instrument *par excellence* for the school in the hands of an expert rather than for ordinary clinical use. The clinical habit of listening to the heart, not only with the view of hearing morbid sounds but to estimate work value, is also of recent acquirement, and thus we are coming better to perceive the true function and value of instrumental methods to illustrate, record, and instruct in the more accurate use of our naked senses.

The Clinical Thermometer.

The late Sir William Jenner, my revered teacher, in an address before this Association thirty years ago classified the thermometer with the stethoscope in clinical medicine, yet but a few years before the instrument was looked at askance by the greatest of physicians. It is as important in bedside medicine to-day as the barometer and compass combined are in navigation, and where we are sometimes led astray by pyrexial charts it is not the thermometer that is at fault but our insight that is imperfect. Not long ago the thermometer came almost to be regarded as a divining rod and a sole and sufficient indicator in febrile affections, and the temperature mistaken for the disease has been pursued round the dial by antipyretic medication and measures to the spoiling of the chart, the detriment of the patient, and the disappointment of the doctor. It is only comparatively recently that we have fully recognised that it is merely the exuberances of temperature or the abnormal effects produced upon the nervous system of individual patients by temperatures otherwise normal to diseased conditions that can be wisely treated by antipyretics. A better knowledge of the habits and vital history of the micro-organisms upon whose doings pyrexial phenomena so largely depend informs us that their initial attack and greatest activity is at the lower ranges of temperature, and that the higher ranges, the results of such activity, are more or less inhibitive to their well-being; so that given a febrile disease, we must accept without necessarily interfering with a temperature normal to it. Thus we have often observed a pneumonia or an influenza treated too vigorously with pure antipyretics pursue an abnormally stormy and adynamic course.

Anomalous Fevers.

The clinical study of anomalous fevers has gradually convinced us that in their development and full activity specific poisons may overlap one another in the same illness; thus the typical *crescendo* temperature of the early period of an enteric fever may be masked by the fluctuating pyrexia due to the toxin of an associated sepsis, or by the more abrupt incidence of a pneumonic or a rheumatic fever, and it is only as the course of these overlapping complications draws to a close that the more continued latent fever dawns through their misleading perturbations. In the later periods of enteric fever, again, the pyrexial process is normally overlapped and modified by blood contamination from the intestinal lesions sometimes amounting to pyæmia. A rational treatment of specific diseases must be guided by the recognition of these superfactors. I would venture to say in this connection that the rational and most successful treatment of tuberculosis is for the most part unwittingly directed to attendant phenomena which are secondary, and which for brevity sake we call septic. Tubercle in tissues at rest and protected from impure atmospheric contamination tends to obsolescence; our antiseptic treatment and our pure-air methods are mainly operative against such secondary infections.

Although in the diagnosis of fevers we have still in the main to trust to the gradual evolution of the characteristic features of the primary or predominant disease, we have auxiliary tests of modern design—some purely chemical, such as Ehrlich's, others furnished by examination with bacterial reagents, such as Widal's test in enteric fever; none of them quite crucial, but both, and especially Widal's, of considerable value in anomalous cases.

The Combination of Surgery with Medicine.

Time does not permit me to do more than allude to the wonderful accession to preciseness in diagnosis as well as in successful treatment that has become possible of late years from the developments of surgery under Listerian methods. Perhaps one could not suggest better illustrations of the value of combined surgery and medicine than can be found in the diagnosis and treatment of cases of impacted gall stones, renal calculi, appendix disease, obscure empyema, and sequestral lung disease, cases that but a few years ago involved months of suffering and a fatal issue, but which can now be explored with little danger, and often treated with complete success.

Bacteriology.

It must be confessed that bacteriology in its application to diagnosis and treatment in practical medicine is yet in its infancy; but it is a very robust infancy, full of promise, the complete fulfilment of which none of us will live to see. The bacterial origin of tubercle, anthrax, diphtheria, erysipelas, septicæmia, typhoid, malaria, influenza, has been revealed to us almost within the memory of the youngest here, and has already been, in many instances, fruitful in suggesting measures of prevention and treatment.

Bacteriology in all its departments is, and must ever remain, subject to expert investigation. It is impossible for the busy practitioner to find the time or to maintain the technical skill and apparatus necessary for trustworthy investigation. The various Research Associations have hitherto in part fulfilled the want and the bacteriological departments of our hospitals are steadily growing in importance and value; but it is to be hoped that the time will soon come when in every district throughout the country there will be in connection with the Public Health Department a bacteriological laboratory, where the ordinary, and even the extraordinary, clinical tests will be at the command of every practitioner at a moderate scale of fees. Those who possess the D.P.H. degree should be the qualified experts. In many districts these laboratories already exist, and they would probably all pay a remunerative interest upon public capital expended upon their upkeep.

It is a matter for congratulation to see the departments of research and clinical observation approaching to closer communion in our great hospitals, a co-operation which cannot but be to the great advantage of the physicians, and I venture to think scarcely less so to the research expert. We are thus acquiring daily a more accurate knowledge of organised poisons and we are interpreting better the phenomena they produce.

Susceptibility *v.* Immunity.

I am inclined to think that we are also coming to recognise better the third circumstance which renders virulent the

specific microbe to its host. It has long been clear to every observant physician who has on the one hand even superficially kept in view the results of bacteriological inquiry and who has thought upon the incidences of such infective diseases as he happens to meet, that we carry about with us in our accessible mucous tracts in our naso-oral and respiratory passages and in our blood, amidst other unconsidered trifles and as yet unclassified germs, samples of the organisms specific to many diseases. We are tenanted by these varied organisms from time to time in small colonies or singly, rendered inert only through want of opportunity. The very careful observations of Drs. StClair Thomson and Hewlett recorded in the *Medico-Chirurgical Transactions* for 1895 show that there is a natural cleansing if not antiseptic secretion from the healthy nasal membrane which preserves it from contamination by the numerous organisms which abound in the nasal avenues, so that mucus taken from the central membrane of the nose in health may contain few or none. Other bacteria surround us on all sides and from time to time obtain a temporary but abortive lodgment within us: virulent catarrh, diphtheria, pneumonia, influenza, tubercle, erysipelas, perhaps rheumatism and probably in epidemic times some of the other infective diseases would be represented in one or other category amongst our domesticated or casual occupants. It is not however enough to have the poison germ on the one hand to acquire the disease on the other; there are intermediate or antecedent circumstances of dosage, acquired susceptibility or that subtle malformation of tissue in certain organs which is inherited, and renders them weak in resistance to certain forms of attack. Let a period of depression come over us, involving some slight change in our blood or tissues, some local or general alteration in our chemical or vital functions, and one or other of these organisms may receive the opportunity for aggressive cultivation. We virtually know that this is so in the case of a common cold. Acquired by a momentary chill at an open door, or a wetting that would fail to affect us on the mountain side, such a catarrh becomes at once a highly contagious disease, and will "run through the house." There can be no doubt that the catarrh is associated with the cultivation of an organism; it is equally probable that that organism must have pre-existed in some part of the nasal surface. Does some vasomotory disturbance bring about the local conditions of increased heat and moisture needful for that particular form of microbic cultivation, or is it merely depressed vitality that makes the host susceptible? No one, so far as I am aware, has yet condescended to work out the bacteriology of a common cold. Yet it is the type of a large number of more important diseases, and carefully investigated it would, I believe, be fruitful in side-lights upon their etiology and prophylactic treatment.

Dr. Washbourn,[23] with whom I was discussing this question the other day, referred me to a most interesting and suggestive inquiry which he had made with regard to a case of recurrent catarrh, apparently simple. I must refer to the paper, which is very short (being a single inquiry) for details, but I may briefly say that in an apparently simple coryzal catarrh, a bacteriological investigation of the mucous discharges revealed the presence of characteristic influenza bacilli and of pneumococci. The patient, aged 35, had been subject to similar, or apparently similar, attacks so long as he could remember. He had also had many recognised attacks of mild influenza, and had been working at the bacteriology of pneumonia. There are many people of somewhat feeble vitality whose complaint is that they are constantly catching colds. Such attacks are due probably to the cultivation of successive crops of an ever-present organism. We have little power in attacking the organism; we might as well do battle with a sunbeam. Our treatment is to fortify the host, although, meanwhile, some local applications of a cleansing kind will in these, as in hay asthma, help to protect from the poison. Whatever the true bacteriology of a common cold may be, this humble malady is one of the most common starting points of more important respiratory diseases, both as regards initial and secondary attacks.

Some few years ago I saw in consultation a medical friend who had pneumonia of a pythogenic type; but in response to my inquiry about drains I was informed that he had been in the house for some years, that he had a healthy family of young children, and that he himself had been in perfect health until he went out thinly clad on a cold night and got definitely chilled. He died after the lapse of a day or two, and on investigation a free communication was found to exist between the main drain and his surgery. This gentleman must for some months have been occupied by microbes which did not become operative under the control of a robust vitality until that vitality was temporarily impaired.

The tendency to rheumatism runs in families. It is hardly possible to conceive that chorea is not a manifestation of the rheumatic poison, which is most probably a micro-organism. A mental shock is the usual intervening etiological factor in chorea, which presumably weakens the resistance of the nerve centres upon which the toxic influence falls. It is hardly possible that the mental shock and infection should have coincided in time; until more exactly informed we can only provisionally assume that the infective agent was indefinitely pre-existent.

This intermediate quantity in infective disease requires to be yet more carefully thought out in regard to measures of prevention and even of treatment. Much has been done by physicians in the last generation in general preventive hygiene with regard to the diseases then recognised as specific before their knowledge of the virus of these diseases was so accurate as now. More may yet be done if with the growing precision of our knowledge of the infective elements, we maintain our inquisitiveness as to the conditions under which they become operative.

SERUM-THERAPEUTICS.

I am in no way competent to discuss the question of serum-therapeutics from the bacteriological side. I will only glance at it from the side of results achieved in the form of additions made, and others we may hope to make, to our therapeutics. It is already an immense achievement if we have acquired the knowledge that every infection requires a separately-prepared serum for its treatment. It explains many of our failures, and gives promise of adding to our successes. It has for some time been recognised that infective endocarditis has a manifold microbic pathology—streptococcus, staphylococcus, pneumococcus, gonococcus, are some of the organisms concerned. It is useless to employ an anti-streptococcus serum for a pneumococcus infection, and even the two organisms, streptococcus and staphylococcus, which seem to work most cordially in couples, require a separate treatment. Thus is in part accounted for the very poor success as yet achieved by the serum treatment of this and of some other maladies more or less allied to it. From the clinical side one would judge there to be very frequently more than one poison in association. This is certainly the case in many diseases, for example, in the third and often in the first stage of enteric fever, in the suppurative stages of tuberculosis, in scarlatina, and perhaps in gonorrhœal rheumatism. In pneumonia again it is remarkable that in every variety of the disease, the sthenic, the asthenic, the typho-pneumonia, the septic pneumonia, and the influenzal catarrhal forms, the characteristic pneumococcus is invariably to be found,[24] and this coccus may be the micro-organism conspicuously present in those secondary lesions with which pneumonia is often complicated, and which are attributed to it, such as empyema, infective endocarditis, etc. Yet there are, I think, good reasons to doubt whether the pneumococcus organism alone, unassisted by some of its pyogenic *confrères*, is ever able to bring about these secondary lesions which are usually attributed to it. We must push our diagnosis then further to include a recognition of the precise organism or organisms which have obtained lodgment in any given case. Unfortunately in the earlier stages at least of ulcerative endocarditis bacteriological investigation is by no means always successful in identifying the organism or indeed in recognising any organism, for with well-marked clinical features the specimen of blood examined may be sterile. We may yet for some time to come, therefore, as in complex cases of enteric fever, with which these cases are often confounded, have to rely upon the general clinical phenomena presented by the case and its history of attack in our attempt to identify the poison and in our endeavour to select the antidote.

Whilst the possibility of neutralising by appropriate treatment the specific poison in certain diseases will relieve practitioners of some anxiety, it cannot fail on the other hand

to add much to the tension of their labours by requiring an earlier diagnosis, and by the great care needed to avoid accidents in the use of delicate organic fluids prone to contamination and decomposition. It is impossible that the treatment can be much developed in general use until abundant local centres are secured for the provision of materials of guaranteed purity.

It is curious and instructive to note that the two diseases in which antitoxins are of most approved value, namely, diphtheria and tetanus, the bacillary cultivation is declared (Behring) to be limited to the seat of inoculation, the blood only being charged with their toxins. Whereas the mortality from diphtheria but a few years ago varied from 25 to 50 per cent., according to the severity of the epidemic, it has been reduced by the serum treatment to from 25 per cent. to 8 per cent. according to the severity of the case and the date of infection.

Unfortunately, we have not yet been supplied with any reliable antidote for the serum treatment of pneumonia. I was goodnaturedly twitted by some of my friends in their criticism of a book published eight years ago because I did not speak well enough of the then recent observations of the Drs. Klemperer on the serum treatment of pneumonia; but in a paper read before this Association in London five years later I could say no more, and to-day, although Pane's anti-pneumococcic serum will protect a donkey or a rabbit from the evil consequences of a strong dose of pneumococcus infection,[12] it has not as yet come into practical use in the human disease. I have recently tried it in two cases without result. This may be due to three causes. In the first place, it is difficult to use the serum early enough in the disease, and, secondly, the most severe cases in which alone at present one feels disposed to try the remedy are most generally complicated with some other infection, so that the pneumococcus in the sputum does not signify the sole—perhaps not the most important—element of danger in the case. Thirdly, the doses employed by Dr. Pane have been very large, so large that one shrinks from introducing in such bulk an unknown or imperfectly accredited element into any case not already desperate. In the use of these very large doses, my friend Dr. Charles of Rome has suggested to me the introduction of the serum *per rectum* as a method which he has known to prove efficacious with other serums, the absorption being rapid and the serum being unchanged. As yet, however, the serum cannot be obtained in sufficient quantity for use in such large doses. In all probability the want of success, with casual exceptions, in the antitoxin treatment of erysipelas, puerperal fever, and allied affections, including infective endocarditis, may be similarly accounted for by the presence of more than one organic infection, thus requiring, as pointed out by Behring, Pfeiffer, and Kanthack, more than one antidote. I cannot mention the name of Kanthack without deploring the loss which our profession and humanity at large have suffered through the early death while yet in full vigour and promise of work of this most able pathologist.

Preventive Inoculation.

It seems possible that we may look in the near future for considerable development of preventive serum treatment in the prophylaxis of endemic diseases. Already within the past few months we have seen maturing towards successful action the researches of Haffkine and Wright and others on the means of procuring immunity from typhoid fever and plague in those regions of our world-wide empire in which as yet the sources of the infection are beyond our control. We are no doubt becoming more susceptible to specific infections from the very increasing purity of our sanitary home surroundings, and it may be the more necessary on this account to grant an artificial immunity for those about to proceed to less favoured regions and who would otherwise present, as it were, a virgin soil for microbic cultivation. Indeed, the whole question of antitoxin and serum-therapeutics has only within the last five years become of practical interest to the physician; doubtless many mistakes will have to be retrieved, many apparent steps forward retraced, but we may expect every day to bring to light fresh developments in the sure advance of the new departure. It must be a matter of consolation to our ultra-humane friends to note that although some sacrifice and some suffering to animal life may be involved in the necessary experiments, countless dumb creatures as well as many mere human beings will thereby be saved from destruction.

The Prevention and Treatment of Tuberculosis.

Amongst the questions that have in the present year ripened considerably, and have been urged forward strenuously towards a final settlement, that of the prevention and treatment of tuberculosis has taken a very prominent place, and it is impossible not to allude to it here, although it will be the subject of a special discussion in the Section of Medicine. Truly a disease which still claims one-ninth of our mortality may well command our deepest interest. That much has been done to diminish our national liability to consumption by improved sanitation on general grounds by Parkes, Simon, Bowditch, Buchanan, Milroy, MacCormac, Smith, Greenhow, is evident by the gradual reduction of the mortality in the last half century from 38 to 14 per 10,000 living,[23] or in proportion to the population for England and Wales by one half since 1851 (Tatham). Even in comparing the quinquennium 1875-79 with that of twenty years before, Longstaff found that the mortality from phthisis at the ages between 5 and 35 had decreased by 15 to 28 per cent., and he could say in 1884 that "the decline of the deaths in recent years is chiefly to be attributed to a diminished number of deaths assigned to fever and phthisis."[25] All this has been effected without direct reference to the special bacillus element in the disease, chiefly by amending those conditions to which I have alluded as being intermediate between the bacillus attack, of which most of these pioneers in tubercle sanitation knew nothing, and the illness of the patient.

It may, however, be urged with some justice that we in this country have been behind our Continental friends in grasping the full significance from a prophylactic point of view of the discovery of a definite infective bacillus element in the disease which was made seventeen years ago, and anticipated seventeen years previously.

For our sins in this respect, and perhaps in part because there are political and commercial as well as human interests concerned in the further measures necessary, the question of the prevention of consumption, which should have been calmly and forcefully considered as heretofore by experts in human and veterinary medicine, has become the subject of popular agitation with all the reckless exaggeration and no little threatening of the social tyranny which such agitations tend to produce. The whole subject seems to me, however, to have been well and fully discussed by delegates from all parts of the world at the Berlin Congress, and I believe that the careful, temperate, and broad-minded summary of the proceedings added by Dr. Pye-Smith to the report of the British delegates will do much to bring the matter again within the sphere of sober practical work on the part of private medical men and the proper State departments.

That it is *au fond* a right grouping to place all the previously ascertained causes of consumption amongst the predispositions, and to regard the disease itself as produced by definite infection or contagion through the inhalation of sputum dust, or by the ingestion of tuberculous foods, has been accepted at least for the last ten years; but we must not discontinue to attach a due importance to the other etiological factors because one of them may seem *primâ facie* to be sufficient. To set heredity at nought, to regard climatic considerations as of no importance, and to state that the disease is always acquired by direct contagion or infection is, in my opinion, to ignore much that is true, and to magnify that which should be carefully guarded from exaggeration.

Thirty years ago Sir W. Jenner, in an address to the Epidemiological Society, declared the transmission of tuberculosis from parent to child to be one of the best-established facts in medicine. Jenner did not mean by this the actual transmission of tubercle, nor has anyone that I know of, in modern times at least, made any such contention; but that the susceptibility to become tuberculous runs in families, and this I must confess remains with me an unshaken belief. Take, for example, on the one hand, the striking account by Dr. Reginald Thompson[26] of 80 families of consumptive parentage yielding 385 children of whom 194 became phthisical and 37 died in infancy, leaving only 154 exempt. Consider this in account with the unproven direct communicability of the disease to which I shall presently allude, as shown by the distribution

of mortality amongst married people compared with their numerical liability as members of the general public, and the case for heredity as a predisposing cause of consumption is a strong one if not still "one of the best-established facts in medicine." We cannot, of course, prevent consumptive people from marrying; there are exceptional conditions under which they may rightly do so, but the advice of the family physician should be steadfast in discouraging such alliances, which are unfortunately often prolific. Life assurance offices, whose calculations are based upon experience, will probably wait for much further evidence against the heredity of phthisis before they will feel justified in accepting without surcharge the lives of those who present a consumptive family history.

We are all familiar with circumstances connected with the incidence of certain cases of tuberculosis which render it probable that they have been acquired by indirect contagion through the contaminated dust of dirty rooms, and know that under certain conditions of stagnant, dark surroundings a patient with advanced phthisis of unclean habits would cause local danger of tuberculous infection to his attendants and friends and to future occupants of the room. But except under such and similar almost experimental conditions the evidence of the contagiousness of phthisis is extremely slender.

It for instance has not been proved that tuberculosis is more prevalent amongst married than single people, and Dr. Longstaff[27] has shown that normal coincidence would account for more than the deaths reported. Pulmonary consumption is comparatively rare before puberty, infantile mortality being almost exclusively from bowel consumption through milk infection. Tuberculosis is nearly twice as frequent amongst male as amongst female infants. The mortality from tuberculosis has diminished more greatly, by from one-third to one-fourth, amongst females than males above the age of 20 in the last 30 years (Hugh Beevor),[28] when one would think that industrial, nursing, and indoor conditions generally would have told against the female in this respect. The records of the officials and servants of one of our largest consumption hospitals taken out for 50 years, including a period precedent to the use of any special preventive measures beyond those of ordinary sanitation show a death-rate not in excess of that of the ordinary population.

Whilst, therefore, on the one hand advising every ordinary measure of cleanliness, avoidance of dust, and proper disposal and disinfection of sputum, we may, and indeed must, avoid all exaggerated statements calculated to alarm the public as to the contagion of phthisis. In respect of sanitary precaution I would instance the simple and efficient directions of the Medical Officer of Health for Brighton[30] as being in most reassuring and refreshing contrast to the theoretical and alarming precautions printed for some other health resorts and published on no official authority. These directions are, I understand, privately sent through the medical practitioner to the person affected.

THE SOIL AND DISEASE.

It is again difficult to recognise the striking testimony of such reliable observers as Middleton, Bowditch, and Buchanan as to the influence of a wet subsoil on the prevalence of consumption with the present view of the acquirement of the disease only by human and bovine infection. We must recall, too, to mind the enormous prevalence of bovine tuberculosis, not be it observed only among stall-fed, crowded, and insanitary cattle communities, but amongst animals under good open-air conditions. Do we not find in this prevalence of tubercle amongst pasture-fed cattle, and in the fact of the prevalence of the disease in localities with wet subsoils and deficient sunlight,[23] some probability that the tuberculous organisms, like those of actinomycosis, tetanus and anthrax may have an independent and preparasitic existence, and that like malaria tuberculosis will probably be found to have a double origin from purely microphytic as well as from parasitic infection.

It is remarkable that two at least of the most deadly of disease microbes, tetanus and anthrax, should be normal inhabitants of the soil, and yet how comparatively scarce these diseases are, and, as regards one at least, how communicable. It would seem that, as is the case also probably with malaria, whilst the ultimate source of the disease is vegetation in the soil, yet a greater virulence and activity is attained, and for a short time maintained by cultivation in the human body, or in that of certain other warm-blooded animals. With regard to tuberculosis I would make this final remark: that whilst we may hope on the one hand by further careful sanitation, by destroying and diminishing the careless distribution of bacillary dust, and by withdrawing from human consumption tuberculous foods, still to effect a considerable inroad upon the remaining 14 per 10,000 mortality from consumption; we cannot afford; on the other hand, to withdraw or relax precautions dictated by observations, sound in themselves, although in some regards capable of amended explanation, or we may have to make some deductions from the two thirds diminution in mortality already achieved. In my belief there is a mephitic laboratory beyond our special control, yielding organisms ever ready to attack the unwary and those whose vitality is depressed. General sanitation and cleanliness is our first line of defence against them all. Wherever the conditions of insanitation, dampness, deficient sunlight, and the prevalence of favouring diseases are present there aggressive activity may be again looked for.

Table Indicating the Actions of Various Sera.

——	Bactericidal.	Antitoxic.	Prophylactic	References.
Diphtheria ...	*Nil*	Strongly*	Decidedly (similar to tetanus)	Behring,[1] Cobbett and Kanthack,[2] Clinical Soc.,[3] SimsWoodhead,[4] American Pediatrics Society.[5]
Tetanus ...	*Nil*	To circulating poison, that which is as yet unfixed by the tissues. More promising in early and less acute cases. Cerebral or subdural injection preferred	Prophylactic for tissues as yet not attacked	Roux and Borrel,[6] Köhler.[7]
Septicæmia† (streptococcal and allied affections, erysipelas, puerperal fever, etc.	Doubtful	Decidedly	Decidedly	Bulloch,[8] Mitchell Bruce,[9] Commission American Gyn. Soc.,[10] Petruschky.[11]
Pneumonia ...	Probably not	Decidedly (experimentally)	Decidedly (experimentally)	Pane, Eyre and Washbourn,[12] Mennes.[13]
Yellow fever...	Encouraging results	*Nil*	Decidedly	Sanarelli.[14]
Snake poison..	—	Antitoxic	Prophylactic	Calmette and Delarde.[15]
Leprosy ...	?	? (probably not)	?	Atherstone and Black,[16] Herman and Abraham,[17] Palakawski.[18]
Botalismus (meat poisoning)..	—	Antitoxic	Prophylactic	Van Ermenger,[19] Kempner.[20]
‡ *Plague* ...	—	? Slight	Decidedly	Haffkine,[21] Clemow.[22]
‡ *Cholera* ...	Yes	Not	Decidedly	Haffkine[21]
Anthrax ...	Yes	Not	Decidedly	Haffkine[21]

* N.B.—Paralytic affections are apparently increased by the use of antitoxin, greater number of lives being preserved to the period when paralysis occurs.

† N.B.—The "streptococcal infections" are difficult to differentiate, and are frequently manifold, so that for the present each case is more or less experimental, and must be judged on its own merits until we can push diagnosis to exact variety of organism or organisms involved.

‡ In plague and cholera the treatment is rather a vaccination than a serum treatment.

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ADDRESS IN SURGERY

BY

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At the Annual Meeting of the British Medical Association at Portsmouth, August, 1899.

THE MEDICAL SERVICES OF THE ARMY AND NAVY.

In presence of an assemblage of so many representatives of the medical science of the British Empire, I have much pleasure in gratefully acknowledging the honour of being called upon to deliver the Address in Surgery. It is a task I enter upon with a sense of responsibility, and a fear lest I should fail to do justice to the duty entrusted to me by the Council of the British Medical Association. But I take courage from the belief that you will be disposed to form a lenient judgment of any endeavour to contribute to the usefulness of the annual meeting of our Association, and because I think that the theme I have chosen for the Address in Surgery on this occasion is one in harmony with the high aims of our science, since it has for its design to promote the great objects for which our profession exists, those, namely, of saving the lives and diminishing the sufferings of our fellow-men.

A New Day in Surgery.

At a time like this one cannot help being strongly impressed by the feeling that the surgical profession in our day has had much given to it, and that from it much will be required. We live in an era that can claim to be one of most exceptional, probably unique, interest. We have witnessed in it the most marvellous and rapid advances the world has ever experienced in the powers of mastering and warding off disease. We have passed through many gloomy years, in which we worked our life's work blindly and in the dark, with dread fastening on the heart as surely as the hand grasped the knife, for ever trembling before the horrors of surgical pestilence; and now we have been privileged to see the dawn of a new day when septic disease is being robbed of its terrors by the discoveries of Lister, those great gifts to humanity, which coming generations will hereafter delight to recall, recognising that whatever we owe to the great surgeons of the past has been but little in comparison with the benefits he has conferred on us, and through us on all mankind. And we may be sure that future ages will be very critical in their judgment of us, the present race of surgeons, and demand to know what use we made of our unparalleled opportunities, and whether we went astray amidst all the light that was given us.

The Effect of Lister's Discoveries.

The importance of the period in which we live it would be difficult to exaggerate. For the first time in all the centuries that have flown our profession has changed from a craft into a science, a result that, though many have contributed to it, we owe mainly to Lister. Every progress made in the years of my own professional life seems to dwarf before his great discoveries, and imagination fails to grasp the limits and possibilities of the gigantic revolution which he commenced, or the unspeakable benefits it has conferred, and may yet confer, upon upon the world. The achievements of the surgeons before his day have now for the first time become fruitful and certain. Fresh fields of relieving and curing disease have been opened up at every point of our horizon, and in all the busy centres of the earth is springing up a new race of surgeons, who effect as part of their everyday work marvels of cure that even thirty years ago, had anyone ventured to forecast them, would have been looked upon as the dreams of a visionary.

It is not merely surgery that has undergone a revolution. The discoveries of Lister are changing the aspects of medicine, midwifery, pathology, and many other provinces of medical science, and creating new departments in them; they are, as they develop themselves, shaping our sanitation, our modes of life, our relations to the lower animals, and even raising questions that may profoundly affect the value of our colonies and dependencies. Year by year their power becomes more widely felt, and promises to extend yet further beyond what we can now foresee. But to follow out this train of thought would lead me astray from the practical purpose I have in view.

It is after all perhaps in our surgical hospitals, where they had their origin, that we witness some of the most impressive effects of Lister's doctrines. These homes of the sick poor have been reconstructed and reorganised in accordance with the principles he taught, until nowadays, in our own and in all civilised countries, the most advanced, the most deeply scientific, the most marvellous and delicate methods of cure are daily practised and placed at the service of our fellow-creatures. There is hardly anyone in this land, however humble and however poor, who, when stricken by a disease that modern surgery can grapple with, finds it beyond his power, if he possess the will, to convey himself to where some surgeon, skilled in all that is most powerful to aid him, may bid him be of good cheer, and hold out to him no doubtful chance, but well-nigh the certainty of a safe and permanent cure of his malady. Those who live near the remoter districts of Britain, where men are few and help most distant, can best realise the influence of Lister and his teachings in bringing safety and cure within the reach of all, where before him no remedy existed.

It is, moreover, I think, impossible to avoid the conviction that the open-handed beneficence we now witness in the increased interest and support extended to public charities in all their forms, by all the liberal and benevolent, from the artisan to the occupant of the throne, has been in no small degree evoked by the great work he has enabled the surgical and nursing professions to carry out.

Are we now, however, with all this, in a position to look confidently around us and challenge the verdict of the world and of posterity on the use we are making of our increased knowledge? Have we done all that it is our duty to do? It is three-and-twenty centuries ago that the wise and practical old Greek wrote: "Medicine is of all arts the most noble; but, owing to the ignorance of those who practise it, it is at present far behind all the other arts." We can picture to ourselves how great would be his rejoicing could the Father of Medicine see those things which we now see; but the reflection will obtrude itself at times like this, would such as he find us in all respects worthy of our opportunities?

Powers and privileges, bequeathed to a profession like ours, entail responsibilities which it is a sacred duty to fulfil, and this is felt and admitted by all the nations of the world who lead the van of progress. Our own country, which can boast of having produced the great reformer who is yet among us, witnessing the fruition of his work, is under a greater obligation than any other to profit by his discoveries; and it may be well, leaving the unalterable past that has gone from us, to make use of the present occasion to consider if we are sufficiently discharging our whole duty in this respect towards the immediate future, in which it is still ours to think and act.

The Unsatisfactory Condition of the Services.

While, in many respects, we have good reason to praise the age we live in, and the way in which it has availed itself of

its advantages, no one fully acquainted with the state of surgery in our land can fail to be impressed by the fact that in some quarters the changes and modifications necessitated by the progress of science are even yet meeting with obstacles that ought not to exist, and that some of our medical and surgical brethren are still hampered by systems and restrictions which must be swept away, if we are to ensure that none of our fellow-countrymen shall be denied those benefits which are now within the reach of the humblest and the poorest. I venture to believe that in the city of Portsmouth it will not be out of place—perhaps even specially appropriate, to advert to the condition of our Army and Navy Medical Services. These, since the surgical world was stirred to its depths 30 years ago by the doctrines of Lister, have been, I fear, gradually falling into a condition that cannot fail to evoke much anxiety regarding their present and future. I believe the causes of this can be more accurately pointed out than has heretofore been possible: I feel sure that, by endeavouring to do so here and now, more good is likely to be attained than would result from a similar inquiry on any less public or representative occasion; and it appears to me that the present time is suitable, beyond any in the past half-century, for drawing attention to the reforms that may be necessary to ensure that, when the supreme moment arrives, the medical departments of these services will be found adequately prepared to undertake the duties they will be called upon to discharge. We possess at the present moment an enlightened Minister at the head of the War Office, to whom we owe it that many desirable reforms have already been introduced into the Army Medical Service. We have also every reason to believe that the trend of public opinion is favourable to such further improvements as may be required in both army and navy. Recent events, too, have demonstrated that we may be unexpectedly called upon to engage with both army and navy in European or even world-wide wars, such as would put their efficiency to the severest possible test.

It is moderate and reasonable to expect that the medical departments of the army and navy shall be in a condition commanding the respect and approval of the medical profession and the public; that their officers shall be at least as favourably placed in regard to their work as their civil brethren; and that both ashore and afloat they shall be able efficiently to perform their functions in time of peace, and fully prepared for the eventualities of war. Yet no observant member of the profession, particularly if connected with one of the medical schools whose graduates used to furnish many candidates to the services of the army and navy, can have failed to observe how changed is the estimation in which they have come to be held during the last three decades. The most talented graduates have ceased to aspire to enter them, and it has by degrees come to pass that few indeed, and these as a rule of inferior qualifications, can be induced by any means to present themselves at their entrance examinations. Such a one will have noted that those medical officers who possess a few years' experience of the services, however much loyalty seals the lips of most of them and influences all, show themselves disappointed and discouraged with the professional life they have to lead, admit they have made a mistake in entering them, and would gladly, were it possible, sacrifice the years they have spent in them and quit them entirely, even for some comparatively unpromising post in civil life. He must have perceived that many of the most intelligent officers who remain in them are pervaded by a conviction that their abilities have been thrown away and their lives wasted, and that the services are not what they ought to be. He will have followed the continual endeavours made through all these years to remedy their growing want of attraction for men of ability, and the failure of these endeavours one after another. He will have learnt that year by year the medical services, especially that of the Queen's army, have become more attenuated and undermanned, so that an undue amount of foreign service, at the cost of health, is entailed on those who enter; and that hence it has become necessary to supplement the deficiencies at home by employing civil members of the profession, of a class whose work unfits them for forming officers of the stamp needed in the event of war, even if their other engagements rendered it probable they would consent to be so employed. He may, perhaps, have been told that in the last year or two the post of medical officer in the army has been going a-begging, and been hawked for presentation about the various schools and universities, where suitable men might be supposed to exist. And, lastly, he may see how, when lapse of years has earned them a moderate pension, many of the medical officers, in the prime of their abilities and best working period of their lives, hasten to quit the services; but find themselves, save in the instance of a few gifted men, unfitted for any professional activity, so hopelessly have they fallen behind the acquirements of their civil compeers. There cannot be such smoke without fire.

THE ARMY MEDICAL SERVICE.

It has sometimes been asserted that, in the opinion of foreign judges, our Army Medical Service is in a state of efficiency enabling it to discharge its duties in a way superior to anything that could be achieved by other countries. One must, however, discriminate. Oft-repeated experience, over the very same ground, has indeed taught us to conduct, in some respects, the medical part of expeditions in the jungles and swamps of West Africa, the deserts of the Nile, or the ravines of the Himalayas, in a way that probably no other Power could excel or even equal. Our enemies there are poorly armed and our casualties few. But it dare not be inferred from this that we are in a condition to deal with a war against a Great Power, with arms and organisation at least equal to our own, in which large numbers of wounded—thousands instead of tens—must fall to be treated. That would be a most erroneous conclusion, and would not be the general verdict of either the civil profession or the ranks of the services themselves. And such of us as possess friends among foreign military surgeons, men of large experience in actual warfare, do not hear from them any such expressions of approval as would warrant very sanguine inferences. It is absolutely conclusive on this subject to recall that last year, when a deputation from the British Medical Association was received by the Secretary of State for War, its members, most of them leading authorities from our universities and medical schools, expressed themselves deliberately to the contrary effect, using expressions that ought to be well weighed as coming from those whose position enables them to form an unerring judgment. An eminent President of this Association there gave utterance to the following ominous opinion: "If there were to come a time of war it is to be dreaded that the horrors which occurred during the Crimea may be repeated." All others present spoke to a similar effect, and the Secretary of State admitted that, owing to the condition of the Army Medical Department, "only comparatively inferior men present themselves.....the best men turning away from the Army Medical Staff.....a very grave condition of things."

With regard to the duties in time of peace, it may be contended that these, being chiefly to maintain our army and navy in good health, are efficiently performed in the services; though I need not repeat that even these are at present carried out in the army to some extent by the aid of civil practitioners, whose other occupations unfit them for being effective and satisfactory army medical officers. But it must not be forgotten that this is not all the country expects. The duties of the Royal Army Medical Corps and Royal Navy Medical Service involve preparation for war. This is the chief end of all departments of the army and navy; and, unless they fulfil that end, no matter how creditable they may be in other respects, they are but a pretence of what they ought to be. In this it must, I think, be admitted that they are in a condition leaving much to be desired. Attendance on minor ailments, trifling complaints, and the few serious diseases and injuries occurring among bodies of men in the prime of their age and health, selected for strength and soundness, and the other routine duties, which together constitute the whole ordinary work of the immense majority of the medical officers serving in our forces, form so great a contrast to much that would be expected of them in an active campaign against European troops that comparison between them is hardly possible. They afford the army and navy surgeon, it is no exaggeration to say, scarcely any chance of acquiring the knowledge and skill that would be demanded of him in war.

No surgeon can now, as in former days, rise suddenly out of the ranks of those destitute of special training, however emi-

nent his natural abilities may be. He who is skilled in exercising his profession becomes so by many years of special training. No man who is but theoretically acquainted—be it in ever so perfect a fashion—with the mere doctrines of antiseptic surgery is able to step at once into the arena as a practical surgeon. He must, in the first place, acquire by slow and painful degrees a familiarity with methods, manipulations, and procedures built up of a multitude of little details. It takes him many years to acquire these by practice, by training himself alongside of those to whom they are already familiar, by the discipline of his own failures, and by a study and familiarity that eventually imprint them so deeply that they become a part of himself, and are carried out instinctively and unerringly under all ordinary conditions, as well as in the unusual events and emergencies that continually arise in so many of the cases he treats. Septicity is an enemy of infinite variety, not to be combated with success by theory alone, or by wielding a single weapon; the modern surgeon must be armed at all points, both for offence and defence, and acquaintance with his weapons and their powers is not attained save by a long course of study and training.

Even after the ordinary practice of surgery, as nowadays carried out, has had its foundations laid by a training in antiseptic and aseptic work, the greater part of the education of the skilled surgeon has yet to be acquired. The methods of cranial, thoracic, and abdominal surgery are necessarily, to meet the varying circumstances, so numerous, so intricate, and demand so great intellectual and manipulative skill, that only one who has spent years in constantly improving himself in them, whose mind has been fashioned by long experience and study of the problems he daily meets, and whose hands have gained by constant usage the technical facility and delicacy indispensable to success, can with impunity venture into these territories with the requisite boldness and confidence, and ensure the successful results which alone render these procedures justifiable. Such is the life-long training of the skilled surgeon of our cities and hospitals, who carries out the marvellous methods and obtains the wonderful results of modern surgery.

The Standard of Military Surgery.

A standard of work at least equal in excellence to that of the civil surgeon ought to be expected of army and navy medical officers. Senn, of Chicago, chief operating surgeon with the United States army recently in the field, and one who has done much for surgery, points this out in the following axioms:

1. That in theory and practice military surgery is equivalent in every respect to emergency practice in civil life.
2. That the wounded soldier is entitled to the same degree of immunity against infection as persons in civil life suffering from similar injuries.
3. That all formal operations in war must be performed where the wounded can receive the full benefit of aseptic and antiseptic precautions.
4. That operative interference is indicated in all penetrating wounds of the skull.
5. That gunshot wounds of the chest should be treated under the strictest antiseptic precautions.
6. That laparotomy in penetrating gunshot wounds of the abdomen is indicated in all cases where life is threatened by hæmorrhage of visceral wounds, and the general condition of the patient is such as to sustain the expectation that he will survive the immediate effects of the operation.

These are reasonable demands, many might ask more, but nothing that falls short of some such standard can be accepted as satisfactory. Statistics prove that of all wounds in battle there are 7.4 per cent. of the brain, 7.5 per cent. of the chest, and 4.7 per cent. of the abdomen, amounting to 20 per cent. of all wounds. There must, therefore, in the next great campaign, be an enormous field of usefulness to properly trained antiseptic surgeons, and a fearful waste of life if they be not there to occupy it. It scarcely, moreover, requires to be pointed out that gunshot wounds of other parts besides those of head, chest, and abdomen offer a field for modern surgery that has scarcely yet been entered on. No extensive campaigns have been conducted since antiseptic surgery was fully introduced, but the smaller ones have shown the need for a class of surgeons more highly trained than hitherto to carry the best methods of antiseptics into the domain of gunshot wounds, where septicity is a danger greater and more frequent than in any other class of injuries whatsoever. And I am convinced, from a study of wounds inflicted by modern projectiles, on which it would be out of place to enter here, that in gunshot wounds of the soft parts and extremities a very much larger proportion of lives and limbs than hitherto can be saved, and another great field of modern conservative surgery opened up by the application of improved methods and principles of treatment, in the hands of those who really know how to employ them.

In all that pertains to surgical work, it will not be questioned by those aware of what is now required, that our military and naval surgeons have, in peace, virtually no training to fit them for what they may at any instant be called upon to undertake in war. Who that compares the conditions under which the civil surgeon is formed with those existing in the Royal Army Medical Corps or the Royal Navy Medical Service will be so bold as to say that the latter furnish any adequate means of familiarising their surgeons with the highly complicated and difficult procedures which they ought to be able to carry out with dexterity and success? Save a few connected with Netley—and perhaps Haslar—Hospitals, most officers have hardly once in their lives an opportunity of carrying out any important operation on the brain, thorax, or abdomen. How, then, can they undertake, with any prospect of a happy issue, the intricate steps of, say, a laparotomy in a gunshot wound of the abdominal contents, with all its complicated problems and perils? Under the existing system no junior officer of the Royal Army Medical Corps has any opportunity of practising modern surgery; even if an occasion offers, he is tied down by restrictions and impediments enforced by his seniors, and his natural desire to prepare himself for the highest work is disregarded and repressed, so that few, if any, are capable of the class of surgical work which will be expected of them by the country, and for the non-performance of which they will be unjustly blamed when the test of war is imposed upon their performances. So long as the medical services afford their surgeons no proper facilities for acquiring and maintaining a competent knowledge of these highly-important and necessary matters; so long as the junior medical officers have neither the chance nor the encouragement to perfect themselves in their science, and especially in what would lie before them in the event of a war; it can hardly be wondered at that a service entailing on those who enter it what is, from a professional point of view, almost an intellectual sterility, should be a mode of life our best graduates recoil from, and which few of them can be persuaded to adopt.

The Want of Adequate Training.

Moreover, the destitution of the army and navy of institutions where surgery can be practised is very great. Netley Hospital, limited as it is to the treatment of soldiers, and Haslar to that of sailors, do not offer such varied material as is required by surgeons and physicians to cultivate the practical branches of their art. And there is an almost total absence of hospitals and lazarettos throughout the stations where medical officers are serving, of a kind fitted to afford them any of the facilities they have a right to expect. The provision of places of study and practice is imperatively called for, where the younger and middle-aged officers, provided with all the appliances found in civil institutions, and with every class of patients on whom they may be used, may fit themselves for their duties of attending the wounded during action or in field or base hospitals. And until such provision is made, we may be assured the services will not secure the number and quality of officers they require; for graduates will not nowadays, after being fashioned by years of high mental training, consent to exchange an intellectual profession for a life of stagnation. The services must either adapt themselves to the altered spirit of the times, or remain undermanned, and officered by a class of graduates inferior to those who would otherwise enter them. It is written, "Man shall not live by bread alone."

Had custom not dimmed our eyes, the position of matters in the army and navy would ere now have excited indignant surprise. While the calls of modern science have been heard in the surgery and medicine of civil life, and effected the changes to which I have alluded; and while they have been

taken to heart in the medical services of foreign armies and navies, they have fallen on unheeding ears among those responsible for the efficiency of our own. The contrast between the medical and other departments makes the matter more astonishing. Such scientific corps as, for instance, artillery, engineering, and telegraphy have undergone extensive improvements and reforms in the last few decades. No means of enhancing their efficiency is neglected. For them all the inventions of modern science are studied, adopted, and improved. Elaborate care is taken that every one whose duties in war time will necessitate his familiarity with appliances or knowledge of any kind is trained in them, so that when the call of war is heard perfect efficiency shall have been attained. The lives of the officers and men of the navy, of the Royal Engineers and Artillery, of the cavalry and infantry, are devoted to the daily acquirement of a knowledge of and familiarity with what they must use in war, attainable only by constant practice under conditions resembling as nearly as may be those of a real campaign. Tactics are studied, manœuvres held, officers and men practised and drilled, fleets and bodies of men are put in motion, and any unreadiness is observed and remedied. Yet the Royal Army Medical Corps and the Royal Navy Medical Service, which demand an even higher and more varied culture, a more profound knowledge, and a greater degree of practice and experience than either artillery or engineering, ere their delicate machinery can be brought into salutary use, are left in a condition which may have answered well enough fifty years ago, when rough-and-ready surgeons could do the rough-and-ready work then required, but which is out of harmony with the revolutionised conditions of modern surgery and the state of the medical service of the armies and navies of rival military powers. Even the care that has been bestowed on the development of ambulance will only result in wounded men being now brought, on the best surgical principles, to surgeons rendered as unfit to treat them as it is possible for a bad system to make them. Were the Engineers or Artillery treated thus, supposing that their officers, after acquiring the highest scientific culture and technical education that military academies can afford, were, on obtaining their commissions, to be denied any further opportunity of maintaining and increasing their familiarity with the ever-improving appliances, constructions, weapons, and manœuvres that war will compel them to employ, the absurdity would arouse universal derision and enforce an immediate adoption of a saner system. Yet that is precisely what we witness in the medical services, where the problems dealt with are even more scientific and recondite, and in which constant practical application is even more necessary.

These defects tend to their own perpetuation. Save in the case of a few exceptional men, medical officers trained under such conditions must, by the time they reach the higher ranks, where they possess to some extent the power of introducing reforms, necessarily have become so unfamiliar with the progress their science has been making, and so unaware of what ought to be done in the way of modernising the services, that we cannot wonder they should be slow to move in the direction of effecting the necessary changes. Again, though numbers of the best men in our profession are in the ranks of the services, and many there carry out work of the highest order, it is nevertheless true that such men exist in them, not owing to their opportunities and encouragement, but in spite of them, and have become what they are owing to intellectual forces within themselves, which in any other line of life would have ensured the highest eminence and the greatest success. And it is unfortunately the case that the standard of acquirements of the successful entrants into the Royal Army Medical Corps of the last series of years has been such as to compel the belief that the proportion of eminent men is already becoming less than it has hitherto been, and that the service is undergoing rapid deterioration.

In considering the requirements of the services I have not overlooked that, along with purely surgical work, a very large amount of medical and sanitary duty falls to be carried out by the medical officers in the event of war; but time does not permit of everything being elaborated, and my standpoint being chiefly surgical, I must limit myself to saying that, for these also the opportunities of practice in peace are not such as they ought to be, and that the causes of this are similar to those stated regarding the purely surgical aspect of the services.

CAUSES OF DISCONTENT IN THE SERVICES.

The present system has had a sufficient trial, and, in spite of all attempts to amend it, has yielded unsatisfactory results, mainly owing to the deficiencies indicated. The Royal Army Medical Corps and Royal Navy Medical Service, indeed, are at present existing under impossible conditions; they cannot be subjected to such impediments without their effects being felt in a hundred ways. They are in a state of internal discontent from the consciousness of being seriously defective somewhere. Their members realise that they do not possess the same privileges of professional occupation as their civil *confrères*, and are sensible that they are not equipped as they ought to be in following out the intellectual problems to which they have dedicated their lives. This is perceived not only by themselves but by others, especially by the other scientific branches, and naturally they do not enjoy the same appreciative esteem as is accorded to departments engaged in the constant healthful exercise of all their due activity, and possessing the internal vitality and self-respect resulting from conscious advance in the exhilarating race of intellectual progress, which forms the very life of the leading professions in the world's foremost nations. It is certain, too, that the same cause underlies what has often been complained of, namely, the cold regard paid by the military and naval authorities to the medical services, their lack of appreciation of them, the way in which they are starved in their pecuniary requirements, and the fashion in which their exercise and training during peace are overlooked and neglected. They would seem to be considered as less deserving of development than even such departments as the commissariat and transport—the contemptuous belief being apparently held that trained surgeons to attend the wounded in war can be summoned into the field at a moment's notice by the expenditure of so much money, like the horses, mules, and camels that an army requires.

THE ARMY MEDICAL SERVICE UNDERMANNED.

This condition of things is one from which there must some day be a rude awakening. It may be true that in former days an army medical service could be so extemporised, but it is so no longer. The Royal Army Medical Corps ought to be made, what it at present is not, a complete and perfect entity, fully equipped with everything needful, and regularly trained like any other department. If it is to furnish the priceless service for which it exists, it must be fully manned, the members composing each of its units must be accustomed to work together, so that their duties are familiar and can be promptly performed, and the whole of its equipment must be prepared in time of peace for instant employment in war. Instead of this we have a department so starved and undermanned that, as the Under-Secretary for War recently admitted, in the event of a war breaking out requiring the employment of two army corps we could not supply them with the requisite medical contingent. Let me give an example of how the Army Medical Service worked in an expedition of some 11,000 men, sent under Sir Gerald Graham to the Eastern Soudan, and landed on the Red Sea littoral in 1885. Following as it did on the death of Gordon at Khartoum, when the country was roused into excitement, many millions were spent upon it, and it was furnished with everything, even to hospital ships, at profuse expense, nothing being wanting to its medical department that money could supply or care provide. Yet in the bearer companies the men were from Aldershot, the carts and harness from Woolwich, the mules and muleteers from Spain, dhoolies and dhoolie-bearers from India, and camels and camel-drivers from Aden. The waggons arrived in one ship, the harness in another, the mules in a third, and all at different times. When the ambulance waggons were landed, along with several carts, the pieces were mixed up, and the men had to fit them together as best they could. When the mules and harness turned up, it was found that, while the waggons were made for one kind of draught, the harness was made for another, and so on. And the officers, non-commissioned officers and men knew nothing of one another.

For the medical part of the expedition generally, the stores came without storekeepers, and without proper outward indi-

cation of what the packages contained. Chaos reigned, and I am assured that if there had been an engagement on the day the forces landed there would not have been a bandage forthcoming for the wounded. And very much the same state of matters exists in the service to-day.

To manage in this fashion is simply to ensure, when a critical time occurs, a repetition of the scenes of the Crimea, where admirable medical officers were made a sacrifice by the war authorities to appease the public indignation excited. A system that produces such results stands self-condemned, and none who remember the Crimean War will consider any efforts to prevent a repetition of like experiences ill-timed or unadvisable.

So complex an organisation as the Royal Army Medical Corps ought to be kept in a high state of efficiency, and be vitalised by continual practice. It ought to consist of separate units, each complete in itself and familiar with its equipment and work. Each field hospital should be completely furnished and frequently practised in its duties. Every corps should be ready to act, as in other departments, the moment it takes the field, and not have to learn its duties there when the day of trial comes in a campaign. Whether stationed at home or abroad, the officers should be provided with all the proper means of keeping themselves informed regarding the advances that are for ever being introduced into their science. The literature bearing on every new progress should be supplied to them at remote stations where scientific periodicals and books are not found; for no medical officer can, from his pay, purchase and transport a library of the newest medical works, even if he were aware, which he often cannot be, of what he ought to procure. The want of all these things prevents the due development of the services, and there can be no reasonable hope of a better state of matters until they are remedied. But were the reforms that naturally suggest themselves carried out, who can hesitate to believe that new life would be infused into them? The best graduates would once more flock to and remain in them; and the country would not be placed in the dreadful position of having to pay, with the lives of its bravest and best, for the state into which its medical services have been allowed to drift.

The Indian Medical Service.

It is not necessary to enter into many details concerning the Indian Medical Service. To some extent it shares in the defects of the Queen's; but opportunities of professional work are more frequent, two-thirds of its officers being engaged in civil work; and it therefore affords a professional training that places it in a much better position, and approximates it in some degree to the condition of Continental army medical services. Its comparative popularity is a strong corroboration of the remarks I have just made, for it attracts the best graduates of our medical schools, so that the weakest men who enter its ranks are of a class superior to the best who enter the Royal Army Medical Corps.

The Royal Navy Medical Service.

The Medical Department of the Navy, on which I have already partly touched, has, no more than the army, kept pace with the advance of the times; it still preserves an organisation that may have answered its purpose well enough in the first half of the present century, but is inadequate to meet the requirements of to-day.

In it, as in the army, the fundamental error is perpetuated of adhering to a system whereby its officers, shut out from practising their profession as civil surgeons have to do, fall year by year more out of touch with the advancing requirements of science, and necessarily fail to familiarise themselves with what will be their great duties in the event of a naval war. Treating none but the healthy and strong in time of peace, their opportunities of dealing with wounds, and especially with the higher branches of surgery, are as good as non-existent; and they cannot by any possibility, as things are, acquire the skill everywhere possessed by surgeons engaged in civil work, but which would in war be equally demanded of them. Such as it is, their work has to be carried out under arrangements that seem deliberately calculated to render the practice of antiseptic or aseptic surgery impossible, in rooms without antiseptic materials, irrigators, or sterilisers, and with a limited armamentarium of instruments provided, even at the present time, at their own expense. Proper diagnostic instruments and apparatus do not exist among them; even the surgeons, in the best equipped vessels and stations, are left destitute of the facilities that are wanting in hardly a single civil hospital or dispensary for the poor throughout the length and breadth of the land.

Nearly all that has already been stated regarding the Royal Army Medical Corps is at least equally true of the Royal Navy Medical Service; but to enter *seriatim* into these matters again would be an unjustifiable waste of time. More than the army the navy requires the touch of a reformer's hand. I should be sorry to use any word that may give needless offence, but am forced to say that, even on board the most modern ships of war, a comparison of their surgical outfit and arrangements with the varied armamentarium and the conditions of work of the civil surgeon tends to evoke a vision of the knight of La Mancha equipped in his great-great-grandfather's suit of armour. When we consider what the medical officers of the navy may at any moment be called upon to do, and their vast importance to the country, we feel that they, of all others, ought to be almost lavishly supplied with the best facilities for work, with instruments and apparatus of all kinds, instruments for special diagnosis, instruments for special operative procedures, endoscopes, electrical instruments, radioscopic apparatus, sterilisers, and apartments where antiseptic and aseptic surgery can be practised; and have reasonable opportunity, in time of peace, of familiarising themselves with their use. The highest care should be bestowed on fostering the British, of all the naval medical services in the world, and we can scarcely believe that this is not done.

The Wounded in Naval Warfare.

In the event of a naval engagement of any magnitude the wounded on board our ships of war would have to be attended to in a small dark room, unprovided with any save the rudest appliances and a few cots, where at most half a dozen men could be handled, and which is moreover, in many vessels, as much exposed as any other part of the ship to the fire of the enemy. Were such a fighting bay rendered untenable the wounded, however great their need, could be attended to only by being lowered, slung in a vertical posture, down the narrow hatchways, where the shot is brought up from the magazines to the guns, and even these would not be available during the heat of an action. Everything on board ship that can destroy life is in the highest perfection, everything that can save it is of the rudest description and behind the age. In the case of a gunshot wound through the abdomen the only chance of recovery is laparotomy performed within twelve hours, but on board none of Her Majesty's fleet is there any possibility of performing such an operation; there are neither accommodation, instruments, nor accessories. Or were 20 per cent. of the men of one of her battleships or cruisers killed and disabled in action, the wounded among them could not, in the present state of things, receive the attention that ought to be given them.

Yet there is no reason why the constructors of the navy should not arrange under the water line, shielded from the enemy's fire by the turtle-back armour deck of the vessel, a sufficiently large and well-lit space, fitted with all that is required for wounds, compound fractures, and operations on the main cavities of the body. Into these the wounded could be lowered through hatchways made capable of transmitting men on stretchers or litters even in the midst of an engagement, so that all emergency operations could be satisfactorily performed.

Matters are even worse on board the smaller vessels, which have no surgeon and few surgical appliances. On torpedo boat destroyers there are no materials for making splints, only a box of antiquated remedies like those supplied in the vessels of the mercantile marine, where the sailing master acts as the doctor. It would not sensibly retard the speed of such a boat to carry a surgeon—or at least several men specially and fully instructed in first aid, and really capable of efficiently affording it—and to furnish such appliances as would enable them to deal with wounds and compound fractures.

The requirements of naval warfare must always, more or less, impede the carrying on of surgical work on shipboard

during naval actions. No person will impugn the principle that the efficiency of war vessels as fighting machines has first to be considered, and as much accommodation as possible allotted to their fighting armament. It is inevitable this should be the chief consideration in fitting out the navy. To keep the communicating doors of water-tight sections open during action, in order to convey the wounded to the surgeons, might cost the lives of all on board. It may also be that in naval warfare, especially in some vessels, success may occasionally best be purchased by throwing aside, for the time being, all considerations of dealing with the wounded. But the principle may be, and is being, carried too far; for it is a duty to see that, short of interfering with the perfection of the fighting machine, no suffering is left unrelieved or life needlessly sacrificed, and no means neglected of bringing wounded men the earliest and best attention that can be given. No questions of economy should be allowed to prevent officers and sailors wounded in naval warfare receiving such early and effectual help as their condition so urgently demands. The cost of a couple of twelve-pounder guns would probably cover all that is required for each ship. We must lead rather than follow in all naval matters, as foreign ships of war are constructed according to the example England sets. And our navy, being the most perfect and greatest destroying force of all the war fleets of the world, we should be the foremost in introducing into it the best planned methods of relieving suffering and saving life that can be devised.

More than three centuries ago one of the maiden Queen's wisest advisers wrote thus to Secretary Cecil, and his words, though quaint and antique, are as apposite to-day as they were in 1560:

> In any wise bend your force, credit, and device to maintain and increase your navy by all means you can possibly, for at this time, considering all circumstances, it is the flower of England's garland. Animate and cherish as many as you can to serve by sea: let them want neither good deeds nor good words. It is your best and most cheap defence, and most redoubted of your enemies and doubtful friends. There is not so many perils in it as there is to depend on fortresses; neither be the charges like. Surely at this time it is so necessary to increase and to preserve it, that immunities and privileges are to be granted to those that serve in that kind of service.

Does any one doubt that these old words still breathe England's spirit, or believe that she will grudge to provide in her fleets what ordinary humanity requires?

LINES OF REMEDY.

Criticisms without suggestions are usually better unmade; and to call attention to defects in the services, without indicating the lines of remedy, would be almost unpatriotic. I have already ventured, to some extent, to indicate how I think defects may be made good, though some of the suggestions have been more of detail than principle. It would be out of place to dwell at length upon minor suggestions; but it may now be desirable to state generally the lines on which the services can be brought into harmony with the requirements of modern science, so as to ensure the wounded in war the most enlightened treatment, and for the medical officers the means and training for carrying on their work in a manner that will bear comparison with that of their civil compeers.

It would be easier to do so if we possessed universal military service, as we might then look for guidance from Continental examples. In countries where this obtains the most eminent civil surgeons are at the disposal of the authorities in time of war, and in peace hold rank in the army, receiving promotion like those actively serving. They are soldiers in reserve, and can be made use of wherever their eminence and special qualifications make them most useful in war. The idea of adopting this system among ourselves, but on voluntary lines, is no new one; although it has recently been brought prominently into notice by Lord Lansdowne's creation of the Central British Red Cross Committee. If the Committee make an endeavour to attach a number of our most capable civil surgeons to the Royal Army Medical Corps, by conferring on them military rank and titles, with special privileges and emoluments, on condition that their services be at the disposal of Government in time of war, some good may be done. There are obvious difficulties, but they do not seem altogether insuperable, and, at any rate, such a plan is worthy of the attention of the War Office. But anything short of this, as for instance, the old desultory method of inviting civil practitioners to volunteer their aid when war breaks out, and so supply the defects of the service, is doomed to failure; because, though capable young graduates are thus obtainable in considerable numbers, they are not the class of experienced surgeons who are wanted, they cannot replace the military or naval medical officers, and are at best but a species of superior dressers. Few, if any, of the men who would be of real value will come forward, save perhaps in the event of an impending national calamity. The system was tried in the Crimea, and has since occasionally been carried out by the National Aid Society: but I am sure those who have seen it in operation must admit that it is at least a comparative failure.

Neither of these methods, or indeed any other, will, however, compensate for an inefficient army or navy medical service, and should the War Office or Admiralty be induced by any such expectation to defer the necessary improvements in their medical departments, they will find when the day of trial comes that they have made a fatal mistake. But I shall have to return to this question farther on.

MEDICAL SERVICES OF GERMANY.

Although the arrangements of foreign services cannot be directly adopted in our own, they may teach us how to improve them, for we find most of them imbued with a recognition of the altered conditions of the surgery and medicine of to-day, and making progress in adapting themselves to these changes in a fashion that is not found among ourselves. Much that is instructive may be learned from the medical services of Germany, where, of course, compulsory service exists. In that empire every medical man who has served possesses a fixed military rank, even if engaged in civil practice, and is liable to be called upon to serve where and when required. Those who have not served in the regular army, but are in private practice, receive annually an inquiry addressed to them by the War Office as to whether they are prepared to serve their fatherland in case of war. Every German medical man who has served in the army at all is maintained for nineteen years under military orders—that is, he possesses a fixed rank, and is allotted, even in time of peace, a known military post which he would occupy if war broke out. Thus the university professors hold high military rank, corresponding with their eminent civil position and scientific attainments, and are required to give annual courses of instruction to the medical officers serving in the army or navy. Such well-known surgeons as Bergmann, Bruns, Trendelenburg, and Mikulicz have to teach these classes during the Easter holidays, so as not to interfere with the winter and summer sessions of the universities. Each professor has his fixed military rank assigned to him in case of war; most of them rank as lieutenant-generals, some as generals, and even higher, and in the event of war they act as consulting surgeons to the medical officers of the army in the field or base hospitals. They receive the same pay as the military surgeons, as do also the other surgeons who are liable to be called out in case of war; and some of the latter have places assigned them in the sanitary corps, etc., so that their skill and experience are utilised in every department of the service.

In time of peace German army surgeons have the development of their professional culture ensured by the following measures: The most promising surgeons and assistant surgeons are sent to do duty for a year at a time in the medical, surgical, and gynæcological departments of the hospitals connected with the universities, and in other large public hospitals unconnected with them. The junior and assistant surgeons are also annually sent to attend the special courses of instruction in anatomy, surgery, and operative surgery mentioned above. The senior medical officers, nearly corresponding with our surgeons-major, at least the most competent and promising of them, have to serve in rotation in the large military hospitals, in which are treated, not merely soldiers, but all kinds of ordinary patients; there they have to act as teachers and attend and take a share of the tutorial work among the pupils in the classes of the various professors; or they may be sent to do duty for a year in the general hospitals, not only in the surgical, but also in the medical and gynæcological, wards. They have also to attend, as they may

be ordered, annual courses of bacteriology; or they may be furnished with funds for travelling in other countries and studying their medical and sanitation arrangements.

All surgical instruments and appliances in the German army are provided by the State, and in their navy this is likewise the case; every hospital in which the medical officers serve has its complete armamentarium provided for it, so that no unwise economy hampers the most thorough and modern practice of the healing art; and the same thing is true in regard to their naval medical service.

Medical Services of Russia.

In the Russian army and navy similar care is taken of the professional culture of the medical officers. Russia possesses 6 large and 300 small hospitals connected with the army, besides smaller lazarettos; and in some of these the equipment is far in advance of anything the services possess in this country. Thus the military hospital of St. Petersburg, wherein are treated all medical, surgical, gynæcological, ophthalmic, and other diseases, consists of five separate clinics or infirmaries, each of which is complete in itself, and possesses departments for every class of disease, and even wards for paying patients. The wards are excellent, and replete with appliances of every kind; and there are bandage rooms, purifying rooms, operation theatres, bacteriological departments, rooms for physical research, laboratories for teachers, and laboratories for students, all excellent and complete. Each clinic possesses 850 beds, 120 of which are for women's diseases, and 20 for children's: and about 45,000 patients are treated per annum. In these clinics the students and assistants have to work in the most thorough manner, and study every kind of case. The hospital possesses a staff of 34 professors, 70 *privatim docentes* and 47 assistants. Each department is furnished with an ample annual allowance for instruments and apparatus, and can apply for and obtain additional grants for anything more that is required, or for anything new and expensive. They have liberal provision of everything calculated to assist the most advanced work and investigation: *x*-ray rooms, photographic rooms, electrical rooms, immersion lenses, centrifuges, etc., to an extent that excites the marvel and envy of British visitors. The work in the wards, such as case taking, temperature recording, and every sort of examination and study of the cases, is of the very highest character; and the operations and dressings are carried out by the surgeons and qualified assistants in a fashion that is above praise.

Russia has 3,000 surgeons in her army, and any of these may, if he show ability and powers of work, apply for and be ordered to return to study in the hospitals for a period of two years. There he has to work as a regular assistant, and on proving his capacity may attain a place among the teachers of the institution; or he may be transferred to the hospital of some provincial city, and there continue to perfect himself in his profession, and further qualify himself for his duties in time of war.

The Russian naval hospitals are arranged like their army hospitals; they exist in many parts of the empire, there being five large ones at different ports, besides one or two smaller ones; they admit civil cases of all kinds; and in them the medical officers possess opportunities of training themselves in all manner of high-class professional work. In the Russian navy the medical officers who show ability can obtain permission to return for two years to the hospitals, and can there advance by merit, ten every year, to become *privatim docentes*, and so proceed to the position of professor. And they have the same privilege as those of the army of obtaining, after ten years' service, two years of study leave in the hospitals and schools, during which time they are granted extra pay.

The Russian State supplies its army, its navy, and their hospitals with instruments of the newest construction, embracing appliances for special diagnosis and treatment; the operation instruments, and even the boxes that contain them, are arranged so that they may be readily sterilised by heat or otherwise; and Schimmelbusch's sterilisers, and apparatus specially constructed for carrying out antiseptic and aseptic treatment under the difficulties of a campaign, are supplied with them. The drugs are prepared for the services in the form of tabloids, with the active principles accurately dosed and made up by the newest machinery. Dressings, bandages, and such like are prepared, sorted, made up, sterilised, and sent out from factories which are ideals of purity, ingenuity and care, in a way that is an example to the world.

Medical Services of France.

In the French army post-graduates courses, expressly for medical officers, are conducted by professors at the different universities throughout the Republic, and the cost is borne by the Army Medical Department; while a certain number of the medical officers of the active and reserve army are every year ordered to attend them, extra pay being drawn by those who do so.

A Scheme of Reform.

But enough has been said to show that we have much to learn from foreign countries; that, unless we follow their example, our officers, soldiers, and sailors who may be wounded in war will be attended to in a very imperfect fashion compared with those of other European Powers; and that our services stand in need of great reforms, which must be more or less of the following nature.

It would, first, be a great advantage to the services were a Section created for military and naval surgery at the annual meetings of this Association, in which all professional matters connected with them could be discussed, and where all communications should be privileged. There can be little doubt that the responsibility for the defects of the services chiefly lies in the apathy and ignorance of the civil part of our profession regarding them, and this is the first thing that should be remedied. Such a Section would furnish instruction as to the actual state of matters and what amendments are required, and by its agency the profession and public would be educated to obtain them. Reforms so initiated and urged on the authorities by the Association could not fail to be quickly introduced. In such a Section also questions of ambulance, transport, equipment, wounds, and subjects of a kindred nature would be perennially dealt with. And special work by medical officers would secure due publicity and appreciation.

Information as to the condition of the services should be laid before the War Office and Admiralty, and the necessary reforms urged upon them in all proper ways, in order that their organisation and equipment may be modernised. The War Office in particular should be induced to carry into complete effect the system initiated when the regimental system was abolished. Medical provision should be made for three complete army corps. This, if it exists at present, is a mere framework on paper, of no real use in so complex a machine as the Royal Army Medical Corps. The number of those who are to serve when war breaks out should be completed; the equipment and materials should be ready and at hand; and men and officers frequently trained in their use. Field hospitals should have their equipment complete, and their staff attached to them. And the whole service should be organised as a body of independent units, capable of acting alone or being combined or brigaded as required. Everything belonging to each unit, even to its transport, should be complete and under the command of its medical officers. This would give the military authorities a medical corps on which they could always depend, out of which they could be supplied with such a proportion of units as the particular exigency required, to be distributed where and when they were called for. Such a system would throw responsibility for the adequacy of medical arrangements on those in command; and we should no longer have the Royal Army Medical Corps bearing on its shoulders a vicarious load of sins whenever a general—to use a terse vulgarism—miscalculates the size of his butcher's bill.

Instruction of Officers.

The most clamant of all reforms is provision for the proper instruction of officers in their war duties. It is the climax of unwisdom to deny them this, and not until it is fully conceded can the services regain their lost popularity and attract such graduates as will provide the number and quality of medical officers the country requires. The principle of study leave has been conceded, but cannot be carried out in a service too undermanned to do its work. And the amount conceded is, in my opinion, far too little to enable medical officers to keep pace with the advances of science. I cannot put too strongly the absolute necessity for at least one out of

every five years of service being devoted to this. Were every meritorious officer, especially if he have been stationed abroad, set free to devote every fifth year or its equivalent during the first twenty years of his service, or up to forty-five years of age, to visiting and participating in the work of military, naval, and above all civil hospitals and schools of medicine, much would be done to ensure his possessing the skill in the higher methods of surgery and medicine to which he and those under his charge are entitled to lay claim. In this we should be but adopting what has been found indispensable by other European Powers. Officers receiving study leave should be sent to act as assistants, residents, and house-surgeons and physicians to our hospitals and schools of medicine, in the same way as our younger graduates who are in training for the highest places in the civil profession. Officers from the services would be cordially welcomed in such institutions, where men of their stamp are continually in demand. There exist, besides, numberless infirmaries throughout the country unconnected with schools of medicine, where most excellent surgery is being daily done, in which they would be received with open arms and welcomed to take a share in the work. It is often most pitiful to see our graduates in the services returning to the schools where they were trained, longing for and acutely feeling the need of such work and practice, who, under existing arrangements, can only hang about for a few days and look wistfully on under every discouragement of their natural aspirations, till they have to turn away, hopeless of obtaining the privilege of mixing among the workers and training themselves in the refined surgery of to-day.

Development of Hospitals.

It is of the most vital importance that the development of military and naval hospitals should at once receive the attention of the authorities. The services can never be what they should until their hospitals and lazarettos, both at home and abroad, are multiplied, improved, and cherished into new life and activity. They should, wherever it can by any possibility be done, be thrown open for the reception of ordinary patients from the civil population, and for the admission of diseases of all kinds. The number of medical officers in charge of or serving in them should be largely increased, and they ought to be provided in them with fully the same opportunities as are enjoyed by their civil brethren. No more deadly injury has ever been done to the medical services than by starving and neglecting their hospitals. They are the heart of the services, and it is necessary that the authorities should be brought to recognise that this is so, and follow the wise example set by foreign nations.

Hospital Ships.

I cannot believe it possible that the medical arrangements on board our ships of war should be permitted to continue in their present state. The succour of the wounded in a naval action is, no doubt, a question of very great difficulty on board ship, and no considerable alteration of the existing distribution of space can be claimed with any hope of its being conceded. But, without going so far as this, it is the duty of the State to provide those who shed their blood in its defence with suitable special accommodation, in as safe a situation as possible; and to see that those in charge of them are furnished with every material, appliance, or instrument that can lessen suffering, or confer an additional chance of saving life. Other Powers are more generous and wise, and a nation depending on its navy as we do cannot be pardoned for such suicidal economy.

New discoveries may possibly some day alter the conditions of naval warfare; but in the meantime it seems unlikely that any great change can take place in the general character of our fleets and warships, and a considerable naval action would certainly at present furnish such a mass of wounded men as might defeat the best efforts of the Naval Medical Service to cope with. The only means of doing so, and one so obvious that it is a marvel our country has not long since adopted it, is to provide every fleet with a certain proportion of fast steamers, without armour or armament, flying the Red Cross flag, fitted up with wards, operation theatres and dressing rooms, anæsthetic, sterilising, and apparatus rooms, officered by a staff of surgeons and attendants, and in every way imitating the arrangements of the best civil hospitals. These should form as essential a part of every squadron as do the bearer companies and field hospitals of an army. Their duty should be to dash to the aid of ships disabled or out of action, or the moment the conflict was over; and, with the help of their trained attendants and the best forms of slings, litters, and barges, remove the wounded to the protection of the Red Cross, and render them the same attentions as those given in like straits to the injured and wounded in the army or in civil life. The cost of such vessels would be small compared with ships of war, and the good they would achieve in great naval engagements, and even in ordinary times, would be unspeakable. I am glad, since this was written, to perceive that the Peace Conference at the Hague has occupied itself with this question, and is endeavouring to secure such vessels being treated as neutrals. But, even if the Conference fail to procure their neutrality, it will not make it the less our duty to provide such vessels in the navy.

Civil Aid a Broken Reed.

It is necessary, also, to make strenuous war on one of the most serious obstacles in the way of obtaining the reforms required for perfecting the services—namely, the tendency on the part of the military authorities to believe that deficiencies in them can, at any time, by the power of money, be compensated by engaging civil aid. No more erroneous idea could possibly exist, as those who are acquainted with its working well know. The civil aid at present employed in various stations throughout the country is of an inferior quality, and could not, even such as it is, be made use of in war to any extent. The medical men who fill these substitutive posts, as well as those who would volunteer to aid in active service, are not the skilled and trained class who could be entrusted with the difficult surgery of gunshot wounds. The urgency of the situation has driven some to suggest that, should need arise, the duty of attending part of the wounded and convalescents could be discharged by existing civil instiurions. This could never be the case to any extent; neither their accommodation nor funds could be made applicable to such purposes, save in the event of a dangerous national crisis. The country and the heads of the services must be brought to recognise voluntary aid, even such as that proposed to be organised by the Central British Red Cross Committee, cannot provide the class of medical officers required, unless that organisation were to be developed at great cost into a second army medical department, which would crush the present one out of existence, without being itself fitted to take its place. The fatal error of imagining that the Army Medical Corps can be supplemented by civil aid is one that has already done infinite harm; it has been made a constant pretext for hindering the due development of the services and producing the defects of which I have spoken, and is a mischievous delusion that cannot be too strongly combated. Were such a proposal made regarding any other scientific department, such as—say—the Royal Engineers, its absurdity would be at once perceived; but so little is the peculiar position of military surgery known to the laity, that it passes as being reasonable among many without, and some even within, the limits of the medical profession. At its best it is but a poor palliative, but can never be a cure.

Fallacies and Facts.

It is conceivable that some may be found, even in the services themselves, who contend that they are not in so unsatisfactory a condition as I have painted. They can point to good work done in them but yesterday, to individuals in them whose admirable labours or brilliant achievements are well known to us all, and to evidence that special institutions or special expeditions are provided with many of the latest appliances for scientific diagnosis, treatment, or research. It would be wrong to deny, or grudgingly and unfreely to admit, these facts; to overlook the enlightened, devoted, and admirable work, or the talents and valour of numbers of our brethren in the services; or to minimise the efforts of those highly placed in them to maintain and elevate their standard. I should be very sorry to seem to do so. But let those who hold that all is well with the services visit the hospitals, depôts, ships, and stations of the army and navy, and see with their own eyes the circumstances under which the sur

geons have to work now, and would have to work in war. Let them contrast their equipment with that of our civil hospitals, even of our minor country infirmaries. Especially let them study the military and naval arrangements of other countries, and realise the full and energetic professional life enjoyed by the medical officers of the best European Powers. They will then find no escape from the conviction that our present system is most seriously at fault, and that, without recognition of this and its timely amendment, our country will have its eyes rudely opened when the strain of war shall arrive, and the test of facts unfolds the lamentable revelation of how unfitted the services are for their great and real work. I have given sufficing reasons why I and many civil surgeons feel unable to agree with those who take a hopeful view of the condition of the services, and have striven to show that there lies before us a struggle of no small magnitude to be gone through ere we can expect to do so.

I trust it is not necessary for me to say that, under what I have stated regarding them, there lurks no hostile undervaluing of the services, or of those who are in their ranks. I have been moved by a sincere respect for them, and regard for their interests, and by the conviction that the present is a suitable time for one in the civil part of the profession to speak boldly what is in the minds of many civil surgeons, and is known to still more who are in the services themselves. "Better are wounds from one who loves than fraudful kisses from an enemy." It has been far from my intention to reflect on the medical officers of the army and navy, numbers of whom are my own intimate and valued friends. Should I seem to have done so in any degree, then:

> Sir, in this audience,
> Let my disclaiming from a purposed evil
> Free me so far in your most generous thoughts,
> That I have shot mine arrow o'er the house
> And hurt my brother.

I know well that though in the services good work gets little reward, and bad work as a rule no punishment, yet in truth there is much good work done and little bad. I have been privileged to witness those in them doing all that men can do under the most discouraging circumstances, where everything seemed to conspire against success, and have admired and wondered how well things were done. The system is at fault, not the men, and no body of men can quite overcome the impossible conditions in which the services are placed, or make bricks without straw.

But I hope my motives will not be misjudged, and that what has been said may contribute in some degree to stir the profession generally, and this powerful Association in particular, to increased efforts to open the eyes of the British nation to the real state of matters, regarding which it is at present blind; so that when the Temple of Janus once more opens in our midst, the services may be found in such a state of preparation and efficiency as is demanded by the honour and well-being of our country and the interests of humanity.

REMARKS

DELIVERED AT THE OPENING OF THE

SECTION OF MEDICINE.

At the Annual Meeting of the British Medical Association at Portsmouth, August, 1899.

By J. MITCHELL BRUCE, M.A., M.D., F.R.C.P.,

President of the Section.

My first duty on taking the chair is to me a very pleasing one—to thank the British Medical Association for the honour which it has conferred upon me in inviting me to be President of the Section of Medicine at the present meeting. I am fully conscious of my unworthiness of this mark of confidence, but with the invaluable assistance of my friends the Vice-Presidents and Secretaries, I will employ my best endeavours to discharge the duties of my office with judgment and impartiality.

Very different views appear to have been entertained of the manner in which the Section should be formally opened. My own interpretation of the unwritten law is that the President in this matter must be guided by circumstances, and the course which I should do wisely to follow on this occasion is to me clear: business first, reflexion after.

In addition to many very valuable papers, we have two important discussions—the one on the Tests for Admission to the Public Services, the other on Tuberculosis—both thoroughly practicable, both inspired by the *genius loci*. With a programme of this importance before us, success is not likely to be achieved by spending precious time on a review of the progress of medicine during the last twelve months, which is better detailed in the pages of the British Medical Journal, nor on speculations on the future of preventive and remedial medicine. The proper occupation of the Section is *work*.

Very few words from me will suffice to introduce you to the business of the next three days in this room. Our place of meeting this year possesses two eminent features. First, Portsmouth is, and has long been, one of the greatest of our naval and military centres, with magnificent dockyard and powerful defences both on land and by sea, and thus in all its relations past and present, material and sentimental, intimately associated with the fleet and the army. The first thought of your Executive, therefore, was of these two great public services; their first desire was to afford our colleagues in the navy and army an opportunity of discussing subjects in which they are specially interested and on which they might speak from experience and with authority. No subject concerns them more intimately, and at the same time all of us as members of the profession and as loyal citizens, than the selection of the *personnel* to which the interests and honour of our country in relation to other States, and our position as one of the great civilising powers, are entrusted. The physical qualifications of all candidates and recruits are determined by them, and they are themselves primarily responsible for the admission of the boys and men whose health and efficiency they have afterwards to preserve. Your Executive have great reason to be gratified with the way in which their plan to discuss the tests for admission into the public services has been received by the Association. Such a discussion, opened by Sir Dyce Duckworth and spoken to by distinguished officers, cannot fail to be a practical success. But, in addition to these attractions, we can promise you that the high level of the discussion will be sustained by many eminent civil authorities at home; by Professor Osler, a worthy representative of our cousins across the Atlantic, who have lately been anxiously concerned with the fitness of their own combatant services, consequent on an acute recrudescence of that Anglo-Saxon disposition to rove and conquer which has always been an endemic trouble in the Old Country; by Dr. Manson, who will give us the benefit of his intimate and well-considered experience of the health of officers in the Far East; by Major W. Turner, of Gibraltar; and by Dr. Wallace and Dr. Sykes, of Southsea, both of whom are in a position to submit to us the conclusions at which they have arrived after the deliberate consideration of this subject during a professional life spent in a community the majority of whom are either beginning, or following, or have retired from naval and military life. Let us hope, also, that the universal importance of the subject may induce some of our Continental colleagues, all of whom have had personal experience of military service, to offer us their views on the proper standards of health and fitness.

In striking contrast with Portsmouth and its endless suggestions of strength, effort, activity, the protection of our ceaseless stream of commerce, and the encouragement to the utmost of our national disposition to colonise and civilise every corner of the globe, is the peaceful island that lies on the other side of the Solent. In it there is climate and every proper provision for those who have earned rest, quiet and retirement, after a laborious and adventurous life, for the delicate, for the infirm, and for that unhappily large class of the community with whom we are most concerned, the victims of diseases of the chest, particularly tuberculosis. The Isle of Wight and the coast region of the south of Hampshire and Dorset, with Netley, Southampton, the New Forest, Milford-on-Sea, Southbourne, Bournemouth, Swanage, and Weymouth, are the types of English winter quarters for the phthisical, vieing in this respect with the health resorts of Devon and Cornwall on the west, and of Sussex and Kent on the east. In this extensive region there have settled many distinguished

members of our Association, who devote themselves mainly or entirely to the study and treatment of tuberculosis, and to whom we who live and work elsewhere commit a considerable proportion of our chest patients every winter. Naturally, the second direction in which the officers of this Section turned for a subject of useful discussion was tuberculosis; and, indeed, the extraordinary interest being manifested at present in the treatment of this disease of itself justifies the choice. And inasmuch as we have now departed from earlier empirical methods of dealing with a matter of this kind, now that we have a firm basis of etiological and pathological facts on which to work, we resolved not to confine ourselves in this discussion to the bare question of treatment, but to include prevention also; and we thought it wise to ask that distinguished master of medicine, Professor Allbutt, to introduce the subject with an essay which we felt would be characterised by his accustomed breadth and at the same time penetration of view, as well as by the felicity of thought and expression which have made so many of his addresses and writings instructive, suggestive, and fruitful even beyond their immediate exposition of the facts on which they were based. I repeat that we expect great things from this discussion. It may be somewhat premature to inquire what the results are of the open-air treatment of tuberculosis, at any rate in this country; but I am confident that we shall undertake the discussion with the enthusiasm which is begotten of the consciousness of rapidly-increasing knowledge and of growing hope, and that in the hands of men like Sir William Broadbent, Sir Richard Douglas Powell, Sir William Gairdner, Dr. Ransome, Dr. Theodore Williams, and other distinguished members whom I need not name, the discussion will be continued on a high level and prove a genuine practical success.

Gentlemen, if the result of our work in this Section be, on the one hand, to improve in any degree the quality and efficiency of the public services, on which the glory, prosperity, and, indeed, the continued existence and beneficent influence of our country among the nations so much depend; and, on the other hand, to reduce the misery and waste wrought by tuberculosis in our entire population, civil as well as official, I think we shall be able to congratulate ourselves on time profitably as well as pleasantly spent. I look forward with confidence to the outcome of the labours of these three days.

AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF SURGERY.

At the Annual Meeting of the British Medical Association, at Portsmouth, August, 1899.

BY H. T. BUTLIN, F.R.C.S., D.C.L.,

Surgeon to St. Bartholomew's Hospital; President of the Section.

THE WORK OF THE SECTION.

I SHALL only so far exercise the privilege which the President has of delivering an introductory address as to occupy your time for a few minutes with reference to the work which lies before us. There is so much material in the hands of our Secretaries that a long address would be scarcely justifiable.

The object of such a meeting as ours is to afford opportunity for the exhibition and discussion of new material; the interchange of ideas; the consideration of subjects with respect to which there is diversity of opinion, and the like. But, in addition, the mere meeting of men who are not often brought in contact is in itself a great advantage, and reference has been made to the benefit which is derived from it on more than one occasion.

At Portsmouth we are peculiarly fortunate in this respect. For over and above medical men and medical women from all parts of the United Kingdom and the Colonies we have here a large number of naval and military medical officers, many of whom are distinguished in their respective services. The meetings of the Association are rarely graced by the presence of so large a number of them, as we have every reason to expect to see this week.

We trust they will take an active part in the business of the Section, for we hope to learn many things from them of which a long experience has made them masters, and which we only know, as it were, by reflection. But to ensure their active co-operation we have arranged that the introduction of each of the two discussions shall be delivered by our naval and military colleagues, and we have taken care that the subjects shall be of peculiar interest to the shipmen and the soldiers.

At the same time, we have been careful to select subjects which are of sufficiently wide interest to attract civil as well as fighting medical men. For instance, gunshot wounds of the abdomen have been studied by surgeons who are not attached either to the navy or the army. Of late years the use of firearms in civil life has increased alarmingly. If a young man has a grudge against his fellow-workman he buys a pistol and shoots him; if a youth quarrels with a maiden he shoots her, sometimes fatally: then turns the weapon against himself, but rarely with such success that he blows out the little brains he has. The statistical tables of my hospital (St. Bartholomew's) illustrate in a remarkable manner the increase in the number of wounds due to firearms. In the Seventies and early Eighties we used to have an average of about three cases in a year. For some years past we have had an average of eleven or twelve cases every year. And during last year I had under my own care four patients with bullet wounds of the chest, whose cases have been put together by my former house-surgeons for our Surgical Section. At this rate we may hope by-and-by to become as cunning in the diagnosis and treatment of gunshot wounds as our naval and military brethren. I do not know whether there is any essential difference in the character of gunshot wounds in civil and in military practice, provided the weapon is the same in both instances. But I suppose it rarely is the same. Some of the pistols used are very good, but some of them are little better than toys. The moral effect on the patient is, however, much the same whether the weapon be good or bad. If he is shot point-blank and from a short distance, he is horribly frightened, and fully expects to die. He cannot believe escape is possible, so that we have to deal with a mental distress much greater than that from which the soldier suffers from a wound which may or may not be dangerous in itself. I was called down to the hospital one evening to see two young men who had been shot, each in the chest, and at very close quarters. One of them appeared seriously injured, and was very ill for several days. He breathed with difficulty, and made no outcry, but the other bewailed his fate in loud groans, and as the bullet had struck him full in the chest, and the assassin was only about 4 feet distant from him, he fully believed his time was come. My class was disposed to take a similar view, but when I came to examine him, I discovered that he presented no sign of serious injury, and was not in the least likely to die. The prognosis of rapid recovery was fully borne out, and at this day he is as sound as he ever was. The civil mind can scarcely believe in such good fortune.

The other subject for discussion seems at the first sight to belong almost wholly to the navy and the army. Indeed, it is worded as if it were intended to be of exclusive interest. But this is only apparent, and those who look closely into the matter will see that it is of almost greater interest to non-military than to military persons.

The number of men suffering from venereal diseases in certain sections of the army is enormous. To give an example, the ratio per 1,000 of soldiers in India "constantly sick" of venereal disease during the year 1897 was 39.41; in the West Indies during the same year it was 35.56; and in the United Kingdom it was nearly 12 per 1,000. Fevers, agues, and even local injuries are trivial disabling agencies compared with syphilis and gonorrhœa. No wonder the Legislature is concerned at such a frightful record of daily sickness and disability. No wonder the subject for the next Parkes Memorial Prize is "Venereal Diseases in the British and Indian Armies—their Prevalence and Prevention."

Unhappily the mischief does not end in the mere sickness of the soldier during his period of service. The treatment of syphilis, particularly, is very inefficient, and there is no machinery for prolonged continuous treatment which might effect a permanent cure of the disease. The consequence is

that every year a vast number of soldiers and sailors suffering from syphilis are let loose upon the community, and convey the disease to women, and, through them, to children; so that, what with the probability of future outbreaks of syphilis in the men themselves, and the infection of women and children, there can be no question that the health of a considerable portion of the community is seriously impaired, both at present and for the future. The prevention and treatment of syphilis in the navy and army is, then, a subject in which our profession as a body is very deeply interested.

So much for the discussions. A perusal of the list of separate papers shows how wide a ground they cover, and their titles bear the promise of rich fruit. Eight of them deal with malignant disease, either in general or of some special part of the body; and they are the work of medical men in various parts of the country, which shows the interest which is taken at the present moment in the dread subject of cancer. I am sorry not to see the names of a greater number of naval and military men in the list of authors; but I have no doubt they will join in the discussion of the papers.

Finally, the *x* ray department is under the charge of Dr. Mackenzie Davidson and Dr. Hugh Walsham. Dr. Walsham has devoted attention to the use of the *x* rays in affections of the lungs; and Dr. Mackenzie Davidson is well known for the skill with which he has been able to localise objects embedded in various parts of the body, so that we are confident that the department will be a great success in their hands. The more so as we expect, also, to see what has been accomplished by our military colleagues in the course of active service.

AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF STATE MEDICINE.

At the Annual Meeting of the British Medical Association, at Portsmouth, August, 1899.

By GEORGE WILSON, M.A., M.D., LL.D.,
M.O.H. Mid-Warwick District.

After some preliminary remarks, Dr. Wilson proceeded to say: In the brief interval at my disposal there is no subject on which I desire to speak out with more direct frankness and sincerity than the relations of bacteriological research and methods of treatment to preventive medicine. And at the outset, I may be permitted to say that ever since the great Pasteur announced the results of his prophylactic inoculations with respect more especially to fowl cholera and anthrax, I have been a close, and I hope unbiassed, student of bacteriological literature. I may say, too, that my attitude towards these newer methods of treatment was at first one of expectancy, though I could never see that there was any legitimate analogy between them and Jenner's great discovery, on which they are admittedly based, and the more I have studied them the more firmly I feel convinced that they are based on errors, and are the outcome of illogical inductions, every one of them. That, you will say, is a very strong statement to make, but after all these long years of flickering hope, I am prepared to contend that the indiscriminate maiming and slaughter of animal life with which these bacteriological methods of research and experimentation have been inseparably associated cannot be proved to have saved one single human life, or lessened in any appreciable degree the load of human suffering. I have ventured to make that pronouncement before, but in halting academic fashion; I reiterate it here and now with the strongest and fullest conviction. In order to make my contention as clear as possible, let me refer for a moment to the doctrine of immunity as illustrated by small-pox and vaccination.

We know there are certain infectious diseases one attack of which protects, as a rule, against any future attack, and that of all diseases this can be more emphatically said of small-pox than of any other. That was why inoculation was practised for a time and was successful so far as the individual was concerned. The person inoculated suffered from the disease because he was inoculated with the actual *materies morbi*, but he ran the risk of suffering from perhaps a very severe attack and became a centre of infection unless he was isolated. Now Jenner's happy induction was this: he knew that it was common talk that milkers who suffered from sores on their hands which they contracted from the vesicles on the teats of cows infected with cow-pox were protected against small-pox. He therefore concluded that if he inoculated with the matter contained in the vesicles of cow-pox instead of with small-pox matter he might be able to confer immunity against small-pox. He tried the experiment and tested it over and over again, and not only so, but by using the matter from the vesicle produced by vaccination he made the further discovery that he could confer immunity from small-pox by vaccinating from person to person—that is, by arm-to-arm vaccination in continuous series with this matter which had been originally obtained from the vesicles of vaccinia or cow-pox. He thus made it clear that cow-pox or vaccinia was a modified form of small-pox, and as we all know, the experiment, though not an easy one, has been tried successfully and repeatedly to produce cow-pox in the cow or calf by inoculating the animal with the virus of small-pox. Vaccination, therefore, induces vaccinia, and vaccinia protects against small-pox because it is a modified form of the disease. Unlike small-pox itself, it does not confer absolute immunity as Jenner imagined it would. It only confers a modified degree of protection against small-pox, because vaccinia is only a modified form of the disease itself by transmission of the virus through the cow or calf. And yet the protection afforded by successful primary vaccination is of such value that the successfully vaccinated in infancy are, as a rule, completely protected up to the age of 10 or 12, and are always made more or less immune through their whole life time, so that if they do become infected the disease manifests itself in a mild or modified form. But in order to confer complete protection primary vaccination must be supplemented by revaccination.

Now, gentlemen, however much you may dissent from my first statement, I feel sure I can claim, I may almost say, universal agreement with this very rudimentary statement concerning small-pox and vaccination. But it has been admitted by Pasteur, Koch, and all of their followers, that their methods of prophylaxis and cure are based on Jenner's happy inductive inspiration. Let me now further clear the way by a few other comparisons. In the first place, bacteriologists have failed to discover any pathogenic microbe either of small-pox or vaccinia which they can isolate with certainty, and I venture to predict that they never will discover any which they can label and cultivate as the *causa causans* of either disease. The few pathogenic microbes which bacteriologists have discovered associated with human disease, and which they can isolate and cultivate, are those of tuberculosis, diphtheria, enteric fever, cholera, and plague; but all these are found associated with necrosed tissues, and it is open to argument whether, instead of being labelled the unconditioned *causæ* of these respective diseases, they may not be performing a benign function in changing the necrosed tissues into harmless products, just as various kinds of micro-organisms are necessary to change filth and all dead organic matter into harmless matter. No specific organism has been discovered in respect to scarlatina, whooping-cough, measles, or typhus fever; and, even granting the spirilla of continued fever, and the micro-organisms of influenza they cannot be isolated and cultivated. Then again, vaccine lymph must be taken from the vesicle at a certain stage of development. It is cultivated, and can only be cultivated in the living body. When successfully used, as in vaccination, it is followed by manifestations of a definite disease known as vaccinia, with a well-defined incubation period, and well defined and characteristic symptoms—a varying amount of pyrexia, tumefaction at the point of vaccination—the vesicular stage, and the pustular stage.

Let me now go a step further, and institute comparisons with the so-called results of serumtherapeutics. We know that a successfully vaccinated cow or calf is made immune. We can therefore use the serum of a perfectly immune animal, but on reading all the experiments in this direction, as summarised by Dr. Copeman in his admirable work on vaccination, the serum of an immunised animal confers at the utmost only a doubtful and short-lived immunity, so doubtful as to

be discarded altogether, and as a cure for small-pox it is of still more questionable efficacy.

On all these grounds, gentlemen, I boldly reiterate my statement that there is no legitimate analogy between Jenner's great discovery and these newer methods of prophylaxis or cure which are based on that discovery. And in passing I wish to say that there has never been a more deplorable travesty of a great name than to designate the Institute of Preventive Medicine the Jenner Institute. Jenner's experimental altar was no sacrificial altar, but anyone who has studied the recent widespread antagonism against vaccination can see that one of the most potent of them has been the rush of the younger men in the profession to use these antitoxin serums. The medical profession—though I may say they believe to a man in vaccination and revaccination as a full and complete protection against small-pox—are largely to blame for this revolt; and I boldly say that there should be some pause in these ruthless lines of experimentation to take a calm and candid review of the whole position of bacteriological methods in the prevention or cure of human disease. I have not allied myself to the antivivisectionists, but I accuse my profession of misleading the public as to the cruelties and horrors which are perpetrated on animal life. When it is stated that the actual pain involved in these experiments is commonly of the most trifling description, there is a *suppressio veri* of the most palpable kind, which could only be accounted for at the time by ignorance of the actual facts. I admit that in the mere operation of injecting a virus, whether cultivated or not, there may be little or no pain, but the cruelty does not lie in the operation itself, which is permitted to be performed without anæsthetics, but in the after-effects. Whether so-called toxins are injected under the skin, into the peritoneum, into the cranium under the dura mater, into the pleural cavity, into the veins, eyes, or other organs—and all these methods are ruthlessly practised—there is the long-drawn-out agony. The animal so innocently operated on may have to live days, weeks, or months, with no anæsthetic to assuage its sufferings, and nothing but death to relieve.

And what triumphs has bacteriology achieved in stemming the tide of human disease on these empirical lines? Pasteur's antirabic vaccination is, I believe—and others with me—a delusion. Koch's tuberculin cure for phthisis has long since been labelled as worse than worthless. As a test even for bovine tuberculosis tuberculin possesses only a secondary and not a specific value. The much-vaunted antitoxin cure for diphtheria does not command the universal approval of even the physicians of the metropolitan fever hospitals. Just because tetanic antitoxin serum has failed when used subcutaneously, medical men have felt justified in deliberately trephining patients and injecting it into the brain substance, and one medical man has had the courage to confess, after making a *post-mortem* examination of his patient, that such treatment can no longer be justified. The serums used for the treatment of other diseases—such as the pneumococcic serum, the serum used for puerperal fever (the serum which was so much vaunted as another great discovery), Sanarelli's serum for the cure of yellow fever—are all of them allowed to slip into the lap of forgetfulness. I know these statements of mine will not command assent, but I have no axe of my own to grind except the clean-cut edge of truth, which I admit even bacteriologists are striving empirically to sharpen. I accuse none of want of good faith, but I think I can see—and will strive to make others see—that in the protection afforded by vaccination against small-pox, Nature gives no authority or warranty for these reckless experiments. The bacteriologists so dominate the public press that we almost seem to live in a bacillus-stricken world.

And, so far as preventive medicine is concerned, bacteriology has rather led us on false lines in assuming that the pathogenic microbe of any disease is the *causa causans* of that disease. I venture to say that the unconditioned microbe need have no terrors for humanity. We know that there are certain diseases which are notoriously infectious, therefore we isolate. We know that there are others which breed on filth, therefore we say be clean, and insist on cleanliness of house and home, of the water we drink, the food we eat, or the air we breathe.

Bacteriology has assisted, and largely assisted, preventive efforts at disinfection, isolation, and so on, but it can never confer immunity against disease except by using minimal doses of the virus of that disease, and that virus I say to be effectual can only be cultivated and bred in the living body, not cultivated artificially in organic media. I do not hesitate to designate the whole list of therapeutic serums as the materia medica of septic therapeutics. We talk of aseptic surgery, and we begin to know something of its absurd ritual when it is gravely advanced that even masks are to be worn on the face because the beard of the surgeon may harbour pathogenic germs. Hahnemann was denounced for his absurd doctrine of *similia similibus curantur*. We are all accepting it now on these utterly empirical lines, and institute a crusade against tuberculosis as if the tuberculosis bacillus was the sole *causa causans* of the disease.

I say that we can only fight phthisis on the old lines, by improving heritage when that is possible, by improving the homes and conditions of life and labour, which are always possible, and always call loudly for interference. But this insane hunt after the tubercle bacillus, as if it could be bottled up in twopenny-halfpenny spittoons and got rid of, is the insanest crusade ever instituted on illogical lines. Bacteriologists are not sure of their tuberculosis bacillus, and it is a moot question whether the bacillus which is found in milk, and which is labelled as the tubercle bacillus, is not a cow-dung bacillus. A distinguished bacteriologist has admitted it; I venture to reiterate it.

Institute sanatoria all over the country by all means—people will flock to them who can pay, but so far as public bodies are concerned, the guardians of the insane and the poor—I say this and deliberately—your asylums are full of these phthisical patients, your huge workhouses are full of them. Begin by experimenting on them, and do not declaim all over the country that this crusade, because it has been patronised, and rightly patronised, by Royalty is to seize hold of the national mind. It looks to me as if we were returning to the days when the king's touch was regarded as the cure for the king's evil, and when all sorts of decoctions were the prized cures for human infirmities.

The physician can never cure; he can only direct and assist Nature in eliminating the *materies morbi*, whatever it may be.

In my student days I was taught that there was such an influence, such a *vis* as the *vis medicatrix Naturæ*. That appears to be no longer recognised as of any efficacy, and now when a patient does not die or survive bacteriological treatment, he is claimed as an instance of cure. For years back the papers have been flooded with these isolated mythical cures, and I am told that the consensus of the medical profession is against me; but I console myself with the reflection that medical opinion in these days means only the opinion of bacteriologists, who are, I admit, our smartest men, win our research scholarships, and imbibe their creeds on the Continent; and so they return and become our teachers; but the whole of bacteriological theory and practice is steeped with commercial interests.

Behring has patented his diphtheria antitoxic serum on the Continent; Koch for years has made a princely royalty out of his tuberculin. Little Denmark has boomed her butter trade through tuberculin, and we in this country, it seems to me, cannot accept the gospel of prevention and cure except as it is preached in Paris, Berlin, Vienna, Lille, or other Continental schools. As President of this Section I regret to have to be so much out of harmony with so many of my fellow-workers; indeed, I feel almost apologetic, but I hope you will give me credit for honest convictions, which I myself will always strive to concede to those who cannot help teaching what they have taken so much pains to learn. In addition to the pathogenic microbe, there are always other conditions—conditions of soil and circumstances—without which the microbe is powerless. With these conditions we can always deal more or less effectually, and our most successful efforts must always remain based on these lines.

Yellow Fever in Santiago.—General Wood has officially announced that the epidemic of yellow fever at Santiago, which caused a good deal of alarm, is at an end. He has, however, ordered the troops to be kept in the mountains till the end of the rainy season in November.

AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF TROPICAL DISEASES.

At the Annual Meeting of the British Medical Association at Portsmouth, August, 1899.

By GEORGE THIN, M.D.,

President of the Section.

THE ETIOLOGY OF MALARIAL FEVER.

The programme which has been arranged for our Section is ample enough to have justified the suppression of the usual introductory address; and if I had consulted my own wishes I should have invited you to begin without delay the important work that is before us. But there are exceptional circumstances which lead me to think that some introductory remarks may be useful.

The Mosquito Theory.

At the last meeting of this Association, when the Section for Tropical Diseases was constituted, your distinguished first President was privileged to make to you the announcement of a discovery of the first importance. Major Ross, after several years' laborious work, guided by scientific instincts of a high order, and characterised by a tenacity and strength worthy to be put in comparison with the best feats—and that is not saying little—of other eminent Scotchmen whose names are indissolubly bound up with the history of our Indian Empire, succeeded in finding the key to a problem which had long puzzled the ablest and most careful students of the etiology of malarial fevers. The coincidence of the fever season in malarial countries with the period of activity of mosquito life, the danger of exposure to night air, night being the time when mosquitos most actively bite, had long struck observers. I find, from an admirable summary by Dr. Nuttall, published in the twenty-fifth volume of the *Centralblatt für Bakteriologie*, that the causation of malarial fever by insects was referred to by Nott in 1848 at New Orleans as something already known, whilst in 1883 Dr. King published in America an excellent exposition of the mosquito theory. This theory was again suggested by Laveran in 1891, and also by Flügge in the same year. In 1892 Pfeiffer, in a paper on the Coccidium of the Rabbit, in which he showed that this parasite is capable of two different cycles of development, one being exogenous, mentions that Koch had suggested that a similar condition might hold good for the parasite of malaria, and that exogenous malarial spores might be conveyed to man through the agency of blood-sucking insects such as mosquitos.

The Work of Manson and Ross.

In 1894 Dr. Manson, in his Goulstonian Lectures, brought this problem prominently before medical men in this country, and urged that a mosquito theory was best calculated to explain the various conditions of the problem. His suggestion was that, similarly to what takes place in the case of filaria Bancrofti, in connection with which his own work is so well known and appreciated, the female mosquito fills herself with infected blood, lays her eggs some days later, and dies beside them. The water then becomes contaminated with the spores of the parasite of malaria, through which they might be taken into the human body, or they might be breathed in the dust of dried-up pools, or the larvæ coming out of the eggs might eat them with the body of the mother; or the ground might become infected by mosquitos containing the parasite falling and dying on it. I take this brief summary from Nuttall's paper. (Dr. Manson, who is happily with us, will, I hope, in one of our discussions, give us his latest views on this important subject). King, Laveran, Bignami, Mendini, and Koch, on the other hand, considered that the infection is conveyed by the direct bite of the mosquito.

So far we have been dealing with theories, more or less suggested and justified by reasoning from recognised facts, but no direct proof had been forthcoming: whilst, on the other hand, there were conditions which seemed to render a mosquito theory improbable. It was well known that mosquitos might prevail in abundance in localities in which no malarial fever occurred. It was pointed out to me, for example, during a visit I paid to Sicily a few years ago, that a very narrow line separated the fever from the fever-free zone, whilst mosquitos prevailed equally in both, and some distinguished physicians, of great experience in the climate and in malaria, to whom I spoke of Ross's earlier work and the importance it seemed to me to have, found these objections insuperable. Ross's discoveries at once and for ever removed these objections. From the time that he showed that to inoculate sparrows with proteosoma by the medium of the mosquito a special mosquito was necessary, it was evident that the next thing to do was to discover whether some particular genus or species of mosquito was the host of the parasite of malaria. Already in August, 1897, Ross when examining two "dappled-winged" mosquitos which had been fed on a patient who had crescents in his blood had found in the middle intestine certain round bodies which contained malarial pigment and which he rightly regarded as a development of the parasite.[1]

I had hoped that we should have had the gratification of hearing from Major Ross's own lips the account of the interesting story of how, inspired and encouraged by Dr. Manson's advice and experience, he undertook the solution of the malarial problem, and finally succeeded in removing what had previously been only theory to the domain of ascertained fact; but, as you know, he has left on an expedition to the West Coast of Africa to continue his researches, and I need hardly say with what expectation we look forward to the results of his work in that fever-stricken land.

The Work of the Italian Investigators.

Major Ross's investigations in India have been too recently described in the pages of the British Medical Journal to make it necessary for me to refer to them further. I shall now, therefore, proceed to give a brief exposition of what has been done during the past year by Grassi, Bignami, and Bastianelli in Rome, the result of whose labours has been to throw much light on many of the conditions that regulate the propagation of human malaria by the agency of mosquitos.

Whilst Ross was working in Calcutta with proteosoma, the probable connection between mosquitos and malaria was being studied from another side by the distinguished Italian naturalist Grassi. During the summer of 1898 he made an exhaustive study of the mosquitos that prevail in different parts of Italy, and he found that there were many places where culex pipiens, the predominating mosquito, was common, but in which there was no indigenous malaria; whilst in places where malaria occurs he found a large mosquito, called by zoologists anopheles claviger. This species, characterised by four spots on the wings arranged like a capital T, may, he says, be defined as the true talebearer of the presence of malaria. He has mentioned a number of malarial places in Italy in which this holds good, and he refers to malarial zones existing in the midst of non-malarial districts. In these zones he found anopheles claviger, but in the surrounding free zones the mosquitos were of other genera. At one part where he found tertian ague very prevalent he found this mosquito enormously diffused, and he associated it with the fever. He finally came to the conclusion that in connection with malaria in Italy all mosquitos may be excluded except three species, the characteristic marks and habits of which he has described at length. Anopheles claviger, to which fever could be most clearly traced, bites sometimes during the day and night, but mostly half an hour before and half an hour after sunset.

The Experimental Proof.

Such was the condition of our knowledge of this subject when Bignami first succeeded in getting positive results which supported his theory of the direct inoculation of malaria by mosquito bites. His first experiments, in which a number of adult mosquitos were brought from a malarial station and set free in a suitable room in Rome, were made in 1894. The result was negative. Another series of experiments was begun early in 1898, and again had a negative result. A second experiment in that year, which was begun on August 24th, also had a negative result; but at the end of September Grassi's observations showing that malaria in Italy was associated with the prevalence of particular mosquitos, and Ross's papers showing that a special mosquito

was needed as the host of the proteosoma of the sparrow were published, and at once suggested to Bignami the course which he had to take. The same man who had voluntarily submitted himself to the experiment in August, and in which the results were negative, again submitted himself to experiment. Bignami gives an account of the history of this man, which shows that he had never been exposed to the chances of malarial infection. Guided by Grassi's information, mosquitos were first brought on October 10th from Maccarese, where fever prevailed, and were identified by Grassi as culex penicillaris, culex malariæ, and anopheles. The experiment begun on September 26th was suspended on October 3rd for want of mosquitos, and was resumed on the 10th to the 14th with new supplies. On the 23rd a new but scanty supply was again got. During the last days of October the subject of the experiment began to suffer from symptoms of fever, which developed in an unmistakable manner on November 1st, and was cured on November 3rd by hypodermic injections of quinine. By November 7th the patient was perfectly free from fever, and rapidly regained his appetite and strength. On November 2nd the blood carefully examined gave a negative result. On the 3rd a few young ring-shaped parasites, moving or discoid, without pigment, with characteristic appearances of the summer-autumn parasites, were found, increasing in the course of the day and being very numerous in the afternoon, when very fine granules of pigment were found on the edge. Dried and stained preparations showed the characteristic appearances of the parasite. In the district in Rome in which the experiment was carried out there had not been a case of spontaneous fever within the memory of medical men, the centre of Rome being absolutely free from fever. The type of fever was that which prevailed at Maccarese, from whence the mosquitos were brought.

This result has since been amply confirmed by further experiments by Bignami and Bastianelli, and it has now been conclusively shown that anopheles may be made to bite a man suffering from malarial fever, and if then kept at a proper temperature (30° C.) for the requisite number of days to allow the sporozoites to be present in the salivary glands, and then made to bite a healthy man who is free from malarial fever, this man will, after the regular incubation period, develop malaria; and it is important to note that the parasite so conveyed from man to man through the mosquito retains its specific type. If the source of supply gives in the first instance crescents, the mosquito conveys to the healthy man the corresponding fever of the summer-autumn type. They have also shown by microscopical examination that in the different stages of development in the body of the mosquito the crescents and tertian parasites retain their distinguishing characteristics. It further results from their experiments that a very few bites are sufficient to convey fever; probably a single one sufficing. What is important is the species of mosquito and the stage of development of the parasite in its body. They infer that in the course of the winter the parasites in anopheles die out, and that infection is conveyed in the spring by the insects biting persons who suffer from relapses of fever from the previous season, and then biting healthy persons after the sporozoites have developed.

The Parasite and the Host.

Grassi, Bignami and Bastianelli have made a series of observations and experiments on the development of the parasite in the body of anopheles, and have collected much valuable information regarding the habits and life history of that insect. The development of the parasite of malaria in the body of anopheles seems to be identical with the development of the proteosoma in the "grey mosquito" of Ross. If the mosquitos are placed in a temperature of 14° or 15° C. after they bite, no development takes place. Development takes place at 20° to 22° C., but more slowly than at 30° C. The observations which they record refer to cultivations at the latter temperature. They have found that in order that crescents should develop in anopheles it is necessary that they should be ripe. For the first 40 hours the crescents are still mostly fusiform in shape, being almost identical with those observed in fresh preparations, except that they are larger and the pigment is differently disposed. In preparations stained at this stage a large nucleus, with a mass of central rounded or elongated chromatin, is observed, and the protoplasm is already vacuolated. After four days the parasites have become larger, the vacuoles more distinct, and the pigment less in quantity and scattered. After six days the parasites are very large, and are seen in the thickness of the middle intestine bulging into the body cavity, from which they are separated by the external coat of the middle intestine. Some of them seem to have slight enlargements, and a great number of small bodies can be distinguished in them, consisting of a minute portion of nuclear substance around which there is a small quantity of protoplasm. These sporoblasts become so many sporozoites. There are, in addition, to be observed shining corpuscular elements of a fatty appearance which could partly be seen in earlier stages. After seven days the parasite contains an enormous number of filaments disposed radially around several centres. These delicate filaments (sporozoites or mastigopods) are 14 micromillimetres long. In some individuals a clear homogeneous mass is to be distinctly observed; in some two or three such masses can be seen; in others none are visible. Pigment still exists, and is found in the clear masses. From the parasite the delicate filaments escape through the burst capsule into the body cavity.

On the following days there are the burst capsules still found adherent to the intestine, and near them the sporozoites. These spread through the body cavity, and at a later stage are found accumulated in great numbers in the tubes of the salivary glands, either in the cells or in the duct. In this stage the capsules or the remains of them may still be found in the intestine, but in some mosquitos the remains of them are no longer to be seen. In the capsules and in the salivary glands the sporozoites were immobile, but in one case they saw them moving.

The process is the same as that observed and described by Ross in the proteosoma of the grey mosquito, and is common in many sporozoa. It consists essentially of increase of volume, accompanied by capsulation, which ends on the sixth day by division of the cell contents into very numerous small nuclei around which a little protoplasm is arranged, leaving a *nucleus de reliquat*.

In tertian fevers it is the mature non-sporulating forms which develop in anopheles, the body of the parasite being paler, less refractive, and a little larger at the same stage of development, as compared with the crescent. The pigment is less in quantity and finer. The first phases of life in the intestine of the mosquito thus show a distinction between the crescent and tertian. The full-grown capsulated parasite is about 70 micromillimetres in size.

In rare cases in anopheles taken from malarial houses and from stables, they found in the developing parasite bodies of a varied form and length—some sausage-shaped, longer than a sporozoite, and with swellings, others about half the measure of a sporozoite, ovoid, straight, or curved. These bodies have a strong membrane of a yellowish brown colour, and contain a body comparable to a sporozoite, particularly conspicuous in the shorter forms. The various stages of the development of the membrane can be followed. They are found in the midst of granular masses, which may or may not be capsulated, and are evidently analogous to spores which are found in other sporozoa, but they have not yet been able to trace their development. These bodies are of a similar nature to the "black spores" described by Major Ross.

Bignami and Bastianelli describe minutely the mode in which the parasites of tertian fever in developing in anopheles can be divided into two kinds, a smaller, *mikrogamete*, containing the male element, and a larger, *makrogamete*, containing the female element. Although no one has yet seen the entrance of a flagellum into a *makrogamete*, nor has followed the first consecutive nuclear modifications, they believe that the sporozoon which develops in anopheles is the fertilised *makrogamete zygote*. This view is based on structural resemblances to allied sporozoa in which sexual phenomena have been observed.

The Italian observers describe some other appearances which, as observations of this nature are sure to be extensively carried out in many parts of the world, it may be useful to describe. In specimens of anopheles which have bitten malarial persons for some time, there are frequently found in the salivary glands cells which, instead of being purely hyaline, contain the following appearances. Sometimes the

whole cell is filled with minute bodies apparently rounded or slightly elongated, massed in heaps. In other cells they occupy only the centre part. Sometimes in a tube only a few cells are found containing these bodies, but more frequently one or more of these tubes are full of them. If the gland is ruptured these fusiform bodies escape. They are much shorter than a sporozoite, are finer, and are furnished with what resembles a nucleus. In some cases they find in the same cell in the midst of these bodies filaments which can be easily recognised as ordinary sporozoites which come from the capsules contained in the body cavity. They were at first disposed to consider these bodies to be a retrograde process in sporozoites which had not been expelled from the salivary glands, but in a later paper they describe that they found similar appearances in the salivary glands of newly-hatched specimens of anopheles, and that they can be referred with certainty to a process of secretion of the glandular cells and partly to the result of the method of preparation of the specimens. In addition to the bodies that have been described they have found surrounding the intestine and the dorsal vessel tubular or jar-shaped masses of spores which apparently belong to sporozoa. Usually a certain number of them have a yellowish-brown colour which resembles that of the yellowish-brown bodies which have an undoubted relation to malaria, and the various stages of the formation of the dark membrane can be followed. After many examinations, in which they never found that they were derived from the parasite of malaria, they now believe that these are parasites *per se*, and are not parasites of malaria.

They had previously described in the developing eggs of some mosquitos numerous bodies which they thought might be interpreted as the spores of the human hæmatozoa, but as after further study they had not been able to meet with any intermediate stage connecting the parasite of malaria with the spores with eight sporozoites which they had discovered in the eggs, they consider that these also represent an independent parasite.

The discoveries of Kilburn and Smith, by which it was shown that the hæmatozoon which causes the Texas fever of cattle is transmitted from the tick, which is its temporary host, to a second generation of ticks, by which it is again conveyed to cattle—the resemblance between the hæmatozoon of Texas fever and the human malarial parasite being so great that the proof that the one was conveyed by an insect was considered almost a proof that human malaria must be similarly conveyed, even before it had been demonstrated that it is so—rendered it necessary to investigate whether in anopheles also the parasite is transmitted from parent to offspring. The Italian observers have, therefore, made a diligent examination of this question. They cultivated the larvæ of anopheles taken from houses that were infected with malaria, and when the new generation of winged insects was developed they allowed them to bite healthy people. So far these experiments have turned out negative. At the Hospital Santo Spirito a person who had never had malaria exposed himself voluntarily to the bites of newborn anopheles. He was bitten from March 30th to April 20th by numerous insects of this species, which were developed in a room in the hospital. He has nevertheless continued to enjoy good health. In the Laboratory of Comparative Anatomy, Professor Grassi and five persons belonging to the laboratory exposed themselves to the bites from numerous anopheles developed in the laboratory from larvæ or nymphs taken at many parts of the Campana, from places near dwellings in which malaria had run riot. The first bites dated from April 10th. These five persons continued to allow themselves to be bitten daily without one of them becoming infected with malaria. So far (up to May 7th) all these experiments had been negative, and up to that date only those anopheles that had bitten human beings suffering from malaria had been shown to be capable of propagating the disease.

There is a strong presumption that the yellowish-brown spores found in anopheles infected by human malaria are equivalent to the black spores described by Ross in the grey mosquitos which have bitten birds infected with proteosoma, and that they are the first stage of a phase of existence of the hæmatozoon which has not yet been discovered. Their strong membrane suggests a capacity to resist external agents, and it is natural to suppose that they might be destined to infect the offspring of mosquitos or man direct through drinking water. The harmlessness of the bites of young anopheles appears to show that they do not affect the offspring, and other experiments indicate that they do not cause malaria through drinking water. One of the experimenters has swallowed a great many of these bodies at various times without any bad effects. These negative results have raised the question in their minds as to whether it may not be possible after all that these black bodies may be degenerating forms, an idea which seems to be strengthened by their irregular forms and size and their stratified appearance.

Anopheles Claviger: Its Habits.

It will be seen from what I have related of the experiments of the Italian observers that the habits of anopheles claviger are matters of enormous importance to the human race, and it is interesting to know that these insects pass the winter in human habitations, and that during this period their habits of migration are so much in abeyance that, although the anopheles in the dwelling-houses are found charged with human blood and contain the hæmatozoa of malaria, those in the adjoining stables and henhouses do not contain the parasite. This has, of course, an important bearing on the question of prophylaxis—a wide question about which you will probably hear more in the course of the discussion, which is to be introduced by Dr. Nuttall in the absence of Major Ross.

Anopheles: Species.

In order to understand the bearing of Grassi's investigations, it is necessary to bear in mind that the family of European Culicidæ can be divided according to Ficalbi into three genera based on the following characters. The first anopheles (*ἀνοφελής, hurtful*), has the palpi in both sexes about the same length as the proboscis; the second, culex, the palpi about the same length as the proboscis in the male only, in the female much shorter; the third, aëdes, the palpi in both sexes much shorter than the proboscis. Five species of anopheles have been admitted for Europe. The first three, without spots on the wings, are A. bifurcatus, A. villosus, and A. nigripes. The remaining two have the wings spotted—anopheles claviger (maculipennis) and A. pictus. Ficalbi thinks it is possible that the first three belong to one species, and Grassi states that from an examination of a certain number of individuals collected from different sources he is of opinion that anopheles nigripes is simply a variety of anopheles bifurcatus. This reduces the species in Italy to three—anopheles bifurcatus, anopheles claviger, and anopheles pictus or pseudo-pictus. Grassi, Bignami, and Bastianelli have now extended their investigations to all the three species, and have found that the parasite of malaria develops in all of them, although for Italy A. claviger is by far the most important.

Anopheles: Geographical Distribution.

The geographical distribution of anopheles thus becomes a matter of importance. The anopheles claviger is widely diffused in Europe. It occurs in Scandinavia, Austria, Germany, Russia, Italy, and the adjacent islands, and both anopheles bifurcatus and anopheles claviger were described in 1825 by Stephens as existing in England. It would be interesting to know what are its limits of distribution in England at the present time, and whether it can be found in districts in which malarial fevers still occasionally occur.

In the list of mosquitos contained in *Bulletin* No. 4, New Series, U.S. Department of Agriculture, Division of Entomology, no fewer than seven species of anopheles are mentioned as existing in the United States. Amongst them are A. punctipennis, A. claviger and A. nigripes.

Schools of Tropical Medicine.

The same year that has seen the momentous discovery of the intermediate host of the parasite of human malaria has seen the establishment of schools for tropical medicine in Great Britain, of which the interest and importance will, I hope, not be confined to these islands. The material requisite for the study of tropical diseases has long been present in this country, and there has never been a time when it was not important to use this material for clinical instruction. It has been long utilised for the training of army surgeons,

but no sufficient systematised instruction was provided for civilian medical men destined to practise in the tropics. Dr. Manson called attention to this deficiency with convincing force, and Mr. Chamberlain, bringing to the subject the clear perception and decision for which he is distinguished, took a step which at once brought the subject prominently before not only the profession but the people of England.

Now that so much has been done to further the study of tropical medicine in this country within one short year, we wonder why it was never done before. That this movement will not only be sustained, but that its scope will be largely increased, seems to me a matter of certainty. The imperial idea, which has now got a firm hold of so many people in this country, means such an expenditure of life and health in tropical countries, that it is a question whether the population of these islands is able to bear it. It is all the more necessary, therefore, that we should be able to provide for these countries a supply of thoroughly trained medical men. Two schools have in the meantime been established, one in London at the Seamen's Hospital, and another at Liverpool, and we may confidently expect excellent work from both. The circumstances connected with the establishment of the school at the Albert Docks are too fresh in your memories to require comment from me. The cynic might remark that the consecration of the school has been associated with an imitation of the barbarous rites performed in some semi-civilised countries where the gods are propitiated at the building of a temple by burying victims under the foundations. The establishment of the new school may be figuratively said to have had its victims. It is not necessary for me to dwell further on these unfortunate circumstances, nor to explain the metaphor. We have only now to express our good will to the new school, and we have every reason to believe that the investigations and researches which will be carried on in its wards and laboratories will bear excellent fruit. A centre of investigation into the etiology and pathology of tropical diseases within easy reach of London is a subject of congratulation, for there are students and investigators to whom residence in London is a necessity, and who would not be able to utilise a medical school situated in the provinces. But, after all, London does not offer the greatest opportunities for the study of tropical diseases, particularly as regards clinical instruction, that exists in this country. Liverpool, with its immense shipping and its intimate relations with the African Coast, supplies more patients suffering from tropical diseases than are to be found in London. It is very fortunate then that private munificence and the enterprise of the University at that port have established a system of instruction in tropical diseases which an ample supply of patients and skilled teaching promise to render of great utility, the close association at Liverpool of instruction in tropical disease with the medical and pathological teaching of the University being an advantage which is too evident to require comment.

TROPICAL DISEASES AT NETLEY.

But if we take into account the number of patients suffering from tropical diseases, and the consequent opportunities for clinical study, the great military hospital at Netley stands out prominently as offering conspicuous advantages with which London and Liverpool cannot compare. The large and swift transports that are employed by Her Majesty's Government bring regularly sick soldiers—from India particularly—to Netley Hospital, and the number brought is so great as to render the opportunities for teaching tropical diseases at Netley unique. Not only can no institution in this country be compared with Netley as a school for tropical medicine, but no other possible school in Europe could be compared to it.

The Netley Medical School is, I believe, due to the initiative of Mr. Sidney Herbert (Lord Herbert of Lea), who had been Chairman of a Royal Commission to inquire into the sanitary condition of the army. The school was organised and opened in 1860. Four professors were appointed to instruct in military hygiene, military surgery, and military medicine and pathology, and arrangements were made for practical and clinical teaching in these branches. The men originally appointed were Dr. E. A. Parkes, Sir Thomas Longmore, Surgeon-General Campbell Maclean, and Sir William Aitken. The Chair of Military Medicine was understood to be mostly concerned with tropical diseases, the invalids admitted from India and other tropical stations serving as subjects of clinical education. The school was transferred to Netley Hospital in 1863. The Chair of Military Medicine was held by Maclean till 1885; since then it has been filled by Dr. David Boyes-Smith, H. Cayley, and is occupied at present by our Vice-President, Lieutenant-Colonel Kenneth MacLeod. These names are an ample guarantee for the thoroughness with which tropical medicine has been and will be taught at Netley.

It is sufficient to mention that the teaching of pathology is in the hands of Professor Wright to know that that branch of medical instruction is in the hands of a master of modern scientific methods. As a matter of fact, those who have had the pleasure of meeting the young military surgeons who have passed through Netley cannot have failed to be struck by the thoroughness with which they have been instructed in the pathology and clinical management of tropical diseases.

I have attempted to make clear to you the comparative advantages of Netley, London, and Liverpool by endeavouring to show in a graphic form the comparative number of cases which are to be found in each. The statistics from which I draw my inferences, and the diagrams by which I hope they are made plain, have been compiled for me from the reports of the respective hospitals by my friend Dr. Arnold Chaplin—to whom I express my warm thanks—those from Netley being taken from a letter sent to the *Times* by Dr. John Anderson, the figures of which were supplied to him through official sources. The figures for the Liverpool School and for Haslar only deal with one year.

That a school with the advantages of Netley should have been confined to army surgeons in a country whose connection with the tropics is so close as ours would be a subject of astonishment if we did not consider the manner in which education has hitherto been managed in this country. Private enterprise has always to a large extent taken the place of Government regulation. That private enterprise by quickening competition, and by a process of survival of the fittest, has its merits and has, as regards general medical education, done well, cannot be doubted, but there are occasions in which private enterprise does not find its scope, because it is limited and cramped by service regulations and *esprit de corps*. It is hardly possible that if the advantages of Netley as a School for Tropical Medicine had been brought before the notice of the Government they would have refused to open its wards and its class rooms to civilians who intended to practise medicine in the tropics. Not only would no Government have taken the responsibility of refusing such a request, but, if the facts of the case had been sufficiently made known, I believe there is enough statesman-like initiative in Government circles to have led to spontaneous action on their part. Probably in no other European country would such opportunities be overlooked. The time which most young medical men can give to acquiring special professional knowledge after they have qualified in medicine is necessarily limited. It is of great importance, therefore, that as many cases as possible should be utilised in their teaching. Although for the purposes of scientific investigation a few cases may be sufficient, and the scientific work of a school may be not only not in proportion to the number of patients, but may conceivably be in an inverse ratio with the clinical instruction which is the main object of a school for tropical medicine it is quite different. From the time the young practitioner arrives in the tropics he will in most cases be left to work unguided. Clinical knowledge does not come by intuition, and cannot be got from lectures and theoretical teaching. It is of the utmost consequence, therefore, that the young practitioner preparing for the tropics should see as many cases as possible within the short time that he can devote to their study.

How does Netley compare with London and Liverpool in respect to the number of patients available for instruction? This question is best answered by examining the following figures extracted by Dr. Chaplin from the Hospital Reports:

NOTES TO ACCOMPANY DIAGRAMS.

Method.—In order to establish a comparison, the returns of tropical cases for seven years were used, namely: the returns for 1892-3, 4-5, 6-7-8 from Netley, and the returns for 1889-90, 91-92-93, 94-96 from Greenwich. The returns for only one year were obtained from Liverpool and Haslar.

Diseases dealt with.—Ague, malarial cachexia, beri-beri, dysentery, hepatic abscess, sunstroke, remittent fever, hepatitis, sprue.

For the seven years above noted the tabulated number of cases admitted into Netley and Greenwich were as follows:

	Netley.	Greenwich.
Ague	886	409
Dysentery	558	194
Remittent fever	170	0
Malarial cachexia	518	6
Hepatic abscess	158	8
Hepatitis	258	18
Sunstroke	55	3
Beri-beri	0	78
Sprue	2	1

(See Diagram 1.)

The total number of cases admitted to the two hospitals during seven years worked out as follows:—Netley, 2,605; Greenwich, 717. (See Diagram 2.)

The average number of each disease admitted per annum is as follows (in these columns are included the returns for one year from Liverpool and Haslar):

	Netley.	Liverpool.	Haslar.	Green'ch.
Ague	130	294	74	58
Dysentery	79	42	0	28
Remittent fever	24	0	40	0
Malarial cachexia	74	0	0	1
Hepatic abscess	22	0	0	1
Hepatitis	37	0	0	3
Sunstroke	8	0	0	2
Beri-beri	0	13	0	11
Sprue	1	0	0	½
Mediterranean fever	78	0	77	0
Tropical anæmia	0	23	0	0
	450	371	200	102

These numbers are approximate.

(See Diagram 3.)

From these figures it appears that at Netley the student would see in a given time four times more cases of malarial fever than he would at would at London (malarial fever including ague, remittent fever, and malarial cachexia), but not quite so many as he would at Liverpool. Of dysentery he would see at Netley three times more cases than at London, and twice as many as at Liverpool.

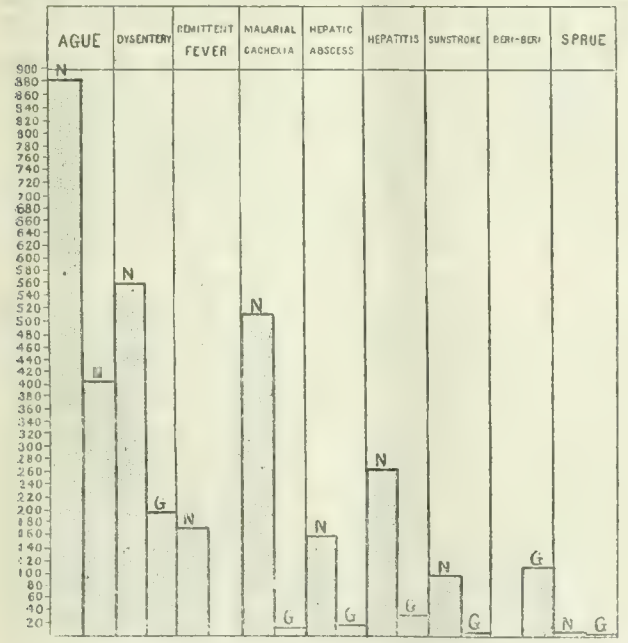


Diagram 1.—Number of cases of tropical disease admitted to Netley and Greenwich during seven years. N = Netley; G = Greenwich.

At Netley he would see twenty times more cases of hepatic abscess and of hepatitis than at Greenwich, and at Liverpool he would probably see few or none. The distribution of these diseases at the different schools is due to the sources from which they draw their patients, and is inseparable from circumstances over which the schools themselves have no control. If we look at the figures given in the reports it is evident that while Liverpool and Netley afford excellent schools for the study of malarial fevers, and that at Greenwich there is clearly a sufficient number of cases to enable the main features of the diseases to be studied, for the study of dysentery Netley and Greenwich afford the only available supplies, while the material at Netley far outnumbers that at Greenwich; and when we come to the most important diseases, hepatic abscess and hepatitis, in which clinical instruction is of so much importance, Netley appears to be the only school in this country in which adequate instruction can be given. The prevalence of these diseases amongst the civilian population in the tropics, the mortality and ill-health which they cause, and the frequent difficulty of diagnosis and treatment, render it a matter of the greatest consequence that medical men who are called on to deal with them should have instruction in a large hospital where there are groups of cases, and as Netley appears to be the only school in this country in which sufficient material for the study of hepatic abscess and hepatitis occurs, a course there ought to be considered indispensable to every medical man who wishes or is obliged to thoroughly equip himself for tropical practice. As regards beri-beri, Greenwich and Liverpool afford nearly exclusive facilities, the reason being that it is a disease which is found almost entirely amongst natives. For the study of Mediterranean or undulatory fever the only available hospitals in this country appear to be Netley and Haslar, both hospitals being supplied by soldiers and sailors from Malta and the Mediterranean, Greenwich and Liverpool offering no facilities for the study of that disease.

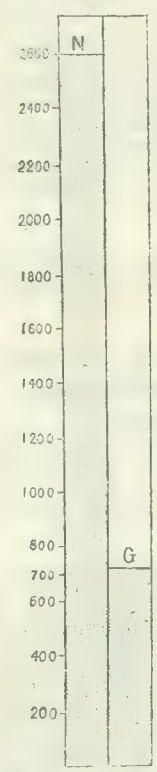


Diagram 2.—The total number of cases of tropical disease admitted to Netley and Greenwich during seven years. N = Netley; G = Greenwich.

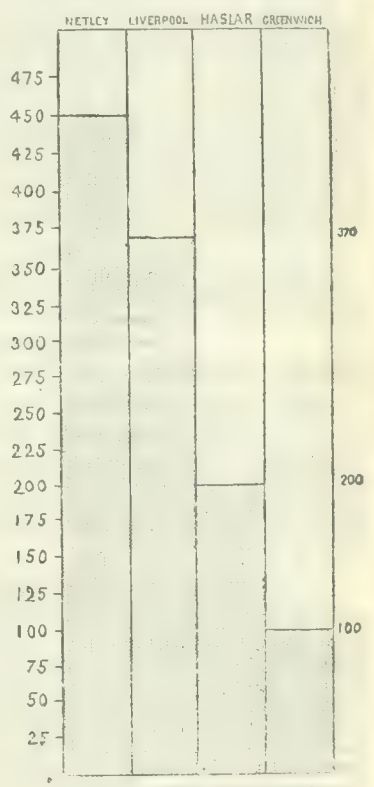


Diagram 3.—The average number of tropical cases admitted per annum to Netley, Liverpool, Haslar, and Greenwich.

Whether the authorities could be brought to consider such a startling proposal as opening a military hospital to civilian practitioners I do not know. Innovations of this kind are too apt to be met with a *non possumus*, and certainly there is no precedent; but it is difficult to believe that an application for permission on behalf of medical men appointed or to be appointed to the Colonial Service would be met by a refusal Although the administration of a country renders depart

ments indispensable, these departments, after all, have only to recognise one principle—the good of the governed. On this principle it is difficult to understand how the Government should refuse to open Netley to the Colonial Service. Indeed, I cannot see that any important objection could be made to opening the teaching to all qualified medical men, but for a beginning it would perhaps be prudent to press first of all the claims of medical men qualifying for the appointments given by the Colonial Office, and of a selected number of private practitioners whose sphere of work is in the tropics.

The opening of Netley to civilians for instruction in tropical diseases would soon be accomplished if the perspicacity, breadth of view, and decision shown by Mr. Chamberlain in the case of the London school were again brought into action. This great hospital, so long as the unfortunate supply of sick soldiers continues, is fitted to become a centre of clinical instruction in tropical diseases not only for England, but for Europe.

The Colonial Service.

With the multiplication of medical schools for tropical medicine there ought to come the principle of the selection of candidates for the Colonial Service and other similar appointments on their merits. Although much has been said, and much can be said, against competitive examination for appointments, nothing else has been suggested that is not open to greater objection, and, everything considered, it is the method that is most likely to secure the best men.

Having now very imperfectly accomplished the task which I set myself, of placing before you the latest results of the investigations regarding malaria, and of strongly advocating the claims of the country on Netley for the instruction of civil practitioners in tropical diseases, I invite you to proceed to the consideration of the eminently practical questions which during the next few days will engage your attention. The programme is well calculated to elicit the results of the experience of the eminent men who have promised us to take part in the work of the Section; and, in conclusion, I wish now to thank you most cordially for the high honour you have done me in asking me to preside over your meetings.

Note.

[1] A specimen of "dapple-winged" mosquito, which was sent by Ross to Rome, was identified by Grassi as belonging to the genus Anopheles, but was found to be very different from A. claviger, and to resemble very closely A. pictus. It is 2 mm. shorter.

SIXTH REPORT OF MR. VICTOR HORSLEY TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

In making this my sixth report to the registered practitioners of England and Wales, I wish first to point out that the recent May session of the General Medical Council has been one of usefulness to the public and furtherance of the interests of the practitioner.

I.—Conduct of Business of the Council.

(*a*) *Inspection of Documents.*—It will be remembered that a year ago the President of the Council immediately after his appointment (April 7th, 1898) issued a decree directed against myself to the effect that no member of the Council had any right to inspect the documents, although he himself and the Registrar of the Council retained the full enjoyment of that privilege. This embargo of the President was supported at the May session, 1898, by an erroneous opinion furnished by Mr. Muir Mackenzie, the legal assessor to the Council, and thereupon the Council itself, on Dr. Glover's motion, passed a Standing Order making it practically impossible for any member of the Council to gain access to any document. This embargo of the President also had the further effect of preventing me, in May, 1898, from discovering what was being done in the scandalous prosecution of the late Mr. Hunter. I am glad to be now able to report that this gravely unconstitutional procedure of illegal secrecy received its death blow at the November session, 1898, when, on my moving in the Council that the Hunter and other documents should be produced, and when such production of documents was strongly resisted by the President, Mr. Carter, Dr. MacAlister, and a few others, the vote of the Council was largely in my favour in each instance. Ultimately Dr. Glover's objectionable Standing Order was referred to the Executive Committee for reconsideration. At the May session just completed the Executive Committee presented their report, which completely surrendered the claims of the President. The result is that the unconstitutional action I protested against has been entirely abrogated, and the rights of the members of the Council are now, after twelve months' futile and expensive delay, fully restored to them as they were before April 7th, 1898, when I was first refused access to the documents. This is a very distinct victory for constitutionalism, and it is to be hoped that we shall not have any more absurd attempts to introduce a despotic *régime* which is entirely out of date in the affairs of this or any other public institution.

(*b*) *Character of the Work of the Last Session.*—The work of the last session was characterised by a much greater output of effective business than the previous sessions, and especially because all questions on the programme received proper attention, and were not hurriedly and injuriously dismissed at the last days of the session as has been the invariable and objectionable custom of previous years.

(*c*) *The Hunter Case.*—In the session just concluded I at last, against an unscrupulous resistance headed by Mr. Carter, gained an opportunity to draw attention to the scandalous procedure of the officials of the Council in relation to the Hunter case. Although it was arranged beforehand, on my insistence, that the law officers of the Council should be present when my notice was brought forward, both were absent at the time appointed, and, even though the matter was further postponed to secure their attendance, only the solicitor to the Council came to the Council. He did not venture to question the accuracy of my charges against him regarding his breaches of duty.

I proved that the late Mr. Hunter, L.S.A., was wrongfully described to the Council by the law officers in November, 1897, as being a quack practising with a bogus M.D. degree, and I proved that the Council's Penal Cases Committee had herded him with some quacks for presentation to the Council as a fit subject for prosecution under Section xl of the Medical Act, 1858.

I further proved that the solicitor, without the slightest authorisation from the Council, prosecuted Mr. Hunter on a charge which had never been laid before the Council at any time, nor even did the minutes of the Penal Cases Committee show that that body had ever discussed such a charge—namely, that Mr. Hunter, L.S.A., a registered practitioner, wilfully and falsely (although qualified under the Act of 1886) styled himself "physician and surgeon." In the first place, therefore, I established the fact that the direct and primary responsibility for this abominable prosecution rested upon the law officers to the Council, and this charge I repeat the solicitor who was present never attempted to repel. The second breach of the procedure of the Council which I have now to report in connection with the Hunter case was the action of the Penal Cases Committee. This Committee is not a statutory committee, and it has no right to spend the money of the profession in instituting actions at law, except under the immediate and particular direction of the Council itself; nevertheless, this Committee took upon itself in a wholly illicit manner to order that Mr. Hunter's appeal, which had been taken into the High Court, should be resisted, and without any authorisation from the Council they instructed the law officers of the Council so to act. The law officers of course ought to have refused to act without the proper and legal instructions from the Council, but in accordance with the rest of their behaviour in this unhappy case they took upon themselves to join the proceedings in the Appeal Court, actually illicitly assuming the authority and name of the Council to do so, with the result that, as everyone knows, a so-called judgment was obtained which was a farrago of ignorance and rubbish, and has only had the effect of rendering the use of medical titles and especially of all University degrees by medical practitioners most unsafe.

The persons upon whom this heavy responsibility rests made no serious attempt to vindicate themselves and chiefly sought shelter in silence. Mr. Carter, the Chairman of the Penal Cases Committee, which resolved to attack Mr. Hunter, made a speech which was nothing but personal abuse of myself. Dr. Glover, who was also a member of the Committee,

first misrepresented what I stated and then declared that Mr. Hunter was a gentleman who enjoyed being ruined in order that he should afford material for a test case on the use of the word "physician." Further comment on this transaction is unnecessary, but the cost of it must not be allowed to fall on the profession.

(*d*) *The Conduct of the Legal Business of the Council.*—Knowing full well how the legal business of the Council has been conducted for years, and especially in regard to the penal cases, I moved last session and carried a resolution instructing the Penal Cases Committee to draw up a report on the procedure they adopted, and of the cost of the same with suggestions for improvement. That Committee evasively reported that no improvement was possible in the legal procedures of the Council, or in saving money paid for law expenses. I am glad to say that on my motion the Council immediately repeated its instructions to the Penal Cases Committee to continue their investigations, and to again report to the Council at its next session. As regards the law officers of the Council, who are constantly spoken of as the legal assessor to the Council and the solicitor to the Council respectively, I asked at the recent session for the record of the appointments of these gentlemen, and elicited the fact that no such appointments had ever been made at all. It is obvious, therefore, that the Council is at liberty to employ any legal assistance it may prefer.

II.—Personation and Fraudulent Misrepresentation of the "Register."

At the session November, 1898, I carried a motion in the Council instructing the Executive Committee to draw up a report on fraudulent personation of registered practitioners, and on the best method of securing accurate registration. In accordance with every other occasion on which the Executive Committee were ordered to report to the last session that Committee returned a report which was useless for its intended purpose. In view of the importance of the subject and the obvious necessity of the Council fulfilling its elementary duty of keeping the *Register* correctly, the Council, on my motion, took the matter out of the hands of the Executive Committee and entrusted it to a special Committee to report during the session. The special Committee, of which I was appointed chairman, duly reported, but when the report was presented the Council recognised that the subject was an extremely complex and important one, and it was therefore agreed that the determination of the alterations which the Committee suggested ought to be made in the procedure of registration and in the work of the office should be postponed till the November session of the present year.

III.—Reciprocity Question.

The question of reciprocity of foreign practice came up before the Council under two distinct heads. It may be remembered that after my exposure of the erroneous character of the Council's official document on the subject in the May session, 1898, that paper was referred to the Executive Committee for report. The report of the Committee, which was also full of inaccuracies, was brought up for discussion at the November session, but the discussion was postponed, and the same thing again happened this session. Inasmuch as the document in question is not only misleading, but directly injurious to the profession, it is a matter of congratulation that it should still remain in abeyance. At the last session, however, the reciprocity question came up in a totally different and more pertinent form, namely, on a species of international bargain which was proposed by the Italian Ambassador, and concerning which the Executive Committee had already illegally taken it on themselves to make a statement to the President of the Privy Council. In that statement the Executive Committee had expressed a desire to see the privileges and rights of medical practitioners in this country extended to all foreigners who could offer the privileges of practice in their own country. The adoption of the Executive Committee's principle would, of course, render entirely nugatory the whole system of medical education and registration in the United Kingdom. Many further defects, which also were not foreseen by the Executive Committee, having been brought to the notice of the Council, the matter was postponed to the next session.

IV.—On the Examination for Higher Qualifications.

It will be remembered that certain Fellows of the Faculty of Physicians and Surgeons of Glasgow being aggrieved by the scandalously insufficient nature of the examination held by the Faculty for the Surgical Fellowship made a representation on the subject, as they thought, to the General Medical Council. Their communication was, however, owing to a slight flaw in the address, taken by the President, and then rejected by him on the ground that the character of the examinations for the higher diplomas did not come within the purview of the General Medical Council. This position being totally contrary to the Medical Act of 1858, I endeavoured to raise the question on the point of complaint made by the Fellows of the Faculty, but the matter was prejudiced by the President drawing attention to the verbal error before mentioned, and the question was postponed by the previous question being carried. On a subsequent day I brought the matter on its strictly legal aspect without reference to the particular case of the Glasgow licensing body, but the motion was lost by reason of a number of members of the Council abstaining from voting. In this particular the division list on page 72 of the Minutes of the Council (vol. xxxvi) is interesting because it shows that abstention from voting was resorted to in order that the view expressed by the officials of the Council should be protected regardless of the facts of the case.

V.—Illegal Certificates of Proficiency in Medicine, Surgery, or Midwifery.

This important matter, prejudiced as it was by the language and terms of the memorials presented to the Council from the Corporate and Medical Reform Association, was treated very unsatisfactorily by the Council. The Executive Committee had had the matter referred to them, and had of course reported to the effect that nothing ought to be done. Thereupon Mr. Brown and I moved that a special committee be appointed to report on the subject at the next session. Our amendment was lost, those voting against this matter, which so clearly needs close attention in the interests of the profession, being Dr. MacAlister, Mr. Bryant, Sir Dyce Duckworth, Dr. Pettigrew, Dr. McVail, Dr. Heron Watson, Dr. Bennett, Dr. Philipson, Dr. Reid, Dr. Cameron, Mr. Carter, and Sir John Tuke. It should be noted that nine members of the Council had already left the session.

VI.—Medical Aid Societies.

With regard to the serious matter of medical aid associations, the Committee appointed under the chairmanship of Dr. Glover to report to the Council on that subject, at last presented their long-looked-for report. Practically that report dealt with only two points: first, it proposed the appointment of a Conciliation Board; and secondly, the adoption of a resolution of general disapproval of medical practitioners taking office under the medical aid societies. As I could not obtain any satisfactory explanation from the members of the Committee respecting the formation of the Conciliation Board, or the conditions under which the profession was asked to join such a Board, I spoke against the proposal as being an inchoate one, and also because the report of a conference held between Dr. Glover's Committee and certain representatives of friendly societies showed beyond all manner of doubt that the so-called Conciliation Board would not be allowed to take into consideration the important point of wage limit. In fact, the attitude of the friendly societies on the subject of wage limit is actively hostile to the opinion of the medical profession. Under these circumstances, unless the conditions under which such a Board is to meet are clearly laid down, I cannot see how its deliberations can be of any service, nor how the profession is to elect its delegates, nor how the Board is to enforce its decisions, nor how the expenses of its business are to be met. During the discussion in the Council very serious statements were made by Mr. Bryant and Dr. Glover which evidently influenced many members of the Council in favour of the Conciliation Board, but for which no specific authorisation was forthcoming. I would therefore advise the profession to reserve judgment until it has distinctly before it in print all the necessary conditions for the establishment of such a Board.

The second part of this matter, namely, the warning

addressed to persons accepting office under medical aid societies, ought to have been passed by the Council long ago. Although exception may properly be taken to the wording of the Council's resolution, it will naturally constitute the basis of further action on this subject.

VII.—UNQUALIFIED PRACTICE.

Considerable progress was made at the recent session in regard to the legislation further inhibiting unqualified practice by persons forming themselves into companies. By the communication of a Committee of the Council (the work of which was chiefly carried out by Mr. Tomes) with the Lord Chancellor, full consideration of the needs of the profession in connection with these specially medical bogus companies was obtained, with the final result that the object of the profession will be met by the Government introducing the necessary clauses in their Companies Act Amendment Bill. This must be regarded as a favourable advance in this matter.

VIII.—MIDWIVES BILL.

Regarding the Midwives Bill now before the House of Commons, the Council confirmed its former disapproval of that Bill; but, as the Bill lost its place, nothing more was done in the matter than to communicate definitely to the President of the Privy Council further objections of the Council; and as will be seen from the result of a recent deputation, the President of the Privy Council has given the matter his full consideration. The Bill will doubtless come up next session, and care must be taken to prevent its passage in its present pernicious form, since it neither secures safety to the public nor adequate observance of the interests of the profession.

IX.—ENTRY OF HIGHER QUALIFICATION ON THE COLONIAL LIST OF THE REGISTER.

A graduate of Calcutta University having applied for the registration of her qualification of the F.R.C.S.I., which she had obtained, this was refused to her by the Executive Committee on the advice of Mr. Muir Mackenzie, apparently without having the facts fully placed before him by the solicitor. As soon as I became aware from the minutes of the Executive Committee that this unjust action had been taken, I gave notice of the motion that this action and opinion of Mr. Mackenzie were contrary to the terms of the Medical Acts, and moved that the application of the graduate in question should be acceded to. After I had moved the resolution in question, Mr. Mackenzie admitted that the facts had not been properly before him, and stated that the Medical Acts fully admitted of the construction I placed upon them. The report of the debate on this matter, which would have seriously affected our Colonial colleagues, is only to be found in the pages of the BRITISH MEDICAL JOURNAL.

X.—SCIENTIFIC EDUCATION OF STUDENTS.

A very important question was raised by the Education Committee on the scientific education of medical students. It arose from the fact that unfortunately the English Conjoint Board—that is, the College of Surgeons and the College of Physicians—had adopted an attitude of hostility to the provisions of the Council for securing a thorough scientific training to the student; and this attitude was aggravated by the representative of the College of Physicians, who defied the Council. The Council, however, were not intimidated by this disloyal action on the part of the English Conjoint Board, and supported the Education Committee.

XI.—CONSTITUTION OF PENAL CASES COMMITTEE.

The number of members of this Committee has been increased by the addition of Sir Christopher Nixon, Dr. Bruce, and myself.

XII.—FINANCE.

As I pointed out in previous years, the financial arrangements of the Council are in a serious state. If the accounts of the *Pharmacopœia* are separated, as they ought to be—and as at the last session of the Council it was finally determined that they should be—and a true estimate obtained of the finances of the Council, it then becomes clear that the income is diminishing while the expenditure is increasing, that the reserves of the various branches are also decreasing, and that the Irish branch is already bankrupt. The proposal was made by the junior Treasurer that money should be lent from the funds of the English branch to the bankrupt Irish branch; but this provisional and unsound proposition fortunately met with no support from the Council. The whole trouble of the Irish branch arises from the fact that the financial system of the Council and its branches is faulty. The necessary expenditure of the branches imposed upon them by the Medical Act of 1858 is by the same Act only to be met by such registration fees as happen to be paid into the account of that particular branch Council, the result being that if, as is the case, the students educated in Ireland to a considerable extent register themselves in England and Scotland, the Irish branch of the Council is deprived of its proper income. The whole constitution of the Council and its branch Councils and their financial arrangements, therefore, needs immediate revision, and this fact alone constitutes a powerful argument for obtaining as quickly as may be an amendment of the Medical Acts. A committee, however, which was proposed by Dr. Glover to consider the amendment of the Medical Acts was refused by the customary clique of obstructionists, headed as usual by Mr. Carter; and in the discussion upon Dr. Glover's motion, the same obstructionists suggested that all propositions for a medical amendment Bill should come from the outside. This had better be regarded as an invitation to the British Medical Association, which has been engaged on this matter for several years, to advance its work, and afford the General Medical Council an opportunity to deal with this urgently-needed reform.

Summarising the work of the last session of the General Medical Council, the profession can be fairly congratulated on the fact that at this last session the majority of the questions raised for discussion not only have been accredited sufficient time for their consideration, but also that the interests of the profession have obtained on the whole nearly as much consideration as the interests of the general public.

July 31st.

THE MANCHESTER MEDICAL GUILD.

AT the quarterly meeting of the Manchester Medical Guild, held on July 28th, Professor J. DIXON MANN, M.D., F.R.C.P., in the chair, the following resolutions were passed:

That this meeting of the Medical Guild strongly supports the memorial of the British Medical Association to the General Medical Council praying for an increase in the number of direct representatives on the Council.

That the Medical Guild is of opinion that the establishment of a central Board of Conciliation for the settlement of disputes with medical aid and friendly societies is inadvisable, since such Board would be unauthorised and unrepresentative so far as the profession is concerned. The Guild is further of opinion that all questions referring to friendly societies and sick clubs ought to be dealt with locally by representatives chosen by the profession at meetings to which all the local practitioners had been summoned.

THE PLAGUE.

POONA.

THE only serious outbreak in India at present is at Poona, where a most alarming condition prevails. On July 28th 151 cases of plague occurred, and 121 deaths. Amongst those attacked are 4 Europeans, 3 being ladies. The recurrence of the disease at the height of summer is somewhat anomalous, but according to a Reuter's telegram the rains still hold off, and the crops are withering. The plague bacillus seems to stand dry heat better than moist heat, and drought is ever associated in China and Japan with the prevalence of plague. Poona escaped fairly lightly when last attacked. Major Read and Captain Beveridge dealt wisely and firmly with the outbreak, and succeeded in limiting its ravages. The present recrudescence, however, seems very sudden and uncontrollable.

ALEXANDRIA.

Only 3 cases are reported from Alexandria during the past week, and nowhere else in Egypt is there any outbreak.

FIRE IN A LUNATIC ASYLUM.—On July 31st an alarming fire broke out at Glack Lunatic Asylum, a branch of the Royal Asylum, Aberdeen, and situated about twenty miles from the city. There were at the time some 200 patients in the place, who were all rescued and conveyed to the head establishment. The damage is estimated at £5,000.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, AUGUST 5TH, 1899.

THE ANNUAL MEETING AT PORTSMOUTH.

The sixty-seventh annual meeting of the British Medical Association opened at Portsmouth on Tuesday afternoon, August 1st, and is still proceeding as we go to press. Under the genial presidency of Dr. Ward Cousins, and with the hearty co-operation of the members of the Association in Portsmouth and its neighbourhood, everything has been done to render the meeting both useful and agreeable to the large number of members attending. The Mayor and Corporation of Portsmouth gave willing and effective aid. The Mayor welcomed the Association in a graceful speech at the opening of the proceedings, and he, as well as a large number of ladies and gentlemen resident in Portsmouth, formed part of the great audience which assembled to hear Dr. Ward Cousins's inaugural address, an address delivered with a passion and fire which aroused the enthusiasm of all who listened to it.

A special character has been given to the meeting by the proximity of the two great schools of Haslar and Netley, and many officers of the Royal Navy Medical Service and of the Royal Army Medical Corps have taken part in its proceedings. Professor Ogston devoted his Address in Surgery to the consideration of reforms urgently needed to maintain the efficiency of the medical services under the new conditions of medical and surgical practice; while the first discussion both in the Section of Medicine and the Section of Surgery were on subjects which intimately concern medical officers of the public services. We publish in another column brief accounts of the proceedings on the first day of meeting of these Sections, as well as others, and it will be seen that a great deal of useful work ranging over many fields is being done. Arrangements have been made which, it is hoped, will enable us to publish, as has been done during the last few years, full reports of all the Sections within the next two or three months.

The Association has lost the services of two of its chief officers—Dr. Robert Saundby of Birmingham, the President of Council, and Dr. Charles Parsons of Dover, the Treasurer of the Association—who, after holding these offices for the usual period of three years, have laid them down during the annual meeting at Portsmouth. They both have the satisfaction of looking back upon good work well done for the British Medical Association and for the medical profession in the British Empire. They leave the Association more numerous and its affairs more prosperous than they found them. Of Dr. Saundby's services to the Association it would be difficult to speak in terms of too high praise. He has shown himself strong and able in the chair, and the proceedings of the Council have never been conducted in a more effective and business-like manner, a fact which was warmly acknowledged by the members when he vacated the chair. But the work demanded from the President of Council is by no means limited to the business actually transacted at the meetings of the Council. Few members of the Association probably realise to the full the amount of time and energy which the President of Council is called upon to give to the affairs of the Association in preparing the business for the Council, and in considering, and in many cases deciding, upon the many matters of executive detail which arise weekly and almost daily, and upon which his advice or decision is sought. Dr. Saundby has responded to every call upon him not only readily and promptly, but in a spirit which showed that he was thoroughly devoted to the interests of the Association; he never spared himself, and grudged neither time nor trouble in his efforts to promote its prosperity, increase its efficiency, extend its influence, and further the causes which, in the interest of the profession at large or of particular sections of it, the Association has made its own. He brought to the work enthusiasm, striking executive ability, a wide experience in public affairs, and a large knowledge of public men. He has, by his personal influence, and by the manner in which he has put forward the case of the profession, been able to ensure the attention of Government departments, and to bring many negotiations to a successful issue.

The most important domestic event during Dr. Saundby's tenure of office has been the purchase of the freehold of the Association's house in the Strand, a matter in which he had the able co-operation of the retiring Treasurer, Dr. Parsons. The finances of the Association have never been in a more prosperous state than during Dr. Parsons's tenure of office, and he is able to hand them over to his successor in a thoroughly satisfactory condition. In Mr. Andrew Clark the Association has a Treasurer who has already rendered it important services in various capacities, and no one who remembers the excellence of the arrangements for the annual meeting in London which he had so large a part in organising, will have any hesitation in prophesying for him a successful term of office as Treasurer.

At its meeting on Wednesday the Council elected Dr. J. Roberts Thomson as its President. Dr. Roberts Thomson is well known to many members of the Association as the President of the highly successful annual meeting of the Association in Bournemouth, and the Council is fortunate in having secured the services in the chair of a member of so much ability and energy.

On Wednesday the annual meeting had the pleasure of accepting an invitation from the East Anglian Branch to hold the next annual meeting—the last of the century—in Ipswich. It is a quarter of a century since the Association held its annual meeting in East Anglia, and there is something appropriate in winding up the century by meeting within the confines of the oldest Branch of the Association.

THE PRESIDENT'S ADDRESS.

FOR each succeeding President of the British Medical Association the task of selecting an appropriate subject becomes increasingly difficult. In this, the penultimate, year, of the century there is immediately suggested to one's mind as an acceptable subject the review of modern or recent progress in medicine and surgery. But there are difficulties which, in proportion as the subject is thought out, become correspondingly more obvious and more threatening. To deal with such a subject attractively needs a wide and exact knowledge, and the deft and skilful handling of a master. The President for this year has selected the Century's Progress in Medicine and Surgery, and it must be admitted by all who heard or will read the address that he has succeeded in giving to his subject the freshness and attractiveness which make for immediate success. He has told a tale, most of the exciting incidents in which were known to all his hearers, but in the telling he has added just that personal charm which is the peculiar ift of an enthusiast.

At the outset of the address his hearers were invited "to go back to the dawn of the present century and to take a hasty survey of the general condition of medical science at that period." It is then shown how, as the result of the labours of Hunter, and his pupil Jenner, a new method was becoming established, a method which was destined to revolutionise all "medical science" in the future. Practically, with few notable exceptions, it was considered up to Hunter's day that the highest intellectual gifts of members of our profession could not be better utilised than in expounding the teachings of Hippocrates or some other of the "Medical Fathers." The change of method Hunter introduced may be summed up in his famous advice to Jenner, "Don't think—try the experiment." How that new method of trying the experiment has been the basis of all our thoughts and all our acts was in vivid outline swiftly sketched by the President in his address. Sanitary science, after the birth throes of 1834 and the crises of 1848 and 1855, is now fairly established, and is promising by its advance to go far towards eradicating not a few of the diseases of highest mortality. Of pathology and bacteriology there was much to be said. They are sciences which, to all intent, have been born and bred, and are now attaining maturity within the reign of our Queen. The noblest share of labour in this field is that of Rudolf Virchow. To him Dr. Cousins paid an eloquent and well-earned tribute. The fascinating page in medical history which tells of Manson's pregnant and scientifically elaborated theory, and of the brilliant practical work of Ross, was laid open.

Of the dawn of surgical anæsthesia a graphic and fascinating description was given. The earlier experiments which led up to the final achievement of Lister were narrated. The marvellous results of antiseptic and of aseptic surgery were told with that glow of personal conviction and of gratitude which tells of a keen participation in the work. What an achievement! What a triumph! Not all the wars of all the centuries have destroyed so many lives as one man, Lister, has saved. One cannot hear that story too often.

Of the recent advances in medicine due mention was also made. Preventive inoculations have already done much. How much may be expected of them in the future no man yet can say. An appreciative word was spoken of Meyer, of Copenhagen, and of his work upon adenoids. His discovery seems simple enough to us now, but it is more than probable that the physique of future generations will be in no small degree the better for it. With a brief glance at the future so far as preventive medicine is concerned, the President brought his address to a close.

Dr. Cousins has added one more to the many eloquent and graceful addresses which have been delivered by the holders of his high office. In reviewing the century's progress, he has admirably marshalled his facts, and has placed them before us with that perspective which history will probably finally assign to them. He has told a tale of absorbing interest for mankind, and his manner of telling it was worthy of this noble theme.

THE ADDRESS IN SURGERY.

PROFESSOR OGSTON'S address is very unconventional in that, instead of the usual review of the progress of the science and art of Surgery, generally or in special directions, his thesis is, Have the nation or the profession placed the recent marvellous advances in operative surgery, which he shows have followed the adoption of Listerism, within the reach of the naval and military medical services of the country?

He pleads with eloquence and earnestness that it is a paramount duty to do so, and that continued neglect in this direction involves the gravest responsibility. To this we very heartily subscribe.

No one among our leading civil surgeons is better fitted or entitled to discuss such an important question than Professor Ogston, because, in addition to professional eminence, he has long taken a deep personal interest in military medical matters, and himself actually shared in active duty in the field.

There are, indeed, points in his address to which we cannot fully subscribe without reservation. Among these is the suggestion that the present race of naval and military surgeons are professionally inferior to or less worthy of respect than their predecessors. They may, indeed, in the extraordinary expert knowledge and skill demanded of the modern surgeon be relatively so; but on the whole we maintain they compare not unfavourably with their brethren in the profession at large. It is true the most able and ambitious of the graduates and licenciates of our universities and schools have of late years shown little disposition to enter the public services, but that has notoriously arisen from causes, both social and professional, which we believe to be rapidly disappearing. Yet no one will accuse Professor Ogston in his animadversions of hostility to the services, for he has always vigorously championed the medical officers, and towards the end of his address he bore handsome testimony to their wonderful successes under adverse and discouraging circumstances, which he himself has witnessed in the field. It is the system and not the men that he condemns.

He pertinently asks: Have the marvellous and beneficent advances under Listerism, and the methods, instruments, and appliances which antiseptic surgery have called forth, been fully extended to our naval and military surgeons and

hospitals? The answer, unfortunately, is very largely in the negative. He raises no question of status, rank, or titles, matters of great importance, but now happily solved or in process of solution. He asks, broadly, Have medical officers the means or opportunities afforded them of keeping abreast of the continual advances in operative surgery, or of acquiring necessary dexterity therein? Not only, he declares, are they not so equipped, individually or collectively, but there is no indication on the part of the war authorities that they shall be so. Nor is there any evidence that these authorities are at all alive to the undoubtedly terrible problem of how to deal with the masses of wounded which the next great battle on sea or land is certain to unfold.

He quotes the startling but true dictum of Dr. Senn, Chief Operating Surgeon to the United States Army, "that, in theory and practice, military surgery is equivalent, in every respect, to emergency practice in civil life." This constitutes a heavy responsibility cast on service surgeons; yet they are not afforded the smallest opportunity of acquiring in peace that which they must suddenly put in practice in war.

The ordinary peace duties of a naval or military hospital of course afford little or no opportunities of acquiring dexterity in emergency practice, such as is found in a large civil hospital. But in the present undermanned condition of our medical services, "study leave" for attendance in civil hospitals cannot be obtained; and so our service surgeons get little or no emergency training. This question will be more fully dealt with in a further article; but Professor Ogston was fully justified in saying that, while opportunities of study at the expense of the State are afforded to all other branches of the navy and army, medical officers alone cannot get leave to study, even at their own expense. The unfairness of this to the medical officers is only exceeded by the sad hardship which must inevitably fall upon the wounded committed to their charge.

Statistics show that 20 per cent. of wounds in battle, including nearly all the more serious and hitherto hopeless cases, are in the head, chest, and abdomen; and it is just in these regions that the greatest advances in operative surgery have recently been effected. But the highest intellectual or professional ability can secure no success in delicate operations on the brain, chest, or abdomen, without previous demonstration and manual practice.

In foreign countries where conscription is in force—as Germany, France, and Russia—military and naval surgeons are at certain periods during their service carefully trained in such operations in civil hospitals. As, in such countries, nearly all the chief civil surgeons have served their time in the army and have carried their military rank into retirement, and are available for recall in emergency, the most expert medical and surgical skill is at once brought to bear upon the wounded in a great battle. We, of course, have no such provision, although some imitation of the system on voluntary lines has, Professor Ogston thinks, been recently brought into prominence by Lord Lansdowne's creation of the Central British Red Cross Society. He predicts, however, that unless such auxiliary help as therein contemplated be organised on military lines, it is already "doomed to failure." He considers it a fatal error to suppose that our present inadequate so-called "Army Medical Reserves" will be of material use in emergency, and he insists that reliance on "civil aid" will prove "a broken reed;" from this text we have preached in and out of season any time these past ten years since our paper reserves were formed.

He declares that the nation should not be content with anything less than a thoroughly trained and organised medical service for three army corps; while the most pressing of all reforms is full instruction of individual officers and men in everything pertaining to war duties. Our present system of hastily bringing together a scratch field hospital or bearer company can only result in lamentable failure, and would be utterly scouted if attempted in the case of any other army unit.

It is, of course, impossible to review Professor Ogston's admirable address fully in one or even in half-a-dozen articles; but we trust it will be the means of arousing the attention of the public and of the War Office to the dangerous and alarming state of our medical services.

As he declares, our military authorities are not slack in their primary duty of perfecting our means of offence and defence, let them also show they do not forget the demands of humanity in providing the highest skill in succouring our wounded in war.

ANNUAL MEETING.

The sixty-seventh annual meeting of the British Medical Association was opened at Portsmouth on Tuesday, August 1st, and the members had the advantage of seeing the town of Portsmouth and its residential suburb, Southsea, in most brilliant summer weather. The general meetings were held in the large hall of the Town Hall, which afforded accommodation for a large gathering. Owing to the regretted absence of the retiring President (Sir Thomas Grainger Stewart), who, though convalescent, is not yet sufficiently recovered from his recent illness to venture the long journey from Edinburgh, the chair at the opening of the first general meeting was taken by Dr. Robert Saundby, who, after reading a letter of regret from Sir T. Grainger Stewart, introduced Dr. Ward Cousins, who was warmly welcomed to the chair. Thereupon a resolution expressing the warmest thanks of the Association to Sir Thomas Grainger Stewart for so ably presiding over the Association for the past twelve months, and an earnest hope for his speedy recovery to health, was carried unanimously, and he was at the same time elected a Vice-President of the British Medical Association. The meeting was attended by the Mayor and Corporation of Portsmouth, and the Mayor made a short speech extending a warm welcome to the Association. The Mayor's good wishes were loudly applauded. The municipal representatives then retired, and the meeting, a somewhat scanty gathering, settled down to the business of discussing the annual report of the Council. Four of the Sections met in rooms in the Town Hall itself, while the remainder met in various rooms within a short radius. The annual museum was displayed in a large hall at no great distance, and the Pathological Museum, to which the Naval Medical School at Haslar and the Army Medical School at Netley made contributions of interesting series of specimens, found adequate accommodation in a detached school building.

A service was held in Portsea Parish Church on Tuesday morning at 11 o'clock. The attendance was large, the noble edifice being almost filled. The Mayor, Aldermen, and Councillors of the borough, attired in their robes of office, and the President-elect and members of the Council of the Association, walked in procession from the Parish Institute

to the Church. The service was of a special character. Hymn 166 (A. and M.) was sung whilst the clergy proceeded to their places. The prayers were intoned by the Rev. C. G. Lang (Vicar of Portsea). The first lesson (Ecclesiasticus xxxviii, verses 1 to 15) was read by the Rev. S. G. Scott, Vicar of Havant; the second lesson (St. Matthew viii, verses 1 to 18) by the Rev. Canon J. S. Blake, Vicar of St. Jude's, Southsea. The *Te Deum*, following the first lesson, and several others of the musical portions of the service, were accompanied by an orchestra, some of the performers in which were ladies. After the collects and other prayers, Hymn 368 (A. and M.), "Thou to Whom the sick and dying," was sung. The sermon was preached by the Lord Bishop of Winchester, who took for his text the words "Freely ye have received, freely give," from St. Matthew x, part of verse 8. The words, he said, embodied the foremost thought of the greatness of the trust and, therefore, of the responsibility given to those who had to do with the health and well-being of other men. The preacher dwelt impressively on this point of responsibility on the part of those whose duty it was to lead and guide, remarking that the clergyman and the doctor were the only two who had access to the inner secrets of a man's home. Another matter, he pointed out, was the prevalence of impurity, in which the doctor had more chance of being heard than the clergyman, and the Bishop also alluded to the opportunities members of the profession possessed for leading public opinion into a higher channel in many social matters, especially in regard to education in the rural districts, where children were still educated up to a period in life when they began to form some estimate of the value of education, and were then turned into the fields and hedgerows to forget all that they had learned. During the collection of the offertory Hymn 369, "Thine arm, O Lord, in days of old," was sung; and, after the blessing, the Recessional, "Now thank we all our God." The offertory was in aid of the Royal Medical Benevolent College, Epsom, and amounted to £26 1s.

ON Tuesday, August 1st, a special service was held and high mass was celebrated at St. John's Roman Catholic Cathedral, Edinburgh Road, Portsmouth, for the Roman Catholic members of the British Medical Association. There was a large attendance of worshippers, to whom the Right Rev. Monsignor Cahill addressed an earnest and well-thought-out sermon. In the course of his remarks the preacher reminded his hearers that they were there on that day to pray to Him Who was pre-eminently the head of the medical profession, Who when on earth went about not only preaching the Gospel unto men but also healing their infirmities. God had communicated His knowledge in part to men, and that knowledge was to be increased by patient study and by prayer. It was right that some time should be spent in considering what part religion must play in the exercise of the medical profession. The business of the priest was primarily with the soul, the business of the doctor was primarily with the body; and yet the priest had to deal with the body just as a medical man had also to recognise and deal with the soul. While treating the body the doctor must also be engaged in treating the soul. The Latins had the same word for life as for the soul—*anima*. The soul had a marvellous power of retaining the pictures produced by the senses and then sorting these pictures. Next came the comprehension of external impressions followed by the capacity to remember at will, making each man a world for himself. As God was one in nature and three in person, so the soul was made in the likeness of God in that it was one, and that it had memory, understanding, and will. Herein lay the exercise of reason and soul, and here, in the dominion of soul over all moral acts, it was that medicine and religion joined together in watching the soul. The soul in its moral acts came under the care of the priest, but it belonged to the priest and physician alike during the time of growth when the senses were conveying impressions to the soul. When appetite and desire had been aroused for good or for evil, then must be considered the passions, which furnished common ground for the medical man and the priest. In the passion of love there was fierce excitement, action and reaction; in hatred also there was seen first the influence of the mind, followed by the involuntary actions of the body. The body suffered in proportion to the influence of the soul, and thus might result frenzy or even madness. For these reasons the physician was watchful of the soul, for he knew how the body might break down, and it was to the interest of priest and doctor that there should be *mens sana in corpore sano*. Where material remedies were useless in certain classes of disease, the doctor must put off the character of the physician and appeal to the moral sense of the patient, and moral sense was in the sphere of religion. It was as much in the interest of medicine as of the Church that men should be virtuous. It must be admitted that the greatest good was obtained when science and religion went hand in hand to the bedside of the sick. The preacher concluded by an eloquent appeal to the medical profession to remember most carefully that where it was necessary to forbid a patient to see anyone, the fact that the ministrations of the priest were in nowise a disturbing element, but far otherwise, should always be borne in mind. The collection at St. John's Cathedral for the British Medical Benevolent Fund reached £2 7s. 3d.

ON Monday evening (July 31st) Dr. Ward Cousins entertained at dinner in the Banqueting Hall of the Town Hall a number of officers of the Sections and members of the Council, as well as some other guests, including the Mayor of Portsmouth, the Bishop of Winchester, and the Rev. Monsignor Cahill.

A DEMONSTRATION of the use of the mutoscope in medicine was given by Mr. Noble Smith during the meeting of the British Medical Association at the Freemasons' Club, Portsmouth. The idea of this exhibition was to show the usefulness from an educational point of view of the method of illustration by moving photographs. By means of the apparatus a lecturer now may have ready for demonstration a regular stock of cases, so that he will be able to show not only one individual case, but a series of cases for purposes of comparison and differential diagnosis. The exhibition comprised cases illustrating congenital dislocation of the femora, athetosis, infantile paralysis, and slight spastic contraction of the calf muscles. Everyone knows of the "living photography" which projects a series of moving pictures on a screen, but in this apparatus the spectator looks through ths photograph itself and sees its magnified image. No great call is made upon the energy of the spectator, who is simply required to turn a handle, which causes the photograph to move as rapidly or as slowly as desired, and at any particular phase the movement can be stopped for closer observation. The machines of the Mutoscope Company, by means of a method of registration, have reduced to a minimum the objectionable flickering observed in some apparatus. The first case shown was that of a child, aged 6, the photograph portraying his first attempt to walk. The right thigh had been contracted upwards and outwards, and to enable this first attempt at walking to be made, these contractions were relieved by operation. There was left, however, paralysis of some of the flexors and adductors of the thigh. In another machine was a study of a case of infantile paralysis, affecting the left arm, and a severe lateral curvature of the spine. The moving photograph represented the child's best manner of walking before section of the tendo Achillis and the biceps

femoris, the knee and foot being contracted. In the third instrument the observer was shown a series of three cases, the first illustrating well the movement of the hands in paralysis agitans, the second was a remarkable example of athetosis, and the third showed the peculiar waddling gait of congenital dislocation of the hips. The arrangement was taken advantage of to illustrate the methods of resuscitating the apparently drowned, and the process was well shown in the fourth instrument, bringing out the plan in a clearer manner than could be conveyed by any routine description or ordinary drawing, the Superintendent of the Royal Humane Society at the Serpentine Station being depicted actively engaged demonstrating the Sylvester method.

The members of the Association visiting Portsmouth have been presented by the Local Committee with a most excellent *Guide to Portsmouth, Southsea, and its Neighbourhood*, edited by Mr. H. T. Lilley, M.A. The volume is elegantly bound and printed, and profusely illustrated, and is not only useful as a guide, but will form an agreeable remembrance of the meeting. The Local Committee express special acknowledgments to the Mayor, Alderman T. Scott Foster, who has enabled them to make the volume worthy of a most interesting occasion.

The National Temperance League entertained the members of the Association at breakfast in the Upper Albert Hall on Thursday morning. A large number attended, and the meeting was presided over by the Right Reverend the Bishop of Southampton, who gave a very interesting address urging the members of the British Medical Temperance Association to use their utmost influence to reduce as far as possible the quantity of alcohol consumed by their patients. Dr. Ridge followed with some vigorous remarks on the abuse of alcohol, and the discussion was continued by the Rev. C. G. Lang, Vicar of Portsea.

On Wednesday evening the President of the Association and the members of the local Reception Committee held a reception on the Clarence Esplanade Pier, which was attended by a large number of ladies and gentlemen. By permission of Colonel Commandant F. H. Poore, the band of the Royal Marine Artillery played a selection of music in the kiosk, while the Burgon Opera Recital Company gave a selection of vocal music in the hall. The evening was beautifully fine and warm, and the entertainment was greatly appreciated.

On Wednesday afternoon the members of the Association attended in large numbers a very pleasant garden party in the spacious lawns and gardens of the Asylum grounds, Milton, given by the Mayor and Mayoress of Portsmouth (Alderman and Mrs. Scott Foster) in honour of the visit of the British Medical Association to Portsmouth. The guests numbered over 2,000, but so excellent were the arrangements that there was never any crush in the magnificent tents provided for refreshment. Those interested in the management of asylums were conducted by the Superintendent, Dr. Mumby, round the Borough Lunatic Asylum, which affords accommodation for 720 inmates. The majority of the guests, however, were well content to remain in the grounds, where, by permission of General Sir Baker-Russell, K.C.B., Lieutenant-Governor of Portsmouth, a very smart set of gymnasts from the gymnastic staff of the garrison gave a display, which included boxing and bayonet contests. An extremely graceful bicycle Maypole dance attracted a large concourse of spectators, and the ladies and gentlemen who rode in this maze of evolutions were most warmly cheered at the end of their performance. The members of the Field Fisher Quartette made merry in their own manner and had no reason to complain of any want of appreciation. Among the distinguished company present were: Bishop of Portsmouth, General Sir George Willis, Alderman Barnes, J.P., Sir William King, Inspector-General Turnbull, Admiral Sir Henry Chad, Sir Collingwood Hughes, Colonel Isherwood, Alderman King, Lieutenant-Colonel Exham, Deputy Inspector-General Sedgwick, Deputy-Inspector-General O'Malley, and other naval and military officers.

At a meeting of the Police Surgeons' Association held on Thursday morning, the subject of fees to medical witnesses was fully considered, and it was stated by Mr. Nelson Hardy, in moving the adoption of the report, that the matter had been before the Association for several years. A deputation had seen Mr. Asquith when he was Home Secretary on the subject, and he had admitted the justice of the claim for the revision of the scale of fees, but he had said that as the scale on which medical witnesses were paid had been fixed forty years previously by Sir George Grey, and successive Home Secretaries had been afraid to burn their fingers by changing it, he should follow their prudent example. This year the matter had again attracted attention, and a joint committee of the Police Surgeons' Association and the British Medical Association was being appointed to ask for another interview. The report of the Council was carried, and the following officers and members of Council were elected: *President:* Dr. Lysander Maybury (Portsmouth); *Vice-Presidents:* Timothy Holmes, F.R.C.S. (London), Thos. Bond, F.R.C.S. (London), Sir H. D. Littlejohn (Edinburgh), and Dr. Houchin (London); *Treasurer:* H. Nelson Hardy, F.R.C.S.Ed. (129, Dulwich Grove, London); *Hon. Secretaries:* F. W. Lowndes, M.R.C.S. (Liverpool), H. C. Hopkins, M.R.C.S. (Bath); *Council:* Dr. Barnes (Carlisle), J. R. Baumgartner, M.R.C.S. (Newcastle-on-Tyne), F. J. Craig, M.D. (Birmingham); C. Eastwick Field, M.D. (Midhurst), G. H. Heald (Leeds), W. F. Heslop, F.R.C.S.Ed. (Manchester), D. Macdonnell (Belfast), H. W. Roberts, M.R.C.S. (London), W. M. Roocroft, M.R.C.S. (Wigan), Charles Templeman, M.D. (Dundee), W. Washbourn (Gloucester), S. Wyborn, M.D. (Windsor).

On Thursday morning the Section of Medicine was crowded to hear a discussion on the Preventive and Remedial Treatment of Tuberculosis, which was opened by Professor Clifford Allbutt, who was followed by Sir William Broadbent, Sir R. Douglas Powell, Professor Osler, Dr. James Tyson (Philadelphia), Dr. Ransome, Dr. C. T. Williams, and others.

The time of the Section of Surgery on Thursday was occupied mainly in a discussion on The Prevention and Treatment of Syphilis in the Navy and Army, which was opened by Deputy-Inspector-General Mahon, R.N., and Major W. Dick, R.A.M.C.

In the Section of Obstetrics and Gynæcology Mr. J. Bland Sutton opened a discussion on the Natural Menopause compared with (1) the Menopause produced by Removal of the Uterine Appendages; and (2) the Menopause produced by Removal of the Uterus without Removal of the Appendages.

A discussion on the Personal Communication of Tuberculosis and the Measures available for its Prevention was opened in the Section of State Medicine by Dr. Joseph Groves. The discussion was continued by Dr. A. Newsholme, Dr. E. Seaton, Dr. Sidney Davies, and others.

In the Section of Psychology the discussion on Lunacy Legislation as it affects the Temporary Care of Incipient Cases was continued and concluded, and the Section then proceeded to discuss the subject of General Paralysis.

IN the Section of Anatomy and Physiology Professor Charles introduced a discussion upon the Causes of the Entrance of Oxygen into the Blood in the Lungs. In the course of his paper he considered the rival theories, and after a review of the evidence came to the conclusion that he could not accept the view of Pflüger and his pupils that physical and chemical causes, such as diffusion, solution and chemical affinity, were sufficient to account for the entrance of oxygen into the blood in the lungs. The vitalistic theory, supported by Bohr, Haldane, and Lorrain Smith, was discussed, and the secretory activity of the living epithelium of the lungs was considered by the President to be a necessary factor in respiration. A discussion followed, in which Professor Anderson, Dr. Pembrey, and others took part. The following papers were then read: Two by Professor Dixon on the Anatomy of the Bladder and on the Ossification of the Femur; and one by Dr. J. O. W. Barratt, on the Anatomical Structure of the Ninth, Tenth, Eleventh, and Twelfth Cranial Nerves.

The Section of Pathology met specially on Thursday in the Freemasons' Club, where facilities were afforded for lantern demonstrations of the pathology of renal tumours, a subject introduced by Mr. J. H. Targett and Dr. Kelynack.

THE Section of Ophthalmology discussed on Thursday the Visual Tests employed in the Navy, Army, and Mercantile Marine, a subject introduced by Deputy-Surgeon-General Henry Cayley, who dealt with the efficiency of the tests.

IN the Section of Diseases of Children a discussion took place on Thursday on the Causation and Treatment of Convulsions in Infancy, introduced by Drs. J. A. Coutts and A. M. Gossage.

THE Value of Intestinal Antiseptics was discussed on Thursday in the Section of Pharmacology and Therapeutics.

IN the Section of Laryngology and Otology on Thursday Mr. Charters Symonds and Dr. E. J. Moure, of Bordeaux, introduced a discussion on the Diagnosis and Treatment of Chronic Empyema of the Frontal Sinus.

THE greater part of the time of the Section of Tropical Diseases on Thursday was taken up by a prolonged discussion on Psilosis or Sprue: its Relations (Etiological and Pathological) to other Forms of Tropical Diarrhœa, and its Treatment.

THE QUEEN AT THE ISLE OF WIGHT COUNTY HOSPITAL.

ON July 28th the new children's wing at the Royal Isle of Wight Infirmary and County Hospital, Ryde, was opened by Her Majesty. The ceremony was preceded by the unveiling by Her Royal Highness Princess Henry of Battenberg of a bust of Her Majesty, placed over the verandah entrance to the ward. The bust is by Mr. E. Onslow Ford, R.A. Several of the medical men present at the ceremony wore gowns and hoods, which with the smart summer dresses of the ladies made a brilliant blending of colours. The Queen was received by Her Royal Highness Princess Henry of Battenberg, Governor of the Island and President of the Hospital; the Deputy Governor, the Bishop of Winchester, the Mayors of Ryde and Newport, and the members of the Reception Committee, among whom were Mr. B. Barrow, F.R.C.S., J.P.; Dr. A. G. Davey; Dr. Groves, J.P.; and Mr. E. Groves, J.P. The Queen was accompanied by Princess Christian and Princess Victoria of Schleswig-Holstein. The Deputy Governor read an address, in which he stated that in celebration of Her Majesty's Diamond Jubilee the children's wing had been erected by the inhabitants of the Isle of Wight as a memorial of their loyal devotion to Her Majesty's throne and person, and of their thankful sense of the blessings which the country had in the good providence of God enjoyed under Her Majesty's wise rule. Since the opening of the hospital 50 years ago the number of patients had increased from 75 in the first year to 408 in the last. But although in the course of years the number of beds had been increased, no special provision had hitherto been made for children. That need had now been supplied. The Queen replied as follows: "I thank you for your loyal address. It gives me great satisfaction to open the Children's Wing of the Royal Isle of Wight Infirmary and County Hospital. I have never ceased to watch with great interest the growing usefulness of this institution. I am gratified to see that special provision has now been made to extend to children the benefits which older patients have enjoyed. I am glad to associate this event with the completion of the sixtieth year of my reign, and I receive with pleasure your renewed expressions of attachment to my throne and person." After the choir had sung the hymn, "Thou to Whom the Sick and Dying," and the Bishop of Winchester had offered up prayers, the architects handed to the Princess Henry a silver disc and she passed it to the Queen, who, by pressing it, completed an electric circuit, and thus opened the doors of the new ward, the opening being greeted by cheers. The ward will henceforth be known as the Queen Victoria Ward. The children's wing is built in connection with the block at the north end of the hospital grounds, and its arrangement makes it exceedingly well adapted to the purposes for which it is designed. There is accommodation for 10 cots, 5 of which have been named and endowed in perpetuity, at a cost of £1,000 each, as follows: The Battenberg Cot, the Worsley Cot, the Gassiot Cot, the Polson Cot, and the Alexander Davey Cot. The whole building was designed by Messrs. Young and Hall, of London.

THE HUMOURS OF TESTIMONIALS.

THE Wise Man would seem to have had an extensive and varied experience of fools, but he lived in an age of comparative simplicity. He did not know the *fine fleur* of folly, which is one of the products of our complex modern life; he had no opportunities of studying the fool who not only takes quack medicines but writes testimonials in their praise. Of course the vendors of these things may have means of stimulating faith in their therapeutic properties more potent than what may be called suggestion by advertisement. But when due allowance has been made for the influence of such hypothetical factors, there is still left a huge residuum of testimony which comes from the abysmal depth of human folly. How accurately the vendors of "proprietary" medicines gauge the mental capacity of their patrons may be judged from the literature which they supply for their edification. One does not know which to admire most in these publications—the pathology, the diagnosis, or the grammar. But the most interesting feature is the unconscious humour of the writers. In a pamphlet entitled *Treatment of Neuroses of the Stomach*, by Dr. Johann Hirschkron, "specialist for nervous diseases, Vienna, Austria," which appears to be intended to set forth the many and manifold virtues of a much-advertised narcotic preparation, the author states that he has seen only one case of "antiperistaltic movements of the stomach"; naively adding that the patient left Vienna as soon as she had consulted him. In other cases which he had longer opportunities of studying, he discovered remarkable complications. One patient suffered from boulimia, which is graphically described as "a condition of general distress, accompanied by weak legs and a voracious appetite"; this afflicted individual would think nothing of eating "twenty

rolls at the least." Many people would be glad enough to have half his complaint. Another was a neurasthenic and "suffered later on from a number-phobia"—that is to say, "he was terrified by all figures and numbers; no one could speak of them in his presence, and he had all the faces of his clocks covered over so as not to see a single figure." We think we have seen instances of this strange malady in lads confronted with a stiff paper at a mathematical examination, and symptoms of it are produced in many grown-up persons by the mere sight of a page of statistics of any kind. We are not sure that we have not ourselves suffered from "number-phobia" in a mild form on the delivery of suspicious-looking documents marked "On Her Majesty's Service." The testimonials from medical practitioners appended to Dr. Hirschkron's erudite lucubrations on "paroxyotic attacks" of gastric spasms, "gastroxynxis," and other pathological monsters of equally fearful mien, have no reference to neuroses of the stomach—unless we are to class among these such ailments as intermittent facial neuralgia, facial neuralgia aggravated by disorder of the brain, blindness "resulting from neuralgia," "consumption of the nerves," "pharyngo ulceration," and whooping cough. In another collection of medical testimonials to the efficacy of a preparation which is modestly put forward as "*the* uterine tonic," one learned doctor somewhat ambiguously says: "In an active practice of twelve years, I have never prescribed a remedy with such success," which rather reminds us of the unwashed gentleman who used a certain soap two years ago, and since then has used no other. Another practitioner deposes that the preparation "wrought a perfect revolution" in one of his patients. Caligula wished the Roman people had one head, that he might cut it off at a blow; similarly, one cannot help wishing that certain nations had one body, which could be physicked with this revolutionary medicine. Another doctor says the elixir "relieved the complexion" of a young lady, which reminds us of a barber who used to recommend a powder of his concoction as "allaying the face" after the fiery touch of his razor. Another witness testifies that a patient after eight bottles had been taken came a distance of forty miles to see him. This suggests the arithmetical problem: If ten bottles had been taken, would she have come fifty miles, and so on, the attractive power of the preparation being in direct ratio to the number of bottles consumed? The same writer is "satisfied the profession is not fully aroused to the importance of even extensive combinations." In this we regret to be obliged to agree with him; if the profession were fully aroused to the importance of extensive combinations, they would all join the British Medical Association. In this way they would, in the language of the writer from whom we are quoting, "obtain results that cannot be had otherwise. In them (to wit, in the 'extensive combinations' aforesaid) and in some way—well, we'll say by a sort of *therapeutic catalysis*—there seem to be a rearranging and an intensifying of forces." "Therapeutic catalysis" is good, though we do not quite know what it means. But think of its effect on a dissatisfied patient or his troublesome friends! "Madam," we can say to the anxious wife who is pressing inconveniently for a clear view of the situation, "your husband is suffering from a cachexia, but the medicine which I am about to prescribe will cause a therapeutic catalysis." There is healing in the very sound. "Therapeutic catalysis" is more comforting even than "that blessed word Mesopotamia."

THE LONDON COUNTY COUNCIL.

The last meeting of the Council prior to the recess was held last Tuesday, Lord Welby presiding. Owing to numerous adjourned reports the agenda occupied over ninety pages. A discussion took place on the proposal of the Public Health Committee to report the St. Pancras Vestry to the Local Government Board for failure to appoint an adequate number of sanitary inspectors. Mr. Nathan Robinson, on behalf of St. Pancras, pleaded for a *tempus penitentiæ*; the Vestry had already appointed two additional inspectors, and he argued that the overcrowding was due to causes over which the Vestry had no control—such as the action of the Midland Railway and of certain large employers of labour, who had encroached seriously upon the dwelling-house accommodation in the parish. The debate was adjourned, so that the Vestry will have two months to reconsider the representations which have been made, and may of their own initiation render further action by the Council unnecessary. Mr. Dickinson, in bringing up the report of the Water Committee, had still more serious figures to mention as to the shortness of water in the Thames than those given in our last number. If this summer proves to be as dry as last summer he contended that it was not inconceivable that the water companies might actually take the whole volume of the river's daily flow. The Housing Committee reported that they had taken counsel's opinion as to whether the Council could purchase or receive as a gift land outside the County of London for the purpose of housing the working classes under Part III of the Housing Act. Both Mr. Lawson Walton, Q.C., and Mr. Haldane, Q.C., are of opinion that the Council does not possess such power. This is a serious check to the new housing policy of the Council, which relied largely upon acquisition of extra-metropolitan sites for housing which should be reached by tramways from the centre. It also necessitates the rescinding of a previous resolution passed by the Council, accepting the generous offer of Sir S. Montagu, Bart., M.P., of a plot of land at Edmonton for building purposes.

LORD ROSEBERY AND THE MEDICAL PROFESSION.

The authorities of Epsom College may be congratulated on the happy inspiration which moved them to invite Lord Rosebery to preside at the distribution of prizes on Saturday last. The noble earl, who himself, if we mistake not, can trace his descent to the surgeon of a Scottish king, was evidently thoroughly at home among the boys and even among the masters, though he was bold enough to put science and classics and mathematics in a secondary position in the work of a school. His speech was in his most characteristic vein—light in manner, but in matter rich with experience ripened by thought, and broadened by knowledge of men and affairs as well as books. A brief report of his speech is given elsewhere. In these days when the antimedical bias, as Mr. Herbert Spencer would call it, is strong not only among catchpenny journalists and emotional persons with a taste for cheap martyrdom, but among politicians who are prepared to sacrifice the health of the people to a mistaken notion of liberty, it is encouraging to hear a statesman like Lord Rosebery speak of medicine as "containing the most supreme elements of manhood of all the professions." Our profession does, indeed, require more stubborn and obdurate courage than any other—not merely, as Lord Rosebery says, because its practice is one long struggle against the Angel of Death, but also, and perhaps chiefly, because it is a bitter fight against the Devil of Darkness. This evil spirit comes to us in the manifold shapes of ignorance, stupidity, prejudice, misjudgment, slander,

> The whips and scorns of time,
> The oppressor's wrong, the proud man's contumely,
> * * * *
> The insolence of office, and the spurns
> That patient merit of the unworthy takes.

Each one of us has, in his own sphere and in his own way, to fight the Devil, and for this he will need all the manhood he can muster. It is satisfactory, therefore, to hear from so competent an authority as Lord Rosebery that this most necessary quality is well cultivated at Epsom,

where so many of those in whom lies the future hope of the medical profession receive their preliminary education. And as the list of honours and rewards gained by the pupils at the universities, the medical schools, and elsewhere shows, the school turns out highly promising scholars as well as men. Certainly, if we may judge from their success in after-life, we must agree with Lord Rosebery that the pupils of Epsom College have cause to thank their school for the training which they received within its walls.

INDIAN MEDICAL SERVICE.

THE ruling of the Indian Government which was published in the BRITISH MEDICAL JOURNAL of July 29th (p. 320), that, henceforth, promotion shall not be regulated by mere seniority, but solely by selection, for demonstrated merit and ability, however admirable in theory, will, we fear, like previous attempts in the same direction, prove difficult in practice. For it is easy to pass by proved incompetence, but difficult deliberately to supersede long and faithful service, perhaps because it has never had an opportunity of being brilliant. Dull seniority may be bad, but at the same time it is safer than mere showy brilliancy. We cannot understand the paragraph about the recent "great increase" in the Indian Medical establishments. We know of none in the covenanted service; perhaps it is the uncovenanted which is to receive a still further share of the civil appointments. We shall watch the effect of these changes.

THE MALARIA EXPEDITION.

ON July 31st the expedition for the investigation of malaria organised in connection with the Liverpool School of Tropical Diseases left the Mersey on board the steamship *Fantee*, their destination being Freetown, Sierra Leone. The party comprises Major Ronald Ross, the Chief of the Liverpool School of Tropical Diseases; Dr. Annett, Demonstrator; and Mr. E. E. Austen, of the Natural History Department of the British Museum. Mr. Van Neck, of Belgium, will join the others at their destination. Messrs. Elder, Dempster, and Co. telegraphed to the Colonial Secretary on Saturday: "Major Ross and staff of Tropical Diseases School, sailing in steamship *Fantee*. Excellent spirits. Hope great things from this expedition." The same afternoon Mr. Chamberlain replied by telegraph: "Secretary of State thanks you for telegram regarding Malaria Commission, and wishes the expedition all success." The departure of the expedition was watched by Mr. A. L. Jones, Chairman of the Tropical School; Colonel J. Goffey, V.D., Chairman of the Liverpool Local Marine Board; Mr. W. Adamson, President of the Royal Southern Hospital; Professor Paterson, Dean of the Medical Faculty of University College; Professor Carter, and a number of others. Though Major Ross must be back in Liverpool to resume his duties at the Tropical School in October, the investigation will probably be continued by others.

LOYALTY AND LOCKJAW.

AMERICANS are demonstrative in their patriotism, and their feelings of loyalty to their flag are apt to find vent in manifestations of which the leading motive is noise. For the proper celebration of the Fourth of July, which is the anniversary of the Declaration of Independence, able-bodied citizens deem it their duty to make the welkin ring with every instrument of acoustic torture, and to shout themselves hoarse and each other deaf with barbaric yells. The day is made still more hideous by the firing of guns and pistols. The general effect is such as sensitive persons get from Hogarth's "Enraged Musician," multiplied by a figure representing the male population of the United States. What may be the general results of these annual saturnalia of noise to the hearing apparatus and nervous equilibrium of the people can only be conjectured. But on one point definite information is forthcoming. The Fourth of July this year was followed by something like an epidemic of tetanus. Of 144 deaths which occurred throughout the States as the direct consequence of the celebration of the Declaration of Independence, 83 were due to tetanus. Of these 26 occurred in New York or its immediate neighbourhood. In almost every instance the tetanus was the result of a pistol-shot wound of the hand received on the Fourth of July. The toy pistol, it is said, is responsible for these fatalities, the wad of the blank cartridge penetrating deep into the tissues of the hand, which we hope it is no offence against the majesty of the American people to assume was in most cases not ideally clean. A considerable proportion of the cases were treated with antitoxin, in most instances by means of intracerebral injections. The percentage of recoveries is not accurately known, but it is certain that a large proportion of the patients died. Nearly all these victims of national sentiment were young lads. Their country could doubtless have better spared an equal number of Fourth of July orators, and poetic justice would have been satisfied if those voluble persons had been overtaken by lockjaw.

THE ST. ANDREWS CHAIR OF PATHOLOGY.

THE University Court of the University of St. Andrews has elected Dr. Lewis R. Sutherland to the Chair of Pathology, rendered vacant by the appointment of Professor Muir to the Chair of Pathology in Glasgow University. Dr. Sutherland is a distinguished graduate of the University of Glasgow, where he graduated in medicine with high commendation in 1890. While a student he gained numerous medals and prizes, and shortly after graduation was awarded the Foulis Memorial Scholarship in Pathology. After acting in the Western Infirmary, Glasgow, as Resident Physician and Resident Surgeon, he began to devote himself exclusively to the study of pathology in its various branches, studying more particularly at Frankfort and Berlin. In 1892 he was appointed Junior Assistant, and in 1895 Senior Assistant to the Professor of Pathology in Glasgow, which post he has held up to the present time. He has also for nearly four years been Pathologist to the Royal Hospital for Sick Children, Glasgow. During the somewhat prolonged and lamented absence through illness of the late Professor Coats, much additional work, both in teaching and in examining, devolved upon Dr. Sutherland, and was performed with much ability and acceptance. In addition, Dr. Sutherland has pursued research in several important pathological subjects, and has published various contributions, which are to be found principally in the *Glasgow Medical Journal*, and in the *Transactions* of the Pathological and Clinical Society of Glasgow. At present he is engaged in editing the fourth edition of the late Professor Coats's *Manual on Pathology*.

WE are glad to be able to report that Sir Thomas Grainger Stewart continues to make steady, though slow, progress towards recovery. The urgent symptoms have all subsided, and he now enjoys excellent sleep.

DR. E. H. STARLING, F.R.S., Lecturer on Physiology at Guy's Hospital, has been appointed Jodrell Professor of Physiology in University College, in the place of Professor Schäfer, translated to Edinburgh.

THE Neill Prize for 1895-98 has been awarded to Professor J. Cossar Ewart, M.D., F.R.S., by the Royal Society, Edinburgh, for his experiments and investigations bearing on the theory of heredity.

THE Japanese Government has, it is stated, decided to make vaccination and revaccination compulsory in Japan. All children must be vaccinated before the age of ten months. Revaccination is to be performed at 6 and again at 12 years of age.

SIXTY-SEVENTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held at Portsmouth, August 1st, 2nd, 3rd, and 4th.

First General Meeting of Members—Tuesday, August 1st.

The Retiring President.

In the absence of the President, Sir Thomas Grainger Stewart, who had not recovered sufficiently from his recent illness to be present, the President of Council, Dr. Robert Saundby, took the chair.

The President of Council, who, upon rising, was received with applause, said that he had to express, on behalf of Sir Thomas Grainger Stewart, the President of the Association, his great regret that he was prevented by indisposition from travelling to Portsmouth to attend and share in the commencement of the business. Dr. Saundby said that all would join in hoping that this indisposition was only temporary, but it had imposed on him, as President of Council, the duty of fulfilling, as well as he could, Sir Grainger Stewart's duties in his absence. Dr. Saundby expressed the great pleasure all present felt in coming to Portsmouth, and holding the annual meeting there under the presidency of Dr. Ward Cousins. He therefore called upon Dr. Ward Cousins, as President-elect, to take the chair as President of the Association. [Applause.] Before vacating the chair he had been told that he ought to put the minutes of the previous meeting. They had been printed and circulated, and would doubtless be taken as read. [Hear, hear.]

Induction of the New President.

Dr. Ward Cousins, who on taking the chair was very cordially received, said that he need scarcely say how much he appreciated the great kindness members of the Association had bestowed upon him in electing him their President. He was sure that he was expressing the feeling of all his colleagues in and in the neighbourhood of Portsmouth in giving them a most hearty welcome to that ancient port. He hoped the arrangements made for their entertainment would render their stay there most enjoyable and pleasurable. Through the kindness of the Mayor of Portsmouth and the Council, and the ready assistance given by the naval and military authorities, opportunities had been offered to the members of seeing the various objects of historical interest. He hoped they would not thereby be taken away from their scientific pursuits, but that they would blend science with pleasure. He felt the greatest regret that Sir Thomas Grainger Stewart was unable to be here; and he had had a letter from Lady Stewart also expressing his regret at his enforced absence. He was sure they would accord a hearty vote to the resolution which he then proposed:

That the warmest thanks of the Association be given to Sir Thomas Grainger Stewart, M.D., LL.D., F.R.S.E., for so ably presiding over the Association during the past twelve months, with an earnest hope for his speedy recovery to health, and that he be and he is hereby elected a Vice-President of the Association for life.

This was seconded by Dr. Robert Saundby, and carried unanimously.

The President said if it was the pleasure of the meeting he would send the resolution in the form of a telegram to Sir Thomas Grainger Stewart.

This was agreed to.

The Mayor of Portsmouth said it was his privilege to offer a most cordial welcome to the members of the British Medical Association. He spoke not for himself alone, but in the name of the governing authority and of the people of Portsmouth. They were sensible of the very great honour conferred upon the borough by the visit of the members of so important a profession as that of medicine and surgery. Portsmouth was not an educational centre; they had not a university, therefore they were unable to offer them in that respect advantages which were to be had in many other places; but he ventured to think they could show them many things which they could not see elsewhere. In one respect Portsmouth was the most important town in the kingdom. It was the headquarters of the British navy, and as such it was impossible that it should be anything like a mean town. They had an unrivalled dockyard; they had stores and provisions sufficient to equip the largest fleet that could possibly be got together. They had in their harbour one or two of the old wooden walls of England, and amongst them Nelson's famous flagship, and side by side with that they would find the most modern of sea fighting machines. Most of them just now were away engaged in the autumn manœuvres, but they would find sufficient interest in visiting those that were left. They also had in the sea those armoured forts which were unique, each having its own fresh water supply; and there were many other places which he thought would interest them. The building in which they were assembled was the home of the civil authority which had placed it unreservedly at their disposal. He trusted that the members would find in it sufficient accommodation, and that their deliberations would result to the advantage of the profession and to the welfare of mankind. After seeing the town he hoped they would come to the conclusion that it was not half so bad as it was very often represented to be. It had a very strong fortress, and it was a strong naval base, and it also had an attraction which few towns had—a capital watering place. He thought they would soon make themselves acquainted with the town and would go away satisfied. Before resuming his seat he would like to congratulate Dr. Ward Cousins upon having attained so high a position as that of President of the British Medical Association. He was proud to know that a citizen of Portsmouth was going to occupy that position. He had a very high appreciation of Dr. Ward Cousins's professional attainments, and he hoped that every person in the room would join with him in wishing that the forthcoming year might be a useful year and a happy one. [Applause.]

The Mayor, aldermen, and members of the Corporation then withdrew.

The Annual Report of Council.

Dr. Saundby (the President of the Council) then proposed the adoption of the annual report of the Council. He said they now came before the members with the report of their stewardship, and the accounts of a very prosperous year. They had during the past year got through an average amount of work. It had been a very prosperous year financially. The revenues for the year amounted to £42,924, which was an enormous revenue when it was remembered that twenty-seven or twenty-eight years ago the total revenue of the Association was not more than an eighth part of that sum. They had purchased their premises in the Strand; and although they had left a considerable portion of the purchase money on mortgage, they had paid off during this year the first instalment of £4,000. They had also paid off the land tax. The work of the Council had been directed to many questions, amongst them being one raised by the London Chamber of Commerce. That body had published a report upon secret commissions, and had stated in it that such commissions were received by members of the medical profession, and gave some very loose hearsay evidence upon it. The report of the Chamber of Commerce stated that it was a common practice for doctors to receive commissions from druggists; for surgeons to receive commissions from instrument makers; and, lastly, that doctors received commissions from undertakers. This latter part raised considerable discussion in the papers, and one gentleman had allowed his inspiration to run so far that he pictured a doctor going round with a sheaf of undertaker's cards in his pocket, considering whether it would suit him best to let the patient die, and get the undertaker's commission, or to cure him. Inquiries had been made which resulted in their hearing that presents had occasionally been offered for various services after the event; but there was no case in which a commission was offered to a person if he would do a certain thing. Cheques had been given to medical men to recompense them for what was supposed to be a good turn, but these cheques had always been returned. They thereupon wrote to the London Chamber of Commerce asking them to give the different cases, because it was felt that such an accusation as had been made was not justified. That letter was simply acknowledged by the London Chamber of Commerce. The registration of medical practi-

tioners in different parts of the Empire had engaged the attention of the Council, which had tried to get information as to the condition under which medical men were admitted to practice in the different Colonies and in India. That matter was still under consideration. A representation had been received with regard to an Act which imposed the duty of notifying infectious diseases in Jamaica, but made no provision for payment. That matter had been set right by Mr. Chamberlain. The matter of fees to medical witnesses had also been considered. A new research scholarship had been founded in memory of the late Editor, Mr. Ernest Hart, in commemoration of his labours for so many years in the cause of public health, and for the way in which he so successfully conducted the BRITISH MEDICAL JOURNAL. The Council had asked the Government to appoint a commission to inquire into the prevalence of contagious diseases, and had learnt in reply that Lord Salisbury was waiting for the report of the International Congress at Brussels before deciding what he would do. The Midwives Bill had been before Parliament, and the Council felt it necessary to take care that no legislation was hurried through the House of Commons. The subject of legislation for midwives had been under consideration for some years, and a Bill had been drawn in such a way as was thought would best meet the objections raised to such legislation. It was put before the House of Commons as an alternative measure, so that the House might know what safeguards the medical profession considered necessary, and to distinguish between the two Bills. The Council had also considered the amendment of the Medical Acts. All were agreed that amendment was necessary, but they were not quite agreed as to the details. The Parliamentary Bills Committee had been busily engaged during the year, but that would appear more fully in the report of the Parliamentary Bills Committee. He would conclude by moving:

That the report of Council, together with the financial statement for the year ending December 31st, 1898, be received and adopted.

The TREASURER said he had not much to add to the very lucid statement which the President of Council had made. It had fallen to his lot, as Treasurer of the Association, to write the largest cheque any Treasurer of the Association had ever had to write—a cheque for £41,000. That amount was paid in cash for their present premises, and the remainder of the purchase money of £38,000 was left upon mortgage at 3 per cent. Of that sum they had paid off £4,000. The assets were more valuable this year than last. Last year their balance was £69,196, while this year it was £69,721. The investments now only amounted to £10,000, in consequence of the purchase of their premises, but it was very gratifying to know that if they were to sell these investments to-morrow at the present price, they would clear £2,000 on the transaction. With regard to the revenue or profit and loss account, he would point out that although they had a very large number of members, the subscriptions to the JOURNAL did not pay the expenses of the publication. The expenses of printing the JOURNAL amounted to £21,000, and the subscriptions amounted to £19,000. But their advertisements now amounted to £19,000, and that was the largest sum the advertisements had ever brought in. He begged, in conclusion, to congratulate the members on their trading for the last year, which had yielded a profit of £4,736. He thought that was most satisfactory, and it was evidence of the business capacity of their Council, the business capacity of Mr. Fowke, and all the staff connected with the office. [Applause.] He hoped that the new Treasurer would be able to produce a balance sheet as satisfactory next year.

Dr. LORIMER HART proposed, and Mr. JACKSON seconded, that the report should be taken in detail, paragraph by paragraph.

The resolution was lost.

MIDWIVES LEGISLATION.

Mr. GEORGE BROWN asked what steps had been taken by the Council to put the Midwives Bill which had been adopted by the Parliamentary Bills Committee before the House of Commons.

The PRESIDENT OF THE COUNCIL said that a copy of their Bill had been sent to each member of the House of Commons.

Mr. GEORGE BROWN thought that some expression should go from that meeting that the Council should take some action so that the best Bill was put before Parliament. The only Bill which was before Parliament was the Bill of the Midwives' Institute, and a worse Bill could not be conceived. As matters stood their own Bill might as well be buried. The Bill at present before Parliament did not represent the views of the medical profession. Their own Bill did to some extent represent their views, although he was very much afraid that even if the Bill with all its safeguards was passed, it would cause very great injury to the public and the medical profession. He was sorry that this Association had not taken any step to represent to the Lord President of the Privy Council that the Bill promoted by the Midwives' Institute, a committee of nurses assisted by a few specialists in midwifery, did not represent the view of the profession. He would therefore propose to add as a rider to the resolution:

That the Council be requested to cause representations to be made to the Lord President of the Privy Council to the effect that this meeting of members of the British Medical Association deprecates the adoption of the Bill promoted by the Midwives' Institute, and brought into the House of Commons by Mr. J. B. Balfour as a Government measure.

Mr. BRINDLEY JAMES seconded.

Dr. BRASSEY BRIERLEY said that the Bill, as proposed, absolutely failed to adopt the principle of complete medical control. By Clause 4 the diploma of the Obstetrical Society of London became a legal document, and it was to be retrospective—a thing which was never known before. He thought that the general public had no idea of what the aims and aspirations of these people were. It was no good their applying again to the Duke of Devonshire, because twice already the Duke had declined to hear the profession through the President of the Council. On one occasion when he declined to see the profession he had in his possession this wretched Bill, and within a few weeks of that occurrence he sent the Bill of the Midwives' Institute to the General Medical Council for their approval.

The PRESIDENT OF THE COUNCIL did not remember the occurrence which had been referred to, nor did his predecessor, Dr. Ward Cousins.

The report, together with the rider, were then put to the meeting and carried.

RETIREMENT OF TREASURER.

Dr. RADCLIFFE CROCKER had much pleasure in proposing:

That the best thanks of the Association be given to Dr. Parsons for his able services as Treasurer for the past three years, and for the interest he has shown in the welfare of the Association, and that he be, and he is hereby, elected a Vice-President for life.

Dr. Parsons was one of the oldest members of the Council. He had served the profession in a great many capacities, and he had now crowned his labours of many years by filling the arduous part of Treasurer. The work of a Treasurer was not brought prominently before the members of the Association, but it entailed an enormous amount of labour and personal attention, which Dr. Parsons had always been ready to lavish upon it, and there was no more faithful and earnest worker for the welfare of the Association than Dr. Parsons.

Dr. BLACKMAN seconded the resolution.

The PRESIDENT felt certain the motion would be carried with acclamation, inasmuch as Dr. Charles Parsons had been a faithful servant of the South-Eastern Branch, and had carried on the work most satisfactorily until he was elected Treasurer of the Association.

The resolution was carried unanimously.

Dr. PARSONS asked the meeting to accept his most sincere thanks for the great honour they had conferred on him. The three years he had occupied the position as Treasurer had been years of pleasure and satisfaction to him. It was also a source of great rejoicing to him that when he left the position of Treasurer their finances were in a flourishing condition. He desired to impress upon them very strongly that a great deal of the success of the Association's finances was due to the efforts of their General Secretary, Mr. Fowke. Mr. Fowke had devoted about twenty-seven of the best years of his life with all the energy he possessed to advance their interests. Dr. Parsons then gave a short history of the growth of the Association, attributing this in no small degree to Mr. Fowke, and concluded by saying that he hoped when the time came, as it must come, that Mr. Fowke had to retire,

the Council would bear in mind what they owed to Mr. Fowke, and give him a retiring pension worthy of his services.

Election of New Treasurer.

Mr. Butlin then proposed that Mr. Andrew Clark should be Treasurer in the place of Dr. Charles Parsons.

Dr. Owen seconded this, and it was carried unanimously.

Mr. Andrew Clark thanked the meeting for the honour they had done him, and hoped at the end of his term of office the balance-sheet would be as satisfactory as at the present time.

Scottish Poor-law Medical Officers.

Dr. Muir desired on behalf of the Scottish Poor-law medical officers to thank the Association for what they had done in regard to the great grievances they laboured under. He illustrated his remarks by reference to the case of Dr. Lamont, and moved that the members of the British Medical Association hereby desire to record their great sympathy with Dr. Lamont.

Mr. George Eastes seconded, and the resolution was carried unanimously.

Amendment of the Medical Acts.

Mr. Victor Horsley then moved the resolution standing in his name:

That any draft Bill for the amendment of the Medical Acts shall contain, *inter alia*, provision for further direct representation of the profession on the General Medical Council, and for the establishment of a one-portal system of qualifying examination.

He said it was greatly to his regret that he was compelled to move this resolution; but he was obliged to do so by the action of the Council. Some two years and a-half ago the Parliamentary Bills Committee instructed a subcommittee to draw up a draft Medical Acts Amendment Bill, but, owing to the fact that the subcommittee had to give attention to the midwives question, the subject was shelved for a time. However, a year ago the committee began seriously to draft a Bill, which contained three main points: First, increased direct representation of the profession on the General Medical Council; secondly, the one-portal system of medical education; and thirdly, complete suppression of unqualified practice. The Bill was adopted by the Parliamentary Bills Committee with one or two slight alterations. It was sent to the Council, the Council considered it, and, chiefly because of what the President of the College of Physicians of Ireland said, the Council had emasculated it by cutting out that part which related to increased representation of the profession on the General Medical Council, and also that part relating to the one-portal system. The Bill had thus been reduced to a feeble measure dealing with what was considered to be the monopoly of the profession. The members of the Council were direct representatives, and it was not generous of them to try to support the corporations in their struggle against the practitioners throughout the country. The explanation offered was that the proposal of the Committee did not come within the scope of practical politics. He did not know anything more practical. There were two ways in which increased direct representation could be obtained; one was more practical than the other. The first plan was to go to the House of Commons, and ask that the present constitution of the Council should be reformed altogether, so as to convert it into an electoral body; the other method was to carry out the provisions of the Medical Acts of 1858 and 1886. The corporations boasted that the persons appointed by them on the Council now were not representatives of the body at all, and however incredible that it might seem, yet it was the fact the Bill of the Parliamentary Bills Committee contained a clause providing that a representative should be elected by the Fellows and Members of each corporation, and he thought no objection could be taken to that except on the part of one who was determined not to have direct representation under any circumstances. With regard to the one-portal system he thought it a very serious question, and one with which the Council of the British Medical Association might have shown a little more sympathy. The head and front of the opposition to this system was the President of the College of Physicians in Ireland, but the opportunity occurred of showing Dr. Moore that he was mistaken, and that his opposition was not founded on such accuracy of fact as would have been expected from him. He had practically admitted he was mistaken on the chief point of his opposition. In conclusion he expressed the hope that the next annual meeting would have a more complete Bill before it, but in order that it should not be emasculated he asked the meeting to pass the resolution which he had moved.

Dr. Brassey Brierley seconded the resolution. He had put down a motion to the same effect, but when he saw that Mr. Victor Horsley had the subject in hand he withdrew.

Dr. Alderson had great pleasure in supporting the resolution. The question of an increase in the number of direct representatives had been advocated during the last ten or twelve years, and it was to be regretted that they were no forwarder. In his opinion they would be able to get no real relief until they had parliamentary representation, and he considered that so important a body as this Association ought to have a representative in the House of Commons.

Dr. Crocker explained that the action of the Council in rejecting the special Bill to which Mr. Victor Horsley had referred was not due to any want of sympathy with direct representation and the one-portal system; but the attitude of the existing corporations and universities had to be considered. After considering the matter fully, the Council came to the conclusion that it was not within the sphere of practical politics to carry the one-portal system, however much they might desire to have it. It was for that reason that the Council had thought it better to fight for something which they could hope to get.

Dr. Pope was of opinion that if such a Bill had been adopted they would have lost a large number of members of the Association, including some of the most influential men and the members of the great corporations.

Mr. George Brown thought that they should agitate until the reforms which they sought were obtained; if members agitated through their colleges and universities the General Medical Council would more generally represent the feeling of the practitioner.

The President of Council wished to explain the point of view adopted by the Council. They were discussing here two somewhat different subjects. Mr. Victor Horsley had no doubt in his mind a Bill with the drafting of which he had a great deal to do, and which was submitted to the Council of the Association. The resolution asked the meeting to affirm that in any future draft Bill the two questions mentioned should be included. That he wished to be passed somewhat as a vote censure upon the Council for the action it had taken in cutting the Bill in which he was interested in halves. Before they voted on that matter he thought they ought to recognise that they had not seen that Bill. It was felt that that was a hopeless Bill. They all felt that the one-portal system was most desirable; many eminent men had worked hard to obtain it. As to the question of direct representation, that had many meanings attached to it. They all understood that direct representation meant a direct representative whom they all voted for as they did for Mr. Victor Horsley on the General Medical Council, but that was not the kind of thing meant in this Bill. In that the representatives of the various corporations were to be elected by the licentiates and members of these different bodies. That was what was called direct representation in that Bill. He thought, instead of adopting the proposal in the Bill, it would be better to cut the country up into electoral areas. The Council had retained clauses directed against unqualified practice in the Bill, which as a whole they regarded as highly contentious, and which they felt would have not the remotest chance in the House of Commons. In conclusion, he thought if the motion was passed they would be tying the hands of the Council by insisting that all medical reforms must proceed together or not at all. That, he thought, would be a matter to be regretted.

Dr. Parsons wished to say that the question of the one-portal system was discussed many years ago, when it was found that there was so much division of opinion that it was absolutely impossible to carry the measure; the appointment of the Conjoint Boards had been a compromise, and it was felt by those who watched the progress of events that no Government would disturb the existing state of things unless there was practical unanimity in the profession upon the point. So long as the corporations and universities were opposed to it, there was no possibility of getting a measure through the House of Commons.

Mr. VICTOR HORSLEY, replying, said the President of Council had recommended them to push one reform at a time, but if he had read the minutes of the General Medical Council he would have seen that the Government would not look at a one-subject Bill, and therefore what was the good of going to Government with such a Bill. He had a bone to pick with Dr. Saundby. He said, "If you had only seen this dreadful Bill, you would have had nothing to do with it." Who was responsible for this Bill? Why Dr. Saundby, because he was a member of the Parliamentary Bills Committee which sent up the Bill, which was discussed from end to end and every clause passed, and he said nothing; yet when it got before the Council, he said the Bill was absolutely hopeless.

The PRESIDENT OF COUNCIL explained that he did not know why Mr. Victor Horsley should attack him personally. He had never taken part in the work of the Parliamentary Bills Committee except once or twice as Chairman, and therefore he ought not to be charged with being responsible for this Bill.

The resolution was carried.

REPORTS OF COMMITTEES.

The reports of the Scientific Grants Committee, Inebriates Legislation Committee, Medical Charities Committee, Anæsthetics Committee, Therapeutic Committee, and of the General Practitioners and Ethical Committee were then received.

APPOINTMENTS IN INDIA.

Dr. SARAT K. MULLICK (for Dr. T. M. NAIR, who was unable to leave India) moved:

That the present constitution of the Civil Medical Service of India, whereby all important educational, scientific, and sanitary appointments are exclusively reserved for members of a military medical service—namely, the Indian Medical Service, who are only lent for civil work till required for war purposes—is wrong in principle, prejudicial to the interests of medical education, science, and sanitation, and unsuited to existing conditions and requirements; and that in the interests of medical education and sanitation in India, and for the general advancement of medical science, the Civil Medical Department should cease to be an appendage of, or a close reserve for, a military service, and all educational, scientific, and sanitary appointments in the department should be thrown open to the best talent available from the open profession of medicine.

The whole object of the resolution was that at present all the civil medical service appointments in India were held by the Indian Medical Service, and it was felt that they should be open to competition. He wished to acknowledge the great work which the Indian Medical Service had done for India in the past, and said that the people of that country would ever be grateful for the energy with which the members of that service had carried on their work in India.

Dr. POTTER, in seconding the resolution, said he had had some experience of the great grievance under which the Indian medical profession suffered, as he had practised in Bombay, and anything more unfair than the present system it was difficult to imagine. He fully endorsed the views of Dr. Mullick.

Surgeon-General HARVEY as a member of the Indian Medical Service thought it his duty to say something to the resolution. A similar resolution was moved at Carlisle, and was referred to the Branches, which practically reported against it. A representation was made to the Government of India by a medical association in Bombay, but their assertions, on investigation, were found to be somewhat inaccurate; that the whole tendency of their recommendations was iconoclastic and that they did not propose anything reasonable as a substitute for that which they wished to destroy. Having complimented Dr. Mullick on the tone in which he moved the resolution, he observed in conclusion that he feared the British Medical Association, much as he admired and loved it, was not in a position to give an opinion upon such a question as this one way or the other. The Government of India, which supported the hospitals and medical institutions of India, was responsible for the efficient carrying out of the medical service and to decide under what conditions the appointments shall be filled.

Professor K. MCLEOD, M.D., I.M.S., as holding the appointment of Professor of Military Medicine in the Army Medical School at Netley, fully endorsed the observations of Surgeon-General Harvey. The Indian Medical Service was open to natives of India, and if they entered it all the appointments which they showed themselves competent to fill were open to them.

Dr. MULLICK having briefly replied the resolution was put, but was not carried.

VENEREAL DISEASE.

The PRESIDENT stated that Mr. Macnamara, not being able to be present, had asked him to propose the resolution in his name. He therefore proposed:

That the British Medical Association begs to urge on Her Majesty's Government the necessity for appointing a departmental committee to inquire

(1) As to the extent to which venereal disease prevails among the civil population of Great Britain irrespective of its temporary increase or decrease.

(2) To collect information as to the present arrangements for the treatment of venereal disease, the distribution of hospitals and the number of beds available in different places, and to make suggestions as to the more efficient provision for the treatment of the disease.

(3) To collect suggestions and to express opinions as to the means that can be devised for preventing or limiting the spread of venereal disease among the civil population of this country.

This was seconded by the PRESIDENT OF COUNCIL, and carried.

On the motion of Dr. CROCKER, seconded by the PRESIDENT OF COUNCIL, the following was adopted:

That the above resolution should be forwarded to the President of the International Congress on Venereal Disease which will meet at Brussels on September 4th, 1899, urging the Congress to support the resolution by requesting the Governments of the respective delegates to pursue a similar investigation with a view of devising a uniform plan of action to mitigate the spread of this terrible disease among the people of Europe.

THE MIDWIVES BILL, 1899.

Dr. J. BRASSEY BRIERLEY moved and Dr. COLIN CAMPBELL seconded the following resolution:

That this meeting records its appreciation of the attitude of Mr. T. P. O'Connor and Mr. W. J. Galloway towards the Midwives Bill recently before Parliament, and begs to assure these gentlemen that, in the main, their objections to the proposals (as reported in the *Times*, April 13th, 1899) are shared by a large majority of the medical profession.

That this meeting regrets the course adopted by Sir William Priestley during the second reading debate upon the Midwives Bill recently before Parliament (as reported in the *Times* of April 13th, 1899) in stating that it was quite true that there was a certain amount of opposition to the Bill among a certain section of the medical profession, but the danger likely to arise to the interests of medical practitioners had been greatly exaggerated. The object of the Bill was to secure that women of the poorer classes should have the assistance of properly skilled midwives," which was adopted.

On the motion of Dr. J. BRASSEY BRIERLEY, seconded by Dr. HAYES, it was resolved:

That this meeting condemns the action of those members of the British Medical Association who continue to lecture to persons other than duly-recognised medical students—upon midwifery and the diseases of women and children—and records its displeasure at the free distribution, by certain unauthorised examining bodies, of certificates and diplomas to these irregular persons, asserting that the holders of such documents are "skilled" in the practice of midwifery.

MEDICAL REGISTRATION IN INDIA.

Dr. MULLICK then proposed, it was seconded by Mr. BRINDLEY JAMES, and agreed:

That having regard to the fact that persons possessing no knowledge of medicine are by law allowed the same right to practise in India as fully qualified practitioners, this Association considers it advisable that there should be a system of registration to protect the public from the mischievous machinations of charlatans; it further undertakes to do all in its power to carry this resolution into effect.

COVENTRY MEDICAL DISPENSARY.

On the motion of Mr. GEORGE JACKSON, seconded by Mr. BRINDLEY JAMES, it was resolved:

That the Council be requested to ascertain whether any of the present medical officers of the Coventry Provident Dispensary are members of the British Medical Association, and, if so, that they be called upon to explain why they still continue to give their services to that institution.

The meeting then adjourned.

Adjourned General Meeting.

President's Address.

The adjourned general meeting was held in the Town Hall. The President, who was enthusiastically received, delivered the address, which is published at page 325.

Mr. Butlin, in moving a vote of thanks to the President, said that Dr. Ward Cousins was an old friend of his. He must confess, however, that he had been a little thrown off his balance by the address they had listened to that evening. There were two or three occasions in his life when he had been astonished. He was foolish enough some years ago to consent to interpret at the Apothecaries' Hall for a foreigner who was to be examined. When the foreigner came there, he found that a number of his (Mr. Butlin's) friends were the examiners, and there had to be a kind of *vivâ-voce* examination before them. He was quite astonished at all they knew; in fact, he was thunderstruck at the curious things which they remembered which he himself had forgotten. They told him he was not to tell the candidate what to say, to which he replied that, if he did, the candidate would be plucked, for he himself did not know the answer. He had had the pleasure of knowing Dr. Ward Cousins for a great many years, but he really did not anticipate that he should hear an address of the kind they had listened to, which was very much out of the common, and was very much above the average. He had heard the presidential addresses at a great many meetings of the Association in past years, but he did not know that he had ever heard so scientific or distinguished an address as that to which they had just listened, which dealt with the progress of medicine and surgery during a great many years. He would like also to say that, although Dr. Ward Cousins had given it in a very uncommon way, he had given it in that way because he knew it would be better suited to his audience than if he had given it in the ordinary impassive manner in which medical men were in the habit of giving their addresses. On that account he thought it was all the more extraordinary and astounding that Dr. Ward Cousins should have remembered all the dates and names and times of happening of different events, and had been able to refer to them without on more than one or two occasions referring to his notes. In fact, it appeared to him an act of conjuring. Dr. Ward Cousins had been a very active member of the British Medical Association; he had gradually risen from one position to another until he at last became President of Council some years ago, and that night he occupied the highest position which the Association had to offer anyone. He offered him his most hearty congratulations, and he did so because he was intimately associated with him for three years when Dr. Ward Cousins was President of Council of the Association, and he, Mr. Butlin, was Treasurer. During that time he was a loyal and good colleague. Therefore he desired to wish, and he hoped the meeting would agree with him in wishing, Dr. Ward Cousins long life and good health to enjoy a continuation of the success that he had attained at the present moment.

Professor Ogston said he felt that he was greatly honoured in being asked to second the vote of thanks to the President for his address, and although he was quite unprepared to do so when he was asked, he felt that it would be a very bad soul who would not rejoice to testify in any possible fashion to the brilliant address to which they had listened. All those who were present must have been struck with the cosmopolitan tone and the generous and sympathetic way in which Dr. Ward Cousins had dwelt upon merit wherever it was to be found throughout the world. It was not only a brilliant historical speech, but a witty address, possessed of all the elements of oratory that it was possible to imagine. They must all feel that in their President they had a bowman who could hit the mark; and besides that they must all feel that what they had heard was a sermon which they would take to heart. Dr. Ward Cousins had spoken generously of the past, and was so sanguine as to the future that it would be, he thought, a stimulus to them to persevere in the development of their great and noble calling. He had much pleasure in seconding the vote of thanks which had been proposed.

The resolution was put and carried with acclamation.

The President, who, on rising to reply was received with great cheering, said he was sure he would be forgiven if he did not make another long speech. He thanked them all most heartily for the way in which they had received his most humble effort that night. He would like to inform his audience that he had just received a telegram from their able ex-President, Sir Thomas Grainger Stewart, to the effect that he had greatly improved in health. [Applause.] The telegram was: "I beg to acknowledge with warmest thanks the receipt of your generous expression of sympathy and goodwill. I wish the Association a most successful meeting, and glad to report myself greatly improved during past few days."

Second General Meeting.

The President in the Chair.

Election of President of Council.

The President said he had the honour to report that the Council that morning had appointed Dr. Roberts Thomson of Bournemouth successor of Dr. Robert Saundby as President of the Council. [Applause.]

The Annual Meeting of 1900.

The President of Council stated that on behalf of the Council he had to report that that morning it had received a deputation from the East Anglian Branch with an invitation to the Association to hold its annual meeting at Ipswich next next year. The Council agreed to recommend to the general meeting—whose business it was to say whether or not it should be so—that the next annual meeting should be held at Ipswich, and that the President-elect should be Dr. W. A. Elliston of Ipswich. He had much pleasure in formally moving that the invitation be accepted.

Mr. Henry Rundle seconded the motion, which was carried unanimously.

The President then congratulated Dr. Elliston on his election, and hoped that his year of office would be most successful.

Dr. Elliston thanked the members for bestowing on him the highest honour that it was in their power to give. To be the head of that Association, which was, he believed, the largest scientific society in the world, with 17,000 members and Branches in every part of the British Empire, was sufficient to satisfy the ambition of any member of their Association. He was quite aware of the responsibility of the position in which he was placed, and he pledged himself to be true and loyal to the interests of their Association and to the profession at large during his year of office. East Anglia, to which they had not been for twenty-six years, would be exceedingly honoured by the compliment the Association had paid it accepting the invitation to visit Ipswich; and he was sure he might, on behalf of the ancient borough of Ipswich, assure the members that they would find a reception worthy of that great Association. [Applause.]

Vote of Thanks to Dr. Saundby.

Mr. Andrew Clark (the Treasurer) was quite sure the resolution he was going to propose would be received with the greatest cordiality. He desired to move:

> That the cordial thanks of the Association be given to Dr. Robert Saundby, LL.D., for his able services as President of the Council during the past three years, for his great attention to the affairs of the Association, and that he be and he is hereby elected a Vice-President for life.

He was sure that every member of the Council would agree that Dr. Saundby had performed the duties of his office with the greatest tact, and had managed the affairs of the Council and of the Association in a way that nobody could cavil at. Those who were members of the Association but not members of the Council might not know the amount of work that devolved on the President of Council. He could assure the members that not only had Dr. Saundby devoted his attention to the duties of the Council meetings, but he had given his time and thought to the affairs of the Association. During his term of office there were various matters that he had steered through the difficult road that sometimes they had occasion to travel. He was instrumental in carrying out the negotiations for acquiring the premises the British Medical Association now occupied in London as their own. He also was the President on the occasion of their visit to Canada. Further

than that, it was in a great measure owing to Dr. Saundby that the Ernest Hart scholarship was established. There were other matters with which he was connected, such as the reform in the Army Medical Service, and it was during his term of office that the Royal Army Medical Corps was appointed as the result of a deputation to the Marquis of Lansdowne on the subject which he had headed. Again, he had successfully negotiated, if he might so express himself, the rescinding of a very objectionable law in the colony of Jamaica by which members of the profession were fined if they did not notify certain diseases when they were not paid to do so. That law had been abrogated. Dr. Saundby had given attention to the proposals on foot to take measures to check the Contagious Diseases Act, and had undertaken to attend the Congress at Brussels on behalf of the Association. There were many other matters in which he had been useful to the Association which were deserving of their cordial thanks.

Mr. Eastes had very peculiar pleasure in seconding the resolution. He had served on the Council under Dr. Saundby during the last three years, during which time he had been a constant attendant of its meetings, and had efficiently carried out his duties; so efficiently had those been performed that Dr. Roberts Thomson, who had succeeded him, would have a very difficult task in following him. He thought the least they could do was to tender to him their most cordial thanks.

The resolution was then put and declared carried.

The Address in Medicine.

The President then called upon Sir Richard Douglas Powell, Bart., M.D., F.R.C.P., to deliver his Address in Medicine.

Sir Richard Douglas Powell, who was very cordially received, delivered the Address, which is printed at page 332.

Vote of Thanks.

Colonel Kenneth Macleod, I.M.S., said he had great pleasure in proposing:

That the best thanks of the Association be given to Sir Richard Douglas Powell for his able Address in Medicine.

In doing so it was not for him to comment upon him or criticise the address which they had just listened to, but he was sure he expressed the feeling of all when he said that they had listened to it with very great pleasure and profit. The element of matter and the element of manner in the address had left nothing to be desired; the manner was charming, and the matter was excellent. Medicine had progressed until at present it had almost reached the high-water mark, but the high-water mark of to-day would become low-water mark in a century or half a century. He thought they were fortunate in having been born at the comparative high-water mark of our time, and they were all much indebted to Sir Douglas Powell for his interesting discourse.

Dr. Osler felt highly honoured in being called upon to second the motion, thanking Sir Douglas Powell for his admirable address—admirable in matter and in form, clear-cut and logical. He always liked to hear a clinician talk about bacteriology, because, after all, the ultimate court of appeal in bacteriology which concerned them as physicians was with the clinical man. This had been called a wonderful century, but it had not been more wonderful in its broad aspect in the development of material science than it had been in the development of humanity to man. It was a wonderful century for the sick man—the man in his home. He had much pleasure in seconding the resolution.

The President then put the motion, which was carried by acclamation.

The President, in conveying the vote to Sir Richard Douglas Powell, said he was sure that throughout the length and breadth of the land his address would be read with great interest.

Sir Richard Douglas Powell, in reply, said he thought the best expression he could make of his gratitude was to say no more, as he had said so much. All he would do would be to thank them heartily for their kindness.

The Business of the Council.

Dr. F. Lorimer Hart asked under what power the President of Council had ruled out of order a motion he had sent in with reference to the conduct of the Journal.

The President pointed out that the President of Council had put the correspondence in the matter before the Council, and if Dr. Lorimer Hart had followed the advice of their General Secretary there would have been no difficulty.

Dr. Lorimer Hart said the form of his resolution first of all was that the salary of the Editor should be reduced by £10, but that was simply to draw attention to the fact of the exclusion of certain interesting matters from the Journal.

Mr. Victor Horsley asked whether he was to understand that at a general meeting he had no power to discuss the expenditure on any portion of the Journal. He would like to know why Dr. Lorimer Hart's original motion was not submitted to the meeting.

The President replied it was because the Council decided that the terms of the resolution ought to be modified for the purpose of public business.

Mr. Victor Horsley inquired by what right under the Memorandum or the laws of the Association the Council could introduce that novel restriction.

The President read By-law 24.

Mr. Victor Horsley, after some further discussion (in which Mr. George Brown, Mr. R. B. Anderson, and Dr. Claremont took part), said that in consequence of what had taken place, he felt compelled to move the following resolution:

That inasmuch as the President of the Council, and subsequently the Council itself, have ruled that the members of the Association have no right to discuss in general meeting the question of the expenditure of the Association upon its Journal, this meeting strongly disapproves of the action of the Council.

Mr. Tomlin seconded the resolution.

On the motion being put from the chair, 16 voted in favour of the resolution, 5 voted against, and 7 members of the Council did not vote.

Dr. Lorimer Hart then moved:

That the attention of the Council be invited to the exclusion by the Editor of the British Medical Journal of matters of interest to the Association and to the profession; especially in reference to the Memorials of the General Medical Council against the certification of unqualified persons by registered practitioners; and to his silence on such matters obstructing reform.

Dr. Frederick Spicer seconded.

The President stated that Dr. Saundby had been compelled to leave for Birmingham, but before doing so he had handed to him the following: "Dear Mr. President,—I am very sorry that I cannot be present to defend the Editor of the Journal against the complaint voiced by Dr. Lorimer Hart that the Editor will not publish certain communications emanating from a body which devotes itself to questions of medical reform. In justice to the Editor the meeting should be told that he did this in obedience to a resolution of Council, so that the Council and not the Editor should be blamed if anybody is blameworthy. That decision of the Council was come to after due deliberation, and I can only ask the meeting to believe that it was the only practical course open to us. I have to return to Birmingham to give evidence at the assizes, or I should not have run away from this discussion.—Yours faithfully, "Robert Saundby."

Mr. Victor Horsley said, having heard the letter read, he wished to disclaim any attack on the Editor. It was now made clear that the Council, instead of helping them in reforms, was doing all it possibly could to prevent them. Dr. Saundby's letter made that fact clear.

The motion was then put, when it appeared that 15 voted for, 2 against, and 6 members of the Council did not vote.

Collective Defence.

Dr. Lorimer Hart moved:

That the Council be requested to appoint a Committee for the purpose of formulating, and at an early date reporting upon, a scheme of collective defence of the interests and consistent maintenance of the honour of the medical profession, in accordance with the provisions of Paragraph 3 of the Memorandum of Association,

and in doing so said the policy of the Council had been to discredit and resist medical defence, and special resolutions which had been passed at the annual meetings in regard to the matter had been treated by the Council with contempt.

Mr. Victor Horsley seconded the motion because he thought the proper course for the Council to adopt was to appoint a Committee in accordance with the terms of the resolution. It had been said the Association was too big to make it possible to work such a scheme, but he instanced the Cyclists' Touring Club which within the last few years had successfully taken up the question, and he saw no reason why the Association could not do the same.

Dr. Brassey Brierley thought it was monstrous that when a member got into trouble he should not be able to look to the Association for assistance.

On the motion being put 16 voted for and none against.

Proposed Conciliation Board.

With regard to the following resolution, which stood in Mr. George Brown's name,

That this meeting requests the Council to take such action as they may find expedient to facilitate the formation of a Conciliation Board in reference to medical attendance on members of clubs and friendly societies.

the President announced that a Committee had been appointed that morning by the General Council, and he hoped this resolution would not be moved.

Mr. George Brown said he was perfectly satisfied, but he thought he should have had some intimation of the fact.

The Corporations and their Members.

Mr. R. F. Tomlin moved:

That this meeting requests the Council to take measures to support in every lawful manner the rightful claims of the constituents of the several medical corporations to choose, as they are by law entitled, the corporate members of the General Medical Council; and also to assist and support the Members of the Royal College of Surgeons of England in securing (as constituting the body corporate of the College) a rightful and satisfactory voice in the conduct of its affairs,

and was proceeding to discuss the motion, when the President stated that, as a quorum was not present, the meeting would be adjourned.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SEVENTH ANNUAL MEETING.

THE SECTIONS.

BRIEF SUMMARY OF PROCEEDINGS.

Wednesday, August 2nd.

The following notes upon the proceedings in the various Sections will afford some indication of the discussions which have taken place. We propose to publish during the next few months complete reports of the papers and discussions in the various Sections.

Section of Medicine.

The proceedings of this Section were opened by an introductory address from the President, Dr. Mitchell Bruce, which is printed on page 345. The President then read (in the absence of Sir Dyce Duckworth) his opening contribution to a discussion on the Medical Tests required at present for Admission to the Public Services, in which the factors of the eligibility of candidates, both on account of physique and the power to pass examinations were generally discussed, and the causes of the rejection of defective candidates reviewed. Professor Osler, who followed, advocated that the physical examination of candidates should take place earlier in the course of their training, and alluded to the presence of a cardio-respiratory murmur, a pulmonary systolic murmur, and adolescent albuminuria as more common causes of their unnecessary rejection. Dr. Wallace discussed the question from the civil point of view, and invited the co-operation of military and naval authorities in forming a definite standard of physical fitness. Dr. W. Turner emphasised the importance of the mental condition of candidates, and referred to the occurrence of temporary insanity during active service. Dr. Savill contributed some general facts from his own experience, and analysed the rejection of candidates on account of their height. Dr. Sykes urged that more importance should be given to physique in selecting candidates. Dr. Barr also wished to raise the physical standard, which, as he said, involved a larger number of candidates presenting themselves. Dr. Calwell compared the subject with examination for life insurance, and asked that the standard should be higher. Surgeon-General Muir and Surgeon-General Cuffe spoke of the question from the military side, and on the whole supported the *status quo*: while Surgeon-Colonel Welch thought that the most suitable men were not obtained for the army on account of its literary requirements. The President congratulated the Section on the discussion, and suggested that the following resolutions should be sent up to the Council, requesting that they be submitted to the War Office: "That the physical examination should precede the educational; that soldiers should not serve in the tropics until 22; and that the question of the physical standard required reconsideration." These resolutions were passed unanimously. Professor Osler then read a paper on Hypertrophic Cirrhosis, with Bronzing of the Skin, describing two cases that resembled the bronzed diabetes of the French, but without glycosuria. After remarks by the President and Dr. Rolleston, a group of papers dealing with uric acid and gout were read: one by Dr. Haig on some new methods of estimating the amount of uric acid in the blood by the condition of the capillary circulation; one by Dr. Luff on the gelatinous form of sodium biurate and its bearing on the pathology and treatment of gout; and a third by Dr. Bain, entitled An Experimental Contribution to the Study of Gout. The President, Dr. Sykes, and Dr. Tyson discussed the papers, and the authors replied.

Section of Surgery.

The Section of Surgery was very well attended, 110 members being present, including two ladies. For the set discussion the subject of The Diagnosis and Treatment of Gunshot Wounds of the Abdomen had been selected, and the opening paper was read by Colonel Stevenson, M.Ch., R.A.M.C., Professor of Military Surgery at Netley, who alluded to the importance of the subject from the military surgeon's point of view. For the civil surgeon it carried an almost equal interest. Civil practice had been freed from the dread of interference with a serous membrane; military surgeons had been slower in recognising the capability of modern surgery in cases of gunshot wound of the abdomen, and for the following reasons: The procedures must be carried out in field hospitals; the *personnel* of these hospitals was kept as low as possible; the work done in them was performed at high pressure; wounded men were often left on the field of battle a long time before being picked up, and the military surgeon's mind was influenced by the feeling of the "greatest good to the greatest number." When cases were healed by rest and opium, the cures were probably not more than 1 per cent. of those diagnosed. When a bullet traversed the abdomen it might be assumed that either extravasation of intestinal contents or hæmorrhage, or both, had occurred. A fatal issue was certain in either. The indication was quite distinct; the abdomen must be opened, the intestines sutured, and the peritoneum cleansed. The symptoms of hæmorrhage and of extravasation of intestinal contents were analysed and discussed. Hæmorrhage resulted from the following injuries, in point of frequency. Rupture of the liver, spleen, kidneys, small intestines and large intestine. The symptoms of extravasation were misleading, irregular, and inconstant. The onset of sudden meteorism, upon which so much stress had been laid was considered of no value. The absence of liver dulness might be observed when no rupture of intestine had occurred, and liver dulness might be present when there was much free gas in the peritoneal cavity. So far as treatment was concerned, the result of the recent campaigns was mentioned. In the Spanish-American war all cases operated on died. In the Græco-Turkish war 1 case of hæmorrhage recovered, 1 of injury to the liver recovered, 1 of wound of hollow viscera died. In the Tirah campaign 5 cases were operated upon and all died. The statistics of Morton of Philadelphia were more encouraging. In 234 cases occurring in Europe and America, the mortality was 58.9 per

cent. Coley's statistics showed a death-rate of 53.9 per cent. within twelve hours, and of 77.3 per cent. after twelve hours. When a wound of the intestine was found it was best treated by (1) simple suture in two layers, one for the mucous membrane and one for the peritoneum; (2) the method of Maunsell, (3) Murphy's button. The questions he proposed for discussion were: 1. Does the diagnosis of mere penetration warrant surgical interference? 2. What are the best means to employ for restoring the continuity of the canal after excisions? Dr. Ward Cousins pointed out that the chances of success depended on early operation as soon as the diagnosis of internal injury had been made out. The diagnosis was not always easy. Perforation with very little extravasation might not cause urgent symptoms; on the other hand, severe contusion of the abdominal wall might be followed by great collapse. Every case must be left to the judgment of the surgeon. When operation was performed it was best to enlarge the wound of entrance, and to use as retractors stitches passed through the edge of the wound and held by assistants. The methods of treatment he preferred were simple suture by fine silk and the Murphy button. Mr. Berry Blacker dealt with the application of *x* rays to the localisation of the bullet. A skiagraph would show the position and therefore the probable course of the bullet. The difficulties were great, and were chiefly due to the enlargement of the shadow and the alteration in position due to respiration. Major W. C. Beevor, R.A.M.C., agreed with the general opinions expressed by Colonel Stevenson. He quoted the experience of Colonel Whitehead and himself in the Tirah campaign. The number of the wounded was very large; all water within access was contaminated by the urine and fæces of men and animals. He quoted cases showing the enormous difficulties in the way of carrying out adequate treatment. Major Beevor drew attention to a most important point, which was the enormous advantage obtained in the treatment of collapse, by the preliminary irrigation of the peritoneal cavity. Mr. Damer Harrisson referred to the want of reliance to be placed upon the presence or absence of liver dulness. He quoted a case of wound of the stomach involving both surfaces. Mr. Clement Lucas agreed with the maxims of Colonel Stevenson, but feared that with the present arrangements in warfare it was impossible to carry them out. He proposed the following resolution: "In consideration of the great increase in the number of bullet wounds due to the free sale of revolvers and pistols, this Section desires to impress upon the Council of the British Medical Association the importance of furthering a Bill in Parliament for the restriction of the sale of small arms." This was seconded by Mr. Bush, and carried unanimously. After some observations by Dr. Murphy (Sunderland) and Mr. Paul Bush on the question of the liver dulness, Surgeon-General O'Dwyer expressed the belief that operation on the field of battle was impracticable. Unless patients could be dealt with as in civil life it was better not to operate. In reply Colonel Stevenson regretted that in the Tirah campaign the conditions did not approximate to those existing in civil life, but felt sure that with the new equipment the measures suggested as being necessary for the adequate treatment could be efficiently carried out. Mr. Clement Lucas read two papers, one on the Removal of a Bullet and of a Detached Fragment from the Interior of the Skull, and the other on the Removal of a Bullet from the Front of the Second Cervical Vertebra. In both cases the operation was performed after localisation by the *x*-rays. Mr. Butlin referred to the difficulties in diagnosis, even with the assistance of the *x*-rays. In two cases of bullet wound of the chest under his care there was an aperture of entrance in each case, but no aperture of exit. A careful examination by Mr. Mackenzie Davidson failed to show the position of the bullets. Mr. Walker Downie (Glasgow) described two cases of Sarcoma of the Tongue which had been under his observation, and referred to published cases. A specimen, and sections, of one case was shown. The swelling was on the posterior aspect of the tongue, and on being punctured blood alone was discharged. There were swelling, salivation, pain, and great difficulty in deglutition. Mr. Butlin said that in a very large experience he had only seen one case of sarcoma of the tongue. Many of the recorded cases were open to legitimate doubt. There was a possibility of mere inflammatory tissue being mistaken for growth. A number of the recorded cases were certainly not sarcoma. Mr. Bush read a paper on Some Operations on the Jaws for Extensive Malignant Disease. He referred to the fact that local removal, if extensive, was usually followed by prolonged or permanent immunity from recurrence. Mr. Clement Lucas and Mr. Butlin discussed the paper.

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

THE President, Dr. Granville Bantock, opened the Section with an address which will be published. The first discussion was then introduced by Dr. Herbert Spencer (University College, London) who read a paper upon the Treatment of Fever following Delivery, with special reference to Serumtherapy. Dr. Spencer distinguished four groups of fever following delivery: the first, often called "one-day fever," due to emotion, copræmia, or other transitory cause; the second, due to complications which are not referable to the labour, including such febrile affections as influenza, scarlet fever, acute phthisis, and typhoid fever; the third, due to infection from pre-existing pelvic lesions, such as pyosalpinx, appendicitis, etc.; the fourth, due to external infection, and what is understood by "puerperal fever." Recent observations had shown that puerperal fever might have its origin in a number of micro-organisms: thus Whitridge Williams, among 26 cases, found streptococci, staphylococci, colon bacilli, gonococci, anaërobic bacilli, diphtheria bacilli, gas bacilli, and typhoid bacilli. In discussing the prophylaxis of puerperal fever, Dr. Spencer expressed the opinion that it was not necessary for a medical man to abstain from practice when attending such cases, as thorough disinfection would immediately enable him to attend other women with safety. After dealing with the question of local and operative treatment, the speaker pointed out that among the methods of remotely influencing puerperal fever were the nuclein treatment, saline infusion into the cellular tissue, and intravenous injection of antiseptics. Coming to the serum treatment, it was pointed out that a large number of observations had now been made upon its use, over 350 cases having been collected by a Committee of the American Gynecological Society, and among these cases there was a mortality of 33 per cent. Probably the natural mortality was not greater than this. The conclusions to which Dr. Spencer had arrived were: (1) That as usually applied serumtherapy in the treatment of puerperal fever has no scientific basis; (2) that it has not lowered the mortality; (3) that it usually lowers the temperature and sometimes improves the general condition; (4) that its use is not free from danger. A paper by Dr. Arnold Lea (Manchester), entitled Two Cases of Puerperal Septicæmia due to Streptococcic Infection, was next taken, and Dr. Whitelocke (Oxford) read Notes of Two Cases of Puerperal Fever in which he believed that great benefit resulted from the use of the serum. A long and interesting discussion followed, opened by Professor Murdoch Cameron (Glasgow), who laid stress upon the importance of emptying the uterus, but had little faith in the efficacy of the serum. Dr. Shaw-Mackenzie (London) expressed the opinion that venereal causes of septicæmia deserved consideration, and advocated hypodermic injections of mercury as a therapeutic agent in these cases. The discussion was continued by Dr. Purslow (Birmingham), Dr. Inglis Parsons (London), Dr. More Madden (Dublin), and Professor Byers (Belfast), who pointed out that notwithstanding the progress of antiseptic principles puerperal fever was not diminishing. He demonstrated an apparatus for obtaining the secretion from the uterine cavity in a sterilised tube, for bacteriological examination, and emphasised the fact that it was of no use to administer the serum without first demonstrating the presence of streptococci. Remarks were then made by Major Peck, R.A.M.C., Dr. Johnson, Dr. Draper, Dr. Kealey (Gosport), Dr. Edgar Barnes (Eye), and Mr. J. W. Taylor (Birmingham), and Dr. Spencer briefly replied. A short paper was also read by Professor Murdoch Cameron, entitled a Case of Rupture of the Uterus, Mixed Labour, and Delivery Three Months Later.

SECTION OF STATE MEDICINE.

THE chair was taken by Dr. George Wilson, who gave an introductory address, in which he took up a highly critical attitude

with regard to the preventive treatment of disease by inoculation and the methods of treatment advocated by bacteriologists, insisting on the essential difference between these newer methods and vaccination. Dr. E. Seaton proposed a vote of thanks for the address, which was seconded by Dr. J. Groves, and carried. Dr. Seaton introduced a discussion on Recent Vaccination Legislation and the Prevention of Small-pox, and especially directed the attention of the meeting to the Order of the Local Government Board of October last, in regard to domiciliary vaccination and the instructions to vaccinators, to render vaccination free from risk. In every case, he urged, there should be a report as to vesiculation and marks. Medical officers of health were, of course, anxious to isolate the earliest cases of small-pox, for which there should be suitable hospital accommodation, one of the most urgent needs of the present day. Dr. C. R. Drysdale thought the compromise of last year had satisfied very few people. The German Government had entirely eradicated small-pox since 1876, when the compulsory vaccination of infants and the revaccination of children aged 12 was enacted, and he recommended that this admirable system should be adopted as soon as possible in the United Kingdom. Dr. Groves said that the individual will in every community must bow to the will of the majority for the general good. The Act of last year had caused a great awakening in the minds of members of the profession, especially of the public vaccinators, who now took hygienic precautions with respect to the patient and the patient's dwelling. The difficulty of the private practitioner in obtaining lymph was great; the Local Government Board now refused to supply him with lymph. They could not in this country obtain that absolute protection against small-pox which there was in Germany until revaccination at adolescence was rendered compulsory. County councils should provide isolation hospitals for small-pox patients. Members of sanitary committees should attend to the health of the community, and not be too particular about the ratepayers' pockets. Dr. Brassey Brierley said in his district a notice was exhibited by a medical man to the following effect: "Vaccination, with calf lymph, one spot, sixpence; with two spots, one shilling," at the discretion of the parents. In fact, the vaccination of private practitioners should be supervised by Government inspectors. Mr. T. Garrett Horder said that medical men should not truckle to the views of ignorant parents. Public vaccinators now were practically sanitary inspectors; he himself had refused to vaccinate in certain insanitary premises until they were placed in a sanitary state. He had found considerable difficulty in making out his account for his services as a public vaccinator: the form on which that account was detailed was too complicated. Mr. H. May said the present Act was good in that it was increasing the number of vaccinations and the fees of vaccinators, and had undermined the position of the antivaccinators. The private practitioner had his grievance, which was that unless he was prompt he might find his patient vaccinated by the public vaccinator. The private practitioner ought to have the same facilities for obtaining calf lymph that were enjoyed by the public vaccinator. Mr. J. Brindley James related the case of a practitioner in South-East London, who having a grievance against the public vaccinator took to vaccinating at a very small charge, and gradually obtained the vaccination of his district. Dr. Seaton, in reply, expressed the opinion that it was especially important that the Local Government Board should define "efficient vaccination." Dr. Colin Campbell read a paper on the Technique of Vaccination, insisting on the absolute necessity of cleanliness at every stage of the operation and throughout the vaccinal process. He exhibited a case which he had devised, in which were collected all the instruments and apparatus required for rendering vaccination perfectly aseptic. Dr. Sinclair Holden described his method of procedure to render vaccination aseptic. He was of opinion that glycerinated calf lymph deteriorated during the hot weather. Dr. Colin Campbell, in reply, said that nothing would clean off greasy dirt except soap. He also thought glycerinated calf lymph did not always give equally satisfactory results. The next subject discussed was that of meat inspection and the abolition of private slaughterhouses. Dr. E. Petronell Manby read a paper in which he advocated the abolition of private slaughterhouses, and insisted on the inspection of all meat offered for sale in towns and rural districts. In regard to slaughtering and inspection, Great Britain, he stated, was far behind Germany and other Continental countries. Alderman Sir William Pink said that farmers were afraid of public abattoirs, fearing that prime meat would thereby lose its position in the market. Compensation for the abolition of private slaughterhouses was out of the question in Portsmouth. Dr. Sidney Marsden thought it impossible to mark all the carcasses in a manner that would be thoroughly protective to the public; for one point, the cost of marking every joint would be excessive. A whole army of inspectors would be required. Butchers should not be compensated for the abolition of their private slaughterhouses as the public had provided public abattoirs in which they could carry on their work far more efficiently than in the private slaughterhouses. Dr. C. R. Drysdale advocated the adoption of the German system of inspection, and Dr. Manby briefly replied. Dr. Sidney Marsden read a paper on Overcrowding in Secondary Schools, in which he advocated the conferring of such power upon medical officers of health to inspect and control secondary schools with regard to light, air space per head, ventilation, proper drainage, and sufficient sanitary conveniences, as they possessed over workshops under the Factory and Workshop Acts. There was at present no Act of Parliament giving them such power. The evil was a great one, and the young life of the nation at its most susceptible age ought to be protected from so easily remediable a danger. Dr. Sidney Davies and Dr. Drysdale discussed the question, and a resolution requesting the Council to urge on the Government the necessity of inspection of all schools was proposed by Dr. Marsden, seconded by Dr. Groves, and carried with one dissentient.

Section of Psychology.

The Presidential Address was given by Dr. David Nicolson, C.B., Lord Chancellor's Visitor in Lunacy, on the question, Can the reproachable Differences of Medical Opinion in Lunacy Cases be obviated? It was pointed out that the right estimate of conduct and of motives requires prolonged and careful observation, and this applied with peculiar force to judgments formed regarding cases of mental disease. The medico-psychologist had to use neurological methods—tests regarding reflexes, sensibility, etc.—as well as those belonging more properly to the domain of psychiatry. Particularly difficult to detect were cases of malingering or so-called feigned insanity, which often required prolonged watching and examination at an asylum before a definite conclusion could be reached. The lunacy cases to which the above remarks might apply belonged to one of four classes—namely: (*a*) Ordinary lunacy cases, (*b*) civil cases, (*c*) non-capital criminal cases, and (*d*) capital criminal cases. The element of malingering as a factor was undoubtedly large in criminal cases, and led to great difficulty of diagnosis. Differences of opinion among medical men were not uncommon in such cases, and might be due to differences in experience and in carefulness of observation, or be attributable in some cases to prejudice. All medical men signing lunacy certificates should have previously acquired asylum experience in the study, care, and treatment of insanity. It was a deplorable fact that owing to want of such knowledge and experience among the body of general practitioners cases of lunacy with suicidal and homicidal, or other dangerous impulses, passed largely unrecognised in the community. While accepting the methods and measurements (cranial and bodily) of anthropologists and criminalists, too much stress should not be laid on these as indices of character and disposition towards crime. Sentiment should not be allowed to bias the evidence of independent facts. Were due regard paid to such considerations as the above, differences of opinion among medical men as to the nature of lunacy cases and questions of sanity and responsibility in alleged lunatics would tend to be reconciled or solved smoothly and harmoniously. Dr. Orange, in proposing a vote of thanks, referred to the advice given by Sir James FitzJames Stephen, that when medical men were about to appear on opposing sides in a case regarding a person's sanity or insanity, it would be well if they conferred beforehand regarding the medico-psychological aspects and facts of the case. Dr. J. F. Sutherland read a paper

on the Urgency of Legislation for the Well-to do Inebriate. The Acts of 1879 and 1888 were in a measure provisions for dealing with inebriates among the lower classes of society who might come under police cognisance, a measure also contemplated by the Act of 1898. That many of the well-to-do inebriates did not fall into the hands of the police for incapacity or disorderly conduct was due to the mere accident of circumstance. Notorious drunkards existed in every parish among the better classes, whom the legislation for 1898 scarcely touched. Drunkenness *per se* it was proposed should be made an offence, and punishable as such by fine or short imprisonment. Finally a resolution was moved to bring the question before the consideration of the Council of the British Medical Association. The discussion which followed this paper was taken part in by Drs. S. Tuke, Briscoe, Lloyd Andriezen, Manning, Seward, Fletcher Beach, and the President. Dr. G. Archdall Reid read a paper on Alcoholism in Relation to Heredity, in which the prevalent belief that the offspring of alcoholic parents were liable to suffer from hereditary drink craving was controverted on *a priori* grounds. It was added that drunkenness in parents arose from some innate vice, some internal blemish, and that the latter might reappear in the children in the form of some nervous or other disorder, but not as an impulse towards drink. From historical considerations it appeared that nations indulged in drink in an inverse ratio to the length and antiquity of the use of the intoxicant. The paper was discussed at some length by Drs. Lloyd Andriezen, Briscoe, Sutherland, Seymour Tuke, and Fletcher Beach. Dr. Savage opened a discussion on the Temporary Care of Incipient Cases of Insanity, and criticised at some length the provisions of the proposed Lunacy Act of last year in Clause 23, pointing out the desirability of extending some of the provisions of this clause as regarded the certification, readmission, and care (as single patients) of incipient lunatics. Dr. Lionel Weatherly advocated an extension of the system of single care, and urged the importance of preserving all legal safeguards for the lunatic. Dr. Sutherland briefly referred to the conditions that obtained in Scotland on this subject. The discussion then stood adjourned.

SECTION OF ANATOMY AND PHYSIOLOGY.

THE proceedings on Wednesday opened with the delivery of an address by Dr. J. J. Charles, Professor of Anatomy and Physiology, Queen's College, Cork, President of the Section, which will be published in full in the BRITISH MEDICAL JOURNAL. A discussion on the interaction between the ovaries and the mammary glands was opened by Mr. Stanley Boyd. In the course of his paper he showed that removal of both ovaries in some cases caused apparently a total disappearance of well-marked cancerous growths. The most marked case was one of a woman who, even twenty-eight months after the operation, was apparently in perfect health and free from cancer. In other cases quoted the success was only partial; the growth at first underwent atrophy, and the patient's sufferings were for a time relieved, but this was later followed by recurrent growth in different parts, and finally by death. In other cases, especially those of "acute cancer" in young people, the operation seemed to have no marked effect. The administration by the mouth of the extract of thyroid gland appeared to produce uncertain results in some cases; the patient's condition sometimes was even made worse, and in others there seemed to be slight improvement or no marked effects. Mr. Boyd also referred to Dr. Beatson's cases, and mentioned that he was led to work in this direction from reading the account of a case published by that gentleman. Dr. Amand Routh showed that ovulation proceeded normally after removal of both mammary glands, that lactation was unaffected by the removal of both ovaries during pregnancy, and that these combined facts established fairly well the belief that there was no essential interaction between the ovaries and the mammary glands. From a case quoted it was shown that lactation was perfectly normal in a woman whose spinal cord was destroyed by an accident at the level of the fifth and sixth dorsal, proving that spinal conveyance of the pelvic influence was not the essential route, and there was further evidence to show that the known facts tended to show that lactation is due to some chemical change in the blood, and that this change was almost certainly in the uterus and not in the ovaries, and was practically an internal secretion. Dr. Maybury and Mr. W. Roger Williams (Bristol) continued the discussion, the latter observing that cancer was known to subside under various states of constitution which reduced the general health to its lowest ebb. Professor Anderson narrated a case bearing on the question, and was followed by Mr. Cantlie, who asserted his agreement with the contention that when the ovaries physiologically wasted in a patient the subject of cancer, the disease assumed a different state from that seen when the ovaries were normally active. Dr. Pembrey referred to the instances in animals in which the ovaries being diseased the development of the mammæ had been distinctly affected. The President asked if any reliable conclusion had been arrived at in the matter from the administration of the extract of ovaries. Mr. Stanley Boyd, in replying, repudiated any suggestion that his operation was to be considered a "cancer cure." The Section then took up the question of the anatomy of the liver. Mr. Cantlie brought forward evidence from clinical, anatomical, pathological, and developmental grounds for considering that the liver was composed essentially of a right and left half. Professor Dixon criticised this view from the embryological point of view, and Dr. Pembrey suggested the advisability of physiological experiments for elucidation of this matter. Professor Charles thought that a *primâ facie* case had been made out in favour of the new nomenclature. Mr. Cantlie briefly replied, and the proceedings terminated for the day.

SECTION OF PATHOLOGY.

THE President (Dr. J. Frank Payne) commenced the proceedings by delivering his presidential address, in which he reviewed the history of the modern idea of inflammation, and, referring to ulcerative endocarditis as a sample of inflammation, pointed out how unsatisfactory was the nomenclature. He thought that it would be well to drop the term inflammation, and endeavour to give the cause of the condition. Dr. Washbourn then introduced the discussion upon Ulcerative Endocarditis. He described the anatomy of the endocardium, and said that endocarditis, arteritis, and phlebitis should be classed together. Generally speaking, two ways of infection were possible; the bacteria might be brought by means of the blood flowing by the valve, or by the blood vessels supplying the valves, the latter only being possible in a previously damaged valve. He discussed the bacteria causing the lesion, and next the incidence upon the various valves, especially the difference between the different incidences according as the valve were previously healthy or no. Next he touched the question of the precursor of the lesion, and quoted statistics. He had succeeded in obtaining both streptococci and pneumococci during life. Lastly he touched upon experimental endocarditis and the seasonal incidence. Mr. A. G. R. Foulerton discussed the preponderance of left-sided over right-sided ulcerative endocarditis, and he expressed some doubt as to the correctness of many of the cases of so-called gonorrhœal endocarditis. Dr. Poynton drew attention to the relation between rheumatic fever and endocarditis. Mr. W. C. C. Pakes gave an account of the bacteriology of 21 cases, 75 per cent. of his cases being produced by streptococci. One case (he thought only the third recorded) was produced by the B. pyocyaneus. Dr. Bertram Abrahams pointed out the excess of the incidence in males over females—25 males and 14 females out of 39 cases coming under his notice. He considered that rheumatic fever was caused by cocci of very low virulence, and if from any cause the virulence was exalted, an endocarditis might be produced. Dr. Lazarus-Barlow thought that there ought to be two classes of endocarditis: first, where the valve had been previously affected; and secondly, where it had been previously healthy. He thought "ulcerative" was a better term than "infective," since the great majority of cases of endocarditis were infective; he had certainly found organisms in cases which would have been termed simple. Dr. W. Bulloch gave an account of thirteen cases which he had examined, both in life and *post mortem*. Dr. W. H. Bryant thought that more care should be taken to obtain the valves under aseptic conditions, and gave in detail the method which he adopted. Dr. H. M. Tickell gave a classification which he hoped would be adopted.

Dr. Theodore Fisher thought that an aortitis might precede an endocarditis; and Professor Clifford Allbutt also emphasised this point. Dr. O. J. Kauffmann had not been at all successful in obtaining organisms in life; he did not agree with Dr. Washbourn that the term infective endocarditis should drop. Dr. Driver explained how difficult it was to arrive at a diagnosis when the disease was complicated with malaria. Professor Trevelyan pointed out how meningitis could be complicated by ulcerative endocarditis, and quoted some cases in illustration. Dr. Payne thought that a general infection often preceded the endocarditis, and showed how the adult left-sided and fœtal right-sided endocarditis might be explained by supposing that the rheumatic poison would not live in venous blood. Dr. Washbourn having replied, Dr. Campbell Thomson read a paper upon the Pathology of Acute Chorea, and Dr. Bertram Abrahams made some comments. The last paper read was one on a Case of Streptothrix Infection by Mr. A. G. R. Foulerton.

Section of Ophthalmology.

The President of the Section, Mr. Simeon Snell (Sheffield) opened the business with some few general remarks, and then proceeded to read a paper on the Prevention of Eye Accidents to Iron Workers by Pieces of Metal flying off the Tools or the Moulding, which will be published in full with reproductions of the photographs of workshops and workers shown on the screen. He strongly advocated the wearing of some protecting device, and showed some wire gauze which he highly recommended; glass, even the hardest, was of but little use except to grinders. He thought that the use of pneumatic clippers, the arrangement of the workers with canvas shields interposed, and the wearing of suitable protectors, would render eye accidents very uncommon. Mr. Richardson Cross (Bristol) opened the discussion on the Pathological Signification of Sympathetic Irritation and Sympathetic Ophthalmia, and entered most fully into the question. He thought that the microbic, combined with the reflex nervous, theory would together explain some points at present unexplained, by either theory alone. Dr. Landolt (Paris) strongly condemned irritating a wounded eye by injections and other treatment, and thought that dangerous eyes should be excised. Mr. McHardy was pleased to find such unanimity of opinion concerning the treatment of the disease. Surgeon-General Caley recounted an interesting case in which the irritative symptoms disappeared on removing the eye. Mr. Devereux Marshall discussed at length current pathological theories, and mentioned the results of some of his examinations. Dr. de Schweinitz (Philadelphia) said he entirely agreed with the previous speakers, and agreed with Mr. Devereux Marshall in his criticism of Deutchmann's theory. He strongly advocated examining not only the eye but also the blood and other organs which might throw some light on the disease. Dr. Reeve (Toronto) recounted 2 cases. Dr. A. Bronner (Bradford) also mentioned a case which followed a blow on one eye from a fist. The President congratulated Mr. Cross, and fully agreed that at present there was no treatment save removal of the eye. Dr. A. Bronner (Bradford) read a paper on The Use of Homatropine Drops in Some Cases of Muscular Asthenopia, and gave several examples of cases. The President was greatly in favour of homatropine and cocaine drops. Mr. Arnold Lawson thought that in most cases homatropine was sufficient, but that occasionally atropine was indispensable. Dr. Lodge recounted some cases he had operated upon for high myopia with good results. Mr. Richardson Cross thought that no one who had done the operation would be likely to give it up as the results were so satisfactory. Dr. Bronner thought that high myopia was more common than was generally supposed, and that early linear extraction was essential. Mr. Juler was of the same opinion. The President thought that the anterior capsule should be freely opened, and the lens matter let out without delay.

Section of Diseases of Children.

The Section met on Wednesday, August 2nd, at 10 A.M., when Mr. Edmund Owen opened the discussion with a highly interesting and suggestive paper on The Treatment of Ununited Fracture in Children. Mr. Owen pointed out that in children the tibia and fibula were the bones in which these fractures were commonly found, and raised the question why the results of all treatment were almost always so bad, even when all the conditions were good, and when there was apparently no local impediment whatever to reunion of the fragments. There was occasionally an ill-defined bending of bone leading probably to its fracture, while an atrophic condition of the lower fragment was often found in cases operated on long after the original injury. The explanation of this was still to seek. All his best endeavours to establish consolidation in these cases had ended in complete failure. Mr. Morgan (Brighton) recalled a case in which there was entire absence of the fibula, suggesting a congenital cause. Mr. Tubby thought that soft bones were not proper objects for the operations of osteotomy or osteoclasis. He had observed acute fatty degeneration in an old-standing case. Dr. Maguire (London) opened the discussion on the treatment of Pleuritic Effusions in Children from a medical point of view, including under this heading the operation of simple puncture and aspiration. Treatment was discussed in relation to such questions as the positive tension and resiliency of the thorax, the character and quantity of the fluid, displacement of the heart and abdominal viscera, and the general state of the patient. Some conditions in which operation might not be desirable or possible and the question of medicinal treatment were touched upon. Mr. Betham Robinson (London) referred to certain points of surgical procedure, the relative advantages of high or low incisions, resection of rib, counter openings, irrigation, and the time of retention of the tube. The President, Mr. E. Mansell Sympson, Mr. Tubby, and Dr. Stirling also spoke, and Dr. Maguire and Mr. Robinson replied. Dr. G. F. Still contributed a paper on the Morbid Anatomy of Tuberculosis in Childhood, and Mr. Morgan a paper on Tuberculous Adenitis, both of which were received with great interest. The Section was very well attended by members.

Section of Pharmacology and Therapeutics.

The President (Dr. John Buckley Bradbury) in opening the work of the Section referred to the place occupied by this branch of science in the final examinations of the various licensing bodies. He alluded to the tests of a few years ago when a candidate was expected to be able to distinguish between the various senna leaves, and hoped that there would not now be a reaction to the opposite extreme. He considered a knowledge of pharmacology essential, and as its basis praised the new edition of the *British Pharmacopœia*, which in his opinion comprised what a student should know and should be expected to pass in after clearing himself of anatomy and physiology. The regular work of the Section commenced with a discussion on Headaches and their Treatment, opened by Dr. T. Lauder Brunton. His paper contained a quantity of interesting information, and brought out the connection of cerebral vasomotor disturbances and toxæmia with the majority of headaches not due to local causes. In the course of the discussion Dr. Dundas Grant pointed out the frequency of nasal troubles as a cause of headache, while Professor Clifford Allbutt was disinclined to attach much importance to vasomotor disturbances. Dr. Harry Campbell dwelt on headaches of syphilitic origin and recommended the administration of drachm doses of iodide of potassium, smaller doses often being insufficient to modify this specific disease. Both he and Dr. W. J. Tyson dwelt on climate as a factor in the production of headaches, while Dr. Herschell referred to over-distension and dilatation of the stomach as frequently associated with headache. On the other hand, Dr. Pope referred to those numerous cases in which headache resulted from an empty stomach. These he attributed to a liver which soon ceased to secrete bile after the taking of a meal. Dr. StClair Thomson had often found headache in association with chronic ear disease. Dr. Sarat K. Mullick referred to tropical diseases in connection with headache, and Dr. Masters, speaking from his own experience, agreed with Dr. Brunton as to the vasomotor disturbances present in many forms of headache. The President quoted instances in which smoking had proved beneficial, while Dr. Duffin referred to a variety which he had observed in coal mine workers. Dr. Brunton, in replying, mentioned that altitudes and depths probably produced headaches by altering the atmospheric pressure in the

sinuses. Dr. Bampton described a case which he had the opportunity of watching for a considerable time, the patient taking regularly large doses of sulphonal without his knowledge. Death resulted from peripheral neuritis, motor and sensory. Drs. Eyre and Washbourn introduced a paper on further experiments with Pane's antipneumococcic serum. Prior to the opening of the Section, Dr. George Herschell showed an apparatus for the administration of the intragastric needle brush and an improved apparatus for washing out the stomach.

SECTION OF LARYNGOLOGY AND OTOLOGY.

THE President (Mr. Cresswell Baber) delivered an address on the Progress of Rhinology during the last Thirty Years, which will be published. Dr. P. Lacroix (Paris) showed an apparatus for the application of medicated vapours to the upper-air tract. Formalin and menthol had yielded him good results in the treatment of tuberculous laryngitis, and he described experiments showing that the vapour inhibited the development of pus cocci and tubercle bacilli. Dr. Bronner (Bradford) read a paper on the Use of Formalin in Atrophic Rhinitis. Drs. Watson Williams, Kipp, and Boboni had found formalin irritating, and Dr. Pegler and Dr. Tilley emphasised the importance of douching. Dr. Jackson (Pittsburg) recommended papaya solution for softening crusts. Dr. Bronner said he stopped short of strengths that caused irritation—1 in 1,000 or 1 in 2,000 solution, or a coarse spray rather stronger. Dr. Tilley read a paper for Messrs. Lake and Pollard on a Case of Exophthalmic Goître cured by the removal of one lobe of the thyroid. Dr. Watson Williams thought few would care to urge operation, considering the risks and the uncertainty of cure. Dr. Tilley agreed, and spoke of good results from drug treatment. In reply to Dr. Tilley, the President, Dr. Snow (Syracuse, U.S.A.), and Dr. Pegler described cases in which symptoms of Graves's disease had either supervened upon nasal operations or had been benefited by intranasal treatment. Dr. Dundas Grant read a paper on Some Forms of Laryngitis consequent on Purulent Affections of the nose. He referred to sphenoidal and posterior ethmoidal empyema, and ozæna laryngis, describing the macerated aspect and inter-arytenoid swelling, and referring to the diagnosis from phthisis and syphilis, and the relation to pachydermia. Professor Luc (Paris) agreed as to the similarity to phthisis, and described the suffocative dyspnœa of ozæna laryngis. Dr. Pegler inquired the kinds of rhinitis in question, and Dr. Grant replied. Dr. Louis Bar (Nice) read a paper on the Diagnosis of Chronic Frontal Sinus, Empyema, and Malignant Tumours of the Nasal Fossæ, dealing particularly upon the impossibility in many cases of ascertaining the cause without exposing the sinus by external operation. Professor Luc kindly repeated the substance of the paper in English.

SECTION OF TROPICAL DISEASES.

THE address of the President (Dr. George Thin) will be found at page 349 of this issue of the JOURNAL. The remarks of the President excited controversy only as regards the localities of the teaching of tropical diseases. The matter was fought to an issue by a motion "that Netley be opened to civil practitioners for the study of tropical diseases." Dr. Charles, Lieutenant-Colonel Macleod, and Dr. Watson spoke in favour of Dr. Thin's motion; but an amendment proposed by Dr. Manson, and seconded by Inspector-General Turnbull, R.N., was carried. The supporters of the amendment held that the time for such a step was inopportune, and that Government had shown a liberal spirit in supporting the tropical schools at the Albert Docks and in Liverpool, where ample clinical experience was to be had. Dr. George H. F. Nuttall (Cambridge) read an important and eminently scientific paper on the *Rôle* of Insects, Arachnids, and Myriapods in the Spread of Diseases due to Parasites. After referring to the brilliant researches of Ross, Grassi, Bignami, and Bastianelli to the part played by insects in the distribution of disease, he proceeded to consider the passive and active parts played by insects as carriers of pathogenic organisms. As passive carriers the common fly was held to be the chief offender in this respect. Although unable to bite they might, from the character of their food or by their dejecta, spread several diseases—anthrax, plague, cholera, typhoid, frambœsia, Egyptian ophthalmia, and Florida sore eye were capable of being thus dispersed, and experimental research had ascribed to pediculi a similar *rôle*. The evidence as to the active agency of insects was more negative. In fact, experiments made by the writer, some 250 in number, in reference to the part played in plague, anthrax, mouse septicæmia, and chicken cholera, all gave negative results. In a large number of experiments made by allowing these insects to bite animals dying of the diseases named, and immediately afterwards transferring them to healthy animals, not a single case of infection occurred. As regards the spread of animal parasites by insects, arachnids, and myriapods, Dr. Nuttall again considered their active and passive bearing. Whilst serving as intermediary hosts, insects might perform a passive *rôle*, as when they were devoured by a host of the parasite they contained; and, again, an active *rôle*, when as in the case of the tick in Texas fever and malarial fever they inoculated the parasite into a host by means of their probosces. On the other hand, insects, etc., without serving as intermediary hosts might serve as active and passive agents. As examples of their active *rôle* he cited the tsetse-fly disease, in which the infective agent was carried from one animal to another, and inoculation of the parasite itself took place. Insects, etc., probably played a passive *rôle* in the distribution of animal parasites by the transportation of the eggs and their deposition in food, etc. As examples of this form of propagation he mentioned flies transporting eggs of tænia solium, trichocephalus, etc. Dr. Nuttall concluded by saying that in bacteriological studies what was required was more thorough work and less general theory. By microscopical specimens, photographs, and lantern slides, Dr. Nuttall showed the development of the malarial parasite. Mr. C. P. Childe read a paper on Bilharzia Hæmatobia in a girl aged 16, who he believed had contracted the disease through bathing in a pool of fresh water. Dr. Manson and Lieutenant-Colonel Macleod (Professor of Military Medicine, Netley) dissented from the opinion that the patient could have been infected directly by the skin. Dr. Patrick Manson read a paper on Filarial Periodicity. He dwelt chiefly on the question of what became of the filaria during the day. In answer to this question he was able to record the results of a *post-mortem* examination held in February, 1897. The cadaver had been known to be the subject of filaria nocturna, and death had taken place at 8.30 A.M. (by suicide)—that is to say, just about the time the filaria had retired from the peripheral circulation for the day; 17 adult filaria Bancrofti were found in an enormous lymphatic varix in the pelvis. By microscopic examination of the blood it was proved that the pulmonary veins, the pulmonary arteries, the lungs and blood clots in the heart and aorta contained swarms of embryos. The brachial venæ comites, the liver, and spleen contained but few filariæ, whilst in the bone marrow filariæ were absent. Dr. Manson could not supply any explanation of how these parasites maintained themselves in the arterial blood stream of the carotid or aorta. The facts seemed to point to the existence of some physiological product, the outcome of the activities of waking life, which either drove filaria nocturna from the surface of the body during the day, or attracted it to larger arteries during the night. What this substance might be it was for the physiologist to say.

MR. GUNTRIP KING has been appointed Secretary to the Samaritan Free Hospital, in the place of Mr. Scudamore, who has retired owing to ill-health.

SUCCESSFUL VACCINATION.—The Government award for efficient vaccination has been granted to Frederick Cant, M.R.C.S., L.R.C.P.Lond., public vaccinator for the Bredbury District of the Stockport Union.

DENTAL HOSPITAL OF LONDON.—An entrance scholarship of the value of £20 has been founded by Dr. Joseph Walker, and will be awarded in October of each year. The subjects of the examination will be dental mechanics, chemistry, and physics. The examination will be held on September 28th and 29th, commencing at 4 o'clock on the first date. Intending competitors should send in their names to the Dean a week beforehand.

THE ANNUAL MUSEUM

OF

FOODS, DRUGS, INSTRUMENTS, BOOKS, AND SANITARY APPLIANCES.

The annual museum in connection with the sixty-seventh annual meeting of the British Medical Association was held in a well-lighted hall, 150 feet in length and 60 feet in width, close to the reception room. The display of sanitary appliances was held in a Board School at a short distance. The following is a short account of the principal objects exhibited, arranged under the names of the exhibitors.

Drugs and Pharmaceutical Preparations.

A large number of pharmaceutical and diabetic preparations are exhibited by Messrs. Allen and Hanburys, Limited (Plough Court, Lombard Street). It would be impossible to enumerate all these, but we may draw particular attention to the Allenbury's food for infants, a series designed to meet the requirements of the infant organism during its development. A detailed report upon this food was published in the British Medical Journal some years ago. With regard to the "first food for infants," we were able to state that the results of a careful examination and test had been remarkably satisfactory. Decided improvement was observed in many instances in which the food was given to infants suffering from atrophy and other wasting diseases. The powder appears to be thoroughly well manufactured and keeps for a reasonable time after the tin is opened. This food is intended for children up to two months. The next food is for children during the first months of life, but in the case of delicate infants the first food can be used with advantage for a longer period. Messrs. Allen and Hanburys show also the antitoxin serums prepared at the Jenner Institute of Preventive Medicine.

Messrs. Bayer and Co. (19, St. Dunstan's Hill, E.C.) exhibit somatose, which is a dry, almost tasteless, and odourless powder containing albuminoid principles, prepared from meat. They also exhibit iron somatose (ferro-somatose), in which the albuminous substance is combined with iron, and milk somatose (lacto-somatose) made from the albuminous material of milk. They also exhibit specimens of a number of drugs, including iodothyrin, an active principle isolated from the thyroid gland by E. Baumann and E. Roos. These observers believe (*Year Book of Pharmacy*, 1896) that the substance exists in the gland partly in the free state and partly combined with albuminoid matters, and that it represents the entire activity of the gland. Its efficacy in myxœdema has been proved by Leichtenstern and Ewald. It has also been employed in the treatment of obesity and other disorders in which thyroid treatment is indicated. Other pharmaceutical preparations exhibited by this firm are trional, lycetol (tartrate of di-methyl-piperazine), europhen (recommended as a substitute for iodoform), sulphonal, tannigen, and tannopine (intestinal astringents), creosotal, a mixture of the phenol carbonates of creosote, duotal, a pure guaiacol carbonate, and aspirin, an acetic ester of salicylic acid, which is not acted on in the stomach, but is decomposed in the intestine yielding salicylic acid.

Messrs. Burgoyne, Burbidges, and Co. (Coleman Street, E.C.) exhibit for the Chemische Fabrik von Heyden, Radebeul, W. Dresden, a series of drugs and pharmaceutical preparations, most of which have been recently introduced, and present certain advantages. Among these may be mentioned various preparations of guaiacol and creosote, and zuckerin, a sweetening substance stated to be 550 times sweeter than sugar, acoin, and collargolum, a soluble preparation of silver and hyrgolum, a soluble preparation of mercury, both used in the form of ointment.

Messrs. Thomas Christy and Co. (25, Lime Street, E.C.) exhibit a large series of pharmaceutical preparations which they manufacture. Among these we may mention an improved form of cachet and an apparatus for closing; Pictet's ethyl chloride in improved containers; various medicinal preparations of fluorine; iodalbacid, a chemical combination of iron and albumen which is stated to be of use in avoiding iodism; ferralboid, a peptonised albuminate of iron, and various other more or less novel pharmaceutical products.

Messrs. Fairchild Brothers and Foster (Snow Hill Buildings) exhibit a number of digestive products, including pepsencia, described as a solution of the essential organic ingredients of the gastric juice extracted directly from the peptic glands, and pepsine in scales and powder and in tablets. Zymine and zymine peptonising tubes, peptogenic milk powder, which when added to milk leads to a modification of the casein which is rendered softer, but not completely peptonised, and a food product, stated to be made from beef and wheat, to which the name panopepton is given, are also exhibited.

Messrs. C. J. Hewlett and Son (Charlotte Street, E.C.) exhibit a number of pharmaceutical preparations, including flexible and medicinal capsules, for the exhibition of nauseous and bitter drugs, They also exhibit a neutral, tasteless, oily liquid, to which they have given the name of petrolatrine. Camphor, menthol, thymol, and other similar bodies readily dissolve in it, and such preparations are used in the treatment of nasal and laryngeal affections. For this purpose the firm makes an atomiser of convenient form. Messrs. Hewlett also exhibit standard preparations of ipecacuanha wine, and liquid extracts of ipecacuanha and of belladonna, made according to the requirements of the *British Pharmacopœia, 1898*. Various other antiseptic preparations are shown by them, including antiseptic jellies, one of which contains 1 part per 1,000 of mercury perchloride, and antiseptic pellets for the rapid preparation of perchloride solutions. They also exhibit isphagul, a new drug said to be useful in diarrhœa and dysentery, and certain other new drugs. Apparatus for the analysis of urine and various test solutions in a convenient form are also shown by this firm.

Mr. B. Kühn (36, St. Mary-at-Hill, Eastcheap) exhibits a number of preparations of various remedies all of more or less recent introduction. Among these are chinosol ($C_9H_6NKSO_4$), a yellow crystalline powder with a slight aromatic odour and a strongly astringent taste. The drug, according to the report quoted in the *Year Book of Pharmacy* (1896) from *Noveaux Remèdes* (xii, 132), is non-toxic and greatly exceeds phenol as a germicide, while it has no caustic action on the skin. It is shown both pure and in various preparations for medical and surgical practice, for veterinary practice, and in a crude form for general disinfecting purposes. A compound of silver and chinosol to which the name argentol has been applied, is used as a dusting powder. According to the *Year Book of Pharmacy* (1897) it is readily decomposed and in the presence of septic substances splits up into oxychinolin and metallic silver, both of which have a bactericidal action. It has been used as an application in powder to foul suppurating surfaces and indolent ulcers. Two preparations made from pyrogallol are exhibited—lenigallol and eugallol. The former is a mild preparation which has been recommended in eczema, while the latter is more active. Eurobin is the name applied to a body obtained in powder which is stated to be chrysarobin acetate and to have the advantage over chrysarobin that it does not stain the skin. Betul-ol (a methyl salicylate) possesses anodyne properties and has been used in a liniment as an application in painful affections of the joints and other parts. Mr. Kühn also exhibits samples of tannalbin (Knoll), diuretin (Knoll), and papain (Finkler), as well as ethyl chloride and anestile in bulbs and cylinders for the production of local anæsthesia, and a foot pump ("Nebro pump") for distributing disinfectant liquids on walls, floors, etc.

Messrs. Kutnow and Company, Limited (41, Farringdon Road) exhibit the effervescent Carlsbad powder made by them and also an antiasthmatic powder and cigarettes made from it.

Messrs. Mackey, Mackey and Co. (Grange Road, Bermondsey) exhibit a number of pharmaceutical preparations adapted to various purposes, among others a compound mixture of cascara and a compound mixture of cerium, various drugs in compressed pellets, and a number of glyceroles or glycerine tinctures, which are described as economical substitutes for tinctures prepared with spirit. Glycerine dissolves most of the alkaloids and their salts, and when it is unnecessary to have in solution a substantial proportion of resin or essential oil, they may in most cases take the place of

spirit. The same firm exhibits an aseptic syringe (Luer's patent).

The Maltine Manufacturing Company (Hart Street, Bloomsbury) state that the maltine prepared by them is made from malted barley, wheat, and oats without the addition of extraneous syrup or sugar. The company exhibit maltine plain and also in combination with various drugs, as with hypophosphites (lime, soda, and iron) with cascara sagrada, with cod-liver oil, with Easton's syrup, with pepsin and pancreatin, with phosphates (chemical food), and with iron. They also exhibit a preparation of maltine (malto-yerbine), in which each fluid ounce contains 30 grains of yerba santa.

Messrs. M. Hoff (Hamburg) and Leopold Hoff (29, New Bridge Street, London, exhibit specimens of their malt extracts.

Mr. W. Martindale (10, New Cavendish Street, W.) shows a long series of pharmaceutical preparations, which are perhaps too well known to the profession to need a detailed description. Mention may be made of the preparations of the expressed juices of greater celandine—chelidonium majus—a drug for which much was hoped some few years ago as a remedy for cancer, although we have not seen any recent reports upon its value. Mr. Martindale also shows moss dried and pressed into sheets which possesses the property of absorbing about twenty times its weight of fluid. He also shows nitroglycerine tablets made of chocolate, each containing $\frac{1}{100}$ gr. of the active drug. Mr. Martindale points out that the official trinitrin tablets are now double the weight of tabellæ nitroglycerini, *B.P.*, *1895*. He, however, believes that this greater dilution is undesirable, but makes the tablets of various strengths. Chocolate tablets containing apomorphine, caffeine, cocaine, as well as erythryol and mannitol nitrates, are also manufactured. He also exhibits a sterilised glycerinated jelly in collapsible tubes designed for use in obstetrical and general surgical practice as a substitute for carbolised vaseline and other oily lubricants, and iodum oleatum, a solution of iodine in oleic acid. It is a dark brown liquid which as a local application possesses the advantage that it does not stain the skin. A urine test case designed by Mr. W. Harrisson Martindale, Ph.D., to meet the requirements of the practitioner, and capable of being carried in a handbag, is also exhibited.

Messrs. Newbery and Son (1 and 3, King Edward Street, London) exhibit a number of pharmaceutical preparations including dialysed iron and elixir of salicylic acid; a fluid extract, as well as an elixir of cascara; and a series of granular effervescent salts including lithia benzoate, Kissingen salt, sodium salicylate, and caffeine hydrobromate. The same firm exhibit ingluvin, a digestive ferment obtained from the gizzard of the fowl, which has been found in some cases a useful substitute for pepsine. They also exhibit lithia tablets, effervescent Carlsbad and Vichy tablets, and compressed tablets of various drugs to which the name of lentiforms is applied, manufactured by W. R. Warner and Co.

Messrs. Parke, Davis and Co. (21, North Audley Street, London, W.) show a number of pharmaceutical and dietetic preparations. Among the former are standard fluid extracts, a fluid extract of cascara sagrada (a drug which they claim to have been the first to have brought into general use), various elixirs, an egg emulsion of cod-liver oil, and preparations of euthymol, an antiseptic body. Among the food products may be mentioned Mosquera's beef jelly, beef meal, and beef cacao, and nutrient suppositories for rectal feeding. The same firm exhibit various serums and antitoxins, including antidiphtheria and antistreptococcus serum, and also takadiastase, a vegetable amylolytic ferment.

Messrs. Nicolay and Co. (36, St. Andrew's Hill, Doctors' Commons, E.C.), show specimens of Hommel's hæmatogen which it is stated contains hæmoglobin, the salts of blood, and certain albuminous constituents of the serum.

The Sanitary Wood Wool Company, Limited (26, Thavies Inn, Holborn Circus), exhibit a number of specimens of Hartmann's wood-wool preparations, including wadding, antiseptic tissue, sheets for use in confinements, towelettes, vaccination pads, sponges, infant napkins, and an outfit for use in confinement containing the necessary appliances. The same firm exhibit also sublimate and iodoform gauze, catgut, absorbent cotton wool, and absorbent cotton tissue. The former, which is made according to the direction of Professor von Bruns, can be obtained medicated with various antiseptics.

Specimens of Scott's cod-liver oil emulsion are exhibited by Messrs. Scott and Bowne, Limited. They state that the emulsion is made with glycerine, and contains hypophosphites.

The Timothy White Company, manufacturing chemists and druggists (Portsmouth), show some interesting specimens of raw drugs and of pure alkaloids in bulk, as well as a series of pharmaceutical preparations, compressed drugs, pills, and syrups, including a compound syrup of hypophosphites. The same firm show a number of surgical instruments, microscopes, general operating appliances, and nurses' wallets, manufactured by Messrs. Lynch and Co., of London.

Messrs. Wyley's, Limited (Coventry) exhibit a series of pharmaceutical preparations, including some non-alcoholic "hospital tinctures," various standard liquors, an antiseptic soap called sapolette, compressed pellets of different drugs, and vaccination cases.

Messrs. A. M. Zimmerman (9, St. Mary-at-Hill, London) exhibit a number of Schering's pharmaceutical products, including beta-eucaine, a substitute for cocaine; sanose, a dry food obtained from milk, and said to possess 20 per. cent. of casein and 20 per cent. albumose. The same firm exhibit also the diphtheria antitoxin manufactured by Schering. Among other specimens shown by Messrs. Zimmermann are orexin tannate, hetol, and hetokresol prepared by Messrs. Kalle and Co. Naftalan, a raw naphtha obtained by the Naftalan Gesellschaft, Magdeburg, from a spring in the Caucasus, is said to have been found useful in eczema and burns. Messrs. Zimmermann also show tanocol, a gelatine tannate employed as an intestinal astringent, an ointment basis called resorbin, an antiseptic and disinfectant called lysol, and specimens of the water of Levico in the Tyrol, where there is a natural arsenio-ferric spring.

Mineral Waters.

The Borough of Leamington have a stall on which they exhibit the natural mineral waters of Leamington Spa—plain, aërated, and concentrated—together with photographs of Leamington baths and pumproom, and the surrounding country.

The Municipality of Harrogate show a working model of the Harrogate massage douche, photographic views of Harrogate, and a series of samples of the natural mineral water of Harrogate—the strong and the mild sulphur waters, the pure chloride of iron water, and the saline iron water, together with the residual salts from these waters.

The Apollinaris Company, Limited (Stratford Place, Oxford Street) exhibit, in addition to the Apollinaris and Johannis water, Apenta water, which is stated to be a natural mineral water containing magnesium and sodium sulphates, the former predominating, and a small amount of lithia. The water is well known as a convenient and not unpalatable saline laxative. The same company also exhibit Friedrichshall aperient mineral water, which contains alkaline chlorides, as well as magnesium sulphate. The company exhibit also Johannis lithia and Johannis potash waters, made by adding a definite proportion of these alkalies to the Johannis water.

The Condal Water Company, Limited (38, Walbrook, E.C.), exhibit Condal water, which is stated to be a natural aperient water, containing about 20 grs. of sodium sulphate and less than 2 grs. of magnesium sulphate in the fluid ounce. It also contains a small quantity of sodium chloride.

Idris, Limited (Pratt Street, Camden Town), exhibit specimens of Idris mineral waters and of Emmaburg natural table water, as well as lime juice and fruit syrups manufactured by them.

Messrs. Ingram and Royle (26, Upper Thames Street, E.C.) exhibit a series of natural mineral waters imported by them, including specimens of the Celestins, Grand-Grille, and Hôpital Springs at Vichy, and the mineral waters of Carlsbad and Hunyadi Janos aperient water. They also show specimens of Vichy salts and pastilles, and of Carlsbad salts in powder as well as in crystals.

The Kronthal Company, Limited (66, St. James Street,

S.W.), exhibit three kinds of water, distinguished by red, blue, and green labels. With regard to the red and blue waters, which were recently examined for us, we were able to report that the results of our analyses showed that the waters contained very slight amounts of organic matter, so slight as to be without importance, and might therefore be regarded as organically pure. The red label water contained a considerably higher amount of saline constituents than the blue label water, but in neither case were the amounts or the nature of these constituents such as not to justify the conclusion that the waters, which are very pleasant and palatable, are of excellent quality and perfectly suitable for table use. The green label water is said to contain iron in an assimilable form.

Orezza water is exhibited by Mark Whitwell, Son, and Judge (6, St. Helen's Place, E.C.), who state that it is obtained in Corsica from a natural spring at an elevation of about 2,000 feet above sea level. The spring is the property of the Department of Corsica, and the water is stated to contain iron carbonate and protoxide, sodium, magnesium, and calcium carbonates, and sodium and potassium chlorides, with a trace of manganese, arsenious acid, and sulphur. It contains sufficient free carbonic acid to cause it to effervesce slightly in a tumbler.

Messrs. Andreas Saxlehner (Budapest; London Agency, Trafalgar Buildings, Charing Cross) exhibit specimens of Hunyadi Janos natural aperient water, for which it is claimed that the ratio of the active saline constituents to each other is constant. According to the analyses which have been published, sodium and magnesium sulphates are present in proportions which are almost equal, while the water contains also sodium chloride and carbonate, as well as some lithium carbonate. The water is well known as a useful saline laxative.

There has been a disposition on the part of manufacturers for some time past to offer to the profession various artificial mineral waters containing stated quantities of various salts, or natural mineral waters modified by the addition of stated quantities of certain salts. An example of a water of the latter class is the "Wiesbaden gout water," exhibited by Pharmacie Internationale, Hamburg. This water is made by adding sodium bicarbonate to the water of the Wiesbaden Kochbrunnen. The quantity of sodium bicarbonate added is stated to be 8.5 gr. per litre. Special stress is laid by the manufacturers upon the small quantity of lime salts present in the water of the spring mentioned. Those who desire to prescribe sodium bicarbonate for gout will find in this water a palatable preparation and one which is believed by some physicians to be particularly well borne. Wiesbaden Kochbrunnen water is also exhibited, together with the salt from this water both for internal use and for making baths. The same Pharmacie exhibits a drug to which the name sanochinol has been given. It is stated to be prepared from quinine by the action of nascent oxygen, which leads to a rearrangement of the molecules of quinine producing a body differing in its chemical quantities from quinine, but possessing similar therapeutic powers. The Pharmacie also exhibits an animal vaccine lymph, which is stated to be prepared under the supervision of the German Government.

A domestic method of aërating water is demonstrated at the stall of Aeratos, Limited, Broad Street Avenue, E.C. The company supply small steel receivers called sparklets, containing compressed carbonic acid gas. If the user takes care to employ pure or distilled water he can by the use of this invention easily obtain an aërated water which can be modified by the addition of soda, potash, lithia, etc.

Food and Dietetic Preparations.

The importance now attached by milk vendors to the sterilisation of their products is shown by a number of preparations exhibited by the Aylesbury Dairy Company (St. Petersburgh Place, W., London). These include sterilised milk and cream put up in convenient bottles, and sterilised humanised milk, which has been for many years before the profession as a useful food for infants. Sterilised whey is exhibited also, and appears to be a well-made and palatable article. The company also make a modified milk for infants, prepared on the system which Dr. Rotch, of Boston, has done so much to popularise. There is no doubt that Dr. Rotch, in working out this system, was guided by correct scientific principles, and that when carefully prepared the milk is calculated to be of real service in the bringing up of delicate infants. Koumiss, in various forms—"full," containing the maximum of casein; "medium," containing more lactose and less casein; "koumiss whey," free from casein; and the so-called "diabetic koumiss," prepared with or without glycerine—is also exhibited by this company. The company also show a "muffler sterilised food" for infants and invalids, in vacuum-stoppered bottles, which we have had no previous opportunity of examining.

The Anglo-Swiss Milk Company (10, Mark Lane, London) exhibit the condensed milk—Swiss and English—manufactured by them under the brand of "Milkmaid." Samples of this were examined for the British Medical Journal in 1895, and the analyst reported that it contained 10.92 per cent. of fat, which proved it to be a condensed milk of good quality. The same firm exhibit another brand, called "The Ideal," which they state to be unsweetened, sterilised, and enriched.

Messrs. Brand and Co., Limited (11, Little Stanhope Street, Mayfair) exhibit various specialities for invalids made by them, among others a meat juice for which it is claimed that it consists of the juice of the finest English beef in its natural state extracted in the cold by pressure. This preparation was examined for the British Medical Journal some years ago, and the examination showed that the juice contained the physiological proximate principles which enter into the composition of a liquid obtained in this manner. It is a very concentrated solution, becoming solid when warmed, and in drying loses about 60 per cent. of its weight. The ash consists of phosphates with sodium chloride. The juice has an agreeable roast-meat-like flavour. Messrs. Brand also exhibit peptones of beef, mutton, veal, and chicken and albuminous essences of beef, mutton, veal, and chicken, concentrated beef-tea, mutton broth, chicken broth, and veal broth, turtle, beef, mutton, and chicken jellies, and various soups and concentrated soups. Thay also exhibit a powder which is stated to consist of muscle fibre only from which the moisture has been removed by a temperature below the coagulation point of muscle proteids. From its general character and slight taste it appears to be well adapted for use in various cases where meat in ordinary forms cannot be readily taken.

Bovril, Limited (30, Farringdon Street, London, E.C.), exhibit a set of the principal specialities manufactured by the company, including ordinary bovril, invalid bovril, beef jelly, and certain so-called emergency cartridges and concentrated foods designed for military and naval purposes, and for use in Arctic expeditions. The company also show cocoa and chocolate manufactured by them, and various sorts of condiments. Bovril meat juice is stated to be expressed in the cold from raw meat, and to be an article economical in use. The company also show a meat extract made after Liebig's formula.

Cadbury's Company, Limited, exhibit a cocoa for which they claim that it is a pure cocoa entirely free from all admixtures. Some years ago Messrs. Cadbury's cocoa essence was examined for the British Medical Journal, when it was found that the statement that it was a pure cocoa from which about two-thirds of the fat had been removed was correct. The preparations of this company are well made, and can, we believe, be relied on.

Messrs. Callard (65, Regent Street, London, W.) exhibit various diabetic foods. Several of this firm's preparations were examined for the Journal some years ago, and were found to contain no sugar and but a small proportion of starch. A palatable brown bread, which has the advantage of being moist, is now made, and also a marmalade made with glycerine. The same firm exhibit an infants' food described as non-farinaceous.

Messrs. Carnick and Co. (Hart Street, Bloomsbury) exhibit beef peptonoids powder, which they state to be made from beef, milk, and wheat, and to be sterilised during manufacture. Another preparation, liquid peptonoids, is prepared from this powder, and the manufacturers state that to ensure its aseptic condition sufficient alcohol is added to the liquid product to preserve it. Liquid peptonoid is also prepared with pyrophosphate of iron, the whole being dissolved in sherry. The same firm exhibit a soluble food for infants, and a preparation called "maltoline," stated to consist of malt extract, cod-liver oil, and hypophosphites.

Cerebos salt for table and culinary use is exhibited by the CEREBOS, Limited (Newcastle-upon-Tyne). The salt is a fine table salt, which experience shows keeps well, even in rather damp localities. The manufacturers state that it contains a definite proportion of the mixed phosphates of wheaten bran. The same company exhibit "pepsalia," a preparation in which pepsine is added to ordinary salt. The preparation can be ordered as an ordinary condiment when it is desired to prescribe pepsine.

HOVIS BREAD FLOUR COMPANY, Limited, exhibit specimens of Hovis bread, flour, and biscuits.

MELLIN'S FOOD, Limited (Marlborough Works, Peckham), show their food for infants and invalids. The company also exhibit food biscuits prepared from the food, and a cod-liver oil emulsion, which, it is stated, contains 50 per cent. of fine Norwegian oil.

The firm of HENRI NESTLÉ (Vevey, Switzerland, and 48, Cannon Street) exhibit the condensed Swiss milk made by them. The sample examined for the BRITISH MEDICAL JOURNAL in 1895 was found to contain 10.83 per cent. by weight of milk fat, and the other constituents were present in proper proportion to the fat. The milk is therefore a good specimen of condensed milk. The same firm exhibit a condensed milk without sugar, and a food designed for the use of infants and invalids.

The PROTENE COMPANY, Limited (36, Welbeck Street, W.) exhibit their products both in the raw state and worked up into bread, biscuits, and other forms. The substance, to which the name "protene" is given, is stated to be made from milk, and to consist almost entirely of the proteids of milk, that is to say, mainly of casein. Pure protene biscuits are stated to be made entirely from milk, and are flavoured in various ways; and protene medical biscuits to consist mainly of pure proteid material. These biscuits are suggested as likely to be useful in the treatment of diabetes as a substitute for gluten, and also in obesity. A kind of bread is also made from protene. It is stated to consist entirely of proteid, and is sold under the name protene proteid loaf. For other purposes protene is mixed with flour and made into biscuits and bread, which contain a high percentage of proteid bodies.

Messrs. G. VAN ABBOTT AND SONS (101, Wigmore Street, W.) exhibit various foods which they recommend as suitable for diabetics, dyspeptics, and invalids, including various forms of bread, jelly, soups, lozenges, and biscuits.

BOOKS.

Mr. B. ALLSOP (publisher, Times Office, Shipley, Yorks) exhibits books designed by him for carrying out the system of medical bookkeeping which he has called the A. B. C. The system has been favourably reported upon by correspondents of the BRITISH MEDICAL JOURNAL, who have made use of it, and who have found it simple and expeditious.

Mr. HENRY KIMPTON (82, High Holborn) exhibits a number of books, especially a large series of medical works published in America, and also a set of his "essential series of compends" by various authors.

Mr. H. K. LEWIS (136, Gower Street, W.C.) exhibits a large number of works on medicine and the allied sciences, including a set of the Cambridge Natural Science Manuals, specimens of the publications of the New Sydenham Society, and various periodical publications, including the newly established *Polyclinic*.

INSTRUMENTS AND APPLIANCES.

Surgical Instruments.

Messrs. ALLEN AND HANBURYS, Limited (48, Wigmore Street), show a variety of surgical instruments and appliances, including antitoxin syringes, dressing trays, perforated metal and other splints, and aseptic pocket cases. They also exhibit a centrifuge, stethoscopes, and a portable weighing machine.

Mr. F. DAVIDSON, optician (140, Great Portland Street, W.), shows a series of twenty artificial eyes illustrating various diseases of the eye producing external signs, such as pterygium, subacute glaucoma, glioma, traumatic cataract with iritis, cataract, etc. The same maker exhibited a double optometer, in which the lenses are inserted in the dials in the order in which they are used. By revolving the dial any desired lens can be brought opposite the eye being tested. He also shows a conveniently arranged card, 20 inches by 30 inches, upon which a set of types arranged on Snellen's basis for testing the acuteness of sight are printed. There are also three dials revolving on the card; the inner one has on it sets of parallel lines of different degrees of thickness representing the acuteness of sight at different distances, corresponding to Snellen's types; these can be placed at any degree of inclination by revolving the card. The second dial contains another series of Snellen's types, which can be exposed separately two lines at a time. The third dial contains colours, which can also be exposed separately or in contrast for testing the colour sense. The reverse side of the card contains a series of vertical and horizontal lines for testing for muscular defect. The "complete sight test," as the maker calls it, is simple and comprehensive, and is likely to prove useful to the practitioner in all cases of defective sight due to error in refraction that are commonly met with.

Messrs. DOWN BROTHERS (21, St. Thomas Street, London) exhibit an aseptic operation theatre completely fitted, and a collection of surgical instruments.

Messrs. EVANS AND WORMULL (31, Stamford Street, S.E.) exhibit a paraform steriliser for urethral instruments. The apparatus is constructed with two open wirework shelves sliding in and out, upon which the instruments to be sterilised—catheter sounds, urethroscopic tube, etc.—are placed, after having been carefully washed and dried. On the lower shelf, covered with a strip of lint, is sprinkled a thin layer of paraform powder. This substance gives off vapour at the ordinary temperature of the room, and, according to Guyon's experiments, effects the sterilisation of the instruments placed on the shelves above.

Messrs. J. G. INGRAM AND SON (the London Indiarubber Works, Hackney) exhibit a number of enema syringes in various forms, which appear to be all good and of strong construction. Among them may be mentioned a pocket syringe designed for use in diseases of the eye, ear, nose, and urethra. It occupies only a small space, and seems well adapted to meet the purpose for which it was designed.

A variety of flax and cotton lints are exhibited by the LIVERPOOL LINT COMPANY (Mark Street Mills, Liverpool), as well as bandages of various kinds. Among the latter may be mentioned an open-wove bleached bandage which is highly absorbent and intended to be used for water dressings or for plaster-of-paris splints. They showed also cotton wadding manufactured for surgical purposes, absorbent tissue, surgeon's tow in rolls, protective lint with a waterproof backing, and a padding for splints made with absorbent wool and carbolised tow between layers of gauze, which appears to be well adapted for this purpose. Small packages of first-aid dressings containing in a small waterproof cover all the materials for first-aid were also shown. The company also exhibit undervests and body-belts for which it is claimed that they are made of the finest lambswool.

Messrs. MAW, SON, AND THOMPSON (7 to 12, Aldersgate Street, E.C.) exhibit a long series of aseptic instruments and dressings, and a variety of other instruments and appliances useful to surgeons. Among the appliances to which attention is directed as presenting the greatest points of novelty, mention may be made of Teske's sphygmograph, illustrated in the figure (Fig. 1, p. 381); the clockwork is regulated so that the smoked paper shall pass through in ten seconds, so that six times the number of traces on the paper is the number of pulsations a minute; the instrument can be fixed on to the arm by a band, but it is said that with a little practice it can be held perfectly steadily by the hand. The instrument is simple in construction, small and portable, and it is stated that it does not easily get out of order. Teske's stethonoscope (Fig. 2) is described as a new instrument for auscultation; it is constructed on the principle of the microphone and can be attached to any ordinary binaural stethoscope; it is claimed for it that by increasing the loudness of sounds it is particularly useful in the examination of the lungs, rendering it possible to distinguish more easily the variety of *râles*. It requires some practice to use it with confidence, owing to the increased strength of the sounds; but it is fitted with an appliance for reducing the loudness of the sounds if desired. The same firm exhibits a clinical thermometer which is so designed that the index can be shaken down with one gentle jerk; it is therefore called the "easy shake down clinical thermometer"; the form of the instrument is shown in the

accompanying illustration (Fig. 3), and the manufacturers state that it can be adapted to all forms of clinical thermometers, whether half-minute, minute, magnifying, or ordinary, while the difference in price is very small. The firm

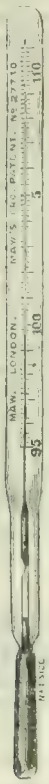


Fig. 3.

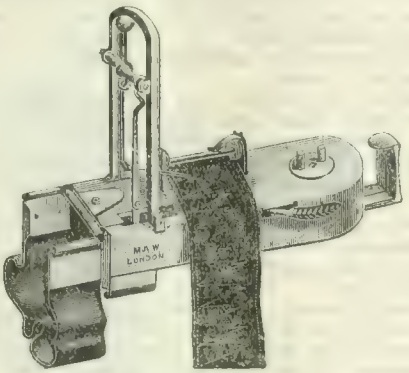


Fig. 1.



Fig. 2.

also exhibit a small iron table for the operating theatre to hold ligatures and other articles, as well as an improved tonsil snare, and a snare for aural and nasal polypi, both designed by Mr. Charles Heath.

Messrs. Mayer and Meltzer (71, Great Portland Street, W.) exhibit a series of modern surgical instruments to meet the requirements of aseptic surgery, various apparatus for use in urine testing and for testing the human milk, enema syringes, dry-cell batteries, anæsthetic inhalers, and sets of gynæcological and laryngological instruments, as well as sectional models of the larynx and nose.

Mr. J. H. Montague (101, New Bond Street, W.) exhibits a number of surgical appliances. Among them is a steriliser (Fig. 4) for surgical dressings, which consists of an inner

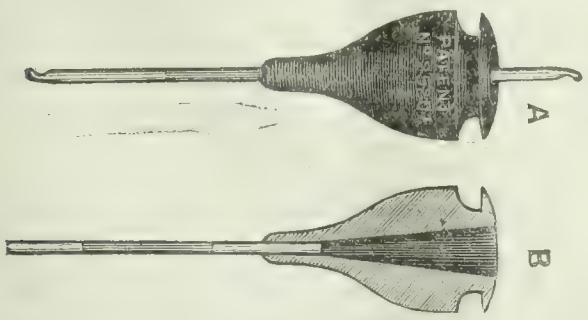


Fig. 5.—Vaccine expeller.

chamber intended for the materials to be sterilised, surrounded by a water jacket heated by a flame placed below. The steam generated in this jacket is conducted through a coil of copper tubing (the superheater) placed in contact with the flame immediately below the body of the instrument. The object of this is to raise the steam to such a temperature as to render it not only dry, but capable of drying that with which it comes in contact. This dry superheated steam is admitted to the inner chamber in order that it may rapidly penetrate and sterilise the dressings, etc., within. Mr. Louis Cobbett, M.B., F.R.C.S., has made a favourable report upon the efficacy of this appliance, which is called the "atmo-therme steriliser." Mr. Montague also exhibits (Fig. 5) a vaccine expeller, which

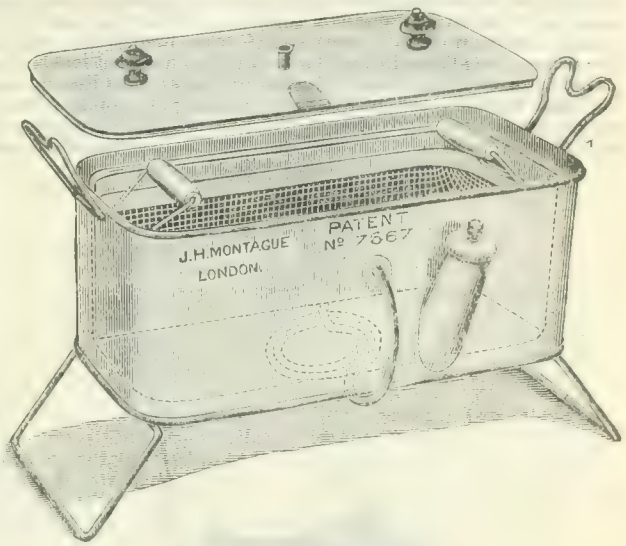


Fig. 4.—Atmo-therme steriliser.

is shown in the drawing and section on previous column. The tube, with the ends sealed, is first drawn midway through the larger opening, as illustrated; the upper end is then broken off, and is drawn so far through the hole that the broken end is only about half an inch from the smaller hole. The other end of the lymph tube is next broken off, and the mount held between the first and second finger by placing the thumb over the top, and opening and compressing, the vaccine is expelled. By this means the vaccine can also be distributed as desired. Mr. Montague also exhibits skiagraphs of interesting cases, a large collection of surgical instruments, and some specimens of splints made of veneer and varnished.

The O'Connor Extension Co. (2, Bloomsbury Street, London, W.C.) show a series of appliances for the lame, intended to supersede unsightly instruments, and to give

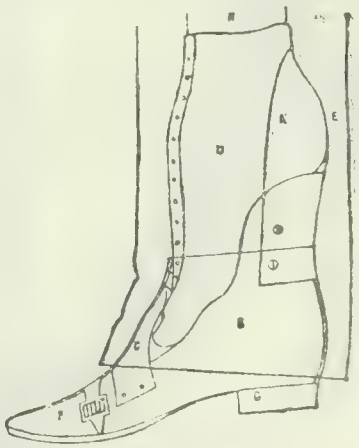


Fig. 6.—A, Aluminium heel plate. B, Wooden base of 'extension.' C, Aluminium instep plate, which keeps pressure of leather off toes. D, The foot in position. E, Trousers. F, Jointed toe of "extension." G, Heel of boot. H, Leg.

adequate support. Of these, the most interesting is the ex-

tension apparatus, intending to compensate for the shortening of the leg, and to enable ordinary shoes to be worn. The principle of the construction of this apparatus will be understood from the diagram, Fig. 6, p. 381. It consists essentially of a platform, which may be constructed of light wood or cork according to the requirements of the case. The platform is shaped to fit the plantar surface of the patient's foot; the heel rests in a moulded heel piece of aluminium (A), which gives the ankle lateral support, and acts to some extent as a staying post. The foot is encased in a leather cover or upper, which is laced in front over a padded tongue. The foot is then held firmly, and the weight is distributed from heel to toe, so that the action in walking is similar to that in a sound foot. The manufacturers have placed at our disposal a radiograph of the right foot of a person with a shortening of 5 inches, wearing the boot. The position of the foot when the radiograph was taken is shown in the diagram (Fig. 7). The radiograph



Fig. 7.

(Fig. 8) shows very clearly the position of the foot when the



Fig. 8.

person wearing the extension apparatus is in the attitude for walking. This extension apparatus has been recommended in our columns on a good many occasions by orthopædic surgeons of experience, and we believe it to be a valuable device in a large number of cases of shortening of the leg.

Messrs. THOMAS J. SYER AND CO., 45, Wilson Street, London, E.C., exhibit a telescopic consulting-room couch, which can be adapted to two heights for use as an ordinary couch or as an operating table. It is fitted with a sloping headrest and sliding tray for instruments, and can be closed to occupy only a small space.

Messrs. JOHN WEISS AND SON (287, Oxford Street, W., and Manchester) show a model of an operation table in nickelled steel, fitted with gearing for altering the height horizontally and for placing the frame in the Trendelenburg position for abdominal section, as well as with floating gear for placing the table on wheels, hot water tanks, etc. They also show instrument cabinets in various forms, sterilisers for both instruments and dressings, Schimmelbusch's steam steriliser for dressings, together with operation cases and instruments of all kinds. They also exhibit the highly ingenious automatic cautery of Déchery, which was described in the BRITISH MEDICAL JOURNAL some time ago. In this apparatus the use of the bellows is done away with, the incandescent properties of platinum being used to keep up a continuous stream of vapour by which the point is heated. Messrs. Weiss exhibit also sets of ophthalmic instruments fitted with metal handles designed to ensure asepsis; the instruments are contained in metal cases, which can be used as lotion trays and for sterilising the instruments. They show also some pocket dressing instruments in cases which can be rendered aseptic, lithotrites and bladder instruments of various patterns, and a large collection of surgical and diagnostic instruments and appliances.

Electrical Instruments.

Messrs. HARRY W. COX, Limited, electrical engineers (Cursitor Street, Chancery Lane, W.C.), show a variety of electrical appliances. Among other apparatus adapted for use in *x*-ray work, mention may be made of an induction coil, shown in Fig. 9. It is constructed in various sizes, ranging

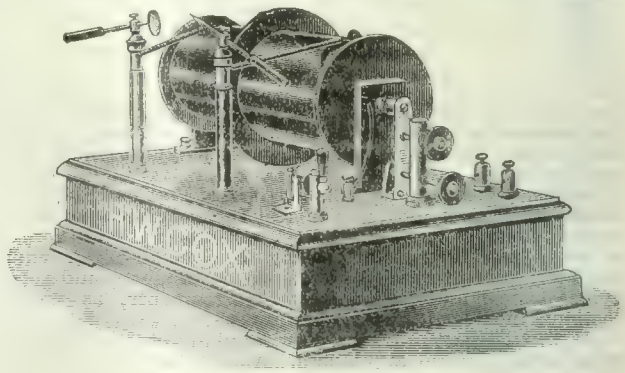


Fig. 9.—Induction coil.

in price from £10 to £70. The manufacturers state that with all but the smallest size satisfactory effects can be obtained with the fluorescent screen in the inspection of the spine, ribs, and other deep-seated parts. The firm also exhibit focus tubes, tube-holders, and other appliances required for successful work in radiography. They also show Dr. Wehnelt's new electrolytic current interrupter (Fig. 10, p. 383). This apparatus consists of a closed jar, with two electrodes of unequal surface immersed in dilute sulphuric acid. When the current passes through the electrolyte it is rapidly intermitted, making a loud humming sound. The frequency of this break is so great, and the break of circuit so complete that no condenser or contact breaker is required, though when working direct from mains a resistance should be inserted in the circuit. The uses to which Wehnelt's interrupter can be put and some of the special advantages it presents have already been described in the BRITISH MEDICAL JOURNAL. We are informed that Messrs. Cox manufacture the coils in their own workshops, so that the purchaser has the advantage of obtaining instruments of English workman-

hip. The winding is arranged in sections, which it is believed produces the highest efficiency and most satisfactory results with *x*-ray tubes. The manufacturers state that they are willing to give a written guarantee with every coil, and

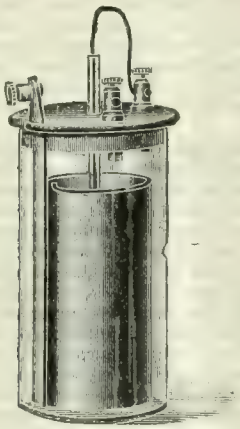


Fig. 10.—Wehnelt's interrupter.

affirm that under most circumstances the length of spark guaranteed can be exceeded by from 1 to 2 inches without straining the coil.

Mr. J. R. Penning, electrical engineer and scientific instrument maker, shows a number of appliances, including induction coils specially constructed for *x* rays apparatus and fluorescent screens, Crookes's focussing tubes, and tube holders, and various interrupters and accumulators. He also exhibits phonographs, telephones for domestic use, and Tesla's apparatus for high frequency and high potential experiments.

The Dowsing Radiant Heat Company (24, Budge Row, E.C.), show their appliances in various forms. The particular type which is shown in the accompanying illustration, consists of a bed (Fig. 11) on which the patient is placed with electric heaters fixed on movable arms on either side; from these luminous heat is thrown on to the body. A small apparatus is made for appliance to various parts of the body, and the company also exhibit numerous electric radiators designed for use as a source of heat in consulting rooms, hospitals, and private houses.

Messrs. Isenthal, Potzler and Co. (85, Mortimer Street, Cavendish Square, exhibit a series of Roentgen-ray appliances including the so-called "K." hospital outfit consisting of a table upon which all the electrical instruments of a Roentgen ray installation are mounted and collected so that the whole may be transported from ward to ward. They also exhibit various other appliances, including a localiser, a number of "Double Bulb Tubes" for ordinary work and special tubes for work with the electrolytic interrupter. They show also a mercury interrupter, jet, and Wehnelt interrupter, and a new alternating current rectifier to work induction coils from the main where only alternating currents are available. They also exhibit various electrical medical instruments, including portable accumulators and battery for electrolysis, as well as a new combined galvanic and faradic battery suggested by Dr. Herschell.

Sanitary and Hospital Appliances.

Messrs. Billington Brothers (11, Dyers Buildings, Holburn, E.C.) show various forms of bedsteads and beds for use in hospitals and asylums. The invalid's bed has an adjustable head and elevator.

Messrs. Boyd and Co. (Belfast) exhibit various woollen articles of clothing, including the Eiderdon rug, and a material which they call "naquatum," stated to be all wool, and porous but waterproof.

The "Ceres" automatic letter and card files are exhibited by the Ceres Depot (10, John Street, Adelphi, London, W.C.). The system is simple, and can be adapted to file boxes, drawers, and writing tables for private use, or to larger cabinets and standing desks for offices and institutions. The Ceres card files for library catalogues carry out the principle of the card catalogue in an easy and convenient form.

Messrs. J. Defries and Sons, 147, Houndsditch, exhibit in working order the Pasteur (Chamberland) filter made by them including a system for working without pressure, a laboratory filter for water examination (Dr. Klein's pattern), filters for yachts, railway carriages, etc., and filters for domestic and institutional purposes. Plans showing the application of the filters under various conditions, and a photograph of the Pasteur (Chamberland) filter at the Darjeeling Municipal Waterworks is also shown. The firm exhibit also Equifex disinfectant appliances and Scurfield's ventilation (carbonic acid) indicator.

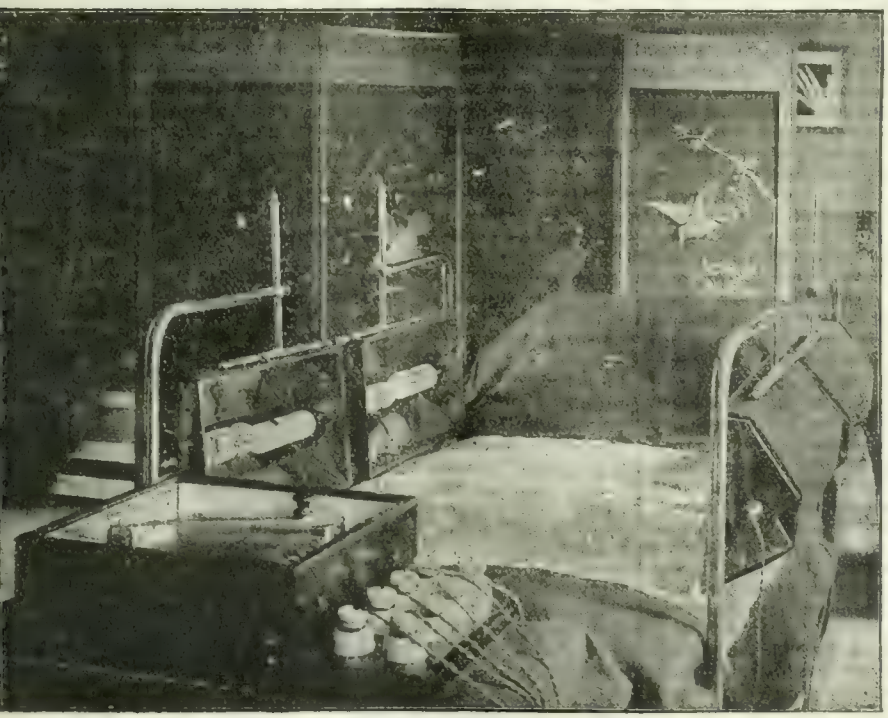


Fig 11 The Dowsing Radiant Heat Apparatus.

The Formalin Hygienic Company (9 and 10, St. Mary-at-Hill, London, E.C.) exhibit formalin, formalin solution, disinfectant powder and soap, the alformant lamps, and Trilat's stove for generating formic aldehyde, and formalin tablets for use in the alformant lamps.

Messrs. George Gale and Sons (Dominion Works) and S. B. Whitfield, Limited (Watery Lane, Birmingham) exhibit the Lawson Tait spring beds for hospitals in various forms, including one with movable curtain arms for use in cases of fracture, and another with ends hinged to drop down. They also show an invalid's bed which can be adjusted and fixed at any angle, and enables a nurse to lift a heavy patient without undue exertion. The bedsteads are made with smooth corners and castings, and can be fitted in a variety of ways with wood or indiarubber feet so as to be easily moved.

The Blackman Ventilating Company exhibit in motion (the

Blackman fan, with electric motor combined. The general appearance of the appliance is shown in the accompanying illustration (Fig. 12), which shows a fan (18 inches in dia-

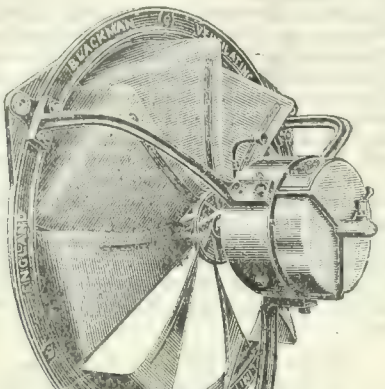


Fig. 12.—Blackman fan with electric motor.

meter) with the motor attachment. The combination of the motor with the fan renders it possible wherever an electric current is available to use mechanical ventilation. The fan will work either horizontally, vertically, or in an inclined position, and the motor can be adjusted either on the feed or discharge side of the fan. The speed at which the fan runs can be controlled by means of a regulating switch and resistance. When fixed in a suitable position, and with ordinary attention to cleanliness and oiling, the fan undoubtedly does its work well, and the cost is stated to be moderate. The same firm exhibit other fans of the same form, but mounted to be driven with pulley and belting.

ARCHIBALD H. HAMILTON AND CO. (Elliot Street, Glasgow) exhibit a floor polish sold under the name of the "Shell Brand," which is especially designed for use in asylums, hospitals, and similar institutions. It is recommended as a near approach of the old-fashioned bees' wax and turpentine, but it is claimed that, being made from pure American turpentine only, it has a more agreeable odour. Materials from which the polish is made are also exhibited, as well as specimens of pitch pine and other wood floorings treated with this floor polish.

Izal disinfectant fluid is exhibited by the manufacturers, Messrs. NEWTON, CHAMBERS AND CO., Limited. After an examination of this substance made some years ago we reported "that the samples examined by us contain an oil having about the boiling point mentioned, and that no objection can be taken to the emulsifying agents used. The preparation contains a fairly high amount of active antiseptic agents, and while we cannot bear out all the claims that are made for it, the results of our experiments show that it may be regarded as a very useful and probably important addition to the disinfecting fluids on the market. We are not, however, in a position to endorse the statement that a preparation of this kind is non-poisonous." The company now show a body described as pure izal oil, which is stated to be chemically pure, and is used as the basis of medical izal, a preparation intended for use by surgeons; medical soap, lozenges, ointments, cream and embrocation made with izal, and surgical dressings charged with the same substance, are also exhibited. A vaporising solution also is prepared, and a form of vaporiser is exhibited by the firm.

JEYES' SANITARY COMPOUNDS COMPANY (64, Cannon Street, E.C.) exhibit Jeyes' disinfectant fluid, sanitary powder, and soaps, together with creolin and various preparations of creolin, including creolin gauze.

Wire mattresses, carriage seats, and cycle saddles manufactured under Wood's patent are shown by the LONGFORD WIRE, IRON, AND STEEL CO., Limited (Warrington). The cycle saddle, which appears to be the most novel article exhibited, is covered in various kinds of glove leather. The manufacturers demonstrate that the wire used for all these articles is capable of standing great strain.

The NEWELLITE GLASS TILE CO., Limited (139, Cannon Street, London, E.C.) exhibit specimens of opal glass tiles made for lining lavatories, laundries, hospital walls, etc., as well as decorated tiles for ornamental purposes. The tiles, which have a perfectly smooth glass-like surface, have a rough back for fixing. It is claimed for them that the elasticity of this backing prevents the surface cracking, and that they are durable. They can be obtained on the curve as well as with flat surfaces.

Various polishers and cleansers for floors are shown by "RONUK," Limited (Upper Thames Street), including a special preparation for polishing the floors of hospital wards. Specimens of wood treated with the company's stains and afterwards with the Ronuk sanitary polish are exhibited.

Sanitas disinfecting fluid is exhibited by the SANITAS COMPANY (London), as is also the sanitas disinfectant oil. Various forms of sprays, inhalers, fumigators, and bronchitis kettles for use with the different preparations of sanitas are also shown. Sanitas powder and soap, both for toilet and domestic use, and for the cleansing of dogs and other animals, are exhibited, together with gauze and wool charged with the same substance. The company also exhibit eucalyptus oil and various preparations thereof, as well as peroxide of hydrogen and corrosive sublimate pellets, made according to the recommendations of the Local Government Board, permanganate and carbolic acid pellets, and sulphur fumigating candles.

Messrs. TWYFORDS, Limited (Hanley, Staffordshire), exhibit a series of fire clay appliances, including an operating table, *post-mortem* table, mortuary slabs, bedpans, and various forms of sinks and basins adapted for use in hospitals.

THE PATHOLOGICAL MUSEUM.

THE Pathological Museum in connection with the annual meeting of the British Medical Association at Portsmouth, is not so large as has been formed in some recent years, but it contains a peculiarly interesting collection of specimens drawn from the museums of the Royal Naval Hospital at Haslar, and of the Royal Victoria Hospital, Netley.

The series from the Royal Naval Hospital at Haslar, which are lent by permission of Sir Henry Norbury, K.C.B. Director-General R.N., comprises a small collection of projectiles including some old specimens of British bullets, Egyptian projectiles, Russian bullets from the Russo-Turkish campaign, Chinese projectiles of fearful and wonderful form, and a small collection of modern projectiles of various sizes and types. The collection of pathological specimens from Haslar was particularly rich in examples of fractures and injuries of bones and joints.

The specimens from the Royal Victoria Hospital, Netley, were lent by permission of Surgeon-General J. Jameson, C.B., Director-General of the Army Medical Service. They comprise an interesting series of specimens of gunshot and sabre wounds, classified under wounds of the skull, the atlas, the spine, the heart, the liver, the intestines, and the bones of the upper and of the lower limbs. Interesting specimens were three sets exhibiting the effects of the Lee-Metford bullet upon the tibia and fibula, and ankle-joint, in which both the bones and the skin wounds of entrance and exit were displayed. The whole series, as illustrating the effect of gunshot wounds, especially on bones, was of most exceptional interest. A large number of skiagraphs of gunshot injury were also exhibited by the Army Medical School at Netley.

The London Hospital Medical College contributed specimens, both anatomical and pathological. Among the former were dissections of the basal parts of the brain, thyroid gland, the kidney, and the liver hardened *in situ* and preserved in formalin. The pathological specimens included specimens of "tar-workers' cancer" and "chimney-sweep cancer" (Mr. Barnard), hydatid cyst of liver (Mr. Roxburgh), and avian tuberculosis (Dr. Bulloch).

Professor E. F. Trevelyan showed a series of pathological specimens from the museum of the Leeds Medical School. These included hydatid disease of the rib; an example of primary sarcoma of the pharynx; a specimen in which gangrene of the hand had followed simple fracture,

which produced great damage to the blood supply; a large mass of dense lung tissue expectorated by a patient; a congenital hernia formed by a partially-obliterated Meckel's diverticulum; a specimen of deciduoma malignum from a case under the care of Dr. Hellier; a series of six specimens of renal growths, a subject which was discussed in the Section of Pathology; and a large calculus of the kidney weighing 14 ounces, believed by Mr. Ward to be the heaviest on record, from a case in which other smaller calculi were present.

The Royal Portsmouth and Gosport Hospital museum showed a series of specimens, including a box of vesical calculi collected by the President of the Association, Dr. J. Ward Cousins; an example of hydronephrosis lent by Mr. Henry Rundle; and specimens from a case in which a bullet remained for fourteen years in the femur.

Among the other specimens exhibited were twelve illustrating the pathological conditions of the eye mounted in glycerine jelly, by Mr. L. Vernon Cargill; the pancreas from a case of pancreatic diabetes, shown by Mr. E. Willmer Phillips; photographs and drawings of pathological specimens, by Mr. Jonathan Hutchinson, jun.; and water-colour sketches of tuberculosis of the conjunctiva, by Dr. J. Eyre. Dr. C. C. Claremont showed specimens of tuberculous ulceration of the small intestine, involving all the coats of the bowel without opening the peritoneal cavity; Dr. D. Walsh showed skiagraphs illustrating various pathological conditions; and Dr. Mackenzie Davidson exhibited his stereoscopic skiagraphs in the Brewster's stereoscope.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The summer general meeting of the above Association was held on Wednesday, August 2nd, in the Town Hall, Portsmouth. In the absence of the President (Sir William Thomson, F.R.C.S.I.), the chair was occupied by Dr. Jocelyn Swan.

There was a large attendance of members, including Surgeon-General Cuffe, C.B., Sir Raymond Kynsey, C.M.G., Lieutenant-Colonel Boileau, M.D., A.M.S. (Trowbridge), Dr. Dolan (Halifax), Mr. O'Callaghan, F.R.C.S.I., Major A. S. Faulkner, I.M.S., Dr. S. Hamilton (Newport), Dr. T. Neville, Colonel Maturin, R.A.M.C., and the Provincial Honorary Secretary, Dr. J. Stewart (Clifton).

The Council reported that they had had under discussion the question referred to them from the annual general meeting as to the best way of celebrating the "coming of age" of the Association, which had just that day completed its twenty-first year, and that they had determined to mark the occasion by a *conversazione* at the Hotel Cecil, London, on or about November 23rd, after the autumn dinner.

The Provincial Honorary Secretary (Dr. Stewart) reported that a considerable accession of new members was expected from the effort now being made by the Council to bring the Association under the notice of the 2,000 practitioners resident in Great Britain who were eligible for membership but were not yet enrolled. If the result was equal to their expectations the Council would have sufficient funds to proceed immediately with an attack upon another of the strongholds of monopoly.

Surgeon-General Cuffe said he could not refrain from an expression of surprise that there should be in these days, when "the open door" was so much talked of, any necessity for the Association to carry on this warfare against monopoly. Why should hospital governors in London or any part of England shut their doors against candidates for honorary appointments unless the latter held diplomas from two specially-favoured London Colleges? What right had they to imply (as they did by their exclusiveness) that those holding diplomas obtained in Scotland and Ireland were not good enough to be allowed even to compete for these appointments? Such an implication was in his opinion either impertinence or the result of gross ignorance. He had had a large experience of scientific and practical work done in military hospitals, and he had no hesitation in saying that the very best men in the Army Medical Department were Irishmen. The proper principle to act on in these matters was "*Liberté, Égalité, Fraternité.*" The medical man should not be trammelled in his choice of a college from which to obtain his higher diplomas; the diplomas of the same standing in each of the three countries should be treated as on an equality, and thus the brotherhood of the profession, to which they were all proud to belong, would be maintained. How could the fraternal feeling be sincere when the Irish college was treated as only a step-brother? How could the public understand that the General Medical Council was a body governing impartially medical education in all three divisions of the kingdom when they see from time to time (in the Liverpool papers, for instance) advertisements, reading through the lines of which one can see the cruel words, "No Irish need apply"?

After some observations from Dr. Hamilton (Newport), Dr. G. Roe Carter, and others, the meeting adjourned.

PRIZE DAY AT EPSOM.

The distribution of prizes at Epsom College took place on Saturday, July 29th, in the presence of a large gathering of the parents and friends of the scholars. The Head Master (the Rev. T. N. Hart-Smith) presided, and was supported by a number of members of the Council of the College, including Sir Joseph Fayrer, Chairman, and Dr. Holman, Treasurer. Lord Rosebery distributed some of the prizes, and afterwards delivered an address.

The Head Master, after extending a cordial welcome to the relatives of the students and to Lord Rosebery, went on to recount the scholarships and distinctions that had been gained by the school during the year. He pointed out that the list covered a wide and varied field, and included two mathematical scholarships at Oxford, won by W. T. Wood and A. G. Alderson. One of their old boys (C. A. Meadows) had received the Sword of Honour at Sandhurst, and two former pupils had been awarded the Distinguished Service Order for their services in the Soudan. He did not believe, however, that scholarships and distinctions were by any means a complete test of the work of a school. The value of the work done was far better tested by the tone of the rank and file. Their aim at Epsom College was to train the boys on sound principles, so that they might have a good general education—and by sound principles he meant classics and mathematics—and to turn out not necessarily scholars and prize winners, but boys of the right stamp, who were able to set an example in whatever situation they might be placed.

The Head Master then distributed the minor prizes to the boys, and Mr. J. Lumsden Propert, a son of the Founder of the College, presented to W. T. Wood the Propert Medal for the student who gains the highest distinction during the year, and addressed a few words to the boys on the importance of cultivating the qualities of energy, courage, and perseverance.

Lord Rosebery, after some humorous introductory remarks, said the first and primary object of every school was to turn out men. In this country special worship had always been paid to that virtue of manhood which Mr. Propert so justly described. The qualities of manhood could be exercised all through school life—those qualities not merely of industry but of self-denial, and that which perhaps showed the most manhood in a boy, the power to say "No." He hoped they would remember when they came there perhaps in after-life that Epsom taught them the elementary lessons of manhood. They would be scattered all over the world, some of them exercising that profession with which the College was so much associated, that which in its science contained perhaps the most supreme elements of manhood of all the professions—the medical profession. That profession needed tenderness and courage in the highest degree—tenderness to alleviate sickness and suffering, to help the sufferer by sympathy; and, indeed if the physician were not the patient's most welcome sight, that physician was a failure. But not merely was it tenderness and courage that the physician needed. His profession required more stubborn and obdurate courage than any other. He was always fighting one life-long battle in which he knew that he must be beaten; he was always fighting a life-long contest with the Angel of Death, and he knew that, struggle as he might, the Angel of Death must win in the end. The profession of the physician was one long struggle in which, like the Englishman, he must never know

when he was beaten until victory had gone against him. He must be tender and he must be brave. And, therefore, when they were scattered all over the world, having in view what was taught them at the school, they might have some cause to thank Epsom College for the training which they had received. What they wished them to remember Epsom for was that they might be able to look back and feel in future years, if they succeeded, that they owed much of that success to Epsom, and that if they failed, they did not fail owing to their life there; while their recollection of the College might give them energy for one more trial which might achieve success.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

Bills to be Starred.—Towards the close of the session the Government usually places an asterisk before a few Bills introduced by private members, which thus gain the priority given to Government measures. This year certain Bills, to which there is practically no opposition, come into this category, among them the Shop Assistants (Seats) Bill and the Summary Jurisdiction Bill. The First Lord has been unable to include the Isolation Hospitals Amendment Bill in the list, as there are amendments demanded in the Bill to save non-county boroughs, which so far the Local Government Board does not see its way to accept. The loss of the Bill will be much regretted.

London Water Supply.—Mr. Pickersgill last Friday (July 28th) elicited an important statement from Mr. Chaplin. It appears that under the Metropolis Water Act, 1899, communications have been effected between the mains of the Southwark and Vauxhall and East London Companies, and between the Grand Junction, the West Middlesex, and the New River Companies. The New River Company is also in communication with the East London, and the Kent Company is laying a main to communicate with the Southwark and Vauxhall system. The East London Company has since the beginning of June been receiving water from the New River and the Southwark and Vauxhall Companies. From the latest information there was considerably over a thousand million gallons in the East London reservoirs, and Mr. Chaplin thinks that the measures taken will be effectual to meet the needs of East London during the present summer.

Vaccination in Somersetshire.—Mr. Chaplin was able to tell Mr. Llewellyn, one of the members for Somersetshire, last week, that the new Act was working well in that county. In the Axbridge Union during the first six months of 1898 the number of certificates of successful vaccinations amounted to only 81. The number for the similar period in the present year was 415, a gain of 334.

The Aldershot Sewage Farm was, it appears, conducted at a small loss last year, but it nevertheless fulfilled economically the purpose for which it was established, namely, the disposal of the camp sewage. In view of the recent report of Dr. Andrewes, confirmed by the medical officer of health for the county, it has been decided to continue the farm as at present constituted, but under strict supervision. So far no nuisance or danger to health, the Under-Secretary of War says, has presented itself, even under the trying conditions of the hot weather. The milk from the farm will not be sold below the current rates of the district.

Bills Withdrawn.—The massacre of the innocents is always followed by a less summary destruction of Bills in the shape of withdrawals. The Lunacy Bill had passed the Lords, but it was too large a measure to pass the Commons so late in the session. In the Lords the Oysters Bill was also withdrawn. The proposal to make the Local District Fisheries Committee the controlling authority in a matter of public health was too much for the Local Government Board. Such Committees may be competent to look after the health of the oyster, but in a matter affecting so seriously the health of human beings a better authority must be found to supervise oyster beds.

Bills Passed.—The Bill for the Education of Defective and Epileptic Children was improved in Committee on Monday by new clauses enabling parents to present their children for examination for special instruction, and afterwards when sufficiently improved to remove them to the ordinary school classes. The requirement of a medical certificate before a child is sent to a special class, and a regulation as to the number of defective children to be housed in one building, were also inserted. The Inebriates Bill passed with slight amendment, and also the Poor-law Amendments Bill and the Lincolnshire Coroners Bill.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

FIELD OFFICER.—Major, Madras Presidency in one of the best stations, climate better and healthier than Poona, not due for Burmah for two years, only arrived in India end of last year, wants an exchange to either Halifax (liberal terms), Bermuda, Barbadoes, West Indies, or home. Please state terms to Major, R.A.M.C., care of Cook and Son, 13, Esplanade Road, Bombay. An exchange to Punjab, Bengal, or Bombay Presidencies could easily be managed.

ROYAL NAVY MEDICAL SERVICE.

SURGEON EDWARD HAINES has been appointed to the *Canopus*, lent, August 1st.

ARMY MEDICAL STAFF.

THE appointment of Surgeon-General W. S. M. PRICE to be Principal Medical Officer, Bombay Command, from June 17th, appears in the *Gazette of India* of July 8th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL W. J. CHARLTON is promoted to be Colonel, *vice* T. O'Farrell, promoted, July 1st. Colonel Charlton was appointed Assistant-Surgeon, April 1st, 1871; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1883; granted the rank of Lieutenant-Colonel, April 1st, 1891; and made Brigade-Surgeon-Lieutenant-Colonel, May 2nd, 1895. He has no war record in the Army Lists.

Lieutenant-Colonel G. T. LANGRIDGE retires on retired pay, August 2nd. He entered the service as Surgeon, September 30th, 1873; became Surgeon-Major, September 30th, 1885; was granted the rank of Lieutenant-Colonel, September 30th, 1893, and appointed Brigade-Surgeon-Lieutenant-Colonel, July 22nd, 1896. He served in the Afghan war of 1878-80 with the Kurram and Kabul Field Force, including the affair at Karatiga and the engagement at Charasiah on October 6th, 1879, the capture of Kabul and subsequent cavalry pursuit, the two expeditions to Maidan, the engagement at Tukht-i-Shah, and the defence of Sherpore (medal with two clasps). In the Boer war in 1881 he had medical charge of the 92nd Highlanders.

INDIAN MEDICAL SERVICE.

COLONEL G. W. R. HAY, M.D., Bombay Establishment, is appointed to act as Surgeon-General with the Government of Bombay during the absence of leave of Surgeon-General G. Bainbridge, Bombay Establishment.

THE VOLUNTEERS.

THE undermentioned Surgeon-Lieutenants are promoted to be Surgeon-Captains, dated August 2nd: C. STONHAM, Middlesex Yeomanry Cavalry (Duke of Cambridge's Hussars); A. COSGRAVE, 9th Lancashire Artillery; E. G. PECK, 2nd West Riding of Yorkshire Artillery (Western Division Royal Garrison Artillery); B. L. STIVENS, M.D., 13th Middlesex (Queen's Westminster) Rifles.

Messrs. WILLIAM A. MACNAUGHTON, M.D., and JOHN H. DOUGLAS, M.B., are appointed Surgeon-Lieutenants in the 1st Aberdeenshire Artillery and the Galloway Rifles respectively, August 2nd.

Surgeon-Captain J. R. ESSEX, 3rd Volunteer Battalion the South Wales Borderers, is promoted to be Surgeon-Major, August 2nd.

Surgeon-Lieutenant S. BRAITHWAITE, 1st (Cumberland) Volunteer Battalion the Border Regiment, has resigned his commission, August 2nd.

The appointment of Mr. E. J. DECK as Surgeon-Lieutenant in the 1st Cinque Ports Rifles, which appeared in the *London Gazette* of January 17th last, is cancelled.

Surgeon-Captain C. A. O. OWENS, M.D., 4th Volunteer Battalion the Norfolk Regiment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Norfolk Volunteer Infantry Brigade, August 2nd.

The 5th and 9th Middlesex Rifles, having been formed into one corps entitled the "5th Middlesex (West Middlesex) Volunteer Rifle Corps," the officers holding commissions in the said corps will be considered to have received commissions of the same rank and date in the new corps. The medical officers affected are Surgeon-Lieutenants J. N. BROWN, M.D., C. A. GOULLET, and C. E. GODDARD.

VOLUNTEER MEDICAL STAFF CORPS.

SURGEON-LIEUTENANT C. H. GAGE-BROWN, M.B., the London companies, is promoted to be Surgeon-Captain August 2nd.

MEDICAL NEWS.

The will of Mr. Lawson Tait, dated April 6th, 1893, has been proved. The whole of the testator's estate has been valued at £9,571 13s. 10d. gross, and his personal estate at *nil*. He left all his property to his wife absolutely.

The Alvarenga Prize of the College of Physicians of Philadelphia has been awarded to Dr. Robert L. Randolph, of Baltimore, for his essay entitled "The Regeneration of the Crystalline Lens; an Experimental Study."

MEDICAL VACANCIES.

The following vacancies are announced:—

BIRKENHEAD UNION.—Assistant Medical Officer for the Infirmary, Workhouse, and Schools. Salary £80 per annum, with board, washing, and apartments. Applications, endorsed "Assistant Medical Officer," to the Clerk to the Guardians, 45, Hamilton Square, Birkenhead, by August 7th.

CHELTENHAM GENERAL HOSPITAL.—Assistant House-Surgeon; unmarried. Appointment for two years. Salary £100 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by August 12th.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. No salary; board, lodging, and washing provided. Applications to the Secretary of Medical Committee by August 24th.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon; unmarried. Must be Fellow, Member, or Licentiate of one of the Royal Colleges of Surgeons of England, Edinburgh, or Ireland. Salary, £80. Applications to the Chairman of the Committee by August 16th.

DOWNPATRICK: COUNTY DOWN INFIRMARY.—Registrar, Compounder of Medicine, and Assistant to the Surgeon. Salary, 60 guineas, with board, fuel, and washing. Applications to Dr. T. M. Tate by August 10th.

DUNDEE ROYAL LUNATIC ASYLUM.—Medical Assistant. Must be qualified. Salary, £100 per annum, with rooms, board, and laundry. Applications to Dr. Rorie by August 19th.

ENNIS DISTRICT LUNATIC ASYLUM.—Resident Medical Superintendent. Salary, £350 per annum, with residence, fuel, light, etc. Applications to the Chairman of Committee of Management.

GEORGE HENRY LEWES STUDENTSHIP FOR THE ENCOURAGEMENT OF ORIGINAL RESEARCH IN PHYSIOLOGY. Applications to Professor Sir Michael Foster, K.C.B., New Museums, Cambridge, by October 1st.

GLOUCESTER: COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried and not over 30 years of age. Salary, £120 per annum, rising to £150, with board, lodging, and washing. Applications to the Medical Superintendent.

GUY'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Biology. Applications to the Treasurer, Superintendent's office, Guy's Hospital, S.E., by September 1st. Also Demonstratorship of Chemistry and Physics. Applications to the Dean by September 1st.

HALIFAX: ROYAL INFIRMARY.—House-Surgeon. Salary, £80 per annum, advancing to £100, with extra allowance of £9 2s. 6d. per annum, with residence, board, and washing. Applications to the Secretary by August 8th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Assistant Resident Medical Officer. Salary, £100 per annum, with board and residence. (2) Resident House-Physicians. Appointments for six months. Honorarium, £25 each. Applications to the Secretary by August 8th.

LAGOS RAILWAY, West Africa.—Two Junior Assistant Medical Officers for the Medical Staff, aged 25. Salary, £30 per month, first-class passage out and home, free quarters, and four months' leave after eight months' residential service. Applications, endorsed "Junior Assistant Medical Officer," to Mr. W. Shelford, 35A, Great George Street, Westminster, S.W.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary, £100 per annum, with board and residence. Applications to the Secretary, 34, Moorfields, Liverpool.

MANCHESTER: ANCOATS HOSPITAL.—Resident Junior House-Surgeon. Salary, £55 per annum, with board, etc. Applications to the Secretary by August 9th.

MANCHESTER CORPORATION.—Medical Assistant. Salary, £300 per annum. Applications, endorsed "Appointment of Medical Assistant," to the Chairman of the Sanitary Committee, Public Health Office, Town Hall, Manchester, by August 5th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer for In-patient Department, Bowden. Salary, £60 per annum, with board, apartments, and washing. Applications to the Secretary by August 8th.

MANCHESTER: OWENS COLLEGE.—Demonstrator in Anatomy for the winter session. Applications to the Registrar by August 11th.

MELROSE: ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with furnished quarters, board, washing, and attendance. Applications to the Medical Superintendent.

METROPOLITAN ASYLUMS BOARD: LEAVESDEN ASYLUM.—Assistant Medical Officer. Salary, £3 3s. a week, with the usual residential allowances. Applications to the Medical Superintendent.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Appointment for six months, with prospect of re-election as senior. Salary, £40 per annum, with board, attendance, and washing. Applications to the Secretary by August 9th.

NEWCASTLE-UPON-TYNE: UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—Lecturer on Midwifery and Diseases of Women and Children. Applications to the Secretary by August 16th.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Appointment for twelve months. Salary, £50 with board, lodging, and washing. Applications to the Secretary by August 12th.

NOTTINGHAM LUNATIC ASYLUM, The Coppice.—Assistant Medical Officer; unmarried, and under 30 years of age. Salary, £150 a year, with apartments, board, attendance, and washing. Applications to the Medical Superintendent.

OXFORD EYE HOSPITAL.—Honorary Assistant Surgeon. Applications to the Hon. Secretary, Oxford Eye Hospital, 29, Banbury Road, Oxford, by September 16th.

PADDINGTON INFIRMARY.—Assistant to the Medical Superintendent of the Infirmary, and Assistant Medical Officer to the Workhouse; unmarried, and between the ages of 23 and 30. Salary £100 per annum, rising by £10 annually to £120, with board, lodging, and washing. Applications to the Medical Superintendent, 235, Harrow Road, W., by August 12th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. Applications to the Secretary by August 8th.

ROCHDALE INFIRMARY AND DISPENSARY.—House-Surgeon; unmarried. Salary £90 per annum, with board, residence, and laundry. Applications to R. W. Shaw, Hon. Secretary, Buersil House, Rochdale, by August 10th.

ROYAL EYE HOSPITAL, Southwark, S.E.—House-Surgeon. Remuneration, £50 per annum, with full board and lodging. Applications to the Secretary by August 5th.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Junior Out-patient Surgical Officer. Salary, £50. Applications to the Secretary by August 10th.

ST. LUKE'S HOSPITAL, E.C.—Clinical Assistant. Appointment for six months. Board and residence provided. Applications to the Secretary.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road.—Resident Medical Officer. Salary £105, with residence and attendance. Applications to H. P. Bodkin, Honorary Secretary, 23, Gordon Street, Gordon Square, W.C., before August 14th.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant Resident House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board and lodging. Applications to the Honorary Secretary by August 6th.

STAFFORDSHIRE COUNTY ASYLUM, Stafford.—Junior Assistant Medical Officer, unmarried, and under 30 years of age. Salary, £120 per annum, rising £20 yearly to £160, with furnished apartments, board, etc. Applications to the Medical Superintendent.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought).—Senior House-Surgeon at the Branch Hospital, Royal Victoria and Albert Docks, E. Salary, £75 per annum, with board and residence, and £25 additional if certain clinical work is performed satisfactorily. Applications to the Secretary at the Hospital, Greenwich, by August 7th.

TORQUAY: TORBAY HOSPITAL.—House-Surgeon. Salary, £80 per annum, and £5 5s. for the nurses' lectures, with board, lodging, washing, and attendance. Applications to the Secretary by August 14th.

TYNEMOUTH: VICTORIA JUBILEE INFIRMARY. Spring Gardens, North Shields.—House-Surgeon. Salary, £100 per annum, with apartments. Applications to Mr. J. W. Meadows, Secretary, 43, Howard Street, North Shields.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, Chelsea, S.W.—House-Surgeon. Appointment for six months from September 1st. Honorarium at the rate of £50 per annum, with board and lodging. Applications to the Secretary by August 12th.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—House-Surgeon; unmarried and reside on the premises. Salary, £60 per annum, with board and residence and 10s. a month for washing. Applications to the Secretary.

WESTMINSTER HOSPITAL.—Pathologist. Salary £250 per annum, and a sum of £80 per annum allowed for expenses. Applications to S. H. Quennell, Secretary, by October 1st.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—House-Surgeon; unmarried. Salary, £65 per annum, rising to £75, with board, residence, etc. Applications to the Secretary by August 10th.

WORKSOP DISPENSARY, Notts.—Medical Officer. Salary £120 per annum, with house, coals, gas, and attendance. Applications to Mr. C. A. Whall, Worksop, by August 15th.

MEDICAL APPOINTMENTS.

BROADWAY, T. B., M.B., Ch.B.Glasg., appointed Medical Officer for the Second District of the St. Austell Union, *vice* E. Jeffery, L.R.C.P.Edin., L.R.C.S.Edin., L.F.P.S.Glasg., and L.M.

BUTLER, James, M.B., C.M.Glasg., appointed Senior Assistant Medical Officer to Govan District Asylum, Hawkhead, *vice* Francis O. Simpson, M.R.C.S., L.R.C.P.Lond., resigned.

BYFORD, W. F., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the No. 1 Llanfair District of the Ruthin Union, *vice* W. D. Jones, resigned.

CORKE, C. A., L.F.P.S.Glasg., L.R.C.P.Edin., appointed Medical Officer of Health to the Pebworth Rural District, *vice* R. H. Gilpin, M.R.C.S., L.R.C.P.Lond., L.S.A.

CURREY, E. F. N., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator to the Sheldon District, Honiton Union, *vice* F. Morgan, M.R.C.S., L.S.A., resigned.

FORBES, J. G., M.B., B.C.Camb., appointed Second Assistant Medical Officer of the Shoreditch Infirmary, *vice* M. E. Smallwood, M.R.C.S., L.R.C.P.Lond.

GOODING, R., A.B.Lond., M.D., M.B., M.R.C.S., appointed Medical Officer of Health of the Barnstaple Port Sanitary District, *vice* E. Rouse, deceased.

HICKS, C., L.R.C.P.Edin., L.R.C.S.Edin., L.F.P.S.Glasg., L.M., appointed Medical Officer of the Seventh District of the Tonbridge Union, *vice* A. D. Forbes, M.B., C.M.Aberd., deceased.

HUGHES, J. B., M.R.C.S.Eng., L.S.A., appointed Senior Assistant Medical Officer to the Toxteth Park Workhouse.

KINMONT, P., M.B., Ch.B.Edin., appointed a Resident Medical Assistant, Dundee Royal Infirmary.

PITWAY, E., L.S.A., appointed Medical Officer of the First District of the Saffron Walden Union, *vice* Dr. Sunderland, resigned.

ROBERTS, Henry Hugh, M.B., Ch.B., appointed Medical Officer to Bury Tinplate Works, Llanelly.

SPACKMAN, H. R., F.R.S.P.H., appointed Medical Officer of Health to the Selsden Rural District, *vice* W. Spackman, M.D., resigned, after twenty-eight years of service.

SPRAGUE, W. C., M.D.Edin., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer o the Seventh District of the Saffron Waldon Union, *vice* Dr. Sunderland, resigned.

WEBB, J. E., M.B., C.M.Aberd., appointed Medical Officer of Health of the Love Urban District.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

CAZALET.—On July 29th, at Grey Friars Green, Coventry, the wife of Grenville W. Cazalet, L.R.C.P.Lond., M.R.C.S.Eng., of a son.

COWNIE.—On July 26th, at 89, Severn Road, Cardiff, the wife of James F. Cownie, M.B. and C.M. Edin., of a daughter.

EDELSTEN.—At 370, Brixton Road, S.W., on July 29th, the wife of Ernest A. Edelsten, M.A., M.B.Oxon., of a daughter.

ELLIS.—On June 29th, at Sepoy Lines, Singapore, the wife of Dr. W. Gilmore Ellis, of a daughter.

OSBURN.—On July 26th, at Bagshot, Surrey, the wife of Harold Burgess Osburn, of a son.

SHAW.—On July 24th, at 32, New Cavendish Street, Cavendish Square, W., the wife of John Shaw, M.D., M.R.C.P.Lond., of a son, prematurely.

MARRIAGES.

BARENDT—CROWE.—On July 27th, at St. Augustine's Church, Liverpool, by the Rev. W. J. Adams, Vicar, assisted by the Rev. J. Henderson, Rector of St. Pancras, Chichester, Frank Hugh Barendt, M.D.Lond., F.R.C.S.Eng., of 65, Rodney Street, Liverpool, third son of the late J. E. Barendt, of Liverpool, to Mary Burchall (May), eldest daughter of Mrs. Crowe, 47, Bedford Street North, Liverpool.

COTTELL—RUTHVEN.—On the 26th July, at St. Augustine's, Hull, by the Rev. W. H. Abraham, M.A., Vicar, assisted by the Rev. F. G. Coote, B.A., Major R. J. C. Cottell, R.A.M.C., son of the late Captain J. W. Cottell, H.E.I.C.S., to Edith, fourth daughter of James Ruthven, Esq., of Hazelmere, Prince's Avenue, Hull.

GOLDIE—THOMAS.—On August 1st, at St. Martin's Church, Haverfordwest, by the Rev. C. Martin Phelps, James Oliphant Goldie, son of J. M. Goldie, Esq., of Forest Gate, Essex, to Winifred Warlow, youngest daughter of James Thomas, Esq., J.P., of Haverfordwest.

GUTHRIE—POWER.—At Frant Church, on the 26th July, by the Rev. W. Champion Streatfield, Rector of the Parish, assisted by the Rev. J. H. Townsend, D.D., Thomas Clement Guthrie, M.B., to Norah, second daughter of Sir William Tyrone Power, K.C.B., of Kilmore, Tunbridge Wells, and Annamakerrig, County Monaghan, Ireland.

SIMPSON—BARBOUR.—On the 26th July, at St. Alban's Church, Tattenhall, Cheshire, by the Rev. C. L. Arnold, M.A., Rector of the Parish, assisted by the Rev. W. Lutener, B.A., and the Rev. F. R. Plummer, M.A., Vicar of Harthill, Cheshire, G. F. B. Simpson, M.B., Ch.B., second son of Professor Simpson, M.D., Edinburgh, to Caroline Elizabeth, eldest daughter of George Barbour, Esq., of Bolesworth Castle, Cheshire.

DEATH.

HOUSEMAN.—At the Manor House, Houghton-le-Spring, Durham, James Martindale Gilpin Houseman, the infant son of James Gilpin and Isabel Houseman.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A. desires to hear of an institution where the Schott treatment could be carried out in London (N.).

M.B. wants information about a suitable place for a chronic inebriate who will not consent to go to any large or public home.

H. J. W. will be glad if any one can inform him of some way of preventing ants getting into a house and overrunning store cupboards, etc.? He has been much bothered with them for the last few weeks.

"RUSTIC" would be obliged if any country member would say if he has used an American buggy or American gig in his practice and if satisfactory.

G. P. would be glad to know of any institution or home where a female, aged 25, a confirmed epileptic, would be admitted. She could only pay a very small fee.

GNORAMUS writes: Would one of your readers who has recently passed the M.D.Brux. be kind enough to give me a few particulars as to the general scope of the work, the books necessary to read, and any other details we may deem of value to a candidate?

ANSWERS.

J. A. S.—There is, we believe, an establishment for the open-air treatment of consumption on the Mendip Hills. It is called Nordrach-upon-Mendip. An account of it by Dr. Rowland Thurnam, one of the physicians, was given in the *Practitioner* for July.

ELECTROLYSIS OF NÆVUS.

CAPTAIN GEORGE BIDIE, F.R.C.S.E., I.M.S. (Berar, India) writes: With reference to "M.D. (Manchester's)" query as to the "best method of removing a small nævus on the bridge of the nose," I would recommend Dr. John Duncan of Edinburgh's method by electrolysis, a good and succinct account of which is given in *A Surgical Handbook* (by Caird and Cathcart), page 177, 3rd edition.

REMOVAL OF SUPERFLUOUS HAIR.

CAPTAIN GEORGE BIDIE, F.R.C.S.E., I.M.S. (Berar, India) writes: In reply to "M.D. (Manchester's)" query in the BRITISH MEDICAL JOURNAL of June 24th as to "means by which the hair on a young lady patient's upper lip can be removed," I would recommend the following depilatory: ℞ Tinct. iodi 0.5, olei terebinth 1.0, olei ricini 1·5, alcohol 10.0, collodii 40.0.; M. Sig.: Apply twice daily. As the layer of collodion is peeled off the hairs come out with it (*Münch. med. Woch.*).

APPOINTMENT OF PUBLIC VACCINATORS.

A YOUNG PRACTITIONER.—A Board of Guardians offered certain terms to five public vaccinators; four accepted the terms, and one refused. The Local Government Board objected to the scale of fees, not because they considered them inadequate, but for a technical reason, and suggested certain others, which appear to have been offered to the public vaccinators, when the four again accepted, and the fifth, as before, declined them. The Board of Guardians determined the appointment of the one public vaccinator, A., and C. was appointed to the vacant post. As A. left his dispute to the decision of the Local Government Board, and then appears to have refused the terms suggested by the central authority, we do not see that C. is acting at all unfairly to A. in accepting the appointment.

NERIUM OLEANDER.

DR. J. BARKER SMITH (Herne Hill, S.E.) writes in answer to a question with regard to this plant: In *A General System of Botany*, by Le Maout and Decaisne, translated by J. D. Hooker, 2nd thousand, page 551, Order Apocyneæ, I read: "Oleander wood, flowers, and leaves are very poisonous; death has followed using its wood as meat skewers; an infusion of its leaves is an active insecticide, and its bark a rat poison." In Dorvault's *L'Officine*, under Nerium Oleander—"The Rosebay," page 579, I translate the following: "Leaves reputed narcotic; M. Landerer says salicin is present in the leaves and flowers. Infusions of the leaves in water or oil have been employed in skin affections (Dartres); the leaves powdered and mixed with lard have been employed as a remedy for the itch. It is poisonous. According to Lukomski the oleander contains two alkaloids—pseudo-curarine and oleandrine: the latter is an active poison. Another authority states that the plant contains a cardiac poison analogous to digitaline." I may add that I am sensitive to the action of an aconite plant in flower, and I have been obliged to remove such from outside my window on account of its depressing the action of my heart. The pulse falls from the exhaled aconitine. Digitalis in flower affects me in the same way.

NOTES, LETTERS, Etc.

ERRATUM.—In the third line of the postscript to the letter on Members, (R.C.S.) Gowns by Dr. Frederick H. Alderson which was published in the BRITISH MEDICAL JOURNAL of July 29th, p. 316, the word State should be "stole."

THE LAURIA FUND.

DR. JOHN H. BARRS (6, Wandsworth Bridge Road, S.W.) and Dr. EDWARD B. HARTNELL (1, Ryecroft Street, Fulham, S.W.) write: In answer to Mr. Victor Horsley's appeal on behalf of the widow and children of the late Dr. Lauria in the BRITISH MEDICAL JOURNAL of July 29th, we beg to say the following amounts have been received:

	£	s.	d.		£	s.	d.
Claud Worth	2	2	0	Y. H. B.	2	2	0
W. Domett Stone... ...	1	1	0	G. W. G.	1	1	0
K. W. M.	1	1	0	E. D. Coates	1	1	0
K.	0	10	0	Jas. Whitson	3	3	0
Volens	1	1	0				

TREATMENT OF SCARLET FEVER IN THE OPEN AIR.

X. writes: Is there any reason why scarlet-fever patients should not be treated in the open air, provided the weather be sufficiently warm, and means taken to prevent the scales being blown about? Small-pox patients have been said to get on better under canvas than in hospital. Might one not expect a similar result in the case of scarlatina? Has it ever been tried?

METALLIC MERCURY AS A MEANS OF ARRESTING HÆMORRHAGE.

LIEUTENANT-COLONEL CHARLES MONKS (I.M.S., European General Hospital, Aden) writes: I am not aware if the metal mercury has ever been used as a mechanical means of arresting hæmorrhages, but it seems to me that it is a substance easily lending itself to this purpose from its weight and consistence, and from the facility with which it can be run into cavities, deep wounds, etc., where the employment of other means of controlling bleeding is not readily applicable. It ought to be very effective in uterine hæmorrhages. I should be grateful to hear of any experiences in this connection.

LETTERS, COMMUNICATIONS, ETC., have been received from:
A Mr. H. Armstrong, Liverpool; Dr. F. Armitage, Leicester; Dr. C. M. Allan, Longton; Dr. F. H. Alderson, Bournemouth; Dr. F. A. Arnold, Bulawayo; Professor C. Addison, Sheffield; Ambulance. **B** Mr. W. L. Brown, London; Dr. Bevan, London; Mr. L. Bidwell, Devonport; Dr. O. A. Brown, London; Dr. L. H. Bryson, Derby; Dr. A. J. Bentley, Tunbridge Wells; Mr. G. H. Broadbent, Manchester; Mr. W. H. Battle, London; Mr. W. Bennett, St. John's Chapel, R.S.O.; Bookworm; Mr. C. Boyd, London; Mr. J. Beattie, Newcastle-on-Tyne; B.; Dr. J. H. Battersby, Doncaster; Dr. A. J. Boyd, Ware. **C** Mr. H. W. Cox, London; Mr. H. W. Cotman, London; Dr. A. Cox, Gateshead; Dr. J. J. Charles, Kilkee; Dr. W. Charnley, Shrewsbury; Mr. J. H. Croudace, Stafford; Dr. A. H. Cook, London; Mr. J. Carslaw, Briston; C. G. S. M.; Mr. E. F. W. Currey, London; Dr. J. Carslaw, Glasgow; Mr. B. Cooper, London. **D** Dr. A. R. Darley, Rugby; Mr. F. Davidson, London; Dr. O. W. Duggar, Gibraltar; Dr. R. A. Dove, London; Dr. W. Donovan, Birmingham; Dr. E. P. Davis, Philadelphia; Mr. J. Davies, Newtown; Dr. M. Dixon, Cheshunt, Dr. W. Darley-Hartley, Cape Town. **E** Mr. E. H. Ellison, Lyston; Mr. J. B. Endean, Cockington; Dr. E. A. Edelsten, London. **F** Mr. A. G. R. Fullerton, London; Mr. W. Fearnley, Harrogate; Dr. W. T. Freeman, Reading; Dr. N. R. Finsen, Copenhagen. **G** Dr. J. G. Glover, London; G. P.; Mr. F. Greaves, London; Dr. W. G. Ellis, Singapore; Miss F. Grove, London; Dr. D. M. Glen, Rutherglen; Mr. M. B. Gorman, Beckenham. **H** Mr. H. Hemsted, Whitchurch: Dr. Hertoghe, Antwerp; Mr. Victor Horsley, London: Mr. C. H. Hartt, London; Dr. E. B. Hulbert, Windsor; Dr. S. Harris, Las Palmas; Mr. F. S. D. Hogg, Rickmansworth; Mr. A. Hughes, Manchester Dr. L. Henry, Melbourne; Mr. S. O. Hall, Quetta; Hon. S. Holland, London; H. J. W. Dr. F. de H. Hall, London; Dr. J. Hislop, Blackford; H. S.; Mr. J. L. Hamilton, Brighton; Dr. G. A. Heron, London. **I** Messrs. Isenthal, Potzler and Co., London Ignoramus. **J** J. G. B. C.; Dr. E. A. Johnson, Göttingen; Mr. J. B. James, London Mr. R. F. Johns, Dublin: Dr. G. Jones, Lee. **K** Mr. C. W. Krohne, London; Dr. J. W. Keating, Ann Arbor, U.S.A.; Mr. H. A. Kynsey, London; Mr. W. G. King, London; Dr. S. J. J. Kirby, Fressingfield. **L** Professor E. K. Lankester, London; Mr. T. Laffan, Cashel. **M** Mr. T. McCormick, Cardiff; Mr. P. Michelli, London; Dr. E. P. Manby, Liverpool; Dr. T. G. Macormack, Newport; Dr. C. E. Maguire, London; Dr. J. B. McLaren, Salford; Dr. A. D. McQueen, Old Hill; Dr. W. H. Mondelet, Brighton; Dr. A. J. Morton, Huelon; Dr. R. Morton, Nenagh. **N** Mr. F. Norton, London: Mr. A. Neve, Kashmir; Mr. J. Neal, Birmingham; Mr. F. L. Nicholls, Fulbourn. **O** O'Connor Extension Company, London. **P** Dr. W. H. Pinches, Cairo; Mr. F. J. W. Porter, Perham Down; Dr. F. C. Palmer, Woking: Mr. F. Percival, Preston; Mr. E. F. Parry, London; Physician. **R** Dr. W. Renner, Sierra Leone; Mr. D. Rice, London; Mr. W. K. Rix, Southbourne; Mr. T. W. F. Romney, Derby; Mr. W. L. Ruthven, Hull; Dr. J. E. Rosenstein, Rowley Regis; Rustic; R. **S** Surgeon-Major Retired H.P.; Mr. A. W. Smith, Huddersfield; Dr. A. Stewart, Manchester; Mr. G. Simpson, London; Mr. W. W. Stocker, London; Mr. J. B. Smith, London; Dr. R. Sevestre, Leicester; Dr. W. Sykes, Gosport; Dr. A. Smart, Edinburgh; Dr. T. D. Savill, London; Mr. W. Smith, Warsaw Dr. R. B. Selby, Port William; Mr. T. Smyth, Peddie, Cape Colony; Mr. H. Spackman, Wolverhampton; Mr. J. A. Southern, Derby; Dr. H. G. Smeeth, Stockport; Dr. A. J. Smith, Dublin. **T** Dr. W. H. Tate, London. **U** University of London, Registrar of, London. **W** Mr. O. Webster, Halifax; Dr. J. K. Watson, Byfleet; Dr. F. R. Walters, London; Mr. A. S. Williams, Bath; Dr. W. H. Wigham, South Molton; Professor Wilson, Warwick; Dr. P. McK. C. Wilmot, London; Messrs. J. Wright and Company, Bristol; Mr. W. R. Watson, Hawkhead, Paisley; W. W. P.

BOOKS, ETC., RECEIVED.

Etudes des Arthropathies Tabétiques et de l'Influence des Nerfs Trophiques sur la Nutrition. Par J. A. Cree, M.B.Dub. Paris: Vigot Frères. 1899.

Medical Gymnastics, including the Schott (Nauheim) Movements. By A. V. Grafstrom, B.Sc., M.D. London: Scientific Press. 1899. 2s. 6d.

A Handbook of Sanitary Law. By B. B. Ham, M.R.C.S., L.R.C.P., D.P.H. London: Ash and Co. 1899. 1s. 6d.

The Principles of Bacteriology. By A. C. Abbott, M.D. Fifth Edition. London: H. K. Lewis. 1899. 12s. 6d.

On Fractures and Dislocations. By Professor H. Helferich. Translated from the Third Edition by J. Hutchinson, jun., F.R.C.S. London: Baillière, Tindall and Cox. 1899. 15s.

A Record of Indian Fevers. By Major D. B. Spencer, I.M.S. Calcutta: Thacker, Spink and Co., and London: W. Thacker and Co. 1899.

The Plague Inspector. By W. G. King, C.I.E., M.B., C.M., D.P.H., Lieutenant-Colonel I.M.S. Parts I and II. Madras: Addison and Co. 1899.

*** In forwarding books the publishers are requested to state the selling price.

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AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF OPHTHALMOLOGY.

At the Annual Meeting of the British Medical Association at Portsmouth, August, 1899.

By SIMEON SNELL, F.R.C.S.Edin.,

Ophthalmic Surgeon to the Royal Infirmary, Sheffield; and Professor of Ophthalmology, University College, Sheffield; President of the Section.

ON THE PREVENTION OF EYE ACCIDENTS OCCURRING IN TRADES.

My first duty is the pleasing one of cordially acknowledging the honour conferred in selecting me to preside over the Section of Ophthalmology, and whilst as a stranger, like many others amongst us, it ill becomes me to bid you welcome to this town, I can and do give a hearty welcome to all who may attend our meetings, and express the hope that you will freely take part in the discussions, and will also derive profit from our deliberations.

I desire to ask your kind attention for a short time to some remarks I propose to make on the very important subject of the causation and prevention of eye accidents in certain trades. It is not possible in the limited time at my disposal to consider at all completely such a very wide subject. Practically my whole professional life has been spent in a very populous district, well known for its extensive iron and steel works, for its cutlery, and for a number of metal and other trades, and also as the centre of a very extensive coalfield. It is possible that eye accidents occur there with as great frequency as in any other district that could be named, and if the number of accidents is large the methods by which they are occasioned are also very varied. Experience gained in such a field gives one, perhaps, some title to speak of the causes of these accidents, and the means which should be adopted to obviate them.

No one can have seen much of ophthalmic practice in such a large industrial centre without being painfully aware of the enormous destruction to sight occasioned annually by accident. It is difficult, of course, to obtain anything like accurate statistics. Magnus in his tables makes 8.5 per cent. of all cases of blindness as due to accident. Those blind in one eye only and the far larger number who have sustained permanent injury in varying degrees short of blindness are excluded in such a calculation, and however true such a statement may be for the community generally, it must be largely exceeded in large and populous centres, especially those in which iron and steel are important industries.

Statistics.

I do not intend to burden my remarks with many statistics. A few figures are, however, necessary. Mr. Watson, the able Secretary of the Miners' Permanent Benefit Fund, has given me the following statistics as to the proportionate frequency of eye accidents among miners to other accidents. In all these accidents the miners have been rendered unfitted from continuing their work, at least temporarily. The figures are for 15 years, arranged in periods of 5 years. It is curious to see the proportion 5 per cent. coming out practically the same for each period. The number of non-fatal accidents dealt with is 48,262.

Period.	Number of Accidents.	Number to Eye.	Percentage.
1884 to 1888	16,870	857	5.08
1889 to 1893	12,768	670	5.24
1894 to 1898	18,624	979	5.25
Total... ...	48,262	2,506	5.19

The average yearly membership for each period was: 1884 to 1888, 22,410; 1889 to 1893, 17,876; and 1894 to 1898, 23,005.

Mr. Bridgeman, the secretary to the Equalised Druids Society, a benefit society embracing all classes of workmen, has given me other statistics. This society gives to its members who are permanently incapacitated from following their employment a grant of £100. The number of cases of all accidents in which this grant has been made during the last five years is 57, and out of that number the recipient has obtained it seven times owing to eye accidents. My own infirmary figures (which Dr. Barker, my house-surgeon, has kindly worked out for me) also testify to the large number of eye accidents annually occurring in the district of which I am more particularly speaking. Of the last 2,546 patients who have passed through my wards at the Sheffield Royal Infirmary 2,038 were men and 516 women. Of the 2,038 men 622 were admitted for accident, or 30.4 per cent. This percentage has kept fairly uniform, but at periods like the present of great trade activity the ratio of accidents to other cases admitted has gone up. Of 516 women only 36 were admitted for accidents, or 6.9 per cent.

Iron and Steel Works.*

It is necessary to exclude entirely from my remarks all reference to accidents caused in everyday civil life, much as could be said about their prevention. My observations have reference only to accidents met with in connection with labour and, as already stated, they have a more particular bearing upon accidents occasioned by such trades as are carried on in the Sheffield and the surrounding districts. Iron and steel works are no longer confined to one district, but are located in many different parts, and there are many other industries to which the general principles here set forth will equally apply.

The important part occupation bears to the number of eye accidents is well illustrated by my infirmary statistics, which I have already quoted. The men not only exceeded the women very largely in actual numbers, but still more so by percentage, this latter being six times as great as for the women.

Grinders.

In many trades associated with iron and steel in all its varieties small foreign bodies are very prone to become lodged in the workmen's corneæ. I take as an example the grinders. In the course of the day a grinder may get several foreign bodies fixed in his cornea, or days may elapse without such a mishap. "Mote" is the name popularly given by the workmen to these particles in their eyes. If the cornea of a grinder be carefully examined with a magnifying glass it will not infrequently be found to be studded over with minute nebulæ; though, therefore, the damage done by each "mote" may often not be serious, yet the frequent repetition, by dulling the cornea, will, in many cases, diminish the acuteness of vision. These particles may either be small fragments of stone, or much more frequently small portions of steel, or emery, which latter is largely used as a wheel for glazing cutlery and for other purposes.

A few observations about the grinders' work will be of interest. I take works where, at the time of my visit, besides outworkers, 700 men were engaged in making pocket knives and razors, etc. Of the two varieties of grinding it was at once evident that the dry grinders were more exposed to injury from foreign bodies than the wet grinders. A grinder sits across his bench, which he calls his "horse," and presses the knife or razor blade on the stone. The wet prevents the particles flying about a good deal, but a man's face becomes, as he works, bespattered; nevertheless, a wet grinder would say that, compared with the dry grinder, he seldom gets "motes" in his eyes. In dry grinding the sparks fly freely, and it is evident that particles, very minute, of steel or stone are being projected about, and it is the merest chance whether they hit the man's eye or face or scatter about the room. The fans, which it is well known have for many years been required in the grinding trade in consequence of its deleterious effects upon the health of the operatives, must be regarded as in some measure a protective means. It is interesting to observe the remarkable way a fan draws into it the sparks and particles flying from the wheel. There can be no question that the grinder derives considerable immunity from these "motes" by the employment of protective glasses. Several grinders whose ocular condition

* For table of accidents to iron and steel workers, see p. 394.

necessitated the wearing of spectacles have admitted the protection they afforded. If further testimony were needed it can be found in the condition of the glasses after use for some time by a grinder. I have here a concave glass which a grinder used at his work. It will be noticed that its surfaces are studded all over by small dots; both surfaces in this instance, because the side of the glass had been changed; so that when one surface had become studded the position of the glass in the frame had been reversed, and that which was next the eye had been placed externally, and had also in turn become studded with marks. This may be regarded as what occurs to the cornea in consequence of the repeated lodgment of particles.

The nearer a man is to his work the greater is the chance of his eye being hit by one or more of these small particles. This suggests the proper correction of errors of refraction by the appropriate spectacles.



Fig. 1.—Grinders: Edge tool grinding.

It must be admitted that in the great majority of instances the damage occasioned to the grinder or other operatives in which similar mishaps occur is not attended with serious results. To many, however, the immediate injury is serious either directly or by the ulceration that ensues. There is another way also in which injury results. A man once said to me, pointing to his damaged finger, "This would not have happened if something had not got into my eye, because I could not see my finger on the circular saw." He was an ivory cutter.

"The Mote Remover."

In the various trades in which steel and iron are used the operatives are liable, though to a less degree than the grinder, to get these "motes" into their eyes. Many workmen are skilful in removing "motes" from their comrades' eyes. In all the large works there are men who have a reputation in this way. It is, besides, not an infrequent sight, even in the streets, to see a man with his head pressed against a wall, and a fellow workman endeavouring to remove a foreign body from his eye. The number of foreign bodies some of these men remove in the course of a day is very large. One man, a timekeeper at works where 1,000 men, besides outworkers, were employed, told me he had for fifteen years at least been recognised as a skilful remover of "motes." Sometimes he has extracted a score or more a day; sometimes the number was much less, but he had not for many years passed a day without at least one case. He was not the only man with a reputation at these works for grinders, and others also removed motes. He used a lancet with the end blunted. It was quite clean, and he kept it so by either putting it on a strop or a wet stone. For the same purpose other men would use a lancet, pocket-knife blade, or even a pin, etc. The knife would very possibly be the same used at the man's lunch, and the pin not infrequently is put into the mouth to wet it before being used, and is very likely kept stuck in the man's waistcoat, where it comes in contact with the dirt collected in the clothing.



Fig. 2.—Grinding: Emery wheel.

Infection of Corneal Tumours.

Without doubt, in many instances these motes are skilfully removed; in others there is a good deal of bungling. The instruments generally used are unsuitable. Not infrequently cases come under observation in which sloughing corneal ulcers have resulted from the efforts made to remove a "mote." It seemed to me not unlikely that a septic condition was set up in consequence of the uncleanly instruments which were so often employed. Dr. Shennan, of Edinburgh, kindly undertook a bacteriological examination of some of these instruments for me. I collected 22 tools used by different men; 17 of these were got together for me by the skilful timekeeper I have already mentioned; the other 5 were obtained at large engine works. The photograph shows these instruments except two pins which were accidentally omitted. Some of the tools were fairly clean, but others were in a dirty state; two or three were magnetic. Dr. Shennan examined the majority of these tools. Taking all in all he found nothing pathogenic excepting the staphylococcus pyogenes albus, whose virulence is comparatively slight. The other organisms found were chiefly sarcinæ of the more common varieties, and bacilli of the "subtilis" (hay bacillus) group. He failed to obtain cultures from one only of the instruments, and the greatest number of separate colonies were obtained from a common white pin. The presence of organisms had apparently no special relation to the clean-

ness or rustiness of the tools. They were present on the brightest steel, whereas the instruments from which he failed to obtain cultures was a lancet, the blade of which was slightly but decidedly rusty. Still, as he remarks, one cannot lay much stress on such an occurrence, as it might be accidental.

Of course there are many sources besides these tools by which a corneal wound may become septic. But good should result if something cleanly and more suitable can be made accessible to these removers of "motes." A member of a large firm has promised to provide the men at his works enjoying reputations for removing motes among his employees with such instruments as in my opinion would be suitable. After considering different means which could be adapted for sterilising spuds, the simplest device seems to me to be to provide a case containing a couple of iridium platinum blunt pointed spuds, together with a small spirit lamp, and directions are printed in the top of the case saying that before use the extremity of the spud should be heated in the flame of the spirit lamp, or if this be not accessible in a gas or other flame which may be at hand. Messrs. Down Brothers have made such cases on my suggestion.

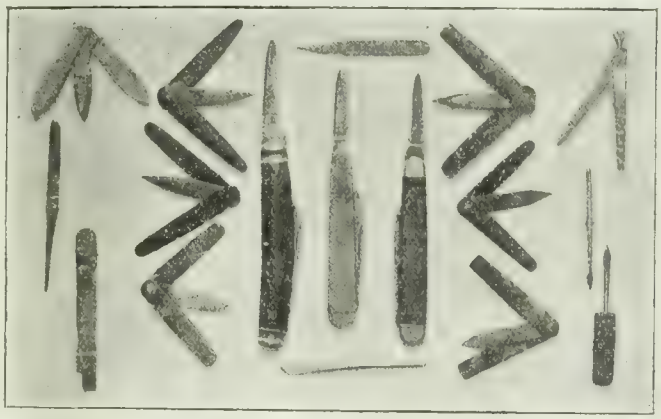


Fig. 3.—A series of instruments used by men for removing foreign bodies from the cornea.

"Chippers" or "Fettlers."

The opportunity for the infliction of severe injuries to iron and steel workers is multitudinous. They occur in all branches of the trade, in the lighter iron and steel industries as well as in the heavy trades, where armour plates are made and heavy castings of scores of tons. A very large proportion of the accidents are occasioned by what is called "chipping" and "fettling." "Dressing" is the name given in some parts to this process. This work consists in chipping the rough edges from steel and iron castings, ingots, and all kinds of iron and steel work, and, among other things, even the large armour plates. I append a short list which a patient, himself badly injured when passing men engaged in "chipping," has furnished me with of the articles in connection with locomotive work, as an example, of the number of objects in which "chipping" is required.

Rolled Steel.—The frame plates for locomotives require chipping for the hornblocks or axlebox slides

Cast Iron.—The saddle casting which is placed under the front end o the boiler and between the frames to which it is bolted. This casting wants chipping to the radius of the boiler.

Cast Iron.—The dragbox, which is placed between the frames at the back of the engine.

Cast Steel.—The hornblocks or axlebox slides sometimes require chipping and facing. The platform plates (of mild steel), which are the plates round the engine, require chipping on the edges.

Steel.—The boiler has to be chipped and faced in various places for the mountings.

Cast Iron.—The chimney, if a casting, requires chipping and bedding to the boiler.

Steel.—The clothing plates for the boiler. These plates are rolled to the radius of the boiler, and then laid over a block and pieces from 1 to 4 or 5 inches in diameter are chipped out to clear different mountings, etc., on the boiler.

Castings of either iron, steel, or brass are the most dangerous to work upon, because the chippings fly about on account of the metal being brittle. It is very dangerous chipping castings in the corners or where the chipping strikes the metal and rebounds. Chippings from the castings are about ¼ inch to ¾ inch long and very sharp. When chipping thin plates on the edges, the chippings are sometimes 1, 2, or 3 inches long before they break off. All castings are fettled at the foundry, that is, the runners are cut off, and the places where the metal has run at the joint of the moulding boxes are trimmed off.

Whatever be the special kind of metal or steel to be fettled, the manner in which it is done is practically the same. A hammer and chisel or sate are used, and with these the roughnesses are removed. Frequently also whilst one man places the chisel another, or even two others, will use a hammer and are called "strikers." I understand that at works where, say, 1,000 men are employed, 200 or more would be occupied more or less in "chipping." Many men are frequently working close to each other, so that the danger is not only to the worker himself but to those around. Passers-by are by no means infrequently the victims, and many blinded in this way have come under my notice. The chipper himself is often hit by the rebound of the splinter after it has struck perhaps the narrow angle of steel or iron upon which he may have been working, or some other object. It must be recollected, also, that in the process spoken of the danger is not merely from the iron or steel which is being operated upon, but there are three other places from which splinters may be, and actually are, given off and cause injury—namely, the hammer head, the chisel head, and the chisel point.



Fig. 4.—Men engaged in chipping.

It is obvious that men engaged in work which causes the splinters to fly about so freely should be so arranged as not to be chipping against their fellow workmen, or in a direction in which passers may approach. This is managed in some works by getting the men to chip against a wall, though not too close to it, or again by interposing a canvas screen between sets of workmen.

The sizes of the splinters spoken of vary from the most minute to others measuring some inches in length, and they may be thick or thin. The injury inflicted varies, of course, in accordance with the size of the missile and the force with which it is projected. The small fragments may be thrown off with such velocity that they penetrate the eyeball and become embedded in its interior, in some instances passing through the eyelid before reaching the globe. The destruction to sight in this way is very large. I have myself removed from the globe, with the electro-magnet, I believe more than 200 fragments of steel and iron, mostly projected into the eye in the manner I have just mentioned. I have arranged in a case for inspection 116 of these splinters. Though all are comparatively small there is a great variety in size. One is no heavier than 0.0015 gr.; there are several as light as 0.0030 gr. and 0.0046 gr. The largest weighs 36 grs. and there are two others 12 and 9 grs. respectively. This is not the place to refer to the results of the extraction of this number of foreign bodies with the electro-magnet, and I content myself by saying that many eyes have been saved by its employment which otherwise would have been hopelessly lost. The large chippings may occasion such extensive wounds of the eyeball that the eye is at once irreparably damaged or so injured that removal of the globe will subsequently be necessitated.

It has been my sad fortune on more than one occasion to have a workman under treatment in consequence of a severe injury caused by a large or small splinter of steel or iron and in which loss of sight has resulted, who has afterwards returned to his work and has again come under my care with a similarly disastrous accident to the remaining eye. In one instance, which I well remember, a very few weeks only had elapsed between the two accidents.



Fig. 5.—Chipping against a screen. Men wearing protectors.

THE PNEUMATIC CHIPPER.

Besides the manner of arranging the men at their work to which reference has already been made, and the means to be recommended later for adoption by the workmen, it is fortunate that the dangers of chipping may be avoided by adopting a pneumatic chipper. My friend, Mr. Bernard A. Firth, of the well-known firm of Messrs. Thomas Firth and Sons, has kindly given me the following note on this method. He says:

> For chipping ingots of steel or anything that is of a comparatively soft nature—that is, not very brittle—we have almost entirely given up the use of hand chipping by sate and hammer and adopted a pneumatic chipper. The advantage of this is that the pieces do not fly from a chisel, but merely curl up and fall over. In cases where this cannot be used the blocks to be chipped should be ranged near the walls inside the building, with the men facing the wall so that they do not chip towards each other. A certain number of accidents occur among men known as fettlers, who are employed in chipping the rough edges from steel castings. Up to the present these pneumatic tools have not been a success for this work, but possibly in due time some improvement will be made which will enable them to be used.

I visited these works, and there saw the pneumatic chipper at work on a large casting. It has the advantage of accomplishing in one hour, what, by hand, would take six or seven hours. It certainly prevents the flying about of splinters in a remarkable manner. It is more like using a cheese scoop in a fairly soft cheese than running any tool over hard steel.

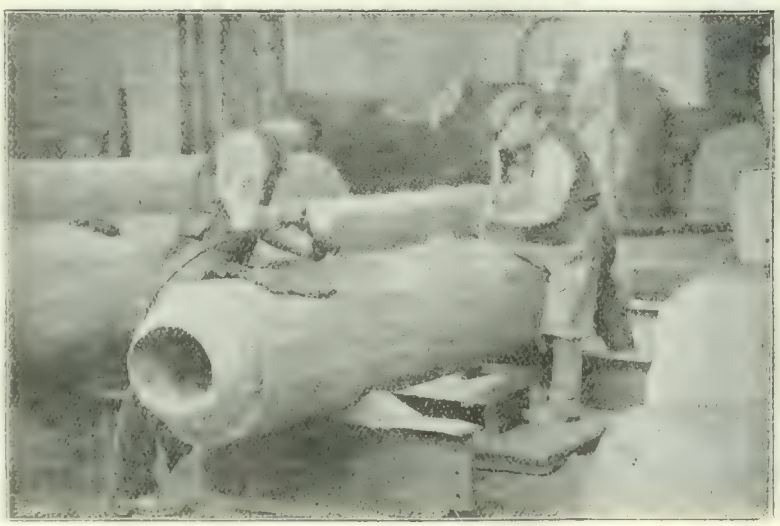


Fig. 6.—Pneumatic chipper

INJURIES FROM MOLTEN METAL.

Another class of severe injuries which are of common occurrence are burns from molten metal. Sparks and flashes fly about freely in almost every instance that molten metal is run into the moulds; but in some, of course, more so than in others, and the portions given off vary much in size. Injuries caused in this manner were no fewer than 43 out of the 359 consecutive accidents in males already mentioned as admitted into the Royal Infirmary under my care. In the forging, also, great or small, when the iron or steel is being hammered either by hand, or, in the case of larger castings, by a steam or hydraulic hammer, portions are given off the glowing metal, and those working, and the bystanders, are exposed to danger of burns. Injuries inflicted by molten metal are very serious owing to the immediate destruction of tissues or the later results.

Preventive Measures.

The knowledge which I have acquired from contact with working men who have been injured, and visits from time to time to many of the principal works has long since satisfied me that much of the destructive injury to sight, which is constantly coming under one's observation, is preventable, and that means can and should be adopted to endeavour to lessen the risks to sight which are at present associated with such important industries. My experience has shown me that there is less difficulty in enlisting the support of the employers than the assent of the men to adopt precautionary measures. With the Compensation Act in force I have no doubt the assistance of the masters will even be stimulated. It only recently came to my knowledge that one firm had made it compulsory on men engaged in "chipping," "fettling," "turning," and other work in which iron and steel splinters were liable to fly off and endanger sight, to wear protectors, which were provided at the expense of the firm. This decision was taken in consequence of a workman being blinded by a "chipping," and it is easy to see, while creditable to their humanity, how such a course, if it tends to preventing loss of sight, is likely to be a considerable pecuniary saving.



Fig. 7.—Crucible steel melting.

Eye Protectors.

In considering what kind of protectors men should use certain points must be borne in mind. The cost must be very moderate, and any covering over the eyes should interfere with the sight as little as possible, if at all. Among ironworkers, glass is practically out of the question. Even thick rock crystal, which has been suggested for some kinds of work in consequence of its thickness and peculiar manner of fracture, would hardly do. There are a variety of protectors in the market, but they have been little used.

Gauze wire, fitting close to the eye like a cup and attached to the head by a string, is employed by stonebreakers and in some ironworks. I have photographs of men working with these protectors over their eyes. They are taken from men actually engaged at their daily work at the works (*vide* Figs. 5 and 8) to which reference has already been made, where the men are practically compelled to adopt protectors. They complain of them as being hot and interfering with sight, but there is no question that such protectors afford considerable immunity from accident. Another practical point about protectors is that they should not be liable to rust. For this reason galvanised iron wire, or better, aluminium wire, is of service. The mesh should be strong and fine, and sufficiently close to prevent, as far as possible, even small chippings passing through it, and yet to interfere with sight as little as need be. I have had experiments made by allowing men engaged in fettling to "chip" against wire gauze which has been suspended for the purpose, to ascertain how far a mesh answered before deciding to adopt a given size. Then, acting on a suggestion derived from Snellen's shield for operation cases, I have had this netting made into protectors which cover the eyes and the adjacent parts. The portion over each eye is bulged forward so as to allow very free play to the eye underneath, and the convex surface will be a greater protection than one merely flat would be. I have supplied workmen with these protectors, who have used them for chipping, steel melting, and other dangerous iron and steel work. I learn that they are regarded as satisfactory, that they answer their purpose well as protectors, and that the interference with sight is very little.



Fig. 8.—Turning: Man wearing protectors.

Iron and Steel Workers.

By far the most serious eye accidents happen to men engaged in working iron or steel. The following figures (p. 394) exhibit this in a very lurid light.

Out of this total of 359 eye accidents to males, taken from the records for this purpose consecutively, which were so serious as to require admission to my wards at the Sheffield Royal Infirmary, no fewer than 173 were caused by iron or steel, including splinters of iron or steel, pieces of rivet, of drill, wire, and many other means associated with the iron and steel trades. There were also 43 due to burns from molten metal, sparks, flashes, etc. I am not sure also whether to the former number should not be added 5 put down as caused by nails, as most, if not all, of them would have occurred to iron or steel workers.

STEEL AND IRON.	
Steel and iron splinters, rivet, chips, pieces of drill, file, wire, etc.	173
Nail	5
BURNS.	
Metal sparks, flashes, etc.	43
Lime	8
Gas explosion	1
Ammonia	1
Gunpowder	4
Cinder	1
Poker	1
MISCELLANEOUS.	
Dynamite, and dynamite explosion, and cartridge	6
Wood, sticks, and peggy	13
Hook	1
Knife	8
Glass, soda-water bottles etc.	15
Pick	5
Stone	24
Fork	7
Pin	1
Fist	3
Branch of tree	1
Crane handle	1
Cork	2
Cinder	4
Coal	11
Straw	1
Cat's-claw	1
Sand	1
Ball	1
Pen	2
Firework	1
Boiling oil	1
Tin	2
Band-strap	2
Band-buckle	2
Chain	1
Kick	1
Brick	1
Thorn	2
Elastic, piece of	1
Total	359



Fig. 9.—Chipping. Man wearing protectors.

CONCLUSIONS.

I would sum up my suggestions as to the means for protection as follows:

1. The grinder will find that large glasses made of plain glass or indeed his own spectacles, should his refraction require their use, will afford great protection. Or he may use other protectors made with glass in front and gauze surrounding it.

2. The use of protectors should be compulsory for those workers in iron and steel whose employment renders them liable to be injured by iron or steel splinters, or are exposed to danger from molten metal.

The gauze eye shield I have described will, I believe, answer the purpose well. The cost is low, and it is worth the employers' while to supply their men with them. Other means to be adopted are: (*a*) The use of a pneumatic chipper whenever practicable; (*b*) the proper arranging of the men at their work; and (*c*) the use of screens so as to avoid injury to their fellow-workmen and to passers by.



Fig. 10.—Protectors.

It is my belief that a consideration of the facts I have advanced will lead to the conviction I have myself long held, that very many eye accidents associated with trades are preventable, and to the view that, such being the case, preventive means should be adopted.

NOTES.

[1] After a time, in grinding blades a stone gets blunted, and its pores become filled with portions of hard steel. A process is then adopted for "cleaning" or "sharpening" the stone, and it is more than usually dangerous, because it liberates these particles, as well as makes fresh ones. A bar of soft iron is held against the stone, in the opposite way to which the wheel is running. This is called "straddling." A great deal depends on the fineness of a stone, and accidents are much more common with new rough ones, as particles are much more likely to fly from it. The mode of preparing a new stone is a dangerous one; it is called "racing." The stone is put on the band and it is turned the wrong way, and then a man holds a piece of steel against it to smooth its surface. The dust is tremendous, and splinters of stone fly in all directions. The men cover their mouths to keep the dust out, but they do not generally use any protective over their eyes. It is during this process that stones are apt to crack and fly, and that accidents occur entailing serious results to life and limb. An emery wheel is used for glazing, and here again much depends on whether the wheel is new and rough or not. [2] By Messrs. Priest and Ashmore, opticians, Sheffield. [3] The interference to sight is not greater than that occasioned by many ladies' veils.

AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF ANATOMY AND PHYSIOLOGY.

At the Annual Meeting of the British Medical Association, at Portsmouth, August, 1899.

BY J. J. CHARLES, M.D., F.R.S.E.,

Professor of Anatomy and Physiology, Queen's College, Cork; President of the Section.

RECENT ADVANCES IN PHYSIOLOGY.

GENTLEMEN,—When I reflect upon the number of distinguished men who, from time to time, have occupied this chair, I feel deeply the honour which the British Medical Association has conferred upon me by appointing me President of this Section.

To-day I shall direct your attention mainly to the consideration of the advances which have lately been made in Physiology. Time will permit me to say only a few words, at the close of this address, on recent progress in Anatomy. I shall, of necessity, refer to much that is already familiar to many here present; so far as this is so, my aim, obviously, is not to reach them, but rather that large body of the members of this Association who cannot, through force of circumstances, keep themselves *en rapport*

with the progress of physiology. With this object in view, our discussions and demonstrations have been so arranged as to be of general as well as of special interest. It is to be hoped, therefore, that many members of the Association, other than specialists, will take an active share in our proceedings.

Physiology is said by Max Verworn[1] to have as its task, "the investigation of life;" but the nature of life is to us, as yet, a mystery. No doubt, we are acquainted with many of the phenomena which accompany it; but it has been truly said that "everywhere, to whatever branches of physiology we may turn, wherever the gross activities of the body are traced to the activity of the individual cells, we always come upon an unsolved problem."[1] Thus, we cannot explain, nor can we discover, how nervous impulses originate in the retina, and give rise in us, through the agency of the cerebrum, to the idea of the image; why the salivary glands secrete ptyalin, and the glands of the stomach pepsin; or why some cells of the mesoblast develop into muscle and others into cartilage.

The minute structure of living cell protoplasm is a question still open to discussion. W. B. Hardy recently, in an able paper,[2] gives the four views which are at present held on this subject: the first, that protoplasm is made up of a reticulum and a homogeneous fluid substance; the second, that it consists of a more or less solid material containing vacuoles, in which there is a fluid; the third, that it is a homogeneous jelly, with granules; and the fourth, that it is entirely homogeneous. As the result of his observations on colloids, such as white of egg, and on the living cell substance of the pancreas and other glands, Hardy has come to the conclusion that the reticulum which may be demonstrated in fresh or fixed cell protoplasm is largely due to the physical and chemical alterations which occur in it at death, and to the action of the fixing reagents upon it which induce coagulation. Hardy has succeeded in making preparations with egg albumen, showing a reticulum very closely resembling that of protoplasm. One of these, a film fixed by steam, while flowing between two cover glasses (Fig. 1), is very interesting, as exhibiting the

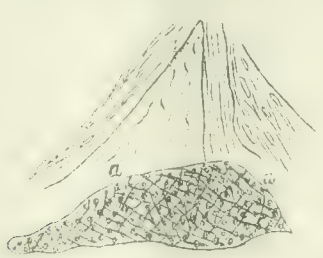


Fig. 1.—Film of white of egg fixed by steam while flowing between two cover glasses, showing the abrupt transition *a a* from the network to the homogeneous substance (Hardy).

abrupt transition from the network to the homogeneous substance similar to that demonstrated years ago by Schäfer, in the white corpuscle when fixed in the same way by heat.

The microscopical characters of striped muscle have not ceased to be a debatable subject amongst histologists. The interpretation given by Rutherford has met with much acceptance, and is undoubtedly supported by the examination of specimens of crab's muscle which have been prepared according to his method; but the recent researches of Hardy would lead us to look with suspicion on the appearances presented by this tissue after it has been subjected to the action of chemicals.

The contraction of muscle is believed by McDougall to depend on the elimination of lactic acid, causing the passage of the fluid sarcoplasm into the sarcostyles. Unstriped muscle has been found by Triepel in all the cerebral veins, but the muscle cells, he says, are isolated and mixed with white fibrous tissue.[3]

By the use of osmic acid and uranium nitrate, with various dyes, Kolossow has demonstrated between the cells of the liver, testis, ovary, pancreas, and thyroid body, processes of connection which may serve for the conduction of impulses and the transference of nutrient materials.

The axis cylinders of nerve fibres have been shown by St. Apáthy,[4] in invertebrate animals, to be made up of fibrils which terminate, in the case of the "sensory" cell, in a single basket around the periphery, and in the "motor" cell in one basket around the periphery, and a second around the nucleus. This view, in some respects, resembles that which Arnold advanced, years ago, as the mode of origin of nerve fibres from nerve cells.

It is now agreed that the amount of hæmoglobin in the blood is not greater in the inhabitants of high altitudes than in those living at lower levels.

Gamgee[5] has drawn attention to the absorption band in the extreme violet end of the spectrum of blood, which he has named "the band of Soret," after its discoverer. He has pointed out that not only is it more distinctive than the bands seen in the spectrum when examined in the ordinary way, but that it is absolutely characteristic of hæmoglobin and its compounds; so that by this means they can at once be distinguished from bilirubin and urobilin as well as from carmine and all other colouring matters hitherto examined. This is a matter of practical importance, because this method may yet come to be employed in medico-legal investigations. Gamgee has indicated that the best and easiest way of demonstrating this spectrum is by means of an electric arc, a fluorescent screen, and a Bunsen's spectroscope.

R. Jarry[6] has investigated the influence of reduced pressure and increased temperature in causing the compounds of silver chloride with ammonia to dissociate somewhat like oxyhæmoglobin. Perhaps the further study of such "loose" compounds may lead to an increase of our knowledge with reference to the properties of hæmoglobin.

Haldane[2] has discovered a quick and ready plan of liberating the oxygen of the blood by the use of potassium ferricyanide; but to insure success, the blood should be fresh, else bacteria will interfere with the result. Nicloux,[7] employing Gautier's test for carbonic oxide—namely, that this gas has the power of decomposing iodic anhydride and forming carbon dioxide, whilst iodine is liberated and absorbed by copper*—has endeavoured to prove its presence normally in blood; and Louis St. Martin[7] has estimated the quantity in the blood of animals living in towns to be 1.5 c.cm. per litre. But as it is possible that during the application of this test, whilst the blood is being boiled with acetic acid, carbonic oxide may be formed by combustion, in the absence of oxygen; and as several hydrocarbons at 60° can reduce iodic anhydride, and as other gases besides carbonic oxide might respond to the test in a similar way, the results of Nicloux and St. Martin can only be provisionally accepted.

A fully satisfactory theory as to the coagulation of the blood has yet to be discovered. Probably, we shall not find it till we are better acquainted with the chemical constitution of the proteids of the blood. The view, however, which meets with most favour, and is open to fewest objections, is that there are three agents or factors concerned in the formation of fibrin, namely (1) fibrinogen, which is present in the plasma; (2) nucleo-proteid, derived in part from blood platelets, but chiefly from the shedding out, or perhaps from the disintegration of the white corpuscles; and (3) lime salts, in solution in the plasma. The nucleo-proteid, by the action of the lime, is changed into fibrin ferment, and this ferment, reacting with fibrinogen, transfers its lime to the chief constituent of fibrinogen (thrombosin), and thus gives rise to fibrin. Pekelharing is of opinion that fibrin is a *compound* of fibrinogen and lime, but it has been proved conclusively that fibrin contains no more lime than the fibrinogen from which it is derived. It is admitted that a lime salt is essential in some way in the coagulation of the blood, but the exact part it plays is still undetermined.

Delezenne[2] has succeeded in isolating an anticoagulant substance, of the nature of Lilienfeld's histon, from peptone plasma. He believes it is derived from the destruction of white corpuscles, but others hold that these corpuscles only leave the blood vessels, and are not destroyed. The fact that a second dose of peptone injected into the veins of an animal shortly after the action of the first has disappeared produces no anticoagulant effect, Delezenne explains by supposing that an antitoxin has been formed which protects the white corpuscles against their destruction by peptone. In favour of this view is the fact that the blood or serum of a "pep-

* $I_2O_5 + 5CO = 5CO_2 + I_2$.

tonised" or immunised dog when injected into the veins of another animal, confers upon it immunity from the action of peptone, snake poison, or extract of crab's muscle.

The formation of lymph is still a fruitful source of controversy. Some, as Heidenhain, regard it as in the main a secretion by the walls of the capillaries from the blood, whilst others maintain it is the product of filtration and osmosis from that fluid. Asher and Barbèra have of late advanced[4] the view that lymph is produced by the tissues and organs generally, such as the liver, the muscles, and the glands; but the evidence in favour of it can scarcely be considered adequate.

Langley[5] has caused the vagus and the sympathetic nerve in the neck of a cat to join together; and on applying stimuli, before and after the injection of nicotine, he has been able to prove that the nerve fibres of the vagus make functional connection with the cells of the superior cervical ganglion of the sympathetic, and give rise to the same results on stimulation as the sympathetic did before the section.

There has been considerable discussion of late years concerning the causes of the entrance of oxygen into the blood in the lungs. Most physiologists, following Pflüger and believing that the tension of oxygen in the blood is less than in the air of the alveoli, regard diffusion as sufficient to explain the passage of the gas. But the results obtained, first by Bohr and recently by Haldane and Lorrain Smith,[6] have induced some physiologists to consider this view untenable. Attention has accordingly been directed more to the chemical affinity of the hæmoglobin in the blood for oxygen. It is not likely that this affinity acts at a distance on the alveolar air; but undoubtedly the hæmoglobin in the red corpuscles, by absorbing oxygen, is constantly lowering the tension of the oxygen in the plasma around them, as Foster has pointed out, and so indirectly causing more oxygen to enter the blood from the air cells by diffusion. The chemical affinity of hæmoglobin is, therefore, an important factor, though it acts more as an aid to diffusion than as an agent or force by itself. Another hypothesis—that the cause depends on the secretion of oxygen by the endothelial cells of the alveoli, and perhaps by the capillary walls—has of late come into prominence. In favour of it we have the fact that in the secretion of urine, and *possibly* in the transudation of lymph, the endothelium containing living protoplasm discharges a somewhat analogous function. Again, there are some grounds for believing that epithelial cells may be the active agents in causing the passage of oxygen from the maternal to the fœtal blood in the placenta. But the most important evidence in support of this view is found in the case of the swimming bladder of fishes, in which oxygen, nitrogen, and likely argon, are at one time secreted and at another absorbed under the influence of the nervous system.[7]

Opinions are likewise much divided as to the causes of the exit of carbon dioxide from the blood in the lungs. Some physiologists endeavour to explain all the phenomena by diffusion; but we cannot regard this process by itself as sufficient, if we accept Bohr's statement that the tension of this gas in the trachea is usually greater than its tension in the blood. But Werigo[8], whilst accepting this statement, has tried to prove that the diffusion hypothesis is correct. He alleges that the *actual* tension of the carbon dioxide in the blood in the capillaries of the air cells may be higher than the tension as made out by the aërotonometer, because oxygen on its entrance into the blood breaks up the compound of carbon dioxide and hæmoglobin (a very doubtful compound), sets carbon dioxide free, and thereupon raises its tension in those blood vessels. But these grounds are insufficient to establish Werigo's supposition.

With regard, then, to the exchange of oxygen and carbon dioxide in the blood at the lungs, I think it must be admitted that though diffusion plays an important part, it is by no means "master of the situation," but is supplemented and largely modified by chemical affinity, and *possibly* by the vital or secretory activity of the endothelial cells.

Lorrain Smith[9] infers from a series of experiments on birds and other animals, that whilst oxygen at the tension of the atmosphere excites the cells of the alveoli to absorption; at a higher tension (say 180 per cent. of an atmosphere) it gives rise in 24 hours to inflammation of the lungs; and at a still higher tension (say 300 per cent. of an atmosphere) leads, as first pointed out by Paul Bert, to convulsions like those of tetanus, owing to its toxic effects on the nervous system.

G. N. Stewart[2] by what is known as the "electrical method," and also by the injection of methylene blue, has determined in the dog the duration of the circulation as a whole, and he concludes that in man the pulmonary circulation would take 15 seconds, and the entire circulation one minute. This is a longer period than that hitherto accepted. The mean velocity of the blood in the larger arteries of the dog he has found to be about 100 mm. per second—a rate less than formerly believed. He has also by the electrical method made investigations in the dog as to the output of the heart, and he infers that the output in man would not be much more than 3 ounces of blood for each beat.

The old view—that a man may increase in weight without the use of food—has been revived. Bouchard has ascertained that the increase may amount to one ounce in an hour, and he attributes it to the absorption of oxygen, or to its retention in the body, along with the production of glycogen, and the imperfect oxidation of fat; but Berthelot believes it is due to the formation of new substances and the imperfect oxidation of albuminoids.

Pembrey and Nicol[2] have made a large number of observations on the temperature of different parts of the body, and have arrived at the conclusion that the temperature of the rectum is 0.26° C. higher than that of the urine, and 0.65° higher than that of the mouth; and that the mouth is most untrustworthy for clinical observations. Pembrey thinks that the quickened breathing through the mouth, by increasing the loss of heat, takes part in the regulation of the temperature of the body during exercise and fever.

The extract of the suprarenal capsules was injected by Langlois into the veins of rabbits and dogs, but its presence could not be detected in the arterial blood a few minutes afterwards. There is reason to believe that it is destroyed principally at the liver.

Information has been obtained regarding the movements of the stomach by observations made on animals immediately after death, and by means of the Roentgen rays alone, or after the administration of bismuth subnitrate with the food, during life. It has been noticed that shortly after the entrance of food the stomach becomes almost completely divided by a transverse band of contraction, about 3 inches from the pylorus, into the fundus and antrum pylori. The fundus is for the most part at rest, retaining the food as a reservoir for digestion, but at intervals pressing it through the constriction into the antrum. The peristaltic contractions of the antrum—about six per minute in the cat—proceed always towards the pyloric valve, and drive its fluid contents into the duodenum; but any solid masses present which may be too large to pass are forced back by an antiperistaltic wave into the fundus, to be further acted on by the gastric juice.[9]

Bayliss and Starling[2], by means of a "rubber capsule" and by "enterographs" have studied the intestinal movements in the dog. They have observed two kinds of movements in the small intestine—the "pendulum movements" and the true peristaltic contractions. The former, slight swaying movements, are caused by rhythmic contractions of the circular and longitudinal muscular fibres acting *simultaneously*, 10 times per minute, and travelling with a velocity of 2 to 5 cm. per second. The latter (the peristaltic contractions) travel as a wave, always from above down, and are, they say, "true co-ordinated reflexes, started by mechanical stimulation of the intestine and carried out by the local nervous mechanism (Auerbach's plexus)." A local irritation of the intestine causes excitation above the spot stimulated and inhibition below it. Stimulation of the splanchnics leads to inhibition of the longitudinal and circular fibres; stimulation of the vagus nerves produces first a short inhibition and then augmentation. The splanchnics exercise a tonic action on the intestine, but the vagus nerves do not.

In connection with the peristaltic action of the intestine, it is interesting to note that Grützner[10] has observed that liquids and particles, such as lycopodium spores, may, if placed in the human rectum, make their way to the stomach.

The entire stomach has been removed in man by different surgeons; the small intestine, nearly its whole length, has been cut out in the dog by Fillipi; and the large intestine, the greater part of it, has been excised in the dog by Vaughan

Harley. In all these cases, when successful, digestion appears to have gone on as usual, except that after excision of the small intestine, fat was imperfectly absorbed, and after removal of the large intestine, proteids and water were only partially absorbed. Indeed, Mr. Treves, the eminent surgeon,[11] states, as the result of his experience, that we "might possibly dispense with our present type of stomach;" and the removal of considerable portions of the intestine "has done no more than add to the comfort of those individuals who have recovered from the operation." It is probable that after these operations, the remaining parts of the alimentary canal took on vicarious or abnormal action, and thus adapted themselves to the changed conditions. It is also, no doubt, true that care was taken to administer food easy of digestion. We cannot, therefore, attach much importance to the results of such operations and experiments as guides to the use of individual parts of the alimentary canal. It might as well be contended that because a portion of the cerebral cortex of a dog can be removed without inhibiting the performance of most of its ordinary functions, the portion so removed was unnecessary.

Vaughan Harley[12] recently isolated a loop of the large intestine of a dog, and after some months, he found that the contents consisted of fat, cholesterin, proteid, and salts—which, he thinks, form the normal excretion of the large intestine—in fact, its contribution to the fæces. Another observer (Moraczewski), however, described the excretion in a loop after the lapse of a year as made up principally of sodium carbonate, Voit, by a similar plan, ascertained that the excretion of the small intestine was fat, cholesterin, proteid, and salts, with colouring matter. But in these cases the intestine can scarcely be said to have been in a normal condition. At any rate, the results obtained are discrepant, so that it is difficult to know what inference should be drawn from them.

Carbon dioxide is a constant constituent of the gases in the intestines. It is the product of fermentation, and of the neutralisation of the sodium carbonate of the secretions. Moreover, it is derived from the blood by diffusion, as well as given off in the small intestine by the bile, which, as I showed in 1881,[13] contains in the case of the rabbit a larger percentage of this gas than any other animal liquid.

Waymouth Reid's experiments[12] on the absorption of serum, peptone, and glucose from the intestine of animals by means of two loops of intestine—the experimental and the control loop—have led him to infer that the epithelial cells are essential agents, because absorption continues when filtration and osmosis have been excluded; and because it diminishes or ceases altogether after these cells have been injured or removed, as, for instance, when they have been poisoned with sodic fluoride, or when their blood supply has been cut off. An attempt, however, has been made to explain results of this kind by the chemico-physical method. Thus, if we place a solution of gelatine in the inner cylinder of a dialyser (Fig. 2), and a solution of common salt in the outer vessel, the gelatine will not diffuse through the membrane, but owing to its affinity or "elective" action for the salt, will draw the salt to itself by what has been termed "adsorption." Similarly, it is alleged that the protoplasmic contents of the intestinal epithelial cell do not diffuse, but being complex in chemical composition may contain imbibing substances of various kinds. These substances are supposed to exercise an affinity for certain food stuffs, which they draw from the contents of the alimentary canal into themselves, and form "loose" chemical compounds with them, whilst they leave behind, untouched, other substances, for which they show no such affinity. Further, as cells differ in chemical composition, it is said, they will accordingly vary in their affinities; and it is alleged that it is no more extraordinary that epithelial cells should take up fat and not pigment, than that phosphorus should unite with oxygen and not with platinum[1]. But that the cell contents have an affinity for such a substance as fat, and afterwards form a compound with it, seems to be a mere conjecture; consequently, this explanation, ingenious though it is, cannot be accepted—if accepted at all—as having more than a limited application.

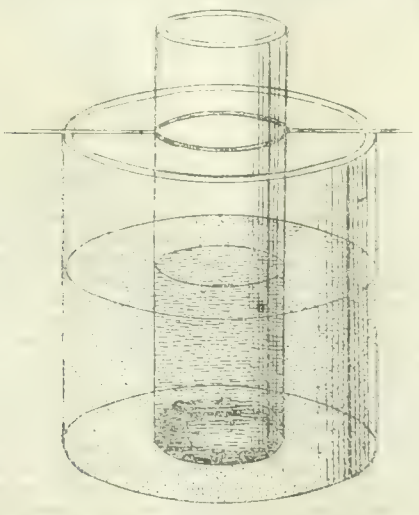


Fig. 2.—Dialyser, with solution of gelatine in the inner vessel, and a solution of common salt in the outer (Max Verworn).

A few years ago it was stated on authority that bacteria are not only useful in digestion, but that death would ensue if the air and food used were sterilised. But the experiments of Nuttall and Thierfelder[14] have shown this statement to be erroneous.

Aldehoff and Mering[11] believe that they have proved by their experiments that the central nervous system exercises only an inhibitory influence on the stomach. They cut the vagus near the diaphragm, and observed that the movements of the stomach were unaffected; that the quantity of the secretion and the amount of hydrochloric acid in it were at first diminished, but afterwards became normal; and that absorption was not interfered with. Riegel[11] has experimented on the stomachs of animals after Pawloff's method, and has noticed that atropine diminishes the amount of hydrochloric acid and of gastric juice secreted, but pilocarpin, especially if there is no food present, increases it five times.

Bunch[2] by using a plethysmograph for the intestines has demonstrated the existence of vaso-constrictor and vaso-dilator nerve fibres in the splanchnic nerves supplied to it, the vaso-constrictors being the more numerous. He has observed that nicotine, coniine, and piperidin cause great constriction of the vessels, followed by slight dilatation; that stimulation of the central end of the vagus produces either constriction or dilatation of the vessels of the small intestine, whilst stimulation of the central end has no vasomotor effect on these vessels.

The process of internal secretion is carried on by many of the organs of the body. The action of the kidney in this respect is not yet fully understood, but the remarkable results of Bradford[2] indicate that it has an important influence in the nitrogenous metabolism of the tissues of the body. Bradford has removed two-thirds of the total kidney weight, and has observed that the urine is much increased, but the urea only slightly so. However, if three-fourths be excised, there is an increase in both the urea and the urine excreted, with an increase of the nitrogenous extractives in the blood and in the muscles. He attributes the increase of the extractives, such as urea, in the muscles, to a rapid breaking down of their substance. W. H. Thompson[2] has ascertained that normal salt solution causes a marked increase in the urine and in the amount of urea in it. He does not offer any explanation of these results; but it is likely they are due to the salt acting locally, and either causing active dilation of the renal blood vessels (Starling), or directly stimulating the secreting cells of the kidney.

Many are now disposed with Heape[11] to believe that menstruation in monkeys is virtually the same process as menstruation in women; that, in both, "ovulation does not occur during each menstrual period, and that it does not necessarily occur during any menstrual period," and therefore may take place independently of it.

Vitzou[7] has found that the blindness following entire removal of the occipital lobes in young monkeys may be recovered from in the course of two years. The recovery he attributes to the growth of new nerve cells and nerve fibres;

but this supposition is very doubtful, as regeneration of nerve cells is unknown in the higher animals.

Mott and Hill[2] after ligaturing all the cerebral arteries in cats, dogs, and monkeys, observed some hours (5 to 24) afterwards, that the sensori-motor area of the cerebral cortex was in a very irritable condition, so that the application of a weak induced current gave rise to movements of the limbs, and sometimes even to fits. The cells of the cortex—their nuclei and processes—were all swollen, the granules of Nissl were altered, and the edges of the cells irregular. The interest in these results lies chiefly in the fact that corresponding changes have been noticed in the brains of persons who have died after prolonged epileptic convulsions.

Hodge and others, some years ago, described changes in the shape and size of the ganglion cells and of their nuclei as the result of fatigue. Recently, Lugano of Florence,[11] by injecting Cox's solution (chiefly corrosive sublimate) into the carotid artery of a dog, killed it instantaneously, and at the same time *fixed* the nerve cells of its cerebral cortex in the functional state they were in before death (Fig. 3). His results lead him

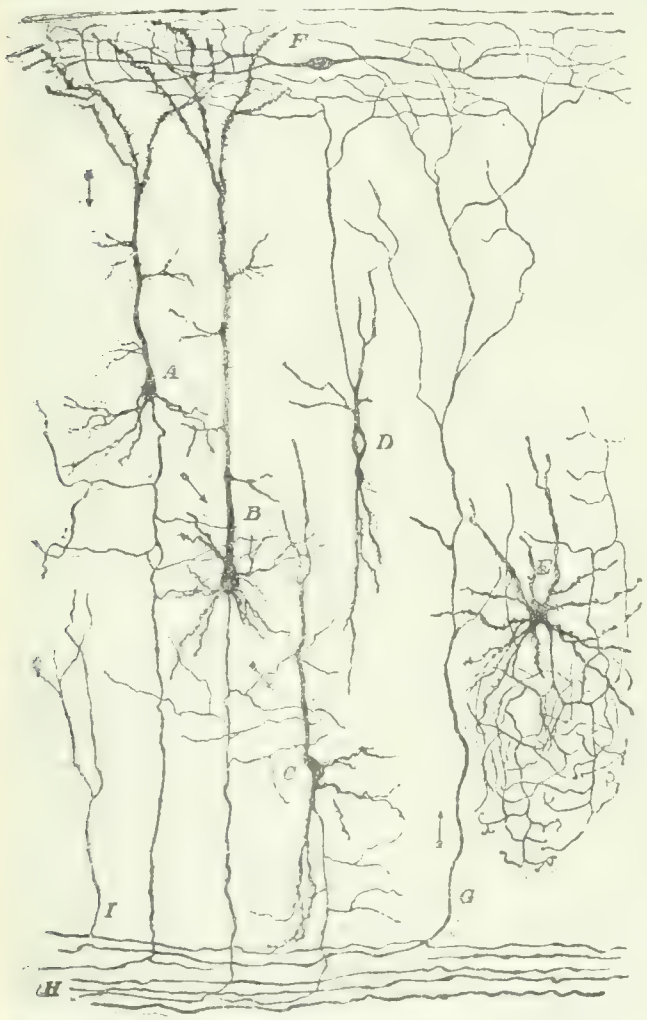


Fig 3.—Cerebral cortex, showing nerve cells with their dendrites and gemmules (Ramon y Cajal).

to agree with Ramon y Cajal that nerve cells and their larger branches are incapable of amœboid movements, such as we find in the white corpuscle, but to believe that the small processes of the dendrites—the gemmules—exhibit forward and backward movements sufficient to make and break contact.

Lugano thinks that the nerve cell in a state of functional activity has few connections, lest the entrance of other impulses should interfere with the impulse which at the moment is being elaborated in its interior, and consequently



Fig. 4.—Dendrites of molecular layer of cerebral cortex of a dog, representing state of functional activity. Majority of gemmules retracted (Lugano).

the most of its gemmules are retracted (Fig. 4); but when it is ready to receive new impulses, the gemmules resume their expanded condition and approach others in their neighbour-



Fig. 5.—Dendrites of molecular layer of cerebral cortex of a dog in chloroform narcosis. Gemmules expanded (Lugano).

hood (Fig. 5). In sleep as well as in the narcosis produced by chloroform, ether, or chloral, the gemmules are usually all expanded and in a torpid state, their capacity for contraction being exhausted until the sleep is nearly over. It is too soon to criticise the results of Lugano's experimental investigations and the ingenious theory he has based upon them. But I may mention that Ramon y Cajal has not found any histological change in the dendrites during activity; and that Alex Hill has adduced some reasons to show that Golgi's method is inadequate to prove a want of continuity between the dendrites of adjoining nerve cells. Indeed, Hill holds that the gemmules serve rather as a mode of connection between the dendrites and unstained filaments in the intercellular material. Then, if we bear in mind the possibility of some of the dendrites and gemmules being produced by the action of chemicals on the nervous tissue, as structure in

protoplasm has been shown to be by Hardy, there are undoubtedly good grounds for withholding our assent to any histological theory of brain activity till these questions have been settled.

Horsley and Lowenthal have found that the removal of the cerebrum in certain animals is followed by tonic contraction of the extensor muscles, and that in such animals the stimulation of the superior vermis of the cerebellum, at its junction with the lateral hemisphere, leads to the relaxation of the extensor muscles, and at the same time to contraction of their antagonists, the flexors.

It is now generally acknowledged that there is not sufficient evidence for belief in specific trophic nerve fibres. The Gasserian ganglion and the part of the fifth nerve proximal to it have been excised, and no truly trophic effect has resulted.

A rare opportunity for studying the characters and the secretion of the cerebro-spinal fluid has lately occurred to Drs. StClair Thomson and Halliburton in the case of a patient who is described as having had a "continuous dripping from the nose."[12] The liquid on examination proved to be cerebro-spinal, and amounted in 24 hours to half a litre. The flow was observed to be increased by the horizontal posture, by compression of the abdomen, and by forced expiration—all of which usually cause in the capillaries of the brain a rise of blood pressure. According to Cavazzani, the cerebro-spinal fluid varies somewhat in composition at different periods of the day—that collected in the morning being more alkaline, and containing more solids than that in the evening, the difference, it is conjectured, being due to the activity of the nervous system.

Our views of the functions of the spinal cord have been considerably altered of late years, owing to the remarkable results which have been found to attend operations made upon it. Goltz and Ewald, after destroying the lumbar and sacral regions of the cord in dogs, have observed that these animals in the course of time regained the power of retaining and spontaneously evacuating the contents of the bladder and rectum, whilst digestion as well as parturition took place in them as in normal animals.[10] Of course, the inference we are to draw from these experiments is not that the processes referred to are independent of the reflex and automatic action of the cord, but rather that much can be accomplished by the local nervous mechanism and by the tonicity of the muscles when they are deprived of central control.

There is still doubt whether, and if so, to what extent, the afferent fibres decussate in the spinal cord. Some maintain that in man they decussate almost completely; others that they do so only partially.

Schäfer[2] has recently made hemisections of the spinal cord in the monkey, and as the result of his investigations has come to the conclusion that Clarke's column atrophies almost entirely in two or three months, on the same side, below the lesion, and that the fibres of the pyramidal tract do not terminate in the anterior cornu, but in the base of the posterior cornu and in Clarke's column. If this be the case, efferent impulses descending from the cerebrum by the pyramidal fibres would influence the motor cells in the anterior cornu of the cord *indirectly*, through the afferent arm of the reflex arc, and not *directly*, as hitherto believed. This view as to the termination of the fibres of the pyramidal tract is, however, so contrary to the results of all past observers, that it should not be accepted until it has been confirmed by further investigations. In addition, Schäfer has traced, he believes, the fibres of the descending antero-lateral tract to the anterior cornu, where they end for the most part in arborisations amongst its cells.

In anatomy our knowledge has become of late years more minute and accurate, and this is due, no doubt, in part to the excellent work which has been done by the Anatomical Society, now worthily presided over by Dr. Macalister. The exact shape and relations of the viscera of man have been carefully investigated by means of frozen sections of the body (Braune), by the reconstruction method after freezing (Cunningham), by hardening the viscera *in situ* (His), and by the use of long steel pins driven through the abdomen at definite points (Addison); and it must be acknowledged that in all these ways valuable information has been acquired which could not be obtained by dissection. But I venture to suggest that possibly too much importance has been attached to the surfaces and borders brought out by these methods. It should be borne in mind that the position of the body during the process of hardening, and the pressure of the ice upon it during the freezing process, must lead to the production of notable differences in the shape of internal organs; and this contention is supported by the fact that leading anatomists are at variance amongst themselves regarding the exact results obtained. Furthermore, it is rightly urged by Hepburn[13] that "we must not fall into the error of supposing that the solid abdominal organs present at all times during life the facetted appearances which characterise them after death, for as the hollow viscera are constantly changing their dimensions, so the solid viscera must similarly present larger and smaller surfaces of contact with the hollow viscera and with each other."

A. F. Dixon[11] has shown that the facial nerve contains afferent as well as efferent fibres. The afferent fibres are represented in mammals by the chorda tympani and the great superficial petrosal nerves, and are, he thinks, probably gustatory in function. He has brought forward a number of facts in support of his views; but the question as to the taste fibres can scarcely be considered settled yet, as the clinical and the pathological evidence is contradictory.

Cantlie[13] has adduced a number of satisfactory reasons for a change in the nomenclature of the lobes of the liver. He describes the liver as made up of a right and a left "side," nearly equal in weight, and joined along a line leading from the gall bladder to the groove for the inferior vena cava.

Attention might be called to many other interesting papers in anatomy, but your time and patience have already been trespassed on too far. I cannot, however, forbear remarking on the great progress achieved of late years by physiology in Great Britain and Ireland. Whilst we have, it is true, pursued anatomy with more or less success at all times, physiology has, as you are aware, suffered long and deeply from neglect. This neglect was, of course, attended by its just and inevitable Nemesis in the comparative barrenness of the English school of physiology; for science, like religion, metes out its rewards only to those who diligently seek it. But for the diligent seeker we had to look elsewhere than at home. In the numerous and well-equipped laboratories of Germany hosts of ardent investigators have been long at work, and accordingly till of late Germany overshadowed all other countries by her progress in physiological research. During this unfruitful period of physiology at home, our students were obliged to receive a large part of their knowledge from German sources, and "made in Germany" became as it were the hallmark of most of the best work of the time. But this unhappy period has now passed away, and its reproach has been removed by the many brilliant English physiologists whose names have appeared in the course of this address, as well by others whose works belong to earlier years; and the "Queen of the Natural Sciences," as Du Bois-Reymond rightly designated physiology, has nowhere more zealous and devoted subjects than in the British Isles. English physiologists have of late years contributed their full share to the advancement of the science, and the zeal they have shown in the cause of research has, no doubt, been owing, to a large extent, to the Physiological Society, and to the Oxford, Cambridge, and London Schools of Medicine, under the able guidance and leadership of Sir J. Burdon Sanderson, Sir M. Foster, and Professor Schäfer.

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Italian Obstetrical and Gynæcological Society.—The Italian Obstetrical and Gynæcological Society will hold its sixth annual meeting this year at Pavia in October. The following are the subjects proposed for discussion: The Organisation of the Teaching of Obstetrics and Gynæcology (to be introduced by Professor Ercole F. Fabbri); and Intraligamentous Tumours (to be introduced by Professor Giovanni Calderini).

AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

At the Annual Meeting of the British Medical Association at Portsmouth, August, 1899.

By G. GRANVILLE BANTOCK, M.D.,

Consulting Surgeon Samaritan Free Hospital; President of the Section.

A PLEA FOR CONSERVATIVE GYNÆCOLOGY.

Allow me in the first place to acknowledge the compliment that has been paid me by my election to the honourable post of President of this Section, and in the second to crave your indulgence with my shortcomings, of which I am only too sensible.

It is not my intention to occupy any considerable portion of the time at our disposal, for I conceive it to be the duty of the President rather to keep himself in the background as much as possible. I might, as a gynæcologist, be tempted to review the progress which this branch of our art has made during the last third of a century—a period covered by my own practical acquaintance with the subject—and indicate the enormous advance made in abdominal surgery, and the influence it has exerted upon surgery generally, but it would take too long. I shall only touch with a light hand upon one or two subjects of practical importance.

For several years past I have viewed with much concern a strong and, I fear, a growing tendency to resort to the knife too frequently—in other words, a *cacoethes operandi*—instead of a reliance on measures of a more simple and conservative character, and this is associated with a tendency to "run amok" whenever a new idea is suggested. This is capable of illustration by many examples. Who does not know, for instance, how that eminently useful operation which goes by the name of its inventor—I mean Emmet's operation for the repair of a lacerated cervix—has been "done to death," until its inventor had to protest against too much zeal?

Again, it seems to be sufficient in the eyes of some men that a woman should have a fibroid, however small, in her uterus to justify them in not only proposing the total removal of the generative organs, but even in urging submission by picturing a prospect of pains and penalties.

It was an idea of the late M. Péan's that a fibroid was essentially a malignant growth that must be removed some day, and some of the younger generation seem to have adopted that view. When the life-history of the uterine fibroid comes to be written, it will be seen how erroneous that idea is. A fibroid tumour does not necessarily interfere with impregnation, the full development of the fœtus and its safe delivery, nor with the repetition of the process again and again. Fallacious arguments have been drawn from the supposed analogy between the ovarian tumour and the fibroid, and because of the improved results which have followed upon early interference in the case of the ovarian tumour, it is maintained that a like result would follow in the case of the fibroid.

But it is impossible to establish any analogy between these two diseases. Who has heard of an ovarian tumour disappearing, except by the hand of the surgeon? On the other hand, who has *not* heard of fibroid tumours disappearing under various conditions, of which the essential element would seem to be an interference with the nutrition of the growth, as, for example, by the natural processes of the menopause and child-bearing, or by the removal of the appendages? Who, with an experience of 10 or 15 years, has not known fibroid tumours become arrested in their growth and all symptoms cease, if, indeed, there were any; or observed tumours of considerable size become so quiescent as to render the risk of surgical interference unjustifiable?

Again, if a woman complain of pain in the pelvis—especially in either ovarian region—as the result of an abortion, chronic uterine congestion, or follicular disease of the cervix; or if she present symptoms attributable to the minor forms of derangement of the generative apparatus, she is deemed to require the removal of the appendages; and if she should be the subject of an uncomplicated retroversion which an ill-devised and ill-adapted pessary has failed to relieve, then she must undergo an operation, either by the vaginal or the abdominal route, for fixing it in position. I have seen many examples of all these, in which I have felt it my duty to advise against operation, and I do not know of a single case in which there has been reason for regret that that advice has been acted upon, while, on the contrary, I have positive evidence of its soundness in many cases. With regard to the case of uncomplicated retroversion, I have never seen the necessity for any operation, either that senseless method of fixing the organ by the vaginal route, or the more rational method—of course, on the assumption of its necessity—by the abdominal route. It would be taking a charitable view of the matter to say that errors of diagnosis are answerable for many mistakes in practice.

It was a maxim of the late Mr. Lawson Tait, to whose initiative gynæcology owes so much, and who has left the impress of his genius indelibly stamped upon the face of gynæcology, "When in doubt, open the abdomen." But it was very much misunderstood. Mr. Tait did not mean that the abdomen should be opened to solve a doubt as to whether there was disease or not, but to ascertain the exact nature of a diseased condition of the existence of which there could be no doubt, which is a very different thing. I know that he shrank with horror from the practice of opening the peritoneal cavity and cutting a piece out of an ovary for microscopical examination and the purpose of diagnosis.

An idea of recent origin is this, namely, that the ovary secretes a something which is of service in the economy, and that whenever it is possible, in an operation involving of necessity the removal of only a part of the generative apparatus, one or both ovaries should be left. There is not an atom of evidence to support that idea. Yet there are those who do not hesitate to found and urge the adoption of a practice upon a pure and ridiculous assumption. It appears to have been assumed that because disease or loss of the thyroid gland—of whose function we know absolutely nothing definite—is sometimes followed by a certain train of symptoms, therefore the loss of the ovaries—of whose function we have definite knowledge—must be avoided because their loss will deprive the economy of something which the ovary secretes. Now the ovary was evidently devised for the purpose of perpetuating the species by providing ova—of which each ovary contains a definite and limited supply—and for nothing else except it be to provide fees for their removal, not for their retention, and in the normal state, having discharged that function it atrophies, and like its neighbour the uterus, becomes not only a useless but a dangerous organ; for, as we only too well know, it is very liable to disease. In a very large proportion of cases disease attacks this organ long after it has served its purpose, and it seems to me rather one's duty to secure the removal of such an unsatisfactory appendage when opportunity offers than to take steps for its retention. In my own practice I have had to remove both ovaries in a large number of cases. I have never willingly left an ovary when the uterus or its Fallopian tube has been removed; and over and over again patients, thus deprived of both these organs, have testified by word of mouth, confirmed by appearances, to a condition of good health, mental and physical, that had not been experienced for years previously, although these organs played no part in bringing about the disease which involved their removal. On the other hand, it has occurred to me to have to remove the second ovary after an interval of as many as eleven and even eighteen years. Surely the possibility of such an occurrence is a strong argument against the practice in question. Tait was much nearer the mark when he urged that the removal of the second ovary—as in the case of the appendages—should become a rule of practice, because of the frequency with which it was subsequently attacked.

A habit has grown up lately of promulgating opinions and stating results of practice on insufficient evidence. Thus an operator makes up his mind that he will sew up his abdominal wounds in a particular manner, and forthwith he announces to the world that he has banished ventral hernia after abdominal section. He does not wait ten years, he does not even wait five years, to see the results and ascertain the permanence or otherwise of his handiwork. I mention this subject for the purpose of inculcating more moderation—may

I say modesty?—in assuming results, remembering that it is not safe to prophesy until one knows.

But I said at the beginning that I would only occupy a few minutes of your time, and I will not stand any longer between you and Dr. Herbert Spencer, upon whom I will now call to introduce the subject of the Treatment of Fever following Delivery, with special reference to Serumtherapy.

AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF LARYNGOLOGY AND OTOLOGY.

At the Annual Meeting of the British Medical Association at Portsmouth, August, 1899.

By E. CRESSWELL BABER, M.B.Lond.,

Surgeon to the Brighton and Sussex Throat and Ear Hospital
President of the Section.

THIRTY YEARS' PROGRESS IN RHINOLOGY.

Gentlemen,—In opening the work of this Section, it may not be out of place if I make a few remarks on the development of rhinology during the last thirty years.

It is just thirty years ago that Wilhelm Meyer, of Copenhagen, brought his eventful discovery of adenoid vegetations to this country, and read a paper on it before the Royal Medical and Chirurgical Society in London on November 23rd, 1869.[1] He had previously published an article in the *Hospitals Tidende* (1868), and subsequently wrote a long monograph on the subject in German in the *Archiv für Ohrenheilkunde* of 1873. Meyer, as I remember him in Copenhagen in 1874, was a charming personality, enthusiastic in his work, and full of energy with, as he himself described it, his heart in his general practice, his intellect in his special work. Meyer's paper, which forms a landmark in modern rhinology, appears to have attracted little immediate attention in this country, and it was not till some years after its publication that we find any original articles on the subject in England. Meyer, as he acknowledges, had been preceded in his discovery by the publication of scattered cases of adenoid vegetations by several observers, notably by Voltolini and by Loewenberg, but for an exhaustive study of the disease, both as regards diagnosis, prognosis, and treatment, and for a recognition of its great importance and far-reaching effects, we are undoubtedly indebted to Wilhelm Meyer, who, as Mackenzie says, may be justly considered as the discoverer of these growths. Meyer recognised his first case by palpation, and laid great stress on this mode of examination. His description of this disease was so full and complete that, except in pathology and treatment, no material advance has since been made. Numerous fresh instruments have, as you are aware, been devised for the operative treatment of adenoids, and removal under general anæsthesia is now an everyday occurrence. The use of general anæsthesia was, I believe, first practised in this country, one of the pioneers being Dr. Woakes, who, as mentioned in a paper on adenoid vegetations which I wrote in 1882,[2] had been using anæsthetics for the purpose to a considerable extent before that date.

The way for Meyer's discovery had been paved by the invention by Czermak some ten years previously of the art of posterior rhinoscopy. Voltolini, who published his first work on rhinoscopy in 1861,[3] began to work at this subject soon after Czermak, and was an ardent advocate for many years and in many writings of this method of examination. To him we are indebted for insisting on the importance of the palate hook, although one had been previously used by Czermak. Voltolini emphasised the fact that firm pressure with the hook was better borne than slight irritation, and therefore advocated the use of a large, strong hook drawn rapidly and firmly forwards. It was not, however, till more than twenty years afterwards when White of Richmond (Virginia) and others introduced the self-retaining palate hook, employed after cocainisation, that the full benefit of this method of examination was apparent, and I think that even now the value of this instrument is insufficiently taught in our schools, as it can be so easily used on almost any patient, and gives an insight into the naso-pharyngeal cavity obtained by no other means. This instrument alone enables us to fully examine with the eye the posterior wall of the cavity; otherwise the view of the latter obtained in the mirror is usually too foreshortened to be of much value. Of Voltolini it has been truthfully said in a recent work[4]: "In the course of a long and laborious life he has presented science with many valuable observations; even where he errs he is more instructive than the eclectic from whom we only obtain a selection of opinions current at the time, without meeting with any original thought."

Anterior rhinoscopy, which is, of course, of much older date, cannot, singularly enough, be said to have been much cultivated in modern times until 1859, when Markusovsky invented the speculum bearing his name. Thudichum of London, and Duplay of Paris, both published accounts of their specula in 1868, instruments which for their purpose cannot be improved on at the present day. Fränkel's speculum dates from 1872. But real advance in anterior rhinoscopy was, I think, more due to the use of light reflected from a mirror with a central perforation than to any special form of speculum.

In 1882, the study of anterior rhinoscopy, and of nasal diseases generally, received great impetus from the well-known researches of Zuckerkandl on the normal and pathological anatomy of the nose and its accessory sinuses. The next most noticeable event in rhinology was the ardent championship of reflex nasal neuroses by Hack of Freiburg. In an able brochure published in 1881, and in numerous other papers, Hack contributed abundant material on the subject, and albeit his theories were not all sound, still a valuable substratum of truth, sifted by later observers, remains, for which we are indebted to this brilliant worker. Amongst other things, Hack's theories led to an extended use of the galvanic cautery, invented by Middledorpf some years before, and much employed by Voltolini. Moderation in regard to its use has now happily set in, and it is not used so promiscuously as I am afraid it was at one time. It may be mentioned that before Hack both Voltolini and B. Fränkel had drawn attention to the relation existing between asthma and certain forms of nasal disease. Very shortly after this date, rhinology was destined to undergo what amounted practically to a revolution by the introduction of cocaine. In 1884 Jellinek published an article on its use in the throat and nose. In spite of the originally high price, the employment of cocaine rapidly spread in this department, not only on account of its anæsthetic properties enabling numberless operations to be painlessly performed, but also on account of its contracting power on the nasal mucous membrane. Its value in the latter respect in enabling a successful examination to be made may be fairly compared to that of atropine in examination of the eye.

While all these rapid developments were taking place with regard to the careful examination and treatment of the nasal cavities, the study of the various reflex neuroses connected with the nose and the use and action of cocaine, a new phase of rhinology was springing up. I refer to the study of sinus diseases. Diseases of the accessory sinuses when producing gross extranasal lesions had been known from time immemorial, and many fearful and wonderful operations had been devised for their removal. But the study of diseases of the sinuses, especially chronic empyema with only nasal symptoms (*Latent Empyema*, Litchtwitz) was practically a new departure and materially enlarged the scope of rhinology. The nasal cavities as we can inspect them were beginning to be regarded as only a small portion of the nasal tract, the gateway as it were to large and important cavities whose diseases merit careful study. Ziem, in his publications dating from 1880 onwards did pioneer work in latent empyema of the antrum, and was followed by a host of observers, who added largely to our knowledge. One of the most stimulating is Grünwald, and whilst his conclusions are doubtless some of them extreme, his work is highly suggestive and has greatly increased the interest taken in the subject. All the different sinuses have been carefully investigated, including the frontal sinus, on some of the diseases of which we are about to hold a discussion.

Amongst other developments of modern rhinology may be

mentioned the general recognition of the importance of nasal respiration and the improvement of the means of treating various forms of nasal obstruction. The pathology of the nose has continued to advance *pari passu* with that of other parts, and bacteriology has been laid under contribution in investigating the diseases of this organ. The physiology of the nose has also been reinvestigated.

In these few remarks I have merely attempted to point out some of the rapid strides which this speciality has made in the last thirty years, and in doing so have had to omit the names of very many successful workers, some of whom are honouring us with their presence at this meeting. This short sketch has, however, I hope, shown that the progress of modern rhinology is in nowise behind that of any of the other medical sciences, and I feel confident that by persevering and judicious application of the general knowledge of medicine and surgery to this particular branch, the efforts of its many devotees all over the world will enable it to make as rapid progress in the future as has been accomplished in the past. If I have confined my remarks to rhinology it is not that I consider it more important than laryngology and otology, but that a review of all three would have been impossible without encroaching unduly on your time.

Before concluding I should like to express the pleasure that I feel at seeing so many of our foreign colleagues present, and to offer them a cordial welcome in the name of the Section, and an invitation to take part in its proceedings.

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REMARKS

MADE AT THE OPENING OF THE

SECTION OF PHARMACOLOGY AND THERAPEUTICS.

At the Annual Meeting of the British Medical Association, at Portsmouth, August, 1899.

BY J. B. BRADBURY, M.D.,

Downing Professor of Medicine in the University of Cambridge; President of the Section.

THE PLACE OF PHARMACOLOGY IN THE MEDICAL CURRICULUM.

AN intimation has reached me from high quarters that a formal address is not expected at this meeting at the opening of any Section, and for this reason my remarks shall be few.

The subjects for discussion in the Section must be of interest to all medical men, and the members who have kindly consented to open and take part in these discussions are well known to have devoted much time and attention to the subjects. I trust, therefore, we shall all profit by their remarks, and that this meeting of the Section will be a successful one.

For some time my mind has been exercised as to the proper place of pharmacology in the medical curriculum. So far as I can make out there is a growing tendency for medical corporations (if we except the universities) to require less and less knowledge of the natural history, properties, composition, and action of drugs, from candidates for their diplomas; a condition of things which I think is much to be regretted. Personally I have no wish to revert to the state of affairs when candidates were expected to have a minute knowledge of the distinctions between the different species of senna, and of cinchona bark, etc.; but the danger now is that they may not be able to recognise senna at all, or to know the ingredients and doses of the most important pharmacopœial preparations. The consequence is, when settled in practice, that they are tempted to prescribe ready-made tabloids, elixirs, etc., the purity and the precise dose of the ingredients of which have no official sanction. Far be it from me to speak too disparagingly of these products of the chemist's ingenuity; in many cases they are most useful and valuable on account of their easy portability; but in other cases, I feel sure, the therapeutic results would be more satisfactory if *B.P.* preparations were issued instead. And here may I say one word in praise of the new *Pharmacopœia*? I think it is a model of what such a work should be—accurate, learned, and not overburdened with details. I am surprised, when I have to consult it, at the extent and variety of the information which it contains.

Well, gentlemen, I think the contents of such a book, so far as they bear directly or indirectly on prescribing, should be thoroughly mastered by all medical students, and I would make such knowledge a compulsory part of the curriculum. Think for a moment of what is required of a medical man once started in practice. A considerable part of his work is writing prescriptions for his patients, and yet in respect of the knowledge of drugs and their actions I maintain his education is often most imperfect. This brings me to the subject of pharmacology, or the action of drugs on the body in health and in disease. Is it too much to expect those who are daily to prescribe remedies to be acquainted with what is known of their actions? Certainly not. Well, then, how can this best be taught, and where in the student's course should it come in?

I think after anatomy and physiology, and alongside of pathology. I would make the first part of the final examination pathology and pharmacology—the sciences dealing respectively with disease and its treatment—and then the student should at the next stage be ready to apply the principles thus acquired to actual practice in connection with his clinical medicine, surgery, and midwifery.

The more intimately a student knows the action of the drugs he prescribes, the greater will be his success in treatment, and it is much to be regretted that some of the Examining Boards require a student to acquire this knowledge only in a haphazard way, or at a premature stage of his course. He cannot appreciate physiological action until he is possessed of the elements at least of physiology. On the other hand, he cannot appreciate the importance of judicious prescribing, unless he has learned the nature and properties of the agents prescribed. These two considerations seem to me decisive as to the exact place in the curriculum at which pharmacology should be introduced.

I believe I am correct in stating that every German university demands of its students a knowledge of pharmacology, and that the subject is regularly taught in these universities. It has been said that the medical student is already overburdened with subjects. That may be, but I would say lighten some of the other less necessary subjects, and encourage him to give more attention to knowledge which when in practice he will daily and hourly be called upon to use.

THE PARSEES AND THEIR DEAD.—A controversy has been raging in the Parsee community in Bombay concerning the respective merits of exposure and of burial of the dead, and endeavours to persuade the Parsees to break away from their traditional practice seem to have been made. The controversy originated with the holding of a meeting of Parsees at Matheran to consider the desirability of securing a proper place at Matheran for the disposal of the dead. "The Towers of Silence" in Bombay are well known, where the dead bodies of Parsees are exposed to the light of the sun, consumption by vultures, and preservation of the bones. Some of the high priests of this Parsee community have declared in unmistakable terms against disposal of the dead by burial, and declare it "sinful."

GERMAN CONGRESS OF SCIENTISTS AND MEDICAL PRACTITIONERS.—The seventy-first annual meeting of the German Congress of Scientists and Medical Practitioners will be held this year at Munich, from September 18th to the 24th. Among the general addresses to be delivered the following deal with subjects of medical interest: Professor Ernst von Bergmann, What Radiography has done for the Treatment of Surgical Affections; Professor Birch-Hirschfeld, Science and the Healing Art; G. Klemperer, Justus von Liebig and Medicine. In the Section of Pathology a report will be presented by Drs. Marchand and Rabl on the position of the blastoderm theory in pathological anatomy and general pathology. In other sections communications are promised by Professors Hueppe and Blasius on the Prevention of Tuberculosis; by Drs. Rehn and Sillmann on Basedow's Disease; and by Drs. Rille and Loos on Eczema in Infants.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SEVENTH ANNUAL MEETING.

THE SECTIONS.

BRIEF SUMMARY OF PROCEEDINGS.

Section of Medicine.

The second day of the meeting of the Section of Medicine was principally devoted to a discussion on the Preventive and Remedial Treatment of Tuberculosis, which was opened by Professor Clifford Allbutt. He limited his introductory remarks to the question of pulmonary tuberculosis in the adult, and particularly to its first stage. His contribution dealt in turn with the modes of infection of the disease, the morbid anatomy of its first stage with its diagnosis, its prevention and its cure, making special reference to the treatment in sanatoria. Sir William Broadbent, who followed, endorsed many of the opinions advanced, and referred to the fact that in treating the patient not only the tubercle bacilli had to be dealt with but other micro-organisms that followed in its train. Sir R. Douglas Powell alluded to the advantages of sanatoria in educating the practitioner how to treat the patients at home, in providing for homeless persons afflicted with the disease, and by instructing the patient in the discipline of illness; he also referred to some of their drawbacks. Professor Osler laid great stress on the repeated examination of the sputum for tubercle bacilli, and said that in his experience—not a small one—the tuberculin test for the diagnosis of early phthisis had been invariably favourable. In his opinion the personality of the physician in charge of the sanatorium was the most important factor of the treatment. Dr. Tyson referred to the marked decrease in the mortality from phthisis in Philadelphia during the last twenty years, a reduction of 8 per cent. He thought that the treatment by drugs should not be entirely ignored, and quoted favourable results from the use of creosote. Dr. Theodore Williams said that in many cases of early tuberculosis the temperature was not raised or was even subnormal. He remarked that in London the mortality from phthisis was comparatively low in the districts surrounding the consumption hospitals, showing that it was certainly not strongly contagious, but was high in the densely populated parishes. He emphasised the importance of increasing the resisting power of the individual. Dr. Arthur Ransome called attention to the need for educating not only the public, but particularly the local sanitary authorities, who, having the power to prevent tuberculosis, should be induced to exercise it. The discussion, which had excited great interest, was then adjourned. During the morning the large room in which the Section met was almost inconveniently crowded. Dr. Ewart next read a paper on the treatment of heart disease by inhalations of carbonic acid gas, as a preliminary to the employment of baths, and the uses of these inhalations in cardiac disease and anginoid pain. He thought that the value of this treatment depended on the action of carbonic acid gas in small quantities as an anæsthetic, a vasodilator, and as a stimulant of the respiratory centre. He showed special apparatus for generating the gas. The paper was somewhat adversely criticised by Mr. Briscoe and Dr. Barr, and was favourably commented upon by Dr. Theodore Williams, Dr. Wells, and Dr. Verco. The concluding paper for the day was one by Dr. Harry Campbell, on the Mechanism of Thoracic Enlargement in Emphysema—as he maintained, a contracture of the inspiratory muscles—with its treatment. The President made some remarks, and Dr. Ewart, on the whole, supported Dr. Campbell's position, but there was not sufficient time to allow of the adequate discussion of the paper. The proceedings of the concluding meeting of the Section commenced with a paper by Dr. Parsons on the accurate diagnosis and successful treatment of perforated gastric ulcer, in which he strongly advocated early laparotomy; it was discussed by the President and Dr. Forbes Ross. The next paper, read by Dr. Calwell, was on a cognate subject—gastric adhesions the result of previous ulceration as a cause of chronic dyspepsia; Dr. Mullick made some general remarks, and Dr. Rolleston discussed the main questions raised by the two papers. The adjourned discussion on the Prevention and Remedial Treatment of Tuberculosis was then resumed by Dr. Shingleton Smith, who rather deprecated the notification of phthisis, hoping that anything of the nature of quarantine of consumptives would be avoided. Sir Hugh Beevor concentrated his observations on overcrowding as a cause of tuberculosis, and referred to tables showing the relation of phthisis mortality to density of population. Dr. Woods Hutchinson advanced views as to the early diagnosis of phthisis from the shape of the chest, stating that the rounded long chest corresponded with the ordinary human adolescent and the quadrupedal form. The President called attention to the prevalence of tuberculosis in the training ships for boys in the Royal Navy, and to its probable cause being the retention of the old-fashioned insanitary wooden ships, particularly when used for sleeping quarters. Dr. Parsons considered that in view of the great difficulty in diagnosing early tuberculosis every apparent cure of a case, prior to the appearance of tubercle bacilli in the sputum, should not be included in statistics. Dr. Hillier alluded to the questionable value of haphazard sea voyages, and advocated the treatment of patients in the open air of their own country. Mr. A. G. S. Mahomed appealed for the support of sanatoria for the poor by the State. Dr. StClair Thomson discussed the early diagnosis of phthisis from the appearances of the larynx, antecedent to those of tuberculous laryngitis. Mr. Lardner Green described the use of a spray of dilute formalin as an adjunct to the sanatorial treatment of phthisical patients. Dr. Newsholme strongly recommended the voluntary notification of phthisis and the disinfection of houses, as after an ordinary infectious fever. Dr. Denton Johns distinguished between sanatorial and climatic open-air treatment, and discounted the latter in the absence of the former. He showed a patient that had been cured under sanatorial treatment. Dr. Gardner narrated his experience in carrying out sanatorial treatment, and described a new form of kiosk. Dr. Calwell brought forward details of cases that had done well under hygienic treatment independently of sanatoria. Dr. Burton-Fanning pointed out that while formerly directions to patients for hygienic measures in phthisis were general, now they were precise and individualised. He insisted on the harmfulness of mental excitement in keeping up the fever of phthisical patients. He stated that the National Association for the Prevention of Consumption and other Forms of Tuberculosis was just about to begin the building of sanatoria for the London poor. Dr. Pruen spoke as to the diet and aids to nutrition in the treatment of tuberculosis. This successful meeting was then brought to a close with a short address from Dr. Burnet, as one of the vice-presidents, who reviewed the work done and congratulated the Section on its value and amount, and particularly on the importance of its discussions.

Section of Surgery.

The special discussion appointed for Thursday was the Prevention and Treatment of Syphilis in the Navy and Army. It was opened by Deputy-Inspector-General E. E. Mahon, R.N., and Major W. Dick, M.B. Deputy-Inspector-General Mahon, R.N., C.B., in an able and concise address, called attention to the following statistics. In 1880, the average strength of officers and men on the home station was 22,370; in 1897 it was 43,900, or nearly double. In 1880, the loss to the service in number of days' sickness from syphilis, primary and secondary, and gonorrhœa was as follows:

Syphilis, primary	32,223
,, secondary	12,850
Gonorrhœa	40,392

In 1897 the loss to the service in number of days' sickness was:

Syphilis, primary	76,335
,, secondary	49,764
Gonorrhœa	77,054

According to these figures, the loss to the service, except in the case of secondary syphilis, did not seem to have increased much, when the increased number of men was taken into consideration. But still the figures showed what an enormous loss there was to the country through the prevalence of these diseases. He considered that it was impossible to hope that the Contagious Diseases Acts would ever be enforced

again: even if they were, they would be useless, unless they were universally enforced. That, however, would be the most effective way of dealing with the question. Failing this the moral elevation of the men themselves must be attempted, and especially the encouragement of sobriety. It was emphatically asserted by Dr. Mahon that intemperance was very largely responsible for the number of cases of venereal disease. The following suggestions were made:—(1) Good naval barracks to be substituted for depôt ships in all the principal ports. (2) Advice to be given to young soldiers in regard to personal cleanliness. (3) Early marriages to be encouraged, which might be done by offering pensions to the widows of seamen. (4) Pensioners in good health, and not suffering from the sequelæ of venereal disease, to be given preference for civil employment by the Admiralty. As regarded the treatment of syphilis, the absolute necessity of a mercurial course prolonged for upwards of two years was pointed out. The best form, in Dr. Mahon's experience, was grey powder with opium. Major Dick called attention to statistics, collected at five-years intervals, showing the increasing number of cases of venereal disease in the army as follows:

Year.	Average Number constantly Sick from all Disease.	Average Number constantly Sick from Venereal Disease.	Percentage.
1882	3806.37	910.74	[illegible]
1887	4505.00	1200.79	[illegible]
1892	5707.81	1766.21	30.04
1897	6541.90	2543.37	38.71

It will thus be seen that there was in fifteen years an increase of 15 per cent. of cases of venereal disease. In 1897 the number of cases of venereal disease treated at Netley was nearly one-third of the total number of cases of sickness. The following suggestions were made as to the prevention of syphilis in the army: (1) The inculcation of moral principles in the young soldier, this, though admirable, was theoretical rather than practical; (2) hygiene of the individual; (3) the rendering of a soldier's life as pleasant as possible in barracks, to prevent his seeking his pleasures abroad in the evenings. Men should be encouraged to come to hospital the moment they themselves detected anything suspicious. Major Lambkin, R.A.M.C., dealt in detail with the intramuscular method of injection. By this method the treatment of syphilis could be continued for as long a period as was thought necessary with little or no trouble to the patient. The following prescription was employed: Hydrarg., ℥j; lanolin pur., ℥ij; ol. carbol. (1 in 20), ℥iv. Of this, ℥x were injected in the buttock once a week, and the whole course of treatment lasted about eight to twelve months. In 20,000 injections Major Lambkin had only once seen any bad result—a localised abscess at the point of injection. Major William Niven, pointed out that though the general sobriety of the soldier had increased, the amount of syphilis had increased. He believed that the sexual instinct was approached and treated on erroneous principles. Any regulations to be made should be applicable to both sexes. Dr. G. Ogilvie contrasted the recently-reported severity of syphilis among British troops in India and that reported from Portugal by Fergusson in the beginning of this century, which was due in the latter to "murderous and unnecessary courses of mercury." He then discussed the part played by malarial fever in the production of malignant syphilis, and how, when malarial fever or its cachectic effects existed, great care had to be taken in the administration of mercury. Dr. Shaw-Mackenzie urged the natural causes of mitigation and aggravation of syphilis, and thought that questions of success or failure of treatment varied according to conditions of constitution, time, climate, and place. He thought that the improvement during the Contagious Diseases Acts was due to the hospital treatment rather than to the machinery of the Acts, and that provision for such hospital treatment of both sexes, voluntary as opposed to compulsory, seemed necessary at the present time. Colonel F. H. Welch, R.A.M.C., believed that the present state, especially abroad, of the army in its relation to venereal disease, was such as to require measures of prevention. All public measures of prevention must lie in the control of prostitution, and authorities abroad should be allowed a free hand in meeting the local conditions which pertained voluntary hospitals were inadequate. Mr. A. H. Ward believed that the increased virulence of syphilis seen in coloured races was due to the difficulty of carrying out continuous treatment for the proper period of at least a year and a-half. In the hypodermic method of treatment the collection of mercury injected might remain encapsuled for long periods, so that the patient carried his treatment with him for some years. Lieutenant-Colonel H. Grier, R.A.M.C., added his testimony to the efficacy of the intramuscular method of administration. In 15,000 injections there was no case of salivation, and practically no ill-result. Dr. Bell-Taylor, Surgeon-General O'Dwyer, and Dr. Maxwell also spoke. Mr. A. H. Ward read a paper on The Rational Treatment of Syphilis. The following points were considered essential: (1) To push mercury to the toleration point and keep it there; (2) to commence the course at the earliest possible moment; (3) to continue it throughout the normal period of the evolution of the disease; (4) treatment must be made easy, and not be irritating; (5) to take special care of the general health; (6) the value of water as an adjuvant to treatment. Colonel Francis H. Welsh read a paper on the Prevention of Syphilis, which he said could be brought about in two ways—hygienically through curtailing the lineal descent of the virus, sociomorally through curtailing prostitution. The evidence accruing during the last thirty-five years pointed to the conclusion that through surveillance of prostitution and segregation of the affected it was possible both to reduce the prevalence of the disease and to diminish its virulence. The disease must be attacked from all sides—morally, socially, and hygienically. Mr. J. Lynn Thomas (Cardiff) read a paper on Two cases of Operations on the Gasserian Ganglion by the Hartley-Krause Route. Both patients had remained quite well; in each the sense of taste was normal. Major J. D. Day, R.A.M.C., showed a new form of truss. Professor E. Laplace, of Philadelphia, demonstrated a new forceps for intestinal anastomosis. The advantages claimed by Professor Laplace for his instrument were rapidity of operation, complete and watertight union of opposed surfaces, and extreme simplicity. The special discussions having been dealt with on the two former days, Friday was devoted to a series of short papers. Mr. H. Rundle read a paper entitled Notes on 375 Cases of Variocele treated by Operation. The following inferences were drawn: First (*a*) That variocele exists in a large number of young men, probably 18 to 20 per cent., and does not produce any physical discomfort; (*b*) and ought not to be considered a cause for disqualifying them, except in rare and pronounced cases, from entering the service; (*c*) and that such ordinary cases do not demand operative interference. Secondly, in cases where an operation was required, ligature and excision of veins by an open incision was best to adopt. It was a simple undertaking, free from danger and the result excellent. Mr. Lucy agreed with Mr. Rundle as to the rarity of the cases applying for operation on account of symptoms due to the varicocele; nearly all cases at the South Devon Hospital were operated on for admission into the naval service, and by the open method with shortening of the cord. In many cases the vertical wound was sewn up transversely. Mr. Jonathan Hutchinson, jun., whilst fully agreeing with Mr. Rundle's contention that the great majority of subjects operated on for varicocele possessed no true pathological defect or symptoms of real inconvenience, submitted that in a certain number the persistent aching and the risk of atrophy or softening of the testicle fully justified the open operation apart from service consideration. He had seen a few cases where atrophy of the gland followed severe varicocele. He thought some cases, in which the scrotum and cremaster were extremely lax, were only to be dealt with by free excision of the lower part of the scrotum, at the same time as high ligature of the anterior bundle of veins. Mr. J. A. Buck said that he had operated upon a large number of cases in the Royal Isle of Wight County Hospital, chiefly for the purpose of passing candidates into the services, in which,

otherwise, he would not have advised operation. He mentioned a case in which atrophy of the testicle to the point of almost complete disappearance had followed the operation. Mr. Buck advised that only a portion of the veins should be excised. Colonel Stevenson (Netley) believed that the cases operated on in the services, or the cases of candidates for the services, were nearly always less marked than those in civil practice. The testicle was seldom atrophied. It was necessary to operate even on very slight cases in the army, because a soldier with any physical disability, even a slight one, was practically useless for duties which he might dislike. Mr. L. A. Bidwell read a paper on a Method of Attaching the Skin to the Mucous Membrane of the Rectum after Perineal Excision. After excising the rectum by the usual perineal racket-shaped incision extending to the tip of the coccyx, two transverse incisions were made on each side of the anus, and the skin flaps were dissected up and attached to the mucous membrane of the rectum. In this way tension was diminished, and it was possible to unite the mucous membrane to the skin even after removal of several inches of the rectum. The duration of convalescence was shortened, the comfort of the patient was greater during dressings, etc., and the chance of cicatricial contraction was lessened. He referred to the case of a man, aged 60, in whom he had operated in this way; the wound healed within five weeks. Mr. Carwardine (Bristol) described a method for excision of the rectum for cancer, the aim of which was the safe and complete excision of the rectum, with the lymphatic area in continuity and the functional restoration of the parts. Mr. Carwardine showed photographs of the various steps of the operation, and a patient upon whom he had operated about a year earlier. The disease had been extirpated with the presacral glands and tissue in continuity, and a new and bifid coccyx had reformed from the periosteum. The operation was carried out as follows:—The patient was placed prone, and the coccyx and second and third pieces of the sacrum excised subperiosteally; then a long knife was passed through the anus and out in the middle of the periosteum, and all the retro-rectal tissues rapidly cut through. The rectum was completely isolated on all sides, avoiding the sphincter. The periosteum was deflected as far as required. Only the mucous membrane was divided above, and the whole presacral tissue and glands drawn down and cut across high up in the hollow of the sacrum. The upper bowel was united to the anus, and with but little drainage the periosteum and soft parts united by first intention. Mr. C. Ryall read notes of a case of extensive transacral excision of the rectum, followed by perfect sphincteric control; 12 inches of the upper rectum and lower sigmoid were removed. After two subsequent operations the upper bowel was anastomosed to the lower rectum. Mr. Morton (Bristol) considered that Mr. Carwardine's operation differed but slightly from Kraske's procedures. Mr. Roger Williams considered Mr. Carwardine's operation as a modified adaptation of Kraske's method. He believed that cancer high up in the rectum would eventually be dealt with by abdominal section. Mr. James Berry read a paper on Seventy-two Consecutive Cases of Removal of Goître by Operation (Extirpation or Enucleation). In nearly all the cases the operation was performed on account of dyspnœa, often very severe. He drew attention to the serious nature of the goître in which a prolongation extended down behind the sternum; many of his cases were of this variety. In 10 cases the operation had been done through a transverse skin incision, which yielded excellent results as regards appearance. Of late he had been in the habit of operating with local anæsthesia in all cases in which there was much tracheal obstruction. As regards results there had been 3 deaths in 72 cases, one from chloroform, the other two were due to severe recurrent hæmorrhage. In the remaining 69 the immediate and remote results were excellent. Dr. William Sheen read a paper on a Case of Secondary Thyroid Growth. The patient, a woman aged 58, had a bronchocele for 38 years, and a tumour of the skull for 4½ years, which latter was removed. Mr. D'Arcy Power called attention to the fact that in extensive removal of the tongue the division of the suprahyoid muscle was attended by sudden dyspnœa, and inquired if a similar condition had been observed when the infrahyoid muscles were divided. Mr. Berry said, in reply, that he had not noticed dyspnœa after the division of muscles.

Mr. Morton (Bristol) read a paper on the Successful Resection of Three-quarters of the Stomach for Carcinoma. The specimen was shown. The results of a recent examination had led Mr. Morton to believe that the growth was sarcomatous in nature. The patient made a good recovery. Mr. Moynihan (Leeds) believed that it was almost if not quite, impossible by means at present at our disposal to diagnose cancer of the stomach when purely local. Mr. W. G. Spencer objected to Mr. Moynihan's general condemnation of pylorectomy. Mr. Bidwell had up to the present year agreed with Mr. Moynihan. During the last few months he had operated upon 4 cases, removing the pylorus, believing the disease to be confined to the stomach. Mr. W. G. Spencer described 2 cases of fatal venereal phagedæna, the one in an otherwise healthy man, aged 61, in whom death, 2½ weeks after inoculation, followed gangrene of the skin of the penis, the scrotum and testes, the perineum, and a small portion of the anterior abdominal wall. The second case, a woman, aged 35, who had had previous pelvic inflammation, was infected about 1 month before. The phagedæna complicated a double pyosalpinx, affected the uterine cavity, and ultimately spread to the abdominal wall and perforated the intestines. Allusion was made to the bacteriology of the subject. Mr. Roger Williams read a paper on the Surgical Treatment of Uterine Cancer, advocating the performance of an abdominal section and the removal of uterus, broad ligaments, lymphatic vessels, and glands. Dr. G. E. Armstrong (Montreal) read a communication on the Surgical Treatment of Hæmorrhage from Gastric Ulcer. He recorded the results of the *post-mortem* examinations at the Montreal General Hospital. In all cases of fatal gastric bleeding the hæmorrhage was arterial, and was readily accessible to surgical treatment. Mr. Jonathan Hutchinson, jun., read a paper on the Vermiform Appendix in Relation to Hernia and Intestinal Obstruction, in which he put forward the view that attacks of inflammation in the appendix tended to cause its inclusion in the sac of a hernia. Mr. R. H. Lucy gave a demonstration on the use of a simple and portable set of straps for maintaining the lithotomy position. Dr. Bampton (Ilkley) read a most interesting account of a bullet in the brain for 9 months.

Section of Obstetrics and Gynæcology.

In introducing a discussion on Thursday upon the Natural Menopause compared with the Menopause produced by Removal of the Uterine Appendages, and the Menopause produced by Removal of the Uterus without Removal of the Appendages, Mr. Bland Sutton (London) remarked that the function of the ovary were not merely ovigerous; Graaffian follicles were to be regarded as mucous crypts, and the ovary as a ductless gland of the same type as the thyroid. The period of ovarian activity was coterminous with that of menstrual life, and removal of the ovaries caused not only amenorrhœa, but also a series of symptoms characteristic of the menopause. The uterus was structurally a hollow muscle forming an incubation chamber for the reception and development of oösperms. The endometrium, from fundus to internal os, was the organ of menstruation, and the source of the menstrual hæmorrhage; but besides hæmorrhage there were important vasomotor phenomena in menstruation. The normal menopause was the result of atrophy of the secreting elements of the ovary. In addition to cessation of menstruation, other disturbances were generally met with at this epoch, such as the phenomenon known as "flushing," mental irritability, and sometimes erotomania. The artificial menopause, likewise, was something more than arrest of the usual monthly hæmorrhage. Removal of the uterus, although it produced amenorrhœa and sterility, did not induce a complete menopause; removal of the ovaries, on the other hand, was followed in a fair proportion of cases by flushings, which he had known to occur as frequently as fifteen times in an hour. These signs did not supervene after removal of the uterus alone; usually the patient passed through a quiet menopause without disturbances. No information was as yet forthcoming as to the changes which occurred in the ovaries left behind after removal of the uterus. Mr. Sutton urged that in performing hysterectomy one ovary at least should be spared if possible, so as to avoid the production of a complete artificial menopause. The President (Dr.

Granville Bantock) moved a vote of thanks to Mr. Sutton for his paper, and a discussion followed, in which Dr. Stuart Nairne (Glasgow) remarked that his experience led him to the same general conclusions as those of Mr. Sutton; Mr. J. W. Taylor (Birmingham) said that he had known cases in which menstruation continued for some months after vaginal hysterectomy, and he supposed that the blood came from the Fallopian tubes. After remarks by Dr. Macpherson Lawrie (Weymouth), and Mr. J. D. Malcolm (London), Dr. Reade (Cincinnati, U.S.) said that he agreed with the view that it was an advantage to leave a portion of the ovary if possible, but had sometimes found a second operation was necessitated by disease of the retained portion. He drew attention to the importance of further study of the changes in the hæmatogenic functions at the menopause. The President pointed out that, after treatment of the ovarian pedicle by the clamp, menstruation not infrequently occurred from the stump, and he believed that in these cases the source of the bleeding was the Fallopian tubes. He had also known cases in which menstruation had continued regularly for two or three years after complete removal of both ovaries. Mr. Bland Sutton replied briefly. A short paper was then read by Professor Byers (Belfast) on Cases of Amenorrhœa associated with Raynaud's Disease and Pulmonary Tuberculosis. Dr. Stuart Nairne followed with a paper describing a new and more perfect method of colporrhaphy. This method consisted in uniting the lateral vaginal walls from the cervix to the vulva, so as to divide the vagina into two canals of more or less equal capacity. Remarks were made by Dr. Walter Tate (London), Mr. J. W. Taylor, and Dr. Purslow (Birmingham). Dr. Inglis Parsons next read a paper presenting a further report of cases illustrating his method of treating prolapse of the uterus. An interesting discussion followed, in which remarks were made by Major Peck, R.A.M.C., Dr. Kealey, Dr. Purslow, Dr. Tate, and the President, and Dr. Inglis Parsons replied.—On Friday, in the absence of the President, the senior Vice-President, Dr. Kealey took the chair. The first paper was read by Dr. Macpherson Lawrie on Fifty Consecutive Cases of Cœliotomy for Diseases of the Uterus and Appendages, with Forty-eight Recoveries. The series comprised 8 cases of ovariotomy, 28 cases of salpingo-oöphorectomy, 4 cases of abdominal hysterectomy, 8 cases of vaginal hysterectomy, and 2 cases of secondary operations for complications. In conclusion, Dr. Lawrie affirmed that the principal factors on which good results in abdominal surgery depended were, first, asepsis, and secondly careful hæmostasis, and, as secondary points of less importance, reasonable speed in operating, avoidance of unnecessary intra-peritoneal manipulations, and careful after-treatment. Dr. Warden (Paris) advocated the method of vaginal section in removing diseased appendages, and explained the use of a new instrument for clamping the broad ligaments invented by Doyen (Paris). Dr. Walter Tate agreed with Dr. Lawrie as to the desirability of operating in cases of salpingitis associated with constant pain and inability for work. Mr. J. W. Taylor insisted upon the importance of the investigation recently reported by him to the British Gynæcological Society which appeared to show that gonorrhœal salpingitis might be largely controlled by mercury and iodide of potassium when persistently administered. Dr. More Madden (Dublin) next presented a paper entitled Modern Methods of Treatment of Uterine Cancer, which was briefly discussed, and Dr. Archdall Reid (Southsea) followed with a paper upon the Causes which Render Difficult the Labours of Civilised Women. Dr. Reid commented adversely upon the conclusions arrived at by Professor Sinclair in his address to the Obstetric Section at the Montreal meeting of the Association, and stated his own view to be that the frequent use of forceps at the present time was rendered necessary by the steadily increasing difficulties attending labour in civilised countries. These increasing difficulties he attributed to the want of correspondence between the size of the pelvis and that of the fœtal head, and in minor cases to rigidity of the soft parts. Dr. Purslow thought that the difficulty met with in labour was more often due to muscular inefficiency than to the small size of the pelvis or the large size of the fœtal head. After remarks by Dr. Kealey, Dr. Reid briefly replied. Dr. Shaw-Mackenzie (London) next read a paper entitled the Syphilitic Factor in the Diseases of Women. He pointed out the frequency with which pelvic inflammatory disease in parous women was associated with minor syphilitic sequelæ, and for the most part with previous abortion. Syphilis was often modified in women, the primary lesion being of a suppurative character, and the secondary phenomena might be limited to erosions of the genital tract with purulent discharge. He advocated the treatment of pelvic inflammation by mercury and iodides; in subinvolution of the uterus it was especially useful as opposed to the curette. In advanced inflammatory or suppurative lesions, however, it was not satisfactory, but in menorrhagia and metrorrhagia it was very useful. Dr. Warden (Paris) followed with a short paper on the Treatment of Puerperal Infection in the Maternity Hospitals of Paris. He referred to the importance of the early recognition of the infected state as indicated by the pulse and temperature, and the importance of immediate local treatment by intra-uterine irrigation and careful curetting. The curette should never be used before the third day. Professor Pinard performed the operation without the use of anæsthetics, and, after curetting, the uterine cavity was swabbed out with a strong antiseptic, and packed with salol gauze. In the discussion which followed Dr. Kealey remarked that he did not think that all cases of rise of temperature before the third day of the puerperium were due to sepsis. Dr. Tate pointed out the importance of exploring the uterine cavity with the finger and not relying upon the intrauterine douche to detach placental fragments. Dr. Childe (Southsea) thought that, notwithstanding a rise of temperature, no intrauterine interference should be practised unless there were local symptoms. Dr. Warden replied briefly, and the business of the Section concluded with a vote of thanks to the Chairman, moved by Dr. Purslow and seconded by Dr. Shaw-Mackenzie.

SECTION OF STATE MEDICINE.

DR. J. GROVES, in opening the discussion on Personal Communication of Tuberculosis and the Measures available for its Prevention on Thursday, said that twenty-five years ago phthisis was supposed to be purely a hereditary disease; now it was known to be communicable, and as such must necessarily come under the cognisance of the sanitary authorities and the medical officers of health. But authorities were not yet agreed as to the degree of this communicability. He was not at present in favour of notification, which would result in the breaking up of families. But, although compulsory notification was not good, a medical officer of health should have a knowledge of the localities in which phthisis existed. He might then give friendly advice on the subject. Phthisis was on the decrease in consequence of better ventilation and sanitation. Dr. A. Newsholme said that all present views of phthisis were founded on the idea of its communicability. Notification should be enforced on quite different lines from those applied to the more acutely infectious diseases. It was a communicable disease, but its communicability was much more manageable than that of other infectious diseases, seeing that it had to do almost solely with disinfection of the sputa. The occupants of a besieged city were like those subjected to communication with phthisis. They could for a time withstand the opposition of the enemy, but after a time they succumbed. The medical officer of health should be associated with the family doctor in notification. It had been stated that the medical officer of health had no time to attend to cases of phthisis. If that were so let him have more help. Further, the advantages derived from inspection would give the greatest success in the prevention of phthisis. There was in Brighton a modified system of notification; and Dr. Newsholme gave particulars of the visits recently made in 56 such cases. He advocated the giving of a fee for voluntary notification, which he wished to be adopted. Visits of the medical officer of health should be confined to those cases in which the medical man attending made no objection. In certain districts compulsory notification might be even now adopted, without penalty in the event of the practitioner objecting to notify. Medical officers of health should lead in these matters. Dr. E. Seaton said that he was not yet educated up to the point in regard to notification that Dr. Newsholme would desire. Small-pox and other like diseases were always recognised by the public as communicable, but

seventeen years ago no one considered phthisis communicable, and public opinion must be educated up before compulsory notification would be acceptable. Dr. Sidney Davies quoted authorities to the effect that phthisis was communicable at all stages. Cases of phthisis were in a certain sense curable at all stages. Proper spittoons should be easily procurable for the poor. Rich people were well looked after by their physicians, and could look after themselves. The poor required supervision. He preferred voluntary notification: but even voluntary notification could not be practised unless it was paid for. Dr. Alderson considered it the duty of medical men to circulate leaflets on the communicability and hygienic treatment of phthisis amongst their patients: and to work cordially with the medical officer of health. The President expressed the opinion that phthisis was communicable in a very modified sense, especially amongst persons having an hereditary tendency. Dr. J. Groves considered the method of modified notification suggested by Dr. Newsholme should be adopted. Dr. J. W. H. Eyre read a paper on Diphtheria Bacilli in Milk, in which he described the varieties of bacilli he had found in certain specimens of milk supplied to a school. Dr. G. Wilson considered that the symptoms in inoculated guinea-pigs were symptoms of septicæmia, first local, subsequently general—not diphtheria at all—and were quite unlike the pharyngeal diphtheria of human beings. Dr. J. W. H. Eyre, in reply, said that the injection of cultivated diphtheria bacilli into the subcutaneous tissues of the lower animals produced local morbid processes in the suprarenal capsules, pericardium, etc., from which pure cultures could again be made. Mr. J. Brindley James read a paper on Death Certification, in the course of which he contended that the present certificate did not afford proof that the medical practitioner signing the certificate had attended the deceased, or had viewed the corpse. The law should be altered in both these respects. He read also a second paper in which he advocated the suppression of a coroner's jury and the appointment of two educated assessors. Dr. Wynn Westcott spoke of the difference between coroners in large cities who gave their whole time to the holding of inquests, and coroners in small places who held inquests at rare intervals. He thought the public would resist the suppression of juries. The medical man, if he had the slightest suspicion, should send the certificate to the coroner on its way to the registrar. Dr. David Walsh stated that he had examined the literature of premature burial, and had come to the conclusion that there was no case on record where the evidence was sufficient to establish the fact of such burial. Dr. Alderson thought the present certificate should be modified in certain ways, and that the doctor himself should send the certificate to the registrar, and not to the friends of the deceased. Infanticide would be done away with if the medical man were compelled to view the body. Dr. Sidney Davies and Dr. F. L. Hart concurred in the opinion that the certificate should make clear the distinction between the disease producing death and the cause of that disease. Dr. W. H. Symons read a paper on the disinfection of books and other articles by steam disinfection, advocating the use of formalin for this purpose. On Friday a discussion on the means of preventing the spread of infection in elementary schools was opened by Dr. A. Newsholme. He spoke of the difficulties of the subject, and said that other measures were even more imperative than the medical inspection of schools and scholars. These were the provision of prompt medical attendance upon children who became ill, in order to secure an early diagnosis, with proper treatment and isolation if necessary. Medical inspection of scholars, with the bacteriological investigation of their discharges (nasal, aural, etc.), had only a limited utility in limiting the spread of infection. To combat such diseases must be chiefly the affair of parents and private medical practitioners. Absentee scholars who were ill should be visited at home for diagnostic purposes alone by the medical officer of the school; but the public were not yet prepared for such an innovation. He described and exhibited the forms used in Brighton for the notification of infectious diseases by school authorities, and stated the advantage accruing from their use, especially in the obtaining of an increased school grant. Dr. Sidney Davies spoke of the large number of children below the school age who suffered from diphtheria, whereas with scarlet fever it seemed to be the schools which kept up the infection. Measles, too, he thought, was usually contracted at school. Children taught at home were apt to escape these infectious diseases. The cases were probably spread from unsuspected or ill-developed cases of the disease. He strongly advocated the inspection of children in schools by qualified medical men. Dr. H. R. Kenwood considered that all pupils in schools should be examined twice a year at least in non-infectious times; whereas the inspection might be made daily in times of epidemics. Prizes for maximum attendance should be abolished, as children, in order to obtain them, often attended when for medical reasons they should be at home, if not in bed. Mr. Henry May considered "education at all costs" was rather to the credit of School Boards. He advocated, however, the appointment of their own medical officer by School Boards. As to the mechanism of school closure, the first step to be taken was for the medical man to communicate with the School Board clerk, recommending that the schools should be voluntarily closed; the other elaborate procedure requiring the school to be closed was not then necessary. Dr. R. Sydney Marsden advocated a special daily report to the medical officer of health of all cases of infectious disease from the sanitary authority and the schools themselves. Dr. A. M. Fraser instructed the masters and mistresses to send home any child becoming sickly, and had the child carefully certificated by the medical man before it was allowed to return to school. Mr. Rolston advocated the disinfection of children's clothing and of the schoolrooms after they were closed for the day, without closing them entirely for weeks. Dr. Walter Smith thought that the children should be inspected by a special medical school officer. Dr. J. Groves thought the medical officer of health should come to know the schoolmasters and mistresses of his district, so as to disarm their suspicions, for they were filled with the desire to keep up the attendance in their schools. Dr. H. R. Kenwood thought the paper was another argument in favour of the isolation of enteric patients, otherwise the bacillus might enter the dust of the room, become dried and wafted about on to food, and thus swallowed. Dr. A. Newsholme replied, and concluded by moving a resolution requesting the Council of the British Medical Association to make representations to the Education Department, Whitehall, urging upon the Department the necessity, from the standpoint of the public health, of authorising medical officers of health to inspect all school premises, and to inspect or secure the inspection of scholars when the prevalence of infectious disease was judged by him to make such an inspection desirable. The resolution was seconded by Dr. Kenwood, and carried unanimously. Mr. J. Cantlie read a paper on the Early Decay of Teeth in Great Britain, which he attributed to feeding infants on artificial foods, and to the use of the gutta-percha "comforter," which produced also the high-arched palate, post-nasal adenoids, and defective growth. Dentistry should aspire to producing healthy teeth, not to the tinkering of decayed ones only. He moved the following resolution: "That in view of the early decay of the teeth prevalent in Great Britain, this Section requests the Council of the British Medical Association to appoint a committee of not fewer than three persons to inquire into the subject, and to report thereon to the Council in twelve months from the date of appointment." The resolution was seconded, and carried unanimously. Dr. J. K. Barton read a paper in which he insisted that the prevalence of decayed teeth was due to artificial feeding with improper food. Sterilised pure cow's milk would prevent such decay of teeth, which was especially prevalent amongst rickety children. The examination of the teeth of children in schools was done too late to prevent the decay, which was due to improper feeding in infancy. Dr. J. Groves said that it was the duty of the profession to instruct ignorant people on the proper feeding of infants. Dr. R. S. Esler thought the children of to-day were overfed in regard to quantity, and underfed in respect of quality, of artificial food. Dr. Herbert Peck read a paper on Sickroom Infection in Typhoid Fever, and concluded that sickroom infection was more common than was supposed, and that the danger of it did not receive the amount of attention it deserved; also that sickroom infection was much commoner in the small and often crowded houses of the poor than in the larger houses of the well-to-do. Dr.

D. Walsh (London) referred to the spread of other diseases, such as summer diarrhœa, by house infection, and Dr. J. Groves said that medical officers of health were probably now all convinced of the spread of typhus and other diseases in the way described by the author. Dr. Stuart Nairne (Glasgow) read a paper on the influence of long-continued standing in the production of women's disease, with reference to recent legislation (Shop Assistants Bill). He described 100 cases which had come under his care in Glasgow; the cases were tabulated, and showed that female shop assistants were subject to a definite number of diseases peculiar to the sex in far greater proportion than were other females. Dr. J. Groves moved a resolution "that the Section recognises the evil effects of long standing upon the health of women, and urges the Council to promote the passage of the Bill as to providing seats for shop girls (Scottish Section)." The resolution was seconded by Dr. Peck, and carried unanimously. Dr. R. J. Philpotts urged the importance of rest being obtained by shop girls during the "monthly period." Dr. J. Groves proposed a vote of thanks to the Secretaries and the Mayor and Corporation of Portsmouth for the facilities they had afforded the Section. Mr. G. Eastes seconded the resolution, which was carried with acclamation. Dr. D. Walsh proposed a vote of thanks to the President and to Dr. J. Groves. The resolution was seconded by Dr. Kenwood, and carried unanimously.

Section of Psychology.

On Thursday the discussion on Dr. Savage's paper on the Temporary Care of Incipient Cases of Insanity was resumed by Dr. Seymour Tuke, who pointed out the disparity in the number of patients in Scotland and England. It would be well to have every house and every person taking patients duly registered; and, further, it would be advisable that no person should be granted such permission who could not show that he or she had some knowledge and experience of insanity and its treatment. The existing system which permitted (or winked at) anyone that chose to do so taking charge of patients of unsound mind was a scandal. Notification or certification should be the rule in all cases—every case should be brought under official cognisance. The part of the section in the proposed Lunacy Act of 1898 which would prevent a relapsed case from being recertified for treatment within two years, or from returning to the same institution, seemed unnecessary. Dr. Macdonald pointed out the great difficulty even specialists had in determining whether a case of insanity was incipient or not. As long as these and allied cases of mental disease were treated by the general practitioner with the same freedom as he treated any other diseases of the system, so long would many of these cases of early mental disease suffer. Dr. Bower said that he would welcome a system of carefully regulated single care without a magistrate's order, and pointed out the ills of concealed custody, and gave an instance of a recent glaring case. Dr. Manning said that only medical men should be entrusted with the care and treatment of persons of unsound mind, and urged a system of registration and compulsory notification. In the absence of the latter there would be a return to the old system of concealed treatment with all its evils. Dr. Mahomed concurred in the necessity of registration and inspection of houses receiving patients in single care or in small numbers—two or three at a time. Dr. Lionel Weatherly regretted that proposed legislation on his subject had been recently shelved. He had advocated for twenty years the view that supervision was as necessary as, if not more necessary than, in private houses receiving single patients as in public institutions, a view which was cordially endorsed also by the late Lord Shaftesbury. The great increase in recent years of the clandestine treatment of insanity in private care was a scandal, and he would welcome any legislation which would provide at least for some supervision over these single cases. In very recent cases, some of which had come to light, he feared some of our leading consultants were not altogether blameless. The clauses relating to inability to recertify a relapsed case for single care within six months of recovery, and the provision for limiting care to single cases, both required some modification and extension both on medical and pecuniary grounds. Papers on the Etiological Relation of Syphilis to General Paralysis and on Congenital General Paralysis were read by Dr. Campbell and by Drs. Macdonald and Davidson respectively. The papers were followed by a long discussion, in which Drs. Weatherly, MacDowell, Briscoe, Mahomed, Macphail, Seymour Tuke, and the President took part. Surgeon-General Harvey read some Notes on Asylums in India, and among those who spoke on the subject were Dr. MacDowell and Surgeon-General Penny. Dr. Weatherly read a paper on the question, Can we Instil Rational Ideas regarding Insanity into the Public Mind? The speakers who took part in the discusion which followed were Dr. Stewart and the President. On Friday a discussion on the Treatment of Epileptics and Imbeciles was opened by Drs. Shuttleworth and Fletcher Beach. Dr. Shuttleworth dealt with the provisions for the housing and treatment of sane epileptics in England, and referred to the administrative side of the question. There was at present no provision for sane epileptics in England. (The provision for epileptic imbeciles was not here in question.) In the United States such provisions were afforded by the Craig Colony, New York, and by similar institutions. The system was generally that of detached cottages for housing the patients, and the buildings were spread over a large area. Workshops and gardens, orchards, farms, etc., were provided for teaching and training in useful occupations and industries. An institution of such a kind would be a boon to this country. Dr. Fletcher Beach referred to the medical aspects of the question. He mentioned a case of epileptic automatism; a woman was able to cook her husband's breakfast while in the automatic state following an epileptic fit. Some cases of epileptic aura were mentioned in which olfactory sensations or a feeling of numbness of one side of the body supervened. As regarded the treatment of Jacksonian epilepsy, the removal of local cysts causing the fits, etc., gave good results, but craniectomy did not. As to drugs, he could speak well of the alkaline bromides and of strontium bromide. The addition of liquor strychninæ in suitable cases prevented spinal cord depression. For workmen liable to fits 60 grs. of bromide was advised to be taken on going to bed. In syphilitic cases the addition of the alkaline iodides was indicated. Errors of ocular refraction should be corrected if present. Open-air occupation and a diet in which nitrogenous food (meat, eggs) was reduced to a minimum should be the rule. All epileptics should be advised not to marry—emphatically. In cases with gastric and intestinal fermentation small doses of carbolic acid should be given. Dr. Lloyd Andriezen referred to the importance of the social side of this question. An expression of opinion by medical men, founded on a thorough study of epilepsy, should do much to influence public opinion and legislation. Open-air occupation in farms and fields was most important, and the system of providing workshops not only for industrial training but to make institutions for epileptics in a measure self-supporting was a step in the right direction. In the administration of bromides he had found the addition of a small quantity of syrup of the hypophosphites beneficial in averting muscular depression and feebleness of circulation. For several years he had tried a combination of antipyrin (5 grs.) and ammonia bromide (15 grs.) in cases of epilepsy, and found it more suitable in preventing apathy and stupor which cases would otherwise exhibit, and in promoting a degree of mental brightness and clearness. He had found in gastric cases the administration of pure carbolic acid or of tincture of iodine (2 or 3 minims in capsules) of great advantage, and mentioned also cases in which he had practised lavage (washing out) of the stomach with water. Dr. Dickinson Berry maintained the need of some provision for sane epileptic children seen in her work under the London School Board who were quite up to the average in mental attainments, but could not be admitted to the ordinary schools owing to fits. Dr. Briscoe read a paper on the subject of convulsive seizures, and referred to an interesting case of a man who had suffered from unconsciousness and coma while occupied as a diver, and who recovered slowly after venesection. Dr. Haig contributed a few remarks on the value of non-nitrogenous diet in epilepsy. He recommended the total disuse of meat, eggs, and tea, and proposed a system of diet free from uric acid, which substance he looked upon as the primary agent in producing attacks of headache, and mental dulness and depression, and even epilepsy. The diet recommended would be 10 ounces of bread per diem, 12 ounces of vegetables and fruit, and about 2 ounces each of oatmeal, rice, milk, and cheese. Macaroni, potatoes, etc.,

could be taken in proportion to the wants of hunger and labour; and for those who had been accustomed to eat much meat, small quantities of protene and glutene could be added. Papers were also contributed by Dr. Lloyd Andriezen on the Bearings of Pathological Discovery on the Treatment of Mental Diseases, by Dr. Hyslop on Double Consciousness, by Dr. Harry Campbell on Morbid Self-Assurance, by Dr. Rutherford Macphail on Post Operative Insanity, and by Dr. Milne Bramwell on the Appreciation of Time in Hypnotism.

Section of Anatomy and Physiology.

On Friday morning Professor R. J. Anderson (Galway) read a paper on Some Questions concerning Asymmetry. He said that the parts of one side of the body in man and other animals corresponded generally to the parts on the other side. This was what was known as bilateral or lateral symmetry, and deviations from this arrangement were given as instances of asymmetry. Vertebrate animals were said to have symmetry of two kinds, bilateral and vertical; the latter consisted in deviation of the body by transverse planes into a series of segments, each of which had homologously the same constitution as the rest. The bilateral arrangement was regarded as the established law, but this was not invariable; the skeleton in the Bonn Museum referred to by Humphry had the bones of the arm and leg of one side longer than those of the opposite side. In the skeleton, however, there were were differences in the lateral parts that could scarcely be said to be anomalous, although they were decided examples of asymmetry. There were differences in the sinuses of the skull bones, and the septum of the nose was frequently bent over to the right or left. There was frequently a lack of symmetry in the cranium, and it was to be remembered that a shrinkage of the brain led to a thickening of the skull. All this must of course be regarded apart from any asymmetry that might exist in the brain itself. Professor Anderson concluded his paper by referring to inquiry he had made in relation to the appearance of "crooked keels" in barn-door fowls by crossing them with several special light breeds. Mr. A. J. H. Crespi (Wimborne) observed that it had been noted in persons known as factory cripples who had had to work beyond their strength in early life that their bones were abnormally twisted. This distortion occurred in obedience to the requirements of their particular calling. Dr. F. W. Forbes Ross (London) pointed out that undoubtedly the greatest example of asymmetry was the situation of the speech centre. Professor A. F. Dixon believed in the view that the radial symmetry in lower invertebrates was secondary to the changed mode of life of the adult forms. Dr. Forbes Ross next gave details of the results of observation of blood corpuscles when treated with formalin in various strengths. He affirmed that all the corpuscles which were noticed to have burst or to have opened did so by splitting in a plane parallel to the discoidal surface, through the peripheral substance on to the free edge of the corpuscle, that a red corpuscle invariably opened or burst on its free edge through the peripheral substance, that was to say, in a contrary manner to what might be expected, and not by rupture of the envelope on its flat surface. Dr. Ross concluded by remarking that the study of the construction of a blood corpuscle as gleaned from its shape and reactions, its mode of opening and the exact locality of the same, and the exact relations which its contents bore to one another, might be of value in appreciating the complex physiological action of the blood and help to clear up some points of interest. Dr. Havelock Charles communicated a paper on the Progress of Anatomical Teaching in Northern India, and the Section then adjourned to the optic lantern room, where Professor Dixon gave a demonstration with lantern slides on the Course of the Taste Fibres, in the course of which he sought to show that embryological comparative anatomy and experimental evidence was entirely in favour of the seventh and ninth nerves being the nerves of taste. The development of these nerves and their branches was described and the observations of O. Strong were noted. Professor Dixon then proceeded to demonstrate the grooves and markings often found in the human calvaria corresponding in position to certain vessels or sensory nerves of the scalp. He then demonstrated for Mr. J. Lynn Thomas the anæsthetic areas in two cases in which the second and third divisions of the fifth nerves were cut intracranially. A number of photographs showing these anæsthetic areas were exhibited, especially noteworthy being the persistence of the sense of taste all over the tongue after section of these nerves. The work of the Section then came to an end by Professor Dixon demonstrating some slides for Professor D. J. Cunningham on Some Points in the Section and Anatomy of the Brain of the Orang and Chimpanzee.

Section of Pathology.

Dr. Kelynack opened the discussion on Thursday upon the subject of renal tumours. He called attention to the confusion which existed as to the origin and characters of renal tumours, and to the loose way in which they were classified. He thought that they should at least tentatively be divided into true renal, pelvic, hilum, capsular, adrenal inclusion, adrenal, and perirenal. He then gave a description of the various kinds of growths, grouping them under sarcoma and carcinoma, and pointed out in what direction further research must be directed in order to clear up much of the confusion. Mr. J. H. Targett exhibited lantern slides representing the various forms of renal growths met with in children. He instituted an anatomical classification of the tumours in accordance with their probable site of origin. The derivation of certain complex neoplasms of the kidney from embryological relics was adopted in opposition to the views of some observers who regarded them as teratomata. He disagreed with the view that many tumours were derived from "rests' of accessory adrenal bodies, and hoped that it would be found that the clinical histories of these tumours would prove to be different. Mr. Roger Williams remarked upon the greater malignancy of the tumours occurring in infancy, and suggested that this might be explained by their multiplicity and by their more frequent origin from congenital tissue. The striped muscle tumours were also malignant—at least there was no case of total recovery. Mr. Wakelin Barratt gave an account of the analysis of 4,118 cases in the West Riding Asylum, Wakefield, in which there had occurred 8 cases of renal tumours, of which 1 was simple, 3 primary, and 4 secondary. He thought that these figures would probably represent the incidence of such diseases on the population in the district. Dr. Lazarus-Barlow said that, of 10 cases which he had examined, 3 were villous columnar-celled carcinomata, 3 were spheroidal-celled carcinomata, 3 round-celled or irregular-celled sarcomata, and 1 a rhabdo-myosarcoma. Mr. Eve thought that certain of the congenital tumours were undoubtedly produced by the "rests" of adrenal tissue. He thought also that the connective tissue had something to do with the tumours. Dr. Trevelyan showed and described some exceptional renal tumours which he had brought to the meeting. Dr Brodie then read a paper upon the physiological action of diphtheria toxin, and showed slides illustrative of the variation in blood pressure. Dr. Seligmann illustrated a very interesting paper upon the morbid conditions met with among the natives of British New Guinea. Dr. Posadas, after expressing the good wishes of the medical faculty of the Argentine Republic, read an account of his work upon generalised infectious psorospermosis. Dr. Woods Hutchinson read a preliminary paper upon the distribution of tuberculous lesions in animals as compared with those in man. Drs. Trevelyan, Lazarus-Barlow, Pakes, and Kauffmann took part in the subsequent discussion. On Friday Dr. Lazarus-Barlow began the work of the Section by reading papers upon Dissecting Aneurysm of the Heart, Syphiloma of the Heart, and Anæmic Infarct of Liver. He showed specimens of these, and in the course of his first paper he reviewed the literature upon the subject. Dr. Tickell remarked that three cases of infarction of the liver were recorded in the *post-mortem* records at St. Bartholomew's Hospital, all in cases of ulcerative endocarditis. Dr. Coles then read a paper on the Bacillus of Influenza, collecting together nearly all that was at present known about the organism. Dr. Poynton made some suggestive observations upon the pathology of the myocardium. After Dr. Wohlmann's paper upon the bacillus of rheumatoid arthritis, Dr. G. Leslie Eastes read a very instructive account of his experience of the examination of milk, and called special attention to the presence of streptococci and pus in so many samples of mixed milks.

He stated that there had been evidence of inflammatory lesions in 80 per cent. of the milks he had examined. Mr. Pakes, Professor Trevelyan, and Dr. Driver having discussed the paper, Dr. Trevelyan showed an interesting specimen of hydatid disease of the vertebral column and extradural space, and commented on the great rarity of the condition. Mr. Bellingham Smith introduced the question of infective sarcomata in dogs, which raised a good discussion. A paper on a case of primary carcinomatous cyst of the liver by Mr. White was followed by that by Mr. Roger Williams upon tumours of gigantic size, in which several very large tumours were described, and their histology stated. Dr. Reid discussed the question of heredity in relation to disease, and pointed out that each disease, by weeding out the weak against itself, caused an evolution of resisting power in the race. Dr. Pearse followed with some observations on the pathology of plague, and Dr. Phillips concluded the meeting with remarks upon the influenza throat. Microscopic specimens were shown by M. Achalme, Chef de Clinique de la Faculté de Médecine de Paris, illustrative of the Bacteriology of acute rheumatism; and by Mr. Bellingham Smith and Dr. Eastes illustrative of their papers; while Dr. Eyre sent some cultivations illustrative of the bacteriology of ulcerative endocarditis.

Section of Ophthalmology.

On Thursday a paper on Enophthalmos was read by Mr. E. Treacher Collins. He divided the cases into traumatic and non-traumatic. He described five cases, and showed photographs of the patients in the lantern. He entered in an elaborate manner into the theories he entertained concerning the disease. The President said that he had seen several cases of a similar nature, and Dr. de Schweinitz said that he had recorded a case in which he thought the exophthalmos was due to orbital cellulitis. Mr. Richardson Cross mentioned a case which followed an operation on the Gasserian ganglion for severe fifth nerve neuralgia. Deputy-Surgeon-General Cayley opened the discussion on the Visual Tests employed in the Navy, Army, and Mercantile Marine, and their Efficiency. For the army recruits the sight required was about $\frac{1}{4}$ of normal vision; this was equal to myopia of about 1.75 D.; while for the departments and militia it was only half this, and equalled myopia of about 3.5 D. With modern weapons he considered that this minimum vision required was too low. Colour blindness and hypermetropia might pass undetected in the soldier. For a commissioned officer the test was more severe. For the Royal Navy normal sight was essential, though there was a rider which allowed the examiners some latitude. There were, however, no absolute rules to guide the surgeons. In the mercantile marine the regulations were all in confusion. For ordinary seamen no test whatever was used, and the rules were too slack to ensure good sight even for officers. For the English pilot service no test was enforced, while in the Indian pilot service strict tests were applied. Dr. Landolt (Paris) then read a paper on the Determination of Acuteness of Vision, the Principle of its Determination, and the Tests for Visual Acuity. He demonstrated and explained his new tests, which roughly consisted of a broken circle in which the candidate had to state the position of the gap. The Secretary then read some notes by Dr. George Mackay, who quoted numerous cases in which the patients had become inefficient on account of defective vision, which might easily have been determined by suitable examination before they were admitted. Mr. T. H. Bickerton read a paper on the part that colour blindness and defective vision played in the production of collisions at sea at night and at other times. Mr. McHardy confined his remarks to the tests used in the Royal Navy; while Colonel Drake-Brockman, I.M.S., expressed the opinion that the present sight test was most inefficient with modern weapons. Mr. Richardson Cross thought that physique as well as eyesight should count for far more than it did. He was quite sure that the tests were inefficiently applied, and could be dodged to a great extent. Mr. Devereux Marshall asked if captains of guns were ever examined after their admission into the service, and he also mentioned the inefficiency of the application of tests for stokers in the navy. Deputy-Surgeon-General Cayley, in reply, stated that he thought there was no further examination made after the men were admitted, unless they were detailed for special service. Mr. John Griffith read a paper on Primary Sarcoma of the Conjunctival Fornix, upon which remarks were made by Mr. Devereux Marshall and Mr. Treacher Collins, who mentioned cases. Dr. James Hinshelwood read a paper on the Use of Euphthalmin; a new Mydriatic. He considered that euphthalmin, although it did not completely fulfil all the conditions of an ideal mydriatic, yet approximated to this more closely than any other mydriatic, as it caused rapid dilatation of the pupil, which soon returned to its normal condition. A resolution concerning the tests used in the mercantile marine was passed, and was subsequently reported to the concluding general meeting of the Association on Friday. On Friday Dr. Bull (Paris) read a paper on the Stereoscope as a Test for the Ocular Muscles, and described the various tests he employed by means of the stereoscope. Mr. Watson Griffin (Brighton) described five cases illustrating the value of the correction of hyperphoria with vertical prisms, in which the patients were unable to use their correction without the prisms. Dr. Reeves (Toronto) thought that in one of Mr. Griffin's cases, which was corrected with 0.25 prism in each eye, a slight decentering of the glass would be equally effective, though in his own cases he often found that more hyperphoria became manifest after the original correction. Mr. Arnold Lawson read a paper on the Correction of Refractive Errors in the Treatment of Trachoma. He described two cases in which, after a temporary improvement with local treatment, they ceased to get better, but when the refractive errors were corrected they rapidly got well. He strongly recommended the use of glasses when the corneæ were sufficiently clear to estimate the refraction. Colonel Drake-Brockman, who had had great experience of the disease in India, used to correct the refraction as a routine treatment, and was certain of its beneficial effect in many cases. Dr. de Schweinitz, though he had no actual experience in the modification of trachoma by means of the correction of refractive errors, thought that like many other inflammatory affections it was likely to be benefited by such correction. A paper by Dr. John Hern on the Eye Symptoms in Hay Fever was read by the Secretary. In it Dr. Hern described the symptoms, but was uncertain as to its cause. Mr. Devereux Marshall, who was well acquainted with the symptoms from his personal experience, said he had found treatment most unsatisfactory, and was by no means certain as to the cause. A paper by Mr. Kenneth Scott of Cairo on Destructive Ulceration of the Eyelid was in his absence read by the Secretary. Mr. Arnold Lawson suggested that the case was one of gumma of the conjunctiva, and Colonel Drake-Brockman said that he had seen cases exactly resembling this which were undoubtedly syphilitic; he had seen gummata greatly benefited by europhen.

Section of Diseases of Children.

The second meeting of this Section was opened by a paper by Drs. A. M. Gossage and J. A. Coutts on the Etiology of Convulsions in Infancy. Dr. Coutts and Dr. Gossage pointed out that true convulsions were much more infrequent than was generally supposed. Predisposing causes were more important than exciting causes. The instability of the infantile nervous system was one cause, but there were others, such as inherited neurotic conditions and rickets. The alleged frequency of teething and digestive disturbances, convulsions as merely the equivalent of signs at the onset of acute diseases, and exanthemata, and the convulsions in asphyxia were discussed. Dr. Hugh Jones regarded all convulsions as symptomatic only. There had of recent years been a fall in the recorded deaths from convulsions, corresponding with a decrease in other diseases, and with improved general sanitation. Dr. Jones attributed the majority of the cases to bad feeding. The public-health aspect was definite. A symptom was not the cause of death, and certificates of death should be accurate and precise; death could not be combatted by registering symptoms. Dr. Cautley and Dr. James Green continued the discussion; and Dr. Gossage replied. A paper was read by Dr. Graham Little on Night Terrors in Children, and a discussion followed, in which Dr. Cautley, Dr. Masters, Dr. J. Green and Mr. Mansell Sympson took part. Mr. A. H. Tubby contributed a paper on the Treatment of Deformities due to

Infantile Hemiplegia, and Mr. Jackson Clarke and Dr. Wright spoke on the subject. Dr. Porter Parkinson read a paper on the Varieties and Causes of Cough in Children, with Especial Reference to Practical Treatment. Dr. Cautley read a paper on Abnormal Ossification of the Parietal Bone in an Infant, and Dr. J. Priestley a paper on Infantile Hemiplegia. The third meeting of the Section took place on Friday, August 4th, Mr. Edmund Owen in the chair. The proceedings were opened by Mr. John Langton (London) who read a paper on the Treatment of Inguinal Hernia in Infancy and Childhood. Mr. Langton gave statistics regarding the relative frequency of the condition in the two sexes, and touched on its prevalence in children of the Jewish race. He thought the diagnosis simpler in infants than in older children. He discussed the frequent association of umbilical hernia with other hernias. He laid great stress on the proper dieting of children suffering from this affection, and considered that phimosis did not play an active part in the production of hernia. He discussed the questions of exercises and mechanical forms of support, condemning the wool truss. He also spoke in detail with regard to kinds of trusses, the proper instruction of the patient's parents or guardians, and the length of time for which a truss should be worn. He discountenanced operation prior to 6 years of age, except under pressing circumstances, and enumerated the cases in which operation was necessary. As regarded sutures he preferred kangaroo tendon. Mr. Frederic Eve discussed the question of operation in relation to the amount of danger, the age of the patient, the kind of operation, and the result, Mr. Robert Campbell (Belfast) and Mr. Whitelocke (Oxford). Mr. Heaton (Birmingham) and Mr. Damar Harrisson (Liverpool) joined in the discussion. Mr. Edmund Owen advocated circumcision as a preliminary operative measure, and deprecated the use of the term "radical cure." Mr. Eccles (London) spoke, and Mr. John Langton replied. Dr. Mansell Sympson (Lincoln) read a paper on the Treatment of Rickets in an Out-patient Department. Dr. F. J. Poynton (London) contributed a paper on the Study of Cardiac Overstrain in the Young, Mr. George Heaton (Birmingham) Study of a Successful Case of Splenectomy for Rupture of the Spleen, with a note on the Consequent Blood Changes, illustrated by most interesting tables. The Section throughout was fairly well attended, and its proceedings were fully up to the high level of interest and scientific value attained in previous years.

Section of Pharmacology and Therapeutics.

On Thursday, Dr. Burney Yeo introduced the subject of Intestinal Antiseptics. Dealing with the design and scope of antisepsis first, he stated that they should be used to antagonise the evil effects of toxic agents, or, in other words, to prevent auto-intoxication. Secondly, the scientific basis for the use of antiseptics rested on our knowledge of bacteria, and our aim should be to render them non-virulent. As to the morbid conditions calling for the use of antiseptics, the speaker named gastric dilatation, duodenal indigestion, summer diarrhœa, and remote affections of other organs. Finally, as to the choice of drugs, Dr. Burney Yeo dealt with sterilised water, mercurials, chlorine, bismuth salts, and carbolic acid, but recommended more especially menthol, thymol, and other volatile substances unabsorbed by the stomach. Salol, he considered, could not be relied upon. In a large number of cases irrigation *per rectum* was also desirable. Dr. Vaughan Harley read a paper on the same subject, treating it from the laboratory point of view, detailing especially his experiments with calomel. Dr. Frank Pope had not seen marked results from the use of antiseptics in cases of typhoid fever. Dr. G. Herschell considered that all bacteria found in the intestine existed in the mouth at some time or other, and that, therefore, both it and the stomach should receive treatment. Dr. R. Briggs Wild advocated charcoal and sulphur. Dr. A. Haig discussed the physiological action of calomel, and the President observed that salol might pass in the shape of concretions after long-continued use. Dr. A. Haig contributed observations on paroxysmal headache existing together with an excess of uric acid. The treatment consisted in the elimination of uric acid from the food. Dr. Watson Dixon read a paper on the Pharmacology of Cannabis Indica. He pointed out the relative strength of the raw drug as received from the various localities, and proceeded to describe the effects on nerve, muscle, heart, and circulation. He advocated its use by the inhalation of the washed fumes. When thus administered it could be placed in the same category with tea, coffee, kola, and other stimulants, and did not generate a dangerous habit. Taken by the mouth, on the other hand, it was a narcotic of varying strength. Dr. W. Knowsley Sibley read a paper on the Therapeutics of Light and Heat, that is, the effects of dry hot air when applied to different parts of the body. All forms of arthritis, erythema nodosum, rheumatic nodules, hysterical joints, malnutrition, some forms of paralyses and neuritis, were benefited, whereas locomotor ataxia, paralysis agitans, and writer's cramp, were not improved. As to the addition of luminous rays, the red gave the most satisfactory results. The President observed that he had seen good results from the same treatment. On Friday Dr. Hugh Walsham (London) read a paper on Cases treated with Erythrol Tetranitrate. He had found its administration safest in the form of chocolate tablets. The cases treated were patients suffering from various forms of heart disease, from interstitial nephritis, and from Raynaud's disease. Success was obtained in nearly every instance. The President remarked that he had frequently used the drug, and that the danger of explosion, with ordinary precautions, might be neglected. He had also known sleeplessness of Bright's disease relieved by a single dose. Dr. R. B. Wild (Manchester) opened a discussion on the Constitutional Treatment of Skin Diseases. The distinction between local and constitutional treatment could not be made accurately, and he considered that a combination of both was necessary. He distinguished five groups: (1) The cases in which the skin lesion was symptomatic of a general disease, such as scarlatina, etc.; (2) the toxic group, often the result of drugs, poisons introduced by food, etc.; (3) local disease accompanied by a new formation, often the result of irritation; (4) the parasitic group; and (5) the large category of skin diseases remaining, which all required both constitutional and local treatment. Reviewing the various drugs administered at the present time, Dr. Wild stated that the success of arsenic depended in many cases on the idiosyncrasy of the patient. Whereas he had been disappointed by ichthyol, he had considerable confidence in sulphur, mercury, antimony tartrate, potassium iodide, and sometimes salicylic acid. Creosote and guaiacol, given in increasing doses, he found of special value in lupus. Thyroid gland he had found unreliable, one of its drawbacks being the emaciation which frequently resulted. In discussing general treatment he emphasised rest in bed and change of climate. Dr. J. R. Philpots (Parkstone) spoke in favour of ichthyol applied externally. The President said that he had been disappointed after the use of arsenic except when given for psoriasis of the nails. Dr. Norman Walker (Edinburgh) condemned the administration of arsenic in cutaneous malignant disease, but spoke in praise of ichthyol in cases of urticaria, even given to children in doses of 2 to 4 minims. Dr. E. Schiff (Vienna) read a paper on the use of X Rays in the Treatment of Skin Diseases. His experiments had shown that the rays affected the inner layers of the skin, and were thus useful in the treatment of lupus vulgaris and erythematodes. Their strength could be graduated, and by causing pathological changes in the tissues the author and Dr. Freund were most successful in the removal of superfluous hairs. Finally he described the results achieved in the treatment of lupus, and exhibited a most interesting series of lantern slides showing cures effected in cases of lupus, sycosis, and favus. Dr. J. Hall-Edwardes followed with a similar paper, his cases illustrating cures effected in patients suffering from lupus vulgaris and erythematosus. A number of photographs were produced. In the discussion on these two papers Dr. Wild said that he had observed both loss of hair and dermatitis to follow the use of *x* rays. Dr. Walsham referred to a case of lupus now under treatment by *x* rays at St. Bartholomew's Hospital which appeared to be improving. Dr. Schiff, in replying, admitted a certain amount of danger, which was unavoidable in all treatments in unskilled hands. Dr. Hall-Edwardes spoke in similar terms. Dr. J. C. McWalter (Dublin) made some suggestions for the next *Pharmacopœia*, and Dr. E. H. Willcox read a paper on the mechanical treatment of certain diseases of the chest, with special reference to emphysema.

Section of Laryngology and Rhinology.

A discussion on the Diagnosis and Treatment of Chronic Empyema of the Frontal Sinus was opened on Thursday by Mr. Charters J. Symonds, who was followed by Dr. Moure (Bordeaux). Dr. Luc (Paris) communicated the particulars of a very complicated fatal case. Dr. Röpke (Solingen) read a paper describing his method of radical operation. Dr. Herbert Tilley described the course of an extremely complicated case which ended fatally. He gave an account of the *post-mortem* appearances, and showed the skull. A paper by Dr. Spiess (Frankfurt) was taken as read. In the subsequent discussion the following gentlemen took part: Mr. Ernest Waggett, Dr. Sergeant Snow (Syracuse), Mr. W. J. Nourse, Mr. Mayo Collier, Dr. Bryan (Washington), Dr. Dundas Grant, Dr. William Hill, Dr. Herbert Tilley, Dr. Scanes Spicer, Dr. Knapp (New York), Dr. Rudloff (Wiesbaden), Dr. Logan Turner, Dr. Mink (Holland), Dr. StClair Thompson, and the President. Mr. Charters Symonds, in replying, summarised briefly the general result of the discussion. He thought all were agreed upon two points: (1) The necessity for a free external opening in bad cases; (2) the usefulness of removing the anterior part of the middle turbinated body. There was evidently still some considerable balance of opinion in favour of intranasal methods, and these might suffice for the simpler cases, but no force must ever be used. Opening the sinus from the nose was universally condemned as very dangerous. "Free curetting" was a vague phrase. He did not himself attempt to remove all mucous membrane. Dr. Moure replied briefly in French. On Friday the Section met at the Freemasons' Club, where Dr. Jobson Horne gave a lantern demonstration on pachydermia laryngis, showing a large number of beautiful photographs in illustration of the naked-eye appearances and microscopic changes. He pointed out that pachydermia was as purely symptomatic as jaundice, and was frequently associated with tuberculosis, syphilis, and interstitial nephritis. Dr. Tilley supplied the clinical history of one of Dr. Horne's specimens. Mr. Ernest Waggett read a paper on a case of Cerebellar Abscess secondary to Chronic Middle-ear Suppuration. Dr. Dench (New York) spoke of the importance of optic neuritis, and quoted cases of his own in which the gauze packing had produced congestion of the disc. The Secretary read a paper by Dr. Aristide Malherbe, on the Treatment of Chronic Attic Suppuration by Scooping out the Petro-mastoid. He spoke of Stacke's operation as causing disfigurement. Dr. Rudloff pointed out that this was inaccurate, and defined the indications for Stacke's operation. Dr. Luc (Paris) and Dr. Moure (Bordeaux) advocated Stacke's operation. They did not see any advantage in Dr. Malherbe's method. Dr. Malherbe, in reply, explained that his operation was intended for cases of intractable suppuration, with a small perforation above the short process. Dr. Dench read a paper on epidural abscess, and Mr. Damar Harrisson asked if Dr. Dench had observed signs of cerebellar pressure in such cases. Dr. Dench said he had not. He thought disturbances of equilibration must be extremely rare in epidural abscess. Dr. Tilley read a paper, for Dr. D'Ajutoto (Bologna), on the removal of a large subglottic malignant tumour by a specially contrived loop. Dr. Garnault (Paris) read a paper on the ventriloquists and inspired oracles of antiquity, particularly amongst the Jews. Dr. Rohrer (Zürich) read a paper on Anomalies of Development of the Auricle. Votes of thanks to the President and Secretaries closed the proceedings.

Section of Tropical Diseases.

On Thursday Colonel Kenneth Macleod, Vice-President, took the chair, and the President, Dr. George Thin, opened the discussion on Psilosis or Sprue: its Relations (Etiological and Pathological) to other Forms of Tropical Diarrhœa, and its Treatment. Dr. Thin said that the disease was characterised by irregular and abnormal motions, there being, first, diarrhœa, varying much in severity, frequency, and persistence; secondly, symptoms of disordered digestion, dyspepsia, being always present; and, thirdly, progressive emaciation. Dr. Thin contested the opinion that sprue could arise in persons who had never been out of England. He drew attention to two types of the disease—one common in the Eastern Archipelago and the other commonly found in India. In the former mouth, tongue, and throat symptoms were prominent early; in the latter copious watery stools were the chief feature, the mouth and tongue symptoms developed late, or might never appear at all. In the condition to which the term "white flux" or "diarrhœa alba" was applied in India mouth symptoms were usually synchronous with advanced malnutrition and emaciation. Dr. Thin said that a third class of cases of sprue developed in the Far East in elderly persons or in persons who had lived long in that region. Diarrhœa was the initial sign, but very gradually the tongue grew raw and bare. A fourth class of cases was distinguishable in persons who had lived in the East and developed sprue after returning to reside in England. The pathology of sprue he summed up as a gradual atrophy of the organs of the body and a general emaciation. Atrophy of the mucous membrane of the stomach and intestine developed and a sclerosis of the sub-mucosa, but why the disease attacked the intestine was not known. Dr. Thin believed, contrary to the opinion of Bernand and Fontan that ulceration of the bowel was quite a secondary phenomenon. The etiology of sprue was unknown, and was associated with residence in certain parts of the world, and absent in others. It was a specific poison, in all probability resident in the ileum, which caused the disease. In discussing the treatment of the disease, Dr. Thin advised rest, warmth, and milk. He mentioned a case in which strawberries seemed to have done good. A variation in diet was recommended as soon as the patient's condition justified the change. Dr. Henderson read notes on sprue as met with in Shanghai. He found sprue in two classes of cases, one in which after residence in China for ten or twenty years or more, morning diarrhœa came on, followed by sore mouth, etc., and another in which the disease appeared after three years' residence, and chiefly in young delicate females. He had never a case in which raw tongue, etc. preceded the diarrhœa, but the raw-mouth symptoms remained after the stools became solid. Dr. Henderson spoke highly of a medicinal mixture made by boiling 3 ounces simaruba bark and 1 ounce cinnamon bark in 3 quarts of water until the quantity was reduced to 1 quart. A wineglassful of this mixture was administered three or four times a day. Dr. Watson, vice-president of the Section, read a paper on a case of diarrhœa, probably sprue, which occurred in India, and came under his care at home. The patient was much benefited by milk. Mr. James Cantlie stated that he had for some time eliminated milk from the dietary in the treatment of intestinal flux. He held that milk prolonged the treatment unnecessarily, and that the so-called solid stools were not fæcal at all, but merely a caseation of the milk taken. Farinaceous and starchy foods seemed to favour intestinal fermentation, and did not check emaciation. Meat diet brought down bilious motions and favoured a return of the liver to its normal size, the real key to treatment. Surgeon-Major Giles, I.M.S., said that he had not seen a case of sprue in Northern India, and although hill diarrhœa was in many respects similar to sprue, he did not believe that sprue as described by physicians in China existed in Northern India. Captain Lamb, I.M.S., stated that Professor Wright had succeeded in removing the lime from milk by adding citrate of soda (1 in 400), thus rendering the coagulum loose and light and easily digested. Dr. Manson said that in his opinion sprue should be regarded not as one disease but as a variety of diseases, with a series of symptoms in common. In the tropics the abdominal organs were functionally very active, and suffered from subsequent exhaustion, hence their special liability to invasion by parasites and by various ailments. He regarded sprue in the tropics as pandemic, and had met with cases from the West Indies, India, and China. He recommended rest in bed, warmth, and simple diet. Milk and fruit (such as bananas) he held to be the staple diet, but considered that meat was indicated at times. At the close of the meeting a formal resolution was drawn up and carried, to the effect that the Council of the British Medical Association be asked to convey the thanks of the Association to Mr. Secretary Chamberlain for the assistance he had given to the study of tropical disease, by his generous help towards establishing a school of tropical medicine in London. Captain Buchanan, I.M.S., contributed a paper on sprue. Contrary to generally-expressed opinion, he stated that sprue was common amongst

the natives of India as a primary disease. He claimed to have noticed sprue as a sequel of dysentery and other forms of intestinal ulceration. Captain Buchanan was of opinion that "famine" diarrhœa was a form of sprue, and that in chronic dysentery a similar condition of tongue, mouth, and throat to that met with in sprue was apt to develop. On Friday, Mr. James Cantlie read a paper on Suprahepatic Abscess. Mr. Cantlie defined suprahepatic abscess as a collection of pus between the layers of the broad ligament of the liver, having as boundaries the peritoneum circumferentially, the diaphragm above, and the liver below. The affection was not preceded by hepatitis, dysentery, or any other abdominal ailment. It was characterised by sudden onset, symptoms of fever, cough, and some respiratory distress. When allowed to pursue its course, it usually terminated by the pus finding its way through the diaphragm and lung to a bronchus, from which the purulent matter was expectorated. He believed the disease to be due to chill, which caused a lymphangitis of the channels between the layers of the broad ligament. Dysentery played no part in the etiology of the suprahepatic abscess. The pus was sterile; in other words, the suprahepatic abscess was the "sterile pus abscess" concerning which so much discussion had taken place. Local evidence of the disease was met with in the region of the right nipple, where, immediately internal to the nipple line, the highest point of an inverted saucer-shaped or cup-shaped area of dulness existed. The immediately superimposed part of the right lung suffered a fleeting congestion, which tended to obscure the area of the outline of the abscess, and led to mistakes in diagnosis and delay in treatment. Mr. Cantlie recommended early exploration, and, when pus was found, tapping by a large trocar and cannula and the introduction of a drainage tube of the largest size, in the manner recommended by Dr. Manson. Inspector-General Turnbull, R.N., related three cases of what he believed to be suprahepatic abscess, which he operated upon in Hong Kong successfully, after the manner described by Mr. Cantlie. The patients made an excellent and complete recovery. Captain Lamb, I.M.S., stated that he had found sterile pus in abscesses in the centre of the liver interspersed with abscesses containing streptococci and amœba coli. Dr. Charles (Falmouth) dwelt upon the importance of examining the blood for leucocytes as a confirmation of pus in the liver when a hepatic abscess was suspected. He believed that abscesses opened through the abdominal wall did better than those opened through the thoracic wall. Dr. Manson stated that the presence of amœba coli in liver pus was an interesting phenomenon, as in it the organism was not found in the pus which flowed from a liver abscess during the first day or two, but in 50 per cent. of the cases it was met with after the fourth day. Dr. Manson did not attach much importance to leucocytosis as a means of diagnosis in liver abscess. Dr. Sambon objected to the term "sterile" pus, and held with Dr. Manson that in all probability the pyogenetic organism died speedily after exciting inflammation. Dr. Rho (Rome) stated that he did not consider suprahepatic abscess to be a tropical disease at all, as abscesses of a similar nature were met with in Europe above both liver and spleen. Dr. Henderson (Shanghai) advocated the metal drainage tube, introduced by Dr. MacLeod of Shanghai, in place of the indiarubber tubing in general use. Colonel Macleod, I.M.S., pointed out the dangers of puncturing the liver by aspirating needles, and stated that Lieutenant-Colonel Hatch, of Bombay, had recorded 5 or 6 cases of fatal hæmorrhage after this operation. Major Giles, I.M.S., showed microscopic specimens illustrating the life history of the free stage of ankylostomum duodenale. Thermic fever, so-called siriasis, which had evoked a large amount of discussion lately, was dealt with by Colonel Kenneth Macleod, M.D., from the standpoint of Dr. Sambon's contention that sunstroke or siriasis was not a mere heat fever, but an infectious disease. Colonel Macleod did not consider the term "siriasis," recently introduced, as any advance in nomenclature. There was no proof that any microbe existed, and Stiles had shown that the injection of blood taken from persons suffering from heat fever was not followed by any specific pathological change. Dr. Sambon sought to establish his belief in a microbic cause for the disease by analogy and by a process of exclusion. Neither of these could be accepted as scientific evidence as they were liable to many fallacies; it would be as justifiable to conclude that death due to extreme cold was parasitic in its nature. All the organs in tropical climates which were called into overaction by the influence of heat soon tended to become played out. Hepatic excitement was followed by hepatic exhaustion, and so it was with the power of resisting heat. The skin might be partly concerned, but it was chiefly in the nerve centres which regulated the calorific influences that the lessening of power to resist heat occurs. Long exposure to heat lessened the power of accommodation of the heat centres, and accounted for old tropical residents decreasing in their power to withstand prolonged heat. Dr. Sambon said that heat alone could not cause siriasis, and that there were many arguments in favour of the disease being due to a microbe. Many of the leading men in tropical pathology were favourable to such a conclusion, and Wood, of Philadelphia, had described a micro-organism. Hirsch could explain the phenomenon of heat fever on no other basis than that the disease was parasitic in origin. Major Giles, I.M.S., said that the geographical distribution of the disease argued rather in Dr. Sambon's favour. In proof of this he stated that the prevalence of sunstroke in many parts of the tropics was quite exceptional, whilst in other parts in which the temperature was equally high the disease was unknown. As an example he cited the troops in South Africa, where they worked in a temperature as high as in India, yet they were not subject to sunstroke. Dr. Watson ascribed sunstroke to the action of heat upon men who were alcoholic, more especially when they had had an insufficiency of food. Dr. Manson contended that though there was direct proof that thermic fever was due to the toxic influences produced by a microbe, there was much in favour of such a theory. Microbes and parasites of many kinds developed only when a certain temperature was reached, and it seemed, from a study of thermic fever, that at a certain given temperature a microbe was called into play which by its toxin produced the train of symptoms called siriasis. Lieut.-Col. Boileau, I.M.S., believed that it was the heat-regulating centres that were exhausted and at fault in thermic fever, while Dr. Parker thought it was the direct effect of the sun's rays that caused heat apoplexy and hyperpyrexia. Colonel Wood, R.A.M.C., stated that in Cyprus he had observed thermic fever suddenly develop when the temperature in the tents in which the soldiers lived reached 120° F. The President (Dr. Thin) pointed out that it was not so much the temperature of the air as the amount of moisture it contained that determined sunstroke. In Shanghai, for instance, where the air was often saturated with moisture, sunstroke was common, whereas in Tien-tsin, where the air was dry, sunstroke was unknown. He was of opinion that it was often through the eyes that the sun acted in producing sunstroke. Dr. Rho (Rome) inclined to the belief that there were at least two varieties of sunstroke; the real sunstroke was sporadic and there was but little elevation of the temperature of the body; the other variety was epidemic and attended by pyrexia or hyperpyrexia. The latter, Dr. Rho thought, was the siriasis described by Dr. Sambon. A paper contributed by Lieutenant-Colonel M'Cartie, I.M.S., entitled the Cause and Prevention of Heat Apoplexy in the Army, was read. The writer maintained that it was the uniform served out to the troops in India that was the main cause of the excess of sunstroke amongst them as compared with civilians. He showed that during an expedition, whilst the soldiers in their harassing and heavy uniform were knocked over by sunstroke, the coolies who accompanied them, although bearing heavier loads, did not suffer in the same manner. It was not only the amount of clothing, but its texture and its tight fit that placed the soldier at a disadvantage. The coolies' clothing was loose and allowed the skin free action and the possibility of getting the surface of the body rapidly cooled. He could not agree with Dr. Sambon's contention that the disease was of a parasitic nature. Staff-Surgeon O. W. Andrews, R.N., dealt with the subject of antivenene in a lengthy paper. The composition of snake venom consisted of a coagulable and a non-coagulable proteid. It contained at least two poisons; one was destroyed at a temperature of 85° C., and the other was still active at a temperature of 100° C. It had been shown by Calmette that the antivenene serum was a physiological and not a chemical process, that it was a species of phagocytosis that stimulated the white

corpuscles to perform an intercellular digestion. Whilst, however, advocating subcutaneous injections of antivenene serum for snake bite, Calmette recommended the ordinary methods of treatment. Whilst deprecating the use of stimulants in the treatment of snakebite, he considered that a subcutaneous injection of either calcium hypochlorite (1 in 60) or of chloride of gold (1 in 100) at and around the seat of the bite, was likely to be attended by good results. As the result of experiments performed by Major Semple, R.A.M.C., Major Lyons, I.M.S., and Staff-Surgeon Andrews, it was proved that when a dose of snake poison was injected into a dog, in quantity sufficient to destroy life in six or seven hours, its effects were nullified by 10 c.cm. of the antivenene serum injected one or two hours afterwards, or even three hours afterwards, if 20 c.cm. of the serum were used. Mr. Rees (School of Tropical Medicine, London) stated that he had seen two natives in West Africa, who, after being bitten in the foot by poisonous snakes, developed thrombosis in the femoral veins on the bitten limb. Colonel Macleod stated that it was unnecessary to inject more antivenene than was sufficient to counteract the excess of poison over and above what the human body could itself tolerate. Surgeon Stalkartt, R.N., read a paper on Blackwater Fever. Dr. Sambon said that he considered blackwater fever to be a specific disease, that its malarial origin was improbable, and that both by its character and by its geographical distribution it presented all the features of a distinct disease. He entirely disagreed with Koch in his statement that it was the result of dosage by quinine. Dr. Manson discussed the subject from a broad standpoint, and pointed out the arguments in favour of, and the arguments against, blackwater fever and malaria being associated. Blackwater fever occured in a limited geographical range; it did not occur at the season of the year in which malarial disease was most rife; the malarial parasite was not always found; and cases of blackwater fever had occurred within a short period after a tropical country was reached, and before malaria could have acquired a marked hold on the system. On the other hand, blackwater fever occurred in very highly malarial districts; the malarial parasites were often met with in the blood, and it was most apt to occur in persons who had had many attacks of malarial fever and who had been exposed to the "climate" for three or more years. Major Giles, I.M.S., pointed out that although hæmoglobinuria was met with occasionally in India, it was not so fatal as in West Africa, and he believed that blackwater fever and malaria would prove to be distinct diseases. Mr. Rees stated he had met with cases of blackwater fever on the West Coast of Africa which occurred within two or three months of the patients arriving on the Coast. The President, Colonel Macleod, and Drs. Rho (Italy), Parker, Mould, and Porter took part in this discussion, after which a paper on Dysentery as a Terminal Symptom of Disease in the Tropics, by Captain W. J. Buchanan, I.M.S., was read. From observation of a large number of cases, 28 of which were recorded in detail in the paper, he showed that dysentery was very apt to supervene a few weeks before death, and to carry off the patient. Dr. Manson said that Captain Buchanan's paper illustrated the power of healthy organs resisting the pernicious action. When the restraining influences which prevailed during health were removed the disease had full scope. Colonel Macleod said that dysentery was a frequent precursor of death in leper and lunatic asylums in India. He believed that when once dysentery prevailed to a considerable extent in a dwelling it became infected, and that the infection was very difficult to get rid of. In a paper on Malarial or Climatic Neuralgia and its Treatment, Major A. S. Faulkner, I.M.S., contended malarial neuralgia was characterised by a marked periodicity, by acute pain, by the confinement of pain to one branch of a nerve for a time, and by shifting about from one branch to another of the same nerve. Quinine carefully administered was a specific. Captain Louis Hughes, R.A.M.C., in a paper on the Geographical Distribution of Undulant (Malta) Fever, expressed the belief that the geographical limitation of undulant fever was mostly a question of temperature. The disease had no doubt a wider distribution than its name "Mediterranean" fever would imply. It had been met with in some parts of India, China, Hong Kong, Porto Rico, Zanzibar, Monte Video, the basin of the Mississippi, Venezuela, South Africa, and Fiji. Major M. T. Yarr, R.A.M.C., contributed a paper entitled a Further Contribution to the Study of Malarial Eye Affections—the diseases of the conjunctiva, cornea, and iris, attributed to malarial infection. The evidence of causation was based chiefly on association with malarial fever, periodicity, and amenability to quinine. A vote of thanks to the President, Dr. Thin, and to the Hon. Secretary, Fleet-Surgeon John Tyndall, R.N., and Dr. J. R. S. Robertson, closed the work of the Section.

THE SALISBURY PLAIN MANŒUVRES.

The Work of the Royal Army Medical Corps.

Perham Camp.

The first part of the drills at Perham Down Camp are concluded, and the second commenced on July 31st, and will continue until September 2nd.

Lieutenant-Colonel Charlesworth, R.A.M.C., has had charge of the medical arrangements since June 1st, and continues in command until the end.

The officers of No. 1 Bearer Company are Surgeon-Major Kilkelly (Grenadier Guards), Captain Heaton, and Lieutenant Lupton.

No. 2 Cavalry Brigade Field Hospital has Major Moberly, Major Burtchaell, Captain Beach, Lieutenant Scarlett, and Quartermaster Painton.

The Bearer Company and Field Hospital arrived on July 31st in relief of No. 17 Bearer Company and No. 11 Field Hospital.

The work of the past week has been directed to pitching tents, operating tents, making field kitchens, stretcher drill, sanitary duties, arranging equipment for camp, and signalling.

This week the Bearer Company and Field Hospital move out of camp and mark out camp, pitch tents, mark out horse lines, make kitchens and latrines, and so on. This is done first on even ground and then on rough uneven ground.

Later on in the week the Bearer Company convoy sick and wounded to the railway station at Ludgershall, where they practise entraining in an ambulance carriage, and also fix up Aldershot iron stretcher frames in a guard's van for sick and wounded.

The Field Hospital prepare operating tent, sterilise ins ments, etc. r

The Disposal of the Sick.

The Field Hospital receives all the ordinary sick every day. The serious cases are transferred to No. 2 Stationary Hospital, under the charge of Lieutenant-Colonel Charlesworth, assisted by Captain Wade-Brown. Men not likely to be fit for further duties this training are sent to the Connaught Hospital at Aldershot.

A sick convoy is sent once a week by ambulance carriage (accommodating ten lying-down patients) from Ludgershall Station (M. and S. M. J. Railway) to Farnborough Station. The medical arrangements are so complete this year that not a single casualty has occurred in the transport of sick and wounded.

The sickness so far has been light, only 54 men having been sent to Aldershot. The principal cause has been exhaustion from the heat, but there have been no cases of sunstroke. Accidents have been very few.

The Water Supply and Sanitary Arrangements.

The water supply to the camp is obtained from a newly-sunk well 200 feet deep and with 457 feet of headings. There are two reservoirs, each holding 150,000 gallons, and two iron tanks, each holding 10,000 gallons. The two reservoirs can be filled with 48 hours' pumping if they should get emptied at any time. They are in a good healthy situation for the troops, and are made of waterproof canvas sheeting, turf being banked up round the sides to give a depth of 6 feet. They are emptied once a week, and each day 1 or 2 feet let off and replaced by fresh water.

The latrines are earth closets, a zinc bucket being under every seat, and burnt ashes are thrown in after use. These are cleared by night. The urinal pails are also emptied by a suction pump connected to an iron tank cart, which acts quickly with a minimum of labour. At the men's washing tables the waste water is not thrown about indiscriminately, but is put into proper pits dug some feet down, and filled in with loose gravel and rubble, allowing water to soak off quickly. The drills are carried out according to the new *Manual for the*

Royal Army Medical Corps, and are thoroughly practical, so that the experience gained is of the utmost importance.

The duties are very heavy, as the first parade is at 6.30 A.M., and parades and lectures continue until 4 P.M. The Stationary Hospital and Field and Bearer Company are on the highest ground in the camp. General Rundle and his staff take the greatest interest in the drills of the Bearer Company Field Hospital, and give every facility for the work. The greatest cordiality exists between the officers of the R.A.M.C. and the general, his staff, and the commanding officers of the regiments at the camp.

THE SIXTH INTERNATIONAL OTOLOGICAL CONGRESS.

Past and Present Congresses.

In accordance with a resolution agreed upon at Florence in 1895, the Sixth International Otological Congress is being held at the present time in London. This is the first occasion on which the Congress has met in London. Of the previous congresses, the first was held in New York in 1876, the second in Milan in 1880, the third in Basle in 1884, the fourth in Brussels in 1888, and the last in Florence in 1895.

The number of adherents to the present Congress is larger than on any previous occasion, and, exclusive of ladies, is upwards of 250. The Congress is being held at the Examination Hall of the Royal Colleges of Physicians and Surgeons on the Victoria Embankment.

The Museum.

The large rooms on the first floor are given up to a museum. The British section contains upwards of 2,000 preparations, and is as complete a collection as has ever been exhibited. It embraces the comparative anatomy, embryology, human anatomy, injuries and diseases (arranged in pathological order) of the ear, nose, and naso-pharynx. A catalogue fully descriptive of this collection has been compiled. Interesting collections and exhibits have also been received from Austria, Belgium, France, Germany, Holland, Italy, Norway, and Switzerland. This museum, as was announced in the British Medical Journal, is open to members of the profession on presentation of their visiting cards.

The wish having been expressed that a further opportunity may be afforded of studying the unique collection gathered together in the museum of the Congress, it has been decided that the British section of the museum shall remain standing for one week after the Congress closes on August 11th. The British section embraces a complete collection demonstrating the comparative anatomy, embryology, anatomy, injuries and diseases (arranged in pathological order) of the ear, nose, and naso-pharynx. Members of the profession will be admitted on presentation of their visiting cards.

Opening Ceremonies.

On Monday evening, the President and the Organisation Committee held a reception at the Examination Hall, and on Tuesday morning the opening ceremony of the Congress took place.

The proceedings commenced with an address by the President-elect, Professor Urban Pritchard, who, after welcoming the foreign members in the name of British otologists, referred to the loss which science had sustained in Burkhardt-Merian of Basle, Sapolini of Milan, Moos of Heidelberg, the elder Delstanche of Brussels, Meyer of Copenhagen, Colladon of Geneva, and Hewetson of Leeds. He then glanced at the history of the birth and growth of otological science. Professor Roosa had called attention to the fact that the Ebers papyrus contained a monograph on "medicines for ears hard of hearing," and "for ears from which there is a putrid discharge;" in the museum at the Congress might be seen an Egyptian relic consisting of a wooden tablet showing in bas-relief two effigies of the Sacred Bull and two auricles, undoubtedly a votive offering to the god Hathor. Although the Royal Ear Hospital in Dean Street, Soho, the first successful aural clinic in Europe, was established in 1816, aural surgery continued more or less in the stage of infancy until between 1840 and 1860, when Sir William Wilde and Toynbee gave a fresh impetus to the study of the pathology and treatment of diseases of the ear. Otology had suffered from the incursions of quacks and the indifference or the sneers of surgeons, and had had a hard fight before it won honourable recognition among men of standing in the medical profession. During the last quarter of a century there had been a great change, and instead of a few aural surgeons scattered here and there in Great Britain, there were now at least two hundred, while the number of clinics in London alone had increased from two or three to nearly twenty. In many other countries this branch of medical science was even more strongly represented. The unique museum formed for the Congress contained the largest and most valuable collection of otological specimens ever made, and could only have been brought together by international action. It afforded a proof of the increased interest in the work. There was still room for improvement, especially for the better recognition of otology by universities and colleges. The University of Edinburgh had taken a step in the desired direction by making otology one of the qualifying subjects for medical degrees, and he hoped that this example would be followed, and would lead to a fuller recognition of the position of teachers of aural surgery. In other countries chairs of otology were numerous, but in this country the dignity of a professorship was conferred upon its teacher of aural surgery by King's College, London, alone. Professor Pritchard then briefly reviewed the progress of the last thirty years in pathology, in the means of diagnosis, and in treatment. In the treatment even of chronic middle-ear catarrh, and of sclerosis, distinct advance had been made, indirectly in prophylaxis, by better treatment of the nose and naso-pharynx. There had been very great improvement in the treatment of suppurative disease; the use of boric acid, alcohol, and other suitable antiseptics had made simple otorrhœa much more manageable, and its complications—caries, granulations, and polypi—were much more under control, so that the large protruding polypus was now rarely seen. Curetting of carious spots and the removal of ossicles, so important in the treatment of many cases, had been introduced recently; thanks to Professors Schwartze and Stacke, a wonderful stride had been made in the treatment of disease of the antrum and mastoid, and by the joining of hands of general surgery and otology, intracranial suppuration had been robbed of many of its victims. It was due to the adoption of antiseptic surgery that surgeons were now able to cope with intracranial conditions, and to operate on the tympanum, attic, and mastoid practically with impunity. Professor Pritchard paid an eloquent tribute to Lord Lister, and concluded by referring to some of the difficulties which remained for solution, especially to that opprobrium of aural surgery, the chronic non-suppurative diseases of the middle ear.

Professor Urban Pritchard proposed a vote of thanks to the Royal Colleges of Physicians and Snrgeons for having placed at the disposal of the Congress their Examination Hall. He further expressed his thanks to the Royal College of Surgeons for the loan to the museum of the Congress of some of its most valuable and interesting specimens, more particularly mentioning those of Professor Stewart on the comparative anatomy of the ear and nose.

Sir William Mac Cormac, in the absence of the President of the Royal College of Physicinns, acknowledged the vote, and congratulated the President of the Organisation Committee on his address, and on the large numbers attracted to the Congress. The College of Surgeons had great pleasure in lending specimens from their collection to the museum of the Congress.

Professor Grazzi (Florence), President of the last Congress, then gave an address, in the course of which he expressed his pleasure that the hopes he had entertained of the next Congress being held in London had been realised. He regretted that so long an interval had elapsed between the fourth and ths fifth Congress, and he hoped that so long an interval would not recur. He referred to the Congress in Milan, and to the work of Voltolini, to that of Sir William Wilde and Toynbee in England, who had brought otology out of the terra incognita; and to Trolsch, who contributed so much to the science in and Germany, and regarded himself as a disciple of these two English pioneers. Finally he offered a vote of thanks to Professor Urban Pritchard and to the British Organisation Committee for their successful efforts in promoting the present Congress.

Professor Grazzi then proposed that the following telegram should be forwarded to Her Majesty the Queen.

The sixth International Otological Congress which opened in London this day begs, on the proposition of Professor Gražzi of Florence, to offer to your Majesty its respectful congratulations on the completion of the sixty-second year of your Majesty's prosperous reign. From Urban Pritchard, President, Cresswell Baber, Secretary-General.

A reply was subsequently received from Sir Arthur Bigge, in the following terms:

The Queen desires me to convey to the Sixth International Otological Congress the thanks of Her Majesty for the congratulatory message received yesterday.

The Secretary-General announced the attendance of the following delegates from foreign societies: Professor Lucae and Dr. Arthur Hartmann of Berlin from the German Otological Society; Dr. Delavan of New York.

Election of Officers.

On the motion of Professor Politzer, seconded by Dr. Lucae of Berlin, Professor Urban Pritchard was elected President, Mr. Cresswell Baber Secretary-General; Dr. Thomas Barr of Glasgow, Dr. Benni of Warsaw, Dr. Bobone of San Remo, Dr. Hartmann of Berlin, and Dr. Lemoyez of Paris, Secretaries; and Mr. Cumberbatch of London Treasurer. The above to form the Editorial Committee for the Transactions of the Congress.

Measurement of Hearing Power.

At the meeting on Tuesday afternoon, Dr. E. Schmiegelow (Copenhagen) read a paper on a New Method of Measuring the Quantitative Hearing Power by means of Tuning Forks.—Professor G. Gradenigo (Turin) followed with a paper on the Examination of the Hearing Power, advocating a more uniform notation of the results.—Dr. Richard Kaysen (Breslau) also contributed a paper on Experimental Investigations into the Phenomena of Hearing in Fluid Media.

Tuberculosis of the Middle Ear.

Then followed two papers on tuberculosis of middle ear, the first by Dr. O. Brieger (Breslau), and the second by Dr. W. Milligan (Manchester) upon the Diagnosis and Treatment of Tuberculous Disease of the Middle Ear and adjoining Mastoid Cells.

Congenital Anomalies.

Dr. Arthur Hartmann (Berlin) read a paper on the Absence of the External Auditory Meatus, and related two cases. One was that of a newborn child, and the other was an adult. The specimens, together with models of the external ear, were exhibited, and are to be seen in the museum of the Congress. He related also the case of a patient with acquired occlusion of both external meatuses resulting from scarlet fever. On one side was performed the radical operation with a considerable improvement of the hearing.

Dr. F. Rohrer (Zurich) followed with a paper on the Anomalies of Development of the Auricles in relation to the Mathematical and Physical Conditions of the Folding of the External Ear.

Adenoid Vegetation.

Dr. T. Bobone (San Remo) and Dr. Allen Haight (Chicago) read papers relating to adenoid vegetations.—On Wednesday afternoon Dr. Rudloff (Wiesbaden) read a paper on the Operation for the Removal of Adenoid Growths with the head hanging over the table, while the patient is under the influence of chloroform.

The Mastoid Operation.

The morning session on Wednesday was given up to a discussion on Indications for Opening the Mastoid in Chronic Suppurative Otitis Media. The discussion was opened by Professor Knapp (New York), Professor Luc (Paris), Professor William Macewen (Glagow), and Professor Politzer (Vienna), and a general discussion followed.

Lantern Demonstrations.

On Wednesday afternoon lantern demonstrations were given.

Dr. Arthur Hartmann (Berlin) gave a demonstration on the Anatomy of the Frontal Sinus. A series of excellent lantern photographs of anatomical preparations were shown, demonstrating variations in the development of the frontal sinus and the anterior ethmoidal cells. Dr. Hartmann drew attention to the important bearing these variations in the formation of the sinus had upon the operative treatment.

Dr. Aldren Turner (London) gave a lantern-slide demonstration on the Course and Connections of the Central Auditory Tract.

Mr. R. Joyce (Dublin) gave a lantern-slide demonstration on the Topography of the Facial Nerve in its Relation to Mastoid Operations.

Dr. L. Katz (Berlin) gave a macroscopic and microscopic demonstration of preparations of the Auditory Apparatus.

NOTES ON HEALTH RESORTS.

THE CLIMATIC AND OTHER ADVANTAGES OF JERSEY FOR THE OPEN-AIR TREATMENT OF DISEASE.

By H. Nelson Hardy, F.R.C.S.Edin.

One great object of the open-air treatment, on which so much has been written during the last year or two, being the exposure of the patient to the greatest amount of light and sunshine in the open air, it is obvious that a place like Jersey, where bright sunshine abounds more than in any other spot in the British Isles, is a specially suitable place for such treatment. Few will doubt that climate exercises an important influence on phthisis, for instance, though of course it can be treated successfully, as Dr. R. W. Philip, of Edinburgh, has shown[1] both in the Victoria Hospital in that city, at the level of the sea, and at elevations up to 6,000 feet. Nevertheless, as the patient has to be freely exposed to fresh air as far as possible day and night—to be, so to speak, continually bathed in fresh air—it can hardly prove a matter of indifference to him whether the air is cold and foggy or bright and sunshiny.

In the *Medical Magazine* a couple of years ago, I published some tables prepared for me by the Meteorological Department,[2] showing the average maximum and minimum temperatures in Jersey for a series of years, with the amount of rainfall and of bright sunshine, to the latter of which only I propose to direct attention now.

Table showing the Average Monthly Hours of Bright Sunshine in Jersey for 15 Years as Compared with London.

—	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Dec.
Jersey ...	71.2	95.0	160.2	196.3	249.2	243.1	230.0	241.2	183.4	127.4	70.9	62.6
Greenwich*..	30.6	42.7	85.7	89.3	202.7	165.6	138.9	179.9	104.8	55.4	65.2	13.7

* Year 1895.

It will be seen that our coldest and foggiest months in London—December, January, February, and March—are those in which the superiority of Jersey is most plainly shown. It is not necessary for my present purpose to compare these figures with those of places in the South of France or in Egypt, since among the 250,000 consumptives in England there are many thousands to whom it would be useless to recommend a visit to Egypt or the South of France, but for whom a stay in Jersey would be quite practicable. One meets with many such cases in London and all large towns—cases of incipient phthisis in middle-class people, in which, if the patient could be sent away before our fogs and east winds commence, and kept out of town for two or three successive winters, there is every reason to think that the disease might be arrested, as well as cases in a more advanced stage, where hæmoptysis has perhaps occurred, and which are sometimes unfortunately sent out to South Africa to die. Several warnings have appeared in the British Medical Journal lately[3] against sending out such cases to the Cape, since the towns on the coast are quite unsuited for them, and if they go up-country the hotel accommodation is defective, and one letter from a medical man even mentions that a poor invalid staying at a hotel was in danger of being starved because he could

[1] British Medical Journal, July 23rd, 1898.
[2] *Medical Magazine*, September, 1897.
[3] British Medical Journal, April 29th, and May 27th, 1899.

not go the *table d'hôte*, and had to bribe natives passing by in the street to purchase food for him at a store. This state of things seemed to me so almost incredible, that I took the opportunity of asking some friends who had lately returned from Natal whether there was not some exaggeration, but was told that the statements made were quite accurate. On this same subject of food and feeding, so important to the invalid, Dr. Gardiner, of Colorado Springs, who read a paper before the American Climatological Association in May last on the Treatment of Consumption by air and light in Colorado,[4] stated that he had practised medicine on a ranch for several years, and knew something of that kind of life, and he was convinced it was all that a man in good health could do to eat and digest the food furnished in such places. No such danger of starvation or semi-starvation for invalids exists or is likely to exist in Jersey, where, as in all the Channel islands, food is plentiful and cheap, tea, tobacco, and foods of all sorts being alike free from duty, and the hotel-keepers remarkably civil and attentive to strangers.

As man, however, cannot live by bread alone, and as the consumptive is often an individual of very active, perhaps too active, mind, it may be well to mention that there is plenty to interest him or her in Jersey; boating, golf, tennis, coach and carriage drives are available for both sexes. The mere male, if fond of botany, will find among the 900 varieties of flowering plants and ferns many not included in the British flora. If a geologist, he will have an opportunity of examining the syenite and quartz components of the Jersey rocks. Should his tastes be antiquarian, he can study some famous old cromlechs, an ancient fisherman's chapel said to be 1,000 years old, and a mediæval castle of which the foundations were laid, it is believed, in the time of Julius Cæsar. Should he, above all, be interested in studying the condition of his fellow men, he will find in Jersey a hardy seafaring race, and also an industrious and contented peasantry, frugal and laborious like their Norman ancestors, cultivating their fields or ploughing the waves with equal assiduity, speaking their old Norman French, though also for the most part understanding English, and governing themselves by their Parliament or States, while loyally attached to the British Crown.

The two places in Jersey which seem to me specially suitable for trying the open-air treatment are St. Brelade's, a well protected bay on the south-west, and St. Aubin's Bay, on the south of the island. Sanatoria might be erected here if thought necessary, but as there is already excellent hotel accommodation in both places, with an ample verandah at the former place where the patients might lie in the sun inhaling sea air, and in the latter with grounds in which shelters could be erected of wood and glass so as to protect from cold winds and expose to sunshine at the same time, there is nothing to hinder a trial being made without delay. Sanatoria have, of course, advantages for the treatment of phthisical patients, which have been well summed up by Dr. F. R. Walters[5] in a recent discussion as follows: (1) Every place is not equally suitably for the treatment of phthisis; (2) treatment in the active stages of the disease calls for complete supervision of the hygienic conditions of living; (3) time and money are saved, and better results, he states, are obtained by treating numbers of consumptives in the same place. Sanatorium treatment, he concludes, is the combination of all hygienic and medical means known to be useful under one responsible medical head. The National Hospital at Ventnor, Isle of Wight, is probably one of the best examples in these islands of such a sanatorium, and will well repay a visit, while at the one at Cromer shelters such as I have mentioned have been erected, and are placed in position every morning after the direction of the wind has been ascertained. Even the greatest advocates of sanatoria, however, admit that constant medical supervision is not required if the disease is quiescent and the patient intelligent, and for such cases it will probably be found that the best climate is that which least restricts the daily duration of the patient's stay in the open air, and the best residence one which does not convey the slightest impression of being either a barrack or a prison.

[4] *New York Medical Record*, May 13th, 1899.
[5] *Lancet*, May 8th, 1899.

THE BRITISH MEDICAL ASSOCIATION AND THE COLONIAL OFFICE.

During the last few months the British Medical Association has had occasion to make representations to the Secretary of State for the Colonies with regard to two matters affecting the welfare of the members of the profession practising in Jamaica and in Southern Rhodesia respectively.

With regard to Jamaica, it will be remembered that a law was passed providing for the notification by medical men practising in Jamaica of cases of infectious diseases under a penalty for default, but without making any provision for payment, or for safeguarding the position of medical men compelled to make such notifications. The injustice of the provisions of this law was immediately brought under the notice of Mr. Secretary Chamberlain, who promptly replied that he had taken action in the matter, and had directed the Government to introduce legislation to meet the objections which had been laid before him by the President of Council (Dr. Saundby) on behalf of the Association. A communication has now been received from the Colonial Office enclosing a copy of the following law which was passed early last month. It will be seen that Section 2 provides for payments of fees for notification on the same scale as is in force in this country.

JAMAICA LAW XIX OF 1899.

A Law to Amend the Infectious Diseases Notification Law, 1898. (July 8th, 1899.)

Be it enacted by the Governor and Legislative Council of Jamaica, as follows:

1. *Short Title and Incorporated with Law 22, 1898.*—This law may be cited as "The Infectious Diseases Notification Amendment Law, 1899," and shall be read as one of with Law 22 of 1898, hereinafter referred to as the Principal Law.

2. *Medical Practitioner's Fee on Certificate.*—The local authority shall pay to every medical practitioner for each certificate duly sent by him in accordance with the Principal Law a fee of two shillings and sixpence if the case occurs in his private practice, and of one shilling if the case occurs in his practice as a District Medical Officer.

3. *Limitation of Action.*—No action shall be brought against any person for anything done in pursuance or execution, or intended execution, of the Principal Law unless the same shall be commenced within three months after the date of the thing complained of.

4. *Notice of Action.*—Notice in writing of any such action, and of the cause thereof, shall be given to the intended defendant one month at least before the commencement of the action.

The other matter is one of more recent date. An article was published in the British Medical Journal of July 15th, stating that a Medical Ordinance had been passed by the Legislative Council of Southern Rhodesia, which contained many provisions of an unsatisfactory character. The matter had been brought to our notice by a representation received from medical men practising in Buluwayo, who, in addition to criticism of the provisions of the ordinance, pointed out that it had been framed and read a second time before its existence became known to the medical profession in Southern Rhodesia. The President of Council (Dr. Saundby) wrote to the Colonial Secretary calling attention to the objections to the Ordinance, stating that a deputation would, if desired, wait upon him to lay the facts before him, and suggesting that Mr. Chamberlain should advise Sir Alfred Milner, the High Commissioner, to withhold his assent to the Ordinance, as, until such assent be given, the Ordinance would not have the effect of law. It will be seen from the following letter that Mr. Chamberlain has at once taken action in the matter, and that Sir Alfred Milner has withheld his assent:

The Under-Secretary of State.
Colonial Office, London, S.W.

Downing Street, August 8th, 1899.

Sir,—I am directed by Mr. Secretary Chamberlain to acknowledge the receipt of your letters of the 17th and 27th ultimo respecting the Medical Ordinance recently passed by the Legislative Council of Southern Rhodesia.

I am to inform you that Mr. Chamberlain is awaiting a report on the subject from the High Commissioner for South Africa, and does not consider that until he has received that report there would be advantage in his making an appointment for an interview with the proposed deputation.

I am to add that Mr. Chamberlain learns that Sir Alfred Milner has withheld his assent to the Ordinance in question.

I am, Sir,
Your obedient servant.
(Signed) Fred Graham.

The President of the Council of the
British Medical Association.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

Enteric Fever in India.—The Secretary for India made an interesting statement last week on the prevalence of enteric fever in India. It is really a subject of constant anxiety to the Government of that country. It appears that the virulence of the disease is decreasing; the ratio between the number of deaths and the number of admissions per 1,000 of British troops was 1878 to 1883 nearly 1 to 2, for 1884 to 1888 1 to 3, and since then about 1 to 4. The sanitary condition of the cantonments is receiving attention, and voluntary inoculation against enteric fever at the public expense among the troops has been sanctioned. So far no general report on the origin of the fever in the cantonments has been issued.

The State of the Thames.—There have been two causes for anxiety with reference to the Thames lately affecting the public mind. The one has been the remarkably lessened flow of the river at certain points, which affects the supply at the intake of the water companies; and the other has been the foul condition of the river between London and Purfleet. On July 21st the Harbour Master reported the water as black, with an unpleasant odour, at Jenningtree Point, the discoloration being caused by the main drainage outfall. The water at Crossness has recently been affected by the main drainage, and this, with the long-continued hot weather, makes the condition one of serious import from a public health point of view. The Local Government Board have directed the attention of the London County Council to the matter.

Criminal Lunatics are to be provided with a new asylum. The male accommodation at Broadmoor is fully occupied, while there are still vacancies for females. It is intended to provide in the new asylum accommodation both for male prisoners becoming insane, as well for the more serious cases of criminal lunatics. It will not be possible, however, the Home Secretary says, to relieve county and borough asylums altogether from their statutory obligation to receive criminal lunatics.

Vaccination under the Act of 1898.—A question by Sir Walter Foster on this subject elicited from Mr. Chaplin the statement that the total number of certificates of successful primary vaccination received by the vaccination officers during the first six months of the present year was 353,992, as against 277,821 in the first six months of 1898, that is to say, there has been an increase of upwards of 76,000 primary vaccinations, or of more than 27 per cent. in the first six months of the present year, as compared with the corresponding period of 1898. These results, Mr. Chaplin pointed out, had been attained notwithstanding the difficulty of giving effect to an entire change of method from stational to domiciliary vaccination, and in spite of the fact that in numerous instances there was very considerable delay in the fixing of fees and the appointment of officers, and that in some cases, as at Leicester, the necessary appointments have not yet been made.

The Muzzling Order was the subject of a question by Mr. Whitmore last week, and elicited from Mr. Long the following interesting figures. In 1896, before the Muzzling Orders were issued, there were 438 cases of rabies; in 1897 there were 151 cases, and in 1898, 17, and this year up to date only 1. Arrangements are to be made to prevent the introduction of the disease from Ireland on the same lines as those in force as regards foreign countries, and when these are in effective operation, the President of the Board of Agriculture hopes to stop muzzling in the Midland and West Riding areas, and later on in Lancashire and the Metropolitan area. It was stated on Tuesday that no fewer than 5,137 persons were proceeded against for offences relating to dogs in the metropolitan area in 1897.

Tuberculosis.—The President of the Board of Agriculture still considers that there is no general desire on the part of agriculturists that the Government should gratuitously provide tuberculin and the services of a veterinary surgeon for the purpose of enabling stockowners to test their animals for tubercle. In the debate on report of Supply, Mr. Channing again brought up this subject in the interests of public health as well as of agriculture, but Mr. Long refused to make himself responsible for any attempt to enforce the tuberculin test in the present state of knowledge, and especially when it was not asked for. In the course of the debate it came out that, although the Board of Agriculture had spent £724,000 during the last five years in dealing with swine fever, that disease has not been stamped out.

Glycerinated Calf Lymph is, it appears from a statement made by the Secretary of the Local Government Board on Tuesday, being supplied in large quantities to public vaccinators. It was at first estimated that 1,000 tubes a day would be issued, but in a short time 2,287 were supplied, and the demand even lately has been as high as 1,790 a day. Some complaints of the lymph have recently been received as regards its efficiency, but the fault has been due it is thought to the exceptionally hot weather. It is to be regretted that the Local Government Board see no prospect of being able to supply private practitioners at an early date.

Prosecutions by Vaccination Officers.—The Derby magistrates appear to have dismissed summonses under the Act of last year on the ground that the vaccination officer had prosecuted without first obtaining the consent of the guardians. Mr. Labouchere elicited from the Local Government Board that this was probably done by the magistrates in ignorance of the Board's Circular, but that the matter was under consideration. To remove doubts on this subject, Mr. Pickersgill has given notice of a Bill for next session, to limit the prosecutions by vaccination officers to those sanctioned by the guardians.

The Appropriation Bill, which marks the conclusion of each session by finally applying the requisite sums out of the Consolidated Fund for the public service of the year, affords on its second reading an opportunity for raising a variety of questions. This year no points of special medical interest were discussed except the position of the Leicester Guardians. The members for Leicester made appeals to Mr. Chaplin to alter his policy, but the President gave them no encouragement, and said the matter had now passed out of his hands and rested with the Court of Queen's Bench. The Court will no doubt act in due course, and if the guardians remain obdurate they may enjoy the hospitality of one of Her Majesty's prisons. The Appropriation Bill was read a third time on Wednesday, leaving some fifty private members' Bills unpassed, among which were Bills like the Isolation Hospitals Bill and another which had passed the Lords. But above all must be noticed the Companies Bill, which was read a third time, and so sanctioned by the Lords, but was not even introduced in the Commons. So ended the session 1898-99.

The Work of the Session does not include the passage of any Bill of first-rate importance to medicine or State medicine. Small but useful measures have been the Act which extends the Infectious Diseases Notification Act to all districts, and that providing for the education of defective and epileptic children. The Sale of Food and Drugs Bill has disappointed its friends, and the Inebriates Act Amendment Bill merely remedies certain omissions in last year's Act. The Midwives Bill, after a somewhat obscure career, was withdrawn, and we refer elsewhere to the similar fate which overtook the Oysters Bill. We have also to regret the withdrawal of the Lunacy Bill, and the failure of the Government to press forward Mr. Cross's Bill to give Poor-law medical officers in Scotland the right of appeal to the Scottish Local Government Board from the decisions of the parish councils. It was hoped for a time that the strong feeling expressed by the House in connection with the case of Dr. Lamont, so ably brought forward by Sir Charles Cameron, would have ensured the passage of the Bill, even at a late stage of the session, and the Government can hardly fail to fulfil early next session the pledges implied by Mr. Balfour during that debate. The chief Bill of the session, the London Government Bill, will not probably involve any important changes in public health administration, although it will necessitate the rearrangement of duties.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, AUGUST 12TH, 1899.

THE ANNUAL MEETING.

The annual meeting at Portsmouth will be remembered by most of those who took part in it for the practical tone of the discussions in the Sections, for the large part which medical officers of the Navy and of the Army took in those discussions, for the admirable arrangements made by the resident members of the Association and by the medical officers of the two services to enable members visiting Portsmouth to see the dockyard and the naval and military defences of the port, and lastly for the generous and genial hospitality extended by the Mayor and Corporation of Portsmouth, and by residents in the town and neighbourhood. We refer in detail elsewhere to the great success which attended these hospitable efforts. Where all were actuated by the same cordial and friendly spirit towards their guests it is perhaps invidious to mention names, but it would be ungrateful to fail to say that most hearty thanks are due to the President, Dr. Ward Cousins. He opened the meeting by an address which deeply moved his audience and aroused an interest among the lay public which was reflected in many of the speeches at the annual dinner. He devoted himself heart and soul to make the meeting both pleasant and instructive, and his genial presence contributed not a little to bring about the desired result. His efforts were ably seconded by Dr. C. C. Claremont, and his colleague, Mr. C. P. Ruel, the local secretaries of the meeting, who were untiring in their exertions, and by the treasurers, Dr. James Watson, and Mr. F. A. Way. To Dr. Blackman, the Chairman, and Drs. A. M. Fraser and James Green, the secretaries of the Reception Committee, thanks are also due, and will be gratefully accorded by all who benefited by the excellence of the arrangements which were made by that Committee.

In another column the publication of summaries indicating the scope of the work of the Sections, in anticipation of the full reports which will be published in the next and following numbers of the British Medical Journal, is continued and completed. The prevention and treatment of tuberculosis was the subject to which most time and attention was devoted in more than one Section, and this was typical of the essentially practical character of the work of all the Sections.

Though the attendance at most of the Sections was good, that at the general meetings in the afternoons was poor. The weather was hot and sultry, with a threatened thunderstorm which never came to clear the air. Under such conditions a certain lassitude, showing itself in a distaste for polemics, is apt to overtake all but the most energetic, and the temptations to seek a cooler and fresher air on the waters of the Solent were numerous. It was, perhaps, partly for this reason that the attendance at the general meeting on Wednesday afternoon was comparatively scanty. The majority of those present withdrew when Sir Douglas Powell had concluded his address, and the discussion on business matters was thus continued in a very small meeting. When Mr. Horsley's resolution expressing disapproval of the action of the Council on the ground that certain financial matters had been withdrawn from the general meeting was put to the vote, there were only some twenty-eight or thirty members present. Thereafter the meeting dwindled still more, until finally it was adjourned, owing to the fact that there was not a quorum present. As a quorum is only twenty-five, and as there must have been nearly 900 members present in Portsmouth, it will be generally recognised that the interest shown in these proceedings left something to be desired. Neither the Council nor the officers of the Association have anything to fear from well-considered criticism. They are actuated by but one desire, which is to serve the best interests of the Association and of the medical profession, of which so large a proportion is included within its membership. Some of those who shared in the desultory, and at times heated, discussions which took place at the general meeting referred to, appeared to be almost as imperfectly informed with regard to the work done by the Association in the past, or still engaging its attention, as the leader writer in the *Times* who has once again indulged his spleen while displaying his want of acquaintance with the object of his ill-humour.

We do not propose here to discuss matters which will no doubt be raised again, and we desire to recognise the friendly spirit towards the officers responsible for the conduct of the Journal shown by those who thought it necessary to move resolutions condemning the non-publication of certain documents which they held to be of importance, but the attitude assumed by some of those who complain that their activities have not met with adequate support recalls one of the most famous cartoons of *Punch*, which, at the time when Mr. Disraeli was preparing his Reform Bill, humorously represented him as listening under the windows of the Reform Club. Some of these gentlemen, as has been said, seem to be quite unacquainted with what the Association has done and is doing.

The objects with which the Association was established were "the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession." The objects were put in this order by the founders of the Association, and that they knew what they were about is proved by the fact that the Association now numbers over 18,000 members. This success, while it must be a legitimate source of satisfaction, is looked upon, not as justifying the Association in resting upon its laurels, but as a stimulus

to further exertions. In the present position of the profession there are many matters which call for reform, but opposition must be expected. We have to meet opponents within the profession who are ready to fight for the maintenance of obsolete privileges, who are only too glad to make the most of differences of opinion, and to seize any opportunity to belittle an Association which has been built up by the working members of the profession, and has already done so much for the scientific, social, and politic advantage of the profession. We have to meet, also, the indifference and the selfishness of the public. To attain success, those who believe in the necessity of reform—and they are the majority of the profession—must stand shoulder to shoulder, sinking small differences, and presenting a united front.

LEAVE AND "STUDY LEAVE" FOR MEDICAL OFFICERS.

IN commenting last week upon Professor Ogston's Address in Surgery we expressed the intention of returning to the consideration of one point which is of first-rate importance. With the battle of army status and titles for medical officers fought and won, and the claims in these respects made on their behalf by the medical profession conceded, there yet remain certain secondary disabilities which press severely on the individual officer. These disabilities nearly all flow from one remediable cause — an undermanned establishment. The chief among them, as we gather from many correspondents, is the great difficulty in obtaining leave of any kind, whether on private affairs or for purposes of study. This is felt not only in the Royal Army Medical Corps, but also in the Indian Medical Service. In India, indeed, exceptional circumstances had lately greatly aggravated the difficulty which has never been altogether absent. Both in India and at home the medical establishments are apparently framed without any margin for contingencies, and when they arise there is a scramble to get the duties performed and to allow reasonable leave for the medical officers.

The difficulty as to leave demonstrates perhaps better than anything else that, quite apart from exceptional disturbing causes, our nominal medical establishments are really fixed "dangerously low," to use the words of the late Sir Thomas Crawford when Director-General. While it is difficult to discover the real figures of our nominal medical establishments, it seems next to impossible to divine the data upon which the establishments themselves are based. The numbers appear to have been fixed haphazard, if indeed fixed at all. This much is certain, that, notwithstanding an increased standing army and larger demands on the foreign service roster, the medical establishment of officers of to-day is about 20 per cent. under what it was thirty or forty years ago.

If we take, first, the Indian Medical Service, we find that, excluding the subordinate body, the medical department is made up at present of about 652 officers of all ranks and for all duties, civil and military, within the recently extended bounds of the Indian Empire. This is about one man to 1,500 square miles. There is no doubt whatever that this establishment is insufficient, and thus disturbing causes, even of moderate intensity, are apt to throw it out of gear. The double strain created by the late frontier campaign and by the plague caused such dislocation of duties that all leave, except on medical certificate, was abrogated. Sick leave, however, it is well known, always imposes some disability or another on the unfortunate individual who is forced to resort to it. Similarly, the above strain upset leave among officers of the Royal Army Medical Corps on the Indian Establishment; showing that the entire medical service in that country is undermanned.

The present number of officers of the Royal Army Medical Corps, of all ranks on full pay, and (nominally) for all duties at home and abroad, is about 840; or 50 under the level which Sir Thomas Crawford considered "dangerously low." Why he accepted 890 as a nominal establishment at all, we know not, unless it merely chanced to be the actual number on the list at the time he spoke. Be that as it may, in view of an increased army, and the enhanced requirements of Egypt, Africa, and other parts of the empire where our army must go, what was dangerous years ago must be much more so now.

At present about 90 officers on the retired list and a large number of civil practitioners are employed in the discharge of home duties which could not possibly be carried on by the present "active" staff. We lately heard of one district in England which possessed only 7 full pay officers, though its normal complement was 19. Many important charges had to be delegated to civilians.

It is needless to labour the point that it is this state of matters which reacts so disastrously on leave and on home service, causes much discontent within the service, and endangers its growing popularity.

The true remedy is increased establishments; and we challenge dispute in affirming that, to bring about contentment and due efficiency, the Indian Medical Establishment should be increased to 750, and the Royal Corps to 1,000 officers.

We are aware military leave is, or used to be, described in official language as an "indulgence," an expression of course embodying an antiquated theory, which it would be hard to justify at the present day. But would those who use it, seriously or otherwise, consider the Sunday rest they give their horses an "indulgence"? They know it to be a vital necessity. And if it be so to the brutes, it is likewise so to man; and of all men to medical men, whose duties are incessant, and whose professional anxieties are not intermitted on Sunday or on any other day.

But there is another kind of leave, beyond that of rest for body and mind, which every medical officer requires and greatly desires, and that is called "study leave."

We were glad to observe that the able memorial of the Royal College of Surgeons of Edinburgh to the Secretary of State for War, to which we some time ago referred,[1] laid much stress on this point. Of course study leave has been promised over and over again, but has seldom been given simply on account of shrunken establishments. It is to be feared that the military authorities are not sufficiently alive to the steady and extraordinary advances constantly taking place in the science and art of medicine and surgery. A surgeon cannot keep himself abreast of the advance of science and prac-

[1] BRITISH MEDICAL JOURNAL, November 12th, 1898, p. 1526.

tice by studying books. He must see and observe for himself in practical demonstration and post-graduate courses, such as have been organised in the great medical centres to meet the similar need which civilian practitioners also feel. The army medical officer spends so much of his time in scientific isolation abroad that a six months' study leave, some time in the middle of his service, is a necessity, not merely in fairness to himself, but in justice to the valuable lives placed in his care.

We trust we have demonstrated that our nominally undermanned and otherwise shrunken medical establishments lie at the root of the unredressed grievances of the medical services, and earnestly appeal to the Secretary of State for War to look into the matter in framing the next Army Estimates.

PRACTICE BY COMPANIES.

The Companies Bill was read for the third time and passed by the House of Lords on August 4th, when the Earl of Kimberley expressed a hope that the Bill would be introduced early next session and passed by both Houses.

The Lord Chancellor mentioned that some clauses had been introduced in Committee which had relation to medicine and pharmacy, and it will be remembered that these clauses replace the two short Bills introduced by the Lord Chancellor early in the session to which we have frequently referred. Lord Halsbury said that he had received a large number of communications on the subject, but that he was still strongly convinced that a company ought not to be permitted to do what an individual was prohibited from doing. He illustrated this principle by observing that in connection with establishments on the company basis the public must be protected against the making up of prescriptions by persons who had not been properly educated for the work. He then went on to enunciate the principle that in the Acts, which formed the code dealing with the subject, the work "person" must be construed to mean a natural person, and not a company, for to imagine a company being an ideal personage practising and undergoing examination was absurd, and would not cohere to the language. This principle, which is sufficiently obvious, required to be clearly enunciated owing to the perplexity introduced into the application of the special Acts by the judicial decision that a company was not a person. That decision the Lord Chancellor said was undoubtedly correct; but, as we have frequently pointed out, it has had the effect, not of preventing companies being formed to carry on the practice of medicine and pharmacy, but to absolve such companies from the special legislation which applies to such practice by individuals. The Lord Chancellor said that the Committee of the Upper House was unanimously of opinion that companies should not be formed with the object of taking advantage of company machinery to do that which an individual without qualification could not do. He further said that some of his correspondents had argued that the clauses introduced into the Bill were an attempt to prevent proper trading enterprises; but such an opinion, he said, showed that the writers were not familiar with the existing state of the law. While new legislation should not interfere with any properly-vested interest, Parliament should take care that the public generally was not exposed to the dangers resulting from the practising of unqualified persons.

Nothing could be more satisfactory than the views thus enunciated by the Lord Chancellor, who, indeed, devoted the greater part of his speech to these clauses. It must be a source of gratification to those who have taken an active part in pressing the matter upon the attention of the Legislature, in spite of not a little discouragement at first, that at last their views have been endorsed in every essential particular, not only by the Lord Chancellor, but also by a strong Committee of the House of Lords, which happened to include some whose opinions carry the greatest weight, but who had formerly been correspondingly reticent in acknowledging the practicability of legislative interference in this direction.

Those persons or companies to whom the clause is distasteful appear not to have been idle, for the Lord Chancellor implies that he has heard a good deal from them; but they have not met with much success in their opposition. Indeed it has been hinted to us that there is reason to suppose that some of the opponents of the clauses have really given them a helping hand, and they have perhaps emerged from their obscurity only to afford an unintentional object lesson of the necessity for legislation, by demonstrating what sort of persons form these companies, and how they carry on their business when they have done so. At all events the Lord Chancellor dropped no hint that anything had been brought to his knowledge which would induce him to modify the wording of the clauses in any essential respect.

We should think that our friends—for such we hope we may now term them—the pharmaceutical chemists would gather some satisfaction from the speech, which, short though it was, indirectly affirmed and reaffirmed the broad general principle that qualification as tested and granted by examination was the essential antecedent to any recognition, tacit or expressed, of the right to practise. The Lord Chancellor expressed the confident anticipation that the Companies Bill containing the medical clause will be revived next session, and there is good reason to hope that it will then be passed into law. But even should this unfortunately not come to pass, the agitation will not have been wholly fruitless, for it will have done something towards paving the way for the much-needed measure of medical reform in which practice and not title shall occupy the foremost place.

The existing anomalies have been brought forcibly under the notice of the Legislature and of the public, and we think that it may almost be asserted that they have been won over to the adoption of views in consonance with those of the most earnest, thoughtful, and practical of medical reformers.

THE ABANDONED OYSTERS BILL.

In our article in the British Medical Journal of July 29th on the Oysters Bill, we wrote as it were with bated breath. We did not wish, until it had been otherwise proved to be so, to announce that the changes introduced into the Bill by the Select Committee of the House of Lords had wrecked the Bill; we simply contented ourselves with pointing out the difficulties of dealing with the subject by means of an authority having commercial in-

terests and antecedents instead of one having public health duties, and we indicated that the transference of the duties to the Fisheries Committees, as desired by the Lords Committee, deliberately left altogether uncontrolled many of the most important oyster layings round our coasts. It is well known, for example, what interest Brighton has taken in this Bill, and how often Dr. Newsholme, the medical officer of health, has shown that grave danger of typhoid fever to the inhabitants of that borough must persist so long as the importation of oysters from sources liable to pollution remained uncontrolled. But, notwithstanding this, the Lords Committee deliberately deprived the one authority which could have dealt with this matter of all power to provide a remedy, and handed the execution of the Bill over to another body which has absolutely no jurisdiction over or interests in the layings in question. In other words it left the matter, as regards this amongst other parts of the coast, exactly where it was before the Local Government Board introduced their Bill. What the motive of the Committee was still remains to be ascertained; but one thing is clear—it has for this session stopped all legislation which has for its object the control of disease through the consumption of oysters. Mr. Chaplin, who must understand how the change introduced by the Lords has whittled away the primary object of his Bill, wisely arranged for the discharge of the order, or, in other words, for the abandonment of the Bill.

Lord Harris, who was Chairman of the Lords Committee, explained to the House of Lords that his Committee was of opinion that the matter to be dealt with was rather the health of the oyster than the health of the human being. This interest in the oyster as opposed to the human being is under the circumstances rather grotesque, but it explains in some measure why the Committee expressed itself as not desiring to hear evidence as to injury to the human subject through the consumption of oysters from sewage-polluted layings and beds. Yet as a matter of history it cannot be denied that it was precisely this that formed the basis on which the Bill was founded. It was the public health question which had led to the lengthened inquiry and voluminous report of the Local Government Board on the subject; and the Bill, as it left the Lords Committee, is actually entitled, "An Act for the Protection of the Public Health"—not of the health of oysters, as it was contended before the House of Lords it ought to have been when the order was discharged

In one sense we do not regret the loss of the Bill for this session. We believe that it had been effectually deprived of its chance of usefulness by the change introduced into it; that bodies such as the Fisheries Committees, which have commercial interests as their foremost object, and which have no jurisdiction over many of the oyster layings, could not properly have acted as the administrative authorities; and that, if the question is not one of public health, the President of the Local Government Board has no reason to interest himself in it, or to accept the task of dealing with appeals under the Bill. Mr. Chaplin was therefore quite right, under existing circumstances, in consigning the Bill to the waste-paper basket allotted to the session of 1899.

THE NORTH WALES BRANCH.

As already announced, the jubilee meeting of the North Wales Branch of the British Medical Association will be held at the University College of North Wales, Bangor, on Wednesday, August 16th, at 1.15 P.M., when Mr. Jones Morris will succeed Mr. H. V. Palin, M.B., as President. A service will be held at the Cathedral at 11.30, when the bishop of the diocese will preach a sermon. At the annual meeting Mr. Jones Morris will deliver an address on Medical Reform—a Brief Retrospect and Prospect. Afterwards a garden party will be held in the grounds of the University College, and at 6 P.M. the annual dinner will be held at the George Hotel. Many members of the Branch have already expressed their intention of being present at the service, the garden party, and the dinner, to which a number of distinguished guests have been invited, including the Parliamentary representatives of North Wales. In connection with this meeting, a souvenir has been issued consisting of a list of the presidents of the Branch since its formation in 1849, and a reproduction of the minutes of the Branch during the first year of its existence. From this it appears that on July 27th, 1849, a meeting of the medical profession was held at Bangor, under the chairmanship of Dr. Jones Roberts, when, on the proposal of Mr. John Lloyd, seconded by Mr. Thomas Humphreys, it was unanimously resolved to found a North Wales Branch of the Provincial Medical and Surgical Association, the title which the British Medical Association then bore. In consequence, a communication was addressed to Dr., afterwards Sir Charles, Hastings, at Worcester, and a general meeting of the medical profession was held at Bangor on August 29th, when the North Wales Branch was formally constituted with Mr. Thomas Griffith as President, and Mr. D. Kent Jones and Mr. Edward Williams as Secretaries. On the same occasion resolutions were passed having for their object the amelioration of the position of Poor-law medical officers, the suppression of empiricism, and the promotion of good feeling and unanimity amongst the members of the profession in the principality. In the April following a special general meeting of the Branch was held to consider the proposals as to medical reform made by the central Council of the Association, and resolutions were adopted affirming that a satisfactory measure of medical reform should comprehend (1) a liberal preliminary education with uniform and sufficient qualification in every branch of medical and surgical science, (2) equal right for all so qualified to practise throughout the whole extent of Her Majesty's dominions, (3) the adoption of the representative principle in the formation of the Council of the governing bodies. Another resolution expressed emphatic disapproval of a separate incorporation for general practitioners; and, lastly, the meeting expressed the opinion that there should be one portal by which all men should enter the profession. This old minute book shows how early the British Medical Association took up subjects some of which are still agitating us. It shows also with what extreme deliberation the coach of reform moves.

IRISH DISPENSARY DOCTORS.

THE new Councils in Ireland, under the Local Government Act, are not in their relation to their medical officers an improvement upon the old Boards of Guardians. On all Boards, wherever vacancies have occurred, the guardians are engaged in the operation of reducing salaries. The want of a sense of equity which is thus shown is serious. When public bodies are so composed that they are unable to gauge the true relation between recompense and work done, we must regard them as wanting in one of the most important qualifications for their position. It is quite true that men are to be found who will take the small salaries, but we are certain that they will not always be the most efficient or desirable; and when guardians play

he *rôle* of sweaters they are traitors to their constituents nd to the poor. In another way also some of them are howing obstinacy and incompetence. The Local Government Board have ordered that the medical officer shall have an an- ual vacation not exceeding four weeks. The Belfast guar- ians, who represent an enlightened and wealthy community, ave set the example of resistance to this order. They have iven their officers a fortnight only. The Local Govern- nent Board expressed a hope that the four weeks would e allowed; and having thus weakly implied that "not xceeding four weeks" might mean less than four weeks, he guardians have adhered to their interpretation. Of ourse, there is no reason now why it should not mean a veek, and probably we shall have the new economists in ther districts giving one day. Apparently that would ome within the meaning of the phrase, and so the doctor nay be cheated of any leave at all. If the Local Govern- nent Board mean that the doctor is to have four weeks hey ought to say so. At this hour of day they know the uality of the Boards they control, and they know that very possible evasion will be availed of when the question s the fair and just treatment of the doctor.

THE VENTNOR CONSUMPTION HOSPITAL.

On Wednesday afternoon Princess Henry of Battenberg pened a new block of the Royal National Hospital for Consumption at Ventnor. The block, which has been erected in memory of Prince Henry of Battenberg, nd will bear his name, consists of three houses, and will rovide accommodation for 21 patients. The cost of the hree houses has been provided by the treasurer, Mr. P. B. Burgoyne, the executors of the late Mr. Edward Armitage, nd Mr. Peemuller respectively. Each patient will have a eparate bedroom with south aspect, and there is a sitting- oom for every 7 patients. Accommodation is provided lso for the requisite staff of nurses. The floors nd staircases are of teak, and the walls are aced with Parian cement, all angles being rounded ff to prevent the accumulation of dust. The Princess vas received by Lady Adela Cochrane, by the Deputy Governor of the Isle of Wight, by the medical staff of the ospital, by the Bishop of Southampton, and a number of nvited guests. After the Princess had declared the build- ngs open, Sir Richard Webster, M.P., thanked her for her resence, and said that there was no one whom the uthorities of the hospital would more gladly welcome in lace of Her Majesty, who was unavoidably prevented from arrying out her intention of being present. It was, he aid, a satisfaction to know that for years the hospital had een coping with tuberculosis on the principles of treat- ment recently recognised as of general application. The ospital now contained 155 beds and received about 800 patients a year, yet there were at the present time 137 cases waiting for admission. After a short religious service the Princess inspected the new block.

THE CONTINENTAL ANGLO-AMERICAN MEDICAL SOCIETY.

The members of the Continental Anglo-American Medical Society present at Portsmouth during the annual meeting of the British Medical Association lunched together on Wednesday, August 2nd, at the Pier Hotel. Professor William Osler (Baltimore), one of the Vice-Presidents of the Society, occupied the chair. The guests included Sir William Broadbent, Bart.; Sir R. Douglas Powell, Bart.; Professor Clifford Allbutt, Dr. Burney Yeo, Dr. Mitchell Bruce, Mr. Malcolm Morris, Dr. StClair Thomson, Dr. Frederick Roberts, Dr. Watson, Dr. C. C. Claremont, and Dr. Cholmeley. Dr. Ward Cousins and Dr. Dawson Williams were prevented by pressure of business from being present. The members present were Dr. T. E. Charles (Rome), Dr. Johnston-Lavis (Beaulieu), Dr. D. W. Samways (Mentone), Dr. Cree (Paris), Dr. Hamilton (Bordighera), Dr. Freeman (San Remo), Dr. Gairdner (Naples), Dr. Warden (Paris), Dr. Robinson (Paris), and Dr. Bull (Paris), Honorary Secretary of the Society. The toasts of "The Queen" and of "The President of the United States" were proposed by the Chairman. Sir William Broadbent then gave "The Continental Anglo-American Medical Society," and spoke of the advantage to practitioners in England of being personally acquainted with medical men practising on the Continent to whom they often had to send patients. Dr. Samways (Mentone) replied for the Society. Dr. T. Edmonston Charles (Rome) then proposed "Our Guests." The Society, he said, might be congratulated on so distinguished a company of medical men having accepted its invitation to be present. Dr. Mitchell Bruce responded for the guests. Professor Clifford Allbutt then proposed "The Health of the Chairman," and observed that one of the chief indications of merit and success in a professor was the men of note who had been turned out from his department during his professorship. So judged, Professor Osler might well be congratulated. The Chairman, in replying, said that the manner in which he had been received and treated in the States had made him feel that his home was there. But, after all, he was a Canadian. No man could get away from his early associations. He was an American Canadian, and there was but one thing better, and that was to be an Anglo-American Canadian.

A RARE BOOK.

At the recent Comitia of the Royal College of Physicians attention was drawn by the President to the recent gift to the College Library by the Harveian Librarian, Dr. J. F. Payne, of a copy of *Galeni Pergamensis de Temperamentis, et de Inæquali Intemperie, Libri tres, Thoma Linacro Anglo interprete*. The work is the sixth in order of the seven books printed by John Siberch, the first Cambridge printer, in 1521. Besides these seven, one appeared in 1522, after which no book is known to have been printed in Cambridge till 1584. The books printed by John Siberch are all very scarce; of one but a single copy is known, and of three of the books there is not a single specimen in Cambridge. The existence of only ten other copies of this work is known, and all with two exceptions are in public libraries. A peculiarity of the present copy is a cut of the Nativity on reverse of leaf 63, showing that the book was intended to end here, and that the rest of the book—namely, "De inæquali intemperie" was added later. Only one other copy is known possessing this peculiarity, which is in the Library of Trinity College, Dublin. The copy in the Cambridge University Library has been reproduced in facsimile (Cambridge, 1881) with an introduction by the present Harveian Librarian.

THE UNIVERSITY OF LONDON.

The supplementary vote of £65,000 for the establishment of the University of London in part of the buildings of the Imperial Institute, South Kensington, has been agreed to by the House of Commons. The new home of the University of London will be in the central and eastern portions of the building. The space to be placed at its disposal will be far greater than that which it now possesses. It will include the principal entrance, vestibule, staircase, and the great hall, subject to certain reservations in favour of the Government of India and to the occasional use by the Institute of certain portions of the central block under regulations approved by the Chancellor of the University. The University will also obtain a portion of the upper floor of the inner block of the building running east and west, as well as the temporary structures now standing in the south-eastern court. The University will occupy its new quarters under conditions substantially the same as those under which it now occupies the buildings in Burlington Gardens. Difficulties have been encountered

in carrying on the practical examinations in physics and chemistry, and it has been arranged that provision for these purposes shall be made in the new buildings about to be erected for the Royal College of Science.

INSPECTORS OF MEAT AND OTHER FOODS.

THE report of the Royal Commission on Tuberculosis recommended that no person should be permitted to act as meat inspector until he had passed a qualifying examination. Under these circumstances the Sanitary Institute has resolved to arrange examinations for inspectors of meat and other foods, the syllabus to include the subjects specified in the report of the Royal Commission. The duties of a meat inspector can only be discharged by an inspector of nuisances or sanitary inspector, and candidates will therefore be required to show that they hold a certificate qualifying them to act as sanitary inspector or inspector of nuisances from the Sanitary Institute or some other examining body. They must produce evidence also of training in meat inspection for two months in a cattle market and slaughtering establishment recognised by the Institute, and of having studied the subjects of examination, which comprise the knowledge of the laws, by-laws, and regulations affecting the inspection and sale of meat and other articles of food, including their preparation and adulteration; signs of health and disease in animals destined for food; some general ideas as to the visceral anatomy of animals used for food; a knowledge of the appearance and character of fresh meat, fish, poultry, and other articles of food; an acquaintance with the hygiene of cowsheds, slaughterhouses, markets, dairies, and other places where food is stored; and with practical methods of stalling and slaughtering animals and preserving and storing meat and other foods. The first examination will be held in London next December; the next in Birmingham in March, 1900; the next in London in May, 1900; the next in Liverpool in July, 1900; and another in London in December, 1900.

FRENCH CONGRESS OF MEDICINE.

THE fifth meeting of the French Congress of Medicine opened at Lille on July 28th, under the presidency of Professor Grasset of Montpellier. Among the French physicians present were Dr. Combemale, the General Secretary of the Congress, Dr. Renaut of Lyons, Dr. Huchard of Paris, Dr. Pitres of Bordeaux, and Dr. Calmette of the Lille Pasteur Institute. Many foreign doctors were also present. The President delivered an address on Medical Progress in France in the nineteenth century. The questions discussed were: Myocarditis; Leukæmia and Adenitis; Tolerance in regard to Drugs. Among the communications presented were the following: M. Pitres: Treatment of Exophthalmic Goître by Parenchymatous Injections of Iodoform and Ether; M. Ingelrans: A Case of Conjugal Tabes; M. Doumer: Streptococcus and Infantile Paralysis; M. Dransart: Reflections on the Origin of the Visual Functions suggested by the case of a lad of 19 born blind and cured by operation; M. Bra: The Parasite of Cancer; Dr. Comby: Renal Lithiasis in Children; Dr. Mossé: Potatoes in the Diet of Diabetics.

THE ST. JOHN AMBULANCE DIFFICULTY IN STOCKPORT.

WE learn from the Secretaries of the Stockport Medical Society that in spite of strenuous effort in certain quarters to prevent inquiry into the past management of the local centre and the conduct of the local honorary secretary, the Central Executive Committee, after careful consideration of the matter, have offered to appoint as arbitrators three gentlemen quite independent of Stockport, provided all parties agree to accept their decision as final. This offer has been accepted by the Stockport Medical Society. If the local hon. secretary declines to agree to this proposal the whole matter will, it is stated, be investigated by the local centre, from whose decision an appeal would lie to the Central Executive Committee in London. In the meantime, no apology having been tendered by the local honorary secretary, and the position remaining practically unaltered, the members of the Stockport Medical Society strictly adhere to the resolution not to lecture in connection with the local centre.

PROFESSOR GRASSI AND THE ETIOLOGY OF MALARIA.

THE Italian Superior Health Council, having carefully considered the investigations and experiments on the etiology of malaria carried out by Professor Grassi, Lecturer on Comparative Anatomy in the University of Rome, has allocated a fund to assist him in pursuing his work.

FOOD PRESERVATIVES.

THE Departmental Committee on Preservatives and Colouring Matters in Food again met on August 5th, when there was present Sir Herbert Maxwell (Chairman), Dr. Timbrell Bulstrode, Dr. Tunnicliffe, and Mr. Charles J. Hudda (Secretary). Applications from various Associations to be heard by representatives in evidence were considered, and the general question of the scope of the evidence to be taken was under discussion, and settled so far as is at present practicable. Experiments within the terms of reference to the Committee have been set going in one and another direction.

OOPHORECTOMY AND HYSTERECTOMY IN ANIMALS

THE experience of veterinary surgeons on this subject is of interest at present, when the question of natural and artificial or surgical menopause has been under discussion in the Section of Obstetrics and Gynæcology at the Portsmouth meeting. Mr. Hobday reports 55 cases of oöphorectomy (18 in bitches, 37 in cats) for the relief of troubles due to œstrum and its sequelæ, or for disease. The details of the operation are of little value to the general surgeon or gynæcologist, as the lower animals for many reasons require different manipulations and different after-treatment; nor are the after-histories long enough to be reliable in scientific evidence; but some immediate results are of interest. In one case both the ovaries were carefully removed from a bitch, yet a fortnight after the operation she was distinctly in œstrum, and admitted the approaches of a dog. Mr. Leeney has recently reported similar observations of the recurrence of œstrum after complete removal of the ovaries, but believes that the œstrum will not return if the operation be performed when the bitch or cat is pregnant. But Mr. Hobday reported previously in the *Veterinary Record* (in which all the other above-related observations will be found) how in one case the gravid uterus as well as the ovaries were removed, yet the "patient" has been twice in œstrum since the operation, which was performed early in May. Thus there is much yet to be learned about the effects of extirpation of the ovaries in canis and felis. That fact is certain, and it is equally certain that much is yet to be learnt respecting the same effects in our own species. Fifteen years ago most of us believed that removal of the ovaries cured uterine fibroids. For several years some authorities have declared that it is the fibroid and the uterus that should be removed, whilst the ovaries ought to be left; then, they maintain, there will be no troublesome artificial menopause. Zweifel and Abel, however, have found out from experience that under these circumstances the menopause is merely delayed for a year or two. Possibly we are too much alarmed about the dangers and inconveniences of an artificial menopause. Double ovariotomy at least is not followed by very evident physiological troubles.

ANNUAL MEETING.

The very generous manner in which the naval and military authorities in Portsmouth placed at the disposal of members of the Association unusual facilities for visiting the many objects of interest under their control deserves special recognition. By the kindness of Colonel Rosseter, R.A., and Major Mallins, R.A.M.C., a party was taken over the fine new Clarence Barracks, and afterwards in a steam launch to Noman's Fort, one of the Spithead forts, where they were shown all over the building, and witnessed a display of heavy gun drill by the garrison artillery. The inspection was most interesting. Life in one of these forts is very much like life on a ship at sea, except that the visitor feels the solid ground under his feet, and has the comforting assurance that, should he be detained by stress of weather, he will not want for one of the chief necessities of life, for the fort is provided with an artesian well which yields an inexhaustible supply of good water. By permission of the Commander-in-Chief, the members had the opportunity also of visiting the Dockyard, where H.M.S. *Terrible* was lying, the training ship *St. Vincent*, Nelson's flag ship the *Victory*, the Gun Wharf (by kind permission of Colonel O'Callaghan, Chief Ordnance Officer, Southern District), and H.M.S. *Vernon* Torpedo School. A party visited also the Victoria Barracks, over which they were conducted by Colonel Spens (Shropshire Light Infantry) and Major Mallins, R.A.M.C.

The Medical Officers of the Royal Navy (active and retired) in Portsmouth and its neighbourhood were "at home" to members of the British Medical Association at the Royal Naval Hospital, Haslar, on Thursday, August 3rd. The visitors were received by Deputy-Inspector-General Stanistreet, and refreshments were served in the officers' garden, where the band played during the afternoon. The hospital occupies a striking position with a long frontage to the Solent; between the buildings and the sea are extensive grounds planted with ilex and provided with seats at convenient spots. The climate is not exactly bracing, but the facilities which the large grounds afford and the mildness of the air are well calculated to re-establish the health of convalescents returned from hot stations. The hospital buildings are old and massive; they surround three sides of a square in double blocks so that though there is a large central quadrangle, yet there is a comparatively narrow air space between each pair of blocks. This condition, itself somewhat contrary to modern ideas of hospital construction, has been made worse by the erection at some time in the distant past of certain transverse buildings which tend to diminish the free circulation of air. During a visit of Mr. Goschen to Haslar some two years ago these transverse buildings were condemned and are about to be removed. A great improvement will thus be effected. Various other improvements have been in contemplation for a good many years past, and the necessity for them having been brought strongly under the notice of the Admiralty by Inspector-General Turnbull, during the time that he was principal medical officer of the hospital, a decision was taken to carry out a number of alterations, some of which have already been completed, while others are in progress. One of the most important of these is the erection of an entirely new laboratory for the use of the classes of newly appointed medical officers of the Royal Navy who go to Haslar for a term of instruction. The laboratory is a detached building with a good north light, and is fitted with tables, racks, and sinks of the best modern pattern. It replaces a singularly inappropriate room, ill-lighted and imperfectly equipped, underneath the refractory rooms of the lunacy department. Another very extensive improvement is the erection of what is in fact a new infectious disease hospital in a part of the hospital grounds at some little distance from the main building. It has not yet risen above its foundations, but it is, we were informed, to consist of eight pavilions, each containing twelve beds, which can be used as required in isolating various infectious diseases. Under present conditions cases of infectious disease have to be treated in the hospital proper, and this sometimes involves the reservation of a large ward for one or two cases. One of the pavilions will, we believe, be reserved for cases of typhoid fever, which it is considered undesirable to nurse in the general wards. Another great improvement which has been made has been the construction of two operating rooms with a waiting room. This has been effected by the modification of one of the large wards of the central block of the old building. One of the operating rooms is reserved for septic cases, but it has a polished cement floor and painted walls, an operating table of modern construction, and washing sinks with foot taps. The chief operating room is reserved for cases of operation where it is possible to ensure asepsis. The floor is of polished cement, the walls are painted with impermeable paint, and the room has been excellently lighted by throwing out a large bay window. The operating room is supplied with all necessary appliances, aseptic operating table, instrument cupboard, sterilisers, and so on. Adjoining these operating rooms is a special room for dental cases. Various other minor improvements have been introduced into the old hospital which need not perhaps be enumerated, but mention may be made of the great alteration for the better in the officers' quarters which is about to be carried out. These also date from the tenure of office of Inspector-General Turnbull, and at the present time a new block of buildings is being erected between the chapel and the sea wall which will provide all the facilities of an excellent mess. Close at hand, on a somewhat confined space, a house is being erected for the nursing sisters. New buildings for reserve stores, which would be required at once on mobilisation, are also being erected. The improvements which we have indicated, due in large measure to the efforts of Inspector-General Turnbull, will in their sum materially increase the facilities for the effective treatment of cases admitted into Haslar, but the new principal medical officer, to whom and to the other officers of the Royal Navy (active and retired) in and near Portsmouth, the Association is much indebted for their graceful hospitality, will have plenty of room for the exercise of the energies with which he is generally accredited.

On Friday afternoon, Surgeon-General Nash and officers of the Royal Army Medical Corps gave an "at home" to the members of the British Medical Association at Netley. Netley was reached by train, and brakes were provided for conveyance of the guests to the Royal Victoria Hospital. Marquees had been erected on the lawns in front of the hospital, where refreshments were served, and music was supplied by the band of the Portsmouth Police. The large establishment at Netley includes the hospital, a medical college for the higher instruction of officers, and a training school for female army nurses. The place is famous for the beauty of its situation, well-kept lawns sloping by easy gradients from the front of the hospital down to Southampton Water. The grounds are well wooded and laid out with great taste. The whole site lies behind rising ground which shelters it from north and east winds. The hospital consists of three storeys, and its front measures a quarter of a mile. Along the whole length of each storey runs a corridor into which the wards open. The middle floor of the three is used for medical cases; the top floor for surgical cases, and the ground floor is reserved for use when the hospital is full. There are 138 wards containing 1,065 beds, but the accommodation is stated to be fixed for 900 patients, thus allowing for an excess of that number in case of emergency. On higher ground to the north of this

building stands the Army Medical School, which has a staff of four professors (of military surgery, pathology, medicine, and hygiene), each with his respective assistant professor. The feature of this gathering was a demonstration by Professor Wright on the method of inoculation against typhoid: this was given in the pathological laboratory, and the speaker divided his remarks into three parts: the preparation of the vaccine used for inoculation; the method of drawing off the vaccine from the bottles and capsules and the way to inoculate; and lastly the method of testing the effect of vaccination. Taking first the preparation of the vaccine Professor Wright demonstrated to the company its cultivation, the plan followed for killing the culture, then how the vaccine was put up into bottles and capsules, and the method of testing the sterility of the vaccine. He explained how the fluid was standardised by direct experimentation on guinea-pigs, or by determining the opacity of the vaccine. After discussing fully the "sea of difficulties" connected with standardisation by opacity, he proceeded to the second part of his demonstration, that is to say, how to apply the vaccine; he first demonstrated the method of sterilising the syringe in oil, the precautions to be observed when filling the syringe to avoid spoiling the vulcanite rubber, and then pointing out the methods to be followed to sterilise the needle of the syringe when inoculating a large number of people one after the other. After commenting on the place to be chosen for inoculation, he gave it as his opinion that the flank was the best site, and advised the insertion of the needle well into the subcutaneous tissue. Passing to the last part of his demonstration, Professor Wright next described how after inoculation the effect was tested not only qualitatively but quantitatively; this was done by studying the agglutinative reaction of the patient's blood, and the speaker concluded his remarks by a detailed description of how a standardised culture of typhoid was prepared, the method of preparing the sedimentation tubes, and the details necessary to be followed when drawing off the patient's blood. Between forty and fifty members attended, and followed the Professor's explanations with great attention. At the conclusion, Professor Trevelyan proposed a vote of thanks, which was carried with great enthusiasm.

Colonel-Commandant Poore and the officers of the Royal Marine Artillery entertained the British Medical Association to a garden party on Thursday afternoon, August 3rd, in the grounds of the Eastney Barracks. The guests admired much the pleasant situation of these famous barracks at the edge of the sea, and were greatly delighted by the military displays, the bayonet exercise in quick time eliciting hearty applause. The excellence of the band of the regiment was a revelation to some of the civilian guests who were strangers to Southsea. A company of ladies and gentlemen executed to the strains of this band a very fine performance of a bicycle musical ride. The splendid weather, the general air of military smartness, and the genial hospitality of the hosts all combined to place this function among the most enjoyable of the meeting.

One of the most popular entertainments given to the members attending the annual meeting of the Association was that provided by the hospitality of Surgeon-General Cuffe, C.B., and the officers of the Royal Army Medical Corps. The company proceeded for an excursion in the Solent on Saturday afternoon, starting from Clarence Pier at 2 P.M., on board the s.s. *Dandie Dinmont*, of the Southsea and Ventnor Steamship Company, Mr. Mill, the manager, specially accompanying the trip to ensure the comfort of the guests. The weather on starting was threatening; but it soon cleared up, and on a smooth sea and to the music of the band of the Royal Army Medical Corps the Royal yachts were soon reached, "God Save the Queen" an "God Bless the Prince of Wales" being duly played. Th vessel then steamed to the Needles. On the retur journey, after having partaken of afternoon tea, th visitors assembled amidships, and the President of th Association, Dr. Ward Cousins, in a few graceful word conveyed to Surgeon-General Cuffe the thanks of th Association, not only for the particular trip which the were then enjoying, but also for his unwearied efforts i providing for the comfort and entertainment of the medica visitors to Portsmouth.

Many members of the Association availed themselves o the invitation to inspect the Royal Clarence Victuallin Yard, which consists of an extensive range of buildings fo the supply of provisions to the fleet. Vast stores biscuit, charcoal, wine, rum, beef and pork, and othe commodities, are kept here, but what interested the visitor most was the making of biscuits, which are turned out a the rate of ten tons an hour; the flour and water are mixe by machinery, the dough is kneaded and rolled into fla sheets, and cut into biscuits of an hexagonal form so as t avoid waste. Amongst other things this establishmer supplies clothing; in fact a ship can be fully stocked wit stores of every description at once.

The golf match in connection with the annual meetin at Portsmouth took place on the United Service course a Haslar on Friday, August 4th. The match was arrange as far as possible as North *versus* South, the Trent bein the dividing line, and the North once more asserted it traditional superiority. The following were the results:

North.	Holes up.	South.	Holes u
Dr. Macphail	... 2	Dr. Mumby ...	...
,, Bampton	... 5	,, Elliot... ...	...
,, Clement Palmer ...	... 10	,, Pagan Lowe ...	...
,, Simson Fowler ...	... 10	,, Maloney ...	...
,, Dinnis	... 10	,, Glass Davies ...	...
,, Norman Walker ...	... 1	,, Nicolson ...	...
,, Blaikie	... 0	,, Reid	...
,, Andrews	... 0	,, Pope	...

The North thus beat the South by 29 holes. The Gol Medal granted by the Council was won by Dr. Bampto (Ilkley) by 1 hole up, as against "Colonel Bogey."

On Friday morning a party proceeded on a visit to th new barracks, Gosport. These barracks are of great exten reaching a mile along the front, and are capable of hol ing 1,000 men. Major Perry Marsh, Royal Army Medica Corps, met the party at the barrack gates, and Colon Mends had arranged a display of drilling by recruits fro the first to the last stages, and also a short exhibition b the gymnastic staff. Opportunities were supplied also fo the inspection by the visitors of the different places interest in the new barracks.

The wives and daughters of the principal medical me in Portsmouth formed a committee to offer hospitality t the ladies accompanying members attending the annua meeting. They elected the Mayoress (Mrs. Scott-Foster) a President, and Mrs. Lloyd Owen as Vice-President. Th Ladies' Committee arranged reading and waiting-rooms fo the lady visitors' accommodation. On Thursday night a ver large reception was held by the Committee, and an ente taining programme was carried out under directions Mrs. Cuffe and Mrs. Robertson. There was a concert i the Banqueting Hall, at which Mr. Pillow and his gle party, Dr. Kyffin in a whistling solo, Dr. Haydn in thre violin solos, Dr. Coope in two recitations, Mrs. Blegg an Mr. Bedervaise in some charming songs, Mr. Baxter, of th

R.M.A. Band, in a 'cello solo, were all heard to great dvantage. In the Council Chamber Mr. Penning gave everal electrical displays, in another room Mr. Sidney ielder gave his admirable conjuring entertainment, and in he Grand Jury Room there were two representations of most amusing farce written by Mrs. Robertson and Miss airtlough, entitled "A Trying Time"; the parts were ost ably filled by Colonel Jopp, Captain Beitt, R.M.L.I., iss Fairtlough, Fröken Aste Lange, and Mrs. Robertson. here was also a variety entertainment, to which Mr. illow's glee party contributed two glees. Mrs. Blegg a ong, Mrs. Robertson a monologue, Dr. Kyffin a whistling olo, and Mrs. Perry Marsh a Spanish dance. All the ntertainments were much appreciated by large and nthusiastic audiences. Previous to the reception Miss Vard Cousins, on behalf of the Ladies' Committee, pre- ented the Mayoress with a bouquet and silver holder as a light acknowledgment of her kind assistance as Pre- ident.

Mr. Benjamin Barrow, F.R.C.S., who was President of he Association in 1881, the year of its meeting at Ryde, as "at home" to members of the Association on Thursday nd Friday afternoon at St. John's Lodge, Ryde.

Mr. Philip Murch, the borough engineer of Portsmouth, ad prepared a brief description of the methods adopted ith regard to the sewage of Portsmouth. The present ystem consists of a sewage-collecting tank large enough to ontain all the sewage of the district during any one tide. n this tank the sewage is stored when the tide is rising, nd when it has fallen too low to discharge with con- enience. With the object of allowing the outflow to begin t such early period after high water as is found best, the loping bottom of the tank has been placed only 1 foot below rdinary high water. The discharge pipes stand out from he seashore into the entrance of Langston Harbour, aving their open ends placed slightly below low-water nark, and delivered well into the tidal stream. It has een found by experiment that if the sewage be delivered rom the pipes at the proper time it is carried many miles o sea, and never approaches the shore. Mr. Murch is to e congratulated on having, within a short distance of ortsmouth, the large natural reservoir Langston Harbour, hich is filled and emptied with each rise and fall of the ide by a channel a few hundred yards wide with a tidal urrent of four or five miles an hour.

The Borough of Portsmouth Waterworks Company on Friday entertained a party of members at their works at Havant. The visitors were met by Mr. W. Grant, J.P., chair- man of the company, and other directors. The water supply s on the constant service system, and is taken from the deep halk, one of the springs being at Bedhampton and the other at Havant. The party were conducted by the secretary of the company, Mr. Wilson, round the pumping stations, and were subsequently entertained to what was alled an afternoon tea but which was in reality an elaborate banquet.

On Friday a party of the members of the Association paid a visit to Carisbrooke Castle and the Isle of Wight County Asylum (Whitecroft). Dr. Shaw, the medical superintendent had kindly made every arrangement for the comfort of those who accepted his hospitality. The party proceeded by boat from Portsmouth Harbour Pier to Ryde and thence by train to Newport. From Newport a pleasant drive brought them to the castle, where the different objects of historical interest detained the party for a short time. Then a move was made to the asylum, where refreshments were provided. The return journey was made by driving through Blackgang and Undercliff to Ventnor, from which place a departure was made by train the excursion ending at Southsea Pier.

Mr. A. S. Norman (Havant) invited a party of members to visit the celebrated Stallard's parchment works at Havant. This manufactory of parchment from hides is quite a local institution, the industry having been in the same family for several hundreds of years. The site on which the building stands is famous for the Homewell Spring, which rises in the works.

A most enjoyable excursion was made on Friday after- noon by a party of 100 members and ladies to the house of Mr. Montagu Foster at Stubbington. Conveyances from Gosport went by way of Alverstoke and Lee-on-Solent, and the charm of the ride was enhanced by the fineness of the weather, the light seabreeze, and the presence in the offing of several yachts engaged in the races of the Cowes Regatta. At Stubbington the visitors were received by their host and Mrs. Foster. Beneath the shading elms dozens of small tables covered with white cloths were spread about the lawn, with dishes and bowls of fruit, recalling what Aladdin saw when he arrived at the last hall. The visitors also had the great treat of listening to the band of the Royal Marine Light Infantry. Stubbington House is an old English mansion which has gradually evolved itself into an enormous school, in which a very considerable proportion of our future admirals, generals, and legislators are educated. Our correspondent had the opportunity of inspecting the class-rooms, bedrooms, dormitories, and the sanitary arrangements of the esta- blishment generally, and was greatly pleased with all that he saw. As regards the reception so kindly given by Mr. and Mrs. Foster, he says that, though it has been his good fortune to attend many a similar entertainment, he has never been at one in which the arrangements were more delightful or more perfectly carried out.

The Mayor and Mayoress of Portsmouth gave a ball on Friday night at the Town Hall, Portsmouth. Though over 2,000 people were present, so well had the arrangements been made that the function proved to be the most brilliant and successful of the series of enter- tainments given in honour of the visit of the Associa- tion. The Town Hall is an ideal place in which to give a ball, the cool corridors round the central hall being used for sitting out. The handsome suites of rooms on the first floor, all beautifully decorated, were utilised as smoking rooms, refreshment rooms, and lounges. The vestibule was most tastefully decorated; the guests were re- ceived by the Mayor (Alderman Scott-Foster) and Mayoress at the end of one of the spacious corridors just before enter- ing the ball-room. On entering the hall the effective and lavish way in which this splendid dancing room had been decorated for the occasion at once commanded the admiration of all the guests. From the walls were sus- pended the pennants of ships and bannerettes, on which were inscribed the names of famous English sailors. Round the balconies trophies of old armour surrounded the names of men famous in the history of medicine. A glittering shield composed of swords standing out from the midst of great Union Jacks furnished an artistic front to the organ. The difficult task of serving 2,000 people with supper was accomplished in an extremely hospitable manner. Each guest received a separate ticket, giving him a settled time when he could repair to a large supper tent seating over 500 people at a time. Three-quarters of an hour was allowed for supper. By permission of General Sir Redvers Buller, the band of the Royal Army Medical Corps came over specially from Aldershot to perform at this ball, and their rendering of

the programme deserved the highest praise. Among the guests present were: Admiral Sir Michael Culme-Seymour and Lady Culme-Seymour, Lady Baker Russell, Lord Robert Bruce, General Sir George Willis, and the Aldermen of Portsmouth. The spectacle when the spacious ballroom was filled with dancers, the uniforms of the naval and military officers imparting a heightened effect to the dresses of the ladies, was brilliant. To entertain with lavish hospitality 2,000 guests with entire absence of any crushing or delay was a triumph not only of liberal hospitality, but of intelligent management, for which thanks are due to the indefatigable labours of the hosts of the Association.

The excursion to Winchester was a great success. The local Branch of the Association had left no stone unturned to make the way easy. The party collected at the station on Saturday morning in time for the 9.25 train to Winchester. On this occasion the railway company exerted all their power, and the train was only about fifteen minutes late. Arrived at Winchester brakes were provided, and the company was driven by way of the Plague monument to the Great Hall of Winchester Castle. The interesting points in connection with this most interesting hall were described by Mr. W. H. Jacob, who then conducted the party over the cathedral. In this the kindness both of Mr. Jacob and of the local Committee was exhibited, for to be shown over the old places by a native of the city, an alderman, and an archæologist of no mean repute all rolled into one, was in itself no little pleasure. Time did not unfortunately allow of a long look, and the members were next escorted to a most sumptuous repast at the Town Hall, which was honoured by the presence of the mayor. After Dr. Lockhart Stephens had expressed to the local hosts the thanks of the party, the brakes were again requisitioned, and Winchester College was reached by way of St. Giles Hill after a most enjoyable drive. The bursar of the College very kindly conducted the company over the College, and gave some most interesting facts about the old foundation of which all Wykehamists are so justly proud. From here a short drive to the ancient Hospital of St. Cross was taken, and many of the thirsty, if not footsore, passengers partook of the free beer so generously provided for wayfarers by Henry de Blois and Cardinal Beaufort of pious memory. After this light refreshment one of the thirteen brethren conducted the party over this "The most famous and most ancient of existing eleemosynary institutions." The guide was one of the most intelligent to whom it has ever been our privilege to listen, and he described the beauties, antiquities, and unique features as if he loved every stone of the old place. Tea and coffee in the Town Hall concluded the day's jaunt, and the party left for their various destinations at such times as the congested traffic would allow.

A grand military tattoo took place on Saturday night, August 5th, by permission of Sir Baker Russell, at the Men's Recreation Ground, Portsmouth, to which the members of the British Medical Association were invited and accorded special seats commanding an excellent view of this unique performance. Nine o'clock was the time fixed for the show to commence, but the enormous field was crammed with spectators fully an hour and a-half before the appointed time. With military punctuality the massed buglers of the R.M.A., 1st East Lancashire Regiment, R.M.L.I., and 2nd Shropshire L.I. performed Retreat Beating, and it soon became apparent that not only was there to be a military tattoo, but that the evening's entertainment was also to include a fine display of fireworks. The massed buglers next sounded "Retreat" and then from the further distance was seen advancing in a blaze of light escorted by torchbearers the combined bands of the Royal Marine Artillery and the 2nd Shropshire Light Infantry playing on to the ground the right guard. Each man of this guard bore a coloured light, and after having advanced in a dense column to where Sir Baker Russell was sitting changed direction to the right. The line of coloured light thus formed took up its station on the fringe of the ground. Then followed the advance of the left guard, who in a similar manner were escorted by torchbearers, and were accompanied by the combined bands of the 1st East Lancashire Regiment and R.M.L.I.; they in their turn having moved off to the left, a salute was sounded by the trumpeters of the Royal Artillery. Then came an intricate movement of the massed bands with their escort of torchbearers, technically described as countermarching. To the ordinary civilian this seemed a brilliantly illuminated "orderly disorder," and won the well-merited applause of the thousands of onlookers. The pipers of the Scots Guards next secured the admiration of the spectators, their progress being accompanied by a dazzling display of fireworks. A selection from the *Greek Slave* having been given by the combined bands conducted by Mr. Forrest, "First Post" was sounded, and the massed buglers played a bugle march escorted by soldiers bearing flaring torches. Then came "Reminiscences of All Nations," played by the combined bands conducted by Mr. Green, and a company of soldiers went through a surprising series of movements mounted on bicycles illuminated with Chinese lanterns. Clad in white and moving swiftly in the half darkness, these performers executed a musical ride the rapidity and exactitude of which extorted such a burst of applause that the spectacle was in the course of the evening repeated. The trumpeters of the Royal Artillery next claimed attention, their efforts being rewarded by the special praise of the commanding officer. Surrounded by torchbearers, the massed drums and fifes marched on to the ground, having as a background a broad belt of blazing light from the set pieces of the fireworks. Then advanced a line of men with torches, having just in front of them the pipers of the Scots Guards. This set of men halted in front of the commanding officer, and the torchbearers having formed a semicircle the pipers began to play, and a very fine Highland reel was danced. This picturesque event having been completed, "Last Post" was sounded, and then came a fine display of musical figure marching by the Royal Marine Artillery. Out of the darkness then blazed out a colossal fire portrait of Her Majesty the Queen, and all the soldiers engaged advanced across the ground in a long double line the massed bands playing, the whole being escorted by torchbearers. The moving mass of light and sound came to a halt before the Commanding Officer, and a Royal salute having been given, three hearty cheers for the Queen followed. Sir Baker Russell stepped forward and thanked the performers for their successful efforts. "Lights out" was sounded by the massed buglers, and one of the most striking entertainments given in honour of the British Medical Association came to an end. Too much praise cannot be accorded to Colonel Auld, Chief Staff Officer, to whose care had been entrusted the arrangements for this complicated display.

We have received from Mr. William Bird, the Chairman of the West London Hospital, a copy of a correspondence which has passed between him and Mr. Sydney Holland with reference to a circular letter of Mr. Stephen Coleridge inviting subscribers to the West London Hospital to transfer their subscriptions to the Poplar Hospital. It is unnecessary for us to reproduce this correspondence, because the facts have already been sufficiently brought out in the correspondence between Mr. Sydney Holland and Mr. Stephen Coleridge which has taken place in our columns recently.

SIXTY-SEVENTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held at Portsmouth, August 1st, 2nd, 3rd, and 4th.

Third General Meeting of Members—Thursday, August 3rd.

The Address in Surgery.

The third general meeting of members was held in the Upper Albert Hall, Portsmouth, on Thursday, August 3rd, Dr. Ward Cousins, President, in the chair.

The President said he had much pleasure in calling upon Professor Alexander Ogston, Surgeon-in-Ordinary to Her Majesty the Queen in Scotland, Regius Professor of Surgery in the University of Aberdeen, to give the Address in Surgery which he had kindly promised the Association.

Professor Alexander Ogston, who upon rising was received with much cheering, then delivered the address which was published in the British Medical Journal of August 5th, p. 337.

At the conclusion of the address Surgeon-General Harvey, C.B., moved:

That the best thanks of the British Medical Association be presented to Professor Ogston for his very able and interesting Address in Surgery.

He had the very greatest pleasure in doing so because Professor Ogston was one of his own fellow-students and friends whose distinguished career had been watched with the greatest interest. Although some parts of the address would no doubt stir the profession and cause a certain amount of criticism, he ventured to hope that the address would be received in the spirit in which it was intended, namely, as one of kindly criticism intended to improve the services on which the Army and Navy depend. Without criticism progress was impracticable and impossible. There was no question that in many directions great improvements were possible in military matters, and he believed also in the administration of naval matters. So far as India was concerned, and that was the country he could well speak to, the painter had made his picture a little too gloomy, because, as a matter of fact, the recent experience on the frontier showed that the Medical Service contained a great number of officers who were skilled surgeons, and possessed surgical qualities of which any hospital might be proud. There were things that needed alteration in this country; one of these was that they wanted some arrangement to be made by which naval and military hospitals might be kept employed in time of peace in order that junior medical surgeons might learn what was expected of them when war came. Another thing was that arrangements should be made to give opportunities in practical surgery by utilising the enormous amount of practical surgery which was available in our civil hospitals. Both these things could be done easily by the medical authorities without any difficulty if they chose. With regard to the Indian Medical Service, he would like to say that he was glad to hear Professor Ogston say that he considered it was a fairly popular service. He (Surgeon-General Harvey) thought there had been a tendency of late years to rather hold it up to condemnation which was applied to other services, and to say that it was going down, and was not equal to what it was. He wished to express his deliberate opinion that the Indian Medical Service was as good as ever it was, and still possessed officers who were quite willing to devote their lives to the service, and to do the work that should be required of them in such a manner as even the most ambitious would desire.

Mr. Clement Lucas had great pleasure in seconding the resolution. He thought it was pretty clear that it was against the Army and Navy Departments Professor Ogston's remarks were addressed, and not against those who, under great discouragement, performed the duties of medical officers of the army and navy, than whom he could say that no more clever or self-denying men were to be found in Her Majesty's dominions. In his opinion a very powerful indictment had been made out against the departments he had mentioned, and he hoped they would be able to get a Royal Commission to inquire into what better arrangements could be made in future in order to make those departments thoroughly efficient.

The resolution was then put and carried by acclamation.

The President said he had the greatest pleasure in tendering the very best thanks of the Association to Professor Ogston for the very able address which he had just delivered.

Presentation of the Stewart Prize.

The President thought they would all agree with him that he had an exceedingly pleasant duty to perform in Portsmouth. The Association every two or three years offered a prize for research in the origin and prevention of epidemic diseases; it was a prize of £50. He was delighted to say it had been awarded to Surgeon Frederick James Abercrombie Dalton, R.N., for his original investigations in beri-beri. He, the President, was sure there was no part of the world more appropriate than Portsmouth to present the award to an officer of the Royal Navy, who by his original research should have had this prize awarded to him, and it was a very pleasant duty for him personally to perform. The President then formally presented the prize to Surgeon Dalton, who bowed his acknowledgments.

General Business.

The President then called on Dr. Tomlin to move the resolution standing in his name, when

Dr. Lorimer Hart observed that the motion had already been moved.

The President thought that Dr. Tomlin had only commenced to speak at the time the meeting adjourned, owing to there not being a quorum present at the end of the meeting on the previous day.

Dr. Lorimer Hart wished to know if he could not move it; but, replying to the President, said he could not say he had direct authority from Dr. Tomlin.

The President said as Dr. Tomlin was not present to move his resolution they must go on.

Mr. R. B. Anderson and Dr. J. F. Butler Hogan not being present to propose the resolutions standing in their name, the business of the meeting terminated.

Fourth General Meeting of Members—Friday, August 4th.

The concluding general meeting was held on Friday, August 4th, Dr. Ward Cousins, President in the chair.

Resolutions of Sections.

The President reported the following resolutions from the Sections:

Resolution passed in the Section of Psychology.

Resolved: That the Section of Psychology respectfully suggests that the Council of the Association be asked to consider the advisability of procuring early legislation for the well-to do inebriates, and to refer the question to the various Branches of the Association for their opinions.

Resolutions passed in the Section of Medicine.

Resolved: That the Council be requested to communicate to the War Office that it is the opinion of this Section that the physical examination of candidates for the army should precede the educational.

Resolved: That the Council be requested to communicate to the War Office that it is the opinion of this Section that soldiers ought not to serve in the tropics before the age of twenty-two (22).

Resolved: That the physical standard for admission to the public services requires reconsideration, and that the Council be also requested to communicate this resolution to the War Office, the Admiralty, and the other Governmental bodies interested.

Resolution passed in the Section of Ophthalmology.

Resolved: That the Section of Ophthalmology of the British Medical Association begs to express its profound belief that it would prove of great public benefit if the Board of Trade could see their way to include in their regulations the twelfth recommendation of the Royal Society's Committee: "That in case of judicial inquiries as to collisions or accidents, witnesses giving evidence as to the nature or position of coloured signals or lights should themselves be tested for colour and form vision," and suggests its application in every case of judicial inquiry upon accidents at sea.

Resolution passed in the Section of Tropical Diseases.

Resolved: That the Council of the British Medical Association be asked to convey the thanks of the Association to the Right Hon. Joseph Chamberlain, M.P., Her Majesty's Secretary of State for the Colonies, for the interest he has shown in forwarding the study and teaching of tropical diseases in Great Britain, and especially for the active part he took in establishing the School of Tropical Medicine, London.

Votes of Thanks.

The President said that there were a number of resolutions of thanks to be submitted to the meeting, and he therefore thought the more convenient course would be to read them, and then ask the President of Council to propose their adoption. They were as follows:

That the thanks of the Association be given:

To his Worship the Mayor and the Corporation of Portsmouth for the warm welcome accorded to the Association at the opening meeting, and for the ample accommodation in the magnificent Town Hall so liberally accorded to the Association.

To his Worship the Mayor and the Mayoress of Portsmouth for their Garden Parties, and the splendid Reception and Ball given in the Town Hall.

To the Right Rev. the Lord Bishop of Winchester for his sermon to the Association; to the Vicar of Portsea, the Rev. Cosmo Gordon Lang, for the service at St. Mary's Church.

To the Right Rev. Dr. Virtue, Bishop of Portsmouth, for the special service and High Mass at the Cathedral; and to Monsignor Cahill for his sermon on the occasion.

To Inspector-General Stanistreet and Medical Officers (active and retired) of the Royal Navy; to Colonel Commandant Poore and officers of the Royal Marine Artillery, Surgeon-General Nash and officers of the Royal Army Medical Corps (Netley), and Mr. Montague Foster, J.P., of Stubbington House, for their great hospitality in giving garden parties.

To Colonel Rosseter, R.A., and Major Mallins, R.A.M.C., for their kindness in conducting parties to the Sea Forts.

To the Committee of the Royal Naval Club, Minnesingers' Club, Freemasons' Club, and of the United Service Recreation Ground, for granting the honorary membership of the clubs during the meeting.

To the Presidents and Secretaries for the various Committees.

To the Winchester, Salisbury, Southampton, and the Isle of Wight Districts of the Southern Branch for their entertainment of members.

To the Waterworks Company and Messrs. Stallard for receiving a party of members at their works at Emsworth.

To Admiral Sir Michael Culme-Seymour for arranging for visits of the members of the Association and their friends to Her Majesty's ships and naval establishments at the port,

To the Saxe-Weimar Bowling Club for making the members of the Association honorary members during the week of the meeting.

To the Portsea Island Gas Company, Portsmouth Waterworks Company, Freemasons' Club, Portsmouth School Board, the Guardians of the Portsea Island Union, the Overseers for the Parish of Portsea, and the Committee of the Seamen and Marines Orphan School for the use of rooms.

To Dr. Shaw, of the Isle of Wight Asylum, and Dr. Kidd, of the Sussex Asylum, for receiving and entertaining parties, and showing them over the asylums.

To the Mayoress, to Mrs. Lloyd Owen, and the Ladies' Committee, for the reception given last Thursday at the Town Hall, and for their attention and hospitality to ladies accompanying the members of the Association.

To the Inspector-General, for throwing open Haslar Hospital, and to Surgeon-General Cuffe, for throwing open the Station Hospital, Portsmouth.

To the Board of Management of the Hospital for Consumption, at St. Lawrence, Isle of Wight, for entertaining the members of the Isle of Wight excursion.

To General Sir Baker Russell, Commanding the Southern Division, and the following officers: Surgeon-General Cuffe, Colonel Spens, Colonel Mends, Colonel Poore, and Colonel O'Callaghan, for the facilities for viewing the military establishments.

To Mr. A. W. White, J.P., and the Directors of the Clarence Esplanade Pier for granting the use of the Pier for the Soirée on Wednesday evening.

To Dr. Blackman, Chairman, and Mr. James Green and Dr. Fraser, Honorary Secretaries of the Reception Committee; to the Chairman and Honorary Secretaries of the various Committees—namely: Mr. H. Rundle, Chairman; Mr. A. Bosworth Wright, Mr. R. Emmett, and Mr. J. McGregor, Honorary Secretaries of the Museum Committee. Mr. F. Lord, Chairman; Mr. L. K. H. Hackman and Dr. M. Aston Key, Honorary Secretaries of the Printing and Publishing Committee; and to Mr. Lilly for so ably editing the interesting Guide. Dr. B. H. Mumby, Chairman; Dr. J. R. S. Robertson and Mr. J. H. F. Way, Honorary Secretaries of the Local Entertainment Committee. Dr. L. Maybury, Chairman; Dr. L. Cole-Baker and Mr. L. H. D. Hale, Honorary Secretaries of the Excursion Committee. Surgeon-Major-General J. Davis, Chairman, and Mr. S. Goss, Mr. L. H. O. Hale, Mr. J. Malpas, Honorary Secretaries of the Dinner and Luncheon Committee. Surgeon-General Cuffe, C.B., Chairman; Mr. T. Archer Colt, Dr. W. J. Essery, and Dr. McEldowney, Honorary Secretaries of the *Soirée* Committee. Mr. H. F. Hann, Chairman; Mr. W. B. Mason and Mr. T. W. Mead, Honorary Secretaries of the General Purposes Committee, for their able and willing help, rendering the meeting so successful.

Last but not least was a resolution of thanks to Dr. C. C. Claremont and Mr. C. P. Ruel, Honorary Secretaries, and Dr. Watson and Mr. Way, Treasurers, for their successful labours in the organisation of this meeting.

The President of Council said he had very much pleasure in proposing that the various votes of thanks be adopted, and he was sure the motion would be carried with acclamation. He had never at any annual meeting heard such a long list read, and it showed what an immense amount of co-operation had been placed at the disposal of the Local Committee, which had gone so far towards leading the meeting to the splendid success which it had attained.

Dr. Bruce Goff seconded the resolution. He thought the members had every reason to be gratified with the reception they had had at Portsmouth, and he hoped some members would live long enough to return on a future occasion.

The resolutions were carried.

Vote of Thanks to Dr. Ward Cousins.

The President of Council said it would never do for them to break up without acknowledging their indebtedness to Dr. Ward Cousins, the President, for the able manner in which he had conducted the meeting, and for the splendid success which it had achieved. It would be unbecoming for him to detain them as he might by descanting at great length upon the marvellous ability, geniality, and courtesy which their President had displayed throughout the proceedings. He, Dr. Roberts Thomson, had passed through the mill as president of an annual meeting, and knew something of the anxiety, trouble, and care which were involved in bringing it to a successful conclusion. He could only say that had Dr. Ward Cousins's presidency come before the annual meeting, which was held in his part of the world, he, Dr. Roberts Thomson, would have had great hesitation and difficulty in accepting the office, for he should have felt it would not have been possible to have followed successfully a man who had displayed the marvellous power their President had done in managing this meeting. He therefore proposed:

That the cordial thanks of the Association be given to Dr. Ward Cousins for his able and courteous conduct in the chair at this the sixty-seventh Annual Meeting of the Association.

Dr. Bruce Goff, in seconding the resolution, said he had nothing to add to what had been said by Dr. Roberts Thomson, and he most cordially endorsed every word that had come from him with regard to Dr. Ward Cousins. The resolution was carried with acclamation.

The President, in reply, said it would ill become him after the very kind sentiments which had been expressed to him that day to detain the meeting by a long address. He could only express his indebtedness to his local friends, Dr. Claremont, the honorary secretary of their local committee, and to all the officers who had taken part in the successful meeting of the Association. He was quite sure that the vote of thanks which had been passed that day would be received by them with very great pleasure. They had laboured constantly and persistently to make this meeting a success and he honestly thought it had been a successful meeting, and he might say that he had heard golden opinions expressed on all sides on the labours of his friends. As long as he lived he should feel greatly indebted to all his colleagues and to all his personal friends in the Association for the great kindness he had received. Portsmouth was a singular place for the annual meeting to be held in, being an army and navy centre, but he hoped they had found it attractive. He acknowledged the courtesy and kindness shown towards the Association by the mayor and naval and military authorities in granting every facility to the members of the Association. In conclusion, he again thanked them for the kind way in which they had received the remarks of Dr. Roberts Thomson, and he sincerely hoped, although he could hardly anticipate it while he lived, that before many years a still more successful meeting might be held in the borough of Portsmouth.

THE ANNUAL DINNER.

The annual dinner of the Association was held in the Town Hall, Portsmouth, on Thursday, August 3rd, Dr. Ward Cousins (President) being in the chair.

The Rev. Appleton Gordon Lang (Vicar of Portsea) said grace before dinner, and Canon Broderick returned thanks The following toasts were given during the evening.

"The Queen."

The President said they saw on every side abundant evidence of the prosperity of the empire and the beneficence of Her Majesty's long reign. The Queen had always taken a great interest in the evolution of science, especially those sciences which had added to the health and happiness of her people. Every year they had greater reverence for her, and he was confident that throughout the length and breadth of the empire the members of their Association would join with them that night in expressing their sincere hope and prayer that God would bless Her Majesty, and grant that she might long live to grace her throne.

"The Prince of Wales and the Rest of the Royal Family."

The President was sure this toast would be received almost with equal joy and satisfaction as the last. All the members of the Royal Family had endeared themselves to the people of the country. His Royal Highness the Prince of Wales was universally popular among all ranks. During the last year or two he had done splendid work among the hospitals of the United Kingdom, and he was President of the great national institution for the suppression of one of the worst scourges of humanity. During the residence of His Royal Highness the Duke of Connaught in Portsmouth, he obtained the golden opinions of all the inhabitants. He took a great interest in Portsmouth Hospital and in the charitable institutions of the town, and the President was confident it would have given His Royal Highness great pleasure to have been present that night if circumstances had permitted. He had in his pocket a letter from Colonel Egerton expressing regret that His Royal Highness was unable to be present on that occasion.

"The Army, Navy, and Auxiliary Forces."

Sir William King congratulated the President, and also congratulated Portsmouth, on the splendid address he had given them on the preceding Tuesday. He had been asked at the eleventh hour to propose this toast, which he was satisfied would meet with the hearty reception it so thoroughly deserved. He regretted that on the occasion when so many medical men were present from all parts of the world they had no big ships to show, because they were engaged on the manœuvres; but if they had not the navy, they had the seat of the navy, namely, the dockyard. With regard to the army, they knew how admirably it behaved in Egypt, and, in point of fact, wherever its services were required it was immediately to the front. As to the reserve forces, they needed no commendation. It was only a few weeks before the splendid spectacle was seen when 27,000 men were inspected by His Royal Highness the Prince of Wales in London, and they were prepared to do their duty whenever the occasion arose. He coupled with the toast of the Navy the name of Inspector-General Turnbull, with that part of it which related to the Army Surgeon-General Cuffe, and with that part which related to the Auxiliary Forces Surgeon-Colonel Sparrow.

Inspector-General Turnbull, R.N., said it was certainly a most unexpected honour bestowed on him, a superannuated officer, to be called on to reply to their enthusiastic toast of the Navy in Portsmouth, where, even during the present state of war, there were serviceable officers more competent to undertake this duty. He felt sure his fellow associates were Imperialists, and that as such they were all proud of their splendid navy, which recently enabled them to look with calmness and confidence on a most critical condition of international affairs. It was only requisite to name Mr. Goschen, Admiral of the Fleet Sir Frederick Richards, with his colleagues and Mr. Austen Chamberlain, to explain their confidence and feeling of security. The civil, and more especially the naval, members of the Association might, when it was remembered that at present an Admiralty Departmental Committee was deliberating on naval medical reforms—none too soon, he could assure them—feel confident that reform would result, and that service, which he and his brother officers were so proud of, would soon become one of the most popular of the Government medical services. The Chancellor of the Exchequer was the giant in the way when money was wanted, and he would urge all their civil associates to impress on their parliamentary representatives that, as Mr. Austen Chamberlain had expressed it, it was the bounden duty of the authorities who recruited thousands of seamen and marines for service in all climates, to provide them with the best medical and surgical care.

Surgeon-General Cuffe, replying on behalf of the Army, greatly regretted that, owing to the absence of General Sir Baker Russell, who had the Queen's commands to attend at Osborne, it fell to his lot to respond to this toast. He thanked them all very much on behalf of his brother officers for the kind way in which they had received the toast of the Army.

Surgeon-Lieutenant-Colonel Gordon Sparrow, V.D., returned thanks for the Auxiliary Forces. He said that during his twenty years' service he had seen many very great changes which were all for the better. The strength of the force, comprising the Militia, Yeomanry, and Volunteers, was 415,000 of all ranks. Portsmouth possessed three of the smartest regiments in the kingdom, numbering over 2,000, and comprising artillery, engineers, and infantry. Their efficiency was due to the fact that they formed part of the garrison, and they enjoyed the kindly help of their brothers in arms—the regulars—who were always ready to give a helping hand. Public opinion was kinder to the volunteers now than it used to be, and, after repeated discouragement, the Government had at last recognised their value as an instrument of national defence.

"The Bishop of the Diocese and Clergy of all Denominations."

Dr. Elliston (President-elect), who on rising was most cordially received, said that the Association wherever it met had the support of the Bishop and the clergy of the diocese. On that occasion he had to ask them to join with him in thanking the Lord Bishop of the diocese for his admirable and spirited sermon to the members of the British Medical Association. They looked to the clergy as professional brethren wherever they were and on whatever occasion to support them in the great movement in which they were all interested. They had to thank the great clerical profession, who carried on their duties for the advancement of all good, for being ever ready to come to their response for aid. He regretted that the Bishop of Winchester was not there, although they had present various members of the great clerical profession, but he asked them to return their sincere thanks to the Bishop of Winchester, to Canon Blake, and to Monsignor Virtue. They had also to thank the Rev. J. P. Williams and other members of the Protestant Free Churches in England.

Canon Blake thanked those present very sincerely for the kind way in which the health of the Bishop and clergy of the diocese had been proposed and for the very cordial way in which they had received it. He always felt that the work of the clergy and the work of doctors ran on parallel lines, and very often intersected each other, and that, therefore, they ought to live in the very closest sympathy.

The Bishop of Portsmouth said that the experience of half a century had convinced him that it would be the greatest mistake for the doctors and clergy to fall out with one another. During the 27 years he had worked as an army chaplain he was brought into constant relations with the doctors, and he had found the desirability of their reposing confidence in each other.

The Rev. J. P. Williams said that he was proud to be in some sense a representative of the great Free Churches of the town and country. He was there as the senior Free Church minister in the town, and on behalf of the thirty or forty Free Church ministers in the district and the hundreds of Free Churchmen whom they represented, he begged to thank them for the kind words which had been spoken and the kind sentiments which had been expressed, and also to assure them of the kindly feelings which they cherished in that direction.

"THE HOUSES OF PARLIAMENT."

Dr. D. NICOLSON, C.B., in proposing this toast said that it was impossible to have a toast more congenial to their feelings. He regretted very much that there was no member of the House of Lords or House of Commons present, but the exigencies of the public service required the presence of those gentlemen elsewhere, and on that account his duty and responsibility were correspondingly curtailed. He asked them to drink to the health of the "Houses of Parliament."

"THE MAYOR AND CORPORATION OF PORTSMOUTH."

Mr. RICHARDSON CROSS said that he need not trace the history of Portsmouth. He would only refer to the great distinction and the great position that borough had in the days of Queen Elizabeth. When they met in that magnificent town hall and municipal buildings, which were probably second to none in the country, they realised what the Mayor and citizens of Portsmouth had been doing for the ancient borough. His object in rising was to ask them to join with him in thanking the Mayor and Corporation for what they had done for the British Medical Association. The Southern Branch of the British Medical Association was recognised as one of the strongest and most important. They knew that Dr. Ward Cousins had done magnificent public work as chairman of the Council, and now as President, an honour which they all felt he deserved, and it was an honour to them that he had accepted the position. When the medical men suggested to Mr. Kimber, the late mayor, and to the Town Council that an invitation should be given to the British Medical Association the most hearty co-operation was given. He wished to be allowed as a humble member of the British Medical Association to thank the President, the Town Council, and the citizens of Portsmouth for what they had done for them on that occasion.

The toast was received with much applause.

The Mayor of PORTSMOUTH, who on rising was greatly cheered, said in responding to this toast he was unable to convey in words at any rate what the people of Portsmouth would have him say on that occasion. During the time he had the honour of occupying his present position, both this year and on a previous occasion, he had been called upon to welcome distinguished bodies and distinguished persons, but he could truly say on no occasion had he felt greater pleasure than in extending a welcome to the British Medical Association. The people recognised that no branch of science had made greater strides in recent years than that of medicine and surgery; the lay mind also recognised that the profession as a whole was working with the object of lessening human suffering and lengthening human life, and for those reasons if for none other the British Medical Association would be sure of a welcome at any large town in the kingdom. The Portsmouth Corporation, like corporations all over the kingdom, was a complex piece of machinery which had been running for centuries; the parts were now and then renewed but still it went on doing its work. He thought that the Portsmouth Corporation, and, indeed, all corporations, were doing the work which the Legislature intended them to do. The President in his address had referred particularly to the dwellings of the poor, and told them, and he (the Mayor) agreed with him that there was ample room for improvement; but, unfortunately, although there was a desire to improve the dwellings of the poor, they were hampered very much for two reasons—one was want of money, and the other was that there was too much law. If they could induce Parliament to pass an Act which would enable local authorities to deal with those unhealthy areas, they might depend upon it there was sufficient progressive feeling in Portsmouth and all large towns to take the matter in hand. Eight years ago, when he was Mayor of Portsmouth, he made a point of saying that during that year they must clear away a very unhealthy area in Portsmouth. They set to work, but they found themselves hampered on all sides, and it took them five years to deal with that particular area, and it cost five times the money that it should have cost. Therefore, if pressure could be brought to bear on Parliament to pass a short Act to give local authorities power to deal with such areas, he was perfectly certain they would be dealt with. The Corporation, as soon as it was hinted that the British Medical Association would be likely to come to Portsmouth, determined that if it came there the members should go away with happy recollections of the dear old town, and he was quite sure when they reached their homes they would say with reference to the attractions of the town and its local government—not that they were perfect, because they could not expect perfection—but that they would say at least that in Portsmouth "All 's well."

"THE BRITISH MEDICAL ASSOCIATION."

The Rev. GORDON LANG, Vicar of Portsea, said he was sure that he could safely bespeak a patient audience while he proposed this toast, because it might be described, he trusted, without undue flattery as that of "their noble selves." He wished that the honour of doing so had fallen into worthier hands, because the condition of his mind most unfortunately and the condition of his body, most fortunately, had kept him and medical science somewhat apart. His attitude to the profession, therefore, had hitherto been one of benevolent neutrality, but the circumstances of the last week, when science and human festivities had been so happily blended, had made it easier for a layman like himself to approach such a toast. He had expected beforehand that the air of Portsmouth would have been thick with the syllables of unintelligible words, and he had reserved for the President a counterblast of technical terms which he intended to deliver to him in the simpler form of his own native tongue, and to wish him to translate, in answer to the difficulties which he supposed his words would have occasioned him. He referred to the definition of her complaints which was given by a Scotch servant when her mistress asked her if she had suffered from any disease and she replied: "Yes, mum; I've had the wirls, the flabs, the scaw, the kinkhost, and the branks." But he found that his repartee was entirely unnecessary and pointless, and if it had not been for the sake of telling the story he ought not to have touched it that evening, because when he went as an ignorant outsider to their meeting he found no polysyllabic and unintelligible terms, but by the magic touch of their President he found that science had all the charm of a dramatic romance. Then again, he had observed in the course of the week that another anticipation of his had been frustrated. He had supposed that he should come in contact with men who knew all about the malignant resources of the common enemy whom they had now destroyed, or were on the point of destroying—the ever-present bacillus—and that he should meet men who had the sombre air of persons who knew great secrets; but, instead of that, he found that they had about them the air of an almost exuberant vitality. He came to the banquet with a certain apprehension. He felt that scientific and expert eyes would watch him to see what he did; but he found to his relief that the entire medical profession, represented at least by those around him, disregarded all those rules of diet which they were apt to lay down for other persons. Under those circumstances he felt greater ease in proposing the toast. It was not to be expected of him he should praise the British Medical Association for the care it had taken of the professional interest of its members. Naturally from his point of view the subject of the protection of fees was not one that could inspire any enthusiastic oratory: but their society, with its 19,000 members must do a grand service to the profession. He supposed that, as in his own profession, all professional men were apt to become liable to run in grooves; but, with the aid of their JOURNAL, the proceedings of their meetings could be made known to every practitioner in every part of the world, who would have an opportunity of feeling that he was not an isolated practitioner, but a member of a profession which was engaged in a constant inquiry into the causes and remedies of human disease. It was a great thing for a man to be kept abreast with the best line of thought in his own profession. There was another reason why he should propose with enthusiasm this particular toast on that occasion. It was recognised more and more now that disease and its treatment was a social question. More and more it was becoming obvious that the causes and remedies of disease could not be separated from questions of social and public policy. If he might venture for a moment to trespass on what might be controversial ground, he would say that it would be well to lay to heart what Sir Douglas Powell had said the other day,

that they should not be too ready to plunge at once from the laboratory into the excitement of social agitation, yet it must be of the greatest moment that they should be able to act upon the opinion of a body of experts in those matters. He noticed from the President's address that much had already been done to investigate the social conditions which favoured tuberculosis and other diseases, and he also noticed, as a sign that the Association was as wide as the empire, that they had devoted special attention to a matter upon which the future health of their race in many quarters of the globe largely depended, namely, the treatment of tropical diseases. Nobody could doubt that it was of the highest moment that the opinion of medical men on these questions of social and public policy should be focussed and find adequate expression in the resolutions and proceedings of great associations such as the British Medical Association. It was, therefore, in no spirit of mere post-prandial enthusiasm, but with a sincere belief in what he said that he asked them without any compunctions of self-conceit to drink very loyally and heartily to the toast of "The British Medical Association," which had done so much to keep the medical profession, not only in line with, but in the front of all movements that tended for the amelioration of the people. He desired to couple the toast with the name of Dr. Roberts Thomson, the President of Council.

The President of Council said that it had fallen to his lot very early in his professional career to have under his care an old man to whom it was necessary sometimes to speak rather strongly as to what he might or might not do, and when the old man thought his physician was a little dogmatic he used to say: "You are of yesterday and know nothing." That was his position that night. It was little more than twenty-four hours since he had been called to the post which he now had the honour to occupy, and he was rather tempted by his official youth and inexperience, and as he had not the toastmaster's voice, simply to offer thanks for the toast which had just been drunk. But the Vicar of Portsea had spoken so eloquently and kindly of the Association and its objects that he was tempted in a sentence or two to dwell on some of the thoughts that he had placed before them. He had told them that the Association now numbered 18,000 or 19,000. For what objects did such an Association exist? In the first place he might mention the annual meetings, and he was ready to aver that if they existed for no other purpose their existence would be amply justified. The Vicar of Portsea had spoken of the blending of science and festivity. Their ambition at the annual meetings was that there should be the maximum of scientific work combined with the maximum of social enjoyment. He ventured to think that that was so at all their meetings, and not the least so at this most important meeting, where, under the genial, kindly, and able presidency of Dr. Ward Cousins they were met. As to their scientific work they were met there in twelve Sections, and lest it should be thought that perhaps, tempted by the weather, or by all the many attractions which existed, their members forgot science, he might tell them his experience that morning. He tried to go to a Section to hear a discussion on a question in which he was interested; he was delayed by business, and when he got to the room it was so crammed that it was impossible for him to get an entrance. Points of vast importance had been dealt with in the various Sections at that meeting. They had that afternoon all listened to a most able address, and there could be no doubt of the importance of such an address and the great benefit which must follow from the subject having been so freely ventilated. As to the question of social enjoyment he must say that the magnificent and munificent hospitality which had been measured out to them would live long in the memory of those who were fortunate enough to take part in it. The most cordial thanks of the Association were due, and were heartily rendered to the Mayor and Corporation, and the people of Portsmouth, for all they had done. There were many other points which could be discussed, but he was sure at that hour of the night he should best consult their wishes if he simply in the heartiest way possible thanked the Vicar of Portsea for his kind words, and all their guests for the cordial and hearty manner in which they had received the toast.

"The President."

Professor Ogston rose with much pleasure to propose the health of their President, Dr. Ward Cousins. [Applause.] For that purpose he wished for the eloquence of a Demosthenes and the voice of a drill sergeant. He was sure that in their recollection of the meeting at Portsmouth the President would bulk largely in their minds. The admirable address to which they had listened on Tuesday, which was so different from almost any of the addresses they were accustomed to hear and to immediately forget, would long dwell upon their memories. It was a poem in prose, and touched in a most kindly manner upon all that had been done by other nations beyond their own, without losing the ring of true patriotism. All the arrangements that the President had provided for them had been phenomenal even to the weather; and in their name he begged to thank him for the kindness he had shown the Association, and for the interest he had displayed in the various Sections, where he had been omnipresent. He was quite sure that those who shook hands with him and felt the kindly pressure of his fingers would always have the happiest recollections of their President. They sincerely hoped his year of presidency would be a happy and remarkable one, and that he would find it useful as well as memorable, and one of which he would preserve the pleasurable recollection to the end of his days. [Loud applause, the company singing "For he's a jolly good fellow."]

The President begged to thank them all very heartily for the kind way in which they had received the toast. He could assure them that the distinguished honour they had conferred upon him in placing him in the Presidential chair of the British Medical Association would be remembered by him, and their kindness would be a solace and comfort to him as long as he lived. He was convinced that their visit to Portsmouth would do them a great deal of good. Last year they met in a northern capital and were in touch with much science and much literature and much learning, but during the last few days they had been in an altogether different climate, and he was glad to see them that night in such excellent spirits, and glad to see that the air of Portsmouth was so beneficial to them. [Applause.] He occupied the remarkable position of being the last whole President of the present century. His friend and able successor, Dr. Elliston, would be half in the 19th century and half in the 20th, and his first would be the last and his last would be the first. That position was one he was quite sure Dr. Elliston would be able to fill. As regards their visit to Portsmouth, it had been fortunately selected as their meeting place for the reason that they had had around them and as their colleagues and associates during the meeting so many able officers of the army and navy. [Applause.] They had had more opportunity of coming in contact with their colleagues, the medical officers of the army and navy, at this annual meeting than at any previous meeting that he could remember, and they had had the opportunity of congratulating them on many recent reforms, and also on the formation of that long-expected corps, the Royal Army Medical Corps. [Applause.] Their Association began as a very small thing, but it had grown and developed into a great organisation, and by it they were able to bring about the genuine aspirations of medical practitioners. Their Association had passed through many troublous times; they had gone through many storms and difficulties, and many of their veterans who had in the past raised the highest standard of professional enthusiasm had gone to their rest. Still they had not attained their zenith as an association. They were ever increasing in numbers, and that night could boast of an army of nearly 19,000 members, and although they would never see them in battle array, they could be thought of that night, scattered all over the world, fighting with human suffering and disease. No other association had ever had the power of consolidating the medical profession like the British Medical Association. Union was strength, and they might depend upon it that they must stand shoulder to shoulder and close their ranks, and not fight singlehanded. If they did stand together they might look for brighter days when a body of goodly members would not only express the opinion of all sorts and conditions of medical men, but when it would carry the moral power of the medical profession as a united body. But, after all, he thought they would agree with him that the bounds of their Association were even still broader. They were in touch with the medical profession all over the world, across the ocean, and beyond

the differences of nationality. They could boast that they were nearer and nearer each other, and that, in the grand march of science, they believed that, with medical science, international goodwill would be developed, which would help on the peace and progress of the world. [Applause.] He could assure them that he felt very much the kind remarks that had fallen from Professor Ogston. He congratulated them all on being in such excellent health, and he sincerely hoped that when they left Portsmouth they would carry with them the most pleasant recollections. [Applause.]

"OUR FOREIGN GUESTS."

Dr. DAWSON WILLIAMS, in proposing this toast, said he thought it might fairly be said that on that occasion the audience had been more liberal in their applause than in their attention, but he would ask them to bear with him whilst he gave them the last toast of the evening. Their Association was an association of British medical practitioners, but they were glad to recognise the great debt that they owed to foreign practitioners when representative foreign practitioners visited their shores. It had well been said that science knew no frontiers, and he thought it might also be said that the art of medicine knew no boundaries. If boundary questions arose, as boundary questions would arise (and he believed there was a boundary question at that moment somewhere near the North Pole), those questions would only make their welcome to foreign practitioners who joined their meetings the more cordial. A happier time had come in our relations with the great Republic of the West, and he thought that the British Medical Association might fairly claim that it had contributed to that better understanding, because year after year they had had the pleasure of welcoming members of the medical profession of America. He had the honour of coupling with the toast the name of a most eminent physician of the United States; an eminent professor and an eminent clinical physician, who had recently been called to fill the place of a remarkable man, an eminent professor and an eminent physician, the late Dr. Pepper, of Philadelphia. He coupled with the toast the name of Dr. Tyson of Philadelphia, well known to all British practitioners by his writings, whose personal acquaintance it had been a great pleasure to them to make at that meeting. He also had to couple with the toast the name of a representative of the medical department of the Italian navy, Dr. Rho of Rome. He thought it was very appropriate that the name of this medical officer of the Italian navy should be coupled with this toast in Portsmouth, the great port of the British navy. He therefore had much pleasure in giving them the toast of "Our Foreign Guests," coupled with the names of Professor Tyson (Philadelphia) and Dr. Rho (Rome). [Applause.]

Dr. TYSON said it was not necessary for him to say that he was proud to be with them on that occasion, and to receive the acknowledgment they had so kindly tendered him. He regarded the British Medical Association as a typical representative association of the world, distinguished alike for the eminence of its members and the nobleness of its aims. He regretted that he was not able, by reason of inexperience and inability, to respond appropriately to the toast in which he had been included, and especially did he appreciate his own insignificance when he recalled the marvellous address of their President, and the trenchant and able remarks of the proposer and seconder of the vote of thanks to him. He felt, however, that he could in his own way thank them for all their liberality in having extended to foreign visitors the privileges of that meeting, and a share of the pleasures which the hospitality and the many objects of great interest which that ancient town had afforded them. There was only one thought he would like to leave with them. It was in accord with some remarks which had been already made that evening, and that was the influence of science and of medicine on international relation. He thought he could best illustrate his meaning by narrating an incident which occurred in connection with the late Spanish-American war. About the time hostilities broke out, a medical congress was held in Spain, and was attended by an American delegate. Ministers were receiving their passports, and Consuls were invited to withdraw, many in danger of their lives; but this simple scientist was protected by his scientific brethren, and treated with the utmost courtesy throughout the entire proceedings. He thought that probably under no other circumstances could such a thing have occurred, although it seemed to him perfectly natural under the circumstances. The levelling effect of science, combined perhaps with that of commerce, would do more to bring about that hoped-for era, when there should be no longer any misunderstandings or wars between nations. They might have differences about the effect of salicylate of soda, but there was no doubt as to their opinion of the conduct of man towards man. Again he thanked them most cordially for having given him the opportunity of saying these few words, and he should always remember that occasion as long as he lived. For years he had been looking wistfully at the notices of the meetings of the Association for the opportunity which had now come to him. It was more than likely it would not be repeated in his life, and it would be therefore the more cherished as long as he lived. [Applause.]

Dr. RHO said: The hearty hospitality offered by the British Medical Association and the borough of Portsmouth to their foreign guests has been expressed in kind and flattering words. I cannot find terms equal to the feeling of gratitude which we should like to convey. As a child of sunny Italy, allow me to hail with Southern transport the hospitality of sunny Southsea. The coasts and cliffs of this noble land tell the history of England's marvellous expansion. In fact from these shores started the famous expeditions of Sir Francis Drake and a host of celebrated navigators who conquered the world and that sea power by which Britannia rules the waves. In this glorious conquest a nation may meet jealous and envious rivals, but there is a peaceful conquest in which there are no rivalries, and all civilised nations are united in the common interest of science. In such a conquest all people, all nations, bear the stamp of their peculiar character. The character of the British people is eminently practical, and therefore we find in their science a just equilibrium between theory and practice. It is greatly due to them if modern medicine is not only a pure science, but an art, the *ars divina salutaris*, as it was called by the ancients. Gentlemen, my toast is for the alliance of civilised nations in the peaceful conquest of all that is true and useful and noble in life.

THE NEW VACCINATION ACT IN OPERATION.

DIFFICULTIES OF THE PUBLIC VACCINATOR.

DR. RICE MORGAN (Morriston) writes: All public vaccinators, I presume, have had much the same kind of experience as myself. About the middle of June some very inferior lymph was sent out by the Local Government Board—the authorities admitting this; this resulted in a great many unsuccessful arms, entailing a great deal of extra labour. I will just give an instance of the number of miles I have had to travel over one case only, and this could be added to *ad lib.* if necessary. On June 14th I vaccinated M. T.; the house is just three miles away, hence the going and coming makes six miles. On inspection on the 22nd, finding it unsuccessful, I again vaccinated with a tube from the same number—namely, 150. This makes a total of twelve miles. On visiting it again on June 29th no marks were visible. Not thinking it likely it would prove twice unsuccessful I had no lymph by me; so I had to journey there on August 2nd, and of course I shall have to inspect it again next week. I find therefore by the time I have completed this case I shall have travelled altogether thirty miles, and, according to the scale of our Board, I shall be allowed the fee of 5s. for vaccination *plus* 1s. the capitation fee. Yet I have no remedy against the Local Government Board for defective lymph and the extra mileage in consequence; nor will our guardians allow anything for the extra time and trouble.

PRIVATE PRACTITIONERS AND PUBLIC VACCINATION

GENERAL PRACTITIONER writes: Allow me to give more information respecting the working of the above Act in a rural district. When the parent goes to the registrar, "who is the vaccination officer," for the purpose of registration of the child, the vaccination officer gives his advice on the subject, and practically gives one to understand that only the doctor appointed can vaccinate; in fact, here it amounts to touting for the medical officer. I have not seen any mention in the BRITISH MEDICAL JOURNAL of this grievance; but such is the case in this district. With regard to the number of marks, the public vaccinator may do four, but how many of these actually develop? From my personal knowledge frequently two or three of these marks have been washed off directly the doctor left, and only one has taken, and yet these are signed as successful vaccination by the public vaccinator. And if the children are vaccinated by their own medical attendant in two places and both develop, he is considered as not carrying out the law. The Local Government Board has stated that one mark is sufficient for legal vaccination. I am glad to see private practitioners ventilating their grievances on the above subject, and I think, if the subject were brought forward for discussion at all the Branch meetings of the Association it would do some good. What are the remedies? In my district with the larger number of patients it means vaccination gratuitously,

which I am adopting, instead of lowering my fees for those of the working class. The question arises, Am I right in doing so? The only other suggestion I can offer, "under the present state of the law," is for the private practitioner to call on all his cases before the three months, and vaccinate the child, so as not to allow the public vaccinator an entry. This will necessitate a lot more work, but I consider it the only way to keep your patients.

THE PLAGUE.

INDIA.

Poona.—The plague continues to spread in Poona to an alarming extent. During July 29th and 30th 360 cases occurred, and 317 deaths. Five Europeans are numbered amongst the victims: Lieutenant MacLeod, Miss O'Gorman, Mr. and Mrs. Stephens, and Miss Bartley. Of these, the last named is reported to have died. The larger number of cases have occurred in the city, but the cantonment is also seriously stricken. The dryness of the season is causing great distress, and, as the meteorological conditions indicate the close of the monsoon, the prospects are considered ominous.

Bangalore.—Plague has reappeared in epidemic form in Bangalore, and a great exodus of the inhabitants is reported.

PERSIA.

Bushire.—The mullahs and the people of Bushire telegraphed to the Shah, on July 25th, demanding the abolition of the plague measures. The populace have wrecked the telegraph wires, and so threatening is their attitude that the British Consul has advised his countrymen to avoid the native town.

EGYPT.

Alexandria.—During the week ending August 2nd 6 cases of plague occurred in Alexandria. Since the beginning of the outbreak 37 cases have proved fatal, 39 have recovered, and 4 cases remain under treatment. The sanitary authorities have the work well in hand, and no effort is being spared to eradicate the disease.

HONG KONG.

A marked decrease of plague in Hong Kong is reported, during the past week only 30 cases and 30 deaths being officially reported. It is only two weeks ago since we had to report over 100 deaths a week. The officials hope that the outbreak will soon entirely disappear.

MAURITIUS.

A telegram has been received at the Colonial Office from the Governor, stating that there were 52 cases of bubonic plague there during the past week, 37 of which proved fatal.

ASSOCIATION INTELLIGENCE.

NOTICE OF THE NEXT QUARTERLY MEETING OF COUNCIL.

A MEETING of the Council will be held on October 11th, 1899. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, September 21st, 1899.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NORTH OF ENGLAND BRANCH.

THE thirty-fifth annual meeting of this Branch was held at Middlesbrough-on-Tees on July 20th, the president, Dr. ROBINSON, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Secretary's Report and Financial Statement.—The Secretary's report and the financial statement for the past year were read and accepted.

New Members.—The following gentlemen were elected members of the Branch: Drs. M. Bruce, C. Kemp, A. Paget Steavenson, W. H. Vickery, J. Craig, J. P. Elliot, W. Fowler, T. Yeates, H. Scurfield, J. McLachlan, R. Forsyth, A. Fairlie, D. K. Muir, W. Hardcastle, T. Aitchison, R. T. Manson, H. J. Mathews, E. P. Pentony, D. G. Fife, C. V. Dingle, and H. K. Young.

Election of Officers.—The following were elected officers of the Branch for the ensuing year 1899-1900: *President:* Dr. S. Walker, Middlesbrough; *President-Elect:* Dr. R. S. Peart, North Shields; *Honorary Secretary:* Dr. T. Beattie. *Council of Management:* Dr. D. Drummond, Dr. G. H. Philipson, Mr. G. E. Williamson, Dr. Wm. Robinson, Dr. J. Murphy, Dr. W. Mearns, Dr. J. W. Blandford, Dr. G. Middlemiss, Dr. M. Wardle. *Representatives on Council of Association:* Dr. J. Murphy and Dr. T. Beattie. *Representative on Parliamentary Bills Committee:* Dr. A. Cox.

Induction of New President.—Dr. Robinson, the retiring president, then vacated the chair and introduced the president for the ensuing year, Dr. S. Walker.

President's Address.—Dr. S. WALKER delivered his presidential address upon the subject of Co-operation in the Medical Profession, in which he advocated the formation of local societies in every town and district for mutual ethical improvement and education. And in the consideration of such co-operation dealt with the following matters amongst others: Medical practitioners and representation on the General Medical Council; the assistant problem; medical advertising and unprofessional conduct; the relationship of practitioners towards one another; the relationship of practitioners and consultants; the abuse of specialism; medical fees; the suppression of quackery.—A hearty vote of thanks was accorded to Dr. Walker for his able address, which was followed throughout with the closest interest.

Entertainments by President.—After the meeting the President entertained those present to afternoon tea at his residence and to dinner at the Erimus Club.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular monthly meeting was held at the Royal Society's Room on Friday, May 26th; Dr. E. T. THRING, President, in the chair. There were also 42 members present. Visitors: Drs. Allen and Levy.

Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The PRESIDENT announced the election of the following members of the Branch: Drs. H. G. Bennetts, Thos. Davies, R. H. Jones, J. P. Hocken.

Papers.—Dr. SPENCER read a paper on the Epidemics of 1898. Drs. TIDSWELL and J. B. NASH discussed the paper.—Dr. F. NORTON MANNING read a paper on the Immediate and Ultimate Treatment of the Inebriate. A discussion ensued, in which Drs. CRAGO, WEST, ASHBURTON THOMPSON, THRING, CHISHOLM, F. H. QUAIFE, TAYLOR YOUNG, MILLS, and W. H. GOODE took part. Dr. MANNING replied.

Specimens.—Dr. J. B. NASH exhibited specimens of (1) Kidney with attached cysts and contents; (2) Multilocular Ovarian Cyst; (3) Gall Stones from gall bladder and cystic duct.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

Poor-law Sanatorium for Tuberculosis.—Proposed Fever Hospital for Colwyn Bay.

THE three unions, Liverpool, West Derby, and Toxteth, have conjointly purchased a site near Heswall for the purpose of erecting a sanatorium for the treatment of consumption. Fifteen acres of land overlooking the river Dee have been purchased. The Local Government Board has given its approval to the scheme, the site is chosen, and the building will be proceeded with almost immediately. The scheme at present in hand provides for thirty beds.

The Colwyn Bay Urban District Council has made application to the Local Government Board for the necessary powers to enable it to borrow £2,700 for the purpose of erecting a fever

hospital at Tynterfyn, a farm situated at the back of the town at an elevation of 300 feet above the sea. The question of providing hospital accommodation for infectious diseases has been occupying the Council for several years, and hitherto the difficulty of obtaining a suitable site at a reasonable figure has proved insuperable. In favour of the site now proposed it is alleged that it is at a suitable distance from dwelling houses, that it is approached by a good road, though one over which there is no great amount of traffic; that it is within easy reach of all the medical men practising in Colwyn Bay and Old Colwyn; that it has an excellent water supply, and that it admits of satisfactory provision for drainage. The farm at present belongs to the trustees of the Tynterfyn Charity, who are willing to transfer it to the Council in consideration of a perpetual rent charge of £12 per annum. The Charity Commissioners are prepared to consent to this, and only the approval of the Local Government Board is required for the sale to be completed. Dr. Frazer, Medical Officer of Health, supports the scheme, which is, however, opposed by the majority of the medical practitioners in the town, who consider that the site is not the best that could be obtained, cast doubts upon the purity of the water supply, and consider that it would be very inconvenient for them to attend there. Dr. S. W. Wheaton has held an inquiry on behalf of the Local Government Board, but the decision of the latter body is not yet made known.

CORRESPONDENCE.

THE PROPOSED CONCILIATION BOARD.

Sir,—I have for years read the correspondence that has appeared in the columns of the British Medical Journal with respect to club and contract practice, and have also carefully scrutinised what has appeared in connection with the new idea—namely, the proposed Conciliation Board. The name itself suggests to my mind compromise on the old lines, which will leave neither side satisfied. I am decidedly of opinion that both sides are on the wrong tack, and take leave to say that the present financial arrangements between clubs and doctors are fundamentally wrong, and can never be worked harmoniously. I devoutly hope that the bad method of the present financial plan will, now that the subject is up for discussion, receive its *coup de grâce*, as it is high time a better method took its place.

The method by which the doctor receives so much per head or a salary, irrespective of the amount of work and materials that may be required of him, is undoubtedly a bad one for the doctor, and I am satisfied it is not a good one for the clubs or the individual member. Neither is it fair to society at large; numerous club members are passed on to hospitals who ought to be treated at their own homes by the club doctor. The present system, besides being wasteful, tempts the individual member to get what he considers his full value, and it tempts the medical man to get through this work in the easiest and cheapest way he can. The doctor is worried by unnecessary and trivial demands upon his time and materials; and the neurotic, the faddist, the malingerer practically manipulate the doctor at their pleasure, until all the likeness he once possessed to a self-respecting, kindly, and courteous professional gentleman is sadly smeared, if not entirely wiped out. Payment for work done is the only fair and pleasant way to conduct practice, be the payment ever so modest; and I hope the Conciliation Board will insist upon this method, which is honestly and fairly carried into effect by the National Deposit Friendly Society. In the district in which I practise the National Deposit Society numbers just over 200 members, and the amount paid for medical attendance for the last financial year was £53. This works out just at the rate of 5s. per head on the old method of contract, and is therefore not disadvantageous to the friendly societies, but it is very greatly advantageous to the doctor.

It is not necessary to explain in detail the method of this Society. No doubt it is well known; suffice it to say that over and above his usual contribution the individual member has to refund to the Society one-third of his doctor's bill, those who have not been sick only pay their usual contribution to the funds, therefore consultations and visits for trivial ailments are rare, the neurotic, the faddist, and the malingerer has to first of all consult his pocket and therefore never consults the doctor, the fees are the same as the usual ready money fees in the Lancashire and Yorkshire manufacturing towns, and are paid direct by the Society, who is responsible for them. Another great advantage is that the individual member can have any doctor he likes, who will take these mitigated fees, and, on the other hand, the doctor can refuse any case he does not care to attend; thus club patients under the old *régime* become private patients, and there are no disputes as to the bill, inasmuch as the terms are prearranged.

I am anxious to see the old lump contract] system ended. It breeds unpleasantness, indignities, and humiliations for both doctor and patient, and I beseech the Conciliation Board to end it now they have the opportunity at hand, and I cannot think that other friendly societies could refuse to try a system which works so pleasantly and successfully for the National Deposit Society.—I am, etc.,

July 29th. Spero.

Sir,—Dr. Leslie Phillips has made an important hit in the discussion on this subject when he says: "It is much more for those members of the profession outside medical aid associations than for the medical officers of the associations to say what is right and proper, and the suggestion that mere increase in payment will settle this question is not worthy of serious consideration," and it appears to me that, if there is to be a Conciliation Board, the normal practitioners ought to have three members on it and the club doctors two, in order that normal practice and the honour and dignity of the profession may be protected. If this were not done, club, medical aid, and dispensary doctors might virtually make terms with those who are described in Dr. Wolstenholme's letter, and so "give away" the normal practitioners, and the end of the business would be worse than the beginning.—I am, etc.,

Manchester, July 29th. G. H. Broadbent.

P.S.—By "normal practitioners" I mean those highly-favoured gentlemen who have no clubs.

Sir,—Your correspondent "Ion" and the medical aid associations forget one important fact. Medicine is not at present adopted as a career just for the sake of the position it gives, or for the scientific interest of the work it entails. The Bar, on the other hand, does attract many independent men who know they will never appear in court. But then no one goes to the Bar without being the possessor of an independent income. Would the public at large like to see the possession of a sound and scientific knowledge of medicine and surgery restricted to those alone of the profession who had private fortunes of about £500 a year? I imagine fees would then rise at once to a minimum of half a guinea, no accounts would ever be sent in and no credit ever given, the open surgeries would disappear, and the clubs no less than the club surgeons would vanish.

No man, unless independent of his profession, has ever yet given more than a shilling's worth of work for less than a shilling without ending in physical or financial bankruptcy. The thing cannot be done, and the attempts of the clubs to get out of their surgeons a shilling's worth of work for sixpence leads only to their surgeon giving them exactly what they have paid him to give them—half as much, that is to say, as they think they are getting out of him. I do not say the club surgeon intentionally shirks his work, but I do say that it is not likely that (while human nature remains such as it is generally known to be at present) any man who feels he is being underpaid, overworked, and insolently treated is likely to do as much or to think as much for his patients as one who, in trades-union language, is getting a fair day's wage for a fair day's work. When the millennium comes things may be different, but not in our time.—I am, etc.,

July 30th. M.A.Oxon.

Sir,—Mr. Bryant, in his interesting address, refers to the motion of the General Medical Council disapproving of medical practitioners associating themselves with medical aid associations, and hints that this may blossom into something stronger if a special case of systematic canvassing comes before the notice of the Council.

What about friendly societies? Do they not canvass? It

seems to me they all do, and parade among their advantages the privileges of medical attendance and medicine. Do they not demonstrate in our streets in their symbolic decorations to draw members? Do they not circularise the district with handbills, whereon sometimes is the name of their medical officer? Do they not give prizes to those who bring the largest number of new members? These will be within the experience of most club surgeons.

If the Council could only adopt the suggestion, and remove from the *Register* the name of the practitioner who does friendly society work under these circumstances, or under circumstances of inadequate remuneration, the question would be solved. Friendly society surgeons would, I fancy, rejoice to receive such an ultimatum from the Council.

The Conciliation Board may be a means of mutual enlightenment and ultimate good. Could not one of its members be one of the members of the Council?

Mr. Bryant also refers to local organisations with professional and social objects. I understand there are already several of those here, where all the practitioners in a district meet monthly in each other's houses. I also understand they are doing good work, such as drawing up a scale of fees, promoting mutual understanding, harmony, and uniformity of action. If these were universal in certain districts and guided by a central executive, they would become a power in the land. The advantages of membership could be such that outsiders would be constrained to join. Thereafter we can revive the guild hall or club house.—I am, etc.,

Glasgow, Aug. 2nd. M.B.

THE MIDWIVES BILL.

Sir,—Mr. Horsley has favoured me with a reply to my letter, but I hope I am wrong in thinking from the tone of it that he regarded my remarks as being anything resembling a personal attack. My principal reason for writing at all was to point out what I believe—from twenty-seven years' practical experience of midwifery, during which time I have frequently come into contact with midwives, and because I prefer this experience to all the papers on the subject, which by-the-bye I have read—to be a fallacy, that the Legislature could rely with certainty on securing the services of the greater part of the medical profession to assist midwives in their abnormal cases.

Of course I do not "consider it possible for the profession to stop all midwifery legislation by blank negatives" or by any other means, as I do not know that the profession could command a majority in the House of Commons, but I am more in favour of the blank negative than of a half-and-half measure, which, while it accedes to the wishes of the midwives, attempts to conciliate the medical profession, and all the time assists the former to insert the thin end of the wedge. Having gained the distinction of an Act of Parliament the next endeavour would be to get the Act amended. Although Mr. Horsley has denounced the blank negative method as absurd, yet with a Conservative majority in the House of Commons I should have liked to have seen that method tried. It may be said that this would only stave matters off for a time, but then so would the other method, because any Bill that can be passed may be amended. Mr. Horsley has evidently failed to grasp one fact, as I never said he had changed front, only that he had defended himself against a charge of change of front. He also thinks the protective clauses sufficient, and calls on me to show how they are not. I have only concerned myself with one clause, and think that in that case I have done so; if I have not, I cannot do better than refer him to the letter on the subject next to his in this week's Journal.

I thought the point of "covering" was already disposed of. I fail to see how assisting a registered person can be "covering." With regard to the name, either "midwifery nurse" or "midwife" will do for me, but I should like to know how I misrepresented Mr. Horsley in this matter.

Lastly, as to a diploma, certificate, or copy of register, or whatever document may be given signifying that the midwife is registered; these may be nicely worded restricting the advantages conferred on the person registered, but it is one thing to restrict a person on paper and another thing altogether to prove an infringement of that restriction, as those members of the profession who attempt to get a conviction before the General Medical Council are well aware. I do not assess the value of this document, whatever form it may take, at the number of square inches or amount of flourishes it may contain, nor on the fact that the midwife may or may not have "something to frame and hang up," but at the amount of encouragement and support she would receive as a class by an Act of Parliament; and worse than that, that the Act was obtained by the consent and assistance not only of the medical profession, but of many of the leaders of it. If the Bill approved by the British Medical Association, which I have not read, really provides that no document shall be issued signifying that the midwife is registered, then I think this provision renders the whole Bill antagonistic to the principal argument that has ever been advanced in favour of registration—namely, that a Bill was required to enable the public to distinguish the registered and capable from the unregistered and incapable midwife, for it would be unreasonable to expect every parturient woman of the poorer classes, for whom this Bill is specially provided, to purchase a copy of the register for the current year.

In making these remarks I do not attempt to criticise any person, but merely the necessity for legislation on this subject.—I am, etc.,

Holloway, N., July 30th. Frank Greaves.

Sir,—I shall be much obliged if you will allow me again to state that the Midwives Bill now before Parliament is not "the Bill of the Midwives Institute," nor is it promoted by us, as would be gathered from the statements made at the annual meeting of the British Medical Association at Portsmouth and reported in the British Medical Journal of August 5th.

The Midwives Institute have promoted no Bill since that introduced by Mr. Fell Pease in 1890, in consequence of which the Select Committee on Midwives Registration was appointed. From that time the Bill has been in more influential and competent hands than ours, and our part has been limited to sending a representative to the Bill Committee.—I am, etc.,

Rosalind Paget,
Representative of the Incorporated Midwives Institute on the Midwives Bill Committee.

Buckingham Street, W.C., Aug. 7th.

MR. STEPHEN COLERIDGE AND THE POPLAR HOSPITAL.

Sir,—I am delighted that any action of mine should have "afforded genuine diversion" to the National Antivivisection Society. They must be hard up for amusement in Victoria Street. Let me see if I can give them a little more.

Mr. Coleridge knows that I am in favour, as his Society is, of putting vivisection under proper and efficient restrictions—we may differ as to what is covered by the words "proper and efficient"—and that I am not in favour, nor is his Society, of the total abolition of vivisection. There is no "confusion" about this. Control, and not abolition, is the policy of his Society as declared at the meeting held at St. James's Hall, and if Mr. Coleridge is fighting really for total abolition under the pretence of fighting merely for proper control he is fighting for a policy which the Duke of Portland, as Chairman of that meeting and Vice-President of the Society, declared to be no longer the policy or aim of the Society.

The Society may know what it wants, and it may know how to fight for it, as Mr. Coleridge writes, but it does not fight in a way which commends itself to most people if it allows one policy to be openly declared to be its policy, and thereby attracts many of the public, while all the time it is really aiming at another and different policy.

Similarly, I dislike the way the resolution passed by the Poplar Hospital was used. The "admired confusion" into which I am thrown by the fact that the resolution was used to divert subscriptions from other hospitals is the confusion anyone experiences when the unexpected happens; for example, a stab in the back. I do not mean by this that Mr. Coleridge has in my opinion been guilty of anything unfair from his point of view. He no doubt fully intended so to use the resolution, and he was therefore quite justified in doing so. All I can say is I never dreamt of it being so used. He cannot really think, when he is out of his war paint, that any Chairman of any hospital could honourably allow any action of his own hos-

pital to divert money from another hospital doing equally good work. There is plenty of wholesome rivalry between hospitals, but the rivalry takes the form of each hospital trying to do as well or better by its patients than any other, and thank goodness there has never yet arisen a jealousy amongst us at the success of any one hospital, nor has any one hospital ever yet tried to damage another to its own advantage.

I had hoped to have been able to save the souls of those who have never so far subscribed to hospitals at all thinking that vivisection took place at all of them, by telling them of a hospital where there can be no vivisection. Now I fear they will have to start again the Antivivisection Hospital, on the staff of which not one single honourable member of the medical profession would serve.

As a matter of fact, the result of Mr. Coleridge's circular to the subscribers of the West London has only been that one lady has said that she will divert her £5 subscription next year. However, the resolution passed by the Poplar Hospital has now been rescinded, and any money received will be returned. Returning money is, I confess, a new experience to me.—I am, etc.,

SYDNEY HOLLAND.

44, Bryanston Square, W., July 31st.

P.S.—Everybody ought to read the cogent article on vivisection in the July *Edinburgh Review*. There both sides are put fairly and judicially.

RECIPROCITY WITH FOREIGN COUNTRIES.

SIR,—The recent discussions of the General Medical Council of the question of medical reciprocity have suggested to me the following points:

First, it is assumed that in accepting reciprocity we should be conferring a favour on foreign countries. The latter regard the question in precisely the same light, and so convinced of it are their more important members, namely, France, Switzerland, and Germany, that they refuse to entertain the question of reciprocity with England. In order to practise even among his own fellow countrymen in the above countries, the British practitioner must pass a critical examination in a foreign language. The question is a mercenary one, and amounts to this: That when a given country discovers it can draw the British public to its health and pleasure resorts without the support of the local British practitioner, it bows the latter out and diverts fees into the pocket of the native practitioner.

The circumstances which surround the British practitioner abroad are entirely different to those which surround the foreign practitioner in England. On the one hand, large numbers of the British public frequent foreign health, pleasure, and residential resorts, and prefer the services of medical men of their own nationality in case of illness. This discloses a wide field of practice to the British practitioner on the Continent, to which access is now gained solely by a narrow gateway fenced around by stringent legal restrictions. Admit reciprocity, and the field would be practically open.

England, on the other hand, is not a health and pleasure resort to the foreigner in the same sense as the Continent is to the British public. Moreover, the foreigner is more willing to adapt himself to the institutions of the country which he temporarily inhabits, and readily seeks advice from the English physician. If he comes to stay, he still more tends to adapt himself to the custom of his adopted land.

Hence, should reciprocity be established between England and Continental countries, the efflux of British practitioners to the Continent would probably be far greater than the influx of Continental physicians to England.

But there is no probability of reciprocity being established, because the Continent will not entertain it. The Englishman abroad is a profitable commercial article, and reciprocity would mean immediate loss.

Italy alone of the important Continental States courteously permits qualified British physicians to practise among foreigners within her confines. To recognise such freely-granted concession by extending a like courtesy to Italian physicians would be dignified and expedient on our part, especially if done before pressure is brought to bear by the Italian Government. Such concession need be no special relaxation in favour of Italy, but merely an application of the general rule of reciprocity.

The second point to which I wish to draw attention relates to the "security as to the standard which foreign practitioners had passed." It should be borne in mind that we alone of the more advanced European States have a number of licensing corporations varying in the severity of their examination tests, while each member of the more important Continental States has the "one-portal" system. In all cases the Government sets the standard which alone confers the right to practise. In France, Germany, Switzerland, Italy, Sweden, Denmark, and probably elsewhere, the course of training is prolonged and thorough. The Continental medical student enjoys advantages, especially in the field of modern research, which are denied to us, and his education is progressive and thorough from the school room to the bedside and operating theatre.

In conclusion, I do not think the Continental practitioner would disgrace his prototype in England either in point of general education or of technical knowledge; nor do I think that reciprocity would lead to overcrowding at home, but it probably would lead to overcrowding of foreign health resorts by British physicians, as is actually the case in Italy at the present movement.

In dealing with the question of reciprocity I should first, however, recognise our Colonial obligations *qua* reciprocity, and, secondly, accept reciprocity with foreign countries having an adequate curriculum and State-regulated examinations.—I am, etc.,

STUART TIDEY, M.D.Lond., M.R.C.P.Lond.,
Maloja. Diplomate in Medicine of the Swiss Federation.

ILLEGAL CERTIFICATES OF PROFICIENCY IN MEDICINE, SURGERY, OR MIDWIFERY.

SIR,—As signatories of those memorials, who have also some personal responsibility for their terms, we desire to be permitted to ask Mr. Horsley through your columns in what respects the "important matter" of "illegal certificates of proficiency in medicine, surgery, or midwifery" was in his opinion "prejudiced," as he states in his "Sixth Report," by "the language and terms of the memorials presented to the Council from the Corporate and Medical Reform Association." That Association in the first instance alone raised the question, brought it diligently before the profession, and obtained to its two memorials the phenomenon of united action of our direct representatives, the support of some fifteen medical societies all over the country, and about 1,200 signatures, including those of some 200 laymen of good position, and of such leading men in our own profession as Mr. G. Anderson Critchett, now President of the Ophthalmological Society, U.K.; Mr. H. E. Juler, Dr. Argyll Robertson, Mr. Brailey, Mr. John Couper, Mr. Adams Frost, Dr. Robert Barnes, Honorary President; and Dr. Macnaughton Jones, President of the British Gynæcological Society, and many others of scarcely less eminent position. The *Lancet* was won over to at least a friendly view of the resistance to such certification. The memorials and measures in support of them have recently obtained the unanimous approval of four Branches of the British Medical Association, inviting the co-operation of other Branches and the Council.

In the General Medical Council not one phrase or word of the memorials was criticised or objected to; and, so far from the Executive Committee reporting that "nothing ought to be done," that Committee, as we understand its meaning, reported, and the Council resolved, that charges should be entertained against registered practitioners for improper conduct in reference to such certification of opticians—and impliedly with reference to such certification of midwives—but that there was a Bill before Parliament, which is not now the case.

It is a moderate claim that the direct representatives have never on any subject had behind them, in questioning the conduct of the Council and inviting it to reconsider its position, such a body of general and influential support. Those brief memorials were a mathematically correct demonstration of the illegality of such certification, and of that of the Council's action in drafting the licence of the London Obstetrical Society and sanctioning that licence and others, with a formal prayer, respectful but definite, that such illegal sanction be rescinded.

Is it possible that Mr. Horsley does not regard such sanction

by the Council as illegal and calling for rescission? or considers that, if illegal, the Council ought not to be shown that it is so, or rescission of such illegal sanction be prayed for in the memorials?

Our desire is to heartily support combined action of our direct representatives against the overwhelming majority that opposes them. Mr. Horsley will greatly assist us in this, we hope, most proper object, by explaining in what respects the memorials were, in his opinion, faulty.—We are, etc.,

James A. Myrtle.
F. Lorimer Hart.
R. F. Tomlin.
Tom R. Taylor.

Guilford Street, W.C., Aug. 9th.

THE DUTY OF THE PROFESSION WITH REGARD TO ALCOHOL.

Sir,—I regret to say that through a careless but quite unintentional omission on my part, due prominence was not given to the work of Mr. W. L. Brown on "Inebriety amongst the Ancients and How they Cured it," as the source of my remarks in the historical part of my address as printed in the British Medical Journal of July 22nd. The source of my information was given at the meeting, but I omitted to note it in my paper before I placed it in the hands of two medical friends to have it forwarded to you as I was leaving for the Continent the morning after our meeting. I did not return until Thursday, July 20th.

Trusting this explanation will do tardy justice to Mr. Brown and remove any suspicion of unfair journalism on your part, or purposed plagiarism on mine.—I am, etc.,

Bolton, July 28th. Charles Macfie.

Sir,—With reference to Dr. Archdall Reid's letter in the British Medical Journal of the 29th ult., I should like to point out that according to recent French medical literature on the subject alcoholism is making alarming progress in France, and that nation far from being one of the most temperate is becoming one of the most intemperate.—I am, etc.,

Upper Gloucester Place, N.W., Aug. 1st. George Pernet.

MEMBERS' (R.C.S.) GOWNS.

Sir,—I have noticed the correspondence *re* Members' (R.C.S.) gowns. It is also being noticed by others. A personal friend, who holds the licentiateship of a Scotch College, told me the other day that if the Members of the Royal College of Surgeons obtained the right to wear a gown, he was sure his brother licentiates would fight for the same thing. Where would it all end, and where would the honour and glory come in?

Dr. Alderson suggests that the gown might be worn in our consulting rooms. Well, the men holding the higher university degrees or diplomas do not wear their gowns under such circumstances, nor are they likely to.

Indeed, it seems to me that if the Members of the Royal College of Surgeons, and probably the licentiates of other colleges, are to wear gowns, and use them on every possible occasion, even when they are seeing patients in their own houses, the hall-mark of a distinguished doctor will be the fact that he is not anxious to be always parading his dignity or his degrees. A solicitor not possessing a university degree would be as entitled as are the Members of the Royal College of Surgeons to the wearing of a gown, but the use of it would be ridiculous. I have mixed freely during the last 20 years with the profession, and I have never seen a medical man gowned outside university precincts or a lecture room. In our consulting rooms, forsooth, it makes one think of the jackdaw strutting in peacock's feathers.—I am, etc.,

July 31st. M.R.C.S.

THE POLLUTION OF THE RIVER LEE.

Sir,—Will you kindly grant me a few lines to reply to Dr. Shelly's vigorous attack on my letter in the British Medical Journal of July 22nd? As a member of the Hertford Corporation he no doubt is well acquainted with the facts of the case, but he can hardly go so far as to say that because Mr. Justice Williams sixteen years ago found that there was no traceable pollution, and that the Hertford Corporation thoroughly and effectively treated the sewage, the same happy state of affairs exists at present. That a nuisance does exist I most emphatically affirm, and notwithstanding what has been said with regard to the treatment of the Hertford sewage, the emanations from the Manifold Ditch are at times most offensive. I am confident that anyone passing that way during the present hot weather will confirm this statement. This may not amount to "a nuisance at common law," but it is a state of affairs which should not be tolerated by any of the corporations interested. If this method of dealing with sewage is so innocuous as Dr. Shelly would have us believe, why is it not more extensively adopted all over the country? In fact, why is it not suggested in place of the very expensive scheme now under consideration for dealing with the whole of the sewage of the Lee Valley? It is quite evident that an astute body like the Lee Conservancy would not have entered upon an expensive lawsuit in the year 1884 had they not considered that some nuisance at the time existed, and in my opinion it has increased ever since. I am perfectly well acquainted with the learned judge's conclusions in this case, and also the nature of the evidence that led him to these conclusions.

With regard to the latter part of Dr. Shelly's letter, I can only say that I have had many more opportunities of examining the banks of the river in the part alluded to than he has had, and still adhere to the opinion I expressed before.—I am, etc.,

Ware, July 31st. Alex. J. Boyd.

MEDICAL MEN AND THEIR GRIEVANCES.

Sir,—I cannot intelligently follow all the demands put forward by the different writers to the British Medical Journal, but I am sure that all the clamourings about our grievances will not bring them any nearer any remedy until medical men can sink their minor differences with their own neighbours, and sit down together to work for their own mutual good. In going about amongst medical men in this county, it is most disheartening to find such petty differences keeping medical men apart, and not willing to act with their neighbours to obtain increased remuneration for their work. If doctors will not learn the principles of union, they may go on clamouring about their grievances until doomsday. In the fable we are told that the frogs clamoured for a king, and they got a stork for their king who swallowed up the frogs. I will leave others to say who corresponds to the stork in our case. I do not believe in a Conciliation Board to deal with friendly societies (the profession should take a higher stand than this), but I do believe in medical unions being formed in each county, and the scale of fees drawn up and demanded, collectively and individually, and not to go, hat in hand, to ask what will you give us?—I am, etc.,

Edward Jepson,
Durham, Aug. 1st. President County of Durham Medical Union.

CLIFFORD ALLBUTT'S "SYSTEM OF MEDICINE:" A CORRECTION.

Sir,—In your review of the eighth volume of Clifford Allbutt's *System of Medicine* you refer to the article on Idioglossia which I contributed; and on my authority you state that the name was given to it by the late Dr. Hadden. I regret very much that I have fallen into error. The name was given by Dr. Hale White and Mr. Golding-Bird in a paper which they read before the Royal Medical and Chirurgical Society in March, 1891, and was not used in Dr. Hadden's excellent account of two cases which appeared two months earlier in the *Journal of Mental Science*, January, 1891.

In justice to those who first suggested the use of the term, I shall be obliged if you will find room for this correction.—I am, etc.,

Wimpole Street, W., Aug. 5th. W. S. Colman.

THE PLAGUE IN EGYPT.

Sir,—As regards the statement in the British Medical Journal of July 22nd, I never, either officially or otherwise, attributed the low mortality from plague to the mildness of the disease, but to the fact that we are succeeding in getting hold of all cases, mild as well as severe, which naturally reduces the proportion of deaths to cases.—I am, etc.,

J. G. Rogers,
Cairo, July 28th. Director-General Sanitation Department.

VENTRAL HERNIA AFTER LAPAROTOMY.

Sir,—In the report of the meeting of the British Gynæcological Society on July 13th I see that Dr. A. Lapthorn Smith (Montreal) considered that ventral hernia was a frequent complication after laparotomy.

So far as I have been able to learn by the courtesy of the registrars and from the published reports of 49 general hospitals, 39 cases of ventral hernia after laparotomy occurred in England during the four years 1894-1897. These numbers confirm the statement of the President of the Society that the complication is not a common one in this country.—I am, etc.,

Nottingham Place, W., Aug. 8th. May Thorne.

OBITUARY.

JOSEF MAYER, M.D.,

Professor in the University of Cracow.

Dr. Josef Mayer, some time Surgeon-General of the Polish Army, and Professor, Dean, and Rector of the Jagellonian University, Cracow, died recently, aged 91. He was a Member of the Polish Academy of Medicine, of which he was President for many years, and he was a member of a number of other societies, Polish and foreign. He was a member of the Austrian House of Lords, and for a long time a Deputy for his district and a Town Councillor of Cracow. In his person was embodied nearly a century of the intellectual life of Poland. Born at Cracow in 1808, he studied in the University of that city, and took his doctor's degree in 1831. He took part in the Polish rising of that year, serving in the army of his country as a medical officer.

In 1833 he was appointed Professor of the Jagellonian University, and continued to occupy his chair after Cracow was ceded to Austria in 1848. In 1849, and again in 1850, he was elected Rector of the University, in which office he showed himself an able organiser and administrator. For his services he received the thanks of the Government. In 1860 he was elected President of the Scientific Association, which largely through his instrumentality was transformed into the Academy of Science; of this new body he was unanimously chosen to be the first President. In 1877 he resigned his professorship, but for many years subsequently he continued to take an active part in the life of the University. He was editor of the *Jahrbuch* of the Medical Faculty, and was one of the founders of the *Przeglad Lekarski*. He was the author of nearly eighty books and papers on the physiology of the nervous system, the physiology of the senses, the length of man's life, the influence of meteorological conditions on mortality, etc. As a politician he was especially active in promoting reforms in schools. His services were recognised by the Austrian Government with the Cross of Commander in the Franz-Joseph Order, the Iron Cross (Third Class), a life peerage, and the title of Privy Councillor.

Dr. James C. Rait, who recently died at Singapore, was born at Leuchars, in Fifeshire, and educated at St. Andrews, and afterwards at Edinburgh. His university career was uniformly successful. He worked for his work's sake, and took what honours came in his way—and they were not few. But his health broke down, and he was for long invalided after taking his degree. As an undergraduate he had acted as clinical assistant at Dundee Royal Asylum, and when he got stronger he took up the speciality again as extra assistant-physician at the Perth District Asylum. He left behind him at Murthly a reputation as an excellent physician and a no less excellent cricketer, and went to sea as a surgeon on the Anchor line to establish his health. Some months ago he went out to private practice in Singapore, and now comes the news of his death. To those who knew him is left but the respectful memory of a man who for long must have felt the heavy odds against him in his weary struggle for health, and who yet was able to keep his sympathies for his kind to the last.

Mr. Walter Leaf, who died recently in his 64th year at Waveney Mansions, Fairhazel Gardens, Hampstead, N.W., studied his profession in Edinburgh and at the London Hospital, and became M.R.C.S.Eng. and L.S.A. in 1861. He had previously obtained the degree of Ph.D. at Heidelberg in 1856. He was made Honorary B.Sc. of Victoria University in 1882; and was the first to receive that distinction. He was for a time Surgeon to the Marylebone General Dispensary, but he retired many years since from the active practice of his profession.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE ARMY MEDICAL SCHOOL, NETLEY.

Lieutenant-General Sir George White, V.C., G.C.B., G.C.S.I., G.C.I.E., presided at the ceremony which marks the close of the session of the Army Medical School, Netley. The names of the successful probationers for admission into the Royal Army Medical Corps and the Indian Medical Service were announced as follows:

List of surgeons on probation who were successful at both the London and Netley Examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:

Royal Army Medical Corps.

	Combined Marks.		Combined Marks.
F. J. J. Palmer	4,053	H. F. Hart	3,996
G. H. Irvine	4,926	A. L. A. Webb	3,946
R. A. Cunningham	4,925	S. G. Butler	3,908
V. G. Crawford	4,611	L. F. Forbes-Winslow	3,901
G. G. Delap	4,595	J. J. W. Prescott	3,873
O. Challis	4,476	P. H. Faulkner	3,778
W. A. Woodside	4,358	H. E. M. Douglas	3,718
H. Simson	4,348	E. E. Ellery	3,647
*H. H. Norman	4,320	O. W. A. Elsner	3,631
W. R. Blackwell	4,270	J. W. Langstaff	3,616
H. M. Nicholls	4 105	J. I. W. Morris	3,558
H. B. Onraet	4,026	E. T. Inkson	3,496
A. Chopping	4 015	A. A. Seeds	3,456

*Gained First Montefiore Prize of 20 guineas and medal.

The positions of the following gentlemen nominated Surgeons-on-probation are determined by the marks gained at Netley:

	Netley.		Netley.
H. S. Anderson	2,385	E. L. Munn	1,938
H. Ensor	2,342	T. C. Mackenzie	1,472
L. N. Lloyd	2,040	E. P. Connolly	1,458
L. Wood	2,003		

Indian Medical Service.

	Combined Marks.		Combined Marks.
*E. D. W. Greig	6,269	W. H. Dickinson	4,619
†C. Dykes	6,146	M. W. Manuk	4,600
W. E. McKechnie	6,019	W. H Tucker	4,552
‡W. F. Harvey	5,998	A. W. Tuke	4,544
§W. C H. Forster	5,900	C. S. Lowson	4,500
J. J. Urwin	5,770	J. H. L. Beaman	4,324
D. McCay	5,766	J. Sloan	4,084
A. B. Fry	5.171	G. H. Stewart	4,003
H. D. Peile	5,177	D. N. Anderson	3,995
D. H. F. Cowin	5.107	M. N. Chaudhuri	3,618
E. C. G. Maddock	5,041		

*Gained the Herbert Prize of £20, the Second Montefiore Prize, and Pathology Prize presented by Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I., M.D.

†Gained the Martin Memorial Medal.

‡Gained the De Chaumont Prize in Hygiene, the Pathology Prize presented by Dr. Wright, and the Prize for Clinical and Ward Work.

§Gained the Parkes Memorial Medal and the Maclean Prize for Clinical and Ward Work.

Sir George White, in presenting the prizes, said that, having passed most of his services in tropical climates he had exceptional opportunities of seeing the immense benefit which had accrued to the army as the result of the education started at Netley. Medical officers of the army were ever ready to show an earnest and grand sense of duty, of which he had himself witnessed many instances. He quoted figures showing the great reduction in the rate of mortality in the army brought about by the increased facilities for the study of the prevention and cure of disease, and stated that during the five years for which he was Commander-in-Chief in India he could recollect only one really bad attack of cholera among British troops. He related the circumstances of this outbreak (in the East Lancashire Regiment) which he said was traced indirectly to a system which had been condemned by the medical officers. He then referred to enteric fever, which he said was one of the greatest troubles which his hearers would have to face, not only in India but at the Cape and elsewhere.

As Quartermaster-General he had received reports as to the system of inoculation which had been established by Professor Wright, of Netley. Professor Wright had been able to show results which had carried conviction to the mind not only of Lord Wolseley, but had convinced Lord Lister, who had said that the results more than justified giving every soldier who went to the India or the Cape the opportunity of taking advantage of the protective treatment. During the years from 1895 to 1898, when he was well placed for noting gallant acts done in India, where fighting was always going on, he had been reason to recommend more of the medical officers for the Victoria Cross than any other branch of the service, and he did not think that he would be far wrong if he said than all the other branches of the service put together. It had always been a great pleasure to him to recommend a medical officer for the V.C. In action to a man of high nervous temperament it was an absolute relief to be sent on, but the self-sacrifice and self-control which kept a man at the side of the wounded under a hot fire deserved a higher credit.

Surgeon-General Harvey, C.B., congratulated those who had chosen the Indian Medical Service to which he belonged. They should not give too ready credence to the rumours that the service was going to the dogs, and was not so good as it used to be. That had been said ever since he knew it. It was still advancing, and had great possibilities in the future. To them, and to those who came after them, they looked to carry on the traditions of one of the finest services of the world.

Surgeon-General Jameson, C.B., Director-General A.M.S., congratulated the probationers on their success and on having been addressed by Sir George White, than whom there were few general officers in the service with wider experience.

Sir William Mac Cormac, Bart., President of the Royal College of Surgeons of England, also congratulated the probationers, and observed that they had been trained in methods by which they would be able to acquire knowledge for themselves in the future, and he trusted and believed that they would turn these opportunities to account.

Surgeon-General Nash in a few words then bade farewell to the probationers leaving the school.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

Wanted by an officer R.A.M.C., field rank, early for India this trooping season, an exchange on roster which will insure him one year's longer home service, or with an officer going to or in the colonies. Liberal terms offered. Address, 146, British Medical Journal Office, 429, Strand, London.

Field Officer.—Major, Madras Presidency in one of the best stations, climate better and healthier than Poona, not due for Burmah for two years, only arrived in India end of last year, wants an exchange to either Halifax (liberal terms), Bermuda, Barbadoes, West Indies, or home. Please state terms to Major, R.A.M.C., care of Cook and Son, 13, Esplanade Road, Bombay. An exchange to Punjab, Bengal, or Bombay Presidencies could easily be managed.

ROYAL NAVY MEDICAL SERVICE.

Surgeon A. W. B. Livesay, M.B., has been appointed to the *Duke of Wellington*, for disposal.

Deputy Inspector-General William Richardson died at Edinburgh on August 4th. He was the eldest son of the late Paymaster John Richardson, R.N., Belhaven, Dunbar, and entered the Royal Navy as Surgeon, March 5th, 1848; becoming Staff-Surgeon, May 1st, 1857; Fleet-Surgeon, June 19th, 1872; and Deputy Inspector-General on retirement from the service, April 29th, 1882.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel C. E. Dwyer retires on retired pay, August 9th. He was appointed Assistant-Surgeon, September 30th, 1871; Surgeon, March 1st, 1873; Surgeon-Major, September 30th, 1883; granted the rank of Lieutenant-Colonel, September 30th, 1891; and made Brigade-Surgeon-Lieutenant-Colonel, March 30th, 1896. He has no war record in the *Army Lists*.

The undermentioned captains, having completed twelve years' full-pay service, are promoted to be majors, dated July 27th: G. F. Alexander, M.B., C. S. Spong, F.R.C.S., D.S.O., W. B. Leishman, M.B., J. Thomson, M.B., G. T. Rawnsley, C. W. Reilly, E. C. Freeman, A. P. Blenkinsop, J. Paterson, M.B., V. H. W. Davoren, A. Wright, R. J. Copeland, M.B., J. Girvin, A. J. Luther, H. S. Pecke, A. L. Borradaile, M.B., T. Birt, W. Hallaran, M.B.

The undermentioned lieutenants, having completed three years' full-pay service, are promoted to be captains, dated July 28th: E. T. F. Birrell, M.B., E. W. W. Cochrane, M.B., A. H. Morris, G. B. Riddick, S. A. Archer, A. J. M'Dougall, M.B., R. W. Clements, M.B., M. Swahey, H. Hewetson.

The undermentioned surgeons on probation are appointed lieutenants, July 29th: F. J. Palmer, G. H. Irvine, R. A. Cunningham, M.B., V. J. Crawford, G. G. Delap, O. Challis, W. A. Woodside, H. Simson, H. H. Norman, W. R. Blackwell, H. M. Nicholls, M.B., H. B. Onraët, A. Chopping, H. F. Hart, M.B., A. L. A. Webb, S. G. Butler, L. F. F. Winslow, J. J. W. Prescott, P. H. Faulkner, H. E. M. Douglas, E. E. Ellery, O. W. A. Elsner, J. W. Langstaff, J. I. W. Morris, E. T. Inkson, A. A. Seeds, M.B., H. S. Anderson, H. Ensor, M.B., L. N. Lloyd, L. Wood, E. L. Munn, T. C. MacKenzie, E. P. Connolly, and J. H. R. Bond.

Major A. W. P. Inman has been appointed Physician and Surgeon to the Royal Hospital at Kilmainham, Dublin.

Deputy-Inspector-General Henry Pillean died at Brighton on July 28th, aged 86 years. He was appointed Assistant-Surgeon, January 22nd, 1836; Surgeon, April 14th, 1846; Surgeon-Major, June 27th, 1854; and Deputy-Inspector-General on retirement, May 24th, 1301.

Surgeon-General William Godfrey Watt died recently at Sholden Paddocks, near Deal, aged 78. His commissions were thus dated:—Assistant-Surgeon, March 1st, 1844; Surgeon, March 28th, 1854; Surgeon-Major, March 1st, 1864; Deputy Surgeon-General, May 8th, 1872; and Surgeon-General, May 30th, 1879. He retired from the service March 27th, 1880. From *Hart's Army List* we learn that he served in the Eastern Campaign of 1854-5 with the 23rd Fusiliers, and was at the battles of Alma and Inkerman, the affairs of Bulganac and M'Kenzie's Farm, the battle of Balaklava, and the siege of Sebastopol (medal with three clasps, 5th class of the Medjidie and Turkish medal). During the second winter he was present at the great explosion of magazines in the French camp, and remained behind attending to the wounded of our own and the French army when the troops were marched to the front to avoid the danger of a second explosion which was supposed to be imminent.

The following is a list of successful candidates for commissions in the Royal Army Medical Corps at the recent examination in London:

	Marks.		Marks.
L. W. Harrison	2,875	F. Harvey	2,102
F. S. Irvine...	2,284	C. E. Trimble	2,086
H. M. Morton	2,260	J. Matthews	2,084
M. H. Babington...	2,231	W. A. McLoughlin	1,940
F. G. Richards	2,150	E. W. Siberry	1,816
E. B. Knox...	2,121	B. F. Wingate	1,805
H. T. Roch	2,115	P. S. O'Reilly	1,800

INDIAN MEDICAL SERVICE.

Surgeon-Major Edward D'Arcy Evezard, late of the Madras Establishment, died at Broadstairs on August 1st, in the 70th year of his age.

Surgeon-Major William C. B. Eatwell, M.D., late of the Indian Medical Service, died at Upper Norwood on August 7th, aged 79.

Brigade-Surgeon-Lieutenant-Colonel Charles J. W. Meadows, late of the Bengal Establishment, died at South Norwood on August 2nd, from the result of an accident, at the age of 55 years.

The following candidates for Her Majesty's Indian Medical Service were successful at the competitive examination held in London on July 28th and following days:

	Marks.		Marks.
A. C. MacGilchrist	3,151	M. H. Thornely	2,400
C. M. Goodbody	2,867	L. P. Stephen	2,356
J. W. D. Megaw	2,732	C. C. Murison	2,335
E. O. Thurston	2,619	W. O'S. Murphy	2,261
R. Steen	2,571	F. V. O. Beit	2,172
J. L. MacInnes	2,565	H. M. Mackenzie	2,139
L. Gilbert	2,550	W. C. Long	2,085
G. Browse	2,542	L. B. Todd	2,046
E. A. C. Matthews	2,497	M. Corry	1,945
T. G. N. Stokes	2,415	G. C. Beamish	1,943
F. F. Elwes	2,410	H. A. Williams	1,939

MILITIA MEDICAL STAFF CORPS.

It has been decided to disband the Berkshire Company. The other companies of the corps are supplied by Hants, Middlesex, Surrey, the Eastern Counties, and Kent.

THE VOLUNTEERS.

Surgeon-Lieutenants G. A. Troup, M.B., 1st Essex Artillery (Eastern Division Royal Garrison Artillery), and J. E. H. Davies, 1st Volunteer Battalion the Royal Welsh Fusiliers, are promoted to be Surgeon-Captains, August 9th.

The Volunteer Officers' Decoration has been conferred upon the following officers: Surgeon-Lieutenant-Colonel W. Draper, 1st East Riding of Yorkshire Volunteer Artillery (Western Division Royal Artillery); Surgeon-Major D. E. Flinn, 5th (Irish) Volunteer Battalion the King's Liverpool Regiment; Surgeon-Major J. H. Hay, M.D., 7th (Clackmannan and Kinross) Volunteer Battalion Princess Louise's Argyll and Sutherland Highlanders; Surgeon-Lieutenant-Colonel John Meredith, M.D., 2nd Volunteer Battalion the Prince Albert's Somerset Light Infantry, retired.

THE INDIAN SUBORDINATE MEDICAL DEPARTMENT.

The Secretary of State has sanctioned the following improvements in the conditions of service for the Indian Subordinate Medical Department, Hospital Assistants Branch, in order to render it more popular, and obtain a better class of recruits:

1. Abolition of subhospital assistants, which will make the commencing pay of military medical subordinates Rs. 20 monthly, *plus* Rs. 5 for English qualification.

2. A subdivision of the grade of senior hospital assistant into two classes, the first with a relative rank of Subadar and a salary of Rs. 100, and the second carrying the relative rank of Jemadar, with a salary of Rs. 80, to include Rs. 30 and Rs. 25 respectively, open to men possessing an English qualification.

3. The creation of a native warrant rank for first, second, and third grades of hospital assistants.

4. An improvement of barracks.

CIVIL SURGEONCIES IN INDIA.

TWENTY-EIGHT Civil Surgeoncies in the various Provinces have now been reserved for Civil Assistant-Surgeons: in Bengal 7, in Madras 5, in the North-West Provinces and Burmah 4, and in the Central Provinces 2. The complete arrangements will be gradually carried out.

THE *BULLFINCH* DISASTER AND HASLAR HOSPITAL.

THE following appears in the *Naval and Military Record*, from its own correspondent's communication dated Portsmouth, August 2nd: "Up to the time of writing everybody is singing the praises of the Haslar staff, with the exception of the two convalescent patients from the *Bullfinch*, who are denouncing the doctors for starving them, which is the same kind of praise as the villain of a melodrama receives when he is hissed off the stage. The fact is they are getting on so well that they have discovered voracious appetites, but the doctors will not take the risk of overfeeding; and the manner in which they kept Mr. Tremayne alive is high testimony to their skill, for when he was admitted to hospital his recovery appeared to be beyond all hope. This is not the first time that doctors have shown that the days of black draught and blue pill are over, and that medical and surgical skill has reached a high standard in the navy.

VOLUNTEER MEDICAL ASSOCIATION.

WITH reference to a paragraph under this head published in the BRITISH MEDICAL JOURNAL of July 1st, p. 60, we have received communications from Surgeon-Lieutenants C. J. Beattie, J. C. Fenwick, and D. J. Lawson stating that we were incorrectly informed that they had received instruction from the classes of the Volunteer Medical Association. The two first-named officers add that they received instruction from the Volunteer Ambulance School of Instruction.

ARMY EXPERIMENT AS TO SUGAR NUTRITION.

THE *Neue Preussiche Zeitung* states that arrangements are to be shortly made for two companies from two regiments of each army corps carrying out long trial marches, especially in the summer, with a view to undertaking experiments with regard to the working of sugar as a nutritive. On the march the more intelligent men of these companies will have issued to them plain sugar and pastilles of sugar flavoured with coffee or lemon, which will be dissolved in water carried in the tin water bottles, in order to ascertain if fatigue may be more easily borne by using these. On January 14th we noted some trials made during last year's German autumn manœuvres respecting the value of sugar as a nourishment for troops, with Dr. Leitenstorfer's views. The results of further experimentation will be looked forward to with interest.

CANTONMENT HOSPITALS IN INDIA.

THE Secretary of State has approved the establishment of cantonment hospitals at seventy stations in India to carry out the cantonment rules of 1897. Twenty-seven of these will be first class at stations having more than 1,000 troops, and the remaining forty-three will be second-class hospitals. Medical officers in charge of the former get Rs. 150 extra pay, and those in charge of the latter get Rs. 100 extra, and horse allowance where necessary. This, practically, is a re-establishment of lock hospitals, we take it, although the name no longer exists; but we assume the "cantonment hospitals" are for the treatment of cases of syphilis or gonorrhœa in native women found diseased.

"VIVRES DU SAC" (RESERVE RATIONS).

IT is announced in the *Belgique Militaire* that, in consequence of successful experiments conducted by the manufactory of preserves at Anvers, the composition of the reserve rations called the "vivres du sac" will be modified as follows: The biscuit will be replaced by a similar but more friable production, of a more agreeable taste, and containing a larger quantity of nutritive matter. The aluminium boxes which contained the rice, coffee, pepper, and salt will be done away with; a *cartouche alimentaire* will be substituted for them, containing a tablet of desiccated salt, a tablet of compressed coffee, chicory, and sugar, and a tablet of pulverised pease meal and meat. These three tablets are enveloped in waterproof paper, enclosed in an aluminium cylindrical case 2 inches in length and 1½ inch in diameter; each of these cases representing, with 1½ lb. of biscuit, the equivalent of a reserve ration; on mobilisation each soldier would receive one or more of such reserved rations.

STATE CEREMONIALS.

WE continue to receive protests against the exclusion of army medical officers from State ceremonials. At the late Queen's State Ball it is averred that, while all the different corps in the Home and adjacent districts were duly invited, the Royal Army Medical Corps was left out. One correspondent says this is the third slight within three weeks, the others being the omission of the principal medical officer's name in the Soudan vote of thanks, and the entire ignoring of the corps at the Royal Review at Aldershot. Evidently the old, bad system of officials being allowed to snub the corps according to their sweet wills is still allowed.

A CORPS OF FEMALE NURSES FOR THE UNITED STATES ARMY.

AN order has been issued for the organisation of an army nurse corps for the United States Army, under the direction of the Surgeon-General. The corps will be under the immediate supervision of Dr. Anita McGee. It will consist of chief nurses, nurses, and reserve nurses. The Surgeon-General may assign female nurses to duty at all army hospitals, where the cases treated require the care of trained nurses. Contracts for nurses will be for one year, except for immune nurses, who will not be required to sign for any definite period. For service in the United States a nurse will received 40dols. per month, and in any of the colonies 50dols. Chief nurses over from 5 to 10 nurses will receive 10dols. additional, and those over 10 or more nurses 25dols. additional. In case a nurse becomes ill while in the service medical attendance and care will be furnished, but extra leave with pay will not be allowed.

UNDERMANNED.

SHORTHANDED writes: It would be interesting to know:

1. How many medical officers are wanted in each district to bring th strength up to the proper complement?
2. How many civil practitioners are employed?
3. The reasons which deter retired officers from accepting emplo ment?

*** The third question perhaps needs no official answer, and is but t well known—namely, that when a retired, but employed, officer asks f leave he is told there is no one to relieve him, or he must provide a su stitute at his own expense.

UNIVERSITIES AND COLLEGES.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary meeting of the Fellows was held on Thursday, July 27th, I W. S. Church, President, in the chair.

Members.—The following gentlemen, having passed the required exan nation, were admitted Members of the College: A. W. Addinsell, M.B. Edi R. W. Marsden, M.D. Vict., L.R.C.P.; R. O. Moon, M.B. Oxon., L.R.C.I T. F. Ricketts, M.D. Lond., L.R.C.P.; R. D. Rudolf, M.D. Edin.; E. Spriggs, M.D. Lond.; and J. H. Thursfield, M.A., M.D. Oxon., L.R.C.P.

Licences.—The licence of the College was granted to 124 candidates. these, 31 were under the regulations dated October 1st, 1884.

Diplomas in Public Health.—Diplomas in Public Health were granted co jointly with the Royal College of Surgeons to the following candidates: V. N. Chitale, F. L. Dodd, H. G. Felkin, M. B. Foster, I. George, J. Griffiths, F. H. Haines, M. L. Hughes (Captain R.A.M.C.), P. T. Hugh J. D. Jenkins, M. A. Kirton, A. Lewers, W. A. Logan, A. A. Martin, J. Murray, R. Raines, E. M. Wilkes, and T. H. Woodfield.

Bradshawe Lecture.—The President announced that the Bradshawe Lectu would be delivered at the College on Thursday, November 2nd, by Dr. Foxwell (Birmingham)—Subject: The Causation of Functional Murmur

Bisset-Hawkins Medal.—The Bisset-Hawkins Medal has been award by the President to Dr. J. B. Russell, of the Scotch Local Governme Board.

Congress on Tuberculosis.—The President drew attention to the fact t the delegates of Her Majesty's Government upon the recent Congress Tuberculosis had sent in their report, and that copies of the same, gether with a valuable addendum by Sir Herbert Maxwell and Dr. P Smith, were upon the table.

Communications.—Communications were received from (1) the Pre dent of the General Medical Council on the proposal of the Cou to obtain additional penal powers; submitting clauses for ame ing the Medical Acts revised to meet the objections raised by qualifying bodies to those previously proposed. These clauses w carefully considered, and with certain emendations were accep by the College. (2) From the Incorporated Society of Medi Officers of Health, praying the College to appoint a Commit to consider the subject of the certification and classification diarrhœa deaths. On the proposal of Dr. Seaton, seconded by William Broadbent, it was resolved to appoint such a Committee, and President nominated Dr. Payne, Dr. Tatham, Dr. Seaton, and Dr. Corfi to serve thereon. (3) From the President of the International Comm sion on Medical Hydrology, praying the College to answer certain quiries formulated by the Commission. The matter was referred to Corfield. (4) From the Dean of the Medical Faculty, University of Ed burgh, with regard to the regulations for the Murchison Scholarsh suggesting the advisability of extending the period during which ca dates are eligible to the seventh year. (5) A memorial from medical p titioners in Rhodesia, praying the College to approach the Secretary State for the Colonies with a view to obtain the repeal of a medical o nance recently enacted, to which serious objections have been taken, upon the motion of the President, referred to the representatives of College upon the General Medical Council.

Registration of Medical Students.—The representative of the College in General Medical Council having presented a report on the proceeding that Council during its session in May last, a letter from the Registra the General Medical Council was read communicating for the info ation of the College a new regulation with respect to the registra of medical students, adopted by the Council at their late session, the matter was referred for consideration to the Committee of Man ment.

Officers.—On the nomination of the President and Council, the follow were elected Censors, Examiners, and other Officers of the Colleg *Censors:* P. H. Pye-Smith, M.D.; P. J. Hensley, M.D.; Sir R. Dou Powell, Bart., M.D.; C. T. Williams, M.D. *Treasurer:* Sir Dyce Duckwo M.D. *Emeritus Registrar:* Sir H. A. Pitman, M.D. *Registrar:* E. Live M.D. *Harveian Librarian:* J. F. Payne, M.D. *Members of the Library mittee:* P. H. Pye-Smith, M.D.; J. W. Legg, M.D.; G. V. Poore, M.D. Moore, M.D. *Curators of the Museum:* W. H. Dickinson, M.D.; H Bastian, M.D.; W. Cayley, M.D.; N. Moore, M.D. *Finance Committee:* T Whipham, M.D.; J. M. Bruce, M.D.; A. L. Galabin, M.D. *Examin Chemistry and Chemical Physics:* W. Ramsay, F.R.S.; P. F. Frankl Ph.D., F.R.S.; F. D. Chattaway, Ph.D., D.Sc.; A. P. Laurie, D.Sc.; H Hake, Ph.D. *Materia Medica and Pharmacy:* E. Warner, M.D.; W. Ca M.D.; N. J. C. Tirard, M.D.; H. W. G. Mackenzie, M.D.; J. Calvert, Physiology:* W. D. Halliburton, M.D.; J. W. Washbourn, M.D.; M. S. brey, M.D. *Anatomy:* G. R. Turner, F.R.C.S., L.R.C.P.; A. W. Hug M.B., F.R.C.S. *Medical Anatomy and Principles and Practice of Medic* J. F. Payne, M.D.; T. L. Brunton, M.D.; A. E. Sansom, M.D.; T. Bar M.D.; F. de H. Hall, M.D.; T. C. Allbutt, M.D.; Isambard Owen, M.D K. Fowler, M.D.; W. Hale White, M.D.; T. Oliver, M.D. *Midwifery Diseases Peculiar to Women:* C. J. Cullingworth, M.D.; J. Phillips, A. J. McC. Routh, M.D.; C. M. Handfield-Jones, M.D.; R. Boxall, F.R.C.S.; J. N. C. Davies-Colley, F.R.C.S. *Public Health:* Part I: Notter, M.D. Part II: W. H. Corfield, M.D. *Murchison Scholarship:* Green, M.D.; S. Mackenzie, M.D.

The Baly Medal.—On the recommendation of the Council the Baly Medal in Physiology has been awarded to C. S. Sherrington, M.D., F.R.S., Professor of Physiology in University College, Liverpool.

Laboratories Committee.—The following quarterly report of the Laboratories Committee, dated June 9th, was received and adopted: (1) Work on Diphtheria for the Metropolitan Asylums Board, Bacteriological Department. Since March 10th last, 1,100 doses of antitoxin, each containing 2,000 units, and 4,425 doses, each containing 4,000 units, for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, have been supplied and all the demands fully met. During this period 19,900,000 units have been supplied. During the same period 5 doses of 4,000 units each have been supplied to medical officers of health according to instructions received from the Metropolitan Asylums Board. (2) Under the grant from the Goldsmiths' Company 459 doses of antitoxin, containing 1,134,000 units, have been supplied to the general and children's hospitals in or near London.

University College, Sheffield.—A recommendation of the Committee of Management that University College, Sheffield, be added to the list of institutions at which the necessary course of laboratory instruction for the Diploma in Public Health may be attended, was adopted by the College.

Libraries Committee.—The annual report of the Libraries Committee was received and adopted. The President drew attention to the recent generous gift to the College by the Librarian, Dr. J. F. Payne, of an excellent copy of a very rare book, referred to elsewhere in the columns of the British Medical Journal, and the best thanks of the College were heartily accorded to Dr. Payne.

The Museum.—The annual report of the Curators of the Museum and the quarterly report of the Examiners for the Licence were also received and adopted.

Books Presented to Library.—A list of books presented to the Library during the past quarter was read, and the thanks of the College accorded to the donors.

UNIVERSITY OF EDINBURGH.

Medical Graduation Ceremonial.

The Summer Graduation Ceremonial, which is always mainly medical, was held in the McEwan Hall, on Saturday, July 29th, the Vice-Chancellor (Sir William Muir) presiding. After the bestowal of certain honorary degrees, the following ordinary degrees were conferred:

Doctor of Medicine.—N. D. Bardswell, R. W. Beesley (gold medallist), P. H. Boyden, T. L. Brander, R. W. Briggs, N. Caine, W. J. Calder, T. M. Callender, S. W. Carruthers, J. M. Coates, R. P. Cockburn, J. H. Crawford, A. Croll, D. N. P. Datta (gold medallist), E. P. Dickin, J. D. Doherty, J. A. H. Duncan, W. J. A. Erskine, W. Evans, A. Fahmy, J. Forbes, M.A., B.Sc., J. S. Fowler, W. H. Goldie, R. Gordon, W. B. Gow, D. J. Graham, J. Harvey, F. H. Hawkins, J. M. Hermon, P. T. Herring (gold medallist), M. L. Hewat, J. Howard-Jones, D.Sc., J. V. Hulme, D. M. Hutton, B.Sc., T. H. Jones, C. H. Kruger, A. E. G. Langschmidt, O. R. Lewis, G. H. List, Jessie M. Macgregor (gold medallist), J. Macmillan, J. F. Macphail, M.A., R. H. Makgill, J. Malcolm (gold medallist), H. B. Mapleton, M.A., R. Maxwell, D. M. Moir, M.A., W. J. Munro B.A. (gold medallist), H. V. Munster, J. T. Nash, A. Newall, B.A., L. J. H. Oldmeadow, T. W. Parkinson, J. A. Parsons, R. J. Paton, H. Peck, H. Rainy, M.A., M. S. Rau, M.A., B.Sc., W. Riach, W. T. Ritchie, W. A. Rutherford, D. W. Scotland, W. C. Sharpe, A. H. H. Sinclair, T. Stuart, W. Sydenham, J. W. Talent, T. J. Thomson, H. Watthews, A. M. Williamson, B.Sc., R. A. Wilson, G. P. Yule, B.Sc.

Bachelors of Medicine and Masters in Surgery.—J. Brown, D. B. B. Hughes, Elsie Maud Inglis, D. J. M'Adam, Marion Balfour Marshall, I. J. Van Der Merwe, A. L. Owen, A. Sayba, Esther Molyneux Stuart, Emily Charlotte Thomson, Addie White

Bachelors of Medicine and Bachelors in Surgery.—Ivie Aaird, J. Alcinder, Tina M'Culloch Alexander, W. J. Baird, C. A. J. A. Balck, W. J. Barclay, B.A., F. A. F. Barnardo, M.A., E. F Bashford, J. G. Bell, P. J. Bodington, H. W. Boreham, G. A. Brogden, W. J. D. Bromley, E. A. Brown, G. H. J. Brown, R. Bruce, J. M. Buist, D. A. Callender, H. G. Carlisle, J. C. Carr, M. Carthew, Lilian Mary Chesney, C. S. Clark, H. E. Coghlan, W. J. Collinson, J. D. Comrie, M.A., B.Sc., E. J. Courtney, R. M'L. Dalziel, W. Darling, M.A., S. L. Dawkins, Y. A. Djedjizian, B.A., D. Ewart, W. Ewart, W. R. Eyton-Williams, R. R. Fasson, H. Faulkner, D. Ferrier, E. G. Fort, A. R. Fordyce, J. J. Galbraith, A. B. George, M.A., H. A. H. Gilmer, B. K. Goldsmith, J. H. Gordon, T. B. Gornall, F. J. Gray, St. L. H. Gribben, A. H. Griffith, G. Haddow, P. W. Hampton, F. J. Hathaway, G. G. Hay, A. C. Heath, P. H. Henderson, W. E. Herbert, I. K. Hermon, H. T. Holland, A. M. Holmes, J. Husband, Alice Marion Hutchison, J. G. Jack, W. T. James, R. F. Jardim, J. Jeffrey, W. J. Jones, J. W. Kerr, D. B. King, M.A., G. D. Laing, L. S. Lessing, T. H. Livingstone, E. A. Loch, J. L. Louis, J. Luckhoff, G. Lyon, Elizabeth Greer Macdonald, J. M. Macdonald, M.A., P. H. MacDonald, P. N. M. Macdonald, W. J. M. M'Farlan, J. M'Gregor, Robina M'Gregor, W. M. Mackay, M. MacKelvie, H. N. Mackenzie, T. C. Mackenzie, P. A. Maclagan, L. C. Maclagan-Wedderburn, T. D. M'Laren, G. C. M'Leavy, L. W. Macpherson, A. G. Martin, E. W. Martin, J. F. Martin, Ruth Massey, J. Masson, M.A., B.Sc., J. W. Matthewson, B.Sc., E. T. Melhuish, E. G. D. Menzies, F. N. Menzies, G. H. Menzies, M.A., J. Miller, B.Sc., J. G. Mitchell, H. A. D. Moore, J. R. Munro, J. A. Murray, B.Sc., W. A. Murray, B.A., A. W. Nankervis, A. C. Neethling, T. P. Oates, J. Orr, T. S. A. Orr, W. Park, M.A., F. M. Parry, W. M. Paul, M.A., A. S. M. Peebles, E. J. Peill, A. Preston, T. A. Price, R. N. Pringle, S. C. Pritchard, J. M. Reid, W. Reid, M.A., C. M. Robertson, A. A. Robinson, T. Rogerson, R. M. Rowe, M.A., A. B. Shed, S. Simpson, B.Sc., A. B. Slater, V. E. Serapure, S. Southall, H. B. Sproat, B. Stacey, W. J. Stuart, M.A., W. W. Thom, G. N. W. Thomas, J. A. Thompson, W. G. Thompson, G. Thomson, R. G. Thomson, A. K. Traill, R. B. Turnbull, A. Tweedie, C. S. Vartan, N. D. Walker, C. H. J. Watson, B.A., C. H. Watson, M.A., A. Whittome, A. Whyte, A. S. Whytock, M.A., H. D. Wilson, A. H. Wood, E. M'K. Young.

The Degree of Bachelor of Science (Public Health) was conferred on James Wilson McIntosh, M.B., C.M.

The following scholarships and prizes were awarded: Ettles Scholarship, W. J. Barclay, B.A., M.B., Ch.B.; Beaney Prize in Anatomy and Surgery, A. Preston, M.B., Ch.B.; Syme Surgical Fellowship, C. H. Kruger, M.D., C.M.; Goodsir Memorial Fellowship, P. T. Herring, M.D., C.M.; Mouat Scholarship in Practice of Physic, J. Jeffrey, M.B., Ch.B; Murchison Memorial Scholarship in Clinical Medicine, A. C. Sandstein, M.B., Ch.B.; Gunning Victoria Jubilee Prize in Zoology, J. P. Hill, B.Sc.; Gunning Victoria Jubilee Prize in Pathology, W. T. Ritchie, M.D., C.M.; Pattison Prize in Clinical Surgery, E. F. Basbford, M.B., Ch.B., and H. D. Shepherd, equal; Buchanan Scholarship in Gynæcology, W. J. Barclay, B.A., M.B., Ch.B.; James Scott Scholarship in Midwifery, F. A. F. Barnardo, M.A., M.B., Ch.B.; Cameron Prize in Therapeutics, Major D. Bruce (R.A.M.C.), M.B., C.M.Edin., for his discoveries of the cause of Malta fever and of the tsetse disease, and the great value of these discoveries in their prevention and treatment.

The Promoter's address to the graduates was then given by Sir Henry D. Littlejohn, who contrasted the teaching facilities of the University of today with those which obtained when he was a student. He discussed the duties and responsibilities of the medical profession, and counselled all connected with it not to interfere actively in municipal or political life, save when it might be their duty to give their fellow citizens the benefit of their training on questions relating to public health.

First Professional Examination for the Degrees of M.B., Ch.B.—The following candidates have passed this examination in the following subject:

Botany.—J. Allan, E. A. W. Alleyne, D. Allison, J. A. Anderson, G. W. Armstrong, M. Ashkenazie, Agnes Balfour, A. J. Beattie, L. H. I. Bell, A. R. Berrie, J. M. Beyers, A. S. L. Biggart, B. Blacklock, T. C. Blackwell, R. Blair, F. H. Borthwick, D. W. Boswell, F. S. Brennan, J. Brennan, W. S. M. Brown, L. G. Bruce, G. M. Brunton, A. Buchanan, D. E. A. Buchanan, G. G. Buchanan, C. W. Burrows, W. C. Burton, H. Caird, R. B. Calwell, T. F. Campbell, R. A. Chambers, W. P. Chrystall, H. S. Coghill, A. F. R. Conder, A. G. Coullie, C. K. Coutts, A. B. Cox, R. W. Craig, C. S. Crichton, D. H. Croon, F. D. Crosthwaite, R. Crothers, W. B. Cullen, W. H. Cusack, J. M. Darling, J. Davidson, W. H. Davidson, J. M. Dewar, S. E. Douglas, C. B. Drew, A. M. Dryden, J. F. Duncan, T. H. Easton, A. M. Ebden, C. G. Edmonston, E. A. Elder, G. J. Farie, J. J. H. Ferguson, J. Findlay, G. H. L. Fitzwilliams, N. C. Forsyth, W. H. Forsyth, J. Fortune, A. N. Fraser, T. Gardner, L. Gavin, C. R. Gibson, F. H. Gibson, L. Gibson, J. D. Giles, H. M. Gillespie, A. G. Glass, J. A. Glover, D. P. Goil, A. S. Gordon, Jeanie Gordon, M. H. Graham, A. Gray, J. Grieve, P. Hallam, J. Halley, G. Harrison, E. Henderson, R. L. Henderson, J. O. Heyns, Isabel Hills, A. E. Hodgson, A. F. Hughes, M. M. Huk, W. Hume, J. Hunter, J. M. Johnston, J. H. Kay, J. W. Keay, I. C. Keir, J. Kirk, L. A. H. Lack, J. Lauder, C. D. Lochrane, J. B. Lockerbie, A. P. G. Lorimer, J. M. Lovett, J. S. MacDonald, J. MacDonald, J. R. M'Gregor, G. S. Mackay, H. G. M'Kay, W. MacLaren, E. M. Macmillan, J. J. M'Millan, J. B. M'Neill, D. P. Marais, P. W. Mason, J. B. Mears, A. G. M. Middleton, H. P. Milligan, G. H. S. Milln, V. Moralejo, W. C. Morton, T. B. Mouat, P. H. Mules, H. L. Munro, A. W. Neil, W. Newlands, D. M. Newton, W. H. Nutt, C. F. A. Oberlander, A. Oliver, D. D. Paton, J. B. P. Perrier, B. Pickering, J. J. N. Pierre, J. A. Pottinger, F. M. S. Price, L. Ram, W. Readman, D. G. Reid, H. S. Reid, A. O. P. Reynolds, Eva A. Robertson, W. S. Robertson, W. S. I. Robertson, Amy Robinson, L. C. Robinson, S. M. Ross, J. A. Roux, N. C. Rutherford, J. Saffley, F. G. Saleeby, W. Sanderson, D. G. A. Scott, J. E. Scott, A. M. Sharp, G. H. Skinner, J. H. Smith, O. Smith, S. W. Smith, W. A. W. Smith, E. M. Snowball, R. A. L. van Someren, H. Speirs, W. Steuhouse, A. C. Strain, N. Sturrock, J. Tait, W. B. Tannahill, A. F. Theobalds, T. T. Thomson, R. S. E. Todd, A. Todrick, H. R. Vickers, D. C. Welsh, W. H. Welsh, D. H. Wessels, L. West, R. M. M. White, D. P. D. Wilkie, H. S. Winterbotham, W. B. Wishart, A. C. T. Woodward, G. W. Young, M. C. W. Young, W. Young.

Degrees of M.B. and Ch.B.—The following are the completed list of candidates who have passed the several examinations for these degrees:

First Professional.—D. Allison, J. A. Anderson, G. W. Armstrong, L. H. I. Bell, C. A. Bennet, B. Blacklock, T. C. Blackwell, J. Brennan, G. M. Brunton, G. G. Buchanan, C. W. Burrows, W. C. Burton, H. Caird, J. C. G. Carmichael, T. P. Caverhill, R. A. Chambers, H. S. Coghill, A. F. R. Conder, G. M. Coughtrey, C. K. Coutts, A. B. Cox, D. H. Croom, B.A., F. D. Crosthwaite, R. Crothers, W. B. Cullen, W. H. Cusack, J. Davidson, M. Davies, A. C. Devereux, J. M. Dewar, C. B. Drew, A. M. Dryden, J. F. Duncan, A. M. Ebden, C. D. Eyles, G. J. Fairie, J. Findlay, J. Fortune, A. N. Fraser, A. J. Gardner, L. Gavin, J. George, C. R. Gibson, M.A. (with distinction), F. H. Gibson, J. D. Giles, A. G. Glass, M.A., D. P. Goil, D. Golding, A. S. Gordon, Jeanie Gordon, M. H. Graham, A. Gray, M.A., P. Hallam, J. Halley, R. L. Henderson, J. O. Heyns, Isabel Hill, A. E. Hodgson, A. O. Hooper, A. F. Hughes, W. Hume, J. Hunter, J. H. Kay, J. W. Keay, L. A. H. Lack, R. H. S. Langeveldt, J. Lauder, J. M. Lovett, J. R. M'Gregor, G. S. Mackay, J. J. M'Millan, J. B. M'Neill, P. W. Mason, J. A. Mathers, A. E. Melville, A. G. M. Middleton, G. H. S. Miln, W. C. Morton, M.A. (with distinction), P. H. Mules, H. L. Munro, W. Newlands, M.A., B.Sc.; D. M. Newton, T. Nicol, D. D. Paton, J. J. N. Pierre, D. E. C. Pottinger, J. A. Pottinger, J. L. Pringle, A. M. Pryce, G. Ritchie, E. A. Robertson, W. S. Robertson, W. S. I. Robertson, Amy Robinson, S. M. Ross, J. A. Roux, N. C. Rutherford, F. G. Saleeby, W. Sanderson, J. E. Scott, M.A., W. M. Selby, A. M. Sharp, M.A., G. H. Skinner (with distinction), J. H. Smith, E. M. Snowball, B. M. S. Sodhi, A. W. K. Straton, E. P. M. Stuart, H. R. Vickers, R. M. Walker, W. R. S. Watkins, J. H. D. Webster, D. H. Wessels, H. S. Winterbotham, E. E. Wood, A. C. T. Woodward, G. W. Young, W. Young.

Second Professional.—Old Regulations: Maung Ba-Ket, R. A. M. Macleod, W. H. Meyer, A. H. Reid (with distinction), R. S. Williams. New Regulations: May Agnew, G. S. Blandy, V. C. de Boinville, E. S. Brett, A. J. Brock, J. Brocket, J. E. M. Brown, W. Brown, G. C Burgess (with distinction), A. W. S. Christie, R. E. Collins, A. P. Coskey, W. J. Crow, J. Dalgleish, T. G. B. Dodds, C. Douglas, J. L Duncan, J. Duncan, W. A. Duncan, W. Eggeling, O. J. Evans, J. W.

Falconer, A. H. Firth, M.A. (with distinction), G. A. Forrest, E. C. Glimson, E. M. Glanville, M. D. Gulland, J. Halliday, W. Hamilton, N. C. R. Hansen, A. W. Hauman, P. J. Hay, L. A. Holcrott, A. R. Johnston, M.A., E. Jones, W. Landsborough, P. V. Longmore, A. R. K. Lauddie, E. W. Lewis, Isabella Logie, H. E. M'Cloghry, H. K. Macdonald, A. M'Ewan, W. M'Farlane, N. F. MacHardy, F. D. S. Mackenzie, M. E. Mackenzie, W. M'Lachlan, L. A. M'Munn, G. M'Neill, E. H. Martin, A. F. G. Masson, E. C. C. Maunsell, P. Murray (with distinction), W. Murray, J. F. Orr, J. L. Palmer, D. E. S. Park, T. B. Paterson, W. S. Patton, J. G. Peebles, J. H. H. Pirrie, B.Sc., L. T. Price, F. L. Rigby, R. A. C. Rigby, W. A. Robinson, R. Rorie, L. Rundall, T. A. Smyth, H. L. Spark (with distinction), W. C. Spiers, A. J. de Spignanovicz, M. M. Stevenson, I. S. Stewart, J. Sullivan, H. P. Thompson, T. L. Thompson, P. S. Tillard, W. L. Trafford, A. R. Wallis, B. E. Wareham, Ada Wilkinson, D. Young, R. T. Young.

Third Professional.—H. Alexander, E. M. Anderson, W. L. G. Anderson, A. A. Ayton, J. H. M. Bell, L. N. Biggs, J. S. Bostock, J. M. Benson, E. Cameron, S. M. D. Campbell, L. Crossley, G. A. Davidson (with distinction), A. Dods, J. P. Douglas, B. G. Forman, C. Fraser, A. W. Fuller, N. Glegg, J. L. Green, G. W. Guthrie, C. E. P. Husband, W. Hutchison, G. R. Laing, T. G. S. Leary, G. H. Lewis, Elizabeth M'Elney, A. F. Mackay, J. G. Mackenna, L. A. MacMunn, Elizabeth Macrory, M. M. Meikle, J. A. S. Mouat, C. E. O'Connor, P. Pattison, C. E. Pepper, P. C. Rayner, J. L. Rentoul, L. C. P. Ritchie, C. H. Ritter, R. Rutherford, R. A. Savage, H. O. Smith, J. A. Smith, C. E. Southon, H. M. Speirs, G. R. Steven, F. T. Thompson, J. P. Thorne, J. Thorhill, G. H. Turner, K. H. H. Ullmann, N. N. Wade, A. S. Watson, A. J. Williamson, J. H. Wrightson, J. C. Zuidmeer.

VICTORIA UNIVERSITY.

FINAL EXAMINATION.—FACULTY OF MEDICINE.—The following candidates have passed this examination:

Part I.—A. Anderson, Owens; J. T. Bailey, Owens; W. E. Bamber, Owens; A. D. Beckett, Owens; P. Bennington, Univ.; A. T. Blease, Owens; W. H. Broad, Univ.; R. Burnet, Univ.; P. I. Caddow, Univ.; A. C. Clarke, Owens; E. R. Cooper, Owens; D. Cowin, Owens; C. W. Crawshaw, Owens; J. L. Dimond, Univ.; D. J. Ferris, Owens; F. H. Flack, Owens; A. H. B. Fletcher, Yorks.; W. Garstang, Owens; R. Gordon, Owens; F. G. Hack, Owens; C. R. Hall, Owens; W. D. Hamer, Owens; H. Holt, Owens; E. C. Hulme, Owens; A. R. Jackson, Univ.; L. C. Johnson, Univ.; W. C. Johnson, Owens; R. Lawrence, Owens; C. H. Lee, Owens; H. C. Ling, Yorks.; S. F. Linton, Univ.; H. S. Lister, Owens; H. S. McLellan, Owens; E. Newhouse, Yorks.; W. Parker, Owens; A. S. Parkinson, Yorks.; A. Ramsbottom, Owens; E. C. Roberts, Univ.; C. W. S. Saberton, Owens; W. R. N. Smithard, Owens; J. H. Stephens, Owens; R. N. West, Owens; H. W. Whiteley, Owens; G. M. Y. Whittingham, Owens; C. R. Willans, Yorks.; T. B. Williams, Owens; P. G. Williamson, Owens; W. A. B. Young, Owens.

Part II.—G. P. Alderson, Univ.; W. J. W. Anderson, Yorks.; P. A. Browne, Univ.; H. R. Clarke, Owens; †W. Crabtree, Owens; E. C. Dutton, Owens; R. J. Ewart, Univ.; †E. W. Falconer, Owens; C. H. Ferguson, Univ.; †H. M. Fletcher, Univ.; C. Garner, Owens; J. Goodall, Yorks.; A. Greenwood, Owens; C. H. Greenwood, Yorks.; †H. W. Hall, Owens; R. Hamer, Owens; †H. C. R. Hime, Yorks.; J. C. Hindley, Owens; C. E. Horsfall, Yorks.; J. A. Howard, Univ.; †W. A. Illingworth, Yorks.; F. W. Johnson, Yorks.; L. R. Lempriere, Owens; H. Lett, Yorks.; E. J. Martin, Owens; J. W. Miller, Univ.; *J. Moreton, Owens; †A. Morton, Yorks.; R. A. Needham, Owens; H. Osborne, Owens; †A. E. Rayner, Owens; J. E. H. Scott, Yorks.; C. E. Silvester, Owens; †H. Snape, Owens; W. H. Tattersall, Owens; T. J. Thomas, Univ.; W. Thompson, Owens; H. West, Univ.; L. S. Whitwam, Univ.; D. O. Williams, Yorks.

* First-class honours. † Second-class honours.

SECOND EXAMINATION.—FACULTY OF MEDICINE.—The following candidates have passed this examination in the subjects undernoted:

Anatomy and Physiology.—W. M. Alexander, Univ.; E. M. Ashcroft, Owens; S. B. Breutnall, Owens; R. N. Butterworth, Yorks.; A. Cran, Owens; S. W. Davies, Univ.; F. S. Fletcher, Owens; F. W. Gatenby, Owens; G. Heathcote, Owens; J. Hindshaw, Owens; B. H. Hirst, Yorks.; A. G. Jackson, Univ.; H. L. Jenkins, Owens; S. J. C. Johnson, Owens; E. W. Kemp, Yorks.; C. P. Lapage, Owens; H. F. Lee, Owens; W. G. Lloyd, Univ.; S. B. Mehta, Owens; S. Platts, Yorks.; H. H. Rayner, Owens; C. A. Ricketts, Owens; F. M. Rodgers, Owens; J. C. Teasdale, Yorks.

Materia Medica and Pharmacy.—J. W. Anderton, Owens; R. Appleton, Yorks.; P. W. Ashmore, Yorks.; L. R. Braithwaite, Yorks.; W. Briggs, Owens; G. H. Brown, Owens; J. W. H. Brown, Yorks.; S. Brown, Univ.; T. Brown, Yorks.; A. Burkhard, Yorks.; A. G. Christian, Univ.; R. Cook, Univ.; W. E. Cooke, Univ.; E. H. Cox, Owens; H. Crawley, Yorks.; J. A. Davenport, Owens; R. T. Dobson, Univ.; A. J. Edmonds, Owens; F. S. Fletcher, Owens; W. P. Grant, Owens; J. W. Greenwood, Owens; A. H. Gregson, Owens; H. E. Heapy, Univ.; G. R. Hitchin, Owens; A. Hodgkinson, Owens; C. H. Hopwood, Owens; A. Howard, Owens; J. R. Hutchinson, Owens; H. L. Jenkins, Owens; A. E. Johnson, Owens; J. A. Johnson, Univ.; J. A. Jones, Owens; R. J. Jones, Univ.; G. W. N. Joseph, Univ.; R. E. Knowles, Univ.; F. H. Lacey, Owens; R. J. M. Ladell, Yorks.; A. W. Latham, Owens; G. H. Leigh, Owens; J. A. Longley, Yorks.; H. Maffin, Yorks.; H. E. Moore, Owens; J. H. Part, Owens; A. H. Radcliffe, Yorks.; J. A. C. Roy, Owens; F. W. Schofield, Owens; R. Smailes, Yorks.; P. K. Steele, Yorks.; F. E. Tylecote, Owens; D. Walker, Owens; T. B. Wolstenholme, Owens; M. S. Wood, Owens; H. F. Woolfenden, Univ.; W. S. Wrigley, Owens.

FIRST EXAMINATION.—FACULTY OF MEDICINE.—The following candidates have passed this examination in the subject undernoted:

Part II. Biology.—R. A. H. Atkinson, Owens; J. Battersby, Owens; B. M. Bennett, Owens; A. N. Benson, Owens; J. A. Bligh, Univ.; F. L. Boag, Owens; A. Boothroyd, Owens; W. Botham, Owens; A. Boyle, Yorks.; W. E. Brierley, Yorks.; H. Buck, Owens; A. Cambell, Owens; L. Clay, Owens; R. Coates, Yorks.; R. Collier, Yorks.; T. Coogan, Owens; E. Cundall, Yorks.; F. da Cunha, Owens; J. B. Dalton, Owens; W. B. Dougan, Owens; J. L. Falconer, Owens; J. P. Garlick, Owens; P. C. Garrett, Owens; E. A. Gibson, Univ.; E. S. H. Gill, Univ.; T. Glover, Owens; J. W. Hartley, Owens; R. Haslam, Owens; H. D. Haworth, Owens; S. L. Heald, Yorks.; A. Hendry, Univ.; W. E. Hewitt, Univ.; H. E. Holmes, Owens; A. W. Houghton, Owens; F. C. Hudson, Owens; C. A. Hughes, Univ.; H. R. Hurter, Univ.; L. Hutchinson, Univ.; F. G. P. Ilderton, Owens; J. M. H. Jones, Owens; G. H. Joseph, Univ.; W. H. Judson, Owens; W. Longley, Yorks.; T. W. Lonsdale, Owens; H. J. Macvean, Yorks.; W. Y. Martin, Owens; J. de V. Mather, Owens; W. F. Mitchell, Univ.; R. H. Mole, Univ.; S. Murray, Owens; L. D. Napier, Univ.; C. S. O'Neill, Owens; R. N. Porter, Owens; W. B. Ramsden, Owens; E. W. Reed, Yorks.; F. Robinson, Owens; G. H. H. Russell, Owens; F. H. Salisbury, Univ.; W. G. Scott, Yorks.; H Simms, Owens; R. T. Slinger, Owens; J. Smalley, Owens; J. C. Smyth, Owens; J. W. Sowerbutts, Yorks.; H. B. Spurway, Owens; R. H. Swindells, Owens; F. P. S. Thomas, Owens; A. M. Walker, Owens; T. W. Walker, Owens; D. Wardleworth, Owens; S. H. West, Owens; H. V. White, Owens; W. F. J. Whitley, Yorks.; E. M. Wilkins, Owens; H. Woods, Univ.; W. Wright, Owens.

The Diploma in Public Health has been conferred on H. Coates, J. L. B. Dixon, H. Ramsden.

At the Degree Ceremony on Friday, July 28th, the candidates who passed the second part of the final examination (see above) were presented for the Degree of Bachelor of Medicine and of Surgery.

CONJOINT BOARD IN SCOTLAND.

THE following candidates have passed the respective examinations:

First Examination (five years' course).—Katharine Mary Chapman (with distinction), A. M. Laurie (with distinction), J. R. Robertson, A. Glen (with distinction), W. Adams, R. C. Blyth, J. R. Purcell, W. D. Cockburn, A. Allan, P. M. C. O'Doherty, A. R. Young (with distinction), R. Baranov, D. C. Callaghan, J. Webster, J. H. Fyfe.

First Examination (four years' course).—W. Barclay, J. Willett, J. A. Aickin, J. J. O'Sullivan, J. M. Campbell, J. Dunlop, S. G. Kinloch, T. Dow, H. D. Pitt.

Second Examination (five years' course).—H. A. Lunn (with distinction), R. J. Roberts, T. E. Harty, D. R. Williams, M. B. Conroy, H. Williams, D. Moodie, H. M'Master, W. D. Sutherland, J. H. O'Sullivan, J. N. M'Morris, A. F. Fleming.

Second Examination (four years' course).—H. J. Fryer, J. G. Welsh, J. A. F. Hatch, J. K. Bell, J. Graham, J. C. Shelmerdine, J. Willett, R. M'K. Wilkin, R. G. Whitelaw, J. James, A. Bryans, M. O'Halloran.

Third Examination.—D. S. E. Macnab (with distinction), G. R. Jarvie, J. T. Griffiths (with distinction), R. Wardlaw, D. Duff (with distinction), J. Allan, G. J. Campbell, W. Thomson, W. Burns, Charlotte M'Crea, J. Lynch, J. B. O'Mahony, J. J. M'Nicholl, W. J. Healy, F. W. M'Cay, S. J. Farries, W. Mason, J. Sykes, T. R. Hunter, J. Eygott, Winifred Nell, W. Hilbert, Mary Eleanor Rocke, Katharine Elizabeth Gregg, G. Goldfoot, A. C. Balfour.

Final Examination.—J. Scott, H. R. Macnee, J. T. Farren, N. Johnstone, G. B. M'Kendrick, D. F. Mangan, G. A. Thompson, J. Dunlop, A. L. Brown, K. R. D. Shaw, J. H. Lawson, H. J. Bell, Evelyn S. Milestone, H. Dodd, R. Stewart, W. Hibbert, W. F. C. Bennett, J. T. Bradley, S. H. Ali, W. B. Bhat, J. J. Porter, C. S. Wilkinson, G. M. Freke, A. B. S. C. Morrogh, E. J. Ling, N. R. Bharmavir.

APOTHECARIES' HALL OF IRELAND.

AT the annual meeting of the Governor and Council of the Apothecaries' Hall of Ireland held on August 1st, the following were duly elected to hold office for the ensuing year: *Governor:* James Raverty, L.R.C.S.Edin. *Deputy Governor:* Hugh A. Auchinleck, F.R.C.S.Edin. *Directors:* F. G. Adye-Curran, F.R.C.S.I., M.D.Dub.; John Evans, L.R.C.S.I.; W. V. Furlong, L.R.C.S.I., L.R.C.P.Edin.; F. D. Finucane, M.D.; J. A. Johns, M.B. Dub.; Robert Montgomery, M.R.C.S.Eng.; Robert J. Montgomery, M.B., F.R.C.S.I.; R. G. O'Flaherty, M.B., L.R.C.S.I.; Christopher O'Brien, M.B., L.R.C.S.I., L.R.C.P.I.; James Shaw, L.R.C.S.I.; G. S. Stritch, L.F.P.S.G.; Samuel M. Thompson, L.R.C.S.I., L.R.C.P.I.; C. R. C. Tichborne, LL.D., L.R.C.S.I., Dip.P.H. *Representative on the General Medical Council:* C. R. C. Tichborne. *Secretary:* Robert Montgomery, M.R.C.S.

The Diploma of the Hall entitling them to practise medicine, surgery, and midwifery has been granted to Messrs. M. O'Carroll, S. W. Battle, and Patrick O'Neill.

MEDICO-LEGAL.

REGINA v. MAGUTH.

ON July 24th, the Rev. Stephen Shepard Maguth,* LL.D., was charged at the Central Criminal Court before Mr. Justice Ridley with the manslaughter of Henry Arthur Baker. It was stated on behalf of the prosecution that the defendant, who was not a qualified medical man, kept a shop at Wandsworth, where he sold medicines called "The People's Pills of Health," etc. The name, "Dr. Maguth, LL.D.," was painted on the window and door of the shop. The deceased, Henry Arthur Baker, was a little boy. In June last his mother took his sister Rose, who was suffering from a sore throat, to see defendant, believing that he was a qualified medical man. The defendant, having examined the girl's throat, pronounced it to be merely an ulcerated sore throat, and gave her some medicine and embrocation. The mother asked if there was any danger in her little boy (the deceased) sleeping with his sister. The defendant replied that there was no danger. As a matter of fact, the girl was suffering from diphtheria and the little boy caught it, and Mrs. Baker again consulted the defendant, who, without seeing the boy, prescribed some "spasmodic drops" and a bottle of embrocation. Subsequently the boy was taken to see defendant, who examined his throat and said there was

a small ulcer. He directed that the boy should be rubbed with the embrocation and swallow some of the drops. The boy got worse, and, after taking him to see another doctor—who, however, refused to prescribe, believing that, according to the mother's statement, a qualified medical man was already in attendance—he was again taken to the defendant, who examined his throat and said that he was much better and needed no more medicine. Later, however, he sent another bottle of spasmodic drops. When the boy took these drops he nearly died from choking. Eventually Dr. Charlesworth was called in and found that the boy was in the last stage of diphtheria beyond the possibility of recovery, and he shortly afterwards died. The girl was also suffering from diphtheria, but was now recovering. It was alleged by the prosecution that the boy's death was caused or accelerated by the gross ignorance or carelessness of the defendant. An inquest was held at which the defendant gave evidence. An analysis of the embrocation and drops showed that the principal ingredients of the former was camphor, while the latter contained capsicum, and evidence was called to prove the aggravating effect of such medicines in a case of diphtheria.

The defendant, who gave evidence on his own behalf, stated that he was an LL.D. of Cambridge, and a clergyman of the Church of England, though he had not acted as such since 1895, owing to conscientious objections. He had studied botany for thirty years, and had also studied at the London Hospital in 1887 and 1888. He had treated a large number of cases of diphtheria, and had cured them all. His treatment of the deceased was quite right, and he denied any ignorance or carelessness. The drops which he prescribed, and which were to be diluted with water, contained a large mixture of myrrh, which considerably lessened the effects of the capsicum.

In cross-examination, defendant said that he studied at the London Hospital because he wanted information for a theological work he was writing. Defendant's counsel urged that he was a man of education, and not a quack, that he only charged a few pence for the medicines supplied. The jury, after a short deliberation, found the defendant guilty, with a strong recommendation to mercy. The judge said that he thought the verdict was a right one, though at the same time he agreed that the recommendation to mercy was well founded. He would, therefore, pass as light a sentence as he could, having regard for the interests of the public. He sentenced the defendant to two months' imprisonment without hard labour.

RESIDENT MEDICAL OFFICERS AND FEES FOR *POST-MORTEM* EXAMINATIONS.

W. W. P. cannot claim any fee in the case he mentions. The Coroners Act, 1887, Section XXII. runs as follows: "Where an inquest is held on the body of a person who has died in a county or other lunatic asylum, or in a public hospital, infirmary, or other medical institution, or in a building or place belonging thereto, or used for the reception of the patients thereof, whether the same be supported by endowments or by voluntary subscriptions, the medical officer whose duty it may have been to attend the deceased person as a medical officer of such institution as aforesaid, shall not be entitled to such fee or remuneration."

MEDICAL TITLES.

"Physician" asks whether there is any legal objection to a M.R.C.S. and L.R.C.P. putting the words "Physician and Surgeon" on his door-plate, and refers to the peculiar remarks of one of the judges in the case of Hunter *v.* Clare as to the rights of a Licentiate to style himself "Physician."

*** It is true that in the case referred to Mr. Justice Lawrance stated in effect that he thought that the title "Physician" imported that the holder was a doctor of medicine, and held a diploma entitling him to practise as such; and the same judge also stated that he considered that the proper description of the L.S.A. was Licentiate of the Society of Apothecaries simply. On the same grounds, therefore, it might be argued that the Licentiate of any other college or body is similarly restricted in his choice of title. However this may be, it is improbable that, so far as the General Medical Council is concerned, another prosecution against a registered practitioner will be sanctioned.

THE WORKMEN'S COMPENSATION ACT.

W.G.—Our correspondent does not state his grievance very clearly, and as he gives no hint as to the nature or duration of his engagement with the colliery company we are unable to say whether there has been any breach of it or not. As regards the Workmen's Compensation Act the employer is by the Act entitled, though not obliged, to have a workman who has given notice of an injury examined by a medical man provided and paid for by himself, and it would seem to be the interest of the employer that when a medical man is so provided the employer should stipulate that he should not also attend the workmen as his private patients, though this again is not laid down in the Act.

AN UNQUALIFIED ANÆSTHETIST.

Enquirer.—If any accident were to occur our correspondent might be placed in a very unpleasant position. It would be desirable for him to make representations to the hospital authorities, with a view to getting them to sanction the employment of a properly qualified man.

A SINGLE QUALIFICATION.

A correspondent, whose registered qualification is L.A.H.Dublin, 1883, writes that he has been requested to become medical officer to a branch of the Oddfellows, and wishes to know whether he can accept it, holding only a single qualification?

*** We are not aware what—if any—are the requirements of this particular branch of the Oddfellows in this respect, but we should suppose that the fact that our correspondent is a registered practitioner would be sufficient. It would be as well if our correspondent were to ascertain precisely what the rules of the branch in question are.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

[Specially Reported for the British Medical Journal.]

The Registrar-General has just issued his return relating to the births and deaths registered in England and Wales during the second or spring quarter of 1899, and to the marriages during the three months ending March last. The marriage-rate was equal to 11.4 per 1,000, and was 0.4 below the average rate in the corresponding quarters of the ten preceding years.

The births registered in England and Wales during the quarter ending June last numbered 239,295, and were equal to an annual rate of 30.2 per 1,000 of the population, estimated by the Registrar-General to be nearly thirty-one and three-quarter millions in the middle of this year. This rate was 0.7 below the mean rate in the corresponding quarters of the ten preceding years. The birth-rates in the several counties ranged from 22.8 in Rutlandshire, 23.2 in Sussex, 23.7 in Oxfordshire, and 24.1 in Westmorland to 34.1 in Nottinghamshire, 34.7 in Northumberland, 34.9 in Warwickshire, 36.4 in Staffordshire, and 37.2 in Durham. In thirty-three of the largest English towns, including London, the birth-rate last quarter averaged 30.8 per 1,000, and exceeded by 0.6 the general English rate. In London the birth-rate was equal to 29.6 per 1,000, and was 2.0 below the rate in the thirty-two provincial towns, among which it ranged from 23.2 in Halifax, 24.1 in Bradford, 24.5 in Huddersfield, and 24.9 in Oldham to 35.4 in Wolverhampton and in Hull, 35.5 in Birmingham, 35.6 in Liverpool, 36.5 in Sunderland, and 39.4 in Gateshead.

The births registered in England and Wales during the three months ending June last exceeded the deaths by 107,779; this represents the natural increase of the population during that period. From returns issued by the Board of Trade, it appears that 72,048 emigrants embarked during last quarter, for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these 72,048 emigrants, 21,998 were English, 4,037 Scotch, and 19,721 Irish, while 26,292 were of foreign nationality. Compared with the averages in the corresponding quarters of recent years, the proportion of English emigrants showed a decline, while that of Scotch and of Irish emigrants showed an increase.

During the second quarter of this year the deaths of 131,516 persons were registered in England and Wales, equal to an annual rate of 16.6 per 1,000 of the estimated population, the average rate in the corresponding quarters of the ten preceding years having been 17.7. The lowest county death-rates last quarter were 12.3 in Middlesex, and 13.7 in Surrey, in Sussex, in Berkshire, and in Buckinghamshire; while the highest rates were 18.2 in Shropshire, in Warwickshire, and in Northumberland, 18.4 in Staffordshire, 19.1 in Lancashire, and 20.2 in North Wales. In the urban population of England and Wales, estimated at twenty-one and three-quarter millions of persons, the rate of mortality during the quarter under notice was 17.1 per 1,000; while in the remaining and chiefly rural population of nearly ten millions the rate was 15.6 per 1,000. These urban and rural rates were 1.2 and 0.9 per 1,000 below their respective averages in the corresponding quarters of the ten preceding years. Among thirty-three of the largest English towns the mean death-rate was 17.5 per 1,000, or 0.9 in excess of the general English death-rate during the same period. In London the rate was 16.6 per 1,000, while it averaged 18.1 in the thirty-two large provincial towns, among which the rates ranged from 12.8 in Cardiff, 12.9 in West Ham, and 13.3 in Croydon to 20.6 in Salford, 22.0 in Wolverhampton, 22.7 in Liverpool, and 23.6 in Manchester. In sixty-seven other large towns, with an estimated aggregate population of more than four millions, the mean death-rate was 16.0 per 1,000, or 1.5 below the rate in the thirty-three great towns.

The 131,516 deaths registered in England and Wales during the three months ending June last included 2,973 which were referred to whooping-cough, 2,600 to measles, 1,811 to diphtheria, 1,418 to diarrhœa, 952 to "fever" (including typhus, enteric, and ill-defined forms of continued fever), 793 to scarlet fever, and 25 to small-pox; in all, 10,572 deaths resulted from these principal zymotic diseases, equal to an annual rate of 1.34 per 1,000, which was 0.35 below the average rate in the corresponding quarters of the ten preceding years. The mortality from diphtheria showed an excess, that from "fever" corresponded with the decennial average, while from each of the other principal zymotic diseases the mortality was below the average. Of the 25 deaths from small-pox registered in England and Wales during the quarter under notice, 19 occurred in the Borough of Hull; of the remainder 1 belonged to London, and 1 to Liverpool, while 3 occurred in the registration district of Barnet, and 1 in Oldham registration district.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under 1 year of age to registered births, was equal to 116 per 1,000, and was 12 per 1,000 below the average rate in the corresponding period of the ten preceding years. In London the rate of infant mortality was 114 per 1,000, while it averaged 131 in the thirty-two large provincial towns, among which it ranged from 96 in Halifax, 100 in Croydon 105 in Swansea, and 106 in Hudderfield to 154 in Manchester, 167 in Preston, 171 in Oldham, and 193 in Burnley. The mortality in England and Wales last quarter among persons aged between 1 and 60 years was equal to an annual rate of 8.8 per 1,000 of the estimated population at this group of ages, and was 0.8 below them ean rate in the ten preceding second quarters. In the thirty-three great towns the mortality at this age-group averaged 10.2 per 1,000, and ranged from 6.6 in Croydon, 6.8 in Cardiff, 7.3 in Norwich, and 7.4 in West Ham to 12.4 in Wolverhampton,

12.5 Salford, 14.6 in Liverpool, and 15.3 in Manchester. Among persons aged 60 years and upwards, the death-rate in England and Wales last quarter was equal to 70.1 per 1,000 of the estimated population at this age-group, against an average rate of 68.7 in the corresponding quarters of the ten preceding years. In the thirty-three great towns the rate was 72.8 per 1,000, ranging from 61.2 in West Ham and in Norwich, 65.2 in Gateshead, and 65.9 in Bristol to 87.5 in Blackburn, 88.3 in Oldham, 99.5 in Halifax.

The mean temperature of the air at the Royal Observatory, Greenwich, was 52.8°, and was 0.7° above the average in the corresponding quarters of 128 years; it showed an excess of 0.5° in April and of 2.3° in June, but in May it was 1.7° below the average. The rainfall during the quarter amounted to 5.41 inches, and was 0.20 of an inch below the average.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,519 births and 4,529 deaths were registered during the week ending Saturday last, July 29th. The annual rate of mortality in these towns, which had increased from 15.7 to 18.4 per 1,000 in the four preceding weeks, further rose last week to 20.7. The rates in the several towns ranged from 11.5 in Cardiff, 12.9 in Wolverhampton, and 13.1 in Blackburn and in Huddersfield to 25.2 in West Ham, 25.3 in Salford, 27.6 in Sheffield, and 29.7 in Liverpool. In the thirty-two provincial towns the mean death-rate was 20.1 per 1,000, and was 1.5 below the rate recorded in London, which was 21.6 per 1,000. The zymotic death-rate in the thirty-three towns averaged 5.1 per 1,000; in London the death-rate was equal to 5.5 per 1,000, while it averaged 4.8 in the thirty-two provincial towns, among which the highest zymotic death-rates were 8.7 in Liverpool, 8.9 in West Ham, 9.1 in Salford, and 10.8 in Sheffield. Measles caused a death-rate of 1.1 in Manchester, 1.4 in Burnley, and 1.9 in Salford; whooping-cough of 1.0 in Plymouth, in Bolton, and in Huddersfield; and diarrhœa of 4.8 in Nottingham, 4.9 in Preston, 6.7 in Liverpool and in Salford, 7.3 in West Ham, and 8.7 in Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 76 deaths from diphtheria included 35 in London, 8 in Sheffield, 6 in Leeds, 5 in Liverpool, and 4 in Leicester. Two fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, July 29th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,161 to 2,653 at the end of the ten preceding weeks, further rose to 2,667 on Saturday last; 307 new cases were admitted during the week, against 315, 299, and 292 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, July 29th, 992 births and 523 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 17.7 to 16.5 per 1,000 in the four preceding weeks, rose again to 17.1 last week, but was 3.6 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 11.4 in Leith and 13.5 in Aberdeen, to 19.8 in Glasgow and 20.3 in Perth. The zymotic death-rate in these towns averaged 3.5 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 279 deaths registered in Glasgow included 15 from measles, 2 from diphtheria, 7 from whooping-cough, 4 from "fever," and 42 from diarrhœa. Five fatal cases of diarrhœa and 2 of whooping-cough were recorded in Edinburgh; 4 deaths from scarlet fever occurred in Paisley, and 8 from diarrhœa in Dundee.

THE SANITARY INSPECTORS EXAMINATION BOARD.

THE first examination for certificates of qualification for appointment of sanitary inspector under Section CVIII (3) (*d*) of the Public Health (London) Act, 1891, will be held in London on Tuesday, December 5th, 1899, and the four following days. Particulars can be obtained on application to the Honorary Secretary, Wm. R. E. Coles, 1, Adelaide Buildings, London Bridge.

QUARTERLY REPORTS ON BOARDED-OUT CHILDREN.

CAUTIOUS.—We think the use of an official quarterly report on the condition of the boarded-out children is to be advised. As the filling up of the form involves a visit, it can hardly be included in the retaining fee paid to the local medical man for medical attendance; the amount of the fee might be increased, with a distinct understanding that it includes the quarterly report. As these reports form valuable material for reference, they have a money value.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE SWANLEY OPHTHALMIC SCHOOL.

THE new ophthalmic school which the Metropolitan Asylums Board proposes to erect at Swanley will provide accommodation similar to that shown on the plans of the Highwood School at Brentwood, for 360 children and a total staff, exclusive of school teachers, of 80, of whom 7 would be non-resident. The estimated cost, however, is higher than that for the Brentwood school—namely, £110,524, against £106,600. It is proposed to house the children in cottages, built in pairs and arranged in five groups, three pairs of cottages in each, each cottage to contain 12 beds. It was expected that the cost of working the establishment would be £13,165 a year (or between £36 and £37 a child). Exception has been taken to the great expense, and it has been pointed out that while the most expensive of the barrack schools had worked out for maintenance, interest, and sinking fund for repayment of capital at something like £32 or £33 per annum a child, in this case the expense, estimated in the same way, would probably be about £50 or £60. In reply to this criticism it has been pointed out that this would not be a school in the ordinary acceptance of the word, but rather a hospital and a school combined. The amount of cubic space given to each child would be just double what it would be in an ordinary school.

MEDICAL NEWS.

SUCCESSFUL VACCINATION.—Mr. William H. Kerbey, Public Vaccinator for the Fifth and Charmouth Districts of the Bridport Union, has been awarded the Government grant for efficient vaccination in both districts.

PRESENTATION.—Dr. G. H. Graham, who recently left Storrington, where he had been in practice for fifteen years, has been presented by his friends and patients of Storrington and the neighbourhood with a silver tea and coffee service, with kettle and a silver salver, suitably inscribed, as a token of their esteem and sincere regard.

POOR-LAW MEDICAL OFFICERS IN ITALY.—Measures are being taken to organise a congress of the Poor-law medical officers of Italy. The object of the congress is the protection of the interests of the officers and the consideration of reforms in their relation to the communal authorities under which they serve. Among the principal reforms to be discussed are fixity of tenure, irreducible scales of salary, the employment of substitutes, and pensions. It is also proposed to form a society of Poor-law medical officers.

CERTIFICATES UNDER THE WORKMEN'S COMPENSATION ACT.—At a meeting of the honorary medical staff of the Swansea General Hospital, held on August 2nd, the following resolutions were passed: "(1) That the medical staff of this hospital do not fill up certificates under the Workmen's Compensation Act for patients treated in the hospital for a fee of less than a guinea. (2) That the house-surgeon be requested not to give any certificate under the Workmen's Compensation Act except under the direction of the honorary medical officer in charge of the case."

WINDSOR AND DISTRICT MEDICAL SOCIETY.—A society, under the above title, was constituted at a meeting held recently (by kind permission of the Mayor, Sir J. T. Soundy) at the Guildhall, Windsor. After a few introductory remarks from Mr. James Startin of London and of Egham, who was unanimously voted into the chair, the election of officers for the ensuing session was proceeded with, amongst the number being Mr. W. B. Holderness as President, Mr. J. W. Gooch as Treasurer, and Mr. E. B. Hulbert as Secretary. It was decided to hold monthly meetings during the winter months, that is from October to March inclusive; and an annual general meeting in April of each year, at which the official business of the Society will be transacted; this to be followed by an annual dinner. A code of rules was adopted, and it was agreed that the same should be printed, and circulated amongst the members of the Society, which at present numbers over fifty members. Cordial votes of thanks were passed to the Mayor for courteously allowing the Society the use of the Guildhall, to Mr. W. B. Holderness for kindly providing refreshments, to the Chairman for his able conduct of the business of the meeting, and to the Secretary. The next meeting will be held during the latter half of October. Due notice of the date will be sent to every member.

MEDICAL VACANCIES.

The following vacancies are announced:—

BIRKENHEAD AND WIRRAL CHILDRENS' HOSPITAL, Woodchurch Road.—House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications to Mr. P. E. Arrowsmith, Honorary Secretary, 20, Chapel Street, Liverpool, by August 21st.

BIRMINGHAM GENERAL HOSPITAL.—(1) Two Assistant House-Physicians; (2) House-Surgeon. Appointments for six months. No salary; residence, board, and washing provided. Applications to the House-Governor by August 26th.

BRIGHTON, HOVE, AND PRESTON DISPENSARY (NORTHERN BRANCH).—House-Surgeon. Salary, £140 per annum, with furnished apartments, coals, gas, and attendance. Applications to the Assistant Secretary, 113, Queen's Road, Brighton, by August 26th.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke Road. House-Surgeon. Appointment for twelve months. Salary £80, with board, lodging, and washing. Applications, under cover, to the Chairman of the Medical Committee by September 5th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary £80 per annum, with board, residence, and washing. Applications to the Secretary by September 5th.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. No salary; board, lodging, and washing provided. Applications to the Secretary of Medical Committee by August 24th.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon; unmarried. Must be Fellow, Member, or Licentiate of one of the Royal Colleges of Surgeons of England, Edinburgh, or Ireland. Salary, £80. Applications to the Chairman of the Committee by August 16th.

DUNDEE ROYAL LUNATIC ASYLUM.—Medical Assistant. Must be qualified. Salary, £100 per annum, with rooms, board, and laundry. Applications to Dr. Rorie by August 19th.

DURHAM COUNTY ASYLUM, Winterton, Ferryhill.—Assistant Medical Officer; unmarried: also to act as pathologist Salary £120 per annum, with apartments, board, and attendance. Applications to the Chief Officer by September 1st.

FINSBURY DISPENSARY, Brewer Street, Goswell Road, E.C.—Resident Medical Officer. Salary £120 per annum, with furniture, residence, attendance, coal, and gas. Applications to the Secretary by September 2nd.

GEORGE HENRY LEWES STUDENTSHIP FOR THE ENCOURAGEMENT OF ORIGINAL RESEARCH IN PHYSIOLOGY. Applications to Professor Sir Michael Foster, K.C.B., New Museums, Cambridge, by October 1st.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Physician. Applications to the Secretary by September 13th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary £60 per annum, with board, lodging, and washing. Applications to Mr. R. F. E. Ferrier, Honorary Secretary, 13, Hall Plain, Great Yarmouth, by August 24th.

GUY'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Biology. Applications to the Treasurer, Superintendent's office, Guy's Hospital, S.E., by September 1st. Also Demonstratorship of Chemistry and Physics. Applications to the Dean by September 1st.

HULL: VICTORIA HOSPITAL FOR SICK CHILDREN.—Lady House-Surgeon. Salary £50 per annum, with board and laundry. Applications to the Honorary Secretary by August 16th.

MACCLESFIELD INFIRMARY.—Junior House-Surgeon. Salary, £70 per annum, with board and residence. Applications to the Chairman, House Committee, before August 17th.

MANCHESTER ROYAL INFIRMARY.—Medical Registrar (non-resident). Salary, £70 per annum. Applications to the Chairman of the Medical Board by August 19th.

MELROSE: ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with furnished quarters, board, washing, and attendance. Applications to the Medical Superintendent.

NEWCASTLE-UPON-TYNE: UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—Lecturer on Midwifery and Diseases of Women and Children. Applications to the Secretary by August 16th.

OXFORD EYE HOSPITAL.—Honorary Assistant Surgeon. Applications to the Hon. Secretary, Oxford Eye Hospital, 29, Banbury Road, Oxford, by September 16th.

PADDINGTON UNION.—Assistant to the Medical Superintendent of the Infirmary and Assistant Medical Officer of the Workhouse. Salary £100 per annum, rising £10 annually to £120, with board, lodging, and washing. Applications to the Clerk to the Guardians, 289, Harrow Road, W., by August 12th.

READING: BERKSHIRE ROYAL HOSPITAL.—Assistant House-Surgeon. Must be M.R.C.S. of Great Britain or Ireland, or a Medical Graduate of a University of the United Kingdom. Salary, £50 per annum with board, lodging, and washing. Appointments for six months. Applications to the Secretary.

ROCHDALE INFIRMARY AND DISPENSARY.—House-Surgeon; unmarried. Salary £90 per annum, with board, residence, and laundry. Applications to the Honorary Secretary, Mr. R. H. Shaw, Buersil House, Rochdale, by August 17th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road.—Resident Medical Officer. Salary £105, with residence and attendance. Applications to H. P. Bodkin, Honorary Secretary, 23, Gordon Street, Gordon Square, W.C., before August 14th.

SOUTHPORT INFIRMARY. Resident Senior House Surgeon. Salary £80 per annum, and all found. Applications to the Secretary by August 21st.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Surgeon. Salary £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

TORQUAY: TORBAY HOSPITAL.—House-Surgeon. Salary, £80 per annum, and £5 5s. for the nurses' lectures, with board, lodging, washing, and attendance. Applications to the Secretary by August 14th.

WARRINGTON INFIRMARY AND DISPENSARY.—Junior Resident House-Surgeon. Salary £100 per annum, with furnished residence and board. Applications to the Honorary Secretary by August 24th.

WESTMINSTER HOSPITAL.—Pathologist. Salary £250 per annum, and a sum of £80 per annum allowed for expenses. Applications to S. H. Quennell, Secretary, by October 1st.

WORKSOP DISPENSARY, Notts.—Medical Officer. Salary £120 per annum, with house, coals, gas, and attendance. Applications to Mr. C. A. Whall, Worksop, by August 15th.

MEDICAL APPOINTMENTS.

BENNETT, Norman G., B.A., B.C.Cantab., L.D.S., appointed Dental Surgeon to the Great Northern Central Hospital.

FEGEN, C. M., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer of Health for the Croydon Rural District, *vice* L. W. Darra Mair, M.D.Lond., resigned.

GUNTHER, H. A., M.B., appointed House-Surgeon to the Great Northern Central Hospital.

HORDER, T. J., M.B., B.Sc.Lond., appointed Physician to Outpatients at the Great Northern Central Hospital.

LONNON, F., M.R.C.S., L.R.C.P., L.D.S.Eng., appointed Dental Surgeon to the Gordon Boys' Home.

PURVIS, W. Prior, B.Sc., M.D., M.S.Lond., F.R.C.S.Eng., appointed Surgeon in charge of the Ear and Throat Department of the Royal South Hants Infirmary, Southampton.

SAYRES, A. W. F. M.D.Brux., M.R.C.S.Eng., L.R.C.P.Lond., appointed Public Vaccinator for the Woodford District of the West Ham Union.

STEVENS, William Mitchell, M.D.Lond., appointed Honorary Pathologist to the Cardiff Infirmary.

STRATFORD, Howard, M.B., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Hereford General Infirmary.

WILLIAMSON, R. T., M.D.Lond., M.R.C.P., appointed Honorary Physician to the Ancoats Hospital, Manchester.

YOUNG, C. A., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the No. 3 District of the Bridlington Union, *vice* C. G. Heard, M.R.C.S.Eng.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

AUDEN.—On July 10th, at Rustenburg, Transvaal, the wife of F. T. Auden, M.B., District Surgeon, of a son.

WILSON.—On August 5th, at The Manor, Ibstock, the wife of Thomas Nash Wilson, M.B., C.M., of a son.

WREFORD.—August 2nd, at 59, Osborne Road, Newcastle-upon-Tyne, the wife of John Wreford, M.B., B.Hy., M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

DYER—HEPTON.—On August 1st, at the Ilkley Wesleyan Church, by the Rev. Alfred Freeman, Charles Harold Dyer M.D., of Cleckheaton, son of the late William Dyer, of Halifax, to Fannie Evelyn Lawrence, youngest daughter of the late William Hepton, of Leeds and Ilkley. At home, Scarsdale, Cleckheaton, August 22nd, 23rd, and 24th.

MOFFATT—VAVASSEUR.—At Knockholt Parish Church, on August 3rd, by the Rev. Havard Jones, M.A., Rector, Robert Unwin Moffatt, C.M.G., M.B., C.M., to Hilda, youngest daughter of J. Vavasseur, of Knockholt, Kent.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 3.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations,*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30: Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 2.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 3; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 1.3 ; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 3.30; Th., 2

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30: Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 3.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu, F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 3; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

CARNARVON asks for advice regarding treatment of nocturnal cramp, especially affecting the feet and muscles of the leg.

W. asks where a middle-aged lady (epileptic) of moderate means could find a home.

DR. JOHN HIGHET, M.O.H. (Workington), asks where he can get information with regard to public health administration in France, Germany, Italy, and United States of America.

A QUESTION OF FEES.

IGNORAMUS asks for information under the following circumstances: A lady residing in a London suburb calls in a neighbouring practitioner as a family attendant. The latter, after some months' attendance, sends in an account in which he charges 10s. for every visit, and 21s. for a certificate stating his patient was unfit to give evidence before a court, this certificate being given without seeing patient. Are these fees reasonable and can they be enforced?

*** These fees would not be too high in the case of a patient in a good sociable position. If the practitioner is in the habit of charging such fees he could probably recover them in the county court.

A HOLIDAY DIFFICULTY.

A CORRESPONDENT asks advice under the following circumstances:

A. is engaged to attend a lady in her confinement. A. goes away for his holiday at the time the case is expected to come off, leaving his son, a young man just qualified, in charge of his practice, and without informing his patient of his probable absence. The patient's husband, however, hears of A.'s intention, and, after the latter has gone, refuses to allow A.'s son to attend, and engages another practitioner (B.).

Is B. justified in taking charge of case, and, if A. returns while he is in attendance, ought he to hand the case over to him?

*** The patient's husband might reasonably object to A. appointing his son as his deputy, and is entitled to call in B. B. is justified in taking charge of the case, but he should endeavour, if possible, to get the patient to accept him as A.'s deputy, and should then hand the case over to A. on his return.

ANSWERS.

H. S.—We are not sure that we understand our correspondent's question; but it seems hardly necessary to say that a house-surgeon is not expected to discharge the duties of a porter.

MEDICAL AID ASSOCIATIONS.

M. B. G.—The General Medical Council has expressed its strong disapproval of medical practitioners undertaking contract appointments where the conditions are such that the practitioner cannot give proper attention to the patients under his care, or where "touting" and similar means are made use of to obtain patients.

TO GET RID OF ANTS.

DR. MEREDITH YOUNG, D.P.H. (M.O.H. Crewe), writes: In reply to "H. J. W.," I observe the following extract from the *Queensland Agricultural Journal* in Messrs. Burgoyne, Burbidges and Co.'s *Monthly Magazine*. I have no practical experience on the point, so cannot guarantee the expedient: "To cleanse a cupboard infested with ants all the shelves should be washed with carbolic acid and water or carbolic soap. If the scent of the carbolic is offensive—as it is offensive to some persons—use the following: A large lump of ammonia dissolved in hot water and cold added: the proportion is ammonia the size of a hen's egg to a quart of water. Brush the shelves well over with it. The ants will soon leave, as they greatly dislike the scent of ammonia.

NOTES, LETTERS, Etc.

A CAUTION.

MR. C. S. LOCH (Secretary, Charity Organisation Society, 15, Buckingham Street, Adelphi) writes: A woman signing herself "E. M. Iselton," and sometimes "Etheridge," has been lately appealing to members of the medical profession in very urgent letters, asking for the means to relieve "with proper nourishment" a medical man, who is in "great need and rapidly sinking." Recipients of such appeals should refer to the Charity Organisation Society.

THE "MEDICAL DIRECTORY."

DR. W. WOODLEY STOCKER (287, Willesden Lane, Willesden Green, N.W.) writes: The time having again arrived for filling up the forms for Churchill's and other directories, I should like to call attention to a distinct grievance which I trust Messrs. Churchill will see fit to remedy in next year's directory. I refer to the abbreviated telegraphic addresses which Messrs. Churchill refuse to insert unless they are registered at the G.P.O. at the expense of one guinea per annum, or the price of two directories yearly. Of course, in a large town, it is necessary to have some code word which must be registered, but in suburbs and small towns where medical men are sufficiently known to simply have their name and town telegraphed, surely Messrs. Churchill ought not to expect them to pay a quite unnecessary guinea to the Post Office. Take my case. I have telegraphed to "Stocker, Willesden Green," from nearly every European country, and always had my wires delivered, and yet my friends often send a long address of six or seven words because they are not informed in the directory that a shorter address is sufficient. Yet Messrs. Churchill require me to pay £1 1s. annually before they print the short address in their directory. I may say Messrs. Kelly's have no such rule, and always print telegraphic address, and I think Messrs. Churchill ought to do likewise.

AN APPEAL ON BEHALF OF THE FAMILY OF THE LATE DR. COOKE.

MR. E. STANMORE BISHOP (St. Peter's Square, Manchester) writes: Would you acknowledge in the BRITISH MEDICAL JOURNAL, on behalf of the late Dr. Cooke, late of Whitefield, £5 from Dr. W. S. Ross of Waipiro Bay, New Zealand, and £1 1s. from Dr. Hanna of Buxton, and express Mrs. Cooke's sincerest thanks for the same.

SCHOOL BOARD LECTURES.

L.R.C.P.LOND. writes: I have seen one or two protests against the payment of lecturers on first aid and home nursing (fully-qualified medical men) by the London School Board at the rate of 10s. 6d. per lecture. I myself was foolish enough last year to undertake a couple of classes at that price. I have now received a circular letter from the clerk explaining that they are altering the number of lectures in each course from six to twelve, and asking me to undertake the work again. Now, Sir, each of those 10s. 6d. lectures was to last two hours, and at least one or more hours each evening was occupied in travelling to and from the school at which the lecture was delivered, in addition to which none of the travelling expenses were refunded. If this was not earning the half-guinea with a vengeance, I don't know what was. I am not asking for commiseration; it was my own fault undertaking the work at such a price, but I publish this warning to deter others who like myself may like the work, or have an evening to spare, from throwing themselves on the charitable consideration of the London School Board.

LETTERS, COMMUNICATIONS, Etc., have been received from:

A Mr. M. Ashley, Weston-super-Mare; Mr. T. Auden, Shrewsbury; Messrs. Arnold and Sons, London. **B** Dr. J. K. Brigham, London; Mr. J. H. Barrs, London; Mr. J. Boot, Nottingham; Mr. P. F. Barton, Wimbledon; Dr. F. C. Bryan, London; Mr. W. Bird, London; Mr. R. T. B. Beale, London; Dr. O. J. Beattie, London; Mr. E. S. Bishop, Manchester, Mrs. M. Bruce, London. **C** Mr. F. Cant, Woodley; Dr. Cope, London; Dr. W. S. Colman, London; Mr. W. R. E. Coles, London; Dr. J. W. Cook, Calcutta; Mr. J. S. Crawford, Dublin. **D** Messrs. Down Bros., London; Mr. R. A. Dool, London. **E** Dr. C. R. Elgood, Windsor; Dr. F. H. Edgeworth, Bristol; Mr. J. M. Evans, Llandrindod; Mr. F. Eve, London. **F** Mr. A. G. R. Foulerton, Sutton; Mr. J. C. Fenwick, Sunderland; Mr. C. E. S. Flemming, Freshford. **G** Mr. R. M. Gibson, Hong Kong; Dr. J. Gilroy, Ecclefechan; G. R. P. **H** Mr. E. M. Boggs, Swinton; Mr. W. T. Hayward, Adelaide; Dr. J. Highet, Workington; Dr. F. de H. Hall, London; Mr. H. Hempson, London; W. J. Horne, M.B., London. **J** Dr. E. Jepson, Durham; Dr. W. D. Johns, Bournemouth. **K** Mr. J. H. G. Kerr, London; Mr. E. Kerr, London; Mr. W. H. Kirbey, Charmouth. **L** Mr. W. T. Lister, Totteridge; Mr. F. Lonnon, London; Dr. A. W. W. Lea, Manchester; Dr. E. Lamphear, St. Louis: Local Government Board (Secretary), London; Dr. D. J. Lawson, Portland; Dr. S. Lodge, jun., Bradford. **M** M.B.; Dr. A. Munro, Glasgow; Mr. E. B. Morgan, Morriston; Mr. G. H. Mapleton, Goudhurst; Dr. A. Marshall, Lowestoft; Dr. R. C. B. Maunsell, Dublin; Professor Murray, Gateshead; Dr. H. W. G. Macleod, London; Mr. J. D. Moir, London. **N** No Name. **O** Mr. E. Owen, London. **P** Dr. W. P. Purvis, Southampton; Pursuer; Dr. E. F. Potter, London. Miss R. Paget, London. **R** Dr. F. W. Ross, London; Dr. E. W. Reid, Dundee; Dr. A. F. B. Richards, Swansea; Messrs. Radcliffe and Co., Leeds; Messrs. Russell and Sons, Southsea; Dr. J. Rae, Elgg; Mr. J. Rogers, Ilfracombe; Mr. H. Rundle, Portsmouth. **S** Dr. C. A. Sturrock, Dunfermline; Mr. J. Stewart, Portsmouth; Dr. G. C. Stewart, Falkirk; Dr. A. W. Sayres, Woodford. **T** Dr. D. Thomas, London; Mr. C. H. Tattersall, Salford; Mr. H. Trench, Bombay; Mr. W. Tyndall, Portsmouth; Dr. J. C. Thresh, Chelmsford; Dr. May Thorne, London; Dr. H. Tilley, London. **V** Dr. Alice Vaningen, Bombay. **W** Dr. R. T. Williamson, Manchester; Mr. H. H. Williamson, Andover; Mr. G. C. Wilkin, Yeovil; Mr. E. W. Wallis, London. Mr. J. T. Williams, Barrow-in-Furness; Dr. T. N. Wilson, Ibstock. **Y** Dr. M. Young, Crewe. **Z** Zephyr.

BOOKS, Etc., RECEIVED.

The Roentgen Rays in Medical Work. By D. Walsh, M.D. Second Edition. London: Baillière, Tindall, and Cox. 1899. 10s. 6d.

An Introduction to the Study of Zoology. By B. Lindsay. London: Swan Sonnenschein and Co. 1899. 6s.

Modern Cremation. By Sir H. Thompson, Bart., F.R.C.S., M.B. Third Edition. London: Smith, Elder, and Co. 1899. 2s.

Les Troubles Mentaux de l'Enfance. Par Dr. M. Manheimer. Paris: Société d'Éditions Scientifiques. 1899. Fr. 4.

Le Diabète et son Traitement. Par R. Lepine. Paris: J. B. Baillière. 1899. Fr. 1.50.

Transactions of the Second International Actuarial Congress. London: C. and E. Layton. 1899.

Bestimmungen über die Zulassung zur ärztlichen Praxis im Auslande. Von Dr. J. Schwalbe. Leipzig: Georg Thieme. 1899.

Leitfaden für den gynaekologischen Operationskurs mit Berücksichtigung der Operationen an der Lebenden. Von Dr. E. G. Orthmann. Leipzig: Arthur Georgi. 1899.

Die Mischgeschwülste. Von Dr. M. Wilms. Heft I. Leipzig: Arthur Georgi. 1899. M. 4.

*** In forwarding books the publishers are requested to state the selling price.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

Eight lines and under	£0	4	0
Each additional line	0	0	6
A whole column	1	12	6
A page	6	6	0

An average line contains six words.

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Post-Office Orders should be made payable to the British Medical Association at the General Post-Office, London. Small amounts may be paid in postage-stamps.

N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

SIXTY-SEVENTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.
Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899.

PROCEEDINGS OF SECTIONS.

SECTION OF DISEASES OF CHILDREN.
Edmund Owen, F.R.C.S., President.

UNUNITED FRACTURE IN CHILDHOOD.

By Edmund Owen, F.R.C.S.,
Consulting Surgeon to the Hospital for Sick Children, Great Ormond Street, W.C.; President of the Section.

It is not unusual, I think, for one who has the honour of being President of a Section at an annual meeting of the British Medical Association, to start the business of his Section with a review of what has been done in his field of work in recent years, and, perhaps, with a speculation as to what is likely to be accomplished in it in the near future.

In many cases the adoption of such a custom is both interesting and instructive, but instead of following it on the present occasion I propose starting our work by asking two questions:

1. Why is non-union after fracture of the tibia and fibula in children of comparatively frequent occurrence?

2. Why does its treatment by operation so often end in amputation?

It is because of the frequency with which the tibia and fibula are involved in pseudarthrosis in children, that I suggest we should confine our remarks to ununited fracture in the leg bones, though there is no reason why the condition as affecting other long bones, notably the clavicle, humerus, and femur, should not be alluded to for purposes of illustration. I have met with non-union after fracture of the clavicle in a child; but, after all, the defect did not prove a very serious one.

The humerus is rarely the seat of pseudarthrosis in children, though in the adult it is often involved. So also with the shaft of the femur; it is frequently affected in adult life but rarely in children, and the only case of femoral pseudarthrosis which I have met with in a child recovered after a long rest, without a cutting operation.

The two great differences between ununited fracture in the child and the adult are these, that in the child the false joint is generally in the leg, and that operative treatment is almost invariably futile.

Comparatively little attention has hitherto been directed to this subject, chiefly for the reason, I suspect, that the surgeons who had to deal with such cases could not publish a satisfactory result to their operative interference. Though why surgeons should publish accounts only of their successful cases I cannot understand, such practice being equally misleading and immoral.

So far as I know, the first essay directing special attention to the subject of ununited fracture in children was by Sir James Paget in *Studies from Old Case-books*, published in 1891. In it he gives brief records of three cases:

The first was that of an infant who broke her tibia and fibula from very slight violence; when she was 15 years old she was glad to have the leg amputated.

The second case was that of a baby who fell and broke its leg below the middle. "The fracture was at once well set, and every care was taken of it; the union gave way, and consolidation never took place, though scraping, excision, wiring, everything" were tried. The limb was eventually amputated.

In the third case a "bonesetter" broke the bent leg of a child, and the fracture did not repair in spite of a resort to resection and wiring, and in due course Dr. Snowcroft amputated the leg.

In the cases on which I have operated there was apparently no local impediment to the consolidation; the broken ends of the tibia, forming a salient anterior angle at the junction of the middle and lower third of the leg, were in close apposition. No tendon or sequestrum interfered with them, and they were surrounded and connected by a considerable amount of fibrous tissue, which, unfortunately, failed to attain the higher development into bone.

It would be as interesting, as it is impossible, to know what is the exact state of the bone at the time of the fracture in those cases in which pseudarthrosis ensues. Does the fracture occur because there is some peculiar atrophic condition of the tibia and fibula at that spot? If this be the case, the failure of operation to remedy the defect is at once explained. Will the *x*-rays eventually help in the elucidation of this mysterious and interesting matter?

In some cases of pseudarthrosis in children the fracture occurs *in utero* or at the time of birth, but more often at a later period, and in many cases as the result of slight violence. In such circumstances, therefore, there might be but little to attract the attention of the mother or the surgeon to the injured leg-bone, and so the fracture might be neither recognised nor treated.

In the adult the chief cause of non-union after fracture is want of rest, and possibly this is one of the causes of the frequent occurrence of pseudarthrosis in the child's broken tibia; the fracture is not detected and not treated, and the child is carried about, the leg hanging over the mother's arm. Thus the weight of the foot constantly draws the lower end of the tibia backwards, and the salient angle at the fracture is directed forwards.

In the adult the humerus and femur are the bones whose shafts are most often the seat of ununited fracture, and with them resection of the pseudarthrosis and wiring the freshened ends of the bone always results in consolidation. But in children non-union most often occurs in the tibia and fibula, and, so far as my experience goes, fibrous union is the best result that follows operative treatment. But as fibrous union of a fracture of the tibia and fibula is of no practical value, the operative treatment very often ends in amputation.

Dr. Packard, of Denver, attributes the non-union to imperfect treatment. He writes in Keating's *Cyclopædia of the Diseases of Children:* "In the Warren Museum there are three specimens singularly illustrative of the effects of neglect in fractures of the leg in early life. The bones form an angle salient forward, and the lower fragments are crowded down close to the foot. In two of the cases bony union failed to occur, and in one amputation was finally resorted to." He also refers to the case of a boy of 14 years in whom union failed to occur after the removal of a wedge of bone from the seat of an old fracture in the leg, and he gives reference to a case reported in the *Lancet* of June, 1862, in which after the broken tibia of a boy had been treated by the introduction of ivory pegs, amputation was subsequently done when "the lower fragment was found to be atrophied."

This reference to the atrophy of the lower fragment is of great importance; in the cases in which I have had occasion to operate I have noticed the same condition.

In his paper in the 75th volume of the *Medico-Chirurgical Transactions*, Mr. D'Arcy Power gives a table of 72 cases of ununited fracture of the long bones in children, of which 45 occurred in the tibia and fibula, giving a percentage of 62.5.

For the care and skill with which he has compiled and displayed this collection of cases Mr. Power has earned our gratitude, but it is a matter of regret to me that he—able physiologist as well as surgeon—had no suggestion to make as regards the explanation of the unsatisfactory treatment of the condition.

He gives it as his opinion that "want of rest is the main cause of non-union of fractures, though there may be subordinate factors." What are these subordinate factors? In those instances in which non-union has followed a fracture which has been "at once well set and every care taken of it in respect of surgery," does not this unknown subordinate factor actually become the main cause?

In the discussion on Mr. D'Arcy Power's paper, Mr. Holmes attributed the non-union to the want of early diagnosis and neglect of proper treatment. But if there were nothing more in the pathology of the condition than that, how is the almost

inevitable failure of the operation for consolidation to be explained?

If neglect of ordinary precautions be, as maintained by Packard and others, the actual explanation, how is it that pseudarthrosis almost invariably follows the operation which, for ununited fracture in the adult, is always successful, for there is no "neglect of treatment" after operation has been performed?

It is worthy of note that in some of the cases the tibia was bending before it broke, or that there was a doubt at first as to whether the bone was bent or actually broken. Sometimes the fracture follows an attempt to straighten the bent bone—that there was, in other words, some ill-defined condition leading up to fracture. And if this be so, it should make the surgeon not only cautious, but apprehensive, when he proposes to straighten an antero-posterior bending in a child's leg.

As to the cause of the almost invariable failure of operative measures I regret to say that I have nothing definite to offer. It has been suggested that previous to its being fractured the bone may have been the seat of an obscure affection somewhat allied to mollities ossium. All I can say is that, cutting down upon the seat of the fracture there was no remarkable softness of the bone. In the instances, however, in which I have operated long after the original injury there was an atrophic condition of the lower fragment of the tibia. The child's foot had been well enough developed, but the fragment between the ankle and the fracture has been poor and spindle-like, as in a case of infantile paralysis. Why should one bone be affected by any form of mollities ossium without other bones being affected, mollities being a general disease?

As to theories—what is wanted is a theory which shall at the same time explain the easy fracture of the bone from some slight injury; the absence of bony union whether the fracture be well treated or not; and the complete failure of those operative measures which can be depended upon for success in the treatment of pseudarthrosis in the adult.

The only theory which, so far as I can see, is able to answer all these requirements is that which invokes the influence of the trophic nerves. I am, therefore, going to suggest that leading up to the fracture there is some subtle disturbance in the anterior cornu of the grey crescent of the cord, inhibiting the due nutrition of the bone, and rendering it weak and friable, subsequently interfering with repair, and eventually frustrating the best endeavours of the operating surgeon. I would thus ally the condition to the molecular disturbance of the crescent which entails infantile paralysis, but one which expends its influence upon bone rather than muscle.

I do not see how this theory could be confirmed or exploded except by a careful examination of transverse sections of the cord made in the case of an ununited fracture, and the opportunity of making such an investigation is not likely to present itself.

I am sure that it would be very interesting to this meeting if brief records of cases of ununited fracture could be laid before us; if we could be told of the operative measures adopted and of the ultimate result of such treatment. I have no personal knowledge of any case in which a surgeon has cured the defect; the cases which have been under my care have ended in amputation.

It would be interesting to know if the forcible straightening of bent bones—a very common operation in these times—has in many instances been followed not merely by delayed union, but by pseudarthrosis. Such an occurrence would, indeed, be a calamity.

In a large proportion of the cases the fracture has been the result of very slight violence. Is it not fair to assume that there was some antecedent weakness in that part of the bone? Admitting the pre-existence of such local weakness, it will not come as a matter of surprise that operative treatment ends in disappointment.

I see no reason why one should endeavour to attribute the fracture to any constitutional dyscrasia, such as rickets, syphilis, or tuberculosis. It is probable that in a large proportion of the cases the general treatment has been in such directions, but always with the same negative result.

In the heading of this paper I ask the question why the operative treatment of ununited fracture of the tibia is so often followed by amputation; and, in order to increase the chance of some satisfactory conclusion being arrived at, I will throw out these definite suggestions for discussion:

(*a*) Why do the tibia and fibula of a child break as he is, for instance, pushing a chair along the carpet, whilst every other bone in his body is apparently sound?

(*b*) Why, if the fracture is promptly discovered and properly treated, does it sometimes fail to consolidate?

(*c*) Whether the fracture has been appropriately treated or not, how is it that the operative measures which suffice to cure pseudarthrosis in the adult fail miserably in the case of the ununited fracture of the leg bones of the child?

(*d*) Is the diaphysis of the tibia, or the lower fragment, generally ill developed in these cases? If so, does this morbid condition help to explain the failure of the operative treatment? What is the explanation of this atrophic condition?

Lastly, has any operator here present ever established consolidation in the ununited tibia of a child? If so, will he kindly explain how he accomplished it? For my own part, I must regretfully confess that all my best efforts in that direction have ended in complete failure.

Mr. GEORGE MORGAN related a case of a girl, aged 5, admitted to the Alexandra Children's Hospital, Brighton, under Dr. Whittle's care, in which there was entire absence of any of the usually accepted constitutional causes such as syphilis, scurvy, or tuberculosis. The child was typically healthy, and the only conclusion arrived at was that the constant failure of union must be due to some congenital trouble in the tibia itself; the possibility of this seemed to be strengthened by the fact that there was no fibula on that side. Several futile attempts at union by operation were made, and after a year's treatment the child was lost sight of.

Mr. A. H. TUBBY thought that if the records of operation by osteotomy and osteoclasis were followed out more carefully the number of ununited fractures would be found to be considerable, and perhaps startling. He thanked Mr. Owen for drawing attention to the subject, and for the attractive theory he had advanced, that in children there might be an alteration in the trophic state of the bones comparable to that existing in anterior poliomyelitis, and this altered trophic state was the cause of failure of union. Mr. Tubby alluded to a case of non-union of the tibia for osteotomy, which he had seen with a colleague, in which all methods, including transplantation of rabbit's bone had been tried and had failed.

Mr. OWEN, in reply, remarked that if the case quoted by Mr. Morgan had since proved successful it would almost certainly have been reported. He agreed with Mr. Tubby that great care ought to be exercised as to the cases selected for straightening. Orthopædic surgeons were in the habit of assuring parents that there was no risk in these operations. They ought not to do this, as there was always some risk. He had himself tried grafting the growing end of the diaphysis of a puppy on the bone of a child, without any result.

A DISCUSSION ON THE TREATMENT OF PLEURITIC EFFUSION IN CHILDHOOD.

I.—ROBERT MAGUIRE, M.D., F.R.C.P.,
Physician to the Hospital for Consumption, etc., Brompton; Physician to Out-patients, St Mary's Hospital.

MEDICAL TREATMENT.

I CONSIDER that my duty is to lay before the Section those points of my subject which are most in doubt, and therefore most worthy of our discussion and of the interchange of views. These, then, I will present to you, stating briefly what I myself think of them. Further, the subject given to me is limited in its range, and I must ask the members to bear its limits in mind, when listening to what I have to say. The subject is the medical treatment of pleuritic effusion in children, and I must avoid discussing anything like surgical procedure, but I think mere puncture of the chest is an operation which any physician may reasonably do for himself, and also that it is the function of the physician to advise the surgeon when, where, and sometimes even how, the more serious surgical operations should be performed.

In the second place, treatment only is under discussion, though in relation to this I am strongly of opinion that it is all important to have a definite idea of the pathology—not merely anatomical but functional—of the conditions which we are treating. Without this we should be acting not scientifically, but by mere rule of thumb.

Next, we must limit ourselves to effusions into the pleura, and to those effusions which are the result of inflammatory action. Finally, we must confine ourselves to such effusions specially as they occur in childhood,

Diagnostic Puncture.

Given, then, an effusion which is pleuritic and occurring in a child, the question is what are we to do with the patient? Undoubtedly, the first thing is to put a needle into the thorax and ascertain what may be the character of the effusion, whether serous or purulent. This is more important in the child than in the adult, for pleurisies are more latent in the child, and also an empyema in the child presents itself much more insidiously than in the adult. Very frequently is it entirely unsuspected, in spite of the most careful observation. Pass the needle, then, at once into any effusion in the pleura of a child. There is no danger in doing this if ordinary antiseptic precautions be adopted, and there need be no pain if we freeze the skin by the usual methods. Mistakes will happen at times, but the needle properly used can do no harm, even if it pierce a consolidation due to pneumonia. Here, however, I would give a warning. Your needle must not be too small nor your suction power too feeble. The ordinary hypodermic syringe is of not the slightest use. You must use a large-bore needle and a fairly powerful syringe for, not infrequently, pus will not pass through a small needle with feeble suction power. I prefer myself to use in such cases the usual apparatus for aspiration—it is just as easy of use as an ordinary needle—and thereby one may, if one wishes, empty the chest at once if, as may happen, the effusion is serous, or even, at times if it be purulent—a matter I will discuss hereafter. We have then ascertained whether the effusion is serous or purulent.

First, we will assume that it is serous and not unduly bloodstained. If it be unduly bloodstained we must bear in mind the possibility of a mistake in the diagnosis, for though intense inflammation of the pleura may lead to an excessive exudation of red blood corpuscles, yet great bloodstaining should make one think of the presence of sarcoma of the pleura, not frequent, however, in the child. Granted that we have satisfied ourselves of this—that the effusion is really serous—we may now consider what ought to be done with it, and here we come to the pathology of the question.

Pathology.

I will commence with the general pathology of inflammatory effusion in so far as it concerns our treatment. Such inflammatory effusion is distinctly an active secretory process, and not a mere transudation, as has very generally been supposed. In mere hydrothorax we have the effect of a simple difference of tension between the stream in the blood or lymphatics, and the negative tension universally prevailing in the thorax. In inflammation leading to serous effusion we have an added forcible factor, the secretory power of the irritated pleural epithelium. When the effusion is purulent, still more force attends its production, for the leucocytes are active beings, each with a little body power, which their numbers multiply by millions, in such a way as to require logarithms to calculate the sum of their energy.

The power of such effusion is slight in hydrothorax, with which we are not now dealing, greater in inflammatory serous effusion, still greater in purulent effusion. But there are other factors to consider. The effusion is always more or less encysted in adults if it be purulent, rarely if it be serous. In children I should not be far wrong in saying that it is always encysted in empyema and very frequently so when the effusion is serous. Any positive tension of the fluid then would be exaggerated—re-infusion—in a child, because of the *point d'appui* afforded to the effusion by the adhesions. But still another consideration appears. What about the resilience of the thorax? I have a short time ago, in a published clinical lecture, spoken of the dynamics of the thorax in disease, and said there that one of the great items in the production of the necessary negative tension of the thorax is the twisting and confined fixing of the ribs which is a normal development. The ribs spring outwards when you divide them after death, and this rib-spring is an important factor in the dynamics of the chest. But in the child the ribs and their connections are soft, the rib-spring is not so great as in the adult, and consequently there is less tendency to the development of positive tension in the thorax as the result of effusion, and the positive force of effusion is to a certain extent counteracted.

Thus—coming to the application of this to treatment—we need not fear, at least in so far as dynamics are concerned, a degree of effusion in the child which might, because of its positive tension, be very serious in the adult. Rarely do we see positive tension, that is, bulging of the intercostal spaces and depression of the diaphragm with its underlying viscera, in children when the effusion is simply serous. I would, however, give a warning, illustrated by a case under my charge at the Brompton Hospital recently:

A child, aged 2½ years, had pleural effusion on the left side, and because of the fact that I felt the spleen well below the left costal margin, I at first believed that I had to deal with a huge effusion showing positive tension. I leave out of the description the other signs which eventually led me aright. There was no depression of diaphragm and spleen, but only a usual enlargement of spleen, which was the result of rickets, and which led to the organ being felt below the ribs.

Supposing, then, that we have thus determined that the effusion is serous and not purulent, we must deal with the question of how it must be treated in a child. Positive tension in the thorax is a very important guide, though, as I have stated, it rarely occurs in children provided that the effusion is simply serous. It is detected and estimated by bulging of the intercostal spaces and by depression of the diaphragm and its underlying viscera. But displacement of the heart is no evidence of its presence. The heart can be displaced by even a small pleural effusion, and we must not be misled by this, nor deceived into thinking that because—as it is still often expressed—"the heart is pushed to the opposite side," there must be immediate operative interference. The heart is scarcely ever "pushed," it is simply drawn by the retraction of the opposite lung and of the mediastinum.

Treatment.

But depression of the liver, stomach, and spleen is a different matter, and further such depression is generally accompanied, even in children, by engorgement of the cervical veins and great dyspnœa. Then, undoubtedly, aspiration is the best treatment, and must be pursued, whether the fluid withdrawn be bloodstained or not. I have mentioned that in the preliminary puncture the aspirator, and not the ordinary needle, should be used. If there be no such signs of positive tension as I have described, and the fluid withdrawn is deeply bloodstained, I think it is better to stop the aspiration at once. To pursue it would only draw more blood to the inflamed lung, which probably underlies the effusion. Suppose again that the effusion be only moderate in amount, that there be no signs of positive tension, and that the fluid be not unduly bloodstained—the usual conditions under which such effusions are met with—here again, I think, that aspiration is best not proceeded with. For once purely medical measures are the best. I am no advocate for any attempts to draw off the fluid by artificial channels—as, for instance, the kidneys—say by the aid of diuretics. There is no need for any such course. Moreover, the resistance of the child's lung is so great that, even after a long collapse, it will expand normally, thus differing from the lung of the adult. But this depends greatly upon the maintenance of the general health.

Fortunately in children tuberculosis is rarely the cause of pleuritic serous effusion. Sir William Jenner stated that it was the frequent cause of empyema, and recently I see that Netter has denied this on the ground of bacteriological examination. But I also see that Netter has trusted simply to microscopic examination, and has not applied the test of inoculation to the fluid obtained from his cases; therefore, his results are by no means reliable, and, in the case of purulent effusions, Sir William Jenner's dictum must be considered unshaken, supported as it must be by the clinical experience of all of us. This, however, refers only to purulent effusions. With regard to serous effusions, one may safely hold the opinion that tuberculosis is rarely present in such cases as they occur in children. Yet there occur cases of serous pleuritic effu-

sions in which there is undoubted evidence of the presence of tubercle in the lungs, and in such cases I strongly advise non-interference with the effusion. The same rule applies to adults also, and I hesitate to give you a conjecture as to its *rationale*. I will merely state what has been supposed. It has been thought that the relief of the lung from the presence of the effusion may lead to increased circulation through the lung, and therefore to increased activity of tuberculous inflammation. This seems to me a very improbable view for many reasons, which we need not discuss here. Another idea is that in the effusion from a tuberculous lung there may be an antitoxin, the result of the cultivation of the bacillus on human soil, and that the gradual absorption of such antitoxin prevents the further development of the tuberculous process. For this view we have no proof, but the theory seems to me well worthy of further investigation. Let us at present be content with the fact, of which I am well satisfied, that it is better to leave tuberculous effusions alone, provided that they do not produce signs of positive tension amounting to pressure, which would endanger the functions of the other thoracic viscera.

Next we must think of the treatment of such simple inflammatory but non-tuberculous effusions as we have determined to not warrant aspiration. To maintain the general health by good feeding and hygiene is the great point, but I think the disappearance of the fluid may be hastened by the administration of grey powder. This is exceedingly old-fashioned treatment, and was much cried down by Sir William Jenner. Nevertheless, I am of opinion that our forefathers were right in its use, though possibly they carried it to excess. Judiciously employed I have seen it act powerfully as a remedial agent, and with no bad effects. I see no reason to insist upon absolute rest for the young patient who has a pleuritic effusion, provided that the inflammatory process has subsided, and that there be no signs of positive tension in the thorax. Judicious open-air exercise is sometimes of great use in removing such effusions, and probably acts by increasing the general nutrition. Naturally, the same advice cannot be given to adults, for in them there is a greater risk of heart failure.

So far I have only mentioned simple serous effusions. But if our initial puncture—or aspiration, as I recommend—should show the presence of pus, what, then, should be our procedure? I would advise that in the first place we should try to find the source of the infective material, and still further to take warning from the presence of the pus to prevent its formation in other cases. I wish here to give a special word of warning. On no account would I decry the operation for the removal of adenoid growths of the naso-pharynx. There can be no doubt in the minds of any of us as to the need of such operation at times for the mental as well as physical well-being of the patient. In regard to the operation I find fault with the surgeons mainly, and almost only, because they are not sufficiently thorough in their removal of such growths, and fail to clear the parts of the pharynx which lie near the base of the skull, and which therefore interfere with mental development. But more judgment is required in choosing the time for such operation, and more precautions are necessary to ensure asepsis. There can scarcely be conceived a surface more capable of septic infection than the newly scraped lymphatic tissue left after such an operation. Recently I was called in to see a case where I prevented such an operation, proposed to be performed actually at the time when the patient was suffering from suppurative inflammation of the middle ear. How could the young patient under such circumstances fail to develop a highly septic wound? I mention the matter here because empyema sometimes occurs as one of the septic manifestations—and by no means the most serious of them—caused by this operation.

Cases will arise at times in which the ordinary and best operation for empyema—incision—cannot be performed. For instance, the patient's friends may object to operation; and, again, empyema may present itself on both sides of the chest, and it is almost impossible to open both sides and disable both lungs. What are then the dangers which may attend leaving the empyema alone, and also those which may result from treating the empyema by repeated aspiration? There is no doubt that empyema will sometimes, but rarely, get well by resorption and with no accidents. In the child, too, perforation of the abscess into the lung is not common, and perforation through the chest wall is still rarer. The great danger then is that of septic infection, causing acute inflammation elsewhere, or gradual interference with the body health and marasmus, with death from asthenia. Some of these dangers, however, can be avoided by repeated aspiration, and the patient thereby restored to health. As an instance of this I may mention two cases; one was a child whom I saw in consultation with Dr. Reid of Lambeth. The parents objected to operation, so Dr. Reid aspirated three times, drawing off about 30 ounces of pus on each occasion, and the child quite recovered. Again, I have a child under my care at the Brompton Hospital in whom I diagnosed empyema, and asked Mr. Godlee to operate, but before he could do so an empyema developed on the opposite side. One empyema was incised, the other is being treated by aspiration, and the child is doing well.

Two other conditions of pleural effusion I wish to mention briefly to complete the materials for discussion from the medical standpoint; these are effusion generally purulent, encysted between the lobes of the lung, and effusion, purulent or serous, as it accompanies pneumothorax.

Effusion between the lobes of the lung is more common on the right side, because here there are three lobes instead of two, and its diagnosis, by no means an easy matter, is of great importance for treatment. Such an effusion shows itself mostly by mere simple pleuritic signs limited to a spot near one of the interlobar fissures, and with only very obscure signs of fluid effusion. Exploratory puncture is very uncertain in its results, for, as I have not infrequently seen, there is only one limited area through which the needle can reach the fluid. Yet it is always desirable to get at the fluid, whether serous or purulent, before it bursts into either the general pleural cavity or a bronchus. The knowledge that such a condition may be present, coupled with the finding of the limited pleurisy described, and possibly the absence of pneumonic signs, will often lead to its detection. In such cases there is rarely any displacement of the heart, for the locality of the effusion tends to prevent it interfering with the dynamics of the chest. Diagnosis here is everything, for treatment must be pursued according to the usual rules.

Finally I must mention the effusion which accompanies pneumothorax. Commonly this is purulent, but sometimes serous. I will not go farther into the question of its mechanism than to refer to a very curious thing. By reason of the generally prevailing negative tension in the thorax, pleural effusions are usually removed from the influence of the force of gravity. So far as I know this is the only instance in nature where such a thing occurs. But when air obtains access to the pleural cavity matters are very different. An ordinary effusion does not obey hydrostatic laws when the position of the patient is changed. An effusion with pneumothorax behaves just as any other fluid would do, and this no matter what the character of the effusion may be, though naturally the thinner the effusion the more mobile it will be.

I cannot too strongly impress upon my hearers the importance of thinking over and understanding these curious conditions of dynamics as they exist in the thorax. Such a consideration led to the invention of the aspirator by a physician, and physicians may reasonably expect to be allowed to use that instrument.

I have said that pus is best removed from the thorax. But I would make a little exception in the case of a small effusion of pus, and *a fortiori* one of serum, accompanying pneumothorax. Pneumothorax with or without effusion may well be left alone if its tension be not very high. Pus in the body is bad, but in the condition to which I refer I think the operation for its removal is worse. Pneumothorax is not a common condition in children, and I imagine none of us can report many cases from our personal experience. But in adults I had an exceptional experience recently, for 5 cases of pneumothorax were at the same time present in my male gallery at the Brompton Hospital, and all with more or less of effusion. *Re* the infusion and the pneumothorax, all the cases were due to tuberculosis, yet 4 of the patients became quite well for all practical purposes, while 1, having recovered from his pneumothorax, is now dying from the coexistent tuberculosis. Not one of these patients was treated surgically.

II.—H. Betham Robinson, F.R.C.S.,

urgeon to the East London Hospital for Children, and Assistant-Surgeon to St. Thomas's Hospital.

Surgical Treatment.

Serous Effusion.

The introduction on the scene of the surgeon in a case of pleural effusion may be said to be practically dependent on the nature of the fluid, whether it be clear or purulent. In children as the fluid is in proportion to adults so frequently purulent we relatively derive most of our experience from dealing with cases in early life.

In the treatment of an "inflammatory non-purulent general effusion," which has not resolved under other remedies, aspiration will be determined on. This is usually done in the mid-axilla through the fifth or sixth space (or the seventh in the left side) or just outside the inferior scapular angle in the ninth interspace. There are certain points in its performance to be attended to. It is not necessary to draw off all the fluid, for, having relieved the tension on the pleural surface, the remainder of the fluid has a chance of being absorbed, and if afterwards not as rapidly as may be desirable, it is better again to aspirate rather than to have emptied the chest at first. Strict asepsis should be attended to, and any introduction of air into the chest prevented. It is not necessary to have too great a vacuum in the aspirator, and proceedings should be stopped directly the fluid becomes bloodstained or there is pain or coughing produced.

Ought we ever to employ incision when the fluid is clear? It has been suggested that when the fluid repeatedly re-collects this ought to be adopted. Not considering, of course, the effusion due to hydrothorax, which would be bilateral, re-collection in a child would be due to tubercle or sarcoma. The latter cause is rare; the lung and pleural involvement are usually secondary to disease elsewhere, and bloodstained fluid would point to this cause and remove all doubt.

With respect to tubercle, this treatment has been seriously advocated arguing from the success that has attended the washing out and admission of air into the peritoneal cavity; but it must be borne in mind that the relation of the serous membrane to the contained viscera is very different. I have no experience of this treatment myself, but that of others is against it as the dyspnœa is only increased.

Purulent Effusion.

If the temperature and physical signs give us indication that the effused fluid is purulent it may be taken as an axiom that directly we have such suspicions aroused the sooner the fluid is removed the better, by this means preventing the binding down of the lung and aiding its re-expansion.

We must remember what is taking place within the pleural cavity. With the extravasation of leucocytes coagulation takes place in the fluid, masses of fibrinous coagulum are formed, some floating free in the pus, the rest deposited on the serous surfaces. At the same time in the deeper layers of this free membrane there is organisation taking place, and this fibrosis tends to extends inwards along the connective tissue planes of the lung.

If the physical signs show the effusion to be general the following is the usual course of procedure. Very rarely is the surgeon requested to operate until an exploratory puncture has been made. The same precautions should be adopted as mentioned before, especially as regards sepsis.

Is aspiration alone likely to be curative? In some instances this has been successful, but here the fluid has been very thin and semipurulent. There is great liability to get the cannula choked with lymph, and so very inefficient emptying of the cavity and a consequent recollection. If the fluid is thick it certainly as a curative measure has no *locus standi*. The recognised treatment in these cases is incision and drainage. Where should the opening be made?

Professor John Marshall was a strong advocate of the fifth space about the anterior axillary line, near the usual place of "spontaneous perforation"—that is, below the nipple, about the junction of cartilage and ribs and just at the termination of the external intercostal muscle in its fascia. While selecting this spot, he laid it down as a rule never to perform an open operation lower than the sixth or seventh interspace at the sides of the chest. In favour of this site he states that "the idea that we necessarily drain the pleural cavity most effectually by an incision at the lowest available spot behind is a chimera. If an incision has been made in the eighth or ninth interspace, or even in the seventh, the aperture has a marked and troublesome disposition to be closed by the diaphragm, and, if a drainage tube has been inserted and a long one becomes necessary, the lower part of the tube, placed between the chest wall and the movable diaphragm, keeps up local irritation, maintains suppuration, and prevents the curative process of adhesion. It is, in fact, the lower part of the distended pleural sac which first collapses, whilst the upper part contracts less quickly and remains open, continuing to yield pus. It seems to me that counter openings to drain the back part of the pleura are not so frequently necessary with a high as a low opening."

This position or its close neighbourhood for the opening has been endorsed by many others, among them Professor Billroth. Mr. Godlee, particularly in adults, inclines to the incision in the ninth interspace, just outside the angle of the scapula, for here, he says, perfect drainage is obtained, both in the recumbent and upright positions. I myself in over 100 cases have used the incision in the mid axilla over the line of the sixth rib, and have been quite satisfied with the results produced and the drainage effected.

The next point is one over which there has been some controversy. Should we or not at the same time resect the rib. This I always do, for it adds no risk to the operation and is attended with very great advantages, for it allows the introduction of the finger to explore the condition of the pleural cavity as to whether there are loculi or not, and enables us to determine the amount of compression of the lung and the density of its pleural covering and facilitates the removal of fibrinous coagula.

Having opened the chest, should we irrigate or not? I suppose the opinion of almost everybody is strongly against this as a regular practice. If the collection is a septic and fœtid one, then its value will counterbalance any attendant risks. Only sterilised water or boracic lotion should be used, and points of very great importance are that the injection should be made very slowly, and that there should be means of easy exit of the fluid so as to prevent any marked increase of intrapleural tension, a factor which probably explains most of the disasters. There are recorded in surgical literature, unfortunately, several instances where sudden death has occurred during its performance, so this must be borne in mind by behoving us to exercise caution and to limit the use of this treatment.

Frequent irrigation, combined with subcutaneous drainage and siphonage has, however, been advocated as a routine measure by Dr. Robertson, Surgeon to the Oldham Infirmary, in papers published in the *Medical Chronicle* in 1888. By his method, which is almost exactly on the same lines as that previously used by Potain, two tubes are introduced into the pleural cavity at different levels through as small openings as possible, the cavity is then immediately irrigated, and the subsequent pleural secretion removed by siphonage, irrigation being repeated as often as necessary.

The design of this treatment, apart from the value of washing out all fibrinous coagula from the cavity, is to prevent the entry of any air into the pleura, which under atmospheric pressure overcomes the normal elasticity of the lung, and causes more collapse. He claims that by this means expansion of the lung takes place much more rapidly, and by his arrangement of his tubes he is not only able to accurately gauge the amount of secretion, but also the expansion of the lung itself. Ingenious as his arguments are, I think some of his objections to the open method are more apparent than real. There is, I am sure, a positive advantage in being able to know the state of affairs by introducing the finger, and the air introduced into the pleura certainly does not always produce this collapse, in fact in several cases I have seen quite the opposite, the lung, after evacuation of the pus, expanding and coming up to the wound. What air is left in the pleura after closing the wound, putting in the tube and applying the dressing under favourable conditions of the lung for expansion is partly absorbed, and the rest escapes with the pus through the tube, especially with coughing; from the rapid healing of the wound and the pus column in the tube, no further air is introduced, and gradually the intrapleural

pressure becomes normal, a vacuum is produced, and the expansion of the lung assisted.

The next question for consideration is, How long should the tube remain in? This, I fear, in many cases is retained far too long, but it is difficult to lay down any hard and fast rule, as each case must be dealt with on its own merits. When with a normal temperature the tube is constantly found in the dressings, provided their shifting does not pull it out, the inference is that the expanded lung forces it out, and that it may be removed. Also if the amount of discharge only averages about one ounce per diem, this is an indication. Premature removal is not such a serious matter, for on any rise of temperature or indication of reaccumulation of fluid it can easily be replaced if necessary.

So far we have been dealing with the accumulation of pus in the pleura from the base upwards. Should the physical signs in the chest indicate that the collection is a localised one, the cavity may be opened over this area as the surgeon may determine, and the subsequent treatment will be on the same lines as before.

To now go a step further, What are we to do if the cavity fails to close? This is an eventuality not nearly as frequent in children as in adults, owing to the lessened rigidity of the chest wall. The condition of chronic empyema is almost for certain due to the failure of expansion of the lung. Possibly as a sequel to the tardy relief of the pus, the lung, compressed towards the mediastinal pleura and costo-vertebral furrow, gets coated with a fibrinous layer; this may be of such thickness and resistance as to bind the lung down, and, associated with the fibrosis spreading into the pulmonary connective tissue, may most effectually prevent its successful re-expansion on removal of the pus. The result is that a space is left between the chest wall and the lung with firm walls, and if the lung cannot expand to the chest wall, the only way of closure is to lessen the resistance of the chest wall in some way to get the cavity to close. When should we consider a case has become chronic? If at the end of three months there is still considerable discharge the case should be thoroughly examined, and the probe will give a great deal of information as to the amount of lung expansion and the size of the remaining space. The treatment, then, is to adopt some further measure to obtain contraction of the chest wall. This will depend on the size of the cavity and the chronicity of the case varying from the resection of another portion of a rib at the posterior part to a multiple rib resection after the method of Estlander. It is not necessary here to go into any further operative details. In early life the extensive operations are rarely required, although in some cases pieces of rib may have to be removed at different times before collapse takes place.

With this review of the treatment I would suggest that the discussion from a surgical standpoint might deal with the following headings: (1) Has free incision and drainage any value in tubercle of the pleura; (2) where should we make the incision, and should we resect rib or not in empyema? and (3) the question of irrigation.

III.—EDMUND OWEN, F.R.C.S.,

President of the Section.

Drainage and Early Closure.

MR. OWEN said the question of the nature of the effusion in pleurisy was one of great importance, and he thought that it had not hitherto received the attention which it demanded. The casual inspection of the fluid drawn off at an exploratory puncture just previous to operating on the empyema did not suffice to reveal its exact nature. He did not think every empyema should be treated on the same lines. On opening a psoas abscess the tuberculous fluid was not always thin and watery; sometimes it was thick and creamy, yet the psoas abscess did well after evacuation and after immediate closure of the wound. So in an empyema the tuberculous effusion might be purulent in appearance though it contained no pus-producing organisms. Was such a tuberculous empyema to be treated in the same way in which the surgeon would deal with a pleural abscess teeming with staphylococci or the cocci of pneumonia? He was of opinion that a considerable proportion of cases of empyema might be advantageously treated without drainage, the wound being closed directly the cavity had been evacuated. If so, the sooner it was shown how such cases could be recognised the better. As to the site of the incision in empyema, he thought it should be in the mid-axillary line in front of the angle of the scapula, the exact interspace not being important. He thought the rib should be resected, and that irrigation should never be practised unless unavoidable—for example, if the wound became septic. As regarded the early removal of the tube he thought the surgeon needed pluck in such cases—in fact, to "ride for a fall," expecting to have to replace the tube if the temperature rose. The case was analogous to that of tracheotomy, and the rule should be the same, and the tube removed, if anything, too soon. Drainage tubes should never be secured by a safety pin, but should have a proper flange to prevent their slipping into the pleural cavity by accident.

IV.—E. MANSEL SYMPSON, M.D.,

Surgeon to the Lincoln County Hospital.

MR. MANSEL SYMPSON said he always used Morrant Baker's tubes when possible. These had flanges, and the danger of the tube slipping into the pleural cavity was avoided.

V.—A. H. TUBBY, F.R.C.S.,

Surgeon to the Evelina Hospital for Sick Children.

Irrigation.

MR. TUBBY regarded irrigation of the pleural cavity as a very dangerous proceeding. It was impossible to foretell when sudden collapse might occur during irrigation. What was wanted was a free opening into the chest, and no irrigation was then necessary. He had conducted experiments on animals, and he found that the collapse was due to a sudden fall of blood pressure. The collapse appeared to depend upon (1) the pressure at which the fluid was injected into the pleural cavity, (2) the nature of the fluid. If sterilised water or weak boracic acid were used no collapse occurred, but if irritating antiseptics, such as 1 in 20 carbolic lotion, iodine water ℥j to Oj, or lotio hydrarg. perchlor. 1 in 2,000 were employed, the collapse was very rapid, and most so with carbolic lotion. In this last case the blood-pressure tracing showed an exceedingly rapid fall from which the animal did not recover.

VI.—R. STERLING, L.R.C.P.Edin.

Kilkenny.

DR. STERLING asked for information regarding the treatment of tuberculous empyema by injection of formalin and glycerine. He had himself had a successful result from irrigation with biniodide of mercury in a case of empyema.

VII.—G. F. STILL, M.D.,

Assistant Physician for Diseases of Children, King's College Hospital, and Assistant Physician to the Hospital for Sick Children, Great Ormond Street.

Serous Expectoration after Puncture.

DR. STILL said there was one point in the treatment of pleural effusion to which attention shou'd be drawn. It had been shown by Dr. West that after the removal of an effusion, especially a large effusion, there occurred in some cases a profuse expectoration of serum, sometimes as much as a pint or more, so that the patient was in danger of being "drowned" by his own expectoration, the whole pint, or nearly two pints, being coughed up within two or three hours after the removal of the pleural effusion. He believed that no case had hitherto been recorded in a child, but there had been recently in the Hospital for Sick Children, Great Ormond Street, a child, aged about 10 years, under the care of Dr. Barlow, and more recently under his own care, who was admitted with a large serous effusion on the right side. It was drawn off under some pressure by the aspirator and the child immediately began to cough up a very large quantity—nearly a pint—of mucus and serum, which showed a large quantity of albumen on boiling. This serous expectoration undoubtedly constituted a real danger owing to the possibility of asphyxia from its profuseness and was therefore an important reason for drawing off pleural effusions early and slowly and for aspirating under low pressure, that is, not very fully exhausting the aspiration bottle.

The Time of Operation.

Sometimes the question was asked, Cannot operation be deferred for a time while we see how the case progresses? At first sight this seemed a reasonable proposal; but *post-mortem* results showed that any delay in the opening of an empyema was fraught with serious danger. So long as an empyema was unopened there was pent up in the pleural cavity a virulent culture, usually pure pneumococcus, which might at any moment become disseminated, causing death by suppurative meningitis, pericarditis, or peritonitis. It was hardly sufficiently realised that death from empyema was very commonly, perhaps usually, due to such secondary infection. In 28 consecutive cases of death from empyema, 10 had shown suppurative pericarditis, 5 suppurative meningitis, 4 suppurative peritonitis, and 1 suppurating joints. In all these cases the empyema appeared to be the primary infection. In some cases more than one of these secondary suppurative lesions had been present, but he thought these figures at least emphasised the necessity of opening an empyema early and freely. Aspiration was for the same reason objectionable. It was practically impossible to remove the thick lymph which was usually present in the pneumococcal empyema through an aspirating tube, and thus a quantity of lymph was left behind which could easily be shown to contain an enormous number of pneumococci.

The President observed that Dr. Still's figures with regard to the mortality from empyema were most important, and the subject deserved carefully working out.

Replies.

Dr. Maguire, replying to previous speakers, said he wished to avoid being misunderstood in what he had said as to the risk of leaving an empyema alone. Undoubtedly as soon as pus was found in the chest it should be removed, and preferably by incision. He would only recommend the use of the aspirator when a proper surgical operation was for any reason impossible. He wished to lay particular stress upon the hygienic conditions under which pleural effusions existed. They explained many points which would otherwise be obscure. It must be remembered that such effusions were relieved to some extent from the force of gravity by the negative tension of the thorax.

Mr. H. Betham Robinson said that he was pleased that the surgical speakers had endorsed his remarks. There was no doubt that in certain cases the chest might be opened, pus set free, and the wound immediately closed without drainage. The difficulty was to generalise as to which cases should be treated thus. If after evacuating the pus the lung expanded up into the wound, this would be a favourable case for this form of treatment which had been adopted by him with success. In the matter of removing the tube early there was certainly not enough risked, and its prolonged retention might lead to much more harm than its premature removal.

OBSERVATIONS ON THE MORBID ANATOMY OF TUBERCULOSIS IN CHILDHOOD,

WITH SPECIAL REFERENCE TO THE PRIMARY CHANNELS OF INFECTION.

By George F. Still, M.A., M.D., M.R.C.P.,

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The prophylaxis of tuberculosis is probably of greater importance in childhood than at any other period of life, inasmuch as it is at this age that the disease is most prevalent and most fatal. In order that prophylaxis may be satisfactorily carried out, it is most desirable that it should be ascertained as far as possible what are the most frequent channels of infection. With this object in view I have ventured to put on record here some observations made in the *post-mortem* room while I was Pathologist at the Hospital for Sick Children, Great Ormond Street.

These observations rest entirely on the results of *post-mortem* examination, and it must be pointed out that it is only from statistics made in this way that any accurate knowledge of the incidence of tuberculosis at particular ages and on particular organs can be obtained. Anyone who has had experience of *post-mortem* examinations knows only too well that tuberculosis is by no means always easy to diagnose clinically in children; even a very extensive tuberculosis may not be recognised as such during life, while many a pulmonary or abdominal condition thought clinically to be tuberculous is found *post mortem* to be non-tuberculous, and this with no blame whatever to the clinician, for such error is common enough where the case has been examined carefully during life by several skilled observers.

It is evident therefore that any statistics which include cases not verified by necropsy are of little or no scientific value in this connection. Large figures may be obtained by making use of the Registrar-General's returns, but as these are necessarily based on death certificates given in the vast majority of cases without *post-mortem* examination, they are of very little use in a scientific investigation, and may lead to entirely erroneous conclusions.

Age-Incidence in Children

With these preliminary remarks I pass to the consideration of the incidence of tuberculosis during the first twelve years of life, and it is of some importance that attention should be drawn to this, for the great prevalence of the disease during the period of infancy is a point of particular interest in the question of the source of infection.

The total number of cases of tuberculosis met with in 769 consecutive necropsies on children under 12 years of age was 269; so that in more than one-third of the total number of cases tuberculous lesions were found. Death was not due in every case to tuberculosis: in 43 out of the 269 cases death was due to some entirely different cause, such as diphtheria, heart disease, etc.

In the chart which is here drawn up, the incidence at the various ages is shown, and it will be seen that tuberculosis is far more frequent during the second year of life than at any other time.

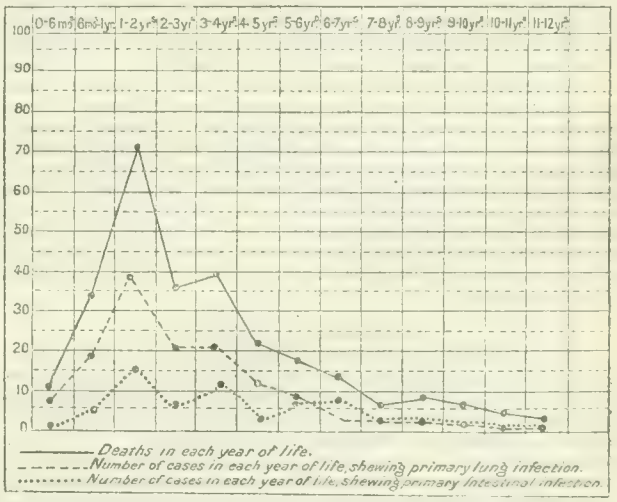


Chart showing relative frequency of tuberculosis in the first twelve twelve years of life, and also of infection through the lung and through the intestine.

The figures given show that 117 out of the 269 cases occurred within the age of 2 years, that is no less than 43.4 per cent. of the whole number of cases of tuberculosis occurred within the first 2 years of life, and it will be seen that 56.5 per cent. occurred within the age of 3.

The Mode of Infection.

It is evident that the main incidence of tuberculosis corresponds more or less exactly with the period at which milk forms, or should form, the chief article of diet. The suggestion that milk contaminated with the tubercle bacillus is the cause of this frequency follows as a matter of course. In a report on tuberculosis issued by the Council of the British Medical Association (January 18th, 1899) the following state-

ment is made: "The mortality from tuberculosis in early childhood is not decreasing as it is at other ages in the United Kingdom, and the opinion that this great prevalence of the disease in infancy and childhood is due to infection through the alimentary canal by milk from tuberculous cows appears to be well founded."

At first sight such a view appears extremely probable. It has been proved beyond dispute by Professor Delépine and others that the milk supplied even to our large towns frequently contains tubercle bacilli, and it has been pointed out by Professor Sims Woodhead that the intestines and the mesenteric glands are very commonly found to be affected with tubercle in young children. But further inquiry is needed before any conclusions can be drawn from these premisses.

The frequency of tuberculous lesions of the intestine and mesenteric glands in infancy and childhood is indeed a well-ascertained fact, but the mere frequency of its occurrence is no evidence of its being the most common source of infection. As a matter of fact pulmonary lesions would seem to be considerably commoner than intestinal; in the series of cases mentioned the intestine or peritoneum was found to be affected in 141 cases, while pulmonary tuberculosis was present in 210.

Moreover, in estimating the significance of such frequency it must be remembered that one of the striking features of tuberculosis in childhood is its tendency to generalisation; it tends to affect almost every organ in the body, and it is therefore often a matter of extreme difficulty to determine which was the primary channel of infection.

Further, there is a special reason for the frequency of intestinal lesions as a secondary phenomenon in the tuberculosis of childhood; namely, that all young children, and many older children, swallow all their expectoration, and consequently, with a primary infection of the lung, tubercle bacilli are constantly being swallowed in large numbers, far larger probably than are ever likely to be swallowed in the worst milk, so that secondary infection of the intestine is extremely likely to occur.

The frequency, therefore, of tuberculous lesions in the intestine or in the mesenteric glands is only what might be expected, and cannot be accepted as evidence that these structures form the primary channel of infection.

The difficulty of determining the primary channel in the tuberculosis of childhood is very great, for the reason already mentioned—namely, the tendency to rapid generalisation of the process; there is, however, one feature of the disease at this age which to some extent diminishes the difficulty; the lymphatic glands in childhood form such a delicate index of the extent and the duration of the tuberculous infection in the organs to which they correspond, that it is possible in many cases, from a careful consideration of the glands, to determine, with at least a high degree of probability, the primary source of the infection.

The Sequence of Infection.

In the observations recorded here the greatest weight has, therefore, been attached to the condition of the lymphatic glands, and it will be necessary to point out briefly the grounds on which I have based my conclusions as to the sequence of infection in these 269 cases of tuberculosis.

The extent and character of the tuberculous process in the lymphatic glands is taken *ceteris paribus* as an index of the duration of the infection in the organs to which these glands correspond—for instance, the presence in a given case of much enlarged, almost dry caseous, glands in the mediastinum, while the mesenteric glands showed only small scattered foci of greyish-yellow tubercle, is taken to prove *ceteris paribus* that the infection through the lung was of older standing, and therefore the primary lesion. Further, the condition of the lymphatic glands is of more importance in determining the duration of the infection than the condition of the corresponding organs; for example, in a case in which there is no demonstrable lesion in the intestine, while the lungs show much, but not advanced, tubercle, the presence of a large, dry, caseous, or calcareous gland in the mesentery, contrasted with only greyish-yellow areas of tubercle in the mediastinal glands, would show that the infection through the intestine had been the primary lesion, in spite of the much more obvious lesion in the lung.

Lastly, the sequence of clinical symptoms is of little or no value, except, perhaps, as confirmatory evidence; for extensive pulmonary or intestinal lesions are often present without producing any special symptoms, and the first symptoms to appear are not always those due to the primary lesion; thus in a primarily intestinal case the secondary pulmonary infection may be the first to produce symptoms.

Glandular Infection.

In some cases, especially in the more chronic ones, the lymphatic glands are so extensively involved in many parts of the body that it is quite impossible to say which were first affected; thus it was quite impossible to determine the primary source of infection in 46 out of the 269 cases.

It must be pointed out that in the statistics given here tuberculous infection of the mediastinal glands has been assumed to occur through the lung, while the mesenteric glands have been assumed to be infected through the intestine. It is quite certain that such infection of glands may occur without any demonstrable lesion in the lung or intestine; this has been proved experimentally in the pig in the case of the intestine by giving tuberculous material in the food; and in children, even with the most careful search, I have several times failed to find any naked-eye lesion of these organs when the corresponding glands were nevertheless quite caseous. But though such cases occur they are quite exceptional. In the 269 cases of tuberculosis only 9 showed affection of the mesenteric glands without naked-eye lesion of the intestine or peritoneum, and 10 showed affection of the mediastinal glands without naked-eye lesion of the lung or pleura. In the light, therefore, of the experimental evidence, it seems almost certain that in the few cases in which no lesion of lung or intestine is found, infection of the corresponding glands has occurred by the bacillus entering through the lung or intestine without producing any lesion, or rather any lesion which can be appreciated without microscopic examination. It has been suggested that in children in a certain number of cases the mediastinal glands become infected, as apparently they may in the pig, by direct extension downwards from the cervical glands. I have made special investigation of this point, and have come to the conclusion that such a method of infection, if it ever occur in the child, must be extremely rare. I have seen one or two cases where it seemed just possible, I have seen none in which it was certain.

Even where there is considerable caseation in the glands at the upper part of the neck, those which correspond to the fauces or those which correspond to the ear, it is usually found that lower down they become less and less affected until just above the clavicle there may be little or no affection, while below the level of the first rib, especially on the right side, there is often an enormously enlarged completely caseous gland or group of glands lying close to the trachea. Now, to suppose that the tuberculous infection after gradually diminishing downwards should for some unexplained reason "jump" completely several glands in the chain and produce more extensive caseation in the mediastinal glands than at any part of its course in the neck, is improbable but not impossible; but when in addition to this it is quite certain from examination of a large number of cases that these tracheal glands are some of the earliest and most severely affected of the mediastinal glands in cases of pulmonary tubercle, even where the pulmonary lesion is very slight, and when it is pointed out that some degree of pulmonary tuberculosis is almost always found as part of the generalised tuberculosis of which the affection of the cervical glands is a part, it becomes exceedingly improbable that the tracheal glands should have been infected in any other way than through the usual source, namely, the lungs.

There is, moreover, another strong argument which might be advanced against such direct extension from the cervical glands. It has been shown by Dr. F. E. Batten, in a most interesting paper on the Relative Frequency of Tuberculous Infection of the Lymphatic Glands in Children,[1] that of the glands in the mediastinum those on the right side are much more frequently and extensively affected than those on the left. My own figures fully corroborate this: in 145 cases it was specially noticed that the glandular affection in the mediastinum was more advanced on one side than on the other; in 113 of these cases the glands on the right side were

the more affected, while in only 32 was the affection greater on the left side; moreover, in 23 cases in which perforation of a bronchus by one of the caseous mediastinal glands had occurred, in 21 it was on the right side, in only 2 on the left.

If, therefore, it be common for the mediastinal glands to be infected by direct extension from the neck, it should be found that there is a correspondingly large predominence of affection of cervical glands on the right side of the neck. Rough statistics of operations for enlarged cervical glands thought to be tuberculous have been collected for me very kindly by my friend Dr. Rowland, and they show no such predominance even in these the most advanced cases, which are just those in which the direct extension might be expected to take place: of 100 cases in which one side was chiefly affected, 51 were on the right side, 49 were on the left; in other words, the two sides of the neck were almost equally affected. It has been suggested, further, that occasionally the mediastinal glands become infected by extension from the retroperitoneal glands. My own experience, so far as it goes, affords no confirmation whatever of this. There are certain glands in the anterior mediastinum, just behind the ensiform cartilage, which are almost invariably affected in cases of tuberculous peritonitis, but I have found no evidence of any extension from these, or from the retroperitoneal glands to the tracheo-bronchial glands.

It will be seen, therefore, that so far as my own observations go it seems extremely unlikely that the tracheo-bronchial glands are infected in any other way than through the lungs, except in very rare instances, some of which may be included in the cases which I have grouped together below as "uncertain," and I may say that I have been careful to separate all such doubtful cases, as by grouping together only those in which the source seemed certain, or fairly certain, a more accurate conclusion was likely to be obtained.

Channels of Infection.

As far as could be ascertained, in the 269 cases the channels of infection were as follows:

Lung	105
Probably lung	33
Intestine	53
Probably intestine	10
Ear	9
Probably ear	6
Bones or joints	5
? Fauces...	2
Uncertain	46

It will be seen that while the lung appeared to be the primary channel of infection in 138 cases, the intestine was thought to be so only in 63. These figures, however, include children of all ages up to 12 years. It is convenient to consider also the incidence at various ages; this has been already shown in the chart given on p. 455, but may be more accurately understood from the following table:

Age.	No. of Cases.	Primary Channel of Infection.		
		Lung.	Abdomen.	Ear.
0-6 months	11	7	0	3
6-12 ,, ...	34	18	5	4
1-2 years	72	38	15	6
2-3 ,, ...	35	20	6	1
3-4 ,, ...	39	20	11	1
4-5 ,, ...	23	12	2	0
5-6 ,, ...	18	9	7	0
6-7 ,, ...	13	4	7	0
7-8 ,, ...	6	3	3	0
8-9 ,, ...	7	3	3	0
9-10 ,, ...	6	2	2	0
10-11 ,, ...	3	1	1	0
11-12 ,, ...	2	1	0	0

It would appear from these statistics that invasion through the lung is much commoner than through the intestine, both in infancy and in early childhood, while after the age of 5 years the chances of infection through the lung or through the intestine become about equal.

An interesting fact which appears from the above figures may be mentioned in passing, namely, that in 15 out of 269 cases—that is, in about 7 per cent. of cases of tuberculosis in childhood—the primary source of infection was the ear; and of these 15 cases, no fewer than 13 occurred within the first two years of life. No case of primary tuberculous disease of the ear was observed after the age of 5 years.

This frequency of infection through the ear in infancy is mentioned here because it seems probable that this channel of infection resembles that of the lung in being really a respiratory infection—that is, by inhalation—the infection passing up the Eustachian tube, and therefore in any consideration of the prophylaxis of tuberculosis these cases should be grouped with those of infection through the respiratory passages.

There is one class of cases which afford almost indisputable evidence of the method of infection in each individual case; I mean those in which death has been caused by some non-tuberculous disease, and *post mortem* a single gland or group of glands shows an old dry caseous focus or just-commencing tubercle, and perhaps the organs to which these glands correspond show similar evidence of past or just-commencing tubercle.

In these cases, as the disease has been arrested at an early stage or has not yet progressed beyond its initial stage, generalisation has not taken place or is only just beginning, so that it is possible to determine with almost absolute accuracy the primary channel of infection. As already mentioned, 43 out of the 269 cases were of this character, and, although they are included in the above statistics, a consideration of them separately is of great importance, for they afford, I think, conclusive evidence of the much greater frequency in childhood of infection through the lung than by any other channel.

In the 43 cases which died of diphtheria, heart disease, etc., the evidence as to the primary focus of infection was as follows:

Lung	26
Intestine	16
Ear	1

These figures, it will be seen, strongly confirm the statistics given above, and leave, I think, no doubt that infection through the lung is far commoner than infection through the intestine in childhood.

The Frequency of Invasion through the Lung.

The special frequency of tuberculosis in infancy and in early childhood seems therefore, so far as these observations go, not to be due to the milk diet to which it has been attributed, though there can, I think, be little doubt that this is responsible for a certain proportion of cases of tuberculosis at this age, about 17 per cent. of the cases during the first three years of life being intestinal in origin. Possibly the boiling of almost all the milk which is given at this age accounts for the much lower percentage of primary intestinal tuberculosis in infancy than during the later years of childhood when milk is more likely to be given unboiled. It is of considerable importance from the practical point of view that this frequency of invasion through the lung should be recognised. Much has been said and written recently of the dangers of infection from the milk supply, and there has been a tendency to assume that this was the usual mode of infection in early childhood. We cannot be too careful in our precautions against tuberculous milk, but the above observations tend to show that food is not the only, nor even the chief source of, tuberculous infection, and emphasise the extreme importance of purity of air for infants and young children.

It is probable that much of the tuberculosis of childhood is a direct result of the terrible overcrowding of the poorer population in our large towns. So long as whole families, and often large families have to live night and day in one ill-ventilated room, and among them too often one or more are already infected with tubercle and ready in turn to infect others, it is not to be wondered at that primary infection through the lung is so common in infants and young children. It seems likely that the special liability to this method of infection during the earlier years of childhood is directly related to the special inability at this age to escape from the foul atmosphere of "home" even for a few hours in each day, and as the child grows older and passes more of its time even in the comparatively pure air and the wider and more cleanly

streets, or in the rather better ventilated schoolroom, the risk of pulmonary infection becomes by so much the less.

The above remarks apply of course mainly to the poor, inasmuch as all the observations recorded above were made on hospital patients; but the principle applies to all classes alike. Fresh air is absolutely essential to the well-being of children, and badly-ventilated rooms and undue confinement indoors, especially where there is already tuberculous infection in the house, constitute a very real danger to children, and particularly to children predisposed by heredity to tuberculous infection. For such children indeed, where circumstances render it possible, residence in the pure atmosphere of a dry, elevated country or seaside district, with an almost open-air existence during the first six or seven years of life, may be the way of escape from an early death from tuberculosis; and where such prophylaxis is impossible, abundance of open air in the parks and in the suburbs of our large towns, and such country air as can be obtained from time to time, may do much to reduce the risk of tuberculous infection through the lungs in the town-bred child.

Conclusions.

The conclusions which may, I think, be drawn from the above observations are as follows:

1. The commonest channel of infection with tuberculosis in childhood is through the lung.
2. Infection through the intestine is less common in infancy than in later childhood.
3. Milk therefore is not the usual source of tuberculosis in infancy, perhaps owing to the precautions taken in boiling, sterilising, etc.
4. Inhalation is much the commonest mode of infection in the tuberculosis of childhood and especially in infancy.
5. The overcrowding of the poorer population in the large towns is probably responsible for much of the tuberculosis of childhood, and prophylaxis must be directed to the prevention of this overcrowding, the improvement of ventilation, and the inculcation of the extreme importance of fresh air during the earliest years of life.

The Tubercle Bacillus in the Stomach.

The PRESIDENT asked Dr. Still how the tubercle bacillus was affected by the acid digestion of the stomach. Dr. STILL replied that no doubt actual infection of the stomach was extremely rare. He only knew of five cases of tuberculous ulceration of the stomach which he had himself reported. It was however evident that the gastric juice did not destroy the bacillus, as by the time it reached the intestine it was manifest that it had retained its infective power. The gastric juice would however seem as a rule to exert a protective power as far as the stomach itself was concerned.

REFERENCE.

[1] *St. Bartholomew's Hospital Reports*, vol. xxxi.

REMARKS ON TUBERCULOUS ADENITIS.

By GEORGE MORGAN, F.R.C.S.Edin., etc.,
Senior Surgeon to the Alexandra Children's Hospital, Brighton.

I shall confine my remarks to the glands of the head and neck, and principally to my own personal experience in the treatment of the same.

Tuberculous adenitis of the head and neck is nothing like so common as it was fifteen years ago. This, I believe, is true both as regards the number and the severity of the cases. In 1884 the gland cases requiring operative treatment admitted into the Children's Hospital, Brighton, were a little over 6½ per cent. of the whole number of patients admitted. The number has gradually been falling; it now stands at about 3½ per cent., and even these figures do not nearly represent the improvement that has taken place, as we now admit cases in earlier stages than formerly.

Etiology.

The chief points of interest in the etiology are clustered around the soil, that is the tuberculous individual; and the paths by which the seed, that is the tubercle bacillus, travels to the glands.

The special fitness of certain constitutions for the development of tuberculous gland disease may be wholly inherited or acquired, or a slight hereditary tendency may be markedly emphasised by a vicious environment. I am paying a deservedly high compliment to Brighton's medical officer of health and its sanitary officers when I tell you we know very little indeed of acquired scrofula or parochial struma in Brighton. In quite 80 per cent. of my cases I was able to clearly trace the inherited tendency, in addition to which about 2 per cent. were the subjects of congenital syphilis. I have no doubt that the falling off in the number of cases I have referred to is principally due to the improved surroundings of the children of the poor. Depend upon it if, in some of our large towns, we heard more about condemned areas we should hear less about acquired scrofula. Unfortunately the marriage and intermarriage of persons predisposed to the ravages of tuberculosis is beyond the jurisdiction of even the medical officer of health; consequently the inherited type of soil, like the poor, will "always be with us."

Glands in Relation with Cutaneous Areas.

Textbooks of anatomy classify the lymph glands of the head and neck into superficial and deep, and anatomically that classification is simplicity itself, but when one studies the glands pathologically, and especially in their relation to the tubercle bacillus, one feels it matters but little whether the glands are superficial or deep to the cervical fascia. The one important factor is, does the gland drain a skin surface or a mucous surface? I am conscious that in a classification of this kind there would be overlapping, as some glands, such as the suprahyoid and submaxillary, drain both skin and mucous surfaces; consequently, they might be divided into those glands which drain a mucous surface and those glands which drain a skin surface only. Everyone who has examined a large number of cases of tuberculous adenitis of the head and neck will at once admit the far greater liability to the trouble that exists in those glands which drain the mucous surfaces, especially where lymphoid tissue is richly distributed. In those glands which drain both skin and mucous surfaces the greater liability to trouble from the latter surface is clearly demonstrated and in none better than in the suprahyoid. It is rare to find these glands affected from a lesion on the skin; the lesion is, in a great majority of cases, on the mucous surface of the lip, or the gum below the incisor teeth. In the following list I have given the order of frequency which the different glands were affected in my own cases:

1. Upper division of the deep cervical.
2. Sub-maxillary, especially near the angle of the jaw.
3. Suprahyoid.
4. Lower division of deep cervical.
5. Parotid.
6. Superficial cervical.
7. Posterior auricular.
8. Occipital.
9. Internal maxillary, or deep facial.
10. Posterior pharangeal.
11. Lingual.
12. Buccal.

I have only seen one case of tuberculous enlargement of the gland on the buccinator muscle; that seemed to have arisen in connection with caries of the molar bone.

The usual path by which the tubercle bacillus reaches such glands as the post-auricular, occipital, and superficial cervical, is by the skin. The skin of face, neck, and scalp, being affected by superficial wounds, eczema, impetigo, porrigo, etc., allows the passage of the bacillus. In one case—a girl of 8—I believe I was able to trace the origin of a large tuberculous post-auricular gland to the scratch of a dressing-comb on the scalp over the right ear; that was in the same house where a younger brother was dying of phthisis.

Impetigo seems to be a more frequent cause of gland trouble than eczema. During the last few months I have seen two cases of impetigo of the face, followed by tuberculous enlargement of superficial glands, in houses where, at the same time, there was an active case of phthisis, and where, probably, tuberculous dust was present from carelessness in the disposal of the sputum. Some authorities, with Professor Unna, believe impetigo is really a skin tuberculosis.

Lupus of the face and ears and strumous ulcers of the cheek may likewise affect the superficial glands, and occasionally one sees such a case; but the cause is not a very frequent one. Mr. Frederick Treves has pointed out how much more potent a suppuration wound is than a non-suppurative infec-

tion, and especially if there is retained pus, as in porrigo of the scalp. I believe the cause in the case of those glands that simply drain skin is, in the great majority of cases, either a superficial wound or impetigo which has been freely scratched, and the crusts picked off by the child's nails, in the dirt of which the bacillus can sometimes be found.

Glands in relation with Mucous Surfaces.

Turning now to the glands that drain mucous surfaces, we find that there are three sites specially favourable for the entrance of the tubercle bacillus:

1. Teeth and gums.
2. Tonsils.
3. Naso-pharynx, especially the vault when affected by adenoids.

Teeth.

Spongy and congested gums and carious teeth or stumps are frequently followed in the strumous child by tuberculous enlargement of the submaxillary and deep cervical glands. It needs no great pathological faith to believe in the possibility of the entrance of the bacillus along the side of a loose tooth, or through the mucous membrane of spongy gums into the lymphatics, and so into the lymph glands; but if we were told that the bacillus could pass through a living pulp, down the root, and by that way reach the lymph gland, we should not unreasonably ask for the evidences. I take it the following evidence is conclusive on this point. Dr. H. Kerner Halle, of Berlin, has lately published his observations and experiments on this point. The author narcotised dogs, laid bare the pulp of certain teeth, painted in some Prussian blue, and closed the cavity with cement. After two or three days the dogs were killed, and the pulp of the teeth, as well as the lymphatic glands, examined microscopically. Particles of Prussian blue were found dispersed through the whole pulp up to the apex of the root, and also in the lymphatic glands, although in very small quantities. How to explain this capability of absorption of the pulp is a further chapter. It is a fact that in most researches lymphatic vessels in the pulp could not be discovered. This absorption, then, does not take place in a regularly-formed lymphatic path, but it is evidently done by the intercellular stream of liquids in the tissue, probably even simply by wandering cells which absorb the colour and carry it. If once the matter gets beyond the apex of the roots there is no further obstacle in the way of its carriage to the lymphatic glands. Apart from this experimental investigation, the author also tried to prove clinically that dead teeth, as well as living defective teeth, may cause enlargement of the lymph glands.

He examined 3,161 children with swelling of the glands with the following result:

2,334, or 78$\frac{6}{10}$ per cent. had bad teeth of the third or fourth degree in the lower jaw.

1,646, or 70 per cent. of these children—the bad teeth, with regard to their position, intensity of illness, etc.—corresponded exactly to the position and the degree of the swelling of the glands.

More than half of all the teeth made responsible for the swelling of the glands had still a living pulp.

As further evidence on this point, I quote from a paper read before the Chicago Dental Association by Mr. Geo. W. Cook, of Chicago, giving his experience of the bacteriological examination of the mouth of dental patients. Cultures and cover-glass preparations were made, and, in many cases, the tubercle bacillus was found, occasionally in the saliva, but most frequently in the pulp of the teeth, or in scrapings taken from around the teeth. A point of interest is that, with one exception, in all the cases the particulars of which he records, the patients were young (girls, 13, 9, 17, 9, 11, 9; males, 18, 11, 13). In most of the patients the bacillus was found at each visit.

The sulcus, where the mucous membrane is reflected from the gums to the cheek or lip, is a frequent point of entrance for the bacillus. This is especially true of the gum below the lower incisor which drains into the suprahyoid glands. A schoolboy fell with his slate pencil in his mouth, causing a lacerated wound of the mucus sulcus below the incisors. Three days after the wound had an unhealthy appearance, and the suprahyoid glands were enlarged. These remained enlarged for 8 and 9 weeks, and then, softening, were incised, and the usual tuberculous matter scraped away. This same spot in the mucous sulcus is not an infrequent spot in which to find irritable and dyspeptic ulcers, and should always be examined if the suprahyoid glands are enlarging.

Tonsils and Adenoid Tissue of the Naso-pharynx.

There can be no doubt that, as regards the deep cervical and glands about the angle of the jaw, the two chief points of infection are the tonsils and the lymphoid tissue of the naso-pharynx, and it is, indeed, difficult to say which of the two is the more important. It is interesting to note that, in many cases in which they have probably acted as the channel of infection, there is no manifest enlargement of the organ, the tubercle bacillus having passed through apparently a healthy tonsil. That it is capable of doing this there can be no question.

Mr. Spencer, in his valuable lectures on the Pathology of the Lymphadenoid Structures, says: "If a culture of tubercle bacilli be injected into the trachea of an animal, the bacilli pass through the intact mucous membrane and infect the neighbouring glands. Similar results may be obtained by feeding animals on material containing tubercle or anthrax bacilli, which pass through an uninjured intestine." Mr. Spencer, in the same lectures, further says: "It is quite the exception to see a combination of hypertrophied tonsils or adenoid vegetation and tuberculous glands in the same patient."

I cannot say that has been my experience. In very many of my cases there was some enlargement of the tonsil, or evidence of adenoids of the naso-pharynx. Indeed, I feel it is impossible to emphasise too strongly the danger of adenoids in a child predisposed to gland trouble. The two media by which the tubercle bacillus must be conveyed to the tonsil are by inhaling tuberculous dust and drinking tuberculous milk. Now pathologists are unanimous that the bacillus more frequently enters the body by inhalation than deglutition, the bronchial glands being affected fully four times as frequently as the mesenteric; hence the danger of oral respiration, and the danger of adenoids as an indirect cause of tuberculous adenitis. But adenoids have more than an indirect influence in the cause of gland trouble; they are themselves frequently the seat of a local tuberculosis.

Observed.	No. of Cases Examined.	Tubercles and the Tubercle Bacilli Found.
Gottstein...	33	4 times.
Brindel	64	8 ,,
Pluder and Fisher	32	5 ,,
McBride and Logan Turner	100	3 ,,

The last-named authorities, although their results show the lowest average, believe that with more careful investigations the results of even Brindel 12½ per cent. and Pluder and Fisher 15 per cent. will be found too low.

The tonsils, too, are frequently tuberculous, but as to the relative frequency I have at present found no record. Professor Sims Woodhead calls attention to its presence both in man and pigs fed on milk from tuberculous cows, and Dieulafoy's experiments, whilst not proving that the tonsils were themselves tuberculous are nevertheless exceedingly interesting in showing how frequently they are infected with the bacillus. He obtained from various hospitals in Paris, but chiefly from the Hôpital des Enfants, a number of portions of tonsils and adenoid vegetations removed on account of overgrowth. Hypertrophied tonsils from 61 cases were inoculated into guinea-pigs, and 8 of the animals became tuberculous. Adenoid vegetation from 35 cases were inoculated and 7 of the guinea-pigs became tuberculous.

Taking these facts into consideration we see at once the futility of excising an enlarged gland not yet suppurating, whilst leaving behind a probable cause in the shape of tuberculous ulceration of the lymphoid tissue of the nasopharynx or a tonsil containing tuberculous foci.

Treatment.

For those children who are severely handicapped by the inheritance of a tendency to tuberculous gland disease, a great deal can be done, both in the shape of prevention and cure.

As regards prevention, it can scarcely need emphasising, at this date, that all milk should be boiled, and that the child's environment should be watched with the greatest care. The child should not be allowed to visit tuberculous houses, or rooms where phthisis has been treated; especially if the room is undergoing repairs, or if the walls are being stripped. There can be no question as to the advisability of a frequent examination of the throat, nasopharynx, and gums. Loose teeth, carious teeth and stumps should be removed; cavities should be thoroughly disinfected and filled. Adenoids, if sufficiently pronounced to cause symptoms, should be promptly removed, likewise enlarged tonsils, especially if liable to repeated attacks of catarrh, or if they have an irregular surface.

If tuberculous glands appear, and they are discovered in an early stage, undoubtedly a great deal can be done for their cure without operative interference. As regards the general constitutional treatment, I have no new suggestion to offer.

Before commencing the cod liver oil, which in the majority of cases does so much good, it is often well to give a little grey powder, and alkaline mixture before meals, for a few days, and then, whatever suits the child best, should be the tonic selected. For the majority, iodide of iron with malt is good, and is generally liked by the children. Of far greater importance than any drug is abundance of fresh air and sunlight—if possible, at the seaside. Tepid sea-bathing, followed by friction, is good; in a word, all means that tend to improve the child's general health, and raise his tone, should be adopted.

It is the local treatment in which I am specially interested, and as to which I wish to make a suggestion. Teeth, tonsils, and naso-pharynx should be attended to. Stomatitis and small ulcers of the lips and gums should be promptly treated. In treating the glands themselves we should always think of the part of the skin or mucous membrane the diseased gland represents, and then apply the remedy to that spot. For instance, the gland at the angle of the jaw and the upper deep cervical drain the tonsil, therefore apply the remedy to the tonsil. I was first led to try this plan accidentally.

I prescribed for a young lady of 20, who was suffering from chronic pharyngitis, an application of iodine and iodide of potassium in glycerine to be painted on the tonsils and pharynx each night. She returned in six weeks with her throat trouble much better, and delighted at the disappearing of an enlarged gland at the angle of the jaw which had been in evidence for over two years. I at once started to use the application in my hospital and private practice, and, in the majority of cases, with the greatest benefit. In many cases its action was very marked.

A late colleague of mine at the hospital had a patient of 5 with a number of markedly enlarged glands of the deep cervical group and also the suprahyoid gland. The skin was not adherent, and they were freely movable. Dr. Whittle was about to excise them, but postponed the operation that the above plan of treatment might be tried first. For six weeks the pigment was painted on the tonsils, and on the gum below the lower incisor teeth. At once improvement set in, eventually the glands entirely disappearing. The application is composed of iodine, 12 grs.; potass. iodid, 15 grs.; ol. menth. pip., ℿij; glycerine, ℥ j.

It will not affect all glands; but, if applied before softening takes place, it undoubtedly reduces the majority. I have been using it now for seven years in a large number of cases, and always adopt that line of attack first. Comparing the experience of the last seven years with those of the seven years previous, I have no hesitation in saying the results have proved very gratifying. For the superficial glands draining the skin I use iodide of potassium ointment, well rubbed into the skin representing its surface of absorption.

The old method of direct injection of iodine into the gland invariably spoiled the syringe, injured the child, and damaged the surgeon's reputation. Nor need it surprise anyone, for a gland that is busy fighting its internal foes is very likely to throw up the sponge when it receives an unfriendly stab from the outside; hence the importance of shielding the gland as far as possible from mechanical injury and severe cold.

If after a fair trial of constitutional and local treatment the glands still increase in size, or show signs of softening, the sooner they are removed the better. For those which are completely broken down it is better to incise the capsule at once, and scrape it out with a sharp spoon, then dress the inside of the capsule with pure carbolic acid; afterwards, if the capsule can be teased out so much the better; but it is a pity to waste time trying to dissect out the remains of a gland that is, in reality, only a bag of pus. It is certain to burst; and by the dissection the connective tissue around the gland has been opened up, into which the tuberculous pus is distributed, and may be carried to other glands.

In excising glands, no pressure should be made on the gland, either by the fingers or by pressure forceps of the various special types. If several in a group are affected, the lower one should be taken first, working up in the opposite direction to the lymph current. The danger of pressure is, that some of the tuberculous material may be pressed from the medulla of the gland into the efferent vessels, the valves of the lymph vessels allowing the current to pass by way of the efferent vessels, and preventing its passage into the affarent vessels. To my mind this is the only explanation of a quick relapse a few days after the excision of glands. I have seen this happen, not infrequently, both in my own practice and in the practice of other surgeons. Perhaps the dissection has been a very careful one: the gland has come out without bursting, the wound has healed by first intention; but to the chagrin of the surgeon no less than to the disappointment of the patient, in seven or fourteen days other glands of the same series appear as large as, or even larger, than the one excised. Since using greater care in avoiding pressure on the gland, I have certainly had little or no trouble from this source.

The Time for Operation.

Mr. H. BETHAM ROBINSON, after thanking Mr. Morgan for his practical remarks, endorsed all that he had said, and thought it could not be written up too large that the enlarged glands were always due to a local cause which must be looked for and treated. Adenoids were perhaps the most frequent cause, and cases of difficulty presented themselves when the adenoids were associated with marked glandular enlargement. The rule he laid down was that if the glands were markedly softened they should be dealt with first, and afterwards the adenoids should be treated. If the glands were not softened the adenoids should be removed, leaving the glands to give the enlargement a chance of subsiding. Both should not be removed at the same time.

Mr. GEORGE MORGAN, in reply, agreed that it was sometimes difficult in cases of adenitis with caseous glands to know which to attack first. As a rule, unless the glands were mere bags of pus, the adenoids should be excised first and the glands dealt with afterwards.

A DISCUSSION ON CONVULSIONS IN INFANCY.

I.—A. M. GOSSAGE, M.B.Oxon., M.R.C.P., Assistant Physician, Westminster Hospital, and East London Hospital for Children.

and

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THE ETIOLOGY OF CONVULSIONS IN INFANTS.

SINCE both the lay public and even sometimes members of our profession are prone to use the term convulsions very loosely, it is necessary to start this discussion by defining what is meant by convulsions. The name convulsions is usually given to more or less purposeless muscular contractions, occurring simultaneously and successively for a variable time, attended in most instances by a loss of consciousness more or less profound. There seems to us no need to retain the term "eclampsia," which has been so generally used in connection with infantile convulsions, especially as authorities differ considerably in the exact meaning they attach to the word.

Frequency.

Convulsions, properly so called, occur under a great variety of conditions in infancy. We believe, however, that their frequency has been greatly exaggerated, more especially by

the laity, who have extended the term convulsions to phenomena which they are pleased to call "inward convulsions," "silent convulsions," "screaming convulsions," and the like. These phenomena are probably merely the infant's methods of expressing the emotions of anger or pain, and have nothing to do with true convulsions. Many dying infants, too, if not most, suffer from convulsive movements of the limbs just before or at the point of death. Dr. Hughlings Jackson has aptly described such convulsions as "merely a mode of dying." We think that convulsions occurring in this fashion at the point of death should be differentiated from convulsions occurring in other conditions, since their inclusion has led to an overestimate of the frequency of convulsions proper, and to an exaggeration of the probability of convulsions causing death.

Etiology.

The causes of convulsions are most conveniently divided into predisposing and exciting, of which the former are the more important. It may, however, be difficult to say with which particular class, predisposing or exciting, many of the causes should be placed.

All writers on the subject place foremost amongst the predisposing causes what has been termed "instability," or "irritability of the infantile nervous system." Owing to the incomplete development of the higher controlling centres, it is certain that an explosive nerve discharge may result from slighter stimuli, peripheral or central, in infants than in adults. This instability disappears with advancing age and further development of the higher centres. We consider, however, that too much stress has been laid on this instability of the infantile nervous system. Such "instability" is naturally common to all infants of the same age, and should be equal for the same stage of development. It is, nevertheless, only the exceptional infant that suffers from convulsions, while the majority escape even when exposed to the most powerful exciting causes. Still by far the greater number of infants who have suffered from convulsions exhibit no trace of neuroses in after-life; this fact, we admit, is evidence in favour of the prevalent belief in the greater instability of the nervous system at the infantile age.

An inherited neurotic tendency is one of the most important of the predisposing causes, if not the most important. It is not uncommon to find certain families where the majority of the children, and in some families all the children, suffer from convulsions in infancy. Such a common tendency must have been derived from a parental source. Statistics published by one of us gave a neurotic history in the parents in 32 per cent. of cases of infantile convulsions, and where the occurrence of convulsions in the patient's brothers and sisters was taken as evidence of definite neuroses, the neurotic percentage amongst near relatives rose as high as 67 per cent. We believe that the importance of the family history has not as yet been sufficiently recognised and acknowledged.

Rickets is admittedly a frequent predisposing cause of convulsions, and a very large percentage of infants with convulsions are rachitic. Only a small proportion of rickety children, however, suffer from convulsions. Amongst 54 children with rickets recently seen by one of us as out-patients at the Shadwell Hospital, convulsions only occurred in 4, that is, 7.4 per cent., and we are inclined to believe that this proportion is higher than the normal. In rickety children convulsions are frequently associated with tetany and laryngismus stridulus. It is probable that the brain suffers with the general malnutrition of the body in rickets, and that it is to this malnutrition of the brain that convulsions, tetany, and laryngismus stridulus are due. This being so, one would expect convulsions to be more frequent in those more severe cases of rickets in which cranio-tabes occurs. We thus get a simpler explanation of the frequent association of cranio-tabes and convulsions than is afforded by supposing that the convulsive phenomena are caused by pressure on the softened areas of skull.

Exciting causes may originate in local disease or injury of the brain or its membranes. Thus concussion of the brain may cause convulsions, or convulsions may be started by hæmorrhage into the brain, cerebral abscess or tumour, and meningitis, and they are frequently associated with those developmental deficiencies and abnormalities which result in idiocy. Convulsions which date from birth are generally due to meningeal hæmorrhage, and so are frequently associated with spastic paralysis and followed by amentia. The symptoms of cerebral tumour in young children often present themselves with a startling abruptness, and convulsions at the first may be bilateral in character, and this may afford no evidence of any value as regards localisation. The first prominent symptom of meningitis may often be convulsions, which not infrequently are unilateral at the onset. Venous engorgement of the brain, the result of violent coughing, and the exactly opposite condition, cerebral anæmia, whether resulting from hæmorrhage or any exhausting disease, may equally give rise to convulsions in infants.

Uræmia is a recognised cause of convulsions at all ages, but it is of exceptional rarity under that of two years.

It is asserted by nearly all writers that acute diseases, especially those in which a sudden rise of temperature occurs, such as croupous pneumonia and the exanthemata, are frequently ushered in with an attack of convulsions in young children. We consider that the frequency of such an occurrence has been largely overestimated. Carefully compiled statistics, by three separate observers, show that convulsions do not occur in more than 5 per cent. of all cases of croupous pneumonia in children. In statistics published by one of us in 1892, out of 68 cases of croupous pneumonia at the Shadwell Hospital under the age of 7 years, convulsions occurred at the onset in 3 only; one of these had frequently had fits before, one was the child of an epileptic father, while in the third case there was no information in the notes as to previous convulsions or as to the family history in regard to neuroses. In another set of cases, collected by one of us at the Westminster Hospital in the years 1891, 1892, 1893, and 1894, out of 311 cases of lobar pneumonia there were 42 under the age of 7 years; in only two of these did the disease start with convulsions, one of whom had previously frequently had convulsions, whilst the personal and family history of the others was not fully recorded. Dr. J. Shardlow has kindly collected for us a further series of 56 cases of croupous pneumonia under the age of 5 years from the records of the Shadwell Hospital during 1897 and 1898. Out of these 56 cases, 3 were stated to have begun with convulsions. Adding the cases together, we find that 8 cases out of 166 started with convulsions, a percentage of 4.7. The small percentage of convulsions as an initial symptom in these cases contrasts strongly with the 25 per cent. given by Sturgis and Coupland in their work on *Pneumonia*. Their conclusion, however, was drawn from only 20 cases. Convulsions are much more frequent during the course than at the onset of pneumonia, especially in the catarrhal form, but the convulsions at this later stage most probably arise from asphyxia rather than from pyrexia.

Convulsions at the onset of the exanthemata are admittedly much rarer than they are at the onset of croupous pneumonia in infants. Probably, then, much less than 5 per cent. of these cases have convulsions as an initial symptom. This conclusion is confirmed by the experience of certain of our friends in the fever hospitals. As with pneumonia, so with the exanthemata, convulsions are much more frequent during the course than at the onset; but here they are dependent on various well-recognised pathological contingencies that need not be discussed. From the above statistics it would follow that the statement, so commonly met with, that convulsions in infants are merely the equivalent of the rigor so common at the commencement of acute specific diseases in adults is contrary to the facts. Convulsions under these circumstances in infants are very rare, and usually only occur in those infants who are hereditarily predisposed to them. Rigors sometimes are observed in infants, and convulsions as the initial symptom in the croupous pneumonia of adults are not unknown.

Peripheral nerve irritation, especially in the form of teething troubles and bowel disturbance, has been almost universally advanced by the profession and accepted by the lay public as by far the commonest cause of convulsions in infants. Of late, however, much more caution is shown in ascribing convulsions to such trifling causes alone, and modern writers lay an increasing stress upon the predisposing over the exciting causes. In very exceptional instances teething or bowel disturbance may be solely or directly responsible for convulsions; but in the huge

majority of cases they are entirely dependent for their efficacy upon the presence of a predisposing cause, such as rickets or a neurotic disposition. Severe surgical injuries and extensive burns, however, sometimes excite convulsions in young children in whom a predisposing cause is apparently wanting.

Asphyxia is one of the most powerful exciting causes of convulsions at all ages. This is in strict agreement with physiological experiments on animals and with clinical experience with human beings. The convulsions arising during the course of diseases where there is interference with the respiratory functions are more certainly due to asphyxia than to any other factor in such complaints. We would suggest that the convulsive movements so commonly seen in dying infants are possibly due to asphyxia secondary to collapse of the lungs, pulmonary collapse being almost invariably found *post mortem* in infants, whatever complaint they have died from. The importance of the part played by asphyxia in causation of convulsions is, perhaps, not yet duly appreciated by the profession.

Pathology.

As a rule, after death from convulsions no change can be found in the brain or spinal cord which can be regarded as the cause of the disorder. Such changes as are found are probably the results and not the causes of the convulsions. An exception to this statement is, of course, to be found in those cases where the convulsions are secondary to coarse brain lesions, such as meningitis, tumour, hæmorrhage, etc. Just as with epilepsy, we are quite ignorant what pathological processes give rise to the "nerve storm," as it has been called. We do not even know whether the brain state immediately preceding convulsions is one of vascular engorgement or of anæmia. It is, however, certain that the nervous tissue is in an enfeebled condition, and not in any state of enhanced nutrition; beyond this our positive knowledge does not extend.

Treatment.

All that is necessary during an actual attack of convulsions in most cases is to loosen the clothing about the neck, chest, and abdomen, and to lay the child on its back with the head slightly raised until it recovers consciousness from the fit and the subsequent drowsiness. The placing of the child in a hot bath, as is such a common practice, probably does no harm, and if the child be in feeble health it may be advantageous to use a mustard bath, which has decided stimulating properties. Cases, however, where the unconsciousness is unduly profound and prolonged, and especially if with this further fits are associated, require more active measures. Chloroform inhalation is the most efficacious of these, and profound unconsciousness is no bar to its employment, recovery from the anæsthetic being usually accompanied by regain of consciousness. The inhalation of chloroform may be replaced, or in severe cases followed by the rectal injection of chloral, in doses of 3 gr. to an infant of 6 months, to which 2 or 3 gr. of potassium bromide can be added if desired. If the chloral be retained, its sedative action on the nervous system is usually quickly manifested, while in other cases its presence in the rectum brings about the evacuation of an especially foul-smelling motion, and this is generally followed by a return of consciousness. Some authorities have recommended the inhalation of nitrite of amyl in 1-minim doses, and Eustace Smith praises the hypodermic injection of morphine in doses of $\frac{1}{12}$ gr. to an infant of 6 months, and says that it can be repeated, if necessary, in the course of half an hour. Any local irritation which may be regarded as an exciting cause of the fit calls for appropriate treatment. For instance, if it be suspected that indigestible food is responsible, an emetic may be given, followed by a calomel purge, and in very exceptional instances it may even be justifiable to lance the gums.

In all cases small doses of one of the bromides should be given for a few days after the attack. Unless the fits recur, however, the bromides should be discontinued. The greatest care should be bestowed on the diet and on the thorough ventilation of the rooms occupied by the child both by day and night. The child's head should be raised during sleep and its feet kept warm. If the child be suffering from rickets, the appropriate treatment for this complaint should be rigorously employed, and mercury should be given if there be any sign of syphilis. In those cases where the convulsions recur with any frequency, even only once a month, a course of bromides should be prescribed. Every attack possibly lessens the resistance in the nervous tracts, so that a much slighter exciting cause than was necessary for the first fit may bring about succeeding ones. It is therefore probable that more harm is done by repeated fits than could possibly arise from the effects of the bromides on the developing tissues. It is perhaps best to continue the administration of bromides until three months have elapsed since the last fit, though it is very difficult to fix a definite time. If the bromides fail to stop the attacks, borax in doses of 2 gr. for a child of 6 months might be tried. Other remedies, such as belladonna, salts of zinc, digitalis, ergot, musk, etc., have been vaunted from time to time in the treatment of convulsions; these may be useful in special cases, but as a rule are much less efficacious than the bromides.

In conclusion we would sum up some of the more important points for discussion as follows:

1. The frequency of convulsions in infants has been vastly overrated.
2. The immediate danger of a fit has been overrated, while the danger as regards future neurotic manifestations has been underestimated.
3. The predisposing causes are of much more importance than the exciting causes; the slighter exciting causes will produce convulsions except in predisposed infants.

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PUBLIC HEALTH ASPECT.

From the public health point of view convulsions must be regarded as merely "symptomatic" of some underlying disease. No one died, no one ever will die, from convulsions alone; there must be something else. The number of deaths recorded from convulsions every year is very large though it is diminishing steadily. In 1878 the total was 24,700, in 1897 it fell to 18,384. This diminution has occurred in spite of an increasing population. The rates per million are as follows:

	1878.	1897.
Males	1,149	 604
Females	833	 496
Persons	987	 592

In 1897, 10,445 males and 7,939 females died from convulsions (total 18,384). Why there should be so great a difference in sex incidence is difficult of explanation. Male deaths from all causes are generally in excess, though deaths from whooping-cough may be mentioned as a striking exception. Of all deaths registered from convulsions, 98 per cent. occur under the age of 5 years, and account for 10 per cent. of all deaths at the (0-5) age-period. It is obvious that if convulsions be only symptomatic, the number of deaths registered from other diseases which terminate with convulsions must be inaccurate, and, owing to the large number so recorded, the inaccuracy is of importance.

Other symptoms are also included in the death returns, for example, debility, dentition, etc. Until more precise certification of the cause of death be attained, full use cannot be made of the returns of the Registrar-General. It will probably be admitted that by far the largest proportion of deaths from convulsions is really due to disorders of digestion. Not only does clinical experience support that view, but a study of statistics proves conclusively that the number of deaths from convulsions varies with the number of deaths from disorders of the digestive system.

To avoid quoting figures, I have drawn a chart of the annual deaths 1878-1897 from convulsions, diarrhœa, and atrophy (see Chart 1). The three curves vary simultaneously, for example, a simultaneous decrease in 1884, 1894; a simultaneous increase in 1885, 1895, and so on. The resemblance between the curves is more marked when death-rates are compared instead of deaths, The steady fall in the number of deaths both from convulsions and from atrophy tends to obscure the similarity in form between the curves. Yet the resemblance is too great to be regarded merely as a coincidence. Similarity in the form of curves generally indicates that the data

from which they are constructed have some relation to one another.

Dr. Longstaff *(Studies in Statistics)* found a similar relation between the curves representing the weekly mortality in London from diarrhœa, enteritis, English cholera, atrophy, want of breast milk, jaundice, tabes, thrush, and dysentery, so that it may be stated with confidence that a very large number

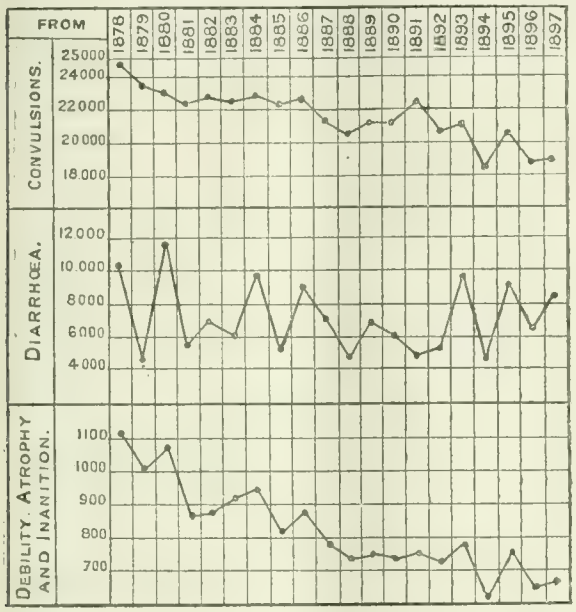


Chart 1.—Annual deaths, 1878-1897.

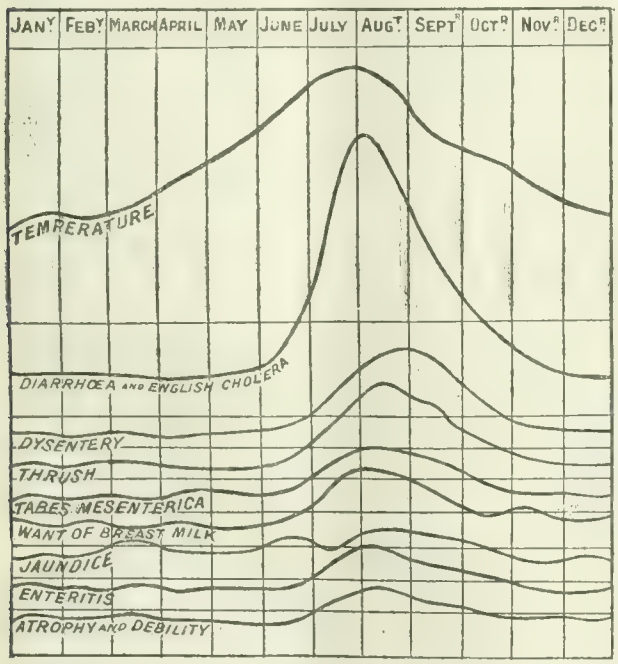


Chart 2.—Deaths from various causes, 0-1 year. London 1847-1874.

of the deaths from convulsions ought to be ascribed to disorders of the digestive system (Chart 2). The clinical view of the causation of convulsions is thus amply confirmed.

Probably the tranference of deaths from one alleged cause of death to another accounts for the smaller number of deaths now registered from convulsions. During the last few years there has been a great increase in the number of deaths registered from premature birth. There is strong reason for believing that many deaths previously ascribed to convulsions are now registered as being due to premature birth. The decrease in the number of deaths from convulsions is also probably due to a more exact diagnosis of the diseases of the central nervous system. Other examples might be given.

Many fatal cases of convulsions will always remain undiagnosed, but the number of these will tend to become fewer and fewer. To the student of public health deaths from convulsions often give an indication of the social condition of the people. Dr. Farr found in comparing the statistics of fifteen large towns that the death-rate from convulsions varied with the ignorance of the mothers, with the proportion of women employed in industrial occupation, with the number of underage marriages, and with the sanitary condition of the town in respect to overcrowding, drainage, etc. It must be remembered, however, that infant mortality tends to fall in times of great industrial depression, when babies receive more attention from their mothers, and when breast-feeding is more general.

To sum up, convulsions must be regarded as causally related to digestive disorders or other organic disease, and, indirectly, also to social conditions tending to produce disease. It is important to reduce the complexity of medical statistics, which are more than usually intricate, because they involve very frequently more than one factor. It is desirable to reduce to a minimum the obstacles which tend to prevent the recognition of the ultimate origin of disease, for progress in the improvement of the public health is retarded through want of accurate knowledge.

III.—Edmund Cautley, M.D.Cantab.,

Physician to the Belgrave Hospital for Children.

Dr. Cautley thought that, apart from definite organic causes of infantile convulsions, and neglecting the group of cases due to febrile conditions, there were a very large number of cases in which the fits were due to the food of the child. In many of these cases the child was rachitic and, consequently undue prominence had been given to rachitis as a cause of the fits. The true explanation probably lay in the fact that rickets rarely became evident until the child was of such an age that it was very likely to be given unsuitable food, and that the malnutrition of the nervous system rendered it more susceptible to explosive manifestations from reflex or other causes. It was, therefore, in the youngest infants that they must seek for evidence of the direct effects of unsuitable food on the nervous system. In older children they frequently met with cases in which the fits were due to bacon, pork, peas, or currants, or such-like substances. In the youngest infants, too, they must seek for the cause in the milk or other food given. He would bring forward a typical instance to illustrate his meaning: He saw last year in consultation a male infant 9 weeks old. It had been brought up on the bottle from birth on a diet of cow's milk and Mellin's food in large quantities, as much as 4 ozs. being given at a feed. Severe convulsions occurred on the seventeenth day. The diet was then changed to one of humanised milk and meat juice. This change resulted in cessation of the fits for a week. After that the fits had returned, not severely but very frequently—twenty or thirty a day—in spite of treatment with bromides and belladonna. So it went on for five or six weeks. On inquiring into the family history and the details of the confinement, and on physical examination of the infant, no cause could be found. The food, however, was not well digested. A diagnosis was therefore made of reflex intestinal irritation due to unsuitable food. A diet of proteid 0.5 per cent., fat 1 per cent., sugar 5 per cent. was ordered, 100 c.cm. being given at 2½ hours intervals—8 feeds in 24 hours. Half a teaspoonful of a mixture of equal parts of cod-liver oil, maltine, and compound syrup of phosphate of iron was ordered three times a day. As soon as this diet was commenced, the fits abruptly ceased, and did not recur. The various constituents of the food were slowly increased, and the child gained 36 ozs. in seven weeks. He had come across no case in which he could ascribe infantile fits to excess of fat or sugar. The cause had invariably consisted in an excess of proteid, and it could not be too widely recognised that some infants could digest only a very small percentage of proteid—less than 1 per cent. The excess of proteid generally acted mechanic-

ally, the milk forming indigestible curds, and causing reflex intestinal irritation. He was, however, convinced that in some instances the cause was not a mechanical one, but lay in the absorption of intermediate products of proteid digestion acting on the central nervous system. In other words, the explanation lay in a defective and excessive proteid metabolism. Thus, in the case of infants fed on humanised milk or predigested (peptonised) milk, a reduction of the percentage of proteid and a suitably modified cow's milk would generally bring about a cure. Drug treatment should be directed to improving the general nutrition, but all such treatment was of little or no avail as long as the diet was unsuitable.

IV.—James Green, L.R.C.P., M.R.C.S.,
Vice-President.

Mr. James Green inquired as to the cause of the convulsions accompanying syncope—for example, the syncope following trifling operations such as revaccination, in which it was impossible to suppose that the peripheral irritation was sufficient in itself to cause convulsions. He also referred to the different *post-mortem* appearances in children dying from "overlying" or from convulsions. Regarding the treatment of uræmic convulsions, he urged the advisability of blood letting from the loin by leeches or cupping.

Reply.

Dr. Gossage, in reply, quoted the after-history of 85 cases of convulsions collected by Dr. Coutts as evidence in favour of the view that convulsions were due to neurotic predisposition. Out of these 85 cases 40 suffered from neuroses in after life. Of these 40, 11 had epilepsy in the severe form, 4 had *petit mal*, 5 suffered from somnambulism, 4 from melancholia, 7 from chorea, 9 from migraine. Of the 45 who were free from neuroses, 8 were said to be eccentric, and nearly all the rest were below their brothers and sisters in intelligence. He considered that Dr. Hugh Jones's views agreed with those expressed in the paper. Most of the cases certified as dying from convulsions were really cases of other disease, and the convulsions occurred at death as a "mode of dying." In such cases disturbances of the digestive system were numerous. Cases dying of exhaustion after digestive diseases—for example, diarrhœa—were generally convulsed at the point of death. Convulsions in syncope would be due to the associated anæmia of the brain; convulsions from anæmia of the brain were well known. Uræmic convulsions under the age of 2 years were very uncommon. He agreed with Mr. Green in considering blood-letting an appropriate form of treatment in such cases.

THE CAUSATION OF NIGHT TERRORS.

By E. Graham Little, M.D., M.R.C.P.Lond.,
Assistant Physician to the East London Hospital for Children, Shadwell.

The causation of night terrors in early childhood is one of the most debated of the smaller points in medicine, and the very diversity of the explanations offered is an indication that no quite satisfactory theory of causation has been found. Doubtless the looseness of the name, and the fact that it covers more than one class of disorder, is to some extent responsible for the unsettled and even contradictory opinions on the subject; and my friend and colleague Dr. Coutts[1] has done an important service in attempting to differentiate two classes of disturbed sleep in children; in one of which, in his opinion, the disturbance is due to reflex stimulation of the sleeping child; and in the other the restlessness is caused by disordered central impulses. He would restrict the term "night terrors" to this second class, and include the first class with the group of nightmares. This classification is similar to that suggested by Silbermann,[2] who would also make two divisions of the affection in question, grouping in the first class those cases in which disturbance of sleep is secondary to some other disorder, mostly of digestion; and in the second class those cases in which no such causes could be ascribed, which he therefore calls idiopathic, and which he assumes to be due to disordered brain functions in a neurotic child. The latest writer on the subject, Dr. Leonard Guthrie,[3] whose valuable paper has appeared since I began to put these notes together, adopts Silbermann's classification, though deprecating the somewhat too rigid separation of the two classes of cases. Most other writers have laid stress alternately on the symptomatic or idiopathic nature of their cases; and the idiopathic forms have usually been explained as due primarily to cerebral causes. Several authors consider that digestive derangements explain most of the cases; thus West[4] described them as due to constipation as a rule, though he relates a case in a child of 11 months in which diarrhœa was the proximate cause. Moizard[5] noted the absence of convulsions during or after the night starts, as differentiating them from epilepsy, and regards digestive disorders as the principal factor in their production. Eustace Smith[6] points out their frequent association with disturbed gastro-intestinal functions in a class of cases of what he calls mucous disease, coming on often after whooping-cough and during dentition.

Cheadle[7] writes of night terrors: "They are in the vast majority of cases not indicative of brain disease, nor, indeed, of any serious disease; they are nothing more nor less than children's nightmare, bad and terrifying dreams, and are produced by some internal disturbance and irritation, having their seat almost invariably in some region of the alimentary canal. Henoch[8] described them, too, as merely "terrifying bad dreams;" he could not associate them with digestive, circulatory, or respiratory troubles. Comby[9] also explains them as terrifying dreams, nightmares due to alimentary derangements. He points out their frequent association with rickets, an association which Jacobi[10] and Dawson Williams[11] also note.

Enlarged tonsils and adenoids were the probable cause of night terrors in some cases reported many years ago by Warrington Haward,[12] and the same association has been noticed by Baginsky,[13] by Osler,[14] and many recent writers. Starr's *Encyclopædia*[15] gives a reference to a case in which errors of refraction and astigmatism were the probable cause of persistent night terrors, and Leonard Guthrie notes a type of cases in which migraine and night terrors are associated with errors of refraction.

Debacker,[16] in an old thesis, gave a complete history of night terrors apparently caused by the presence of a tapeworm and cured by its removal, and Still[17] showed good reason to ascribe their occurrence in one case to the presence of oxyurides in the vermiform appendix. Goodhart,[18] Donkin,[19] and Angel Money[20] have pointed out how frequently rheumatic children are subject to night terrors. Guthrie gives some interesting personal experiences of bad dreams, which he ascribes severally to aural vertigo, to profuse night sweats, to febrile temperatures, to nasal catarrh; but these are obviously to be included in the nightmare group in Dr. Coutts's classification, and not to be considered now.

There is, on the other hand, a large group of writers who look upon this disorder as evidence of a neurosis, allied to epilepsy if not actually due to it. Clouston[21] classes them among his "developmental insanities," and considers that the state has in it "something of dreaming, something of a mental epilepsy, something of somnambulism." Angel Money, though pointing out the rheumatic association before alluded to, considers night terrors to be a form of cortical epilepsy. Colman[22] dwells on their analogy with migraine; they are allied to epilepsy, yet few subjects become epileptic; like migraine they are often connected with disease of other organs, and the alimentary canal is principally at fault. Coutts considers that night terrors proper, as distinguished from nightmares, are always evidence of central neuroses. Ollivier[22] and Simon think they are allied to epilepsy and hysteria, and are always the stigma of a degenerate.

An analysis of these various statements shows the authorities to be divided into two main camps, one of which holds that night terrors are symptomatic of some organic disorder causing reflex stimulation, and the other that they are due to central neuroses allied to epilepsy. I have thought it worth while to examine into such cases as have come before me during the past nine months, selecting only those in which night terrors were a prominent feature in the tale of symptoms dwelt upon by the mother of the sick child, and I have endeavoured to exclude the cases which might be described as simple nightmare, with causes temporary and ready to hand, such as a sudden spurt in school work, an attack of indigestion, a rise of temperature, etc. I have investigated the

physical condition of such cases as could not be thus excluded, and I have been struck with the large proportion of instances of morbus cordis which I have found in these cases; an observation which brings me unexpectedly into line with the group of writers who laid stress on rheumatic conditions associated with night terrors.

I am led to discount very largely what I may call the epileptic explanation of their causation. I have collected 30 cases for the purposes of this paper, of which I shall inflict upon you here only the analysis of the causes. The ultimate common factor seems to me to be almost always dyspnœa, not of so urgent a type as to be painful, or even always conscious, but such as nevertheless adds a sustained discomfort to sleep.

In nearly two-thirds of my cases the night terrors were associated with early morbus cordis. To be more exact, in 17 out of 30 cases there were definite valvular murmurs of the heart. This approximates curiously to Goodhart's statistics of 37 cases of night terrors in which a rheumatic family history was present in 19 instances. In 2 other of my cases there was increased frequency and irregularity of cardiac action without definite murmur in children with a rheumatic history. In 5 cases the causes seemed to be narrowed down to enlarged tonsils and adenoids, in 2 other cases to chronic rhinitis. In 2 cases there was obstinate dyspepsia, which seemed to be the proximate factor in production of night terrors. In 1 case only was there a definite history of previous epileptic seizures in a child with an epileptic family history; and in 1 case there was chronic urticaria pigmentosa very widespread, and itchy, which seemed to be the cause of persistent night terrors of more than twelvemonths' duration. The ages of the children varied from 6 months to 11 years, and there were 19 girls to 11 boys.

I would argue this proposition: Night terrors are caused by a reflex stimulation, produced almost always by dyspnœa, moderate in degree but prolonged, and they occur in the early hours of sleep of young children. I explain the absence of respiratory diseases in my list by the observation that severe dyspnœa, such as they usually produce, is too violent a stimulus to furnish the "still small voice" of reflex suggestion. The stimulus is usually of the character of what Bain[24] called an organic sensation, vague in its mental character as compared with the stimulations of special sense, but attended by voluminous though ill-defined feeling. He gives the instance of suffocation as a type of these sensations. The dyspnœa which precedes night terrors is always moderate. The discomfort, initially feebly realised becomes massive by its prolongation, and is translated, in the child's peculiarly fantastic turmoil of subconsciousness, into the mental content of terror, associated with an external cause. It is in early sleep, in the borderland, as Bevan Lewis[25] writes, between loss of subject and object consciousness, that this distortion of obscurely felt sense impressions into hallucinations takes place. Soltmann adds the ingenious explanation that in sleep the inhibitive power of the senses, chiefly of sight, being removed, reflexes are more uncontrolled. The hallucinations are mostly visual; indeed, Ollivier speaks boldly of night terrors as caused by spontaneous irritation of the visual centres in the brain, which evokes images analogous to those which in the waking state are caused by peripheral excitations of light. But Colman records the occurrence of hallucinations of hearing and of common sensation, and one of my cases had a persistent auditory hallucination.

Deductions from the Cases Examined.

1. Night terrors are in the great majority of cases caused by disorders productive of moderate but prolonged dyspnœa.
2. A preponderating number of cases are found in rheumatic subjects with early heart disease.
3. A considerable proportion of cases are due to obstruction of nasal cavities and fauces.
4. Digestive disturbances do not play the important part in causation that is often assigned to them.
5. The evidence for their causal connection with epilepsy or allied neuroses is scanty.
6. The attacks occur in the subconscious stage of early sleep, and are confined to young children under puberty.

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Dr. Cautley thought there was another fact of importance, and that was the association of night terrors with educational overpressure. Many cases occurred in children a few weeks or months after first attending school. He had also been struck with the association of somnambulism with night terrors in these children, and ascribed both to the increased irritability of the brain due to excessive or too early stimulation of the brain. Board schools had a good deal to answer for as a factor in the production of childish disorders.

Dr. Masters (Parkstone) believed that one exciting cause of night terrors in young children was the highly injudicious treatment of their nurses, who threatened them for instance with "bogies." Worms were also probably a cause, and he quite endorsed the remark that high pressure in teaching these young subjects had much to answer for.

Mr. James Green thought that in the matter of overpressure at school any fresh occupation was liable to occupy a child's attention by night in his dreams as well as by day. He considered that dyspnœa was a prominent cause of dreams.

Mr. Mansel Sympson (Lincoln) said that in night terrors he had always found the administration of bromide of potassium very useful.

Mr. Herbert Wright (Natal) said that he agreed generally with what Dr. Graham Little had said; but he should have been glad to have had his opinion as to the association of somnambulism with these night terrors. He had seen several cases in which the two were associated, and he could recall in particular the case of a boy of 12 whom he had been called to treat. The boy was thin and delicate and of a highly nervous temperament. He suffered from nocturnal enuresis and from incontinence of fæces by day after the slightest over-exertion. He was subject to severe night terrors, which came on an hour or two after going to bed. Sometimes these terrors were replaced by somnambulism, and he got up from his bed, went down the staircase, and, when led back to bed, went to sleep and remembered nothing next morning of his midnight excursion. The boy had suffered in this way for two or three years. No organic disease could be found. He had found potassium bromide, with or without chloral, useful in these cases, and the boy he had mentioned was always relieved by these drugs, good sleep following. He was convinced that night terrors and somnambulism were closely associated.

THE CAUSES OF COUGH IN CHILDREN, WITH SPECIAL REFERENCE TO PRACTICAL TREATMENT.

By J. Porter Parkinson, M.D., M.R.C.P., F.R.C.S.Eng.,

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The object of this paper is to classify the causes of cough in children, and emphasise the fact that this symptom is frequently due to other causes than disease of the respiratory organs. For this purpose, I collected 700 consecutive cases occurring in children aged from 6 months to 12 years, in which cough was the chief symptom complained of. In all these cases the chest was carefully examined, and all those in which chest disease was present are included. The results are as follows:

	Cases.
Acute or chronic enlargement of the tonsils	170
Varying degrees of bronchitis	143
Constipation	69
Gastro-enteritis	58
Adenoids well marked	58
Pharyngitis	51
Worms chiefly threadworms	30
Tuberculosis of lungs	29
Rickets	23
Whooping-cough	23
Acute pneumonia	18
Broncho-pneumonia	11
Simple dry pleurisy	8
Laryngismus stridulus	3
Laryngitis	2
Mixed cases, pleural effusions, or adhesion, lymphadenoma, carious teeth, etc.	12

Analysing these cases further, it will be seen that 215 were due to various chest diseases, 279 were due to morbid conditions of the throat, and 160 cases were due to intestinal or gastro-intestinal disturbances, or in percentages.

Due to chest disease	...	...	31 per cent.
,, ,, throat disease	...	...	40 ,, ,,
,, ,, gastro-intestinal disease	...	...	23 ,, ,,
,, ,, other causes ...	...	...	6 ,, ,,

We may take first the most frequently-occurring cases due to throat conditions. In these the cough is usually very severe, occurring in paroxysms after talking, and are often much worse in the lying-down position, in which latter case an elongated or relaxed uvula is frequently seen.

By far the commonest cause of throat cough is an enlargement of the tonsils, accompanied by more or less inflammation and often some surrounding pharyngitis, the back of the throat being dry and granular, with commencing enlargement of the veins. In the worst of these cases adenoids are also present. Owing no doubt to the engorgement of the heart produced by the severe and frequent cough, an occasional rhonchus is often present in the lungs, a fact which may lead some to diagnose bronchitis, but treatment directed to this condition will not effect a cure if the tonsillar affection be disregarded.

The tonsils may be enlarged and inflamed, or only enlarged, the enlargement being chronic, in which latter case removal is the only treatment likely to be of permanent benefit. This cause of cough is specially frequent between the ages of 6 and 12, and accounts for nearly a quarter of the cases.

Well-marked adenoids were present in about 8 per cent. of the cases, and no doubt existed in many more, but did not give such clear symptoms. In these cases the cough is often followed by vomiting and epistaxis, and deafness and otitis media frequently occur. The development of the chest is interfered with, and there may be seen an inspiratory recession of the lower yielding part of the thorax, showing the obstruction to free breathing and the necessity of active treatment. A preliminary course of tonics such as iron and cod-liver oil may be tried, in conjunction with the intranasal injection of an alkaline astringent lotion such as the following: Acid. carbol, gr. i; acidi tannici, grs. xx; sodæ biborate, grs. xl; glycerin, ℥ii; aquam, ℥iv.; but I cannot say the results of this treatment are very striking. Usually the symptoms continue, and are aggravated by frequent attacks of coryza and the removal of the adenoid vegetations is indicated.

I of course refer only to those cases in which symptoms are produced by vegetations, for there is no doubt that they are frequently present and cause no ill-effects.

In 51 cases general pharyngitis was present without well-marked enlargement of the tonsils or adenoids, and in these the cough can be easily removed by tonics conjoined with an astringent gargle or pigment.

In a few other cases laryngitis with or without laryngismus stridulus was the cause.

The next set of cases producing cough are lung diseases, of which bronchitis is far the most frequent, accounting for 143 cases, or 20 per cent. of the total number. Twenty-nine cases were due to tuberculosis of the lungs, and the same number to pneumonia, of which 18 were of the lobar type, and in passing one may mention the frequency of lobar pneumonia at the apex of the lung in children. Goodhart says that in children there are 3 cases of apex pneumonia to 5 occurring at the bases of the lungs.

A few cases are due to pleurisy with or without effusion and to empyemata, also to bronchiectasis and enlargement of the mediastinal glands.

The kind of cough from the last two causes may exactly simulate that of whooping-cough, consisting of a series of expiratory efforts separated now and then by whooping inspiration and accompanied by vomiting, epistaxis, or other hæmorrhages. Such cases doubtless are often mistaken for pertussis. The chief points to which attention may be directed are, first, the patient may have had whooping-cough previously, and this disease rarely occurs more than once, though for a few months after an attack the whoop may return if the child have a cough; secondly, examination of the child may show signs suggesting bronchiectasis as clubbing of the fingers, cyanosis, deformity or dulness of the chest, and *râles* here and there. The sputum is generally described as offensive, but as pointed out by Eustace Smith may not be so, but it is often coughed up in large quantities at considerable intervals. Another condition which may cause a cough identical with whooping-cough is enlargement of the bronchial glands, generally of tuberculous origin. I have recently had two cases under my care at the North-Eastern Hospital for Children. In both cases the symptoms were much the same; both children had suffered from whooping-cough some years previously, and since had not been well, suffering from chronic cough. One child, aged 6, had a chronic cough followed by occasional vomiting and hæmoptysis; the paroxysm of cough was exactly like that of pertussis. The child was pale and thin, and the fingers markedly clubbed. The left side of the chest was smaller than the right and moved less well. There was moderate dulness back and front over the whole of this side, and the breathing was obscured by numerous moist sounds. On the right side there was some impairment to percussion at the base, with harsh breathing and numerous *râles*. There was no dulness to be discovered either over the manubrium sterni or between the scapulæ at the back, which were carefully percussed, as enlarged bronchial glands were thought to be the most probable cause of the symptoms. The child died a week after admission, and at the necropsy the left lung was found markedly retracted, its tissue condensed, and the bronchi uniformly dilated and filled with a muco-purulent fluid. The left bronchus was slightly compressed by a mass of caseous glands behind and above the root of the left lung, which glands by their proximity to and pressure on the vagus nerve had probably produced the peculiar cough. The heart was somewhat dilated, but the other organs were fairly normal.

The second case was a repetition of the first, except that the bronchiectasis was absent, and merely the enlarged bronchial glands present.

The third class of cases, in which cough is a frequent and prominent symptom are the gastro-intestinal diseases. They include 160 cases, or 23 per cent. of the whole. I have excluded from this group all cases with any obvious disease of the throat or lungs. The conditions present were constipation, vomiting, and diarrhœa, and intestinal worms, chiefly the oxyuris vermicularis.

I wish specially to mention the presence of cough in these cases, the symptoms being so marked that many of them had been treated for it before they came to the hospital, with a negative result, as the underlying cause had not been removed.

Diarrhœa is of course a frequent complication of bronchitis, broncho-pneumonia, or tuberculosis, owing to swallowing of the sputum, but in the above cases such causes were excluded by physical examination. The cough is generally frequent, but not very severe, and in the cases of intestinal worms often occurs only at night.

The remaining 6 per cent of the cases were due to various causes. In many of them rickets was present, a condition which is well known to predispose to many reflex nervous disturbances, and in a few cases the cough was not relieved till numerous carious teeth were extracted. I have not mentioned ear troubles as a cause of cough, as in my cases when the ear was diseased there was always some morbid state of the throat present which seemed in itself quite competent to produce cough.

AN OPERATION FOR THE RELIEF OF CONTRACTION OF THE FOREARM AND HAND FOLLOWING INFANTILE HEMIPLEGIA.

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THE deformities of the arm and leg resulting from infantile hemiplegia are such as to seriously cripple a child and render him frequently a dependent in adult life. For some past it has been my custom to divide the contracted structures in the leg and foot. As a rule the plantar fascia and tendo Achillis require division, but in more severe cases the hamstring tendons and those of the flexors of the hip also need attention. It seems that neurologists do not often recommend surgical interference in these cases, but content themselves with

measures of a simple nature such as massage, tonics, and, if spasm be present, the administration of antispasmodics. There comes a time, however, in nearly all these cases when the cortex cerebri ceases to send out irritating discharges and the condition is then one of contraction, of unbalanced and insufficiently opposed muscles. This is the stage to select for operation either in the upper or lower extremity.

The position usually assumed by the upper extremity is as follows: The forearm is flexed and fully pronated, the wrist is flexed, the fingers also, and the thumb is flexed into the palm and adducted, that is, there is some loss of power in the extensors and supinators, with unbalanced action of the flexors and pronators. This loss of power is very variable. If it be complete it is useless to attempt operation. But it is difficult at first sight to form a definite opinion as to the possible extent of recovery of a partially paralysed muscles for the following reasons. Paralysed or semi-paralysed muscles are always in a state of elongation owing to the excessive contraction of their opponents and the weakened muscles therefore undergo a progressive loss of tone. If by any means we can secure rest for paralysed muscles they rapidly recover to a very considerable extent and do so in an unexpected manner.

The operation which is about to be described has two objects, namely, to lessen the power of the flexors and pronators, and to transfer some of the pronating force in such a way as to make it a supinating force, thus subtracting from the excessive pronation and adding to supination. From a series of observations on these contracted arms and hands, I have been led to think that the most effectual hindrance to the proper use of the limb is the excessive pronation. Among the muscles arising from the internal condyle are two powerful pronators, the pronator radii teres, and the flexor carpi radialis, the latter of which acts also as a flexor of the wrist. The internal condyle muscles also act as powerful flexors of the elbow, so that in attacking them at some portion of their length it is possible to get at once at the root of the trouble. On several occasions in former years I have divided the biceps tendon at the bend of the elbow, but without any good resulting, and it is now quite evident to me that as the biceps is a great supinator of the forearm, such procedure is irrational.

The operation, then, which I practise is as follows: The pronator radii teres is detached from its radial insertion, and passed through a gap made in the interosseus membrane and then around the posterior surface of the radius, and reattached to its original site. By this means it becomes a supinator instead of a pronator. The flexor carpi radialis is divided at the wrist, and here, too, the tendons of some of the muscles arising from the internal condyle are also divided. By this means the excessive pronation of the forearm is diminished and the supinating force added to, while the flexion power at the elbow, wrist, and fingers is diminished. It may be asked, Does the forearm after the operation remain in a permanent state of supination and the hand of extension? This result does not follow, for the pronator quadratus has not been touched, and the deep flexors of the fingers and thumb, which are also untouched, retain sufficient power to balance the extensors. Besides, by carefully graduating the gap made by cutting the tendon at the wrist by a suitable splint, the elongation which they can be made to undergo can be regulated to a nicety.

For the purposes of illustration three diagrams are appended which deal with the method of subtracting from the pronating power and adding to the supinating power. Fig. 1 shows the pronator radii teres (*a*) in its natural position acting as a pronator, while the flexor carpi radialis (*b*) is almost hidden by the pronator radii teres and radius. In this diagram there should be more flexion of the elbow than is seen. Fig. 2 is a front view of the forearm now supinated by passing the pronator radii teres (*a*) through the interosseous membrane at (*c*), and reinserting it at the outer side of the radius at (*d*). At (*e*) the flexor carpi radialis is seen divided. The section at the wrist of the tendons of some of the other muscles arising from the internal condyle is not shown for the sake of clearness. Fig. 3 is a back view of the supinated forearm, showing the altered course of the pronator radii teres (*a*) passing through the interosseous membrane at (*c*), and around the back of the radius to its new insertion (*d*).

The steps of the operation are as follows: Every precaution is taken to secure asepis, and unless this can certainly be obtained the operation should not be undertaken, as the results of any error as to cleanliness are extremely serious. An incision three inches in length is made in the middle of the forearm as for ligature of the radial artery. The inner edge of the supinator longus is rapidly defined, and beneath it the radial artery and nerve. The latter structures are drawn inwards and the distal part of the pronator radii teres is separated from the surrounding muscles and fascia. Its tendon is then removed from the radial attachment, care being taken not to remove the periosteum. The pronator radii teres is then held aside and an opening is made into the

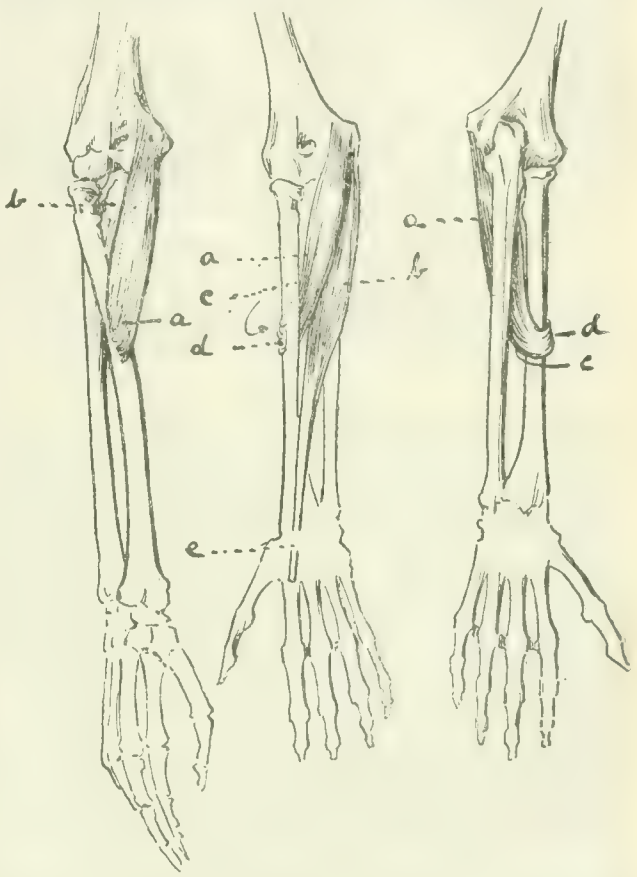


Fig. 1. Fig. 2. Fig. 3.

Fig. 1.—Outline of the bones of the forearm, the radius pronated by the pronator radii teres (*a*). A small portion of the flexor carpi radialis (*b*) is seen.

Fig. 2.—Outline of the bones of the forearm, which is now in supination. The radial insertion of the pronator radii teres (*a*) has been detached from the bone and has been passed through an aperture made in the interosseous membrane at *c*, and passed round the posterior surface of the radius and reinserted on the outer side at *d*. The flexor carpi radialis (*b*) has been divided at *e*.

Fig. 3.—Back view of the supinated forearm. The pronator radii teres (*a*) is seen passing through the interosseous membrane at *c* and reinserted at *d*.

interosseous membrane, just internal to the inner border of the flexor longus pollicis, and an aneurysm needle is then passed behind the radius from without inwards, and as close to the bone as possible, and a sufficient space is made for the passage of the tendon of the pronator radii teres, and the aneurysm needle is left in with its eye towards the ulna. The tendon of the pronator radii teres is then transfixed with silk of medium thickness in the form of a Staffordshire knot, and leaving two free ends. The ends are passed through the eye of the aneurysm needle, and by traction on it the tendon of the pronator radii teres is brought round the radius. The two ends are now utilised in the following way so as to secure the

tendon to the bone. They are rethreaded on separate suture needles, and the tendon is grafted thus to the periosteum. One suture is passed through the periosteum on the outer side of the radius above the transplanted tendon, and the other passes through below. The two ends are then knotted together over the tendon. But I am disposed to think it is better to work a drill through the bone from before backwards, and near the outer surface, and then secure the ends through the aperture. This completes the first part of the operation.

The second part consists in dividing the tendons at the wrist. A transverse incision is made there, the median nerve is defined and protected, and the following tendons are divided: the flexor carpi radialis, the flexor sublimis, palmaris longus, flexor carpi ulnaris, and, if the thumb is strongly flexed and adducted, the flexor longus pollicis. Both wounds are then closed and dressed, and the limb is put up with the elbow extended, the forearm supinated, and with the wrist well flexed for eight days. From this time onward till the sixth week the angle of flexion at the wrist is gradually diminished until it is in a straight position. Here the limb should be maintained while the extensors and supinators are massaged and stimulated with interrupted current, care being taken to control the limb with a splint reaching from the upper arm to the fingers. The arm recovers its use very rapidly indeed.

I have now practised this operation in two cases with great success; and I find that in about three months after the operation the patients could use the hands well, and perform such fine movements as picking up a pin. If there is any hesitation on a child's part as to using the limb, it is well to tie up the sound arm, and insist on the child using the recently operated-on limb.

Mr. Jackson Clarke (London) agreed that surgical treatment in these cases had a large sphere of utility. He referred to two cases of his own. The first was that of a girl aged 8 years who could neither sit nor walk. Three years ago he had divided the tendo Achillis on both sides and the tendons of the biceps, semimembranosus, and semitendinosus. Three years had now elapsed since the operation and no tendency to recurrence had shown itself. The patient could now both sit and walk. In a second case in a girl aged 3 years in which both legs and the right hand were affected, he had operated on the tendo Achillis and the hamstrings, and was waiting till the patient was a little older, when he proposed to elongate the flexor tendons at the wrist in order to remove the spasm. In such cases he had found that elongation of the tendons by the Z-shaped method was equally efficacious with tenotomy or tenectomy.

Mr. Herbert Wright (Natal) said that he had operated on a case of deformity following infantile paralysis. The patient was a boy aged 12 years, who was taken ill with retention of urine and symptoms of intestinal obstruction. After the subsidence of the obstruction he was found to be paralysed in his left leg. Wasting of the muscles followed rapidly and resulted in a well-marked talipes equino-varus. Some months later Mr. Wright divided the usual tendons and the result was most satisfactory. The boy now walked about and could put his foot flat to the ground and there was hardly a limp when walking.

ABNORMAL OSSIFICATION OF THE PARIETAL BONES IN AN INFANT.

By Edmund Cautley, M.D.Cantab., etc.,
Physician to the Belgrave Hospital for Children, etc.

Abnormal ossification of one parietal bone is by no means a common condition, and it is still more rare to find both bones affected. In the literature of the subject several cases are recorded in which one bone presents an abnormal suture. Anatomists dismiss the condition in a few words, stating that the bone is sometimes divided by a longitudinal suture.

Wenzel Gruber in 1871[1] gave an account of previously recorded cases of congenital subdivision of the parietal bone by a transverse or oblique suture. He described also the right parietal bone of a youth which was divided by a fissure extending from the anterior superior angle backwards and downwards through the lambdoidal suture into the right half of the interparietal part of the occipital bone. Joseph Hyrtl[2] described three cases of fœtal crania in which a suture, starting in the coronal suture, traversed the parietal bone in an antero-posterior direction, so as to divide it into an upper and a lower segment, in one instance not quite completely. Ch. Féré[3] described a similar condition in the left parietal, a suture parallel with and from 40 to 46 mm. distant from the sagittal suture. He refers to three examples in Esquirol's collection in the Musée d'Anthropologie, Paris—one in a fœtus and two in adults. Coutagne[4] details a case of anomalous ossification of the parietal bones. Curnow[5] records a horizontal suture throughout the whole length of the left parietal in an adult. Stanley Boyd[6] records a somewhat similar condition in the right parietal of an adult, not complete and more of a groove than a suture. Barclay Smith[7] records the case of a "divided parietal bone" in a skull from the Egyptian collection in the Anatomical Museum of Cambridge, a suture running diagonally from lambda to pterion, dividing the bone into two triangular pieces, dentate in the posterior half and squamo-parietal in character in the anterior half.

From these records it is clear that a horizontal suture is the most common abnormality, while an oblique one sometimes occurs. The notes of the present case show that both bones are affected, a complete horizontal suture being present on the right side, a vertical and a short additional horizontal suture on the left side.

Description of the Skull.—During life the head was large, measuring 17⅜ inches in its greatest circumference, and markedly asymmetrical. The anterior fontanelle was larger than normal for the age, and soft spots were felt in the regions of the other fontanelles. Only the two parietal bones present abnormalities.

Right Parietal.—This is divided into two almost equal portions by a well-marked horizontal suture which extends from a point in the sagittal suture, 1 inch anterior to the posterior fontanelle, to a point in the fronto-parietal suture at the junction of the middle with the lower third. The posterior half is a simple denticulate suture while the anterior half is largely composed of membrane. The parietal boss is situated just above and in front of the middle of the suture.

Left Parietal.—This bone is divided into three parts. An abnormal dentate suture extends vertically downwards from a point almost in the middle of the sagittal suture to the middle of the squamo-parietal suture, and divides the bone into two nearly equal halves. The posterior half is further subdivided into an upper two-thirds and a lower one-third by a horizontal overlapping suture, squamo-parietal in character, which extends from the abnormal vertical suture to the parieto-occipital suture.

It is clearly evident that the right parietal bone consists of two and the left parietal bone of three distinct bones.

Abstract of Notes of the Case.

The skull is that of a boy who died at 8 months from marasmus. During life the abnormal sutures could be easily felt, the one on the right side forming a distinct groove. The child was under my care at various times for four months.

Family History.—The first child was apparently healthy, except for a moderate degree of rachitis. The patient is the second child. A third child, aged 2 months, came under my care a year later for snuffles, and a squamo-pemphigoid rash, almost certainly due to congenital syphilis. The mother has had no miscarriages, and gave no history of any illness indicating syphilitic infection, although this was carefully inquired into.

Past History.—The child had snuffles at two months; a morbilliform rash and convulsions at 4 months, followed by double otorrhœa; and at 5 months was markedly marasmic. With alternate periods of improvement and loss of ground, attacks of diarrhœa when in charge of the mother, occasional febrile attacks without apparent cause, and one fit two months before death, there was no satisfactory progress, and death resulted from exhaustion, preceded for a day by retraction of the head and opisthotonos.

Post-mortem.—No evidence of congenital syphilis was found, nor any abnormal condition save wasting, slight rachitis, and the peculiar condition of the cranial bones.

In seeking for an explanation of the curious development of the bone, the first question that arises is whether the abnormal sutures are actually due to an irregular process of ossification, or to a reabsorption of bone. In the latter case the condition might be regarded as one of linear tabes, and on looking at the anterior half of the large horizontal suture on the right side, consisting as it does of nothing but membrane, some support is accorded to this supposition. It is moreover asserted that craniotabes is commonly due to congenital syphilis; and though I do not agree with this view of the cause of craniotabes, the history of the family lends support

to the contention, as almost certainly there has been syphilitic infection.

Examination of the other sutures does not support this view, for the vertical suture on the left side is a dentate suture, and the short horizontal suture on the left side is distinctly of the squamo-parietal type; neither indicates that there has been reabsorption. Congenital syphilis commonly affects the long bones, especially the epiphyses, causing an osteochondritis. In this case there was never any indication of such disease. If craniotabes ensues it usually takes the form of small softened spots, nearly circular, about half an inch in diameter, and most common in the occipital bone. This child's skull exhibits no such thin spots, nor were any felt during the earlier stages of the illness.

It may therefore be stated that the abnormality is one due to the irregular ossification of the bones and not to any morbid condition, such as rachitis or congenital syphilis.

REFERENCE.

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A CASE OF ACUTE INFANTILE HEMIPLEGIA, WITH RECOVERY.

By James Priestley, M.D.,

Lee-on-the-Solent.

The case which I wish to relate is one of hemiplegia lasting forty days, coming on suddenly, in an infant of 20 months. Blindness lasted for the first fortnight; screaming fits began at the end of the first week, and continued night and day for twelve days. Clonic movements of the left foot and hand—like those of paralysis agitans—lasted a month. Suppurative arthritis occurred in the third week. Jactitation and contortions of sound side lasted three or four days. The temperature was normal throughout except a rise caused by the joint suppuration. Complete recovery occurred eventually. The notes of the case are as follows:

V. M. D., a girl of 20 months, ill with mild whooping-cough for two months, was suddenly attacked with pain in head, and had, as stated by the mother, something resembling a fit on June 27th, 1897. A rash on the back was seen on the 28th, and on the 29th in the afternoon she was brought to the North-Eastern Hospital (Metropolitan Asylums Board) as she was supposed to be suffering from scarlet fever. Here some erythematous patches were observed on the legs, but fauces, tongue, and temperature were normal. Some little time after being placed in her cot the nurse noticed that she was in a semi-unconscious state, not recognising anything around her or anything done to her. On examination it was found, with sharp pinching she could be roused to make a short cry; respiration irregular, with an occasional sigh; conjugate deviation of eyes to the left, and head turned also to the left: pupils reacted to light; could move both arms; the left felt much more rigid than right; the abdomen and thorax revealed no abnormal physical signs. Enemas of hot coffee were given.

June 30th. General condition of torpor remains, but left arm and leg are now powerless, left eyelids do not close completely, left naso-labial groove deeper than right, knee-jerks not obtained, the pulse 108. Ophthalmoscope reveals nothing abnormal.

July 1st. Same general condition—semi-unconscious and left hemiplegia. Pulse 96, irregular and weak.

July 2nd. Whooped once or twice yesterday and to-day. General condition the same, but a tremulous movement of lower jaw has begun, and the right leg—flexed at hip and knee—is kept in rapid irregular movements. She can hear her mother's voice, but is unable to see her. Yawns a great deal.

July 3rd. Same condition. Pulse 80, and irregular. Heart sounds normal.

July 4th. *Tache cerebrale* (?). During last night loud piercing screams (like those of tuberculous meningitis) began, and are going on at short intervals. Yawns and sighs a great deal. Rigidity, paralysis, and general condition remain as on July 2nd.

July 6th. The loud piercing screams now more frequent, go on day and night, and can be heard about 30 yards away from the ward.

July 9th. Quick clonic movements of left foot, small and regular, resembling those of paralysis agitans, are now seen. She keeps on rubbing her lips and face with right hand in an automatic fashion, and keeps biting her lip.

July 12th. The screaming, the paralysis, and the movements of left foot continue, and she has produced an ulcer, large, greyish, and ragged, inside her lip, and one inside her left cheek. Seems able to accommodate her eyes for distance to some extent. Wild contortions of right side of body, and at times slight opisthotonos.

July 15th. The screaming fits are now getting less loud and less frequent, but the jactitation of the right limbs, the small clonic movements of left foot (and occasionally of left hand), and the rigidity of left arm and leg continue as before. The temperature has been daily getting higher, and is to-night 40.8° C. To-day she ceased biting her lip and cheek. In the evening she slept for a little while, during which the rigidity of left arm and leg passed off.

July 16th. Now quite quiet, and to-day recognised her mother by sight as well as by hearing.

July 18th. Now fully conscious.

July 25th. Left shoulder joint discovered distended and aspiration showed pus.

July 26th. Joint opened and drained, under chloroform.

August 1st. Counter-opening made and tube passed through joint.

August 3rd. Three large boils on buttocks incised.

August 4th. Drainage tube removed. The rigidity and clonic movements continue.

August 9th. Shows signs of returning power in left arm and leg; the clonic movements still continue in left foot.

August 10th. To-day has found her voice and can say "No" distinctly.

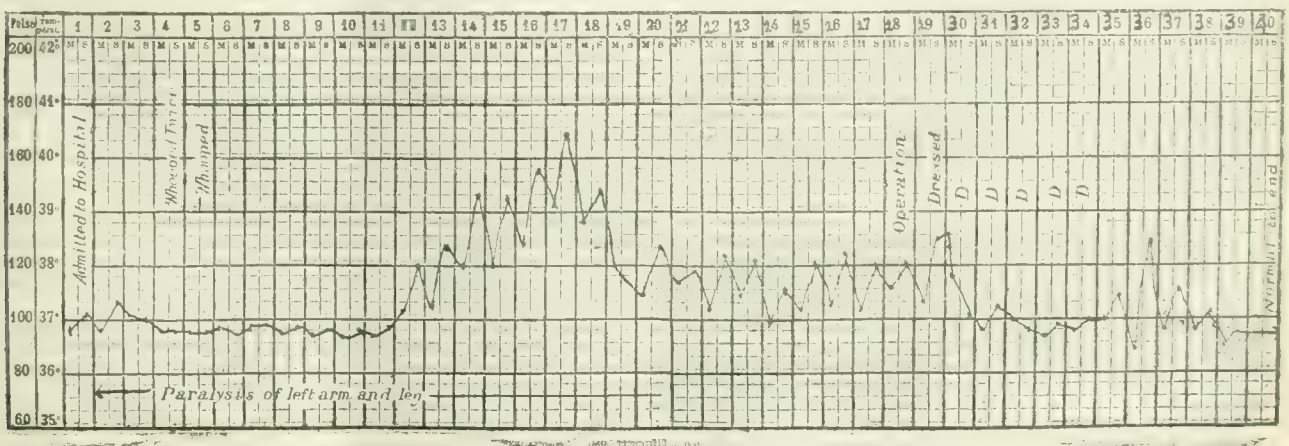
August 12th. The clonic movements have now quite ceased.

August 21st. Can now walk two or three yards, but left leg gives way soon.

August 27th. Walks steadily and well and is quite talkative.

August 30th. Sent home. Her shoulder joint unimpaired in movement and the ulcers of mouth quite healed. Her bowels were regular all through and the analysis of the urine showed nothing abnormal. Her mother states that from 6 months old she used to take "hysterical fits" at intervals, was very easily excited and apt to scream loudly if opposed in any way.

I am inclined to the opinion that (1) the whooping-cough and (2) the excitement caused by the removal from home of an excitable child are the main factors in the etiology, and that as vision, leg, and arm were affected a meningeal hæmorrhage occurred, exercising pressure over the angular, supramarginal, ascending parietal, and ascending frontal convolutions of the right side. The continued rubbing of lips and cheek with right hand might be an example of a "reflex act," occasioned by some sense disturbance in the skin of face. The screaming and contortions, from whatever cause arising, were not influenced to any marked degree by very liberal doses of chloralamide. The suppurative arthritis was largely perhaps a coincidence, but probably the paralysis predisposed to it.



A DISCUSSION ON THE TREATMENT OF HERNIA IN CHILDREN.

I.—JOHN LANGTON, F.R.C.S.,
Surgeon to St. Bartholomew's Hospital and to the City of London Truss Society.

THE pathology and treatment of hernia in the adult have for many years occupied a first place in surgery, and more so since the operation for its radical cure has completely revolutionised its treatment.

In infants and children, however, this lesion has not received the same attention, and it is owing to this that our President asked me some months ago to introduce this discussion. It has been proposed, and I think wisely, that its consideration should be limited to the age of 10 years and under.

Frequency.

The discussion of hernia in infants is practically confined to the inguinal variety, as the femoral form is comparatively rare under the age of 10, amounting as it does to only 0.3 per cent. of all cases of hernia. I have only seen one case of femoral hernia in a child under 1 year, although several instances have come under our observation at the Truss Society whose parents stated that the patients had suffered from this form since birth. These statements must be received with caution, but it is interesting to note that this form of hernia occurs more often in boys than in girls under 10.

The Percentages in each Lustrum of Inguinal Hernia in Male and Female Children at the Time of First Discovery.

Ages.		Males.		Females.
0	...	15.22	...	8.55
1— 5	...	4.32	...	7.08
6—10	...	2.86	...	6.91

Inguinal hernia in both sexes up to 10 years of age amounts in males to 23.4 per cent., and in females to 22.54 per cent. of all cases of hernia at the time of its first discovery. It will be noted that though the percentage in both sexes is in the total nearly identical up to this 10 year age limit, there is no corresponding equality at the same ages, for while in males under 1 year the percentage is 15.22, in females it is only 8.55 from 1 to 5 years of age the percentage is 4.32 and 7.08 respectively, and from 6 to 10 years 2.86 and 6.91 respectively. This inequality is easily accounted for by difference of sex and developmental causes.

There are, so far as I know, no statistics which afford any accurate data of the proportion of ruptured infants to the total number of living children, nor of the predisposition in different races to hernia. I have, however, no doubt that Jewish children, and especially boys, are more liable to hernia than are the mixed races.

Boys are more liable to hernia than girls, for out of 12,896 cases which I have collected of inguinal hernia in both sexes, no fewer than 11,833 occurred in boys, of whom 7,801 were situated on the right side, 2,851 on the left side; while in 1,171 both sides were affected. Of the 1,063 girls, in 593 the hernia was situated on the right side, in 360 on the left, and in 110 on both sides.

The greater frequency of right inguinal hernia as compared with the left in boys is due to the fact, recorded by Camper, that the vaginal process of the peritoneum in the right side is nearly always patent at birth on the right side, while on the left side it is nearly always closed. In girls, Féré and Sachs, who conjointly have examined the bodies of 259 girls, have demonstrated that in 15.8 per cent. the canal of Nuck was pervious at birth.

Diagnosis.

It is difficult to determine definitely whether the hernia in boys is in the cavity of the tunica vaginalis testis, while in the adult no such difficulty exists. In infants the mesentery is so short and the omentum is so ill-developed that neither descends so low into the scrotum as to surround the testes, by which alone the diagnosis can be accurately set at rest.

It does not necessarily follow that the hernia is in the cavity of the tunica vaginalis testis because the patient is born with a hernia. The two are not of necessity associated, although the literature of the subject almost infers it. The term "congenital," as I always teach, has reference to the time of the occurrence of the lesion, while the second has reference to the developmental and anatomical relations of the protrusion.

Before the proper treatment for a hernia can be recommended we must be assured of its existence, and this diagnosis is not always easy, for it may be that only from time to time a swelling occurs which simulates a hernia. In infants the diagnosis presents far fewer difficulties than in older children. Here complications arise of which malposition of the testis or disease of that organ or of the cord are the most important. Malposition of one or both testes does not often in early life lead to much trouble, so that their displacement or absence is only recognised late on in life, and it is only when the child approaches puberty that interstitial hernia and other complications of retained testes become evident. Out of 1,417 cases of ruptured boys under 5 years of age I find that 15 cases presented evidences of misplaced testes; of these 7 were at the mouth of the external ring, 5 were within the canal, one of which was associated with an interstitial hernia, whilst in 3 the testis was completely retained. In this number of 1,417 cases of rupture there were 5 instances of irreducible omentum, 4 being on the right side, and 1 only on the left; there were also 6 cases of congenital hydrocele in this total number.

Complications.

It is not my object to discuss the many varying conditions complicating hernia in infants, but to enumerate those only which have a distinct bearing on its treatment. The treatment for all practical purposes may be included under the heads of prevention, instrumental, and operative measures. This must be varied if associated with an umbilical hernia, which is met with in no less than 21 per cent. of all cases of inguinal hernia. In this number I include only definite umbilical protrusions, and not the pouting umbilicus so frequently met with in early infancy.

Prevention.

The preventive plan of treatment includes the proper dieting of infants, and on this subject there is much to be enforced. In many infants there exists chronic intestinal irritation leading to distension of the intestines and consequent increased pressure on the abdominal walls. The size of the abdomen is frequently increased to such an extent that in infants of 6 months it is not unusual to find that the umbilical girth of the abdomen is 3 or 4 inches in excess of its iliac girth. This error of diet is more frequently met with in the lower than in the upper classes.

Circumcision is much advocated, not only as a preventive measure but also as a curative one, when a hernia is present. The value of circumcision I recognise most fully, but I do not think that phimosis plays any active part in the causation of a hernia; and I would go further still in asserting that it has little or no indirect action. The Jewish race, as I have before stated, are very prone to hernia, and logically they should be markedly exempt if phimosis is so productive of this lesion. Good as the exercise of this religious rite is from many points, we must not ascribe to its performance greater virtue than it possesses.

The operation is in itself attended by considerable pain to the little patient, and every time the wound is dressed the infant gives expression to its trouble by explosive fits of crying and straining, in themselves a cause, in many surgeons' minds, of the very lesion the operation is supposed to cure. In practice it is known that phimosis and hernia are not necessarily associated, and many infants come for relief who have already been subjected to circumcision and are still ruptured.

I have for many years urged that micturition is not as a rule the result of the sole action of the abdominal muscles, even though a phimosis does exist, and which act is, even under extraordinary conditions, performed by the intrinsic action of the muscular walls of the bladder alone.

Muscular exercises play an important part in preventing hernia by strengthening the abdominal muscles, and specially those forming the walls of the inguinal canal. These exercises can be enforced only in children from 3 years and upwards, and I always employ them not only as a preventive measure in those who have a strong family tendency to hernia, but in those also in whom a protrusion has already manifested itself.

Every measure which conduces to the maintenance of good general health serves to lessen the tendency to hernia.

Treatment by Trusses.

The curative treatment of hernia is effected by the application of some form of mechanical support either by means of a spring truss or by the use of skein wool truss or bandage. Whichever method is recommended it is of the first moment that the treatment should be commenced directly the existence of a hernia is recognised. If a hernia is treated by effective instrumental support operative measures will probably not only not be needed, but will not even be discussed.

The skein wool truss is a method now adopted not only in many hospitals but also in private practice. This plan is comparatively modern and was warmly advocated by the late Mr. William Coates, of Salisbury. In his Hunterian lectures in 1884 Mr. Lund alluded to its use. On referring to my notes I ascertained that Mr. Fred. Wood at St. Bartholomew's Hospital was in the habit of treating infants by this method. Some years ago he forwarded at my request some skein wool specially made for him at Lichfield, in Staffordshire, and which he used in exactly the same way as now practised. One of the acutest observers of disease and its treatment I know, he was not satisfied with the results. I have had now a large experience of its use, and observation and practice have convinced me of its unsatisfactory results, and at some children's hospitals many patients are brought to us by their mothers who bear strong record of its absolute inutility in the majority of cases. The failure of its use may safely be predicted, owing to the almost habitual malposition of the knot, its dirtiness, its loss of elasticity and resiliency, upon which so much of its vaunted benefits depend. As the result of almost invariable disappointment I have practically discarded its use. I am glad to note that my friend Mr. Bull, in the *Annals of Surgery* for 1893, p. 531, states that, "In children under the age of 1 year the worsted or so-called 'hank truss' has been extensively tried. This truss has been very highly praised by some, and as strongly condemned by others. During the past year an attempt has been made to give it an impartial trial, and alternate cases up to the age of 1 year were treated by the 'hank' and the light spring truss. The results in 240 cases carefully followed up led us to discard the hank truss as a routine method of treatment, although there are still a few cases—for example, very young and ill-nourished infants, where it fills a useful but temporary place."

With this verdict I must cordially agree, and if we consider the reasons for its use we shall be inevitably drawn to the conclusion that in theory and in practice it fails to attain the first object of its use—that of efficiency in retaining a hernia in position.

Trusses.

In this form of mechanical support we possess in my experience all the essentials of cure by a pressure sufficient to procure obliteration of the processus vaginalis, together with comfort.

It is not my purpose to discuss the details of the manufacture nor of the mechanical requirements of the spring truss, only so far as to say that experience counts for much in the proper measurement and adjustment of the truss, without which it must be ineffective. It needs a long apprenticeship to properly measure and to scientifically apply a truss on a patient.

Our President, in his Lettsomian lectures for 1890, has a passage which appears to me to touch this whole point of mechanical treatment. He says: "As a rule, the truss which the trussmaker chooses—mark the word—for the child is needlessly strong in the spring," and it is in this statement that the condemnation lies of the manner in which these helpless patients are relegated to the care of the trussmaker. The choice and adjustment of trusses should not be left to the judgment of the mechanician, and if so can we wonder at the thrice-told pain and disappointment due to ill-fitting trusses.

In the course of over thirty-five years' experience in private practice and at the largest special hospital in the world for this disease, I have never seen the glibly-told tortures of children so graphically described as resulting from the use of trusses in infants. The number of cases in which trusses failed to efficiently retain difficult herniæ could be counted on one's fingers.

It goes for the saying that for adequate treatment the truss must be of good make and of the proper size, and in infants covered with soft indiarubber, while proper attention must be given by its mother or its nurse to cleanliness and to dryness. If these precautions are carried out excoriation and other troubles are of the rarest occurrence. To obtain a cure the instrument must be worn day and night, and only removed for the purpose of cleanliness. No grease should be allowed to come into contact with the rubber truss nor with the patient's skin.

This treatment should be be commenced immediately the hernia is discovered. As might be expected the results of treatment are more satisfactory in private than in hospital practice, and the causes are not far to seek. This is instructive, since cases in private are usually more complicated than in hospital experience. In home practice the cure of the hernia may be confidently forecast.

In private we are able to trace our patients for years either by personal knowledge or by his history, and my experience has been most favourable as to the permanent cure of most of these infant patients. Almost the first question an anxious mother puts to the surgeon is the length of time needed the child to wear a truss if he is to secure a permanent cure.

The question is more easily asked than answered, and indeed it is often difficult to be certain when the child is cured. My answer to this question is that when protrusion takes place before the age of 1, the use of the truss should not be discarded under any circumstances till the age of 4 years; if a truss has not been worn till the age of 3 or 4 it must be worn till the age of 10; and if not worn till the age of 7 then the truss should be worn till puberty.

That these patients in large numbers become permanently cured there is no doubt, for statistics show that as years roll on the number of ruptured children gradually diminish. This diminution is not the result of death, for there is no evidence to show that the mortality of ruptured children is greater than in non-ruptured ones. We have thus every reason to believe that the lessening is the outcome of a cure. To substantiate this I have examined our statistics, and they show that during the first decade of life this decrease is very marked. In a total of 4,910 patients under 10 years of age, the numbers in successive years are 2,322 in the first year of life, 520 in the second, 480 in the third, 440 in the fourth, and in the succeeding years 260, 230, 200, 240, 120, and 120 respectively.

The prospect of a permanent cure is thus most encouraging, but the longer the treatment is delayed the greater the progress of the disease, and the less probability of success. In my experience the outlook of cure is more favourable in girls than in boys.

If an umbilical hernia coexists with an inguinal hernia, the treatment of the inguinal hernia should be the first consideration, as pressure by an umbilical truss, especially in boys, tends to increase the inguinal protrusion. In boys the umbilical hernia nearly always becomes cured; in girls the cure is more tardy and less satisfactory.

Operative Treatment.

It is the experience of most surgeons who have had a large experience of ruptured children that the indications for operative treatment are not often present. The anatomical conditions of the structures concerned in inguinal hernia are not favourable for effective suturing in early life, for there is practically no canal, the aperture of the primary exit of the hernia being almost opposite the external ring. The muscles and other structures also are so soft and ill-developed as to afford very insufficient support to suturing the boundaries of the canal.

The details of the operation are so varied and depend so much on the experience of different operators that it would be waste of time to discuss the operation in all its minuteness. In my opinion no operation should be advised except under unusual or pressing conditions prior to 5 or 6 years of age, and I have previously stated that if the hernia is properly treated by truss pressure, the majority of ruptured children are cured long before this age.

The form of ligature I am inclined to recommend is kan

garoo tendon, which resists destruction for at least three or four months. Silk sutures are advocated by many, but it is the experience of some surgeons that they cause suppuration even as long as three or four weeks after the operation.

The operative cure should be undertaken:

1. In cases of irreducible omentum.
2. In cases of irreducible omentum with fluid in the sac.
3. In congenital hydrocele.
4. In operations for the relief of strangulated hernia.
5. In all cases of fluid in the sac of a hernia.
6. In all cases where it is impossible to efficiently return the hernia by mechanical appliances.
7. Where proper treatment is impossible owing to incompetence or ignorance of the mother.
8. In cases in which a truss has been worn for three or four years with no benefit.

In early infancy the result of the operative cure for inguinal often results in one of the most intractable forms of hernia—a traumatic vertical extrusion.

The conclusions, therefore, which I beg to suggest are:

1. That hernia in infancy, if properly and promptly treated, is a curable lesion.
2. That in children in whom there is a marked family history of hernia the preventive measures should be employed at as early an age as possible.
3. There is no evidence to prove that circumcision either prevents or cures hernia in infants.
4. The cases requiring operation are comparatively rare, and should not be recommended in infancy.
5. Experience proves that hernia occurs at an age ill suited for operation, and that if properly treated it is usually cured long before any question of operation arises.

II.—FREDERIC EVE, F.R.C.S.,

Surgeon to the Evelina Hospital for Sick Children.

MR. EVE said he proposed to consider the question under four headings: (1) On what cases should we operate? (2) Was the operation dangerous? (3) Was it satisfactory? (4) What operation should be performed, and at what age? With some additions he accepted Mr. Langton's indications for operation. He would also operate, after the age of 1 year, in all cases of inguinal hernia in early life complicated with undescended testis, and for the following reasons: The testis, if in the canal, prevented cure; it might become twisted, inflamed, and was liable to injury, and, to some extent, to tumour formation. There were grounds for believing that so long as it remained in the abnormal situation it underwent a process of progressive fibrosis. The speaker was glad to find that Mr. Langton included in his list of conditions justifying operation, "cases in which owing to the carelessness and ignorance of the parents the treatment by truss was unsatisfactory." In Mr. Eve's opinion this included a large proportion of hospital cases. Personally, he would operate on any case of scrotal hernia if the parents—after having matters explained—preferred operation to treatment by truss. Except in slight cases, he was prepared—on general grounds of greater convenience—to advise operation, although not to urge it, unless some special indication existed. It must be remembered that a rupture apparently cured in infancy by a truss, might descend later in life and become tightly strangulated. Such cases had come under his observation. In regard to the other questions, he would give briefly an analysis of his own cases. The numbers were small in comparison with adults; of the latter he operated upon between 150 and 200 cases for radical cure. During the ten years, 1889 to 1898 inclusive, he had operated on 29 cases of inguinal hernia in males of 10 years or under; 17 were under 2; and 5 under 1 year of age. In four instances the hernia was strangulated. No patient died, except one child who took diphtheria. The wound was then healed. Two cases suppurated superficially. Of the 29 cases he had recently seen 19, and heard from 1 case; and of these 20 cases only one had recurred slightly, making 5 per cent. of recurrences; 18 cases were treated by ligature of the neck of the sac, after slitting up the aponeurosis of the external oblique, and 2 by Bassini's method. He invariably used Bassini's operation in adults, but in children only when the rings were wide or the parts ill-developed. Contrary to what was said, this operation was quite feasible in infants. He would not operate on infants under 1 year, except for strangulation or other special reason. He thought that division of the aponeurosis of the external oblique was necessary in order to tie the neck of the sac sufficiently high up. The result of his cases showed that it did not weaken the canal, provided there was no suppuration of the deeper structures.

III.—ROBERT CAMPBELL, M.B., B.Ch.,

Belfast.

MR. ROBERT CAMPBELL said that he did not agree with Mr. Langton's statement that phimosis played no part in the production of hernia, for it appeared to him only reasonable that any marked obstruction of the urinary outlet must lead to increased intra-abdominal pressure, and so promote the formation of a hernia. In this connection he would like to ask Mr. Langton if a case of hernia in a child with phimosis were presented to him, would he not perform circumcision? As regarded the wool truss, while he agreed that a properly fitting spring truss was the more useful appliance of the two, he considered Mr. Langton's wholesale condemnation of the former not altogether justifiable. A great amount of dissatisfaction with its use was due to its improper application. If a truss had failed to cure a hernia after constant use for two years at the outside, operative treatment was, in the vast majority of cases, necessary. In children under 3 Mitchell Banks's operation was all that was required, but for children over 5 a more extensive operation might be necessary, and the method of Bassini was the one that gave the best results. The buried sutures should be catgut, hardened in formalin, and so capable of being boiled.

IV.—RICHARD H. ANGLIN WHITELOCKE, M.B., C.M.,

Surgeon to the Surgical Aid Society, Oxford.

MR. WHITELOCKE said that there was a natural tendency in these cases to cure. A properly applied spring truss, worn day and night and under all circumstances for three years, would in most cases be successful. He had abandoned the use of the wool truss as unreliable, owing to the carelessness of most nurses. Nurses should always be taught to apply the truss with the child recumbent. Cases in which he would recommend operation were those of irreducible or strangulated hernia, and those in which there was an undescended testis. He operated by opening the canal, carefully separating the sac and ligaturing it with silk, closing the canal, and dressing with collodion. He allowed the patient to get up on the fifteenth day. He had only operated on a limited number of cases, which had all been so far successful with no return. He had never applied a truss after operation, but had only been doing the operation during the last five years. He had met with 3 cases of irreducible hernia, one sac contained cæcum and another the urinary bladder. He had given up catgut, and always used silk for ligatures and sutures. The dietary was most important where a truss was used, especially among the poorer classes, for the over-distension of intestine not only increased the intra-abdominal pressure, but produced a peevish, unhappy, crying child. He did not consider circumcision was indicated in all cases, as herniæ often occurred in Jewish and in female children.

V.—GEORGE HEATON, M.B., B.Ch.,

Surgeon to the Birmingham and Midland Counties' Hospital for Sick Children.

MR. HEATON uttered a plea for the old-fashioned worsted truss. It had the great advantage of being cheap, and if carefully applied was efficient in a large majority of cases. The use of a spring truss in hospital patients was in many cases precluded by its expense. With regard to the question of radical cure, each case must be judged on its own merits. Personally he never did an operation for radical cure in a child under 4 years of age unless there was a good reason for not attempting cure by truss, or for abandoning it as useless. Some herniæ were so large and had so strong an impulse that any such attempt at cure would be useless. In other cases the hernia might be partially irreducible or complicated with an undescended testicle, rendering the application of a truss difficult or impossible. With regard to the particular form of operation, each surgeon would doubtless perform that in which experience had

given him the best results. He believed that in young children the simplest operation they could perform was the best. He seldom did anything more than fully expose the sac and remove it after ligature applied at the internal abdominal ring. Primary union of the wound must be secured, and the wound should never if possible be drained. The child should be kept on his back for a month.

VI.—Damar Harrisson, F.R.C.S.,
Liverpool.

Mr. Damar Harrisson agreed with previous speakers as to the kind of cases requiring operation. They often heard that in the case of undescended testicle, removal was the only good procedure. But it could often be drawn down into the scrotum. He had done this on three occasions, in one case on both sides. As to the kind of operation, he thought all were equally successful. Banks's operation was perhaps the best. He had hardly ever ordered a truss after operation. He operated on cases in adults where there was great strain and the wearing of a truss not possible—for example, in stokers on Atlantic liners—and ligature of the sac was all he had found necessary.

VII.—Edmund Owen, F.R.C.S.,
Consulting Surgeon to the Hospital for Sick Children, Great Ormond Street; President of the Section.

Mr. Owen was surprised to hear that little attention was apparently paid to the association of phimosis and hernia. For his own part he regarded phimosis as a fertile cause of hernia, and he had on more than one occasion known a hernia cease to descend after a boy had a tight prepuce removed. Hernia should be regarded as a symptom of there being something wrong, and not as a pathological entity; and if the surgeon looked out for and treated the cause, the radical operation was often found unnecessary. He used silk in all his operations and for all purposes. He liked to have his armamentarium as simple as possible. Aseptic silk was harmless; catgut was too apt to be septic. As regarded a time limit for operation, he knew of none. The simplest operation was the best. He thought that torsion of the sac was full of danger. He had operated on a small femoral hernia, tying the neck of the sac high up, and the twisting up of the sac had implicated a portion of the bladder, and the patient died of peritonitis. He thought the term "radical cure" for hernia was a most immoral one. The operation was not a certain but an attempted cure. He was glad to hear Mr. Campbell and Mr. Heaton say a good word for the wool truss. He thought a child should be kept on its back a month after operation. The depressing effect of this proceeding was much more manifest in the mother than in the child. Undeveloped and undescended testes should be removed. It could only be for sentimental reasons that a surgeon would leave an undeveloped testis when operating for an inguinal hernia.

VIII.—W. McAdam Eccles, M.S., F.R.C.S.,
Assistant Surgeon, City of London Truss Society and West London Hospital.

Mr. McAdam Eccles said there were three main divisions into which the instances of reducible inguinal hernia in children should be placed with regard to treatment. The first was the infant within the initial months of its life, the third was the child over 5 years of age. The second, or intermediate class, was one to which belonged a large number of cases. To this latter might be relegated those instances in which proper truss pressure had perceptibly failed to bring about a cure within the first few years of life, those in which the treatment by trusses had been admittedly imperfectly carried out, and those in which such treatment had never been attempted. With regard to the actual treatment of the cases under the first heading he ventured to think that most, if not all, would be agreed that, seeing that there was an undoubted natural tendency towards spontaneous closure of the patent processus vaginalis, the correct line of treatment was by instruments. If the walls of the process were not kept apart by the constant descent of viscera there was a strong probability that they would adhere and so obliterate the neck of the sac. He could confirm Mr. Langton's assertion that he had not as yet seen a case of hernia in a young child that could not be efficiently controlled by a properly-made and rightly-adjusted truss. There was, however, another point which, as Mr. Langton had said, deserved closer attention during truss treatment, and that was the importance of a right form of diet for the infant. Gastro-enteritis meant the development of flatus, and the distension of the intestines thus caused necessitated increased abdominal tension, and so a liability to the protrusion of viscera. No hernia was likely to be cured by a truss so long as the child was improperly fed. He believed that most surgeons were agreed with regard to treatment of the third class of cases. If there was no contra-indication an operation should be advised in a child who, having reached the age of 5 years, still presented a hernial protrusion. He thought again that a factor in the after-treatment of children was a careful attention to the development of the abdominal muscles by suitable exercises. But when they dealt with the second class a considerable difference of opinion seemed to exist. Where the correct form of truss pressure had been consistently carried out and had not been rewarded by a consequent cure, there was always, so far as his experience went, some other condition which was so assertive as to negative the likelihood of a cure resulting, even after an operation had been performed. Where truss pressure had been imperfect, and the child had passed out of early infancy, he thought that many cases were benefited by the application of a proper truss, so that the distended structures might have an opportunity to contract, although they might not be able to close completely. An operation performed some months, or it might be years, later was then, in his view, decidedly more usually successful. The same remarks applied to those cases in where truss treatment had never been tried, only with perhaps more force than to the former cases. There could be but little doubt that a carefully carried out operation in a congenital hernia, where there was no want of development in the muscles of the anterior abdominal wall, but a mere congenital deficiency of closure of the processus vaginalis, was likely to be followed by a very certain success. On the other hand, the same form of treatment in a child with a large hernia, with lax abdominal wall and distended abdomen, was almost equally certain to be a failure. Such cases, however, might be brought into a condition which would be far more favourable for operative procedures if they were subjected to efficient truss pressure for a time and their diet carefully regulated.

Reply.

Mr. Langton, in replying, said that in thirty-five years he had seen about a quarter of a million patients, 30 to 40,000 of whom were children. He had once thought that operation was good in all cases. Many of his cases had had previous treatment, including circumcision, at Great Ormond Street, showing that they had not all been successful. He liked the measures advocated by previous speakers better than their reasons for such measures. Much had been said about ignorant and incompetent mothers, but he had generally found that if the treatment was properly and intelligently explained to them they carried it out remarkably well. He did not think a large number of operations need be due to this cause. There were a large number of ruptured children under 1 year of age. Few surgeons operated if they could avoid doing so under 9 months; something must be done meantime. Many surgeons did the operation for phimosis first; the surgeons of the Truss Society themselves did it, but they also used a truss for the hernia during that time. Many patients were permanently cured by wearing a truss for a few months. As regarded what Mr. Damar Harrisson had said about pulling down undescended testes, he thought these cases were not satisfactory. Many lay afterwards an inch below the external ring, an unpleasant position. Much had been said about pain, fibrosis, and new growths as liable to occur in association with undeveloped testes, but as a matter of fact they were seldom seen. Primary disease of the undescended testicle was very rare, and he had seen three cases only of this condition. Regarding the time of wearing a truss, hernia never descended with a proper truss, but parents were very prone to take the truss off too soon. As to phimosis, how was the frequent occurrence of hernia among the Jews to be accounted for if phimosis was a frequent cause? With regard to the child's state of health, he

did not think the wearing of a truss ever interfered with that. He agreed with Mr. Owen that the term "radical cure" was misleading. Regarding the kind of operation to be done, all who operated knew that this depended on what was found at the time. Bassini's was in adults the most scientific. There was practically no danger at all from operation in early life. He had done 1,300 or 1,400 operations with only 1 death. In the child there was practically no inguinal canal. Splitting the aponeurosis of the external oblique was a bad procedure in the child. The tissues were not strong enough. Regarding the cost of trusses, an indiarubber covered truss should last a year at least, whereas the wool ones needed constant renewal, and cost about 3d. each time. He doubted whether they were really cheaper in the end. Torsion was a good plan, but if the sac was torsioned without opening it there was the possibility of such risks as Mr. Owen had described. He agreed with Mr. Eccles that a child was often a fitter subject for operation after wearing a truss for a few months. In one case he had operated on one side for a strangulated hernia, and on the other side five weeks afterwards for radical cure. The child had not been in a condition of health to stand the strain, and was afterwards in a much worse position owing to the development of an enormous ventral hernia.

NOTES ON THE TREATMENT OF RICKETS IN AN OUT-PATIENT DEPARTMENT.

By E. MANSEL SYMPSON, M.A., M.D.Cantab., M.R C.S.,
Surgeon to the Lincoln County Hospital.

Two great principles of out-patient treatment are, I think, simplicity and directness. There is always such an atmosphere of doubt as to whether the directions of the physician or surgeon are carried out away from the hospital, as to whether the medicines and applications prescribed are used rightly or indeed at all, that the simpler the treatment, and the more directly it can be applied to the patient, the more satisfactory the results will be.

Again; I attach great value to taking the parents or friends of the patient into one's confidence, and the easier the methods of treatment are to understand and explain the more quickly do we gain over to our side an ally or allies, of perhaps not much active good, but one or more whose efforts against us would paralyse our work.

And I believe that these remarks apply particularly to the out-patient treatment of rickets. For patients in the first few years of life, from $1\frac{1}{2}$ to 5 years, my plan of campaign is practically the same for all. For those with heavy bodies and heads, protuberant bellies, head sweats, and commencing or acquired bow legs or knock knees, the food supply is carefully attended to, the digestive functions restored as soon as possible, starchy food being limited, fats being recommended, especially bacon fat and dripping, which I believe has for these cases a high nutritive value. For very young children especially the addition of some cream to the dietary is most valuable. Condensed milk, if it be taken, should be replaced by cow's milk boiled, and a weak gravy soup or broth will often help to stop the ricketty tendency. For marasmic patients nothing acts so well as a daily rubbing under each axilla of cod-liver oil. For all these rachitic patients, then, varying the dose slightly according to age, I prescribe cod-liver oil and syrup of the phosphates of iron.

In very hot weather I let the children leave off the oil, but the mixture generally is very well taken, and the results certainly are most satisfactory. In cases with any tuberculous or syphilitic history the syrup of the iodide of iron should be substituted for that of the phosphates.

Next as to the treatment of the ricketty deformities, especially of the leg bones. In the case of patients under the age of 4, even with very marked bowed and bent tibiæ, and some degree of knock-knee, I can assure the parents with great confidence that after nine months' to fifteen months' treatment these deformities will be very greatly improved or altogether remedied. I show them how, if one presses a warm stick of sealing wax at one end on the table, it bends and curves, and I tell them it is much the same with their child's leg bones, which are soft and overweighted with the heavy body and head they have to carry. If I then lay the stick of wax down on the table they see that no pressure is bending it, and I tell them that is the condition of their child's bones when he is off his feet.

Few things mothers dread for their children more than the thought of an operation, and a good deal of moral pressure can be brought to bear on them to induce the proper carrying out of one's orders by the suggestion that the alternative to your treatment is an operation. I was glad to find the opinion of our President and other members of the Section strongly expressed as to the not remote danger of operating (whether by osteotomy or osteoclasis) on soft bones. In that opinion I thoroughly share, and am prepared to leave any question of operation to a later age—say that of 5 or 6 years. By that time we can see whether ordinary treatment has been able to effect anything, the bones have got harder, and there is less risk of producing the calamitous condition of pseudarthrosis.

These children's legs should be put up in splints, preferably outside ones, which may purposely be made 3 or 4 inches too long. This treatment prevents the patient's walking; or, at any rate, prevents much pressure being exercised on the soft bones. The splints should be taken off once every month or three weeks in the winter, and once a fortnight in summer. Here again is a good opening for explaining to the mother that we do not want to apply any pressure to the child's legs to straighten them, and that she can generally be taught to replace the splints, if necessary. I do not deny that a ricketty child's legs occasionally become much straighter with no treatment whatever. I remember one case of a little girl with very bent tibiæ, whom I wanted to put into splints, especially as her grown-up brother looked as if, like the sailor, his feet had been tied together under a horse's abdomen. In spite of this object lesson, the parents objected to my keeping the child in splints. Nothing more was done for her at that time. Her diet was rectified, and in a year's time the legs were quite straight. Still I feel sure that the great mass of these ricketty children are far better when off their feet—for this reason, that the deformity of the pelvis is so much less apt to occur, as little or no pressure is acting upwards through the acetabula while the child is lying down, or even sitting up. We have in Lincoln a fair number of cases of rickets, not so much from insufficient as from bad feeding and over-feeding of infants.

I have only to thank you for the attention you have given to these notes, the fruit of my experience during the last seven years.

A CONTRIBUTION TO THE STUDY OF CARDIAC OVERSTRAIN IN THE YOUNG.

By F. J. POYNTON, M.D.,
Casualty Physician to St. Mary's Hospital; Clinical Assistant to the Hospital for Sick Children, Great Ormond Street.

IN bringing forward these observations, I feel that they are too few in number to furnish definite conclusions. But the question of heart strain being one of considerable and increasing interest, and a subject about which it is difficult to get accurate data, I have ventured to put these few results upon record as a small addition to the literature of the subject. In 1871 the observations of Da Costa upon the irritable heart in soldiers aroused considerable interest; and quite recently Professor Clifford Allbutt, in an authoritative article in his *System of Medicine*, has dealt with this and allied subjects, and has called attention to the interesting observations of Dr. M'Carthey. Two of the greatest difficulties in estimating the effect of prolonged and severe exertion upon the heart are, I suppose, the following: In the first place, when an individual presents himself with symptoms, it is almost impossible to gauge at all accurately the actual part taken by the muscular exertion; and, secondly, when, as may be the case, there is no definite valvular lesion, the examination of the heart may afford little assistance, and the disorder of its mechanism requires then to be estimated by symptoms which are sometimes very obscure. There will, I think, be a tendency for those who are not athletes to take an alarmist view, and those who are athletes to underrate the dangers. It is difficult not to feel convinced that a certain number of "picked men" must do themselves needless harm in these days in which there is so much competitive athleticism, and that an accurate knowledge—clinical, one can scarcely term it—of the steps by which the damage i

brought about would be of very great interest to those who have to advise upon such questions.

The subjoined tracings illustrate the method described in detail in the paper. Both tracings were taken from the same individual; No. 1 on February 6th, and No. 2 on April 6th, 1898.

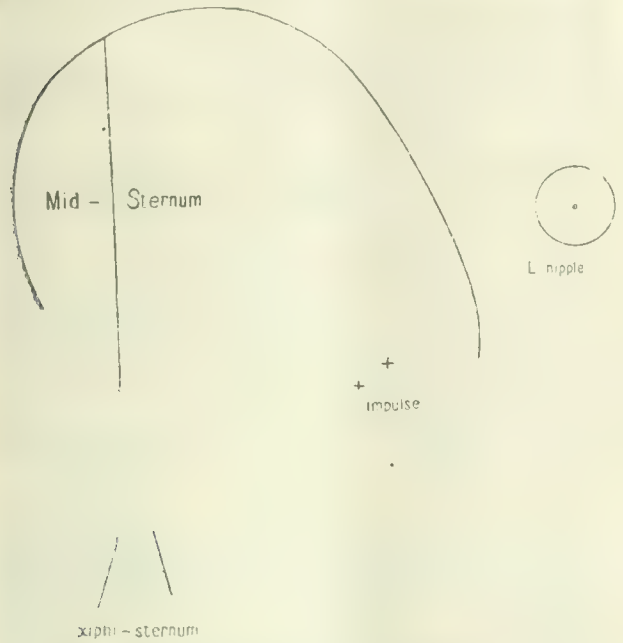


Diagram I.—Aged 17 years 6 months. February 6th, 1898.

At the examination the pulse was 72; physique good; no unusual feature noted upon examination o the heart.

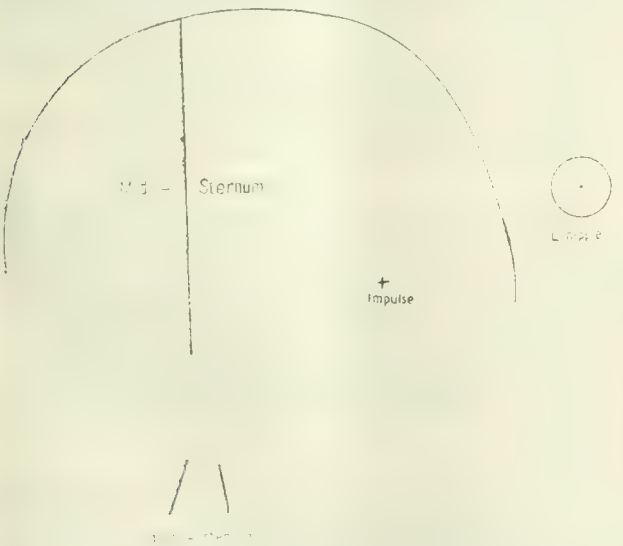


Diagram II.—Aged 17 years 8 months. April 6th, 1898.

The examination took place on the day after the final heats of the races in which he had taken a prominent and successful part. The following is the list of events in which he had competed: One Hundred and Two Hundred Yards, Quarter and Half-Mile, Hurdles, Steeplechase, and Long Jump. The area was increased to the right, and slightly upward and to the left. Pulse 74. General health quite good, and looking perfectly well. In spite of the active part taken in the races, it is of interest that there was no tendency to tachycardia.

I am indebted to my friend Dr. Penny, the medical officer to Marlborough College, for permission to make my observations under conditions which avoided those ethical difficulties which are apt to occur when observations are made upon the healthy. The method that I adopted was one which I have already used extensively when investigating with Dr. Lees dilatation of the heart in rheumatic fever. The subject lies upon the back with the left arm slightly abducted, and the deep cardiac dulness is percussed and marked out upon the chest with a dermatographical pencil. The position of the impulse is noted, and any murmur or accentuation of sounds is also recorded, and the result transferred to tracing paper. This paper is then named and dated after the following landmarks have been made: The left nipple, the mid-sternal line, and xiphisternal notch. Finally, the pulse-rate and any peculiarities of the heart or general physique are registered upon this paper, which is then preserved as a permanent record.

Observations can be repeated in a precisely similar manner, and quite independently the one of the other. It is clear that a great many of them are required, for cardiac percussion, especially of the deep dulness, is looked upon with great suspicion. I believe with practice and care it leads to results which are sufficiently accurate, and it is desirable in such an inquiry as this to make use of every means of physical examination. The foot races at Marlborough College are held in the Lent term, shortly before the school breaks up, and a more or less rough training is done for them by the likely competitors. On February 5th and 6th, 1898, that is, early in the term, I examined by this method fifteen boys who were likely athletes, and upon April 6th, a day after the final heats, I repeated these observations. In nine out of fifteen, I was fortunate enough to get a second series of observations, to which were added notes of the amount of training that had been done, and the races, both trials and finals, in which they had taken part. I also made observations of the same character upon two young adults before and after foot-races.

As already stated, these observations are too few to permit definite conclusions being drawn, but an extended series would be, I believe, of value in investigating this question of cardiac overstrain. Though several of the boys ran in a considerable number of races, it was interesting to find that the day afterwards, beyond a trifling increase in the pulse-rate, there was not the slightest indication of tachycardia. Even in this series there are indications of an enlargement of the heart to the right and upward and to the left in the region of the infundibulum of the right ventricle. In one case a systolic murmur internal to the nipple was present in February and unchanged in April, but a basal systolic murmur present on the first occasion had disappeared on the second. The ages of these boys varied from 14 to 18.

It is not, I am aware, at this time of life that heart strain will be most clearly manifested. It will be found more certainly in those athletes who are passing their prime, who by force of circumstances are unable to maintain the necessary training, and who have already a past history of severe physical exercise. This no doubt will be the time at which a series of accurate observations will throw most light upon the gradual development of pathological results. Nevertheless, though in the earlier years any positive results may be few, their discovery would be of great importance, and negative results are also of some value.

The question of cardiac overstrain in the young naturally leads to the subject of athletics at our large schools. From a practical acquaintance with most of the well-known games I would venture to say a few words upon this subject, for there seems to be, even amongst authorities upon diseases of the heart, a lack of precise knowledge upon the exertion value of the various athletic pursuits. Thus, I have known a weakly boy with a feeble heart forbidden to play cricket and football but allowed to play racquets. Again, one of our greatest authorities upon these questions, writing of lawn tennis and hockey, alludes to them as girls' games, to which the more weakly men will be drawn by a process of natural selection, giving, in my opinion, an erroneous idea of the exertion value of these games, and especially of the latter. There are certain conditions—for example, organic heart disease in a rheumatic boy—which preclude any participation in the violent games of our schools; in other cases it is customary to curtail rather than stop all exercises, and it is in these cases that care is needed. Perhaps only those who have had that particular education can thoroughly realise how prominent a part athletics take in the life of a public school boy. It is, therefore, a serious step to interfere with a boy's

athletics, and the more so because those medical men who have had the greatest experience of them tell us that palpitation, cardiac arrhythmia, and discomfort are liable to occur at these ages in connection with puberty, when it is especially important they should if possible take part in all healthy pursuits. Again, though the masters at large schools have no accurate knowledge of the mechanism of the heart, no class of men have a more accurate knowledge than they of the exertion value of our usual school games. If, then, it is thought necessary to curtail a boy's athletics, it is highly needful to be consistent in so doing.

Running, rowing, cycling, and all sports which are indulged in competitively have all the common drawback that the individual is tempted to better his best, for he is practically certain to meet his equal if not superior on many occasions. There is not only the continued severe exertion, but the danger dependent upon this competitive element. The reality of the danger of this strain upon a weakened heart is well known, and the following case gives point to the fact:

A young, strong man, aged 26, had been out of sorts for a week, and went for the first row of the season in a four-oar to shake off the *malaise*. On landing, he felt extremely ill, vomited, and consulted a doctor. The doctor found that his heart was acting at the rate of 180-200 per minute, and he was admitted to St. Mary's Hospital in this condition. He died a few days afterwards, the tachycardia persisting to the end, and at the necropsy I found evidence of previous pericarditis and mitral valvulitis.

Both Rugby and Association football are violent games, not only because of the running that is required, but on account of the "tackling." Thus in the Rugby game a light player running at considerable speed may be compelled to collar a heavier player moving in the opposite direction. The result is a considerable and sudden strain, which, as Professor Clifford Allbutt has pointed out, is liable to especially damage the aortic area of the heart. For a very striking example of the truth of this assertion I am indebted to Dr. Lees, with whom I saw the following case at St. Mary's Hospital:

A powerful, healthy coastguardsman between 40 and 50 years of age, was in the habit of playing football every Saturday. After a game in the afternoon, he returned home, and in the evening thought he heard a steamer. He got up and went out of the house to find her whereabouts, but unfortunately the sound that he heard was not a steamer, but his ruptured aortic valve which had attracted his attention. When we saw him in the hospital he had well-marked aortic regurgitation, and a murmur that could be heard at the bedside.

A more deplorable case than this can, I think, hardly be imagined. I cannot agree that hockey is a "girls' game." Fast it undoubtedly is, in fact, one of the fastest of our winter games and by no means devoid of danger. It owes its popularity in part to the fact that "tackling" and "charging" are not allowed, and that sudden strain which is so trying is thus avoided. It is eminently suited to athletes who are unable to get sufficient training to keep their muscles ready for the quick response required for sudden wrenches, but the pace of the game renders it unfit for the weakly boy. Racquets is probably the most trying of all these games. Not only is the exertion continuous and great and the game played in a covered court, but the muscle response, technically known as "the eye" must be extremely rapid and accurate. For this latter quality, I should suppose, it is needful to have a very perfect circulatory adjustment, if one may judge from the mental and bodily tremor that is frequent with feeble and dilated hearts. Fives also, if played at all well, involves great exertion, and boxing for a boy with a weak heart is, of course, quite out of the question.

Cricket as an exercise has far more varied qualities, and the ages of many of our best cricketers are proof that it is not among the most trying of athletic pursuits. The regular action of a slow bowler differs but little I imagine from some of our medical exercises, while the strain of fast bowling is best attested to by the fact that every year boys are completely spoiled as bowlers by this over-exertion. Finally gymastic exercises at public schools differ in their exertion value from the most gentle and graduated muscular movements to the superhuman efforts required to climb a rope hand over hand.

In conclusion, though in certain cases games are absolutely contraindicated, and the duty of the medical man is clear, it must always be a most difficult undertaking to attempt simply to curtail them. There are few, if any, of the regular games that do not involve considerable exertion, unless the doubtful advice is given to the boy to play them badly. To cut off certain games at random, with a vague notion of their exertion value is, I think, either harmful or useless.

DISCUSSION.

The PRESIDENT observed that the paper was one of great interest, and hoped that it would be widely read.

Mr. E. MANSEL SYMPSON quoted the case of a small boy who was seized with an attack of dyspnœa and night terrors after overfatigue on a bicycle, as bearing both on Dr. Poynton's paper and on the discussion on night terrors.

A SUCCESSFUL CASE OF SPLENECTOMY FOR RUPTURE.

By GEORGE HEATON, M.A., M.B., F.R.C.S.,
Surgeon to the Birmingham General Hospital and the Midland Counties Hospital for Sick Children.

I HAVE ventured to bring this paper on a case of splenectomy for rupture of the spleen before this Section, partly owing to the great rarity of the case, and partly because the blood changes which were observed most carefully after removal of the organ help to throw some light on the probable functions of the spleen.

The accident occurred in a small boy of 9 years, which must be my excuse for bringing it forward in the Section devoted to diseases of children.

I will first of all read a short clinical abstract of the case:

CLINICAL HISTORY.

W. R., a boy aged 9 years, was admitted into the General Hospital at 6.15 P.M. on December 2nd, 1898, suffering from abdominal injuries, the result of being run over. His history was that at 5.30 P.M. that day as he was crossing the road he was knocked down by a heavy cart. The wheel of the vehicle went over his abdomen, and he was picked up and carried to the hospital.

On admission he was in a semiconscious state. His face was pale and his body generally blanched; pulse 130, small; respirations 30, shallow. There was no external wound, but some bruising of the skin over the lower ribs on the left side. He complained of much abdominal pain across the umbilicus. There was some dulness in the left flank which rapidly increased in area, and soon after admission the whole of the lower part of the abdomen became dull on percussion, and showed signs of free fluid in it.

He rallied somewhat after admission, and his pulse fell to 84, but an hour or so afterwards his condition changed for the worse; he became more and more blanched; his pulse increased in frequency; he became very restless, and tossed about the bed complaining of pain.

A diagnosis of severe intra-abdominal hæmorrhage, probably from a rupture of the liver or of the spleen, was made. As his condition was getting worse rapidly, I decided at once to open the abdomen and not to wait in the hope of his rallying so as better to stand an operation.

OPERATION.

Abdominal section was performed at 11 P.M., five hours and a half after the accident. A median incision was made between the ensiform cartilage and the umbilicus. On exposing the peritoneum it was of a purple black colour, and on opening it a large quantity of dark fluid blood escaped. There was no free gas, and no intestinal contents in the peritoneum. The hand was rapidly passed up towards the liver and that organ examined. It was found uninjured. On passing the fingers towards the spleen they encountered a mass of soft blood clot, and the hæmorrhage became alarming. The abdominal wound was rapidly enlarged, and the clots turned out from the splenic area and that organ sought for. A small part was eventually found attached to the gastro-splenic omentum, and proved to be about one-third of the entire organ. The remainder of the spleen had been completely torn away, pulped, and lay in little bits free of the abdominal cavity. The bleeding from the torn splenic vessels was furious, and was only stopped by applying large pressure forceps.

The boy's condition was by this time almost hopeless. He was pulseless, and the respiration was merely an occasional slow, shallow sigh. On ligaturing the pedicle, however, and removing the remnant of the lacerated organ a pulse again appeared at the wrist. Saline fluid was infused into the median basilic vein and strychnine was injected hypodermically. It was quite impossible to search for the remaining fragments of the spleen or to attempt to cleanse the abdomen of blood clot. Before closing the abdomen a large *submortem* intussusception of the splenic flexure of the colon was exposed and reduced. The wound was closed with salmon gut sutures and the patient hurriedly put back to bed. His pulse was then 180 and his respiration 36.

He was given strychnine injections every three hours during the night and a small morphine injection at 1 A.M. He vomited at frequent intervals all night and was extremely restless. At 9 A.M., December 3rd, his temperature was 96, his pulse 160, running. Twelve ounces of saline fluid were injected subcutaneously into the side of the chest, and he was given enemata of milk, beef-tea, and brandy. He was very restless all day and vomited several times.

On December 4th his condition had somewhat improved. His pulse fell from 160 to 120 during the day. His temperature remained between 100° and 99°. During the afternoon his restlessness increased and he twice tore all the bandages off the abdominal wound. The abdomen became distended. A large purgative enema was given which was followed

by an action of the bowels. This relieved the distension somewhat and he became a little quieter.

On December 5th he was given a draught containing strychnine and digitalis, and occasionally morphine subcutaneously to prevent his extreme restlessness. When awake he complained of pain in the left side of the chest on breathing. Some weak friction sounds were audible over the lower part of the left lung. The vomiting ceased and he was able to take nourishment by the mouth. He complained of intense thirst.

After-progress.

He convalesced very slowly. The vomiting ceased and did not return, and the bowels gave no trouble, reacting always to simple enemata. The temperature remained persistently raised, varying from between 100° and 99° for nine days. On the tenth and following days it became more hectic, and at the same time he became considerably worse. He was extremely cross and peevish, his appetite very small and capricious, and he rapidly emaciated. This feverishness attained its height on December 17th and 18th—that is to say, on the fifteenth and sixteenth days after the injury. His temperature then ranged between 102° and 100°. He seemed to become even more anæmic and weak every day, and his blood showed an enormous excess of leucocytes (60,000 per c.cm.). After this he gradually improved, and by December 28th his temperature was normal, though occasionally it was raised at night for some weeks afterwards. His pulse during all this time remained rapid, varying from 110 to 120, and his respiration varied from 32 to 36.

The cough and pain in the left side were followed by dulness, and the lower half of the left lung with weakness of the breath sounds over that area and œgophony. An exploring needle was inserted on December 12th, but only a little blood drawn out. The dulness afterwards slowly disappeared, and was replaced by a resonant note, while the normal area of splenic dulness was replaced by a tympanic note due to stomach.

There was some slight enlargement of the lymphatic glands, particularly of the inguinal glands and of the cervical glands on the left side of the neck. These became largest about the first week in January, and since then have become much smaller.

The wound was dressed on December 5th, as the patient had torn all the dressings off; and again on December 7th. There was some little stitch suppuration, but otherwise it healed kindly. Unfortunately, owing to the hurry at the operation, the two recti muscles were not firmly united to one another in closing the wound, and a small ventral hernia has developed in consequence.

He was allowed out of bed on January 5th, and left the hospital on January 30th convalescent. His restoration to complete health was a very gradual one. At the time he left the hospital he was still very anæmic, and weighed only 4st., and it was not until May, or six months after the accident, that his anæmia entirely disappeared.

Clinical Examination of the Blood.

Dr. Macdonald (Pathologist to the General Hospital) has made a series of most careful investigations of the changes which took place in the blood after the accident and during convalescence, and I must take this opportunity of expressing my indebtedness to him for the great care and trouble he has taken in the matter.

Blood Estimations.

Date.	Red Cells.	Leucocytes.	Hæmoglobin.
		Per c.cm.	Per cent.
December 9th, 1898	4,100,000	60,000	40
,, 17th, ,, ...	4,370,000	46,000	50
,, 21st, ,, ...	4,300,000	38,000	
January 9th, 1899	–	26,000	
,, 17th, ,, ...	—	17,000	
February 9th, ,, ...	4,500,000	25,000*	
May 4th, 1899	4,480,000	10,440	75

* This observation was made in the afternoon when digestion was probably active.

The examination of fresh specimens of blood showed nothing beyond the increased number of leucocytes. The red blood cells, both in the fresh and stained specimens, presented a remarkably normal appearance throughout. A very few poikilocytes were seen, and only two or three nucleated forms (normoblasts) were seen during the entire investigation.

For the examination of the leucocytes the blood films were fixed as a rule either in formalin or alcohol, or in formalin vapour and stained with methylene blue and eosin.

It should be understood that the term "lymphocyte" here has been used to describe the small mononucleated cells of the blood with a dark staining nucleus and small amount of clear or finely granular (basophile) protoplasm, the total size of the cell at the most only slightly exceeding that of the ordinary red blood cell. It is therefore possible that some of the leucocytes described above as lymphocytes might be described by others as hyaline, or as belonging to the smaller variety of mononucleated cell. Making due allowance, however, for this, the relative proportions of the different varieties given above would not be much altered.

With regard to the unclassified varieties of leucocytes described as varying from 7 per cent. to 1 per cent. the following cells were noticed:

(*a*) A few leucocytes filled with large clear granules almost like small vacuoles. These cells had usually a rather pale multipartite nucleus. Similar bodies were also found in other leucocytes, together with fine and coarse oxyphile granules.

(*b*) One typical and several atypical myelocytes.

(*c*) Some cells three or four times the size of a red cell, resembling enormous lymphocytes with a small amount of granular (basophile) protoplasm.

(*d*) Transitional cells with some fine oxyphile granules.

The following observations were made on December 9th and 17th with a Gowers's hæmacytometer, and on December 21st and subsequently with Thoma-Zeiss hæmacytometer:

Differential Counts based on Counts of from 500 to 1,200 Leucocytes.

	Dec. 9th.	Dec. 21st.	Feb. 15th.	Mar. 1st.	May 4th.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Leucocytes: Finely granular, oxyphile, ordinary, multipartite	81.6	78.9	60.1	78.0	61.9
Lymphocytes: Small, mononuclear ...	6.0	11.4	7.1	5.0	14.3
Large mononuclear and transitional ...	12.0	8.6	30.1	13.0	17.1
Coarsely granular, oxyphile, ordinary, eosinophiles	0.3	11.1	2.3	3.0	6.7
Abnormal unclassified forms. See* ...	0.1	—	0.4	1.0	

* This observation was made in the afternoon when digestion was probably active.

A fuller account of the leucocytes in this case will be published later, but with this explanation and reservation it seems possible to state that the removal of the spleen in this case was followed by:

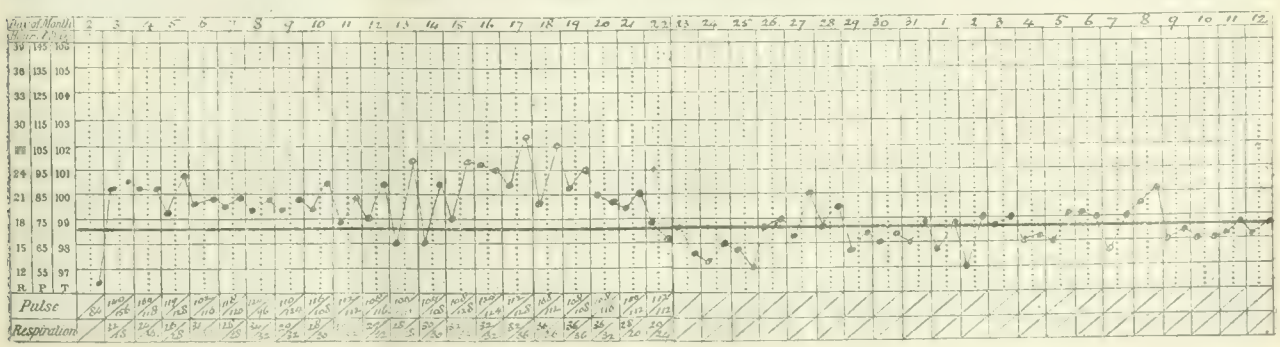
1. A marked pathological leucocytosis better marked than in any hitherto recorded case.

2. A proportionate diminution in the number of lymphocytes notwithstanding the slight hyperplasia of the lymphatic glands.

3. A proportionate and large actual increase in the large mononucleated forms, which seems to throw discredit on the theory that the spleen is specially concerned in the production of such cells.

4. An abnormal number of the so-called transitional cells exhibiting changes in their nuclei, and protoplasm as in the transformation of large mononucleated cells into finely granular oxyphiles.

5. A remarkable want of evidence of interference with the ordinary red blood cells.



Diagnosis and Treatment.

The diagnosis of the exact lesion in cases of rupture of the spleen is generally a matter of some uncertainty until the abdominal cavity is opened. The patient in this case had the classical symptoms associated with internal hæmorrhage, with evidence of free fluid in the abdominal cavity. This, together with the absence of special symptoms pointing to lesion of the stomach or intestine, made it probable that the bleeding came from a mesenteric vessel or from a rupture of either the liver or spleen. The presence of superficial bruising on the left hypochondriac region made an injury of the latter organ the most probable.

I am of an opinion that when once the diagnosis of severe intraperitoneal hæmorrhage has been made, immediate abdominal section offers the patient the best or the only chance, whatever be the source of the bleeding. In cases of severe accident, it may be necessary to wait a few hours until the patient shall have rallied from the shock of his accident; but directly it is seen that the anæmia is increasing in severity, the sooner, if possible, the abdomen is opened, and an attempt made to find and stop the source of the bleeding, the better.

The relief of pressure on opening the abdominal cavity in these cases is apt to cause at once an increase in hæmorrhage, and the short delay which occurred in this case while the bleeding area was being found and secured nearly cost the patient his life. When once the source of the hæmorrhage has been stopped, the pulse will frequently at once begin to improve, but no time should be lost in attempting, in severe cases, to cleanse the peritoneum of either blood or clot.

Transfusion of saline fluid into the subcutaneous tissue, and hypodermic injections of strychnine are the best methods of tiding over the immediate risk of death from hæmorrhage, and should be had recourse to immediately the bleeding is staunched, and while the remaining steps of the operation are being rapidly completed.

Bibliography.

Removal of the spleen for disease has become a well-recognised operation. Vulpius of Heidelberg, in 1894, collected 117 cases, and many more have been published since. The general death-rate of the operation, excluding cases of leukæmia, in which it does not seem a justifiable operation, is about 34 per cent. Examinations of the blood after such operations have thrown considerable light on the probable functions of the organ, but any conclusions from them are apt to be vitiated by the fact that the blood has usually been in an abnormal state before the removal of the organ. The spleen has also been removed a considerable number of times for prolapse through an abdominal wound. In fact, removal of such a prolapsed organ seems to be a more successful procedure than its replacement if we are to be guided by the published list of such cases. It is only during the last seven years that active surgical measures have been undertaken with any success to save the lives of patients suffering from rupture of the spleen without abdominal wound. Lane, in 1890, recorded two unsuccessful attempts to remove a ruptured spleen, but Regnier of Breslau, in 1892, was the first to actually remove the organ with success. Since then a few more successful cases have been recorded, notably three cases by Messrs Ballance and Pitts, who published a full and interesting account of the subject in the *Clinical Society's Transactions* for 1896. Since then two more cases have been published by foreign surgeons, making in all, with my own, seven cases. The table gives a few details of these cases.

Conclusions.

We are justified, I think, from a study of these seven cases of splenectomy for rupture, in drawing the following conclusions:

1. That a marked leucocytosis follows removal of the spleen in these cases. The leucocytosis follows immediately after removal, and continues gradually to decline; but it exists in a less degree for six months or more.

2. That in the leucocytosis the various forms of leucocytes are increased in number in various proportions, and do not bear the same ratio to each other as in normal blood.

3. That the anæmia produced by the accident is very slowly recovered from after removal of the spleen.

4. That in a certain number cases (three out of seven) the removal of the organ is followed at an interval of from ten days to three weeks by a train of symptoms characterised by pyrexia, wasting, extreme weakness, anæmia, frequent pulse, pallor, thirst, and headache, which last for a varying period, and are slowly recovered from.

5. That the external lymphatic glands undergo enlargement and in some cases a marked hypertrophy.

Successful Cases of Splenectomy for Rupture.

Surgeon.	Date.	Age.	Sex.	Blood Change.	Remarks.
1. Reigner (*Berliner klinische Woch.*, 1893)	May, 1892	14	M.	Red cells, 2,500,000; white cells, 25,000	Enlargement of all external lymphatic glands. gangrene of left foot.
2. Ballance and Pitts (*Clin. Soc. Trans* xxix, p. 77)	Sept., 1895	10	M.	Red cells, 4,580,000; large excess of white cells	Spleniculus left; cervical, inguinal, and axillary glands enlarged.
3. *Ibid.*	Sept., 1895	45	F.	Red cells, 3,730,000; white cells, 20,000	Slight enlargement of lymphatic glands; severe symptoms during convalescence.
4. *Ibid.*	Oct., 1895	36	M.	Red cells, 3,590,000; white cells, 17,000	Axillary glands enlarged; severe symptoms during convalescence.
5. Chrobak (*Centralblatt für Gynäkologie*, Dec. 1898)	July, 1898	—	F.	—	Patient 7 months pregnant; delivery at term.
6. Bernhardt (*Münch. med. Woch*, Nov. 1897)	Nov., 1897	19	M.	No leukæmia; red cells, 2,500,000	No enlargement of lymphatic glands.
7. Heaton (present communication)	Dec., 1898	9	M.	Red cells, 4,100,000; white cells, 60,000	Lymphatic glands slightly enlarged; severe symptoms during convalescence.

REMARKS ON THE NECESSITY OF REQUIRING A FULL COURSE OF LECTURES ON CHILDREN'S DISEASES AND ATTENDANCE AT A CHILDREN'S HOSPITAL AS PART OF THE MEDICAL CURRICULUM.

By J. Ewens, L.R.C.P.Lond., L.R.C.S.Edin.,
Consulting Surgeon to the Children's Hospital, Bristol.

The subject which I have chosen appears to me to be one of the greatest importance, and it has engaged my attention for a long time. Nearly fifty years of general practice amongst all classes of the community and over twenty-three years in connection with one of the largest children's hospitals in the kingdom have, I think, enabled me to take a fairly large and comprehensive view of the question of the study of children's diseases and entitle me to speak with some amount of confidence on this subject.

Probably most of us have passed the period when we had to master the difficulties necessarily attendant upon our first introduction to the bedside of our little patients, upon the successful treatment of whom has depended the confidence and trust which has since been reposed in us by grateful and anxious parents. But we can all look back upon the time when we were called upon to give a prompt and decided opinion on the nature of the complaint some child was suffering from and were scarcely allowed, under pain of being deemed an ignoramus, to plead for time for consideration to enable us to discriminate between the conflicting conditions. And this, not from culpable ignorance on our part, but simply from want of early definite training in the methods whereby we might, unaided by the description given by, and expected of, older patients, be enabled to analyse the sometimes obscure symptoms presented by the child. Children, as a rule, shrink from strangers, and are easily frightened by injudicious use of the word "doctor," so often employed in order to compel obedience or submission.

But have we not often found how this timidity or fright can be readily overcome by a little manœuvring with a watch, or toy, or a little coaxing and a few kind words? Hence the great importance of gaining intimate acquaintance with the respective mental and moral, as well as physical idiosyn-

crasies of children so as to get thoroughly at home with them individually that having gained the confidence of the child we may conduct our examination with success. Some children are naturally so nervous that a rough touch or a sharp word will often completely upset them and render nugatory our examination. Even the sudden application of a stethoscope will sometimes frighten a child.

Again, the surgeon may be called on to examine a child supposed to be suffering from some acute affection; if he examines the affected part first, he will of course give pain, and subsequent examination of other parts will probably result in expression of sense of pain, even though they may be unaffected. Of course, this rule will mainly apply to an injury so recently inflicted as to manifest no external symptoms. These are illustrations of the necessity of tact and judgment, which simplify examinations and aid in the ready detection of the nature of the case.

As far as I know, no definite systematic teaching in diseases of children is given at any of the medical schools to students preparing for examination, although I believe in some of the larger children's hospitals in London, Edinburgh, and other places, post-graduate clinical lectures are given occasionally, but these, not being compulsory, extend only to gentlemen anxious to acquire special knowledge in this subject, and by no means meet the great want experienced by most young men entering on their practice, many of whom, perhaps theoretically acquainted with the subject, are practically incompetent to treat children, because of the special difficulties to which I have referred. Although most of our general hospitals do not furnish sufficient material for clinical teaching for any large number of students, and few will be found to interest themselves in work which is not compulsory, especially as more trouble is entailed in the study of diseases of children than of adults, attention is chiefly given to the more severe and rare cases, especially to those of great pathological interest. Hence we have often met with newly-qualified men, who may be able to diagnose pretty correctly diseases of comparative rarity, but who cannot recognise the more ordinary diseases, such as measles, scarlatina, pulmonary and abdominal affections, croup, laryngismus, or diphtheria. And this is not to be wondered at, seeing that they cannot have had much, if any, practical experience of children's diseases in the wards of a general hospital. The old system of apprenticeship, in spite of some disadvantages, had its uses, for during that period men used to see the simpler and more common forms of disease, and got intuitively to distinguish one from another.

It is necessary that the initial sources of disease in children should be early detected, and that constitutional affections—for example, congenital syphilis, so commonly met with among the children, especially of our large cities and seaports—should be readily differentiated from apparently similar but milder diseases. The practitioner should learn also how to diagnose serious injuries, such as those of the spine or joints, which may lead to lifelong physical infirmity if overlooked. Hospital surgeons constantly meet with neglected cases of deformity, such as knock-knee, club-foot, curvatures of bones, and such-like, which have too often been treated by medical men as of no consequence and only to be "grown out of." Ignorance may thus be displayed of which a gardener would be ashamed if he were to treat a valuable shrub or tree in the same fashion.

The knowledge necessary for the avoidance of such mistakes must then be gained in hospitals where a sufficient number of children furnish teaching material, and it seems to me to be scarcely necessary to indicate the peculiar advantages offered by hospitals devoted exclusively to children, and officered by physicians and surgeons who make their diseases a special study. Those who know how naturally children cling to their homes will duly appreciate the immense advantages possessed by the home-like comforts and surroundings of a well-ordered children's hospital over an institution in which adults are sometimes mixed with children. These hospitals should be affiliated to the medical schools. Systematic and clinical lectures on medicine, surgery, pathology, and therapeutics, as applied to children, and attendance at hospital for a period of not less than six months in the fifth year of the curriculum, and frequent examinations, as on other subjects, should be instituted. Children's diseases should not, any more than women's diseases, be made into a direct speciality, for they are in themselves an integral part of the practice of medicine, and form a most essential portion of a man's practice, and any separation would be fatal to the usefulness of the practitioner. A good all-round acquaintance with the subject is all that is requisite. An examination as on other subjects should be instituted by every university and licensing body in the kingdom, and no degree should be complete without it.

After qualification those who wish to give their special attention to diseases of children should endeavour to obtain an appointment in a children's hospital, or a year with a general practitioner having a large union appointment.

This subject was briefly alluded to by my colleague, Dr. Barrett Roué, in a paper read at the British Medical Association meeting in 1894. He said:[1]

> I fear it is the want of good all-round study upon the part of medical students, and consequent deficiency of knowledge in certain branches of medicine and surgery, that makes the specialists. It seems that most students work to pass, and pass only, and as long as examinations can be got through without any attention being paid to special subjects, so long will those subjects be neglected. Junior practitioners know, too, that they can rely on outside help in cases where any difficulty arises, and this constant reliance has educated the public mind in the supposed necessity of specialism.

In cases of difficulty or obscurity this may be necessary, but Dr. Roué alludes to

> Cases in which a practitioner, say of ten years' standing, would never think it necessary to call in a special consultant, but would treat upon his own responsibility as the result of his past experience. But it has taken him ten years of private practice to learn what he could have mastered in as many months in a special hospital..... I consider it a great misfortune for him, and a neglect of his interests, that the study of children's diseases has not been made compulsory.....Few branches of the healing art are so neglected in student days, and yet in our early days of practice perhaps children constitute two-thirds of our patients.

And Dr. Roué confirms my views on the old system of apprenticeship. He says:

> I am not at all sure we have done well in altogether abolishing the apprenticeship system. It had its difficulties and dangers and its weak side, but surely we have erred in going to the other extreme.....and a partial return to it would be a step in the right direction.

In conclusion, I beg to urge upon all interested in diseases of children, especially those who have influence with the General Medical Council, the importance of bringing some such scheme as I have but very imperfectly set forth before their consideration, in the hope that it may lead to medical legislation on the subject, and I shall be truly glad if in any degree these words of mine may be instrumental in bringing about a more satisfactory condition in reference to the study of diseases of children than has hitherto existed.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, September 25th, 1894.

ON BIRTH PALSY WITH DISSEMINATED TREMORS.

By G. A. SUTHERLAND, M.D.,

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THE condition of birth palsy is usually easily determined by the symptoms presented a few months after birth. Certain of these by their frequency of occurrence have come to be looked on as diagnostic, and their absence may consequently lead to an erroneous or delayed diagnosis. This is more especially the case as regards spastic paraplegia or hemiplegia. Other symptoms may predominate, concealing or replacing a spastic condition, and producing a very different condition from the typical clinical picture. Amongst these may be mentioned disseminated tremors, two examples of which I propose to relate. Although these are the most marked examples of tremors in birth palsy which I have met with, the condition in varying degree is not infrequently present.

CASE I.—F. B., a female child, 2½ years old, was brought to hospital because of nodding of the head and shaking in the limbs, which had existed ever since birth. Her general health had been good, the only acute illness having been bronchitis eight months previously, and the doctor in attendance at that time remarked that she had got St. Vitus's dance. She had commenced teething at the age of six months, but had never learned to walk, and talking was limited to a few monosyllables. The child was of slight physique, but well formed, and the internal organs appeared to be normal. When she was lying at rest there were occasional slight twitching movements of the muscles of the face and extremities, and also coarser movements producing nodding or shaking of the head, and jerking of the limbs. When raised to the sitting position the head movements were much increased, the body swayed helplessly from side to side, the limbs were jerked irregularly, and she was quite

unable to steady herself. In trying to grasp anything there was no co-ordination of the fingers, but the object if seized at all was taken hold of by the hand closing as a whole, and each attempt was accompanied by a succession of jerking movements, which frequently knocked the object away. When anything was conveyed to the mouth the arm had to be pressed firmly to the side and the head bent forwards to meet the hand, which was then kept in contact with the mouth, into which the food was finally and clumsily transferred. Supporting any object (like a cup) with the arm stretched out was quite impossible, and all feeding had to be done by the mother. These movements had been present since the patient's birth, becoming more marked as the infant developed a larger range of natural movements. During sleep all the tremors ceased entirely.

There was no paralysis or wasting of the muscles in the trunk or extremities, and when the child was at rest no spasm or rigidity. Muscular power generally seemed good, and sensation appeared to be normal. Hearing and vision were good, and there was no evidence of nystagmus or squinting. Ophthalmoscopic examination could not be carried out. The knee-jerks were slightly increased, but there was no ankle clonus. There was an early condition of pes cavus in both feet; the feet pointed downwards, the soles were arched, the great toes were hyperextended at the metatarso-phalangeal joints, and there was slight contraction of the tendo Achillis on both sides.

If the patient were placed in the sitting position against a wall, she would soon slip over to one side, and lie there unable to alter her position. She could not stand, and, when placed in the position for walking, the previously relaxed limbs were at once thrown into a state of spasm, and the joints became rigid. Her only method of progression was, when placed on her face on the floor, by means of a swimming action of the legs and arms, the upper and lower limbs becoming rigid and the body being jerked forwards. The child was of a placid temperament, the expression of the face was intelligent, but the mental development appeared to be behind that of a healthy child. She has been under observation for a period of nine months, but has not yet learned to walk, the speech remains extremely limited, and the tremors and jerking movements continue unchanged.

CASE II.—A. B., aged 9, a brother of the last patient, had suffered all his life from paralysis of the lower extremities, never having been able to stand or walk. He was able to get along the ground in a sitting position, propelling himself by the flexed lower limbs without using his hands. As regards his mental condition, the expression of his face was fatuous, his speech was limited to one or two words, and his general behaviour was that of an imbecile. When at rest there were occasionally slight involuntary movements of the facial muscles and of the fingers and toes; on sitting up irregular coarse tremors of the trunk muscles and in the muscles of the extremities were produced; and on any purposive movement of the hands these were much increased, the trunk swaying unsteadily, and marked jerking of the limbs being produced. He was able to feed himself, but could not support a cup with the arm stretched out. The muscles generally were flabby, but not wasted, and motor power was good. When the patient was at rest there was no spasm or rigidity, but on placing him in a position to walk the muscles of the lower extremities at once became rigid, the knee and ankle-joints fixed, and the toes pointed. The knee-jerks were exaggerated, but there was no ankle clonus. There was incontinence of both bladder and bowel, but the anal sphincter reflex was normal. A condition of pes cavus, with hyperextension of the great toe, was present on both sides. The only other condition in connection with the nervous system which calls for notice was internal strabismus dating from soon after birth. Attempts were made to teach this child to walk, but irrespective of the state of his limbs, the mental condition was such that he was incapable of learning anything.

FAMILY HISTORY OF BOTH CASES.

Both parents are healthy. Six children had been born alive, and there had been one miscarriage. Four of the children were healthy and normal as regards their physical and mental development. Case I, the sixth child, was born head first after a lingering confinement, was quite black in the face, and some time elapsed before she came round and breathed properly. Case II, the second child, was born after an easy labour, but the mother could not say whether he was cyanosed or not. Apart from the conditions described the general health had been exceptionally good in both cases, and in neither patient had convulsions occurred at any time.

I have described these cases in the order in which they presented themselves, because their special features are more marked in the first case, while aid in the diagnosis is afforded by the second. The clinical picture presented by Case I was typically that of multiple sclerosis, with the intention tremor as a leading symptom, and bore little resemblance to birth palsy from meningeal hæmorrhage as it is usually seen. Consequently at first one hesitated as to the diagnosis, and such conditions as multiple sclerosis, congenital ataxy (Friedreich's or cerebellar) suggested themselves, but none of them seemed to suit the case. The fact that the symptoms had dated from birth was against any one of them, because in these affections they do not usually appear until a much later period. Again, spastic paraplegia is usually a striking feature of birth palsy at the age this patient was first seen, but it was not recognisable while she was at rest, and it was only when she was placed on her feet that the limbs became rigid and the movements spastic. In Case II slight tremors increased on purposive movement were also present, and in addition there were those symptoms which point clearly to birth palsy—namely, imbecility, squinting, spastic paraplegia, and exaggerated knee-jerks, all of which had apparently existed since birth. This case would appear to be a connecting link between the ordinary type of birth palsy and the somewhat unusual one I have described.

Various forms of tremor or involuntary movement have been described in connection with birth palsy: (1) Slight twitching of individual muscles, chiefly affecting the face, fingers, and toes, such as are characteristic of cortical irritation in infants. (2) Larger, coarser, irregular movements of groups of muscles producing twitching of the face, shaking of the head, and jerking of the arms or of the legs (choreiform movements). (3) Intention tremors with loss of co-ordinating power (multiple sclerosis type). (4) In connection with the last variety, associated movements are often present, so that on any attempt to grasp an object the head jerking, the swaying of the body, and the movements of the lower limbs, are much increased. All these various forms of tremor were well represented in Case I. The last variety of tremor occurring in cases of birth palsy, namely (5) rhythmical athetoid movement was not present, and its absence is probably to be explained by the fact that in the limbs a condition of permanent spasticity has not been established.

The presence of definite spastic paraplegia, associated with disordered movements, will probably lead to a correct diagnosis of birth palsy, but Dr. Osler points out that even cases of this nature, described as "chorea spastica," may be difficult to separate from cases of multiple sclerosis or Friedreich's ataxy. This difficulty will be much increased when the disordered movements are not accompanied by persistent spasticity. A history of the development of the movements at or soon after birth will tell strongly in favour of a meningeal lesion, while it will tell as strongly against multiple sclerosis or Friedreich's ataxy. Clinically considered, the intention tremors of birth palsy are identical with those of multiple sclerosis, and in the latter affection the commonly-accepted view as to their causation was originated by Trousseau, who held that they were due to the interrupted conduction of nervous impulses. There is no evidence that the motor tracts are affected in birth palsy, and it is believed that the meningeal hæmorrhage produces a disturbance in the cortex or the subcortical region from pressure and later sclerosis. The function of those parts is therefore seriously interfered with, so that the intention tremor and inco-ordination may be the result of an irregular discharge of nervous impulses in the cortex, or of an interrupted conduction of nervous impulses in the subcortical region.

REFERENCES.

[1] Dr. Osler: *The Cerebral Palsies of Children*: 1889. [2] Dr. Railton: A Case of Infantile Splastic Diplegia with Tremors of the "Disseminated Sclerosis" Type, BRITISH MEDICAL JOURNAL, 1891, vol. i, p. 1382.

THE scientific members of the Commission appointed to inquire into the present condition of the inland fisheries of Ireland are Dr. D. J. Cunningham, Professor of Anatomy in Trinity College, Dublin, and Professor W. Carmichael McIntosh, of St. Andrews University.

WIGAN MEDICAL SOCIETY.—At a special meeting of the above Society on August 10th, Mr. Mitchell Roocroft was voted to the chair, and he explained the object of the meeting, which was to make a presentation to Mr. Luther Cook, President, on account of the birth of a daughter during his year of office. Mr. Brady, in a few well-chosen remarks, asked Mr. Cook's acceptance of a solid silver afternoon tea-service in honour of the occasion. Mr. Cook thanked the members present for their kind appreciation of his services, and for the handsome present the Society had made him.

ROYAL NAVAL HOSPITAL, PLYMOUTH.—The Lords of the Admiralty, in the course of their tour of inspection in the *Enchantress*, visited the Royal Naval Hospital, Plymouth, on August 10th. They were received by the Director-General, R.N. (Sir Henry Norbury, K.C.B.), Inspector-General Fisher, the principal medical officer, and other medical officers attached to the hospital. Certain improvements, similar to those which, as was mentioned last week as having been undertaken at Haslar, have been recently carried out or are now in progress. New operating theatres and waiting-rooms have been constructed, and new blocks are being built for the treatment of officers suffering from infectious diseases.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, AUGUST 19TH, 1899.

MILK AND DIARRHŒA.

If the enormous mortality produced every year when we have any warm summer weather occurred among adults, it would awaken as much public attention as was aroused by the heavy mortality produced by influenza. As it is, the deaths of many thousands of infants is viewed with an indifference which is partly to be accounted for by familiarity, and partly, perhaps, by a tacit acceptance of certain of the fallacies popularly attributed to Malthus. Too many people, who give any thought to the matter at all, hold up their hands in pious horror at the indifference and the ignorance of the mothers of the poorer classes. Most women, however, do the best they know for their infants, and the better instructed should feel their own responsibility for the ignorance which undoubtedly prevails. But better instruction alone would not be a complete remedy. At the root of this, as of so many other sanitary difficulties, lies the great question of overcrowding and of the miserable housing of the poorer classes in great towns. An infant reared in a small room of a crowded house in a narrow street of a big town lives under conditions which favour the onset of all sorts of infection. Milk is one of the chief vehicles of the infection which produce diarrhœa, and if it has to be hand-fed the baby gets milk which, even if it had been of fair quality when bought, soon deteriorates in a small, hot, dusty dwelling-room.

Some years ago the terrible mortality among infants in New York from summer diarrhœa led to the establishment by philanthropists of a system of selling sterilised milk properly prepared for immediate use. Depôts were established at various convenient points in the neighbourhood of crowded districts. The system worked well, and has, we believe, been followed in other cities in the United States.

Some years ago Professor Budin, after consultation with the Director of the Assistance Publique, established first at the Charité Hospital, and afterwards at the Maternité, in Paris, a system under which sterilised milk was given free for the use of infants which could not be brought up at the breast. This example was subsequently followed at various dispensaries and *crèches* in Paris, as well as at Fécamp, Rethel, Grenoble, and other French provincial towns, including Havre, which, we believe, somewhat anticipated Paris, and in Brussels. In Paris orders for sterilised milk can be purchased by charitable persons, and given either through medical men or through the system of poor relief. Each order represents a bottle of milk.

St. Helens, Lancashire, is, we believe, the first town in this country to institute a similar system. The medical officer of health, Dr. F. Drew Harris, having made himself acquainted with the excellent results as regards the diminution of infantile mortality, especially from diarrhœal diseases, which have followed the sale of sterilised humanised milk in France, brought the matter to the notice of the Health Committee. A deputation visited Fécamp and Havre, and on their return reported most favourably on the process. It was therefore decided to make the experiment in St. Helens. A small house was taken in a central position. The steriliser, which was obtained from Paris, consists of a cylindrical chamber about 10 ft. high, containing at the base a small coal fireplace, beneath a boiler capable of containing 6 gallons of water. The rest of the cylinder is divided into 5 tiers, separated from each other and from the boiler by perforated zinc plates. It is also provided with a cooling apparatus. The milk is "humanised" by adding water, sugar, and cream in suitable proportions, and is then placed in 9 small bottles in such quantities as shall be sufficient for the needs of the child for twenty-four hours. It is thus intended that the nine bottles shall contain nine feeds, namely, one every two hours during the day, and one every four hours during the night. The amount of milk is graduated according to the age of the child. The bottles having been filled are closed by a stopper and placed in a steriliser. The fire is then lighted and the temperature raised to 102° C. It is kept at this point for ten minutes. The bottles are then removed and placed in wire baskets, nine in each, and are ready for distribution. The milk is fetched daily by the parents, who take away a basket with nine fresh bottles therein and bring back the basket with the nine empty bottles. The charge for the day's supply has been fixed at 2d., and it is hoped that this amount will slightly more than cover the actual cost of the milk. It is intended that the infants shall be examined fortnightly, and that the amount of milk taken shall be varied according to medical advice. Already a large number of people have availed themselves of the system. It is hoped later to establish a ladies' committee which will have funds at its disposal, by means of which people unable to pay 2d. a day may be assisted to procure the milk. The only stipulation made is that the use of the milk shall be continued as long as the child needs it.

THE SALE OF FIREARMS.

The subject of bullet wounds would appear at first sight to be of more importance to military than to civil surgeons. But the recent interesting discussion in the Section of Surgery at the annual meeting of the British Medical Association at Portsmouth upon the diagnosis and treatment of gunshot wounds of the abdomen elicited the remarkable information that a surgeon to a civil hospital in a given time and in a large town may actually see more cases of bullet wounds than his military brother except in time of war. Suicides, homicides, and "hooligans," apart from pure accidents such as occur at rifle ranges or shoot-

ing galleries, are responsible for the majority of the cases which come under the care of civil surgeons.

The number of gunshot wounds is increasing year by year to such an extent that the Section has now felt justified in passing a resolution to the effect "in consideration of the great increase in the number of bullet wounds in consequence of the free sale of revolvers and pistols, this Section desires to impress upon the Council of the British Medical Association the importance of furthering a Bill in Parliament for the restriction of the sale of small arms." The majority of the wounds are not inflicted with regulation weapons, but by toy pistols and saloon rifles which can be bought for a few pence or a few shillings at a toyshop or at "novelty" stores. They are fired at close quarters, and the wounds inflicted are often made more serious by the very inferior character of the projectiles, which allow the bullet to act in precisely the same way as an expanding rifle bullet.

It is probable that no difficulty would be experienced in controlling the sale of better class weapons used chiefly for legitimate purposes, though they are occasionally employed with less worthy motives. The repressive measures should be enforced entirely against the cheap and bad weapons which are at present so often used with such damaging effects upon Her Majesty's subjects. The remedy appears to depend wholly upon the money value of the pistol. The increased number of bullet wounds in London at any rate seems to be associated with the formation of gangs of young roughs who have recently infested certain districts with increasing frequency. The members of the gangs are fortunately as impecunious as they are bloodthirsty, and the sale to this class could be reduced to a vanishing point by making the retailer sell a licence with each weapon, care being taken not to reduce the matter to an absurdity by including popguns, peashooters, *et id genus omne*.

LEAVE AND STUDY LEAVE IN THE ROYAL NAVY MEDICAL SERVICE.

In our last issue we dealt with the subject of study leave as it affected military medical officers. We may now refer to the senior service, and view the matter as it concerns naval medical officers.

The isolated position of many of these officers, in small vessels, with small complements, in all outlying quarters of the globe, precludes the majority from adequate opportunities for professional improvement by practical experience. Even in larger ships, the necessity of discharging all serious cases to hospital, or sick quarters on shore, tends to deprive nearly all medical officers afloat of many opportunities of gaining practical experience of diseases or injuries. By so much, therefore, is their need greater even than that of their military brethren, for periods of study leave during their service afloat.

For some time past economy has apparently been the sole idea in naval medical administration, the number of the medical officers of the Navy has been kept so low, even for these times of peace, that during the annual mobilisation at home, it has been usual, in order to provide medical aid for the fleet, to draw on the newly-entered officers, and thus curtail even the limited time ostensibly now at their disposal for instruction and for study in the special subjects of the course at Haslar designed to qualify them for their future special duties.

There is recent evidence that the authorities have awakened to a sense of the fact that this policy is erroneous, and a hope arises that not only will the period of study after entry into the service not be curtailed, but that a period of four months will at length be definitely fixed, while at the same time the special subjects of study will be increased so as to fit these young officers more efficiently for the responsible duties which await them when sent afloat.

As to study leave, it is true that it is authorised; but how few are granted it? How many, desirous to obtain it, are denied it, owing to the exigencies of the service with an undermanned staff? Again, this study leave is only authorised for junior medical officers. But is it not as much or more requisite for the senior officers, those longest absent from the schools, where such rapid advances are now being made in all branches of their profession—for the seniors whose responsibilities are greater, as are their opportunities for the practice of their profession?

It has been truly said that the duty of the Admiralty is to provide the best available medical and surgical aid for the many thousand officers and men employed in all climates in the Royal Navy. Recent events encourage us to hope that the present Board of Admiralty will not allow the views, advocated by Professor Ogston, to fall on deaf ears, or the desire of all able medical officers to be frustrated by any of the past false ideas of economy which ruled their medical department. We are assured that many of the ablest and best informed naval medical officers seek the first opportunity to retire from the service which has been so much neglected, in which their seniority has been so much ignored as to appointments, and evaded as to cabin accommodation, and consequent well-merited comfort in sea life, away from home and family for prolonged periods.

There are questions that affect recruiting for the naval medical service. Yet there is hope and encouragement now for officers to prove their fitness for administrative positions, and to that end it is to be expected that study leave will be granted to ensure that all desirous to perfect their professional skill, and to fit themselves for important positions requiring such skill combined with administrative ability, may have reasonable opportunities for so doing.

Judging from the information at our disposal, Professor Ogston's views have been received with almost unanimous approval by the naval medical officers who have listened to or read them, while his remarks on the treatment of the wounded in action unquestionably deserve the best consideration of the executive as well as of the medical officers. In the wondrously complicated modern warships the inquiry is beset with great difficulties, and it seems necessary to deal in time of peace with, at any rate, the general principles, so as to be prepared for war. Nothing is more demoralising to a gun's crew than to see a wounded comrade uncared for either afloat or on shore.

THE INTERNATIONAL OTOLOGICAL CONGRESS.

The International Otological Congress, which was held in London last week, under the presidency of Professor Urban Pritchard, was the sixth Congress, and the first that has been held in this country. It has been an important meeting, and its success has been in no small measure due to the unprecedentedly large attendance of foreign otologists. Although the number at present engaged in the study of otology and its sister sciences must be considerably larger than when the first Congress met in New York in 1876, the present attendance cannot but be regarded as the outcome of careful organisation, and the results must be highly satisfactory to the Secretary-General, Mr. Creswell Baber, and the members of the Organisation Committee. The plethora of papers to be considered rendered it necessary to hold afternoon as well as morning sittings during the four days the Congress met, but this did not prevent opportunities being found for enjoying the entertainments and excursions so well arranged for the members of the Congress. The Congress has been productive of much useful work, and of much matter for reflection on the possibilities and limits of aural surgery. The report of the discussion upon the indications for opening the mastoid in chronic suppurative otitis media, which will be found in another column, will be read with considerable interest by many besides specialists. "Every congress," to quote from the speech of Professor Politzer at the closing meeting, "has an outstanding feature. The outstanding feature of this Congress has been the museum." It has afforded ample proof that the development—one might say the revolution—at present going on in aural surgery has been brought about by patient anatomical and pathological research. The progress of the science in all countries was well represented. The collection of the British section could well arouse patriotic satisfaction in a country that has paid so much attention to morbid anatomy, and will doubtless stimulate study still further in this direction. The unique museum is now dispersed, but the descriptive catalogue remains a witness to its excellence and to the devoted labours of Mr. Ballance, the Chairman, and of Mr. Cheatle and Dr. Jobson Horne, the Secretaries of the Committee which organised it.

THE EXTENT OF HOSPITAL ABUSE.

Mr. Loch has addressed to the *Times* a letter on hospitals and out-patients which forms a valuable contribution to the discussion of this subject, and well deserves careful consideration on the part of all hospital authorities having control over out-patient departments. In 1897 the Hospital Sunday Fund resolved that where any hospital having an out-patient department appoints a special and efficient officer to detect abuse in that department, it will be regarded by the committee of distribution as an important factor in determining "merits." To comply with this resolution many hospitals have appointed officers, and the varying value of their work may be judged by some of the specimens which Mr. Loch quotes from the returns. At one hospital, with an annual roll of about 109,000 out-patients and casualties, only 54 have been rejected; at another, which treats 28,000 in the year, inquiry was made as to 6,288, and 52 (or less than 1 per cent.) were rejected; at another hospital, with nearly 37,000 out-patients and casualty patients, 1,069 were inquired into, and 335 (or 31 per cent.) rejected; at another the returns show (of 1,121, the number inquired into) that 28 per cent. were rejected. Other instances might be given, and it is alleged by the hospital authorities that these figures show the small extent of the abuse. We agree, however, with Mr. Loch that they rather indicate the inadequacy of the inquiry. To charge one inquiry officer with the duty of detecting abuse among many thousands of out-patients and casualty cases is to play with the whole matter, and though it may satisfy the Hospital Sunday Fund Committee that something is being done, it certainly will not convince the profession or the public of the limited extent of hospital abuse. All that such an officer can do is to register applications, and, picking out what appear to him to be doubtful cases, try to prevent imposture by leading others to fear that their cases also may be inquired into. Even at the Royal Free Hospital, which Mr. Loch mentions as an institution where the work of inquiry is better done than at most hospitals, it does not appear to us that it can claim to be very thorough. During the year 1898, out of about 36,000 out-patients and casualties, 4,632 were interviewed. Of these, 1,447 were recommended to join a friendly society or a provident dispensary on recovery, 70 were sent away after first aid as able to pay for private advice, 157 were referred to the Poor Law, 292 were dealt with by various district Committees of the Charity Organisation Society, and 41 were assisted from other sources; in all about 43 per cent. of the 4,632 interviewed, whose cases had been considered, advised, aided, or rejected from the point of view of general charity. This is all very well so far as it goes, but what about the 2,625 with regard to whom no action was taken, and what about the 31,000 odd who were not even interviewed?

THE MEDICAL SERVICES OF THE ARMY AND OF INDIA.

The result of the recent examination for commissions in the medical services announced in our columns last week cannot be considered altogether satisfactory. In fact, it is anything but reassuring as regards the Royal Army Medical Corps; both the number of qualified candidates and the marks gained in that corps are disappointing. Only half the number of candidates wanted are secured. The Indian Service secured 22, and the home 14 candidates; the latter service we presume will have to fall back heavily on nomination. There was not much difference between the actual highest and lowest marks gained in either service; but if the total marks are taken and divided by the number of competitors, it will be found that the Indian service averaged nearly 300 marks more (in a minimum of 1,800) than the home service. Of course under the system, which is understood to exist, of allowing successful competitors to choose which service they will take, comparison of results in a combined enumeration is rendered difficult and not of much value, except in regard to the relative popularity of the two services. By this standard the Indian retains its popularity on grounds perhaps difficult to explain, for we fear there is a good deal of discontent in that service. We have lately received several communications, with extracts from Indian newspapers, on the question of the pay of the juniors in the Royal Army Medical Corps in that country. The disabilities in that respect have been accentuated by the concession of simple military titles. For the first six years medical officers are paid on a scale fixed on a warrant issued many years ago, and now, of course, obsolete in all other respects. It will hardly be believed that, for the first five years, medical officers receive 50 rupees per mensem less than veterinary lieutenants, and no horse allowance. The rank of captain is also, as regards pay, not fully recognised until after six years' service. But the same inequalities exist higher up the scale: a lieutenant-colonel R.A.M.C. receive 450 rupees less than the colonel of a British battalion, and 750 rupees less than the commandant of a native regiment. A surgeon-general receives 2,200 rupees a month, and a military officer of corresponding rank 3,500 rupees. Without going so far as to advocate identical pay in all these ranks, yet it may be asserted that the glaring inequalities pointed out demand investigation and remedy. We have little doubt that the treatment of medical officers of the Corps as regards pay in India has much to do with the failure of the service to gain popularity in the schools.

PLAGUE IN PORTUGAL.

THE existence of plague in Oporto, now admitted and officially notified to the Local Government Board, must be reckoned a most serious matter for Europe, and will be a source of anxiety to all port sanitary authorities in this country. The Board have issued notices to all ports indicating the precautions to be observed. These will be of the same nature as those which were so successful in preventing the spread of cholera, which, since they were elaborated, has been introduced on more than one occasion, but has never spread. These include the inspection of passengers and crews, the detention and isolation of persons suffering from symptoms which may indicate the existence of the disease, the notification of local authorities of the intention of healthy passengers to proceed to their districts so that they may be kept under observation, and the disinfection of vessels. The Royal Mail Steamship Company have given orders that their steamers, for which the port of arrival is Southampton, shall not at present call at Oporto.

YELLOW FEVER IN VIRGINIA.

IT is announced that yellow fever has broken out in the National Soldiers' Home between Hampton and Fort Munroe, Virginia. There are between 3,500 and 4,000 inmates of the home, and 40 cases with 7 deaths have been reported. We learn from the *Medical Record* that according to the official report of Dr. Wasdin, of the Marine Hospital Service, an old soldier entered the home early in July for a short rest, and soon afterwards appeared at the dispensary, where he informed the physician in charge that he had recently reached a northern port on a transport from Santiago. He complained of "dumb chills and fever," and was prescribed for. He mingled freely with the inmates of the home, and after a time went away. This is a possible cause for the outbreak, or at least there is as yet no other cause suggested. On July 21st and 22nd, some ten inmates of the home suffered from pronounced chills followed by a high fever, but no suspicion of the true nature of the disease was aroused until July 27th, when a death occurred, the man becoming distinctly yellow some time prior to death. On the same day another man died and he also turned quite yellow. Necropsies were held on both by the resident pathologist. A diagnosis of yellow fever was made tentatively, and a request was sent to Washington for an examination by a marine hospital surgeon familiar with yellow fever. This was made by Dr. Wasdin, who confirmed the diagnosis. Two other surgeons of the Marine Hospital Service have been sent to the institution, and it is hoped that the vigorous steps taken will prevent the spread of the infection.

DEATH OF PROFESSOR BUNSEN.

THE Bunsen burner and the Bunsen battery are appliances so familiar, and spectrum analysis a method of research which has been so completely worked into the fabric of chemistry and astronomy, that it is almost startling to be reminded that until Wednesday morning last the man who gave these appliances and that method to science was still living in Heidelberg. Few events could perhaps bring home to the mind more vividly the enormous strides which science has made. Bunsen was born in 1811, graduated at Göttingen in 1831, became Professor of Chemistry at Cassel in 1836, at Marburg in 1838, and at Breslau in 1850. In 1852 he was called to Heidelberg as Professor of Experimental Chemistry, and retained that chair, in spite of an invitation to Berlin, until 1889, when he resigned. The invention of the gas burner, so familiar to every student of chemistry, was due to no accident, but was the result of a profound knowledge of the conditions of burning of mixtures of gas and air. His greatest achievements, however, were connected with the study of light, and his elaboration of the system of spectrum analysis placed in the hands of chemists and astronomers a method of analysis of extreme beauty and accuracy which has been most fruitful in important discoveries. He was not only himself a great investigator, but a stimulating teacher. Most of the leading chemists of all countries have worked as young men in his laboratory, and all regarded him not only with admiration but with affection. In 1858 he was elected a Foreign Fellow of the Royal Society, which awarded him a Copley medal in 1860, and in 1877 made to him and to Kirchhoff, his fellow worker in the study of the spectrum, the first award of the Davy medal.

MAITRE LABORI'S WOUND.

THE latest accounts of Maitre Labori's condition are not reassuring. It is stated that the wound was carefully examined on August 15th, and that it was ascertained that the bullet had not touched either the lungs or spinal cord. The patient is reported to have some fever, but M. Reclus, one of the surgeons who first saw him, has said: "You may take it for certain that before many days are over Maître Labori will be in his place again." Another authority declares that the patient is fast recovering, and that his state of health already shows a marked improvement. The exact position of the bullet may perhaps be determined in time by means of the Roentgen rays, though there will be special difficulties in obtaining a satisfactory result. At present, in the absence of any precise knowledge of its form, size, and nature; of the strength of the charge which propelled it; of the distance from which it was fired; of the precise region struck; the direction and obliquity of the wound, and of the introduction or otherwise of portions of the clothing which might set up a septic action, it is useless to make any attempt to foretell the issue, especially since no long time has elapsed since the patient recovered from an attack of typhoid fever. It seems that the victim of the crime owes his escape from more serious consequences in part to the maladroitness of the criminal, and in part to the badness of the weapon.

VETERINARY EDUCATION IN BENGAL.

THE report of the Cattle Plague Commission, submitted to the Government of India in 1871, made it clear that an immense loss of agricultural and draught cattle, on which the prosperity of India so essentially depends, was yearly occurring through rinderpest and other epizoötics. It was also made evident that there was great room for the improvement of the breed of cattle; that the housing, feeding, and general management of stock left much to be desired, and that no means of treating sick and lame animals existed in the country. Among other recommendations the advisability of establishing schools for the education and training of natives in these matters was strongly urged. In 1883 a Committee was appointed by the Government of Bengal to prepare a scheme for establishing a veterinary school in or near Calcutta. It was presided over by Dr. Kenneth Macleod, and submitted an elaborate and practical report. Funds were not found available for realising the proposal, which remained in abeyance until an enlightened and wealthy native gentleman named Sheobux Bogla, whose son had been rescued from death by opium poisoning by Dr. Macleod, anxious to present a thank-offering to that gentleman, was advised by his doctor, Kailas Chunder Bose, to offer Government a site and endowment for a veterinary school as the most acceptable expression of his gratitude. A philanthropic Parsee gentleman of Bombay, Sir Dinshaw Petit, at the same time volunteered to provide money for the purpose of erecting a hospital in connection with the school. These offers were readily accepted, and the foundation stone of the Bengal Veterinary School was laid by the Lieutenant-Governor of Bengal, Sir Charles Elliot, in April, 1892, on the eve of Dr. Macleod's retirement from

India. The school was opened in 1894, and a report submitted by Veterinary-Major F. Raymond, Superintendent of the School and Chief of the Civil Veterinary Department, Bengal, for the year ending March 31st, 1899, indicates that a substantial commencement has been made in realising the views and objects formulated by the Cattle Plague Commission. The institution has now been raised to the status of a college, and the curriculum extended to three in place of two years. Thirty-five students have been educated, and after examination passed as qualified to practise veterinary medicine and surgery. Of these nineteen have obtained permanent and three temporary employment under district Boards and municipalities; ten have started in private practice: two are studying medicine, and only one was out of work. The practice of the hospital appears to be active and growing.; 405 horses, 190 cattle, 56 sheep and goats, and 199 dogs were treated as indoor patients during the year; 361 horses and 319 cattle, outdoor. Nine dispensaries have been opened at the headquarters of districts in which a considerable amount of relief work, gratuitous and paying, has been done. The people are beginning to value the services of the veterinary assistants, who have also been found useful in investigating and treating outbreaks of rinderpest. A detail is furnished of those which were reported during the year, and though confessedly imperfect it indicates large losses of cattle. Veterinary-Major Raymond also reports good work in suppressing outbreaks of glanders, the mallein test having been usefully employed. He refers to experiments which were made for preventing and curing rinderpest by the use of bile and serum. He also describes efforts to improve the stock of cattle, ponies, and donkeys, and to breed mules. All these matters are appreciatively discussed by the Government, and it is obvious that the Bengal Veterinary College is fulfilling an excellent purpose and has formed a nucleus around which many important subjects connected with the improvement of stock, the study of comparative pathology, and the saving of animal life, have naturally accreted.

ANNUAL MEETING: EXCURSIONS.

The excursion to the New Forest started from the Clarence Pier at 8.25 A.M., calling at Ryde and Cowes, and arriving at Southampton about 10 o'clock, where the party was met by Dr. Wade, President of the Southern Branch of the British Medical Association. From Southampton the party drove by way of Totton, Cadnam, and Compton Arms, to Stoneycross, where those who wished had an opportunity of visiting Rufus's Stone. Time did not permit the route by Boldrewood to be taken, and the direct road to Lyndhurst was followed. Here a most sumptuous lunch was provided by the Southampton members, to which all the visitors did ample justice. A cordial vote of thanks was proposed by Dr. Cole Barker, the conductor of the tour, to the medical men of Southampton, and their health was drunk most heartily by all standing. Dr. Wade in reply expressed the pleasure it gave them to entertain the Association. Professor Byers (Belfast) then proposed the health of the conductor and his wife. Lyndhurst was left at 4 P.M., and the party drove straight to Southampton, where again the Southampton members had provided a most refreshing tea in the pavilion on the pier. Leaving Southampton at 6, Southsea Pier was reached safely at 8.20 after a most enjoyable day. Too much praise cannot be given to the Southampton medical men for their most lavish hospitality and foresight in providing entertainment of every description for the members at every point where they stopped, and for looking after the comforts of the ladies so thoroughly. If there is any matter for regret it is that more of the visitors did not avail themselves of this excursion. When it is remembered that the men of Southampton gave the lunch ten miles away from their homes, that it was Cowes week and the last day of the Australians *v.* Hants match, too much cannot be said of their sacrifices on behalf of the Association. All praise to them for their hospitable spirit.

The excursion to Salisbury and Stonehenge was a great success owing to the excellent arrangements of the local Committee, the splendid weather, and the objects of surpassing interest visited. The excursionists, numbering fifty-three members and their ladies, leaving Portsmouth at about 9.30 A.M. on August 5th, found that the railway authorities had reserved carriages for them. On arrival at Salisbury the local Committee, headed by Dr. H. J. Manning and their Secretary, Dr. J. E. Gordon, guided them to the Cathedral, whose history and beauties were lucidly explained to them by the sub-Dean. The one regret was that the time at disposal was all too brief to do justice to the subject. Mr. South, organist, favoured the party with an organ recital which all enjoyed greatly. Much regret was expressed that time did not permit of a visit to the Salisbury and Blackmore Museum, with its remarkable collection of flint implements and many other objects of great interest. Luncheon at the County Hotel, an entertainment by the local Committee followed, and was worthy of these hospitable associates. Inspector-General Dr. Turnbull, R.N., representing the Excursion Committee, in a few words expressed the feeling of the excursionists at their splendid reception, to which Dr. Manning replied, renewing their kindly welcome, and regretting the time at their disposal was so short, entailing strict military discipline in their arrangements. An interesting drive of 8½ miles, passing residences of historic interest, brought the party to Stonehenge, where Dr. Blackmore drew attention to the chief points of interest in this wonderful prehistoric place, an enigma as to its builders, and the means of transport for the huge monoliths standing and prostrate there, which could not have been obtained nearer than 15 miles away. The excursionists afterwards drove to Amesbury, where Dr. P. J. and Mrs. Barcroft had invited a large party of residents to meet them at a most enjoyable garden party. The carriages then conveyed the party to Salisbury, where some proceeded direct to London or the West, the remainder travelling with the same railway accommodation to Portsmouth *viâ* Southampton, the traffic being somewhat delayed by reason of the concurrent Bank Holiday arrangements. All were loud in their praises of the success of the excursion, the consideration of the London and South-Western Railway, the hospitality of the local Committee and their admirable arrangements, and the invaluable guidance of the sub-Dean and Dr. Blackmore at the visit to Salisbury Cathedral and Stonehenge.

INQUESTS IN LONDON.

From a return issued last week it appears that 7,479 coroners' inquests were held in London in 1898, which was at the rate of 1.6 per 1,000 of the estimated population of 4,493,717. The total disbursements amounted to £19,037 16s. 5d., or £3,431 10s. 7d. in excess of 1897. The new practice of paying 2s. to each juryman who asks for it up to a maximum of 15 jurors involved an expenditure of £3,119 14s. The verdicts given are classified under the following heads: Murder, 41 (chiefly infanticide); manslaughter, 28; suicide while insane, 422; *felo de se*, 4; death due to disease aggravated by neglect of others, 27; want, cold, and exposure, 52; excessive drinking, 382; accidents, 2,440; and natural causes, 3,632. Fifty-five persons were found to have died from injuries the causes of which were unknown, while in 146 cases, 114 men and 32 women, a verdict of "Found drowned" was returned. In relation to 30 males and 18 females found dead the cause of death was declared to be "unascertainable." No fewer than 570 inquests were held with regard to the deaths of infants

suffocated in bed with their parents or others, and in all but 2 cases the verdict found was "accidental death." In the 2 cases an open verdict was returned. The occurrence of so large a number of deaths from overlying in London alone casts a somewat lurid light on the habits of certain classes of the population, for it will not be forgotten that an investigation made some years ago revealed the fact that the majority of the accidents occurred on Saturday nights, and were thought not to be unassociated with intoxication in the parents.

BUTTER PRESERVATIVES.

DR. LOUIS HENRY, of Brunswick, Victoria, whose excellent lecture on milk some time ago attracted considerable attention, has recently addressed the Victorian Branch and the Australian Health Society on the subject of butter. He contends that while pure fresh milk has, for some hours, certain germicidal properties due to its protoplasmic milk cells, the same milk sterilised by heat has none. The use of antiseptics also destroys this property, while these do not altogether prevent the contamination of the milk. They are themselves objectionable, affecting the digestive processes and acting as irritants. He discusses the common preservatives added and especially boric acid and formalin. The presence of the latter, he points out, may be detected by treating the milk with some quantities of a mixture of sulphuric acid and ferric chloride, which produce a purplish-violet colour even in weak solutions. He will probably be now watching with interest the progress of the Departmental Committee on this question.

SIR EDWARD FRANKLAND.

SIR EDWARD FRANKLAND, the news of whose death in his seventy-fifth year during a holiday in Norway on August 9th has been received with much regret, first turned his attention to public health questions in 1865, when he succeeded Hofmann as Professor of Chemistry at the Royal School of Mines. At that time the monthly analyses of the water supplied to London had just been commenced. On taking over the duties Frankland found it necessary to institute researches to ascertain the most satisfactory method of water analysis. Ever since then he has continued to take part in the issue of the monthly reports. In 1868 he was a member of the second Commission on Pollution of Rivers, and for six years he was largely occupied, in a laboratory specially equipped for the purpose, in studying the chemistry of water from various strata, and from lakes, rivers, and wells, and in ascertaining the nature of the alterations which occur in water in mains and service pipes. The whole inquiry had special reference to the quality of the water taken from the Thames. At that time he arrived at an opinion extremely unfavourable to the continued use of water from the Thames for the supply of London, because he found that the methods of filtration then in use were ineffectual to prevent the propagation of disease through water. The improvement which subsequently took place in the methods of sand-filtration caused him to modify this opinion, and for some years he has been an advocate of resort to the Thames, and was willing to depend upon sand-filtration associated with adequate storage reservoirs. Sir Edward Frankland also in the early part of his career gave some attention to physiological chemistry, and was associated with Fick and Wislicenus in their metabolism experiments on the excretion of nitrogen and the relation of nitrogenous metabolism to muscular action. He was born at Lancaster and educated at the Lancaster Grammar School and afterwards at the Museum of Practical Geology and in the chemical laboratories of Liebig and Bunsen. His first practical scientific research resulted in the discovery of compounds of zinc with methyl and ethyl, and the brilliant manner in which he discussed theoretical considerations raised by the discovery of these bodies led to his election as a Fellow of the Royal Society in 1853. In 1857 the Society gave him a Royal medal, and for many years he acted as its Foreign Secretary. He was for a time Lecturer on Chemistry at St. Bartholomew's Hospital and Professor of the same subject at the Royal Institution. He afterwards became Professor of Chemistry at the Royal College of Science, South Kensington, and retained that post until 1885. He received the honour of K.C.B. in 1897. Professor Percy Frankland is his second son by his marriage with the daughter of Herr F. W. Fick, of Hesse-Cassel.

THE GOVERNMENT ANALYTICAL LABORATORY

THE report of the Principal Chemist of the Government Laboratory for the year ending March 31st, 1899, which has been issued as a Parliamentary paper, draws a somewhat optimistic picture of the present state of the butter trade. The number of samples of butter examined was 1,083, and only 2 were reported adulterated, as against 25 last year and 46 the year before. Experiments made at Wye and in the laboratory are held to have proved beyond doubt that the characteristic constituent of cotton-seed oil passes into the milk of cows fed upon cotton cake. Certain samples of butter examined during the year gave reactions for cotton-seed oil, but the amount indicated was held to be not more than might be due to feeding on cotton cake. The Danish and Scandinavian butters examined were entirely free from boric preservatives, but those from France, Holland, Australia, and New Zealand contained such preservatives. The use of colouring matters derived from coal tar seems to be most prevalent in the United States, but is also met with in samples from Holland. The majority of the margarines contained contained cotton-seed oil, boric preservative, and aniline colouring matters. Samples of cream imported from Holland, Denmark, Norway, and Sweden were examined at the instance of the Local Government Board, and all found to be genuine. The laboratory also made a number of analyses in connection with the Home Office inquiries into the use of lead in pottery manufacture, and phosphorus in the manufacture of lucifer matches. Among the samples of food substances from various canteens examined for the War Department, many proved to be of low quality. A number of medicinal preparations were examined for the Army Medical Department, and in several instances were found to be markedly inferior to the standards of the *British Pharmacopœia*.

CORONER'S INQUESTS AFTER INJURY.

A CORRESPONDENT has sent us an interesting communication respecting the holding of an inquest in the case of an old lady who, when recovering from an indisposition for which she had been confined to her bed for a month or so and beginning to get about again, one evening in the act of getting into bed sustained a spontaneous fracture of the femur. This did not unite, bedsores and cystitis followed, and she died about three months after the above occurrence. Our correspondent, not regarding the fracture as arising from an accidental cause, certified the injury as the primary cause of death. The registrar of deaths at once forwarded the certificate to the coroner, who in spite of all explanations given held an inquest. To this our correspondent takes exception; but we understand that the registrars of deaths have received instructions from the Registrar-General, in all cases where on the face of the medical certificate death appears to have been caused or accelerated by injury, to forward a copy of the same to the coroner of the district in which the death occurred or the body is lying, and to await his decision before issuing the burial order or registering the death. This

no doubt was done in the present instance. Now in all cases where death is alleged to have been caused or accelerated by any injury, from whatever cause arising, it is a duty imposed on the coroner by law to hold the statutory inquest. In such cases no discretionary power is allowed, and this is defended on the ground that similar cases occurring in asylums or elsewhere might otherwise easily be passed over without any official inquiry or evidence concerning the case taken upon oath and duly recorded. Whilst the law says that criminal proceedings cannot be instituted against a person for murder or manslaughter if the victim lives over a twelvemonth and a day after the date of the assault, no limit of time has been fixed after the injury to the deceased, or even after his death, beyond which an inquest cannot be held. If the medical attendant does not witness the occurrence he would be unable positively to assert in such cases that the fracture of the thigh or other injury did not arise from an accidental cause or from the direct act or neglect of some other person or persons. This duty the law imposes upon the jury, and it rests with them after hearing all the evidence on oath to come to a conclusion on these points, and to record it in their verdict. In a recent case the medical attendant certified the cause of death as arising from "exhaustion from diabetes, traumatic hæmorrhage in the lungs, syncope." The registrar, at first, not appreciating the meaning of the word "traumatic," registered the death and issued the burial order, but afterwards he communicated with the coroner, who held an inquest, at which the jury returned a verdict of syncope following shock and hæmorrhage in the lungs caused by bullet wounds in the chest, self-inflicted. The medical attendant in the case stated that he thought he was justified in giving the certificate, and the friends at first fell in with this view, but afterwards were thankful the inquest had been held, as it cleared them all from any suspicion that might afterwards have arisen as to who might have fired the revolver causing the death. In all cases like these, and where death is caused or accelerated by injury, no matter how the said injury is supposed to have arisen, and also in cases of very sudden and unexpected death, though natural causes may be strongly suspected, the medical man is always on the safe side if, before granting the certificate of the cause of the death, he communicates with the coroner, briefly stating such facts as may be known to him, and any opinion he may have formed in respect to them. The coroner will then cause the usual inquiries to be made, and, where he can exercise a discretion, decide as to the holding of an inquest or otherwise. The coroner has to carry out the law as he finds it. Recently a coroner got into considerable difficulty from neglecting to hold inquests in such and similar deaths, and he was forcibly reminded that neither he nor anyone else could settle cases and register deaths the causes of which and the circumstances in connection with which it was the province of a jury only to determine. In the case related by your correspondent the inquest was no doubt really unnecessary, but the law has to guard against the unforeseen and the unusual.

THE ETIOLOGY OF BERI-BERI.

In an interesting contribution to the subject of beri-beri, Dr. Laurent[1] gives an account of a sharp epidemic of this disease which attacked the Annamite soldiers forming part of the French troops of occupation of Chautabun (Siam). Acting on the view of Dr. Brémaud that fat plays an important part in the prevention of beri-beri, steps were taken to include this important article of diet in the rations, and in forty-eight hours the epidemic was arrested. That the absence of fat in the dietary is not the sole factor in the production of the disease was proved by the fact that one of the worst cases occurred in a Frenchman, but he was the only European attacked, and rapidly recovered on removal from Chautabun. This case would point to an infectious factor. On his return to Saïgon, Dr. Laurent had an opportunity on the voyage of visiting the island convict settlement of Poulo-Condore, where he found beri-beri very prevalent—in fact, there had been 360 deaths from it in the year, and there were no fewer than 160 cases under treatment. His experience of the influence of fat on the course of the Chautabun epidemic led him to recommend its trial, with beneficial results. Commenting on the foregoing, Dr. Brémaud[2] refers to his experience of the Poulo-Condore Settlement in 1877-78, when the cutting off of fat in the dietary of the convicts was followed by a severe outbreak of beri-beri with many deaths. The epidemic immediately ceased when the original fat-containing diet was resumed. Dr. Brémaud also observed an outbreak on board the English vessel *Ilione* in 1879, whilst in charge of a consignment of coolies shipped from Pondicherry to Martinique. During the voyage, which lasted four months, Mohammedans only were affected by the disease. On religious grounds they systematically abstained from fat (pork). The other coolies who partook of the pork escaped. These facts certainly point to the importance of fat, and there should be no difficulty in putting the views of the French observers to the test. In this connection it would be interesting to know what part fat formed of the dietary of the Richmond Asylum, Dublin, before the appearance of beri-beri there. There can be no doubt that suet, dripping, fat pork, the fat of milk, and so forth, are most valuable articles of diet, and their exclusion from the dietary a fruitful factor in the development of rickets, tuberculosis, and possibly of leprosy also.

[1] *Archives de Médecine Navale et Coloniale*, No. 3, March, 1899, p. 194.

ALCOHOL AND LIFE ASSURANCE.

The excessive mortality in the assured who are engaged in the liquor trade has for a long time exercised the minds of the directors of life assurance companies. The figures put forward by the Abstainers and General Insurance Company present the drink question from another point of view. From a report made by Mr. James Meikle upon the mortality experience of the Abstainers' ordinary department during the first fourteen years of the company, it appeared that but forty-eight deaths had occurred out of each hundred anticipated under the H^{m}. table. If this experience continues to prevail in the future, abstainers will have justice on their side if they claim that they should pay a lower premium than those persons who habitually take alcohol, even though in small quantities. It will, however, be necessary to ascertain how long the applicant has been a total abstainer, as reformed drunkards who have become abstainers are not good lives.

The Right Hon. A. J. Balfour has promised to preside at a festival dinner to be held at the end of next November, in aid of the fund to provide new laboratories for King's College, London.

The *Occidental Medical Times* announces that the Lane Medical Lectures in San Francisco for 1900 will be given by Sir Michael Foster, K.C.B. Previous courses have been given by Mr. Christopher Heath, Professor Clifford Allbutt, and Dr. Nicholas Senn.

A Reuter's telegram announces that the expedition of the Liverpool School of Tropical Diseases, under the direction of Major Ronald Ross, I.M.S., has arrived safely at Freetown, Sierra Leone, all well. Major Nathan, the Acting Governor of the Colony, has written to Mr. Alfred L. Jones, the Chairman of the School, stating that he will do all he can to assist the expedition, and expressing the hope that one result will be the establishment of a bacteriological laboratory in the colony.

[2] *Archives de Médecine Navale et Coloniale*, No. 5, May, 1899, p. 369.

THE SIXTH INTERNATIONAL OTOLOGICAL CONGRESS.

(Continued from page 416.)

Indications for Opening the Mastoid in Chronic Suppurative Otitis Media.

The general discussion on this subject, which took place on Wednesday morning, August 9th, was opened by Professor Politzer (Vienna), Professor William Macewen (Glasgow), Professor Luc (Paris), and Professor Knapp (New York).

Professor Politzer thought it was a happy idea of the Organisation Committee to have a discussion on such an important question. The chief point in that discussion, he said, would be to decide whether it was justifiable, without well-marked symptoms, to operate as frequently as some operators advocated. Experience taught him that the clinical symptoms did not always correspond to the pathological changes found during the operation. At times only insignificant changes, such as a small quantity of granulation tissue in the attic or antrum was found in cases where the operation had been performed on account of dangerous symptoms. On the other hand, serious changes might be met with which before the operation were not expected. These circumstances rendered it more difficult to draw strict lines in regard to the indications for opening the mastoid. There would always be cases in which, owing to the impossibility of predicting exactly the pathological changes, some surgeons would not regard it advisable to delay for the appearance of well-marked changes, whilst others would advocate more conservative methods. Many cases could be healed by vigorous antiseptic treatment, by removal of granulations, and by partially removing the wall of the attic. Although a strong advocate for the radical operation in suitable cases, he did not hold with those who performed it for the mere purpose of stopping the discharge, unless strenuous efforts had first been made to stop it by other means. He thought that in these cases it was not justifiable to have recourse to an operation which, although not necessarily dangerous in the hands of a skilled operator, was nevertheless a serious one, especially when they considered (1) the many important structures in the vicinity which might be injured; (2) the possible permanent impairment of hearing in those who before the operation could hear fairly well; (3) the protracted healing process after the operation.

Professor Macewen (Glasgow) considered that the mastoid antrum and cells ought to be opened when a pyogenic lesion existed in the middle ear or in its adnexa, which could not be reached or effectually eradicated through the external ear. He then described the operation he performed. In advocating the mastoid operation in persistent otitis media purulenta he claimed for it three advantages over that of the treatment by way of the external auditory meatus: (1) That it exposed to inspection all the area affected, and thus it was possible to reach all the recesses in the bone which had been invaded, (2) that it secured asepsis, and (3) that it raised an efficient barrier against pyogenic extension to the most vulnerable parts of the brain and sinus. He reminded his hearers of the many instances in which the otitis being obscure the symptoms of septic absorption might be attributed to typhoid fever or pneumonia, and the real cause overlooked. The virulence of the otorrhœa could not be measured by the quantity of the secretion, nor by its odour or the slightness of the initial symptoms. An insidious pyogenic process might unexpectedly culminate in a dangerous or fatal crisis. He raised the question whether the lesions in the middle ear, which could mechanically be removed through the external auditory meatus, could not be removed with greater safety through the mastoid. This question, he considered, should be answered in the affirmative. When the osseous tissue was involved, as it commonly was in cases of chronic middle-ear suppuration, it was very difficult to eradicate the disease through the external meatus, and in recurrent cases the patient could not be pronounced safe even when the otorrhœa ceased temporarily. Cholesteotoma and tuberculous processes, with secondary pyogenic involvement, were diseases which could only be efficiently removed by opening the mastoid. He compared the problems connected with the question of operation upon recurrent attacks of purulent otorrhœa with those which arose in connection with appendicitis. In conclusion he added that the more frequently the operation of opening the mastoid was undertaken, the fewer would become the cases of so-called incurable ear disease.

Professor Luc (Paris) summarised his paper in the following conclusions: That the opening of the mastoid is indicated in the course of chronic otorrhœa under three distinct conditions: (1) In order to give free vent to pus in the case of purulent retention; (2) in order to arrest threatening or commencing symptoms of intracranial infection of aural origin; and (3) in order to cure the otorrhœa when it has proved intractable to the various means of local treatment applied through the auditory meatus, including the extraction of ossicles, and the curetting of all granulations by that path. The operation he considered to be urgent only in the first two conditions. In all cases of chronic otorrhœa the opening into the bone must be extended from the antrum to the attic, or from the attic to the antrum, and must be followed by curetting and thorough disinfection of the entire cavities of the middle ear. When intracranial complications threatened the opening in the bone should be immediately extended as far as the suspected region of the dura mater, but the membrane should only be opened at a subsequent operation, if after waiting as short a time as possible the intracranial symptoms persisted or increased.

Professor Knapp (New York) considered that when acute purulent otitis media was on the border line of becoming chronic or had already become chronic, opening of the mastoid was indicated both as a curative and prophylactic measure. He attributed the frequency of relapses in children to the structural condition of the infantile mastoid. In chronic suppuration of the middle ear without symptoms of the mastoid being involved, and which had resisted local treatment, he considered attico-antrectomy to be indicated. Good results from the removal of the ossicles and cleansing the attic had been reported in chronic cases without cerebral symptoms, but unfortunately these results had not proved permanent. Personally he was not disposed to lose much time with intratympanic operations. If the disease extended beyond the mastoid process, the radical operation had to be supplemented by operating on the parts outside the ear.

Professor Lucae (Berlin) read a paper on the Radical Operation for Chronic Middle-ear Suppuration. He summarised his paper by saying that he was of the opinion that the opening of the mastoid was a very important help, but he considered that, instead of saying that he had operated on a good many patients, a surgeon should be more proud that he had cured so many patients without having recourse to operation.

In the discussion that followed, Professor Guye (Amsterdam) agreed with Professor Macewen that the mastoid operation was a very great boon to humanity, but he was with Professor Lucae when he said that one should be prouder of having cured cases of chronic suppuration without the operation. The important point he considered in the treatment of chronic otorrhœa was to keep the meatus well cleansed and the Eustachian tube freely open. He advocated nasal insufflation of menthol. The radical operation ought to be reserved for really dangerous cases.

Dr. McBride (Edinburgh) expressed himself in favour of the conservative methods with regard to mastoid operations. A question to be considered was what could they promise to their patients from mastoid operations. In chronic cases they could promise nothing. A certain proportion did not do well after the operation.

Professor Gradenigo (Turin) speaking with reference to his own experience in the treatment of chronic middle ear suppuration, considered that the indications for the retro-auricular operation had been exaggerated. He expressed himself in favour of the removal of the ossicles or even of the malleus alone, or of the removal of the posterior superior bony wall through the external meatus as efficient in a great many cases. He opposed the retro-auricular operation, excepting in the more severe cases with symptoms of mastoid implication, on the ground that it did not give better results, it was attended with risks, and required a long after-treatment at times difficult to carry out, especially in children, and the final results of the best performed operations were often disappointing.

Dr. Jansen (Berlin) referred to those cases arising after measles and scarlet fever as difficult and requiring careful

consideration. He pointed out that there were cases of middle-ear suppuration which could not be reached by opening the mastoid process, and mentioned cerebral and cerebellar abscesses; and also the rare cases originating in the Eustachian tubes. Suppuration in the antrum must be differentiated from suppuration in the mastoid; the former might heal without operation, the latter could not.

Professor Brieger (Breslau) pointed out that even in cases of operation conservative treatment could not be altogether dispensed with. It was required in the after-treatment. He made special reference to the good results obtained by Professor Politzer's tampon with alcohol in the after-treatment of operations for cholesteotoma. The main indication he considered was to remove the primary cause.

Professor Kümmel (Breslau) drew attention to the occurrence of symptoms usually held to indicate operation in hysterical girls, and reported the case of a girl who had been operated upon five times without any evidence of disease being met with.

Dr. Barr (Glasgow) considered that the methods of operating, and the results of operations, might have been usefully included in the subject of their discussion. The question of attic treatment, he thought, had been rather disparagingly referred to by Dr. Knapp. The attic syringe he considered to be of great value, provided it was not too narrow. He had found the attic treatment sufficient.

Dr. Milligan (Manchester) was in favour of the mastoid operation in cases in which suppuration continued after twelve months' treatment, and expressed himself decidedly in agreement with Professor Macewen.

Mr. T. Mark Hovell (London) said that the mere fact that the discharge had existed for a long time was not in itself sufficient reason for opening the mastoid.

Dr. Holmes (Cincinnati) said he had practised, and was likely to continue to practise, upon the lines laid down by Professor Macewen.

Mr. Cresswell Baber thought that they were all agreed that in chronic suppuration of the middle ear, accompanied by severe pain, an operation should take place. The important question was, he considered, whether the mastoid should be operated upon in cases without any symptoms excepting discharge. The logical surgical position was not to do a mastoid operation until all means for operating through the meatus, such as curetting, had been exhausted. The real facts of the case ought, in his opinion, to be put before the patient.

Dr. Holinger (Chicago) referred to the cases following influenza as a class of cases of chronic suppuration of the middle ear in which time should not be lost in any conservative measures.

Mr. P. de Santi (London) said that in the cases he had had under his care, the discharge had lasted from two to fifteen years. In some of his cases he had followed the teaching of Professor Macewen, and these had been perfectly successful.

Mr. F. Faulder White (Coventry) expressed the hope that it would not go out to the profession that otologists in general were all for operating, and not in favour of good general treatment. Having regard to the size of the cavities to be dealt with, he considered the meatus afforded a very good entrance, and advocated antiseptic irrigation. He was not opposed to operating when the bone was diseased.

The President said that if an operation was to be done it must be done thoroughly, and care must be taken not to leave a large hole covered up behind. By operating, the patient was not left as he was before. Nature had been interfered with. It was extremely difficult to say which cases should be operated on.

Dr. Moure (Bordeaux), Dr. Noyes (New York), Professor Eeman (Ghent), Professor Faraci (Palermo), Dr. de Mendoza (Paris), Dr. Dench (New York), and Dr. Lederman (New York) also joined in the discussion.

Professor Macewen replied briefly, and pointed out that he had not said that in simple discharge operation should be resorted to. That statement had been made elsewhere, and he wished it to be known that it was not correct.

Professor Luc and Professor Knapp also briefly replied.

On Thursday morning the Congress met again, and Professor Grazzi (Turin) presided.

Dr. Dench (New York) read a paper on the Operative Treatment of Mastoid Inflammation. He alluded to the greater frequency with which the operation was now performed in New York. "Tip tenderness" as an important diagnostic sign, in his experience, had proved to be of little value. He advocated the strictest antiseptic precautions in performing the operation.

In the discussion Professor Knapp asked Dr Dench whether he attached the same importance to tenderness on pressure in acute cases as in chronic.

Dr. Dench replied in the negative, and Professor Knapp said he was in accordance with him.

The Petro-squamosal Sinus.

Mr. Arthur H. Cheatle (London) read a paper on the Anatomy and Pathological Importance of the Petro-squamosal Sinus, and gave a lantern demonstration of specimens.

Comparative Anatomy.—Mr. Cheatle deplored that little or nothing was written in even the best works on otology concerning this sinus which had most important connections with the middle ear, both from anatomical and pathological standpoints. He referred briefly to the few British and foreign authors who had written on the subject. In some lower animals—the dog and calf, for instance—this sinus ran across the roof of the middle ear, making its exit by means of a large foramen between the base of the zygoma and the bony meatal wall, and served almost entirely for the exit of intracranial blood, taking the place, in fact, of the sigmoid portion of the lateral sinus. In the higher forms of monkeys—such as the chimpanzee, gorilla, and ourang-outang—the sinus closely resembled the human.

Human Anatomy.—In early fœtal life, before the formation of the internal jugular vein, the petro-squamosal sinus carried all intracranial venous blood emerging in front to open into the primitive jugular (afterwards the external jugular). It was not to be wondered, then, that this channel, which served such important duties in early fœtal life, should persist in some form or another in later life. The anterior opening usually closed, the sinus or its remains at its anterior extremity forming a connection with the middle meningeal vein. The sinus dwindled to a small size. It was the rule rather than the exception for remains of the sinus to be present in some form or another all through life. In infancy and childhood the sinus, as a rule, had a well-marked opening into the lateral sinus behind, by means of a valve-like opening, and in front joined the middle meningeal vein. In adult life, though it was often marked, careful search had sometimes to be made. The absence of markings in the bone in the neighbourhood of the sutures did not by any means show that the sinus was not present. In infancy and early childhood, in the region of the posterior extremity of the suture, numerous irregularities were often seen; it was at this spot that a bridge often formed over the posterior end of the sinus before it opened into the lateral sinus, a common condition in the adult bone. On looking at the roof of the middle ear in a fresh specimen after the dura mater had been stripped off, a network of rather large veins could be plainly seen immediately beneath the bone, from this network several veins emerged through the suture to empty into the sinus.

Pathological Importance.—Mr. Cheatle said that it was therefore seen that there was a connection between veins of the middle ear and those of the meninges, and occasionally, at all events, with those of the temporo-sphenoidal lobe, and through the meningeal coverings the middle ear was in communication with veins of the middle and posterior fossæ. Under these circumstances the importance of this sinus with its tributaries and connections from a pathological point of view was very evident, and explained how infection might spread from the middle ear to the meninges and brain, without microscopical evidence of connection. Such a state of things was not uncommon, as all knew, in infants and children in whom, as had been said, the pathology under consideration was well marked, and in whom the membrane might be intact. It was astonishing, in the face of this close connection of the middle ear with the meninges, that meningitis was not of more frequent occurrence. The explanation might be that the meninges, like the peritoneum, were able to deal with a certain amount of infection, and only when the dose was excessive was this resisting power overcome. This pathway would also explain the presence of a cerebral abscess without microscopic connection with the diseased middle ear.

Mr. Cheatle further said that he had evidence in two cases of the sinus being the pathway for septic thrombosis of the lateral sinus. It might be that the existence of this pathway might solve some of the unaccountable intracranial affections met with by physicians, such as the posterior basic meningitis of infants, cerebro-spinal meningitis, and perhaps some cases of tuberculous meningitis.

DISCUSSION.

Professor KNAPP (New York) said that he felt sure he was speaking the sense of the meeting if he expressed his most hearty thanks to Mr. Cheatle. His attention was first drawn to the significance of the petro-squamosal sinus by the case of Dr. Cleveland, of Philadelphia, which Mr. Cheatle quoted. Now that attention had been authoritatively directed to this sinus, they should hear more about it. He felt sure a knowledge of it would enable them to understand many conditions which hitherto had been obscure.

Papers were also read by Professor GRAZZI (Florence), Dr. MALHERBE (Paris), Professor AVOLEDO (Milan), Dr. LOUIS BAR (Nice) Dr. COSTENIN (Bucharest).

This completed Thursday morning's proceedings. The afternoon was given up for demonstrations in the museum.

TREATMENT OF TYMPANIC DISEASE.

On Friday morning Professor LUCAE (Berlin) occupied the chair, and Dr. GOLDSTEIN (St. Louis) read a paper on the Therapy of the Tympanic Mucous Membrane. He recorded several experiences from practical work, which by comparison with various therapeutic measures with which he had become familiar had offered better possibilities, and he expressed himself opposed to the indiscriminate use of the syringe and the indifference frequently observed in the medication of nasal passages and naso-pharynx when treating the ear. He was opposed to too hasty operative steps when milder measures, if given a fair trial, would succeed, and in favour of petroleum in preference to aqueous solution as a basis for sprays and vapours, of dry draining in suppurative otitis, and especially of massage, prolonged inflation and medicated petroleum injection into the tympanum, all effected at the same sitting.

EXTRACTION OF THE STAPES.

Professor POLITZER (Vienna) read a paper on the extraction of the stapes, with demonstrations of histological preparations. He was against performing this operation during the course of chronic suppuration of the middle ear. But when suppuration had ceased and there were adhesions between the branches of the stapes and the niche of the fenestra ovalis, there was, he thought, a distinct future for operative extraction of the stapes with a view to improving the hearing. He based his opinion upon observations made by others, and also upon a case which he had under his notice.

OTHER PAPERS.

A paper was received from Dr. MENIÈRE (Paris) on the Treatment of Chronic Suppuration of the Attic, and in his absence was read by Dr. LERMOYEZ (Paris).

Dr. MOURE (Bordeaux) followed with a paper in which he discussed some cases with intracranial complications of aural origin.

Dr. DELIE (Ypres) contributed a paper on Panotitis with Cerebral Complication: Operation; Death; and Necropsy.

NEXT MEETING OF THE CONGRESS.

On Friday afternoon the closing meeting took place. The President, Professor URBAN PRITCHARD, occupied the chair. It was announced that an invitation had been received from France, and the next place of meeting would be the city of Bordeaux. The new Organisation Committee was then elected, with Dr. Moure, of Bordeaux, as President-elect.

THE LENVAL PRIZE.

The CHAIRMAN next announced that the Lenval Prize, founded by Baron Lenval, to be awarded to the author of the most marked progress bearing on the practical treatment of affections of hearing since the last Congress, or to the inventor of any new apparatus readily portable, which improved considerably the hearing power of deaf persons, had been awarded to Dr. Charles Delstanche, of Brussels, for his instruments for treating the middle ear. Upon the suggestion of Professor GRAZZI (Florence) a telegram was sent to Dr. Delstanche acquainting him with the jury's award. A new jury was appointed to consider the applications for the next award.

CONCLUDING PROCEEDINGS.

The PRESIDENT then delivered his closing speech. He thought that too much was made of the President; he was but one of the many stones which built up the Congress. He referred to the organisation, and more particularly to the Secretary-General, to the Chairmen of the various Sub-committees, to Mr. Field, and to the Honorary Treasurer, Mr. Cumberbatch. Lastly, and far from least, to the Museum Committee. When the suggestion was first made that a museum should be held in connection with the Congress he was delighted, and still more so when Mr. Ballance kindly undertook the chairmanship putting into it his enthusiasm. Through the energy of Mr. Arthur Cheatle and Dr. Jobson Horne the museum grew and grew, and the results had been worth the labour. After the museum had been dispersed, and even after another museum of the same kind had been formed, the catalogue would be a work of reference useful to all otologists. He concluded by expressing his indebtedness to all the members of the Congress, who really formed the foundation layer of its success.

Professor GRAZZI (Florence) proposed a hearty vote of thanks to the President, which was carried by acclamation.

Dr. BENNI (Warsaw) in the name of the foreign members, proposed a vote of thanks to the Organisation Committee.

Professor POLITZER, speaking in English, said: Mr. President and gentlemen, in every congress there is always one outstanding feature which remains in our memory for ever; it will, I think, be allowed by everyone here present that the outstanding feature of this Congress has been the museum. I have attended every Otological Congress up to the present, and also seen every important museum in the world, and I do not hesitate to say that I have never before seen such a magnificent and well-organised museum, and I doubt if it will be possible to see such a one again. This result is due to the exertions of Dr. Cheatle, ably assisted by Dr. Jobson Horne. Those of us who have had to arrange specimens in the museum will join with me in giving unlimited praise to these two gentlemen for their never-failing urbanity, their suavity of temper, and their amiable behaviour in the midst of very trying circumstances. I take upon myself to express to these gentlemen the thanks of the Congress for their incessant and indefatigable labours which have so materially helped to render this Congress such a great success.

Mr. CRESSWELL BABER acknowledged the vote of thanks to the Organisation Committee, and expressed the hope that the results would be an encouragement to the future study of otology.

Mr. CHEATLE thanked Professor Politzer for his kind expressions.

ENTERTAINMENTS.

On Wednesday evening the President entertained the members of the Congress at dinner in the Hotel Cecil. During dinner the Cecil Viennese Orchestra played a selection of music. After "The Queen," the PRESIDENT gave "Our Absent Confrères," coupling with it the name of Dr. Delstanche (Brussels), to which Dr. DELSTANCHE, junior, replied. "The Future of Otology" was next given, and then "Our Foreign Guests." This was replied to by Professor GRAZZI for Italy, Dr. MENIÈRE (France), Professor LUCAE (Germany), Professor POLITZER (Austria), Dr. SUNE-Y-MOLIST (Spain), Dr. ROHRER (Switzerland), Professor GUYE (Holland), Dr. CAPART (Belgium), Dr. VON STEIN (Russia), Dr. KNAPP (United States), Dr. SCHMIEGELOW (Scandinavia), Dr. BENNI (Poland).

On Friday evening, August 11th, the President and the Organisation Committee entertained their foreign guests at a dinner given in the Whitehall Rooms, Hôtel Métropole. During dinner a telegram was received from Dr. Delstanche (Brussels), acknowledging the award of the Lenval Prize, and thanking the Committee for their kind sympathy. The PRESIDENT gave "The Queen." The next toast, "The Otological Congress," was proposed by Dr. BENNI (Warsaw), and was responded to by Professor POLITZER. The PRESIDENT next proposed "Our Foreign Guests," to which Professor GUYE (Amsterdam), Dr. EWING (St. Louis, U.S.A.), Dr.

Pollak (Hungary), Dr. Capart (Belgium), Dr. Vincent (Denmark), Dr. Moure (Bordeaux), Professor Lucae (Germany), Dr. Moll (Holland), Dr. Sune-y-Molist (Spain), Dr. Uchermann (Norway), and Dr. Rohrer (Switzerland) replied. "The Health of the Ladies" was proposed by Dr. Noyes (U.S.A.), and responded to by Mr. Mark Hovell. Professor Grazzi next proposed a toast of gratitude and admiration to the President. Of gratitude, he said, for he little thought in the year 1878 that his teacher would become his friend twenty years afterwards; and he added his admiration for the profound studies which had placed Professor Pritchard in the front rank of the otologists of Europe and America, and raised him to the position of presiding over the largest Otological Congress that the world so far had ever seen. The President replied, expressing his indebtedness for the support he had received.

Saturday was devoted to an excursion to Windsor, Bray, and Marlow, which was attended by upwards of 150 members of the Congress. The party went by train to Windsor, and and by permission of Her Majesty the Queen were able to have a speeial view of Windsor Castle. From Windsor the members were conveyed by steam launches to Bray, where they were most hospitably entertained at Bray Court by Mr. George P. Field at luncheon. During the afternoon the band of the Scots Guard played, and the pipers performed at intervals strathspeys, reels, and dances. The party then went by launches from Bray to Marlow, and thence by special train to Paddington.

Dr. Macnaughton-Jones, the President of the British Gynæcological Society, entertained a number of foreign members of the Congress at dinner at the Cafe Monico on August 30th. After the toast of "The Queen" had been honoured, the Chairman gave "Greeting to our Foreign Visitors" This was acknowledged by Professor Politzer (Vienna), Professor Rohrer (Zurich), Professor Grazzi (Florence), the President of the last Congress, Dr. Hartmann (Berlin), Dr. Benni (Warsaw), Professor Uchermann (Christiana), and Dr. Ewing (St. Louis). Several of the guests referred to the fact that the host was as well known as an otologist as a gynæcologist. The toast of "Otology" was then given by Sir J. Crichton Browne, who dwelt on the growth in knowledge of diseases of the ear, and on the improvements in the prevention and treatment of such diseases. The toast was briefly acknowledged by Dr. Moure (Bordeaux). Finally, the toast of "The President of the Otological Congress, Dr. Urban Pritchard," was given in excellent English by Dr. Luc (Paris), and very briefly acknowledged by Dr. Pritchard. Dr. Benni made a very complimentary reference to the excellence of the organisation of the Congress, upon which he highly complimented Mr. Cresswell Baber (Brighton), the General Secretary. The evening was marked with much cordiality, and regret was expressed at the absence of Dr. Ward Cousins, the President of the British Medical Association, who was unexpectedly prevented from attending.

THE SALISBURY PLAIN MANŒUVRES.

The Work of the Royal Army Medical Corps.

Perham Down Camp.

On Friday, August 11th, a field day took place between the troops at Perham Camp and those at Bulford Camp. The actual fight commenced at 3 P.M., and "cease fire" sounded about 6 P.M. After this a march past took place before Viscount Wolseley. This took place in a bottom between Sidbury and Clarendon Hills and Dunch Hill.

Half the Field Hospital, and No. 1 Bearer Company from Perham left at 12.15 P.M., and marched to Bulford Camp, with orders to report themselves at 2.30 P.M. to the General Officer Commanding, and place themselves at his disposal.

The Staffordshire Volunteer Brigade at Bulford had their Bearer Company (50 officers, non-commissioned officers, and men) out as well, and these did all the preliminary drill—stretcher, camp kitchen, etc.—and on this occasion were lent transport and ambulance waggons. They did their work in a very creditable manner.

The Bearer Company followed the fighting line. The Field Hospital marked out a site at Manor Farm, South Tedworth. A dressing station was formed on Chalk-pit Hill, and a collecting station behind the Brigade in the Pennings at Sidbury Hill, They marched past with the other troops. That day the Bearer Company marched fully 17 miles, and not a man fell out.

The medical officers in charge of the Brigades, in company with the company officer, inspect the men's feet after each march, and now a shallow bath, 6 inches deep, has been made near the bathing place, and men can wash their feet with soap. Some men still soap their socks before a march, but mostly now a powder of equal parts of boric acid and Fuller's earth is used.

Bulford Camp.

This, like Perham, is mainly for infantry, though there are three batteries of artillery and a small body of cavalry. The S.M.O. is Lieutenant-Colonel Hughes, D.S.O., who is in charge of the stationary hospital, assisted by Lieutenant Fuhr. The officers of No. 15 Field Hospital are Major Baker, Major Younge, and Lieutenants Harvey and Taylor, with Lieutenant J. Hurst as Quartermaster. There is no bearer company here, but the brigades have surgeons attached to them—two to each—and these officers drill the regimental stretcher bearers. There is a Maltese cart, pair of panniers, and eight stretchers for each brigade carried in the cart with the following medical equipment: 1 pair field medical panniers, 1 medical companion and surgical haversack.

The R.A.M.C. officers of the 7th Brigade are Major Russell and Lieutenant Jones; of the 8th Brigade, Major Baird and Lieutenant Winkfield.

The Field Hospital goes through the same drill as that at Perham.

Invaliding.

With regard to the statement made last week that 54 men had been sent back from Perham, it should have been added that these men were sufferingfromspecific causes—rheumatism, etc., and were not likely to be fit for further service during these manœuvres. All serious cases, such as pneumonia, etc., are kept in the stationary hospital, and only when convalescent sent back.

Correction.

In the report published last week it should have been stated that the "bath held 155,000 gallons, and was made of waterproof canvas sheeting, turf, etc., and that the hospital was in a healthy situation on the highest ground in the camp.

LITERARY NOTES.

It is probably not generally known that George Stubbs, the great animal painter, perhaps the most successful painter of the horse who ever lived, began his career as an artist by making a series of eighteen drawings for Dr. Burton's *Essay towards a New System of Midwifery*. He was at that time only 21 years of age, and the drawings were made in York. Stubbs had been engaged a little earlier at a Lincolnshire farm house in a study of the anatomy of the horse, for which he made careful dissections. He encountered greater difficulties in his study of human anatomy, and the *Athenæum*, in the course of a review of Sir Walter Gilbey's *Life of George Stubbs, R.A.*, published recently, asserts on the authority of Mayer that the subjects were obtained "by that simple process of 'body-snatching' which was then greatly in vogue; the grave of a woman who died in childbirth was frequently opened."

La Semaine Médicale publishes a letter from a correspondent in the Balearic Isles who states that Orfila, the well-known chemist and medical jurist, who was a professor in the Faculty of Medicine of Paris and Dean from 1830 to 1848, has left behind him an autobiography. Orfila was a native of Mahon, Minorca, and the manuscript is in the possession of his heirs there. The autobiography, which it is stated relates the various events of his professional life, ought to contain some interesting reading, for Orfila was concerned in most of the *causes célèbres* which raised medico-legal questions in his time. The correspondent says that the autobiography would not only shed light on certain matters not fully known from other sources, but that it affords a picture of the medical world of Paris for half a century. There is no promise that the autobiography will be published, but if it answers at all to this description it ought to be allowed to see the light.

MEMBERS PRESENT AT THE ANNUAL MEETING.

THE following names of members and visitors attending the annual meeting were entered in the books provided for the purpose:

Abrahams, B. M.B., London
Agnew, Thomas, M.B., Clifton, Ontario
Ainley, D., L.R.C.P., Halifax
Alderson, F.H., M.D., Bournemouth
Aldridge, Charles, M.D., Plympton
Alexander, W., M.D., Liverpool
Allbutt, T. Clifford, M.D., Cambridge
Allen, H. M., F.R.C.P., Brighton
Allfrey, Charles H., M.D., St. Leonard's-on-Sea
Anderson, Mrs. Garrett, M.D., London
Anderson, H. B., M.D., Toronto, Canada
Anderson, R. B., F.R.C.S., London
Anderson, R. John, M.D., Newry
Andrews, Staff-Surgeon O. W., R.N., Gosport
Andriezen, W. L., M.D., London
Anthonisz, Lieut.-Colonel A. H., R.A.M.C., Gosport
Appleton, T. A., M.R.C.S., London
Archdell, M. T., L.R.C.P., Northampton
Archibald, John, M.D., Winton, Bournemouth
Armstrong, G. E., M.D., Montreal, Canada
Ashford, E.C., M.R.C.P., Bath
Austin, Surg. T., R.N., Sheerness

Baber, E. C., M.B., Brighton
Bain, W., M.D., Harrogate
Baker, Thomas, M.R.C.S., Waterlooville
Balding, B. D., F.R.C.S., Royston
Balfour, Mrs. Margaret Ida, M.D., Nahar, Punjab
Ball, J. A., M.B., Bromsgrove
Ballance, Hamilton A., M.D., Norwich
Bamford, C. R., M.R.C.S., Uttoxeter
Bampton, A. H., M.D., Ilkley in Wharfdale
Bantock, G. Granville, M.D., London
Barnes, Edgar G., M.D., Eye
Barr, James, M.D., Liverpool
Barratt, J. O. W., M.D., Wakefield
Barry, Chas. J., L.K.Q.C.P.I., London
Barton, J. K., M.R.C.P., London
Battle, W. H., F.R.C.S., London
Beach, Fletcher, M.B., London
Benham, R. Fitzroy, M.R.C.S., London
Bentham, A. L., M.R.C.S., Southsea
Berry, Frances May D., M.D., London
Berry, James, F.R.C.S., London
Bevan, W. L. P., M.D., Alton
Beveridge, R. E., M.B., Sunderland
Beverley, Michael, M.D., Norwich
Bickerton, T. H., M.R.C.S., Liverpool
Biden, C. W., M.R.C.S., Framlingham
Bidwell, L. A., F.R.C.S., London
Birkett, Herbert, M.D., Montreal
Birmingham, C. L., M.D., London
Black, J. Robert, M.D., Greenock, N.B.
Blacker, B., M.D., London
Blackman, Josiah G., M.D., Portsmouth
Blaikie, J. B., M.B., St. Boswell's, N.B.
Blaikie, R. Henry, M.D., Edinburgh
Blair, William, M.D., Jedburg, N.B.
Boileau, Lieut.-Col. J. P. H., A.M.S., M.D., Trowbridge
Bond, F. St. Quinton, M.R.C.S., Havant
Bonney, W. A., M.D., London
Booth, P. L., M.R.C.S., Barrow-in-Furness
Bower, David, M.D., Bedford
Boyd, John S., L.R.C.P., London
Boyd, Stanley, F.R.C.S., London
Bradbury, J. B., M.D., Cambridge
Bramwell, J. Milne, M.B., London
Brayn, Richard, M.R.C.S., Broadmoor
Brennan, M. A., L.R.C.P., Charlestown, co. Mayo
Brereton, J. G., L.R.C.P., Ryde, Isle of Wight
Breton, Fleet.-Surg. W. E., R.N., Portsmouth
Brierley, J. Brassey, M.D., Old Trafford
Briscoe, J. F., M.R.C.S., Alton
Broadbent, Sir W. H., Bart., M.D., F.R.S., London
Broadbent, Walter, M.D., Brighton
Brodie, T. Gregor, M.D., London
Bronner, Adolph, M.D., Bradford
Brook, W. Frederick, M.R.C.S., Fareham
Brookhouse, Jos. O., M.D., Nottingham
Brown, Alfred, M.A., M.D., Manchester
Brown, Geo., M.R.C.S., London
Brown, J., M.D., Bacup
Brown, Robert, M.D., Glasgow
Brown, Fleet-Surgeon William, R.N., L.R.C.P.Edin., Southsea
Browne, H. Langley, F.R.C.S., West Bromwich
Bruce, M., M.D., London
Brunton, T. Lauder, M.D., F.R.S., London
Bryant, Jno. Henry, M.D., London
Buck, C. W., M.R.C.S., Settle
Buck, T. A., M.B., Ryde
Buckell, A. E., M.D., Chichester
Buckell, E. H., M.R.C.S., Chichester
Buckell, L. M., M.R.C.S., Gosport
Buckle, Fleet-Surg. F., R.N., Southsea
Bunting, James, M.R.C.S., Torquay
Burkitt, J. C., M.D., Leicester
Burnet, R. W., M.D., London
Burney, W. C. S., L.K.Q.C.P.I., Greenwich
Burton-Fanning, F. W., M.D., Norwich
Bush, J. Paul, M.R.C.S., Clifton, Bristol
Butlin, Henry T., F.R.C.S., London
Byers, Professor J. W., M.D., Belfast

Cade, S. E. P., L.R.C.P., Southampton
Callaghan, J. Leslie, L.R.C.P., Coventry
Calwell, W., M.D., Belfast
Cameron, J. Wilson, M.B., Glasgow
Cameron, Professor Murdoch, M.D., Glasgow
Campbell, Alfred W., M.D., Liverpool
Campbell, Colin, M.R.C.S., Saddleworth
Campbell, H., M.D., London
Campbell, Robert, M.B., Belfast
Cantlie, J., M.B., London
Cargill, L. Vernon, F.R.C.S., London
Carling, Albert, M.B., Bristol
Carling, W., M.B., Southsea
Carter, G. Roe, M.R.C.P.I., London
Carter, R., M.D., Bath
Cassidi, F. R., M.D., Derby
Castor, Major R. H., I.M.S., London
Cattanach, J. G., M.B., Edinburgh
Caudwell, H., L.R.C.P., Woodstock
Cautley, Edmund, M.D., London
Cave, Edward J., M.D., Bath
Cayley, Dep.-Surg.-Gen., I.M.S., F.R.C.S., Weybridge
Charles, J. J., M.D., Cork
Charles, T. E., M.D., LL.D., Falmouth
Charlesworth, Lt.-Col. H., R.A.M.C., Portsmouth
Chilcott, Edward, M.R.C.S., Woolston, near Southampton
Childe, Charles P., F.R.C.S., Southsea
Claremont, Claude C., M.D., Southsea
Clark, Andrew, F.R.C.S., London
Clarke, J. J., M.B., London
Clift, S. Leonard, M.D., Bournemouth
Clippingdale, S. D., F.R.C.S., London
Coad, Stanley A., M.R.C.S., Luton
Coates, Honiton, M.D., Southsea
Cocking, W. T., M.D., Sheffield
Codrington, Oliver, M.D., London
Colbourne, Louis, M.B., Berkhamsted
Coles, Alfred C., M.D., Bournemouth
Collier, Mark P. M., M.B., London
Collins, E. Treacher, F.R.C.S., London
Collinson, F. W., M.B., Preston
Cole-Baker, L., M.D., Southsea
Colt, T. A., L.R.C.P., Southsea
Combe, F. Orloff, M.D., Witham
Coombs, M. L. B., L.R.C.P., Newport, I. of W.
Cook, H. G., M.D., Cardiff
Cooper, W. R., F.R.C.S.I., Southsea
Corlette, C. E., M.D., London
Costello, M. J. B., M.B., Ballindine, co. Mayo
Cousins, J. Ward, M.D., Portsmouth
Cowan, Inspector-Gen. M. W., R.N., M.D., Worcester
Creasy, L. E., M.R.C.P., London
Cree, James A., M.B., Paris
Crespi, A. J. H., M.R.C.P., Wimborne
Crighton, Alex., M.D., Brymbo
Crocker, H. Radcliffe, M.D., London
Crocker, James, M.R.C.S., Bingley
Cronk, Herbert G., M.B., Repton
Cross, E. J., M.R.C.S., St. Neots, Hunts
Cross, F. K., M.B., Clifton
Cudmore, Arthur W., F.R.C.S., London
Cuffe, Surg.-Gen. C. McD., C.B., L.R.C.P.Edin., Southsea
Cuffe, E. M., M.D., Lincoln
Cureton, Edward, M.D., Shrewsbury
Cuthbert, C. F., M.R.C.S. Gloucester

Dalton, Arthur J., L.R.C.P., Calverton
Dalziel, T. Kennedy, M.B., Glasgow
Dane, Lieut.-Col. A. H. C., I.M.S., Millbrook
Davey, Alex. G., M.D., Ryde, Isle of Wight
Davidson, A., M.D., Dorchester
Davidson, J. M., M.B., London
Davies, E. Clueglas, M.D., Lampeter
Davies, Eleazer, L.R.C.P., Glamorgan
Davies, S. H., L.R.C.P., London
Davies, Sydney, M.D., Bognor
Davis, Surg-Major-Gen. J., M.B., Southsea
Day, Major J. D., R.A.M.C., London
Delaney, R.A., L.R.C.S.I., Bexhill-on-Sea
Dempsey, A., M.D., Belfast
Dick, Major W., M.B., Netley
Dickson, T. H., M.B., London
Dickson, W.A., F.R.C.S.I., Bexhill-on-Sea
Dinnis, Staff-Surg. J. J., M.D., R.N., Portsmouth
Diver, E., M.D., London
Dixon, A. F., M.B., Cardiff
Dixon, W. E., M.D., London
Dodsworth, F. C., M.R.C.S., Gunnersbury
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THE PRESENT AND FUTURE WATER SUPPLY OF LONDON.

[FROM A CORRESPONDENT.]

The Risk of Scarcity.

There are few subjects of greater interest than that of the water supply. The City's ever-increasing population, its constant encroachments on and absorption of the outlying districts make it a problem that is yearly more and more difficult to solve, and yet must be faced and overcome.

A supply which a few years ago seemed ample, almost inexhaustible, is at the present moment, in the opinion of many, scarcely adequate for our immediate wants. According to numerous authorities, some political, some mercenary, and some simply perhaps purely meddlesome, there is in the near future a probability of a general drought in London compared with which last year's local scarcity in the East End would fade into insignificance.

Should the reports of a water famine, which have been published broadcast, be found only to have a slight foundation, it still leaves an uneasy feeling as to what would happen to over 5,000,000 of people should such an eventuality arise. Given a smaller average rainfall, and therefore a decreased flow of water in the Thames, the public jump to the conclusion, ably assisted by a certain section of the press, that their water supply is giving out altogether.

At the present moment there are two parties in the water world—the water companies and the London County Council. The former maintain that, with a normal rainfall, and on the completion of their new reservoirs, the Thames is competent to supply the needs of all London, not only at present but for the next thirty or forty years. The London County Council, on the other hand, urge that the Thames as a water supply is deficient both in quantity and quality, and as this state of things will continue to get worse instead of better, it is high time to turn to another source altogether for our supply.

The water companies, eight in number, have immense interests, are constantly increasing their storage reservoirs and filtering areas, and therefore the value of their property, and one would think that their interests should be identical with that of the population they supply.

Much of the abuse that has been showered on the metropolitan waterworks companies has been wholly undeserved; and although the inconvenience and ill-effects of the apparent scarcity seem sufficiently grave, it has doubtless been greatly exaggerated by agitators for their own purpose.

The Existing Water Supply of London.

London may be divided into two areas:

Greater London, or the area included within the metropolitan and city police districts comprising all parishes situate within a circle of fifteen miles radius from Charing Cross. Its total area is 701 square miles; the population in 1891 was 5,633,332, and in 1899 it is probably 5,703,404.

Water London is the area supplied by the eight metropolitan water companies, and has a total area of 620 square miles, extending from Amwell, near Hertford, in the north to Croydon in the south, and from Hampton in the west to Ilford in the east. Its population in 1891 was 5,500,000, and in 1899 it is about 5,800,000.

The average daily supply by the metropolitan water companies in 1897 amounted to 202,102,544 gallons, being an average of 35.43 gallons per head. The sources of supply are: (*a*) The Thames and the gravel beds adjacent to the river; (*b*) the Lee and springs in the Lee Valley; and (*c*) 32 wells in the chalk formation. In 1897 the above-named bulk of water was drawn from the sources in the following quantities, the percentages of the whole supply being given in parentheses: Thames, 112,178,641 gallons (55.51); Lee, 55,292,863 gallons (27.36); springs and wells, 34,488,016 gallons (17.06).

The following are the several waterworks companies supplying the metropolis:

East London derives its water from (1) the river Lee, (2) deep wells in the chalk at Walthamstow, Chingford, Lee Bridge, and Waltham Abbey; (3) the Thames at Sunbury; (4) springs at Hamdorth. Grand Junction, West Middlesex, and Southwark and Vauxhall have their intakes at Hampton. Chelsea and Lambeth receive their water at West Molesey. The New River Company derives its principal supply of water from the Lee, the Chadwell springs in Herts, and numerous deep wells.

The total permissible draught from the Thames is 150,000,000 gallons daily, apportioned as follows:

Company.	Allowable Daily Intake from the Thames.	Average Daily Supply.
	Gallons.	Gallons.
East London	10,000,000	—
Grand Junction ...	24,500,000	19,532,580
West Middlesex ...	24,500,000	20,337,019
Chelsea	22,000,000	12,283,789
Lambeth	24,000,000	23,688,305
Southwark and Vauxhall	45,000,000	33,767,401

The drainage area of the Thames above the intake of the water companies is 3,548 square miles, and the average yearly rainfall above the intakes for the past sixteen years—namely, from 1883 to 1898—has been 26.43 inches, which is equal to a daily supply of 800,000,000 gallons.

The daily average flow in the Thames for the last four years has been:

1138.7 millions of gallons in 1895
773.0 ,, ,, 1896
1374.4 ,, ,, 1897
642.3 ,, ,, 1898

and has, as a matter of fact, been equal to about 1,300 million gallons for a cycle of years, out of which, as remarked above, the greatest permissible daily quantity that can be taken by the water companies is 150 million gallons, which is a small proportion of the total volume of the Thames.

There has been a considerable increase of the population in each company's district for several years past, with a consequent increase of the daily amount of water used, but even with this there has never been any general scarcity; they have had in some instances to draw an extra quantity of water, but there has always been sufficient to meet the extra demand.

Of late years there have been unusually dry seasons, but there are no indications of a probability of their continuance, and the remedy may be found in efficient storage against the times of scarcity.

Below is a table of the rainfall and the volume discharged at Teddington Weir for sixteen years (1883 to 1897):

Rainfall for the Year.	Volume Discharged Teddington Weir.
Maximum, 33.31 inches	6,596,476.4 million gallons
Minimum, 21.32 ,,	234,421.0 ,, ,,
Average, 26.43 ,,	409,291.0 ,, ,,

The above table of the volume discharged at Teddington Weir shows the amount of water at that point after the companies have taken what they require some miles above. The minimum flow over Teddington Weir is supposed never to be below 200 million gallons per diem; it has fallen as low as 77 million gallons.

The Thames storage reservoirs are capable of containing 1,193 million gallons, but others calculated to hold an additional 4,983 million gallons, will, it is hoped, be completed in about four years. The total amount of water would be then 6,176 million gallons, which, allowing for loss by evaporation, etc., would work out roughly, allowing 35 gallons a head *per diem* to about forty days' supply. When this is an accomplished fact, I do not consider we will be in any danger of a scarcity of water. It will be ample not only for our immediate wants but for those of distant years to come, with which the present generation will certainly have no concern.

The storage and filtering areas available in the case of each company are shown on p. 496:

Names of Companies.	Capacity of Subsidence Reservoirs.		Filters.	
	Cubic Contents.	Number of Days' Supply.	Area.	Area per Million Gallons of Average Daily Supply
	Gallons.		Acres.	Acres.
Chelsea	140,000,000	9.0	8	0.65
East London ...	1,215,000,000	29.6	31	0.76
Grand Junction ...	64,000,000	3.3	21⅝	1.11
Lambeth	128,000,000	5.4	12½	0.52
New River	168,100,000	4.7	16⅝	0.46
Southwark and Vauxhall	136,000,000	4.1	20¾	0.61
West Middlesex ...	397,500,000	19.5	15	0.74

It is observable, that with the exception of the East London and West Middlesex, the remaining companies are working at a distinct disadvantage.

The Growth of London.

It is maintained by a considerable number of authorities that what may be sufficient for the wants of the present population will not be anything like enough for that of, say, 1930. To-day London contains nearly 6,000,000 people. It was estimated by Lord Balfour's Commission that the population of Greater and Water London will in the year 1930 reach the stupendous total of between 11 and 12 millions, and that the daily quantity of water necessary for this population will be 393,750,000 gallons. This calculation is based upon the increase per annum being about 18 2 per 1000. The London County Council put these figures somewhat higher.

To meet these, to say the least, somewhat speculative requirements, Lord Balfour's Commission stated that the following supplies could be provided:

The Thames	300.0	million gallons.
The Lee	52.5	,, ,,
Wells in the Lee Valley	40.0	,, ,,
Wells in Kent Company's District ...	27.5	,, ,,
Total.	420.0	,, ,,

or sufficient with adequate storage to supply a population of 12 millions at 35 gallons per head. Now, in the first place, there is no record in ancient or modern times of any town with this number of inhabitants, and in the second it is an extremely doubtful contingency, not to say without the bounds of human probability, that this city should for the first time in the world's history take upon itself to reach such an exceptional scale of magnitude.

The Welsh Scheme.

The London County Council undoubtedly hold a strong hand in their scheme for a "pure Welsh water supply for London." Their idea is to take over the control of the metropolitan water companies, and at the same time obtain a perpetual abundance of pure water from the Welsh hills.

This they propose to do by the acquisition of a catchment area in Wales of 170 square miles, the construction of certain storage reservoirs by the utilisation of the waters of the river Yrfon. The Council proposes to construct reservoirs on the Yrfon river, a tributary of the Wye; on the Towy, which flows into Carmarthen Bay; on the Upper Wye and on the Chwefri, a tributary of the Yrfon; with a compensation reservoir on the Doethie, a tributary of the Towy.

Connections are intended to be made between the several reservoirs, and an aqueduct to carry some 210 million gallons of water a day; to pass through or near Builth, Hay, Dorstone, Abbeydore, Much Dewchurch, Harewood, Ross, Longhope Wooton, Great Barrington, Charlbury, Heath, Padbury, Chedington, Hemel Hempstead, and Abbots Langley; to deliver the water into a service-reservoir proposed to be constructed at Elstree in Hertfordshire, from which place the water would be forwarded through a conduit to filter beds at Edgware.

The drainage area contributing to this supply is said to be about 200 square miles, more or less, while if the whole available drainage area be taken into account, it is 488 square miles. If the rainfall available for supply and compensation be taken at 28.5 inches over the whole area, that for supply alone will be 21.4 inches, or 415 million gallons a day. Here we have what will be an absolutely pure water; at the same time it must not be forgotten that the land to be appropriated has at present a fair population, and in the construction of works several villages with their churches and graveyards will have to be submerged.

The ultimate risks of pollution are, however, almost *nil*, and this can never be said of the Thames, no matter how careful we may be in our endeavours to prevent contamination of the river.

It is proposed to bring the water from the Welsh districts in two instalments, and in the meantime to continue using the Thames, in all probability to take always a certain amount from it, regarding it as an alternative or contributory source of supply, if, for no other reason than the undesirability, that the metropolis should be dependent upon one source of supply, which might be liable to accidental interruption.

There is always the danger of a breakdown from one cause or another. If we suppose our supply to be cut off by frost, the consequences would be appalling. The New River is not an analogous case; it is not so far north, and is only 26 miles long, whereas the London aqueduct will be open for quite 100 miles.

These two instalments will be about 200 million gallons each, and will come from the Wye and the Usk and Llangorse reservoirs, costing over £38,000,000, and will, it is said, provide for the contingencies of the next fifty years.

The Welsh water will be very soft, and as the action of this kind of water on lead piping is well known, it is fraught with a certain amount of danger, the importance of which we can not afford to overlook.

Thames Water and Disease.

The solution of the difficulties with regard to the Thames supply for London may be found in the provi vision of increased storage, settling tanks, and reservoirs which would capture and hold the surface waters of a rainy period, at present allowed to run into the sea; but the same holds good for the Welsh waters. The question on either side is one of storage.

In the Welsh scheme advantage must certainly be taken, as in the Thames Valley, of the flood waters, and they greatly excel those of the Thames in purity, but they will have to be stored and subsequently filtered.

Both Sir William Crookes and Professor Dewar have said that flood water might be taken without the least harm to anybody, provided it underwent efficient filtration, and it has been stated that for thirty years no waterborne disease has been traced to the London water supply.

Mr. Shirley Murphy found that during a period of four consecutive years, including 1894, the year of the great floods in the Thames district, with the increase of flood water there was a distinct increase in the notifications of typhoid fever, and a corresponding increase of the organic impurity in the water, and the amount of oxidisable organic matter as determined by Tidy's process. This may have been only a coincidence, but still it is a curious one. The time—four years—was not long enough; observation through a larger number of years would be necessary before we would be able to arrive at any positive conclusion. It may be asked why have not continuous records been taken including other years of flood? Simply because the previous floods occurred before the Infectious Diseases Notification Act came into force.

I say "notification" as it is quite impossible, in a city such as London and its population, to judge from the death-rate whether typhoid fever has been waterborne or not. At the same time, it must be allowed that London enjoys a far smaller death-rate from typhoid fever due to any cause than the large majority of other provincial towns, including Liverpool, Birmingham, and Glasgow with their lake-water supplies.

Pros and Cons.

Here I have endeavoured to show the condition of the water supply of London of the present time, the provision that is being made for the future, and an alternative scheme for obtaining an entirely fresh supply from another source.

Whether it will be wise to give up the existing supply which has done excellently in the past, and will doubtless continue to do so in the future for another which cer-

tainly promises much, but at enormous cost, I will not here discuss.

It is a question that is an all-absorbing one at the moment, and has been threshed out by two Royal Commissions, aided by a cloud of witnesses, including most of the experts of the day.

To epitomise the matter, I will take the arguments on both sides:

For the Present London Supply.

1. A supply of excellent water at our very door.
2. No waterborne disease has been traced to it for thirty years, and it has stood the test of its consumption by many millions of people for the same period.
3. It is bacteriologically pure after filtration.
4. It is neither economically or commercially too hard.
5. It has no plumbo-solvent effect on lead piping.
6. More strenuous efforts are made every year to divert sewage and to prevent contamination.
7. The actual decrease of pollution.
8. The present storage on the Thames is being increased to meet the demand, and, as this grows, can be carried on by stages, or be delayed or stopped entirely as circumstances may dictate.
9. The enormous expense laid on the ratepayers by the construction of aqueducts and reservoirs in Wales.
10. The possibility of a breakdown in the aqueduct itself.

For the Welsh Scheme.

1. The increasing population of London and the necessity for a further supply, as what may be sufficient now will not be so for the future.
2. The increasing riparian population above the intakes of the water companies, with the additional risks of pollution.
3. The prejudice existing against drinking a water which is liable to pollution, however perfect the subsequent purification may be either by natural or artificial means.
4. A pure water with scarcely any risk of pollution.
5. An abundant and inexhaustible supply.
6. A soft water, economical with regard to soap, and commercially expedient for manufactories, boilers, etc.
7. There is always the risk of an epidemic in our present supply.
8. With the intercommunication between the water companies it would be difficult to trace and localise any outbreak to the failure and fault of any one particular water company.
9. As to the expense, the public might be induced to take it up and ultimately form the scheme into consols.
10. If advantage is not taken now of a supply from Wales some other northern or midland town may do so, and London will have lost its opportunity.

THE NEW VACCINATION ACT IN OPERATION.

The Shilling Fee.

Dr. A. R. Darley (West Haddon, Rugby) sends us copies of correspondence with the Local Government Board in regard to the payment of the shilling fee in respect of children whose birth was registered before August 31st, 1898, but whose names were included in the lists sent by the vaccination officer to the public vaccinator. The guardians of the Daventry Union disputed these payments, and on writing to the Local Government Board were informed that:

"Paragraph (*a*) of Article 3 (1) of the Vaccination Order, 1898, does not contemplate the payment to a public vaccinator of a fee under that paragraph in respect of any child whose birth was registered before August 31st, 1898."

As we have pointed out before, the vaccination officer is not supposed by his instructions to include such cases in his official list. If, however, the child is vaccinated by the public vaccinator, only the law courts can decide whether Article 3 (2) provides for what was not contemplated by Article 3 (1) (*a*), that is, whether the public vaccinator is entitled to an extra shilling or not.

J. S. R.—The above paragraphs will, we believe, answer our correspondent's first question. As to his second question, it is quite clear from the Third Schedule of the Vaccination Order, 1898, Sections III and IV, that the public vaccinator may use any calf glycerinated lymph supplied by a person who keeps an exact record of its source, unless the person having the custody of the child requires that issued by the Local Government Board to be used.

B. asks whether a Board of Guardians under contract is not obliged to pay 1s. for every birth entered on Form H by the vaccination officer.

*** If the cases have been wrongly included in the list by the vaccination officer, as for example would be the case if the children were registered before August 31st, 1898, the guardians are not liable to pay the 1s. fee. For every case provided for by the Instructions to Vaccination Officer, paragraph 6 (*a*), and for children not included in the lists but vaccinated by the public vaccinator himself, the fee is payable.

Defective Calf Vaccine.

A Disgusted Public Vaccinator writes: Many public vaccinators have the same experience as Dr. Rice Morgan. From the answers to questions in the House of Commons on August 8th I gather that the demand for National Vaccine Establishment calf lymph largely exceeds the supply, and that, consequently, the material is "watered down" to such an extent as to be worthless. The earlier issues were all that could be desired, but now, even when one or two scarifications are successful, I have found the resulting scars to be anything but satisfactory. As I decline any longer to be at the mercy of the officials of the National Vaccine Establishment I have fallen back on Dr. Chaumier's lymph, which has never failed me, and I would advise Dr. Morgan to do the same. If he can string together four of five cases in a day, one tube, which costs but tenpence, will suffice. When once opened it should be kept in carbolised wool, and destroyed at the end of the day.

Twenty-Seven Years a Public Vaccinator writes: It is pitiable to read the letters in your last issue. The Local Government Board are well acquainted with the general practitioner, and are exploiting him as usual. Any other body of men would have struck long ago, but we have to take what is offered us, and should have had to put up with even half that amount for fear that our starving brother next door should get a patient. Having got from us a hard and fast contract they are now asking us to make bricks without straw. Our only remedy is to expend some of our hardly-earned money in calf vaccine from private sources on which we can rely until "the careful investigation" spoken of in Parliament is finished.

An Indignant Public Vaccinator writes: The official who posted up Mr. T. W. Russell for his replies in the House must have had his tongue in his cheek. It is well known that the National Vaccine Establishment is unable to properly supply the demand for calf lymph, and that the lymph is therefore watered down. The whole thing is disgraceful, and the repeatedly unsuccessful attempts at vaccination are rapidly bringing the system into disrepute. I am told that the language of some of the "slum" mothers is frightful. I hope "Mr. Louis de Redmount" is still contented.

G. P. writes: If Dr. Rice Morgan will use Dr. Chaumier's calf lymph at a cost of about threepence per case he will find his difficulties at an end.

Vaccination Order—Form G.

A. F. M. P.—Article 30 (6) of the Vaccination Order, 1898, says that "The request by a parent, or other person having the custody of a child, under subsection (2) of Section 1 of the Act of 1898, *may* be in Form G. or to the like effect."

The Clerk of the Guardians of the Dudley Union advised his Board "that no payment under Article 3, 1 (*a*) of the new Vaccination Order should be made to public vaccinators unless the names entered on the register are included in the H. form, or that G. form is produced by the vaccinator to the guardians."

An appeal to the Local Government Board brought a reply to the effect that "the use of Form G. of the Vaccination Order, 1898, is not compulsory, and that a verbal request to vaccinate is sufficient for a public vaccinator to act upon. In cases where no request in writing has been made, the register would appear to supply the best evidence of the public vaccinator's claim."

CONTRACT MEDICAL PRACTICE.

Medical Contract Work in the County of Durham.

K., in the course of a letter on this subject, writes: I have sometimes talked with working men as to the unreasonableness of those placards one occasionally sees in manufacturing districts urging plasterers, joiners, and others to keep away till some dispute was settled. I have asked them if they would not think it unreasonable if medical men issued placards of that sort, especially during an epidemic. When I did so, I did not for a moment ever suppose that week after week a similar advertisement would appear in the British Medical Journal asking medical men to keep away from Durham till the colliery doctors got what they were asking for.

The question how to obtain reasonable incomes and yet give proper attention and medicine to those earning a small wage will always be difficult of solution. The high rents and small wages paid to many in the metropolis and elsewhere render the question far more difficult of solution than in the north, and yet, though I know many of us are attending our poorer patients at an even less late than sixpence a fortnight, I have as yet seen no advertisements nor placards asking medical men to keep away from special districts in the south. Let the colliery surgeons of Durham cease to hint at boycotting, and employ their brains to work out some method whereby they can be saved any amount of needless work, and it will be good for themselves and an untold blessing to those among whom they practise.

Lightning Stroke on the March.—During the march of the 2nd Battalion Cheshire Regiment from Limerick to Thurles, for the Irish autumn manœuvres, two non-commissioned officers of the regimental band and seven privates were struck by lightning. The non-commissioned officers who were injured were sent to the military hospital at Limerick; one of them has, as the result of shock, been treated for paralysis of the legs, and the left side also is affected.

THE PLAGUE.

APPEARANCE IN PORTUGAL.

Oporto.—The existence of bubonic plague is now officially declared by the Lisbon authorities to exist at Oporto. In previous issues of the BRITISH MEDICAL JOURNAL we notified the fact that there was a suspicious disease present in Portugal, and that the authorities were withholding any official announcement of the state of affairs. It now appears that the "suspicious disease" which has existed at Oporto for two months, is really plague. There may be some consolation in the fact that the cases are not numerous nor is the disease spreading. This is confirmed by the fact that the death-rate of Oporto is not abnormal. As usual, notwithstanding the official announcement, many residents in Oporto and throughout Portugal are sceptical as to the real existence of plague, and are prepared to deny its presence. This is the usual condition of things, as in every country and town where plague has appeared we find persons ready to suppress the truth and deny the possibility of its presence. The appearance of plague is ascribed to packages from Bombay landed in Oporto early in July, 1899. The latest advices mention 36 cases of plague and 6 deaths; but Reuter's Lisbon correspondent states that on August 11th "several cases of plague have been reported in the central quarter of Oporto. It is said that since the first outbreak of the epidemic there have been 26 cases and 11 deaths." All ports in the Azores are closed to Portuguese vessels, and the Brazilian Government has imposed quarantine on vessels which left Portuguese waters after July 1st. The Spanish authorities are in the greatest perturbation, however, and they have good reason to be alarmed. Many Spanish families are at watering places in Portugal, and the authorities are afraid that their return may carry plague to Spain. The sanitary authorities in Spain have decided to impose quarantine on arrivals from all Portuguese ports, to establish five lazarettos on the frontier, and to interrupt all communications both for goods and passengers between Spain and Portugal until these lazarettos are prepared.

Mauritius.—The Colonial Office has received information that 40 cases of plague and 32 deaths occurred in Mauritius during the past week.

Alexandria.—A telegram from Alexandria dated August 13th reports that after a week's interval 1 fatal case of plague was notified on August 10th, and that 3 new cases and 2 deaths from plague have occurred during the week ending August 13th. A report dated July 25th, 1899, has been addressed to the Constantinople Sanitary Administration by the Ottoman sanitary delegate (Dr. Duca) in Egypt on the supposed origin of the present outbreak of plague in Alexandria. Dr. Duca states that Dr. Doxara in January, 1899, saw a case of buboes with fever in Alexandria. During the ensuing months several such cases occurred, but he did not draw the attention of the Government to the fact. When the plague, however, was officially declared in May, 1899 Dr. Doxara reported the cases of bubo with fever he had observed during the previous months. The cases were sporadic, of a mild type, and chronic in their nature. Dr. Doxara states that owing to the slowness of the spread it might appear that the mild type of cases he mentions were not plague nor in any way connected with it, but he draws attention to the fact that in all the epidemics of plague occurring between 1835 and 1843 in Alexandria, similar mild cases of plague always preceded the outbreaks of true plague. Dr. Doxara remarks that there has been direct communication between Bombay by steamers of the Italian "Rubattino" line ever since November, 1898. Many passengers were landed from these boats—including the passengers of the ss. *Mehalla*, on board which a stoker developed plague—and went to various parts of the country. In addition thousands of sacks of grain from Bombay were landed on the wharves at Alexandria during the early part of this year. Dr. Doxara is of opinion that the present outbreak of plague has not occurred suddenly, but that the disease has been present in a mild form (pestis minor) for several months before it was diagnosed or officially declared to exist in Egypt. As a guide to the period of the year at which plague is apt to prevail most seriously in Alexandria, the following extracts from observations extending over ten years 1834-43 is interesting: January, 329; February, 1,112; March, 4,952; April, 2,936; May, 1,799; June, 547; July, 216; August, 100; September, 15; October, 18; November, 63; December, 195. It would appear that when plague prevails in Alexandria it is wont to reach its maximum of virulence during the spring and to subside almost to vanishing point in the autumn.

Hong Kong.—The number of new cases of plague which occurred in the colony during the week ending August 14th was 20. There were 23 deaths in the same period.

China.—A telegram to Shanghai, from the British Consul in the treaty port of Nieuchwang, North China, reports that plague has appeared there.

The Gold Coast.—Mr. Geo. J. Bridges, who has just returned from the Gold Coast, is reported during an interview to have said that "Every effort is being made by the authorities to prevent the importation into the Gold Coast of the fatal type of sickness, supposed to be bubonic plague, prevailing in the adjoining French colony." A French priest with whom Mr. Bridges travelled is reported to have said that 13 of the fathers and sisters, and upwards of 40 European merchants and officials, had succumbed within the last three months.

ASSOCIATION INTELLIGENCE.

NOTICE OF THE NEXT QUARTERLY MEETING OF COUNCIL.

A MEETING of the Council will be held on October 11th, 1899. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, September 21st, 1899.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

EAST ANGLIAN BRANCH.—The autumnal meeting of this Branch will take place at Felixstowe on Thursday, September 28th, 1899, under the presidency of Dr. E. L. Fenn. It is requested that gentlemen desirous of joining the Association or Branch, and members willing to read papers or contribute cases to the meeting, will communicate at once with Dr. Barnes, Eye. Members who have not yet paid their subscriptions for the current year will oblige by sending them to one of the Honorary Secretaries, EDGAR G. BARNES, M.D., Eye; MICHAEL BEVERLEY, M.D., Norwich; BENJAMIN HUGH NICHOLSON, M.B., Colchester.

OXFORD AND DISTRICT BRANCH.

THE annual meeting of this Branch was held at Stow-on-the-Wold on Friday, July 21st; the PRESIDENT (Mr. E. Dening) in the chair.

Election of Officers.—The following were elected for the year 1899-1900: *President-Elect:* Sir J. Burdon Sanderson, F.R.S. *Vice-President:* Dr. Brooks. *Honorary Treasurer and Secretary:* Dr. Collier. *Representative on the Council and Parliamentary Bills Committee:* Dr. Cheatle. *Council:* Drs. Rice (Sutton Courtney), Freeborn (Clifton Hampden), Holmes (Steeple Aston), Alden (Oxford), Yelf (Moreton-in-the-Marsh), Edwards (Banbury), Slade Baker (Abingdon), Whitelocke (Oxford), Style (Moreton-in-Marsh).

Luncheon.—The President (Mr. Dening) entertained the members at luncheon at the Talbot Hotel.

President's Address.—After luncheon the PRESIDENT gave an address on the Diseases most Prevalent in the District.

Vote of Thanks.—A vote of thanks was passed to the late President (Dr. Brooks), and also one to Mr. Dening for his address.

PROCEEDINGS OF COUNCIL.

AT a meeting of the Council held in the Council Chamber, Town Hall, Portsmouth, on Tuesday, August 1st. Present:

Dr. ROBERT SAUNDBY, LL.D., President of Council, in the Chair.

Dr. CHARLES PARSONS, Treasurer.

Dr. JAMES BARR, Liverpool.
Dr. MICHAEL BEVERLEY, Norwich.
Dr. J. BRASSEY BRIERLEY, Old Trafford.
Mr. H. LANGLEY BROWNE, West Bromwich.
Mr. HENRY T. BUTLIN, London.
Mr. ANDREW CLARK, London.
Dr. H. RADCLIFFE CROCKER, London.
Dr. T. M. DOLAN, Halifax.
Brigade-Surgeon-Lieutenant-Col. E. F. DRAKE-BROCKMAN, London.
Mr. GEORGE EASTES, M.B., London.
Dr. W. A. ELLISTON, Ipswich.
Dr. JOHN H. GALTON, Upper Norwood.
Dr. BRUCE GOFF, Bothwell.
Dr. J. GROVES, Carisbrooke.
Dr. HENRY HANDFORD, Nottingham.
Mr. T. R. JESSOP, Leeds.
Mr. EVAN JONES, Aberdare.
Dr. P. SYDNEY JONES, London.
Mr. JORDAN LLOYD, Birmingham.
Mr. H. J. MANNING, Salisbury.
Dr. J. W. MILLER, Dundee.
Dr. ISAMBARD OWEN, London.
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. FRANK M. POPE, Leicester.
Dr. EDWIN RAYNER, Stockport.
Dr. G. E. RENNIE, London.
Mr. H. BETHAM ROBINSON, London.
Dr. JOHN ROLSTON, Stoke, Devonport.
Dr. ALFRED SHEEN, Cardiff.
Dr. E. MARKHAM SKERRITT, Clifton.
Mr. HENRY STEAR, Saffron Walden.
Dr. J. ROBERTS THOMSON, Bournemouth.
Dr. W. J. TYSON, Folkestone.

The minutes of the last meeting having been printed and circulated, and no objection received, were taken as read and signed as correct.

Read letters of apology for non-attendance from the President, Dr. L. W. Sedgwick, Dr. G. H. Philipson, Mr. T. Vincent Jackson, Sir William T. Gairdner, Mr. J. D. Harries, Mr. R. H. Kinsey, Dr. Henry Barnes, Dr. R. W. Philip, Dr.

Bridgwater, Dr. J. C. McVail, Dr. Jones Morris, and Dr. W. Russell.

The President of Council reported that he had received a letter from Sir Thomas Grainger Stewart announcing that he was unable to be present at the annual meeting through illness.

Resolved: That the Council expresses its regret at the absence of the President, Sir Thomas Grainger Stewart, through ill-health, and its sympathy with him during his illness, and hopes that he will very shortly be restored to health.

Read acknowledgment from the London Chamber of Commerce to the resolution of the Council on the subject of Secret Commissions.

Read acknowledgment of the Liverpool School of Tropical Medicine for the grant of £100.

Read communication from the Public Health Department, Melbourne, asking for permission to reprint 5,000 copies of a pamphlet, entitled *Facts about Small-pox and Vaccination*.

Resolved: That permission be accorded, with a request that in any republication it should be stated that the pamphlet was issued by the British Medical Association.

Read letter from the United Kingdom Police Surgeons' Association, asking the Council to appoint a Joint Committee to consider the subject of fees to medical witnesses.

Resolved: That Dr. Barr, Mr. Andrew Clark, and Dr. Dolan be appointed a Committee to consider the subject.

Read communication from some lady memorialists on the question of venereal diseases.

Read letter from Dr. Mullick on the question of the registration of medical practitioners in India.

The election of candidates was then considered.

Resolved: That the 53 candidates whose names appear on the circular convening the meeting, together with the 18 candidates on the supplementary list, be and they are hereby elected members of the British Medical Association.

The President of Council reported upon the notices of motion for the annual meeting, and stated that he had ruled certain of them out of order.

Resolved: That the action of the President of Council be approved.

Read list of attendances of members of Council for the past twelve months as follows:

	Total Attendances.
Stewart, Sir T. Grainger, M.D., F.R.S.Edin., President	0
Cousins, Dr. J. Ward, Portsmouth, President-Elect	6
Saundby, Dr. R., LL.D., Birmingham, President of Council	9
Parsons, Dr. Charles, Dover, Treasurer	9
Acland Sir H. W., K.C.B., M.D., F.R.S., Oxford, Vice-President	0
Banks, Sir J. T., M.D., Dublin, Vice-President	0
Barnes, Dr Henry, Carlisle, Vice-President	2
Barr, Dr. James, Liverpool, R.	9
Barrow, Mr. B., F.R.C.S., Ryde, Vice-President	1
Batten, Dr. R. W., Gloucester, R.	2
Beverley, Dr. M., Norwich, R.	8
Bridgwater, Dr. T., LL.D., Harrow-on-the Hill, Vice-President	2
Brierley, Dr. J. Brassey, Old Trafford, R.	7
Browne, Mr. Langley, F.R.C.S., West Bromwich, R.	8
Butlin, Mr. Henry T., D.C.L., F.R.C.S., London, Vice-President	3
Campbell, Dr. John, Belfast, R.	3
Cantlie, Mr. James, London, R.	5
Carter, Dr. Alfred H., Birmingham	4
Clark, Mr. Andrew, F.R.C.S., London, R.	9
Corby, Professor Henry, Cork, R.	[illegible]
Craig, Dr. James, Dublin, R.	[illegible]
Crocker, Dr. H. Radcliffe, London, R.	9
Crowe, Dr. G. W., Worcester, R.	2
Cuming, Dr. J., Belfast, Vice-President	0
Deas, Dr. P. Maury, Exeter, R.	0
Dickinson, Dr. E. H., Liverpool, R.	4
Dolan, Dr. T. M., Halifax, R.	4
Donaldson, Mr. E., Londonderry, R.	0
Drake-Brockman, Brigade-Surgeon-Lieutenant-Colonel E. F., F.R.C.S., London, R.	6
Drummond, Dr. D., D.C.L., Newcastle-on-Tyne, R.	2
Dyson, Dr. W., Sheffield, R.	4
Eastes, Mr. George, M.B., London, R.	8
Edwards, Dr. W. T., Cardiff, Vice-President	0
Elliston, Dr. W. A., Ipswich, R.	[illegible]
Fergus, Dr. Freeland, Glasgow, R.	[illegible]
Finlay, Dr. David W., Aberdeen, R.	7
Foster, Sir Walter, M.D., D.C.L., LL.D., M.P., London, Vice-President	[illegible]
Fowler, Mr. R. S., Bath, R.	[illegible]
Fox, Dr. E. Long, Clifton, Vice-President	0
Gairdner, Sir William T., K.C.B., M.D., F.R.S., Glasgow, Vice-President	0
Galton, Dr. J. H., Upper Norwood, R.	8
Godson, Dr. A., Cheadle, R.	7
Goff, Dr. Bruce, Bothwell, R.	7
Gomes, Dr. C. J., Edinburgh, R.	0
Gooding, Dr. C. G., Deptford, R.	3
Grant, Dr. Ogilvie, Inverness, R.	6
Groves, Dr. J., Carisbrooke, R.	9
Handford, Dr. H., Nottingham, R.	8
Harries, Mr. John D., Shrewsbury, R.	5
Holman, Dr., London, Vice-President	0
Jackson, Mr. T. Vincent, Wolverhampton, R.	5
Jessop, Mr. T. R., F.R.C.S., Leeds, R.	8
Jones, Mr. Evan, Aberdare, R.	7
Jones, Dr. P. Sidney, London, R.	4
Lindsay, Dr. J. A., Belfast, R.	3
Lloyd, Mr. Jordan, F.R.C.S., Birmingham, R.	5
Maclaren, Dr. R., Carlisle, R.	1
Macnamara, Mr. N. C., F.R.C.S., London, Vice-President	6
McVail, Dr. J. C., Partick, R.	5
Manning, Mr. H. J., Salisbury, R.	5
Miller, Dr. J. W., Dundee, R.	8
Moore, Dr. John William, Dublin, R.	5
Morier, Dr. C. G. D., London	4
Morris, Mr. W. Jones, Portmadoc, R.	5
Nicholson, Mr. R. H. B., Hull, R.	[illegible]
Norton, Dr. J., Bagnalstown	0
O'Dwyer, Surgeon-General, T. F., M.D., Aldershot, R.	5
Owen, Dr. Isambard, London, R.	4
Parkinson, Mr. C. H. W., Wimborne Minster, R.	9
Philip, Dr. R. W. Edinburgh, R.	5
Philipson, Dr. G. H., D.C.L., Newcastle-on-Tyne, Vice-President	1
Phillips-Conn, Dr. H. H., Reading, R.	4
Pope, Dr. F. M., Leicester, R.	8
Rayner, Dr. Edwin, Stockport, R.	8
Rennie, Dr. G. E., London, R.	2
Robinson, Mr. H. B., M.S., London, R.	8
Roddick, Dr. T. G., Montreal, Vice-President	0
Rolston, Dr. John, Devonport, R.	6
Russell, Dr. W., Edinburgh, R.	6
Sedgwick, Dr. L. W., London, R.	5
Sheen, Dr. A., Cardiff, R.	5
Shuttleworth, Dr. G. E., Richmond Hill, R.	8
Skerritt, Dr. E. Markham, Clifton, R.	5
Somerville, Dr. R., Galashiels, R.	0
Stear, Mr. Henry, Saffron Walden, R.	6
Thomson, Dr. J. Roberts, Bournemouth, Vice-President	2
Tyson, Dr. W. J., Folkestone, R.	7
Urquhart, Dr. A. R., Perth, R.	4
Verrall, Mr. T. J., Brighton, R.	6
Wade, Sir Willoughby, Birmingham, Vice-President	[illegible]
Waters, Dr. A. T. H., Liverpool, Vice-President	0
Wheelhouse, Mr. C. G., F.R.C.S., Filey, Vice-President	[illegible]
White, Mr. Joseph, D.C.L., F.R.C.S., London, Vice-President	1
Williamson, Mr. G. E., F.R.C.S., Newcastle-on-Tyne, R.	3
Winterbotham, Dr. W. L., Bridgwater, R.	6
Woodcock, Dr. S., Old Trafford, R.	[illegible]

R=Branch Representative.

Resolved: That the report of attendances of Council be received and entered on the minutes and printed in the JOURNAL in accordance with By-law 21.

At a meeting of the Council held in the Council Chamber, Town Hall, Portsmouth, on Wednesday, August 2nd. Present:

Dr. Robert Saundby, LL.D., afterwards Dr. J. Roberts Thomson (President of Council) in the Chair.

Dr. John Ward Cousins, President.

Mr. Andrew Clark, Treasurer.

Dr. James Barr, Liverpool.
Dr. Michael Beverley, Norwich.
Dr. J. Brassey, Brierley, Manchester.
Mr. Langley Browne, West Bromwich.
Mr. Henry T. Butlin, London.
Dr. W. Calwell, Belfast.
Mr. James Cantlie, London.
Dr. H. Radcliffe Crocker, London.
Dr. T. M. Dolan, Halifax.
Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman London.
Mr. George Eastes, M.B., London.
Dr. W. A. Elliston, Ipswich.
Dr. John H. Galton, Upper Norwood.
Dr. Bruce Goff, Bothwell.
Dr. David Goyder, Bradford.
Dr. J. Groves, Carisbrooke.
Dr. Henry Handford, Nottingham.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Mr. Jordan Lloyd, Birmingham.
Mr. H. J. Manning, Salisbury.
Dr. J. W. Miller, Dundee.
Dr. C. H. Milburn, Hull.
Dr. James Murphy, Sunderland.
Surgeon-General T. F. O'Dwyer, Aldershot.
Dr. Isambard Owen, London.
Mr. C. H. Watts Parkinson, Wimborne.
Dr. Charles Parsons, Dover.
Dr. Frank M. Pope Leicester.
Mr. H. Betham Robinson, M.S. Lond., London.
Dr. John Rolston, Devonport.
Dr. Alfred Sheen, Cardiff.
Dr. G. E. Shuttleworth, Richmond.
Dr. E. Markham Skerritt, Clifton.
Mr. Henry Stear, Saffron Walden.
Dr. W. J. Tyson, Folkestone.
Dr. W. L. Winterbotham, Bridgwater.

The minutes of the last meeting having been printed in the *Daily Journal* were read and signed as correct.

Read letters of apology for non-attendance from Dr. McVail, Mr. Jones Morris, and Dr. Sandford.

Read letter from Dr. Glover respecting the proposed formation of a Conciliation Board.

Mr. Garrett Horder attended the Council Meeting with a deputation, consisting of Dr. Maurice G. Evans (Cardiff), Dr. James McGregor (Southsea), Dr. W. Carling (Portsmouth), Dr. R. H. Shaw (Great Yarmouth), Dr. A. H. Moxon (Great Yarmouth), Dr. F. Lord (Southsea), Dr. L. K. H. Hackman (Portsmouth), and addressed the Council upon the subject of the Conciliation Board.

Resolved: That the President, President of Council, the Treasurer, and Dr. Beverley be appointed a Committee to consider the subject of the proposed Conciliation Board with power to confer with the representatives of medical officers of friendly societies and other parties interested in the subject.

Dr. ELLISTON introduced a deputation from Ipswich inviting the Association to hold its Annual Meeting there in 1900.

Resolved: That it be recommended to the General Meeting of to-day that the invitation from Ipswich and the East Anglian Branch be accepted, and that Dr. W. A. Elliston be appointed President-Elect.

The nominations for the appointment of President of Council were then considered. There were two nominations; namely, Dr. J. Roberts Thomson and Dr. Markham Skerritt.

Dr. Murphy and Mr. Evan Jones were requested to act as scrutineers.

The PRESIDENT OF COUNCIL announced that Dr. J. Roberts Thomson had been elected President of Council.

The President of Council, Dr. Saundby, then retired, and Dr. J. Roberts Thomson took the chair.

Resolved: That the cordial thanks of the Association be given to Dr. Saundby, for the able way in which he has presided over the Council during the past three years, and for his great attention to the affairs of the Association.

The question of opening Sections at times not fixed by the Arrangement Committee of the Council having been brought forward:

Resolved: That the programme drawn up under the supervision of the Council be strictly adhered to in all Sections.

The President of Council reported that the returns of the election of Representatives of Branches on the Council were as follows:

Aberdeen, Banff, and Kincardine Branch.—David W. Finlay, Aberdeen. *Adelaide and South Australia Branch.*—C. G. D. Morier, London. *Barbados Branch.*—C. Gerald Gooding, Deptford. *Bath and Bristol Branch.*—R. S. Fowler, Bath; E. Markham Skerritt, Bristol. *Bermuda Branch.*—(No return.) *Birmingham and Midland Counties Branch.*—Langley Browne, West Bromwich; Alfred Carter, Birmingham; Jordan Lloyd, Birmingham *Bombay Branch.*—(No return.) *Border Counties Branch.*—R. Maclaren, Carlisle; R. Somerville, Galashiels. *Brisbane and Queensland Branch.*—W. B. Nisbet, Queensland. *British Columbia Branch.*—(No return.) *British Guiana Branch.*—L. J. Veendam, London. *Burmah Branch.*—(No return.) *Cambridge and Huntingdon Branch.*—Henry Stear, Saffron Walden, Essex. *Cape of Good Hope Branch.*—(No return.) *Colombo, Ceylon Branch.*—(No return.) *Cork and South of Ireland Branch.*—A. W. Sandford, Cork. *Deccan Branch.*—(No return.) *Dorset and West Hants Branch.*—C. H. W. Parkinson, Wimborne Minster. *Dublin Branch.*—John William Moore, Dublin. *Dundee and District Branch.*—J. W. Miller, Greenfield, Dundee. *East Anglian Branch.*—M. Beverley, Norwich; W. A. Elliston, Ipswich. *East York and North Lincoln Branch.*—C. H. Milburn, Hull. *Edinburgh Branch.*—R. W. Philip, Edinburgh; William Russell, Edinburgh. *Gibraltar Branch.*—William Turner. *Glasgow and West of Scotland Branch.*—Andrew Freeland Fergus, Glasgow; Bruce Goff, Bothwell. *Gloucestershire Branch.*—R. W. Batten, Gloucester. *Grahamstown and Eastern Province Branch.*—(No return.) *Griqualand West Branch.*—(No return.) *Halifax, Nova Scotia Branch.*—Surgeon-General T. F. O'Dwyer, Aldershot. *Hong Kong and China Branch.*—James Cantlie, London. *Jamaica Branch.*—(No return.) *Lancashire and Cheshire Branch.*—J. Barr, Liverpool; Brassey Brierley, Old Trafford, Manchester; A. Godson, Cheadle; T. Arthur Helme, Manchester; A. Brown Ritchie, Hulme; S. Woodcock, Old Trafford, Manchester. *Leeward Islands Branch.*—(No return.) *Londonderry and North-West of Ireland Branch.*—E. Donaldson, Londonderry. *Malaya Branch.*—(No return.) *Malta and Mediterranean Branch.*—(No return.) *Manitoba and North-West of Canada Branch.*—(No return.) *Melbourne and Victoria Branch.*—(No return.) *Metropolitan Counties Branch.*—Andrew Clark, H. Radcliffe Crocker, George Eastes, Isambard Owen, Henry Betham Robinson, L. W. Sedgwick, London. *Midland Branch.*—H. Handford, Nottingham; F. M. Pope, Leicester. *Montreal Branch.*—G. E. Armstrong, Montreal; James Stewart, Montreal. *Natal Branch.*—(No return.) *New Zealand Branch.*—(No return.) *Northern Counties of Scotland Branch.*—Ogilvie Grant, Inverness. *North of England Branch.*—T. Beattie, Newcastle-on-Tyne; James Murphy, Sunderland. *North of Ireland Branch.*—W. Calwell, Belfast; J. A. Lindsay, East Belfast. *North Wales Branch.*—W. Jones Morris, Portmadoc. *Ottawa Branch.*—(No return.) *Oxford and District Branch.*—W. Lewis Morgan, Cradock, S. Africa. *Perthshire Branch.*—A. R. Urquhart, Perth. *Punjab Branch.*—(No return.) *Quebec Branch.*—(No return.) *Reading and Upper Thames Branch.*—H. H. Phillips-Conn, Reading. *Shropshire and Mid-Wales Branch.*—John Davies Harries, Shrewsbury. *South-Eastern Branch.*—J. H. Galton, Upper Norwood, S.E. W. J. Tyson, Folkestone; T. J. Verrall, Brighton. *South-Eastern of Ireland Branch.*—Surgeon-Colonel N. McCreery, Kilkenny. *Southern Branch.*—J. Groves, Carisbrooke, I.W.; H. J. Manning, Salisbury. *South Indian and Madras Branch.*—Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, London, N.W. *South Midland Branch.*—R. H. Kinsey, Bedford. *South Wales and Monmouthshire Branch.*—Evan Jones, Aberdare; A. Sheen, Cardiff. *South-Western Branch.*—P. Maury Deas, Exeter; John Rolston, Stoke, Devonport. *Staffordshire Branch.*—T. Vincent Jackson, Wolverhampton. *Stirling, Kinross, and Clackmannan Branch.*—J. C. McVail, Partick, Glasgow. *Sydney and New South Wales Branch.*—P. Sydney Jones, London; G. E. Rennie, London. *Thames Valley Branch.*—G. E. Shuttleworth, Richmond Hill, Surrey. *Toronto Branch.*—(No return.) *Trinidad and Tobago Branch.*—(No return). *Western Australia Branch.*—T. H. Lovegrove. *West Somerset Branch.*—W. L. Winterbotham, Bridgwater. *Worcestershire and Herefordshire Branch.*—G. W. Crowe, Worcester. *Yorkshire Branch.*—T. M. Dolan, Halifax; W. Dyson, Sheffield; David Goyder, Bradford; T. R. Jessop, Leeds.

AT a meeting of the Council, held in the Council Chamber, Town Hall, Portsmouth, on Thursday, August 3rd. Present:

Dr. J. ROBERTS THOMSON, President of the Council, in the Chair.
Mr. ANDREW CLARK, Treasurer.

Dr. JAMES BARR, Liverpool.
Dr. J. BRASSEY BRIERLEY, Old Trafford.
Mr. HENRY T. BUTLIN, London
Dr. W. CALWELL, Belfast.
Dr. H. RADCLIFFE CROCKER, London.
Brigade-Surgeon-Lieutenant-Colonel E. F. DRAKE-BROCKMAN, London.
Mr. GEORGE EASTES, M.B., London.
Dr. BRUCE GOFF, Bothwell.
Dr. DAVID GOYDER, Bradford.
Dr. J. GROVES, Carisbrooke, Isle of Wight.
Dr. HENRY HANDFORD, Nottingham.
Mr. T. R. JESSOP, Leeds.
Mr. EVAN JONES, Aberdare.
Dr. P. SYDNEY JONES, London.
Mr. JORDAN LLOYD, Birmingham.
Dr. J. W. MILLER, Dundee.
Dr. JAMES MURPHY, Sunderland.
Surgeon-General T. F. O'DWYER, Aldershot.
Dr. C. PARSONS, Dover.
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. FRANK M. POPE, Leicester.
Dr. G. E. RENNIE, London.
Mr. H. BETHAM ROBINSON, M.S., London.
Dr. JOHN ROLSTON, Stoke, Devonport.
Dr. ALFRED SHEEN, Cardiff.
Dr. G. E. SHUTTLEWORTH, Richmond.
Dr. E. MARKHAM SKERRITT, Clifton.
Mr. HENRY STEAR, Saffron Walden.
Dr. W. J. TYSON, Folkestone.

The minutes of the last meeting having been printed in the *Daily Journal*, were taken as read and signed as correct.

The appointment of the Journal and Finance Committee was then considered, and in accordance with the By-laws the members longest on the Committee, viz.:—Dr. Holman, Dr. Bridgwater, and Mr. Vincent Jackson were retired by lot. There were two vacancies and four nominations. A ballot was taken, Mr. Eastes and Dr. Calwell were appointed scrutineers, and the following were reported to have the greatest number of votes, viz.:—Dr. H. Radcliffe Crocker and Dr. Markham Skerritt.

Resolved: That the following be appointed the Journal and Finance Committee for the ensuing year:—

The President; the President-elect; Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer:—Dr. James Barr, Dr. H. Radcliffe Crocker, Mr. Geo. Eastes, Dr. H. Handford, Mr. T. R. Jessop, Mr. Evan Jones, Mr. Jordan Lloyd, Mr. N. C. Macnamara, Dr. John Wm. Moore, Dr. C. Parsons, Dr. W. Russell, Dr. R. Saundby, Dr. E. Markham Skerritt, Mr. T. Jenner Verrall, and Dr. S. Woodcock.

Resolved: That the following be appointed the Parliamentary Bills Committee for the ensuing twelve months:

The President; the President-elect; Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Mr. S. H. Agar, Mr. D. B. Balding, Mr. Gilbert Barling, Dr. A. G. Bateman, Dr. R. W. Batten, Dr. R. L. Bowles, Dr. T. R. Bradshaw, Dr. T. Bridgwater, Mr. George Brown, Dr. J. S. Cameron, Dr. Colin Campbell, Dr. J. Cantlie, Dr. W. A. Carline, Dr. Alfred Cox, Dr. G. W. Crowe, Dr. P. Maury Deas, Dr. Alex. Dempsey, Dr. T. M. Dolan, Dr. E. Donaldson, Dr. W. Douglas, Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockmann, Mr. George Eastes, Dr. R. Eslen, Dr. Robert Farquharson, M.P., Sir W. Foster, M.P., Dr. Bruce Goff, Dr. G. G. Gooding, Dr. David Goyder, Dr. Ogilvie Grant, Dr. Major Greenwood, Dr. J. Groves, Dr. J. B. Hackett, Mr. J. D. Harries, Dr. A. J. Harrison, Dr. Holman, Mr. Victor Horsley, F.R.S., Dr. W. Hugh Hughes, Mr. Evan Jones, Dr. J. E. Ker, Dr. J. C. McVail, Dr. A. R. Manby, Dr. C. W. Marriott, Dr. W. J. Mickle, Dr. C. H. Milburn, Dr. J. W. Miller, Dr. John Wm. Moore, Mr. W. Lewis Morgan, Mr. W. Jones Morris, Dr. James Murphy, Dr. W. Newman, Surgeon-General T. F. O'Dwyer, Professor A. Ogston, Mr. C. H. W. Parkinson, Dr. F. M. Pope, Dr. A. Brown Ritchie, Dr. John Rolston, Dr. W. Russell, Dr. A. W. Sandford, Dr. G. E. Shuttleworth, Dr. R. Somerville, Mr. W. D. Spanton, Mr. C. R. Straton, Dr. Danford Thomas, Dr. J. C. Thresh, Inspector-General Alex. Turnbull, R.N., Dr. A. R. Urquhart, Dr. L. J. Veendam, Dr. T. J. Verrall, Mr. F. Wallace, Dr. Martindale Ward, Dr. Dawson Williams, Dr. W. L. Winterbotham, and Dr. S. Woodcock.

Resolved that the following be appointed the Scientific Grants Committee for the ensuing year:

The President; the President-elect; Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Professor T. Clifford Allbutt

F.R.S.; Dr. T. L. Brunton, F.R.S.; Dr. H. Radcliffe Crocker; Professor W. D. Halliburton, F.R.S.; Dr. H. Handford, Dr. Holman, Mr. Victor Horsley, F.R.S.; Professor John McFadyean; Mr. N. C. Macnamara, Dr. W. Russell, Dr. R. Saundby, Professor B. C. A. Windle, F.R.S.; and Dr. G. Sims Woodhead.

Resolved: That the Inebriates Legislation Committee be reappointed as follows:

The President; the President-elect; Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Mr. D. B. Balding, Dr. T. Bridgwater, Sir C. Cameron, M.P.; Mr. George Eastes, Dr. R. Farquharson, M.P., Sir Walter Foster, M.P.; Dr. E. Long Fox, Sir W. T. Gairdner, K.C.B., F.R.S.; Dr. Alexander Grant, Mr. F. J. Gray, Dr. F. S. D. Hogg, Dr. A. A. Jamison, Mr. H. R. Ker, Dr. A. E. T. Longhurst, Dr. T. Morton, Dr. A. E. Neale, Surgeon-Major G. K. Poole, M.D.; Fleet-Surgeon G. Robertson, M.D., R.N.; Dr. G. E. Shuttleworth, Dr. Danford Thomas, Dr. W. J. Tyson, Dr. Wynn Westcott, Dr. H. W. Williams, and Dr. D. Yellowlees.

Resolved: That the Premises and Library Committee be reappointed as follows:

The President; the President-elect; Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Dr. T. Bridgwater, Dr. Holman, Mr. N. C. Macnamara, Mr. C. H. W. Parkinson, Dr. C. Parsons, Dr. F. M. Pope, and Dr. R. Saundby.

Resolved: That the Anæsthetics Committee be reappointed as follows:

Professor T. Annandale, Dr. Joseph Bell, Mr. F. W. Braine, Professor G. Buchanan, Dr. Dudley Buxton, Professor J. W. Byers, Professor M. Cameron, Professor John Chiene, Dr. C. Childs, Mr. John Croft, Professor E. Duncan, Mr. George Eastes, Dr. A. L. Galabin, Dr. Frederic W. Hewitt, Mr. Jonathan Hutchinson, F.R.S.; Right Hon. Lord Lister, P.R.S.; Professor W. Macewen, M.D.; Professor A. Ogston, M.D.; Mr. G. Rowell, Dr. W. Y. Snow, Mr. T. Pridgin Teale, F.R.S.; and Dr. David Wallace.

Resolved: That the Medical Charities Committee be reappointed as follows:

The President; the President-elect; Dr. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Dr. T. Bridgwater, Mr. George Brown, Dr. Major Greenwood, Dr. R. G. Hebb, Mr. J. Brindley James, Mr. Evan Jones, Mr. H. W. Kiallmark, Dr. Hector W. G. Mackenzie, Dr. J. W. J. Oswald, Dr. Isambard Owen, Mr. W. J. Stephens, Dr. Seymour Taylor, Dr. E. Symes Thomson, and Dr. Hugh Woods.

Resolved: That the Therapeutic Committee be reappointed as follows:

Dr. J. Roberts Thomson, President of Council; Dr. J. B. Bradbury, Sir W. H. Broadbent, Bart., F.R.S.; Dr. Mitchell Bruce, Dr. T. Lauder Brunton, F.R.S.; Dr. A. H. Carter, Professor T. Cash, F.R.S.; Dr. R. Crawfurd, Professor T. R. Fraser, F.R.S.; Sir W. T. Gairdner, K.C.B., F.R.S.; Dr. W. Hunter, Dr. D. J. Leech, Dr. James Little, Professor D. MacAlister, Dr. E. Mackey, Dr. C. R. Marshall, Dr. Sidney H. C. Martin, F.R.S.; Dr. M. McHugh, Dr. W. Murrell, Professor W. Osler, F.R.S.; Dr. C. Y. Pearson, Dr. C. D. F. Phillips, Dr. Sidney Phillips, Dr. Sydney Ringer, F.R.S.; Professor R. Stockman, Dr. W. Hale White, Dr. W. Whitla, Dr. Nestor Tirard, and Dr. F. Willcocks.

Resolved: That a grant of £10 be made to the Therapeutic Committee.

Resolved: That the Committee on the Control of Railway Servants' and Mariners' Eyesight be reappointed as follows.

Mr. W. M. Beaumont, Mr. T. H. Bickerton, Mr. Langley Browne, Mr. G. A. Critchett, Dr. C. E. Fitzgerald, Dr. J. B. Lawford, Dr. D. Little, Mr. N. C. Macnamara, Dr. George Mackay, and Mr. Priestley Smith.

Resolved: That a grant of £10 be made to the Committee on the Control of Railway Servants' and Mariners' Eyesight.

Resolved: That the General Practitioners and Ethical Committee be reappointed as follows:

The President; the President-elect; Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Dr. James Barr, Dr. T. Bridgwater, Dr. Brassey Bricrley, Mr. Langley Browne, Dr. J. H. Galton, Dr. Bruce Goff, Mr. W. Jones Morris, Mr. C. H. W. Parkinson, Dr. C. Parsons, Dr. F. M. Pope, and Dr. R. Saundby.

Resolved: That the Trust Funds Committee be reappointed as follows:

The President; the President-elect; Dr. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Dr. T. Bridgwater, Dr. Bruce Goff, Mr. N. C. Macnamara, Dr. C. Parsons, and Mr. T. J. Verrall.

Resolved: That the following be appointed the Arrangement Committee for the ensuing twelve months:

The President; the President-elect; Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Mr. H. A. Ballance, Dr. E. G. Barnes, Dr. M. Beverley, Dr. S. Evans, Dr. E. L. Fenn, Dr. R. W. Philip, Dr. R. Saundby, and Dr. E. Markham Skerritt.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

The Cancer and Skin Hospital.—The Proposed Poor-law Sanatorium for Tuberculosis.—Cases of Tropical Diseases in Liverpool.

As has already been stated in the Liverpool correspondence, the committee of the Cancer and Skin Hospital resolved unanimously to tender their resignation to the governors, in consequence of the refusal by the latter to elect to the office of surgeon to the institution any of the three candidates approved by the committee. The resignation was tendered to, and accepted by, a small meeting of the governors, which was held on August 10th, and a new committee was elected, the proposer and seconder being two of the newly-appointed medical officers. Mr. William Rathbone said he thought it was much to be regretted that both this and the previous meeting had been called at times when very few of the subscribers were able to be present. It was very painful to those interested in the hospital to find that, judging from several symptoms, it had lost to a great extent the confidence of the public, of the committee, of a number of the subscribers, and of the medical profession almost as a whole. Unless something were done to enable the hospital to regain and retain the confidence which it seemed to have lost, he feared that many would be obliged to withdraw their subscriptions at the end of the present year.

The joint committee of the three unions in and around Liverpool, appointed to deal with the tuberculosis question, have agreed to request the Toxteth guardians to undertake the erection and management of the proposed hospital, the other Boards of Guardians undertaking to pay their share of the cost. A similar arrangement exists between the Select Vestry of Liverpool and the West Derby Board for the maintenance of able-bodied poor and vagrants, and has worked well for several years.

As an illustration of the advantages of Liverpool as a field for the study of tropical diseases, it is stated that there have been under treatment in the Royal Southern Hospital during the present year 60 cases of malaria, three each of dysentery and beri-beri, two cases of tropical abscess of the liver, and one of bilharzia hæmatobia.

MONTREAL.

The Prevention of Tuberculosis, Debate in the Dominion Parliament.—Establishment of a Sanatorium in the Laurentians.—Medical Registration in the Dominion.—The British Pharmacopœia in Canada.—Research Fellowships in Pathology at the Gill University.—The Departure of Dr. Clarence Webster.

In Canada, as elsewhere, the subject of the prevention of tuberculosis has been of late much to the fore. It has been the subject of an active discussion at two meetings of the Montreal Medico-Chirurgical Society, at which valuable papers were read by Mr. McEachran (the head of the Dominion Veterinary Department), Messrs. Lafleur, A. W. Blackader, Richer, and C. F. Martin, and Drs. Jamieson and Kinghorn, of Saranac Lake. The resolutions passed at these meetings bearing upon the prevention of tuberculosis in Canadian cattle, upon the erection of public sanatoria, upon notification and the prevention of spitting in public places have been the subject of an active debate in the Dominion Parliament, opened by Dr. T. G. Roddick. Unfortunately, owing to the Confederation Act having placed matters of public health very largely in the control of the separate provinces, the Government had to confess itself powerless to accomplish much along the lines indicated. It is to be hoped that our Australian *confrères* will profit from our experiences both with regard to matters of State hygiene and the control of education, and that in drafting the Act of Confederation they will ensure the establishment of central professional licensing Boards, thus preventing the state of affairs which has for so long existed in Canada, whereby a practitioner in one is prevented from practising in another. So also in the control of infectious diseases, whether of man or of animals, it is absolutely necessary that the Central Government should have the power to make regulations applicable to the whole country.

While thus the Dominion Government is unable to act, private initiative has this week led to the opening of a sanatorium at St. Agathe, in the Laurentians, some 70 miles to the north of Montreal, a district which in elevation and general features closely resembles the Adirondacks, where Dr. Trudeau's well-known institution has so long been doing good work. This is the second sanatorium to be established in Canada, that at Gravenhurst in the Muskoka district of Ontario having been running for now more than two years.

Dr. Roddick, who was President of the British Medical

Association in 1897-98, is utilising his position in Parliament to accomplish not a little good work. He has personally brought the subject of Dominion registration before the profession from British Columbia in the West to Nova Scotia in the East, and his draft Bill has everywhere received commendation and acceptance.

During this last session Dr. Roddick has procured also the passage of an addition to the Pharmacy Act, virtually rendering the *British Pharmacopœia* official in Canada. It is enacted that all preparations dispensed must be of the strength and made according to the formula of the *B.P.*, unless otherwise directed. Acting under the initiative of the Montreal Medico-Chirurgical Society, a Committee of representatives of several medical and pharmaceutical bodies in the Province of Quebec has prepared a report upon a Canadian addendum to the *British Pharmacopœia*, in accordance with the desires of the General Medical Council. It is proposed to bring this report before the forthcoming meeting of the Canadian Medical Association at Toronto for revision and subsequent acceptance on behalf of the medical profession in general.

At the Medical Convocation at the McGill University in the middle of June, degrees were conferred upon 67 students; of the 116 who entered in 1895, only 45 received the degree in due course. The degree of LL.D. was conferred upon Mr. Rudyard Kipling *in absentiâ*, the first acknowledgment of his services to letters, we believe, on the part of any university. The M.A., M.D. *ad eundem* was conferred upon Professor Adami. Largely as a recognition of the latter's continued connection with the University, two research Fellowships in Pathology have been founded, the one by certain of the governors, the other by the Medical Faculty. These are of of the yearly value of $500, are tenable for two years, and are open to medical graduates of other universities.

Great regret is felt at the loss of Dr. Clarence Webster, who has accepted the important post of Professor of Obstetrics and Gynæcology in the University of Chicago. We doubt whether ever a professor in this chair has been offered *carte blanche* in everything in the matter of beds, teaching equipment, selection of staff, and emoluments to the extent to which Professor Webster was offered by the Chicago authorities. As a teacher and a writer Webster had rapidly made his influence felt in Montreal, but under the circumstances it was impossible, not to say ungracious, to endeavour to retain him.

CORRESPONDENCE.

THE MIDWIVES' BILL: ILLEGAL CERTIFICATES.

SIR,—With the best desire in the world I cannot put myself in Mr. Greaves's position in order that I may understand him better. He evidently agrees with me that the blank negative method of dealing with the midwifery question, and which finds supporters in the profession, for example, at Wood Green, is of course useless, but he will not accept the only other alternative; namely, to render any midwifery legislation harmless against the profession and really useful to the public. There are only these two courses open to us, and if Mr. Greaves rejects the first he must adopt the second.

I have been asked by Drs. Myrtle, Hart, Tomlin, and Taylor to explain why I think that the very important matter of illegal certification is prejudiced by the wording and terms of the memorial issued by the Corporate and Medical Reform Association. The reason is that, in common with many of my co-signatories to these memorials, I felt that the sentences were so much involved as to obscure their meaning, while further, the wording was inflated, and indeed in many instances bombastic.

Had the facts been clearly and tersely expressed, many members of the Council would have given the memorials that consideration which the great importance of the subject deserves, and would have supported Mr. Brown and myself in our endeavour to have the matter thoroughly investigated by a special Committee, and active steps taken to rescind the Council's resolution approving the present form of the L.O.S. diploma. Our amendment however was rejected, and I am convinced it was only because many of the members were repelled by the unfortunate verbosity of the memorials, and therefore did not inform themselves of the serious facts to which they referred.

If, therefore, the Corporate Reform Association desires to help forward the reforms which are so much needed, I would suggest that they should place the drafting of their documents in other hands, and set forth their views and their arguments in as few and as plain words as possible.—I am, etc.

Cavendish Square, Aug. 15th. VICTOR HORSLEY.

THE PROFESSION AND THE QUESTION OF REFORM.

SIR,—May I be allowed to congratulate you on your leading article on the annual meeting, and to make a few remarks upon the subject?

It has been for a long time a matter of certainty that an organisation which commands the respect of the mass of the profession is urgently needed. At the present moment each separate question is dealt with by different collections of individuals. Such collections, in the first place, do not possess sufficiency of funds to deal with great questions satisfactorily, nor can they have the power of a large organisation.

The British Medical Association is, as you have pointed out, a large association, with undoubted capabilities, and the reason why its latent powers have not been developed may be found in the fact that it has been largely controlled by those who have desired to check that development, and that it has not possessed what I will call an organised political department, with a capable secretary at its head.

If the governing body really intends to carry out the wishes of the members, it will pay no attention to the loss of a handful of members belonging to corporations who are considered to be ornamental, but it will set to work to find a man who is capable of managing a great department. The feeling with a large number of members who take an interest in medical politics, as I have been able to collect that feeling, is undoubtedly in favour of such an organisation. With the formation of the department the Branches will be more easily utilised for work, and co-ordinated work and the subjects connected with the political side of the work will be properly worked out before the presentation of the annual report. At the present time there is a great deal of work performed which is wasted because of lack of co-ordination.

Again, such a department will watch movements which affect the interest of the profession, and by prompt action the Association will be able to nip in the bud many such schemes as are at present vexing us. I have no hesitation in saying that, if the midwives question had been properly dealt with by a firm hand fifteen years ago an enormous amount of labour and expense would have been saved.

I believe that if the question of the formation of a political department is approached with a firm determination to carry it through, and with an entire disregard as to the possible loss of a few ornamental personages, the matter can be carried through promptly.

After all, the loss of those whose interests are directly opposed to the formation of an active political organisation can be profitably incurred, and in the long run those of the ornaments who are worth their salt will remain, and will find that it will be worth their while to do so.—I am, etc.,

Hatfield, Aug. 15th. LOVELL DRAGE.

THE PROPOSED BOARD OF CONCILIATION.

SIR,—The Council of the Association, having resolved that a joint committee should be formed to take the necessary steps to carry on the proposal of the General Medical Council to form a Board of Conciliation, the question now arises: How are the representatives of the medical officers of friendly societies to be elected to serve on this joint committee? It is by no means an easy task, and I daresay various plans will suggest themselves to the members. It is perfectly evident that some rough and ready system must be adopted, and I would beg to suggest for the consideration of your readers the following as a sort of arrangement for the purpose.

Divide the country into the following electoral divisions, and ask the officials of the Branches in these districts to call the medical men together, and nominate one of their number to act on this joint committee.

North-Eastern District	1
North-Western District	1
Midland Counties	1
Metropolitan Counties	1
South-Western District	1
South-Eastern District	1

The South-Western District to include South Wales, and the South-Eastern District to include the Eastern counties.

Unless the Branches take up this question I am afraid that there will be great difficulties in getting the medical officers of friendly societies to do so by themselves. It must be remembered that this joint committee will only be empowered to draw up a practical scheme for the election of representatives on the Board of Conciliation, and will therefore have only a short life.

If the formation of a Board of Conciliation will only lead to the formation of a strong union or a series of unions amongst the medical officers of friendly societies great good will have been accomplished.—I am, etc.,

Cardiff, Aug. 14th. T. Garrett Horder.

HOSPITAL ABUSE.

Sir,—The following case may be worthy of reporting for the double purpose of warning my brethren of the country and of cautioning the London hospitals.

An operation had been arranged for the removal of adenoids and nasal spur from a girl in a village near this, no question was raised about fee, and final arrangements were being made when I received a note from the mother saying that after seeing me the previous day her husband on coming home told her they would pass their holiday in London and that he would take the child to Dr. Mackenzie's hospital. I am aware, as all who have practised in special work in London must be, how extremely difficult it is to check abuses, but is the honest attempt made always? At the general hospitals it is said to be done, yet I have heard of cases unable to pay the operation fee of London consultants being admitted by them to the hospital to which they belong and the operation being performed for nothing.

At some of the special hospitals abuses are checked or the effort to do so is made, but this is not always the case. The obvious and only argument general practitioners have is to practise the specialities themselves and so not to give the opportunity for going to the large towns. A general anæsthetic is rarely necessary in throat work.—I am, etc.,

Griffith C. Wilkin,
Late Surgeon to the London Throat Hospital.

West Coker, near Yeovil Aug. 8th.

EXAMINATION FOR HIGHER QUALIFICATIONS.

Sir,—In reference to the paragraph in Mr. Horsley's report with regard to the examination for the Fellowship of the Faculty of Physicians and Surgeons of Glasgow, I think the profession should know that the objection to the complaint on the ground of informality was purely imaginary, and without even the foundation of a respectable quibble. As secretary of the London and Counties Medical Protection Society, I wrote formally calling the attention of the General Medical Council to the way in which the above examination was conducted, and enclosing evidence signed by reliable witnesses. This communication was duly acknowledged without any objection to the form of it, and, indeed, no sensible objection could be made to it.

It is easy to understand the reluctance of the General Medical Council to give it out publicly to the world that it has no control over higher examinations, or that it declines to exercise its powers; but it must be clearly understood that, on behalf of my Society, I laid before the General Medical Council strong *primâ facie* evidence of the insufficiency of the examination for the F.F.P.S.G. diploma, and that the General Medical Council has declined to exercise its jurisdiction in the matter.—I am, etc.,

Hornsey Lane, Aug. 14th. Hugh Woods.

THE PLACE OF PHARMACOLOGY IN THE MEDICAL CURRICULUM.

Sir,—I wish to call attention to the great importance of the remarks on the teachings of pharmacology by Professor Bradbury at Portsmouth. The lack of knowledge on this subject among recently qualified medical men is very striking, and if some steps be not taken the practice of therapeutics will soon be conducted under the auspices of various forms of wholesale chemists. The extension of the practice of prescribing renders a good knowledge of drugs more necessary than ever to the practitioner. If a man have to dispense his own medicines he will in a short time acquire enough pharmaceutical knowledge for his purpose. The prescriber never has this knowledge thrust upon him. If he has not taken the trouble during his student days to learn his drugs he will be hampered by his ignorance all his life. He will never know what his medicine is going to look like, or how it will taste; he will always be at a loss for suitable vehicles, and the great art of combination will be to him a sealed book.

It is a great pity that with our extended scientific knowledge and powers of diagnosis, our control over medicinal therapeutics should not display a like advance. Unless I am mistaken it threatens to decline. I sincerely hope that, as a result of Professor Bradbury's address, more attention will be paid to the teaching of pharmacology, and that the examining bodies will insist on something more than a perfunctory knowledge of the subject being possessed by successful candidates.—I am, etc.,

Friar Gate, Derby, Aug. 15th. G. H. Milnes, M.D.Cantab.

GOWNS FOR MEDICAL PRACTITIONERS.

Sir,—Whilst so many of us have in vain been seeking for remedies which shall cure the ills from which the profession is suffering, Dr. Alderson has quietly stepped in and discovered the panacea which will turn our sufferings into joy. Such a simple remedy too! A gown! No longer shall we complain of indignities; no more shall our fees be small and our troubles great. By wearing a gown the respect which we lack at present will be ours, and remunerative fees will simply be forced upon us by those patients we shall condescend to treat. One cannot be too grateful for this valuable discovery. May I venture to further it by suggesting that, as most married men know, a gown is incomplete without a jacket, and that to make the professional costume more perfect one should be added? I would recommend that this be "strait." Finally, some sort of head gear would be required for outdoor wear—perhaps something in the shape of "cap and bell" would be found most suitable.—I am, etc.,

August 12th. Sartor Resartus.

Sir,—I sincerely hope that the ridiculous movement to obtain the right by Members of the R.C.S. to wear gowns will be futile. In my opinion, such a sartorial distinction belongs to university graduates only, and the proposed innovation would lead to more dissension in the profession, and just at a time, too, when the movement for co-operation and a better ethical state of things is showing more vigour than ever. Self-respect and dignity should mark us out as a body to the public, not vain and inglorious assumption and pretension. What became of the ass in the lion's skin? The Members who seriously want a gown to wear on any occasion are on a par with those who, some time ago, wanted a distinctive badge to mark them out as medicos. A dog in the street does not cause us to run into the nearest house for protection because we see it is not a wolf. Rapid and intuitive diagnosis consequent upon the difference in appearance keeps us at ease. Multiply gowns, and then our brains will be racked, every time we meet one, to decide whether the contents is a minister, university graduate, sandwich-man, quack doctor, or M.R.C.S.—I am, etc.,

Middlesbrough, Aug. 14th. Samuel Walker, M.R.C.S.Eng.

Sir,—M.R.C.S. seems to oppose the Members gown, but he gives no real reason (the Scotch colleges can look after themselves); because he has never seen medical men gowned, it is no reason why he never should. The argument of "jackdaws in peacocks' feathers" is not very complimentary to himself or the profession. Occasions do occur when medical men have an opportunity either at home or abroad of appearing in academic dress, but a Member (R.C.S.), if he is not a graduate of a university, has to appear in ordinary dress. This is detrimental to him, as the lay mind finds it hard to believe that he is equally qualified with the rest. To be a Member of the Royal College of Surgeons is a distinction we all appreciate, and why such a simple request should be shelved in the way it has been is difficult to understand.

The Members' gown should be a realised fact, and I hope with Dr. Alderson that at the meeting of the British Medical Association in 1900 all members will be requested to wear academical costume.—I am, etc.,

Liskeard, Cornwall, Aug. 14th. J. W. Gill.

THE DUTY OF THE PROFESSION WITH REGARD TO ALOHOL.

Sir,—I could supply Dr. Pernet with many instances of fluctuations in national drinking habits such as the one he mentions as now occurring in France. For instance, Italy and Spain are also said to drink more during the present decade than in the preceding one. England was notably more drunken after than during the Commonwealth. I do not see, however, what bearing these cases have on my contention. I have never maintained that increased and cheapened supplies of alcohol, or increased purchasing powers, or loosened moral ties, may not lead for a time to greater drinking, even in a race that has long been weeded out by alcohol. I have merely maintained that cases long afflicted by that poison become, during the lapse of ages, immeasurably more temperate than they anciently were. All the temperate races of the present time were formerly drunken—for example, South Germans. All present-day drunken races are intemperate in inverse proportion to their ancestral experience of alcohol—for example, most savages. Can De Pernet tell us of a single exception? Moreover, among a temperate people such as the Latins, increased drinking does not necessarily imply increased drunkenness. If a man who formerly drank one glass of wine is now able to afford two, he can hardly be said to have become a drunkard.—I am, etc.,

Southsea, Aug. 13th. G. Archdall Reid.

THE BUSINESS OF THE ANNUAL MEETING.

Sir,—I was surprised to see in the British Medical Journal of August 12th that at the general meeting at Portsmouth on Thursday, August 3rd, the President stated that I had not moved my resolution. I most certainly did so by reading it first and stating that I did wish to move that resolution which I read from the agenda published by the Association for that day's work. I was speaking to that motion when the President adjourned the meeting for want of a quorum. It was urgent that I should return by the 5.40 P.M. train, and I desired Dr. Lorimer Hart to second it the following day. I have every reason to believe Mr. Victor Horsley fully considered that I had duly moved my resolution inasmuch as he was going to support it on Thursday. I deeply regret that I did not give Dr. Hart a written authority to continue on my behalf; but I was pressed for time, and considered, after the course pursued on the Tuesday afternoon with regard to Dr. Nair's resolution, there would be no necessity for me to give a written authority to be read by Dr. Hart. With regard to the two following resolutions which were not allowed to be considered I may have somewhat to say later on.—I am, etc.,

Wood Green, N., Aug. 14th. R. F. Tomlin.

Sir,—I desire the favour of space to explain that urgent private affairs necessitated my return to London on Wednesday, August 2nd, and prevented my going again to Portsmouth on Thursday, the 3rd, to move the motion standing in my name for the formulation of by-laws to create an Executive Committee of the Council, responsible to the Association in general meeting—the only form in which it is capable of corporate life and action; and to add, as recent events appear to render necessary, that I did, in fact, return to London, and was not in Portsmouth at any social or other function or otherwise on the Thursday. In my absence my friends considered the motion too important to be moved vicariously at the fag-end of a meeting.

I am in a position to state that Dr. Butler Hogan's motions had been ruled out of order and excluded from the Journal by Dr. Saundby, as President of Council, and Dr. Butler Hogan had left London for his holiday, and therefore could not, I presume, have known that either of his motions had been ruled in order by the Council and inserted in the Wednesday's *Daily Journal* to be brought on—contrary to No. 6 of the Articles of Association, which requires seven days' notice of special business to be given to every member of the Association.—I am, etc.,

Montague Place, W.C., Aug. 14th. R. B. Anderson.

Successful Vaccination.—Mr. S. H. Rentzsch has been awarded the Government grant for efficient vaccination in the Cheshunt District of the Edmonton Union.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

PROFESSOR OGSTON'S ADDRESS.

Professor Ogston's animadversions in his "Address on Surgery" on the medical services, has, as was to be anticipated, called forth considerable comment. We have received voluminous letters on the subject from medical officers of the navy, army, and volunteers, which, owing to their great length, we are unable to print in full, but they are substantially as follows:

"R.N." writes: Naval or military medical officers who heard or have read Professor Ogston's address cannot but feel he has grievously overstated his case, and drawn a picture of the two services alike unwarrantable and unjust. His misstatements and impossible suggestions have produced a feeling of soreness in the naval medical service; no one doubts his sincerity in disclaiming any "hostile undervaluing of the services," but at the same time he has belittled the officers and the service to which they belong in the eyes of the public and of their civil brethren in the profession, when neither they nor it deserved such hard words. Permit me to indicate some of the errors into which he has fallen. First as to his self-contradictions. Speaking of the officers of the services as having fallen in esteem, "no observant member of the profession can have failed to observe how changed is the estimation in which they have come to be held during the last three decades"; and afterwards, "Though numbers of the best men in our profession are in the ranks of the services, and many there carry out work of the highest order."....."I know well that though in the services good work gets little reward," etc. Surely the latter statements are not in harmony with the spirit of the first? It is a monstrous misstatement to say that the naval medical service has during the last thirty years been retrograding; there has on the contrary been a steady advance both in its *personnel* and methods, and there is no difficulty in obtaining candidates for it. As to his impossible suggestions, I am as disinclined as he can be to offer obstruction to possible improvements, but he admits the fighting efficiency of a ship must not be impaired, and it would certainly be impossible to arrange "a large and well-lit space beneath" for the surgeon without impairing fighting efficiency. It would be equally impossible to throw open naval hospitals at home and abroad for the reception of civil patients, as these hospitals are no more than sufficient for service requirements. I do not admit the justice of the comparison he makes between our services and those of foreign countries, which are so different in many respects. But while thus condemning, I am quite in accord with many of his proposals as to hospital ships and post-graduate courses, etc. He has in many points overshot the mark, and his criticisms are often belated, especially as a generous naval administration is giving money with no niggard hand to modernise our hospitals and fulfil all reasonable demands, while contentment reigns in the Naval Medical Service with an ever-increasing efficiency.

"Aberdeen Graduate and Army Medical Officer" writes: When the garrison artillery became unpopular, armament pay was at once granted to induce officers to enter it. Why not some such pay to army medical officers? It must be remembered that the five years' curriculum has much increased the expense of a medical education, whereas pay has remained stationary. Medical officers have certainly great difficulty in keeping up surgical efficiency in operative work, and their opportunities are hardly greater than that of the general practitioner. Why should not the civil hospital appointments in certain garrison towns be handed over to army medical officers? Of course they should be paid for such work.

"Surgeon-Lieutenant-Colonel A.M.R." writes: Professor Ogston alluded to a "Central British Red Cross Society," but failed to mention the existence of the "Army Medical Reserve of Officers," which not only exists in considerable numbers, but does and would be competent and willing to render greater services to the Army Medical Department. They have a prior claim to employment, and their general efficiency is thereby officially recognised. But their services are not given for the miserable pay they may receive, but because

they like soldiering. Why should not these officers receive additional and better military training at the larger stations, with, of course, adequate pay and allowances while so employed? There may be some in its ranks who might find it inexpedient to comply with further military training or duty, but such would retire if unable to further qualify. I have no intention in these suggestions to interfere with the regular Army Medical Service—not supplanting, but only supplementing of it. It is true that in a general mobilisation of the reserve forces the Army Medical Reserve would be required to serve with their corps. I entirely agree with Dr. Ogston that such reforms should be introduced into the Royal Army Medical Corps as will attract good men to its ranks and increase its efficiency, so that supplementary aid may be less and less required.

"Zoji La" writes: As a member present at the meeting in Portsmouth and on again reading Professor Ogston's address, I, in common with many others, consider it very uncalled for and most inopportune. It bristles with errors and inaccuracies strange, indeed, in one in the position of an Aberdeen professor. According to him, so unpopular have the naval and military services become that for the past three decades only men of inferior qualifications have been induced to present themselves for examination; this is utterly untrue, unless the profession is prepared to admit that degrees in Arts and Medicine of the Universities of England, Scotland, and Ireland, diplomas of the several colleges, including Fellowships can be classed as inferior qualifications. He states that after a few years' experience of the services men who enter admit that they have made a mistake and would gladly go if they could; this is sheer nonsense. Why don't they go? Why not sacrifice a few years for "a comparatively unpromising post in civil life"? Even, according to him, if they do leave the service in the "prime of their abilities," all except a gifted few are found to have so degenerated as to be utterly unfit to compete with their civil compeers; the Professor may be assured these compeers find retired army medical officers when he competes against them not so dormant as he imagines! He would also have the public believe that the army medical officer is only called upon to treat minor ailments. A more erroneous statement could hardly be made; he seems unaware of the fact that at Portsmouth and many other military stations special hospitals exist for the treatment of the ailments of women and children. Is the enormous experience of army medical officers in tropical diseases to be ignored as well as in the injuries incidental to active service? I would also inform him that excellent surgery on the brain, thorax, and abdomen is carried on outside Netley by juniors, who are not restricted by seniors as in many civil hospitals. He declares that an ambulance development will only bring wounded men to surgeons unfit to treat them, and compares the medical services of to day unfavourably with what they were fifty years ago. How any man in his position could venture to make such wild assertions passes comprehension. Does he forget that fifty years ago the death-rate of the European army in India often mounted to 89.42 per 1,000, as against 18.99 at present? Is he aware that amongst a large number of wounded during the North-West Frontier campaign, and notwithstanding difficulties which hospital surgeons in this country can hardly realise, the officers who had lived a "life of stagnation" reported their hospitals free from septic contamination, without a single case of pyæmia or tetanus? Let Professor Ogston show better results anywhere. Notwithstanding that he discourses on inferior qualifications, stagnant lives, being fifty years behind the times, inability to undertake surgical procedure of any magnitude, etc., he nevertheless admits that many of the best men in the profession are in the services, who carry out work of the highest order for small reward, etc. Surely such statements are slightly inconsistent! It is impossible here to notice all the misstatements; but his statement that the weakest men who enter the Indian Service are of a class superior to the best who enter the Royal Army Medical Corps is ridiculous. I freely admit there is ample room for improvement in the construction, equipment, etc., of our military hospitals; that field hospitals and bearer companies should be better organised and more frequently exercised; also that post-graduate courses for medical officers are most desirable. But such reforms are more likely to be delayed than furthered by exaggerated statements and reckless assertions; and meanwhile good candidates are scared from the military medical service. The R.A.M.C. have the greatest confidence in Lord Lansdowne, and feel he will effect all real and needed reforms as soon as practicable, notwithstanding Professor Ogston's tirade.

"An Aggrieved Member" of the British Medical Association writes: As a result of Professor Ogston's address comes the enclosed cutting from the Edinburgh *Evening Dispatch*, purporting to give a speech by Sir Arthur Grant, Bart., of Monymusk, at a corporation luncheon given at Aberdeen to a detachment of the New South Wales Lancers, which for unprovoked offensiveness it would be hard to beat. This person, who figures in the *Army List* as honorary colonel of volunteer engineers, and is hardly an irresponsible civilian, is reported to have spoken as follows:

> Professor Ogston, one of the most distinguished surgeons of Europe, had said what, to his personal knowledge, officers of the army had been saying for the last thirty years, that medical officers of the army were ignorant and useless, with, of course, certain brilliant exceptions. There was many and many a man, and many and many an officer's wife, who did not dread being shot or injured, but very much dreaded falling into the hands of the Army Medical Department. For himself, he would much rather be shot by half-a-dozen Boers than be butchered by one army doctor. [Laughter.]

*** We do not think Professor Ogston will at all accept this libellous post-prandial nonsense as representing his views of the army medical service.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

Major R.A.M.C., who arrived home end of April this year, wishes to exchange with an officer who has about a year to complete his tour of foreign service at the end of this year in any colony or India. Address No. 251, British Medical Journal, 429, Strand, W.C.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Warren G. Westcott, Surgeon, to the *Dwarf*, August 31st; Cyril Shepherd, Surgeon to the *Lion*, lent for the *Liberty*, August 31st.

ROYAL ARMY MEDICAL CORPS.

Major G. W. Brazier-Creagh, from the Seconded List, to be Major, *vice* W. G. Clements, retired, August 1st. Major Brazier-Creagh was seconded for extra-regimental appointment in December last.

Major C. S. Spong, F.R.C.S., D.S.O., retires from the service with a gratuity, August 16th. He was appointed Surgeon-Captain July 27th, 1887, and Major July 27th, 1899. He served with the Dongola Expedition under Lord Kitchener in 1896, including the engagements at Firket and Hafir (mentioned in despatches, 4th class of the Order of the Mejidie, British medal, and Khedive's medal with two clasps, and in the operations in 1897-8, for which he was several times mentioned in despatches, was appointed a Companion of the Distinguished Service Order, and received two additional clasps to the Khedive's medal).

A court-martial was held at Portsmouth on August 10th for the trial of Quartermaster and Hon. Lieutenant W. H. Barton, R.A.M.C., of Netley Hospital, on charges of embezzling and fraudulent misapplication of money. The prisoner's certificates showed that he was tried by court-martial at Aldershot last year for being absent without leave, and was ordered to lose all seniority. The prisoner was convicted, and sentence will be promulgated after it has been confirmed.

INDIAN MEDICAL SERVICE.

Major A. G. E. Newland, Madras Establishment, Medical Officer 31st Madras Light Infantry, has retired from the service August 1st. He was appointed Surgeon April 2nd, 1881, and became Surgeon-Major twelve years thereafter. He was with the Burmese Expedition in 1886-9 (medal with two clasps), with the Manipore Expedition in 1891 (clasp), and in the operations on the North-Eastern Frontier of Burmah in 1891-2, with the Baungshe, Tlang-tlang, and Tashon Columns (clasp).

Colonel G. W. R. Hay, M.B., Bombay Establishment, is granted the temporary rank of Surgeon-General, from July 15th, while officiating as Surgeon-General with the Government of Bombay.

Major R. Ross, Madras Establishment, Medical Officer 10th Madras Infantry, is permitted to retire from the service from July 31st. He joined the department April 2nd, 1881, and became Surgeon-Major April 2nd, 1893. He was with the Burmese Expedition in 1886, receiving the Frontier medal with clasp.

Brigade-Surgeon George Yeates Hunter, late of the Bombay Establishment, died at 48, Philbeach Gardens, S.W., on August 11th, in his 69th year. He was the eldest son of the late Mr. George Yeates Hunter, J.P., of Margate, and entered the service as Assistant-Surgeon, July 23rd, 1858, became Brigade-Surgeon, February 7th, 1885; and retired October 27th, 1888. He served in the Abyssinian war in 1867 as Staff-Surgeon and Medical Storekeeper, receiving a medal for the campaign. He was for some years Civil Surgeon at Karachi, and for some time Surgeon to the Jamsetjee Jejeebhoy Hospital, and Curator of the Grant College Museum, and subsequently Presidency Surgeon at Bombay.

THE VOLUNTEERS.

SURGEON-MAJOR C. W. MACGILLIVRAY, M.D., the Queen's Rifle Volunteer Brigade the Royal Scots (Lothian Regiment), is promoted to be Surgeon-Lieutenant-Colonel, August 16th.

Surgeon-Lieutenant CHARLES PORTER, 4th Volunteer Battalion the Cheshire Regiment, resigns his commission and is appointed Second Lieutenant, August 16th.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From	To
Colonel T. J. Gallwey, C.B., M.D.	Aldershot ...	Home District.
Lieutenant-Colonel C. E. Dwyer	C. of Gd. Hope	Fermoy.
Major J. F. Bateson, M.B.	Belfast	Finner Camp.
,, R. C. Thacker	Maryborough	Dublin.
Captain C. A. Stone, M.D.	Aldershot ...	South Africa.
,, R. J. W. Mawhinny...	Birr	Natal.
,, D. D. Shanahan	Dublin	South Africa.
,, T. J. Lenehan, M.B.	Dublin	Birr.
,, F. J. M. Kelly, M.B.	Cranmore Cmp	Dublin.
Lieutenant G. B. Crisp	Woolmer ...	Aldershot.
,, J. Cowan, M.B.	Belfast	Madras.
,, H. S. Taylor	Chester ...	Lancaster.
,, D. Harvey, M.B.	Brackenb'r M'r	Preston.
,, R. S. Rodger, M.B.	Chester ...	Bury.

Lieutenant-Colonel H. W. JOYNT, retired pay, has assumed medical charge of troops at Taunton.

Lieutenant-Colonel H. J. O'BRIEN, M.B., has relinquished the medical charge of troops at Maidstone, and has been succeeded by Lieutenant-Colonel K. S. WALLIS, retired pay.

Lieutenant-Colonel F. E. MCFARLAND has relinquished the medical charge of troops at Belfast.

Lieutenant-Colonels A. W. CARLETON, M.B., and G. A. HUGHES, D.S.O., M.B., have been granted increased pay under Article 362 of the Royal Warrant.

ANTITYPHOID INOCULATION.

ON August 16th, at Colchester, the drafts of the Royal Warwickshire Regiment and 7th Hussars, who are proceeding to Egypt and India respectively, were assembled in the large new recreation room kindly lent by Colonel Reeves of the 2nd Royal Irish Regiment, and the advantages of Professor Wright's antityphoid inoculations were put before them by Captain F. J. W. Porter, R.A.M.C. He explained the nature of the injections, and gave statistics showing the number of attacks and deaths due to enteric fever, as well as of the inoculations among the nurses during the late Maidstone epidemic. Seventy men volunteered for the inoculations, which were carried out on the spot, 75 c.cm. of the serum being injected into each man and 50 c.cm. into boys. The Royal Irish draft will be dealt with when they return from furlough.

VOLUNTEER MEDICAL ASSOCIATION.

WITH reference to the paragraph under this head, published in the BRITISH MEDICAL JOURNAL of July 1st, page 60, Surgeon-Lieutenant F. J. Grindon writes that we were incorrectly informed that he had received instruction from the classes of the Volunteer Medical Association. He adds that he received instruction from the Volunteer Ambulance School of Instruction.

EXTENSION OF THE MILITARY TITLES.

SURGEON-MAJOR (retired pay) writes that he, among many others, has been disappointed with the decision that the use of the new titles should not be extended to retired medical officers. The reason that these titles had been granted for administrative and not social use is scarcely correct, seeing that they were granted in order to improve the position of the medical officers, both in the carrying out of their duties and in their social standing. The granting of the titles to retired medical officers would have been a graceful concession injuring nobody.

MEDICO-LEGAL.

ACTION FOR LIBEL ON A MEDICAL MAN.

THE action of Dr. Hugh Cameron Kidd *v.* Ashwell James Crane, which according to the reports in the local press excited considerable interest in Bromsgrove (Worcestershire) and district, was tried on August 2nd and 3rd in the Nisi Prius Court, Birmingham Assizes, before the commissioner (Mr. English Harrison, Q.C.) and a special jury. Mr. A. R. Jelf, Q.C. and Mr. Wills (instructed on behalf of the Medical Defence Union, Ltd. appeared for the plaintiff, Mr. Hugo Young, Q.C. and Mr. Vachell for the defendant.

The action was brought by Dr. Hugh Cameron Kidd, Medical Officer for the Bromsgrove, Droitwich, and Redditch Joint Isolation Hospital, against Ashwell James Crane, also of Bromsgrove, baker, for libel, concerning the plaintiff's management of the isolation hospital.

It appeared from Mr. Jelf's opening statement that the defendant, at a meeting of the Bromsgrove Urban District Council, of which he was a member, on September 14th last stated that he had a protest to make with regard to the isolation hospital. He had certain manuscript notes with him from which he read, and which were the substance of the charges in respect of which the action was brought, which charges, it appears, were afterwards published in the *Bromsgrove Weekly Messenger*.

Mr. Hugo Young, on the conclusion of Mr. Jelf's opening statement, intimated that he did not propose to raise the question of privilege. So far as any charges were made against Dr. Kidd, the issue would be whether they were true or not.

The plaintiff was then called, and said that he was a Bachelor of Medicine and a Fellow of the Royal College of Surgeons; he had been a general practitioner at Bromsgrove since 1888, and held for some time the position of Medical Officer at the Bromsgrove Workhouse, Medical Officer of Health for Bromsgrove Town, and also Medical Officer at the Isolation Hospital, the efforts to establish which he described. A year after the hospital was established 68 or 70 patients were admitted, and only 4 deaths had taken place. He denied that a woman named Eades was in the hospital seven days without medical advice; she did not require medicine, and was discharged perfectly cured, and had made no complaint. With regard to what had been said about men and women being in the same room, witness stated that the patients were mostly small children. Two boys were in the hospital at the time referred to, but their beds were screened off from those of the opposite sex. The conditions at the hospital were exactly the same as in every well-ordered hospital ward. The hospital tent was properly ventilated. When first put up there was heavy rain, and water ran down the sides in one or two places, and then the beds were drawn away, and screens put round to prevent patients getting cold. The girl Hodgkiss, who died in the hot blankets, was suffering from scarlet fever and sore throat when first admitted, and went on satisfactorily; but she subsequently developed Bright's disease in the worst form, the kidneys ceased to act, and she passed into a condition of uræmic poisoning. It was untrue that she was in unbearable agony, and the statement that she would be put into hot blankets was not used as a threat; she died from convulsions which could not have been prevented.

Cross-examined by Mr. Young, plaintiff said he was represented there by the Medical Defence Union, who relieved him of everything, and he was in no event responsible for the costs of the action. He had not taken upon himself to fight the battle of the hospital, but simply wished to justify his professional reputation. He was responsible for the hospital more than anyone else.

Dr. Arthur Foxwell, of Newhall Street, Birmingham, expressed the opinion that plaintiff's treatment of Mrs. Eades and Hodgkiss, as stated, was quite correct; the best treatment for suppression of urine was the pack, and the hotter it was applied the better.

Mary Ellen Carter, matron, said that she told Hodgkiss to keep the perspiration up and keep the clothes on, or it would possibly lead to her having a hot pack or hot blankets; she did not say boiling blankets; she did not use this as a threat.

Other witnesses having been called, the case for the plaintiff concluded.

On Thursday the hearing of the case was proceeded with, and Mr. Hugo Young, on opening the defence, stated that Mr. Crane had said nothing except what he had been told, and what he believed, with regard to the management of the hospital as a whole, and did not wholly refer to the plaintiff.

The defendant Ashwell James Crane stated that he had been a member of the District Council for five years, and chairman of the Sanitary Committee for five months, and bore out counsel's opening statement concerning the circumstances under which he made the speech. He added that he considered he would be lacking in his duty if he had not brought the matter forward. Cross-examined, he did not think he was imputing mismanagement to the doctor in all that he referred to, but that some of the complaints referred to the other officials. Concerning the death of the child who was put in the "boiling blankets," he intended to convey that the treatment was not proper.

Clara Eades gave evidence, and said that for a week and three days she never saw Dr. Kidd and she had no medicine except salts when she asked for them. She did not consider that due provision was made for decency considering the place was occupied by both sexes.

Josiah Hodgkiss also gave evidence, and several witnesses were called to speak as to the provisions to secure decency.

Louisa Pratt, a servant at the hospital, remembered the child before she went into the pack saying she would not come out alive; the child screamed from the time she was put in till she died.

Mrs. Eades was recalled, and denied that it was she who screamed and not the child, and thereupon the matron was recalled, who said the screaming was done by Mrs. Eades and not by the child.

Counsel having addressed the jury, the Commissioner, in summing up, advised the jury not to let the action stand or fall on the one question of the treatment of the child, but upon a general view of the whole history of the libel. Probably there were some matters in connection with the hospital which might have formed the subject of an inquiry, but a question which the jury would have to decide was whether these matters had been taken advantage of for the purpose of attacking the plaintiff.

The jury after a brief retirement found for the plaintiff, and assessed the damages at £150.

Judgment accordingly, with costs.

UNQUALIFIED PRACTICE AND DEATH CERTIFICATES.

AN inquest was recently held by Mr. Luxmoore Drew relative to the death of a child named Bianca Violeta di Giovanni, aged 5 months, daughter of a blacksmith, whose body had been exhumed from St. Mary's Catholic Cemetery, Kensal Green, on a coroner's warrant. The coroner remarked that the case was an important one, as the child, after being under the treatment of an unqualified practitioner, had been buried without the death being registered, and in a wrong name and age. Such things, if allowed to go on, opened up an easy way to crime.

It appeared from the evidence, as reported in the *West London Observer*, that on July 7th and 8th the child had been attended by a qualified medical man, and subsequently by an Italian, Achille Monpalao, of 26, Great College Street, who stated that he was a Maltese and held a diploma from Bologna, but had no qualification to practise in this country. He stated that he had been to the Middlesex Hospital and studied there, but went round the wards as an ordinary foreign doctor. The librarian at the hospital, however, stated that he was unknown there.

The child died on July 14th, and the Italian was asked for a certificate, but he told the father he would have to see the coroner. At midday on July 14th, as the Italian did not come with the certificate, the qualified medical practitioner who had previously attended the child was called in and gave the certificate produced, ascribing the death of "Violeta Bianchi," aged 6 months, to be due to acute eczema and bronchitis. The father gave the certificate to the undertaker, with the full name, and then went to the funeral of the child, which, in accordance with the custom of his country, he arranged should take place the next day.

Edward Comfort, registrar of deaths, said that he had never seen the certificate produced, and the death had not been registered in either name. The undertaker (Gobby) had no right with the certificate, but he said he had shown it to the cemetery people.

Charles Gobby, the undertaker, said he did not notice that the name was incorrect on the certificate, and he intended to send the certificate to the registrar on the Monday. In reply to a question of the coroner, the undertaker said that cases were often buried without the registrar's certificate and it was possible for a person to be interred without a certificate at all.

The Superintendent of St. Mary's Cemetery, Kensal Green, deposed to having received a letter from Mr. Gobby informing him of his wish to bury Bianca Violeta di Giovanni the following day. When he came he showed a doctor's certificate, and as the name was different he altered the letter he had received. Since this case he had received instructions not to allow a burial unless on a registrar's or coroner's certificate.

In reply to other questions, witness said that when a body had been buried on a doctor's certificate and he had sent the registrar notice of it, still the certificate had never been forthcoming.

By the Coroner: So that it might have been used to bury another person the next day in another part of London?—Yes.

The clergyman who buried the child stated that he was not told of any discrepancies in the certificate.

Mr. H. P. Dunn, of 54, Wimpole Street, who made the *post-mortem* examination, said that death was due to gastro-enteritis, and the jury returned a verdict in accordance with his evidence, expressing their sympathy with the parents, and adding a rider that they considered the law should be amended so that nobody could be buried except on a registrar's or coroner's certificate. They also considered that the Italian should be censured for practising without an English diploma without explaining to the people that he was not qualified.

The Coroner then censured Monpalao, who replied that he had acted out of pure philanthropy. This the coroner said he could hardly accept, when he had charged 3s. a visit.

RECOVERY OF CHARGES.

PURSUER.—The principal and assistant should attend to prove the professional services rendered. The production of the *Medical Register* will be sufficient evidence of the assistant's qualification, assuming that his name has been duly registered. There may be technical proceedings to be observed in the Scottish law courts, and our correspondent would be well advised to consult his legal adviser.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

PRELIMINARY SCIENTIFIC EXAMINATION.—The following candidates have satisfied the Examiners:—

Entire Examination.—First Division: F. Alcock, Owens College; W. Appleyard, Yorkshire College; J. G. Atkinson, Epsom College; A. E. Barnes, University College, Sheffield; C. E. Denton, Yorkshire College; R. Félix, University College and Middlesex Hospital; J. A. Ferrière, University College; A. D. Hunt, Yorkshire College; S. M. Lawrence, Brighton Technical School; E. E. Maples, St. Bartholomew's Hospital; W. M. Sadler, Birkbeck Institute, Royal College of Science, and South-West London Polytechnic; R. K. Shepherd, University College, Cardiff; H. Smith, University College, Sheffield; T. De Smith, Jesus College, Cambridge, and private study; F. J. Thornton, Giggleswick School. Second Division: G. F. S. Bailey, St. Paul's School; A. J. Blaxland, University College; J. H. Bletsoe, St. Paul's School; L. H. H. Boys, Epsom College; F. B. Dalgliesh, St. Thomas's Hospital and University Tutorial College; J. E. Dunbar, London Hospital; H. Finzel, St. Bartholomew's Hospital; W. H. Fleetwood, Epsom College and London Hospital; Margaret Helen Fraser, University College; H. O. Gough, University College, Bristol; †G. Hall, University of Durham, and College of Science, Newcastle-on-Tyne; C. D. Holdsworth, University College; E. L. Holland, King's College; H. S. Hollis, Municipal School of Science and Grammar School, Brighton; J. J. Hummel, Yorkshire College; J. James, King's College; C. H. F. Johnston, Epsom College; T. H. Jones, King's College; J. N. Kilner, St. Mary's Hospital; D. McRae, London Hospital; U. Marks, St. Mary's Hospital; S. H. Matson, St. George's Hospital; E. E. Mossop, St. Thomas's Hospital and University Tutorial College; D. J. Mulholland, University College, Liverpool; W. C. Pickering, St. Bartholomew's Hospital; J. M. B. Rahilly, Epsom College; A. W. C. Richardson, University College, Bristol; P. M. Roberts, University College; R. P. Rowlands, Guy's Hospital and private study; G. W. Russell, Guy's Hospital; A. A. Sutcliff, Epsom College; S. H. Sweet, University College, Cardiff; W. G. Taylor, University College and Middlesex Hospital; G. W. Thomas, Yorkshire College; J. A. Torrens, St. Paul's School; S. L. Walker, Nottingham High School; L. Warren, Epsom College; C. S. White, University College; H. F. Whittall, University College; T. J. Williams, University College, Liverpool; G. W. Smith, private study.

Chemistry and Experimental Physics.—*L. C. Blackstone, University, and University Tutorial College; H. D. Bond, St. George's Hospital and University Tutorial College; *G. P. C. Claridge, St. Mary's Hospital; *A. G. V. Elder, St. George's Hospital; P. Farrant, Allhallows School, Honiton; C. H. Fielding, Felsted School and Hartley Institution; *A. G. C. Findlay, University, and University Tutorial College; Janet Marcia Fishe, Walthamstow Hall and University Tutorial College; R. J. Fletcher, private study; *A. H. Gifford, King's College; *Florence Erin Gubb, University, and University Tutorial College; G. Hamilton, Guy's Hospital; *E. C. Hood, Yorkshire College and private study; R. R. Huxtable, Reigate Grammar School; *H. Irving, Owens College; *Eleanor G. Kensington, Bedford College, Birkbeck Institution, and private tuition; *M. A. J. Lavis, Epsom and University Colleges; *J. T. Lloyd, University College, Liverpool; Eleanor Lowry, Queen Margaret's College, Glasgow, and Kelvin House, Belfast; *B. S. Matthews, University Tutorial College and Birkbeck Institute; J. C. Mead, Berkhamsted School; J. H. Nixon, University College, Nottingham; *G. E. Peachell, St. Mary's Hospital and University Tutorial College; *O. P. N. Pearn, Westminster Hospital; T. Pratt, University College, Bristol; *T. P. Puddicombe, St. Thomas's Hospital; A. M. Roome, Guy's Hospital; *H. C. Samuel, University Tutorial College; *W. L. Scott, University, and University Tutorial College; F. O. Spensley, Kingswood School; A. Toulmin, Owens College; H. E. H. Tracy, private study and University Tutorial College; *E. F. Travers, St. Bartholomew's Hospital; A. G. Tresidder, London Hospital.

Biology.—A. W. Baker, Kingswood School; *W. H. Barnett, University Tutorial College and private study; E. H. Bennett-Bailey, Alwyne Institute; S. L. Benton, Epsom College; Agnes Bernfield, University College; J. F. Boyd, University College; J. F. Broughton, University College; C. P. Charles, St. Bartholomew's Hospital and private tuition; W. F. Corfield, University College; R. J. H. Cox, St. Paul's School; S. T. Crump, Yorkshire College; *E. P. Cumberbatch, St. Paul's School; *E. W. Dewey, St. George's Hospital; H. Dixon, London Hospital; G. S. Earl, St. George's Hospital; W. H. A. Elliott, Yorkshire College; A. R. Finn, University College; Margaret Glennie, Royal Holloway College; F. R. D'A. Glissan, Mason University College; T. W. Godsell, St. Bartholomew's Hospital; G. Graham, St. Paul's School; *M. Greenwood, London Hospital; H. McC. Hänschell, St. Bartholomew's Hospital; Edith Blake Holloway, Birkbeck Institution; H. T. Jones, University College; W. H. Jones, Owens College; A. E. F. Kynaston, Oundle School and Guy's Hospital; *L. Llewelyn, private study; P. J. Marett, Westminster Hospital, private study, and University Tutorial College; Mary Cecil Martin, private study and University College, Bristol; E. W. Matthews, King's College; W. N. May, Reading College; R. Milne, London Hospital; B. E. Moss, St. Bartholomew's Hospital; Helen Irene Moss, private study; J. O. Musson, Guy's Hospital; Alice Maud Mary Niesigh, University Tutorial College; J. Owen, Mason College; G. D. Perry, Mason College; N. B. Powell, St. Bartholomew's Hospital; T. H. Ravenhill, Mason College; C. H. Reinhold, Guy's Hospital; F. D. Roberts, London Hospital; J. L. Schilling, Yorkshire College; G. A. Soltau, London Hospital; A. G. Sworn, Epsom College; *S. B. Turner, University College, Sheffield; F. N. Walsh, Birmingham School and Mason University College; A. G. Wells, University College; E. D. Whittle, Grammar School and Municipal Technical College, Brighton; *G. E. O. Williams, University College; R. O. Williams, Guy's Hospital; *H. W. Wilson, St. Bartholomew's Hospital; E. D. Wolff, King's College; A. R. Wright, Owens College; S. Zobel, University College.

* These candidates have now completed the examination.

† Honours candidate recommended for a pass.

INTERMEDIATE EXAMINATION IN SCIENCE AND PRELIMINARY SCIENTIFIC EXAMINATION CONJOINTLY.—The following candidates have satisfied the examiners:—

Pass List.—First Division: F. B. Ambler, private study and University Tutorial College; W. Arnott, Yorkshire College; S. G. Barling, Mason University College; L. Craske, St. Thomas's Hospital; H. E. Dyson, City of London School; R. C. T. Evans, Birkbeck Institution; J. A. Hughes, University College, Aberystwith, and Merchant Venturers' College; A. V. Jubb, East Retford Grammar School and University College, Sheffield; W. Neave Kingsbury, City of London School; F. P. Luard, Woodbridge School; E. Mapother, University College; P. Moxey, University College, Bristol; E. C. Mvott, Owens College; G. W. Rogers, University College, Cardiff; E. M. Townend, Hull Municipal Technical Schools and private study; H. F. B. Walker, University Tutorial College; J. G. Willmore, University Tutorial College; A. W. G. Woodforde, University Tutorial College. Second Division: J. J. Bauer, private study; W. E. Burrows, Kingswood School; H. H. Carter, Guy's Hospital; J. H. Clatworthy, Guy's Hospital; R. Felton, Guy's Hospital; G. A. Horton, University Tutorial College and Middlesex Hospital; A. Leeming, Guy's Hospital; T. Lewis, University College, Cardiff; M. G. Louisson, Guy's Hospital; W. C. Macaulay, B.A., private study; E. W. Parry, University College, Bangor; E. G. Perodeau, private study and University Tutorial College; W. K. Pfleiderer, King's College and School; A. P. Piggot, University Tutorial College; J. V. Rees, University College, Aberystwith; E. J. Roberts, University College, Bangor; H. Thomas, Kingsholme School, Weston-super-Mare; H. G. Thompson, University College, Liverpool; C. Walker, Queen's College, Galway. Honours Candidates recommended for a Pass: W. F. Annand, University College; W. I. Cumberlidge, Christ's College, Cambridge; N. S. Finzi, University College; R. Payne, Caius College, Cambridge, and University Tutorial College; H. A. Tempany, University College.

Chemistry.—First Class: H. W. Bausor, Cambridge University; S. C. Bradford, private study; J. S. Coates, Trinity College, Cambridge; G. H. Delf, Wilson's Grammar School, Camberwell; *H. W. Hill, University Tutorial College; J. Lister, Royal College of Science; G. Martin, Merchant Venturers' Technical College, Bristol; T. S. Moore (Exhibition), East London Technical College; J. H. Ryffel, Peterhouse, Cambridge; E. E. Walker, Trinity College, Cambridge. Second Class: T. Beacall, Merchant Venturers' Technical College, Bristol; F. Bedford, University Tutorial College and private study; B. C. Burt, Merchant Venturers' Technical College, Bristol; E. L. Edlin, Merton College, Oxford; M. Feldman, London Hospital and East London Technical College; A. L. Gray, Yorkshire College; H. S. Hatfield, University College; F. Heaton, B. A., Emmanuel College, Cambridge, and private study; H. L. Hind, private study and University College, Nottingham; W. H. Jones, Royal College of Science; F. M. Moir, University College; C. C. G. Rudorf, University College; T. Stenhouse, Royal College of Science; W. S. Tucker, Royal College of Science; W. G. Twiney, Reading College; W. H. Watson, Royal College of Science and private study. Third Class: G. H. Broom, Royal College of Science; C. J. J. Fox, University College and University Tutorial College; W. W. S. Nicholls, private

study; T. H. Page, St. Dunstan's College, Catford, City and Guilds Central Technical College, and private study; J. Peck, University Tutorial College and Peterborough Science and Art School; H. G. Prested, private study and the Polytechnic; G. Senter, Pharmaceutical Society, Heriot-Watt College, and private study; G. C. E. Simpson, Mill Hill School; G. H. Thompson, Rutherford College, Newcastle-on-Tyne; G. H. Tipper, Kendal Grammar School; G. Y. Worrall, Hartley College.

Experimental Physics.—First Class: *J. S. Coates (Neil Arnott Medal), Trinity College, Cambridge; G. H. Delf, Wilson's Grammar School, Camberwell; C. H. B. Epps, City of London School; *A. B. Field, St. John's College, Cambridge; *J. H. Field, private study; H. S. Hatfield, University College; O. W. Richardson (Neil Arnott Exhibition and Medal), Trinity College, Cambridge; J. Satterly, Ashburton Grammar School and Royal College of Science; *M. Walker, St. John's College, Cambridge. Second Class: H. E. Boothroyd, Sidney Sussex College, Cambridge, and private study; W. Ditchburn, Royal College of Science; Margaret Frodsham, University College, Bangor; F. Heaton, Emmanual College, Cambridge, and private study; W. Hewson, Royal College of Science, and South-West Polytechnic; G. W. C. Kaye, Huddersfield Technical College, and University College, Liverpool; B. Leech, Clare College, Cambridge; V. Lough, Royal College of Science, and Birkbeck institution; T. O. Pierce, University College, Bangor; J. H. Ryffel, Peterhouse, Cambridge; G. C. E. Simpson, Mill Hill School; W. S. Tucker, Royal College of Science; W. M. Varley, Yorkshire College; A. Wright, King's College. Third Class: R. A. Earp, Owens College; F. W. Goyder, St. John's College, Cambridge; H. W. Hill, University Tutorial College; F. Hine, private study; G. Senter, Pharmaceutical Society, Heriot Watt College, and private study; H. J. Tomlinson, University College, Birkbeck Institution, and private tuition; E. G. Voss, private study; E. E. Walker, Trinity College, Cambridge.

Botany.—Second Class: F. Drabble, University College, Sheffield; Theodora Lisle Prankerd, Royal Holloway College. Third Class: F. V. Dutton, Royal College of Science; J. W. S. Macfie, Caius College, Cambridge; Helen Nora Payne, private tutor and Tunbridge Wells High School; H. M. Woodcock, University and University Tutorial Colleges and St. Thomas's Hospital.

Zoology.—First Class: L. G. Parsons (Exhibition), Mason University College and private study; *H. M. Woodcock, University and University Tutorial College and St. Thomas's Hospital. Second Class: H. B. Fantham, Mason University College; H. J. Gauvain, St. Bartholomew's Hospital; E. A. Scott, Royal College of Science. Third Class: H. D. Clementi-Smith, St. Paul's School; G. E. Richards, The Polytechnic; K. S. Wise University Tutorial College and Battersea Polytechnic.

* Obtained the number of marks qualifying for the exhibition.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

NOTICE is given in the *London Gazette* of August 11th that a petition has been presented to Her Majesty in Council by the Royal College of Surgeons of England praying for the grant of a supplementary charter to enable the College to admit honorary Fellows; and that, Her Majesty having referred the petition to a Committee of the Lords of the Council, it will be taken into consideration by their lordships on September 8th.

OBITUARY.

LAURISTON WINTERBOTHAM, M.R.C.S.

WE have to record the death, on August 8th, of Mr. Lauriston Winterbotham, consulting surgeon to the Cheltenham General Hospital and surgeon to Cheltenham College. Mr. Winterbotham, who had nearly completed his 66th year, was the son of the late Mr. John Winterbotham, of Cheltenham. He received his early education at Mill Hill School, was apprenticed to Mr. Hawkins and became a student at St. Bartholomew's Hospital, where he was house-surgeon. He obtained the diploma of M.R.C.S. in 1856, and settled at Cheltenham very shortly afterwards, when he was appointed honorary surgeon to the Cheltenham General Hospital. On his resignation of that position he was appointed honorary consulting surgeon. Mr. Winterbotham was a man of refined tastes and was an excellent amateur photographer. His grandfather was a well-known Baptist minister in Plymouth, who was condemned in 1793 to a long term of imprisonment and a heavy fine for preaching a sermon advocating the extension of civil and religious liberty. His grandson, the subject of this notice, was a consistent Liberal in politics. He leaves a widow and three children. Some years ago he sustained an injury to the knee from which he never completely recovered, and his health for some time had not been robust. The cause of death was double pneumonia.

MLLE. BONSIGNORIO, who was recently inhibited by the Council of the University of Paris from giving instruction as a *professeur libre* of Ophthalmology, has been appointed by the Minister of Public Instruction Oculist to the Superior Normal Schools of Sèvres and Fontenoy-aux-Roses.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

MANCHESTER PORT SANITARY AUTHORITY.

ON August 9th, Dr. R. J. Reece held an inquiry for the Local Government Board into an application by the Manchester Port Sanitary Authority for an extension of the order of its constitution. By the Public Health Act of 1875, the Local Government Board may constitute a port sanitary authority by, among other methods, forming a joint Board consisting of representative members of any two or more riparian authorities having jurisdiction over the port or any part of the port. The riparian authorities for the Port of Manchester are the Town Councils of Manchester, Eccles, Salford, Warrington, and Widnes, the Urban District Councils of Irlam, Lymm, Runcorn, and Salford, and the Rural District Councils of Barton, Bucklow, Chester, Runcorn, Warrington, Whiston, and Wirral.

The order constituting the Port Sanitary Authority was granted by the Local Government Board in 1896; this order has now expired, and the Port Sanitary Authority has applied for its extension, temporary or permanent. The chief subject of contention was as to which of the towns concerned should bear the cost of providing for cases of infectious disease on vessels calling at the various landing stages on the Manchester Ship Canal. Manchester, Salford, and Stretford were willing to bear the main share, but asked the other riparian authorities to take the responsibility of treating cases arising within their own districts. The representatives of Chester and Irlam objected to those towns having to bear any expense in the matter, as they neither had nor were likely to have wharves. It was pointed out that in the case of a vessel bound for Salford calling for a short time at Ellesmere Port and having an infectious case on board, a fair arrangement would be that the expenses should be borne by the authorities concerned in proportion to the amount of tonnage consigned.

As to whether the order should be made temporary or permanent, the Clerk to the Port Sanitary Authority pointed out that a temporary order would have the advantage of enabling the authority to conclude arrangements with local authorities, as the necessity might arise, whereas the granting of a permanent order would involve the necessity of settling such matters beforehand, in view of the great developments expected in the Ship Canal.

In answer to the Inspector, representatives of all the authorities except the Chester Rural District Council agreed to treat any case of infectious disease on any vessel which might be bound for a wharf within their own district. This concluded the inquiry.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,777 births and 5,320 deaths were registered during the week ending Saturday last, August 12th. The annual rate of mortality in these towns, which had increased from 15.7 to 24.6 per 1,000 in the six preceding weeks, declined again to 24.3 last week. The rates in the several towns ranged from 13.4 in Huddersfield, 14.7 in Blackburn, 16.0 in Halifax, and 17.1 in Bristol to 28.7 in West Ham, 30.3 in Sheffield, and 32.3 in Manchester, 33.6 in Liverpool, and 36.3 in Plymouth. In the thirty-two provincial towns the mean death-rate was 24.7 per 1,000, and exceeded by 1.0 the rate recorded in London, which was 23.7 per 1,000. The zymotic death-rate in the thirty-three towns averaged 7.3 per 1,000; in London the death-rate was equal to 6.6 per 1,000, while it averaged 7.7 per 1,000 in the thirty-two provincial towns, among which the highest zymotic death-rates were 11.2 in Portsmouth, 11.4 in Liverpool, 11.5 in Burnley, 13.4 in Salford, and 13.9 in West Ham. Measles caused a death-rate of 1.0 in Oldham, 1.1 in Halifax, 1.2 in Liverpool, 2.6 in Sheffield, and 2.8 in Burnley; whooping-cough of 1.0 in West Ham; "fever" of 1.2 in Wolverhampton; and diarrhœa of 0.3 in Liverpool, 0.8 in Plymouth, 10.4 in Portsmouth, 11.1 in West Ham, and 11.4 in Salford. The mortality from scarlet fever showed no marked excess in any of the large towns. The 71 deaths from diphtheria in the thirty-three towns included 26 in London, 8 in West Ham, 8 in Sheffield, and 5 in Leeds. One fatal case of small-pox was registered in Hull, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, August 12th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,161 to 2,704 at the end of the twelve preceding weeks, declined again to 2,674 on Saturday last; 227 new cases were admitted during the week, against 292, 307, and 297 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, August 12th, 934 births and 54 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 16.5 to 18.0 per 1,000 in the three preceding weeks, declined to 17.9 last week, and was 6.4 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death rates ranged from 11.5 in Paisley and 11.8 in Perth to 19.7 in Glasgow and 20.5 in Greenock. The zymotic death-rate in these towns averaged 3.4 per 1,000, the highest rates being recorded in Glasgow and Edinburgh. The 278 deaths registered in Glasgow included 12 from measles, 3 from scarlet fever, 4 from whooping-cough, 2 from "fever," and 39 from diarrhœa. Two fatal cases of scarlet fever, 2 of whooping-cough, 3 of "fever," and 8 of diarrhœa were recorded in Edinburgh; 8 deaths from diarrhœa occurred in Dundee, and 6 in Aberdeen.

ZYMOTIC MORTALITY IN LONDON.

THE accompanying diagram shows the prevalence of the principal zymotic diseases in London during the second or spring quarter of this year. The fluctuations of each disease and its fatal prevalence, as compared with that recorded in the corresponding periods of recent years, can thus be readily seen.

Small-pox.—No fatal case of small-pox was registered in London last quarter, the corrected average number in the corresponding periods of

the ten preceding years being 17; 6 small-pox patients were admitted into the Metropolitan Asylums Hospitals during the quarter, and 2 remained under treatment at the end of June last.

Measles.—The deaths referred to measles, which had increased from 238 to 386 in the three preceding quarters, further rose to 696 during the three months ending June last, but were more than 30 per cent. below the corrected average number. Among the various sanitary areas of the metropolis measles showed the highest proportional fatality in Hackney, St. Luke, Shoreditch, St. George-in-the-East, Limehouse, Poplar, Lambeth, and Greenwich.

Scarlet Fever.—The fatal cases of this disease, which had been 139 and 96 in the two preceding quarters, further declined to 84 during the three months under notice, and were 125 below the corrected average number in the corresponding periods of the ten preceding years. Among the various sanitary areas this disease was proportionately most fatal in Fulham, Chelsea, St. Margaret Westminster, Strand, Bermondsey, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 2,883 and 2,272 at the end of the two preceding quarters, rose again to 2,372 at the end of June last. The number of new cases admitted into these hospitals, which had been 3,795 and 2,880 in the two preceding quarters, rose again to 2,990 during the three months ending June last.

Diphtheria.—The deaths referred to diphtheria in London, which had been 511 and 472 in the two preceding quarters, further declined to 357 during the three months under notice, and were as many as 114 below the corrected average number. Among the various sanitary areas this disease showed the highest proportional fatality in Strand, Limehouse, St. George Southwark, Newington, Bermondsey, and Lewisham. The number of diphtheria patients in the Metropolitan Asylums Hospitals at the end of June last was 1,273, against 1,239 and 1,159 at the end of the two preceding quarters; 1,953 new cases were admitted during last quarter, against 2,241 and 1,985 in the two preceding quarters.

Whooping-cough.—The fatal cases of this disease, which had been 240 and 681 in the two preceding quarters, declined again to 528 during the three months ending June last, and were 205 below the corrected average number; among the various sanitary areas whooping-cough was proportionally most fatal in Holborn, Limehouse, Mile End Old Town, Poplar, St. George Southwark, Newington, and Bermondsey.

Fever.—Under this heading are included deaths from typhus, enteric, and simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had been 296 and 158 in the two preceding quarters, further declined to 88 during the three months ending June last, and were 18 below the corrected average number. No death from typhus or from simple continued fever was registered during the quarter under notice. Among the various sanitary areas the mortality from "fever" was highest in St. George Hanover Square, Holborn, Clerkenwell, City of London, St. George-in-the-East, Limehouse, Poplar, and Bermondsey. The Metropolitan Asylums Hospitals contained 105 enteric fever patients at the end of June last, against 255 and 148 at the end of the two preceding quarters; 228 new cases were admitted during last quarter, against 531 and 338 in the two preceding quarters.

Diarrhœa.—The 141 fatal cases of diarrhœa registered in London during the three months ending June last were less than half the corrected average number; this disease showed the highest proportional fatality in St. Giles, Strand, Bethnal Green, Limehouse, St. Olave, and Woolwich sanitary areas.

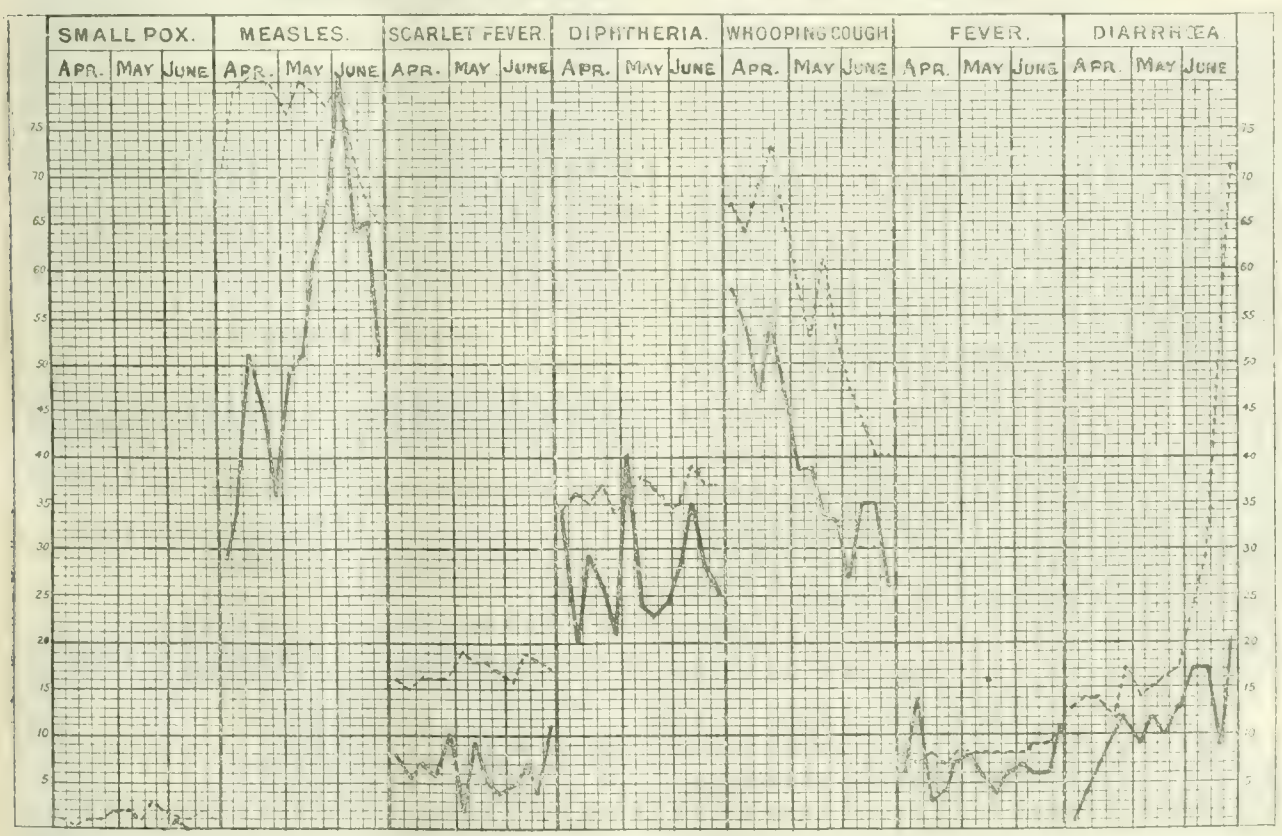
In conclusion, it may be stated that the 1,894 deaths referred to the principal zymotic diseases in London during the second or spring quarter of this year were 944, or more than 33 per cent. below the average number in the corresponding periods of the ten preceding years, 1889-98. The mortality from each of the principal zymotic diseases was below the average. Among the various sanitary areas the lowest zymotic death-rates were recorded in Paddington, St James Westminster, St. Giles, Rotherhithe, Wandsworth, and Plumstead; and the highest rates in Holborn, St. George-in-the-East, Limehouse, Poplar, St. George Southwark, and Newington.

ATTENDANCE ON FEVER PATIENTS.

A CORRESPONDENT states that A. is M.O.H. in a seaside resort of some 20,000 inhabitants. The authority have an isolation hospital, and insist that only A., who is also in private practice, shall attend the patients on the ground of preventing the spread of infection. The keeper of a large boarding house contracts diphtheria, is attended by B., who *pro bono publico* advises removal. Three months later B. learns that his former patient is under treatment at her own home by A.

*** If these are all the facts the case against A. looks black. For the success of the principle of isolation it is desirable that anyone in a fiduciary position to other practitioners should not be suspected of poaching. If B. is the habitual attendant (not merely called in on an emergency) he had a right to expect that when his patient had ceased to be infective A.'s attendance would cease and his own recommence. It is conceivable that the patient might object, but at least some communication with B. might have been made. Unless there are other undisclosed circumstances A.'s action appears to require some explanation.

DEATHS FROM ZYMOTIC DISEASES IN LONDON DURING THE SECOND QUARTER OF 1899



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the ten preceding years, 1888-97.

MEDICAL NEWS.

PRESENTATION.—Dr. T. J. Monaghan, who is leaving Accrington, has been presented with a solid tea and coffee service, bearing a suitable inscription, by the mayor, aldermen, councillors, and borough officials, as a mark of their personal respect and appreciation of his services as medical officer of health for the borough of Accrington.

SUCCESSFUL VACCINATION.—Dr. W. Millar, Public Vaccinator for the West Green District of the Edmonton Union, has received the Government grant for efficient vaccination. Mr. John Aspinall Hunt, Public Vaccinator for the Spondon District of the Shardlow Union, has again been awarded the grant for efficient vaccination in his district.

COLONIAL NURSING ASSOCIATION.—The Colonial Nursing Association has determined that all nurses sent out by it should pass a medical examination conducted by a medical officer connected with the Colonial Office. This announcement is satisfactory, for the nurses will in many cases have to work in trying climates, and it is essential that they should possess a good physical constitution as well as skill and enthusiasm.

THE increase of the smoke nuisance in New York has led to serious steps being taken to check it. Over 300 instances of violation of the law in Greater New York have been detected by the health inspectors, among the delinquents being the city authorities, who are creating a smoke nuisance at a pumping station on Long Island. Fifty complaints will be brought before the grand jury, which has already indicted some of the greatest offenders, but among these the city authorities do not seem to be included.

MEDICAL VACANCIES.

The following vacancies are announced :—

BIRKENHEAD AND WIRRAL CHILDRENS' HOSPITAL, Woodchurch Road.—House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications to Mr. P. R. Arrowsmith, Honorary Secretary, 20, Chapel Street, Liverpool, by August 21st.

BIRMINGHAM GENERAL HOSPITAL.—(1) Two Assistant House-Physicians: (2) House-Surgeon. Appointments for six months. No salary; residence, board, and washing provided Applications to the House-Governor by August 26th.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN. House-Surgeon; unmarried, and under 30 years of age. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance. Applications to the Clerk, 76, West Street, Brighton, by September 2nd.

BRIGHTON, HOVE, AND PRESTON DISPENSARY (NORTHERN BRANCH).—House-Surgeon. Salary, £140 per annum, with furnished apartments, coals, gas, and attendance. Applications to the Assistant Secretary, 113, Queen's Road, Brighton, by August 26th.

BRIGHTON THROAT AND EAR HOSPITAL, Church Street, Queen's Road.—Non-Resident House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum. Applications to Mr. E. W. Pilbeam, 10, Black Lion Street, Brighton, by August 28th.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke Road. House-Surgeon. Appointment for twelve months. Salary £80, with board, lodging, and washing. Applications, under cover, to the Chairman of the Medical Committee by September 5th.

CARLISLE: CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications to the Secretary by September 11th.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon. Salary £100 per annum, with board, residence, and washing. Applications to the Secretary by September 5th.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. No salary; board, lodging, and washing provided. Applications to the Secretary of Medical Committee by August 4th.

DUNDEE ROYAL INFIRMARY.—Resident Medical Assistant (House-Surgeon). Appointment for six months. Salary, £40 per annum. Applications to the Secretary, Mr. D. Gordon Stewart, Solicitor, Dundee, by August 23rd.

DURHAM COUNTY ASYLUM, Winterton, Ferryhill.—Assistant Medical Officer; unmarried; also to act as pathologist Salary £120 per annum, with apartments, board, and attendance. Applications to the Chief Officer by September 1st.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. No salary, but board, lodging, and washing provided. Will be eligible for senior post when a vacancy occurs. Applications to Percy H. Stirk, House-Surgeon, by August 29th.

FINSBURY DISPENSARY, Brewer Street, Goswell Road, E.C.—Resident Medical Officer. Salary £120 per annum, with furniture, residence, attendance, coal, and gas. Applications to the Secretary by September 2nd.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £80 per annum, rising to £100, with board, residence, and washing. Applications to the Secretary by October 1st.

GEORGE HENRY LEWES STUDENTSHIP FOR THE ENCOURAGEMENT OF ORIGINAL RESEARCH IN PHYSIOLOGY. Applications to Professor Sir Michael Foster, K.C.B., New Museums, Cambridge, by October 1st.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Physician. Applications to the Secretary by September 13th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary £90 per annum, with board, lodging, and washing. Applications to Mr. R. F. E. Ferrier, Honorary Secretary, 33, Hall Plain, Great Yarmouth, by August 24th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Resident House-Surgeon. Salary £80, with board, residence, and laundry. Applications to the Honorary Secretary by September 5th.

GUY'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Biology. Applications to the Treasurer, Superintendent's office, Guy's Hospital, S.E., by September 1st. Also Demonstratorship of Chemistry and Physics. Applications to the Dean by September 1st.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House-Surgeon. Unmarried. Salary £60 per annum, with board, lodging, and washing. Applications to the Secretary by August 22nd.

LONDON SCHOOL OF MEDICINE FOR WOMEN.—Lecturer in Physiology. Applications to the Secretary, 8, Hunter Street, Brunswick Square, W.C., by September 4th.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer. Appointment for six months, but eligible for election as Senior. Unmarried. Salary at the rate of £80 per annum as Junior, and £100 as Senior, with board and lodging. Application to the Secretary, Dispensary, Gartside Street, Manchester, by August 29th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers at the Fever and Small-pox Hospitals. Unmarried, and not over 35 years of age. Salary, £160 per annum the first year, £180 the second, and £200 the third and subsequent years. Applications on forms provided to the Clerk of the Board, Norfolk House, Norfolk Street, Strand, W.C., by August 26th.

NORTHAMPTON: BERRY WOOD ASYLUM.—Senior Assistant Medical Officer. Under 35 years of age, and unmarried. Salary £200 rising to £250, with board, lodging, washing, etc. Appointment for five years, but eligible for re-election. Applications to the Medical Superintendent before September 5th.

NOTTINGHAM: GENERAL HOSPITAL.—Assistant House-Physician. Appointment for twelve months. Salary £50, with board, lodging, and washing in hospital. Applications to the Secretary by August 21st.

OXFORD EYE HOSPITAL.—Honorary Assistant Surgeon. Applications to the Hon. Secretary, Oxford Eye Hospital, 29, Banbury Road, Oxford, by September 16th.

ROCHDALE INFIRMARY AND DISPENSARY.—House-Surgeon, unmarried. Salary £90 per annum, with board, residence, and laundry. Applications to the Honorary Secretary, Mr. R. H. Shaw, Buersil House, Rochdale, by August 24th.

ST. LUKE'S HOSPITAL.—Clinical Assistant. Appointment for six months. Board and residence provided. Applications to the Secretary.

SOUTHPORT INFIRMARY. Resident Senior House Surgeon. Salary £80 per annum, and all found. Applications to the Secretary by August 21st.

STOKE ON TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Surgeon. Salary £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

WARRINGTON INFIRMARY AND DISPENSARY.—Junior Resident House-Surgeon. Salary £100 per annum, with furnished residence and board. Applications to the Honorary Secretary by August 24th.

WESTMINSTER HOSPITAL.—Pathologist. Salary £250 per annum, and a sum of £89 per annum allowed for expenses. Applications to S. H. Quennell, Secretary, by October 1st.

MEDICAL APPOINTMENTS.

AIRD, Ivie, M.B., Ch.B.Edin., appointed Assistant Surgeon to the Liverpool Dispensaries.

CLAYTON, W. A., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer for the Sharlston and Crofton Districts of the Wakefield Union, *vice* J. M. Hermon, M.B. C.M.Edin., resigned.

COATES, C. J. A., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Tenth District of the Wycombe Union, *vice* C. F. Pridham, B.A.Camb., M.R.C.S., L.R.C.P.Lond., resigned.

DALEBROOK, J., M.A.Oxon., M.R.C.S.Eng., L.R.C.P.Lond., appointed Second Assistant Medical Officer at the St. John's Road Workhouse and Infirmary of the Parish of St. Mary, Islington, *vice* C. H. Furnivall, M.R.C.S., L.R.C.P.

DODD, A. M., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Surgeon to the Liverpool Dispensaries.

GASS, R. B., M.B., C.M.Edin., appointed Medical Officer of Health for the Heysham Urban District.

GORMAN, E. S., M.B., B.Ch., B.A.O.R.U.I., appointed Assistant Resident Medical Officer to the Birmingham Workhouse Infirmary, *vice* E. T. Burton, M.R.C.S., L.R.C.P., resigned.

HODSON, T. G., M.D., appointed Medical Officer for the Fourth District of the South Stoneham Union, *vice* D. Seaton, M.R.C.S., resigned.

MELDRUM, W. P., M.B., Ch.B., B.Sc.Edin., appointed Assistant Surgeon to the Liverpool Dispensaries.

MILLARD, C. Killick, M.D., D.Sc. (Public Health) appointed Medical Officer of Health for the Borough of Burton-on-Trent, *vice* S. Robinson, D.P.H., resigned.

MORETON E., M.R.C.S., L.R.C.P., appointed Medical Officer for the Wymondham District of the Melton Mowbray Union, *vice* H. Hamilton, M.R.C.S., L.R.C.P., resigned.

NEWBY, Thomas, M.D.St.And., M.R.C.S., reappointed Medical Officer of Health for Cleethorpes.

PROUDFOOT, F. G., M.A.St.And., M.B., C.M.Edin., appointed District Medical Officer of the Oxford Incorporation, *vice* W. A. Thompson, M.R.C.S.Eng., resigned.

STORR, R., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer for the Thorncombe District of the Beaminster Union. *vice* A. Leishman, L.R.C.P., L.R.C.S. Edin., resigned.

STRATFORD, Howard M. B., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Hereford General Dispensary.

DIARY FOR NEXT WEEK.

TUESDAY.

Medical Graduates' College and Polyclinic, 4 P.M.—Dr. Harry Campbell: Clinical Demonstration.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 4 P.M.—Dr. T. D. Savill: Cases of Syphilitic Affection of the Nervous System.

THURSDAY.

Medical Graduates' College and Polyclinic, 4 P.M. — Mr. Jonathan Hutchinson Clinical Demonstration.

FRIDAY.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 4 P.M.—Dr. Harry Campbell: Cases of Headache and Neuralgia.

Medical Graduates' College and Polyclinic, 4 P.M.—Dr. Ewart: Clinical Demonstration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

BROADBENT.—On July 29th, at 6, St. Aubyns, Hove, Brighton, the wife of F. W. Broadbent, M.B., of a son.

LAZARUS.—On August 8th the wife of Dr. A. B. Lazarus, 77, Wimpole Street, W., of a son.

MARRIAGE.

MACKIE—LEGGATT.—On August 10th, at Holy Rood Church, Crofton, Hants, by the Rev. Samuel Bethune Leggatt, brother of the bride, assisted by the Rev. Pitt-Cobbett, Vicar of the Parish, the Rev. Herbert Alder, Vicar of Caynham, Salop, and the Rev. Thomas Owen, Vicar of Christ Church, Wellington, Salop, George Mackie, M.B., C.M.Aberd., Wellington, Salop, eldest son of the late George Mackie, M.D., Insch, Aberdeenshire, to Bertha Ruth, seventh daughter of Samuel Bethune Leggatt, Esq., of Crofton Manor, Fareham, Hants.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.
Central London Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily.
Central London Throat, Nose, and Ear. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.p., Tu., 2.30; o.p., F., 2.
Charing Cross. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9: Throat and Ear, F., 9.30. *Operations.*—Th. F.S., 3.
Chelsea Hospital for Women. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.
City Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.
East London Hospital for Children. *Operations.*—M. W. Th. F., 2.
Great Northern Central. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.
Guy's. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.
Hospital for Women, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.
King's College. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.
London. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.
London Temperance. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.
London Throat, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 2.
Metropolitan. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.
Middlesex. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.
National Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.
New Hospital for Women. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.
North-West London. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.
Royal Ear, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.
Royal Eye, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.
Royal Free. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.
Royal London Ophthalmic. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.
Royal Orthopædic. *Attendances.*—Daily, 2. *Operations.*—M., 2.
Royal Westminster Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily, 2
St. Bartholomew's. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.
St. George's. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.
St. Mark's. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2
St. Mary's. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.
St. Peter's. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.
St. Thomas's. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.
Samaritan Free for Women and Children. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.
Throat, Golden Square. *Attendances.*—Daily, 1.30; Tu, F., 6.30. *Operations.*—Daily, exc. M., 10.
University College. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.
West London. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.
Westminster. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.R.C.S. asks: Will any reader kindly inform me as to the most efficient way to disinfect a house after a case of tuberculosis of lungs.

W. R. asks for information as to the climate of New Zealand, especially Dunedin, its temperature, state of atmosphere as to hygrometric conditions, and suitability for patients suffering from tuberculosis.

O. B. desires to hear of some public institution where a weak-minded cripple could be received and cared for at a cost not exceeding £60 a year.

A. L. desires to hear of a sanatorium or home where he could send a patient suffering from phthisis for the winter months where open-air treatment could be obtained. She could pay 15s., or possibly £1, per week.

ANSWERS.

E. F. C.—Our correspondent would, we think, be well advised to be guided by the usual rule, and pay the visit of courtesy.

BOOKWORM.—The two volumes by Professor A. H. Keane in the Cambridge Geographical Series would probably meet our correspondent's requirements—*Ethnology* (2nd edition), and *Man Past and Present* (1899). The published price of each volume is 10s. 6d. (Cambridge University Press).

J. W. G.—Skating and tobogganing commence about Christmas at Grindelwald, and rather earlier in the Upper Engadine. There is more sun in the Engadine, but Grindelwald is more readily accessible. A healthy person, for whom high altitudes are suitable, can obtain a refreshing and enjoyable holiday both in the Engadine and at Grindelwald; the hotel expenses are on the whole rather less at Grindelwald.

HYDROPATHIC.—Amongst textbooks on hydrotherapeutics, we may mention W. Winternitz on Hydrotherapeutics in von Ziemssen's *Handbook of General Therapeutics*, vol. v (English translation by F. W. Elsner. London: Smith, Elder, and Co. 1886); and Dr. F. Bottey's *Traité Théoretique et Pratique d'Hydrothérapie Médicale* (Paris: G. Masson. 1895). There are many books on hydrotherapeutics in various languages, but we do not know of one devoted solely to the management of a hydropathic institution.

HARVEY'S WORKS.

T. T.—No special value attaches to this 1660 edition of Harvey's masterpiece. The interesting volume is the *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*, published by W. Fitzer at Frankport in 1628. It is a small quarto of 72 pages, followed by two pages of errata.

ADVERTISING CARDS.

E. J.—We have frequently commented upon and condemned similar advertising cards. Where the offenders are members of this Association, they can be reached through the ethical committees of the Branches or through the Council; in other cases the attention of the University or licensing authority whose diploma is being degraded by such practices may properly be drawn to the matter, as it is clearly their duty to watch over and control the conduct of their graduates.

INFECTIOUS DISEASES (NOTIFICATION) ACT.

B.—Section XI of the Infectious Diseases (Notification) Act, 1899, sets forth that the payment to any medical practitioner under the Act shall not disqualify him from serving on a sanitary authority or Board of Guardians. A medical officer of health can even claim his fee for notifying to himself. The fee is only 2s. 6d. for notifying cases in private practice.

TO GET RID OF ANTS.

DR. E. G. BARNES (Eye, Suffolk) writes: In reply to "H. J. W.'s" inquiry in the BRITISH MEDICAL JOURNAL of August 5th, I have on at least three occasions found the following plan efficacious: In the first place, ascertain by observation at what points the ants enter the house or store cupboard. It will usually be found that they do so, not by the open door or window, but through a crevice between the boards of the floor or between the skirting and the floor. Having found this, apply strong carbolic acid by means of an ordinary camel's hair brush, well into the crevice, and repeat the treatment for three or four days, watching meanwhile to see if the ants find a fresh place to enter, in which case that should of course be treated in the same way. At the expiration of this time, my experience is that the enemy is permanently routed. This plan is preferable to washing with carbolic acid in solution, or to exposing carbolic acid in saucers, as by so doing the food in the store cupboard is apt to absorb the carbolic vapour and acquire the characteristic taste. If good acid is used, such as one would use for surgical purposes, and applied as I have described, no unpleasantness results.

NOTES, LETTERS, Etc.

CORPORATION METEOROLOGISTS.

DR. A. MARSHALL, F.R.Met.S., Lowestoft, writes: I note your remarks, in your issue of July 29th, on Mr. J. Baxendell's report on the meteorology of Southport and your assertion that a new profession has come into existence. You must allow me to make some strictures on your remarks:

1. I wish to combat the statement that it is a new profession. If you will refer to the Registrar-General's reports you will see that Mr. Glaisher for many years has given returns from different stations in this country, the observers being practical meteorologists.
2. You speak of corporation meteorologists and you include the

observer at Lowestoft. Allow me to inform you that Mr. S. H. Miller is not a corporation meteorologist. He receives no honorarium, though he has developed an observatory here and reported to headquarters for more than twenty years.

3. There is an insinuation that meteorologists are tempted to send in coloured results. From all I know of the Lowestoft observations nothing but actual fact is ever put before the public.

I feel sure that no honorarium, if one were received, would tempt either Mr. Miller, Mr. Baxendell, or other well-known observers.

*** We may take Dr. A. Marshall's points *seriatim*:

1. Everybody conversant with English meteorology knows and respects both Mr. Glaisher, F.R.S., and his staff, but nobody ever called them corporation meteorologists. As far as we can ascertain every appointment as borough meteorologist has been made within the last ten years, and most of them within five or six. Therefore it is, as we said, a "new profession."

2. We do not understand this. It was stated in the *Meteorological Magazine*, 1898, p. 114, that "a summary entitled 'Meteorology of Lowestoft in 1896,' by Mr. S. H. Miller, F.R.Met.Soc., F.R.H.S., was printed by the Corporation," and we believe that we have seen Mr. Miller described in print as "borough meteorologist." But the acceptance of Dr. Marshall's correction only lands us in a further puzzle. If Dr. Marshall is convinced that every borough meteriologist is immaculate, why is he so anxious to prove that Mr. Miller is not one?

3. We do not make statements without foundation. Had it been possible for Dr. Marshall to have attended the recent meetings of the Royal Meteorological Society, he would have heard some remarks from a distinguished medical officer of health, would have known why we gave a note of warning, and would have been less hasty in defending two men, greatly his seniors in the Fellowship of the Society, whose meteorological work is such that they need no defence, for no one who understands the subject would dream of attacking them.

ATROPHY OF THE TESTICLE AFTER OPERATION FOR VARICOCELE.

MR. THOS. ALPH. BUCK, M.B.Lond. (Ryde) writes: In the BRITISH MEDICAL JOURNAL of August 12th, "Proceedings of Section—Surgery," p. 405, I am reported as having "mentioned a case in which atrophy of the testicle to the point of almost complete disappearance had followed the operation"; the word almost was never used by me, as there was not a trace of testicle to be found. The facts as stated were, "a young man presented himself for examination for life assurance. Observing an operation scar in the scrotum and only one testis I asked, "on what account did you have your testicle removed?" He replied, "I did not have it removed, but was operated on for varicocele, before which I had two testicles." He appeared to think the result of the operation quite ordinary, and I did not undeceive him. As I knew the operating surgeon personally, I inquired of him if there were anything unusual in the case at the time of operation or afterwards, and was answered in the negative.

SHOULD DOCTORS BE ALLOWED TO DISPENSE?

DR. T. M. ALLISON (Newcastle-on-Tyne) writes: A method that I would like to suggest in lieu of home dispensing would be for the men in a district to form a private dispensary, employing a qualified chemist to dispense only. Then a member could call, write his prescriptions in a private locked book (with separate key for dispenser), and the medicine could be sent by messenger. For emergency, or convenience, the prescription could be sent, copied, and destroyed. In case of doubtful payment the fee could be collected at the dispensary and credited. Contract patients would bring their own bottles and prescriptions. Each member would receive a monthly account, and be debited with a charge to cover cost of medicine, salary of dispenser, rent, etc.—a charge which I think would compare favourably with the cost and trouble of drugs and dispensing at home. By this method the dispensing chemist would occupy his proper position as assistant to, not master of, the profession, the prescription would be the private property of the physician, and the public would be saved the danger of self-treatment. Emergency drugs could be kept at home, consulting patients taking sealed prescriptions to the dispensary, and thus a busy man might obtain a few hours for culture or society. This scheme has, however, one objection. It is before its time. It implies medical unity. And medical unity also involves the acceptance of every legally-qualified practitioner as of equal status, the dropping of the contention of diploma and degree, and the recognition of each other as professional brethren, not "opponents." We are, and ought to be, competitors, but competitors within the pale of courtesy and common endeavour.

A FOURPENNY DOCTOR.

THE following appeared in a recent issue of the *Daily Mail*, London: Competition in the medical profession grows fiercer. A dispensary that has just been opened in Stepney, shows hanging in the window the following scale of fees:

Medicine for the working classes:
Advice and medicine ... ... 4d.
Advice and medicine for the week ... ... 1s.

CATERPILLAR RASH.

MR. E. H. ELLISON, M.A.Cantab., M.R.C.S., L.R.C.P.Lond. (Leicester), writes: In the BRITISH MEDICAL JOURNAL of July 29th I noticed an account of an erythematous rash produced by a caterpillar of the "woolly-bear" variety. I am, therefore, I trust, not unduly occupying space in your issue of this week by adding my testimony to a case of a similar nature which happened to one of my patients in Leicestershire about three weeks ago.

In this instance, a bright red and angry-looking rash, accompanied with much itching and a brawny condition of the integument, covered the whole of the posterior cervical region. Unlike Mr. Cantlie's case, there was, however, no rise of temperature and the general health remained good, and by the constant application of lead lotion the rash was quickly relieved. Though not previously aware that the order Lepidoptera was in any way associated with the production of erythema, I can now quite understand from the anatomy of the caterpillar, with its powerful mandibles and hook-like feet which cling so strongly to whatever it may be attached, that an eruption simulating erythema may readily be excited, particularly so in those with sensitive integument.

ECONOMY AND ACCOUNT KEEPING.

MR. G. CLARK STEWART, M.B. (Falkirk) writes: The columns of the BRITISH MEDICAL JOURNAL frequently contain references to the bitter struggle for existence which is the lot of the average general practitioner nowadays. I would venture humbly to suggest that, if medical men deferred marriage until they were fairly well established; and kept an accurate account of their income and expenditure by making daily use of the *Tax-Payer's Cash Book*, which was lately favourably reviewed in the JOURNAL, or some other equally convenient and well-arranged system of account keeping, we should have fewer of those heart-rending appeals for assistance on behalf of widows and orphans which appear almost weekly in the medical press. Personally, I owe you a debt of gratitude for having drawn my attention to the cashbook I mention, and which I have found of the very greatest service.

LETTERS, COMMUNICATIONS, ETC., have been received from:
A Messrs. Arnold and Sons, London; A Twenty-seven Years' Public Vaccinator; Aggrieved Member; Mr. R. B. Anderson, London. **B** Dr. W. C. Bailey, New Mexico; Dr. H. Bartlett, London; Mr. Oswald Baker, London; Dr. R. W. Batten, Gloucester; Dr. E. G. Barnes, Eye: Mr. A. G. Ball, London; T. A. Buck, M.B., Ryde, Isle of Wight: Mr. W. L. Brown, London; Messrs. Burgoyne, Burbidges and Co., London; Mr. B. Boake, Ormesby. **C** Messrs. J. and A. Churchill, London; C. J.; Dr. W. Collier, Oxford; Dr. J. J. Charles, Kilkee. **D** D. P. H.; A. Dingwall, M.B., Presteign. **E** Mr. T. H. Elliott, London; E. M. **F** Filter; J. Fletcher, M.B., London. **G** J. Gilroy, M.B., Ecclefechan; G. W. G.; Mr. J. Grant, Banff; Mr. J. Giles, Caxton: Mr. J. W. Gill, Liskeard; G. P.; Mr. E. R. Greene, Liverpool: Mr. F. J. Grindon, Olney. **H** J. Hay, M.B., Liverpool; Mr. W. A. Hayes, Bournemouth; Mr. J. A. Hunt, Borrowash; C. O. Hawthorne, M.B., London; Mr. T. G. Horder, Cardiff; L. H. L. Harris, M.B., Sydney Mr. V. Horsley, London; F. D. Harris, M.B., St. Helens. **J** G. Jubb, M.B., Glasgow J. R. H.; J. F. **K** H. R. Kenwood, M.B., London; Mr. H. A. Kynsey, London; Dr. L. W. Keiffenheim-Trubridge, Hoo. **L** Mr. C. S. Loch, London; Dr. A. W. Lea, Manchester; Mr. W. A. Loxton, Edgbaston; Dr. A. Lawson, London; Loji La. **M** Dr. Macnaughton-Jones, London; Dr. C. K. Millard, Birmingham; W. Millar, M.B., London; M.R.C.S.; S. K. Mullick, M.B., London; Dr. P. Manson, London; C. R. Marshall, M.B., Cambridge; Major R.A.M.C.; Dr. G. H. Milnes, Derby. **N** Dr. A. Newsholme, Brighton; Dr. J. Neil, Oxford; Mr. E. E. Nicholl, Bath; Mr. J. S. Nairne, Glasgow. **O** The O'Connor Extension Company, London; Observer. **P** Public Vaccinator; Mr. J. J. Powell, Weybridge; Mr. R. J. Pye-Smith, Sheffield; A. F. M. Powell, M.B., Sedgley. **R** G. A. Reid, M.B., Southsea; Dr. W. Rogers, Lampleigh; Dr. R. F. Richardson, Nottingham; Dr. J. S. Revelly, Tettenhall: Mr. S. H. Rentzsch, Week St. Mary. **S** Mr. G. J. Symons, London; Mr. P. R. W. de Santi, London; Mr. H. M. B. Stratford, Hereford; Dr. L. Scott, London; Dr. H. B. Shaw, London; Messrs. Street Brothers, London; Dr. T. D. Savill, London; Dr. E. M. Shirtliff, Ryde, Isle of Wight; Mr. H. de Styrap, Shrewsbury; Dr. G. F. Still, London; Dr. T. W. Shore, Stroud; Scribe; Mr. H. W. Scriven, London. **T** Dr. T. E. Taylor, London; Tory: Mr. C. H. Tattersall, London: Mr. W. K. Taylor, Lifton; Dr. H. Tilley, London: Mr. R. F. Tomlin, London. **V** Viator. **W** Mr. E. S. Whipple, Cambridge; Dr. H. Walsham, London; W. L. Wainwright, M.B., Brixworth; Mr. J. R. Wheldon, South Shields; Mr. E. N. Wallis, London; Mr. G. S. Walker, London; Dr. F. Willcocks, London; Dr. H. Woods, London; Mr. S. Walker, Middlesbrough; Dr. A. S. Wohlmann, Ilfracombe; Mr. P. Walsh, Dulverton.

BOOKS, ETC., RECEIVED.

The Myology of the Pelvic Floor. By P. Thompson, M.D. London: McCorquodale and Co. 1899.

Les Mouvements Méthodiques et La Mécanothérapie. Par Le Dr. Fernand Lagrange. Paris: Baillière et Cie. Felix Alcan, Editeur. 1899.

Zur internationalen Nomenclatur der Todesursachen. Von Dr. Josef von Korosy. Berlin: Puttkammer and Mulbrecht. 1899. M. 1.

Traitement Chirurgical du Cancer du Gros Intestin. Par le Docteur Henri Lardennois. Paris: G. Steinheil, Editeur. 1899.

Therapeutique Clinique de la Fièvre Typhoide. Par le Dr. Odilon Martin. Paris: Masson et Cie.

La Péritonite Tuberculeuse. Par le Dr. G. Maurange. Paris: Masson et Cie, Editeurs. Fr. 3.

Die Leitungsbahnen im Gehirn und Ruckenmark. Von W. von Bechterew. Leipzig: Arthur Georgi. 1899. M. 17.

Die Krankheiten der Eierstöcke, und Nebeneierstöcke. Herausgegeben von A. Martin. Leipzig: Arthur Georgi. 1899. M. 28.

Skiagraphic Atlas of Fractures and Dislocations. By Donald J. Mackintosh, M.B. London: H. K. Lewis. 1899. 12s. 6d.

Llandrindod Wells and the Spas of Central Wales. London: Ward, Lock and Co. 1899. 1s.

Historia da Medicina em Portugal. Por Maximiano Lemos. Vols. I, II. Lisbon Manuel Gomes. 1899.

Dental Microscopy. By A. H. Smith, L.R.C.P.Lond., M.R.C.S.Eng., L.D.S.Eng. London: The Dental Manufacturing Company, Limited. 1899.

*** In forwarding books the publishers are requested to state the selling price.

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EDUCATIONAL NUMBER.

SESSIONS 1899-1900.

MEDICINE AS A CAREER.

When a youth has chosen, or had chosen for him, the profession of medicine as his career in life, his parents or guardians naturally wish to inform themselves as to the successive steps necessary to be taken in order that he may become a qualified practitioner, and as to the probable cost of those steps, as well as to gain some idea of the prospect of his being able, at the end of his pupilage, to support himself either by starting in practice on his own account, or by entering the medical services of the army or navy. They probably turn to their medical adviser for information on these points, and he, if he has arrived at middle age, knowing full well that the whole system of medical education has been changed since he was himself a student, refers to the Educational Number of one of the medical journals to see how matters stand at the present time.

Regulations of the General Medical Council.

The first thing which confronts the inquirer is that all the course along which the student has to tread has been marked out for him by the regulations of the General Council of Medical Education and Registration. Before he can even register himself as a medical student he must first of all pass a Preliminary Examination approved by the Council, and until he has so registered himself no time spent in study or attending lectures will be allowed to count as part of the five years required by the regulations of the Council to be spent in medical study. The curricula of the hospitals and schools where he is taught must conform to the Council's regulations, and when at length he has obtained a registrable qualification or qualifications, these must be duly recorded by the Council in its *Medical Register* before he is legally qualified to practise his profession. The Council's regulations are given in another part of this number, and may be taken as representing the minimum required from all students.

Universities and Corporations.

Even before the student passes his preliminary examination a decision should be come to as to whether he intends to take a degree (M.B. or M.D.) at a university, or to be content with the less ornamental but perhaps, for general practice, quite as useful, double diploma of the Conjoint Board in London, Scotland, or Dublin, entitling him to write after his name the letters L.R.C.P. and M.R.C.S. in England, L.R.C.P.and S. in Ireland, and L.R.C.P.and S. and L.F.P.S.G. in Scotland. If this decision be delayed, and he should desire after commencing study to go in for the degree of the London University, for instance, he will find himself seriously handicapped by having to take up again his preliminary work, when he ought to be working hard at his strictly medical studies.

Where expense is no object, the advantages of having had a university education at Oxford or Cambridge, Edinburgh or Dublin, are apparent to all. Friendships are formed in all these places, often among those who intend to enter other professions—friendships which are of service to the student in his after-career. Then also, the degree of M.D., which they in common with the Victoria and Durham Universities in England, the other Scotch Universities, and the Royal University of Ireland, confer, has a mysterious charm in the eyes of the public which no other combination of letters seems to possess, and it is, moreover, indispensable for those who seek to obtain honorary appointments to hospitals on the medical side, or to practice as consulting physicians. The degrees of the University of London, for which residence is not required, stand on a somewhat different footing from those of the older Universities, and maintain their high character by the exceptionally severe nature of their examinations, which render them comparatively difficult to obtain. The licence of the Apothecaries Company in London and Dublin also gives admission to the *Medical Register*, but few students are content, after a course of study as prolonged and, with the exception of the cost of the diploma, as expensive as that for the Conjoint Board, to be able to write after their names merely L.S.A. For the ordinary run of English students, the great objection to seeking a university degree is the extra year which in practice is so often required, and the fact that unless he happens to reside in a university town, or one in which a college connected with a university exists, his calculations as to cost must be on a higher scale than if he merely design to qualify at the Conjoint Board. At Cambridge, for instance, residence for the university year of about twenty-four weeks can hardly be done much under £200, while at the residential colleges connected with several of the London medical schools, as also at Owens College, Manchester, and the Yorkshire College, Leeds, the charges, varying somewhat in each place and according to the rooms selected, are all very much less than those at Cambridge. Thus at King's College, London, the cost of the academic year for rooms and dinner varies from £50 to £60.

In Ireland the same difficulty of expense in obtaining the degree of M.D. need not arise, since, in addition to old Trinity in Dublin, there are the three Colleges of Belfast, Cork, and Galway in connection with the Royal

University of Ireland, which enable the Irish student to qualify M.D. with as little expense as he would incur to obtain the diplomas of the Conjoint Board. In Scotland the cheapness with which a university degree can be obtained has long been a marvel to Englishmen, and seems to be largely due to the capability of the Scotch student for restricting his personal expenses, both for living and clothing, within such narrow bounds, as are rendered necessary by the *res angusta domi*, a practical lesson in self-control and self-denial which stands him in good stead in after-life.

Selection of a Medical School.

The decision whether a university degree is to be sought or not having been made, the next step is to select a medical school. In the following pages particulars are given of the attractions offered by the various schools, and it would be invidious to name any one of them as affording better opportunities than another for gaining a practical knowledge of medicine, surgery, and midwifery. London, Edinburgh, and Dublin will always attract large numbers of students, but the parent or guardian may be assured that in many of the great provincial centres his son or charge will receive as good practical teaching, and be as well prepared either for the ordinary diplomas or for the higher degrees, as in the metropolitan cities.

As a general rule, the best time for entering at a medical school is May. The student then learns during his first summer session chemistry and chemical physics, also practical chemistry, and passing an examination in them at the end of the session, gets them, so to speak, out of his way before he commences anatomy and physiology in his first winter session. He may also, if he has done practical pharmacy either in the hospital dispensary or with a general practitioner, go in for examination in it, or he may defer this till a later period. By taking practical pharmacy with an outside practitioner the student will gain a useful insight into the usages of private practice, and will be better prepared to undertake the duties of an assistant should this at any time become necessary. With the winter session commence the lectures on anatomy and physiology, the dissections and tutorial classes, with always the prospect of an examination at the end of the session looming in the distance.

The student who loves his work will find the five years spent at a medical school by no means too long to make him thoroughly prepared for practising on his own account. After he has passed his first examination in anatomy and physiology at one of the examining boards he becomes eligible for the offices of clerk or dresser at his hospital, by holding which he is brought at once into close personal contact with the medical and surgical cases of which he is required to take notes; in order that he may be able to do this in a systematic manner he receives instruction from the medical tutor at the hospital on the examination of patients and on notetaking. As clinical clerk to one of the physicians, or dresser to one of the surgeons, he has opportunities of which he should avail himself to the utmost, of cultivating the faculty of accurate observation, of training his eyes, ears, and hands, and of learning the use of various instruments of precision. He will also at this time find occasion for applying the knowledge he has already gained of microscopic and chemical work in the ward and laboratory to the study of disease in the living, and by holding the appointment of clerk in the *post-mortem* room to the morbid appearances after death.

Whether holding these appointments or not, every student should attend as regularly as possible the medical and surgical wards and the *post-mortem* room. Among the special departments of the hospital which he will do well to attend regularly are those dealing with diseases of the eye and throat. Fascinating in themselves as studies, especially the former, they will both be found useful in after-life even by those who do not follow them as specialities. Diseases of the ear should also receive attention, and the dental department should on no account be neglected, as many a country practitioner finds it quite necessary to be able to extract teeth skilfully.

The Cost of a Medical Education.

Most of the London hospital schools arrange that by paying a composition fee of from a little over £100 to £150, either in one sum or by instalments, the student becomes a perpetual student, and is entitled to attend all necessary lectures and hospitals for the double diploma. As cheapness here cannot be considered a special recommendation, we take the larger sum for the purpose of our estimate, and adding to it the necessary expenses for maintenance, clothing, books, anatomical parts, etc., at £100 a year for five years—a rather low estimate for London—we find that the total cost of an ordinary student at a London hospital who qualifies at the Conjoint Board would be from £650 to £700; that of a university graduate would necessarily be greater, and might amount to £1,000. Of course there is always the possibility in either case that rejections at intermediate examinations may prolong the period of studentship by an additional six months or a year, or may even render coaching necessary, and so add to the cost.

The Prospects of a Qualified Practitioner.

Supposing our student to have become fully qualified and registered, he is next confronted with the question, What is he to do to obtain a livelihood? There are, of course, the medical services of the army and navy open by competitive examinations; or if he has filled the offices of house-physician and house-surgeon at his hospital with credit and distinction, and has also some facility for acquiring languages, he may be advised to compete for the Indian Medical Service. With regard to all these services, details will be found on pp. 560-61. Other openings which frequently occur and are advertised in the medical journals are those of assistant medical officers at lunatic asylums, or in the smaller general and special hospitals in London or the provinces, and assistant medical superintendents at the metropolitan infirmaries or fever hospitals; but these, though well enough for a year or two, ought not to be held too long, or the holder is liable to become unfitted for ordinary practice. One form of temptation which the newly qualified man cannot be too strongly cautioned against is that of the co-operative friendly societies, who seek to engage his whole services at certain fixed salary, they providing him with drugs

and a dispenser, and also with a residence or allowance in lieu of one. The offer sounds tempting enough, but those who have tried it have in many cases found themselves the mere slaves of unreasonable members, and after a short time have thrown up their appointments in disgust.

The General Medical Council have expressed disapproval of medical men taking office under these societies, and the profession as a rule fights shy of them, so that the holders find themselves looked upon as black sheep, and cut off from professional society; some of the Branches of the British Medical Association have decided not to admit the holders of such appointments to the membership of the Branch. The lot of a qualified assistant is not without its trials, but it may be considered a happy one as compared with those who allow their medical services to be exploited by a commercial company.

The newly-qualified man who secures an assistantship with a successful practitioner in the suburbs of London or in the country may expect to receive from £100 to £150 a year indoors, with a prospect of rising, if he is found to contribute to the success of the practice, to perhaps £200 or £250. He will also usually have a percentage on the midwifery cases which he attends. At the present time, in consequence of the condemnation by the General Medical Council of the employment of unqualified assistants for any duties except such as dispensing, there is said by medical agents to be an abnormally large demand for qualified assistants and an abnormally small supply of them, showing itself, particularly at this season of the year, in a dearth of *locum-tenants* to supply the place of principals going away on holidays; but the laws of supply and demand will doubtless set this all right within a year or two.

The qualified assistant will find it a distinct advantage to be able to dispense not only accurately but neatly, and with due regard to the requirements of private patients. Should the practice be a country one in England or Wales, he will find that it is principally made up of three elements, in varying proportion: (1) Private practice, which is of course as a rule the part which pays best; (2) Poor-law appointments, generally including that of public vaccinator, which, since the antiseptic method of performing this little operation has been made obligatory and vaccinating stations have been done away with, is better paid for than it used to be; and (3) clubs and friendly societies, which are taken more as an introduction to other practice than for the sake of the remuneration given, which ranging from 2s. 6d. to 4s. a head per annum is far too small—certainly the lower figure is—to pay for the actual work done. If the Conciliation Board, proposed by the General Medical Council, is able to bring about, as we have been led to hope, a rise in these contract prices to at least 4s. a year, it will have done a very considerable service both to our profession and to the friendly societies.

In some parts of Ireland it must be noted that Poor-law appointments form a principal part of the medical man's income, but the system of issuing tickets for his attendance is so much abused that well-to-do farmers and others in no way entitled to gratuitous treatment avail themselves largely of it. In Scotland, too, as recent complaints have shown, there is much need for reform in Poor-law administration as regards its medical service, and in both countries the desirability of having a strong professional organisation like the British Medical Association to fight their battles is becoming fully recognised.

THE MEDICAL CURRICULUM.

The course of professional training through which a student who desires to enter the medical profession must pass is, under the regulations now in force, essentially the same in all cases. The Universities and medical corporations differ from each other only in the severity of the various examinational tests which they impose, but the subjects of study which are laid down by the General Medical Council are broadly the same for all. The minimum period of study after registration as a medical student is five years, whether the curriculum be passed in England, Scotland, or Ireland, and whether the student is seeking a University degree or a College diploma. Although in the case of the Universities the minimum period of study is the same as that for a diploma, some students find it desirable to spread their work over a longer period, and before deciding upon a University course the intending student should carefully consider the regulations and requirements; for his guidance in this respect particulars are given in the following pages of the regulations of the various Examining Boards. When the student has decided upon the degrees or diplomas to which he aspires, and has selected the medical school at which he desires to attend, he should communicate with the Warden or Dean, who will give him all necessary advice in regard to the mode of entrance, registration, and the details of the best way to prepare for his several professional examinations.

Before he can begin his course of medical study, the student must pass one of the recognised Preliminary Examinations in Arts, a complete list of which can be obtained from the Registrar of the General Medical Council (299, Oxford Street, W.) or from the Registrar of the Branch Council in Scotland or Ireland (48, George Square, Edinburgh, or 35, Dawson Street, Dublin). In the case of the student seeking a University degree, he must pass the particular Preliminary Examination laid down by that University. Thus, for example, to pass the Junior Oxford or Cambridge Local Examination in the required subjects will suffice for registration, but will not admit the student to the examinations for the degrees of the University of London, for which the only recognised preliminary is the Matriculation Examination of that University. A list of recognised preliminary examinations will be found at p. 518. Immediately after passing the required Preliminary Examination the student should enter at the medical school he has selected, and register his name at the office of the General Medical Council, after which he begins to count the five years of compulsory study.

Under former regulations it was the almost universal custom for students to begin their professional studies in October; but under the alterations recently made in the curriculum there is now no special advantage in beginning in October. At some of the medical schools the student may with advantage begin his medical course in the summer session by studying chemistry, physics, and pharmacy, if he has passed a Preliminary Examination early in the year

It will not be necessary or desirable that we should enter into a comparison of the details of the adaptation of the curriculum to the requirements of the various Examining Boards. The following account of the curriculum and examinations for the diplomas of L.R.C.P.Lond. and M.R.C.S.Eng, given by the Conjoint Examining Board of the Royal Colleges of Physicians and Surgeons, will probably prove useful to the student as an example of the general course required for entrance into the profession. The curriculum and examinations of this Board have now been brought much more into line with those of the Universities than was formerly the case, and broadly speaking there are three stages with three examinations in the student's career; the first is devoted to elementary science, the second to anatomy and physiology, and the third to the purely professional subjects of medicine, surgery, and midwifery, and their special branches.

The First Examination includes chemistry and physics, elementary biology and practical pharmacy. Pharmacy, however, may be passed separately and, indeed, may be taken at any stage of the curriculum. Generally speaking, the whole of the student's first year is devoted to the study of the subjects of the First Examination, which is usually passed in three parts: (1) biology, at the end of the winter session in March, (2) chemistry and physics, at the end of the summer session in July, (3) pharmacy, which may be passed during the first year or be postponed. The First Examination of the Conjoint Board may be passed before registration, but in this case time spent in the study of biology, chemistry, and physics does not count as a part of the compulsory five years. Except under very special circumstances, therefore, the student should pass a Preliminary Examination in Arts before he begins his science work, and should take care to attend lectures and laboratory instruction in science at a properly equipped and recognised institution, such as a medical school. If the student has been registered, a year spent in the study of science at a recognised institution counts as a year of the curriculum, but not otherwise. In the metropolitan medical schools the students of the first year generally attend lectures on anatomy and dissect whilst engaged in their science study, a plan which has the advantage of permitting them to see the applications of science to the study of more professional subjects. The student should always endeavour to complete the First Examination in his first year of attendance at a medical school, since he must attend at a medical school for four years subsequent to passing it. Before admission to any part of the First Examination a certificate of attendance at a recognised institution on a course of instruction in the subject or subjects for which the student desires to present himself must be produced.

After passing the First Examination the student proceeds to the study of intermediate medical subjects—anatomy and physiology. The regulations require him to attend at a recognised medical school, a course of lectures in anatomy (six months), a course of lectures in physiology (six months), a course of practical physiology (six months), and to have dissected during two winter sessions or twelve months. The earliest time at which he can be admitted to the Second Examination is twelve months after completing the First Examination, or if he has passed the First Examination before entering at a medical school, after two winter and one summer sessions of attendance at a recognised medical school. The student who has followed the usual course and has entered at a medical school in October and completed the First Examination at the end of his first year will therefore devote the whole of his second year to anatomy and physiology, and pass the Second Examination at the end of his second summer session. He will find it greatly to his advantage to have begun anatomy and dissecting during his first year as is the practice in the metropolitan medical schools, for one year is a short time for two such important subjects as anatomy and physiology, and many students require six months longer.

Having passed the Second Examination, the student begins the systematic practical study of disease by attending the out-patient rooms, at the bedside, in the operating theatre, and in the *post-mortem* room, although, if he is wise, he will have taken the opportunity from time to time during the earlier part of his course of paying occasional visits to the wards and out-patient and *post-mortem* rooms. If he has been industrious, and has passed all examinations without mishap, he now has two and a half or three years to devote to the uninterrupted study of disease. The Third or Final Examination is passed at the end of five years from the date of registration, and at the expiration of four years from the date of passing the First Examination and of two years from the date of passing the Second Examination. It is important that the student should pass each examination at the prescribed time, otherwise he will be delayed in obtaining his diploma until the lapse of the required time from the date of passing his earlier examinations, or will find it necessary to encroach upon the time which should be devoted to the more important practical subjects of his profession.

Space will not permit us to enter into full particulars of the lectures and other work required to be attended during the last two or three years, and for this information we must refer the student to the official regulations outlines of which are given below. Speaking generally, however, he must attend lectures in medicine (six months), surgery (six months), midwifery (three months), pathology, including pathological histology and bacteriology (three months), pharmacology and therapeutics (three months), forensic medicine (three months), public health (three months), together with practical instruction in medicine, midwifery, and surgery, operations on the dead body, hospital practice (two winter and two summer sessions), *post-mortem* demonstrations (twelve months), and clinical lectures on medicine and surgery (nine months). The student is also required to attend clinical instruction in ophthalmic surgery, insanity, and diseases of women, and to act as clinical clerk and surgical dresser for not less than six months each, and to attend twenty labours. Instruction in vaccination and attendance at a fever hospital are also necessary.

THE ROYAL MEDICAL SERVICES.

THE Medical Services of the Royal Navy, of the Army, and of India afford honourable careers for medical men; but each branch has advantages and drawbacks, which will be variously estimated by different persons.

A Commission in Her Majesty's Sea or Land Forces undoubtedly confers on the recipient a social status not easily attained in civil life; but entails, at the same time, subjection to the restraints of discipline, some sacrifice of personal freedom, and the curtailment of certain home amenities enjoyed by civilians. On the other hand, it affords an opportunity of seeing life and the world in some of their best aspects; and foreign service has many and varied attractions in our widely-extended empire.

The admission to the services is by competitive examination, held twice a year—January and July—in London by a special Board of Examiners.[1] The main subjects of the examinations are medicine, surgery, anatomy, and physiology, but those who may have any intention of entering one of the services should bear in mind that modern languages are included in the examination, and that proficiency in this respect may not only have an effect upon the candidate's place in the competition but also upon his prospects in the service. Candidates who are successful in the competitive examination for admission to the Royal Army Medical Corps or the Indian Medical Service proceed to the Army Medical School at Netley, where they pass through a special course of instruction. At the end of this course there is a further examination, and the final position of the candidate in the "batch" is determined by the total of the marks obtained at the two examinations (London and Netley). Recently the Secretary of State for War has used his right to nominate to the Royal Army Medical Corps. Such nominations have hitherto been made on the recommendation of the authorities of one of the medical colleges or schools. The gentlemen thus selected pass through the course at Netley, and their places are regulated by the result of the examination at the end of the Netley course, but they all rank in seniority after the members of the batch who have entered by the competitive examination. In the case of the Royal Navy, the successful candidates at the competitive examination pass through a course of special instruction at Haslar Hospital.

The Royal Navy affords a fine career for those who have a taste for sea life. The pay, estimated relatively to unavoidable expenditure, contrasts favourably with the necessary outgoings which fall on the army medical officer. At the present time no medical man need be deterred from entering the Royal Navy Medical Service through fear of meeting with harsh treatment at the hands of the executive authorities.

The medical service of the Army has, after prolonged controversy, acquired a status which should satisfy its friends and at the same time disarm its opponents. It is no longer a department, but a Royal Corps, and, as such, forms an integral part of the army. The ranks of the Corps are: Colonel, Lieutenant-Colonel, Major, Captain, Lieutenant. Officers above the rank of Colonel are styled Surgeon-Generals (ranking with Major-Generals) on the Medical Staff; the Director-General is addressed as of the Army Medical Service, not Department.

Her Majesty having been graciously pleased to constitute a Royal Army Medical Corps, with simple military titles, has assured to officers and men clear and indisputable army status. Under these circumstances the Royal Army Medical Corps may be recommended as offering a promising career to young medical men. We do so the more gladly inasmuch as the great and far-reaching reform was mainly brought about by the unwearied efforts, extending over many years, of the British Medical Association.

The Indian Medical Service has not yet a corps organisation, but has simple military titles. With a great and honourable past, that service still affords many important and lucrative appointments to its medical officers, and opportunities to those who desire distinction, especially in the clinical work of their profession, as well as to others who may aspire to high administrative duties, both medical and political.

The pay and pension, speaking generally, of the medical services are not illiberal, and sufficient for the reasonable maintenance of the individual officer; but, if he has no private means, he must bear in mind that it is generally hazardous to venture early on matrimony, perhaps to find himself in middle life in straitened circumstances, through having to maintain and educate a family. Frequent separation from wife and children, and the necessity of keeping up two establishments is a drawback, social and financial, which attaches more or less to each of the three branches of the service.

The prizes of the services are few, especially in the navy and army; and even in the Indian service are not what they were within comparatively recent times. The lessened value of silver, and the fall in the exchange-rate of the rupee, have disastrously affected the medical, in common with all branches of the public service in India, while, as fully a third of the army medical officers are constantly employed in that country, the depreciation in the currency presses on them as on their Indian brethren. This matter formed the subject of representation to the India Office by the Parliamentary Bills Committee of the British Medical Association, with the result that a moderate increase of pay was conceded to certain of the medical ranks; and they also participated in special concessions by the Government of India in the exchange-rates for remittances home.

If current pay in the medical services is not relatively large, but even small compared with the earnings of many civil practitioners, it is supplemented by substantial pensions; and it will not be overlooked that the State is the most stable of all paymasters.

As army pensions to widows and orphans are small and limited, medical officers must not neglect the duty of making some provision by insurance or otherwise for those they may leave behind them. The medical officer on entering the army should, with this view, satisfy himself whether it would not be to his advantage to join the Friendly Society of the Officers of the Medical Department of the Army, which affords pensions to widows; he should also support the Army Medical Officers' Benevolent Society, which affords assistance to the orphans of medical officers left in needy circumstances. It is a matter of regret, and even astonishment, that these excellent societies are not better known and supported by army medical officers. Particulars of these societies can be obtained at the office of the Director-General, Army Medical Service, 18, Victoria Street, S.W.

[1] Further particulars as to the mode of entering these services, and the rates of pay, etc., will be found on pages 560-61.

REGULATIONS OF THE GENERAL MEDICAL COUNCIL.

IN REGARD TO THE REGISTRATION AND EDUCATION OF MEDICAL STUDENTS.

THE regulations of the General Medical Council as to registration, preliminary examination, and as to professional education must be followed by all medical students seeking to obtain degrees or licences to practise from the universities or medical corporations of the United Kingdom. The separate regulations of the universities and corporations are so drawn up as to meet the requirements of the General Medical Council.

PRELIMINARY EXAMINATIONS.

Every medical student must be registered by the General Medical Council at the commencement of his studentship. To obtain registration the student must pass a preliminary examination in general education, and must produce evidence that he has commenced medical study. A degree in Arts of any British or Colonial University, or of such other Universities as may be specially recognised from time to time by the General Medical Council, is considered a sufficient testimony of proficiency. The student must make application for registration on a special form, to be had on application to the several qualifying bodies and medical schools.

The *Students' Register* is kept by the Branch Registrars, namely: in England, Mr. H. E. Allen, B.A., LL.B., 299, Oxford Street, London, W.; in Scotland, Mr. James Robertson, 48, George Square, Edinburgh; in Dublin, Mr. S. Wesley Wilson, 35, Dawson Street, Dublin.

The following is a list of examining bodies whose examinations in general education will be recognised by the General Medical Council, as from January 1st, 1900,[1] as qualifying for registration as medical or dental student:

I.—UNIVERSITY EXAMINATIONS HELD IN THE UNITED KINGDOM.

University of Oxford:
- Junior Local Examinations; Certificate to include all the required subjects at one time.
- Senior Local Examinations; Certificates to include the required subjects.
- Responsions; Certificate to be supplemented by others showing that the required mathematical subjects have been passed.
- Moderations; Certificates to include the required subjects.
- Final Examination for a Degree in Arts.

University of Cambridge:
- Junior Local Examinations; Certificate to include all the required subjects at one time.
- Senior Local Examinations; Certificates to include the required subjects.
- Higher Local Examinations; Certificates to include the required subjects.
- Previous Examination; Certificates to include the required subjects.
- General Examination; Certificates to include the required subjects.
- Final Examination for a Degree in Arts.

University of Durham:
- Examination for Certificate of Proficiency; Certificate to include all the required subjects at one time.
- Preliminary Examination in Arts for Graduation in Medicine and Science; Certificate to include the required subjects.
- Final Examination for a Degree in Arts.

University of London:
- Matriculation Examination; Certificate to include the required subjects.
- Final Examination for a Degree in Arts or Science.

Victoria University:
- Preliminary Examination; Certificate to include all the required subjects at one time.
- Entrance Examination in Arts; Certificate to include all the required subjects at one time.
- Final Examination for a Degree in Arts or Science.

University of Wales:
- Matriculation Examination; Certificate to include all the required subjects at one time.
- Final Examination for a Degree in Arts.

University of Edinburgh:
- Junior Local Examination; Certificate to include all the required subjects at one time.
- Senior Local Examination; Certificates to include the required subjects.
- Preliminary Examination for Graduation in Medicine and Surgery; Certificate to include the required subjects.
- Preliminary Examination for Graduation in Arts or Science; Certificate to include the required subjects.
- Final Examination for a Degree in Arts or Science.

University of Aberdeen:
- Junior Local Examination; Certificate to include all the required subjects at one time.
- Senior Local Examination; Certificates to include the required subjects.
- Preliminary Examination for Graduation in Medicine and Surgery; Certificate to include the required subjects.
- Preliminary Examination for Graduation in Arts or Science; Certificate to include the required subjects.
- Final Examination for a Degree in Arts or Science.

University of Glasgow:
- Preliminary Examination for Graduation in Medicine and Surgery; Certificate to include the required subjects.
- Preliminary Examination for Graduation in Arts or Science; Certificate to include the required subjects.
- Final Examination for a Degree in Arts or Science.

University of St. Andrews:
- Preliminary Examination for Graduation in Medicine and Surgery; Certificate to include the required subjects.
- Prelimary Examination for Graduation in Arts or Science; Certificate to include the required subjects.
- Final Examination for a degree in Arts or Science.
- Final Examination for the Diploma of L.L.A.

University of Dublin:
- Public Entrance Examination; Certificate to include the required subjects.
- Examination for the First, Second, Third, or Fourth Year in Arts; Certificate to be signed in the approved form by the Medical Registrar of the University.
- Final Examination for a Degree in Arts.

Royal University of Ireland:
- Matriculation Examination; Certificate to include the required subjects.
- Final Examination for a Degree in Arts or Science.

Oxford and Cambridge Schools Examination Board:
- Lower Certificate, to include all the required subjects at one time.
- Higher Certificate, to include the required subjects.

II.—GOVERNMENT EXAMINATIONS HELD IN THE UNITED KINGDOM.

Scotch Education Department:
- Examination for Lower Grade Leaving Certificate, to include all the required subjects at one time.
- Examinations for Higher Grade or Honours Leaving Certificate, to include the required subjects.

Intermediate Education Board of Ireland:
- Junior or Middle Grade Examination; Certificate to include all the required subjects at one time.
- Senior Grade Examination; Certificates to include the required subjects.

III.—EXAMINATIONS BY CHARTERED BODIES HELD IN THE UNITED KINGDOM.

College of Preceptors:
- Examination for a First-class Certificate; to include all the required subjects at one time.

Educational Institute of Scotland:
- Preliminary Medical Examination; Certificate to include all the required subjects at one time.

*Royal Colleges of Physicians and Surgeons in Ireland:**
- Preliminary Examination; Certificate to include all the required subjects at one time.

* The Council has recommended that this Examination be discontinued.

IV.—EXAMINATIONS HELD OUT OF THE UNITED KINGDOM.

University of Malta:
- Matriculation Examination.

University of Calcutta:
- First Examination in Arts.

University of Madras:
- First Examination in Arts.

University of Bombay:
- Matriculation Examination.

Punjab University:
- Intermediate Examination in Arts.

University of Allahabad:
- Intermediate Examination in Arts.

Ceylon Medical College:
- Preliminary Examination.

University of McGill College, Montreal:
- Matriculation Examination.

University of Bishop's College, Montreal:
- Matriculation Examination.

College of Physicians and Surgeons of the Province of Quebec:
- Matriculation Examination.

Universities and Colleges of the Province of Ontario:
- Departmental Arts Matriculation Examination (conducted under the direction of the Provincial Education Department).

University of Manitoba:
- Preliminary and Previous Examinations.

University of New Brunswick, Fredericton:
- Matriculation Examination.

University of Mount Allison College, New Brunswick:
- Matriculation Examination.

College of Physicians and Surgeons of New Brunswick:
- Matriculation Examination.

Dalhousie College and University, Halifax, Nova Scotia:
- Matriculation Examination.

Provincial Medical Board of Nova Scotia:
- Preliminary Examination.

Newfoundland Medical Board:
- Preliminary or Matriculation Examination.

[1] A list of the examinations previously recognised can be obtained on application to the Branch Registrars.

University of Melbourne:
Matriculation Examination.
University of Sydney:
Matriculation Examination.
First Year Examination in Arts.
Senior Public Examination.
Entrance Examination for Medicine and Science.
University of Adelaide:
Senior Public Examination.
University of Tasmania:
Senior Public Examination.
University of the Cape of Good Hope:
Matriculation Examination.
University of Otago:
Preliminary Medical Examination.
University of New Zealand
Preliminary Examination for Medical Students.
Codrington College, Barbadoes:
Examinations qualifying for a Degree in Arts at the University of Durham.
Foreign Universities in Europe:
The German Arbiturienten-Examen of the Gymnasia and Real-gymnasia; Examinations entitling to the French Diplomas of Bachelier ès Lettres and Bachelier ès Sciences; and other corresponding Entrance Examinations to Foreign Universities in Europe.
Egyptian Government:
Examination for the Secondary Education Certificate.

PROFESSIONAL EDUCATION.

The period of professional study between the date of registration as a medical student and the date of the Final Examination for any diploma which entitles its holder to be registered under the Medical Acts must be a period of *bonâ fide* study during not less than five years. The course of professional study and examinations must include the following subjects:

(i) Physics, including the Elementary Mechanics of Solids and Fluids, and the rudiments of Heat, Light, and Electricity. (ii) Chemistry, including the principles of the science, and the details which bear on the study of Medicine. (iii) Elementary Biology. (iv) Anatomy. (v) Physiology. (vi) Materia Medica and Pharmacy. (vii) Pathology. (viii) Therapeutics. (ix) Medicine, including Medical Anatomy and Clinical Medicine. (x) Surgery, including Surgical Anatomy and Clinical Surgery. (xi) Midwifery, including Diseases peculiar to Women and to Newborn Children. (xii) Theory and Practice of Vaccination. (xiii) Forensic Medicine. (xiv) Hygiene. (xv) Mental Disease.

The first four of the five years must be passed at a School or Schools of Medicine recognised by any of the Licensing Bodies; but (*a*) the first year may be passed at a University or Teaching Institution recognised by any of the Licensing Bodies where the subjects of Physics, Chemistry, and Biology are taught; and (*b*) a graduate in arts or science of any university recognised by the General Medical Council, who has spent a year in the study of Physics, Chemistry, and Biology, and has passed an examination in these subjects for the degrees in question, is held to have completed the first of the five years of medical study provided that he has registered as a medical student with the General Medical Council. It is also to be noted that a student who has previous to registration attended a course or courses of study in one or all of the subjects, Physics, Chemistry, or Biology, in any university, school of medicine, or teaching institution recognised by any of the licensing bodies, may without further attendance be admitted to examination in these subjects; provided always that such course or courses shall not be held to constitute any part of the five years' course of professional study.

The General Medical Council recommends the Licensing Bodies to require that the fifth year should be devoted to clinical work at one or more public hospitals or dispensaries, British or foreign, recognised by any of the medical authorities mentioned in Schedule (A) of the Medical Act (1858), provided that of this year six months may be passed as a pupil to a registered practitioner possessing such opportunities of imparting medical knowledge as shall be satisfactory to the medical authorities.

THE ENGLISH UNIVERSITIES.

THE UNIVERSITY OF OXFORD.

There are two degrees in Medicine (B.M. and D.M.), and two degrees in Surgery (B.Ch. and M.Ch.), which under the most favourable circumstances may be obtained in six or seven years from Matriculation.

B.A. Degree.

The degrees of B.M. and B.Ch. are conferred only on candidates who have taken the B.A. degree, for which residence for three years within the University is necessary; the examinations, however, for the degrees in Arts and Medicine may be passed in any order, provided the subjoined regulations are complied with.

The degree of B.A. may be obtained in either of the following ways:

(*a*) By passing Responsions (or one of the Extra-University Examinations, which are held as equivalent to it), Moderations, a Divinity Examination, or, in the event of a candidate objecting, an examination in some specified Greek book; and the Final Pass School in three subjects, two of which may be the same as the Preliminary Examination in Natural Science.

(*b*) By passing Responsions, an additional subject in Responsions, the Divinity Examination, and the Preliminary Examinations in the Natural Science School, and by passing the Final Honour Examination in Chemistry, Physics, Animal Morphology, Botany, *or* Physiology.

Responsions and the additional subject may be passed before a candidate is a member of the University;[1] Moderations can be passed in the fourth term; the Divinity Examination at any time after Responsions; the Final Pass School may be taken any time after Moderations; a Final Honour School may be taken at the end of the third or within the fourth Academical year, that is, twelve or sixteen terms respectively; the Preliminary Examinations of the Natural Science School may be taken as soon as Responsions have been passed.

Degrees in Medicine and Surgery.

Candidates for degrees in Medicine must take the degrees of B.M., B.Ch., to obtain which the following examinations must be passed:

Preliminary.—The preliminary examination of the Natural Science School must be passed. It is held in two parts, namely: (1) Mechanics and Physics, and (2) Chemistry in November and June, (3) Animal Morphology, and (4) Botany in December and March.

Professional.—There are two professional examinations held twice a year at the end of Michaelmas and Trinity terms. The subjects of the first B.M. examination are Organic Chemistry, Human Anatomy and Physiology, Materia Medica, and Pharmacy; but candidates who have previously obtained a First or Second Class in the Final Examination in Physiology or Chemistry are exempt from further examination in these subjects. This examination may be passed at any time after the preliminary. The second examination, held in June, may be taken at any time after the first, but usually two or three years elapse. It comprises the remaining subjects of the medical curriculum, namely Medicine, Surgery, Midwifery, Pathology, Forensic Medicine, and Hygiene.

D.M. Degree.—A B.M. who has entered his thirty-ninth term is admitted D.M. on presentation of a dissertation approved by the appointed professors and examiners.[2]

M.Ch. Degree.—An examination for this degree is held in June. The candidate must be in his twenty-seventh term.

Fees.—University: B.A., £16 or £17. B.M. and B.Ch., £14. D.M., £25. M.Ch., £17. Also an annual fee to the University of £2 for the first four years, reduced to £1 when the B.A. is taken. College: Fees (varying in amount) on taking degrees and for the first four years of membership. Tuition fees, £21 to £30. The cost of living for the four University terms cannot be stated at less than £120.

Scholarships, etc.—The several Colleges grant scholarships of £80 a year tenable for four years in Natural Science, Chemistry, Physics, and Biology, and also exhibitions. Particulars can be obtained on application to the College tutors. A Radcliffe Travelling Fellowship of £200 a year, tenable for three years, is conferred annually. Candidates who have been placed in the First Class in any Final Examination in the Natural Science School, whether they have taken the degree of B.M. or not, are eligible.

Teaching.

Preliminary Examination.—Courses of lectures and demon-

[1] Membership is constituted by Matriculation, and by becoming a member of a College or Hall, or a non-collegiate student.

[2] The regulations for Graduates who took the degree of B.M. previous to 1886 differ slightly.

strations on elementary Mechanics and Physics, on Inorganic Chemistry, on Animal Morphology, and on Botany, are given at convenient periods, and are open to members of the University intending to proceed to a medical degree.

Degree of B.A.—The course of instruction for the Final Honour Examination in Physiology consists of lectures and practical work, and extends over two years. It is intended for students who have passed the Preliminary Examination in other subjects.

First B.M.—The instruction in Human Anatomy is by lectures and demonstrations; the dissecting room is open daily, and dissection may be continued during the vacation. The course of instruction in Physiology consists of a course of lectures extending over three full terms, a course of practical instruction in Histology during three terms, and a course of Elementary Physiological Chemistry, with practical laboratory work during two terms. Instruction in Organic Chemistry is given in the Chemistry Department.

Second B.M.—Lectures on Materia Medica and practical instruction in Pharmacology are given during the summer term, and clinical lectures and tutorial instruction and demonstrations in Physical Diagnosis in Regional Anatomy are given in each term at the Radcliffe Infirmary. Lectures on Pathology and practical instruction in Bacteriology and Pathological Histology are given in Michaelmas and Hilary Terms in the Pathological Laboratory.

THE UNIVERSITY OF CAMBRIDGE.

BACHELOR OF MEDICINE (M.B.) AND BACHELOR OF SURGERY (B.C.)

A student proceeding to this degree must (1) reside in the University during the required portion of each of nine terms, (2) pass (or obtain exemption from) the Previous Examination, (3) pursue medical study for five years.

There are three examinations for the degree of Bachelor of Medicine. They are partly in writing, partly oral, and partly practical. The examinations take place twice in the year, in the Michaelmas and Easter terms.

The First Examination is divided into two parts: 1. Chemistry and other branches of Physics; 2. Elementary Biology. These two parts may be taken together or separately. Before admission to this examination the candidate must have passed (or obtained exemption from) the Previous Examination. He must also produce certificates of diligent attendance on a course of lectures in Chemistry, and of practical instruction in Chemical Manipulations.

The Second Examination is divided into two parts, which may be taken together or separately: 1. Human Anatomy and Physiology; 2. Pharmaceutical Chemistry. Before admission to this examination the student must have passed both parts of the First Examination, must have attended hospital practice and have practised dissection during six months, and must produce certificates of diligent attendance on a course of lectures on each of the following objects: 1. Human Anatomy; 2. Physiology.

The Third Examination is divided into two parts, called the First part and the Second part respectively. Before presenting himself for either part, the student must have passed both parts of the Second Examination. The First part includes Principles and Practice of Surgery and Midwifery and Diseases Peculiar to Women. The Second part includes Pathology, Principles and Practice of Physic, Elements of Hygiene, Medical Jurisprudence, and Mental Diseases. The student, before admission to the First part, must produce certificates of attendances on one course of lectures in each of the following subjects: Pathology, Physiological Actions and Therapeutic Uses of Remedies, Principles and Practice of Surgery, and Midwifery; he must have attended a course of Practical Surgery, and acted as dresser or house-surgeon at a recognised hospital for six months; must have attended twenty cases of Midwifery, and must have obtained a certificate of proficiency in vaccination from an authorised vaccinator appointed by the Local Government Board. Before admission to the Second part he must produce evidence that he has completed the five years' course of medical study and obtained certificates of diligent attendance on one course of lectures in each of the following subjects: Principles and Practice of Physic and Medical Jurisprudence; he must also have attended the Medical and Surgical Practice of a recognised hospital (with clinical lectures), including certain special hospitals and asylums, during three years at least; must have been Clinical Clerk at a recognised hospital for six months at least, or have, subsequently to the completion of his attendance on Hospital Practice, attended to Practical Medicine or Surgery with special charge of patients in a hospital, dispensary, or parochial union, under superintendence of a qualified practitioner, unless the student himself be duly qualified. All candidates must also produce certificates of attendance during three months on (1) practical instruction in Pharmacy and Dispensing, (2) clinical instruction in Fevers at a general or special hospital.

Act.—After these examinations have been passed, an Act must be kept in the schools in the following manner. The Regius Professor of Physic assigns a day and hour for keeping the Act, of which public notice has to be given eight days before. The candidate reads a thesis, composed by himself, on some subject approved by the Professor; the Professor brings forward arguments or objections for the candidate to answer, and examines him orally on questions connected with his thesis as well as on other subjects connected with medicine of a more general nature. As the Third Examination for the degree of M.B. includes operative and clinical surgery, the degree of Bachelor of Surgery is conferred upon candidates who pass the Final Examination for M.B. without further examination and without the Act. The degree of M.B., B.C., is thus a registrable qualification in Medicine, Surgery, and Midwifery.

DOCTOR OF MEDICINE (M.D.).

This degree may be taken by an M.B. of three years' standing, or by an M.A. of four years' standing, who has been engaged in medical study for five years at least. In the latter case certificates of attendance on lectures and hospital practice for the M.B. must be produced, and the examination for the M.B. must be passed. In either case the candidate keeps an Act by reading an original thesis upon which he is examined, and writes a short extempore essay upon one of four topics (at his choice) relating severally to Physiology, Pathology, Medicine, or State Medicine.

MASTER IN SURGERY (M.C.).

This degree is granted to a candidate who has completed all that is required for the degree of B.C. at least two years previously: the candidate is either (1) examined in Pathology, Surgery, Surgical Anatomy, and Surgical Operations, the examination being both written and practical; or (2) submits books or writings constituting original contributions of merit to the science or art of surgery.

DATES, FEES, ETC.

The dates of examinations are announced early in the Michaelmas and Lent terms. Each candidate pays £2 2s. to the Registrary of the University on giving notice of his intention to offer himself for either part of the First, Second, or Third Examination for M.B. He pays £3 3s. before that for M.C. Schedules defining the range of subjects in the First M.B. Examination, and of the Pharmaceutical Chemistry in the Second Examination; also schedules for the necessary certificates, and a list of the schools of medicine and hospitals recognised by the University, may be obtained on application to the Registrary of the University, the Registry, Cambridge.

THE UNIVERSITY OF LONDON.

DEGREE OF M.B.

Every candidate for the degree of M.B. is required to pass four examinations:

1. *Matriculation*, held twice a year, in January and June. This examination consists of the following subjects: (1) Latin, (*a*) translation of selected authors, (*b*) unseen translation, (*c*) translation of English into Latin, (*d*) Latin grammar; (2) one of the following languages: Greek, French, German, Sanscrit, Arabic; translation and grammar; (3) English, grammar, and composition, and the history of the language and literature; History of England to the end of the seventeenth century, with the geography relating thereto; (4) Mathematics, including Arithmetic, Algebra to Quadratic Equations inclusive, Geometry, including the subjects of the

first four books of Euclid, and simple deductions; (5) Genera Elementary Science (including a general acquaintance with the apparatus by which the elementary principles of physics can be illustrated and applied); (6) one of the following branches of science: (*a*) Elementary Chemistry, (*b*) Sound, Heat, and Light, (*c*) Magnetism and Electricity, (*d*) Botany, (*e*) Mechanics. The full text of the regulations, with the syllabus in each subject, can be obtained on application to the Registrar of the University of London, Burlington Gardens, London, W. The candidate must be 16 years of age.

2. *Preliminary Scientific (M.B.) Examination.*—This examination is held for Pass and Honours in July, and for Pass only in January. It consists of two sections: (*a*) Chemistry and Physics, (*b*) General Biology. The examinations are conducted by written papers, *viva voce*, and by practical tests. The two sections may be taken together or separately, and the candidate who passes in one section only, though presenting himself in both, will be credited with the one in which he is successful. Honours may be taken in (*a*) Chemistry, (*b*) Experimental Physics, (*c*) Botany, (*d*) Zoology. Particulars as to the conditions of competition for honours and syllabuses of the subjects, both in the Pass and in the Honours examination, may be obtained on application to the Registrar, as above.

3. *Intermediate Examination in Medicine.*—This examination is held for Pass and Honours in July, and for Pass only in January. The candidate must have completed his nineteenth year, and must, subsequently to having passed the Preliminary Scientific Examination, have been a student in a recognised medical school for at least two years, have dissected for two sessions, have attended courses of Practical Chemistry and Practical Pharmacy, and have attended three course of lectures in the medical school. The subjects of the examination are: Anatomy, Physiology and Histology, Organic Chemistry, Materia Medica and Pharmaceutical Chemistry. Physiology may be postponed by pass candidates till a later examination, but candidates will not be allowed to present themselves for the M.B. Examination till at least twelve months after they have passed in Physiology. The examination is conducted by written papers *viva voce*, and by practical examinations. Honours may be taken in any one of the subjects of the examination under conditions stated in the *Calendar*, an extract from which containing these particulars, as well as syllabuses of the subjects, can be obtained from the Registrar.

4. *M.B. Examination.*—This examination is held for Pass and Honours in October, and for Pass only in May. The candidate must have passed the Intermediate Examination at least twenty-one months earlier, must have attended lectures and hospital practice in a recognised medical school for two years, including at least two months' attendance, each on lunacy and infectious diseases, one of which must be subsequent to the Intermediate Examination, must have conducted at least twenty labours, and have acquired proficiency in vaccination. After having attended Medical and Surgical Hospital practice for at least twelve months subsequent to passing the Intermediate Examination in Medicine, the student is required to attend to Practical Medicine, Surgery, or Obstetric Medicine with special charge of patients in a Hospital, Infirmary, Dispensary, or Parochial Union during six months, such attendance not to count as part of the Surgical or Medical Hospital Practice already referred to. The examination, which is conducted by written papers, *viva voce*, and by practical examinations, comprises the following subjects: Pathology, Therapeutics, Hygiene, Surgery, Medicine, Obstetric Medicine, and Forensic Medicine. The candidate must pass in all the subjects. Honours may be taken in Medicine, Obstetric Medicine, and Forensic Medicine.

Degrees in Surgery.

Bachelor of Surgery (B.S.).—This degree is granted to Bachelors of Medicine after an examination held annually in December. The candidate must have attended a course of operative surgery. The examination comprises Surgical Pathology and Surgery, and the candidate is examined by written papers and clinically, and is required to operate on the dead body. Candidates who pass this examination in the first division may be examined for Honours.

Master in Surgery (M.S.).—This degree is granted, after examination, to Bachelors of Surgery of at least two years' standing; one year is, however, remitted in the case of candidates who passed the B.S. examination in the first division. The examination comprises Mental Physiology, Surgery, and Surgical Anatomy.

Degree of M.D.

Doctor of Medicine.—The degree of Doctor of Medicine is granted to Bachelors of Medicine of at least two years' standing; one year is remitted if the candidate passed the M.B. examination in the first division. The examination comprises Mental Physiology and Medicine, and is conducted by written papers, clinical examination, and *viva voce*. A candidate who presents a printed dissertation, thesis, or commentary, which shall have been approved by the examiners, will be excused the written examination.

Doctor of Medicine in State Medicine.—This degree is granted to Bachelors of Medicine after examination on producing evidence of having attended (*a*) to State Medicine during two years, or (*b*) to State Medicine for one year, and of having held the position of Medical Officer of Health for two years, or (*c*) of having held the position of Medical Officer of Health for three years. The examination is similar to that for the ordinary M.D., State Medicine taking the place of Medicine.

Fees and Scholarships.

The fees are as follows: Matriculation, £2; for the other examinations, in each case, £5. A rejected candidate, on again presenting himself, pays half the fee.

Exhibitions or Scholarships are granted to the first six candidates in honours at the Matriculation Examination, and, if sufficient merit be evinced, to the first candidates in honours at all the other examinations.

The Sherbrooke Prize.—This prize, founded by the late Lord Sherbrooke, will in future be awarded triennially for the best essay embodying original research in some branch of natural science. It is open to all graduates of not more than five years' standing.

VICTORIA UNIVERSITY.

Colleges.—The Colleges of the Victoria University are Owens College, Manchester; University College, Liverpool; and the Yorkshire College, Leeds.

Entrance.—A candidate for the Entrance Examination in Arts is examined in: (1) Latin; (2) Elementary Mathematics; (3) Elementary Mechanics; (4) English Language, including Grammar and Composition; (5) *One* of the following: i, Greek; ii, French; iii, German; iv, Italian; v, Spanish. Candidates may, by special permission of the Board of Studies, substitute any other modern language for either of the subjects named under (5). Candidates who propose to present themselves in Italian or Spanish, or in a modern language not included in the list, must give notice to the Registrar on or before March 1st in the year in question.

Matriculation.—Before matriculating, which consists in signing the University Register, candidates must produce proof that they are registered students of a College of the University, or of a medical school recognised by it.

Degrees of Bachelor of Medicine and of Surgery (M.B., Ch.B.)

Curriculum and Residence.—Five years must be spent in study at a recognised medical school subsequent to registration as a medical student; of these five years, two must be passed in a college of the University, and one of these two years must be subsequent to passing the first M.B. Examination.

First M.B. Examination.—Candidates must have attended during at least one year courses of lectures and laboratory work in each of the subjects of the examination—namely: Part I. (*a*) Physics; (*b*) Chemistry. Part II. Biology (Animal and Vegetable Morphology, Physiology, and Laboratory work). The two parts may be taken together or separately.

Second M.B. Examination.—Candidates must have attended winter courses in Anatomy and Physiology, and a summer course in Materia Medica and Pharmacy, must have dissected for two winter sessions and one summer, and must have had practical instruction in Physiology and in Materia Medica

and Pharmacy. The subjects of the examination are: (1) Anatomy; (2) Physiology; (3) Materia Medica and Pharmacy; (3) may be passed separately.

Final M.B. Examination.—Candidates must produce certificates of having attended, in a recognised medical school, courses of instruction in all the subjects of the examination, which are: Part I. (*a*) Pharmacology and Therapeutics, (*b*) General Pathology and Morbid Anatomy, (*c*) Forensic Medicine and Toxicology and Public Health. Part II. (*d*) Obstetrics and Diseases of Women, (*e*) Surgery, (*f*) Medicine (including Mental Diseases and Diseases of Children). The two parts may be taken separately, and any one of the subjects of Part I may be deferred and taken with Part II.

DEGREE OF DOCTOR OF MEDICINE (M.D.).

A candidate must have obtained the degree of M.B. at least one year previously. He must present a printed dissertation, and may be examined on any subject connected therewith.

DEGREE OF MASTER OF SURGERY (CH.M.)

A candidate must have obtained the degree of M.B. at least one year previously, must have been engaged in the study of Practical Surgery in the interval, and have held a surgical appointment for not less than six months in a hospital or other public institution. He must also produce certificates of having attended special courses in Operative Surgery, Bacteriology, and Ophthalmology.

FEES AND DATES OF EXAMINATION.

Entrance examination, £2; re-examination after failure, £1. First, Second, and Third M.B. Examinations, each £5; re-examination after rejection, £2. M.D., £10. Ch.M., £5 on examination, and £5 on the conferring of the degree.

The entrance examination in Arts is held in June and September. The first M.B. Examination is held in June and also in September. The Second and Final M.B. Examinations are held in March and July, and that for the Ch.M. in July.

THE UNIVERSITY OF DURHAM.

The University of Durham grants six degrees in the medical faculty—M.B., M.D., B.S., M.S., B.Hy., D.Hy. The degrees of M.D., B.S., and M.S. are granted only to M.B. graduates of the University. The degrees B.Hy. and D.Hy. are granted under certain conditions to registered medical practitioners (see page 556). The University also grants a Diploma in Public Health. These degrees are open both to men and women. It is hardly necessary to say that every student intending to attend the University of Durham College of Medicine (Newcastle-on-Tyne) would do well to pass the necessary examination in general knowledge, and qualify himself to obtain the degrees of the University.

DEGREE OF BACHELOR OF MEDICINE (M.B.).

Preliminary Examination in Arts.—In addition to the Certificate of Registration, a candidate must (*a*) pass the Preliminary Examination in Arts for the degree in Medicine of the University of Durham, or hold a certificate of having passed one of the following examinations: (1) The First Public Examination for the Degree of B.Litt. of the University of Durham; (2) the First Public Examination in Arts of the University of Durham; (3) the University of Oxford Moderations; (4) the University of Cambridge Previous Examination with the extra subjects; (5) the University of Cambridge General Examination; (6) the Matriculation Examination of the University of London; or (*b*) be a graduate in Arts of the University of Durham, Oxford, Cambridge, London, Victoria (Manchester), Dublin, Queen's University (Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill (Montreal), Sydney, Melbourne, Queen's College (Kingston), the Victoria or the Royal University of Ireland. Particulars as to the Preliminary Examination of the University of Durham (*a*) can be obtained from the Rev. Henry Ellershaw, M.A., Secretary of the Examinations, the University, Durham, to whom the fee (£1) is payable.[1]

The Preliminary Examination in Arts is held thrice yearly, in January, March, and September, at the same time as the Registration Examination. The next examination will be commenced on September 12th, 1899.

Curriculum.—The curriculum extends over five years, of which one at least must be spent in attendance at the University of Durham College of Medicine, Newcastle-on-Tyne, and in the clinical practice of the Royal Infirmary there. Students are recommended to carry out the curriculum on some such plan as the following:

First Winter: Anatomy, Dissections, Chemistry, Physics, Elementary Biology. First Summer: Practical Chemistry, Practical Physics, Elementary Biology (if not attended during the Winter).

Second Winter; Anatomy, Physiology, Practical Physiology, Dissections. Second Summer: Practical Histology, Practical Pharmacy, Materia Medica, Therapeutics, and Pharmacology.

Third Winter: Medicine, Surgery, Hospital Practice, with Clinical Lectures, Midwifery and Diseases of Women and Children, Practical Midwifery, Public Health. Third Summer: Pathology, Practical Pathology, Medical Jurisprudence, Hospital Practice, with Clinical Lectures.

Fourth Winter: Medicine, Surgery, Regional Anatomy, Hospital Practice, with Clinical Lectures. Fourth Summer: Mental Diseases, Operative Surgery, Hospital Practice, with Clinical Lectures.

Fifth Winter: Infectious Diseases and Clinical Lectures. Fifth Summer: Clinical Lectures, Mental Diseases (if not attended during the Fourth Summer).

Professional Examinations.—There are four professional examinations conducted in writing, practically, and *viva voce*, each held twice a year (April and September). *First Examination:* Elementary Anatomy and Biology, Chemistry, Physics. *Second Examination:* Anatomy, Physiology, Materia Medica, Therapeutics, and Pharmacology. *Third Examination:* Pathology, Medical Jurisprudence, Public Health, and Elementary Bacteriology. *Final Examination:* Medicine, Clinical Medicine and Psychological Medicine, Surgery and Clinical Surgery, Midwifery and Diseases of Women and Children. The *Calendar* of the University of Durham College of Medicine, Newcastle-on-Tyne, contains synopses of the subjects of the examinations and examination papers. Applications for further information should be addressed to Professor Howden at the College. A candidate who has passed the First Examination of the Conjoint Board in England of the Royal College of Physicians of London and the Royal College of Surgeons of England will be exempt from the subject of Biology in the First Examination of the University of Durham if registered as a Medical Student before October 1st, 1896.[2] Candidates who hold a qualification from a recognised licensing Board in the United Kingdom at the date of entry for the First Examination for the Degree in Medicine are in every case required to pass in Chemistry with Chemical Physics.[3] Candidates who have completed part of their curriculum elsewhere may pass their First, Second, and Third Examinations *previously* to entering at Newcastle-upon-Tyne.

DEGREE OF DOCTOR OF MEDICINE (M.D.),

A candidate for this degree must have been engaged in practice for at least two years subsequent to obtaining the degree of M.B. in the University of Durham. The candidate is required to write an essay based on original research or observation, and is subject to examination on the topic of his essay. For particulars as to the degree of M.D. for medical practitioners of fifteen years' standing, without curriculum, see page 553.

DEGREES IN SURGERY.

Bachelor of Surgery.—A candidate must have passed the examination for the degree of M.B.(Dunelm), and have attended courses of lectures on Operative Surgery and on

[1] Candidates from Indian Universities must have passed a Matriculation Examination at one of the Indian Universities, and will have to reside for one academic year at the University of Durham College of Medicine at Newcastle-on-Tyne before presenting themselves for the M.B. Degree Examination, in accordance with the regulation on page 56 of the *Calendar*. If the Matriculation Examination at the Indian University did not embrace Latin and Persian or Sanskrit, then it will be necessary for the candidate, in addition, to produce evidence that he has passed in Latin and one of those subjects, or in Greek, within twelve months of his presenting himself for the Examination for the Degree in Medicine.

[2] A candidate who has passed the First and Second Examinations of the University will be exempt from the First and Second Examinations of the Conjoint Board in England, and will be entitled to present himself for the Final Examination of the Board on the completion of the necessary curriculum.

[3] All candidates for the First Examination for the Degree in Medicine, whether exempt from a portion of it or not, are required to pay the full fee—£5.

Regional Anatomy. He is required to perform operations on the dead body, and to show practical acquaintance with the use of surgical instruments and appliances.

Master in Surgery.—A candidate must have obtained the degree of B.S.(Dunelm) at least two years previously, and have been engaged in practice for that period. The subjects for the examination are Principles and Practice of Surgery, Surgical Pathology, Surgical Anatomy, Surgical Operations, Clinical Surgery.

Degrees in Hygiene (B.Hy., D.Hy.).

For the regulations as to these degrees, see page 556.

Fees.

Preliminary Arts Examination for Degrees, £1. First, Second, and Third Professional Examinations (M.B.), each £5. Final (M.B.), £10. Examination for the degrees of M.D., B.S., and M.S., each £5, in addition to the University of Durham for each degree, £6 6s.

THE ENGLISH COLLEGES.

The Medical Corporations in England are the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries of London. The two Royal Colleges now co-operate to hold a series of examinations, on passing which the candidate receives the diplomas of Licentiate of the Royal College of Physicians (L.R.C.P.), and Member of the Royal College of Surgeons (M.R.C.S.). The Society of Apothecaries grants its diploma separately.

CONJOINT EXAMINING BOARD IN ENGLAND.

A candidate who desires to obtain the licence of the Royal College of Physicians of London and the diploma of Member of the Royal College of Surgeons of England is required to pass three professional examinations, and to produce evidence of having passed through a stated course of instruction at a recognised medical school. The full period of five years must be spent in professional study, after registration as a medical student, of which six months may be spent at an Institution recognised by the Board for instruction in Chemistry, or one year may be spent at an Institution recognised by the Board for Instruction in Chemistry and Biology. The candidate must pass an examination in subjects of Preliminary Education before entering the medical school (see page 518), and must register as a medical student within fifteen days of entering such school. Except in the case of Chemistry and Physics, Practical Chemistry, Practical Pharmacy, and Elementary Biology, professional studies commenced before registration will not be recognised. For institutions from which certificates are accepted by the Conjoint Board see p. 549.

First Professional Examination.

The examination consists of three parts: (1) Chemistry and Physics, (2) Practical Pharmacy, (3) Elementary Biology.

A candidate may take this examination in three parts at different times, or he may present himself for the whole at one time. A candidate will be admitted to examination in Chemistry and Physics and Practical Chemistry and Elementary Biology before registration as a medical student by the General Medical Council, *and he may take Practical Pharmacy at any time during the curriculum.*

A candidate is required to produce evidence of having received instruction in each of the above-mentioned subjects. A candidate referred in any part or parts will not be admitted to re-examination for three months. If referred in Chemistry or Biology he must produce evidence of further instruction. A candidate who produces evidence of having passed an examination for a degree in Medicine on any of the subjects in this examination at a university in the United Kingdom, India, or a British colony will be exempt from examination on the subjects in which he has passed.

Second Professional Examination.

The subjects of this examination are Anatomy and Physiology, and both must be passed at the same time. A candidate must have passed the Parts I and III of the First Examination at least twelve months earlier, and have attended during two winter sessions and one summer session (or fifteen months during the ordinary sessions) at a recognised medical school lectures on Anatomy, Physiology, and a course of Practical Physiology and Histology, and have dissected for twelve months during the ordinary sessions. If rejected, a candidate, before being admitted to re-examination, must continue his studies for not less than three months.

Third or Final Professional Examination.

This examination consists of three parts: Part I, Medicine, including Medical Anatomy, Pathology, Practical Pharmacy,[1] Therapeutics, Forensic Medicine, and Public Health; Part II, Surgery, including Pathology, Surgical Anatomy, and the use of Surgical Appliances; Part III, Midwifery and Gynæcology.[2] The examination may be passed at one time or in each part separately. Evidence of attendance at courses of instruction in the subjects of the three parts must be produced, and also of attendance on twenty labours. The candidate must have passed the Second Examination two years previously, and have been registered as a medical student for at least five years. A rejected candidate must produce evidence of further instruction during three months.

All applications with reference to the examinations for the Licence of the Royal College of Physicians of London and to the Diploma of Member of the Royal College of Surgeons of England should be addressed to the Secretary, Examination Hall, Victoria Embankment, London, W.C. (telegraphic address, "Conjoint," London), from which also synopses of some of the subjects can be obtained.

Regulations for Colonial, Indian, or Foreign Candidates and University Candidates.

A person holding a Colonial, Indian, or foreign qualification which entitles him to practise in the country where such qualification has been obtained, is, after a course of study and examination equivalent to those required by the Regulations of the two Royal Colleges, admissible to the Second and Third or Final Examinations without any interval. Members of an English, Scotch, or Irish University are under certain conditions eligible for admission to the Third or Final Examination two years after passing at their University the subjects included in the First and Second Examination of the Board.

A Doctor or Bachelor of Medicine or Surgery of an Indian, Colonial, or foreign University recognised for the purpose, who shall have passed at his university in the subjects of the First and Second Examination, will be eligible for admission to the Third or Final Examination two years after passing in the said subjects.

Fees, Dates, Etc.

First Examination, £10 10s. Re-examination, Part I, £3 3s., Parts II, III, each £2 2s. *Second Examination*, £10 10s. Re-examination, £6 6s. *Third Examination*, £15 15s. Re-examination, Part I, Medicine, £5 5s. Practical Pharmacy, £2 2s. Part II, Surgery, £5 5s. Part III, £3 3s. Members of an English, Scottish, or Irish University, £5 5s.; for the diplomas, £31 10s.[3]

The examinations are held in January, April, July, and October. A book of questions set at the several examinations is published annually, and can be obtained from Messrs. Taylor and Francis, Red Lion Court, Fleet Street, London, E.C.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Licentiates.—Candidates are now subject to the regulations of the Conjoint Examining Board in England.

Members.—The Membership of the College is granted after examination to persons above the age of 25 years who do not engage in trade, do not dispense medicine, and do not practise in partnership. Under the provisions of the Medical Act of 1886 the Diploma of Membership is not registrable at the

[1] Candidates who have previously passed in Practical Pharmacy will not be re-examined in that subject at the Third Examination.

[2] Candidates may present themselves for examination in Midwifery and Diseases of Women at any time after the completion of the fourth year of professional study at a medical school, and not less than one year after the passing of the Second Examination, on production of the required certificates.

[3] On and after January 1st, 1900, this amount will be raised to £36 15s.

present time as a primary qualification, and is therefore granted only to persons already registered, or who have passed the Final Examination for the Licence.

Medical graduates of a recognised university are admitted to a pass examination, but others must have passed the examinations required for the licence of the College. The examination, which is held in January, April, July, and October, is partly written and partly oral. It is directed to Medicine, and is conducted by the President and Censors. Candidates under 40 are examined in Latin, and either Greek, French, or German. Candidates over 40 are not so examined, and the examination in Medicine may in their case be modified under conditions to be ascertained by application to the Registrar. The fee for the Membership is £42, but if the candidate is a Licentiate the fee is the difference between what he has already paid and £42. In either case £6 6s. is paid before examination.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Membership.—Candidates who registered on or after October 1st, 1884, are now subject to the regulations of the Conjoint Board.

Fellowship.—The Fellowship of the College of Surgeons is granted after examination to persons at least 25 years of age, who have been engaged in professional studies for six years. There are two examinations—the first in Anatomy and Physiology, which may be passed after the third winter session; the second, chiefly directed to Surgery, which may be passed after six years of professional study, or after five years' professional study in the case of a Bachelor or Master of Arts, or Bachelor or Doctor of Science of a university recognised by the Council for the purpose. Candidates must pass the Final Examination of the Examining Board in England and be admitted Members of the College before admission to the Second Examination for the Fellowship.

Fees: At First Examination: Members, £5 5s.; non-Members, £10 10s.; £5 5s. returned if rejected. At Second Examination: Member, £10 10s. Further information can be obtained on application to the Secretary, Examination Hall, Victoria Embankment, London, W.C.

SOCIETY OF APOTHECARIES OF LONDON.

The examinations are Primary and Final (Sections I and II). The Primary Examination is held quarterly on the first Wednesday, and on the Monday and Thursday in the same week, in the months of January, April, July, and October, Section I of the Final Examination is held monthly, and consists of: 1. The examination in Surgery, on the second Wednesday and following days. 2. The examination in Medicine and Forensic Medicine, on the third Wednesday and on the Monday and Thursday of the same week. 3. The examination in Midwifery, on the third Wednesday and on the Monday and Thursday of the same week. Section II of the Final Examination is held monthly, and consists of: 1. The examination in Surgery, on the second Wednesday and following days. 2. The examination in Medicine, on the third Wednesday and on the Monday and Thursday of the same week. Candidates for the examination in Midwifery may enter for the same at Section I or Section II of the Final Examination.

Primary Examination.—This examination consists of two parts: Part I includes (*a*) Elementary Biology (oral only), (*b*) Chemistry, the Principles of the Science which bear on the Study of Medicine; Chemical Physics, including the elementary mechanics of solids and fluids, heat, light, and electricity; Practical Chemistry; (*c*) Pharmacy. A synopsis indicating the range of the subjects in the examination will be sent with the regulations on application. Evidence of instruction in these subjects must be produced prior to examination. This examination may be passed any time before or after registration as a medical student. No professional studies commenced before registration will be recognised as part of the medical course. Should the candidate not succeed in passing in all the subjects of the examination, he will be referred only in the subject or subjects in which he failed. Part II includes Anatomy, Physiology, and Histology. This examination cannot be passed before the completion of twelve months' Practical Anatomy, with demonstrations. These subjects cannot be taken separately except in the event of the candidate having previously passed in one. Evidence must be produced of the candidate's course of study. A schedule of the Primary Examination, to be obtained of the Secretary, must be signed by the Dean of the Medical School or other authority. Candidates will be excused any or all the subjects of the Primary Examination on producing evidence that they have passed equivalent examinations before any examining body recognised by the Society. Candidates referred in Anatomy will be required to produce evidence of further work in the dissecting room before being admitted to re-examination.

Final Examination (Sec. I.)—This examination consists of three parts. Part I includes: The Principles and Practice of Surgery, Surgical Pathology, Operative Manipulation, Surgical Anatomy, Instruments and Appliances. Part II includes: (*a*) The Principles and Practice of Medicine (including Therapeutics, Pharmacology, and Prescriptions), Pathology, and Morbid Histology; (*b*) Forensic Medicine, Hygiene, Theory and Practice of Vaccination, and Mental Diseases. Candidates passing either (*a*) or (*b*) will not be re-examined therein. Part III: Midwifery, Gynæcology, and Diseases of Newborn Children, Obstetric Instruments and Appliances. Part III may be postponed to Sec. II of the Final Examination, and candidates may enter for Parts I, II, and III, together or separately. Sec. I of the Final Examination cannot be passed before the expiration of 45 months after registration as Medical Student, during which time not less than 3 winter sessions and 2 summer sessions must have been passed at one or more of the medical schools connected with a general hospital recognised by the Society.

Final Examination (Sec. II).—This examination consists of three parts. Part I includes: An examination of and written report of Surgical Cases. Part II includes: An examination of and written report on Medical Cases, Medical Anatomy. Part III includes: Midwifery, Gynæcology, and Diseases of Newborn Children, Obstetric Instruments, and Appliances. Parts I and II of this examination cannot be passed before the end of the fifth year. Candidates may enter for Parts I, II, and III together or separately. Course of Medical Study.—The course of study is as follows: For the Primary Examination, Part I, Elementary Biology, not less than 3 months; Chemistry and Chemical Physics, not less than 6 months; Practical Chemistry, not less than 3 months; Pharmacy and Dispensing, not less than 3 months. Instruction in Pharmacy and Dispensing must be given by a registered medical practitioner or by a member of the Pharmaceutical Society by examination or in a public hospital, infirmary, or dispensary. Part II: Anatomy, not less than 6 months; Practical Anatomy with Demonstrations, not less than 12 months; Physiology, not less than 6 months; Histology with Demonstrations, not less than 3 months. Class examinations on the above subjects. The study of these subjects must be pursued at a medical school or at a place of instruction recognised by the Society.

Information as to the details of the course of study required and as to the certificates which must be produced, may be obtained on application to the Secretary to the Examiners, who attends at the Hall of the Society, Blackfriars, E.C., from 10 to 12 o'clock daily.

Fees.—Primary Examination: For the whole Examination, including Part I and Part II, £5 5s.: Re-examination after rejection in Part I, £3 3s.; Re-examination after rejection in Part II, £3 3s. Final Examination, Section I: For the whole Examination, [1]£10 10s.; Re-examination after rejection in A, Part I, Surgery, £3 3s.; Re-examination after rejection in B, Part II, Medicine, including (*a*) and (*b*), £3 3s.; Re-examination after rejection in C, Part III, Midwifery, £3 3s. Section 2: For the whole Examination, £5 5s.; Re-examination after rejection in A, Part I, Surgery, £3 3s.; Re-examination after rejection in B, Part II, Medicine, £3 3s.

THE SCOTTISH UNIVERSITIES.

IT will be convenient to give the regulations for Edinburgh more in detail, and then briefly indicate points of difference as regards the other three Universities.

[1] The fee for Section 1 of the Final Examination is £10 10s., unless £5 5s. has previously been paid for the Primary Examination, in which case the fee is £5 5s. The fee for the three Examinations is £15 15s., or £5 5s for each Examination, except in the case of persons holding a foreign diploma recognised by the Society, who are required to pay the entire fee of £15 15s. when entering for examination.

UNIVERSITY OF EDINBURGH.

The following regulations apply to all who began their studies after October 1st, 1892.

Four degrees in Medicine and Surgery are conferred—namely, Bachelor of Medicine, Bachelor of Surgery, Doctor of Medicine, and Master of Surgery. The degree of M.B. is not conferred separately from Ch.B., and *vice versâ*, but M.D. and Ch.M. are separable.

Preliminary Examination.

This must be passed before beginning medical study; the subjects are: (1) English[1]; (2) Latin, Translation, and Parsing, Prose, Composition, Grammar, and Sentences; (3) Elementary Mathematics, Arithmetic[2], Algebra, and Geometry, Euclid, Books i, ii, and iii (or their equivalents with easy deductions); (4) Greek (Translation, Sentences, and Grammar), or French, or German. [One paper will be set in French and one in German. The papers will be of a lower standard than those set in these subjects in the Arts and Science Preliminaries. The time allowed for such paper will be three hours. The papers will comprise questions in grammar, translations, a piece of English for translation, and some short sentences.]

Excellence in one or more subjects will in some measure compensate for deficiency in others. The examination is conducted by a Joint Board of the four Universities, and will be held from September 30th to October 7th, 1899, and from March 24th to March 31st, 1900, and these dates apply to all the Scottish Universities. The standard of examination corresponds pretty nearly to the certificate of the Scotch Education Department, or the lower certificate of the Oxford and Cambridge Schools. Candidates are required to pass in all the necessary subjects at one or at not more than two examinations. The examinations of a large number of bodies are taken as equivalents of the Preliminary; these will be found on pages 435-438 of the *University Calendar* (Regulations of the Joint Board of Examiners). The fee is 10s. 6d. each time, and is to be sent with the schedule to T. Gilbert, the University Clerk, not later than September 19th, 1899, and March 1st, 1900.[3]

Registration.

The student must register within fifteen days after the commencement of medical study. There is no fee. Forms and information may be had from Mr. James Robertson, 48, George Square, Edinburgh, or at the office of the Faculty of Medicine.

Professional Education.

The course extends over five years. During the first four the student must attend Elementary Botany, Elementary Zoology, Physics, Practical Chemistry, Practical Physiology, Practical Pathology, and Medical Jurisprudence and Public Health during courses of not less than 2½ months each; Practical Anatomy during two courses of not less than 5 months each; Chemistry, Anatomy, Physiology, Pathology, Surgery, Materia Medica and Therapeutics, Medicine, and Midwifery, and the Diseases of Women and Infants, during courses of not less than 5 months each. During the fifth, or final year, he must be engaged in clinical study for at least 9 months, and must attend a 9 months' course in Clinical Medicine and in Clinical Surgery. In all, before graduation he must have attended, for at least three years, a hospital which accommodates not fewer than 80 patients, and possesses a distinct staff of physicians and surgeons, and he must have acted as clerk in the medical, and dresser in the surgical, wards of such a hospital. He must have had approved opportunities of studying at a hospital *Post-mortem* Examinations, Fevers, and Ophthalmology. He must have had a course of Operative Surgery. Every candidate must attend one of the three following courses; (1) A six weeks' course of clinical instruction in the Diseases of Children. (2) A course of instruction, of at least 18 meetings, in diseases of the Larynx, Ear, and Nose. (3) A course of clinical instruction in diseases of the skin, of not less than 20 meetings. He must have attended a course of 25 meetings on Practical Pharmacy, a course on Mental Diseases, been properly instructed in Vaccination by a certificated public vaccinator, have attended 12 cases of labour, or had 3 months' attendance at a lying-in hospital, and have personally conducted 6 cases. Certificates for these various courses must attest regular attendance and due performance of the work of the class. The fees vary from 1 to 4 guineas for each class, and the total minimum cost in class, examination, and other fees for M.B. and Ch.B. may be set down as £150. Two of the five years' course must be taken in the University of Edinburgh. For students beginning their course in winter there may be given the following minimum curriculum for the degrees of M.B. and Ch.B., with suggested order of study and examination:

First Winter Session: Chemistry, including Practical Chemistry, Physics,[4] or Elementary Zoology. Anatomy (Lectures), Examination in Chemistry, including Practical Chemistry, and either Physics or Elementary Zoology. First Summer Session: Elementary Zoology or Physics,[4] Elementary Botany, Examination in Elementary Botany and Elementary Zoology or Physics.

Second Winter Session: Practical Anatomy, Physiology, Surgery. Second Summer Session: Practical Physiology, Practical Materia Medica, Clinical Surgery (with Dressership), Hospital.

Third Winter Session: Materia Medica, Practical Anatomy, Clinical Surgery (with Dressership), Hospital, Examination in Anatomy, Physiology, and Materia Medica and Therapeutics (the last may be postponed to the end of the following summer). Third Summer Session: Practical Pathology, Medical Jurisprudence and Public Health, Clinical Medicine, Hospital, Examination in Materia Medica and Therapeutics (if not previously taken).

Fourth Winter Session: Pathology, Medicine, Midwifery and Diseases of Women and Children, Clinical Medicine (with Clerkships), Hospital, Examination in Pathology, and Medical Jurisprudence and Public Health (the latter may be postponed to the end of the following summer). Fourth Summer Session: Examination in Medical Jurisprudence and Public Health (if not previously taken).

Fourth Summer and Fifth Winter Session: Clinical Medicine, Clinical Surgery, Mental Diseases, Ophthalmology, *Post-mortem* Examinations, Fevers, Diseases of Children, or Diseases of the Larynx, Ear, and Nose, Diseases of the Skin, Out-practice of a Hospital, Dispensary, etc., Midwifery Cases and Practice, Vaccination, Hospital.

Fifth Summer Session: Examination in Surgery and Clinical Surgery, Medicine and Clinical Medicine, and Midwifery.

Professional Examinations.

These are four in number, and the first three may be taken in sections as indicated above.

First.—Botany, Zoology, Physics, Chemistry, taken any time after the full specified course in these subjects.

Second.—Anatomy, Physiology, Materia Medica, and Therapeutics, at the end of the fourth winter.

Third.—Pathology, Medical Jurisprudence, and Public Health, at the end of the third winter.

Final.—Surgery, Clinical Surgery, Medicine, Clinical Medicine, and Midwifery, at the end of the fifth year.

Failure in one subject does not involve failure in the other subjects of that division. Candidates must be 21 years of age before admission to the degrees of M.B. and Ch.B.

Examination Fees for M.B. and Ch.B.

	First Time.	Re-entry.
	£ s. d.	£ s. d.
Preliminary	0 10 6	0 10 6
First Professional	6 6 0	
Any two Subjects of Ditto ...	3 3 0	
Second Professional	6 6 0	£1 1s. each time for each subject.
Anatomy and Physiology ...	4 4 0	
Materia Medica, etc.	2 2 0	
Third Professional	4 4 0	
Final	6 6 0	

Three months' course.

[1] In English no set books are prescribed, nor is a general knowledge of the life and works of the greater authors expected of candidates, but one or two questions may be set, giving an opportunity to candidates to show a knowledge of famous literary works. The historical questions will not be confined to any one period, but will cover the whole of British History, and will be set in such a way as to give an opportunity to candidates who have confined their studies to a single period to show their knowledge. A single three hours' paper will be set, containing an Essay, a Paraphase, two questions on History, two on Geography, four on Grammar (including correction of sentences, parsing, analysis of sentences, and derivations), two of a literary and general kind. Eight answers will be required. The Essay, the Paraphrase, one answer on History, and one on Geography will be compulsory.

[2] *Arithmetic* (including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest); *Algebra* (including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratics, and problems leading to the above Equations).

[3] A student whose native language is not English may substitute his own language for either French or German, and may substitute any other classical language for Latin or Greek.

DEGREE OF M.D.

The candidate must be M.B. and Ch.B. of Edinburgh, must have been engaged for one year in the medical wards of a hospital, or at scientific work at a recognised research laboratory, or in the military or naval medical services, or for at least two years in general practice, and must be 24 years of age. He must write a thesis on a subject not exclusively surgical, and he will be examined in Medicine, and in some of its special departments. The fee is £10 10s., and the re-entry fee £5 5s.

DEGREE OF CH.M.

The candidate must be M.B. and Ch.B. of Edinburgh, have worked one year in the surgical wards of a hospital, or been engaged in scientific work, or in the military and naval medical services, or for at least two years in practice not confined to medicine. He must be 24, must submit a thesis on a subject not exclusively medical, will be examined on Surgical Anatomy, Operations on the Dead Body, Clinical Surgery, and some of its special departments. The fee is £10 10s.

For further detail the student is referred to the *University Calendar* (published by Mr. Thin, South Bridge, Edinburgh, price 3s., post free 3s. 6d.), or the medical *Programme*, price 2d., also published by Mr. Thin, or to the Dean of the Faculty of Medicine, University of Edinburgh.

REGULATIONS FOR GRADUATION OF WOMEN.

When granting recognition to medical schools or teachers for the medical instruction of women, the University Court *requires that the classes shall not be mixed classes, except on special cause shown.*

The University Court have recognised the Medical College for Women, 30, Chambers Street, Edinburgh, as a medical school whose courses of instruction qualify for graduation in Medicine (but see p. 541). Every candidate must produce evidence of having satisfied the conditions with respect to the preliminary examination and registration as medical students, and will be examined in all the subjects necessary for graduation by the Examiners of the University in which she takes her degree. Students attending either of these schools are free to take a class or classes separately in either the one or the other of the schools. All students not matriculated students of the University attending these schools for purposes of graduation must, at the commencement of each year of such attendance, enter their names in a book to be kept in the University for that purpose, paying a fee of the same amount as the matriculation fee paid by students of the University, and having, in respect of such payment, a right to the use of the library of the University.

THE UNIVERSITY OF GLASGOW.

THE regulations are essentially the same as those given above for Edinburgh.

PRELIMINARY EXAMINATION.

The dates of the next two Examinations are the same as those given under Edinburgh. Fee, 10s. 6d. each time. Names to be given in and fee paid by September 11th, 1899, and March 2nd, 1900, to the Assistant Clerk, Matriculation Office. The extent of the examination will be found under Edinburgh.

REGISTRATION.

Printed form of application may be had from the Assistant Clerk at the Matriculation Office, and this must be transmitted to Mr. James Robertson, Scottish Branch Registrar, 48, George Square, Edinburgh.

PROFESSIONAL EDUCATION.

The minimum cost is about £126, and the course is the same as at Edinburgh.

FEES, ETC.

The total examination fees for M.B., Ch.B., are the same as for Edinburgh, but are differently distributed. The fee for the First and Second is £6 6s., and for the Third and Fourth £5 5s. each. In the event of a candidate being rejected in any of these he may be admitted once to re-examination without payment of further fee, but for a second and for each subsequent re-examination a fee of £2 2s. is charged.

For further details the student is referred to the *Glasgow University Calendar* for 1899-1800, published by James Maclehose and Sons, 61, St. Vincent Street, Glasgow, price 3s., post free 3s. 6d. (see also p. 541).

Queen Margaret College, which provides a course of instruction for women, is now an integral part of the University. For course of study, etc., see p. 541.

THE UNIVERSITY OF ABERDEEN.

The regulations are essentially the same as for Edinburgh.

PRELIMINARY EXAMINATION.

The next Preliminary Examinations will be held on precisely the same dates as are given under Edinburgh, and the subjects are the same. Names must be intimated, and the fee paid ten days previously, to the Secretary of the Medical Faculty, Marischal College.

PROFESSIONAL EDUCATION.

The University Court has ordained that the candidate before admission to his Final Examination must produce certificates to the effect that he has acted for a period equal to a winter session both as a Clinical Clerk and Surgical Dresser, that he has attended not fewer than twenty-five necropsies, and taken part in some; that he has attended for not less than three months a fever hospital of at least forty patients, and has had a three months' course on Disease in Children, and the same in Ophthalmology. The total minimum cost for M.B. and Ch.B. is about £115.

The fees for Professional Examinations are: Preliminary, 10s. 6d.; First, Second, and Third, £5 5s. each; Final, £7 7s. The fees for second and subsequent examination have apparently not yet been adjusted.

Further information will be given by the Secretary of the Medical Faculty, or will be got in the *University Calendar* for 1899-1900, published by A. King and Co., Aberdeen; price 2s. 6d., or post free 2s. 11d.

THE UNIVERSITY OF ST. ANDREWS.

United College, St. Andrews; University College, Dundee.

PRELIMINARY EXAMINATION.

The dates of the next two examinations are September 30th, 1899, and March 24th, 1900. Fees 10s. 6d. each time. Examination schedules to be returned, filled up, and fees paid by September 15th, 1899, and March 10th, 1900, to the Secretary of the University.

REGISTRATION.

Printed forms may be obtained from the Dean, and must be sent to the Scottish Branch Registrar.

PROFESSIONAL EDUCATION.

The United College, St. Andrews, offers classes in the subjects of the first two years of the medical curriculum; University College, Dundee, for the full period of five years.

BURSARIES AND SCHOLARSHIPS.

United College, St. Andrews.

The following Bursaries and Scholarships are open to competition during session 1899-1800:

I. Bursaries for men. Two Berry Bursaries of the annual value of £40 each, tenable for three years, open to men who intend to study Arts Science, or Medicine.

II. Twelve Berry Bursaries, of the annual value of £20 each, open to men only who are proceeding to graduation in Medicine. (Candidates must reach the standard necessary to entitle them to pass the Medical Preliminary Examination of the University.)

III. Bursaries for women. The Valentine Bursary of the annual value of about £25, tenable for three years, for students of Arts, Science, or Medicine, *but restricted to applicants from certain districts of Scotland.* Fourteen Taylour-Thomson Bursaries of the annual value of £20 to £30 each, tenable partly for one year, partly for two.

IV. Two Berry Scholarships in Science will be open to competition by students of either sex (who have attended all the necessary graduation courses at St. Andrews and passed all the examinations for the degree of B.Sc.) at the close of next winter session. They are of the value of £100 and are tenable for one year. See page 189 of the *University Calendar* for details.

The Bursaries are allocated in the order of merit, the most valuable ones being given to those students who obtain the highest marks in the Preliminary Medical Examination, and who are prepared to take two *annimedici* at the United College, St. Andrews.

University College, Dundee.

Entrance Bursaries, open to either sex, for students of Arts, Science, or Medicine. Eleven bursaries of £15, tenable for one year.

Second Year Bursaries (Arts, Science, or Medicine, either sex). Four bursaries of £20 and three of £15, tenable for one year.

Third Year Bursaries (Arts, Science, or Medicine, either sex). Four bursaries of £20 and two of £15, tenable for one year.

Patrick Lowson Scholarship, £60 for two years, *restricted to candidates from schools in Dundee or Broughty Ferry.*

Educational Endowment Trust Bursaries. Two bursaries of £25, tenable for three years.

Bute Bursary. Annual income from £1,000 (men only). Applicants must have attended a public or State-aided school in Dundee for at least one year before examination.

Fees, etc.

The total fees for M.B. & Ch.B. are the same as for Edinburgh (21 guineas.) The fee for the First Division is £6 6s., and is payable in two instalments of £3 3s. Each payment of £3 3s. admits the candidate to two periods of examination in the same subject, but for every subsequent appearance in any subject a further payment of £1 11s. 6d. is necessary. The fee for the Second Division of the Professional Examination is also £6 6s., and is payable in instalment at the rate of £2 2s. for each of the three subjects. Each payment of £4 4s. or £6 6s. admits the candidate to two periods of examination in the same subject, but for every subsequent appearance in any subject a further payment of £2 2s. is necessary.

Degrees of M.D. and Ch.M.

The regulations and fees for these will be found under Edinburgh.

Diploma in Public Health.

The University also grants a Diploma in Public Health. Candidates must have been in possession of a Medical Degree of this University or of a University of the United Kingdom for at least twelve months previous to admittance to examination. There are two examinations: first, in Chemistry, Physics, Bacteriology, and Meterology; secondly, in Sanitation, Sanitary Law, Vital Statistics, Epidemiology and Endemiology and Pathology of Infectious Diseases. Fee for each examination, £5 5s.

Further information will be given by the Dean of the Faculty of Medicine, University College, Dundee, or will be found in the *University Calendar* for 1899-1900, published by William Blackwood and Sons, 45, George Street, Edinburgh, price 2s. 6d., or post free 2s. 11d.

THE SCOTTISH COLLEGES.

The three medical corporate Colleges in Scotland—the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow—now co operate to hold a series of examinations, after passing which the student is presented with the diplomas of all three Colleges. Each College grants its single qualification only to persons who already possess another and opposite qualification (see below).

CONJOINT EXAMINATION.

A candidate who passes this series of examinations is granted the diploma of each of the co-operating bodies, and is entitled to register the three diplomas under the Medical Acts, and to write after his name—L.R.C.P.Edin., L.R.C.S.Edin., and L.F.P.S.Glasg.—qualifications which are recognised by the army, navy, and other public services.

Preliminary Examination.

The Educational Institute of Scotland conducts special preliminary examinations in Edinburgh and Glasgow for the Colleges. The next examination will be held on September 28th, 29th, and 30th, 1899, and names must be in and fees paid by September 23rd. Full particulars may be obtained from Mr. David Ross, LL.D., Secretary to the Examining Board of the Institute, Established Church Training College, Glasgow; or to Alex Mackay, LL.D., 40, Princes Street, Edinburgh, Treasurer of the Institute. Certain other preliminary examinations, of which a list may be obtained on application, are also accepted. The entire examination must be passed at one period.

Professional Curriculum.

The course of study after registration as a medical student must occupy not less than forty-five months, which period shall include not less than four winter sessions' attendance.[1] Professional studies commenced before registration will not be recognised, except in the case of Physics, Elementary Biology, Chemistry, Practical Chemistry, and Practical Pharmacy; but graduates in arts or science of any recognised University, who have spent a year in the study of Physics, Elementary Biology, and Chemistry, and have passed examinations in these subjects for their degrees, are held to have completed the first year of medical study. The fifth year must be devoted to practical clinical work, and six months of this year may be spent as a pupil of a registered practitioner.

The following order of study is recommended as conforming generally to the sequence of examinations, but is not imperative.

First Summer: Physics, Elementary Biology. First Winter: Chemistry, Practical Chemistry, Junior Anatomy, Dissections. Second Summer: Histology, Dissections. Second Winter: Anatomy, Dissections, Physiology. Third Summer; Pathology, Materia Medica, and Hospital Practice. Third Winter: Surgery, Hospital Practice, with Clinical Surgery. Fourth Summer: Midwifery and Gynæcology, Hospital Practice, with Clinical Surgery. Fourth Winter: Medicine, Hospital Practice, with Clinical Medicine. Fifth Summer: Clinical Medicine, Medical Jurisprudence and Hygiene, Insanity, Practical Midwifery, Eye Diseases. Fifth Winter: Hospital Practice, Dispensary, Fevers, Vaccination.

Students are also recommended to study in the fifth year the following subjects: Operative Surgery, Diseases of Children, Ear and Throat, Skin.

Professional Examination.

During the five years of the professional curriculum the student has to pass four examinations. Each examination is held six times in each year, four times in Edinburgh, and twice at Glasgow, and a candidate may present himself at either place. An interval of not less than three months must elapse between the passing of any two successive examinations, and an interval of two academic years must intervene between the passing of the Second and of the Final Examination. Candidates may enter for all the subjects of an examination at one period, or may enter for any division of subjects. If the latter a higher percentage is exacted. Schedules showing the course of study followed must be submitted before the examinations to one or other of the Inspectors of Certificates: in Edinburgh, Mr. James Robertson, Solicitor, 48, George Square; in Glasgow, Mr. Alexander Duncan, B.A., Faculty Hall, 242, St. Vincent Street, to whom all inquiries as to professional examinations should be addressed.

Table showing the Fees for the Conjoint Examinations in Scotland.

The Figures signify Pounds Sterling.

	Whole Examination.	Re-entry for all Divisions.	Re-entry in one or two Divisions.	Entry for one Division.	Re-entry for one Division.
Preliminary	1	½	—	—	—
Professional First ...	5	3	2⅔	2⅔	2
,, Second ...	5	3	2	—	—
,, Third ...	5	3	2	—	—
,, Final ...	15	5	—	6	2

The total minimum cost for Lectures and Examination Fees for the Conjoint Examinations is about £102.

First Examination.—This examination may be passed at any time after registration as a medical student by any candidate who has attended the obligatory courses. The examination consists of three parts: (1) Physics, (2) Chemistry, (3) Elementary Biology, and each division may be taken separately.

Second Examination.—This examination may be passed at any time after the end of the second year by a student who has attended courses of Anatomy, Physiology, and Dissection for six months each. The subjects of the examination are: (1) Anatomy and (2) Physiology, including Histology. A candidate may pass in one subject while failing in the other.

Third Examination.—The student must have attended a

[1] This regulation does not apply to students who commenced medica study before January 1st, 1892.

course of Pathology and of Materia Medica before presenting himself for this examination, the subjects of which are: (1) Pathology, (2) Materia Medica and Pharmacy. It may be taken in three divisions, or at one time, or at any time after the end of the third year; but the subjects must be entered for together.

Final Examination.—The student must be 21, and may not pass this examination till the end of the fifth year. The subjects are: (1) Medicine, including Therapeutics, Medical Anatomy, and Clinical Medicine; (2) Surgery, including Surgical Anatomy, Clinical Surgery, and Diseases and Injuries of the Eye; (3) Midwifery and Diseases of Women and of Newborn Children; (4) Medical Jurisprudence and Hygiene. Candidates may also be examined on Diseases of Children, Diseases of the Ear and Throat, Insanity, Vaccination, etc. The examination may be taken in divisions at different times or all at once.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

Licence.—The Licence is only granted as a separate qualification (in Medicine) to persons (of either sex) who already possess a recognised British, Irish, Colonial, or Indian qualification in Surgery. A candidate, who must not have been rejected within three months by any Licensing Board, is subjected to written and oral examination in Medicine, Clinical Medicine, Materia Medica, Midwifery, and Medical Jurisprudence. The fee for the examination is £15 15s.; it is held on the first Wednesday and succeeding days of each month except September and October. A special examination can be obtained on showing cause, and paying £5 5s. extra. Eight days' notice must be given by all candidates to the Secretary of the College, from whom further particulars can be obtained.

Membership.—The candidate, who must be a Licentiate of a College of Physicians, or graduate of a British or Irish University, and 24 years of age, is examined in (1) Medicine and Therapeutics, and in (2) one of the following subjects chosen by him: (*a*) One or more departments of Medicine specially professed; (*b*) Psychological Medicine; (*c*) General Pathology and Morbid Anatomy; (*d*) Medical Jurisprudence; (*e*) Public Health; (*f*) Midwifery; (*g*) Diseases of Women. Further particulars as to other formalities can be obtained from the Secretary. A candidate 40 years of age and ten years in practice *may be excused* any part of or all the examination by the Council. The fee paid by a Licentiate of the College is £21 if licensed prior to August 1st, 1876; if subsequently, £15 15s. Fee for others, £31 10s. The examination is held quarterly (October, January, April, and July), and application must be made a month previous to the date of examination.

Fellow.—A Member, aged 25, and of at least two years' standing, may be elected a Fellow; he pays £56 10s. (including stamp duty). Women are not yet admitted to the Membership or Fellowship.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

Licence.—The Licence is only granted as a separate qualification (in Surgery) to persons (of either sex) who already possess a recognised British, Irish, Colonial, or Indian qualification in Medicine. A candidate, who must not have been rejected by any other Licensing Board in Surgery within three months, is examined on one day by written papers, and on a subsequent day orally, on specimens in the wards of a surgical hospital, and may be required to operate on the dead body. The fee is £15 15s., of which £10 10s. will be returned to unsuccessful candidates, and is payable to Mr. James Robertson, Clerk to the College, 48, George Square, Edinburgh, from whom further particulars may be obtained, nd to whom eight days' notice must be given. A special xamination can be obtained on showing cause. The fee is 20, of which £10 will be returned to candidates remitted on xamination.

Fellowship.—A candidate must have the diploma of the Royal College of Surgeons of Edinburgh, England, or Ireland, or of the Faculty of Physicians and Surgeons in Glasgow, or the surgical degrees of the Universities of Great Britain and Ireland, must be 25 years of age, and must have been engaged in practice for two subsequent years at least. Candidates who are Licentiates of the Edinburgh Colleges are examined in Surgery, Surgical Anatomy, including Clinical and Operative Surgery, and one optional subject, and in other subjects not adequately included in the examination passed elsewhere. The optional subjects embrace: (*a*) Surgery in any of its Ophthalmic, Aural, Laryngeal, Cerebro-spinal, Dental, Abdominal, Gynæcological, Orthopædic, Venereal, or Genito-Urinary branches; (*b*) Advanced Anatomy; (*c*) Advanced Physiology; (*d*) Surgical Pathology and Morbid Anatomy; (*e*) Midwifery; (*f*) Medical Jurisprudence. The examinations are written, oral, and practical. Three weeks' notice must be given to Mr. James Robertson as above, from whom full particulars as to certificates required (among others two from Fellows of the College, of whom one must reside in Edinburgh) may be obtained. The fee is £30 to those who hold the diploma of Licentiate of the College, and £45 to others (no stamp duty is payable on the diploma). Registered practitioners, aged not less than 40, and who have been in practice for not less than twenty years, and who have distinguished themselves in their profession, may under special circumstances be elected without examination. Women are not admitted to the Fellowship.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

Licence.—The licence is only granted as a separate qualification to candidates who already possess a recognised British, Irish, Colonial, or Indian qualification in Medicine. Candidates are examined in Surgery (including Clinical Surgery) and Surgical Anatomy. The fee is £15 15s. The examination is held quarterly. Further particulars can be obtained on application to Mr. Alexander Duncan, B.A., 242, St. Vincent Street, Glasgow.

Fellowship.—Every candidate must be qualified for two years, and aged 24. The ordinary mode of admission to the Fellowship shall be by examination and subsequent election. The subjects of examination shall be either (*a*) Medicine (including Clinical Medicine, Medical Pathology, and Therapeutics); or (*b*) Surgery (including Clinical Surgery, Operative Surgery, Surgical Anatomy, and Surgical Pathology); and one of the following at the option of the candidate: (1) Anatomy, (2) Physiology, (3) Pathology, (4) Midwifery, (5) Diseases of Women, (6) Medical Jurisprudence, Surgery, in one of its following branches, (7) Ophthalmic Surgery, (8) Aural, Laryngeal, and Nasal Surgery, (9) Dental Surgery, Medicine in one of its following branches, (10) State Medicine, (11) Psychological Medicine, (12) Dermatology. Four examinations are held annually (January, April, July, October). Fourteen days' notice must be given. The fee is £30, unless he desires to qualify to hold office, when it is £50. In the case of a Licentiate of the Faculty, £25 and £15 respectively.

Four Fellows may be elected in each year "in virtue of distinction," and without examination. They must be not less than 40 years of age, and ten years qualified.

THE IRISH UNIVERSITIES.

THE UNIVERSITY OF DUBLIN.

The University of Dublin grants two degrees in Medicine (M.B. and M.D.), two in Surgery (B.Ch. and M.Ch.), and two in Midwifery (B.A.O. and M.A O.). A candidate for any one of these degrees must be a graduate in Arts, and have passed the Previous Medical Examination.

The following schools, in addition to the School of Physic, are recognised by the Board of Trinity College—the Schools of the Royal College of Surgeons in Ireland, the Schools of the Catholic University.

Previous Medical Examination.

This examination is divided into three parts: (1) Physics and Chemistry, (2) Botany and Zoology, (3) Anatomy, Practical Histology, and Physiology. The three parts may be taken together or passed at separate examinations. The examinations are held in November, January, May, and June.

Degrees in Medicine.

Regulations for Students who Matriculated since 1891.—The

following conditions must be fulfilled in order to qualify for the degrees in Midwifery (B.A.O.), Surgery (B.Ch.), and Medicine (M.B.): The student must be of B.A. standing, and his name must be for at least five (academic) years on the books of the Medical School, reckoned from the date of his matriculation. He may carry on his Arts course concurrently with his medical course, and he need not have taken his B.A. before presenting himself for his Final Medical Examination, but he cannot have the Medical degrees conferred without the Arts degree. The following courses must be attended:—Lectures: Winter Courses: Systematic Anatomy; Practical Anatomy (with Dissections), first year; Practical Anatomy (with Dissections), second year; Applied Anatomy (with Dissections), Chemistry, Surgery, Physiology (two courses). Practice of Medicine, Midwifery, Pathology. Summer Courses: Practical Chemistry, Practical Histology, Botany, Zoology, Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene, Operative Surgery, Practical Pathology. Term Courses: Physics (Michaelmas, Hilary, and Trinity Terms). The student must attend 3 courses of nine months' attendance each on the Clinical Lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board of Trinity College. One year at a recognised London or Edinburgh hospital or two years at a recognised county infirmary or recognised Colonial hospital previous to the commencement of their metropolitan medical studies may be allowed, on special application to the Board of Trinity College, to count as equivalent to one year spent in a recognised metropolitan hospital. The following examinations must be passed: The Previous Medical or Half M.B. Examination and the Final Examination. The Final Examination is arranged as follows:—First Part:—Section A: Applied Anatomy (Medical and Surgical), paper: Applied Physiology, *viva voce*: Materia Medica and Therapeutics, paper and *viva voce*. Section B: Medical Jurisprudence and Hygiene, paper and *viva voce*; Medicine, paper and *viva voce*; Surgery, paper and *viva voce*; Pathology, paper and *viva voce*. Section A may be passed in any part of the fourth year, provided the corresponding curriculum shall have been completed, and must be passed before B can be entered for; Section B not before Trinity Term of the fourth year. Examinations for both Sections are held in November, January, or February, and May or June. Liceat fee £5 to be paid on entering for A. Second Part—Section C: Midwifery, paper and *viva voce*; Gynæcology, paper and *viva voce*; Obstetrical Anatomy, paper. Section D: Clinical Medicine; Mental Disease, paper. Section E: Clinical Surgery, Operations, Clinical Ophthalmology. Both Sections of the First Part must be passed at least one term before any section of the Second Part can be entered for. One section of the Second Part must be passed in Trinity Term of the fifth year or subsequently; the other two in any part of the fifth year if the corresponding curriculum be completed. Subject to this provision the sections of the Second Part may be taken in any order. Liceat fee £5 to be paid when entering for whichever section the candidate takes first.

Degree of M.D.—The candidate must have taken, or have been qualified to take, the degree of M.B. three years previously, and must read a thesis before the Regius Professor of Physic.

Degree of M.Ch.—The candidate must be a B.Ch. of not less than three years' standing, and have been engaged in practice for two years. Graduates of ten years' standing may be given a special examination.

Degree of M.A.O.—The candidate must have passed the M.B. and B.Ch. examinations. The examination is specially directed to Obstetrics and Practical Gynæcology.

University Diplomas.

The University grants diplomas in Medicine, in Surgery, and in Obstetric Medicine. A candidate must have completed two years in Arts and five years in medical studies.

Diploma in Medicine.—The medical course and examination are the same as for the degree of M.B., excepting that attendance is not required on lectures on Botany and Zoology, and that the candidate is not examined in these subjects.[1]

[1] A Diplomate in Medicine, on completing his course in Arts and proceeding to the degree of B.A., may become a Bachelor of Medicine by attending the lectures on Botany and Zoology, passing the Previous Medical Examination in those subjects, and paying the degree fees.

Diplomas in Surgery and in Obstetric Science.—The examination and courses necessary for those diplomas are the same as for the degrees of B.Ch. and B.A.O. respectively.

Fees.

Matriculation, 5s.; M.B., B.Ch., B.A.O., £17; M.D., £13; M.Ch., £11; M.A.O., £5; L.M., L.Ch., L.A.O., £11.

A schedule containing recommendations respecting the five years' medical curriculum can be obtained on application to the Registrar of the School of Physic in the University of Dublin.

THE ROYAL UNIVERSITY OF IRELAND.

The University grants two Degrees in Medicine, M.B. and M.D.; two in Surgery, B.Ch. and M.Ch.; and two in Obstetrics, B.A.O. and M.A.O. The course for the lesser of these degrees is five years. Graduates in Arts or Science who have spent a year in the study of Physics, Chemistry, and Biology, and passed an examination in those subjects, are held to have completed the first of the five years.

Medical Curriculum.

The order in which the subjects of the medical curriculum are required to be studied is minutely stated in the *Calendar*; the general character of the curriculum is sufficiently indicated by the examination held at the termination of each year.

Matriculation and First University Examination.

Candidates for any degree must pass the Matriculation Examination and First University Examination.

Matriculation.—This examination is held for pass and honours in June, and for pass only in September. Notice of intention to compete must be sent with the fee to the Secretaries, Royal University of Ireland, Dublin, on a printed form, at least one month before each Examination. The examination consists of the following parts:—I, Latin; II, any one of the following languages: Greek, French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; III, English Language; IV, Elementary Mathematics; V, Natural Philosophy. A schedule of the subjects is contained in the *University Calendar*.[1]

First University Examination.—A candidate who has passed the Matriculation Examination in the autumn of one year may be admitted to the First University Examination in the summer of the next year, otherwise an academical year must elapse. The subjects are: I, Latin; II, any one of the following languages: Greek, French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; III, English Language and Literature; IV, Mathematics; V, Natural Philosophy. Schedules are published in the *Calendar*.

Degrees in Medicine, Surgery, and Obstetrics.

A candidate must pass four examinations subsequently to the First University Examination.

First Examination in Medicine.—Candidates must have matriculated at least one year previously, and must have passed the First University Examination, and completed the first year of the medical curriculum. The subjects are Natural Philosophy, Systematic Chemistry, Botany, and Zoology. Schedules are contained in the *Calendar*. The examination is written, oral, and practical.

Second Examination in Medicine.—Candidates must have passed the First Examination one year previously, and are examined in Anatomy, Physiology, and Practical Chemistry. Schedules will be found in the *Calendar*.

Third Examination in Medicine.—Candidates must have passed the Second Examination one year previously. They are examined in Anatomy, Physiology, Materia Medica, Pharmacology, and Therapeutics.

Examination for the Degrees of M.B., B.Ch., B.A.O.—Candidates must have passed the Third Examination. The examination consists of three parts—(*a*) Medicine, theoretical and clinical, including Therapeutics, Mental Diseases, Medical Jurisprudence, Sanitary Science, and Medical Pathology, (*b*) Surgery, theoretical, clinical, and operative, including the use

[1] Dublin: Alex. Thom. and Co.: London: Longmans, Green and Co. Price, 2s. 6d.: by post, 3s. Extracts can also be obtained, price, 4d.

of instruments and appliances: Surgical Anatomy, Ophthalmology and Otology, Surgical Pathology, (c) Midwifery and Diseases of Women and Children. All candidates must enter for and go through the entire examination, but a candidate may be adjudged to have passed in any of the foregoing parts in which he satisfies the examiners. Successful candidates receive the triple degree.

Honours.—There are special examinations for honours held in connection with each of the last four examinations.

M.D. Degree.

A candidate must have obtained the degrees of M.B., B.Ch., B.A.O. at least three years previously, and must have spent at least two of these in practice. The candidate is examined in writing and orally in Medicine and Pathology and at the bedside.

M.Ch. Degree.

The candidate must have obtained the degrees of M.B., B.Ch., B.A.O. at least three years previously, two of which must have been spent in practice. The candidate is examined in Surgery, including Ophthalmology and Otology, and in Pathology at the bedside, and is required to write detailed reports on cases.

M.A.O. Degree.

The candidate must have obtained the degrees of M.B., B.Ch., B.A.O., at least three years previously, have been engaged in practice for two years, have had personal charge of at least 20 cases of labour, and have attended clinical Gynæcology for three months. The candidate is examined in writing, orally, and clinically, in Midwifery, Diseases of Women and Children, and Pathology.

Exhibitions and Scholarships.

Two first class and two second class exhibitions are given after each of the four examinations in Medicine. They are of the value at the first of £20 and £10: at the second of £25 and £15; at the third of £30 and £20; and at the degree examination of £40 and £25 respectively. A travelling medical scholarship, value £100, is awarded in October, after a special examination, to a candidate who has passed the Medical Degrees Examination in that year or the preceding one. Two Dr. Henry Hutchinson Stewart Medical Scholarships are awarded annually, the one of the value of £10, tenable for three years, in the subjects of the Second Examination in Medicine; the other of the annual value of £50, tenable for three years, for Proficiency in the Knowledge of Mental Diseases. One Medical Studentship, tenable for two consecutive years, of the annual value of £200, is offered for competition in October.

Fees.

Matriculation, £1; First University Examination, £1; First, Second, and Third Examinations in Medicine, for each £1. The Examination for Degrees, £2; for admission to the Degrees, £10; for the Degrees of M.D., M.Ch., M.A.O., each, £5.

THE IRISH COLLEGES.

CONJOINT EXAMINING BOARD OF THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

The diplomas of these two bodies are now granted upon conditions and after examinations settled between the Colleges.

Preliminary Examination.—Examinations in general education, which fulfil the requirements of the General Medical Council, are accepted by the Colleges (see pages 518-19). The Preliminary Examination of the College is held twice a year, in spring and autumn, and seven clear days' notice must be given to Mr. Greenwood Pim, Secretary of the Committee of Management, Royal College of Physicians, 6, Kildare Street, Dublin. The Preliminary Examination for the commencement of medical study of the Royal Colleges of Physicians and Surgeons for Sessions 1899-1900 will be held on Wednesday and Thursday, September 27th and 28th, 1899. Prospectus can be had on application.

Professional Examinations.

There are four Professional Examinations:

The *First Professional Examination* may be passed not earlier than the end of the first winter session. It consists of four Parts: I, Chemistry and Physics; II, Practical Pharmacy; III, Biology; IV, Anatomy (Bones and Joints). The four Parts may be taken together or separately.

The *Second Professional Examination* consists of two Parts:

Part I.—A. Anatomy; B. Histology; C. Physiology, as found in Foster and Shore's *Physiology for Beginners*, omitting Chapters 5, 6, 7, and 8, and 18, 19, 20, and 21. Candidates are not admissible to this portion of the examination sooner than the end of their second winter session. No subject can be deferred, but candidates who obtain passing marks in any subject may, at the discretion of the examiners, obtain credit therefor.

Part II.—A. Advanced Physiology (textbook Starling's *Elements of Human Physiology*); B. Materia Medica. Candidates are not admissible to this portion of the examination sooner than the end of their third winter session and they must have completed Part I before presenting themselves for Part II. Neither subject can be deferred, but candidates who pass in one and fail in the other may, at the discretion of the examiners, obtain credit for the subject passed.

The *Third Professional Examination* may be passed not sooner than the end of the fourth winter session. It consists of five parts: I, Medicine; II, Surgery; III, Pathology; IV, Therapeutics; V, Public Health and Forensic Medicine. A candidate must present himself in the first instance in I, II, III, and IV at least, but if he pass any of them he may, at the discretion of the Examiners, obtain credit therefor.

The *Final Professional Examination* may be passed not sooner than the end of the fifth year of medical study. A candidate may present himself in all the subjects at one time, or in one or more in the following groups: (*a*) Medicine, including Mental Diseases, Medical Anatomy, and Clinical Medicine; (*b*) Surgery, including Ophthalmic and Aural Surgery, Clinical Surgery, Operations, and Surgical Anatomy; (*c*) Midwifery, including Diseases of Women and Newborn Children, and the Theory and Practice of Vaccination.

Curriculum.

The curriculum, as above stated, extends over five years, and its general arrangements can be gathered from the subjects of the examination which are arranged to test the student's progress. Full details may be obtained on application to the Secretary as above.

Fees.

Preliminary Examination, £2 2s., except in the case of matriculated pupils of the Royal College of Surgeons, who pay £1 1s.; re-examination, £1 1s. First Professional Examination, £15 15s.; Second, £10 10s.; Third, £9 9s.; Final, £6 6s.; Re-examination fee, £1 1s. for each subject, with a maximum fee of £3 3s., except in Medicine and Surgery at the Final Examination, for each of which the re-examination fee is £2 2s.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

This College continues to issue its Licence in Medicine and the Licence in Midwifery to registered medical practitioners whose names appear on the *Medical Register* of the United Kingdom.

Licence in Medicine.—The subjects of examination are: Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics.

Licence in Midwifery.—The candidate must produce certificates of having attended a course of lectures on Midwifery, and of having attended Practical Midwifery and Diseases of Women, for six months, at a lying-in hospital or maternity recognised by the College; or, where such hospital attendance cannot have been obtained during any period of the candidate's course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding a public medical appointment, the certificate in either case to state that no fewer than twenty labour cases have been actually attended. A registered medical practitioner of five years' standing is exempted from the examination by printed questions.

Fees.—Fee for the Licence to practise Medicine, £15 15s. Fee for examination for the Licences in Medicine and Midwifery, if obtained within the interval of a month, £16 16s.—to be lodged in one sum.[1] Fee for special examination for the Licence to practise Medicine, £21. Fee for examination for the Licence to practise Midwifery, £3 3s. Fee for special examination for the Licence to practise Mid-

[1] Any candidate who has been rejected at the examination for the Licence in Medicine loses this privilege, and shall be required to pay the full fee of £3 3s. for the Licence in Midwifery.

wifery, £5 5s. The admission fee, less the sum paid to the examiners, will be returned to rejected candidates. The examinations for these licences are held in the week following the first Friday in February, May, and November. Notice must be given, and the schedule transmitted at least four days before the first Friday in each of the above months to the Registrar of the Royal College of Physicians of Ireland, Kildare Street, Dublin, from whom further information can be obtained. A special examination can be obtained under certain conditions which can be ascertained on application to the Registrar.

Membership.—A candidate for the Membership of the College must be 25 years of age and a Licentiate of the College of three years' standing, or if a graduate of Arts of a university in the United Kingdom, a Licentiate of one year's standing, or if a practitioner of seven years' standing, then he is admitted to the Membership after one year. He must not be engaged in trade, dispense medicine, or practise in partnership. He must also have held during at least six months the office of resident physician or resident medical pupil, or have acted during the same period as medical clinical clerk in a recognised hospital, or have been in medical charge for at least twelve months of a public institution for the treatment of the sick. Every candidate must pass an examination in: (1) Principles of Medicine, including Pathology, Morbid Anatomy, and Medical Chemistry; (2) Practice of Medicine, including Principles of Public Health; (3) Clinical Medicine. The fee for the examination is £21, which must be lodged in the Royal Bank, Dublin, before the applications and certificates are sent in. The admission fee, less the sum paid to the examiners, will be returned to the rejected candidates. The examinations are held in January, April, July, and October.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The Licence.—Candidates who hold registrable surgical diplomas including the licence of the Apothecaries' Company, London, granted since October, 1886, are admitted to examination without further evidence of study, but candidates who hold medical qualifications only, including the L.S.A. granted before October, 1886, will be required to produce certificates of two courses of lectures in Anatomy and Dissections, one course of Practical Histology, one course of lectures in Surgery, and one course of Operative Surgery.

Subjects.—Candidates are examined in Surgery, Clinical Surgery, Operative Surgery, Surgical Appliances, and Ophthalmic Surgery. The examination is partly written, partly *viva voce*, and partly practical. The fee is £26 5s., of which £5 5s. is retained by the College in case the candidate be unsuccessful. The fee for a special examination is £31 10s.

Diploma in Midwifery.—A diploma in Midwifery is granted after examination to persons possessing a registrable qualification. Candidates must produce evidence of (*a*) attendance on a course of lectures on Midwifery and Diseases of Women and Children in a recognised school; (*b*) attendance on six months' practice of a recognised lying-in hospital or recognised dispensary for lying-in women and children; and (*c*) of having conducted at least thirty labour cases. The fee for the examination is £15 15s., of which £5 5s. is retained by the College in case the candidate is unsuccessful.

Fellowship.

A candidate for the Fellowship shall make application to the President and Council to be admitted to examination, and, if the Council decide to entertain the application, it shall lie on the table for at least a fortnight for consideration before it is put to the Council for approval. All the required evidences of study or qualification, fees, and testimonals as to character must be submitted previously to its being so considered, and the candidate shall then, if approved by the Council, be admitted to the next Sessional Examination or to a Special Examination if granted by Council, at such date as the President may fix. In order that these regulations may be carried out, candidates are required to enter their names with the Registrar at least one month before the date of examination.

Periods of Examination.—Sessional Fellowship Examinations commence, as far as arrangements permit, on the third Mondays in February, May, and November. Special Examinations may be granted at other times by the Council if they see fit, on sufficient cause being shown.

Grades of Examination.—Candidates for the Final Fellowship Examination are divided into two grades: (1) Licentiates or graduates in surgery of less than ten years' standing. (2) Licentiates or graduates in Surgery of more than ten years' standing. Students not either Licentiates or Graduates in Surgery, are permitted to present themselves for the Primary Examination under Grade 1 at the end of their third winter course of dissections.

Grade 1.—Candidates are required to pass two Examinations—Primary and Final. But candidates may present themselves for the Final Examination immediately after passing the Primary part, provided they have complied with the necessary regulations. The subjects for the Primary Examination are: (*a*) Anatomy, including Dissections, (*b*) Physiology and Histology; those for the Final are: (*a*) Surgery, including Clinical and Operative Surgery, (*b*) Surgical Pathology.

Grade 2.—The subjects of examination are: (*a*) Surgical Anatomy, (*b*) Surgery, including Clinical and Operative Surgery, (*c*) Surgical Pathology.

Fees—Grade 1: For Licentiates of the College—for Primary Examination, 15 guineas; for Final Examination, 10 guineas. For Licentiates in Surgery of other licensing bodies—for Primary Examination, 25 guineas; for Final Examination, 15 guineas; for Students of the College, Primary Examination, 5 guineas; Final Examination, 20 guineas; for Students of other licensing bodies, Primary Examination, 10 guineas; Final Examination, 30 guineas. *Grade 2:* Licentiates of the College, 25 guineas; Licentiates in Surgery of other licensing bodies, 40 guineas. Extra fee for Special Examination, 10 guineas. In case of rejection, £10 10s. in addition to the Special Fee, if such has been paid, is retained by the College, and is not allowed in the fees of re-examination. In the case of Fellowship candidates who fail to present themselves for the examination at the time fixed, without having previously given at least a week's notice of their withdrawal, £5 5s. of the fees is retained by the College.

Regulations and entrance forms can be obtained from the Registrar at the College.

APOTHECARIES' HALL OF IRELAND.

The Apothecaries' Hall of Ireland is now entitled to grant a full registrable diploma entitling the holder to practise Medicine, Surgery, and Midwifery. For this qualification there are four examinations, the fees for which are £5 5s. each, except for the Fourth or Final, £6 6s. Also it grants the power to practise as an Apothecary through Ireland along with above, but it is not granted separately except to persons holding other qualifications registered. The Hall grants its licence to qualified practitioners, whose names appear on the *Medical Register*, who wish to add this to other qualifications. The fee is £10 10s. on examination.

The Hall has ceased to be conjoined with the Royal College of Surgeons of Ireland, but candidates who entered their names previous to the cessation of that examination are allowed to enter for examination under that system on applying to the Secretary, Dr. Woods, Merrion Square, Dublin.

Further information can be obtained from R. Montgomery, M.R.C.S., Secretary of the Apothecaries' Hall, Dublin.

NOTES ON MEDICAL SCHOOLS AND COLLEGES.

LONDON.

At the present time the Statutory Commission is still engaged in settling the regulations under which the University of London will in future grant its degrees. We have been asked by the deans of many medical schools in London to call attention to the fact that those who desire to obtain the degree of M.D. should make themselves acquainted with the existing regulations of the London University, and take care to pass at least the matriculation examination before seeking to

enter a medical school in London. Most of the medical schools have special regulations to meet the case of those who commence their studies at the Universities of Cambridge or of Oxford. This involves a residence of three years in one or other university, during which the earlier subjects of the medical curriculum—including anatomy and physiology—can be taken. It should be clearly understood that the Conjoint Board in England, consisting of the Royal Colleges of Physicians and Surgeons, does not grant a degree but the diplomas of L.R.C.P. and M.R.C.S. The Society of Apothecaries grants a licence to practise, which is a registrable qualification. Those intending students who desire to obtain a university degree should from the first regulate their course of preliminary study in accordance with the requirements of the university which they may select to enter.

The following particulars as to the twelve medical schools in London which provide for the full curriculum will be useful to students who purpose to prosecute their studies in the metropolis. The arrangements at the various medical schools are everywhere the same in principle, and are in conformity with the requirements of the General Medical Council and the qualifying bodies. The laboratories for chemistry, physiology and histology, and pathology have at most of the schools been greatly improved during recent years, and the facilities for instruction at the smaller as well as at the larger schools are now in most respects very complete, and are yearly extended and improved.

St. Bartholomew's Hospital Medical School.

The Hospital contains 750 beds.

Appointments.—Clinical Clerks to the Physicians and to the Physician-Accoucheur, and Dressers to the Surgeons and in the Casualty Department are chosen from the students. Clerks and Dressers are also selected from the students to attend in the out-patient rooms, in the special departments (Ophthalmic, Orthopædic, Gynæcological, Laryngological, Aural, Dermatological, Electrical, and Dental), and in the *post-mortem* room. Ten House-Physicians and ten House-Surgeons are appointed annually. During their first six months of office they act as "Junior" House-Physicians and House-Surgeons, and receive a salary of £25 a year. During their second six months they become "Senior" House-Physicians and House-Surgeons, and are provided with rooms by the hospital authorities, and receive a salary of £80 a year. A resident Midwifery Assistant and an Ophthalmic House-Surgeon are appointed every six months, and are provided with rooms and receive a salary of £80 a year. Two Assistant Anæsthetists are appointed annually, and receive salaries of £120 and £100 a year respectively. An Extern Midwifery Assistant is appointed every three months, and receives a salary of £80 a year. Two Assistant Electricians are elected every six months.

There is a residential college within the precincts of the Hospital.

This year a new Physical Laboratory has been added to the school, and it has been furnished in such a manner as to satisfy all modern requirements.

The Physiological Laboratory was—in 1898—rearranged and equipped with all the most modern appliances, including electric motor for experimental work, etc.

The ground—10 acres in area—provided for the use of the members of the Students' Amalgamated Clubs is at Winchmore Hill, within easy reach of the Hospital.

Special classes for students preparing for the Preliminary Scientific Examination will commence October 2nd. Special laboratory instruction for the D.P.H. of Cambridge, Oxford, Durham, and London, is also given. Tutorial Classes in all subjects are held in preparation for all University and other examinations without further fee.

Entrance Scholarships.—Four Scholarships and one exhibition of the value of £150, £75, £75, £50, and £20 respectively, tenable for one year, will be competed or at the end of September; candidates must be under 5 years of age. The subjects are Physics and Chemistry for one, Physiology and Biology for the other. Two Junior open Scholarships, value £150 and £50, will be competed for at the same time in the subjects of the London University Preliminary Scientific Examination. Candidates must be under 20 years of age. The successful candidates must enter at St. Bartholomew's Hospital in the October succeeding the examination. Jeaffreson Exhibition: £20; examination at the end of September; subjects: Latin, Mathematics, and any one of the following languages—Greek, French, German. Candidates for the open Scholarships and the Jeaffreson Exhibition must not have entered to the hospital practice of any metropolitan medical school. The Treasurer's Research Studentship in Pathology, of the value of £100 a year, is given by election to the most promising of the recently qualified men. The Research Student must engage in original work in the Hospital laboratories. The total value of the Scholarships and Prizes is nearly £900 per annum.

Fees.—The composition fee is 150 guineas.

Communications regarding the Hospital and Medical College must be addressed to Dr. James Calvert, Warden of the College, St. Bartholomew's Hospital.

Charing Cross Hospital Medical School.

The Hospital contains 180 beds, and is now being enlarged. Students are also admitted to the practice of the Royal Westminster Ophthalmic Hospital, which contains 30 beds.

Appointments.—In the Medical School Demonstratorships and Assistant Demonstratorships, when they fall vacant, are open to students of the school, and carry honoraria. The Curator and Pathologist is appointed annually, and receives £100 a year. Medical and Surgical Registrars to the Hospital are appointed annually, and receive £40 a year each, with luncheon in the Hospital. Six House-Physicians, six House-Surgeons, and two Resident Obstetrical Officers are appointed each year on the recommendation of the Medical Committee, after Competitive Examination. They are provided with board and residence in the hospital. An assistant to the Roentgen and Electrical Departments is appointed every six months. He receives an honorarium of 12 guineas, with luncheon at the Hospital. Clinical Clerks, Dressers, and Surgical Ward Clerks are appointed in all the general and special departments of the Hospital. Arrangements can be made for students who have not entered for the entire medical curriculum to hold the posts of Clerk and Dresser. Every student holds in turn the appointment of Pathological Assistant, and assists at the *Post-mortem* Examinations. The above appointments are open without any additional fee.

Entrance Scholarships.—Five Entrance Scholarships, of the respective value of 100 guineas (Livingstone Scholarship, founded in memory of the late Dr. Livingstone, a former student of this school), 60 guineas, 55 guineas (Huxley Scholarship, founded in memory of the late Professor Huxley, a former student of this school), 40 guineas, and 30 guineas are open to students commencing their medical curriculum. Three of these (100 guineas, 60 guineas, and 40 guineas) are open to all general students,[1] one (55 guineas) is reserved for the sons[1] of medical men, and one (30 guineas) is open to Dental students only. All these Scholarships are awarded annually at the commencement of each winter session, after a competitive examination in the following groups of subjects: (1) English, including Language, History, and Geography; (2) any two of the following four languages—Latin, Greek, French, and German; (3) Mathematics, including Arithmetic, Algebra, and Geometry; and Mechanics, including Statics and Dynamics; (4) Inorganic Chemistry and Experimental Physics, including Acoustics, Heat, Magnetism, Electricity, and Optics; and (5) Animal and Vegetable Biology. No candidate may offer himself for examination in more than three of the above groups of subjects, the selection of the groups being left to the candidate. Students who join in the summer session have the same privileges as regards scholarships, medals and prizes as those who join in October of the same year. The value attached to each group of subjects is 1,000 marks. No credit will be given for any paper in which the candidate obtains less than one-fifth of the total marks. Candidates must be under 25 years of age on the first day of

[1] Those who enter for their entire medical education.

the examination. In the first three groups the subjects, as regards extent and the authors selected, will be the same as those chosen for the Matriculation Examination of the University of London in the June immediately preceding; in the fourth and fifth, the same as those for the Preliminary Scientific Examination of the same University. Candidates must give notice to the Librarian of their intention to compete, and of the groups in which they offer themselves for examination, on or before Saturday (10 A.M.), September 23rd, 1899. The examination will commence at the school on Monday, September 25th, at 9 A.M., and will continue during the two following days. The successful candidates will be required to enter forthwith for their complete medical education at the Charing Cross Hospital.

One Epsom Scholarship, giving a free education, is, at the commencement of each winter session, placed at the disposal of the Royal Medical Benevolent College at Epsom, to be competed for by their foundation scholars who have passed the Preliminary Scientific M.B. Examination of the University of London.

Two Universities Scholarships, of the value of 60 guineas each, are open to students from the University of Oxford who have passed the First M.B. Examination, to students of the University of Cambridge who have passed the Second M.B. Examination, and to students of the University of London who have passed the Intermediate Examination in Medicine, and who have not entered at any London Medical School. Subjects: Anatomy and Physiology, including Histology. The examination for these Scholarships, which will be partly practical, will be held at the school on September 27th and 28th. Candidates must give notice to the Librarian of their intention to compete on or before Monday (2 P.M.), September 26th, 1898. The successful candidates will be required to enter forthwith at the Charing Cross Hospital for the completion of their curriculum.

Fees.—The composition fee is 110 guineas.

Further information may be had of the Dean, Dr. Montague Murray, Charing Cross Hospital Medical School, Chandos Street, Strand, London, W.C.

St. George's Hospital Medical School.

The Hospital contains 351 beds, of which 205 are devoted to Surgical, and 146 to Medical cases.

Appointments.—Four House-Physicians and four House-Surgeons are appointed quarterly from among the perpetual pupils; they hold office for six months in each capacity in succession, and reside and board in the hospital free of expense. An obstetric assistant is appointed half-yearly; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a salary at the yearly rate of £100. A Curator of the Pathological Museum, a Medical, and a Surgical Registrar are appointed annually from among the senior pupils, each with a salary of £50; another Medical Registrar with a salary of £30; and an Assistant Curator, with a salary of £30. A Senior Anæsthetist is appointed annually, with a salary of £50 a year; and two Junior Anæsthetists with salaries of £30. As the result of a competitive examination held every three months, those students who desire to proceed to the offices of House-Physician and House-Surgeon are appointed as assistants during twelve months in the special and general divisions of the out-patient departments. Two Demonstrators of Anatomy are appointed annually, each with a salary of £50. Each pupil of the Hospital must act as Clinical Clerk and Dresser before a certificate of attendance on hospital practice can be signed.

Entrance Scholarships.—The following Entrance Scholarships are offered for competition: 1. A Scholarship, value £150, for the sons of medical men who have entered the schools during the current year. 2. Two Scholarships, each of £50, open to all students commencing their studies. The subjects for these three Scholarships will be Latin, Greek, French, German, Mathematics, Physics, Chemistry, and Physiography. Three of these to be taken, at option, save that at least one linguistic and one scientific subject must be taken. The examination for all these scholarships will be held on September 26th to 29th. 3. Two Scholarships, value £85, for students who have entered during the current year, and have passed or completed the curriculum for the Oxford First M.B. or the Cambridge Second M.B. Subjects for these three Scholarships: Organic Chemistry, Anatomy, Physiology, Zoology, Botany; any two to be taken at option. 4. A Scholarship, value £85, for students of Provincial University Colleges in England and Wales who have entered the School during the current year, and have passed or completed the curriculum for the First M.B. of London or the corresponding examination of the Victoria University or of Durham. The examinations for these Scholarships will commence on October 5th.

Fees.—The composition fee is £150.

Further information may be obtained from the Dean of the School; from any of the Lecturers; or from Mr. F. J. Marshall, the Resident Medical Officer at the Hospital.

Guy's Hospital Medical School.

The Hospital contains more than 600 beds, of which 546 are in constant occupation. Thirty-six beds are set apart for diseases of the eye, and 40 for the most urgent and interesting medical cases, which form the subjects of the weekly clinical lectures. One of the wards containing 40 beds, which has been closed for fifteen years, has been reopened for the reception of cases of diseases of women. A few beds will be reserved for cases of difficult labour.

Appointments.—All appointments are given without extra payment, and according to the merits of the candidates, as determined by a committee of the medical staff. Eight assistant house-physicians, 8 house-physicians, 24 assistant house-surgeons, and 8 house-surgeons are appointed annually. The house-physicians and house-surgeons hold office for six months each, and receive free board and lodging in the college, as also do the resident obstetric assistants, of whom 8 are appointed annually, each holding office for 6 months. Every student is provided with rooms and commons in the hospital during the period of his "take in" as a dresser. In addition to the clerkships and dresserships in the medical and surgical wards, students are appointed to the posts of clinical assistant, dresser, or clerk in the special departments of ophthalmology, laryngology, gynæcology, dermatology, otology, electricity, anæsthetics, and dentistry. More than 150 additional appointments have recently been added to the list of those annually open to students of the hospital, the majority of them being in the special departments.

The College, fronting the east gate of the Hospital, provides accommodation for 60 resident students. It contains a dining hall, reading rooms, library of general literature, and gymnasium for the use of the residents and of the members of the Clubs Union. The athletic ground is easily accessible.

Scholarships, Prizes, etc.—Entrance Scholarships in Arts: Two of the value of £100 each open to candidates under 20 years of age, and one of £50 open to candidates under 25. Subjects: English, Latin, Arithmetic, Algebra, Euclid, and either Greek, French, or German. Entrance Scholarships in Science: Two of £150 and one of £50, open to candidates under 25, and of £50 to University students who have completed their study of Anatomy and Physiology. Subjects: Anatomy, Physiology, Chemistry, Practical Chemistry, Biology, and Physics. These examinations begin on September 27th; names must be sent in on or before September 12th. Junior prizes for general proficiency, £20, £15, £10; Arthur Durham prizes for dissection, £15, £5; Hilton prize for dissection, £5: Michael Harris prize for Anatomy, £10; Sands Cox scholarship for physiology, £15 for three years; Wooldridge Memorial prize for physiology, £10. Senior prizes for general proficiency, £20, £15, £10; Beaney prize for pathology, £34: Bredin prize for clinical study, £25; Treasurer's gold medal in medicine, Treasurer's gold medal in surgery, and the Golding-Bird gold medal and scholarship (£20) for sanitary science are awarded annually after competitive examination. The Gull Studentship in pathology and the Beaney Scholarship in materia medica, of the annual value of £150 and £31 10s. respectively, are awarded without examination to enable the holders to carry on research in these subjects.

Practical Classes.—An advanced course of Practical Physiology is held in the new laboratories during the winter session and in association with the advanced course of Practical Anatomy is designed to prepare candidates for the University and Fellowship examinations in these subjects.

Special classes are held for the Preliminary Scientific examination of the London University throughout the year.

Two courses of laboratory instruction for the D.P.H. are conducted annually.

Fees.—The compositfon fee is 150 guineas.

The Clubs Union recreation ground, situated at Honor Oak Park, is reached from the Hospital in less than twenty-five minutes.

KING'S COLLEGE MEDICAL FACULTY.

The Hospital contains 220 beds in daily use.

Appointments.—Resident Medical Officers, Clerks, and Dressers are chosen from matriculated students, and the former have rooms and commons free. Two Sambrooke Registrarships, Medicine and Surgery, of the annual value of £50 each, are open to matriculated students who have filled any of the higher appointments of the Hospital. Clinical assistants are appointed in the Ophthalmic, Ear, and Throat Departments.

Entrance Scholarships.—1. Two Warneford Scholarships, for the encouragement of previous education, each £75 value; subjects of examination, Mathematics, Classics, Divinity. 2. Two Sambrooke Exhibitions, one £60 and one £40, open; subjects of examination, Mathematics, Elementary Physics, Inorganic Chemistry, Botany, and Biology. 3. Rabbeth Scholarship, value £20, in July, for best evidence of early scientific training. 4. Two Scientific Exhibitions, open, given annually, in October, by the Clothworkers' Company, value £60 and £40, for proficiency in any four of the following subjects: Mathematics, Mechanics, Physics, Chemistry, Botany, Geology, Mineralogy, and Zoology will be open to all candidates who are under the age of 19. 5. Medical Entrance Scholarships.—One of 70 guineas and one of 60 guineas, instituted for Students who propose to take their degree at Oxford, Cambridge, or other British University, having already passed the examination of that University in Biology, Chemistry, and Physics.

During the curriculum Scholarships and Prizes of the value of £300 are open to matriculated students.

For conditions of Scholarships and subjects of Examinations apply to the Dean, Medical Faculty. Examinations commence September 25th.

The Dean of the Medical Department, Professor A. W. Hughes, attends daily (Saturdays excepted) at King's College for the purpose of seeing students and their friends. Any letter addressed to the Dean during the vacation will receive early attention.

University of London.—A special class for the Matriculation Examination will commence of September 25th. Classes for the science subjects are held by the Professors of the Science Faculty of King's College, and students avail themselves of their laboratories.

Fees.—The composition fee is £135.

Athletic Club.—All students are entitled to the privileges of the Athletic Club, which manages a large recreation ground of the College at Wormwood Scrubbs.

Resident Chambers are available for students. The cost of the academical year varies from £50 to £60 for rent of rooms and dinner.

LONDON HOSPITAL MEDICAL SCHOOL.

The Hospital is the largest general hospital in the kingdom; it contains nearly 800 beds.

Appointments.—Among the salaried appointments open to students are those of Medical Registrar, Surgical Registrar, Medical, Surgical, and Obstetric Tutors, Receiving-room Officers, and Medical, Surgical, and Ophthalmic Clinical Assistants. There are also Resident House-Physicians and Resident House-Surgeons and Accoucheurs. In addition there are Assistantships, and Clerkships, and Dresserships in the various departments.

Scholarships and Prizes.—The following is a list of scholarships and prizes. *At Entrance:* Price Scholarships in Science, £120; in Anatomy and Physiology, £60; Entrance Scholarships in Science, £60 and £35; Epsom Scholarship, £126; Buxton Scholarships in Arts, £30 and £20. *After Entrance:* Anatomy and Biology Scholarship, £20; Anatomy and Physiology Scholarship, £25; Letheby Prize, Senior, £20; Letheby Prize, Junior, £10; Scholarships in Clinical Medicine, Surgery, and Obstetrics, £20 each; Duckworth Nelson Prize, £10; Hutchinson Prize, £35; Sutton Prize, £20; Sir Andrew Clark Prize, £26; Anderson Prizes, £9; Out-patient Dressers' Prizes, £60; Practical Anatomy Prizes, £10.

A special course for the D.P.H. will commence at the beginning of the winter session.

Fees.—The composition is 120 guineas. A reduction of 15 guineas is made to sons of medical men.

New Buildings.—The new buildings providing greater space for the Departments of Bacteriology, Public Health, Chemistry, and Biology are now completed (see BRITISH MEDICAL JOURNAL, July 22nd, 1899, p. 248).

Information may be obtained from the Warden, Mr. Munro Scott, at the London Hospital Medical College, Mile End, E.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

The Hospital contains 281 beds; the number will shortly be raised to 381.

Appointments.—Three House-Physicians and three House-Surgeons are appointed for six months each, and two Obstetric Officers for six months each; all live free of expense in the Hospital. All students must act as Clinical Clerks and Dressers for eight months after passing the Primary Examination, and after having acted as Dressers for two months in the Casualty Department. Demonstrators of Anatomy are appointed annually at salaries of £70; two, or more if necessary, Assistant Demonstrators and two Prosectors with an honorarium of £5 each; a Demonstrator of Physiology at a salary of £100, and two or three Assistant Demonstrators, who receive an honorarium of £5; a Demonstrator of Chemistry and Physics at a salary of £100, and an Assistant Demonstrator, who receives an honorarium of £5; a Demonstrator of Biology at a salary of £75, and two Assistant Demonstrators who receive £5; and two Demonstrators of Pathology, to assist the lecturers, who receive an honorarium of £5 each.

Entrance Scholarships.—One Scholarship in Natural Science, value £144, two of the value of £78 15s., and one of the value of £52 10s.; subjects, Inorganic Chemistry, Experimental Physics, and Elementary Biology. There will be a practical examination in each subject. The examination takes place September 20th and 21st. The candidates must not have completed a winter session of study at a medical school in London. The successful candidates must enter as perpetual pupils of the Hospital, and pursue the full course of study there. A scholarship of £144 for students of Epsom College who are sons of medical men. Two scholarships, each of £57 15s., open to students from a University, who have not entered at any London medical school; subjects, Physiology and Histology, and either Anatomy or Chemistry, at the option of the competitor. The examinations will be held on September 20th and 21st.

Special Classes are held for the Preliminary Scientific Intermediate M.B., and Final M.B. Examinations of the University of London, and for the Examinations for the Fellowship of the Royal College of Surgeons. All the Special Classes for the higher examinations are free to the students of the school.

Fees.—The composition fee is £139.

Students may reside in the College, 33 and 35, Westbourne Terrace, under the supervision of the Warden, Mr. H. S. Collier. Terms can be obtained on application to the Warden.

Further information may be obtained from the School Secretary, or from the Dean of the School, Mr. George P. Field.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.

The Hospital contains 320 beds.

Appointments, etc.—Eighteen Resident appointments are open annually to competition among pupils of the Hospital. The officers reside and board in the Residential College free of expense. There are two Casualty Medical and two Casualty Surgical officers appointed annually. Six House-Surgeons are appointed every year at intervals of two months, after examination; and six House-Physicians are also appointed annually at similar intervals; they must have a legal qualification, or hold a Broderip Scholarship. An Obstetric House-Physician (qualified to practise) is appointed every six months. Non-resident Physicians' Assistants are appointed in the various out-patient departments. In the out-patient

department the appointments are: Dresser to the Assistant Surgeon and to the Dental Surgeon, Clerk to the Assistant Physician, Dresser to the Ophthalmic Surgeon, Clerk in the Department for Diseases of the Skin, Clerk in the Department for Diseases of Women, and Dresser to the Throat and Ear Department. There are also Extern Midwifery Clerks, and *Post-mortem* Clerks. The appointments are so arranged that every student may during his course hold all the Out-patient and In-patient Clerkships and Dresserships. Each student must have held an out-patient clerkship and dresserships before being eligible to hold in-patient clerkships or dresserships. No student can be appointed to any office until he has passed the second examination of the Examining Board in England, or its equivalent. Clinical Assistants are appointed in the Children's, Ophthalmic, Skin, and Throat and Ear Departments.

Entrance Scholarships.—Two Entrance Scholarships, value £100 and £60, are open to all gentlemen commencing their medical studies in October, 1899. The successful candidates must become general pupils of the school. Examination on September 21st and 22nd. Candidates must send in their names to the Dean, stating the three subjects they select, on or before September 14th.

Universities Scholarship.—An annual Entrance Scholarship, of the value of £60, is open to students of the Universities of Oxford and Cambridge who have completed their Anatomical and Physiological studies: Subjects: Anatomy and Physiology, including Histology. The examination takes place on September 21st and 22nd. Application to be made on or before September 14th. Students joining the school in the previous May are eligible to compete for the Entrance and University Scholarships in that year.

The Freer Lucas Scholarship is annually awarded on the nomination of the head master to a pupil of the Royal Medical College, Epsom, who has passed the Preliminary Scientific M.B. Examination.

Fees.—The composition fee is 135 guineas.

New Buildings.—The new dissecting rooms, physiological, chemical, and pathological departments, are now in regular use. They provide every facility for the practical study of Chemistry, Biology, Anatomy, and Physiology, Pathology, including Bacteriology and Public Health work.

Further Information may be obtained from Dr. Pasteur, the Dean.

The Residential College is situated in Cleveland Street, W., and has its frontage in the Hospital garden; it accommodates about 30 students. Warden, D. R. A. Young, B.Sc.

St. Thomas's Hospital Medical School.

The Hospital contains 572 beds, of which about 512 are in use. It is built on the system of separate pavilions, which are connected by a covered and an open-air corridor. The Hospital and School are situated along the banks of the Thames between Westminster and Lambeth Bridges, an open-air terrace running the whole length of the buildings facing the Houses of Parliament. The Operating Theatres have been lately thoroughly refitted, refloored, and provided with electric light, and are specially adapted for the carrying out of aseptic surgery. A Clinical laboratory has been recently built, in which all the more difficult methods of diagnosis, bacteriological, chemical, and microscopical, are carried on under the direction of a Superintendent. The Department for Out-patients has been rearranged, and now consists of a series of rooms, among which are two large, well-ventilated rooms which are provided with ample sitting accommodation, so that large numbers of students are enabled to follow closely the practice and teaching of the assistant staff. During the twelve months ending December 31st, 1898, the number of patients admitted into the hospital amounted to 6,079. In the same period 19,191 out-patients have been treated, and in the maternity department 2,474 women have been attended at their own homes. Casualties to the number of 91,424 attendances were treated during the same period.

The *School Buildings*, which are separated from the hospital by a quadrangle containing a lawn tennis court for the use of the residents, comprise numerous theatres, laboratories, and class rooms, and are well adapted for the modern teaching of large bodies of students in all the subjects of the medical curriculum. A large library and reading room and a very complete museum are open to all students from 9 A.M. to 5 P.M. The new club premises, opened in 1894, contain a dining room, a smoking and reading room supplied with daily and illustrated weekly papers, and a gymnasium. A cloak room with lockers, and a lavatory with bath rooms are in the old building. Students are thus able to spend the whole day at the school, all meals being obtainable at a moderate tariff, and they are further provided with facilities for exercise and recreation. A ground of more than nine acres in extent is provided at Chiswick. It can be reached in forty minutes from the hospital, it is admirably adapted for football, cricket, lawn tennis, and athletic sports. It is provided with a pavilion where refreshments can be obtained.

Scholarships.—Three Entrance Scholarships will be offered for competition in September, namely: One of £150 and one of £60, in Chemistry and Physics, with either Physiology, Botany, or Zoology at the option of candidates, for first year's students. (The Medical School Committee is empowered to grant an exhibition of £20 to any unsuccessful competitor who obtains sufficient marks to qualify for a scholarship); one of £50 in any two of the following subjects, Anatomy, Physiology, Chemistry, for students who have completed their examinations in Anatomy, Physiology, Materia Medica and Pharmacy for a medical degree in any of the Universities of the United Kingdom, and have not entered as students in any London medical school. Copies of the examination papers of last year may be obtained on application to the Medical Secretary. Applications must be sent in not later than September 19th, with certificate of birth and of Preliminary Examination, and in the case of candidates for the Science Scholarships with a notification of their choice of optional subject. Numerous Scholarships, prizes, and medals are open to competition throughout the whole career of a student, including a Fellowship of £100 given by the Salters' Company for research in Pharmacology.

Appointments.—All Hospital Appointments are open to students without charge. A Resident Assistant Physician and a Resident Assistant Surgeon are appointed annually at a salary of £100 with board and lodging. Two Hospital Registrars, at an annual salary of £100 each, are appointed yearly. An Obstetric Tutor and Registrar is appointed each year at an annual salary of £50. The tenure of these offices may be renewed for a term not exceeding three years. Four House-Physicians, two Assistant House-Physicians, four House-Surgeons, four Assistant House-Surgeons, two Obstetric House-Physicians, two Ophthalmic House-Surgeons, and eight Clinical Assistants in the special departments are appointed every three months, and hold office for six months if recommended for re-election. Clinical Clerkships and Dresserships to the in-patient and out-patient departments are available to the number of 400 each year.

Fees.—The Fees may be paid in one sum or by instalments. Entries may be made separately to lectures or to hospital practice. The composition fee is £150. Special arrangements are made for students from the Universities and elsewhere entering in their second or subsequent years, also for dental students and for qualified practitioners.

University Examinations.—Special Classes for the Preliminary Scientific and Intermed. M.B.Lond., for the Oxford and Cambridge Examinations, and for the Primary F.R.C.S. are held throughout the year.

Lodgings.—A register of approved lodgings is kept by the Medical Secretary, who has a list of local medical practitioners, clergymen, and others who receive students into their houses.

Further information may be obtained by application to Mr. Rendle, the Medical Secretary, St. Thomas's Hospital, Albert Embankment, S.E.

University College: Medical Faculty.

The Hospital contains 185 beds, all of which are available for clinical instruction and study.

Appointments.—Eight House-Physicians, six House-Surgeons, twelve Obstetric Assistants, Out-Patients Physicians' and Surgeons' Assistants, Clinical Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants, are selected annually

from among the students without extra fee. The House-Physicians, the House-Surgeons, and four Obstetric Assistants reside in the Hospital, receiving free board and lodging.

Entrance Scholarships.—The Bucknill Scholarship of £30 a year for four years, and two Exhibitions of the value of 55 guineas each, are offered for competition in September to gentlemen who are about to commence their first winter's attendance. The subjects are Chemistry, Physics, Botany, and Zoology. Two Exhibitions of the value of 76 guineas each are offered for competition in September, the subjects of the examination being Anatomy and Physiology. Only one of these Exhibitions may be awarded to a student who has received his Anatomical and Physiological instruction in University College. The Bucknill Scholar is not eligible for these Exhibitions. The examinations for the Scholarship and Exhibitions will take place at the College on September 26th and 27th, 1899. Notice of intention to compete must be given to the Secretary, on or before September 25th, at the office of the College.

Other exhibitions and prizes of the annual value of about £500 are given in the Faculty of Medicine.

Fees.—The composition fee is 135 guineas.

Information respecting the College may be obtained from the Dean, Professor H. R. Spencer, M.D., F.R.C.P.; the Vice-Dean, Professor J. Rose Bradford, M.D., D.Sc., F.R.S.; the Sub-Dean, Professor Thane; or the Secretary, Mr. J. M. Horsburgh.

Westminster Hospital Medical School.

The Hospital contains upwards of 200 beds.

Appointments.—A Curator of the Museum and a Pathologist are appointed annually, with salaries of £40 and £50 respectively, and a Medical and Surgical Registrar, each with a salary of £40. Two House-Physicians, two House-Surgeons, two Assistant House-Surgeons, and a Resident Obstetric Assistant are appointed for six months, after examination, and are provided with rooms and commons. An Assistant House-Surgeon, after six months' service, becomes House-Surgeon for a further period of six months. Clinical Assistants to the Assistant Physicians and Assistants Surgeons, and to the officers in charge of special departments, are appointed from among qualified students. Every student must perform the duties of Out-patient Dresser for four months, and afterwards hold the office of In-patient Dresser for four months, of Out-patient Clinical Clerk for four months, and of In-patient Clinical Clerk for four months. Two Pathological Clerks are appointed every four months to assist in the *Post-mortem* Room. No student is eligible as an In-patient Dresser or Clinical Clerk until he has passed the Second Examination of the Conjoint Board, or an equivalent examination. Clerks and Dressers in the Special Departments of Hospital Practice are periodically appointed. So far as vacancies permit, students of other hospitals are admitted to In-patients' Dresserships or Clerkships.

Scholarships.—The following Scholarships are offered for competition during the years 1899-1900:—*In September, 1899:* Three Scholarships in Arts, £60, £40, and £30; Scholarship in Arts for Dental Students, £20; Two Colonial Scholarships in Arts, £60 and £40; Oxford and Cambridge Scholarship in Anatomy and Physiology, £40; Two Natural Science Scholarships, £60 and £40; Free Presentation, open to pupils of Epsom Medical College. *In April, 1900:* Two Scholarships in Arts, £50 each; Two Colonial Scholarships in Arts, £60 and £40; Oxford and Cambridge Scholarship in Anatomy and Physiology, £40; Two Natural Science Scholarships, £60 and £40.

Fees.—The composition fee is 110 guineas.

Further information can be obtained on application to the Dean at the Westminster Hospital Medical School, Caxton Street, Westminster, S.W.

London (Royal Free Hospital) School of Medicine for Women.

The Hospital contains 170 beds, all of which are available for clinical instruction. There are separate departments for Diseases of Women, Diseases of the Eye, Throat and Ear, Skin, and classes for instruction in Anæsthetics, Bacteriology, etc., in addition to the ordinary Clinical Lectures and Demonstrations and Tutorial Classes. Students also attend the practice of one of the Fever Hospitals of the Metropolitan Asylums Board, and receive special instruction in Lunacy at one of the Hospitals under the Asylums Board of the London County Council, and are also admitted to the practice of 13 special hospitals.

Appointments as Surgical and Medical Registrar, Anæsthetist, Curators of the School and Hospital Museums, and Clinical Assistants, are open to Students after qualification.

Scholarships.—An Entrance Scholarship value £30, is offered for competition at the end of September in each year. The Bostock Scholarship, value £60 a year for two or four years, is awarded on the result of the Preliminary Scientific Examination of the University of London. The Stuart Mill Scholarship, value £30, the John Eyron Bursary and two Mackay Prizes, value £20 each, the Helen Prideaux Prize of £50, together with many other scholarships and prizes, are offered on sundry conditions. Various Missionary Societies also offer scholarships on certain conditions, and assist ladies who wish to go to India as medical missionaries.

The Course of Study includes preparation for the Examinations of the University of London, the Royal University of Ireland, the University of Durham, the Conjoint Colleges of Scotland and of Ireland, and the Society of Apothecaries, London. Classes in preparation for the Preliminary Scientific Examinations of the Universities of London and Durham will begin in October, 1899.

School Buildings.—The Pfeiffer Wing, opened by H.R.H. the Princess of Wales in 1898, contains laboratories for Anatomy, Chemistry, and Physiology, fitted with the most modern appliances. The second wing, containing three lecture theatres, biological laboratory, etc., will be opened in October, 1899. The rebuilding of the third wing, which will complete the new medical school buildings, and will contain chambers available for students, will be begun shortly. A new museum is to be erected at the Royal Free Hospital. A list of boarding and lodging houses can be obtained at the School.

Fees.—The composition fee is £125.

Cooke's Medical School, London.

The School is prepared to admit to its supplementary work all who may wish to join the same, but in regard to its curriculum work it does not receive more than half a dozen students in the course of the year; these have special advantages both as regards anatomy and physiology. The fees, we are informed, are but slightly in excess of current charges.

The Bland Sutton Presentation—named after Mr. Bland Sutton, F.R.C.S., Surgeon to the Middlesex Hospital (a former pupil of the School)—confers the privilege of free education during the first two years of medical studies. Particulars forwarded on application.

By decision of the various Examining bodies, gentlemen rejected at their Anatomical and Physiological Examinations (Second Conjoint, etc.) can get "signed up" from this school for the three months' supplementary work they are required to put in before re-examination. The School is also recognised for the special dissections for the Fellowship of the Royal College of Surgeons.

The operations of Surgery are performed on the dead body. Such courses are recognised for army promotion by the College of Surgeons.

The School possesses a good collection of physiological and chemical apparatus, and gentlemen preparing for the higher examinations receive special instruction in the more difficult subjects.

PROVINCES.

The medical schools in England, outside London, which give instruction in the full medical curriculum, are those of the Universities of Oxford, Cambridge, and Durham (University of Durham College of Medicine, Newcastle-on-Tyne); the three Colleges of the Victoria University (Owens College, Manchester; University College, Liverpool; and the Yorkshire College, Leeds); Mason College, Birmingham (Queen's Faculty of Medicine); University College, Bristol; and University College, Sheffield (School of Medicine).

The opportunities for obtaining a good knowledge of the

Preliminary Sciences, and of Anatomy and Physiology at the Universities of Cambridge and Oxford are unsurpassed: the staffs of teachers are distinguished, and the laboratories are most completely appointed. Instruction in Clinical Medicine, Surgery, and Midwifery is given by the University Lecturers, and by the visiting staffs of the Radcliffe Infirmary at Oxford and of Addenbrooke's Hospital, Cambridge; but it is the rule for Oxford and Cambridge men, after spending three years at the University, and passing the necessary examinations, to proceed for the remaining two years to London or some other large town where the opportunities for gaining clinical experience are greater. At many of the London schools special arrangements—as to which full particulars can be obtained on application to the respective Deans—are in existence to meet the case of students from the Universities joining under these circumstances. At some of the schools they are placed on the same footing in regard to obtaining the appointments of House-Physician and House-Surgeon as students who have attended the hospital throughout. As the circumstances of the various schools are liable to vary from time to time, special inquiries should be made on this point, which after-experience will show to be of great importance.

The arrangements and appliances for laboratory and other practical instruction at Owens College, Manchester, at University College, Liverpool, at the Yorkshire College, Leeds, and at University College, Bristol, are most complete, having in each case been recently enlarged and improved. At Birmingham, where a Midland University is shortly to be established, the medical school is now a Faculty of Mason College, and is provided with all the most modern facilities for instruction in science, while the great hospitals afford equally excellent opportunities for clinical work.

The Medical School of the University College of South Wales and Monmouthshire at Cardiff gives instruction in all the subjects of the medical curriculum belonging to the first three years.

Mason University College, Birmingham (Queen's Faculty of Medicine).

Mason College was founded in 1875 by Sir Josiah Mason, Kt. The Medical Faculty was transferred from Queen's College, Birmingham, to Mason College in 1892, additional buildings being erected at a cost of about £20,000. There are Professorships of Medicine, Surgery, Anatomy, Physiology, Chemistry, Physics, Biology, Therapeutics, Forensic Medicine, Public Health, Midwifery, Gynæcology, Pathology and Bacteriology, Mental Diseases, Operative Surgery, and Ophthalmology, and Lectureships in Toxicology, Osteology, Applied Anatomy, and Materia Medica, etc.

Clinical instruction is given in the General and Queen's Hospitals, which have a joint total of upwards of 400 beds; 6,000 in-patients and 80,000 out-patients are treated annually.

Appointments.—General Hospital: Two Resident Medical Officers, salary £70 a year; a degree in Medicine is necessary. One Resident Surgical Officer, salary £100 a year. One Resident Pathologist, salary £100. Two Non-resident Surgical Casualty Officers, salary £50. Two Non-resident Anæsthetists, salary £40. Four House-Surgeons, office tenable for six months, without salary; a Surgical qualification is necessary. Two Assistant House-Physicians, tenable for six months, without salary; candidates must possess a medical qualification and be registered. One Resident Medical Officer, salary £150, at the Jaffray Hospital; and one Resident Assistant, unqualified, tenable for three months. *Queen's Hospital:* Two House-Physicians, tenable for twelve months, at a salary of £50; a Medical qualification is necessary. Three House-Surgeons, tenable for twelve months, at a salary of £50; a Surgical qualification is necessary. One Obstetric and Ophthalmic House-Surgeon, tenable for six months; candidates must have a qualification; salary £10, with board and lodging, etc. One Resident Dresser, unqualified, tenable for three months.

Entrance Scholarships.—Queen's Scholarships, 30 guineas; Sands Cox, restricted to sons of medical men, 30 guineas; Sydenham Scholarships, one or more annually, restricted to orphan sons of medical men, elected by the Council, on the recommendation of the Medical Board of Studies, 30 guineas.

Further particulars may be obtained by application to Professor Windle, Dean of the Medical Faculty, at the College.

Fees.—The composition fee for the College courses is £70.

University College, Bristol: Faculty of Medicine.

The lectures and instruction given in the Faculty of Arts and Science of University College, Bristol, are adapted to the various Preliminary Examinations, including the Preliminary Scientific Examination of the University of London: and students can complete in Bristol the entire course of study required for the medical and surgical degrees of the University of London, the diplomas of the Royal College of Physicians of London and the Royal College of Surgeons of England, and of the Apothecaries' Society of London, and for the Examinations for admission to the Royal Navy and the Indian Medical Services, and the Royal Army Medical Corps.

It is now arranged that students of the College shall be admitted to the Clinical Practice of the Bristol Royal Infirmary and the Bristol General Hospital conjointly, and consequently both these institutions are open to all students.

The Infirmary and the Hospital comprise between them a total of 470 beds, and both have very extensive Out-patient Departments, Special Departments for the Diseases of Women and Children, and of the Eye, Ear, and Throat, besides large Outdoor Maternity Departments and Dental Departments. Very exceptional facilities are thus afforded to students for obtaining a wide and thorough acquaintance with all branches of Medical and Surgical work. Each student has the opportunity of personally studying a large number of cases, and of acquiring practical skill in diagnosis and treatment.

Appointments—Royal Infirmary.—House-Physician, House-Surgeon, Junior House-Physician, and Junior House-Surgeon; Clinical Clerks and Dressers, also Ophthalmic, Obstetric, and Pathological Clerks are appointed. The Dressers reside in the Infirmary in weekly rotation. *General Hospital:* House-Surgeon, Assistant House-Surgeon, Assistant House-Physician and Casualty House-Surgeon; Clinical Clerks, Dressers, and Obstetric, Ophthalmic, and Pathological Clerks are appointed. The Dressers reside in the Hospital in rotation free of expense.

Scholarships and Prizes.—(1) University Entrance Scholarship, £50. (2) Lady Haberfield Entrance Scholarship, £30 (about), after examination in subjects of general education. (3) Martin Memorial Pathological Scholarships, two of £10 each. (4) Tibbit's Memorial Prize, value 9 guineas, for proficiency in Practical Surgery. (5) Committee Gold Medal for fifth year Students for general proficiency. (6) Committee Silver Medal for the same. (7) Augustin Prichard Prize, value about 7 guineas, for proficiency in Anatomy. (8) Henry Clark Prize, value about 11 guineas, for general proficiency. (9) Crosby Leonard Prize, value 7 guineas, for proficiency in Surgery. (10) Suple Surgical Prize, a Gold Medal and 7 guineas in money. (11) Suple Medical Prize, a Gold Medal and 7 guineas in money. (12) Henry Marshall Prize, value about £12. Dresser's Prize. (13) H. M. Clarke Scholarship, value £15, for proficiency in Surgery. (14) Sanders Scholarship, value £22 10s., for general proficiency. Prizes and certificates are also awarded in the various classes of the College.

Fees.—The composition fee for the College courses is 65 guineas (or 70 guineas in two instalments).

Full information can be obtained on application to the Dean of the Medical Faculty, Professor E. Markham Skerritt, University College, Bristol.

The Yorkshire College, Leeds: Medical Department.

Clinical instruction is given at the Leeds General Infirmary, which has over 400 beds in constant use, and includes gynæcological and ophthalmic wards and a large new out-patient department. The Ida Semi-convalescent Hospital attached to the Infirmary has over 40 beds. The West Riding Lunatic Asylum at Wakefield is also open for the study of Mental Diseases. Students can in addition attend the practice of the Leeds Public Dispensary, the City

Fever Hospitals (100 beds), and the Hospital for Women and Children.

Appointments.—Senior Anæsthetist, £50. Two Anæsthetists, £25 each. The Resident Medical, Surgical, and Casualty Officers, each at £100 per annum. The Resident Ophthalmic Officer at £50 per annum. A Resident Obstetric Officer is attached to the gynæcological ward and an extensive external maternity department. A Resident Medical Officer is appointed every six months for the Ida Hospital (honorarium £25). Four House-Physicians, each holding office for six months, and four House-Surgeons holding office for twelve months. Physicians' Clerks, Surgeons' Dressers are appointed for six months; Ophthalmic and Aural Dressers, Gynæcological Ward Clerks, Assistant Physicians' Clerks, and Assistant Surgeons' Dressers, Dressers in the Casualty Room, *Post-mortem* Clerks, and Laboratory Assistants for three months. A Pathological Curator (honorarium 20 guineas) has charge of the new pathological laboratory. Appointments are also open to students at the Leeds Public Dispensary (three Resident Medical Officers, with salaries commencing at £80), at the Hospital for Women (House-Surgeon, honorarium £90, and Anæsthetist £25), and at the West Riding Asylums.

Entrance Scholarships.—The Yorkshire College awards annually a scholarship in the form of a free admission to the lectures and classes covered by the composition fee. Candidates must have passed the Preliminary Scientific (M.B.) Examination of the London University, or the First (Scientific) Examination of the Victoria University. The subjects of the examination are those included in the above examination. The Infirmary also awards a scholarship of the value of 40 guineas in the form of a free admission to the clinical teaching of the Infirmary. The subjects of the examination are (*a*) Latin, (*b*) Elementary Mathematics, (*c*) English Dictation and Composition, (*d*) English History, and (*e*) one of the following languages: French, German, or Greek.

Fees.—The composition fee for the College courses is 64 guineas.

Further information can be obtained from the Dean, the Medical School, Leeds, or from the Secretary of the Faculty, General Infirmary, Leeds.

UNIVERSITY COLLEGE, LIVERPOOL: MEDICAL FACULTY.

New Medical Buildings are at present in course of erection, comprising departments of Anatomy, Surgery, Anatomical Museum, and laboratory and lecture room accommodation for the School of Dental Surgery, Materia Medica, Toxicology, etc. The Physiological and Pathological Laboratories, which have been built and completely equipped by the generosity of the Rev. S. A. Thompson-Yates, at a cost of £30,000, were opened by Lord Lister in October, 1898. The building includes two theatres for physiology and pathology, spacious laboratories for microscopic, physical, and chemical Psychology, for Morbid Anatomy, Bacteriology, and Chemical Pathology, special rooms for research, gas analysis, galvanometer, centrifuge, etc., private rooms, students' common room, lavatories, etc. The Chemical Laboratories have been extended, so as to provide *inter alia* more complete accommodation for medical students and those engaged in laboratory work for diplomas in Public Health. The chair of Hygiene has secured adequate permanent accommodation in Ashton Hall, an institute adjacent to the College, which contains ample class-room and laboratory accommodation for study and research. The museums of Anatomy, Pathology, and Materia Medica are furnished with complete provision for the needs of students, and have recently been reorganised and revised. The museum of Hygiene, accommodated in Ashton Hall, has been recently established on the lines of the Parkes Museum. It contains meteorological instruments, and numerous models and specimens illustrating good and bad sanitary work. Under the supervision of the Professor of Hygiene a course of lectures on Sanitary Science is given during the winter, suitable for candidates for sanitary inspectors' certificates.

Royal Infirmary.—The Royal Infirmary, which adjoins the School, contains 300 beds, with 40 special beds for the treatment of Diseases of Women. The Lock, Lying-in, Eye and Ear, Women's, Children's, and Dental Hospitals are in the immediate vicinity, and their practice is open to the students of the Medical Faculty.

Fees.—The composition fee for lectures and classes is £24 15s. for Preliminary Scientific Classes; £60 for the Medical Classes required for the Victoria University Degree; £70 for all the classes required for the diplomas of the Conjoint Boards. The medical composition fees are payable in two instalments, at intervals of twelve months. The fee for hospital attendance at the Royal Infirmary is 40 guineas, also payable in two annual instalments.

Appointments.—Three House-Surgeons, three House-Physicians, and one External House-Surgeon to the Thornton Wards, are appointed for six months, after (if necessary) competitive examination. Candidates must have a legal qualification. Clinical Clerks for each Physician, Dressers for each Surgeon, and Clerks to the Thornton Wards for Diseases of Women, are appointed every three months. *Post-mortem* Clerks are appointed for six weeks. All students are required to perform this duty before the schedule for the Final Examination is signed.

Fellowships and Scholarships.—Fellowships, Scholarships, and Prizes of over £500 are awarded annually. (*a*) A Holt Fellowship in Pathology and Surgery, of the value of £100 for one year, is awarded annually by the Medical Faculty to a senior student possessing a medical qualification. The successful candidate is required to devote a year to tutorial work and investigation in the Pathological Department. (*b*) A Holt Fellowship in Physiology awarded under similar conditions, of the value of £100 for one year. (*c*) A Robert Gee Fellowship in Anatomy, awarded under similar conditions, also of the value of £100 for one year. (*d*) An Alexander Fellowship for Research in Pathology, of the annual value of £100, renewable. (*e*) Two Lyon Jones Scholarships, of the value of £21 each for two years, are awarded annually—a Junior Scholarship, open at the end of the first year of study to Victoria University students, in the subjects of the First M.B. Examinations; and a Senior Scholarship, open to all students in the School at the end of the second or third year of study, on the subjects of Anatomy, Physiology, and Therapeutics. (*f*) The Derby Exhibition of £15 for one year is awarded in Clinical Medicine and Surgery in alternate years. Students may compete in their fourth and fifth years; in 1900 the subject will be Clinical Surgery. (*g*) The Torr Gold Medal in Anatomy and the George Holt Medal in Physiology, the Robert Gee Book Prize, of the value of £5, for Children's Diseases, and numerous Class Prizes are awarded annually.

Entrance Scholarships.—Four Robert Gee Entrance Scholarships of the value each of £25 for one year are offered annually for competition. The holder is required to take out the Science Courses for the University Degree in Medicine.

Communications should be addressed to the Dean, Professor Paterson, M.D., University College, Liverpool.

School of Dental Surgery.—A new mechanical laboratory has recently been erected at the Dental Hospital; it is adequately equipped with all modern appliances, and is under the charge of a skilled mechanic. The fees for Dental education are £50 (payable in two instalments) for the Medical School curriculum; £21 payable in entrance for two years' Dental Hospital practice, £10 10s. for General Hospital practice (two winters). Numerous scholarships and prizes are offered: (*a*) A Fletcher Scholarship of £21 in Mechanical Dentistry; (*b*) a Phillips Scholarship of £10 10s. in Dental Surgery; Quinby Prizes (£20), etc.

[For particulars with regard to the School of Tropical Medicine see p. 552.]

Prospectuses and further information may be had on application to the Registrar, University College, Liverpool.

OWENS COLLEGE, MANCHESTER: MEDICAL DEPARTMENT.

The Royal Infirmary contains 300 beds. Associated with it are the Convalescent Hospital (136 beds) and the Royal Lunatic Asylum at Cheadle, which accommodates 260 patients.

Appointments.—The following appointments are made: A Surgical Registrar, at £80 per annum; a Pathological Registrar, at £100 per annum; a Medical Registrar, at £70 per annum; two Assistant Medical Officers, each at £80 per annum; an Anæsthetist, at £50 per annum; an Assistant Anæsthetist, at £50 per annum. Resident Medical Officer, one year, £150 per annum; ditto, at Cheadle, one year, £150 per

annum. Resident Surgical Officer, one year, £150 per annum; two House-Surgeons and one House-Physician are appointed every three months for a term of six months; an Assistant to the Resident Medical Officer at Cheadle is appointed for six months. The House-Physicians and House-Surgeons must possess a qualification which can be registered. For the Resident Assistant at Cheadle a qualification is not absolutely necessary. Four or more Clinical Clerks are attached to each Physician or Assistant-Physician, and four or more Dressers to each Surgeon and Assistant-Surgeon, and to the Ophthalmic Surgeon, and four more Clerks to the Pathological Registrar. Accident Room Dressers will be appointed every three months, and will hold their appointment for three months; there will be three Senior Dressers and twelve or more Junior Dressers, the former selected from students who have acted as Dressers in the wards for the full period of six months. Additional Clinical Clerks are appointed to assist in the departments for the Diseases of the Ear and Throat, and to assist the Surgical Registrar.

Entrance Scholarships.—Rogers and Seaton Scholarships (in alternate years), £40 per annum, tenable for two years. Subjects: Greek and Latin. Credit given for knowledge of Geometry, Algebra, French, German, and English. Examination May 28th, 29th, 30th, and 31st, 1900. Dalton (entrance), two of £40, one of which will be awarded annually, and tenable for two years. Examination May 28th, 29th, 30th, and 31st, 1900. Subjects: Geometry (Euclid I—IV and VI, or the subjects thereof); Algebra (as far as the Binomial Theorem, inclusive); Plane Trigonometry (to Solution of Triangles); Elementary Analytical Geometry, the Conic Sections. Credit given for knowledge of Classics and Modern Languages (including English). Cartwright Scholarship, £35 per annum, tenable for three years; subjects as in Dalton. Examination in May, 1903. Hulme, three of £35, one of which will be awarded annually, tenable for three years. Examination on May 28th, 29th, 30th, and 31st, 1900. Subjects: English Language (Grammatical Structure and Outlines of its History); English Literature (an Essay on some subject of English Literature); and Modern History (Outlines of English History and Geography); with at least two of the following: Latin (Translation at sight; Grammar and Easy Composition); Greek (ditto); French (ditto); German (ditto). Credit given for knowledge of Mathematics (Geometry and Algebra). James Gaskill, two of £40, one of which will be awarded annually, and tenable for two years. Examination on May 28th, 29th, 30th, and 31st, and June 1st and 2nd, 1900. Subjects: Mathematics—Geometry, the subjects of Euclid, I—IV and VI; Algebra, as far as the Binomial Theorem inclusive; Plane Trigonometry (to Solution of Triangles); Elementary Mechanics, including composition and resolution of forces in a plane, centre of gravity of simple bodies, uniform acceleration, direct impact, the elements of Hydrostatics, Boyle's Law. Chemistry; Inorganic Chemistry, Elementary Organic Chemistry; Practical work, including preparations, analysis of mixtures of inorganic salts, easy quantitative analysis. Credit given for knowledge of Classics and Modern Languages (including English). Sir J. P. Kay-Shuttleworth Scholarship, £30 per annum, tenable for three years, open to the competition of scholars from Sedbergh School, Giggleswick School, and Burnley Grammar School, Examination on May 30th and 31st and June 1st and 2nd. Subjects: Geometry, Algebra, Trigonometry, Chemistry, Practical Chemistry, and Mechanics, as in the James Gaskill. Two Dauntesey Medical Scholarships, value £35, tenable for one year. Candidates must not have attended lectures in a medical school. Subjects of Examination: Zoology, Botany, and Chemistry. The successful candidates must enter for the full course of medical studies at the College. A Gilchrist Scholarship of £50 per annum, tenable for three years in the College, awarded annually upon the results of the June Preliminary Examination of the Victoria University. Grammar School Scholarship, value £18 per annum, tenable for three years, open to scholars of the Manchester Grammar School between the ages of 16 and 21. Subjects: Mathematics, with Classics and Physical Science in alternate years. A subject for an English Essay will be set each year.

Fees.—The composition fee for the College courses is £70.

Prospectuses may be obtained from the Registrar, Mr. S. Chaffers.

University College, Sheffield: Department of Medicine.

The Physiological Department, thanks to the generosity of anonymous donors, has been entirely reconstructed and equipped to fulfil the most modern requirements, in memory of the late President of the School, Mr. Wm. F. Favell. The department consists of a lecture and demonstration theatre, students' laboratory, professor's room, preparing room, and galvanometer room. In addition to the usual fittings, the theatre is provided with a projection lantern microscope for the demonstration of microscopic slides. Each student has his own laboratory bench, with gas, water, electric light, and the requisite apparatus. The department is lighted by electricity throughout.

A laboratory of Bacteriology has been completely equipped by a "Sheffield citizen" in premises adjacent to the College.

The Arthur Jackson Chair of Anatomy has been founded by Mrs. Arthur Jackson in memory of her late husband. The Anatomical Department has been improved by the addition of a new theatre and museum.

Clinical instruction in Medicine and Surgery is given at Sheffield Royal Infirmary and the Royal Hospital, and in Midwifery and Gynæcology at the Jessop Hospital for Diseases of Women. Students are also admitted to the practice of the Borough Fever Hospitals and the South Yorkshire Asylum. The Royal Infirmary contains 240 beds, including Ophthalmic wards (30 beds) and Dermatological department. The Royal Hospital contains 125 beds, and Dental and Ophthalmic departments.

Scholarships, etc.—An entrance scholarship of the value of £110 is awarded annually to the best candidate, if of sufficient merit, in Latin, Mathematics, Elementary Physics, Inorganic Chemistry, and English. Prizes in Clinical Medicine and Surgery, of £10 10s. each, awarded by the Clinical Committee. Certificates and Book Prizes are awarded annually.

Fees.—The composition fee, if paid at the commencement of medical study, is 60 guineas; or the fees may be paid 35 guineas at the commencement of the first and 30 guineas at the commencement of the second year. These fees do not include hospital practice or instruction. The composition fee for this is £45.

University of Durham College of Medicine, Newcastle-on-Tyne.

The Royal Infirmary contains 280 beds.

Appointments.—Assistant Demonstrators of Anatomy, Prosectors for the Professors of Anatomy, Assistant Physiologists, Pathological Assistants, Assistants to the Dental Surgeon, and Assistants in the Eye Department, Throat and Ear Department, and Department for Skin Diseases are elected annually. The Assistant Demonstrators of Anatomy receive £5 each; the others are unpaid. Four times in the year Clinical Clerks and Dressers are appointed for three months.

Scholarships.—A University of Durham Scholarship, value £100, for proficiency in Arts, open annually at the beginning of the winter session to intending students, and to those who have attended only one winter and one summer session. The Dickinson Memorial Scholarship, interest of £400, with a gold medal, for Medicine, Surgery, Midwifery, and Pathology, open to perpetual students who have passed the primary examination of a licensing body. The Tulloch Scholarship, interest of £400 annually, for Anatomy, Physiology, and Chemistry. The Charlton Memorial Scholarship, interest of £700 annually, open to full students entered for the class of Medicine, at end of winter session. The Gibb Scholarship, interest of £500 annually, for Pathology, at end of summer session. The Goyder Memorial Scholarship, proceeds of £325; subjects: Clinical Medicine and Clinical Surgery. Luke Armstrong Memorial Scholarship, proceeds of £680, for best essay on some subject in Comparative Pathology. The Scholarship is open to all Graduates in Medicine or Hygiene, and candidates for these degrees who have spent at least six months at the University of Durham, and whose age does not exceed 30 years. The Stephen Scott Scholarship in Surgery, interest on £1,000 annually. The Heath Scholarship. The late George Y. Heath, M.D., M.B., D.C.L., F.R.C.S., President of the University of Durham College of Medicine, bequeathed the sum of £4,000 to found a scholarship in sur

gery, the interest to be awarded every second year. First award in 1896. The Gibson Prize in Midwifery and Diseases of Women and Children, interest on £225.

Fees.—The composition fee for the College courses is 70 guineas.

University College of South Wales and Monmouthshire, Medical School, Cardiff.

This College has for some years prepared students for their Preliminary Scientific Examination (M.B.), and these students have continued their studies in London and elsewhere. By the foundation in 1893 of Chairs of Anatomy and Physiology, and also of a Lectureship in Materia Medica and Pharmacy, students are enabled to prepare for the Intermediate M.B. of London, and may spend three out of their five years of medical study in Cardiff, proceeding subsequently to a London hospital for the remaining two years. A student preparing for a Scottish University, the University of Durham, for the Conjoint College Surgical and Medical diploma, or that of the Society of Apothecaries, may spend his first two or three years in Cardiff. As the College is able to provide an excellent training in the work of the first three years of the medical curriculum, many students, more especially from Wales and Monmouthshire, are glad to avail themselves of the opportunity to carry on their studies near home. The departments of Chemistry, Physics, Biology, Anatomy, Physiology, Materia Medica, and Pharmacy are furnished with the newest and best appliances for teaching and research. During the last year the accommodation in the departments of Chemistry and Physics has been considerably extended.

Students preparing for the Preliminary Scientific and Intermediate Examination in Medicine of the University of London may compound for their classes by paying a composition fee of £57 10s. Students who are preparing for the examinations of the Conjoint Board or of the Society of Apothecaries, London, may compound for their classes by paying a composition fee of £40. In both cases the composition fees may be paid in two instalments.

Scholarships and Exhibitions.—A considerable number of scholarships and exhibitions are open to students of Medicine. The examinations for these take place in September (see Syllabus of Examination, which may be obtained on application to the College Registrar.)

The students have the privilege of attending the Cardiff Infirmary, a large and growing institution containing 200 beds, a large and well-organised out-patient department, and special departments for the eye, ear, etc. The Infirmary is within three minutes of the College, and notices of cliniques, operations, and *post-mortem* examinations are posted on the College notice boards. Further information may be obtained from Dr. A. Francis Dixon, Dean of the Faculty of Medicine.

SCOTLAND.

University of Aberdeen.

Special opportunities for practical instruction are afforded in the chemical, anatomical, physiological, pathological, and hygienic laboratories; and anatomical, pathological, botanical, materia medica, forensic medicine, midwifery, natural history, and surgical museums throughout the day, under the direction of the professors. Practical instruction is given also in the toxicological, pharmaceutical, botanical, and zoological laboratories, and in the surgical museum and laboratory. Courses of practical instruction are given in summer in Medical Jurisprudence and Hygiene; in Diseases of Children, at the Sick Children's Hospital; in Fevers, at the Fever Hospital; in Insanity, at the Royal Asylum; in Diseases of the Ear and Larynx, at the Dispensary; in Diseases of the Eye, at the Infirmary and Eye Institution; in Diseases of the Skin, at the Royal Infirmary and Sick Children's Hospital. The General Dispensary and the Lying-in, Vaccine, and Eye Institutions, and the Sick Children's Hospital are open daily. Practical Pharmacy, Operative Surgery, Practical Medical Jurisprudence, and Hygiene, fee to each class, £3 3s., except Anatomical Demonstrations, Practical Natural History, Practical Midwifery, and Gynæcology, each £2 2s.; Practical Ophthalmology, Insanity, Public Health, Diseases of the Ear and Larynx, Diseases of the Skin, and Dental Surgery, each £1 1s.; Matriculation Fee, both sessions, £1; summer session alone, 10s.; Royal Infirmary, Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 3s. The winter session begins on October 13th. Bursaries scholarships, and fellowships, to the number of forty-seven, and of the annual value of £1,028, may be held by students of medicine in this University. They range from £8 to £100 per annum, and are tenable in most cases for two years. The composition fee amounts to about £120.

Edinburgh University.

Practical Instruction.—The following means are afforded for practical instruction: Royal Botanic Garden, Herbarium, and Museum; Zoological Laboratory and Museum of Science and Art; Physical Laboratory; Chemical Laboratories; Dissecting Rooms, Bone Room, and Anatomical Museum; Physiological Laboratory; Medical Jurisprudence and Public Health Laboratories; Materia Medica Museum and Laboratory; *Post-mortem* Department of Royal Infirmary, and University Pathological and Bacteriological Laboratory; Royal Infirmary of nearly 800 beds; Royal Hospital for Sick Children, with nearly 100 beds; Maternity Hospital; City Fever Hospital, with nearly 400 beds; Mental Diseases at Royal Morningside Asylum; Tutorial Classes of Practice of Physic, of Clinical Medicine, and Clinical Surgery.

Fees.—The Sessional Fee for Zoology, Botany (Garden Fee, 5s.), Chemistry, Anatomy Lectures, Physiology, Pathology, Materia Medica, Medical Jurisprudence, Surgery, Medicine, Clinical Surgery (Winter), Clinical Medicine (Winter), is £4 4s. each. Second Course, £3 3s. Third Free. A perpetual ticket taken at the beginning of the first year is £6 6s. Physics, Practical Chemistry, Practical Physiology, Practical Pathology, Clinical Surgery (Summer), Clinical Medicine (Summer), Practical Anatomy (Winter), Operative Surgery, Obstetric Operations, Practical Materia Medica, including Pharmacy, Pathological Bacteriology, Experimental Pharmacology, Vertebrate Morphology, and Comparative Embryology are £3 3s. Practical Botany (besides Garden Fee of 5s.), Elementary Practical Zoology (besides charge of 10s. for Laboratory expenses), Practical Anatomy (Summer), Anthropology, Anatomy Demonstrations, Diseases of Children, Diseases of the Eye, Diseases of the Larynx, Ear, and Nose, Diseases of Tropical Climates, Clinical Instruction on Diseases of the Skin, Regional Anatomy, Physiological Chemistry, Invertebrate Zoology, Organic Chemistry, Mental Diseases, £2 2s. Vaccination, £1 1s. Matriculation Fee, £1 for each year, or 10s. for a Summer Session. Library open from 10 to 4; Saturdays, 10 to 1.

Fellowships, Scholarships, Bursaries, etc.

The Freeland Barbour Fellowship, £100 for original research in midwifery or diseases of women, the *Allan Fellowship* in clinical medicine and surgery, £40. These fellowships are open to competition among those who have gained a high place in the examinations for bachelorship of medicine or surgery.

Funds for Research.

The William Dickson Travelling Fund, amounting to £87 a year, from which grants are made to graduates; and the Earl of Moray Fund for the promotion of research of the annual value of £625 from which grants are made to graduates and others.

Scholarships.

Three Vans Dunlop Scholarships, £100 a year for three years. Successful candidates must study and take the degrees of M.B., M.Ch. of the University. Two scholarships at the beginning of the fourth winter session, one in anatomy and physiology, the other in materia medica, pharmacology; one scholarship at the end of the fifth winter session in pathology, forensic medicine, and public health.

The Stark Scholarship in clinical medicine of about £112, tenable for one year.

The Monat Scholarship in practice of physics of about £55 for the highest place in the class examination in practice of physic.

The Murchison Memorial Scholarship for proficiency in clinical medicine. Examination held alternately in London and Edinburgh. The examination in 1900 will be held in London.

The Buchanan Scholarship of about £40 in midwifery and gynæcology.

The James Scott Scholarship, of the value of £32 10s., in midwifery.

The Ettles Scholarship in medicine, of the value of £31 5s., to the student considered by the Medical Faculty the most distinguished of the year.

Two Hope Prize Scholarships of the value of about £30 in chemistry.

Two Crichton Scholarships for Research, each of the value of £100, one in anatomy and one in physiology.

The Sibbald Medical Scholarship of the value of £40, tenable for three years, given on the results of an examination in chemistry, botany, natural history, and physics.

The Houldsworth Scholarship for promotion of research in pharmacology, £46 tenable for one year.

The Mackay Smith Scholarship in Chemistry of the annual value of £25.

Bursaries.

Town Council Bursaries given by the Town Council. Application to the City Clerk, Council Chambers, Edinburgh.

Two Sibbald Bursaries for students in the Faculty of Medicine who have passed the preliminary examination of faculty of Arts. Applications to

Messrs. Mackenzie, Innes, and Logan, W.S., 23, Queen Street, Edinburgh, before September 15th.

Two Thomson Bursaries of the value of £25, tenable for four years, given on the result of the preliminary examination required of candidates for graduation in medicine. Preference to be given to candidates of the name of Thomson or Traquair, or to natives of the town or county of Dumfries, or of the city of Edinburgh. Candidates claiming preference must send their names to Messrs. Traquair, Dickson, and Maclaren, W.S., 11, Hill Street, Edinburgh, one clear week before the examination.

Five Grierson Bursaries, three of the value of £20 and two of the value of £10, given at the commencement of medical studies and at the commencement of the second, third fourth, and fifth winter sessions respectively.

Two John Aitken Carlyle Bursaries, of the value of £28, awarded at the end of each winter session for anatomy and chemistry and anatomy and physiology respectively.

Two Mackenzie Bursaries, of the value of £16 5s., in practical anatomy.

The Rentom Bursary, of about £20, for one year after an examination in English and mathematics. Applications to the Secretary's office on or before September 16th.

Two Crichton Bursaries, of the value of £50, tenable for four years after examination in languages, mathematics, logic, and moral philosophy. Competitions in autumn and spring.

The M'Cosh Graduates Bursary, £153, and *M'Cosh Medical Bursary*, £11 11s. 4d., to enable the holder to prosecute study or research in a medical school in Europe.

Four Buchanan Bursaries: May be held in the Faculty of Medicine. Further particulars with regard to the above scholarships and bursaries will be found in the *Calendar* of the University.

Edinburgh Royal Infirmary.

Fees.—Six months, £4 4s.; one year, £6 6s.; perpetual, £12 in one sum, or separate payments, £12 12s.

Eight resident physicians and six surgeons are appointed every six months; they live in the house free of charge, save laundry. They must be registered. Many non-resident clinical clerks are also appointed for six months. The physicians and surgeons appoint their own clerks and dressers, and assistants in the Pathological Department are appointed by the pathologists. Instruction is given in all the special departments.

School of Medicine of the Royal Colleges, Edinburgh.

The teaching is similar to that of the Scottish Universities, and the students receive similar certificates at the close of each session. The courses on the special subjects not included in the curriculum of the Examining Boards are also conducted by teachers specially qualified in each branch, and have for the last quarter of a century formed a special feature of the School.

This School of Medicine is composed of lecturers licensed by the Royal Colleges of Physicians and Surgeons, and also recognised by the University through their *licentia docendi*, who, for the sake of convenience, lecture in several buildings near at hand to the Royal Infirmary. The lecturers form one body, are all subject to the same rules and regulations, and enjoy the same privileges. A new constitution and set of regulations have recently been drawn up, in virtue of whichthe government of the School is placed in the hands of a Governing Board consisting of five members elected by the Royal College of Physicians, of five members elected by the Royal College of Surgeons, and of five members elected by the Lecturers in the School. This Board, with the assistance of the Standing Committees of the School, supervises the whole management, and specially the maintenance of the efficiency and discipline of the school. The different buildings at present utilised for the purpose of lecturing are the following: 1. Surgeons' Hall, Nicolson Street; 2. Minto House, Chambers Street; 3. Nicolson Square: 4. Marshall Street; 5. The New School, Bristo Street; and other places.

Medical College for Women, Edinburgh.

Clinical instruction in the Royal Infirmary qualifies for graduation in the Universities. Precisely the same facilities for medical study are given as to male students in the School of Medicine, Edinburgh. Arrangements, fees, and regulations are similar. All the teachers are qualified lecturers of the School, and their courses admit to the various qualifying bodies for women. The lecturers are also recognised by the University of Edinburgh as giving courses admitting to the degrees of M.B., Ch.B. In the case of those proceeding to such degrees, the same fees as those in the University must be paid. The classes, with the exception of those in the Royal Infirmary, are open to all ladies, whether taking a full medical curriculum or not. Prospectus and all information from Miss H. F. Mackay, 20, Chambers Street (Minto House).

University of Glasgow.

The whole course of study presented by the University of Glasgow (*q. v.*) can be passed in the Medical School of the University.

For practical work there are available the Physical, Chemical (winter course, £10 10s.; summer, £5 5s.), Physiological, Zoological, and Botanical Laboratories; and the Botanic Gardens.

Partial Study Elsewhere.—Only two of the five years need be spent at the University; the remaining three may be spent in such universities or schools, or under such teachers, as are recognised by the University Court.

Bursaries, etc.—Sixteen Bursaries and Prizes in Medicine are open to competition during Session 1899-1900, the aggregate value of which is about £335, besides 15 in the Faculty of Science, and 3 in the Faculty of Arts open to medical students. Several of the bursaries are also open to women.

Hospitals.—The University is in the immediate neighbourhood of the Western Infirmary, with 400 beds, and near to the Lunatic Asylum, and Special Hospitals for Diseases of the Eye, Skin, etc.

Fees.—The class fees are, as a rule, £3 3s., excepting Practical Anatomy and Anatomical Lectures (in summer), Operative Surgery, Embryology, and Diseases of Women, which are £2 2s. A Perpetual Hospital Ticket costs £21, payable £10 10s. in the first year, and the same the second, and this includes clinical instruction. The fee for the degree of M.D. is £10 10s. (exclusive of stamp duty, £10); for Ch.M., £10 10s. The total class and hospital fees for the five years' course amount to about £97 13s., to which add the annual matriculation fee (£1 1s.) and the fees for M.B., Ch.B. (£23 2s.) making a total of £126.

The Women's Department of the University (Queen Margaret College).—The course of study, degrees, regulations, fees, etc., are the same as for men. Women students have their own buildings, with class rooms, reading and writing rooms, drawing room, library, etc., and are taught in classes apart from male students, but have all the rights and privileges of university students. Their clinical studies are taken in the Royal Infirmary, where wards are reserved for their exclusive use, and in its dispensaries; also in the Royal Hospital for Sick Children; the Royal Asylum, Gartnavel; the city of Glasgow Fever Hospital, Belvidere; and the Glasgow Maternity Hospital.

Scholarships and Bursaries at Queen Margaret College.—A scholarship of £20 for three years will be open to competition by first year students at the First Professional Examination in October, 1901. The Mackintosh Mental Science Bursary of £31 is open to medical students who have attended the Insanity Lectures. The University Commissioners have issued an Ordinance to make regulations for the admission of women to certain Bursaries, Scholarships, and Fellowships. It came into force on May 11th, 1895. Miss Galloway will supply details. See Prospectus for 1899-1900, page 46.

Class and Examination Fees.—The class and hospital fees for the subjects enjoined by Ordinance as constituting a five years' course of study and clinical work amount to about £95 11s. To this must be added £5 5s. for matriculation fees (£1 1s. for each of five years), £23 2s. for examination fees, and £5 1s. for registration as a medical practitioner.

Board for Students.—A House of Residence for women students, Queen Margaret Hall, is situated near the College. The cost for board and residence is £30 to £37 10s. for the College session of 30 weeks, according to accommodation. Students bring their own towels and dinner napkins. Full information can be obtained from Miss Galloway, Queen Margaret College; or from the Lady Superintendent, Queen Margaret Hall, Bute Gardens, Glasgow.

For further information male students may apply to Mr. W. Innes Addison, Matriculation Office, Glasgow University; women students to Miss Galloway, Queen Margaret College, Glasgow, W., from whom copies of the prospectus may be got.

St. Mungo's College, Glasgow.

The College buildings are situated within the grounds of the Royal Infirmary, the wards and clinical instruction therein

being available for students. Qualifying classes are held during the winter in Physics, Zoology, Embryology, Chemistry, Anatomy, Materia Medica, Physiology, Pathology, Medicine, Surgery, Ophthalmology, Gynæcology, Diseases of Throat and Nose, and in Public Health, Laboratory Work. Instruction is also given daily in the Dispensary by the Assistant Physicians and Surgeons of the Royal Infirmary. During the summer the classes include Botany, Medical Chemistry, Practical Pathology, Practical Physiology, Anatomy, Operative Surgery, Diseases of Children, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, Dermatology, Otology, Bacteriology and Psychological Medicine. All classes in this College qualify for the diplomas of the English, Scotch, and Irish Conjoint Boards.

Sessional Fees.—First year, £15 15s.; second year, £15 15s.; third year, £10 10s.; fourth year (and perpetual), £5 5s. Total cost of qualifying course, including Corporation Licence, about £100.

Class Fees.—£2 2s. for each class, except Anatomy, £4 4s.; Pathology, £4 4s.; Zoology, £4 4s.; Botany, £3 3s.; Otology, Throat and Nose, and Dermatology, £1 1s.

Hospital Fees.—First year, £10 10s.; second year (and perpetual), £10 10s.

Glasgow: Anderson's College Medical School.

Lectures are delivered on all the subjects of the five years' curriculum. Hospital Practice and Clinical Lectures in Western or Royal Infirmary; Pathology in Western or Royal Infirmary; Vaccination and Dispensary Practice in Western or Royal Infirmary Dispensary. The above lectures qualify for all the Licensing Boards in the United Kingdom. They are also recognised by the Universities of London, Durham, Ireland, Glasgow, and Edinburgh (the latter two under certain conditions which are stated in the School *Calendar*).

The new buildings are situated in Dumbarton Road, immediately to the west of the entrance to the Western Infirmary, within two minutes' walk of that institution and four minutes' walk of the University.

A *Calendar* containing full particulars of the School may be obtained from the Secretary to the Medical Faculty, Anderson's College Medical School, Dumbarton Road, Partick, Glasgow.

The session opens on Thursday, October 19th.

Class Fees.—(Anatomy, Chemistry, Practical Physiology, Practical Materia Medica and Pharmacy, Zoology, Botany, and Mental Diseases excepted), first session, £2 2s.; second session, £1 1s.; afterwards free. Anatomy Class Fees: Winter, first session (including Practical Anatomy), £4 4s.; second session (including Practical Anatomy), £4 4s.; third session, £2 2s. To those who have had the necessary courses of Practical Anatomy, the fee will be £1 1s. Summer—Lectures and Practical Anatomy, £2 12s. 6d.; Lectures alone, £1 11s. 6d.; Practical Anatomy alone, £1 1s.; Osteology and Practical Anatomy, £2 12s. 6d.; Osteology alone, £1 11s. 6d. Chemistry Class Fees: Winter, first course, £2 2s.; second course, £2 2s. Summer (Practical), first course, £2 2s.; second course, £2 2s. Practical Physiology Class Fees: first course, £2 2s.; second course, £2 2s. Practical Materia Medica and Pharmacy Fees: first session, £2 2s.; second session, £2 2s. Zoology, £1 11s. 6d. Practical Zoology, £1 1s. Botany, £1 11s. 6d. Practical Botany, £1 1s. Mental Diseases, £1 1s. Matriculation Fee: Winter, 10s. to those taking out two or more classes, which represents a combined fee for the winter and summer sessions; 5s. to those taking only one class. Summer, 5s., except to those who have paid a fee of 10s. for the winter session. Students who have attended classes at other schools, and who desire to pursue their studies at Anderson's College Medical School, will be admitted to such classes as they may have attended elsewhere at the reduced fees.

University College, Dundee.

Some information as to this college will be found under the head of University of St. Andrews.

Dundee Royal Infirmary.—The Infirmary contains 286 beds, with a special ward for the treatment of diseases of children. Three Resident Qualified Assistants are appointed annually. Clinical Clerks and Dressers are attached to the physicians and surgeons, and students are appointed to assist in the *post-mortem* room. Instruction in Practical Pharmacy is given in connection with the Dispensary. Out-patients are seen daily at 9 A.M. The instruction given at the infirmary is recognised for purposes of graduation by all the Scotch Universities, the University of London, the Royal University of Ireland, and by the Royal Colleges of England and Scotland. Further information may be had on application to the Medical Superintendent.

Dundee Royal Asylum.—The appointments include a qualified Resident Assistant and two Resident Clinical Clerks. Clinical instruction is given.

Fees.—The fee in the case of most of the classes is 3 guineas. The hospital ticket is 3 guineas a year or 2 guineas a session. The total fees for the five years' curriculum would amount to about 80 guineas.

The session begins on Wednesday, October 11th.

IRELAND.

Students desirous of prosecuting their medical studies in Ireland may attend the School of Physic in the University of Dublin; the Schools of Surgery of the Royal College of Surgeons of Ireland, the Catholic University School of Medicine, Dublin; or the Schools of Medicine of the Queen's Colleges in Belfast, Cork, or Galway. The student will be guided in making his arrangements for clinical instruction by the advice of the teachers of the School which he may select to attend.

School of Physic in Ireland, Dublin.

This school is formed by an amalgamation of the medical school of Trinity College and of the Royal College of Physicians; the King's Professors of Institutes of Medicine, Practice of Medicine, Materia Medica, and Midwifery, being appointed by the latter.

Clinical instruction is given by the staff of Sir Patrick Dun's Hospital. The following Hospitals are also recognised by the Board of Trinity College: Adelaide Hospitals, City of Dublin Hospital, Dr. Steevens's Hospital, House of Industry Hospitals, Jervis Street Infirmary, Mater Misericordiæ Hospital, Mercer's Hospital, Meath Hospital, the National Eye and Ear Infirmary, St. Mark's Ophthalmic Hospital, St. Vincent's Hospital, Richmond Hospital, St. Patrick's Hospital.

Catholic University Medical School.

Prospectuses and further information about this school, which provides complete courses of lectures as required by the examining bodies, may be obtained from the Registrar of the School, Cecilia Street, Dublin, who has written a very useful *Guide for Medical Students*. The composition fee is £165 3s.

The Schools of Surgery of the Royal College of Surgeons in Ireland.

The Schools of Surgery are attached by Charter to the Royal College of Surgeons, Dublin, and have existed as a department of the College for over a century. They are carried on within the College buildings, and are specially subject to the supervision and control of the Council. The buildings have been reconstructed, the capacity of the Dissecting Room nearly trebled, and special Chemical, Pathological, Bacteriological, Public Health, and Pharmaceutical Laboratories fitted with the most approved appliances, in order that students may have the advantage of the most modern methods of instruction. There are special rooms set apart for lady students. The entire building is now heated by hot-water pipes, and lighted throughout by the electric light. A refreshment room is also open, where students can have luncheon. The certificates of this school are accepted by all the Universities and Colleges of Physicians and Surgeons throughout the kingdom. The winter session commences October 1st, and the summer session April 1st. All the lectures and courses of practical instruction may be attended by medical students who are otherwise unconnected with the College.

Prizes.—The Barker Anatomical Prize (£21). The Carmichael Scholarship (£15). The Mayne Scholarship (£15). The Gold Medal in Surgery, and the Stoney Memorial Medal in Anatomy. Class Prizes of £3 and £1, accompanied by medals, will also be given in each subject.

Fees.—The composition fee is £166 19s.

Prospectus and students' guides will be forwarded on written application to the Registrar, Royal College of Surgeons, Dublin.

Queen's College, Belfast.

The courses of study meet the requirements of the Royal University of Ireland and other examining bodies. The class fee is £2, except in a few cases. The total cost of the medical curriculum of the Royal University of Ireland, including examination fees and perpetual fee for the Royal Hospital, but not including fees for the special hospitals, is about £95. It amounts to about the same for the course of the Conjoint Board in Ireland.

Clinical instruction is given at the Royal Hospital. *Fees*, six months, £7 7s.; nine months, £9 9s.; Perpetual, £21 in two instalments. The Maternity Hospital, the Ulster Hospital for Women and Children, the Hospital for Sick Children, the Ophthalmic Hospital, the Ulster Eye, Ear, and Throat Hospital, and the District Lunatic Asylum, are open to students.

Prizes.—(1) Ten medical scholarships each year, value £20 each; (2) two Dunville studentships (one each alternate year), value £145 each; (3) one Andrews studentship each alternate year, value £145; (4) numerous sessional prizes. Clinical Prizes: two exhibitions each year, value £20 each.

The College contains laboratories in connection with the departments of Chemistry, Physiology, and Pathology.

A Students' Union provides dining room, reading room, library, and various recreation rooms.

A pamphlet containing full information can be had free on application to the Registrar, Queen's College, Belfast.

Queen's College, Cork.

Clinical instruction is given at the North and South Infirmaries (each 100 beds). Students can also attend the Mercy Hospital 60 beds, the Cork Union Hospital, the County and City of Cork Lying-in Hospital, the Maternity, the Hospital for Diseases of Women and Children, the Fever Hospital, the Ophthalmic and Aural Hospital, and the Eglington Lunatic Asylum. The session at Queen's College extends from October to April inclusive (twenty-seven weeks), but arrangements have been made for the delivery of some of the three months' courses of lectures during the months of April, May, and June. The hospitals are open to students in May, June, and July also. The composition fee is £100.

Clinical Hospitals of Dublin.

Sir Patrick Dun's Hospital.

Appointments.—A House-Surgeon is appointed annually, and four Resident Pupils half-yearly.

Hospital Attendance and Clinical Lectures.—The payment of £12 12s. entitles a student to the benefits of Hospital attendance and Clinical teaching for the winter and summer sessions. *Fee* for winter session only, £8 8s. *Fee* for summer session only, £5 5s. The fees will be received by Dr. Taylor, Honorary Secretary, by any member of the staff, or by the Registrar of the School of Physic in Trinity College.

Richmond, Whitworth, and Hardwicke Hospitals.

These Hospitals contain 312 beds: 110 for surgical cases, 82 for medical cases, 120 for fever and other epidemic diseases.

The Richmond Lunatic Asylum, containing over 1,200 patients, adjoins these hospitals, affording facility for the study of mental disease.

Appointments.—A Resident Surgeon and a Resident Physician are appointed every year, receive a salary, and hold office for one year. Eight Residential Clinical Clerks are appointed each half year, and provided with furnished apartments, fuel, etc. These appointments are open not only to advanced students, but also to those who are qualified in Medicine and Surgery. The Dressers are selected from among the best qualified of the pupils, without the payment of any additional fee.

Further information can be obtained from the Honorary Secretary, Dr. J. O'Carroll, 43, Merrion Square E., or the Honorary Treasurer, Sir William Thomson, 54, Stephen's Green, E.

Adelaide Medical and Surgical Hospitals.

The hospitals contain 140 beds. A House-Surgeon is appointed yearly, and three resident pupils are selected half-yearly.

Further particulars may be obtained from Mr. F. T. Heuston, 15, St. Stephen's Green, Dublin, N., or any of the members of the medical staff.

City of Dublin Hospital.

This Hospital, in addition to the general Medical and Surgical Wards, contains special wards for Ophthalmic and Aural Cases, Diseases of Women, and Diseases of Children. There is also an isolated building for the reception of infectious cases. An entirely new operation theatre has been constructed in accordance with the most modern surgical requirements.

Appointments.—Clinical Clerks to the Physicians and Dressers to the Surgeons are appointed from the most deserving of the class, and certificates awarded for the faithful performance of their duties. Medical and Surgical Resident Pupils are appointed, and Special Certificates awarded if merited. A Resident Medical Officer is appointed annually.

For detailed prospectus or further particulars apply to Mr. G. Jameson Johnston, F.R.C.S.I., Honorary Secretary, Medical Board, 13, Lower Fitzwilliam Street, or at the hospital.

Jervis Street Hospital, Dublin.

The hospital was founded in 1718, and was rebuilt in 1886.

Appointments.—Resident Pupils, Clinical Clerks, and Dressers are appointed every six months without additional fee, and are awarded special certificates if their duties have been satisfactorily performed. Six interns are appointed each half-year, and are provided with apartments, etc., free of expense. *Fees:* Winter session, £8 8s.; summer, £5 5s.; winter and summer, £12 12s.

The hospital prospectus and any further information can be obtained from Dr. Thos. G. Stevens, Hon. Secretary, Medical Board.

Mater Misericordiæ Hospital.

This hospital, the largest in Dublin, at present contains 335 beds. Fifty beds are specially reserved for the reception of patients suffering from fever and other contagious diseases. Connected with the hospital are extensive Dispensaries, which afford valuable opportunities for the study of general Medical and Surgical Diseases, Accidents, etc.

Appointments.—Four House-Physicians, eight House-Surgeons, and twelve Resident Pupils are elected from the most attentive of the class, each year.

Entries are to be made with and fees paid to the Registrar, A. Chance, F.R.C.S., 90, Merrion Square, Dublin.

A prospectus containing in detail the arrangements for clinical instruction, prizes, etc., may be obtained from the Secretary of the Medical Board, Dr. Joseph Redmond, 41, Merrion Square East, Dublin.

Mercer's Hospital.

This hospital, founded in 1707, is situated in the centre of Dublin, in the immediate vicinity of the Schools of Surgery of the Royal College of Surgeons, the Catholic University School of Medicine, and within five minutes' walk of Trinity College. It contains 120 beds for medical and surgical cases, and arrangements have been made with the medical officers of Cork Street Fever Hospital whereby all students of this hospital are entitled to attend the clinical instruction of that institution, and become eligible for the posts of Resident Pupil, etc. There is a large Out-patient Department, and a Special Department for diseases peculiar to women and infants. During the last few years the hospital has undergone extensive alterations in order to bring it up to modern requirements.

Appointments.—A House-Surgeon is appointed annually, Five Resident Pupils are appointed, each for six months, and Clinical Clerks and Dressers monthly, from amongst the most deserving members of the class.

Fees.—Winter, six months. £8 8s.; Summer, three months, £5 5s.; nine months, £12 12s.

The certificates of this hospital are recognised by all licensing bodies.

For further particulars, apply to Mr. R. Charles B. Maunsell, M.B., etc., 47, Fitzwilliam Square, Dublin.

DR. STEEVENS'S HOSPITAL.

The hospital contains 200 beds. The facilities for obtaining practical acquaintance with the treatment of injuries from accidents and other emergencies are unusually great in this institution, owing to its position, and there are always in the wards instructive cases of acute and chronic disease. The various forms of syphilis can be studied in the ward set apart for this disease, and there is also a separate Fever House.

A fee of £10 10s. is charged for each term of three months' residence. This fee includes that for Hospital Practice, and must be paid in advance. Resident pupils not requiring certificates in Hospital Practice are admitted at reduced rates.

There is accommodation for two Medical and six Surgical Resident Pupils, who are provided with separate furnished rooms, with coals and gas, also a common comfortable sitting-room for meals, which latter can be obtained at a reasonable rate.

Further particulars may be obtained from the Honorary Secretary, Dr. R. A. Hayes, 82, Merrion Square South, Dublin.

ST. VINCENT'S HOSPITAL.

This hospital contains 160 beds, and has attached to it a dispensary and three special dispensaries. The whole practice of the hospital is available for clinical instruction, which is carried on during the session in a systematic manner. Systematic courses are delivered in Medicine and Surgery. *Post-mortem* examinations are made in the pathological theatre, and frequent opportunities are given for the examination of morbid specimens. There is a museum in connection with this department. Instruction is also given daily in the dispensaries.

The hospital is in proximity to the principal colleges and medical schools. Its certificates are recognised by all the universities and licensing bodies in the United Kingdom. Two Resident Medical Officers and sixteen Resident Pupils are appointed annually from amongst the most deserving members of the class. The fees for clinical attendance are the same as at the other Dublin hospitals.

Arrangements have been made with the Fever Hospital, Cork Street, for providing senior students with clinical instruction in infective fevers, as required by the licensing bodies, without extra charge.

Further particulars can be obtained on application to the Honorary Secretary, Mr. R. F. Tobin, F.R.C.S.I., 60, Stephen's Green, Dublin.

MEATH HOSPITAL AND CO. DUBLIN INFIRMARY.

This hospital now contains 160 beds available for clinical teaching. A new building for the isolated treatment of Fevers has recently been added. New Accident Wards and Operating Theatres have now been completed and all the modern requirements of Surgical Teaching have been provided. The certificates of this hospital are recognised by all the universities and licensing bodies of the United Kingdom.

Twelve Medical and Surgical Resident Pupils and Clinical Clerks and Dressers are appointed every session, and a House-Surgeon is elected annually.

A prospectus giving the complete arrangements for the Medical and Surgical Classes for the coming session may be obtained from the Secretary of the Medical Board, R. Glasgow Patteson, F.R.C.S., 20, Lower Baggot Street, Dublin.

ROTUNDA HOSPITAL.

Master—Dr. R. D. Purefoy.

This institution consists of two distinct hospitals—namely, the Lying-in Hospital, into which 1,700 labour cases are, on an average, admitted annually, and the Auxiliary Hospital, set apart for the reception and treatment of patients suffering from the various forms of uterine and ovarian disease; about 500 patients are received into this hospital during each year.

There is also in connection with the hospital a large extern maternity (1,838 patients were in the past year attended at their own homes), and a Dispensary for Diseases Peculiar to Women, which is open daily.

Pupils are admitted to the practice of all these departments. Clinical instruction in Midwifery and the Diseases of Wome is given daily, and lectures are delivered regularly during t session on the subjects. Pupils can enter at any time.

The diploma from this hospital is granted to pupils on the passing an examination before the Master and Assistan after a period of six months' attendance on the practice of t hospital.

Accommodation is provided for a limited number of inte pupils.

Fees.—Intern pupils: Six months, £21; three month £12 12s.; two months, £9 9s.; one month, £6 6s. Exte pupils: Six months, £10 10s.; three months, £6 6s.

CLINICAL HOSPITALS.[1]

OPPORTUNITIES for clinical instruction and study are afford by many hospitals which are not directly connected with a medical school, and the student will often find it to h advantage to resort to them, especially in the fifth year of t curriculum, as they offer great facilities for gaining practic clinical experience. The following pages contain brief pa ticulars as to the most important of these.[2]

LONDON.

Clinical instruction and appointments as Clinical Assistan can be obtained at many of the Special Hospitals in Londo as well as at the General Hospitals to which medical schoo are not attached. Resident appointments (Resident Medic Officer, House-Surgeon, House-Physician, etc.) are made fro time to time, and vacancies are announced in our column The appointments are usually for stated periods of six twelve months.

GENERAL HOSPITALS.

Great Northern Central Hospital, Holloway Road, N.—Th hospital is now recognised by the Examining Board England of the Royal Colleges of Physicians and Surgeons a place of study during the fifth year of the medical curric lum. The hospital contains 159 beds, all of which are present occupied. The large rectangular and circular ward each of which contains 20 beds, the operation theatre, ou patient department, general and special, and the pathologic departments, have all been erected since 1887. Medic practitioners are invited to attend the general and speci practice of the hospital. Clinical Assistants (qualified Clinical Clerks, and Pathological Clerks are appointed in t general and special departments, and may receive certificat at the end of their terms of office. There are four Reside Medical Officers, Senior and Junior House-Surgeons, Seni and Junior House-Physicians; also Pathologist and Registra Casualty Officer, and Anæsthetists. Full particulars of a rules for these appointments can be obtained from Peyton B. Beale, F.R.C.S., Honorary Secretary, Medical Committee

London Temperance Hospital.—The hospital contains 1 beds. The medical and surgical practice is open to studen and practitioners. Appointments (vacancies for which a advertised in the medical journals): Surgical and Medic Registrars, Resident Medical Officer, and one Assistan Resident Medical Officer. For particulars as to hospit practice and classes apply at the hospital.

Seamen's Hospital Society.—Dreadnought Hospital, Gree wich, 225 beds. Branch Hospital, Royal Victoria and Albe Docks; 50 beds. Dispensary at 51, East India Dock Roa and at Gravesend. Opportunities are afforded to student and others who may be desirous of studying Practical Surger and diseases incidental to Tropical Climates. Informatio with regard to the School of Tropical Medicine will be foun on p. 552.

West London Hospital, Hammersmith Road, W. (West Lo don Post-graduate College).—The hospital contains 175 bed of which 150 are now in occupation. Some 2,500 in-patient are treated in the hospital during the year. The teaching i the hospital is especially devoted to the requirements of pos graduates. The Physicians and Surgeons attend on Monday Tuesdays, Thursdays, and Fridays, at 2.30 P.M., and instru

[1] Additions or corrections intended for future editions should be fo warded to the Editor not later than the end of July in each year.

[2] For Clinical Hospitals in Dublin see page 543.

tion is given by the Assistant Physicians and Surgeons in the O.P. department daily, at 2.15 P.M. A course of 18 special demonstrations is given in the wards by the Physicians and Surgeons each session. Operations are performed daily, except Saturdays, at 2.30 P.M. There are special departments for Diseases of the Eye, Skin, Ear, Throat, and Nose, Women, and for Orthopædic Surgery. Post-Graduate lectures are delivered on Mondays and Thursdays at 5 o'clock. The date of the commencement of each course is advertised in the medical journals. No Junior Students are admitted to the practice of the hospital, but since it is recognised by the Conjoint Board of the Colleges of Physicians and Surgeons as an institution where six months of the fifth year of study may be passed, fifth year's students will be admitted as Clinical Clerks and Dressers. The course of Ophthalmology is recognised by the Army Medical Department. There is a pathological investigation laboratory attached to the hospital, at which instruction is given in practical pathology and elementary bacteriology. A large lecture room, together with reading and writing rooms, are provided for the use of post-graduates. The fee for the hospital practice, including Post-Graduate Lectures, is £3 3s. for three months, and £5 5s. for one year. For Post-Graduate Lectures alone, £1 11s. 6d. for each course of 18 lectures. Full particulars of the next Post-Graduate Course and any other information about Post-Graduate teaching, can be obtained on application to the Dean, Mr. L. A. Bidwell, at the hospital.

North-West London Hospital, Kentish Town Road.—The hospital, which was established in 1878, provides 53 beds. It is a general hospital. There are two spacious wards for men and women respectively. The children's wards contain 18 cots. The special departments include: (1) Diseases of women; (2) diseases of the eye; (3) diseases of the skin; (4) dental. There are two resident officers; an honorarium at the rate of £50 per annum attaches to the senior post and £30 to the junior. Operation day Thursday, at 2.30 o'clock. Further particulars from J. Herbert Stowers, M.D., Honorary Secretary, Medical Committee, 128, Harley Street, W.

Children's Hospitals.

The Hospital for Sick Children, Great Ormond Street, W.C., contains 200 beds, divided into 102 medical, 73 surgical, and 25 for special and infectious cases, besides 52 beds at the Convalescent Branch, Highgate. The hospital having been recognised by the Conjoint Board for England as a place where, under the new curriculum, six months of the fifth year may be spent in clinical work, the practice is arranged to meet this need, and is open to students who have completed four years of medical study, and also to qualified medical men. Appointments are made every three months to six medical clerkships and six surgical clerkships, which are open to students at the hospital. Lectures or Demonstrations are given once or twice every week during both winter and summer sessions. The sessions are of ten weeks' duration, and begin in October, January, and March. Fees for hospital practice, three months, 2 guineas; perpetual, 3 guineas. Prospectuses and further information will be forwarded on application to the Secretary, Mr. Adrian Hope, at the hospital.

East London Hospital for Children, Shadwell.—The hospital contains 102 cots, one-third being devoted to infants. Two House-Surgeons and two House-Physicians (holding office for six months) are appointed annually. This hospital is recognised by the Conjoint Board for England as a place of instruction for students, at which six months of their fifth year under the new regulations may be spent in clinical work. The following opportunities for the study of the diseases of childhood are offered to gentlemen who have completed four years of medical study, and to those who are already qualified: The practice of the hospital (in the out-patients' department) is open to students every day (except Saturdays), at such hours as the physicians or surgeons for the day are attending. The in-patient practice is open to students holding clerkships or dresserships in the hospital, and to students not holding appointments during the attendance of the physicians and surgeons. A certain number of Clinical Clerks and Dressers are appointed every three months to each physician and surgeon. Gentlemen who wish to hold these appointments must have completed their fourth year of medical study. They are eligible for reappointment at the end of three months. Practitioners and students are admitted to the practice of the hospital in both the wards and out-patient department, and clerkships and dresserships can be obtained. Any additional information may be obtained on applying to Mr. H. Betham Robinson, M.S., F.R.C.S., 1, Upper Wimpole Street, W., or to Mr. Thomas Hayes, the Secretary at the hospital.

North-Eastern Hospital for Children, Hackney Road, Shoreditch, N.E.—The hospital contains 57 beds. Patients in 1898: In-patients, 764 (210 under 2 years of age), out-patients, 15,554 new cases, 58,551 attendances. There are Special Dental, Eye, and Roentgen Rays Departments. Particulars of facilities for attending Medical and Surgical practice can be obtained on application to T. Glenton-Kerr, Secretary (City office), 27, Clement's Lane, E.C.

Lying-in Hospitals and Hospitals for Women.

Queen Charlotte's Lying-in Hospital and Midwifery Training School.—This hospital receives over 1,100 patients annually, besides having a large out-patient department. Medical pupils are received at all times of the year. Pupils have unusual opportunities of seeing Obstetric complications and Operative Midwifery, on account of the very large number of primiparous cases—upwards of three-fourths of the total admissions. Clinical instruction is given. Certificates of attendance at this hospital are recognised by all Universities, Colleges, and Licensing Bodies. Pupil Midwives and Monthly Nurses are received and specially trained. *Fees.*—Medical Pupils, £8 8s. for four weeks, exclusive of board and lodging; Pupil Midwives, £26 5s. for three months; Pupil Nurses, £15 15s. for twelve weeks, inclusive of board and lodging. There is a residence for Medical Pupils close to, and in telephonic communication with, the hospital. *Terms.*—Partial board and residence, £1 1s. per week.

Hospital for Women, Soho Square.—There is an organised School for Gynæcology open to qualified medical men, and students after their fourth year. A limited number of Clinical Assistants to the Physicians and Surgeons in the Out-patient Department are appointed every three months. Clinical instruction is given also in the theatre and in the wards. *Fee* for the three months' course, £8 8s. Further information can be obtained by letter, addressed to the Dean at the hospital.

Ophthalmic Hospitals.

Royal London Ophthalmic Hospital, Moorfields.—The hospital, founded in 1804, and considerably enlarged in 1876, now contains 100 beds for in-patients, which were occupied during last year by 2,227 persons; in the same year the out-patients were 25,713, and the attendances 101,543. Operations are performed daily, from 10 A.M. until 1 P.M., and three surgeons attend on each day. Students are admitted to the practice of the hospital. *Fees*, for six months, £3 3s.; perpetual, £5 5s. Courses of instruction in the following subjects are given at the hospital periodically: (1) The Use of the Ophthalmoscope; (2) Errors of Refraction; (3) External Diseases of the Eye; (4) Surgical Anatomy of the Eye. Systematic instruction is also given in the Laboratory of the hospital on the Pathology of the Eye. Perpetual Students are admitted to the lectures free. Students of the hospital are eligible for the offices of House-Surgeon, Out-Patient Surgical Officer, or Clinical and Junior Assistants. Junior Assistants are appointed every three months. Any further information will be furnished by Mr. Robert J. Bland, Secretary.

Royal Westminster Ophthalmic Hospital, King William Street, West Strand.—The hospital contains 30 beds, and an out-patient department. The practice is open to practitioners and students from 1 to 4 P.M. daily. Special instruction is given in the Diagnosis, Pathology, and Treatment of Eye Affections, including the Operations on the Eye, the Treatment of Errors of Refraction, and the Use of the Ophthalmoscope. *Fees:* Six months, £3 3s.; perpetual, £5 5s. For particulars, apply to Mr. Adams Frost, 30, Cavendish Square, or at the hospital.

Royal Eye Hospital, Southwark.—This hospital contains 40 beds and 2 cots. The new patients in the out-patient department number over 16,000 yearly. Operations are performed

and patients seen daily at 2 P.M. Qualified practitioners and students are admitted to the practice of the hospital. *Fees:* For three months, £2 2s.; for six months, £3 3s.; perpetual, £5 5s. Courses on Ophthalmoscopy, Refraction, and Diseases of the Eye, each £1 1s. (perpetual students one course free); Pathology, £1 1s., to cover cost of materials. Tutorial classes arranged to suit candidates for the various examinations. Qualified students of the hospital are eligible for the offices of Registrar and House-Surgeon, and may also be appointed Clinical Assistants for six months, and are eligible for re-election. Further particulars may be obtained from Mr. Edwin Easton, Acting Secretary, at the hospital, Southwark, S.E.

Central London Ophthalmic Hospital, Gray's Inn Road, W.C.—Clinical instruction is given in this hospital, which contains 28 beds. Full particulars can be obtained from the Secretary.

Fever and Small-pox Hospitals of the Metropolitan Asylums Board.

Students are admitted to study at the Fever Hospitals and the Small-pox Hospital Ships of the Metropolitan Asylums Board after they have completed the third year of medical education, provided they have held the offices of clinical clerk and dresser, and have obtained the sanction of the medical school to which they belong. The minimum duration of the course of study at the fever hospitals is two months, and at the small-pox ships not less than two weeks, not more than four. At the fever hospitals the student may attend three days, and must attend two days, a week; at the small-pox ships he resides, paying 12s. a week for board and lodging. He must abide by the rules laid down as to disinfection and other matters, and must satisfy the Board of Management that he is sufficiently protected against small-pox by vaccination or otherwise. A certificate signed by the medical superintendent of the hospital at which attendance is made is granted to students who complete satisfactorily the courses of study. Qualified medical men are admitted under similar terms and conditions.

Fees.—Fever hospitals, two months, £3 3s., and £1 1s. for every additional month; small-pox ships, two weeks, £2 2s., and £1 1s. for the remaining period.

Other Special Hospitals: London.

Bethlem Royal Hospital—Two Resident House Physicians are appointed twice a year for six months from recently qualified medical students. Students of certain hospitals are allowed to attend for clinical instruction. Qualified medical men are allowed to attend for three months on payment of a fee. Post-graduate courses are given from time to time.

Hospital for Consumption and Diseases of the Chest, Brompton.—The hospital has been recognised by the Conjoint Board for England as a place where under the present curriculum six months of the fifth year may be spent in clinical work. There are 321 beds in the two buildings constituting the hospital, and a special throat department. Pupils are admitted to the in-patient and out-patient practice of the hospital. Three courses of lectures and demonstrations will be given during the year. The next course will commence in October, 1899. Clinical assistants are appointed to the Assistant Physicians in the out-patient department, and clinical clerks are appointed to the Physicians in the wards. These appointments are tenable from three to six months. The fee for the practice of the hospital is £1 1s. for each month, or £2 2s. for each period of three months, or a perpetual fee of £5 5s.

City of London Hospital for Diseases of the Chest, Victoria Park.—There are 164 beds. The practice of the hospital, both as regards in-patients and out-patients, is open to students and medical practitioners. Certificates of attendance in the medical practice of this hospital are recognised by the London University and London medical examining boards. Information as to medical instruction can be obtained on application to the Secretary of the Clinical Subcommittee at the hospital.

National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury.—This hospital with the Finchley branch contains 200 beds and cots. The out-patient practice an lectures are free to students and practitioners. Lectures an demonstrations are given on Tuesdays at 3.30 in three course spring, summer, and winter, and the physicians attend ever Monday, Tuesday, Wednesday, and Friday for out-patients 2 30 Surgical operations are performed on days and at hou of which notice will be posted at the hospital. The hospit has been recognised by the Conjoint Board for England as or of the places where part of the fifth year of study may b spent. Clinical Clerks are appointed to the Physicians fo in-patients and out-patients. All communications regardin clinical clerkships, lectures, and hospital practice should b addressed to the Secretary and General Director at the ho pital.

Central London Throat and Ear Hospital, Gray's Inn Road.—The hospital contains accommodation for seventeen in patients, and has an extensive out-patient department, whic is open to all medical practitioners and students for the pu pose of Clinical Demonstration and Instruction. Fee fo three months' attendance, 3 guineas; for six months, guineas. A course of lectures on the special diseases treate at this hospital is delivered during both the winter an summer months by members of the staff. The date of thes lectures is announced in the medical journals prior to the commencement. They are free to qualified practitioners an advanced students of medicine. Operations on in-patien are performed on Tuesdays at 2 P.M., and on out-patients o Fridays at 2 P.M. Considerable attention is given to scientif work, particularly with regard to bacteriology of the disease of the ear and respiratory passages, for which a special depar ment has been inaugurated.

St. Peter's Hospital for Stone and Urinary Diseases (Henriett Street, Covent Garden).—Qualified medical men and studen are admitted free to the practice of this hospital, which co tains 27 beds, and has a large out-patient attendance (36,6 for 1898). New cases, 4,773. Operations are performed an consultations held on Wednesdays and Fridays at 2. Clinic lectures and demonstrations are given regularly by men bers of the staff.

Royal Ear Hospital, Frith Street, Soho Square, W.—Course of six weeks' duration, in Diseases of the Ear and Nose a given by the members of the staff throughout the teachin years. Students can attend one or more surgeons; the fee f each course (2 clinics a week) is one guinea. The teaching of a practical character, and the number of students limited. The next series of classes will commence o October 3rd. For information, address the Honorary Secr tary of the Medical Board.

St. John's Hospital for Diseases of the Skin.—The Ou patient Practice (at 49, Leicester Square, W.C.) is open free t the medical profession every day from 2 to 4 P.M. on presenta tion of their cards to the Medical Officer in attendance; als on Thursday mornings from 10 20 to noon. Chesterfield Le tures are given free. The In-patient Department with 50 bed is at 238, Uxbridge Road, W. Further particulars may be ob tained from J. Dunlop Costine, Superintendent of the Hos pital, 49, Leicester Square, W.C.

Liverpool.

The following hospitals, in addition to the Royal Infirmar (see page 538), have arrangements for Clinical instruction:

Royal Southern Hospital: Clinical School.—The hospital i situated within convenient distance of the School of Med cine, and contains 200 beds. There is a children's ward, an beds are appropriated to the diseases of women, and also fo cases of tropical disease in connection with the Liverpoo Tropical School. Clinical teaching is given in the hospita and arrangements have been made to render it both thorough and systematic. The members of the staff visit the ward daily, and clinical lectures are given each week. Tutorial classes are also held each day, at which the junior student are instructed in the methods of diagnosis, and the seniors ar prepared for their final examinations. The pathological de partment has a good laboratory attached, in which the stu dents receive practical instruction. *Appointments:* In addition to the usual clinical and *post-mortem* clerkships, tw resident posts of Ambulance Officer are awarded every three months to the students whom the Board may consider mos suited to hold them. *Fees:* Perpetual, £26 5s.; one year

£10 10s.; six months, £7 7s.; three months, £4 4s. *Board* (exclusive of fees for Hospital Practice), £15 15s. per quarter. The practice of the hospital is recognised by all examining bodies. Further particulars may be obtained from the Dean, Mr. Robert Jones, 11, Nelson Street, Liverpool.

Northern Hospital.—The hospital contains 155 beds. There is a special ward for the treatment of children. Clinical instruction is regularly given by the physicians and surgeons during the summer and winter sessions. Clinical Clerkships and Dresserships are open to all students without additional fee. Fees for hospital attendance: Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s.; Practical Pharmacy, £2 2s. Students can enter to the Medical or the Surgical Practice separately on payment of half the above fees. The foundation stone of a new hospital of not less than 200 beds has been laid, in which there will be every facility for clinical teaching and accommodation for resident pupils.

Eye and Ear Infirmary, Myrtle Street.—The infirmary contains 46 beds. Evening courses of Lectures on Refraction and Medical Ophthalmoscopy and Diseases of the Ear are delivered at this infirmary during the winter months by the honorary medical staff. Students of medicine of University College, Liverpool, have free access to the practice of the infirmary. Out-patient dresserships may be obtained on application to the Secretary of the Medical Board. The infirmary is recognised by the Conjoint Board as a teaching institution.

Liverpool Infirmary for Children.—The infirmary contains 88 beds, and has a large out-patient department. In-patients (1898), 1,317; new out-patients, 14,300; out-patient attendances, 58,330. The practice of the hospital is free to students, and clinical instruction is given by the Medical Staff. For further particulars apply to the Secretary of the Medical Board.

Manchester.

In addition to the Royal Infirmary (see page 538) facilities for classical instruction are afforded at the following hospitals:

The Manchester Children's Hospital, Pendlebury.—The hospital at Pendlebury contains 140 beds. The medical staff see out-patients daily at the Dispensary, Gartside Street, at 9.30 A.M., and visit the hospital at 10 A.M. and 5 P.M. The practice of the hospital and dispensary is free to students accompanying the medical staff.

Royal Eye Hospital.—The hospital contains 110 beds. The medical staff attend daily from 9.30 to 12. Clinical instruction is given to students. Further particulars can be obtained from the Secretary, Mr. W. S. Prophet.

St. Mary's Hospital for Diseases of Women and Children.—Sixty beds, including 12 for the reception of lying-in cases, especially those attended with difficulty or danger. In the out-patient department students are taught the various methods of examination and diagnosis, and the use of gynæcological apparatus; while, in the wards, they have an opportunity of becoming familiar with the diagnosis and treatment of graver cases, and of witnessing more important gynæcological operations. The number of maternity cases attended annually is 3,500. A student attends his first five cases under the immediate supervision of the House-Surgeon and Resident Obstetric Assistant Surgeon. The hospital possesses a library, presented by the late Dr. Radford, consisting of nearly 5,000 volumes, chiefly on subjects connected with obstetrics and gynæcology. There is also a museum, containing a large number of pathological specimens, and a valuable collection of deformed pelves, casts, obstetric instruments, and anatomical models. The gynæcological practice of the hospital is free to third and fourth years' students. The fee for the midwifery practice, which includes attendance upon 20 cases of labour, as required by the examining bodies is £2 2s. Application must be made to the House-Surgeon at the hospital.

Manchester Clinical Hospital for Women and Children.—The hospital is situated in Cheetham Hill Road, near the centre of the town, and contains 70 beds. Out-patients are seen daily at 8.30, and the wards are visited at 9 A.M. Secretary, Mr. H. Teague, Barton Arcade, Manchester.

Newcastle-on-Tyne.

Hospital for Sick Children.—There are 60 beds in the hospital, besides an isolated block for infectious and doubtful cases. There is a large out-patient department. The practice of the hospital is open free to all students or qualified practitioners.

Sheffield.

Jessop Hospital for Diseases of Women.—The number of beds is 45; in the Diseases of Women Department 36, and in the Maternity Department 9. Students can attend the practice of the hospital, and be supplied with cases of midwifery. (See also p. 539).

Bath.

Royal United Hospital.—130 beds. The hospital is recognised by the Royal Colleges of Physicians, Surgeons, etc., and licensed for dissections. It contains a library and an excellent museum, in which are a large number of interesting specimens, both in Pathology and Comparative Anatomy. Fees for attendance: Twelve months, £10 10s.; six months, £5 5s. (temporary pupils can also, by permission of the honorary staff, attend the practice of the hospital by the payment of £1 1s. for each month). Instruction in Practical Pharmacy for three months, £3 3s. For further particulars apply to the Secretary, Mr. J. M. Sheppard.

Birmingham.

Birmingham and Midland Hospital for Skin and Urinary Diseases.—The practice of the hospital is open to medical students who have passed their anatomical and physiological examinations, and to registered medical practitioners. The fee for a course of three months is 5 guineas. Further particulars may be obtained from the Honorary Secretary at the hospital.

Bradford.

Bradford Royal Infirmary.—The hospital contains 230 beds. Non-resident pupils are received, and have every opportunity of acquiring a practical knowledge of their profession under the superintendence of a House-Surgeon and House-Physician. One year's attendance is recognised by the Examining Boards. *Fee:* Perpetual, £10 10s.

Brighton.

Sussex County Hospital.—The hospital contains 190 beds, with separate wards for children and for cases requiring isolation; and the Out-Patient Department is attended by 700 or 800 patients weekly. It is recognised by the College of Surgeons and by the Conjoint Board as a hospital where part of a course of Dispensing may be taken. Out-pupils are admitted to the clinical teaching at the fee of £21 for two years. Further information may be obtained from the House-Surgeon.

Canterbury.

Kent and Canterbury Hospital.—The hospital contains 106 beds. Over 700 in-patients and 1,200 out-patients attend every year. Lectures are delivered weekly during term time to the students of St. Augustine's Missionary College, on Practical Medicine by Dr. Gogarty, and on Surgery by Mr. T. W. Reid.

Derby.

Derbyshire Royal Infirmary.—The infirmary has been rebuilt, and will accommodate 198 patients. Pupils are admitted to the practice of the infirmary at £10 10s. a year.

Devonport.

Royal Albert Hospital.—The hospital contains 88 beds. A course of practical pharmacy is given by the dispenser on payment of a fee of £5 5s.; pupils of the medical staff can attend this course on payment of £2 2s.

Edinburgh.

Victoria Hospital for Consumption and Diseases of the Chest.—Excellent opportunity is afforded for the clinical study of Diseases of the Chest. Special Cliniques are arranged from

time to time, both in the hospital itself, which contains 15 beds, and the extensive outdoor department, which has its headquarters in Lauriston Place, close to the University. The number in attendance at these cliniques is limited. The fee is £2 2s. for a six weeks' course. Application for places has to be made some time in advance to Dr. R. W. Philip, 4, Melville Crescent. Two medical appointments in connection with the hospital are vacant every six months: (1) Resident Physicianship; (2) Non-resident Physicianship for the outdoor department. The vacancies occur usually in April and October.

Royal Edinburgh Hospital for Sick Children.—The hospital, which has been recently built, stands in Sciennes Road, about seven minutes' walk from the Medical School and Royal Infirmary, contains 96 available beds, and is fitted up with modern improvements. There are some 700 in-patients and 7,750 out-patients yearly. No cases of infectious disease are admitted. The out-patient department (medical and surgical) is conducted in a building adjoining the hospital, and is well equipped. Systematic clinical courses of instruction, at a fee of £2 2s., which qualify for the University and other examinations, are given at various times throughout the year by the ordinary physicians and surgeons. These are Drs. John Playfair, T. Burn Murdoch, John Thomson, and Mr. Harold J. Stiles. Students may enter at any time. A limited number of clinical clerkships are available, and four resident appointments are made yearly. The Registrar of the Hospital will supply particulars.

Edinburgh Eye, Ear, and Throat Infirmary.—Open daily at 6, Cambridge Street, at 1 P.M., for Eye Diseases; on Monday, Thursday, and Saturday at 12 for Ear Diseases; on Tuesday and Friday at 4 for Throat Diseases. There is a small infirmary of six beds in male and female wards. 2,000 patients are treated annually. Fee for three months, £1 1s.

Edinburgh Royal Maternity and Simpson Memorial Hospital has 28 beds, about 310 in-patients, and 610 out-patients yearly. Cliniques are given by the physicians and their assistants. Fees for three months, £2 2s.

Edinburgh City Hospital for Infectious Diseases contains nearly 400 beds, a large number of which are available for teaching purposes. Short courses of instruction are given by the Visiting Physician and the Medical Superintendent during the winter and summer session at a fee of £2 2s.

Royal Asylum, Morningside, Edinburgh.—There is a clinical field of 500 beds, comprising all the wards except those for private patients. Students have the opportunity of personally coming in contact with and examining the cases, so as to learn the modes of dealing with patients suffering from mental disease; they are exercised in diagnosis and the drawing up of certificates, the aim being to enable them to recognise its early stages, to distinguish its varieties, to adopt suitable treatment, and to advise the relatives as to sending the patient to an asylum. The course extends through the last month of the winter session and the most of the following summer session, and the fee is £2 2s. Dr. Clouston is the Lecturer on Insanity for the University of Edinburgh.

Exeter.

Devon and Exeter Hospital.—The hospital contains 214 beds, including a special Children's Ward. There are a good Library, Museum, Dissecting, and *Post-mortem* Rooms. Attendance on the Practice at this hospital qualifies for all the Examining Boards. Two Resident Pupils are received. Arrangements may be made by which students can attend Midwifery. For further particulars as to fees, etc., apply to the House-Surgeon.

West of England Eye Infirmary.—This infirmary contains 50 beds. Arrangements can be made for students of the Exeter Hospital to attend the practice of the Eye Infirmary.

Glasgow.

Royal Hospital for Sick Children.—This hospital, containing 80 beds for the non-infectious diseases of children, is open for clinical instruction, as is the dispensary, or out-patient department. Students, by paying the fee of £1 1s., are entitled to the practice of the hospital and dispensary for twelve months from the term of entry. Further particulars may be had by applying to the Resident Medical Officer, 45, Scott Street, Garnethill.

Glasgow Western Infirmary.—This hospital adjoins the University of Glasgow. Number of beds, 400. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students may attend whichever they select at the beginning of the session. Special instruction is given to junior students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. Special wards are set apart for Diseases of Women and for Diseases of the Skin. In the Out-Patients Department there are special clinics for Diseases of Women and for Diseases of the Throat, Ear, and Teeth. All the courses of clinical instruction are recognised at the University of Glasgow and other Boards in the kingdom. Nine resident assistants are appointed annually without fee from those who have completed their course. *Fees.*—For the hospital practice, including the various courses of clinical instruction in Medicine and Surgery, £21 in one payment, or in two equal instalments for the first and second years; for six months, £7 7s.; and for three months, £4 4s.

Glasgow Eye Infirmary.—This Infirmary is situated at 174 Berkeley Street, and 80, Charlotte Street. During the year 1894, 17,264 patients were treated, and 3,130 operations performed. Dispensaries open daily at 1 P.M. Operations performed on Wednesday and Saturday, at 2 P.M. Fee for six months, 1 guinea.

Gloucester.

The General Infirmary and the Gloucestershire Eye Institution—The hospital contains 156 beds. Resident and non-resident pupils are admitted by the General Committee on the recommendation of a member of the Medical Board. Each pupil pays in advance £10 for the first half-year, and £5 for every subsequent quarter, or portion of a quarter, of a year. Each resident pupil has board and lodging in the house, for which he pays in advance 26 guineas for the first half-year, and 13 guineas for every subsequent quarter, or portion of a quarter of a year. Each pupil pays in advance to the House-Surgeon a fee of £5 5s. for instruction, and a further fee of £3 3s. for every subsequent year or portion of a year. One year spent at this hospital, after passing a preliminary examination, is recognised by the Royal College of Surgeons.

Lincoln.

County Hospital.—The hospital contains 125 beds, and two isolation beds. The House-Surgeon is allowed to take two pupils, on terms arranged by the Weekly Board, himself, and the pupils. A fee of not less than £10 10s. is paid by every pupil to the hospital. The House-Surgeon is responsible for the conduct of his pupils. The pupils remain in the hospital only when occupied in performing or observing the actual work of the hospital.

Norwich.

Norfolk and Norwich Hospital.—The hospital contains 220 beds. Students (non-resident) are admitted according to the following scale: For three months, £3 3s.; for six months, £5 5s.; as Permanent Student, £8 8s. The resident officers are a House-Physician, House-Surgeon, and Assistant House-Surgeon.

Northampton.

General Infirmary.—There are 163 beds and a large out-patient department. Out-pupils are received, and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given by the House-Surgeon in Anatomy, Materia Medica, and Pharmacy. Non-resident pupils are taken at a fee of £10 10s. annually.

Nottingham.

General Hospital.—The hospital contains 193 beds. The Honorary Staff introduce pupils to witness the practice of the hospitals on payment of £10 10s. annually in advance. The pupils receive instruction from the Resident Medical Officers.

Portsmouth.

Royal Portsmouth Hospital.—133 beds. One year's attendance recognised by the Examining Board. For particulars as to fees apply to the Secretary of the Committee of Management.

Southampton.

Royal South Hants Infirmary.—This institution was established in 1838. The out-patients' building was erected in 1887. The number of beds is 127. The in-patients number about 1,050 a year, the out-patients about 4,500. Large additions to buildings are, including new isolation wards, new operating room, a new ward block, and a steam laundry, nearly finished.

Staffordshire.

Staffordshire General Infirmary.—There are 75 beds. The pupils of medical practitioners resident in the county of Stafford are allowed to witness the medical and surgical practice of the infirmary, and to be present at operations. The pupils of the officers of the institution are admitted to these privileges gratuitously, those of other practitioners on the payment of £10 10s. with each pupil.

North Staffordshire Infirmary and Eye Hospital.—The infirmary has accommodation for 216 patients, including children's wards, eye department, and special ovarian wards. The attendance of pupils at this infirmary is recognised by all the Examining Boards. Particulars as to fees, etc., may be obtained from the Secretary, Mr. R. Hordley, Hartshill, Stoke-on-Trent.

Winchester.

Royal Hants County Hospital.—The hospital contains 108 beds. The Physicians and Surgeons are allowed to introduce a certain number of pupils; the House-Surgeon may also receive a pupil, for whose maintenance a certain sum, to be fixed by the Committee, is payable in advance. Pupils of the hospital may, with the consent of the Committee, become out-pupils, and see the practice of the hospital, under the direction of the House-Surgeon, on the payment of £10 10s. for one year, or £21 for unlimited attendance. Out-pupils are permitted daily (Sundays excepted) to read in the Library on payment of £1 1s.

Wolverhampton.

Wolverhampton and Staffordshire General Hospital.—The hospital contains 230 beds, and is a preparatory School of Medicine and Surgery. The pupils see the whole of the practice of the Physicians and Surgeons, and are trained in clinical work by the medical and surgical staff. Attendance at this hospital is recognised by all the Examining Boards. *Fees:* Six months, £6 6s.; twelve months, £12 12s.; perpetual, £21.

INSTRUCTION IN PRELIMINARY SCIENCES.

The following institutions are recognised by the Conjoint Board in England for instruction in chemistry, including chemical physics, practical chemistry, and elementary biology. Certificates for Biology will only be accepted from those institutions marked with an asterisk.

Aberystwyth.—*University College of Wales.
Bangor.—*University College of North Wales.
Bath.—*Kingswood School.
Bedford.—The Grammar School.
Birkenhead.—Holt Schools of Science and Art.
Bishop's Stortford.—Nonconformist Grammar School.
Bournemouth.—School of Science and Art.
Bradford.—*The Grammar School; *Bradford Technical College.
Brighton.—*Municipal School of Science and Art.
Bristol.—*University College; *Merchant Venturers' Technical College; Bristol Grammar School.
Bromyard.—The Grammar School.
Bursiem.—Wedgewood Institute.
Bury.—Technical School; Bury Grammar School.
Cardiff.—*University College of South Wales.
Cheltenham.—*Public School of Science and Technical School, Clarence Street; Cheltenham College.
Chester.—*School of Science and Art, Grosvenor Museum.
Clifton, Bristol.—Clifton Laboratory, Clifton College.
Darlington.—Technical College.
Devonport.—Municipal Science, Art, and Technical Schools.
Dover.—Municipal Technical School.
Dulwich.—*Dulwich College.
Epsom.—*Epsom College.
Eton.—*Eton College.
Exeter.—*Technical and University Extension College.
Felsted.—Felsted School.
Gloucester.—Municipal Schools of Science, Art, and Technology.
Godalming.—*Charterhouse School.
Hanley.—Higher Grade Board School.
Harrow.—*Harrow School.
Huddersfield.—*Technical School.
Hull.—Royal Institution; Municipal Technical School; *Hymer's College.
Leicester.—*Wyggeston School.
Liverpool.—*School of Science, Technology, and Art.
London.—*The Department of Science and Art, South Kensington.
" City of London School.
" *St. Paul's School, West Kensington.
" The Pharmaceutical Society.
" *Birkbeck Literary and Scientific Institute.
" *South-West Polytechnic Institute, Chelsea.
" *City of London College.
" Polytechnic Institute, Regent Street.
" *Polytechnic Institute, Battersea.
" *Northern Polytechnic Institute, Holloway.
" East London Technical College, People's Palace.
" Mercers' School, Holborn.
" St. Olave's Grammar School, Tooley Street, S.E.
Maidstone.—Municipal Technical School.
Manchester.—Municipal Technical School.
Marlborough.—Marlborough College.
Middlesbrough.—Middlesbrough High School.
Newcastle-upon-Tyne.—*Durham College of Science; *Rutherford College.
Norwich.—Higher Grade Board School.
Nottingham.—*University College; The High School.
Oldham.—Municipal Technical School.
Plymouth.—*The Science, Art, and Technical School.
Portsmouth.—Higher Grade Board School; Grammar School; *Municipal Technical Institute.
Preston.—Harris Institute.
Reading.—*Reading College; Reading School.
Rochester.—Mathematical School.
Salford.—Royal Technical Institution.
Sheffield.—*Royal Grammar School.
Sherborne (Dorset).—Sherborne School.
Southampton.—*Hartley Institution.
Southport.—Victoria Science and Art School.
Stafford.—County Technical Schools.
Stoke-upon-Trent.—School of Science and Art.
Swansea.—Technical College.
Swindon.—Swindon and North Wilts Technical School.
Tonbridge.—*Tonbridge School.
Walthamstow.—Forest School.
Watford.—Watford Endowed Schools.
Wellington (Shropshire).—Wellington College.
Weston-super-Mare.—Grammar School.
Winchester.—Winchester College.
Wolverhampton.—*Science School in connection with the Free Library.
Woodford (Essex).—*Bancroft School.
Worcester.—Victoria Institute.

MEDICAL EDUCATION OF WOMEN.

QUALIFICATIONS FOR FEMALE PRACTITIONERS.

Degrees, Diplomas, and Schools.

The qualifying bodies in the United Kingdom which admit women as candidates for their degrees as diplomas are as follows: The University of London, the University of Durham, the University of Edinburgh, the University of Glasgow, the University of Aberdeen, the University of St. Andrews, and the Royal University of Ireland, the Society of Apothecaries, London, and the Conjoint Board of the Royal College of Physicians and Surgeons in Scotland and Ireland. Women candidates for qualification are subject to the regulations of the General Medical Council as to education and examinations in precisely the same manner as men.

Women medical students can obtain a complete medical examination by becoming students of the London School of Medicine for Women, the Medical College for Women, Edinburgh; Queen Margaret College, Glasgow, and the Schools of Surgery of the Royal College of Surgeons in Ireland. The two first-named schools receive women only. In the Schools of Surgery of the Royal College of Surgeons in Ireland special rooms are set apart for lady students. They can also enter at the Universities of Edinburgh (see page 526), Aberdeen, and St. Andrews, and at the University of Durham, the Medical and Science Faculties of which are located in Newcastle-upon-Tyne, the former in the College of Medicine, and the latter in the College of Science, where women students can receive instruction in the various subjects of these two Faculties.

For the University of Glasgow a complete medical education is given at Queen Margaret College, which is now an integral part of that University. The medical classes (systematic and practical) of the University of St. Andrews (United College, St. Andrews, and University College, Dundee) are open to women on an equal footing with men. Two years of the medical curriculum can be taken at United College, St. Andrews, or the whole five years at University

College, Dundee. Women are received as students at the Dundee Royal Infirmary and the Dundee Royal Lunatic Asylum. The medical degrees of the University are open to women.

Some further particulars as to the London School of Medicine for Women will be found on page 536, but intending students should write to the Secretary of the School, 30, Handel Street, Brunswick Square, London, W.C. The prospectus of this School contains an article of advice to students, which will be found very useful.

Before entering upon the career of a medical student a woman should consider well whether she is in a position to meet the serious calls which the career will make upon pocket and health. She must be prepared to spend at least five full years at a medical school (after passing a preliminary examination in Arts), and must remember that during this period she will find her time fully occupied, and should not attempt—in fact, if she does her duty, should have no time—to earn a penny. Further, the work, which is severe and prolonged, and of necessity sometimes performed under somewhat unhealthy conditions, makes a serious call upon any constitution not naturally robust.

PSYCHOLOGICAL MEDICINE.

THE facilities for the study of mental diseases are now vastly increased, and in addition to the regular lectures given in the different medical schools, post-graduate lectures are also given in the Bethlem Royal Hospital. The London County Council is proposing to throw open their large asylums, and contemplate applying to the Conjoint Medical Boards for the recognition of all of them as teaching hospitals. Dr. Savage at Guy's, and Dr. Rayner at St. Thomas's, have special classes, with clinical instruction, at Bethlem Royal Hospital; Professor E. W. White lectures at King's College, and gives clinical instruction at the City of London Asylum, near Dartford; Dr. Percy Smith is the Lecturer at Charing Cross, and gives clinical instruction at Bethlem; Dr. Claye Shawe at St. Bartholomew's; Dr. Mickle at Middlesex and University College; Dr. Hyslop at St. Mary's; Dr. C. Mercier at Westminster; Dr. J. K. Will at the London Hospital.

In the Provinces, also, each medical school has a Lecturer on Psychological Medicine, who gives clinical instruction in a neighbouring asylum; and in Scotland and Ireland similar arrangements exist.

The Royal University in Ireland grants a diploma for proficiency in the treatment of mental diseases under the following conditions:

The diploma is conferred only on Graduates in Medicine of the University.

Candidates must give notice, in writing, to the Secretaries of their intention to present themselves, and must pay the prescribed fee of £2 at least one month previous to the examination.

Candidates who satisfy the examiners will be required to pay a further fee of £3 before the diploma is conferred.

The subjects for this examination are those required for the Hutchinson Stewart Scholarship for proficiency in the treatment of Mental Diseases.

The Medico-Psychological Association of Great Britain and Ireland also grants a Certificate in Psychological Medicine after a course of training, according to the rules of the Association, to candidates registered under the Medical Act. The examinations are held in London, Scotland, and Ireland twice a year. The fee for the examination is £3 3s. Full particulars may be obtained from the General Secretary, Dr. R. Jones, Claybury Asylum, Woodford Bridge, Essex. The Medico-Psychological Association further gives a Bronze Medal and £10 10s. to Asylum Assistant Medical Officers for the best dissertation on any clinical or pathological subject relating to insanity, and also the Gaskell Prize, value £30, and in 1899 it is expected the Hack Tuke Memorial Prize will be awarded for an essay on some subject connected with insanity.

THE INSTITUTE OF CHEMISTRY.—At the recent examinations of the Institute of Chemistry of Great Britain and Ireland, sixteen candidates passed the Intermediate Examination, six the Practical Examination, and nine the Final Examination for the Associateship.

POST-GRADUATION STUDY.

LONDON.

A RESULT of the enormous growth of medical and surgical science and art in recent years is that a practitioner who is unable to keep himself practically acquainted with the details of that advance finds himself after awhile quite "behind the times." The mere failure to advance places him and his patients at a positive disadvantage in the daily warfare against a large number of the injuries and diseases which he has to treat. Scarcely, too, can the best men in the medical schools, however diligent, find time to attain proficiency in every branch of modern medical and surgical diagnosis and treatment. So that practitioners of all classes require occasional opportunities to keep themselves abreast of science, and to gain proficiency in the use of the newer instruments of precision, and in the interpretation of their indications. Below will be found some particulars as to the institutions which now provide such instruction.

A large number of medical practitioners educated in the United Kingdom every year leave its shores to settle in various parts of the British Empire which are within the tropics. They are at once brought into contact with diseases unknown in this country, and for the successful treatment of which special training is requisite. To supply this, two schools of Tropical Medicine have been founded during the past twelve months, and some account of the arrangements at each is given below.

THE POST-GRADUATE UNION OF METROPOLITAN HOSPITALS.

For one who wishes to engage seriously in post-graduate medical study, it is a good plan to attach himself to one or more hospitals, and for this purpose the Union of Metropolitan Hospitals will be found most satisfactory. It is anticipated that as the plan becomes more widely known much more advantage will be taken of it. It is carefully safeguarded in that no certificates will be issued under it which will secure admission to examinations. The reasonable price of the tickets, compared with the enormous facilities which they give, is likely to attract in the future large numbers of medical graduates. The cards will be issued on personal application between the hours of 1.30 and 3 (except on Saturdays) at the Office of the Metropolitan Schools of Medicine, West Wing, Examination Hall, Victoria Embankment, W.C. Evidence of qualification must be furnished before a card can be issued.

THE LONDON MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

The London Medical Graduates' College and Polyclinic which was opened in May last, has already attracted to itself large classes of practitioners (as was evident at a recent visit of inspection which we made for the purposes of this article) and its success fully justifies its foundation.

The College, which occupies premises formerly used as a High School, is situated in central London, being at the corner of Chenies and Ridgmount Streets, about 50 yards to the west of Gower Street. The building, with the additions now being made, is sufficiently commodious for all present purposes. In the basement is a dark room, against the walls of which are placed twelve seats, each separated from the adjoining seat by a partition, and each having its own electric light that can be used in varying strength, naked or shaded. The accompanying engraving (Fig. 1) illustrates the leading features of this well-arranged chamber, though photographed of course with the sunshine flooding its interior. In this room twelve patients can be examined simultaneously, but separately from each other, and the use of the opthalmoscope, laryngoscope, or other instrument of precision, and its indications demonstrated. An adjoining room is fitted with appliances for in

struction in ophthalmic cases, such as type tests, working models of eyes, stereoscopes, lenses, etc.

The ground floor contains the medical and surgical demonstrating rooms, which are furnished with black boards and various other appliances for clinical instruction. Upon a platform are placed chairs for those attending the classes, the patients and demonstrators occupying the area. For special occasions the partition dividing one room from the other can be removed, and the two rooms thus united will form a classroom of fine proportions.

The first floor is nearly all occupied by the temporary library and reading room and the lecture room. (Fig. 2 shows the library and reading room.)

On the second floor are several rooms not yet allotted to specific purposes; one of these will probably be fitted with a Roentgen ray apparatus.

The third floor has an excellent laboratory for chemical pathology, each table having its Bunsen burner, set of reagents, test tubes, etc.

There is a lift to all the floors, and the whole College is fitted with electric light everywhere. At the side of the building is a vacant plot, formerly used as a playground, which is to be covered with glass, in order to form a permanent museum and library. The museum will be devoted to clinical illustrations; portraits and models of diseased conditions will find their place there, and the newest medical and surgical instruments and appliances of all kinds, which can be examined at any time, will form a marked feature of this department of the College.

One chief method of instruction provided for the medical men attending the classes is the system of consultations taking place every afternoon. These afford opportunities of studying exceptional forms of disease by the most recent methods of diagnosis. Notes are taken of the cases, and are supplemented on occasions by photographs or other portraits of the rarer morbid conditions. Certainly the interest taken in the consultations by those attending them on the day above alluded to was great.

Mr. Jonathan Hutchinson, F.R.S., conducts Clinical Demonstrations every Thursday afternoon during the session from 4 to 6 P.M. His Clinical Museum, 1, Park Crescent, W., is open to all medical visitors.

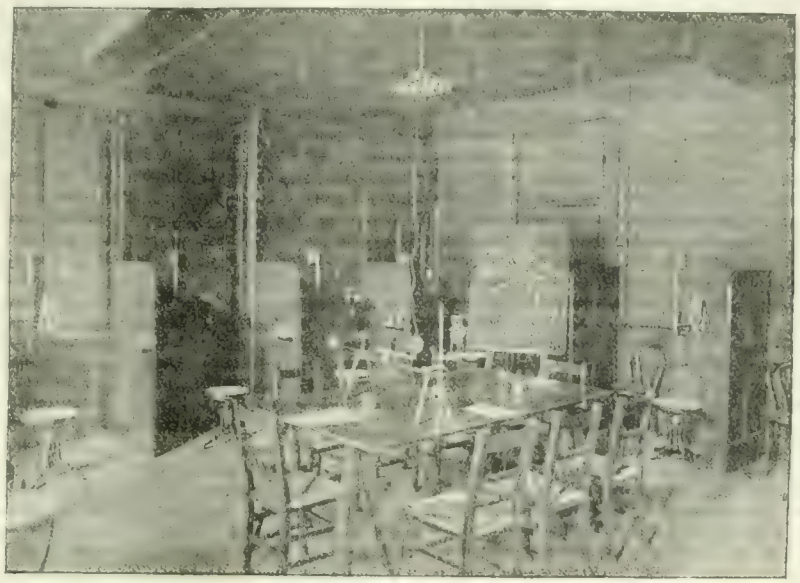


Fig. 1.—The dark room.



Fig. 2.—Library and reading room.

University College, London.

Pathological Chemistry.—At University College, London, Dr. Vaughan Harley, Professor of Pathological Chemistry, assisted by Dr. Francis Goodbody, holds classes in Pathological Chemistry intended for the advantage of qualified practitioners and advanced students. Each course is practical, and includes demonstrations and lectures on the principal points brought out by analysis in the diagnosis and prognosis of disease. Each member of the class is given the actual material to analyse, and from results obtained is required to make the diagnosis, which is corrected if necessary. Thus each man not only does the ordinary class analysis, but he learns to apply his results to practice. Each course includes the analysis of the saliva, stomach contents, fæces, urine, calculi, and pathological fluids, and in the lectures the chemical changes which occur in disease are fully discussed, and as far as possible explained. The laboratory is open from 9 A.M. to 5 P.M., so that the practical work can be done at the hours most convenient to those attending the class. The next class will commence in October, at a date to be fixed by mutual arrangement. The fee for the class, including apparatus and material, is £5 5s. A department is also fitted up for research work, and is open to all researchers at the fee of £1 1s. a month. Most excellent original research work has been and is being done in the laboratory, and in many instances the workers have received grants from the Scientific Grants Committee of the British Medical Association.

Charing Cross Hospital, London.

Post-Graduate Class and Lectures.—Special series of clinical lectures and practical demonstrations, exclusively arranged for the convenience of practitioners and post-graduate students, are given at the hospital throughout the year. The lectures for the year are arranged in three courses, each course consisting of ten meetings, and lasting ten weeks. Two of

these courses are held during the winter and one during the summer. The class meets on each Thursday in the Board Room of the hospital, and proceeds thence to the wards or to the department in which the demonstration may be held. The fee at present charged for each course of ten lectures is one guinea. The first of the two winter courses of the ensuing academical year will commence on October 12th next, and will be conducted by the following members of the medical and surgical staff: Drs. Green, Bruce, Routh, Willcocks, Murray, Galloway, and Messrs. Boyd, Waterhouse, Wallis, and Gibbs. Practitioners wishing to join the class can receive any further information as to the dates and subjects by communicating with the Honorary Secretary (Dr. Willcocks) at the hospital.

THE JENNER INSTITUTE OF PREVENTIVE MEDICINE.

At the Jenner Institute of Preventive Medicine courses of instruction are given and laboratory facilities are provided. In the Bacteriological department three courses are given: (1) The General Course, dealing with Bacteriology in relation to Medicine and Pathology generally; (2) in relation to Hygiene, intended for health officers and students of hygiene; and (3) Biological Chemistry for advanced students. Members of the staff afford every facility to those wishing to prosecute original researches. In the Hygiene department a practical laboratory course is given, but the laboratory is primarily intended for furthering research work in the field of Preventive Medicine. In the Clinical Investigation department medical men can obtain practical instruction in Bacteriological and Chemical methods employed in the diagnosis of disease. The Institute contains a Water Laboratory, fully equipped for bacteriological and chemical examination of samples of water, and instruction is also given in Photomicrography by the photographer to the Bacteriological department. The Institute is now housed in a new and commodious building, and affords special opportunities for post-graduate study, all its students being qualified men. The session begins on Tuesday, October 3rd, and further particulars can be obtained from the Director at the Institute, Chelsea Bridge, S.W. (see also p. 558).

THE LONDON SCHOOL OF TROPICAL MEDICINE.

The Seamen's Hospital Society possesses two hospitals—the Dreadnought Hospital at Greenwich, containing 225 beds, and the Branch Hospital in the Royal Victoria and Albert Docks, E., which is being enlarged to 50 beds. It has also two Dispensaries—one in the East India Dock Road and the other at Gravesend, from which patients are admitted to the hospitals.

The School Buildings, Laboratories, Museum, Library, etc., within the grounds of the Branch Hospital are approaching completion and will be ready for the opening of the winter session on October 2nd.

Opportunities are afforded to students and others who may be desirous of studying diseases incidental to Tropical Climates and also Practical Surgery before entering the services or going abroad. In the hospitals of the Society are to be found cases of Tropical Disease such as may be met with in actual practice in the tropics. There are three courses in the year, each lasting three months, the first course beginning on October 2nd.

The Laboratory, Museum, Library, etc., are open daily, and clinical instruction is given daily in the wards of the hospitals.

The Lecturers in the School are: Dr. P. Manson, Dr. Andrew Duncan, Mr. Oswald Baker, Dr. L. Westenra Sambon, Mr. Malcolm Morris, Dr. R. Tanner Hewlett, Mr. Jas. Cantlie, Mr. E. Treacher Collins, and Professor W. J. Simpson. The Medical Tutor is Mr. D. C. Rees.

Certificates are granted after examination to those who complete a full course.

Resident chambers are available for students, who must be qualified or in the fifth year of their medical studies.

Appointments.—There is a House-Physician and a House-Surgeon at the Dreadnought Hospital, Greenwich, and a Senior House-Surgeon and House-Surgeon at the Branch Hospital. The pay of these officers varies from £50 to £100.

Scholarships.—A Travelling Scholarship of £300 will be offered to students of the school at an early date.

The Prospectus, Syllabus, and other particulars can be obtained on application to the Secretary, Mr. P. Michelli, Seamen's Hospital, Greenwich, S.E.

THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

This school has been established in conjunction with University College, Liverpool, and the Royal Southern Hospital. A special ward at the hospital has been set apart for the reception and treatment of Tropical Diseases, and all facilities for investigation and study are attended in the Pathological Department of University College (Thompson Yates Laboratories).

Major Ronald Ross, I.M.S., has been appointed Lecturer in Tropical Medicine and Consulting Physician to the hospital, and Dr. H. E. Annett has been appointed Demonstrator.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, LONDON.

Clinical demonstrations of Diseases of the Nervous System are held at this hospital at 4 P.M. on each Tuesday afternoon throughout the winter session. Medical men are admitted on presentation of their visiting-cards, but the fee for a course of three months is 1 guinea. Courses are sometimes held during the spring and autumn vacations. The demonstrations during the winter course are so arranged as to cover the main subject of Neurology, and are designed for practitioners. Further particulars can be obtained from the Honorary Secretary, 73 Welbeck Street, W.

CAMBRIDGE.

Special arrangements for advanced study and research have been made recently in the University of Cambridge. Graduates of other Universities may be admitted to the University of Cambridge as advanced students. They may for one or more terms pursue courses of advance study or research, literary or scientific, under the direction of the University teachers, and may become members of certain colleges without fulfilling the same conditions as are imposed on junior students, their collegiate status being assimilated to that of students who have taken their first degree in the University. Advanced students may, if they wish, obtain a certificate certifying to their proficiency in research, or may proceed to the degree of B.A., or LL.B. under certain conditions. In their third or some subsequent term of residence they may become candidates for certain parts of the Tripos (Honour) Examinations, among others the Natural Science Tripos, Part II. Having satisfied the examiners, and after residence of six terms in all, they are admissible to the degree of B.A. or LL.B. The Certificate of Research may be obtained after residing for three terms (one academical year), and when the student has completed six terms' residence he is admissible to the degree of B.A. The facilities for advanced study and research offered by the University include the University Library and the Philosophical Library, while each of the seventeen Colleges possesses its own library, as do also the respective Natural Science departments. The department of Zoology and Comparative Anatomy includes a museum of zoology and a laboratory for animal morphology and elementary biology. The department of Botany contains a comprehensive herbarium and a museum of specimens illustrating the morphology and life-history of plants. There are also laboratories and class-rooms fitted for experimental work, while the Botanic Garden contains a large and varied collection, with numerous plant houses and a botanic laboratory. The department of Human Anatomy contains a spacious dissecting room, a museum, osteological room, and a number of rooms for special study and research in anatomy, histology, and physical anthropology; upon the last-named subject a special course of lectures is given. The department of Physiology contains a number of rooms provided with electric light and motive power, and with abundant and complete appliances of all kinds for practical work. Special rooms are set apart for histology, chemical physiology and experimental inquiries, including psycho-physical researches. The department of Pathology is well equipped for the study of the processes and results of disease and for bacteriological teaching and investigation. There is also a museum containing a fine collection of specimens illustrative of morbid anatomy. The surgical portion is of special importance, and contains a large number of interesting specimens presented by the late Sir George Humphry. The Pharmacological Museum and labora-

tory, at present lodged in Downing College, possesses a complete collection of the official materia medica and ample appliances for experimental and chemical research on the nature and uses of medicinal substances. Lectures on clinical medicine and surgery are given at Addenbrooke's Hospital by the staff. The department of Chemistry is very completely furnished, and several of the Colleges also possess chemical laboratories. Certain scholarships are open, including the John Lucas Walker Studentship for Pathology, the Balfour Studentship for Animal Morphology, and the Coutts Trotter Studentship (at Trinity College) for Physiology and Experimental Physics. Special arrangements for advanced students have been made already by King's College, Trinity College, St. John's College, Christ's College, and Emmanuel College. Further particulars may be obtained from the Registrary of the University, the Registry, Cambridge.[1]

Edinburgh.

Most of the post-graduate courses were given this year (1899) in July, and it is intended that this shall be the arrangement in future. The following are the available courses, *those marked with an asterisk* are held frequently throughout the year:

1. *Anatomy: Medical and Surgical.*—A three weeks' course beginning in the last week of February and June, by Dr. Ryland Whitaker a Surgeons' Hall.

*2. *Practical Bacteriology.*—Three weeks' course daily at suitable times and hours by Dr. Shennan, at Surgeons' Hall.

*3. *Diseases of Chest.*—Short courses at the Victoria Hospital for Consumption, and at the out-patient department of that hospital at 26, Lauriston Place, by Drs. R. W. Philip and G. L. Gulland.

*4. *Diseases of Children.*—A three weeks' course by the Staff of the Children's Hospital.

*5. *Surgery in Children.*—Three weeks' course in the surgical wards and out-patient department of the Children's Hospital, by Mr. Stiles.

*6. *Diseases of Ear, Throat, and Nose.*—Three weeks' limited course by Dr. Hunter Mackenzie, at the Cambridge Street Infirmary, and a less limited course at the same place by Dr. Logan Turner.

7. *Electricity in Medicine and Surgery, and Roentgen Rays.*—Four weeks' course by Dr. Dawson Turner, at Surgeons' Hall.

8. *Diseases of the Eye.*—A four weeks' course on common diseases and injury of the eye, and on eye operations, by Mr. George Berry, at the Royal Infirmary.

*9. *Ophthalmoscopy.*—A three weeks' course (limited to 12) at the Eye Infirmary, 45, Lauriston Place, by Dr. George Mackay; a five weeks' course at 6, Cambridge Street, by Dr. W. G. Sym.

*10. *Diseases of the Skin.*—Three courses (each of 18 lectures) annually in the Royal Infirmary, beginning in October, January, and May, by Dr. W. Allan Jamieson; and three demonstrations, by Dr. Stewart Stirling, at 35, Lauriston Place.

*11. *Diseases of the Stomach.*—Three weeks' course on modern methods, by Dr. Lockhart Gillespie, at the new school.

*12.—*Infectious Diseases.*—Six meetings at the City Hospital, limited to six members, by Dr. Claud B. Ker.

13. *Mental Diseases.*—Six meetings at Larbert Asylum.

*14. *Anatomy and Pathology of Central Nervous System.*—Six weeks' course at Surgeons' Hall, by Dr. Alexander Bruce.

15. *State Medicine, Sanitation, and Medical Police.*—Three weeks' course, by Dr. Harvey Littlejohn, 11, Stafford Street.

*16. *Clinical Surgery.*—Nine meetings at Leith Hospital at 9 A.M., by Mr. Miles.

*17. *Gynæcology.*—Twelve meetings, extending over three weeks, by Dr. Brewis, 23, Rutland Street.

The fee for No. 7 is 3 guineas; for Dr. Stirling's Skin Course, Infectious Diseases and Mental Diseases, the fee is 1 guinea; in all other cases the fee is 2 guineas. The Honorary Secretary is Dr. George Mackay, 20, Drumsheugh Gardens, from whom copies of the detailed syllabus can be had.

[1] *A Guide for Advanced Students*, compiled by Dr. Donald MacAlister, tutor of St. John's College, and University Lecturer in Medicine, has been printed by the Cambridge University Press, and can be obtained (price 6d.) from any bookseller.

Special Departments.

At many of the special hospitals in London and at some of the general hospitals also, such as the West London, courses are given by the members of the staff specially arranged for post-graduate students. Some particulars as to the hospitals having such arrangements will be found under the head of Clinical Hospitals [pp. 544 *et seq.*]. Details are usually published in the advertisement columns of the British Medical Journal from time to time. The facilities which exist for the practical study of diseases of throat and ear are considerable. Special arrangements for the study of laryngology exist in London at St. Thomas's, Guy's, St. Mary's, Charing Cross, and the West London Hospital; for otology at the London Hospital and the Royal Ear Hospital; and for both subjects at the Golden Square Hospital, the London Throat Hospital, and the Central London Throat Hospital. In connection with Owens College, Manchester, a post-graduate course is held at the Ear Institute in June. Anderson's College, Glasgow, has special courses for ear diseases in November and May, and at the Aberdeen General Dispensary there is a course which extends from April to June. At many other hospitals clinical practice can be attended, and full particulars will be furnished by the Secretaries.

At many of these special hospitals, also, a certain number of appointments as clinical clerks or clinical assistants are available. No doubt these posts are mostly filled by senior students or newly-qualified men, but as the special hospitals are not connected with schools, there is nothing to prevent senior men taking them up. The field is very large, and the opportunity for gaining technical knowledge is great, as the work is done in connection with, and under the eye of, a member of the staff. At the children's hospitals, both at Great Ormond Street and at Shadwell, and also at the Evelina Hospital, appointments of this kind can be obtained.

DEGREES FOR PRACTITIONERS.

Since it was formerly the almost universal custom for medical students educated in London not to seek a University degree, and as that custom still prevails to a considerable extent, a very large proportion of medical men in actual practice in England possess diplomas to practise but not degrees in Medicine. The want of a degree and of the title of "Doctor" is often a subject of regret in after-life, and certain universities have issued special regulations under which the degree of M.D. is granted to practitioners of a certain standing under special conditions. The regulations of these universities are stated briefly in the following paragraphs. The University of Brussels also grants the degree of M.D. to practitioners after examination, without restrictions as to residence or curriculum; but this degree is not registrable on the *Medical Register* if obtained subsequently to June, 1886.

University of London.

Registered medical practitioners of not less than three years' standing, and not less than 25 years of age, who shall pass, or have already passed, the Matriculation and Preliminary Scientific Examinations, may proceed to the Intermediate and M.B. Examinations without the intervals prescribed by the Regulations, on producing certificates that they have gone through the required course of training at any time previously (see p. 520).

University of Durham.

The degree of M.D. is granted by the University of Durham to registered practitioners of not less than fifteen years' standing, who have been qualified and in practice for that period, upon the following conditions without residence: The candidate must be 40 years of age, and must produce a certificate of moral character from three registered medical practitioners. If he have not passed previously to the professional examination in virtue of which his name was placed on the *Register* an examination in Arts, he is examined in classics and mathematics; if otherwise, he is required to translate into English passages from Cæsar, *De Bello Gallico* (first three books), Virgil, *Æneid* (first three books), or Celsus (first three books);

he is afforded an opportunity of showing proficiency in Moral Philosophy, Greek, or some modern language, but no extra marks are awarded for these subjects.

Professional Examination.—The candidate must pass an examination in the following subjects: i. Principles and Practice of Medicine, including Psychological Medicine, Hygiene, and Therapeutics; ii. Principles and Practice of Surgery; iii. Midwifery and Diseases Peculiar to Women and Children; iv. Pathology, Medical and Surgical; v. Anatomy, Medical and Surgical; vi. Medical Jurisprudence and Toxicology. The examination is conducted by means of printed papers, clinically, in the Royal Infirmary, Newcastle, and *viva voce*. The classical portion of the examination may be taken separately from the professional, on payment of a portion (£10 10s.) of the full fee.

Foreign and Colonial Practitioners.—Natives of India or the British Colonies are placed on the same footing as natives of Great Britain. Natives of India may produce evidence from an Indian university that they have passed within one year an examination in Latin and in Greek, Persian, or Sanskrit.

Fees.—The inclusive fee is fifty guineas; if a candidate fail to pass twenty guineas are retained, but if he present himself again forty guineas only are required.

Dates, etc.—The examinations are held twice a year, at the end of April and of September. Notice, accompanied by the fee and certificates, must be sent to Professor Howden, Secretary of the University of Durham College of Medicine, Newcastle-on-Tyne, at least twenty-eight days before the commencement of the examination.

UNIVERSITY OF BRUSSELS.

British practitioners of medicine holding medical and surgical qualifications are, in common with legally-qualified practitioners in other countries, admissible without further curriculum to the examination for the degree of M.D. of the University of Brussels.

Examination.—The examination is divided into three parts. The "First Doctorate" includes Medicine, Pathology (with microscopical examination), Therapeutics, Mental Diseases, and Diseases of Women and Children. The "Second Doctorate" comprises Surgery, Midwifery, Hygiene, and Medical Jurisprudence. The "Third Doctorate" consists of clinical examination in Medicine and Surgery, examination in Midwifery with the manniquin, Ophthalmology, Operative Surgery (amputation, ligature of arteries in the dead subject), and Regional Anatomy with Dissections. Special importance is attached to practical knowledge. The examination is conducted in French through an official interpreter, but most of the examiners, it is stated, speak English fluently. The examination is *viva voce*, but a written examination may be obtained on paying a special fee of £1 for each part.

Dates.—The examinations take place on the first Tuesday in November, December, February, May, and June. It is desirable that the candidate should arrive in Brussels on the previous Saturday before 2 P.M. at latest. The whole examination (First, Second, and Third Doctorate) may be got through in about a week, and seldom exceeds eight to ten days.

Fees.—Candidates are required to leave their diplomas with the Registrar of the University prior to the examination. The fees are: For inscription of name, £8 12s.; for examination, £13; for legalisation of diploma, 8s.; total, £22. If a candidate fail in the first part of the examination the fees for the second and third are returned to him; if in the second, the fees for the third. A rejected candidate may present himself again in three months on paying the examination fees, provided his second appearance be in the same academic year (October 1st to June 30th); otherwise matriculation fee must be renewed, that is, fee for inscription of name.

Further particulars may be obtained from Dr. Major Greenwood, Hon. Sec. Brussels Medical Graduates' Association, 243, Hackney Road, London, N.E. An article containing a full description of everything concerning the degree was published in the BRITISH MEDICAL JOURNAL on September 15th, 1888.

N.B.—This degree, if obtained subsequent to June, 1886, is not registrable.

PUBLIC HEALTH OR STATE MEDICINE.

A MEDICAL officer of health of any county or of any single or combined district, with a population at its last census of 50,000 or more, or of any metropolitan district, or the deputy of any such officer, must be legally qualified for the practice of Medicine, Surgery, and Midwifery, and also either be registered in the *Medical Register* as the holder of a diploma in Sanitary Science, Public Health, or State Medicine under Section XXI of the Medical Act, 1866, or have been, during three consecutive years preceding the year 1892, a medical officer of a district or combination of districts in London or elsewhere with a population, according to the last published census, of not less than 20,000, or have, before the passing of the Local Government Act, 1888, been for not less than three years a medical officer or inspector of the Local Government Board.

The following regulations for candidates for diplomas in Public Health have been laid down by the General Medical Council. These regulations are designed to ensure "the possession of a distinctly high proficiency, scientific and practical, in all the branches of study which concern the Public Health."

(1) A period of not less than twelve months shall elapse between the attainment of a registrable qualification in Medicine, Surgery, and Midwifery, and the admission of the candidate to any examination or any part thereof for a Diploma in Sanitary Science, Public Health, or State Medicine.

(2) Every candidate shall have produced evidence of having after obtaining a registrable qualification, attended during six months practical instruction in a laboratory or laboratories, British or foreign, approved of by the body granting the diploma, in which chemistry, bacteriology, and the pathology of the diseases of animals transmissible to man are taught.

(3) Every candidate shall have produced evidence that, during a period of six months after obtaining a registrable qualification, he has practically studied the duties of outdoor sanitary work, (*a*) in England and Wales either under the medical officer of health of a county or of a single sanitary district having at the date of the last census a population of not less than 50,000 or the medical officer of health of a combination of two or more sanitary districts having collectively at the date of the last census a population of not less than 35,000; or (*b*) in Scotland or Ireland, under the medical officer of health of a county or of one or more sanitary districts having at the date of the last census a population of not less than 30,000 or (*c*) under a medical officer of health who is a teacher in the Department of Public Health of a recognised medical school. The certificate of an assistant officer of health of a county or a large urban district may be accepted, provided the medical officer of health of the county or district consents to the assistant officer giving such instruction.

*** Any candidate who shall produce evidence that he has himself held an appointment of medical officer of health under conditions not requiring the possession of a special sanitary diploma shall be exempt from this regulation.

(4) Every candidate shall have produced evidence that he has attended the clinical practice of a hospital for infectious diseases recognised by one of the licensing bodies; provided that such a course of instruction may have been taken as part of the curriculum for his registrable qualification in Medicine, Surgery, and Midwifery.

(5) The examination shall have been conducted by examiners specially qualified; it shall have extended over not less than four days, one of which shall have been devoted to practical work in a laboratory, and one to practical examination in, and reporting on, subjects which fall within the special outdoor duties of a medical officer of health.

*** The rules as to study shall not apply to medical practitioners registered, or entitled to be registered, on or before January 1st, 1890.

The examinations for diplomas in Public Health, granted by the various Universities and Medical Corporations, and the courses of study required, are adapted to meet the regulations of the General Medical Council, and, as a rule, to fulfil the recommendations issued by that body from time to time.

BOOKS.

It is impossible to indicate all the books which may be consulted with advantage by candidates for the various examinations, but the following list of books includes those which are most generally read:

Whitelegge's *Hygiene and Public Health* (London: Cassell and Co., 7s. 6d.); Louis Parkes's *Hygiene and Public Health* (London: H. K. Lewis, 10s. 6d.); Wilson's *Handbook of Hygiene* (London: J. A. Churchill, 12s. 6d.); *The Theory and Practice of Hygiene*, by Notter and Firth (London: J. and A. Churchill, 24s.); Stevenson's and Murphy's *Treatise on Hygiene and Public Health*, 3 vols., for reference on special subjects (London: J. A. Churchill, 30s.); Wynter Blyth's *Manual of Public Health* (London: Macmillan and Co., 1890, 17s.) Smith's *Laboratory Textbook of Public Health* (London: Henry Renshaw 1896, 21s.); Kenwood's *Public Health Laboratory Work* (London: H. K. Lewis, 10s. 6d.); Wanklyn's *Water, Air, Milk, and Bread Analysis*, four separate manuals (London: Kegan Paul, Trench, Trübner and Co., 5s. each); Fox's *Sanitary Examination of Water, Air and Food* (London: J. and A. Churchill, 1886, 12s. 6d.); Woodhead's *Bacteria and their Products* (London: W. Scott, 3s. 6d.); Kanthack and Drysdale's *Practica*

Bacteriology (London: Macmillan and Co., 4s. 6d.); Muir and Ritchie's *Manual of Bacteriology* (London: Young J. Pentland, 12s. 6d.); Klein's *Micro-organisms and Disease* (London: Macmillan and Co., 1896, 10s. 6d.); Crookshank's *Manual of Bacteriology* (London: H. K. Lewis, 1896, 21s.); Daniell's *Textbook of the Principles of Physics* (London: Macmillan and Co., 1896, 4s. 6d.); Balfour Stewart's *Elementary Physics* (Oxford: Clarendon Press, 7s. 6d.); Newsholme's *Vital Statistics* (London: Swan Sonnenschein and Co., 1889, 7s. 6d.); McVail's *Vaccination Vindicated* (London: Cassell and Co., 1887, 5s.); J. W. Moore's *Meteorology: Practical and Applied* (Rebman and Co., 8s.); Scott's *Meteorology* (London: Kegan Paul, Trench, Trübner and Co.); Statton's *Public Health Acts* (London: Knight and Co., 5s. 6d.); Knight's *Annotated Model By-laws* (London: Knight and Co., 12s.); Corfield's *Dwelling Houses: their Sanitary Construction and Arrangements* (London: H. K. Lewis, 1894, 4s. 6d.).

It is also desirable to consult the text of the *Public Health Act, 1875*, or the *Public Health (London) Act, 1891*, *Canal Boats Act*, the *Factory Acts*, the *Food and Drugs Acts*, several *Special Reports of the Local Government Board*, etc. (London: Eyre and Spottiswoode).

University of Cambridge.

A diploma in Public Health is granted by the University, and any person whose name is on the *Medical Register* may apply to be examined, provided that he can show that he has complied with the regulations laid down by the General Medical Council.

The examination, which is usually held twice a year, during parts of two successive weeks, and beginning on the first Tuesday in April and October respectively, is divided into two parts. A fee of £6 6s. must be paid before admission to either part.

The First Part will comprise Physics and Chemistry; the principles of chemistry and methods of analysis, with especial reference to analyses of air, water, and food; applications of the microscope, including the investigation of micro-organisms; the laws of heat, and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage, construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general; meteorology in relation to health; sources of water supply; statistical methods in their application to public health.

The Second Part will comprise Laws and Statutes relating to public health; origin, propagation, pathology, and prevention of epidemic and infectious diseases, including those diseases of animals that are transmissible to man; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

The above schedule is not to be understood as limiting the scope of the examination, which will include every branch of Sanitary Science. No candidate will be approved by the Examiners who does not show a high proficiency in all the branches of study, scientific and practical, which concern the Public Health. The examination in both parts will be oral and practical as well as in writing. One day at least will be devoted to practical laboratory work, and one day to oral and practical examination in, and reporting on, subjects connected with outdoor sanitary work.

Applications for further information should be addressed to the Registrary, University Registry, Cambridge. Dr. Anningson, Walt-ham-sal, Cambridge, will supply particulars as to the course of instruction provided in the University.

A list of Colleges and Schools of Medicine at which the courses of laboratory instruction have, for the purposes of this examination, been already approved by the syndicate, can be obtained on application.

University of Oxford.

A Diploma in Public Health is granted after an examination which will be held in Michaelmas Term, 1898. The examination will begin November 22nd, and will be conducted in two divisions: (1) First Division: The application of Chemistry and Physics to General Hygiene. (2) Second Division: (*a*) General Pathology, with special relation to Infectious Diseases; (*b*) Laws relating to Public Health; (*c*) Sanitary Engineering; (*d*) Vital Statistics. It will be permissible to take the two divisions at the same or at different examinations. Candidates must comply with the regulations of the General Medical Council (see p. 518). The First Division may be passed at any time after registration, provided that the candidate has spent six months studying in a public-health laboratory approved by the Board of the Faculty of Medicine. The Second Division may not be taken until one year after registration, and candidates must have studied for six months under a Medical Officer of Health of a district containing at least 50,000 inhabitants. Fee for each Division, £5. Names to be sent to the Secretary to the Boards of Faculties not later than November 8th.

University of London.

The University does not grant a Diploma in Public Health, but Sanitary Science is made a branch of the M.D. Examination, which is open to persons holding the degree of M.B.Lond. (see page 521).

Victoria University.

A Diploma in Public Health is granted after an examination, which begins about the middle of July in each year. The candidate must fulfil the requirements laid down by the General Medical Council. The examination is divided into two parts: the subjects so nearly coincide with those of the University of Cambridge that it is unnecessary to reproduce them. Special mention is, however, made of the use of meteorological instruments, of the diseases of animals in relation to the health of man, and of "Sanitary Reporting," every candidate being expected to visit and report upon the sanitary condition of some actual locality assigned to him by the examiners.

Each part of the examination occupies two days, and the fee for each part is £5 5s. Application for admission to the examination must be made to the Registrar of the Victoria University, Manchester, not later than July 1st, and the fee must be paid on or before July 1st.

Conjoint Board in England.

The diploma in Public Health of the Royal College of Physicians of London and the Royal College of Surgeons of England is granted to persons whose names are on the *Medical Register*. The examination is held in two parts, and Part I may be passed before fulfilling Clauses 1 and 2 under Part II. The subjects of the two parts of the examination are as follows:

Part I.—1. Physics, in their application to health, with reference to—(*a*) Warming and Ventilation; (*b*) Water Supply, Sewerage, and Drainage; (*c*) Sanitary Construction. 2. Meteorology in relation to Health. 3. Chemistry with special reference to Food, Air, Soil, and Water. 4. Microscopical Examinations as applied to Air, Food, and Water. 5. Bacteriology, including the Cultivation and Recognition of Micro-organisms. 6. Geology and Soil in their Relation to Drainage and Water Supply.

Part II.—1. The origin, development, and prevention of Disease with reference to: (*a*) Special Pathology of Epidemic and Endemic Diseases, including the Natural History of the Specific Organisms of Diseases; (*b*) Influence of Climate, Season, and Soil; (*c*) Effects of Unwholesome Air, Water, and Diet; (*d*) Diseases of Animals in relation to the Health of Man; (*e*) Influence of Occupation and Lodgment; (*f*) Isolation, Quarantine, Disinfection, Vaccination. 2. Sanitary Work and Administration with reference to: (*a*) Health Requirements of Houses, Villages, and Towns; (*b*) The Sanitary Regulations of Households, Establishments, and Occupations, including the Construction and Arrangement of Hospitals; (*c*) the Prevention and Control of Epidemic and Endemic Diseases. 3. Statistics in Relation to Health. 4. Statutes, Orders, and By-laws relating to Public Health. 5. Duties of Sanitary Authorities and their Officers. (The candidates may be required to visit and report on some premises selected by the examiners.)

A candidate will be admissible to examination in Part I on producing evidence: (1) Of having been in possession of a registrable qualification in Medicine, Surgery, and Midwifery for at least 12 months. (2) Of having attended, after obtaining such registrable qualification, practical instruction in a Laboratory recognised by the Examining Board in England during a period of six months.

1. Physics. Gases: Examination of their physical properties: their weight and bulk under varying alterations of pressure and temperature, and the movements thereby set up; diffusion, with especial reference to warming and ventilation. Anemometers and their use. Liquids: their physical properties, their pressure and flow through tubes and conduits; their action on gases. Meteorological instruments, their construction and use. Barometers, thermometers, hygrometers, rain gauges. II. Chemistry. The analysis of water for drinking purposes, including the qualitative and quantitative estimation of total solids (lime, magnesia, chlorides, sulphates, nitrates and nitrites, ammonia, and lead), and loss on ignition of solids; determinations of hardness, of organic impurities, and of acidity and alkalinity. Chemical methods of treating sewage. The examination of air for the detection of polluting gases. Simple methods of eudiometry. Estimation of the quantity of carbon dioxide in air. III. Microscopy. The recognition of the constituents of food, such as starches and muscular fibre. The recognition of the chief fibres of

clothing, such as wool, cotton, and silk. The recognition of constituents of ordinary dust and deposits from water. iv. Bacteriology, including the cultivation and recognition of micro-organisms. v. Parasites and other organisms infesting foods, stuffs, or the human body.

(3) Of being at least 23 years of age. A candidate will be admitted to Part II of the examination on producing evidence: (1) Of having, during a period of six months after obtaining a registrable qualification, either practically studied the duties of outdoor sanitary work under the medical officer of health of a county or large urban district, or else held appointment as Medical Officer of Health under conditions not requiring the possession of a special Sanitary diploma. (2) Of having attended the clinical practice of a hospital for infectious diseases recognised by the Examining Board in England, either before or after obtaining his registrable qualification in Medicine, Surgery, and Midwifery.[1] (3) Of being at least 24 years of age.

The following laboratories are recognised:

London.—St. Bartholomew's, Guy's, London, University College, King's College, Charing Cross, St. George's, St. Mary's, Westminster, St. Thomas's, Middlesex, British Institute of Preventive Medicine.
Birmingham.—Mason College.
Brighton.—Technical School.
Bristol.—Medical School.
Leeds.—Yorkshire College.
Liverpool.—School of Science and Technology; University College.
Manchester.—Owens College.
Newcastle-on-Tyne.—University of Durham College of Medicine.

The two parts may be passed separately or at the same time. The fee for each is £5 5s., and must be paid three days before the examination commences. Fourteen days' notice must be given to the Secretary at the Examination Hall, Victoria Embankment, from whom further particulars and the dates of the examinations (which are held in the months of January and July) may be obtained.

University of Durham.

The University grants a Diploma in Public Health (D.P.H.) and the degree of Bachelor in Hygiene (B.Hy.) and Doctor in Hygiene (D.Hy.).

Degree of Bachelor in Hygiene (B.Hy.).—1. The candidate for the degree of Bachelor in Hygiene (B.Hy.) must be a registered medical practitioner and a graduate in medicine of a recognised University, not less than 22 years of age, and must have passed his first registrable qualification in Medicine, Surgery, and Midwifery at least twelve months previously. He must have spent six months of professional study subsequent to the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery, in attendance at Newcastle-upon-Tyne, in the following manner: *University of Durham College of Medicine.* (α) Course of Lectures on Public Health. (β) Three Months Course of Lectures on Comparative Pathology with practical work in a Bacteriological Laboratory. *Outdoor Sanitary Work.*—(γ) Six Months practical Study of outdoor Sanitary Work under the Medical Officer of Health, Newcastle-upon-Tyne. *City Hospital for Infectious Diseases, Newcastle-upon-Tyne.*—(δ) Three months' attendance on the Clinical Practice and Instruction. Regulation (α) to be omitted in the case of a candidate who has already attended the course before obtaining a registrable qualification. Regulation (γ) to be omitted in the case of a practitioner who has himself held appointment as a medical officer of health under conditions not requiring the possession of a Sanitary Diploma under the Local Government (England and Wales) Act, 1888. *Durham College of Science.*—(ε) Course of Lectures on Sanitary Chemistry and Physics. (ζ) Three months' practical instruction in a chemical laboratory. This course must not be concurrent with the three months' course of Lectures on Comparative Pathology with practical work in a bacteriological laboratory. The candidate shall be required to pass an examination in the following subjects: (*a*) Sanitary Chemistry.—The examination of Air; detection of noxious gases and atmospheric impurities. Water for sanitary purposes; detection of metals in water; the action of water on metals. Milk and Food. Detection of Poisons in Articles of Dress and Decoration. (*b*) Physics.—Hydrodynamics, Pneumatics, and Hydraulics, as applied to Hygiene. Light; Propagation of Light; Reflection and Refraction; Photometry; Heat; Thermometers; Laws of Heat in relation to Hygiene. Principles of Hygrometry and Hygrometers. (*c*) Sanitary Legislation.—Knowledge of the following Statutes and By-laws, namely: The Public Health Acts, 1875; Rivers Pollution Prevention Act, 1876; The Public Health (Water) Act, 1878; The Infectious Diseases (Notification) Act, 1889; The Local Government Act, 1888; The Infectious Diseases (Prevention) Act, 1890; The Housing of the Working Classes Act, 1890; The Public Health Acts (Amendment) Act, 1890; The Model By-laws of the Local Government Board relating to Cleansing, the Prevention of Nuisances, New Streets and Buildings, Slaughterhouses, Common Lodging Houses, Houses Let in Lodgings, Offensive Trades. Most of the above-mentioned statutes will be found in Knight and Co.'s *Public Health Acts* (latest edition), and the By-laws in the work under that title, by the same publishers. (*d*) Comparative Pathology, etc.—Knowledge of the Comparative Pathology, Methods of Propagation, and Prevention of Microbic and Parasitic Diseases intertransmissible between Man and the lower Animals; Morphology of Microbes and Animal Parasites; Methods of Microscopical Examination and Artificial Cultivation of Microorganisms. The Bacteriological Examination of Water, Air, and Earth; the Special Characteristics, Life-History, Properties, and Natural and Artificial Modes of Inoculation of Pathogenic Micro-organisms and Animal Parasites. (*e*) Vital Statistics.—Rates of Birth, Death, and Marriage; Methods of Calculation, Classification, and Tabulation of Returns of Sickness and Mortality; Data required and Conclusions deducible therefrom. (*f*) Nosology.—Definition, Nomenclature, and Classification of Diseases. (*g*) Meteorology, Climatology, and Geographical Distribution of Health and Disease over the Globe, and in Different Urban and Rural Districts of the United Kingdom. (*h*) Sanitary Science in relation to the Origin, Propagation, Pathology, and Prevention of Epidemic, Endemic, Epizootic, and other Communicable Diseases; Diseases attributable to Heat, Cold, or Dampness, Insufficiency or Impurity of Air, Food, or Drink; Parasitic and other Diseases affecting the Food and Drink of Man; Diseases due to Habitation in Cities, Towns, Villages, and Separate Houses; Occupation and Trade Operations in relation to the Health of the Workers; Overwork, Intemperance, Heredity; Preventive Measures, Vaccination, Isolation, Disinfection; the Regulation of Noxious and Offensive Manufactures and Trades; the Removal of Nuisances. (*i*) Practical Hygiene in reference to Meteorological Apparatus, Sanitary Appliances, the Site, Materials, Construction, Capacity, Lighting, Ventilation, Warming, Dryness, Water Supply, Drainage, and Refuse Disposal of Houses, Schools, Hospitals, Artisans' Dwellings, Workshops and Workhouses, and other Buildings of Public or Private Resort; the Construction of Drains, Abattoirs, and Disinfecting Stations; Action with respect to Nuisances and Outbreaks of Disease; the Examination of Butchers' Meat and other Food; the Preparation of Sanitary Reports, and other Duties of a Medical Officer of Health. The examination will be conducted by written papers, and practical and *viva voce* examination, and will commence on April 2nd, 1900. The candidate shall also be required: (1) To pass an examination on medical clinical cases at the City Hospital for Infectious Diseases, or elsewhere; (2) to draw up outlines for annual or other reports of a medical officer of health; (3) to report upon the condition of some actual locality; (4) to analyse liquids, gases, and specimens of food; (5) to describe the construction and use of instruments employed in Meteorological, Hygienic Apparatus, and Sanitary Appliances: (6) to examine with the Microscope submitted Specimens; (7) to describe submitted Specimens of Diseased Organs and Tissues (human and other); (8) to show a practical acquaintance with the usual methods of Bacteriological investigation; (9) to inspect and describe Carcasses. The fee for the examination for the B.Hy. is £10 10s., and for the degree £6. The fee for the examination and Diploma in Public Health is £10 10s. Holders of the licence in Sanitary Science in the University of Durham, prior to January, 1892, who are Graduates in Medicine of the University of Durham, are entitled to admission to the examination for the Degree of Bachelor in Hygiene without residence.

Degree of Doctor in Hygiene (D.Hy.).—The candidate must be a Bachelor in Hygiene, and must have been engaged for two years subsequently to the date of his acquirement of the

[1] This certificate is not required in the case of a candidate who produces evidence that he has commenced special study in Sanitary Science before January 1st, 1894.

degree of Bachelor in Hygiene, in practice as a Medical Officer of Health. He will be required to write an essay upon some practical Hygienic subject, selected by himself and approved by the Lecturer on Public Health, and shall be examined thereon, and upon questions relative to the subject of the essay. The essay should not exceed thirty pages. The essays must be forwarded to the Lecturer on Public Health one month before the date of the examination, and will be retained by the Faculty of Medicine.

Diploma in Public Health (D.P.H.).—The regulations for education and examination for the Diploma in Public Health (D.P.H.) are the same as those for the degree of Bachelor in Hygiene on pp. 556, etc., with the following exceptions, namely: (1) That the candidate is not required to be a Graduate in Medicine of a recognised university; (2) the course of study for the D.P.H. need not be spent at Newcastle-upon-Tyne.

Diploma in Public Health for Medical Practitioners.—The following are the regulations for the Diploma in Public Health, for medical practitioners, registered, or entitled to be registered, on or before January 1st, 1890: (1) The candidate shall be a medical practitioner, registered or entitled to be registered, on or before January 1st, 1890; (2) The candidate shall be required to pass the same examination as that for the ordinary Diploma in Public Health; (3) every candidate wishing to be present for the examination must give at least twenty-eight days' notice to the Secretary of the College, and must, at the same time, send the examination fee and the necessary certificates; (4) the fee for the examination and diploma is £10 10s.

University of Aberdeen.

The University grants a diploma in Public Health. Candidates for the diploma must have graduated in Medicine in the University, or in a University in the United Kingdom, one year before they received the diploma; and they must produce evidence of (1) having complied with the regulations of the General Medical Council (see p. 518); (2) of having attended a fever hospital, containing no fewer than 50 beds, for six months; (3) if not a graduate in Medicine of Aberdeen University, of having attended a course in the University in one or more of the subjects embraced in the examination for the diploma. The examination consists of two parts: Part I (*a*) Physics, Engineering, and Meteorology; (*b*) Chemistry, Microscopy and Bacteriology; Part II (*a*) General Hygiene; (*b*) Sanitary Law and Vital Statistics. The examination (which is written and oral) is held in March and July, and notice must be given to the Secretary of the Medical Faculty two weeks before. A detailed synopsis can be obtained from the Dean of the Medical Faculty, or will be found in the University *Calendar* for 1899-1900. The fee, which must be paid at the time of giving notice, is £5 5s. The fee for re-examination, £1 1s.

University of Edinburgh.

This University confers two degrees in science in the department of Public Health, namely, Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.).

Bachelor of Science.—Two examinations must be passed, and the candidate must produce evidence of having complied with the regulations of the General Medical Council (see p. 518), and have taken a degree in Medicine in the University of Edinburgh or in a university recognised by it. The subjects of the First Examination are: (1) Laboratory work, practical, written, and oral; (2) Elements of Experimental Physics; (3) Geology, written and oral. The second examination cannot be taken sooner than six months after the first. The candidate must have attended a course of lectures (50 at least) in the University of Edinburgh, or in a university recognised by the Court. The subjects of the Second Examination are: (1) Sanitation: (2) Sanitary Law; (3) Vital Statistics; (4) Medicine in its bearings on Public Health; and the examinations in these subjects are taken at one time. (A detailed syllabus is given in the *Calendar*, pp. 251-253.) The examinations are held in March and July. The fee for each examination is £3 3s. Further particulars may be obtained on application to the Dean of the Faculty of Science at the University Matriculation Office, where the schedules for examination are issued and the certificates of candidates examined.

Doctor of Science.—Bachelors of Science in the Department of Public Health may, after the lapse of five years, proceed to the degree of Doctor in the same Department on presenting a Thesis on some subject in the Department of Public Health, or a published memoir of works, and are required to pass an examination in Public Health, and in such of its special departments as may from time to time be determined. (Candidates for D.Sc. in Public Health may appear for examination in any one of the departments of knowledge required for the degree of B.Sc. in Public Health. They are required to submit the subject in which they propose to be examined for approval at least two months before the date of the examination.) Every such Thesis must be certified by the candidate to have been composed by himself, and must be approved by the examiners. The Thesis must be lodged with the Dean of the Faculty of Science on or before December 1st, and the subject of examination must be submitted before January 20th. The examination will take place about the end of March. The fee is £10 10s.

The Conjoint Board of Scotland.

The Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow will grant a conjoint diploma in Public Health, after examination by a Board on which these bodies are represented. Candidates qualified before 1890 will be admitted without evidence of special instruction (though even in their case such instruction is strongly recommended). Registered medical practitioners who have for a period of three years held the position of medical officer of health to any county or urban district of more than 20,000 inhabitants, or any entire rural sanitary district, are also exempt from courses of special instruction. Other candidates must produce evidence of attendance (subsequent to obtaining a registrable qualification) for six months at a Public Health Laboratory, and for six months under a Medical Officer of Health of a county or large urban district. There are two examinations, and candidates may present themselves for both of them at one period, or for either examination separately. The First Examination embraces the following subjects in their relation to Public Health: Chemistry, Laboratory Work, Physics, and Meteorology. The Second Examination includes: (*a*) Report on premises visited; (*b*) examination at fever hospital; (*c*) examination at public abattoir; (*d*) epidemiology and endemiology; (*e*) vital statistics and sanitary law; (*f*) practical sanitation. The various subjects of both examinations are detached and limited by synopses given. The laboratory work embraces not only Chemical Analyses, but also Microscopical Examination, Bacteriology, Parasites, etc. At the Second Examination each candidate is required to submit a report on the sanitary condition of premises to which he may be sent for the purpose, and is examined on the Acts of Parliament included under "Sanitary Law." The fee is £10 10s., or £5 5s. in respect of each examination; and candidates referred are readmitted on the fee of £3 3s. in respect of each examination. The examination is held in Edinburgh or in Glasgow, there being two periods of examination yearly—October and May. Application for examination in Edinburgh to be sent to Mr. James Robertson, 48, George Square, Edinburgh; and in Glasgow to Mr. Alexander Duncan, 242, St. Vincent Street, Glasgow, not later than fourteen days before the examination day. The regulations and synopsis of subjects will be found at page 223 of the 1898-99 edition of the *Medical School Calendar for Scotland*, published by E. and S. Livingstone, 15, Teviot Place, Edinburgh, price 2s., post free 2s. 3d.

University of Dublin.

The diploma in State Medicine is conferred after examination upon M.D.'s or graduates in Medicine and Surgery of Dublin, Oxford, or Cambridge. The name of the candidate must have been on the *Medical Register* at least twelve months before the examination, and, subsequently to registration, the candidate must have completed six months' practical instruction in a laboratory approved by the University, and have studied practical outdoor sanitary work for six months, under an approved officer of health. [This condition does not apply to candidates registered or entitled to be registered on or before January 1st, 1890.] The examination is held in December, and candidates are required to send in

their names at least a week before the first day of the examination to the Registrar of the School of Physic, from whom a full syllabus of the examination can be obtained. Candidates who have registered since January 1st, 1890, are required to make application for permission to present themselves for examination to the Board of Trinity College, submitting at the same time certificates of the required courses of study. The subjects of examination are: State Medicine and Hygiene (paper); Chemistry (paper and laboratory); Physics and Meteorology (oral); Engineering (paper); Sanitary Engineering (practical); Morbid Anatomy (oral); Vital Statistics (paper); Medical Jurisprudence (oral); Law (paper); Epidemiology and the Work and Duties of a Public Officer of Health.

Further particulars can be obtained on application to the Registrar of the School of Physic, Dublin.

Royal University of Ireland.

The University grants a diploma in Sanitary Science, but only to graduates in Medicine of the University. The fee is £2. Further particulars will be found in the *Calendar*.

Conjoint Examining Board in Ireland of the Royal College of Physicians and the Royal College of Surgeons.

A diploma in State Medicine is granted by these two Colleges after an examination conducted by them jointly. Candidates are required to comply with the regulations of the General Medical Council (see page 518). The regulations as to study do not apply to practitioners registered or entitled to be registered on or before January 1st, 1890. The examination comprises the following subjects: State Medicine and Hygiene, Chemistry (including Chemical Physics), Meteorology and Climatology, Engineering, Vital Statistics, Law, and Bacteriology. In addition to written papers, the candidates will be examined orally in Hygiene, and practically in the reading of Plans, Sections, and Scales, as well as in Analytical Chemistry, with special reference to Air, Water, and Food, including the use of the Microscope, and in Bacteriology. They will also be required to read meteorological instruments, and to explain their construction; and they may be called upon to make a practical Sanitary Report.

The candidate must return his name to the Secretary of the Committee of Management under the Conjoint Scheme, Royal College of Physicians, 6, Kildare Street, Dublin, three weeks before the examination, and lodge with him a testimonial of character from a Fellow of either of the Colleges, or of the Royal Colleges of Physicians or Surgeons of London or Edinburgh. If he has been registered subsequent to January 1st, 1890, he must lodge, in addition, a schedule, setting forth that he has attended the necessary courses of instruction as laid down in the Regulations.

The examination is divided into two parts, which may be passed either together or separately, but no candidate can present himself for Part II who fails to satisfy the examiners in Part I. The examination occupies four days.

The fee for examination is £10 10s., for re-examination £5 5s.; the examinations begin on the first Tuesday of the months of February, May, and November.

A Special Examination for the diploma can be obtained on payment of £10 10s., in addition to the ordinary fees mentioned above—except during the months of August and September—and on giving notice at least one fortnight before the date of the proposed examination.

Detailed Regulations and Schedules can be obtained from the Secretary.

Instruction and Laboratory Classes.

Courses of lectures and laboratory instruction to suit the requirements of candidates for diplomas in Public Health have been organised at the following schools, and could probably be arranged for at most of the other schools and colleges (see also p. 556). The chemical and bacteriological examinations for many of the health diplomas are now so practical, and the time allowed so short, that unless a candidate—even though familiar with the duties of an M.O.H.—has a certain amount of the manipulative dexterity only to be acquired by work in a laboratory, he would not be likely to satisfy the examiners.

London.

St. Bartholomew's Hospital.—Inclusive fee, 20 guineas.
Charing Cross Hospital. Inclusive fee, 20 guineas.
St. George's Hospital.—Inclusivs fee, 20 guineas; for candidates registered before January 1st, 1890, 12 guineas.
Guy's Hospital.—Inclusive fee for six months' course of Laboratory Instruction and Lectures, 20 guineas.
King's College.—Inclusive fee, 20 guineas.
London Hospital.—Inclusive fee, 20 guineas; three months' course, 12 guineas.
St. Mary's Hospital.—Six months' course, inclusive fee, 12 guineas.
St. Thomas's Hospital.—Inclusive fee, 20 guineas; short course, 6 guineas.
University College.—Inclusive fee, 20 guineas; three months' course, 12 guineas.

Provincial.

Cambridge University.
Mason College, Birmingham.
University College, Liverpool.
Yorkshire College, Leeds.
University of Durham College of Medicine, Newcastle-on-Tyne.
University College, Bristol.

Ireland.

School of Physic, Dublin.
The Catholic University School of Medicine.
Royal College of Surgeons, Schools of Surgery, Dublin.

Scotland.

University of Edinburgh.—Fees, winter session 10 guineas, summer session 6 guineas.
University of Glasgow.—Fee for course of instruction, 10 guineas.
University of Aberdeen.
St. Mungo's College, Glasgow.—Fees: Winter session of Lectures and six months' Laboratory instruction, 12 guineas; summer session of Lectures and 3 months' Laboratory instruction, 6 guineas.
The Conjoint Board in Scotland.

The Jenner Institute of Preventive Medicine.

The Jenner Institute of Preventive Medicine, Chelsea Gardens, Grosvenor Road, S.W., in addition to the facilities it affords for the prosecution of research work, provides classes in Bacteriology, Hygiene, Biological Chemistry, etc. The work is under the superintendence of the Director, Dr. Allan Macfadyen, assisted in the Bacteriological Department by Dr. R. T. Hewlett and Mr. Sydney Rowland.

Courses in Bacteriology for medical men, students of hygiene, etc., are given in the Bacteriological Department throughout the year. Lectures and Practical Demonstrations are also held from time to time upon such subjects as Immunity, the Preparation of Toxins, Antitoxins, etc., and the varied material sent to the Institute for examination is utilised for classwork. The Institute is recognised by the examining bodies for the curriculum for the D.P.H., and the whole course of study can be pursued in its bacteriological or chemical laboratories.

The increasing importance of Chemistry in Biology has been recognised by the institution of a Biological Chemistry Laboratory, where general instruction in this subject is given suitable to medical men, chemists, and others. The method for the deduction and isolation of bacterial products are practically demonstrated.

The Water Laboratory, under the charge of Dr. Harden, founded by funds from the Berridge Bequest, conducts Bacteriological and Chemical Examinations, and gives instruction in all matters appertaining to Water and Sewage.

A Photographic Department, under the care of Mr. J. E. Barnard, is in working order, and instruction is given in Photomicrography.

In addition to teaching, a large number of investigations are carried out by workers in the Institute, the results of which are published in a yearly volume of *Transactions*.

The extensive new laboratories and lecture rooms are now completed, and are in full working order. All particulars of classes and demonstrations, and permission to carry on research in the laboratories of the Institute may be obtained from the Director.

The Institute also undertakes the preparation of tuberculin, mallein, Coley's fluid, etc., as well as all the antitoxins of proved value.

Pathological material, waters, etc., may also be sent to the Institute for examination and report.

Some further particulars with regard to the classes and laboratory courses will be found at page 552.

OPENING OF THE MEDICAL SCHOOLS.

The arrangements for the opening of the Winter Session of the Medical Schools and Colleges in the United Kingdom, as far as they are at present complete, are as follows:

LONDON.

St. Bartholomew's Hospital and College.

The Winter Session will begin on Monday, October 2nd. The Old Students' Dinner will be held on the same evening in the Great Hall of the Hospital at 6.30 for 7 o'clock, Dr. T. Lauder Brunton, F.R.S., in the chair.

Charing Cross Hospital Medical School.

The Winter Session will commence on Monday, October 2nd, when Dr. Mitchell Bruce will give an Introductory Address at 4 P.M. The Old Students' Dinner will be held in the last week in October.

St. George's Hospital Medical School.

The Winter Session will begin on Monday, October 2nd, with an Introductory Address at 4 P.M. by Dr. Howship Dickinson, Consulting Physician to the Hospital.

Guy's Hospital Medical School.

The Winter Session will begin on Monday, October 2nd. The first meeting of the Physical Society will be held on this day in the new Physiological Theatre at 8 P.M., when Sir Samuel Wilks, Bart., M.D., LL.D., F.R.S., will preside. After the meeting a *conversazione* will be held in the new laboratories and class rooms. A house dinner of the Students' Club will take place at 6.30 P.M. in the College Dining Hall. Application for tickets for the dinner should be made to Dr. Fawcett, Secretary of the Students' Club.

King's College, London.

The Winter Session will begin on Monday, October 2nd. The Old Students' Dinner will be held in the evening.

The London Hospital Medical College.

The Winter Session will commence on Monday, October 2nd. The annual dinner will be held in the College Library in the evening, when Dr. Herman will take the chair.

St. Mary's Hospital Medical School.

The Winter Session will begin on October 2nd, when an introductory address will be given at 3 P.M. by Mr. H. G. Plimmer. The annual dinner will be held in the evening at the King's Hall, Holborn Restaurant, when the chair will be taken by Dr. Sidney Phillips.

The Middlesex Hospital.

The Winter Session will commence on Monday, October 2nd, when Mr. John Murray, F.R.C.S., will deliver an Introductory Address, after which the prizes gained during the previous year will be distributed. The annual dinner of past and present students will take place the same evening at the Trocadero Restaurant, under the presidency of Mr. A. Pearce Gould, M.S., F.R.C.S.

St. Thomas's Hospital Medical School.

The Winter Session will open on Tuesday, October 3rd, when the prizes will be distributed at 3 P.M. by Professor Clifford Allbutt, M.D., F.R.S., in the Governors' Hall. The annual dinner, in which all former and present students are invited to join, will take place on the same evening in the Whitehall Rooms, Hotel Métropole, at 6.30, when Dr. Sharkey will take the chair.

University College, London.

The Winter Session of the Medical Faculty will commence on Monday, October 2nd, when an introductory lecture will be given at 4 P.M. by Dr. G. F. Blacker. The Old Students' Dinner will take place at 6.30 the same evening in the Victoria Rooms, Hotel Cecil.

Westminster Hospital Medical School.

The Winter Session will begin on Monday, October 2nd. The annual dinner will take place in the evening at the Holborn Restaurant, when the chair will be taken by Mr. Thomas Bond, F.R.C.S., Consulting Surgeon to the Hospital.

London School of Medicine for Women.

The Winter Session will open on Monday, October 2nd. An introductory address will be given by the Dean, Mrs. Garrett Anderson, after which the prizes for the past year will be distributed.

London School of Tropical Medicine.

The Winter Session will commence on Monday, October 2nd, when the new School will be formally opened to students. Further particulars will be found at page 552.

PROVINCES.

Mason College, Birmingham.—The Winter Session will commence on Monday, October 2nd, when Sir William Gairdner will deliver the opening address.

University College, Bristol.—The Winter Session commences on October 2nd.

University College of South Wales and Monmouthshire, Cardiff.—The Winter Session will begin on Monday, October 2nd. An address will be given on Friday evening, October 6th, by Professor A. W. Hughes.

Yorkshire College, Leeds.—The Winter Session will open on October 2nd, when an address will be delivered and the prizes distributed by Dr. Byrom Bramwell, F.R.C.P.E., F.R.S.E.

University College, Liverpool.—The Winter Session will begin on Tuesday, October 3rd, when the Rev. S. A. Thompson-Yates, M.A., will deliver the opening address and distribute the prizes.

Owens College, Manchester.—The Winter Session begins on Monday, October 2nd, when an introductory address will be delivered by Sir J. Crichton Browne, LL.D., M.D., F.R.S.

University of Durham College of Medicine, Newcastle-on-Tyne.—The Winter Session will commence on Monday, October 2nd, when a *conversazione* will be held.

University College, Sheffield.—The Winter Session will commence on Monday, October 2nd.

SCOTLAND.

University of Edinburgh.—The Winter Session will commence on Tuesday, October 17th.

The Medical College for Women, Edinburgh.—The Winter Session will commence on October 17th.

The Edinburgh Extra Academical School.—The School will open on October 17th.

University of Aberdeen.—The Winter Session will commence on Monday, October 16th. The Preliminary Examination will commence on September 30th.

University of St. Andrews.—The Winter Session will open on Wednesday, October 11th.

University of Glasgow.—The Winter Session will be opened on Thursday, October 19th. The Winter Session of Queen Margaret College Medical School for Women will begin on Thursday, October 19th.

Anderson's College Medical School.—The Winter Session will open on Thursday, October 19th.

St. Mungo's College, Glasgow.—The Winter Session will open on Thursday, October 19th, with an address to medical students.

University College, Dundee.—The Winter Session will open on Thursday, October 19th.

IRELAND.

The University of Dublin: The School of Physic.—The Winter Session will commence early in October.

The Royal College of Surgeons in Ireland: Schools of Surgery.—The Winter Session will commence early in October.

Queen's College, Belfast.—The Winter Session will begin in October.

Queen's College, Cork.—The examinations for the eight medical scholarships will begin on Thursday, October 19th, and the lectures on Monday, October 23rd. Particulars can be obtained from the Registrar, Mr. Alexander Jack, M.A.

QUEEN'S COLLEGE, GALWAY.—The matriculation examination will be held on October 20th, and examinations for junior scholarships on October 23rd, for second year October 21st, for third and fourth years October 26th.

THE PUBLIC SERVICES.

THE ROYAL NAVY AND ARMY AND THE INDIAN MEDICAL SERVICES.

GENERAL REGULATIONS.

The following are the rules governing admission to these services:—

All candidates must submit to an examination by a medical Board into their physical fitness before being admitted to the entrance examination. Special attention is given to the candidate's power of vision. A moderate degree of myopia is not considered a disqualification, providing it does not necessitate the use of glasses during operations, and that no organic disease of the eye exists.

Candidates for the Army and Indian Services may, before examination, elect to declare their intention to compete for one or other or both of these services; and their position will be determined according to the results of the examination.

As the prospects of a medical officer of one of these services attaining to the highest administrative grades depends to a large extent upon the regulations with regard to compulsory retirement at the age of 55, if below a certain grade at that age, there is a distinct advantage in entering the service at as early an age as possible.

THE ROYAL NAVY MEDICAL SERVICE.

A candidate for admission to the Royal Navy Medical Service must be between 21 and 28 years of age. The entrance examination consists of two parts; in Part I, *Compulsory*, the subjects are the same as in the Army Medical Staff, but the marks are: Medicine, 1,200; Surgery, 1,200; Anatomy and Physiology, 600; Chemistry and Materia Medica, 600. Part II, *Voluntary*, consists of two divisions: (*a*) French and German (200 marks each). A knowledge of modern languages being considered of great importance, all candidates are urged to qualify in them; (*b*) Natural Sciences (Zoology, Botany, Physics, and Physical Geography) (300 marks each). Candidates will be examined in not more than two of these sciences. Candidates who qualify in the compulsory subjects will be allowed to count marks in those of the two sciences only in which they obtain one-third of the maximum marks for each.

Zoology.—The examination in Zoology will include the general principles of biology and a comparison of animals with plants; the distinctive characters of the larger groups of animals—the protozoa, cœlenterata, vermes, arthropoda, mollusca, echinodermata, and vertebrata—as illustrated by common types; the elements of embryology; animal parasites.

Botany.—The examination in Botany will comprise the general principles of the morphology and physiology of low forms of life, for example, torula, bacteria, spirogyra, moss, fern; the general morphology of flowering plants; diagnosis of the important British natural orders; medicinal plants.

Physics.—The examination in physics will be limited to the general principles of mathematics, acoustics, optics, heat, magnetism, and electricity such as: the properties of solids, liquids, and gases; conservation of energy, specific gravity, propagation and reflection of sound and light, temperature, specific and latent heat, thermometers, properties of mirrors and lenses, chromatic dispersion of light, forms of batteries, galvanic and frictional electricity, general properties of magnets.

Physical Geography.—The examination in physical geography will be limited to general principles, such as the relation of the earth to the rest of the solar system, nature of the earth's crust, and the chief kinds of rocks, general configuration of land and water, mountains, plains, lakes, rivers, islands, glaciers and icebergs, the ocean currents, tides, the earth's atmosphere, winds and storms, dew, rain, climate, volcanoes, earthquakes, general distribution of animal and vegetable, life.

The order of merit is determined by the total number of marks obtained in the compulsory and voluntary parts. Should, however, it be considered expedient to grant additional commissions, the Board of Admiralty is empowered to admit annually one candidate nominated by the examining bodies of public schools of medicine in the United Kingdom or attached to such Colonial universities as they may think proper. The candidate must be qualified according to the rules in force for entry of candidates, and must be approved by the Director-General of the Medical Department of the Navy. He will also be compelled to pass a physical and test examination. As regards seniority he will rank next below the last surgeon entered at the same time by competition. Copies of the Regulations for entry of candidates for commissions in the Medical Department of the Royal Navy will be furnished on application to the Medical Director-General, Naval Medical Department, Admiralty, London, W.C.

Successful candidates, immediately after passing the examination, will receive commissions as Surgeons in the Royal Navy, and will undergo a course of practical instruction in Naval Hygiene, etc., at Haslar Hospital.

The rate of pay of Surgeon is on entry £209 17s. 6d. a year after four years' full pay service, £246 7s. 6d. a year; after eight years' full pay service, £282 17s. 6d. A Surgeon at the expiration of twelve years' service may, on the recommendation of the Director-General, be promoted to the rank of Staff-Surgeon, if he has passed the required examination at any time after completion of eight years' service. The pay on promotion is £383 5s.; after four years' full pay service in the rank, £438.

Retirement.—Compulsory retirement will be as follows:

Inspector and deputy-inspector-general of hospitals and fleets.	At the age of 60, or at any age, if he has not served for five years. Except that if in any particular case the Lords Commissioners of the Admiralty may consider that the interests of the public service will be materially advanced by the further retention of an inspector-general of hospitals and fleets on the active list, the age for the retirement of such inspector-general may be extended to 62.	To be retired irrespective of age if found physically unfit for service.
Fleet-Surgeon, staff-surgeon, and surgeon.	At the age of 55, or at any age, if he has not served for five years.	

Voluntary retirement and withdrawal will be allowed as follows:

(*a*) Every officer will have the option, subject to their Lordships' approval, of retiring after twenty years' full pay service on the scale of retired pay, as laid down below or with a gratuity.

(*b*) At the expiration of 8, 12, or 16 years' full pay service, every officer will be permitted, subject to their Lordships' approval, to withdraw from the Naval service, receiving a gratuity on the scale laid down below.

The name of an officer so withdrawing will be removed from the lists of the Navy, with which all connection will then be severed.

(*c*) Voluntary retirement and withdrawal will be allowed, as a rule, only when an officer is unemployed or serving at home.

(*d*) Applications from officers, not entitled to retire or withdraw, to resign their commissions, will receive every consideration.

Gratuities and retired pay will be awarded on retirement and withdrawal on the undermentioned scale:—

Rank.	Gratuities.	Daily.	Yearly.
	£ s. d.	£ s. d.	£ s. d.
Surgeon and Staff-Surgeon:			
After 8 years' full-pay service	1,000 0 0	—	—
,, 12 ,, ,,	1,500 0 0	—	—
,, 16 ,, ,,	2,250 0 0	—	—
Fleet-Surgeon:			
After 20 years' service	—	*1 0 0	365 0 0
After 24 ,, ,, ...	—	*1 2 6	410 12 6
After 27 ,, ,, ...	—	*1 5 0	456 5 0
After 30 ,, ,, ...	—	*†1 10 0	547 10 0
Deputy-Inspector-General	—	1 15 0	638 15 0
Inspector-General	—	2 0 0	730 0 0

*To obtain this rate an officer must hold the Commission of Fleet-Surgeon.

† Or on compulsory retirement at the age of 55.

The allowance of 5s. a day, in addition to full pay, at present granted to the fleet-surgeon of a flag-ship bearing the flag of a commander-in-chief on a foreign station, or of the Flag Officer commanding the Channel Squadron, will be given to the senior medical officer of such ship, being a fleet-surgeon or staff-surgeon; and an allowance of 2s. 6d. a day to the senior medical officer, being a fleet-surgeon or staff-surgeon of a ship of a commodore or of a senior officer commanding a foreign station.

Medical officers conducting the course of instruction at Haslar Hospital will receive the following allowances:

The senior officer employed upon this duty ...	£150 a year.
The junior officer assisting	50 ,,

The hospital allowances for naval medical officers at home and abroad, in lieu of provisions for themselves and servants, and for fuel and light, are as follow:

	At home.	Abroad.
Inspectors-general of hospitals	£85	£130
Deputy-inspectors-general	67	112
Fleet-surgeons and staff-surgeons ...	53	118
Surgeons	39	108

The travelling allowances, extra pay, lodging money, and compensation for losses are fixed for naval medical officers according to their relative rank in the Service, as is prize money.

THE ROYAL ARMY MEDICAL CORPS.

A candidate for a commission in the corps must be over 21 and not over 28 years of age at the date of the commencement of the competitive examination. He must be of unmixed European birth, and registered under the Medical Act.[1] He must produce a certificate of moral character, and a certificate to the effect that he is of steady habits, and likely to prove creditable to the corps. Before admission to the examination his physical fitness will be determined by a Board of Medical Officers. These and some additional facts of minor importance must be embodied in a "declaration" upon a special form, which may be obtained on application to the Director-General, Army Medical Service, War Office, London, S.W., who will also forward a memorandum on conditions of admission, pay, etc.

A competitive entrance examination is held twice a year, generally in February and August. Announcement of the date and of the number of vacancies is made in advance by advertisement in the medical and some other papers, and in the *Monthly Army List*.

Entrance Examination.

The examination consists of two parts:

I. *Compulsory*, the subjects of which are (*a*) Anatomy and Physiology, (*b*) Surgery, (*c*) Medicine, including Therapeutics and the Diseases of Women and Children, (*d*) Chemistry and Pharmacy, and the Practical Knowledge of Drugs; Medicine 1,200 marks; Surgery, 1,200 marks; Anatomy and Physiology, 600 marks; Chemistry and Pharmacy, 600 marks. The examination in medicine and surgery is in part practical, and includes operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients, at the bedside. The examination in Chemistry is limited to the elements of the science, and to its application to medicine, pharmacy, and practical hygiene.

II. *Voluntary.*—A candidate may be examined in the following voluntary subjects: (*a*) French, German, and Hindustani (200 marks each), (*b*) Natural Sciences, two subjects (300 marks each). Competitors are urged to qualify in French and German, as a knowledge of modern languages is considered of much importance. The Natural Sciences include Physics, Zoology, Geology, and Physical Geography, and Botany. A number less than one-third of the marks obtainable will not be allowed to count. An entrance fee of £1 is payable.

The Secretary of State reserves the right to reject any candidate who shows a deficiency in general education as evidenced by bad spelling or composition.

Successful candidates are arranged in order of merit, and are required to proceed to the Army Medical School at Netley on Probation; they receive an allowance of 8s. a day.

Final Examination.

Candidates on probation at Netley attend courses in: (1) Hygiene: (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of Diseases and Injuries incident to Military Service. At the conclusion of the Netley course a further examination in the subjects there taught is held, for which marks are awarded, and the final position of the candidate is determined by the number of the marks obtained at the Entrance and Final Examinations.

Pay.—On leaving Netley the Candidate on Probation receives a commission of Lieutenant, the pay of which rank is £200 a year. The next grade is Captain, and after five years' service the pay is £250 a year. A Captain may be promoted to the rank of Major after twelve years' full pay service; to qualify himself for this promotion he must at any time after his seventh year of service pass a special examination in Surgery, Medicine, Hygiene, the Duties of Medical Officers, Hospital Organisation, Military Law and the Administration of the Royal Army Medical Corps.

Retired Pay.—All officers under the rank of Colonel must retire at the age of 55; above this rank at the age of 60, unless specially extended. An officer of ten years' service on full pay may be permitted to retire on a gratuity of £1,250; after fifteen years' service, £1,800; after eighteen years' service, £2,500.

[1] He must have a diploma in Medicine and in Surgery, but the diploma of the Society of Apothecaries in London, obtained under the conditions of the Medical Act of 1886, is accepted as a double qualification. A candidate is required to produce also the following certificates: (1) Of having discharged the duties of a medical clinical clerk during six months, and of a surgical dresser during another period of six months, of which, in each case, not less than three months must have been spent in the wards of a hospital. (2) Of having attended a course of instruction during not less than three months at an ophthalmic hospital, or the ophthalmic department of a general hospital, which course shall include instruction in the errors of refraction.

INDIAN MEDICAL SERVICE.

All natural-born subjects of Her Majesty between 21 and 28 years of age may be candidates; the conditions are otherwise the same as for the Army Medical Corps (see above), but there is an additional voluntary subject (Hindustani), for which 150 marks are allowed.[1] All particulars regarding condition of admission and subjects of examination are contained in the "Regulations for the Examination of Candidates for Admission to Her Majesty's Indian Medical Service," issued by the India Office and obtainable by application to the Military Secretary. The following is the present scale of marks: Surgery and Medicine, each 1,200; Anatomy with Physiology, and Chemistry with Pharmacy, each 600; French, German, and Hindustani, each 200; Physics, Zoology, Geological and Physical Geography, and Botany, each 300. A certificate of three months' attendance at an Ophthalmic Hospital is required.

The final order of merit is determined, as in the case of the Army Medical Corps, by the combined results of the Preliminary and of the Final Examinations, and, so far as the requirements of the Service will permit, candidates will have the choice of commands in India (that is, Bengal, Punjab, Madras, or Bombay), according to their position in that list. The examinations are held, as a rule, twice a year, in February and August.

Free passage to India is provided. The rate of pay, until arrival in India, is 10s. a day. The minimum rate of pay in India is stated to be Rs. 350 a month. After seventeen years' service for pension, the rate of retired pension is £292 a year; after twenty, £365; after twenty-five, £500; after thirty years, £700. Further particulars as to rates of pay, promotion, pensions, and half-pay will be found in Military Department Form 124, which can be obtained on application to the Under-Secretary of State, India Office, London, S.W.

Examination Papers.

The following are the Papers set at the Examination of Candidates for Her Majesty's Army and Indian Medical Services in July, 1899.

Anatomy and Physiology.—Dr. Cunningham.

1. Decribe the fascia of the psoas muscle, the fascia iliaca, and the fascia transversalis, laying particular stress upon those connections which bear upon the anatomy of psoas abscess, and of femoral and inguinal hernia.
2. Describe "*Hunter's Canal*," and state clearly the relative position of the parts contained within it.
3. Give the form, position, and relations of each suprarenal body, and mention what you know of its function.
4. Describe the optic nerve, the optic chiasma, and the optic tract, and state the central connections of the fibres which form the optic tract.

Surgery.—Sir William MacCormac, Bart., K.C.V.O.

1. How is a dislocation backwards of the hip-joint produced? Give the diagnosis and treatment of the injury.
2. What are the different forms of cystic disease met with in the female mamma? Give the pathology, symptoms, and treatment of each variety.
3. For what conditions may iridectomy be required? Describe the operation, and give the after-treatment of a case.
4. State fully the considerations which would influence your decision as to the treatment, either by amputation or by excision, of a case of tuberculous disease of the knee-joint in a young adult.

[1] Candidates presenting themselves for examination in Hindustani are recommended to study some recognised textbook, such as the annotated edition of the *Taubat-un-Nasuk*, which is the text used by candidates for the Indian Civil Service.

CHEMISTRY AND MATERIA MEDICA.—DR. NORMAN MOORE.

1. What is the composition of chloroform? How is it prepared?
2. State the composition, and explain, with formulæ, the chemical preparation of (1) sulphuric acid, (2) hydrochloric acid, (3) nitric acid, (4) carbolic acid.
3. What rules regulate the strength of tinctures in the latest edition of the *British Pharmacopœia*. Give examples.
4. What is opium? What alkaloids does it contain? What are its official preparations, and what the strength of each?
5. What are the therapeutic uses of mercury and of its salts? What are their official preparations and doses?

MEDICINE AND PATHOLOGY.—PROFESSOR MCCALL ANDERSON.

1. A man, aged 36, had been for some months below par, and was losing flesh and colour, but continued at work, until one day, when he rapidly became comatose. On recovering consciousness, it was found that his right arm and leg were completely, while the lower segment of the face on the same side was partially, paralysed, and to every question he returned for answer either "Yes" or "No." His heart was not sound, but there were no murmurs, and dropsy was absent. He had never had syphilis.

Fill in the picture of all the additional symptoms which might be present. Give the diagnosis in full, and what would you find *post mortem* in the event of a fatal issue?

2. Give an account of the indirect (pressure) symptoms which may be encountered in cases of aneurysm of the arch of the aorta.
3. Give a short sketch of the complications of diabetes mellitus.
4. How can you satisfy yourself (*a*) that pus is present in the urine, (*b*) that it comes from the pelvis of the kidney, and (*c*) how would you treat the condition?

NATURAL SCIENCES.—DR. NORMAN MOORE.

Candidates may answer not more than *six* questions, and they must confine themselves to *two* branches of science only.

Geology and Physical Geography.

1. How would you recognise an extinct volcano? What traces of volcanic action are to be observed in the British Isles?
2. What are the chief fossils of the mountain limestone? What beds lie immediately above and what immediately below that rock in the British Isles?
3. Describe the effects of (1) glacial action, (2) earthquakes.

Physics.

1. Describe Attwood's machine, and explain its use.
2. State the facts which demonstrate that, with the exception of tidal energy, all the work done in the world is due to the sun.
3. Explain the electrical phenomena illustrated and the apparatus necessary in sending an ordinary telegraphic message.

Botany.

1. Give the characters of the following natural orders: (1) Primulaceæ, (2) Iridaceæ, (3) Convolulaceæ, (4) Linaceæ, (5) Polygonaceæ.

Describe the structure of an orchis, and explain the method of fertilisation in that genus.

2. What is the botanical nature of (1) ergot of rye, (2) potato disease, (3) smut of corn, (4) lily disease?
3. Define the following terms: (1) Umbel, (2) spike, (3) capitulum, (4) raceme, (5) placenta, (6) albumen, (7) bract, (8) petiole, (9) sepal, (10) cyme, and give an example of each.

Zoology.

1. How would you recognise a poisonous snake? Describe the structure of the skull and the anatomy of the poison apparatus in any such snake. What difference of action is there between the poison of the cobra and that of a viper?
2. Name the entozoa which inhabit the human body, and describe fully the structure and development of any one form.
3. Describe the placentation of (1) the elephant, (2) the mare, (3) the cow, (4) the cat; and the dentition of (*a*) the sheep, (*b*) the rabbit, (*c*) the dog, (*d*) the sloth.

PRISON MEDICAL SERVICE.

THE prison department consists of two branches—the convict service and the local prison service. These are now practically amalgamated, and the officers of each branch are freely interchangeable. In the case of the smaller prisons the medical officer is usually a local practitioner, but in the case of the larger prisons the medical officers are appointed by the Convict Prison Board or the Prison Commission, and form practically a special service. The Chairman of the Boards is Mr. Evelyn Ruggles Brise. Application for employment may be made to the Board on a special form, which, we understand, can be obtained from the Secretary, Major E. G. Clayton, Prison Commission, Home Office, London, S.W.

The number of vacancies is not large, and the prospects of promotion are bad. This is due in part to the fact that the rate of pay of the higher appointments depends upon the number of prisoners in the particular prison, and that the total number of prisoners in the country is decreasing.[1]

The following was the staff in 1898-99:

Convict Service.—Five deputy medical officers, at £250, rising to £300; four medical officers, at incomes ranging from £300 to £550.

Local Prison Service.—Nine deputy medical officers, at £250, rising to £300; seven medical officers, at £200; two medical officers, at £250; three medical officers, at £300, rising to £390; six medical officers, at £400, rising to £500.

[1] Intending applicants would do well to consult a memorandum prepared for the use of the Parliamentary Bills Committee of the British Medical Association, and published in the BRITISH MEDICAL JOURNAL on April 23rd, 1892.

MEDICAL APPOINTMENTS IN THE COLONIES.

1. Medical appointments are from time to time filled up by the Colonial Office in the following Colonies: British Guiana, Jamaica, Trinidad, Windward Islands, Leeward Islands, British Honduras, Fiji, Sierra Leone, Gambia, Gold Coast, Lagos, Niger Territories, Ceylon, Straits Settlements, Hong Kong, Cyprus, Gibraltar, St. Helena, and the Falkland Islands. In Ceylon and Jamaica vacancies are almost always filled locally by the appointment of qualified native candidates.

It is for the West Indies and the West African Colonies that medical officers are chiefly required.

2. The majority of the West Indian appointments involve medical charge of a district, including, as a rule, the care of a hospital, poor-house, asylum, or other institution, and free attendance on the aged and children.

In West Africa the medical officers are also required to take charge of any hospital, public dispensary, lunatic asylum, or other Government institution at their respective stations, to supervise the sanitation of the district, to perform vaccination, and to give gratuitous attendance to all Government officials, and, in most cases, the families of such officials also.

N.B.—Passage money on first appointment, and leave of absence on half-pay (in case of sickness, or after six years' service, if the medical officer has given satisfaction in the discharge of his duties), are granted to medical officers in the cases specified in the Colonial Regulations; and those serving in West Africa are allowed six months' leave with full pay and free passages home and out again, after every twelve or fifteen months of continuous residential service. With regard to pension, medical officers are usually on the same footing as other Government servants; but in cases where private practice is allowed, the rule is that they are not entitled to pension, except in West Africa.

3. The following is a short account of the appointments in the separate Colonies:

British Guiana.—Forty-two appointments. Candidates must have held for at least six months a resident medical appointment in some public institution. Officers are appointed on two years' probation as supernumeraries, and are paid a salary at the rate of £300 per annum with quarters, without the right to private practice. Supernumerary officers, married or single, who obtain leave to reside out of the quarters provided for them, will not be entitled to lodging allowance. After serving for two years, if appointed to the permanent staff, the officer will receive £400 per annum, rising by increments of £25 annually up to £700 per annum. A Government medical officer on being appointed to a district, and a supernumerary on being appointed to act in charge of a district, will receive a salary of £500 per annum, but will not receive any increments thereto until entitled to such increments by length of actual service. Every medical officer appointed to a district or to act in charge of a district will receive a travelling allowance at a rate varying from £100 to £150 per annum as the extent of the district may require. He is allowed private practice. No more than £30 is allowed for passage money on first appointment. There is a Widows' and Orphans' Fund in the Colony to which all Government servants are compelled to subscribe at the rate of 4 per cent. on their salaries.

Jamaica.—The appointments, 54 in number, are mainly district appointments with private practice allowed; the salary paid by Government varies from £150 to £250 per annum, and in most cases is £200. Newcomers are in some cases attached for a while to the public hospital in Kingston, and given an allowance at the rate of £200 per annum, but not permitted to undertake private practice. There is a Civil Service Widows' and Orphans' Fund established by law, to which all medical officers are obliged to subscribe at the rate of 4 per cent. on their salaries.

Trinidad and Tobago.—In Trinidad there are 32 appointments. Officers are appointed in the first instance on two years' probation as supernumeraries. They will receive a salary of £250 per annum, with furnished quarters, and are usually attached to the Government Hospital; the salary assigned to the district appointments, to which they are promoted as vacancies occur, is £300, which is increased to £400 and upwards by various allowances for horse, house, or otherwise; these posts carry the right to private practice; after every five years' service an officer is given an additional personal allowance at the rate of £50 per annum. All officers hereafter appointed are required to contribute 4 per cent. of their salaries to the Widows' and Orphans' Fund.

In the Island of Tobago there are 3 district appointments, with salary of £200 per annum attached.

Windward Islands (Grenada, St. Lucia, St. Vincent).—The 23 appointments are, with few exceptions, district appointments with the right to private practice attached; the salaries paid by Government vary from £200 to £400, with allowances in certain cases.

Leeward Islands (Antigua, St. Christopher, and Nevis, Dominica, Montserrat, Virgin Islands).—The 25 appointments are of the same nature as in the Windward Islands. An officer when first sent out is not appointed to a particular colony, but to the service of the Leeward Islands, with a salary of £200, and the Governor decides as to the district which is to be allotted to him. As a rule, £30 only is allowed for passage money. The medical officers receive fees for successful vaccinations, *post-mortem* examinations, attendance and giving evidence at courts of justice, certificates of lunacy, and, in the larger islands, for burial certificates. They are also allowed private practice.

British Honduras.—There are 5 medical appointments, in all of which private practice is allowed, if it does not interfere with the public duties of the officer; the pay is $720 to $1,050. The Colonial Surgeon and district surgeon are public vaccinators, and as such receive a fee for every successful case. Four of the medical officers are also district magistrates, and receive an additional $720 in the latter capacity. Unless they already possess a diploma of Public Health, medical officers before they join the Colony are liable to be required to undergo a course of instruction at a laboratory of public health or analogous institution.

Fiji.—There are at present 8 medical officers, of whom the chief medical officer receives £600 per annum, the senior medical officer £450 per annum and £50 allowance for house rent, the others receiving £300 per annum with quarters, or £50 house allowance at the option of the Government. District medical officers receive in addition capitation fees upon all the indentured labourers in their respective districts. These amount usually to sums ranging between £60 and £150 per annum. Government medical officers are entitled to the private practice of their profession in all districts, on the understanding that their official duties are not made subservient to it.

Sierra Leone.—There are 8 Government medical officers. The pay of the Colonial Surgeon is £500 a year. The Assistant Colonial Surgeons receive £300, rising to £350, and the District Surgeons in the Protectorate £350, rising to £400. The Senior Assistant Colonial Surgeon is in charge of the lunatic asylum and the incurable and small-pox hospitals at Kissy, and is stationed in Freetown. Quarters are not provided.

Gambia.—There are 2 medical officers paid respectively £400 and £300 per annum, and allowed private practice. Quarters are provided, or an allowance in lieu thereof.

Gold Coast.—The pay of the Chief Medical Officer is £800, rising to £1,000 by £50 per annum, with consultation practice only. The Colonial Surgeon, the next officer, receives £600 with annual increments of £25 to £700, and there are two Assistant Colonial Surgeons receiving £500 with annual increments of £25 up to £600. The other Assistant Colonial Surgeons, 24 in number, are paid at the rate of £350 per annum for three years. After three years, if the officer has performed his duties in a satisfactory manner and is continued in his appointment, the salary will be increased to £400, rising by annual increments of £20 to £500. Private practice is allowed, but the right of withdrawing this is reserved; there is very little to be had, and it cannot be counted upon, as the medical officers are liable to frequent change of station. Free quarters are provided.

Lagos.—The pay of the Chief Medical Officer is £800 per annum, rising to £1,000 by increments of £50. The Senior Assistant Colonial Surgeon receives a salary of £400 a year, rising by annual increments of £20 to £500. Eight other Assistant Colonial Surgeons receive £350, rising by triennial increments of £25 to £400. Private practice will not be allowed in future. Free quarters, or allowances in lieu thereof, are granted to the Colonial Surgeon and to the European Assistant Colonial Surgeons. (N.B.—It is not considered desirable that anyone under 25 should be appointed to any medical post in West Africa. The special rules as to leave and pension in the case of Government servants on the West Coast of Africa apply also to medical officers.)

In the Niger Territories there are at present two medical services, those of the West African Frontier Force and the Niger Coast Protectorate. In the West African Frontier Force there are three senior and nine assistant medical officers. The pay of senior medical officers is £680 a year, and £100 a year command pay; of assistant medical officers £400 a year; with outfit allowance, free passage, etc. The engagement is for twelve months in the first instance, but is renewable. Two months' leave of absence on full pay and four months on half-pay are given after each tour of twelve months' service. The duties are at present purely military. A separate civil establishment is contemplated. In the Niger Coast Protectorate there are at present sixteen medical officers. The salary is £350, rising to £500 by £50 biennially, but this rate of increment is subject to modification. There is one Principal Medical Officer whose annual salary is £1,000. An increase of the staff is contemplated.

Ceylon.—The pay of the (36) Sub-Assistant Colonial Surgeons and (9) Deputy Colonial Surgeons, and (8) other subordinate medical officers is at the rate of from Rs. 900 to Rs. 1,600 per annum. The (22) Assistant Colonial Surgeons are paid at a rate of from Rs. 3,000 to Rs. 5,000 per annum, and the (4) Colonial Surgeons and (3) other superior medical officers at a rate of from Rs. 5,000 to Rs. 8,000 per annum. The Principal Civil Medical Officer receives Rs. 12,000 per annum, rising by annual increments of Rs. 1,000 to Rs. 15,000 per annum. Private practice is allowed to the subordinate officers, but the Colonial Surgeons may take only consultation practice. The Medical Service is recruited mainly from gentlemen born in the island but possessing British diplomas.

Straits Settlements.—The pay of the (11) different medical appointments is not uniform in value, but the salary of a Colonial Surgeon varies from 1,800dols. to 7,200dols. per annum, with quarters in some cases, private practice being generally not allowed.

Hong Kong.—The pay of the (7) Government medical appointments varies from 2,400dols. to 4,800dols. per annum, besides rent and carriage allowances in some cases, but private practice is in general not allowed.

Mauritius.—There are 24 medical appointments in all. Of these, 14 are minor appointments, with salaries varying from Rs. 500 to Rs. 1,500 per annum. The other 10 appointments have salaries varying from Rs. 2,000 to Rs. 9,000. Free quarters are not given in most cases; and private practice is not allowed. The service is mainly recruited from gentlemen born in the island.

N.B.—Exchange compensation is at present granted to officers appointed from this country to medical posts in Hong Kong, the Straits Settlements, and Ceylon, that is, an allowance of dollars or rupees, in respect of one-half, and one half only, of an officer's salary, sufficient to make up the difference between the market value of the dollar or rupee and a dollar equivalent to 3s. or a rupee equivalent to 1s. 6d. The sterling value of the dollar or rupee from day to day is to be found from the market quotations. There are Widows' and Orphans' Pensions Funds in Ceylon, Straits Settlements, and Hong Kong, to which all permanent Government servants are called upon to subscribe at the rate of 4 per cent. on their salaries.

Seychelles.—There are two medical appointments. The Government Medical Officer receives Rs. 4,000; the Assistant Government Medical Officer receives Rs. 3,000. The holder of the latter appointment has free quarters. Private practice is not allowed.

Gibraltar.—There is a surgeon of the Colonial Hospital receiving £250, and an assistant surgeon receiving £87 10s. The surgeon of the hospital as medical officer of the civil prison and lunatic asylum, receives £50 and house allowance of £42. The assistant surgeon is also police surgeon, port surgeon (£100), and is public vaccinator.

Cyprus.—There is a Chief Medical Officer paid at the rate of £500 per annum, and two District Medical Officers paid at the rate of £250 per annum; all enjoying private practice; these are the only medical appointments in the island which are open to English candidates.

St. Helena.—The Colonial Surgeon receives £200 per annum, and £30 horse allowance. Private practice is allowed.

Falkland Islands.—There are two appointments, one of which is paid at the rate of £300 per annum, and the other at the rate of £200 per annum. Private practice is allowed in both cases.

4. All applicants for ordinary medical employment in these Colonies must be between the ages of 23 and 30, and must be doubly qualified; preference will be given to those who have attended a course of lectures on tropical diseases, or have held hospital appointments as house-physicians and house-surgeons; certificates of moral character and of sobriety will be required, and every officer before being appointed will be medically examined by one of the consulting physicians of the Colonial Office—Dr. Patrick Manson, 21, Queen Anne Street, Cavendish Square, London, W.; Dr. Andrew Davidson, 30, Morningside Drive, Edinburgh; or Dr. Hawtrey Benson, 57, Fitzwilliam Square, Dublin.

5. In addition to the ordinary medical appointments in these Colonies vacancies also occasionally, though very rarely, occur for which specialists are required, as, for example, to take charge of a lunatic asylum, and the particulars of chief medical officer in some of the larger Colonies have not been given, as the headship of the medical department in such Colonies, requiring administrative as well as professional qualifications, is not reserved to the ordinary medical staff of the same Colony, but is often filled up directly by transfer, and sometimes from outside the service.

6. Applications for medical employment in these Colonies from persons in the United Kingdom must be addressed to the Assistant Private Secretary, Colonial Office, Downing Street, S.W. Out of the total number so applying, a list of candidates will be made, who will be eligible to fill any vacancies which may occur during the year, but no promise whatever can be held out that candidates will eventually receive an appointment. It is not possible to forecast either the number or the nature of the vacancies which will arise in the course of any given year and it is not expected that candidates should hold themselves in readiness by refraining from other employment, as usually, when selected for an appointment, they can be allowed sufficient time to make their preparations and to terminate their existing employment. There have been on the average 15 vacancies a year during the last ten years to which appointments have been made from this country. During recent years the vacancies have been more numerous, owing to the increases of medical staff in the West African Colonies.

In the course of the year April, 1887, to April, 1888, there were in all 15 vacancies to which appointments were made from this country. They occurred in the following colonies: British Guiana, British Honduras, Falklands, Gambia, Gold Coast, Hong Kong, Straits Settlements. In the course of the year 1888-1889, there were eight vacancies (British Guiana, Fiji, Gold Coast, Straits Settlements, Trinidad). In 1889-1890 there were twelve vacancies (British Guiana, Fiji, Gibraltar, Gold Coast, Hong Kong, Lagos, St. Helena). In the year 1890-1891 there were 17 vacancies (British Guiana, British Honduras, Gambia, Gold Coast, Leeward Islands, Straits Settlements, Windward Islands). In the year 1891-1892 there were 12 vacancies (British Guiana, British Honduras, Fiji, Gold Coast, Leeward Islands, Windward Islands). In the year 1892-1893 there were 18 vacancies (British Guiana, British Honduras, Fiji, Gold Coast, Jamaica, Leeward Islands, Trinidad). In the year 1893-1894 there were 18 vacancies (British Guiana, British Honduras, Falklands, Fiji, Gambia, Gold Coast, Jamaica, Lagos, Leeward Islands, Straits Settlements, Trinidad). In the year 1894-1895t here were 14 vacancies (British Guiana, Cyprus, Fiji, Gold Coast, Lagos, Leeward Islands, Trinidad, Windward Islands). In the year 1895-1896 there were 15 vacancies (Gold Coast, Lagos, Gambia, Jamaica, St. Vincent, Straits Settlements, Cyprus, and Zululand). The list of candidates applying in April, 1897, comprised about 90 names.

In addition to the above, the Colonial Office and Foreign Office, through the Crown Agents for the Colonies, send out every year an increasing number of medical men to fill temporarily appointments in connection with railway and other large public works in the Crown Colonies and Protectorates.

Application for further information should be made at the Colonial Office, Downing Street, S.W.

BRITISH PRACTITIONERS ABROAD.

FOREIGN practitioners cannot practise medicine in Great Britain without the danger of infringing the Apothecaries' Act, and unless registered they cannot recover their fees by legal process nor give medical evidence in courts of law, nor hold public medical offices. Under the Medical Act of 1886 the General Medical Council may recognise equivalent qualifications granted in countries which treat this country with reciprocity; after certain formalities such qualifications would be registrable. At present, however, no foreign countries have arranged to treat this country with reciprocity, and as a rule British practitioners are required in European countries to pass an examination of greater or less severity. The following list contains particulars as to the regulations of the British Colonies as well as of foreign countries:

BRITISH COLONIES AND DEPENDENCIES.

AUSTRALASIA.

New South Wales.—British qualifications, if verified, admit holders to practise as duly qualified medical practitioners here. By Order in Council the second part of the Imperial Medical Act, 1886, now applies to New South Wales.

Victoria.—Local registration compulsory. British qualifications entitle holder to registration here.

South Australia.—Registration not compulsory here, and persons can practise without it. British qualifications entitle to registration here. Part II of the Imperial Medical Act, 1886, now applies to South Australia.

Queensland.—All medical practitioners must be registered by the Queensland Medical Board. British qualifications subject to verification entitle holder to registration. Persons registered under Medical Act, 1858, can claim registration, but such registration must be legally proved.

Western Australia.—Persons registered under Medical Act, 1858, can claim to be registered by the Medical Board after legal proof of identity and registration.

Tasmania.—Registration compulsory by Local Medical Council, but any person entitled to be registered under Medical Act, 1858, can after legal proof obtain from the Court of Medical Examiners a certificate entitling him to practise in this Colony.

New Zealand.—Medical practitioners must be registered here, paying a fee of £1 5s. All persons entitled to be registered under Medical Act, 1858, can after legal proof be entitled to registration, but have to pay the fee.

SOUTH AFRICA.

Cape Colony.—No person can practise here without a licence signed by the Colonial Secretary on the recommendation of the Colonial Medical Council. Women are eligible for registration. The fee payable is £5. All persons entitled to be registered under the Medical Act, 1858, can, after legal proof, claim to be registered in the Colony, but the fee has to be paid. The following foreign degrees are made by Order in Council qualifications entitled to local registration—The Staats Examens of Austria, Germany, Holland, Russia, and Switzerland. A further fee of £1 1s. is required for registration of any additional diplomas or degrees after the first registration. Midwives are also registered by the Colonial Medical Council.

Natal.—No unlicensed person can either practise in Natal or recover fees. All persons entitled to be registered under the Medical Act, 1858, can, after legal proof, claim to be registered by the Natal Medical Board upon payment of fees from one to three guineas. An annual licence has also to be taken out, fee £5.

DOMINION OF CANADA.

All British degrees and diplomas are registered by the Provincial Medical Board.

Prince Edward Island.—No one may practise here unless registered and licensed by the Colonial Medical Committee. All persons entitled to be registered under the Medical Act, 1858, can claim, after legal proof and the payment of fees not exceeding $20, registration.

New Brunswick.—All practitioners must be locally registered by the Colonial Medical Council under conditions which vary from time to time according to the direction of the Council. Each medical practitioner has to pay an annual fee of $1 to $2.

Nova Scotia.—Local registration compulsory by Provincial Medical Board.

Quebec.—Local registration compulsory by Provincial Board.

Ontario.—No one may practise Medicine, Surgery, or Midwifery who is not registered by the Council of the College of Physicians and Surgeons of Ontario. An examination must be passed.

Manitoba.—No person may practise Medicine, Surgery, or Midwifery unless registered by the Council of the College of Physicians and Surgeons of Manitoba. Persons on *Medical Register* can claim to be registered locally upon legal proofs.

North-West Territories.—No one may practise here unless registered by the Medical Council which sits at present at Regnia, under a penalty of not exceeding $100. All persons entitled to be on *Medical Register* can claim registration after legal proof and payment of $50, and an annual fee of $1 to $2.

British Columbia.—Since the last issue of the Educational Number there has been passed an Act respecting the profession of medicine and surgery and by which Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of British Columbia, enacts as follows: (1) This Act may be cited as the Medical Act, 1898. (2) The members of the medical profession of British Columbia heretofore incorporated under the name of "The Medical Council of British Columbia" shall be deemed to be and to have been from its first establishment a body corporate by the name aforesaid, and the said name is hereby changed to that of "The College of Physicians and Surgeons of British Columbia." (3) Every person registered according to the provisions of the "Medical Act" and any other Act of the Legislature of British Columbia relating to the medical profession shall be a member of the said "College of Physicians and Surgeons of British Columbia." 4. Every person hereafter registered under the provisions of this Act shall also be a member of the said College. 24. The Council shall admit upon the *Register* any person who shall produce from any college or school of medicine and surgery requiring at least four years' course of study a diploma of qualification, provided also that the applicant shall furnish to the Council satisfactory evidence of identification and pass before the members thereof a satisfactory examination touching his fitness and capacity to practise as a physician and surgeon. 63. If any person not registered pursuant to this Act, for hire, gain, or hope of reward, practise or profess to practise medicine, surgery, or midwifery, he shall, upon summary conviction thereof before any justice of the peace, for any and every such offence, pay a penalty not exceeding one hundred dollars.

WEST INDIES.

Jamaica.—Local registration compulsory. Persons entitled to be upon *Medical Register* can claim registration here after legal proof.

British Guiana.—Registration necessary. Medical Board accepts after legal proof any person who is registered under the provisions of the Medical Act of 1858.

FIJI.

Practitioners must be registered in Fiji. The *Register* is kept by the principal medical officer, and any person entitled to be registered under the Medical Act can after legal proof claim to be registered in the Colony. The principal medical officer has power of erasing the name of any registered person for felony, misdemeanour, or unprofessional conduct.

GOLD COAST COLONY.

Registration before the Licensing Board compulsory here, but proof of being upon the *Register* under Medical Act, 1858, establishes right to practise.

GIBRALTAR.

Registration under local law necessary, but right to practise conferred after legal proof upon persons registered under Medical Act, 1858.

LEEWARD ISLANDS.

Registration under local law necessary, and licence to be obtained from the Governor. Persons registered under Medical Act, 1858, can after legal proof claim registration.

VIRGIN ISLANDS.

No person not entitled to practise in the United Kingdom allowed to practise medicine or surgery here.

EUROPE.

Austria.—It is necessary to pass the State examination, or to obtain a University Degree in Medicine, a necessary preliminary to which is naturalisation as an Austrian subject. Exemptions may be granted under very special circumstances.

Belgium.—Upon the advice of a jury which has a right to grant the diploma of Doctor, the Government can give permission to practise medicine to a foreign subject who possesses a diploma in Medicine, Surgery, and Midwifery.

Denmark.—Foreigners are required to pass the State examination.

France.—The degree of M.D. obtained by examination before a French faculty (Paris, Montpelier, Nancy, Bordeaux, Lyons, Lille, or Toulouse) is required. This regulation applies to Algiers. The degree, however, confers the right to practise only if it has been obtained on precisely the same conditions as those to which French students are subject—that is to say, before registration as medical students they must produce evidence of having passed the examination for the French diploma of Bachelor in classic. l education (Arts and Philosophy) and the certificate in Physical, Chemical, and Natural Science, and they must go through the regular curriculum of professional study. The degree of M.D. is still obtainable by holders of British diplomas under the old conditions of exemption, at the discretion of the Minister of Public Instruction, from any preliminary examination in Arts or Sciences and from portions of the professional curriculum and examinations. The degree obtained in this way will not, however, confer the right to practise in France. The wards of hospitals and laboratories are still freely open to foreigners; and for those who may wish to obtain the purely honorary M.D. degree the facilities offered in the way of dispensation from preliminary examinations are even greater than heretofore. Application for such exemption must be addressed to the Minister of Public Instruction, to whom the documents showing the examinations passed by the candidate in his own country and the degrees or qualifications possessed by him must be submitted. Fees to the amount of £69 must be paid. The *Progrès Médical* (14, Rue des Carmes, Paris) publishes a "Students' Number" every year about November, in which full information is given as to teaching and examinations in every medical school in France.

Holland.—Foreigners are required to pass the State examination.

Germany.—Any person may practise medicine, but if he has not passed the State examination he does so at his own peril, and is liable to fine and imprisonment if convicted of a mistake. The right to practise is obtained only by passing the German *Staats-Examen*. A lad who intends to enter the profession of medicine must attend a gymnasium (upper school), and pass an examination in general knowledge—Latin, Greek, German, French, divinity, mathematics, physics, history, and geography. After passing this examination he may be accepted as an ordinary full student of a university. At the end of the fourth semester (second year) he can pass the first State Examination (*Tentamen Physicum*), which embraces anatomy, physiology and physics, chemistry, botany and zoology. In the tenth semester he may pass the Final State Examination. In some universities the degree of M.D. can be obtained at the end of the eighth semester (fourth year)—that is, before the *Staats-Examen* can be passed. The degree of M.D. does not in itself confer a licence to practise in the German Empire. By a recent ordinance the Universities of Prussia will not in future grant the degree of M.D. except to persons who have passed the State examination. The fee for the *Tentamen Physicum* is £1 16s.; for the Final State Examination, £10 6s. The fee to the University for the M.D. degree varies between £15 and £25.

Greece.—A State examination must be passed, but graduates of foreign schools may take their examination in French or English.

Italy.—A foreigner must (*a*) obtain an authorisation (*abilitazione*) from one of the Royal Universities of Italy; or (*b*) if he desires to practise only among foreigners, he is at liberty to do so. In Italy medical studies are conducted in Government Universities under the immediate supervision of the Ministry of Public Instruction in Rome. There are several universities, one in each of the most important centres of the kingdom, such as Rome, Turin, Naples, Genoa, Palermo, Pavia, Pisa. There is only one medical degree in Italy, and it is that of Doctor in Medicine and Surgery. The title is conferred (by the Rector of each University) in the name of the King. The examinations can be passed at any of the universities, and the students can transfer themselves from one to the other. An original thesis must be presented.

Monaco.—The following British qualifications are, for the purposes of medical practice in the Principality of Monaco, considered equivalent to the French diploma of Doctor of Medicine; the degree of Doctor of Medicine of the universities of "the United Kingdom of Great Britain," and the diplomas of Fellow of the Royal Colleges of Surgeons and Physicians of London, Edinburgh, Dublin, and of the Faculty of Physicians and Surgeons of Glasgow. Every application for leave to practise must be accompanied by the diplomas of the applicant or by copies of those documents certified as correct either by a consul of the Principality or by the Mayor of Monaco. The applicants must enter into an undertaking to live in the Principality and to practise their profession during the whole or part of the months of May, June, July, August, September, and October, agreeably to Article 1 of the Ordinance of May 29th, 1804.

Portugal.—The State examination must be passed.

Roumania.—The State examination must be passed (*vivâ voce*).

Russia.—The State examination must be passed, but if the applicant possess the degree of M.D. from a university of high repute, the Minister of Education may give an authorisation after requiring the candidate to compose and defend a dissertation.

Norway.—The State examination must be passed.

Spain.—The State examination must be passed, but exemptions are sometimes granted on application through the British Ambassador. A l cence costing from £1 to £24 must be taken out every year. This regulati n applies to the Canary Islands and other Spanish Colonies.

Sweden.—The State examination must be passed.

Switzerland.—A qualified English practitioner desiring to practise in Switzerland, even if he desire to practise only among his own countrymen, is required to pass the Federal examination in that country. The degree of Doctor of Medicine does not give the right to practise. The Federal examination may be passed at Basle, Zürich, or Berne in German, and at Geneva or Lausanne in French. The applicant is advised to obtain from one of his teachers in this country an introduction to a professor at the university at which he proposes to pass the examination. His proper course would be to call upon the Rector of the University. We are informed that every information would be afforded, and that no difficulties are placed in the way of candidates. At the University of Zürich, the three examinations which it is necessary to pass are held as a rule at the following periods of the year:—*First Examination:* End of January and mid-September. *Second Examination:* End of January and mid-September. *Third Examination:* Beginning of January, end of May, and beginning of October. At Basle the next examinations are in October. At Geneva the examinations are held in the third week of October, and in the second week of July, at the opening and conclusion respectively of the winter and summer session. At Lausanne the examinations take place as follows:—*First and Second Examinations:* April and October. *Final Examination:* February and March, and June and July.

Turkey.—An examination in the chief branches of medicine and surgery must be passed at Constantinople (fee. £4 10s.) Before being admitted to the examination the candidate must present a diploma from a medical school recognised by the Government of the country in which it is situated.

SOUTH AMERICA.

Argentine Republic.—The applicant's diplomas must be verified by the Argentine Consul in this country (fee £1 4s.). This should be done before leaving this country. On arriving at Buenos Ayres the endorsement of the Argentine Consul in this country must be verified by the Argentine Foreign Office. Three examinations must be passed in the University of Buenos Ayres or Cordova. First Examination: Anatomy and Dissections, Physiology, Pathology, Ophthalmology, and Gynæcology. Second Examination: Clinical and Operative Surgery, Histology, Materia Medica, and Mental Diseases. Third Examination: Clinical Medicine, Pathology, Midwifery, and Toxicology. The fee for examination is $300, half of which is retained in case of rejection. The examinations can be passed consecutively at a few short intervals or separately; a rejected candidate is not readmitted to examination until after the lapse of six months. The examination is conducted *vivâ voce* in Spanish. Temporary authorisa-

tions to practise for six months may be obtained from the Governor of a province, and the applicant may utilise this time to improve his knowledge of Spanish. The regulations for graduates of Spanish Universities are less onerous.

Brazil.—A State examination must be passed which is conducted in Portuguese or French. The Faculties of Medicine are at Rio de Janeiro and Bahia.

Chili.—The regulations resemble those in the Argentine Republic; examination by the University of Santiago.

Peru.—Five examinations must be passed. Spanish is the official language. Applications to be made to the Dean of the Medical Faculty, Lima.

Uruguay.—An examination conducted in Spanish, at the University of Monte Video, must be passed.

NORTH AMERICA.

The laws regulating the practice of medicine differ in the different States and Territories. The requirements, corrected up to a comparatively recent date, are as follows:

A. In some States the possession of a diploma does not convey the right to practise, an examination being required in all cases. The following States make this demand:

Florida	Montana	North Dakota
Delaware	Washington	Oregon
Georgia	Idaho	Pennyslvania
Louisiana	Indian Territory	South Carolina
Maine	New Hampshire	Texas
Maryland	New Jersey	Utah
Minnesota	New York	Virginia
Mississipi	North Carolina	West Virginia

B. The following States require an examination by a duly qualified Board, or the approval thereby of the presented diploma:

California	Rhode Island	South Dakota
Connecticut	New Mexico Territory	Vermont
Illinois	Colorado	Indian Territory
Indiana	Iowa	Oklahama Territory
Kentucky	Missouri	Wisconsin
Tennessee	Nebraska	

C. In a few States the presentation of diploma or other certificate of qualification is the only requirement. This is the case in:

Arkansas	Wyoming	Ohio
Michigan	Arizona Territory	Alaska Territory
Nevada	Kansas	District of Columbia

PRACTICE IN KLONDYKE.

Medical men desirous of legally practising in the Klondyke region may do so (1) if they hold a British qualification and pay a registration fee of $50.00; (2) not having such qualifications, they must pass an examination and pay the same fee. Dr. H. N. Bain, Prince Albert, N.W.T., is the Registrar of the Territories. The authorities are insisting on the strict carrying out of these regulations. The examinations are similar in character to those in British Columbia, the subjects of which and the British Columbia regulations are here appended:

Section 1.—Section 29 of the Consolidated Statutes of British Columbia provides: "The Council shall admit upon the register any person who shall produce from any college or school of medicine or surgery, requiring a three years' course of study, a diploma of qualification; provided, also, that the applicant shall furnish to the Council satisfactory evidence of identification, and pass before the members thereof, or such of them as may be appointed for the purpose, a satisfactory examination touching his fitness and capacity to practise as a physician and surgeon." 1886, C. 13, S. 28.

Section 3.—Every person applying for registration under Section 2 of the Medical Act Amendment Act, 1893, shall, on appearing in person before the Registrar of the Council, and paying a fee to the Registrar of $100.00, be entitled to be registered, on producing to such Registrar a certificate duly authenticated under the hand and seal of the Registrar of Medical Practitioners in England, Ireland, and Scotland, as the case may be (or other legal evidence), that such applicant is a duly registered medical practitioner, and that he was duly registered under the Medical Act (Imperial) on or before the 30th day of June, 1887. Such applicant will also be required to produce a certificate of good standing in the profession of medicine from the Registrar or other officer of the medical body having jurisdiction where such applicant last practised his profession, and evidence by statutory declaration that he has not lost the benefit of his said registration under the Medical Act (Imperial) by misconduct or otherwise.

Section 4.—The examination shall be orally and in writing, upon the following subjects: (1) Anatomy, (2) Chemistry, (3) Physiology, (4) Pathology, (5) Materia Medica, (6) Medical Jurisprudence, (7) Theory and Practice of Medicine, (8) Surgery, (9) Clinical Medicine, (10) Clinical Surgery, (11) Obstetrics, and Diseases of Women and Children. Marks required: 50 per cent. in first six branches, 75 per cent. in others.

Section 7.—During the year there will be three regular meetings, and three examinations held, beginning on the first Tuesday of May and September, and the second Tuesday of January, in Victoria, B.C.

Section 8.—Permits are not granted by the Council.

DENTAL SURGERY.

REGULATIONS OF THE GENERAL MEDICAL COUNCIL.

CANDIDATES for a diploma in Dental Surgery are required to produce certificates of having been engaged during four years in professional studies, and of having received three years' instruction in Mechanical Dentistry from a registered practitioner, or at some dental hospital where instruction is given in this subject. One year's *bonâ fide* apprenticeship with a registered dental practitioner, or one year's instruction at a dental hospital, after being registered as a dental student, may be counted one of the four years of professional study. The three years of instruction in Mechanical Dentistry, or any part of them, may be taken by the dental student, either before or after his registration as a student; but no year of such mechanical instruction shall be counted as one of the four years of professional study unless taken after registration.

A Register of Dental Students is kept by the Registrar of the General Medical Council, 299, Oxford Street, London.

Preliminary Education.—Dental students are subject to the same regulations as regards preliminary examination as medical students, but professional study may commence by pupilage with a registered dental practitioner.

DIPLOMAS.

The Royal College of Surgeons of England, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, each grant a licence in Dental Surgery, and the Royal College of Surgeons in Ireland grants a licence in Dentistry, in all cases after the student has produced evidence of passing through the stated curriculum and prescribed examinations. Particulars can be obtained upon application to the Secretary of the Conjoint Board in England, Examination Hall, Victoria Embankment, London, W.C.; to Mr. James Robertson, Clerk to the Royal College of Surgeons, Edinburgh, 48, George Square, Edinburgh; to the Secretary of the Royal College of Surgeons in Ireland, Dublin; and as to the Faculty of Physicians and Surgeons; to Mr. Alexander Duncan, B.A., 242, St. Vincent Street, Glasgow.

EDUCATION.

A candidate for the Diploma in Dentistry can obtain the necessary instruction in special dental subjects (the general subjects being attended at some general hospital) at the Dental Hospital of London (apply to the Dean at the Hospital, Leicester Square, W.); or at the National Dental Hospital and College, London (apply to the Dean, the National Dental Hospital, Great Portland Street, London, W.); at the Dental School of Guy's Hospital (apply to the Dean at the Medical School, Guy's Hospital, S.E.); at the Birmingham Dental School in connection with Mason University College, Birmingham (apply to the Dean of the Medical Faculty, University College, Birmingham); at Owens College, Manchester (apply to the Registrar, Owens College, Manchester); at the Liverpool Dental Hospital and School of Dental Surgery (apply to the Dean of the Medical Faculty, University College, Liverpool); and at the Devon and Exeter Dental Hospital (apply to the Honorary Secretary of the Hospital). The Scottish Schools of Dentistry are the Incorporated Edinburgh Dental Hospital and School (apply to the Dean, 31, Chambers Street, Edinburgh); the Glasgow Royal Infirmary, Dental Department (apply to the Dean of the Faculty of Medicine, Mr. R. T. Kent, St. Mungo's College, Glasgow); and Anderson's College Medical School, Glasgow (apply to the Secretary, Mr. D. M. Alexander, 97, West Regent Street, Glasgow).

DRS. RAISSA PAWLOWSKI, Catharina Malgarewski, and Marie Pokrowski have been appointed junior medical officers in the Russian Medical Department.

THE National Physical Laboratory, for the erection of which Parliament has voted £12,000 with £4,000 a year for maintenance, will be established by an extension of the Kew Observatory in the Old Deer Park. The observatory will be fused with the laboratory, which will thus become possessed of a further endowment of £458 per annum from the Gassiott Trust and an income of about £2,700 from fees for standardising. The laboratory, which will be under the control of the Royal Society, will be managed by a General Board, upon which the great engineering societies will be represented, and by an executive committee which will report to the Board. There will also be a number of subcommittees. It is expected that Mr. Glazebrook, F.R.S., now Principal of University College, Liverpool, will take up his duties as director of the laboratory on January 1st, 1900.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, AUGUST 26TH, 1899.

PLAGUE IN EUROPE.

From an official statement published by the municipal authorities of Oporto, we gather that during June 16 cases of plague and 6 deaths occurred in the city; that during July, 9 cases and 3 deaths from plague were registered, and that down to August 12th 11 cases and 2 deaths were recorded. Between August 12th and 23rd 8 cases and 3 deaths took place. In all, therefore, 44 cases of plague have occurred in Oporto in three months, with 14 deaths. The inhabitants of Oporto, who seemed at first disposed to regard the disease without alarm, if not with indifference, have now taken to rioting, beginning with a demonstration against Dr. Jorge, who was the first to report the existence of the disease in the city. It is further reported that a sanitary cordon has been drawn round the city of Oporto. But this measure appears to have been taken too late to be of any practical value, for cases of plague are reported from Lisbon and from Figueira, a town in the neighbourhood of Cape St. Vincent. It would thus seem that southern Portugal is widely affected. Nor is this the worst news, for if rumour be correct, at Barcelona, on the Mediterranean shore of Spain, a death believed to be due to plague has occurred. If this be true the whole of the peninsula is threatened, and in view of the reported outbreak of plague in South-East Russia the outlook for Europe generally is gloomy. The reported mildness of the epidemic in Portugal, although gratifying as far as human life is concerned, in no wise minimises the commercial loss likely to ensue. Plague, as judged from recent outbreaks in China and India, does not seem to sweep off the population as in the old epidemics, but the inconvenience and financial loss to any community or nation attacked is as great as ever. The same restrictions, precautions, and expenditure have to be undertaken whether the cases be numbered by tens or thousands. The Spanish Government has ordered all communication with Portugal to cease for ten days. No traveller or merchandise will be allowed to cross the frontier from Portugal during that period, or until the five contemplated quarantine stations have been fully established. Up to the present three of these stations have been decided upon—namely, Tuy on the northern frontier of Portugal, Fregeneda on the main line between Oporto and Salamanca, and Valencia de Alcantura, a frontier town on the railway leading from Spain to Lisbon. At each of these camps of inspection a ten days quarantine will be insisted upon. At Rome, Gibraltar, and all Spanish ports stringent quarantine regulations have been issued. According to the Berlin correspondent of the *Morning Post* a report reached Cologne from St. Petersburgh on August 22nd to the effect that plague has broken out in the district of Samara in South-East Russia. Several regiments have been sent to the district, the town of Zarynzin is already isolated and traffic on the Volga is restricted.

THE PRINCIPAL MEDICAL OFFICER WITH AN ARMY IN THE FIELD.

In view of the possibility of a campaign in South Africa, our attention has again been drawn to the impossible position assigned by regulation to the principal medical officer of an army in the field. By Paragraph 629 of the Medical Regulations his nominal headquarters is with the general on the line of communications; but at the same time, it is stated, he will be available, when required, for consultation with the general commanding-in-chief. We suppose he would be required for consultation mostly in emergencies; but how could he be available, perhaps separated by hundreds of miles from the chief? The regulation as it stands is an utter absurdity. It was framed to suit the miserable jealousies of certain military heads towards the medical service. It has proved absolutely impractical in recent campaigns, and the sooner it is cancelled the better. We trust the Secretary of State for War will take this matter into consideration, and restore the principal medical officer of an army in the field to his proper and rightful position on the headquarter staff of the commander-in-chief, where alone he can direct and control medical movements and arrangements, and be readily available for consultation with the heads of the army.

ANNUAL MEETING: EXCURSIONS.

The excursion to the Isle of Wight and Ventnor, which was most popular, started early from Southsea Pier on August 5th, and arrived punctually at Cowes. Members and their friends wended their way to the Isle of Wight Central Railway Station, where special carriages had been engaged to convey the party to Newport. At Newport coaches were in readiness to transport the travellers to Carisbrooke village. Dr. Groves, of Carisbrooke, kindly acted as guide to the church and Roman remains, and his intimate local knowledge was much appreciated. A stiff climb brought the party to Carisbrooke Castle, which, together with the grounds, was kindly and generously thrown open by Mr. T. B. H. Cochrane, Deputy-Governor of the Isle of Wight. Very welcome to the tourists after their climb were the shadowing trees and carpet of green sward within the precincts of the Castle. Then the famous donkey was duly interviewed, and liberal potations were taken of the deliciously cool water which was brought up by that long-suffering animal to the surface. Luncheon was provided by the kind hospitality of the members resident in the Isle of Wight, and was attended by Mr. Cochrane and Lady Adela Cochrane; Dr. James Mann Williamson, President of the Isle of Wight District, took the chair. The President gave the toasts of "The Queen," "The Governor of the Isle of Wight" (Princess Henry of Battenberg) "The Deputy-Governor and Lady Cochrane." Mr. Cochrane replied in suitable terms, and then proposed the toast of the "British Medical Association," to which Dr. Shirtliff replied. Dr. Lysander Maybury, the conducter of the excursions, proposed a vote of thanks to the members of the Isle of Wight District for their hospitality. It was a little after 1 P.M. when the leading coach started, but no time was then lost, and the coaches travelled at a rapid pace, up and down hill alike, passing through Gatcombe and Cholegreen, the scenery calling forth many expressions of admiration. A short blow for the horses was allowed at Blackgang. The beauties of the Undercliff were greatly enjoyed on the road to the Royal Victoria Hospital for Consumption, where the party alighted. The different wards were shown, including the new one presented by the Governor of the island (the Princess Henry of Battenberg), in memory of her late husband. The patients were seen dotted about under the verandahs, or else upon the terrace, breathing the salubrious air of the Undercliff. The inspection over, tea was kindly served, and the nurses ministered to the wants of the wayfarers, while their sympathies were roused by the strains of an organ. So short was the time at the hospital

that there was no opportunity for speech-making, but a telegram was subsequently sent by the entertained to the staff, expressing their thanks. On leaving the hospital Ventnor was seen to advantage, and quiet Little Bonchurch, with its hydrangea-circled pond, did not escape notice. The Ventnor Railway had reserved carriages at Sandown Station, and all the arrangements were punctually carried out. On arriving at Ryde Pier Head a special boat awaited the party for Portsmouth Harbour Pier. A vote of thanks was passed on board to the conductor, Dr. Lysander Maybury. In replying, that gentleman pointed out that the excursion was mapped out by the Isle of Wight members: that the Excursion Committee had simply co-operated, and that their thanks were due to the Isle of Wight members rather than to him or the Excursion Committee.

THE NORTH WALES BRANCH.

The jubilee meeting of the North Wales Branch was held, according to arrangement, on August 16th. In the morning a service was held in Bangor Cathedral, when a sermon was preached by the Bishop of Bangor. At the annual meeting in the afternoon Dr. H. V. Palin took the chair, and read letters regretting inability to attend from Lord Lister, Lord Penrhyn, and Mr. A. J. Balfour. He then gave place to the President for 1899-1900, Mr. W. Jones Morris, of Portmadoc, who met with a very cordial reception. The report, read by Dr. H. Jones Roberts, joint honorary secretary, showed that the membership of the Branch was now 185. The President then delivered an address, of which we shall hope to publish a report in an early number. After this a garden party was given in the grounds of the University College of North Wales; and at the annual dinner in the evening over 100 sat down under the presidency of Mr. Jones Morris. The toast of "The British Medical Association" was given by Dr. R. Langford Jones, and acknowledged by Sir William Mitchell Banks, of Liverpool, and Professor Armstrong, of Montreal. Owing to the pressure on our space we must postpone the further report of this memorable occasion.

THE LIVERPOOL MALARIAL EXPEDITION.

Major Ross, the Director of the Liverpool School of Tropical Medicine, and the leader of the expedition which left Liverpool on July 9th for Sierra Leone, sent a telegram to Mr. A. L. Jones, the Chairman of the School, on August 21st, stating that he had identified the malaria-bearing mosquito in Sierra Leone. By this we understand that he has found mosquitos of the genus anopheles, which have been shown to be bearers of the malarial parasite in other countries, and that the malarial parasite has been observed in them. Further reports from Major Ross will be awaited with interest; but meanwhile he makes an appeal for more men to be sent out to assist in the work of the expedition, and to continue it after Major Ross and Dr. Annett leave Sierra Leone, which they must do at no distant date in order to take up their duties at the Liverpool School of Tropical Medicine at the beginning of the winter session.

The American Association of Obstetricians and Gynæcologists will hold its twelfth annual meeting at Indiana on September 19th, 20th, and 21st.

Medical Students in the Swiss Universities.—The total number of students of medicine in the universities of Switzerland in the summer semester of 1899 is 1,153, of whom 344 are women; of these only 25 are Swiss. The students are distributed among the several universities as follows: Basel has 128, of whom 3 are women; Berne 247, of whom 87 are women; Geneva 277, of whom 90 are women; Lausanne 151, of whom 41 are women; and Zürich 350, of whom 123 are women. The total number of students in the corresponding semester of 1898 was 1,085, of whom 294 were women.

THE REPORT OF THE DEPARTMENTAL COMMITTEE ON GLANDERS.

The report of this Committee, appointed by Mr. Long, President of the Board of Agriculture, has just been published. The reference made to the Committee was to "inquire into the working of the Diseases of Animals Acts, in so far as they relate to glanders, and to consider whether any more effective measures can with advantage be taken to prevent the spread of that disease."

The report reviews past legislation, showing that in this country prior to 1869 the disease was unrecognised by law, and that since 1892 an area of increased administrative vigilance had set in. Statistics, so far as they go, support the view that while the disease was increasing, albeit with fluctuations up to 1892, since that date there has been a material reduction in the reported cases. Its chief prevalence continues to be in large urban centres such as London and Glasgow.

It appears that of recent years the use of mallein as a diagnostic agent has rendered it possible to diagnose cases in so early and occult a stage that they would not in former years have been regarded even as suspicious. This fact raises at once the question of what compensation should be paid to an owner who on the reaction to mallein alone is to be compulsorily deprived of a horse which having no clinical signs of disease still possesses a high earning capacity. The Committee finds that "mallein is a very sensitive diagnostic reagent," but "after due consideration have come to the conclusion that they cannot recommend that the use of mallein should be made directly compulsory." The reason for this apparently somewhat inconsequent conclusion is to be found in the forty-first paragraph of the report in which the Committee state:

> We have considered it to be no part of our reference to enter largely into the history and pathology of glanders, though it is necessary to remember that in devising methods for the restriction of the spread of the disease, regard must be had to the latest reliable information which scientific research has placed at our disposal. The evidence we have taken from scientific experts indicates many points on which there is conflict of opinion, and in which further investigation may lead to a change of view as to the practicability of stamping out glanders or curing the disease when it has not progressed beyond a certain stage in an infected horse. Such suggestions as we make in this report are based upon current views of leading veterinarians, but we feel that further research is needed on some of the most elementary facts of the disease before our means of prevention or treatment can be formulated with scientific exactness. Thus the mode of propagation, whether aërial or by contagion, or by inoculation or by ingestion, needs further elucidation; as also the question of the degree of infectiveness attaching to early or occult cases of the disease. The incubation period can hardly be regarded as certainly defined. The refractiveness to mallein needs explanation when this occurs after previous reaction has indicated the presence of the disease; with this is associated the undecided question of the possibility of spontaneous cure or remedial action of mallein. We understand that the Board of Agriculture are engaged in experiments having the solution of some of these problems for their object, and we could have wished that the results had been at our disposal before concluding our report. As it is we can only endorse the necessity for such authoritative inquiry.

The Committee conclude with the following recommendations:

1. That the Board of Agriculture should exercise a more extended supervision of the working of the Glanders or Farcy order.
2. That notification should be made either to a constable or to a veterinary inspector.
3. That where practicable the local veterinary inspector should not engage in private practice.
4. That it should be made obligatory for veterinary surgeons to notify cases of glanders of which they become aware.
5. That occupiers or owners of knackers' yards should notify any case of glanders found in animals taken to their yards for slaughter.
6. That horses that react to the mallein test should be considered as possible sources of infection.
7. That horses that the veterinary inspector may consider to have been exposed to contagion should be dealt with in the same manner as suspected horses but with certain reservations.
8. That the slaughter of all animals showing clinical symptoms of glanders should be made compulsory.
9. That compensation for horses slaughtered solely on account of reaction to the mallein test should be on a higher scale than that for a "clinical" diseased horse, with a limit of

£25. But in the event of no glanders lesion being found *post mortem*, the compensation should be the full value with a limit of £50.

10. That the Board of Agriculture should conduct experiments with regard to the use and influence of mallein.

Although all the members of the Committee sign the report, there are several dissentient notes, chiefly upon the questions of the use of mallein and the amount and source of compensation money.

ASSOCIATION INTELLIGENCE.

NOTICE OF THE NEXT QUARTERLY MEETING OF COUNCIL.

A meeting of the Council will be held on October 11th, 1899. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, September 21st, 1899.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

East Anglian Branch.—The autumnal meeting of this Branch will take place at Felixstowe on Thursday, September 28th, 1899, under the presidency of Dr. E. L. Fenn. It is requested that gentlemen desirous of joining the Association or Branch, and members willing to read papers or contribute cases to the meeting, will communicate at once with Dr. Barnes, Eye. Members who have not yet paid their subscriptions for the current year will oblige by sending them to one of the Honorary Secretaries, Edgar G. Barnes, M.D., Eye; Michael Beverley, M.D., Norwich; Benjamin Hugh Nicholson, M.B., Colchester.

CORRESPONDENCE.

ILLEGAL CERTIFICATES.

Sir,—Though, by styling himself a "Co-signatory," he shares, and thus diminishes, the slight and discredit he throws upon the signatories, and at the same time emphasises his censure, of the documents, Mr. Horsley was not invited by the Corporate and Medical Reform Association to be, and could hardly have been, a "co-signatory" of the memorials to the General Medical Council against certification of unqualified practitioners; or, if he had signed them, have dealt in Council with his own memorials.

It should be unnecessary to say that had we considered them "involved," "verbose," "inflated," or "bombastic," they would not have been so couched or issued; nor would any of us have signed them. We do not think many men would be found willing, as Mr. Horsley implies that he was, to sign documents of which they had such an opinion.

We regret Mr. Horsley's apparent desire to disparage memorials which enabled the profession to express its determined opposition to this mischievous certification of midwives and opticians, and conveyed the considered views of a large body of his constituents, some at least of whom can scarcely be deemed his inferiors in logical acumen or proper respect for authority.

Condemnation of documents so signed would carry more weight and better render the help we hoped from explanation if it were accompanied by any passage on which it may be based, instead of by invective not altogether free from some apparent animus, such as we venture to think scarcely worthy Mr. Horsley's high position in the esteem of his constituents.

The first memorial contained 1,028, the second 1,326 words, equal respectively to one and one-third, and one and three-quarter columns of the *Lancet* or British Medical Journal—brief space to fully state, in new lights, constitutional questions of the first importance; to which, in less serviceable forms, hundreds, or perhaps thousands of pages, and memorials of much greater length have, with far less result, been during many years devoted.

It is unfortunate that the text of the memorials is not available to your readers; and Mr. Horsley affords no clue to the passages or expressions to which he takes exception, but, if every word of each memorial merited one or other of his hyperbolical adjectives, we as yet perceive no reason why the faults of our memorials should relieve him of the duty of moving to rescind the Council's sanction of such certification, if he considered it illegal.

His opinion as to this most important question of legality, as well as some useful illustrations of our faults in the memorials, will still oblige us—having, indeed, been our objects in this correspondence.

We regret that Mr. Horsley did not take definite action to rescind, instead of merely demanding unnecessary inquiry into, proceedings of the Council that we certainly hold, and hope that he holds, to be illegal.

We regard his abstention from such action with the more concern in the light of his advocacy of a policy of surrender on the question of midwives registration; because if the Bill of the British Medical Association became law, certification of midwives would at once become legal, and the rescission he speaks of useless.

We do not believe there is any real public demand for, or any justification of, such a measure, nor any necessity for such a policy of surrender, which is inconsistent with Mr. Horsley's election pledges, and we hope to have his invaluable support in the determined resistance we are organising to such mischievous and retrogressive legislation to which we understand he yields only on the mistaken ground that it is inevitable.

The gravest obstacles to such resistance are the successive "surrenders" of the principles at stake: (1) By the General Medical Council; (2) by the Council of the British Medical Association; (3) and last and most injurious of all, by Mr. Horsley himself, should he adhere to that mistaken policy, instead of uniting in the "uncompromising resistance" unanimously called for by the Stratford meeting, and thus ensuring its success.—We are, etc.,

James A. Myrtle.
J. Higham Hill.
T. Granville Hockridge.
F. Lorimer Hart.
R. F. Tomlin.
Tom R. Taylor.

102, Guilford Street, W.C., August 21st.

UNIVERSITIES AND COLLEGES.

SOCIETY OF APOTHECARIES OF LONDON.

Pass List, August, 1899.—The following candidates passed in:

Surgery.—F. H. Allen, Manchester; E. R. Bastard, St. Bartholomew's Hospital; J. T. Davies (Sections I. and II.), Michigan and Westminster Hospital; T. S. Elliot (Section II.), London Hospital; T. H. Fox, Leeds; H. Herbert, London Hospital; H. R. Miller, Guy's Hospital; F. S. Pushong, Calcutta; R. G. W. Saint Cedd, Guy's Hospital; A. F. Weston (Section II.), St. George's Hospital.

Medicine.—F. H. Allen, Manchester; J. R. Bentley (Sections I. and II.), Middlesex Hospital; N. H. Bonnerjee (Sections I. and II.), Royal Free Hospital; C. E. Brooks, Manchester; J. Brown, Manchester; T. S. Elliot (Section II.), London Hospital; D. Hamilton, Royal Free Hospital; W. J. H. Hepworth, London Hospital; E. Tyson, St. Bartholomew's Hospital; E. D. Wortley (Section II.), St. Bartholomew's Hospital.

Forensic Medicine.—F. H. Allen, Manchester; J. R. Bentley, Middlesex Hospital; N. H. Bonnerjee, Royal Free Hospital; C. E. Brooks, Manchester; J. Brown, Manchester; J. T. Davies, Michigan and Westminster Hospital; W. J. H. Hepworth, London Hospital; E. Tyson, St. Bartholomew's Hospital.

Midwifery.—F. H. Allen, Manchester; A. St. J. Bateman, King's College Hospital; N. H. Bonnerjee, Royal Free Hospital; J. T. Davies, Michigan and Westminster Hospital; C. J. Marsh, University College Hospital; R. G. W. Saint Cedd, Guy's Hospital; E. Tyson, St. Bartholomew's Hospital.

The Diploma of the Society was granted to Messrs. F. H. Allen, J. Brown, J. T. Davies, T. S. Elliot, T. H. Fox, H. Herbert, and R. G. W Saint Cedd.

The annual Congress of the Railway Surgeons of Russia will be held at Warsaw in October.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE *London Gazette* of August 18th announces that the Prince of Wales has been pleased to appoint Fleet-Surgeon ALFRED GIDEON DELMEGE, M.V.O., M.D., to be Honorary Physician to His Royal Highness, *vice* Sir Alexander Armstrong, K.C.B., deceased.

The following appointments have been made at the Admiralty: WILLIAM R. M. YOUNG, Fleet Surgeon, and PERCIVAL K. NIX, Surgeon, to the *Andromeda*, September 5th; ALFRED E. WEIGHTMAN, Staff-Surgeon, to the *Diadem*, September 5th; FREDERICK A. CAPPS, Surgeon, to the *Duke of Wellington*, for Haslar Hospital, September 5th; NORMAN L. RICHARDS, Surgeon, to the *Devastation*, for Gibraltar Hospital, September 5th; HARRY SPICER, M.B., to the *Northampton*, for the *Curaçoa*, September 5th; JAMES H. FERGUSSON, Surgeon, to the *Hannibal*, September 5th; ARTHUR A. J. MCNABB, M.B., Surgeon, to the *Cockatrice*, September 1st; RICHARD F. CLARK, Surgeon, to the *Empress of India*, August 10th; JOHN W. CRAIG, M.B., Surgeon, to the *Niobe*, August 19th; CHARLES J. S. KELSALL, Surgeon to the R.M.A., Eastney, August 19th.

THE ROYAL ARMY MEDICAL CORPS.

MAJOR S. H. CREAGH retires from the service, receiving a gratuity, August 23rd. He joined the department as Surgeon, July 30th, 1881, and became Surgeon-Major, July 30th, 1893. He has no war record in the *Army Lists*.

Colonel W. E. SAUNDERS, C.B., who is serving in the Bombay Command in medical charge of the station hospital at Mhow, is ordered to return to England at once, to assume the duties of Principal Medical Officer of the North-Eastern District.

Lieutenant-Colonel JOHN JOSEPH GREENE died at Greystones, co. Wicklow, on August 18th, aged 51 years. He was appointed Surgeon, March 31st, 1874; Surgeon-Major, March 31st, 1889; Surgeon-Lieutenant-Colonel, March 31st, 1894, and quitted the service on retired pay, April 5th, 1899. He served in the Afghan war of 1878-80 (medal); with the Nile expedition in 1884-5 (medal with clasp, and Egyptian bronze star); and with the Soudan Frontier Field Force in 1885-6.

Major FREDERICK THOMAS SKERRETT died at Harrogate on August 19th, at the age of 40. He was a son of the late William J. Skerrett, D.L., of Finavara, Burren, co. Clare, and entered the service as Surgeon, January 30th, 1886; becoming Surgeon-Major twelve years later. He was with the Burmese expedition in 1885-7, and again in 1887-9, receiving the Frontier medal with two clasps.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT H. P. GRAHAM, 4th Volunteer Battalion the King's Liverpool Regiment, to be Surgeon-Lieutenant, August 23rd.

INDIAN MEDICAL SERVICE.

THE undermentioned Lieutenants, having completed three years' full-pay service, are promoted to be Captains from July 29th:—Bengal: H. J. WALTON, M.B., H. AINSWORTH, M.B., A. E. H. PINCH, J. S. STEVENSON. Madras: J. W. CORNWALL, M.B., A. MILLER, M.B., F. A. L. HAMMOND, H. R. BROWN, W. G. RICHARDS, S. P. JAMES, M.B., A. N. FLEMING, M.B., P. DEE, M.B., F. O. N. MELL, M.B., F. D. BROWNE, M.B., M. DICK. Bombay: F. A. SMITH.

MILITIA MEDICAL STAFF CORPS.

SURGEON-LIEUTENANT J. E. O'CONNOR, M.B., is promoted to be Surgeon-Captain, August 23rd.

THE VOLUNTEERS.

LIEUTENANT G. S. J. BOYD, 1st Gloucestershire Artillery, resigns his commission and is appointed Surgeon-Lieutenant, August 23rd.

Surgeon-Captain E. REID, 3rd Glamorgan Rifles, has resigned his commission, August 23rd.

Surgeon-Lieutenant L. T. F. BRYETT, M.D., 3rd Volunteer Battalion the Queen's Own Royal West Kent Regiment, is promoted to be Surgeon-Captain, August 23rd.

Surgeon-Captain W. M. ROOCROFT, 1st Volunteer Battalion the Manchester Regiment, is promoted to be Surgeon-Major, August 23rd.

Mr. ALBERT HILTON is appointed Surgeon-Lieutenant in the 3rd Volunteer Battalion the Manchester Regiment, August 23rd.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,866 births and 5,620 deaths were registered during the week ending Saturday last, August 19th. The annual rate of mortality in these towns, which had been 24.6 and 24.3 per 1,000 in the two preceding weeks, rose again to 25.7 last week. The rates in the several towns ranged from 12.8 in Halifax, 13.6 in Huddersfield, 16.2 in Blackburn, and 18.3 Sunderland to 32.5 in Portsmouth, 33.0 in Brighton, 35.2 in Wolverhampton, and 38.3 in Burnley. In the thirty-two provincial towns the mean death-rate was 25.9 per 1,000, and exceeded by 0.6 the rate recorded in London, which was 25.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 8.1 per 1,000; in London the death-rate was equal to 7.0 per 1,000, while it averaged 8.8 in the thirty-two provincial towns, among which the highest zymotic death-rates were 13.1 in Birmingham, 13.4 in Burnley, 13.6 in Salford, 14.4 in Brighton, and 14.5 in Portsmouth. Measles caused a death-rate of 1.0 in Birmingham and in Salford, 1.3 in Sheffield, and 3.7 in Burnley; scarlet fever of 1.8 in Burnley; whooping-cough of 1.0 in Plymouth and in Leicester, and 1.4 in Burnley; and diarrhœa of 10.0 in Wolverhampton, 11.3 in Birmingham, 12.2 in Salford, 12.7 in Brighton, and 13.1 in Portsmouth. The mortality from "fever" showed no marked excess in any of the large towns. The deaths from diphtheria included 33 in London, 10 in Sheffield, and 3 Leicester. Three fatal cases of small-pox were registered last week Hull, but not one in any other of the thirty-three large towns; and small-pox patients were under treatment in the Metropolitan Asylu Hospitals on Saturday last, August 19th. The number of scarlet fev patients in these hospitals and in the London Fever Hospital, whi had been 2,704 and 2,674 at the end of the two preceding weeks, h further declined to 2,612 on Saturday last; 245 new cases were a mitted during the week, against 307, 297, and 227 in the three precedi weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, August 19th, 950 births and deaths were registered in eight of the principal Scotch towns. T annual rate of mortality in these towns, which had been 18.0 and 17.9 p 1,000 in the two preceding weeks, rose again to 19.3 last week, but w 6.4 per 1,000 below the mean rate during the same period in t thirty-three large English towns. Among these Scotch towns the deat rates ranged from 13.5 in Aberdeen and 16.3 in Dundee to 21.5 in Lei and 25.4 in Perth. The zymotic death-rate in these towns averaged 5.3 p 1,000, the highest rates being recorded in Leith and Paisley. The deaths registered in Glasgow included 16 from measles, 4 from scarl fever, 6 from whooping-cough, and 64 from diarrhœa. Two fatal cas of whooping-cough, 2 of "fever," and 18 of diarrhœa were recorded Edinburgh; 2 deaths from whooping-cough occurred in Leith, and from diarrhœa in Paisley.

MEDICAL NEWS.

MEDICAL VACANCIES.

The following vacancies are announced:—

BANBURY: HORTON INFIRMARY.—House Surgeon and Dispenser. Salary, £80 per annum, with board and lodging. Applications to the Honorary Secretary, 21, Marlborough Road, Banbury.

BELGRAVE HOSPITAL FOR CHILDREN.—House-Surgeon. Appointment for six months. Application to the Honorary Secretary, 77 and 79, Gloucester Street, S.W., by September 10th.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £75 per annum, with board, residence, and laundry. Applications, marked "House-Surgeon," to the Honorary Secretary, Woodchurch Road, Birkenhead, by September 6th.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN. House-Surgeon; unmarried, and under 30 years of age. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance. Applications to the Clerk, 76, West Street, Brighton, by September 2nd.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke Road. House-Surgeon. Appointment for twelve months. Salary £80, with board, lodging, and washing. Applications, under cover, to the Chairman of the Medical Committee by September 5th.

BRIGHTON THROAT AND EAR HOSPITAL, Church Street, Queen's Road.—Non-Resident House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum. Applications to Mr. E. W. Pilbeam, 10, Black Lion Street, Brighton, by August 28th.

CAMBERWELL: PARISH OF ST. GILES.—Third Assistant Medical Officer for the Infirmary, Havil Street. Appointment for one year. Salary, £50 per annum, with apartments, board, and washing. Applications, on forms provided, to be sent to the Clerk to the Guardians, 29, Peckham Road, Camberwell, S.E.

CARLISLE: CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications to the Secretary by September 11th.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon. Salary £100 per annum, with board, residence, and washing. Applications to the Secretary by September 5th.

DURHAM COUNTY ASYLUM, Winterton, Ferryhill.—Assistant Medical Officer; unmarried: also to act as pathologist. Salary £120 per annum, with apartments, board, and attendance. Applications to the Chief Officer by September 1st.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—(1) House-Surgeon. Appointment for six months. Board and residence provided, and honorarium of £25. (2) Two Clinical Clerkships. Lunch provided. Applications to the Secretary by September 16th.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. No salary, but board, lodging, and washing provided. Will be eligible for senior post when a vacancy occurs. Applications to Percy H. Stirk, House-Surgeon, by August 29th.

FINSBURY DISPENSARY, Brewer Street, Goswell Road, E.C.—Resident Medical Officer. Salary £120 per annum, with furniture, residence, attendance, coal, and gas. Applications to the Secretary by September 2nd.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £80 per annum rising to £100, with board, residence, and washing. Applications to the Secretary by October 1st.

GEORGE HENRY LEWES STUDENTSHIP FOR THE ENCOURAGEMENT OF ORIGINAL RESEARCH IN PHYSIOLOGY. Applications to Professor Sir Michael Foster, K.C.B., New Museums, Cambridge, by October 1st.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Physician. Applications to the Secretary by September 13th.

GUILDFORD ROYAL SURREY COUNTY HOSPITAL.—Resident House-Surgeon. Salary £80, with board, residence, and laundry. Applications to the Honorary Secretary by September 5th.

GUY'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Biology. Applications to the Treasurer, Superintendent's office, Guy's Hospital, S.E., by September 1st. Also Demonstratorship of Chemistry and Physics. Applications to the Dean by September 1st.

HALIFAX ROYAL INFIRMARY.—Assistant House-Surgeon, unmarried. Salary £50 per annum, with extra allowance of £9 2s. 6d. per annum, also residence, board, and washing. Applications to the Secretary by August 30th.

LEITH HOSPITAL.—House-Physician, House-Surgeon, and Surgeon for the Outdoor Department, and Assistant House-Surgeon (non-resident). Appointments for six months. Applications to the Secretary, 33, Bernard Street, Leith, by September 12th.

LONDON SCHOOL OF MEDICINE FOR WOMEN.—Lecturer in Physiology. Applications to the Secretary, 8, Hunter Street, Brunswick Square, W.C., by September 4th.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £7 per annum, with board and residence. Applications to the Chairman of the House Committee by September 7th.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer. Appointment for six months, but eligible for election as Senior. Unmarried. Salary at the rate of £80 per annum as Junior, and £100 as Senior, with board and lodging. Application to the Secretary, Dispensary, Gartside Street, Manchester, by August 29th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer for In-patient Department, Bowdon. Salary, £60 per annum, with board, apartments, and washing. Applications to the Secretary by August 31st.

METROPOLITAN HOSPITAL, Kingsland Road.—(1) House-Physician; (2) House-Surgeon; (3) Assistant House-Physician; (4) Assistant House-Surgeon. Appointments for six months. Salaries, for the first two, at the rate of £40 per annum, and for the latter two at the rate of £20 per annum. Applications to the Secretary by September 11th.

NORTHAMPTON: BERRY WOOD ASYLUM.—Senior Assistant Medical Officer. Under 35 years of age, and unmarried. Salary £200 rising to £250, with board, lodging, washing, etc. Appointment for five years, but eligible for re-election. Applications to the Medical Superintendent before September 5th.

OXFORD EYE HOSPITAL.—Honorary Assistant Surgeon. Applications to the Hon. Secretary, Oxford Eye Hospital, 29, Banbury Road, Oxford, by September 16th.

STOKE ON TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Surgeon. Salary £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

TOXTETH PARK.—Junior Assistant Medical Officer of the Workhouse and Infirmary. Salary, £100 per annum, with board, washing, and apartments. Applications to the Clerk to the Guardians, 15, High Park Street, Liverpool, by September 6th.

WESTERN GENERAL DISPENSARY, Marylebone Road.—Second House-Surgeon. Unmarried. Salary £75 per annum, with board and residence, and 10s. a month allowed for washing. Applications to the Honorary Secretary.

WESTMINSTER HOSPITAL.—Pathologist. Salary £250 per annum, and a sum of £80 per annum allowed for expenses. Applications to S. H. Quennell, Secretary, by October 1st.

MEDICAL APPOINTMENTS.

ADAMS, E. W., M.B.Lond., appointed House-Physician to the Northern Hospital, Liverpool.

BEST, F. H. de Graves, M.R.C.S., L.R.C.P.Lond., appointed Public Vaccinator to the Cheshunt District of the Edmonton Union.

BEST, P., M.R.C.S., L.R.C.P., appointed Medical Officer for the Third District of the Penzance Union, *vice* G. T. A. Staff, L.R.C.P.I., M.R.C.S.Eng., resigned.

BLACK, Lewis, M.B., B.C.Camb., appointed Medical Officer of Health to the Braintree Rural District Council, *vice* Thomas Carr, M.D.Durh., resigned.

DOHERTY, J. D., M.D.Edin., appointed House-Surgeon to the Northern Hospital, Liverpool.

FRANCIS, Harvey, M.B., B.S.Durh., reappointed Medical Officer of Health to the Arnold Urban District Council.

HALLAM, H., M.R.C.S., appointed Assistant Medical Officer to the Workhouse of the Eccleshall Union.

HAYDON, H. W., M.R.C.S.Eng., L.R.C.P., appointed Medical Officer of Health for the Wadebridge Urban District, *vice* F. G. Stewart, M.R.C.S.Eng.

JOHNSTON, W., L.R.C.P., M.R.C.S., L.S.D.Eng., appointed Honorary Honorary Visiting Dental Surgeon to the Somerset Hospital, Cape Town.

KEAL, W. M., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of the Workhouse and the Oakham District of the Oakham Union, *vice* W. Keal, M.R.C.S.Eng., resigned.

KINSEY-MORGAN, A., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Royal Victoria Hospital, Bournemouth.

KNOWLES, Miss B., M.B., B.S.Lond., appointed Second Assistant Medical Officer to the Waterloo Road Workhouse, Bethnal Green, *vice* G. Gatenby, M.B., Ch.B., Edin.

MACHER, J. H., M.R.C.S., L.R.C.P., appointed Medical Officer for the Second District of the Bodmin Union, *vice* F. G. Stewart, M.R.C.S.Eng.

MOORE, S. C., M.B., Ch.B.Vict., appointed Assistant House-Surgeon to the Northern Hospital, Liverpool.

MUNCASTER, J. G., B.A.Camb., M.B.Lond., appointed Medical Officer for the North and Northowan Wards of the Halifax Union.

O'MARA, Francis, L.R.C.P., L.R.C.S.Irel., appointed Resident Medical Superintendent of the Ennis District Lunatic Asylum.

ROSS, James Alex., M.B., C.M.Aberd., reappointed Medical Officer of Health to the Penistone Urban District Council.

UTLEY, C. J., M.B.Lond., appoint Assistant Medical Officer to the Salford Union Infirmary, *vice* A. Greenwood, M.B., Ch.B.Vict., resigned.

WALLACE, H. J. C., L.R.C.S.I., L.R.C.P.I., appointed Assistant Surgeon and Registrar to the Down County Infirmary, *vice* Wilson Ranson, F.R.C.S.E., resigned.

DIARY FOR NEXT WEEK.

TUESDAY.

Medical Graduates' College and Polyclinic, 4 P.M.—Dr. Harry Campbell: Clinical Demonstration.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street W., 4 P.M.—Dr. T. D. Savill: Cases of Neurasthenia and other Nutritional Disorders of the Nervous System.

THURSDAY.

Medical Graduates' College and Polyclinic, 4 P.M.—Mr. Jonathan Hutchinson: Clinical Demonstration.

FRIDAY.

Medical Graduates' College and Polyclinic, 4 P.M.—Dr. Ewart: Clinical Demonstration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

BLABER.—On August 22nd, at "Sunnybank," Shoot up Hill, West Hampstead, the wife of Percy L. Blaber, M.R.C.S., L.R.C.P., of a son.

DAGGETT.—At Boroughbridge, York, on August 19th, the wife of Henry Ingledew Daggett, M.A., M.B., of a daughter.

LEASK.—On July 15th, at "Mount Farquhar," Sepoy Lines, Singapore, the wife of Dr. Leask, Senior Colonial Surgeon, in charge of General Hospital, of a daughter.

TAYLOR.—On August 18th, at Kidlington, Oxon, the wife of Fredc. H. A. Taylor, M.R.C.S.Eng., L.R.C.P.Lond., of a son.

WILDING.—August 22nd, at the Hawthorns, Hindley, Wigan, the wife of Walter F. W. Wilding, M.R.C.S., L.R.C.P., M.O.H., Hindley, of a daughter.

MARRIAGES.

HALL—CLEMISHAW.—On the 23rd inst., at St. Mary's Parish Church, Bury, by the Rev. A. D. Studdy Studdy, Joseph Percy Hall, M.B., B.S.Lond., of West Derby, to Amy, younger daughter of J. H. Clemishaw, of Bury. "At Home," 7, Eaton Road, West Derby, September 27th and 28th.

MARTIN—BARTLETT.—At the Baptist Church, Westgate Road, Newcastle-upon-Tyne, Tuesday, 22nd inst., Albert M. Martin, M.B., second son of the late Henry Martin, Esq., of Dene House, South Shields, to Mary Winifred Bartlett (Maimie) younger daughter of J. M. Bartlett, Esq., of Newcastle-upon-Tyne.

WARE—SCARF.—On August 22nd, at Christchurch, West Bromwich, by the Rev. J. M. Ware, father of the bridegroom, Henry Samuel Ware, B.A., M.B.Camb., of King's Heath, Birmingham, to Emily, second daughter of the late Benjamin Scarf, of King's Heath House.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 2.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 3.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu, F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 9; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th. 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F. 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

DR. WALTER G. GRAY (Holsworthy, North Devon) desires to hear what public or private institutions there are in London where a patient suffering from rheumatic arthritis could obtain treatment by radiant heat.

BOOMERANG asks (*a*) What is the effect of sleeping with the face exposed to the moon rays? Is it injurious or not? Any medical references will oblige. (*b*) By what method is the monetary value of each individual in a community or nation computed?

EXAMINATION OF THE TEETH.

C. J. asks as to the regulations as regards the state of the teeth for candidates for commissions in the army (*a*) through Sandhurst, (*b*) through the militia.

*** "Loss or decay of many teeth" disqualifies. "Many" in practice means about a third, but the particular teeth lost and the state of the remainder are considered with regard to efficiency of mastication. The physical examination is the same for all classes of candidates for army commissions.

ARTIFICIAL MENOPAUSE.

F. K. asks for help in the treatment of the following case: Both ovaries and tubes were removed nearly two years ago for chronic salpingitis and ovaritis. For the last year anginous attacks (with and without flushings) have been very frequent, distressing, and sometimes prolonged. For over six months the patient has had intense shooting and burning pain in the left arm and hand, especially in the finger tips; occasionally also in the right hand. There has been a gradual enlargement of the fingers, so that rings formerly worn cannot now be used. This without any obesity. After the attacks vesicles appear on painful spots and become eczematous.

OPERATIVE TREATMENT IN CHRONIC SYNOVITIS.

M.D. asks for advice as to a case of chronic synovitis of the knee, of rheumatic origin, of two years' duration. The synovial sac is fairly well filled, extension is almost normal, and flexion to a right angle is possible. The patient is able to walk three miles an hour, but this causes aching and slight œdema of the leg. There are slight symptoms of rheumatism in other joints. Massage, baths, hot air, cotton wool, and various drugs have been used without effect. Has aspiration or free incision and washing out the joint with sterilised water or antiseptic solution ever been practised in such a case and with what result?

A CASE OF EXOPHTHALMIC GOITRE.

LAMBDA asks for advice with regard to the following case: A young woman, aged 24, has for the past five years suffered from exophthalmic goitre with attacks of vomiting every few months. She has had complete amenorrhœa for nine years. Menstruation began at about 14 and lasted a very short time. For the last eighteen months her hair has been going white in patches. He would be glad of advice as to the treatment of the hair. She objects to dyeing. He treated her with considerable success for some months with thymus tabloids and it was while taking these that the hair began to go white. Since discontinuing the tabloids the patches have gone on increasing.

ANSWERS.

EVE.—We do not feel in a position to express an opinion upon an *ex parte* statement.

T. B.—We may refer our correspondent to the answer to "E. J.," published in the BRITISH MEDICAL JOURNAL of August 19th, p. 511.

AMBULANCE might apply to Sir Herbert Perrott, Chief Secretary to the St. John Ambulance Association, 8, John's Gate, Clerkenwell, E.C., from whom he can get all the particulars he appears to require, and from whom can be obtained diagrams, splints, bandages, etc.

G. B.—If the title to the policy of assurance is disputed, this is a matter for the insurance company to deal with. We understand that our correspondent is simply asked to give the usual certificate of the deceased's identity, for which he is entitled to charge the proper fee. There is no obligation imposed by law on the medical attendant to give this certificate, and therefore we are unable to understand the letter of "warning" our correspondent has received from the solicitor of a claimant to the policy.

AMERICAN BUGGIES.

IN reply to "Rustic," we have received two letters giving very different views as to American carts. One correspondent, who signs himself "Tory," speaks in high terms of them, and recommends those of the Cortland Carriage Company. Another correspondent has found a buggy bought on this side of the Atlantic expensive and not very durable, but offers to communicate privately with "Rustic." A communication would be forwarded.

ANOTHER correspondent writes that he finds an American gig more comfortable, warmer in winter, and more durable, and that it weighs a little more than half the ordinary gig; his weighs 2g cwt.

MIDWIFERY NURSES.

W.—When A. has a little more experience of these nurses he will find that it is not an uncommon thing for them to delay sending for the doctor in order that they may themselves have the honour and glory of "taking the baby." If he chooses to pay the money demanded by the nurse he need not, we think, fear any charge of "covering" in consequence. He will, however, be perfectly justified in refusing to pay the illegal demand, and in declining to attend any case in future where this nurse is employed. Under no circumstances should a practitioner give a death certificate unless he has personally attended the case.

INTRODUCTION OF SUCCESSOR.

C. B.—The vendee is entitled to expect from the vendor of a medical practice that the latter will do all he can to transfer to the former his interest in that practice, and the vendor knows best how this can be done. If he acts with good faith towards the vendee, it will be better for the latter not too insist too rigidly on the transference of the practice according to any hard-and-fast rule. A twelve months' personal introduction is a very fair one, and a practitioner usually introduces his successor personally to many of his old patients. It is also legitimate for a practitioner when selling his practice to send a circular to the patients actually on the books of the practice to inform them that Dr. ——— is his successor; but care is very necessary when doing this, as the rights of neighbouring practitioners may often be infringed by careless circularising during the transfer of a practice. A personal introduction is also much better for a newcomer than that given by means of a circular.

OLEANDER.

CAPTAIN E. C. FREEMAN, R.A.M.C. (Bleak House, Prospect, Bermuda), writes: In reply to Dr. Tibbles's query in the BRITISH MEDICAL JOURNAL of July 22nd, I may say that here in Bermuda the islands are full of oleander, both pink, white, and dark red, growing as great bushes and hedges everywhere. I have never heard or seen any case of neurasthenia arising from them, nor do the cut blossoms in a room produce any ill-effects; but if in cutting or trimming them any of the acrid juice penetrates the skin through any small cut or abrasion, it does give rise to a troublesome sore and local inflammation, but not, I think, ever to fatal or even serious consequences.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Mr. W. Adams, London; R. E. Adamson, M.B., Labuan; Dr. R. S. Anthony, Claremont; Audi Alteram Partem; Dr. B. L. Abrahams, Deal; Mr. J. Ashton, Williton; Professor T. Clifford Allbutt, Cambridge; Mr. R. B. Anderson, London. **B** Mr. A. G. Ball, London; T. Black, M.B., Liverpool; Mr. G. Brown, Oakengates; E. C. Baber, M.B., Brighton; Boomerang; Mr. A. H. Bygott, Birmingham; Broken Reed. **C** Country Member; Mr. H. Cayley, Weybridge; Mr. J. A. Creighton, London; Common Sense; Mr. S. H. Croucher, London; Dr. J. Calvert, London; Mr. F. W. Collingwood, Brighton; Dr. J. J. Charles, Kilkee, Dr. J. W. Carr, London; Dr. F. C. Coley, Newcastle-on-Tyne. **D** Dolor; Mr. G. Dalton, London; Dr. R. A. Dove, London. **E** Mr. H. Elliott-Blake, London; Eaglehawk. **F** Fairplay; Mr. C. E. S. Flemming, Freshford. **G** G. S.; G. C. Garratt, M.B., London; G. P.; Mr. W. G. Gray, Holsworthy; Glan-y-Mor. **H** Mr. C. H. Harcourt, Alfreton; Mr. E. B. Hartnell, London; Mr. E. Howden, Newcastle-on-Tyne; A. W. Hughes, M.B., London; Dr. W. M. Haffkine, London; Mr. H. C. Hopkins, Bath; T. W. Hay, M.B., Newcastle-on-Tyne; C. O. Hawthorne, M.B., London; Hopeful; Mr. T. G. Horder, Cardiff. **I** Indignant Public Vaccinator; Dr. G. F. Inglott, Malta; Indian Medical Service. **J** Mr. W. Johnston, Cape Town; Mr. S. C. Johnson, Mumbles; Mr. J. O. Jones, Holywell. **K** Mr. E. Knight, London; J. E. H. Kelso, M.B., Portsmouth. **L** Lambda; Leicester Man; R. C. Lucas, M.B., London. **M** "Medical Guild Quarterly," Editor of the, Manchester; Mr. G. Marjoribanks, Prestonkirk; Mr. D. McNabb, Campbelltown; Dr. P. W. MacDonald, Dorchester; J. W. Martin, M.B., Dumfries; Mr. R. W. Murray, Liverpool; Dr. H. M. Murray, London; M.D., D.P.H.; M.R.C.S. **N** Dr. D. Nicholson, C.B., Guildford; Nemo; Mr. P. Newell, Crowborough. **O** Mr. J. O'Keefe, Griffithstown. **P** Mr. F. E. Pirkis, Nutfield. **R** Dr. J. Ritchie, Oxford; R. S.; Mr. E. J. Reid, London; Mr. A. W. M. Robson, Leeds; E. W. Reid, M.B., Dundee; Dr. W. Renner, Freetown; Mr. G. Rendle, London; Mr. W. Roberts, Walsall. **S** Dr. E. M. Skerritt, Bristol; Dr. T. D. Savill, London; Mr. E. H. Saunders, Castleton; Dr. L. E. Shaw, London; Dr. J. G. Sharp, Leeds; Mr. M. Scott, London; Mr. P. Scattergood, London; Subscriber; Spero. **T** Tax; T. P. Teale, M.B., Leeds; Mr. W. K. Taylor, Lifton; Town Councillor. **U** Professor V. Uchermann, Edenbridge. **W** Mr. E. W. Wallis, London; Mr. J. E. Wright, Ennis; Dr. B. C. A. Windle, Birmingham; Dr. L. A. Weatherly, Bath; Mr. F. E. Williams, Buckden; J. R. Watt, M.B., Ayr; etc.

BOOKS, ETC., RECEIVED.

Les Troubles Mentaux de l'Enfance. Par le Dr. Marcel Manheimer. Paris: Société d'Editions Scientifiques. 1899.

Professions for Boys and How to Enter Them. By M. L. Pechell and James J. Nolan. Second edition. London: Beeton and Company, Limited. 1899. 3s. 6d.

Enlargement of the Prostate. By C. Mansell Moullin, M.D Oxon., F.R.C.S. Second edition. London: H. K. Lewis. 1899.

Cure Prompte et Radicale de la Syphilis. Syphilis et Mercure. Par le Dr. J. F. Jaurieu. Troisième edition. Paris: Société d'Editions Scientifiques. 1899. Fr. 4.

Atlas of Urinary Sediments. By Dr. Hermann Rieder. Translated by Frederick Craven Moore, M.Sc., M.D.Vict. Edited and annotated by A. Sheridan Delépine, M.B., C.M.Edin., B.Sc. London: Charles Griffin and Company, Limited. 1899.

*** In forwarding books the publishers are requested to state the selling price.

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SIXTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899.

PROCEEDINGS OF SECTIONS.

SECTION OF MEDICINE.

John Mitchell Bruce, M.D., F.R.C.P., President.

A DISCUSSION
ON THE MEDICAL TESTS FOR ADMISSION TO THE PUBLIC SERVICES.

I.—Sir Dyce Duckworth, M.D., LL.D.,

Physician and Lecturer on Medicine, St. Bartholomew's Hospital; Honorary Physician to His Royal Highness the Prince of Wales.

Your President has done me the honour to request that I should open this discussion, and he claimed my assistance on the ground that I had experience of the matters in question.

Having served for a short time in the Medical Department of the Royal Navy, and having been engaged in selecting candidates for service in India in connection with several of the great railway companies for over thirty years, I could not deny that I had some experience whereon to form opinions which I might venture to offer at this time.

A discussion of this question appears to be particularly appropriate in a great naval and military centre, undertaken at a meeting such as this. If it be asked why this subject has been selected by those responsible for the business of this Section, I believe I am right in stating that there are differences of opinion as to the precise methods in which the examinations of candidates are carried out, and that there are those who conceive that alterations might be made which would prove advantageous as well to the candidates who offer themselves as to the public services which are to employ them.

I would premise the few remarks I desire to make by affirming that the authorities of the public services may fairly be supposed to know their own business, and allowed to set up their own standards of requirements. There is no reason to doubt that these authorities place themselves in the hands of experienced and competent medical advisers. If this is not the case the fact should be made known, since it is obvious that the determination of physical fitness in each individual rests absolutely with the medical officer set to carry out this duty.

It will have to be shown by those who raise objections to the system now in force that positive injury is done both to rejected candidates and to the services from which they are debarred. It must further be borne in mind that in a voluntary system such as obtains in this country, the several departmental authorities are entitled, and well advised, to maintain the highest standards of efficiency attainable, and that in the British public services it is of especial importance to have each fighting unit as perfect as possible.

I will therefore venture to affirm at once, that taking things as they are there appears no obvious reason to complain of the personal material of our sea and land forces. Those of us who have travelled far and wide can best bear testimony to the fact that our men will well bear comparison with the rank and file to be found in the conscript battalions of many foreign Powers. The worst that can be said of the British line battalions is that the majority composing them are too young, and that they pass from service with the colours just when they have become mature and hardened soldiers.

In respect of the navy this cannot be said; the average bluejacket is, as a rule, a better man than the linesman. The reason for this is obvious. He enters the service younger, his life and his dress permit fuller development of his body, and he secures generally, and more constantly, a more wholesome environment than the soldier. Of the two corps of marines it may be said that under a longer service system, with more drill and constant discipline, the individual men materially surpass those of the line in general soldierly qualities, handiness, and efficiency.

If this be the case, as I believe it is, there can hardly be very much wrong in the methods of selection now practised by medical recruiting officers. We may hear it affirmed, however, in this debate, that the tests for cadets and young officers are in some cases too strict and too inflexibly laid down, and that thus the career of many of these youths is spoiled, and the services deprived of useful officers.

It was not long ago declared in the pages of the *Lancet* that "many desirable young fellows were lost to the services in favour of less manly and desirable candidates, whose great qualification was that they could 'work up' all day long and every day for an examination."[1] It was asserted that physical attainments carried no advantage, and it was urged that marks should be given for a fine physique.

The reply to these complaints and assertions is not far to seek, and it may be formulated as follows. The modern requirements of warfare demand not only a high physical standard of fitness, but a trained and disciplined intelligence on the part of officers. Times have changed since it was said that our battles were won in the playing fields of Eton, or of any other public school. Again, the naval and military authorities have now a much larger field to draw from than they had fifty years ago, and they are beset with applicants for commissions in tens to-day, whereas they had little more than units to select from formerly. The services now demand, very properly as I venture to think, and can easily secure, any number of youths, fitted both by their physical qualities and their trained intelligence to take the places waiting for them. They can therefore afford to lay down stringent tests, and to enforce them vigorously. I will not deny that the services may thus sometimes lose an athletic dunce, fearless, and possibly capable of heroism; but are we prepared to hand over our battalions to be perchance led by men of this mental calibre? It would obviously be difficult, if not impossible, to gauge the exact relation between purely physical and mental acquirements, and the fact remains that there is no incompatibility between these two attainments, and that the happy conjunction of them is now largely to be met with in our schools and universities. Such difficulty as there is is fully met by the arrangement which enables those who are less equipped mentally to pass into the army by way of the militia.

It is well recognised that a hardship exists by reason of the medical examination for officers being held after the literary examinations have been passed. This is a most unfair and unnecessary arrangement. It would surely be wiser to weed out unfit candidates before subjecting them to the toil and expense of special training and examination, and to allow them at once to prepare for some other sphere of life-work. The plan pursued in the sister service might well be followed for military candidates, and I will venture to hope that a strong expression of this opinion may emanate from this meeting, and be submitted formally to the Secretary of State for War.

In the opinion of some who have knowledge of the subject, it is believed that the present literary examinations are unduly hard, having regard to the ages of the candidates for both services, and it is thought that the tests should not be higher than those which are applied to boys and young men of similar ages at schools and universities. I am not prepared to offer any decided opinion on this point, and am content to believe that the several standards required can be fully met by the educational institutions. Preliminary education is being levelled up everywhere and for all professions, and it is high time, if Englishmen are to retain their place in the world, that the standard of it was considerably raised.

With respect to physical requirements, I do not think there is much to be said. We hear of rejections which sometimes appear to be flippant or capricious, in regard to such disablements as varix, varicocele, hammer-toe, etc. In many of these cases rejection might be avoided by previous operative measures, and by a preliminary inspection by civil prac-

[1] *Lancet*, March 18th, 1899.

titioners which would reveal these faults and secure timely attention to them.

Some degrees of colour blindness should hardly disqualify for military service, although the most perfect vision should be compulsory for the navy. The tests for vision generally are not too strict in the army.

It is asserted that too many candidates are examined physically at one time, batches of fifty or sixty coming up before the inspecting medical officer. This might be readily avoided, and more time be allotted to each candidate. Ten or twelve examinations in a day, possibly at different military centres, would be sufficient, and time would thus be given for a fuller inquiry into the details of antecedent family history and proclivity. For this very important matter little attention appears to be formally given, and it has been suggested that each candidate should carefully fill up a schedule with exact replies to definite questions, arranged after the fashion of a life-assurance inquiry paper. This is already carried out in the case of candidates for the Indian Civil Service. Such a method would secure a very valuable document to be subsequently pigeon-holed in the archives of the Director-General's Department, containing information which would often determine the fitness of particular officers for special duties.

I will now refer to some of the most important, because most frequent cases of rejection of candidates. Defective eyesight figures largely in the official returns. This may concern one eye only, but such a defect cannot be disregarded. For naval candidates especially, it is important to have no uncertainty of vision, and neither a naval nor military career can be begun with but one effective eye. In the case of midshipmen, it is not perhaps sufficiently realised that they have to use their eyes in constant and hard study on board ship under the naval instructors, and require perfect vision for this as well as for their duties on deck and elsewhere. Loss or decay of many teeth is a fertile source of rejection. In 1897 nearly 1,800 recruits for the army were disqualified by this cause alone. For sailors it is imperative to have good and strong teeth, and artificial substitutes would prove of little avail in dealing with ship biscuit. The loss of artificial teeth on foreign service, where they could not be replaced, is a serious matter, and might even entail the expense of invaliding an officer to replace them. Deficient chest measurement accounts for many rejections, full allowance being made for the fact that young recruits, under the influence of drill and gymnastics, very rapidly fill out their jackets. General debility, varix, flat-foot, and varieties of heart disease are less frequently encountered, but the figures for these defects are not unimportant. It is difficult to confirm the alleged age of many recruits. Without doubt, many are taken at the age of 16, when development is presumably accordant with that often met with two years later. Of these many are likely to break down, and they are dangerously unfit for tropical service, even after two years of home or Mediterranean service. There is thus much waste and futile expenditure in enlisting such lads. It would be as foolish to expect any satisfactory results here as it would be to expect them from setting three-year-old horses to do regular roadster's work.

Old soldiers have often confessed to me that they enlisted under false ages when only 16 years of age, and some of these lads have been serving in the tropics before they were 18. With respect to the age of soldiers called to do duty in India and other tropical stations it is necessary to speak with no uncertain voice. It has long been known—and my experience of Indian service fully confirms it—that no European is fit for the exigencies, or able satisfactorily to encounter the risks, of military service in these stations under the age of 23 or 24 years. In spite of this knowledge, and of the serious waste of life and health which comes annually from sending out immature soldiers to India and other tropical stations, in spite, too, of the expense incurred in invaliding them; the rule recommended is not, or perhaps cannot as yet be carried out. The temptations to drink, the risk of enteric and malarial fevers, and solar exposure, are all greater in the case of growing lads, and their resistance to all tropical and malign influences is less before the growth of the body is completed.

It would be well if these facts could be impressed upon the military authorities by a resolution of this Section, and public attention should be called to them.

The question of albuminuria in adolescents demands notice. Neither the pathogenic nor pathological position of this condition is as yet fully determined. It must be, at least, recognised as an abnormality. My experience leads me, year by year, to think rather less than more gravely of it. Its occurrence has to be carefully studied in relation to the whole condition of the patient, and if it can be distinctly shown to be in no degree a sequel of scarlatina, if it is independent of structural renal degeneration, and unaccompanied by any cardio-arterial change; and, if moreover, it passes off completely, I see no objection to accepting the candidate for active service.

With regard to diseases of the skin it may be stated that a tendency to recurrent eczema or widespread psoriasis demands rejection of any candidate so affected.

Many other matters in relation to the tests for physical fitness for the active services call for attention and discussion, but time forbids me to enter upon them. I have merely touched upon some of those that appear to be specially interesting, and of which I happen to have had personal experience, and I will leave it for others to complete the subject and secure a fruitful discussion of it.

II.—WILLIAM OSLER, M.D., F.R.S.,

Professor of Medicine in the Johns Hopkins University; Physician in Chief to the Johns Hopkins Hospital, Baltimore.

DR. OSLER said that he had had no experience of the medical tests for the rank and file, but he had seen many cases of the "rejected of the services" as he called them—the young fellows who failed to pass the Army and Navy Boards. Sir Dyce Duckworth's criticism of the hardship of having the physical examination after the mental tests appeared most just. In his experience there had been three common causes of unnecessary rejection. First, the presence of a cardio-respiratory *bruit*, the harmless nature of which was not always recognised by army and navy surgeons and by examiners for life insurance. Secondly, the systolic murmur at the pulmonary area which was frequent in young men with thin chests; this when unassociated with cardio-vascular changes should not be regarded as a disqualifying feature. And, thirdly, the existence of adolescent albuminuria. His experience did not tally exactly with that of Sir Dyce Duckworth; and as his experience had increased he had come to regard the persistent presence of albumen rather more than less gravely. When transient and in a subject who has not had a severe infection—scarlet fever, diphtheria, or typhoid fever—and whose arteries were soft, the blood tension low, and the apex beat in the normal position; then, under these circumstance a man might be passed, but the condition was one which required the most cautious consideration. Dr. Osler then referred to the beneficial effect of general military training on the young men of a nation, as seen in Germany, a benefit seen not less on their bodies than on their minds, which, while plastic, learned the all-important lesson of life—discipline.

III.—E. J. WALLACE, M.D.,

Physician to the Royal Portsmouth Hospital, Southsea.

DR. WALLACE spoke as to the desirability of a better mutual understanding between the naval and military medical advisers on the one hand, and the civil medical men on the other, in regard to the grounds of accepting and rejecting candidates. Men who were rejected by the civil practitioners were often passed by the naval and military examiners, and many were passed by the latter who should have been rejected on their own regulations. He thought there was not enough discrimination made between functional disturbance without any signs of sequential organic disease and organic disease itself. He knew of many boys suffering from functional murmur who had been rejected, and who had turned out to be strong and effective men. He thought colour blindness ought to be a cause of rejection. He agreed with Sir Dyce Duckworth as to functional albuminuria. His experience was the same, and he found it was often a mere temporary affection, the result of keen mental cramming. He felt strongly that the physical examination should precede the literary, and in the main agreed with Sir Dyce Duckworth's

views. He was much in favour of the previous family history being thoroughly gone into, as was done for life insurance.

IV.—William Turner, M.D.,
Surgeon, Colonial Hospital, Gibraltar.

Dr. Turner said that the remarks he wished to make had reference, not to the physical fitness of the recruit for enlistment into Her Majesty's services, but to call the attention of the Section to the mental capacity of the candidate. The army recruiting regulations took little notice of this matter. Beyond the fact that the candidate was required to state whether he had at any time been subject to fits—a question which he might or might not answer truthfully—no attempt apparently was made to investigate his antecedents or those of his family for evidence of mental obliquity or of insanity. Yet when it was remembered that these men were to be put in possession of the most lethal of weapons, and trained in the use of them, the importance of noting the condition of his nervous organisation and his powers of self-control would be apparent. Seeing that education was compulsory throughout the country, and that recruiting was now largely carried out on the territorial system, he thought that much useful information in respect of mental fitness would be easily obtainable by reference to the district schoolmaster, the parish minister, or the local medical practitioner. The need for additional precaution in this respect in the selection of recruits for the army and navy was manifest in view of recent events. Reference was made to the reckless firing of our men at the Atbara and elsewhere from the undue excitement of young troops, and loss of self-control at a critical moment. Instances were also related of sudden development of insanity with homicidal impulse, apart from the influence of excitement or of alcohol. Some of these cases might have been obviated by careful investigation of the personal history. The most recent case of this kind was that of a young soldier on guard for the first time at Gosport some months ago, who fired on his relief party and seriously wounded several of them, and who, when tried by court-martial, stated that he could not in any way account for his action.

V.—T. D. Savill, M.D.,
Physician to the West End Hospital for Diseases of the Nervous System; Assistant Physician to the Hospital for Diseases of the Skin, Leicester Square.

Dr. T. D. Savill had had the subject brought forcibly under his notice in his connection with the British College of Physical Education and with several gymnasia in London, and he was very strongly of opinion that the question of height should be relegated to the background as a test of the physical fitness of a recruit for active service. In the first place it had been shown that the ratio of rejections amongst candidates increased with increased height, showing that their physical fitness in other respects was not in keeping with their height. Another fact of the same kind was the relatively greater frequency of phthisis and pulmonary complaints amongst the men in tall regiments such as the Guards. On the other hand, by rejecting candidates owing to deficient height, many very efficient and capable recruits were excluded. He had often found young men of robust health and endurance who had been rejected from the army because they measured only 5 feet 3 inches or 5 feet 4 inches. This was to be regretted, for not only was the valuable training and discipline of the army denied to these young men, but many valuable recruits were lost, and in their place persons of mental and physical capacity inferior to these had been taken. It was a strange fact that military men had this kind of truth constantly before them, for in several departments, such as drivers in the Artillery, who were taken at 5 feet 2 inches or 5 feet 3 inches, but with a chest girth of 34 to 36 inches, the men were the healthiest in the whole army. No doubt chest or rather respiratory capacity was the best single test that could be applied.

VI.—William Sykes, M.D.,
Gosport.

Dr. Sykes pointed out that the finest physical material made the best soldier; that the men we had most difficulty in beating were savage foemen like Afghans and Soudanese, and that the only nation which chose its officers like ourselves, on a purely literary examination, was the Chinese, who had the poorest army in the world. The present methods of physical examination for the army, navy, and militia were inconsistent. Thus for entry into the militia a civil medical certificate only was necessary into the navy; the physical preceded the literary examination; in the army it followed. The men most wanted were public school men, the captain of cricket and football teams, not mere literary men. There was uncertainty in the admission-standard into the army; some were rejected who should be accepted, others accepted who should be rejected. The ratio between height and chest measurement was not a good one. The boy of six feet and the boy of five feet five were expected to have the same chest measurement. There was, moreover, overwork in preparation for the services; many candidates working eleven hours a day to obtain admission. The candidates for admission to the services ought to be examined like those for an insurance company, and passed first, second, and third class, and allowed, say, 3,000 marks for a first-class certificate, 2,000 marks for a second class, and 1,000 for a third-class certificate, and these should be allowed to count together with those of the literary examination towards obtaining admission into the public services.

VII.—James Barr, M.D.,
Physician to the Royal Infirmary, Liverpool.

Dr. Barr stated that, in his opinion, the British Medical Association should endeavour to raise rather than lower the physical standard for entrance into the public services. This was largely a question of supply and demand. If plenty of good men could be got then inferior types should not be accepted to the exclusion of better men. In the army and navy we required both the men and officers to have good physical and mental development. Personally, he would not admit any man whose pulse-rate was over 90. If there were a man in action with a pulse of 120, and his courage oozing out at his finger ends, he would not hit anything, and there would be consequently an enormous waste of powder and shot.

VIII.—Surgeon-General H. S. Muir,
Deputy Director-General, A.M.S.

Surgeon-General Muir considered that a standard of physical equivalents was much required for the public services, and that the British Medical Association might assist in compiling such a standard. Height should be decided by what was considered the type of British manhood, as endurance was necessary as well as "good shooting" capabilities. Those who referred to those excellent soldiers, the Goorkhas, as specimens of "little man," must remember that theirs was the Asian or "Napaulese" type. Chest measurement was another point requiring better definition; it was a question whether the degree of expansive power was not more valuable than a large maximum measurement with small power of expansion. As regards the physical examination of officers following the literary test, how could it well be avoided? Granting that a young man was considered healthy and fit two years previously, was it not possible that he might break down before his preparation for the literary examination were complete? He might break down from overstudy or he might have an accident in performing the very athletic exercises which were so desirable. Another physical examination was emphatically necessary, as they should be "fit" on their actual entry into the service.

IX.—Surgeon-General Cuffe, C.B.

Surgeon-General Cuffe said that the healthiest men were found to be the drivers in the Royal Artillery, short stout men of good chest development. The tall overgrown men of the Life Guards and heavy cavalry, when narrow-chested, very soon broke down. Men could not be taken with defects with a view to curing them after entry into the service. It was found that men in the service with defects often made use of them to shirk their work. It must not be forgotten that recruits frequently enlisted when employment in civil life did not offer, and, repenting after enlistment, endeavoured to get rid of their obligations. Eye tests were founded on the necessity of officers and men being required to see distinctly at long ranges, and the requirements of signalling. The correlation of height, weight, and chest measurement was a

difficult one, but the present standard could certainly not be lowered. Recruits called "specials" were the first to succumb to the strains required on active service. The educated young man who was a good all-round man at boating, cricket, football, etc., as well as a good rider and good shot, would decidedly be the best man for the public service, but such men were difficult to obtain; and all these might, however, break down after study for examination.

X.—William Calwell, M.D.,
Assistant Physician Royal Hospital, Belfast.

Dr. Calwell pointed out the great difficulty of prognosis in so-called functional murmurs of the heart. He thought these the exact cases that were unable to resist any exceptional strain, such a strain as was common in the combatant services, both in peace and war. The tests bore a certain analogy to those of life assurance, but the analogy was only partial. We could accept a life with a "loading," and so recognised and accommodated ourselves to a lower standard. This was impossible in the services. It seemed a question of average type, and this should be a high one in the services. The importance to be attached to albuminuria depended on the origin and nature of the albumen. We might not accurately understand nucleo-albumin, but practically there was at least a form of albuminuria or nucleo-albuminuria which depended on irritation of the urinary tract, more especially of the prostate and bladder, and perhaps also of the kidney, or on a leakage of semen, which was purely transitory, and left the sufferer in as perfect health as he enjoyed before the attack. It was difficult to estimate how far nervousness, with increased frequency of pulse rate was a sign of weakness; it varied with individuals and at different times in the same individual.

XI.—Surgeon-Colonel Welch, F.R.C.S.

Surgeon-Colonel Welch maintained that the personal material of the army was far below what was desirable in relation to the duties thrown upon it. The average of the army was under the average of the British race. With reference to officers, the question of physical qualification was not sufficiently taken into consideration; these qualifications should form a part of the result equally with the literary test. The examination for physical qualification should precede the literary test; it was merely a question of supply and demand, and an efficient examining body. Albuminuria if merely passing not accompanying structural changes, but coming under the category of adolescent albuminuria, should not exclude a candidate. The present system of chest measurement was bad in that it was no test of the actual breathing capacity of the individual; it took in the muscular development of the chest, which varied much. What was wanted was a spirometrical test showing the actual breathing space at the disposal of the man irrespective of the thickness of his chest wall. The age question of the recruit was all-important. No lad should be accepted on the army strength until he was over 20 and had passed a series of physical tests. The present condition led only to the necessary elimination of the unfit after being subjected to the service condition, after filling the hospitals, and invaliding, and wasting the public funds. It would be to the general well-being of the British race if its manhood could be passed through the ranks for two years. The results would be physical and moral, the latter no less than the former.

A Dental Therapeutic Business.—In the course of a recent examination in bankruptcy, the debtor, whose failure was attributed to losses as a theatrical manager, stated, according to the report in the *Times*, that in 1897 he was engaged in managing a touring theatrical company, but that in February, 1898, he commenced "a dental therapeutic business, his capital at that time being £10. In the following July he was joined by another person who found £500, but the partnership was dissolved in October, and he received £500 as the value of his share of the business." The facts, if correctly stated, are curious, and not without special interest when read in connection with the Lord Chancellor's speech, to which reference was made last week.

SECTION OF STATE MEDICINE.

George Wilson, M.D., President.

A DISCUSSION ON RECENT VACCINATION LEGISLATION AND THE PREVENTION OF SMALL-POX.

I.—Edward C. Seaton, M.D.,
Fellow (Milroy Lecturer, 1896) Royal College of Physicians, London.

The subject of vaccination has been so much under discussion of late that many may think that it might rest for awhile. But the introduction of the new Act brings a fresh element of interest to those practically engaged in public health and vaccination work. Whatever the view may be of those who guide the policy of administration, the organisers of this meeting evidently considered that the old subject—vaccination and the prevention of small-pox—still affords abundant material for discussion at a gathering of medical experts and practitioners such as that which assembles here to-day under the auspices of our famous Association.

When the representative of this Section did me the honour to request me to open the discussion for to-day, I reflected that whatever our views may be on the principle of compulsion, the very large concession to the voluntary principle embodied in the new Act relieves us of any necessity of repeating arguments on one important aspect of this great medico-political question on which it has been the duty of our profession to offer a great deal of technical information and advice during the present century. We of the medical officer of health society did our share last year when the question was before Parliament by sending a representation which I had the honour to sign on behalf of the society. While recognising the value of auxiliary measures, we left no doubt as to our unanimous opinion of the place occupied by vaccination in our national and local systems of prevention. The question, as you know, became one of political consideration mainly. Whether for good or otherwise, it is now settled for us by the Legislature.

But apart from these considerations there is ample room for a discussion in an assembly of practical men. Anything that improves vaccination in respect of its convenience, safety, and efficiency must increase its popularity, and consequently add to the value of our insurance against epidemic small-pox. The President of the Local Government Board evidently regards the working of the Act in this light. In his speech on June 2nd, on the Local Government Board vote, he referred in terms of high satisfaction to the recent vaccination returns of some districts as compared with those of the same districts in the corresponding period last year. The parliamentary secretary of the Board, in his speech at the Sanitary Institute on May 2nd, had previousiy given some very interesting details of the working of the new Act, which he believes is "going to win."[1] Although we may not all agree with Mr. T. W. Russell, M.P., as to the paramount advantage of substituting different methods for the well-tried "stational and arm-to-arm" system of vaccination, to which I am most naturally attached, we all loyally obey the new regulations, and heartily wish them success, and will do our best to secure it.

In the new departure now being made in the practice of vaccination there are many points on which experienced members of our Association may desire to comment.

I think, therefore, that I shall lead it into the most useful channel if I direct your attention almost exclusively to the provisions of the General Order of the Local Government Board, dated October 18th, 1898, and addressed to the Board of Guardians of every Poor-law union in England and Wales; to the public vaccinators of the several vaccination districts in England and Wales, and to all others whom it may concern.

Qualifications and Duties of Public Vaccinators.

These are stated under the respective headings of Contracts with and Duties of Public Vaccinators, Articles 2 and 6. They deal with the certificates of proficiency of public vaccinators, and the conditions under which their work may be done by deputy.

[1] *Journal of San. Inst.*, vol. xx, Part II, p. 289.

Remuneration of Public Vaccinators.

This is a delicate subject. The great statesman who introduced the Elementary Education Act enunciated certain principles of action based on a knowledge of human nature generally (and a lifelong experience of our shrewd countrymen in the North) which have been made applicable to the administration of prophylactic measures. From our medical standpoint and experience we are all free to admit that a certain modicum of oil is essential to the smooth working of any machinery. In some districts the provisions of the new Act and the arrangements with the guardians are spoken of as satisfactory by gentlemen who are engaged as public vaccinators. It may be otherwise in very sparsely populated country districts. Let me in this connection recall to you a picture in the British Medical Journal which so humorously represents the pains and troubles of the public vaccinators of to-day. I need only add to these few suggestive remarks that when a fixed sum is mentioned in any Act or order as a minimum, it so frequently becomes adopted as the maximum. It needs, then, to be observed that fair remuneration in every case is, of course, essential to efficiency.

Domiciliary Visits of the Public Vaccinator.

Next among the new regulations is that which relates to the domiciliary visits of the public vaccinator, which are taking the place of the old system, which, in spite of its drawbacks, possessed many advantages. The order of the Local Government Board provides as follows:

Article 7. (1) The visit of the public vaccinator to the home of a child, whether on request of the parent or other person having the custody of the child, or after notice from the vaccination officer, shall be made not earlier than 9 o'clock in the morning nor later than 4 o'clock in the afternoon, unless some other time shall have been arranged between the public vaccinator and the parent or such other person.

(2) The visit of the public vaccinator to the home of a child, whether on request of the parent or other person having the custody of the child, or after notice from the vaccination officer, shall in the absence of any sufficient reason for delay be made within the two weeks after receipt of the request or notice as the case may be.

The gentlemen present will no doubt be in a position to offer valuable suggestions for smoothing over the difficulties which arise from the practical working of these provisions.

Instructions to Vaccinators under Contract.

Now we come to the most important part of our subject—namely, the way in which vaccination in future is to be performed. This will be as far as possible, according to modern views, free from risk. Will it be quite as efficacious as the old method? Whatever answer we may be disposed to give to this query, we shall, I am sure, be inclined at the present time to lay great stress upon the Government rules with regard to areas of vesiculation and marks. Not only do I desire to insist upon the necessity of creating or maintaining a strong professional feeling in this respect, but as a most profound believer in the evidence of Marson and many others, I would most strongly urge that there should be a levelling up in this respect, and that in every case of vaccination there should be a reliable record of the area of vesiculation and marks.

Here, then, in these four principal considerations, we have ample material for useful discussion in the subject of prevention of epidemic small-pox. Personally, I should prefer to stop at this point, but a discussion of the prevention of epidemic small-pox would, at the present day, be considered incomplete without reference to municipal and county sanitary organisation and the provision of isolation hospital accommodation. Into the merits of isolation, on a proper system, of course, as a necessary auxiliary to vaccination, I do not propose to enter. I have, at various times, contributed to the discussion of this subject, and need hardly refer to it now; but others will no doubt give us the benefit of their opinions.

I may remind you that medical officers of health generally, while maintaining that vaccination is the first line of defence, are strongly in favour of isolation as auxiliary to the main prophylactic. What would London do if it were proposed to abolish the ships at Long Reach? Is not every medical officer of health of a large town anxious to secure hospital accommodation for initial imported cases? Is it not their constant complaint that they are not sufficiently helped by the powers that be?

Here is a case within my own official knowledge and experience, illustrating the difficulties under which the sanitary authority, anxious to do its duty, labours at the present day. A case of small-pox is imported into a common lodging house. It is removed under compulsion to a workhouse. Its isolation at the workhouse is against official rules. It is removed from there to an ordinary isolation hospital, where cases of scarlet fever, diphtheria, and typhoid are under treatment, and it is again against official rules. The authority in question endeavours to obtain a site for a small-pox hospital in one of the most lonely places within thirty miles of London. It is opposed by a resident within a mile, and eventually has to expend a very large sum, some thousands, in defending this action. Such a case, I venture to say, only needs to be stated to show that if small-pox should become prevalent, more help will be needed from the Legislature to secure sufficient prophylactic measures.

No department concerned in protecting the country generally from the invasion and development of epidemic disease could, under such circumstances, be considered free from responsibility in the event of some great disaster, comparable to explosions of other preventable epidemic disease—typhoid, for example.

The provision of suitable hospital accommodation for large populations and areas, by combination if necessary, is only one part of the problem to be solved. The establishment of a proper organisation, under good medical direction, as at Brighton, Bristol, Portsmouth, as well as in many large towns in the Midlands and the North of England, is one of the most urgent needs of the present day. Towns with a population of 30,000 or 40,000 inhabitants and upwards need the constant supervision of a medical expert.

I do not express any view as to the best arrangement for such a purpose, as so much depends upon individuals, as well as the terms of appointments, but I do unhesitatingly declare that the organisation of many fair-sized boroughs and urban districts is often unsatisfactory, and that consequently their condition is a source of public danger.

On this, as well as upon other points, I beg to invite your remarks.

II.—C. R. Drysdale, M.D.Lond.,

Senior Physician, Metropolitan Hospital, etc.

Dr. Drysdale said that the Act of last session had pleased no one who understood the question. The opponents of compulsion by the State, the leader of whom was Mr. Herbert Spencer, would go on endeavouring to overthrow what had already been gained; on the other hand, those in favour of vaccination seemed willing to compromise in this matter. It was impossible to say what was the very best way of preventing small-pox; but it was now known that Germany, with 54,000,000 of population, had succeeded, by vaccinating every child in infancy and revaccination at the age of 12, in stamping out small-pox; for example, in 1897 there had been only 5 deaths from small-pox in Germany, and all vaccinations and revaccinations had been performed with animal vaccine. There had been 97 per cent. of successful vaccinations, and 93 per cent. of revaccinations had succeeded. It appeared that in Holland in the towns the mortality had been 7 times as great as in Germany; in England, 16 times; in Belgium, 21 times; in France, 123 times; and in Austria 247 times. In Germany, in 1897, the deaths from small-pox were merely in the ratio of 0.1 per million. He considered that medical men should speak out openly and candidly, and leave the onus of compromise to politicians.

III.—Joseph Groves, M.B.,

Medical Officer of Health, Isle of Wight Rural District.

Dr. Groves thought the time had scarcely come for judging the operation of the present Act. All medical men and sanitarians were naturally indignant that a principle so important in the interests of the public health was conceded; but there could be no doubt the outcome of the passing of this Act had been a very largely increased amount of protection against small-pox. Not only had more children, including many pre-

viously passed over, been vaccinated, but the vaccination had been better done, because the public vaccinator had had more definite directions from the Local Government Board, and because lymph was supplied to him. What was needed was a definite pronouncement as to what constituted efficient vaccination. Private practitioners were placed in a difficult position as a result of the Act. The Local Government Board would no longer supply other than public vaccinators with lymph. In reply to Sir Barrington Simeon, Bart., Member for Southampton, the President of the Local Government Board gave no hope that private practitioners would be supplied with lymph by the British Government. Unfortunately, neither did the Act provide for the efficient supervision of vaccination done by other than public vaccinators. Notwithstanding the Act, the subject was not being lost sight of by either the Society of Medical Officers of Health or the British Medical Association. The former body had made representations to the Local Government Board with reference to the vaccinated area on the arm, and a Subcommittee of the Parliamentary Bills Committee of this Association, with Dr. McVail as Chairman, had the whole subject in hand. But small-pox would not be barred in this country as it was barred in Germany, until revaccination was compulsory. The Government half promised a Bill upon the subject, but party considerations apparently caused them to recede from this satisfactory position. In the meantime, it was of the first importance that the sanitary administration should be as perfect as possible in its defence against small-pox, and to this end there ought to be—at least in every county council area there should be—a properly established small-pox isolation hospital, to which any case of small-pox might be at once removed.

IV.—J. BRASSEY BRIERLEY, M.D.,

Medical Officer and Public Vaccinator, Old Trafford District, etc.

DR. BRASSEY BRIERLEY said that it was impossible to carry out the present Vaccination Acts efficiently so long as private practitioners were allowed to make one vesicle only. This was a common practice in his district, and people were encouraged to disregard the efficiency of the operation by charging a fee per "spot," which was usually sixpence. If a conscientious objector's certificate was not sent to the authorities by a parent employing a private practitioner an efficient operation should be required, and the result should be subject to Government inspection. He further thought the Section should make a recommendation to this effect to the Local Government Board. This would also strengthen the hands of the Council of the Association, which had the subject under consideration.

V.—T. GARRETT HORDER, M.R.C.S.Eng., L.R.C.P.Edin.,

Public Vaccinator, Cardiff.

MR. HORDER said that medical men should not truckle to the views of ignorant parents. Public vaccinators now were practically sanitary inspectors; he himself had refused to vaccinate in certain insanitary premises until they were placed in a sanitary state. He had found considerable difficulty in making out his account for his services as a public vaccinator: the form on which that account was detailed was too complicated.

VI.—HENRY MAY, M.R.C.S.Eng., L.R.C.P.Lond.,

Late Medical Officer of Health of the Aston Manor Urban District.

MR. MAY observed that the Act of last session was good in that it was increasing the number of vaccinations and the fees of vaccinators, and had undermined the position of the antivaccinators. The private practitioner had his grievance, which was that unless he was prompt he might find his patient vaccinated by the public vaccinator. The private practitioner ought to have the same facilities for obtaining calf lymph that were enjoyed by the public vaccinator.

REPLY.

Dr. SEATON, in reply, expressed the opinion that it was especially important that the Local Government Board should define "efficient vaccination."

THE TECHNIQUE OF VACCINATION.

By COLIN CAMPBELL, M.R.C.S.,

Public Vaccinator, Saddleworth.

THAT the recent Vaccination Act has enormously increased the details of the work of public vaccinators goes without saying. I should put it, roughly, that the pay has been doubled whilst the labour has been quadrupled. The necessity of many of the new regulations may at first sight appear to be doubtful; but it is our duty, as faithful servants of the State, to carry them out to the utmost of our ability, to be carefully watchful of results, to discuss the subject amongst ourselves, with a view of being able to formulate and suggest to the Local Government Board such alterations and improvements as experience may show to be desirable to secure the highest standard of efficient vaccination.

To such an end, I desire to offer a few observations on some doubtful points of technique.

The amended rules under which public vaccinators are now required to carry out vaccination are contained, for the most part, in Arts. 3, 4, 5, 6, and 7 of the third schedule of the General Order, and the first question is the particular sort of lymph to be employed. Art. 3 says:

> All public vaccinations are to be performed with glycerinated calf lymph, or with such other lymph as may be issued by the Local Government Board.

This apparently means that public vaccinators are restricted—in public vaccinations, of course—to the use of N.V.E. lymph; and this interpretation is borne out by the wording of Form I (notice of intended visit).

> .....I hereby give you notice that I shall visit.....and shall offer to vaccinate it with glycerinated calf lymph, or such other lymph as may be issued by the Local Government Board.

On the other hand, Art. 4 inferentially permits the use of private supplies:

> The public vaccinator.....must not employ lymph supplied by any person who does not keep an exact record of its source.

Therefore he *may* employ lymph supplied by those who do keep such record.

But many private producers of lymph supply tubes containing sufficient for two, three, or even five vaccinations. The General Order condemns this, but in somewhat ambiguous language:

> When once he has unsealed a tube of lymph he must never attempt to keep any part of its contents for vaccination on a future occasion (Art. 5).

The exact meaning of the word "future" appears to be open to doubt.

As regards the method of using lymph, directed by Art. 5, no one will cavil at a word. Most of the directions have long been carried out by public vaccinators, with perhaps the exception of the "artificial blower," "blowing" being rarely needed when we used points, and had a regular succession of children.

The necessity for sterilisation and aseptic vaccinations, often in the midst of suspiciously septic surroundings, has necessitated a reconstruction on an elaborate scale of our armamentarium. Hitherto a lancet (or one of its substitutes), a basin of hot water, and a clean towel, were all that was required. Even now we might sterilise and cleanse without heat—but for the blower. It is a great improvement, an obvious necessity; and if you have a nice one, much spilling of lymph is prevented. But it has a nasty trick of "sucking back," and for its recleansing nothing short of cold washing followed by boiling, can be thoroughly sufficient.

But as we cannot put our fingers into boiling fluid, we require a forceps, and we also want a scissors to cut the lint or other material required for cleansing the skin and drying our instruments. As there is no real cleansing without soap, that is also required; so that our new "case" must include "vaccinators," blower, forceps, scissors, spirit lamp, basin, aseptic soap (some may desire some antiseptic tabloids), lint or gauze; and some means for protecting "the vaccinated surface against extraneous infection, both *on the performance of the operation* and on inspection of results" (Art. 6).

This is a rule to which I desire to draw attention, for personally I am unable to conceive a way in which the italicised part of it can be scientifically carried out, unless we have some means of determining the atmospheric purity of the apartment in which the operation is to be performed. We

make four abrasions, four doors through which potentially possible septic germs may enter. How can we scientifically keep them out—protect "the vaccinated surface against extraneous infection?"

The addition of glycerine to lymph adds a new difficulty. Fresh lymph dries as quickly as it is introduced, whereas the glycerinated lymph takes 45 minutes to dry, and so seal the abrasion.

Fortunately the dangers which the rule is designed to meet cannot be so real as an out-and-out advocate of the germ theory would have us believe. During 17 years' work as public vaccinator I have not known a single case in which any troublesome symptoms followed on the initial operation, that is to say, in which symptoms of sepsis developed within three or four days.

And from my own experience, again, I would assert that in 99 cases out of 100, the unpleasant results which occasionally follow vaccination are caused either by the irritation of the vesicle after it has begun to form—by clothing, or by a premature dislocation of the scab—subsequent to "inspection."

To guard against these more real dangers the General Order gives us very little assistance, except by directing that "advice as to the precautions to be taken ..... shall always be given." It is easy to give advice, but difficult to ensure its being carried out.

The two objects which the public vaccinator aims at, are (1) thoroughly efficient vaccination, and (2) the prevention of those unpleasant consequences which may cause suffering to our patient, and also tend to bring the operation into disrepute.

The Vaccination Department of the Local Government Board has provided us with a lymph capable of giving the most perfect results. I believe that when failure follows its use, a careful reconsideration of any individual case would reveal some slight error of procedure on the part of the vaccinator.

As to its reliability, my own statistics are perhaps worth recording. From January to April last, I vaccinated 258 cases with 256 perfect results. In 4 cases only was there any inflammation present at the time of inspection—almost invariably the eighth day. There were 9 cases in which I was asked to see the after inspection, and found in all that the cause of trouble was premature rubbing-off the scabs. Without troubling the Section with statistics, I may say that these 258 cases included 194 children whose age varied from 1 to 14 years, and the worst arms were those of children between 1 and 6 years old.

Thus the greatest danger of bad arms, which are the bugbear of public vaccinators, arises in children who have reached the age of roughness, but not of discretion; and these, it may be hoped, will become a diminishing quantity when the new Act is carried out.

But there are still a small percentage of "bad arms" even amongst children between 4 and 6 months. They are usually found in the dirty homes of the ignorant thriftless classes, and on a very small basis of reality the most astounding tales of horror are circulated and eagerly swallowed. In this connection there is another matter on which a great deal has been written and said, so far without avail—I refer to the "one-mark" question. The position in which public vaccinators and the better class of general practitioners generally are placed is not only illogical, but utterly unreasonable. The law, in its wisdom, acknowledges as "successful" vaccination a "mark" of any size, however microscopic, whilst the Local Government Board directs, and probably every teacher of vaccination inculcates the necessity of four marks. What is the position of a man trying to "explain" that four marks are necessary when his listener knows that a certificate of successful vaccination under the Vaccination Acts can be obtained perhaps fifty yards off for the modest sum of sixpence, and one pimple!

But the difficulty does not end there. A large number of people regard a vaccination as good or bad, not by measuring the size of the vesicles produced, but by the presence or absence of all irritation, inflammation, or subsequent trouble of any sort. Well, if the *efficient* vaccinator must produce four pocks aggregating half a square inch, whilst the one-mark man can also certify "successful" with one mark of $\frac{1}{25}$ of a square inch ($\frac{1}{5}$ by $\frac{1}{5}$), it would be an interesting calculation to estimate how many times more frequently "efficient" vaccination is likely to produce what is regarded as unfavourable results than *successful* vaccination.

The consequences of this wretched condition of things are far-reaching. It makes the position of the efficient vaccinator logically untenable; it amuses and provides weapons of arguments for the antivaccinators; and, worse than either, it is piling up future "evidence" against the utility of vaccination itself.

To secure efficient vaccination, and at the same time the avoidance of inflamed arms, has been with me—and probably most public vaccinators—a constant study during the past six months. I have mentioned 258 cases, with 2 failures. My next 100 cases showed 9 failures, and these I now attribute to a determined, though perhaps misguided, effort—to carry out thoroughly the precepts of the General Order. The initial difficulty is the glycerinated lymph; it takes 45 minutes to dry! Well, one cannot wait so long at every house. If you apply a pad of wood wool or gauze immediately, I am satisfied that it "sucks up" the lymph, and so spoils the vaccination. If you leave the application of the pad to others it is applied awry, or too tightly or too loosely, and so the vesicle is endangered.

Alternative applications for immediate use—discs prepared with gelatine or other non-absorbent material—may be applied, but it is far from easy to secure their uniform adhesion. If a large disc sufficient to cover four marks be used, it usually wrinkles at its circumference, and so becomes readily displaced, whilst smaller discs, designed to cover each separate mark, fail to adhere to the glycerinated surface, and are usually on the day of inspection found far away from where they were placed. Occasionally a very pretty result is secured with both large and small discs, when the intelligent co-operation of the mother is secured.

Recently I have tried the application of flexible collodion, not exactly immediately. I have vaccinated, then packed up my case and filled up certificate, and at the last moment applied it. Nothing further has been applied till the day of inspection, when a gauze or wood-wool pad has been personally applied. I have examined several cases so treated on the *fourteenth* day, and the results have been remarkably good.

In conclusion I would say that in the perfection of our technique lies the surest hopes of perfecting our results. I am fully conscious that I have not attained the ideal in my technique, and the object of this paper is to elicit the views of other workers in the same direction.

[In exhibiting a case of instruments for public vaccinators Mr. Campbell said: "I respectfully call the attention of the Section to a box of vaccinator's instruments prepared at my suggestion by Messrs. J. Weiss and Son. In a large number of dwellings there is absolutely no space on which to lay out our instruments. My first object was to make the box, or case, complete in itself, and no other space is required by the vaccinator who has this box with him than that which it stands on, and no other material than cold water."]

Discussion.

Dr. Sinclair Holden (Sudbury) said that a certain latitude should be given to public vaccinators during the summer months with respect to the time allowed after receiving legal notice to vaccinate. His experience, extending over several years, of using glycerinated calf lymph was that during the hot weather the resulting vesicles were small and disappointing and often failed altogether. The same result had occurred with the excellent calf lymph now supplied by the Local Government Board, which gave most satisfactory vesicles during the winter and spring, but during the hot weather was uncertain. He understood that in Germany for this reason public vaccination was altogether suspended during the summer months.

Mr. Colin Campbell, in reply, expressed the opinion that accuracy of detail in carrying out the directions of the Local Government Board should be aimed at rather than rapidity. He did not think greasy dirt could be efficiently removed by alcohol, soap for that purpose was necessary, and the rubber blower required boiling. The operation could hardly be done in less that twenty minutes.

A DISCUSSION ON THE PERSONAL COMMUNICATION OF TUBERCULOSIS AND THE MEASURES AVAILABLE FOR ITS PREVENTION.

I.—JOSEPH GROVES, M.B.,

Medical Officer of Health, Isle of Wight Rural District.

DR. GROVES referred to the fact that the subject of tuberculosis was being at the same time taken in the Section of Medicine, but he said he thought the points of view from which the subject would be considered in the two Sections would be quite distinct. The question in this Section must necessarily be treated from the point of view of hygiene and preventive medicine. Views had altered since the discovery of the tubercle bacillus, but, as regarded treatment, the accepted mode of treatment twenty-five years ago was precisely the mode of treatment vaunted now; but twenty-five years ago phthisis was supposed to be simply and purely a hereditary disease; now it was known to be a communicable disease, and, as a communicable disease, it must necessarily come under the cognisance of the sanitary authorities and their medical officers of health. At the same time we must remember the President of this Section—and Sir Douglas Powell, in his Address in Medicine, seemed to lend support in this matter—had made it evident that we were not united in opinion with reference to the degree in which phthisis is communicable, and to the relative importance of the hereditary feebleness of constitution and of the presence of the tubercle bacillus. But if by heredity there was meant feeble power of resistance, there was then greater reason for the absence of the bacillus. When, however, it came to the question whether the sanitary authority should be compulsorily informed of the presence of the bacillus, there was great difficulty in deciding how far it was justifiable to interfere with the privacy of life and the life of invalids, having regard to the comparatively small amount of communication which takes place so far as we at present know. He challenged the advocates of notification to produce some scheme which would be a compromise.

II.—ARTHUR NEWSHOLME, M.D., F.R.C.P.,

Medical Officer of Health, Brighton.

DR. NEWSHOLME remarked that from the standpoint of public health administration, the wisdom of intervention with a view to the diminution of mortality from phthisis depended on our certainty as to its communicable character, and as to the great part played by infection in spreading the disease. Whatever stress might be laid upon heredity and the condition of individual nutrition, infection alone could be controlled by local sanitary administration. The Association for the Prevention of Tuberculosis had by its propaganda caused a certain amount of public alarm and uneasiness. He was one of those who thought that this alarm would militate for the public good. How was this good to be best secured? Alarm with regard to other infectious diseases, with the possible exception of small-pox, had subsided, when the public became assured that active and efficient official measures for the prevention of disease were being taken. So with phthisis, alarm would cease when it was known that the simple and easily practicable measures against its spread were supervised by the medical officer of health. It was argued that the medical practitioner alone would suffice for the attainment of this object. This was an erroneous view; the latter was usually too busy; furthermore he could not obtain the correction of those evil house conditions, whether structural or due to dirtiness, which played such an essential part in the spread of phthisis. It was desirable that precautionary measures should be reiterated, and this was best secured by co-operation of practitioners and health officers. The notification of phthisis would furthermore enable centres of insanitation and infected areas to be localised, and would hasten their removal under Parts I and II of the Housing of the Working Classes Act.

It had been urged that the medical officer of health would have no time for this work. This was surely a reason for giving him additional assistants, not for blocking what promised to be his most useful sphere of work. There was probably no one disease concerning which active preventive measures were so likely to be rapidly successful as phthisis. In Brighton in five and a-half months the medical officer of health or his deputy had visited 120 phthisical houses, 56 of these during the life of patients, whose cases had been voluntarily notified by the physicians of the County Hospital, workhouse dispensaries, etc., with the result that a large number of sanitary improvements had been carried out. No difficulty had been encountered in paying these visits, and the simple precautionary measures required had been readily carried out.

The wisdom of visiting and arranging for the cleansing, etc., of houses after deaths from phthisis had been generally acknowledged. Why wait until death occurs? Surely if such precautionary measures were desirable after the death of a patient, they would be even more valuable if started, say, six months earlier. The conditions of a household having a phthisical member might be compared to that of a city subjected to a protracted siege. Given that the siege is raised at an earlier date (or that preventive measures *re* phthisis are taken earlier) further deaths may be avoided; but if the siege or the illness be protracted, with the exhausting effects of hunger and protracted infection, the risks are correspondingly increased. Everything pointed to the advisability of notification of phthisis. By all means let it be voluntary for the present, though eventually it must become obligatory. But to suppose that because an infectious disease is chronic, therefore no preventive measures are to be taken, could not be regarded as a counsel of wisdom. The best means of ensuring that reasonable preventive measures would be taken was through the official sanitary organisation, which must ere long be brought into active co-operation in the crusade against phthisis.

III.—EDWARD C. SEATON, M.D., F.R.C.P.Lond.

DR. SEATON said that he admired the spirit and ability of such men as Drs. Niven and Newsholme; but though he had read and heard a great deal on this subject he was not yet "educated up" to the point at which these gentlemen started. The personal communicability of phthisis was what they had to teach first of all. Small-pox was frequently referred to as analogous to phthisis. But contrast the state of generally accepted knowledge with regard to the two diseases a few years ago or even now. When it came to the question of compulsory notification everything depended on the state of public knowledge. He specially referred to one point that had not, so far as he knew, been dwelt upon in the numerous discussions of the subject. It was that in the case of the diseases first notified compulsorily in certain towns—Nottingham, for example—by special Act of Parliament, there was an antecedent condition, and that was that the sanitary authority already had the duty imposed on it of dealing with epidemics of small-pox and scarlet fever by isolation and otherwise. Hospitals had been built for the purpose, and then it was found there were no means of knowing of the beginnings and extent of epidemics. It was this anomalous state of things that led to compulsory notification. The conditions in the case of phthisis were different; there was, so far as sanitary authorities were concerned, in the present state of the law and public opinion no analogy.

IV.—SIDNEY DAVIES, M.A., M.D.Oxon, D.P.H.Cantab.,

Plumstead.

DR. DAVIES said that although general hygienic measures were most important in preventing phthisis, we must bow to the decision of bacteriologists that the disease depended on a specific germ and was communicable. Heredity and predisposition only played a similar part to that played in other infectious diseases. Phthisis was curable to some extent even in advanced conditions, as experience showed us cases we had thought hopeless getting up and going back to work for one, two, or three years before finally succumbing. Ordinary spitting cups should be used without cover, or sputa would dry on the sides. A pocket spitting flask needed to be popularised. Dettweiler's was expensive, and difficult to obtain. Much needed to be done in workshops to prevent the spread of phthisis by spitting on floors. In the Royal Arsenal workshops, Woolwich, bills had been posted forbidding spitting on the ground, but, except in the surgery, no spittoons had been

provided. Prevention of phthisis was largely a matter of poverty, and therefore very difficult to deal with. Instances were mentioned of a man receiving out-door relief and refusing to go into the Infirmary, though living in a house unfit for habitation, but too ill to be turned out, and in all probability infecting his family. Compulsory powers of removal were necessary for such cases. Power to pay for voluntary notification was very necessary. If only to know when to take bills of precautions it was well worth while having voluntary notifications.

V.—Frederic Alderson, M.D.St. Andrews, Bournemouth.

Dr. Alderson said that the previous speaker had mentioned a case of the cure of advanced phthisis where the patient continued his occupation for two or three years. Dr. Alderson would consider that this case was evidently arrested, but not cured. The great importance of the question of notification made it worthy of all attention and the ventilation of the subject was very useful. Much weight must be given to the observations of Sir R. Thorne, and to the great evil and distress that at present this notification of phthisis must cause owing to our present generally imperfect knowledge. In the early stages such notification might produce a pseudo-phthisis that would be productive of much family discomfort in producing nervous symptoms most harmful to the patient and calculated even to increase and produce disease. There was certainly more need for compulsory notification of pertussis and rubeola than of phthisis. The use of the Japanese paper handkherchiefs as Dr. Groves suggested was very important, as were also the constant open window, good liberal diet, milk and not beer being given freely. It was the duty of the general practitioner to circulate the leaflets the medical officers of health issued and to caution the patient to attend to his personal general health in every possible way.

VI.—George Wilson, M.D., President of the Section.

Dr. Wilson said he wished to make his position clear. He admitted and believed long before Koch discovered his bacillus that tuberculosis was a communicable disease, but only to a very limited extent, and only to those with inherited tendencies in the first instance and to those who were living or working in insanitary conditions in the second place. All knew that, all admitted it, and Koch's discovery was practically of no assistance in the line of prevention. Indeed the bacillus was discovered seventeen years ago, so that it had taken fifteen years at the least to convince the profession of the terrible risks the public were always facing from this deadly and ubiquitous microbe. He had been told that the medical profession, at least a section of it, were lagging behind the public in their enthusiasm in this crusade. He admired enthusiastic crusades of this character, but he wished to remind them that some few years ago slumming became a fashionable craze. Let the fashionable public take to slumming again and they would be carrying out the best preventive measures against the prevalence of this disease, instead of providing patients with spittoons, and all the other paraphernalia for the destruction of the will-o'-the-wisp bacillus.

Reply.

In reply to the discussion, Dr. Groves thought Dr. Newsholme had met his challenge very fairly, and he thought if there was voluntary notification and the notifications were paid for the knowledge which would come into the hands of the medical officer of health would be very valuable. He could then deal with insanitary areas, giving advice and taking proper measures, while he might leave those who were suffering in good sanitary houses to be guided as regards hygiene by their medical advisers.

MEAT INSPECTION AND THE ABOLITION OF PRIVATE SLAUGHTERHOUSES.

By E. Petronell Manby, M.D., D.P.H.,
Assistant Medical Officer of Health, Liverpool: Lecturer on Public Health, University College, Liverpool.

Introduction.

I am well aware that little that is new can be said on this subject. It has been discussed on many occasions and in many places. Why, therefore should one tell again a twice-told tale? I will give you at once the reason I have in mind in bringing the subject before the State Medicine Section of the British Medical Association.

It is because at a great gathering like the annual meeting, very many medical men are present whose direct connection with public health work is slight. That is to say, the majority of them are not medical officers of health—a condition the reverse of what obtains at sanitary congresses. So that, either at the meeting itself, or through the medium of our valuable Journal, one is to some extent addressing an audience many of whom perhaps have not fully considered the subject of meat inspection nor the need in England for improvement in such inspection. Now these medical practitioners are in touch with thousands of thinking men and women throughout the country, and have infinite powers of forming and influencing public opinion on health questions, if they will only use them—powers far greater perhaps than they recognise.

The medical officer of health is primarily concerned with his health committee, and cannot, except secondarily, influence private individuals. The health committee may approve the reports of their medical officer, and the town council may confirm the views of the health committee, but behind and far above both is the central governing body of the country—Parliament—which is not always influenced—I say it in all humbleness—by the opinion of experts, but by its master, the "free and independent elector."

No great reforms, sanitary or otherwise, are brought about in this country by a stroke of the pen of a high official. They come by the educating of public opinion. Let us, then, lose no time in educating public opinion aright on this meat question; for as an evidence of educating power misdirected—that is perverted education—the recent action of Parliament with regard to vaccination will occur to every one of us.

All this, no doubt, is simply a statement of truisms; but what is it that the medical practitioners of the country can do in the way of bringing about an improvement in our system of meat inspection and in the conditions under which animals intended for human food are slaughtered? It is by continually impressing on their friends and patients, influential and otherwise, for we all have votes nowadays, the need—the pressing need—in this country for improvement in the system. The abolition of private slaughterhouses, where only too often meat is prepared and kept under grossly insanitary conditions, and the substituting of public slaughterhouses under municipal control, being the only satisfactory means of attaining the desired end.

(*a*) The Commission reported on this question as follows:

In favour of this view I may here quote from (*a*) the Report of the Royal Commission on Tuberculosis; (*b*) the Report of the Public Health Committee of the London County Council, July, 1898; (*c*) the recently published Harben Lectures of the Medical Officer of the Local Government Board, Sir Richard Thorne.

1. We recommend that in all towns and municipal boroughs in England and Wales, and in Ireland, powers be conferred on the authorities similar to those conferred on Scottish corporations and municipalities by the Burgh Police (Scotland) Act, 1892—namely:

(*a*) When the local authority in any town or urban district in England and Wales and Ireland have provided a public slaughterhouse, power be conferred on them to declare that no other place within the town or borough shall be used for slaughtering, except that a period of three years be allowed to the owners of existing registered private slaughterhouses to apply their premises to other purposes.

(*b*) That local authorities be empowered to require all meat slaughtered elsewhere than in a public slaughterhouse, and brought into the district for sale, to be taken to a place or places where such meat may be inspected; and that local authorities be empowered to make a charge to cover the reasonable expenses attendant on such inspection.

(*c*) That when a public slaughterhouse has been established, inspectors shall be engaged to inspect all animals immediately after slaughter, and stamp the joints of all carcasses passed as sound.

2. It appears desirable that in London the provision of public in substitution for private slaughterhouses should be considered in respect to the needs of London as a whole, and in determining their positions regard must be had for the convenient conveyance of animals by railway from markets beyond the limits of London, as well as from the Islington market, to the public slaughterhouses which should be provided. At the present time no administrative authority has statutory powers authorising it to provide public slaughterhouses other than for the slaughter of foreign cattle at the port of debarkation.

3. With regard to slaughterhouses in rural districts, the case is not so easy. But the difficulty is one that must be faced, otherwise there will be a dangerous tendency to send unwholesome animals to be slaughtered and sold in small villages where they will escape inspection. We recom-

mend, therefore, that in Great Britain the inspection of meat in rural districts be administered by the county councils.

4. We recommend that it shall not be lawful to offer for sale the meat of any animal not killed in a duly licensed slaughterhouse.

(*b*) The Public Health Committee of the London County Council in July, 1898, submitted a report to the Council in the following terms:

(*a*) That in the opinion of the Council it is desirable that, as a first step towards ensuring the proper inspection of meat, private slaughterhouses should cease to exist in London, and that butchers should in substitution be afforded such facilities as are necessary for the killing of animals in public slaughterhouses to be erected by the Council.

(*b*) That a copy of this report and of the Council's resolution thereon be sent to the Local Government Board, with an intimation that the Council is prepared to accept such responsibilities as may be necessary to give effect in London to the recommendations of the Royal Commission on Tuberculosis, and that the Board be asked whether they will include in any legislation introduced by them in connection with the Royal Commission's report the provisions which would be necessary for this purpose.

The Council, however, owing no doubt to the powerful opposition of the Meat and Cattle Trade Associations, has shelved the matter for the present.

(*c*) Sir Richard Thorne says:

How is the very proper demand of the butchers for uniformity in the conditions regulating the seizure of carcasses on account of tuberculosis to be met? How is such skilful handling of slightly tuberculous carcasses to be attained as will secure the removal of the diseased portions in such a way that no risk shall attach to the remainder? I only know one answer, namely, by the abolition, as far as practicable, of private slaughterhouses, by the provision in all large centres of population, whether technically styled urban or rural, of public slaughterhouses under the direct control of the sanitary authorities and their officers, and by the adoption of measures which will, as soon as practicable, provide a class of skilled meat inspectors.

The properly administered public slaughterhouse is demanded as an act of justice to those trading in meat; it is demanded in the interests of public health and decency; it is demanded for the prevention of cruelty to the lower animals, and it is demanded in order to bring England, if not the United Kingdom, somewhat nearer to the level of other civilised nations in this matter.....

Public slaughterhouses, officered by skilled inspectors, and supervised by medical officers of health, are urgently required, amongst other reasons, for the prevention of tuberculosis in man.

Private Slaughterhouses.

It is obvious to anyone how inefficient meat inspection must be where there are a large number of private slaughterhouses in a town. The occupiers naturally slaughter at times to suit their own convenience, and not that of the inspector. In Liverpool, with a population of 668,000, we have, besides an abattoir owned by a private company, only thirty private slaughterhouses, and we have five meat inspectors who devote their whole time to the work. But in smaller places where there are perhaps many more slaughterhouses and no special inspectors, meat inspection becomes very often practically a dead letter. One remedy suggested for this state of things is to increase the number of meat inspectors, as being cheaper than closing all private slaughterhouses and building municipal ones. Cheaper it would be of course and better than the present conditions, but how far behind the methods adopted, for example, in Germany!

And even if, as has been suggested, one inspector to every ten slaughterhouses be appointed, the question of insanitary conditions under which slaughtering takes place in many private slaughterhouses would not be remedied, though it might be improved.

Regulations in Foreign Countries.

Both in arrangements for slaughtering and in meat inspection, England is very far behind when compared with Continental countries, as those of us who have studied the subject in Berlin, Leipzig, and other places know well. In these towns well-managed municipal slaughterhouses exist, all private ones have been abolished, and all meat, whether killed at the abattoirs or imported, must be inspected and stamped by competent inspectors before being sold. In Germany laws were passed in 1868, 1876, 1879, and 1881 dealing directly with the question of the provision of public slaughterhouses, the prohibition of the erection of private slaughterhouses, and other matters connected therewith. These are the general slaughtering Acts, and when the Town Council of a place desire to apply them to their own town they obtain a local Act giving them the necessary powers to build public slaughterhouses, close private ones, make regulations for the examining and stamping of meat, etc.

In Leipzig, for example, which possesses one of the most modern abattoirs in Germany:

1. No private slaughterhouse exists.
2. All slaughtering is carried on in the public slaughterhalls, under sanitary surroundings, and the work of meat inspection is enormously facilitated thereby.
3. All meat brought into the town has to be taken to the central office for inspection before being sold.
4. Microscopical and other examinations of meat are carried out.
5. All meat passed as sound is stamped in several places with the official stamp, showing that it is fit for human food.
6. Bad meat is taken away and destroyed by the municipality.

I pass round a card showing the stamps used at Leipzig, and the arrangements in other towns are practically identical.



The stamp of the inspector who passes or returns the meat.



Stamp showing that the meat is from the municipal abattoir and not imported.



Stamp placed on imported meat which is passed.



Stamp placed on imported meat which is sent back as not of good enough quality to pass though not bad enough to destroy.



Stamp placed on meat sent to the Freibank from the slaughterhouse.

I also pass round a plan of the slaughterhouses at Leipzig, and have marked with a red ring the three slaughtering halls, used respectively for cattle, swine, and sheep.

The question of the Freibank should be mentioned, and though it has many points in its favour I do not think that English people at present would take to the idea. I have, however, seen much very fair meat sold at the Freibank at 4½d. per 0.5 kilo. (=1.1 lb.). Practically no frozen New Zealand or River Plate meat is sold in Germany, and Freibank meat seems somewhat to replace it.

In Berlin, and in slaughterhouses of old construction, the system of separate small slaughterhouses, each let to one butcher, obtains. In Leipzig, Hanover, Cologne, Potsdam, and all modern buildings of the kind in Germany, the system of large slaughtering halls exists. In these no special place is assigned to any butcher, he just uses the space vacant at the moment.

The advantages of the large halls are that the systematic inspection of all carcasses and offal can be much more readily carried out, and that free ventilation and plenty of light are more readily obtained. Every director I questioned was in favour of the large halls, which indeed, as I say, are universal in all new abattoirs in Germany now.

It may be interesting to quote some of the regulations in force at Leipzig with regard to inspection, etc., of cattle slaughtered there, and of meat brought in from outside. This will indicate in the fewest words how complete the system is.

Regulations made by the Leipzig Council as to the Examination of Cattle and Meat.

The examination of cattle, etc., brought into the market and slaughterhouses shall be made by experts appointed by the Council—namely, the director, two veterinary surgeons, six assistant veterinary surgeons, the chief of the microscopical department, the microscopical assistants, and the officers engaged in taking the samples of meat.

The director is the supreme officer of the establishment.

To him are delegated all powers for the examination of meat. All other employees are under his control.

He also exercises final judgment in all cases of dispute.

One of the two veterinary surgeons supervises the cattle markets, and also takes charge of the examination of all imported fresh meat. He is the director's deputy, and has a title of Official Cattle Market Veterinary Surgeon.

The other veterinary surgeon has the supervision of the slaughterhouses and the sanitary department, and is known as the Sanitary Veterinary Surgeon.

A veterinary surgeon is appointed to supervise each of the three slaughter halls.

A veterinary or assistant veterinary surgeon shall inspect all animals entering the cattle markets and lairages.

Animals found to be suffering from disease shall be taken to the sanitary department for observation or slaughter.

All animals shall be inspected immediately after slaughter by the veterinary inspector who is present in the slaughterhall.

An additional microscopical examination of the carcasses of pigs, with a view to the discovery of trichinosis, shall be made by the examiners.

If upon examination the veterinary inspector finds the meat to be good and the intestines healthy, he shall mark each carcass with the veterinary stamp in a noticeable and conspicuous position, and shall order further marks to be placed on the meat by the superintendent of the slaughterhall.

As soon as a carcass has been marked the owner can dispose of it as he thinks fit.

Meat which is healthy but of poor quality, calves which are immature, also meat found unhealthy but which may still be eaten, all of which meat is wanting in nourishment, shall be marked as being of less value and of inferior quality and shall be transferred to the Freibank.

Where animals are found on slaughtering to be affected in a small degree, such as with abscesses, deformities, etc., having no influence on the general quality of the meat, the affected parts shall be taken away and the remainder of the carcass declared by the veterinary surgeon as fit for food.

Meat which upon examination is found to be unfit for human food shall be taken to the sanitary slaughterhouse, there to be destroyed in the usual way.

Examination of Imported Meat.
(Meat which is not slaughtered in the city).

All meat which is brought into the city shall be taken, before being sold, or eaten, to the inspection office at the public slaughterhouses, to be examined.

The person bringing meat for inspection shall give at the inspection office the name of the importer and butcher, and a full description of the meat.

If the meat is emaciated, or immature, or if there are any symptoms of disease, it shall be condemned and destroyed.

The meat shall be examined microscopically if necessary.

A register shall be kept of all meat which has been imported.

Meat which is submitted for examination shall not be removed from the inspection office until it has been stamped.

The imported meat, if good, shall be stamped as such, but with a different stamp to that which is placed on good meat slaughtered in the city, in order that all concerned may see that such meat is imported.

If the imported meat is offered for sale raw, the purchaser must be informed in some way that it is imported meat.

Where the two kinds of meat are sold in one shop they shall be kept separate, and sold for what they are.

Imported meat shall not be transferred to the Freibank.

Regulations as to Stamping of Meat.

The meat which has been passed as fit for human food shall be stamped as follows:

A carcass of beef with 12 stamps.
A carcass of veal with 6 stamps.
A carcass of mutton with 8 stamps.
A carcass of pork with 12 stamps.

Persons requiring more marks put on the meat than those stated must make application at the time the stamping is being done, and point out where the additional marks are to be placed.

Regulations as to the "Freibank."

This is an establishment to which all meat which is passed as fit for food, but which is of an inferior quality, is taken, in order that such meat, being of less value than meat which is fully nourished, shall, under the supervision of the authorities, be sold as meat of an inferior quality, and at prices to be fixed by them, which must not exceed four-fifths of the market prices of good meat.

All fresh meat which has, upon examination by the veterinary surgeon, been found to be of an inferior quality, shall be taken to the Freibank; such meat can only be sold at the Freibank, and by persons employed by the City Council.

Such persons shall not sell any other kind of meat, nor shall they sell meat outside the Freibank.

The Council shall fix the locality and time for the holding of the Freibank.

The flesh of animals slightly diseased, which has been thoroughly boiled on the premises, may be sold at the Freibank, but it must be stated at the time of sale what the animal has been affected with.

The meat shall be weighed to the salesman, who shall account for all meat given him to sell.

The meat shall be sold in pieces not exceeding 6lbs. in weight, and for private consumption only.

The amount realised from the sale of meat at the Freibank shall, after deducting expenses and fees, be handed over to the owners of the meat.

Compensation for Closure of Private Slaughterhouses.

In Germany compensation is paid for closing the private slaughterhouses. The method of determining the amount being by arbitration, the owner of the slaughterhouse appoints one arbitrator, the Town Council another, and the Provincial Government a third. In any case the owners have to give notice of their intention to claim compensation within six months after they have received notice to close, or no claim will be considered.

This question of compensation, you may remember, was not touched on by the Royal Commission on Tuberculosis in their recommendations. It was simply suggested that three years' notice should be given. It is of course an important point, and it is here again that the help of the family practitioner can be of service in rousing interest in the matter, and so gradually forming public opinion.

In considering the question of compensation, two classes of persons concerned have to be mentioned, one of which classes may be again subdivided.

1. The people whose slaughterhouses are unsatisfactory and insanitary in every way. Are such people to be compensated for being compelled to desist from perpetuating a most unsatisfactory condition of things? I think not.

2. There are owners and tenants of slaughterhouses who do everything they can, under the circumstances, to carry on their business with as much regard as possible to the public health. They keep their premises in good order, and are always ready as far as possible to modernise them to meet the suggestions of the medical officer of health. These people deserve better treatment in the way of compensation or length of notice than the first class I mentioned.

It seems to me, however, that the question of compensation need not be so large a one as we have been led to suppose, for there is little necessity to compensate any but those whose actual business as slaughterers is stopped.

The better-class slaughterhouse owner that I have been speaking of is either: (*a*) A butcher who uses the private slaughterhouse for his own convenience; for example, as being convenient to his shop, or for other reasons; or (*b*) a slaughterer who is not a meat seller at all, and simply lives by his business of slaughtering for others.

Surely if it is in the interests of the public health that private slaughterhouses should be closed, the mere question of convenience to the butcher and meat seller should not entitle him to compensation for disturbance. He would have his three years' notice, and at the end of that time let him do his slaughtering at the proper place, namely, the public abattoir; and if in any special case it were shown that he had

perhaps recently spent considerable sums of money in endeavouring to comply with the requirements of the medical officer of health of the district, some basis of compensation might be easily arrived at.

But with the other man the case is somewhat different. He has a trade on which he lives, and at the end of three years that source of livelihood comes to an end. Should it be a very serious matter to compensate him? and if some compensation is necessary, could not it take the form of guaranteed employment at the new abattoir, if he is a working man? If, on the other hand, he did not himself actually use the poleaxe, he could receive an annuity or lump sum, calculated on a fair and moderate basis.

The German Act of 1881 specially provides that no compensation shall be paid for the extra trouble there may be involved by reason of a butcher having to slaughter away from his own place of business. Compensation paid shall be for real damage or loss which can be proved on account of the closing of the places; such places having been built for slaughtering purposes. And compensation to be paid must have deducted from it the amount which may be realised from the properties and fixtures when used for other purposes.

I think in England the difficulties have been exaggerated. Let public opinion be sufficiently aroused on the subject, and I do not think the question of compensation will be a very serious difficulty. At present public opinion is not strong; on the other hand the butchers and their federations are, and naturally the Government says "the time is not yet ripe."

Stamping Meat.

With regard to the question of stamping the meat it has been suggested that the British public will object to have its joints of meat disfigured thereby. I do not believe so for one instant. In Germany such marks are understood, looked for, and sometimes even more of them asked for on a carcass than the authorities usually put, and why should it not be the same in England?

DISCUSSION.

Sir WILLIAM PINK (Chairman of the Portsmouth Sanitary Committee) explained what was being done in Portsmouth with a view to establishing a public abattoir. Compensation could not be thought of, for the rate was limited to 2s. 6d., and councillors were pledged not to raise it above this limit. What they proposed to do was to compete with butchers side by side and to erect a public abattoir and public meat market, and in course of time he believed they would convince the butcher it was to his own interest to join with them and support the public slaughterhouse.

Dr. SYDNEY MARSDEN (Birkenhead) said that the evidence laid before the Parliamentary Committees had entirely settled the question of "meat marking" as impracticable. With regard to compensation, if public authorities provided efficient and proper abattoirs, these were so much more convenient for the butchers, and enabled them to turn out their meat in such much better condition than what they could in their private slaughterhouses, that there was no need for compensation to be given for abolishing the latter.

Dr. C. R. DRYSDALE (London) advocated the adoption of the German system of inspection of slaughterhouses and meat.

Dr. MANBY, in reply, expressed his pleasure in finding the feeling of the Section entirely in favour of the closing of private slaughterhouses. He again repeated that the aim of the medical profession should be to educate public opinion on the question. He agreed that compensation should not be paid in all cases; but if a man had done all he could to satisfy the requirements of the health authorities, and had frequently spent large sums of money on his slaughterhouses, it seemed only fair that he should receive something. Dr. Manby did not agree with Dr. Marsden that the stamping of meat was impracticable. It was done in Germany, and why not in England?

OVERCROWDING IN SECONDARY SCHOOLS.

By R. SYDNEY MARSDEN, M.B., D.Sc., F.R.S.Edin., etc.,
M.O.H. Birkenhead.

THE time at our disposal being very limited, I do not propose in this paper to deal very fully with the subject of overcrowding in secondary schools, but rather to point out dangers and indicate points for discussion, with the purpose of calling public attention to a subject which may be regarded as one of national importance.

In January of this year I published a letter in the *Times* on this subject, and I have not much more to say now than what I then said, of which the following is a summary:

The want in the powers of sanitary authorities as regards the control over private and other secondary schools from a health point of view is a serious one. I refer to our total inability to enforce a sufficient amount of air space per child.

It is a well-known fact that all sorts of rooms are used for the purposes of private schools which are quite unsuitable therefor, and large numbers of children are frequently crowded together in such places for many hours of the day in a totally inadequate amount of air space, and generally without any attempt at even partial ventilation. Is it to be wondered at, then, that we so frequently get complaints amongst these children of headache, *malaise*, nervous affections, and other derangements of health which are usually attributed to overpressure in work? I am satisfied from my own observation that the real cause in many of these cases is overcrowding, and that the evils of which I complain frequently lay the seeds for serious illness in after-life, the cause of which is not recognised.

Then, again, in the matter of inspection of the drains and sanitary conveniences of such schools. If the proprietor objects to our making an examination of the premises to see that there are no defects (and in nine cases out of ten they do object), we have no power to insist on such examination, unless good chance has given us sufficient evidence of existing evil to warrant us in applying to a magistrate for an order.

This ought not to be so, as the fact of its being used as a public school ought to be sufficient reason for the sanitary authority having power to see that the premises are in a proper sanitary condition.

I would advocate that medical officers of health be given the same powers of inspection and control over secondary schools (whether private or otherwise) in regard to light, air space per head, ventilation, proper drainage, and sufficient sanitary conveniences, as they possess over workshops under the Factory and Workshops Acts.

There is at present no Act of Parliament which gives them that power, and it is only by such a congress as this, and the public taking the matter up, and insisting that such powers shall be given, that the defect can be remedied. Yet the evil is a great one, and the young life of the nation at its most susceptible age ought to be protected from so easily remediable a danger.

DISCUSSION.

Dr. J. GROVES suggested that Dr. Marsden should propose means for securing the objects of his paper. The private, primary, and secondary schools were, like the private practitioner in connection with vaccination, free from supervision. As Parliament was now preparing to consider the whole subject of secondary education, an opportunity might be afforded of tendering evidence with reference to the sanitary conditions under which private education was carried on in this country.

Dr. SIDNEY DAVIES and Dr. DRYSDALE also discussed the question, and the following resolution was proposed by Dr. MARSDEN, seconded by Dr. GROVES, and carried with one dissentient:

That it be a recommendation to the Council of the British Medical Association that representations should be made to the Local Government Board and the Education Department that powers may be given to sanitary authorities enabling them to control the condition of all schools (private or otherwise) with regard to overcrowding and other sanitary arrangements similar to those they possess over workshops under the Factory and Workshops Acts.

DEATH CERTIFICATION.

By J. BRINDLEY JAMES, M.R.C.S.Eng., L.R.C.P.I.,
Hammersmith.

THE official death certificate as laid down under the Births and Registrations Act of 1874 is familiar to us all, nevertheless I will, for more complete illustration of my subject, quote its words:

I hereby certify that I attended ..... during the last

illness; that such person's age was stated to be ....., that I last saw h ..... on .....; that he died on .....; at .....; and that to the best of my knowledge and belief the cause of h..... death was as hereunder written.

A marginal note in this form authorises the certifying practitioner, where he hesitates to assume the responsibility of certifying the actual fact of the person's death, to write: that he died, as I am informed, on (such a date), etc.

Then follows a space to fill up describing the fatal disease, whether primary or secondary, with a specification of its duration in years, months, days, hours; the duration of each form of disease or symptom being reckoned from its commencement until death occurs; while a final footnote reminds the certifier that this certificate is intended solely for the use of the registrar, to whom it should be delivered by the person giving information to him of the particulars required by law to be registered concerning the death, that there is a little rod in pickle for said informant in the shape of a £2 fine should he omit delivering this certificate to the registrar, also that the Registrar-General cautions all persons against accepting or using this certificate for any purpose whatever except that of delivering it to the registrar.

Now, this reads speciously enough at first, but if read attentively its laxity reveals itself. It affords no proof whatever that the medical attendant on the fatal case, when sending, as occurs so frequently, his assistant to treat it for him, sent a qualified representative in his stead. Now, the qualified doctor who substitutes an unqualified proxy for himself, is not doing his duty by his patient, who relies implicitly on his personal skill. When, in 1893, a Parliamentary inquiry was held into this most important subject, it was pointed out that in many cases the deceased had never even been personally visited at all by the registered employer of an unqualified assistant, to whom he deputed the responsibility of treating the case throughout until death itself. It was also affirmed that many unscrupulous practitioners, in order to meet such cases, have had death certificates specially printed for their own use according to the customary formula, but omitting from it the word "attended." Obviously the law should be amended in order to obviate such equivocation, and render compulsory on all practitioners the use of a special form of official certificates, to be issued by the Registrar-General alone.

Nevertheless, such an enforcement would prove of little avail unless the form were itself completely revised. It affords no proof whatever that the medical practitioner in attendance on the case himself viewed the corpse after death. Certainly as the law stands he is not compelled to do so. Where he entertains doubts to the cause of death he is simply authorised to add the easy-going qualification, "As I am informed." Now it is a trite saying that doctors take nothing on trust; it stands to reason that no medical man should be permitted to issue a certificate describing a patient as having died from a specified natural cause, without having satisfied himself of the fact by a careful examination of the corpse. It is no less obvious that he should be compelled to specify in writing that in such *post-mortem* external investigations he could discern no traces of violence or poisoning, while fully satisfied of the fact that the patient was really dead. Certificates are only too often distorted out of considerate regard for the feelings of the deceased person's relatives. I will give an instance of the easy way wherein suspicious facts, as the law now stands, may be hushed up. A person died by drowning. It was very doubtful, indeed, whether this fatality was attributable to suicide, or purely accidental. But the doctor, shrewdly guessing that the local registrar, being a man of rather inferior social station in this instance, would not understand Latin, wrote the cause of death in that language; and as this unlearned functionary mistook this for the professional name of some natural complaint, an inquest was thus evaded.

Another genus of easy-going practitioners do view the corpse after death without having personally treated the deceased while alive. And they are simple enough to imagine this justifies their writing in the certificate "I attended ——." It has been suggested that the obligatory certificate should be worded thus: "I attended —— personally during life." Also, that "I last saw him alive at (such a specified date)," that "he was then suffering from (specifying the complaint), and then was in (a specified general state of health)." Also—a most important point—that "I could find on careful personal investigations of the corpse no traces of violence nor suspicious indices of poisoning, nor suggestions of death having been induced by either, directly or indirectly."

But whilst earnestly advocating a sweeping reform in the law as it now stands concerning death certificates, I energetically disclaim the least invidious reflection on my own honourable profession, because it contains a percentage of careless or unscrupulous practitioners. We know that tares will grow among the wheat, that every flock has its black sheep, every calling or profession its unfavourable specimens. Moreover, it is not the doctor who makes the laws, and if his voice is scarcely heard in the House of Commons, it is mainly because his time and energies are so entirely engrossed in his professional duties. All a doctor has to do in a case which he deems suspicious is to report it as such to the local registrar for him in his turn to report it to the coroner. I have already quoted an instance of the uneducated class to which rustic registrars are often found to belong; if this functionary prove at the same time no less pig-headed than ignorant, it is clearly not the doctor's fault.

It must also be borne in mind that in rural practice the country practitioner often has to ride some ten or fifteen miles and back to a patient's residence. Assuming the case to terminate fatally, it would be very hard upon him indeed should an amended law compel him to go and inspect the corpse, unless the same law entitled him to a duly specified fee for his loss of time in doing so—a grave consideration to an actively engaged country doctor, whose patients may be scattered over half a county.

The French system of appointing in every district of a duly mapped-out national localisation, a medical magistrate who views every corpse, without a single exception, after a decease within his jurisdiction, and from whom alone after such obligatory scrutiny can the order for burial be obtained, is excellent indeed. This State-appointed medical official is practically a registrar and a coroner combined, while his public functions do not debar him from private practice on his own account, and of course thereby adding to his valuable experience.

As the law now stands, then, it is obvious that an official death certificate, supremely satisfactory in unthinking or unpractised eyes, may really, like charity, cover a multitude of sins. Some have actually been granted by over-trustful and credulous practitioners where there has been no death at all, the mockery of a false funeral being carried out afterwards in order to lay fraudulent claim to an insurance policy. Need I suggest what fearful possibilities may not have resulted from such culpable laxity, of murderous criminality successfully evading well-merited punishment? And again—setting aside all sinister hypotheses of criminality—how many times may not a contingency more sinister still than murder itself have befallen the victim of medico-legal carelessness? How many unfortunate victims may not have been actually buried alive through an ignorant or thoughtless unqualified assistant mistaking trance for death?

REFORM IN THE CORONER'S COURT.

By J. Brindley James, M.R.C.S.Eng., L.R.C.P.I.,
Hammersmith.

Sir Archibald Alison and Lord Macaulay, profound students both of human nature, have pointed out that the most iniquitous decisions in State trials under the Tudors and Stuarts were delivered by British juries; the atrocities of the Reign of Terror were ratified by French juries. Study attentively all the coroners' inquests you can find in the papers, and then ask yourselves, Are their decisions exactly Solomonic? Let me give you one charming little gem, culled not from Joe Miller, but from the Parliamentary Blue Books: "We find A. B. died from stone in the kidney, doubtless swallowed by deceased while lying in an unconscious state of drunkenness on a gravel path." Now these twelve good men and true were doubtless not born idiots, but it is clear that reference to such a haphazard tribunal is a farce. In point of fact, the coroner's jury, summoned at a great inconvenience to itself individually, is a grotesque farce, carried out only in deference to time-honoured prejudice. The coroner himself is nowadays a most able arbiter, well versed alike in law and medicine, and as a

general rule juries are unconsciously guided to the formation of their decisions by the directions of the coroner himself, combined with the evidence of the medical expert. In fact, the coroner himself is everything, the jury nothing; and unquestionably one able man, legally and medically qualified, is worth two dozen honest, conscientious, but supremely ignorant laymen. It is not advisable, though, to throw such an onus of responsibility on him alone. In many Continental countries civil lawsuits are decided without any jury at all, but by a Commission bench of three. A presiding judge, and two assistant judges, and the rational assumption that three heads are better than one, and certainly worth far more than twelve utterly inexperienced and unlearned heads. Why, then, persist in summoning away from their businesses at pain and loss to themselves, twelve worthy but useless men, when they can be more than replaced by the coroner as he stands and two assessors? And, moreover, either the medical practitioner who habitually (or in the last stage of life) attended the deceased, or else the medical man who conducted the necropsy, and was called in directly after death had occurred, should be the obligatory expert witnesses. Often coroners to save expense call in no expert at all, but form their own inferences (and guide the jury's decision accordingly) from what witnesses they hear. This proposed reform would obviate what is at present a most crying want—the presence of independent medical opinion as to the cause of death.

As the law now stands, the coroner is under the Lord Chancellor alone. Ought he not, on the contrary, to be exclusively under the Registrar-General? At present many suspicious cases are overlooked as nobody's business. A more stringent system of death certification, such as I have already suggested in another paper, compelling every Registrar to report all such to headquarters, would then entail instructions to the coroner from the Registrar-General to investigate them forthwith.

Discussion.

Dr. Wynn Westcott (Coroner for N.E. London) said that criticisms on coroners and registrars of death were liable to be unfair and unreasonable, because it was sought to apply similar critical remarks to officials who had to do their work under such different conditions, as were seen in country villages as contrasted with great cities. It was easy to understand that the procedure of a medical coroner who held 1,100 cases a year, led by experience to a more thoroughly scientific investigation into violent and unnatural deaths than was possible to a public official who was a county solicitor, and who only held in a few villages a few inquests a year. The amendment of the Registration of Deaths Acts was deferred because of the difficulty of amending the form of certificate in the directions agreed upon as necessary, and yet preserving the form as suitable for general use alike in cities and villages. The certificate of death should be amended so as to declare that the dead body has been seen, and doctors should in all doubtful cases tender their certificates to the coroner.

Dr. David Walsh (London) said that Dr. James had alluded to the possibility of trance burial. He might remind him that there was a recent scientific addition to the exact tests of death afforded by the modern method of the *x* rays. The shadow of the heart when taken on a sensitive plate was vague and diffuse because it was the record of a pulsating object. The *x* ray photograph of the dead heart, on the other hand, had a sharply-defined margin because it was the record of a fixed object opaque to the rays. He had investigated all the available literature of the subject of premature burial, and had elsewhere published the conclusion that there was no single case on record where the evidence was sufficient to establish the fact of live burial. On analysis, no one case could be said to be scientifically established.

Dr. Alderson (Bournemouth) said that the discussion reduced itself to the need of sending the death certificates direct to the registrar, the reasons for which were very obvious, especially when the death had been caused or accelerated by alcohol. He wished the temperance reformers would take the question up, as they would not obtain correct statistics until medical certificates only were received as evidence of the death, and sent direct to the registrar. The present statistics of death due to alcoholism were probably under-estimated. He scarcely thought the time was ripe for doing away with the coroner's jury; still there were much force and reason in Dr. James's suggestion as to two assessors assisted by the coroner, somewhat after the Scotch custom. Juries at present were almost entirely led by the doctor, especially if he was known to them, and if not they were apt to be influenced by their own crude opinions, or perhaps public scandal was against the skilled opinion of the coroner, which was not to the public benefit or accuracy of statistics.

Dr. Sidney Davies (Plumstead) said that the distinction between the disease producing death and the cause of the disease was not made clear. The certificate form now used was generally taken as asking for the primary and secondary pathological causes; what was required in certificate forms was a space asking for the cause of the disease—for example, disease: cirrhosis of liver; cause: alcohol.

Dr. Lorimer Hart (Sydenham) said that he agreed in what had been said regarding the distinction which had been drawn in the filling up of death certificates between the cause of death and the cause of the disease. He gave the example of death resulting from diseases of the intestinal tract following the ingestion of fruit. If the skin caused diarrhœa it was called blood poisoning; if the stone was absorbed, then an accident. It was a distinction what should be made in any further revision of the Acts.

THE BACILLUS DIPHTHERIÆ IN MILK.

By J. W. H. Eyre, M.D., D.P.H.,

Bacteriologist to Charing Cross Hospital, and Lecturer on Bacteriology in the Medical School; "Ernest Hart" Memorial Research Scholar.

History of Prevalence.

In local epidemics of diphtheria the *prima facie* evidence has frequently implicated the milk supply as the vehicle engaged in the dissemination of the disease, but as in the case of waterborne enterica, the difficulties attending the investigation are so great, and the action of the original contamination usually so transitory, that the specific organism of the disease has but rarely been isolated from the fluid medium conveying it. In fact, with the exception of that recorded by Bowhill in the *Veterinary Record*,[1] I am not aware of any sufficiently authenticated instance; and although I have several times been called upon to examine samples of milk suspected of containing the Klebs-Loeffler bacillus, it was not until February of this year that the investigation of such a sample yielded a positive result.

During the latter months of 1898 and the beginning of 1899, a number of cases of diphtheria had occurred among the inmates of a large school, and in the course of an inquiry as to the channel by which the disease had gained access to the school, I received a sample of the milk supply for bacteriological examination.

As far as I can gather, the method of collecting the sample was as follows. The cans containing the day's supply were brought to the school at about 11 A.M. on Sunday, February 2nd, 1899, and were unloaded from the cart and deposited in the kitchen of the institution. Here the sample of milk was removed from the can by means of a small jug, previously sterilised by boiling for ten minutes, and filled into two sterile half-litre bottles. (The sterile bottles were obtained from the bacteriological laboratory of Guy's Hospital.) The bottles were securely stoppered, and sealed down, and at once conveyed to me, reaching the laboratory at 12.30 P.M., when the examination was immediately commenced.

Analysis.

After agitating each bottle in order to ensure a thorough and even admixture of its contents, and well flaming the projecting portion of the stopper, and then the neck, 50 c.cm. of the milk were withdrawn by means of a sterile pipette, added together in a sterile flask, and labelled "Mixed milk."

Plates poured from this mixture gave an approximate enumeration of 10,960 organisms per cubic centimetre, and included such organisms as staphylococcus aureus, staphylococcus albus, sarcina lutea, bacillus mesentericus vulgatus, B. fluorescens liquefaciens, torula alba, etc.

The "mixed milk" was now filled into twelve small sterile tubes, labelled A to K, and centrifugalised for about ten minutes, the machine, one of the Dairy Company's centrifugalisers, running at some 2,000 revolutions per minute. On removing the tubes from the centrifugaliser the milk in each was seen to have separated into three distinct layers. The uppermost, consisting of the cream, formed practically one-quarter of the column of fluid; below this came the separated milk; whilst the rounded portion of the lower extremity of the tube was filled with the sedimented deposit.

Microscopical Examination.

I. The Tube A was used for microscopical examination:

Cream.—Coverslip film preparations made from the cream (which formed a firm mass, of about the consistency of butter, and necessitated the use of a very stout platinum spatula to remove it), and stained with a view to the demonstration of bacteria, showed a fair number of micro-organisms—both bacilli and cocci—also a very few leucocytes. No bacilli were observed which would resist decolorising with 25 per cent. solution of sulphuric acid.

Separated Milk.—No micro-organisms could be detected in this fluid.

Centrifugalised Deposit.—As in the cream, both bacilli and cocci were noted in the films prepared from the deposit, but in much fewer numbers. Leucocytes were present in numbers decidedly in excess over those found in the deposit from healthy "one-cow" milk similarly treated, also some epithelial cells and granular *débris*.

Cultivation.

II. Portions of the cream from five of the tubes, lettered B to F were used to inoculate tubes of inspissated blood serum in the following manner.

Tube B.—A stout platinum loop, after sterilising in the Bunsen flame, was thrust into the semisolid mass of cream, withdrawn, and the material retained in the loop planted on surface of a blood serum tube (1).

From Tube C.—A similar quantity of cream was used to inoculate "consecutively" the surface of two serum tubes (2 and 3). (By "consecutively" is meant the inoculation of tubes of media in series, that is, without sterilising the loop or adding more material between its withdrawal from the first tube and its introduction into the next.)

From Tube D.—A loopful of cream was used to inoculate consecutively three serum tubes (4, 5, 6).

From Tube E.—One loopful of cream was used to inoculate four serum tubes consecutively (7, 8, 9, 10).

From Tube F.—One loopful of cream was used to inoculate five serum tubes consecutively (11, 12, 13, 14, 15).

III. The centrifugalised deposit from tubes lettered G to K was used to plant fifteen more blood-serum tubes, and in order to minimise the risk of diluting the deposit and to render it more easily get-at-able, the greater part of the cream was removed from each tube in the form of a cylinder, by means of a small sterilised cork-borer. Through the orifice thus made a sterilised pipette was introduced and the separated milk pipetted off. After the removal of the pipette the platinum loop was easily passed into the tube, and a portion of the deposit taken up.

From Tube G.—One loopful of the sediment thus obtained was used to inoculate consecutively five blood-serum tubes (16, 17, 18, 19, 20).

From Tube H.—One loopful of the sediment thus obtained was used to inoculate consecutively four blood-serum tubes (21, 22, 23, 24).

From Tube I.—One loopful of the sediment thus obtained was used to inoculate consecutively three blood-serum tubes (25, 26, 27).

From Tube J.—One loopful of the sediment thus obtained was used to inoculate consecutively two blood-serum tubes (28, 29).

From Tube K.—One loopful of the sediment thus obtained was used to inoculate one blood-serum tube (30).

The entire batch of thirty tubes were then placed in the incubator regulated at 37.5° C., and examined at the end of twenty hours, when a growth was found to have occurred in every one of the tubes.

Naked-Eye Examination.—The growth in each of the tubes consisted of minute colonies much too closely aggregated to allow of the characteristic development of any one of them, and in all the tubes with the exception of 15 (which appeared to contain a pure culture) a very mixed growth was present, including several chromogenic organisms.

Microscopical Examination.—As it appeared well-nigh hopeless to search for individual colonies resembling the B. diphtheriæ, coverslip film preparations were made from a surface scraping of the growth in each of the thirty tubes, care, however, being taken to avoid touching with the spatula any such colonies or masses of colonies as were obviously not composed of the B. diphtheriæ. All the films were stained with well-matured carbolic methylene blue, and carefully examined with a $\frac{1}{12}$ inch oil-immersion lens. This microscopical examination resulted in the discovery that bacilli morphologically resembling the B. diphtheriæ were present in no fewer than fourteen of the tubes (namely, Nos. 1, 2, 4, 6, 10, 12, 13, 14, 15, 16, 21, 22, 24, and 30). The bacilli represented two well-defined types, the one the typical segmented and clubbed form known as the Klebs-Loeffler bacillus, the other the type described by Peters as the "short pathogenic," but which is more happily termed the "sheath" bacillus.[2]

The two varieties were present in practically equal proportions, the segmented form predominating in eight of the tubes, whilst in the remaining six the sheath variety was the prevailing type.

Now, on comparing the numbers of the tubes containing these suspicious bacilli with the list of preliminary inoculations given above it will be seen that whilst every loopful of the centrifugalised "cream" contained these (?) diphtheria bacilli, only three out of the five loopfuls of the centrifugalised deposit appeared to do so; and this result one expected from the ratio existing between the number of organisms present in the coverslip films made directly from the centrifugalised "cream" and "deposit" respectively.

Isolation.

The next step was to isolate one of each of the two types present in the milk, to study their morphology and biology and to compare them with a known pathogenic B. diphtheriæ, obtained from a diphtherial throat, as a control.

The sheath variety was easily isolated from Tube 15, which was almost a pure culture to start with. This was labelled "Δ 15." The segmented variety (from Tube 30) gave considerably more trouble and required "consecutive" planting upon twelve blood serum tubes before it could be obtained in a state of purity. This bacillus was labelled "Δ 30."

Staining Reactions.

Both types stained equally well with the aniline dyes and also by Gram's method. The distinction between the segmented form "Δ 30" and the sheath variety "Δ 15" was extremely well marked in 18 to 20-hour blood serum cultivations when carbolic methylene blue was the stain used, but upon staining coverslip preparations by the method suggested by Neisser—the so-called diagnostic stain—the two were indistinguishable, each showing two dark polar granules and in a few isolated cases a third central one. Every trace of the sheath with its tapering extremities disappeared under these conditions from "Δ 15" and it now presented the appearance of a regular rod of the same size, shape, and colouring as the control B. diphtheriæ.

Cultural Characters.

Both "Δ 15" and "Δ 30," after isolation from the milk, were planted upon various media, and carefully compared with cultivations, made under identical conditions, of the control B. diphtheriæ. The media used in each case were: bouillon, glucose bouillon, agar, glycerine agar, inspissated blood serum, gelatine, litmus milk, litmus whey, and potato. Without describing in detail the various cultural appearances, which to the naked eye were those typical of the B. diphtheriæ, it will suffice to say that they were identical in all three sets of cultures, and the acid production at the end of 36 and 48 hours was equal.

Pathogenesis.

Each of the two varieties was fully tested by inoculation experiments, and the following extracts from my note-book yield conclusive evidence not only on the point of pathogenicity, but also as to identity, with the B. diphtheriæ.

Guinea-pig 3: Weight, 220 grams. Received 2 milligrammes of a 48-hour blood serum culture of "Δ 30" (emulsified with 0.5 c.cm. of sterile broth) under the skin of the abdomen. Result: Death in forty-eight hours.

Post-mortem Examination: The subcutaneous tissue at the seat of inoculation was occupied by a spreading gelatinous exudation. The peritoneal and pleural cavities contained a large quantity of clear serous effusion. The kidneys and adrenals were hæmorrhagic. The organism was recovered in pure culture from the seat of inoculation and also from the peritoneal effusion.

Guinea-pig 4: Weight, 400 grams. Received 1 c.cm. of a 48-hour glucose-broth culture of "Δ 15" under the skin of the abdomen. Result: Death in rather less than sixty hours.

Post-mortem Examination: As in Guinea-pig 3, except that the organism was recovered from the seat of inoculation only.

Guinea-pig 5: Weight, 390 grams. Received a similar dose to Guinea-pig 4, and from the same culture. This was followed after a few minutes by the subcutaneous injection of 1 c.cm. of diphtheria antitoxin (B.I.P.M.) Result: Animal unaffected. Alive and well six weeks later.

Note and Reference.

[1] Bowhill, Milk the Vehicle of Contagion in an outbreak of Diphtheria, *The Veterinary Record*, No. 561, April 8th, 1899. [2] This latter bacillus when stained with a carbolic methylene-blue shows a distinct sheath of faintly-stained protoplasm tapering to a fine point at either extremity and enclosing one darkly-stained elongated lozenge-shaped aggregation or protoplasm about one-third of the length of the entire organism.

Discussion.

Dr. W. H. Symons (M.O.H. Bath) wished to know if Dr. Eyre traced the origin of the diphtheria bacillus in the milk to a human or a bovine source? The previous history of the milk was often sufficient to enable a medical officer of health to stop a milk supply. He would also like to know if Dr. Eyre

had tried the effect of diluting the milk before centrifugalising. Bacilli had a specific gravity varying from 1035 to 1045, and floated indifferently in milk, urine, and other fluids of similar specific gravity. Dilution lessened the specific gravity of the fluid, and so allowed the organisms to be thrown to the bottom away from the fat.

Dr. Eyre, in reply to the President, said that no other organism but the diphtheria bacillus would produce in the guinea-pig the same conjunction of spreading gelatinous exudation at the seat of inoculation; peritoneal, pleural, and pericardial effusions and hæmorrhage into the suprarenals. Therefore, if by introducing a cultivation of the organism which he had isolated from the milk into the subcutaneous tissue of a small guinea-pig he obtained a result conforming to these appearances, he considered his point was proved, and his diagnosis of the bacillus diphtheriæ was fully confirmed.

THE DISINFECTION OF BOOKS AND OTHER ARTICLES INJURED BY STEAM.

By W. H. Symons, M.D.Brux., D.P.H.Oxon., F.I.C., M.O.H., Bath.

Only a small class of goods can be submitted to the action of moist steam without injury, and in disinfecting by steam we are practically limited to bed and bedding, cotton, and linen goods. Flannels and woollen goods generally are liable to shrink and to be discoloured, while kid and leather are altogether spoilt. The expert disinfecter is he who uses steam in such a manner that its special qualities, as demonstrated in laboratory experiments, do not come into play and the principal English steam disinfectors are so constructed that steam cannot be turned into the chamber without heating the jacket more than the chamber. "The efficient working of Washington Lyon's machine depends on the fact that it is a steam jacketed chamber, with the steam in the jacket at a pressure and temperature distinctly above that employed in the chamber among the articles to be disinfected. The result of this arrangement is that the steam used for disinfecting is kept dry and free from condensation and the goods operated upon are not wetted . . . coloured patterns on the most delicate fabrics are not injured in any way, as they certainly would be if there was any actual wetness." Under these circumstances it is doubtful if steam is any more efficient than warm moist air and worth using as a separate process. At present, in order to disinfect in the most modern way the contents of a single room, three or four processes must be employed and the cost, if done by contract, is probably out of all proportion to the real value of the work. The bulky goods—bed and bedding—may be thoroughly disinfected by moist steam, the blankets and woollen clothes being more carefully, but less thoroughly, done by dry steam. For the third time the chamber is used for dry warm air—books, leather goods, furs, etc., being treated in this way either with great chance of injury or little chance of disinfection. The furniture must be properly sponged, sprayed, and fumigated, and the walls and ceilings must be similarly treated and afterwards scraped and repapered. Even then some of us will doubt the disinfection of the room. How very much easier to burn a little sulphur or generate a small volume of chlorine in a room and call it disinfection! Is there no middle course between this ancient farce and the impracticable methods of thorough disinfection?

The introduction of formaldehyde for disinfecting purposes seemed full of promise; formalin will do wonderful things in a laboratory, but my experience with this chemical, using much larger quantities than those commonly recommended, leads me to think its action quite superficial and variable.

The goods to be disinfected are placed in a Washington Lyon's steam disinfector, and the process conducted as when disinfecting with dry heat, but after the first partial vacuum is produced a quantity of formalin is introduced into the chamber. About two ounces of formalin is considered sufficient for the medium size machine; it is passed in through a rubber tube connected with the test cock in the door of the chamber. The jet of formalin strikes against a pad of house-flannel tied to the upright pillar of the cradle opposite the aperture; about one ounce of water is also sent in. The cock is closed as soon as the liquids have passed, and ten minutes allowed for volatilisation. Air is then admitted; it becomes saturated with formalin, and is allowed to act upon the goods for a quarter of an hour. After this the chamber is exhausted for ten minutes, another small charge of formalin admitted, and the vacuum broken by warm air. The steam is then turned off from the jacket, and the machine allowed to remain quiescent for at least an hour. The goods are then considered to be disinfected, the air of the chamber is changed two or three times, and if it is desired to get rid of the odour of formalin an ounce of ammonia, followed by one of water, may be introduced, and the air again changed two or three times, after which the door of the chamber may be cautiously opened. If the operation has been properly performed there will be no discomfort from either formalin or ammonia.

Woollen, fur, leather, and rubber goods may be treated in this way. French polished and varnished woods are blistered if the jacket be heated, but if a by-pass is made for the steam to avoid the jacket and enter the exhaustor direct, the operation may be conducted at normal temperature, and all the benefits of the prolonged action of formalin obtained.

The rapid penetration of formalin under these conditions was proved by means of long glass tubes hermetically sealed at one end, and packed for a foot or more of their length with various materials used in bedding, the sealed end being afterwards opened with proper precautions. Experiments with test organisms were less satisfactory, and it was found possible to protect them from the action of the formalin. Broth cultures of typhoid bacilli on paper, wrapped in tinfoil and tightly pressed between the leaves of a book, were not invariably sterilised. The process is, therefore, not comparable to steam disinfection, but is considered an improvement upon the so-called disinfection by dry heat. What molecular changes take place in the formalin has not been determined.

Formaldehyde escapes through the crevices of the room, or forms paraformaldehyde, or is thrown out of action far more rapidly than it penetrates bedding, and as it does not kill the spiders and flies which may be present in the room, it does not command much respect from the public. But the claims of formaldehyde as a germicide are too great to be disregarded; there is, I believe, no organism which can resist the action of a 1 per cent. solution of this chemical for one hour. The problem appears to be how to bring the organism and the unaltered chemical into contact, and to keep them in contact a sufficient time. I have tried to solve this problem by using a steam disinfector, without allowing the steam to enter the chamber containing the goods to be disinfected. Washington Lyon's steam disinfector fitted with Alliott and Paton's exhaustor for producing a partial vacuum, lends itself admirably to the experiment. The mode of working is as follows:

The goods are loosely arranged in the chamber and the doors closed; the process is then conducted as directed for disinfecting by dry heat, but after the first partial vacuum is produced a small quantity of formalin is injected into the chamber. The formalin may be boiled in from a flask, or carried in by air in the form of spray, but the simplest way is to allow the required quantity, 2 to 4 ounces, to be sucked in through a rubber tube attached to the little test cock in the door of the chamber, being careful to wash in the chemical with an ounce of water to prevent action of the tap. It is as well to tie a pad of house flannel to the upright pillar of the cradle just opposite the aperture of the tap, so that the liquid may strike it and be absorbed until volatilised.

Paraformaldehyde.

Time is allowed for the formalin to evaporate, and the vacuum is broken by admitting air simultaneously from the small cock in the door and warm air through the rose. One quarter of an hour is now allowed for the superficial portion of the materials to become saturated with formalin. The chamber is then exhausted for five minutes, so as to bring the air from the interstices into contact with formalised material; another smaller quantity of formalin is now sent in and the vacuum broken as before, the steam is then turned off from the jacket, and the machine allowed to remain quiescent for an hour or more. After this period the goods are considered to be disinfected, the air of the chamber is changed two or three times, and if it is desired to take away the odour of formalin,

an ounce of solution of ammonia, followed by water, may be introduced into the chamber, and the vacuum made and broken as before and the door cautiously opened. If the operations have been properly performed, there will be no discomfort from formalin or ammonia. The whole process, excluding the interval, which may be a meal time or night, takes about two hours, and the cost of the chemicals is sixpence.

Two fluid ounces of formalin produce about a cubic foot of formaldehyde vapour and two cubic feet of water vapour. Slater and Rideal found that 1 oz. of formalin per 1,000 feet of room space when evaporated over a spirit lamp showed decided effects of the vapour.[1] The chamber of a medium-size Washington Lyon's disinfector measures less than 70 cubic feet, so that 2 oz. of formalin in such a chamber would be equivalent to about a pint and a half per 1,000 feet, and there is no leakage.

The efficiency of the process is that of formalin, the penetration of the chemical being easily demonstrated, using one-eighth of the quantity recommended, namely one quarter of an ounce. I found it penetrated the innermost recesses of books, and through long tubes packed with various materials used in bedding—horse-hair, flock, feathers, and cotton wool. Experiments with test organisms gave less satisfactory results, and it was found possible to protect paper which had been moistened with a broth culture, by wrapping in tin foil and tightly pressing between the leaves of a book. The process is therefore not comparable to disinfecting by steam, but it is probably more efficient than warm air alone.

I may say that so far I have not noticed any corrosion of the machine. Formalin usually contains some formic acid; iron is rapidly rusted in the presence of weak solutions. Ammonia stops this action, but it is as well to clear out the machine with steam after each time of using.

A DISCUSSION ON
THE MEANS OF PREVENTING THE SPREAD OF INFECTION IN ELEMENTARY SCHOOLS.

I.—Arthur Newsholme, M.D., F.R.C.P.,
Medical Officer of Health, Brighton.

The Difficulties.

Increased facility and rapidity of personal communication form one of the most striking features of the present day, affecting the lives not only of the persons living in different parts of the same town or district, but also of those living in different districts and in different countries. Steam power, while bringing with it enormous improvement in the general conditions of life, has thus also greatly facilitated the spread of infectious diseases. This point needs to be remembered in comparing the present with the past incidence of such diseases. The devastating epidemics of the past, followed by, ofttimes protracted, complete absence of infectious disease, have in a large measure ceased, and we have instead less elevated and more protracted epidemic peaks, followed by valleys more shallow than those of old. In other words, the chief infectious diseases tend to be in a higher proportion endemic and in a less proportion epidemic than in former times.

It is not surprising that among the increased means of personal intercommunication, compulsory school attendance, affecting as it does the most susceptible period of life, occupies an important place. It is not necessary here to discuss the exact share taken by school attendance in the spread of these diseases, and more particularly of diphtheria. I have elsewhere [2] given my reasons for regarding school infection as only a minor cause of spread of diphtheria, as forming, in other words, but one incident in a battle, which by no means determines the issue of the entire campaign. This, however, does not relieve us from our duty of disputing every inch in the battlefield; and there can be no doubt that our armamentarium for this purpose is at present imperfect or insufficiently utilised in the majority of sanitary districts.

What then are the most important measures applicable to the prevention of the spread of infection in connection with school life? The usual answer is that an elaborate system of medical inspection of school and scholars is necessary. It appears to me that other previous measures are even more imperative.

Early Diagnosis.

The first and most urgent is the provision of prompt medical attendance upon children when they first fall with what may prove to be an infectious complaint. The greater part of the spread of infection in school life is caused by the absence of diagnosis in the acute febrile stage of disease. A child begins with a "bad throat" or an attack of "nettlerash." Either no doctor is called in or he does not see the patient until the characteristic signs have partially disappeared. The difficulty in obtaining dispensary letters or other gratuitous medical advice, the rigid rules in connection with such establishments, which frequently necessitate delay in seeing patients for twenty-four to thirty-six hours, operate in the same direction. I am not prepared with any ready-made solution of a most difficult social and medical problem, but so long as the conditions under which medical aid is obtainable remain as at present it cannot be expected that the mother of half-a-dozen children whose husband earns only 25s. to 30s. a week, and has to pay 7s. a week in rental, will hasten to obtain medical aid in the early stages of diphtheria and scarlet fever when diagnosis can be most readily made and when treatment and isolation can be most beneficially applied.

This introduces us to a second difficulty. A large number of private cheap dispensaries cater for the typical family mentioned above. Qualified medical practitioners give in these dispensaries hasty interviews to patients, who, if more carefully examined, would be found to be suffering from infectious disease. I cannot attempt to state, as I am uncertain, which of the two above-named factors—lack of medical advice or medical advice given under unfavourable conditions—is the more frequent cause of mischief in schools. Together they cause an enormous amount of evil; and no measures for preventing the spread of infection by children attending school in an infectious condition will secure complete success which do not end both of these evil influences.

Medical Inspection of Scholars.

Will the medical inspection of scholars meet the requirements of the case? No doubt much good can be done by this means. Every medical officer of health has probably had the experience of picking out children desquamating from scarlet fever in the class room of an elementary school; and if scarlet fever is so extremely infective at this stage of the disease, as is commonly supposed, it is wonderful that so many children not protected by a preceding attack, are insusceptible to scarlet fever infection. I am strongly of opinion that this disease is most infective in its earliest stage. Medical inspection can secure again the exclusion of children suffering from such suspicious symptoms as recent otorrhœa, enlarged cervical glands, nasal discharge, and so on. Medical inspection can do much more in the case of diphtheria when it is conjoined with the bacteriological examination of secretions taken from the throats of children who have sat in the class room near a child who has recently had diphtheria. In several cases I have found the systematic employment of bacteriological diagnosis of the greatest value, when applied to children in an infected class room and to children who were kept at home with a slight sore throat, but for whom no doctor had been called in. I cannot regard any measures for the prevention of diphtheria in connection with school life as complete which do not include the visitation of schools by a medical man, a careful inspection of the school registers, and the taking of "throat swabs" from children who have sat near undoubted cases of diphtheria or who have returned to school after a few days' absence with ill-defined illness. That the London School Board should during the past year have raised objection to inspection of school children by a medical officer of health appears to be a most suicidal policy.

But when all such measures as the above are rigidly enforced, it must, I think, be admitted that the medical inspection of schools has only a limited utility. Let it be utilised to its fullest capacity, but it must not be forgotten that the prevention of the greater part of the spread of infection lies in the hands of the parent and of the private medical practitioner. Failure to diagnose infectious disease at its onset,

[1] *Lancet*, April 21st, 1894.
[2] *Epidemic Diphtheria: A Research on the Origin and Spread of the Disease from an International Standpoint*, pp. 137-8, 1898.

or wilful or careless neglect on the part of parents to take the necessary precautions when disease is recognised, will still constitute the chief reasons for the spread of infectious diseases in schools.

Visitation of Absentees.

The medical supervision of scholars might be extended to the visitation of absentees at their homes whenever absence is caused by illness. It will not suffice that such visits should be limited to infectious cases. To attempt such a limitation would be to beg the very point at issue. If parents could ensure a visit to their child from a qualified medical practitioner without fee, for diagnostic purposes and for treatment until the patient can be handed over to the family practitioner, there is no doubt about their readiness to accept such an offer. But such visits from the paid medical inspector of the school or sanitary authorities would almost necessarily disorganise all the present arrangements for medical attendance, as they would imply the provision, without the implication of pauperisation, of gratuitous medical relief to the children of school-age of the majority of the English population. On general grounds, this is probably more easily justified than the provision of free meals for poor school children. It does not, however, appear at present to come within the range of practical medical politics.

Notification by School Authority.

At the present time we are dependent in our attempts to prevent the spread of infection in school on (*a*) the compulsory information supplied under the Infectious Disease (Notification) Act, the operation of which has happily, in the present session of Parliament, been made universal in England and Wales; and (*b*) the voluntary information supplied by teachers and others, particularly for measles and whooping-cough, which in the majority of districts are not scheduled among the notifiable diseases.

There is a great and constant struggle among school authorities to increase their "average attendance," as the position of the schools and the amount of monetary grant from the Imperial Exchequer depend upon this. It cannot be expected, therefore, that under ordinary circumstances teachers will always furnish the medical officer of health with information which may lead to the exclusion of their scholars from attendance at school. To meet this objection I have had during the last eighteen months the following plan in operation. The clerk to the School Board has, on my recommendation, supplied each Board school teacher with forms like the following:

SCHOOL BOARD FOR BRIGHTON AND PRESTON U.D.

Form for Notification of Infectious Diseases to Medical Officer.

(1) Name and Address of Scholar.	(2) Date of Last Attendance at School.	(3) Date when Reported to M.O.H.	(4) Date when Scholar may return to School.* (*This Column to be filled in by M.O.H.*)	(5) Supposed Nature of Illness.	(6) Inclusive Dates within which Scholar was Absent from School on account of Notice of Sanitary Authority. (*This Column to be filled in by M.O.H.*)

* This date is subject to no other case of infectious disease arising in the house.

Signature of Medical Officer of Health ..... *Name of School*.....

..... *Department* .....

..... *Teacher's Signature*.....

The teacher as soon as he becomes aware of the absence of a scholar on account of what is suspected to be an infectious ailment, sends the form to me with columns (1), (2), (3), and (5) filled in. This is always done promptly, because the advantage (in average attendance) to the school only commences from the date when the form reaches the medical officer of health. The absentee scholar is then visited, and on the basis of the information thus received the medical officer of health fills in columns (4) and (6). Chronic contagious complaints like ringworm are not included, but we sign up for mumps and chicken-pox in addition to the diseases already mentioned. At the end of the school year application is made to the Education Department on Form 101*, the entries in this

Fly-leaf to Form 101*.

_____ School.

_____ County of _____

1. What vacations were allowed during the past School year? (give exact dates)
2. During what period or periods was the School closed on account of epidemic sickness or for other causes? (give exact dates)

We certify that the children whose names and addresses are entered in column I. were excluded from School for the reasons and period stated in columns II. and III.

Signed _____

Correspondent for the School Managers.

Date _____ Principal Teacher.

I.		II.	III.		IV.
Name of Child.	Address.	Authority for Exclusion on ground of Infectious Disease. †	Period, falling within the School-year, during which child has been excluded from attending School. Beginning	Ending	Number of actual meetings of the School during the period specified in column III ‡

† Enter in this column *S.A.*, if the child was excluded by Notice of Sanitary Authority; *P.*, if under the requirement of any Act of Parliament; and *M.A.*, if under Medical Advice as to children living in infected houses.

‡ No entry may be made in Column IV. for any period during which the School was closed.

N.B.—The Entries for Boys, Girls, and Infants respectively must be kept distinct, and the sex of the Infants distinguished.

form being checked from the forms which have been carefully preserved by the teacher during the year. Form 101* is then countersigned by the medical officer of health, who in addition writes a formal certificate to the effect that

The children belonging to ——— School, Brighton, who are enumerated in the accompanying list, to each sheet of which I have appended my signature, were excluded from attendance at school by order of the Sanitary Authority of the County Borough of Brighton.

During the last school year the Brighton School Board has gained an additional grant amounting to £126 17s. 9d. in respect of the arrangement just described. As the average attendance in these Board schools was 10,050 in 1898, while the average attendance in voluntary schools in Brighton (in which exactly the same arrangement is at work) was 6,287, it is probable that over £200 has been earned during the year in connection with the above arrangement.

It should be noted that the medical officer of health signs up not only for absences of patients, but also of all other children from infected houses. This fact secures the co-operation of teachers and school-attendance officers, and relieves the stress of compulsory school attendance, which, however necessary it may be on general grounds, is not infrequently the means of spread of infection.

I take this opportunity of describing our scheme in some detail as it is not, so far as I am aware, widely adopted.

II.—SIDNEY DAVIES, M.A., M.D.Oxon., D.P.H.Cantab., Plumstead.

DR. DAVIES said: Diphtheria is not so much kept up by school attendance as scarlet fever and measles. The reason why scarlet fever prevalence continues undiminished in spite of an elaborate system of isolation must be school influence. Mild undetected cases partly account for this, but they are probably not very infectious. Cases of wilful neglect or culpable carelessness—

as when a child is sent to school immediately the rash has gone—probably cause many cases of infection. Return cases of scarlet fever and diphtheria probably account for many cases of infection. Children who have discharges from the nose, ear, and other parts of the body may act as carriers of infectious germs for several months without ever having scarlet fever themselves. Medical officers of health should come to some agreement as to what proportion of children absent for measles justifies closure of school or class, and for how long the school should be closed. He would suggest that one-tenth the attendance absent for measles would justify closure, and the duration should be at least one month. It is the duty of school authorities to provide medical inspection of all the children in their schools at frequent intervals, for the detection of children in an infectious condition, or in a condition likely to act as carriers of germs.

III.—H. R. Kenwood, M.B.Edin., D.P.H.Eng., Conj. Board,
M.O.H. and Public Analyst, Stoke Newington and Finchley.

Dr. Kenwood said: My own conviction is that a considerable amount of communicable disease is the direct consequence of bringing large numbers of children together into crowded schoolrooms, and that in the interest of education itself every available means should be taken to reduce it and to remove the well-founded parental complaint, which one hears so often, that children are always "catching things" at school.

Our present measures are inadequate mainly because they fail in the Intelligence Department of the organisation directed against preventable disease, and it is this which more especially requires improving. The knowledge at present obtained by sanitary and school authorities of the occurrence of infectious disease is often not sufficiently complete and prompt; and in seeking for a remedy against this state of things we have to consider that the difficulties mainly arise from (*a*) medical advice not being sought because of the supposed trivial nature of the disease, or because of the cost, or because of parental ignorance or indifference, and (*b*) where medical advice is sought, parental ignorance or indifference often leads to the spread of disease at school. I do not think Dr. Newsholme's suggestion of gratuitous medical advice will meet these difficulties nearly as well as the alternative measure of an examination of scholars by a medical man appointed to each district, who in non-epidemic times will examine the scholars, say twice a year, with the view of detecting those numerous conditions which unfit a scholar temporarily for school attendance, or which require early correction (such as developmental defects, faulty vision, overpressure, etc.), and other diseased conditions not necessarily infectious. He should also be able to make a prompt examination of every pupil referred to him at any time by any teacher, and should lecture to and instruct the teachers upon the symptoms of disease in school life. During exceptional prevalence of communicable disease he should make frequent and sometimes daily inspection of the scholars in the schools allotted to him, and all suspicious cases should be excluded from school and, after diagnosis, should be handed over to the care of their regular medical attendant, when such exists.

The London School Board has some admirable instructions *on paper*, in which it is sought to make the teachers exclude suspicious scholars. They have failed in actual practice of course, for uninformed school teachers cannot be expected to detect suspicious illness. But teachers would acquire a useful knowledge if properly instructed, and then in their co-operation with a medical adviser there is ground to hope for a substantial improvement in the present state of things. The giving of prizes for maximum attendances is wrong in principle, and a scholar often continues attendance with bad results to himself and sometimes to others.

Such an improvement in the Intelligence Department as suggested would give the best results with the minimum of labour and expense, and would, I believe, often obviate the necessity of school closure.[1] The medical officer of health should generally be the man appointed to do the work, because he has a special knowledge of communicable disease, and he has an early knowledge of epidemic prevalence.

In conclusion, we all of us know what the education authorities will have to say to the suggestion of such an appointment. In a time when no site or structure seems too expensive, and considerable outlay is faced in teaching the Board school scholar a considerable amount of purely ornamental knowledge, it will be said that the appointment will be "too expensive" (trifling as the cost will be), and that it will interfere with education. Such inspections, as a matter of fact, entail very slight hindrance to school work, and a positive gain would result in the better annual average of attendance that such an inspection would ensure by reducing preventable illness among the scholars.

IV.—A. Mearns Fraser, M.B.Edin., D.P.H.Camb.,
M.O.H., Portsmouth.

Dr. Fraser said: I wish specially to emphasise the value of Section 101 in dealing with schools. It is of more use to the M.O.H. than any other school regulation, either in the School Code or Public Health Act. The advantage is that not only can the M.O.H. grant a certificate for the child ill with infectious disease, but also all the children belonging to the same household, for such time as infectious disease may exist in that house. Also, on the occurrence of infectious disease in a school, the M.O.H. can visit the school, thoroughly acquaint the teachers with the first symptoms of the disease, and instruct them that any child who shows any of these symptoms must be sent home at once, and then, if the child is going to have infectious disease; a focus of disease is removed from the school at the earliest opportunity, but if the child is only attacked by a temporary indisposition, then it returns to school in a few days and no harm is done. At the same time, the school does not lose any grant for the time the child is absent from school, as the M.O.H. (under Section 100, School Code) gives a certificate for the time the child is absent.

V.—J. Rolston, M.D., L.R.C.S.Edin.,
Devonport.

Dr. Rolston said: I advise disinfecting clothing of children and the school buildings rather than closing the schools altogether, and that the cases of children absent from school should be reported on by the medical officers of the Board and then handed over to the medical attendant of the family.

VI.—Walter Smith, M.D.Brux.,
Medical Officer, St. Pancras.

Dr. Smith said: Every district of schools should have its own medical officer, who should visit periodically the schools in this district and leave the medical officer of health to be an administrative officer; and his duty should not be to visit and inspect pupils, except in times of epidemics. The Health Committee of St. Pancras has been in the habit of visiting every school in the district, and in one case the Vestry took proceedings where they had been refused admission, which was afterwards taken to the Court of Appeal and lost. He would advocate that the law should be altered, whereby a sanitary authority should have power to inspect every school in its district. The sanitary authorities obtain very little help from the Education Board.

VII.—Joseph Groves, M.B.,
Medical Officer of Health, Isle of Wight Rural District.

Dr. Groves said: I consider the conditions obtaining in towns so different from those of rural districts that the methods necessary in the presence of infectious diseases must vary. The rural health officer is as a general defending a country constantly in danger of invasion. He has his strategic points, and he knows the roads along which infection travels from the towns and their portals. I strongly advise medical officers of health to watch Dr. Newsholme in his work, and to consider the question of the application of some of his modes of procedure to their respective districts. He has himself started voluntary notification of non-notifiable infectious diseases by schoolmasters and mistresses. The forms should have impressed halfpenny stamps. I entirely differ from the view of one of the speakers that the medical officer of health should explain to school

[1] In New York during three months over 4,000 children were excluded in consequence of a careful medical inspection of all the scholars, and of these 88 were found to be suffering from measles, 167 diphtheria, 32 scarlet fever, and 2,627 from parasitic diseases.

managers his reasons for recommending them to close their schools in the presence of spreading disorders, and that he should try to conciliate them and render them less unwilling to do what is right from the sanitary standpoint. The medical officer of health is a person appointed to safeguard the interests of the public health in his district, and in my opinion he has no choice but to do his duty. He has to maintain a stiff back. He knows more about his subject than anybody else in his district, and he is the only person able to judge of what measures are necessary. He knows the attention of the school authorities is simply concentrated upon the grant, and it does seem absurd that he should excuse his action in connection with his sacred duties.

REPLY.

Dr. NEWSHOLME said: I am glad to learn that the provision of free diagnosis for poor school-children is not regarded by Dr. S. Davies so Utopian as I had feared. I am anxious not to be misunderstood as minimising the importance of medical inspection of schools. That is most important; but when this is done efficiently, as described by Dr. Kenwood, there is still a large importation of infection into schools from children whose slight illness has not been medically diagnosed, or has been maldiagnosed. Even though there be daily medical inspection of scholars, much evil will still result from this cause. It is not likely that the adoption of every other measure will entirely obviate the necessity for occasional closure of schools or special classes in schools, and Dr. May's remarks on the ultimative methods by which this can be carried out are of value. It is impossible to discuss fully all the various aspects of this question which have been mentioned. I cannot, however, admit that the chances of infection are so great among children, even in a town, outside as inside school. No definite rule can be made as to the medical officer of health occasionally undertaking personal inspection of suspected absentees. Local circumstances vary, but in many instances efficient control over the spread of an epidemic can only be obtained by the medical officer of health himself conducting the investigation by all the means at his command, bacteriological as well as medical. Dr. Newsholme concluded by moving a resolution requesting the Council of the British Medical Association to make representations to the Educational Department, Whitehall, urging upon the Department the necessity, from the standpoint of the public health, of authorising medical officers of health to inspect all school premises, and to inspect, or secure the inspection of, scholars when the prevalence of infectious disease was judged by him to make such an inspection desirable. The resolution was seconded by Dr. Kenwood, and carried unanimously.

THE EARLY DECAY OF THE TEETH IN BRITAIN.

By JAMES CANTLIE, M.B., F.R.C.S.,
Surgeon Seamen's Hospital Society.

SINCE the announcement appeared that I intended reading a paper upon this subject, I have received numerous letters expressing interest in the matter, and asking questions of various kinds. That the teeth of our children are in a bad way is an acknowledged fact, proved over and over again by scientifically-conducted investigations which leave no doubt on the subject. The teeth of our school children in all grades of society, in our public schools and in our Board schools, have been examined and fully reported upon. The result of all such inquiries has been the publication of statistics proving an abnormal amount of disease. The national importance of this can hardly be over-estimated. We cannot expect to rear a healthy race on carious teeth, and it is to try to stem an evil which is sapping our national strength that I would seek your attention now. The remedy suggested by all who have dealt with this matter is that carious teeth should be immediately attended to, that misshapen jaws should be corrected, and, to effect these ends, recommendation is repeatedly made that children's teeth in our schools should be systematically inspected, stopped, or removed as occasion requires.

The cause for this premature and abnormal decay is, however, scarcely dealt with. True I have indeed received innumerable suggestions as to the cause but scarcely two people are agreed on the subject. One blames sweets, another infant foods, a third declares that children partake at too early an age of animal food; some contend that it is a developmental change, and that in time the human teeth will disappear; some ascribe the decay to two such opposite conditions as gout and rickets. In fact, there is scarcely an inherited disease or a variety of human food or drink which has not been suggested to me as the cause. The developmental idea is a favourite theme; it is even seriously discussed by persons of respectable scientific attainments. The idea is that, in our quest after education, we are attracting a superfluity of blood to our brains and thereby starving our teeth and our jaws. A very pretty theory, indeed, but it is not true. The future of our teeth, in common with the general state of our adult physique, depends largely on the care taken of the infant during the first two years of life. The future of our teeth is laid before the child has begun to use its brain; and not only is this true of the milk teeth but also in regard to the permanent, and one may fairly gauge what the state of the permanent teeth is to be by a study of the development and shape of the jaws at that period.

Another phase of the developmental theory is that our jaws are getting smaller, leaving less room for our teeth. The teeth, therefore, it is contended, become overcrowded and overlap, leaving nooks and recesses in which particles of food may find shelter, setting up decomposition, eroding the enamel and leading to caries of the dentine.

This is stating an actual condition whilst begging the cause. Our bodies are not changed thus rapidly. We are acquainted with various functionless remnants in our bodies. The hair on our bodies has lost its original purpose, and the gradual disappearance has been going on ever since man was known—yet it is with us. The appendix vermiformis still appears attached to the cæcum, and has been there to all appearance unchanged since anatomy first revealed its presence. The nictitating membrane still occupies the inner canthus of our eyelids ever since it performed the function of a third eyelid. In like manner many developmental structures are present in our bodies, but it is not within the knowledge of man that any decisive change has taken place in their structure or size, although their function has well-nigh, if not wholly, gone. I make these statements for the purpose of showing that developmental changes are gradual, very gradual, so gradual indeed that neither tradition nor recorded history has any change to notify, and so it must be in the case of our jaws. The generation immediately before us had fairly good teeth and well-shaped jaws, and to assume that in one generation the development of our jaws should have so modified as to affect the teeth of the rising generation is contrary to natural law. I would therefore dismiss these two theories—namely, the starvation of the teeth by the development of our brains, and the sudden arrest in development of our dental and maxillary apparatus—as wholly unworthy of serious consideration. Were the evolutionary theory true the fight would be a hopeless one, for neither art nor science could stem it. Were it true, we cannot expect to raise a healthy race of people, and must be content to succumb before a people with better physique.

In spite, therefore, of all that has been said, it is not natural that the teeth of our children should become carious at an age when they are most required. They are not developmental changes that are at work, but in my opinion causes which are capable of demonstration and arrest if we have but the courage to deal with the question.

The dental art has attained so high a position in this country and in America, that, so far as the mechanism of the art goes, there is but little more to be done. But I would like to induce our dental brethren to look a little further afield, and to tell us how to rear the child so that the teeth, while yet unerupted and within the dental sacs, may be allowed to grow to the greatest perfection. It is not only when the teeth are through that I would ask the dentist's aid; it is to a period when the basis and substance of the tooth is being formed that I would wish him to direct his attention. If dentistry is to aspire to its highest ideal, it must not be content with merely repairing or removing damage done. We look to it to tell us why do our children's teeth decay so early, and what steps are we to take to remedy the evil, so that sound teeth in the young may be hoped for? It is during the period of growth and development, during the antenatal stage perhaps, or at any rate during the first few months of

infant life, that we must look for guidance and direction. We want to know what error of diet or mode of living on the part of either the mother or the child fills our children's mouths with painful stumps and festering abscesses.

In elucidating this point the first question that suggests itself is: Has any radical change in the feeding of children taken place during the past fifty years? The answer is known to every one, and it is this: Artificial food, and more important still an artificial manner of feeding has become a general custom within the period mentioned. The wet nurse is a being of the past. In many instances, I grieve to say, the natural mother has also to a large extent disappeared. Pleasure in one phase of society and self-imposed form of labour in the other has deprived the infant of its natural food. Women amongst the leisured class will not allow the nursing of their children to interfere with the routine of what they are pleased to term social duties; whilst amongst the less opulent class the gossip at the mill has more attraction than the prattle of the children. The natural calling of both classes is being sapped by the shadowy myth of female rights and independence, and the future is being sacrificed to pure selfishness.

The majority of children are now brought up on the "feeding" bottle. Let us consider the food thus supplied for a moment as it is all-important. The food is composed of cow's milk, warm water and cane sugar. These are all artificial, or shall I say unnatural elements for the human infant, but it is not so much with the character of the food as with the way in which it is supplied, that I join in issue. The child must have food artificially when its mother cannot supply it, and were these simple substances used to the exclusion of more dangerous food it would no doubt be for the child's good. But it is to the temperature of the food that I wish to direct attention. An ordinary bottle full of milk requires ten to fifteen minutes to consume or, at least, it ought to. It is evident, therefore, that at the beginning and end of the meal there must be a marked difference in the temperature of the milk. The suitability of the temperature is usually judged by the mother or nurse tasting it. But the mother can sip her tea at 140°F., and considers tea cool if it only reaches a temperature of 110°F. We educate the mucous membrane of our mouths to stand a temperature many degrees above what nature intended. Imagine the effects of a hot fluid, the temperature of which is thus judged, upon the infant's mouth. The tender mucous membrane must be well nigh, if not actually, scalded; at least a sodden condition of the lining membrane is established and a continued irritation maintained. The effect upon the dental sacs, imbedded in the gum, must be to withdraw nutrition from them owing to the counter irritation of the hot fluid, and the congestion of the gingival membranes it produces. The dental sacs are thereby starved—the normal amount of their nutrition being withheld. The temperature of the human milk supplied by nature to the child is about 99° F. throughout the process of suckling. It is not warmer at the beginning than at the end of the process, as so often happens during bottle feeding when a drop of 20° in the heat of the milk in the feeding bottle obtains. It is needless to dwell upon the local and digestive ailments consequent upon food of so abnormal a quality, and having broached the subject I will pass on to another. After withdrawing the feeding bottle teat from the child's mouth, the modern mother in 70 per cent. of cases substitutes what is called the "comforter." This solid piece of indiarubber, shaped like a teat to deceive the child, shaped and used for the purpose of causing the child to imitate the action of sucking, is a modern introduction which we could well spare. What is the effect of continued abortive sucking of a solid teat? Harder and harder does the child suck in the hopes that the "comforter" will yield some nourishment. The muscles employed in sucking are exercised to a degree, with the result that they become hypertrophied, and generate an amount of power which tells detrimentally on the shape of the jaws. When the mouth is exercised in sucking, the cheeks are drawn inwards and impinge against the sides of the upper jaw. With constant efforts in this direction the hypertrophied muscles press upon and compress the upper jaw, ultimately causing the sides to be drawn inwards, and the front of the upper jaw to be pointed and to protrude like a pig's. But compression of the lateral aspect of the upper jaw causes the arch of the palate to rise, hence the high arch we so frequently see, and the ill-fitting jaws, the upper jaw falling within the lower at the sides and overlapping it at the front. Nor does the evil rest here. The hard palate can only be arched at the expense of the nasal space immediately above it, and the consequence is an obstruction to the entrance of air by the nose. A misshapen jaw is always associated with nasal obstruction, and breathing takes place by the mouth in place of by the nose.

I am aware this is heterodox pathology; our nasal specialists declare it is obstruction to the nose that is the primary cause of breathing through the mouth. I go a step further back in tracing the evil, and maintain that it is the causes which produce the high palatal arch which are the source of nasal abnormality. The nasal obstruction is secondary to the high arch, and the high arch is produced during the first twelve months of infant life by abnormalities in feeding.

What are the consequences of a nasal mucous membrane which is left to soak in abnormal mucous secretion instead of being traversed by the incoming and outgoing currents of air? It gets sodden and swollen, it increases the obstruction by becoming hypertrophied, its adenoid tissues are abnormally nourished, and they grow and protrude from the surface as do vegetables in the forcing pit of the gardener.

Adenoid, nasal and pharyngeal growths have become a prevalent factor in disease during the last decade or two. They came in synchronously with artificial foods, feeding bottles, "comforters," early dental decay, and misshapen jaws, and I believe some common cause is at the root of all these evils. I am aware that bad teeth and misshapen jaws are met with although much less frequently, but they certainly are met with in children who are naturally fed and who have never had a "comforter" in their mouths. But the responsibility of those entrusted with our national health does not end because of that. If the decay of the teeth is due to abnormal feeding or other causes on the part of the mother during either the antenatal period or during lactation, let the evil be pointed out and remedied if possible. If there are errors in diet, be they under the guise of "nourishing stout," "invalid port," or wines with adjuncts of many kinds, let them be proclaimed. If it be found that in some parts of this country owing to soil, water, etc., good teeth prevail, let the subject be investigated, and see if by addition to the ingesta of less favoured districts a similar good result cannot be attained.

I am quite prepared for adverse criticism. I am quite aware that dental caries is known in rural as well as in urban populations. I am also aware that toothache prevailed from the earliest times, although Job is not mentioned as being afflicted with "that hell o' a' diseases" as Burns styles it. I also know that in Roman times feeding bottles were not unknown, and that such dental arts as bridging and stopping were practised during the heyday of the Roman Empire. This last reference perhaps favours my argument. Luxury in Rome led to unnatural motherhood and the use of the feeding bottle, and they are held to have reached the acme of their civilisation, by some, because what we are accustomed to style modern dental arts were known to them. But this was only during the period of their luxury, and, as we know, that was followed by collapse, defeat, and expulsion. The conquering Goths knew none of the practices of civilisation in the rearing of their young. Their simple diet gave them fine teeth without the aid of the toothbrush or of that necessary accession to high prandial civilisation, the dentist.

I am also aware that carious teeth are met with by the missionaries and travellers amongst the most remote and primitive races of the earth. Even the Matabeles and the Ngnoni of Central Africa suffer from toothache and decayed molars. Nor is the evil confined to mankind. Decayed teeth and painful stumps are met with in the lower animals, but with these it is not the young that are affected. Given healthy teeth the young may grow to perfection, with carious teeth they cannot.

I have not traced the further trouble of bad teeth: dyspepsia, the production of ptomaines, convulsions, neuralgia, headache, undeveloped chest owing to nasal obstruction and the development of a physique in which the seeds of disease are only wanted to generate tuberculosis and allied disease. We have heard a great deal of the national importance of dealing with the question of tuberculosis, and with this every man and woman sympathises. But I am sure that were we to consider the infant's

welfare during the first two years of life, we would contribute not only to lessening the amount of tuberculosis, but strike at the root of many other as important ailments which fill our hospitals, and account for the degeneracy of our urban population more especially. The early decay of the teeth is but one symptom of want of care of the infant, but it is an evidence of something wrong which is patent to everyone, and which causes anxiety to the parent, suffering to the child, and deterioration of the national health.

Have I made my case strong enough to induce this meeting to take some decided step? Are my arguments too illusory to stimulate you to serious action? If so, please neglect them, but do not, I beseech you, neglect the facts. They are these, that the condition of the teeth of our children is bad, that it is getting worse, that it has become aggravated during the past generation, and that it is controllable. Science is surely sufficiently advanced to deal with this subject, and the men or women amongst us who have the patience, the ability, and the patriotism to grapple with the subject will deserve well of their country, and eliminate from amongst us much unnecessary suffering and physical incompetency.

I would test the effects of my words and your earnestness in the matter by asking you to draw up a form of motion to be submitted to the Council of the British Medical Association to nominate a Commission to deal with the subject; on that Commission I would place two dentists and a physician, men who are versed in children's ailments and possessing the scientific attainments necessary for such work. I would suggest that a grant of £100 be asked for the purpose, and that the Americans, and perhaps the Germans, French, and Italians, be asked to co-operate with the British Commissioners and to present a report, preliminary if only that form be feasible, by January, 1901.

I have ventured to bring forward various ideas that have occurred to me in connection with this subject, not that I wish to stifle or restrict inquiries in other directions, but that they may serve as a basis to argue from. Their condemnation, if it is done with real knowledge, may help the cause of the preservation of our teeth just as well as if my statements were accepted as true explanations of the matter. It is to gain an end—the preservation of teeth—that I aim at, not at getting my statements accepted. And if by condemning and rejecting my poor arguments attention can be called to this important question of public health, I will still consider that they have done their duty.

DISCUSSION.

Dr. J. GROVES (Carisbrooke) said the subject was of the greatest possible importance, and they who understood the laws under which we "live and move and have our being," had the greatest possible responsibility to the community in connection with it. It was our bounden duty to influence the community in the direction of obedience to natural law, and in order to be able to influence them we must educate them. We had to check and stop this tendency to the artificial feeding of infants, to which was due, in the opinion of those who agreed with Mr. Cantlie, the increasing decay of teeth in childhood —an opinion which he himself had held for many years. It was a shame that infants should be denied the protection Nature provided because in their vanity and self-indulgence women shirked the duties of maternity,

Dr. R. ESLER (London) considered the question of the early feeding of children one of national importance. With an experience of a dozen years in a children's hospital, he was convinced that the majority of the children of the working classes, and a proportion of the children of the middle and upper classes, were being starved by the character of the artificial food supplied to them. He did not think that the funds of this Association could be better spent than in an effort to rectify the errors prevalent in the feeding of children during the first two years of their existence. It was with much pleasure he seconded the motion that a grant of £100 be asked for this purpose.

RESOLUTION.

The following resolution, proposed by Mr. CANTLIE, seconded by Dr. ESLER, was then put to the meeting, and carried unanimously:

That, in view of the early decay of the teeth prevalent in Great Britain, this Section requests the Council of the British Medical Association to appoint a Committee of not fewer than three persons to inquire into the subject and to report thereon to the Council in 12 months from the date of appointment.

THE FREQUENCY OF SICK-ROOM INFECTION IN TYPHOID FEVER.

By HERBERT PECK, M.D., D.P.H.,
Medical Officer of Health, Chesterfield Rural District.

The Basis of the Inquiry.

IT is generally accepted that the immediate cause of enteric or typhoid fever is the ingestion of the bacillus typhi abdominalis of Eberth, and that the invasion of the body by the micro-organism may take place in various ways, as during the consumption of water, milk and other foods, the inhalation of effluvia from drains or miasmata from soil, and in other less frequent ways. On the other hand, the subject of the relative frequency with which cases of the disease can be definitely attributed to one source of infection or another has received comparatively little attention, with the result that little is known of it, so that a well-known medical officer of health fairly described the situation when he recently stated that "in probably over 80 per cent. of the reported cases of typhoid fever the origin of the infection cannot be ascertained with any certainty."[1]

I attribute this to the fact that many cases arise under conditions in which any one of several causes may be to blame, and in which it is impossible to say that one or other is the cause of the disease. This is more frequently the case in urban than in rural districts, which latter offer greater facilities for accurate observation than do towns; but, on the other hand, the number of cases occurring in rural districts is often too small for deductions from them to possess much value, even when the medical officer of health is alive to his opportunities.

It is in consequence of the neglect with which this subject has been treated, and of my belief that the danger of infection from one particular source has been much underrated, that I have taken as the subject of this paper "The Frequency of (what I have called for want of a better name) Sick-room Infection in Typhoid Fever."

My observations and deductions therefrom are based upon my personal inquiries into the 206 cases of typhoid fever notified to me while medical officer of health of the West Lancashire Rural District, during the six and a-half years ending September, 1898. The investigation of the cases necessitated the paying of more than 500 visits and much correspondence. The total probably includes some which were not cases of typhoid fever, but, though I saw a few of the patients at the request of their medical attendants, I have no means of settling which were and which were not true cases, and have therefore included them all.

The District.

The West Lancashire Rural District has an area of 68,614 acres, or about 107 square miles, and had, at the time of the census of 1891, a population of 25,684 persons, composed chiefly of farmers, persons engaged in or retired from business in Liverpool or other neighbouring towns, a few hundred colliers and fishermen, and the families of these.

About 40 per cent. of the houses in the district were supplied with water by public service at the commencement of the period dealt with, but the number thus supplied was gradually increased, and the percentage stood at 74 at the end of 1898. This affected my inquiry insomuch as it enabled me to exclude the water supply as a possible source of infection more frequently towards the end than at the beginning of the period. Twenty houses were connected with the sewer of a neighbouring district, but the remainder were drained into cesspools, which the sanitary authority required to be impermeable. The conservancy system was in vogue, but a large number of waterclosets existed.

Definitions.

Before giving particulars concerning the class of cases with which this paper chiefly deals, I consider it advisable to define as accurately as I can the class of cases included under each heading of the following table.

Soil Infection.

This includes the cases attributed to emanations from soil containing typhoid bacilli. The experiments of Drs. Robertson[2] and Sidney Martin[3] have established the long suspected fact that typhoid bacilli can exist for prolonged periods in organically polluted soil, and even increase in number.

The nine cases ascribed to this cause occurred at intervals during a period of several years in a hamlet which had been put in a sanitary condition and provided with a public water-supply, after being in an insanitary condition for many years, during which cases of typhoid fever frequently occurred. It is possible that one or more of the patients acquired the disease in another manner, but I ascribed them as I have done after careful consideration.

Drain Effluvia.

In the cases under this heading sewer gas was found to enter the houses in which the patients lived, either from broken or defective fittings.

Pollution of Watercourse.

Five of the patients whose cases are recorded under this heading lived in two houses which had nothing in common, except that they lived near a ditch or watercourse into which the excreta of typhoid fever patients had been thrown; owing to drought very little but sewage from an infected house higher up was passing down the stream. Two other cases occurred simultaneously on two dredgers working together on a canal which was polluted with sewage at that point.

The other cases occurred in persons living on the banks of ditches or streams into which filth was surreptitiously placed, and which were sometimes very offensive.

Manure.

Enormous quantities of manure are imported into the district, but the only classes of manure to which I attributed an outbreak of typhoid fever were "black manure," which consists of human excreta mixed with ashes and cinders, and "Oldham shoddy," which consists of human excreta mixed with refuse from cotton or woollen mills. One case was that of a child who searched among manure for marbles, and the remainder those of men who had been working among it, or who had it stored near their houses.

Water.

Many cases were probably due to this cause, but only one could be certainly attributed to it; this was the case of a woman who drank water polluted with the sewage of a neighbouring town, being the only one in the house to suffer at that time.

Importation.

This term includes:

(*a*) Cases in which the patient had been away from home for more than 14 days, and returned ill.

(*b*) Cases in which the patient returned home after an absence of not less than one week, and sickened between 5 and 14 days later.

(*c*) Several cases in which the patients worked in a neighbouring district on premises which inquiry—made at my request by the officials of the district—showed to be insanitary.

It is probable that several cases which should be included have been placed under "several possible causes."

Sick-room Infection.

I have used this term to include cases due to the ingestion of specific bacilli directly derived from excreta and suspended in the air of the sick room or infected part of the house, whether this took place in the act of eating or drinking, the swallowing of saliva, or in any similar way. The significance of the term will become more apparent upon a perusal of the cases ascribed to this cause.

Several Possible Causes.

This term covers those which occurred under circumstances which rendered it impossible for me to ascribe the origin of the disease to any one of several of the above defined causes, or to any other cause—such as milk infection, privy infection, and so forth—with a reasonable degree of certainty.

No Ascertainable Cause.

This term explains itself. Included under it are doubtful cases which occurred on sanitary premises and undoubted cases which could not be ascribed to any known cause.

SUMMARY OF CASES.

Soil infection	9 cases equal to	4.37 of the whole.	
Drain effluvia	21 ,, ,,	10.20 ,, ,,	
Pollution of watercourse ...	9 ,, ,,	4.37 ,, ,,	
Manure	6 ,, ,,	2.91 ,, ,,	
Water	1 case ,,	0.50 ,, ,,	
Importation	25 cases ,,	12.13 ,, ,,	
Sick-room infection ...	28 ,, ,,	13.50 ,, ,,	
Several possible causes	69 ,, ,,	33.50 ,, ,,	
No ascertainable cause	38 ,, ,,	18.44 ,, ,,	
Total... ...	206 cases.		

GROUP I.—The patient, 35 years of age, frequently visited her mother and sister, living in another district, when they were suffering from the disease and fell ill as they were recovering.

GROUP II.—A woman, aged 29, came home from service in an early stage of the disease. Her sister, aged 11, slept in the same bedroom throughout the illness and developed the disease in a typical form about a fortnight after her recovery.

GROUP III.—A gentleman came to his country house while suffering from the disease, and one of the maidservants went down with it during his convalescence. She did not see her master during his illness nor did she wash any infected clothing, and is believed to have contracted the disease through eating delicacies which had previously been in the sick room.

GROUP IV.—A priest, aged 30, attended patients suffering from the disease and was taken ill with typhoid fever three weeks later.

GROUP V.—A woman, aged 37, who had been frequently from home, developed the disease and died. Her child, aged 9, frequently sat with her mother and was taken ill the day she died. An elderly woman came from some cottages half a mile distant and nursed her through her illness, also washing her clothes, and developed the disease as her patient recovered. I know from personal observation that she sometimes took food in the sick room. She returned home and was nursed by her daughter, aged 25, who, notwithstanding my remonstrances, slept in the sick room and developed the disease nine days after she had disinfected and cleaned the house. A child of 4 years was also taken ill, but the medical attendant did not regard her complaint as typhoid fever, though there was considerable gastro-intestinal disturbance.

GROUP VI.—A woman, aged 30, was taken ill with typhoid fever and was nursed by a midwife. Her nurse returned to her home in a neighbouring township at the conclusion of her illness and developed the disease about a week later. I can only attribute her illness to her swallowing her saliva or eating in the sick room, as I know she did on at least one occasion. Several members of the family living in the house adjoining that of the nurse frequently visited her and three of them were taken ill, but only one was notified as suffering from typhoid fever.

GROUP VII.—A woman, 29 years, drank water from a brook polluted with the sewage of a neighbouring town, and was taken ill with typhoid fever between two and three weeks later. Her husband nursed her through her illness and then developed it himself, whereupon he went to stay at the house of his father a quarter of a mile distant. His brother, aged 6, was taken ill as he got better. The house was of only one storey and the sick room door was often left open and so ventilated into the house.

GROUP VIII.—A sailor, 42 years, came home from a long voyage and was reported the same night as suffering from typhoid fever, from which he died. His father slept in the sick room and was taken ill with the disease nine days later. A woman, 32 years, nursed them and was taken ill between four and five weeks after the return of the first patient; she was removed to a local hospital where she died. A boy, 7 years, slept in a room communicating with a sick room of the first two patients and developed the disease six weeks after the return of his uncle, the first patient, from sea. Fourteen days later his other uncle, 27 years, who slept with him until the commencement of his illness, also went down with the complaint. I had recently condemned the premises on which these cases occurred as unfit for human habitation, but they were carefully attended to throughout the series of cases, for which they were in no way responsible. The water supply was the same as that of a dozen other households which did not suffer from the disease. The excreta were disinfected with corrosive sublimate solution, 1 in 960, from the commencement of the outbreak, and I can only attribute the disease to the fouling of the bedlinen.

GROUP IX.—A young man, aged 21, stripped off the wall-paper of a room in which there had been a case of typhoid fever, and began to be ill twelve days later. He was reported on the sixteenth day to be suffering from typhoid fever.

GROUP X.—A girl, 8 years, was allowed to sleep in the same room as a patient suffering from the disease (which he probably contracted outside the district), the medical attendant saying that this was "quite safe." She was taken ill nineteen days after the first patient.

GROUP XI.—A girl, 17 years, slept in a room leading from the sick room of a typhoid fever patient, and began to be ill three weeks after the latter, the disease being well marked.

GROUP XII.—A woman, 26 years, worked on a canal boat, and probably contracted the disease outside the district. Her brother, 29 years, attended to her on the boat, and began to be ill twenty-one days after she did.

GROUP XIII.—A girl, 7 years, contracted the disease and died. Her sister, 18 years, came home about a week before the death and attended to her, being assisted in the task by her father. Both father and daughter contracted the disease, and the latter died.

GROUP XIV.—The first patient was one of two mentioned as having contracted the disease while working on canal dredgers, and was brought home ill, but died twelve days later. His sister, 7 years, was frequently in the sick room, and was taken ill with the disease twenty-two days after his return home.

GROUP XV.—A girl, 7 years, was "feverish," and suffered from diarrhœa, but was not seen at that time by a medical man. A brother and two

sisters slept in the same bedroom, and developed the disease simultaneously, about five weeks after the commencement of her illness. Their mother nursed them, and developed the disease four weeks later. Their next-door neighbour assisted them with the housework during the illness, and a child which she frequently brought into the sick room developed the disease.

Group xvi.—A person suffering from typhoid fever was frequently visited by his uncle, aged 40, who spent many hours at his bedside. The latter lived about two miles away, and took to his bed twenty-six days after his last exposure to infection.

Conclusions and Remarks.

The sixteen groups of cases described above include 28 which may be accepted as cases of "sick-room infection," equal to 13.5 per cent. of the cases investigated; 4 other cases were probably also due to this cause, but I prefer to exclude them rather than weaken a good case by the employment of doubtful evidence. It is also probable that other cases are included under the headings "Several Possible Causes" and "No Ascertainable Cause."

My conclusions from the cases detailed are:

1. That sick-room infection is more common than is supposed, and that the danger of it does not receive the amount of attention it deserves.

2. That sick-room infection is much commoner in the small and often crowded houses of the poor than in the larger houses of the well-to-do.

In support of these I may say that though it appears remarkable upon first consideration that so little importance should be attached by the medical profession to this mode of infection, reasons for it are not hard to find. I think the chief of them are the difficulty of excluding other possible causes and the comparatively small number of cases met with by individual practitioners. Another is the fact that it is the practice in some general hospitals to treat typhoid-fever patients in the same wards as patients suffering from other diseases. I do not consider the practice a wise one, for accidents may happen even in a hospital, though there is a great difference between the amount of risk incurred in a hospital, where the excreta are cremated or carefully disinfected, and the stock of linen is practically unlimited, and articles are removed as soon as soiled, and in a cottage, where the importance of the disinfection of the excreta is not understood and the stock of linen is very limited, so that soiled linen is sometimes used for days and even weeks. In connection with this latter point I may say that only two of the cases detailed—namely, Nos. iii and xvi, occurred in houses with more than three bed rooms, and these did so under peculiar circumstances.

Under the conditions usually met with in small houses, opportunities are afforded for the drying of portions of the excreta of the patients and the diffusion through the air of the sick-room of the typhoid bacilli, and, possibly, their spores. Those who have noticed the comparatively bulky motes illumined in a sunbeam will understand how this occurs.

Dr. Philip Boobbyer[4] found that 85.3 per cent. of the cases which occurred at Nottingham during the ten years ending 1896 happened in houses of five rooms or under, and 14.7 per cent. in larger houses. The sanitary condition of the larger houses may have been better than that of the smaller, and their occupants may have been more intelligent or docile than those of the cottages, but my own experience teaches me that this sidelight of Dr. Boobbyer's inquiry into Endemic Typhoid Fever in Nottingham tends to prove my contention that a larger number of cases of typhoid fever than is suspected is due to what has been called "aërial" and "direct" infection, but which I consider might be more appropriately called "Sick-room infection."

Bibliography.

[1] and [2] Notes on an Experimental Investigation into the Growth of Bacillus Typhosus in Soil, by John Robertson, M.D., B.Sc., in British Medical Journal, January 8th, 1898. [3] Report by Dr. Sidney Martin on the Growth of the Typhoid Bacillus in Soil, in *Twenty-seventh Annual Report of the Local Government Board.* [4] Endemic Typhoid Fever in Nottingham, by Philip Boobbyer, M.B., in *Journal of the Sanitary Institute*, January, 1899.

Discussion.

Dr. H. R. Kenwood (London) thought Dr. Peck's paper afforded further useful evidence of the danger which most medical officers of health had repeatedly noted as attending the isolation and even sick nursing of typhoid patients in their homes; and the paper testified to the great desirability of isolating the disease in the separate wards of an isolation hospital.

Dr. J. Groves (M.O.H., Isle of Wight) said that medical officers of health were familiar with what Dr. Peck called sickroom infection in enteric fever, but he thought a useful purpose would be served by bringing the subject forward again. Dr. Walsh's suggested inquiry into the infectivity in epidemic diarrhœa would be useful. It was desirable to know as much as possible about the conditions in order that we might take precautions against them. Doubtless special susceptibility was one of them.

Dr. Herbert Peck, in reply, said that he considered the subject had been unduly neglected. He regretted that he could say little with regard to summer diarrhœa, but though he inquired into all the cases which came to his knowledge while medical officer of health for West Lancashire, he only found one case in which spreading took place. In this one the patient infected three other persons.

THE INFLUENCE OF PROLONGED STANDING IN THE PRODUCTION OF WOMEN'S DISEASES.

AN ANALYSIS OF ONE HUNDRED CASES TAKEN ALPHABETICALLY FROM THE RECORDS OF ST. MARGARET'S HOME, GLASGOW, *re* THE PARLIAMENTARY BILL FOR SHOP GIRLS' SEATS (SCOTTISH SECTION).

By J. Stuart Nairne, F.F.P.S.Glas., F.R.C.S.Edin.,

Surgeon to the Glasgow Samaritan Hospital for Women.

The Bill for providing shop girls with seats has passed the House of Lords, and become practical law for England. The same measure for Scotland was rejected by the Upper House on the motion of Lord Salisbury, who also moved the rejection of the Bill for England, but failed to carry it.

The Scottish Bill passed the House of Commons without the production of any medical evidence as to its necessity; and it was rejected in the House of Lords on general grounds advanced by Lord Salisbury, and in the absence of any medical testimony either for or against its adoption.

In the discussion, however, on the English Bill in the Lords, medical testimony was freely quoted in the House, namely, the tables given below. That Bill passed by a considerable majority; and I am glad to think that the result was, to some extent, due to a fair consideration of the issues involved in these records.

The Scottish Bill has to run the gauntlet once more; and although the result can hardly be questionable it seems to me that a few points have emerged in the course of events which demand our attention.

I.—The Analytical Tables.

These tables were not prepared for the Scottish Bill as it was presented to the House of Commons. I understand that no medical evidence whatever was asked by anybody. It seemed to be taken for granted that a Bill which had for its ostensible object the amelioration in some manner of the conditions of labour in a section of the working classes required no medical support; that its ostensible object was in itself a sufficient ground for its presentation, and a sufficient justification for its passing.

This, however, did not prove to be the case, and a lesson all round was administered. The Bill was produced under the auspices of the Scottish Women's Trades Union, of which Miss Margaret Irwin is the indefatigable secretary, and Mr. Ballantyne, Factory Inspector, of Glasgow, the Convener of Council.

After the Bill had been thrown out by the Lords Miss Irwin communicated with me, referred to the desire of certain members of the Legislature for some direct medical testimony on the matter, and asked me categorically if I was of opinion that prolonged standing was detrimental to the health of women. I answered Yes. And then she asked if I could give her any statistics in support of my statement, and I replied as follows:

"Dear Madam,—You have asked me if I can substantiate my statements with regard to the evil effects on the health of

girls compelled to stand for long periods daily in shops and otherwise.

"Of the absolute truth of these statements I have no doubt whatever; experience and observation in themselves are a sufficient ground for the individual to form a definite and accurate view of a subject, and generally are the only means whereby a physician arrives at any valuable conclusion with regard to disease. But unless he has adopted some method of tabulating his observation and recording his experience, it is next to impossible to present his conviction to the public in a form in which they can recognise the truth for themselves.

"I wish to make this statement to account for the difficulties that have hitherto beset the due recognition of the above which you and your council have set themselves to remedy in some degree.

"It would be easy to produce general medical testimony that long periods of standing are detrimental to girls. In fact it would be difficult to get one medical man who would testify otherwise. But to come from the general to the practical particular, and ask categorically in what respects was there any damage done, how many girls were rendered unfit for work or duty, and were these only partial or complete, temporary or permanent disablements, it would be very difficult indeed to find the corresponding categorical answer which would satisfy the inquirer.

"On these points I am in a position to answer categorically, and to supply sufficient statistical evidence, not only to justify my own conviction, but to prove that it is high time for something to be done to mitigate a great evil.

"I have been for over thirteen years Chief Surgeon to the Free Samaritan Hospital for Women and to the free day for women in Blythswood Hospital and St. Margaret's Home, Glasgow. The Samaritan Hospital is by far the largest hospital for women in Scotland, and I shall see as many as 50 women in a day for free consultation. It will, therefore, be plain that with such a vast number of special patients I have had every opportunity of comparison and judgment. The cases for years have been arranged in books and sheets tabulating the following items: Name, address, age, single or married, occupation, family history, disease, treatment, result.

"It is manifestly impossible, in the limited time at my disposal—and I think it also unnecessary—for me to tabulate the thousands of cases that have passed through my hands, but from the records I have extracted 100 cases. No special method of selection of the cases has been adopted. They have been taken in rotation by alphabetical order, and I have noted only those points that are germane to the question. I shall let the tables speak for themselves, whatever tale they may tell."

TABLE I.—SINGLE OR MARRIED.

The percentage of single to married women who came under treatment was: Single, 12, married, 88. The ages of the single women were:

Between 20 and 30	8
Between 30 and 40	2
Over 40	2
Total.	12

Of the single women 7 were engaged in shops, and 5 in other employments.

Of the married women 40 were engaged in shops, 43 in other employments, and in 5 cases the nature of the employment was not ascertained. Thus of the whole number 47 per cent. were employed in shops.

TABLE II.—*Showing Proportion amongst "Married," Formerly Shop Girls of Special and Other Disease.*

No.	Age.	Disease.	No.	Age.	Disease.
1	29	Uterine.	54	40	Ovarian.
3	30	,,	55	26	Uterine.
5	43	Appendages.	57	47	Tumour.
8	29	Uterine.	60	25	Uterine, anæmia.
12	27	Heart.	62	35	Neurosis.
14	31	Appendages.	64	25	Appendages.
15	32	,,	68	27	Uterine, anæmia.
17	31	Ovaries.	70	29	Appendages.
18	30	Uterine.	71	24	Bowels, anæmia.
20	29	Chest.	75	32	Cancer.
26	22	Uterine.	79	31	Appendages.
30	27	,,	80	34	Bladder.
31	30	Ovaries.	82	62	Bladder.
33	25	Anæmia.	86	25	Heart.
36	39	Ovaries, anæmia.	87	28	Appendages.
42	24	Anæmia.	92	33	Uterine.
44	38	Injury to bladder (accident).	94	50	Tumour.
			97	28	Hæmorrhoids.
47	28	Anæmia.	98	40	Miscarriage.
49	31	Ovarian.	100	20	Tumour.
53	32	Ulceration.			

Special diseases	27
All other diseases	10
Anæmia	3
Total.	40

TABLE III.—*One Hundred Cases in Alphabetical Order, giving Age, Married or Single, Occupation, Disease.*

No.	Age.	M. or S.	Occupation.	Disease.
1	29	M.	Shop	Uterine, A.
2	26	M.	Servant	Appendages, A.
3	30	M.	Shop	Uterine, A.
4	43	M.	Factory	Bladder.
5	43	M.	Shop	Appendages.
6	31	M.	Clerk	Kidney.
7	54	M.	Servant	Bladder.
8	47	M.	Waitress	Rectocele.
9	47	M.	Waitress	Rectocele.
10	27	M.	None	Congenital malformation, A.
11	30	M.	Servant	Hæmorrhoids.
12	27	M.	Shop	Heart.
13	28	M.	Factory	Bladder, A.
14	31	M.	Shop, dairy	Appendages.
15	32	M.	Shop	Appendages.
16	55	M.	Servant	Stomach.
17	31	M.	Shop	Ovarian.
18	30	M.	Shop	Uterine.
19	29	M.	Servant	Bladder.
20	29	M.	Shop	Chest.
21	57	M.	Servant	Tumour.
22	54	M.	Factory	Uterine.
23	27	S.	Shop	Appendages, A.
24	21	S.	Shop	Stomach, A.
25	21	M.	Servant	Uterine A.
26	22	M.	Shop	Uterine.
27	64	M.	Farm servant	Debility.
28	19	M.	Factory	Kidney.
29	31	M.	Needlewoman	Appendages, A
30	27	M.	Shop	Uterine.
31	30	M.	Shop	Ovarian.
32	40	M.	Servant	Stomach.
33	25	M.	Shop	Uterine, A.
34	48	M.	Teacher	Hernia.
35	64	M.	Servant	Debility.
36	39	M.	Shop	Ovarian.
37	39	M.	Not known	Bladder.
38	34	S.	Shop	Bladder.
39	26	S.	Dairy	Pregnancy.
40	41	M.	Factory	Uterine.
41	43	M.	Servant	Chest.
42	24	M.	Shop	A.
43	45	M.	Not known	Tumour.
44	38	M.	Shop	Injury to bladder.
45	30	M.	Seamstress	Uterine, A.
46	43	M.	Factory	Cancer.
47	28	M.	Shop	A.
48	48	M.	Servant	Cancer.
49	31	M.	Shop	Ovarian.
50	39	M.	Fruit-seller	Appendages.
51	28	M.	Factory	Injury to bladder.
52	28	M.	Servant	Debility.
53	32	M.	Shop	Ulceration.
54	40	M.	Shop	Ovarian.
55	26	M.	Shop	Uterine.
56	?	?	?	?
57	47	M.	Shop	Tumour.
58	23	M.	Servant	A.
59	34	S.	Factory	Stomach.
60	25	M.	Shop	Uterine, A.
61	40	S.	Factory	Ovarian.
62	35	M.	Shop	Neurosis
63	38	M.	Servant	Ovarian.
64	25	M.	Shop	Appendages
65	44	M.	Servant	Uterine.
66	20	S.	Shop	Tuberculosis.
67	25	S.	Shop	Bowels.
68	27	M.	Shop	Uterine, A.
69	29	M.	Servant	Stomach.
70	29	M.	Shop	Appendages.
71	24	M.	Shop	Bowels, A.
72	34	M.	Umbrella maker	Abscess.
73	26	M.	Servant	Uterine.
74	40	M.	Servant	Abscess.
75	32	M.	Shop	Cancer.
76	28	M.	Factory	Debility, A.
77	30	M.	Factory	Uterine.
78	49	M.	No occupation	Heart.
79	31	M.	Shop	Appendages
80	34	M.	Shop	Bladder.
81	38	M.	Servant	Debility.
82	62	M.	Shopkeeper	Bladder.
83	35	M.	Farm servant	Bladder.
84	41	M.	Unknown	Cancer.
85	50	S.	At home	Cancer.
86	25	M.	Shop	Heart.
87	28	M.	Shop	Appendages.
88	36	M.	Factory	Bladder.
89	43	M.	Servant	Uterine.
90	21	S.	Shop	Uterine.
91	20	S.	Dressmaker	A.
92	33	M.	Shop	Uterine.
93	56	M.	Servant	Stomach.
94	50	M.	Shop	Tumour.
95	28	M.	Factory	Tumour.
96	37	M.	Factory	Cancer.
97	28	M.	Shop	Hæmorrhoids
98	40	M.	Shop	Miscarriage.
99	22	S.	Factory	Malformation.
100	26	M.	Shop	Tumour.

TABLE IV.—*Showing Proportion amongst Single of Special and Other Diseases.*

No.	Age.	Special.	Anæmia.	General.
23	27	Appendages	X.	—
24	21	—	X.	Stomach.
38	34	—	X.	Bladder.
39	26	Pregnancy	—	—
66	20	—	—	Tuberculous.
67	25	—	—	Bowels.
90	21	Uterine	—	—
		3	3	4

Note on Anæmia.

(The A. in the tables stands for anæmia.)

This disease requires a notice for itself. It is without doubt the chief curse of growing girls in cities, and it is to its prevalence amongst them that I attribute the subsequent breakdown in such a large number after marriage. I have not tabulated anæmia in the special diseases incident in the present case, but that is only because its existence is so general. The course of events is quite plain. There is not enough outdoor exercise, there is necessarily deficient aëration of the blood, there is the long-continued strain of standing or stooping, and, therefore, deterioration of the blood cells sets in slowly, and insidious—anæmia sets in. In itself it is accompanied with no distressing symptoms except weakness. It is, therefore, battled against and it is only when the organic system, which is so dependent on a healthy blood supply for its maintenance in firmness begins to suffer, that pains and aches show themselves. The special organs lose their tone, suffer from passive congestions which, under the irritation of unsuitable conditions at special times, pass into acute inflammation, prolapses, and the various other uterine and ovarian ailments which render a woman's life miserable.

SUMMARY.

(*a*) Seven per cent. of unmarried shop girls only come for medical attendance, but

(*b*) Forty per cent. of married women who have been shop girls come under medical attention at a very early period in their married life, namely, mostly under 30 years of age (*vide* Table I).

(*c*) Out of the 7 per cent. of single women 3 come with diseases special to women, and out of the 40 per cent. of married 27 come with the (*d*) same class of disease, so that we have a clear 30 per cent. of women who are or have been shop girls suffering from these special diseases.

(*e*) Why should there be comparatively such a small percentage of single girls in actual employment under treatment, and such a large percentage of married women? This looks very extraordinary at first sight, and seems to somewhat minimise the importance of the position I have maintained. A moment's consideration will, however, put this right. The girls in work are as a rule kept busy from morn till night; they are young and have not yet exhausted their energies; they have little time to rest and no time to complain. Parents and masters are alike frequently unobservant of the early symptoms of exhaustion and overwork. The girls themselves are anxious to work: they like to be considered strong, the world is before them, and much brighter if they look or pretend to be well and healthy. They are much more likely to form a suitable "match" if they are strong, and therefore they go on, and only the small 3 per cent. come for advice and assistance who can go on no longer.

(*f*) Now with regard to the 40 per cent., the alarmingly large proportion of 27 who suffer from special uterine and ovarian disease shows emphatically that it is no chance illness, but that it must be a regular and frequent consequence of some condition of their daily work. One of the conditions, and I have no hesitation in saying it, one of the most potent, is the long period of standing and hanging about on their feet.

Statistics can proverbially be made to prove anything, but in this case I am only dealing with facts and supplying the proportionate numbers of these facts. I have indicated a definite number of shop girls, having no way specially selected them, and I have shown that as a statistical fact they are burdened with a definite number of special diseases. At the short time at my disposal it is impossible to deal with a larger number of cases, but if it were necessary I would do it; it is not necessary. I am quite aware that a thousand would give identical results. The girls are broken down and wearied while in active work. They keep at their work by force of circumstances. They get married, and presumably have an easier time of it; but their former hard conditions now tell on them. They suffer from inflammation and displacements and dislocations, and the new order of things, instead of mending matters, makes them worse, and they can endure no longer.

I sincerely hope that you will succeed in your endeavour to mitigate some at least of the hardships pertaining to this occupation, and I believe that the providing of seats for the girls, so that they might rest themselves as opportunity occurred, would be an immense boon—a step in the right direction.

II.—THE PLACE OF MEDICAL EVIDENCE.

I sincerely hope that the expression of opinion in this important body will bear out my contention as to the importance which should be attached to medical testimony in all cases where laws are proposed to be passed, or modifications of existing laws made, relating to the well-being of the community at large, and especially to the general health of the people. I wish you to recognise with me the necessity for insisting upon the value of medical evidence in all health questions coming before the Legislature. The career of these Bills—Scottish and English—exemplifies what I mean. I am sorry the Scottish Bill did not pass, because I believe it to be intrinsically a good one and a necessary one. It will be all right; it will pass by-and-by. But I am glad it received a check just where it was needed. No doubt the Bill seems a simple modification of the Factory Act, but it applies to a section of the working classes that was deliberately omitted from the sphere of that Act, and it would certainly open up a field for the possibility of abuse were the scope of any Act to be quietly enlarged without skilled advice; and especially Acts relating to health where medical testimony can be so readily obtained.

One cannot be accused in questions like these of having any ulterior motives. I do not see that we have any purpose to gain, or if we had I do not see how non-electoral shop girls could help us. Our action must presumably be quite disinterested, and therefore our opinion should have the greater weight.

Again, it is a real comfort to find that certain legislators before taking up a decided attitude with regard to matters of health, hygiene, and social improvement, are anxious to be guided by medical skill. This little incident of throwing out the Scottish Bill is a proof of that, and we may take it as at least one of the justifications of the continuance in existence of that "bloated" institution—the House of Lords. All things in order.

That Lord Salisbury did not do what was right here is my opinion. But I have no intention of dealing with his arguments *seriatim*. I am anxious, however, to deal shortly with two points, which appear to be the only ones worth considering in the argument which led to the rejection of the Bill. The first relates to Lord Salisbury's belief that if seats are provided for shop assistants (girls) women will be supplanted by men in their occupation. And the second relates, as a consequence, to the increased difficulty that women would then find in securing respectable and remunerative employment.

If this belief were well founded and likely to be fulfilled, it would be a very sad affair indeed. But we who are mixing constantly with the shop-keeping classes are not likely to agree in this belief. Nay, the very opposite. As likely indeed is it that the proverbial man will cut off his nose to spite his face. Shops are kept open for the purpose of making money. I never heard of a shop being carried on for philanthropic purposes. The middleman is a man of many parts; but he won't employ higher-priced labour than he can help. And I am not aware that women have come so seriously already into competition with men as to make men's labour cheaper. I have no doubt it is a threat; and I have no doubt it will remain a threat. No—no—the man has yet to be found who will stand from ten to sixteen hours in a shop for the wage that is paid to a woman.

But suppose the girls were all thrown out of shop work—which is manifestly absurd—something else quite as respectable would be sure to turn up. We have lived into a day now when the resources of woman's art are quite as great as man's. Whether we like it or not, we have to recognise it; and there

is hardly a trade, profession, or pursuit but would afford employment to women as well as to men.

This is not the place for politics, and I therefore say no more. But woe be to the politics that sacrifices humanity to its soulless creed; and woe be to that man through whom such politics thrive.

Discussion.

Dr. J. Groves observed that many years ago he was associated with an inquiry into possible prejudicial results in women of continuous standing for many hours. He was convinced, as a result of that inquiry, that hyperæmia of the uterus and ovaries at the catamenial period, and the influence of gravity upon the temporarily enlarged organs, led not only to prolapsus but to other uterine and ovarian derangements. Not only were women who stood every day for many hours prejudiced in this way, but their veins became varicosed, and they after a time exhibited symptoms of various forms of neuritis, due in part, perhaps, to the continuous contraction of dorsal muscles. Here, again, they who, as medical men, understood these things, should make their opinions known, and endeavour to influence public opinion. He would be pleased to move the following resolution on the subject:

That this Section recognises the evil effects of long standing upon the health of women, and urges the Council to promote the passing of the Bill as to providing seats for shop girls (Scottish Section).

The resolution was seconded by Dr. Peck, and carried unanimously.

AN INVESTIGATION INTO THE BACTERIOLOGY (AËROBIC) OF THE AIR AS FOUND IN SCHOOLS.

By R. Atkinson Dove, M.B.

The researches of Pasteur in 1860 demonstrated the presence of living bacteria in air, and since that date many investigations have been made, but the results when collected do not amount to many pages. The popular belief that the air teems with micro-organisms was exploded by Stern, who showed at the Hygienic Institute of the University of Breslau, that if air be left undisturbed even in places known to abound plentifully with bacterial life the number of micro-organisms found will be exceedingly limited, the effect of gravity playing a very important part in so ridding the atmosphere of organisms, which if not injurious are at least unnecessary to the health of the community.

There has been no uniformity in the method of conducting the examination of air. Each investigator adopted his own particular apparatus. Pasteur demonstrated his results by aspirating a considerable quantity of air through a filter of gun-cotton. He then dissolved the gun-cotton in alcohol and ether and filtered; from this he prepared his cultures. Another method employed by the earlier investigators consisted in collecting the atmospheric moisture precipitated as dew. Again in 1870 Maddox and Cunningham made systematic attempts with the assistance of Pouchet's aëroscope. The names of Petri, Miquel, Hesse, Koch, Frankland, Sedgwick, and Tucker suggest their own particular apparatus. The method now generally accepted is that of Sedgwick and Tucker, but the open dish of Petri, though not so strictly reliable, gives fairly satisfactory results.

With a view to ascertaining the state of the air in schools with regard particularly to micro-organisms the appended series of investigations were undertaken with the permission of the medical officer of the School Board of London.

The methods adopted were those of Sedgwick-Tucker and Petri. In the former a slight modification of the Sedgwick-Tucker tube was used, the expanded portion being somewhat spindle-shaped, doing away with all shoulders and allowing of a wider mouth and more surface. This was fused to the ordinary glass tube, and plugged with cotton wool at the neck, with two small plugs in the narrow tube—one at the open end, the other a few cubic centimetres from the wide part. After sterilising, the narrow part of the tube up to the first plug was filled with finely-powdered sugar previously sterilised, and the whole again sterilised at 120°. A portable aspirating bottle, by means of which a known quantity of air could be drawn through completed the equipment. After aspirating the required amount of air through the tube the powdered sugar, with the arrested micro-organisms in it, was shaken into the wide part of the tube, and about 15 c.cm. sterilised 15 per cent. gelatine melted and poured in. In this the sugar readily dissolved, and by cooling a roll culture was made in the tube. In the second series the Petri dish with the 15 c.cm. gelatine or agar was exposed for 10 minutes, and the agar dish incubated at 37° C. The results were expressed as organisms falling per square foot per minute.

On each occasion an estimation of the impurity in volumes of carbonic acid per 1,000 c.cm. was made by means of the Lunge Zeckendorf minimetric apparatus. As this method is purely empirical, relying for its results on the experimental comparison with Pettenkofer, the figures can only be taken as approximately correct, but sufficiently so to represent the varying conditions of CO_2 as found in the class rooms, and as an adjunct to the sensation experienced in going into the room from the fresh air; no conclusions could be drawn from the effect of excess of CO_2 in the air of the rooms on the number of micro-organisms present; in fact, on referring to experiments in which no disturbance of the air took place, though excess of CO_2 was present, the number of micro-organisms found was almost the lowest of the series. In all the schools with the exception of No. 7, and the two above mentioned, the ventilation was exceptionally good; indeed in some instances it was overdone and became a draught.

The cubic air space per head came up to and considerably exceeded the standard required by the London School Board; in one instance only (No. 14) was it below.

To exemplify the maxim demonstrated by Professor Tyndall, that the air of rooms must be in motion to contain micro-organisms, the air was examined whilst the class was (*a*) at rest, (*b*) drilling, (*c*) moving in or out.

The results are divided into two series. In the first series, both the Sedgwick-Tucker tube and the Petri dish were used. In the second series the Sedgwick-Tucker apparatus was only used when a strong draught caused the Petri dish to be unreliable. It should be added that agar-agar was the medium employed in the results given, although in many cases gelatine was used as a means of comparing the liquefying and non-liquefying organisms, and the results, as far as they went, tended to confirm the view that in bad air the ratio of liquefying to non-liquefying organisms is increased. Agar was selected to allow of incubation and to permit of the accompanying photographs being taken, without liquefaction disfiguring the colonies.

The bacteriological examination of the colonies was undertaken at the Bacteriological Laboratory of King's College, London, and the following micro-organisms subcultured and recognised: B aurantiacus, B. aureus, B. fluorescens aureus, B. mycoides, B. luteus, B. fluorescens liquefaciens, B. putrificus coli, B. ochraceus, B. subtilis, B. mesentericus aureus, B. tetragonus versalis, Staphylococcus pyogenes aureus, Staphylococcus pyogenes albus, Micrococcus candicans, M. flavus desidens, Diplococcus citreus conglomeratus, Sarcina lutea, Sarcina alba, Saccharomyces rosaceus.

In all the plates, with the exception of Nos. 7 and 9, B. subtilis and Sarcina lutea were found.

With the exception of Nos. 1, 7, 9, and 11, M. candicans occurred in all.

The staphylococcus pyogenes aureus and the pink torula were likewise exceedingly common.

None of the recognised pathogenic organisms were found, but that they do occur in air has been demonstrated beyond doubt, as in the case of tubercle bacillus occurring in the air of the wards of patients suffering from phthisis, and their non-appearance in the ordinary methods of investigation may be accounted for by the enormous number of micro-organisms consuming the general pabulum, and crowding out the more pathogenic forms. With this in view it would appear to be a distinct commendation in our schools and other places to limit, as far as possible, the number of micro-organisms present. It is true that the great function of microbes is to break up into more simple combinations the complex molecules of the organic substances which form the bodies of plants and animals or their products, and it may be contested that, as we are constantly inhaling numbers of micro-organisms, a few more or less cannot have much influence on the general health, but it is impossible to say with any



Plate 1.—Class at rest. Rapid growth of B. fluorescens liquefaciens.

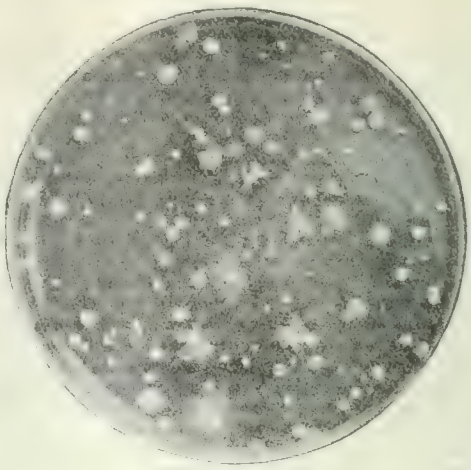


Plate 4.—Boys coming into class room.

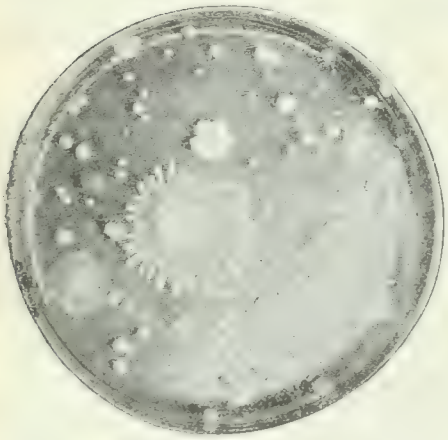


Plate 2.—Class drilling. Plate shows two growths of B. subtilis—star and colony directly above.

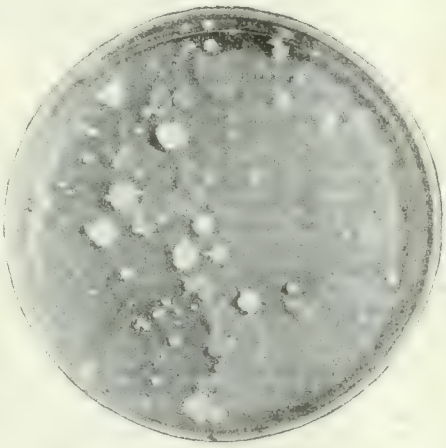


Plate 3.—Class drilling as in Plate 2. Another form of B. subtilis spreading over greater part of plate on sixth day.

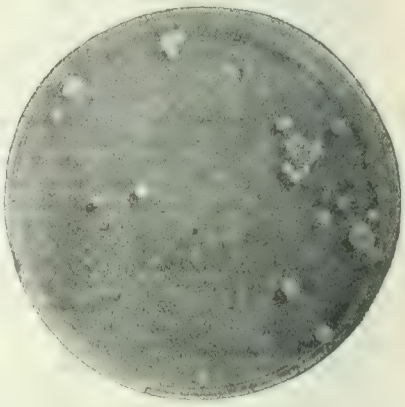


Plate 5.—Class at rest.



Plate 6.—Exposed in middle of room. Class at rest.

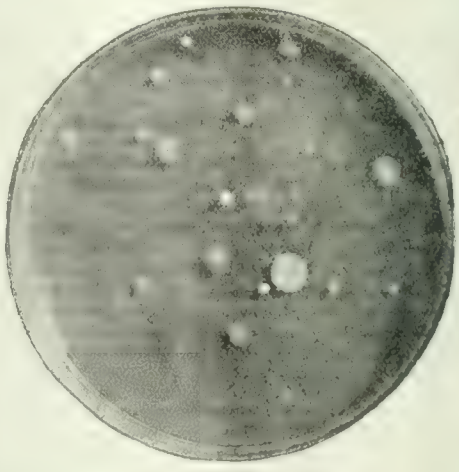


Plate 7.—Exposed under open window. Class as in Plate 6.

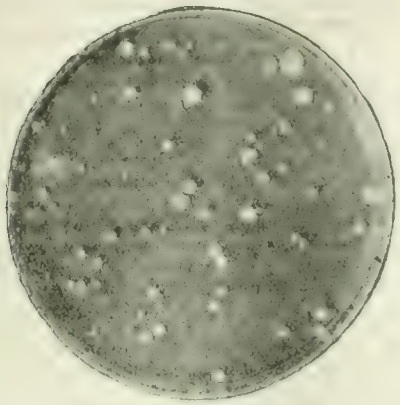


Plate 8.—Exposed in middle of class room. Half class removed during exposure.

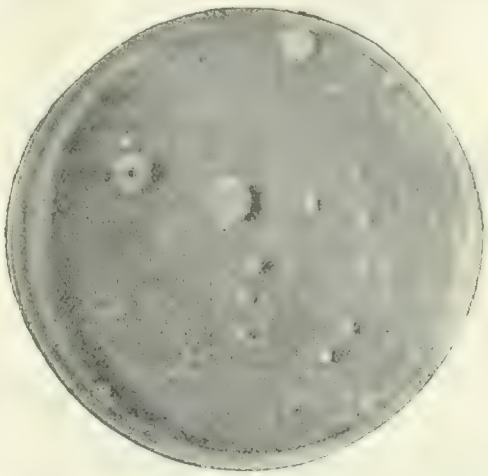


Plate 9.—Plate exposed near open window. Same conditions as Plate 8; mostly moulds.

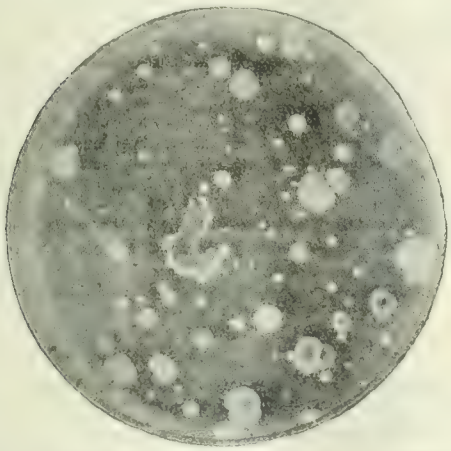


Plate 10.—Exposed in middle of class room. Large class moved to small class room during exposure.

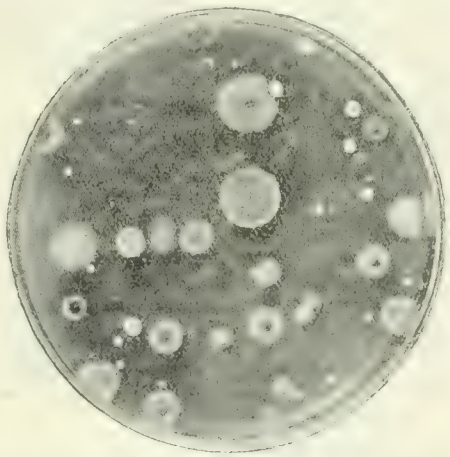


Plate 11.—Exposed near open window. Same condition as Plate 10; mostly moulds.

degree of certainty that these common micro-organisms do no harm. If it is true that a harmless bacillus or saprophyte can be made to produce a pathogenic effect, and that it is even possible that the pathogenic organism may, in the first instance, have been derived from a non-pathogenic saprophyte; it is, then, conceivable that the cases of sore throat, for example, which occur from time to time in schools, particularly among the "mouth breathing" members of the community; in the first instance mild, but, later taking the diphtherial type, are instances of the non-pathogenic becoming pathogenic; the bacilli arrayed in sufficient numbers for the attack, and assisted by the sometimes impure condition of the atmosphere, find, in the lowered vitality resulting, a soil suitable for their existence and multiplication, and so, overcoming the resistance of the tissues, assume as the paramount power a more virulent type. Some stress has been laid on the ratio of moulds to microbes, and in the three instances, 12A, 13A, 14A, the proportion was distinctly marked. To compare the effect of the purer air and the more polluted air, two Petri dishes were exposed in each room, one within about 2 feet of the open window and the other in the middle of the class room. All the former showed a ratio of moulds much in excess of those in the middle of the room. A point which is abundantly demonstrated in the table is the difference in number of microbes in what is termed a class at rest and the class drilling or moving out or in. On two occasions the master of the school was good enough to put the boys through what is tabulated as drilling. The ordinary drilling is carried on, weather permitting, in the open air, or in the large hall of the building. The former term "drilling" is not what one understands as calisthenics, but a "stand to," "open desks," "close desks," etc., with a good deal of shuffling of feet and disturbance of dust, and appears to be a routine practice of coming in or leaving school, and, although an excellent form of discipline, cannot be recommended at the beginning of school, the dust, micro-organisms, or organic matter thrown up into the air being anything but a healthy precursor of the hours of school work.

Draughts in the same way from open windows, whilst aiming at the purification of the air, disturb dust and micro-organisms which would be better allowed to rest. That the schools should be systematically cleaned and swept out every night after the children leave does not seem to be sufficiently insisted upon. I say advisedly systematically; the use of the brush, whilst giving a cleanly look to the room, throws up an innumerable number of organisms which again settle on the floor behind the brush, in the crevices, ledges, and walls of the room. This process is repeated day after day, and yet the same organisms remain in the room. In conclusion, the running of a damp cloth over desks, walls, and floor does infinitely more to sterilise the air than anything we can anticipate from repeated brushings. This is generally recognised in all bacteriological laboratories, hospitals, etc., where pathogenic

organisms are expected to exist, and should be the universal means of removing dust from all interiors.

School.	Number Present.	Cubic Feet of Air per Head.	Time of Day and Date.	Temperature Fahrenheit.	Impurity of Air in Volume of CO_2 per 1,000 c.c.	Micro-organisms per Litre.	Micro-organisms per Square Foot per Minute and Moulds.	Remarks.
	Boys.			Deg				
1	30	151	12.0 P.M., 23-5-99	64	1.00	34	50—5	Class at rest.
2	28	405	12.0 P.M., 25-5-99	62	0.87	77	101—16	Boys coming into class-room that another class has just left.
3	38	289	11.15 A.M., 30-5-99	64	0.83	189	214—20	Class drilling.
4	50	218	12.0, 5-6-99	75	1.15	20	32—5	Class at rest.
5	36	140	2 P.M., 5-6-99	76	0.74	46	67—6	Class moving into class room (draught).
6	33	143	12.0, 6-6-99	67	0.80	48	71—10	Class at rest.
7	54	163	12.0. 6-6-99	66	1.25	134	224—22	Class drilling.
8	30	170	2 P.M., 6-6-99	66	0.60	256	320—36	Class moving into class-room.
9	32	210	12.30 P.M., 13-6-99	67	0.80	—	480—6 *	Class moving out of class-room (draught from school).
10	30	325	12.30 P.M., 16-6-99	68	0.90	—	91—3	Class moving out.
11	33	261	2.30 P.M., 16-6-99	68	0.69	—	59—4	Class at rest.
12	30	157	2.30 P.M., 19-6-99	70	0.64	—	56—4	Class at rest.
12A	30	159	2.30 P.M., 19-6-99	70	0.64	—	36—14	Class at rest. Almost fresh air. Plate exposed 2 ft. from open window.
13	14	337	2.30 P.M., 19-6-99	72	0.69	—	104—8	Half class removed during exposure of plate.
13A	14	337	2.30 P.M., 19-6-99	72	0.69	—	33—17	Half class removed during exposure of plate. Exposed as in 12A.
14	108	93	3.0 P.M., 21-6-99	70	0.87	—	212—17	Large class moved to small class-room.
14A	108	93	3.0 P.M., 21-6-99	70	0.87	—	73—41	Large class moved to small class room. Exposed as in 12A.

* Mostly liquefying.

DOGS IN IRELAND.—A recent order of the Board of Agriculture forbids, under a penalty of £20, the landing of a dog from Ireland, whether taken from Great Britain or not, unless the person to introduce the dog has obtained before embarkation a licence permitting the landing of the dog. Applications for the licence must be made in writing to the Secretary of the Board of Agriculture, 4, Whitehall, London, S.W. The licence will require the detention of the dog for a period of six months on some suitable premises approved of by the Board. This period may, under special circumstances, be reduced to ninety days.

INTERNATIONAL CHARITIES CONGRESS.—A Congrès International d'Assistance Publique et de Bienfaisance Privée will be held in Paris from Monday, July 30th, to Sunday, August 5th, 1900. It will be presided over by M. Casimir-Perier, ex-President of the French Republic. Dr. Theophile Roussel, the author of the law which safeguards infant life in France, and at present at the head of the Conseil Supérieur de l'Assistance Publique, is the Honorary President. There will be four sections: I, Infancy; II, the Sick, Aged and Infirm; III, Able-bodied Paupers; IV, Help by Labour. The main questions suggested for discussion are (1) out-relief, (2) treatment of orphans and of children withdrawn from the custody of their parents, (3) should help by labour be left to private philanthropy? (4) the care of poor consumptives. French will be the official language, but communications in foreign languages will be received if accompanied by translations. Further particulars can be obtained from the Secretary-General, rue Cambacérès 7, Paris.

PRELIMINARY NOTE ON SOME EXPERIMENTS TO DETERMINE THE COMPARATIVE EFFICACY OF THE DIFFERENT CONSTITUENTS OF HAFFKINE'S PLAGUE PROPHYLATIC.

BY C. BALFOUR STEWART, M.A., M.B.CAMB.
[From the Plague Research Laboratory, Bombay.]

THE following short note gives the results of experiments done at the Plague Research Laboratory, Bombay, between February and May, 1899. The full account has been sent in to Government, and will appear in due course.

A number of rabbits were inoculated with increasing doses of a young culture of living plague in broth, and the somewhat unexpected result was found, that the rabbits which received the larger doses showed a smaller mortality. I thought it possible that during the growth in broth the latter had acquired sufficient prophylactic properties to render the animal immune to the microbes contained in the broth culture injected.

To see whether the prophylactic property lay in the broth altered during the growth of the microbe or in the sediment, several sets of experiments were done in which the broth was filtered through a porcelain filter. The sediment of a certain quantity of living plague culture was found to be more virulent than the same quantity of broth culture unfiltered when injected into rabbits.

Some rabbits were inoculated with the filtrate alone, others with the sterilised sediment alone, and immediately afterwards injected with a suspension of living plague from an agar tube. The result seemed to show that both the filtrate and the sterilised sediment possessed prophylactic properties.

Immunity seems to be conferred even when the animal is inoculated with the prophylactic immediately before the injection of plague.

In testing the virulence of a plague culture, it is evidently important to use only a very young broth culture or an agar culture.

REVIEWS.

WAR CORRESPONDENCE (HISPANO-AMERICAN WAR). Letters from Dr. NICHOLAS SENN, Chief Surgeon U.S. Volunteers Chief of Operating Staff with the Army in the Field. Reprinted from the *Journal* of the American Medical Association. Chicago: American Medical Association Press. 1899. (Crown 8vo, pp. 282.)

THIS book is an instalment of that full history of the Spanish-American war which has yet to be written; it is from the pen of an eminent surgeon fully cognisant of all that went on; the accuracy of his facts and the soundness of his deductions may therefore be entirely relied on.

Dr. SENN gives instructive, curious, and even amusing glimpses of the extraordinary military condition, both of officers and men, of the American army of volunteers, hastily mustered at the commencement of the war. Had such an undisciplined mob encountered a regular army, of even moderate fighting power, there could only have been one result—disaster.

The first sixty pages describe the enlistment and embodiment into battalions of the Illinois Volunteers (the writer's own State); the letters are "very American," for the elaboration of minute details is freely garnished with ethical and historical reflections and personal sketches, both male and female.

The very first matter which fell to Dr. Senn, as the medical head of the Volunteers, was to get together a staff of medical officers, of which, according to the State laws, five are attached to a battalion. It was done by advertisement and the issue of schedules, which the candidates had to fill up as to personal and professional qualifications. Those deemed eligible underwent a thorough physical inspection, and if found fit, a professional examination of a practical kind.

By this means a body of fairly good officers was collected, who physically "compared favourably with the line and field officers." Of course, they had no military experience, and had to be hastily instructed in the elements of military duty and hygiene; but their first work was to vaccinate every recruit right away, for the "conscientious objector" is summarily dealt with in democratic America.

One of the most curious features was the remarkable division of labour in the necessarily rapid medical inspection of recruits. First, they were examined in mass, and a rough elimination of all obviously and visibly unfit made; those selected were then inspected; one medical officer examined the chest, a second eyes and ears, a third mouth and neck, a fourth the extremities and abdomen, and yet a fifth made a broad survey as to "general aptitude for active service." No standards are mentioned.

By this system it is stated between 800 and 950 were examined in a day, until a total of 9,899 was reached; the rejections were about 10 per cent. What do our examiners of recruits, of whom only an expert can get through a dozen in an hour, say to this wholesale despatch? The inspection, even at best, must have been very superficial. Supposing the examiners had physical endurance to stick to such fatiguing work continuously for five hours, then the recruits must have been passed at the rate of three a minute! We suspect many bad bargains must have slipped through, who at the end of the war probably further swelled the gigantic American pension list, by diseases supposed to have been "contracted in and by service"!

It is mentioned that 25 per cent. of those examined presented some degree of varicocele; a proportion, we believe, much in excess of that found in British recruits.

The volunteers were massed in various "crowded camps," and with "imperfect equipment" and bad weather much sickness soon ensued. The most serious diseases were cerebro-spinal meningitis, typhoid fever, and septic pneumonia. Of course, with such masses of raw soldierly material, there was much confusion and lack of discipline in these camps, but comparatively little drunkenness.

Of the military officers, Dr. Senn gives some amusing accounts. Those of the United States regular army were everwhere highly spoken of, and all they should be; but those of the volunteers, pitchforked from civil life into military position by political interest, often made themselves the butts of ridicule. Fun is poked at the "lucky" ones, suddenly advanced from rank to rank; but a clean leap from "second lieutenant to lieutenant-colonel," is held to be beyond a joke. In another place, commenting on the want of sufficiently high rank in the medical department, Dr. Senn says: "Major-generals (in these camps) were in abundance; brigadier-generals by the dozen; colonels turned out by the hundreds." Many of the latter, in the gayest of "bran new uniforms, could not handle a musket to save their lives," much less command men. Some were seen "even attempting the unusual feat of mounting their horse from the right side!" Such a condition of things is atmost incredible, and the wonder is, not that there was confusion and constant breakdowns, but that anything was accomplished at all. Truly the patriotism, versatility, and practical ability of the American people must be unbounded to make headway against such a system.

From the camp at Chickamauga Dr. Senn went as chief of the operating staff to Santiago de Cuba, in the hospital ship *Relief*. He calls this "vessel" a great institution, for she was fitted with every imaginable contrivance for the reception of sick and wounded; and yet there were complaints of a medical breakdown by newspaper correspondents, whose charges he resents and traverses with justifiable warmth. There was neither want of capacity in the medical chiefs, nor lack of hospital supplies, nor dependence on the Red Cross Societies; but the default lay with the transport branch in not overcoming the difficulty of establishing communication between the ships in the offing and the troops on shore. In short, it was a repetition of the old Balaclava breakdown, with the same result, that the blame was put on the wrong shoulders.

Dr. Senn's letter on the "qualifications and duties of the military surgeon" shows that he found that ideal, good, all round medical officers were not as plentiful as blackberries. He considers that the essential qualities in this officer are: liberal general and professional education; good physique; courage; ready resource; mechanical handiness; he should be a man of the world in general social fulness and wide culture, and above all he must be imbued with the true "military spirit," or he has no business in the army. All this is absolutely correct, but where are such paragons to be found?

The invasion of Cuba, he says, was "characterised by hasty action, a lack of organisation, and inadequate preparation." Yellow fever made its appearance in less than two weeks from the time the troops landed, and in two weeks more 500 comparatively mild cases had occurred; this, coupled with sickness from the "ever present malaria" soon reduced the fighting power of the invaders; Santiago just surrendered in time to prevent a catastrophe. In the subsequent invasion of Porto Rico many of the mistakes in Cuba were naturally provided against; but typhoid fever soon became alarmingly prevalent, and there was little doubt that the specific cause of it came direct from the American camps, and was not picked up on the island; for, as it is remarked, that while the sufferings of the troops at the theatre of operations were great, the volunteers left behind in the American camps had also their own share of "deaths, sickness, and hardships."

The adverse climatic influences in Cuba was greatly aggravated by inadequate and improper food; it was really such causes and not the enemy which struck down the American forces. The casualties of the war from the enemy are estimated at no more than 280 killed or died immediately of wounds, and 1,425 wounded.

There is much of interest in the surgery of the war, and Dr. Senn quotes many cases. The small Mauser bullets used by the Spaniards caused clean flesh wounds, which soon healed because they carried no clothing or other infective matter with them. Bone was sometimes penetrated without being fractured or broken up. Meddlesome probing is condemned; the old-fashioned probe was almost entirely superseded by dissection and the use of the *x* rays.

Finally, Dr. Senn pays a warm tribute to "Esculapius in the battlefield," in which he shows that the military surgeon does his unselfish work in circumstances demanding the utmost courage and devotion. The nurses, both male and female, in camp and in the field, are also the subjects of his praise and admiration.

The book is profusely illustrated by photographs, sketches, diagrams, and tables.

NOTES ON BOOKS.

The value of Dr. Charles W. Purdy's *Practical Uranalysis and Urinary Diagnosis* (Fourth revised edition. Philadelphia: F. A. Davis; and London: Sampson Low, Marston, and Co. 1898. Demy 8vo, pp. 375, 7 coloured plates, and 44 figures. 14s.) is certainly attested by its having arrived at a fourth edition in less than four years. In a review of the first edition in these pages attention was drawn to the general character of the work. Some extensive alterations both by way of addition and elimination have been made, especially in the part dealing with the chemistry of the urine. Some interesting observations will be found on centrifugal analysis. The author has himself introduced an electric centrifuge with a speed regulator, and he describes and figures an apparatus for sedimenting micro-organisms. In centrifugal analysis he finds that normally chlorides stand at 10 to 12 per cent., phosphates at 8 per cent., and sulphates at 0.8 per cent. bulk measure. The section on the toxic action of the urine has received much attention. The subject is discussed both in respect to normal urine and to the urine in infective processes, such as tetanus, pneumonia, cholera. In the second part of the work not only are the alterations in the urine described, but also the prominent clinical features of the disease, as well as the differential diagnosis. It includes the diseases of the kidney and its pelvis and also bladder affections, as well as a description of the urine in other diseases, and especially in infective fevers. A useful list of apparatus is given in an appendix. The work maintains a high standard of efficiency, and should prove of much service both to student and practitioner.

CONTRACT MEDICAL PRACTICE.

"TRUTH" ON "DOCTORING BY CONTRACT."

OUR contemporary *Truth* having given some attention to the aims and constitution of medical aid associations has expressed the opinion that "those associations lead to serious abuses, against which the profession at large has the best possible right to make a stand," and that in the North of England where the system has developed to a greater extent than in the south, "its consequence to the struggling general practitioner are extremely serious, and in self-defence doctors could not longer defer taking some action."

After describing the rates of payment by the subscribers to these associations, the system of canvassing which they have introduced, and the miserable salaries paid to the medical men they employ, *Truth* observes that the case becomes stronger when the patients' interest in the matter is considered.

It stands to reason that the medical attention obtained on such terms as have been described must be of the most perfunctory and slipshod kind. No medical practitioner can possibly give a fair share of his time, skill and knowledge—whatever these latter may be—to some hundreds of patients at a contract price of 3s. per head per annum. And remember, he contracts for that price not only to give whatever personal attendance may be necessary, but also to supply the drugs. In a practice embracing a whole army of poor people, with a large proportion of women and children, there will be, almost every day in the year, some few patients who ought by rights to have the whole of his time. Either he must scamp his work all round, or he must devote himself to the few and neglect all the rest. And the probability is that he will do the former, for the majority will not stand being neglected, and the association, or the proprietor manager, will insist, for the sake of the subscription, that every member who really wants the doctor is able to get him. A more vicious system of providing the poor with medical attendance can hardly be conceived.

After pointing out that there is, in principle, no reason why a number of individuals should not compound for medical attendance at a fixed salary, our contemporary observes that it is necessary from the professional point of view, and desirable from that of the public, that some limit should be placed, in one direction to the cutting down of the doctor's remuneration, and, on the other, to the multiplication of his patients—actual or potential.

Truth then proceeds to consider what can be done, and expresses the opinion that an attempt to suppress all medical aid associations, including those which do not sweat their medical officers, must be condemned.

It would probably lead to a serious political agitation against the professional authorities, and it might have unexpectedly disastrous consequences to the general practitioner. It could not fail to largely increase the practice of resorting to hospitals by people who are quite competent to pay medical fees; and it would produce a greatly increased demand for medical relief under the Poor Law.

What the profession is clearly justified in doing may be very briefly stated. To begin with, they are obviously entitled to strike with all their might against the system of one-man associations, or associations which are merely commercial speculations. It is contrary to public policy and to the intention of the Medical Acts that medical treatment should be undertaken as a business by unqualified laymen, through the instrumentality of qualified doctors in the position of paid servants. To get rid of this system, what is in the first place required is that the association shall be a *bonâ-fide* one, controlled and managed by the members through a proper committee. In the next place, all working expenses—whether of secretary, manager, canvassers, or committee—should be paid on a fixed scale, and the whole of the receipts, after these charges are met, should go to the medical officer. In this way the Association would cease to be a profit-making machine, unless for the doctor himself. There is also every right on the part of the profession to require that the class of persons eligible for admission to the association shall be clearly defined, and that the subscriptions shall be determined with some regard to the social status or incomes of the patients. On the same principle, the profession is entitled to insist that the subscriptions of members shall be classified according to their probable medical requirements. This implies (1) some sort of medical examination before admission; (2) a higher scale of payments for women and children, and possibly an extra payment for midwifery cases. Next, whether or not it is desirable from the professional point of view, the protection of the subscribers' interests certainly requires that some maximum limit should be fixed to the number of patients for each doctor engaged. It is to be presumed also that the profession would desire to fix a minimum sum per member to be paid to the medical officer, and such a limit would probably serve a useful purpose all round. It might be provided that where the income from subscriptions is insufficient to pay this amount, a special levy should be made for the purpose. This, however, is a detail.

If the medical authorities choose to lay down certain principles of the above kind, and to require that every Association shall be constituted in accordance with them, and have definite rules giving them effect, they will be perfectly justified in making it a professional offence on the part of any medical man to connect himself with an association not so constituted and managed. More than this, they will, I think, be rendering a service at the same time to the large numbers of poor people who must always be dependent on some such arrangement for medical attendance in the hour of need. But if they go beyond this, and attempt to put a stop to the practice of contracting by doctors or collective bargaining by patients, they will speedily find themselves in very hot water, and will probably do the profession at large more harm than good.

MEDICAL AID AND FRIENDLY SOCIETIES.

EMANCIPATED writes: In the BRITISH MEDICAL JOURNAL of July 1st "A Club Surgeon" writes a pithy and pertinent letter, and his contention that in practice there is no distinction between the so-called touting clubs and the friendly societies is in the main true, but as far as my experience goes I prefer the so-called touting clubs. If the doctor fails to satisfy one of the members of the so-called touting clubs he loses the individual patient, but if he has any difference with a member of a friendly society his abilities and methods are freely discussed by the society in conclave. The friendly societies admit not only men, but have within the last few years extended their benefits so as to include women and children, and when these become large enough establish medical aids, and put into the doctor's club their delicate children, sisters, cousins, and aunts, whom their regulations debar from being benefit members, as they only take healthy individuals, and the poor salaried doctor must take the lot or leave the lot. The "touting club," which is usually an insurance club, runs a certain risk with all its members; the friendly society that runs a medical aid bears no risk with a great number, who go to swell the doctor's list and help to pay his salary. I am fully in accord with much that Mr. Bryant said at the annual meeting of the Metropolitan Counties Branch. At the same time he will forgive me if I tell him that he does not know enough of these class of practices to be able to give a wise and mature judgment about them, or to be able to discriminate fairly on this subject as he seems inclined to do. The modern "provident dispensary" is only a medical aid, and for injustice to the general body of practitioners is no better than the other medical aids, but that is a matter for the medical men themselves, but I believe they will remain as they are unless helped by some more powerful aid than their own. But the practical working of these medical aids is no doubt not for the true interests of the poor members, and that is what may concern the General Medical Council. These medical aids were evidently established by persons more shrewd than the average "doctor;" they exploit the profession to a shameful degree by winking at abuse, and shutting their ears to any cry about wage limit. As a matter of fact those institutions tend to keep down the living wage of the workers, and for that reason are praised and nursed by employers of labour; but so long as medical men are ununited and jealous of each other so long will these evils flourish.

THE NEW VACCINATION ACT IN OPERATION.

DEFECTIVE CALF LYMPH.

AUDI ALTERAM PARTEM writes: My experience of the N.V.E. calf lymph differs entirely from that of the public vaccinators who complain of its inefficiency in the BRITISH MEDICAL JOURNAL of August 19th. I have used lymph from twenty different series, and my case success is 97.1 per cent., with an insertion success of 90 per cent. The only series in which there were failures were Nos. 134 and 167.

R. (P.V.) writes: As a public vaccinator of some years' standing, and one who has never missed the grant, I quite endorse all Dr. Rice Morgan has said. The lymph supplied by the Local Government Board may be good glycerine, but the results are not satisfactory. Before the present useless Act came into force, I always used lymph from the Jenner Institute, and I never found it fail. Why may we not find our lymph now, it will save us miles of tramping?

*** We may call our correspondent's attention to the Third Schedule of the Vaccination Order, 1898, Sections III and IV, to which reference was made in the BRITISH MEDICAL JOURNAL of August 19th, p. 497, in answer to "J. S. R."

A P.V. FOR TWENTY-FIVE YEARS writes: I should advise Dr. Rice Morgan to make a trial of the lymph from the Jenner Institute. Why send to France for a supply if he can get such excellent results as I have had with this lymph? During this extremely hot month of August I have vaccinated thirty children with it, only one of which partially failed in the four insertions made in every case. The other twenty-nine were thoroughly successful, the vesicles being full sized, firm and free from excessive areola.

CONTRACTS AND FEES.

M.B. writes: A public vaccinator having agreed to accept the minimum fee for vaccination, but not having signed a regular contract, is informed by the clerk of the guardians that he is only entitled to one shilling a head for vaccinating in his parish, and five shillings for vaccinating at a distance. Is this scale of fees correct?

*** If "M.B." has signed a contract previously to January 1st, 1899, when the new Act came into force, the provisions of the Vaccination Order, 1898, as to fees apply, notwithstanding any fees stated in the original contract, and are binding on the guardians. If the guardians have not entered into any legal contract with the public vaccinator, they are in fault; the public vaccinator should insist upon a legal contract, and report to the Local Government Board if the guardians are still negligent. There should be no doubt whatever as to the meaning of Article 3 (1) of the Vaccination Order by this time. The minimum fee for successful domiciliary vaccination is five shillings, and to this another shilling must be added according to Article 3 (1) (*a*), this fee being payable in respect of all cases in List H, sent by the vaccination officer to the public vaccinator, together with such cases as are not included in such lists, but are vaccinated by the public vaccinator, for example, at the request of the parent, before the child is 4 months old.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 2nd, 1899.

MEDICAL TESTS FOR ADMISSION TO THE PUBLIC SERVICES.

Sir Dyce Duckworth's address, published at page 573, in the Section of Medicine on this important and debatable subject displayed that broad common sense which always makes his views on public questions instructive and valuable.

He was careful not to assume or imply, as is often too readily done, that the medical regulations governing admission into the public services are not merely faulty, but even doubly err in being either too lax or oppressively severe. Rather did he give the authors of these regulations due credit for knowing something of their work, and for a genuine desire to hold the scales evenly between the State and its potential servants. For he affirms "there is no reason to doubt these (naval and military) authorities place themselves in the hands of experienced and competent advisers."

But the views on medical and other tests are so divergent as to afford little hope for reasonable agreement between extreme men. Some, for instance, assert that we are, in the mere fetish worship of literary competition and the exclusion of wider physical tests, little better than the Chinese; while others maintain that we deliberately sacrifice brains to mere physical standards. As usual, truth and safety lie between the two extremes, so that we may define the ideal service candidate to be he who best combines in due proportion sufficient physical and mental requirements.

It must be admitted that in view of the superfluity of candidates for naval and military commissions the State is entirely justified in setting up a relatively high educational and physical standard—one rather above than on the level of ascertained averages in the class from which the candidates are drawn.

Some of the standards, of course, are not applicable in the same degree to every branch of the service; those relating to vision or teeth, for instance, need not be so exacting in the army as in the navy. The standards of chest measurement, and more particularly of weight, for military candidates, are considered by experienced recruiters to be, if anything, too high; for the correlation between height, weight, and chest in growing lads of 16 to 18 is so extremely wide as scarcely to admit of an average being struck. On this ground some argue that medical boards or examiners should, in this matter, have fairly wide discretionary powers relative to individual cases. But if such licence were granted, it is feared that the outcry of favoritism would at once be raised; so that it is perhaps safer and better to adhere strictly to hard-and-fast rules.

Sir Dyce Duckworth's remarks were perhaps as pointedly directed to the best period for the medical examination as to the propriety of the standards—in short, to the question whether the physical should as formerly precede,or as now follow, the literary examination. He thinks it should precede, and his opinion was fully adopted by the Section. The question is an open one; but, on the whole, this decision appears to be just and fair. For, if a candidate be really physically unfit, no amount of brains will bring him a commission; why, therefore, allow him to compete, and, as it were, put the cart before the horse? Is it not also cruel to parents as well as to candidates to pass lads, perhaps high in a literary competition, and immediately afterwards reject them for an unknown or unsuspected physical defect?

The remedy suggested by the advocates of the present system is that care should be taken to ascertain a candidate's physical fitness before entering him on service studies at all. The advice is of course sound, but expert opinion on service requirements is not always at hand; while the average practitioner or medical man of the family may know little or nothing about them.

Deputy-Surgeon-General Cayley's argument in his letter to us that a precedent examination would be an interference with the legitimate work of the medical profession is not a very strong one; nor can we fully subscribe to the statement that it would be a too serious affair to arrange for the medical examination of 800 candidates twice a year. He seems to forget that this was actually done for many years and until comparatively recently. From ten to twenty medical officers, not under the rank of surgeon-major, were drafted to London from the adjacent military stations, and a temporary Board of an administrative officer and two seniors formed; by this arrangement all the candidates of a term were examined in one day, not long before the literary examination. It was, of course, a hard day's work for all concerned, and involved War Office trouble and expense, but was otherwise simple and effective enough. What led to its abandonment we do not know, but many profess to believe it was no recondite consideration, but simply one of trouble and expense, and the difficulty of getting a sufficient number of medical officers together when the service became undermanned. Nevertheless, the system, good or bad, could doubtless be revived if a strong public demand for it were to arise.

We regret with Surgeon-General Cayley that two Sections did not agree as to the proper period for the medical examinations; for, while the Section of Medicine resolved that it ought to precede in the army, that of Ophthalmology appeared disposed to recommend that it should follow the educational test for cadetships in the navy. Contradictory resolutions of this kind, as he remarks, do not tend to give weight to recommendations.

Sir Dyce Duckworth's remarks on tests were not confined to those for officers, but extended to a certain extent to recruits and recruiting. In the discussion which followed some of his critics were disposed to fall into a common

error by forgetting that enlistment being entirely voluntary our recruits must be judiciously handled with steady reference to that central fact. They must, in short, not be bullied by a too inquisitorial system which would scare or disgust them. Inquiries into their personal or family history must not be too minute. If it was attempted, as suggested, to extend these to hereditary antecedents, physical or mental, it would be certain to arouse suspicion and resentment and end by frightening recruits away.

ELECTRICITY AND PUBLIC HEALTH.

It is one of the penalties of the popularity of sanitary science in this country that every prominent Englishman is presumed to be an expert in matters of public health. Our towns and villages now boast, each of them, of an Urban or Rural District Sanitary Council presided over by a chairman elected by his fellows, frequently from the interest he takes or has taken in sanitary matters. Without reckoning the medical officers, inspectors, engineers, professionally advising the authorities, there are thus throughout the country a large number of intelligent men engaged in the study of health conditions and the administration of sanitary affairs whose claim to be regarded as to some extent experts in these respects few would care to dispute. So thoroughly has sanitation come to be considered a function of the village Hampden that there is some little danger of the real workers in this department being elbowed out of public notice by these tasters of the Pierian spring. Fortunately the innate good sense of our public men renders this danger remote, and as the success of our sanitary undertakings is dependent upon their popularity the gain is worth the risk.

When, in 1891, the International Congress of Hygiene met in London, the promoters were fortunate in securing the Prince of Wales as their leader, and the suggestive words uttered by him on that occasion, when, referring to the group of zymotic diseases, it has become the habit of medical statisticians to refer to as "preventable," he asked, "If preventable, why not prevented?" are still remembered. These words, epigrammatic enough in themselves, have since been repeated again and again, and the mere fact that they fell from the lips of the Prince has rendered a service to sanitary progress not very easy to over-estimate.

The Council of the Sanitary Institute have evidently grasped the importance of selecting persons of distinction to preside over their autumn congresses, or assist in popularising their important exhibitions. At Newcastle, the Sanitary Exhibition was opened by a royal duke; at Leeds by an eminent mechanical engineer. The President of the Congress at Leeds was Dr. Farquharson, M.P., whose long parliamentary career has been marked by a consistent interest in sanitary legislation; while in Southampton, where the Congress of the Institute met on Tuesday, Sir William Henry Preece, as President, delivered the inaugural address. That Sir William has achieved greatness as engineer and electrician to the Post Office was deemed a sufficient warrant for asking him to undertake this duty.

As was to be expected, the President's address, while covering in a general way a very large amount of ground, was characterised by that modesty of manner which men of real distinction seldom lack. Early in his address he ventured on a biological illustration. "The human frame," he said, "is a little world in itself—inhabited by different nations and by different races, born, living, and dying in us, as we do on this earth, perhaps in peace, generally at war. . . . As long as we are in health they live in peace, and we remain unconscious of their existence; but let some external enemy, some mute, inglorious, invisible bacterium force the ramparts and enter the fort, then is there bitter war, and either the invader is destroyed by our friends, or we ourselves succumb . . . . to some other inimical, but victorious, bacterial race."

The greatest sanitary engineer the world has ever known, according to Sir William Preece, was Moses. "The book of Leviticus," he adds, "is a treatise on hygiene." Following up this line of thought, he sums up what he regards as at once the teachings of Moses and the leading objects of sanitation to-day under the six headings of pure air, pure water, pure food, pure soil, pure dwellings, and pure bodies.

Underlying all practical applications of sanitary engineering Sir William discerns three important principles—energy, or the ability to do work; chemistry, or the power to transform matter; life. The last is "beyond our comprehension . . . . and if we cannot divine the reason of its existence, it is because we are able to read the book of God only as through a glass, darkly." Sir William Preece, however, when he quits metaphysics, is not inclined to look at sanitary matters merely as in a mirror, darkly, but honestly and face to face. In speaking of what he regards as the first of the Mosaic requirements, pure air, he considers refuse destructors in towns as a natural development of the Levitical device of carrying unclean matters outside the camp. The electrician peeps out when he adds that "we are even utilising their heat for the generation of steam for electric lighting . . . . thereby economising waste, the highest function of the engineer."

After emphasising the neglect or mismanagement of ventilation, and asking, without exactly answering, the question, "What is a draught?" the specialist again comes to the front, and he forcibly remarks in regard to the contamination of air by artificial light: "Electricity has fortunately come in to simplify our difficulties." In the glow-lamp form it does not vitiate the air. Where laid on, we have, moreover, a convenient form of energy to promote circulation of air, either by forcing in fresh air from without, or by withdrawing the foul air. We are told it can even warm the air or sift from it material impurities before admission. "Where the energy is cheap, as in a free waterfall, it can be used not only for lighting, but for heating, cooking, ventilation, and for all mechanical purposes, such as raising lifts, cleaning knives, etc. If electricity were properly utilised," he adds, "life should certainly be extended beyond David's allotted span."

When speaking of pure water he suggests that "the water engineer who desires to pursue his avocations, to comply with all the requirements of modern civilisation, must be a physicist, a chemist, and a biologist. The microscope, the scales, the test tube, and the retort . . . . . must be his companions." Certainly we admit he must have sufficient knowledge in all these matters to enable him to judge of the evi-

dence of the purity of a supply, but we question if he would be wise to spend his time in preparing nutrient media and counting bacteria, or in analysing the chemical constituents of a source and the strata in which it arises. These important functions are likely to be much better performed by chemical and biological experts; and a wise engineer, consulted on an important water scheme, would, we think, strengthen rather than weaken the value of his opinion by advising his clients to have the best advice on these matters: *Non omnes omnia possumus.*

Another suggestion thrown out in regard to water we are not prepared to accept without further consideration. It is that of a duplicate supply, one for domestic, one for public purposes. It certainly seems a waste, as he says, to use a carefully purified supply to lay dust, to generate steam, or to flush public sewers. Something may certainly be said in favour of using sea water for some of these purposes, as is done at Great Yarmouth and Bournemouth. We believe it was tried at Southport and abandoned. The Thames, he suggests, with the present works, would supply London with excellent drinking water for the next fifty years if London would only go to the sea for public purposes. He seems to have a very high opinion of the quality of the present water supplied to the Metropolis for drinking purposes. He is more at home, however, when he adds that electricity might furnish valuable aid in this respect. There is a great demand for a "day load" at all electric lighting works. This is met at Worcester, he tells us, by utilising the spare power for pumping, and Great Yarmouth is about to discard its gas pumping-engines and raise the sea water it requires for street watering and sewer flushing in the same manner.

Electricity, Sir William frankly admits, has not played any important part in the disposal of sewage. Even the value of the "hermitine" electrically produced at Netley from sea water is doubtful. Evidently he expects more from biological than from chemical or physical means.

When he speaks of pure dwellings, we are glad to have his assurance that the electric light "is essentially the poor man's light." He repudiates the notion that, properly arranged, it injures the eyesight. It is chiefly in referring in this way to the uses of electricity that Sir William Preece speaks with the voice of authority, and it is his frequent references to this subject that made his address so specially interesting to the large and intelligent audience who assembled at Southampton to listen to his words. A good deal of his address, as we have already hinted, was a mere summarisation of what is already familiar to most persons interested in sanitary progress. His allusions, however, to his pet study redeemed his utterances from any charge of the commonplace. One would even have pardoned so distinguished a scientist if he had told us a little less about the Mosaic law, and a little more about electrical possibilities in modern sanitation. Perhaps before a less popular auditory he may yet do so.

DEATH CERTIFICATION.

A CASE recently occurred at Birmingham which strongly enforces the demand we have so often made in these columns for an early amendment of the laws of death certification. The Deputy Coroner of the City of Birmingham ordered and held an inquest on a child 5 days old because the doctor (Mr. A. H. Bygott) had refused to give a certificate. It appeared at the inquiry that there was no doubt as to the cause of death, but that there had been delay in issuing the certificate, which had been sent direct to the Registrar instead of being given to the parent of the child or his representative. It was shown by the evidence that the doctor's fees for attendance on the mother had not been paid, and that the application for the certification of death had been made long after surgery hours. While we must acquit Mr. Bygott of refusing the certificate on the ground that his fees were not paid, there does seem some excuse for his action in sending it to the Registrar direct, in the information given him that a collection might be made for the funeral expenses. In his experience death certificates are often improperly used for begging and we can well understand how a practitioner may wish to prevent such misuse of a medical document. In the end the jury found that a mistake had been made (we presume) in sending the certificate to the Registrar, but no censure was passed on Mr. Bygott, who indeed received in the court strong testimony to his humanity and kindness to the poor in his locality.

We refer to the case more especially on account of some interesting points which it raises. In the first place, there is no doubt the law as it stands requires the certificate to be given to "the qualified informant" of the death, and not sent to the Registrar direct. In this case a technical mistake was made in not giving it to the father when he applied for it, or to his representative afterwards. The law, however, would be much better if it were amended in the direction of the practice followed in this instance by the surgeon, and the certificate of death sent direct in every case by the medical attendant to the Registrar. Indeed, if we are not mistaken, one of the recommendations of the Select Committee on Death Certification was that the medical attendant should be required to send all death certificates direct to the Registrar of the district. Such a course would prevent the improper use of certificates for begging purposes, and it would do much more. It would prevent, as appeared in evidence before the Select Committee, the gross scandal of it being possible to bury two bodies on one certificate, and it would, we believe, as the Select Committee reported, prove an important obstacle to the concealment of crime. In the particular case before us it came out in the coroner's court that it had occurred to some of those concerned, that the child might have been buried as "a still-born" without any particular fear of detection. Thousands of infants are, it is well known, thus disposed of annually, in order to save the expenses of the funeral.

The present unsatisfactory state of the law, which this Birmingham inquest illustrates, has arisen from the unwillingness of the Legislature to incur the expenditure necessary to make the law more perfect. The death certificate is now granted gratuitously as a statutory obligation by the doctor; it should be paid for by the State as a document necessary (1) to protect the community against crime and (2) to build up the system of vital statistics of the country.

We have over and over again urged upon successive Govern-

ments the importance of seriously considering this question, and not letting the expenditure of a few thousand pounds annually, prove a barrier to the amendment of the law. There is, indeed, no reasonable excuse for delay. A very exhaustive report was presented to Parliament some five or six years ago, recommending all the necessary reforms in our law, and we ask once again, Is a question so important to be still longer neglected?

THE CULTIVATION OF THE MALARIAL QUARTAN PARASITE IN ANOPHELES.

WE have received from Major Ross a telegram forwarded on August 27th, 1899, from Las Palmas containing the important statement that in the anopheles genus of mosquito he has succeeded in cultivating the quartan malarial parasite. As is well known, Major Ross proceeded from Liverpool in charge of an expedition to the West Coast of Africa to prosecute investigations in connection with malaria. The first communication received from him was that he had met with the anopheles (or hurtful mosquito), that is the mosquito which has been found to be by direct experiment capable of conveying malarial injection to man. Ross now communicates the fact that the anopheles may become the host also of the quartan parasite. Through the investigations of the Italians we were already aware of the fact that the tertian and summer-autumn parasites affected the anopheles as their host; but now Ross's discovery proves that the anopheles can also become the intermediate host of the quartan. The cycle had hitherto only been completed for two of the three differentiated parasites of malaria, leaving the quartan to be dealt with. This Ross has done, so that the anopheles is now proved to be an intermediary host for all known malarial parasites. Another important point settled by Ross's investigations is the fact that the quartan parasite is to be met with on the West Coast of Africa. The prevalent form of fever on the West Coast is the summer-autumn, the tropical malaria of Koch, and, although the tertian parasite has been found there in a few cases, we had no definite knowledge that the quartan parasite existed in these regions. We congratulate Major Ross on the excellent work he has done. His discovery completes an important phase in the natural history of the malaria parasite, with regard to which he has already done so much. He was the first to test the mosquito-malaria theory in a scientific manner, and to submit it to experimental proof. By his latest addition to our knowledge he has completed the branch of investigation he began in Calcutta, and we look to him and to the Italian investigators who have so greatly advanced this all-important study to further our knowledge in regard to the extermination of this scourge of the tropics. In response to Major Ross's appeal for more workers the Liverpool School of Tropical Medicine has arranged to send out Mr. R. Fielding Ould, M.A., M.B.Oxon., who will leave Liverpool for Sierra Leone on September 2nd.

PRECAUTIONS AGAINST PLAGUE IN ENGLAND.

THE prevalence of plague in Portugal has given rise to many speculations as to the probability of its invasion of England, and the precautions that should be taken against it. We have never been in a stronger position than at the present time to combat any epidemic which might obtain a footing in this country. Of cholera in the past we have had unhappily many visitations—in 1831, 1849, 1854, and 1866, sweeping off some 100,000 persons altogether. But ignorance is gradually dying away, and we are now more alive to the paramount importance of cleanliness and efficient sanitation for the protection of our shores. In 1884 the Local Government Board commenced to devote itself to the inspection of English ports, and the laying down of regulations with a view to determine the best measures for preventing the possibility of a recurrence of cholera. Prior to this, things sanitary were in a state of absolute chaos. In 1892 there was an epidemic of cholera on the Continent, and Hamburg, it will be remembered, suffered most severely, and, despite all precautions taken by the Local Government Board, England did not entirely escape. In that year the Local Government Board made another inspection of English ports and harbours; isolation hospitals were recommended; some were established where necessary, and hulks were cleaned and got ready to receive patients at a moment's notice. In 1896 the Local Government Board issued a further set of regulations—revoking those of 1890 and 1892—as to cholera, yellow fever, and plague, and these were addressed to the Queen's harbour masters of dockyard ports, all officers of Customs, medical officers of health, masters of ships and pilots. These regulations give power to remove patients suffering from cholera, yellow fever, and plague to a hospital. If their condition does not admit of this, the ship must remain under the control of the medical officer of health, and they are not allowed to leave it without his written leave. Suspects may be detained either on the ship or in a hospital, or other suitable place, for two days, in order that it may be ascertained whether they are suffering from one or other of the above-mentioned diseases. In 1897 plague broke out in Bombay, and the Local Government Board at once began to take precautionary measures against the contingency of its being carried into England, and have since continued to do so. A systematic inspection was made not only of the larger English ports, their faults seen to and remedied, but all the small ports along the entire English coast have been inspected. Medical officers of health, harbour masters, etc., have all been put even more on the alert, and so well had the previous work of the Local Government Board been done, that in only two or three cases were their inspectors dissatisfied with the existing order of affairs. Small scattered seaports have been consolidated under a joint Board of Medical Supervision. The attention of local authorities has been specially drawn to ships' rats, as infection from plague has been traced to these vermin. The Local Government Board has arranged to have bacteriological examinations of the blood and purulent discharges from bubonic patients made in suspected cases. Further, not only are vessels from Portuguese ports being watched and inspected on arrival, but Spanish vessels will be looked after as well. Portugal is geographically a part of Spain, and it is scarcely to be hoped that with plague in Portugal her equally insanitary neighbour will remain immune. Old-fashioned quarantine is distinctly opposed to the true principles of preventive medicine, and has over and over again proved its uselessness. To take only one recent instance, in the European outbreak of 1892 cholera arrived at the eastern border of the Caspian, which it might have been supposed would have been a good barrier; the most rigorous quarantine that has ever been imposed was put in force, ruining thousands and paralysing trade; with what result? Cholera got over to the western border of the Caspian in ten days. Spain, Italy, and Portugal uphold quarantine because, being poor, lazy, and neglectful, they impose quarantine rather than take the trouble to clean and keep their filthy ports in order.

THE INVESTIGATION OF BERI-BERI IN MALAYA.

DR. HAMILTON WRIGHT, assistant under Dr. Mott, F.R.S., in the Pathological Laboratory of the London County Council at Claybury, has, we are informed, been selected by the Secretary of State for the Colonies to go out to the Malay Peninsula, there to found a pathological laboratory and investigate tropical diseases, more especially beri-beri.

Dr. Hamilton Wright is particularly well qualified to investigate beri-beri, as he has a thorough knowledge of all the methods of investigating the morbid conditions of the nervous system. He has resided in the East for some time, and was for several years pathologist to the Royal Victoria Hospital, Montreal. We understand that he will go through a course of special instruction in tropical medicine under Dr. Manson and Major Ross before he proceeds to his new sphere of work. The Colonial Office will supply all that is required for the laboratory, and the salary attached to the post is, we believe, £500 a year. The establishment of the laboratory was suggested by Dr. Manson. We have received from the Royal Society a copy of a memorandum forwarded by the Governor of the Straits Settlements to the Secretary of State for the Colonies. This memorandum states that the Government of the Straits Settlements desires to invite the attention of Radcliffe's travelling Fellows, and of holders of scholarships for medical and physical research, to the study of beri-beri. This disease caused in the hospitals of the Colony 730 deaths in 1896, and 692 in 1897. The Government will be glad to assist any scholar who desires to engage in the scientific investigation of this disease in the Colony by providing him with furnished quarters, rent free, by giving him free access to all the hospitals and facilities for studying the cases therein, by defraying the cost of his passage to the Colony, and in any way which may be agreed upon hereafter between the scholar and Mr. J. A. Swettenham, Colonial Secretary, Straits Settlements, Singapore. The establishment of the laboratory under the direction of Dr. Hamilton Wright will provide excellent opportunities for pathological research.

VACCINATION PROSECUTIONS.

The game of cross purposes in vaccination prosecutions is still going merrily on in various parts of the kingdom. Not a week passes without one or other representative of the antivaccinist cause checkmating the vaccination officer somewhere, and making him look, like Mr. Bumble, somewhat foolish in the eyes of his little world. Quite recently at Corsham, in Wilts, Mr. Schultess Young appeared to try conclusions with a Bath solicitor who had been instructed to support a batch of summonses against defaulters under Section XXIX of the Vaccination Act of 1871. Mr. Young succeeded in procuring the dismissal of several cases on the ground that there was no evidence to show that the doctor's notice reached the defendant in proper time. As the vaccination officer was not in a position to show that 24 hours' notice had been given to the parent by the public vaccinator, although that official stated that he had sent notice by post, the cases had to be withdrawn. Mr. Young appears to have contended that it was the duty of the public vaccinator to deliver the notice personally to the parent, and on his very improperly remarking in one case to the public vaccinator, who gave evidence that he had seen the notice in the hands of the defaulter's wife, that he "should perform the work for which he was paid," he was met by the retort of the doctor that he was not a messenger boy. As the bench convicted in this case, Mr. Young applied for a note to be taken of his objection, so that perhaps we may hear something further of it. A point taken in this case also was that as the birth of the child was registered by the mother and not by the father the notice ought to have been served on her. We have more than once urged upon all who are involved in getting up these vaccination prosecutions the importance of being able to prove their case fully step by step. Until Mr. Schultess Young may see it to be expedient to bring out a new edition of his little book on *Legal Defences to Compulsory Vaccination*, brought up to date, with information as to the pitfalls of the last Vaccination Act, or until some provaccinist legal authority will do the same service for the cause of vaccination which Mr. Young has done for its opponents, it remains for those who may have to meet him to rest assured that if they are not prepared to prove their case up to the hilt they are pretty sure to get thrown. It is, of course, very obliging of Mr. Young and the Antivaccination League to thus clarify the vaccination law for the benefit of those whom it may concern at considerable cost to somebody, and the experience gained as to the weak points of the late Act will doubtless eventually prove useful. But it is a process which is not without disadvantages, foremost amongst which is the dissatisfaction likely to be produced amongst those Boards who are called on to pay for prosecutions which end in failures. It is a misfortune that whilst the antivaccinist defence is in the hands of an advocate who has the whole subject at his fingers' ends, the attack is too often entrusted to novices who, whatever may be their familiarity with other branches of litigation, show that they are unprepared to meet the technicalities by which an astute lawyer can confuse an issue when he finds he cannot bounce the bench.

A VACCINATION BLUNDER.

In one of the last replies on the subject of vaccination in Leicester which Mr. Chaplin gave in the House of Commons, in answer to a question on the subject of the Leicester Guardians, he attempted to put them in the wrong by stating that "in Leicester there were many who wished to avail themselves of the advantages of vaccination, but were prevented from doing so by the action of those tyrannous guardians." Now the Leicester Guardians have quite enough to answer for in the way of ignorance and folly without fathering this "tyranny" upon them. If Mr. Chaplin had taken the trouble to master thoroughly the facts of the vaccination question, he would have known that the non-existence of a vaccination officer in Leicester need not prevent any parent from having his child vaccinated if he really wishes to do so. There are still public vaccinators in Leicester, to say nothing of other medical men, who will only be ready to vaccinate anyone who may apply to them. It is not for such persons that the vaccination officer is needed, but for the ignorant, who require to be reminded of the requirements of the law, and for the obstinate, who refuse to obey its prescriptions. As might be expected, the Leicester Guardians have decided by 21 votes to 10 to send a letter to the President of the Local Government Board pointing out that two public vaccinators were already appointed, who were more than able to perform all vaccinations. The guardians add that they had complied with all requirements with the exception of appointing a prosecuting officer.

THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

The need for a new infirmary in Newcastle has long been felt, and it is due to the energy of Mr. Riley Lord, who was Mayor of Newcastle in the year of the Queen's Diamond Jubilee, that the completion of the project is now assured. The wish of Mr. Lord was to raise a sum of £60,000—£1,000 for each year of the Queen's reign—but the response was so liberal that before long the amount promised rose to £100,000. With this money it was proposed to erect a new building on the old site, but whilst the architects were preparing their plans, Mr. John Hall, a local philanthropist, wrote and promised to build a new infirmary at a cost of £100,000. His conditions were that the building should be placed on the Leazes, a piece of public land, and that the £100,000 already promised should be an endowment for the Hospital. The offer was accepted, and parliamentary powers were obtained by which the site could be handed over by the Corporation. A few weeks ago Mr. Hall died, and by his will he left the hundred thousand pounds free of legacy duty, but with the added condition that it was not to be paid until the amount received for

the Jubilee Fund reached also £100,000. A limit of three years from the time of his death was allowed, after which the legacy would lapse. Mr. Lord found, on going through his subscription list, that a sum of about £6,000 left by the late Dr. Heath, could not, for legal reasons, be included, and a further sum of about the same amount had to be deducted on account of subscriptions withdrawn or doubtful. A fresh effort was then made to complete the £100,000, without which Mr. Hall's gift would be lost. A few days ago Mr. Lord wrote to Mr. Eno, formerly a student and dispenser at the Newcastle Infirmary, asking his help. Mr. Eno telegraphed in reply that he would send a cheque by return of post for the whole of the deficiency, which (other subscriptions having come in) was £8,500. The cheque was received last Saturday, and the Jubilee Fund being thus completed, Mr. John Hall's legacy is secured. In the meantime Messrs. Newcome (of Newcastle) and Adams (of London) were successful in the competition of architects, and with some slight alterations their plans have been adopted. It will take about nine months longer to complete the detailed plans and to arrange for a contractor. The foundation stone may therefore be laid some time next year, and in about three years it is hoped that the hospital may be completed. Newcastle will then possess a handsome new infirmary of 400 beds, on a beautiful open site, and the old institution in the Cattle Market will be pulled down.

PROPOSED NESHAM MEMORIAL HOSPITAL FOR WOMEN.

AT a special court of governors of the Lying-in Hospital, Newcastle, it has been decided to erect a memorial to the late Dr. Nesham, who for many years occupied with great distinction the chair of midwifery in the University of Durham College of Medicine. An appeal for subscriptions is made. It is not yet definitely settled what form the memorial should take, but it will be one of the three alternatives announced, either (1) a new hospital; (2) alterations of the present buildings; or (3) improvement of the financial position of the present hospital. Now that the new infirmary scheme has been met the way is cleared for the appeal which is made to the Newcastle public for funds for a new hospital for women. It is felt that there must be many medical men in various parts of the Empire who would like to show their regard for their old teacher by contributing to a memorial such as that which the governors of the Lying-in Hospital propose to erect. A strong and influential committee has been formed, the president of which is the High Sheriff of Northmberland, and the chairman Dr. Thomas Oliver. The duties of honorary secretary are being discharged by Dr. Beatley, from whom information can be obtained. Former students and friends of the late Dr. Nesham are requested to send donations to Henry Middleton, Messrs. Lambton and Company, Newcastle-upon-Tyne.

THE INTERNATIONAL OPHTHALMOLOGICAL CONGRESS.

THE ninth international Ophthalmological Congress was held at Utrecht, from August 14th to the 18th, under the presidency of Professor Snellen, senior. Upwards of 285 members were presented, and about 105 papers were announced. The members were received on Monday evening at the Hôtel de Ville by the Burgomaster, who offered a most cordial and hearty welcome to the ancient university city. The following morning, on the motion of the retiring president, Dr. Argyll Robertson, Professor Snellen was nominated as his successor to the presidential chair. In a well-conceived and eloquent speech Dr. Robertson referred to the obligations under which ophthalmic surgeons lay to the university of Utrecht, the home of Donders and Snellen. The new president, after returning thanks for his election to the chair, gave an interesting and instructive address on the progress of ophthalmology and paid a high tribute to his illustrious predecessor, Professor Donders. The scientific work of the Congress was opened by an admirable address on the treatment of strabismus, by Mr. Priestley Smith, of Birmingham. Thereafter the Congress was divided up into three sections; (*a*) Anatomical; (*b*) Biological and Optical; and (*c*) Clinical and Therapeutic. Many interesting and valuable papers were read before these Sections, especially on anatomical and optical subjects. On the following days, from 9 to 10 A.M., general meetings of the Congress were held in the University Hall, when addresses were delivered by Professors Leber, Panas, Reymond, and Knapp. These were followed by sectional meetings which extended well into the afternoon. A banquet, held in the pavilion of the Tivoli on August 15th, at 6 P.M., was attended by ladies as well as gentlemen, by representatives of the Government, and by other State officials. The remaining afternoons were spent at Amsterdam, Baarn, and Schevening. At Amsterdam a visit was paid to the Ryk's Museum, and the Zoological Gardens and Aquarium. The members dined together at 7 P.M. in the large hall of the Zoological Gardens, and returned to Utrecht about 11 P.M. The excursions to Baarn, and to the Queen's Palace, at Soestdijk, were most enjoyable. After a pleasant walk through the palace grounds, the members were entertained to a light repast, and on leaving the palace each lady was presented with a choice bouquet of flowers. The excursion to Schevening on Friday afternoon was a most enjoyable termination to the Congress, which in every way may be described as a magnificent success, and an occasion which will not readily be forgotten.

THE COTTAGE HOMES BILL.

THE recommendations of the Select Committee on this Bill give official utterance to that need for better classification which all workhouse reformers have been urging for years past. The Committee recommends that means shall be taken by which the respectable and deserving poor shall be placed apart from the vicious and degraded class, that all children shall be provided for outside the workhouse, that special accommodation be provided for the respectable married couples, that adequate outdoor relief so far as is possible be given to the aged and deserving poor, and that the county councils shall take charge of the pauper imbeciles and epileptics. These are in brief the recommendations of the Committee, which represent a distinct advance on previous legislation; we have a recognition of the respectable and deserving poor, a class hitherto non-existent in official language, and we have a clear pronouncement that the workhouse is not the proper place for the children. There is one class omitted about which it would have been well to make a recommendation, and that is the defective and feeble-minded. This class which, whether among the adults or the children, appears unhappily to be on the increase, is one for which much might be done by legislation. We should have welcomed any recommendation which would have increased the control over the adults, and suggested improved education for the children. However, now that the idea of effective classification is receiving recognition, we have hopes for the feeble-minded, and in the meantime accept this promise of reform with gratitude.

A LINK WITH THE PAST.

AN interesting ceremony took place at the Tottenham police-station on August 23rd, when in presence of the assembled officers and men, the Superintendent of the N Division of Metropolitan Police presented Mr. William Hall, M.R.C.S., with a handsome engraved silver goblet as a parting gift from those in the division who have been under his medical care until his recent resignation of the office of Divisional Surgeon after 57 years' service. Mr. Hall, who, as was customary in those days, took the "Col-

ege and Hall" in 1834 and 1835, has since practised at Tottenham for 65 years in the house formerly occupied by ir Astley Cooper, and has preserved his faculties to a onderful degree, so that he can still read without glasses, nd walk without using a stick. He has never carried an mbrella, and rarely worn an overcoat. The Superintenent, in a neat little speech, spoke of the many acts of indness, apart from his professional duties, done to members of the Force by their late Divisional Surgeon, whom he ad had the happiness of knowing for 21 years, and asked is acceptance of the cup as a lasting memorial of their eir regard. Mr. Hall, who was much affected, made a uitable reply. The date of Mr. Hall's appointment as olice Surgeon carries us back to the time when Sir Richard ayne was Commissioner of Police, an office in which he as been succeeded by Sir Edmund Henderson, Sir Charles Varren, Mr. Monro, C.B., and Sir Edward Bradford. The hief Surgeoncy at the time was held by a predecessor in ffice of Mr. Timothy Holmes, but Mr. Hall could not at ne moment remember his name.

"FREE DOCTORS FOR THE POOR."

N July, 1895, the Whitechapel Guardians, in consequence f a local scandal arising through difficulty in obtaining edical aid in that district, agreed—and the arrangement as sanctioned by the Local Government Board—to pay the ame scale of fees for one attendance as that paid by the etropolitan police—namely, 7s. 6d. for a night and 3s. 6d. or a day attendance on condition that the applicant to the octor had first been to the district medical officer, and ad failed to obtain assistance, and that the doctor attendng immediately notified the fact of his attendance to the lerk to the guardians. It is stated that the clerk to the uardians have reported recently that "the arrangement has een of immense advantage to the poor, and that there has een no abuse of it." That it has not been abused to the xtent of throwing much extra pecuniary burden on the oor rate we can well believe, for since 1895 the fees paid o outside practitioners for work done under this arrangeent have not amounted to three guineas. The benefit to he poor, if benefit there have been, must have been of an ndirect nature. It would appear that one result of such n arrangement is to put moral pressure on the district edical officers to do work under conditions not contemplated by the general Poor-law Orders. No district edical officer can be legally required to attend a pauper without an order from the relieving officer or certain other Poor-law authorities; but the Whitechapel district medical fficers are practically compelled to attend every call made n them by persons claiming to be paupers, whether they ave orders or not. For if they decline there will always e the risk of the applicant going to another doctor, whose emand for a fee will at once lead to official inquiries and ndless worry. Such an arrangement may have the effect f sometimes preventing a public scandal, but it may likewise often assist improper applicants to obtain medical id, if not directly at the cost of the rates, yet at the cost f the district medical officer, who is practically compelled o do work he is not paid for.

HOSPITAL REFORM.

The Hospital Reform Association has arranged to hold a onference in London on October 11th and 12th to discuss: 1) The Enquiry System; (2) Payments by Patients at Hospitals; and (3) Provident Dispensaries. Papers have been romised by Dr. Bertram Rogers (Clifton), Mr. Douglas Dent (Bristol), Dr. Brown Ritchie (Manchester), Dr. Arnold Lea (Manchester), Mr. G. A. Hawkins Ambler, F.R.C.S.E. Liverpool), Mr. C. S. Loch (London), Mr. C. W. Warren London), Dr. Francis Waring (Brighton). It is hoped that epresentatives from Ireland and Scotland, as well as from he provincial centres of England and Wales, will attend the onference, which will be held at St. Martin's Town Hall. Further particlars can be obtained from Dr. T. Garrett Horder (Cardiff), the Honorary Secretary of the Hospital Reform Association, who will be glad to hear at an early date from any persons interested in the reform of hospital administration.

HEALTH RESORTS IN THE VOSGES.

A CORRESPONDENT writes: A good many of our fellow countrymen are spending their holiday, or part of it, in pursuit of health at one or other of the watering places in the Vosges. The railway service from Paris is so excellent that access to them is quite easy. By far the lion's share of English visitors has this year fallen to Contrexéville, where there are, or have been, staying Lord Roberts, Lord Bath, Lord Shand, Mr. and Mrs. Ritchie, Lady Granville, Dr. and Mrs. Playfair, Dr. Saundby, Mr. and Mrs. Vesey Knox, and Sir Henry Burdett, K.C.B. Vittel, in spite of many natural advantages, has not yet secured much English patronage, although the list of visitors contains the names of Admiral Sir Robert and Lady Freemantle, H. E. Crookshank Pacha and Mrs. Crookshank, Mr. and Mrs. Bischoffsheim, etc. Both places are excellent for the treatment of disorders dependent upon the uric or oxalic acid diatheses, and the benefit derived from the treatment pursued at either cannot be doubted. As an after-cure many go to Gérardmer, a village on the borders of a small lake 3,000 feet above the level of the sea, surrounded by pine woods. It is a good starting point for many charming excursions, and should certainly not be missed by visitors to the Vosges.

DISPENSARY DOCTORS' HOLIDAYS.

We notice that the new rule of the Irish Local Government Board declaring that the dispensary doctor shall have a month's holiday is causing much disturbance at the new district councils. The guardians do not object to the holiday in itself, but they protest against being called upon to pay for the substitute. The Local Government Board require the guardians to offer "such remuneration as would induce duly qualified medical practitioners to accept the temporary appointments." But there is a division of opinion as to what that sum is. The substitutes claim £3 3s. a week, and the guardians offer £2 2s. It is to be remembered that for this small sum the *locum tenens* has to lodge and feed himself, to provide a conveyance, and to do the duty of a district perhaps twenty miles long. For such temporary employment the sum offered is absurd, and we strongly advise the dispensary doctors throughout Ireland to refuse any sum less than £3 3s. a week. The Cavan guardians have made themselves specially prominent by their resistance, and by the contemptuous insolence with which they have treated the whole subject. But the doctors have this matter in their own hands. They are entitled to their holiday. That is now beyond gainsay. Let the guardians provide the substitute; but we hope that no one will be found to accept a payment which is obviously insufficient. If dispensary doctors are to be found who will do this, then they can make no claim upon the sympathy and help of their brethren.

THE PSYCHOLOGY OF SPIRITISM.

We have to thank Professor Charles Richet for giving us a definition of "the occult." There is a whole large literature of the occult, and some secondhand booksellers make a speciality of occult literature. In the books they offer for sale abracadabra and other mystic words are writ large across the page, or arranged in admired confusion on the sides of a triangle. The science of sciences, we were given to understand, lay buried in these pages, only to be disinterred by midnight vigils. The whole was meant to be awe-inspiring, and was certainly bewildering. Now Professor Richet comes to our assistance. "Occult," he says

"means unknown," and he illustrates his meaning by comparisons. "Alchemy before it became chemistry, astrology before it became astronomy, medicine before it became bacteriology, were nothing more than occult sciences." It is perhaps a little strange to find Professor Richet altogether ignoring the debt of medicine to physiology, the department of science in which he has himself won so many laurels; but the passage we have quoted occurs in the course of an address given to the Society for Psychical Research. The address consists, in the main, of an interesting psychological analysis of Professor Richet's own relation to the subjects with which the Society is concerned. He first gave his attention to somnambulism. This was in 1873, and he says that it then required some courage to pronounce the word, a statement which will be read with some surprise. In the course of his studies of somnambulism he came across "certain facts of lucidity, of premonition, of telepathy; but since these facts were denied and ridiculed on every side," he did not push "independence of mind so far as to believe in them." Professor Richet in those unregenerate days "mocked at what was called spiritism," and even laughed at Mr. Crookes. After a time, however, Professor Richet found that a friend of his possessed the power of table turning, and could get answers "of which he had no knowledge, although he remained fully awake, and his own personal consciousness seemed quite intact." To explain this, Professor Richet invented a theory of "hemi-somnambulism," for which he now apologises. A telepathic hallucination experienced by a relative, and a study of the *Proceedings* of the Society, recalled his thoughts to the subject, but being a physiologist he was repelled by the impossibility of making exact measurements in psychical experiments. Then he arrived at the position that "certain psychological facts of lucidity, of telepathy, perhaps of premonition, were true; but that no occult facts actually affected the material universe. Our human intelligence, I said to myself, is perhaps endowed at certain moments with extraordinary powers, with faculties which remain latent in the mass of men, but that is all; it cannot act directly upon matter." He apologises for ever having been in a state of mind so incredulous, but in reality his present attitude appears to be fairly well-defined by the sentence quoted. It is true that he is puzzled by the "phenomena" which he and others have observed to occur in the presence of Eusapia Paladine, and while the impression remains fresh he is convinced, but after time for reflection he again becomes incredulous. This he explains by the assertion, italicised in the original, that "certainty does not follow on demonstration, it follows on habit." Thus it is that after sixty experiments with Eusapia he still has "a trace of doubt; doubt which is weak, indeed, to-day, but which may perchance be stronger to-morrow. Yet such doubts, if they come, will not be due so much to any defect in the actual experiment as to the inexorable strength of prepossession which holds me back from adopting a conclusion which contravenes the habitual and almost unanimous opinion of mankind." It must be confessed that Professor Richet's analysis of his own mental attitude is not calculated to help the average man very much.

THE "ATTENTION" REFLEX OF THE PUPIL.

The existence of a definite reflex act having a cortical representation has been verified by several observers. Bechterew cites a patient of his who could dilate his right pupil voluntarily to the maximal degree; the dilatation was interrupted by the act of blinking. Monakow[1] confirms Bechterew's observations, and adds that a close relationship exists between the cortex and the centre for dilatation of the pupil. He believes that the path probably lies through the Gasserian ganglion. Haab in 1886 found that by fixing the attention on a light object situated in the periphery of the field of vision without in any way altering the fixation point, a contraction of the pupil took place. Lately the interest in this subject has been renewed by some experiments by Dr. Piltz.[2] He not only corroborated the observations previous described, but also proved that a dilatation of the pupil occurred when the attention was directed to a dark object. An intellectual man was selected for these experiments. The room was lighted with gas; a spot on the opposite side of the wall was chosen for the fixation point. Under these conditions the pupils remained immovable. A black hat was now placed in the right field of vision, whilst a light object was placed in the left field. The subject was now told to think of the black hat without in any way altering his fixation point; a dilatation of the pupil immediately took place. Again, when his attention was directed to the light object a contraction of the pupil occurred. These experiments were repeated on several days with the same result. The mere suggestion of darkness in a garden caused a dilatation of the pupil; also when the light and dark objects were entirely removed from the field of vision and placed behind the subject's head a similar contraction and dilatation occurred. Piltz made another interesting observation. He noticed that sometimes the pupil showed signs of "hesitation" in its movements—a series of minor contractions occurred following each other very closely. This "hesitation" of the pupil was found to correspond with the subject's periods of indecision. His attention sometimes wavered between dark and light objects.

[1] *Gehirnpathologie*, 1897.

HOSPITALS AND OUT-PATIENTS.

Sir Trevor Lawrence has written a letter to the *Times* in reply to Mr. Loch, which is a good specimen of the line of defence adopted by hospital authorities whenever the subject of out-patients and casualties is discussed. Sir Trevor writes in the double capacity of a member of the Visiting Committee of the Prince of Wales's Fund, and Treasurer of St. Bartholomew's. As to the former, he deprecates the Committee taking upon itself to interfere with hospital administration in dealing with patients, forgetting apparently that the very basis of the Prince's appeal for funds is an assurance to the public that their money will be well spent. Sir Trevor would have the Committee inquire into the general administration of hospitals as to buildings, finance, appliances, equipment, and general efficiency, leaving out of view altogether the part which has been most often and most severely criticised, both from a charitable and medical point of view, on the ground that hospital authorities must best know how to deal with this part of their work. This would be the play of *Hamlet* with the Prince of Denmark left out with a vengeance. Sir Trevor asks two questions to which we should unhesitatingly reply in the affirmative: (1) Are the methods of the Charity Organisation Society applicable to the charitable relief given at hospitals? Answer: Yes, because they are the best methods known for dealing with cases where professional mendicants seek to share in public charity intended only for proper objects. (2) Is it right to regard the sick poor as presumably on the same level as professional mendicants, and practically to deal with them as not entitled to the help they seek until it be proved that they are? Answer: Yes, if the question-begging epithet be left out, for abundant experience shows that it is quite right to regard applicants for hospital charity as including many who have no legitimate claim to it. As Treasurer of St. Bartholomew's, Sir Trevor quotes the opinion of the Central Hospital Council for London, a body composed mainly, we believe, of hospital officials, as to the small amount of hospital abuse, and says that the experience at St. Bartholomew's, where, during the last five years over 760,000 casualty and out-patients have been

[2] *Neurolog. Centralbl.*, January 1st.

treated, strongly corroborates this. The well-worn case of the poor clerk needing a serious operation, whose clothes would attract an inquiry officer's notice, is duly trotted out as it has been many times since Sir Wm. Fergusson's Committee first demonstrated the serious extent of hospital abuse more than a quarter of a century ago. Mr. Loch having pointed out that the inquiry system as at present carried out is a sham, Sir Trevor Lawrence replies that to make it a reality would be a great waste of time and money. If it be a sham the public must judge for themselves whether it is worth while to keep up this sham, or whether more effectual means should not be found of reforming out-patient administration.

COUNTY HEALTH OFFICERS.

Dr. Kaye, in his annual report to the West Riding County Council, gives some striking illustrations of the variety of subjects on which medical officers of health to local areas in the Riding sought his advice in a single year. Simply to quote examples, we may name biological treatment of sewage, geology in relation to water supply, disinfection, school sanitation, tenure of office, diseased meat, the Pasteur treatment, and anthrax. The county adviser who can render prompt, practical, and efficient advice will often succeed in securing an active co-operation in local schemes which in his absence the local officers might feel unable to carry through alone. Much diversity of treatment of local annual reports by county health officers exists, and is perhaps not to be regretted so long as essential points are set out in all the yearly volumes issued to county councils. But one general feature seems to be that of summarising each local report, and of prefacing the aggregate of summaries by some more general statement as to what has been done, and still needs to be done in the county. Dissertations on special matters of local or national sanitary interest are often added. In some instances each summary concludes with a record of improvements effected and requirements still pressing; and this Dr. Williams gives for the county of Glamorgan, and the value of his masterly volume is thus increased. The system which Dr. Barnes has used in his summary of the reports of local health officers in Cumberland is very excellent. In his prefatory notes he sets out in pithy sentences the defects and needs of each locality. We could wish to see this system elaborated and rendered still more potent for good by separation of each item, as in Dr. Williams's report, and by a tabulation of defects in the order of pressure for their remedy. County councils would thus have at a glance a picture of the year's progress and of needed future action; and for the rest the more detailed references at present given would furnish information on any special point.

POST-GRADUATION STUDY IN LONDON.

The Dean of the Post-Graduate College of the West London Hospital writes to say that not only are courses of lectures and demonstrations in the wards given by the staff of the hospital, as was stated last week (p. 544), but that the practice of the West London Hospital is reserved exclusively for post-graduates, and accommodation in the shape of lecture, reading, and writing-rooms are provided for their use. That this undertaking has met with success is proved by the fact that nearly 100 medical men from all parts of the world have taken out tickets for study at the college during the past 12 months.

THE PERILS OF ARTIFICIAL TEETH.

A sad tale of the dangers of high days and holidays is related in the otherwise prosaic pages of the *Bulletins et Mémoires de la Société Anatomique de Paris*. On Easter Sunday a married woman, aged 32, one in the ranks of the *bourgeoisie* of Paris, was feasting, not wisely but too well in a restaurant, when part of her toothplate broke off and was swallowed. It included two incisor teeth on a portion of the plate, armed with two sharply incurved hooks. She applied at the Hôpital St. Louis at once, when not in a condition to feel much pain. The house-surgeon on duty succeeded in passing a sound into the stomach, as reflex irritability was in abeyance through intoxication; nothing could be felt, but the patient believed that the plate passed downwards. On the next day the patient could swallow solids and liquids. There was a deep scratch on one tonsil, and she complained of distinct pain in the left side of the neck at the level of the larynx. She was not yet thoroughly sober, yet, as it turned out, she was accurate. A specialist carefully made an exploration with the Roentgen rays, but no evidence of a foreign metallic body in the pharynx was thus obtained. On the third day —April 4th—the patient was better and at least sober, but there was rise of temperature without any local symptoms; she could still swallow solid food. But on the next day there was distinct swelling in the neck, and free expectoration of rusty sputum. Diffuse cellulitis and pneumonia were diagnosed. On April 6th the swelling was marked on both sides in the carotid region, and deglutition had become painful. Retropharyngeal suppuration clearly existed. An incision was made along the anterior border of the sterno-mastoid (the left, we presume, though the side is not stated), and the carotid and jugular pushed aside. Morestin, the operator, then succeeded in opening a fœtid abscess behind the lowest part of the pharynx. It contained gas. When it was emptied the operator once more explored its cavity, and detected the piece of toothplate, which was carefully extracted. Relief was immediate, but the pneumonia advanced; the patient, owing to her intemperate habits, could not resist so formidable a complication, and she died within twenty-four hours of the operation. The dangers of swallowing a tooth-plate during anæsthesia or intoxication are well known. The gravest feature in this case, as Morestin admits, is the failure of the *x* rays to detect the piece of plate, though the patient knew she had swallowed it, and had, as the after-history proved, accurately located it before the *x* rays were used. Had the operation been undertaken at once on the strength of this unhappy woman's localising ability, she would, M. Morestin insists, have been saved.

INSTRUCTION IN LIFE ASSURANCE MEDICINE.

The question of the desirability of instituting a special course of instruction in the method of examination for life assurance has been raised by the *Medical Examiner* of New York. Our American contemporary appears to be right in urging the advisability of some definite instruction on subjects relating to the examination of applicants for life assurance. In some of the medical schools of this country we know that from time to time special lectures have been given on this subject, usually in the course of lectures on forensic medicine, and some useful little monographs on life assurance have been the outcome of this practice. We would, however, urge that what has been occasional, and left to the initiative of the individual lecturer, should be included in the regular course of instruction. Not only is life assurance becoming almost universal, but a physical examination is now required previous to entry into the public and other services. It is therefore becoming a matter of importance that students should have some definite training in the art and science of making examinations for these purposes. We fully recognise that the unfortunate medical student is already overweighted with subjects which he is expected to get up and be examined in, but a few lectures in the course of forensic medicine might well be devoted to instructing the student in the method of examining applicants for life assurance. Dr. Brandreth Symonds, the medical examiner of the Mutual Life Insurance Company of New York, suggests that in a course of

six or eight lectures the following topics could be covered: "(1) Some instruction in vital statistics and the fundamentals of life insurance; (2) the relations of the examiner to the company and the applicant; (3) the facts concerning each disease which are of importance from a life insurance point of view; (4) habits, occupation, and environment; (5) the family record and heredity; (6) the physical examination, particularly with reference to the distinction between essentials and non-essentials; (7) the relations of the examiner to the agent; (8) frauds and fraudulent practices." This represents a more ambitious scheme of instruction than is required for the ordinary medical examiner, but if it were modified so that four lectures were given, we are convinced that all the parties concerned in life assurance would benefit.

LATHYRISM IN ALGERIA.

DR. H. BLAISE has recently[1] published the result of some interesting researches into the etiology of lathyrism. Bourlier, some time ago, asserted that the condition could be produced not only by *lathyrus sativus*, but also by *lathyrus cicera*. He injected alcoholic extracts of the bean into sparrows and tortoises; the result was death in twenty to forty hours, with paralysis of the hind limbs. Dr. Blaise gives details of experiments of his own on the same lines, which do not give at all the same results. He used glycerine extracts, and is disposed to attribute Bourlier's results to the injection of alcohol. Rabbits and guinea-pigs did not react at all; one pigeon showed some weakness of the extensors of the feet for a few minutes; two doves were seized with vomiting and inability to use the lower limbs; two sparrows had the legs more or less affected, but did not vomit, though one died; tortoises were affected by an alcoholic extract, but not by a glycerine extract. Dr. Blaise also fed various animals exclusively on djilben, as the seed is called in Algeria, but without result. He states that a planter's wife told him that one year all her fowls died; she attributed their death to djilben, which, however, fowls can as a rule eat with impunity. The same person fed a pig on djilben, and the animal developed paralysis of the hind limbs. Dr. Blaise concludes from these experiments, and the numerous cases of paralysis recorded in horses, that large mammals are more liable to lathyrism than small. He has been unable to perform any necropsies on natives affected by the disease, and the only necropsy he mentions on the animals he experimented with is in the case of a guinea-pig fed for six months on djilben, which he then injected with a culture of the bacillus of blue pus. This animal developed rigidity of the hind limbs, and died. Dr. Blaise felt inclined to ascribe these symptoms to the localisation of the pyocyanic infection in the lower part of the cord, supposed to have become the part of least resistance from the long ingestion of djilben, but the cord showed no changes to justify this view. Cantani found no changes in the cord, but fatty degeneration of the muscles. Allbutt mentions two horses which died of lathyrism, in which the cells of the anterior cornua were diminished and atrophied, and there was thrombosis and thickening of the arteries. The muscle of the heart and the intrinsic muscles of the larynx showed fatty degeneration. These facts rather point to the vascular origin of the mischief, and, indeed, the sudden onset of many of the recorded Indian cases tallies with this view. Whatever the poisonous principle may be (Astier thinks it is a volatile liquid alkaloid produced by some proteid ferment), it seems to be destroyed by thorough cooking. The natives of Kabylia, though quite aware of this fact, eat it uncooked or badly cooked. Its use is forbidden in Government institutions in India, and it is said there that the poverty of a village may be gauged by the proportion of *kesari dal*, as it is called, exposed for sale. In Algeria, as in India, the natives do not attribute the disease to any disease of the bean itself, but they state that in certain years it is so pernicious that merely sleeping near it is enough to cause a man to wake paralysed—an idea common to the native doctors in India also. Dr. Blaise speaks of it as "epidemic" at times, as well as endemic. The probability is that the "epidemic" is due to the failure of wheat and other crops. The cases described at Allahabad by Irving in 1857 followed a failure in the wheat crop, and those which have occurred recently in the North-West Provinces and Bengal followed the recent famine. *L. sativus* will grow on wretched soil, in swamps where no other food stuffs will flourish. Irving put the disease down to the damp of the rainy season, but this probably acted simply through the fact that the *L. sativus* flourishes in the rains. A curious similarity may be noticed between the ideas of the natives in Algeria and in India. Dr. Blaise states that the Kabylians consider a mixture of djilben and meat particularly likely to cause paralysis, while the natives of Shahabad (Bengal) hold that no harm results from *kesari dal* unless the curd of buffaloes' milk is used with it. Blaise, in treating of the prophylaxis, arrives at the same despairing conclusion as Irving: "In spite of every warning, the natives, lazy and fatalistic, will continue to eat the pulse."

[1] *Revue d'Hygiène*, July, 1899.

NEW SOUTH WALES MEDICAL UNION.

THE New South Wales Medical Union was founded some six years ago for the purpose of medical defence. As several actions at law against medical men for alleged malpraxis had occurred at that time, medical men were being continually asked to contribute towards defraying the legal expenses of their fellow practitioners, and to obviate the recurrence of this the Union was founded. It undertakes to assist its members both financially and by advice in cases where legal actions are threatened and actually brought against them. The sixth annual report received recently shows a highly satisfactory state of its affairs; 271 members had paid the annual subscription. During the year the calls upon the funds had been the heaviest in the history of the Union, yet the reserve funds in hand amounted to £1,052. The Union is making steady progress both in numbers and finances, owing to the energy of its Honorary Treasurer and Secretaries.

A HYGEIA MEDICAL COLLEGE.

THE Charter of the Hygeia Medical College of Ohio empowers it to educate "suitable persons in the art and science of curing disease by the use of air, baths, electricity, heat, magnetism, massage, and all other resources of Nature." The Attorney-General of the State contended that this language was too general, but the Supreme Court of Ohio has decided against him on the ground that it did not appear that any subject taught by the faculty was beyond "the resources of Nature." The *Medical News* of New York, from which we take this information, does not explain what is the system to be taught, and apparently the terms would include anything and everything except perhaps Christian science. The hygeian graduates will now, we presume, be permitted to practise with "all the resources of Nature" on the inhabitants of Ohio, as the Christian Scientists are now legally permitted to practise in Illinois with what may perhaps not improperly be called supernatural resources.

WE regret to have to record the death on August 25th of Mr. John Duncan, Consulting Surgeon to the Edinburgh Royal Infirmary. He was enjoying his usual autumn holiday in the Island of Skye, and had spent a quiet day, when he was suddenly seized with cardiac symptoms, and expired in half an hour. His death will be deeply lamented by a large circle of friends and old pupils. We shall hope to publish a biographical notice in our next issue.

JUBILEE OF THE NORTH WALES BRANCH.

PRESIDENTIAL ADDRESS
ON
MEDICAL REFORM: A BRIEF RETROSPECT AND PROSPECT.

By W. Jones Morris, L.R.C.P.Ed., M.R.C.S.Eng.,
Portmadoc.

[After a few preliminary remarks, Mr. Jones Morris said:]

In the *souvenir* which has been sent to every member, consisting of a facsimile of the first pages of our minute book in the handwriting of one who has only comparatively lately been called away from us after a long career of usefulness, with a most honourable record, and whose memory will be ever held dear by all who had the pleasure of his acquaintance—Dr. Edward Williams, of Wrexham—it is recorded that at one of the first meetings of the Branch a series of resolutions were passed which may be looked upon as the manifesto or programme that the Branch and Association laid itself out to perform. In the few words I purpose addressing to you the various points of that programme will be touched upon and scrutinised. I have been prompted to take up this subject, not only for its own intrinsic interest to every member of the profession, but also from the fact that I have been able to give but little account of my stewardship as a member of the Council of the Association and of its Parliamentary Bills Committee, to which you generously appointed me fourteen years ago; and, as during that period I have been in close touch with some of those questions as well as others affecting the welfare of our profession, I thought the subject would have more than a passing interest. To the credit of our Association it should be mentioned that no Bill in which the interests of medical men are in any way affected is introduced into Parliament which does not have the attention of the Parliamentary Bills Committee, and is not if necessary referred to a committee of experts on the particular subject affected, so that any hardship or grievance is at once taken into consideration and, as far as the Council has power, remedied. In this way most useful work is performed for the benefit of the whole profession in a simple, quiet, and unostentatious manner. But before entering upon my subject, let me very briefly glance at the progress of our Association and Branch since that date. I will not enter into any details of our Branch's progress, as my worthy and estimable co-Secretary has some ambition to undertake the congenial task of producing in pamphlet form a short sketch of our proceedings as a Branch, from its origin to the present day. It is very interesting to record the success of the British Medical Association and Branch. In 1849 the President of the British Medical Association was Dr. Charles Hastings (knighted in 1850), and the members numbered 1,760; now they number 18,185. The North Wales Branch then numbered 24 members, and now 185. The North Wales Branch was the ninth recognised, now there are over 70 Branches spread over every part of the empire. Then the funds of the Association were *nil*: now it has nearly £70,000; revenue last year, £43,000.

A Liberal Preliminary Education.

In the *souvenir* it is recorded: That this meeting approves of the principles adopted by the members of the parent Association assembled at the general meeting, and considers that a satisfactory measure of medical reform must comprehend

A liberal preliminary education, with uniform and sufficient qualification in every branch of medical and surgical science.

It is somewhat incredible that fifty years ago no preliminary examination was required by the Royal College of Surgeons of England from any of its would-be Members, although a somewhat easy one and mainly rudimentary was required for the Fellowship, and it was not till 1860 that an examination was instituted, and that was one that ought to be passed by an average Standard VII. child in an elementary school, where Greek and Latin are taught, or after a year in one of our intermediate schools. It should be stated for the credit of the Apothecaries Society of London that it was the first of the licensing bodies to move in this matter, and its preliminary was made compulsory before that of any other of the licensing bodies. We are glad to see that at the recent meeting of the General Medical Council a committee was appointed to enquire into the preliminary examinations of the various bodies with a view to raising the general standard of preliminary education. It need not be mentioned in this assembly or any other in Wales that to whatever status the preliminary examination of any of the various bodies of the empire may be raised, we are quite prepared and fully equipped for the future with our intermediate schools in every district, fitted with physical and chemical laboratories consonant with the requirements of the present day. Our University Colleges, in one of which, by the grace of the Senate, we are met to-day, are recognised by the General Medical Council to impart the instruction necessary to pass the first professional examination in science and physics, and it is the same with our University. The ever-increasing demands of the present day will render the interpretation of the term "liberal" education a difficult one. What even twenty years ago was considered "liberal" is now considered by enthusiasts and reformers to be fossilised, and we must be ever on the alert. Although the five years' course obligatory for the medical curriculum must require a large pecuniary sacrifice, the next age will undoubtedly exact if not a degree in arts and science —one in arts or science—before that professional study is commenced. Many following Professor Huxley hold that science should be the groundwork for our profession, still Greek and Latin, with French and German, must ever have advantages and fascinations for those who wish to study thoroughly in the vernacular the old and new masters of the healing art. Perfection on this head cannot be attained, and therefore this is a subject that must ever remain on the list of medical reforms. If the profession in Wales was polled tomorrow the great majority would be in favour of still further raising the standard of preliminary examinations.

Education in Medicine and Surgery.

Uniform and sufficient qualification in every branch of medical and surgical science.

One of the main objects aimed at in the Medical Act of 1886 was that no one should enter the profession unless he satisfied the examiners in medicine, surgery, and midwifery. Clause 2 states that

> On and after the appointed day (June 1st, 1887) a person shall not be registered . . . . unless he has passed such qualifying examination in medicine, surgery, and midwifery, as in this Act mentioned.

The various unsuccessful attempts, since the year 1839 to that date, to carry such a measure, although most interesting, are too long and wearisome to chronicle. Suffice it to say, that the pertinacity and thorough devotion to the cause of medical reform shown by many of those who preceded us, and more especially our late friend, Dr. Edward Waters, of Chester, is to us, who are still seeking for parliamentary powers to redress grievances, an incentive to be of good heart. We have entered into the fruit of their labours in the past, and that should stimulate us in the present to prepare the way for further reforms in the future.

Equal Rights in the British Empire.

Equal rights for all so qualified to practise throughout the whole extent of her Majesty's dominions.

This is also conceded in Clause 6 of the Act of 1886, which states that

> On and after the appointed day a registered medical practitioner shall . . . . be entitled to practise medicine, surgery, and midwifery in the United Kingdom, and (subject to any local law) in any part of her Majesty's dominions.

The proviso, "subject to any local law," does in some parts of the empire, such as the self-governing Colonies, press somewhat unduly on the registered medical man who may wish to practise there. He must in some places pass a qualifying examination provided by the State, whereas in others he is registered by simply presenting his degree or diploma. In the Dominion of Canada the degrees of one province are not recognisable in another province, and the recognition of degrees is a very vexed question in our oldest possession, and was very pertinently referred to by our colleague, Dr. Roddick, in his able inaugural address at Montreal. In other parts of the empire there are certain anomalies in local regulations

which have lately had the attention of your Council, and representations have been made to the Secretaries of State requesting their assistance in removing them and redressing grievances. The latest that, on account of its urgency, was considered without notice by your Council was with regard to the medical ordinance proposed for Rhodesia. The Administrator wished to have a council to supervise and superintend matters medical, and for this purpose three persons were to be nominated—one a medical man, one a chemist, and one a dentist, and, as far one can understand, to this trio all matters pertaining to education, registration, etc., were to be referred; and as there is already a considerable number of unqualified and quasi-qualified practitioners in that El Dorado, and no definite regulation that the medical representative was to be a British graduate or diplomatist, our excellent representative member of the General Medical Council, Mr. Victor Horsley, brought it forward, and it was at once referred by your Council to the Colonial Secretary, requesting him to defer sanctioning such a crude and retrograde step till the scheme was considered by those fitted to advise on such matters. Under certain conditions, which are very amply stated in the Medical Act of 1886, being recited in eight clauses, foreign practitioners are entitled to be registered in England, provided the qualifying examination is acceptable to the General Medical Council. In case of its decision as to the validity and sufficiency of the examination being questioned, an appeal to the Privy Council is provided, and the name is allowed on the *Medical Register* under the heading "Foreign Practitioner," in a separate list. Cases of great hardship have recently occurred where duly qualified registered practitioners of Great Britain and Ireland have been subjected to very harassing and, in some instances, undignified proceedings on the part of the authorities of various foreign countries before they have been allowed to practise, in the majority of instances among their own countrymen, in those States. We have, in Britain, for many years been somewhat enthusiastic in the cause of Free Trade, and have allowed every liberty and inducement even to the foreigner to enter our country. The polemical question as to whether the time is not ripe to restrain this invasion I will not enter upon; but we cannot allow our own kith and kin to suffer indignity abroad when the right hand of fellowship is gladly extended here to all within our gates, under certain liberal and legitimate limitations. Our Foreign Office is at present negotiating with some of those countries with a view of relaxing the regulations which unduly and unnecessarily fetter the action of British practitioners abroad. Whether or not our forefathers anticipated the recent proclamation of the General Medical Council, that any registered practitioner who employed an assistant not so qualified would be guilty of infamous professional conduct, is not at this date clear, but as a corollary of other resolutions, it could not be altogether absent from their minds. Every legislative enactment for the regulation of the medical profession, giving its General Medical Council, backed up by the Privy Council (that mysterious and awe-inspiring authority which the Britisher obeys, although its origin and constitution are to him a veritable enigma) is ample, plenary, and penal powers for the protection of the public. If the interest of the public weal demanded this, among our mining and quarrying population, in many cases ample testimony, by public subscriptions and presentations, to well-known, highly respected, unqualified assistants, who, by years of patient devotion, under circumstances of great stress, endeared themselves to the population, refute the suggestion, if the public weal demands what it undoubtedly should possess, and what is to it an inestimable blessing,

> A wise physician, skilled our wounds to heal,
> Is more than armies of the common weal.

If this wise physician must in all cases be a thoroughly qualified one, we have a perfect right to request the General Medical Council and its second, the Privy Council, to purge our country from the notorious quacks which infest it. If men who are in no wise unworthy of their position as subordinates to duly qualified medical men are to be drummed out of the subsidiary ranks, why should the law of England allow the charlatans who, under every euphonious appellation, flagrantly flout their ignorant services before the British public, be allowed to flourish and wax fat and (in many cases) drunk? Although your Parliamentary Bills Committee has drafted a Bill by which the practice of irregular and illegal medicine can be better dealt with than by the present difficult and inadequate method under the Apothecaries Act, it concedes it is entrenching on the functions of the General Medical Council, who should have further powers to suppress these practices.

The Representative Principle.

The adoption of the representative principle in the formation of the Council of Governing Bodies.

Thirdly, this resolution is somewhat ambiguously drawn, and shows that at that time the constitution of the General Medical Council, which was created by the Act of 1858, was not as clearly seen as it is by us who have formed our conclusions as to its work by forty years' experience. The representative principle was, from the very commencement of the reform movement the leading "plank" in the programme, but it was not till 1886 that this was attained, being the second of the great and prominent objects of the Act of 1886, the first being what has already been referred to, namely, qualification in medicine, surgery, and midwifery. Clause 7, referring to the constitution of General Medical Council, states that after the passing of the Act, the General Medical Council shall contain the following members:

Three persons elected from time to time by the registered medical practitioners in England.

One person elected from time to time by the registered medical practitioners in Scotland.

One person elected from time to time by the registered medical practitioners in Ireland.

Although we have had the principle conceded, and have five direct representatives out of thirty on the General Medical Council, many think the time is ripe for reopening the question and pressing for a larger number and a more equable proportion, while others consider the lethargy and apathy shown by the general practitioner in the exercise of his rights in the election of his medical representative a bar to any further concessions in this direction. The movement for giving members of the College of Surgeons of England some voice in the management of that institution was probably before our predecessors, and the still greater question as to whether each graduate and diplomate of every university and incorporation which has a representative on the General Medical Council should not be enfranchised to vote for the representative, instead of being, as at present, elected by the Senate and Council respectively, is undoubtedly a phase of the principle enunciated.

Education in Midwifery.

That the College of Physicians and Surgeons, in conjunction and being properly modified, are sufficient to meet the wants of the profession, but this meeting is deeply concerned that any system of examination that may be adopted should include a special one in midwifery.

Clause 3 states:

A qualifying examination shall be an examination in medicine, surgery, and midwifery, held for the purpose of granting a diploma or diplomas, conferring the right of registration under the Medical Acts by any of the following bodies, that is to say (*a*) any university in the United Kingdom or any medical corporation legally qualified at the passing of this Act to grant such diploma or diplomas in respect of medicine and surgery; or (*b*) any combination of two or more medical corporations in the same part of the United Kingdom who may agree to hold a joint examination in medicine, surgery, and midwifery.

Rarely is it to be noted that a resolution passed 37 years prior to an Act of Parliament and relating thereto should be almost identical in phraseology: verily comment is needless. "Facts are chiels that wanna ding."

Status of General Practitioners.

That this meeting emphatically disapproves of a separate incorporation of the general practitioners.

At this period of time the object of this resolution does not appear very clear other than what is apparent on the face of it. The majority of the members at that time were, and to a very large extent still are, general practitioners, without many consultants, and as the same examinations had been passed by both classes, it would certainly have been undignified for one section who, by mere force of accident, or of choice, were engaged in more active duties as general practitioners should be accorded what they considered a lower status by a special incorporation. In another and a different sense every member of the Association is a member of an incorporated society, as, in 1874, the British Medical Association

was incorporated under the provisions of the Joint Stock Companies Act, this being a business proviso rendered necessary for legally carrying out many of its objects. It was some years ago suggested that the Association should obtain a Royal Charter of Incorporation, but for reasons, mainly financial, it was dropped. It is not the latter incorporation our founders protested against; they were members of the "Provincial Medical and Surgical Association," founded in 1832, and remained under that title till 1856, when the name was changed to the "British Medical Association," and at that early period no Joint Stock Companies Act existed.

One Portal.

That this meeting is of opinion that there should be one common portal by which all men should enter the profession, that the fundamental laws of medicine should be known by the surgeon, and the leading principles in surgery be understood by the physician. It also reprobates any enactment which would debar the general practitioner (because he practises midwifery or supplies medicines to his private patients) from the Council, or any other honourable status in his profession, which talent and character would otherwise entitle him to.

This resolution has a threefold meaning: (*a*) One portal, a single portal, to the profession by means of an examination; (*b*) the equal importance of medicine and surgery; (*c*) the equal right of every member so qualified to sit (if elected) on the General Medical Council. In 1839, ten years before the date of this resolution—that is, sixty years ago—this resolution was more explicitly stated in a petition from the Medical Reform Committee of that year, for "an adequate and uniform education for the whole profession, so that all who enter it shall pass through the same course of preliminary medical instruction, be tested by the same examinations, and when approved, be entitled to the same privileges." The one-portal system (the State examination of foreign countries) again has been considered by its promulgators and supporters in a twofold light: (1) Those who consider there should be one examination for Great Britain and Ireland; (2) those who consider that each separate division should have an examining Board: one for England and Wales, one for Scotland, one for Ireland. There is the same consensus of opinion, by the two schools of thought on this question, that whether it be one system or three systems, the examiners should in each case be the same, to ensure uniformity of examination, or that the majority of the Board should be examining assessors, appointed by the State, together with the divisional examiners, appointed by the various authorities within the division. The fundamental idea of a single portal system is the thorough subservience of medical education and examination to the State. The State alone is to give its imprimatur on whom it shall allow to practise. Its licence to practise is alone to be the criterion of entrance to every public service in which medical opinion is required, whether it be sanitary, naval, army, Poor Law, lunacy, mercantile marine, factory, etc. In fact, according to the earlier resolution, there is the monotony of sameness, a "cast-ironness," "all moulded in the same groove," which is somewhat repulsive to modern ideas, but from their point of view it was right. There was no uniformity in anything, there was very little examination, there was not very much need even for a licence to practise, unqualified men being so rife. Competition for those who wished to qualify rather lowered the standard of examination among the various corporations which had a right to licence. Probably there is danger for us nowadays in following too closely the actual wording of these earlier resolutions; subsequent events, the reforms already passed, the progressive spirit of the age, all demand more caution in the choice of words than was necessary fifty years ago. "One portal," "a single portal," is a phrase often used without considering its significance, without contemplating the tremendous difficulties that have to be surpassed, without reckoning the strong powerful influence of "vested interests" that have ever stood in the way of reform. The various Acts regulating the profession have been the result of compromises with those interests. Even the supporters of the idea of a one portal are divided in their definition. Can you take away some of the privileges that Scotland enjoys, and has enjoyed for centuries, attracting some of the best men of the empire to her schools and take her degrees, without ruffling the susceptibilities of every Scotchman, who will at once verify his country's motto, *Nemo me impune lacessit?* We know too well the impetuosity and the eloquence with which our Celtic *confrères* across the Channel would protest, if in trying to establish a "single portal" in London, you created another "injustice to Ireland." Besides these patriotic prejudices—and where is there more sympathy with them than in Wales and among the Welsh?—who have had a very hard battle against prevailing sentiment in carrying out their national educational policy, and much yet remains to be done. There are the interests of over twenty incorporations, the older universities and the latter, with the various licensing corporations. It was only a few years ago comparatively that the Victoria University, with its great and well equipped medical schools in Liverpool, Manchester, and Leeds, was founded, with the Midland University, an example of nineteenth-century generosity, laying well the foundation of an institution, that if one can judge from its enthusiastic foundation bids well to compete with any in Britain. With our own University of Wales, having as its chancellor our titular Prince, probably in a few years seeking for powers to confer degrees in medicine as it does now in arts, science, music and Divinity, how will these various interests look upon a scheme which undoubtedly will, to some extent, be antagonistic to their progress? Will human nature be so far changed or modified that, at the request of, say, the bulk of the profession—with the public apathetic, probably—to make this a burning question within the range of practical politics, for the sake of universal uniformity? When the changed circumstances of our day with regard to this question is considered, we find that from even the casual perusal of these resolutions the reforms indicated have taken much of the brunt of the arguments in its favour—the one portal in this resolution is based on the truism to us, but to our forefathers a vista, that the examination of the physician and surgeon should coincide and be co-equal—that the qualified man should have the right to sit on the "Council." It has been shown that since that date the General Medical Council has been established, the principles and practice of medicine, surgery and midwifery are obligatory in the law-established examinations, and we have, and have had, general practitioners sitting as the direct representatives of the profession on the General Medical Council. As this question is to be brought prominently forward during the next year or two, let me remind you of the opinion of one who was the life and soul of the reform movement, and also for many years the chairman of the Parliamentary Bills Committee, and whose loss we much deplore. Mr. Ernest Hart, writing in the Journal after the passing of the Act of 1886 (May 15th, 1886), says:

> Every effort has been made for many years by different powerful Governments, and by the profession, to establish the one portal. The battle for it has been fought with unswerving persistence, but events have proved that it is unattainable. Scotland alone, with its 70 members all zealously guarding the interests of the Scottish Universities and Corporations, would prevent its enactment: and to the power of Scotland that of Ireland must also be added. The struggle for the "one portal" must therefore be abandoned, at any rate for the present; and the profession must be content to receive the boon of direct representation in the Medical Council, and the establishment of the threefold examination in medicine, surgery, and midwifery of all candidates for admission to the *Medical Register*. The achievement of these two points will give a better platform for future advance.

This is a question that requires much careful thought and consideration from every member; it does not concern us much individually; we shall not have to submit ourselves for examination—let us thank Heaven for small mercies; it might fare badly for some of us, your President not excluded; but, if we consider that the future equipment of our successors will be furthered and their qualifications for practice be strengthened by a one-portal system—for that must be the main object; setting every sentimental objection, every national prejudice, every *esprit de corps* and attachment to our Alma Mater on one side, it is our bounden duty to throw ourselves heart and soul into the movement. We have the experience of foreign countries, notably Germany, to guide us in this matter, and even in that country the strict one portal—the sole examination in a central place—has had to be modified for peripatetic State examiners to conduct the State examination at the various universities. We must well consider the standards of the several examinations of the various degree-giving and licence-conferring bodies as they at present exist, and the cry in our medical

journals that they are exceptionally difficult, and follow very closely the reports of the assessors of the General Medical Council of their visits to the examinations. If they show a decadence, which I for one will not admit, if the results in actual practice of our recruits to the medical ranks show a want of confidence and sympathy by the general public, of which I see no sign—then let us change our present system (a growth of only thirteen years), and substitute for it a one-portal system. The history of the various attempts to carry the "one-portal" scheme through Parliament as well as the other reforms mentioned is a most interesting one, and worth perusal, but is too large a question to enter upon when I have already exhausted the time allotted me; but there is one fact that among all the varying changes of politics, above the din of contending parties in the State, notwithstanding the heat and controversy of polemical factions, this question of medical reform is one that all, to whatever shade of politics attached, whatever side of the House they chanced to sit, have contributed to its solution. Bills bearing upon this important subject have been in the past brought in by the Duke of Richmond and Mr. Mundella, by Lord Carlingford and Lord George Hamilton, while Lord Cairns and Lord Ripon, Sir Lyon Playfair, Dr. Lush, Sir Charles Cameron, and others, took prominent parts in its discussion. This fact, in these days—when the dividing line is rather acutely drawn—should teach us a lesson that in the discussion of these and kindred questions no one should be for party, but all for the State.

CONCLUSION.

In these few words I have briefly, inadequately, and imperfectly sketched the steps taken in the past for furthering medical reform, and roughly delineated our aspirations for the future; but notwithstanding all Acts of Parliament, every enactment of the Legislature, and the several edicts of our special Medical Council, we should ever remember that there is another reform enunciated in one of the fundamental principles of our Association, when first founded by Sir Charles Hastings and the small but enthusiastic band that assisted him, and the principle is equally applicable to the present day. It is the "maintenance of the honour and respectability of the profession generally by promoting friendly intercourse and free communication among its members, and by establishing among them the harmony and good feeling which ought ever to characterise a liberal profession." In attaining our ends in a collective, compact mass we show the great advantage and benefit accruing from organisation founded on the most democratic principle of thorough representation, with liberty for every individual opinion to be expressed in a constitutional manner. When the honour and respectability of the profession is considered every member is a unit, upon whom and through whom should be perpetuated the noble traditions that have ever characterised our profession; that every member should always have in mind that it is incumbent upon him to hand down to posterity a heritage more precious than rubies, being that of a life devoted to the service of others. The more thorough that devotion the more glorious the halo. "Act well thy part, there all the honour lies," is never more thoroughly realised than when the multifarious duties of our calling are performed in the spirit of Him who, in his ministrations among the sick, the blind, the maimed, laid down for our guidance the divine command: "Do unto others as ye would they should do unto you." May it be our object in the present to more thoroughly appreciate the spirit of that behest; may all our actions towards each other be always in charity and concord; may we be more firmly united in indissoluble bonds of benevolence and thorough co-operation, and should these attributes permeate our professional intercourse, future generations will bear witness that we, in our day, did our duty, and we will have no reason to regret that we took part in the proceedings of this memorable, and I would fain hope auspicious, occasion.

THE Académie de Médecine of Belgium has decided in favour of the principle of the compulsory notification of infectious diseases. The debate was prolonged, and was only brought to an end by the application of the closure, when 14 voted for compulsory notification, 5 against, and 5 did not vote.

THE RECONSTITUTION OF THE UNIVERSITY OF LONDON.

WHEN the Statutory Commission reassembles after the recess they will have before them the various representations made by the University of London, the Technical Education Board, the medical schools, and various colleges respecting the "Draft Statute No. 1," which, together with certain draft regulations having reference to the B.Sc. Examination, were issued to the parties concerned in June last, but which have been most punctiliously regarded as "strictly confidential." We called attention at the time to the anomalous position in which, for instance, the Convocation of the University was placed in being summoned to consider in public meeting what was jealously guarded as a confidential document.

We desire to respect the wishes of the Commissioners, who doubtless intend, in accordance with the procedure indicated in Clause 5 (1) of the University London Act, 1898, to postpone public discussion of the statutes they are engaged in framing until these shall have been published in the *London Gazette*, and laid on the table of both Houses of Parliament. We are, however, able to obtain meanwhile some notion of the nature of the changes in the University which these statutes foreshadow from the discussions which have taken place upon them in bodies which they concern but whose proceedings are not withdrawn from the public gaze. Thus, we find in the minutes of the Technical Education Board of June 26th, which were confirmed at the last meeting of the Board held just prior to the long vacation, a very full and detailed criticism of the draft statutes and regulations. From this we gather that "the draft statute" contains 93 clauses which deal with the whole question of the reconstitution of the University, and amplify while they follow the main provisions of the Act of last year and the schedule attached thereto, which latter, it will be remembered, contained the so-called "compromise" arranged between the rival parties in university politics.

THE SENATE.

The new Senate will consist of the Chancellor, the Chairman of Convocation, and 54 other persons. The schedule to the Act requires 16 senators to be elected by Convocation and 16 by the faculties. Clause 11 deals with the appropriation of the 16 senators to be elected by Convocation among the graduates in the various faculties.

At first the 16 representatives are to be elected as follows: 6 by the graduates in arts, 1 by the graduates in laws, 1 by the graduates in music, 2 by the graduates in medicine and surgery, 6 by the graduates in science; but as soon as the registered graduates in theology number 30, 1 member shall be elected by the graduates in theology, and 5 by the graduates in arts; in the meanwhile the graduates in theology are to vote with the graduates in arts. The same clause appropriates the 16 members of the Senate elected by the faculties among the several faculties as follows: 1 by the faculty of theology, 4 by the faculty of arts, 1 by the faculty of laws, 1 by the faculty of music, 3 by the faculty of medicine and surgery, 4 by the faculty of science, 1 by the faculty of engineering, 1 by the faculty of economics and political science.

THE ACADEMIC COUNCIL.

The Academic Council is dealt with in Clauses 28 and 29; the constitution of the Council is defined by the Act, and of the 20 members 16 are the persons appointed to the Senate by the faculties. The Act, Schedule, Part 2, provides for the due representation on the Senate and the Academic Council of all sections of teachers of the University. The draft statute provides in Clause 66, in accordance with the Act, Schedule 1, Section XI, that the Senate shall take care that teachers of the University, not belonging to any school of the University, shall be adequately represented on each Board of Studies, but there is no such corresponding provision with respect to the representation of teachers not belonging to a school of the University on the faculties, and therefore there is no guarantee that such teachers will be found among the representatives of the faculties on the Senate, and as the representatives of the faculties on the Senate constitute the great majority of the Academic Council, there is no guarantee that the external teachers will be adequately represented on the Academic Council.

EXTERNAL STUDENTS AND UNIVERSITY EXTENSION.

The next following clauses in the draft statute relate to the

Board for External Students and that for the promotion of University Extension.

The Faculties.

Clause 54 provides that there shall be eight faculties, namely:

Theology.
Art.
Law.
Music.
Medicine and surgery.
Science.
Engineering.
Economics and political science (including commerce and industry).

The faculties will consist of (1) those teachers who are nominated as members of the respective faculties by the Commissioners, (2) professors, (3) assistant professors, (4) readers and lecturers appointed by the Senate, and (5) such other teachers of the University as may from time to time be admitted by the Senate.

The Boards of Studies.

Clause 64 provides for the appointment of 35 boards of studies. These boards are the following:

(1) Theology.
(2) Greek and Latin.
(3) Oriental (including Semitic) languages.
(4) Mediæval and modern languages.
(5) Ancient mediæval and modern history and geography (see also 29).
(6) Greek, Roman, and Syriac, Egyptian, and general archæology with palæography and diplomatique.
(7) Philosophy, including logic, psychology, and metaphysics, moral, political, and social philosophy and the history of philosophy.
(8) Pedagogy.
(9) Fine art, including architecture.
(10) Law.
(11) Economics and political science (including commerce and industry).
(12) Music.
(13) Preliminary medical studies, such as physics, chemistry and biology.
(14) Early medical studies, such as anatomy, physiology, general pathology, and pharmacology.
(15) Advanced medical studies.
(16) Dentistry.
(17) Pharmacy.
(18) Hygiene and public health.
(19) Mathematics.
20) Astronomy and navigation.
(21) Physics.
(22) Chemistry.
(23) Chemical industries.
(24) Geology, including petrology, palæontology, and mineralogy.
(25) Ethnology.
(26) Zoology and comparative anatomy.
(27) Physiology and experimental psychology.
28) Ethnology.
29) Physical, political, and commercial geography.
(30) Mechanical and marine engineering.
(31) Electrical engineering.
32) Naval architecture.
33) Civil engineering.
(34) Mining and metallurgy.
35) Agriculture.

Matriculation.

Clause 80 provides that every candidate for admission as internal or external student shall pass such entrance or matriculation examination or fulfil such other test of fitness as may be from time to time prescribed. The Senate may make provisions for separate examinations by way of matriculation for different classes of students according to the course of study they propose to follow, and there is to be a special board to advise the Senate on questions relating to the matriculation both of internal and external students, the Board to consist of the Vice-Chancellor, the Chairman of Convocation, and such teachers of the University and other persons as the Senate may annually appoint, provided that the number of such other persons shall not exceed one-fourth of the total number.

Internal Students.

The last six Clauses, 88 to 93, relate to internal students. The course of study for an internal student must be approved by the Senate and extend over not less than three academic years. The Senate is to provide for the guidance of the courses of study for internal students, with however a wide option in the choice of study and with power to vary the course. It appears that a matriculation may be dispensed with in some cases, but certificates of courses of study must be produced by candidates before admission to examination for the first degree. Such course of study, if approved by the Senate, may be carried on in any school of the University. A graduate who has taken a degree as an external student may proceed on approved conditions to the next higher degree as an internal student.

Medical Degrees.

From this condensed summary it will be seen that many different avenues of study and examination will be open to students who will eventually arrive at the same nominal result in the shape of a degree. If the connotation of the degree be thus rendered ambiguous some compensation may be found in increased opportunity and multiplied variety for students. In regard to degree examinations in medicine it is not as yet evident that there will be much change in procedure though there may be in standard. It is worthy of note that a special Board of Studies will supervise preliminary medical studies, namely, physics, chemistry, biology; the effect that this will have on the standard of the preliminary scientific examination, which has hitherto been the chief difficulty, can only be determined by experience.

A "STRIKE" OF COLLIERY SURGEONS.

A dispute is now in progress in the Bolton mining district, Lancashire, between the medical men and colliers, the former alleging that the fees are too low, and that they have not been met in a proper spirit by one of the miners' societies. Nearly all the colliers in and around Bolton are members of accident clubs to which the local doctors are attached. Formerly every employee was compelled to join such a club, and the employers added to the fund thus subscribed 25 per cent. of its amount. The clubs then included the surface-men, amongst whom accidents are rare, and whose freedom therefrom somewhat compensated the surgeons for the small amounts received from the pitmen. The passage of the Workmen's Compensation Act, however, altered all this. The employers withdrew their subsidies, and many of the clubs thereupon ceased to exist, their funds being divided amongst the members. But, inasmuch as compensation cannot be enforced unless the injured person is invalided for more than a fortnight, the pitmen formed new clubs to provide medical assistance and relief for minor accidents, or for the fortnight immediately succeeding accidents of a more severe nature, but the surface-men have not joined such clubs.

Every colliery possesses an accident club, which is controlled by a Board consisting chiefly of check-weighmen. Out of the funds subscribed by the members, 2s. 6d. a man per annum is set aside for medical fees. The Board appoints as many doctors as it requires to attend to accident (not sickness) cases; and the doctor living nearest the injured man's home is usually summoned to attend him. All the half-crowns at the end of the year are "pooled," and divided equally among the doctors attached to each pit. Thus it arises that a practitioner attending possibly not more than 4 patients in the year receives as much remuneration as another who attends 50 or more in the same period. This is one of the medical grievances. For this uneven system of payment the doctors have proposed a uniform fee of 15s. a case. The average paid by the Wigan Miners' Permanent Relief Society for each case for the latter half of 1898 was 8s. 7¼d.; whilst the fees actually paid to the doctors were so uneven that the average per case fluctuated from £1 2s. 8d. in one district to as little as 1s. 2d. in another, without any reference whatever to number of visits or duration of treatment.

In self-defence the local practitioners, over one hundred in number, in the course of last year formed themselves into a Colliery Surgeons' Association, which includes every surgeon resident in the district. The secretary is Mr. J. H. Marsh, of Little Hulton, who initiated the movement some fifteen months ago, whilst the chairman is Dr. W. Duncan, of Tyldesley. The annual subscription is 5s., an amount which has so far amply sufficed to cover expenses. The members of the Association decided not to attend any new clubs formed on the old lines; and several clubs were accordingly started on the principle of paying 15s. per (accident) case to the attending surgeon. Shortly, however, some of the officials endeavoured to evade this payment, and to that end dissuaded members from seeking the surgeons' aid when the accidents were slight, and actually granted the week's pay without requiring the surgeon's certificate of inability to work. Such

a procedure manifestly exposed the members to serious risks from the withholding of proper treatment, and also to the risk of loss of compensation under the Act. Some of the new clubs have since cancelled their contract with the Surgeons' Association, but others have decided to continue their membership, and the payment to the surgeons of 15s. for each case of accident attended by them. The Surgeons' Association has resolved to attend miners, not enrolled in any club recognised by the Association, as private patients only, should they meet with accident, and has agreed upon a scale of fees which has been published and sent to all the colliers.

The Wigan and District Miners' Permanent Relief Society, which has over 2,000 members, has absolutely refused to pay the members of the Surgeons' Association 15s. per (accident) case, and has endeavoured to engage surgeons who do not belong to the Surgeons' Association, importing them into the district. It is this action which finally determined the members of the Surgeons' Association on June 23rd last not to attend any member of the Wigan Miners' Society in case of accident on any terms whatever. At the same time it was resolved "that printed circulars with full details and explanations be issued and delivered to miners; also inviting them to public meetings to be held in each district of the Colliery Surgeons' Association." As the terms of the Association were not accepted by the Miners' Society, the members of the Association, having failed to obtain by milder measures redress of their grievances, determined to "strike," and have been on "strike" since July 17th. A member of the Miners' Society sustained a fracture of the arm on August 10th at the Nelson Pit, and Atherton, went immediately to the surgeon of the Association (Dr. Marshall) practising in his district, but the doctor refused to attend him.

The "strike" is not, however, to be the heartless procedure that this might at first lead one to suppose, since, in cases of very severe accident, threatening life, "first aid" is to be given without charge by any doctor "on strike," and the patient to be directly afterwards transferred to the medical man of his society—that is, to the one imported practitioner whose services alone the Society has apparently so far succeeded in securing.

The Miners' Society is still willing to pay the rate for accidents, which has prevailed for twenty-five years; but it is maintained that two recent decisions of the General Medical Council justify and in fact necessitate an increase in medical charges; these are (1) the lengthening of the period of medical study to five years, and the general raising of the standard (and consequent increase in the cost) of medical education, and (2) the prohibition of the employment of unqualified assistants.

Such appears to be a fair statement of the broad facts of the case, and it certainly shows that the contention between the parties concerned is very sharp. The medical men, those at any rate who have attended most cases under the old "pooling" system, have had a very real grievance, having been much underpaid for the very important services they rendered. The amount of fees received by each at the year's end should in some way be proportional to the amount of work done, and payment of a definite sum for each accident seems to be fair, and a vast improvement on the unfair "pooling" arrangement, formerly the usual method of payment. Some clubs indeed appear to be still conducted on this principle. In their case surely the doctors might arrange amongst themselves how the whole amount subscribed by the miners during the year shall be divided, and might distribute it amongst themselves in sums proportionate to the number of cases of accident attended by each doctor during the year. If the sum per case is found to be inadequate, a request to raise it should be made. The fee of 15s. a case which the medical men have fixed for the new clubs appears to be reasonable under the circumstances. The attendance must frequently be of many months' duration, whilst for accidents still more severe and ending quickly in death, or so severe that the patient is sent on to hospital, the doctor must attend immediately and devote much time, notwithstanding other engagements, and every possible attention to the injured man. If the miners refuse to divide their total payment to the doctors in fees proportionate to the number of cases, it would not be difficult for the doctors to do it for themselves; each one might hand in at the year's end a list of the cases attended by him, and should receive a sum *pro ratâ*. If the colliers should then refuse to entertain the request to raise the fee per case to 15s. or other sum, the doctors must endeavour to convince the men of the reasonableness of their request.

It must be remembered that the present "strike" is not the result of a refusal to raise the medical fees only, but of the attempt on the part of the Wigan Miners' Relief Society to engage surgeons for its members whom it desired to import into the district. It is gratifying that the Society's action has met with an almost complete want of success, but the attempt excuses the severe counter-move, adopted in this instance by the surgeons, of going on "strike." We feel sure that the profession generally consider that a "strike" should not be brought about except as a very last resource, since it corresponds to a declaration of war in diplomacy. It must never be undertaken with a "light heart," but only after long consideration, and when every expedient for effecting a peaceful solution has been exhausted.

Doctors, after all, do not work for bread alone for themselves and those dependent on them, but also, as the best traditions of medicine recognise, with philanthropical objects towards their patients. A "strike" puts philanthropy entirely aside, and places the monetary object of their work alone in the foreground. Further, if there is one kind of illness more than another which is wont to call forth the commiseration of onlookers, it is when a severe accident has suddenly overtaken a man in prime health who is perchance the breadwinner of a large family. To withhold help, when one can give it, from such an "unfortunate" on any plea is almost sure to place one in the wrong in the eyes of a not too discriminating or reflecting public. We emphasise these points to show the circumspectness with which those who engage in a "strike" of this description must in general act if they desire the approval of their professional brethren and the public in their action. But, having well weighed the circumstances of this particular case, we are convinced that the colliery surgeons have by the procedures of their opponents received such provocation as justified this "strike," mitigated as it is to be by gratuitous "first aid" to any collier whose life may be really endangered through accident; and that the surgeons, moreover, did not initiate the "strike" until they had exhausted every means of conciliation.

No real concessions appear so far to have been made by either side for smoothing differences. But as the employers naturally dislike the inadequate attendance which their men now receive, which may lead to increased compensation after accidents, and as most of the miners themselves seem to entertain no ill-will towards their doctors—the Board of the Society, not its general members, having originated the dispute—it is to be hoped that the strike will be of only short duration.

THE PLAGUE.

Inoculation in Hubli.

Captain Leumann, I.M.S., begins his report on preventive inoculations against plague in Hubli from May 11th to September 27th, 1898, with some theoretical considerations as to the agglutinating action on plague bacilli of the serum of the blood of persons recently subjected to Haffkine's antiplague inoculation. As he did not at first find that this occurred, he was nearly led to condemn the inoculations; and as he found it marked in regard to persons twice inoculated, he praises that system. Probably Captain Leumann is right in declaring that the twice inoculated are safer than the once inoculated, but the proofs are in the figures he gives as a result of his work in Hubli.

Captain Leumann's report is a very able exposition of the results of the antiplague inoculations in Hubli, where under his direction more people were proportionately inoculated than in any other locality attacked with plague. The disease was not of a mild type, for in one week the mortality stood among those who held aloof from inoculation as high as 657 per 1,000. The town could not be evacuated, and therefore concurrently with disinfection, unroofing of houses, and segregation, the inoculations were vigorously applied, so much so that in a short time more than 24,000 were inoculated twice, and 10,000 once. The results are remarkable, indicating a protection of 85 per cent. on the whole epidemic, with a figure of

from 90 to nearly 100 per cent. for the greater part of the time. The twice inoculated show a record just over 10 per cent. better than the once inoculated. Captain Leumann deserves much credit for the energy he displayed in meeting this epidemic, and is to be congratulated on the happy issue of his efforts.

Plague, Sanitation, and Hot Weather.

We have received a communication from a correspondent in Egypt, who writes as follows:

In the British Medical Journal of July 29th the following remarks occur: "It is to be hoped that Alexandria, like Calcutta, will prove that either the soil or the environment of the city is inimical to a virulent outbreak of plague, and that it is not merely the heat of summer which is postponing an epidemic."

Two questions arise on such a statement: (1) Has the soil or environment of Alexandria anything to say to the spread of the disease? Modern opinion is opposed to the theory that the soil contributes in any way to the development or non-development of plague; while as to the environment, it is difficult to say what this term means as applied to its spread. Has the soil of Alexandria changed since the years 1834 to 1843? In March, 1835, 4,459 deaths from plague were shown in the official returns. From 1834 to 1843, 12,282 deaths from plague were officially reported in Alexandria alone, then a city of 60,000 inhabitants. These figures are independent of the large number of deaths which were never reported.

(2) As to the heat of the summer postponing the epidemic, our correspondent refers to the old statistics, quoted in the British Medical Journal of August 10th, page 408, and observes that the figures show that the disease raged in the summer months—for, as regards actual temperature, May and June are hot months of the year.

Records exist of outbreaks occurring in Egypt commencing in June and July and ending in September, while the great epidemic of plague in Constantinople, Scutari, and the Bosphorus, which carried off 320,955 people, commenced on June 15th, 1812, and ended January, 1813.

That the spreading of plague is not merely a question of temperature is proved by the fact that the winter climate of Bombay, when plague rages, is practically the same as the summer climate of Alexandria. If then it were a question of temperature alone, why has Alexandria so far escaped? A certain section of the local press is much puzzled over this fact, and wishing to abolish quarantine with all its restrictions on trade has arrived at the satisfactory conclusion that the disease is not plague at all; for, they argue, if it were plague it must kill thousands. The Sanitary Department's statements as to the nature of the disease are not credited, and international Commissions are called for with the faint hope that these statements may be found incorrect.

Now we have soil, environment, and temperature put forward in the British Medical Journal as possible reasons for the non-spread of the disease. Would it not be more rational to seek an explanation in the system and organisation being applied for its control on modern principles? This organisation aims at immediate detection and isolation of cases, efficient disinfection of houses, clothing, etc., segregation of contacts. It may confidently be stated that this organisation is attaining its ends and producing its results. That it is working quietly and unostentatiously reflects the highest credit on Pinching Bey, the senior inspector of the Sanitary Department; Dr. Gotschlich, the sanitary inspector of the town, and the small army of employees, 800 in number, charged with its application.

If all cases be discovered, and in Alexandria they certainly are, whether alive or dead, and if the above measures be promptly applied, an efficient control is certain.

In 113 houses disinfected not once has a second case occurred. This speaks for efficient disinfection. A systematic cleaning of the infected quarters is being carried out. Every week some 6,000 rooms are limewashed and 2,000 bags of filthy rubbish collected and burned.

The following table will be of interest as showing the course of the disease from the very beginning:

	New Cases.	Deaths: In Hospital.	Deaths: Out of Hospital.	Cured.
May 5th to May 24th	3	—	—	—
May 25th to May 31st	6	2	—	—
June 1st to June 7th	6	2	—	4
June 8th to June 14th	12	5	1	3
June 15th to June 21st...	4	2	2	5
June 22nd to June 28th	10	1	2	3
June 29th to July 5th	9	2	2	5
July 6th to July 12th	8	3	3	6
July 13th to July 19th	3	1	3	5
July 20th to July 26th	—	1	—	5
July 27th to August 2nd	4	3	2	3
August 3rd to August 6th	—	—	—	—

What the future may bring forth no one can predict. It is possible if the disease continues that the greater overcrowding in small rooms which takes place in the winter months may afford greater opportunities for infection, and so increase the spread of the disease, but in the opinion of those most competent to judge, there is but little risk of plague assuming an epidemic form next winter so long as the disease remains confined as at present to one seaport town, while the results so far obtained may be attributed to the intelligent application of a rational organisation.

*** Whilst fully aware of, and thoroughly appreciating, the admirable sanitary service which obtains in Egypt, we do not consider that we are sufficiently acquainted with the behaviour of plague, and, for that matter, a number of other better understood diseases, to ascribe the subsidence of plague in Alexandria altogether to sanitation. In several other parts of the world more isolated than Alexandria, men as well qualified as the sanitary officers in Egypt happily are, and with every means that science could devise for stemming the encroachments and advance of plague, have failed in their task. We do not wish to withhold any meed of praise due to the officers who have devised and carried out the campaign against plague in Egypt. We consider that all that sanitary science can possibly do has been done, and we only hope that their labours—and they have not been light—will result in complete success. Yet the system of immediate detection, isolation, disinfection of houses, clothing, and furniture, segregation of contacts, has been practised in several parts, with, no doubt, beneficial results, in a manner as efficient and thorough as in Alexandria, and still plague advances or recurs. We know of several cities in which plague was as effectually dealt with as in the case in Alexandria; cities which congratulated themselves on the disease being stamped out, and *fêted* the doctors and sanitary officers for their skill and vigilance, alas! all too soon, for within a year plague returned in a virulent form, although every precaution had meantime been taken. Should plague neither recur in Alexandria nor spread to other parts of Egypt, we shall certainly bestow all praise on the sanitary officials for their vigilance; but, on the other hand, knowing the nature of the disease they are fighting, should plague recur, we shall not be inclined to blame them for the recurrence, for, unfortunately, sanitation is not yet one of the exact sciences.

Portugal.

Up to August 26th 51 cases of plague with 18 deaths had occurred in Oporto, and since then one or two cases and one or two deaths have taken place almost daily. The Portuguese authorities seem to be taking extensive precautions, and amongst others the military cordon figures largely. At the present moment eight battalions of infantry patrol the country around the city of Oporto for thirty miles, but with what rigor they pursue their object it is impossible to say. There is a great exodus from the city and intense indignation against the establishment of the sanitary cordon. Dr. Vincente, who was sent to Oporto by the Madrid authorities, is reported to state that he considers the epidemic grave, and that the pulmonary type of the disease is the prevalent one. In Madrid laboratory for the manufacture of plague serum has been established.

The disease seems to spread. In one of the Oporto jails a prisoner died of plague. Suspected cases have occurred at Lobrigos, Regoa, San Mamedi, and at Tambuija, and Atalaya, north of Santarem, on the railway between Oporto and Lisbon.

The populace in Oporto are hiding their sick, not only the plague-stricken, but persons suffering from ordinary illness. This is proved by the attendance at the public hospital, where the daily number of outpatients has fallen off. At the Misericordia Hospital the out-patients are only 48 daily, in place of 220. The poor believe that once sent to the hospital on suspicion of having plague that they are straightway poisoned.

The only official means of exit from Oporto is now by sea, but it would seem, however, that plague has infected the country beyond the cordon, so that, as so often happens, the soldiers forming the cordon may, as the infected zone is included, become the means of spreading the disease.

Dr. J. F. Hicks (Funchal, Madeira), writing under date of August 21st, informs us that all communications between Madeira and Portugal had then been stopped.

Egypt.

Alexandria.—During the week ending August 27th 3 cases and 2 deaths from plague had occurred in Alexandria, making the total since the appearance of plague in Egypt 38, of which 42 died and 42 recovered.

Russia.

The suspicious disease which recently broke out at the village of Kolobooka, in the province of Astrakhan, seems to be plague of the pneumonic form. A large number of deaths are recorded, and the matter is considered so important that the Duke of Oldenburg, the President of the Committee for Combating the Propagation of Plague, has gone to Kolobooka, accompanied by a number of medical men.

The Roumanian authorities have, in consequence of the news from Russia, closed the Russo-Roumanian frontier, and passengers are allowed to pass only at four of the frontier towns. The Russians have placed military observation posts all along the infected border, and persons from Astrakhan will not be permitted to cross the frontier at all. All goods are being disinfected, and a ten days' quarantine is, in addition, insisted upon.

Italy.

The report that plague existed at Naples is officially denied.

Madagascar.

It was reported on August 26th that a Creole had died of plague at Tamatave. The population were much alarmed, and ships were refusing cargoes.

Mauritius.

During the week ending August 24th, 45 cases and 33 deaths occurred from plague in the island.

Hong Kong.

On August 27th the Colonial Office was officially informed that 15 cases of plague and 15 deaths from the disease had occurred in Hong Kong during the previous week.

China.

Seventy-three deaths occurred from plague within four days in the town of Newchwang. As this news left Shanghai on August 29th it would seem that a very severe epidemic is raging in Newchwang, and that it is spreading. It is difficult to conceive how plague reached Newchwang, whilst Shanghai, and some 1,500 miles of sea coast between Newchwang and Amoy (the nearest infected port) has escaped.

THE CONGRESS OF THE SANITARY INSTITUTE AT SOUTHAMPTON.

The eighteenth Congress of the Sanitary Institute was opened on Tuesday, August 29th, by the Mayor, who received the members of the Congress at Hartley College, and subsequently a luncheon was held in the Pavilion, Royal Pier.

President's Address.

In the afternoon the more serious work of the Congress was initiated by the address of the President, Sir W. H. Preece, K.C.B., F.R.S. After enunciating the principles of modern sanitary science as "the development of the new empire of bacteria," he reviewed the objects of the sanitation of to-day in the light of the book of Leviticus, "a treatise on hygiene by the greatest sanitary engineer the world has ever known—Moses." Moses's doctrines might be summed up as: (1) Pure air; (2) pure water; (3) pure food; (4) pure soil; (5) pure dwellings; (6) pure bodies.

Pure Air.—Although Moses had no need to inculcate the principles of ventilate because his followers dwelt in tents, he did his best to prevent the fouling of the air from decomposing rubbish by causing it to be burnt. It was worthy of note that although the British Legislature had taken care that lunatic asylums, hospitals, workhouses, and jails should be provided with proper air space per person, and should be supplied with effective means for ventilation, on the other hand churches, chapels, theatres, meeting-halls, railway carriages, and other places where healthy, honest, and well-to-do people most congregated were totally neglected and still remained sinks of discomfort. There were 1,000 cubic feet per person in a hospital; 250 in a factory; and 47 in a full third-class railway carriage. Such modern improvements as electric fans were not sufficiently used in the ventilation of our buildings and living rooms.

Pure Water.—Although Moses 3,400 years ago was confronted with the problem of a pure water supply, it was only during the Victorian era that our authorities had really begun to treat this matter seriously and scientifically. The plentiful supply of a good wholesome water was a crying need. He thought the double supply as practised by Richmond, St. Helens, Great Yarmouth, and Bournemouth would solve the difficulty in many towns. Why could not London follow Bournemouth and water her streets with sea water, and leave the water companies to supply the domestic water? The rivers and sources of water should not be permitted to be contaminated by sewage. The Rivers Pollution Bill of 1876 was quite inefficient.

Pure Food.—The food which was perhaps the most important at the moment was milk. There was no doubt that the control of the milk supply was totally inadequate. He thought that the legislative measures were perhaps ample, but the enforcement of the regulations, the control of the supervising powers were weak. In fact he considered that at the moment the control was not in the hands of the proper sanitary authorities. In spite of this the consumers could do much if they properly understood that milk could be rendered harmless by boiling or pasteurising.

Pure Soil.—This was the great question of the hour, because the obtaining of a pure soil depended entirely upon the manner in which the refuse was disposed of. "Many beasts of the field," he said, "are wiser in their generation than many a human race, even of the present day. Carnivora cover up their dung with earth. The cat, though domesticated, retains this instinct. The badger has its run to its own latrine. The fox will not pollute its own hole. The Persian, it was reported, polluted even the rooms of Buckingham Palace. The first-known disposal of sewage was that prescribed by Moses, who commanded his hosts to go to "a place without the camp," and enjoined the covering up of all excreta with earth. After centuries we were at last coming back to the principle which underlay the command of Moses, and we were allowing Nature to get rid of the unwholesome and often injurious matter in her own way. Mechanical and chemical methods had been tried; now biological methods were being studied. The subject was not simple because of the enormous quantities of sewage which required treatment. The evolution of the modern ideas was touched upon, and the speaker thought that crude as were the methods at present, they had come to stay, though perhaps in very different forms.

Pure Dwellings.—The clearing of slums, the prevention of overcrowding, the designing and construction of convenient and healthy houses, was one of the important aims of sanitarians. Edinburgh had reduced the death-rate from 28 to 17 per 1,000 for an expenditure of £560,000.

Pure Bodies.—Of this point Moses had realised the importance, as is evidenced by the rigid laws regarding lepers. The Sanitary Institute had made a very great step by inaugurating an examination for the encouragement of the acquisition of a knowledge of hygiene by teachers. The Cleansing of Persons Act, 1897, was also a step in the right direction, but the mass of the people required teaching the cleanliness which is so near to Godliness.

In conclusion, he said the Institute was doing work of national importance. It removes apathy; but above all, it excites enthusiasm—enthusiasm in good work, enthusiasm in new discoveries, and enthusiasm in imparting acquired knowledge to benefit those who are prepared and willing to receive it. We separate and are made wiser and more able to enthuse our weaker brethren, and to distribute in ever-widening circles those waves of energy excited by the electrical influence of bright and brain-exciting intellects.

Annual Exhibition.

The annual exhibition was opened at 8.30 P.M. by the Mayor of Southampton. The Chairman of the Judges, Dr. Louis Parkes, stated that it was, if not the best exhibition, one of the best which had been held under the auspices of the Institute. Among the exhibits, Messrs. Parke, Davis and Co. showed a diphtheria antitoxin which is claimed to be more powerful than any other on the market. March, Limited, showed an automatic water steriliser. One excellent exhibit was an antivibration incandescent light, and close to it an antisplash tap, which really does prevent splashing, was exhibited by the Webbs Engineering Company. Two excellent brougham ambulances were much praised. These were a few of the many both good and new things seen which won the commendation of the judges.

LITERARY NOTES.

It is pretty generally known that Marat lived for some time in London, and the late Mr. J. B. Bailey, Librarian of the Royal College of Surgeons, published in a small volume reprints of two essays which l'Ami du Peuple wrote on medical subjects while a practitioner in Soho. We learn from a note in *La Chronique Médicale* that M. G. Pilotelle, a French artist resident in London who draws for the magazines, will publish shortly a book entitled *J. P. Marat, sa Vie en Angleterre.* Not very much is known as to Marat's life in England, and as to what the extent of his practice in Church Street, Soho, may have been. Indeed it is very doubtful whether he had any legal right to practise. He possessed the degree of M.D. St. Andrews, but this would not at that time have given him any right to practise in London.

We are asked to state that the delay in bringing out *Burdett's Hospitals and Charities* this year has been unavoidable, but that it will be published by The Scientific Press during next week.

Professor Virchow has published in a quarto pamphlet the address which he delivered at the opening of the new pathological museum of the University of Berlin on June 27th last, and has added to it the remarks of Professor Dr. Waldeyer, Rector Magnificus of the University, and an appendix giving an account of the arrangements of the museum, which is illustrated by a series of plans. The volume is published by August Hirschwald, Berlin.

Major G. F. Leverson has published recently (Kegan Paul) under the title *The Conduct of War* a translation of a work by Lieutenant-General von der Goltz. It is written for the technical student, and the author insists that the popular idea that the losses in battle are the chief losses of an army is altogether erroneous. In support of the assertion, familiar enough to medical readers, that more men are disabled by disease than by the arms of the enemy, the author quotes the striking fact that in 1812 Napoleon crossed the Niemen with

442,000 men, but led only 95,000 into Moscow. In 1870 the Prussian Guard Corps lost over 5,000 men between Gravelotte and Sedan. Again the Germans crossed the frontier in 1870 with 372,000 men, but could only bring 171,000 before Paris only six weeks later. Such facts afford a striking comment on the ignorance of military advisers who would relegate medical officers who must advise the general to "the line of communication." The first general who recognises in the field that sanitary considerations are pre-eminent will doubtless be acclaimed a genius.

We are asked to state that a Rationalist Press Association has been incorporated as a company at 17, Johnson Court, Fleet Street, E.C. It is not, we are assured, a commercial undertaking, but proposes to publish "works of a serious, and especially those of a seriously philosophic character," which, it is said, and no doubt with truth, "are heavily handicapped in the competition for popular favour." Among its Honorary Associates are numbered Professor Ernst Haeckel, of Jena, Dr. E. Westermarck, M. Emil Zola, Mr. Leslie Stephen, Mr. Edward Clodd, and Dr. Stanton Coit.

We have received the first number of a new Italian medical monthly, entitled *Giornale Italiano di Laringologia, Otologia, e Rinologia*, which is published at Naples, and is edited by Dr. R. Borgoni. As its title shows, it takes the larynx, ear, and nose for its province. A novel feature is that it has a motto on the title page. We cannot honestly say that this motto "*Nunquam satis*" strikes us as particularly well chosen. The unfortunate reviewer, looking at the countless numbers of journals with which he is overwhelmed, as poor Tarpeia was by the shields of the faithless Romans, is much more disposed to cry, "*Ohe jam satis!*"

The *Occidental Medical Times* has absorbed the *Pacific Record of Medicine and Surgery*. The *Occidental Medical Times* began life as the *Sacramento Medical Times* in 1887, and has hitherto been published in Sacramento. In future it will be published in San Francisco under the joint editorship of Dr. James H. Parkinson (Sacramento), who has conducted it with great ability and good judgment since its foundation, and Dr. Louis A. Kengla (San Francisco), formerly editor of the *Pacific Record*.

We have received from the Cambridge Scientific Instrument Company their new Catalogue of Physiological and Anthropometric Instruments. Like all the productions that come from the works of this company, it is exceedingly well got up, and the illustrations will be of value not only to purchasers, but to those who wish to study the modern methods of physiological investigation. The prices strike us in most cases as being extremely high, and, so long as this continues to be the case, many working physiologists will no doubt continue to obtain their apparatus from abroad.

A new series of The *Journal of the Anthropological Institute of Great Britain and Ireland* was commenced with the current volume. The page is larger, and the whole appearance of the journal much improved. The larger page permits illustrations to be reproduced in a more satisfactory manner, and full advantage has been taken of the opportunity.

ASSOCIATION INTELLIGENCE.

NOTICE OF THE NEXT QUARTERLY MEETING OF COUNCIL.

A MEETING of the Council will be held on October 11th, 1899. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, September 21st, 1899.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting will be held at Hastings early in October. Members wishing to read papers or make communications are requested to notify their intention to the Honorary Secretary, J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards.

EAST ANGLIAN BRANCH.—The autumnal meeting of this Branch will take place at Felixstowe on Thursday, September 28th, 1899, under the presidency of Dr. E. L. Fenn. It is requested that gentlemen desirous of joining the Association or Branch, and members willing to read papers or contribute cases to the meeting, will communicate at once with Dr. Barnes, Eye. Members who have not yet paid their subscriptions for the current year will oblige by sending them to one of the Honorary Secretaries, EDGAR G. BARNES, M.D., Eye; MICHAEL BEVERLEY, M.D., Norwich; BENJAMIN HUGH NICHOLSON, M.B., Colchester.

CEYLON BRANCH.

A meeting of this Branch was held at the Colonial Medical Library, on July 15th, Surgeon-Major ALLAN PERRY (President) in the chair. There were also the following members present: Drs. A. Loos, G. P. Schokman, S. de M. Asserappa, H. M. Fernando, Harvey Hilliard, Van Dort, Sinnetamby, G. de Saram, C. G. Peiris, Paul, E. P. Asserappa, and W. H. de Silva (Hon. Secretary).

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The following new members were admitted: Harvey Hilliard, L.R.C.P.Lond., M.R.C.S.Eng.; E. N. Jan, L.C.M.C.Ceylon; S. O. Dharmaratne, L.C.M.C.Ceylon.

The Proposed Imperial Pharmacopœia.—Dr. W. G. VAN DORT then read his paper on the native drugs for the Imperial Pharmacopœia, a copy of which was forwarded to Professor Attfield, Reporter on Pharmacy to the General Medical Council. The following three drugs were recommended by Dr. Van Dort, he having used them and known them for a long time—namely: (1) Ipomœa Turpethum, *nom. vulg.*, Trasta Vaen; (2) Hygrophila Spinosa, *nom. vulg.*, Nurmulei; (3) Adhatoda Vasica, *nom. vulg.*, Pavitai (Tamil), Adhatoda Walpane (Sinhalese). He also mentioned several Indian drugs. At the conclusion of the paper a long discussion took place in which several older members took part. A Subcommittee was eventually appointed, with Dr. Van Dort as chairman and Dr. de Silva as secretary.

Votes of Thanks.—The meeting terminated with a vote of thanks to the reader of the paper and to the Chair.

The annual meeting of the Branch was held at the Colonial Medical Library, Surgeon-Major ALLAN PERRY (in the chair), and twelve other members present.

New Members.—The PRESIDENT announced the election of the following new members to the British Medical Association: Mrs. M. Ratnam, M.D. (Montreal), Miss A. de Boer, L.C.M.C. (Ceylon), and A. L. Perera, L.C.M.C. (Ceylon).

Election of Office-bearers.—The following gentlemen were duly proposed, seconded, and elected to fill the various offices: *President:* Surgeon-Major Allan Perry, P.C.M.O. *Vice-Presidents:* W. G. Van Dort and T. F. Garvin. *Honorary Treasurer:* O. Johnson. *Honorary Secretary:* W. H. de Silva. *Councillors:* G. P. Schokman, F. Oorloff, H. Marcus Fernando, H. G. Thomasz.

Paper.—Dr. S. C. PAUL read a paper on Anæmias peculiar to Ceylon, by M. SINNETAMBY, M.B., F.R.C.S., of Balanyoda.

Vote of Thanks.—After a vote of thanks had been given to Dr. M. Sinnetamby for his paper, and after examining a few interesting clinical cases, the meeting terminated.

THE annual dinner of the past and present students of St. George's Hospital will take place at the Whitehall Rooms of the Hôtel Métropole on Monday, October 2nd, at 6.30 for 7 P.M.

SPECIAL CORRESPONDENCE.

CAPE TOWN.

Medical Reform in the South African Colonies.—Enteric Fever at Stellenbosch.—Popular Health Lectures.—Proposed Post-Graduate Medical School at Cape Town.

Singularly enough three of the South African Colonies are engaged at one time on the task of medical reform. The Cape, Natal, and Rhodesia have all medical Bills on the legislative stocks. In the latter case it is the first essay, for Rhodesia has hitherto contented itself with adopting the Cape registered medico. Now it has passed a measure of its own which is opposed by the local profession. It is very much on the lines of the existing Cape Act. The administration is to be placed in the hands of a medical Committee consisting of not fewer than three and not more than nine members; of these, one may be a licensed chemist and one a licensed dentist. The remainder are to be medical practitioners, and all are to be removable by the Administrator at pleasure. The President is to be nominated by the Administrator, and the term of office of all members is to be during pleasure. It will therefore be seen that the whole Committee is to be absolutely under the control of the Government, and it is to this, as one feature, that the profession takes objection. It is, however, doubtful whether, in so young a country as Rhodesia, election would have been workable. The first Medical Committee of the Cape was constituted on much the same lines. Any person registered in the Cape is to be entitled to registration in Rhodesia, and in addition holders of all the qualifications of the British bodies, and "such other qualifications as the Board may recommend, with the sanction of the Administrator." The profession object to the admission of Cape registered men as such on the ground that some of them are unqualified. This objection, however, loses much of its weight, from the fact that such men only number some four or five at present, and that their number cannot be added to. There is more weight, however, in the objection that the Cape is somewhat indiscriminate in its open door to foreign diplomas, irrespective of the reciprocity consideration. This is an evil, inasmuch as it lets in a number of men with totally different ethical ideas from British trained practitioners. In the Cape political exigencies prevent any chance of this being amended, but Rhodesia should be free from this difficulty, and it is rather hard that it should have to bow to it. In Natal only such qualifications can be registered as would be registrable in England. The provisions against unqualified practice are very inadequate. Apparently, the only privilege which a registered man possesses is that of holding public appointments. Not only is there no penalty against practising illegally or pretending to be registered, but the unregistered man is not by this law even debarred from recovering fees. In the Cape the actual practice, apart altogether from pretending to be registered, is penal, thus being far in advance of the English enactment. Medical men in Rhodesia are to be allowed to dispense their own prescriptions, and to keep open surgeries if ten miles away from a licensed chemist. In the Cape no open surgeries are allowed at all. The Act contains provisions for the admission of chemists and for their examination after four years' apprenticeship; also poison regulations similar to those of Great Britain. The Act seems to be ridiculously inadequate. A new Medical Bill is drafted by the Government for submission to the Cape Parliament, mainly at the instance of the Medical Council, who have found that, excellent though the present Act is, it is defective in some points. Some of the provisions are of much importance. The Council is to be strengthened by the addition of the Colonial Medical Officer of Health, *ex officio*. The present holder of that office is a Government nominee in his personal capacity, and, should the Act pass, there will consequently be a nominee vacancy. Another clause removes the doubt as to whether membership of the Council is compatible with parliamentary membership by distinctly declaring that membership of the Council is not an "office of profit under the Crown." This is a very necessary provision, as many of our ablest medical men seek parliamentary honours, and several have been debarred from seeking a seat on the Council by reason of the legal doubt. The Hon. Dr. Berry, the present Speaker, is a case in point, and the present President of the Medical Council, Dr. J. H. M. Peck, has just been elected to the Assembly, although he has not yet taken his seat. Another provision introduces a milder grade of professional delinquency than that hitherto described in the Act as "infamous or disgraceful." This is classified as "improper or unprofessional," and the Council is empowered to deal with it, in the first place by written reprimand, followed by removal from the *Register* in case of contumacy. Hitherto the Council has had, apparently, no available penal discipline short of the major alternative. This has (why, I do not know) prevented it dealing properly with cases of advertising and the like. One would have thought that, after once fairly announcing that such practices would lay the offender open to penalty, there should have been no compunction about removal from the *Register*. Another provision declares that no person "shall be entitled to medically treat any person by reason of being a licensed chemist and druggist." This is very badly wanted. Despite the fact that very few medical men in the towns dispense, counter prescribing is in this colony quite naked and unashamed. It is not too much to say that in many places the chemist is the general practitioner and the medical man the consultant. The section will meet with the strongest opposition, and it is very doubtful whether our bucolic legislators will pass it. Another useful section forbids a chemist's shop being conducted, "except under the constant and personal supervision of a licensed chemist and druggist." This the smaller chemists are strongly opposing, but the provision is distinctly necessary. Whether the Bill will get through at all in the present seething state of things political is extremely doubtful. The Natal Bill strengthens the law somewhat against unqualified practice, making the actual fact of practising plainly penal; but its main feature is the registration of veterinary surgeons, under a Veterinary Board of five, of whom two shall be members of the Medical Council, and the remainder veterinary surgeons. The Bill puts the veterinarians in much the same legal position as in England. It does not make actual veterinary practice *per se* penal.

A good deal of excitement has been caused by an outbreak of enteric fever at Stellenbosch, an old town not far from Cape Town, a sort of South African Bedford, practically living on numerous colleges and schools. The epidemic is rampant there, and temporary ruination to the prospects of the town is imminent. The medical men, with one exception, have for a long time pointed out to the municipal authorities the error of their sanitary ways, but, as is too often the case, have only met with obloquy and boycotting in return, and nothing has been done. Clearly the water supply is at fault. The supply is derived from a reservoir drawing from a manure-polluted catchment area on a farm upon which typhoid cases are known to have occurred. No pipes are used, the water being conveyed in open furrows. Unfortunately this state of things is rather the rule than the exception in many of our country towns in the Western Province. In the Eastern parts, where the population is mainly English, things are better. Take Beaufort West, for instance, a place with a well-deserved reputation for phthisis. There the death-rate has for years actually touched 70 per mille, mainly due to typhoid. One of the Stellenbosch medical men maintained at first that the disease was "bilious fever," whatever that may be, but a necropsy of one of his patients has shown unmistakable enteric lesions. The real difficulty in securing the sanitation of these towns is the crass indifference of the local property owners, and the pressure they bring to bear upon the district surgeons, who are charged with the duty of reporting to the the Government. These gentlemen receive merely nominal official salaries, and, such is the power of boycott in Dutch districts, that they dare not report plainly for fear of losing their private practice, which in the keen competition which exists is easily brought about.

The Young Men's Christian Association of Cape Town has taken a very useful departure in instituting a series of popular health lectures, of which three have been delivered, one by Dr. Claude Wright, on the Bacteriological Treatment of Sewage; one by Dr. Darley-Hartley, on Diet; and one by Dr. Arderne Wilson, on Good Health and how to Maintain it.

The Cape Town Branch of the British Medical Association

is now discussing a Committee report on Tuberculosis. Nothing special has been brought out except a general consensus of opinion that the disease is rapidly increasing in the colony, and the curious fact that tubercle is almost non-existent in cattle. Medical and veterinary opinion are practically unanimous on this point. The result of the discussion will probably be the formation of an Association on the lines of the British one, but at present it is almost impossible to enlist public interest in anything outside political turmoil. The new Somerset Hospital is in sore financial straits, and is making an appeal to the public, but this is not being well responded to on account of the general depression. A Committee of the Medical Association, moved for by Dr. Darley-Hartley, is considering the practicability of forming a post-graduate and preliminary medical school here. It is not contemplated that the latter portion of the scheme shall aim at more than the first year's curriculum, or, at the most, that of the second.

BERLIN.

Leprosy in the Memel District.—Tubercle Bacilli in Milk.—Artificial Vocalisation after Laryngectomy.

In the presence of the Prussian "Cultus-minister," Dr. Bosse, of Count v. Bismarck (the Provincial Governor), of numerous high Government officials and State medical officers from Berlin and Koenigsberg, as well as a delegate of the Russian Government (Professor von Petersen), a Home for Lepers was opened at Memel in East Prussia. During the last twenty-eight years, about 50 cases of leprosy have occurred in the Memel district—near the Russian frontier—and it is to prevent its further dissemination that the new home has been founded, in accordance with the modern view that isolation of the sufferers is the only safeguard. Two one-storeyed pavilions each containing four double-bedded rooms, living and dining-rooms, bathrooms, etc., are connected by covered corridors with a building containing the nurses', housekeeper's, and servants' apartments, kitchens, etc. A separate building contains the disinfecting apparatus. The grounds are six acres in extent, and are situated in the heart of one of the large pine forests, for which East Prussia is famous. Dr. Urbanowitz of Memel, who has made a special study of leprosy, has undertaken the medical supervision of the new Home, with which he is connected by special telephone. Two sisterhood nurses (*Diakonissinen*) are to be in residence.

At the last meeting of the Society for Public Hygiene (July 24th), Dr. Obermüller read a paper on the subject already treated by him at the late Tuberculosis Congress, namely, the occurrence of tubercle bacilli in milk and milk products. In spite of the oppressive heat, a larger audience than usual had assembled, and the paper, which lasted nearly two hours, was listened to with the greatest interest. Dr. Obermüller began by saying that nearly 25 per cent. of deaths (after the first year of life) are caused by tuberculosis. Opinion is very much divided on the question of infection; direct contagion is probably responsible for the great majority of cases, but there cannot but be other sources of infection. Bovine tuberculosis has been proved by theoretical and experimental investigations to be very dangerous for man, and the speaker's own experiments with the milk of tuberculous cows have given like results. Infection from tuberculous cows not only exists, but is very widespread; the milk is infectious, even if the cow has only a slight form of the disease. Experiments upon animals show that 38 per cent. of the guinea-pigs infected by such milk, or by butter made from it, became tuberculous. In margarine, too, tubercle bacilli have been found. Dr. Obermüller went fully into the different methods of investigation, and concluded by saying that the general public should be enlightened on the dangers of unsterilised milk. Further, a department for the official examination of milk should be opened in the State and municipal hygienic institutes; the sale of milk should be more stringently supervised; inoculation of cows with tuberculin should be made obligatory; it should be illegal to sell the milk of tuberculous cows. Bacteriologists and veterinary surgeons should join hands, and endeavour to stamp out this great danger to the population.

Professor Mikulicz (Breslau) has constructed a metal whistle for the use of a patient after total extirpation of the larynx, by the aid of which he is able to articulate distinctly, and with a certain amount of "voice." The little instrument is easily put in its place, at the opening of the mouth, by the patient himself. In inspiration sound is prevented by a small valve; the air passes freely into the mouth, and from there by way of a cannula fixed in the windpipe on to the lungs. In expiration the air takes the same road back. The word sounds are now formed in the mouth; they are no more than whispers, until they reach the metal pipe, in which a set of artificial "vocal cords" strengthen them so that they issue from it as clearly audible words.

CORRESPONDENCE.

A BILL FOR THE RESTRICTION OF THE SALE OF SMALL ARMS.

Sir,—As the mover of the resolution passed unanimously in the Surgical Section of the British Medical Association requesting the Council of the Association to further a Bill in Parliament for the restriction of the free sale of revolvers and pistols, I may perhaps be allowed to make a few remarks on the reasons which led me to take this course. I have been greatly impressed by the many and increasing number of bullet wounds that have come under my care in hospital practice of late years as well as by the motives which led to these bullet wounds being inflicted; and what appeals most strongly to one's sense of duty in the matter is the fact that had any difficulty been experienced in purchasing the weapons with which these wounds were inflicted the terrible tragedies associated therewith could never have been enacted.

The cause of the increase of the number of bullet wounds may be in part due to the low price at which pistols and revolvers are now sold, but I am inclined to think the limitation of the means of committing murder or suicide by the use of poisonous drugs, owing to the beneficent influence of the Poisonous Drugs Act requiring the sale of such to be registered and witnessed, has driven many of unstable mental equilibrium to have recourse to the more open, but not less dangerous resort, the use of firearms.

Love, jealousy, vindictive spite, hatred, remorse—all those passions which uncurbed or associated with hereditary predisposition, lead to homicide or self-destruction, may be and often are thwarted in the execution of the evil impulse by lack of means and opportunity. To what shifts the would-be murderer by poison is now driven—to fly papers, to beetle or rat poison; but a man half mad with drink, enraged or more happily insane, has but to turn the corner where hang the three golden balls, and he can provide himself for a trifle with a six-chambered revolver with which to endanger the lives of half a dozen people. Let me give a few instances from my own practice:

1. A lawyer's clerk has a slight misunderstanding with his *fiancée*, and declares he will buy a revolver and shoot himself. The following day (Saturday) he secures the revolver, then proceeds to get intoxicated. He is locked up by the police, who fail to search him. Awaking to the situation, he begins by trying his revolver at the door of the cell, and then fires it at his forehead. The first shot failing to take effect, he fires a second time at the same spot, and dies of the injuries some five days later.

2. A young man of 20 years, receiving no encouragement from the young woman to whom he paid his attentions, bought a revolver and dogged her steps when she proceeded to her work in the morning. As she tried to avoid him he began to shoot at her. The first shot went through her umbrella; the second bullet was lodged in the back of her neck; as she put her hand to the spot injured a third bullet struck her arm near the elbow and travelled up to the axilla. He then fired twice at his own head, but, the bullets striking obliquely, did not penetrate, but travelled up to the top of the scalp, where they were extracted. Those lodged in the girl were also extracted without harm following.

3. The same week an old man, tired of life, shot himself over the heart, but the ball, striking a rib, travelled round to the back, near the spine, where it was extracted without difficulty and no complication followed.

4. An old man, the subject of osteitis deformans and mentally feeble, had been kept by his only son for ten years.

When the son married, the old man became intensely jealous of his daughter-in-law. This came to a climax when she became ill and her mother came into the house to nurse her. There were two old horse-pistols in the house, but these did not suit the old man's design. He purchased a good revolver, and shot first his son's mother-in-law, then his son's wife, and finally himself. All three wounds were exactly in the same site—in the centre of the forehead—and all three proved fatal.

5. The more recent Camberwell tragedy is another illustration of the danger of the free sale of revolvers. A man addicted to drink, who had maltreated his wife for years, purchased a revolver with the object apparently of destroying his whole family. He shot at his wife twice, hitting her first above the eye, and lodging the second bullet in her neck; next he fired at his elder daughter's forehead; and, thirdly, he shot his younger daughter in the back of the head. All these injuries were severe, especially that of the younger girl, in whose case the bullet penetrated the brain, but not one is likely to prove fatal.

Then there is the boy buccaneer and Hoolighan class which the modern cheap literature does so much to develop. These should be deprived of the opportunity of arming themselves with revolvers. I read in the papers two or three days ago of two boys of 9 and 10 years old who had run away from home and were found at the seaside, each armed with a loaded revolver they had purchased. A Hoolighan bullet injury came into court this week.

6. On November 5th a boy was firing off a loaded revolver indiscriminately for the sake of the report, and lodged a bullet in the astragalus of a companion, whence I extracted it. Such cases ought not to be possible.

Now to consider the best means of putting a stop to this useless and dangerous traffic in revolvers and pistols. Whatever is suggested is, of course, certain to be opposed by the trade. A Bill was, I believe, introduced into Parliament a year or two ago, but, owing to the opposition of the trade, it was withdrawn. The provisions of that Bill I do not remember, but I believe it was intended to impose a heavy licence. I doubt if any such course would prove effective, as the weapons, being small, can easily be secreted.

The suggestion I would make, and which I am certain would limit the nefarious traffic without interfering with that which is legitimate, is that pistols and revolvers should be put under the same sale restrictions as poisonous drugs. No person should be allowed to buy one unless he writes down the use for which he intends it, and this should be witnessed by two respectable householders, and a book containing these entries should be kept by each salesman. Thus, supposing a man were going to Central Africa or some dangerous foreign station, he would have no difficulty in stating a sound reason for his purchase, or in getting friends to testify to it. On the other hand, a murderous ruffian or a boy buccaneer would be stopped. If there were accomplices to purchase a revolver for burglarious purposes, the entries in the book and the evidence of the salesman would aid the law greatly in the detection of the criminals.—I am, etc.,

Wimpole Street, W., Aug. 20th. R. CLEMENT LUCAS.

THE MEDICAL EXAMINATION OF CANDIDATES FOR THE PUBLIC SERVICES.

SIR,—At the late meeting of the British Medical Association the following resolution was passed in the Section of Medicine:

That the Council be requested to communicate to the War Office that it is the opinion of this Section that the physical examination of candidates for the army should precede the educational.

At the same time in the Section of Ophthalmology the following resolution was proposed by Mr. McHardy, an undoubtedly high authority on the subject:

That the physical examination of candidates for cadetship in the navy should follow the educational.

The motion was not, I think, actually voted on, but it was certainly generally approved of. The above two resolutions of different Sections of the Association are utterly contradictory, and if they had been sent respectively to the War Office and to the Admiralty they would have made us, I think, appear rather ridiculous, or at least would not have tended to give weight to the recommendations of the Association.

The fact is, in my opinion and in that of many others, that the Committees and members of the British Medical Association have not before them the data and have not the special knowledge requisite for giving a sound opinion on such special points, as is possessed by the Military and Naval Medical Departments and by the Civil Service Examination Commissioners, who frame the rules for these examinations.

For the army, if the physical examination were held before the educational, it would be necessary for Government to create Medical Boards and arrange for the examination of 800 or more candidates twice a year, of whom only about 10 per cent. gain commissions. By so doing, Government would also be directly interfering with the legitimate work of the medical profession generally, who are now almost invariably consulted by youths before preparing for or going up to these examinations. If, again, as was so strongly advocated at the meeting of the Section of Medicine, the physical examination should take place earlier in the course of training, Government would then have to undertake the physical examination of some half of the educating youths of the country, and their passing this test would be made a sort of guarantee of physical health and fitness, and by such direct competition Government would be to a much greater extent usurping the work of the medical practitioner. Also there could be no certainty that a lad who was passed fit at the age of 15 or 16, when commencing his special studies, would be fit at 18 or 19 when going up for the competitive examination.

For the navy circumstances are different, as only a limited number of candidates are nominated for competition, and they are medically examined before this examination; but for the navy also I believe it would be better that the medical examination should be held after the competitive, so that only the successful candidates would be medically examined, as is now done for commissions in the army.

Another matter which was a good deal discussed at the meetings of the Association, and which also is a good deal discussed outside, is that the Navy and Army Medical Board often reject candidates for some temporary or unimportant defect who are really sound and fit, especially in cases of cardiac disturbance and abnormal sounds and of defective sight; but in all such cases you may rest assured that the Medical Boards have solid ground for their decisions. They have practical knowledge and experience of the conditions of military service to guide them which often the medical men in civil life, who take different views, do not possess.

The Government, acting through its medical examiners, has to reject men as officers who are likely to prove unfit when exposed to the hardships and to the wear and tear, bodily and mental, of active service, and in the interests of the service cannot admit men who are only fit for barrack life or carpet service.

I hope that the Council of our Association will pause before it communicates the above resolution to the War Office, for, as a member of the Association, I think that to do so would not add to our reputation as a body of men of practical as well as scientific ideas.—I am, etc.,

HENRY CAYLEY,

Weybridge, Aug. 15th. Deputy-Surgeon-General I.M.S. (Retired).

TUBERCULOSIS IN CHILDHOOD.

SIR,—Traditional beliefs die hard in medicine as in other subjects, and it is a deeply-rooted belief that in young children tuberculous infection is more common through the intestines than through the lungs, and that consequently abdominal disease is by far the most fatal form of tuberculosis in early life. This conviction has doubtless been deepened by Sir Richard Thorne's statement in the Harben Lectures last year that abdominal tuberculosis in infants is increasing, a statement apparently based entirely on the assumption that the recorded deaths from "tabes mesenterica" represent so many cases of abdominal tuberculosis, an assumption which I believe to be absolutely fallacious.

In many reported addresses in connection with the present crusade against tuberculosis, prominent members of the profession speak as if purification of the milk supply were the most important—if not, indeed, almost the only—measure necessary to prevent tuberculosis in infancy, a view doubtless largely determined by Sir R. Thorne's lectures. Even Sir Douglas Powell, in his admirable address in Medicine at

Portsmouth, said that "pulmonary consumption is comparatively rare before puberty, infantile mortality being almost exclusively from bowel consumption through milk infection."

Statements such as these from the leaders of the profession are naturally accepted almost without question, and protests from juniors pass unheeded; nevertheless, I hope that Dr. Still's valuable paper on the Morbid Anatomy of Tuberculosis in Childhood, published in the British Medical Journal for August 19th, will materially help in the growth of more accurate views on the subject.

For some years I have been interested in this question. In 1894 I read a paper before the Medical Society of London, very much on the lines of Dr. Still's, based on 120 necropsies on tuberculous children at the Victoria Hospital, Chelsea. My figures correspond generally with his, but the preponderance of chest cases is even greater, for I found 79 in which the disease most probably started in the chest, only 20 in which it seeemed certainly to have begun in the abdomen, and 6 in which it was not possible to decide between the two. In 26 children with early or limited tuberculous lesions, the thorax was alone affected in 12 cases, the abdomen in 7. (In 46 similar cases Dr. Still found primary focus in lung in 26, in intestine in 16; a remarkable similarity in the two sets of figures.)

At the annual meeting of the Association in 1895 I read a short paper in the Section of Diseases of Children protesting against the use of the term "consumptive bowels," and pointing out that *post-mortem* experience proved that death from tuberculous disease beginning in the abdomen was comparatively rare in young children.

Last December, after the delivery of Sir R. Thorne's lectures, I published a letter in the *Lancet*, vol. ii, 1898, p. 1662, entitled "What is Tabes Mesenterica in Infants?" in which I endeavoured to show that in the vast majority of cases it is probably only marasmus due to chronic gastro-intestinal catarrh. This was followed by an article by Dr. Guthrie in the *Lancet*, vol. i, 1899, p. 286, in which, as the result of a most careful analysis of 77 necropsies on tuberculous children at the Paddington Green Hospital, he came to the conclusion that tuberculous disease in children commences far more commonly in the chest than in the abdomen, and that tabes mesenterica as a cause of death in young children is practically unknown. No one, so far as I am aware, has attempted any justification of the traditional meaning attached to the term "tabes mesenterica."

Finally, Dr. Still's paper, giving the results of several hundreds of necropsies at the largest of the London children's hospitals, fully confirms and extends the statistics of other institutions, and will, I trust, further assist in the exposure of a time-honoured fallacy which, if allowed to survive, may have disastrous consequences.

Furthermore, I may point out that Dr. Still, Dr. Guthrie, and myself all find that in early childhood, when the liability to milk infection is supposed to be greatest, the preponderance of cases of disease starting in the chest is most marked, whereas later the chances of infection through the lung or through the intestine become more equal. My own figures show that out of 53 tuberculous children under 2, in 43 the disease most probably began in the chest, and in only 5 certainly in the abdomen, 2 being doubtful; whereas in 27 children over 5, in 12 the disease began in the chest, in 6 in the abdomen, and 1 was doubtful. It is noteworthy that Sir Richard Thorne stated that in later childhood deaths from tabes mesenterica, as from all other forms of tuberculous disease, are actually decreasing, the increase being limited to infants; as a matter of fact, I believe that after the first two or three years of life, when we have no longer to deal with marasmic conditions, the term tabes mesenterica does really represent in the majority of cases abdominal tuberculosis, whilst in infants it should usually be interpreted as marasmus due to improper feeding.

The practical conclusion is that whilst we should by all means endeavour to provide children with tubercle-free milk, we must realise that if we do this only we are still leaving untouched what, as Dr. Still points out, is by far the most potent cause of tuberculosis in infants, infection through the respiratory passages by the inspired air.—I am, etc.,

Cavendish Place, Aug. 22nd. J. Walter Carr.

THE BACTERIOLOGY OF A "COMMON COLD."

Sir,—Sir Richard Douglas Powell, in delivering the annual Address in Medicine of the British Medical Association, makes the statement that "No one, so far as I am aware, has yet condescended to work out the bacteriology of a common cold." Such an observation may lead to some bacteriologist investigating the complaint as a new field for research. Many observers have already taken up the subject, and their work is referred to in two papers of mine "On the Etiology of Influenza Colds," published in the Local Government Board reports for 1893-94 and 1894-95. In the latter paper it was noted that no bacilli had been previously found in the nasal secretion of acute febrile catarrh in larger numbers than might be accounted for by accidental contamination.

As a result of the complete bacteriological investigation of 8 successive cases, 7 being typical instances of the affection, certain very definite micro-organisms were found in large numbers. An organism, named the bacillus coryzæ segmentosus, was found in 7 cases. Another, named the pseudo-influenza bacillus, was present in two instances; and a bacillus almost identical with this was found in 2 of the other cases. In the atypical case the streptococcus pyogenes longus was found in almost pure culture.

Put shortly, the general results of the research were that the affection known as a "common cold," or an "influenza cold," is due to a type of organism closely allied to the bacillus of influenza. Photographs and specimen cultures were shown in the Pathological Museum at the meeting of the British Medical Association in London. For details and references let me refer anyone interested to the papers mentioned.—I am, etc.,

Edmund Cautley, M.D.Cantab., etc.

15, Upper Brook Street, W., August 26th.

UNUNITED FRACTURE IN CHILDHOOD.

Sir,—I have just read a report of the discussion at the Portsmouth meeting on Ununited Fracture in Childhood, and notice that some of the speakers state that if the after-history of cases of osteotomy and osteoclasis was more carefully followed out non-union of the fracture would probably be found to occur more commonly than is usually supposed. During the ten years I was connected with the Liverpool Infirmary for Children no case of ununited fracture came under my observation, and while surgeon to that institution I performed osteoclasis—as distinct from osteotomy—more than 1,400 times. While thoroughly agreeing with Mr. Edmund Owen that the explanation of the non-union is most probably a nutritional defect, akin to that affecting the muscles in infantile paralysis, still my own observations could lead me to suppose that non-union of a fracture during childhood must be very rare.—I am, etc.,

Liverpool, Aug. 21st. R. W. Murray.

THE PROPOSED CONCILIATION BOARD.

Sir,—At the general meeting in August Mr. George Brown withdrew his resolution with regard to the above Board, because the Council stated that they had already arranged to take the matter in hand. I think it was a great pity that the meeting was not given an opportunity of discussing the scheme, more especially as it is quite essential, if the Board is to have any success, that it should have the confidence and sympathetic support of the great majority of the profession, and that it is not likely to have if the profession feels itself to be treated with neglect or contempt in the formation of the Board.

No doubt it is our duty to accept any help that may have the possibility of solving our difficulties; but we must make the reservation that the suggested scheme shall be in every way consistent with the position of the profession and the honour of its members. At present we know nothing definite of the constitution, the methods, or the scope of the proposed Conciliation Board. The public and the friendly societies will look on the medical members of the Board as representative of the profession, and if we do not accept whatever proposals they may agree to, or suggestions they may make, we shall at once be denounced as bigoted and unreasonable, although it is absurd to suppose that some members chosen by our not exactly representative Council, and the others chosen we know not how, and all without special instruction, can form a Board

that the profession may look to without misgiving to represent its views and wishes.

We ought to be sure in the first place that the Board will in no way consider any question connected with such medical aid societies as are commercial undertakings and not simply mutual benefit societies, for our relations with the former constitute a question of medical ethics to be decided by the profession alone without any outside interference; and it must be clearly defined that the Board will be a Conciliation Board pure and simple, and that it will in no way attempt to act as a court of arbitration. I should hardly have thought it necessary to suggest this had not correspondents evidently had the idea that the Board would so act.

On the very important question of a wage limit it seems rather useless to speak, as the friendly society representatives refuse to listen; it is possible, though not probable, that the Board in their deliberations may conceive some mutually agreeable alternative, which may, directly or indirectly, have the same effect; but as there is small chance of this, the possible good that may result from the labours of the Board is very much diminished in amount.

And finally, in accepting the proffered services of the Board we must remember that there is small chance of their completely solving our difficulties, and therefore we must not relax one iota of our energies in other directions, first among which should be an endeavour, persistent, definite, and, if possible, organised to instruct the working classes as to what really are our complaints and our wants; at present they are deplorably ignorant on these points, and no wonder, for they have no means of knowing; they hear the opinions of their own leading men, who more often than not are of the very class we would exclude from medical aid, and when occasionally they do hear our views, it is too frequently during some heated discussion which only tends to deepen in their minds the impressions already there.

In addition to the public press, we might do much by small local and friendly conferences between the representatives of the Branches of the friendly societies and their various medical officers. Again, at the annual dinners so common with these societies, the medical men who often attend might without offence and with good effect put in a few judicious words to advance their views. We are more likely to influence the working man by local conferences and direct conversation than otherwise, and the working man himself is, I believe, not unreasonable nor ungenerous.

To be effectual these attempts must not be confined to a few small areas, and the medical men in each district must work together with the one object in view. It should be easier to get men to work together in this way than to get them unanimously to adopt more extreme measures, and even if some remained inactive it would not undo the work of the others. Anyhow, we must peg away until we influence a large body of opinion. This course will be more in keeping with the dignity and the traditions of a humane and learned profession than any attempt by an artificial union to wrest from the friendly societies by force the terms we think proper and just. And for this reason, for its methods, as I imagine them, and for its probable educational value, I like the suggestion of a Conciliation Board.—I am, etc.,

Freshford, Aug. 8th. CHARLES E. S. FLEMMING.

MEDICAL AID SOCIETIES.

SIR,—The tone adopted by Mr. Bryant in that part of his address in which he alludes to medical aid societies is, to say the least, disappointing. To dispute the magnitude of their system of touting is absurd; patients of mine complain of it as a positive nuisance. One of my patients was touted whilst I was actually making a visit.

Their method is to ask the person canvassed to join Dr. So-and-So's club. That they are ruthless and powerful is proved by the following case. A medical man of my acquaintance severed his connection with a medical aid society. They promptly set up a dispensary opposite him and quashed him. It is a significant fact that one of the most energetic directors of a certain medical aid society is a medical man.

Touts are paid on commission, or at all events the fixed wage is very small.

The continued existence of the Hearts of Oak Society indisputably proves that assurance for sickness and death can be arranged in such a manner as not to sweat medical men.

If club and medical aid work were abolished insurance societies would promptly adapt themselves to these new conditions.

To arrange a so-called "Board of Conciliation" is merely a way of arranging to continue paying blackmail.—I am, etc.,

August 13th. J. F.

EXAMINATIONS FOR HIGHER QUALIFICATIONS.

SIR,—In my opinion the General Medical Council has acted wisely in having nothing to do with this new crusade against the methods of carrying on examinations for higher qualifications. The spirit of the law is against the Council burdening itself with any such task. The Council has the authority of Parliament to safeguard the public against men insufficiently educated being allowed to practise. This is all the public demands, and the General Medical Council performs its duty satisfactorily.

If colleges or corporations admit to their Fellowships individuals after a paltry examination, then the corporations in question will be the sufferers, for such Fellowships will cease to be of value from the standpoint of superior knowledge. Moreover, it must be remembered that in many instances Fellowships are sought after not because of their educational value, but because they give social standing, or because they are a guarantee that the possessor is likely to conform to the dictates of good conduct.—I am, etc.,

Leeds, Aug. 19th. G. SHARP.

IMPROVED VENTILATION.

SIR,—The revolution which has been effected in the conditions of ventilation by the introduction of electric lighting does not as yet appear to be fully realised by the advisers to public bodies and institutions, or we should not find so many examples in London of the absence of provision for the respiratory needs of the assembled multitudes. It might be well worthy of discussion whether in a hall which has been lit by electricity without any new provision for ventilation the audience are better or worse off than when they were stifled by the heat and carbonic acid of the old gas illumination. The atmospheric conditions are now quite different, for the whole contamination is the effect of human exhalation, to which may possibly be added the introduction of air from improper sources. Such air becomes unfit for respiration much earlier than when carbonic acid alone has to be considered, and the necessary air-change is certainly retarded by the absence of gas burners.

In the present state of our knowledge we turn to the bacteriologist rather than to the chemist for an estimate of the impurities we have to combat in designing ventilation under such circumstances. If we could satisfy the former, the latter would have little or nothing to add. A principle of ventilation directed especially to the expulsion from places where people congregate of solid frequently disease-bearing impurities of air, could not fail to have a great future before it, and is not so impossible of application as might be supposed. In fact, the difficulties of the ventilating engineer are much fewer than they were formerly, when he was bound to the superheated, carbon-laden, upward stream which was stronger than he was. He did his best with sunlights, etc., and tried to pacify those who complained of draughts with floor-inlets heated by hot-water pipes.

Electricity has changed all that. The engineer is free to act upon a body of air which has no very strong tendencies. It has to be changed imperceptibly, noiselessly, economically, without inconvenience to the breathers. The bacteriologist also demands that the supply shall be well chosen, free from dust and other evils, and that the greatest facilities shall be offered to all offensive particles to pass out as quickly and quietly as possible. To meet all these requirements will exercise the skill of the engineer, but he has his object clearly before him. The air must be taken from a level far enough above road refuse, and yet not so high as to encounter the upshafts of drains. It may with advantage be filtered, and then brought in at as great a distance as possible from the people in order to avoid draughts. The outlet, on the other hand, should be as near as possible to the source of the impurities to be carried away. These are thickest upon the floor, and are

most speedily removed in a downward direction. Moreover, pure air coming from above reaches more directly that part of the human body which is destined to receive it. The principle of downward ventilation has everything to recommend it in theory, and it only remains for those who are engaged in such work to apply the proper mechanical means of carrying it out. Whatever objection there may have been formerly to mechanical ventilation it no longer exists, and the same force which gives the light will also drive rotatory fans at no great cost.

Until sunlights are taken away and replaced by ceiling inlets, through which pure air is mechanically introduced, and floor outlets for the escape of what is foul, no approach to the ideal ventilation will be recorded. We have almost a counterpart of this arrangement in the open fire-grate supplied by a window open a little at the top; and the comfort of that is beyond question. It would not be practicable to arrange open fireplaces round the walls of the Queen's or St. James's Hall, but there is no great mechanical difficulty in maintaining a downward current from ceiling to floor, which will answer the same purpose.

It is deplorable to see what enormous sums are spent upon systems that can never supply pure air however perfectly they work. One interesting example of this is in the House of Commons, where the air is collected from the Terrace, then wisely filtered, warmed, and moistened, and afterwards directed to the members' muddy boots, finally to arrive at their nostrils accompanied by the chance produce of betrodden matting. Can anyone wonder that influenza has a habit of spreading itself rather freely among our legislators? The hot air rising from the floor in the British and South Kensington Museums, whatever else it may do, certainly brings with it much that is undesirable, and would account for the prevalence of respiratory complaints among those who have to live in it.

In the light of what we know now about the solid organic impurities of air, such conditions should have become things of the past, but it is to be hoped that it will soon be realised how the electric light has conferred a greater blessing upon us than mere convenience of illumination, by making possible a system of ventilation which will enable us to live through our duties and entertainments with less risk of serious consequences.—I am, etc.,

Thurloe Square, S.W., July. W. A. Aikin.

OBITUARY.

JAMES CUMING, M.A., M.D., F.R.C.P.I.,

Professor of the Theory and Practice of Medicine, Queen's College, Belfast; Senior Physician to the Belfast Royal Hospital; Vice-President of the British Medical Association.

It is with profound regret that we record the death of Dr. James Cuming of Belfast, which took place somewhat suddenly on the night of Sunday, August 27th, at his seaside residence, Loughside, Greenisland, co. Antrim. He had been in failing health for more than a year past, the symptoms pointing to myocardial degeneration, but although he had largely restricted the sphere of his activities he continued to work up to the last and attended to patients on the day preceding his death. On Sunday he had some threatenings of cardiac failure, but retired to rest as usual. Shortly afterwards he was seized with a violent fit of coughing and dyspnœa, and expired in the presence of his son, Mr. Francis Cuming, of the English bar, and his daughter, Mrs. Charles Russell. The North of Ireland thus loses one of its most conspicuous figures and the medical profession of Ulster is deprived of its revered and honoured head. The news will carry sorrow to the most distant parts of the Empire, as Dr. Cuming's pupils are scattered all over the world. It is safe to say that there is not one of them who will not feel a pang on learning that their loved and venerated teacher is no more.

James Cuming was born in the year 1833 at Markethill, co. Armagh. He was originally designed for the legal profession, but manifesting a reluctance for this career, he was entered as a medical student at the then recently-founded Queen's College, Belfast. He speedily gave evidence of exceptional ability and energy, and, amongst other honours, he obtained the senior scholarship in chemistry. In the year 1855 he became M.D. of the Queen's University. Subsequently, he went through the usual Arts Course, and graduated M.A. in 1858. On the completion of his collegiate course, Dr. Cuming went abroad. He studied for some time in Paris under Charcot, with whom he formed a lifelong friendship and from whom he may have acquired his abiding interest in nervous diseases. A further course of study was undertaken by him at Vienna, where Oppolzer was one of his teachers.

He returned to Belfast, and entered practice there. So great was the reputation which he had already won, that in 1865, on the death of Dr. Creary Ferguson, Professor of the Practice of Medicine in the Queen's College, Dr. Cuming was with general approval chosen as his successor. In the same year he was elected Physician to the Belfast Royal Hospital, and both of these appointments he continued to hold until his death. He soon rose to eminence in his profession, his learning, sagacity, and strength of character being universally recognised. Honours came thick upon him, but were received without a trace of ostentation or self-consciousness. He was twice President of the Ulster Medical Society, President of the North of Ireland Branch of the British Medical Associaion, Member and subsequently Chairman of the Belfast District Asylum Board, Lord Chancellor's Visitor in Lunacy, and consulting Physician to the Ulster Eye, Ear and Throat Hospital. In 1884 the British Medical Association held its annual meeting in Belfast, and Dr. Cuming was, as a matter of course, elected President for the year. It will be in the recollection of many of our readers with what dignity, tact, and *bonhomie* he discharged the duties of the Chair. His presidential address on The Necessity for the Control of Pathological Research by Clinical Observation was an eloquent and masterly discourse. It emphasised a favourite doctrine of his that in medical science isolated facts or series of facts may be misleading, that all theories must be brought to a practical test at the bedside, and that the results of experiment and research are always provisional until confirmed by the direct observation of disease in the living subject.

Dr. Cuming took a lively interest in everything connected with the Queen's College, where he filled the Chair of Medicine for more than thirty years. His lectures were models of lucid and pithy exposition, carefully prepared and admirably delivered. He dealt by preference with the natural history of disease and with pathology, in which he was thoroughly versed. He viewed with great interest the development of pathology, and more especially bacteriology, in recent years, though unable to accept as final many of the modern doctrines in this department. His relations with his colleagues were uniformly happy, and he enjoyed in a high degree the confidence and esteem of the three presidents—Henry, Porter, and Hamilton—under whom he served. With such men as Andrews, Thompson, Gordon, Craik, Purser and Redfern, he had much in common, and they were at one in recognising his eminent qualities of intellect and character. On the staff of the Royal Hospital he had as colleagues in past years such men as Sir William MacCormac, Alexander Gordon, Samuel Browne, Henry Murney, James Smith and Richard Ross. For many years he had been chairman, and the feelings towards him of the present members of staff, nearly all of whom were formerly his pupils, were those of affectionate regard and admiration. He was never more at home than when steering the ship through troubled waters, smoothing over difficulties, reconciling conflicting interests, softening asperities and healing wounded feelings with admirable suavity, tact, and good nature. His faculty for seeing the right course and saying the fitting word was almost unerring. For more than two years past he had taken great interest in the movement to found the Royal Victoria Hospital in succession to the present Royal Hospital, in commemoration of the Queen's Jubilee in 1897. At the town meeting held in 1896 to launch the scheme, Dr. Cuming delivered a weighty and powerful speech, which did much to give a successful start to the movement. In the preparations of the plans for the new hospital he took the liveliest interest, and the want of his guiding hand will be painfully felt at the present juncture. For twenty years he was an active member of the Belfast District Asylum Board, and his interest in lunacy remained with him to the last. In the reorganisation of the administration of lunacy

affairs which has taken place in the north of Ireland, involving the erection of a new asylum at Purdysburn and another at Antrim, he took an active and effective part, and devoted much time and labour to this field of philanthropy. He took no part in politics or in municipal affairs, except when questions of public health arose, when his advice was often sought by the various public bodies. He showed a warm interest in the large scheme, now near completion, for providing Belfast with a new water supply derived from reservoirs in the Mourne Mountains.

Dr. Cuming wrote little, and seemed to have a constitutional repugnance to authorship, although master of an excellent literary style. A work, entitled, *Contributions to the Study of some Thoracic Diseases*, and another on the *Pathology of Delirium Tremens*, both written in the Sixties, are all that came from his pen, with the exception of an occasional rare contribution to the medical journals.

As a physician Dr. Cuming's leading characteristics were the range of his knowledge and his philosophic caution. He kept himself abreast of all modern progress in medical science, and was fully acquainted with the best work being done in Germany, France, and America. He scrutinised every new doctrine, every fresh departure in pathology and therapeutics, and was fond of dwelling upon the errors and mistakes of the past, and upon the misplaced confidence with which medical theories which could not stand the test of time had been put forward. His caution in diagnosis and prognosis had become proverbial, and was sometimes resented by men of a different intellectual temper. But everyone recognised that Dr. Cuming's caution was the caution of vast experience, that his reticence had its root in knowledge wide in range and profound in character. His mind was essentially critical and philosophic. Nature presented herself to him as infinitely complex, various, subtle, inscrutable. He felt that in disease he could put no limits, or hardly any, to the possible.

Dogmatism he did not so much despise as ignore as unworthy of notice, though he could smile genially on the enthusiasms of smaller men. He seemed to hide, rather than parade, his knowledge, and was fond of saying that he always understated his case. In matters relating to therapeutics he carried his negative and critical attitude to a point which seemed to some extreme. Apart from a few of the leading remedies, he set a low value upon drugs, and was in the habit of saying that many of them seemed to him "alien to the human body," though at other times he would express himself as much impressed with the selective action of medicines. He was content to leave much to Nature, and had a large faith in the good effects of rest, dietetics, and judicious change of locality or occupation. Severe remedies and extreme courses were always repugnant to him. Of the clinical teachers of his youth he often spoke with respect of the diagnostic sagacity of Stokes, the insight of Graves, the therapeutic enthusiasm of Trousseau. It was characteristic of his large intellect and tolerant nature that he could appreciate teachers —such as Trousseau—whose attitude towards the problems of medical science was in many respects the opposite to his own.

It is to be regretted that Dr. Cuming's lifelong repugnance to controversy or propaganda of any sort prevented him from making his views upon medical education more fully known to the world. He held that the foundation of medicine was anatomy, that its superstructure should consist of clinical observation, and that pathology was invaluable as a check upon crude theories and as an ultimate court of appeal. Other subjects he regarded as of very subordinate importance. He saw no advantage in making the embryo medical man an expert chemist or a trained physicist. The time thus spent would, in his judgment, be much better employed in the wards of a hospital, in the accumulation of practical medical and surgical knowledge. He thought that medical students should be trained to think and to observe, and that some tincture of psychology would be useful to them. As regards the higher culture—classical literature, poetry, criticism, philosophy—he thought these things of inestimable worth in themselves, but rather outside the sphere of the average practitioner. He regarded them, however, as indispensable to the leaders of the profession, to the men who are called upon to speak and write, and represent medical science to the world. Dr. Cuming was himself a man of universal culture, and to this his unique influence was in a large measure due. He was a good classical scholar, spoke French and German fluently, and was familiar with the whole range of English literature. Homer was his favourite among the Greeks and Horace among the Latins. His character in its genial wisdom, natural humour, and delightful *urbanitas* had a distinctly Horatian quality. He was in the habit of saying that whatever his humour he could always find something to suit it in Shakespeare, and he had an enthusiastic admiration for the finished grace of Tennyson and the virile force of Browning. Newman was one of his first favourites. He took a great interest in the history and literature of Ireland, and the fortunes of his native country always had his sympathy. He had read widely in philosophy, and his turn of mind was Aristotelian rather than Platonist, and he had more sympathy with Mill and Spencer than with Hegel or Green. He was in the habit of saying—with less, perhaps, than his usual wisdom—that he could not understand the high place occupied by Kant in the history of philosophy, and that "he had never got an idea from Plato."

Dr. Cuming was a man of remarkable conversational powers. No department of intellectual activity was unfamiliar to him, and his views were always put forth in soft, unemphatic tones, and with a charming courtesy. He was always more ready to hear than to speak, and he treated even the most insignificant person as if his views deserved the utmost consideration. His drollery never failed, even when health was failing, and he had an admirable faculty alike for telling a humorous story and for smoothing over some difficulty with jest or repartee. He shone as an after-dinner speaker, and some of his speeches at the annual dinners of the Ulster Medical Society, and on other similar occasions will be long remembered for their admirable blending of grave and gay, their pith and point, their humour and drollery. His plan was to prepare a slight draft of the general purport of his speech, and then to leave the details to the inspiration of the moment. His impromptu sallies were always happy and well-timed, his wit sparkled but never scorched, and nothing was ever said which had been better unsaid.

Dr. Cuming had many claims on the confidence and regard of his fellow men, but perhaps the chief was his natural and unaffected integrity and rectitude. He made no professions and used no high-sounding language, but everyone knew that to think truly and to act rightly were as natural to him as to breathe. Those who knew him would have found it absolutely impossible to associate any idea of self-seeking, self-advertisement, vanity, or meanness with his character. His motives never required defence, for they were well known to be above suspicion. To the inner circle he revealed himself as the kind friend, the delightful companion, the trusted adviser. In that circle the blank left by his death is well known to be irreparable.

Dr. Cuming's health began to fail in the winter of 1897-98. An attack of influenza left behind a troublesome laryngeal catarrh, and after a time syncopal attacks and a tendency to cyanosis on slight exertion suggested degeneration of the heart muscle. There was no obvious valvular mischief. Last summer his health was very unsatisfactory, and for a time work was entirely relinquished. After a time some improvement set in, and Dr. Cuming resumed his lectures at the Queen's College. He remained weak, however, and in the course of the winter he was obliged to seek temporary relief from the duties of his chair, Dr. Lindsay acting as his *locum tenens*. Recently he had been feeling better, and was attending to his practice, but his condition continued precarious, and the sudden end to his life of unceasing activity and abundant honour was not a surprise to those who were aware of the facts. We tender our sincere condolences to the bereaved family.

GEORGE BURN, M.D.EDIN., L.M.EDIN., J.P.,

Latheron, Caithness-shire.

WE regret to report the death of Dr. George Burn, of Lybster, in the County of Caithness. In the end of July last he went to Edinburgh with a patient for consultation. While in Edinburgh he took skilled advice regarding an internal malady from which he had himself suffered for some time. An operation was done, and he succumbed a few days later.

George Burn, the son of a merchant and town councillor

of Edinburgh, was born in that city some 72 years ago, and received his early education at the High School. He graduated M.D. at the University of Edinburgh in 1850. In the same year he went to Caithness-shire, where he remained in practice for well nigh half a century. Throughout that long period he gained and held the confidence of the people. He took a keen interest in all that pertained to their well-being. He was a skilful physician and a courteous gentleman. He was an extensive farmer. In January, 1891, he was entertained to a banquet by his parishioners, and presented with candelabra and fruit-dishes as an appreciation of long and faithful service as medical officer of the parish. Nearly a thousand persons gave subscriptions to this. These were of all classes, from the Duke of Portland to the humble farm servant or hind.

He was twice married, and he is survived by his widow and five children—two sons and three daughters.

Dr. Thomas Stainthorpe, of Hexham, Northumberland, died very suddenly on August 4th whilst travelling from Newcastle to Hexham. He was seized with vomiting of blood and death had already occurred when the train reached the next station. Dr. Stainthorpe was a native of Hexham, and celebrated his 83rd birthday in June last. He was educated at the University of Edinburgh and became a Member of the Royal College of Surgeons of England in 1838 and a Fellow in 1873. In 1862 he took the degree of M.D. in the University of St. Andrews. He had been in practice in Hexham for sixty years and retired about a year ago. He was an old member of the British Medical Association and a regular attendant at the annual meetings. He was present at that held in Edinburgh last year. He was a member of the North of England Branch and had held the office of President. In 1865 the residents in and about Hexham presented to him a gold watch and a purse of gold in recognition of the manner in which he had discharged the duties of his profession. He was a Liberal in politics, and the active part which he took in municipal affairs resulted in important improvements in the sanitation of the town. In his early days he was well known in the hunting field and did much of his work on horseback and had some rather alarming adventures, for years ago the country around Hexham was very wild. The funeral, which took place on August 7th, was very largely attended, and at a meeting of the Hexham Board of Guardians on August 8th a resolution of condolence was passed with the family of Dr. Stainthorpe, who had been for the long period of fifty-five years a highly valued medical officer of the Board.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Staff-Surgeon A. G. P. Gipps has been promoted to be Fleet-Surgeon, August 7th. He was appointed Surgeon, March 31st, 1879, and Staff-Surgeon, March 31st, 1891. He was Surgeon of the *Inconstant* during the Egyptian war in 1882 (medal and Khedive's bronze star). He served in the punitive naval expedition commanded by Rear-Admiral Rawson, C.B., and landed from the squadron to punish the King of Benin for the massacre of the political expedition, 1897, ending in the capture of Benin City, February 18th, 1897 (mentioned in despatches, medal with clasp).

Fleet-Surgeon A. G. Delmege, M.D., M.V.O., has been placed on the retired list, August 17th. His commissions are thus dated: Surgeon, January 1st, 1869; Staff-Surgeon, December 25th, 1879; Fleet-Surgeon, March 9th, 1880. He served with the first detachment of Royal Marines sent out to Cape Coast Castle during the Ashanti war, receiving the medal. He was nominated a Member of the Royal Victorian Order for professional ability during the illness of H.R.H. the Prince of Wales in 1898.

Inspector-General Adam B. Messer, M.D., has been appointed Honorary Physician to the Queen, *vice* Sir Alexander Armstrong, K.C.B., F.R.S., M.D., LL.D., deceased, August 15th. Inspector-General Messer joined the department as Surgeon, July 30th, 1859; attained the rank of Inspector-General, April 27th, 1892, and retired from the service, May 20th, 1896. From the *Royal Navy List* we learn that he was Assistant Surgeon of the *Curaçoa* in medical charge of the Naval Brigade at battle of Rangariri, New Zealand war of 1863 (mentioned in despatches for attendance on wounded under fire, and for "proceeding under heavy fire to rescue Midshipman Watkins, who lay mortally wounded under enemy's works," specially promoted (New Zealand medal). He is the author of *Exhaustive Inquiry into the Nature of Poisoned Arrows*, for which he received the special thanks of the Medical Director-General and his report published by order of Admiralty; also of *Report on the Fiji Islands*, incorporated in the High Commissioner's report, which led to the annexation of those islands by Great Britain (awarded Sir G. Blane's gold medal and promoted to Fleet-Surgeon).

The following appointments have been made at the Admiralty: Charles W. Buchanan-Hamilton, Fleet Surgeon, to the *Prince George*, undated; Horace X. Browne, Fleet Surgeon, to the *Unicorn*, September 6th; Morris C. Langford, Surgeon, to the *Hazard*, August 22nd; Francis Bolster, B.A., M.B., Surgeon, to the *Ganges*, temporarily, August 22nd; Montague H. Knapp, Surgeon, to the *Gleaner*, August 22nd; Alexander G. P. Gipps, Fleet Surgeon, to be Instructor to the newly-entered surgeons at Haslar Hospital, October 1st; James Bradley, M.D., Staff Surgeon, to the *Egeria*, August 17th; George Hewlett, M.B., Staff-Surgeon, to the *Comus*, August 17th; Jonathan Shand, M.B., Staff-Surgeon, to the *Brisk*, reappointed on promotion, August 17th: Norman I. Smith, Surgeon, to Plymouth Hospital, August 22nd; C. Ross, M.B., Surgeon, to the *Excellent*, for disposal, August 19th; Robert Hill, Surgeon, to the *Duke of Wellington*, for disposal, August 19th; Alfred Woolcombe, Surgeon, to the *Snipe*, undated; John G. Corry, M.B., Surgeon, to the *Seagull*, lent, on commissioning, undated; Alexander G. Andrews, Staff-Surgeon, to the *Terrible*, September 1st; Alexander F. Harper, Staff-Surgeon, to the *Thunderer*, September 1st.

ARMY MEDICAL RESERVE.

Surgeon-Captain James Shaw, M.D., 1st Bucks Volunteer Rifle Corps, to be Surgeon-Captain, August 30th.

THE VOLUNTEERS.

Mr. Ernest H. Tipper is appointed Surgeon-Lieutenant in the 1st City of London Artillery (Eastern Division Royal Garrison Artillery), August 30th.

Surgeon-Lieutenant H. J. Hargrave, 2nd Volunteer Battalion the Suffolk Regiment, resigns his commission, and is appointed Second Lieutenant, August 30th.

Surgeon-Captain J. P. Atkinson, M.D., and Surgeon-Lieutenant C. E. Stephens, M.B., 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment, are promoted to be Surgeon-Major and Surgeon-Captain respectively, August 30th.

Surgeon-Lieutenant L. F. Cox, 1st Volunteer Battalion the Royal Welsh Fusiliers, has resigned his commission, August 30th.

Surgeon-Lieutenant C. W. Howatson, M.B., 4th (Perthshire) Volunteer Battalion the Black Watch (Royal Highlanders), is promoted to be Surgeon-Captain August 30th.

THE MEDICAL DEPARTMENT OF THE WELSH BORDER BRIGADE.

The full strength of the Welsh Border Brigade V.I., 6 regiments, has been encamped at Towyn under Colonel Robinson, commanding the 53rd Regimental District. The medical department under Brigade-Surgeon-Lieutenant-Colonel P. B. Giles, V.D., is very well organised; the brigade hospital was administered to by bearer the company; there are no separate regimental sick. Colonel Duke, Principal Medical Officer of the N.W. District, made his inspection on the third day of the camp, and expressed his great satisfaction on finding not only a bearer company up to strength, but 6 sections of regimental stretcher-bearers—that is to say, a parade of 160 trained men, all under the command of the senior medical officer the whole period of camp.

GOVERNMENT HOSPITALS IN INDIA.

A correspondent writes, with reference to the paragraph on cantonment hospitals in India in the British Medical Journal of August 12th, that the assumption that they are lock hospitals, is not "quite correct," and points out that the cantonment hospitals were started by Lord Lansdowne seven or eight years ago, "in place of the old lock hospitals," in all the larger cantonments, and are "practically" civil hospitals available for the civil inhabitants of the cantonments and surrounding districts. All diseases are to be met with in these hospitals.

INOCULATION FOR ENTERIC IN INDIA.

Formal intimation has now been conveyed to the medical authorities to the effect that the Government of India has sanctioned the resumption of voluntary inoculation against enteric fever at the public expense.

THE R.A.M.C. FOR INDIA.

A scheme for the introduction of the rank and file of the Royal Army Medical Corps into military hospitals in India is occupying, says the *Calcutta Englishman*, the attention of the Government of India. The present system of nursing serious cases of illness by partially or totally untrained regimental orderlies is considered disgraceful. We have noted long since that the scheme was submitted to the Government about 1888 or 1889 by Sir James Hanbury, then Surgeon-General and P.M.O. of Madras. If carried out great benefit must accrue to the sick. The Indian nursing sisters are not in themselves quite sufficient for all needs.

HEALTH OF MILITARY PRISONERS.

In the Report on the Discipline and Management of the Military Prisons for 1898 by Lieutenant-Colonel M. Clare Garsia, Inspector-General of Military Prisons, the general health of the prisoners in the several military prisons is reported as on the whole good, and the sanitary conditions also satisfactory. At Malta, the inspector-general says it is most important and urgent that the residence provided for the governor and medical officer should be made habitable, and points out that the danger of not having a medical offier within call is obvious.

VOLUNTEER AMBULANCE CHALLENGE SHIELD.

We are informed that the winning team this year, the 3rd Volunteer Battalion the Queen's, passed through the Volunteer Ambulance School of Instruction last year, when they obtained tenth place in the competition. We are also informed that this year they were trained by Surgeon Captain Campbell Boyd and Ambulance Sergeant Scarborough, both of the battalion.

RECALL TO SERVICE.

Pax writes: While provision is made for recall of medical officers to service up to 55 years of age, there is none for their voluntary return to active military duty should they desire to do so. He knows several on

the retired list who would voluntarily return to duty if permitted to do so in these times of an undermanned service.

*** A voluntary see-saw between the retired and active lists would never do; it would lead to abuse.

MEDICO-LEGAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

WORKMEN'S COMPENSATION ACT.

COUNTRY MEMBER writes: "A. M.," a boy employed in a joinery works, where the employers have all the men insured on account of the Workmen's Compensation Act, meets with an accident to his hand. The injury will take a good deal of attention, and probably months to heal. Owing to the low wages in the district, the lad's parents cannot pay the bill. How can I make myself secure? do the insurance companies pay the medical expenses in cases of accidents under the new Act?

*** It does not appear that the Workmen's Compensation Act, 1897, makes any provision for medical expenses of the patient except in the case of the patient's death leaving no dependents within the meaning of the Act. The policies of insurance effected by the employers would presumably only amount to a contract of indemnity. It would seem, therefore, that our correspondent should arrange for his fees being payable out of the compensation to which the person in question may be entitled to recover.

WORKMEN'S COMPENSATION ACT: MEDICAL CERTIFICATES REQUIRED BY INSURANCE COMPANIES.

SENIOR PHYSICIAN.—In reply to our correspondent's questions, we must premise that insurances effected by employers in respect of claims under the Workmen's Compensation Act are outside the provisions of the Act. The claim of the workman is against the employer, and the provisions of the Act are clear as to the medical evidence which the employer is entitled to require. If the employer effects a policy of insurance to meet claims under the Workmen's Compensation Act, and the insurance company requires certain certificates from a registered medical practitioner, there is no doubt that the latter is entitled to be paid a proper fee therefor. If such a certificate is given by the house-surgeon to a hospital, the fee should, we think, be paid to the house-surgeon, thus following the universal custom which obtains in cases where the house-surgeon to a hospital is summoned to give evidence at a coroner's inquest, and receives a fee therefor. The sum of £1 1s. would seem to be a reasonable fee for any such certificate, except when the amount of compensation claimable was very small, when it might be reduced to 10s. 6d.

MEDICAL WITNESSES' FEES.

X. Y. Z.—The usual fees allowed to medical witnesses in cases in the High Court are from 2 to 3 guineas a day (where the witness does not reside in the town in which the case is heard), inclusive of all except travelling expenses.

We do not gather whether our correspondent was called as a witness in reference to facts in the case, or as an expert or scientific witness; but even in the latter case unless there was some special agreement between our correspondent and the party who subpœnaed him or his solicitors, there is reason to doubt whether higher fees than those above mentioned would be recoverable in an action. Perhaps, however, if the matter is put in its proper light before the solicitors in question they would be willing to accept our correspondent's claim as being a reasonable one under the circumstances.

We have frequently impressed on correspondents the desirability in all cases where they are requested to attend to give evidence that there should be an express undertaking, either by the party subpœnaing or by his solicitor, to pay the usual fees, and in case of expert or scientific evidence being required a fee to be agreed upon.

The solicitor consulted by our correspondent having probably had all the facts before him would doubtless be in a better position to advise what claim our correspondent should endeavour to maintain if the claim put forward is not met in an amicable spirit.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE BRISTOL LUNATIC ASYLUM.

THE thirty-eighth annual report for the year ending December 31st, 1898, shows that the total number of patients under treatment during the year was exactly 1,000. Of these, 507 were males, and 493 females, and the average daily number resident was 767. There were 216 patients admitted, which is an increase of 25 per cent. upon the previous years, the average number for the last five years being only 168; this increase is accounted for by the extension of the boundaries of the city. This raises the serious question of a further increase in the accommodation of the asylum, the limit which the Commissioners in Lunacy have fixed being accommodation for 1,000 patients. The sooner this is carried out the better, for the population of this asylum is sure to increase, and there are already 53 female patients in the Gloucester Asylum waiting for accommodation here. The recovery-rate was 34.63 per cent., and the death-rate 10.30 per cent. Of the 79 deaths, 19 occurred within a month, and 16 within three months, of their reception. *Post-mortem* examinations were made in 71 cases. The general health of the establishment was good, and Dr. Beuham reports one case of enteric fever which he thinks was sporadic.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

A CORONER ON AN IRISH BOARD OF GUARDIANS.

MR. THOMAS PHELAN, coroner, recently held an inquest with regard to the death of an old woman on her way to the Monaghan Workhouse Hospital, and made some strong observations on the conduct of the guardians. The guardians passed a resolution to which Mr. Phelan replied by a letter dated August 13th. In the course of his letter he stated that the woman "was done to death on the public highway by exposure and shaking while being carted like a log of wood over mountainous roads from her home in the hills of Errigal Truagh to Monaghan Workhouse Hospital, fourteen miles distant." The Board, instead of taking these observations to heart, endeavoured to shelter itself behind the plea of ignorance. If the ignorance is a fact, it only makes bad worse, for if the Board is thus unprovided with the machinery to relieve and succour these poor clients in the outlying districts it is high time the guardians set their house in order, or made way for more efficient administrators. The report from which we are quoting is from the *Belfast Morning News* of August 22nd. So long as the guardians look on the board room as the town or village parliament so long will the interests of the poor be neglected; there are guardians who have no higher conception of their duties than walking in and out of the board room each board day.

A VOICE FROM LEICESTER.

"A LEICESTER MAN BRED AND BORN," writes to assure us that everybody in that town is not opposed to vaccination, nor in favour of the whims and caprices of the guardians. He argues that the fondness of the people for a free show largely accounts for 20,000 of them meeting the guardians on their return from the London law courts, and in support of this view he points out that not 20,000, but only three dozen, had contributed to the defence fund raised to aid the guardians in their opposition to the Local Government Board. In this, however, he seems to us a little premature, as the list is not yet closed, and we can well believe that antivaccination is sufficiently fashionable in Leicester to produce a larger number of subscribers. We agree with him, however, in holding that "antivaccination leagues are the cause of much harm and mischief." In illustration, he says that in Leicester the League have coerced past members of the Board of Guardians into retirement, that they do not scruple to boycott people of opposite views; that they decry the medical profession on the one hand, but on the other hand freely accept their aid gratis at local infirmaries, and even cadge for recommendations to get there. Generally, he holds that the principles of the "free conscience" party are to allow no others to exercise their own opinions, but to intimidate all who differ from them. Our correspondent's letter is an interesting one, and we have no doubt that he expresses the view quietly held by very many people in Leicester and other centres of antivaccination.

SPECIAL FEE FOR TREATMENT OF FRACTURE OF LEG.

VIATOR, who is a district medical officer, asks whether he can claim the special fee of £3 allowed for fracture of leg for attendance on a pauper patient with fractured patella.

*** The Local Government Board has ruled that fracture of patella does not come within Regulation 5, art. 177 of Consolidated Orders, which allows the special fee for treatment of simple fractures or dislocations of thigh or leg. We consider fracture of patella ought to carry the same fee as other fractures of leg.

ATTENDANCE AT ISOLATION HOSPITALS.

M.O.H.—A return as to accommodation for infectious diseases in sanitary districts, ordered by the House of Commons to be printed on February 8th, 1895 (No. 28), gives facts as to the arrangements for medical attendance on patients in isolation hospitals provided by sanitary authorities, joint hospital boards, etc., but no summary has been made of the details given. A glance at the column, however, shows that in by far the greater number of cases the local medical officer of health is either the only attendant, or attends all cases other than those desiring to have their own medical adviser; and of these two classes, the former is in greatest preponderance. Still there are, nevertheless, many instances where either a "district medical officer" attends, or a special officer has been appointed, or all save pauper cases have attendance by their own medical men.

INCREASE OF SALARIES TO POOR-LAW MEDICAL OFFICERS.

A POOR-LAW MEDICAL OFFICER writes to say that the guardians of his union have decided to increase the salaries of all the medical officers of the union, but that the Local Government Board have not given their consent to this, though repeatedly urged to do so. Our correspondent says that this refusal on the part of the Board to confirm the action of the guardians arises from the fact that the two Boards "are in conflict," and have been so for some length of time. He thinks it hard on the medical officers that they should suffer from the effects of this conflict, as they do not now receive the remuneration which the guardians consider them entitled to.

*** Our correspondent does not tell us whether the matter on which the Local Government Board and guardians disagree, has anything to do with the increase of salary, and this is important; but whether it have or not, it is certain that the salaries cannot be increased without the sanction of the Local Government Board, which Board is not compelled to give any reason for declining its sanction to the proposed change. Why the Local Government Board should object to approve an act of justice to the medical officers if their quarrel with the guardians is about something else we must confess our inability to explain.

ATTENDANCE ON NON-PAUPER PATIENT BY ORDER OF RELIEVING OFFICER.

D.P.H., who is a district medical officer, writes to say that he received a medical order signed by the relieving officer to attend a case which he found to be enteric fever. His attendance lasted for two months. The guardians now refuse to pay any of the expenses incurred in connection with the case, on the ground that the patient was not a pauper and that it was the duty of the sanitary authority to provide for the case, and the latter have had (on appeal to the Local Government Board) to defray the cost. "D.P.H." asks whether he cannot claim payment for his attendance in this case from the sanitary authority, which bears all other expenses.

*** We should be inclined to say that our correspondent's claim would be on the guardians, as it was by direction of their officer that his attendance was given, and if they (the guardians) were to pay for this we should expect them to be able to recover the amount so paid from the sanitary authority if they wish to do so.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,776 births and 5,868 deaths were registered during the week ending Saturday last, August 26th. The annual rate of mortality in these towns, which had been 24.3 and 25.7 per 1,000 in the two preceding weeks, further rose to 26.8 last week. The rates in the several towns ranged from 20.8 in Croydon, 21.2 in Huddersfield, 21.7 in Wolverhampton, and 21.9 in Halifax, to 33.7 in Manchester, 35.5 in Burnley, 36.7 in Liverpool, and 38.0 in Salford. In the thirty-two provincial towns the mean death-rate was 28.7 per 1,000, and exceeded by 4.6 the rate recorded in London, which was 24.1 per 1,000. The zymotic death-rate in the thirty-three towns averaged 8.8 per 1,000; in London the death-rate was equal to 6.3 per 1,000, while it averaged 10.4 in the thirty-two provincial towns, among which the highest zymotic death-rates were 14.5 in Portsmouth, 14.7 in Liverpool, 16.5 in Brighton, and 17.1 in Burnley. Measles caused a death-rate of 1.1 in Sunderland, 1.2 in Salford and in Sheffield, and 1.4 in Burnley; scarlet fever of 1.5 in Derby; whooping-cough of 1.0 in Huddersfield, 1.1 in Portsmouth and in Leeds, and 1.5 in Gateshead; "fever" of 1.2 in Blackburn, and 1.4 in Birkenhead; and diarrhœa of 11.5 in Portsmouth, 11.7 in Birmingham, 12.0 in Manchester, 12.7 in Liverpool, 13.4 in Burnley, and 16.5 in Brighton. The 72 deaths from diphtheria in the thirty-three towns included 20 in London, 7 in Sheffield, 5 in Liverpool, 4 in West Ham, 4 in Birmingham, 4 in Leicester, and 4 in Leeds. One fatal case of small-pox was registered last week in Hull, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, August 26th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,704 to 2,612 at the end of the three preceding weeks, had further declined to 2,547 on Saturday last; 225 new cases were admitted during the week, against 297, 227, and 245 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, August 26th, 957 births and 689 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.9 and 19.3 per 1,000 in the two preceding weeks, further rose to 22.6 last week, but was 4.2 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.1 in Greenock and 17.5 in Aberdeen to 25.4 in Perth and 31.1 in Paisley. The zymotic death-rate in these towns averaged 6.4 per 1,000, the highest rates being recorded in Leith and Paisley. The 356 deaths registered in Glasgow included 12 from measles, 5 from scarlet fever, 3 from diphtheria, 4 from whooping-cough, 8 from "fever," and 82 from diarrhœa. Two fatal cases of "fever" and 12 of diarrhœa were recorded in Edinburgh; 2 deaths from "fever" and 15 from diarrhœa occurred in Paisley, and 16 from diarrhœa in Dundee.

INDIA AND THE COLONIES.

INDIA.

Pneumonia in the Tochi Valley.—Dr. Lalor records his observations on the acute lobar pneumonia which prevailed among native troops and their followers in the Tochi Valley. He believes it to be identical with the general type of the disease met with in other parts of the North-Western Frontier. It commences in October, and increases during November and December, attaining its greatest prevalence during the months of January, February, and March. During the first quarter of the year the disease is contagious in varying degree; so well recognised is this fact that the sick attendants of pneumonia patients in the Tochi are changed as a rule every twenty-four hours. Dr. Lalor holds that owing to the "micrococcus pneumoniæ crouposæ" being able, as he believes, to multiply within the alimentary canal of herbivorous animals when swallowed without doing them harm, the disease is kept up by man breathing the dust of infected excreta of the horse, mule, or other herbivorous animals with which man is closely associated. He states that owing to the conditions of warfare in the Tochi valley the overcrowding of man and animals is very great, and produces special insanitary features.

The Countess of Dufferin's Fund.—The fourteenth annual report of the National Association for Supplying Female Aid to the Women of India for the year 1898 is a portly quarto volume containing, with appendices, 492 pages. The report itself, drawn up by the Honorary Secretary, Lieutenant-Colonel E. H. Fenn, R.A.M.C., C.I.E., is, however, concise and very readable, and gives a clear and comprehensive view of the working and progress of this most commendable organisation during the past year. Among many changes which have taken place in the list of officers of both central committee and branches, two are of special interest, namely, the resignation of the office of Lady President by Lady Elgin, and its assumption by Lady Curzon; and the substitution of Lieutenant-Colonel Fenn for Colonel Franklin, I.M.S., C.I.E., as Honorary Secretary. The keen interest in the objects and welfare of the Association taken by a succession of Vicerines has contributed greatly to its prosperity, and the services of both Lady Elgin and Colonel Franklin are referred to in this report in terms of the highest praise. It is satisfactory to note that many of the institutions founded by the agency and help of the Association have become independent and self-supporting. It is stated that there are in India 185 hospitals, wards, and dispensaries of various kinds for the treatment of women which are officered by women, and that there are 430 medical women of various grades engaged in furthering the objects of the Association. It appears, also, that there are, including nurses and compounders, 324 women at present studying medicine in the various classes of the medical colleges and schools in the different provinces. Difficulty is still experienced in obtaining the best stamp of native female for medical tuition and training, and the marriage customs of the country interfere not a little with efforts to enlist and retain the services of suitable students. The number of patients treated by the agency of the Association amounted to 1,484,967. Decided progress is being made in inducing *purdah nishins* (ladies of the zenana) to accept medical aid at their own homes or in specially-arranged apartments in hospitals. Financially the Association continues to flourish. The income of the central committee and branches amounted in 1898 to about 3⅛ lakhs of rupees; the invested funds being nearly 22 lakhs. The appendices annexed to the report give detailed information regarding female medical education and medical relief through the empire. Full reports of the speeches delivered at the fourteenth annual meeting of the fund at Calcutta are published in a separate pamphlet. It was on this occasion that Lord Curzon paid the warm and handsome tribute to the value of medical science and medical services in India, to which reference has already been made in the British Medical Journal.

Transport of Potable Waters.—It has been brought to notice that drinking water led into stations by pipes is often conveyed from the hydrants to barracks in mussuks or leathern pakhals, thereby much affecting its purity, and an order has been issued to the Punjab Command that unless the distance is very great all drinking water should be carried in galvanised buckets or metal pakhals or even in kerosine tins if nothing better is procurable.

Bombay Conservancy.—A commencement will be made this year with the scheme sanctioned for improving the conservancy in cantonments in the Bombay Command upon lines similar to those adopted in Bengal and the Punjab. A certain number of stations will be taken in hand yearly in the order of importance, beginning with Mhow and Quetta, where enteric fever has been prevalent, and going on to Ahmednagar, Kirkee, and Neemuch.

Vaccination in India.—In the Bombay Presidency the results attained have been very good. During the five years ending 1897, the percentage of births successfully vaccinated was never lower than 55, and one year it rose to 59. No other province can show such high percentage save the Punjab. In Bengal the percentage was only 12 in 1893, though five years later it had risen to 18. Bengal compares with Bombay unfavourably in another respect, as it employs six times as many vaccinators, but the average number to each Bengal vaccinator is 650, as against an average of 1,690 by Bombay operators.

MEDICAL NEWS.

Mr. Kenneth Scott has resigned his appointment as Surgeon to the Eye Section of the Kasr-el-Aini Hospital, Cairo.

Mr. F. H. Turner (East Bergholt, Suffolk), Public Vaccinator for the Capel and Holbrook Divisions of the Samford Union, has been awarded the Government grant for efficient vaccination for the third time.

Metropolitan Hospital Saturday Fund.—The total receipts of the Fund for the present year up to August 19th were £8,556 as compared with £7,803 on the corresponding date last year. The cost of collection has decreased, and the Fund does not seem to have suffered by giving up the street collection by ladies which was abandoned in 1897.

Southport Medical Society.—A Society, under the above title, has been constituted among practitioners in Southport, Birkdale, and district. About 50 have signified their intention to join. A code of laws previously drawn up by a provisional committee was approved and the following officers elected:—*President:* Dr. H. H. Vernon. *President-Elect:* Dr. Robert Harris. *Vice-President:* Dr. Pinkerton. *Treasurer:* Dr. Baildon. *Secretary:* Dr. R. M. Littler, 29, Hawkshead Street. *Committee:* Drs. Reinhardt Anderson, Ashworth, Baines, Barrett, A. J. Popert, and G. C. Walker, sen. The first meeting of the session will be held in the Albany Galleries on Wednesday, October 11th, when Sir William Mitchell Banks has promised to deliver an address.

A Governor's View of Medicine.—A Bill intended to regulate the practice of medicine in Colorado recently passed both Houses of the State Legislature by good majorities. It

was, however, vetoed by the Governor, on the ground that "medicine is not a science which has reached perfection, but merely a series of experiments."

COTTAGE HOSPITAL FOR EAST HAM.—Mr. J. H. Bethell has received a letter from Mr. Passmore Edwards offering to give the sum of £4,000 for the erection of a cottage hospital at East Ham. The Committee has already collected £2,000 towards the purchase of the site.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION. — The American Electro-Therapeutic Association will hold its ninth annual meeting at Washington, D.C., September 19th, 20th, and 21st, 1899, under the presidency of Dr. F. B. Bishop. Many interesting papers have been promised, and a very successful scientific meeting is confidently expected. There will be an exhibition of electro-therapeutic apparatus in Willards Hall during the meeting. The Committee also promises a very pleasant social programme, including a reception by the President of the United States.

INTERNATIONAL CONGRESS ON VENEREAL DISEASE.—The International Conference to discuss the prophylaxis of syphilis and other venereal diseases will open on September 4th at Brussels. The programme is long. Professor Fournier (Paris) will discuss syphilis, and Professor Neisser (Breslau) gonorrhœa, as a social danger; Drs. Le Pileur and Verchère (Paris) the part of prostitution in the dissemination of syphilis and other venereal diseases; and Professor Lassar (Berlin), other modes of dissemination. Other questions to be discussed are whether systems of regulating prostitution have any effect in diminishing the frequency of venereal diseases; whether present systems of medical inspection can be improved; whether on medical grounds the system of licensing brothels should be suppressed; whether the police supervision of prostitution can be improved; what legal means can be taken to diminish the number of prostitutes; and what measures, apart from the supervision of prostitution, can be taken to check syphilis and other venereal diseases.

MEDICAL VACANCIES.

The following vacancies are announced:—

BELGRAVE HOSPITAL FOR CHILDREN.—House-Surgeon. Appointment for six months. Application to the Honorary Secretary, 77 and 79, Gloucester Street, S.W., by September 16th.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £75 per annum, with board, residence, and laundry. Applications, marked "House-Surgeon," to the Honorary Secretary, Woodchurch Road, Birkenhead, by September

BIRMINGHAM AND MIDLAND SKIN AND URINARY HOSPITAL.—Clinical Assistant. Applications to the Secretary by September 11th.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke Road. House-Surgeon. Appointment for twelve months. Salary £80, with board, lodging, and washing. Applications, under cover, to the Chairman of the Medical Committee by September 5th.

CARLISLE: CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications to the Secretary by September 11th.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon. Salary £100 per annum, with board, residence, and washing. Applications to the Secretary by September 7th.

DURHAM COUNTY ASYLUM, Winterton, Ferryhill.—Assistant Medical Officer; unmarried. Salary, £120 per annum, with apartments, board, and attendance. Applications to the Chief Medical Officer by September 8th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—(1) House-Surgeon. Appointment for six months. Board and residence provided, and honorarium of £25. (2) Two Clinical Clerkships. Lunch provided. Applications to the Secretary by September 16th.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—Two Clinical Clerks. Applications to the Secretary by September 16th.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £80 per annum rising to £100, with board, residence, and washing. Applications to the Secretary by October 1st.

GEORGE HENRY LEWES STUDENTSHIP FOR THE ENCOURAGEMENT OF ORIGINAL RESEARCH IN PHYSIOLOGY. Applications to Professor Sir Michael Foster, K.C.B., New Museums, Cambridge, by October 1st.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Physician. Applications to the Secretary by September 13th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board, lodging, and washing. Applications to F. E. Ferrier, Honorary Secretary, 33, Hall Plain, Great Yarmouth, by September 23rd.

GUILDFORD ROYAL SURREY COUNTY HOSPITAL.—Resident House-Surgeon. Salary £80, with board, residence, and laundry. Applications to the Honorary Secretary by September 5th.

HEMEL HEMPSTEAD: WEST HERTS INFIRMARY.—House-Surgeon and Dispenser; unmarried. Appointment for two years. Salary, £100 per annum, with board, fire, light, attendance, and washing. Applications to the Assistant Secretary by September 13th.

LANCASTER: ROYAL ALBERT ASYLUM.—Resident Medical Officer. Between 30 and 40 years of age. Salary, £400 per annum, advancing to £450, with furnished house, coals, gas, milk, and vegetables. Applications to the Principal and Secretary by September 14th.

LEITH HOSPITAL.—House-Physician, House-Surgeon, and Surgeon for the Outdoor Department, and Assistant House-Surgeon (non-resident). Appointments for six months. Applications to the Secretary, , Bernard Street, Leith, by September 12th.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—House-Surgeon. Salary, £85 per annum, with board and lodging; also Assistant House-Surgeon. Appointment for six months, with board and lodging. Applications to the Honorary Secretary by September 15th.

LONDON SCHOOL OF MEDICINE FOR WOMEN.—Lecturer in Physiology. Applications to the Secretary, 8, Hunter Street, Brunswick Square, W.C., by September 4th.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £70 per annum, with board and residence. Applications to the Chairman of the House Committee by September 7th.

METROPOLITAN HOSPITAL, Kingsland Road.—(1) House-Physician; (2) House-Surgeon; (3) Assistant House-Physician; (4) Assistant House-Surgeon. Appointments for six months. Salaries, for the first two, at the rate of £40 per annum, and for the latter two at the rate of £20 per annum. Applications to the Secretary by September 11th.

NORTHAMPTON: BERRY WOOD ASYLUM.—Senior Assistant Medical Officer. Under 35 years of age, and unmarried. Salary £200 rising to £250, with board, lodging, washing, etc. Appointment for five years, but eligible for re-election. Applications to the Medical Superintendent before September 5th.

OXFORD EYE HOSPITAL.—Honorary Assistant Surgeon. Applications to the Hon. Secretary, Oxford Eye Hospital, 29, Banbury Road, Oxford, by September 16th.

PORTSMOUTH BOROUGH ASYLUM.—Junior Assistant Medical Officer. Salary, £120 per annum, increasing to £150, with board, lodging, and washing. Applications to the Medical Superintendent.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, washing, etc. Applications to W. Davis, Secretary, 5, Winkley Street, Preston, by September 13th.

PRESTWICH: MANCHESTER COUNTY ASYLUM.—Assistant Medical Officer; unmarried, and under 35 years of age. Salary £135, increasing to £250, with board, apartments, and washing. Applications to the Superintendent.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Surgeon. Salary £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by September 5th.

TOXTETH PARK.—Junior Assistant Medical Officer of the Workhouse and Infirmary. Salary, £100 per annum, with board, washing, and apartments. Applications to the Clerk to the Guardians, 15, High Park Street, Liverpool, by September 6th.

WESTERN GENERAL DISPENSARY, Marylebone Road.—Second House-Surgeon; unmarried. Salary, £75 per annum, with board and residence, and 10s. a month allowed for washing. Applications to the Honorary Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Appointments tenable for six months. Applications to the Secretary-Superintendent by September 20th.

WESTMINSTER HOSPITAL.—Pathologist. Salary £250 per annum, and a sum of £80 per annum allowed for expenses. Applications to S. H. Quennell, Secretary, by October 1st.

MEDICAL APPOINTMENTS.

BUCK, Thomas Alpheus, M.B.Lond., appointed Admiralty Surgeon and Agent at Ryde, Fishbourne, and Seaview.

CADDICK, C. J., M.B., C.M., appointed House-Surgeon to the Walsall and District Hospital, *vice* W. Smith, M.R.C.S., resigned.

CROWTHER, E. E., L.R.C.P.Edin., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer for the Luddenden District of the Halifax Union, *vice* T. Crowther, M.D., King's College, Aberdeen, resigned.

DU BUISSON, E. W., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer to the Dewchurch District of the Hereford Union, *vice* R. Thomason, M.R.C.S.Eng., L.S.A., resigned.

HARRISON, H. F. E., L.R.C.P.Lond., M.R.C.S.Lond., appointed Medical Office Third District of the Parish of Hammersmith.

INCE, A. G., M.R.C.S., L.R.C.P., appointed Medical Officer for the Fourth Dis ict o the Blean Union, *vice* Mr. Salt, resigned.

JONES, W. E., M.R.C.S., L.R.C.P.Lond., appointed Senior House-Surgeon to the Halifax Infirmary.

LONGFORD, J. M., L.R.C.P.I.&L.M., L.R.C.S.I.&L.M., appointed Assistant Medica Officer of the Workhouse of the Halifax Union.

MARLER, W., M.B., C.M.Edin., appointed Medical Officer of "The Mansion, Wood Green, N.

MAYNARD, G. D., M.R.C.S.Eng., L.R.C.P.Lond., appointed Junior Out-patient Surgical Officer to the Royal London Ophthalmic Hospital, City Road.

NUTTALL, T. E., M.B., C.M.Edin., appointed Medical Officer for the First Accrington District of the Haslingden Union, *vice* T. J. Monaghan, M.D.St.And., resigned.

REID, J., M.D.Glasg., M.B., C.M., appointed Medical Officer of the First District of the Parish of Hammersmith.

SHARMAN, Mary N., M.B.Lond., appointed Lady Medical Officer in Ceylon.

STEWART, J. B., M.A.Glasg., M.B., C.M., appointed Medical Officer of the Workhouse of the Haslingden Union, *vice* J. Fenwick, resigned.

STURGIS-WHITE, R., M.B., C.M.Edin., appointed Medical Officer for the Cradley District of the Stourbridge Union, *vice* J. Blackford, resigned.

WOOD, R., M.D.St.And., L.R.C.P.Lond., L.R.C.P.Edin., appointed Medical Officer for Bromsgrove.

DIARY FOR NEXT WEEK.

FRIDAY.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W.—Mr. James Cantlie: Cases of Surgery of the Nerves.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

HOGGAN.—At Bessville, Liberton, Midlothian, on the 22nd ult., the wife of Robert Hoggan, M.B., C.M., of a daughter.

MARRIAGES.

MILLARD—LONGLEY.—On August 24th, at St. Saviour's Church, Saltley, by the Rev. J. Longley, assisted by the Rev. C. S. Millard and the Rev. Canon Hodges (grandfather of the bride), Charles Killick Millard, M.D., D.Sc., second son of the Rev. C. S. Millard, Rector of Costock, Loughborough, to Annie Susan, third daughter of the Rev. J. Longley, Vicar of Saltley, Birmingham.

MILTON—DE LA CONDAMINE.—On August 29th, at St. John the Evangelist, Kingston-on-Thames, by the Rev. H. R. Jennings, Vice-Chancellor of Truro Cathedral, John Penn Milton, M.R.C.S.Eng., L.R.C.P.Lond., to Alice Ellen, eldest daughter of the late John de la Condamine, Esq., formerly of Edinburgh and Penzance, and granddaughter of Henry Oldham, Esq., M.D., F.R.C.P.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.
CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.
CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.
CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.
CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.
CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations,*—M., 4.
EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.
GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.
GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.
HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.
KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.
LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily. 2.
LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations,*—M. Th., 4.30.
LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily. 2.
METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.
MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.
NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.
NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.
NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.
ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.
ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.
ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.
ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.
ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.
ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2
ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.
ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Thrgal, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.
ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2
ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.
ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2, F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.
ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.
SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations*—Gynæcological, M., 2; W., 2.30.
THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu, F., 6.30. *Operations.*—Daily, exc. M., 10.
UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.
WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 9; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.
WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

F.R.C.S. desires to hear of (1) some home where a girl of over 20, who is at times uncontrollable from hysteria, with a marked history of epilepsy, could be admitted, and (2) of a firm or firms who hire out bicycles to medical men at about £5 a year, changing the machine every year.

EXAMINATIONS FOR THE MEDICAL SERVICE, R.N.

W. B. asks what are the textbooks usually read in physics and botany for the medical examination for the Royal Navy?

*** We are informed that in physics, Balfour Stewart's *Lessons in Elementary Physics* (Oxford: Clarendon Press, 7s. 6d.) is the work most usually read. Botany is a subject which we are told is not often taken up. Works recommended are Professor Reynolds Green's *Textbook of Botany*, two volumes, Second Edition (London: J. and A. Churchill, 1897, 7s. 6d.); or the English translation of Strassburger's *Textbook of Botany*, Fourth Edition (London: Swan Sonnenschein and Co., 1897, 9s.) The first-named would probably be the better for the purpose named.

ANSWERS.

M.M.M.—Application might be made to Mr. W. Van Praagh, 11, Fitzroy Square, London, W.

FAIRPLAY.—Much depends upon the extent of the examination required. If a full report is asked for, 10s. 6d. is the fee usually paid for examination in which the policy is from £50 to £100.

G. R. P.—The stamp duty paid on patent medicines, so-called, in the year 1860 was £43,600; in 1892 it had increased to £240,000. We have no later statistics at hand.

M.D.—It is the custom for a medical man starting practice in a town to call upon the medical men living there, or, in the case of a large town, on those who reside in the neighbourhood in which he has settled.

MR. P. S. CHANDRA SAKAR, M.B.—Flint's *Treatise on the Principles and Practice of Medicine* is not the same book as Flint's *Clinical Medicine.* The literature of antitoxin serums is fully represented in recent volumes of the BRITISH MEDICAL JOURNAL.

DR. GEORGE PEACHEY (Wantage) writes in reply to "Boomerang" (BRITISH MEDICAL JOURNAL, August 26th, p. 572): The best work to consult is A Dissertation on the Influence of the Moon, included in the later editions of *A Treatise on Tropical Diseases, etc.*, by Benjamin Moseley, M.D., better known as the leading opponent of vaccination at the beginning of the present century.

IGNORAMUS.—The following works may be mentioned: *Dictionnaire de Médecine, de Chirurgie, de Pharmacie, de l'Art Vétérinaire, et de Sciences qui s'y Rapportent.* Par. E. Littré. Dix-Septième Edition. (Paris: J. B. Baillière et Fils, 1893. 25s.); *A New Dictionary of the English and French Languages.* By E. C. Clifton and A. Grimaux. (Paris: Garnier Brothers. 14s.)

SUBSCRIBER may be advised in the first place to write to the Chief Secretary, Ambulance Department, St. John's Gate, Clerkenwell. The number of books published as guides to lectures on first aid is legion. The following are well known: Shepherd's *First Aid to the Injured* (London: St. John Ambulance Association); *First Aid to the Injured*, by Dr. H. W. Gell (London: Allman and Co. 2s.); *First Aid to the Injured*, by Dr. E. J. Lawless (London: The Scientific Press. 1898. 3s. 6d.); *First Aid to the Injured*, by Dr. F. Esmarch, sixth edition (London: Smith, Elder and Co. 1898. 2s.); also the Lectures by Mr. Andrew Clark, F.R.C.S., published by the Polytechnic, Regent Street, London, W.

A PATIENT OF THE FIRM.

C. T. B.—We are advised that under the circumstances stated a fee of ten guineas a visit would be a fair claim, or forty guineas for the four visits. The attendance at the funeral was "of sentiment," and could not possibly be charged for.

OPEN-AIR TREATMENT OF PHTHISIS.

DR. J. HARLEY GOUGH (Torquay) writes: In reply to "A. L.'s" question as to where he could send a phthisical patient for treatment at an open-air sanatorium for £1 a week, I can thoroughly recommend the nursing home at Torquay. The address is Miss Maddock, Coombehurst, Torquay.

ETHER FOR INHALATION.

E. M.—Ether of specific gravity 0.717 is not applicable for use in Clover's or any other inhaler, as it is an unsafe general anæsthetic. It may, however, be used for local anæsthesia. Ether purificatus, specific gravity not exceeding 0.720, or rectified ether, specific gravity 0.720, can be used in a Clover's inhaler, and, if the rectification is properly carried out, the ether is quite as good as that prepared from pure rectified spirit. The same remark applies to methylated chloroform.

CANVASSING BY AGENTS AND BY CARDS.

WALLSEND PRACTITIONERS AND J. W. H.—We have over and over again pointed out that the custom of touting by paid canvassers and printed cards for private clubs is just as reprehensible as that which the General Medical Council has condemned on the part of medical aid societies; but the Council has not declared such conduct to be "infamous in a professional respect," and the only available means for controlling such offenders is to bring the facts to the notice of the local Ethical Committee or the Council of the British Medical Association, if they are members of that body, or to that of the licensing authority from which their diplomas are derived.

OPERATIVE TREATMENT IN CHRONIC SYNOVITIS.

F.R.C.S. writes, in reply to "M.D." (BRITISH MEDICAL JOURNAL, August 26th): Aspiration of the joint, followed by firm pressure obtained by wool pads and a bandage, and the fitting of a "calliper" Thomas's knee splint, so that the patient can get about, is often a successful measure in such a case. Incision and washing out has been practised, but there is often a tendency to recurrence after this operation, though many cases are reported as cured.

SALINE INJECTIONS IN COLLAPSE.

R. D. S.—The following appeared in the BRITISH MEDICAL JOURNAL of November 28th, 1898, page 1663, in reply to a similar query: We are indebted to Mr. Arbuthnot Lane for the following: Introduce slowly through a cannula tied into a superficial vein, as the basilic, from two to five pints of normal saline solution (1 drachm of common salt to a pint of water) at 100° F., by means of a glass, or Higginson's, syringe, care being taken to avoid the entry of air. The vein so readily exposed by a long incision crossing its course obliquely. It is freed from the surrounding parts, and an opening is made in it sufficiently large to admit the cannula. The vein beyond the cannula is closed by a ligature. The surgeon must be guided by the condition of the patient in determining when he has injected enough fluid.

NOTES, LETTERS, Etc.

THE INTERNATIONAL MEDICAL CONGRESS, PARIS, 1900.

THE *Practitioner* for August contained some pertinent remarks about the forthcoming International Medical Congress which is to be held in Paris The editor says: "On looking at the list of those who have so far promised to take part in the proceedings, one cannot fail to be struck not only by its extreme meagreness, but by the almost total absence of the representatives of general medicine, surgery and obstetrics. The dermatologists appear to be mustering in force, but where are the physicians and where are the surgeons? Mr. Treves is indeed a host in himself, and Mr. Mayo Robson may be trusted to hold his own against all comers in his own special field; but what are these among so many? British physic, though well represented in point of quality, is sadly deficient in quantity. Obstetric medicine is in a still worse condition, having only one champion, though a doughty one. Britannia's honour, in an obstetrical respect (to use the English of our medical parliament), is safe enough in the hands of Dr. Champneys; but are there no other knights of the forceps and speculum to do battle for her in the lists at Ecole de Médecine? It will not be there as at Agincourt, 'the fewer men the greater share of honour.' Therefore, so far from obeying King Harry's behest and not wishing one man more, I should like to see all our country's best in every department of medical science and practice at the Congress. At Moscow there was but a handful of Britishers, *rari nantes in gurgite vasto*, while the Germans were present in big battalions, and their organisation was magnificent. Each chief went to the Congress 'with his tail on,' as they say in the Highlands; in other words, he was attended by a group of obsequious henchmen who played the part of a *claque* whenever he read a paper or made a speech. The whole Teutonic contingent was so well drilled that even the Russians were made to feel like outsiders, and the uncombined molecules of other nationalities could hardly even get near a buffet. This kind of military discipline is altogether repugnant to the British mind. But a little cohesion would not hurt us, and if we wish to make any figure in the gathering of the nations in the 'City of Light,' some organisation of our forces is absolutely necessary." The strictures of our lively contemporary are in many respects well founded, and although August, 1900, may still be in the womb of Time, it is already so well advanced in development that it is incumbent upon those who are willing to contribute to the work of the Congress at least to send in their names and the titles of their contributions to the sectional secretaries in Paris. There can be no doubt that the President and Secretaries of the Committee for Great Britain and Ireland will use their best endeavours to effect coherence if the opportunity be allowed them.

THE LAURIA FUND.

DR. JOHN H. BARRS (6, Wandsworth Bridge Road, S.W.) and Dr. E. B. HARTNELL (1, Rycroft Street, Fulham, S.W.) write: We beg to acknowledge the following further donations to the above fund:

	£	s.	d.
Amount previously acknowledged	13	2	0
Walter Jessop	3	3	0
S. W. Arundell	1	1	0
W. Hayward	2	2	0
W. H. Coke	2	2	0
P. Phelps	0	10	6
J.O.W.	2	2	0
Mr. F. Silles...	1	1	0
Mr. J. Silles...	1	1	0
Dr. Sutton	1	1	0

A CORRECTION.

DR. N. CARPENTER, M.R.C.S. (British Honduras), writes: In the BRITISH MEDICAL JOURNAL of July 22nd appears a short report by me on "An unusually large liver abscess, etc." There is an error in the date, 1898 should be replaced by 1893 wherever 1898 appears.

EDUCATIONAL NUMBER: CORRECTIONS.

MISS E. WINIFRED DICKSON, F.R.C.S.I. (Dublin) writes to say that the Queen's Colleges of Belfast, Cork, and Galway should have been enumerated among the medical schools at which women can study.

Dr. Thomas Carr (Blackpool) complains that in the section relating to English universities Durham is placed last. He maintains that Durham is entitled to rank after Cambridge and before London owing to the earlier date of its charter of incorporation.

Professor E. Waymouth Reid, Dean of the Medical Faculty, University College, Dundee, writes to point out that on p. 559 it was erroneously stated that the winter session of University College, Dundee, will begin on October 19th. The correct date is October 11th. In the list of bodies granting a diploma in public health on p. 557, a cross reference to the information on this head given in p. 527 was accidentally omitted.

A FOURPENNY DOCTOR.

MR. FRANK TAYLOR, M.A., M.B.Cantab. (Lower Sydenham, S.E.) writes: In the BRITISH MEDICAL JOURNAL of August 19th, p. 532, there has turned up again the 4d. doctor. He is of perennial recurrence, though sometimes he is a 6d. doctor. Still the principle is the same, and he is held up to the scorn and horror of his fellows. Personally, I have great sympathy for him, having pointed out repeatedly that the fault is not in him, but in those who force him to such methods. There is, indeed, a good deal to admire in his plucky assertion of his "right to exist," if he could get more than this 4d. or 6d. you may be quite certain that he would not rest content with this paltry sum. It is the so-called provident dispensaries and such-like that do it at this price, and as a general rule throw a carriage-and-pair in, so how is the "poor walking doctor" able to demand more? There is little doubt that his neighbourhood (that he probably paid a good price for the right of), like all working-class neighbourhoods, is envied, simply because of its ready money, by those who live on the fashionable outskirts and who could well afford to leave it and its hardworking medical man alone. No; you will find it perfectly riddled with dispensaries touted for by the parson and all the Sunday school teachers, and rendered still more attractive by having diverted to their use all the available charities of the parish, so that a patient has only to declare on his or her club to be immediately inundated with tickets (coal, tea, bread, and meat). This I boldly assert fixes the price at 4d. We shall never improve till we add to our motto, "Live and let live," and in the glorious evolution the fittest will survive.

ESCAPES OF GAS.

DR. R. R. RENTOUL (Liverpool) writes: Will you please state (1) the different general plans of testing for an escape of gas; (2) the plans for locating the escape?

*** As we did not feel competent to answer these questions with any authority, we communicated with Mr. Fletcher (Warrington) who has been good enough to send the following reply: The only safe method is by the smell, and, with experience, this is the quickest. If a serious leak is suspected where it cannot be smelt, it can be detected by the movement of the small drum over the meter dial, which is marked to register single feet. If all the taps are closed and this drum still moves there is a leakage somewhere, but the finding of this is not always easy, even by the most experienced fitters, and it sometimes means relaying the whole service.

LETTERS, COMMUNICATIONS, ETC., have been received from: **A** Messrs. Ayrton and Saunders, Liverpool. **B** J. W. Batterham, M.B., St. Leonards-on-Sea; J. Booth, M.B., Cork; Sir J. C. Browne, London; Miss A. M. Browne, London; T. A. Buck, M.B., Ryde, I.W. **C** C. T. S.; Mr. P. Carpenter, British Honduras; Dr. T. Barr, Blackpool; Mr. F. R. S. Cozens, Oakham; Dr. E. Cautley London; Dr. J. Cotter, Cork; Dr. F. G. Clemow, London Dr. C. Colombo, Rome. **D** Miss E. W. Dickson, M.D., Dublin. **E** E. F. **F** Mr. T. Fletcher, Warrington; Mr. H. Fox, London; F.R.C.S. **G** Mr. J. H. Gough, Torquay; Mr P. Giles, Letton; G. L. H.; Sir W. T. Gairdner, K.C.B., Glasgow. **H** F. J. Hicks, M.B., Funchal; Mr. R. T. D. Hamilton, Tunbridge Wells; Dr. W. M. Harman, Winchester; H. J. F. B; Mr. A. M. Hawkes, Penally. **I** Dr. G. F. Inglott, Malta; Ignoramus: Messrs. J. G. Ingram and Son, London. **J** Dr. E. Jepson, London; Mr. T. S. James, London. **K** Mr. J. B. Kenny, Killeshandra; Messrs. Keys, Hitch, and Co., London; Dr. S. J. J. Kirby, Fressinfield. **L** Dr. W. Lamb, Birmingham; Dr. A. E. T. Longhurst, London; Mr. R. M. Littler, Southport. **M** M. M. M; Medicus; Mr. A. H. Milne, Liverpool; Dr. A. McGillivray, Dundee; Midlands; M.D.; M.B.; Mr. F. C. Melhado, London. **O** Mr. C. Ogle, London. **P** P. V.; P. V. for Twenty-Five Years; Mr. G. C. Peachey, Wantage. **R** E. W. Reid, M.B., Dundee; Dr. E. Rearley, Ilderton. **S** Mr. P. S. C. Sekar, Triplicane; R. D. Shiels, M.B., Tiverton; Dr. R. B. Selby, Portwilliam. **T** F. Taylor, M.B., London; Mr. F. H. Turner, East Bergholt. **W** Dr. A. S. Wohlmann, Bath. **X** X. Y. Z., etc.

BOOKS, ETC., RECEIVED.

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The Accuracy of Voluntary Movement. By R. S. Woodworth. London: Macmillan and Co. 1899.

Asthma: Recent Developments in its Treatment. By E. Kingscote, M.B., C.M. London: H. J. Glaisher. 1899.

Die mikroskopische Technik und Diagnostik in der gynakologischen Praxis. Von Dr K. Abel. Zweite Auflage. Berlin: August Hirschwald 1899. M 5 60.

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SIXTY-SEVENTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.
Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899

PROCEEDINGS OF SECTIONS.

SECTION OF TROPICAL DISEASES.

George Thin, M.D., President.

A DISCUSSION ON PSILOSIS OR SPRUE: ITS RELATIONS (ETIOLOGICAL AND PATHOLOGICAL) TO OTHER FORMS OF TROPICAL DIARRHŒA AND ITS TREATMENT.

I.—George Thin, M.D.,

President of the Section.

Not a Disease of Temperate Climates.

The disease or diseases which we are to consider are characterised by certain symptoms which are never absent. Irregular and abnormal motions occur in all of them, there being: First, diarrhœa, varying much in severity, frequency, and persistence; secondly, there are always symptoms of disordered digestion—dyspeptic symptoms; and, thirdly, there is progressive emaciation—symptoms of malnutrition.

Looked at more closely, I would invite you to tell us what you know regarding distinct types of disease to which these symptoms are common. As a preliminary it might be worth discussing whether there is any similar disease known to physicians as occurring in this country. This question is worth raising, because two distinguished physicians of long experience and much consulted for abdominal and dyspeptic complaints in this country have told me that they had observed cases in persons who had never been out of England. I have not been convinced by this opinion. I have not been able to find in medical literature dealing with diseases in this country an account of any cases answering to psilosis as we know it. My opinion that the disease is unknown in England is strongly supported by the fact that one of the most eminent consultants we have ever had insisted that a case of psilosis was a case of secondary syphilis, and another, equally eminent and experienced, informed a patient of mine, who afterwards died of psilosis, that the disease from which he was suffering was chronic malaria and treated him with full doses of quinine for three months.

Psilosis Linguæ and Diarrhœa Alba.

Giving our attention more particularly to this tropical disease the members will tell us whether they are able to bear me out in distinguishing at all events two distinct types of psilosis. Those who may have done me the honour of reading my book on the subject will know that I divided these cases into at least two categories; one set of cases of which types are common in the Eastern Archipelago, and a class of cases that are more commonly found in India. In the former, mouth, tongue, and throat symptoms are early prominent, and are even the most pronounced and disagreeable of the symptoms of the disease. In the other, copious watery stools are the chief feature, the mouth and tongue symptoms do not manifest themselves in a decided form until a later stage of the disease, and cases may be met with in which after a duration of a considerable length of time, even years, the tongue and mouth are quite free from specific inflammation, the tongue particularly being still covered with a moist, thin epithelium, and entirely free from localised erythematous and herpetic spots.

In the class to which I have applied the term "psilosis linguæ," discomfort in swallowing, both in the mouth, throat, and gullet is often very great long before the development of the disease has led to much debility or emaciation. In the Indian type of cases, the diarrhœa alba or white flux type, the mouth symptoms are usually synchronous with advanced malnutrition and emaciation. I have seen cases of this diarrhœa alba or white flux from all parts of the East, including Japan, but chiefly patients from India. The cases associated with psilosis linguæ are mostly from the Eastern Archipelago, are not infrequent in Ceylon, and are, proportionately to the other forms, uncommon in most parts of India. These are points on which the members present can give us information.

Chronic Tropical Diarrhœa.

Another form of tropical diarrhœa which is common to most of the Eastern tropical countries of which we have experience cannot well be included in either of these two categories. It is a form of chronic diarrhœa which comes on gradually in elderly persons or in persons of long residence in the East. Its chief characteristic is looseness of the bowels, and, after it has lasted a considerable time, gradual thinning of the epithelial covering and considerable rawness of the tongue occur. It would appear to be due to some degenerative change of the intestinal mucous membrane, although why a degenerative change should show itself more particularly in the intestinal canal is not known. These cases, which well deserve further study, are clinically different from the acute diseases, psilosis linguæ, and the psilosis which exclusively affects the intestinal canal, and which attacks young persons who may be in good health, the first onset commencing, perhaps, after a very short stay in the tropics. Allied to this last group of cases, and perhaps due to a common cause, is the remarkable group in which persons who have been in the East first develop intestinal symptoms long after they have returned to this country. In these cases there are the symptoms common to all the group—diarrhœa, dyspepsia, rawness of the tongue, and emaciation. They are apt to occur in elderly people when the powers begin to fail, although why the mucous membrane of the bowel should be singled out for degenerative change we do not know.

I have seen a sufficient number of these cases to justify my putting them in a separate group. I have recently seen an elderly lady about 65 years of age, who has been home from China for 25 years, who never was subject to diarrhœa or intestinal trouble until within the last few months; but the diarrhœa, dyspepsia, and thinly-covered tongue with erythematous points, and the incapacity to swallow anything hot without great pain, differs in no way from the previous group of cases, in which symptoms of a similar kind developed in the tropics in weak persons after long residence.

Pathology.

As regards the pathology of this disease, I cannot say much without repeating the chapter in my book. Our knowledge must continue to remain very deficient on this subject until we have a record of *post-mortem* changes in persons who have died from other causes while the disease was in its early stages. Before the cases of which we have records came to the dissecting room the whole of the intestinal canal, more particularly the small intestine, had become thin and atrophied. How much of that atrophy is due to a specific cause and how much to a special atrophied condition of the whole body we do not clearly know. What we do know is that, notwithstanding the general atrophy, there is a special connective tissue development, a true sclerosis in the submucosa, and it has been made out that, at all events in some cases, this sclerotic condition is specially characteristic of the ileum. What we are ignorant of is the cause of the chronic irritation that leads to this sclerosis, with its necessary degeneration of the glands and follicles, and why it should specially affect that part of the bowel, and why it should also specially select the œsophagus for special destructive superficial inflammation, as I found it did in one case.

That this cause of irritation may be sufficiently active to produce a real inflammation—a true enteritis—was shown by the intense congestion of the mucous membrane of the ileum and jejunum, particularly of the former, in one of my patients who died from a very acute attack before emaciation had occurred. Any facts that have been observed that can illustrate or throw light on these *post-mortem* conditions will be most welcome. May I take this opportunity of suggesting that, in *post-mortem* examinations in these cases, tissues that are to be of any use must be very carefully hardened, and the

post-mortem examination should be done within a few hours of the death of the patient? Otherwise the *post-mortem* disintegration of the epithelial layer will be too far advanced to render a subsequent examination of much value.

More particularly in connection with the views of Bertrand and Fontan we shall be glad to have information regarding the existence and nature of any ulceration which may have been found *post mortem*. My own view is that these ulcerations, when present, are secondary in their nature, and that the active agent of the disease may cause a great amount of congestion and subsequent atrophy, with little or no ulceration. I purposely pass over the slight ulcerations found in the rectum and large bowel, which are clearly coincident with symptoms that set in a few weeks of death, and which are mere sequelæ of the disease.

Etiology.

The primary cause of this disease is unknown. It is clearly not due to the age of the patient, nor to living in high temperatures. It is associated with residence in certain parts of the world, and is absent in others. That it is of a specific nature is, I consider, made clear by the symptoms of the disease, and, whatever it may be, it finds its best soil for development in the ileum. The mouth symptoms may possibly be reflex in their origin. I have seen herpetic eruptions on the soft palate which simulated so exactly ordinary herpes as to suggest a local nerve inflammation. The effects of this specific poison in the small intestine is to alter its secretion and to allow the food bolus to retain its acidity. Hence the dyspepsia, malnutrition, and acid stools. It generates a poison which produces extreme anæmia, and it destroys the colouring matter of the bile—the hydrobilirubin. Its activity may be greatly increased by the nature of the intestinal contents, often developing freely in farinaceous and animal foods. It may be starved out by limiting the patient's diet, and it appears not to grow if the food consists exclusively of milk.

An exclusive diet of meat juice seems in some cases to lead to its annihilation, possibly due to the fact that a strict meat juice diet, to the extent to which it is practicable, is largely a starvation diet. Milk is not the only nutriment in which it does not thrive. I have previously referred to cases in which strawberries were not only well borne, but were curative in this disease, and possibly other fruits may have similar qualities.

I have recently seen a remarkable case, which deserves to be put on record at greater length than my time at present will allow. The patient was a lady under the care of Dr. Playfair (Bromley), with whom I saw her. Her anæmia, wasting, and debility were extreme, and the prognosis I considered bad. She had had the disease for a period of years. Amongst other treatments, milk treatment appeared to have had a thorough trial, and apparently little new was left to suggest. That little consisted in keeping the room night and day at a temperature of 64°, and in never allowing the patient to be removed from under the bed clothes, on the theory that the skin should be kept constantly warm to diminish congestion of the mucous membrane. On this treatment the diarrhœa ceased, but the quantity of milk taken was too small to render recovery possible. After six weeks of this very limited milk diet, at her own instance she began to take strawberries, steadily increasing the quantity. With an increasing amount of strawberries she was able to take more milk, until she ended in taking a large quantity of milk and several pounds of strawberries a day. She made an excellent recovery, became healthy and strong, and can now eat ordinary food without bad consequences. My theory of this and similar cases is that the mechanical qualities of the strawberries have nothing to do with the cure. From that point of view one would indeed consider the small seeds of the strawberries harmful. My view is that, whatever the cause of the disease may be, it does not live on the strawberry juice, and that a diet of strawberries and milk starved it out. If I have made an exception in mentioning this case—for I have purposely avoided going into the treatment—it is only because of the light I consider it throws on the etiology of the disease.

II.—EDWARD HENDERSON, M.D., F.R.C.S.Edin.,
Shanghai, China.

Classification of Cases.

WHEN I arrived in China, in 1868, no distinction was made between cases of chronic diarrhœa and the cases which we now distinguish as cases of psilosis or sprue; when we used the term "tropical diarrhœa" we simply emphasised our belief that the cases we had to deal with were only met with as the result of residence in a hot climate, and were never developed without this as one, and probably the principal, factor in their production. The cases of sprue in which I have been consulted in Shanghai may be roughly divided into two groups:

Group I.—In one the patient has lived in the East for ten, twenty, or more years, and during the whole of that period has enjoyed good, in many cases exceptionally good, health. He suffers now from diarrhœa, which has gradually developed, and is limited to two or three motions in the early morning; the stools are pale, often copious, occasionally sour-smelling and frothy. Latterly he has been troubled by red patches and white spots, which come and go on his tongue and lips, leaving small superficial ulcers behind. He is losing weight, suffers from dyspepsia, and feels weak and ill. Such a case may go on, with periods of improvement almost amounting to recovery and relapses, for years. In the end the patient, with a few exceptions, succumbs directly or indirectly to the disease.

Group II.—The patients composing this group are comparatively young people, and the disease is developed at a much earlier period of residence—from three to six years. In nearly all of the cases there is a previous history of bowel delicacy, shown by repeated attacks of diarrhœa, occurring for the most part during the hot weather, and insufficiently accounted for by trifling errors in diet, overfatigue, etc. Sooner or later in one of these attacks the stools assume the sprue character, the mouth becomes sore, and the disease may be considered as established. In nearly all of the cases in this group change of climate was early had recourse to, and the patients, with very few exceptions, completely regained health. In both these groups the leading symptoms are the diarrhœa and the sore mouth; a doctor practising in Shanghai would, I think, hesitate before applying the term psilosis or sprue to a case where the two conditions were not associated.

Pathology.

In the pathology of sprue the chief advance made of late years has, I think, been the limitation of the essential lesion to inflammatory and degenerative disease of the mucous membrane lining the alimentary canal. During the life of the patient the lesions of this membrane are seen in the mouth, and the presence elsewhere is inferred from the diarrhœa and dyspepsia from which the patients suffer more or less throughout their illness. That these lesions are due, in the first instance at least, to a specific poison connected with the development of a hitherto undiscovered bacterium, is of course possible.

During the progress of a case of sprue I have on several occasions seen the lesions in the mouth distinctly apparent when the stools had become solid as the result of treatment or otherwise, and it is quite common to see the attention of the patient entirely directed to the condition of the mouth. I have, however, no note of any case, nor any recollection of one, in which the sore mouth has preceded the diarrhœa, or has ever had what I could myself regard as a distinctly independent existence. At the same time, in nearly all the carefully-observed cases of which I have preserved notes, these mouth lesions would seem to have developed so early in the history of the case that they could not fairly have been considered as merely the outcome of a condition of general marasmus due to the diarrhœa. Death in a case of uncomplicated sprue is brought about by a process of gradual starvation. At the last *post-mortem* examination which I made in a case of the kind, the diminution in the size and weight of nearly all the organs and tissues of the body was remarkably shown. The liver was greatly reduced in size, but when cut into had to the naked eye a perfectly healthy appearance. The atrophy of the mucous membrane was apparent throughout the whole alimentary canal. It was impossible to say how much of all this was due to starvation and how much to the original disease. My patient had suffered from sore mouth and diarrhœa for at least eighteen months before his death.

Treatment.

Since I returned to England I have been asked what I think

of the cures said to have been effected in Shanghai in cases of sprue by the use of drugs, the nature and preparation of which has been kept secret by the irregular practitioners who prescribe them.

Some years ago there was only one such remedy at all extensively used in Shanghai, and this gradually acquired such a reputation for the cure of diarrhœa, being also credited with the cure of cases of sprue, that the municipality decided to purchase the secret from its possessor, a Mr. Rein. This medicine is now prepared and sold by all the druggists in Shanghai under the name of Rein's Mixture. Rein's Mixture is an infusion of the rough barks of simaruba and cinnamon; the bark of the native (Chinese) cinnamon being the proper bark to use in its preparation. That it is of distinct service in the treatment of chronic diarrhœa which has resisted the usual remedies I can myself testify. As to its value when given in a case of genuine psilosis I have, I confess, serious doubt, the few trials I have witnessed do not encourage me to think that in Rein's Mixture we have got a specific medicine for the treatment of cases of sprue.

At the present day another irregular practitioner has taken the field in Shanghai, and the cures which have gained for him his reputation are attributed to the use of two drugs, one a liquid purgative medicine, and one a white powder having an opposite effect. Nothing is known positively as to the nature or composition of these drugs, but that they are active and in the ways indicated is certain. That patients subjected to this treatment have recovered, and recovered completely, I cannot doubt; that others have received no benefit and have even lost ground while under treatment is equally certain. How many of the cases treated were cases of genuine sprue I have no means of knowing. Personally I am inclined to attribute recoveries of this kind rather to the dieting and general management of the case than to the use of drugs supposed to have a specific action. If I can trust the statements of the patients who have undergone the treatment, the preliminary purging is carried out as a rule much more energetically by the sprue doctor than the average practitioner. The object is attained partly by the strength of the medicine used and partly by repetition of the doses. In advanced sprue any rough handling would be dangerous, but at a comparatively early stage of the disease thorough clearing of the bowel may be of real service. It is to be noted that the use of purgative medicines in full doses is a point insisted on in every system of treatment by drugs which has yet been brought forward.

III.—James Watson, M.D.

Report of a Case.

A. B., an English lady, went to India in January, 1896. Sometime in that year she suffered from a sharp attack of dysentery, and frequently in other respects her health was far from satisfactory. The hot weather had just set in when distinct symptoms of psilosis manifested themselves. At this time, towards the end of April, she was living at Dehra Dun, a low hill station in the Himalayas. Her first attack of diarrhœa with the characteristic white, frothy, copious, and offensive stools occurred at noon on April 31st, 1897, and the diarrhœa continued, although she restricted herself to light diet of which milk formed the greater portion. The stools, white, frothy, and copious, from the first were not very frequent, occasionally only once in the twenty-four hours. After the diarrhœa had continued for three weeks she removed to a higher hill station in the Himalayas. The diarrhœa was still troublesome; it would however cease sometimes for eight or ten days, but the stools continued to be quite colourless. From the beginning of June, 1897, she had for a period of three months a pure milk diet, that is, milk and nothing else. Under this treatment the diarrhœa ceased, the stools became natural in colour, and the patient, thinking she was cured of her malady, commenced to take a light, varied, and easily digested diet, and she returned to her home at Dehra Dun. Three weeks after this, early in November, the old symptoms—loose, frothy, white stools—suddenly reappeared. She at once restricted her diet to milk and farinaceous food, and she took regularly thrice daily Hewlett's bismuth and pepsine mixture. This state of affairs continued during November, December, and January, 1898. Towards the end of January the diarrhœa became frequent, weakness increased, nervousness and mental depression marked, and she was strongly advised to leave India for England. This she did one week after her marriage.

She arrived in England in the middle of February, 1898. During the voyage of three weeks, it is interesting to note, there was no diarrhœa, digestion was better, and she arrived in England feeling fairly well—in decidedly better health than when she left India.

For two months after her arrival in England she had very little diarrhœa, but the stools continued to be white, relaxed, and copious. Towards the end of April she felt the weather to be bitterly cold, and on May 1st she again had recourse to a strict milk diet; but in spite of this she continued to lose strength until she took to her bed in the end of June.

She came under my care on August 10th, and was then excessively weak, dyspeptic, anæmic, depressed, and nervous about herself. I at once stopped all drugs, and regulated the amount of milk and the times she was to take it. She continued to take from this time 3 to 4 pints of milk daily, divided into doses, which she took every hour and a-half from about 7 A.M. till 10 P.M. The stools, which were white, loose, acid in their reaction to litmus, and frothy, and contained some mucus, soon became nearly solid and of a light golden colour; but every three or four days, without any obvious cause, diarrhœa would supervene. I prescribed, on August 15th, 1 gr. of rhubarb and 2 gr. of bicarbonate of soda, which were taken twice daily, and by the end of the month the stools were generally fairly solid and of a normal appearance as regards colour and consistence.

After a prolonged milk diet of five months and careful nursing, my patient was allowed in September small quantities of other food (beef tea, arrowroot, soft-boiled eggs, white fish, etc.) At the first hint of loose stools milk was again prescribed. She gradually gained strength and good spirits, and increased slightly in weight, so that during the months of October, November, and December she was able to be up and to take ordinary diet, without inducing diarrhœa, and in a quiet way she once more enjoyed life. She was now, therefore, apparently cured of her ailment, though far from strong. She went to San Remo, but the fatigue of the journey induced a relapse soon after her arrival there. Hitherto the tongue had been free from pain; it now became inflamed, raw, and tender, and was the cause of considerable discomfort, sometimes of distress, to her. The strict milk diet was again enforced, and continued till May of this year. During most of the time my patient was in the South of Europe she was confined to bed. On her return to England in the middle of May last she was able to take a moderate amount of ordinary food and some gentle exercise. During the last two months she has gained a very considerable amount of strength and some increase of weight. If, as she sometimes, but rarely, has an attack of diarrhœa, a dose of Gregory powder and milk diet for forty-eight hours puts her bowels in a comfortable and satisfactory condition.

Treatment.

In cases of psilosis I have frequently tried what various drugs will do in their treatment. I regret to say they generally do no good; I am inclined to think they very frequently do harm. I have found, however, rhubarb and soda combined, occasionally small doses of castor oil, and now and then a few grains of Dover's powder, useful. But most cases are best treated without drugs. Prolonged rest in bed and careful dieting are likely to be successful in securing recovery, if these means are used sufficiently early, in the treatment of this disease. I am sure there is no diet more salutary in cases of psilosis than pure milk (boiled or not as the patient likes); and it is wonderful how many patients can be induced to take it continuously for months at a stretch. I am inclined to think that if patients suffering from psilosis are carefully protected by sufficient clothing from chills, they may be as successfully treated in many places in England as in the South of Europe. But as prolonged rest in bed is quite as essential as milk diet, it is necessary that the bedrooms, besides being comfortably warm, should be large and airy and have a southern or western aspect.

IV.—Captain W. J. Buchanan, M.B., I.M.S.

Sprue in Natives of India.

It seems to me that it is too generally assumed in textbooks on tropical disease that sprue is mainly a disease of Euro-

peans residing in tropical countries. It seems to me, however, that the disease is very common among natives of Bengal, and in them often runs a very rapid course. I beg, therefore, to put forward the following statements:

1. That primary or protopathic sprue is common among natives of India.

2. That secondary sprue following on (*a*) dysentery, (*b*) acute enterocolitis or enteritis, is common.

3. That incomplete or arrested sprue is probably very common.

4. That the condition known as "famine diarrhœa" is essentially the same in its symptoms and ultimate results as sprue.

5. That in many cases of chronic relapsing dysentery a condition strongly resembling fully-developed psilosis is met with, and that characteristic frothy pultaceous diarrhœa alternates with the dysentery.

Statements 1 and 3 may be taken together. It seems to me that many cases of "chronic diarrhœa" in India are in reality sprue. The history of a "morning diarrhœa" is seldom to be obtained, however. The cases usually begin by complaints of flatulent dyspepsia; this is followed sooner or later by diarrhœa with pale yellow, copious, frothy, fermenting stools; then the diarrhœa may cease for a time but soon recurs; the tongue becomes vesicular then red and raw; the buccal mucous membrane becomes raw and eroded; very frequently, and often before the psilotic symptoms on the tongue, a small ulcerated patch will be found between the last two molar teeth (upper and lower jaw) on one or both sides. This is well known in India, and is called "Crombie's molar ulcer," having been described by Colonel A. Crombie, I.M.S., very accurately some dozen years ago.

Secondary sprue, following an attack of dysentery or acute enteritis, is certainly not uncommon among natives in Bengal. The acute attack passes away but a chronic diarrhœa remains. In the post-dysenteric form the chronic diarrhœa is at first mainly due to unhealed-up ulceration of the colon left by the previous dysentery. This keeps up increased peristalsis and leads ultimately to atrophy of the glandular functions of the intestines, as is illustrated in the following case:

Patient had an attack of acute dysentery in March, 1898, remaining in hospital fourteen days. After a few weeks he came back complaining of dyspeptic flatulence, soon ensued diarrhœa with pale bileless frothy pultaceous stools, then appeared the red raw tongue and inflamed buccal membrane, the molar ulcers. This condition lasted for about six months. He died in October and *post mortem* was found complete atrophy of the glandular structures of the small intestine, and chronic ulceration for about two feet at the sigmoid flexure.

Famine Diarrhœa.

Anyone who has read Dr. D. D. Cunningham's description of "famine diarrhœa" in the 1887 report of the Sanitary Commissioner to the Government of India, will recognise the atrophic condition of the intestines therein described as very similar to a case of fully-developed sprue.[1] Again, anyone who has had opportunity (as among prisoners) of watching in its whole course a case of chronic relapsing dysentery will recognise in many cases a condition very strongly resembling sprue.[2] In relapsing dysentery there are intervals in which the dysenteric symptoms are quiescent, when only a chronic diarrhœa remains. Many such cases soon develop into a condition of sprue, as seen in the red-raw tongue and mouth, the peculiar diarrhœa, the anæmia, the dyspepsia, the pearly-white conjunctivæ, the wasting, and great physical and mental debility. The dysenteric symptoms may or may not return, but the patient may linger on for weeks or months, no better and no worse, till either "terminal" dysentery supervenes to carry him off, or he succumbs to a sudden attack of œdema of the lungs or of pneumonia, his body having been reduced to the last degree of emaciation from a physiological starvation, owing to the almost total atrophy of the glands of the digestive tract.

Treatment.

I believe that many cases, especially among carefully watched prisoners, are caught in time and cured. For the developed cases the traditional treatment in Bengal gaols has been "milk, only milk." This is necessary for natives who won't usually touch meat. For Europeans I prefer the all-meat juice treatment recently advocated by Mr. J. Cantlie in the *Practitioner*. For natives, the milk may also be given alkaline (by addition of soda bicarb., potass. bicarb., and common salt, each 6 gr. per pint of milk), or with lime water as used for children. For the preliminary flatulent dyspepsia, I know nothing so good as papain (Finkler), or the fresh papaya fruit may be used. But in all cases patience—infinite patience—is necessary.

[1] See Manson's article on Sprue in Allbutt's *System*.
[2] See Dr. Thin's article on Psilosis in Quain's *Dictionary*.

V.—James Cantlie, F.R.C.S.

Etiology.

In a recent number of the *Practitioner* I ventured to suggest that one possible intestinal irritant in sprue is the acrid vegetable oils used by Chinese (and other native) cooks in the preparation of food. Although these oils (rape, cocoanut, etc.) are supposed to be used only in the preparation of their own food, they often serve their European employers with food cooked in vegetable oils instead of the more expensive butter or lard. The acridity of the products of these oils may be gauged by the pungency of their odour whilst exposed to heat in the frying pan, and their prolonged use is well calculated to set up an irritation of the mucous membrane of the alimentary canal which may become chronic. It may be that the food so prepared is the direct cause of the intestinal lesions met with in sprue, or their inhibition may allow of the development of an intestinal bacterium which generates the disease.

Treatment.

I have for several years now discarded milk. In fact, be the cause of intestinal flux what it may, it is my practice to withhold milk from the dietary. Milk in sprue relieves the symptoms, but does not cure the disease, and its prolonged use is calculated to continue the disease indefinitely. At whatever stage patients suffering from sprue come under my care I immediately put them on a meat diet. If the patient is very ill, confined to bed on account of weakness and exhaustion, I have the patient fed every fifteen or thirty minutes with raw meat juice, scraped beef, freshly made beef essence, raw meat sandwiches (wafers), and some plain jelly. If not so markedly weak, or as the weakness subsides, the intervals of feeding are longer, the quantity greater at a time, and as soon as possible finely-minced beef, passed twice through the mincing machine and rapidly "heated" over a bright fire, is substituted. In time the beef so prepared may be given thrice daily in quantities of 5 oz. at a time. Between the meals and during the night calf's-foot jelly or plain jelly is allowed the patient *ad libitum*. As a drink hot water or rice tea—boiling water poured over roasted rice—or toast-water is given. As soon as possible a cut off a joint, beef or mutton, steamed chicken or pigeon, game of any sort, and easily-digested fish, are to be added to the diet, with rice boiled and steamed until dry. The white of an egg goes well with the minced beef, and the whole egg may be eaten if digestion improves. The first vegetables to be tried are well-cooked celery, seakale, or spinach. Baked bread—that is, thinly-cut stale bread baked in the oven until dry and crisp—is to be given as soon as expedient. In this way the patient is gradually brought back to a mixed diet. The effect of this treatment is to alter the consistence and appearance of the stool. Whilst taking milk the stool becomes solid, but it is pale and neither smells nor looks like fæces—in fact, it is scarcely fæcal at all, being mostly a cheesy mass of partly-digested milk curd. Milk is not used as a food for adults during health owing to its indigestibility, and how can it be good for one when the liver or intestine is diseased or when their functional activity is in abeyance, as in sprue? A meat diet immediately brings down a dark coloured bilious motion; the digestive organs generally are brought into play and their functional activity re-established. The liver more especially is called upon, with the result that its dimensions increase rapidly, its atrophied condition disappears, and in place a liver of normal size and function results. As accessories to the meat treatment of sprue I recommend a cold wet pack—warm at first, if the patient is weak—to the abdomen for two hours every morning and evening; rest in bed for a few days, or until vegetables come to be added to the diet, as on meat alone the patient becomes muscularly very weak and unable to be up and about.

VI.—Captain G. Lamb, I.M.S.

Removal of Lime from Milk.

Captain Lamb said the digestibility of milk, as far as the prevention of the formation of milk curd was concerned, was aided by removing the lime from milk by adding citrate of soda in the proportion of 1 in 400 as recommended by Professor Wright.

VII.—Patrick Manson, M.D., LL.D.

Etiology.

Dr. Manson said that sprue should be regarded not as one disease, but as a variety of diseases with a series of symptoms in common. It was in this respect with sprue as with dysentery or with eczema. They were not single diseases, but rather groups of symptoms common to a variety of diseases. An element in the etiology was the special liability of organs functionally very active to subsequent physiological depression or exhaustion, and their consequent liability to successful parasitic invasion. Sprue as regarded the tropics and subtropics should be regarded as pandemic. The earliest description of the disease was that by Hillary, who wrote of it as it occurred in Barbadoes and the West Indies. He had seen cases of the disease from India. Forms of the disease in which a limited portion of the alimentary canal was alone affected did occur. Dr. Manson related a case in which mouth and stomach were alone affected, which recovered temporarily, and later on developed the intestinal form.

Treatment.

There was no exclusive treatment of the disease, and there would not be until the etiology was known. The principles of treatment, however, were the same for all types—physiological rest, rest in bed, warmth, simple diet. A lesson might be taken from the Scotch farmer, who finds that, by ignoring the recognised principles of hygiene, and keeping his cattle in close, warm, badly-ventilated stables—he can fatten them on a smaller quantity of food, and therefore more profitably than when the cattle are housed in well-ventilated buildings. The use of fruit, of apples, bananas, and of strawberries was often of great value. Milk was best to begin with, but it must not be too slavishly adhered to.

VIII.—L. W. Sambon, M.D.

Dr. Sambon said he did not think that the differences observed in the location and extension of the peculiar erosions of sprue along the digestive tract justified the division of the disease into two separate varieties, as suggested by Dr. Thin. He attached much importance to the geographical distribution of sprue, which rendered it possible to separate this illness distinctly from other intestinal disease, such as dysentery and hill diarrhœa, with which it had been confounded. As to the cases in which the disease manifested itself for the first time in Europe, but always after residence in China, Ceylon, or Java, Dr. Sambon thought an analogy might be found in blackwater fever, enteric fever, and other diseases. The specific agents of those diseases probably became parasitic at an early period, but did not manifest themselves in a typical attack until favourable conditions of low health or metabiosis supervened.

IX.—Major G. M. Giles, I.M.S.

The Hill Diarrhœa of Northern India.

Major Giles remarked that all the cases of true sprue seemed to be described by medical men who gathered their experience in China. His field of observation had been chiefly in Northern India and in Natal, and he could not say that in either country he had ever met with cases of the kind described from China, that is, with early mouth symptoms. Hill diarrhœa, which, held by some to be an analogous disease, was common in Northern India, and he was convinced that a case of the nature described by Dr. Watson would be considered one of hill diarrhœa. If cases of this nature were obstinate they were sent home, and it might be that they did not remain long enough in India to develop mouth symptoms. Hill diarrhœa appeared to be mainly due to suppression of hepatic functions brought about by chills; and, as a general rule, meat diet in any form was harmful, owing, no doubt, to the extra work thrown on the liver by the amount of urea contained in meat. But was this disease sprue? Major Giles stated that his chief object in joining the discussion was to elicit a statement from medical men of Indian experience if they had ever met with a case in India of the exact nature described by observers in China.

X.—Sarat K. Mullick, M.B., C.M.Edin.

Dr. Mullick gave his experience of cases of sprue which he had met with in this country. He had not found any drug which could be considered a specific. General intestinal antisepsis was the only prophylaxis of any use. He had found milk diet of great benefit. As the case improved koumiss milk in concentrated form was well borne. He had no experience of the "strawberry treatment." In the next case he would try this most pleasant specific, and, he had no doubt, with the entire concurrence and approval of the patient.

XI.—Dr. Filippo Rho,

Rome.

Dr. Rho observed that Fontan and other observers stated that they always found small, almost microscopical ulcerations in the last portion of the small intestine and the whole length of the colon. For these reasons they believed that sprue (which they term *diarrhée chronique de Cochinchine*) was only a residuum of dysentery, more especially as they believed that traces of blood were always to be found in the stools of patients at the commencement of the disease. The lesions of sprue seemed more like those found in another disease localised in the stomach only, namely, Reichman's disease, which was characterised by dilatation of the stomach, sclerosis of its walls, and great increase of secretion of a very fluid mucus (gastro-succorrhœa) which might be compared to the diarrhœa met with in psilosis where the disease was localised in the intestine. Dr. Rho added that he did no mean to imply that sprue and gastro-succorrhœa were identical diseases. He desired merely to call attention to the anatomical analogy.

XII.—Inspector-General Turnbull, R.N. (Retired.)

Dr. Turnbull remarked that he had never met with cases of sprue on board ships of Her Majesty's navy, but he had seen several cases in naval hospitals in England. He had had experience of the meat treatment recommended by Mr. Cantlie and could bear testimony to its efficacy. The treatment by santonin recommended by Dr. Begg, of Hankow, China, did not seem to find advocates in other parts of China, although many medical practitioners had tried it.

XIII.—Kenneth Macleod, M.D.,

Netley.

Professor Macleod said that he had not met with cases in Calcutta corresponding in all particulars with sprue as described by physicians in China. He had often seen cases of hill diarrhœa on their way through Calcutta for England, but he had not observed the characteristic mouth symptoms of sprue in them. It would seem, however, that even in Hong Kong cases of hill diarrhœa existed, for in the *Indian Medical Gazette* some time ago he remembered reference being made to cases of the kind in Hong Kong by Mr. J. Cantlie. It would therefore appear that the two diseases were distinct in type.

Reply.

The President, in reply, remarked that there was no evidence that the liver was diseased in these cases, or that the shrinking depended on anything more than the persistent diarrhœa and general wasting. The white stools were proved by chemical analysis not to consist of undigested milk. Undigested casein had quite a distinctive and different appearance. There was a stage in treatment when milk was no longer required, and when meat was borne well and caused immediate improvement, but that was when the specific diseased condition no longer existed, and when only the sequelæ remained. In the earlier stages, and when the congested condition was active, milk in the great majority of cases answered best, and should, he believed, be always tried in the first instance. After a time—the right time being only found by experiment—meat should be tried. He had tried

santonin carefully in two cases without result, and other patients who had consulted him had tried it before he saw them.

THE PART PLAYED BY INSECTS, ARACHNIDS, AND MYRIAPODS IN THE PROPAGATION OF INFECTIVE DISEASES OF MAN AND ANIMALS.*

By GEORGE H. F. NUTTALL, M.D., Ph.D.,
Demonstrator of Bacteriology in the University of Cambridge.

THE facts which have been established by the brilliant researches of Ross, Grassi, Bignami, and Bastianelli with regard to the *rôle* of various species of mosquitos in the propagation of malaria have at last aroused more general attention to the part which insects may play in the propagation of disease, and it is probable that the new impetus given by these investigations will lead to fruitful researches in other directions.

When we look at the work which has been done on insects as carriers of bacterial agents of disease, we are struck by its relatively small amount, whereas an unlimited amount of experimental work has been devoted to the study of the behaviour of bacteria under various physical and chemical conditions, in air, water, soil, food, etc. It is certain that insects may under certain conditions play a most important part—both active and passive—in the propagation of bacterial diseases.

THE PART OF INSECTS IN THE SPREAD OF BACTERIAL DISEASES.

1. *Passive.*

Insects may play a passive part as carriers of pathogenic organisms. *Musca domestica* and allied species are chiefly to blame in this respect. Such flies are incapable of "biting," but may, from the nature of the food which they seek, carry pathogenetic bacteria about on their bodies or within their alimentary tract, and deposit them on lesions of the mucous membranes or skin, or on food.

Anthrax.—Raimbert (1869) and Davaine (1870), and many others since have attributed such a part to flies in the propagation of anthrax. Celli (1888) reported experiments which showed that virulent anthrax bacilli were contained in the fæces of flies which had been fed with material containing these organisms. Proust (1894), as also Heim (1894), showed that certain beetles and their larvæ which are found on dried skins might serve to scatter the spores of anthrax. They found anthrax spores on the skins which were derived from animals dead of anthrax, as also in and on the insects named. The fæces of these insects, light and powdery, are scattered by the slightest current of air.

Plague.—The presence of numerous flies during plague epidemics has been recorded in some of the older chronicles. Yersin (1894), working in Hong Kong, noticed many dead flies lying about his laboratory where animals which had died of plague were examined. He inoculated an animal with the contents of one fly, and noted that it died of plague. The fly was seen to contain bacilli morphologically identical with those of plague. He came to the conclusion that flies might serve as carriers of the germs, and play a *rôle* in the propagation of the disease. He, however, went too far when he concluded from the examination of this one dead fly that all the others had died of plague, as the insects might very well have died from coming in contact with disinfectant solutions. In 1897 I made a number of experiments with flies which were fed with the organs of animals dead of plague. It was found that such flies contained virulent plague bacilli in their fæces for 48 hours and longer after they had received plague organs and then sterile food to eat. In one experiment flies were kept at a temperature of 12° to 14° C., and it was found that they were all alive at the end of 8 days. In two other experiments, at 14° C., all the flies fed on plague organs were dead by the seventh or eighth day. At temperatures of 23 to 28° C. the flies infected nearly all died within 3 days. Though it is evident that flies die off more rapidly at high temperatures, these experiments showed that they might live a considerable time whilst carrying plague bacilli in a virulent state. The practical conclusions to which these experiments lead are too self-evident to be mentioned here. About the same time Hankin (1897), in India, found that the fæces of certain ants (*Monomorium vastator*) contained virulent bacilli after they had been fed on rats dead of plague. He expressed the belief that such ants might serve to spread the plague by gaining access to the bath-rooms in search of water and defæcating there.

Cholera.—Nicholas (1873) relates observations which he made in 1849 at Malta on the warship *Superb*, which led him even at that time to conclude that flies might play a very important *rôle* in the propagation of cholera. Maddox (1885) observed the cholera spirilla microscopically in the dejections of flies (*Musca vomitoria*) which he had fed with cultures of that organism. Tizzoni and Cattani (1886) isolated cholera germs from three flies caught in the cholera wards at Bologna. Sawtschenko (1892) fed flies with cultures, and found the spirilla in the fæces after two hours. Simonds (1892) found spirilla in a fly caught in the *post-mortem* room at Hamburg. He made a few experiments with flies which had been in contact with cholera intestines. After they had been removed the flies were rolled in gelatine tubes after intervals of four minutes to one hour and a half had elapsed. All cultures showed colonies of cholera germs. Macrae (1894), working in conjunction with Haffkine and Simpson in India, observed how flies carried cholera germs to sterilised milk, which was purposely exposed in various places in the prison where cholera prevailed. Flies were very numerous in the prison. Buchanan (1897) describes the occurrence of cholera in a prison at Burdwan at a time when flies were numerous. There had been no cholera in the prison until after a strong wind had blown over numerous flies from the direction of some huts outside where cholera prevailed. Only those prisoners who received their food at the corner of the prison nearest to the huts developed cholera. The evidence here presented seems convincing enough.

Typhoid Fever.—Celli (1888) reported experiments by Alessi in which that observer had isolated virulent typhoid bacilli from the excreta of flies which had been fed with cultures of that organism. Further evidence is wanting, but it seems almost certain that flies may infect themselves by feeding on typhoid excreta, and then transport the germs of the disease to food which is left exposed.

Other Diseases.—Similarly flies may act as passive carriers of infective agents in framboesia, transferring the specific agent from diseased to healthy persons, and depositing them on cutaneous lesions. An important part has long been attributed to flies in Egyptian ophthalmia, and it seems certain that *Hippelates pusio* disseminates the disease germs, producing "Florida sore eye" (Schwarz, 1895). Dewèvre (1892) reports experiments which show that pediculi may serve as carriers and propagators of impetigo.

2. *Active.*

An active part may be played by blood-sucking flies in the propagation of bacterial diseases. Experimental evidence is wanting, though clinical writers report a certain number of cases of anthrax, septicæmia, pyæmia, and erysipelas as arising from the bites of flies. In the case of anthrax subjective sensations very frequently lead patients to declare that they have been bitten by an insect, whereas this is not the case. In many cases infection may result from an infected fly being crushed by the person bitten. An active part has recently been attributed by clinical writers to blood-sucking insects in plague. Bugs and fleas were supposed to be the active agents here. Experiments made by the writer on animals with plague, anthrax, mouse septicæmia, and chicken cholera all gave negative results. In a large number of experiments made by allowing these insects to bite animals dying of the diseases named, and then immediately afterwards transferring them to healthy animals, not a single case of

* This subject will be found exhaustively treated in my publications: Die Rolle der Insekten, Arachniden (Ixodes) und Myriapoden als Träger bei der Verbreitung von durch Bakterien und thierische Parasiten verursachten Krankheiten des Menschen und der Thiere, *Hygienische Rundschau*, Berlin, 1899, vol. ix, 72 pages, with bibliography. Die Mosquito-Malaria Theorie, *Centralblatt für Bakteriologie*, Abth. I, vol. xxv, 1899, 40 pages and bibliography. Neuere Forschungen über die Rolle der Mosquitos bei der Verbreitung der Malaria, *Ibid.*, vol. xxv and xxvi, 20 pages and bibliography. See also the forthcoming volume of the *Johns Hopkins Hospital Reports*, Baltimore, 1899. Reviews of new work in connection with the *rôle* played by mosquitos in the propagation of malaria will appear from time to time in the *Centralblatt für Bakteriologie*.

Some Animal Parasites and their Hosts.

Parasite.	Definitive Hosts.	Intermediary Hosts.	Remarks and Authority.
Dypilidium caninum (L.)	Dog, cat, man (rare)	Larva of parasite in dog-louse (Trichodectes canis) dog-flea (Pulex serraticeps P. Gervais), and Pulex irritans. Only in fully developed insects	Melnikoff, 1869; Leuckart, Grassi and Rovelli, 1888-9; Sonsino, 1888. Successful infection experiments.
Drepanidotœnia infundibuliformis (Goeze, 1782); Ralliet, 1893	Gallus domesticus. Coturnix coturnix, Anas boschas. Tame duck	Cysticercus claimed to be in musca domestica	Grassi and Rovelli, 1888 and 1892. No infection experiments.
Tœnia serpentulus (Schrank)	Various birds	Geotrupes silvaticus (a dung beetle claimed to contain cysticercus)	Von Linstow, 1893. No infection experiments.
Hymenolepis pistillum (Duj.)	Sorex araneus.	Glomeris (a myriapod contains cysticercus)	Villot, 1877. Successful infection experiments.
Hymenolepis diminuta (Rud.)	Mus decumanus, M. rattus, M. musculus, M. Alexandrinus. Man (rare, only 5 cases known)	Various insects :—Lepidoptera (usually Asopia farinalis, the parasites found both in caterpillar and butterfly). Orthoptera (Annisolabis annulipes and two adult coleoptera (Akis spinosa, Scaurus striatus)	Grassi and Rovelli, 1889. Successful infection experiments with feeding Annisolabis to rats and man.
Hymenolepis microstoma (Duj.)	M. rattus, M. musculus	Tenebrio molitor (Mealworm)	Grassi and Rovelli 1889, etc. Successful infection experiments.
Hymenolepis unicinata (St.)	Crocidura aranea	Glomeris limbatus (a myriapod)	Blanchard, 1891.
Distomum ascidia, van Beneden, 1873	Bats, Vesperugo pipistrellis, V. Nathusii, etc.	Cercaria develop in molluscs (Lymnaeus stagnalis), bore there way out and penetrate into aquatic larvæ of various insects remaining in them when they develop into flies	Von Siebold, 1844; Von Linstow, 1887.
Distomum endolobum (Duj.)	Frogs	Cercaria bore themselves into a number of aquatic larvæ of insects	Von Linstow, 1887-1897. Successful infection experiment on Rana temporaria
Gordius tolosanus (Duj., 1842)	Beetles (16 different species) harbour the second or large larval form of the parasite, the adult form of which is not parasitic. Fish ? (Occasional) pseudo-parasite of man)	Aquatic larvæ of numerous insects	Meissner, 1855; Villot, 1874; Von Listow, 1893
Gigantorhynchus gigas (Goeze)	Pig, boar, pecari	Melolontha vulgaris (May beetle) and its larvæ. Cetonia aurata, Orictes nasicornis, in Europe. Lachnosterna arcuata in N. America	Schneider, 1871; Kaiser, 1887; Stiles, 1891.
Gigantorhynchus moniliformis (Bremser)	Cricetus vulgaris (hamster), Arvicola arvalis. man	Blaps mucronata Lat. (a common beetle contains encapsuled echinorhynchus)	Grassi and Calandruccio, 1888. Successful infection experiments on white rat and man. (Calandruccio infected himself.)
Filaria rytipleuritis (Delongchamps, 1824)	Rats	Periplanata orientalis	Baleb, 1878. Successful infection experiments.
Spiroptera sanguinolenta (Rud. 1819)	Dog, wolf, fox (?)	Periplaneta orientalis	Grassi, 1888. Successful infection of dogs with cockroaches.
Spiroptera obtusa	Mouse	Tenebrio molitor	Leuckart.
Filaria Bancrofti (Cobbold, 1877)	Man	Mosquito. Spec. ? (Manson), development observed by Sonsino, 1884, in Culex pipiens	Manson, 1887; Lewis, 1878; Sonsino, 1883. No infection experiments.
Filaria recondita (Grassi, 1890)	Dog	Pulex serraticeps, Pulex irritans. Development also observed in a tick Rhipicephalus siculus (Koch)	Grassi and Calandruccio, 1888, 1890. Infection experiments negative.
Pyrosoma bigeminum (Southern or Texas Cattle Fever)	Ixodes, or Boophilus bovis. The eggs of infected ticks give rise to young ticks capable of communicating Texas fever	Cattle	Theobald Smith and F. L. Kilborne, 1893. Successful infection of cattle by means of young ticks. Development of parasites in ticks not observed. On account of the analogy between Texas fever and malaria parasites, I have chosen provisionally to consider the tick the definitive host.
Proteosoma	Ross's "grey mosquitos" resembling Culex pipiens	Crows, larks, sparrows	Ross (Calcutta), 1898. Describes life-cycle of parasite in mosquito. Successful infection through infected mosquitoes (July 7th, 1898), confirmed by Daniels, 1899.
Prescentic parasites of æstivo — autumnal fever	Ross's "dappled-winged mosquitos" at Secunderabad :	Man	Ross, 1898, observed first developmental stages. Grassi, Bignami, and Bastianelli observe complete development and carry out successful infection experiments on man.
	A. claviger, Nov. 28th, 1898	In Italy.	
	A. pictus or superpictus		
	A. bifurcatus		
	A. nigripes		
	A. pseudopictus, June 18th, 1899		
Quartan parasites	Anopheles claviger	Man	Grassi, Bignami and Bastianelli, February 5th, 1899.
Tertian parasites.	Anopheles claviger	Man	Grassi, Bignami and Bastianelli, April 19th, 1899. Successful infection experiment.
	Anopheles bifurcatus		

infection occurred. Though the dejecta of bugs contained virulent bacilli after twenty-four hours, they did not do so later. In fact it was shown that both fleas and bugs digest various pathogenic bacteria which they have taken up with the blood of diseased animals. Simond (1898) goes so far in his elaborate theorising as to conclude that plague bacilli may require a heightened virulence in the bodies of such insects. He attributes a very important share to these insects in the propagation of plague, but gives no evidence to prove his assertions. The entirely negative results of my experiments would weigh more than gratuitous assumptions. That a bug or flea filled with the blood of a patient containing plague bacilli may serve as a passive carrier of the germs may be safely concluded from my experiments with these and other germs which were seen to remain alive and virulent in the bodies of these insects for twenty-four hours or longer when they were kept at low temperatures. If such an insect were crushed and the skin scratched by nails soiled with the blood it contained, infection might readily occur. In warm weather the insects are physiologically more active, and consequently digest the micro-organisms more rapidly. It has been asserted that such insects as well as biting flies are capable of propagating recurrent fever, the "bouton de Biskra," frambœsia, leprosy, tuberculosis, and yellow fever, etc., but decidedly more

evidence is wanting before we can come to any definite conclusions in this respect. In the case of the three last-named diseases the evidence given may well be termed frivolous.

THE PART OF INSECTS, ARACHNIDS AND MYRIAPODS IN THE SPREAD OF DISEASE DUE TO ANIMAL PARASITES.

1. Insects, etc., whilst serving as Intermediary Hosts, may play:

(*a*) A passive part, when they are devoured by a host of the parasite they contain (see table on p. 643).

(*b*) An active part, when, as in the case of the tick in Texas fever, and various mosquitos in malarious affections of man and animals, they inoculate the parasite into a host by means of their probosces.

(*c*) An intermediary position must be given to mosquitos in connection with *Filaria Bancrofti* and *Filaria recondita*, as they infect themselves by sucking the blood of the definitive host.

2. Insects, etc., without serving as Intermediary Hosts, may play an Active or Passive part.

(*a*) A passive part when they transport the eggs of animal parasites and deposit them in food, etc. Grassi (1883) made experiments on flies showing that they might transport the eggs of *Tænia solium*, *Trichocephalus*, etc.; and Stiles (1889-1890) informed me that he saw the eggs of *Ascaris lumbricoides* undergo developmental changes in flies raised from maggots which had been fed with the eggs of the parasites during warm weather. Provided that flies take up the eggs in a sufficiently developed condition, they might readily disseminate the parasite by dropping their excreta on food, or falling bodily into it.

(*b*) An active part by carrying the diseased agent from one animal to another and inoculating the parasite. Tsetse-fly disease (Bruce).

In the table (p. 643) will be found a brief summary of our present knowledge of the part played by insects, myriapods, and ticks in the spread of diseases due to various animal parasites.

A CASE OF BILHARZIA HÆMATOBIA.

By C. P. CHILDE, B.A., F.R.C.S.

MY patient is a white girl, aged 16, who has lived until two years ago in Natal. Her symptoms, which consist of intermittent hæmaturia, with some irritability of the bladder, the blood being passed at the end of micturition, have been present for four years, and are invariably increased by exercise.

I may mention in passing with regard to diagnosis that the symptoms, when confined as in the present case to the bladder, are very similar to those of villous or polypoid tumour of the bladder; the bleeding is intermittent, and comes at the end of micturition, as in tumour; and in fact, after hearing my patient's history, and not having in my mind bilharzia, I came to the conclusion that she very probably had some villous growth in the bladder; a microscopical examination of the particles floating in the urine of course at once cleared up the diagnosis.

On going into the history of the case I found that she had been accustomed to bathe pretty frequently in a fresh-water pool at a farm in Natal. The sex and habits of this patient are important points as bearing on the theory held by many as to the mode of infection of the human body. Brock, who has seen many hundreds of cases in South Africa, never saw a female affected. With regard to her habit of bathing in a fresh-water pool, many competent authorities believe that infection occurs by the embryos penetrating the skin, urethra, or anus during bathing, and this is supposed to account for the absence of the disease in infants and very young children, and its great scarcity among females, who seldom bathe in rivers or pools in South Africa, while the opposite sex is frequently in the water. My patient is a female, and moreover was accustomed to bathe in a fresh-water pool, facts which bear suggestively on the above-mentioned theory of the mode of infection. With regard to the treatment of this affection, I have not been able to find any drug recommended with confidence.

ON FILARIAL PERIODICITY.

By PATRICK MANSON, M.D., LL.D.,
Physician to the Seamen's Hospital Society.

FILARIA BANCROFTI discharges its young (Filaria nocturna, the Filaria sanguinis hominis of Lewis) into the lymph stream. In the lymph stream the embryo parasites are carried to the general circulation, where they exhibit the peculiar phenomenon known as "filarial periodicity"—that is, they appear in countless swarms in the cutaneous circulation during the night, and disappear from it during the day.

This singular phenomenon suggests certain questions:

I. What is the object of it?

II. Is it constant?

III. What becomes of the young filariæ during the day? (*a*) Do they die after a brief life of a few hours, and is there, therefore, a fresh swarm launched into the circulation every evening? or (*b*) do they live for many days, retiring every morning to some organ or organs, and remaining there during their daily absences from the peripheral circulation?

IV. If the latter be the case, how is it brought about?

I.

The answer to the first question, What is the object of filarial periodicity? has already been supplied. The mosquito has been shown to be an efficient intermediate host for the filaria. Bancroft in Australia has recently confirmed the original observations made in China on this point. The particular species of mosquito concerned are nocturnal in their habits. It is therefore reasonable to conclude that the nocturnal appearance of the filaria at the surface of the body is an adaptation of the habits of the parasite to those of the mosquito, its intermediate host.

II.

Is filarial periodicity constant? Yes; unless during fever, and unless the usual habits as regard the times of being awake and of sleep be inverted. In the former case periodicity is disturbed; in the latter, as shown by Stephen Mackenzie and confirmed by myself, it is correspondingly inverted.

III.

What becomes of the filaria during the day? This question a recent experience enables me to answer.

I had already ascertained by examinations of the fluids escaping in various forms of filarial lymphorrhagia that the embryo parasite is more or less constantly being passed into the lymph stream in which the parent worm lies, and that therefore filarial periodicity is not caused by a quotidian periodicity in the act of parturition. I had also ascertained, by examining blood collected from spouting arteries severed during surgical operations performed on filariated subjects at a time when the parasite is normally absent from the cutaneous circulation, that it was present, though in inconsiderable numbers, in the smaller arteries at such time; but until recently I had no opportunity of acquiring any fairly complete conception of its exact distribution in other organs during its daily temporary absence from the surface of the body.

On February 19th, 1897, a man in whose blood Filaria nocturna abounded committed suicide by swallowing prussic acid. The case is recorded by Mr. Young in the BRITISH MEDICAL JOURNAL. As proved by numerous observation made at intervals during the previous nine months, this man's filariæ invariably had observed the usual quotidian periodicity, appearing in the cutaneous circulation about 5 or 6 P.M. and disappearing from it about 8 A.M. The dose of poison swallowed was apparently large. Death took place almost instantaneously about 8.30 A.M., that is just about the time when it may be assumed the filariæ had retired from the peripheral circulation for the day. The man's body was removed to Charing Cross Hospital and a *post-mortem* examination made the same afternoon.

Seventeen adult Filariæ Bancrofti—16 females and 1 male—were found in an enormous lymphatic varix which occupied a great part of the pelvis and abdomen; probably many more parental worms were present, but, owing to the small size of this parasite and the difficulties of the dissection, were overlooked. At the time of the examination a hurried microscopical scrutiny of the blood from various organs gave the following result:

A pulmonary vein contained very many embryo filariæ.
A pulmonary artery contained very many filariæ.
The margin of a lung contained prodigious numbers.
A small clot in left ventricle of heart contained a large number of filariæ.
A small clot from aorta contained a large number of filariæ.
A coronary artery and vein contained a very few filariæ.
The right ventricle of the heart contained a few filariæ.
The femoral vessels (a doubtful observation) no filariæ.
The bone marrow contained no filariæ.
The basilar artery of the brain contained two filariæ.
The middle cerebral vein contained a few filariæ.
The spleen contained no filariæ.
The liver contained no filariæ.

At the same time drops or smears of blood from the following organs were spread on microscope slips. The films were subsequently fixed with alcohol and stained with methylene blue or logwood. The filariæ on the films were then counted with the following result:

Organ.	No. of Slides.	Aggregate No. of Filariæ.	Average per Slide.
Liver...	3	2	⅔
Spleen	3	3	1
Brachial venæ comites ...	4	111	28
Bone marrow	1	0	0
Muscle of heart	3	365	122
Carotid artery	1	612	612
Lung...	10	6,751	675

The number of filariæ in the blood expressed from the lung was prodigious, as many as 30 or 40 being visible in some fields of one-sixth of an inch objective. In proportion to the amount of blood examined they were even more numerous in the thin film obtained from the carotid artery. In the lung blood they appeared to occur in groups. In the newly expressed blood most of the parasites were dead; only a few exhibited languid movements. They had the usual anatomical characters of Filaria nocturna; when stained the sheath could readily be made out.

Through the kindness of Dr. Mott, F.R.S., pathologist to the London County Council's asylums, sections were cut from the following organs, and the filariæ, or rather fragments of filariæ (for most of the parasites were necessarily cut across in making the sections), which they contained carefully counted. The sections were all of the same thickness and, approximately, of the same size. From three to ten sections of each organ were made, each section being from a different part of the organ. The following is the result of the count:

Organs.	No. of Sections.	Aggregate No. of Filariæ.	Average per Section.
Liver...	10	3	0.3
Spleen	4	0	0.0
Kidney	8	13	1.6
Brain	4	4	1.0
Muscle (voluntary)	3	2	0.33
Heart muscle	4	68	17.0
Lung...	6	301	50.16
Lobe of Ear	4	1	0.25
Scrotum	4	0	0.0

From these facts and figures it may be concluded that Filaria nocturna during its temporary absence from the cutaneous circulation is present in the larger blood vessels, particularly the arteries; that a few are to be found in the capillaries of the muscles and brain, a few in the vessels of the kidneys, a considerable number in the muscle of the heart; but that the majority are lodged in the blood vessels of the lungs. In the last-mentioned situation the sections showed that the filariæ are somewhat irregularly distributed, occurring in clusters in the larger vessels, or singly and more or less coiled up in the capillaries.

IV.

What is the mechanism determining this distribution of the filariæ, and what causes their absence from the cutaneous circulation during the day and presence there during the night?

This question I am unable to answer. It has been suggested that the capillaries of the skin are relaxed during sleep and so permit at that time the entrance of the filariæ. I would point out, however, that the parasites begin to come into the cutaneous circulation about 5 or 6 in the evening, and are present there in vast numbers by 9 P.M.—that is to say, long before the usual time for sleep; and that they begin gradually to diminish in number about midnight or 1 A.M.—that is, when sleep is usually profound. Therefore, although the appearance of the filariæ at the surface of the body concurs to a certain extent with the hours of sleeping, their presence there is not caused by sleep. Rather, it seems to me, their presence in the cutaneous circulation is dependent on something that tends to accumulate in the body, or in certain parts of the body, in consequence of the activities of waking life, and which tends to disappear during sleep. Manifestly, the cause is not meteorological; for, as already mentioned, the inversion of the times of waking and sleeping suffices to bring about an inversion of the periodicity.

The question suggests itself, By what means do the filariæ maintain their position in the organs they elect to occupy? How, for example, do they stem the current of blood in the aorta, or in the carotid artery, where they are in vastly greater numbers than in the slower flowing blood of the veins, as the observations I have enumerated indicate? For example, in the case of the carotid artery, the quantity of blood which I examined was insignificant—a mere trace—and yet it contained over 600 parasites; whereas large drops from the veins contained only about 25 filariæ each. In the brain and voluntary muscles a few of the filariæ occupied the larger vessels, but the majority were in the capillaries, in which they lay lengthwise, filling the little vessels. In the lungs some were in the arterioles and outstretched, usually in company with others; many were coiled up in the capillaries and smaller vessels, the disposition of their bodies suggesting that they had assumed this particular attitude so as to jam or fix themselves in the vessel. In the kidneys they occupied principally the vessels of the Malpighian bodies; in one instance I saw three filariæ in one Malpighian tuft.

It is difficult to account for their complete absence from those highly vascular organs—the spleen, the liver, and the bone marrow.

It might be suggested that the absence of the filariæ during the day from the vessels of the skin was owing to a contracted condition of these vessels at this time. Against this supposition is the fact that there is another blood worm, Filaria diurna, which also observes an equally regular periodicity, but appears in the peripheral circulation during the day, and disappears from it during the night, an arrangement exactly opposite to that which obtains in the case of Filaria nocturna. Then there are at least two other blood worms of man—Filaria perstans and Filaria demarquaii—which are constantly present in the peripheral circulation both by day and by night. The two latter parasites are very much smaller than Filaria nocturna; it is therefore conceivable that they might enter vessels through which the latter could not pass.

Filaria diurna, however, is practically identical in size, shape, and structure with Filaria nocturna, so that what in respect to size of vessels applies to the one should equally apply to the other.

The facts seem to point to the existence of some physiological product, the outcome of the activities of waking life, which either drives Filaria nocturna from the surface of the body during the day, or attracts it to certain internal organs, particularly to the lungs and large arteries, during the night. What this substance may be it is for physiologists to say.

The Periodicity of the Malarial Parasite.

In conclusion, I would point to another blood parasite of man which at one period of its life is in abundant evidence in the peripheral circulation, and which at another period elects to lie up in the vessels of certain of the deeper organs. This parasite also exhibits a periodicity almost as regular as that of Filaria nocturna. I refer to the malaria parasite. In certain varieties of this parasite, whilst the young forms are readily obtainable in finger blood, the mature forms are almost entirely confined to the capillaries of the deeper viscera. Strange to say, the principal of these viscera are just those which are shunned by the filaria, namely, the spleen, the liver, the bone marrow, and the brain.

It is a singular and suggestive circumstance, and one which,

to my way of thinking, points to some important underlying biological law, that the two blood parasites of man subserved by the mosquito exhibit during what I might term their anthropal phase a well-marked diurnal periodicity, and, at the same time, a well-marked predilection for special but different organs during their periods of temporary absence from the peripheral circulation.

SUPRAHEPATIC ABSCESS.

By James Cantlie, M.B., F.R.C.S.,
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Definition.

By a suprahepatic abscess is meant the formation of pus between the layers of the broad ligament of the liver, having as boundaries the peritoneum (limiting the space between the layers of the broad ligament) circumferentially, the liver below and the diaphragm above. The affection may be unattended by hepatitis, dysentery, or any other abdominal ailment. It is characterised by a sudden onset, symptoms of fever, cough, and some respiratory distress and, when allowed to pursue its course spontaneously, usually terminates by the pus finding it way through the diaphragm and lung to a bronchus, from which the purulent matter is expectorated.

It will be at once evident that this is not an intrahepatic abscess; that it arises independently of any antecedent inflammation of the liver; that it may run its course without giving rise to enlargement or tenderness of the liver; and that it is independent of dysentery, although hepatitis and intestinal flux may develop during its course. In fact, it is that form of "so-called liver abscess" which arises independently of dysentery.

Etiology.

We speak of tropical liver abscess as though it were a definite disease; as though all inflammatory troubles in connection with the liver which end in pus were to be considered as constituting a definite niche in our nomenclature. This I regard as wholly unscientific, and against clinical experience and pathological evidence.

In the pathology of suprahepatic abscess dysentery plays no part, not even a secondary part, nor is it ushered in by hepatitis. The commonest cause of suprahepatic abscess is a chill. Just as acute pneumonia is consequent upon a chill in temperate climates, so is inflammation in the region I have defined a common sequel to chill in the tropics. In several cases of abscess of this nature I have met with, the disease rapidly followed a chill. A typical example will suffice.

A man, aged 28, engaged in athletic sports in Hong Kong during the month of January when the temperature in the sun is high and a rapid fall takes place when the sun goes down. He did not change his clothes after severe perspiration, and within twenty-four hours he was seized with what appeared to be sharp pleuritic pains in the lower part of the right chest. A careful examination of the lung and liver threw doubt upon the pain being due to pleurisy or hepatitis, and I diagnosed inflammatory trouble combined with effusion between the diaphragm and the liver. I localised the situation of the lesion from previous clinical and pathological experience of similar affections and from evidence of effusion and swelling as elicited by percussion in the right suprahepatic region. As evidence of my confidence in my diagnosis, I telegraphed to the patient's brother in Formosa that his brother, under my care, had an abscess of the liver and was seriously ill. This diagnosis proved to be absolutely correct, although before the telegram was sent the patient had only been ill forty-eight hours. I mention these facts to show that it is possible to diagnose this ailment as a distinct disease from almost the onset. Pus may not have been, in all probability was not, present from the beginning, but a collection of inflammatory fluid was certainly present, as evinced by the local symptoms and subsequent history. The man I speak of was an officer on a Chinese Customs cruiser, and had never had dysentery, fever, or any tropical ailment previously. This case serves as a type of many others, in which a suddenly developed suprahepatic inflammatory effusion arises, independently of dysentery or malaria, and runs a course towards suppuration. What causes the signs and symptoms to be located in this region instead of in the lungs or liver will be considered later.

Anatomical Characters and Post-mortem Conditions.

The region to which I am calling attention is situated over that part of the liver which is destitute of peritoneum. Between the layers of peritoneum which pass from the liver to the diaphragm is an interval occupied by the superior vena cava, by the lymphatics passing from the upper surface of the liver towards the thorax and some small blood vessels. The initial seat of the inflammation is in the lymphatics of this region, in the lymphatics passing from the liver to the under surface of the diaphragm. Here a lymphangitis takes place with effusion into the area, causing the liver to be pushed downwards, the diaphragm to be pressed upon from below, and the anterior and posterior aspects of the space bounded by the peritoneum to bulge. Early, very early in the disease, the local pain induces the patient to forbear using the lower part of the chest in breathing, so that the upper part of the thorax is exclusively used—a purely costal type of respiration in fact. The lower lobe of the right lung is therefore speedily congested, and pulmonary clinical signs in that region are set up. This tends to obscure the primary seat of the disease, and unless the practitioner is careful his attention may be wholly diverted to the lung symptom—a congestion of the right base—to the neglect of the more serious condition below.

The *post-mortem* appearances, gathered from 7 cases in which I had the opportunity of observing them, are as follows: On opening the abdomen, an inexperienced observer will be astounded to find that the liver, which he had regarded as the seat of the disease, and from which pus had either been withdrawn by aspiration and drainage, or been coughed up from the lung, is healthy in appearance and normal in size. He will begin to doubt, as I often did, the correctness of the diagnosis, and, believing after all that the pus was located in the pleural cavity, proceed to open the thorax. Astonishment is followed by perplexity when in opening the pleura the costal and opposite visceral layer appear quite healthy, and one turns again to the abdomen in quest of explanation. There is neither pleurisy, peritonitis, nor hepatitis to account for the signs and symptoms during life. A closer inspection, however, will disclose that the anterior wall of the broad ligament seems to bulge, that on cutting it or tearing it through pus will escape, and the seat of the abscess be determined, and that the lung is adherent to the upper surface of the diaphragm by a firm basal pleurisy. An examination of the abscess cavity will show, perhaps, one, two, or more abscesses in the region. One—the large abscess—will either open upwards through the diaphragm to a bronchus, or it may have been tapped by operation during life. A second, and even a third, abscess may exist between the peritoneal layers, lying as small unburst sacs on the top of the liver. The abscesses may attain any bulk, from a hazel nut to a walnut, whilst they are unruptured. When the floor of the large abscess is examined it is seen to be formed by the liver substance, the capsule of the liver has disappeared, and the ulcerated surface looks as if it had been scooped out of the liver quite superficially. Here an examination of the contents will reveal pus cells and broken-down red and white corpuscules in the centre, whilst around the walls will be found living white corpuscles and a few hepatic cells, and frequently the amœba coli. Abscess cavities which communicate with the surface, either by way of the respiratory passages or through the chest wall, may contain "infusoria" of various kinds, and in one case I found on drawing off liver pus by the aspirator what I could only consider to be empty sheaths of the Filaria nocturna. In the unruptured abscess the pus is wholly sterile, this is the true sterile-pus abscess. Much has been written and spoken concerning the absence of pyogenic bacteria. Here I maintain is the solution. Abscesses the result of intestinal ulceration, be the cause of the ulceration what it may, are of a septic character, but it is difficult to conceive such a process of infection arising in the situation I refer to. The pus is sterile, it is the result of a blocked lymph channel in a situation in which direct infection from without is impossible.

Signs and Symptoms.

In addition to the ordinary symptoms attendant upon febrile

disturbance we have the local sign of effusion in the right subdiaphragmatic or, as I prefer to call it, the suprahepatic region. Pain in the early stages is caused by the mobility of the inflamed parts. The patient at first has not learnt to accommodate the chest movements so as to ameliorate the pain; but soon the chest movements are adapted by the breathing becoming costal, so that the attachments of the diaphragm are left at rest as much as possible. The pain is of a dragging character, the dial of pain is to be found within the right acromio-clavicular angle. When the upper surface of the diaphragm becomes involved in the inflammation, the pleural surface opposite the base of the right lung and the visceral layer covering the right lung base itself are inflamed, giving rise to sharp twinges of pain. This lasts but a short time however and may be merely transient owing to the speedy adhesions that form between the pleural surfaces. When pus has actually formed there is frequently no pain complained of, and the patient may divert attention from his liver by some pulmonary, gastric, intestinal, or feverish ailment, which, whilst dependent upon the formation of pus, serves to obscure its presence.

Local Symptoms.

Percussion and palpation of the liver, made in the usual way, may elicit neither tenderness, enlargement, nor abnormality of margin or surface. If, however, one hand is placed behind over the right lower rib and the right loin, whilst the other hand is laid on the anterior wall of the abdomen just below the right costal arch, and the liver grasped firmly at the same time causing a to-and-fro motion of the liver, a sharp, shooting pain is immediately felt in the right shoulder at the acromio-clavicular angle. The pain so elicited is of so intense a character that the patient dreads any attempt at a repetition of the examination, and prays to be spared the agony. Whilst percussion of the lower limit of the liver affords well nigh negative evidence, it is different on the upper aspect. Percussion above the right hepato-pulmonary line reveals an increase in dulness upwards. The dull area, moreover, is characteristic in shape and fairly constant in position. In the neighbourhood of the right nipple, whilst percussing from the sternum outwards, the area of dulness is found to rise suddenly and drop behind as suddenly, mapping out a rather conical-shaped patch, with its base below at the liver and its apex above, usually a little within the nipple line. The cone may be fairly sharp, or it may be blunted, the dull patch may in fact present an outline like an inverted saucer, or even a bowl on the top of the ordinary line of hepatic dulness. The intercostal spaces over the dull area may bulge, and percussion of these spaces may or may not be attended by pain.

It frequently happens that the lower lobe of the right lung becomes congested. The congestion is what might be termed a fleeting congestion, for whilst one day the liver dulness, the dulness caused by the area of the pus, and the pulmonary dulness due to congestion, are indistinguishable, on the next day the lung may have cleared up, leaving the cone of dulness, due to pus, distinctly mapped out. These lung lesions vary from day to day, and I have been frequently deluded into the hope that I was wrong in my diagnosis, and that what was the matter was but a right pulmonary congestion after all, and not a serious hepatic trouble. These fleeting lung congestions and clearings are apt to deceive the beginner and to cause him, as it has caused me, to delay operation until it is too late.

It is unnecessary to go over the other well-known clinical signs and symptom—the characteristic cough, the pain induced by lying on the left side, the alternating constipation and diarrhœa, the accompanying fever, the night sweats, and many other minor ailments which for the most part come and go.

I must remark, however, upon the absence of pain and rise of temperature. Neither pain nor increase in temperature are necessary adjuncts to the presence of pus in the region of the liver. When the initial attack of fever is over there may be no more evidence, except by clinical examination, that there is any collection of pus in or around the liver. I remember a patient of Inspector-General Turnbull, in Hong Kong, who had had neither pain nor any increase of temperature for fourteen days before operation, yet a couple of pints of purulent fluid were withdrawn from a conical-shaped area of dulness on the top of the liver in the neighbourhood of the right nipple.

Diagnosis.

When in warm climates a right lung basal congestion suddenly develops, trouble in the hepatic region ought to be suspected. When the congestion is fleeting and recurrent, when the hepatic dulness along the upper border rises in a conical shape in the neighbourhood of the right nipple, when the liver itself is but slightly or not at all painful or enlarged, but when the liver is grasped and moved to and from a sharp lightning pain shoots up to the right shoulder, a suprahepatic inflammation may with fair certainty be assumed to be present. The needle of the aspirator, however, is the ultimate arbitrator in the question of diagnosis.

Prognosis.

By early treatment—that is, aspiration and subsequent tapping and drainage—the mortality from liver abscesses has been greatly reduced. Of 30 cases of liver abscess, on which I have either operated or been present at the operation, 4 died and 26 recovered. Of these, Inspector-General Turnbull, R.N., had 3 operations and 3 recoveries; Dr. Alex. Cowie had 4 operations and 4 recoveries; Dr. Stedman had 3 operations and 2 recoveries. Of 20 cases on which I operated 17 recovered and 3 died. Two of my 20 cases were the first two cases of liver abscess I ever saw or treated, and they were lost by delay. Both ultimately coughed up the hepatic pus, which is considered the right thing to hope for by many who pursue an expectant treatment. I know many cases recover after the pus has burst upwards through the liver, but it is a risky line of treatment to pursue, and I have come almost to this conclusion, that a practitioner who allows a hepatic abscess to burst upwards through the lung has not done his duty by his patient.

Treatment.

There is but one line of treatment to pursue in suprahepatic, as in intrahepatic, inflammatory conditions which threaten to develop pus. It is to aspirate early, to tap by trocar and cannula if pus is found, and to drain the abscess. Aspiration is almost without danger, but it is necessary to have a specially long needle made for the purpose. It should be about 8 inches in length, so that you can reach the most remote parts of the hepatic area, if so deep a puncture is necessary. Again and again may it be necessary to put the needle into the liver, either by changing direction or by separate punctures, and every probing does good. The abscess cavity may, however, be missed, and the chief cause of this is the assumption that the pus is in the liver. Had I acted on these premisses, eight men I know of would have in all probability died. The abscess has to be reached through the chest wall from the back, sides, or front. When far advanced the pus will be found bulging forwards in the area of the nipple line, and may there be found; but in earlier stages suprahepatic pus may be approached from the side, entering the aspirating needle in the mid-axillary or anterior axillary line between the seventh and eighth, or eighth and ninth ribs.

I have stated that every additional puncture of the liver, made during examination, is in all probability attended by relief. What happens to the liver when it is punctured, and how can good arise? I am able to afford some explanation of this phenomenon. Whilst tapping a man for ascites dependent on liver enlargement, I pushed an aspirating needle into his liver in two or three places for the purpose of clearing up my diagnosis. On withdrawing the aspirating needle the ascitic fluid which was previously perfectly clear, became tinged with blood. As the fluid flowed, it became more and more sanguinous, colouring the ascitic fluid deeply. The patient was greatly relieved by the combined operation, whilst I gained the knowledge that the puncture caused by the aspirating needle bled freely, thereby accounting for the immense relief always bestowed upon patients suffering from hepatitis by puncturing the liver. I am convinced that were the aspirator resorted to in the early stages of hepatitis, there would be fewer liver abscesses. To do good the operation must be done early, and instead of losing time by deluging the

liver with antiphlogistic drugs and applying counter-irritants, it is a safe, reliable, and speedy method of relieving hepatic inflammation to draw off blood by an aspirating needle early in the disease.

Tapping.

When pus is found the abscess must be immediately tapped by a trocar and cannula. There are many advocates of incision. The old "operations," as they were termed, for liver abscess consisted of waiting patiently until the abscess bulged at the abdominal wall or through the ribs, when a cutaneous incision was all that was necessary to reach the pus. Still these were dignified by the name of "operations for liver abscess." But another style of operator has arisen who removes pieces of ribs, sews up the pleura, makes an opening in the diaphragm, stitches the parts together so as to make a channel for the pus to travel. I was shown the use of the trocar and cannula by Dr. Manson, and I have used it on many patients and never had occasion to regret it. I followed the principles he taught, but modified in some degree the practice. As it is important that one should know how deep the needle penetrates, and how far the trocar and cannula ought to go, I had both needle and cannula marked in inches, so that it is possible to know exactly how deep one has punctured, and how far to push in the trocar and cannula after withdrawing the needle. After plunging a large trocar along the tract of the aspirating needle, and as far as the needle went, I withdraw the trocar, leaving the cannula. Through the cannula left in position an indiarubber tube of a size considerably larger than the cannula is introduced by being stretched on a metal rod. The metal so covered by the stretched tube is introduced to the bottom of the wound, the cannula slipped over the tubing, and then, with the rod held against the bottom of the cavity, the tube is relaxed and the rod withdrawn. The piece of tubing used for insertion should be 1 foot long. Into the projecting end a piece of glass tube 3 or 4 inches long should be inserted and a drainage tube conducted therefrom over the edge of the bed to a basin containing antiseptic fluid. I dispense with Dr. Manson's rather complicated and elaborate dressing and apparatus calculated to prevent infection of the wound by entrance of air. The tissues from the skin to the pus which have been pushed inside by the bayonet-pointed trocar do not lose their elasticity, but embrace the indiarubber holding it firmly in position. My method of introducing the indiarubber tubing is simple in the extreme, merely catching the rubber in a projecting spike from the rod. By this means the end of the tube is left open, a most important point in my estimation, and one which leads me to dispense with Dr. Manson's method of drainage in which the end is closed, the pus having to find its way through the eyelets cut in the sides of the tube. No doubt Manson's drainage answered in large abscesses, but when the cavity is small there might not be space to accommodate sufficient tube to allow of the pus gaining access to the eyelets.

Discussion.

Inspector-General Turnbull, M.D., R.N., said: My experience in Hong Kong in 1892-3, appear to me to confirm Mr. Cantlie's view of the common site of hepatic abscess. In all, I operated on three cases by intercostal tapping, with Dr. Manson's admirably arranged trocar and cannula, with subsequent drainage through an indiarubber tube, with glass tube inserted to watch the character of the discharge from day to day.

Case I.—I have full notes of the first case, a Lieutenant R. M. L. I., aged 24; prior to his illness, of fine physique, a champion swordsman, an ardent cricketer and football player. On December 17th, 1892, subsequent to a cricket match at Singapore, and after being much overheated, he felt ill in the evening. On December 19th jaundice was noted and the temperature was 102°. On December 20th he was discharged to hospital, where he was treated for malarial fever. While there he felt well by day, his appetite good, and he slept well, but a rise of temperature 102°, with sweating, occurred in the evening. A rigor was experienced in January, 1893, with hepatic and right shoulder pain. The hepatic region examined from time to time with negative results. On February 1st he was discharged from hospital, the temperature was 98.4° and 100.4° in the evening. He proceeded to Hong Kong on February 6th, and arrived on February 12th. On February 14th he was admitted to hospital as a reputed convalescent from fever; he was anæmic, and the conjunctivæ had an icteroid tint, but he had no pain or discomfort. Hepatic dulness extended from the nipple to a little below the ribs, with slight tenderness. The appetite was good and the tongue clean. On February 18th there was fine friction crepitus below right nipple, with pain on coughing or laughing, the latter common as his spirits were good, and he amused himself with his guitar, penny-whistle, and singing. From February 20th to 26th friction crepitus slowly ascended; though his spirits and appetite continued good, there were slight night sweats, and on one occasion relaxed bilious stools, with undigested food in them. Hepatic abscess was now suspected, though from his *bien-être* such a diagnosis was considered questionable by a civilian medical expert in liver abscesses. On February 27th it was noted that he slept well, no night sweating, no hepatic pain or tenderness, stools normal, considered to be convalescing. On March 5th it was recorded that slight evening temperature had recently been noted. The persistence of friction crepitus and its continued slow ascent, with associated dulness, led to an exploratory puncture in the sixth intercostal space anteriorly, when an abscess was discovered about 1.5 inch below the surface; six ounces of pus were evacuated by exploratory syringe; spasm of the right rectus muscle and slight fever followed for forty hours, then a normal temperature. On March 10th I tapped and drained the abscess through the seventh intercostal space anteriorly; the drainage tube leading into an antiseptic solution. For ten days the drainage was continued; there was slight evening rise of temperature, but the patient slept and took nourishment well and he suffered little or no discomfort. This being my first experience of such a system of treatment I considered the long tube drainage was continued too long, the discharge being apparently pure bile from the sixth day after the operation. On March 19th I cut the drainage tube flush with the skin, and dressed antiseptically as hitherto. On March 22nd the 0.5-inch drainage tube was replaced by a smaller sized one. On March 29th this was expelled. On April 5th the wound was healed and the liver dulness measured 4 inches vertically. On May 3rd patient proceeded to England *viâ* Canada. Shortly after his return home he was appointed gymnasium instructor at Plymouth. In 1896 he proceeded with my approval to join the Egyptian army on active service in the Soudan, where he still is in good health; he has served with distinction there. The two subsequent cases were somewhat similar in the obscurity of the signs of abscess, even to my civilian expert friends. Aspiration established the diagnosis, then the treatment was identical with the first case.

Case II.—One of these, a man-of-war's man, returned home *viâ* Canada after a steady convalescence, and I lost sight of him.

Case III.—The other, a storehouse man in the Naval Dockyard, Hong Kong, after an excellent recovery, would not be persuaded by Mr. Cantlie or myself to quit the island; he saw me off on my embarking for England in 1894, then in better health than for years previously, and active in the performance of his duties, and Mr. Cantlie left him in the same healthy condition when he left Hong Kong in February, 1896. With this precedent I did not hesitate to sanction the first patient proceeding to the Soudan in 1896, as before mentioned.

I cannot too highly praise the simplicity, safety, and effectiveness of Dr. Manson's hepatic abscess trocar and cannula, by means of which, without hesitation, you can penetrate the thoracic and abdominal cavities. Hepatic abscess appears to have been unusually common in the Navy at Hong Kong in 1893-4. On my leaving Hong Kong early in the latter year, a captain, R.N., entered hospital with pleurisy, it was thought, of an intensely painful character. In the long run, after many ebbs and flows in the symptoms, an hepatic abscess opened into the lung, and after long discharge therefrom, with associated ill-health, a cure was effected by an exploratory incision into the liver, which failed to find the abscess, but was succeeded by perfect cure. A commander, R.N., at this time, I learned, suffered from hepatic abscess, was treated at Singapore, and made a perfect recovery.

Dr. L. W. Sambon said he could not admit the possibility

of sterile abscesses. A collection of pus must have been caused by some kind or other of irritant. When an amœba was not found in liver abscess, and admitting that one particle of material had not been overlooked, that was probably because it had been destroyed. This was certainly not surprising when it was remembered that such was the special object of phagocytosis. In plague the specific bacillus is found in large numbers within the hyperplastic lymphatic glands, but only exceptionally in those which have suppurated. The common pyogenetic bacteria so frequently found in abscesses are usually a secondary infection. They are, however, important factors in the development of the abscess and in the destruction of its exciting agent.

Dr. Manson thought the sterility or apparent sterility of liver abscesses might be explained by the micro-organisms having died out. The amœba was frequently missed owing to the fact that it did not occur in the centre of the abscess, but in its wall. It should be searched for in discharge from the drainage tube some days after the operation.

Captain Lamb, I.M.S., said that he had found abscesses in the substance of liver sterile and without amœbæ; sterile abscesses, therefore, were not confined to the suprahepatic region. He had found an abscess in practically the same position as described by Mr. Cantlie, but this abscess had a very thin layer of liver tissue between it and that part of the liver which was denuded of peritoneum. It might be that the abcesses named by Mr. Cantlie "suprahepatic" might have a similar origin.

Dr. Rho (Italy) said that suprahepatic abscess was not a tropical disease, but was of special interest in tropical pathology on account of the differential diagnosis between the suprahepatic abscess and the true hepatic abscess. Suprahepatic abscess was a well-known disease in temperate climates and described in recent surgical works. Suprasplenic abscess also might occur, and both were usually dependent upon some chronic disease of the intestine, especially ulcerative enterocolitis without dysentery or any diarrhœa. The pathogenesis was the following: The lymphatic vessels and retroperitoneal lymphatic glands carried all morbid materials upwards and not downwards, and pyogenic micro-organisms were thus conveyed behind and above the liver or spleen. A German observer gave an experimental proof of this fact by injecting coloured materials into the lymphatic vessels of the mesocolon, when he found that these were conveyed behind and above both the liver and spleen.

ON THERMIC FEVER (SO-CALLED SIRIASIS), WITH SPECIAL REFERENCE TO ITS ALLEGED MICROBIC CAUSATION.

I.—Kenneth Macleod, M.D.,
Professor of Military Medicine, Army Medical School, Netley.

In the British Medical Journal, dated March 19th, 1898 (p. 744), Dr. L. Westenra Sambon published a paper entitled, Remarks on the Etiology of Sunstroke (Siriasis); not Heat Fever, but an Infectious Disease. In this paper Dr. Sambon contended that so-called thermic fever was not due to heat *per se*, but to a microbe called or recalled into existence and activity by excessive heat under certain circumstances—climatic, local, and personal. He proposed to revive the ancient name "siriasis," as a distinctive term indicating thermic fever, or rather thermic hyperpyrexia. All other cases of heat lesion, of the nature of exhaustion, syncope, or shock, he would place in a separate category, arguing that the symptoms were due rather to ill-health or organic disease of the subject than to the dynamical effect of heat, solar or artificial. Dr. Sambon claims by his rearrangement and fresh interpretation of known facts (for no new facts are adduced) to have removed the disease from the domain of astrology, and straightway fulfils that purpose by calling it after a star. The term "siriasis" has been adopted by Dr. Patrick Manson in his work on tropical diseases, and he evidently inclines also to adopt the hypothesis with which Dr. Sambon has associated the term.

The name appears to me to be a faulty one from various points of view:

1. It is more or less mythological; the rising and setting of the dog-star (Sirius) with the sun was anciently credited with the causation of heat and the rise of the Nile as well as with the production of this fever. 2. Heat fever is by no means limited to the dog days—July 3rd to August 11th—but, as a matter of fact, is more common at earlier and later periods of the year, at any rate in India. The report of the Sanitary Commissioner with the Government of India for the year 1897 contains good evidence to this effect. 3. A pathological name, when sufficiently justified by facts, is on general principles preferable to a fanciful one. 4. The revived term "siriasis" has been wedded to a hypothesis which rests on a very infirm foundation.

Practically—from the point of view of prevention and treatment—it does not much matter whether the influence of heat is held to act directly or through the intermediacy of an organism. Measures to reduce heat in the environment and individual must be adopted in either case, and noxious adjuvants have to be avoided or removed on either theory. Still, as names possess some importance—perhaps with some minds much importance—it seems proper to consider whether this new departure is good, and whether the old names of "heat shock" and "heat fever" do not better signify the prejudicial effects of exposure to excessive solar and artificial heat.

Before entering on the merits of the question I wish to draw attention to two spurious antagonisms which have been stated in discussions which have taken place on this subject, namely, (1) an antagonism between dynamical and microbic causes of disease, and (2) an antagonism between toxic and nervous agencies in originating and maintaining increased temperature of the body. As regards the first, it seems unreasonable to attribute to heat such very remarkable power over the life and life energies of microbes, and to deny its influence over the physiological processes of the higher organisms. Besides, even if we allow that microbes and their toxins are the efficient cause of thermic fever, they must still act dynamically; and the question is one of correlation and substitution of energies, which are in a sense antagonistic, while they are likewise mutually sustaining and convertible rather than one of contest and contrast between dynamical and organised agencies, physical and physiological forces. It is vain to attempt to exclude dynamics from pathology, the real issue being their kind and quality.

Similarly, as regards nervous agency in preserving the uniform temperature of the body, the balance between thermogenesis and thermolysis is undoubtedly governed and regulated by the nervous system, whether by the general nervous system or by a special nervous centre is not of much consequence from the present point of view. Toxins disturb the balance, perhaps by producing more heat than can be readily dispersed; perhaps by impairing or disturbing the mechanism which sets in action dispersing agencies. The pyrogenetic influence of toxins is quite consistent with, probably necessarily dependent on, heat regulating nervous arrangements (which may also be disturbed by other means), and not antagonistic to them.

No positive evidence has been advanced by Dr. Sambon or anyone else regarding the existence of special microbes in cases of thermic fever. It has indeed been shown by Stiles that the injection of blood taken from subjects of this disease into a healthy subject does not induce any pathological disturbance. This would *pro tanto* exclude both infective microbes and toxins from the circulating blood. Dr. Sambon has therefore been compelled, in the absence of proof of the existence of a microbe, to resort to two very treacherous kinds of argumentation—namely, the argument by analogy and the argument by exclusion. The analogies sought to be established concern the epidemiology and the clinical phenomena of heat fever. The relations of the disease to locality and season and its manner of occurrence in communities resemble in a loose sort of way the incidence of some epidemic—microbe-caused—affection; but there are great and important differences, and the constructive evidence thus deduced is very feeble. As regards clinical and pathological analogies, the argument stated syllogistically would take this form. Diseases characterised by hyperpyrexia are due to toxins elaborated by microbes; heat fever or siriasis is characterised by hyperpyrexia; therefore it is due to a toxin. There is a double fallacy in this syllogism. The major premiss, if general or distributed, simply begs the question. If particular or undistributed it constitutes an example of a middle term undistributed in the major and distributed in the

minor, which is faulty. The whole of Dr. Sambon's reasoning may be subjected to this test and found wanting. But there is one analogical argument which was open to him which he has neglected to use—namely, the analogy of the effect of reduced temperature or cold. The chilling of the body is as dangerous as the heating, if not more so. Self-protective arrangements are put in action to conserve heat under chill, just as similar efforts are made to disperse caloric under heat. These arrangements, vasomotor and otherwise, are effected by the agency of the nervous system. General or nervous debility impairs the protective power under cold as under heat. Hygienic and dietetic conditions affect heat conservation as well as heat dispersion. Reduction of temperature—the algid state—is brought about by drugs, frequently by toxins of microbic origin. The phenomena caused by overchilling are peculiar and definite, as are those caused by overheating. The incidence of cold stroke has some resemblance to the incidence of epidemic disease, being in some instances single or sporadic, in others multiple, simultaneous, or quickly successive. Finally, the duration of attacks, many or few, grouped or otherwise, is precisely limited by the duration of excessive cold in one case, and excessive heat in the other. The parallel is almost perfect, and I do not suppose that Dr. Sambon would invoke the aid and intermediacy of a microbe to explain the noxæ, local or general, caused by depressed heat; nor can I recognise the necessity of doing so in mischief due to exalted heat.

The argument by exclusion is equally weak. It takes this form. Excessive heat, solar and artificial can be endured, *per se*, by the human organism with impunity, therefore something in addition is necessary to render it noxious.

The principal exclusions are these:

1. Experiments on animals, which prove that exposure to excessive solar or artificial heat causes serious or fatal effects, the phenomena of which resemble those of sunstroke in man. The experiments are simply set aside as inapplicable to the case of man. Nevertheless they constitute a large mass of sound research, conducted by such men as Stiles, Kühne, Claude Bernard, Vallin, and Wood, and cannot, in my opinion, be brushed aside in this manner. They undoubtedly establish the fact that sustained superheating proves disastrous or fatal to the animal organisation by producing definite impairments of function and well-marked organic lesions.

2. Cases of heat stroke, as distinguished from heat fever—of exhaustion, syncope, and shock—are excluded on the ground that they are due to defect in the subject rather than to potency of heat influence. Infirm people are no doubt more prone to succumb to heat than sound people; but it is indisputably true that perfectly healthy persons are liable to suffer from this sort of sunstroke when the exposure is sufficiently acute and lasting.

3. The impunity with which excessive solar or artificial heat may be endured for a time under certain circumstances does not assuredly prove that under other circumstances less degrees of it may not do harm. A man may plunge his arm into molten metal under special conditions; but that by no means proves that the experiment is safe under all conditions. Both are cases, in fact, of the exception proving the rule, and, as in the instances of prophetic dreams, presentiments, and so forth, where the rare examples of fulfilment are paraded and the infinitely more numerous cases of non-fulfilment ignored, so marvellous endurance of great heat is apt to be noted, and the much more common instances of damage by heat unconsidered. The distinction between heat shock and heat fever is unquestionably a real one; but there are cases in which sunstroke is the precursor of thermic fever, and in which so-called apoplectic symptoms are succeeded by pyrexial or hyperpyrexial symptoms. This sequence probably occurs more frequently than is apparent; for the circumstances under which heat stroke is sustained are commonly such as to preclude thermometric observation. For this reason it is generally impossible to say whether soldiers stricken fatally on the march or in the field, or civilians in the street, or natives of India taken out of railway carriages moribund or dead, have had hyperpyrexia or not; while men attacked in quarters or in hospital, or persons who come under medical observation and care and linger for days, have their temperatures taken and are found to be hyperpyretic. The main question in this matter is whether derangement or enfeeblement of the heat-regulating centres or heat-dispersing agencies is sufficient under conditions of superheating by exposure to excessive solar or artificial heat to establish hyperpyrexia. This is the view put forward by Hertz and Wood, and which I venture to assert is consistent with both experiments on animals and observation of the effects of heat stroke in man. A consideration (1) of the classes of persons most subject to heat stroke—those, namely, who are most exposed to excessive solar and artificial heat; (2) of the circumstances under which heat stroke is sustained, namely, short exposure to very high temperatures or prolonged exposure to lower but still excessive degrees of heat; and (3) of the conditions pertaining to the subject and environment which exalt susceptibility lends support to the theory. The conditions predisposing to heat fever, whether personal or circumambient are such as: (1) To increase heat production (too much food and drink, excessive exercise, increased metabolism and eremacausis, however, arising); (2) to impede heat dispersion (humidity of atmosphere and defective ventilation, hindering evaporation, imperfect action from impaired function or organic disease of skin, lungs, heart, kidneys, or bowels); (3) to impair general and nervous power (debility, alcoholism, fatigue, etc.); and (4) to derange adjustments between thermogenesis and thermolysis (previous or present attacks of fever, prolonged exposure to excessive heat, etc.) The fact that these adjustments are apt under excessive stimulation and exercise to undergo exhaustion or derangement has not been put forward so prominently as it appears to me its importance deserves. We know that hepatic exhaustion succeeds hepatic stimulation, just as overaction of any organ or function is prone to be followed by failure of activity. Continued exposure to heat impairs the power of resistance to heat, and one of the principal sequelæ of heat stroke or heat fever is an incapacity to endure or resist heat. It seems reasonable, therefore, to believe that fatigue of the heat-regulating nervous centres, as well as of the heat-dispensing agencies, constitutes an essential, or the essential, factor, in the production of heat fever.

The questions which present themselves for discussion on the present occasion may be summarily stated as follows:

1. Is it desirable to adopt the term siriasis in preference to and supersession of the term thermic fever to denote one of the noxious effects—the pyrexial—of exposure to excessive heat?

2. Is there any evidence regarding the existence of a special microbe or special toxin in cases of heat fever?

3. Is excessive heat sufficient *per se* to cause heat exhaustion, syncope, or shock in healthy subjects?

4. Is the doctrine of deranged or exhausted heat regulation, combined with excessive heat production and defective heat dispersion, competent to explain the causation of heat fever?

II.—Major G. M. Giles, I.M.S.

Major Giles said that there was one point which appeared to offer some support to Dr. Sambon's view of a specific rather than a climatic etiology, and that was that heat stroke had a geographical distribution which did not always coincide with a higher air temperature. Sunstroke was almost unknown at the Cape of Good Hope. Troops doing hard work in the field—throwing up fortifications, felling timber, etc., with a blazing sun and an air temperature equal to that of India—wore nothing but their Glengarry caps, and neither officers nor men felt any need for protecting helmets. During these operations, the only case that at all resembled heat stroke was rather of the nature of syncope. It occurred in a sapper working at the bottom of a deep well. Yet, as far as climate went, the conditions in Natal appeared most favourable to sunstroke.

III.—L. W. Sambon, M.D.

A year and a-half ago I advanced a theory that siriasis was an infective disease, and I have since been criticised, perhaps with more pungency than reason, by a few, but on the other hand I have received the support of such authorities as Patrick Manson in England, Professor Firket in Belgium, Dr. Rho in Italy and Professor William Osler in America.

The theory I advocate is not altogether new, because the old Anglo-Indian surgeons who laid the foundations of tropical medicine frequently expressed a doubt whether heat alone could account for the disease.

In reading Hirsch's monumental work on geographical and historical pathology, my attention was aroused by the fact that the geographical distribution of siriasis seemed incompatible with the heat theory. From a careful perusal of the copious literature of sunstroke I found that in the main Hirsch's sketch was correct. Siriasis is a widely-spread disease in tropical and subtropical regions, but it exhibits one of the characteristic features of parasitic diseases; its special endemic areas are strictly limited. Like yellow fever, it prevails only in the lowest regions, more especially on coast districts or in the valleys of great rivers. Its altitudinal range is even more restricted than that of yellow fever. Its distribution and prevalence, like that of enteric fever, cholera infantum, and other infective diseases, is seemingly connected with conditions of temperature and moisture. Nevertheless it is absent in regions in which what appear to be the most favourable climatic conditions obtain.

It is as yet impossible to give an exact and complete sketch of the distribution of siriasis. Information is exceedingly scanty for some countries; a number of other diseases have been mistaken for siriasis, and in statistics it has been frequently classed with cerebral hæmorrhage and other widely-different diseases. But there are salient features in its distribution which are altogether unmistakable. Its constant fluctuating prevalence in certain regions, its constant absence in others which offer even more favourable conditions of heat and moisture. Unfortunately the importance of geographical distribution has not been hitherto sufficiently recognised by medical men, who seem to forget when studying the diseases of man that pathogenic organisms, which after all are plants and animals, are subject to exactly the same laws which govern the disposal of all plants and animals.

Notwithstanding Professor Macleod's assertions to the contrary, a micro-organism has been described as the causative agent of siriasis by Cagicol and Lapierre, of the University of Coimbra. It is linear, incurved and slightly constricted in the middle; viewed in the blood it is from 2 to 2.5 μ long, and 0.5 μ in thickness; it stains easily with aniline colours, but not by Gram's method. I have not seen this parasite, and the observations of the two Portuguese doctors have not been confirmed. But the description of a micro-organism assumed to be the specific agent of any disease is not by any means the only reasonable evidence that can be brought forward in support of its parasitic nature. We have no knowledge of the specific organism of small pox, and yet small-pox is rightly regarded as the type of all infective diseases.

Of course, nothing could be more desirable than the actual demonstration of a specific agent answering thoroughly to Koch's laws, but in the absence of such, I think we can establish the parasitic nature of siriasis as satisfactorily as that of other diseases now considered infective, and of which we have as yet no demonstrated parasite.

No discussion is possible on the etiology of siriasis unless we are perfectly agreed as to what disease we are speaking of under the name of siriasis or thermic fever. Most of my critics have confounded siriasis with ordinary syncope.

Professor Wood of Philadelphia, in 1872, gave a very good description of siriasis, and clearly recognised its distinction from syncope, which is commonly called heat exhaustion or sunstroke when occurring in hot weather. Unfortunately subsequent writers again confounded the two conditions, and some have quite recently described heat exhaustion as a preliminary stage to siriasis. The main characteristics of siriasis are hyperpyrexia, profound coma, contracted pupils, and intense pulmonary congestion. These conditions are widely different from those of syncope, in which temperature is usually normal or below normal, the loss of consciousness is incomplete, the pupils are dilated, and the breathing is easy though hurried. What is commonly called sunstroke in England during the summer months is nothing more than syncope, which occurs in weakly persons, and especially in those with circulatory unsoundness under the stress of overexertion or alcohol. It is this condition which occurs so frequently amongst soldiers who are known to be greatly liable to heart failure. It is mostly in fatiguing campaigns and during the great manœuvres in summer that soldiers fall unconscious on the line of march, especially when oppressed by tight-fitting clothes and heavy accoutrements. A striking example was afforded by the French army at the passage of the Mincio on July 4th, 1859, when about 2,000 out of a force of 12,500 men suffered from exhaustion, and 26 died. This example has been erroneously quoted by several authors, who copied from one another, that the French army lost 2,000 men out of a force of 12,000 from sunstroke. This condition was frequently met with in the American Civil War. At the International Medical Congress of Washington, Drs. Sherwood and Goodman stated that cases of siriasis were extremely rare during the war. The majority of cases that went on the army record as sunstroke were simply cases of heat exhaustion in which the heart was mainly involved. Since the war they had opportunity to study the after-history of these cases in the Pension Bureau, and found that they almost invariably showed some form or other of cardiac disease.

Lieutenant-Colonel McCartie of the Indian Medical Staff, in a recent article on the relation of the soldier's dress to heat apoplexy, pointed very strongly to the unsuitability of the soldier's dress in India, and showed that it was a great factor in bringing about exhaustion and heat apoplexy. Unfortunately he confounded cerebral hæmorrhage with siriasis.

It is important to bear in mind that whilst siriasis is limited to certain restricted low areas and in such places is only prevalent during the hot season, heart failure may occur in any place and at any time. Cases of heart failure are quite common in winter, and I remember a number of soldiers falling out faint and unconscious during a long forced march in the winter of 1885 in Naples. The Franco-Prussian War of 1870-71 offered many such examples. I do not mean to imply that heat has nothing to do with cases of syncope in summer, because a comparatively high temperature imposes exceptional work on the heart and circulation, but I believe that impaired resistance is the chief cause of heart failure. It seems surprising that syncope from heart failure should have been confounded with the fever siriasis, but the reason is that both conditions have been given the same name, have been assigned the same cause, and have been consequently considered as different stages of the same pathological process. As soon as the distinction is clearly made out; siriasis becomes sharply outlined as a distinct disease with its own unmistakable features. Other conditions and diseases have been confounded with siriasis on account of certain symptomatic resemblances. Thus alcoholic coma, cerebral hæmorrhage, epilepsy, tuberculous meningitis, cerebro-spinal fever, and pernicious malaria have often been mistaken for siriasis.

The name "sunstroke" is derived from the belief that siriasis was caused by the direct action of the sun's rays. This opinion is now obsolete. A number of observers both in India and America have stated that most cases occur at night or in the early morning; in prisons, barracks, and hospitals; in people who have in no way been exposed to the sun's rays. It is for this reason principally that the terms heat stroke and thermic fever were substituted for the older term sunstroke.

The theory that excessive heat is the cause of siriasis is chiefly due to the fact that the disease occurs during the hottest season of the year. This is true, but it is illogical to conclude that because a given fever occurs only in conditions of high atmospheric temperature, that fever is necessarily caused by the high atmospheric temperature. There are many other diseases which prevail only during the hot season, but they are not for this reason attributed to heat. If high temperature were the cause of siriasis, we should expect to find the disease wherever and whenever temperature is high; but this is far from being the case. Siriasis is unknown in many of the hottest parts of the world, and moreover, in its restricted endemic areas it is not specially prevalent in the warmest years, or at the hottest season of the year.

In the United States siriasis becomes imminent during the summer in temperatures varying between 74° and 90° F., but it is unknown in Arizona, in West Africa, in certain parts of

India, with temperatures of 120° to 130° F. Stokers on large steam vessels work for as long as four hours at the time in the ill-ventilated and dark stokeholds at temperatures varying from 150° to 180° F., and although occasionally one may be brought up from the furnaces unconscious from syncope, or "stoker's collapse," as it has been called, they never show symptoms of siriasis except in the Red Sea, on the shores of which siriasis is exceedingly prevalent. Indeed, 90 per cent. of all cases in the British navy occur in the Red Sea, the disease having been contracted while coaling or stopping along its coasts.

There is the widest discrepancy of opinion as to the way in which heat acts in producing the peculiar symptoms and lesions of siriasis. With so obvious a cause as heat one would expect to find the pathology of siriasis as clear and satisfactory as that of a burn. It seems to me that the numerous, varied, and for the most part conflicting, theories advanced to explain the action of heat in producing siriasis tend to prove that we are on a wrong scent.

The numerous theories as to the way in which heat is supposed to produce siriasis are all entirely hypothetical, they do not agree with *post-mortem* findings, and they are not sufficient to explain all facts in the symptoms and natural history of the disease. The only theory capable of explaining fully the natural history of siriasis is the parasitic theory. It explains the premonitory symptoms which usually precede siriasis, and the relapses which not infrequently follow it; it is in perfect accordance with the symptoms and *post-mortem* appearances of the disease; it explains its epidemic outbursts, the immunity of natives and old residents, the meteorological conditions under which it prevails, and, above all, its peculiar geographical distribution.

Professor Macleod reproaches me for having brushed aside animal experiments. I was obliged to dismiss them in very few words because of the exigencies of space and because of their relative unimportance.

The conditions to which the animals experimented upon were subjected and the resulting phenomena differed widely from those of siriasis. The animals were placed in small closed boxes covered with glass and resting on hot-brick flues, or hot-water bonnets were applied to their heads. Stiles immersed them in water at 120° F., and held them by the back of the neck so as to permit respiration until death supervened. In all these experiments death was preceded by convulsions, but never by the characteristic symptomatology of true siriasis. On the other hand, it must be remembered that more recently Naunyn and Welch managed to keep rabbits alive for weeks with an average temperature of 107° F. The animals lay most of the time stretched out, but they took their food greedily and manifested no symptoms of illness. Welch concludes from his own observations and those of Naunyn that a considerable part of the current arguments based upon experiments concerning the injurious effects of high temperature must be revised.

The best proof that these animal experiments have no relation to siriasis was given by Professor Macleod himself when he mentioned Stiles's inoculation experiments. Stiles did not inject the blood taken from subjects of siriasis as Professor Macleod stated, but the blood of animals subjected to artificial heat, and failed to induce any pathological disturbance in the healthy inoculated subject. If Professor Macleod had studied the recent literature of siriasis he would have known that his strongest argument against the parasitic theory of siriasis was null, because several experimenters had proved that the blood serum of patients suffering from true siriasis is exceedingly toxic to animals. Levene and Ira Von Giessen found that 9 c.cm. injected into the ear veins of rabbits killed the animals in less than an hour.

The examination of the blood in siriasis reveals a considerable destruction of red cells and a marked phagocytosis. The destruction of red cells is proved by the presence of pigment in the leucocytes and by the pronounced anæmia following the disease. As the red cells do not disintegrate from heat till the temperature reaches 125.6° to 129° F., the destruction observed in siriasis points distinctly to some toxic element in the blood.

The parenchymatous changes described by Ira Von Giessen after siriasis are similar in every way to those produced by microbic toxins and other poisons. He says that there is no other interpretation open as to the significancy of the acute parenchymatous degeneration of the ganglion cells of the brain and spinal cord than the operation of a toxic substance on these cells. Von Giessen bases on these data a theory that siriasis must be a species of autointoxication.

These facts are of great importance. We have evidently in siriasis a special toxin which, as in other infective diseases, is the cause of the peculiar symptoms and lesions of the disease. This alone would not be sufficient to prove the parasitic nature of siriasis, but taken in conjunction with the geographical distribution of the disease and with the other circumstances already mentioned, it appears to me to be a strong argument in favour of my theory.

IV.—Patrick Manson, M.D., LL.D., F.R.C.P.

As a literary performance Professor Macleod's paper is excellent, but as a confutation of Dr. Sambon's contention that siriasis is a bacteria or micro-organismal disease it is of questionable value. Although Dr. Sambon uses an astrological name for a disease which he is endeavouring to show is not an astrological one, and thereby exposes himself to the fun poked at him by Professor Macleod, I yet consider that he has done a distinct service to medicine by rechristening this disease. In my opinion, although I do not consider that he has completely proved his point, Dr. Sambon's arguments in favour of siriasis being a bacterial disease are much more potent than Professor Macleod's arguments to the contrary. The facts of geographical distribution, the definite course, the definite lesions, the relapses, the want of definite correlation to temperature are all in Dr. Sambon's favour. Not one of the facts in connection with siriasis is incompatible with a specific germ cause; many are against its being regarded as the result of high atmospheric temperature pure and simple, and these Dr. Sambon has marshalled for us with a full and critical knowledge of the extensive and confusing literature of the subject.

V.—Lieutenant-Colonel J. P. H. Boileau, M.D., A.M.S. (Retired).

Lieutenant-Colonel Boileau said that the suddenness with which sunstroke often occurred was a circumstance more in favour of a dynamic change in the system than the development of microbes. Again, with regard to the beneficial effects of cold applied to the body, it seemed more easy to believe in the production of some counteracting dynamic force than a destruction of microbes.

VI.—Lieutenant-Colonel Oswald Wood, M.D., R.A.M.C.

Lieutenant-Colonel Wood said that in Cyprus in the summer of 1878 the British troops were quartered in single bell tents on a treeless plain in the month of July. What the temperature in those tents was he could not say, but in the double-roofed hospital marquees it used to rise to 120° F. during the heat of the day. A large number of cases both of simple heat syncope and of true heat hyperpyrexia, marked by unconsciousness, convulsions, and other symptoms of direct influence on the nervous centres occurred. The nights were pleasantly cool, so that the intense heat was not continuous. After the troops were hutted and better fed and looked after generally cases of heatstroke almost entirely disappeared, and since that summer Cyprus had had no unenviable notoriety for such diseases. This would seem to justify the belief that to solar heat and to that alone, without the aid of any specific micro-organism, the numerous cases of heat hyperpyrexia so familiar to the military surgeons who went through that trying experience were due.

VII.—The President.

Dr. Thin considered it probable that direct sunlight, as distinguished from simple heat, had much to do with the causation of sunstroke, and thought the line between heat exhaustion and sunstroke very clearly drawn. He considered that in many cases sunstroke was at least partly due to the direct effect of light through the eyes.

VIII.—Filippo Rho, M.D.,
Rome.

Dr. Rho (Rome) said that the epidemiological and clinical facts collected by Dr. Sambon from the literature of tropical medicine seemed to suggest that cases of sunstroke were divisible into two classes: the first, true sunstroke, or *coup de chaleur*, met with sporadically, in which the temperature did not go over 40° C.; and the second an epidemic kind of fever with hyperpyrexia, which might be described by the name siriasis. In the sporadic cases of real sunstroke, the heat, fatigue, and low health played the first and perhaps the only part; the epidemic cases belonged probably to an infectious disease, but in what way it was impossible to say until bacteriological facts came really to support the new theory.

IX.—James Watson, M.D.

Dr. James Watson said that during hot weather persons who for any reason had partaken of an insufficient quantity of food and an excess of alcohol were especially liable to sunstroke. In such conditions the heat centres became readily paralysed, and all power of resistance and accommodation to heat were in abeyance.

X.—Lieutenant-Colonel C. I. McCartie, M.D., I.M.S.

Lieutenant-Colonel McCartie made some remarks on the Cause and Prevention of Heat Apoplexy in the Army, already published in the *Indian Medical Gazette*, June, 1899. He stated that the explanation of the differences in liability to heat apoplexy between civilians and soldiers in India lay in the nature of the dress. As an illustration he said that in August, 1897, he was with a native regiment, marching to the frontier. At one stage sufficient coolies could not be obtained, and part of the baggage had to be carried by sepoys in mufti. Before the end of the march, nearly all the men in the ranks were utterly exhausted, and some of them had heat apoplexy. Their brothers in mufti, though carrying much greater weight, but wearing their loose, light, national dress, were not in the least distressed. They were quite jolly, while the uniformed sepoys were so absolutely prostrated that they would not have been able to defend themselves if attacked. Dr. Sambon's argument that the soldier died at a temperature which did not affect the civilian, and that therefore his death could not be due to the temperature, but to a disease of an infectious nature, seemed plausible enough until the questions of dress and accoutrements were considered, and the fact that soldiers and civilians did not work under similar circumstances.

DYSENTERY AS A TERMINAL SYMPTOM OF DISEASE IN THE TROPICS.

By W. J. Buchanan, B.A., M.B., D.P.H.Dub.,
Captain, I.M.S.; Superintendent, Central Gaol, Bhagalpur, Bengal.

The following cases are intended to call attention to a form of dysentery which supervenes in the later stages of many diseases in India, and I believe elsewhere. The Province of Bengal, in which my experience chiefly lies, is notorious for its malaria, and for the prevalence of bowel complaints of all kinds; so much so, that Norman Chevers many years ago proposed the term "morbus Bengalensis" for the chronic forms of diarrhœa and dysentery to which so many of the inhabitants succumb.

As will be seen from the following 28 cases this "terminal" dysentery (as I call it) frequently supervenes in the last stages of many chronic diseases in India; it is a certain symptom of impending death, but may commence even three or four weeks before that event takes place.

The following are very brief notes of 28 cases of chronic disease in which this "terminal" dysentery supervened, and was the immediate messenger of death. They are given as taken from my notebook in chronological order. All the cases were prisoners in the hospitals of either Bhagulpur or Buxar Central Gaols, as it is in gaols alone in India that we can be certain of getting *post-mortem* examinations.

Case I.—J. M., died February 4th, 1894, after a long illness from low chronic malarial fever. Dysenteric symptoms supervened just four weeks before death. No previous history of dysentery. *Post mortem*, recent ulceration in lower half of large intestine. Speen enlarged, ascites, etc.

Case II.—C. M., died May 1st, 1894, of malarial cachexia, general dropsy, enlarged spleen, etc. Dysenteric symptoms appeared nineteen days before death. *Post mortem*, low grey gangrenous ulceration of large intestine around sigmoid flexure.

Case III.—B. M., died May 27th, 1894, of malarial cachexia, spleen, ascites, etc. Dysenteric symptoms appeared twelve days only before death. Gangrenous ulceration of lower half of great intestine found *post mortem*.

Case IV.—M. P., died June 10th, 1894, from tubercle of the lungs emaciated, spleen enlarged; large cavities in both lungs; no ulceration in small intestine, recent superficial ulceration in descending colon. The dysenteric symptoms supervened twenty-one days before death.

Case V.—B. P., aged 55, died November 1st, 1894, of malarial cachexia; enlarged spleen, liver much contracted, ascites, recent grey gangrenous ulceration along whole length of large intestine. No dysenteric symptoms till ten days before death.

Case VI.—J. P. died November 24th, 1894, from tubercle of lungs; pleural adhesions, cavities in both lungs, spleen enlarged (malarial); no ulceration in either large or small intestines, but disintegration of mucous membrane of colon. Dysenteric symptoms only supervened fourteen days before death.

Case VII.—M. D., died November 30th, 1894, from tubercle of lungs; cavities in both lungs; small intestines healthy; recent ulceration of gangrenous type in region of sigmoid flexure. The symptoms of dysentery only supervened seven days before death.

Case VIII.—M. D., died January 20th, 1895, of malarial cachexia; enlarged spleen, general dropsy, etc., recent grey-blue gangrenous ulceration in lower 3 feet of great intestine. Dysentery only supervened when patient was moribund, about one week before death.

Case IX.—S. (F.), an old woman about 60, died January 23rd, 1895, from tubercle of lung and malarial cachexia; old pleural adhesions, two large cavities in apex of left lung, liver and spleen enlarged; recent fresh inflammation of sigmoid flexure. Dysentery only supervened ten days before death.

Case X.—Female (name not noted), old, died February 8th, 1895, from malarial cachexia; spleen much enlarged, anæmia, ascites. Recent grey gangrenous ulceration of lower intestine up to sigmoid flexure. Dysentery only supervened about ten days before death. No previous history of dysentery during three years in gaol.

Case XI.—K. S., died November 8th, 1895. Admitted to hospital in September for chronic bronchitis; readmitted October for tubercle of lung. Dysenteric symptoms first appeared on October 23rd, sixteen days before death. Both lungs studded with tubercles and minute cavities. Grey malodorous gangrenous ulceration of lower few feet of great intestine.

Case XII.—S. N., died November 18th, 1896, from tubercle of lungs pleural adhesions, cavities in right apex. Black gangrenous inflammation in lower 5 feet of large bowel. The symptoms of dysentery only appeared four days before death.

Case XIII.—M. C., died April 24th, 1897. Long in bad health; several months in hospital with tubercle of lungs. Left lung chiefly affected. Recent low gangrenous inflammation of large intestine. Symptoms only fourteen days before death.

Case XIV.—S. B., died August 8th, 1897, from malarial cachexia; anæmia, enlarged spleen, dropsy. Lungs congested and very œdematous; large yellow *ante-mortem* (so-called) clots in both ventricles; small gut healthy; recent ulceration in large intestine. The dysentery only appeared twenty-eight days before death. Had been three months ill in hospital.

Case XV.—P. D., died April, 1897, from malarial cachexia; lungs anæmic, heart small, liver enlarged, spleen very large and soft, ascites, anæmia. Congestion and recent ulceration of lower half of large intestine. Symptoms of dysentery twenty-two days before death.

Case XVI.—K. D., died July 11th, 1897, from malarial cachexia, spleen very much enlarged, anæmia, œdema of feet. Small intestine found healthy. Recent ulceration of large intestine, symptoms of dysentery appeared about twenty days before death.

Case XVII.—M., died August 8th, 1897, of malarial cachexia, spleen and liver enlarged, lungs very anæmic; œdema of feet and ankles, anæmia. Small intestine found healthy, no ankylostomata, but in large intestine recent superficial ulceration, symptoms of which only appeared about twelve days before death.

Case XVIII.—S. D., died September 8th, 1897, emaciated, suffering from tertiary syphilis, gummata of liver, spleen very much enlarged (seven times), capsule much thickened, one large white gumma extended into substance of spleen. Mesenteric glands enlarged. Small intestine healthy, recent grey gangrenous ulceration in large intestine; the symptoms of dysentery only appeared four days before death.

Case XIX.—B. K., died September 14th, 1897, from malarial cachexia. Spleen much enlarged (thrice), capsule of spleen thickened. Small intestine healthy. Recent ulceration of descending colon. Dysenteric symptoms only four weeks before death, nine weeks in hospital.

Case XX.—S. M. C., died October 19th, 1897, from malarial cachexia. Liver and spleen both much enlarged, spleen below level of umbilicus, small intestine healthy, recent blue-grey gangrenous ulceration of large bowel (lower half). Symptoms of dysentery only supervened within last ten days.

Case XXI.—B. K., died January 15th, 1898, from malarial cachexia. Liver and especially spleen much enlarged, anæmia, ascites; small gut healthy, large intestine recent ulceration in its entire length. Dysentery had supervened within last seven days.

Case XXII.—C. D., died February, 1898, from tubercle of lung. Much emaciation, both lungs broken down, fluid, 2 ounces in pericardium; much ascites, spleen much enlarged, small intestine healthy, large intestine recent gangrenous inflammation. Symptoms of dysentery only within past twelve days. An example of tubercle occurring in a malarial cachectic and of dysentery as a "terminal" symptom.

CASE XXIII.—D. (F.), aged 60, died from malarial cachexia. Emaciating dropsy, spleen much enlarged, liver cirrhotic, small intestine contained seven round worms, otherwise healthy; recent ulceration in lower 3 feet of great gut. Dysentery supervened only three weeks before the fatal issue. Died July 5th, 1898.

CASE XXIV.—M. M., died October 25th, 1898, of malarial cachexia. Body emaciated to a skeleton, feet œdematous, ascites, anæmia, skull and brain healthy, lungs healthy, old pleural adhesions, heart normal, albuminuria, small intestine healthy; large intestine, upper half congested, lower half in a state of sloughing gangrenous dysentery. Spleen weighed 3¾ lbs. Symptoms of dysentery only seven days before death.

CASE XXV.—J. D., an old thief with thirteen convictions, died January 23rd, 1899. Previous admissions to hospital for ague and bronchitis. Copious hæmoptysis September 1st, 1898, again on November 2nd. Since then the lung disease ran a rapid course, with high fever, many times over 105° F. The symptoms of dysentery first appeared on January 5th, 1899, or 18 days before death, when he was plainly dying from tuberculosis. Both lungs found broken down, spleen slightly enlarged, liver healthy, kidneys congested (albuminuria), no ulceration in small intestine, mesenteric glands not affected, recent ulceration in large intestine in three distinct patches, separated by healthy tissue.

CASE XXVI.—S. D., died of tubercle of lungs on January 24th, 1899. Great emaciation, both lungs riddled with small tuberculous cavities. Other organs normal. No ulceration of small intestine, grey gangrenous sloughing, ulceration of lower half of large bowel. The dysentery did not appear till January 8th, or 16 days before death. There had been no hæmoptysis during the lung disease.

CASE XXVII.—M. S., died of exhaustion following on diffuse cellulitis of right leg. The dysenteric symptoms only appeared 14 days before death. The small intestine was pale and atrophic. The large intestine showed recent dysenteric ulceration.

CASE XXVIII.—M. S., died May 1st, 1899, from exhaustion following on a continued fever (nature not determined) lasting 62 days. His bowels were perfectly regular during the long continued fever. There was nothing found *post mortem* to account for the fever. The spleen was certainly considerably enlarged. Patient had been in a "typhoid state," with low muttering delirium for two weeks before death. It was not till he was in this moribund condition that 12 days before death, the symptoms of dysentery appeared. At the necropsy recent grey gangrenous ulceration was found in the region of the sigmoid flexure.

In all the above 28 cases of chronic illness the dysentery supervened as a "terminal" symptom only. All of these cases had been in hospital for various periods for some other severe illness, in the last stage of which this form of dysentery appeared and hastened the fatal end. In most cases this dysentery appears to be of a low gangrenous type, in others it is of a more acute nature. Most of the above cases were in a state of advanced malarial cachexia, in others the patients were dying of tuberculosis of the lungs. I have specially excluded all cases in which there was a previous history of dysentery, as in such it might be said that the terminal dysentery was only a relapse, as indeed often occurs. With regard to the tuberculous cases above recorded, it might be thought that the dysenteric symptoms were only symptomatic of tuberculous ulceration of the intestines, but in such case the intestinal trouble would not be postponed to the last few days of life, nor would it be of the diffuse gangrenous type seen in above cases. Moreover, the terminal dysentery does not differ in onset or in appearances whether it appears in the last stages of tuberculosis, syphilis, or malarial cachexia. Again, in tuberculous ulcerations of the bowels we invariably find enlargement or caseation of the mesenteric glands, but these were not found affected in any of the above cases.

The symptoms of this "terminal" dysentery differ considerably from those of the acute disease; the pain, tormina and tenesmus are slight or altogether absent; fever is present, probably due to absorption of septic material from the ulcerated surface. It is the occurrence of blood, mucus, and sloughs in the stools which call attention to the occurrence of this fatal dysentery.

As regards the nature of the affection I can only speculate. It appears to me to differ from ordinary acute dysentery; sloughing gangrene of the bowel is, however, frequent in chronic dysentery, and even in some very acute attacks and in days of old used to be still more common, especially when patients were drenched and poisoned with mercury. The amœba, I believe, has nothing to do with this "terminal" dysentery, though it will be found on examination, as in every other kind of dysentery, for I hold it to belong to the harmless fauna of the intestines. The bacillus coli might be invoked, and it might be said that such low cachectic states afford this somewhat maligned organism an opportunity of exercising his usually latent virulence, but although every one who has cultivated a special bacillus in the favouring culture medium of the intestinal contents has described a special form of dysentery, yet we know but little of the essential cause of dysentery, and till we know more of the *vera causa* of acute ordinary dysentery, it is useless to speculate upon the nature of the special form here described. It is essentially a degenerative process, and more allied in nature to noma or gangrenous ulceration of the buccal membrane than to any of the acute forms of this protean disease. The form of dysentery seen in the famine stricken is very similar to the form now described. In scurvy also the same form is seem in the advanced stages of scorbutic cachexia. Dr. Sandwith has also described it in the last stages of pellagra. In English asylums Gemmel, in his admirable monograph, shows that dysentery is "specially liable to attack the feeble and debilitated;" but while in the tropics the strongest are just as liable to acute dysentery as the weakest, yet the particular form here described only occurs in the last stages of chronic diseases, and, in Dr. Sandwith's words, "is often the final messenger of death."

DISCUSSION.

Dr. MANSON maintained that these cases illustrated the fact that in healthy conditions when resistance was normal, one of the germs of the many forms of dysentery, and probably of cholera and other diseases, might be present in the alimentary canal, and not excite pathological effects. Relapsing dysentery was another illustration of the same fact. Dr. Manson mentioned the case of a patient at the time absolutely free from symptoms who had had, at intervals of many months for some time past, acute attacks of dysentery supervening on slight irregularity in feeding or on exposures, and this, too, whilst the patient had not been exposed to fresh dysenteric infection. Captain Buchanan's cases showed the importance of maintaining the general health, for it was only when his patients became vitally depressed that the parasites, which had probably been in the alimentary canal for months, became capable of producing their specific disease.

Professor KENNETH MACLEOD observed that dysentery was a frequent precursor of death in lepers and in the inmates of lunatic asylums in India. He considered that there was reason to believe that a dwelling became infected if a considerable number of cases occurred in it, and that when this condition had been brought about it was exceedingly difficult to rid the dwelling of the infection.

Dr. L. W. SAMBON said that these cases of very different diseases, terminating with clear symptoms of dysentery, were evidently cases of mixed infection, the secondary dysenteric infection being greatly favoured by the low condition of the patient. Professor Kenneth Macleod had mentioned the special prevalence of terminal dysentery in the leprosy asylums of India, but dysentery was also very common in lunatic and other asylums in Europe. It was especially common in certain collective dwellings, and, like beri-beri and yellow fever, it might be very difficult to get rid of it in such asylums when once they became infected. For years there would be a great prevalence of terminal dysentery in such dwellings, while other asylums which were not so infected showed no such cases. Dr. Sambon hoped the day was not far off when a better knowledge of the natural history of pathogenic organisms in the environment would enable us to get rid of cases of terminal dysentery and beri-beri as we had already thoroughly eradicated hospital gangrene.

HÆMOGLOBINURIC FEVER AND PALUDISM.

By Surgeon W. H. S. STALKARTT, M.D., R.N.

Nature and Distribution.

BLACKWATER fever has been studied much of late, and for some years its importance among the diseases of the tropics has been impressed on the medical profession. The mortality from this malady in certain regions in which its prevalence may be said almost to prohibit European races residing, and its frequent intractability to treatment with the tendency to relapses, even when removed to a healthy climate, render a study of the disease of no little importance. When once the disease has been suffered from, most are agreed that the patient should leave the country where it was contracted at the earliest opportunity, to escape a relapse and its possible fatal effects. However prominent a place this disease may have attained among tropical maladies, its true nature is still a matter of uncertainty.

Blackwater fever is a disease noted only in unhealthy

regions, and the term unhealthy one may restrict according to the late Dr. Parkes's definition as meaning malarious. Outside malarial regions it does not occur, as far as I am aware, unless after exposure to possible infection in such places. It appears however to be unknown in some malarious regions. This malady has some resemblances to ordinary malarial fever, and there are medical men of large experience who regard it as originating in paludism. Many reasons however seem to militate against this view purely and simply, among which is its relative infrequence taking groups of cases of malarial fever together. Very many cases of the latter indeed may be seen before one of hæmoglobinuria is met with. The disease has been considered an aggravated or pernicious type of malarial fever, and among such its percentage would appear very inconstant. Pampoukis gives 156 cases of hæmoglobinuria noted out of 307 pernicious cases at Athens. During the late Benin Expedition, out of some 54 cases of malaria classified as pernicious 4 were noted with hæmoglobinuric symptoms. After this expedition among the many cases of malarial fever treated at the Royal Naval Hospital, Simon's Town, no case of a hæmoglobinuric type was observed, although it is well known how severely the men of the expeditionary force suffered from climatic effects. I am indebted for the above notes to Surgeons Acheson and Clayton, Royal Navy. One may incidentally note here that in the above instance there had not been any very protracted stay ashore, owing to the excellent manner in which the operations were completed. Again, in this relation may be noted the infrequency of blackwater fever, even the practical immunity from it among those on board ships stationed on the W.C. and E.C. Africa. During the period I was on the West Coast of Africa Station and again during two years on the Zambesi and Shire rivers in neither instance did blackwater fever occur among the crews, although malarial fever was very rife after expeditions up the Vintang Creek and the Gambia and the Great Sharcies rivers in one case, and among residents in British Central Africa in the other.

In many regions has this malady been noted. It is very prevalent in intertropical Africa; and on portions of the West Coast and of British Central Africa it is now almost proverbially severe. In Sicily, Sardinia, East Africa, tropical America, and New Guinea, besides other regions, is it found. Also it has been noted in the Indian Terai. In Australia and many districts of India it does not seem to have been observed.

Symptoms.

The symptomatology of this disease has been so fully described that it is needless to dwell on it at any length—the fever, the rigors, the hæmoglobinuria with the great destruction of red blood cells, the jaundice, the green or bilious vomiting, together with pain and tenderness over the liver, headache, restlessness, and feeling of weakness. Also the marked prostration after the attack and tendency to syncope. The fever may at first be indistinguishable from ordinary malaria. The temperature may be 105° or 106° ushering in the hæmoglobinuria. In subsequent attacks the fever runs a lower course. It may be pointed out that this is so, too, in recurrent malarial attacks, and in such, with no great elevation of temperature, a grave issue may result where this continues persistent. The rigors in ordinary malaria are initial, but may be masked. In blackwater fever rigors recur even during the fever. Whether this is always distinctly so seems open to question. Hæmoglobinuria is pathognomonic of this disease. There is no hæmaturia. No blood cells are seen in the urine, or only a few by accidental occurrence. Test reaction for blood pigment is extremely marked. Albumen is present in large quantity. Tube casts, granular or pigment-laden, are abundant in the urine. The urine may vary from port-wine-like to porter-like in appearance. In a severe case the jaundice is peculiarly marked and sudden in occurrence. A patient seen overnight may seem unrecognisable in the morning from deep saffron discoloration of the whole body. This arises from the large amount of free blood pigment or hæmoglobin in the circulation. There is no itching of skin present, as in biliary jaundice. Marked jaundice in acute malarial febrile attack has been observed, and is of ill-omen. In recent textbooks on bilious remittent fever, a pronounced icteric or saffron tint of skin is mentioned as a feature arising from modified hæmoglobin free in the blood or deposited in the derma. In milder forms of blackwater fever a much less degree of jaundice may be found. Green or bilious vomiting is often markedly present. That this occurs in severe types of African malarial fever to almost same degrees my experience testifies, or with retching it is a very distressing symptom. There may be much headache and restlessness, with pains in loins, feeling of weakness and yawning. After the attack prostration may be pronounced, and the patient should not be allowed to get up from the recumbent position. The case may progress favourably, and urine contain less albumen or blood pigment. On the other hand, death may ensue from exhaustion, syncope, coma, hyperpyrexia, uræmia, or suppression of urine. The last is not not common. Relapses may occur at longer or shorter intervals, and even after leaving the country, without fresh infection. Ensuing debility, with anæmia, has to be combated.

Etiology.

The following theories are to be considered: (1) That it is due to malarial infection; (2) that it is due to quinine poisoning in malarial cachectics; (3) that it is a distinct disease; (4) that it arises as far as the hæmoglobinuria is concerned from individual idiosyncrasy as to kidneys in a patient suffering from malarial fever; (5) that it is due to food substances ingested. This last does not seem borne out. I have seen cases of blackwater fever in which quinine was seldom, if ever, taken. To me it seems doubtful if true blackwater fever does occur where quinine precaution has been systematically carried out.

The circumstances which bear strongly against the malarial hypothesis to account for hæmoglobinuric fever are the limited distribution of this malady and its non-occurrence in certain highly malarious regions where *a priori* we should expect to find it if so caused. It has, however, been unobserved notwithstanding bad malarial cachexias found in those places. Its occurrence in persons who are not malarial cachectics and soon after coming to particular districts. This would seem to indicate a disease of *locale*. Certain marked symptoms have been regarded as pathognomonic and distinctive from malaria, namely, the green vomit, the pronounced jaundice, the recurrence of rigors, temperature often not much elevated and even running a subnormal course, the hæmoglobinuria with great destruction of red cells and great subsequent prostration. Also its pecular recurrence in that blackwater fever always begets itself even in mild attacks and with the same train of symptoms varying only in degree. In some cases the vomiting may not be present and the jaundice scarcely apparent; also the rigors not evident. May the subnormal temperature be rather a secondary effect from blood destruction than a primary feature? The hæmoglobinuria is distinctive. In ordinary malaria the parasites convert hæmoglobin into pigment subsequently deposited in the tissues and converted by liver into bile pigment.

A very strong argument against the malarial hypothesis is that if a person suffering from malarial cachexia be sent from Asia to the West Coast of Africa he will very certainly get blackwater fever, but would not do so as long as he remained in Asia. Again, it has been noted that the melanuria ceases independently of treatment and spontaneously; but may not this be said too of some malarial attacks (as of other diseases) where the natural tendency of the system to health has more than counterbalanced the tendency to disease? The non-amenability of this disease to quinine has been pointed out. To what extent this is so has not been settled definitely.

The above argument supports the theory that this malady is a distinct disease. This view has been most ably propounded by Dr. Sambon. That small unpigmented parasites and free pigment granules have been found in the blood of blackwater fever patients, as I have also observed, would indicate the incidental occurrence at least of some malarial infection. Further, there have been found *post-mortem* pathological changes characteristic of malaria. These changes do not, however, appear so pronounced as the marked coloration of the urine would lead one to expect. The relatively small quantity of pigment found in the tissues (Dr. Thin) may be explained owing to that the corpuscles are destroyed or their contents liberated, the hæmoglobin passing free in solution into the circulation, and comparatively little is converted into pigment or deposited in tissues. This, too, would account for the

free pigment granules, as I have observed in the blood of patients, being seemingly not in excess of an ordinary severe malarial case.

That quinine is the cause of hæmoglobinuria cannot be held. It would appear as an aggravating cause in some cases. There is no evidence as to an individual idiosyncrasy being the cause of hæmoglobinuria, for alterations in kidneys are a secondary condition.

To conclude: As far as our knowledge at present goes, it would seem that:

1. Blackwater fever is only found associated with malaria. The circumstances under which it occurs, or which appear to be propagating factors would indicate this.

2. Blackwater fever is not malaria simply, but a distinct disease, possibly malarial in nature, due probably to an organism having a specific action, or one of peculiar intensity, in giving rise to great blood destruction.

3. Quinine is not the cause of true blackwater fever, although in certain cases it may aggravate it.

4. Quinine has been distinctly beneficial in this malady—to what extent is uncertain, but with mixed malarial infection, or in warding off subsequent malaria, it should be given a foremost place. Few, indeed, would care to omit it from their medicinal equipment.

Treatment.

In all cases at all marked the patient should be kept at rest and in a recumbent posture. The usual routine remedies, as a saline to free the primæ viæ, diaphoretics, etc., may be given with advantage; pilocarpin hypodermically, antipyretics, and cool sponging done carefully, as indicated. Quinine, 20 gr. twice at least in the day, should not be omitted at first. Symptomatic treatment as requisite. Draughts of hot water for the vomiting. This if rejected and repeated, relieves stomach of bile and eases retching; also aids diaphoresis. Hydrochloric acid is recommended for vomiting by some, also liq. hydrarg. perchloridi given internally. Morphine hypodermically may be necessary to relieve retching. Quinine hypodermically may be considered. Sulphonal is useful for restlessness ensuing. Bland drinks may be given; milk, and with eggs, if able to be taken. A little stimulant, as the best champagne or brandy, may be necessary. Oxygen inhalation has been suggested as a possible benefit. Weakness or tendency to syncope must be kept in mind during convalescence. Removal to healthy climate should be impressed on patient after blackwater fever, or non-return for at least six months or a year. Pig's bile has been praised as beneficial in the treatment of this disease. Avoidance of chills, sun exposure, wettings, etc., with subsequent prophylactic use of quinine, should be kept in mind.

DISCUSSION.

Dr. SAMBON said that he believed blackwater fever to be a specific disease. Its peculiar geographical distribution and seasonal prevalence, its recent appearance in malarious regions in which it was previously unknown, its characteristic symptoms always constantly the same in the mildest and gravest cases, proved that the specific agent of blackwater fever could not be any one of the several malarial protozoa already differentiated. The closest analogies were not between blackwater fever and tertian fever, or summer-autumn fever, but between blackwater fever and Texas fever or redwater fever which was the hæmoglobinuric fever of cattle. The parasites of tertian fever and those of summer-autumn fever had been found in cases of blackwater fever; but this *per se* was no proof that they were the cause of hæmoglobinuria. That they should be found in a patient suffering from blackwater fever was only what might be expected, because blackwater fever was in many places co-endemic with tertian and with summer-autumn fever. A mixed infection of blackwater fever and summer-autumn fever was therefore just as possible as a mixed infection of tertian and quartan fevers. Several authors had observed a small unpigmented parasite in cases of blackwater fever which, so far as description went, seemed to correspond entirely with that found by Smith and Kilborne in Texas fever. The morphological differences between the parasites of Texas fever and those of the summer-autumn group were so slight, and the concurrence of some form or other of malarial infection with that of blackwater fever was so frequent, that it was not surprising that the specific parasite had not been as yet definitely isolated. No multiple, rosette-like division had been witnessed in the parasite of Texas fever, as in those of other malarial fevers, but probably simple binary fission was the mode of multiplication in the asexual phase of *Pirosoma bigeminum*. Possibly in blackwater fever there was the same mode of division. In fact, the frequent association of two parasites within the same corpuscle and their apparent connection had been noticed by Woldert and others. This would be an important diagnostic character if it were confirmed.

Dr. MANSON classified the arguments for and against the hypothesis which would regard blackwater fever as a malarial disease, as follows:

For.

(*a*) It occurred in malarial—very malarial—districts.

(*b*) The malarial parasite was often found in the blood.

(*c*) It occurred in people who had had many attacks of malaria.

(*d*) It occurred only after prolonged residence and consequent malarial saturation.

Against.

(*a*) Its geographical range was limited as compared to malaria.

(*b*) The malaria parasites were not always found, and when found they were not always of the same kind.

(*c*) It was not certain that the fever preceding attacks of blackwater fever were really all of them malarial in character. It was possible they were, so to speak, incomplete or abortive hæmoglobinuric fever before the symptom from which the disease receives its name was developed—a not unusual occurrence in other specific diseases.

(*d*) Cases had occurred within a short period of arrival in the endemic areas of the disease.

(*e*) The epidemic seasons of malaria and blackwater fever did not always correspond.

(*f*) Blackwater fever was not amenable to quinine.

Professor MACLEOD stated that, although acquainted in India with cases resembling blackwater fever, in which the symptoms developed as a sequence to malarial fevers, such cases were not to be confounded with the true blackwater fever met with in Africa.

Major G. M. GILES, I.M.S., desired to emphasise a point which had already been alluded to by Professor Kenneth Macleod. He supposed that everybody had met with stray cases of undoubted malarial fever in which this symptom of hæmoglobinuria appeared. The point was that those cases were so rare in India that no one thought of calling them blackwater fever till so much had been heard of the disease from Africa. Further, cases of malaria complicated in this way met with in India were not even exceptionally fatal, whereas the African disease was an absolute terror. It therefore appeared probable that the apparent resemblance did not extend beyond the striking and alarming symptom common to both conditions, and that the diseases were really quite distinct.

Dr. RHO (Rome) said that Dr. Sambon's theory of the etiology of blackwater fever was certainly the most satisfactory. This theory explained all the symptoms of the disease, and gave a plausible reason for all epidemiological facts; moreover, it had in its favour all the arguments from analogy drawn from the hæmoglobinuria of cattle, or Texas fever. If the non-pigmented parasite suggested by Dr. Sambon were to be found in patients suffering from blackwater fever, he would have done a great service to the scientific world. As to the connection of quinine intoxication with blackwater fever, Italian observers had ascertained that in malarial subjects a few centigrams of quinine might give rise to an accession of fever with hæmoglobinuria, very similar to the symptoms produced by pirodin and other blood poisons which destroyed blood corpuscles. These cases could be explained by Sambon's theory only by supposing that 10 or 12 centigrams of quinine could favour the pathogenic action of his suggested parasite.

Mr. D. C. REES said he was disinclined to believe that blackwater fever was malarial. It certainly was not an intense form of malaria, for he had seen cases of blackwater fever of the mildest description, with the passage of cherry-red urine perhaps on two occasions only, and with few other clinical symptoms. It was not

chronic malarial poisoning, for he knew of patients who had contracted blackwater fever within two or three months of arrival in Africa. It had been said that there was little evidence of blood destruction, but he believed that there was no disease in which this was so marked. Hæmoglobin could be seen abundantly, both macroscopically and microscopically in the spleen and liver. He could endorse what Dr. Manson had said as to the seasonal difference of blackwater fever and malarial fever. This was most marked at one station on the Niger, where as the malarial curve decreased, the blackwater fever curve gradually increased. All his experience was against the idea that hæmoglobinuric fever was due to quinine poisoning. Quinine was taken largely in Nigeria prophylactically, and those who adhered to this most carefully escaped blackwater fever.

Captain W. T. Mould, R.A.M.C., mentioned that a patient under his care in hospital for a sprained ankle developed blackwater fever. He had had no quinine for three weeks and no malaria.

Mr. A. P. Parker stated that he had seen cases of blackwater fever in Liverpool from the West Coast of Africa. He would ask whether the fevers met with in Colon, Jamaica, Honduras, and Brazil were not of the same nature. He regarded blackwater fever not as a distinct disease, but merely as the name of a symptom.

The President (Dr. Thin) in summing up the discussion, remarked that in addition to the case which he had recently published in which a man who died of blackwater fever was found to have the parasite of malaria in the blood vessels of his brain, and pigment in the spleen and liver,[1] he had examined portions of liver and spleen from another fatal case of blackwater fever, and found much pigment deposit in these organs—sufficient to show that at the time of the man's death he had been suffering from an acute malarial attack.

THE GEOGRAPHICAL DISTRIBUTION OF UNDULANT (MALTA) FEVER.

By Captain M. Louis Hughes, R.A.M.C., D.P.H.

The geographical limitation of the endemic prevalence of this fever appears to be primarily a question of temperature. In Europe, north of the annual isotherm of 55° F. (about latitude 46° N.) only imported cases are met with which do not themselves start endemic foci. South of this line the endemic prevalence of the disease becomes of increasing importance until we reach the annual isotherm of 60° F., where we find the disease firmly established, and especially prevalent in those months during which the mean temperature is at or about 60° F. In the Mediterranean it is fairly prevalent, in Gibraltar, the Balearic Isles, Sardinia, Sicily, Southern Italy, Greece, Crete, Cyprus, Smyrna, and the North African Coast; also down the Red Sea littoral to Massowah well into tropical regions.

North of isotherm, 60° F., we meet with the disease in low-lying and coast towns as far north even as Padua and Trieste, but rarely at all in Southern France and the Riviera. Within these regions, and corresponding portions of Spain and Turkey, it either very rarely occurs or is mistaken for enteric fever.

Going further afield, cases have been reported from certain parts of India, Hong Kong, and Porto Rico in which the blood serum gave a reaction to the micrococcus melitensis, the micro-organism which is the proximate cause of the disease. Analogous cases are also reported from Zanzibar, China, Monte Video, Venezuela, Mississippi, Fiji, and South Africa. I would wish, therefore, to urge three points:

1. That any such local names as Malta or Mediterranean fever are misnomers to be avoided.

2. That the geographical distribution of this disease is worthy of the attention of investigators in tropical or subtropical regions, seeing that unrecognised cases of the disease, would lead to unfortunate errors from both clinical and scientific points of view.

3. That we have in Professor Wright's method of serum reaction with dead micro-organisms in sedimentation tubes, an accurate diagnostic test capable of being mastered in a few minutes, even by those who have no knowledge of bacteriological and microscopical technique.

[1] British Medical Journal, 1899.

MALARIAL OR CLIMATIC NEURALGIA AND ITS TREATMENT.

By Alex. S. Faulkner, F.R.C.S.Ed., I.M.S. (Retired).

This distressing affection, owing to its frequency and urgency, its tendency to become chronic, and the occasional difficulty experienced in defining its etiology, is worthy of consideration.

Very few symptoms can be compared to neuritis of a given set of nerves so far as the difficulty in its etiology is concerned. By a negative method of diagnosis we can sometimes arrive at a satisfactory conclusion in certain cases, but the fact remains that neuralgia is always simply a symptom of some existing disease.

Putting aside, then, all uncomplicated cases of neuralgia which can be traced to some definite cause and treated accordingly, for example, a disordered stomach, dental troubles, astigmatism or other error of refraction, functional derangements in women, mental worry, as well as cases caused by the presence of some constitutional specific disease, such as syphilis, gout or rheumatism, or due to some local pressure, there still remain a considerable number of cases in which, owing to the apparent absence of some definite cause, only a dubious diagnosis can be made, and hence an inclination exists to treat neuralgia topically as a local disease instead of regarding it merely as a symptom.

Excluding the possibility of the disease being, in truth, a *damnosa hereditas*, I consider that the majority of such cases can be ascribed either to malarial or climatic influences—a class of cases which I do not think have been recognised so fully as they deserve, and to which little or no reference is made in standard works.

Naturally, those who have resided in a tropical climate, and have previously suffered from malarial influences, are the subjects most disposed to such attacks, but similar cases are undoubtedly met with in practice in this country in patients who have never been abroad, but who have lived continuously in low-lying tracts of country and non-salubrious surroundings. Such a case, obviously, was that quoted in the British Medical Journal of June 24th, by Dr. J. C. Walker.

Happily no mosquitos, especially of the genus Anopheles, are prevalent in England, so I purposely refer to these cases as being also of climatic origin, or, in other words, traceable to abnormal humidity or miasm, in due deference to those authorities who expound the "mosquito origin of malaria," which, in theory, has been so excellently demonstrated, but which has yet to be verified and defined, so far as the practical utility of the theory is concerned.

The symptoms of this affection, referable especially to the nervous system, are the regular periodicity of the attacks, acute if not excruciating pain in the set of nerves implicated (usually the facial), the pain being characterised by being confined only to the one set of nerves, but shifting from one nerve to another in that set. At first the pain is accompanied by a slight rise in temperature, followed by copious perspiration at the height of the attack, when the pain has reached its acutest stage. Palpable throbbing of the arterial system in connection with the affected nerves is always evident, and there is a feeling of nausea or actual vomiting. The attacks are followed by marked general depression and subsequent lassitude.

The ordinary course of this disease, especially when chronic, proves that the influence of a partially degenerated nervous system, combined with concomitant conditions, tends materially to affect general nutrition, as loss in weight of the body is an ordinary sequel of continuous attacks of this nature.

In the intervals of an attack there is no hyperæsthesia or superficial tenderness of the affected nerves, and the patient feels comparatively well, but dreads a recurrence, which he feels must follow at a given time, so long as the disease is existent in his system, or is not checked or eradicated by appropriate treatment.

As to the treatment of these cases we fortunately possess a specific remedy in quinine (sulphate) in large doses. If administered in small doses it is of no avail. Further, the more of this drug the patient has taken the larger is the dose he is able to tolerate, whether he be a resident abroad or at home;

Unquestionably there exists an unaccountable temerity on the part of practitioners in England to prescribe quinine except in small and useless doses. In large doses this drug undoubtedly causes dysæsthesia in some form or other, and the usual singing noises in the ears, and even temporary deafness, are evidences of this fact. Further, whilst its influence remains in the system there is anæsthesia of the nervous organisation, thus relieving the nerves affected: but these effects of this drug are only of a temporary nature, and in degree are equivalent to the amount prescribed and the predisposition of the patient to the influences of the drug.

I have neither heard of nor seen any case in which the administration of large doses of quinine, when appropriately prescribed in these cases, has resulted in any permanent degenerative effect on the auditory, ophthalmic, or other special nerve or set of nerves, and I have never known a case in which any form of cutaneous eruption has followed its use. Large doses of quinine are best borne on an empty stomach; they should be plentifully diluted, and prescribed to be taken between meals and from one to two hours before an anticipated attack.

A certain amount of caution is necessary with patients unaccustomed to the drug in following this treatment, but the dysæsthesia which it causes gives a fair indication of the influence of the drug on the system.

Quinine in small doses, and other drugs as arsenic, strychnine, and gelseminum, if prescribed in these cases, resolves the treatment more into an attempt to improve the general tone of the nervous system, but they cannot be said to have any specific action in relieving the urgent symptoms of a most distressing affection, which, if combated by the method of treatment above suggested would, I feel confident, alleviate the afflictions of a considerable number of sufferers.

A FURTHER CONTRIBUTION TO THE STUDY OF MALARIAL EYE AFFECTIONS.

By Major M. T. YARR, F.R.C.S.I., R.A.M.C.

IN the class of cases I propose to deal with in the present communication—mainly, diseases of the conjuunctiva, cornea, and iris—the evidence of malarial causation is not so satisfactory as it is in the case of malarial affections of the fundus, as the demonstration of the plasmodia in the affected tissues has so far been lacking. Nevertheless, in many of these cases the suggestion of malarial origin is at least plausible, and in some the clinical evidence in favour of paludism being the *causa causans* appears conclusive. A brief summary of the salient features of these diseases, with references to the few recorded cases, may therefore be of service to those interested in tropical eye diseases, and will complete the survey of the subject commenced in my paper on Malarial Eye Affections, read at the annual meeting of the Association in 1898.

CONJUNCTIVITIS.

At least three different varieties of conjunctivitis have been found connected with malaria, namely: (*a*) Intermittent ophthalmia; (*b*) conjunctival injection due to neuralgia of fifth nerve; (*c*) epidemic conjunctivitis.

(*a*) *Intermittent ophthalmia* is thus described by Griesinger:[1] "It is nearly always unilateral, and consists of a more or less marked hyperæmia of the eye, with photophobia, lachrymation, contracted pupil, and frequently swelling of the lids." There is some discomfort, but no neuralgic pain; the symptoms either come on during the attacks of fever in acute intermittents, or replace the paroxysm altogether; in the intermisions the eye is quite healthy; ordinary treatment fails to cure, but it yields readily enough to quinine. Curiously enough, the left eye is nearly always the one affected. That this form of conjunctivitis, accompanying or replacing the paroxysms of acute intermittents, is a real entity is undoubted in view of the many cases collected by acute and cautious observers; that it is directly due to malaria appears almost equally certain. Morton, as far back as 1727,[2] described a case of tertian fever, apparently cured by quinine, which recurred later in the form of a tertian ophthalmia. Strack,[3] in his work on intermittent fever published in 1785, gave notes of a case of quotidian congestion of the left eye, without pain or fever, in a malarious patient. Beylot[4] saw several cases of the disease in the course of an epidemic of malarial fever at Biskra in Algeria, and Raynaud[5] has published notes of three cases which he watched carefully, and in which the connection with malaria seems fully established. De Schweinitz, also,[6] whose authority none can question, states that he has seen instances where the ordinary manifestations of malarial fever were replaced by this intermittent ophthalmia. Many other observations will be quoted in Raynaud's excellent work. Most of the published cases were observed in Algeria and the United States; the disease must be very rare, if not unknown, in the far East, as I never saw an instance in the course of four years' residence in China.

(*b*) *Conjunctival injection due to neuralgia of the fifth nerve* is very common in malaria and malarial cachectics, as every practitioner in the tropics is aware, but can only be considered indirectly due to malaria. Pain in such cases is severe, and the conjunctival injection comparatively slight.

(*c*) *Epidemic Conjunctiritis.*—Epidemics of conjunctivitis have been attributed to malaria, notably that in South Carolina in the summer and autumn of 1882.[7] The concurrence of the diseases, however, is probably accidental.

Xerosis.—An affinity has also been traced between epithelial xerosis and malaria, and a connection undoubtedly exists, but probably only inasmuch as xerosis is the local expression of a general malnutrition of which malaria may be one cause.[8]

KERATITIS.

The various forms of keratitis which have been described as malarial may be conveniently grouped under three heads: (*a*) Dendritic keratitis; (*b*) Keratitis profunda; (*c*) Vesicular keratitis (herpes corneæ).

(*a*) *Dendritic Keratitis.*—Kipp (Newark, U.S.A.) has made a very careful study of malarial keratitis, and there seems little doubt that the "dendritic" form described by him, Van Millingen, and others, is not merely associated with, but directly due to, malaria. Kipp's first description of the disease appeared in 1880; in 1889 he gave his most recent results.[9] In all he has observed this peculiar form of keratitis in no fewer than 120 malarial patients patients, in whom the connection between the malaria and corneal affection appeared to be quite clearly established. Beginning, in the course of or after a paroxysm of fever, with photophobia, lachrymation, and supraorbital neuralgia, the characteristic lesion of the cornea soon made its appearance, a peculiar narrow serpiginous superficial ulcer with lateral offshoots, like the skeleton of veins in a lanceolate leaf. Antimalarial treatment cured most cases rapidly; in a few, however, it had to be supplemented by local applications where the ulcerative process tended to penetrate deeply into the cornea. Kipp's observations were soon confirmed by several other American surgeons, notably Hotz, Miller, Sutphen, and Noyes; the last-named drew special attention to anæsthesia of the cornea, and exaggerated tenderness of the supraorbital nerve as characteristic symptoms of the disease.[10] The malarial dendritic keratitis described by Van Millingen in 1888[11] is evidently the same disease, "fungus-like lesions, with ciliary neuralgia and anæsthesia of the cornea."

(*b*) *Keratitis Profunda.*—Fuchs, in his *Textbook of Ophthamology*, states that "intermittent fever in its chronic form of malarial cachexia sometimes results in a keratitis profunda, which is characterised by the absence of marked symptoms of irritation and also by an unusually chronic course." A greyish infiltration of the middle and deep layers of the cornea at or near its centre, comes on very slowly, remains stationary for days or weeks and then subsides without producing any solution of continuity or in fact affecting the superficial layers at all. Under a lens the apparently homogeneous opacity is found to be made up of minute dots and striæ. Lévrier[12] was, I believe, the first to point out the frequent association of this disease with malaria. In one case described by him the patient had suffered severely from malarial fever in Africa; on returning to France the attacks of fever ceased for some time and then returned in the form of shivering and sweating in the early hours of each morning, while at the same time he experienced a slight sensation of uneasiness in the left eye. Seen by Lévrier a month later the upper half of the cornea was found to be opaque, the conjunctiva was injected, and there was slight photophobia; the patient had shivering, followed by a rise of temperature and sweating every morning, exactly the

same feverish symptoms as he had suffered from in Africa. Under atropine, fomentations, and quinine in ½-gram doses twice daily, the eye slowly improved and eventually the cornea was left almost clear. Similar cases have been described by Sedan, Poncet, Landolt, and Javal.[13] I have seen in Mr. Morton's clinic at Moorfields a case of diffuse central corneal opacity, looking under the magnifying glass like a shower of snowflakes, in a man who had suffered from blackwater fever on the West Coast of Africa. The patient had had rheumatism, but the symptoms most characteristic of rheumatic keratitis, pain, inflammation, and marked photophobia, were wanting. He did well under atropine and small doses of quinine and arsenic, and the infiltration had began to subside when he ceased attending and we lost sight of him; there was no history of syphilis.

(c) *Vesicular Keratitis.*—Godo[14] in reviewing 40 published cases of herpes febrilis of the cornea found that 13 had occurred in malarials, the corneal eruption being accompanied by herpes of the lips and nose. Tangeman, of Cincinnati,[15] has met with a similar affection amongst malarials which he calls "keratitis bullosa." I hardly think however that this herpes corneæ can be considered as directly due to malaria.

Iritis.

Recorded cases of malarial iritis are not numerous, and in very few is the evidence of malarial origin perfectly satisfactory. While assistant to Mr. Treacher Collins at Moorfields, I saw one case of iritis which seemed to us probably due to malaria. The patient was a discharged soldier, married, with three healthy children. He had had "fever and ague" in Burmah and India. When first seen he complained of violent pain and photophobia in the right eye. The iris was discoloured, and there was considerable ciliary injection, but no synechiæ, and no fever. He stated that he had had three similar attacks in the same eye in Burmah, that they came on during paroxysms of fever, and subsided in a few days' time under quinine. There was no history of gout, rheumatism, or syphilis. He recovered within a week under atropine, and has not returned to the hospital since. Mr. Collins kindly showed me notes of two other cases he had seen of recurrent iritis in malarials; in both, however, there was a history of gout, and he thought the diagnosis of malarial iritis, though probable, was not absolutely certain. Tangeman's case[15] seems clear enough; his patient suffered from periodic iritis with pain and photophobia, each attack coinciding with a paroxysm of fever; atropine seemed to have no effect, but quinine gave almost immediate relief. M. Péchin, at the recent Congress of the Ophthalmological Society of France (1899) read notes of a case of double malarial iritis.

The patient, a woman aged 48, suffered from tertian ague in 1870; the fever lasted in all several months, but eventually yielded to quinine. During one of the paroxysms her right eye became injected and painful, with discoloration of the iris and immobile pupil; eventually the iritis subsided, leaving a posterior annular synechia. Five years later she suffered again from a severe attack of malarial fever; this time the left eye became affected in one of the paroxysms and several synechiæ formed; she had had no recurrence of iritis or malaria since. Dr. Péchin went carefully into the history and antecedents of the case, and came to the conclusion that the disease was undoubtedly due to paludism.

With reference to this subject Gowers's words (*Medical Ophthalmoscopy*, 3rd edit.) are worth bearing in mind.

Purulent affections of the eye (choroiditis, iritis, etc.) such as are seen in pyæmia, have been described in intermittent fever, but are extremely rare, and some doubt may be felt regarding the diagnosis of the original disease when it is remembered how closely some cases of pyæmia simulate intermittent fever. Even the influence of quinine, on which diagnostic weight is often laid, is not entirely conclusive; for example, in a case of this kind described by Landesberg, although quinine cut short the affection, abscesses formed during convalescence in one toe and forearm.

I hardly see how the formation of abscesses in the case cited invalidates the diagnosis of malaria, as boils and abscesses are very common during convalescence from malarial fever. However, it is always well to remember the possibility of confounding pyæmia with intermittent fever.

Cataract.

The only instances of cataract attributed to malaria which I have been able to find are 2 cases recorded by Bagot,[16] of Guadeloupe. The first patient was a mulatto boy of 15 who had a severe bilious remittent fever with gastro-intestinal symptoms and coma; this lasted two or three days, and immediately afterwards his sight began to be affected; three months later it was found that he had a soft cataract in each eye. The second patient was a mulatto girl of 16, who also had an attack of grave malarial fever lasting three days; immediately afterwards sight began to fail; nine months later she also was found to have a soft cataract in each eye.

In the absence of more precise details, it seems hardly fair to comment on the above; but judging from the published facts alone, I am inclined to think the coincidence of malaria and cataracts must have been accidental.

Anomalies of Accommodation.

My friend Dr. Manson has shown me notes of a case of monocular ciliary spasm, associated with malarial aphasia, which he saw in Hong Kong; with the cure of the malaria the spasm disappeared. So far as I am aware this is the only case of the kind ever noted; the unilateral character of the spasm is exceedingly curious.

Cases of malarial cycloplegia have also been recorded by Manhaert, Bull, and others.

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SOME OF THE MORE COMMON FORMS OF TROPICAL DISEASES MET WITH IN GENERAL PRACTICE IN ENGLAND.

By Sarat K. Mullick, M.B., C.M.Edin.,
Calcutta.

Malarial cachexia in the treatment and care of people long resident in the tropics—the "tropical diathesis"—is often lost sight of. It may happen that with some minor differences the symptoms tally with some well recognised diseases of the temperate zones. Unless the proper value is attached to these so-called minor differences the consequences are likely to be serious. When we find persons from the tropics suffering from chills for some time, anæmia, the blood counting as low as 1,000,000 per cubic millimetre, a peculiar saffron yellow skin with a lemon tint, breathlessness on exertion, œdema of the legs, hæmorrhage in the retina, the condition may be diagnosed as pernicious anæmia. If the physician will but percuss out the spleen and differentiate the colour of the skin, and examine the blood, he will find that the patient has not pernicious anæmia, but is suffering from malarial cachexia. The cases of malaria met with in England are not the typical examples described in the textbooks. Sometimes the quotidian or tertian types are met with in their characteristic forms. But the difficulty of treatment is exaggerated when the chronic effects of such a disease are to be treated. Sometimes the comatose form presents itself. The delirium and coma may often come on without chill or high fever. Or the only symptoms complained of may be those of the hæmorrhagic type, with hæmoglobinuria as its cardinal feature. Quinine stands out pre-eminently useful in the treatment of malaria. Koch, it is true, has doubted its efficacy under certain circumstances. In cases of pernicious malaria hypodermic injections of bisulphide of quinine gr.xxx and tartaric acid gr.v every two or three hours is recommended. In the comatose form, plunging the patient in a bath, and douching him with cold water to raise the temperature, has been found beneficial.

Dysentery.—A case which has suffered from preliminary dyspepsia followed by diarrhœa, colicky pains, a red and glazed tongue may often be confounded with the hundred and one attacks of gastro-intestinal disturbance so commonly met with in England. But the great straining and tenesmus, the fæces mixed with clear mucus and blood, and stools numbering as many as 200 in 24 hours give an indication of its dysen-

teric nature. The character of the stools changes with the period of the disease. At the end of the first week the mucus becomes opaque, the blood diminishes, and brownish or shreddy material appears. Often the stools are of greenish pultaceous material. As the case improves, the mucous or gelatinous matter gets less and less, and fæcal matter more and more till fully formed fæces appear. Microscopically, the stools consist of red and white blood corpuscles, swollen epithelioid cells, containing fat drops, with vacuoles and sometimes cercomanes intestinalis. Of all the remedies suggested for dysentery none excels ipecacuanha. The usual plan of treatment suggested is to give a dose of opium or laudanum first, then from 20 to 60 gr. of ipecacuanha, to be repeated if rejected. The vomiting is lessened if ipecacuanha is given when the patient is flat on his back. If he vomits a bowl is to be brought to his mouth—he is on no account to raise his head. This often checks vomiting. Corrosive sublimate, gr. $\frac{1}{10}$ every two hours, has been tried. Bismuth ʒss to ʒij every two hours is also followed by good results. Irrigating the colon is attended with the difficulty that it sets up tenesmus, due to the irritability of the rectum. Therefore it is always advisable to give a cocaine suppository first. As the majority of cases met with in England are chronic, silver nitrate irrigation is of prime importance. The diet in dysentery is important. Milk, whey, and broths are borne well. If curds appear with oily matter, milk is to be discontinued and beef tea, or juice, or egg albumen ought to be given.

Beri-beri.—Sometimes the nerve lesions of tropical diseases simulate those of temperate climate. Beri-beri is one of them. Here multiple peripheral neuritis has followed residence in a place where an epidemic has been prevalent. It may be confounded with alcoholic neuritis. But the presence of œdema, especially over the shins, together with signs of cardiac failure, are strong evidence in favour of beri-beri. In slight cases there may be but little analgesia of the calf of the leg, with œdema over the tibiæ. There is also hyperæsthesia of the calf muscles, and the knee-jerk is impaired. The patient should be placed in some dry locality and plenty of nitrogenous food given. The cardiac failure is to be treated by absolute rest, aided by sol. glonoin in ♏1 or 2, nitrate of amyl, venesection ʒ10-12, etc. Faradism, galvanism, massage for muscular atrophy after the state of hyperæsthesia, strychnine, arsenic, and silver nitrate are favourably received. Foot-drop may be remedied by various talipes splints.

Sprue.—The mouth lesions of sprue are characteristic, but may simulate the lesions of syphilis. There are superficial erosions, patches of congestion, and, in rare cases, minute vesicles appear at the tip of the tongue. Sometimes the tongue looks fissured, because the mucous membrane becomes so swollen that folding takes place. On either side of the frænum linguæ on the buccal mucous membrane there are red patches of superficial erosion. The irritation caused by these lesions makes the mouth fill with a watery saliva. Entero-colitis often passes into sprue. Some remarkable cases of sprue have been described, in which the characteristic features, such as sore mouth, dyspepsia, and diarrhœa, disappear, but the wasting continues, and the stools become very copious, the excretion being often out of all proportion to the ingestion. There is no point of treatment which is of more importance than diet. Milk is the best. It is better to give a purge as a preliminary, then 3 ounces of milk are to be sipped through a pipette. When the dyspeptic condition and distension have subsided milk should be increased to half-pint at a time, and gradually to 100 ounces daily. The patient should be kept in bed till milk has been increased to 6 or 7 pints daily. Dr. Manson states "that for six weeks dating from the time the stools become solid and the mouth free from irritation no other food or drink should be given." In the stage of improvement raw eggs in milk, malted food, well boiled arrowroot, then stale bread and butter, chicken broth, fruit, and chicken till ordinary diet is reached by successive stages. Strawberry, it is said, is a specific in sprue. In cases of relapse the treatment by milk should be rigidly enforced.

Hepatitis.—Perhaps there is no tropical disease more commonly met with in England than the tropical liver. Unwise personal habits as regards food, spirits, and exercise may have been the starting cause. By the time the patient is seen in England he has probably passed through the stages of hyperæmia and congestion into that of hepatitis. Pain or tenderness over the liver, diarrhœa, pale stools—often frothy due to fermentation produced by want of bile—headache, furred tongue, and foul breath are the symptoms in this stage of the complaint. Nothing does more good than sulphur or Carlsbad salts. Alcohol, cold baths, and meat are to be tabooed. In cases in which acute symptoms supervene low diet, barley water or milk and water, purging, and poultices over the liver do good. If the hepatitis is the result of dysentery, ipecacuanha in large and oft-repeated doses is indicated; if due to malaria, quinine is serviceable.

THE LIFE-HISTORY OF THE FREE STAGE OF ANKYLOSTOMA DUODENALE.

By Major G. M. Giles, M.B., I.M.S.

The free stage worms were cultivated as follows:

1. Clean river sand, sterilised by heat, was placed in a shallow vessel and covered.

2. Over the surface of the sand was poured the fæces of a patient suffering from ankylostomiasis mixed with a sufficiency of previously boiled water to make it flow freely and suffice to thoroughly wet the sand. It is obvious that the method employed rigidly excludes the possibility of the inclusion of nematode ova other than those contained in the fæces used.

3. In the course of a few days, the length of time varying with the air temperature, the embryos hatch out. Within ten or fourteen days they attain sexual maturity. The females are impregnated, and, though differing entirely in size and appearance from the parasitic stage, lay eggs which are identical in size and appearance with those of the parasite.

4. If a sufficiency of nourishment be provided in the shape of fæcal matter, these eggs hatch out and proceed to sexual maturity like their parent, and an indefinite number of generations can be obtained in this way. It is needless to remark that the fæcal matter used to nourish these subsequent generations should be obtained from a person known to be free from ankylostomiasis.

5. It is probable that embryos of any generation, if introduced into the human intestine, develop into the well-known parasites.

Major Giles demonstrated specimens illustrating the life-history of the worm. The specimens in question were prepared, in 1889-90, from cultivations made in the course of an investigation into the etiology of the diseases known in Assam as kala-azar and beri-beri, the report thereon being published in the latter year. Although his observations had not yet been repeated by other observers, he had repeatedly carried through new series of cultivations, and beyond the fact that in 1896 he succeeded for the first time in maintaining the free stage worms to sexual maturity in water, he had found no reason to modify the statements advanced in his original report. Since the date of his report, however, an almost absolutely parallel life-history had been worked out for rhabdonema intestinale. Although carefully looked out for, he did not come across the anguillula stercoralis, or early free stage of this worm while in Assam, but the two forms can be easily distinguished by the markedly shorter tail of the ankylostoma rhabditis in all its stages.

ON THE PREPARATION AND USE OF CALMETTE'S ANTIVENENE.*

By O. W. Andrews, M.B., D.P.H., Staff-Surgeon R.N.

Varieties of Poisonous Snakes.

Poisonous snakes are chiefly met with in warm countries. All tropical countries except the Pacific Islands contain poisonous snakes, and most of the temperate regions, with the exception of New Zealand, do also. Venomous snakes are divided into two principal classes:

* Much of the matter included in this paper is contained in an unpublished report furnished by me to the Director-General of the Medical Department of the Navy in a course of instruction given at the Pasteur Institute, Lille, by the Director of that Institute, Dr. A. Calmette, to delegates from the Navy, Army, and Indian Medical Services.

(i) *Colubrine*—for example, cobras (Asia), mocassins, and coral snakes North and South America respectively), black snake, tiger snake, and deaf adder (Australia).

(ii) *Viperine*—for example, small viper (England), rattlesnake (North America), chain viper (Daboia), russelli (of India), and puff adder (of South Africa). Colubrine snakes have comparatively long maxillary bones, which are mobile, but to a less extent than the corresponding bones of viperine snakes, and ankylosed to the fore part of the maxillary bones are grooved fangs; posterior to these teeth in some varieties there are smooth hooks without furrows. Viperine snakes have broad heads, very short and very mobile maxillary bones carrying fangs which are perforated by a complete canal, which alone would serve to distinguish a viperine from a colubrine snake.[1] The poison apparatus consists of a gland homologous with the parotid salivary gland of other vertebrates; it is situated on each side of the head behind the eye and in front of the tympanic bone, which is united by ligaments with the mastoid bones and mandibles; the gland is so placed beneath the masseters and internal pterygoid muscles that when the fangs pierce the skin the contraction of these muscles ejects the venom through a duct opening at the base of the poison fang.

Collection of the Venom.

The method employed at Lille to collect venom is as follows:

The snakes are kept in large iron-wire glass-lined cages in a house warmed artificially, so that the temperature never falls below 27° C. (= 80.6 F.). When a snake is required, it is grasped with the right hand below the head with catch forceps about three feet long (resembling tongue forceps). It is next caught between the index finger and thumb of the left hand. The jaws are then forced apart by the thumb and fore-finger holding the snake, taking care that the mouth of the snake is turned away from the operator and his assistant, lest some of the venom be injected into the eye, as it is readily absorbed by the conjunctiva, and even a very small amount suffices to set up severe ophthalmia. The fangs are next cleared by pushing back the sheath of mucous membrane which surrounds them, and the assistant holds a watch glass beneath the poison fang, whilst the person holding the snake encourages the ejection of the venom by pressure on the glands with his (free) right hand. When the secretion ceases to flow the assistant removes the watch glass, and inserts a glass funnel down the mouth of the snake, breaks a raw egg into it, and forces this through the funnel by means of a glass rod. The snakes appear to resent this artificial feeding, but it suffices to keep them alive and well. The collection of venom and feeding being completed, the snake is returned, and the process repeated in about a fortnight's time. In returning the snake the catch forceps are always employed in the same manner as when taking it out of its cage.

M. Calmette, as a rule, mixes the venom from all the snakes in his collection, which, when we were there, included amongst others the naja haje of Egypt (Cleopatra's asp); cerastes or horned viper, also of Egypt, and the pseudechis porphyriacus (black snake) of Australia, hoplocephalus curtus (tiger snake) from the same country, bothrops lanceolatus (fer de lance) of Martinique, and crotalus durissus (rattlesnake) of North America.

Composition of Snake Venom.

Venom, which is always collected from a fasting snake, is a clear limpid fluid resembling white of egg in consistence but of a light yellow colour; it is acid in reaction, and has a specific gravity of 1050. The average yield is from 2 to 3 c.cm. according to the size of the snake. A good-sized cobra yields from 30 to 45 mg. of dried venom. The venom is dried at a temperature of 16° to 20° C. in a desiccator over calcium chloride, and when dry has the appearance of gum arabic. If thoroughly dried and kept in well-corked bottles it preserves its toxic properties indefinitely. The composition of venom has been investigated by Dr. C. J. Martin, who finds that it consists of coagulable and non-coagulable proteids, and that the coagulable proteids may be regarded as albumoses rather than as globulins, the albumoses being hetero-albumose, proto-albumose, and deutero-albumose.

Snake venom is not a simple poison but is composed of at least two distinct poisons, one of these, the one which has the power of producing hæmorrhagic extravasation and intravascular clotting is destroyed by heating[2] a solution to 85° C. But there is another, or others, not destroyed by a temperature close to 100° C. If a solution of venom be heated to a temperature of 102° C. for twenty minutes all toxicity is completely destroyed. Dr. C. J. Martin states that if the fluid be filtered after precipitation of the albumen by heat varying between 70° and 95° C., and the filtrate dialysed in a current of sterile distilled water, the venom thus freed from albumin and deprived of its salts still contains a substance in the dialyse which when dried rapidly *in vacuo* consists of a brown amorphous powder forty times more toxic than normal desiccated venom, and which, moreover, kills in a manner which shows all the classical symptoms[3] of snake poisoning. The analogy existing between the toxic albumoses produced by bacilli and those produced by the epithelial cell of the venom glands of snakes has been shown by Dr. Sidney Martin. The experiments of M. Calmette and Delearde[4] show that the blood of animals immunised against abrine is antitoxic for the venom of serpents as well as against ricine and diphtherial toxins,[5] so that the production of immunity against snake-bites is quite as feasible as against these vegetable toxins. M. Calmette has shown that the only reliable chemical reagents are solutions of hypochlorite of lime 1 in 60, freshly prepared, containing 80 per cent. of available chlorine, or else 1 per cent. solution of gold chloride. Both of these reagents injected into the tissues immediately around the wound are capable of destroying any venom with which they come in contact. *In vitro* potassium permanganate can exert the same power, but in contact with the tissues of the body this power is speedily lost, therefore permanganate is not of any practical value. It throws down a dark precipitate of albumin when mixed with a solution of venom. Permanganate mixed with venom solution which has been previously heated to 80° C. and freed from albumin by filtration still throws down a precipitate which when dried consists of a brownish powder.[6] Ammonia, alcohol, chloroform, and mercury perchloride all precipitate the albuminous bodies from venom, but these precipitates are capable of being redissolved in water or in excess of the reagent, and are as toxic as pure venom.

Symptoms of Snake Poisoning.

These vary with the species of snake concerned, the local effects being slight in some cases and grave in others.

Cobra Bite.—The symptoms are swelling of the part with intense pain and redness. The swelling extends towards the body; there is intense congestion, and the patient becomes drowsy or faint, suffers from vertigo, great weakness of the legs, profuse salivation, and loss of speech, but still appears to be conscious. There is dimness of sight, an aspect of extreme anxiety, nausea, vomiting, feeble pulse, and laboured breathing. The patient lies on his back, the respiratory efforts grow feebler, then the breathing ceases. Convulsions due to asphyxia follow, and lastly the heart ceases to beat, respiration stopping before the heart. Until respiration ceases the pupils are somewhat contracted, but respond to light.

Rattlesnake Bite.—There is considerable pain and swelling at the seat of the wound, and the local injuries have to be reckoned with, even after the general symptoms have ceased to cause anxiety.

Indian Viperine Snakes.—Bloody discharges from the rectum and other orifices of the body are very noticeable symptoms and ecchymoses occur in various organs; albuminuria is observed during recovery, which is never the case with cobra poisoning. Another distinct feature is that the pupils are always dilated and insensible to light.

Treatment.

Ammonia.

Professor Halford's method consisted in injecting 10 or 20 drops of the strongest ammonia, mixed with 20 drops of water into the jugular or median vein, a method which Dr. Lauder Brunton long ago pointed out was powerless to protect the victims of the very venomous snakes. Frank Buckland was a great believer in ammonia as a remedy for snake-bites, but Calmette discourages the use of either alcohol or ammonia, which he says only do harm.

Strychnine.

Dr. Mueller, in Australia, injected strychnine hypodermically in all cases of snake-bites until the physiological action of the drug was manifest. Dr. L. Ralston Huxtable,[7] of Sydney, N.S.W., at the Intercolonial Medical Congress of Australia, Sydney, in September, 1892, gave statistics of 426 cases of snake-bites as follows:

—	Number.	Deaths.	Mortality.
Cases treated by strychnine...	113	15	13.2
Cases treated otherwise ...	313	13	1.4

Calmette's Serum.

M. Calmette, in February, 1894, gave an account of the treatment of snake-bites by means of the serum of an animal immunised against cobra venom, and also against that of a viper, and against that of the Australian tiger snake. Experiments were first conducted by producing immunity in rabbits by the injection of gradually increasing doses of venom, commencing with a dose well under the lethal; and, finally, injecting doses many times the

lethal. The method of producing the serum is as follows: A solution is first made from the dried venom of three distinct species of snakes, viperine and colubrine (crotalus durissus, bothrops lanceolatus, and naja tripudians), 3 grams of dried venom, the estimated cost of which is £6 sterling, are dissolved in 300 c.cm. of distilled water, the solution is effected by frequent agitation in a flask during a period of twenty-four hours, the solution during the intervals being kept in a dark cupboard. After this it is placed in three flasks with flattened sides and heated for thirty minutes in a water bath, the temperature of which is kept at 72° C. by means of a Roux's regulator. Heating to 72° C. coagulates the albumin, which falls down as a flocculent white precipitate, which is removed by filtration through filter papers. In all experiments hereinafter mentioned solutions of mixed venom prepared in this way were employed, namely, 1 in 100 for injecting into all animals except guinea-pigs, for which 1 in 1,000 was used.

The horses employed for the production of antivenomous serum are strong, young, healthy cart horses kept in stables hygienically perfect. All horses employed must be proved to be free from glanders by giving a negative reaction with the mallein test. The neck is washed with carbolic lotion. Half a milligramme of venom (that is $\frac{1}{2}$ c.cm. of 1 in 100 solution) is injected into the subcutaneous tissue just in front of the shoulder. An abscess follows in a few days; it is opened and dressed with antiseptic lotions. After fifteen days, if the abscess has healed, 1 mg. (that is, 1 c.cm. of solution), is injected, and at the end of another fortnight 2 mg. are injected. The dose is increased from time to time, so that after one year the horse can resist 0.5 gram (that is, 50 c.cm. of solution) when injected subcutaneously, a dose which would suffice to kill twenty-five horses not previously immunised. After sixteen months of this treatment the horse should be sufficiently immunised to yield a valuable serum, and after two or three years it is immunised to the extent of being able to resist a dose of 1 gram (100 c.cm. of solution). When this state is reached the serum is said to have the strength of 200,000 units according to Roux's notation, that is to say, that if a rabbit be injected with a dose of serum equal to $\frac{1}{200000}$ of its weight, it will resist a dose of venom capable of killing the same weight of rabbit in twelve hours; 1 c.cm. of antivenomous serum injected intravenously should protect a rabbit against a dose of venom calculated to kill a similar but unprotected animal in twenty minutes. Immunity produced by repeated injections of venom is comparatively evanescent, so that horses after they have been brought up to the maximum degree of resistance must be injected every two or three months with 1 gram of dried venom (100 c.cm. of solution). When employing large doses of solution of venom for horses, a wide-mouthed bottle is used, having a rubber cork perforated for two tubes which are arranged as in a wash bottle, the short tube is connected with a Higginson's syringe, the longer one which reaches to the bottom of the bottle is connected with a rubber tube terminating in a metal cannula which is introduced into the subcutaneous tissue of the neck in the situation already described, the solution being injected by bringing the syringe into play.

The method of bleeding the horses is similar to that employed in obtaining antidiphtherial and other serums. The serum, after being allowed to separate in a dark cool room for twenty-four hours is syphoned off into 10 c.cm. bottles fitted with rubber corks and caps; sterilisation is effected by heating to 60° C. in a water bath for one hour on three successive days. This temperature is sufficient to destroy any micro-organisms which might possibly have gained access to the serum during collection, but is insufficient to interfere with its protective power.

It is important to note that a temperature of 60° C. does not in any way impair its protective value, as this is a higher temperature (140° F.) than would ever be met with in the shade anywhere. The antitoxic value and also the superiority of intravenous over other modes of injection are clearly shown in the experiments which were performed by Major D. Semple, R.A.M.C., Major R. W. S. Lyons, I.M.S., and myself.

EXPERIMENTS.

SERIES I.

Three rabbits injected intravenously with $\frac{1}{10}$ c.cm. of venin, 1 per cent. solution. One control and two receiving serum as stated.

No.	Animal.	Weight.	Substance Injected.	Result.	Remarks.
1	Rabbit	Full-grown	$\frac{1}{10}$ c.cm. venin	Died in 19 minutes	Control.
2	,,	Kilo 1.97	1 c.cm. antivenene serum, followed in 5 minutes by $\frac{1}{10}$ c.cm. venin	Recovered.	At first dull for a few minutes, but quite well and eating after 20 minutes.
3	,,	Full-grown	$\frac{1}{10}$ c.cm. venin, followed in 2 minutes by 2 c.cm. antivenene serum	,,	—

This series shows very clearly the therapeutic value of the antivenene when injected intravenously.

SERIES II.

These three rabbits were injected on October 5th, 1898, with antivenene serum, and after 48 hours each received $\frac{5}{10}$ c.cm. of venin, 1 per cent. solution, hypodermically.

No.	Weight.	Substance Injected and Dose.	Method.	Result.	Remarks.
1	Kilos 1.87	1 c.cm. antivenene serum on October 5th, and $\frac{5}{10}$ c.cm. venin on October 7th	Hypodermically	Died in 1 hour 17 minutes	The dose of serum in this case was too small; the animal began to be sick at 4.17, and died at 4.25.
2	Kilos 2.15	5 c.cm. antivenene serum on October 5th, and $\frac{5}{10}$ c.cm. venin on October 7th	,,	Recovered	—
3	Kilos 2.12	10 c.cm. antivenene serum on October 5th, and $\frac{5}{10}$ c.cm. venin on October 7th	,,	,,	—

This series shows that if a sufficient quantity of serum be injected subcutaneously before the venin, the animal is able to resist a very large dose of venin.

SERIES III.

To determine the lethal dose of venin which is required to kill (*a*) rabbits, (*b*) guinea-pigs in two hours approximately.

No.	Animal.	Weight in Kilos.	Substance Inoculated and Dose.	Method of Inoculation.	Result.	Date of Inoculation.
1	Rabbit	1.07	$\frac{2}{10}$ c.cm. venin (1 per cent. solution)	Hypodermically.	Died in 6 hours 2 minutes	October 5th.
2	,,	1.95	$\frac{6}{10}$ c.cm. venin (1 per cent. solution)	,,	Died in 1 hour 47 minutes	,,
3	Guinea-pig	0.47	$\frac{3}{10}$ c.cm. venin (1 in 1,000)	,,	Died in 6 hours 42 minutes	,,
4	,,	0.5	$\frac{5}{10}$ c.cm. venin (1 in 1,000)	,,	Died in 4 hours 12 minutes	,,
5	,,	0.53	$\frac{7}{10}$ c.cm. venin (1 in 1,000)	,,	Died in 3 hours 25 minutes	October 6th.
6	,,	0.50	1 c.cm. venin (1 in 1,000)	,,	Died in 3 hours 22 minutes	,,

The lethal dose requiring approximately 2 hours for rabbits is thus seen to be $\frac{2}{10}$ c.cm. of a 1 in 100 solution of venin. The lethal dose requiring approximately 2 hours for guinea-pigs was taken to be 1 c.cm. of a solution of venin 1 in 1,000; subsequent experiments showed that as a rule 1 c.cm. of venin, 1 in 1,000, when injected hypodermically caused death in 2 hours.

SERIES IV.

These rabbits were injected hypodermically with $\frac{1}{10}$ c.m. venin 1 in 100, and after intervals of 15 minutes, 30 minutes, 45 minutes, and 60 minutes with antivenene serum as follows:

No.	Animal.	Weight in Kilos.	Substance Inoculated and Dose.	Method.	Result.
1	Rabbit	1.92	2 c.cm. antivenene serum 15 minutes after the venin	Hypodermically	Died in 2 hours 7 minutes.
2	,,	1.91	5 c.cm. antivenene serum 30 minutes after the venin	,,	Died during the night.
3	,,	2.07	7 c.cm. antivenene serum 45 minutes after the venin	,,	Died in 2 hours 17 minutes.
4	,,	2.10	10 c.cm. antivenene serum 60 minutes after the venin	,,	Died in 1 hour 53 minutes.

In these cases the venin was sufficient to cause death in 1 hour 47 minutes, and 2 c.cm. serum subcutaneously 15 minutes, 5 c.cm. serum subcutaneously 30 minutes, 7 c.cm. serum subcutaneously 45 minutes, and 10 c.cm. serum subcutaneously 60 minutes were unable to prevent death. If we employ a dose of venin $\frac{2}{100}$ c.cm. (1 in 100) which when injected subcutaneously causes death in from 4 to 6 hours (as shown, Series III experiments) the majority can be saved by injecting 10 c.cm. serum subcutaneously from 15 minutes to 30 minutes after the venin, but if we only inject subcutaneously from 2 to 10 c.cm. of serum, 15 minutes, 30 minutes, or 45 minutes after the venin, all will die.

By these experiments we learn that the surest method of saving life is to inject serum intravenously.

SERIES V.

Five rabbits and five guinea-pigs, two being left as controls, were each inoculated hypodermically, with, in the case of rabbits, $\frac{5}{100}$ c.cm. venin (1 in 100), in the case of guinea-pigs 1 c.cm. venin (1 in 1,000), and after intervals of 15, 30, 45, and 60 minutes they were injected with graduated doses of antivenene serum as follows:

No.	Animal.	Weight in Kilos.	Substance Inoculated and Dose.	Method of Inoculation.	Result.
1	Rabbit	2.02	$\frac{5}{100}$ c.cm. venin (1 in 100)	Hypodermically	Died in control, 3 hours 5 minutes
2	,,	2.37	Do. + 5 c.cm. antivenene serum 15 minutes after the venin	,,	Found dead after 2 hours 15 minutes.
3	,,	1.97	Do. + 10 c.cm. antivenene serum 30 minutes after the venin	,,	Died in 4 hours 53 minutes.
4	,,	2.51	Do. + 15 c.cm. antivenene serum 45 minutes after the venin	,,	Found dead after 2 hours 15 minutes.
5	,,	2.16	Do. + 20 c.cm. antivenene serum 60 minutes after the venin	,,	Found dead after 2 hours 15 minutes.
6	Guinea-pig	0.52	1 c.cm. venin (1 in 1,000)	,,	Died in control, 1 hour 19 minutes.
7	,,	0.56	Do. + 1 c.cm. antivenene serum 15 minutes after the venin	,,	Found dead after 2 hours 15 minutes.
8	,,	0.50	Do. + 3 c.cm. antivenene serum 30 minutes after the venin	,,	Found dead after 2 hours 15 minutes.
9	,,	0.50	Do. + 5 c.cm. antivenene serum 45 minutes after the venin	,,	Died in 2 hours 34 minutes.
10	,,	0.62	Do. + 10 c.cm. antivenene serum 60 minutes after the venin	,,	Found dead after 2 hours 15 minutes.

Series V, which showed no survivals, was at first thought to have been due to an error of the porter, who had possibly brought antidiphtherial or other serum instead of antivenene, but the two following experiments performed by M. Guérin in our presence showed conclusively that no such mistake had occurred, and merely served to accentuate the importance of treating snake-bite poisoning by intravenous injections of the serum:

1	Rabbit	Full grown	1 c.cm. serum intravenously, and after 2 minutes $\frac{2}{5}$ c.cm. venin (1 in 100) injected intravenously into the opposite ear	It survived, and was perfectly well afterwards.
2	,,	,,	1 c.cm. serum intravenously, and after 5 minutes $\frac{2}{5}$ c.cm. venin (1 in 100) injected intravenously into the opposite ear	It survived, and was perfectly well afterwards.

The dose of venin, $\frac{2}{5}$ c.cm. (1 in 100) intravenously would have caused death in 20 minutes if serum had not been injected.

SERIES VI.

Five rabbits were inoculated hypodermically with $\frac{5}{100}$ c.cm. venin 1 in 100. Then after intervals of 15 minutes, 30 minutes, 45 minutes, and 60 minutes with graduated doses of antivenene serum intravenously as below.

No.	Animal.	Weight in Kilos.	Substance Inoculated and Dose.	Mode of Inoculation.	Result.
1	Rabbit	1.6	1 c.cm. antivenene serum injected 15 minutes after the venin	Intravenously	Died in 4 hours 4 minutes.
2	,,	2.08	2 c.cm. antivenene serum injected 30 minutes after the venin	,,	Survived.
3	,,	1.89	5 c.cm. antivenene serum injected 45 minutes after the venin	,,	,,
4	,,	2.04	5 c.cm. antivenene serum injected 60 minutes after the venin	,,	,,
5	,,	1.85	$\frac{5}{100}$ c.cm. venin only as a control	,,	Died during the night.

This series shows that even after an interval of 60 minutes, a comparatively small dose of serum injected intravenously is capable of protecting a sensitive animal like the rabbit.

SERIES VII.

Three rabbits inoculated intravenously with $\frac{5}{100}$ c.cm. of venin 1 in 100, mixed with gradually-increased doses of antivenene serum.

No.	Animal.	Weight in Kilos.	Substance Inoculated and Dose.	Mode of Inoculation.	Result.
1	Rabbit	2.25	$\frac{5}{100}$ c.cm. venin (1 in 100) $\frac{1}{2}$ c.cm. antivenene serum mixed in vitro	Intravenously	Died in 18 minutes.
2	,,	1.98	$\frac{5}{100}$ c.cm. venin (1 in 100) $\frac{1}{2}$ c.cm. antivenene serum mixed in vitro	,,	Died in 26 minutes.
3	,,	2.3	$\frac{5}{100}$ c.cm. venin (1 in 100) 1 c.cm. antivenene serum mixed *in vitro*	,,	Died in 29 minutes.

SERIES IX.

Three rabbits (one control) were injected intracranially as below.

No.	Animal.	Weight in Kilos.	Substance Inoculated and Dose.	Method of Inoculation.	Result.
1	Rabbit	Full-grown	$\frac{5}{100}$ c.cm. venin; 1 in 100	Injected into the left side of brain	Died in 55 minutes.
2	,,	,,	$\frac{5}{100}$ c.cm. venin, and 1 c.cm. antivenene serum (mixed in vitro)	,,	Survived.
3	,,	,,	1 c.cm. antivenene serum injected into brain, $\frac{5}{100}$ c.cm. venin hypodermically	—	Died in 20 hours.

1. Experiment shows that death from a lethal dose which kills in 25 minutes when injected intravenously takes 55 minutes when injected into the brain.

2. Experiment shows that when a mixture prepared in vitro is injected into the brain in the proportion of 1 venin to 5 serum, the dose of venin being $\frac{2}{100}$ c.cm. of 1 in 100 solution, that the animal survives.

3. Experiment shows that when antivenomous serum is injected into the brain and venin hypodermically that it kills after a considerable delay (20 hours or thereabouts), whilst if the same mixture be injected intravenously that the animal survives, so that if the serum is to exert a protective action it must come in contact with the leucocytes and not with the nervous elements directly as in the treatment of tetanus.

SERIES VIII.

Eight rabbits, two of which were controls. Of the controls one was injected hypodermically and the other intravenously. Three rabbits received serum after fifteen minutes, thirty minutes, and one hour, and three received a mixture of venin and serum in the proportion of 1 in 5, but in varying amounts.

No.	Animal.	Weight in Kilos.	Substance Inoculated.	Method.	Result.
1	Rabbit (control)	2.01	$\frac{1}{10}$ c.cm. venin (1 in 100)	Hypodermically	Died in 3 hours.
2	Rabbit (control)	2 03	$\frac{2}{10}$ c.cm. venin (1 in 100)	Intravenously	Died in 25 minutes.
3	Rabbit	2.06	$\frac{2}{10}$ c.cm. venin (1 per cent.), followed after 15 minutes by 5 c.cm. antivenene serum	Hypodermically	Died in 5 hours 2 minutes.
4	,,	2.05	$\frac{2}{10}$ c.cm. venin (1 per cent.), followed after 30 minutes by 10 c.cm. antivenene serum	,,	Survived.
5	,,	1.92	$\frac{2}{10}$ c.cm. venin (1 per cent.), followed after 60 minutes by 10 c.cm. antivenene serum	,,	Died in 4 hours 18 minutes.
6	,,	1.97	$\frac{2}{10}$ c.cm. venin (1 per cent.), 1 c.cm. antivenene serum (mixed in vitro)	Intravenously	Survived.
7	,,	2.06	$\frac{4}{10}$ c.cm. venin (1 per cent.), 1 c.cm. antivenene serum (mixed in vitro)	,,	Died in 2 hours 55 minutes.
8	,,	2.1	1 c.cm. venin (1 per cent.), 5 c.cm. antivenene serum (mixed in vitro)		Died in 33 minutes.

In this series we see that the same dose of poison kills about seven times as quickly when injected intravenously as it does when injected beneath the skin. That 5 c.cm. of antivenene serum fifteen minutes after the venin cannot protect, and that 10 cc.m. thirty minutes after the venin does, and that if sixty minutes be allowed to elapse the injection of serum must be made intravenously.

In the experiments, with a mixture in the proportion of 5 of serum to 1 of venin in the smaller amount, where $\frac{2}{10}$ ccm. venin was used, the animal resists, but where the same proportion is maintained, but with larger quantities the animal dies in Experiment 7 after considerable retardation, and in No. 8 after practically no delay.

SERIES X.

To show that the process of sterilisation employed in the preparation o fthe serum does not impair its protective power.

A. Serum not heated.

B. Serum heated for 1 hour at 60° C.

C. One control to show the value of the venin.

A. Series.—Serum not heated.

No.	Animal.	Weight in Kilos.	Substance and Dose.	Method.	Result.
1	Rabbit	2.12	$\frac{2}{10}$ c.cm. venin, 1 c.cm. antivenene serum (mixed *in vitro*)	Intravenously	Survived.
2	,,	2.06	1 c.cm. antivenene serum injected into left ear, after 5 minutes $\frac{2}{10}$ c.cm. venin injected into the right ear.	,,	,,

C. Control.

No.	Animal.	Weight.	Substance.	Method.	Result.
1	Rabbit.	2.2	$\frac{2}{10}$ c.cm. venin, 1 in 100	Intravenously	Died in 35 minutes.

B. Series.—Serum heated to 60° C. for 1 hour.

No.	Animal.	Weight in Kilos.	Substance and Dose.	Method.	Result.
1	Rabbit	2.15	$\frac{2}{10}$ c.cm. venin, 1 c.cm. antivenene serum (mixed *in vitro*)	Intravenously	Survived.
2	,,	2.05	1 c.cm antivenene serum injected into left ear after 5 minutes $\frac{2}{10}$ c.cm. venin injected into the right ear	,,	,,

SERIES XI.

Two dogs were injected on the inner side of the right thigh with a dose of venin calculated to kill a dog weighing 8 to 11 kilos in 6 to 7 hours, namely, $\frac{1}{10}$ c.cm. venin, 1 in 100. One was left as a control, and the other received 10 c.cm. of antivenomous serum one hour after the venin.

No.	Animal.	Weight. Kilos.	Substance.	Method.	Result.
1	Dog (control) (terrier bitch)	5	$\frac{1}{10}$ c.cm. venin, 1 in 100	Hypodermically	Died in 4 hrs.
2	Dog (Species of poodle)	6	$\frac{1}{10}$ c.cm. venin, 1 in 100; after 1 hour 10 c.cm. antivenene serum.	,,	,,

On October 10th M. Guérin had injected a dog weighing 8 kilos. with $\frac{2}{10}$ c.cm. of 1 in 100 venin, and after 3 hours 20 c.cm. of serum hypodermically. It did not die.

As has been stated elsewhere, the sensibility of animals varies considerably, some being much more resistant to the poison than others. In the two examples of Series XI., the dogs received too large a dose of venin for their weight, as they both died two or three hours before the time anticipated.

SERIES XII.

Three dogs each received $\frac{1}{10}$ c.cm. of 1 in 100 solution of venin calculated to cause death in 6 to 7 hours, given hypodermically, and aftervals of 1 hour, 2 hours, and three hours received hypodermically 10 c.cm. of serum respectively, serum and venin given subcutaneously, in inner side of thigh

No.	Animal.	Weight in Kilos.	Antivenene Serum.	Result
1	Terrier dog.	10	10 c.cm. 1 hour after the venin.	Survived.
2	Terrier dog.	8	10 c.cm. 2 hours after the venin.	Survived.
3	Small sheep dog.	12	20 c.cm. 3 hours after the venin.	Survived.

This series showed very well that when in an animal sufficiently resistant like the dog, one injects a dose of venin calculated to cause death in 6 or 7 hours, that if we inject serum even subcutaneously in amounts 10 c.cm. one or two hours after the venin, or 20 c.cm. three hours after the venin, that it will survive.

These experiments also show that the larger the animal the greater the resistance, thus: guinea-pigs, rabbits, dogs. One gram of serum per kilo is sufficient to preserve a dog alive after receiving a dose of venin calculated to kill in 6 or 7 hours. The rabbit requires at least 5 grams per kilo, whereas in the guinea-pig, which is still less resistant, even 20 grams of serum per kilo failed to prevent death after receiving a dose of venin 1 c.cm. of 1 in 1,000, calculated to cause death in 2 hours when injected subcutaneously; so that assuming from analogy that man must be considerably more resistant than a dog, 10 c.cm., or at the most 20 c.cm. of antivenene should suffice to prevent death, if given within from 1 hour to 3 hours after the receipt of the bite.

MODE OF ACTION OF ANTIVENENE.

The manner in which antivenene acts has been the subject

of much investigation. M. Calmette maintains that the action is not a chemical but a physiological process in which the white blood corpuscles are stimulated to carry on intracellular digestion which he regards as a variety of phagocytosis. M. Calmette considers that the venom is destroyed only within the leucocytes, and that if the amount of serum injected before, with, or after the venom has been sufficient to impregnate the leucocytes so that they can carry on this process of digestion, the animals will resist doses of venom which would otherwise cause death. The evidence in support of this assertion is that if exudation containing leucocytes from the peritoneal cavity of an animal vaccinated with antivenene be centrifugalised the seat of the digestive power is found to be in the leucocytes separated out from the plasma, since the leucocytes possess in a marked degree antitoxic, that is to say, digestive power, whereas the plasma is practically inert. M. Calmette mixed a lethal dose of venom with a corresponding dose of serum *in vitro*, and this mixture injected into an animal had no ill effects, but if the same admixture were treated to 68°C. (a temperature which is insufficient to destroy the toxicity of venom, but sufficient to render the serum inert) the animal died. Martin and Cherry,[8] however, have shown that if antivenomous serum and venom be mixed *in vitro* and left in contact at a temperature of 23° C. for twenty minutes and then heated to 68° C. for ten minutes in order to destroy the antitoxic power of the serum, the animal survives. This proves that the element of time is important and that if we give the serum sufficient time to act it is not essential for the destruction of the venom to be effected *in corpore*, as Calmette asserted.

In support of the physiological explanation of the action of the serum, M. Calmette adduces the fact that the bile[9] of various animals has a digestive power over venom when mixed with it *in vitro*, a power which it exercises equally well over various toxins. Bile warmed to 80° C., or even 100° C., is still active, though to a much less extent; warmed to 120° C. it no longer destroys venom or toxins if it have been filtered to remove substances precipitated by heat, nor has fresh bile any protective action if given even in large doses twenty-four hours before the venom. Calmette therefore concludes that the antitoxic action of bile is not a true antitoxic action against snake venom, but acts simply by stimulation of the leucocytes, which is a power many substances possess, and is extremely transitory. On the other hand, Calmette states that antivenene injected twenty-four hours beforehand enables the new leucocytes to perform their digestive functions, and so protect the animal.

Dose.

The dose of serum required to protect a man against a lethal dose of the most deadly venom is from 10 to 20 c.cm., but additional security would be afforded in severe cases by increasing the dose to 30 c.cm. or even 40 c.cm. No ill effects attend the injection of the serum, which acts most surely and quickly when injected intravenously. That 10 or 20 c.cm. should be sufficient has been shown by experiments conducted by Major D. Semple, R.A.M.C., and Captain Lamb, I.M.S.,[11] to determine how much venom an animal is capable of actually disposing of by determining the maximum non-lethal dose and then giving a lethal dose with antivenomous serum to balance reckoning 1 c.cm. of venom serum as being able to neutralise 1 millegramme of dried venom. These experiments, together with the observations of Calmette in regard to the varying resistance of animals (the larger the animal the greater its resistance to venom) and Fayrer's statistics, which show that only 25 per cent. of those bitten by venomous snakes in India die and that these deaths as a rule usually occur in from six to twelve hours, all point to the fact that, weight for weight, man must be more resistant than a rabbit, and consequently 10 c.cm., or certainly 20 c.cm., should, without doubt, afford certain protection against a bite from any of the most poisonous snakes known.

In conclusion, I would point out that M. Calmette[12] advises no relaxation of the ordinary mode of treatment adopted in cases of snake bite, such as ligature, and advises as an additional precaution injections of calcium hypochlorite or gold chloride into and around the seat of the bite in the manner already mentioned.

Bibliography.

[1] *Thanatophidia of India*, Fayrer, 2nd edition. [2] British Medical Journal, October 15th, 1898, p. 1123, and Allbutt's *System of Medicine*, vol. ii, p. 814. [3] *Le Venin des Serpents*, Calmette, 1896, p. 34. [4] *Annales de l'Institut Pasteur*, vol. vi, 1896. [5] Allbutt's *System of Medicine*, vol. ii, 1897, p. 813. [6] *Le Venin des Serpents*, Calmette, p. 31. [7] Report of the Army Medical Department for 1882, p. 301. [8] *Transactions* of Third Session Intercolonial Medical Congress, 1892, p. 152. [9] Immunisation contre les Venins, *Annales de l'Institut Pasteur*, Tome xii, 1898, pp. 343-48. [10] British Medical Journal, October 15th, 1898, p. 1121. [11] *Ibid.*, April 1st, 1899. [12] Sur le Mécanisme de l'Immunisation contre les Venins, *Annales de l'Institut Pasteur*, Tome xii, 1898.

Discussion.

Mr. D. C. Rees, M.R.C.S. (London) said he could confirm Surgeon Andrews's statement as to the intravascular clotting of a venin toxin. In the only two fatal cases he had seen in Nigeria both had marked thrombosis of all the large veins of the limb which had been bitten.

Professor K. Macleod, M.D. (Netley), observed that it was an interesting physiological and valuable practical fact that it was only the excess of snake poison in the blood that had to be dealt with. The fluids of the body could themselves deal with and neutralise a certain amount of the venom of snakes, and as only the excess had to be dealt with, a smaller dose than experiment would seem to indicate was all that was required.

SECRET COMMISSIONS AND THE MEDICAL PROFESSION.

The following letters appeared in the *Times* of September 2nd, 6th, and 7th:

Sir,—I crave your permission once more to address you on the subject of secret commissions, and this time with reference to the attitude assumed on the question by an important body connected with the medical profession.

In the report of the committee of the London Chamber of Commerce on secret commissions they expressed the conclusion that such commissions are prevalent in almost all professions to a great extent; and with regard to the medical profession they published the statement of a pharmaceutical chemist that "secret commissions are given by chemists to medical men on their prescriptions supplied to patients, in some cases amounting to from 25 to 50 per cent. on the price charged by the dispensing chemist," and the allegation of an optician, jeweller, and silversmith of 50 years' experience that "it is an open secret that hospital doctors receive commissions from makers of surgical instruments."

The Council of the British Medical Association took notice of these allegations, and passed a resolution calling upon the Chamber of Commerce to substantiate the accusation—a demand not very likely to be complied with beyond the evidence stated in the report, as the committee had confessed that most of the communications "were received under a promise that they should be treated as strictly private and confidential." After some correspondence the Council of the Association reported to the annual meeting held this month that, in their opinion, such charges should not have been made public unless the Chamber was in a position to substantiate them.

At the annual meeting of the Association, held on the 1st inst., Dr. Saundby, the President of the Council, referred to the subject, and stated that "inquiries had been made which resulted in their hearing that presents had occasionally been offered for various services after the event; but there was no case in which a commission was offered to a person if he would do a certain thing. Cheques had been given to medical men to recompense them for what was supposed to be a good turn, but these cheques had always been returned." It would be satisfactory to know much more about these inquiries than was disclosed by Dr. Saundby. By whom were they conducted, and how? Were inquiries made of the pharmaceutical chemists, and of how many? Have the opticians and instrument makers been approached in such a way as to induce a full disclosure? Were inquiries made of medical men, and of how many? To give any value to the negative conclusion on which the President of the Council relied, the inquiry must have been, if not absolutely exhaustive, at least very wide, general, and thorough.

But the President of the Council is not content with his conclusion of fact; he enters upon the morals of the question, and suggests that the acceptance of a commission on work done is either innocent or less immoral than the acceptance of a like favour for work to be done. He seems to suggest that whilst it would be (or, perhaps, I should say might be) improper to receive a commission on prescriptions to be written, it is permissible to receive it on prescriptions after they are made up; and yet one sees in an instant that the expectation of a payment at Christmas will act as forcibly on the practitioner as a previous payment or previous promise. If Dr. Saundby does not mean to defend such payments "after the event," why does he dwell upon the distinction? If he does mean to defend them, has he not grievously injured the honour of a noble profession?

Can we, as we all gladly should, rely on the sufficiency of the inquiry referred to? I fear not. In your issue of August 9th, 1893, you reported a case before Mr. (now Lord) Justice Vaughan Williams—"*In re* Macdonald, Sons, and Company (Limited)." The company was formed to acquire and carry on the business of medicated wine manufacturers, and part of the consideration to be paid by the company to the vendors of the business consisted of forty "founders' shares" of £25 each to be allotted as fully paid to persons named by the vendors. The company entered upon "negotiations with various medical men to induce them to prescribe and recommend to their patients and tradesmen the goods dealt with by the company, promising to each doctor who undertook thus to recommend the company's wares a fully-paid founders' share." Whether

the whole 40 shares were allotted or not does not appear, but a considerable number certainly were, and the recipients combined together and made an application to the judge to be relieved from paying anything on their shares in the liquidation of the company. The judge acceded to their application, but justly observed that "it was a sad thing that members of a learned profession should have consented to take shares on those terms." In your leader on this case of the same date you pointed out how desirable it was that the names of the doctors who had accepted shares should be made known, in the interest alike of the public and of rest of the medical profession. You said: "It seems to us that the case is eminently one which calls for the interference of the medical authorities. The Medical Council, the College of Physicians, the College of Surgeons, the Society of Apothecaries, and the various cognate bodies have many privileges, and in return they have the responsibility of maintaining the honour of a great profession..... It is certain that they have a *locus standi* in the case, and that there would be no difficulty in their discovering the identity of the delinquents. We hope to hear without loss of time that they have taken steps to do so."

I believe (I shall be glad to be corrected if I am in error) that no step has been taken by any of the bodies to whom you made this forcible appeal to discover the delinquents or to relieve the whole profession from the stain cast upon them. This is strange; I think even lamentable. But this case is very important as bearing on the statement of the President of the Council of the British Medical Association. Here is a case attracting public notice and of a very flagrant description, but it never reaches the knowledge of those who made the inquiries for the Association; it is a case which I should have thought would have touched the feelings, as it certainly touched the honour, of the profession, and yet no notice is taken of it by the Association or, I believe, any other medical body; it is a case in which the payment is made, not after, but before the event; it is a case in which no cheque is returned, but, on the contrary, some thirty or forty medical men have the hardihood to insist on the bargain of which they ought to have been ashamed.

When the Lord Chief Justice brought into the House of Lords his Bill on corrupt payments, a Glasgow paper (the *Glasgow Evening Citizen*) made some local inquiries in respect of various trades and professions in that city; and they reported the statement of "a prominent member of the drug trade." "In Glasgow," he said, "it is a very common thing for doctors to insist on a commission on all prescriptions sent to the druggist," and the same paper cited a letter from a "dispensing chemist," giving the terms of a contract to this effect which he entered into with a young doctor, under which the charges were to be excess of ordinary dispensing charges and the doctor was to receive 30 to 40 per cent. on the net profits. In addition to these public statements, I may mention that I have received communications from more than one person confirmatory of the existence of the practice.

One more observation occurs. The charge has publicly been made. Has it been denied by anyone acquainted with the profession of medicine or the trade of a chemist? So far as I know there has been no such denial. It may be said that no one can speak for his fellows; but that is only partially true. If the Chamber of Commerce had charged the judges of England with the receipt of bribes I should have said that I had never received one; that no one had offered me one; that I had an intimate knowledge of many judges, and that, to the best of my belief, all English judges were as innocent of the charge as myself. But here I have seen nothing of the sort. The Council of the Association do not pledge their belief in the falsity of the statement made by the Chamber of Commerce; the Chairman of the Council does not say that he has reason to believe that the whole charge is false.

When on September 26th, 1896, you permitted me to address you on the subject of secret commissions, I adduced two cases which suggested that occasionally commissions were paid by undertakers to doctors. I still believe that the practice must be rare: but I am forced to believe that such things occasionally occur. "Probably," wrote the *Lancet*, "most medical men have had offers some time or another, generally upon their starting practice, from enterprising undertakers, which offers have, in *the usual way*, been consigned to the waste-paper basket." The italics are mine. "It cannot be denied," wrote the *Medical Times*, "that many undertakers seek to attract business by offering commission to medical men for introducing jobs, but I venture to say," adds the writer, "that the instances are very rare indeed where such bribes are accepted." If the offers were never accepted they would cease to be made. A correspondent of the *Birmingham Daily Mail*, under the date of April 24th, 1899, states a case in which he was concerned where it appeared that the doctor had received 10 per cent. on the undertaker's bill of £80. Furthermore, the undertakers have met in council on Lord Russell's Bill, and aver that demands for commission are made on them by medical men, and that sometimes this is paid by the undertaker providing the doctor with a brougham to carry him on his rounds. Last, and not least, a paper which purports to represent the undertakers' trade says: "Unfortunately the charge is, or has been, true even amongst some of the heads of the trade or profession we represent." I cannot entirely disbelieve all these allegations. For these reasons I am not sure that the inquiry of which Dr. Saundby speaks is more satisfactory than his ethical distinction.

Let me not be misunderstood. I make no charge against the medical profession as a whole. I am sure that many of its members are as incapable of taking a secret commision as Her Majesty's Judges are of accepting a bribe. But there is evidence which shows that a noble profession is not untainted in its lower walks by the vice of secret commissions; and I think that it is deeply to be regretted that the Council of the British Medical Association have sought to hamper rather than to help the London Chamber of Commerce in their effort after honesty, and that the President of the Council of that body should have appeared to palliate the receipt of commissions "after the event." I am confident that this does not express the true mind of the profession which I profoundly honour.

I have been surprised at the extent to which the belief exists in the public mind that medical men do receive commissions, and I think that that belief will be strengthened rather than removed by the course taken by the British Medical Association.—Your obedient servant,

Failand, August 26th. EDWARD FRY.

SIR,—In your issue of September 2nd there appears a long letter from Sir Edward Fry, headed "Secret Commissions and the Medical Profession." With that part of the letter which refers to Dr. Saundby I do not propose at present to deal. Dr. Saundby at the moment is in Brussels, officially representing the British Medical Association at an International Conference, and he will, I have no doubt, reply to Sir Edward Fry's letter as it affects himself.

Since the meeting on August 1st Dr. Saundby's tenure of office as President of Council of the British Medical Association has expired. He can, therefore, no longer speak as the official head of the Council. As his successor I desire to refer to one or two points in Sir Edward Fry's letter. Sir Edward Fry is perfectly willing to believe in the existence of "evidence which shows that a noble profession is not untainted in its lower walks by the vice of secret commissions," and he founds this belief largely on the statement of a pharmaceutical chemist, and the allegations of an optician, jeweller, and silversmith of fifty years' experience; but, when dealing with the other side of the question, he refuses to attach any importance to a denial unless it is the result "of an inquiry which must have been, if not absolutely exhaustive, at least very wide, general, and thorough."

Further, Sir Edward states that "the Council of the British Medical Association have sought to hamper rather than to help the London Chamber of Commerce in their effort after honesty."

This is his description of the action of the Council. Let me quote from the report of the Council submitted to the general meeting of the Association at Portsmouth on August 1st, 1899:

"In consequence of charges made in a report of the London Chamber of Commerce against members of the medical profession, the following resolution was passed:

"Resolved, that the attention of the Council has been called to grave general accusations impugning the probity of the medical profession in the matter of receiving secret commissions, and the Council calls upon the London Chamber of Commerce to substantiate such accusations in order that the Council may be in a position, should such practices exist, emphatically to condemn them as a grave breach of professional good conduct, and inconsistent with membership of the British Medical Association."

In my opinion, Sir Edward Fry's description of our action is the reverse of the actual position, and a gross travesty of the facts. We have asked that evidence should be furnished as to the existence of practices which we emphatically and earnestly condemn. That evidence is not forthcoming, and I repeat that general charges of this kind should not have been made unless the Chamber of Commerce was prepared to substantiate them.

That the existence of secret commissions throughout the commercial world generally is a great and a grave scandal every one must admit. That there may be in a body so numerous as the medical profession a member here and there who so far forgets himself as to commit this grave breach of professional propriety no one will be prepared to deny; but that the profession generally deserves the sweeping censure conveyed in Sir Edward Fry's letter I most earnestly repudiate. Not even in "its lower walks" does this system, I most sincerely believe, exist to any appreciable extent. Sir Edward Fry's letter, I fear, betrays considerable animus, and its conclusions are, in my opinion, entirely at variance with the facts.

I am, your obedient servant,
J. ROBERTS THOMSON, President of the Council of the British Medical Association.

429, Strand, W.C.

SIR,—Will you allow me a few lines in which to reply to Sir Edwary Fry? I regret that absence from home prevented my seeing his letter until today. In the first place I wish to say most explicitly that the acceptance of any payment or consideration from a tradesman for recommending his wares is repudiated by the medical profession as a most dishonourable transaction, and that I had no intention of palliating such an acceptance whether before or after the event. But we were accused of receiving commissions in order to induce us to do certain things; and while claiming to have some evidence of a more substantial character laid before us, I pointed out that our inquiries failed to show that anyone had been so approached, although we had discovered instances where presents had been sent and returned after the event. To my mind such presents indicate lack of delicacy on the part of the sender, but are not necessarily given with a corrupt motive; however, perhaps the more cynical view may be more generally entertained.

I cannot at this distance of time, and with no books to aid my memory, say what was done about the wine scandal to which Sir Edward Fry alludes, but I do remember that the medical press unhesitatingly condemned the offenders, and that there was an outcry for stronger measures being taken: but our medical qualifying bodies, and especially the Universities, have over and over again refused, on the ground of want of legal authority, to exercise disciplinary power over their graduates, and the General Medical Council has shown until lately great unwillingness to move out of beaten paths and has only used its penal powers in the case of persons convicted of crime or for certain breaches of well-established professional rules.

I quite agree that it would be better for the medical profession if the General Medical Council would take more notice of the conduct of members than it does.

May I be allowed to say that the medical profession is not disposed to accept unsubstantiated accusations and that it resents as entirely unjust Sir Edward Fry's imaginary picture of the doctor going his rounds with a sheaf of undertakers' cards in his pocket, weighing the advantage to himself of his patients living or dying?

I am no longer the President of Council of the British Medical Association, my term of office having expired, but I am sure that the inquiry was conducted in good faith, that the Council repudiates any sort of sympathy with or approval of such transactions as those of which the medical profession has been accused, and that had the inquiry elicited any evidence of such practices it would have been followed up and every effort made to rid the profession of complicity in such a scandal.

ROBERT SAUNDBY, M.D., LL.D.,
Vice-President British Medical Association.

Hôtel de Flandre, Brussels, Sept. 5th.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 9TH, 1899.

SECRET COMMISSIONS AND THE MEDICAL PROFESSION.

Some time ago, it may be remembered, Sir Edward Fry was moved to deliver himself, in the *Times*, of some remarks on the subject of secret commissions, in the course of which he appeared to imply that the medical profession was in an unholy alliance with undertakers. As will be seen from the correspondence which we reprint from the *Times* on p. 665. Sir Edward Fry has returned to the charge, and this time his attack is made along the whole line. We are now accused not only of feeding our children on funeral-baked meats and being carried on our rounds in broughams obligingly provided by tradesmen whose speciality is hearses, but with levying a tax upon the chemists who dispense our prescriptions, and with accepting shares, which are really bribes, in companies trading in medicated wines or patent foods.

This sweeping indictment is based on evidence which is not merely slender in amount, but of the flimsiest possible texture. Had it been brought by one of the irresponsible scribblers who are always so ready to play the part of candid friend in regard to the medical profession, we should not have thought it worth notice. But any utterance of a judge who has held the high office of a Lord Justice of Appeal must be listened to with attention, if not necessarily with respect; and we cannot allow Sir Edward Fry's allegations to pass unchallenged.

His letter raises two distinct issues: the attitude of the Council of the British Medical Association in regard to the question of secret commissions; and the conduct of the medical profession generally in the matter. With respect to the former of these points we find it difficult to acquit Sir Edward Fry of a misrepresentation of facts, doubtless unintentional, but none the less serious. He complains that "the Council of the British Medical Association has sought to hamper rather than to help the London Chamber of Commerce in their effort after honesty." No shadow of proof of this charge, which we can only characterise as reckless, is vouchsafed, and the President of Council, Dr. Roberts Thomson, is fully justified in saying that Sir Edward Fry's description of the action of the Council is a gross travesty of the facts.

In order to place the situation in its true light, it may be well briefly to recall the facts. In March last the London Chamber of Commerce issued a report on Secret Commissions. This report, which was drawn up by a Special Committee, was founded on replies received from various sources in response to a public appeal for information. The report stated that the evidence collected showed that secret commissions in various forms were prevalent in almost all trades and professions to a great extent. Among the professions in which the practice was said to prevail that of medicine was included, on the strength of statements by two individuals. One of these was a pharmaceutical chemist, who wrote that "secret commissions are given by chemists to medical men on their prescriptions supplied to patients, in some cases amounting to from 25 to 40 per cent. on the price charged by the dispensing chemist." The other was an optician, jeweller, and silversmith of some fifty years' experience, who said: "It is an open secret that hospital doctors received commissions from makers of surgical instruments."

With the object of getting some more substantial evidence on a subject so closely concerning the honour of the medical profession, we made inquiries among representative members of the profession in its various departments. An analysis of the results of these inquiries was published in the British Medical Journal of April 8th. The evidence which we were able to collect conclusively showed that secret commissions, if offered, and perhaps accepted here and there, by individual tradesmen and practitioners, are most assuredly not "prevalent" in the medical profession. The general feeling of the profession is absolutely and emphatically opposed to anything in the nature of secret commissions, and the feeling is fully shared by pharmaceutical chemists and by the better class of tradesmen generally. One surgical instrument maker, who may be taken as fairly representative of his class, sent us a copy of a letter which he had addressed to the London Chamber of Commerce, stating that having had a large and varied experience in the supply of surgical instruments to large general hospitals, extending over a period of about twenty-five years, he could assert absolutely that requests for commissions from surgeons were quite unknown to him. He added that were he to approach any of the staff of these hospitals to which he was appointed with any such suggestion, he felt sure that his future would be most seriously prejudiced.

The charges against the medical profession contained in the report of the Chamber of Commerce were considered at a numerously-attended meeting of the Council of the British Medical Association held on April 12th, and the following resolution was passed:

> That the attention of the Council has been drawn to grave general accusations impugning the probity of the medical profession in the matter of receiving secret commissions, and that the Council call upon the London Chamber of Commerce to substantiate such accusations in order that the Council may be in a position, should such practices exist, emphatically to condemn them as a grave breach of professional good conduct, and inconsistent with the membership of the British Medical Association.

This resolution was forwarded to the Chamber of Commerce, which in reply virtually confessed its inability to substantiate the charges which it had made on no better evidence than that of two informants whose statements it is impossible to test. By what psychological process Sir Edward Fry has reached the conclusion that the resolution which we have quoted is intended to hamper the London

Chamber of Commerce in its effort after honesty, we are unable even to conjecture. It would surely be a more accurate description of the situation to say that the Chamber of Commerce, by refusing to supply the information asked for, has hampered the Council in its effort to promote right professional conduct amongst its members.

Sir Edward Fry's unjudicial temper of mind in regard to this question is sufficiently shown by the way in which he deals with the evidence before him. While he appears to accept the inquiry of the Chamber of Commerce as exhaustive, he is much less easily satisfied with any testimony on the other side. As to our inquiries he asks: "By whom were they conducted, and how? Were inquiries made of the pharmaceutical chemists, and of how many? Have the opticians and instrument makers been approached in such a way as to induce a full disclosure? Were inquiries made of medical men, and if so, of how many?" We submit that this schedule of questions might more profitably be directed to the London Chamber of Commerce, with its single pharmaceutical chemist and its solitary optician, jeweller, and silversmith.

We are content to leave the side issue raised by Sir Edward Fry as to what he calls commissions "after the event" to be dealt with by Dr. Saundby, whose letter we reprint elsewhere. We may say, however, in passing, that if Sir Edward Fry sees no moral difference between accepting a bribe to do a certain act, and a present after having done it without any such inducement, he would do well to improve his mind by the study of some elementary treatise on ethics. We cannot help adding that in this matter also Sir Edward Fry displays an inability to see—or to state—things as they are, which seriously detracts from the weight of his judgment. He says that Dr. Saundby "enters upon the morals of the question, and suggests that the acceptance of a commission on work done is either innocent or less immoral than the acceptance of like favour for work to be done." But Dr. Saundby, in the speech from which Sir Edward Fry professes to be quoting, suggested nothing of the kind; he merely stated as a fact that it had been said that "cheques had been given to medical men to recompense them for what was supposed to be a good turn, but these cheques had always been returned." The "distinctions" and the "suggestions" which Sir Edward Fry attributes to Dr. Saundby are entirely the offspring of a powerful imagination which makes him read hidden meanings into a plain text. However useful this faculty may be to literary men it is out of place in a lawyer, and particularly in a judge.

We have left ourselves little space to deal with Sir Edward Fry's charges against the medical profession in general. But this is not of much importance, for enough has been said to show that these charges rest on a very slender basis of fact. We may perhaps deal more fully with the matter in a future issue; in the meantime, we would respectfully remind Sir Edward Fry of the classic dictum of Mr. Justice Stareleigh, that "what the soldier said is not evidence." The medical profession has no reason to dread the full light of day in this or any other matter. We have no wish to "palliate," still less to defend, the receipt of secret commissions by medical practitioners; but we ask for proof that the practice exists among us to any considerable extent, and we protest most strongly against Sir Edward Fry's bringing wholesale charges of the gravest kind against a profession at least as honourable as his own on no better evidence than vague hints and tenth-hand gossip. The question is one that we can with confidence leave in the hands of the public, which will, we doubt not, prefer to accept Mr. Fildes's "Doctor" watching in a humble cottage for a chance to snatch a poor child from the grip of death, as more true to nature than Sir Edward Fry's picture of a doctor by the side of a sick bed calculating whether it would be more profitable to allow his patient to die or to recover.

WHAT IS HOMŒOPATHY?

WE gather from a letter published in the *Homœopathic World* of July 1st that certain schoolboys were some time ago invited to answer this interesting question. The writer thinks the results show "the deplorable lack of knowledge on the subject which exists." The answers given were as follows:—"1. Curing by means of pellets. 2. Curing by means of doses of certain poisons. 3. Druggery. 4. Aversion to mankind. 5. Sympathy between man and man. 6. An illness affecting the joints and spine."

Schoolboys in these days have so many things to learn that we cannot affect to regard ignorance of homœopathy as in any sense deplorable. Hegel said that there are many things that we must be content not to know, and there are few things that one can better afford to be ignorant of than homœopathy. And after all some of the boys showed that they had a pretty correct notion of the true inwardness of homœopathy. If "curing by means of doses of certain poisons" and "sympathy between man and man" are wild shots, "curing by means of pellets" is not so very wide of the mark, and "druggery" hits it neatly. To define homœopathy as "aversion to mankind" is to treat the matter too seriously; one can be foolish without being misanthropic. Again, homœopathy is not quite accurately described as a disease of the joints and spine; the peccant part is the head. But the "druggery" definition is a stroke of genius, and curiously enough its correctness as a description of homœopathy is confirmed by one of the oracles of the cult in the same number of the periodical from which we have quoted. The editor, lamenting the tendency shown at the Homœopathic Congress recently held at Leicester by many professed followers of Hahnemann, to run after false gods, says, "When adjuvant treatment comes to the front in homœopathic affairs, and in homœopathists' thoughts, then homœopathy becomes decadent..... As ministers of the law of similars, it is our business to work it for all it is worth; and the more thoroughly we do it the less noticeable will be the catholicity of our sentiments in tolerating adjuvants. These will take, as they ought to take, an inconspicuous position, for genuine homœopathy leaves comparatively little for them to do." Among "adjuvants" appear to be counted surgical and all other non-medicinal therapeutic methods. "The drug's the thing," is the motto of your thoroughgoing homœopath, and if he is obliged to "tolerate" adjuvants he should be careful to make the catholicity of his sentiments in so doing as little noticeable as possible. The homœopath struggling to hide his "catho-

licity of sentiment" reminds one of the friar of orders grey who mortified his self-denial with a dainty bit of a warden pie. But at any rate we have authoritative confirmation of the schoolboy's definition of homœopathy as "druggery." The disciples of Hahnemann are, we are told, ministers of the law of similars, and this truly sublime ministry they are exhorted to exercise by working the law for all it is worth. By all means, they say with Sampson in *Romeo and Juliet*, "Let us take the law of our sides." And properly worked the "law" may, we admit, be worth a good deal—in one sense. But here, again, comes a difficulty. What is the law of similars? The true fold itself appears to be divided on this fundamental point. In the same issue of the *Homœopathic World*, Dr. R. E. Dudgeon (the only man among the sectaries of whom we feel disposed to say *Talis cum sis utinam noster esses*) shows that the great dogma *Similia similibus curantur* is a perversion of the word of Hahnemann, who wrote *Similia similibus curentur*. The prophet of homœopathy did not, it would appear, teach that likes are cured by likes, but that likes should be treated by likes, the Latin verb *curare* meaning not to "cure," but to care for, that is to say, to treat—a very different thing, as even the most malignant "allopath" will allow. But perhaps the prophet did not know Latin; and in any case the difference is not of a vital character. Dr. Dudgeon, however, clearly shows that the sacred text of Hahnemann has been misconstrued, and even tampered with almost as much as some other inspired writings have been. With so uncertain a voice, indeed, does the discoverer of the famous "law" speak that Dr. Dudgeon actually calls on the disciples of cult to cease regarding its author as "the inspired Messiah of a new faith, and his Organon as an impregnable evangel of a new *religio medici!*" On the other hand, we find in the *Homœopathic Envoy* a vigorous profession of faith in the founder of its creed; it wants "not scientific-coal-tar-salicylic-acid-quinine homœopathy, but the old Hahnemann kind." But in the light of Dr. Dudgeon's textual criticism we may be permitted to ask: What is the old Hahnemann kind? Poor Hahnemann, in these rationalising days, has gone the way of most prophets; his law is a disputed text over which his followers wrangle with a warmth which proves that whatever may be the right definition of homœopathy, it is not quite correctly described as "sympathy between man and man."

THE INTERNATIONAL CONFERENCE FOR THE PROPHYLAXIS OF SYPHILIS.

This Conference, which has been held this week in Brussels under the honorary presidency of M. de Bruyn, Minister of Agriculture and Public Works, has had before it a vast amount of information collected with great labour and at no slight cost. Reports upon prostitution and the prevalence of venereal diseases have been prepared for nearly every civilised country in the world, which form when printed a thick volume of over 700 pages. The reporters are:—For England: Dr. C. R. Drysdale. For France: Drs. Ozenne and Jullien. For Germany: Dr. Blaschko and Professor Neisser. For Austria: Professor Finger. For the United States: Dr. Dyer. For Italy: Professor Tommasoli and Dr. Bertarelli. In addition there were presented reports upon the social dangers of syphilis and gonorrhœa, upon the relation of prostitution to the propagation of venereal diseases, and upon the part played by other conditions in their dissemination. These reports contain a mass of data gathered from official sources which is undoubtedly of great value, although it is needless to add that the reporters have their own opinions, and all have not been able to avoid colouring their conclusions with the tone of their own minds. Naturally, in a discussion of this kind, few take an active part who are not partisans, but it is fair to say that many of the reports have been written in a perfectly impartial manner. The business of the Conference has been arranged under six headings: 1. Have the systems of regulation actually in vogue had any influence upon the frequency and the dissemination of syphilis and venereal diseases? 2. Is the present system of medical inspection of prostitution capable of improvement? 3. From a purely medical point of view, is there any advantage in keeping up recognised brothels, or should they be suppressed? 4. Is the administrative organisation of police supervision capable of improvement? 5. By what legal measures can the number of women living by prostitution be diminished? 6. Apart from prostitution, what general measures can be taken to wage war effectively against the spread of syphilis and venereal diseases? We print this week a brief report of the opening sittings of the Conference, and hope to give the conclusion in our next.

THE PREVENTION OF "PHOSSY JAW" IN MATCH MAKERS.

The Medical Officer of Health for Bow has just issued his annual report on the sanitary condition of his district, and among the numerous subjects of interest that he deals with is the prevention of phosphorus necrosis in match makers. In May, 1898, Mr. Talbot reported to his Sanitary Committee that a death had occurred due to phosphorus necrosis, confirmed by *post-mortem* examination. The unfortunate workman had been employed in a large match factory in Bow. The case at the time attracted considerable attention in the House of Commons and in the country generally. As medical officer of health Mr. Talbot visited the factory where the man had been employed, and as a result of his investigations he reported to the local committee that "unless the use of yellow phosphorus is prohibited these unfortunate cases will occur." This expression of opinion the committee felt obliged to transmit to the Home Secretary. More than a year has passed since then, and Mr. Talbot has had opportunities of seeing how match making is conducted in other factories. The Salvation Army has a match works in Bow in which 80 to 90 hands are employed. This factory has been in existence for six years; no yellow phosphorus is used, and as a consequence no case of phosphorus necrosis has occurred. In another small factory employing 50 workpeople only one case of phosphorus necrosis has occurred in thirty years. Bryant and May's factory is also in Bow. This firm employs 1,100 workpeople, among whom, as is well known, there have been a few cases of phosphorus necrosis. Since then certain much-needed structural alterations have been made in the works, and so far all has gone on well. There is yet another match factory situated in Bromley-by-Bow to which the medical officer of health draws special attention, and which supplies an object lesson. The dangerous departments of match making are the mixing and dipping, drying, and filling. In the Bromley factory the mixing and dipping are carried on upon the exposed roof of the factory in the open air. The mixing is done in a closed pot, the contents being stirred automatically. In the drying-room which opens on the dipping floor fans are kept going, and as a result the fumes are swept off into the open air. The firm employs 500 hands; only 2 mild cases of phosphorus necrosis have occurred in the works, both of which recovered. As a result of his larger experience of match making, Mr. Talbot reports that he is obliged to modify

the opinion, previously expressed to his Committee, that cases of necrosis would occasionally occur where yellow phosphorus was used. It is his belief that in match factories where the mixing and dipping are performed by the open-air method, and where the work generally is conducted with the most minute precautions, it is possible to manufacture lucifers from yellow phosphorus without injury to the workers. Stronger support to the opinions expressed by the Home Office experts could scarcely be found than that given in the annual report of Mr. Talbot. Phosphorus necrosis was shown by the Government experts to be largely a matter of ventilation and imperfect structural conditions, and therefore preventable. Mr. Talbot's comparison of two large match works is extremely interesting. In one where the buildings are old and not satisfactory, no expense has been spared by the firm to provide medical and dental attention to the workers. Notwithstanding this the workpeople have suffered. In the other factory where no dentist is employed, and only scanty medical supervision takes place, the hands have escaped. The freedom from illness in the smaller factory is attributed to the different method in using the phosphorus. The open-air system of dipping is that which appeals to Mr. Talbot as most in accordance with common sense and freedom from danger. For fifteen years has the open-air method been in trial at the Bromley factory without one case of necrosis occurring. Whether the free escape of the phosphorus fumes into the atmosphere has any deleterious effects upon people living in proximity to match works we are not told, but there should not be any more danger by this than by other methods, since it is into the atmosphere that the fumes always escape. The height at which the dipping is carried on, the weakening and dispersion of the fumes should certainly diminish risks that would undoubtedly exist at a lower altitude and in a confined space. The open-air method advocated by Mr. Talbot can exercise no preventive influence upon workers engaged in the "filling" department. The risks of necrosis remain here the same unless ventilation is sufficient.

THE TELEGRAPH ACT, 1899.

ANYONE who has followed the debates in Parliament upon the new Telegraph Act (which might be better termed "the Telephone Act") will have noticed that important changes are to be made in the working and management of the telephone. Members of the medical profession will hear with satisfaction that the Post Office are about to acquire control of all the metropolitan telephones, and to work them at rates very much lower than those which have been hitherto demanded. In his speech before the Committee of Supply, Mr. Hanbury, by whom the Telegraph Act was conducted through Parliament, proposed that the Treasury should be empowered to advance a sum not exceeding £2,000,000 to the Postmaster-General for the purposes of the Telegraph Acts, 1863-97. These Acts grant to the Postmaster-General power to take over at any time the business of any existing company. Of the sum mentioned, £1,000,000 is to be spent in purchasing the entire system of telephones in the metropolis. "It is proposed," said Mr. Hanbury," to adopt the system prevalent in Switzerland, under which the subscriber pays a very small subscription. I believe the subscription for London will be about £3 a year, and and after that a small fee for each message sent." Apart from the proposed reduction in price—the present rate being an average of £14 for each subscriber—the introduction of the small fee-system will, we think, render the telephone more useful and less troublesome than it is at present. The payment of a small sum will have the effect of stopping the frequent idle calls which are made upon the telephone, and which so often cause annoyance, while it is almost needless to remark that the reduction of the annual subscription will popularise the telephone in the metropolis to an extent altogether unprecedented. The remaining £1,000,000, which will be entrusted to the Postmaster-General is to be devoted to establishing exchanges in outlying districts which have hitherto been unable, owing to lack of capital, to organise systems of their own. If the extension of the system of telephonic communication is appreciated in the metropolis, how much more will its establishment in remote country districts be welcomed. Among the first to benefit by it will be the country practitioner. In those places which have not yet been reached by the tentacles of the National Telephone Company we may expect before long to see a cheap and effective means of swift communication.

MEDICAL PRACTITIONERS AND PLAGUE DUTY IN INDIA.

MORE medical practitioners are badly wanted in India for plague duty, and we are informed that the India Office finds it difficult to get them. This is scarcely to be wondered at, considering that the remuneration offered for a service involving special risks and considerable hardship is only 700 Rs. per mensem—roughly £46 at 15 Rs. to the £, the present exchange. The minimum period of stay in India is nine months, the Government being able to shorten that period at its discretion; as, for instance, should plague be stamped out and no further need be had of the doctor's services; or, on the other hand, he can volunteer for a further period of duty. No leave is given. A period of nine months of plague duty, either in city, hospital, or segregation camp, is surely worthy of more remuneration than is at present attached to it.

GRAPE CURES.

A GRAPE cure requires medical supervision, as all other methods of treatment do, and the invalid abroad who undertakes a grape cure without medical advice is likely to obtain as unsatisfactory a result as occasionally follows the excessive use of strawberries for some supposed medical purpose in England. Dr. Benno Laquer,[1] of Wiesbaden, has recently carefully considered the subject of the physiological effects and therapeutic indications of the grape cure. By experiments on a healthy person it appears that the use of a moderate quantity of grapes for the "cure" does not act harmfully on the metabolism, but in association with a suitable diet may even favour albuminous anabolism. Larger quantities of grape-juice (more than 4 to 5 German pounds) have a purgative effect, and lead to loss of weight. The tannic acid in the skins may have a somewhat constipating effect if the whole grapes are consumed, but this varies in different cases. According to their richness in sugar, two or three German pounds of grapes contain an amount of easily digestible carbohydrate food, which may be valued at 300 to 600 calories, and, according to the weight and work of the man, supplies him with one-tenth to one-fourth of the total amount of combustible material necessary for the day. The nutritive effect is not increased by consuming a larger quantity of grapes, because they then exercise an irritant effect, favouring peristalsis and action of the bowels. Grapes relieve thirst, are slightly diuretic, and tend to lower the acidity of the urine; moderate amounts probably slightly diminish the excretion of uric acid. As part of the treatment for obesity Laquer has had good results from the grape cure. In gout he has employed it together with the use of the Wiesbaden waters. In cases of constipation he has given the juice only with satisfactory result; but the diet should be regulated; and other treatment, such as hydrotherapy, faradism, and massage of the abdomen, may be indicated. In functional nervous affections the grape cure can sometimes be employed as part of the treatment, and in association with proper chalybeate remedies, may

[1] *Zeitschrift für diätetische und physikalische Therapie*, 1899, vol. iii, p. 45.

be of use in certain cases of anæmia associated with constipation. Caution should always be observed in commencing a grape cure; the effects in each individual case should be noted. The grapes should be washed before being taken, and should not be too cold: the skins should be chewed before being spat out. A little white bread may be eaten with the grapes, to protect the teeth, and afterwards the teeth may be cleaned, and a gentle walk taken.

DEGENERATE EARLY RISING.

A YEAR or two ago we ventured to observe that the habit of early rising, which is regarded by so many excellent elderly people as a virtue in itself, was in reality to be traced to physical and not to moral causes. To be drowsy in the evening and wakeful in the early morning is rather characteristic of age, and is probably to be attributed to the hardening of the arteries and the less ready action of the vasomotor system. These remarks attracted a great deal of attention at the time, and were received with a chorus of approval from writers all over the world. It often happens that a sign of degeneration in the individual may be found crystallised as a characteristic of the body politic in China; and Mrs. Henry Clarence Paget, in an article in the *Cornhill* for September, gives a curious account of the early rising habits of the Imperial Court of China. "In spite," Mrs. Paget writes, "of the reluctant awakening of China, what has been the custom still remains so, and at 2 A.M. every morning the Halls of Audience are opened, and at 3 A.M. the Cabinet Councils are held. What minister's ideas would not be congealed if called upon to assemble at such an unearthly hour, with the thermometer many degrees below zero? Even the Court entertainments take place at 8 A.M., and at 10 A.M. the work of the Emperor's day is over. Anything more uncomfortable can hardly be imagined; but from the Emperor down to his lowest subject, who is ground down and obliged to subsist on fare which would mean starvation to most races, the Chinese are supremely satisfied with themselves, and they see no reason for any change." Even in China it would seem that this turning of night into day is not altogether appreciated, and possibly the "reluctant awakening" to which Mrs. Paget refers may have as one of its results that the statesmen of Pekin will in time get up a little later and awaken with less reluctance.

MULTIPLE SURGERY ON ONE PATIENT.

DR. PAUL MUNDÉ reports a case recently under his treatment which is perhaps as complex as any ever recorded in the history of surgery. The patient was a woman on whom he operated first for ruptured tubal pregnancy. After doing well for a week she suffered from an inexplicable rise of temperature. A stone, evidently impacted in the left ureter, was detected on vaginal examination. This did not account for the rise of temperature. There was pus in the urine, but no evidence of acute cystitis. A week later violent pain set in, referred to the right iliac region. Inflamed appendix was diagnosed, and Dr. Mundé opened the peritoneum once more. With the exception of a slightly enlarged kidney, everything was found normal till the gall bladder was reached and opened, as it was enormously distended and almost gangrenous at one spot. Numerous calculi were removed and the bladder drained through the incision made over it, for the first incision, lying over the area of the appendix, had to be closed. At the end of a week the temperature was again high, and the urine contained much pus. Mundé cut down on the stone in the ureter, and removed it through an incision in the anterior vaginal fornix, a quantity of pus and urine followed as the calculus was extracted. A catheter was passed into the ureter, and as far as the pelvis of the kidney, and left in place for drainage. The patient, nevertheless, became worse. McBurney, called into consultation, advised opening the left kidney in order to ascertain whether there was a second stone there. Mundé, however, opened the right kidney, purulent urine escaping. No stone could be found, and hæmorrhage was so severe that the kidney was packed with gauze. The patient had been infused previous to the operation; her condition was now so serious that the infusion was repeated. The right kidney was then aspirated, but as no pus was found nothing more was done. The patient died four hours later, within seven weeks after the operation for tubal pregnancy. The *American Gynæcological and Obstetrical Journal*, which reports this case, sums it up by a heading which in itself gives matter for reflection, "Chronic Nephritis on Left Side: Acute Nephritis on Right Side: Stone Impacted in Left Ureter: Ruptured Ectopic Pregnancy and Impacted Gall Stones: Cœliotomy, Exploratory Appendectomy, Cholecystotomy, Ureterotomy, Nephrotomy, successively." The courage of the operator, who did everything to save the patient, cannot be too much admired. He expresses regret that he did not cut down on the stone in the ureter directly he detected it during the patient's convalescence from the removal of the ruptured tubal sac. He notes how the advanced bilateral kidney disease had long been in abeyance till it was roused to activity by abnormal gestation, operation, and anæsthesia.

PRISONERS IN SCOTLAND.

IT is announced that the Secretary for Scotland has appointed a Departmental Committee, consisting of the Earl of Elgin (Chairman), Sir Thomas David Gibson Carmichael, Sir Colin Campbell Scott Moncrieff, Sir John Batty Tuke, M.D., and Mr. James Parker Smith, M.D., with Mr. J. H. Gascoigne, of the Scottish Office, as Secretary, to inquire into the following matters connected with prisoners in Scotland: 1. The provision for the nursing and accommodation of sick prisoners. 2. The sufficiency of the accommodation provided for ordinary prisoners. 3. Juvenile and first offenders, and to what extent they should be treated as classes apart. 4. The sufficiency of prison dietary. 5. Prison labour and occupation, with special reference to the physical condition and of the moral improvement and training of prisoners.

THE INNERVATION OF THE BLOOD VESSELS OF THE BRAIN.

THE question of the vasomotor supply of the cerebral blood vessels may at last be said to be settled definitively and in the affirmative. Anatomists in the early part of this century—Bochdalek, Arnold, Bourgery, and Jacob—had shown that nerve plexuses were found in the trunks of the internal carotid and vertebral arteries in their passage into the cranial cavity, and that the nerves could be traced along these blood vessels as far as the base of the brain. The introduction of the more recent methods of staining nerves by Golgi and Ehrlich has thrown quite a new light on the subject, and enabled us to demonstrate the presence of a vasomotor mechanism in the brain. In 1894, Lloyd Andriezen, in the course of an elaborate memoir,[1] stated that cerebral vasomotor nerves could be stained by a modified Golgi's method, and described and figured vasomotor nerves and terminals in the blood vessels of the kitten's brain. Bundles of nerve fibres, according to this author, accompanied the cerebral arteries and their branches in the pia, running in "tortuous and zig-zag fashion," and forming around the smaller pial blood vessels a "very fine non-anastomotic plexus of fibrils lying between the outer and muscular coats." From this perimuscular plexus terminal fibrils issued, which, running a short distance along the muscular layer, ended in little ovoid, bulb-like enlargements lying

[1] *Brain*, Winter, 1894.

against the muscular cells. Andriezen states that he could trace the distribution of such nerve fibrils to the finest pial branches, but could not trace them on the walls of the intracortical vessels, the vasomotor distribution appearing to terminate in the blood vessels of the pia. In 1895 Lovell Gulland, using the methylene-blue stain of Ehrlich, failed to stain the vascular nerves; but on a later occasion (1897) he states that he succeeded in observing nerves on the blood vessels in specimens of brain stained by Cox's modification of the Golgi method. In the same year A. Morison also succeeded in staining the vascular nerves in the pia mater of the brain of a fœtal kitten by the aid of Sibler's hæmatoxylin method. The nerves were observed to pass in tortuous fashion round the blood vessels "terminating in a plexiform manner on them, the mode of termination being mostly visible on the larger vessels." Fortunately in the same year (1897) Obersteiner also described and figured a preparation of the pia mater in his possession, which had been stained by gold chloride, and in which a number of large nerve fibres could be seen surrounding a small blood vessel of the human brain. In this specimen, however, only the coarser nerve branches were stained, the finer branches and their terminations remaining unstained and invisible.[2] Dr. Carl Huber (Michigan)[3] states that by the use of methylene blue injected *intra vitam*, he has succeeded in staining the nerves on the blood vessels of the brain in dogs and cats. He finds that bundles of nerve fibres (both medullated and non-medullated) accompany the cerebral arteries in the pia, and on tracing these for some distance they are observed to form a fine plexus of fibrils lying upon the muscular coat (perimuscular plexus). From this fine plexus delicate terminal fibrils are seen to issue, and these enter into the muscular coat, the individual terminal fibrils passing between the delicate smooth muscular fibres—mostly in a transverse direction to the long axis of the blood vessel—and terminating in fine granule-like points abutting on the muscular cells. In addition to the above vasomotor fibres, other fibres are also seen which, proceeding in the first instance from medullated fibres, lose their medullary streak, and terminate as free varicose fibrils in the adventitia and connective tissue of the pia. These, however, are regarded by Huber as probably sensorial endings. The chain of evidence, therefore, may be said now to be complete as regards the facts of the occurrence and distribution of vascular nerves (vasomotor nerves) in the brain of man and of certain mammals (cat, dog, rabbit), and the facts and findings of pathology and of experimental physiology must be interpreted anew in the light of these newer discoveries.

THE NEW SOUTH WALES DEPARTMENT OF PUBLIC HEALTH.

The first annual report of the Chief Medical Officer of the Government of New South Wales and President of the Board of Health has just been published. Though the Board of Health has been in existence for eighteen years, no official report of its proceedings has been published before. But the reorganisation of the Department, and the greatly increased amount of work thrown upon it by the Public Health Act of 1896, has rendered an annual report a necessity. The Department is accommodated in a building specially constructed, having on the ground floor general offices, and on the upper floor laboratories for the chemical analyst, where analyses of gas water, food, etc., are made, and also all the examinations of the viscera and suspected articles in medico-legal cases. On the second floor are the bacteriological laboratories, under the direction of Dr. F. Tidswell. These laboratories are fully equipped with all modern appliances for chemical and biological research. The Department is concerned with the administration of several Acts of Parliament dealing with public health matters. It has to administer the Quarantine Act, the Acts providing for the supervision of dairies, for infectious diseases supervision (small-pox), for noxious trades and slaughtering, for diseased meat and animals, the Leprosy Act, and, lastly, the important Public Health Act of 1896. Full details of the work done in connection with these Acts are given in the report, and there are several appendices, amongst which are two memoranda by the President of the Board, Dr. Ashburton Thompson, on the prevention of tuberculosis and the application of the tuberculin test in cattle. In connection with the special forms of diseases and accidents occurring in Australia, directions for the prevention of hydatids, and for the immediate treatment of the apparently drowned, and of persons suffering from sunstroke and snakebite, have been issued in the form of posters, which are exhibited at every police station, court-house, railway station, and schoolhouse throughout the Colony.

TREATMENT OF SHOCK.

The deadliest morbid conditions are not always associated with proximity to a hospital where experts are ever ready with special apparatus to counteract them. Again, those appliances are usually complicated and often failures. What surgery demands is the simplest method for overcoming the worst possible complications. Shock, hæmorrhage, or sepsis may occur far from hospital aid leaving the patient in the hands of a practitioner of average ability himself far from his own surgery. Arm-to-arm transfusion of blood to counteract shock from loss of that fluid is not easily managed except by expert surgeons, and is now rejected by them as actually dangerous. Transfusion of "artificial serum," or saline solution, into the veins of the arm, as simplified by Dr. Horrocks and others, has saved many lives in hospital and surgical practice. But it is a step from which the practitioner may, for several reasons, recoil. Transfusion of saline solution into the subcutaneous tissue is much easier, and the Baltimore school find it quite efficient. But of late several operators have taken to the use of enemata of saline solution. At first the enema was looked on as a mere adjunct to transfusion, venous or subcutaneous. Now it seems to be considered to be as useful as the more difficult process. Lépine, of Lyons, as the result of observations, concludes that whilst subcutaneous injection of saline solutions is quite as good as intravenous injections, saline enemata are as efficient as the former. He finds that the rectal mucous membrane absorbs the solution at least as speedily as does the subcutaneous connective tissue. What is quite as important is that clinically the effect of absorption by the rectum is the same, and appears just as quickly as the effect of absorption by the subcutaneous tissues. Lastly, those effects are in the case of enemata, as in the case of the less simple appliances, beneficial alike for shock, for sepsis, and for hæmorrhage.

RETARDATION OF PAIN-SENSE IN LOCOMOTOR ATAXIA.

Dr. J. J. Muskens, of Cornell Medical College, in a communication in the *Journal of Nervous and Mental Disease*, July, 1899, observes that the fact that retardation of the sensibility for pain is not at all rare in locomotor ataxy is now well known. Attention was called to this clinical phenomenon by Cruveilhier and Charcot twenty years ago. Most observers have since pointed out that this feature is often noticed when the lower extremities are tested for sensibility. Dr. Muskens has conducted some careful observations on 31 cases of tabes dorsalis, with the result that he has arrived at the conclusion that areas of analgesia observed in tabetic patients are bordered by zones where

[2] *Arbeit. a. d. Inst. für Anat. u. Phys. des Centralnervensystems a. d. Wiener Univ.*, 1897, p. 215.
[3] *Journal of Comparative Neurology*, March, 1899.

retardation of pain-sense occurs. Examining carefully the zone where algesia, that is, normal sensibility to pain began to pass into analgesia, it was found that response of the patient on pricking this zone with the pin-point was usually delayed. The patient remarked, after inquiry, that he "felt two distinctly separated sensations—first the touch, then the pain." On the borders of analgesic areas, whether on the legs, arms, and chest, such a condition was found almost constantly. It was found necessary in almost all cases to help the patient to distinguish qualitatively different sensations, to ask him which he felt first, the touch of the pin-point or the pain. The patient would soon catch the meaning and answer either: "First the pain," or, "The touch and then the pain," or, in case the skin of the normal algesic area was pricked "Both together at the same time," etc. It was found by Dr. Muskens that the zone of retardation bounding an analgesic area varied very much in width, from a millimetre or less to some decimetres. Broad zones were frequently found in the lower extremities, whereas in many old-standing cases of the disease the zone of retardation was absent from the upper borders of analgesic areas on the chest and from the ulnar borders of analgesic areas on the arms. It appeared that the zone of retardation was found with regularity where the analgesia was incipient or in course of development, and could not be so easily or regularly found in advanced stages where the process of destruction of centripetal (posterior spinal) fibres had come to a stop. This retardation thus appeared to be an important and early symptom of the disease, and it generally preceded the total loss of sensibility for pain. A retardation in the conduction of the wave of contraction in dying cardiac muscle has been observed by Engelmann and confirmed by others; and Dr. Muskens believes that an analogous condition underlies the retardation phenomenon described by him. "As to the retardation in the centripetal nerve fibres (in the condition cases noted), it is quite clear that where the nerve fibres are slowly perishing, the first phenomenon may be retardation of the conduction of the impulses," and that only later could there be total loss of conduction—that is, loss of sensibility—in the affected nerves. It will thus be seen that the symptoms described are of differential diagnostic value in early cases of tabes dorsalis, and should be carefully looked for in incipient or doubtful cases.

TREATMENT OF CEREBRAL AFFECTIONS FROM LEAD POISONING.

G. Goidin[1] gives the results of observations made on saturnine encephalopathy and on its treatment by bleeding and the injection of artificial serum. Apart from the more common symptoms of lead poisoning—namely, anæmia and subicteric pallor, attacks of colic, anuria, tremors of the hands and fingers, and the presence of the blue line on the gums, other symptoms more infrequent, but none the less grave and important, may occur. These are symptoms of cerebral origin, and they may take the form of delirium, convulsions, or coma. This class of symptoms was systematically investigated by Tanquerel des Planches (1840), who was the first to give a full and adequate description of it under the heading of saturnine encephalopathy.[2] Goidin divides the disease into the following clinical forms: (*a*) Delirium of mild type, with troubles of speech and disturbances of sight and of hearing. Occasionally the visual and auditory disturbances take the form of acute hallucinations, which may impel the patient to homicidal or suicidal violence, and may demand mechanical restraint and asylum treatment. (*b*) Convulsive type, simulating epilepsy, but lacking the epileptic aura. The epileptic cry, however, preceding the convulsions is generally heard. Sometimes consciousness is not entirely lost during an attack, but only disturbed (epileptic vertigo), and occasionally the attack may be of the Jacksonian type. (*c*) Comatose type, rarely primary. This usually is a sequel to attacks of the convulsive type just noted. Finally there are mixed forms combining the features of two or more types. It is pointed out that encephalopathy may in some subjects be the first manifestation of saturnism, as, for example, in the remarkable and striking case recorded by Dr. Denison Stuart,[3] where two members of the family presented it as the first symptom following the eating of cakes coloured with lead chromate. All the other members of the family (females) who partook of the cake also presented as sole symptoms convulsive phenomena, and in four of them it proved fatal. The influence of predisposition therefore must be admitted. The following general conclusions are drawn: (1) Cerebral affections may constitute the first symptoms of lead poisoning. (2) Drunkenness, exposure to cold and suffering, and privation are determining causes of encephalopathy. (3) As regards treatment, it is found that normal saline solution sterilised and warmed to the temperature of the body may be injected subcutaneously in large doses (600 to 800 cubic centimetres, or 1 to 1¼ pint), and this is the treatment found most satisfactory. Bleeding to the extent of about half the amount of the proposed injection should be carried out at the same time. (4) In case of grave issues threatening from convulsions and coma, bleeding and saline injection is the only remedy to meet the urgency of the case; in no case have bad effects been known to follow the adoption of this treatment, while the albuminuria which is present in these cases is also found to disappear completely with the same treatment.

[1] *Thèse de Paris*, January, 1899.
[2] *Traité des Maladies du Plomb ou Saturnisme* Paris, 1840.

THE CENTRAL NERVOUS PATHWAYS FOR GENERAL SENSIBILITY.

Dr. Edward Long has written an important memoir[1] on this subject, based on extensive observations of 54 cases of cerebral and nervous lesions. The work, which is illustrated by 75 drawings, emanates from the laboratory of M. Déjerine, at the Salpêtrière, and is the most complete exposition at the present time of this subject. The first part gives a summary of the views and discoveries of other investigators, and here we find excellent accounts of the work, anatomical and pathological, of Forel and von Gudden, of Flechsig and Hösel, of von Monakow and Mahaim, of Bruce and Turner, and of Déjerine and the author himself, in reference to various parts of the investigation. The second part contains detailed accounts of cases studied clinically and microscopically by the author. Dr. Long has been forced to abandon the view that there was a decussation of sensory fibres in the spinal cord, a theory associated with the name of Brown-Séquard. The clinical symptom-complex of Brown-Séquard exists, but the anatomical explanation postulating a decussation of sensory fibres in the spinal cord cannot be maintained. The afferent fibres of the spinal cord give forth collaterals which terminate freely in the grey substance of the cornua of the corresponding side, while the main branch ascends and descends for varying lengths (Golgi, Cajal). The ascending branches pass into the bulb and there terminate freely in the nuclei of Goll and Burdach. The afferent terminations of the cranial sensory nerves are similarly distributed to nuclei homologous with those of Goll and Burdach—situated in the grey substances of the bulb and pons. The grey substance which thus receives all bulbo-spinal sensory fibres is of great complexity, both in structure and in function. It has many connections with various parts of the nervous system, and its own separate parts have also communications with each other through

[3] *American Journal of Medical Science*, 1895.
[1] *Thèse de Paris*, 1899.

ascending and descending fibres. Among the functions of this grey substance are to be included the conduction of impressions which arise from the periphery and constitute "general sensibility." The theory of the individuality of tactile, painful, thermal, and muscular sensations is but partially borne out by the results of physiological and anatomical study. Some of these different sensory impressions are due to a variation in the intensity of peripheral excitation. The fillet represents a complex system of fibres constituting the sensory pathway from the bulbospinal grey substance before alluded to, to the brain cortex itself. This pathway, however, is interrupted in the optic thalamus. Intermixed with the fillet fibres are descending fibres from the "motor centres" of the brain, and their number and disposition are variable. Cortical lesions are followed by a descending degeneration of such fibres. Cortical lesions, congenital or acquired very early in life, cause an asymmetry of the fillet, owing to simple atrophy or arrest of development. The optic thalamus constitutes a station where ascending fillet fibres are arrested. The median fillet thus is found to terminate in the external nucleus and in the *centre médian* of the thalamus. From the thalamus various fibres proceed to different parts of the cortex (thalamo-cortical fibres). There is no special aggregation of sensorial fibres in the hindmost part of the internal capsule, and the application of the term *carrefour sensitif* to that special portion of the internal capsule is incorrect. The views of Flechsig that there is an uninterrupted communication between the ascending fillet fibres and the cortex are thus not confirmed. Persistent hemianæsthesia is more common when the thalamus is destroyed than in lesions of other parts of the cerebral hemisphere. The anæsthesia from a cortical lesion is never complete and diminishes in intensity after a time. General sensibility and muscular sense have the same location in the cerebral cortex, and this portion of the cerebral cortex constitutes the sensori-motor area (kinæsthetic area of Bastian)."

RHEUMATIC DISEASES OF THE EAR.

At the recent International Otological Congress, Professor v. Uchermann of Christiania read a paper on rheumatic diseases of the ear, which seem to be rare and but little known. The symptoms are apparently not sufficiently distinct nor the etiology so clear as to establish a safe conclusion with regard to cause and effect. The rheumatic ear affections hitherto described have been complications of rheumatic fever. Ménière mentions a case in which severe intermittent pain preceded by four days the attack of ordinary acute polyarthritis. A similar case is given by Wolff, who adds that the joints of the ossicles may be affected. The clinical or pathological proof, however, is not given. In both cases the appearance of the disease does not seem to have been altered. Moos has observed a case of apoplectiform (Ménière's) deafness during the period of convalescence after acute rheumatic fever complicated with endocarditis (perhaps embolic). In a second case various cerebral hyperæsthetic symptoms appeared, with attacks of pain and hyperacusis; in the eighth and ninth weeks impaired hearing ensued, and ended in total deafness. Among the deaf-mutes in Norway is one in whom the condition of the ear points to the existence of a combined middle-ear labyrinth affection caused by this disease. Uchermann, however, believes that in more chronic cases of rheumatism the ear may become affected in a less acute and violent manner, but sometimes with a more serious result for the organ itself. He ventured the hypothesis that many of the cases of serous middle-ear affections, especially those marked by yellowish or amber-coloured exudate, were rheumatic in origin, and that salicylic treatment should be tried before any surgical intervention was resorted to, but admitted that the salicylic treatment seemed to influence the acute forms but not the chronic. These latter, from the experience of a case still under treatment, he thought might perhaps be more benefited by a general rheumatic treatment.

HONEY POISONING.

A case of poisoning by honey was related recently in the *Therapeutische Monatschrift* (No. 12, 1898). A woman aged 54 ate a quarter of a pound of honey, and immediately complained of a burning sensation on her forehead; this was associated with visual hallucinations. The face became pallid and cold and the pulse irregular. The patient gradually lost consciousness, and was soon attacked with general convulsions, which began in the arms. After an emetic and the hypodermic injection of stimulants she revived. Mydriasis and a pricking sensation in the tongue remained some time after the return of consciousness. The honey had a bitter taste. History relates some cases of honey poisoning. In Xenophon's time it seemed to be a fairly common event. He describes the symptoms as consisting of vomiting, diarrhœa, a staggering gait, and subsequent delirium. In 1790 in North America Barton says it was frequently observed in Florida, Pennsylvania, and New Jersey. Hasemann reports 2 cases occurring in Altdorf in Switzerland. Jenner describes cases of poisoning following the administration of honey tainted with bombus terrestris and bombus lucovum. The admixture of products from poisonous plants with the honey is the usual cause of poisoning; the azalea pontica and rhododendron ponticum are frequent offenders. The active principle in these plants has been isolated by Plugge, who termed it andromedotoxin, on the ground that it was first discovered in the andromeda japonica. The cases of poisoning in America were probably due to the same alkaloid. Plugge has also found andromedotoxin in calmia angustifolia. In Germany the aconite plant and nerium oleander are generally suspected in honey poisoning.

THE PASTEUR INSTITUTE AND PLAGUE SERUM.

The Pasteur Institute of Paris has sent Drs. Calmette and Salinbeni to investigate the outbreak of plague that has occurred in Portugal. The institute is overwhelmed with requests from every country in Europe for plague serum, and every effort is being made to supply the demand. Professor Metchnikoff is reported to have stated that the Institute will be able without difficulty to supply the demands of Portugal, Spain, Italy, and Turkey without touching on a stock which is reserved for France in case of any invasion by the plague.

THE MALARIA EXPEDITION.

The *Times* publishes a Reuter telegram, dated Liverpool, September 2nd, which says: "This morning the Elder Dempster line *Biafra* sailed from the Mersey for West Africa, having on board Dr. R. Fielding-Ould, the gentleman who has been selected to join Major Ross's expedition at Sierra Leone to investigate the source of malaria, and whose appointment had been decided upon since the discovery of the malarial mosquito, and in response to Major Ross's cablegram. Reuter's representative had an interview with Dr. Fielding-Ould before he left. The doctor explained that he expected to be away for three or four months, and that it was very probable that the expedition's researches would extend to other British colonies on the West Coast." Dr. Fielding-Ould took the degree of M.B. at Oxford in 1898, and is Assistant Surgeon to the Ophthalmological and Throat Departments of the Liverpool Royal Infirmary.

The projected South African Medical Congress has been postponed to a date (probably next year) to be hereafter notified. This decision is based on the almost unanimous opinion of the medical practitioners of the Cape Peninsula.

THE MALARIA EXPEDITION TO SIERRA LEONE.

[*From a Correspondent.*]

The expedition sent here to study the mosquito theory of malaria by the Liverpool School of Tropical Medicine arrived ten days ago. It consists of Major Ross and Dr. Annett, lecturer and demonstrator of the school, and Mr. E. E. Austen, dipterologist of the British Museum. Dr. Van Neck from Belgium is expected to join it shortly. The members received the hospitality of His Excellency the Acting Governor, Major Nathan, R.E., C.M.G., for some days, but are now assigned quarters with the officers of the 1st West India Regiment on Tower Hill, owing to the kindness of Major Norris, commanding the regiment. They are receiving every assistance from Drs. Prout, Renner, Berkeley, Major Josling, R.A.M.C., and other officers of the colony. I am glad to be able to report that, as anticipated by Major Ross, the expedition has met with almost immediate success, at least on malaria-bearing species of mosquito, an anopheles (again as anticipated by him) having been already detected. No excuse need be offered for describing the operations of the expedition in some detail, as I am in a position to do, because it is obvious that similar work must shortly be undertaken in all our malarious possessions.

Freetown is a charming town built on and between small richly-wooded hills, sloping somewhat abruptly to the sea. The houses are mostly made of wood, and are generally of two storeys. They are however small, and in the town overcrowded. There is an excellent water supply, and dysentery and typhoid are comparatively scarce—the latter, indeed, being said to be absent. Nevertheless, the place is certainly very unhealthy to Europeans. The sickness is attributed to malaria; but, as the microscope is not generally employed for accurate diagnosis, it may at least be questioned whether there is not some other important disease factor.

It may be remembered that Ross first succeeded in cultivating crescents in anopheles two years ago. He would then have doubtless succeeded in following out the life-history of the æstivo-autumnal parasite in the mosquito, had he not been suddenly moved at the moment of success to a non-malarious station. When, a year ago, he had completed the study of *Hæmamœba relicta* (*syn. Proteosoma Grassi*)—I employ his new nomenclature from *Nature*, August 3rd—he was again prevented from applying his results to human malaria by another interruption. This enabled the Italians to follow out the life-history of the æstivo-autumnal and tertian parasites before him—a work which, in spite of the fuss made about it, was devoid of all serious difficulty. The present expedition thus aims at completing Ross's work. It has already succeeded in cultivating the quartan parasite in a small, probably new, species of anopheles—this being, I believe, the first time this parasite has been grown in the mosquito. The steps by which this result was reached are most interesting.

The expedition began by examining the mosquitos round Government House. They turned out to be all culex—namely, species allied to *C. tineatus* (brindled mosquitos) and to *C. pipiens* (grey mosquitos). Next day (eleventh), however, there was a find of anopheles under the following circumstances: The medical authorities had been asked to mark down any outbreaks of fever in isolated buildings. Such an outbreak had recently occurred in the lunatic asylum in the suburbs (Kissy). Three of the patients (old inmates) were suddenly attacked. One had died, and the two others were practically recovered when the expedition arrived. Dr. Berkeley, the medical officer of the institute, now made a capture of a number of mosquitos from the sleeping room of the male patients (natives). They turned out to be all anopheles of a very small black or dark grey variety. A number of them were examined immediately, and a characteristic zygotes was found in one. It contained fine brown pigment (being only about 30 μ in size), suggestive of *H. vivax* (the tertian parasite). The blood of one of the convalescent patients was examined, but nothing was found suggesting that the illness had been due to quartan or tertian parasites (since there were no crescents). The zygote found in the anopheles was probably derived from one of these cases, since the insect was caught in the sleeping room of the patients, for whom mosquito nets are not used.

Another capture of anopheles was made in a second suburb, Wilberforce, in the opposite quarter of the town. Here some 400 men of the 3rd West India Regiment are stationed, and the place is so unhealthy that there are over forty daily sick out of this force. Out of 8 cases examined, quartan parasites were found in 3, tertian in 1, and æstivo-autumnal in another. Hence all species of malaria were present. About the walls of the hospital and barrack rooms there was a "pure cultivation" of a large species of anopheles very like the Kissy species, most of them full of blood. Out of 11 examined, zygotes were found in 2, namely, nearly mature zygotes in 1, and a very young one containing pigment suggestive of quartan in the other.

It was, therefore, nearly certain, even from these preliminary investigations, that the two species of anopheles, both at Kissy and Wilberforce, are capable of carrying human malaria. The insects had been found gorged with blood, microscopically that of human beings, or at least of the mammalia, and were caught in rooms occupied by numbers of men. If the zygotes had not been derived from human beings, they must have been derived at least from some other animal; but the second alternative was evidently extremely improbable. To obtain final proof it was necessary only to find the zygotes in an anopheles fed experimentally on a man with parasites. A case at Wilberforce containing fairly numerous full-grown quartan parasites was selected, and five of the small Kissy anopheles were fed on him by applying the test tube containing each insect to the patient's skin. This was done on the 17th. Forty-eight hours later three of the mosquitos were examined. One still contained blood, and the second was a bad dissection; and these must therefore be struck out of court. The third contained three zygotes of the well-known size and appearance of zygotes of the second day, namely small cells of about 16 μ in diameter, copiously pigmented, and attached to the outer wall of the stomach. It was therefore at once perfectly obvious that these zygotes were derived by the insect from the blood of the patient on which it had been fed, and that this species of insect is capable of carrying the human quartan parasite. This inference follows with complete certainty from the numerous previous observations of Ross, Koch, and the Italian investigators, by which it is shown that the zygotes have a size and appearance corresponding with the period which has elapsed since the insect became infected by feeding on the subject.

No formal experiment has yet been made with the large anopheles, but as zygotes have been found in two insects caught in the hospital at Wilberforce, it may be looked upon as practically certain that this species also carries human malaria. Experiments will, however, be made with this species, and even with some of the local species of culex. A third large black species of anopheles has just been caught at Government House.

The members of the expedition think it unnecessary and unjustifiable to attempt to infect human beings by the bites of infected mosquitos. They consider that the life-history of the parasites and the infectiveness of the bite of the mosquito have been sufficiently established already by previous work. To ascertain whether a given species of mosquito is dangerous it is necessary only to find the zygotes after a definite feeding experiment.

A point of supreme practical importance now remains to be studied, namely, the distribution and origin of the anopheles here. It has already been ascertained that while culex breeds in every pot and tub of water and is easily distributed in the town, anopheles appears to have a very localised distribution and an origin so obscure that up to the present not a single anopheles larva has been found. This exactly bears out what Ross prognosticated. The anopheles probably has some extremely isolated breeding-ground, which fact suggests a distinct possibility of extermination. We must not, however, be too sanguine as yet. Every effort will now be directed toward this point to the exclusion, if necessary, of other work.

Major Ross considers that the young quartan zygotes are almost, if not quite, indistinguishable from those of crescents and *H. relicta*. Possibly the cell is a little larger for its age

and a little rounder, while the pigment is perhaps more brown.

Mr. Austen has discovered the important fact that the tsetse fly is present here, a fact which may account for the difficulty of keeping horses in the place. It is not the South African *Glossina morsitans*, but belongs to the West African type which was obtained by Dr. W. H. Crosse at Asaba on the river Niger.

I hope to give details of the further work of the expedition by next mail.

P.S.—Two more of the large anopheles caught in the Wilberforce Hospital have just been dissected. Both contained numerous mature zygotes, some with zygotoblasts (germinal threads). Thus four out of thirteen insects caught in that locality have been found infected. It is now evident that the insects have been infected from man, as no animals are about in sufficient numbers to account for such a large percentage of affected mosquitos.

BRUSSELS CONFERENCE OF SOCIAL HYGIENE.

MOST of the delegates to the Conference arrived in Brussels on Sunday, and were entertained at a sort of *Bier-commerz* at the Hôtel Ravenstein on Sunday evening. Among those present we noticed Professors Kaposi (Vienna), Kromayer, Blaschke (Berlin), Neisser (Breslau), Rona (Buda-Pesth), de Amicis (Naples), Rosenthal (Berlin), Dr. and Mrs. Drysdale (London), Dr. Nicholas (Bucharest), Surgeon-Colonel Richardson, I.M.S., Major McPherson, R.A.M.C., Drs. Jullien (Paris), R. Crocker, Mr. Alfred Cooper (London), Drs. Saundby (Birmingham), Augagneur (Lyons), Wolff (Strassburg), and Pontoppidan (Copenhagen).

OPENING OF THE CONFERENCE.

The formal opening took place on Monday, at 9.30 A.M. in the Palais des Académies. Delegates, on inscribing their names, were presented with three bulky volumes containing reports and papers to form the basis of the discussions. About two hundred delegates met in a handsomely decorated hall, but which was acoustically very defective. Present besides those above were Dr. Birkbeck Nevins and Miss Leppington (England), Professor Fournier (Paris), etc.

The PRESIDENT D'HONNEUR (M. de Bruyn, Minister of Agriculture) was in the chair, and was accompanied by M. de Trooz, Minister of Education, and M. Beco, Secretary-General of the Department of Public Works, who is at the head of sanitary matters in Belgium.

M. DE BRUYN opened the Conference by a speech in which in the name of the Belgian Government he welcomed the representatives of other countries. He fully recognised the advantages to be gained by comparing the experiences of different nations, and he considered that those who had promoted this Conference deserved well of the public. Their Government was anxious to learn the truth and to do what was best for public health and public morals. The various reports and papers which had been prepared constituted a great mass of valuable material, and he trusted that in the forthcoming discussions a solution of these problems might be found. In conclusion he expressed his best wishes for the success of the Conference upon those subjects which were at once so difficult and delicate, and yet so important to the commonwealth.

Professor MAUBACH, President of the German official delegation, thanked the President for his welcome, and expressed the desire of his Government to associate itself with this inquiry and to derive assistance from the labours of the Conference.

Professor STÜRMER, representing Russia, thanked the President and wished success to the Conference.

Professor SANTOLIQUIDO, representing Italy, added a few sympathetic words.

M. BECO introduced Dr. Dubois-Havenith, and eulogised his zeal and industry in organising the Conference.

Dr. DUBOIS-HAVENITH said he was sensible of the delicate nature of the task he had undertaken, and thanked those who had prepared reports, especially Professors Fournier and Neisser. He thanked the Belgian Government for its ready help and countenance, the authors of papers, M. Lejeune, Minister of State, and the Honorary President, M. de Bruyn. He believed they had met to discuss these questions in all sincerity, without any foregone conclusions; they were not merely a collection of Government delegates, but a meeting of all those most competent by knowledge and experience to throw light upon the subjects under discussion.

ELECTION OF OFFICERS.

M. BECO proposed M. Lejeune, Minister of State, as President of the meeting.

M. LEJEUNE then took the chair amidst applause, and announced the rules which would govern the proceedings. Upon his nomination M. Beco was elected Vice-President, and Dr. Dubois-Havenith General Secretary.

MM. de Bruyn and de Favereau then left the hall, the delegates rising in their seats.

Professor Ehlers was elected Foreign Secretary. It was the duty of this gentleman to read out summaries of speeches made in German or English for the information of those who could not follow the speakers in those languages, and he performed this difficult task most admirably in a few well-chosen words at the close of each speech.

SYSTEMS OF REGULATION AND VENEREAL DISEASE.

The question before the meeting was: Have the systems of regulation actually in force had any influence upon the frequency and dissemination of syphilis and venereal disease?

Dr. BLASCHKO (Berlin) opened the discussion by pointing out that regulation had so far failed to produce the expected results, and that clandestine prostitution was increased by it. The statistical evidence was contradictory and could not be cited to support the present system. He did not think it was possible to increase the number of registered women, and he hoped that one result of the conference would be to draw the attention of Governments to the other means by which they might oppose the spread of venereal diseases.

Dr. AUGAGNEUR (Lyons) argued eloquently against regulation as having been proved to be an insufficient means. He criticised the statistics that were adduced in its support and pointed out that most of the registered prostitutes had been syphilised and become immune before getting on the register. Comparisons between different towns or between national and professional armies as the French and the English were inadmissible.

Dr. BARTHÉLEMY (Paris) said it was impossible to apply inspection properly without registration, and he contended that free prostitution meant unrestricted syphilisation of the people.

Dr. FIAUX spoke against regulation, but his remarks were unfortunately inaudible.

Professor FOURNIER (Paris) would not trust to statistics; he appealed to common sense. An infected prostitute was safe only when she was shut up; outside she became a social danger. To imprison her in a hospital was no doubt an infringement of liberty, but it was justified by the peril to which society was exposed. He descanted upon the dangers of syphilis, the full extent of which had only been disclosed by modern pathological research; the eye, the nervous system, all the organs suffered from an infinity of diseases due primarily to syphilis. This disease was the cause of most stillbirths, and, moreover, children who were born alive suffered from horrible diseases. He attributed many deformities, such as hare-lip and facial hemiatrophy, to the same source. The opponents of regulation minimised these dangers. He estimated the number of persons who acquired syphilis in France as 17 per cent. of the population.

Professor WOLFF (Strassburg), who was very badly heard, defended his statistics, which had been attacked by Dr. Augagneur. He considered that their experience in Strassburg had demonstrated the utility of regulation.

Professor LASSAR (Berlin) would not go so far as Professor Fournier in rejecting statistics, but in other respects agreed with him. An infected prostitute was a focus of disease which it was the duty of society to remove.

Dr. LE PILEUR (Paris) contested the views of Dr. Augagneur. A syphilitic woman remained a source of danger for years.

Professor NEISSER (Breslau) said he shared the opinions of Professor Fournier; the question must be looked at from a common-sense standpoint. He was opposed to the views of the abolitionists.

Professor OLTRAMARE (Geneva) said that the question had been lately put to the vote in Geneva, and regulation had

been affirmed by a majority of 2 to 1. He considered that the success of regulation depended greatly upon the competence and carefulness of the physicians to whom the work was entrusted.

Professor Stürmer (St. Petersburg) supported regulation, and said that unregistered prostitutes came to the dispensaries in a frightful state.

Dr. Nevins (Liverpool) recapitulated the statistical evidence against the Contagious Diseases Acts. He contended that there were great differences in different places, whether regulated or not, and that there was no evidence that regulation in any case should be credited with the diminution of disease.

Major McPherson, R.A.M.C., disputed Dr. Nevins's conclusions, and produced a diagram to show that the curve of venereal incidence in 14 regulated and 14 non-regulated towns in Great Britain, closely approximated before and after the period during which the Acts were in force, but during that period separated widely in consequence of the lowering of the rate in the regulated towns.

Dr. Drysdale, who was very indistinctly heard, disputed the value of Major McPherson's statistics, and maintained that the movements of troops vitiated all such conclusions.

Dr. Kromayer (Halle) exhibited a number of tables to show that the British army statistics when analysed indicated that the Contagious Diseases Acts had had a distinctly beneficial effect upon the incidence of syphilis, but had not affected the frequency of soft sores or of gonorrhœa.

Dr. Jullien (Paris) presented tables to prove that venereal disease occurred more commonly among unregistered prostitutes, that syphilis was most amongst women between the ages of 17 and 22, and that the same relation existed for soft sores and gonorrhœa.

Professor Fournier pointed out that Dr. Jullien's second table showed the great risk of syphilis incurred by very young women, and insisted that there should be power to place such women who were under age in reformatories.

Miss Lippington (England) argued that the admission of regulation led to worse evils. It demoralised the police, promoted clandestine prostitution, and placed vice under the sanction of the authorities without sensibly diminishing the amount of disease.

Professor Santoliquido (Rome), who was very badly heard as the meeting had partly broken and a good deal of confusion existed, was understood to argue against regulation. He believed that no proper comparison could be made between modern and older statistics, owing to the advances of pathology having brought under the head of syphilis many diseases formerly unknown or undifferentiated.

M. Pierson (President of the International Society for the Abolition of Regulation) disputed the views of Professor Fournier. He said regulation had failed because women could not be registered, the numbers of registered women remaining practically stationary in spite of the growth of the large towns. Every infected woman infected in turn a number of men, who under the system went free to infect any number of other persons, so that men were as dangerous as women. If all women could be made healthy disease would not be stopped. He asked how it was explained that in some non-regulated towns the incidence of disease was not greater than in others which were regulated. He accepted Professor Fournier's account of the social dangers of syphilis, but held that that did not justify the system.

Dr. Augagneur (Lyons) summarised the debate and replied to some objections.

Dr. Reimers (Hamburg) continued the discussion, but could not be heard.

Dr. Auffret (Brest), a medical officer of the French navy, supported regulation, but allowed that the system was capable of improvement.

Professor Fournier again interposed, and repeated his arguments.

It was then 5 o'clock, and the Conference had sat with only a short interval for lunch since 9.30, so that there was general relief when the President rose and adjourned the discussion until the following morning.

Second Day.

On Tuesday, September 5th, the discussion of Question 1 was resumed.

The President summarised the previous day's debate.

Dr. Commenge (Paris) read a long defence of regulation, and was repeatedly called to order by the President for travelling outside the subject.

At length Dr. Dubois-Havenith pointed out that at this rate the Conference would never come to a decision upon the questions which had been framed, and urged the termination of the discussion on the first question.

Drs. Fiaux and Le Pileur, although taking opposite sides, agreed in demanding that the debate should proceed.

The President hoped members would confine themselves to the actual question before the Conference, and said that the time allowed to each speaker would in future be ten instead of fifteen minutes.

Dr. Commenge continued the rapid reading of his paper.

Dr. Fiaux (Paris) in a second speech demonstrated a table which showed that a considerable proportion of syphilitic registered women in Paris escaped from the police, and were not recaptured.

Professor Holst (Christiania) said that since the abolition of regulation in Christiania, syphilis had increased 25 per cent., clandestine prostitution had increased, and many prostitutes arrested for other offences, although found to be syphilitic, were yet undergoing no sort of treatment.

Dr. Bertzen (Christiania) referred to his published statistics for the refutation of Dr. Holst. Regulation had produced an inappreciable effect in Christiania, Bergen, and other Norwegian towns.

Dr. Ehlers (Copenhagen) said the personal elements must not be lost sight of in statistics. Figures had been quoted which to his knowledge emanated from an individual unworthy of any trust.

M. Minod (Geneva), general secretary of the Abolitionist Federation, disputed the arguments which had been put forward by the other side, and defended his Society from the charge of bad faith.

Professor de Galatz (Bucharest) said that in Roumania regulation was not fairly tried, for the law, although excellent, was not enforced thoroughly.

Professor de Amicis (Naples) said that in Italy regulation had done good, and its abolition had had bad results.

Dr. Drysdale (London), in a second speech, said that there was more syphilis in Paris than in London, in spite of the system.

Dr. Barthélemy (Paris) denied that registration made women professional prostitutes, as they were so before.

Dr. Blaschko (Berlin) contended that it was well known that the English army statistics did not support regulation, and that Dr. Kromayer had confounded primary syphilis with soft sores. The statistics of Dr. Jullien dealt with too small numbers and proved little.

Dr. Kromayer defended his appreciation of the English figures.

Dr. Bertarelli (Milan) supported regulation.

Dr. Le Pileur disputed the relevance of Dr. Fiaux's statistics.

Professor Petersen said that regulation worked well in Russia, and moved:

That supervision and inspection are of the greatest importance in preventing the spread of syphilis.

Professor Fournier (Paris) said there were good and bad statistics, and was understood to prefer those that supported regulation. He accused the abolitionists of caring nothing for the security of innocent wives and children. If there was more in syphilis in Paris, it was because so many strangers came there.

Dr. Drysdale retorted that strangers went to Paris because they believed the women there were healthy.

The President desired to put the question, and there was a general cry for closing the discussion, in the midst of which a member tried to speak.

Professor Kaposi maintained that only scientific men should vote.

Professor Petersen opposed this on the ground that the Conference wished to attain a practical result.

Professor Ehlers proposed to resist the question to the Government delegates only.

This was opposed, and ultimately withdrawn.

After a brief interval for refreshment, the Conference re-

sumed at 12.15, when the President announced that the medical supervision of prostitutes question would not be put, and that the Conference would proceed to the consideration of the second and third questions.

Second question: Is the actual organisation of the medical supervision of prostitution capable of improvement?

Third question: Are tolerated houses of advantage from a purely medical point of view?

Professor Stürmer (St. Petersburg) continued the discussion, advocating treatment for four years.

Dr. van Hoorn (Amsterdam) said that Amsterdam showed good statistics in spite of the absence of regulation.

Colonel Panara (Rome) continued the discussion upon the same lines. He was called to order by the President, and then said he advocated more facilities for hospital treatment.

Dr. Schrank (Vienna) said that the work of examination should be placed in the hands of venereal specialists, and that the search for the gonococcus should be continued for two years.

Professor de Galatz said that would be impossible. He advocated the appointment of a scientific director at the head of the department with a sufficient number of assistants. The examination of three or four hundred women daily was too much for any man.

The sitting was adjourned at 1.35 p.m. until 9 o'clock on Wednesday morning, no decision of any kind having been arrived at, the discussion having revealed the greatest differences of opinion and the utter absence of any trustworthy data for the formation of sound conclusions. Statistics were good, Professor Fournier said, when they supported you, and bad when they opposed you. No doubt if it were possible to shut up every diseased prostitute until cured some good might result, but it was doubtful if the seclusion of a few for short periods had any material effect upon the spread of venereal diseases. It is perhaps to be regretted that the Conference was not confined to members of the medical profession, as the presence of lay representatives of abolition made the discussion more a party fight than a scientific conference.

THE SANITARY CONGRESS.

[*Continued from page 622.*]

The Sanitary Congress at Southampton, the opening of which has been reported in a previous number of the British Medical Journal, was, so far as numbers go, a great success. There were about 2,000 persons—including about 500 ladies—present. These included 800 delegates, representing no fewer than 400 municipalities and learned bodies. Wednesday, August 30th, was devoted to the conferences, and Thursday and Friday, August 31st and September 1st, to the work of the sections.

Conference of Municipal Representatives.

President's Address.—Alderman Walton, the Chairman of the Conference, gave as his presidential address an account of the sanitary arrangements of the town of Southampton. The town was supplied with excellent water from the chalk. The sewage was treated by precipitation, and then turned into the river Itchen. This, he hoped, would end the nuisance which had existed so long through turning the untreated sewage into the sea near the western shore. All the town refuse was destroyed in their destructor. The floating infectious hospital was being superseded by an isolation hospital, which when completed would provide accommodation for 100 patients. In addition to this they would still have a floating hospital for seaborne cases. Southampton was not in the background regarding their insanitary improvements. They had purchased between two and three acres of the worst part of the town, and were constructing a municipal lodging-house and artisans' dwellings. He thought that local authorities were handicapped in carrying out the requirements of the Local Government Board, for while the private speculator was only restricted by the by-laws of the authority as to the class of building and the construction thereof, the Local Government Board raised all sorts of difficulties, and required a standard of building which no local authority could insist upon in its own district. The port sanitary authority, in spite of their wide jurisdiction, were prepared for any emergency. It pressed hardly, however, upon the local authorities, not only of Southampton, but of all the port sanitary authorities, that they should still be called upon to bear the whole cost of the guarding of the doors of the country.

Unhealthy Areas and Municipal Rehousing.—Mr. T. Blashill opened a discussion on this subject. He pointed out how inefficient the Act was in action. An authority purchased an insanitary area, pulled down the houses and began to construct model dwellings. Two things happened: The first was that the occupants of the demolished houses flocked to other insanitary areas and made them still more insanitary; the second was that the inhabitants of the new houses were not those of the demolished ones. This happened from one or two causes: in the first place, the authority could not let a tenement of two rooms to more than a certain number of people; therefore if a family of ten were turned out of a tenement for which they paid 3s. 6d. per week, they could not be rehoused under something like twice that sum, unless the authority came upon the ratepayers to make up the deficit.

Councillor Batley (Leeds) agreed with the opener as to the inefficiency of the Act, and explained how Leeds was trying to improve their areas, not so much by destruction and reconstruction of the property, as by clearing all obstructive buildings, and he thought that very much good might be done in many towns by this process, which was less costly, and which had the additional advantage that it did not drive the tenants to other insanitary areas.

Councillor Purcell (Liverpool) said that in that town they were more fortunately situated, as they were working under an Act of their own. Under this Act, he thought that they were really rehousing their tenants. True they were doing it slowly, but the point was it was being done.

Dr. Porter (M.O.H. Stockport) spoke for the need of having an annual licensing of common lodging-houses. Under the existing general law the rule was "once a registered lodging-house, always a registered lodging-house," unless the licensee had as such been three times convicted of an offence against the Public Health Act, or unless the health officer could obtain closure by certifying, under the Housing of the Working Classes Act, 1890, that the house was unfit for human habitation. A house which was not unfit for human habitation might be quite unfit for a common lodging-house; and one reason why Parliament was successfully asked in Section 21 of the Stockport Corporation Bill, 1899, for power to require annual registration of these houses, was in order to be able to deal eventually with the unsuitable places at present registered. It was believed that such a requirement would in addition (1) conduce to the better condition and ordering of all the registered houses in the borough, by making them annually toe the line of sanitary decency, and, as the registered accommodation in Stockport was wholly insufficient, it would enable the Corporation to license temporarily some of the least objectionable of the numerous unregistered places which were structurally unworthy of permanent registration. These places would thus be brought under regular sanitary supervision until, by municipal or private enterprise, sufficient suitable registered accommodation was provided.

Prevention of River Pollution.—Major Lamorock Flower (Sanitary Engineer to the Lee Conservancy Board) strongly urged that for purposes of prevention of pollution joint Committees for watershed areas should be established. This would put a stop to the disagreements which were always taking place between neighbouring authorities whose interests were in conflict, and would ensure a greater diminution of the pollution.

Conference of Port Sanitary Authorities.

President's Address.—The President of the Conference (Mr. Millar Wilkinson) urged that the living accommodation of the sailors of the mercantile marine should be improved. There was no doubt that they helped to convey disease from port to port, and it was very essential that this danger, which was really a great one, should be guarded against. The sailor slept, ate, and lived in a space which, according to law, need not exceed 72 cubic feet, which had to include his bunk, bedding, and belongings. Many of the leading shipowners were, with the assistance of the port sanitary authorities,

endeavouring to remedy the grievance, but there were many shipowners who knew little, or cared less, about the health of their crews, and these, he thought, should be compelled to provide more reasonable accommodation. It was strange that whilst so many matters had improved, this had been left untouched.

Ports and Small-pox.—Dr. Hope (M.O.H. Liverpool) drew attention to the great responsibility of the ports in regard to small-pox, perhaps the most difficult disease to deal with in such places. The ports drew to them enormous numbers of unskilled labourers, and it was very necessary that these should all be rendered as immune to this disease as possible by vaccination. This was very necessary in order to prevent any epidemic; for, apart from the damage which would ultimately result to the public health from any large neglect of vaccination, there was the great and serious damage to the industry and commerce of the port, since the presence of any above a small number of cases was at once the subject of inquiry by foreign Consuls, and vessels coming from an infected port were liable to many restrictions, to the very grave prejudice of the trade. Since the abolition of the vaccination station in Liverpool, the number of successfully vaccinated persons had decreased, and at present one of the most mischievous hindrances to effective vaccination was the existence of cheap private dispensaries, where it was the practice to vaccinate in one place only on the arm instead of four, and the closure of the vaccination stations seemed to have added to that pernicious practice.

Conference of Medical Officers of Health.

Notification of Phthisis.—Dr. Newsholme (M.O.H. Brighton) again advocate the notification of phthisis, and urged in its favour the very valuable information which the voluntary notification thereof in Brighton had elicited. Quite contrary to the opinion expressed by many of his opponents that the patients and their friends would resent any interference from the sanitary authority, he found, almost without exception, a readiness to accept suggestions as to precautionary measures, and a degree of education on the subject which was, to say the least, unexpected. In addition to the advantage of instituting precautionary measures, the notification had been instrumental in discovering insanitary conditions which would otherwise have been undiscovered for some time. He was quite satisfied that it had done real service in Brighton, and he felt convinced that the further extension of the system would be still more successful.

Sanitary Authorities and Sanatoria for Phthisis.—Dr. Scurfield (M.O.H. Sunderland) gave facts and figures from Sunderland to justify his contention that sanitary authorities should contribute towards the support of sanatoria for consumptives. If 10 beds were supported in Sunderland, 30 patients could be treated per annum, and this would in twenty-one years reduce the consumptives doomed to prove fatal in Sunderland from 660 to 625.

Conference of Medical Officers of Schools.

President's Address.—Dr. Shelly, in addressing the first such Conference held under the auspices of the Institute, spoke of many things in connection with the hygiene of school life. There was one great omission, he thought, in the ordinary school curriculum. How was it that in our great public schools the one thing of which the pupil was systematically taught nothing was the care of his own body and the relationship in which he personally stood to what are called the laws of health? No one would more strongly deprecate than he the manufacture of schoolboy faddists, and there was no person more harmful in his way than the sanitary prig. The best kind of health was unconscious health. Yet, even where ignorance was bliss, wisdom was not of necessity folly. And in a state of civilisation so complex as our own, attended by dangers so many and often so insidious, some knowledge of the perils which would certainly beset his path through life was not only serviceable to the individual, but served to make him, both directly and indirectly, more helpful to his fellows. No boy or girl would be the worse for acquiring before leaving school an elementary knowledge of what made for health in the house, in the village and the town, and in their own persons. To him it appeared anomalous that, while instruction in the elements of hygiene was recognised in Board Schools, and when lectures on the subject were to be delivered to the convicts in our prisons, the future legislator and landowner, the great employer of labour, the mistress of a household, should be deliberately trained in an ignorance which might easily make all the difference between their becoming dangerous or useful members of society.

Conference of Ladies.

In this conference several papers were read on domestic hygiene, but perhaps the keynote may be said to have been the learning and teaching of hygiene by the gentler sex. If this conference has proved nothing else it has proved this, that women are more alive than ever to the necessity of some knowledge of hygiene. Two hundred ladies sat throughout the meetings, in spite of the many counter-attractions and beautiful weather, and discussed how they could contribute towards the spread of the principles of hygiene among their fellows.

Conference of Veterinary Inspectors.

The President (Mr. Hunting) emphasised the value of the veterinary surgeon in the prevention of disease through animals. His sphere, he said, might be a small one, but it was intimately associated with public health, and required for its mastery as much special and technical knowledge as any other calling. There was no doubt in his mind that this special training should be more used. The latest Public Health Act—that of Scotland—recognised the veterinary surgeon as an essential officer in the examination of living animals, and, to a less extent, in the inspection of carcasses. London was perhaps pre-eminent for its veterinary arrangements. There was a Cattle Diseases Committee of the County Council, not one member of which had any practical knowledge of animal diseases, and it had never consulted an M.R.C.V.S. since its formation.

The Sections.

Section of Sanitary Science and Preventive Medicine.

Recognition and Isolation of Phthisis.—In this Section Dr. G. A. Heron read a paper upon the Recognition and Isolation of Pulmonary Consumption, which was discussed. He moved the following resolutions, which were carried unanimously:

That in the opinion of the meeting, the early recognition and the prevention of tuberculosis, as well as of certain other diseases, would be expedited and made surer were a rudimentary knowledge of the laws that govern the spread of infective diseases properly taught in all schools throughout the country.

That this meeting, in view of the resolution it has just passed, requests the Council of the Sanitary Institute, drawing the attention of the President of the Council of Education to the good likely to follow the practical adoption in rate-aided schools of the proposal contained in the first resolution.

That the Council of the Sanitary Institute be recommended to endeavour to secure similar action on the part of other associations and societies interested in the subject.

The Plague.—Prof. W. J. Simpson, speaking of the recrudescence of the plague in the East, sounded a note of warning concerning this country. It was true we had not been visited with this disease since 1665, and we rather prided ourselves that our sanitary conditions were such that we could never have it again in pandemic form. But it was to be remembered that Bombay had also been free for two hundred years, and yet it had assumed a truly pandemic form there. There was no doubt that we knew very little of what the disease would be in Europe, and thought that more should be done, and that at once, to obtain that knowledge. The following resolution was unanimously adopted:

That it be a recommendation to the Council of the Sanitary Institute to make a representation to Government that it is at the present time of great importance to the health and trade of the Empire that a Commission consisting of experienced physicians, epidemiologists, and bacteriologists, be appointed to visit the Peninsula and study on the spot the pecularities of the present outbreak of plague in its epidemiological, prophylactic, and curative aspects as modified by its conditions in Europe, and that immediate steps should be taken by the Government to provide such a supply of Haffkine's prophylactic and the other curative serums, as will meet the urgent wants of our seaports.

The Guarantees of the Milk Supply.—Dr. Bushell Anningson reviewed the question of the guarantees of milk supply. He

pointed out that limitation to protection consequent upon tuberculosis was not a scheduled infectious disease. For instance, in the Infectious Diseases (Prevention) Act of 1890 tuberculosis could not be included in the infectious diseases, and in the Milkshops Order of 1885 the word disease had the meaning assigned to it by the Act of 1878, and included only cattle plague, pleuropneumonia, and foot and mouth disease. The impossibility of dealing with the matter by slaughtering every animal which reacted to the tuberculin test was obvious; the suggestions which were feasible were:

(1) Eradication of the disease from stock by "breeding it out" as recommended by Professor Bang, viz., by—
(a) Testing all breeding stock with tuberculin.
(b) Separating the diseased from the healthy.
(c) Placing the healthy in a clean, healthy, well ventilated, and lighted shed.
(d) Placing the diseased in a disinfected, clean, and well ventilated and lighted shed.
(e) Branding all reacting animals on the horn or hoof so that they can be readily identified and continuously isolated.
(f) Keeping separate utensils for their use and even separate attendants.
(g) Slaughtering at once all those that show signs of advanced disease.
(h) Fattening and slaughtering of, as soon as possible, all those that show disease of the udder or advanced tuberculosis, and on no account allow the milk to be consumed.
(i) Removal of all calves born of tuberculous cows away from their parents as soon as born, and not permit them to suck their dams, but rear them on healthy cow's milk or sterilised milk.
(k) Testing the calf as soon as possible, say at one or two months old, with tuberculin.
(l) Isolation and testing all fresh cows before allowing them to mix with the others.
(m) Retesting the healthy stock twice during each year to be sure they are remaining healthy.
2. Protection of actual milk supply by:
(a) Compulsory testing of all milch cows used for providing milk for sale; branding all reacting cows.
(b) Experts to test the milk from reacting cows both microscopically and by feeding guinea-pigs, and when found to be virulent condemn the cow for milking purposes, and mark her with a special brand.
(c) Sterilisation of milk obtained from reacting animals before retailing it to the public, and heating the cream to 85° F. before churning it into butter.
(d) Prohibition of the use of the milk of cows with diseased udders for food.
(e) Periodical examination of the cows and sheds by veterinary experts.
(f) Compulsory notification of any disease of the udders of milch cows, and inspection of the same by veterinary inspector.
(g) Exclusion of persons in an infectious state (including phthisical persons) from all kinds of dairy employment.

The following resolutions were adopted by the meeting:

1. That the Council of the Sanitary Institute be recommended to urge the Government to undertake a scheme for the reduction of the prevalence of bovine tuberculosis.

2. That the Council of the Sanitary Institute be recommended to endeavour to secure similar action on the part of other associations and societies interested in the subject.

Ice Creams and Infectious Disease.—Dr. Petronell Manby, after describing how outbreaks of enteric fever in Liverpool had been traced to the consumption of ice creams, gave an account of the manner in which the city was endeavouring to regulate the traffic in this delicacy. Section xxxii of the Liverpool Corporation Act of 1898 is as follows:

32.—(1) Any person being a manufacturer of or merchant or dealer in ice creams or other similar commodity who within the city—
(a) Causes or permits ice creams or any similar commodity to be manufactured sold or stored in any cellar or room in which there is an inlet or opening to the drain; or
(b) In the manufacture sale or storage of any such commodity does any act or thing likely to expose such commodity to infection or contamination or omits to take any proper precaution for the due protection of such commodity from infection or contamination; or
(c) Omits on the outbreak of any infectious or contagious disease amongst the persons employed in his business to give notice thereof to the medical officer of health for the city,
shall be liable for every such offence on summary conviction to a penalty not exceeding forty shillings.

Although this did not make any provision for the licensing or registration of premises, yet in point of fact it was tantamount to that, for if the manufacturers did not put their premises in order they were prosecuted under the Act. Many of the manufacturers had really put their premises in order according to the instructions of the health authorities; and although they hoped to get further powers at some later period, their Act had resulted in a great improvement as regards the manufacture and storage of ice cream.

Section of Physics, Chemistry, and Biology.

In this Section the treatment of sewage was the chief subject of discussion. Professor Bostock Hill and Mr. Garfield described the year's working of the Wolverhampton sewage through coal filters, and mentioned the difficulties they had at first experienced with the salts of iron. As a result of the experiments, they came to the conclusion that in a sewage which did not contain more than a very small proportion of manufacturers' waste, it was possible to produce a high-class effluent, and at the same time deal with the organic matters without previous precipitation, by a process compounded of the septic tank and coal filter; the sludge problem had, therefore to this extent been solved.

THE PLAGUE.

PRECAUTIONS AT BRITISH PORTS.

Dr. J. Wright Mason has drawn up a series of precaution against plague for the Hull and Goole sanitary authority. They are plain, simple, and conceived in accordance with our present knowledge of the disease.

It is well known that microbial maladies may be divided into two great classes. In one the microbe is parasitic, and is dependent for its life on the organism it infests; such diseases are conveyed from person to person by actual contact. On the other the microbe is saprophytic, or capable of living and multiplying in organic refuse, aptly called "matter in the wrong place," or dirt. Such diseases can be carried from the sick by water, air, or clothing. The precautions necessary to be taken to prevent the diffusion of diseases depending on each class is of course different. The plague bacillus is capable of leading both a parasitic and a saprophytic existence, so that from the point of view of preventive measures it is necessary not only to isolate the patient, but to render the surrounding conditions unfavourable to the growth of the plague organism.

Dr. J. Wright Mason advises masters of vessels visiting ports infected with plague to confine their crew as far as possible to the ship, to frequently clean and disinfect waterclosets, and to provide disinfectants. Strict attention should be paid to those engaged in the discharge of a cargo, and in the event of illness, however slight, occurring amongst those so engaged, or amongst the crew, medical advice should be immediately obtained. Particular care should also be taken in respect to the food and water taken on board. Rats and mice have been the means of spreading infection, and every effort should be made to exterminate them in warehouses connected with the port, and in the ships themselves. He also advises the prompt isolation in a special cabin of anyone on board ship who shows any suspicious symptoms, the thorough ventilation of the cabin, and the provision of a special attendant who shall avoid direct contact with the crew, and the frequent use of antiseptics. All bed and body linen, as soon as removed from the sick person, before being taken from the berth, should be put first into a solution of some reliable antiseptic. The discharges from the bowels and kidneys should be received on their very issue from the body into vessels charged with disinfectants. In case of death from plague occurring on board any vessel immediate burial is imperative. The bedding and effects used by the patient should be burned, and the berth occupied by the patient thoroughly disinfected. It would have been as well, however, if more definite instructions had been given on the subject of disinfection, especially as to the nature of the disinfectants to be employed and the mode of using them, as the instructions are evidently intended for vessels which do not carry a surgeon.

It may be taken as assured that the vast majority of people in general are very much alive to the danger of an outbreak of plague in this country, and would take any necessary precautions suggested to them in order to prevent such a catastrophe. That this is a fact is proved by the few difficulties the Local Government Board had to contend with in their recent thorough inspection of the English ports; people, as a rule, being quick to recognise the value of the sanitary precautions instituted for their benefit and the community at large. On the event of any epidemic it is always far more expedient to have instructions and regulations in large print placarded on walls, etc., than to have them distributed. They then receive more attention.

We take this opportunity of suggesting that our large ocean-going steamers which carry a surgeon and touch at plague-infected ports should have a supply of prophylactic serum in order that at least those in attendance on the sick should be protected, not necessarily for the wholesale inoculation of the passengers. The Local Government Board have under their consideration the provision of plague prophylactic serum to ports in England liable to be visited by plague. Although there may be a sporadic case or so on our shores, hovering on our flanks so to speak, there does not seem any danger that there will ever be a serious outbreak in this country.

Prevalence of the Disease.

Portugal.

Oporto.—The total number of plague cases in the city of Oporto since the commencement of the outbreak amounts to some 64 cases in all. Seeing that, in all probability, the disease has already existed in Oporto for two and a half months, it would not appear that the plague is spreading rapidly. Unfortunately this is no criterion as regards the future virulence, the recurrence or the continuance of the disease. We are rich in the literature of the behaviour of plague, and one thing which stands out more prominently in this disease than in any other is the inveteracy with which plague clings to any city or district where once it has established itself. Hong Kong, now in the throes of its fifth or sixth outbreak, is an example of this, and it is the chief example we possess in modern times to guide us in our knowledge or to indicate the behaviour of plague. Poona, in India, rejoiced in the speedy disappearance of the initial visit of plague, only to be cast down by the recurrence of an outbreak of increased virulence and of wider extent. Let, therefore, the Portuguese and all European authorities recognise this peculiar aspect of plague, for by familiarity with the disease or by holding light the virulence or diffusion of the particular outbreak, the restraint on passengers, the commercial loss, the direct expense to the nations threatened may induce one or other or all to relax their precautions. Portugal may remain infected, may be a possible source of infection for some years to come, and spasmodic efforts against this insinuating disease are not what are wanted. Constant vigilance must be maintained for some years to come, and the nation which best maintains it will stand the best chance of escape. Another source of danger is the smaller death-rate in plague cases which obtains in Egypt and in Portugal than we are accustomed to expect from statistics derived from China or from India. Practically a native seized with plague dies, but in Alexandria one-half the cases have recovered, and in Oporto out of 64 cases but 25 persons died. This may be a tribute to European medical skill, to the stamina of Europeans as compared with Oriental sufferers, to the so-called mildness of the epidemic, or to the more hygienic environment. Be this as it may, it does little to remove the dread of an attack, and in no way lessens the labours of the sanitary authorities. During the past 14 days 12 cases of plague occurred in Oporto. Bacteriologists and sanitarians from France, Germany, and Italy are proceeding to Portugal to investigate and study plague. Business is so paralysed that many of the shops have closed. As usual when plague is rife the general health is excellent, a circumstance which has never been explained. The latest telegram, dated September 5th, states that 3 new cases of plague occurred on September 4th.

Egypt.

Alexandria.—On September 3rd a death from plague occurred in the city of Alexandria. We sympathise with the sanitary authorities in Alexandria having to record these very occasional cases and deaths. They would seem so near the end of the outbreak as time goes on, when for days together no case of plague is met with, that it must be dispiriting in the extreme to have their hopes annulled and their work seemingly thwarted by one or two sporadic cases.

India.

Poona.—A very virulent form of plague is raging in Poona, and Lord Sandhurst, the Governor of Bombay, has visited the city. Lord Sandhurst regrets the spread of plague, in spite of measures taken to combat it. He draws a dark picture of the future in many parts of India, where the crops have failed owing to the failure of the monsoon rains, and that they have to face not only plague, but a famine of more or less severity.

Mauritius.

For the week ending August 31st, 63 cases of plague occurred in the island of Mauritius, causing 44 deaths.

Hong Kong.

Fourteen cases of plague and 14 deaths from the disease occurred in the island of Hong Kong during the week ending September 3rd.

China.

The Russian Plague Commission has notified that the port of Inkou, near Newchwang, is infected with plague. This would seem an acknowledgment that the plague in Manchuria is spreading. The Russians fear a scare being raised amongst the 30,000 Chinese coolies at work on the railway between Ta-lien-wan, Newchwang, and Mukden. The character of the epidemic is stated to be mild at present, but there seems to be a great tendency to spread. The presence of Chinese coolies on the Russian railway may explain the presence of plague in this neighbourhood. Newchwang is the port where all coolies proceeding from the Chinese ports would disembark. Up to a few years ago the Chinese labourers on this railway belonged to the north of China, chiefly the province of Shan-tung; but no doubt with a great increase in the number of coolies required, the large sources of coolie labour in the south of China have been called upon to meet the increasing demand, and the plague-infected ports of Amoy, Swatow, Canton, and Hong Kong have sent their diseases with them.

Russia.

Astrakan.—The plague-stricken village of Kololovka, in the Astrakan district, has been completely enclosed by a rigid military cordon. The first case of plague in the Kolobovka occurred on July 23rd of this year, and since then 24 cases of plague have occurred with 23 deaths. The last death occurred on August 24th, and at present only one person is under treatment. It has not been ascertained whence the disease came, and a careful report on the surrounding districts by Prince Oldenburg states that nowhere in the neighbouring regions is there any suspicion of plague.

HOSPITAL ABUSE.

A Special General Committee of the Bradford and District Medico-Ethical Society was called for February 15th, 1899, to consider the question of hospital abuse. Adjourned meetings were held February 24th, March 8th, 14th, 22nd, and 28th, April 7th, 13th, and 27th. The resolutions passed were eleven in number and were as follows:

1. *Medical Relief is Charity.*—That in the opinion of this Society it is of the first importance that the boards of management of public hospitals and the public generally should recognise the principle that medical relief is charitable relief, and that the hospital funds are provided in trust for the benefit only of the sick who are unable to pay when suffering from serious ailments, and that it is not only dishonourable but dishonest for other persons to take any part of these funds.

2. *Wages Scale.*—That the Bradford and District Medico-Ethical Society approve the following wages scale for use in our hospitals:—For 1 person when in work, 18s. per week; for 2 persons when in work, 23s. per week; for 3 persons when in work, 28s. per week; for 4 persons when in work, 31s. per week, with 3s. for each additional member of family. That cases of long-continued illness or cases for serious operation should be considered exceptional, and shou d be recommended by their medical man.

3. *Inquiry Officer.*—That the necessary inquiries as to the inability of applicants for medical charity to pay for treatment at home cannot be satisfactorily made except by a special inquiry officer, and that all cases should be inquired into by such an officer.

4. *Serious Cases.*—That no patient who is excluded by the wages scale ought to be entitled to receive medical charity unless suffering from an ailment of so serious a nature that it cannot be properly treated except in hospital.

5. *No Small Payments to be taken.*—That the acceptance of small payments from patients in receipt of medical charity, whether as a contribution towards the cost of maintenance or in return for medical treatment, is highly undesirable. This is not intended to interfere with voluntary contributions by grateful patients after the treatment in hospital has been finished.

6. *Recommendations.*—That the system of giving recommendations to subscribers is objectionable, is greatly abused, and should be abolished.

7. *Casualty Patients.*—That casualty patients should receive first aid, and then if above the wages limit be referred to private medical men.

8. *Dental Extractions.*—That cases of simple extraction of teeth should be inadmissible.

9. *Out-patients.*—That out-patients shall be admitted to the hospitals without charge, subject to inquiry as to their monetary suitability. That patients sent by their medical men for a second opinion, but not for hospital treatment, shall be eligible without inquiry by the inquiry officer.

10. *In-patient Department.*—That in-patients shall be admitted according to the wages scale, exceptions being made when operations are required, or when other extraordinary circumstances obtain. That no paying patients shall be admitted as such.

11. *Home Patients.*—That the home-patient department, as carried out in connection with the Bradford Royal Infirmary, is much abused, objectionable in principle, and should be abolished.

THE SCARCITY OF WATER IN THE EAST END.

Considerable uneasiness is felt as to whether or not there will be a scarcity of water in the East End of London, owing to this year's extreme drought. There have been three former periods of scarcity in the district supplied by the East London Water Company—namely, in 1895, 1896, and 1898. The population is about 1,336,000.

In 1895 the constant service was interrupted from June 28th to September 8th. The cause of this was made the subject of an inquiry by the Local Government Board, who came to the following conclusions:

"That the suspension of water in the metropolitan area comprised in the district of the East London Water Company was forced on the company by the unprecedented drought in the Lee Valley during the first six months of this year (1895), following on an unusually long and severe frost, which had caused such extensive fractures to lead pipes that they could not be repaired fast enough to prevent exceptional waste of water. Further, that the East London Company were hampered in dealing with the above difficulties by want of additional storage and pumping power that their Bill of 1893 would have given them had it passed into law at the time."

In 1896 a second failure took place, and the constant service

was interrupted from July 14th to September 14th. The cause was nearly identical with that of the year before.

In 1898 the third of the series occurred. In this year there were 2.5 inches less rainfall than in any one of the 82 years during which records have been kept at Greenwich. The mean rainfall in the Lee Valley is 26.5 inches, but in 1898 it was only 13.5 inches, or just half.

This year's experience is even worse than that of 1898, for the rainfall in the districts round London for May, June, July, and August is 60 per cent. below the average. It may be a matter of wonder, with the experiences of want and discomfort in past years, why the East London Company have not built larger storage reservoirs in order to guard against a repetition of any scarcity. Lord Balfour's Commission, so far back as 1892 urged increased storage, and had the East London Company received the powers they sought for in 1893, namely, to increase their storage from 600 to 1,200 million gallons, there would have been little probability of scarcity in 1895. The following session their Bill was introduced again, passed, and the storage made.

Another Bill was introduced and passed by Parliament in 1897, which sanctioned the construction of additional reservoirs for another 1,200 million gallons. This work is being pushed forward as rapidly as possible, and when completed will insure a total of 2,400 million gallons. Even this large supply was not deemed sufficient, and in 1898 the Company asked Parliament to allow them to erect works for about 5,000 million gallons additional storage, and this after a most patient and careful hearing was passed by Sir Joseph Pease's Committee.

It was eventually, however, rejected by a committee of the House of Lords, although it was proved that with the recurrence of a drought like that of last year, 2,400 million gallons would be insufficient. The unfortunate part of the matter is that the public do not understand that the company is powerless to execute works without the sanction of Parliament; therefore the company receive the entire blame for a situation which it is powerless to remedy.

Another potent factor in producing a scarcity of water is the enormous amount of waste that takes place every day. It is calculated that what with bad fittings, allowing garden hose to run all night, and culpable negligence in letting domestic taps do the same, over 50,000,000 gallons, or more than sufficient to give two days' supply at 20 gallons a head to the whole population supplied by the company, is allowed to run to waste every 24 hours.

Consider this waste in a month, which, if prevented and stored, would carry them through any drought. A system of intercommunication has lately been established between the different water companies, so that in the event of any one company breaking down, or requiring an extra supply, it can rely on the support of all the others.

But it is doubtful, with the present limited storage, and the continuance of a widespread drought, if any water company will have much more than suffices for the immediate wants of its own consumers. There are signs that the drought will not continue; but should it recur the position in the East End may be a very serious one; the other sources of supply, such as wells, springs, etc., must inevitably diminish in volume, and with that will come an almost certain interruption of the water service in the East End.

The only solution of the difficulty of meeting this or any other future drought is the provision of sufficient storage accommodation for all and any contingency that might possibly occur.

THE CARE OF INEBRIATES IN NEW SOUTH WALES.

ONE of the great advantages—counterbalanced no doubt by certain disadvantages—that a new country has over an old one is that, as a rule, it is able, whether in politics, in social movements, or in legislation, to go in for initial broad general effects, and then to put in detail as may be required. In legislative matters the theory of the liberty of the subject is elevated into a kind of religious belief, but woe be to the individual subject should he in any way interfere with the well-being of those with whom he comes in contact—rough justice, but still justice, is meted out to him with no unsparing hand. In our ultra-civilised countries, with their numerous agencies for the protection of life and limb of the intoxicated subject, and with a policeman to look after him during his temporary insanity, the drunkard was, until quite recently, allowed to contract and continue a habit which is said to be a disease, without effort of any kind being made to control or cure him; and once the disease was contracted, if disease it be, the patient, no longer able to judge for himself, could not, and even now cannot, rely on the good offices of those who, if he were suffering from an infectious fever or from a form of lunacy not produced by intoxicants, would take charge of him and put him under conditions favourable to his recovery.

Some attempt has indeed been made to remedy this by our legislation under the advice of those who have studied the question most carefully, but we are still behind our Australian cousins in regard to this matter.

The Honourable Dr. J. M. Creed introduced a Bill, to which we have already referred, into the Legislative Council of New South Wales. It passed in November last, and has been presented to the Legislative Assembly. This Bill, in its essential details, appears to have been framed so as to interfere as little as possible with the liberty of the subject, but at the same time an effort has been made to cast it in such form that it affords an inebriate protection against himself and enables him to be treated for dipsomania for a sufficiently long period to allow of a return of both body and will to a healthy and stable condition. Under this Bill it is lawful for a judge or magistrate or the master in lunacy, and after the evidence of a medical practitioner and on inspection, to make an order as to the control of an inebriate.

On the application of—

(*a*) An inebriate or any person authorised in writing on that behalf by an inebriate while sober;

(*b*) the husband, or wife, or a parent, or a brother, sister, son, or daughter of full age, or a partner in business of an inebriate; or

(*c*) a member of the police force of or above the rank of sub-inspector acting on the request of a duly qualified medical practitioner in professional attendance on the inebriate, or on the request of a relative of the inebriate, or at the instance of a justice of the peace,

to order that the inebriate be placed under private or public treatment for a period not exceeding twenty-eight days; or be placed in a licensed institution for such period not exceeding twelve months, as may be mentioned in the order; or that the inebriate be placed for any period not exceeding twelve months, to be mentioned in the order, under the care and charge of an attendant or attendants to be named in the order, and who shall be under the control of the judge, master in lunacy, or magistrate making the order.

It is evident that the framers of this Bill are wishful that the provisions therein made shall be effective, and shall be brought into force without the necessity of applying any very complicated machinery. Dr. Creed, in view of the action proposed on the recommendation of the Comptroller-General of Prisons, has introduced into his Bill Clause 3, which most of those with experience will look upon as going to the root of a much debated question—a clause which, as seen in the present Bill, appears bristling with common sense. This clause runs:

Where an inebriate has thrice within the preceding twelve months been convicted for an offence of which drunkenness is a necessary ingredient, it shall be lawful for any Court of Petty Sessions to order that the inebriate be placed for such period of not less than six or more than twelve months, as may be mentioned in the order, in any institution which may be established by the Government for the reception, control, and treatment of inebriates so convicted; and on the order of a Judge of the Supreme Court, or of a District Court Judge, or of the Master in Lunacy, such period may from time to time be extended for further periods not exceeding twelve months each.

Power is given to place these inebriates under immediate medical treatment in any convenient hospital, gaol, or private house, and to

direct that the expense of the care, charge, and maintenance of the inebriate be paid out of any property of the inebriate, and may fix the amounts to be so paid, and the amounts so fixed may be recovered in any court of competent jurisdiction.

These directions may be given on orders varied, renewed, or rescinded, as those making the order may think fit.

A notable feature in the Bill is that the attendant shall be authorised to prevent the supply of intoxicants to any inebriate under his charge, this authorisation extending to "any drug or instrument which may be used for the purpose of producing a state of inebriation." Further, "any such attendant who neglects to comply with any such direction shall be liable to a penalty not exceeding five pounds." This

is certainly a much more efficient clause than the one in which it is laid down

That any person who supplies an inebriate, being the subject of an order under the Act, with intoxicating liquor, or any drug or instrument which may be used for the purpose of producing a state of inebriation shall be liable to a penalty not exceeding ten pounds.

In country places, as has been pointed out, the latter clause may serve the purpose for which it has been drawn up, but in large towns it is absurd to suppose that the numerous liquor sellers could in any way be made liable for the large number of inebriates under restraint.

Dr. Creed, who approaches the question purely from the standpoint of a medical man who has a belief in the power of legislation, is thoroughly convinced that if this Act be put into force, and habitual drunkards kept under treatment for periods of from six to twelve months, and if, in addition, patients who have so far recovered that they are allowed to go about their usual avocations, are still kept under surveillance so that they may be carefully controlled during those periods when conditions are such as to favour a relapse to the dipsomaniac condition, something like 90 per cent. of habitual drunkards might be reclaimed. This may perhaps be a somewhat hopeful view to take, but there can be little doubt that under this Bill, which no more interferes with the liberty of the subject than does the Lunacy Act or an Infectious Diseases Isolation Act, the recoveries should be much more numerous than they are at present.

We in this country will watch with the utmost interest, and even anxiety, what the effects of this Bill on habitual drunkenness and its treatment in New South Wales may be, and there can be little doubt that, should it be found to work smoothly and effectively, some of the clauses may with advantage be drafted bodily, or with such modifications as the different conditions may require, into Bills dealing with the legislative treatment of inebriates in this country.

THE DESTRUCTION OF MOSQUITOS.

[FROM OUR SPECIAL CORRESPONDENT IN ROME.]

Professor A. Celli and Dr. Casagrandi have been engaged in an investigation of substances capable of destroying mosquitos, a subject which has gained in importance since it has been proved that mosquitos are the hosts of the malarial parasites.

Nature of the Experiments.

The experiments were made made with the larvæ and nymphæ of *Culex pipiens* and *Culex annulatus*, with the eggs of *Culex pipiens*, and with the perfect *Culex annulatus*, *Culex pipiens*, *Anopheles claviger*, and *Anopheles bifurcatus*.

Professor Celli and his colleague have taken specially into consideration the stage of development—the egg, the larva, the nympha, or of the perfect mosquito. In the last stage the mosquitos live in the air, in the other stages in water. The authors made the following classification of culicidal substances:

1. Substances which kill the eggs.
2. Substances which kill the larvæ.
3. Substances which kill larvæ and nymphæ.
4. Substances which kill the perfect mosquitos.

As the criterion for judging the larvicidal action of a substance, they took the time necessary to kill the larvæ, considering any substances inefficacious which did not kill within at most three days (seventy-two hours).

Larvicidal Substances.

The results of the action of the substances that kill the larvæ are given in three tables, which show that:

1. Among the mineral substances potassium permanganate, even in the considerable dose of 5 per cent., acts slowly; lime, copper, and iron sulphates and ammonia, even in very large proportions, act rather slowly; sulphurous water, even when not saturated with sulphurous oxide, is one of the most active larvicidal substances; corrosive sublimate, even when as strong as 1 per cent., kills the larvæ slowly and does not kill the nymphæ.

2. Among the vegetable substances very potent poisons to the larvæ are those of the leaves of strong tobacco, and some of the insecticide powders of commerce, which are obtained from the unexpanded flowers of chrysanthemums. Other insecticide powders are either less active or altogether inefficacious. Then comes the commercial extract of tobacco, and finally a saturated aqueous infusion of quassia, of solanum nigrum, and of daphne quidium.

3. Of the aniline dyes (blue, violet, red, yellow, and green), the two that have the most energetic action are the gallol of Weiler-ter-Meer, of Uerdingen, and the green malachite of the Actiengesellschaft für Anilin Fabrikation of Berlin. The larvicidal dose of gallol is 0.0062 per cent. of the green malachite 0.0125; the minimal larvicidal dose of the first may descend to 0.0007, while the second is never less than 0.0031.

In regard to the substances which kill larvæ and nymphæ the authors come to the following conclusions:

1. The destruction of the nymphæ is in general rather difficult; oily substances alone, which float where the nymphæ generally come to breathe, kill the nymphæ before or at the same time as the larvæ.

2. Classifying the substances employed according to the time required for killing the larvæ, water saturated with sulphurous oxide occupies the first place, then comes potassium permanganate mixed with hydrochloric acid. The action of the permanganate alone is much weaker even in greater proportions (2 per cent.—1 per cent.). The slightly oily substances, among which is petroleum, are very efficacious. At the ordinary temperature petroleum must be present in the proportion of at least 0.10 c.cm. per 100 cm. of surface. Oil has an analogous action. Salt water, which at 5 to 10 per cent. kill the larvæ in fifteen hours, in concentrated solutions kills them in thirty minutes and the nymphæ in an hour. The commercial insecticide powders obtained from chrysanthemum flowers are also very active. Caustic lime, ammonia, and chloride and carbonate of lime only act in very high proportions.

3. Of the more powerful bactericidal substances formalin and lysol are not very efficacious, and corrosive sublimate is even less so.

4. The nympha stage being very transitory, it may be neglected in practice in the destruction of mosquitos.

The use of mordants is of little advantage in practice, though in many cases they augment the larvicidal action of the substances. Direct sunlight does not diminish the larvicidal efficacy of the substances, and it retards the putrefaction of the waters.

The Chemical Constituents and Temperature of Water.

The influence of the physical and chemical properties of a water and temperature are more important. With a rise of temperature the time of the destruction both of the larvæ and of the nymphæ by different substances is shortened, except in the case of petroleum, which acts mechanically by forming a stratum impermeable to air. The chemical properties of a water have an influence on the mode and the time of destruction of the larvæ. For example, potassium permanganate is destroyed in marshy water having to oxidise the organic substances, and it is destroyed in sulphurous waters. Directly putrefaction begins it arrests the larvicidal action of gallol and malachite green, insecticide powders, petroleum, and, as a rule, of other larvicidal substances.

In waters contained in a vessel with earth at the bottom the soluble larvicides, such as gallol, maintained their action for a longer time in proportion to the height of the stratum of water above the earth. In the case of those substances which act on the surface, if the stratum does not protect the whole surface from contact with the atmosphere, their action immediately ceases. The young larvæ are much more easily killed than the older.

Duration of Larvicidal Action.

Of the various substances observed for several days in succession, the first to lose its larvicidal action was petroleum, which evaporated and no longer covered the whole surface of the water. In the proportion of 0.20 c.cm. per 100 cm. of surface it lasted only two days at 18° C.

Practical Application and Price.

Sulphurous oxide is the least practical of the larvicidal substances, owing to the difficulties of its production and its dearness. Petroleum is relatively easily used, even in ponds and large lakes. It does not kill the fish or the inferior animals. Its action, however, is proportional to its diffusi-

bility on the surface of the waters, therefore the lighter the petroleum the better it acts.

The insecticide powders are easily used, and when swallowed even in large doses are not poisonous to herbivora, but they are poisonous to some worms, molluscs, and fishes.

The use of staining substances when, like the two cited, they are very soluble and diffusible in water, is easy and practicable. Very concentrated solutions should be made and added to the water containing the larvæ; the proportion can be determined by the colour produced. They destroy also all animals in the water.

The cost of all the mineral substances, including chloride of lime, in the necessary larvicidal dose, is too great. The vegetable powders, staining substances, and petroleum are the cheapest for use on a large scale. In calculating the price it must be remembered that the action of its staining substances is of greater duration.

SUBSTANCES WHICH KILL THE PERFECT MOSQUITO.

From a practical point of view the substances used are divisible into three categories: (1) odours, (2) fumes, (3) gases.

The odours were tested under a bell-glass, which was contained in a glass capsule covered with gauze; for fumes and gases a wooden and glass chamber of the capacity of about 100 litres, invented by Rosenthal for the demonstration of the ventilation of rooms, was used. After each experiment the mosquitos were collected in recipients to ascertain whether death was real or apparent.

Among the odours which caused death were turpentine, iodoform, menthol, nutmeg, camphor, and garlic; among the fumes, tobacco, chrysanthemum flowers, fresh eucalyptus leaves, quassi wood, pyrethrum, and also simple wood smoke; among the gases, the most practical and efficacious was sulphurous oxide.

The best time for destroying mosquitos is the winter, when they are in least number in the waters and new generations do not appear. It is always possible to destroy mosquitos in houses, and this may be done with greatest effect in the winter, when the insects take refuge in houses. Better knowledge of their habits—that is, of the place and time of breeding—will render their destruction easier. Even in the most favourable cases, when drainage shall have done all that is possible, this will not be so easy as many believe. Nevertheless, after the treasure spent by nations and private individuals for preserving the vine from oidium, permospora, and the phylloxera, it is to hoped that something will be done to protect man from the malarial mosquito.

EFFECTS OF THE EXCLUSION OF MOSQUITOS.

Professor Grassi, of the University of Rome, has recently obtained from the Italian Railway Company leave to use two rooms in a cottage situated near Maccarese, a place well known as malarious, on the line between Rome and Civitavecchia. The windows of the two rooms were covered with perforated zinc, and for eight days Professor Grassi left Rome every evening at 5.30, accompanied by a family living outside the Porta San Giovanni, consisting of the father, mother, and five children, varying from 1 to 9 years of age, for the above rooms, where they passed the night. The windows of the rooms were left open, but the entrance of mosquitos was prevented by the perforated zinc. Professor Grassi took care that none of the members of the family left the rooms between sunset and sunrise. At about 8 A.M. every morning he and the family returned to Rome.

The experiment was completely successful, inasmuch as twelve days after Grassi and the family had returned permanently to Rome not one of them had been attacked with malaria, while during the same time several persons sleeping only 100 metres away from the cottage and not protected in the same manner, were taken ill with the disease.

Professor Grassi and his subjects having slept with open windows naturally breathed the night air of this intensely malarious spot, and they drank the water found there. It may therefore, he says, be deduced that their immunity was due solely to the fact that having protected the windows with perforated zinc those species of mosquitos which produce malaria could not penetrate through the zinc into the rooms.

Professor Grassi states that anopheles begins to lay its eggs ordinarily in the spring, depositing them in waters rich in vegetable matter; but its generations follow irregularly. The anopheles bites persons only between sunset and sunrise.

ASSOCIATION INTELLIGENCE.

NOTICE OF THE NEXT QUARTERLY MEETING OF COUNCIL.

A MEETING of the Council will be held on October 11th, 1899. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, September 21st, 1899.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

NOTICE.

THE Library will be closed for the purposes of cleaning o Tuesday, September 12th, and will reopen on Monday, September 18th.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting will be held at Hastings early in October. Members wishing to read papers or make communications are requested to notify their intention to the Honorary Secretary, J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards.

EAST ANGLIAN BRANCH.—The autumnal meeting of this Branch will take place at Felixstowe on Thursday, September 28th, under the presidency of Dr. E. L. Fenn. It is requested that gentlemen desirous of joining the Association or Branch, and members willing to read papers or contribute cases to the meeting, will communicate at once with Dr. Barnes, Eye. Members who have not yet paid their subscriptions for the current year will oblige by sending them to one of the Honorary Secretaries, EDGAR G. BARNES, M.D., Eye; MICHAEL BEVERLEY, M.D., Norwich; BENJAMIN HUGH NICHOLSON, M.B., Colchester.

BORDER COUNTIES BRANCH.—The autumn meeting of this Branch will be held at Keswick on the afternoon of Friday, September 29th. Gentlemen desiring to join the Branch, and members proposing to read papers, etc., are requested to communicate as early as possible with the Honorary Secretary, W. F. FARQUHARSON, Garlands, Carlisle.

BRITISH GUIANA BRANCH.

THE third quarterly meeting of this Branch was held at the Public Hospital, Georgetown, on August 10th. Dr. EDMONDS, President, was in the chair, and twelve members were present.

Revision of Medical Ordinances of the Colony.—The PRESIDENT gave a short summary of the result of the meeting of the Branch delegates with the British Guiana Medical Board *in re* revising the medical ordinances of the colony on the lines of the recent Trinidad medical ordinance, but as the Acting Surgeon-General was not prepared to discuss certain clauses which were considered most important by the delegates, namely, the position of the new president, it was considered advisable to adjourn same until the return of the Surgeon-General, who is away at present on leave; the principal object being to obtain an ordinance to regulate the practice of medicine and surgery in the colony apart from the Government Medical Service. Under the present ordinance, entitled one to establish a Government medical service, the whole medical practice of the colony is practically controlled by the Government Surgeon-General, and it is to allow the private medical

practitioners to have some voice in matters affecting their profession, that it is their desire to have this ordinance brought into effect.

Appointment of Auditors.—Drs. Barnes and Hodgson were appointed auditors for the year.

Malaria in Lower Animals.—A paper was read by the Honorary Secretary for Mr. J. H. Bell, M.R.C.V.S., who unfortunately was called to the country and could not be present, on Malaria as it Affects the Lower Animals. Mr. Bell gave a graphic description of the various symptoms which he considered due to malaria in the horse, ass, mule, cattle, dog, cat, and monkey, and how the same were readily cured by the use of quinine.—Dr. Ozanne stated that when in a country district once the hospital was full of cases of malarial fever, and, curiously, the cattle and horses were ill at the same time. His attention being called to the fact he made a *post-mortem* examination on several, and found marked pigmentation of the liver, spleen, brain, and various other organs, the same as is seen in malaria of the human being.—Dr. MacAdam gave his experience with an imported horse and with dogs; he found the good effect of quinine, as under its influence the animals readily recovered, whereas if withheld they went from bad to worse. He quite agreed with Mr. Bell's description of the symptoms.

Vote of Thanks.—The President proposed a vote of thanks to Mr. Bell for his paper, and said he once treated a favourite kitten with quinine, and it soon recovered; it had regular exacerbations. He thought it a pity we had not had a full examination of the blood, which might be most interesting, and requested that some of the members might take it up.—Dr. Honiball seconded the vote of thanks.

CORRESPONDENCE.

ILLEGAL CERTIFICATES.

Sir,—I regret that I overlooked a serious error of fact put forward in a letter contained in the British Medical Journal of August 26th, signed by certain gentlemen, but composed in the inimitable style of the author of the memorials which I was invited by the Corporate Reform Association to sign.

The error in question is contained in the following sentence: "We do not believe there is any real public demand for, or any justification of such a measure, nor any necessity for such a policy of surrender which is inconsistent with Mr. Horsley's election pledges."

From a simple failure of memory the gentlemen signing this letter have thus published a grave misrepresentation of my public position in regard to the midwifery question.

As I knew how treacherous men's memories are apt to be, I took to the "Stratford meeting," and read to that meeting the document which I sent to every member of the profession just before my election in 1897, and which was published in the British Medical Journal. In that document I stated fully my views on the matter, and I have never altered them in any way.

To say, therefore, as Dr. Myrtle and his friends now do, that I advocate "a policy of surrender" is to say that which is not true, and, further, to allege as they do that my present position "is inconsistent with my election pledges" is demonstrably false.

Inasmuch as both the author of the memorials and letters and several of the gentlemen signing the letters now attacking me were present at the Stratford meeting and heard me read my election pledges of 1897, I cannot account for their conduct except on the hypothesis that their recollections of what occurred only a few weeks ago have served them very badly.

I also observe that Dr. Myrtle and his friends again advocate what they term "an uncompromising resistance." This is only another expression for the method of opposition by "blank negatives" which Mr. Brown and I proved at the Stratford meeting to be quite impotent, and that therefore the only reasonable course was the one I suggested in 1897—namely, to render any proposed legislation of real benefit to the public and at the same time devoid of injury to the interests of the profession.—I am, etc.,

Rustington, Sept. 5th. Victor Horsley.

TUBERCULOSIS IN CHILDHOOD.

Sir,—I have just read in the British Medical Journal of September 2nd an article on Tuberculosis in Childhood, in which the author, to illustrate his text that traditional beliefs in medicine die hard, selects what seems to me some very unfortunate examples. The ignorance he deplores being attributed especially to "leaders of the profession," whose statements, he says, "are naturally accepted almost without question while protests from juniors pass unheeded," my own withers are unwrung. But I will beg space for a few words in order to ensure some heed to at least one protest of a "junior," as the author, by implication, very modestly styles himself, and to attempt a defence of the average obsolescent seniors who are clearly included within the general scope of Dr. Carr's admonition.

I do not think that traditional beliefs die nearly so hard in medicine as in many other matters. Rather would I say that the rapid march of medicine along the road of modern research is mainly marked by a series of explosions of old beliefs. But let that pass. Dr. Carr says (1) that it is a deeply-rooted belief that in young children tuberculous infection is more common through the intestines than through the lungs, etc.; and (2) that there is a widely-spread assumption that "tabes mesenterica" always means abdominal tuberculosis.

Now, of these two medical Aunt Sallies which Dr. Carr has just put up to throw down, the one is not traditional at all, erroneous though it be, the other has died perhaps hard, but dead it is, and by this time scarcely stinks.

As to (1), first, is there a deeply-rooted belief that abdominal tuberculosis is the commonest and most fatal form of the disease in early life? Perhaps so. But even if it be deeply-rooted I do not think it is widely spread. That tuberculous infection, through the intestines, or tuberculosis mainly abdominal, is proportionately much less frequent as age advances is certainly widely taught, and is moreover true; as well as that other belief that pulmonary consumption, clinically so-called, is much less common in early childhood than in youth or early maturity. But the obsolescent seniors cannot really recognise a new discovery on the part of Drs. Carr, Guthrie, and Still, when they announce the absolute prevalence of pulmonary over abdominal tubercle in children, nor will they credit these crusaders at present with an exposure of any "time-honoured fallacy" at all. This new revelation is probably to be found in most works on the subject. Some may possibly have taught in recent days the heresy which is said to be so disastrous, but for many years most of us have known and have been taught the truth, even in our salad days. Writing as I am away from London, I have no books to refer to in support of my statement except one by myself—now quite antiquated, having even entered its second lustrum. Having quite forgotten what I wrote (if I wrote at all) on the matter, I have just looked it up, and find the mention of 400 in-patient cases of tuberculosis in children, classified from the point of view of prominent distribution in the body. These cases were registered as "tubercular," either on *post-mortem* or clinical evidence or on both of these, 25 per cent. were in the "pulmonary" category, 25 per cent. the "general," 38 per cent. in the "cerebral," and 12 per cent. in the "abdominal." I emphasised nothing fresh in making the statement, and never thought that it was new. But I quote it now merely as an illustration of what I believe to be common knowledge and ordinary teaching, namely, that while "general tuberculosis" is of very frequent occurrence in childhood, tuberculosis, localised or apparently localised, in one of the three great cavities is least often found in the abdomen.

Next (2) as to "tabes mesenterica." Verily long before Dr. Carr's protest appeared in 1895 against the use of the term "consumptive bowels," followed by his inquiry in 1898, What is Tabes Mesenterica? even the oldest and therefore most fallible of us knew that both these terms meant for doctors cases of nutrition disorder, with wasting and "something of a round belly." It is scarcely credible that even the leaders of the profession regard as "tuberculous" all or any of the cases which may still be "registered" when they are dead under either of these titles. Few, indeed, even of the con-

fessedly uninstructed of our profession (whom Dr. Carr does not address) talk in these terms now; fewer write in them; and very few, indeed, who hear or read them are thereby much misled.

Sir, I trust I have succeeded in showing that even as far back as some years ago there was a little medical knowledge that has not been upset, but has even been endorsed by fresh "research;" and I trust, also, that Dr. Carr will not anathematise me with the formula of *pereant qui ante nos nostra dixerunt*.—I am, etc.,

Harley Street, W., Sept. 5th. H. B. DONKIN.

UNUNITED FRACTURE IN CHILDHOOD.

SIR,—I certainly agree with Mr. R. W. Murray regarding the rarity of ununited fracture of the leg bones in children. Although my experience is but small compared with Mr. Murray's, I have, since succeeding him as Surgeon to the Liverpool Infirmary for Children, performed osteoclasis of the tibia thirty-three times. These cases have all been carefully followed up, and in every instance firm osseous union has resulted. I have also within the past three months treated two cases of simple fracture of the tibia in children caused by very slight indirect violence, in neither did non-union occur. I have only met with one instance of fibrous union following osteoclasis of the bones of the leg; the operation was performed at a general hospital when the child was 1 year old. At the age of three years the case came under my care. My first operation, resecting the fibrous tissue with careful approximation of the fragments failed, as also did subsequent forcible rubbing together of the fractured ends. It is my intention to make a further attempt at union by refreshing the fractured surfaces and wiring. I shall watch the case with much interest on account of Mr. Edmund Owen's remarks at the Portsmouth meeting on the frequent failure of operative interference. I may say that in this case I observed no atrophy of the lower fragment at the time of operation. From my knowledge of Mr. Murray's results and my own experience of osteoclasis I look upon it as a safe procedure by no means frequently followed by non-union.—I am, etc.,

6, Rodney Street, Liverpool, September 5th. ROBERT CRAIG DUN.

CERTIFICATES ISSUED BY SOCIETIES.

SIR,—The Council of the Medical Defence Union has lately appointed a Subcommittee to inquire into the question of certificates, etc., which are used for the purpose of medical practice, and which are issued by medical practitioners or societies. It is necessary, before a report be made, to collect facts relating to (1) the prevalence of the use of such certificates, so-called diplomas; (2) the method of granting them; (3) the use which is made of them by the "diplomates." The Subcommittee venture to ask members of the profession who may be able to assist in the inquiry on the lines named above, to kindly communicate any facts known to them, and to make such communication to me.—I am, etc.,

A. G. BATEMAN,
4, Trafalgar Square, W.C., Sept. 5th. General Secretary.

THE ETIOLOGY OF BERI-BERI.

SIR,—In the BRITISH MEDICAL JOURNAL for August 19th, in discussing the etiology of beri-beri, you remark that it would be interesting to know what part fat formed of the dietary in the Richmond Asylum, Dublin, before the appearance of beri-beri there. Beri-beri broke out in the Richmond Asylum, Dublin, in the summer of the year 1894. At that date the general dietary of the patients not under special medical treatment was as follows:

Breakfast.—Bread, ½ lb.; tea, 1 pint.

Supper.—Bread, ½ lb.; cocoa, 1 pint. (The tea consisted of 1 oz. of tea leaves, 3½ ozs. of sugar, and ½ pint of new milk to every 7 pints; the cocoa of ½ oz. of ground cocoa, ¾ oz. of sugar, and ½ pint of new milk to every pint.)

Dinner.—Sunday, Monday, Wednesday, and Saturday: Beef, 8 ozs. for men and 7 ozs. for women. Tuesday: Bacon, in the same quantities. Thursday: Pork, home grown and very fat, in the same quantities. Friday: Dried ling, ½ lb., males and females.

Besides these rations bread was supplied at dinner every day and potatoes for about eight months in the year. Every day, except Friday, there was also another vegetable, cabbage, turnip, parsnip, or the like. These vegetables were prepared with dripping. The fish on Fridays was served with sauce, consisting of 1 pint of new milk, 1 oz. of butter, and 1 oz. of flour to every seven patients. With regard to the beef, it is to be observed that the meat was bought in sides and quarters for use on three days in the week and therefore contained a good mixture of fat. One day in the week neck beef was used, which is of course very lean.

On the whole this dietary does not seem more deficient in fat than most dietaries in similar institutions. It was certainly superior in this as in other respects to most Irish asylum diet scales of the same period, and infinitely before the dietaries of Irish workhouses.

Ling, owing to certain administrative reasons, was not given to the epileptics. They had coffee and bread and butter (1 oz. each) for dinner on Fridays. They were the members of our population who suffered most severely from beri-beri in the 1894 epidemic.

The opportunity arising out of the beri-beri epidemic was taken advantage of to improve the dietary. From the latter part of 1894 to the present time, butter (½ oz. to each patient) has been supplied for breakfast and for supper, fresh fish (cod, hake, ling, and haddock mixed) has been used for Friday's dinner; neck and leg meat has been discontinued. Waste dripping not used for cooking vegetables has been worked up into pastry (meat pies, etc.).

Beri-beri, after being absent during the year 1895, has revisited the asylum in 1896, 1897, 1898, and doubtfully even in 1899.

On the whole, I am afraid our experience does not lend aid to the newest any more than to the older notions of the dietetic origin of beri-beri. It would be out of place to discuss here the many theories as to the etiology of beri-beri, each of which has, at various times and places, seemed able to appeal to weighty evidence. Probably many elements, some varying, determine any particular outbreak, and Kohlbrugge—as you pointed out in the JOURNAL a short time ago—has shown that the affection seems to follow some obscure law of periodicity. But it is interesting to observe, with regard to the latest European epidemic (that in the Asylum at Sainte-Gemmes-sur-Loire) that Chantemesse and Ramond have pointed out that the affection is probably identical with a singular epidemic which appeared in the same asylum in 1855, and the following years. If this be so it affords confirmation to the doctrine of those who hold that the poison of beri-beri is specially connected with certain localities. On the other hand, the recent epidemic at Sainte-Gemmes only attacked patients of the "indigent" class, whose diet was the poorest in the asylum, and the disease was most fatal among the epileptics. Again, our Dublin records show the difficulty of generalising from a limited experience. In the Richmond Asylum only the insane were attacked in 1894, and the epileptics were specially affected. In 1896, 1897, and 1898, the epileptics were not particularly liable to the disease, which in each of these years attacked sane members of the asylum staff as well as the insane patients.—I am, etc.,

Dublin, Aug. 28th. CONOLLY NORMAN.

THE REPORTED OUTBREAK OF PLAGUE IN RUSSIA.

SIR,—There would seem now to be little room for doubt that plague has made its appearance in European Russia. The outbreak is at present confined to the village of Kolobovka, in the Government of Astrakhan, and near the mouths of the Volga. It was in this neighbourhood that the last appearance of plague in European Russia—the Vetlianka epidemic of 1878-79—occurred. That outbreak, it will be recalled, although extremely severe in the few villages attacked, was entirely confined to them, and there was no general spread of the infection to other parts of Europe. This consideration should do much to lessen any apprehensions with which the present outbreak might be regarded—even were it not quite overshadowed in interest and in the apprehensions which it arouses, by the much nearer outbreak in Portugal.

In view of the re-appearance of plague in Russia the following details, which have not yet I believe appeared in the English press, relating to the outbreak which occurred it will be remembered last autumn in Central Asiatic Russia, are not only of interest but of considerable importance, pointing as they do to a possible source of infection in the present outbreak. These details have only recently come to my knowledge, partly from a report published by Dr. A. M. Levin, who

personally visited the scene of the outbreak, and partly from the minutes of the frequent meetings of the Imperial Commission which the Russian Government despatched at the time to Central Asia, under the personal presidency of H.H. the Prince of Oldenburg. For the latter papers I am indebted to the courtesy of Dr. Yassenski, who, after conducting the Russian Plague Commission to India, was appointed in charge of the plague measures in the Khanate of Bokhara.

The scene of the outbreak was Anzob, a village near a mountain pass of the same name, which divides the province of Samarkand from the Khanate of Bokhara. It lies on a stream which falls into the Fan-Darya, one of the sources of the Zeriafshan River, which flows through Samarkand. It is 220 versts, or 140 miles, south-east of Samarkand, in a mountainous region most difficult of access, and some six or seven thousand feet above sea level. It was at the end of September, 1898, that the authorities first heard of the outbreak, and on the 3rd (15th) of October a medical man, Dr. Aphramovitch, reached the spot. His inquiries elicited the following very interesting facts. At the end of August in a village called Marzitch, sixteen versts from Anzob, a boy named Shukur, aged 12, sickened and died after four days' illness. Ten days after his death his brother Shakir, aged 9, sickened and died also on the fourth day. A few days later their mother sickened and died on the third day.

These were all the cases in this particular village. Two days after the last death a woman named Ashur Bibi, a relative of the deceased, came over from Anzob. She washed the body of the last patient, took part in the funeral, and received the customary present. Returning to Anzob, she became ill and died on the third day of the illness. After this cases occurred among this woman's relatives and among people who attended the funerals. The rapid spread of the disease was ascribed to Divine wrath, and one of the villagers, Hassan Rakhimof, induced the others to believe that the scourge was sent because, in burying Ashur Bibi, they had omitted some of the rites prescribed by the Shariat or traditional Mohammedan law; so the body was exhumed and reinterred with full rites. But the scourge was not stayed. Those who helped in the exhumation died first—among them Hassan himself, his three sons, their mother, his two daughters-in-law, his brother, and the brother's wife and son. The terrible mortality in Anzob may be judged from the fact that, out of a population of 387 inhabitants, only 150 remained alive on October 3rd; 237, or over 61 per cent. of the total, having died in about six weeks. Of 60 families, only 3 escaped without a case.

It would occupy too much space to quote or discuss the symptoms the disease presented. Though they differed to some extent from those most frequently met with in plague in India, there seems no room for doubt that it was plague, particularly as the bacillus associated with the disease was isolated from some of the cases.

The most interesting question is, How and whence did the infection reach this remote spot? Dr. Levin asserts that it could not have come directly from India. He suggests one or two other possibilities. The ordinary pilgrimage routes to Mecca being closed last year, it is faintly possible that pilgrims from Central Asia, making their way from Bokhara, through Afghanistan, to Bombay (*sic*), chose the mountain paths instead of the ordinary roads, but there is no evidence whatever of this. A second suggestion is that pilgrims from Bokhara (which has constant communication with India) may have visited the tombs of local saints or *ishans*, which exist both in Anzob and Marzitch. But a much more important point brought forward by Dr. Levin is the following: He examined every surviving inhabitant of both villages. In many he found buboes in various stages of absorption, or which had been opened and were in various stages of scarring. Now in several other persons, who had not been attacked in the recent epidemic, exactly similar appearances were present. These persons said they had been ill two, four, or even ten or twenty years previously. They described the illness as lasting from three to five days, and as characterised by headache, fever, pain, and swelling in one groin; the swellings suppurated and either burst or were opened by the "wise women" of the village. That the swellings were not venereal in origin was proved by the fact that children of 5 or 6 had had them. Neither syphilis nor scrofula was present in a single case, and small-pox could be excluded. Swellings of this kind were found in 30 people in the two villages above-named.

The author of the report comes to the conclusion that there exists in these *kishlaks*, or mountain villages, an endemic disease, which he names "lymphadenitis femoralis suppurativa." Might not plague, he asks, have been introduced into this remote spot twenty years ago, and remained to give rise to occasional epidemics? Epidemics of this kind might easily escape notice. For example, last year's outbreak only became known by an accident. The villagers of Margif, though only eight versts (5½ miles) from Anzob, had heard nothing of the appalling occurrences there until a month after they began, when 200 people had already died. They had run short of linen "for shrouds" (even to the last detail the story of these poor highlanders is gruesome and pitiful), and some of them went to Anzob to borrow some. It was they who reported the occurrences there to the authorities. Supposing, it is very appositely asked, they had not run short of linen? A whole village might have died out and the world been none the wiser.

The last suggestion made by the author is that the recent outbreak was caused by imported infection from Bagdad, where, he states, plague was epidemic in 1873, and where there were many isolated cases at least as late as 1892.

I have already trespassed far upon valuable space, and must leave the facts here brought forward with but the briefest comment. Their importance is obvious. It is certain that last autumn a concentrated and virulent epidemic of plague occurred in the region described; it is possible that the disease has been epidemic in certain centres there for many years past. Such centres in this region would be closely analogous to the so-called endemic centres in the Himalayas, in Gurwhal and Kumaon. They would be the nearest, and most probably are the actual, centres whence the infection has during the past week or two been introduced into European Russia. By far the larger part of the traffic between Central Asia and European Russia passes through Astrakhan, and it is therefore not surprising that it is in the neighbourhood of that town that plague has made its appearance.—I am, etc.,

London, Aug. 29th. FRANK G. CLEMOW, M.D., D.P.H.

PHTHISICAL PERSONS AS OUT-PATIENTS.

SIR,—It is generally admitted that persons suffering from phthisis who have fever require complete rest, and that at all stages of the disease any over-exertion or undue fatigue is decidedly prejudicial. Many authorities are also of opinion that a phthisical person travelling by public conveyances—as railway trains, omnibuses, etc.—is a source of danger to the travelling public. In spite of these commonly-held opinions, it is a notorious fact that hundreds of men, women, and children in all but the last stage of consumption weekly, if not daily, leave their homes in the suburbs to journey to the three or four consumption hospitals in London, there to obtain medical treatment.

This journey means—in the cases I am specially interested in, say—a quarter of an hour's walk to the station, standing for several minutes on the platform, three-quarters of an hour in the train (at least), five minutes' walk and waiting for an omnibus, half an hour's ride in the omnibus, and another short walk to reach the hospital; and the same reversed to return home. At the hospital there is also usually one to three hours' waiting and deprivation of proper food. An experience of this kind is well known to cause headache and exhaustion, lasting one or two days in moderately strong persons, but in the average phthisical patient it must and does cause increased fever, impairment of digestive functions, and extension of disease of the lungs, which is probably not recovered from before the next visit augments the mischief.

It is not to be wondered at that the working class public should resort to the hospitals for out-treatment, for they know the beneficial results often obtained by in-patients, and even by out-patients in suitable cases, and they cannot be expected to see that these results are not simply the effect of the medicine prescribed. But it is to me matter of surprise that the able members of the medical staffs of the consumption hospitals should encourage these visits. Surely it is no disparagement to these gentlemen to assert that their skill is not suffi-

cient to counteract the evils inseparable from the out-patient attendance in such a case as I have mentioned. Surely an average local practitioner who knows the home conditions is more likely to treat with success. And I think that with provident dispensaries, free dispensaries, and other means of cheap and gratuitous treatment, there are few cases where local medical attendance cannot be obtained. One visit to hospital with a note from the local medical attendant for consultation purposes might be made with advantage in many cases.

The hospital out-patient physician is not, I am aware, altogether blind to the evils I am pointing out, and endeavours often to meet them by ordering medicine for a prolonged period. But, surely, these poor people require to be seen more than once in two or three weeks. Why cannot the physician advise them plainly that unless they can get an in-patient letter they had better arrange for local treatment, and confine himself to patients living within a mile of the hospital and cases sent for consultation?

I do not wish to charge my consulting brethren with anything but want of consideration, and perhaps in this respect I may be doing them an injustice. If so, I shall be very glad to be put right. But meanwhile I shall continue to oppose at every opportunity the attendance of phthisical persons from this district as hospital out-patients.—I am, etc.,

Plumstead, Sept. 2nd. SIDNEY DAVIES, M.A., M.D.Oxon.

MEDICAL APPOINTMENTS IN WORKHOUSE INFIRMARIES.

SIR,—The letter of Major Greenwood in the BRITISH MEDICAL JOURNAL of July 8th, p. 117, seems to call for some comment, first with reference to the nature and aim of a poor-law hospital, secondly with regard to its medical staff.

1. Dr. Greenwood objects to the "assimilation of workhouse infirmaries to public hospitals;" but I venture to think that substantially such assimilation is much to be desired. Surely both institutions are alike charities for the relief of the sick poor; and surely those who are, by their own desire and with the ratepayers' approval, elected to be in name and in truth guardians of the poor, ought not to allow their hospital patients to be less efficiently and charitably treated than are the patients of ordinary hospitals. Having held resident posts in both kinds of hospital I have good reason to hold strongly the opinion that the Poor-law hospitals ought to be steadily improved and should be recognised as what they truly are, the chief resource of the sick poor. The fact is that ordinary hospitals are hopelessly inadequate to their task; so that, for instance, the 550 beds of the Manchester Royal Infirmary, the Salford Royal Hospital, and the Ancoats Hospital have to be supplemented by 3,500 beds provided by the Manchester, Charlton, and Salford Poor-law hospitals. Surely anyone can see that at present the proper treatment of the sick poor depends chiefly on the administration of Poor-law hospitals, and only accessorily on the work of ordinary hospitals. Now, as ordinary hospitals have commonly done their work so far as they could really well, and as Poor-law hospitals have been much thrown back by that grave fault in public opinion which maligns or neglects the losers in life's race, it follows that the former furnish, just at present, most useful working models for Poor-law hospitals to imitate, not slavishly, but with common sense. For example, an ordinary hospital has commonly a resident doctor for every 60 beds; a Poor-law hospital ought to have (what it practically never has) at least a resident doctor for every 200 beds. An ordinary hospital has a nurse (trained or in training) for every 5 or 6 patients; a Poor-law hospital ought to have, but seldom has, at least a nurse for every 10 patients. It is clearly the duty of the medical profession, of whose heart the warmest corner should always be reserved for the sick poor, to do its utmost towards encouraging those guardians of the poor who frankly and boldly attempt to bring their Poor-law hospitals up to the standard of ordinary hospitals, so that the sick poor who crowd into the Poor-law hospitals with all their varied ailments, not only chronic but acute, may be treated according to the proper standard of a public charity, which ought to be at least as high as that of a private charity.

2. With regard to the medical staff there is certainly no difficulty, as this summer's experience in Manchester has abundantly shown, in getting consultants of high standing to join the paid visiting staff of Poor-law hospitals. Still, when Dr. Greenwood denies that "modern Poor-law administrators do not favour" the appointment of resident medical superintendents, he is supported by the success of that system in London. That system involves the appointment, at a salary worth from £500 to £600, of a doctor of considerable distinction and experience to reside with his family on the premises, and to devote his whole life and energy to the service of the hospital. He is made, like the captain of a ship, effectually responsible for the whole management of the hospital. If there be no resident medical superintendent but merely a visiting staff, which because it does but visit cannot be held adequately responsible, there necessarily ensues a mischievous division of real responsibility and a slackening of discipline. The resident assistant medical officers, who are usually young men in their second hospital appointment, and commonly hold their posts for less than two years, cannot in that time earn any great weight of influence; while the hospital matron, and even the sisters, as being the chief permanent residents, acquire far more real power and influence than their qualifications warrant. The sick poor, I believe, are best off when under the strong government of a distinguished and experienced resident doctor, whose life is entirely and permanently devoted to them. For cases where the medical superintendent believes in the necessity of hands more skilful even than his own he should be encouraged to call in a consultant. And if some day, finding an organisation ready for them, honorary consultants be allowed to come, as in ordinary hospitals, and hold classes, prescribe, and operate, that again will be an assimilation of Poor-law to ordinary hospitals well calculated to improve, not only the efficiency and cheerfulness of the places concerned, but also by immensely developing observations and records, even the art of medicine itself.—I am, etc.,

CHARLES GASKELL HIGGINSON.
(Former Resident at Manchester Royal Infirmary and Chorlton Union Hospital).
Pendleton Dispensary.

SEROUS EXPECTORATION.

SIR,—My attention has been drawn to a possible misinterpretation of my remarks on serous expectoration, which appeared in the BRITISH MEDICAL JOURNAL of August 19th. I shall be glad if you will allow me to make my statement more clear.

I mentioned that "it had been shown by Dr. West that after the removal of an effusion.....there occurred in some cases a profuse expectoration of serum." I did not mean that Dr. West was the first to record this occurrence; he certainly was not. Several English and French writers had described and discussed this phenomenon some years before Dr. West's paper appeared, and indeed references were given in that paper to previous writers on the same subject. Amongst English writers, Professor Clifford Allbutt had recorded this occurrence several years earlier in *Quain's Dictionary of Medicine*. I referred to Dr. West simply because his interesting paper seemed to me the most important of recent contributions on the subject.

May I at the same time be allowed to correct a reporter's inaccuracy in the same number of the JOURNAL, page 458, where I am stated to have said that "I was aware of only 5 cases of tuberculous ulcer of the stomach." My statement referred only to children, and to cases published in this country. I have myself collected elsewhere a considerable number of cases in children, recorded by Continental and American writers.—I am, etc.,

Gower Street, W.C., Aug. 31st. GEORGE F. STILL.

THE PREVENTION OF EYE ACCIDENTS.

SIR,—I find that in my Address on the Prevention of Eye Accidents which appeared in the BRITISH MEDICAL JOURNAL of August 12th, I referred to Snellen's shield for operation cases, whereas those I had in my mind should have been attributed to Dr. Bronner. I shall be obliged if you will kindly allow me to make this correction.

Whilst writing, let me say that the eye protectors or shields described by me in the above-mentioned address will be found useful for operation cases, and in a great variety of other instances.—I am, etc.,

Sheffield, Sept. 4th. SIMEON SNELL.

OBITUARY.

JOHN DUNCAN, M.A., M.D., LL.D., F.R.C.S.E., F.R.S.E.,

Consulting Surgeon to the Edinburgh Royal Infirmary.

On the morning of Friday, August 25th, the medical profession in Edinburgh, and, indeed, throughout Scotland, was shocked and saddened by the announcement that John Duncan was dead.

His more intimate friends knew that for some time he had been troubled with cardiac embarrassment, and many had noticed that he had aged beyond his years, but none were prepared for his sudden death.

He left Edinburgh at the beginning of August for his usual autumn holiday in the island of Skye. On the evening of August 24th, without having made any unusual exertion (he had not been shooting), he was seized with severe cardiac symptoms, and in half an hour all was over. His friend, Sir John Batty Tuke, who had arrived in the morning, was present.

John Duncan was born in Edinburgh on August 18th, 1839, and had just passed his 60th year. His grandfather was the founder of the firm of Duncan, Flockhart, and Co., the well-known chemists. His father, Dr. James Duncan, occupied a prominent place in the medical profession in Edinburgh, and was at one time Surgeon to the Royal Infirmary. His mother was one of a well-known family of Balfours, a sister of the late John Hutton Balfour, formerly Professor of Botany in the University. The present occupant of the Edinburgh Botany Chair (Isaac Bayley Balfour), Sir James Crichton Browne, and Mr. Balfour Browne, Q.C., are his cousins.



John Duncan was the elder of two sons. His younger brother, who was in the 57th Regiment, and was mentioned in dispatches for storming a native fort in New Zealand, died at an early age of the same malady as his father, namely, cholera. His wife, a daughter of the late Andrew Thomson, W.S., died in 1885; he is survived by a son and four daughters.

John Duncan was educated at the Edinburgh High School. He subsequently entered the arts classes at the University, and graduated M.A. with honours. During his arts course he contemplated going to the Bar. After taking his degree, however, he began the study of medicine. In 1859, during the contest between Mr. Gladstone and Lord Neaves for the Lord Rectorship, John Duncan was Chairman of Lord Neaves's Committee, and played a very active part in that contest. His medical curriculum was marked by the ability, thoroughness, and culture which characterised his subsequent career, and he was early looked upon as one who would rise to eminence in his profession. He owed a thorough grounding in surgical principles to his own father and to his father's friend, the late Professor Spence.

Among his fellow students were Dyce Duckworth, William Rutherford, Crichton Browne, T. R. Fraser, Claud Muirhead, Crum Brown, Pettigrew, Blair Cunynghame, and many others who have made names for themselves. Duncan took his medical degree in 1862 with distinction, and he subsequently acted as house-surgeon to Mr. Syme for nearly a year and a half, and then spent two years in the schools of Berlin, Vienna, and Paris, having as his companion his life-long friend, the late Professor Rutherford, the first and personal part of whose obituary notice he wrote for the British Medical Journal. In 1864 he was admitted after examination F.R.C.S.Ed. Shortly after he had established himself in practice in Edinburgh his father died at Tours of cholera, when on a holiday in France, and John Duncan succeeded to a large portion of his practice, which speedily increased until it became one of the largest in Edinburgh. Finding, however, that general practice interfered with surgical work, he after a time confined himself to surgery. The invaluable training which he had obtained in all departments of medicine showed itself in his subsequent career as a surgeon.

Mr. Duncan was appointed assistant-surgeon to the Royal Infirmary in 1868, surgeon in 1877. He became senior ordinary surgeon in 1886. In 1892 his time as ordinary surgeon expired, but at the request of Mr. A. G. Miller and by the consent of the managers he remained in charge of one of his male wards and was made an extra surgeon until the completion of Mr. Miller's term of office in 1897, when, after having been in charge of wards for twenty years, he retired and was placed upon the consulting staff.

During the last two years his former colleagues on the surgical staff have frequently sought his advice in difficult cases. Mr. Duncan succeeded his father at the early age of 29 as medical officer to one of the largest life assurance offices, the Scottish Provident, and this appointment he held at the time of his death.

The University of St. Andrews conferred the honorary degree of LL.D. upon him some years ago. He was consulting surgeon to the Edinburgh Deaconess Hospital and a member of the board of managers of the Royal Edinburgh Asylum. He was for many years a member of the University Court, and until recently a manager of the infirmary, in which institution he was mainly instrumental in getting equipped the recent electrical department. He was an examiner for the Royal College of Surgeons, and formerly examined for the University in clinical surgery. At the meeting of the British Medical Association in Edinburgh in 1898 he was President of the Surgical Section.

While yet a student of medicine he was elected senior president of the Royal Medical Society, succeeding his cousin, now Sir James Crichton Browne. He had been a distinguished student of Aytoun's in the class of rhetoric and English literature, and he gave his presidential address "On Style."

He was one of the members of the Round Table Club, and for a long number of years he was also a member of the Æsculapian and Medico-Chirurgical Clubs, and no one was more welcome or more popular at their meetings than he.

As President of the Royal College of Surgeons he more than fulfilled the expectations of the Fellows concerning him; his dignity was admired as his wisdom was appreciated. He declined more than once the offer of a safe seat in Parliament as member for the Universities of Edinburgh and St. Andrews, as it would have entailed his relinquishing the work to which he was so devoted. The great disappointment in his professional career was his non-election to the Chair of Surgery in the University of Edinburgh.

With his physical and mental endowments Duncan was an ideal surgeon; at the bedside or in the operating theatre his fine presence and deliberate speech were eminently characteristic. He laid more stress upon knowing what was wrong and why anything should be done, than upon the mechanical details in carrying it out. As an operator he was calm, precise, deliberate, and thorough, and yet when occasion demanded no one could be more rapid; it might almost be said of him that he rejoiced in difficulties.

While he appreciated the services of a skilled assistant, he was quite prepared to dispense with such aid and to undertake anything with a house-surgeon or a student who would do as he was told. He was against the elaborate furnishings of a modern operating theatre, because their tendency might be to create a sense of false security and lessen the attention to the essential personal factor in surgical practice. With his house-surgeons and dressers his patience and forbearance were unequalled; he never said a hasty or a bitter word, but showed the utmost and most unvarying consideration and courtesy.

His diagnostic powers were remarkable; they were the natural outcome of his knowledge and of his logical habit of mind. When abdominal surgery was in its infancy he was well to the front, and was able to record brilliant results in the treatment of diseases of the liver, kidney, and appendix. At this period also his success in the surgery of the lung and pleura was remarkable.

In the early days of bacteriology and antiseptic surgery he was always in advance of his compeers; he took nothing for granted, but examined and investigated everything for himself. He was among the first to have a special clerk in his wards to stain films and carry on cultures. Distrusting the carbolic spray, he submitted its powers to patient investigation; relying upon facts and disregarding popular impressions and tendencies, he demonstrated its baneful qualities, and was the first to discard it on scientific grounds.

He apparently never tired of hospital work; he arrived early at the infirmary and left late; every patient interested him; he selected no rarities for clinical lecture; he could make the most uninteresting case a theme for imparting the essential principles of surgery; he would listen to the lengthy stories of out-patients as if he had the whole day to spare; he would discuss with an inquiring student the pros and cons of drainage or any other problem of the day; he would criticise any microscopical preparation from some tumour removed in the wards with an acumen which showed him to be an accomplished pathologist.

Although by no means a bookworm and rarely seen with a book, he was well abreast of the literature of the day; it was most difficult to tell him anything he did not know or had not observed, although no one welcomed and criticised a new fact more eagerly or was more able to immediately extend its range of application.

He was not a voluminous writer, for he disliked publicity, and had no desire to extend his reputation; he gave away all his thoughts and matured experience in his daily teaching; many of his observations have been rediscovered elsewhere and published as new. His papers on electrolysis and on the surgical treatment of aneurysm and of nævus are, and always will be, classical.

Duncan began to lecture on surgery in the Extramural School in 1872; his first class consisted of one of his cousins, who acted as class assistant, and one other. Although students were slow to recognise and appreciate his merits as a teacher, his ultimate success was assured, and he finally attracted a class of 150, mostly seniors, who had had a course of surgery before.

In the ordinary course of promotion he became senior ordinary surgeon to the infirmary, and gave up his systematic class for the more congenial sphere of clinical teaching. It was then that Duncan was seen and heard at his best. His daily bedside demonstrations were intellectual treats, appreciated by senior students, by house-surgeons, and by the junior members of the surgical staff. Former pupils who had made their name elsewhere would return to listen to their old teacher, and would realise that the relationship was still the same, and that he still towered above them. The following extract from a letter written two years ago by an old house-surgeon, now in Sydney, illustrates the influence exerted by Duncan on his pupils:

"For myself, I look back on the days of my discipleship with pride and affection. I more and more admire the dignity, the nobility, and the all-round effectiveness of the surgical teaching in which I was privileged to share as a pupil. To follow Mr. Duncan was to witness the constant revelation of a mind of a very high order, and the note of distinction appeared in every feature of it. I think that Duncan's teaching was, indeed, the greatest educational influence I experienced during my course, and it has been a lasting inspiration. Over the globe are scattered many men—not all surgeons—who to the end of their days will carry the imprint of Duncan's personality."

Duncan was a good all-round man as well as a scientific surgeon. He was a first-class cricketer in his younger days, and was selected to keep wickets for Scotland; his batting powers may be estimated from his own statement in later years that he could usually count on a run for every minute he was at the wickets.

As a youth he was an excellent rifle shot, and there are many students who at his hospitable table have seen the Edinburgh City cup which he won in the Sixties. Year after year he spent his summer holiday in the Highlands; he was a deadly shot both at grouse and deer, and few men could throw a better salmon fly. He did not take up golf until later in life, but his accurate eye and knowledge of the game made him no mean opponent, and one who was never beaten till the match was over.

He was a keen and skilful curler, at one time President of the Coates Club, and rejoiced in the advent of frost. He was fond of whist, chess, billiards, and of every kind of game or sport. He was an artist of no mean order, and in the Highlands he spent many an off-day with his brush. Everything he did was well done.

It is difficult to estimate the loss which Edinburgh has suffered by the death of John Duncan. There was certainly no one in his profession who commanded more universal respect. It was to him that many men turned for advice when in difficulties. His splendid physique, commanding presence, and gracious manner were the index of a kindly heart.

He was as gentle as he was strong. His apparent calm and characteristic laugh concealed a sensitive and even diffident nature. One could not be long in his company without feeling that here was a manly man—broad-minded and whole-hearted; ready to feel, able to do. Nothing petty or insincere could live in his presence; he towered above such things, he looked down upon them, and they shrank away. He dedicated his gifts to the highest uses, and truly may be written as one who loved his science and served his fellow men, *sans peur et sans reproche*.

A prominent member of the Edinburgh Medical School writes as follows: Duncan's connection with the teaching staff of the Edinburgh Medical School commenced in 1872, when he was recognised as a lecturer on surgery by the Royal College of Surgeons. The character and the success of his teaching have been already dealt with, but it is right that his influence in the development and consolidation of the school should be recognised. He seems early to have felt that the antagonism between the University and the extramural school, though of value as a stimulus to teachers in both, was not in accordance with the history or with the best interests of the school as a whole. His knowledge of the history of the school and of the part which the school founded by the Royal College of Surgeons had played in the institution of the Medical Faculty of the University, made him feel that the treatment received by it from the University was at least not generous. For these reasons he, in conjunction with others, determined that the position of the Extramural school should be strengthened, and after much discussion it was decided to endeavour to acquire a charter constituting the school into a College. In 1884 a petition was prepared, but in the face of the threatened opposition of the University the scheme was abandoned. The prospect of a Commission to legislate for the Scottish universities seemed to Duncan to promise great things for the Edinburgh School of Medicine, and we well remember how he used to point out that in the University, and in the group of extramural teachers all lecturing in close proximity, material was to hand for the formation of one of the greatest medical schools in the world. His idea was practically to incorporate the extramural school with the university, using its members as teachers and as examiners in return for the privilege of teaching for university degrees. He worked hard in advocating these ideas and in supporting them with the commissioners. But the Commission sat, and whether from the narrow-mindedness of its members or from the opposition of certain of the medical professors, nothing was done, and the school was left stereotyped in its old lines. Duncan felt this most keenly, and for a time he could not be persuaded to take any active part in the development of the school. But when a few years ago the plan was advanced of bringing the lecturers under the ægis of the Royal Colleges as they had been in the past, and of securing a proper governing Board to represent the school, Duncan again threw himself into the fray, and played a large part in carrying through the scheme. It was but fitting that he should be chosen the first Chairman of the governing Board. Not only the School of Medicine of the Royal Colleges, but the whole Edinburgh Medical School

must mourn the loss of one who devoted his great abilities with absolute unselfishness to its service, and who perhaps alone possessed the imagination to see the possibilities which might have been realised under more favourable circumstances.

Sir Dyce Duckworth has published (in the *Scotsman*) a letter, in which he pays the following graceful tribute to his friend's memory:

My memory of him goes back just forty years. He was then, physically and mentally, an "outstanding" figure amongst us. He always appeared to take life easily, while systematically diligent and regular. His strong and cultivated intellect readily grasped and assimilated what was to many of us complex and difficult, and he stored up his knowledge, gathered in the class-rooms and the infirmary, together with other mental aliment, in the simplest and most gracious manner. His charming temper, good nature, and his sense of humour, grafted on a handsome and commanding presence, the latter barely concealing immense physical power and agility, made him the beau ideal of a companion and *bonus comes*.

I lived for a year in close intimacy with him as a resident physician in the infirmary, and it is now amongst the happiest memories of my life to have known him. John Duncan's sturdy intellect, well-balanced mind, and even temper, clearly marked him out as a leader of men. He abominated shams, discarded nonsense, and had, what too few men have nowadays, the courage of his opinion. He could have accomplished anything he set his mind to. We admired him, we loved him, and now we feel we have lost something that can never be replaced in our time.

It is well for the public, and still better for the profession, to have men of this mould in their service. No higher object lesson can be set to the medical undergraduates of Edinburgh than to point the moral of the career and qualities of dear John Duncan. *Requiescat in pace!*

Deputy-Inspector-General Robert MacWharrie, of Toftcombs, Biggar, Lanarkshire, died on August 28th. He was an L.R.C.S.Edin. of 1893, and M.D. of St. Andrews, 1841. He entered the Army Medical Department in 1842 and retired in 1867. He served as Surgeon of the 59th Regiment during the operations at Canton in 1857. He became proprietor of the small but beautiful estate of Toftcombs, which is remarkable as having been the birthplace of the late Mr. Gladstone's father, and was long associated with that family. Dr. MacWharrie was greatly respected in the Biggar district, and will be much regretted by many friends.

We regret to announce the death of Deputy-Surgeon-General John Low Erskine, which took place suddenly at his residence, Goodhope, Bournemouth, on August 25th. He was L.R.C.S.Edin. and M.D.Edin., 1852. He entered the Army Medical Department in 1854 and retired in 1881. He served in the Crimea with the 4th Regiment (medal and clasp and Turkish medal), and with the same regiment in India at the latter part of the Mutiny. He was afterwards for a number of years in the Royal Engineers. Surgeon-General Erskine had a large circle of friends in the army, by whom he will be long remembered for his kind and genial qualities. He was a member of the British Medical Association.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

PROFESSOR OGSTON'S ADDRESS.

We continue to receive numerous communications on this address, of which the following may be quoted:

E. F. writes: Professor Ogston should be given every credit for his intentions, judicious or otherwise, which have aroused public attention, even if his pictures be held to be overdrawn.

First, he assumes medical officers to be generally of inferior calibre; but with vastly greater experience than he can possibly have, I deny this, and affirm that the vast majority are of excellent quality, equal in all respects to their civil *confrères*.

Secondly, his strictures on training and surgical equipment of hospitals are in the main correct.

Training in civil hospitals entirely hinges on "study leave," that on the full manning of the service, and that again on questions of expense. Successive War Ministers admit the principle of study leave, but the whole hinges on Treasury finance. Undermanning is at the root of many grievances of the army medical services; this, combined with under-payment in India, continues to keep the service unpopular in the schools.

Hopeful writes: As a medical officer I take no umbrage, but welcome Professor Ogston's address. The equipment of military hospitals is behind the age. What station can boast an operating table? In India only one microscope is allowed to a district, and without an oil immersion lens cannot be used for bacteriological work. The R.A.M.C. do not shrink from comparison with their brethren in civil life. Their energies are often frittered away, as in "case book" writing, an old world means of checking the giving of "extras," but otherwise worse than useless. No doubt many of the younger medical officers could have opportunities of attending civil hospitals at stations which are held by retired pay officers.

A Broken Reed writes: If the professor has been offensive to army medical officers he has been equally so to their civil brethren. Even if he has found "civil aid" given to military hospitals to be of an inferior kind, he cannot speak for the whole country. And if this aid is so inferior, why ask for it in civil hospitals? He asserts it is as absurd for the Army Medical Service to depend on civil aid as it would be for the Royal Engineers, but he forgets that corps has a permanent civil branch attached to it. Nor is the decently-qualified civilian unequal to "surgical emergencies"; indeed, he may really see more of "shot wounds" than his military brother. I unhesitatingly assert after some experience that the average professional capacity of the army medical officer is quite as high, if not higher, than that of his civil brother. There is nothing to be gained by belittling him any more than "civil aid."

A correspondent forwards a copy of *South Africa* of August 12th, which in a leading article, entitled, "Army Surgery in South Africa," written in view of a possible conflict there, and ostensibly founded on parts of Professor Ogston's address, contains the following outrageous nonsense:

"Many men will gladly enlist and take the chance of being shot outright for the sake of their Queen and country; but they naturally object, after escaping the enemy's bullets with a wound, to be butchered by their own doctors, more especially as Lister's marvellous researches in relation to anæsthetics (*sic*) have made it possible to perform surgical operations almost entirely without pain," etc.

This truculent utterance seems an echo of a post-prandial speech by a certain baronet, which we at the time held up to the derision it deserved. The cheap impudence of the writer is only equalled by his gross ignorance in confounding Lister's discoveries with "anæsthetics."

ROYAL NAVY MEDICAL SERVICE.

Deputy-Inspector-General Henry D. Stanistreet has been promoted to be Inspector-General, August 23rd. His previous commissions are thus dated: Surgeon, August 4th, 1862; Staff-Surgeon, February 19th, 1876; Fleet-Surgeon, July 29th, 1883; and Deputy-Inspector-General, January 2nd, 1894.

Fleet-Surgeon H. M. Ellis is promoted to be Deputy-Inspector-General, August 23rd. He was appointed Surgeon, September 30th, 1875; Staff-Surgeon, November 18th, 1882; and Fleet-Surgeon, January 27th, 1891. He served with the Battalion of Royal Marine Artillery throughout the campaign in Egypt in 1882, being present at the two engagements at Kassassin on August 28th and September 9th, and at the battle of Tel-el-Kebir (mentioned in despatches, and promoted to Staff-Surgeon; medal with clasp and Khedive's bronze star). While Fleet-Surgeon he was wrecked in H.M.S. *Victoria*, flagship of Vice-Admiral Sir George Tryon, K.C.B., Commander-in-Chief of the Mediterranean Fleet, which was sunk off Tripoli, on the Syrian coast, in collision with H.M.S. *Camperdown*, when the Admiral, 21 officers, and 350 men were drowned, June 22nd, 1893.

Fleet-Surgeon E. R. H. Pollard is also promoted to be Deputy-Inspector-General, August 23rd. He entered the service as Surgeon, March 30th, 1878; became Staff-Surgeon, November 18th, 1882; and Fleet-Surgeon, April 11th, 1891. As Surgeon of the *Boadicea* he landed with the Naval Brigade during the Zulu war in 1879 (medal with clasp). He also took part in the war in Egypt in 1882 with a battalion of Marines, and was present at the battle of Tel-el-Kebir; he was promoted, and received a medal with clasp, and the Khedive's bronze star.

The following appointments have been made at the Admiralty: Alfred H. Jeremy, B.A., M.B., Surgeon, to the *Phœnix*, August 20th; William R. Center, M.B., Surgeon, to Chatham Hospital, to date the day after the expiration of his full pay leave; Elystan G. E. O'Leary, Surgeon to the *Lion*, September 1st; Lawrence Bidwell, Surgeon, to Plymouth Hospital, September 1st; Hilary C. Arathson, Surgeon, to the *Widgeon*, when recommissioned, at Simon's Bay, undated; Fred. C. B. Gittings, Surgeon, to the *Pembroke*, for disposal, August 31st; Samuel Connor, M.B., Surgeon, to the *Illustrious*, August 10th; William H. Thomson, Surgeon, to the *Albacore*, August 19th; Robert Hardie, M.B., Staff-Surgeon, to the *Eclipse*, reappointed on promotion, February 28th.

ROYAL ARMY MEDICAL CORPS.

Quartermaster W. H. Barton, who was recently tried by court-martial at Portsmouth for misapplying £31 while in charge of the provision store at Netley Hospital, has been ordered to refund the money and to be dismissed the service.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel T. S. Weir, Bombay Establishment, is granted the temporary rank of Colonel from July 25th, while officiating as Principal Medical Officer, Bombay and Aden Districts.

THE VOLUNTEERS.

Surgeon-Lieutenant G. W. Adams, 1st Volunteer Battalion the Royal Warwickshire Regiment, is promoted to be Surgeon-Captain, September 6th.

Surgeon-Lieutenant D. M. Mills, M.D., 2nd (Angus) Volunteer Battalion the Black Watch (Royal Highlanders) retire under Par. 111 of the Volunteer Regulations, 1898, September 6th.

VOLUNTEER MEDICAL STAFF CORPS.

Quartermaster A. A. De Lessert, the Aberdeen Company, is granted the honorary rank of Captain, September 6th.

RECALL TO SERVICE.

Pax writes: Medical officers who voluntarily retired on completion of twenty years' service have, it appears, no option of return to the active list, although by the terms of the Royal Warrant they are liable to recall to service up to the age of 55 years. Provision is made for the employment of retired medical officers at certain stations, but nothing as yet sanctioned for those who seek to return to the army and active service abroad before they have reached the age limit. As permission is granted for a voluntary retirement on completion of twenty years, there should be permission granted for re-employment as in the other branches of the service. As matters now stand, once on the retired list for ever retired. There are many not yet 50 years of age who would voluntarily return to duty without regard to the loss of seniority forfeited from date of retirement to date of re-employment.

THE DRESS OF THE ROYAL ARMY MEDICAL CORPS.

We have received several letters complaining of the inconvenience and loss to medical officers caused by the delay in settling the changes in dress which the formation of a Royal Corps entails. The matter is, of course, of less consequence to those who had old uniforms to wear out than to those who have to obtain new.

We learn that new dress regulations are to be issued at once; indeed, that they are already in the hands of a few staff officers. Whether the changes therein will meet with general approval is a matter that remains to be seen.

COMPETITION *V.* NOMINATION IN THE ARMY MEDICAL SERVICE.

Wide if not uncompromising disagreement may always be expected on the broad question of competition *versus* nomination for any branch of the public service. There are some who would condemn nomination unheard, and simply erect competition as a fetish to which all must bow down. But although much can be said against nomination as contrary to democratic institutions, not a little can be advanced in its favour if it be duly safeguarded from abuse, whether of fraud or nepotism.

In the days of nomination for the Indian civil and other services the country never possessed better public servants, on the whole. In those days lads of good social standing were deliberately trained for public careers which were before them as a certainty, while patrons made it a point of honour that their nominees offered full promise for the future.

From such a system, as from any other which can be adopted, abuse and failure could not be wholly eliminated, nor can it be revived beyond a limited extent, for unfettered merit and talent must now be allowed free scope in every department of the public service.

But just as a nominee need not be an after-failure, so a high-placed competitor may not prove a future success; for, apart from the side issue of cramming, it is a matter of experience that securing high marks in a competition does not necessarily imply the makings of a good executive officer; these are moral qualities which cannot be gauged by literary tests.

Nomination for the Army Medical Service has apparently come to stay, at least for a time; and the relative merits of candidates so obtained and those who enter by competition will be closely canvassed.

As yet nomination has scarcely had a fair chance; for the system being new, and probably at first viewed askance, some of the medical schools have had a difficulty in finding suitable nominees, which, however, is not likely to continue.

A comparison can be made between the two classes of candidates who lately passed out of Netley: and, so far, the competition men have the best of it; they averaged 2,108 marks against a fraction over 1,948 by those nominated.

We have received a copy of a circular letter addressed by the University of Durham to its students, clearly setting forth the conditions under which candidates for nomination may apply. We presume similar circulars have been issued by other medical schools.

AMERICAN ARMY MEDICAL SERVICE.

Dr. W. H. Devine, Lieutenant-Colonel and Medical Director, Second Brigade, Massachusetts Volunteer Militia, late Major and Brigade-Surgeon, United States Voluteers, in a paper recently read before the Massachusetts Medical Society (*Boston Medical and Surgical Journal*, August 17th), makes the following suggestions for improving the efficiency of the American Army Medical Service, some of which have been practically adopted by the Massachusetts Volunteer Militia, and which are recommended for adoption by the entire National Guard: "1. That professorships of military medicine be established in every reputable medical college. 2. That until such time as professorships are established the State shall provide a course on required subjects. 3. That physical examination of officers and men be made mandatory. 4. That troops of State encampments conform as nearly as possible to duties required in service on the field. 5. That every medical officer receive commission (this pertains to contract surgeons). 6. That one or more men in every company be detailed for regular instructions in ambulance corps, to prevent possibility in the future of the country losing the service of men especially trained for this service. 7. That one medical officer be selected in each regiment or brigade for his surgical ability. 8. That a corps of female trained nurses be organised in every State. 9. That divisional hospitals, in the broad sense, be abolished, and that small brigade and divisional hospitals be established for special cases, such as surgical and contagious. 10. That the volunteers follow, as closely as practicable, the regular army, so that men called into service together, the two branches may work in harmony. 11. In addition to the present instruction in "first aid," a course in prevention of contagious diseases, etc., be given. 12. That a reserve staff of medical officers be formed in each State, said staff to be composed of ex-members of the medical department of the National Guard."

MEDICO-LEGAL.

HEARING CASE "IN CAMERA."

It appears to be a vexed question whether magistrates must necessarily sit in open court to investigate a charge of an indictable offence with a view to the committal of a person for trial. The Act 11 and 12 Vic., chapter 42, section 19, expressly empowers the justices to exclude the public if it appear that the ends of justice will be best answered by so doing, and it is contended that the Summary Jurisdiction Act 42 and 43 Vic. chapter 49, does not abrogate this power, although it provides that a case arising under that Act or any other Act, past or future, shall not be heard, tried, determined, or adjudged by a Court of Summary Jurisdiction except when sitting in open court. The ground for the contention seems to be that the investigation of a charge referred to is not "hearing, trying, determining, or adjudging" the case within the meaning of the Summary Jurisdiction Act, 1879.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,657 births and 5,571 deaths were registered during the week ending Saturday last, September 2nd. The annual rate of mortality in these towns, which had risen from 24.3 to 26.8 per 1,000 in the three preceding weeks, declined to 25.5 last week. The rates in the several towns ranged from 18.5 in Bristol, 18.6 in Swansea, 18.8 in Croydon, and 19.7 in Blackburn, to 34.3 in Brighton, 34.6 in Wolverhampton, 36.8 in Salford, and 38.1 in Preston. In the thirty-two provincial towns the mean death-rate was 27.7 per 1,000, and was 5.6 above the rate recorded in London, which was 22.1 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.0 per 1,000; in London the death-rate was equal to 5.6 per 1,000, while it averaged 9.6 in the thirty-two provincial towns, among which the highest zymotic death-rates were 13.4 in Salford, 16.1 in Brighton, 17.7 in Preston, and 18.9 in Burnley. Measles caused a death-rate of 1.2 in Sheffield and 1.8 in Burnley; whooping-cough of 1.1 in Leeds, 1.2 in Leicester, 1.5 in Huddersfield and 1.8 in Burnley; fever of 1.0 in Huddersfield and 1.7 in Brighton; and diarrhœa of 11.7 in Wolverhampton, 13.4 in Burnley, 13.5 in Brighton, and 16.4 in Preston. The mortality from scarlet fever showed no marked excess in any of the large towns. The 61 deaths from diphtheria in the thirty-three towns included 29 in London, 5 in Leeds, 4 in Liverpool, 3 in Preston, and 3 in Sheffield. One fatal case of small-pox was registered last week in Hull, but not one in any other of the thirty-three towns; and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, September 2nd. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,704 to 2,547 at the end of the four preceding weeks, further declined to 2,537 on Saturday last; 252 new cases were admitted during the week, as against 227, 245, and 225 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, September 2nd, 995 births and 736 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17.9 to 22.6 per 1,000 in the three preceding weeks, further rose to 24.1 last week, and was 1.4 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 16.4 in Aberdeen and 20.5 in Greenock to 25.7 in Paisley and 26.4 in Glasgow. The zymotic death-rate in these towns averaged 7.1 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 372 deaths registered in Glasgow included 98 from diarrhœa, 8 from whooping-cough, 6 from "fever," 5 from measles, 5 from scarlet fever, and 1 from diphtheria. Twenty-nine fatal cases of diarrhœa and 4 of whooping-cough were recorded in Edinburgh; diarrhœa caused also 18 deaths in Dundee, 11 in Greenock, 10 in Leith, and 8 in Paisley.

APPLICATION FOR INCREASE OF SALARY TO DISTRICT MEDICAL OFFICER.

Medicus writes saying that he holds a district medical appointment, and that the area is about 16,000 acres and the population 2,300. He receives £20 4s. per quarter, besides rations. He wishes to know whether the Local Government Board would be likely to support an application for an increase of salary.

*** It is impossible for us to say what the Local Government Board would do if any such question came before it, but we apprehend that the

matter would be referred to the guardians, and not entertained by the Local Government Board unless the guardians had already passed a resolution in favour of our correspondent's application.

ALTERATION OF MEDICAL OFFICER'S DISTRICT.

M.D., who has been a district medical officer in a provincial union for the past twenty-seven years, writes saying that this union is about to be dissolved by order of the Local Government Board. He asks what compensation he will become entitled to, if not engaged as medical officer under the fresh arrangement of the district, also what he will be able to claim for depreciation if engaged at a reduced stipend.

*** We are afraid that our correspondent will not be able to claim any compensation for loss of office, as by Medical Appointments Order of May 25th, 1857, it is distinctly stated that when any such change is made as our correspondent describes, the guardians may, with the consent of the Local Government Board, after six months' notice in writing to the medical officer determine his appointment. It is evident, therefore, that this can be done, though the appointment is supposed to be for life, and we are not aware of any regulation which provides for any form of compensation in such a case.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE NIGHTINGALE FUND.

From the report of the Nightingale Fund for the year 1898, it appears that there were 111 probationer nurses under training at St. Thomas's Hospital; 25 left for various reasons, and 35 completed their year's probationary training, and were taken on the staff at St. Thomas's Hospital. Since the school opened in 1860, 1,519 candidates have been admitted; 899 have been placed on the register of Nightingale nurses, and received appointments at various hospitals and public nursing institutions. Besides the training afforded to the probationers by the Home Sister, Miss Haig-Brown, and in the wards by the sisters and staff nurses, lectures have been delivered to them by Professor Dunstan, Mr. Clutton, and Dr. Sharkey. The attendance at the lectures and the results of the examinations were satisfactory. At the St. Marylebone Infirmary Training School 51 probationers were under training; of these 9 resigned, and 20 were taken on the staff of the Infirmary. Lectures were delivered by Mr. Lunn, the Medical Superintendent, and classes held by the Home Sister. Miss Blackett. The receipts from all sources amounted to £2,157 10s. 3d; and the expenditure including gratuities to certified nurses, and a pension, amounted to £2,061 19s. 8d., leaving a balance of £95 10s. 7d.

ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES, NORTHAMPTON.

The annual report for 1898 shows that the number of admissions has increased from 73 in the preceding year to 86 for 1898, and the average daily number resident has been 366, an increase of 7. The percentage of recoveries has risen from 41.66 for 1897 to 43.33 for 1898; 74 patients were assisted by the Charity during the year, the charges for their maintenance being considerably reduced, and 3.46 per cent. were treated free of cost. Charity such as this is a great boon to the community. The death-rate for the year has been higher than usual, but Mr. Bayley, the medical superintendent, states that all the deaths were from natural causes except one, that of a man admitted with a self-inflicted wound of the throat who died from exhaustion. The provision of occupation for the patients receives much attention at this hospital, while healthy rational amusement is provided with a liberal hand to the advantage of all resident in the institution.

"THE LAWN" HOSPITAL FOR MENTAL DISEASES, LINCOLN.

During 1898 the total number of patients under care and treatment was 119, while the daily average number resident was 82. This number includes voluntary boarders, of whom 1 male and 1 female were resident at the beginning of the year, 1 male and 4 females were discharged, so that at the end of the year there was no boarder resident. Dr. Russell states that of the voluntary boarders some were patients who had recovered and wished to remain at the hospital, and 1 lady remained as a voluntary boarder after having been discharged recovered in order that she might accompany a party of patients to the seaside. No more eloquent testimony than this could be borne as to the kindness and care shown in the treatment of the patients. To those unacquainted with the management of our modern asylums for the insane, it must seem almost incredible that any sane person should prefer to remain in one. The recovery-rate is 33 per cent., and the health of the institution generally good.

MEDICAL NEWS.

It is stated by the *Pioneer* that Surgeon-General Taylor is taking steps to have a supply of Calmette's antivenene issued to all military hospitals throughout India.

The Intercolonial Medical Congress of Australasia will hold its fifth session in Brisbane from September 18th to 23rd. A large attendance is accepted.

The late Mr. Thomas Lockwood of Harrogate has by his will bequeathed £2,000 each to the Bradford Infirmary, the Harrogate Bath Hospital; £1,000 each to the Bradford Ear and Eye Hospital, the Huddersfield Infirmary, and the Harrogate Cottage Hospital.

International Electrotherapeutic Congress.—The French Electrotherapeutic and Radiological Societies has decided to organise an International Congress, with an exhibition of new apparatus, to be held each year. The organising committee is composed of Drs. Apostoli, Boisseau de Rocher, Branly, Oudin, and Moutier of Paris, and Doumer of Lille. All communications should be addressed to Dr. Doumer, 57, Rue Nicolas-Leblanc, Lille.

Congress of Italian Alienists.—The tenth congress of Italian alienists will be held in Naples from the 10th to the 14th of October, under the presidency of Professor Tamburini. The following are the subjects proposed for discussion: Practical methods of individual psychological investigation in asylums and clinics; the light which has been, and may be, thrown by anatomical data on normal and pathological psychology; psychiatry and the study of the individual and his activity in social relations; intoxications and infections in the pathogenesis of mental diseases and neuropathies.

Travelling in Egypt.—Messrs. Cook and Son have just issued their programme of arrangements for travelling in Egypt, by which it appears their steamers will commence to run between Cairo and the First Cataract in November, and continue until the middle of March with connecting steamers between the First and Second Cataract. A new feature is the arrangement of combined bookings by Messrs. Cook's steamers and the Egyptian and Soudan railways, enabling tourists with only limited time at their disposal to make their visits to Upper Egypt more rapidly than can be done by using the steamers only. Under arrangements with the Governor-General of the Soudan through tickets will be issued to Khartoum early in the New Year.

Insanitary Chinese Ports.—The reports by the Customs medical officers to the Inspector-General of Customs on the nature and prevalence of diseases among the foreigners and natives at different Chinese ports throw some light on sanitary conditions in the ports where Europeans live and die. Dr. Rankine, of Ichang, reports on the prevalence of various forms of bowel complaint, dysentery, diarrhœa, etc., and fevers of malarial and typho-malarial types. Dr. Clindening reports on the health of Kiukiang, and notes an absence of sickness attributed to climatic or surrounding influences; the only epidemic was one of chicken-pox. Besides the ordinary forms of illness such as pneumonia, bronchitis, rheumatism, etc., some cases of enteric fever and malaria contracted elsewhere came under his treatment. At Chinkiang, in the early spring, typhoid fever and small-pox were prevalent, the outbreak of the latter, according to Dr. Lynch, being more widespread and virulent than in previous epidemics. In the autumn malaria and typhoid prevailed. In Ningpo, Dr. Hickin reports an absence of epidemics, the most prevalent disease being malaria and bowel complaints. Dr. Roderick Macdonald's report on Wuchow is of special interest, dealing, as it does, with many important sanitary questions. He shows that a large amount of disease is to be attributed to the sanitary defects of the residences, and the milk supply is bad, the milk being largely diluted with impure water. The meat is sometimes unfit for human consumption, diseased animals being at times slaughtered by the butchers. The water for drinking purposes is derived from various sources, the purest (?) being that from the Icy Well, which in its chemical and microscopical characters resembles diluted pond water, and is polluted with sewage matter. In conclusion, Dr. Macdonald describes the state of the town as execrable, and points out the urgent need of sanitary reform in various directions.

A Method of Printing in Colours.—An invention of Mr. Ivan Orloff, chief engineer and manager of the Bank Note Printing Establishment of the Russian Government, St. Petersburg, has recently been shown in London. One of the chief reasons for the costliness of printing in colours has been that by previous methods only one colour is applied at one impression, and between each impression the paper must be left to dry. In the Orloff press the picture is printed by a single operation. There is a separate printing surface for each colour; these are arranged on one large cylinder; this cylinder in revolving prints each colour in its proper register on to an impression cylinder, and the impression cylinder prints upon the paper. The advantages claimed for the machines are the saving of time, great economy of cost, and greater accuracy in register.

GERMAN PUBLIC HEALTH ASSOCIATION.—The German Public Health Association will hold its twenty-fourth annual meeting at Nuremberg from September 13th to the 18th. Among the subjects proposed for discussion are the Hygienic Aspects of the Different Kinds of Artificial Illumination; the Duties of Medical Officers of Schools: the Smoke Nuisance in Towns.

MEDICAL VACANCIES.

The following vacancies are announced:—

AYR COUNTY HOSPITAL.—House-Surgeon. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary by September 18th.

BELGRAVE HOSPITAL FOR CHILDREN.—House-Surgeon. Appointment for six months. Application to the Honorary Secretary, 77 and 79, Gloucester Street, S.W., by September 16th.

BIRMINGHAM GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. Residence, board, and washing provided. Applications to the House-Governor by September 30th.

BIRMINGHAM AND MIDLAND SKIN AND URINARY HOSPITAL.—Clinical Assistant. Applications to the Secretary by September 11th.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. No salary; board, lodging, and washing provided. Applications to the Secretary by September 23rd.

CAMBRIDGESHIRE LUNATIC ASYLUM, Fulbourn.—Assistant Medical Officer; unmarried. Salary, £140 per annum, with board, lodging, and attendance. Applications to the Clerk to the Visitors by September 20th.

CARLISLE: CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications to the Secretary by September 11th.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried, and not more than 26 years of age. Salary, £100 per annum, with board and residence. Applications to the Medical Superintendent.

DEVON COUNTY ASYLUM.—Two Assistant Medical Officers. The first to begin with a salary of £120 per annum, rising to £150; the second £100, rising to £130, with board, lodging, and washing. Applications to Dr. Davis, Medical Superintendent, County Asylum, Axminster, by September 19th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—(1) House-Surgeon. Appointment for six months. Board and residence provided, and honorarium of £25. (2) Two Clinical Clerkships. Lunch provided. Applications to the Secretary by September 16th.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—Two Clinical Clerks. Applications to the Secretary by September 16th.

EDINBURGH: VICTORIA HOSPITAL FOR CONSUMPTION.—Non-Resident Clinical Assistant for Out Patient Department. Salary, £60 per annum. Applications to Messrs. Wallace and Guthrie, Honorary Secretary, 1, North Charlotte Street, Edinburgh.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £80 per annum, rising to £100, with board, residence, and washing. Applications to the Secretary by October 1st.

GEORGE HENRY LEWES STUDENTSHIP FOR THE ENCOURAGEMENT OF ORIGINAL RESEARCH IN PHYSIOLOGY. Applications to Professor Sir Michael Foster, K.C.B., New Museums, Cambridge, by October 1st.

GLOUCESTER: BARNWOOD HOUSE HOSPITAL FOR THE INSANE.—Junior Assistant Medical Officer. Salary, £120 per annum, rising to £140, with board, etc. Applications to the Medical Superintendent.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Physician. Applications to the Secretary by September 13th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board, lodging, and washing. Applications to F. E. Ferrier, Honorary Secretary, 33, Hall Plain, Great Yarmouth, by September 23rd.

HALIFAX: ROYAL INFIRMARY.—Assistant House-Surgeon: unmarried. Salary £50 per annum, with an extra allowance of £9 2s. 6d. per annum, with residence, board, and washing. Applications to the Secretary by September 20th.

HEMEL HEMPSTEAD: WEST HERTS INFIRMARY.—House-Surgeon and Dispenser; unmarried. Appointment for two years. Salary, £100 per annum, with board, fire, light, attendance, and washing. Applications to the Assistant Secretary by September 13th.

LANCASTER: ROYAL ALBERT ASYLUM.—Resident Medical Officer. Between 30 and 40 years of age. Salary, £400 per annum, advancing to £450, with furnished house, coals, gas, milk, and vegetables. Applications to the Principal and Secretary by September 14th.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—House-Surgeon. Salary, £35 per annum, with board and lodging; also Assistant House-Surgeon. Appointment for six months. Salary, £25 per annum with board and lodging. Applications to the Honorary Secretary by September 15th.

LEITH HOSPITAL.—House-Physician, House-Surgeon, and Surgeon for the Outdoor Department, and Assistant House-Surgeon (non-resident). Appointments for six months. Applications to the Secretary, 33, Bernard Street, Leith, by September 12th.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park Place, Cheetham Hill Road.—House-Surgeon. Salary, £80 per annum, with apartments and board. Applications to the Secretary, 33, Barton Arcade, Manchester, by September 28th.

MARGATE: ROYAL SEA BATHING HOSPITAL.—Assistant Resident Surgeon. Salary, £52 with board and residence. Applications to the Secretary, Royal Sea Bathing Hospital offices, 30, Charing Cross, S.W.

METROPOLITAN ASYLUMS BOARD.—Three Assistant Medical Officers (two for the Darenth and one for the Leavesden Asylums). Not exceeding 35 years of age. Salary, £120 per annum, rising to £150, with board, lodging, attendance, and washing. Applications, on forms provided, to the Clerk to the Board, Norfolk House, Norfolk Street, Strand, W.C., by September 30th.

METROPOLITAN HOSPITAL, Kingsland Road.—(1) House-Physician; (2) House-Surgeon; (3) Assistant House-Physician; (4) Assistant House-Surgeon. Appointments for six months. Salaries, for the first two, at the rate of £40 per annum, and for the latter two at the rate of £20 per annum. Applications to the Secretary by September 11th.

MONTROSE ROYAL ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to the Medical Superintendent.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—(1) House-Surgeon. Salary, £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th. (2) Assistant House-Surgeon. Apartments, board, and washing to be an equivalent for services rendered. Applications to the Secretary by October 23rd.

OXFORD EYE HOSPITAL.—Honorary Assistant Surgeon. Applications to the Hon. Secretary, Oxford Eye Hospital, 29, Banbury Road, Oxford, by September 16th.

PORTSMOUTH BOROUGH ASYLUM.—Junior Assistant Medical Officer. Salary, £120 per annum, increasing to £150, with board, lodging, and washing. Applications to the Medical Superintendent.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, washing, etc. Applications to W. Davis, Secretary, 5, Winkley Street, Preston, by September 13th.

PRESTWICH: MANCHESTER COUNTY ASYLUM.—Assistant Medical Officer; unmarried, and under 35 years of age. Salary £125, increasing to £250, with board, apartments, and washing. Applications to the Superintendent.

ST. LUKE'S HOSPITAL, E.C.—Clinical Assistant. Appointment for six months, with board and residence. Applications to the Secretary.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Assistant Resident Medical Officer. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by September 25th.

SOUTHAMPTON: ROYAL SOUTH HANTS INFIRMARY.—House-Surgeon. Salary, £100 per annum, with rooms, board, and washing. Applications to T. A. Fisher Hall, by October 2nd.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Surgeon. Salary £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

STOKE-UPON-TRENT UNION.—Resident Medical Officer for the Workhouse. Salary, at the rate of £100 for the first year, £110 for the second year, and £120 for the third year, with board, washing, and furnished apartments. Applications to the Clerk to the Guardians by September 22nd.

WESTERN GENERAL DISPENSARY, Marylebone Road.—Second House-Surgeon; unmarried. Salary, £75 per annum, with board and residence, and 10s. a month allowed for washing. Applications to the Honorary Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Appointments tenable for six months. Applications to the Secretary-Superintendent by September 20th.

WESTMINSTER HOSPITAL.—Pathologist. Salary £250 per annum, and a sum of £80 per annum allowed for expenses. Applications to S. H. Quennell, Secretary, by October 1st.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £120 per annum, with £30 per annum for dispensing, furnished apartments and attendance. Applications to the Secretary by September 23rd.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum, with board, lodging, and washing. Testimonials, sealed, to the Chairman of the Medical Committee by September 22nd.

MEDICAL APPOINTMENTS.

BALFOUR, T. S., M.D.Edin., M.B., C.M., appointed Medical Officer and Public Vaccinator to the North Chardstock District of the Axminster Union.

BREBNER, C. S., M.B., Ch.B.Edin., appointed House-Surgeon to the Durham County Hospital.

EDINGTON, George H., M.D., M.R.C.S.Eng., L.R.C.P.Lond., F.F.P.S.Glasg., appointed Extra Dispensary Surgeon, Royal Hospital for Sick Children, Glasgow.

KENDAL, C. R., M.R.C.S.Eng., and L.S.A., appointed Medical Officer for the Parish of Wendron, in the Helston Union.

LEAH, T. Noy, M.R.C.S., L.R.C.P.Lond., appointed Surgeon to the Provident Dispensary of the Royal Albert Hospital.

LIVINGSTONE, T. H., M.B., Ch.B.Edin., appointed House-Surgeon to the Rochdale Infirmary.

MORRIS, J. J. Nixon, M.R.C.S., L.R.C.P.Lond., appointed Assistant Surgeon to the Royal Albert Hospital, Devonport.

MUNRO, D. G. Macleod, M.B., M.R.C.P.Edin., appointed Physician to the Cheltenham Provident Dispensary, *vice* R. Renton, M.B., resigned.

ROBINSON, E., M.D.Edin., M.B., C.M., appointed Medical Officer of the Frencham District of the Farnham Union.

THURNELL, H. L., M.A.Camb., B.A., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the Gravesend District of the Gravesend and Milton Union, *vice* J. Gramshaw, M.D.St.And., resigned.

ST. THOMAS'S HOSPITAL.—The following gentlemen have been appointed House Officers from September 5th:—

House-Physicians—E. H. Ross, L.R.C.P., M.R.C.S.; J. Gaff, L.R.C.P., M.R.C.S.; A. Bevan, L.R.C.P., M.R.C.S.; H. C. Thorp, M.A., M.B., B.C.Cantab.

Assistant House-Physicians—F. H. Ellis, B.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S.; B. F. Howlett, L.R.C.P., M.R.C.S.

House-Surgeons—H. J. Phillips, L.R.C.P., M.R.C.S.; P. W. G. Sargent, M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S.; S. A. Lucas, L.R.C.P., M.R.C.S.; H. T. D. Acland, L.R.C.P., M.R.C.S.

Assistant House-Surgeons—A. Webb Jones, L.R.C.P., M.R.C.S.; E. A. Gates, L.R.C.P., M.R.C.S.; E. C. Bourdas, L.R.C.P., M.R.C.S.; N. Unsworth, L.R.C.P., M.R.C.S.

Obstetric House-Physicians—(Senior) H. M. Scraping, B.A.Cantab., L.R.C.P., M.R.C.S.; (Junior) A. E. Stevens, M.B.Durh., L.R.C.P., M.R.C.S.

Ophthalmic House-Surgeons—(Senior) T. Hoban, L.R.C.P., M.R.C.S.; (Junior) J. A. Barnes, L.R.C.P., M.R.C.S.

Clinical Assistants in the Special Department for Diseases of the Throat—L. H. Lindley, B.A., M.B., B.Ch.Oxon.; C. L. Hawkins, B.A.Cantab., L.R.C.P., M.R.C.S. Skin—H. R. Beale, L.R.C.P., M.R.C.S.; T. Perrin, L.R.C.P., M.R.C.S. Ear—A. E. Martin, B.A.Cantab., L.R.C.P., M.R.C.S.

DIARY FOR NEXT WEEK.

TUESDAY.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 4 P.M.—Dr. Fletcher Beach: Mental Defects in Childhood.

FRIDAY.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street W., 4 P.M.—Dr. Dundas Grant: Cases of Disorders of the Ear, Nose, and Throat in Relation to Diseases of the Nervous System.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

ATKINSON.—On July 26th, at the Government Civil Hospital, Hong Kong, the wife of J. M. Atkinson, M.B.Lond., of a son.

STOCKER.—On August 23rd, at Pinehurst, Clevedon, the wife of E. Gaved Stocker, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

LUCAS—BASSETT.—On August 31st, by the Rev. J. H. Jowett, M.A., Albert Lucas, F.R.C.S., of 9, Easy Row, Birmingham, to Edith Hannah, younger daughter of the late John Bassett, M.D., of Handsworth.

MANSELL—LANGHAM.—August 30th, at St. Helen's Church, Ore, Hastings, Harry Rosser Mansell, M.R.C.S.Eng., of Crofton, West Hill, Hastings, to Lilian Annie, only daughter of F. A. Langham, Esq., of Menadeun, Ore.

RANDALL—COOKE.—On September 5th, at the Parish Church, Litton, Bath, by the Rev. G. F. Cooke, R.D., father of the bride, Martin Randall, M.D., F.R.C.S., of Wimbledon, to Edith Katharine Cooke of Litton Rectory.

STEVENS—REEVES.—On August 31st, at St. Peter's Church, Eltham Road, by the Rev. Richard Owen, M.A., Vicar, Thomas George Stevens, M.D.Lond., F.R.C.S.Eng., M.R.C.P.Lond., of 8, St. Thomas Street, S.E., eldest son of G. J. B. Stevens, Esq., M.R.C.S.Eng., L.R.C.P.Lond., of Newington Green, N., to Lizzie, eldest daughter of John Reeves, Esq., of Ecclesbourne, 85, Eltham Road, Lee, S.E.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.
CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.
CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.
CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F.S., 3.
CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.
CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations,*—M., 4.
EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.
GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.
GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.
HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.
KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.
LONDON. *Attendances.*—Medical, daily, 1.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily. 2.
LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.
LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 2.
METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.
MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.
NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.
NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.
NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.
ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.
ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.
ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.
ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.
ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.
ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2
ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Th., 9; Laryngx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.
ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.
ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 3.30; Th., 2
ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.
ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.
ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.
SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations*—Gynæcological, M., 2; W., 2.30.
THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu, F., 6.30. *Operations.*—Daily, exc. M., 10.
UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.
WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.
WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attalogy, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.B. desires to know of a winter resort on the south coast where the climate is specially dry and not too cold.

R. wants to know how long, after complete immersion in water, one would expect artificial respiration to be of any avail, and what is the record time of submersion.

NEMO would be glad to know of an institution for men or boys of a weak intellect where they could work and be kept for not too large a sum annually.

A CORRESPONDENT asks for an expression of practical experience of the use of acetylene as a lighting vehicle for a brougham, and the best sort of lamp hitherto invented.

DR. J. THOMSON asks if any reader who has had experience of eucaine in dentistry can inform him if its use predisposes to hæmorrhage. In two cases in which he has used it, secondary hæmorrhage has followed. He investigated both, and in one found a history of preceding bleeding after tooth extraction, the other gave negative results.

M.B. writes: A medical neighbour of mine is the subject of chronic asthmatic bronchitis; age about 40. His resisting power is now considerably reduced. I have recommended him to try to get to a suitable place in New Zealand or Australia. Would one who has acquaintance with these countries kindly assist by naming a place likely to be suitable, and where he might have a chance of work?

VIATOR writes: Can any member give me a hint as to the treatment of weakness of the circulation resulting from the long use of full doses of sulphonal. The patient, aged 43, suffered years ago from syphilitic hemiplegia, from which he almost completely recovered. Last November he suffered from mental worry and insomnia, for which he took sulphonal, which he continued till June. The failure of circulation was not marked till influenza supervened in February. He has had no narcotics save bromide since June, but still is quite unable to bear any change of temperature. Heart sounds quite regular; pulse fairly strong.

COCA DE MER.

SEYCHELLE will feel obliged to any reader who can give him the address of a dealer residing at home or in the Seychelle Archipelago, from whom a good specimen of the coca de mer nut could be procured. It is required for a local collection.

PROFESSIONAL ASSISTANCE TO BROTHER PRACTITIONERS.

A CORRESPONDENT asks for advice under the following circumstances: A short time ago his *locum tenens* was called to assist a practitioner in his neighbourhood in a difficult confinement. He was detained all the evening, and unable to attend to his surgery work. What—if any—fee should be charged?

*** If the patient is able to pay an additional fee for the services rendered by the *locum tenens*, the amount should be in proportion to the patient's means. It is the duty of the practitioner calling for assistance to see that his professional doctor is paid, and he will know best what his patient is able to pay.

ANSWERS.

MIDLANDS.—The nurse is entitled to her full fee. She has fulfilled her part of the contract. That the confinement has not come off is not her fault, but is due to the error of those who engaged her.

A. J.—No one can legally practise medicine within the territory of the French Republic unless he possesses the degree of Doctor of Medicine granted after examination by a French Faculty.

F. C. B.—We do not give medical advice. We may say, however, that we do not think the carrying in the right trouser pocket of a phial containing two ounces of quicksilver is a method of treatment likely to be approved by scientific men.

NOTES, LETTERS, Etc.

MALARIA AND THE MOSQUITO THEORY.

LIEUTENANT-COLONEL EDWIN FAIRLAND, A.M.S. (R.P.) (Gravesend), writes: The interesting discoveries that Major Ross and his colleagues are making in connection with the etiology of malarial fevers demand attention; and if they succeed in proving, as we believe they will, that the mosquito is the *causa causans* of the disease, they will be entitled to take rank amongst the world's greatest benefactors. But a curious point has occurred to me, and I ask, What light can any of your readers throw upon it? During the recent hot weather the mosquito has become unpleasantly familiar with us: and surprise is expressed at his presence here in England, for he was not recognised as a resident in temperate climes. Yet from the earliest times malarial fevers have been prevalent in several parts of England, such as the fens in Lincolnshire, the Thames Valley, etc., and often of a grave type. Now here we have two admitted facts—that is, the presence of the specific fevers, the absence (or non-existence) of the mosquito. How does the theory explain this?

COMPETING MEDICAL QUALIFICATIONS.

A FOREIGN correspondent under the title "Aliboron" writes complaining of certain strictures by "Indian graduates," notably of the Madras University, on the value of certain European qualifications—particularly of those of Edinburgh and the M.D. of Brussels—*vera* as their own. We have not seen these strictures in their original form, but judging from the quotations he gives they are in the worst possible taste, and

characterised by the puerilities of Babooism. Especially is our Belgian correspondent indignant over the assertion that the "medical 'doctorate' of Brussels can be had for the asking"—in other words, for a fee. He challenges these Indian graduates to try their luck at Brussels and see how they will fare. We have no wish to hold the scales against competing qualifications—home, foreign, or Indian; but, while fully acknowledging the excellence of our young Indian schools of medicine, would counsel their graduates to show a little more modesty and not to draw hasty comparisons as to qualifications, of the value of which they can have no possible opportunity of rightly judging.

A DISCLAIMER

DR. F. W. ROBERTSON (Monkton, Ayrshire) writes: My attention having been called to a paragraph in the *Daily Mail* of August 23rd in which my name occurs as making "an interesting statement," and as being "an authority on nervous diseases," allow me the use of your valued and widely-read journal to disclaim absolutely and wholly any connection with this paragraph or article.

CHARGE FOR SICK CERTIFICATES.

FAIRPLAY (London) writes with reference to the answer to "E.H.H." in the BRITISH MEDICAL JOURNAL of July 15th on this subject: Whatever may be the custom in the Midlands, the custom of not paying for these certificates is decidedly iniquitous, and I do not think "E.H.H." ought to be ruled by such a custom, but should in strict equity charge for these extra certificates 6d. each if more than one, if only one 1s. extra. The fact that the member wants these extra certificates show that he is earning a good wage, or he could not keep paying into so many clubs; and of course when he is sick he may receive as much as, and in some cases more than, he earns when in work, and yet the poor medical practitioner is asked to give his services gratis for what in many cases is an intolerable nuisance, namely, having to write so many extra certificates when one has more important work to do, and so busy often that one does not know where to go first. I should advise him never to give these extra certificates without payment. If the British public have to pay for what they get from the profession, they will value us more, as the more you do for nothing the more you may do, and they value you the less. When I was an assistant in London it was always the practice to charge for these extra certificates, and I believe it is the universal custom here to do so.

MEDICAL ETHICS.

P. writes: According to many of your correspondents the only "righteous" medical men are those who are without clubs, and being without them, make up for their exceeding righteousness by decrying them and those who seek to do their duty by them.

Among such a select few, one would naturally expect a high class of professional ethics. Whether or not such is the case generally I don't know, but in this place the rule of ethics seems to be rather in abeyance. Four instances will suffice.

1. A newly-imported practitioner tells a chemist that if he will introduce patients to him he will open an account with him (the chemist).

2. A patient developing scarlet fever sends for me, but in my absence while visiting, another practitioner is sent for and keeps the case.

3. Case of angina, also out when sent for; another practitioner keeps the case, and another case very similar. I could understand the conduct if I was in the habit of "poaching," but I am always most careful when I am sent for in another man's absence, to do what I can and resign the case to the regular attendant. Such a course may not be financial wisdom, but at any rate I have the consolation of having acted fairly.

COLLECTIVE DEFENCE.

MR. H. ELLIOTT-BLAKE, M.R.C.S., L.R.C.P. (Chelsea) writes: The greatest asseveration and averseness that I recall to the perennial subject of "defence"—and a favourable vote has again been carried—was that the whole Dublin Branch threatened to resign, *en bloc*, if the British Medical Association took it up. Though not long ago, it is to be hoped this desire has been lived down, and a fair Committee will thresh out what amounts to whether Article 3 can mean that we should consider at our meetings important questions of "medical policy," or arrange for committees; by all means, if thought advisable, after scientific business. I persist that scientific discussions, in our midst, would never pale before the living vital energy that defends our calling from pitiable incursions and the deceits of custom, as ungoverned as they are unredressed. By the personal side of medical defence the most that could be meant would seem to me to be that a privilege be granted to members to join an existent defence union, or one specially formed as in a colony, at a reduced fee, say, 5s.; a standing Ethical Committee managing their recommendations and supporting applications; a privilege, in fact, compulsory to none, and no expense to the Association. The late *plébiscite* vote required this, and, with apathy rampant, the support of 5,644 members cannot be considered otherwise than a large vote. One may rightly admire the spirit of reserved conservatism, but here it is the easiest of lines to pursue, and even adorn and embellish, but it stops reform.

CATERPILLAR RASH.

MR. G. C. GARRATT, M.B. (London Fever Hospital, Islington, N.) writes: That certain caterpillars can produce urticaria in those who handle them is well known. This property is, however, dependent not on "powerful mandibles and hook-like feet," but on hairs of an irritant nature. Thus the hairless caterpillar of the goat moth, whose mandibles will readily bore through an inch plank, is unable to produce any such effect. The hairs are easily detached from the animal, and adhere to the skin of the sufferer, where they may be found if looked for directly irritation commences. The caterpillars most to be avoided are the hairy caterpillars of certain moths of the genus nocturni, and especially that of the yellow-tail moth. It is a small creature ornamented with red stripes, white spots, and tufts of black hair of peculiar virulence, and is found on hawthorn hedges in June. A vivid description of its effects was given by the late J. G. Wood, and by others before him. The "woolly bear" or larva of the tiger moth, and several other hairy caterpillars possess similar properties, but to a much less degree, only very sensitive skins being affected by the former.

GOWNS FOR MEDICAL PRACTITIONERS.

M.R.C.S. writes: I should think the amusing letter from "Sartor Resartus" will settle the R.C.S. gown question; but how handy that gown might have been for the Fourpenny Doctor at Stepney if he could afford to purchase one.

DOCTOR AND NURSE.

DR. F. L. NICHOLLS (Fulbourn, near Cambridge) writes: A relative of my wife required a nurse for a friend, and went to a nursing home for the purpose of obtaining one. The matron requested the name of the doctor attending, and on being told, replied: "I don't know anything of him, but our nurses have worked under Dr. So-and-So, who lives close by, and is a very clever man," and on the nurse undertaking the case she also enlarged upon the cleverness of the said Dr. So-and-So. Comment is unnecessary.

THE ETIOLOGY OF INFANTILE CONVULSIONS.

DR. J. W. MARTIN (Dumfries) writes: With regard to convulsions in infancy or childhood, I should like to ask if it is not the experience of most practitioners that convulsions are brought about by a foul state of the bowels, as shown when an enema is administered, and that the primary cause of the convulsion is the absorption of some toxin generated by the fæces, and so acting upon the nervous system, and especially the respiratory centre, bringing about the violent convulsion which one frequently sees. Convulsions are fairly common at the ushering in of the exanthemata, and particularly whooping-cough, in children.

LETTERS, COMMUNICATIONS, ETC., have been received from:
A Amateur; Mr. T. H. Aquino, Bhusawal; Mr. H. Armstrong, Liverpool; J. M. Atkinson, M.B., Hong Kong; Messrs. Atkinson, Saunders, and Co., Manchester. **B** C. S. Brebner, M.B., Macclesfield; Messrs. Burroughs, Wellcome, and Co., London; B. Baskett, Halton; A. J. Beveridge, M.B., Sidapur; Dr. T. S. Balfour, Chard; Dr. T. W. Blake, Bournemouth; F. Beach, M.B., Kingston Hill; Mr. J. K. Barton, London; Mr. B. Boake, Ormesby; A. G. Bateman, M.B., London; Dr. A. C. Black, Shotts. **C** C. M.; Dr. J. J. Charles, Kilkee; W. Colquhoun, M.B., Glasgow; Dr. F. G. Clemow, London; R. F. Castle, M.B., Darfield; Criticus; Mr. A. J. H. Crespi, Wimborne; Mr. E. T. Collins, London. **D** W. H. Dickinson, M.B., Tintagel; Dr. T. M. Dolan, Halifax; W. B. Drummond, M.B., Edinburgh; Mr. S. Davies, London; D.S.O., C.M.G.; R. C. Dun, M.B., Liverpool. **E** Dr. M. G. Evans, Caerphilly; Dr. G. H. Edington, Glasgow. **F** F. T. M. C; Fairplay; Mr. L. Fletcher, Hoxne; F. C. B. **G** Mr. J. L. Green, Salisbury. **H** Mr. G. L. Hill, Birmingham; Mr. W. Hutchinson, London; J. B. Hall, M.B, Bradford; Dr. H. Horrocks, Perth, W.A.; Mr. V. Horsley, London. **I** Inquirer; Ignorant. **J** Dr. E. Jepson, Durham; Mr. A. Jones, Harrogate; J. H. **K** Dr. S. J. J. Kirby, Fressingfield; Dr. J. H. Keay, London. **L** Mr. H. C. Lawrence, Cheltenham; Mr. H. K. Lewis, London. **M** J. W. Mason, M.B., Hull; Mr. E. C. Montgomery, London; F. W. McIntosh, M.B., Manitowaning; Dr. A. S. Myrtle, Harrogate; M.B.; Dr. J. More, Rothwell; Dr. C. Muthu, London; Militant; Mr. C. E. D. Maile, Esher. **N** Mr. J. T. Neech, Manchester; Dr. C. S. G. Nagel, Berne; Nemo. **O** Dr. J. Oliver, London; Old Member. **P** Mr. J. J. Pitcairn, London. **R** Mr. E. J. Reid, London; Dr. J. B. Ridley, Bromley; F. W. Robertson, M.B., Monktown; Mr. W. P. Rodrigo, Bernwala; Mr. G. Rendle, London; Rouge et Noir; R. **S** Seychelle; Dr. G. F. Still, London; Dr. W. Sykes, Gosport; H. B. Smith, M.B., Bradford. **T** H. Tylecote, M.B., Cana Mines; Mr. J. Thomson, Portrush. **V** Viator. **W** Mr. A. J. G. Waters, March; etc.

BOOKS, ETC., RECEIVED.

A Handbook with Hints—Plain, Homely, and Practical—for the Nursery. By J. M. Carvell. M.R.C.S. London: George Barber. 1899. 1s.

King's College Hospital Reports. Vol. v. London: Adlard and Son. 1899.

The Pathology of Emotions. By C. Féré. Rendered into English by R. Park, M.D. Watford: The University Press. 1899. 15s.

Darwin on Trial at the Old Bailey. By Democritus. Watford: The University Press. 1900. 2s.

La Malaria secondo le nuove Ricerche. Par A. Celli. Rome: Società Editrice Dante Alighieri.

Notes on the Therapeutics of Indigenous Vegetable Drugs. By L. B. Dhargalker, L.M. and S. Bombay: "Tatva-Vivechaka" Press. 1899.

The Causes of Consumption, with special reference to its Prevalence in the Isle of Man. By C. A. Davies, M.D. Douglas: Brown and Sons. 2s. 6d.

The Schott Methods of the Treatment of Chronic Diseases of the Heart. By W. Bezly Thorne, M.D., M.R.C.P. Third Edition. London: J. and A. Churchill. 1899. 6s.

The Universal Illusion of Free Will and Criminal Responsibility. By A. Hamon. Watford: The University Press. 1899. 3s. 6d.

Ringworm and some other Scalp Affections. By H. Brown, L.R.C.P.Edin. London: J. and A. Churchill. 1899. 5s.

Nursing its Theory and Practice. By P. G. Lewis, M.D., M.R.C.S., L.S.A., A.K.O. London: The Scientific Press. 1899. 3s. 6d.

The Mechanics of Surgery. By Charles Traux. Chicago. 1899.

Mitteilungen aus der Augenklinik des Carolinischen medico-chirurgischen Instituts zu Stockholm. Herausgegeben von Dr. J. Widmark. Zweites Heft. Jena: Gustav Fischer. 1899. M.4.50.

Ueber epitheliale Gebilde im Myometrium des fœtalen und kindlichen Uterus einschliesslich des Gartner'schen Ganges. Von Dr. R. Meyer. Berlin: S. Karger; and London: Williams and Norgate. 1899. 5s.

Neueste Methoden zur Bekämpfung akuter sowie häufig auftretender Metrorrhagien. Von Dr. O. Schaeffer. Munich: Seitz and Schauer. 1899. M.1.50.

*** In forwarding books the publishers are requested to state the selling price.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

PLAGUE:
ITS SYMPTOMATOLOGY, PATHOLOGY, TREATMENT AND PROPHYLAXIS.

By W. J. SIMPSON, M.D., F.R.C.P.,
Professor of Hygiene, King's College, London.

Introduction.

Two features are specially characteristic of plague. They are, first, the slow, irregular, and gradual manner in which the disease acquires a hold over a locality into which it is imported, and which may later on become the scene of an epidemic; and secondly, the obscurity which often surrounds the earlier cases. The first is apt to raise false hopes of the disease dying out, to cause the procrastination of effective measures, and to favour the postponement of careful inquiries into the disease at a stage when its movements and mode of spread are more easily followed than later on. The other gives rise to disputes as to the nature of the disease, and consequently to the loss of valuable time. Much of the obscurity which formerly involved the early cases in a locality is beginning to be cleared away since the discovery of Kitasato's bacillus. When everyone is on the alert as to the probability of plague being one of the diseases which may be met with, the bacillary test is all-important in its usefulness, but when there is no suspicion, there are two varieties which may escape attention for some time, and so permit the germs of the disease to be extensively spread. These are the pneumonic and ambulant varieties.

The Pneumonic Form of Plague.

The pneumonic variety, which is very infective, has been demonstrated by Surgeon-Major Childe, I.M.S., to owe its infectivity to the fact that the sputum frequently contains almost a pure culture of plague bacilli, which get on to handkerchiefs, clothing, bedding, and other articles of furniture, as well as on to the floor of the patient's room. This form is particularly dangerous because the clinical symptoms are not typical of ordinary plague, and it is more likely to be mistaken for bronchitis, broncho-pneumonia, or pneumonia. Pain, tenderness, and enlargement of the lymphatic glands in the inguinal, femoral, axillary, and cervical regions, which are the most prominent external signs of bubonic plague, are absent; and beyond cough and fever, and a prostration which is exceptionally severe, and far exceeding that which ought to be expected from the small amount of lung mischief discernible, there are few signs to raise suspicion that the disease is plague. The illness commences with a rigor, and symptoms of general *malaise*, intense headache, nausea, vomiting, and pain in the limbs and body, followed by fever varying in range from 102° to 105°. Cough more or less pronounced with dyspnœa sets in, and a quantity of watery sputum tinged with blood, and becoming profuse as the disease advances, is coughed up as a rule without effort. The sputum is not the glairy, viscid, rusty character of acute pneumonia, though on the clothes it may be readily mistaken for this. Moist sounds are heard at the base of the lungs and over the pneumonic patches; but however hurried the breathing and quick the rate of the pulse, there is not that disproportion between the pulse and respiration ratio which obtains in acute pneumonia. The symptoms become rapidly worse, the patient becomes delirious, there is gradual failure of the heart action with or without coma, and death occurs on the fourth or fifth day, or earlier. This form of plague, besides being the most infectious, is also the most fatal.

The Bacillary Test.

The only certain means of diagnosis during life is to examine the sputum by spreading a small quantity on a cover-glass or slide, drying, fixing, and staining with gentian violet, methylene blue, carbol fuchsin, or any of the ordinary aniline dyes. An examination with one-twelfth oil immersion will decide whether the characteristic cocco-bacilli or diplobacteria, more deeply stained at the ends than in the centre, are present. Should these be found at a time when there is only suspicion of plague existing in a locality, the confirmatory test of cultivating the bacillus should be immediately applied; and, as this cannot be done without a laboratory, the suspected sputum should be placed in a stoppered phial, properly sealed, and taken or sent to the nearest bacteriological laboratory for examination and report.

The most reliable diagnostic test as to whether the diplobacteria are plague microbes is Haffkine's stalactite test. This consists in cultivating the microbe in broth to which drops of clarified butter or cocoa-nut oil have been added. From the drops of oil suspended on the surface of the nutrient medium the bacilli grow down into the depths of the liquid in the form of long threads, producing the appearance of stalactites. When disturbed the threads fall in snow-like flakes to the bottom. This stalactite formation is, under these conditions, peculiar to the growth of the plague microbe, no other microbe having hitherto been found to possess the same property.

The Ambulant or Mild Form of Plague.

The ambulant or mild variety of plague, which is a non-fatal form, is even more likely to escape attention than the pneumonic, because of the slight constitutional disturbance which it may produce, and because it is often taken for some other disease. Pestis minor or pestis ambulans is, if anything, more insidious and dangerous to the community at large than the pneumonic, for its mildness produces no sense of danger. Further, it is not discernibly infectious, the cases appearing to crop up unconnected with one another, and it is generally mistaken for mumps, syphilis, the result of a strain, scrofulous glandular affections, and malarial disease. The clinical symptoms are ill-defined or well-defined fever; pain, tenderness, and enlargement of the lymphatic glands, in the groin, armpit, or neck; weakness, a tongue which is coated with a creamy white fur in the centre, and is angry and red at the tip and edges; the eyes may be slightly congested and the speech may be a little thick. This is the acute form, which may only last a week, the bubo resolving rapidly or quickly suppurating. In the more chronic form, which may last two or more months, the bubo or buboes are indolent, and they undergo a slow process of suppuration and sloughing, constituting a serious drain on the general health of the patient, producing anæmia and debility. These mild or benign forms of plague have been observed in nearly all plague epidemics; they are described by Sydenham in his observations on the plague of London 1665 and 1666; also by Fodéré in his account of the plague of Marseilles in 1720, and by Forbes in his description of the Pali plague. Again they are noticed in the records of the comparatively recent plagues of Benghazi on the North African coast, of Mesopotamia and of Persia. The most recent example of this form of plague, unmixed with other varieties, was the glandular sickness, as it was called in Astrakhan in 1877. In this city an outbreak which affected more than 200 persons occurred without a single death, and without being followed by the virulent form. Those affected suffered from fever more or less acute, with swellings and inflammation of the lymphatic glands, which in most cases ended in abscesses. Beyond the inconvenience and discomfort caused by the buboes, sometimes in the neck, sometimes in the armpit, and at other times in the groin, the general symptoms were not such as to prevent the patient from moving about. About the same time there prevailed at Resht in Asia Minor, and with which Astrakhan has more or less communication, the same type of glandular sickness along with a severe type of plague. In the next year—in 1878—the glandular sickness of Astrakhan appeared at Vetlianha, a village on the banks of the Volga, and some distance from Astrakhan; but in a short time it was succeeded by a most virulent type of plague, which assumed the pneumonic form, and was of an extremely infectious and fatal character. The mortality at the height of the epidemic was 100 per cent. Mild cases of plague were observed in Calcutta, Bombay, and Alexandria long before the fatal cases attracted attention, and apparently these mild cases have also occurred in Oporto, for a peculiar type of fever with swellings is reported to have been noticed in that city for some time. This mild form is only distinguised by a careful inquiry into the history of the case, and by a process of elimination. In Calcutta examination of the blood from the affected gland showed in some cases the characteristic bacillus, but in others none could be detected.

It is evident that this form of the disease requires special and further investigation. The elucidation of pestis ambulans is of the greatest importance from an epidemiological point of view. The fatal forms of plague cause alarm, and are likely to be met by stringent effective measures of control; but the milder forms are almost certain to be overlooked or considered to be unimportant, and in the meantime the disease gains a firmer hold on the locality, and may later develop into a more virulent type.

It is too frequently assumed that the milder forms are not communicable. This is an assumption which has gained ground of late owing to the supposed imprisonment of the bacilli within the infected glands, strengthened by the difficulty in connecting one mild case of plague with another. It is a pretty theory, but against this is the fact that mild cases continue to spread, and that no systematic inquiry has ever been made into their mode of spread.

The Bubonic Form of Plague.

The bubonic variety of plague, as its name implies, is always accompanied by buboes, which usually appear at the commencement of the illness in the groin, armpit, or neck, and occasionally in the supratrochlear or popliteal space. The most common site is the groin, and the next is the armpit; but more than one region may be affected, and often groups of neighbouring glands on the same course of lymphatics become infected. The bubo varies in size, and is, as a rule, extremely tender and exquisitely painful. In cases which prove fatal early the glands may remain hard and painful, but in the majority, owing to the matting together of glands by a serous and sanguinolent infiltration, and by a mass of extravasated blood, the bubo enlarges and forms a doughy and bulky swelling. At times, owing to pressure on veins, a considerable amount of œdema of the tissues in the neighbourhood of the bubo occurs. The size of the bubo is not of so much importance as its position. When situated in the axilla or in the cervical region it is particularly dangerous when the exudation is extensive, because the effusion is apt to become organised and converted into a hard mass, which may press on some vital part, or may form a large slough. If the patient lives for seven or eight days the bubo either begins to resolve, or shows signs of softening and goes on to suppuration or to suppuration and sloughing. Examination of the lymph and blood of the glands and buboes show large numbers of the plague bacilli. A gland or bubo may be punctured, and a small quantity of the contents drawn off by suction with a sterilised pipette, closed at one end to protect the operator against accidental infection.

There are certain symptoms common to all forms of plague of the severer type: these are the peculiar expression of the face, the halting speech, and the appearance of the tongue. The countenance generally portrays in the early stages anxiety and distress, later resignation and apathy; the eyes are red and congested, and the patient has the appearance of being under the influence of a hypnotic, and yet unable to sleep, the eyes remaining wide open. Unless delirious when the face is flushed and the physiognomy wild, the expression in advanced cases is apathetic or vacant, masking the approaching dissolution. The speech is peculiarly hesitating and broken, being more or less staccato in character, each syllable being pronounced by itself in a thick and husky tone like that of a drunken man, or only half the sentence may be spoken, the rest being forgotten. The tongue is early coated with a creamy white fur, except the tip and edges, which are clean and red; later it is dry, covered with a yellowish or whitish-brown fur, the tips and edges remaining red and irritable.

The characteristic physiognomy, speech, and tongue with the presence of a bubo are unmistakable signs of plague. The general symptoms of a typical case are shivering, high fever, nausea, vomiting, intense general or frontal headache, painful and tender bubo, staggering gait, suffused and congested eyes, anxious expression, coated tongue except on tip and edges, restlessness with uncontrollable desire to wander aimless to some distant locality, dyspnœa, increasing disturbance of the nervous and circulatory systems, manifesting itself in high and noisy delirium or coma, and in gradual or sudden failure of the heart's action. The pulse, which is quite soft and easily compressible at the onset, becomes intermittent and dicrotic and often difficult to count, and there is a tendency to collapse, the patient's extremities becoming cold and clammy. After the sixth or seventh day the patient's chances of recovery are much increased, and the temperature usually reaches the normal about the tenth day.

The Septic Variety of Plague.

The septic variety of plague is a virulent type in which the lymphatic glands show no special enlargement during life, and consequently the bubo is absent, but after death the glands are found to be generally affected, being somewhat enlarged and much congested. In this form of plague the bacilli early invade the blood in large numbers, and are easily detected. The chief characteristic is its rapidity. The patient is profoundly affected by the amount and strength of the poison received. Usually ushered in with high fever, there is at times no power in the patient for reaction, and the temperature does not reach 100° F. The countenance is pale, and the expression apathetic. Extreme nervous prostration, muscular weakness, delirium, picking of the bedclothes, stupor, and coma follow quickly on one another, and the patient dies on the first, second, or third day. In these cases there may be bleeding from the nose, kidneys, and bowels.

Post-mortem Appearances.

The characteristic appearance in a necropsy of plague is that of engorgement and hæmorrhage, nearly every organ of the body participating more or less; there is also parenchymatous degeneration and change in the heart, liver, spleen, and kidneys. The bubo consists of a number of congested glands embedded in a mass of extravasated blood, with extensive exudation into the adjoining areolar tissue, the larger blood vessels being often involved. The glands in the bubo are swollen, vary in size from a bean to a walnut, and when cut into are found to be much congested and of a dark-purplish colour. In the septicæmic and pneumonic form, in which the bubo is absent, nearly all the lymphatic glands are slightly enlarged, pink or dark-red in colour, and some may be engorged. In the pneumonic there is, in addition to the general engorgement of the lungs, several pneumonic patches. Plague bacilli are to be found in the different varieties in the lymphatic glands, and the serous or sanguinolent exudation around them, in the blood, spleen, lungs, liver, bile, urine, peritoneal fluid, and fluid of the brain. It is obvious that, with so general a distribution in the corpse, the danger of some of these bacilli escaping and finding a lodgment in a favourable medium for their multiplication is not inconsiderable, and that the greatest care is needed to prevent this.

Treatment.

Curative treatment has but a small share in lessening the general mortality of plague, which ranges between 60 and 90 per cent. The antitoxin treatment has hitherto practically failed. The hopes that were raised by the success following the employment of Yersin's serum in a few cases in China have not been borne out when applied on a larger scale in India, nor has any greater success attended the employment of Lustig's or Roux's serum. In the treatment of plague all that can be done is to secure the best conditions in order that the patient may make a good fight against the disease, and these consist of good nursing, early confinement to bed, the maintenance of the recumbent position to present syncope, careful feeding, and general treatment to keep up the patient's strength and prevent complications if possible. To control the febrile symptoms and check delirium, ice bags to the head and sponging of the body and the use of hypnotics and sedatives which are not depressants have been found to be beneficial. To sustain the action of the heart alcoholic stimulants, ammonia, strychnine, and digitalis have been freely employed. Complications may be treated on general principles as they arise. The pain and tenderness of buboes are much relieved by the application of the ice bag, which has also a good effect on the infiltration. Other applications, such as glycerine and belladonna and poultices have been practised. The bubo is opened when pus forms, but nothing is gained by too early incisions.

Precautions.

As soon as plague is suspected or diagnosed, the case should be notified to the local authorities, with whom rests the

responsibility for carrying out the necessary measures to prevent the spread of the disease; but medical men and nurses can materially assist the authorities in this respect, and prevent the disease from spreading in the family or infecting themselves. For this purpose, until the local authorities can take action, or if the circumstances of the patient do not permit of removal, the patient should be strictly isolated in the most secluded and best ventilated room in the house. An acid solution of perchloride of mercury, of the strength of 1 in 500, should be obtained at once. Sputum, urine, and excreta should be received in vessels containing perchloride of mercury of this strength, while a solution of half this strength may be used in vessels for soaking soiled clothes, disinfecting cups and spoons, etc., or washing the doctors' and nurses' hands after handling the patient.

Nothing from the patient should be discharged down the drain without being thoroughly mixed with an abundant quantity of this disinfectant, otherwise rats in the sewers may become infected and carry the disease elsewhere. In the event of death a sheet soaked in the strong perchloride solution should be wrapped around the body and carbolised sawdust should be put into the coffin. Nurses, doctor, and the inmates of the house should be inoculated with Haffkine's prophylactic. Under ordinary hygienic condition and with ordinary precautions there is no danger to a doctor or nurse attending a plague patient. I have not entered into the precautions which the local authority are likely to take, for these do not come within the scope of this paper.

MOSQUITOS IN RELATION TO MALARIA.

By IAN MACDONALD, M.D.,
Assistant Medical Officer, Rio Tinto Company, Spain.

The most recent advances in our knowledge of the parasite of malaria prove clearly that part of its life-circle can be passed in the body of certain mosquitos of the genus *Anopheles*. It becomes, then, of immense importance to investigate whether in fever-stricken localities the distribution of this mosquito is associated with the presence of fever.

Working under the direction of Dr. Thin I have begun an inquiry with reference to the presence or absence of mosquitos in certain localities. The district, as a whole, over which my observations extend embraces an area of 60 miles, reaching from the southern part of the Spanish Sierra to the Atlantic. I have examined, in all, twelve districts; of these nine have endemic malaria, the remaining three may be considered free from fever. Isolated cases do occur in two of them, but I have always been able to trace the infection to a night or more passed in the fever zone beyond them. The remaining one on the sea coast is quite free from malaria.

The subjoined table shows the mosquitos I have identified up to the present, and their distribution in the different localities:

Three Healthy Districts.

Culex elegans Culex phytophagus Culex pipiens Culex spathipalpis	From larvæ and found as adults.
Culex penicillaris ...	Adult specimen only. Sea coast (pines).

Nine Malarial Localities.

The first four already mentioned; with also
Anopheles claviger in all nine, anopheles pictus in three; and
Anopheles bifurcatus in one (one adult).

Most of the malarial villages are situated on the face of a hill, with small ravines or partially dried up streams at its foot. In small pools in these ravines I have always found anopheles larvæ without difficulty, and in one district notoriously malarial the larvæ of anopheles pictus were present in great abundance. It will be seen that here, as in Italy, up to the present anopheles claviger is the predominating anopheles.

I could cite circumstances where apparently the use of curtains has warded off fever, but I shall only mention two. During four years' residence in a fever-stricken locality, the only Englishman who has avoided fever has invariably slept under curtains. Further, he has always made it a custom, in order to avoid being bitten, when sitting outside his house in the evening to cover his feet with towels, protecting his hands with gloves, and his neck with a muffler. His servant has suffered severely from fever. The only mosquito present in his house is *Anopheles claviger*. They are found in numbers in the rooms of the house and adjoining shed.

The healthiest area, as I mentioned, is on the coast, where the company has its sanatorium on a sandy shore. Malaria does not occur there. Mosquitos exist, but are hardly noticeable. I have found *Culex penicillaris* biting sometimes at night, and have obtained here *Culex spathipalpis* from larvæ. Six miles further along the coast I visited a fishing colony of 100 people, all of whom were suffering from fever at the time of my visit, for those who were not actually ill said they awaited their attack next day. Three deaths had occurred amongst them in a week from pernicious attacks. The only difference between those two coast areas consists in the latter having behind it a small lagoon, some stagnant pools, and disused surface wells. In all those places I found anopheles larvæ. The people said they were bitten furiously at night by a large mosquito. Their "patron" alone slept under curtains and had not had fever. Adult specimens sent me from their huts were *A. claviger* and one *A. bifurcatus*.

Can it be said that these facts are only coincidences? That might be possible, but looked at in connection with recent researches on the life cycle of the parasite in *Anopheles*, it will be probably considered that they have a direct bearing on the all-important problem of malarial infection.

In conclusion I thank Mr. C. E. Rowcroft, M.P.S., for much help in the search for, and collection of, the different larvæ.

SIXTY-SEVENTH ANNUAL MEETING
OF THE
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Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899.

PROCEEDINGS OF SECTIONS.

SECTION OF PSYCHOLOGY.

David Nicolson, C.B., M.D., President.

CAN THE REPROACHFUL DIFFERENCES OF MEDICAL OPINION IN LUNACY CASES BE OBVIATED?

By David Nicolson, C.B., M.D.,
Lord Chancellor's Visitor in Lunacy.

One of the first cases that I had to deal with in my present appointment was that of a lady, a native of the Principality, who had been left some money. A question arose as to her capacity for managing her affairs. Two medical men swore in their affidavits to the effect that the lady was perfectly sane and capable of managing herself and her affairs; while two other medical men swore to the effect that she was an absolute imbecile, and had been so from birth, and that she was totally unfit to look after her affairs. The Lord Justice before whom the case was being argued, finding himself unable to arrive at a decision upon these affidavits, called for a special report from the Chancery Visitors' Department; and, as the case happened to be in my district at the time, I had to go and inquire into the state of her mind. This was a duty for which I was not specially well qualified, as the lady could not talk a word of English, and I could not speak a word of Welsh. However, with the aid of an interpreter, I was able to arrive at the only possible conclusion in the case, and to find that all the doctors were wrong, and that truth lay, as it so often does, somewhere between the two extremes.

This incident will form a fitting text for the few remarks I propose to make on the question: "Can the reproachful differences of medical opinion in lunacy cases be obviated?"—a question which deeply concerns us and which is of considerable public interest.

In ordinary plain-sailing cases of insanity the adult lay mind, by reason of its common sense and experience, has no

difficulty in appraising the insane conduct of a lunatic at its value. No one for instance more speedily detects deviations from the normal mental characteristics and behaviour of an individual than does a mother with the various members of her family, or a companion with his friend. And, by the way, it is this faculty of observation which it is our duty to cultivate in asylum attendants and nurses, whose services in this direction often become most valuable, as their experience of the cases with which they are in daily association ripens.

But this adult lay mind very speedily finds itself at fault when it undertakes the estimate of conduct due to morbid or diseased mental states where differential diagnosis becomes necessary. I refer to mental states where delirium, hysteria, aphasia, stupor, toxæmia, alcoholic paralysis, or any one of the large group of conditions which the psychological neurologist is pleased to recognise as the "allied neuroses," may be mistaken for insanity, and where the diagnosis requires some amount of technical medical training and skill, in order that advantage may be taken not only of the indications afforded by an examination of the pulse, tongue, and temperature, but also of such physical tests and aids to diagnosis as we have in the knee-jerks and the reflexes, and in the condition of the pupils and of the peripheral sensibility.

The same adult lay mind is also very much at fault in cases where insanity is feigned, for in these all the resources of medical experience and observation are often taxed to their utmost.

In this relation I may quote the case of a man under sentence of death for murder, whom a colleague and I had to examine. He appeared to be demented and to some extent paralytic, and he had been certified as insane by two medical men. We had grave reasons to doubt the genuineness of the symptoms and indications. Although he evidently could hear what we said, he declined to commit himself to speech. His knee-jerks were quite normal, and we were unable to find any deviation from the normal in any direction by the ordinary physical tests which we applied. The importance of being able to apply and make use of physical tests was here demonstrated; for, having satisfied ourselves that the partially paralytic condition of the lower extremities was not genuine but assumed, we were able to reason upwards, as it were, and to conclude, in the first instance that our suspicions as to the genuineness of the dumbness were well founded, especially as the prisoner made no effort to speak or to move his lips, such as a paralytic would have made. And, in the second instance, we were further able to conclude that the mind which originated and carried out a scheme (such as it was) of imposture and deception was not only not the mind of a dementedly insane person, but was the mind of a person conscious of the necessity of making some kind of effort for the preservation of his life in the predicament in which he had placed himself.

After a very full inquiry and investigation, in which the history of the case was analysed, and the prison officials who had had him under care were examined, we reported that the appearances were, to our mind, due to imposture, and that we did not regard him as being insane. Under the circumstances, it was very satisfactory to my colleague and myself that two days before his execution the convict confessed his imposture, and acknowledged the justice of his sentence.[1] Very little reflection is necessary to show that the adult lay mind, however experienced and even judicial it may be, is not fully equipped for diagnostic purposes, and that the decision as to the sanity or insanity of individuals in lunacy cases must rest with medical men; and it is obvious that violent conflict of opinion among them cannot redound to the credit of the profession.

Lunacy cases are divisible in the first instance into two large groups—ordinary lunacy cases and special lunacy cases. Special lunacy cases are divisible into two classes—civil cases and criminal cases. Criminal lunacy cases are divisible into two kinds—the non-capital and the capital. The following diagram shows this grouping:

I. Ordinary lunacy cases

II. Special lunacy cases { 1. Civil cases; 2. Criminal cases { a. Non-capital cases. b. Capital cases.

So that in the end we arrive at four sorts of lunacy cases—namely: (1) Ordinary cases; (2) civil cases; (3) non-capital criminal cases; (4) capital criminal cases.

These groups are characterised by varying circumstances in which the question of insanity or sanity arises; by varying considerations which ought to be weighed by the medical man in arriving at a decision as to the individual's sanity or insanity; and by varying consequences in the event of the individual's sanity or insanity being certified and proved.

Thus in ordinary cases the primary considerations are, first, as to how far the individual is a source of danger to himself or others if he is permitted to remain at large; and, secondly, how soon is it necessary or desirable in the interests of the community and of the individual whose mental condition is in question to remove him from his domestic surroundings and place him under asylum care and supervision.

In the civil group of cases, often a contentious group, the considerations become more complex and intricate in consequence of the introduction of family and domestic interests which are frequently conflicting in themselves and by no means always free from unworthy and self-seeking motives. In these cases there is a considerable tendency to hard swearing by the relatives on both sides, and an insincere show of intense affection on all hands for the monied and aged relative, whose somewhat failing memory is sworn to by one doctor as senile dementia in its most hopeless and incapacitating form, but is left out of account in the affidavit of the other doctor, who regards the old gentleman as perfectly sane and the most delightful and interesting of companions.

In this group the considerations deal more especially with the mental condition of the individual in his pecuniary, domestic, and commercial relationships; with his capability of managing his affairs, his testamentary capacity, and his personal attitude in regard to such questions as those bearing on matrimony and divorce, and the power of engaging in and carrying out contracts, trusts, and the like.

The criminal cases are characterised by the fact that the mental condition of the individual, his sanity or otherwise, has to be estimated primarily in its relation to an act of criminal import committed by him. This criminal act introduces the idea of responsibility and punishability, and the consequences of a finding of sanity or insanity are therefore materially different. In non-capital cases there is the alternative of prison or asylum, while in capital cases (that is, murder cases) there is the additional alternative of the death penalty.

The considerations which have to be weighed in criminal cases by the medical man are complicated by the possible presence of simulated insanity. In cases where the plea of insanity is raised we have to find out whether the man was sane or insane at the time he committed the act, and we have to satisfy ourselves whether any abnormal, eccentric, or insane-like behaviour is the genuine and natural outcome of an insane condition of mind or whether it is due to the feigning of a sane person seeking to avoid punishment for a criminal offence.

From what I have said as to the considerations that have to be dealt with in these various groups of lunacy cases, it will not be wondered at—indeed, it is only to be expected—that medical men should ofttimes differ somewhat in their estimate of the mental condition in individual cases; but the points that I am anxious to urge seriously upon you to-day are, first, that those differences are, in too many cases, far greater than they legitimately ought to be; and, secondly, that this being so, it is our duty to endeavour to diminish such conflicts of opinion, and thereby lessen the reproach that not unnaturally attaches to the medical profession generally as well as to medical psychologists in this matter in the public mind.

This attitude of reproach even goes so far as to imply that our opinion is to be bought for the golden guinea (or its bimetallic counterpart). But, although appearances may sometimes rather point that way, I am bound to say that I have no doubt whatever in my own mind that in the vast majority of instances the reproachful differences, when they exist, are referable not to certificates or affidavits given merely for filthy lucre, but to inexperience, or to careless or insufficient examination of the alleged lunatic, or to misplaced sentiment or prejudiced advocacy, on the part of some of the medical referees.

Medical men, taken collectively, are supposed to know everything that is possible to be known about what pertains to the physical and mental health and well-being of individual members of the community. But the distribution of this knowledge is very uneven. Some medical men are wise, some are not; some possess the gift of healing, others do not shine in that way; some are bookishly disposed, some can scribble, others are practical; some are thoughtful, others are casual, some strong, others timorous. The experience that enables a surgeon to deftly operate for the radical cure of hernia is a different kind of experience from that which enables a physician to diagnose a complicated case of typhoid, or prognosticate successfully in an obscure case of brain disease.

But all medical men who are called upon to sign or refrain from signing a certificate of sanity or insanity, ought to be in possession of certain acquirements which fit them for the (let us say) reasonably efficient carrying out of a duty which is at once highly responsible and fraught with serious, if not fatal consequences.

Now, apart from his own common sense and personal qualifications as a man of the world, what are the essential requirements for a medical man who in lunacy cases seeks to inspire confidence in himself either as a family practitioner or as a skilled and expert adviser? To these, in a brief and somewhat categorical form, I propose now to direct your attention.

1. A study of insanity and mental diseases in their various forms and phases, as expounded in the textbooks. This forms a basis or groundwork upon which is built up his after-knowledge of the subject.

2. Practical asylum experience of the insane, and of the moral and therapeutical methods by which lunatics are treated and cared for, as well as of the means used for exercising proper and protective supervision and control.

I hold that without a study of insanity and an asylum experience of the insane the education of a medical man who intends entering upon the general practice of his profession cannot be regarded as complete.

The resulting ignorance causes insanity and morbid nerve conditions to be the very *bête noire* of the practitioner, who has a grave responsibility resting upon him in this matter. It is he who has the best opportunity of taking the initiative in securing proper care and treatment in the earliest and least pronounced stages of the disease; and if from ignorance or carelessness he fails to realise the nature and gravity of the case, he not only does his patient an incalculable injustice and discredits himself and his profession, but he augments the risks of violent and dangerous acts which may be attendant upon delusional mania or melancholia. By his indecision and procrastination those risks are too often allowed to develop into actualities, and the resulting homicides, attempted suicides, and violent assaults go to swell the list of preventible cases of criminal lunacy, and cause an infinity of trouble and anxiety. It is marvellous how supine and tolerant parents and the public generally are in this matter. Look, for instance, at the suicides committed by both young and old, and referred by a puzzled coroner's jury to a limbo of "temporary insanity!" How many of them could have been averted by a definite and firm policy on the part of the medical man concerned—the family guide, philosopher, and friend? Yet, with the public it is a case of "earth to earth," and all over. God help them!

3. A sympathetic strain of interest in insane persons should be cultivated. We have to find how far and in what directions we have ever gone in subjectively realising what insanity is, by mental states occurring in ourselves, and which, if unduly, indefinitely, or uninterruptedly protracted, would be the means of unfitting us, just as insanity unfits people, for following out the occupations or carrying on the duties of everyday life.

We may be "off colour," or have a "fit of the blues." There are the extremes of exaltation and depression, and states of undue restlessness, irritability, apprehensiveness, and restlessness. There are the mental weariness and clodheadedness which bespeak brain-fag; there are the mental inability and confusion after injuries to the head, or after the weakening processes referable to anæmia, influenza, and other severe and prolonged illnesses. No doubt many of these mental states are due to defective or deteriorated blood supply to the brain, or a the secondary effects of lesions or pathological changes in physical organs other than the brain. But there is teaching for us in them all. Our knowledge of them tells us how often insanity is but an extension into more or less persistent morbidity of normal processes of mentalisation in sane people. It also enables us more successfully to arrive at and to analyse the workings of the insane mind, while the strain of sympathy thus engendered between lunatic and doctor not infrequently tends to make the former more readily unbosom his feelings and his troubles to the latter.

4. There should be an honest intention of forming an independent opinion. There should be no prejudging the case. In contentious cases there should be no taking part as a *matter of course* with relatives on one side or the other; that is, no suspicion should be generated that our opinion as to the sanity or insanity of the person is trimmed to suit the wishes of the side that has consulted us.

5. There should be a freedom from such fads and one-sided notions as are likely either to bias us or fetter us in forming our opinion. For instance, if we hold a strong conviction that, whatever the law may say, capital punishment is wrong, or that all persons who commit murder are *ipso facto* insane, or that a drunk person is not be be held responsible, we in some measure disqualify ourselves as impartial referees in cases involving a consideration of these points.

6. We should avoid speculations of mere theorists. In our search for insanity in individuals in criminal cases we must be careful to avoid being misled by speculative and doubtful theories as to the value of head measurements and local variations in physical conformation, about which so much has been written. No doubt, if we have found a man to be insane or imbecile by reason of his behaviour and conversation any physical peculiarities will become interesting to us as concomitants and in a collateral sense; but we must beware of putting the cart before the horse and saying that physical peculiarities are in themselves evidences of insanity and irresponsibility.

7. A capacity for analysing and properly estimating the value of collateral evidence and external indications is needed. Such questions as the family history and previous attacks have to be fully inquired into and all available sources of information have to be examined. The same may be said with regard to possible predisposing and exciting causes, as injury to the head, sunstroke, syphilis, drink, severe illness, business or domestic trouble, etc. The circumstances under which the question of insanity has arisen have also to be borne in mind and carefully considered.

8. The one essential and all-important feature of an inquiry is the personal examination of the alleged lunatic in ordinary and civil cases, and of the accused person in criminal cases. Do not form a "certifying" opinion as to a person's insanity or otherwise or as to his responsibility or otherwise without first seeing him, conversing with him, and examining him. This almost, but apparently not entirely, goes without saying.

Again, do not let yourself be introduced into the individual's room as "Mr. Smith," or "Mr. Johnson," or by any name other than your own; for, if you get at a suspiciously-minded person by "falsehood, fraud, and wilful imposition," and not as a gentleman, you have no right to expect to be treated as a gentleman. Besides, what opinion can be hold of you when he, in the course of your inquiry, discovers your falsity?

The examination must be careful, thorough, and not hurried. It may be necessary to see the individual on more than one occasion before you can really satisfy yourself; because one of the points that make a diagnosis of insanity difficult is the fact that the indications or symptoms are not always continuous. Again the individual may be, as the insane so often are, artful and quite capable of concealing his delusions. I had to visit an insane person in an asylum the other day with a view to making a special report. I knew him to be a dangerous lunatic and, for fully an hour I conversed with him, hearing all about his early life-history. I purposely abstained from starting him off on the subjects concerned in his delusional monomania, and if I had so wished, I could have honestly certified that I had conversed with him for over an hour on a great variety of topics and that I had found no indication of insanity in him. When I did introduce his pet difficulty I was speedily made acquainted with his insane and murderous proclivities, which he justified with much

show of reason and with a calmly earnest vehemence and occasional excitement.

Once when I was on the Northern Circuit I had to visit and report upon a lady whom a physician of repute in insanity had seen at his own chambers and certified to be quite sane. When I arrived at the address given the cabman said at once, "There b'aint no one lives here, sir," and the boarded-up windows, detached bell communication, wilderness garden, and general appearance of desolation had already suggested to me that I had come to the wrong house. I knocked and knocked in vain at the door, but I ascertained from the neighbours that "she" lived there alone and without any servant, and would allow no one to visit her. After some negotiations I saw her at an office in the village, and satisfied myself that she was insane and suffering from delusions of persecution and suspicion. She fenced for a long time in her answers, and showed herself to be quite capable of concealing her delusions for a time. She told me she knew I had come from the "enemy," and she evidently felt that she had to be on her guard in speaking to me. However, in the end I prevailed, and she confessed, among many other curious points, that she was tortured by "electric batteries" which were worked upon her. She told me that a fur cape which she sometimes wore over her shoulders protected her from the painful currents so far as it extended; and she ultimately took me into her confidence and asked me whether I did not think that a complete suit of undergarments made of spun silk or chamois leather would be the best means of protecting other parts of her body from the shocks from which she so constantly suffered.

This illustrates the necessity for an extended and thorough examination before a certificate of sanity is given; and I am quite sure that my friend the physician referred to, if he had put himself in possession of all the facts of the case, would have had no difficulty in certifying to her insanity.

No personal examination is complete without the individual being asked for his explanation of his behaviour or for his reason or motive for committing the criminal act. You may not get the real answer at first, but the kind of reply given will help you in your estimate of his mental characteristics, that is, whether he is straightforward and truthful, or unwilling and evasive, or absolutely false and misleading in his answers.

In a capital case where a youthful convict was executed for the murder of his sweetheart who had played him false, a medical man had given evidence at the trial that he had examined the prisoner and found him suffering from homicidal mania. Now, gentlemen, the term "homicidal mania" may be a convenient one, and one that *looks* learned and conclusive, but it is not a happy one, and regarded by itself (apart from any other indication of insanity in association with the idea or condition which it is supposed to represent) it is a phrase which in my opinion is incorrect from a scientific and practical point of view, and one which I have never so far as I recollect found myself justified in making use of. However, in the case of the youth to whom I am referring there was not found during a prolonged examination by my colleague and myself a tittle of evidence of mania or insanity of any sort, and I have good reason for believing that the doctor whose evidence I am criticising never asked the prisoner why he had murdered the girl.

Many medical men, including some asylum superintendents, who are in every way admirable in their ordinary lunacy work, find themselves not quite at home in the investigation of criminal cases, because the methods of critical examination are often dissimilar in the two classes of cases.

Again, people approach the subject of insanity in a variety of ways in conversing with the individual himself. I cannot commend that of a legal gentleman who came to see an inmate of Broadmoor whom he had never seen before, but in whose condition he took an interest. After the usual salutation on introduction he at once said, "Well, how's your delusion now?" a question which naturally did not lead to a protracted friendly intercourse.

The personal examination of the alleged lunatic is such a many-sided subject that I cannot enter upon it here beyond saying that it is very largely the rock upon which we, as a profession, split in individual cases, and, where it is conducted carelessly, onesidedly or too briefly, it becomes the foundation in many cases of the reproachful differences which I assert ought, if we are true to ourselves, to be greatly reduced both in numbers and in kind.

9. The part played by sentiment in lunacy cases may now be referred to.

In so far as it has reference to our responsibilities, and to our sense of duty in difficult and often painful circumstances, sentiment is a veritable two-edged sword. In the simplest cases there are often delicate family and personal considerations which may cause us from a mistaken kindness to delay too long the needful certificate; a policy which frequently brings greater blame and unfriendliness upon the doctor than if he had acted firmly and manfully upon the obligation which he clearly ought to have carried out in the earlier stage.

In criminal cases, with their sterner environment, our tenderer susceptibilities are often severely tried in the face of what is clearly our duty to the individual in question and to the community.

Sentiment which in ordinary lunacy cases suggests a procrastination of certification often fatal, is found in criminal cases to suggest certification upon grounds that would never carry weight under ordinary circumstances. Sentiment *per se* is generally a bad guide. Duty comes first and we must be stoical, deriving a pleasing satisfaction whenever duty and sentiment are found to run hand in hand.

As an illustration of sentiment causing an individual to swerve from the dictates of duty, I may mention the case of a prison surgeon who was cross-questioned by my colleague and myself as to his grounds for certifying as insane a prisoner who was being tried for murder, and who was manifestly feigning to be mad. After some minor statements and excuses, he concluded by saying: "Well, as a matter of fact, I hate these hanging jobs," it being part of his duty to be present at the execution.

Gentlemen, I have said that I believe the conflicting differences and divergences of opinion among medical men and medical psychologists in lunacy cases ought not to occur if we know our work, and if we carry out that work in an honourable, careful, independent, and fearless manner.

I have mapped out certain lines upon which uniformity of opinion is made more possible. The closer those lines are adhered to the greater will be the uniformity. The more they are departed from the greater will be the divergence and the reproach.

Note.

[1] It may interest those who are so ready to proclaim the callous inhumanity and the utter moral insensibility of the murderer to learn that this man's stolid determination completely broke down when he was visited a couple of days before his execution by his favourite niece, a young girl of whom he was very fond. His affection overcame him, his tongue was loosed, and he said that he had quite intended to "see the job out," but the sight of his niece was more than he could stand.

A DISCUSSION ON
LUNACY LEGISLATION AS IT AFFECTS THE TEMPORARY CARE OF INCIPIENT CASES.

I.—G. H. Savage, M.D., F.R.C.P.

I feel special pleasure in opening this discussion, for I believe its result may have important bearings on future legislation.

The subject is really a practical one, having at least two sides, and it should be considered calmly, and without personal feeling or prejudice. It is known to most of you that a Joint Committee of the British Medical Association and of the Medico-Psychological Association, after meeting several times and discussing the Lunacy Bill (which I regret to have to announce has once more been set aside) obtained an interview with the Lord Chancellor to lay before him the views of the Joint Committee on the clause which is the text for our discussion to-day. They were met in a most friendly spirit, and were rather surprised to find the Lord Chancellor much more favourable to their proposals than they had expected. He probably asked many of the questions which will be asked by members here present to-day, and he seemed satisfied that the proposals were worthy of consideration at least.

The clause is 24 of the Lunacy Bill, 1899, as amended:

TEMPORARY CARE OF INCIPIENT LUNATICS.

24.—(1) If a medical practitioner certifies that a person is suffering from mental disease, but that the disease is not confirmed, and that it is expedient, with a view to his recovery, that he be placed under the care of a person whose name and address are stated in the certificate for a period therein stated, not exceeding six months, then during that period the provisions of Section three hundred and fifteen of the principal Act shall not apply.[1]

2. The certificate must not be signed by the person under whose care the patient is placed.

3. Where a medical practitioner signs any such certificate he shall, within one clear day after signing it, send a copy of it to the Commissioners, and the Commissioners may visit the patient to whom the certificate refers.

4. The person who receives a patient under any such certificate shall, within one clear day after receiving the patient, give notice to the Commissioners of his reception, and if the patient dies, or the residence of the person receiving him is changed within the period mentioned in the certificate, shall within two clear days give notice of the death or change of residence to the Commissioners.

5. He shall also, within two clear days after the expiration of the period mentioned in the certificate, or if he ceases to have the care of the patient at an earlier date, then within two clear days after that earlier date, send a report to the Commissioners stating whether the patient recovered, and, if not, in what manner he was dealt with when the person making the report ceased to have the care of him under the certificate.

6. If default is made in sending any notice or report required by this section, the person in default shall be guilty of a misdemeanour, and be liable to a penalty not exceeding £50.

7. No person shall under this section receive more than one patient at the same time.

8. After the expiration of the period mentioned in the certificate, another certificate under this section in respect of the same patient shall not be given within two years from the date of the expiration.

The object is to enable a medical man to place for a definite time in a definite place, under a definite person, a patient who is suffering from mental disease which is not of a confirmed character. The details of the proceeding are that a medical practitioner must certify that the insanity is, in his opinion, only temporary; he must send a notice to the Commissioners, and the latter have the option of visiting the patient. The person who receives the patient must likewise inform the Commissioners, and he must keep them informed of any change in the custody of the patient. The Commissioners are thus kept in touch with the custodians of the patient.

If a patient is kept for the full term of six months he may not be received again under similar terms for two years. The avowed object of this clause is the early treatment of insanity, and if this is not really the object the clause cannot be supported. We all recognise that not in insanity only, but in all bodily diseases, early treatment is advisable. Nothing more should be required for mental diseases than for bodily ones, but directly we have to consider the interference with the liberty of the subject in treating disease serious legal complications arise.

The law insists upon very strict supervision, and on regular licensing and visitation of places where persons are detained and located against, or at least apart from, their wills.

It is not unreasonable that medical men who are obliged by the law to conform to such strict terms before they can treat the insane should object to any serious relaxation of the law in favour of laymen and of medical men who are to be allowed to treat cases of incipient insanity apart from asylums or certification. I shall hope to point out that in my opinion the suggested legislation will tend to reduce rather than increase what may be called illicit lunacy practice.

It being admitted that early treatment is of importance in incipient insanity, I will ask, Is the clause likely to assist this? I reply, Yes, for first of all, while there are very many medical men, including distinguished neurologists, who decline to certify for asylums, I believe nearly all these would be perfectly willing to "notify" such cases for private care. Here then, first of all, recognition of mental disease would be secured in good time for early treatment.

[1] The following is the text of the Section: 315.—*Lunatics not to be detained except in accordance with Act.*—(1) Every person who, except under the provisions of this Act, receives or detains a lunatic or alleged lunatic in an institution for lunatics, or for payment takes charge of, receives to board or lodge, or detains a lunatic or alleged lunatic in an unlicensed house, shall be guilty of a misdemeanour, and in the latter case shall also be liable to a penalty not exceeding fifty pounds. (2) Except under the provisions of this Act, it shall not be lawful for any person to receive or detain two or more lunatics in any house unless the house is an institution for lunatics or workhouse. (3) Any person who receives or detains two or more lunatics in any house, except as aforesaid, shall be guilty of misdemeanour.

Next, we may preach as we like and advise as we will, yet among the wealthy classes in particular, and among those with numerous relations—brothers and sisters particularly—we cannot get consent to early removal to asylum care. The friends object to the word "asylum," and they have got to have almost as strong a prejudice against a relation becoming a "certified lunatic." It is no good kicking against the pricks. If the British public does not wish to send its relations to asylums or to have them in the earlier stages certified as single cases, we must do our best to get the patient under really efficient care in some other way. For what happens now. We tell the relations that the patient is suffering from early but marked mental disease and ought at once to be under control. Very well, they say, we do not mind what the cost is, but for the present we will have as many nurses as you like and we will take a house in the country and try what we can do there. In some cases this kind of treatment is quite satisfactory and results in recovery. Yet one cannot blind oneself to the fact that it is open to abuse.

Nurses or attendants without medical supervision are liable to act on a *lex talionis*, and return violence with violence. This line of early treatment is not to be wholly commended; but, as I said, the friends will do many things before consenting to certification. They will hand over patients to unscrupulous doctors or laymen, who cover themselves for the risk of prosecution by the Commissioner by enormous fees, and they will restrain or hide away in attics the unfortunate patients. Unsuitable patients are sent travelling, and thus add to the tale of suicides.

All such subterfuges I constantly come across, and there is no doubt that at the present moment much clandestine custody—I cannot say treatment—of the insane is going on.

As a consultant I suffer from hundreds upon hundreds of applications for patients which are sent to me by suitable and unsuitable persons alike. What is to be done?

I believe that it will be comparatively easy to get the medical man and the public to understand that notification is only a safeguard, and is not a public or judicial act. No magisterial interference is involved, and the bugbear of the Lunacy Act of 1890 is reduced.

The Lord Chancellor appreciated this point, and said that our suggestions were going counter to his favourite part of the Act; we admitted this, and he shook his head, but in a kindly way.

The general practitioner would probably be willing to notify cases of early insanity; and the places to which the incipient cases were sent would be officially known, and I believe that this notification would deal a great blow to unsuitable places. A medical man would hesitate to send a patient to a place the proprietors of which objected to being known to the Commissioners.

The optional visitation again would almost certainly be very rarely used, but it is only right that the treatment of the insane should be in some way safeguarded, and I think the notification to the Commissioners would suffice. I do not agree with the suggestions that only one such patient should be received at a time, or that a patient should not be renotified within two years. I know some cases subject to very short and sharp attacks which recur more frequently than intervals of two years, who would be excluded from the benefits of this clause. And now for another point. I believe more patients would be sent to asylums, and also that they would be sent earlier than at present. Once let the patients be away from their friends, under careful treatment, time is given for consideration, and people who were panic-stricken and unreasonable, become calm and judicious.

Again, if six months' treatment has not resulted in great gain, the friends will be prepared for the next step—namely, certification for asylum care and treatment. And here I would enter a mild protest against a piece of humbug which I constantly hear from hospitals and asylums, both public and private—the stereotyped phrase, "You see, now you have brought the patient to us, it is too late." I hear this said of patients who, such as general paralytics or neurotic degenerates, were hopeless from the first. Early treatment may, however, be just as well carried out in some homes as in any asylum, and we must not be obstinate in opposing our will to that of the public.

I trust, in discussing the subject, the broad points at issue

will be considered, for I am fully aware of many technical difficulties which must arise, and for which, though I may be prepared to give my own suggestions as to many of these difficulties, yet in the end, when the Bill passes before the Committee of the House, much may be done by amendment.

Now, Gentlemen, one parting word. This is no new scheme. It works well in Scotland, and has been fully discussed by the representatives of the British Medical Association and the Medico-Psychological Association, who are, however, ready to do everything to make the Bill more useful in fulfilling the object of early treatment of incipient insanity.

II.—LIONEL A. WEATHERLY, M.D.

DR. WEATHERLY said: We are, I am sure, much indebted to Dr. Savage for so clearly bringing this subject before us, and we regret with him that for the present the new proposed legislation is put on the shelf. Some twenty years ago I advocated this form of treatment, and our good friend, the late Lord Shaftesbury, not only allowed me to dedicate my little book on this subject to him, but also kindly examined and corrected the proofs of that book. I maintained then, as I maintain now, that if supervision is necessary in institutions in which patients are treated in large numbers, supervision is all the more necessary where patients are looked after in single care. We, who are engaged in treatment of private cases in our supervised houses, have been rightly angered at the great increase recently of the clandestine so-called "treatment" of insanity and we welcome any proper legislation by which some supervision at least will be exercised over these single cases. I fear some of our leading consultants are not altogether blameless for many recent cases of the defiance of our lunacy laws, relating to private care. But although we shall all be glad to see these new clauses in operation, I for one think that we ought not to be content with them. The clause relating to the inability of placing a patient who has had his six months' treatment and recovered, and then relapsed again, under such care within a period of two years, appear to me to be absurd or to have nothing in its favour. Then again, from a pecuniary point of view, I think that it would be wise to allow, under proper and satisfactory circumstances, more than one patient to be taken. If this is not done I fear the benefit to be derived from these clauses will be curtailed by reason of the expense of proper single care. I trust, if this Act has a chance of yet being passed, that before becoming law our Association will try its utmost to get these clauses considerably extended, with the idea of giving, under proper supervision, this form of treatment of incipient cases of insanity a fair trial.

III.—T. SEYMOUR TUKE, M.D.

DR. TUKE said that on the whole he agreed with the proposal, while recognising to the full the difficulties with which the subject of single care bristled. He pointed out the disparity in the number of patients to be dealt with in Scotland and England, and the enormous amount of work that the legislation proposed, if properly or usefully carried out, would involve. For instance, Dr. Tuke would like to see every house, and every person who was proposing to take patients, registered and placed under official cognisance, and if it could be enacted that no one should be placed on that register who could not show that he or she had some knowledge and experience of insanity and its treatment it would also be a great and important advance. There was no mention of either of these in the proposed Section. The present system of allowing, or rather winking at, anyone that chose to take charge of patients of unsound mind was becoming a scandal, and it was an undoubted fact that the latitude allowed, and the apathy and want of interest exhibited by the public and the medical profession too, was greatly to blame for this. The question of notification *versus* certification seemed a purely technical one. If all medical men (nerve specialists, neurologists, psychologists, and general practitioners alike) liked the word better, and would use the power thoroughly and freely when occasion arose and thus bring early cases under official recognition, a great deal would be gained. Psychologists themselves were not wholly guiltless of having made certification a bugbear. There were certainly cases in which the clause of the section which would prevent a relapsed case from returning to the same house seemed unnecessary. Dr. Tuke, while deprecating the constant use of the phrase, still was of opinion that there were sad cases of patients being sent to asylums "too late."

IV.—A. G. S. MAHOMED, M.R.C.S., L.S.A.

MR. MAHOMED thought the best results were obtained by individual treatment of solitary cases, though he appreciated the financial difficulties involved. He suggested that latitude might be given to the Commissioners to allow the care of more than one in homes which were inspected and registered.

V.—H. G. MANNING, M.D.

DR. MANNING said that it should, in his opinion, be expressed definitely by this Section that only medical men shall be entrusted with the care of persons of unsound mind, and that there should be a system of registration and a compulsory visitation by authorised persons, such as the local Board of Visitors. If not, they were in danger of falling back to that terrible system of secret treatment of mental disease which it had been the whole scope of lunacy legislation to prevent.

VI.—DAVID BOWER, M.D.

DR. BOWER objected to the clause from the point of view of a medical officer of an asylum taking private patients, as it would still further reduce the admission of cases in their early and curable stages. He, however, admitted the fact of concealed custody, giving a recent glaring instance, and would welcome some carefully regulated system of single care without a magistrate's order, which would lead to the abolition of concealed custody.

VII.—P. W. MACDONALD, M.D.

DR. MACDONALD said that there was a danger of overlooking the vital importance of selecting well-qualified individuals for certifying when the case should be placed under care, as well as in the selection of the home. Further, who was to say that the case was incipient? This, at all times difficult, could hardly be expected of those not specially qualified for such work. The general practitioner should be able to treat early mental disease with the same freedom and success as he did any of the other system diseases; and until he could do so many of these early cases would suffer.

A DISCUSSION ON THE RELATIONSHIP BETWEEN SYPHILIS AND GENERAL PARALYSIS OF THE INSANE.

I.—ALFRED W. CAMPBELL, M.D.,
Rainhill, Lancashire.

IN introducing the question of the relationship between syphilis and general paralysis for discussion, I feel all too conscious of the fact that I am undertaking a task which should have been entrusted to an abler and more experienced exponent, and that I am usurping a position which I am unworthy to occupy; but I would ask you to pardon my presumption in coming before you on the ground that the subject is one of burning importance.

I am under the impression that the attention of our legislators is being directed towards the necessity of the adoption of measures for the repression of contagious disorders, and I believe that the discussion now proceeding in the Surgical Section of this Association On the Question of the Prevention and Treatment of Syphilis in the Army and Navy is really aimed at securing the sanction of such measures. I think, therefore, that there could be no more opportune moment for ascertaining your views concerning the etiological connection between syphilis and general paralysis; and if your verdict be that that relationship is a close one, by being able to definitely state that general paralysis, undoubtedly one of the most terrible scourges of modern times in being dependable upon syphilis for its production, is accordingly a preventable disease, capable of diminution by the adoption of measures for the repression of contagious disorders, we shall materially

aid our surgical colleagues in their efforts to obtain the ratification of preventive measures; and if these measures could be made applicable not only to our army and navy but also to the entire civil population, an incalculable boon would be conferred on our nation.

Although it has all along been suspected that venereal disease played some *rôle* in the production of general paralysis, it is only within the last ten years that the actual importance of syphilis as a causative factor has been recognised. This being so, it is manifest that all etiological statistics collected prior to that period may be cast aside as valueless, for it is probable that in obtaining the histories of cases of general paralysis in the earlier years, evidence of specific infection was frequently overlooked through not being suspected, and it would be specially liable to remain undiscovered if there happened to be a history of alcoholism, overwork, or trauma in the case; for in accordance with former doctrines, this would be immediately entered as sufficient cause for the attack, and further inquiry under this head omitted. Now, however, we have had at our disposal some six or seven years in which to carefully, critically, and deliberately study the frequency with which syphilis has preceded an attack of general paralysis, and doubtless there are some present who have devoted special attention to the subject, and who will give us the benefit of their observations.

Two eminent neurologists, Gowers and Erb, maintain that tabes dorsalis is invariably the outcome of previous syphilitic infection. In the same way there are certain noted psychiatrists, including Krafft-Ebing, who hold that if syphilis could be stamped out general paralysis would cease to exist. The validity or not of this conviction constitutes the main point for discussion to-day, and for your guidance I shall first indicate some of the grounds on which this assumption is based:

1. In the first place, statistical enumerations prove that in a large proportion of cases an attack of syphilis has preceded the onset of general paralysis.

I have consulted the papers of fourteen writers who have recently studied the etiology of general paralysis; and, without entering into burdensome details, I would state that the number of cases in which syphilis has been assigned by these writers as the cause of general paralysis varies between 24 and 86 per cent. I would add that if the combined average of all these investigators be taken, syphilis will be found to have been an ascertained forerunner of the general paralysis in about 58 per cent. of the total cases.

Of all these statistical investigations, those of Hougberg, who worked in Finland, possess most interest. True it is that he did not collect many cases of general paralysis (only 107 altogether), but as his patients were drawn from a small fixed population living in an isolated locality, he was afforded unusual facilities for obtaining correct histories from friends and relatives of the sufferers, and therefore his figures should be reliable. He found that 75 per cent. of his general paralytics had certainly been infected with syphilis, and that another 11 per cent. were probably tainted, a proportion of 86 per cent. in all.

Our experience of the frequency of the concurrence of syphilis and general paralysis at Rainhill Asylum is as follows: Between October, 1893, and March, 1899, 255 male and 57 female general paralytics have been admitted to the asylum. Of these 76 males and 9 females have been excluded from enumeration, because, being without friends, no history was obtainable. Of the remaining 179 males 62 per cent. had certainly been infected with syphilis; in 24 per cent., though no direct evidence of syphilis was forthcoming, still sufficient data existed for declaring that they had probably had the disease; and in 13 per cent. no history of syphilis could be elicited, but at the same time the disease could not be altogether excluded. Of the 48 females 37 per cent. were certainly syphilitic, 60 per cent. had probably had the disease, and in 2 per cent. no evidence of infection was forthcoming.

In working out these percentages one has included as certainly syphilitic (*a*) all those who bore undoubted scars of Hunterian chancres, (*b*) all who showed undeniable tertiary eruptions (but of these there have not been many), (*c*) all who have had three or more miscarriages, (*d*) all those whose children carry evidence of congenital syphilis (and it is remarkable how many such children have been seen in our visiting rooms), (*e*) and lastly, all those who on *post-mortem* examination have shown syphilitic growths (but these, in our experience, are distinctly uncommon).

Since I and my colleagues cannot pretend to a special knowledge of the manifold cutaneous eruptions pathognomonic of syphilis, it is more than probable that we have occasionally overlooked or disregarded signs which an experienced syphilographer would have discovered and classed amongst the undoubtedly specific; add to this the natural unwillingness on the part of friends and patients to own up to a previous attack of syphilis, and it will at once be admitted that our percentage of syphilitic cases probably falls short of the real number. What I have just said applies also to the statistical calculations of all those who have worked unaided by a specialist on venereal diseases or dermatology.

2. In the next place it appears that the majority of cases of general paralysis emanate from localities where the traffic in immorality is greatest, and for this reason it is a disease of urban and industrial communities rather than of rural populations.

Von Ehlers, writing in 1896, stated that in Iceland (where syphilis is practically an unknown disease), only 3 cases of general paralysis had ever been observed; one occurred in a young man who had lived abroad for six years, and there led a fast life, and two in females who had indulged in immoral intercourse with foreign sailors.

We have also the evidence of various observers for proving that general paralysis is extremely uncommon among the Highlanders of Scotland. The figures of Greidenberg and others likewise show that the Continental peasantry possess a comparative immunity, while as far as large towns are concerned the figures of Idanow and McDowall demonstrate that in the case of Berlin, Paris, and Newcastle, the proportion of cases of general paralysis relative to the total admissions is a high one.

At Rainhill Asylum, which is the principal outlet for the insane of Liverpool, it is found that as nearly as possible 20 per cent. of the total males admitted, and 4 per cent. of the females, are general paralytics.

3. Thirdly, the more the etiology of juvenile or adolescent general paralysis is studied, the more clear does it become that the majority, if not all cases, arise in the victims of hereditary syphilis. For a further opinion on this point we look to those of you who have made a special study of this form of disease.

For my part I am inclined to believe that all cases of general paralysis occurring in persons under the age of 24 years probably owe their affection to congenital syphilis.

I have notes of 9 cases, 6 male and 3 female, of an age varying between 20 and 30 years, all of whom bore signs of congenital syphilis, or else had a history pointing to it; and this brings us to the question of the period which elapses between the attack of syphilis and the outbreak of general paralytic manifestations. According to a number of statistics which I have looked up, this period may vary between one and thirty years, but only in about 3 per cent. is it under five years, and it is rarely more than twenty years. The average period may be set down as twelve years.

4. Another argument in favour of the syphilitic origin of general paralysis is the occurrence of that disease in married couples who have infected one another with syphilis. Mendel of Berlin, has collected notes of 20 such cases. In 7 instances both husband and wife developed general paralysis; in 6 instances the husband developed general paralysis and the wife tabes; in 3 instances the husband developed tabes, the wife general paralysis; in 4 instances both developed tabes. In one interesting case the husband infected his wife, and then died of general paralysis. The wife married again, and the second husband died of tabes, and at the time of writing the wife was developing a disease which was either general paralysis or tabes.

Then Lavallée, in France, knows of 5 men who received syphilis from the same woman; of these 3 died of general paralysis, and 2 of cerebral syphilis, but by the irony of fate the woman still remains comparatively healthy.

5. The fifth indication in favour of the syphilitic origin of general paralysis is the occasional occurrence of the disease in parent and offspring. Fourteen cases of this so-called "homologous heredity" have been recorded within the past

twenty years. To this list I could add two more, and it is probably commoner than is generally supposed.

6. In the next place there is Krafft-Ebing's statement that no case has been recorded of a general paralytic acquiring syphilis after the mental symptoms have declared themselves, and yet many of these cases, at any rate at the commencement of their illness, are prone to sexual excess, and are therefore liable to expose themselves to contagion. In the same way, with the exception of juvenile and adolescent cases, general paralysis has never been observed in a *virgo intacta*. For the purpose of testing their immunity to syphilis, Krafft-Ebing experimented on eight advanced general paralytics by inoculating them in various parts of their bodies with fresh secretion from Hunterian chancres, but none gave a syphilitic reaction. The conclusion was therefore drawn that latent syphilis has rendered them immune.

7. Lastly, the influence of social conditions on the prevalence of general paralysis is of importance. It is stated that among the officers of the Continental armies general paralysis is common, but among members of the priesthood it is rare, and among women of high standing it is practically unknown. Among Jews and Quakers, also, both syphilis and general paralysis are uncommon.

Formerly, it appears that general paralysis was confined more or less to the upper classes, and was regarded as a disease of the aristocracy; but now the reverse holds, and year by year it becomes increasingly prevalent among the democracy.

Having now disposed of the evidence in favour of the syphilitic origin of general paralysis, let us next consider the arguments that can be brought forward in opposition to that view.

Of first importance arises the fact that no investigator has been able to sweep the decks with the declaration that every single case of general paralysis that has come under his observation has had the toxins of syphilis lurking in his system; a certain varying percentage of cases always remains over in which no evidence of syphilis whatever can be elicited but in which the existence of a history of drink, of privation, of injury, or some other factor might just as well be assigned as the cause of the attack. In the present state of our knowledge this argument is one which will not bear refutation, although it may be urged, in a negative manner, that in the residuum of cases proof was not forthcoming that the subject had not been tainted with undiscoverable acquired or congenital syphilis.

Secondly, it has been argued that if general paralysis is the outcome of syphilitic infection it is but reasonable to expect that it should be influenced by antisyphilitic remedies, but though such remedies have been repeatedly tried no such amelioration of the condition has been recorded. To this the answer may be given that neither is tabes dorsalis—a disease of undoubted syphilitic origin, influenced by specific remedies, the assigned reason being that these remedies cannot possibly restore the activity of nerve fibres already destroyed, and the question suggests itself, How far will the same argument apply to general paralysis?

I might here mention that Collins of New York has stated that thorough treatment of an original attack of syphilis does not seem to postpone the onset of general paralysis or tabes, nor does insufficient treatment of an attack of syphilis predispose to the development of a specially severe form of tabes or general paralysis.

The third argument against the syphilitic origin of general paralysis is that among certain races where syphilis is rife general paralysis is said to be uncommon. Christian of Charenton is responsible for such a statement concerning the Arabs of Algeria, but I believe it requires substantiation.

Lastly, it has been asked, Why is it if the two diseases are so dependable on one another that all individuals infected with syphilis do not develop general paralysis?

If it be granted, for the sake of argument, that syphilis is the prime etiological factor in the production of general paralysis, we have now to advance to the realm of theory, and decide what the pathology of the condition is.

On this question there has been much speculation. Many admit that syphilis is an important predisposing agent, but deny that it is a factor in the production of general paralysis, arguing that it only prepares the soil for the discharging agent, which may be alcoholism, sexual excess, mental overstrain, trauma, or any other recognised factor. Others make a slight distinction, and look upon syphilis as the discharging factor in a neuropathic soil.

The majority regard general paralysis as a toxæmic degeneration, the result of the circulation within the nervous system of syphilitic toxins, which therein directly induce anatomical changes. The initial point of attack of these toxins is by no means agreed upon—namely, whether nerve fibres, nerve cells, or blood vessels, are the first to be attacked. Wirkel believes that the poison first acts on the nerve fibres, as is the case in ergotism, alcoholism, and plumbism. Sarbó compares general paralysis with post-diphtheritic paralysis. Mott is in favour of a primary progressive degeneration of the neuron. Angiolella holds that the poison first attacks the small blood vessels. Fournier and others refuse to believe that general paralysis is a specific affection, but classify it among the parasyphilitic diseases, the characters of which are that they do not exclusively or necessarily depend upon syphilis for their production, and that they are not influenced by antisyphilitic treatment, while Hirschl accepts general paralysis as a direct tertiary manifestation comparable to the gumma, the anatomical process being a diffuse interstitial encephalitis analogous to interstitial hepatitis.

Some years ago, when studying the neuromuscular changes in general paralysis, it occurred to me that the disease was essentially a toxæmic one. I upheld this view on the grounds that a morbid blood state provided us with a far more reaching and sufficient explanation of the general widespread disposition of the disease, of the symmetrical distribution of diseased changes in the peripheral nerves, of the universal implication of the small vascular channels, of the proliferation of cells in the lining membrane of the ventricles of the brain and the central canal of the spinal cord, and a host of other signs, but the source of this toxæmic condition completely baffled me. That, however, was before the connection between syphilis and general paralysis was recognised, and now that it is proved that the association between the two diseases is a close one, I have little doubt that syphilis is the fountain head of the morbid blood state which occasions such grave changes not only in the nervous system of general paralytics but in almost every organ and tissue of their bodies. It also seems absurd to me to wrangle over the point of attack of the poison, for its ubiquity renders judgment impossible, but as regards the neuron it seems probable that, following physiological rules, it will first show signs of degeneration at that point which is furthest removed from the chief trophic supply, or where it is most highly organised and functionally susceptible.

In addition to these points there remains for consideration the question of the entity and differential characters of a disease which continental writers have recently directed attention to, namely, pseudo-general paralysis syphilitica, possibly some of those present are interested in this condition and will tell us whether the disease is entitled to a separate standing.

The last question concerns the increase of general paralysis; this increase is, I believe, an absolute fact, and we desire to know whether it is proceeding *pari passu* with the multiplication of syphilis, whether it is the outcome, as Krafft-Ebing puts it, "of the advance of civilisation and syphilisation."

[A PRELIMINARY CONTRIBUTION.]

CONGENITAL GENERAL PARALYSIS.

II.—P. W. MACDONALD, M.D., and A. DAVIDSON, M.B., C.M.,
Dorset County Asylum.

WE wish to call attention to a group of facts which in our opinion are of considerable value regarding the early appearance of general paralysis. Since the days of Bayle, when general paralysis was thought to be an affection only met with in adult life, the contributions have been numerous in proof of its appearance in adolescence, at puberty, and even in children, and we now desire to go a step farther back—to birth. The following cases, selected from among a number of others, met with in the ordinary course of asylum practice, exemplify in a striking manner the peculiar characteristics of the disease, and it seems to us to be of supreme interest and importance that these cases should be recognised during the earlier stages of infant life.

Case I.

L. E. D., female, aged 9, admitted April 20th, 1889. The history was that she was a congenital idiot, with a strong family history of neurotic degeneracy. Unfortunately it was not suspected that this patient was a general paralytic, and we have to express our regret that the clinical and pathological records are somewhat imperfect. The patient lived about a year, and ultimately died from an attack of bronchitis. During this time she was a noisy, untidy, dirty idiot, and the obvious condition of arrested growth, together with the rapid general deterioration, were absolutely inexplicable during life. At the *post-mortem* examination the characteristic adhesions and other signs of the morbid appearances of general paralysis were found, but beyond this apparently no trouble had been taken to follow up the matter. We should mention that the absence of more complete clinical and pathological facts is somewhat atoned for by knowing that this case is sister to No. 3, about to be described, and in which case all particulars were carefully noted, including a complete family history.

Case II.

H. A. V., male, aged 9, admitted March 30th, 1892. The medical certificate states that "he is an idiot (congenital), cannot speak, and makes a great deal of noise; that he is mischievous, that his habits are dirty." As regards family history, it has been ascertained that the mother was an alcoholic, and is at present insane.

Condition.—On admission, the following notes were made:—He is a poorly-developed, undersized boy; height 3 ft. 10 ins., weight 3 stone 12 lbs. Head is small, palate highly arched; pupils are equal but somewhat dilated, react normally; knee-jerks and plantars present: motion and sensation both normal. During the following two years, namely, from March, 1892, till May, 1894, when he died, the notes may be summarised thus:—He suffers from frequent epileptiform seizures, before which he is very noisy, and beats his head with his hands. The seizures are of an epileptiform type, affecting all the limbs simultaneously, and after each he sleeps for several hours. He has a vacant appearance, constantly moving his head from side to side, shouts and screams. He cannot speak but is not deaf; he is very mischievous and irritable, trying to bite or spit at anyone who goes near him; habits very dirty.

After-History.—While the physical condition remained good there was a slow but recognisable increase of the dementia, and he gradually became more noisy, more objectionable in his habits, and almost constantly whining or making a noise. About this time we had in consultation agreed that it was a case of general paralysis, and we had not long to wait for a confirmation of the diagnosis, for in May of the same year he developed an attack of lobar pneumonia, which proved fatal.

Post-mortem Examination.—Skull thick and very hard for a child of 11 years; shape generally fairly regular; sutures quite evident; dura mater slightly thickened and adherent over frontal region, especially to the skull; pia congested, milky, and very much thickened; it stripped extremely badly from cortex of cerebrum, especially over the frontal and occipital regions, and also to a less extent over the parietal region; in places the entire thickness of the grey matter stripped off with the pia; convolutions fairly well formed though of simple type. The brain generally was fairly firm except the ulcerated parts of the cortex, which seemed softer, and of a darkish colour. On section the grey matter was thinner than usual, layers seemed fairly well marked; the basal ganglia were congested; ventricles slightly dilated; no granulations on ependyma: pons, medulla, and cerebellum congested. The other organs, except the lower lobe of right lung, which was in a state of early grey hepatisation, were healthy.

Case III.

This case, which in some respects is the most remarkable and convincing of the series was that of H. D. (brother of L. E. D., No. 1), aged 11, admitted into the Asylum in March, 1892. The certificate states that "he is an idiot, that he is unable to understand what is said to him, and can make no reply to questions." His mother states that "he has been an idiot from birth. He is very dirty in his habits, and at times very quarrelsome and destructive, and cannot be left alone; he seems to be getting gradually worse.

Family History.—Both parents living. Father an invalid for seven years (from influenza), said to suffer from fainting fits. The mother seems a fairly intelligent woman, and in good health. Two paternal aunts were idiots, and the maternal grandmother and one aunt on the same side were insane. There were ten children—six sons and four daughters. Henry (Case III) was the eldest of the sons, two were stillborn, and three are now living, the eldest of whom is dull and cannot learn. Of the daughters there is but one living, aged 7. The eldest (L. E. D., Case 1) died in the asylum, and has already been referred to, one died when three months old, and one was stillborn.

Condition on Admission.—Badly nourished, badly-formed child; height, 3 feet 4 inches; weight, 45 lbs.; looks very much younger than his age. Face and head generally asymmetrical. He is an idiot, cannot speak, but utters some peculiar noises. He appears to take little interest in his surroundings, and likes to be taken notice of. He is unable to do anything for himself.

After-History.—During the next four years this patient continued in an almost unaltered condition, the most striking feature perhaps being that, while his appetite was enormous, he remained thin, and became more stupid and dull. In 1896 an attempt was made to take care of him at home, but this proved a signal failure, and he was returned to the asylum after a lapse of three weeks, and it was stated that he was far too noisy and troublesome to be elsewhere than in the asylum. From this time until his death, in April, 1899, the physical condition gradually failed, and there was a marked inco-ordination of all movements. Mentally he became a mere whining, miserable object of creation. He died from an attack of broncho-pneumonia.

Post-mortem Examination.—Skull asymmetrical, right side more prominent than left in parietal region, the central suture being convex towards left side; there were irregular bosses here and there over different parts of the skull. The sutures were firmly united, but could be distinctly made out everywhere. Thickness of skull very irregular, in some places very thin, in others—there being no well defined regions in either case—of about normal thickness. Diploë everywhere very scanty. Dura slightly thickened and in a few places adherent to skull. In subdural space on the right side was a huge hæmatoma made up of a mass of blood clot of dark chocolate colour and of a jelly-like consistence; at its thickest point over the parietal region it was half an inch thick, and extended everywhere on the right side, the left side being quite free. Pia thickened and milky, vessels being very little in evidence, except at two well-defined areas in each hemisphere; in each case this was situated about the middle of the Rolandic area. On the right hemisphere, in the middle of this area, projected the free end of a ruptured pial vessel, the mouth of which was blocked by a soft clot about same colour and consistence as that of the hæmatoma. On the left the vessels were distended, but there was no ruptured vessel. The pia stripped very badly, especially over the right hemisphere, there being large areas of deep decortication; over the left hemisphere this was marked mostly in frontal region. Convolutions were generally flattened, especially on the right side. All convolutions were present, but were of a very simple type. The sulci were shallow, and in some places had a small quantity of clot, similar to that of hæmatoma, lying in the deepest parts; there was no localised atrophy. On section the grey matter was somewhat thinner than normal; the different layers were very well defined, especially in occipital region, colour was slightly paler than normal; white matter firm; punctæ very coarse; basal ganglia were very well defined; lateral ventricles of normal size; no granulations; choroid plexus normal. Cerebellum, along the posterior border, and extending for some little distance on the under surface, was a well-marked hæmorrhagic effusion, situated in the layers of the pia, which was everywhere thickened and stripped very badly. The cerebellar lobes were of equal size, and arrangement of convolutions normal. Section showed nothing abnormal. Over the pons on the under surface pia was slightly thickened, and over its layers was a slight hæmorrhagic effusion which, however, did not penetrate into pons. The pons and medulla were otherwise normal. Brain weighed 35 ounces; right hemisphere 15⅝ ounces; left, 16 ounces; pons, medulla, and cerebellum 4 ounces. Arteries at the base of brain were very thin. Microscopic sections were made by Bevan Lewis's method, and the cells were found to be very few in number and small in size, the shape was very irregular, processes short and stunted. The neuroglia was increased in quantity; walls of blood vessels thickened. The cortex was examined also by Turner's method, which showed the same irregularly-formed cells. Nuclei in most cases well defined, in some badly. Nissl's rods were everywhere broken up into granules, and in some cases stained very badly. Fibres were seen of very irregular outline and covered with nodules. The other organs were all small, and in the right lung was found a large cavity with a thick lining membrane containing a small quantity of pus.

It will be convenient and perhaps conducive to clearness if we briefly summarise the foregoing facts.

Family History.

The family history is sufficiently complete to show the strong neuropathic taint that existed in each case. As regards Cases I and III it is seldom that we meet with, and are able to follow up such a train of degeneracy. In none of the cases were we able to trace intermarriage or syphilis on the part of the parents, and the one supposed cause beyond all others of general paralysis of the insane—namely, syphilis—we were unable to trace in the history of either parent.

The stillbirths alone are suspicious; yet, after a most full and exhaustive inquiry, we unhesitatingly came to the conclusion that the facts remained unshaken, notwithstanding the strong pronouncement of Dr. Mott at the annual meeting of the Medico Psychological Association, 1899. This is a fact in the family history to which we desire to call your special attention. Dr. Ireland states that he has met with but few instances in which general paralysis appeared to have been the cause of the idiocy. As regards the etiology, alcohol may have played a small part, but not, in our opinion, a sufficiently important one to warrant us in connecting any of the cases with the seeds of alcoholic degeneracy. Our present facts go to show, if not to prove, that hereditary predisposition was the one predominating factor in the production of the general paralysis in these cases. This opinion is not without support from authorities on the subject of mental disease in the young, for Dr. Ireland says, "A neurosis in the family of the parents is by far the most common predisposing cause of insanity in children," and Sir John Sibbald has stated that as regards general paralysis, "Hereditary predisposition is probably not without influence upon its production." In discussing the question of etiology in cases of general paralysis at puberty, Dr. Wiglesworth thought that there was a neuropathic taint in seven-eighths of the cases. All this clearly shows how immensely higher the proportion of hereditary cases is among the young than in after-life.

Age and Symptoms.

Two of the cases were little more than infants, both dying under 11. The age question is of great moment, for though individual observers have mentioned the occurrence of signs simulating general paralysis in infants, they have not made special mention of the presence of general paralysis at birth. The time-honoured notion of general paralysis being an ac-

quired disease in early or adult life has little significance in the light of newer facts and later observations. Just as in the case of grown-up general paralytics these congenital cases run very varying courses, some succumbing early, others dragging on, but speaking generally we are of opinion that the disease has a longer life-history in congenital cases that in the acquired adult general paralysis.

With reference to the symptoms the most important point is that all three cases were certified as congenital idiots, which is very different from the recorded cases of general paralysis in the young. Owing to the imbecility of mind subjective clinical symptoms were absent, but the progressive mental deterioration was early recognised, and was quite as intense as in the ordinary general paralytic. In Case III the gait was most peculiar. The boy straddled about in a semi-bent position, holding out his hands as if to balance himself, and on the slightest touch over he rolled.

Morbid Appearances.

As regards the pathological appearances, we need only observe that they were so characteristic of the classical morbid appearances met with in adult general paralysis that no doubt could be entertained as to the true nature of each case.

The occurrence of general paralysis at puberty and adolescence has, according to the existing records, been met with in cases whose intelligence previously had been normal, whereas the cases now under consideration were mentally defective from birth. With reference to the former class of cases, and as showing how ideas have changed, we might quote Dr. Clouston, who, in discussing a paper by Dr. Wiglesworth on General Paralysis at Puberty, said :

As regards the occurrence of general paralysis at this period of life of which Dr. Wiglesworth speaks, I admit I was extremely sceptical of the first case. One's whole ideas of general paralysis were contrary to its occurrence taking place at this early period of life. I, along with Dr. Maudsley, had attached very great importance to sexual excess in the causation of general paralysis; and here we had cases where undoubtedly there had been nothing of the kind in any shape or form. Then it seemed extraordinary that every other possible cause of general paralysis was absent in these particular cases. On the whole it had the effect on my mind of almost revolutionising my ideas of general paralysis.....With regard to the ages at which general paralysis occurs, I am beginning to be more impressed with the fact that we may have it occurring not only at puberty, but that we may have general paralysis between 60 and 70 years of age.

A careful perusal of the literature on the subject does not help us much, for we have found an almost complete absence of any reference to cases dating from birth. In the *Journal of Mental Science* (January, 1899) references are made to the subject by Drs. Mickle and MacDonald. On page 105, in a discussion on a case of adolescent general paralysis, Dr. Mickle is reported to have said :

I do not think that there is any age when individuals are free from the disease; I believe in an infantile general paralysis, and see no reason why a child should not be a general paralytic at its birth. It is difficult to prove that; but if we examine the history of the recognition of general paralysis, one has very fair grounds for believing that to be probably true. I think that among those who have been described as dying in early life from congenital syphilis with lesions of brain and cord, many were general paralytics.

Dr. MacDonald is reported to have said (page 194) in the course of a discussion on the cause of insanity :

Another point of great importance is the small number of juvenile or developmental general paralytics met with by the author of the paper. In the course of ten or twelve years he had met with some six or seven, and the conclusion he had come to was that there were equally strong grounds for believing that there are congenital general paralytics, as there are for accepting congenital syphilis, etc., and he thought a percentage of the congenital cases who had been classed as idiots were in all probability general paralytics.

In a most able contribution on the subject of general paralysis,[1] Dr. Reginald Farrar says :

Some of the cases of inflammatory and of hypertrophic idiocy, most of which die early with or without fits, and some with paralytic symptoms, as related by Dr. Savage, would seem to belong to the same category..... It is well known that general paralytics are particularly prone to engender idiot children. While not disputing the comparative infrequency of general paralysis in early life, and its elective affinity for the age of adult vigour, I maintain that there is nothing of a specific or pathognomonic character about this election; and just as the same process gives rise in the adult to a complex of symptoms known as general paralysis, and in the old man to a complex of symptoms, less intense and more slowly evolved, known as senile dementia, so it is not unreasonable to suppose that this process may at times occur in the young, and escape recognition, the symptoms being modified in conformity with the age, and not conforming to the clinical type which we recognise in the adult by the name of general paralysis of the insane. On the whole, perhaps, we cannot hope as yet formally to identify this disease in children; still, it were as well to bear such possibility in mind, and to allow our views of the disease to be unbiassed and open to extension.

[1] *Journal of Mental Science*, 1895.

This extract from Dr. Farrar's paper goes far to support our contention of the existence of general paralysis as a congenital disease, though we feel that Dr. Farrar's remarks are meant to apply to cases occurring in children previously healthy rather to a congenital condition.

From time to time attention has been directed to the occurrence of pathological changes in the very young, resembling the classic morbid appearances of general paralysis, and, probably because the condition is so likely to be masked by idiocy, no attempt has hitherto been made to differentiate between congenital idiocy and what we are pleased to term congenital general paralysis. In describing the pathological appearances met with in sclerotic idiocy, Dr. Ireland says :

"The pia mater is not adherent over the sclerosed masses, sometimes it is over the remaining cortical tissues;" and later in the same paragraph he says : "In the atrophic form the shrunken cortex reminds one of the lesions in general paralysis."

In additional support of this view we might quote the late M. Voisin, who suggested that certain cases of idiocy were cases of general paralysis occurring in childhood. In his textbook on *General Paralysis*, Dr. Mickle mentions that Dr. Köhler records a case of apparent general paralysis in a girl aged 6; and Dr. Claus declared he had detected it in a young idiot girl (age not stated). It is also mentioned in Dr. Fagge's *System of Medicine* that he had met with a case of an infant, aged 18 months, in whom the pathological changes corresponded with that of general paralysis. Then Dr. Wedl has described pathological changes identical with those of general paralysis in the case of three congenital idiots.

These fragments, or scattered references, are of more than passing value because of the greater attention given to the subject, and more particularly now that the question of congenital general paralysis has been submitted for consideration. As Dr. Ireland has clearly pointed out to us in the course of correspondence, the ordinary case of idiocy runs a totally different course to any of the cases referred to as congenital general paralytics. Idiots are by no means short-lived, for the majority grow to womanhood and manhood, and some even to old age; and as Dr. Ireland says : "In most cases of idiocy there is an upward tendency, a slow progress towards improvement;" but in these cases of congenital general paralysis the reverse is invariably true. From their earliest infancy they fail to grow or develop, and at a very early stage of their existence drift into contracted bedridden dements, if such a phrase can be applied in the case of the young. Other characteristics are that they scream, bite their wrists, make hideous noises (not the vociferous shouting of the adult general paralytic), lie huddled and rolled up in bed. The comparatively quiet calm course of events attending the development of the ordinary idiot is in these cases replaced by an early progressive dementia with every outward sign of physical dissolution.

The question may be raised, Were these cases of congenital general paralysis, or were they ordinary cases of idiocy with the condition known as general paralysis supervening? The course of events would, in our opinion, indicate that the general paralysis was inherited, as evidenced by the mental state, the stunted growth (both so unlike what we find in the ordinary idiot), the fact that two of the cases were diagnosed previous to death as general paralytics, and the abundant pathological proofs, all of which remain as strong arguments in support of our contention that general paralysis is a congenital as well as an adult or adolescent disease.

In closing this paper it is right to record the admission that it can lay no claim to anything more than touching, and that but slightly, certain parts of a great subject. We have desired to make this humble contribution in the hope of directing attention and stimulating fresh inquiries, and we have wholly avoided the questions which concern this or that particular form of general paralysis.

III.—Lionel A. Weatherly, M.D.

Dr. Weatherly said he could not help feeling that recently we had put syphilis too much by itself, too much as the one great cause of general paralysis, and, although admitting that syphilis was most frequently a predisposing or an exciting cause of this disease, deprecated losing sight of the fact that

stress on the nervous system, especially sexual excess, might have a great deal to do with this terrible disease?

IV.—J. C. McDowall, M.D.

Dr. McDowall expressed the opinion that syphilis was the chief if not the only cause of general paralysis, illustrating this by the distribution of the disease in rural and urban localities.

V.—J. F. Briscoe, M.R.C.S., etc.

Mr. Briscoe said that general paralysis was probably a new name for an old disease. We had no knowledge of mental affections a hundred years ago. It was very certain that syphilis did play some part in the disease. Nervous diseases among natives in Africa were now common owing, as was stated by medical men, to drink and syphilised women. Syphilis had been imported of recent years into Africa, and there was good evidence to prove that mental disease was spreading among the natives of Africa; this was particularly so with the Portuguese littoral of East Africa. It was questionable whether there were not three points in the history of general paralysis—an exciting cause, the specific element, and a neuropathic tender[illegible].

VI.—A. G. S. Mahomed, M.R.C.S., L.S.A.

Mr. Mahomed thought that several conditions were essential to establish most diseases. For instance, pneumonia required exposure to cold as well as exhaustion. General paralysis required high pressure, strain, plus syphilis, or syphilis, alcohol and strain. Sexual occurrence bore this out; equal exposure to syphilis distinguished the male who was subjected to high pressure more than the female.

VII.—S. Rutherford Macphail, M.D.

Dr. Macphail said that previous speakers had assumed that the increase of general paralysis could be accounted for by a similar increase of syphilis in recent years. In his opinion this was a large assumption, and personally he did not believe that syphilis was increasing.

VIII.—Allan Mahood, F.R.C.S.

Mr. Mahood said that as a general practitioner he was interested in the etiology of general paralysis, but could not admit that it was proved that syphilis was the only cause. He did not think syphilis had sufficiently increased to account for the increase of general paralysis. In fact, every doctor with whom he had spoken upon the subject seemed to be decided that there was really less syphilis now, and of a much less severe character, than in their early days. It would be advantageous to work out, so far as possible, the proportion of syphilitics amongst the general population to the number of general paralytics amongst the insane in asylums, workhouses, and even at home; and, on the other hand, the proportion of syphilitics in the asylum population suffering from general paralysis and from other diseases of the nervous system. Dr. Campbell had stated that 20 per cent. of males and 4 per cent. of females admitted to Rainhill had general paralysis. If syphilis were the cause, there should have been a larger number of general paralytics amongst women. Many of the men who were admitted must have been married, and their wives had a good chance of contracting syphilis, and Liverpool offered many opportunities of developing this disease. Again, from his own experience he should expect more general paralysis amongst women, as he had found many women suffering from gynæcological conditions entirely due to syphilis. In his opinion, women who were undoubtedly subjects of syphilis did not suffer from mental diseases in the same proportion as the men in the same station of life who had a greater mental strain in their work. It was not sufficiently taken into account that the modern life of the artisan entailed a more severe strain upon the nervous system than his ancestors even dreamt of. Sailors certainly were exposed to shock and strain, frequently of greater severity than inland men could understand, and he had found general paralysis arise in such men without any evidence of syphilis in themselves, their wives, or their families. It was wrong to say that a sailor or a soldier should of necessity be a victim of syphilis. The paper upon Congenital General Paralysis was very interesting, and opened up a new branch. He believed that he had a case of a boy, in private practice, who was classed as a congenital idiot. While in charge of the case he was much puzzled by his condition, which resembled in many details the cases related by Drs. MacDonald and Davidson in their paper, and in this case he had never been able to discover any trace of syphilis in the parents or their children, all being healthy, but there was a neuropathic element in their relatives.

IX.—T. Seymour Tuke, M.D.

Dr. Tuke, while recognising the importance of syphilis as a factor, was inclined to lean towards the statement of Dr. MacDonald that there were those who considered it as a discharging factor in a neuropathic condition. The more the life-history of the educated general paralytic was studied the more convinced was the observer that he differed in many ways, from the first, from the ordinary standard.

X.—G. E. Shuttleworth, B.A., M.D.

Dr. Shuttleworth referred to his experience at the Royal Albert Asylum in connection with the syphilitic causation of cases of idiocy. Long ago (in 1883) his attention was called to this subject in aiding Dr. Judson Bury to determine how far idiocy, and more especially juvenile dementia, depended upon hereditary syphilis. The statistics of training institutions for imbeciles gave but a small percentage of cases arising from syphilis (not more than 1 per cent.), but it must be borne in mind that institutions did not receive cases under 6 years of age, and that they selected their patients with a view to educational improvability; moreover, the fact of syphilitic affection of patients was carefully concealed in the application forms. It was a fact, however, that the more one got to know of the family history of the cases the more obvious became the influence of inherited syphilis, and whereas in 1887 he reported that out of 1,000 cases in which the history had been ascertained only about 0.4 per cent. could be certainly attributed to inherited syphilis, and there was a fair presumption of it in about 1 per cent. only, a few years later, when he knew the family histories better, the percentages went up to 1.05 and 1.33 respectively, and he might almost say that the more one saw of the relations the clearer became the connection between syphilis and some forms of juvenile mental weakness. Probably cases classed as hydrocephalic idiocy were largely of syphilitic origin, as well as some of the eclampsic. As regards juvenile general paralysis, the name was comparatively new, but the pathological conditions, now so called, had been long ago observed. For instance, in 1868, Mendel described in the *Archiv fur Psychiatrie*, a case characteristically one of "juvenile general paralysis." Dr. Judson Bury described similar cases in *Brain* in 1883; and in 1888 he (Dr. Shuttleworth) contributed to the *American Journal of Insanity* details of four cases of progressive dementia in children approaching the age of puberty, which had all the clinical and pathological features of general paralysis, afterwards so ably described by Drs. Clouston and Wiglesworth. He congratulated Dr. MacDonald and Dr. Davidson on the attention they were giving to this subject in the field of observation of a county asylum.

CAN WE INSTIL RATIONAL IDEAS REGARDING INSANITY INTO THE PUBLIC MIND?

By Lionel A. Weatherly, M.D.

The question which the title of my paper asks denotes a fact patent to all who have experience in our department of medicine; and possibly many of you may agree that this fact has been so often repeated and argued about that no good purpose can be served by again bringing it forward. But, surely, if the fact that the public have an irrational idea of mental disease admits of no dispute, then we cannot too often bring the subject forward and propound views as to how best we can alter the utter want of rationalism in relation to this prevalent mental disaster.

It may be broadly stated without fear of contradiction that this disease, which affects that portion of ourselves called the mind, is not looked upon by the general public at all in the same light as other diseases; that it is considered to be something to be ashamed of, a something to be kept a profound secret as

long as possible. I believe the most conscientious persons do not scruple to tell untruths unblushingly to hide from anyone the fact that they have a history of this disease in their family; and, I doubt not, many would almost as soon confess that they had had relatives within the walls of Her Majesty's prisons as in an asylum for the treatment of mental disease.

Not only have our countrymen and our countrywomen this utterly stupid and dangerous way of looking upon insanity, but those who know nothing of the subject, and consequently shout the loudest, have the most irrational ideas of the treatment of cases of mental disease in the present day. They believe that asylums are places into which patients are entrapped for all sorts of ulterior motives, and that many within the walls of such institutions are treated far from humanely. Others again look upon our asylums as places in which are collected raving mad people, whose actions are those of the beasts of the field, and whose language is that of Billingsgate or Seven Dials.

Take again the public attitude with regard to crime and insanity, and my contention of their irrational reasoning becomes again emphasised. Terriss, the handsome popular actor, is killed by a man with the most definite delusions of persecution. He is sent to Broadmoor with the cries of the public "Crucify him! crucify him!" in his ears. Ansell, the secret plotter of a wicked poisoning, murders her poor half-witted sister for the sake of a mess of pottage, and the public, with the aid of "an eminent specialist" and a halfpenny morning journal, harasses the Home Secretary to save her from the gallows. Could irrational conduct, could inconsistent reasoning go further?

Lately we have had what I would like to call a relapse in the ethics of journalism. Anonymous letters have been written with sensational accusations of all kinds against asylums, especially private ones; and to the ordinary public, no doubt, many of these letters have borne the stamp of truth. Again stories have been published with the ostensible purpose of showing up the iniquities of asylum management, or rather mismanagement, and all the old exaggerated misstated facts and ideas of the *Valentine Vox* and *Hard Cash* days have again been dished up for the morbid irrational public. But worse still, these stories have been headed by the note that all therein contained can be proved to be facts, and that these are not facts of other days, but of this our present time.

I have no hesitation in saying that more wicked, cruel, slanderous, and totally untrue accusations were never made. That in many instances these anonymous letters are emanations of hysterical and unstable brains is no doubt true; but of these stories professedly written with a worthy object, I say, without fear of contradiction, that they are the products of a brain actuated by the love of notoriety and gain.

Legislation may have done something for our protection, but no one can gainsay that our treatment of the disease we have to battle with is hemmed round with the most rigid restrictions, and the very fact that this is so may no doubt have something to do with the public idea which puts mental disease in a totally different category to other physical ailments.

We recognise that the liberty of the subject having to be interfered with before any right and proper mode of treatment for this disease can be carried out, makes legislation necessary and proper supervision called for; but we must all wish that the framers of our lunacy laws had some more practical knowledge of, and were more conversant with, the trials and difficulties which those who take up our special branch of medicine have to cope with.

One clause, however, in the Act of 1891 has, I firmly believe, been productive of much good. I allude to the voluntary boarder clause. At first I expected trouble from the admission of voluntary boarders into my house. I feared lest they might, by expecting greater liberty and lessened general supervision, be the cause of discontent among my other patients. But by making them understand, when applying to come under my care, that they must expect me to deal with them exactly as I thought best, I have had no trouble; whilst I have come to fully recognise the value of their presence from the outside public point of view. Nothing, I believe, has of late years been more effective in giving many of the public, confidence in our management than the knowledge that persons of their acquaintance are living in an institution month by month of their own free will and accord.

I can only hope this clause may yet be made more elastic, and that voluntary boarders need not be counted in the numbers of our licence. Such elasticity could do no harm, and might be productive of much good.

And now I come to what I maintain has been the greatest cause of the public taking such an irrational idea of insanity, and of placing this disease in quite a different class to any other.

I consider one word must bear on its shoulders all this great blame—the word "lunatic." It would be a grand day for our speciality when it was banished from our language. The word is classified in many minds with two others—"drunkard" and "criminal"—and has done untold harm to those unfortunates who, maybe from no fault of their own, have been made to suffer from divers kinds of mental disease. It is a word which our legislators are far too handy with; a word which, if our legal friends would banish it, would soon pass into oblivion.

Take an instance of what is happening every day under Section CXVI of the Act of 1891. A patient who has come under our care for treatment has property, and while he is legally dead, and unable therefore to manage his affairs, this section is set in action, and trustees are appointed to administer his estate. Maybe he is as sensible on many points as any of us, and he may even recognise that he is for the time being suffering from some mental unsoundness. On the summons which is given to him he is at once confronted with the fact that the law considers him a lunatic. If he is such a case as I have above described, he resents this most bitterly, and tells you that he considers his people most cruel and wicked to allow him to be called by such a name. Why the law could not have been satisfied to tell him that by reason of mental disease he was for the time being considered unable to look after himself or his affairs I fail to see, and I trust that this manifest wrong and unjust expression will soon be altered in all these documents.

If all I hear is true, I fear some of our Commissioners are too apt to use this word lunatic, instead of encouraging its total abolition. If they could only realise the feeling this word produces they might be less ready to call our patients by this wretched and cruel name.

We are gradually, I am glad to see, getting out of the way of using the term "lunatic asylum." I can only hope that the time is not far distant when all our institutions in which persons suffering from mental diseases are treated and cared for, will be called "hospitals for diseases of the mind," or "hospitals for mental diseases." They could be classified as county hospitals, borough hospitals, registered hospitals, and private hospitals, and the very name would, I believe, gradually help to make the public realise that insanity, instead of being a something to be ashamed of, a something to be kept a sacred secret, a something of almost a criminal and disgraceful character, was a disease demanding early and special treatment, demanding real and heartfelt sympathy, and lastly a disease which could be more frequently cured if only it was more quickly recognised, and as quickly placed under the best considered circumstances for the individual case. But we must teach our public more than this; we must try to make them understand what heredity does towards filling our institutions and causing widespread misery in our midst; we must teach them how all-important it is that unstable nervous constitutions must not be linked together in marriage; and we must be constantly emphasising the fact that with the education of the young the greatest care must be exercised to prevent too much stress on their mental processes.

I am glad to see that the Commissioners have in their annual report drawn attention to the very harmful and mischievous practice of some magistrates' clerks of insisting upon the certified patients being brought to the court-house before the magistrate's order is given. They have no power, no right to do do this, and should be opposed in their action by all interested in the treatment of insanity. It is harmful to the patients, to their relatives, to the general public, and places an utterly false stigma upon a disease about to be properly treated. It may be a convenience to the magistrate and to the clerk, but the one has accepted a duty and the

other is paid for it, and the feelings of the patients and their friends must be studied before the convenience of officials. I trust now the Commissioners have placed this great grievance on record that the Lord Chancellor will see that it does not continue.

A DISCUSSION ON THE TREATMENT OF EPILEPTICS AND IMBECILES.

I.—G. E. Shuttleworth, B.A., M.D.,

Formerly Medical Superintendent Royal Albert Asylum, Lancaster; Medical Examiner Defective Children, School Board for London.

In inviting the attention of this Section to a somewhat well-worn subject, I feel bound to mention that I have been much assisted by an exhaustive paper on the Care of the Epileptic by Dr. Lord of the London County Asylum, Bexley, published in the last number of the *Journal of Mental Science*, but of the existence of which I was unaware when I undertook to open this discussion. With regard to the treatment of imbeciles there still seems room to plead for a more systematic provision on the part of Poor-law authorities for this unfortunate class. Only last week my own Board of Guardians, that for the Richmond Union, were bewailing the necessity of providing in their workhouse for six imbeciles discharged from the Surrey County Asylum on account of want of room there, and the Chairman quoted the report of the Select Committee of the House of Commons on the Cottage Homes Bill as recommending the removal of imbeciles to institutions other than workhouses, such institutions to be provided by the county councils and the county boroughs.

With regard to epileptics, schemes for dealing with them on the colony system have of late been very much in the air. I am not sure that the public, and even the average medical practitioner, quite realise the administrative differences between provision for the sane and the insane epileptic. For the sane epileptic, indeed, the law makes no provision in this country, and the insane epileptic is only provided for because he is a lunatic. Here, consequently, the sane epileptic can only be aided by voluntary effort; but the boundary line between sanity and insanity in the case of epileptics is a very narrow and a very variable one, and it would seem to be good policy for our State authorities to consider the example of America, Germany, and other countries, where by timely care of the sane epileptic he is often prevented from passing into the category of the insane. In Ohio, in Massachusetts, in New Jersey, in California, and in New York State statutory homes for epileptics have for some years past been established, the most notable of these being the Craig Colony at Sonyea, Livingston County, formerly the seat of the "Shaker" community. This contained at the date of the last report 322 patients, and contemplates providing ultimately for 600. In all these institutions there is extensive hospital accommodation for those requiring it, and there is no statutory prohibition against patients being retained who have passed the border line, and are (at times, at any rate) insane. In each of the American establishments the system is that of detached cottage homes (though the so-called cottages contains from 50 to 75 beds) spread over large cultivated estates, and they are all, I believe, under medical direction. The huge colony at Bielefeld, which now contains 3,000 epileptics, one cottage being set apart for the mildly insane, has been so frequently described that I need only refer to it here as the pioneer institution in Germany for ministering to the needs of the epileptic. This voluntary institution (founded thirty years ago by Pastor von Bodel Schwingh) has been followed by other colonies established on a more official basis at Alt Scherbitz, Uchtspringe, Dalldorf, Wühlgarten, and elsewhere.

The institutions just referred to may be described as of mixed character, primarily established for epileptics not insane, but not rejecting them as soon as the border line dividing sanity and insanity has been passed. Under the restrictions of our own lunacy laws such institutions would be hardly possible, one would think; yet I see that Dr. Rhodes and his enterprising colleagues of the Manchester and Chorlton Joint Asylums Committee propose to provide on the same estate accommodation for sane epileptics belonging to those unions, also for imbeciles and insane epileptics, separate portions of the estate being set apart for each category.

The London County Council have decided to build on a portion of their estate at Horton Manor, near Epsom, detached buildings to accommodate 300 male patients, distributed in eight or nine cottages over the 127 acres on which they are to be employed. This will be a very interesting experiment, and will doubtless form a precedent for similar colonies in other counties.

In the present state of the law the provision for sane epileptics must of necessity remain in the hands of charitable enterprise. Happily an excellent beginning has been made by the formation of voluntary institutions at Maghull, near Liverpool, dating from 1889, and accommodating 119 patients of both sexes; Lady Meath's home for epileptic women and children at Godalming, with about 50 patients; and, finally, the colony at Chalfont St. Peter, founded in 1894, and now affording accommodation in six cottage homes for nearly 150 epileptics—men, women, and children. Lately also a small home for pauper epileptic children has been opened at Lingfield, Surrey; and still another colony at Chelford, Cheshire, is shortly to be started, by the help of the Lewis Trustees, for some 250 epileptics from Lancashire and Cheshire and adjacent counties.

The reports of the institutions which have been longest in existence are distinctly encouraging. Not only do they record good results from judicious care, feeding, and occupation, in the diminution of the number of fits (in some cases apart from drug treatment), but it is remarkable that (according to Mr. Penn Gaskell) only one colonist has had to be discharged from Chalfont on the ground of insanity during the five years of its existence; and a similar account comes from the Meath Home that, out of 20 patients discharged, only 1 developed insanity. At Maghull, also, only 1 patient has had to be discharged on account of insanity. The clear inference seems to be that if only you put your epileptic early enough under favourable surroundings, give him suitable employment as much as possible in the open air, so withdrawing him from loafing and the consequent temptations of great cities—drink and sexual vices—the chances are that you may save him from becoming insane. And even if he have passed the border line the experience of American institutions seems to show that, if not mixed too much with the victims of confirmed insanity, he may lead a fairly useful life employed in the labour of the colony, though how far he will be amenable to curative influences has yet to be seen. Time forbids my entering upon the financial aspects of the question; but if, as Dr. Spratling contends, the inmates of a large colony can be maintained at about £20 per head—though at present the cost varies at different colonies from £35 to £50 per head—the contrast with ordinary asylum expenditure need not be prohibitive.

With regard to provision for imbeciles—and more especially young imbeciles—as distinguished from the insane, I feel that my feeble utterances may be well compared to "a voice crying in the wilderness," and I do not propose to detain the Section by discoursing on the subject at any great length. I will merely say that, apart from the training institutions, such as Earlswood, the Royal Albert Asylum, Lancaster, the Eastern, Western, and Midland Counties Asylum for Idiots, but little provision has been made for this class outside the metropolitan district, other than as ordinary inmates of the county lunatic asylums. Honourable exception must, however, be made in the cases of the county of Middlesex, where there is a separate annexe in the grounds of the lunatic asylum for 200 imbeciles, chiefly young imbeciles; the county of Northampton, where there are separate wards for 50; the county of Hants, which has a block for 50 idiot children in connection with the county asylum near Fareham; the county of Lancashire, which has utilised Winwick Hall for the accommodation of 50 imbecile boys; and the Birmingham City Asylum at Rubery Hill, which has a separate ward for a similar number. Special accommodation is thus provided by Poor-law authorities for less than 400 imbeciles throughout England and Wales outside the metropolitan district; in the latter there are three special institutions for imbeciles with a total of 6,000 beds, the Darenth schools having accommodation for 1,000 young imbeciles. One system or the other must

be faulty, for if the London standard be the correct one, the provinces ought to provide for certainly no fewer than 5,800 young imbeciles alone. Even taking into account the accommodation for pauper imbeciles, provided by the voluntary institutions, which may be stated as about 450, the gross deficiency of accommodation throughout the country exceeds 5,000.

Had time permitted I should have been glad to refer to the necessity of special arrangements for the education of sane epileptic children in elementary schools. It is often a question as to what course should be taken in the case of a scholar whose mental condition is only abnormal at the time of invasion of the fits. I must content myself by simply referring to the recommendations of the Departmental Committee on Defective and Epileptic Children (of which I had the honour to be a member), and which may be condensed as follows:

EPILEPTIC CHILDREN.

The number of epileptic children is estimated at 1 per 1,000 of whom one-sixth are severely afflicted. It is recommended that epileptic children of normal intellect should be left in ordinary schools if the fits are not frequent or violent fits do not occur in school, and that teachers be provided with instructions as to the treatment of children known to be epileptic. Feeble-minded epileptics may be received into special classes when the epilepsy is not severe; and for such cases it may be necessary to provide guides or conveyances between the home and the school. With regard to severe cases, whether mentally feeble or otherwise, treatment in residential homes seems essential, proper classification being provided. Each house of residence should consist of one floor only, and should not contain more than twenty inmates; but there may be an aggregation of such homes round an educational centre, as in the colony plan. It is recommended that school authorities should have power both to provide homes and to contribute to voluntary homes which conform to the conditions laid down.

II.—FLETCHER BEACH, M.B., F.R.C.P.,

Physician to the West End Hospital for Nervous Diseases; formerly Medical Superintendent of the Darenth Asylum and Schools for Imbecile Children.

DR. FLETCHER BEACH said: The treatment of epileptics naturally divides itself into that of the sane and the insane; and the treatment of the sane epileptic varies according as he is under treatment at a hospital or in private practice or at a colony.

Turning first to the treatment of the sane epileptic at a hospital, it may be well to give my experience as one of the physicians at the West End Hospital for Nervous Diseases, Epilepsy and Paralysis. A large number of epileptics come there for treatment, some having suffered from epilepsy for years, others only for a few months. I have had no time to draw up statistics on the subject, but I find that in all cases there has been an improvement, and in some cases cure, under the treatment pursued. Some of the patients present very interesting symptoms. Thus, one case is a very good example of epileptic automatism. This patient cooks her husband's breakfast and lays it on the table for him in a state of unconsciousness, and only knows that she has had a fit by seeing the table laid when she comes to herself again. In another case the centre of smell is irritated, and the patient complains of the odour of rotten eggs or something even more disgusting than this. In another case the fit takes the form of numbness which affects one half of the body.

I have seen no cases of epileptic mania, for patients in this condition are not brought to the hospital; but many children come, in whom the fits are followed by excitability and irritability, which either passes away after the fits are over or more frequently persists for a considerable time. In these cases the mothers complain more of the excitability than of the epilepsy in their children. I have seen a few cases of Jacksonian epilepsy; in one case craniectomy was performed and some thin pieces of bone, which were apparently pressing on the dura mater, were removed. For a time the fits ceased; then they recommenced and the child became strange in her manner, and was so irritable and spiteful to the children in the ward that she had to be discharged. In cases in which cysts or small growths have appeared on the surface of or under the dura mater and have been removed there has been no recurrence of the fits, but in other cases craniectomy has not proved successful.

As regards treatment by drugs, I am accustomed, both in hospital and private practice, to prescribe bromide of potassium and ammonium, either alone or in combination; lately I have been trying bromide of strontium. The strontium and ammonium bromides are much less depressing than bromide of potassium, and I usually prescribe these in confirmed cases of epilepsy, in which the drug has to be taken for a considerable time. The dose which I administer varies from 15 gr. to 30 gr. three times daily. In cases in which it is necessary to administer drachm doses three times daily, it will be useful to prescribe five drops of liquor strychninæ as well, in order to remove any depression of function of the spinal cord. Liquor arsenicalis should always be prescribed in 4-drop to 5-drop doses in cases in which the bromide is administered, in order to prevent the bromide rash. Clerks, artisans, and others who are away at work from morning to evening should take a drachm dose of bromide at night; there is no danger then that the drug will be forgotten, and it will have the same effect as the 20-drop dose three times daily. In many cases the fits occur at night or in the early morning; in these the drachm dose at night will serve to check the outbreak; but when children suffer from this affection the ordinary dose should be given twice daily, and a double dose at night. Occasionally the administration of bromide seems to have no effect in diminishing the fits, and in these cases my colleague, Dr. de Watteville, prescribes trional in 10-grain doses three times daily with success. Bromide of camphor, which is extolled by some French writers for this affection, I have not myself administered. Frequently we are asked how long it is necessary to take the bromide; my own opinion is that it should be administered for two years after the last fit, and in some cases in diminished doses for a third year.

Of course in every case it is necessary to endeavour to find the cause, so that it may, if possible, be removed. In children we know that pressure on the gums by the eruption of teeth, the presence of worms, undigested food, constipation, and diarrhœa will provoke convulsions; these causes can be removed by lancing the gums, administering an anthelmintic, a purgative, an enema of half a teaspoonful to a teaspoonful of glycerine, and an enema composed of starch, with half a teaspoonful of brandy and three or four drops of laudanum respectively. During the convulsion the clothes should be loosened round the neck, and chloroform should be inhaled. This treatment should be applied when convulsions are due to the puerperal state, uræmia, and morbid blood states. In these cases the cause should as soon as possible be removed; but meanwhile the bromides, under the directions before mentioned, should be administered; and the same remark applies to eclampsic convulsions occurring in brain disease and in general paralysis of the insane. Although the cause cannot be removed in the last two diseases, yet the convulsions can be checked. In cases in which there is a history of syphilis, either congenital or acquired, the iodides of potassium, sodium, and ammonium should be given with the bromides. In one case which was under my care for two or three years the patient never had a fit from the time of his commencing to take the iodide, and in another case, that of a child, the fits became at once reduced. A cause which is frequently overlooked is astigmatism, which gives rise to eye-strain, and so acts as a reflex cause of epilepsy. The condition of the eyes in doubtful cases should therefore be carefully observed.

As regards the diet, I am in favour of omitting meat and eggs for a time; my experience at the hospital certainly leads me to believe that their exclusion does aid in reducing the number of fits. Children whose parents are known to be neurotic or epileptic require to be carefully brought up. I have no time to enter into the details of the conditions which should be observed while the child is growing beyond observing that plenty of exercise in the open air is absolutely necessary, and mental strain must at all costs be avoided. If our opinion should be asked, we should advise the non-marriage of epileptics, as a considerable number of the children will be sure to suffer from the affection.

In a large number of cases the presence of fits prevents the

patient from obtaining or continuing at work, and in such cases treatment at a colony should be tried. I happen to be one of the physicians at the Chalfont Colony for Epileptics, and our experience there is most gratifying. One of the good effects obtained, especially if the colonist had lived in a town, is removal to the country. Life in the open air is, we know, absolutely necessary for epileptics. Many of the colonists arrive in a state of physical debility, and cannot at first be put to full work, but in a short time they recover their health, and are able to undertake their share of it. Regular employment is most important. I mentioned before that epilepsy prevented the patient from obtaining or continuing at work, and this cessation from it has a bad influence upon the epileptic. He believes himself capable of carrying on useful work, and should be encouraged in this direction. As is usual in asylums for the insane and for the imbecile, the kind of work given to the colonist is, as far as possible, that to which he is most accustomed, although out-of-door employment is carefully attended to. At Chalfont the life of the colonist is regular and well-ordered; no alcohol but plenty of nourishing food is allowed, and excitement of any kind is avoided. The result of such a life is a marked improvement in the general state of health—and in the epilepsy—as the fits become less in number. In a few cases deterioration takes place, but this must be expected in a colony of epileptics who suffer from the debilitating effects of the disease. As regards the colonists, the women appear to do better than the men, but the effects of the system are most marked in youths of from 15 to 18 years of age. The reason of this is that they are admitted at an early stage of the disease, and improve in their physical condition, while the fits diminish in frequency. The result is very encouraging, as two homes have lately been opened for children, and we hope for very good results in their cases. The employment is limited at present to gardening, carpentering, and household work for the men, and laundry and domestic work for the women; but it is hoped that, as time goes on, brush making and other trades will be introduced. Colonists who suffer from repeated fits are at first treated with 30 grains of bromide of potassium at night.

As regards the treatment of the insane epileptic, I have had little experience, but formerly I had a large number of imbecile epileptics under my care when Medical Superintendent at Darenth. These were treated in the same way as sane epileptics, with the exception that all the best cases had scholastic and industrial education, so that some of these were discharged cured, and a number were much improved.

As regards the treatment of imbeciles, much attention should be paid to the hygienic conditions under which they live. Exercise in the open air is as necessary in these cases as in epileptics, but should the weather prove unfavourable, dancing, gymnastics, and other games, which involve the active use of the limbs, should be encouraged. All patients of this kind have a feeble circulation, so that they should have as much exercise as possible. It will be well also to see that flannel is worn next the skin. Warm baths will be found to be absolutely necessary, in order to keep the sebaceous and sweat glands in good working condition. The diet should be liberal, and consist chiefly of milk, cocoa and milk, bread and milk, farinaceous puddings, vegetables and cooked fruit. A good supply of meat is also necessary, except in the case of the epileptic imbecile, for whom fish should be prescribed. There is a great tendency in these cases to phthisis and scrofula—conditions which must be treated by administering cod-liver oil and maltine, and steel wine. Diarrhœa, especially in the summer months, is frequent; when it is simply watery in character, astringent remedies, such as catechu and kino will be sufficient to check it; but should it be at all fermentative, small doses of carbolic acid will be required. In some cases in which the diarrhœa has persisted and medicine has not checked it, I have cut off the milk and given instead strong solutions of barley water with good results. As many of these patients suffer from faulty habits, much care is required to keep the skin in as healthy a condition as possible. A dusting powder composed of equal parts of starch and oxide of zinc, or a spirit lotion, will be found useful in hardening the integument, but great cleanliness in nursing is necessary in order to prevent bedsores. Should these unfortunately appear, lotions, or ointments of a stimulating nature must be applied. Some patients suffer from adenoids, which make them appear more dull than usual; their presence is easily detected, and they should be removed as soon as possible.

It is impossible in the limits of this paper to enter fully into the treatment of imbeciles. This will be found in published works on the subject, but I may say that it is necessary to lay a good physical foundation before attempting to improve the mind. All these patients suffer from physical defects and imperfections, and these have to be corrected by properly applied exercises, so as to nourish the muscles, correct the want of co-ordinating power, and improve the use of the limbs and especially of the hands. Great attention should be paid to the correction of faulty habits, and the patient should be trained to evacuate the bowels and use the chamber at regular intervals. The moral training, which should go on side by side with the physical and mental training, is most important, and ideas of justice, self-reliance, prudence, forethought and perseverance, etc., must be inculcated. With regard to the intellectual training, it must be remembered that imbeciles do not pick up notions and ideas like ordinary persons, and so everything has to be taught. Education should in all cases commence by the cultivation of the senses, and especially by improving the sense of touch. Abstract notions are not easily imparted, so that the teaching must be carried out by the use of concrete forms, at first of a simple character, but becoming more complex as time goes on. In many cases the speech is indistinct, and has to be corrected by a speech drill, so that the patient becomes better able to use labials, linguals, gutturals, etc. After the senses have been educated and the speech improved, higher branches of learning, such as reading, writing, arithmetic, drawing, painting and elementary geography, etc., are taught, and when good progress has been made, education in sloyd-wood, fretwork, carpentering and gardening for the boys, and domestic work, sewing and fancy work by the girls, will be found useful, alternating the industrial with the purely intellectual training. It is obvious that treatment such as the above, though I have from want of time imperfectly described it, cannot be carried on at home. Removal to an institution is absolutely necessary, as the patient is then on the same mental plane as the others, the spirit of emulation is aroused, and his life becomes cheerful and bright.

III.—W. Lloyd Andriezen, M.D.

Dr. Lloyd Andriezen referred to the importance of the social side of the question. The conclusions reached by medical men who had devoted special and long attention to the study and treatment of epilepsy and its accompanying mental conditions should be brought forward to guide public opinion and to prepare for legislation. For severe cases of epilepsy, that is, with severe fits, not however associated with marked imbecility or with epileptic furor and violence, life in a farm colony with open-air treatment and manual and industrial training were the best. The food and milk supply were to be watched and examined to obviate against tuberculous infection to which epileptics are prone. Such institutions would be, if planned on a large scale, made relatively self-supporting. In the administration of bromides he had often found the addition of a small quantity (½ to 1 drachm) of syrup of the hypophosphites daily of benefit in averting muscular depression, apathy, and feebleness of circulation. For many years he had tried a combination of antipyrin (5 gr.) and ammonium bromide (15 gr.), and found it suitable in preventing stupor and in promoting a degree of mental brightness. In cases with gastric troubles like fermentation the administration of pure carbolic acid or of tincture of iodine (2 or 3 minims in capsules) was of advantage, and he mentioned cases where he had practised lavage (washing out) of the stomach with decided benefit. In conditions of *status epilepticus* not only should venesection be tried, but injection of normal saline solution (at 99°) should also be given.

IV.—Frances M. Dickinson Berry, M.D.

Dr. Berry maintained the urgent need for some provision for sane epileptic children. She saw many in her work under the London School Board who were quite up to the average in mental attainments, but who could not be admitted into the ordinary schools because of the occurrence of fits. Even in the special classes for mentally and physically defective child-

ren, only those children could be admitted who had fits on rare occasions, or those whose parents were able to foretell the fits and keep the children at home. Of the latter there were a considerable number. For the education of those with frequent fits there was practically no provision whatever nor any means of fitting them for some useful work.

V.—A. HAIG, M.A., M.D.Oxon., F.R.C.P.

Treatment of Epilepsy by Diet.

EPILEPSY not due to any obvious structural lesion or defect resembles migraine (the uric acid headache) in very many points. The attacks of both diseases are paroxysmal, occurring at more or less regular intervals for years in the life of the patients. Both are contemporaneous with a very marked fluctuation in the excretion of uric acid and the amount of this substance in the blood.[1]

Now the uric acid headache can be controlled and practically cured by the control of the uric acid in the blood and urine. Thus, a patient excreting 400 grs. of urea per day and 16 grs. of uric acid will have high blood pressure, and with fluctuations in excretion will have higher blood pressure and headaches. On the other hand, a patient excreting 400 grs. of urea with only 11 to 12 grs. of uric acid will have lower general blood pressure, the fluctuations will also be fewer, and probably insufficient to cause headaches. Now the difference between these two is simply a question of diet and of excluding animal flesh which contains xanthin and uric acid, and vegetable substances such as tea and coffee rich in alkaloids, which are xanthins, so as to convert the one condition into the other, and gradually to lower the blood pressure and to diminish the frequency and severity of the headaches, till after twelve to eighteen months what is practically a cure results.

Now I believe that precisely the same may be done for epilepsy and with equally good results, and that in the great majority of functional cases, especially in children subjected to early treatment, the fits could be reduced to quite insignificant proportions. In the few recorded cases of cure of epilepsy, diet has been the means; but it has hitherto been used in a purely empirical manner, with no definite aim, and no accurate knowledge as to circulation and blood pressure; or in fact, any useful knowledge of cause and effect. It seems to me then that with the more accurate knowledge we now possess, diet might be used as it has never been possible to use it before, and that we might look forward to reducing the fits to insignificant proportions in quite one-half of our functional cases of epilepsy.

In my own practice epilepsy is a rare disease, as it is not often possible to keep such cases in general hospitals; but several adults to whom I have been able to give a more or less correct diet have certainly done well as to frequency and severity of the fits; and in children the results have been so good that the relatives have been impatient to relax the diet rules, believing them to be cured. From America also, where my researches have been closely followed for a good many years, I have had several most encouraging reports as to the relief or cure of this terrible disease; and I believe the treatment has only to be more widely applied for these results to become general.

The diet can do no harm, for I have myself lived on it in the best of health for years; but I would say emphatically that half-measures are useless, and that nothing but the most absolutely uric-acid-free diet possible is worth doing at all.

Notes on Diet for those who Suffer from Gout, Rheumatism, and Allied Diseases.

It is just as impossible to keep up strength and nutrition without nitrogen as without oxygen.

We generally depend for our nitrogen upon substances containing albumens, and it is the habit of this country at the present day to get it almost entirely from animal albumens, in ignorant disregard of the poisons that animal tissues contain.

It can be calculated from the data given in works on Physiology that a man, in order to get enough nitrogen, must be supplied with from 2 to 11.6 grains of albumen per day for each pound of body weight. Children require more; thus a child of 35 pounds weight may require as much as an adult three or four times his weight, and this gradually diminishes till the adult standard is reached, while old and sedentary people may require considerably less than the adult allowance.

But given a sufficient quantity of albumens nutrition, strength, and power of endurance should be quite as good on vegetable albumens as on those of animal origin, and the vegetable albumens are in my experience completely digested and absorbed; so that the result calculated from their percentage composition is generally identical with the result obtained.

Now, the animal foods in common use (meat, fish, fowl, game, eggs) all contain uric acid, or substances of the xanthin group which can be converted into it. The alkaloids of tea, coffee, and cocoa are also xanthins, and to be avoided; and certain other vegetable substances as the pulses contain considerable quantities of xanthin.

Now, the prevention or cure of gout, rheumatism, and their allies require that the body and blood be cleared of all excess of uric acid; but it is obviously impossible to do this while these substances are being continually introduced with every meal that is eaten; therefore the very first thing to do is to cut off all food that contains them. It is also necessary not to eat much more than the above physiological allowance of albumens, for if this is exceeded uric acid will be formed in some excess, and part of this excess may be retained in the body. There is, however, one animal food—namely, milk and its products, as cheese—that contains little or no uric acid or xanthin, and the chief foods available for a uric acid free diet fall into these groups:

(A) Foods to live upon: Bread, macaroni, rice, and other cereals; potatoes and vegetables, nuts and fruit.

And whole nations are often practically dependent on a single one of these substances, so that those who cannot live on a mixture of them all must be hard indeed to feed.

(B) Additions: Milk, cheese, protene,[2] and gluten.

Those who have lived on the flesh of animals have become accustomed to get their albumens in a comparatively small bulk, and are often unable to eat as much of Class A as will supply what is necessary; therefore the addition of a certain amount of the substances from Class B is necessary in their case, either for a time or constantly.

And now applying the rule of the relation of albumens to body weight: A young adult weighing (after deducting weight of clothing) ten stone, or 140 pounds, and leading a fairly active life, would have to consume $140 \times 10.0^{3} = 1{,}400$ grs. of albumens per day, and these might be got as follows:

10 oz. bread (8 per cent. albumens)	...	...	=	344 grs.
2 oz. oatmeal (12 per cent. albumens)	...	...	=	104 ,,
2 pints milk (5 per cent. albumens)	...	...	=	525 ,,
2 oz. cheese (33 per cent. albumens)	..	...	=	281 ,,
2 oz. rice (5 per cent. albumens)	...	...	=	43 ,,
12 oz. vegetables and fruit (2 per cent. albumens)			=	103 ,,
				1,400 ,,

If this man lives and works in the open air, he may have such a good appetite for bread, macaroni, rice, oatmeal, potatoes, nuts, and fruit, that no milk and cheese will be required; but those who live in towns and are more sedentary will generally require to add these to a greater or less extent.

Protene and gluten are alternatives to milk and cheese, and may be used either constantly in place of these or as a change. Those who are too stout, or are afraid of becoming so, should avoid butter, and if they use milk at all should take care to have it separated; and as regards the palate they will find that bread and fruit are quite as nice as bread and butter.

Those who wish to reduce weight must eat a certain amount of bread, macaroni, rice, vegetables, and fruit, and rice is specially advantageous because poor in fat; and then they must add a considerable quantity of protene and gluten; and it is possible in this way to obtain any quantity of albumen, and a diet very similar to that of fish and meat, while avoiding its dangers.

Speaking generally, 1½ to 2 pints of milk and 2 to 3 oz. of cheese per day will be as much as anyone will require to add from Class B, and these may be more or less replaced by protene or gluten at pleasure.[4]

In Class A, bread, macaroni, rice, potatoes, and fruit may each for a time be made the staple of diet, so that four or five changes of food are obtained in the year. Thus, in spring and summer potatoes and fruit may bulk largely. In autumn nuts may be added in place of some of the potatoes, fruit being continued. In winter and early spring bread, macaroni, and rice will bulk largely, with a smaller amount of potatoes, nuts, and fruit.

The only point in making a choice is to get such things as are liked and easily digested, and as the great majority of the human race live on these things they cannot be very far wrong. Digestion is largely a matter of habit, and the power to digest and live upon these more bulky foods can be gradually reacquired.

Many of these diets have the advantage that, while introducing little or no xanthin or uric acid, they keep the blood supplied with the alkaline salts which it requires, and thus aid the solution and removal of uric acid introduced into the body by previous wrong diets. This removal, however, will produce some effects which beginners must remember to credit to their true source, the old diet.

Taking the above figures as approximately correct, a diet scale can be calculated for any individual whose weight is known, which will enable him to find his feet on the new diet and meet his wants for himself, just as he did on the old one.

In some obstinate cases we may be prepared to go further, and even reduce the total nitrogen which controls the formation of uric acid in the body; thus when full diet for a patient

[1] For other very numerous parallels between them see *Uric Acid*, ed. iv, p. 225.

[2] This is a substance obtained from milk, of which it contains the albumen without the sugar or the butter, so that it is useful as a food or as an addition to other foods when butter and sugar are not wanted. Protene, gluten, and some nut foods can be obtained from Protene, Limited, 36, Welbeck Street, London, W.; and other useful articles can be obtained from the following: Blatchley, 167, Oxford Street, W.; Callard, 65, Regent Street, W.; Van Abbott, 104, Wigmore Street, W.; Veigele, 89, Praed Street, W.

[3] For middle-aged sedentary people it will be sufficient to multiply by 9, and those who are stout should take their body weight before they became stout.

[4] 1 oz. of pure protene or gluten is equal to rather less than 1½ pint of milk or 3 oz. of cheese.

is 400 gr. of urea per day, we may reduce it to 350 or even 300 gr. per day, so that uric-acid formation would be only 9 or 10 gr. per day.

VI.—T. Telford-Smith, M.D.,

Medical Superintendent Royal Albert Asylum, Lancaster.

General opinion, and especially that of such public bodies as county councils and boards of guardians, is rapidly awakening to the great need for better provision for epileptics and imbeciles.

Speaking of the epileptics, there has, up to the present, been an almost complete absence of such provision, the only refuge for the majority of poorer epileptics being either the workhouse or the lunatic asylum, both of which places are quite unsuited for either the custody or treatment of these unfortunates.

The marked success of the epileptic colony at Chalfont St. Peter, as also of the home at Maghull, and Lady Meath's home at Godalming, has been an object lesson to the whole of England as to the benefits to be derived from scientific and suitable treatment applied to the epileptic.

For the purposes of such treatment it seems to me that epileptics may be divided into five groups, each group needing to be dealt with differently.

1. Mild cases of epilepsy with normal intellect, to attend ordinary schools.
2. Mild cases of epilepsy with feeble-mindedness, to go to special classes.
3. Severe cases of epilepsy, not insane or imbecile, to go to special homes for special treatment.
4. Severe cases of epilepsy, with insanity, to go to lunatic asylums.
5. Severe cases of epilepsy with idiocy or imbecility, to go to custodial idiot asylums.

With regard to Group 1, the mild cases with normal intellect, I agree with the statement of Dr. Alexander, that "except in very mild cases the epileptic cannot be educated, cannot be taught a trade, and cannot be employed in company with ordinary healthy boys, youths, or men."

For Group 2, the mild cases with feeble-mindedness, provision is now being made in most large towns by the establishment of the special classes, in special centres under the School Board, for defective children, but precautions will need to be taken against accidents due to fits in going to and from school. For both Groups 1 and 2, when the school is situated in a large town, the benefit to the patient of a sunny open-air life is often lost, and the general health suffers in consequence.

For Group 3, severe cases of epilepsy not insane or imbecile, experience is certainly strongly in favour of the farm colony system, located in the open country, and conducted on the family plan, the training being largely manual in character, and the colonists living as much as possible in the open air. Under this system not only do the fits get fewer and milder, but the patient is happier and less depressed by his affliction, while the tendency to progressive mental deterioration is lessened or checked.

For Group 4, severe cases of epilepsy with insanity, there already exists suitable accommodation in our lunatic asylums.

Group 5, severe cases of epilepsy, with idiocy or imbecility, is at present a sadly neglected class, herded for the most part in workhouses and lunatic asylums. Such cases are ineligible for admission to the existing voluntary imbecile institutions. The most suitable place for them would be in a special department in a rate-supported custodial idiot asylum.

In the Royal Albert Asylum, which is a training institution built to accommodate 600 idiots and imbeciles, we find that, in spite of a strict rule against the admission of epileptics, a certain number of cases get elected, and a certain number of patients develop fits after admission, so that on an average we have between 50 and 60 (about 10 per cent.) epileptic cases, of varying degrees of severity, among our population.

In mental capacity they range from profound idiocy to slight imbecility, and we find that many of them are capable of considerable training and education, and are able, under suitable conditions, to lead useful and partially self-supporting lives. Up to the present these cases have, except during the night, been scattered among our general population; but from our experience we consider they would be better in a special department of their own, and we are now building separate quarters for them. These quarters will include large, airy, and sunny rooms both for day and night, and all situated on the same floor, with easy access to the open air. There will be ample lavatory and closet accommodation, and the whole department will be self-contained both for the patients and the necessary staff. The food will be cooked at the central kitchen of the asylum. While practically a detached department, it will be connected by corridor with the main building, so that the epileptic patients can go at all times and weathers to the schools, workshops, entertainments, etc.—a point of great importance in considering where to locate such cases.

A large reform is needed in the present mode of dealing with pauper imbeciles. It has long been recognised by those experienced in the subject that neither the workhouse nor the lunatic asylum is a suitable place for them. The five existing voluntary imbecile asylums, or training institutions, are supported by the contributions of charity, and might, I think, continue to carry on the education and training of the more intelligent cases for the period of 5 to 7 years, as at present; but for the untrainable idiots, and for the trained cases after their term at the voluntary asylums is finished, rate-supported custodial idiot asylums are required for the life-long care and custody of these cases. In such asylums the work of the trained imbeciles could be utilised in the most profitable manner, and such patients would, to some extent, be self-supporting; while for the hopeless idiot and the epileptic idiot and imbecile a safe and suitable refuge would be found where they would be cared for during life, and their existence rendered, as far as possible, happy and bright.

A DISCUSSION ON THE MENTAL CONDITIONS INVOLVED IN POST-HYPNOTIC APPRECIATION OF TIME.

I.—J. Milne Bramwell, M.B.

[The discussion on this subject was opened by Dr. Bramwell, who in the course of some preliminary remarks cited cases of alleged appreciation of time by somnambules, and discussed the different theories in connection therewith. The cases of Beaunis and Liégeois—the one with 172, the other with 365 days' interval—were quoted.]

Bernheim, Dr. Bramwell said, had advanced the theory that hypnosis was a conscious state characterised by mental concentration; he pointed to its spontaneous alternation with normal life, and insisted that hypnotic memory was not always latent.

Beaunis, while admitting the influence of attention and concentration, held that they were insufficient to explain deferred suggestion. Beaunis pointed out the analogy between deferred suggestions—waking at a fixed hour—and appreciation of time by savages and animals, and dwelt on the connection between the periodicity of days, months, and seasons, and periodic organic variations. Beaunis, in opposition to Bernheim, pointed out important differences between the influence of association of ideas on the revival of hypnotic and of ordinary memories. Pierre Janet urged as a fatal objection to Beaunis's theory the view that a number of days represents an abstraction and not a sensation. But to this Beaunis replied that time was not an abstraction but a succession of sensations and reactions bound together according to a certain law.

Delbœuf objected to Beaunis's and Liégeois's experiments that the terminal day fell on a fixed date known to the patients. Delbœuf's own experiments were carried out by telling the subject to perform the act in a certain number of minutes, varying from 350 to 3,200. In 2 out of 13 experiments the acts were carried out to the moment. In such cases the subject was supposed to calculate when suggestion fell due, and to set his organism like an alarum to go off at the appropriate time; but Delbœuf's subjects could not calculate with sufficient accuracy to do this in their normal state.

Gurney considered that Beaunis's explanation did not fully meet Janet's objection that such a length of time was simply an abstraction. Admitting that "a day" was a sufficiently familiar and definite unit to present a concrete character—

that it represented a series of conscious reactions—and, further, that there were periodic organic changes which extended over weeks and months, this did not prove that "the measurement of time was not an abstraction, but had its roots and conditions in the very life of the organism." It did not follow that "sixty-nine days" were concrete in character because this was the case with "one day," and, further, the organic conditions associated with established physiological periods were absent from those suddenly and arbitrarily fixed by human volition. According to Gurney, the passage of time must be registered, looking at it from the brain side alone, not by general gradual change, but by a series of specific changes corresponding to the days and units of measurement, and this was the only kind of cerebral process capable of clearly differentiating the case from that of ordinary physiological time reckoning. Further, unless cerebral events such as were normally correlated with the ideas "sixty," "sixty-one," "sixty-two," etc., really took place, how could the gulf be spanned with precision? Any other kind of change would not know when to stop or how to associate a point it had reached with the order given long before. Granting that these specific brain changes took place, was it not reasonable to suppose that their mental correlate existed and that, hidden from view, there was an actual watching of the course of time? This hypothesis went a long way towards removing Paul Janet's difficulty; from this point of view his "unknown faculty" resolved itself into a known one, working in the normal way, but below the surface of ordinary consciousness. The following experiments, amongst others, were cited by Gurney:

A suggestion was given in hypnosis to be fulfilled at a stated hour thirty-nine days later. The subject on awaking remembered nothing of this, and no reference was made to it until he was again hypnotised and suddenly asked how many days had elapsed since the command was given. He instantly replied, "sixteen," and added that there were twenty-three more to run, both statements being correct.

Another subject was given an order on March 26th to be carried out after 123 days. On April 18th he was re-hypnotised and asked if he remembered the suggestion. He replied at once, "Yes, this is the twenty-third day; 100 more." In answer to further questioning, he said the suggestions came into his mind every few days, when he calculated how many days had passed and how many had to come. His waking memory retained no recollection of the original suggestion, nor of the calculations which he described when hypnotised.

Dr. Bramwell next referred to the experiments which he had reported to the Section in 1898.[1] The subject, C., a girl, aged 19, when subsequently questioned in hypnosis, said:—(1) That when the suggestions were made she did not calculate when they fell due. (2) She did not calculate them at any time afterwards. (3) She had no recollection of them when awakened. (4) No memory of them ever arose in the waking state. (5) She never recalled them by spontaneously passing into the hypnotic condition. (6) Shortly before their fulfilment she always experienced a motor impulse; her fingers moved as if to grasp a pencil and to perform the act of writing. (7) This impulse was immediately followed by the idea of making a cross, and of writing down certain figures. (8) She never looked at clock or watch until after she had written the figures.

Fifty-five experiments in all were made by Dr. Bramwell, but the record of one had been lost, while in another the patient had mistaken the original suggestion, but fulfilled it correctly in accordance with what she thought it had been. Forty-five were carried out to the minute. In eight the patient wrote down the correct time, namely, that at which the suggestion was due, but in these eight cases there were slight differences, never exceeding five minutes, between the patient's estimate of when the suggestion fell due and the moment at which she carried it out. The proportion which these errors bore to the respective intervals varied between 1 to 2,028 and 1 to 21,420.

C.'s calculations, made in hypnosis, as to when the suggestions should fall due, were frequently wrong, but this did not affect the accuracy of the result. Most of the suggestions were fulfilled in the waking state, others in ordinary sleep, and the remainder in hypnosis.

Many of the experiments were carried out in Dr. Bramwell's presence and attested by trustworthy witnesses. C. had sometimes been several hours under conditions which rendered it impossible for her to consult the time. The correctness of some of the results depended on the evidence of C. and her friends. It was, however, to be noted (1) that C.'s normal memory was incapable of retaining the complicated series of figures suggested, and (2) her normal arithmetical powers were incapable of determining when the suggestions ought to have been carried out.

In many instances, Dr. Bramwell did not work out the arithmetical problems involved until the experiment was completed. In the remainder, when he calculated the terminal time, it was generally estimated only approximately. For these and other reasons it was impossible for C. to receive direct or indirect help from Dr. Bramwell. The results of the experiments were only completely estimated after the series was completed, when they were carefully checked by others.

Dr. Bramwell's concluding remarks were as follows:—

According to Bernheim, everyone possesses a certain definite amount of nervous force or cerebral activity. In the waking state this is concentrated in the higher nervous centres—the reasoning part of the brain—in hypnosis in the lower ones, the imaginative or automatic part. All the phenomena induced during hypnosis—conceptions, movements, sensations, images—owe their origin to this concentrated and accumulated nervous force. When the subject awakes this nervous concentration ceases, and the impressions received during hypnosis fade. When hypnosis is again induced, the former state of concentration reappears, and at the same time the lost memories are revived.

This explanation is ingenious, but not in keeping with observed facts. If I suggest to a subject that on waking he will remember the events of hypnosis, he invariably does so. Yet, according to this theory, the redistribution of nervous forms to the higher centres should inevitably have prevented this. Again, suggestion may rob the hypnotised subject of the power of recalling the events of past hypnoses. If, however, Bernheim's explanation be correct, the lost memories could not escape revival, seeing that they must have reappeared when the nervous force was again concentrated on the lower centres.

Further, as numerous and varied hypnotic phenomena can be simultaneously evoked in the same subject, this clearly shows that hypnosis cannot be explained by the concentration of attention on any one given point. Again, the fact that the multiple phenomena are sometimes similar in character to the isolated ones, indicates that the explanation of hypnotic phenomena by means of the amount of attention concentrated is also fallacious. If all the attention is requisite for the production of one hypnotic phenomenon, and yet while it still lasts many others are simultaneously induced whence do these derive that excessive amount of attention which is said to be necessary for the induction of the primary phenomenon?

Admitting that hypnotic memory is associated with this psychical concentration, the evidence in favour of the frequent and spontaneous occurrence of the latter is far from convincing. The fact that two subjects stated in hypnosis that each of them had once dreamt of a suggestion during natural sleep does not justify the conclusion that somnambules pass easily and spontaneously from the normal to the hypnotic state. Further, although the memories of hypnosis, whether self-induced or not, are lost on awaking, these can easily be evoked by questioning in subsequent hypnoses. Thus, the subjects who passed spontaneously into the hypnotic state and thought about the suggestions could be made to recall the fact that they had done so. Despite this, Bernheim's generalisations are founded on two dreams, and he has apparently made no attempt to discover the actual mental conditions involved by means of the simple method of interrogation in subsequent hypnoses.

Granting both the points in dispute, that is, the psychical concentration and its spontaneous occurrence, the difficulty is still unsolved. If no trace of the hypnotic memory remains in the normal state, what advantage does the normal consciousness obtain from the unknown or forgotten fact that the hypnotic consciousness recalls the suggestion at some time before the date fixed for its fulfilment?

Beaunis's explanation assumes (1) the existence of some kind of unconscious faculty for measuring time, and (2) its applicability to the cases in question. According to Beaunis, certain persons can awake at a given hour, others always know what o'clock it is, and savages can appreciate time, but in support of this he does not cite a simple example. To take

[1] BRITISH MEDICAL JOURNAL, 1898, vol. ii., p. 670.

the simplest case, that is, that of waking at a given hour, many persons believe they can do this. Usually, however, the self-waker only shows the power of giving himself a lighter sleep than usual; he wakes several times during the night, and in the end does not always hit the exact hour. On behalf of the Society for Psychical Research several persons who believed they possessed this power of self-waking tested it in a rigorously scientific manner. The results were disappointing. One experimenter only succeeded on 2 occasions out of 17, and one of these was his usual hour of waking. Another was successful 5 times out of 29, but on 3 of these he woke at other hours as well. The third was right 2 out of 13 times, while the fourth succeeded in 4 instances only out of 46.

Admitting that certain persons possess the power of awaking at a given hour, this does not explain the fact that it is almost universal amongst somnambules. It is an attempt to explain the little known in terms of the less known, and the analogy, even if successfully established, does not solve the problem, but adds another to it.

Granting that the savage possesses some natural power of appreciating the passage of time, it would be of little use to him in cases such as those cited by Delbœuf and myself. If he cannot count above 5, how is he to bring his time-appreciation powers to bear on a suggestion which starts from say 3.15 yesterday and is to terminate in 20,840 minutes?

The objections raised by Gurney to the views of Bernheim and Beaunis are reasonable, but while agreeing with them I have attempted to supplement them by others. His theory, however, does not apply in all cases. According to Gurney the hypnotic consciousness marked the passage of time in the same way as the waking consciousness might have done. The former knew exactly when the correct moment had arrived, and, pushing the normal consciousness on one side, as it were, carried out the command. This theory would be acceptable if all hypnotised persons acted in the same way as those he describes.

My cases, however, do not confirm this view in its entirety. When C., for example, was questioned in the interval between the giving of the command and its fulfilment, she neither knew how many days had passed nor how many had to come. Unless expressly ordered to do so, her hypnotic consciousness apparently never made any calculations at all. Further, when she set her organism to go off at a particular hour by means of erroneous calculations and self-suggestions, the phenomena still appeared at their appropriate date, and yet no trace of any memory of the process by which the original mistakes had been corrected could be discovered in the hypnotic consciousness.

To enable C. to carry out her time experiments some mental process must first solve a complicated arithmetical problem, then check the time as it passes, and finally start and regulate the motor acts which carry out and record the suggestion. Now, with few exceptions—and these do not include phenomena like those just referred to—every event of hypnotic life can be recalled by questioning in subsequent hypnoses. C., however, could recall nothing beyond the fact that the fingers of the right hand had twitched at the moment the suggestion fell due, and that the idea of certain figures had then come into her mind along with an impulse to write them down. Beyond this everything was a blank. Apparently, therefore, C.'s ordinary hypnotic consciousness was not responsible for her feats in calculation and time appreciation. Does she possess a third personality endowed with powers which transcend those of the ordinary hypnotic one? If so, how did these arise, and how came they to be evoked? To these questions we can for the moment give no answer whatever.

II.—W. Lloyd Andriezen, M.D.

Dr. Lloyd Andriezen agreed in the main with Professor Beaunis's notion of time as set forth in the latter's views on hypnotic appreciation of time, namely, that "time" represented a succession of sensations—nerve currents—occurring in the brain according to a certain law. In normal subjects the capacity of estimating the passage of time was developed in different degrees; in some it was very imperfect, and its activity attended with feelings of confusion and difficulty; in others it was facile and fairly accurate, and in a few exceptional subjects it might have almost the ease and precision of an automatic and machine-like process. Even vegetative idiots—helpless, bedridden, and somnolescent as they were—presented clinical phenomena which pointed to a capacity in them for feeling the lapse of time. The tics and rhythmical oscillating movements practised almost automatically by many idiots and imbeciles could be easily conceived as "marking time" after a crude fashion. The action of the cardiac and respiratory centres were rhythmic, and the latter especially might be physiologically connected with special mechanisms in the central nervous system, which were able to appreciate the passage of time, though this view was put forward tentatively. In hypnotised subjects the capacity of appreciating time might be enhanced by the special awakening of such subconscious mechanisms into activity. There were two factors to be distinguished in the problem, namely, (*a*) the action of the psychical centres, which were concerned in calculation—that is, in resolving so many thousands of minutes into days and hours (Flechsig's association centres), and (*b*) the action of centres below these, that is, infrapsychical centres. The psychical centres were in themselves too subject to a host of multitudinous and disturbing stimuli in the waking state to permit of their being able to estimate with accuracy the passage of time. Their action would not be comparable in accuracy with that of centres of a lower grade, that is, the infrapsychical centres alluded to, which might subserve the operations of time-measurement with greater freedom of disturbance, and therefore with greater accuracy. He therefore regarded Gurney's theory favourably as regards the localisation of that function—namely, that it was subserved by a secondary consciousness, or, as he (Dr. Andriezen) would put it, by infrapsychical centres of the brain. That such centres existed in the brain there could be no doubt. Infrapsychical centres may rise into activity in pathological conditions of grave hysteria, hystero-epilepsy, idiopathic epilepsy, stupor, etc.; or they may be evoked into action by hypnotism. Some of the extraordinary local vasomotor and other phenomena induced by hypnosis could only be explained in that way. Subconscious centres rising into activity out of place and season, and so dominating a person's conduct and behaviour, as in the diseases mentioned, were quite familiar to alienists. Some cases of double consciousness were of this character, though not all. They were physiological centres gone wrong, acting out of place and out of season. Though there were differences in the two sets of conditions evoked—namely, the one by disease, and the other by hypnosis—yet there were fundamental resemblances. In Dr. Andriezen's opinion, hysteria afforded a condition intermediate between the two, and showed some characteristics common to both, as Gilles de la Tourette and others had also pointed out. The accuracy of the estimate of time in Dr. Bramwell's subjects was noteworthy, especially when it was realised that the subjects were young and uneducated girls. Yet these patients must have possessed some mechanism in their brain—though uneducated—for translating the minutes in the experiment into days and hours. In some hypnotised subjects two phases were present—namely, (*a*) the action of subconscious areas roused into special activity by hypnotic suggestion; and (*b*) and a conscious, purposive, voluntary element, which might in hysterical subjects assume the form of fraud or easily lend itself to deception—but this seemed to have been eliminated in Dr. Bramwell's experiments. The experiments showed that the post-hypnotic appreciation of time was located in subconscious centres whose activities could be carried on independently of and apart from the psychical centres of the waking state, and were another valuable confirmation of the doctrine that important operations and functions were going on in the brain below the threshold of consciousness. They stood as yet on the verge of discoveries in that branch of psychological science, and the questions raised demanded the most careful investigation.

III.—G. E. Shuttleworth, B.A., M.D.

Dr. Shuttleworth referred to the existence of a keen sense of time appreciation in the case of some imbeciles, instancing the case of a patient formerly at Earlswood, able to tell fairly accurately the time at any hour of the day or night. Whether this was a reversion to a primitive instinct, or whether it was

due to a specialised attention to the subject, as seemed to be the case with regard to phenomenal memory of numbers, it was difficult to say. These special gifts often disappeared when the mind became more active and employed in a greater number of directions.

Reply.

Dr. Bramwell, in reply, said that, granting Dr. Shuttleworth had observed an increased appreciation of time in feeble-minded or even idiotic children, it was doubtful if this could be explained as he suggested, by their increased attention to passing events. Generally speaking, attention was in direct proportion to mental development. Its most rudimentary form was to be found in idiots who possessed little spontaneous and absolutely no voluntary attention. It was true that several cases had been recorded where extraordinary powers of arithmetical calculation existed in individuals who were distinctly feeble-minded. Here, however, the problems did not appear to be solved by an increased faculty of grasping and retaining their details. On the contrary, they apparently came into the ordinary consciousness in a complete form, as a sort of uprush from some hidden workshop. The "calculating prodigies," like Dr. Bramwell's hypnotic subjects, could not tell how the problems had been solved. Possibly increased time appreciation in the savage depended on a constant and accurate observation of the events which passed in the world about him. Dr. Bramwell did not agree with Dr. Andriezen in thinking an analogy existed between hypnosis and morbid states, such as stupor, epilepsy, etc. Hypnosis was a physiological not a pathological condition, and could be induced more readily in the healthy than in those suffering from nervous disorders. The hypnotic subject, while losing none of the powers which had characterised his waking life, had acquired others and far-reaching ones over his organism. Above all, there was no decrease in his volition or increase in his automatism. Dr. Bramwell agreed with Dr. Andriezen in thinking that the time experiments referred to must have been carried out by the action of the higher nerve centres. No mere physiological process could solve such complicated arithmetical problems and mark the passage of such periods of time. Not only did a secondary consciousness exist in hypnosis, but this could be easily demonstrated in every deeply hypnotised subject. Of this, so-called "automatic writing" was an example. Here a problem suggested during hypnosis and involving mental calculation was carried out and recorded in the waking state, when all the subjects attention was concentrated on something else. The waking consciousness did not know that the hypnotic consciousness had received a problem to solve, and was equally ignorant of the fact that it had done so after hypnosis was terminated. Further, a phenomenon still more strange, it failed to notice the motor acts, writing of figures, for example, which recorded the result of the mental processes of the secondary consciousness. These motor acts, automatic as far as the primary consciousness was concerned, were performed consciously by the secondary personality, for their memory could be recalled by questioning in reinduced hypnosis. Dr. Bramwell's only objection to Gurney's theory was the absence of hypnotic memory as to the time calculations. Some consciousness, however, must have carried them out. That this was a third personality below the threshold of ordinary hypnotic as well as of ordinary waking life seemed probable. Dr. Bramwell suggested this, however, more as a subject for further investigation than as a definite theory.

URGENCY OF LEGISLATION FOR THE WELL-TO-DO INEBRIATE.

By J. F. Sutherland, M.D.,
Deputy Commissioner in Lunacy for Scotland.

The Inebriates Act, 1898.

The closing year of the 19th century has witnessed a great and important step taken by the legislature of this country to deal rationally with habitual drunkards from the lower stratum of society. The Act of last year, hailed with satisfaction by every thoughtful citizen, was passed in the interest of the inebriates themselves, of their families and dependents, and of society. Is it too much to indulge the hope that the opening year of the 20th century will witness the conferring of a like legislative boon upon the well-to-do inebriate, in which the element of compulsion will, for the first time, most righteously and properly find a place? His case and condition from every point of view is as clamant. Were the urgency of the case, and the absolute reasonableness and justice of the proposals which I shall submit for your judgment, the guiding principles in securing legislative interference, then, assuredly, the answer of our law makers would be in the affirmative.

The Act of last year was not obtained without the expenditure of many, too many, years of labour, not made easier by many experiences of hope deferred, on the part of zealous advocates of the besotted and submerged thousandth in our midst. Society has looked on with a strange apathy, *laissez-faire* has prevailed, and the alcoholic derelict has drifted like tangle in the tide. Among the band of true pyschologists and social reformers, who were in the front rank throughout many campaigns was the late Norman Kerr. In spite of failing health he rendered yeoman service to the cause. Than he, it will readily be acknowledged, there seldom rode forth to wrong's redressing a worthier Paladin.

Compulsion, as you are aware, will now be applied for the first time to the drunkards who fall frequently into the hands of the police, followed by detention in reformatories for a maximum period of three years. Occasionally, very rarely I should say, a well-to-do inebriate will get caught in the meshes of this Act. But it is not intended for them. The mesh is too wide.

I cannot too strongly impress upon you the fact that the falling into the hands of the police is a mere accident or incident of the alcoholic habit. Among the poorer classes the house accommodation and the means of the wage-earner do not admit of that safeguarding and sheltering which are the lot of the more fortunate and better circumstanced classes of society, who, in consequence, escape the solicitous attentions of the guardians of public order and of the new legislation.

The Herschell Bill of 1894.

Why the Act of 1898 now in operation, or some of its provisions modified to suit the case more appropriately, should only apply to one class, and that maintained at the joint expense of the imperial and local exchequers, is difficult of comprehension. It would appear strange if vulgar theft was punished, and fraud and astute swindling winked at by the law. The Herschell Bill of 1894, to avoid the appearance or suggestion of class legislation, provided for the two kinds of inebriates, the police and non-police, by two methods adapted to the circumstances and habits of each. Later, I shall refer to the one or two weak points in that part of the Bill applicable to the well-to-do inebriate. The seclusion of the police drunkard was defended on the grounds of public order and decency, in the interests of family life, and in order to reduce to a minimum the commission of grave crime, and likewise to bring about the reformation and restoration to society of those who are not hopelessly unsalvable. All these considerations, save the first, apply equally to the well to-do inebriate. One would have thought that there was much in every way to justify the experiment being made with the class who could pay for their care and treatment in retreats. Such a feeling is strengthened by the reluctance of local authorities to provide reformatories for police drunkards. Whatever individual opinions may be as to what the local authorities should do, collective opinion—by that I mean society—by leaving him alone, gives countenance to the theory entertained by a good many, although not openly expressed, that the drunkard fulfils his destiny in life in his own way, and should be allowed to do so.

Objections to the Bill of 1894.

The objections to the Herschell Bill of 1894 were that it was a danger to the liberty of the subject, owing to the constitution of the court which left out a jury and the right of appeal. Such danger is a veritable myth when applied to the notorious inebriates present to the mind of every one whom I have the honour to address. Some minor objections were not without point, and one would imagine if these objections could be met and removed, the way would be clear for speedy and united action.

Corollary of Act of 1898.

One thing, however, is pretty sure, legislation cannot rest where it is in a free country, just as it has not rested in other free countries. Sanitary, lunacy, and criminal laws do not stop at one class, but apply to all. The obvious corollary and necessary complement of the Act of last year is an Act dealing compulsorily with the well-to-do inebriate which can be so constructed as to be free from every possible and real objection, and certainly from all the objections so far publicly urged against the Bill of 1894 by the most competent and exacting of critics.

It is safe to say that the vast number of the well-to-do inebriates will never voluntarily submit either to the deprivation of the control of their affairs, or to lengthened confinement in retreats. In a word, compulsion might mean, as a first step in the process of intervention, the appointment by the Court of something in the nature of a *conseil de famille*,[1] and failing the success of that after trial, a committee of the estate, or its equivalent in Scotland, judicial factory, and if neither of these are going to succeed, the seclusion of the inebriate himself would become a necessity. Nothing but much hurt to all concerned (the individual and society), so far as I can see, is to be gained by delay in bringing this class within the pale of legislation, just as not much is to be learned from the operation of the Act of 1898 applicable to the police drunkard. Perhaps on the whole it might have been better if compulsory legislation for the well-to-do inebriate had come first, because in that case there would not, so far as this country is concerned, in the experimental stage now entered upon, be the difficulty and reluctance of local authorities to provide retreats. It is safe to say, once the element of compulsion for the well-to-do inebriate is part of our law, retreats will soon spring up to meet the demand.

Probable Number of Inebriates.

From long and close observation of this problem I should be inclined to say that of chronic inebriates whose case and condition call for urgent interference, there are approximately in England 10,000, in Scotland 2,000. They are in the proportion of 1 to 9 insane.[2] There is no possible mistaking this lot. Specimens are to be met with in every town or parish in the ratio of something like 1 to 2,000. They are marked men and women, and of them an admirable definition is to be found in the Acts of 1879 and 1888. The truth is, they are much worse than the definition in the Act implies. Their habits of inebriety are notorious, leading to all disregard of personal honour, of family and social obligations, and to the wasting of their substance and the wreckage of their homes.

To talk of doing a possible injustice to such individuals, or to suggest that seclusion obtained in open court, and before a jury, is an interference with the liberty of the subject, is to burlesque the sacred name of justice, and to drag the high ideal of the liberty of the subject—the palladium of every Briton—through the mire of unrestrained licence. The kind of men and women to be scheduled for a fair and thorough inquisition will recur to every one of you. Doubtful cases I would not be inclined to meddle with. But, then, we are asked, what about the incipient cases, and those whom some might think bad enough for interference? Are they to be allowed to go on unchecked until they pass into the class ripe—and more than ripe—for compulsion?

Drunkenness an Offence.

With Sir W. T. Gairdner and Sir Dyce Duckworth I would be inclined, in their cases, to make drunkenness *per se* as an offence or vice deserving of punishment, to be met by, first, exposure in a court of justice, and sureties and recognisances; secondly, by fines; and perhaps after trial of these, thirdly, by remission to a higher court. Society would thus adequately and justly mark its sense of displeasure of the overt act of drunkenness, whether accompanied by incapacity or disorderly conduct and violence or not. If punishment is going to be effectual in preventing such from falling into the ranks of the notorious inebriate, for whom seclusion for long periods has become a necessity, the kind and extent I have indicated should suffice.

Definition of Drunkenness.

It is said difficulties would at once present themselves in any attempt to define drunkenness. I admit the force of that, and therefore would leave it to the definer—the magistrate—with the aid of witnesses. The view of the toper in the Greek epic recurs to one:

> The rule I think is right,
> Not absolutely drunk, nor sober quite.

No doubt there are degrees of drunkenness, just as there are degrees of insanity. Yet it is not maintained that all certifiable insanity must come up to a pattern.

Like insanity and most things drunkenness is relative. But it must be held that a state of drunkenness, like a state of insanity, implies certain well-defined manifestations, some or all of which are present.

I will content myself with alluding to speech which is indistinct, to unrestrained garrulity, to incoherence, to locomotion (inco-ordination more or less), to eccentric, foolish, and it may be criminal conduct (conduct quite unlike the usual or normal), to a diminished regard for the proprieties and decencies of life.

The drunkard may be noisy short of the degree required to constitute a charge of riotous conduct, and not incapable to that extent which would render the charge of incapacity a relevant one. All these and other evidences betoken a loss of controlling or inhibitory power which is in evidence in sobriety. Unlike insanity sobriety has a standard to go by.

Therapeutics of Inebriety.

But in the penal or therapeutic treatment of drunkenness, the vice—I am not speaking of it now as the disease, which it unquestionably is, the lash must have no place. We are two centuries beyond that, whatever philosophic and well-meaning persons may think of the stimulating and salutary effect of the lash on the grey matter of the brain of the sot, it is certain beyond the shadow of a doubt no Parliament in this country will sanction such a corrective. And if that be so, *a fortiori*, it is an outrage upon ethics and humanity to propose flogging for the chronic inebriate, upon whose mind and body years of indulgence has left indelible impressions, even if as yet in this, the era of pathological psychology, the microscope and the specialist have not in every case detected lesions indicative of structural and functional change. To suggest the lash for the inebriate requiring compulsion and seclusion is to betray a superficial acquaintance with his psychology.

Difference between Police and Non-Police Inebriate.

Let me invite your attention for a moment to the difference between the chronic inebriate who falls into the hands of the police, and for whom the Legislature has made provision, and those who do not. It is one of circumstances rather than degree. The proximate results of ethylic alcohol upon the nervous system and viscera, and through these upon conduct, like the indirect results indicative of pathological changes are much the same in all grades of society. There is this marked difference, however. In the case of the well-to-do inebriate, his incapacity is hidden from the public gaze, and his violence is either restrained by timely intervention or concealed if it has been used against members of his household or others. Thus it is he escapes the solicitous attentions of the authorities, and does not, except in very few instances, become offensive or dangerous to society.

A Disease or Vice or Both.

It is far from my intention to enter upon the fruitless task of attempting to determine whether the chronic inebriety, which I am anxious to see restrained, is a disease or a vice, or both, further than to say that in those cases where the evidences of vice are strong, the vice if long indulged leads in all cases to disease, even if to ordinary as well as to extraordinary observers, the nervous and other systems do not present distinct evidence of degeneration, and in a large number of cases to mental and bodily change. You will see I have said nothing about the part biology, heredity, and diseases present before the habit has been acquired, play in the *rôle* of inebriety. In these aspects there is not only room for differences of opinion, but considerable doubt. My case is strong enough without their aid, and the views I have just

put forward will, I think, meet with the acceptance of al reasonable men, whether lay or medical. The individuals for whom I bespeak your aid to secure speedy legislation are, by long indulgence of the habit, diseased both physically and mentally, and are fit subjects for the care, protection, and treatment I now advocate, and which would be secured with safety to every interest, including the highest of all—the liberty of the subject—by the methods which time will only permit of my outlining. That is in brief my proposition. The lash or flogging nowhere comes in. It is out of place for all drunkards, and it would be hardly less barbarous to suggest it for drunkenness the vice, as it would be to apply it to the alcoholic maniac who commits a grave crime under its influence, no matter whether the passing mania be induced by one or more bouts.

Liberty of the Subject.

Just a word or two about the "liberty of the subject," which in this country is an axiom, and, like many axioms apparently simple, transcends ordinary intelligence. Of the two antithetical truths—the rights of the individual and the rights of society—some people have no difficulty in appreciating the one, but find it all but impossible to grasp the other. The rights of the individual must be subordinated to the rights of society. That is the object of Government. But our laws do present striking incongruities, and none more difficult to justify than the refusal to accept intoxication as an excuse for crime, and the treatment of intoxication itself as beyond the jurisdiction of the law, although with many the certain avenue to crime. No less incongruous is the law which makes attempted *felo de se* a punishable offence. And yet for this slow *felo de se* of getting habitually inebriated the law has no penalty! Of habitual drunkards there are two classes (when temperament and disposition are made the dividing line)—those who get drunk and remain peaceable and guiltless *quoad ultra*, and those who get drunk and commit a statutory offence or crime. Those in the second category alone are dealt with, and then only for the resultant offence or crime, which is largely, as I have explained, an accident or incident of the bout, and which, among the better classes, thanks to the timely intervention and care of friends, is prevented, and, if not prevented, does not come to the knowledge of the authorities. The law pounces upon the habitual drunkard who is reported as guilty of beating his wife and children. But if he, to the knowledge of the authorities, breaks their hearts and harries their homes by years of dissipation, the law is not only too magnanimous to punish him in the mild manner I have suggested as a first instalment, but it hesitates to pronounce him a diseased subject, and schedule him for compulsory seclusion. It is frequently said by scoffers of social reform that the compulsion of drunkards is an attempt to make people sober and good by Act of Parliament. And why not? This is exactly what, *mutatis mutandis*, the Ten Commandments were meant to do.

Legislation Outlined.

Very briefly let me put before you an outline of the legislation which would meet the case and safeguard every interest. (1) Definition of habitual inebriate (Acts of 1879 and 1888). (2) Inquisition at instance of Public Prosecutor, based upon the precognitions of witnesses, with the approval of revising Crown Counsel. This is preferable on many grounds to the course followed with Chancery lunatics. It more closely resembles the procedure followed in dealing with criminal lunatics who are dangerous or offensive. (3) Constitution of the Court—A county court judge or sheriff, chairman of quarter sessions, or stipendiary, each sitting with a jury *in camera*, or otherwise as the alleged inebriate may elect. (4) Witnesses, ordinary and medical, to be examined upon oath. (5) Chronic inebriety having been established to the satisfaction of the court, the judge would be empowered first of all to appoint a committee of the estate or judicial factor, or something in the nature of what the French law provides, namely, a *conseil de famille*, and, should trial of these methods fail, compulsory seclusion of the well-to-do inebriate under proper safeguards. (6) The right of appeal to a higher court. It is difficult to see where anything in the nature of a *chantage* or blackmailing, the *lettre de cachet* or oppression could possibly come in, any more than it is now with Chancery and criminal lunatics, found so by inquisition. I am inclined to think there would be less likelihood of miscarriage of justice than is the case at present with many of our laws. It has been alleged in high quarters that near relations would have sinister objects to serve in putting the machinery of the contemplated law into operation, and would not scruple to use it oppressively. I am not a prophet, but I believe experience will be in quite an opposite direction, namely, that of relations, actuated either by kindly and mistaken consideration, or by base ones, concealing the infirmity. Of course, if relatives do not come forward, and from mistaken notions shelter the drunkard, then the law which might save him and them will, unless he commits an offence or crime, remain a dead letter. Relatives who do intervene would require to be protected against the possibility of the inebriate making a will adverse to them, or disposing of his substance to their disadvantage. It is not intended that compulsion will supersede voluntary submission as at present. It will run alongside of it, and have the effect of inducing many who now, from perverseness and mental obliquity, resent interference with their insane conduct, to avail themselves of its provisions, and thus save the exposure of themselves and their families.

In conclusion, I would ask your consent to move, after discussion, the following practical suggestions: That the Psychological Section respectfully request the Council of the Association to consider—having regard to the urgency and importance of the question—the advisability of remitting it to the Branches of the Association for their opinion, with a view to such action being taken separately and unitedly as would secure legislation, providing as a first step after habitual inebriety has been established in open court or otherwise, as the inebriate may elect, before a judge and jury, for the management of his or her affairs by a *conseil de famille*, a committee of the estate or judicial factor, and, failing that, to arrest the habit, the seclusion of the person. There would be the right of appeal to a higher court; and the notification of all inebriates to the vendors of liquor. This last was recommended by the Scottish Departmental Committee of 1894, and by the Royal Commission on Licensing now sitting. Each Branch of the Association might enlist the sympathies of statesmen and members of Parliament in its own sphere. Discouragement we may expect, but from the experience of the past we need not despair. In the impressive words with reference to this subject, of a French statesman who visited Glasgow ten years ago, I would close: "Surely these things are not without a remedy in a land where blows the breeze of freedom, and where the Christian faith soars high above the coarse ties of flesh."

NOTES.

[1] Something of this kind is done in the Channel Islands. [2] If to these are added police habitual drunkards, it would be 1 to 5 or 6.

DISCUSSION.

Dr. SEYMOUR TUKE cordially agreed with Dr. Sutherland that this was a question too easily passed by. Year after year sad cases were met with in which if any such means as the French *conseil de famille* had existed, untold misery might have been prevented. Evidence on oath, whether in public or private, ought to be allowed, as in a Chancery inquiry. It was not so much the drunkard that suffered; it was the wife, husband, children, family, and connections—the home and all that made life dear to most of us. Though it might be difficult to devise legislation it ought not to be impossible. It was often forgotten in speaking of the liberty of the subject that that subject might grossly interfere with the liberty of other subjects, especially those dependent on him.

Mr. J. F. BRISCOE said there were three points to be considered with regard to the drunkard: (*a*) The prevention of drunkenness by severe legislation—stopping brewers and retail sellers from selling intoxicants to the alcoholic; (*b*) the lash to be applied rather to the brewer than to the drunkard; (*c*) drunkenness was a sign of insanity.

Dr. LLOYD ANDRIEZEN said that there were two points in Dr. Sutherland's proposal which should be specially noticed. Legislation to reach the drunkard in his home and in his private life would have to be too inquisitorial, a method not likely to commend itself to legislators and sociologists. General practitioners had the best means of combating drunkenness. Cases of that sort passed first through their

hands, and they had a confidential position in the estimation of the family. Alienists should bring their special knowledge to the general practitioner and thus strengthen his hands. The Act of 1898 now in force contemplated detention only when persons were convicted three times before a proper authority. If its provisions should be extended without distinction of class, it would reach well-to-do and poor inebriates alike. Proposals regarding laying the lash either on drunkards or on sellers of liquor were reprehensible—as unpractical, harsh, and unscientific.

Dr. Bower emphasised the necessity for compulsory methods of treatment of the inebriate, and referred to the constantly-recurring cases seen in general practice for whom little could be done under the present provisions of the law.

Dr. Manning asked why Dr. Sutherland insisted upon the impropriety of using the lash. Was it anywhere seriously contemplated? Possibly most of those present had at times a desire to try the effect of a thrashing in those cases when all efforts in other directions failed.

Dr. Smalley was of opinion that the Government had been rather unfairly criticised. The subject was a most complex one, and caution was necessary in carrying out the required arrangements. There was no intention of allowing the Act of 1898 to be a dead letter, but if patience were exercised probably some institution would soon be available.

Dr. Fletcher Beach said that the question in the paper was one that had been to some extent sprung upon the members, and was one that some of them had not had sufficient time to consider. He would propose that a resolution be passed by the Section and sent to the Council, with a request that it be sent round to the Branches of the Association for consideration, and that any report received thereupon be discussed at the meeting of the Psychology Section of the Association in 1900.

The following resolution was then moved by Dr. Sutherland, seconded by Dr. Fletcher Beach, and carried:

The Psychology Section respectfully suggests that the Council of the Association be asked to consider the advisability of procuring early legislation for the well-to-do inebriate, and to refer the question to the various Branches of the Association for their opinions.

ALCOHOLISM IN ITS RELATION TO HEREDITY.

By G. Archdall Reid, M.B., C.M.Edin.

In medical as in general literature one constantly sees this or that post-natal phenomenon in the child attributed to the previous intemperance of the parent. Above all, insanity, epilepsy, and especially an increased craving for drink, are supposed thus to have origin. Industrious members of our profession have collected instances without number, and statistics without end, proving that drunken parents tend to have drunken children, or that the offspring of drunken parents are often insane, epileptic, or neurotic. "See then," they exclaim, "what a terrible thing is drunkenness, which thus visits the sins of the parents on the children."

Now, while I am prepared to concur heartily in the dictum that drunkenness is terrible, I suggest that it is as yet unproved that parental or ancestral drunkenness affects offspring in the manner described. It is beyond doubt true that the offspring of drunkards are very generally intemperate, and that they are sometimes epileptic, insane, or neurotic, but to attribute these evils to the influence of parental indulgence acting through heredity is, I think, to confuse *post hoc* with *propter hoc*.

In every drunkard's crave there are two necessary factors, the one inborn, the other acquired. The inborn factor is the capacity for delighting in the sensations which excessive indulgence in alcohol induces. It is a necessary factor, for of course no one would get drunk unless he were capable of finding drunkenness delightful, either as positive pleasure or as dulling pain. This capacity for enjoying alcohol is comparable to the inborn capacity for enjoying sugar or salt, or tobacco, or sexual indulgence, and so forth. The second necessary factor in an inebriate's crave, the acquired factor, is the memory of the delights conferred by former acts of drinking. It is a necessary factor, for, of course, no one craves for alcohol unless he has had previous experience of it. The inborn factor, like other inborn traits, is transmissible from parent to child, and, therefore, just as big men tend to have big children and fair men fair children, so a man capable of delighting deeply in alcohol tends to have children with a similar peculiarity. The acquired factor, as no one will dispute, is not transmissible, for no one will maintain that a child inherits any recollection of the sensations induced in the father by acts of indulgence before the child was born. So far, I think, we must all be in agreement.

Next let us consider the point in dispute—a point of such importance that on it hinges the matter in hand, as well as the whole question as to what method shall be pursued in promoting temperance reform and many other important questions highly interesting to the medical psychologist. May I ask you not to prejudge what I have to say simply because it is new, and to remember that in this special case I merely apply a scientific doctrine which is held in general by the great majority of biologists—the doctrine that acquired traits are not transmissible?

To say that children are drunken because the parents drank is to affirm the transmission of an acquired trait. Though the question of the transmission of acquired traits has been the burning scientific question of the age, though the whole plant and animal worlds have been ransacked, yet no single instance of the transmission of such a character has yet been proved. *A priori*, therefore, it is most unlikely that the acquired effects of alcoholism are transmitted, and before we accept their transmission as proved we should insist on very clear evidence. Has such evidence been furnished? Most emphatically never. To compile statistics proving that drunken parents tend to have drunken children is to demonstrate merely that the inborn capacity to delight in drink is transmissible, a thing no one has doubted. So, also, big men tend to have big children. It does not prove, as is commonly assumed, that the capacity undergoes increase in the child in consequence of the drinking of the parent; nor does it prove, as is also often assumed, that it would be eliminated or diminished by the parent's abstinence. The evidence is wholly negative, and proves nothing in point. It does not, in fact, prove that the offspring is in any way affected by the parent's intemperance. Nevertheless, there is plenty of positive evidence bearing on the point, though hitherto it has been quite ignored. Before considering it, let us agree, if possible, on four propositions of fundamental importance.

Variation in the Liking for Alcohol.

The first of these is that individuals differ greatly in their love for alcohol. Some men relish drink so greatly that, having had experience of it, they crave for deep indulgence ever after. From their ranks the army of drunkards is recruited. If any of them lead sober existences it is only because they cannot procure drink, as is the case with many savages, or because by the exercise of a strenuous will they resist the craving, as is the case with some abstainers. To some men, on the other hand, drink presents no great attraction, and intoxication none at all. Between the two extremes are all shades of drinkers. The current, but erroneous, theory is that, generally speaking, men are drunken or sober, not according to the strength of their desires, but according to the degree of restraint they place upon themselves. A little reflection will demonstrate that this hypothesis is very far from generally true. Consider your own cases. Probably most of you are not abstainers, and are therefore daily exposed to temptation. Let me ask of you why you are not drunken. Is it because you perpetually resist by strenuous force of will a keen desire for intoxication, or is it simply because you do not like the sensations which intoxication induces—because, in fact, you are not tempted? I think all, or nearly all, of you will reply that you are sober primarily because you are not tempted to intoxication, not because you strenuously resist the craving. But, think now, of the many people you have known in your own class of life who have been reared among much the same conditions, and who have ruined themselves mentally and physically, materially and socially for drink. At once you will recognise the immensely important fact that, just as men differ in other respects, so they differ vastly in the depth of their craving for drink, and that, generally speaking, men are drunken or temperate according to the strength of their desires, not according to their power of resisting temptation.

The Poisonous Qualities of Alcohol.

My second proposition is that alcohol is a poison, and the cause of a huge death-rate. I do not think this will be disputed. It has been proved too often and too thoroughly and completely by common experience, and by the statistics of temperance, friendly, and insurance societies. I have only to remark that alcohol poisons most those who drink most, who in general are those that have the greatest capacity for delighting in deep indulgence. With them to some extent perish through neglect and ill-feeding their offspring, who also in the next generation would have exhibited a like capacity for delighting in alcohol.

Racial Difference.

My third proposition is that just as individuals differ in their tendency towards drunkenness, so also do nations and races. This, again, can hardly be disputed. It is notorious that Jews and South Europeans generally are extremely temperate; that North Europeans are much less temperate than South Europeans; and that most savages are so extremely drunken that given the opportunity they poison themselves and perish.

Racial Craving Inversely Proportional to Familiarity.

My fourth proposition is that races and nations, unlike individuals, crave for alcohol in inverse proportion to their past familiarity with it; in other words, that the more a nation has been afflicted by alcohol in the past, the less it is now inclined to drunkenness. At first sight this proposition seems less obvious than the preceding; yet, on consideration, I think it also will be found indisputable. South Europeans and Jews, the most temperate of all, undoubtedly have been continuously familiar with alcohol longer than any other peoples on earth. Some degree of civilisation is necessary for the manufacture of alcohol in any but extremely dilute solutions, and the civilisation of South Europe is of enormous antiquity. Its oldest historical records, even its oldest myths, tell only of highly-civilised, vine-growing nations. As old or older are the civilisations of Egypt, Syria, India, and China; but in these countries the use of alcohol has been forbidden during ages by law and religion. When the South of Europe had long been highly civilised, the wandering savages of the North, still in their stone age, must have lacked the very utensils in which to manufacture alcohol. At a later period, at the dawn of their history, we hear of them as extremely drunken when opportunity offered. But opportunity must have been rare among them, since they drew their alcohol, their mead and ale, from food products, which are always scanty among the savages of cold climates. Habitual drunkenness therefore must have been restricted among them to the fortunate, or unfortunate, few—the priests and chief men—who could afford a continuous supply of the poison. Present-day savages, such as most of those inhabiting the New World, America, Australasia, and Polynesia, who have never manufactured alcohol even in the most dilute solutions, delight in it so intensely that, given the opportunity, they drink to extinction. Other savages, such as the Africans, who, like the ancient North Europeans, have been able to manufacture alcohol in dilute solutions and in limited quantities, though more drunken than Europeans, are so much less drunken than savages of the New World that they are able to survive and increase when introduced to abundant quantities of strong alcohol, as is the case with negroes in America. It is clear, therefore, that the different peoples of the world are inclined to indulgence in alcohol strictly in inverse proportion to their racial experience of it.

Acquired Effects of Intemperance not Transmissible.

Now if it be true, first, that individuals differ in their capacities for delighting in alcohol; secondly, that alcohol is a poison; thirdly, that it poisons most those who most indulge in it; fourthly, that races that have longest used it crave least for it, then it must follow as a logical conclusion that the acquired effects of intemperance are not transmissible; in other words, it must follow that the parent's drinking does not so affect the child as to create in him a greater love for drink than he otherwise would have had. For did it do so the constant accretion of these effects generation after generation would render the nation that had longest used drink the most inclined to drunkenness at all. On the other hand, if it be true, as I am contending, that the parent's drinking does not through inheritance affect the offspring, then since drink is a lethal agent which generation after generation poisons those that crave most for it, its racial use should tend in the long run towards racial sobriety, and this as we see is the actual case. It is clear, therefore, that the acquired effects of alcoholism are not transmissible, at least in so far as concerns the alleged transmission of the increased delight in drink which indulgence confers. As regards epilepsy and insanity I have no such certain evidence to offer. I can only say that as regards the millions or billions of effects which alcohol may produce on the germ cell it is very unlikely these are the particular two it does produce. If it be argued that inebriates very often have insane or epileptic offspring, I must reply so have non-inebriates. If it be further argued that inebriates have a higher proportion of offspring so afflicted, I must retort that it is precisely from those who have a tendency to epilepsy that one would expect inebriety, and that though this tendency may not find expression in the parent and may result only in drunkenness, yet it is to it and not to the parental inebriety that the filial epilepsy is probably due. In fact, here again nothing can be proved from such histories of individuals as usually fill statistics. They supply negative evidence only. When it has been proved that epilepsy and insanity are now more common than formerly among the non-drunken offspring of a savage tribe which has recently taken to drink, then and then only if other things be proved equal, shall I be prepared to admit that alcohol has the effect on the offspring attributed to it in this instance.

Temperance Reforms in Operation.

From the foregoing it will be apparent that there are two schemes or methods of temperance reform in operation. One is what I may call Nature's plan—the elimination of the drinkers, and the consequent breeding out of the capacity for delight in drink. The other plan is the temperance reformer's—the elimination of drink. The two schemes are plainly antagonistic: for the reformer's plan, of course, places Nature's in abeyance. Moreover, it must be remembered that throughout Nature cessation of selection is invariably followed by reversal to the ancestral type. Thus all prize breeds of animals and all garden plants revert to the ancestral type when the careful selection under which they were evolved ceases. A race which has undergone alcoholic evolution under Nature's plan would therefore revert to the ancestral type, in which the tendency to excessive drinking was greater were alcoholic selection withdrawn as temperance reformers propose. The two plans, consequently, are doubly antagonistic. Not only does the reformer's plan put Nature's into abeyance, but it destroys its past results. Nature's plan, as we have seen, has been fairly successful. All communities which were anciently drunken are now sober, precisely in proportion to their past sufferings from drink. This plan of the elimination of the unfit has operated in other directions. Thus, for instance, the deadly narcotic opium has been in use for hundreds of years in India; it has been used for two hundred years in China; it was introduced forty or fifty years ago to Burma. At the present day, speaking practically, no native of India takes it to excess or appears to have any desire to do so; the Chinese take it in much greater excess, though most of them are moderate in their desires; but Burmans take it in such excess and perish of it in such numbers that we, the English rulers of the country, are obliged to forbid its use in Burma to Burmans alone, while permitting it to all other peoples, just as in Canada and Australia we are obliged to forbid the use of alcohol to natives alone, while permitting it to all others. Again, any race which has long been afflicted by a prevalent and deadly disease is particularly strong against it—for instance, negroes as regards malaria, and Europeans as regards tuberculosis.

The reformer's plan has been tried for a time very much shorter than Nature's, and on a much less extensive scale, but yet long enough and widely enough to furnish valuable data. We have knowledge of some five thousand years of temperance endeavour, and, on the whole, they tell us of five thousand years of disaster. We read of scores of laws in almost all countries where alcohol has been plentiful, and their constant alteration tells of continued failure. Only in some Moham-

medan and Buddhist countries have temperance laws been successful for prolonged periods, and then only under religious systems so cruel and fanatical as to render barbarous and seclude from the rest of mankind their votaries. Considering that we cannot banish the means of production nor guarantee immortal permanence to human laws, it is not surprising that temperance endeavour has hitherto been rendered vain by the opposing force of reversion; and it is surely plain that, if any permanent success is to be attained in this matter, it must be by following the laws laid down by Nature. I have not time to discuss this great subject at present, but, of course, I must not be understood as meaning we should poison unfit people or permit unfit people to poison themselves with alcohol or any other narcotic.

Discussion.

Dr. Lloyd Andriezen believed that drink in the parents—that is, alcohol circulating in the blood of father or mother—at the time of conception, might result in the production of a diseased offspring owing to the effect of the alcohol on the ovum or spermatozoon (germ cells). An occasional and festive act of intoxication in a couple otherwise temperate might produce abnormal issue, and many instances illustrating this were referred to. Dr. Charles Féré had given experimentally the most indisputable proof of the deleterious action of alcohol and of absinthe on eggs hatching in incubators. Parental intemperance in Dr. Andriezen's own collection of genealogical tables was found to result frequently in imbecility and weak-mindedness of the offspring, or in infantile convulsions and meningitis, in brutal degradation with criminal tendencies, and in tendencies towards epilepsy, and towards periodic hereditary drink craving, and other impulses and obsessions. The drunkard transmitted to his posterity the seeds of disease in his damaged spermatozoa. In the case of a woman, habits of drink during pregnancy also affected the ovum or growing fœtus in varying degrees according to the period of indulgence. Among the various blemishes thus imposed on the offspring was a craving for drink or for sexual or other excesses, arising from an instability and want of harmony of the cerebral centres. The historical facts mentioned by Dr. Reid were not sufficiently definite to base large conclusions on, and were open to grave difficulty of interpretation also.

Mr. J. F. Briscoe did not believe in the transmission of drunkenness from parents to children. It was also very doubtful whether alcoholic vapours in the experiments of Dr. Féré did affect the germ of the egg. The parents of the eggs, their history (family relationship) should be considered, as this might be responsible for much deformity of chickens. It was important in these experiments to be sure of the fact that there was no inbreeding.

Dr. Sutherland said that Dr. Reid's views were opposed to the scriptural statement that if the parent had partaken too freely of the juice of the grape, the teeth of the children were set upon edge. Whether alcoholism *per se* was transmitted or not to the progeny could never be a matter of certainty, though in all probability the evidence was in favour of Dr. Reid's views. One point pretty well accepted was that the inebriate transmitted to his progeny an unstable nervous system, which made it liable to alcoholic excess as well as to other obsessions. The experiments made by Magnan were valuable in determining that the epileptic explosions and bad effect of absinthe were due to the furfurol and other deleterious ingredients, etc., but alcohol of the purest kind in excess produced a condition almost identical with epileptic seizures.

Dr. Seymour Tuke was of opinion that the facts and observations pointed towards a special nervous instability being the outcome (in the offspring) of parental intemperance.

Dr. Fletcher Beach believed that various nervous and cerebral defects, including idiocy, imbecility, and epilepsy in children could be directly traced to parental alcoholic excess. He referred to such cases which had come under his observation when he was at the Darenth Asylum for Imbecile Children.

Vaccination Grant.—Mr. C. E. Drayson Maile, Dedham, Essex, Public Vaccinator for the Seventh District Lexden and Winstree Union, has been awarded the Government grant for efficient vaccination for the fifth time.

REVIEWS.

Encyclopædia Medica. Under the general editorship of Chalmers Watson, M.D. Vol. I. Abdomen to Bone. Edinburgh: William Green and Co. 1899. (Pp. 579. 25s.)

The last few years of this century will be remarkable in medical literature for the number of systems contributed by many authors that have seen the light. Just at the time that Allbutt's *System of Medicine* in this country and the *Twentieth Century Practice of Medicine* in America are drawing to a conclusion, the medical reader is presented with the first volume of an *Encyclopædia Medica* that is planned to serve him as a complete professional library. It is proposed that medicine, surgery, midwifery, etc., and the various special departments shall all be dealt with in a number of articles arranged in alphabetical order. The promoters thus hope to do for medical science what the *Encyclopædia Britannica* has accomplished for general literature. There are to be twelve volumes in all, which are advertised in the prospectus to come out at intervals of three months, so that the whole should be complete in about three years. This is indeed a colossal task, and it will be interesting to see how the enterprise will fulfil its high aims.

A manifest objection to the alphabetical arrangement of a medical work in many volumes is that the reader who is interested in any one subject, say diseases of the eye, cannot by buying a single volume provide himself with an authoritative treatise by a number of representative writers, but must take all or none. The possible difficulties that might arise from not knowing in which volume to look for certain subjects are to be met by an elaborate system of cross references. How this will work remains to be seen when the future volumes have come out; but there is little doubt that the utility, and therefore the success, of this medical encyclopædia will depend in great measure upon its arrangement.

Turning to the contents of the present volume, most of the articles will be found to be concise and practical rather than exhaustive. This character, like the alphabetical arrangement, renders the work more suitable for general use by the practitioner than for standard reference. The work will, therefore, more nearly take rank with Treves's *System of Surgery* or Quain's *Dictionary of Medicine*, than with Holmes's *System of Surgery* or Reynolds's *System of Medicine*.

The editor has met with considerable success in the selection of his contributors. Thus the important subject of anæsthesia and anæsthetics is introduced by a consideration of the physiology of anæsthesia by Dr. Dudley Buxton, while Professor Ogston deals with chloroform, and Mr. Pridgin Teale with ether. Dr. Lauder Brunton appropriately writes on angina pectoris, Dr. Byrom Bramwell on aphasia, Professor A. R. Simpson on abortion, Dr. Clouston on adolescent insanity, and Dr. John Thomson on achondroplasia.

The subject of aneurysm is divided up among Mr. Stanley Boyd, who deals chiefly with the surgical aspect, Dr. Dreschfeld, who deals with abdominal aneurysm and with aneurysms on branches of the abdominal aorta, and Dr. Graham Steele, whose contribution is entitled Aorta (Thoracic) Aneurysm and Dilatation of. The consideration of the medical affections of arteries, including atheroma and arteriosclerosis, is postponed to a much later volume under the heading of Vessels; but Mr. Waterhouse describes the injuries and ligature of arteries in a well-illustrated and practical article.

Mr. G. A. Berry writes on amblyopia and asthenopia, Mr. W. T. Lister on accommodation, but astigmatism will be considered under the head of Refraction. Mr. Lockwood contributes the section on the aseptic treatment of wounds, but abscess is cross-referenced to suppuration in a subsequent volume. It is probable that the editor is obliged to fit the articles in, and to postpone the insertion of others by the force of a circumstance not entirely under his control—namely, the punctuality or otherwise of contributors in delivering their "copy."

Enough has been said to show the scope and aims of this *Encyclopædia Medica*. The first-fruits justify the hope that it will be a success, but inasmuch as it is premature to pass judgment on so large an undertaking at so early a stage, it will be sufficient to express our best wishes for its future. A word of praise must be given to the printing and general get-up of the volume.

RECENT REPORTS ON PLAGUE IN INDIA.

WITH the object of appealing to the intelligence of leading men in native communities, whose co-operation during plague outbreaks is so valuable to Government, Professor Hankin has written a small pamphlet[1] giving in narrative form a very clear and simple account of the Black Death, the plague in India, the cause of plague, its prevention, and what to do when plague threatens. There is a preface by Professor Haffkine. The need of such a pamphlet was suggested to Professor Hankin by a conversation with a *fakir* of high position, who had used his influence to good effect in persuading his neighbours to submit to the measures which were necessary in dealing with an outbreak of plague. This well-disposed Brahmin asked Professor Hankin if it was not true that some *sahib* had taken the poison out of a cobra and put it into the head works of the Bombay water supply, and that in this way the plague had been produced over the town. If such were the beliefs of an intelligent man, there can be little surprise at the extraordinary phantasies which the Indian in general believes in concerning the cause of plague, and it is to be hoped that the tract will help to dispel the ignorance that prevails even among the best educated. The tract on cholera which Professor Hankin wrote some years ago has been translated into thirteen languages, and we trust a similar or even greater success will attend the publication of this one. When first the antiplague inoculations were started the objection was raised that they could not be extensively applied, and however effective they might be for limited groups of individuals, as in gaols and hospitals, they lost their value when plague threatened a town. The success obtained at Hubli has shown that this objection can be overcome. Professor Hankin relates that at Hubli during the week ending August 26th, 1898, the disease was so virulent that among those who had not been inoculated 1 man in 9 was attacked, yet at the same time among those who had been inoculated only 1 man in 299, and among those who had been inoculated twice only 1 person in 755 was attacked. At this date the numbers who had been inoculated twice amounted to 26,488, which was more than half of the population. Later, when 30,911 persons had been inoculated, the results were still more remarkable, for though the disease appeared to have increased in virulence, and no fewer than 1 in every 7 persons of those not inoculated was attacked, only 1 in 793 of those inoculated was attacked. By the end of September the whole population of Hubli with the exception of 143 had been inoculated. It is stated that the 143 were reinforced by a few other persons who began to return to the town when they heard rumours of the cessation of the pestilence, and who through ignorance did not take the trouble to be inoculated. Among these, 106 persons were attacked, while among the twice inoculated only 1 in 1,320 was attacked. These facts are of more than local concern; they stamp Haffkine's discovery as the most potent weapon against plague, and Professor Hankin is doing a service in making it widely known.

Dr. Hornabrook's *Report*[2] is carefully compiled, contains two excellent photographs of the contact camp and plague hospital, and a ground plan of the arrangements of the hospital camp. The first imported plague death in Dharwar was recorded during the week ending July 11th. Between this date and August 12th 4 cases were admitted to the hospital, all imported from Hubli. On August 12th the first indigenous case in Dharwar was admitted into hospital. From August 12th to 19th, 22 plague cases, all indigenous, occurred. There was an interval of a month between the first imported case in Dharwar and the first indigenous case reported. The epidemic lasted a little over three and a-half months, rising and falling rapidly, and reaching its height during the month of October, when 524 deaths were recorded. Owing mainly to delay in removal to hospital the majority of the deaths occurred within forty-eight hours of admission. In the cases of early removal to hospital the percentage of recoveries was 51.85 per cent. against a mortality of 93.3 per cent. among those who received no treatment. Dr. Hornabrook thinks that the hospital returns give a more accurate idea of the results of inoculation, because under other conditions it is impossible to ascertain properly the number of plague attacks that may occur among inoculated persons, for so many of the people are removed into the jungle directly they are taken ill. Moreover, a large proportion of inoculated people live outside the town, and it is difficult to ascertain with accuracy what actually occurs among them. Again, the inoculation figures would naturally read better than they might really be from the fact that plague is generally at its height, or nearly so, before the people readily came forward for inoculation, and further inoculation is continued after the epidemic has subsided, and thus the returns will continue to improve even after the risk of infection is lessened. But admitting these possibilities and their disadvantages, Dr. Hornabrook is of opinion that the hospital returns show a very great advantage attached to inoculation in lessening the severity of an attack of plague when admitted into hospital. Thus, of 83 persons who had been inoculated once before they were attacked with plague 59 or 71 per cent. recovered, and of 16 persons who had been inoculated twice 13 or 81 per cent. recovered. Inoculation, either single or double, has apparently no effect in lessening the mortality in pneumonic plague cases. Six hospital servants were attacked with plague—all were inoculated; none of the inoculated servants were affected. Pneumonic cases of plague were kept in a separate ward from the other acute cases. In one instance in which unfortunately a pneumonic case was left in the same ward with two other patients of the same caste suffering from the bubonic form, who were at the time doing well, pneumonic symptoms developed within forty-eight hours, and they both died. The general treatment was early opening of the bowels, the administration of antipyrin when the temperature registered 103° or over, and the free use of stimulants. The injection of mercury perchloride into buboes appeared to be attended by harmful results. The bubo was not interfered with in the acute stage, but an application of belladonna and glycerine was used; when fluctuation was detected it was opened under antiseptic treatment. The only exception made was in cervical cases in which there was danger of suffocation, and in which deep multiple incision afforded great relief.

Kankhal, which is situated on the right bank of the Ganges, two miles below Hardwar, but separated from it by a canal, was visited by plague in September, 1897. In fact, Kankhal is built upon an island, and communicates with neighbouring towns and villages only by means of two bridges over the canal. Captain Chaytor White, M.D., in his report[3] states that in Kankhal, which has about 5,000 inhabitants, rats began to die in June, 1897, but it was not until September of the same year that human beings became affected with plague. As soon as it was evident that the disease was epidemic, a police cordon was drawn round the village, and no one except officials were allowed to enter or leave. The group of buildings first infected were emptied, and the inhabitants, about 120 in number, removed to an accommodation camp outside the cordon. Fresh points of infection occurred, and in every case the inhabitants were similarly treated, until it became evident that complete evacuation was the only efficient method of dealing with the outbreak. The whole of the people were deported, just beyond the cordon, to excellently chosen camps, where water and shade were plentiful. Thorough disinfection of the houses, of the clothing, and, even of the stored grain (by being spread out and turned over in the sun) was practised, and the plague speedily disappeared. No recrudescence occurred when the village was reoccupied, and the effect of the cleansing was a general improvement in the health of the community as a whole. Captain White and his colleagues are to be heartily congratulated on the efficiency and the success of the work they accomplished. The plan adopted is, Captain White remarks, applicable to any town with a population under 7,500 people. During the epidemic monkeys, although they are capable of contracting plague, were proved not to be readily susceptible to the disease.

The report[4] forwarded by Lieutenant-Colonel E. Lawrie, Plague Commissioner, Hyderabad, to the Nizam's Govern-

[1] *The Bubonic Plague.* By E. H. Hankin, M.A., with a Preface by Professor Haffkine, C.I.E. Allahabad: The *Pioneer* Press. 1899. (Crown 8vo, pp. 58. 4 annas.

[2] *Report on the Dharwar Plague Hospital*, August 28th to December 18th, 1898. By R. W. Hornabrook, M.B., B.S., Medical Plague Officer, Dharwar.

[3] *Bubonic Plague at Hardwar, North-West Provinces, India*, being an Account of the Outbreak at Kankhal (Hardwar) in 1897-98. By J. Chaytor White, M.D., Captain, I.M.S. Allahabad: *Pioneer* Press. 1898. (Pp. 46. R.1.)

[4] *Plague—Hyderabad State.* 1898.

ment deals with the infection of the earthen floors of plague-infected dwellings, and the means of destroying the bacillus so found. Lieutenant-Colonel Lawrie says: "The infection of plague can be tracked about by means of the microscope with as much certainty as if it were visible to the naked eye." So convinced, also, is he of the possibility of stamping out plague by fire that he adds, "By means of the microscope, fire, and boiling, plague can be stamped out with nearly mathematical certainty." In the report Captain Johnston, I.M.S., and Mr. Stevens, Deputy Plague Commissioner, give details of bacteriological work which seem to prove conclusively that the earthen floors of dwellings become infected to a depth of at least half an inch. Mr. Stevens gives in detail the steps employed in disinfecting houses by what is termed the "kiln" process. They are as follows: (1) The house is emptied of its inhabitants, who are removed to temporary lodgings. (2) Every article of clothing and of furniture is removed from the dwelling, so that only the four bare walls are left. (3) The floor of the dwelling and the wall for 2 feet from the floor are whitewashed. The object of this is to ensure that every particle of the whitened surface is removed for burning, any white patch immediately showing an unremoved portion. (4) In an open space near the house a circular "kiln" is constructed thus:—A piece of ground, say 5 feet in diameter, is covered over with two layers of "ooplies" (dried cakes of cow-dung). The earth from the floor of the infected house is removed to a depth of 1½ inch, filled into tins or iron baskets, and then sprinkled over the "ooplies" for a depth of 1½ inch. On this a second layer of "oolpies" to the depth of 2 inches is laid, and again a layer of infected earth. A third or fourth layer, or as many as are necessary, are superimposed in alternate layers of "ooplies" and earth until a heap of the height of 1½ to 2 feet is attained. Lastly, the kiln is covered in from top to bottom with two layers of "ooplies" and the kiln lighted. The kiln burns usually for forty-eight hours, but as it smoulders for a week it should be left undisturbed for that time. The ashes may be removed and used for land manure. All that has now to be done to the house is to fill in the floor with fresh field earth, which is subsequently moistened, rammed firm, and mud plastered. Finally the new floor, surface, and walls should be drenched with 1 to 1,000 perchloride of mercury solution, and when the room is dry it is fit for occupation.

The President of the Grant College Medical Society deals *seriatim*[5] with the preparation of Haffkine's prophylactic, the mode of administration, the dose, and the effects. He considers that the facts prove (1) that inoculation with Haffkine's fluid confers immunity against plague, which practically holds good for six months—the average duration of one plague epidemic; (2) that it reduces the chances of being attacked; and (3) lessens the mortality when attacked. The average case mortality among the uninoculated is 70 to 80 per cent., whereas amongst the inoculated it is only 30 to 35 per cent. He contends that the fluid, as prepared by Haffkine, is free from living bacilli; the heat and the subsequent carbolisation of the fluid being a sufficient guarantee on this point. Moreover, he finds no living bacillus in the fluid. He holds that by inoculation the health of the individual does not suffer; that the inoculated person does not act as a source of infection; and that an immunity is conferred upon the inoculated.

[5] *M. Haffkine's Plague Prophylactic Inoculation.* A paper read before a meeting of the Grant College Medical Society, Bombay, November, 1898, by Bhalchandra Krishna, L.M., President of the Society, etc. Bombay: Tatva-Vivechaka Press. 1898. (Demy 8vo, pp. 22).

Homœopathy and Tropical Diseases.—A sign of the times is the recent action of the Committee and Medical Board of the Liverpool Hahnemann Hospital in organising courses of instruction in tropical diseases. They have, as we learn from the *Homœopathic World* of September 1st, issued a circular in which they state that, "recognising the very serious nature of tropical diseases, especially of Africa, and in view of the great mortality under ordinary treatment" they, "knowing the certainly curative power of homœopathic treatment in those diseases, have arranged etc., etc." The "certainly curative power of homœopathic treatment" is an expression which considerably o'ersteps the modesty of true science.

THE BRITISH ASSOCIATION.

The sixty-ninth annual meeting of the British Association for the Advancement of Science, which is being held this year at Dover under the presidency of Sir Michael Foster, K.C.B., M.D., Secretary of the Royal Society and Professor of Physiology in the University of Cambridge, opened on Wednesday, September 13th.

President's Address.

In his presidential address Sir Michael Foster, after some introductory remarks, in the course of which he made a touching reference to the loss which the Association and science had suffered by the death of Sir Douglas Galton, proceeded to draw an interesting picture of Dover as it was a century ago. He said: Dover in the year of our Lord seventeen hundred and ninety-nine was in many ways unlike the Dover of to-day. On moonless nights men groped their way in its narrow streets by the help of swinging lanterns and smoky torches, for no lamps lit the ways. By day the light of the sun struggled into the houses through narrow panes of blurred glass Though the town then, as now, was one of the chief portals to and from the countries beyond the seas, the means of travel were scanty and dear, available for the most part to the rich alone, and, for all, beset with discomfort and risk. Slow and uncertain was the carriage of goods, and the news of the world outside came to the town—though it from its position learnt more than most towns—tardily, fitfully, and often falsely. The people of Dover sat then much in dimness, if not in darkness, and lived in large measure on themselves. They who study the phenomena of living beings tell us that light is the great stimulus of life, and that the fulness of the life of a being or of any of its members may be measured by the variety, the swiftness, and the certainty of the means by which it is in touch with its surroundings. Judged from this standpoint life at Dover then, as indeed elsewhere, must have fallen far short of the life of to-day. The same study of living beings, however, teaches us that while from one point of view the environment seems to mould the organism, from another point the organism seems to be master of its environment. Going behind the change of circumstances, we may raise the question, the old question, Was life in its essence worth more then than now? Has there been a real advance? Let me at once relieve your minds by saying that I propose to leave this question in the main unanswered. It may be, or it may not be, that man's grasp of the beautiful and of the good, if not looser, is not firmer than it was a hundred years ago. It may be, or it may not be, that man is no nearer to absolute truth, to seeing things as they really are, than he was then. I will merely ask you to consider with me for a few minutes how far, and in what ways, man's laying hold of that aspect of or part of truth which we call natural knowledge, or sometimes science, differed in 1799 from what it is to-day, and whether that change must not be accounted a real advance, a real improvement in man.

Biology in 1799.

[After referring to the notions as to the composition of the atmosphere, of water, and of matter generally, as to electricity, and as to geology possessed by natural philosophers at the close of the last century, Sir Michael Foster proceeded:]

In another branch of science, in that which deals with the problems presented by living beings, the thoughts of men in 1799 were also very different from the thoughts of men to-day. It is a very old quest, the quest after the knowledge of the nature of living beings, one of the earliest on which man set out; for it promised to lead him to a knowledge of himself, a promise which perhaps is still before us, but the fulfilment of which is as yet far off. As time has gone on, the pursuit of natural knowledge has seemed to lead man away from himself into the furthermost parts of the universe, and into secret workings of Nature in which he appears to be of little or no account; and his knowledge of the nature of living things, and so of his own nature, has advanced slowly, waiting till the progress of other branches of natural knowledge can bring it aid. Yet in the past 100 years, the biologic sciences, as we now call them, have marched rapidly onward. We may look upon a living body as a machine doing work in accordance with certain laws, and may seek to trace out the working of the inner wheels, how these raise up the lifeless

dust into living matter, and let the living matter fall away again into dust, giving out movement and heat. Or we may look upon the individual life as a link in a long chain, joining something which went before to something about to come, a chain whose beginning lies hid in the farthest past, and may seek to know the ties which bind one life to another. As we call up to view the long series of living forms, living now or flitting like shadows on the screen of the past, we may strive to lay hold of the influences which fashion the garment of life. Whether the problems of life are looked upon from the one point of view or the other, we to-day, not biologists only, but all of us, have gained a knowledge hidden even from the philosophers a hundred years ago. Of the problems presented by the living body viewed as a machine, some may be spoken of as mechanical, others as physical, and yet others as chemical, while some are, apparently at least, none of these. In the seventeenth century William Harvey, laying hold of the central mechanism of the blood stream, opened up a path of inquiry which his own age and the century which followed trod with marked success. The knowledge of the mechanics of the animal and of the plant advanced apace; but the physical and chemical problems had yet to wait. The eighteenth century, it is true, had its physics and its chemistry; but, in relation at least to the problems of the living being, a chemistry which knew not oxygen and a physics which knew not the electricity of chemical action were of little avail. The philosopher of 1799, when he discussed the functions of the animal or of the plant involving chemical changes, was fain for the most part, as were his predecessors in the century before, to have recourse to such vague terms as "fermentation" and the like; to-day our treatises on physiology are largely made up of precise and exact expositions of the play of physical agencies and chemical bodies in the living organism. He made use of the words "vital force" or "vital principle" not as an occasional, but as a common, explanation of the phenomena of the living body. During the present century, especially during its latter half, the idea embodied in those words has been driven away from one seat after another; if we use it now when we are dealing with the chemical and physical events of life we use it with reluctance, as a *deus ex machinâ* to be appealed to only when everything else has failed. Some of the problems—and those, perhaps, the chief problems—of the living body have to be solved neither by physical nor by chemical methods, but by methods of their own. Such are the problems of the nervous system. In respect to these the men of 1799 were on the threshold of a pregnant discovery. During the latter part of the present century, and especially during its last quarter, the analysis of the mysterious processes in the nervous system, and especially in the brain, which issue as feeling, thought, and the power to move, has been pushed forward with a success conspicuous in its practical, and full of promise in its theoretical, gains. That analysis may be briefly described as a following up of threads. We now know that what takes place along a tiny thread which we call a nerve fibre differs from that which takes place along its fellow-threads, that differing nervous impulses travel along different nerve fibres, and that nervous and psychical events are the outcome of the clashing of nervous impulses as they sweep along the closely-woven web of living threads of which the brain is made. We have learnt by experiment and by observation that the pattern of the web determines the play of the impulses, and we can already explain many of the obscure problems not only of nervous disease, but of nervous life, by an analysis which is a tracking out the devious and linked paths of nervous threads. The very beginning of this analysis was unknown in 1799. Men knew that nerves were the agents of feeling and of the movements of muscles; they had learnt much about what this part or that part of the brain could do; but they did not know that one nerve fibre differed from another in the very essence of its work. It was just about the end of the past century or the beginning of the present one that an English surgeon began to ponder over a conception which, however, he did not make known until some years later, and which did not gain complete demonstration and full acceptance until still more years had passed away. It was in 1811, in a tiny pamphlet published privately, that Charles Bell put forward his *New Idea* that the nervous system was constructed on the principle that "the nerves are not single nerves possessing various powers, but bundles of different nerves, whose filaments are united for the convenience of distribution, but which are distinct in office as they are in origin from the brain." Our present knowledge of the nervous system is to a large extent only an exemplification and expansion of Charles Bell's *New Idea*, and has its origin in that. If we pass from the problems of the living organism viewed as a machine to those presented by the varied features of the different creatures who have lived or who still live on the earth, we at once call to mind that the middle years of the present century mark an epoch in biologic thought such as never came before, for it was then that Charles Darwin gave to the world the *Origin of Species*. That work, however, with all the far-reaching effects which it has had, could have had little or no effect, or, rather, could not have come into existence, had not the earlier half of the century been in travail preparing for its coming. For the germinal idea of Darwin appeals, as to witnesses, to the results of two lines of biologic investigation which were almost unknown to the men of the eighteenth century. To one of these lines I have already referred. Darwin, as we know, appealed to the geological record; and we also know how that record, imperfect as it was then, and imperfect as it must always remain, has since his time yielded the most striking proofs of at least one part of his general conception. In 1799 there was, as we have seen, no geological record at all. Of the other line I must say a few words. To day the merest beginner in biologic study, or even that exemplar of acquaintance without knowledge, the general reader, is aware that every living being, even man himself, begins its independent existence as a tiny ball, of which we can, even acknowledging to the full the limits of the optical analysis at our command, assert with confidence that in structure, using that word in its ordinary sense, it is in all cases absolutely simple. It is equally well known that the features of form which supply the characters of a grown-up living being, all the many and varied features of even the most complex organism, are reached as the goal of a road, at times a long road, of successive changes; that the life of every being, from the ovum to its full estate, is a series of shifting scenes, which come and go, sometimes changing abruptly, sometimes melting the one into the other, like dissolving views, all so ordained that often the final shape with which the creature seems to begin, or is said to begin, its life in the world is the outcome of many shapes, clothed with which it in turn has lived many lives before its seeming birth. All or nearly all the exact knowledge of the laboured way in which each living creature puts on its proper shape and structure is the heritage of the present century. Although the way in which the chick is moulded in the egg was not wholly unknown even to the ancients, and in later years had been told, first in the sixteenth century by Fabricius, then in the seventeenth century in a more clear and striking manner by the great Italian naturalist Malpighi, the teaching thus offered had been neglected or misinterpreted. At the close of the eighteenth century the dominant view was that in the making of a creature out of the egg there was no putting on of wholly new parts, no epigenesis. It was taught that the entire creature lay hidden in the egg, hidden by reason of the very transparency of its substance, lay ready-made but folded up, as it were, and that the process of development within the egg or within the womb was a mere unfolding, a simple evolution. Nor did men shrink from accepting the logical outcome of such a view—namely, that within the unborn creature itself lay in like manner, hidden and folded up, its offspring also, and within that again its offspring in turn, after the fashion of a cluster of ivory balls carved by Chinese hands, one within the other. This was no fantastic view put forward by an imaginative dreamer; it was seriously held by sober men, even by men like the illustrious Haller, in spite of their recognising that as the chick grew in the egg some changes of form took place. Though so early as the middle of the eighteenth century Friedrich Caspar Wolff and, later on, others had strenuously opposed such a view, it held its own not only to the close of the century, but far on into the next. It was not until a quarter of the present century had been added to the past that von Baer made known the results of researches which once and for all swept away the old view.

He and others working after him made it clear that each individual puts on its final form and structure, not by an unfolding of pre-existing hidden features, but by the formation of new parts through the continued differentiation of a primitively simple material. It was also made clear that the successive changes which the embryo undergoes in its progress from the ovum to maturity are the expression of morphologic laws, that the progress is one from the general to the special, and that the shifting scenes of embryonic life are hints and tokens of lives lived by ancestors in times long past.

The Future of Science.

[Turning away from the past, Sir Michael Foster said he did not propose to tell, even in outline, the tale of the work of science in the nineteenth century. He had, he trusted, said enough to justify the statement that, in respect to natural knowledge, a great gulf lay between 1799 and 1899. That gulf, moreover, was a twofold one; not only had natural knowledge been increased, but men had run to and fro, spreading it as they went. If it were true that the few to-day were, in respect to natural knowledge, far removed from the few of those days, it was also true that nearly all which the few alone knew then, and much which they did not know, had now become the common knowledge of the many. He continued:]

The story of natural knowledge, of science, in the nineteenth century, as, indeed, in preceding centuries, is, I repeat, a story of continued progress. There is in it not so much as a hint of falling back, not even of standing still. What is gained by scientific inquiry is gained for ever; it may be added to, it may seem to be covered up, but it can never be taken away. Confident that the progress will go on, we cannot help peering into the years to come, and straining our eyes to foresee what science will become and what it will do as they roll on. While we do so, the thought must come to us, Will all the increasing knowledge of Nature avail only to change the ways of man—will it have no effect on man himself? The material good which mankind has gained and is gaining through the advance of science is so imposing as to be obvious to everyone, and the praises of this aspect of science are to be found in the mouths of all. Beyond all doubt science has greatly lessened and has markedly narrowed hardship and suffering; beyond all doubt science has largely increased and has widely diffused ease and comfort. The appliances of science have, as it were, covered with a soft cushion the rough places of life, and that not for the rich only, but also for the poor. So abundant and so prominent are the material benefits of science that in the eyes of many these seem to be the only benefits which she brings. She is often spoken of as if she were useful and nothing more, as if her work were only to administer to the material wants of man. Is this so? We may begin to doubt it when we reflect that the triumphs of science which bring these material advantages are in their very nature intellectual triumphs. The increasing benefits brought by science are the results of man's increasing mastery over Nature, and that mastery is increasingly a mastery of mind; it is an increasing power to use the forces of what we call inanimate nature in place of the force of his own or other creatures' bodies; it is increasing use of mind in place of muscle. Is it to be thought that that which has brought the mind so greatly into play has had no effect on the mind itself? Is that part of the mind which works out scientific truths a mere slavish machine producing results it knows not how, having no part in the good which in its working it brings forth?

The Scientific Mind.

What are the qualities, the features of that scientific mind which has wrought and is working such great changes in man's relation to Nature? In seeking an answer to this question we have not to inquire into the attributes of genius. Though much of the progress of science seems to take on the form of a series of great steps, each made by some great man, the distinction in science between the great discoverer and the humble worker is one of degree only, not of kind. As I was urging just now, the greatness of many great names in science is often in large part the greatness of occasion, not of absolute power. The qualities which guide one man to a small truth silently taking its place among its fellows, as these go to make up progress, are at bottom the same as those by which another man is led to something of which the whole world rings. The features of the fruitful scientific mind are in the main three. In the first place, above all other things, his nature must be one which vibrates in unison with that of which he is in search; the seeker after truth must himself be truthful, truthful with the truthfulness of Nature. For the truthfulness of Nature is not wholly the same as that which man sometimes calls truthfulness. It is far more imperious, far more exacting. Man, unscientific man, is often content with "the nearly" and "the almost." Nature never is. It is not her way to call the same two things which differ, though the difference may be measured by less than the thousandth of a milligramme or of a millimetre, or by any other like standard of minuteness. And the man who, carrying the ways of the world into the domain of science, thinks that he may treat Nature's differences in any other way than she treats them herself will find that she resents his conduct; if he in carelessness or in disdain overlooks the minute difference which she holds out to him as a signal to guide him in his search, the projecting tip, as it were, of some buried treasure, he is bound to go astray, and the more strenuously he struggles on, the farther will he find himself from his true goal. In the second place, he must be alert of mind. Nature is ever making signs to us, she is ever whispering to us the beginnings of her secrets; the scientific man must be ever on the watch, ready at once to lay hold of Nature's hint however small, to listen to her whisper however low. In the the third place, scientific inquiry, though it be pre-eminently an intellectual effort, has need of the moral quality of courage—not so much the courage which helps a man to face a sudden difficulty as the courage of steadfast endurance. Almost every inquiry, certainly every prolonged inquiry, sooner or later goes wrong. The path, at first so straight and clear, grows crooked and gets blocked: the hope and enthusiasm, or even the jaunty ease, with which the inquirer set out leave him and he falls into a slough of despond. That is the critical moment calling for courage. Struggling through the slough he will find on the other side the wicket gate opening up the real path; losing heart he will turn back and add one more stone to the great cairn of the unaccomplished. But, I hear someone say, these qualities are not the peculiar attributes of the man of science, they may be recognised as belonging to almost everyone who has commanded or deserved success, whatever may have been his walk of life. That is so. That is exactly what I would desire to insist, that the men of science have no peculiar virtues, no special powers. They are ordinary men, their characters are common, even commonplace. Science, as Huxley said, is organised common sense, and men of science are common men, drilled in the ways of common sense. For their life has this feature. Though in themselves they are no stronger, no better than other men, they possess a strength which, as I just now urged, is not their own, but is that of the science whose servants they are. Even in his apprenticeship, the scientific inquirer, while learning what has been done before his time, if he learns it aright, so learns it that what is known may serve him not only as a vantage ground whence to push off into the unknown, but also as a compass to guide him in his course. And when fitted for his work he enters on inquiry itself, what a zealous anxious guide, what a strict and, because strict, helpful schoolmistress does Nature make herself to him! Under her care every inquiry, whether it bring the inquirer to a happy issue or seem to end in nought, trains him to the next effort. She so orders her ways, that each act of obedience to her makes the next act easier for him, and step by step she leads him on towards that perfect obedience which is complete mastery.

The Discipline of Scientific Inquiry.

Indeed, when we reflect on the potency of the discipline of scientific inquiry we cease to wonder at the progress of scientific knowledge. The results actually gained seem to fall so far short of what under such guidance might have been expected to have been gathered in that we are fain to conclude that science has called to follow her, for the most part, the poor in intellect and wayward in spirit. Had she called to her service the many acute minds who have wasted their

strength struggling in vain to solve hopeless problems, or who have turned their energies to things other than the increase of knowledge; had she called to her service the many just men who have walked straight without the need of a rod to guide them, how much greater than it has been would have been the progress of science, and how many false teachings would the world have been spared! To men of science themselves, when they consider their favoured lot, the achievements of the past should serve not as a boast, but as a reproach. If there be any truth in what I have been urging, that the pursuit of scientific inquiry is itself a training of special potency, giving strength to the feeble and keeping in the path those who are inclined to stray, it is obvious that the material gains of science, great as they may be, do not make up all the good which science brings or may bring to man. We especially, perhaps, in these later days, through the rapid development of the physical sciences, are too apt to dwell on the material gains alone. As a child in its infancy looks upon its mother only as a giver of good things, and does not learn till in after-days how she was also showing her love by carefully training it in the way it should go, so we, too, have thought too much of the gifts of science, overlooking her power to guide. Man does not live by bread alone, and science brings him more than bread. It is a great thing to make two blades of grass grow where before one alone grew; but it is no less great a thing to help a man to come to a just conclusion on the questions with which he has to deal. We may claim for science that while she is doing the one she may be so used as to do the other also. The dictum just quoted that science is organised common sense, may be read as meaning that the common problems of life which common people have to solve are to be solved by the same methods by which the man of science solves his special problems. It follows that the training which does so much for him may be looked to as promising to do much for them. Such aid can come from science on two conditions only. In the first place, this her influence must be acknowledged; she must be duly recognised as a teacher no less than as a hewer of wood and a drawer of water. And the pursuit of science must be followed not by the professional few only, but, at least in such measure as will ensure the influence of example, by the many. But this latter point I need not urge before this great Association, whose chief object during more than half a century has been to bring within the fold of science all who would answer to the call. In the second place, it must be understood that the training to be looked for from science is the outcome not of the accumulation of scientific knowledge, but of the practice of scientific inquiry. Man may have at his fingers' ends all the accomplished results and all the current opinions of any one or of all the branches of science, and yet remain wholly unscientific in mind; but no one can have carried out even the humblest research without the spirit of science in some measure resting upon him. And that spirit may in part be caught even without entering upon an actual investigation in search of a new truth. The learner may be led to old truths, even the oldest, in more ways than one. He may be brought abruptly to a truth in its finished form, coming straight to it like a thief climbing over the wall; and the hurry and press of modern life tempt many to adopt this quicker way. Or he may be more slowly guided along the path by which the truth was reached by him who first laid hold of it. It is by this latter way of learning the truth, and by this alone, that the learner may hope to catch something at least of the spirit of the scientific inquirer.

Co-operation in Scientific Work.

[Sir Michael Foster went on to refer to the brotherhood of science and to the need of mutual knowledge and common action among men of science in different lands. The desire that in the struggle to lay bare the secrets of Nature the least waste of human energy should be incurred was leading more and more to the concerted action of nations combining to attack problems the solution of which was difficult and costly. After referring to the expeditions to the Antarctic regions now being organised by England and Germany, he went on to speak of

An International Index of Scientific Literature.]

Another international scientific effort demands a word of notice. The need which every inquirer in science feels to know, and to know quickly, what his fellow-worker, wherever on the globe he may be carrying on his work or making known his results, has done or is doing, led some four years back to a proposal for carrying out by international co-operation a complete current index, issued promptly, of the scientific literature of the world. Though much labour in many lands has been spent upon the undertaking, the project is not yet an accomplished fact. Nor can this, perhaps, be wondered at, when the difficulties of the task are weighed. Difficulties of language, difficulties of driving in one team all the several sciences which, like young horses, wish each to have its head free with leave to go its own way, difficulties mechanical and financial of press and post, difficulties raised by existing interests—these and yet other difficulties are obstacles not easy to be overcome. The most striking and the most encouraging features of the deliberations which have now been going on for three years have been the repeated expressions, coming not from this or that quarter only, but from almost all quarters, of an earnest desire that the effort should succeed, of a sincere belief in the good of international co-operation, and of a willingness to sink as far as possible individual interests for the sake of the common cause. In the face of such a spirit we may surely hope that the many difficulties will ultimately pass out of sight.

NOTES ON HEALTH RESORTS.

Sodenthal Baths, near Aschaffenburg.—Hoffa (*Therapeut. Monat.*, July, 1899) gives a description of the Sodenthal waters, which have as yet received little attention. Sodenthal itself is situated in the valley of Spessart, about an hour's journey from Aschaffenburg. It is 143 metres above sea level. Sodenthal is sheltered from the north and east winds by mountains. The surrounding forest, cool springs, and river, help to maintain a constant supply of moisture in the air, and also prevent great changes in the temperature. The inhabitants of the village are particularly healthy, and phthisis is said to be unknown. There are two springs of mineral water, having a similar composition. The chemical ingredients contained in 1,000 parts of water are as follows:

Sodium chloride	13.863000
Magnesium iodide	0.000276
Magnesium bromide	0.015890
Chloride of calcium	0.905000
Chloride of magnesium	0.729300
Chloride of potash	0.570000
Carbonate of magnesium	0.002800
Carbonate of calcium	0.055400
Sulphide of calcium	0.689400
Chloride of lithium	0.016600
Silicic acid	0.047500
Specific gravity	1.017200 at 15° C.

The water is used either externally or internally, and it is said that all diseases in which iodine or lithia form part of the treatment are benefited by a course of Sodenthal waters. Disturbances in general nutrition, such as anæmia, chlorosis, and tuberculosis, are often much improved by this treatment. Nasal and pharyngeal catarrh, rheumatism, gout, and sciatica are successfully treated. The presence of iodine is particularly valuable in the treatment of skin diseases. Sodenthal started as a hydropathic establishment for the treatment of organic and functional diseases of the nervous system.

A Sanatorium for Consumptives in Illinois.—The Illinois Society for the Prevention of Consumption is preparing plans for a State sanatorium for consumptives, which it will ask the Legislature to build. The Illinois State Board of Health has been investigating the advisability of such an institution, and has reported favourably. The Legislature will be asked for an appropriation of half a million dollars for the construction of the sanatorium.

Compulsory Notification of Tuberculosis in the United States.—The Michigan State Legislature recently passed an Act requiring physicians to report to the Health Office all cases of pulmonary tuberculosis, classing the disease as contagious. Physicians very generally refuse to obey the law, and the Health Board had a warrant issued against Dr. Ernest L. Shurley, of Detroit, in order that a test case might be tried. The trial ended with Dr. Shurley being found guilty and fined $50 and costs. The case will be carried to the Supreme Court for final decision.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 16TH, 1899.

THE BRUSSELS CONFERENCE.

It is impossible to do justice in a single article to the Brussels conference if we estimate its work by the enormous mass of printed matter laid before it in the shape of reports from all civilised countries, and special papers from the most eminent experts, together forming three bulky volumes.

The business of the Conference was admirably organised by the able and energetic General Secretary, Dr. Dubois-Havenith, who received every encouragement from the Belgian Government. Several members of the Ministry took part in the proceedings, which were presided over with conspicuous ability by M. Lejeune, Minister of the Interior, while the post of President d'Honneur was occupied by M. de Bruyn, Minister of Agriculture, and the Vice-President was the Secretary-General of Public Works, M. Beco.

The official inquiries, filling a volume of nearly a thousand pages, form a mine of information respecting the state of prostitution, and the frequency of syphilis and venereal diseases in different countries. Two other volumes contain the preliminary reports and communications, while sheaves of separate papers were printed and distributed each day throughout the meeting.

If we may be pardoned for shrinking from the attempt to analyse and classify at the moment the results of such vast labours, we can with more confidence turn to the work of the Conference itself, the appreciation of which presents less difficulty.

The programme of the meeting was arranged under six headings presented in the form of questions. The first of these was, Do the systems of regulation actually in force exert any influence upon the frequency and dissemination of syphilis and venereal diseases? This occupied the attention of the Conference for nearly the whole of two days, a not unreasonable amount of time in view of its supreme importance in the contest between those who support and those who oppose regulation. The negative position was not held only by those who are total and unqualified abolitionists. The value of the measures actually in force was stoutly contested by Professor Augagneur, of Lyons, and Dr. Blaschko, of Berlin. Both sides appealed to statistics, and it seems evident that the question cannot be settled by such figures as were produced. For example, a very good case for regulation seemed to have been made out by Professor Wolff for the city of Strassburg, until it was pointed out by Dr. Hoeffel that his figures did not agree with the official returns of the German army. Professor Wolff admitted this, but explained the want of harmony by saying that he considered himself at liberty to exclude all cases originating outside Strassburg. It is obvious that manipulation of this kind destroys the value of figures for all purposes of comparison, and the incident shows the need that exists for exercising caution before we accept any conclusions based upon statistics until these have undergone the most careful revision.

The failure of the statistical argument in favour of regulation was emphasised by Professor Fournier, the very able leader of the French regulationists, who said he rejected it altogether and preferred to rely upon "common sense." Professor Fournier's "common sense" reasoning amounted to this—that if you shut up an infected prostitute you thereby protect society against the danger she constitutes, but if you do not she becomes necessarily a focus for the dissemination of disease. To this the opponents of regulation replied that it is impossible to shut up every infected prostitute until she ceases to be a source of danger; that only a small proportion of women engaged in prostitution come under medical inspection; that inspection itself, as usually practised, is inefficient, and probably must always be more or less so, for gonorrhœa; and, finally, that it is absurd to say that a prostitute with syphilis may safely return to her trade after a few weeks or months of treatment. The only reply to this was that a partial remedy is at least better than none at all. The medical line of argument being exhausted, the reserve of abolitionists marched up with their battery of moral and political objections. The end of the fight was that the question was not put.

The same result followed a debate that took place over questions 2 and 3, which referred to the practicability of improving the method of medical inspection and the desirability from a medical point of view of maintaining tolerated or licensed brothels. The speakers followed the same lines of cleavage, although there was a less vigorous defence. It was generally admitted that the method of inspection was not everywhere as good as it might be, while licensed brothels are clearly disappearing at a rapid rate. Unfortunately their disappearance seems, when not due to legal suppression, to be caused by and to be in proportion to the activity of medical inspection, for they are replaced by a steadily-increasing number of free or unlicensed houses, known to but not recognised by the police. Their advantage from a purely medical point of view appeared to be, in the opinion of many of the speakers, at least doubtful, while from a moral standpoint they could only be condemned.

The fourth and fifth questions were also taken together. Upon the former, which considered how far police inspection could be improved, several speakers urged that it would be better to make inspection altogether a medical matter, and to co-ordinate inspection and treatment by letting the women attend at special dispensaries.

The fifth question asked was by what legal means the number of prostitutes might be diminished? This led to a very lively debate. The abolitionists urged the necessity

for a whole series of repressive measures directed against, for example, immoral literature, the stage, alcohol, tobacco, dancing rooms, *brasseries*, and inciters to prostitution, and made suggestions for better instruction in personal hygiene, improved care of neglected children, female inspectors of factories, greater facilities for the employment of women, notification of venereal diseases, etc. The only formal result of the debate was the unanimous adoption of a resolution moved by Professor Fournier calling upon the various Governments to exert all their powers to suppress prostitution among women under age, or as expressed more accurately in French, *en état de minorité civile*. A subsequent attempt to extend this so as to include both sexes was defeated by the previous question being carried by a large majority. No conclusion was come to upon the remaining questions, but at the final meeting many resolutions were adopted including one in support of the memorial sent to Lord Salisbury by the Council of the British Medical Association asking for a departmental inquiry into the prevalence and the existing arrangements for the treatment of venereal disease.

We may be allowed to express a hope for the success of the society which it is hoped to found for the study of these questions. The proposal to add another subject to our already overburdened examinations will not probably be accepted in this country, where Mr. Hutchinson's suggestion of post-graduate instruction will be generally preferred. The speech of Mr. Hutchinson deserves an article to itself, so full of interest are the questions raised by him, but we can only draw the attention of our readers to a summary of it contained in our report of the proceedings.

We cannot close this article without alluding to the gracious interest in the work of the Conference manifested by His Majesty the King of the Belgians, the members of the Belgian Government, and the authorities of the city of Brussels; and we desire to express the hope that this meeting will have a great and widespread influence for good by the diffusion of information and the interchange of ideas upon what is perhaps the most difficult social problem of modern civilisation.

ADULTERATED FABRICS.

Dishonesty, like poverty, is always with us. Competition in trade is keen, and the public will buy in the cheapest market, but neither of these facts affords an excuse for manufacturers adulterating food or filling textile fabrics with mineral or organic material, in order to increase the weight of their goods. Anything, therefore, that exposes this baneful practice, and leads to the detection of the fraud, deserves support. The Manchester Chamber of Commerce rendered the public good service when it invited Professor Dixon Mann to investigate and report upon certain fabrics submitted to him for analysis. The inquiry was directed to (1) the percentage of moisture held by fabrics, (2) the loss of weight sustained by the fabric on washing, and (3) the nature and the amount of the filling.

A stronger indictment of the practice adopted by certain manufacturers could scarcely be found than that set forth in the report. Facts shall tell their own tale. A certain sheeting, for example, was found to hold 7.1 per cent. of water, and when washed it had lost 11.5 per cent. of its weight. The filling material in this instance was zinc chloride and magnesium sulphate along with some insoluble mineral matter. Flannelette, which contained 5.2 per cent. of water, lost on washing 11.7 per cent. of its weight, the filling material having been sodium sulphate. Oxford shirtings held 21.1 per cent. of water, and lost 37.5 per cent. of their weight after washing, the mineral materials in this instance being magnesium sulphate and chloride. Moleskin, which is used for making trousers for working men, retained in its fibre 4.1 per cent. of water, and lost on washing 44.3 per cent. of its weight. Other examples might be quoted.

That goods when bought should be found to contain one-fifth of their weight of water, and on washing should lose anything from one-fourteenth to nearly one-half of their weight is a circumstance that demands attention. It is the result of a practice which alike in the interests of health and of commercial morality ought to be stopped. In this country there is at the present time an outcry against lead poisoning and the effects of certain dangerous trades upon the health of workpeople. Employers and employed may not always be fully aware of the risks to health in a particular industry, and ignorance may be pleaded as an excuse, but the conduct of a manufacturer who deliberately adds foreign materials to fabrics to increase their weight must be strongly condemned. Such men sell goods under false pretences. They obtain money for what they do not supply. Besides, they occasionally add to the fabrics materials which make them harmful to the wearer.

Dr. Dixon Mann accounts for the discrepancy between the loss of weight suffered by the fabrics when washed and the weight of the mineral filling respectively yielded by the presence of a varying amount of size which is required to carry the filling and also to finish the fabrics. In some of the fabrics glycerine was found. It had been added to the fabric to prevent the mineral matter from being shaken out as a white powder. Since glycerine attracts moisture from the atmosphere, and keeps the mineral matter more or less damp, any person wearing next his skin clothing made from such a fabric would run the risk of being made uncomfortable, if not of being chilled. A working man's trousers made of white moleskin lose nearly one half their weight on washing, owing to the large amount of mineral matter retained within the meshes of the cloth. Oxford shirtings, on the other hand, absorb and retain moisture owing to magnesium salts present in the fabric. A man's shirt holds about 4½ ounces of water and loses 6 to 7 ounces in weight on washing. Other fabrics—for example, grey moleskin used for making jackets—while holding little mineral matter, contain a large quantity of animal matter in the form of glue, which dissolves out into the water on washing; so that if a man's jacket and trousers were made of grey moleskin they would lose 22½ ounces in weight on being washed.

It is right that the public should be enlightened upon these points. The dairyman who adds water to milk and reduces its specific gravity below a certain standard is deservedly punished, not because he adds anything positively harmful to the milk, but because he supplies an article of less nutritious value than he ought. The grocer who adds

flour to mustard can also be brought to the bar of justice and fined. Why should the defaulting textile manufacturer escape? He is wittingly doing wrong and is taking money for that which he does not give. It is the cheap fabrics that are heavily weighted with foreign material, so that in this particular instance things cheap are things nasty, and as these fabrics are purchased mainly by the working classes it is upon them that the burden of the fraud falls. The masses ought to be protected. Government and municipal inspectors can at any time and in any place remove samples of milk for analysis and they have little difficulty in obtaining a conviction. Is there any reason why trade inspectors should not be appointed with power to place in the hands of analytical chemists fabrics such as we have described for examination? Adulteration of food is less prevalent now than formerly. It is not simply the conviction of the offender and his being mulcted of a few shillings that tell. It is the publicity given to wrong doing that is dreaded. A few similar wholesome lessons taught to textile manufacturers would soon bring about the diminution of a practice which is apparently on the increase.

SECRET COMMISSIONS AND THE MEDICAL PROFESSION.

Sir Edward Fry has made a somewhat tardy reply to the letters of the past and present Presidents of the Council of the British Medical Association reprinted from the *Times* in the British Medical Journal of September 9th. He makes no attempt to justify his wholesale charges against the medical profession, but seeks to turn the argument against the Council of the Association in a manner more befitting an advocate than a judge. He simply assumes that the Council "could have had no doubt that there were in so numerous a body as the medical profession those who committed grave breaches of professional propriety" of the kind to which he adverted, and then denounces them for not having taken action on the knowledge with which he credits them. Sir Edward Fry evidently knows nothing about the body whose conduct he is so ready to condemn, and we respectfully suggest that he might add to the other studies which we ventured to recommend a glance at the constitution and objects of the British Medical Association, and at the powers possessed by its Council. He might thus learn that the Council has no disciplinary power whatever over the medical profession at large. Sir Edward Fry appears to confuse the Council of the Association with the General Medical Council, for he says, "The members of the Council of the British Medical Association.... had before them the case of the thirty or forty medical men who took the founders' shares (in Macdonald, Son, and Co., Limited), and who, for aught that appears, are still registered medical practitioners." They certainly may be, for all the Council of the Association could do to remove them from the *Register*. A measure of the care which Sir Edward Fry has taken in drawing up his grave indictment against the Association is afforded by his statement that Dr. Saundby was President of the Council when "they had this case before them." The Council of the British Medical Association have never had the case before them at all, and Dr. Saundby was elected President in 1896, three years after the case was tried! Sir Edward Fry's charge against the Council of the Association that it "has shown no zeal against the black sheep, but abundant zeal against those who point them out," is further evidence that his own zeal in the cause of which he has constituted himself the champion is not according to knowledge. The Council asked to have the black sheep pointed out, but no help was forthcoming from those who professed to be able to do so. So far almost all the information obtained on the subject has come from the medical profession itself. Since our last article appeared certain correspondents have written to point out that relations exist in some districts between medical men and chemists which amount to profit sharing if not to secret commissions. A doctor who wishes to give up dispensing finds a chemist who will either make up his medicine upon a fixed scale, and leave the doctor to charge the patient for advice and medicine as before, a practice to which no objection can be taken that does not apply equally to dispensing from the doctor's own surgery. Or, on the other hand, the chemist charges what he pleases, although it is difficult to believe that his prices are not regulated by the ordinary laws of supply and demand, the doctor taking a share of the profit. Now we do not hesitate to point out that this second form of the transaction is open to grave objections, although we can understand that medical men who have been used to dispense and to gain a profit upon their drugs consider that there is nothing dishonourable in transferring this part of their business to a chemist's shop. But it is alleged to lead to extortionate prices being charged, and members of a liberal profession should not occupy the position of sharers of profits upon the drugs they prescribe. A similar judgment may be applied to the transaction which a correspondent over the signature of "Physician" described in the *Times* of September 8th. He relates that he ordered an instrument for a patient, and received from the maker two accounts—one for the price in full, the other allowing him the trade discount. One would like to know why "Physician" did not allow his patient to deal directly with the instrument maker? If he had done so the latter could not have supposed that "Physician" wished to act as a broker in the transaction; but if professional men accept the position of intermediaries in trade transactions, they must not be offended at the offer of the usual trade terms. The safe and proper course for medical men is to let their patients deal directly with the druggist, instrument maker, etc., and to keep clear of all profit-sharing relations. If a medical man wishes to give up dispensing he is at liberty to send his patients to a chemist, but he must pay the chemist himself and recover the cost of the medicines from his patients, or retain no interest whatever in the profit derived from their sale.

DREYFUS DELIRIUM.

There appears to be some danger lest the frenzy of political passion and religious rancour which the Dreyfus case has aroused in France should cause a responsive paroxysm of delirium in this country. The intense sympathy which the wrongs of the unhappy victim of official oppression have awakened among us does the greatest honour to the heart of the nation, but we cannot help thinking that some of the modes in which that generous feeling is manifesting itself scarcely does honour to the head of the British public. Edmund Burke long ago warned us against the folly of drawing an indictment against a whole nation. Apparently, however, a good many of us at present see neither injustice nor absurdity in condemning and punishing France for the crimes of some of the least worthy of her sons. The proposal to boycott the Paris Exhibition is bad enough, but what is to be said of the suggestion that English physicians should no longer send their patients to France? Unless we are to adopt the view—which might perhaps commend itself to Sir Edward Fry, but will be accepted neither by the profession nor the public—that medical men send their patients abroad for the benefit of the foreign hotel keepers, the punishment intended for France will fall on the ailing Britons whose health might have been improved by its

climate. A still more foolish proposal is that the medical profession of this country should boycott the congresses which are to be held in Paris in 1900. In plain terms, this means that because certain Frenchmen have done wrong we are to punish the world at large by hindering, as far as it lies in our power to do so, the progress of medical science. It is comforting to turn from this fatuous proposal to a passage in Sir Michael Foster's presidential address to the British Association, in which he proclaims the brotherhood of science. "The man of science," he says, "cannot sit by himself in his own cave weaving out results by his own efforts, unaided by others, heedless of what others have done and are doing. He is but a bit of a great system, a joint in a great machine, and he can only work aright when he is in due touch with his fellow-workers. If his labour is to be what it ought to be, and is to have the weight which it ought to have, he must know what is being done, not by himself, but by others, and by others not of his own land and speaking his tongue only, but also of other lands and of other speech. Hence it comes about that to the man of science the barriers of manners and of speech which pen men into nations become more and more unreal and indistinct. He recognises his fellow-worker, wherever he may live and whatever tongue he may speak, as one who is pushing forward shoulder to shoulder with him towards a common goal, as one whom he is helping and who is helping him. The touch of science makes the whole world kin." France is greater than her corrupt generals or her scheming churchmen, and she will continue to carry high the torch of science when the sins of officialdom for which she is now suffering are forgotten.

THE HOUSING QUESTION.

NUMEROUS are the reminders which come to hand, all tending to emphasise the pressing need of increased housing accommodation in or around London for those dependent on weekly wages. Open-air meetings have passed urgent resolutions demanding action on behalf of public authorities. In the Tower Hamlets it seems clear that rentals have risen considerably during the past year, and the practice of charging "key money" from entering tenants is operating as a new and increasing hardship on the poor in that district. Meanwhile we learn that the action of the London County Council under Part 3 of the Housing of the Working Classes Act has suffered a temporary check by the adverse opinion of counsel as to the power of the Council to purchase or hold land outside the County of London. This power, it will be remembered, is one of those which under the London Government Act of last session is to be exercisable by the new Borough Councils which that Act creates. It will be for these bodies to combine with the Council to obtain an early amendment of the Housing Act so as to permit the provision of working class lodging-houses without as well as within the areas of the boroughs and county respectively. Over and above the inherent difficulties of the housing problem and the legislative difficulties, which may be easily though perhaps tardily removed, there are economic and financial difficulties which complicate any desired solution. The London County Council has hitherto steadily declined to allow any charge to fall upon the rate as the result of its housing schemes. It has also bound itself to charge rents so low that these shall not exceed those ruling in the neighbourhood. Moreover, its dwellings are of high standard alike in construction and in accommodation, and the Government departments are averse from any reduction in the standards hitherto accepted. In view of the rise in value of land in London and the increased cost of materials and labour in building it is becoming increasingly difficult to provide model dwellings at rents which shall be both payable and paying. While, however, the rents obtainable are unalterable except in obedience to the ratio between supply and demand a very superficial inspection will show that the outgoings which have to be met by the Council, and covered by the gross rental, are composite and capable of varying interpretation. Setting aside a certain sum annually for upkeep there remains the "cost" of dwellings. Out of the rents received, the Council provides a sinking fund to redeem in sixty years the capital cost of the buildings *plus* the land (valued for housing purposes), and the payment of interest on the capital borrowed. It has been contended with reason: (1) That the "life" of these dwellings is at least equal to 120 years, and that the present tenants, in repaying the whole in half that period, are presenting posterity with a valuable asset provided out of present rents. (2) The value of the land, even at its reduced housing value, is not credited as an asset against debt. We understand that the consent of the Treasury would be requisite before the Council can effect the reforms thus indicated in the bookkeeping of its housing department. Though the relief such changes would afford may not be very great, it might be just sufficient to sanction building operations on sites which under present restrictions are prohibitive.

INSANITARY HOUSES IN ST. PANCRAS.

ANOTHER aspect of the housing problem presented itself last Tuesday week in St. Pancras, when some dozen families were evicted from their dwellings in Seaton Street, Hampstead Road. Some of them endured the drenching rain in the street, being without a roof to cover them all night. The matter occupied the attention of the vestry at their first meeting after the holidays. It appears that Seaton Street has for some time past enjoyed an unenviable notoriety. The houses are in many instances insanitary, overcrowded, and dilapidated. The landlord, it is stated, unable to obtain his rent, and dissatisfied with the habits of his tenants, decided to make a wholesale clearance. The rents in this street are relatively low, being 3s. or 3s. 6d. a room; but a visit to the spot has convinced us that in several instances they would be dear at any price. Nuisances in the shape of ill-paved entries, stopped waterclosets, vermin-infested walls, and transgressed by-laws revealed themselves to the most casual inspection. Once a street has dropped below a certain standard of decency it loses caste, and becomes the haunt of the "submerged tenth." This is the moral of Seaton Street, and it behoves the vestry or council to deal directly, promptly, and strongly with those responsible for such a state of things.

MOTOR CARS FOR MEDICAL MEN.

THERE have been numerous advocates for the use of motor cars for doctors, not so much perhaps in towns, where distances are as a rule not very considerable, and some means of transport can generally be obtained at any hour of the day or night, but more especially in the country. It is claimed that a large saving in money as well as time is effected by the employment of this method of locomotion. In many country practices a doctor is obliged to keep three or four horses at least, besides traps, and this is a constant drain on his income, whereas one motor car will suffice for all his work, is always ready at a moment's notice, and costs next to nothing to keep. Take the case of a doctor in the country with a large and scattered practice, four to six horses, a couple of men, stabling, shoeing, forage, wages, repairs, vets' bills, etc., will cost him at least £300 a year. A motor car, on the other hand, after the first initial expenses (they vary in price from 150 to 300 guineas) only requires the services of a lad to keep it clean, and it will cost considerably under £100 a year, including wages, repairs, and the fuel or motor power required. All country practitioners have

experienced the worry of an urgent night call, and the time wasted before the trap makes its appearance at the door. With a motor car the doctor goes direct to the stable, or wherever he keeps his conveyance, no assistance is required, he applies a light, or turns a lever as the case may be, sets the machinery in motion, and within a very few minutes of his first receiving the summons, is off on his journey at full speed. This is, of course, the bright side of the picture, and there are many who aver that a motor car requires neither feed nor keep, and with proper treatment should, like Tennyson's brook, go on for ever. But this is precisely what the present form of motor car fails to do, and as against their employment in country practice it must be remembered that they have a fatal facility for breaking down at the wrong or most critical moment. Horses are always liable to fall ill; but it is seldom that all the stable is laid up at the same time; if, however, the doctor's one and only motor car gets out of sorts he is absolutely helpless. Motor cars for doctors, as remarked before, are intended principally for use in the country, where unfortunately the difficulties of repairs being promptly executed are of course the greatest. Manufacturers guarantee their machines only for six months, and after the warranty which allows of free repairs (unless due to carelessness or rough treatment) expires, a doctor is not only out of pocket owing to the expense necessary to put the motor car in proper order again, but there is the difficulty of carrying on his duties in the meanwhile. A motor car, we are quite sure, would not be looked on with much favour in a hunting country, where a large proportion of better-class patients would be sporting people, who would certainly look askance on anyone who did not pay due reverence to the fetish of horseflesh. There are three varieties of motor car. The electric are almost noiseless, and when they made their appearance in London under a company, were facetiously alluded to by the cabmen as "humming birds." There is always the difficulty of recharging them, and in the country, where there are no electric works or charging stations, this constitutes an almost insurmountable objection to their general use. Steam motor cars are not very popular, owing to their weight, vibration, and the constant attention which must be paid to the water in the boilers, if a serious accident is to be avoided. Oil motor cars are the best, safest, and cheapest; but they are clumsy, and vibrate considerably, and have the further disadvantage of leaving an abominable smell behind them. This is not perceived by the occupants of the carriage, but it is doubtful whether this smell which the doctor would disseminate in his progress through the country would bring him into good odour with his neighbours. The fact of the matter is that the whole subject of motor car construction is in its infancy. Given a light, inexpensive, and elegant motor car, guaranteed not to break down, its advantages over horses in some parts of the country would become firmly established; as it is, we would advise medical men to wait for further developments of safety, comfort, and appearance in motor cars, before committing themselves to the purchase of any class of motor vehicle at present before the public.

PUBLIC VACCINATORS AND ANTIVACCINATION PROSECUTIONS.

Since prosecutions of vaccination defaulters have recommenced under the provisions of the Vaccination Act of last year, it has been the policy of the Antivaccination League in all cases in which they have thought it worth while to take up the defence of a case to compel the prosecution to adduce proof at every step of procedure that the requirements of the law, real or assumed, have been complied with. This always involves the attendance of the public vaccinator, by whom vaccination was offered to the defaulter, to substantiate that fact. As it is no part of the contract duty of this official to give evidence in such cases, the question has naturally arisen, Who is to pay him for so doing? The magistrates generally refuse to give costs against the defaulter, and in not a few instances the case against him has been dismissed. In such cases the public vaccinator would seem to have a claim against the vaccination officer, and through him indirectly against the guardians. This question has been submitted to the Local Government Board by Dr. Johns, the Public Vaccinator of Cheltenham, who has been informed in reply that it was no part of the duty of the public vaccinator to attend proceedings before the magistrates in the capacity of witness, and that in cases in which he was required to attend for the purpose of formally stating that he had offered vaccination he was entitled to be paid his reasonable costs, whether the justices allow them as costs or not, and that they formed part of the costs incurred by the vaccination officer which are chargeable to the guardians under Article 29. This question is therefore now settled, and the only one that remains is as to whether the public vaccinator should require to be formally subpœnaed in order to give him a claim for remuneration if the case should fall through before he is required to give evidence. The solution of this problem would appear to depend in some degree on his relations with the vaccination officer and his board.

INSTRUCTION IN TROPICAL DISEASES FOR NAVAL MEDICAL OFFICERS.

Dr. Patrick Manson, in his address at the opening of the St. George's Hospital School in 1897, called public attention to this important question. Some correspondence followed, in the course of which it was pointed out that of the public services the navy alone had no such instruction. At the end of that year Inspector-General Turnbull, then in medical charge of Haslar Hospital, represented to the Medical Director-General of the Navy the desirability of such instruction being given at Haslar, and the present course of instruction reconsidered; and again in August, 1898, the advantages, in his opinion, of transferring the Haslar School to the Royal Naval College at Greenwich in view of the London School of Tropical Diseases, and the benefit that would be derived from the association of surgeons on entry with the naval and marine officers under instruction at that college. This suggestion was carefully considered by the Admiralty and supported by many connected with, and interested in, the Royal Naval College, as also by the Colonial Office. It is understood that difficulties arose as regards accommodation there, if not at present, in the future, owing to the progressive increase of the navy, and as now notified, the full course of instruction at the Albert Docks was not considered requisite for naval medical officers; arrangements are therefore being made for instruction in the diseases of foreign stations at Haslar.

THE DECLINE OF SCURVY AFLOAT.

In a paper on this subject read before the Hong Kong Branch of the British Medical Association in February, 1899, by Surgeon C. Marsh Beadnell, R.N., a reprint of which is before us, the subject is presented in all its aspects. The author lays stress on mental depression and excess of prolonged physical exertion, as also "foul and rebreathed air" as auxiliary or predisposing causes of scurvy, "the *fons et origo* of the malady being a specific micro-organism," as proved in his opinion by Frerichs, Frein, and others. He quotes a great number of instances of scurvy outbreaks afloat and ashore—in fleets, armies, as late as the Crimean war, in single ships, and in civilian life. One remarkable instance has possibly escaped his notice, but can be recalled by the seniors of the profession as having been ably investigated by the late Professor Christison in 1847 and 1848, as published in the *Monthly Journal of Medical Science* for those years. The disease at

that time appeared among prisoners at Perth Penitentiary, and among railway and other labourers employed at and near Edinburgh; food was not deficient in quantity, but lacked a sufficiency "of nitrogenised articles of food from the animal world." The absence of scurvy in Nansen's Arctic voyage he merely mentions. When one considers that Nansen and his companion in their remarkable sleigh and canoe journey, where they could not transport the old indispensable lime-juice, as it was thought by our arctic authorities, even at the time of our latest arctic exploration under Nares, one would desire fuller information as to Nansen's antiscorbutic regimen, and it is to be hoped it may be forthcoming ere our South Polar investigators proceed on their way. The prevalence of scorbutic affections in artificially-fed infants is mentioned, and Barlow's Bradshaw Lecture (1894) is referred to, but this aspect of the disease is, perhaps, hardly sufficiently recognised. In concluding his valuable and interesting paper, Surgeon Beadnell pays a deserved panegyric to the "immortal Gilbert Blane," who in 1795 by his "repeated exhortations" ultimately succeeded in establishing limejuice as an antiscorbutic in the British navy, to be, from its proved efficiency, established in our merchant service in 1866! The mention of Gilbert Blane suggests reference to the "blue ribbon" of the Naval Medical Service. By the present out-of-date regulations, a medical officer, to become entitled to this much-coveted distinction, must have been "in medical charge of a ship of war in the royal navy." The author of this address, which indicates his high scientific attainments, erudition, professional zeal and industry, is debarred from this prize, as he is not in medical charge, but the second medical officer of his ship, and in the same way no naval medical officer in a hospital can acquire this distinction for work done there. Surely it is time to reconsider the terms of this award. Possibly naval medical officers were not employed at naval hospitals, or qualified surgeons under the medical officer on board ship in Gilbert Blane's day.

GLASGOW PARISH COUNCIL.

THE union of the Barony and the City Parishes to form the Parish of Glasgow was accomplished at the end of last year, and the recent issue of the first combined report for the four and a-half months from December 27th, 1898, to May 15th, 1899, is interesting, and shows at a glance the large amount of work the officials have to deal with. The new parish embraces all Glasgow north of the Clyde and east of the Kelvin, including practically all the most crowded districts, while the rest of the city forms part of the Govan combination parish. Even during the short period reported on there were no fewer than 7,122 applications for relief. The present poorhouses, with hospitals attached, are the City Poorhouse and Barnhill Poorhouse, and these have for some time been found inadequate to cope satisfactorily with the increasing work. This applies particularly to the hospital accommodation, and very frequently to relieve the pressure in the hospitals other wards have had to be utilised. Notwithstanding the disadvantages of such an arrangement very successful work is done in both these institutions, but it is gratifying to learn that the Parish Council has now fixed on a suitable site in the Springburn district for a large new hospital. It is also intended to put up two smaller district hospitals, one in the eastern and another in the western part of the parish, and this large increase of hospital accommodation should relieve the present buildings and also provide for the growing needs of the city. The part of the report which deals with the certification of lunatics is important, and illustrates a feature of the management of lunatics as it is carried on under the auspices of this Council. The Glasgow District Lunacy Board has two large and splendidly-equipped asylums under its charge. In addition to these, wards are set apart in one of the poorhouses for the treatment of insane patients, whose illness is considered by the Council's certifying physician (Dr. John Carswell) of a favourable nature, and probably of short duration, and not necessitating confinement in an asylum. If, after a reasonably short period, these patients (usually acute cases) do not recover, they are then certified, but the result of this plan, which has been practised now for ten years, has been most encouraging, and the large proportion of the patients so treated have been saved the stigma of residence in an asylum. During the few months dealt with in the present report 108 cases were admitted to these observation wards, of whom only 14 had afterwards to be transferred to the asylums.

THE PROFESSORSHIP OF MEDICINE IN QUEEN'S COLLEGE, BELFAST.

OWING to the lamented death of Dr. Cuming, who occupied the chair of Theory and Practice of Medicine in Queen's College, Belfast, for a period of thirty-four years, the professorship is now vacant, and, up to the present, there are two candidates—Dr. J. A. Lindsay and Dr. James Moorhead. The authorities have fixed the 25th of the present month as the last date on which application for the post can be made, as this will give ample time for the appointment to be considered and settled before the opening of the winter session at Queen's College on October 17th. Dr. J. A. Lindsay has devoted himself for many years to the special study of medicine. He is Physician to the Belfast Royal Hospital, and has won a high position as a most successful clinical teacher. Last session when, for a time, Professor Cuming was unable to meet his class, Dr. Lindsay lectured in his place. Two memorials have been presented to the President of Queen's College, Belfast, on Dr. Lindsay's behalf, one very largely signed by the members of the medical profession in Belfast and the North of Ireland; the other memorial has been sent in by the students. In both testimonials attention is drawn to Dr. Lindsay's success as a lecturer, and it is urged that his appointment as Professor of Medicine would be in the best interests of the Belfast Medical School. The other candidate is Dr. James Moorhead, who, like Dr. Lindsay, was a very distinguished student of the Belfast Medical School. After graduating, Dr. Moorhead gained a very high position in the Indian Medical Service, where he rose to be a Surgeon-Lieutenant-Colonel. Dr. Moorhead, on retiring from the Indian Medical Service a few years ago, came to reside in Belfast, where he has since practised.

ROYAL INSTITUTE OF PUBLIC HEALTH.

THE Congress of the Royal Institute of Public Health will be held in Blackpool on September 21st to 28th, under the presidency of the Most Honourable the Marquis of Lorne, K.T., G.C.M.G., M.P., who will deliver an address in the Grand Theatre at 11.30 A.M. on the day of opening. The work of the Congress will be divided among the following sections: A. Preventive Medicine and Vital Statistics (President, Dr. E. W. Hope, Medical Officer of Health for the City of Liverpool). B. Chemistry and Meteorology (President, A. E. Fletcher, F.I.C., late Chief Inspector under the Alkali Acts). C. Engineering and Building Construction (President, Benjamin Sykes, M.Inst.C.E.). D. Municipal and Parliamentary (President, T. Loftus, Town Clerk of Blackpool). The programme of the Congress also includes a conference of Medical Officers of Health, a conference of Veterinarians, a conference of Sanitary Inspectors, and a conference of ladies on Domestic Hygiene. In the Section of Preventive Medicine and Vital Statistics a discussion on The Etiology and Prevention of Diarrhœa in Children and Adults will be introduced by Dr. J. Wheatley, medical officer of health for Blackburn; and papers have been promised on The Serum Diagnosis of

Enteric Fever, by Professor Delépine; on The Influence of Personal Hygiene and General Sanitation on Tuberculosis in Man, by Dr. A. Ransome, F.R.S. and Dr. E. H. Cartwright; on The Advantages of Medical Inspection of Children in Elementary Schools, by Dr. Arnold W. W. Lea. In the Section of Chemistry and Meteorology, the following among other papers will be read: A Century of Smoke Production with Efforts for its Abatement, by Dr. W. Graham, Medical Officer of Health, Middleton; and The Pollution of the Atmosphere of Large Towns, by William Thomson, F.R.S.Edin., Royal Institution Laboratory, Manchester. In the Municipal and Parliamentary Section, papers on Cremation will be read by J. Harvey Simpson, Secretary of the Manchester Crematorium, Limited, Manchester, and Dr. Ed. Drummond, St. Anne's-on-the-Sea, and the following resolution will be moved by E. F. Hunt (Acton): "That cremation is the most sanitary method for disposal of the dead, and that it is desirable to erect crematoria in the neighbourhood of thickly-populated districts, and that facilities should be given to governing bodies for that purpose, and that it be a recommendation to the Congress that a copy of this resolution be sent to the President of the Local Government Board." At the conference of medical officers of health a discussion on Recent Legislation with respect to Defective Children will be introduced by Professor W. R. Smith, President of the Institute. Dr. J. C. Thresh will read a paper on the Protection of Surface Water Supplies. A discussion on The Administrative Uses of Bacteriology will be introduced by Meredith Young, M.D., D.P.H., Medical Officer of Health, Crewe; one on the Notification of Measles, by William Berry, F.R.C.S.I., D.P.H., Medical Officer of Health, Wigan; and one on the Desirability or otherwise of Corporations having Knackers' Yards attached to one of their Public Departments, by R. Sydney Marsden, M.B., D.Sc., F.R.S.Edin., Medical Officer of Health, Birkenhead. At the congress of ladies on Domestic Hygiene papers will be read on the Importance of Teaching Housewifery as an Aid towards the Improvement of the Public Health, by Dr. Roger McNeill, Medical Officer of Health, Argyll County Council; and on the Care of Children during Infancy, by Edith Johnson, M.B., B.Ch., Blackpool. Applications to be enrolled as members of the Congress should be addressed to the Honorary Secretary, Public Health Office, Blackpool. The associated railway companies have arranged to charge a fare and a quarter for a return ticket on production of the certificate signed by the Honorary Secretary. If a member of the Congress is taking any members of his family, he should ask for the requisite number of certificates. Applications for these certificates should be made not later than Monday, September 18th. During the Congress meeting the Lancashire and Yorkshire and London and North-Western Railway Companies have arranged to issue to members, on production of their Congress tickets, return tickets for single fare from Blackpool to all stations within fifty miles.

LONDON SCHOOL OF TROPICAL MEDICINE.

It is announced that the official opening of the London School of Tropical Medicine will not take place till the spring of 1900, when it is expected that the new buildings will be complete. Work at the School will, however, commence as arranged on October 1st. The staff of the School consists of the following: Physicians—Dr. Patrick Manson, Dr. R. Tanner Hewlett, Dr. Guthrie Rankin, and Dr. Andrew Duncan; Physician to Out-patients—Mr. Oswald Baker. Surgeons—Mr. Johnson Smith, Mr. W. Turner, and Mr. James Cantlie; Surgeon to Out-patients—Dr. J. B. Christopherson; Ophthalmic Surgeon—Mr. L. Vernon Cargill; Lecturers—Professor W. J. Simpson, Dr. L. W. Sambon, Mr. E. Treacher Collins, and Mr. Malcolm Morris; Medical Tutor—Mr. D. C. Rees. An introductory lecture will be delivered by Dr. Manson.

MEDICAL ORGANISATION.

We are informed that the Medical Guild, Manchester, is endeavouring to organise a conference of delegates from all societies and associations of general practitioners in the country. In pursuance of that object, a committee of the Guild has been appointed to make preliminary inquiries, to see how far the various societies will co-operate in this matter. The objects of the conference are stated to be: (1) To promote greater cohesion and better organisation amongst the general practitioners of the country, and generally to develop an *esprit de corps*. (2) To afford general practitioners from all parts of the country an opportunity of meeting together and discussing all matters affecting their welfare, and in this way of bringing their views to a focus. (3) By giving publicity to their views on questions affecting them to influence public opinion in their favour, and thus to uphold and improve the status of the profession. (4) To provide some machinery by which the advantages of an annual conference may be secured to the profession.

ANOTHER COLLIERY SURGEONS' DISPUTE.

Almost simultaneously with the colliery surgeons' "strike" in Lancashire[1] comes news of a similar dispute in South Wales. There the workmen engaged at Messrs. Davis and Sons' collieries at Ferndale decided at a mass meeting held on August 26th to advertise for the services of a doctor in addition to, and independent of, Dr. Parry, J.P., who has been medical officer to these collieries for twenty-seven years. According to the *South Wales News* of August 28th, the agitation commenced some months ago, when Dr. Parry, Dr. Morris, and Dr. Griffiths, all connected with different collieries under the same owners, requested the workmen to increase the poundage from 2d. to 3d. in the £. The advance was accepted by some of the men, but at Ferndale the workmen met, and passed a resolution regretting their inability to grant the extra poundage. Dr. Parry posted a notice that on and after the first day of September he would expect to be paid for his services as medical officer 3d. poundage (which was paid to the other colliery surgeons under the company), to be deducted from the men's wages, unless before August 31st the men sent in a written objection to the company. Thereupon the men held a meeting, and resolved to forbid the deduction of the extra poundage from their wages. Dr. Parry also declined to accept the 2d. poundage. A ballot amongst the workmen resulted as follows:—For the 3d. poundage, 418; against, 1,792; majority against, 1,374. But, although the men forbade a general poundage above 2d. for the doctor, they were not opposed to any of their number who chose to pay 3d. doing so in order to secure Dr. Parry's services; and they requested the company to deduct the 2d. poundage as before, and hand the same over to the workmen themselves. The company decided to deduct the 3d. poundage for those willing to pay it, and to make no deduction from all other men. Inquiry was made as to the system of payment for medical attendance at Rhymney. The reply stated that a committee consisting of representatives from each pit and from among outside workers had sole control of the said medical fund. The poundage was 2d., and the amount thus collected was deducted at the company's office, and paid to the committee, who paid a fixed salary of £600 per annum to the medical officer, Dr. Redwood, and likewise paid the assistants (who were appointed by Dr. Redwood), and the bills for medicines used. A considerable amount of money had accumulated in the fund. The Ferndale men thereupon unanimously resolved to have two surgeries; they likewise forbade the deduction of any poundage whatever at the company's office for medical attendance unless the company agreed to keep 2d. for those wishing to have another medical attendant, as well as the 3d. poundage

[1] *Vide* British Medical Journal, September 2nd, p. 619.

for those wishing to retain Dr. Parry's services. They finally decided to advertise at once for a senior medical officer at a salary of £400 per annum. It was explained that the £400 would be exclusive of assistants—though the question of the appointment of assistants was not considered—and of medicine.

HOSPITAL REFORM ASSOCIATION.

The Hospital Reform Association has made arrangements to hold a conference at St. Martin's Town Hall, Charing Cross Road, London, on October 10th and 11th. The subjects set down for discussion are as follows: (1) The Inquiry System, October 10th, 4 P.M.; (2) Payments by Patients, October 10th, 8 P.M.; (3) Provident Dispensaries, October 11th, 4 P.M. Among those who have promised to read papers are Mr. Hawkins-Ambler, Liverpool; Dr. Bertram Rogers, Bristol; Lieutenant-Colonel E. Montefiore, R.A., London; Dr. A. Brown Ritchie, Manchester; Dr. Arnold Lee, Manchester; Dr. W. Richardson Rice, Coventry; Dr. Francis J. Waring, Brighton; and Dr. Macnaughton-Jones, London. Sir William Broadbent has promised to attend the Conference. Mr. T. Holmes will preside at the meeting when provident dispensaries will be discussed. The Rev. Russell Wakefield will preside at the meeting when payments by patients will be discussed.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA.

The fifth session of the Intercolonial Medical Congress of Australasia will meet in Brisbane on September 18th, and will sit till the 23rd. The various governors of the Australian colonies, the Lieutenant-Governor of New Guinea, and the Admiral of the Australian Station, have signified their willingness to become patrons of the Congress. The following have been elected Presidents of Sections: Dr. Scot-Skirving, Medicine; Dr. A. M'Cormick, Surgery; Dr. H. Lindo Ferguson, Eye, Ear, Nose, Throat; Dr. M. U. O'Sullivan, Midwifery and Gynæcology; Dr. Ashburton Thompson, Public Health. The Australian steamship companies and the railway commissioners have consented to reduce their fares considerably to members and their wives, and the Queensland Government has made preparations on a liberal scale for the entertainment of the visitors.

CANCER AND CATTLE.

A contemporary has recently published a communication from Mr. Jasper More, M.P., stating that cancer in cattle is far more common than tuberculosis, and suggesting that the consumption of imperfectly-cooked cancerous meat is a possible source of cancer in persons who are otherwise predisposed to the disease. The statement and the suggestion are alike erroneous, and Mr. Jasper More has been misled by relying upon the information of farmers, when he might have gone to more trustworthy sources. Professor McFadyean, the Principal of the Royal Veterinary College in London, has lately had occasion to inquire[1] as to the frequency with which cancer occurs in the lower animals, and he proves conclusively that cancer, although it is not very common, is not at all rare among some species of domesticated animals. Of 49 cases of carcinoma which were removed during the last six years in the clinic of the Royal Veterinary College, 25 were in the horse, 16 in the dog, 5 in the ox, 2 in the cat, and 1 in a sheep; whilst as compared with the incidence of the disease in human beings, the rarity of cancer of the tongue, uterus, and mammary gland is very remarkable. Professor McFadyean states that he has never seen a case of carcinoma of the udder of the cow, and, so far as he is aware, there is no authentic record of such a case. It is clear, therefore, that cancer in cattle is much less common than tuberculosis. The suggestion that cancer can be propagated by eating the flesh of animals who have died with the disease scarcely needs refutation. In the first place, cancer hardly ever affects the muscles, and when it does it is either by extension, when the disease would be obvious, or by metastatic nodules, which are so distinct that no one would eat them; secondly, animals have been repeatedly fed upon cancerous material without developing any form of new growth.

[1] *Practitioner*, April, 1899.

LUNACY IN SURREY.

The prevalent cry of "What shall we do with our lunatics?" is making itself widely heard now in the county of Surrey, for Brookwood Asylum being more than full, it has been necessary to make room for acute cases by removing many of the imbecile class back to their workhouses. This plan does not give general satisfaction to the local authorities, and some Boards of Guardians who have no proper accommodation for such cases have protested strongly against it. The Local Government Board having declined to aid the County Council to obtain the 4s. grant for imbecile patients warded in workhouses, even after a period of treatment in the asylum, the latter body has now issued a circular to Boards of Guardians asking for their opinion as to the desirability of the county providing separate asylum accommodation of a simple character for imbeciles and chronic lunatics. We would venture to suggest that the time is opportune not only for the establishment of a custodial asylum for chronic cases, apart from the asylum for acute and curable patients, but also to consider the possibility of providing a training institution for juvenile imbeciles, as has been so successfully done by the adjoining county of Middlesex, where a block for 200 such cases has been erected in the grounds of the Wandsworth Asylum. The population of Surrey is much the same as that of Middlesex, and what has been done by the latter, and favourably reported on by the Lunacy Commissioners and local and medical authorities concerned, might well form a precedent for the neighbouring county.

The German Government has commissioned Professors Frosch and Kossel to investigate the outbreak of plague at Oporto.

The first meeting of the International Congress of Life Assurance will be held in Brussels from September 25th to the 28th.

The Royal Colleges of Physicians and Surgeons in Ireland have just published a *Medical Students' Guide* containing full particulars of the examinations held conjointly by the Dublin Colleges. The preliminary examination will be held on Wednesday and Thursday, September 27th and 28th.

We publish this week a paper on the Symptomatology, Pathology, Treatment, and Prophylaxis of Plague, contributed by Dr. W. J. Simpson, in response to a wish for information on the subject expressed to us by several correspondents.

According to the *Times*, Señor J. C. de Pereira Pinto, Consul-General, in Liverpool, of Brazil, has written on behalf of the Association of Foreign Consuls to Mr. A. L. Jones, chairman of the Liverpool School of Tropical Diseases, to express his warmest congratulations on the important discovery of the malarial mosquito made by Major Ross, of the malaria expedition now on the West Coast of Africa. He also expressed the hope that this most gratifying discovery may stimulate the members of the expedition to achieve further success in their work of research in so praiseworthy and humane a cause.

CONGRESS OF THE SANITARY INSTITUTE.

(Concluded from p. 680.)

TUBERCULOSIS.

At the Congress of the Sanitary Institute recently held at Southampton, the "Lecture to the Congress" was delivered by Mr. Malcolm Morris, who took as his subject Tuberculosis. He said he proposed to expound, in its broad lines, the policy of the National Association for the Prevention of Consumption, about which there appeared still to be a good deal of misconception in various quarters. He argued that a crusade for the suppression of tuberculosis was expedient because, in spite of the great decrease in the ravages of the disease that had taken place in the last sixty years, it was still a scourge more destructive than all other infectious diseases put together. An appeal to the people was necessary, for it was the people themselves that must work out their salvation; but the production of a panic was no part of their programme. So far from wishing to establish a sanitary reign of terror, they came forward to protect the people from fanatical sanitarians who would institute a policy of "Thorough" in regard to tuberculosis which might justly be described as social tyranny. In spite of its lessened ravages, tuberculosis still claimed an enormous annual tribute of lives, to say nothing of the incalculable amount of ill-health, suffering, and impaired efficiency for which it was responsible. No special measures had hitherto been employed aiming directly at the extinction of the disease. Was it not worth while now to try the effect of such measures, and by assuming the aggressive to complete the victory which the defensive warfare of sanitary reform had already half won? To secure the co-operation of the people and to direct its action in an aggressive warfare against the tubercle bacillus was the object of the Association. Theoretically, tuberculosis could be suppressed by the destruction of the infective material actually put into circulation by sufferers, and by cutting off the supply of fresh infection at its sources. These sources were in general terms: (1) Infected persons, (2) infected dust, fabrics, and furniture; (3) infected foodstuffs, and (4) infected animals. In regard to all these things there were measures of protection which could be taken by the State, by municipal and local sanitary authorities, and by the individual respectively. The concentration of these various forces to one objective was the "general idea" of the campaign. With regard to the State, while agreeing with Lord Salisbury as a general principle that they should not invoke the aid of the secular arm, Mr. Morris said he did not think the State should be content with maintaining an attitude of benevolent neutrality. The State had already done much for the betterment of the condition of the people, and this had a very direct bearing on the prevention of tuberculosis, for a well-housed, well-fed, and well-clothed population was thrice armed against the tubercle bacillus. Besides the condition of the people question, there was the condition of the cattle question with which the State might with advantage deal. If tuberculosis in the bovine species could be abolished they would be far on the way towards the deliverance of the human race from the scourge. As a first step the recommendation of the Royal Commission on Tuberculosis that no meat from cattle affected with general tuberculosis should be allowed to be sold for food should be acted upon. Foreign cattle should be inspected, and isolated if there were suspicion, destroyed if there were certainty, of disease. He did not propose that the tuberculin test should be made compulsory in our home-bred herds. But at least the State should protect us from the importation of tuberculous cattle from abroad. As regards home-grown tuberculosis, stock breeders were already beginning to realise that tuberculin was a protection to the farmer as well as to the public; and public opinion, as it became more and more fully educated on the subject, would insist on every possible precaution being taken by all concerned in the supply of meat and milk from the stock breeder to the retail vendor. Passing from the prevention of the transmission of the disease from human beings to each other, Mr. Morris said the compulsory notification of tuberculosis would be a good thing, and it might come in time, but the time was not yet. The majority of the medical profession were opposed to it, and even if they were favourable to such a measure, the people would certainly not submit to it. It was clear, however, that notification must be the basis of any effective administrative measure of reform; and as compulsory notification was impracticable, could there not be notification without compulsion? The scheme of the Association for the Prevention of Tuberculosis included missionary work by lay members as well as by the medical profession. One form of such work might be the discovery and unofficial notification of cases among the poor. For the work of such a volunteer intelligence department, ladies would be particularly well fitted, and in this way they might help the cause better, perhaps, than in any other. They did not wish in any way to interfere with private practitioners, or to encumber medical officers of health with unnecessary help. He thought, however, that the co-operation of lay workers in the manner suggested, under the guidance of the Association, would be hailed by most sanitary authorities as a valuable assistance. Compulsory notification, on the other hand, would be certain to lead to much friction between medical officers of health and private practitioners. Municipal and local authorities could do much indirectly by giving practical effect to Acts of Parliament directed to the amelioration of the condition of the people, notably in the drainage of soil, the cleansing of towns, the prevention of overcrowding, and the provision of healthy dwellings for the poorer classes. They could also do much directly by the supervision of the milk and meat supplies, and by insistence on certain elementary hygienic precautions. One of these was the prohibition of the filthy practice of spitting in streets, omnibuses, railway carriages, and other public places. Another way in which municipalities could most powerfully help in the abatement of tuberculosis was by the erection of sanatoria in which the disease could be treated in its early stages. A sanatorium had a twofold object: (1) As a means of isolating sufferers who outside would be centres of infection to others; (2) as places where the best treatment could be given to patients who could not otherwise get it. Every town should have its own sanatorium, as was the case in Switzerland. It was also part of the programme of the Association to establish sanatoria for persons who could pay a small amount for their maintenance. For the individual the best way to avoid tubercle was to trust to those natural disinfectants, air and sunshine. The open air in the day, and the open window at night was sound sanitary policy. Lord Beaconsfield said, with more truth perhaps than he was aware, "The atmosphere in which we live has more to do with human happiness than all the accidents of fortune and all the acts of Government." With regard to the prospects of the crusade, Mr. Morris expressed a confident hope of success. The question was simply one of knowledge and the application of knowledge. They already had all the knowledge that was necessary; the only real difficulty lay in getting the State, the local authorities, and individuals to apply that knowledge.

The Plague.

Professor W. J. Simpson read a paper entitled Recrudescence of the Plague in the East and its relations to Europe. He said the commonly-received view that advancing civilisation caused the disappearance of plague in Europe, and would accordingly prevent a recurrence of plague epidemics, was not supported by historical facts. Five years ago, when plague broke out in Hong Kong, Japan was the only foreign country which, owing to its proximity to the centre of the epidemic, was interested in the outbreak, and showed that interest in an active manner by sending a scientific commission to Hong Kong to study the nature of the disease. The result of the mission's work was the important discovery by Kitasato of the bacillus of plague, which placed us in much more advantageous position of defence against this disease than that of our predecessors. From Hong Kong the disease spread through Southern China, little note of its extension being made. Two years later it appeared in Bombay, and then the expansive character of the epidemic began to impress itself on the civilised world. In two years it had travelled 3,000 miles westward. In India, in the course of six months, the epidemic assumed most threatening proportions. The general mortality rose in Bombay city to over 1,600 a week; and important centres in the Presidency becoming infected, panic, unreasoning resistance to regulations, and flight from the city followed. The disease

having gained a footing in India, continued not merely to spread, but also to reappear annually in the infected centres, declining generally during the intense heat and rains, and recrudescing in the cooler seasons. Since its advent the plague had caused in India over a quarter of a million deaths. The European Governments being alarmed at the outbreak in Bombay, the Venice Conference was called to formulate rules and regulations for commerce and pilgrim traffic, having for their object the prevention of the importation of plague, more particularly into Egypt and Europe, as well as into other countries east of the Suez Canal. The rules and regulations had been in force some two years, and during that time, notwithstanding a most rigid adherence on the part of all concerned to the recommendations of the Convention, plague had reached the Persian Gulf, Penang, the Mauritius, the French island of Réunion, Madagascar, Jeddah, Egypt, and, if rumour was correct, the Gold Coast of the French possessions in West Africa, and lastly Portugal. Its reappearance in Egypt after an absence of fifty years, and its extension to Portugal, was a matter of profound interest, because it indicated that this plague from China partook rather of the nature of a pandemic than an epidemic, and possessed that which other plague epidemics for nearly the past 200 years had lacked—namely, the quality of diffusiveness which defied the precautions hitherto employed against its progress. The intimate commercial relations between the countries of the Mediterranean basin were very favourable to the diffusion of plague. When it was a question as to the possibility of plague spreading from India westwards, the condition of the sea traffic between India and Europe rendered it less likely that the disease would spread by sea than by land. The danger to Egypt of infection by plague had not been in its commercial relations with India, but in its religious pilgrimages, which brought its pilgrims in the Hedjaz into very close relationship with Mohammedans from infected centres. But now that plague had arrived in Egypt, a goal had been reached which was favourable to its further extension, because the conditions of sea traffic between Egypt and Europe were very different from those between India and Europe. There was constant communication kept up by fishermen, traders, and travellers, and extending to all classes, and including those likely to be affected with the disease. In the case of a ship coming from India, distance gave time for the development of illness on board, and allowed of the adoption of precautionary measures should it turn out to be plague, but a ship coming from Egypt arrived at its destination in the Mediterranean basin before any signs of illness were manifested. Therefore the plague in Egypt came under a set of new conditions which were far from being unfavourable to the westward progress of the disease. Preventive measures must be based on our knowledge of the disease. Two discoveries of the first magnitude had been made, the one by Kitasato showing that the bacillus was the cause of the disease, the other by Haffkine proving that from this bacillus a prophylactic might be prepared which had strong protective powers. These discoveries, combined with the fact that plague was a disease which only slowly gained a firm footing in a locality, rendered the checking or mitigation of an outbreak much more hopeful and certain than before. The recognition of the bacillus permitted observations to be made as to the manner in which the microbe left the body. The bacillus had been found in the excreta, urine, and sputum. Precise information of this kind was a considerable advance, though it must be admitted that the information did not extend to the life-history of the bacillus in Nature, or to the exact methods by which the human body became infected. All that could be said at present was that water as a vehicle for the multiplication and spread of the disease played a very unimportant part. The slow progress of the plague in an infected locality, its apparent inability to spread by water, the mortality which usually occurred among rats previous to a general outbreak, and the fact that the bacillus of the rat plague was identical with the plague bacillus in man had led some observers to think that the extra-corporeal life of the microbe was in the soil, Experiment had so far not confirmed this opinion, but researches in this direction had not been numerous. The danger of extension lay in our ignorance as to the medium and agents by which the bacillus gained access to the body; and if the bacilli were not destroyed immediately they left the body, the necessary dependence on general rather than on special measures of defence was a defect which might be far-reaching in its results. It was a disadvantage which every opportunity should be taken to remove, and for this purpose it seemed to him to be of paramount importance that the Governments of those civilised countries which were affected with plague should not be content with merely endeavouring to combat the disease by every known method at their disposal, such as isolation of the sick, evacuation and disinfection of infected houses, etc., but should systematically, as a part of the sanitary defence of the country, establish laboratories and special departments for organised research and inquiry into the mode of spread of the disease, for it was only by the adoption of these methods that success was likely to be attained. Owing to the researches of Haffkine in another direction, they were in possession of a prophylactic which if extensively employed would lend powerful assistance to the other measures which might be introduced to control the disease. An agent which almost wherever it had been tried was uniformly successful in reducing the mortality amongst the inoculated when compared with the uninoculated to over 80 per cent., and had reduced the hospital mortality among the inoculated attacked by 50 per cent., was a most valuable weapon of defence. That its value was being recognised outside of India might be gathered from the fact that many applications had already been made for quantities of the prophylactic. Among these might be mentioned applications from the Governments of the Mauritius, Natal, Italy, and Russia, from the Crown agents for the Gold Coast, from the Consul-General of Zanzibar, from the Governor of Nicosia, Cyprus, and from the Chamber of Mines, Johannesberg. In addition to the precautions devised by the Venice Conference to prevent importation of plague into a healthy country and embodied in the Venice Convention, Dr. Simpson suggested the addition of two others. The first was that use should be made of the protective power of Haffkine's prophylactic, and the second was that rats, as they have been proved to suffer from the same plague as human beings and to be agents in its dissemination, should be dealt with at infected ports and on the voyage on ships from infected ports. The practical application of Haffkine's prophylactic to the crews of all ships and boats, large and small, coming from infected ports would probably largely reduce the danger of importation of plague and relieve the anxiety felt at a healthy port when a ship entered having left an infected port a few days previously. Similarly, under certain circumstances and precautions, protection might be given to passengers or travellers desirous of crossing the frontiers into a healthy country. In connection with the checking or stamping-out of plague when it broke out on land, the early notification of diseases was of immense advantage, for it allowed measures to be early and promptly applied, so that the sick could be isolated, the inmates of the house removed and watched, and the house itself disinfected. It was possible with proper organisation to deal with an outbreak of plague much in the same way as with an outbreak of small-pox. Large supplies of Haffkine's prophylactic were necessary in order that every possible contingency might be provided for; and the preparation of these supplies, which required time and a skilled organisation, ought not to be left to the last moment. To meet plague the organisation for defence required to be placed in as complete and in as efficient a state of preparedness in every respect as the army and navy of the country would be if there was danger of invasion. The importance to this country of observing the behaviour of plague as modified by conditions in Europe was such that study of it in its epidemiological, prophylactic, and curative aspects should be undertaken by Government. To this end it appeared to him advisable that a small commission of experts of physicians, epidemiologists, and bacteriologists should be sent to the Peninsula for that purpose. It was a matter of Imperial concern and admitted of no delay. That attention to general sanitation was necessary went without saying. While preparing to immunise individuals with Haffkine's prophylactic every

endeavour should be made to immunise the locality by sanitary measures. But excellent water supplies were of little protection against plague, and special attention should be paid to measures for the dryness and purity of soil. Precautions should also be taken against overcrowding, and war should be waged against filth. Overcrowding might be lessened or at least regulated or watched, and filth might be easily removed and the dirty spots cleansed.

BRUSSELS CONFERENCE OF SOCIAL HYGIENE.

[From our Special Correspondent.]

[*Concluded from page 678.*]

Receptions.

In my letter of Tuesday I forgot to mention that on Monday evening the members of the Conference were received by the President (M. Lejeune) at his house in the Rue de la Charité.

On Tuesday evening a similar reception took place at the official residence of the Minister of Foreign Affairs, M. de Favereau. There was a considerable display of uniforms and orders among the foreign members, and the scene was not lacking in brilliancy. Unfortunately the weather has become very warm, so that these crushes are only tolerable for a short time.

Improvement of System of Inspection.

On Wednesday, September 6th, the Conference resumed discussion of Questions 2 and 3, which, I may remind your readers, deal with the possibility of improving the system of inspection and the desirability of maintaining licensed brothels.

Dr. Galewsky (Dresden) stated that the suppression of brothels in Dresden had been followed by increased disease, and a growth of prostitution among servants in brasseries, etc.

Professor Troisfontaines (Liége) had never seen a case of syphilis acquired in a licensed house in Liége, but gonorrhœa might be contracted in them. The women were examined twice a week.

Dr. Neisser (Breslau) admitted the difficulty of checking gonorrhœa. He would like to see inspection made purely medical and not a matter of police.

Dr. Perrin (Marseilles) said that there were only a few licensed houses in Marseilles, but many free brothels in which the women paid a fixed sum to the proprietor for their board and lodging.

Dr. Nevins (Liverpool) would abolish inspection and suppress all brothels. He referred to the brothel system at Hong Kong as a costly failure which had been supported by false reports as to its results upon the health of the Colony.

Professor Lassar (Berlin) agreed with Professor Neisser in the desirability of supervision being made medical, but he would also have the houses looked after by the municipal sanitary authorities, who should enjoin cleanliness upon the inmates, and see that they were well supplied with corrosive sublimate solution.

M. Hirsch (Paris) delivered an impassioned speech against regulation and licensed houses, in which he denied that they benefited the public health, while they outraged public morality.

Professor Stern (Düsseldorf) supported inspection.

Professor Augagneur (Lyons) admitted that different towns showed different results from licensed houses. In Lyons disease was frequently contracted in them, especially gonorrhœa, and in the lower class of houses. Moreover, such houses were less and less popular.

Dr. Santoliquido (Rome) advocated the establishment of special free wards for venereal cases, as in Italy, where they were open to the inhabitants of the town and adjoining country, the Government paying travelling expenses when necessary. The women could not leave until cured.

Dr. van Hoorn (Amsterdam) said that the suppression of licensed houses in Amsterdam had not affected the prevalence of venereal diseases.

Professor de Galatz (Bucharest) would make the keepers of brothels responsible for the health of the women.

M. Pierson (Zetten), President of the Abolitionist Federation, condemned inspection and licensed houses. He suggested the appointment of a Mathematical Committee to devise a form of statistics which should be free from the doubts apparently surrounding those now available.

Professor Jadasohn (Berne) agreed that there was room for improvement in the system of inspection and in the hospital accommodation.

Dr. Fiaux (Paris) showed that the licensed houses in Paris had diminished from 202 in 1855 to 46 in 1895 without influencing the question.

Dr. Le Pileur (Paris) contested the arguments of Professor Augagneur and Dr. Fiaux.

Dr. Hoeffel (Bouxwiller, Alsace) maintained that closing the brothels in his country had been followed by good results. He disputed Professor Wolff's statistics, and said they did not agree with the official statistics of the German army. According to these, Strassburg occupied a very high position for venereal disease as compared with the other garrison towns of Germany. He denied that he was an abolitionist, but considered licensed brothels to be a relic of barbarous times.

Professor Wolff (Strassburg) defended his statistics, and said he had a right to eliminate cases which were imported from outside.

M. Honnorat (Chief of the 1st Division of the Prefecture of Police, Paris) said that while the number of licensed houses had diminished, there was a great increase in free brothels which were known to the police. Inspection was necessary; whenever political difficulties had suspended its operation, disease had always increased.

The sitting was adjourned at 1.45 P.M. until the following morning.

An excellent supplementary report upon England from the pen of Mr. Alfred Cooper, F.R.C.S., was distributed. Mr. Cooper suggests that women who frequent music halls should be registered and required to submit to periodical examination or be refused admission. He thinks the police should clear the streets of prostitutes and thus prevent the nightly scandal in the neighbourhood of Piccadilly. In order to diminish the causes of prostitution he urges that the Government should provide further facilities for the employment of women.

Reception by the Burgomaster.

On Friday, September 8th, the delegates were received by the Burgomaster and Sheriffs of the city at the beautiful Hôtel de Ville. The whole suite of magnificent rooms was thrown open to the admiration of the guests.

The Licensing of Brothels.

On the resumption of the sitting on Thursday at 9 A.M. the President was accompanied by M. Beernaert, Minister of State and President of the Chamber of Representatives, who had also been present for a short time on the previous day.

Professor Stürmer, Dr. Commenge, and Dr. Peroni continued the discussion of the second and third questions, dealing chiefly with the subject of licensed brothels. No conclusions were formulated and the President proposed that the Conference should pass to the consideration of the fourth and fifth questions. These are: Is any improvement possible in the administrative organisation of police inspection? By what legal measures can the number of women engaged in prostitution be reduced?

Dr. Pontoppidan (Copenhagen) desired to see inspection made a medical and not a police matter. That change would improve both inspection and treatment, which should be co-ordinated.

Dr Blaschko (Berlin) took the same view.

Professor Lesser (Berlin) did not think the women would attend for examination without police compulsion.

M. Rethan-Mecaré (Haarlem) considered that the evil resulting from regulation outweighed the good, and that Professor Fournier by maintaining brothels encouraged vice. Professor Fournier should extend his supervision so as to include young men as well as young women. It should be the duty of every doctor who met with venereal disease in young men or women under age to communicate with their parents.

Professor Fournier (Paris) denied that brothels, by the relative security they afforded, encouraged vice; they were diminishing in number everywhere. The law should be extended so as to withdraw all girls under age from prostitution; it should be the duty of the State to cure and reform them,

and give them the means of earning their living by honest work. Many prostitutes would give up their calling if they could see their way to earn two or three francs a day by other means.

M. PIERSON (Zetten), President of the Abolitionist Federation, would suppress immoral books and plays, instruct young people of both sexes in the dangers of immorality, and include venereal diseases among those to be notified.

M. YOURIÉVITCH (St. Petersburg) accused doctors of being ready to sacrifice every sacred principle of personal liberty in order to carry out their ideas.

Dr. LE PILEUR (Paris) explained the means for supervising the women in licensed houses in Paris.

Madame BIEBER-BOEHM (Berlin) denied that prostitution was a necessary evil. The women of Germany were determined to protect their families, their sons and daughters, from these terrible diseases. She complained that women were kept out of the liberal professions, but allowed that of shame. She would restrict the sale of drink and tobacco, suppress dancing saloons and night cafés, prohibit immoral books and plays, forbid women to serve in *brasseries*, punish as a crime incitement to prostitution, remove children from the custody of immoral parents, promote instruction in the duties of personal hygiene, and protect female workers by the appointment of women as inspectors of factories.

M. DIDIER (Geneva) would aim at suppressing prostitution altogether. He would develop every means for the protection of children, and promote better instruction in the laws of health.

Dr. FIAUX (Paris) denied the efficiency of inspection as conducted in Paris, and accused registration of fixing prostitutes in their trade.

M. HONNORAT (Paris) held that society had the right to protect itself against infectious diseases, especially those due to vice. Existing conditions must be recognised, and improved as far as possible. In France, girls of 16 living as prostitutes could be sent to reformatories, and an effort was being made to raise the age to 18. He quoted from the card given to each prostitute to show that she could be released on producing evidence (verification) that she intended to give up her mode of life.

On resuming the sitting after a brief interval,

Professor FOURNIER (Paris) moved, and the Conference ultimately unanimously agreed, to the following resolution:

The International Conference assembled at Brussels expresses the hope that Governments will use all their powers to suppress absolutely prostitution among women under age (*en état de minorité civile.*).

Dr. BOUREAU (Paris) moved a similar resolution applicable to both sexes, but a member having moved the previous question this was carried.

Dr. BERTARELLI (Milan) spoke of the good effected in Milan by a hospital for the reception of prostitutes under age (*mineures*).

M. SCHWÖLDER (Hamme) would abolish the entire system of regulation.

Dr. MIREUR (Marseilles) recommended reforms in the present police system; these should include a special tribunal to determine inscription, the director of the service des moeurs to be placed directly under the prefect of police with the rank of "commissaire de police," and better pay and position for all employed in the department.

BANQUET TO VISITORS.

The day concluded with a banquet at the Grand Hotel, given to the visitors by the Organising Committee and the Belgian members of the Conference. In addition to the usual loyal toasts and that of "The City of Brussels," proposed by Professor MAUBACH, and responded to in a brilliant speech by M. DEMOT, the Senior Sheriff of the city, "The Health of Dr. Dubois-Havenith," the popular Secretary-General, was drunk amidst great applause, and afterwards a bronze statue of a kneeling female figure, subscribed for among the foreign guests, was presented to him.

RESUMED DISCUSSION.

On Friday the discussion of Questions 4 and 5 was resumed. After a few further remarks from M. RETHAN MECARÉ and Dr. LE PILEUR, Professor NEISSER asked the President to pass on to Question 6. This question is as to what general measures, apart from all that concerned prostitution, could be taken to combat the spread of venereal diseases?

Professor FOURNIER (Paris) advocated, (1) Improved medical education, special courses of instruction, and a place in the examinations for venereal diseases; (2) more dispensaries where the consultations should be not only free, but should not involve to the patients the loss of valuable working hours, and that there should be greater privacy; (3) simple directions to be printed on the back of the prescription paper for the patient's conduct, so as to prevent the spread of infection; (4) each patient to be supplied with a history card, as a record of the case.

Professor WOLFF (Strassburg) said his patients came at the hours most convenient to themselves; consultations went on from morning to night.

Dr. DE MORGENSTIERN (Christiania) proposed a law, which is printed in the volume of Communications, and contains a number of provisions for the detection and treatment of venereal diseases.

Professor HOLST (Christiania) criticised the law as a series of impracticable proposals.

Mr. JONATHAN HUTCHINSON (London) said there would be great difficulty in England in passing or carrying out any repressive legislation. Hereditary syphilis would disappear if the rule were generally adopted that two years' interval after infection should elapse before marriage. He held, in opposition to Professor Fournier, that syphilis was not dangerous to the race, but disappeared in the third generation. Under the modern use of mercury syphilis was curable, and was generally cured. Greater facilities were needed for the treatment of syphilis in hospitals, and post-graduate instruction was much required. Young men should be taught the dangers of sexual irregularity. He expressed the opinion that there was evidence of a growing elevation of moral tone among medical students and other young men similarly situated. The sect of Quakers was distinguished for the continence of its young men, but their health and vigour had not suffered; no case of general paralysis had ever been admitted to the Retreat at York until one sent by the speaker last year. Even in the army there were signs of great improvement in the tone of the men, and public opinion would no longer tolerate the degradation of the soldier. The severity of syphilis in the army had been exaggerated, as he had satisfied himself by a visit to Netley. The English public would not agree to anything that would look like approval of vice, but was in favour of all means to raise the soldier's moral tone. By these means he believed we should best secure the future of our race.

RESOLUTIONS.

The following resolutions were unanimously adopted by the Conference:

I.—Proposed by MM. FOURNIER and LEJEUNE:

The Conference desires to see the various Governments employ all their powers to suppress absolutely prostitution among girls under age (*en état de minorité civile*).

II.—Proposed by Professor FOURNIER:

The Conference desires to see the present meeting used as a basis for the foundation of a society for sanitary and moral prophylaxis, having its home in Brussels, and which will show its existence: (*a*) By the creation of a quarterly journal for the publication of reports and papers of interest to the said Society; (*b*) by Congressional meetings. The Conference decides that the next Congress shall be held in Brussels in 1902. A provisional Commission is nominated to act with the powers of a permanent Committee until the next meeting; this Committee to be composed of—President: M. Lejeune, Minister of State. Vice-President: M. Beco, Secretary of the Department of Sanitation and Public Health in the Ministry of Agriculture. General Secretary: Dr. Dubois-Havenith, General Secretary of the International Conference for the Prophylaxis of Syphilis, Extra-Professor in the University of Brussels. This Commission is requested to present to the next Congress laws and by-laws for the organisation of the society. It is empowered to take such provisional measures as may be required to provide ways and means necessary for the working of the Society and the publication of the quarterly journal. The Conference recognises the principle of an annual subscription. Authors may publish their papers in English, French, or German, but they are begged to supply with each a very succinct short abstract. This abstract will be translated into the two other languages under the direction of the General Secretary.

III.—Proposed by MM. FOURNIER, PAVLOFF, JONATHAN HUTCHINSON, DOUTRELEPONT, LESSER, PETERSEN, DE STÜRMER, NEISSER, WOLFF, and MRACEK:

The Conference, considering that a profound knowledge of venereology forms one of the best means for effectually combating the spread of venereal diseases, recommends urgently to the various Governments to provide for the education of truly competent medical practitioners by the institution in every university of complete and compulsory courses, the subject of which shall form part of the State Examinations. The Conference requests that the examiners may be specialists.

IV.—Proposed by Dr. DE STÜRMER:

(*a*) For the better protection of orphan children guardians should not only be anxious to defend the material interests of the children com-

mitted to their charge, but above all to assure their morality. (*b*) Whoever has charge of the education of young people should apply all his care to the moral development of his pupils; he should teach them temperance and respect for women in every class of life.

V.—Proposed by Dr. Commenge and amended by Professor Fournier:

The Conference asks for the utmost rigor of the law against men living upon prostitutes (*souteneurs*).

VI.—Proposed by the British Medical Association and moved by Dr. Saundby:

The Conference requests the various Governments to constitute in each country a Commission charged: (1) To determine the frequency of venereal diseases among the civil population apart from temporary variations. (2) To inquire into the institutions actually in existence for the treatment of venereal diseases, the distribution of hospitals, the number of beds available in different places, and to propose the most efficacious measures for the treatment of these diseases. (3) To collect opinions as to the best means for preventing and limiting the spread of venereal diseases among the civil population, and to formulate conclusions upon this subject.

VII. Proposed by Professor Lassar (Berlin):

The various Governments are requested to seize every favourable opportunity for drawing public attention, and especially that of young persons, to the danger resulting from prostitution to the health of the young of both sexes, and to the terrible consequences of venereal diseases.

VIII.—Proposed by MM. Pierson and Fiaux:

The Conference desires to see the venereal statistics of all countries arranged upon uniform bases.

Reception by the King.

In the afternoon all the delegates were received by His Majesty Leopold II, King of the Belgians, at the palace. His Majesty walked round the room and addressed a few gracious words to each delegate who was presented to him by Dr. Dubois-Havenith.

MEDICAL MEN AS WITNESSES.

The duty of appearing to give evidence in courts of justice, which is imposed upon all citizens, is one which falls in a particular degree to the lot of a medical man. From the time when he first undertakes the duties of a hospital appointment he is ever liable to be called on to prove material facts or speak as to the extent of the injuries sustained—in criminal cases by the prosecutor and in civil cases by the plaintiff.

From the police court to the Old Bailey, from the county court to the House of Lords, the practitioner must follow the cases in which he is called in to assist the court, often at great personal inconvenience and but seldom with any pecuniary advantage. We need not waste time in drawing attention to the importance of medical testimony. In criminal cases the liberty of a subject, in civil cases the measure of damages for personal injury, often turn upon the opinion of the practitioner.

It is proposed in the present article to sketch out the law whereby the attendance of witnesses is procured, the procedure which is adopted to ensure attendance, and the penalties which attach in the event of disobedience. Attention will also be devoted to the demands which a witness may lawfully make of those who require his attendance in courts of justice.

As there are many tribunals before which a medical man may be summoned as a witness, it will be convenient to deal with these and the practice and procedure relating to each of them under separate headings, pointing out, in conclusion, the general duties which witnesses have to perform and the risks to which they are exposed. It is proposed, in the first place, to deal with the statutes which have been passed to ensure the attendance of witnesses before courts of criminal jurisdiction.

Before the Coroner.

The attendance of witnesses before the coroner is provided for by the Coroners Act, 1887. After authorising coroners to order medical witnesses to attend inquests (Section XXI), it is provided (in Section XXII) that a legally-qualified medical practitioner who has attended an inquest in obedience to a summons may claim:

(*a*) For attending to give evidence at any inquest whereat no *post-mortem* examination has been made by such practitioner, one guinea; and

(*b*) For making a *post-mortem* examination of the body of the deceased, with or without an analysis of the contents of the stomach or intestines, and for attending to give evidence thereon, two guineas.

Provided that

1. Any fee or remuneration shall not be paid to a medical practitioner for the performance of a *post-mortem* examination instituted without the previous direction of the coroner.

2. Where an inquest is held on the body of a person who has died in a county or other lunatic asylum, or in a public hospital, infirmary, or other medical institution, or in a building or place belonging thereto, or used for the reception of the patients thereof, whether the same be supported by endowments or by voluntary subscriptions, the medical officer, whose duty it may have been to attend the deceased person as a medical officer of such institution as aforesaid, shall not be entitled to such fee as aforesaid.

Some difficulty has arisen with regard to the meaning of the term "other medical institution." In the case of Horner *v.* Lewis (67 *L. J.*, 524), which was decided last year, the honorary medical officer of a cottage hospital sued for his fee for a *post-mortem* examination of the body of a person who died in the hospital. It was decided that in view of the above section he he had no right to recover. The question arises whether the practitioner in charge of a surgical cottage hospital to which workmen employed by a particular firm are alone admitted could make a claim for his fee on a *post-mortem* examination made at the request of the coroner. The better opinion would seem to be that if such an institution is of a private nature the fee can be claimed in the ordinary course.

By Section XXIII of the same Act, it is provided that where a medical practitioner fails to obey a summons of the coroner issued in pursuance of the Act, he shall, unless he shows a good and sufficient cause for not having obeyed it, be liable on summary conviction, on the prosecution of the coroner or of any two of the jury, to a fine not exceeding £5.

Courts of Summary Jurisdiction.

By the Indictable Offences Act, 1848, Section XVI, power is given to any justice to issue a summons to any person requiring him to appear and give evidence, if it shall appear to the justice that the witness's evidence is material. If he refuse to appear without a just excuse, then, after proof of the service of the summons the justice may issue a warrant in order to bring the witness before the court. Nothing is said in this section as to a tender of expenses, and it would seem that a tender of expenses is not necessary in indictable cases (R. *v.* Flavell, 4 Q. B. D., 364), and this rule appears to apply to witnesses for the defence as well as for the prosecution (R. *v.* James, 1 C. and P., 322). Nevertheless, if the witness is too poor to travel, that may be deemed a just excuse. Mr. Justice Hawkins has expressed the opinion that solicitors have no right to bring a person a long way from his home by subpœna without tendering conduct money (see the *Times*, September 6th, 1893, R. *v.* Osmond).

Under the Summary Jurisdiction Act of 1848, Section VII, if it appear to any justice by the oath of any credible person that any person within his jurisdiction is likely to give material evidence for the prosecution, and that he will not voluntarily appear, he may issue a summons requiring him to do so, and if the witness fail to appear, upon proof that reasonable expenses were tendered, the magistrate may order him to be brought up on a warrant. If a witness resides in the same town, it will still be necessary to tender a trifling sum for expenses to justify a warrant of apprehension. As to whether a witness is allowed to have compensation for loss of time, there seems to be some doubt. In the case of Pritchard *v.* Mahon (23 *Sol. J.*, 124) where a veterinary surgeon made a claim of this kind, Mr. Justice Mellor directed judgment to be entered for the defendant, on the ground that as the plaintiff was bound to obey the subpœna there was no consideration for any promise which could be inferred on the part of the person causing him to be served to pay expenses. And this, too, was a case of great hardship, for it came to light in the evidence that the plaintiff had been unable to make any appointment for nine days owing to his uncertainty as to when the case should come on.

If a witness who has entered into recognisances before the magistrate fail to appear, his recognisance may be estreated (7. Geo. IV, c. 64, Sec. XXXI); and if he refuse to be bound by recognisances, he may be committed for contempt. The power of a magistrate to order the attendance of a witness is not confined to those who are within the jurisdiction of his

court; for, by the Summary Jurisdiction Act of 1879, it is provided that such summons may issue, and that it may be "backed," if necessary by a magistrate belonging to the district in which the required witness resides.

QUARTER SESSIONS AND ASSIZES.

The next tribunal before which the testimony of medical men is likely to be required is the Court of Quarter Session. Inasmuch as the method of procuring attendance is similar to that which is used at assizes in the country, and the Central Criminal Court in London, it will be convenient to deal with them together. Subpœnas are issued from the Crown Office to procure the attendance of witnesses at these courts, and attendance is equally compulsory whether the subpœna be *ad testificandum* or *duces tecum*—that is, bring and produce documents.

Except in the case to which allusion will presently be made a tender of expenses is not necessary in criminal cases, the attendance of witnesses being in the nature of a public duty. Where motion is made to attach a witness for non-attendance, it is no answer for him to say that there was no such tender, unless he be too poor to get to the place of trial without such assistance.

Where, however, by 45 Geo. III, c. 92, S. III, a witness is called upon to give evidence in another part of the kingdom, and he is served with subpœna for that purpose, a sufficient sum to defray his expenses must be tendered at the time. Thus a surgeon resident in Ireland subpœnaed to give evidence at the Old Bailey could claim the expenses of the journey. While, therefore, except in the instance mentioned above, the State is under no liability to pay the expenses of a witness, the Secretary of State for the Home Department, by virtue of 14 and 15 Vict., c. 55, has ordered that medical men should be remunerated upon the following scale: To prosecutors and witnesses being members of the profession .....of medicine attending to give professional evidence for their trouble, expenses, and loss of time, for each day they shall necessarily attend the court to give professional evidence, a sum not to exceed £1 1s. For each night if detained all night, 2s. And if they shall attend from a distance: for mileage—per mile each way, 3d.

Medical men who attend as witnesses at courts of petty and quarter sessions should be careful to obtain personal payment of their expenses from the clerk of the court, at the conclusion of the case in which they are retained. They are cautioned against employing an unauthorised person in the vicinity of the court who may tender his services in this behalf, as cases have been known in which inexperienced members of the profession not knowing the proper amount of the fee to which they are entitled, have been imposed upon.

EVIDENCE IN CIVIL CASES.

We now proceed to consider the duties and liabilities of witnesses who are summoned to give evidence before civil tribunals, as distinguished from those of criminal jurisdiction. Between the two there lies the important distinction, that whereas the giving of evidence in criminal cases is part of the duty of a medical man in common with the rest of the public, his presence in the civil courts, although theoretically of a public and compulsory nature, is often the result of a private, and in some cases a highly lucrative, bargain between himself and the litigant whose interests he is prepared to maintain. Nevertheless there are cases in which the appearance of a solicitor's clerk with a subpœna is by no means welcome, not only by reason of the inadequacy of the fee, but because of the trouble and interference with private practice which is caused by the law's delays. We now propose to deal with the duties and liabilities consequent upon the service of a subpœna.

COUNTY COURTS.

By the County Courts Act, Section CXI, it is provided (in effect) that any person summoned as a witness, to whom at the same time payment or a tender of payment of his expenses shall have been made on the prescribed scale of allowances, who refuses or neglects to appear, or who shall refuse to be sworn or give evidence, shall forfeit and pay such fine not exceeding ten pounds as the judge shall direct. It has been decided under this section that a witness though sworn may refuse to give evidence until he has been paid his expenses (*re* Working Men's Mutual Societies (1882) 21 Ch. D. 831).

IN THE HIGH COURT OF JUSTICE AND AT ASSIZES.

By the 17 and 18 Vict., c. 34, which was passed to enable courts of justice to compel the attendance of witnesses out of their jurisdiction, after providing that the superior courts of common law (now represented by the High Court of Justice) may order the attendance of such witnesses, it is expressly enacted that "None of the said courts shall proceed against any person for making default by not appearing to give evidence, unless it shall appear that a reasonable and sufficient sum of money to defray the expense of coming and going was tendered to the witness."

A witness who disobeys a subpœna issued out of the High Court, after having had his expenses paid or tendered, is guilty of contempt, and may be committed (1894, 70, *L. T.*, 382).

He is also liable to an action under 5 Eliz., c. 9, s. XII, at the hands of the party who suffers damage owing to his not having been present to give evidence.

It has been decided that a person who is subpœnaed as a witness, and who attends at the trial, but there refuses to give evidence unless his expenses are paid, and is thereupon not examined, may yet maintain an action to recover his expenses against the party who subpœnaed him (Hallett *v.* Mears, 13 East, 15-17). It has also been held that the court will not grant an attachment for the non-attendance of the witness at the place of trial unless his full expenses have been tendered (Fuller *v.* Prentice, 1, H. B., 1, 49). It has been held, however, that the acceptance by a witness of an inadequate sum constitutes a waiver of his right to expenses (Bentley *v.* M'Leod, 1837, 3 Bing, N. C., 405), and in another case a witness who went to an assize town before being paid the cost of his journey thither was held to have waived the expenses of that journey (Newton *v.* Harland, 1 M. and G., 956), but she was nevertheless entitled to the expenses of the journey home.

Generally speaking, a witness's expenses include the entire cost of travelling and of the necessary stay in town. The scale depends upon the witness's station in life. Should he be of opinion that the amount paid is not sufficient, the best course for him to adopt is to take an objection in the hearing of the court before the oath is administered.

To the rule that conduct money must be tendered there is this exception, namely, that it is unnecessary to tender money to a witness residing in town in a town case (Jacob *v.* Hungah, 3 D.P.C. 457).

It sometimes happens that a witness is subpœnæd by both parties to an action. Thus in the case of Allen *v.* Yoxall (1844, 1 C. and K. 316) a witness was called who objected to give evidence unless his expenses were paid. It appeared that he had been subpœnaed by both plaintiff and defendant. He was called by the defendant. Baron Rolfe stated his opinion to be that, although a witness were subpœnaed by both parties in a cause, he was still entitled before giving evidence to be paid all expenses by the party calling him. Again, where a witness has been subpœnaed on both sides it seems that recovery of his expenses in an action against one party is no bar to an action against the other. (Hale *v.* Bates 1858, El. Bl. and El. 575.)

An important question occasionally arises as to whether a witness whose expenses have been paid on a subpœna to give evidence in an action is bound to refund if the action is compromised or if for some other reason it does not come to trial and his services are not called into requisition. The case of Martin *v.* Andrews (El. and Bl. 1) appears to answer this question. An action for money had and received was there held maintainable to recover back conduct money paid to a witness where in consequence of the cause being settled no trial took place and the witness incurred no expense. But in another case where both parties required a witness to attend, and he received payment from both, it was held that the loser could not recover money so paid over to the witness. (Crompton *v.* Halton 1810, 3 Taunt. 230.)

RECOVERY OF EXPENSES.

A witness who attends a trial in a civil action in obedience to a subpœna may without any express contract maintain an action for his expenses against the party who subpœnaed him,

for the very fact of his attendance is sufficient evidence of an agreement (Pell *v.* Daubney, 5 Ex. 955). And this rule holds good, although the witness may have refused to give evidence on the ground that his expenses were not paid (Hallett *v.* Mears, 13 East 15). This right of action disappears if the witness chooses to give evidence without previously making any claim for expenses.

The law relating to the recovery of expenses may be summed up as follows:

1. A witness can only maintain an action against the party who has subpœnaed him if an express or implied contract upon the subject can be shown.

2. The jury may in some circumstances reasonably infer a promise to pay from the mere fact of the attendance of the witness at the trial.

3. A witness cannot recover any larger amount than the sum specified in the scale of allowances as fixed by the judges, even though he rest his claim on an express promise.

4. No action can be maintained against the solicitor upon an implied contract to pay the expenses of attendance, although such an action will succeed if an express agreement for any payment can be established.

Fees are allowed to medical men appearing as witnesses of fact before the various civil tribunals upon the following scale:

In the House of Lords.

	Per Diem. Time.	Hotel Expenses if from Home.
	£ s. d.	£ s. d.
Apothecaries, Chemists, and Druggists...	1 1 0	1 1 0
Physicians and Surgeons	2 2 0	1 1 0

Sundays do not count as time. Travelling expenses are allowed upon the same scale as in the Queen's Bench Division.

In the Queen's Bench and Chancery Divisions.

	Per Diem.	
	£ s. d.	£ s. d.
Physicians and Surgeons:		
If resident in the town where the cause is tried ...	1 1 0	
If resident at a distance from the place of trial, inclusive of all except travelling expenses ...	2 2 0	to 3 3 0

"If the witnesses attend in one cause only they will be entitled to the full allowance. If they attend in more than one cause they will be entitled to a proportionate part in each cause only. The travelling expenses of witnesses shall be allowed according to the sums reasonably and actually paid, but in no case shall exceed 1s. per mile one way."

With some very slight modifications allowances are made upon the above scale in Probate, Divorce, and Bankruptcy cases.

In the Admiralty Court.

	Per Diem.	
	£ s. d.	£ s. d.
Physicians and Surgeons:		
If required to come a distance not exceeding five miles	1 1 0	to 3 3 0
If a greater distance, inclusive of all except travelling expenses	1 1 0	to 3 3 0

Travelling expenses are allowed upon the same scale as in the Queen's Bench Division.

In the County Courts.

	£ s. d.	£ s. d.
Medical men as ordinary witnesses per diem ...	0 15 0	to 1 1 0
Medical men as expert and scientific witnesses:	If Costs Taxed on Ordinary Scale.	If Taxed on Higher Scale.
For qualifying to give evidence...	1 1 0 to 3 3 0	1 1 0 to 5 5 0
Attending court on trial per diem	1 1 0 to 2 2 0	1 1 0 to 3 3 0

In the Mayor's Court, London.

	Per Diem.	
	£ s. d.	£ s. d.
Physicians and Surgeons	0 10 6	to 1 1 0

The above scale is primarily intended to be used as a guide to the taxing master when deciding what proportion of the costs are to be borne by the losing party in a suit at law. It having been decided in the case of Willis *v.* Peckham (1 B. and B. 515) that a witness can only recover the amount allowed him by the rules, the figures above quoted will also show what may be claimed by a medical man if the payment of fees for attendance and loss of time is refused.

Expert Evidence.

It has long been the custom to compensate "professional men" for loss of time when appearing as witnesses. It is for this reason that additional fees in accordance with the above scale are paid to medical men. A country gentleman, for instance, appearing to give evidence in the Queen's Bench Division would be only entitled to £1 1s. per diem exclusive of travelling expenses. But, apart from compensation for loss of time, there is a wide discretion vested in the taxing master to allow much larger fees to a medical man who appears in the *rôle* of an expert witness. By Order 65, r. 27 (9) of the Rules of the Supreme Court it is provided that: "As to evidence, such just and reasonable charges and expenses as appear to have been properly incurred in procuring evidence and the attendance of witnesses are to be allowed."

A moderate fee, such as £7 7s. a day, may be allowed for a scientific witness to read up a case for the purpose of giving evidence (Smith *v.* Buller, 19 Eq. 473). In the case of Ryan *v.* Dolan (*L.R. Jr.* 7 Eq. 92), which was decided in Dublin, a fee of £7 7s. a day was declared to be reasonable remuneration for a medical expert. It was also decided in this case that the remuneration for loss of time which medical witnesses attending during the examination of other witnesses fairly claim may be paid to them and charged to the opposite side. In the above cases the question as to the amount of the expert's fee was not in issue between him and the party who retained him, but between the parties to the action upon taxation of the bill of costs. We may assume, however, that in cases where an expert finds it necessary to sue for his fee, the Court in arriving at a decision upon the matter would observe the rules which guide the taxing master. Thus the length or complexity of the suit and the necessity for the constant attendance of the witness at court might be taken into consideration. In view of the rule already quoted, namely, that a witness cannot recover any larger amount than the sum specified in the scale of allowances as fixed by the judges (which is taken from Taylor *On Evidence*), the above opinion is expressed with some hesitation.

It is hardly necessary to enter at any length upon a discussion as to the consequences of non-attendance as a witness. Nevertheless a knowledge of a few of the rules which guide the Court in determining whether the witness shall be punished for his omission may be found useful. In the first place the person who applies for the attachment must be in a position to show that everything has been done which was necessary in order to secure the attendance of the witness. The fact of the immateriality of the evidence will sometimes be taken into consideration (Dicas *v.* Lawson, 3 Dowl., 427). The illness of a witness, or the fact that leave to depart has been given him by the solicitor of the party requiring his attendance will afford an ample excuse. But it should always be borne in mind that the duty of attending a court of justice is paramount to the duty of obedience to the commands of any master (Goff *v.* Mills, 13 *L. J.*, Q. B., 227).

A witness subpœnaed to attend the court at an assize town must remain there from day to day until the case is reached, although the subpœna relates only to commission day (Vaughan *v.* Brine, 9 Dowl., 179).

We have already seen that a witness refusing to attend is liable to an action of damages at the hands of the party who issued the subpœna. In such an action the plaintiff must prove (1) that the witness was material; (2) that the trial could not safely proceed without him; and (3) that in point of fact the party has sustained some damage owing to his absence.

His Majesty the King of Hungary (Emperor of Austria) has, at the instance of the Minister of Education, sanctioned the conferring of the honorary degree of Doctor of Medicine on Dr. Theodor Duka, of London. Dr. Duka, who is M.D.St.And., and a Fellow of the Royal College of Surgeons of England by examination, is a Surgeon-Lieutenant-Colonel on the retired list of the Bengal army.

TRAINING OF NAVAL MEDICAL OFFICERS.

REPORT OF THE COMMITTEE.

ALL concerned in the welfare of the Navy must welcome with pleasure the report of the Committee on the Training of Naval Medical Officers, and its recommendations as to facilities being furnished to these officers during their career for study leave.

As the report is dated May 29th, 1899, the Committee had anticipated the most important representation in Professor Ogston's address at the annual meeting at Portsmouth, and, what is perhaps more remarkable, led—and not as heretofore followed—the procedure of the sister service.

The Committee, as we recently announced, consisted of Rear-Admiral A. W. Moore, C.B., C.M.G., Junior Naval Lord, as President; Austen Chamberlain, Esq., M.P., Civil Lord; Sir Henry F. Norbury, K.C.B., Medical Director-General; Staff-Surgeon Gipps, R.N., Secretary.

The summary of their recommendations, after considering the replies to questions forwarded to eleven naval medical officers representing all ranks of the service, and including the medical director-general, the three last inspector-generals of Haslar, where the course of instruction is given, down to a junior surgeon who had recently passed through the course, may be thus stated:

1. That special wards should be established at Haslar for the treatment, etc., of the diseases met with on foreign stations, from which cases clinical lectures should be given, and, as far as possible, all cases of diseases of foreign climates should be treated at Haslar in preference to the other home hospitals.

2. That the instruction now given in meteorology should be considerably reduced, and that in food analysis should be confined strictly to the requirements of the service afloat.

3. That lectures on and instruction in the following subjects should be added to the present course, namely:—(*a*) Diseases of foreign stations met with in the naval service abroad. (*b*) Bacteriology, especially that connected with the above diseases. (*c*) Examination of blood for diagnostic purposes. (*d*) Serum therapeutics, including that of snake bites. (*e*) Pathology of the diseases of foreign stations, supplemented by specimens obtained from foreign naval hospitals. (*f*) Ambulance drill. (*g*) Naval surgery (bullet wounds, etc.), a short course. (*h*) Fitting out a hospital ship (two lectures). (*i*) Use of the Roentgen ray apparatus, and the necessary photography connected therewith.

4. That the course last for four calendar months, free from interruption. Entries of surgeons should in future be made in February and August, following as at present the quarterly examination for diplomas.

5. That an additional medical officer, of the rank of fleet or staff surgeon, should be appointed on the instructing staff for charge of the special wards before referred to, and to lecture on the diseases treated therein. He should be given a special allowance of £150 (one hundred and fifty pounds) per annum in addition to his ordinary full pay and allowances, and a residence; and during the sessions his duties should be limited to teaching, and having charge of the special wards for foreign diseases.

6. That in future the names of surgeons on entry should not appear in the Navy List until after they leave Haslar, and that then their position in the list, that is, seniority, be determined by the sum of the marks they obtain at the examination in London on entry and those at the conclusion of the Haslar course.

7. That three prizes, each of the approximate value of £10, be established, to be given each session (that is, twice a year), one prize to be given for each group of subjects conducted by the respective lecturers: (1) A gold medal; (2) a microscope with inscription; (3) a silver medal and books with inscription.

8. That medical officers on entry should only be required to provide themselves with a pocket case of instruments, a stethoscope and three clinical thermometers, and that a set of surgical instruments (see below) should be supplied at the public cost to all ships bearing medical officers and to naval and marine barracks.

9. That the number of medical officers attending a post-graduate course be increased, and that they be drawn from all ranks below that of Deputy Inspector-General.

10. That those attending a post-graduate course might with advantage utilise the course at the Royal Albert Dock Hospital.

11. That the health report of the Navy be remodelled.

The unanimity of the replies "as to the inadequacy of the present course of instruction to surgeons on entry at Haslar," and "that the Haslar course should include special instruction in those diseases of foreign stations on which Her Majesty's ships serve" has been fully recognised, and the reforms recommended will be forthwith carried out.

The Committee have also recommended the curtailment of the hitherto excess of instruction in meteorology, food and drink analysis, to the actual requirements of the navy.

They further recommend that instruction in ambulance work ashore and afloat; the surgery of bullet wounds, etc. (military surgery as it is generally called); the fitting out of hospital ships; Roentgen ray work with its necessary photography should be given, all subjects new to the course hitherto given.

Also that an additional medical officer should be appointed to Haslar to instruct in some of the above subjects, and while so engaged to be exempt from ordinary routine hospital duties.

The curtailment of the duration of the course, which was recently the case, so harassing to the instructors and detrimental to the instructed, is now abolished, unless there should be mobilisation for war, and a definite period of four months "at least" is established for the course in future.

The expenses entailed by these reforms and those following have been sanctioned by the Treasury. The antiquated and in great measure obsolete schedule of instruments hitherto authorised has been revised, though some surgeons have of late optionally, or by persuasion of the senior instructor, provided themselves with modern instruments, and not those of their ancestors or provided by their tailors with their uniform.

The Committee have now provided a valuable supply of modern aseptic instruments for all ships, with a medical officer, and for all naval and marine establishments, the naval medical officer will thus be relieved of the heavy cost of these instruments, which he alone in the public medical service had to bear.

This future outfit is as follows:

Aspirator, Potain's, complete in mahogany case.

Set of amputation instruments, aseptic, the instruments fitted in metal frames, in a metal tray; the tray can be used for antiseptic solution, and forms an inside lining to a brass-bound mahogany case, fitted completely with the following: Bullet forceps, aseptic; forceps, Luer's, aseptic; forceps, bone, curved to the left, aseptic; forceps, bone, large, aseptic; forceps, spring, aseptic; forceps, torsion, Bryant's, aseptic; knife, amputation, double edge, 9-inch, aseptic; knife, amputation, double edge, 8-inch, aseptic; knife, amputation, double edge, 7-inch aseptic; 2 knives, finger, aseptic; 6 needles, suture, curved, plated; 6 needles, suture, half-curved, plated; 6 needles, suture, straight, plated; 6 needles, suture, half-curved, for wire; 2 saws, amputation, large, aseptic; saw, metacarpal, aseptic; 2 scalpels, aseptic; 2-oz. silk suture; 2 tenacula, aseptic; 2 Pettit's screw tourniquets; scissors, curved on flat, aseptic, 5-inch; scissors, straight, strong, aseptic, 6-inch; bullet probe, plated, 10-inch; Nélaton's bullet probe, 8-inch; lion forceps, aseptic; 2 retractors, plain metal, 1-inch; 2 Volkmann spoons, double.

Set of minor operation instruments, aseptic, the instruments fitted in metal frames, in a metal tray; the tray can be used for antiseptic solutions, and forms an inside lining to a brass-bound mahogany case, fitted complete with the following: Bistoury, curved probe, aseptic; bistoury, curved, sharp, aseptic; bistoury, hernia, aseptic; bistoury, straight, sharp, aseptic; bistoury, straight, sharp, 4-inch blade, aseptic; director, plated metal; forceps, bone, small, aseptic; hooks, sharp, aseptic; knife, tenotomy; needle, aneurysm; probe, silver; saw, metacarpal, aseptic; scalpel, double edge, aseptic; 3 scalpels, aseptic; 1-oz. silk ligature; scissors, straight, aseptic.

Set of trephining instruments, aseptic, instruments fitted to metal frames, in a metal tray, to a brass-bound mahogany case, fitted complete, containing the following: Elevator, double; skull forceps; lenticular, aseptic; 2 saws, Hey's, aseptic; 3 scalpels, Tang, aseptic; trephine, small, aseptic; trephine, large, aseptic.

Set of tooth instruments, in mahogany case, brass-bound, fitted complete, containing the following: Upper incisors and bicuspids; lower incisors and bicuspids (hawksbill); lower molar; upper molars, right; upper molars, left; upper wisdom; lower wisdom; Read's stump forceps; stump forceps; stump forceps (hawksbill); 2 elevators, right and left.

Instruments and materials for stopping teeth: 1 wooden case for instruments; 1 dental probe, double ended; 1 tweezers, Dr. Witzel's, No. 3; 1 enamel chisel, double ended; 6 burrs, Nos. 3, 4, 7, 8, 9, and 10; 4 excavators, Nos. 125, 126, 129, and 130; 3 plugging instruments "special plastic," Nos. 1, 2, and 3; 1 scaler, Dr. Baylis', No. 2; 1 scaler, Dr. Howe's, No. 1; 1 amalgam spoon; 1 mortar and pestle; 1 glass slab; 1 spatula; copper amalgam; Ash's metallic filings; mercury; phosphate cement.

Catheters, elastic *à boule*, aseptic, solid ends, set; catheters, elastic gum, cylindrical, solid ends, set; case, japanned tin for above; set of catheters, silver, aseptic with solid ends, Nos. 4 to 12, with bottle for oil, fitted in Down Brothers' registered lift out rack, in metal case; director, canaliculus; director, plated; director, hernia, Keys'; 18 forceps, Spencer Wells's pressure, aseptic; saw, Butcher's, with two spare blades, aseptic; 6 scalpels, aseptic, in metal case; specula, ear, Brunton's, with 3 tubes, in case; brass spirit lamp; 2 tracheotomy tubes, silver, different sizes; 24 Foulis's tourniquets; 2 pus basins, vulcanite; 1 copper dressing tray, triangular; 1 enamelled iron dish for instruments, 14 inches by 10½ inches; 1 enamelled iron dish for catheters; 1 steriliser for instruments and dressings; set of Wheelhouse's instruments; Wheelhouse's staff; Wheelhouse's gorget; Wheelhouse's director; 1 stomach pump; 3-oz. silver suture wire, assorted sizes; 3 bottles catgut ligatures, in alcohol, sterilised, in tin cases, each bottle containing 3 spools; 1 hank horsehair; 1 folding spatula; tongue forceps, aseptic; brass ear syringe, 2 oz., with 3 rings, and Toynbee's pipe; 2 Ingram's syringes; 1 irrigator, metal, enamelled iron, 2 pint, with 6 feet of tubing, vulcanite wound pipe, and push stop-cock; 1 probang and coin catcher; 1 saline infusion apparatus; 1 ward thermometer; 1 bath thermometer; chloroform drop bottle, 2 oz., in case; 12 yards drainage tubing, assorted sizes; 1 long Liston's thigh splint; 2 Neville's iron back leg splints, for swinging (as shown, Fig. 1,457, Down Brothers' catalogue); 4 wooden side pieces for use with above; 6 webbing straps with buckles; 1 set straight arm splints. A strong plain wooden box to contain above, approximate cost, £60 per set.

In addition to above, medical officers are to provide themselves with the following:—1 aseptic pocket case, 1 stethoscope; clinical thermometers.

The absence of a small case of eye instruments, of an

ophthalmoscope, and of a laryngoscope, is to be regretted; and while instruction in water and food analysis, bacteriology, and Roentgen-ray work is to be given, no efficient apparatus for these procedures appears to be provided, even for flag or battle ships; all ships are, however, now provided with electric dynamos for the latter work.

Zealous officers, it would appear—for the present only let us hope—must provide the requisites for these procedures at their own cost; but from the reforms already indicated we may venture, we trust, to anticipate that the necessaries for all this work will be provided in the near future.

The unsatisfactory rendering of the Health of the Navy Report of late years is also recognised by the Committee; this is to be remodelled, and original observations encouraged, for publication as formerly, but in a separate annual publication, for the information of the medical officers, and possibly for sale.

THE PLAGUE.

Precautions Taken by the Manchester Port Sanitary Authority.

The Manchester Port Sanitary Authority's Inspector holds a master mariner's certificate and the certificate of the Sanitary Institute; he will be stationed at Eastham during such periods as cases of plague are likely to be brought to this country.

Every vessel coming from a foreign port must pass through the locks at Eastham; this takes place about high-water time, and the inspector will be on the quay at each tide. If the vessel has been boarded by the Liverpool medical officer, and reported all well, or if the vessel is not from an infected country, it is allowed to proceed; but if there is any case of sickness on board the Port medical officer of health of Manchester is immediately communicated with by telephone.

By the order of the Local Government Board, the medical officer has power to have a vessel taken back to Liverpool if a case of plague is discovered before the ship has begun to discharge. If such a case is discovered after a ship has begun to discharge, the case will be taken to the hospital belonging to Salford, in accordance with the agreement between that authority and the Manchester Port Sanitary Authority. The medical officer will then take such measures as he deems necessary to prevent the spread of the disease.

Any person suspected of suffering from plague can be detained two days, and if not found suffering from the disease at the expiry of that time, he will be allowed to depart. The persons on the ship who are well will be allowed to go free at once, after satisfying the medical officer as to their names, addresses, and destinations.

Dr. J. H. Crocker, the Manchester Port Medical Officer of Health, has issued leaflets concerning plague and the danger of its introduction to masters of vessels leaving the port, and to shipowners and agents. He mentions sources by which the disease can be "caught": (*a*) By means of breathing; (*b*) by food or drink: (*c*) by direct inoculation through any abrasion of the skin or mucous membrane; people with bare feet are therefore more liable to be infected; (*d*) inoculation by fleas, bugs, mosquitos, from infected rats, mice or human beings. The disease may be spread by infected clothing, bedding, or by discharges from the patient; all these should be burnt when possible.

Corrosive sublimate (1 in 1,000) is mentioned as the best antiseptic; it does not seem to be sufficiently recognised, however, that perchloride of mercury is of little or no use in disinfecting fæces unless the solution is made acid; this is a most important point.

Antiseptics mixed with boiling water are more efficacious than with cold water.

In issuing instructions to masters of vessels it is always as well to be very explicit in regard to the details of disinfection and the precautions to be employed.

Not only should the names of disinfectants be mentioned, but the proper proportions and quantities to be used, and their proper method of application, should be clearly stated.

A sailor's knowledge of modern sanitary science is somewhat elementary, and it is useless to direct, for instance, the skipper of a coasting schooner to use antiseptics, when in all probability he has not the remotest notion what an antiseptic is; and unless the quantity to be used in different cases is mentioned distinctly, how can he know whether a bottle or a barrelful is necessary?

By Article xviii of the Local Government Board Order, 1897, "The master of every ship bound to the port of Manchester and infected with cholera, yellow fever, or plague, shall, when within three miles of the coast of any part of England or Wales, cause to be hoisted at the masthead, or where best seen, a large flag of yellow and black borne quarterly, and shall keep the same displayed during the whole of the time between sunrise and sunset, and no person (other than officer of Customs, or a person acting in the execution of this order) shall leave such ship until after such visit of the officer of Customs, or until after the visit of the medical officer of health of the Liverpool Port Sanitary Authority, or the medical officer of health of the Manchester Port Sanitary Authority."

For the neglect of the above duties a fine of £100 can be imposed.

Prevalence of the Disease.

Portugal.

Oporto.—During the past week 6 fresh cases of plague have occurred in Oporto. The latest reported case occurred on September 12th. The cordon around the city has caused a stagnation in trade, and some 12,000 persons have been thrown out of work owing to the closure of several factories. The cordon is also being discredited as regards efficiency. The troops forming the cordon are said to be without proper arrangements for the supply of food, and people are passing backwards and forwards selling food to the soldiers. Considerable excitement has been caused locally by the fact of a cat having eaten some mice inoculated with plague and then managed to make its escape. The cat, however, is one of the animals least liable to contract plague. A number of bacteriological and sanitary experts have arrived in Portugal from several countries to study and report upon the disease and the measures being adopted for its arrest. Dr. Shadwell, sent out specially from this country, is stated to have reported favourably on the steps being taken by the Portuguese authorities to combat the epidemic. Although all agree that the epidemic is mild, increased virulence is dreaded when the next heavy rainfall occurs. The Portuguese Government have availed themselves of the several experts in Oporto to form an international commission to superintend the employment of antiplague vaccine.

Egypt.

Alexandria.—We have the welcome news from Alexandria that at the present moment the city is free of plague; the last case left the hospital on September 7th. The total number of cases in Alexandria since the commencement of the outbreak has been 89, of which number 46 recovered. If the Alexandrian experience has proved nothing else, it has shown that the high mortality which we are accustomed to associate with plague is not invariable. This may be due to the so-called mildness of the epidemic, but we are inclined to believe that the early diagnosis of the cases, due to the extreme vigilance of the authorities in searching out all fresh cases has had a highly beneficial effect. We congratulate the sanitary authorities in Alexandria on having got rid of the disease so speedily.

India.

Bombay.—Some 10 to 20 fresh cases of plague occur in Bombay daily, but with the approach of cooler weather during next month it is hoped that a still further decrease may be recorded.

Poona.—So virulent is the outbreak in Poona that the authorities of the India Office have advertised for medical men to proceed to India on a nine months' engagement to treat plague. The salary will be 700 rupees per month, but to those possessing the diploma of public health or who have already served on plague duty to the satisfaction of the authorities Rs. 800 a month is offered. We understand it is not altogether the small pay that has caused the paucity of applicants for these posts, but the unsatisfactory position assigned to civil medical men when they enter upon their duties. Applications have to be addressed to the Secretary, Revenue Department, India Office, Whitehall. The number of fresh cases and deaths in Poona amount to about 150 and 110 respectively per diem. Three Europeans have been attacked by plague in Poona during the past week.

Belgaum.—Miss Murphy, a nurse engaged on plague duty in the city of Belgaum, has, we regret to say, died of pneumonic plague. Belgaum is some 350 miles south of Bombay on the main line of railway, and it would seem as though all the towns to the south of Bombay, including Satara, Kholapore, and Belgaum were likely to be attacked by a recrudescence of plague in Poona, which is on the same line of railway.

At the Kolar gold fields a fatal case has also occurred.

Russia.

Astrakan.—Since August 22nd no fresh case of plague has occurred at the village of Kolobovka in the Astrakan district, where plague was at one time rife.

At Samara, a town on the Volga, a disease of an acutely contagious character was reported to the authorities. The outbreak has not been diagnosed as plague, and since September 7th no fresh cases are reported. It would seem, however, that these mysterious illnesses occurring along the banks of the Volga bear only one interpretation.

Constantinople.

A passenger from Alexandria, suffering from plague, has been placed by the Turkish authorities in the lazaretto at Beirut.

Mauritius.

The Governor of Mauritius reports that during the week ending September 7th 62 cases of plague occurred in the island, and 51 deaths.

Hong Kong.

During the week ending September 11th 13 cases of plague were reported in Hong Kong, and 12 deaths from the disease.

We are glad to note the subsidence of the epidemic in Hong Kong.

THE MALARIA EXPEDITION TO SIERRA LEONE.

MOSQUITO-BORNE FEVER AT WILBERFORCE.

[From a Correspondent.]

The fever among the West Indian troops at the suburb of Wilberforce continues to give a most interesting object lesson regarding the mode of propagation of malarial fever—a mode quite different from what we formerly supposed. Batches of *Anopheles* caught in the hospital and barracks are examined from day to day, and one mosquito in three is still found to be infected. The details are very interesting. I mentioned in my last letter that all the three species of human parasites are found among the troops, and that only one species of mosquito is to be caught in the barracks—the large *Anopheles*. Hence it is to be inferred that this species carries all the kinds of malaria, and, as a matter of fact, the zygotes of both quartan and tertian have been identified with certainty in the insects. Those of æstivo-autumnal fever have not yet been definitely distinguished, probably owing to the rarity of crescents among the men. The parasites have been found in all their stages, namely, the young zygotes, the mature ones, and the zygotoblasts or "germinal threads" in the salivary glands. The young zygotes of quartan and tertian can be recognised at once on inspection by their pigment; that of the quartan zygotes being course, of a dark-brown colour, and comparatively scanty; that of tertian being very copious, fine, and of a light-brown. The containing cells of both are very delicate, and sometimes indistinguishable without reagents—more so, according to Ross, than with *Hæmamœba relicta* (*Proteosoma Grassi*), or perhaps than with the æstivo-autumnal parasites. In the later stages, also, the capsule is less defined. The youngest tertian zygotes are almost precisely like the mature gametocytes—non-sporulating forms—found in the human blood itself.

The zygotoblasts have been detected in several insects in large numbers. It is not possible to know by inspection from which species of parasite they are derived: but they differ from those of *H. relicta*, being considerably shorter, thicker, and less twisted and bent, while they lie in bundles, and not irregularly placed, in the salivary cells. The empty capsules of the zygotes are frequently found adhering to the stomach of the *Anopheles*. In one insect, the stomach of which showed numerous empty capsules, the salivary cells were packed with hosts of the zygotoblasts. Bundles of these could frequently be seen lying outside the cells, but within the containing capsule of the lobe of the gland; other bundles lay within the cells; others, again, were evidently making their way from the cells into the central duct, being found half within the cells and half within the duct; while, to complete the picture, the duct itself was crammed with them, lying parallel to the axis. These phenomena are easily seen in *Anopheles*, in which, unlike *Culex*, the distal end of the duct is dilated into a chamber. Typical "black spores" have not been seen as yet, though bodies somewhat like them have been observed.

It is obvious that these phenomena give a complete and sufficient explanation of the fever amongst the troops. The insects are caught gorged with human blood on the walls of the barracks, are kept for two or three days until the meal has been evacuated, are then examined, and are frequently found to contain zygotes of the second or third day, that is, zygotes of a size corresponding to the time that has elapsed since the insect was last fed. At the same time, of course, older zygotes or zygotoblasts are found in some of the mosquitos, showing that these had become infected at a previous meal. Ross infers from his experiments with *H. relicta* that numbers of zygotoblasts remain in the salivary glands after those have been partially emptied during a meal, to be finally discharged at one or more subsequent meals; in other words, that an infected mosquito may infect several persons. Now, when the insects first began to be collected from the barracks, there must have been several hundreds of them altogether, of which one-third were infected. These would doubtless be able to infect or reinfect a large number of men every week. Hence no other method of infection is required to explain the sickness in this case, the mere transference of the parasites from man to man by the insects being quite sufficient to do so. Of course many infected insects must be eaten by spiders or blown away, but the fact remains that numbers of them can actually be caught at any given time, and there is no wonder that so many of the men are attacked daily. It must also be remembered that each single infection may give rise to many recidivous attacks extending over six months or much longer, and that many of the soldiers must be infected over and over again. Evidently the same laws of diffusion must hold in other parts of the country wherever *Anopheles* is present. The insects, infected from malaria patients, live for weeks in the dark corners of houses or wander into other houses, infecting or reinfecting whomsoever they may bite—permanent inhabitants, travellers, Europeans just arrived in the country—each of whom becomes in turn a focus from which the disease spreads further.

Whether malarial fever may be acquired in any other way or not (and this is beginning to appear very improbable), the great fact which is shaping itself before us is this—given the presence of the proper kind of mosquito, malarial fever is capable of spreading from the sick to the healthy. This is the last thing we dreamed of a little over a year ago. It is now a certainty, and a certainty of immense importance. Prevention becomes possible at once, either by destruction of the mosquitos or by guarding both sick and healthy from their bites by the correct use of mosquito nettings.

For instance, at Wilberforce a number of *Anopheles* are being daily caught by the men in test-tubes as they sit asleep on the walls. Many of these are infected, and each infected insect caught means the prevention, probably, of several infections among the soldiers. The insects were never so numerous in the barracks that a chase of this description will not affect their numbers, and in fact it is now beginning to be difficult to find them at all. Wherever *Anopheles* are found in barracks and hospitals numbers can easily be destroyed simply by telling off a man to go round and kill them. Then again mosquito nets should obviously be used, at least for the sick; whilst, lastly, the buildings can be rendered comparatively mosquito proof by the use of wire screens on the windows. Hence it is scarcely too much to say that medical men can already put a stop to epidemics of malarial fever occurring under their management by using these simple precautions.

But the more general measure on which Ross relies is the discovery and obliteration of the breeding pools of *Anopheles*. This requires a careful study of the habits of the germs, a work on which the members of the expedition, assisted by Drs. Prout and Berkeley, of the Colonial Medical Service, are now busily engaged. They have already made some interesting observations, an account of which I reserve for a subsequent letter. I may mention here, however, that all efforts to find the larvæ of the Wilberforce *Anopheles* have as yet been fruitless.

A fact of considerable interest outside malaria has been noted. Manson's developmental stages of filaria nocturna have been found in three of the Wilberforce *Anopheles* taken from the barracks. It will be interesting to observe whether many of the men contain filaria embryos.

It has been learnt from telegraphic instructions that Dr. Fielding-Ould will shortly join the expedition from Liverpool, to continue the work. Dr. Van Neck from Belgium has already arrived.

ASSOCIATION INTELLIGENCE.

NOTICE OF THE NEXT QUARTERLY MEETING OF COUNCIL.

A meeting of the Council will be held on October 11th, 1899. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, September 21st, 1899.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Notice.

The Library will be closed for the purposes of cleaning on Tuesday, September 12th, and will reopen on Monday, September 18th.

BRANCH MEETINGS TO BE HELD.

South-Eastern Branch: East Sussex District.—The next meeting will be held at Hastings early in October. Members wishing to read papers or make communications are requested to notify their intention to the Honorary Secretary, J. W. Batterham, M.B., Bank House, Grand Parade, St. Leonards.

East Anglian Branch.—The autumnal meeting of this Branch will take place at Felixstowe on Thursday, September 28th, under the presidency of Dr. E. L. Fenn. It is requested that gentlemen desirous of joining the Association or Branch, and members willing to read papers or contribute cases to the meeting, will communicate at once with Dr. Barnes, Eye. Members who have not yet paid their subscriptions for the current year will oblige by sending them to one of the Honorary Secretaries, Edgar G. Barnes, M.D., Eye; Michael Beverley, M.D., Norwich; Benjamin Hugh Nicholson, M.B., Colchester.

Border Counties Branch.—The autumn meeting of this Branch will be held at Keswick on the afternoon of Friday, September 20th. Gentlemen desiring to join the Branch, and members proposing to read papers, etc., are requested to communicate as early as possible with the Honorary Secretary, W. F. Farquharson, Garlands, Carlisle.

Border Counties Branch: Counties of Roxburgh, Berwick, Selkirk, and Peebles District.—This District will meet in the Station Hotel, Newtown, St. Boswells, on Friday, October 6th, at 3.30 P.M. The Chairman, Dr. Blair, of Jedburgh, will make some remarks introductory to his second year of office. Dr. Menzies, of Galashiels, will, as arranged, open a discussion on the Etiology, Diagnosis, and Treatment of Typhoid Fever. Members who have cases to show, and all intending to be present, are requested to communicate with the Honorary Secretary, Dr. W. Hall Calvert, The Laurels, Melrose.

North Wales Branch.—The autumnal intermediate meeting will be held at Llanrwst, in the last week of September, probably 28th or 29th. Members having a paper to read, case to communicate, or motion to propose, are requested to intimate their intention not later than September 20th. Applications for membership should be made forthwith, and it is hoped that every member will exert himself to get eligible medical men to join the Branch.—W. Jones-Morris, Is-y-Coed, Portmadoc; H. Jones Roberts, Gwyddfor, Pen-y-groes, Honorary Secretaries.

South-Eastern Branch: North Kent District.—The October meeting of this District will be held in the Hall of Science and Art School, Tweedy Road, Bromley, on Thursday, October 5th, at 3.45 P.M., Dr. Ilott in the chair. The following papers have been promised: (1) Summer Diarrhœa and its Treatment, by Dr. G. Newton Pitt (Guy's Hospital), and (2) the Conservative Treatment of Pelvic Inflammation in Women, by Mr. Alban G. Doran, F.R.C.S. (Samaritan Hospital). All members of the Branch are entitled to attend and to introduce a professional friend. Members wishing to show cases of interest are requested to communicate with the Honorary Secretary.—A. Tennyson Smith, M.D., Honorary Secretary, The Birches, Orpington.

South-Eastern Branch: East Kent District.—The next meeting of this District will be held at the Royal Hotel, Harbour Street, Ramsgate, on September 21st, at 3 P.M., Dr. Styan in the chair. Mr. Isacke: The Treatment of Incipient Insanity in General Practice. Mr. Raven: Shock in the Etiology of Infectious Diseases. Dr. Halstead: (1) Note on the Treatment of Infantile Diarrhœa. (2) The Desirability of increased Opportunity for Medical Men of the Study of Pathology by *Post-mortem* Examination. Tea and coffee will be served after the meeting. All members of the South-Eastern Branch are entitled to attend these meetings and to introduce professional friends.—Thos. F. Raven, Honorary District Secretary, Barfield House, Broadstairs.

South-Eastern Branch: East Surrey District.—The next meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 12th, at 4 P.M., J. G. Ogle, M.D., of Reigate, in the chair. Dinner at 6 P.M.; charge, 7s., exclusive of wine. Agenda: 1. Minutes of Croydon meeting. 2. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., have been promised: Dr. F. R. Walters: The Modern Treatment of Phthisis. Mr. W. Bruce Clarke: Exploration of the Kidney and Ureter as a Conservative Measure. Dr. W. S. A. Griffith: The Value of the Douche in Gynæcology and after Delivery. Messrs. Down Bros. will exhibit Surgical Instruments, etc. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements and promote the success of the meeting.—Henry J. Prangley, Tudor House, Anerley, Honorary Secretary.

SYDNEY AND NEW SOUTH WALES BRANCH.

The regular monthly meeting of this Branch was held at the Royal Society's Rooms, Sydney, on June 30th, Dr. E. T. Thring, President, in the chair. There were thirty-four members present.

Confirmation of Minutes. The minutes of the previous meeting were read and confirmed.

New Members.—The President announced the nomination of the following gentlemen for membership of the Branch: Drs. Harvey, Belli, Simpson, Caden, Muller, Broinowski, Neale, and Bray.

Communications.—Dr. S. H. Hughes read some notes on Eye Symptoms in some General Diseases, and exhibited two patients to illustrate his paper. Dr. Pockley made remarks.—Dr. Mills read some notes on a case of Pulsating Exophthalmos. A discussion ensued, in which Drs. Pockley and Hankins took part.—Dr. Worrall exhibited some Ovarian Teeth, and read a paper on a case of Choledochotomy. Drs. Hinder and Thring discussed the paper.—Dr. Sydney Jamieson exhibited some Pathological Specimens.—Dr. Frank Tidswell reported that he had made a microscopical examination of the tumour of the kidney exhibited by Dr. Nash at the last meeting. The growth was found to be a Malignant Adenoma. Sections of the tumour were exhibited.

Notice of Motion.—Dr. S. H. Hughes gave notice of the following alteration to Article 23: "All members of Council to retire annually, and (subject to Rule 42) one-third of them shall be ineligible for re-election until the expiration of two years. For the first two years following the passing of this rule the retiring four councillors shall be determined by ballot, and thereafter the four senior members to retire." This rule to come into force at the next election.

CORRESPONDENCE.

ILLEGAL CERTIFICATES.

Sir,—In answer to Mr. Horsley's letter of September 9th, it is not clear whether he was asked to sign "the memorials" or our joint letter of August 26th. In No. 2,017 of the British Medical Journal he calls himself a co-signatory of the memorials, and in this letter of September 9th says he was asked to sign. Which? I expect the paragraph is not clear from the printer failing to put in a comma in its right spot. As the cause of the "Stratford meeting" being held I may state that my charge at that meeting of Mr. Horsley going back from his election pledge was from the following question put to all candidates, and his reply to Mr. Jackson on October 4th, 1897, herewith appended:

Whilst opposing the registration of midwives will you support?—

6. The insertion of a provision in any Act of Parliament for the training or registration or nurses, that, whereas such nurses have no medical training, their presence in no way relieves those who may be concerned of any responsibility to provide medical attendance; and that by undertaking, or pretending to undertake, any medical care of any case, or to render any medical attendance on any case, any such nurse renders himself or herself responsible in the first degree for any injurious consequences of such interference or of any delay thereby occasioned; besides any disciplinary consequences for misconduct as a nurse.

7. The insertion of a provision into any such Act that whereas the successful treatment of patients and their efficient nursing require the teaching, training, and control of nurses by medical men, any council or other body or bodies to be created for the purpose of regulating such teaching, training, and control consist of registered medical practitioners only, and be brought under the authority of the General Medical Council.

25, Cavendish Square, W., October 4th, 1897.

Dear Mr. Jackson,—I agree with all the reforms mentioned in the circular you kindly send me, and, though some are plainly impossible of attainment for a long period, I would use every effort to press them forward. May I add that I cannot see that our views as to what is urgently required to further the interests of the profession are in any degree divergent? and remain, yours sincerely,

VICTOR HORSLEY.

George Jackson, Esq., F.R.C.S.

My charge was that by assisting in drawing up the Midwives Bill of the British Medical Association he had broken that pledge. In answer he read his letter to the profession, and in a most admirable speech stated that he did not like the Bill, but such outside influence was at work that a Bill must pass, and that the Association Bill contained all the safeguards that could be devised, but at the same time thought it very likely that Parliament would not pass these safeguards, and if they were accepted they would be only of very little use in actual working. Mr. Brown followed him, and expressed a still stronger opinion of their inutility. The result was that after hearing Mr. Horsley's defence of his circular letter, and after action, the meeting unanimously passed Dr. Stanilaud's resolution, pledging the meeting to support the direct representatives in uncompromising hostility to the passing of any Bill legalising the certification of midwives to attend cases of even normal labour without medical supervision.

Mr. Horsley says this is a system of "blank negatives." Most assuredly so, and so we all meant it. Better that an honourable profession should be beaten on a direct negative (if it must be so), and thus the responsibility for this murderous Act will alone fall on those who have passed it. I cannot see that we are wrong in taking Messrs. Horsley and Brown on their own showing, and asking them to lead our profession in the fight against unqualified practice. Would they only put themselves at the head of the only Association which is willing to act as well as to talk, I think they would shortly find themselves the Picquarts of our profession.—I am, etc.,

R. F. TOMLIN.

Wood Green, N., Sept. 9th.

SIR,—We welcome Mr. Horsley's letter. Will he kindly state when and how he was invited by the Corporate and Medical Reform Association to sign the memorials to the General Medical Council against the certification of unqualified practitioners? The document he sent to members of the profession before his election of 1897 was dated September 18th, 1897, and no doubt expressed the view he then desired to commend to his constituency, including "3. The registration of obstetric nurses;"[1] but the following direct question was, on September 29th, 1897, put to him by certain constituents:

> Whilst opposing the registration of midwives will you support the insertion of a provision in any Act of Parliament for the training or registration of nurses, that whereas such nurses have no medical training, their presence in no way relieves those who may be concerned of any responsibility to provide medical attendance.....?

In answer to this question amongst others, Mr. Horsley, on October 4th, 1897, wrote to Mr. George Jackson:

> Dear Mr. Jackson,—I agree with all the reforms mentioned in the circular you kindly send me, and though some are plainly impossible of attainment for a long period, I would use every effort to press them forward. May I add that I cannot see that our views as to what is urgently required to further the interests of the profession are in any degree divergent? and remain yours sincerely, VICTOR HORSLEY.

This had the ring of a frank and sincere pledge; but it is not consistent with its sincerity for Mr. Horsley to fall back upon and misinterpret a prior document; to second and advocate the Bill of the British Medical Association, which concedes the principles of certification of medically unqualified persons as competent to undertake attendance on so-called "natural" or "normal" labour, which is "medical attendance," or to persuade his constituents to abandon the direct opposition to such certification, to which opposition he stands pledged by his letter to Mr. Jackson; and, if his doing so on the ground that opposition without an alternative is "impotent" is not correctly described as "a policy of surrender," words cease to have meaning.

The advocates of registration of midwives consist principally of a few interested medical men and a few lay faddists; and their only strength is derived from the successive "surrenders" of principle by the General Medical Council and the Council of the British Medical Association.

In his speech at Stratford, far from supporting, as Mr. Horsley avers, any registration of midwives, Mr. Brown earnestly deprecated both the Bill of the British Medical Association (which he had consistently opposed, by moving a "blank negative," in the Parliamentary Bills Committee) and also this action of the Council. He said:

> If midwives are recognised by law as competent to attend midwifery, it will be useless to lay down regulations that they must send for doctors in cases of difficulty. ... In the interests of the public, as well as of the profession, we must do our best to prevent the practice of midwifery, or of any other branch of medical practice, by unqualified persons.....We need no registration to assist unqualified persons .....It is monstrous to allow any but fully qualified and educated persons to undertake these responsibilities of the lying-in chamber.....A stop should be put to the practice of midwifery by unqualified persons.[2]

The policy of a "blank negative" to a confessedly mischievous Bill will in no way hamper opponents of the Bill in efforts to amend it in detail if, on the second reading, defeated upon the principles involved; but we should be effectually silenced on the second reading of the worst Bill if we were presenting a substitute distinguishable in detail but not in principle. The "alternative" we propose—to which, as well as to a "blank negative," Mr. Horsley is pledged by his reply to Mr. Jackson—was submitted to him in the following questions:

> Amongst such amendments of the law, will you promote measures as follows, or modifications thereof?
>
> 1. To render a medical certificate.....or a coroner's inquest.....conditions precedent to registration of death.....
>
> 5. To render illegal the employment by..... any municipal or public body.....of unregistered persons for the performance of any medical functions.[3]

This "alternative" will mitigate and in time prevent the mortality in childbirth now shamefully permitted by defects in the law or by laxity in its administration, and, as Mr. Horsley may be willing to ascertain whether such an alternative is supported by the profession, we hope to obtain, as at Stratford, his co-operation in meetings to take it into consideration.

Far from attacking Mr. Horsley, reference to this correspondence *passim* will show that we are defending, not ourselves, but measures and a policy we believe both useful and necessary, in which measures and policy we conceive ourselves entitled to his invaluable support.—We are, etc.,

GEORGE JACKSON,
JAS. A. MYRTLE,
J. HIGHAM HILL,
F. LORIMER HART,
R. F. TOMLIN,
TOM R. TAYLOR,
T. GRANVILLE HOCKRIDGE.

Tysoe Street, W.C., Sept. 12th.

MOSQUITOS AND MALARIA.

SIR,—I am very much obliged to Dr. Thin for his report about me in his address delived at the opening of the Section of Tropical Diseases, but I cannot help making a little rectification about a point which puts me in contradiction with my publications, making believe that I had appropriated to myself more than came to my account. The point in question is the part which has been appropriated by Bignami and Bastianelli.

It is not according to truth that it was Bignami who thought of the new way to make experiments, but it was I myself, who, without being referred to, proposed to Bignami to repeat his experiment with the mosquitos, which I had provided, and it was still myself who, likewise without being consulted by Bignami, on October 20th had brought in the room where the patient was those few *Anopheles* which, as it is now known, caused the experiment finally to be successful, an experiment which had been attempted in vain by Bignami since September 26th, 1898. I made use of Bignami's patient, as I could have done of anyone else if I had had a medical room at my disposal, and I made chiefly use of his patient to be able to operate quickly, being persuaded, just as everyone else, that Koch had already anticipated me. Without this hurry imposed upon us by Koch, I should have waited another fortnight to assure myself that I had not contracted

[1] BRITISH MEDICAL JOURNAL, September 25th, 1897.

[2] *Lancet*, July 8th, 1899, p. 111.

[3] BRITISH MEDICAL JOURNAL, October, 1897.

the malarial fever—as I had recently made peregrinations in several malarial regions—and I should have made the experiment on myself, as I had done with the newborn *Anopheles* with the spore brune, and having slept for more than a week in a very malarial spot, only protected by metallic nets from the bites of the *Anopheles*.

At all events, I cannot conceive how an experiment made in the above-mentioned conditions (an experiment which consisted in setting at liberty in a room where the patient was certain *Anopheles* provided by myself) can be attributed to Bignami, whose part has evidently been only secondary. However, the mistake has not been made by Dr. Thin, but it was Bignami who, concealing part of the truth in his publications, gave rise to this misunderstanding.

After this first positive experiment, all the rest which since has been published by us has been made in company with Bignami and Bastianelli or by myself alone; for instance, I alone determinated that also a fourth species of *Anopheles*—the *Anopheles superpictus*—propagates the malaria, and concluded that all Italian *Anopheles* could propagate it; and it was I almost alone who excluded the influence of the *Culex*, the *Phlebotomus*, the *Ceratopogon*, etc., and I alone studied the habits and life-history of the *Anopheles*, etc.

Therefore it does not seem to me fair that the essential part in the "experimental proof" should be attributed to Bignami and Bastianelli.—I am, etc.,

Rome, Sept. 6th. BATTISTA GRASSI.

PREVENTIVE MEASURES AGAINST PLAGUE.

SIR,—It is to be hoped that the report of the Plague Commission will be published with as little delay as possible. Plague is waiting at our door and it is high time that such facts about the disease as have been ascertained to be established beyond dispute should be made public. "Scare" in any form cannot be too heartily deprecated, but hardly less mischievous than panic is a complacence established upon unverified surmises.

The unique opportunity afforded to the Indian Government of systematic research into the disease by scientists of accredited standing has been neglected. I unhesitatingly affirm that scientific research into plague has not been in any way encouraged by the authorities; the problem has been dealt with on the lines of a civil misfortune to our Indian dependency, while the momentous interest which the disease has for the whole human race has been left to the consideration of a few private individuals.

Since the Great Plague of the seventeenth century two great advances have been made—the specific micro-organism has been discovered, and Haffkine has proved that a considerable degree of protection is afforded to those who submit to a subcutaneous injection of a sterilised broth culture of the bacillus. This latter discovery has practically robbed the Black Death of its terrors.

There seems to be considerable uncertainty about the nature of Haffkine's "prophylactic." It is not in any sense a "serum," neither is it in any way a remedy when once the disease has shown itself. All plague "serums" have proved useless for therapeutic purposes, and whether they convey any immunity to the human subject has not, so far as I am aware, been ascertained.

A Dalziel's telegram, which was copied by certain of the daily papers at the end of last month, stated that large quantities of Haffkine's prophylactic had been requisitioned for from Bombay "for use in England and Europe generally." It is, of course, an obvious duty of all our seaport sanitary authorities to be prepared with a stock of this immunising agent. I would ask, however, if all the prophylactic which would be required in England, to say nothing of Europe, if once the disease escaped the seaport barrier, is to be obtained from Bombay? From personal experience of the manufacture of this fluid in Bombay, I believe that the establishment there would be quite unable to meet the demand. Allowing that the people of England would be satisfied to make use of a preparation which has been in its routine manufacture manipulated by natives, it is to be remarked that there has been the greatest difficulty in obtaining a sufficient number of reliable native subordinates for the production of the present output. It seems to me that the laboratory at Bombay, with its seminative staff, should be left to supply Oriental countries, and that prophylactic should be prepared by European scientists much nearer home.

I am of the opinion that a laboratory for the special purpose of manufacturing Haffkine's prophylactic fluid should be built and equipped without any delay. It should be remembered that the broth culture should be of at least six weeks' growth to give reliable results. Adequate isolation could be obtained for the building (which need be of only a temporary nature) by erecting it upon a small island near our coast. To those who would argue a danger from the wholesale cultivation of the bacillus so near our homes, I would point out that communication with the island need not be less unconstrained than that which has gone on uninterruptedly for nearly five years with the plague-infested city of Bombay. The prophylactic laboratory in Bombay is in no way isolated from neighbouring bungalows; a few weeks ago a public reception was given in the building, and a large crowd of interested laymen was conducted round the incubating rooms.

There can surely be but few who would urge against such a scheme as I have suggested above the argument of expense. No expense can be too great or precaution too punctilious which will help to avert a repetition, even on a small scale, of such national calamities as the Black Death or the Great Plague.—I am, etc.,

WILFRED WATKINS-PITCHFORD, F.R.C.S.Eng.,
Late Special Plague Medical Officer.

Edgbaston, Sept. 9th.

CAUTION TO MEDICAL PRACTITIONERS.

SIR,—Once again it is my duty to warn medical practitioners against employing persons as assistants or "*locums*" without being sure that such are qualified and registered. Unfortunately, it is not always a sufficient guarantee that the persons applying for appointments come from medical agents. In all the cases of impersonation I have investigated not the slightest amount of care had been taken by the medical agent in question to see that the person applying was either registered or qualified. In each case the man's word was taken without questioning that he was what he represented himself to be, and he was sent out as duly qualified, and engaged by medical practitioners as assistant or otherwise. In the latest case which has come before me the facts are these: Diplomas had been stolen from a qualified practitioner in Australia, and the thief has here, by using the name, style, and titles of the said practitioner, succeeded in getting employment from several medical men in London and elsewhere, he having been "booked" through a medical agent. The diplomas should, however, have been worthless in England, as the original owner of them had not registered here, and his name was not upon the *Medical Register*. There is no excuse, therefore, for such employment, as a few minutes' search in the current *Medical Register* would have proved that the man was not a duly qualified medical practitioner under the Act, and thereby incapable of being legally employed by medical men in England.

As I have written before, no person should be employed as *locum tenens* or assistant who cannot produce not only diplomas but registration certificate issued by the General Medical Council. I grant that both these might be "stolen," but the medical practitioner would be held guiltless if he took the precaution of seeing these documents before engaging the assistant; if he took no such precaution, and the assistant turned out afterwards not to be qualified, the risk would be run of, at the least, his being charged before the General Medical Council for covering. Impersonation is rife at the present time, and with the present want of care on the part of certain medical agents and medical practitioners is a game not very difficult to play.—I am, etc.,

Trafalgar Square, W.C., Sept. 10th. A. G. BATEMAN,
General Secretary, Medical Defence Union.

MEDICAL APPOINTMENTS IN WORKHOUSE INFIRMARIES.

SIR,—As Mr. Higginson in your last issue referred to a letter of mine on this subject published last July, I may be permitted to point out that he does not quite grasp its drift. I did not object to the "assimilation of workhouse infirmaries to public hospitals," because pauper patients ought not to be treated as efficiently as hospital ones, but rather because

under the Poor-law organisation it would be impossible to apply to infirmaries in any efficient manner a rigid hospital system, at any rate to the advantage of the pauper, and I more particularly condemned the pseudo-hospital system recently inaugurated at Bradford in the teeth of the opposition of the whole local profession. Poor-law infirmaries most assuredly should be brought up to the level of ordinary hospitals in everything appertaining to the practical treatment of the sick, and as far as my experience goes this has been done in all the parish infirmaries with which I am acquainted.

I quite agree with the purport of most of Mr. Higginson's remarks, but do not think he quite appreciates the meaning of the word "charity." In the true meaning of the words "workhouse infirmaries" and "ordinary hospitals" are not "charitable institutions alike," and in any discussion on this subject the distinction must never be lost sight of. One of the essentials of our present hospital system is that the honorary medical and surgical staff receive no adequate remuneration for their work. Assimilation in this respect is not to be thought of. The Poor Law knows nothing about honoraria; it is expected to pay all its officers for work done the market value of that work, and the whole Poor-law service would suffer by one class of its officers agreeing to do work on honorary terms. As no reputable physician or surgeon would be likely to give his services to a State-supported institution on the same terms as to a public charitable institution the endeavour to assimilate medical appointments in workhouses to those in public hospitals is not likely to redound to the ultimate benefit of the pauper.—I am, etc.,

Hackney Road, N.E., Sept. 10th. MAJOR GREENWOOD.

MEDICAL ORGANISATION: PROPOSED SCHEME.

SIR,—I enclose a copy of a circular[1] that is being distributed at the instance of the Medical Guild, Manchester, amongst secretaries of all associations of general practitioners of medicine in England and Wales, about which we have been able to obtain definite information. We fear, however, that many societies exist about which we have been able to learn nothing, and we appeal, therefore, to you to help the work by printing this letter and the accompanying circular, if possible, in your next issue. In this way, we may be able to reach all parts of the country, and I shall be glad if all secretaries who have not received circulars will communicate with me at once.

There are one or two points about the proposed conference I should like, with your permission, to mention. In the first place, it is proposed that it should be a conference of delegates elected by each medical society to represent its members. Thus it would be elected by, and speak in the name of, a large section of the profession. Each delegate would, in fact, have the authority of, perhaps, thirty or forty of his brother practitioners behind him.

In the second place, it is intended to be national in character, although in the first instance it is of necessity being organised locally.

Thirdly, it is hoped that the conference, if it meets, will elect a central executive committee, whose business it will be to perpetuate the work and perfect the organisation of the profession.

By means of this organisation each individual practitioner in the country would have, if he chose, his share of representation at the annual conference, and would be able to exercise through it his influence on all questions affecting the welfare of the profession.

We are somewhat sanguine, therefore, in appealing to all general practitioners in England and Wales to exercise all the influence they possess to secure the representation of every society at the proposed conference. As it is not intended to hold this before the spring of next year, there is ample time to form new societies in districts which do not already possess them, and it is hoped that men who are really anxious to further their own interests as well as those of their fellows will take steps in this direction.

I do not know that I need dwell upon the necessity—the pressing necessity—for organisation along these lines. The various medical papers contain abundant evidence of the evils under which the general practitioner suffers and the steady encroachment on his prerogatives that are continually being made. Under these circumstances it is absolutely essential that we stand together shoulder to shoulder. We shall then not only be able to resist aggression effectually, but be in a position to uphold the dignity of the profession, and have in our hands the machinery with which to improve its status.

Thanking you in anticipation for the insertion of this letter and circular, I am, etc.,

S. CRAWSHAW, M.B.,
Secretary to the Conference Committee of the
Ashton-under-Lyne, Sept. 11th. Medical Guild.

[1] The main points of the circular are embodied in a paragraph printed on p. 715

PHYSICAL TESTS FOR THE PUBLIC SERVICES.

SIR,—Surgeon-General Cayley is in error in saying that the British Medical Association speaks with uncertain voice on the subject of medical tests for the public services.

It is true that a resolution was proposed in the Medical Section that the physical should precede the educational test, while in the Ophthalmological Section a directly contrary resolution was mooted. In the Medical Section, however, the resolution was carried; in the Ophthalmological Section it was not, and this, you see, makes all the difference. The Council of the Association has only to deal with resolutions when they are passed, and therefore the only conclusion before the Association is that of the Medical Section, which is perfectly definite in its wording.

Even had the resolution of the Ophthalmological Section been carried (and it was not), the apparent contradiction would only have meant that the British Medical Association was dissatisfied; that in one great branch of the public services (the naval) the medical examination should precede the educational, while in another (the military) it should follow it. Both methods cannot be right, and we are certainly not stultifying ourselves by calling attention to such a glaring anomaly, even although "The Military and Naval Medical Departments and the Civil Service Examination Commissioners who frame the rules for these examinations" have, as Surgeon-General Cayley assures us, a monopoly of "the special knowledge requisite for giving a sound opinion on such points."

I suppose they have, for certainly no other bodies of men can understand or explain why in the volunteers and militia the certificate of a civil practitioner preceding entrance is sufficient for the would-be officer's admission, while in the navy and army a naval or military officer's examination respectively is demanded, which in the one case must precede and in the other follow the educational test. But let us see on what the resolution of the Ophthalmological Section was based. The main argument produced, namely, "that the general health and eyesight of candidates for naval commissions were so detrimentally affected by the cram work necessary to secure success that they were often rejected on account of insufficient eyesight, which a few weeks' rest might sufficiently restore to permit their acceptance," is simply an exposure of the fallibility of one factor at least of this preciously infallible trinity. The Civil Service Commissioners know their own business so little that they set such impossible tasks to growing boys as certainly injures their health. This might be thought by mere civil practitioners a reason rather for diminishing the overwork than for postponing the physical examination.

I know that I shall be told, in this best of all possible worlds of red tape, that naval cadets are not overworked. Let us see. I was able to state in the Medical Section from my own knowledge that boys of from 14 to 15 are frequently kept working from ten to eleven hours a day during the weeks and months preceding the Naval Educational Examination. May I now give, to show how well the Civil Service examiners gauge the capacity of boys of that age, a comparative list placed in two parallel columns of (1) the amount of knowledge required from young men of from 19 to 20 by the University of Cambridge for its Previous Examination, and (2) the requirements of the Civil Service Commissioners from boys of 14 to 15 for entrance as naval cadets?

Subjects required for:	
1. *Cambridge Previous Examination.*	2. *Examination for Royal Navy Cadetships.*
Latin: Horace's *Odes*, Books ii and iii, and unseen translations.	Unseen translations of passages from Cæsar, Livy, Tacitus, Ovid, etc., Latin prose composition.
Greek: St. Matthew's Gospel, Plato's *Apology.*	French: Unseen translations from and into French; also conversational French.
Arithmetic: General.	General.
Algebra: To Progressions.	To Quadratics and Problems in x and y.
Euclid: Books i, ii, iii, and iv.	Books i, ii, iii, and vi Problems i to xii.
English: Literature (very mild; an English essay on a given author).	English History, Geography, Composition, etc.
Subjects for Honours Candidates only, which need not be taken by others.	*Optional Subjects, some of which must be taken.*
Trigonometry and Statics.	German, Drawing, Trigonometry, High Algebra, Advanced *Euclid.*

When one remembers, too, that the Cambridge examination is merely a pass examination in which all those attaining a fairly low standard can all equally pass, while that for the naval cadetship is a severe competitive examination, for which the Admiralty issue three nominations for every vacancy, so that the unfortunate children are worked to the very extent of their endurance in order to surpass their competitors—one can the better grasp the comparative and actual severity of the latter over the former, even if we do not take into account the four or five years' additional time for preparation allowed to the Cambridge candidate.

So much for the reasons for the unpassed resolutions of the Ophthalmological Section. Now let us deal with Surgeon-General Cayley's arguments for not forwarding the resolutions of the Medical Section to the proper authorities.

1. That the naval and military medical authorities and the Civil Service examiners are the only people who understand the matter. To this I would reply that similar claims to infallibility have always been advanced by vested interests whenever attacked by reformers. They were advanced by the Inquisitors who racked Galileo; they were advanced yesterday by the military authorities as a reply to the demands for reform in the Army Medical Service; they are advanced to-day by the officers of the French General Staff as a reason why Dreyfus must be guilty. Let me, in reply, ask another question, Why should the authorities in question possess special knowledge on these subjects? Have they thought about them, read about them, debated them? Are they authorities on education, physical and general? By no means; they are men tied hand and foot by regulations issued from headquarters by the one or two in high authority, without any debate or inquiry on their part whatever. To debate or to inquire would be next door to mutiny.

Here is an example, among many, of the scientific shortcomings of the regulation by which the medical military authorities are bound. If a candidate for a commission in the army is of the age of 21 he must have respectively a minimum height of 5 feet 4 inches, a chest girth of 33½ inches, and weight of 9 stone 11 lbs. But while a man of this minimum height must possess the weight and girth in question, a candidate, a foot taller—that is, 6 feet 4 inches, need possess no more. Now it is quite obvious to the civilian intellect that the shorter man might come short of the required weight and chest girth, and yet be quite strong and healthy, while a man standing over 6 feet might possess them and yet be a potentially consumptive weed.

2. That the passing a physical test prior to examination would necessitate (*a*) the physical examination of 800 candidates for commissions each year, and would (*b*) interfere with the gains of civil practitioners who apparently largely add to their income by the preliminary amateur examination of intending candidates.

The answers to these objections are: (1) That a medical staff which has to deal successfully with 30,000 recruits per annum ought not to be overcome by the addition of 800 candidates for commissions; and (2) that the gains of private practitioners by making preliminary examinations are practically non-existent, since they are fully aware that the powers that be (of whom Surgeon-General Cayley was once one) assure us that they attach no weight whatever to our certificates of fitness, while our unofficial detractors declare that we are not in a position to judge of the requirements of the service. Even the parents of candidates prefer to risk the glorious uncertainty of the physical examination as at present conducted rather than take our opinion when unfavourable to their offspring. So that even if we were of the opinion of the Ephesian silversmiths, we need not hesitate a moment to advocate another plan—our gains from the present one are so infinitesimal. When we observe, however, our detractors to become suddenly careful over our interests, the proverb occurs to us: "In vain is the net spread in the sight of any bird."

3. That a boy passed as fit at 15 or 16 might not be fit when he entered the army at 19 or 20. On the contrary, a boy rejected as unfit at 15 or 16 would not waste four of the most precious years of his life in further injuring his health and ruining his professional prospects in other directions by the necessary preparations for a profession for which he was elementally unsuited. How is it, too, that no large proportion of naval officers who are admitted upon a physical examination held at 14 or 15 are discharged from the service as unfit at or before 19 or 20? If any large proportion of invalidism results between those ages in those preparing for the army, which I do not believe, upon the head of the unfair examination required of them meanwhile be it.

In conclusion, and in positive support of the resolution of the Medical Section, the physical test should precede and be of more importance than the educational test, because:

1. The physical fitness of our officers to fight, which is their life business, is of more importance to their country than their book cram, and should take the principal place in their examination and count for marks.

2. Our present system of ignoring muscle, and wind, and heredity, and stamina, is a failure so far as producing healthy officers is concerned. They die off in India from typhoid like rotten sheep, while even at Sandhurst and Woolwich the Commander-in-Chief remarks on their poor physique.

3. It is most unfair to compel parents to spend hundreds of pounds in ruining the constitution of their sons, and unfitting them intellectually and preferentially for other professions, by submitting them to an ordeal of mental over-pressure extending over the whole educational period of their lives, and at the same time to withhold from them until too late the elementary information whether or no those sons come up to an arbitrary physical standard, a point which could be settled in an hour by a preliminary physical examination conducted by one of those gentlemen who alone are familiar with the requirements of the service, from whose dictum there is no appeal, and "who alone possess the special knowledge requisite for giving a sound opinion on such points."—I am, etc.,

William Sykes, M.D., F.S.A.,
Joint Secretary, Section of Medicine, British Medical Association, 1899.
Gosport, Sept. 6th.

HERNIA AND CIVILISATION.

Sir,—A perusal of the discussion on the Treatment of Hernia in Children at the recent meeting of the British Medical Association gives rise to much speculation, and not the least interesting of the side issues connected therewith is that which brings into question the frequency of hernia, especially of inguinal hernia, among civilised nations.

My personal experience of uncivilised peoples extends, for its greater part, to the less-known districts of the Nyasaland plateau, and embraces members of various tribes differing in physical characteristics, habits, and descent. These tribes may individually be specified as the Atonga, Atembouka, Zao, Wa-Bisa, Wa-Gunda, Angoni, etc.; collectively they may be taken as fair samples of primitive folk as opposed to the inhabitants of civilised countries.

Now among these people umbilical herniæ are exceedingly common, probably on account of the scant attention paid to the cord at birth. They never seem to cause trouble, however, and disappear for the most part spontaneously during the earlier years of life.

With inguinal hernia it is very different. This, by far the most common physical disorder with us, occurring in an almost incredible proportion of the male population, is so rare with them as to be practically unknown. The reasons for this great contrast are of interest.

In the beginning the mother carries her child seated on the

prominence of her hip, its legs embracing her flank, and its whole weight borne by a simple sling carried to the opposite shoulder. Think for a moment of the position of the legs *in utero*, and of their inclination at birth. The posture of the infant is entirely natural; the tendency to flexion of the thigh at the hip, and to abduction of the whole limb, is simply followed and maintained. One sees tiny mites of a very few days' existence nursed in this manner with perfect comfort. The advantages to the child are obvious. If a male the descended testis is kept in its place in the scrotum, an open processus vaginalis is encouraged to close, and the inguinal canal—still inclined to patency after the passage of the sexual gland—is adequately supported by the conforming pressure of the mother's side.

We, in our wisdom, take other ways. We bind down and almost splint the struggling legs by weight of swaddling clothes, and still their protests by folding or pinning these after the manner of a sack. We fix a binder which overlaps its useful purpose of pressure upon the umbilicus, and seriously hampers the free movements of the lower chest and of a great part of the abdomen. Thus we stretch and weaken the already feebler parts of the abdominal wall, we remove from them the support of the flexed thigh, and make the delicate inguinal regions bear the brunt of every cough and cry and varying distension of the gut. We help the possible evil results of a tardy development, and find that the common hernia in the male "occurs with extraordinary frequency in the first year of life."

The immunity as life goes on is no less striking. The boyhood and youth of the native are brief. Puberty comes quickly under a fierce sun; and before our own children have well left school he is already taking upon himself the duties and responsibilities of the man. During this time there is no very apparent reason why he should be free from inguinal hernia. Rather to the contrary. The young boy, with maize as the staple of his diet, grows a huge belly out of all proportion to the rest of his body. The abdominal walls seem stretched almost to bursting point, and the resolved pressure, together with the direct weight of the abdominal contents upon the inguinal regions, are still further increased by the greatness of the lumbar curve, a greatness which is partly characteristic of the negro's build and partly exaggerated by the throwing back of the upper part of the trunk as counterpoise to the anterior weight of the intestines and omentum below.

Again, throughout life his food supply is always fluctuating. At one time the abundant crops of the rainy season and all the prodigal fruits of his clime; at another time famine, when the precious store of seed corn is hardly spared, and a mere sustenance eked out by the leaves of the forest and the roots of the bush. At one time a perfect picture of rotund well-being; at another time a ghastly model of skeletal anatomy. And rapid variations in the viscera and parietes such as these favour, we believe, the occurrence of rupture.

Why, then, his protection? The explanation may lie in two points:

In the first place, the native is a practical believer in the doctrine of conservation of energy. He rarely puts to its full use any co-ordinate group of muscles. He objects to the rigid fixation of any part of his frame as the preliminary to exercise of power, but depends for his efforts rather upon balance and the press of his body mass. There is all the difference in his actions as between the cricketer's stubborn, muscular drive, and the lithe, weight-transferring swing of the golfer. And so there are wanting those violent contraction of the trunk muscles which are so fruitful an exciting cause of hernia with us.

Secondly and chiefly, a great deal must ensue from the position the native takes up when sitting, and especially when disposing himself for the necessary eliminatory functions. He squats down upon his heels like a huge grasshopper, with the back of the thigh touching the calf, and the body swayed forwards to the full flexion of the hips—a posture we have so far forgotten that it is not only uncomfortable but even difficult for the civilised man to imitate it. Yet the native under these circumstances does entirely what is most wanted and which we most neglect—he supports to the greatest possible extent, and at the time when it is most needed, those portions of the abdominal wall which are especially patent to the dangers of strain. One cannot advocate a complete return to his methods, but our sanitary potters might deduce a lesson and lower the height of their models with advantage.

The freedom of the savage from inguinal hernia cannot but excite comment. At the same time, any one individual experience must of necessity be limited, and it would be valuable to have the views of others who have also "lived beyond the outer edge" upon this interesting and important point.—I am, etc.,

STANLEY KELLETT SMITH, F.R.C.S.Eng.

Liverpool, Sept. 12th.

MULTIPLE OPERATIONS ON A SINGLE PATIENT.

SIR,—The following case, reported by Mercanton, seems to throw into the shade even Mundé's remarkable performance.[1] I mention it here as an example for the prevention of the Continental *furor secandi* spreading among ourselves.

The patient was an unmarried peasant woman, aged 47, who had suffered from uterine prolapse for four years. For this the following operations were done—anterior colporrhaphy, with perineoplasty, Alexander's operation, excision of the portio vaginalis, and extirpation of the vaginal mucous membrane. Prolapse of the anus having supervened twelve months after the first of these operations, the actual cautery was applied to the recto-anal region. While this lesion was healing, fourteen months after admission, a hard nodule, the size of a nut, was noticed in the left breast, with enlarged axillary glands. For this the breast was extirpated and the axilla cleared sixteen months after her admission into hospital. The tumour proved to be acinous cancer. The uterine prolapse having returned, a further operation—hysteropexy—was done for it. She soon recovered, and left the hospital in good health a month later. She returned three months afterwards with a left ovarian tumour. For this laparotomy was done, and both ovaries being affected with soft cystic cancer, they were removed. A few months afterwards she left the hospital convalescent. Two and a half years later she again came under treatment with an intra-abdominal tumour of the left sacro-iliac region. Laparotomy was again performed, when the sigmoid and rectum were found embedded in a hard mass of cancerous growth, and the peritoneum was infiltrated. Under these circumstances an artificial anus was established at the abdominal wound. From the operation this poor peasant woman again recovered, but subsequently she succumbed to the disease.—I am, etc.,

Clifton, Sept. 11th. W. ROGER WILLIAMS.

SUPRAHEPATIC ABSCESS.

SIR,—The paper read by Mr. Cantlie on suprapubic abscess leads me to think that the report of a case of hepatic abscess I had some time back may be of interest.

The man, a shepherd, came under my treatment last February complaining of persistent vomiting and pain in his right side. He had been subject to similar attacks, and they had usually passed off under saline aperients, but on this occasion the vomiting continued more or less, and after a time there was some dulness over the right side of the back of chest, but puncture with an exploring needle gave no results. The man continued to get worse, and an enlargement of the liver below the ribs began to take place. The enlargement continued to increase, and suspecting an abscess I used a needle and obtained a drop or two of pus. I then aspirated, but only a couple of ounces of most fœtid pus was drawn off. Up to this time the swelling had been very hard, with no fluctuation, but two days after aspirating it was softer, and I then cut down about an inch, with a tenotomy knife, and passed in a large trocar and cannula. On withdrawing the trocar about a pint of most offensive pus of a dirty greenish colour was obtained; a tube was then passed through the cannula into the abscess cavity and the cannula withdrawn. A piece of silk was tied to the tube and then to a small bunch of absorbent cotton wool to keep the tube in its place, and over this a handful of absorbent wool was placed. The abscess continued to discharge for three or four weeks, and then was quite healed.

I cannot say anything about the temperature, as I only saw the man during the first part of his illness at intervals of two

[1] BRITISH MEDICAL JOURNAL, 1899, vol. ii, p. 671.

or three days, and he had no one whom I could depend upon to take it, but I do not think it was ever raised more than a trifle. He had on two occasions what from his description were evidently rigors. As to the cause, could his occupation as a shepherd have anything to do with it, through any of the fluke tribe?

I see Mr. Cantlie speaks very highly in favour of the trocar and cannula and tube passed through the cannula; and I may here mention that I reported a case of empyema some six years ago in which I treated a child in the same way with the most happy result.—I am, etc.,

Fulbourn, Cambridge, Sept. 10th. F. L. Nicholls.

THE INTERNATIONAL MEDICAL CONGRESS, PARIS.

Sir,—You very rightly observe that it is time to take some action for the representation of British Medicine at the forthcoming Congress; and you refer to some Committee already existing.

When was this Committee formed? How was it constituted? How elected? It appears to me that the British Medical Association should move in this matter, and that the Council should appoint a Committee, adding to it the names of members who are not members of the Council. Then we should have a thoroughly representative Committee. I have attended nearly all the international medical congresses, and I have been struck by the disorganisation of British medical representation.—I am, etc.,

September 3rd. M.D.

*** The National Committee for Great Britain and Ireland was formed at the request of the Executive Committee of the thirteenth International Congress of Medicine in July, 1898, who addressed a similar request to every civilised country. The President of the British Committee is Sir William Mac Cormac, Bart., K.C.V.O. Amongst the members who have consented to serve upon the Committee are the Presidents of the Royal Colleges of Physicians and Surgeons of England, Scotland, and Ireland; the Professors of Medicine in the Universities of England, Scotland, Ireland, and Wales; the Master of the Apothecaries Company of London; the Inspector-General of the Navy and the Director-General of the Army; the President and the President of Council of the British Medical Association; the Presidents of the chief medical societies and representatives from the medical schools in England, Scotland, Ireland, and Wales. The Committee selected as Secretaries: Dr. Keser, Physician to the French Hospital and Dispensary; Dr. A. E. Garrod, Physician to the Great Ormond Street Hospital for Children; and Mr. D'Arcy Power, Assistant Surgeon to St. Bartholomew's Hospital. There is no doubt that the English section at every Congress is badly organised, for our nation does not lend itself readily to any form of discipline; but we venture to think that every suggestion tending towards improvement will be gladly received and considered by the National Committee if they be addressed to one of the Secretaries.

A MEDICAL UTOPIA.

Sir,—Your correspondent in the British Medical Journal for July 22nd need not have gone so far as the Argentine Republic for giving us an example of a country where doctors do not dispense. This practice is almost unknown on the Continent.

In no country in Europe is the practice of medicine placed upon such a commercial basis as in England, and consequently in no country has the doctor such an inferior social position.

Such purely commercial transactions as buying and selling practices, entering into partnerships, keeping assistants, selling drugs, are not calculated to make the public look upon the practice of medicine as one of the learned professions. Anyone who has come into contact with the poor must be familiar with the expression "the doctor's shop." In fact, the poor are generally under the impression that it is chiefly for their medicines that they pay their doctor, and are often indignant if they be charged the same price for a 2-oz. as for a 6-oz. bottle.

In a country so thickly populated as England, where, moreover, unlike some other countries, there is no Government monopoly, and hence no limit to the number of chemists' shops, there is no necessity for medical men dispensing their own medicines.

I am convinced that all economical grievances and jealousies in our profession that we constantly read about in the medical journals are due to nothing else but this commercial spirit, which has unfortunately been allowed unchecked to creep into our honourable profession. I might mention as an example that if medical men did not enter into competition with chemists by dispensing their own medicines, the latter would not pay us back by prescribing and spreading the sale of quack medicines. The practice of keeping assistants, and thereby appropriating the profit of another's work, is far more unprofessional and injurious to the interest of one's fellow practitioners than the comparatively harmless practice of advertising.

As a contrast to this commercial spirit I should like to mention the professional sensitiveness of the Swedish doctors, who do not even send in bills for their attendance.

Most Swedish families send their doctor a cheque once a year, whether he has been in attendance or not during the year. The amount varies according to their means. The doctor does not send a receipt, but simply his card, "with many thanks and wishes for a happy new year." None of the commercial transactions mentioned above are known, neither do Swedish medical men act as midwives. All have to pass the State examination, and have spent about ten years at the university. Their social position is as good as that of any other profession, the law, the army, etc.—I am, etc.,

Warwick Street, S.W. G. B. Jacobi.

THE RESTRICTION OF SALE OF SMALL ARMS.

Sir,—Most medical men will agree with Dr. Lucas that it is high time something practical was done to prohibit the supply of revolvers, etc., to anyone who cares to purchase. I consider the plan of licensing far superior to that suggested by Dr. Lucas, as writing down the name of purchaser, etc. (which could easily be false) would prove no safeguard whatever, and be on a par with the Poisonous Drug Restriction Act, which in many cases is of no use.

The meaning of "heavy licence" I do not quite comprehend, but conclude it means a costly one. Any *bonâ fide* licence issued would be better than none at all, and an age limit could be determined upon doing away with boy buccaneers, Hooligans, etc.—I am, etc.,

Cheltenham, Sept. 5th. Alexander Duke.

TUBERCULOSIS IN CHILDHOOD.

Sir,—Dr. H. B. Donkin in his letter to you on September 5th makes the following remark: "But the obsolescent seniors cannot really recognise a new discovery on the part of Drs. Carr, Guthrie, and Still, when they announce the absolute prevalence of pulmonary over abdominal tubercle in children, nor will they credit these crusaders at present with an exposure of any 'time-honoured fallacy' at all." I trust you will allow me to state:

(1) That I have never regarded my professional seniors as "obsolescent," much less have I expressed the opinion that any of them are so. Such an attitude towards them on my part would be in the highest degree unseemly.

(2) That I have never claimed to make a new discovery in medicine, pathology, or any other branch of science.

(3) That I do not desire credit for posing as a "crusader," nor for the exposure of any "time-honoured fallacy" at all.

I have merely published statistics[1] which seem to be in accordance with Dr. Donkin's own, and with those of others.—I am, etc.,

Upper Berkeley Street, W., Sept. 11th. Leonard Guthrie.

GOWNS FOR MEDICAL PRACTITIONERS.

Sir,—If graduates, many of whom owe their position on the *Medical Register* to the fact that their teachers were their subsequent examiners, also that their relatives could conveniently provide the necessary funds, so much grudge to their brethren a professional gown, I would suggest that they be left severely alone on public occasions, or that men authorised to wear uniform be expected to appear in such. I, as only a physician and surgeon, saw quite enough on one

[1] *Lancet*, vol. i, 1899, p. 280.

occasion at a gathering in St. Paul's to convince me that under present conditions poor members and licentiates were expected to take a back seat and be unrecognisable.

Personally, I prefer the ordinary dress of a gentleman, but if some of the *élite* like a gown, "strait" jacket, and "cap and bell," all should have the option of being on an equality by virtue of registration, which must in the near future prevail.—I am, etc.,

NEMO.

SIR,—It is difficult for me to see why Mr. Samuel Walker is so opposed to members or diplomates generally being granted a gown.

I consider that to extend to all members of the profession a professional dress which is already worn by a portion of the said profession would allay rather than increase friction between members of our somewhat disunited profession.

I submit that, though equally well qualified with graduates, diplomates, from the absence of any distinctive dress or title, are relegated to a subordinated position in the profession of medicine in the eyes of the general public.

In the case of the Members of the College, they feel that, as Fellows have been granted a gown, an invidious distinction has been made in excluding the greater part of the body corporate from the enjoyment of this privilege granted by the Council. However logical or superior-minded a man may be, he does not feel comfortable on finding himself in a morning costume amongst members of a social gathering in evening dress.

In the same way a diplomate would feel belittled and uncomfortable in plain clothes amongst gowned members of the profession. I submit that occasions would rarely arise on which Mr. Walker's mind would be taxed or required to distinguish between sandwich men, quack doctors, etc., and members of the regular profession of medicine, even though diplomates were granted a gown.—I am, etc.,

Brighton. FREDERICK W. COLLINGWOOD.

TRACHOMA AND RACE.

SIR,—In response to the invitation of Major M. T. Yarr, R.A.M.C., for information from West Africa on the above subject,[1] I am happy to record my experience founded on the result of seventeen years' private and public practice in the colony of Sierra Leone. That experience is in entire accord with the opinion expressed by American surgeons practising in the Southern States of America as to the immunity of the negro race from trachoma in those States, and cited by Major Yarr in his paper. As surgeon in charge of the Colonial Gaol of Freetown, which has an average of 230 prisoners, who come from the labouring classes, of nearly all sections of the heterogeneous tribes from the population of this Colony and its Protectorate, I can affirm that there is not a single trace of this disease noticeable amongst the inmates of the prison.

The nationality of the prisoners may be classified as follows:

Nationality.	No.	Nationality.	No.
Konnoh	1	Eboes	5
Askus	18	Kroos	2
Mendis	57	Mokoe or Calabar	1
Sherbroes	33	Baggas	2
Bassas	2	Veys	2
Jolloffs	5	Serrakulis	2
Timinis	55	Limbahs	4
Mandingoes	6	Congoe	1
Susus	8	Yalunkas	1
Lokkohs	4	Gallinas...	2
Jamaicans	7	Popos	3

These represent the adult section of the population. Turning to the infants and youth, as represented in our high schools for boys and and girls, we find the same immunity. As medical officer of the C.M.S. Grammar School, with an average of 200 boys, and the C.M.S. Annie Walsh Memorial School, with an average of 125 girls, I have never observed a single case of trachoma amongst them. It is also interesting to note that amongst the West Indian negroes from the different West Indian Islands, and their children in this colony the same immunity is observed. Their immunity cannot be set down to a change of climate, perhaps it may be attributed to better sanitation and good food. I cannot say whether this immunity which is observed amongst the negroes of this colony can be taken as a criterion for the rest of the West Coast of Africa, as my experience does not extend beyond the Colony. But, judging from the varied nationalities of the tribes forming the inmates of the gaol who come from various portions of the West and South-West Coast, I can arrive at no other conclusion than that the negroes of this coast enjoy an absolute immunity from trachoma.—I am, sir,

W. RENNER, M.D., M.R.C.S.Eng.,
Assistant-Colonial Surgeon.
Medical Officer in Charge of Royal Colonial Hospital and the
Sierra Leone, Aug. 7th. Freetown Gaol.

[1] THE BRITISH MEDICAL JOURNAL, May 6th.

MIXTURE v. TABLET.

SIR,—I think it high time that medical practitioners aroused themselves to the fact that in prescribing drugs in tablet form they are acting not only contrary to their own interests but are actually encouraging the public in the ever-increasing tendency to self-medication. This evil would not, however, exist to the same extent if these tablets were supplied to the chemists in bulk only, instead of in "conveniently sized" bottles containing a limited number, on the label of which we find the name (frequently in English) and dose of the remedy; and even when a prescription for these tablets is given to a patient, the chemist in many cases is too diffident or too lazy to remove the label, and they are dispensed in the original bottle, and even when in order to check this evil a broken number of tablets has been prescribed, the chemist has induced the patient to take the original "conveniently sized" bottle on the plea that it will be so much cheaper. I speak from personal experience, as for some years past I have been in the habit of prescribing the tablets of a certain well-known firm to the almost complete exclusion of the old-fashioned mixture, but now that I have been awakened to the abuse that exists I shall certainly cease to patronise the firm in question until they alter their methods of doing business and cater less for the convenience of the public and more for the interests of the medical profession by supplying their preparations in bulk only. It seems to me that if the medical profession do not make a stand against this evil it cannot fail to have an increasing tendency to diminish their already so much encroached upon incomes.—I am, etc.,

G. P.

OBITUARY.

HENRY JOHN ROPE, F.R.C.S.

WE deeply regret to announce the death of Mr. Rope, of Shrewsbury (Burd, Rope, and Burd), Surgeon to the Salop Infirmary, and sometime President of the Shropshire and Mid-Wales Branch of the British Medical Association.

After a distinguished record at King's College Hospital, where he was House-Surgeon and Assistant Demonstrator of Anatomy, he went to Shrewsbury and became partner of Dr. Burd, whose daughter Agnes he married. She survives him with six children. His life-work in Shrewsbury cannot be set forth here, for it was an endless round of laborious practice, incessant charity, and absolute forgetfulness of self. In August he began to show signs of breaking down, and a fortnight ago symptoms of intracranial pressure appeared, and a cerebral tumour was diagnosed. The end came with merciful quickness, in the 51st year of his age, on Wednesday last.

In Shrewsbury he was almost worshipped for his goodness and for his kindness to the poor, for he was the ideal surgeon, as Guy de Chauliac described him five hundred years ago: "Well educated, skilful, ready, and courteous; avoiding all evil methods and practices; tender with the sick, honourable to men of his own profession, wise in his predictions; chaste, sober, pitiful, merciful, not covetous or extortionate." Mr. Rope's death will be mourned in the scene of his life not only by his family, but by thousands who lose a good friend and a good example.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE COURSE OF INSTRUCTION AT HASLAR FOR SURGEONS ENTERING THE NAVY.

FOR some time prior to 1881 these officers proceeded to Netley on passing their examination for entry into the Navy, and associated with those entering the Army and Indian Medical Services passed through the special course of instruction there given.

An Admiralty Committee with Admiral Anthony H. Hoskins, G.C.B., President in 1880, recommended "that a training school for naval medical officers be established at Haslar Hospital," and reported that the suggestion of Inspector-General J. D. Macdonald, R.N., F.R.S., at that time Professor of Naval Hygiene at Netley, for the establishment of the Haslar course "commends itself to us for adoption, though it may, we think, be improved on and rendered more economical when the details are administratively worked out."

Dr. Macdonald's suggestions were that the course of instruction should embrace—

1. Clinical medicine; tropical diseases and the diseases of seamen.
2. Clinical surgery; military and operative surgery.
3. Pathology and microscopy, micrometry, and drawing with the camera lucida.
4. Hygiene, naval and general.

On the establishment of the Haslar course of instruction, economy was practised and secured, but certainly not any improvement on the Netley course, as the Haslar course has virtually, from its origin to the present time, been confined to clinical medicine and surgery as seen in a naval hospital, with a little operative surgery demonstration when their other studies would permit, the pathology of the hospital necropsies, hygiene, naval and general, very fully, chemical analyses of food and drink, and meteorology to a great extent, in the case of the latter two subjects, and, as is now decided, in excess of naval requirements. Tropical disease, the special diseases of seamen, military surgery, microscopy, or in these days bacteriology, have been omitted or only briefly dealt with from time to time.

No addition to the Haslar medical staff was made until of late years, when dental surgery instruction was given by an additional officer; while the ordinary hospital routine of duty performed by the two instructors increased steadily with the progressive augmentation of the navy in recent times. The two instructors selected were given extra pay—£150 per annum to the senior and £50 to the junior in view of their extra duties. The reform of the Haslar School now announced has been arrived at none too soon in the best interests of the navy.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From	To
Colonel J. M. Beamish, M.D.	Bombay	Bengal.
Lieut.-Col. B. M. Blennerhassett, C.M.G.	Netley	Bombay.
Major J. D. Day, M.B.	Punjab	Chester.
,, W. C. T. Poole, M.B.	Beacon Range	Pembroke Dk.
,, C. W. Thiele, M.B.	Canterbury	Shorncliffe.
,, G. W. Brazier-Creagh	—	Dover.
,, R. Kirkpatrick, M.B.	Fort George	Edinburgh.
,, L. E. Anderson	Kilworth	South Africa.
,, T. W. C. Jones, M.B.	Aldershot	South Africa.
,, N. C. Ferguson, M.B.	Edinburgh	Fort George.
,, J. H. Daly	Kilworth	Templemore.
,, R. Caldwell	Cork	Kilworth.
,, O. R. A. Julian	Aldershot	South Africa
Captain S. A. Archer	Wouldham Cp.	Bengal.
Lieutenant M. P. Corkery	—	Shoeburyness.
,, P. McKessack, M.B.	Devizes	Portsmouth.
,, H. L. W. Norrington	Tregantle	Bengal.
,, W. H. S. Nickerson, M.B.	Gosport	South Africa.
,, G. B. Crisp	Aldershot	South Africa.
,, D. E. Curme	Dover	Lydd.
,, J. M. Sloan, M.B.	Barry Camp	Inchkeith.
,, H. E. Haynes	Christchurch	Aldershot.
,, R. S. Rodger, M.B.	Bury	Seaforth.

Lieutenant-Colonel J. MACARTNEY, M.D., retired pay, has assumed medical charge of troops at Aberdeen.

Lieutenant-Colonel R. C. GUNNING has been granted increased pay under Article 362 of the Royal Warrant.

Quartermaster H. S. BROOK, recently appointed, is stationed at Shorncliffe.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A CAPTAIN, R.A.M.C., home last trooping season, March, 1899, is willing to exchange out to India (Madras Presidency preferred) this trooping season. Address No. 624, BRITISH MEDICAL JOURNAL, 429, Strand, W.C.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: EDWARD HAINES, Surgeon, to the *Pembroke*, September 6th; JOHN L. BARRINGTON, Staff-Surgeon, to the *Media*, September 20th; HENRY E. SOUTH, Staff-Surgeon, to the *Boscawen*, September 20th; JAMES M. FRANCE, Staff-Surgeon, to the *Barham*, October 3rd; HERBERT W. G. DOYNE, Staff-Surgeon, to the *Lion*, October 3rd; WALTER BOWDEN, Staff-Surgeon, D.S.O., to the *Collingwood*, October 3rd; ARTHUR R. BANKART, M.B., Surgeon, to the *Osborne*, September 8th; BASSETT C. E. F. GUNN, Staff-Surgeon, and MOYLE BRETON, Surgeon, to the *Hermes*, October 5th; JOHN DOWSON, Staff-Surgeon, to the *Repulse*, October 5th; HERBERT W. B. SHEWELL, M.B., Surgeon, to the *Arrogant*, October 5th; FRANCIS F. LOBB, Surgeon, to the *Alexandra*, for the *Spanker*, while employed in Ireland on fishery duty, September 9th.

ROYAL ARMY MEDICAL CORPS.

THE first Christian name of Lieutenant S. G. BUTLER is SYDNEY, and not as stated in the *Gazette* of August 8th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL A. S. REID, M.B., Bengal Establishment, is promoted to be Colonel, May 19th, 1899. He entered the service as Assistant-Surgeon, March 30th, 1872, and became Brigade-Surgeon-Lieutenant-Colonel, June 9th, 1897. He was in the Afghan war in 1879-80 (medal); with the Chin-Lushai expedition in 1889-90 (medal with clasp); and in the North-West Frontier campaign in 1897, for which he was mentioned in despatches, and received a medal with two clasps.

The Queen has approved the following admissions to the Indian Medical Service:—To be Lieutenants: E. D. W. GREIG, C. DYKES, W. E. MCKECHNIE, W. F. HARVEY, W. C. H. FORSTER, J. J. URWIN, D. MCCAY, A. B. FRY, H. D. PEILE, D. H. F. COWIN, E. C. G. MADDOCK, W. H. DICKINSON, M. W. MANUK, W. H. TUCKER, A. W. TUKE, C. S. LOWSON, J. H. L. BEAMAN, J. SLOAN, G. H. STEWART, D. N. ANDERSON, and M. N. CHANDHURL.

The retirement from the service of Lieutenant-Colonel C. T. PETERS, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen.

Major RONALD ROSS, Madras Establishment, has also retired from the service from July 31st. He joined the department, April 2nd, 1881, becoming Surgeon-Major twelve years thereafter. He served with the Burmese Expedition in 1886, and has the Frontier medal with clasp.

Colonel T. S. WEIR, Bombay Establishment, is directed to officiate as Principal Medical Officer, Bombay and Aden Districts, *vice* Colonel G. W. R. Hay, Bombay Establishment, transferred temporarily to the Civil Department.

Captain JOHN PLOWDEN MORTON, M.B., Madras Establishment, officiating in medical charge of the 24th Madras Infantry, died at 21, Beaumont Street, Portland Place, on the 6th inst., aged 33 years. He was appointed Surgeon-Lieutenant, January 30th, 1893, and Surgeon-Captain, January 30th, 1896.

THE VOLUNTEERS.

SURGEON-LIEUTENANT E. F. BINDLOSS, 1st (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment, is promoted to be Surgeon-Captain, September 13th.

D.S.O., C.M.G. has omitted to enclose his card.

THE INDIAN MEDICAL SERVICE.

WE have lately received several—some, we are sorry to note, rather intemperate—letters accusing us of neglecting the Indian as compared with the home medical service.

We deny the charge, and can only conclude that those who bring it cannot have perused our almost innumerable references, critical and commendatory, on the Indian service during many years past. We have spared no pains to arrive at the truth and to hold the scales evenly regarding medical matters in India; but it has proved a very difficult matter through the absolutely contradictory reports received. This has always been a difficulty in commenting upon the constitution or grievances of the medical services in that country.

In the army medical service, on the other hand, we have always found practical unanimity and solid unity in matters of controversy, which has greatly facilitated their discussion. We find the Indian service is largely estimated from the individual point of view of writers: to those who have had a lucky career in it it is the best of all possible services; to the less fortunate the reverse. Many value it entirely as a civil career; others in its military aspects; some would wholly separate the two branches.

We have been taken to task for asking (interrogatively) why it should continue more popular in the schools than the Royal Army Medical Corps? We might hazard a broad answer that it is because, notwithstanding climatic drawbacks, it affords a more varied career; there are possibilities in it (although the probabilities are less than they were) wholly wanting in the Army Medical Service.

The Indian Medical Service has always been to us, and to the entire profession, one of abiding interest, commanding warm sympathy and judicious advocacy. But before such advocacy can command public attention it must be on lines of reform settled with practical unanimity by the service itself; if it is divided on vital issues, ours or any other advocacy will not much avail.

We would therefore advise those who are so ready to criticise our

line of action, to first arrive at some clear and fairly united conclusions as to reforms needed in the condition of service in India, before accusing us of lukewarmness in supporting them.

We would also remind our Indian correspondents that the advance in army status and title which they have recently secured has been entirely due to the leverage exerted through the Royal Army Medical Corps.

SALISBURY PLAIN MANŒUVRES: PERHAM DOWN CAMP.

ON August 31st there took place a very successful competition in First Aid to the Wounded, Tent-pitching, and Signalling, got up mainly through the exertions of Major Burtchaell, R.A.M.C. The first event was circular tent-pitching by squads of 6 men; the winners' time was 3½ minutes. The second event was the most interesting of the day, and no fewer than 11 stretcher detachments competed. It consisted in applying field dressings and splints in a case of compound fracture of the right femur. Eleven men in full marching order represented the patients, and each team applied a suitable dressing and the rifle splint, and carried the patient to an imaginary dressing station on a stretcher. Marks were given for time, dressing of wound, attention to details of drill, and steadiness in carrying stretcher, which was tested by placing a glass of water on the right of the stretcher, in front of No. 3. The next event was the pitching of an operating tent by a squad of 6 men and a N.C.O. This was effected in 7½ minutes, but under extreme difficulty, owing to a very heavy rain having set in which prevented the rest of the programme being carried out. There was a very good attendance, including officers and many ladies, all of whom seemed much interested, and there were many comments on the smartness of the men, both as regards drill and their general duties. Major-General Sir L. Rundle, K.C.M.G., in presenting the prizes, expressed his appreciation of the keenness of the men in their work and the excellent way in which they had performed it.

A MESS FOR THE R.A.M.C.

THE question of a separate mess being provided for officers of the Royal Army Medical Corps is now being considered by the Government of India.

THE BEARER COMPANY, SALISBURY PLAIN.

THE following remarks by the *Times* military correspondent (*vide* the *Times* of September 8th) are worth transcribing: "One other matter very noticeable is the unsatisfactory system of the bearer company transport. This year on the Plain a whole Army Service Corps company—non-commissioned officers, men, horses and harness, but without its officers—was handed over to the Royal Army Medical Corps as transport to the bearer company, and the discipline of the men and the care of the horses placed temporarily, but entirely, in the hands of the army surgeons. No one of higher rank in the Army Service Corps than warrant officer is permitted to appear within the limits of the medical jurisdiction. A mere statement of the system is enough to secure its condemnation by all but the authorities who are responsible for it."

THE FIELD CAP.

SERIOUS complaints have been widely expressed of the uselessness of the field cap during the heat of the manœuvres, both on Salisbury Plain and in Ireland, as a protection against the sun. On September 24th, 1898, in medical notes of the manœuvres that year, allusion was made to the cases of sickness due to heat being to some extent, perhaps to a large extent, due to the insufficient protection to the head afforded by the field service cap. On unquestionable authority we have it that during the Irish manœuvres this year the majority of infantrymen were to be seen carrying under their caps such things as cabbage leaves, towels, bits of paper picked off the road, bracken, leaves, etc., to keep off the sun's rays. Several cases of heatstroke were returned to the base, and two cases of death are also reported. It is high time a new headgear was adopted.

VOLUNTEER AMBULANCE SHIELD.

BRIGADE-SURGEON-LIEUTENANT-COLONEL PETER GILES, F.R.C.S., Senior Medical Officer, writes: Will you be good enough to correct a mistake which occurs in the BRITISH MEDICAL JOURNAL of September 2nd. It is stated that the team of the 3rd Volunteer Battalion the Queen's Regiment, who are this year's winners of the Volunteer Ambulance Shield, had recently been through a course at the Volunteer Ambulance School of Instruction, and had there obtained the tenth place at the competition, but as a matter of fact they came out first, beating the second team by six points.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF DURHAM.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the Examiners:

Chemistry with Chemical Physics (Old Regulations).—E. G. Annis, M.R.C.S., L.R.C.P., D.P.H., St. Mary's Hospital; A. J. Bulger, M.R.C.S., L.R.C.P., Mason College, Birmingham; P. G. Garrett, M.R.C.S., L.R.C.P., Middlesex Hospital; E. J. Miller, Middlesex Hospital and Cooke's School of Anatomy.

Elementary Anatomy and Biology, Chemistry and Physics.—Honours (First Class): A. G. Dunn, College of Medicine, Newcastle upon-Tyne. Honours (Second Class): W. H. Peacock, College of Medicine, Newcastle-upon-Tyne. Pass List: J. F. Bridge, Mason College, Birmingham; J. W. Caton, Guy's Hospital; E. F. Edmunds, University College, Sheffield; E. J. Evatt, Royal College of Surgeons, Ireland; D. R. Guns, College of Medicine, Newcastle-upon-Tyne; F. J. Gowans, College of Medicine, Newcastle-upon-Tyne; G. B. Gill, University College, Bristol; W. G. T. Hepplewhite, College of Medicine, Newcastle-upon-Tyne; W. Hughes, Edinburgh School of Medicine; J. T. McKay, College of Medicine, Newcastle-upon-Tyne; J. C. Stewart, College of Medicine, Newcastle-upon-Tyne.

Chemistry and Physics.—F. G. Armstrong, College of Medicine, Newcastle-upon-Tyne; W. D. Carruthers, Mason College, Birmingham; W. R. L. Drawbridge, St. Bartholomew's Hospital; Margaret Douglas French, London School of Medicine for Women; A. H. Fullerton, College of Medicine, Newcastle-upon-Tyne; B. Glendinning, Guy's Hospital; W. E. Hopkins, University College, Liverpool; C. R. Lease, College of Medicine, Newcastle-upon-Tyne; G. E. V. Morris, Mason College, Birmingham; Flora Murray, London School of Medicine for Women; C. Muthuswamy-Anthony, Guy's Hospital; H. C. Sturdy, M.R.C.S., L.R.C.P., Guy's Hospital; G. W. Smith, Guy's Hospital; H. H. Whaite, Mason College, Birmingham; A. L. Wilkinson, College of Medicine, Newcastle-upon-Tyne; J. R. Wylie, College of Medicine, Newcastle-upon-Tyne.

Elementary Anatomy and Biology.—A. H. Bateman, St. Bartholomew's Hospital; H. L. Currie, College of Medicine, Newcastle-upon-Tyne; W. W. Jones, Mason College, Birmingham; S. Nix, St. Mary's Hospital; L. M. Rosten, St. Bartholomew's Hospital; J. M. Shaw, College of Medicine, Newcastle-upon-Tyne.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,615 births and 5,511 deaths were registered during the week ending Saturday last, September 9th. The annual rate of mortality in these towns, which had been 26.8 and 25.5 per 1,000 in the two preceding weeks, further fell to 25.2 last week. The rates in the several towns ranged from 18.1 in Birkenhead and in Leeds, 18.4 in Croydon, 19.7 in Halifax, and 20.8 in Bristol, to 33.8 in Bolton, 35.8 in Newcastle-upon-Tyne, 36.4 in Wolverhampton, and 43.8 in Burnley. In the thirty-two provincial towns the mean death-rate was 27.2 per 1,000, and was 5.0 above the rate recorded in London, which was 22.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 7.5 per 1,000: in London the death-rate was equal to 4.8 per 1,000, while it averaged 8.9 in the thirty-two provincial towns, among which the highest zymotic death-rates were 12.8 in Manchester, 12.9 in Leicester, 14.8 in Bolton, and 18.4 in Burnley. Measles caused a death-rate of 3.2 in Burnley; whooping-cough of 1.4 in Cardiff; fever of 1.8 in Sunderland; and diarrhœa of 12.0 in Norwich, 12.9 in Burnley, 13.3 in Preston, and 13.8 in Bolton. The mortality from scarlet fever showed no marked excess in any of the large towns. The 68 deaths from diphtheria in the thirty-three towns included 24 in London, 6 in Birmingham, 6 in Liverpool, and 5 in Leicester. One fatal case of small-pox was registered last week in Hull, but not one in any other of the thirty-three towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday last, September 9th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,704 to 2,538 at the end of the five preceding weeks, had risen to 2,550 on Saturday last; 298 new cases were admitted during the week, against 245, 225, and 252 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, September 9th, 945 births and 689 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17.9 to 24.1 per 1,000 in the four preceding weeks, declined to 22.6 last week, and was 2.6 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.5 in Perth and 19.3 in Aberdeen to 23.5 in Leith and 31.6 in Greenock. The zymotic death-rate in these towns averaged 7.4 per 1,000, the highest rates being recorded in Paisley and Leith. The 329 deaths registered in Glasgow included 3 from measles, 5 from scarlet fever, 6 from whooping-cough, 6 from "fever," and 86 from diarrhœa. Thirty-five fatal cases of diarrhœa were recorded in Edinburgh, 26 in Dundee, 16 in Leith, and 12 in Paisley.

PRACTITIONERS AND PAUPER PATIENTS.

A CORRESPONDENT writes to say that a neighbouring practitioner, without his knowledge, called on a pauper patient of his. In ignorance of this he shortly afterwards met the latter in consultation concerning the case, but on the following day the friends of the patient intimated to him that they wished the other doctor to go on attending. Our correspondent wrote to this practititioner for an explanation, but no notice was taken of his letter.

*** It is not in accordance with professional etiquette to visit the patient of another practitioner without his knowledge, whether the patient be a pauper or a peer. It is customary for a parish doctor to resign a pauper patient to another doctor where the friends are willing to pay for the services of the latter. Where this is the case there is clearly no necessity for the patient to be attended at the cost of the ratepayers, but the responsibility will still rest on the parish doctor unless he take care to get the relieving officer's order for his attendance duly cancelled.

MEASLES AND SCARLATINA.

M.D., D.P.H. asks: (1) Is it possible for measles and scarlatina to occur simultaneously in the same person? (2) If so, is the incubation period of either modified? He then asks (3) if there is room for doubt as to the diagnosis under the following circumstances? A. B. sailed on July 20th, touched at various ports till August 2nd, but did not land. August

2nd, rash. Seen by correspondent August 4th. Temperature 101 F., not rising higher. Desquamation, 13th. No true sore throat, only slight difficulty of swallowing. Desquamation on hands scaly, elsewhere chaffy. Rash on legs not entirely gone on 17th. Mottled; child of 7 on board in contact with patient, who (A. B.) had previously had measles twice, but not scarlatina to his knowledge, was attacked on 19th.

*** (1) Yes.

(2) We think not. The exact incubation period of scarlatina is uncertain.

(3) Suppose A. B. infected on July 19th, the day before he sailed, the incubation period might in both cases be that of measles, the rash of which appears on the 15th day.

THE INFECTIOUS DISEASES NOTIFICATION ACT.

THE medical officer of health of an urban district received a schedule notifying a case of "fever." He visited the house with the inspector, was told by the husband of the patient that she had "inflammation of the lungs" and that her doctor had never mentioned "fever" to him. He therefore returned the schedule asking for more definite information that he might take such steps as to isolation or disinfection as might be necessary. He received no reply. Members of the Urban Council before whom the matter came up made various suggestions.

*** It is greatly to be regretted that a matter of this kind should have been discussed by a board of laymen. The return of the "schedule" was rather a strong measure. A letter politely acknowledging it and asking if the practitioner thought the case was likely to prove one of typhoid or not, or better still a personal call, would probably have been met with corresponding courtesy. It is of course to be regretted that the practitioner did not reply, but perhaps he was busy, or he had not yet made up his mind. We should feel inclined to prescribe a mutual cigar, not for the patient but for our two *confrères*. "If a man confer little," said Lord Bacon, "he had need have a ready wit." Conference between men both aiming at the health of the public, the one individually, the other collectively, would have probably conduced to the welfare both of the patient and the community.

INDIA AND THE COLONIES.

INDIA.

PLAGUE LABORATORY, BOMBAY.—The Plague Laboratory, which is now under the control of the Government of India, was to be in working order at the old Government House, Parel, from August 1st. The building is being fully equipped at the expense of the Government of India. The liberality of His Highness the Aga Khan in placing his fine bungalow at the disposal of Dr. Haffkine and his colleagues, rent free, deserves acknowledgment of one of the many services which that enlightened young prince has rendered to the cause of inoculation.

MADRAS.—In forwarding the annual report for 1898 of the Chemical Examiner to the Madras Government the Surgeon-General states that it is "full of interesting facts, and shows how carefully Major Sanjana, I.M.S., has worked to carry on the department efficiently," and the General Order reviewing the report concludes with His Excellency the Governor-in-Council's agreement with the Surgeon-General in his estimate of Major Sanjana's work as Chemical Examiner. The number of medico-legal cases investigated shows a progressive increase during the past three years, being 199 in 1896, 250 in 1897, and 272 in 1898, while the number of articles examined increased from 1,036 in the first to 1,396 in the last year. There were 135 cases of suspected human poisoning, or 17 more than in 1897; 57 cases of examination of suspected blood stains; 74 cases of cattle poisoning; and 930 miscellaneous cases.

MEDICAL AND SANITARY REPORT OF THE PROVINCE OF COORG FOR THE YEAR 1897.—This small province participated in the unhealthiness which prevailed throughout India in 1897. The death-rate was 50 per 1,000 against 27 in the preceding quinquennium, and the birth-rate 20 against 24. Scarcity, high price of food, and a severe outbreak of malarious fever were the main causes of increased mortality and diminished fecundity. The coolies employed on coffee estates contributed largely to swell the death-rate. Efforts are being made, by providing shelters and otherwise, to ameliorate the condition of this class. There were 52,673 patients treated in the seven hospitals and dispensaries of the province. The deaths among 1,832 indoor patients amounted to 446, or 24 per cent. A large proportion of the fatal cases were coolies. Fever, bowel complaints, and chest diseases were the main causes of the high mortality. There were 10,299 successful vaccinations performed during 1897-98, or about 6 per cent. of the population; the number of children successfully vaccinated was 907. Calf lymph was used in every case, the percentage of success being 93.82. The report is drawn up by Major D. S. E. Bain, I.M.S., Civil Surgeon of Coorg, and carefully reviewed by the Commissioners. It indicates minute attention to all matters affecting the health of the population.

REPORT OF THE LUNATIC ASYLUMS OF THE CENTRAL PROVINCES FOR THE YEAR 1897.—There are two lunatic asylums in these provinces—at Nagpur and Jubbulpore—containing some 318 inmates, nearly one-third of whom belong to the class of criminal lunatics. The famine does not appear to have caused any marked increase of lunacy, though the causation in 10 of the cases admitted into the Jubbulpore Asylum is attributed to privation. "In most of these the recovery, both mental and physical, has been rapid." Some increase of sickness, a higher mortality, and a rise in cost of maintenance were apparently due to the prevailing scarcity. Dysentery, diarrhœa, phthisis, and chest affections are accountable for a large proportion of fatalities, and suggest conditions capable of amelioration by improved sanitation.

MILCH CATTLE AND TUBERCULIN IN INDIA.—The Health Officer of Bombay, Colonel Weir, under the authority of the Municipal Commissioner, has had a number of milch cattle inoculated with tuberculin. The result has been to show that tuberculous diseases and phthisis amongst the milch cattle of Bombay are almost non-existent. Opposition to the experiments was made by the owners of milch cattle in well-known dairies but not by the poor. The contractor to one hospital absolutely refused to allow his animals to be inoculated.

DOG BITES IN INDIA.—The Government of India have drawn attention to the number of non-commissioned officers and men who have of late been sent to the Pasteur Institute, Paris, for treatment for dog bites. Fifty-nine cases have occurred since January 1st last year, and it is in contemplation to issue stringent orders as regards the keeping of dogs in cantonments.

HONG KONG.

Insanitary Houses.—The medical officer of health, Dr. Francis W. Clark, in his report on the general sanitary condition of the colony, states that a vast improvement is apparent in the quality of the recent buildings in the colony, but complains that "back-to-back houses" are still allowed, and that many of the older dwellings are "unfit for human habitation." The interior of many living rooms are such that their contents can only be seen by the aid of artificial light.

Drainage.—He also states that the smell from the gully traps in the city is not to be wondered at, when in a population of 125,000 male population there are only three public urinals in the colony.

Malaria and Enteric Fever.—Malarial diseases caused the deaths of 506 persons; enteric fever claimed 52 victims. Several of the enteric cases were sailors from the navy. Dr. Clark remarks that whilst only 2 deaths from enteric fever occurred amongst the soldiers, and 1 in the police barracks, 12 cases occurred among sailors from the fleets in the harbour; "the discrepancy between the figures in the two services rather discounts the theory that sewer emanations have much to do with the disease in this colony."

Enteric Fever among Chinese.—The alleged immunity of the Chinese to enteric fever is considered to be "probably due to an attack during infancy," and the result of a careful search among Chinese infants brought to the mortuary shows "that several such bodies have been found to present typical typhoid ulcers of the intestine." Plague caused 1,175 deaths, giving a mortality of 88.1 per cent. of those attacked; the epidemic occurred in the spring of the year 1898.

MEDICAL NEWS.

COURSES of instruction in cooking for medical practitioners have been established in two schools of cookery in Berlin.

A MARBLE bust of Emil Dubois-Reymond has been placed in the Physiological Institute of Berlin.

DR. L. PEREIRA MARQUES, of Macao, was some time ago created a Knight of the Town and Sword by the King of Portugal in recognition of his services in the epidemic of plague from which the colony suffered last year.

EUCALYPTUS PLANTATIONS IN CUBA.—The *New York Medical Record* states that it is reported that an attempt will be made in several of the most malarious districts of Cuba to effect a sanitary betterment by means of eucalyptus plantations. A number of trees have been planted in and about Santiago, and further experimentation is contemplated.

MIDWIVES IN ILLINOIS.—The Illinois State Board of Health has sent the following circular to every midwife in the State whose address could be found: "Madam,—Under the provisions of the Act to Regulate the Practice of Medicine in the State of Illinois, approved April 24th, 1899, in force July 1st, 1899, midwives are forbidden to call or advertise themselves as physicians or doctors, and prohibited from using any drug or medicine and from attending other than cases of labour. The same law states that anyone shall be regarded as practising medicine who shall treat, profess to treat, operate on or prescribe for any physical ailment or any physical injury to or deformity of another. You are directed, therefore, by this Board to immediately discontinue all advertisements in the newspapers in which you are designated as 'Doctor,' 'Mrs. Doctor,' 'Doctress,' or as 'Physician,' or in which you offer to treat human ailments; and to remove from your office, residence, or place of practice, all signs advertising you as 'Doctor,' 'Mrs. Doctor,' 'Doctress,' or 'Physician.' You are directed further to confine your practice to midwifery alone, as you are licensed as a midwife, and as such are authorised to attend cases of labour only. You have no authority whatever to treat, or profess to treat, diseases of women, or to treat or profess to treat any physical ailments of another. If you wish to advertise in the newspapers, or otherwise, you must do so as a midwife. A violation of the above regulations will subject you to prosecution by this Board, and will be deemed a sufficient cause for revoking your certificate."

DR. A. JACOBI, of New York, has been selected to be an Honorary President of the thirteenth International Medical Congress to be held in Paris in 1900.

VENEREAL DISEASE AND MARRIAGE.—A law recently passed by the Michigan Legislature forbids the marriage of any person suffering from gonorrhœa or syphilis, and provides that anyone so diseased who may marry shall be guilty of a felony, punishable by a fine of not less than £100 or more than £200, or imprisonment in the penitentiary for a term not exceeding five years, or by both fine and imprisonment. A wife or husband may testify against her or his guilty spouse, and the privilege of medical secrecy is also abrogated in such cases.

MEDICAL VACANCIES.

The following vacancies are announced:—

AYR COUNTY HOSPITAL.—House-Surgeon. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary by September 18th.

BELFAST: QUEEN'S COLLEGE.—Professorship of Medicine. Applications to the Under Secretary, Dublin Castle, by September 25th.

BIRMINGHAM GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. Residence, board, and washing provided. Applications to the House-Governor by September 30th.

BIRMINGHAM AND MIDLAND SKIN AND URINARY HOSPITAL.—Acting Surgeon. Applications to the Honorary Secretary at the Hospital by September 23rd.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. No salary; board, lodging, and washing provided. Applications to the Secretary by September 23rd.

CAMBRIDGESHIRE LUNATIC ASYLUM, Fulbourn.—Assistant Medical Officer; unmarried. Salary, £140 per annum, with board, lodging, and attendance. Applications to the Clerk to the Visitors by September 20th.

CARLISLE: CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Junior Assistant Medical Officer, unmarried. Salary, £110 a year, with board and residence. Applications to the Medical Superintendent.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Post tenable for three months. Fee, £8 8s. Applications to the Secretary. Also Qualified Dispenser (lady). Salary, £60 per annum. Applications to the Secretary by September 30th.

DEVON COUNTY ASYLUM.—Two Assistant Medical Officers. The first to begin with a salary of £120 per annum, rising to £150; the second £100, rising to £130, with board, lodging, and washing. Applications to Dr. Davis, Medical Superintendent, County Asylum, Axminster, by September 19th.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer, unmarried. Salary, £140, rising to £160, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, Winterton Ferryhill, by October 3rd.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. No salary, but board, lodging, and washing provided. Eligible for senior post should a vacancy occur. Applications to the House-Surgeon by September 26th.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £90 per annum, rising to £100, with board, residence, and washing. Applications to the Secretary by October 1st.

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury Avenue.—Resident Medical Officer, unmarried, speaking French. Salary, £80 per annum, with full board. Applications to the Secretary.

GEORGE HENRY LEWES STUDENTSHIP FOR THE ENCOURAGEMENT OF ORIGINAL RESEARCH IN PHYSIOLOGY. Applications to Professor Sir Michael Foster, K.C.B., New Museums, Cambridge, by October 1st.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary, £50, with apartments and board. Applications to the Secretary, 88, West Regent Street, Glasgow, by September 25th.

GOVAN DISTRICT ASYLUM, Crookston, near Paisley.—Junior Assistant Medical Officer. Salary to commence at £100 a year, with rooms, board, attendance, and laundry. Applications to the Medical Superintendent.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board, lodging, and washing. Applications to F. E. Ferrier, Honorary Secretary, 33, Hall Plain, Great Yarmouth, by September 23rd.

GREENOCK SMITHSTON POORHOUSE AND ASYLUM.—Medical Officer. Salary, £120 a year, with furnished apartments, fuel, light, and attendance. Applications to the Governor by September 23rd.

HALIFAX: ROYAL INFIRMARY.—Assistant House-Surgeon: unmarried. Salary £50 per annum, with an extra allowance of £9 2s. 6d. per annum, with residence, board, and washing. Applications to the Secretary by September 20th.

INDIA.—Medical Men for Plague duty. Appointments for nine months. Salary, Rs. 700 a month, and those in possession of D.P.H., or have already served on plague duty satisfactorily, Rs. 800 a month. Applications to the Secretary, Revenue Department, India Office, Whitehall.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park Place, Cheetham Hill Road.—House-Surgeon. Salary, £80 per annum, with apartments and board. Applications to the Secretary, 38, Barton Arcade, Manchester, by September 23th.

MANCHESTER COUNTY ASYLUM, Prestwich.—Assistant Medical Officer, unmarried and under 35 years of age. Salary, £125, increasing to £250, with board, apartments, and washing. Applications to the Superintendent.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer for the In-patient Department, Bowden. Salary, £60 per annum, with board, apartments, and washing. Applications to the Secretary by September 24th.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House-Surgeon. Salary, £70 per annum, with residence, board and washing. Applications, endorsed "House-Surgeon," to the Chairman of the Board of Management by October 4th

METROPOLITAN ASYLUMS BOARD.—Three Assistant Medical Officers (two for the Darenth and one for the Leavesden Asylums). Not exceeding 35 years of age. Salary, £120 per annum, rising to £150, with board, lodging, attendance, and washing. Applications, on forms provided, to the Clerk to the Board, Norfolk House, Norfolk Street, Strand, W.C., by September 30th.

NORTHAMPTON: ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES.—Junior Assistant Medical Officer unmarried and not more than 30 years of age. Salary to commence, £150 per annum, increasing £25 yearly to £200. Applications to the Medical Superintendent by September 21st.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—(1) House-Surgeon. Salary, £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th. (2) Assistant House-Surgeon. Apartments, board, and washing to be an equivalent for services rendered. Applications to the Secretary for the former by October 9th and the latter by October 23rd.

SALISBURY INFIRMARY.—Assistant House-Surgeon, unmarried. Salary, £40 per annum, with board, lodging, and washing. Applications to the Secretary by September 1st.

SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £40 per annum. Applications to the Secretary by October 11th.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Assistant Resident Medical Officer. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by September 25th.

SOUTHAMPTON: ROYAL SOUTH HANTS INFIRMARY.—House-Surgeon. Salary, £100 per annum, with rooms, board, and washing. Applications to T. A. Fisher Hall, by October 2nd.

STOKE ON TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Surgeon. Salary £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

STOKE-UPON-TRENT UNION.—Resident Medical Officer for the Workhouse. Salary, at the rate of £100 for the first year, £110 for the second year, and £120 for the third year, with board, washing, and furnished apartments. Applications to the Clerk to the Guardians by September 22nd.

TAUNTON AND SOMERSET HOSPITAL.—Qualified Assistant House-Surgeon. Appointment for six months. Honorarium of £10 10s., with board, washing, and lodging. Applications, endorsed "Assistant House-surgeon," to J. E. W. Wakefield, Honorary Secretary, Bank Buildings, Taunton, by September 29th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Appointments tenable for six months. Applications to the Secretary-Superintendent by September 20th.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard Street, Soho, W.—Third Honorary Surgeon. Applications to the Secretary by September 25th.

WESTMINSTER HOSPITAL.—Pathologist. Salary £250 per annum, and a sum of £90 per annum allowed for expenses. Applications to S. H. Quennell, Secretary, by October 1st.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £120 per annum, with £30 per annum for dispensing, furnished apartments and attendance. Applications to the Secretary by September 23rd.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum, with board, lodging, and washing. Testimonials, sealed, to the Chairman of the Medical Committee by September 22nd.

WORKSOP DISPENSARY, Notts.—Medical Officer, unmarried. Salary, £120 per annum, with house, coals, gas, and attendance. Applications to Mr. C. A. Whall, Worksop, by September 22nd

YORK COUNTY HOSPITAL.—Resident Assistant House-Surgeon. Salary, £60 per annum, with board, attendance, and washing. Applications to the Secretary by September 26th.

MEDICAL APPOINTMENTS.

BROWN, John, M.D., D.P.H.Vict.Univ., appointed Medical Officer of Health for the Borough of Bacup; also Physician to Sourhall Hospital.

LORY, Arthur George Bateman, L.S.A.Lond., appointed Medical Officer and Public Vaccinator for the Chudleigh District of the Newton Abbot Union, *vice* H. H. Lloyd Patch, resigned.

PECK, Herbert, M.D., D.P.H., reappointed Medical Officer of Health to the Chesterfield Rural District.

TAYLOR, Frank E., M.A., M.B., M.Sc.Vict., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Resident Medical Officer at Queen Charlotte's Lying-in Hospital.

TETLEY, T. W., M.R.C.S., L.R.C.P., appointed House-Physician to the Leeds General Infirmary.

WALLIS, P. E., L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health to the East Grinstead Urban District Council.

WILSON, A. Garrick, B.A., M.B.Cambs., M.R.C.S., L.R.C.P.Lond., appointed House-Surgeon to St. Mary's Hospital, London, W.

DIARY FOR NEXT WEEK.

TUESDAY.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 4 P.M.—Mr. H. Work Dodd: Cases of Disorders of the Eye in Nervous Diseases.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

DIXON.—On September 5th, at Eccleshall, Staffs., the wife of Thomas Dixon, M.R.C.S., of a daughter.

DONOVAN.—At Warwick, on September 3rd, the wife of Lieutenant-Colonel H. L. Donovan, A.M.S. (r.p.), of a son.

MARRIAGES.

BELFRAGE—POWLEY.—On September 7th, at St. Mary's Church, Purley, near Reading, by the Rev. Robert Powley, cousin of the bride, assisted by the Rev. Arthur Thomas Powley, Sydney Hennine Belfrage, M.B., of 2, Montagu Place, W., son of James T. Belfrage, of Putney, to Frances Grace, daughter of the Rev. Canon Powley, rector of Purley. Australian and New Zealand papers please copy.

COUTTS—BOULLEN.—On September 6th, at Oakfield Chapel, Ashton-on-Mersey, by the Rev. Alex. Riddell, Francis J. H. Coutts, M.D., of Cromar, Plymouth Grove, Manchester, to Effie, elder daughter of Charles G. Boullen, of Carliol, Ashton-on-Mersey.

DAVIDSON—WAITES.—At St. Mary's Church, Barnard Castle, by the Rev. J. T. Penrose, M.A., on September 6th, Samuel Davidson, M.D.Edin., Helmsdale, Sutherlandshire, to Margaret, youngest daughter of Mr. R. Waites, Bede Terrace, Barnard Castle.

DOBIE—MORRELL.—On September 8th, at All Saints, Belvedere, by the Rev. F. N. Eden, M.A., vicar, assisted by the Rev. P. F. A. Morrell, B.A., brother of the bride, William Henry Dobie, M.B., C.M.Edin., M.R.C.S., son of William Murray Dobie, M.D., of Chester, to Alice Fanny, younger daughter of Commander George Trueman Morrell, R.N. (retired), of Belvedere, Kent.

HAMILTON—CLARK.—On September 6th, at Christ Church, Lumet Lane, Liverpool, by the Rev. Henry Boyden, assisted by the Rev. Canon Irving, George Gibson Hamilton, F.R.C.S., of 34, Rodney Street and 19, Sanson Street, to Mabel Elaine, elder daughter to Walter C. Clark, Esq., of Orleans House, Sefton Park.

MASSIAH—HALLIDAY.—On September 14th, at St. Andrew's Presbyterian Church, Manchester, by the Rev. James Lees, Benjamin J. Massiah, M.D.Edin., West Didsbury, Manchester, son of the late Christopher Henry Massiah, of Barbadoes, to Jessie, youngest daughter of James Halliday, Woodlawn, Fielden Park, West Didsbury, Manchester.

DEATHS.

EZARD.—On September 10th, 1899, Mary Helen Ezard, wife of Edward H. Ezard, M.D., D.Sc., and daughter of John Glegg, Milliken, Renfrewshire, entered into her rest, aged 37 years. R.I.P.

IRELAND.—Died at Mavisbush House, Polton, Midlothian, on September 11th, Margaret, the wife of William W. Ireland, M.D.

KEIGHLEY.—On September 7th, at West House, Batley, Robert Dex Keighley, J.P., aged 79.

KEY.—On September 11th, at Ramsgate, Augustus Cooper Key, M.D., of 30, Wilton Place, Belgrave Square, aged 61. Interment at Honor Oak Cemetery, Friday morning, at half-past twelve. Friends please accept this intimation.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

Central London Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily.

Central London Throat, Nose, and Ear. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.p., Tu., 2.30; o.p., F., 2.

Charing Cross. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

Chelsea Hospital for Women. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

City Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

East London Hospital for Children. *Operations.*—M. W. Th. F., 2.

Great Northern Central. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

Guy's. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

Hospital for Women, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

King's College. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

London. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

London Temperance. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

London Throat, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 2.

Metropolitan. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

Middlesex. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

National Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

New Hospital for Women. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

North-West London. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

Royal Ear, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

Royal Eye, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

Royal Free. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 2; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

Royal London Ophthalmic. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

Royal Orthopædic. *Attendances.*—Daily, 2. *Operations.*—M., 2.

Royal Westminster Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

St. Bartholomew's. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 3; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

St. George's. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

St. Mark's. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2

St. Mary's. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

St. Peter's. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

St. Thomas's. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

Samaritan Free for Women and Children. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

Throat, Golden Square. *Attendances.*—Daily, 1.30; Tu, F., 6.30. *Operations.*—Daily, exc. M., 10.

University College. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

West London. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 3; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

Westminster. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

L.S.A.Lond. will be obliged if anyone could tell him, through the medium of the BRITISH MEDICAL JOURNAL, the nature of the dermatitis, if any, produced by the harvest bug; also what is the natural history of the animal?

Amateur writes: I am asked to give some lectures on physiology and hygiene, under the technical educational scheme, in a country village where my audience will be quite ignorant of the subjects and I shall require to deal with them in a very popular manner. Can any reader advise me as to any books (apart from the medical textbooks) which would assist me and also as to diagrams and illustrations and where I could procure them?

R. M. B. asks for information as (1) The best seaside place for the open-air treatment of consumption; (2) the cost per week; (3) the cost at the establishment in the Mendips; and (4) the cost at Nordrach.

Dr. W. G. Dunwoody asks: Can any reader inform me if the physical examination for navy chaplains is a strict one? Would slight malformation of chest, for example, pigeon breast, with an indistinct mitral *bruit* exclude?

Sussex would be glad to be informed what is the percentage of menthol in English oil of peppermint and in Japanese oil of peppermint.

Rayne desires to know title, price, and publisher of a work on modern dwelling house and stable construction, drainage, and water supply.

F.R.C.P. writes: Can any correspondent tell me of a suitable institution, not a hospital, where a boy, aged 14, suffering from mild epilepsy could be received for a moderate payment?

Inkpot desires to know of recent books on fevers and chest diseases, and their publishers and prices.

*** Fowler and Godlee, *Diseases of Lungs*, Longmans, 25s.; E. W. Goodall and Washbourn, *A Manual of Infectious Diseases*, H. K. Lewis, 15s.

Advertising for Indoor Patients.

Scribe writes: Several members of my household who are trained nurses and are dependent upon me, in order to occupy their time and increase our income, press me to take in private patients, ordinary invalids, or accouchement cases. Would it be a breach of any professional rule if I inserted advertisements in lay papers without disclosing the name and address, say: M.D. has vacancy for invalid or accouchement case in his home. Trained nursing. Apply X. Y. Z., *Mercury* Office.

*** An advertisement in this form would certainly be objectionable. The advertiser would lay himself open to suspicion of keeping an institution for "ladies who get into trouble," and no reputable medical man would be willing to run such a risk.

Contract of "Locum Tenens."

A practitioner engages a *locum tenens* to attend to his practice for five weeks while he is away for a holiday. At the end of the third week, however, he returns, and asks the *locum tenens* to remain with him on the same terms for the rest of his time as an assistant. This the latter declines to do, and insists on leaving forthwith and being paid for the five weeks for which he was engaged. Was the *locum tenens* acting professionally in the course he took?

*** Strictly speaking, as the contract of a *locum tenens* differs from that of an assistant, the *locum tenens* was within his legal right in objecting to become an assistant, although paid at the same rate as before. We believe, however, it would have been more in accordance with the custom of the profession had he acceded to the request of the principal, and stayed on as desired.

ANSWERS.

Sanitas has omitted to enclose his card.

J. G. F.—No special books are named or recommended for the optional scientific subjects in the examination for the medical services. Any of the numerous smaller textbooks on geology, physical geography, zoology, and biology would do for study; but the books should be as recent and up to date as possible.

Dr. T. Wright (Durham).—We know of only two European medical men having died from plague out of a strength of some 500 engaged in plague work. There is practically no danger with ordinary care, but our correspondent should be inoculated. This he can have done immediately he arrives in Bombay at Mr. Haffkine's laboratory, now in charge of Major Bannerman, I.M.S.

Member.—The public vaccinator is not entitled to any fee in respect of the unsuccessful vaccination of a child, however frequently the operation may be repeated without success.

"Coca de Mer."

Fleet-Surgeon writes: In reply to "Seychelle's" query in the BRITISH MEDICAL JOURNAL of September 9th as to where he could obtain a specimen of the coca de mer, I should advise him to try Burton's Old Curiosity Shop, Falmouth, where I saw two or three for sale a few years ago.

"Locum Tenens" and Principal.

R. F. C.—If a *locum tenens* contracts scarlatina in the course of his employment his legal claim on his principal is precisely the same as if the latter on the same day peremptorily dismissed him for no fault on his

part, and would depend on the terms of the engagement, whether it was a weekly or a monthly one. Most principals, however, would deal liberally with a *locum tenens* under such a misfortune, and would not seek to limit him to his bare legal rights.

ACETYLENE GAS AS AN ILLUMINANT.

A MEMBER OF B.M.A. writes: If your correspondent in the BRITISH MEDICAL JOURNAL of September 9th who asks for an expression of practical experience of the use of acetylene as a lighting vehicle, etc., will communicate with Messrs. Frank Wheeler and Co., Horsham, St. Faith's, Norwich, who are agents for the Thorsecor acetylene gas generator, he will be supplied with the information he seeks. The above firm have their workshops and residence lighted up with this gas, which in my opinion is a perfect and safe light. I am so satisfied with it that I hope shortly to have it laid on to my house.

NOTES, LETTERS, Etc.

VACCINE BLOWERS.

DR. J. MATTHEWS (Blundellsands) writes: I notice that others, like myself, find vaccine blowers unsatisfactory. I now break off one end of the vaccine tube, and cautiously place the other end in the flame of a spirit lamp. It is quite easy to fuse up a little of the glass tube and to drive out the lymph without injuring it by heat. The plan is simple and aseptic.

A NATIVE VIEW OF PLAGUE.

THE following amusing paragraph appears in the *Pioneer*: A native gentleman in Poona was recently discussing the all-absorbing topic of the plague with a military officer, and the efficacy of the plague operations in particular. The native gentleman summed up the situation thus: God has sent the plague to India, and when it pleases Him God will remove the plague, though doubtless some civilian will get the credit of it, and possibly a C.I.E.

THE AILMENTS OF SHOP GIRLS.

CRITICUS writes: Surely Mr. Stuart Nairne in the paper published in the BRITISH MEDICAL JOURNAL of September 2nd, on the ailments of shop girls, proves what he says, that "statistics can be made to prove anything." In his summary, which contains the whole gist of the matter, he is guilty of the most extraordinary piece of logic which I have read for a long time, and which, if often indulged in, would go far to justify the Lords in their action in rejecting medical testimony. He takes 100 cases of hospital patients, and finds that 40 per cent. of the married ones and 7 per cent. of the single women have been shop girls, and from these premisses he deduces the conclusions: (1) "That 7 per cent. of unmarried shop girls only come for medical attendance." (2) "That 40 per cent. of married women who have been shop girls also come for that attention." How does he know how many shop girls there are in Glasgow, and that all of them attend his hospital? Or that all married women who have been shop girls do not require medical attendance before very long? He would perhaps see the error if from the fact that 10 Germans appeared in the list of 100 police-court convictions, someone were to deduce the conclusion that 10 per cent. of all Germans appeared in the London police-courts.

SHOULD MEDICAL MEN DISPENSE?

COMMON SENSE writes: I cannot understand the suicidal objection evinced by the younger generation of medical men to dispensing. After many years' experience of both dispensing and non-dispensing practices I infinitely prefer the former. Double the income with half the work is the result of dispensing. If the practice exceeds £700 it is well to keep a dispenser, in my experience, and this can be done with little expense even in smaller practices by the aid of a pupil or lady dispenser, who will also act as governess. I never found dispensing affect one's social position, though I certainly do think it is *infra dig.* to be seen mixing medicines. I for many years held a good class country practice of over £1,000 per annum, fees 2s. 6d. to 7s. 6d.; had I given up dispensing it would have dropped away to about £500. Take a case of anæmia, say 5s. for a prescription; the patient takes the medicine six weeks and is cured, and prescribes for all her friends, whereas by supplying medicine with an occasional consultation each case pays, say, £2 10s.

RUPTURE OF THE VAGINA.

DR. G. F. MYLOTT, D.M.O. (Malta), writes: Ruptures of vagina during coition are very rare. Dr. Price reported in 1886 a few cases of recto-vaginal fistula from violence during first coition. The following is the only case which I have met with: On July 5th, 1899, at about 2 A.M. I was called in great haste to visit Mrs. B., aged 20, of poor condition, but of a very good constitution. She was married the evening before my visit and in the act of coitus felt a sharp pain and a profuse hæmorrhage followed at once. The husband was so alarmed that he called a qualified midwife to assist her and the midwife requested my attendance without delay. I found the woman pale and faint, with short respiration and in a very dangerous condition. I gave an injection of ergotine without any result, and to avoid fainting I gave two injections of ether. On examination of the vagina I found it full of clots, which were removed at once by washing it with a strong solution of boracic acid. I then observed a tear, which commenced at the entrance of the vaginal canal and extended on the left of the median line backwards to and across Douglas's *cul-de-sac* upon the right side of the vagina about one-third. The uterus and the bladder were normal. I disinfected the vagina with carbolic solution and filled it with iodoform gauze. The recovery was complete in about three weeks. A few days ago the woman came in the Government Dispensary in good state of health and perfectly recovered.

A MATERNAL IMPRESSION.

MR. JOHN BOOTH (House-Surgeon South Charitable Infirmary and County Hospital, Cork) writes: A very interesting occurrence has lately come under my notice. A very handsome thoroughbred fox terrier bitch, belonging to a friend of mine, strayed, and was missing for a day or two, and when found it was discovered that her right fore leg was broken. The limb was set under chloroform with the help of the Roentgen rays, and the dog made a good recovery. Several weeks afterwards she gave birth to a puppy whose right foreleg, that is, corresponding to the mother's broken limb, was ill-developed and was minus the paw.

The literature is full of cases of maternal impressions in the human family, but this contribution from the lower creation is, so far as I am aware, unique.

MOSQUITOS AND MALARIA.

RETIRED writes: With reference to the "malaria and mosquito theory," may I relate the following experience? In a tour of three years' service in Ceylon I had several attacks of malarial fever. In a tour of nearly six years in India, a large portion of it in undeniably malarial stations, I never suffered from malarial fever of any kind. Mosquitos were plentiful, and I was freely bitten in both countries; why did I not also suffer from malarial fever in India? In Ceylon I drank water filtered only, in India I drank water boiled as well as filtered. Can water be a carrier of the malarial poison? It is a remarkable fact that at Aden, where I have served, malarial fever is unknown, with the exception of cases imported from India. Mosquitos are numerous there also, and bite, but the water used for drinking is condensed.

"A FOURPENNY DOCTOR."

AN OLD MEMBER writes: I have been in practice for over seventeen years in East London, and always maintained my fees. I have living nearly opposite to me two medical men who charge sixpenny fees; down a turning facing my house is a dispensary where fourpence is charged, and one shilling a week paid in advance inclusive, midwifery at 10s. 6d. To crown all, and within a few minutes' walk, is one of our large general hospitals where letters of admission are not required, and it is there that threepence is taken from each case before the physician or surgeon of the day is seen. Is this an illustration of that beautiful maxim "Live and let live?" Where does the fault lie?

GOWNS FOR MEDICAL PRACTITIONERS.

ANOTHER M.R.C.S. writes: In the BRITISH MEDICAL JOURNAL of September 9th, "M.R.C.S.," writing *re* the R.C.S. gown, asks "How handy that gown might have been for the fourpenny doctor at Stepney if he could afford to purchase one?" I should like to ask "M.R.C.S." why the fourpenny doctor at Stepney should be held in greater derision and contempt than an M.D. Lond who attends club patients at one shilling per year, and drives two or three miles to see these patients?

LETTERS, COMMUNICATIONS, ETC., have been received from: **A** Mr. A J. Andrew, Cardiff; Mr. A. J. Anderson, Blackpool; Another M.R.C.S.; Dr. J. Aitchison, Newcastle-on-Tyne. **B** Mr. T. Blair, Leeds; A. G. Bateman, M.B., London; L. Buchanan, M.B., Glasgow. **C** Dr. J. H. Crocker, Eccles; Dr. T. A. Clinch, Ferryhill; Mr. E. F. Carter, Moosomin; Mr. C. L. Cunningham, Wyke Regis; Dr. W. H. Calvert, Melrose; S. Crawshaw, M.B., Ashton-under-Lyne; C.L.L. **D** Dr. W. G. Dunwoody, Ely; Dr. F. Davidson, London; Mr. W. H. Dickinson, London; Dr. A. Davidson, Liverpool; Dental Publishing Co., Manager of, London; Mr. F. Dickson, London. **F** Dr. W. Farquharson, Carlisle; P. C. Fenwick, M.B., Christchurch, N.Z.; Mr. J. G. Faber, Stockton-on-Tees; Fleet-Surgeon; A. H. Frere, Stradbroke; Dr. W. H. S. Fosbery, Reading. **G** Mr. P. Giles, London; Mr. R. Gray, Armagh; Dr. B. Grassi, Rome; Dr. L. G. Guthrie, London. **H** Mr. J. Hutchinson, jun., London; Dr. J. Haddon, Denholm; Mr. R. J. Horn, Norwich; Dr. E. Hertoghe, Antwerp; A. W. Hughes, M.B., London. **I** Inkpot. **J** Mr. J. B. James, London; Juvenal. **K** Mr. W. R. Kemp, Birmingham. **L** R. M. Leith, M.B., Port Elizabeth; L.S.A. **M** Mr. J. J. N. Morris, Devonport; M.B., M.A.: Dr. J. Mowat, Edinburgh; Dr. J. W. Moir, St. Andrews; Mr. J. H Marsh, Little Hulton: Dr. J. Matthews, Blundellsands; Mr. W. Jones Morris, Portmadoc; Member; M.R.C.P. **N** Nemo; J. H. Nicoll, M.B., Glasgow; Mr. F. L. Nicholls, Fulbourn. **P** Mr. J. M. Pearson, Vancouver; H. Peck, M.B., Chesterfield. **R** R.M.B.; Mr. T. F. Raven, Broadstairs; Retired; Rayne. **S** Sussex; Shay; Dr. W. Sykes, Gosport; Sanitas; Mr. S. J. Sulemani, Baroda; Surgeon; W. R. Smith, M.B., Adelaide; Mr. A. T. Smith, Orpington; Mr. J. S. K. Smith, Liverpool. **T** Dr. J. C. Thresh, Chelmsford; Mr. B. L. Tandy, London: Dr. R. Turner, Bootle; Dr. J. Taylor, Glasgow; Mr. R. F. Tomlin, London; A. H. Tubby, M.B., London. **W** A. G. Wilson, M.B., London; W. Watkins-Pitchford, M.B., Birmingham; Mr. E. W. Wallis, London; Dr. T. Wright, Washington, co. Durham; Mr. W. R. Williams, Clifton; etc.

BOOKS, ETC., RECEIVED.

Refuse Destructors. By Meredith Young, M.D., M.S., D.P.H. Crewe: W. Eardley.

Faith-Healing and "Christian Science." By Alice Feilding. London: Duckworth and Co. 1899. 3s. 6d.

Lehrbuch der Kinderkrankheiten. Von Dr. A. Baginsky. Sechste Auflage. Erste und Zweite Abtheilung. Brunswick: F. Wreden. 1899. M. 20.

A Practical Introduction to the Study of Botany. By J. B. Farmer, M.A. London: Longmans, Green and Co. 1899. 2s. 6d

De l'Hypothyroïdie Bénigne Chronique ou Myxœdème Fruste. Par Dr. E. Hertoghe. Paris: Masson et Cie. 1899.

Burdett's Hospitals and Charities, 1899. By Sir Henry Burdett, K.C.B. London: Scientific Press. 5s.

*** In forwarding books the publishers are requested to state the selling price.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

SIXTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899.

PROCEEDINGS OF SECTIONS.

SECTION OF OPHTHALMOLOGY.

Simeon Snell, F.R.C.S.Edin., President.

A DISCUSSION ON THE PATHOLOGICAL SIGNIFICANCE OF SYMPATHETIC IRRITATION, AND ITS CONNECTION, IF ANY, WITH SYMPATHETIC OPHTHALMITIS.

I.—F. Richardson Cross, M.B., F.R.C.S.,
Ophthalmic Surgeon, Bristol Royal Infirmary.

The consideration and discussion of the "pathological significance of sympathetic irritation" pure and simple, would prove, I think, a matter of considerable difficulty for any of us; but taken in connection with, or in contrast to "sympathetic ophthalmitis," the subject is widened and simplified.

I felt great hesitation in accepting the honour of opening this debate. I have but few facts to bring forward with regard to it, and must be content if I can suggest some lines of thought that may be elaborated by some of my distinguished auditors.

An eye that has been injured, either by an accident or through an operation, is frequently associated after a longer or shorter period of time with symptoms of discomfort, or of inflammation in its fellow, the affection in the second eye depending upon the close functional and anatomical association of the organs of sight. Nowhere else in the body are these conditions at all analogous.

The sense organs for taste and smell are practically central and single, and each ear appears to be entirely separated from its fellow, but the intercommunication of the two eyes is most complete, whether we consider the psychical or physiological arrangement and control of the visual nerve tracts, the intercourse of the blood vessels and lymphatics, or the close binocular correlation which constitutes perfect sight, all of which must be to some extent interfered with by any imperfection of either eye.

The word "irritation" was formerly applied to all conditions of the sympathising eye. Next the term "sympathetic ophthalmia" was introduced. But of recent years a distinct separation has been made between cases of inflammation "ophthalmitis," and of irritation "neurosis."

The separation depends almost entirely upon the character of the symptoms which are present in the sympathising eye, and they can be classified under the two separate headings, respectively, of functional and inflammatory.

The functional subjective disturbances typical of sympathetic irritation are weariness of the eye and disinclination for use, uneasiness, tenderness, or pain in the eye or orbital region; blepharospasm, lachrymation, and hyperæmia of the conjunctiva, photophobia, muscæ, and photopsia; dizziness or fogginess of sight; obscurations of longer or shorter duration; transient defects in the visual field, or even temporary blindness; spasm or weakness of accommodation, or abnormal pupil action. A slight redness or haze of the optic papilla may be present, but careful examination of the eye fails to detect any signs of intraocular inflammation.

The objective symptoms of "ophthalmitis" are those of definite inflammation. They are peculiar and almost typical, and usually early implicate the uveal tissues. Impaired function of the pupil is accompanied by iritis, keratitis punctata, and ciliary congestion. The iridocyclitis, usually of a mild, serous type, and at first causing the patient but little discomfort, insidiously implicates the whole uvea, and gives rise to synechiæ of the pupil and to vitreous opacities. Leber is of opinion that the optic nerve is the part first affected, but it is not easy to prove this by clinical observation. Papillitis seems to be absent in many early, well-marked cases of sympathetic uveitis, but, on the other hand, it is often present, sometimes as neuro-retinitis, or even with retinal hæmorrhages or œdema.

The purely "functional" symptoms of irritation compared with the definite "organic" defects present in sympathetic ophthalmitis render the diagnosis between them easy in typical cases, but clinically the two sometimes overlap one another. Cases occasionally present themselves in which doubtful signs of neuritis or of iritis suggest that an irritated eyeball is being threatened with the more serious inflammatory form of sympathetic mischief.

Again, cloudiness of vision affecting the sound eye after an injury to its fellow may be merely a symptom of irritation; but the optic disc should be carefully examined, for slight neuritis may be present without other organic symptoms as the forerunner of a distinctive inflammatory attack.

As illustrative cases, I may mention the classical one of Donders, where a small fragment set up the most severe irritation in the good eye a few weeks after its fellow had been blinded by accident. The pain was intense, and the eye so irritable that for two years the patient could make no use of it, and believed himself to be blind. But in two hours after removal of the exciter it could be fairly well used, and examined accurately as to sight and absence of organic mischief, and it completely recovered.

Lawson[1] gives notes of sympathetic irritation coming on seven months after an injury. Injured eye removed. Complete recovery, and good sight for nearly nine years; then sympathetic inflammation and loss of sight.

I recently saw what seems a typical case of irritation possibly predisposed by some nervous affection, A. S., aged 44, who was formerly a porter in a warehouse, but for the past seven years has been unable to work owing to spinal disease. He said that for some time he had been in a nervous excited condition, often waking up at night, and unable to keep quiet in bed. The knee-jerk was somewhat diminished.

While the patient was cutting a stick, at 4 years of age (40 years previously) the knife slipped and wounded his left eye. The wound healed well, and this eye, although blind and somewhat shrunken, has remained quiet ever since.

His right eye was perfectly well until four years ago. Since then the patient has complained of photophobia, recurrent obscurations, lachrymation, and occasional slight conjunctival discharge. He says that the sight is at times quite clear, but at other times so cloudy that he cannot see anyone across the street. When this eye is well he can read continuously for almost an hour, but when it is irritable he cannot do so for more than a few minutes at a time, owing chiefly to a mistiness which comes over the centre of the field, while the periphery remains comparatively clear. The right eye shows no signs of inflammation, no iritis, and no impairment of accommodation, but there is some doubtful haze over the optic nerve. The pupil reacts well to light and distance. Vision $\frac{6}{9}$ 1 J, 8 at 15 inches — .50 $\frac{6}{9}$. The left eye is a shrunken stump, probably containing ossifying choroid. Enucleation was advised, but has not yet been accepted.

The patient only paid me one visit, and the actual form of his nervous affection was not fully worked out.

We cannot with certainty foretell what kind of damaged eye may give rise to sympathetic mischief, or what one is perfectly free from risk of causing such complication. The exciting eye may be quiet, or may be irritable, or inflamed, when it gives rise to inflammation, or merely to irritation in the sympathising one.

We know that where sympathising ophthalmitis proper has occurred some kind of perforating lesion of the exciting eye has been present in nearly every case on record, and that any report to the contrary would be received with caution. It is true that exceptions are found in cases that have been published of "sympathetic ophthalmia" occurring without any visible external wound in the injured eye. In some of these an inflammation of the uvea (iridochoroiditis or cyclitis) has attacked the second eye, at an interval after the first, by reason of a diathetic or other cause common to both, and without any sympathetic connection between the two. In

[1] *Royal London Ophthalmic Hospital Reports*, vol. x.

others the lesion has been a subconjunctival rupture of the sclera, caused by a blow. In the majority of cases in this group the sympathising eye has suffered merely from irritation, but at least seven cases are recorded by reliable observers where definite ophthalmitis resulted, although no rupture through the conjunctiva could be found. Even if we overlook the possibility of small conjunctival wounds escaping observation, are these cases really exceptional? It seems to me doubtful how far a bruised conjunctiva is a reliable protection for the damaged contents of a ruptured eyeball against infection from without. Again, it is possible for organisms to enter an uninjured eyeball from the blood stream, and to cause various well recognised forms of inflammation in connection with general diseases. Berlin and Hutchinson think that sympathetic eye diseases may be started by affected particles from the exciter circulating in the blood stream, and producing characteristic sympathetic symptoms as soon as they reach and develop in the congenial soil of the opposite uvea.

The original damage in some typical cases of sympathetic ophthalmitis may be very slight, as for instance a simple intraocular operation. Extraction of cataract, or a needling after cataract extraction, has caused it. In many of these cases iritis had complicated the operation, but in some the operated eyes seemed to be quite free of any inflammation throughout, and in a few the sight in them continued to be good, although the removal of the sympathiser was rendered necessary on account of pain or degenerative changes.

Sympathetic irritation also follows punctured wounds; it may soon cease, or may recur from time to time for years without any further complication. It may be relieved by the removal of the exciting eye, or eventually be succeeded by an ophthalmitis. But more usually irritation is caused by old shrunken eyes, particularly if containing painful or ossifying choroid, etc. The irritation of glass eyes in the socket may bring it on. But it is important to recognise that all these conditions may also be productive of ophthalmitis.

Thus several cases are quoted in the reports of Nettleship and of the Ophthalmological Society Committee[2] where a glass eye has been the cause of sympathetic ophthalmitis, whether worn over a shrunken eyeball, No. 183 (where neuroretinitis and later iridochoroiditis occurred in the sympathiser, which was lost 14 years after the destruction of its fellow by corneal ulceration) or after enucleation of the eyeball, No. 199 (where glass eyes had been worn in comfort for fifteen years, but a new one set up conjunctival trouble and then plastic iritis, which recovered after about three months).

A shrunken eyeball seems able to excite ophthalmitis when it is quite quiet and apparently devoid of any microscopical evidence of inflammation, or it may have previously become ulcerated or irritable.

Even the optic nerve stump, left after enucleation of an eyeball, may become involved in cicatrical bands or worried in some way so as to cause a sympathetic ophthalmitis (No. 191) in one case, or a sympathetic neuritis in another case, both relieved by further operations on the faulty stumps.

Nor can we be certain as to the length of interval which will separate the injury to the exciting eye from the sympathetic complication whether this be functional or organic.

A common period for the development of sympathetic ophthalmitis is two or three months, but many cases commence in two or three weeks, or even earlier. A man came under my notice with well-marked right sympathetic iridochoroiditis. Two years previously he had wounded his left eye with a nail. The right became at once very irritable; he says it was inflamed on the second day. On the seventh day after the accident the left eye was removed by Mr. George Lawson (the right being then very bad and much inflamed), evidently without arresting the sympathetic disease.

On the other hand, out of the 211 cases of ophthalmitis published by the Ophthalmological Society Committee,[3] twelve eyes became inflamed as late as twenty years after the injury, the interval in three cases being no less than thirty-seven, thirty-eight, and thirty-nine years respectively.

In sympathetic irritation the period of interval varies just as much. It may be short or very long, so that if we believe these cases to be really sympathetic in their nature, and that they would not have occurred if the damaged eyeball had been earlier removed, we cannot feel absolutely safe at any period, nor can we say for certain what the character of the sympathetic mischief will be by the interval which separates it from the original injury. A comparison, however, of the proportional number of cases occurring at different periods would seem to show that typical uncomplicated irritation is much more likely than inflammation to occur after a prolonged interval. Thus, among the cases of which I have record, inflammation set in within the first year in 16 out of 23, while within the same period irritation had developed in only 10 out of 27. In other words, within the first year inflammation was proportionally almost twice as frequent as irritation. Many slight cases of the latter, however, pass unnoticed. Others recur and extend into very lengthened periods after the original injury, while ophthalmitis has one definite commencement, and once established is continuous and nearly always progressively destructive, so that deductions in this direction are not reliable.

The theories used to explain the occurrence either of sympathetic ophthalmitis or of irritation remain suggestive but unproven. To speak of one group as a reflex neurosis and of the other as a migrating ophthalmia or septic uveitis has done good service as a working hypothesis, but we are still uncertain along what channels either the nerve currents or the infecting particles may pass, or what special kind of organisms may be concerned in the disorder.

Leber found hyperplasia of the optic nerve in 9 cases of sympathetic ophthalmitis, and believed the disorder to be always due to septic inflammation, and that the first symptom in the sympathising eye was neuritis and not iritis. Snellen has also shown the presence of lymphoid cells around the optic nerve,[4] and Brailey fully describes the microscopical appearances of the cellular infiltration in the affected uvea, in many sympathising eyeballs. He found a similar condition existing in the exciter, if removed while it was still inflamed, but he has seen many cases of undoubted sympathetic ophthalmitis, where the first eye, possibly a mere stump at the time of the outbreak, was neither tender nor painful, having long been quiet, and several where such, when examined microscopically, presented, at the most but very doubtful sign of present inflammation.[5]

The various experiments by Deutschmann mark an epoch in the study of the disease. In his hands they have been almost conclusive, but they have scarcely received corroboration. Scarcely any other experimenter, whether by injecting into the eye itself or into the lymphatic channels associated with it, has succeeded in establishing any symmetrical inflammation of the eyes that resembled sympathetic ophthalmitis, and while the presence of cellular infiltration has been shown in the exciting or in the sympathising eyeball, after its removal, many recent investigators deny that micro-organisms can be found in the affected tissues, while others admit the presence of organisms, but deny the possibility of experimentally producing sympathetic ophthalmia.

If micro-organisms are the essential factor in the causation of this disease, it must at any rate be admitted that the specific organisms in question have not yet been demonstrated.

Some say that sympathetic ophthalmia never occurs in animals, if this is so we could scarcely expect to produce the disease by experiment, and many of the negative results may thus be explained.

Some of the latest observations are those of Angelucci[6] who gives results of experiments and bacteriological examinations from three cases of sympathetic ophthalmitis. The removed exciting eyes contained micro-organisms, which in cultures showed pathogenic micrococci. A piece or iris was taken from each of the sympathising eyes, and showed micro-organisms especially in the perivascular spaces. The cultures showed micrococci which when injected into a rabbit's eye caused iridocyclitis, and infiltration along the optic nerve through the chiasma and down the subvaginal space to the other nerve as far as the eyeball.

None of the animals showed sympathetic symptoms in the second eye; they died of general infection possibly before

[2] *Transactions*, vol. vi.
[3] *Ibid.*
[4] *Trans. Internat. Med. Congress*, 1881.
[5] *Trans. Oph. Soc.*, vol. iv.
[6] *Rev. Gén. d'Ophtalmologie*, 1898.

ophthalmia had time to declare itself. These and other experiments lead him to the opinion (1) that eyes suffering from sympathetic ophthalmitis always contain germs, (2) that these travel from the infected eye along the tissues of the optic nerve to the fellow eye, but (3) he does not believe that sympathetic ophthalmia can be artificially produced in animals, and considers the disease to be peculiar to man.

Bach,[7] experimenting earlier on the same lines with cultures of various micro-organisms, had obtained absolutely negative results. But by means of chemical or mechanical irritants applied to the surface of the eye he produced at once in the fellow eye fibrinous exudations in the aqueous, vitreous, and subretinal space. These were demonstrated by immediate removal of the eye and subsequent examination under the microscope. He concluded that prolonged irritation of an eye produces vascular dilatation and escape of the blood constituents, not only in it but in the fellow eye also, and that sympathising ophthalmia is thus initiated by a neurotrophic action of the ciliary nerves rather than by the direct agency of bacterial organisms, the intensity and duration of the irritation being of more importance in causation than the nature of the irritant.

In opposing Bach's views Angelucci brings forward arguments against the existence anywhere of special trophic nerve fibres, and considers that the results described are due entirely to vasomotor action, and resemble much more an ordinary hyperæmia than the conditions of definite inflammation that characterise sympathetic ophthalmitis.

Dr. Cecil Shaw[8] has made a series of experiments on rabbits' eyes to determine what changes, if any, follow prolonged irritation, external or internal. Wounds in the ciliary region were made while purulent conjunctivitis was set up by jequirity, and the conditions were in some cases maintained for several months; no iritis occurred in the wounded eye, nor were any abnormal symptoms produced in the fellow. Wounds with soiled instruments and the introduction of shot into the eye through the sclera or into the ciliary region seemed to produce scarcely any symptoms in the one eye or in the other. After death the eyes were removed and hardened, and the examinations under the microscope both for exudations and organic changes in the eyes, and for the presence of micro-organisms were practically negative.

Sympathetic ophthalmitis is usually caused by wounds or perforations of recent date, particularly in the ciliary region, or complicated with prolapse of the iris, conditions favourable for infection by organisms, but it is certainly rare after severe suppurative inflammation has taken place. Panophthalmitis of the exciter often causes irritation of its fellow, but seldom inflammation.

This fact has been used against the migratory theory, but it is not likely that the pus-producing cocci are those responsible for sympathetic neuritis or uveitis, and indeed the former organisms may be antagonistic to or destructive of the latter. The inflammatory exudation also may seal up the channels of communication in the eye and prevent the transit of micro-organisms. In this connection I may remind you how many cases of fatal cerebral meningitis have occurred after excision of a suppurating eyeball; it would seem as though the operation opened up a passage for the pus organisms from the eye to the brain, possibly along the perivascular lymph spaces or those of the optic nerve, or by means of the cavernous sinus, and this hypothesis is rendered more probable by the fact that closure of the orbit by over-bandaging seems to increase the risk of meningitis, while free washing and drainage diminish if they do not entirely remove it. Here as in the case of many of the injection experiments which have been made in order to cause sympathetic ophthalmitis the organisms set up inflammation of the brain, while there is no evidence of the other eye becoming affected. The inflammation of a sympathising eye is never suppurative.

Cerebral meningitis very rarely results from an injury to the eyeball or as a complication of sympathising ophthalmitis. Snellen,[9] however, gives notes of a case of acute meningitis occurring simultaneously with sympathetic ophthalmitis. Microscopic examination of the exciting eye showed the uvea to be infiltrated with lymphoid cells, which were also abundant in the tissue surrounding the optic disc and in the subdural space of the optic nerve. A few other cases have been recorded.

Enucleation of wounded eyeballs in which no inflammation has been present, or even where inflammation has been very slight, has on several occasions been rapidly followed by fatal meningitis. Nettleship seems to think[10] that risk from this cause (excision of eyeballs) is not very materially increased by the presence of suppuration in the eye.

A very few cases have been published of fatal meningitis following intraocular operations. (1) Seven days after a cataract extraction in a woman of 70 (Knapp). (2) Four days after needling opaque capsule in a child a year old (Warlomont). (3) Thirteen days after iridectomy for secondary glaucoma following cataract extraction in a woman of 68.

Very little opportunity is afforded for paying attention to the pathology of sympathetic irritation. The old theory of a "reflex neurosis," which has been deposed by that of "migratory ophthalmia," is now made use of to explain it. The symptoms in many cases are such as might be caused by an afferent irritation from the exciting eye being carried along the ciliary branches to a nerve centre, whence the efferent impulses pass to the sympathising eye. These may cause defective or altered nutritive conditions in the tissues of the eyeball, or a diminished power of resistance to disease.

In other cases, however, the affection would appear to be due to the presence in the sympathising eye of organisms, capable for the time being of causing an irritation only, but liable at any time later to give rise to a definite inflammation.

We have often observed that a secondary operation on or an injury to an eye that has been damaged or has undergone a former operation, is not devoid of risk. Persistent inflammation of a low type not infrequently results. This may depend upon the *materies morbi* (which had been quiet, or possibly encapsuled, after the earlier wound) becoming active.

Deutschmann[11] in some of his earlier injection experiments which were negative considered "that the spores did not excite the inflammatory process by germination, for they remained unaltered and became enclosed in masses of pus corpuscles and young spindle cells. To this encapsulation by which the spores were rendered innocuous he attributed the fact that the sympathetic process may become retrograde."

It is sometimes risky to undertake an improving operation on an injured eyeball of some years' standing not only for the eye itself, but because it may set up serious irritation or even sympathetic ophthalmitis in its fellow. The simple needling of an opaque capsule after cataract extraction has caused such a result.

A permanent damage to the eye seems to be inflicted in some cases of sympathetic irritation. Thus, Brailey[12] quotes 29 cases where enucleation of the exciter was performed to relieve irritation; 16 were cured, while 13 were uninfluenced or rendered worse. If the irritation in these cases was a pure neurosis set up by the injured eye, why were they not all cured by the removal of the cause?

Irritation often continues for years without any inflammation occurring, or it may last only a few days before inflammation follows it. The temporary irritation which seems to culminate in inflammation would appear to be different in its causation from that which occurs independently.

I regret that neither my own personal experience nor what I have been able to gather from the writings of others has enabled me to deal in a more capable manner with the pathological significance of sympathetic irritation.

I have no doubt that a seriously damaged eyeball is prejudicial more or less to its fellow, and may predispose it to various kinds of discomforts, if not diseases, and that those which possess no useful sight should be removed or eviscerated, while a shrunken globe interferes with the safe wearing of a glass eye, and may at any time become a source of danger. A degenerate inflamed eyeball seems likely to make an excellent incubator for micro-organisms, and it is certainly damaging to the general health, which I have often

[7] *Oph. Rev.*, vol. xv.
[8] British Medical Journal, 1898, vol. i, p. 1580.
[9] *Trans., Internat. Med. Cong.*, 1881.
[10] *Trans. Oph. Soc.*, vol. vi.
[11] *Oph. Rev.*, ii, 23.
[12] *Trans. Oph. Soc.*, vol. iv.

seen materially benefited by its removal. Synechiæ and cicatricial pressure or traction should be, if practicable, relieved; but the rules of conservatism in surgery should not be overstated in order to retain blind and often dangerous eyes. The good practice initiated by Augustin Prichard for the removal of eyeballs in association with sympathetic troubles should be still further extended, and an eye that is neither comely nor useful, which is in any degree a possible source of mischief to its fellow should be enucleated.

II.—Professor LANDOLT,
Paris.

PROFESSOR LANDOLT quite agreed with Mr. Cross's conclusions. A lost eye which might become a danger to the fellow eye should be removed. If he had made this statement some twenty or thirty years ago it would have seemed superfluous, since everybody would have agreed with this principle. But since then many proposals had been made to save the healthy eye without enucleation of the damaged eye, such as resection of the optic nerve, of the ciliary nerves, subconjunctival injections of antiseptics, etc. He had never followed any of these procedures, but a short time ago he had the opportunity of seeing a case in which, after the penetration of one eye by a foreign body, notwithstanding subconjunctival injections of sublimate, both eyes followed the ordinary course—that is to say, the first became very severely inflamed, and gradually shrank, whilst the other non-wounded eye manifested the symptoms of sympathetic ophthalmitis in a pronounced degree. The removal of the shrinking eye, in which a foreign body was subsequently found, stopped the further development of the sympathetic ophthalmitis in the other.

III.—MALCOLM M. MCHARDY, F.R.C.S.Edin.,
Professor of Ophthalmology, King's College, London.

MR. MCHARDY said: It is satisfactory to recognise that this company of highly experienced ophthalmic surgeons, sitting under our distinguished President, who has such unsurpassed, if not indeed unparalleled, experience in cases of eye injury, are agreed on one point—namely, as to the direct duty of recommending and urging the prompt removal of an eye blinded by injury. They say the rule is for doctors to differ; maybe oculists do so also; but whether that be the rule or no, it is proved by the exception that we are not differing, but agree as to the treatment for a pathological chain of events, which we recognise we have not yet satisfactorily disentangled. Our opinion and advice may, it seems, be briefly and comprehensively summed up in the speech I have to repeat only too often, but happily seldom or never without carrying the desired conviction to the patient: "My friend, you know that no tenant is better than a bad tenant; I know that your injured eye is the worst tenant you could have. It was an eye while it could see; now it cannot, and will not again see; it may at any moment cause the gravest danger to the sight of your only remaining organ of sight. It is good business to cut a first loss at once; part with that injured bad tenant, and have peace of mind as to the security of your only seeing eye." This reminds me of the excellent counsel of that Nestor of English ophthalmologists, our revered Sir William Bowman. He said, "In such cases as those in which you are bound to recommend enucleation of the injured eye for the insurance of the fellow, you should urge the enucleation, but you should be careful never to proclaim it as necessary to the salvation of the sight of the fellow eye. The period which may elapse between injury of the exciting eye and inflammation of the sympathising eye is so variable, even from three weeks to forty years, and if the precaution named be omitted, each year of such postponement tends to damage the patient's estimate of the oculist." I have never eviscerated; and I gather that none of us here, with our special experience, would in our own person allow delay, or any substitute for enucleation, to postpone our certain relief, by enucleation of the injured eye, from our well-grounded nightmare, that, at a future date, sympathetic ophthalmia might overtake our working eye.

IV.—HENRY CALEY, F.R.C.S.,
Deputy Surgeon-General, I.M.S. (retired).

SURGEON-GENERAL CALEY said a case of sympathetic irritation, the symptoms progressing to sympathetic inflammation in one eye, came under his notice in the person of a member of the Public Works Service in India, who seventeen years previously had been shot in the other eye. It was not known whether the shot was lodged in the globe. The injury was followed by inflammation and gradual loss of sight, only bare perception remaining. After this interval of seventeen years the injured eye became sensitive and slightly inflamed. This was soon followed by sympathetic irritation, with symptoms of pain, tenderness, and congestion in the good eye. He removed the injured eye and found a shot lodged in it. The irritation of the sound eye quickly subsided and did not return, and good sight remained. This attack must, he thought, have been due to some neurotic influence, and not due to direct microbic or other inflammation spreading from the injured eye.

V.—C. DEVEREUX MARSHALL, F.R.C.S.,
Curator and Librarian, Royal London Ophthalmic Hospital, Moorfields.

MR. MARSHALL said: I am sorry not to have been able to bring forward as much evidence on this subject as I should have wished, but I found it impossible owing to want of time. With regard to the two theories which are held, I have always seen great difficulty in accepting that of Deutschmann. If sympathetic ophthalmitis were the result of micro-organisms travelling round to the healthy eye from the injured by way of the optic nerves, we should certainly expect to find the disease most marked in those cases where the eye was most surrounded with organisms such as in cases of panophthalmitis and gonorrhœal ophthalmitis. As a matter of fact, it is just these cases which do not produce the disease, but the comparatively quiet cases in which there is an injury to the iris or ciliary region. Again, some of Deutschmann's animals did certainly show signs of disease in the other eye after the injection of organisms into the optic nerve sheaths, but only if they escaped the danger of general infection or of meningitis, of which many died. No one ever heard of a patient having an eye likely to produce sympathetic disease suffering in this way. Again, it is a cyclitis rather than an optic neuritis which we look for. Organisms are said to have been found in the optic nerve and in the ciliary body of the sympathising eye, but the evidence of this requires confirmation before it can be thoroughly accepted. I am much interested in Mr. Cross's suggestion that a combination of the two theories may explain some facts which neither alone are capable of doing.

VI.—Professor G. E. DE SCHWEINITZ, M.D.,
Philadelphia.

PROFESSOR DE SCHWEINITZ said that he agreed with the views expressed by Mr. Cross and Dr. Landolt as to the treatment of an eye liable to excite ophthalmitis. He maintained that although there might be cases in which it was impossible sharply to differentiate between sympathetic ophthalmitis and sympathetic irritation, these two affections should be regarded as separate diseases, each with its own pathology. He concluded with a plea for a more thorough examination of patients with sympathetic ophthalmitis, an examination of the blood for leucocytosis, of the range of temperature, etc., and suggested that such examinations might afford materials for differential diagnosis.

VII.—R. A. REEVE, M.D.,
Professor of Ophthalmology and Otology, University of Toronto

DR. REEVE said: In a case of sympathetic irritation in which distinct photophobia had been present for fifteen years, necessitating the wearing of smoked lenses, and in which the lost eye was much congested and very irritable, the cataractous lens spontaneously dislocated, and recurrent hæmophthalmos occurred. Mules's evisceration was followed in a few weeks' time by complete disappearance of the photophobia. In the only two cases of sympathetic ophthalmitis (iritis) under my care which have recovered, enucleation was done. This is to me

a significant fact. In the first instance, fully 25 years ago, the inflammation of the second eye did not appear until several weeks after enucleation. Atropine and local depletion, with the internal exhibition of mercury, were pushed and full recovery ensued. In the second case the patient was suffering from the abuse of alcohol, and the sympathetic inflammation was fully set up in three weeks after injury to the exciter. Prompt enucleation in conjunction with atropine, mercury, etc., resulted in full recovery.

VIII.—Adolph Bronner, M.D.,
Surgeon, Bradford Eye and Ear Hospital.

Dr. Bronner had seen and reported on a case of sympathetic ophthalmia in which there was no external wound of the injured eye. The patient, a woman, received a blow from the fist on the eye. There was discoloration of the lens, hæmorrhage into the vitreous, but no external wound, as proved by microscopical examination. In three weeks sympathetic ophthalmia of the second eye set in. The chief symptoms were keratitis punctata and papillitis. The injured eye was enucleated, and the vision of the sympathising eye improved up to $\frac{6}{18}$.

IX.—John Hern, M.D.,
Ophthalmic Surgeon, and Surgeon, Darlington Hospital.

Dr. Hern said: There can, I think, be no doubt that we have, as Mr. Cross says, two conditions—one a reflex neurosis, the other some condition of inflammation (microbic or otherwise) travelling back, and invading by continuity the good eye. I have seen two interesting cases bearing on this question of reflex neurosis. Both were men, both otherwise healthy, and both had a shrunken stump. In the first case I could produce an attack of sympathetic irritation by placing a glass eye on the stump. I removed the stump, and the eye is now worn with comfort and without any irritation. In the second case every now and then attacks of inflammation occurred in the good eye, which did not go on to injury of the sight or the destructive cyclitis usually experienced, but the interesting point is that symptoms of cerebral and general nervous irritation were constant, so much so that his wife refused to live with him. The stump was removed, the remaining eye has never since been inflamed, and the general and cerebral irritation has entirely disappeared now for at least three years.

Reply.

Mr. Richardson Cross, in thanking the foreign visitors and members for their valuable experiences, expressed his satisfaction that the general opinion had been strongly expressed against the retention of dangerous eyeballs, or the hopeless efforts sometimes made to save them to the detriment of the other. With regard to the pathology of sympathetic cases the speakers all seemed to agree with him that neither the microbic theory nor that of reflex neurosis was definitely proved. There was a possibility that when scientific investigation was more perfect various kinds of microbes might be found implicating, if not actually causing, sympathetic complications. It seemed to him necessary to work carefully in the direction of seeing how far any general infection of the system (blood or organs) was present where septic uveitis had been developed in the sympathising eye.

THE USE OF HOMATROPINE IN SOME CASES OF MUSCULAR ASTHENOPIA.

By Adolph Bronner, M.D.,
[Senior Surgeon to the Bradford Eye and Ear Hospital.

Abstract.

Dr. Bronner drew attention to the fact that cases of muscular asthenopia were becoming much more frequent, owing to the higher standard of education in schools and universities, and to the increased pressure and competition in daily life. The majority of cases were relieved by glasses. At the Bradford Eye and Ear Hospital during the past year no fewer than 2,300 pairs of glasses were ordered, about 400 of which were cylindrical. In 1885 at the same hospital only 324 cases of error of refraction were recorded, of which 16 were "astigmatic."

Many cases of error of refraction could only be properly diagnosed with the help of retinoscopy. On the Continent retinoscopy was not so universally used as in England, and therefore the number of cases of so-called asthenopia was very much larger than in this country. In some cases, however, the use of correcting glasses, spherical, cylindrical, or prismatic, did not relieve the pain. The orthodox method of treatment was to order atropine drops. The patient was thus prevented from following his occupation for some weeks, which in busy manufacturing districts was a very grave consideration. In many of these cases the use of homatropine hydrobromate drops, 1 per cent. one or twice at bedtime for a week or two, relieved the symptoms. In cases in which a patient was working for an examination or engaged in some important work, and was suddenly seized with asthenopia, the use of homatropine enabled him to tide over the difficulty till he could give his eyes a thorough rest. Many patients refused to wear glasses all day, and if the error of refraction was slight, the application of homatropine at certain periods enabled them to do without the glasses. Numerous cases illustrating the different types of patients were recorded.

Discussion.

Mr. Arnold Lawson thought that although homatropine was very useful in a large number of cases, there still remained a small percentage in which atropine was the only reliable drug, and this was especially the case in young children. A point to bear in mind was that the chief object of the treatment of asthenopia was the relief of the patient's symptoms, and if that was accomplished by the use of homatropine it was unnecessary and undesirable to resort to atropine, which caused great inconvenience for so long a time. In his experience the dilatation afforded by homatropine and cocaine caused sufficient paralysis of accommodation for the above purpose. If the correction resulting from this method did not prove sufficient, atropine could be used later. It was also important to remember that the absolute correction of refracted errors was often not necessary. Thus a small amount of hypermetropia was of no pathological significance, and if the use of homatropine involved leaving this amount of latent hypermetropia uncorrected, it was of no importance provided that the patient's symptoms were relieved.

A CONSECUTIVE SERIES OF CASES OF REMOVAL OF THE LENS IN HIGH MYOPIA.

By Samuel Lodge, Jun., M.D.,
Honorary Surgeon to The Eye, Ear and Throat Department of the Royal Halifax Infirmary.

Case I.—Miss V., aged 23, when 11 years of age, was prescribed −6.0 D. When 20 years of age she was prescribed −12.0 D, and these she continued to wear until 9 months before consulting me in March, 1897, when she accidentally found that two pairs of −12.0 D. glasses one in front of the other improved her vision, and these two pairs she continued to wear. Retinoscopy showed that in the right eye there was myopia of −33 D, and in the left −22 D. The corrected vision in neither eye was better than $\frac{5}{6}$. The glasses prescribed were R. −32; L. −29. The vision got worse and fell with the glasses to R. $\frac{5}{60}$; L. $\frac{5}{60}$. The left lens was then needled, and subsequently the lens was let out by linear extraction. Although she had an attack of scarlatina the next day, no complications occurred.

Vision with Sph.—2.0 D. cyl. + 1.0 D. ax. vert. = $\frac{5}{15}$.
And with Sph. + 2.0 D. cyl. + 1.0 D. ax. vert. = J. 4 at 25 cm.

The patient was so pleased with the result that she requested that the other eye might also be done.

After the removal of the lens:

Vision = Sph. — 1.0 D. $\frac{5}{15}$, Sph. + 2.0 D. J. 6 at 25 cm.

Case II.—A lady, aged 21, who had myopia of 20 D in the right eye and 21 D in the left, with her correction only saw $\frac{5}{24}$. The left lens was then needled and subsequently extracted.

The vision with sph. + 3.5 D cyl. — 1.0 D ax. 5° in $\frac{5}{6}$
sph. + 7.0 D cyl. — 1.0 D ax. 5° in J. 1 at 25 cm.

Case III.—A man, whose subsequent progress it has not been possible to follow up. The left eye was needled and then extracted, and the result was extremely good. In this case the myopia was about − 20 D.

CASE IV.—A woman, aged 27, who had over 25 D of myopia. After needling and extraction the vision without correction was $\frac{6}{18}$, and with + 2.0 D J. 12 at 50 cm.

CASE V.—A girl, aged 13, who had 15 D of myopia in the right eye and 4 D in the left. The right lens was needled and extracted, and very shortly after the operation.

Vision = sph. + 2.0 D $\frac{6}{5}$, sph. + 7.0 D, J. 6 at 25 cm.,

though there was still some lens *débris* in the pupil.

REMARKS.—I shall content myself with saying that in not one of the six eyes did I observe any complication other than one is accustomed to cope with successfully when operating on lamellar cataract in children or adults.

A DISCUSSION ON VISUAL TESTS.

I.—HENRY CALEY, F.R.C.S.,

Deputy-Surgeon-General, I.M.S. (Retired)

IN the due consideration of this subject two important questions are involved. First, whether the standard of vision that these tests imply is sufficiently good for the requirements of the different public services; and secondly, whether the tests themselves, as laid down in the Regulations, do really insure that this minimum is attained.

NAVY AND ARMY.

The subject is very important on many grounds. In the first place, the efficiency of all such service depends largely upon the men having sufficiently good sight to enable them to fully carry out their duties. Secondly, in the interest of would-be candidates for commissions, it is most desirable that they should be able to find out in good time and with reasonable certainty whether they are likely to be pronounced fit or unfit by the medical examiners. Here again the subject is of special interest to the medical profession generally, who are necessarily consulted on such points.

It would of course be most desirable that all the men in the navy, the army, and other services should have normal vision, but such a standard seems to be quite unattainable. If it were insisted on it would, under present conditions, be impossible to get the requisite number of recruits, and the services are forced to accept men whose vision is up to a certain standard of practical fitness, though below normal.

I shall in this paper restrict my remarks to defects of vision due to abnormalities of refraction or to defective colour perception, leaving out of consideration opacities, amblyopia, or other forms of eye disease, though of course the visual tests would at the same time detect defective vision from any cause.

For the British Army the required test is that the recruit must be able to see distinctly, and with each eye separately, the round dots (Snellen's) of $\frac{1}{5}$ inch diameter (0.2 inch) at 10 feet distance. This corresponds with seeing the 3-foot bull's-eye target at 600 yards—the dots are used instead of test types because a certain proportion of recruits are unable to read—and also because the test is thus rendered more simple in application. The dot test is equivalent to reading Snellen's type D = 24 at 6 metres, or 20 feet. With normal sight the dots would be clearly seen at 43 feet, so that the sight required from a recruit is $\frac{1}{2}$ of normal.

This has been found by careful observations, particularly carried out by the late Sir T. Longmore, to represent about 1.75 dioptres of myopia. For the various departments of the army, clerks, etc., and for the militia, it is only required to see the test dots at 5 feet, so that for these a man is admissible with myopia = about 3.5 D. A man with 1.75 D. of myopia has no clear vision beyond about 2 to 3 feet. He cannot recognise a man's face beyond 6 yards, instead of about 40 yards. He cannot discern a man further than 400 yards instead of 1,000 to 1,200, as can be done by a person with normal vision, and he could not see a mounted man (moving) much over 700 yards, instead of over 2,000. In the days of "Old Brown Bess" and in the early days of rifles such an amount of sight would enable a soldier to shoot fairly well, but modern long-range rifles would in his hands be useless beyond a range of 400 yards or so; and it is a question for the military authorities to decide, if there is any use in taking recruits with only $\frac{1}{2}$ of normal sight. I think the standard should be raised. Of course, to raise the standard might diminish the number of available recruits, and in these days there is great difficulty in getting the requisite number of men of good physique; but there is no doubt that men with only the minimum vision required cannot be efficient soldiers with modern rifles. It must also be borne in mind that defective sight due to myopia is increased out of all proportion by conditions of fog, rain, dust or smoke, and also in dim light, as twilight—conditions which render a myope almost helplessly blind.

Fortunately, by far the majority of recruits have a much higher degree of sight than this minimum, so that if the standard were raised it would probably cause the rejection of only a very small proportion.

The tests are chiefly directed against myopia, and no other test is employed, so that colour blindness and hypermetropia may pass undetected; but for soldiers in the ranks, hypermetropia is certainly a much less serious defect than myopia.

This dot test for soldiers is perhaps a rough-and-ready one, but still it is simple and fairly efficient if carefully applied, and any elaborate test that required much time and attention would be impracticable for examining the 50,000 or 60,000 recruits that have to be examined every year for the British army.

For commissioned officers in all branches, including the Royal Army Medical Corps and the Indian Medical Service, the Regulations lay down that if a candidate can with each eye, examined separately and without glasses, read Snellen's type D = 6 at 6 metres (20 feet), and small type D = 0.6 at any distance selected by himself, he is considered fit. This is a fair practical test of normal vision.

If he cannot do so he may yet be accepted as fit if he can read with each eye without glasses at least D = 24 at 6 metres, and also the small type D = 0.8 at any distance selected by himself, provided that with correcting lenses his sight is brought up to $\frac{6}{6}$ with one eye, and at least $\frac{6}{12}$ with the other—the defect being due to faulty reflection. He must also be able to distinguish the principal colours. We may say then that a commissioned officer is eligible who has myopia of about 1.75 D., provided that with correcting glasses the sight of one eye is raised to normal ($\frac{6}{6}$), and of the other to at least $\frac{6}{12}$.

The tests employed are chiefly directed against myopia, and a youth who is able to see $\frac{6}{6}$ small type D = 0.6 may yet have some degree of hypermetropia. For military service this moderate hypermetropia is a less serious defect than myopia. As a young man his power of accommodation will generally serve to overcome the hypermetropia for all outdoor work without much eye strain, and in the higher ranks he can always use glasses. It is often said that there is no reason why all ranks should not be allowed to wear glasses, as is done in many Continental armies.

In our army, which, by reason of its smallness, should be very select and which has to do such varied work in all parts of the world, the standard of efficiency must be kept very high, and I think that on active service the objection to taking men whose efficiency depends on their using glasses is very great. In many circumstances, and especially in cases where good sight would be most urgently required; as so often happens in our numerous Indian frontier and African wars, the proper supply of glasses could not be ensured. Again, in condition of fog, rain, dust, or at night, etc., glasses are worse than useless. A man in front of the enemy or in any difficult position has his hands fully employed, and if unable to shift or wipe his glasses he would be rendered almost blind. The same reasons hold for officers, but there seems no reason why an officer, if he is up to the present standard of vision without glasses, should not use glasses to improve his sight, and there is no rule—only custom or fashion—against his doing so.

The present standard ensures that a soldier, either officer or private, has fairly useful sight without glasses, and this is, I consider, essential, and in the interests of the army and of the officers and men themselves, and it could not be safely diminished. This standard of vision for officers may cause the rejection of some otherwise good men; but the same argument would apply to other physical tests, as height, weight, etc., which are of less importance for an officer than good sight.

For the Royal Navy, as laid down by the "Queen's Regulations," only one rule is in force—"that persons of any class or age labouring under any defects..... including defective sight, are not admissible." This stringent rule is, however, modified

by the following rider: "As it is possible that some of these defects may exist in a minor degree, the examining officers must be guided by their own judgment as to whether the defects are of such importance as entirely to disqualify for the service."

In practice, much latitude is given, not only for departments not requiring a high degree of sight, but for sailors also. A certain degree of ametropia is allowed, and for colours only a rough examination is made with flags and coloured lights. If the person can recognise the principal colours he may be passed.

It would no doubt be a better system if a definite standard and definite vision tests on uniform systems were laid down for the Royal Navy, but as the examinations are conducted by competent medical officers, the present method no doubt works well enough in practice.

For naval cadets and for engineer apprentices, normal vision, tested by Snellen's types for near and distant objects, is required, and also full perception of colours tested by Holmgren's wools, and this standard of normal vision could not wisely be reduced.

Mercantile Marine.

For ordinary seamen no examination is made, and no standard is laid down.

For certificated officers and for apprentices (and for boys entering from training ships) the rules of the Board of Trade are as follows:

Snellen's test types are employed. When being examined the candidate may use both eyes or either eye, so that in reality he might have very defective sight in one eye and yet pass (p. 117, para. 4).

The plate of test types (Snellen's old types are used, not the metrical) are placed at a distance of 16 feet, and the candidate must be able to read No. XL at 16 feet (he is only required to be able to read 3 out of the 5 letters in the line (p. 118), so that if with one eye or with both eyes together he has about $\frac{1}{3}$ to $\frac{2}{3}$ of normal sight he may pass.

If unable to read test dots are employed, and the candidate must be able to see and count them at 8 feet; this only means about $\frac{1}{5}$ of normal vision.

For colour sight he is tested with Holmgren's wools.

These Board of Trade regulations would admit of very defective sight in the mercantile marine, even for certified officers, and certainly in the interests of the merchant service and of the public they need revision, especially on the following very important points:

1. No examination is made of the eyesight of ordinary seamen. This is a dangerous omission. Ships, crews, and passengers must be endangered if the sailors and look-out men do not possess good sight and colour vision.

Some large shipping companies guard themselves by having their own rules and vision tests, and in some—as the White Star line—special men on every ship are examined and selected as look-out men.

2. To allow the candidate to use "both eyes or either eye" when being tested is a very unsafe method. He may be almost blind of one eye, or the dim sight of one may so blur the sight of the other that he can only see clearly with one eye closed, and yet he may pass as a certificated officer.

3. The standard required for officers of being able to read less than $(S.)^{16}_{40}$ is very low—one third—far lower than should be required of an officer on board ship. In dim light or thick weather such a man cannot even see a ship at a very moderate distance.

Also the Board of Trade regulations are themselves very imperfectly carried out, as the examinations are made locally in various seaports, and are not conducted by skilled medical officers. The annual reports of the Board of Trade show that mistakes are often made, especially in the colour tests, which require a good deal of technical skill and scientific knowledge to carry out with any degree of fairness and certainty. There is no doubt that for the safety of our shipping a more thorough, efficient, and uniform system of examining the eyesight of officers and crews in our mercantile marine is urgently needed. How many of our shipping disasters depend on defective sight it is impossible to conjecture.

For our English pilot service no standard of vision is required, and their eyes are not examined, except in a few ports a superficial examination is made. Pilots probably require more perfect sight than any other class of seamen to enable them to carry out their duties safely, and it is hardly credible that in England men can be and are registered and certified as pilots who have defective sight, and are perhaps colour blind. For the Indian pilot service normal vision is required, and also full colour perception, and the same applies to guards, drivers, and other railway servants.

Signalling in Army and Navy.

In conclusion I will very briefly touch upon one other point in connection with vision, which is of great importance in selecting soldiers and sailors and signalmen. This is what may be termed quickness of vision, the faculty of seeing and distinguishing retinal impressions which follow one another very rapidly. There was an interesting paper on this subject read lately at the United States Institution by Mr. Stewart Bruce.

It is found that of men selected for signalling classes only about 15 per cent. have quick enough sight to enable them to go through the course of instruction and to become efficient signallers. They do perfectly well in the early stage, while the signals are slow, but they quite fail to read quick signals, as at the rate of 12 words a minute (the Morse system), to do which the retina must receive and distinguish over 200 impressions a minute.

This quickness of sight seems to depend on the short persistence and short duration of each visual impression on the retina. The less this persistence, that is, the more quickly each impression fades and is eliminated the greater the power of reading rapid signals. In this respect there is a great difference in different individuals irrespective of their sight being otherwise normal.

Mr. Bruce has invented an optical instrument, the aërial graphoscope, for measuring the persistence of retinal impressions, so that men can be tested beforehand as to their fitness for entering a signalling class.

I will now conclude by expressing the hope that some of those who have done me the honour of listening to my paper will favour us with their views on the subject of the efficiency of these vision tests in use in the various public services, particularly those who have had opportunities of practically observing the eyesight of men and officers under the conditions of recent active service, as the Indian Frontier, in Egypt, and West Africa.

II.—E. Landolt, M.D.,
Médecin-Oculiste Consultant à l'Institution Nationale des Jeunes Aveugles, Paris.

TEST TYPES FOR THE DETERMINATION OF ACUTENESS OF VISION.

According to the definition adopted in ophthalmology, the acuteness of vision is determined by the smallest angle under which the eye can distinguish two points as being separated.

The acuteness of vision is therefore inversely proportional to the smallest visual angle. As it is a question of relatively small angles, the visual acuity is estimated as inversely proportional to the space which separates the two points; or, if the interval between the points be constant, as proportional to the distance which separates the eye from the test object. The standard visual acuity corresponds to an angle of one minute.

It would not, however, be possible to estimate the acuteness of vision by means only of two points of variable distance, because it is almost impossible to determine with precision the moment when the two points cease to be seen as separate, and become merged in a single visual impression.

It is for this reason that more or less complicated test objects are used in the examination of the acuteness of vision. To Snellen we are indebted for having endowed ophthalmology with the capital test letters which are used universally for the determination of visual acuity.

1. Though generally employed, letters as test types are open to more than one objection. To begin with, they cannot be used for the illiterate, and they are more easily recognised by those accustomed to reading than by those who read little, or to whom letters of this form are not familiar.

To the first of these objections Snellen replied by con-

structing, for the illiterate, a set of signs of the same dimensions as the letters, some in the form of an E and some in that of a square in which one of the sides is wanting. But the unit of measure is evidently not the same for these two signs, nor is their visibility the same as that of the letters.

2. Some letters are much more easily recognised than others—A, for instance, than B; O than M, etc.

3. The recognition of letters is a more complicated process than might at first be thought, a process in which light sense, movements of the eyes, and, above all, intellectual functions play an important part. I need simply mention the case of word-blindness, where the acuity of vision is intact whilst the letters are no longer recognised.

4. But the principal objection to be raised against the letters as tests is that they do not answer to the definition of the acuteness of vision. Snellen, in fixing the minimum visual angle at one minute, says that his test types are based on the plan of three parallel lines with an intervening space equal to their own thickness. The letters are formed in squares of which the side, when corresponding to the normal acuity, subtends an angle of 5 minutes. The height and breadth of the square being divided into five equal parts, there result twenty-five small squares, black and white, of which the black constitute the letter.

He gives as specimens the letters L, F, and T. With all the esteem we have for Snellen's merit, and our sincere friendship for him, we cannot but ask where the three parallel lines or the two points, the separate perception of which should measure the visual acuity, are to be found here.

5. The square letters have given rise to another serious controversy. Vierordt, Javal, Giraud-Teulon, and others have pointed out that the vision, measured with these test objects, should be expressed as inversely proportional, not to the height of the letter, but to its square. Snellen replies to this objection that the act of vision which concerns the recognition of letters is a compound function, measured partly by linear and partly by square measure.[1]

This being the case, the conclusion to be arrived at is that the function, determined by the recognition of letters, is not, properly speaking, the acuteness of vision, which is defined by the separate distinguishing of two points or lines, a measure essentially linear.

The letters would be serviceable only if, for their recognition, the separate perception of two points under a given angle would be required.

I have endeavoured[2] to realise this desideratum by giving, for example, to an R and a B, to a C and an O such a form as to be distinguishable only to one who is able to perceive the interval at the base of the R, or that on the right hand of the C. But it is only a very limited number of letters which can be thus utilised, and when it is a question of distinguishing between only two signs, the possibility of hitting on the right one by chance is too great.

One might attempt to solve the problem by the aid of a simple line of given thickness, with an interval at some part. But here this difficulty is met that, when one of the parts of the line separated in two by a gap is very short in relation to the other, as, for example, the square dot of an i, the dot, when approaching the limit of visibility, will always be seen less clearly than the line in consequence of the irradiation which encroaches on it from four sides, when it affects the line only from two sides. Added to this it would be difficult, in practice, to make the individual under examination indicate the place where he supposes the gap to be.

There is, however, a simple means of surmounting this difficulty. Let us give to the broken line the shape of a circle. Thus we shall have on both sides of the gap the same amount of black, and, in whatever way we choose to place it, the person examined can indicate the position of the gap by a simple movement of the hand.

[1] "We therefore look upon the act of vision as a compound function, partly to be measured by linear partly by square measure. But even if we should have to grant to Vierordt that "truth is more nearly approached by expressing the psychological value of the retinal image by square measure," there will remain good reasons for continuing to determine vision by by linear measure, and to register it as such; in the meantime bearing in mind that we can always find the square value should we want it."—Snellen, Bowman Lecture, p. 5.

[2] Tableau d'opto-types pour la détermination de l'acuité visuelle. etc. *Soc. Française d'opht.*, p. 157, 1889.

It is on these considerations that I have based my new test types. I could say my test type, because it is, in fact, only one and the same object, of which the position, distance, and shape can be varied.

It consists of a black circle on a white ground, presenting in some direction a gap which, for the unit of the acuteness of vision, corresponds to an angle of 1 minute.

In order not to render the test types too dissimilar to those usually employed, I have given to the circles the same thickness as the corresponding letters in Snellen's types. But the black in my types is constant, while that of the letters varies; for example, in the proportion of 3 to 4 for an L and an E.

In the present cards I have chosen the dimensions in such a manner that, placed at a distance of 5 metres, they correspond to the following fifteen degrees of visual acuity: 0.1, 0.15, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9; 1, 1.25, 1.50, 1.75, and 2.

The expression of the acuteness of vision in decimals, introduced by Monoyer, is an advantageous simplification. I add, however, to the figure which indicates the acuteness corresponding to 5 metres that of the distance at which it is recognised by the normal eye. These distances are as follows:

0.10=50.00 metres.	0.80=6.25 metres.
0.15=33.33 ,,	0.90=5.55 ,,
0.20=25.00 ,,	1.00=5.00 ,,
0.30=16.67 ,,	1.25=4.00 ,,
0.40=12.50 ,,	1.50=3.33 ,,
0.50=10.00 ,,	1.75=2.86 ,,
0.60= 8.33 ,,	2.00=2.50 ,,
0.70= 7.14 ,,	

My test types can serve therefore equally at any distance. The degree corresponding to the visual acuity will always be found by dividing the distance D' at which the individual distinguishes the sign by the distance D at which it is discerned by the normal eye.

$$V=\frac{D'}{D}$$

The interval between the degrees of visual acuity which I have chosen is that which experience has demonstrated as being the most practical. It corresponds very well to simple decimal fractions, in the sense that it is smaller for the higher degrees of acuity and greater for the lower degrees. Between 0.1 and 0.2 I have introduced 0.15. I have, on the other hand, extended the series above the standard visual acuity as far as its double: V=2.

When the visual acuity is less than 0.1 the card may be moved toward the patient until he is able to recognise the gap in the largest circle.

The corresponding visual acuity will be:

For 5 metres	...	...	...	...	=	0.10
,, 4 ,,	...	...	...	...	=	0.08
,, 3 ,,	...	...	...	...	=	0.06
,, 2 ,,	...	...	...	...	=	0.04
,, 1 ,,	...	...	...	...	=	0.02
,, 0.5 ,,	...	...	...	...	=	0.01

In other words, the acuity of vision is equal to twice as many hundredths of the normal as the distance expressed in metres.

For determining low degrees of visional acuity this method is just as simple as counting fingers, and is much more accurate.

In order to avoid the necessity of taking the card from the wall or of moving the patient toward the card, I have, since 1889, had the No. 0.1 of my scale printed on a separate circular cardboard, which, as practice has shown, is a very convenient arrangement.[3]

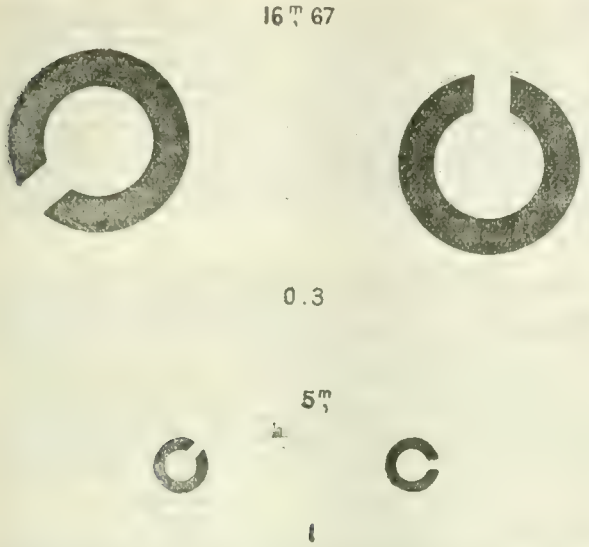
One of the cards contains for each degree of acuity two signs, while the other has only one. With the letters each group ought to contain many tests, because of the difference of visibility of the letters, and because they are easily learned by heart. With my system, on the contrary, one sign is sufficient; we have only to vary the direction of the card to change at the same time all the tests.

They can be shown in a mirror without requiring to be printed inversely, as is the case with the letters.

The card is square, not rectangular as are those generally in use. This shape allows a more uniform illumination if a reflector is used.

But the greatest advantages which, I think, I can claim for these test types is that they realise much better than letters

[3] This card, as well as the present new test-types, may be procured from M. O. Poin, publisher, Paris.



Two of the pairs of types designed by Dr. Landolt. "Optotypes Landolt." The whole sheet contains fifteen such pairs ranging from 50m. to 2.5cm.

the principle of the acuteness of vision, the determination of the "minimum separabile," that they exclude, as much as possible, intellectual functions, and that, being themselves uniform and the same for the illiterate as for the educated of all nations, they represent a true unit, the essential and fundamental condition for every measure and examination.[1]

III.—George Mackay, M.D., F.R.C.S.E.,
Edinburgh.

Need for Improvement in the Examinations.

Looking from the standpoint of an ophthalmic surgeon and civilian, there appears to me much room for improvement in the methods of conducting eyesight examinations in the navy, army, and mercantile marine.

I base that opinion on such experiences as the following:

I.—*Illustrations from the Royal Navy.*

1. A sturdy young bluejacket aged 21 came to me lately with six dioptres of hypermetropia in each eye. He had been in a co-operative store and subsequently in the goods department of a large English railway (duly passing the elementary sight test for the latter), but left both situations because he could not read the labels on packages at night. He then decided to enter the Royal Navy! In 1895 he passed the type and colour test on a training ship, and later at Chatham Depôt was again tested with types, was given a certificate of "good vision," and went to sea on a battleship. After four years' service he came to me confessing his inability to read the compass or to do look-out work at night, and lamenting his consequent difficulty in getting promotion to A.B. One naval surgeon had attributed his bad vision to the "tropics," and tried to ameliorate it by confinement to a dark room and a pressure bandage! Eventually while at home on leave his mother gave him spectacles, and with + 5D. sph. he now gets $\frac{6}{9}$ with each eye, and reads J.1. Without glasses he has about one-sixth of normal distant vision, and no prospect of making a career as a sailor. The British taxpayer has wasted brains and money in trying to make this man an integral part of the fighting machine. The want of an efficient examination into the refraction of his eyes has misled him into an occupation for which he is becoming more and more unsuited, and he should in all charity have been debarred from it at the outset.

2. I know of a naval cadet admitted as an emmetrope on a purely subjective type test who had to leave the navy as a lieutenant without a pension because his hypermetropia became manifest after fever had lowered his muscular tone and accommodative power.

3. Until lately I was under the impression that Holmgren's wools were now employed as the official test for colour sense in the navy and on the various training ships through which boys are admitted to that service. But I have positive knowledge that not many months ago a circular letter was issued from the Admiralty to ships on a foreign station intimating that Snellen's test types would be issued as required, but that "Holmgren's coloured wools are unnecessary, as coloured letters are included with the test types, but coloured bunting may be used exceptionally if required."

Those who are familiar with Professor Snellen's pamphlet entitled *Optotypi ad visum determinandum*, will recall that in the later editions he has inserted two coloured letters (one red, the other green) on a black page. Professor Snellen informs me that he designed these to be used in carrying out his well-known chromatic test for malingerers, not as a test of the colour sense, but as a means of detecting whether an individual is or is not using an eye which he declares is incapable of sight. The test necessitates the use of a pair of spectacles with one green glass and one red glass of complementary hues, and these must harmonise perfectly with the coloured type—a detail not easily secured on an opaque surface, as Professor Snellen himself admits.

Is it possible that these are the coloured type referred to in the Admiralty circular? If they are not, perhaps one of the naval surgeons will inform us what "coloured type" are issued, and whether they appear to satisfy the principle of "comparison," on which Holmgren's test is founded.

In any case after the very decided pronouncement of the Royal Society's Committee in 1892 in favour of Holmgren's wools as the primary test for colour vision,[1] it seems very regrettable that the Admiralty should show the Board of Trade and other public services so bad an example as to withdraw that test in any of its departments.

II.—*Illustrations from the Army.*

1. I recall several cases of soldiers excusing or trying to excuse themselves from further service as their hypermetropia became manifest after admission. I know that a sergeant in a crack cavalry regiment applied for his pension on this account some time before he had fully earned it.

2. There is another aspect of this question. We hear a good deal about the difficulty of getting recruits. I am convinced that the material for many excellent departmental handicraftsmen is lost by an unreasoning and unscientific adherence to the hard-and-fast eyesight standard at present employed, based on the perception of a bull's-eye dot test at prescribed distances, and not on a careful consideration of the particular duties which the candidate has to perform and the probable fitness of his eyes and stability of his refraction in relation to those duties.

I know an intelligent, active young gunmaker who is debarred by a moderate myopic astigmatism from passing with one eye the entrance test for the Government Small Arms Factory. I venture to predict that his error will probably postpone the incidence of presbyopia; he is an excellent workman, a steady fellow, with a physique above the average, and otherwise strong and healthy.

III.—*Illustrations from the Mercantile Marine.*

The unsatisfactory arrangements made by the Board of Trade for vision testing in the Mercantile Marine have been subjected to long-standing criticism.

The Board of Trade has blundered badly in the past and is still blundering, as men ever must when they try to regulate that which they do not understand.

Under pressure of public opinion, expressed chiefly by members of our profession, the Board instituted in 1877 an eyesight examination for all candidates for promotion to the rank of second mate and upwards. But first by using a fallacious colour test and now by employing incompetent lay examiners, and neglecting to apply sight tests early enough, the certificates of the Board are rendered frequently misleading

[1] The degree of acuteness of vision found with my test types and that found with the letters is fairly the same, provided a sufficient number of letters are used to exclude the errors arising from the various causes which have been mentioned above.

[1] *Report of the Committee on Colour Vision*: Parliamentary paper [C. 6688], p. 4, Recommendation 4.

often valueless, and in many sad instances positively ruinous.

I need only remind the members of this Section that a Committee of the British Medical Association for the better control of mariners' eyesight already exists, and for some years past has endeavoured to arouse the Board of Trade to adopt better methods. In its report[2] to the Council of the Association this year it has recommended that a representation should again be made to the Board urging it—

(1) To entrust its eyesight examinations to medical men holding a certificate of ophthalmic proficiency, and

(2) To insist on every apprentice passing an eyesight examination at the outset of his career.

The Committee is prepared to support both of these requests with evidence showing the practical necessity for them.

Conclusions.

It appears to me that the key to the problem in all the public services lies in the employment of competent examiners. In that connection permit me to recall attention to the fact that, consequent upon a discussion which I raised on "Eyesight and the Public Services," the Ophthalmological Society of the United Kingdom on January 31st, 1895, passed a unanimous resolution that in its opinion

"no examination of eyesight is fair or satisfactory which depends merely upon the examination of form vision by test types, and dots, and omits an estimation of the refraction."[3]

It is unreasonable to expect every naval and military surgeon to be an ophthalmic specialist, but a few appointments offered to well-trained junior surgeons to act as "inspectors of eyesight" would only be in harmony with the combatant inspectorships of musketry, fortifications, etc., and would undoubtedly help to leaven the whole mass and train up a set of officers well fitted to advise the authorities on the best tests to employ, the standard of vision demanded by various duties, the propriety of permitting glasses to be worn in certain circumstances, and many details of the highest practical utility to the State.

COLOUR BLINDNESS AND DEFECTIVE SIGHT IN THE MERCANTILE MARINE.

DO THE BOARD OF TRADE REGULATIONS EXCLUDE COLOUR-BLIND AND NAUTICALLY-BLIND SAILORS FROM THE SEA SERVICE?

By T. H. BICKERTON, M.R.C.S.,
Liverpool.

MR. BICKERTON, after some preliminary remarks with regard to the history of the subject,[1] proceeded as follows:

The Number of Colour-Blind Sailors.

We learn from a perusal of the Board of Trade Reports that the old test—the naming of colours—was established in May, 1877, and rescinded on September 1st, 1894. During this period of 17 years and 3 months, the number of sailors compulsorily examined in colours, on their application for master's or mate's certificates, was 72,894; the failures to pass were 409, a percentage of 0.56. In the same period, the number of those who voluntarily offered themselves for examination in colours, paying 1s. for the privilege, was 6,370, with 293 failures, or a percentage of 4.5.

The total number therefore examined, amounted to 79,264, the failures to 702, and the percentage of failures to 0.88. Under the new test—the matching of colours—established on September 1st, 1894, the total number examined in the four years and four months (1894-98), was 21,720, the failures to pass in colours 215, or a percentage of 0.989.

If, now, we add the total failures of both periods together, we get a grand total of 917 individuals who have been stamped as colour-blind by the Board of Trade in the last 21 years and 7 months.

Where are these 917 Colour-blind Sailors?

This is a question I would earnestly commend to the public and to the sea-travelling community in particular. There is not a tittle of evidence to show that they have abandoned the sea life; on the contrary, provision not being made for them by the Board of Trade rules and regulations, past or present, we know that in spite of their defect they are allowed to continue their calling, and that in the vast majority of cases they do so to the menace of the public safety. At the present moment, and under the present regulations, colour-blind boys, colour-blind "look-outs," and colour-blind A.B.s are competent to assist in the navigation of ships, and may remain in the sea profession to the end of their days, while colour-blind officers who escaped detection by the old test, and colour-blind officers with endorsed certificates, are allowed to accept any engagement they can obtain either as officers or in any other capacity.

The Inaction of the Board of Trade.

Among the innumerable mysteries which surround the actions of the Board of Trade in this matter, none is more incomprehensible, nor permits greater room for psychological study, than the attitude which the Board has assumed on the question of eyesight as a possible factor in the production of maritime disasters. Colour-blind tests, say the Board of Trade reports, were instituted because colour-blind sailors ran great risk of causing collisions. Might it not, therefore, have been expected that the successors of those who had officially voiced so universal and sensible a belief would have hastened to make inquiry into this possible cause on the occasion of such disasters? Is not perfect sight the first essential to the avoidance of obstacles, even on land? An examination of the eyesight of the intending witnesses, even as a formality, in order to eliminate the bare possibility of defective vision having contributed in any way to disaster, would commend itself to the judgment of every individual in the land. It cannot but surprise every thinking man to learn that out of the tens of thousands of shipping inquiries that have been held, in not one single case has the Board of Trade ordered an inquiry into the matter. One would have thought that so simple a suggestion would have been welcomed by any body of gentlemen anxious to elucidate the enigmas which so many of our most appalling shipping disasters present. But no. To all such suggestions the Board presents a stolid veto. On the loss of the *Elbe* with 380 lives, I wrote to the Board suggesting the desirability of examining the eyesight and colour-sense of such of the *Crathie's* crew as were on deck at the time of the collision, and they sent me a reply to the effect that the suggestion would be carefully borne in mind.

The inquiry was duly held as announced, but, the question of defective sight not being mentioned in the full reports appearing in the *Times*, I wrote again to the Board of Trade asking for a definite statement of fact as to whether these look-outs had actually been examined or no. In reply I was honoured with the accompanying:

Board of Trade (Marine Department),
7, Whitehall Gardens,
June 26th, 1895.

SIR,—With reference to your letter of the 19th inst., asking whether the look-outs of the *Crathie* were examined as to their eyesight, and where you can obtain a copy of the evidence taken, I am directed by the Board of Trade to state that the witnesses were not examined as to their eyesight, and that the evidence of both sides showed that colour blindness had nothing to do with the cause of the collision.—I am Sir, your obedient servant,

(Signed) INGRAM B. WALKER.

Colour-blindness, or defective vision, may or may not have had something to do with the disaster. But I maintain most emphatically that, considering the awful nature of the catastrophe, and the unsatisfactory nature of the evidence forthcoming, the Board of Trade should have tested the eyesight of the *Crathie's* look-outs, and that, in the face of these letters, their failure to do so is incomprehensible. It is the more incomprehensible when we call to mind the judgment eventually delivered by the Court of Inquiry, namely, "That the mate of the *Crathie* was primarily to blame for the collision, in that he failed to keep a proper look-out."

But the mystery as to the Board's policy deepens yearly. In 1892, after a period of two years' investigation, a Committee of the Royal Society, appointed by Government to inquire into the whole question, reported, "that in case of judicial inquiries as to collisions or accidents, witnesses giving evidence as to the nature or position of coloured signals or lights, should be themselves tested for colour and form vision."

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[2] See BRITISH MEDICAL JOURNAL, July 22nd, 1899, p. 227
[3] *Trans. Oph. Soc.*, 1895, p. 209

Again, on October 12th, 1896, the Liverpool Mercantile Marine Service Association forwarded to the Board of Trade a resolution, the last paragraph of which ran as follows: "That in all cases of official inquiries under the Merchant Shipping Acts in which the question of form or colour vision may be concerned, the sight of the witnesses should be tested," and to this the Board replied on October 30th, 1896, as follows: "Should there be any case of an official inquiry in which the question of form or colour vision may be concerned, arrangement would certainly be made for testing the sight of witnesses."

It will, I think, scarcely be credited that in the face of (*a*) the Royal Society's recommendation, (*b*) the Mercantile Marine Service Association's recommendation, and (*c*) of the Board's letter of May 20th, 1895, on my writing a few days ago, I received the following reply:

Board of Trade (Marine Department),
7, Whitehall Gardens.
July 18th, 1899.

Sir,—In reply to your letter of the 6th instant, asking for information as to the number of inquiries into shipping collisions in which the eyesight and colour vision of the witnesses had been tested, I am directed by the Board of Trade to state that they are not aware of any instance in which a Court hearing a collision case has considered it necessary to have witnesses tested for eyesight or colour blindness.—I am, Sir, your obedient servant, (Signed) Walter J. Howell.

The Grounds for Our Contention.

Reasons for believing that defective sight and colour blindness will account for shipping disasters:

1. The Board of Trade (1877) said so, and instituted tests and regulations with the object of preventing such.

2. The colour-blind pilot of the tug *Lumberman* ran down the ss. *Isaac Bell*, with loss of 10 lives.

3. The colour-blind pilot of the s.s. *City of Austral* mistook colour of buoy and lost his ship, costing owners £40,000 (*Shipping and Mercantile Gazette* and *Lloyd's List*, June 29th, 1881).

4. The ss. *Carbet Castle* collided in the South Channel with the *T. H. Ramien*, due, "so far as we can make out, to the colour blindness or shortsightedness of the chief officer" (private letter of owners to me).

5. "Close shave" recorded by Captain Coburn in *Mercantile Marine Reporter*, vol. xiv, No. 162, in which the third officer (colour blind) tried to run a ship down. The captain's final remark is, "I cannot imagine anything more dangerous or more likely to lead to fatal accidents than a colour-blind man on a steamer's bridge."

6. Similar incident recorded by Captain Heasley, of Liverpool (Royal Society's Report, page 49), this captain's final remark being, "As a practical seaman I consider a great many accidents arise from colour blindness."

7. At least half a dozen more "close shaves" similar to 5 and 6 have been related to me.

8. On inquiry (February, 1892) into the stranding of ss. *Violet* it was accidentally discovered that the mate's certificate was endorsed: "This officer has failed to pass the examination in colours;" and the court commented strongly on the fact that this information had not been laid before them, and considered it "most undesirable and reprehensible that a master's certificate should be granted to a man who is apparently unable properly to distinguish colours."

9. Of 1,263 shipping disasters in 1887 (*Wreck Register*, 1888), 209 are placed under "causes unknown."

10. Of 2,408 collision cases (American Board of Trade) between 1859 and 1863: "Errors of pilot or captain accounts for 215; want of observation 537; undeterminate causes 94"—a total of 846.

11. "As a rule, in stormy weather fewer collisions occur, because a better look-out is kept and greater precautions are taken to ensure the safety of the vessel." (Quotation from *Times* or *Shipping Gazette*.)

12. "The largest number of vessels that are missing have been lost through collision."

13. In many of the most disastrous collisions the atmosphere is stated to have been clear and lights to have been seen for miles. Examples:

(*a*) 1873. Transatlantic liner *Ville du Havre*, loss of life 226. "Friday night was bright and starlight." (*Great Shipwrecks During Queen Victoria's Reign*, p. 69.)

(*b*) 1882. *Douro* and *Yrurac Bat*. "It was a fine, clear night, as fine a night as could be imagined." (*Great Shipwrecks*, p. 94.)

(*c*) 1889. *Nereid* and *Killochan*. "A terrible calamity occurred in the English Channel. During fine clear weather two vessels which had had each other in sight for at least a couple of miles came into collision and sank within fifteen minutes, leaving their crews struggling amid the wreckage in the sea. All inquiries respecting the cause of this disaster lead to the same conclusion that it was due to one of those astounding errors of judgment on the part of one or other of the navigators which seem to defy all attempt at reasonable excuse. Each blames the other." (*Times*, February 5th, 1889.)

(*d*) 1888. *Geiser* and *Thingvalla*. Loss of life 105. "The weather was not at fault; each saw the other approaching in time to put a mile between them, and yet the consequence of the manœuvring of the two vessels was to bring about the very ruin each had seen ahead and desired to avert. Five minutes saw the whole tragedy played out, and never were 105 men and women more irretrievably abandoned to their doom." (*Times*, August 20th, 1888.)

The *Times* comment on this terrible disaster has never received the importance it rightly demands, so I shall venture to quote it here. "The world has a right to demand of maritime expert rules on the subject of collisions which only blind men or madmen shall be able to misunderstand or to disobey."

In this opinion the *Times* came very near the truth. Replace the word "madmen" by "colour-blind men," and then we have the whole truth and nothing but the truth, and as soon as rules so simple and unmistakable that colour-blind and nautically-blind men can understand them have been devised, the necessity for such papers as this will have vanished.

Bearing in mind the following facts:

(*a*) That 917 sailors have been certified by the Board of Trade since 1877 as colour-blind:

(*b*) That in addition a large number of colour-blind sailors never present themselves for examination (See Royal Society's Report, page 38);

(*c*) That colour-blind men continue to follow the sea life,

is it to be wondered at, if, in absence of proof to the contrary, we believe that the only explanation of these terrible collisions at night in clear weather is to be found in the colour blindness or sight blindness of one or other of the navigating officers or of the "look-out"?

And if the above reasons do not suffice to show the reasonableness of our belief, an additional one may be found in the invariable contradictory evidence of the witnesses as to the colour of the lights seen in cases of collision.

The Number of Notified Nautically-blind Sailors.

So far I have limited my remarks almost entirely to the part colour blindness plays in making statistics for the Wreck Reports. A few words are necessary to bring into full relief the part defective sight—other than colour blindness—plays in producing disaster. Prior to 1894 nautically-blind[2] officers were permitted to obtain certificates of master and mate without any examination whatever as to power of distant sight; but since 1894 no fewer a number than 187 sailors, including 36 officers, have been officially declared nautically blind.

Do these Blind Sailors go to Sea?

There must be no mistake as to what this implies. The fact that 187 sailors have been officially discovered to be nautically blind is no bar to their continuing to go to sea as before. These 36 men have their certificates, and just as an intending patient does not ask to see the doctor's diploma, neither is the cabman nor officer called upon to produce his certificate prior to an engagement. And if since distant-sight tests were instituted in 1894, 187 sailors have been notified as nautically blind, how many nautically-blind sailors obtained unendorsed certificates prior to that date? Not that the answer signifies at all, except as a matter of curiosity; for, whether officially notified or not, whether blind or seeing, all are permitted to go to sea.

Is there any proof that blind sailors are detrimental or dangerous to the navigation of vessels? Not any, say the profound intellects at the Board of Trade. We will not, say

hey, examine the eyesight of witnesses, and consequently we know of no case where defective eyesight ever caused trouble. Whether this Rip Van Winkle policy will much longer be permitted it is for the public to decide: at any rate, the three facts now to be related will assist the formation of a definite opinion so far as the public is concerned.

Fact No. 1.

"I was consulted," writes an ophthalmic surgeon, "professionally by the mate of a large passenger steamer, who, after improving a little under treatment, proposed to return to his duty on board. To this I strenuously objected on learning that he would be required to be in charge of the ship and to take his turn in looking-out at night, as his eyesight was far too bad for him to perform his duties with safety. My remonstrances were unavailing. Not many weeks afterwards the steamer was lost in a collision at night, if my memory serves me, and nearly every soul on board perished. Of course, I do not know that my former patient was in charge of the ship or was looking-out at the time; but this I know, the conditions for an accident were present and the accident occurred."

Fact No. 2.

This is within my own personal knowledge. A pilot who had been certified for thirty-seven years ran a vessel aground while taking her into port. The captain attributed the mishap to the pilot's bad sight. An examination was ordered and I found the pilot to be near-sighted, the right eye not having a quarter, and the left not a sixth of normal distant vision.

Fact No. 3.

This concerns the loss of H.M.S. *Vanguard*. Fortunately the Board of Trade have no control over the Navy, and from its records we are able to point to a case which clearly establishes the fact that defective eyesight was a contributing cause, if not the cause, of a most disastrous collision, and one case is as good as a hundred.

On the 1st of September, 1875, the *Iron Duke* rammed the *Vanguard*, the latter sinking in 70 minutes. The loss of so fine a man of war naturally created a great sensation, the court-martial went minutely into the evidence, eventually assigning the loss of the ship to six causes, which the Lords of the Admiralty cut down to two: (*a*) To the reduction of speed of the *Vanguard* and (*b*) to the sheering out of line and quitting station by H.M.S. *Iron Duke*. But however much the *Iron Duke* had sheered out of line a collision could not have occurred but for the reduction of speed on the part of the *Vanguard*, and in the cause which led to that reduction lies the real cause of the disaster. The evidence given proves:

(1) That the cause of the slowing of the *Vanguard* was the report that there was a "ship ahead."

(2) That there was no such ship ahead, for of six "look-out" men placed equally well for seeing only one saw "the appearance of a hull and a loom upwards from the hull." Not only did the other four "look-outs" not see it, but one of them practically denies that a ship was there.

In the year 1875 the possibility of a defective-sighted sailor causing a collision was practically unheard of, and when two years later the Board of Trade established a colour-blind test, defective eyesight was not even mentioned. It is therefore hardly to be wondered at that even this court-martial failed to appreciate the full significance of the evidence. But in the light of our present knowledge, a clearer case of defective sight causing a disaster is not likely to occur, if, from to-day onward H.M. navy and the mercantile marine were purposely manned by blind men. This case proves also the keen insight possessed by George Wilson, when he prophesied that defective-sighted men were not only unable to detect danger when present, but that they actually created danger otherwise not present. Michael Murphy created out of his disordered vision a "ship ahead," and it is indeed a piece of subtle irony to learn that he was put on the "look-out" as an additional—not ordinary—safeguard(!) "on account of the fog."

It is extremely instructive to peruse the report of the Parliamentary discussion on this naval disaster,[3] and learn from it how our contention that perfect sight and perfect hearing are beyond every other consideration the essentials to safety, received abundant confirmation during the debate. The sound opinion expressed on that occasion by Lord (then Mr.) Brassey is worthy of a place in any and every occasion in which the causes of shipping disasters and loss of life at sea are discussed. "Was it not unsatisfactory," said he, "that the men who were placed in the most responsible positions, such as look-out men and signal men, were only ordinary seamen? An ordinary seaman was stationed as look-out man at the top masthead of the *Vanguard* who had been only eight months in a sea-going ship. The entire management and manœuvring of a ship by the officers in command might depend on the experience and judgment of the men on the look-out aloft, and if they were not efficient the gravest consequences might ensue. The seaman placed as look-out on board the *Vanguard* was an ordinary seaman, and it was in consequence of his reporting a ship ahead that the *Vanguard* stopped, and the collision followed. It turned out that this seaman had been twice treated for blindness in the right eye, which was the organ directed to the supposed ship." Again, "the signalman whose duty it was to report signals on the *Iron Duke*, and whose efficiency depended on the full possession of the faculty of hearing, was stone deaf in one ear. In short, the results of the inquiry as to the loss of the *Vanguard* had revealed the fact that there were a great many inefficient seamen in our fleet."

Finally, if there remain any reasonable being who still doubts the efficacy of defective sight to produce disaster, I would refer him to the speech of the First Lord of the Admiralty on this occasion, in which he stated, "What contributed to the disaster was an alarm of a ship ahead. Indeed, the vessel seemed to be the veritable 'phantom ship,' and certainly the man who gave the alarm had defective vision. There were several look-out men aloft and on deck, and none of them ever saw the ship at all. From the evidence there could be no such ship."

The Ophthalmic Deputation.

On the occasion (February 1st, 1895) of the deputation of ophthalmic surgeons to the President of the Board of Trade, in order to lay before him the imperative need for efficient eyesight tests and regulations in the mercantile marine, Mr. Bryce made the following statement: "It was in consequence of the Board of Trade's action that the Royal Society, acting as the scientific adviser of the Government, had appointed the Committee whose report had been so valuable. In order to show practical urgency for further action, it was necessary to prove that accidents were in fact occurring owing to the defective application of vision tests. It was certainly very remarkable that an exceedingly small number of accidents, he might almost say few or no accidents, at sea or on land had been so far traceable to this cause. He had for some months past carefully perused the reports of the Courts of Inquiry, and he had made most careful inquiries of the heads of the marine department, and had been assured that in scarcely any case had it been suggested—or as far as they knew could it be suggested—that defects of vision had been the cause of accidents." This pronouncement, made by a responsible Minister of Her Majesty's Government, annihilated, metaphorically speaking, the case which the deputation had with such care, labour, and anxiety placed before him. The public press, with a very few notable exceptions, accepted this statement. Yet the case presented by the deputation was an unanswerable one, and it is sad to see how truth can be disguised and set at naught by a perverted statement and misapplication of fact.

And though the misleading character of Mr. Bryce's reply was clearly demonstrated in the pages of the British Medical Journal, by the shipping papers, and by a few leading provincial papers, the succeeding President of the Board of Trade (Mr. Ritchie) in February, 1897, again deliberately stated in the House of Commons that "the present system of sight tests is based upon the report of the Committee of the Royal Society specially appointed to inquire into the subject." Now Mr. Ritchie must have known—and if not ought to have known—that the Board of Trade in issuing their regulations, had absolutely ignored the very essentials of that report. The first, second, and twelfth, which are the vital recommendations, find no place in their regulations. On the contrary we know that no check of any kind has been put upon the entrance of colour-blind or poor-

sighted boys to the sea life. We know that colour-blind and nautically-blind sailors are in, and may continue in, the sea service to the end of their days. We know that though colour-blind and nautically-blind men are officially notified on applying for officers' certificates, they are permitted without let or hindrance to follow the sea, and finally we know from the Board's own admission (see letter of July 18th, 1899) that the reason why the Board of Trade is not aware of any case in which defective sight or colour blindness led to disaster, is not because such cases do not occur, but because the Board deliberately declines to examine the eyesight of intending witnesses.

Whether the Board of Trade are to be permitted to ignore in the future the last of these recommendations, which cuts at the root of the whole question, it is for the public to decide. If it were not for the terrible and deadly consequences which result from the Board's apathy, their present attitude would be a ludicrous one. On the one hand, the permanent officials at the Board of Trade refuse to order the examination of the sight of witnesses and thus ascertain the real cause of most collisions, while on the other we have the President assuring the public "that an exceedingly small number of accidents—he might almost say few or no accidents—at sea or on land had been so far traceable to this cause." With such logic it is evident that the seagoing population is between "the ——— President of the Board of Trade and the deep blue sea."

Notes and References.

[1] With reference to this part of the subject see British Medical Journal 1897, vol. i, p. 202. Subsequent articles were published in the same volume, pp. 343 and 537. [2] By the Board of Trade rules an officer is nautically blind if he has less than one half power of normal vision. An officer with one half normal sight is granted a certificate of competency. [3] *Hansard*, 1876.

IV.—Malcolm McHardy, F.R.C.S.,

Ophthalmic Surgeon to King's College Hospital; Senior Surgeon to the Royal Eye Hospital, Southwark.

Visual Tests Misused in Examination of Candidates for the Executive of the Royal Navy.

The matter at stake is of such overwhelming importance that no apology is needed for the prominence given to the subject on this occasion, and in this place, where the very presence of Nelson's flagship should prompt all to do their duty, and particularly inspires me, as the grandson of that inimitable Hero-Sailor's flag lieutenant, to speak out plainly, not merely in technical language, as to the startling misuse of visual tests and abuse of the opportunities afforded for securing only the best-sighted officers for the handling and fighting of the country's men-of-war.

It has been said that it takes a big hammer and many blows therewith to drive a stout nail into a thick piece of wood; we have here a stout truth to drive into some thick, case-hardened, red-taped-enveloped blocks. With much patient persistence, energy, and the most powerful of weapons, public opinion, the press, ridicule, and the means afforded by this Section of this great Association, every member of the Association must co-operate loyally, unflaggingly, and whole-heartedly, if the long-continued scandal is to cease.

A recurring personal experience of mine, which must have been repeated in the practice of many of those around me, is so set out in letters which I write from time to time to the disappointed parents of visually efficient Royal Navy cadet candidates who have been wrongfully rejected and kept out of the service on the ground of inefficient eyesight, that I do not think I can do better than read one letter culled from my copy-book:

My Dear Sir,—Regarding your son, aged 13 to 16, who, as you informed me, has been rejected on account of alleged defective eyesight at the medical survey of Royal Naval cadet candidates immediately before the latest competition, I have to report:

1. That his colour perception is normal.

2. That at my first examination the acuteness of vision of each eye was better than $\frac{6}{9}$, but not quite equal to $\frac{6}{6}$, of the accepted (Snellen) standard of normal vision, which by the existing regulations is required of such candidates.

3. That at my second examination, after the eyes had been physiologically rested during three or four days, the acuteness of vision of each eye (examined separately, without any lens or artificial aid) was better than $\frac{6}{6}$, and almost a full $\frac{6}{5}$ of the before-mentioned Snellen standard.

4. That the focus of each eye is exceptionally perfect, being no more than a quarter of a unit (0.25 D) on either the shortsighted or longsighted side of the accepted ideal.

It is beyond intelligent dispute that just such a pair of eyes as above mentioned should be sought for, and, when found, preserved and prized as a special qualification for an executive, combative or navigation, officer in the Royal Navy. But they are rejected, while eyes of definitely imperfect focus, with as much as one to three and a half units (1.00 to 3.50 D) of focus error have been passed.

It is essential that the decision regarding such eyes should be arrived at after a thorough and skilful examination both of the eyes and eyesight subsequent, and not prior, to literary examination of these youths.

In no other way will imperfectly sighted or imperfectly focussed eyes be excluded, and the admission of only perfectly sighted and suitably focussed eyes be secured, for the executive officers of the Royal Navy. The Admiralty officials have argued that it would be harsh to reject, on the ground of eyesight, youngsters who had successfully negotiated the competitive examination. But it is the National Safety, the Royal Navy of these islands, and not the aspirants to service therein, who deserve the first consideration.

Candidates for the Royal Engineers have their eyesight survey made some time subsequently to the literary examination. Let us all combine to get the same advantage for the ten times more important service—the Royal Navy.

Likely enough, parents of candidates then fairly and properly rejected would howl, as they do now in the case of the Royal Engineers, that the medical rejection did not precede the literary competition. But the individual's convenience must give way to the community's good, and, if the requisite standard of eyesight and eye-focus be officially stated and carefully enforced, any candidate can be privately tested and properly proved before starting the preliminary studies, much less before entering for the competitive literary examination.

Want of time prevents me from now discussing at all, much less in detail, such important matters as the really desirable and practically obtainable degree of eyesight and limit of focus error which may be reasonably demanded in respect to either men or officers employed, or wishing to be employed, on Royal Navy, marine, pilot, or railway service; the unsatisfactory tests in use, the unsatisfactory misuse of the tests, and the neglect to properly time, to properly utilise, or to adequately repeat the opportunities for eye survey.

Personal intimacy with the practical conditions, as regards eyesight, appertaining to service at sea and on railway locomotives and railroads, has taught me much which, as merely an ophthalmologist, I should have little suspected. These far-reaching questions need to be reviewed from a broader point of view than the consulting room or the laboratory of simple ophthalmologists. Primarily justice has to be done to the services for which the candidates respectively apply; secondarily to such candidates themselves.

The admissibility or degree of admissibility of glasses in sea service; the importance or reverse, by night at sea, of form-sense as contrasted with light-sense; the comparative duration of trustworthiness of the eyesight of the longsighted and shortsighted respectively, of differing degrees, for outdoor, sea, shore, day or night work, open large questions for careful, broadminded, skilled investigation. So, likewise, the exclusion from unsuitable duties, and the early detection of those eyes which become centrally, temporarily, importantly impaired for the recognition of coloured signals, particularly by lamps at night; whether from the abuse of tobacco, nervous disorder, or general injury, urgently claim grave attention.

I do not ask the members of this Section, much less the British Medical Association itself, to endorse my views, but, so far as the members' individual opinions may coincide with those of myself, I ask them to lose no opportunity of giving them efficient weight towards securing the most lasting, efficient, trustworthy, quicksighted eyes for the executive officers of the Royal Navy.

I will conclude by recording my conviction that the present eyesight examination as practised upon Royal Naval cadet candidates is mischievous and unfair. It fails to exclude candidates with focus errors, even with such focus errors as are calculated to subsequently impair their eyesight efficiency. It leads to the final rejection, owing to transitory visual imperfection, of candidates who are possessed of exceptionally perfectly focussed eyes and trustworthy acuteness of vision.

V.—C. Devereux Marshall, F.R.C.S.,
Curator and Librarian, Royal London Ophthalmic Hospital, Moorfields.

Mr. Marshall asked if captains of guns were ever examined again after their admission into the service. He thought that were this done the shooting with the large guns might be better. With regard to men being unable to take in rapid signals, he thought it might be due to a psychological defect. He thought that the way in which the stokers for the Royal Navy were tested (who had also to go through a course of musketry) was most perfunctory. There was no regulation as to light, and often no means of obtaining good light.

VI.—Lieutenant-Colonel E. F. Drake-Brockman, I.M.S.(Rd.),
Member of the Medical Board, India Office.

Lieutenant-Colonel Drake-Brockman stated that he had opportunities in his position at the Medical Boards at the War and India Offices of forming some idea of the value of the present methods employed for testing the acuity of vision for admission into the public services. In his opinion the tests for the soldier in the ranks was below what it should be. It was commonly only $\frac{1}{4}$ of Snellen's standard of vision. The same had hitherto been too low for officers' admission into the service. This had recently been raised. He was of opinion that the standard of vision for recruits should be raised to that of the officer. He referred to Dr. Cohen's conclusions as expressed in his pamphlet entitled the *Visual Capacity of 50,000 Breslau School Children:* 85 per cent. had vision superior to the normal, 30 per cent. double or treble (tests in open air). He concludes from this that normal vision is not Sd=6 m. as assumed by Snellen, but Sd=12.1 m. This agreed with the results attained in the German army, where normal vision was 11.5 to 12 metres. It followed that the smallest visual angle was not 1 but $\frac{1}{2}$ minute, and that the older anatomical investigations of the relations of the retinal rods and cords required revision. The longest distance of clear vision in the 52,129 children was 27 metres; 38 per cent. ranged between 13 and 18 metres; 3 per cent. between 19 to 24 metres; only 10 per cent. were defective, and though the proportion increased with age, it was smaller than in his previous investigations thirty years ago. Dr. Cohen proposed to distinguish between indoor and normal vision, 6 m. in the former corresponding to 10 m. in the latter.

VII.—F. Richardson Cross, M.B., F.R.C.S.,
Ophthalmic Surgeon, Bristol Royal Infirmary.

Mr. Cross quite agreed with Mr. Bickerton in his criticism of the mercantile marine. He suggested that any line of passenger ships which would add to its other recommendations that the acuteness of the sight of its officers and men was fully assured by occasional examinations by a competent opinion, would largely increase its popularity; and that if such a step were taken by any line of steamer, others, under the stimulation of competition would have to follow suit. It was true that in the navy perfect vision was required on admission, but many officers became shortsighted, and the sight of a few others failed from other causes. It was obvious that the power of the eyes should be an important element in the selection of officers for special service. As regarded the army, it would seem as though in the case of the men we must be content with what we could get, but those with good sight should be selected for important work, such as artillery sighting, signalling, and so forth. With regard to the officers, he considered that Snellen's standard $\frac{6}{6}$ was not high enough, it might easily be raised to $\frac{6}{5}$ in each eye without any detriment to the service. An exception might perhaps be made in favour of the Royal Engineers or other mainly scientific branches. At any rate the tests should be made under absolutely fair conditions. The light should be constant, of a standard candle power, and the eye should not be allowed any stenopœic aid by putting the head in an unnatural position or by the use of the fingers.

Reply.

Dr. Landolt said that acuteness of vision meant the form sense of the retina. Form sense and light sense were different as light sense and colour sense. With a single dot the light sense alone was tested, since the visibility of a dot only depended upon the intensity of illumination. With a group of dots the acuteness of vision could theoretically be tested, but as soon as counting the dots was required, this test became incorrect, because in counting the eye jumped from one dot to the other, so that the movements of the eye had a great influence upon this test. In fact, the dots were distinguished separately long before seven or eight of them (as the instruction of the "dot test" said) could be counted with certainty.

PRIMARY SARCOMA OF THE FORNIX CONJUNCTIVÆ.

By John Griffith, F.R.C.S.,
Assistant Surgeon and Curator, Royal Westminster Ophthalmic Hospital.

History.—A woman, aged 45, had a slight swelling in her right upper eyelid, more evident when she looked down. It had caused her no pain nor inconvenience of any kind, and it was only at the urgent request of her husband and doctor that she sought advice at the hospital. The eye itself was discoloured, and had been so for many months. For this discoloration she had consulted two years previously an ophthalmic surgeon, who had said, so she stated, that nothing could be done for it. Three months before she came to the hospital her doctor had told her that she had a growth at the back of her eye.

Condition on Admission.—The tumour was lobulated, and occupied the greater part of the upper *cul-de-sac*, from which it projected in a prominent manner when the eyelid was everted. It had for the most part a pink colour, but some nodules were pale brown from pigmentation. There was no manifest displacement of the eyeball, no interference with its movements, nor any indication that the growth had originated within the orbit. Beyond the dusky yellow pigmentation of the ocular conjunctiva, the eyeball was quite healthy, and there was no sign of any intraocular neoplasm. A piece was cut off for examination, and was found to be of a sarcomatous nature.

Operation.—Mr. Griffith excised the growth freely, removing the upper half of the tarsus and the whole of the upper *cul-de-sac*. To expose the growth to its full extent it was necessary to divide the eyelid at its inner extremity.

Microscopical Examination.—The microscope showed it to be a very cellular tumour with thin-walled blood vessels. The cells were closely packed together, and varied in size and shape. There was very little intercellular material. The pigment cells were for the most part stellate. The tumour was limited to the conjunctiva, and adherent to the upper end of the tarsus.

Remarks.—Mr. Griffith considered it a rare tumour in that its seat of origin, if not unique, was most unusual, such growths having a predilection for the limbus conjunctivæ. The case was also of interest, inasmuch as permanent ptosis did not result from the removal of the upper half of the tarsus. The palpebral aperture could be opened almost as wide as that of the opposite side. Another peculiarity in the case was the diffuse pigmentation of the ocular conjunctiva. It would appear to most surgeons that this condition was closely connected with the growth, and that the wiser procedure would have been to have excised the whole of the pigmented area, including the eyeball. The case was full of interest, and Mr. Griffith hoped to record at some later date its subsequent course.

Mr. Devereux Marshall stated that he had seen one case of pigmented conjunctiva associated with a growth. In this case the growth recurred, and the contents of the orbit were subsequently removed.

THE USE OF EUPHTHALMIN: A NEW MYDRIATIC.

[Abstract.]

By James Hinshelwood, M.A., M.D., F.F.P.S.G.,
Surgeon to the Glasgow Eye Infirmary.

Although for most ophthalmoscopic examinations dilatation of the pupil is not required, still there are many cases where the use of a mydriatic is absolutely necessary in order to make

a thorough examination. The mydriatics in use at present have certain very decided disadvantages. Homatropine, though dilating the pupil rapidly and effectively, has the very great disadvantage of producing a paralysis of accommodation lasting from twelve to twenty-four hours. Cocaine, very uncertain in its action as a mydriatic, cannot be relied upon to produce a maximum dilatation of the pupil, and, besides, it often causes a desiccation of the corneal epithelium. Duboisine and scopolamine are very toxic agents, and ephedrine produces a painful conjunctival irritation. Euphthalmin, while producing a prompt and efficient dilatation of the pupil, is comparatively free from the disadvantages associated with all the mydriatics hitherto employed in ophthalmic practice, and hence merits the careful attention of ophthalmologists. Having made a careful and extensive trial of this new mydriatic, I thought it might be interesting to others to hear the results of my experience.

Euphthalmin is a synthetic preparation. It is a white crystalline powder, very soluble in water, and is the hydrochloric acid salt of n-methyl-vinyldiaceton-alkamine. It is closely related to the new anæsthetic beta-eucaine, having the same relation to it chemically as homatropine has to tropa-cocaine. The action of this new preparation upon the eye was first investigated by Dr. B. Treutler, Assistant in the Marburg University Eye Clinic, and was recorded by him in the *Klinische Monatsblätter für Augenheilkunde*, September, 1897.

A 5 per cent. solution of euphthalmin, which is the strength most suitable, does not act quite so rapidly as the 1 per cent. solution of homatropine, but it produces quite as great dilatation of the pupil.

A large number of comparative experiments were tried by instilling a 5 per cent. solution of euphthalmin into one eye and a 1 per cent. solution of homatropine into the other eye of the same patient. The maximum effect of the euphthalmin was produced most rapidly by instilling 3 separate drops with an interval of two minutes between each drop. It was found that the pupil of the eye with the homatropine started to dilate first, and that the dilatation progressed in advance of the other, until the maximum dilatation was obtained. The homatropine took about fifteen to twenty minutes to produce maximum dilatation of the pupil, and the euphthalmin used in the manner indicated above took from twenty to thirty minutes to produce the same effect. It was found that the age of the patient had a direct bearing on the rapidity of dilatation of the pupil, the drug acting more rapidly on the young than on the old.

Snéguiroff of Moscow has pointed out that the previous instillation of holocaine into the eye favours and quickens the diffusion of fluids from the conjunctival sac into the anterior chamber of the eye. I pointed out in a paper read at the last meeting of the British Medical Association that holocaine anæsthesia is produced much more rapidly than that of cocaine.

Acting on this hint I made a number of comparative observations, instilling a drop of 1 per cent. solution of holocaine into one eye, and subsequently the euphthalmin, then into the other eye the euphthalmin alone without any preliminary instillation of holocaine. It was always found that the pupil of the eye into which the holocaine had been instilled began to dilate first, continued in advance and reached its maximum dilatation about seven or eight minutes sooner than the other.

The preliminary instillation of a drop of 1 per cent. holocaine solution increases the rapidity of the mydriatic action of the euphthalmin, and puts it quite on a par with homatropine as regards rapidity of action, producing a maximum dilatation of the pupil in about twenty minutes.

The dilatation of the pupil produced by euphthalmin passes off more rapidly than that produced by homatropine. For a short period after the pupil has attained its maximum dilatation it will be found to be insensitive to light, and not to contract on accommodating. This immobility of the pupil, however, soon disappears, the pupillary reactions gradually become more active, and within two or three hours the pupil contracts pretty actively to light and to accommodation. Hence, if the patient is examined in bright light, the pupil will seem to have returned to its normal size, and hence the fallacious statements of several observers that the dilatation disappears in two or three hours. It will be found, however, that if the patient is examined in subdued light a perceptible dilatation of the pupil exists from eight to twelve hours after the instillation of the drug.

The great advantage of euphthalmin over all the other mydriatics hitherto used in ophthalmic practice is that it weakens the accommodation only to a slight extent, and that even this paresis of accommodation passes away completely in from an hour and a-half to two hours from its first instillation. It has been stated by some observers that euphthalmin has no appreciable effect on the accommodation. My experience is entirely opposed to this. I have made a very large number of observations with a view to test this point, and have found in every case a distinct and appreciable paresis of accommodation. It is the transient character of its action on the accommodation which has led many observers into error. In my observations the accommodative power was examined every ten minutes. At the end of the first ten minutes an appreciable paresis of accommodation was observed, which gradually increased until it attained its maximum about one hour after the first instillation. This paresis of accommodation gradually passed away until the eye again regained its normal accommodative power in from an hour and a half to two hours after the first instillation.

Although in every case the euphthalmin had an appreciable effect in diminishing the accommodative power, yet the amount of visual disturbance produced by it varied very considerably in different cases. In many cases the visual disturbance was so slight as to cause scarcely any inconvenience, the patient being able to read ordinary-sized type during the whole time, but feeling that the eye became easily tired on continuous effort. But even in these cases where the patient's visual acuity is not lowered, it is found there is a gradual recession of his punctum proximum up to a certain point, when it gradually returns again to normal. In other cases the visual disturbance is much greater, the patient for a short time being able to read only the very largest test types, but here, too, the disturbance is very transient, and the return to normal vision is rapid. In hypermetropic and astigmatic patients the paresis of accommodation causes a much greater disturbance of the visual acuity than in patients with normal refraction. Apart from this, however, the drug seems to act on the accommodation with very varying degree of intensity in different individuals. In all cases the disturbance of vision is very transient, the vision becoming normal in from an hour and a half to two hours.

Euphthalmin seems to have no other effects on the eye whatever beyond its mydriatic effect and this very transient paresis of the accommodation. It does not cause any smarting or discomfort on instillation, and patients never object to a second or third repetition of the drops. It has no appreciable effect on the conjunctival vessels nor on the corneal epithelium. It does not elevate the tension of the eye, and no toxic symptoms have ever been observed from its use.

In all cases where a contracted pupil interferes with the thorough exploration of the fundus, or where we wish to secure a maximum dilatation of the pupil in order to examine the transparency of the media, we have in euphthalmin a mydriatic which can be used without hesitation, knowing that the only discomfort to the patient may be a slight weakening of the accommodative power, which will pass away completely within a couple of hours at most. In estimating the refraction by retinoscopy, when the patient will not permit the use of atropine or homatropine, euphthalmin will be found of the greatest service.

We are yet in search of the ideal mydriatic, such as would dilate the pupil rapidly and with certainty to its maximum; would have no effect whatever upon the accommodation; would allow the pupil to return rapidly to its normal condition, and would have no other effect upon the eye. Euphthalmin, although it does not completely fulfil all these conditions, yet approximates to them more closely than any other mydriatic hitherto used in ophthalmic practice, and will therefore prove a very valuable addition to the *Pharmacopœia* of the ophthalmologist.

THE STEREOSCOPE AS A TEST FOR INEFFICIENCY OF THE OCULAR MUSCLES.

By George J. Bull, M.D.,
Paris.

In the examination of cases of inefficiency of the ocular muscles it is important to determine the degree of ease or difficulty with which binocular single vision is attained. For this purpose the Holmes's stereoscope is a useful instrument. The following extract from an unpublished letter written by Dr. Oliver Wendell Holmes serves to describe the instrument, and is not without historical interest:

"All I had to do with the stereoscope," he writes, "was in the way of contrivance rather than of invention. Finding the common box stereoscope heavy and awkward, I mounted the lenses, fastened them to a thin slate, cut some slots or grooves in it to hold the pictures, put a hood round the glasses fitted to my own forehead, stuck a common bradawl underneath for a handle, and there was my stereoscope." Dr. Holmes adds that a workman afterwards suggested the sliding holder, which made the instrument more convenient.

The first use I made of the stereoscope during the period of my association with Dr. Javal was to effect by practical exercises the re-establishment of binocular single vision in patients who had lost it. It occurred to me afterwards that the instrument would be useful also in cases of muscular inefficiency, not only to develop binocular vision by practice but also by way of diagnosis to determine the amplitude of fusion. For this purpose I made a scale to measure the angle of convergence of the visual axis when the test cards are properly seen at any distance.

The cards I prefer have each two circular discs as test objects, one for the right eye and one for the left. Above the right disc is a small dot or cross which I call a controller, and below the left disc is a similar controller. When the discs are properly fused by the patient he sees but a single disc with a controller above and another below. The controllers serve to assure us that the single disc observed is the composite or fused image seen by the two eyes working together, and they make the stereoscopic test superior in this respect to tests of fusion in which the two eyes look at a single object.

The rod upon which the card holder slides is marked in dioptres measured from the centres of the lenses. Each card bears a number indicating in centimetres the distance between the two discs.

Now as the degree of convergence required for fusion of the discs varies with the number of the card and its distance from the lenses, it was necessary to make a scale to show the degree in every case. My scale is made on the basis that the stereoscope has lenses of 6 D, the centres of which are 86 mm. apart, that the centres of rotation of the patient's eyes are 65 mm. behind the lenses, and that his interpupillary distance is 60 mm. If the interpupillary distance is greater or less than this, it is easy to calculate the modification to be made in the scale, but for patients generally the angles of convergence shown by the scale are approximately correct.

Each figure on the upper line of the scale indicates the card bearing the corresponding number, and the line descending from this figure shows by its position on every scale below the degree of convergence required for fusion of the discs of the card at the distance indicated. To the left of the zero of each scale the figures indicate degrees of convergence; to the right they indicate degrees of divergence. Example: when a patient fuses the discs of No. 8 card at 7 D (14.3 cm.) he is converging 1 degree.

It is shown by the table that the Holmes's stereoscope, with test cards numbered from 3 to 12, enables us to measure an amplitude of fusion of 30 degrees—namely, one extending from 20 degrees of convergence to 10 degrees of divergence. We seldom need to measure so high a degree of divergence; but it often happens that we wish to determine whether the patient can converge more than 20 degrees while fusing such test cards. For this purpose I have recourse to another instrument called the "stereoscope for exercises with crossed axes," or simply the "cross stereoscope." This is a Holmes's stereoscope without lenses or prisms, in which the patient

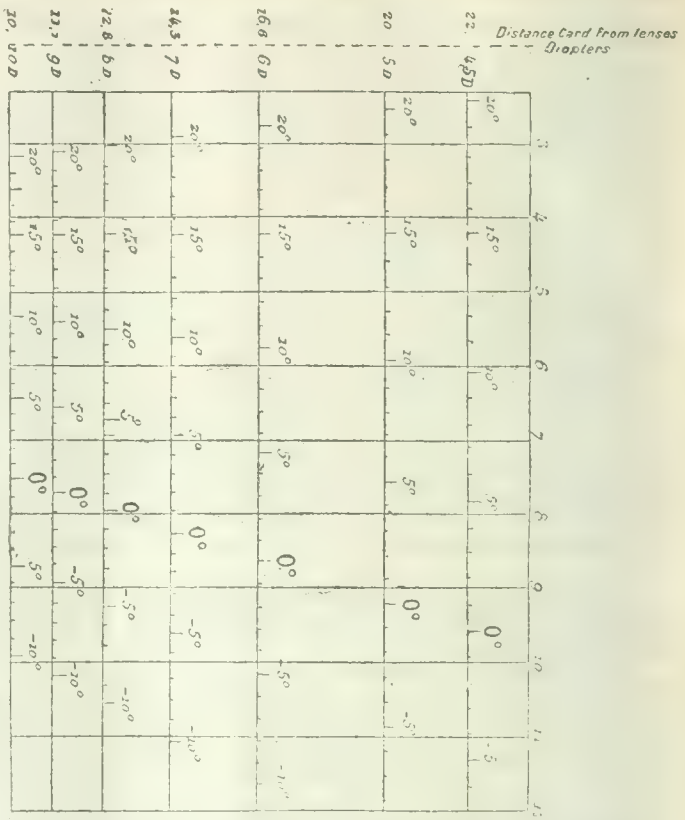


Table for measuring the degree of ocular convergence and divergence with the Holmes's stereoscope.

looks through a diaphragm so placed that his right eye can see only the disc on the left side of the test card, and his left eye can see only the disc on the right. In using the "cross stereoscope" I ask the observer to look through the diaphragm at a pencil, which I bring nearer and nearer till it is about half way between his eyes and the test card. At that moment, if he is seeing the pencil single, he will observe that the discs of the test card come together in fusion. His statement as to the position of the controllers assures me he is seeing the card properly. Removing the pencil, I observe whether the patient can continue to see this card properly. If he does so, I move the card nearer, till I find the nearest point at which he can fuse the discs. In this way it is possible to measure convergence of 40 degrees, which is quite sufficient for practical purposes. The degrees are marked on the rod which carries the card holder.

The advantage of the Holmes's stereoscope over other tests is that you conduct the examination not under unnatural and bewildering circumstances, as in the case of tests with prisms in looking at a candle flame, with or without a coloured glass, but under circumstances closely analogous to the ordinary use of the eyes in reading or writing. Consequently you are able to follow with comparative ease and certainty, and without much danger of error by reason of subjective mistakes of the patient, exactly what happens to the patients' eyes in the effort to conduct the ordinary occupations of life. A single instance will suffice to show the advantages which result from the method described.

In a case shown by the Maddox rods to be one of exophoria, with slight hyperphoria, the stereoscopic tests showed that fusion could be maintained for but a few seconds, and only under low degrees of convergence. The exophoria might have led me to expect to find an increased facility of fusion when the visual axes were parallel or divergent; but the stereoscopic method proved, on the contrary, that when the test card required parallelism or slight divergence fusion seemed to be impossible.

The eyes first converged a little too much, and then went into a spasm of divergence. When the eyes diverged excessively, and under these conditions only, the controllers showed that the left eye became lower than the right. The Maddox rods had already indicated hyperphoria, but the stereoscopic method enabled me to determine with precision the exact circumstances under which the hyperphoria occurred.

The inference in this particular case was that the hyperphoria depended on the divergence, not the divergence on the hyperphoria, from which it followed that an operation for hyperphoria was not indicated.

The observation already referred to, indicating spasm of the externi, directed my attention to the importance in the case in question of spasmodic conditions resulting from the muscular inefficiency, and I was able by following out the line of observations thus opened up to satisfy myself that a whole range of complex and obscure conditions in the patient's state, amounting almost to a general neurasthenia, were nothing but the outcome and development of ocular spasm, and could be, as in fact they were, entirely removed by an appropriate tenotomy.

THE CORRECTION OF HYPERPHORIA.

By W. Watson Griffin, F.R.C.S.,
Ophthalmic Surgeon, St. Mary's Home, Brighton.

Mr. Watson Griffin said that in certain cases in which there was a tendency to upward or downward squint, a tendency only suppressed by an effort on the part of the eyes which involved great discomfort, including an inability to wear binocularly glasses which suited each eye separately, vertical prisms dissipated the discomfort and permitted the wearing of glasses which otherwise could not be borne. In illustration of this he quoted a series of cases one of which was published in the British Medical Journal, 1897, vol. ii, p. 976. He pointed out, however, that not every case in which a latent vertical deviation could be shown to exist called for the use of prisms. In most cases it gave rise to no symptoms and demanded no treatment, but now and then it was a factor which should not be ignored.

Dr. R. A. Reeve observed that in one of the cases related the fact that asthenopia was overcome by adding a $\frac{1}{4}^{\circ}$ prism to each ($+ 3^{\circ\circ}$) spherical lens, for the correction of hyperphoria, suggested the ease with which an artificial hyperphoria might be set up by careless centering of lenses. Careful decentering of spherical lenses also, of course, sufficed to correct slight hyperphoria. Time and again a latent hyperphoria, with return of asthenopia, had become manifest, it might be months after full correction of the hyperphoria detected at the first visit. A period of a year or more was sometimes covered before the latent hyperphoria became fully manifest, confirming, as had been pointed out, the existence of spasm as the faulty condition.

THE CORRECTION OF REFRACTIVE ERRORS IN THE TREATMENT OF TRACHOMA.

By Arnold Lawson, F.R.C.S.,
Ophthalmic Surgeon, Children's Hospital, Paddington.

It is only in a small minority of cases that the question of errors of refraction and their correction can have any consideration in the treatment of trachoma. The involvement of the cornea which so commonly occurs must necessarily put aside all attempts at the estimation of the refraction, which then can be of no importance in the treatment. The following remarks are therefore only applicable to early cases seen before pannus commences, and to that small though definite class in which there seems but little tendency for the trachomatous process to extend to the globe.

I have ventured to bring this subject forward on account of 2 cases that have been recently under my care and both of whom were much benefited by correcting glasses. It was through these two cases that my attention was drawn to the question of ametropic conditions in trachoma, and I relate them not for the purpose of making any dogmatic statement which would be out of place, but simply in the hope that I may thereby bring the matter under more general notice, believing that it is worthy of much greater consideration than up to the present time it has received. None of our ophthalmic textbooks down to the latest even mention the term refraction in connection with trachoma, nor does Sydney Stephenson, in his interesting and exhaustive treatise on epidemic ophthalmia, make any allusion to it. I have looked through the literature of trachoma for the last few years, but have only found one article bearing on the subject,[1] and this I have been unable to obtain. On this point, however, I am open to correction, as the mass of literature upon trachoma is so large that some article may have escaped my attention.

In this country trachoma seems to be rapidly becoming a rare disease, and this fact has influenced me in venturing to speak with so few cases before me, because this question of the influence of uncorrected ametropia in trachoma will be much more quickly settled if the matter receives the attention of those who habitually see a large number of cases.

The following is a brief summary of my two cases:

Case I.—A German Jew afflicted with typical and severe trachoma in both eyes. He was treated for over a year with the routine methods usually employed, that is to say, with silver nitrate both in solution and in the form of mitigated stick; copper sulphate, lapis divinus, and a solution of the perchloride of mercury in glycerine of the strength of 1 in 50. He improved considerably up to a certain point with silver nitrate, but in a few months the case began to hang fire, and further improvement ceased. Successive trials were then made for several consecutive weeks with the above-mentioned drugs. From the first the granulations were soon so reduced in size that expression was never tried or deemed necessary, but a certain amount of thickening and roughening of the conjunctiva, accompanied by a good deal of photophobia, persisted, and at the end of a year the cornea exhibited signs of implication. I thought that I would test his refraction, and did so. I found that he had a high degree of mixed astigmatism, which I corrected. He began to improve at once: local applications were continued as before, the corneæ cleared up, and three months later he was perfectly well, and had resumed his former occupation of cook, which he had practically been obliged to give up for over a year. He remains perfectly well.

Case II.—A girl, aged 16 years. When she came under my care she had been treated for trachoma affecting both eyes for over two years, though treatment had not been kept up very carefully, and short periods had elapsed during which little was done. Both upper lids were covered by abundant fleshy granulations, but the corneæ were not affected. I began with the usual paintings without much benefit, and then recommended expression; but the parents were unwilling to have an operation until all other methods had received fair trial. At one visit after local treatment had been carried on at her home in the country for about six months with very slow progress, the patient happened to complain of frequent headaches and aching eyes, and I examined her refraction. I found a high degree of mixed astigmatism in each eye, and I ordered correcting glasses for constant wear. Marked improvement at once set in, and her condition three months later was vastly better than it had been after six months' local treatment before the refraction was corrected. When I last saw her the trachoma was improving steadily, and was, in fact, nearly well.

The immediate benefit derived from the wearing of the correcting glasses in these two cases could not have been due simply to the protective influence of spectacles, because both patients had previously worn for several months neutral-tinted goggles for outdoor use.

I think that the inference may be fairly drawn that in these two cases, at any rate, the high degree of ametropia did play an important part in keeping up the symptoms, and acted unfavourably upon the means adopted for cure. And, if these two cases have come into my short experience on this subject, it seems fair also to argue that high degrees of ametropia will not uncommonly be found associated with trachoma, and that other cases will receive a similar benefit from its correction. It will be noted that in both of the above cases the ametropia was in the form of mixed astigmatism; but within the last few weeks two more cases of chronic trachoma associated with clear corneæ have come under my notice, and in both there was a considerable degree of refractive error in each eye—in one case due to hypermetropic astigmatism and in the other to five dioptres of simple hypermetropia. Too short time has at present elapsed to say what benefit will be received by the correction of the refraction. It must be understood that I do not suggest that all subjects of chronic trachoma suffer from high degrees of ametropia. Such a dogmatic assertion I am in no sense prepared to assert, much less maintain; but I wish to emphasise its presence in a certain number, and probably a considerable percentage, of cases, and the fact that its correction forms an important adjunct to other methods of treatment.

A consideration of the subject suggests a few interesting points. Is the presence of ametropia purely accidental, or is it possible that ametropia, when of high degree, may play some part in the origin, pathological processes, and course of trachoma?

As regards the question of ametropia being merely a coincidence, I cannot think that this is the case. Without suggesting that it has anything to do with the direct origin of

trachoma, a condition of high, uncorrected ametropia does predispose the eyes to attacks of conjunctival inflammation, and, *cæteris paribus*, a patient suffering in such a way would be more likely to become infected by a special virus, whose nidus is the conjunctival sac, than another patient with perfectly sound eyes. One would expect this to be more especially the case in trachoma of a primarily chronic nature, such as we most commonly see in this country rather than in the acute virulent inflammatory trachoma of the East, in which the virus seems to be of a sufficiently intense nature to obscure any other secondary influence.

As to the second point, may one conceive that high ametropia may modify, or in any way influence, the special pathological processes that we associate with trachoma? Can it influence in any way the formation of the trachomatous granulations?

I think that one may fairly infer something by comparing follicular conjunctivitis and trachoma. Not that the former is ever the cause of the latter, but that the follicle in the one and the granule in the other have much in common, and have a similar commencement. The one is an hypertrophied lymph follicle, and the other this with some further modification. I need not dwell upon the connection between follicular inflammation and ametropia. The two are so frequently associated together, and it so often happens that the correction of the one cures the other that a distinct pathological connection cannot be doubted in a large number of cases, excluding, of course, that particular variety of follicular inflammation which occurs in epidemic form. Moreover, it is not hard to see why ametropia and enlarged follicles should go together. Follicular inflammation in connection with ametropia is encountered almost, if not entirely, in young subjects, most frequently before the age of puberty. Children are very apt to suffer from overgrowth of lymphoid tissue from slight chronic irritation, and Stephenson has aptly pointed out the similarity between the follicles in the lower lids and adenoid vegetations in the naso-pharynx. A slight, but prolonged and constant congestion of the eyes frequently accompanies the overstrain induced by high ametropia, and this chronic increase in vascularity acts as an irritant, and induces the changes which we associate with follicular inflammation. And if ametropia may do so much in the causation of follicular inflammation, why should it not exercise some influence upon the growth and exuberance of the trachoma granule, which after all is but an exaggerated variety of adenoid hypertrophy? Such a question does not trespass upon the domain of a primary specific origin for trachoma. A specific virus may initiate the growth of the granulations, whilst secondary influences may promote or retard their progress.

REFERENCE.

[1] The Refraction of 190 Trachomatous Eyes, Hamilton, *Ophth. Rec.*, Nashville, 95-96.

Dr. DE SCHWEINITZ endorsed Mr. Lawson's position, and thought that as it had been definitely proved that the correction of ametropia favourably modified and often cured various types of blepharitis, chronic conjunctival hyperæmia, follicular conjunctivitis, etc., there was no reason to doubt a similar advantageous influence from the correction of errors of refraction in cases of trachoma with clear or reasonably clear corneæ.

THE EYE SYMPTOMS IN SO-CALLED "HAY FEVER."

By JOHN HERN, M.D.,

Ophthalmic Surgeon, Darlington Hospital.

THE symptoms affecting the eyes in this affection are certainly varied, not only in different individuals, but in the same patient at different times. For the greater part of the year the health and general condition might (and usually does) appear to be good, but as a rule only neurotics have the trouble.

About the second week of June (12th to 15th), sometimes apparently following (but by no means always) a ride or drive in the country, suddenly there arises an intense itching and burning sensation at the inner canthus, usually bilateral. The patient feels impelled to rub or scratch the eye, which "feels as if filled with heated sand." On examining the eye at this period the whole conjunctiva is seen to be swollen and œdematous, especially at and around the inner canthus, and if the swelling extends quite up to the corneal edge, there usually is considerable photophobia. The œdema lasts about two or three hours, and then gradually subsides, provided the eyes are rested absolutely.

At night the patient can usually sleep for two or three hours, and is then awoke by pains and the feeling as if the eyes were filled with sand. Application of a 2 per cent. solution of cocaine gives sufficient relief to enable the patient to go to sleep, but only to be reawakened in two to three hours.

Unless the patient is sent to the seaside, or for a voyage, these symptoms continue for six to seven weeks, and then disappear irrespective apparently of any treatment, but only to reappear the next season.

Often there is asthma, but so far as my observation goes, this occurs only if there is nasal obstruction, and the amount of asthma varies according to the amount of nasal obstruction present. Two cases I have recently had under treatment in which Dr. Scanes Spicer removed the inferior turbinate, were both cured of their asthma, but one has had a bad recurrence of the eye symptoms this season.

To what are these eye symptoms due? To a reflex neurosis from pollen or other particles impacted in the mucous membrane of the nose; to local irritation from particles in the conjunctiva; or to a vasomotor disturbance? I have noticed that the worse the general health the earlier the symptoms appear, the more severe they are, and the longer they last.

Treatment is difficult, and unsatisfactory as to medicaments of all kinds. A few hours at the seaside relieves some, but they cannot go inland during the season without a recurrence. A month's voyage seldom fails to cure for that season. Boric cream, 2 to 4 per cent., gives relief, but relief only. A solution of boric acid, with spirit of nitrous ether ℥ij to ℥iv to ℥vi, also relieves. If the lids are granular, this condition should be treated in the interval, as it always aggravates the symptoms.

Mr. DEVEREUX MARSHALL said he had had considerable experience of the eye symptoms of hay fever from his own personal experience, and he had hoped that Dr. Hern would have some theory as to its cause and something to recommend as to its treatment. He had found that it was most irregular in its development, and all treatment was very ineffective. He severely condemned the use of cocaine, as he found that people who used this for the eyes and nose invariably required to increase the strength frequently, and as they swallowed and absorbed a great deal of cocaine they soon began to feel the general effects of the drug, and consequently they laid the foundation of the cocaine habit, which he believed to be far more widespread and harmful than was usually supposed.

A CASE OF DESTRUCTIVE ULCERATION OF THE EYELIDS.

By KENNETH SCOTT, M.B., C.M.Edin., F.R.C.S.Edin.,

Professor of Ophthalmology, Egyptian Government Medical School, Cairo.

THIS case had come under Mr. Scott's treatment for extensive ulceration of the upper and lower lids. The patient was an Egyptian, aged 45 years. The ulcerated area measured 42 mm. by 16 mm., and the length of the palpebral fissure was 28 mm. The eyeball was unaffected. There was no decided history of syphilis, but inunctions of mercury were used, while locally the ulcerated surface was gently cleansed and dusted with europhen and covered with a simple dressing on which vaseline was spread. The case underwent rapid cure, and in a short time the ulcer had healed. Mr. Kenneth Scott was greatly impressed with the beneficial effect of europhen locally. Drawings of the case, taken both before and after treatment had been adopted, were shown.

Mr. ARNOLD LAWSON thought that the case closely resembled one of tertiary syphilitic ulceration, and this view was also held by Lieutenant-Colonel DRAKE-BROCKMAN.

SECTION OF PSYCHOLOGY.

David Nicolson, C.B., M.D., President.

THE ASPHYXIAL PROBLEM IN CONVULSIVE SEIZURES.

By J. F. Briscoe, M.R.C.S.
Westbrooke House, Alton.

A convulsive seizure may at any time seriously arrest the pulmonary circulation and terminate life by suffocation. In any case the convulsive paroxysm, either directly or indirectly, affects the respiratory and circulatory systems. If it were always possible to open the chest immediately after a death from convulsions, the pathological heart of asphyxia would not uncommonly explain the cause of death. However, *post-mortem* examinations are not generally made within twenty-four hours; and again, the error of removing the heart—as is usually done at necropsies by cutting the large vessels, alters considerably the result of these inquiries. When the pericardial cavity is slit open, the cavities of the heart should either be exposed *in situ*, or, what would be better, ligaturing the big vessels about 2 inches from their connection with the organ, and then placing the viscus aside on a plate. The blood is thus retained in the cavities, its quantity and consistence can be measured, and the dimensions of the spaces gauged.

This practical suggestion is equally important when we wish to concentrate our attention on any other organ in the three cavities of the body. Of the three cavities, that one which is occupied by the brain more often comes under our notice. It is obvious that congestions and hæmorrhagic extravasations into the brain during life may diminish after death. This may occur from *post-mortem* changes. I think, however, that there is another cause; for in making necropsies on the lower animals, I have frequently found the cranial cavity and its contents bloodless after suffocation. I observed, moreover, it was due to the fact that I left the uppermost space of the body till last. The heart and large vessels in the chest having been severed and removed, and under the influence of gravitation, a complete drainage of the gutters of the head had resulted. Harvey, as quoted by George Johnson, says[1]:

I have several times opened the breast and pericardium of a man within two hours after his execution by hanging, and before the colour had totally left the face, and in presence of many witnesses have demonstrated the right auricle and the lungs distended with blood, the auricle in particular being as large as a large man's fist, and so full of blood that it looked as if it would burst. This great distension, however, had disappeared the next day, the body having stiffened and become cold, and the blood having made its way through various channels.

The heart that has only recently been put to asphyxial strain is not always verified *post mortem*. The explanation may be given as above. But chronic dilatation of this organ associated with concomitant apnœa would appear to remain *in statu quo* after death, since distinct pathological change in the muscle wall has been long established. The mode of death does materially vary those appearances which we call *post mortem*, and rigor mortis does produce marked appearances which may create an element of doubt in the mind of the pathologist. The morbid anatomist who is daily making observations in the deadhouse is better able to decide on these moot points. The necessity of always being very thorough in necropsies was impressed upon my mind some years ago.

A young woman, an in-patient of a hospital for some uterine disturbance, died rather suddenly, and was said to be convulsed. The three cavities of the body were examined in the ordinary way, but for a time nothing was found to account for death. I very cautiously examined the brain again, and I found a small cyst the size of a pea. The contents of the cyst were put under the microscope, and there were some characteristic "hooklets." Although I searched carefully, I was unable to detect evidence of hydatid disease in any other organ of the body.

At this juncture the physiology of asphyxia is worthy of our consideration. To be brief on the matter, I cannot do better than give you the words of the late Dr. Swaine Taylor, the great medical jurist. He says:

In asphyxia the right cavities are generally found to contain blood, while the left cavities are either empty or contain much less than the right.

Drs. Guy and Ferrier and George Johnson confirm this dictation and I have already given you Harvey's results of execution by hanging. However Dr. Sanderson would somewhat disagree. Again, Sir Michael Foster, Gerald Yeo, and Landois and Stirling hold opinions which are in accord with the opinions of G. Johnson in his *Essay on Asphyxia*. But they differ as to the causation of the enlarged right cavities of the heart, because they say that, owing to the force of the rigor mortis of the left ventricle, and the greater capacity of the systematic veins, the left side is found comparatively empty some time after death, and at *post-mortem* examinations the right side alone is found overfilled. G. Johnson, in the same essay, quotes a good instance (p. 14) proving that this is not so. The late Dr. Massey, of Nottingham, has been equally fortunate in an experiment on a dog of 19½ pounds. He affixed a ligature on the trachea, and when convulsive movements were over he rapidly opened the chest and found extreme distension of the right cavities of the heart and flaccidness of the left cavities. Dr. Ogston has also performed similar experiments on a large number of animals with the same results. The modern rigor mortis theory, as the cause of contraction of the left cavities, has not been proved practically. Neither do I see how it can be thus settled except in theory. However, G. Johnson[2] clearly settles the exact state of affairs, and this is as follows, namely:

That during the latter stages of asphyxia, when the blood has become entirely deoxidised, the pulmonary arterioles contract and cause the extreme distension of the right cavities, with anæmia of the pulmonary capillaries and a corresponding defective blood supply to the left cavities of the heart. The extreme distension of the right cavities of the heart while the left are flaccid and comparatively empty, the minute tissue of the lungs being pale and bloodless, clearly indicates an impediment to the flow of blood between the right ventricle and the pulmonary capillaries. Such an impediment is explained by the contraction of the pulmonary arterioles, the vaso-constrictors of the lungs.

The experiments of Dr. C. J. Martin, by producing asphyxia on various animals, are very conclusive. These were performed conjointly with G. Johnson.

The trachea being ligatured in rabbits, cats, etc., the chest of each animal was opened during life; the distension of the right cavities was so great that the enlarged heart actually bulged through the split sternum. There was diminished distension of the left cavities; the lungs at the same time were pale, bloodless, and collapsed to an extreme degree.

I will use the term "convulsion" as meaning a symptom of congenital or acquired disease: Convulsions may occur in (1) cases in which the arterial contraction is the result of a purely nervous or reflex influence; (2) cases in which arterial spasm is a result of blood poisoning. Of the former I will take epilepsy as a good instance, of the latter uræmia. All convulsive seizures are unexpected, although the subject may have a warning, as in epilepsy. The fit of epilepsy consists of the aura, the cry, the pallor, the convulsions, the asphyxia, and the recovery. The cry is the result of bilateral spasm of the larynx; the pallor the outcome of arterial contraction; and the asphyxia the result of the spasm of the pulmonary arterioles. These facts are familiar to all. It is very clear that in epilepsy there is an instability, congenital or otherwise, in the molecular functions of the congeries of complex organs which make up the brain and the sympathetic system. The production of convulsive discharges is just as marvellous to comprehend as the delusions or the hallucinations of the insane. The arterial anæmia in epilepsy and the involuntary muscular element in the arteries point to a sympathetic relationship. The reflex irritation would in some cases appear to be so trivial and the attack always so sudden that the cause for this appalling madness of the nervous tissue is very conjectural.

An epileptic fit is to be compared to an asthmatic seizure, and after the storm comes a calm. The congestive venous system, which may have already seriously affected vital organs, now subsides to normal, since the respiratory act is again in healthy motion. However, the convulsions may be so violent and continued that a condition is produced, the status convulsivus. The venous system having become gorged, a hæmorrhage into any organ or tissue may occur after the deoxygenated blood has already committed disastrous consequences; so that at the last the patient dies from asphyxia if unrelieved. It is not safe, in fact almost impossible, to administer drugs at this juncture. Only three things are thus offered to us, namely, chloroform, nitrite of amyl, or venesection. I will dismiss the first and deal with the two last, because I am handling an extreme form of the status epilepticus. Sir J. Crichton Browne has recorded several cases in which nitrite of amyl has cured the epileptic. Yet it

should be remembered that nitrites convert hæmoglobin into methæmoglobin, as a result of which the oxidation of the tissues is hindered. Ignorance of the causes and pathology of epilepsy leads me to bow to the recommendation of this authority. Failing relief from nitrite of amyl, the final resource is venesection. For in the last stage of epilepsy nitrite of amyl would be harmful. The extreme degree of spasm to which the arterial system has been put to during the seizure would seem to have paralysed its action. The right side of the heart and the venous system are also distended to their fullest extent. This helps me to emphasise the importance of blood-letting in convulsive seizures anterior to such a state of affairs. Nay, as I shall show you later on, a condition of things is produced which absolutely demands venesection.

I have heard it stated that you may bleed an epileptic to death and not a drop of blood will leave the head. This statement requires a considerable stretch of the imagination; yet the arterial spasm in epilepsy would not be inconsistent with the theory. However, venesection is rarely if ever practised in asylums for the insane, for medical superintendents of these institutions have quite enough responsibility. Blood-letting in all cases where it is indicated demands the skill of the specialist, since the details, if not carefully attended to, often lead to failure of the operation. If epilepsy, as Sir S. Wilks thinks, is central, that is, owes its origin to molecular upset of the nervous elements, the very beginning of an epileptic fit would appear to indicate disorder of the sympathetic system. The suddenness of the symptoms would seem to be produced by the spasm of the arterial system. The relief of this system by nitrite of amyl further assists us in the matter. If it is a fact that irritation of teething, worms, auto-intoxicating principles in the blood, or any other similar provocative may upset the stability of the nervous system, then we have no difficulty in solving the problem. And, on the other hand, the cerebral congestion of the venous system must inevitably arise as a secondary consequence of the convulsion.

Very little is known of the physiology or pathology of the sympathetic, and it will be useless for me to propound any theories on the subject, yet it is important for us to consider the vaso-constrictor and the vaso-dilator nervous apparatus. If it is true that the ganglia which lie in the very substance of the organs do regulate the co-ordination of movements, then we have something tangible. The chief centre of vasomotor nerve action is in the bulb, near the floor of the fourth ventricle. At any time the slightest disturbance of the economy in an epileptic subject may upset this vasomotor apparatus. Like in all forms of disease, we always look for an exciting, an hereditary, or a predisposing explanation. Every organ or tissue of the body may stammer. There is no reason either why this should not be applicable to the arterial system, dominated as it is by a nervous tree. A nervous system, as we know, predisposed by heredity to instability, would seem to strike us as peculiarly susceptible to irregular action; while a normal nervous system would under the same circumstances be little affected by the irritation of a worm, a tooth, or any other similar provocative. Again, the very presence of foreign effete chemical matter in the blood, as in our second division, in which arterial spasm is a result of blood poisoning, materially assists our endeavours to elucidate the asphyxial problem in convulsive seizures.

It would be a waste of time to attempt to classify convulsive seizures after the line of their exciting cause. There are different types, but I think I have done my duty by taking epilepsy as the best example of the convulsive seizure. Compared with a syncopal attack it is sometimes ill-defined and difficult to trace. There are occasionally semi-convulsive shudderings in syncope. In ordinary fainting fits the circulation gradually fails from a want of cardiac power. There would seem to be an absence of nervous energy in syncope and an excessive quantity in epilepsy.

In studying the pathology, and more particularly the secondary and tertiary consequences of a convulsive storm, we shall find that there is much which deserves our consideration. One of the most important is the cerebral venous congestion, although there are other districts of the body where similar changes occur. If this distension of the venous system is not relieved by venesection, then extravasation of blood follows. These hæmorrhages, moreover, are not confined to the nervous organs, and may be very extensively distributed in the various tissues of the body. Dr. Mott has described very important changes in the brain, muscles, and other organs, found in persons who have died with prolonged epileptiform convulsions. It would be interesting to know whether similar changes are to be found in all convulsive seizures or whether they are not the tertiary consequences of asphyxia. I believe the manifestations which Dr. Mott reveals to us under the microscope are marked appearances in the chromatic substance of the cortical pyramidal cells and œdema of the perivascular and perineural lymph spaces. Are not these tertiary consequences of a convulsive seizure the result of venous congestion? Probably similar appearances are present as a blot on the brain of the epileptic, after years of convulsive seizures; quite apart from or as a consequence of the patient having died in the status epilepticus. In ordinary death from asphyxia, is there time for this œdema of the nerve cells to occur: such as in throttling, hanging, or mechanical obstruction of the air passages? Dr. Mott states in three cases of status epilepticus in young persons the cause of death was asphyxia and heart failure.

Before closing my paper on this subject I will briefly allude to the practice of blood-letting, and also give a very illustrative example from my case book. Sir S. Wilks says in his book on *Nervous Diseases:*

> When you find the venous system gorged in primary affections of the lungs, or in the secondary congestions, as in heart disease, or from paralytic conditions, as in apoplexy, you cannot be wrong in bleeding; you relieve the venous system as well as the heart, and allow the circulating apparatus to right itself. The objection sometimes made that the patient is too weak, as indicated by the pulse, is futile, since, owing to the small amount of blood which reaches the left ventricle to be propelled onwards, the pulse is naturally small.

The following case is very instructive:

> W. W., aged 27, was removed out of the water from about 30 feet or more. He was wearing a diver's dress, and was searching alongside Sandridge Pier, Melbourne, for a large bottle of quicksilver. No air coming to the surface of the water, the attendants dragged him up. He was apparently dead, for when I saw him about three minutes after, he was lying on his back perfectly motionless. He was unconscious and breathing had ceased. I very expeditiously laid him across an extemporised pillow in the supine position and practised the Howard method of artificial respiration. He was cyanosed and little or no pulse could be felt at the wrist. On placing my head to his heart—for his chest was now bare—I could just discern feeble heart sounds. There was no pulse in the temporals. As he did not respond to artificial respiration, and thinking he was dying—the conjunctivæ were quite insensitive and the pupils dilated—I asked a bystander for a knife. With the consent of a few members of the crowd I opened a vein in the right wrist in public. At first little blood escaped; but continuing the shampooing of the extremities which was being adopted, soon a spirt of dark venous blood occurred. When 15 ounces of blood, or thereabouts, had escaped the patient commenced to move his limbs. To our great surprise he gave an involuntary respiration. This I at once imitated by artificial measures. Thirty ounces of blood had already left the gutters of his venous system, so I bound the wound up with a handkerchief. Needless to say, during this momentous period, all the adjuvants recommended for the resuscitation of those suffering from suspended animation were employed. The patient, having so far recovered, was removed to his house two miles away. He was placed on a soft bed without a pillow, and the chamber was darkened.
>
> For the first three days he lay in bed moving his limbs about, but slowly. On the second day he evacuated a bloody motion, and he also passed blood in the urine. The surface of the body was covered with a petechial eruption. On the third day he gesticulated in a drunken fashion. The eyes—for he was quite blind—were carefully examined with the ophthalmoscope, and in both there were extensive retinal hæmorrhages. As he was unable except very slightly to appreciate the bright light from the mirror, the exploration of the interior of both globes was readily accomplished. The patient was apparently deaf. On the fifth day he shed tears, and seemed to recognise his mother; he also drank freely of milk, which up to the present had been his diet. On the sixth day he spoke to me, and was quite conscious. This was the only hope of his return to intelligence and likely recovery from the time I first saw him on the pier. However, he remembered nothing of the accident either before or after the event. He was still only able to distinguish light from darkness. Blue glasses were procured for his use. Up to the present he had been taking 2 grs. of calomel twice daily, and which I now stopped. He made an uninterrupted recovery, complaining at times of rheumatic pains in his limbs and body. The urine gradually cleared itself, and the melæna passed off. In three weeks from the misfortune the eyesight became normal, and he was out on the doorstep at the end of the month.

The pathological importance of this case is great. Are we not justified in assuming that extravasation of blood had occurred in most organs and tissues of the body? Was this attack the result of a convulsive seizure? The young man at the time was fulfilling his father's duty, who was then incapacitated. He had only descended on two previous occasions. There were known to be sharks in Hobson's Bay. Further, he was a highly-strung, anxious man. Although there were remarks passed as to the working of the

machinery, we had no evidence that the diving dress had gone wrong. It was assumed only that one of the valves was faulty, since no air was coming to the surface of the water before he was pulled up. But then in his fit he would have fallen and got buried in the mud. The father, who had been the diver for Hobson's Bay, Melbourne, for many years, told me that he had on several occasions experienced while diving vertiginous symptoms when at the bottom of the water. This is, I believe, the experience of other divers who are not brought up to it from boyhood. However, supposing the case was only one of simple asphyxia, it is equally astounding that the patient survived. Several years after I heard from him periodically, and he was in the enjoyment of good health and was married.

Had I persisted in artificial respiration for another two or three minutes, or pinned my confidence in the ordinary adjuvants for resuscitation of those who have ceased to breathe, the young fellow would not have had recorded this graphic picture. The case does not stand by itself, for in old medical journals are records of most wonderful cures after a vein has been opened. The interesting part of the case is the perfect evidence of extravasation of blood in some cases of convulsive seizures. The gutters of the man's venous system were full to repletion, and his arterial system more or less empty. I relieved him by venesection and set the pendulum of life swinging again.

In conclusion, I would add that from among Sir Samuel Wilks's[3] many successful cases of blood-letting there is one in which he says, "Her life was as clearly saved by the bleeding as if I had dragged her out of the water; and this is more than I can say from the use of drugs."

References.

[1] Second Disquisitions on the Circulation of the Blood. *Syd. Soc. Trans.*, p. 127. [2] On the Physiology of Asphyxia and on the Anæsthetic Action of Pure Nitrogen, *Lancet*, April 11th, 1891. [3] Wilks *On Blood-letting.*

NOTE ON POST-OPERATIVE INSANITY.

By S. Rutherford Macphail, M.D.,
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Cases of insanity or mental disorder appear to be directly caused by surgical operations. The frequency of this unfortunate sequel to surgical interference varies considerably according to different authorities, and there is a considerable amount of literature on the subject (British and foreign). Two kinds of operation seem to be specially liable to be followed by insanity, namely, gynæcological operations and ophthalmic operations, although post-operative insanity may be a sequel to the most trivial or the most serious operations. One authority (Dennis) computes that 2.5 per cent. of operative cases develop mental symptoms, but this is evidently a much exaggerated estimate; although Sears had 12 cases of insanity in 186 ophthalmic operations, and of 128 cases operated on in the Massachusetts Eye Infirmary 4 became insane and one or two others had doubtful mental symptoms. Dr. T. Keith says that insanity follows in 10 per cent. of cases of hysterectomy, while Hourans, an American surgeon, had only 2 cases in 1,000 laparotomies. In 5,500 operations of all kinds performed in Mr. Annandale's wards in the Edinburgh Royal Infirmary during a period of twelve years there were eleven instances of post-operative insanity.

As regards the type of insanity the most common is a transitory form of acute mania with mental confusion and hallucinations. This is a different condition from the delirium which may appear in an alcoholic patient after an injury or an operation. This is delirium tremens pure and simple. Of 163 cases described by Simpson in his monograph, 67 are put down as mania, 45 are melancholia, 26 as acute confusional insanity with delusions, 10 as dementia, 8 as alcoholic and 4 as hysteria, so it is evident that any form of insanity may be a sequel to surgical interference. The age would appear to be in the large majority of cases over 40 years; in 29 cases 11 were under the age of 40, the other 18 were from 40 to 73 years. The age is important so far that this sequel occurring in middle age indicates cerebral malnutrition. So the older the patient the more chance of developing mental disorder.

The sex must be considered, because there is no doubt that mental disorder is more frequent after gynæcological than after general operations, so there would appear to be a large preponderance of females affected; but if gynæcological procedures be excluded there is little difference between the sexes. Thus, out of 167 cases, 102 were women, but 60 were gynæcological operations. In 41 ophthalmic operations 25 were men and 16 women. Simpson has collected 124 cases, of whom 102 were females, and of these 95 were sequent to gynæcological operations.

Besides the age, the sex, and the type of operation, there are other matters which must influence the causation of the insanity. Notably, a hereditary tendency, and the mental type of the individual operated upon. Alcoholic habit would also predispose to insanity as well as to delirium tremens, which is left out of consideration here.

The use of certain antiseptics has been blamed for the appearance of post-operative delirium—notably, carbolic acid and iodoform. Morphine and anæsthetics—notably chloroform—have also been credited with causing mental symptoms. Cases of each of these have been reported, but they are really acute toxæmia, and the entire excretion of the agent is accompanied by a remission of the symptoms, so that they can hardly be classified among the insanities.

Uræmic cerebral symptoms should be excluded in this connection, though I have had 6 cases of uræmia sent to me as insane during the last ten years. I have had no experience of cases becoming insane after sepsis from a surgical wound. A large proportion of cases of post-operative insanity are of short duration, and not very acute, and do not necessitate asylum treatment, but as several cases have been under my care shortly after surgical procedure, I thought it might be interesting to some of you to summarise the cases. I quite recognise that I am able to give only one phase of the disorder, to complete we require the experience of surgeons in both hospital and private operations.

There were in all 40 cases in 990 admissions—slightly over 4 per cent.
Of these 13 were men and 27 women.
The average age of the men was 48 years, of the women 42 years.
In 15 of the 27 females gynæcological operations had been performed, namely:
- Five operations on ovaries—2 double, 2 single removals, 1 tapping.
- Four uterine operations, including 2 hysterectomies.
- Six gynæcological operations, 2 perineal suturing; nature of other 4 not stated.

Excluding the gynæcological cases, there were 13 men and 12 women.
Nine of these were ophthalmic cases—4 men and 5 women:
- Three men and 1 woman, enucleation of eyeball.
- One man and 1 woman, cataract.
- One woman, squint.
- In 2 nature of operation not stated.

Of the remaining 9 men:
- Three were cases of operations on bones.
- One excision of the tongue.
- One excision of testicle.
- One amputation of foot.
- One plastic operation on face.
- One removal of gummatous tumour.
- One operation for fistula.

Of the 7 women:
- Two were operations after cranial injury.
- Two removal of necrosed bone.
- One hernia.
- One carbuncle.
- One hæmorrhoids.

In these 40 cases hereditary predisposition to insanity was ascertained in only 9. This is remarkable, for it gives a percentage of 22 as compared with a percentage of 27 in all the admissions of the last 10 years. One would have expected to find the percentage higher instead of lower than the average, on the apparently erroneous assumption that the operation merely acted as an exciting cause in a person predisposed to insanity.

The type of insanity in my cases was as follows:
- Melancholia, 19 cases.
- Mania, 16 cases.
- General paralysis, 2 cases.
- Dementia, 2 cases.
- Epileptic insanity, 1 case.

There was a great variety in the time of the incidence of the mental derangement and also in the mode of its development according to the information obtained when the patient was admitted, but the statements made on these occasions were so vague and unreliable that it is impossible to speak positively. I have only included cases which became insane a few months after an operation. Twenty-four, or more than half of the cases, dated from the first or second week after operation, and as far as my data go the average day of incidence was about the tenth. Four cases were given at a month, two at two

months, while in the remaining one-fourth no definite time could be ascertained.

It must be remembered that I am speaking of cases that come to an asylum with the slighter forms of mental derangement after operation. The symptoms usually appear on the third or fourth day. As regards the duration and termination of the insanity in these 40 cases, 24 recovered after being under treatment from 2 to 9 months, 8 died, and 8 became chronic or were transferred to other institutions. This is a recovery rate of 60 per cent., a death rate of 20 per cent., and an unrecovered residuum of 20 per cent. Four of the deaths were from malignant disease, 2 from general paralysis, and 2 from other forms of brain disease.

Puerperal insanity or the insanity of childbirth is considered a common form of insanity, and most general practitioners must be familiar with cases. Many get well at home, and do not require asylum treatment. When I began to prepare this summary of my ten years' experience in Derby Asylum I was not prepared to find that the cases admitted for insanity after gynæcological operations so closely approximated to the number of cases of puerperal insanity. The actual numbers being, puerperal mania, 18, as compared with 15 post-gynæcological cases. I do not intend to draw any moral or to give any deductions from this brief summary.

ON "DOUBLE CONSCIOUSNESS."

By Theo. B. Hyslop, M.D.,

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Introduction.

In studying this complicated and difficult subject of double consciousness I have sought—not to emphasise the rarer and more abnormal extremes of the reported cases—but rather to bring forward such observations as may possibly help to bridge the apparently impassable gulf between double consciousness and more ordinary experiences. Even in the most strikingly abnormal cases there are indications that it is possible to interpolate an innumerable series of gradations between them and health.

I have endeavoured to confine myself to the subject of double consciousness, or double personality, and beyond brief analogies derived from a comparison with dream, somnabulistic, epileptic, amnesic, and insane states I have not dealt with the enormous mass of information and side issues at my disposal. Nor have I reopened the much-vexed question as to whether unconscious cerebration can go on without any obvious mental accompaniments, as in the instances of automatic movements derived from habit, and termed by Griesinger "psychical reflex actions."

For convenience sake I will first briefly enumerate what appear to me to be the various types of double consciousness, and conclude with some of the psychological and physiological theories derived from consideration of the cases.

The cases appear to me to fall under the following seven types, namely:

I. Those occurring in early life, and in which the abnormal state is preceded by night terrors, somnambulism, or by both.

II. Types in which the abnormal state is preceded by profound sleep, and in which the normal state is only again reached after prolonged sleep.

III. Types due to temporary or periodic amnesia acquired as the result of accident, injury, or disease.

IV. Epileptiform types.

V. Insane types.

VI. Hysterical anæsthetic types.

VII. Types in which, during the abnormal state, the subject assumes the possession of a mediumship.

I.—*Types seen in childhood in which the condition is preceded by night terrors or by somnambulism, or by both:*

Case I.—J. R. G., a schoolboy, aged 14.

Family History.—Cousin in Morningside Asylum, demented. Sister, aged 11, hydrocephalic. Uncle also hydrocephalic.

Personal History.—The patient was the fifth child; birth natural; mother much worried and troubled at the time. No convulsions. Used to talk in his sleep. Suffered from night terrors, when he would scream and become agitated. Occasionally incontinent. This patient never mixed with other boys or joined in their games; he was always very excitable, and spoken of by the other boys as "mad." He was brought to me on account of a propensity he had of stealing money, stamps, etc., from the other boys, and when convicted and reproved for this he seemed to have no memory of the events at all, and was much distressed at the circumstances.

Condition when First Seen.—He was a bright intelligent-looking boy, but with rather a nervous aspect, slight hesitation of speech. With regard to his special senses, he had diplopia, the chart of which would not fit in with paresis of any one muscle or group of muscles supplied by one nerve. Mr. J. B. Lawford kindly examined the case for me and found the diplopia to be due to irregular astigmatism. There were no ophthalmoscopic evidences of disease. The pupillary reactions were rather sluggish for a boy of his age, but not otherwise abnormal. Glasses were prescribed to correct the error of refraction, and these did away with the double images. He had suffered also from various subjective symptoms. When he lay down he used to see faces which, however, he knew to be imaginary. He also complained of whizzing sounds in his ears, and music. At times these sounds were so real to him that he could not appreciate their subjectivity. Taste and smell were normal. With regard to common sensation, he complained of tingling and a certain amount of numbness in his right hand. At the time I saw him I could not detect any anæsthesia. His mental state was nearly normal. After working at his books for some little time he would become muddled, and it was usually after the strain of work that he had these nocturnal visual phenomena. After one of these nocturnal attacks he would during the daytime do various impulsive things. On one occasion he took some poison with the intention of destroying himself. He told me he was perfectly happy, and that he could not account in the least for what was alleged against him, namely, his attempt to injure himself and his propensity to steal from other boys.

This boy appeared to be one of the group of unstable adolescents who become criminal or not according to surroundings, and it is of interest to note the early occurrence of night terrors followed by abnormal day states, during which he had moral and volitional perversions of which in the fully awake state he had no memory.

Case II.—V. E. W., schoolboy, aged 14.

Family History.—Father died of cancer in the bowels. He was also very intemperate. Mother was ill just before confinement and had a fall just at the time of the birth of the child. He has two brothers living, one of whom suffers continually from nervous headaches.

Personal History.—He has always suffered from pain in the head. As an infant he was very precocious, always suffered from night terrors; he had no convulsions during teething, but from a very early period has had nystagmus. At the age of 7 he had some brain affection which was attended with great pain, confusion, hyperæsthesia of all his senses, and ever since that time he has been subject to bad headaches. In February, 1896, he came under my care as a schoolboy, but nothing abnormal was detected for some considerable time. He was a strong, healthy, industrious lad. About Christmas, 1898, he had an attack of stupidity during school hours and could not be made to answer questions; in the course of a few hours this passed off and he became natural. One night after the other boys had gone to bed he was found sharpening a knife with intent to kill. After a desperate resistance he was overpowered and placed under supervision. Subsequently, he remembered nothing whatever about the incident.

Condition on Examination.—I could not discover any mental or moral defects, with the exception of the failure to recollect either the period of stupidity before-mentioned, or the incident when he had the homicidal tendency. He had no physical symptoms except perhaps very slight giddiness on standing with his feet together, but this may have been due to the fact that he had been confined to bed for several days. His special senses were apparently normal, with the exception of some anæsthesia of his hands and feet and pain at the back of his head. Dr. Savage also examined this boy and found nothing organic the matter with him. He regarded the state as resembling some epileptic state, and recommended that he should be removed from the school, put to some easy daily work, and take bromides for a time. He was examined ophthalmoscopically by Dr. Savage, my colleague Dr. Stoddart, and myself, and no changes in the disc or trace of brain disease could be detected.

This case resembles the foregoing one in the early occurrence of night terrors and the subsequent development of an abnormal unconscious state during which the individual was impulsive and dangerous; followed by the normal state with absolute failure to recall any of the incidents which had occurred in the morbid state.

Case III.—R. P. S., male, aged 19.

Family History.—One sister hysterical. Grandmother very intemperate.

Personal History.—Since the age of 3, when the child had a series of convulsions he has been alternately lethargic and excitable. He also used to suffer from night terrors and occasionally somnambulism. On one occasion in the middle of the night he rushed into his mother's bedroom with his Bible in his hand, exclaiming that he had "a truth from God." During the daytime he would also have strange moods of depression and sullenness, when he would throw things at his sister and threaten to injure her. Occasionally during those attacks he would hear voices to which he responded, and apparently he had visions. Subsequently, when he recovered he had no memory either of the somnambulistic attack or of the morbid day attacks.

Condition when First Seen.—He was very anæmic, rather undersized, with an incipient beard. He could not keep to the point in conversation. He was very voluble and excessively cheerful, and thought the hospital an annexe of Buckingham Palace, whilst the attendants and doctors were various royal and aristocratic personages, such as the Kaiser, Prince of Wales, Earl of Aberdeen, etc. He also complained that sometimes at night he felt a peculiar sensation running up his legs, which he described as being at one time like electricity at another time as being a sensation

of col l or numbness. During his stay in Bethlem of nearly four months he remained in this condition, and when he recovered he denied that he had ever had any delusions as to his own identity or as to the identity of others.

This case is somewhat similar to the preceding two cases, and forms a connecting link between night terrors, somnambulism, automatism, and actual insanity.

Case iv.—A. M., an intellectual and highly cultivated lady, was admitted to Bethlem suffering from melancholia with anergia.

Family History.—Her father was alcoholic; otherwise her family history was good.

Personal History.—Three years previous to her admission she became somnambulistic. She used to make a great noise during the night by banging at her door, shifting furniture, etc. At times she would bump her head on the floor, but never really hurt herself. During her somnambulistic state she would answer questions intelligently and to the point. When comparatively free from somnambulism she suffered in other ways—for example, from indigestion and symptoms of gastric ulcer. Under treatment by hypnotic suggestion she improved somewhat, but subsequently she relapsed into her somnambulistic habits. Two years from the onset of her first symptoms she began to write letters during the night. These letters were badly written, and only faintly resembled her ordinary handwriting. Subsequently she would do and say things during the daytime of which she had no recollection when in her normal state. Again hypnotic suggestion was tried, but it was found that after the experiment she could not be roused for a period of nearly six hours. When in her normal state of wakefulness she failed to recall any of the events of her somnambulistic state. During the latter state, on the other hand, she could give a connected account of her waking state. Subsequently she developed a third state, somewhat resembling *petit mal*, during which she would steal and hide things which did not belong to her.

There is something to be said in favour of the hypothesis that dual consciousness is only complete somnambulism. The successive awakening of the senses constitutes a gradation from ordinary sleep to complete somnambulism, which gives to the person studied the appearance of leading a dual life. Questions of criminal responsibility arise in those cases in which criminal acts are committed in the hypnogogic, or in the somnambulistic state, and undoubtedly there is not only a close analogy between some dream states and insanity, but the analogy also extends to somnambulism.

The night terrors mentioned in these cases can be studied on Hughlings Jackson's hypothesis, and we may assume that the sleep, though apparently profound, has really only suspended some of the highest level functions, leaving uncontrolled play to the lower levels. During the fully awake state the highest level has little or no knowledge (so to speak) of what happened when only the lower levels were at work, but when the child has a repetition of the night terrors there is apt to be another uncontrolled and even facilitated reproduction of the same character. Sometimes it is almost impossible to say whether a given attack is night terror or epilepsy. Certain it is, however, that not infrequently night terrors are followed by hallucinations, somnambulism, and epilepsy, and it is to add to the instances of this sequence that I have reported the preceding cases.

II.—*Types in which the abnormal states are preceded by profound sleep, and in which the normal state is again reached after prolonged sleep.*

(*a*) Dr. Weir Mitchell's case[1] of Mary Reynolds, a melancholic woman who was found one morning in a profound sleep from which she could not be aroused. When after about eighteen or twenty hours she was at last awakened she was to all intents and purposes as if for the first time ushered into the world. She had no memory of the past, and had to be taught everything afresh. This state lasted for five weeks, until one morning after a protracted sleep she awoke and was herself again. Subsequently she had these alternations from one state to another at intervals of varying length for fifteen or sixteen years, until eventually she remained in the second state.

(*b*) Combe[2] reported the case of a girl, aged 16, in which the first symptom was a propensity to fall asleep in the evenings. This was followed by the habit of talking in her sleep on these occasions. Later she frequently passed from sleep into the abnormal state, and circumstances which had occurred during the paroxysm were completely forgotten by her when it was over, but were perfectly remembered during subsequent paroxysms.

(*c*) Combe also relates the case of a young lady who possessed naturally a very good constitution and arrived at adult age without having it impaired by disease. Unexpectedly and without any forewarning she fell into a profound sleep which continued several hours beyond the ordinary term. On waking it was discovered that she had lost every trait of acquired knowledge and she had to relearn everything. After a few months another fit of somnolency preceded her return to the normal state. She was as unconscious of her double character as two distinct persons are of their respective natures. During four years or more she underwent periodical transitions from one state to another, the alterations always being consequent upon a long and sound sleep.

III.—*Type of alternating personality mainly dependent on alteration of memory, etc., due to traumatism or disease.*

After an injury or shock the power of recall of mnemonic images may be inhibited, and recent or remote events may, for the time being, be quite obliterated. According to Ribot this inhibitory process may extend both backward and forwards, and there may be, or there may not be, recovery from the loss. It is assumed that either the registration of anterior states is interfered with or effaced; or if persisting, their power of revivification by association with the present is destroyed. It is to be presumed that in organic brain disease the former is the case, whereas in most of the known cases of double consciousness the latter is the probable explanation, and the coupling apparatus between the past and present is rendered inert by some defect in its organisation. Numerous instances are recorded in which—through injury or shock—a blow on the head, a fall, a fever, or an acute illness may produce effacement from the memory of events of either recent or remote occurrence.

Case v.—B. B., aged 56, dressmaker.

Family History.—Nil.

Personal History.—She was knocked down by a cab in October, 1896; she fell on the back of her head, which was much bruised. She was kept in bed for a week after the accident. She fancied there were people in the room, and called them by their Christian names, when there were really no people there. She also insisted that she had been confined, and would nurse a pillow as the baby. On several occasions she tore up a blanket and sheet, and also a nightdress. She recognised no one except her husband, and occasionally one of her sons.

Condition on Admission to Bethlem.—Her tongue deviated to the right. Her chest was rigid with marked emphysema. Her special senses were difficult to test on account of a certain amount of confusion. Her left eye had better vision than her right. It was found that the appreciation of blue and yellow was very defective. Her hearing also was very defective. A watch could not be heard with the right ear, and only on contact with the left. There was also some anæsthesia of both hands. Her handgrasp was feebler on the right than on the left. The knee-jerks and plantar reflexes were brisk, but there was no ankle clonus. Her speech was also somewhat affected. The usual tests were badly pronounced, and in attempting to repeat them she became confused. Her memory was very defective.

After-history.—She was very destructive, and pulled her bed to pieces, explaining the circumstance by saying that she was staying in a Photidian hotel, where she had been six weeks, and that she was packing up her things to go away. She knew her age, and said she had seven children, the youngest of whom died twice and was kidnapped at the age of 7, the next youngest being a son aged 23, who was staying at home. She said she was quite well, and ascribed the injury to her head as being due to a whacking given her by her husband. She also stated that she was "Mr. Whittaker the solicitor." She had no headache, or cephalic or spinal tenderness. She however complained of vertigo, and said things seemed to go round from left to right. She also volunteered the information that after these fits of giddiness she felt foolish all day. She had some tremor in her arms, which became less or even disappeared on movement. Ten days afterwards she gave another version of the accident to her head. She stated that she was confined three weeks ago, and that this is the year 1860. She thought the child was too small to live. She could recognise and name objects correctly, namely, keys, pencil, knife, and also colours. Two days afterwards she said she was 42 years of age, and that the child was 3 years old. Three days afterwards she was 45 years of age, whilst her child was 6 years. A week after this she stated the year correctly, and that she was 50 years old, whilst her son was 20. She now knew the day of the week, but could remember nothing about the cab accident. A fortnight later she gave her correct age, the age of her son, and correctly appreciated time and place. She could not recall anything of the cab accident, nor could she remember anything that had occurred during her illness.

Epileptiform Attack: Recovery.—When practically well and waiting for discharge, she one day felt faint in church and was taken to her ward in an unconscious state. The pupils reacted slightly to light, were small and equal. The conjunctival reflex was absent. Her eyes oscillated between the medium position and deviation to right. Sensation seemed to be lost to a pinprick in all parts except the central part of the face. When her limbs were raised from the couch there appeared to be greater flaccidity of the right arm and leg. Knee-jerks were absent. There was no rigidity anywhere. Respiration was abdomino-costal. After about fifteen minutes she began to come round and sensation returned. The movements seemed equal on the right side, but no difference between the sensation on the two sides could be made out owing to her dazed condition. She was able to close her eyes when told to do so, but not to protrude her tongue. The left knee-jerk returned before the right. She was unable to answer questions rationally for some time, and her condi-

tion was very similar to that on admission. She was unable to understand or obey simple written commands, such as "shut your eyes." About half an hour later when asked her age she at first said she did not know, then answered 37. Two hours later she quite recovered and regained her knowledge of time. She could not remember anything that had happened during the attack, but she said that before she became faint she had some twitching of her right thumb and forefinger. She had also had some sensations there for two or three days previously. In the course of a few weeks she was discharged from the hospital well.

This case exemplifies a symptom well known to all asylum physicians in which, owing to traumatism, extensive periods of time are obliterated, and it is not uncommon to meet with patients of advanced age who regard themselves as juveniles, and who gradually as they improve regain the knowledge and memories associated with their real ages. So far as I am aware, however, it is not common in such cases to have on recovery complete failure to recall the events which have happened during the mental attack. I am inclined, therefore, to regard this case as falling within the category of states of double consciousness. The occurrence of the anæsthesia and its suggestion of epilepsy is also to be noted.

IV.—*Epileptiform Types.*

Dr. Rieger[3] has reported the case of an epileptic man who for seventeen years had passed his life alternately free, or in prisons or asylums, having no memory of the abnormal states which led him to prison or asylum.

Combe instances a somewhat similar case of a female servant who was perverted and morally defective in the abnormal state, and who in the normal state had no memory of her vicious and perverted acts.

Such conditions of temporary loss of memory are found in every grade, in both the sane and the insane. The amnesic state may last for only a few minutes, or it may persist for several years. In epileptic states the most characteristic instances are to be found. Ribot regards the three forms of epilepsy—namely, *grand mal*, *petit mal*, and epileptic vertigo, as but different degrees of the same morbid state.

To account for these states of mental automatism, as they have been designated, two hypotheses have been advanced—namely: (1) That the period is not accompanied by consciousness, so that nothing can be reproduced; (2) consciousness does exist, but in so weak a form that amnesia ensues. The latter view finds most favour with psychologists, and I propose to deal with it more particularly after I have enumerated the types.

Magnan[4] has recorded the case of an epileptic who was alcoholic. The patient, when seized during the day with an epileptic attack, broke everything within his reach, and was very violent. At night time he had alcoholic delirium, with the characteristic terrifying visions. The following day, on coming to himself, he remembered the delirium of the night, but had no recollection of the delirium of the day.

Falret has pointed out as a very important characteristic of epileptic mania, that the mental condition is surprisingly uniform in the different attacks. The recorded cases of the epileptiform type are so numerous that I refrain from quoting more.

V.—*Insane Types.*

I have already elsewhere[5] pointed out that the instances of alternation of two personalities in the insane may, for convenience, be divided into two main groups, according as the alternation is complete or incomplete. In complete alternation the personality of the individual is entirely different in the two states; there is no continuity of thought, and the memory of one state is absent during the occurrence of the other. We have within the bounds of healthy life various analogous states, as for example, in dreams in which we forget our waking experiences and conversely. And again, as in somnambulistic and hypnotic states; and in the borderland cases of post-epileptic unconsciousness, so in the insane, we have every stage or variation in the alternation of the personality. These variations may depend upon sensory experiences which are different to those habitual to the normal self; there may be new bodily sensations, or loss of old ones, or there may be illusions of identity of part or of the whole of the individual. Of these sensory states I do not propose to speak, inasmuch as they seldom afford examples of complete alternation or double consciousness. Thus one patient in Bethlem had for several weeks alternating conditions. One day he would say, "Now then, my lads! bustle up and get me a good breakfast, I feel as if I hadn't had food for weeks." When asked if he had ever been miserable he would say, "Never known a moment's unhappiness in my life," and when questioned as to his present state of mind, he invariably replied, "I'm as fit as a fiddle, hearty as a buck, and as jolly as a sand boy." During the period of happiness he would laugh, converse with everybody, and eat ravenously. The next day, however, a change would come over him: he would lie in bed, moan incessantly, grumble at everybody, refuse food, and say that he had never in his life known a happy moment, but had always suffered the "tortures of the eternally damned." In this case the alternation was apparently incomplete inasmuch as he in both conditions recognised and called by name those who attended to his wants. I have elsewhere mentioned another case as an example of complete alternation. A female patient admitted to Bethlem some years ago used to be extremely depressed for a period of twenty-four hours, when she thought she was being burnt and failed to recognise people around her; then during the next twenty-four hours she was natural and bright mentally, recognised those around her, but had no memory of her experiences during the preceding twenty-four hours. Quite recently a case has come under my care which illustrates the inheritance of a mental instability, or a result of traumatism, or probably the effect of both.

CASE VI.—H. K., aged 6 years.

Family History.—Father subject to violent paroxysms of rage, during one of which he had an apoplectic seizure, followed by mental instability and dangerous tendencies, on account of which he was confined in an asylum.

Personal History.—At birth labour was prolonged, and the child's head was much compressed, bruised, and injured by the use of instruments. Nothing abnormal was detected in the child till it arrived at the age of 12 months, when it became subject to violent fits of temper, which increased till the age of 3 years. During the fits it would roll on the floor, scream, bite, and kick. It had, however, no night terrors and no somnambulism. During the last few months the child has had several impulses to kill her younger sister, and has taken up a knife with that intention.

Condition when First Seen.—I found her to be bright and intelligent, but quite unable to give any account of the states when she wished to injure her sister. She cried bitterly at the thought of doing harm to one she loved dearly, and disowned having ever made any attempt to injure her. The child's mother told me that during the periods when she was dangerous, she had stated that although she did not wish to harm her little sister she really felt that she must do so.

This case is a very sad one, and one which I shall watch with the keenest interest; and although the details are as yet very imperfectly developed, I fear the outcome will be serious. It will be noted that there were no night terrors or somnambulistic attacks.

There are in literature so many well-known instances of alternating selves in which melancholia alternates with health, or even optimism and euphoria, that it scarcely seems necessary to refer to them here. Doubtless Azam's case of Felida is well known to all, also the numerous cases cited by Binet, Ribot, and others.

VI.—*Anæsthetic Hysterical Types.*

This type comprises those cases, chiefly hysterical, in which there is a noticable amount of anæsthesia, together with a temporary amnesia which brings them within the category of double consciousness. Pierre Janet, to whom credit is chiefly due for a comprehensive account of this type, thinks that "when a certain kind of sensation is abolished in an hysteric patient, there is also abolished along with it all recollection of past sensations of that kind. On restoring that sensation, however, its corresponding memories return. In these cases there are certain inhibitions (Janet), or what Hughlings Jackson terms "negative lesions," which prevent the recall or revival of the former sensations, thus, the occurrence of anæsthesia or akinæsthesia is apt to be attended and followed by an amnesia which forms the basis of a change in personality. When the inhibited sensibilities are restored to the hysteric by means of hypnotism the individual becomes a different person, passing into a second condition entirely unlike the normal, or, I should say, the anæsthetic hysterical condition. Janet's cases are of particular interest in illustration of how the memories and character change with the restoration of sensibilities and motor impulses. His subject Léonie particularly deserves mention. A woman who had had attacks of somnambulism since the age of 3 years, and had been hypnotised frequently from the age of 16 to 45, and during

hypnosis could recall events which occurred during the somnambulism. In this case, in the first state there was visual consciousness, and the subject knew only of herself; in the second or somnambulistic state she knew herself, and the personality of the first state, and had both visual and auditory consciousness; in the third, or hypnotic state, the consciousness was at once visual, auditory, and tactile, and she knew of herself and both the others.

Bourru and Burot[6] have given us a most careful study of multiple personality of the hysterical anæsthetic type in which there existed at various times hysteric anæsthesias, paralyses, and contractures and a series of parallel modifications of the mental state. In this case there existed precise, constant, and necessary relations between the bodily and the mental state. Undoubtedly gaps of memory often go with anæsthesias, but there is no constant relationship between the occurrences of amnesias and anæsthesias. I have seen many cases of insanity in which there have been both amnesias and anæsthesias of very extensive distribution without double consciousness. Moreover, for the marked alterations of character of the individual from dull to gay, or good to bad, we must seek some further explanation. My colleague, Dr. Stoddart, in his recent interesting paper on anæsthesias in the insane, has pointed out that in stuporose states in which there is anæsthesia, the subject will not respond to stimuli at the time, but by constantly drawing the attention of the patient to the stimulus and by the use of suggestions, that they should remember the circumstances, the subject on recovery has been able to recall not only the circumstances, but also the tactile sensations thought to have been absent at the time of the experiment. These conditions, therefore, differ from those of the hysterical anæsthetic type.

It would appear that we have yet much to learn as to what constitutes oblivion, and the possibility of recall under new sets of conditions opens a vast field of research. In the future we shall probably understand more fully the throwing of certain functional brain tracts out of gear with others, and with clearer conceptions on this point we shall appreciate and perhaps even correct the defects of sensorial and ideational service which tend to alter or interrupt the continuity of self-consciousness.

VII.—*The "Mediumship" or "Possessions" Types.*

These are not uncommon, and include those cases in which during the secondary state the subjects speak, write, or act as if animated by others, living or dead. These states vary from the occurrence of automatic writing, inspirational speaking, trance utterances to higher intellectual flights and theatrical scenes. The subject, when of the hysterical type, has no memory of what has transpired during the secondary state, and in the deepest degrees of trance the voice, language, and actions purport to be those of the individual represented by the medium. In one case now in Bethlem the medium regards herself as perfectly passive, and as merely carrying out the designs of the spirits which make use of her mediumship. There is as yet in this case no evidence of discontinuity of memory, and I think it probable that, as in the imperfect amnesias of stupor already referred to, should she recover she will be able to recall her present fancies and delusions. A large number of keen investigators, both in this country and America, are dealing with this subject scientifically, and doubtless some uniformity of results will be arrived at in due course.

Psychological Considerations.

Self-consciousness or the awareness of those inner states determined mainly by physical adjustments (apperceptions of Wundt) and executions is in part defective. The nuclear self consisting of the adjustments, collectively considered, is only in part evident. The adjustments and executions available approach the reflex type. The reactions are primary reactions, although apparently central and interior in comparison with the external objective factors which call them forth. It is, as James says, as if the "sanctuary within the citadel" of our personal life were but partly accessible to light.

These adjustments [or apperceptions (Wundt)][7] claim special significance. As Wundt has pointed out, "the images of feeling we get from our own body and the representations of our own movement distinguish themselves from all others by forming a permanent group. As there are always some muscles in a state either of tension or of activity, it follows that we never lack a sense, either dim or clear, of the position or movements of our body. This permanent sense, moreover, has this peculiarity, that we are aware of our power at any moment voluntarily to arouse any one of its ingredients. We excite the sensations of movement immediately by such impulses of the will as arouse the movements themselves; and we excite the visual and tactile feelings of our body by the voluntary movements of our organs of sense. So we come to conceive this permanent mass of feeling as immediately or remotely subject to our will, and call it the consciousness of ourself. This consciousness is, at the outset, thoroughly sensational, only gradually the second named of its characters, its subjection to our will, attain predominance."

"This consciousness, contracted down to the process of apperception, we call our *ego*; and the apperception of mental objects in general, may thus, after Leibnitz, be designated as the raising of them into our self-consciousness. Thus the natural development of self-consciousness implicitly involves the most abstract forms in which this faculty has been described in philosophy; only philosophy is fond of placing the abstract *ego* at the outset, and so reversing the process of development. Nor should we overlook the fact that the completely abstract *ego* (as pure activity), although suggested by the natural development of our consciousness, is never actually found therein. The most speculative of philosophers is incapable of disjoining his *ego* from those bodily feelings and images which form the incessant background of his awareness of himself. The notion of his *ego* as such is, like every notion, derived from sensibility, for the process of apperception itself comes to our knowledge chiefly through those feelings of tension ('adjustments') which accompany it. Each thought has an owner, and each thought, if complete, is realised in its relation to self. Failure of adjustment of the thought in relation to the complete or wideawake self results in failure of recognition by the wideawake self."

Further, the formal unity cannot be preserved unless the transitions of the elements which go to make up self-consciousness are continuous and consequent. Dissolution of the formal unity occurs with the disjunction of the sequence through inhibition of one of the factors in that sequence. In mental disease there is apt to be first a change in the vital feelings, the sequence of fundamental inner experience is broken, and the patient feels not quite himself, complete estrangement being prevented by the processes of experience which enable him to form a bridge between the old and the new feelings. In more advanced stages the estrangement may be so great as to lead to the belief that the former self was the real self, and that the present self is unrecognisable or even dead. When the conscious memory connection is lost periodically, then we have double consciousness, and lastly, when the brain is incapable of forming or of reviving a sequence, then the final stage of mental dissolution is reached.

Psychologically, therefore, it would appear justifiable to conclude: (1) That in the abnormal states the permanent group or mass of feelings is only in part or slightly subject to the power of volition. (2) There are wanting those conscious accompaniments—or processes of apperception—which raise the apperceptions into our self-consciousness. (3) The disjoining of these bodily feelings and images which go to make up the *ego* removes the background of the awareness of self. And (4) the condition is (to use an expression of James's) one of "sciousness" pure and simple, inasmuch as it does not include those elements or adjustments which go to make up the complete self and which constitute *con*sciousness.

Physiological Considerations.

The primary origin of these freaks of dual and multiple personality is so recondite that so long as psychology finds itself unable to settle upon a tangible and clear basis for memory it is doubtful whether they will ever be explained. It is true that the consciousness of identity groups itself from childhood round the cœnesthesis and the general organic sensations, but even in its earliest stages it depends rather upon reproductions and mnemonic images than upon primary sensations, and the question is how does what is often practically

an almost total inhibition of the reproduction and responsiveness of the stored reflexes and modes of the past take place? Supposing the train of memory to depend upon intercellular facilities, where are those cells which can be utilised for relearning what has been learnt before without arousing what has been experienced through association? Does a man start with a new brain or with a new area which is virgin ground so far as any previous development is concerned? In some instances of extreme rapidity of re-education it has been thought possible that the memory returns, because the inhibited elements are supplanted by other elements having the same properties, primitive and acquired, as those which they replace. This may possibly account for the re-education, but it cannot account for the rapidity of the process. As I have said elsewhere, "We can readily conceive that new elements may take on the functions of old; but the re-education often means the recollection of impressions which have been conserved and reproduced. This if the case would involve restitution of the former acquisitions, revival of the old physiological dispositions, and not necessarily the opening out of new traces to displace the old."

We are all aware of Hughlings Jackson's principles—that the more highly evolved left hemisphere inhibits the right one, and that when the inhibition of the left is withdrawn the right is free to act automatically. This, however, does not offer any solution of multiple personalities, and I do not consider the hypothesis in itself sufficient.

In conclusion, I venture to submit that, until we have a more rational conception of what constitutes the physical basis of consciousness we cannot grapple with this problem. The more one considers the *pros* and *cons* of the possibility of a diffuse localisation of consciousness—by this I mean the diffusion of the elements of consciousness everywhere throughout the brain substratum—the more one is led to believe that there is no supreme centre anywhere. Each unit of the highest evolved parts of the sensorium has its own separate element of consciousness, which exhibits itself under certain physical conditions as occurring within that unit.

I regard the highest evolved centres as being a huge *congerie* of units or groups of units functionally continuous—under certain conditions of contiguity—with the periphery and with each other. These units may be compared to lamps which give light when their respective electric phenomena are in operation. Provided that the switches and transmitting agents, both peripheral and central, are functionally operative, they light up in turn in response to the stimulus be it peripheral or central. The study of seriality of thought would appear to require some physical basis on this plan, and each element of conception would require some physical counterpart correlative to the light [derived from the analogy of the lamp]. Carrying this hypothesis further, just as the switches, couplings, or currents may under one series of conditions become functionally inert at one time, leading to inability to produce light in one or several sets of lamps, so under another series of conditions may the same switches, couplings, or currents again become functionally active and determine the existence of light.

The psychical elements correlative to a series of central lights constitute conception and seriality of thought, and the inertness of any of the physical correlatives of this seriality would result in a loss of some of the elements which go to make up consciousness and consciousness of self. Since the hypothesis of the neurospongium with the movements of its amœboid protoplasmic prolongations has been enunciated by Rückardt and elaborated by Lépine, Golgi, Ramon y Cajal, Duval, and confirmed by Lugaro, I have been anxious to accept it.

It will simplify the hypothesis considerably if the ramifications (or pseudapods) of the nerve cells do elongate and retract under varying influences, thereby favouring or breaking the contiguity of neighbouring neurons, and so rendering it possible or impossible for currents to pass. In any case it seems justifiable to assume that the amnesic defects which go so far to constitute what we call double consciousness are due to failure under one set of conditions to switch on the lamps which were lighted under another set of conditions, and which may again be lighted under that other set. This hypothesis would appear to demonstrate how it is that there may be no end to the number of personalities in one individual.

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MORBID SELF-ASSURANCE.

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[DR. HARRY CAMPBELL having defined the term "morbid self-assurance," pointed out that, like many other morbid mental states, it was merely an exaggerated degree of a normal condition. He went on to observe that self-assurance showed the principle of compensation at work, for if one believes he has what he lacks and finds happiness in the thought, does he not in a sense possess it? Is not his lot in some way preferable to the lot of him who, having it, is all unconscious of the fact?]

CASES OF MORBID SELF-ASSURANCE.

(*a*) *Occurring in the Sane.*—In some perfectly sane individuals, self-assurance is so exaggerated as to be ridiculous. Their evident sense of power and importance is as great as in general paralysis of the insane, the only difference being that inasmuch as there is no disorganisation of the intellect, there are no genuine delusions. I use the qualifying word because, though members of this class are certainly deluded as to their own value, they do not have what we technically understand by delusions. As an instance I may refer to the case of a man whom, though I have never spoken to him, I have yet had the opportunity of studying closely for some years past. A person who exhibits a large degree of self-importance is, I believe, in the slang of the day said to "put on a lot of side," and the man of whom I speak does this to such an alarming extent that, if I had not had convincing proof to the contrary, I should unhesitatingly set him down as a general paralytic. He holds up his chin, pouts out his chest, and struts about in long-measured steps—the very embodiment of over-weening self-conceit. I have seen a crowd actually divide to make a lane for him, while all eyes gazed upon him in mingled wonder and amusement, as he stalked serenely on. The small boy in the street occasionally makes merry at his expense, but nothing seems to damp his enthusiasm in himself, nor shake the belief in his own magnificence. Though his self-assurance is most pronounced in regard to his physical attractiveness, it is also, I understand, highly exaggerated in regard to his mental capabilities. Yet he is, as a matter of fact, by no means wanting either intellectually or physically, and I should regard him as in every respect perfectly sane; he is simply the victim of overweening and irrepressible self-conceit. In this instance the morbid self-assurance shows itself chiefly in respect of personal attractiveness. Sometimes it is displayed chiefly in regard to intellectual capability. There is the parliamentary bore, who, though the House rapidly empties directly he gets on his feet, will, with all the assurance in the world, talk by the hour to empty benches; or the dreary after-dinner speaker, who goes disappointed home unless he has had an opportunity of inflicting his platitudes upon a wearied and yawning audience. This class of person is irrepressible, he will take no hint, no sign of disapproval; no shuffling of feet, no murmuring, has the slightest effect on him—on he goes.

(*b*) *Borderland Cases.*—In some cases of morbid self-assurance it is very difficult to say whether one has to deal with a wholly sane individual, or with an incipient or abortive case of general paralysis of the insane. A case in point, which I am not in a position to give in all the detail I should like, is that of a highly intellectual and altogether delightful man who woke up in the autumn of his life to the belief that he was a great actor. Some of his intimates played up to this belief, got together audiences who vociferously applauded his performances, paid him exaggerated homage, even going to the length of prostrating themselves before him in pretended admiration of his genius; in short, devised all sorts of exaggerated means to flatter his weakness, and it was almost pathetic to see the perfect good faith in which their mock hero-worship was received. Such credulity might suggest to some that the man was not

perfectly sane. I believe, however, after carefully weighing the circumstances, that his sanity could not be called in question.

(c) *Morbid Self-assurance occurring in Abortive Cases of General Paralysis of the Insane.*—It is now generally recognised that some cases of general paralysis do not pass beyond the incipient stage, remaining stationary for years. Such cases do not find their way into asylums, and are perhaps seen in greater numbers by the neurologist than the alienist. I will briefly mention two which have come under my observation. The first is that of a man upwards of 70 years of age, whom I have known as long as I can remember. All this time he has had exalted ideas with regard to his own capabilities. Though he has done no study whatever since he left the university, he has always posed as a man learned both in the classics and in science. For instance, he once told me that he could hold his own in science against any man in England. Many years ago I noticed amongst other symptoms of general paralysis that he invariably stumbled over certain words in reading the Church service. Amongst others he could never properly pronounce the word "inestimable," and this gave me the hint to use this as a test word in cases of suspected general paralysis. This patient is no worse now than he was twenty years ago. The other case has only been under my observation for a few years, but I am told on reliable authority that he has been in exactly the same mental state for some thirty years past. He is what the world would call queer or eccentric, but, although he has unmistakably large delusions, he is able to carry on his work in his own peculiar way, and no physician would be justified in certifying him a lunatic, for the odd thing about him is that his megalomania is redeemed by a liberal allowance of shrewdness. His large delusions refer chiefly to athletic pursuits and accomplishments like singing and painting. His rendering of a serious song is comical to a degree, and his braggadocio as to his surpassing strength is quite as characteristic. On one occasion, while spending the evening at a friend's house, a spirometer was produced, and after everyone present had, according to a preconcerted plan, blown the index round but a very few degrees, he when his turn came sent it round, of course, much further, although, as a matter of fact, his vital capacity was very inadequate. As the index moved round, a note of incredulous surprise was sounded crescendo by those assembled, and this so impressed the little man with the extent of his respiratory powers that he could scarcely contain himself for the rest of the evening. Using the first opportunity he had of getting his hostess alone, he said, "If I were to meet X. [referring to a noted strong man] now, I should say 'How long,'" and with this he contemptuously moved his head slowly up and down as if measuring and taking stock of the individual in question. "How long, what?" asked the hostess. "How long would it take me to annihilate you?" was the reply. Here we have an unmistakable instance of megalomania in a man holding a responsible post, and who has been mentally *in statu quo* for many years past.

[The psychology of self-assurance was next considered, and it was pointed out that it is fostered by the feeling of well-being. This feeling was largely due to the presence in the blood of stimulating substances, either taken in with the food or manufactured in the body. The sense of exuberant well-being observed in the general paralytic was caused by autogenetic stimulants similar in nature to alcohol, the patient being in a chronic auto-intoxication, the feeling of well-being thus engendered determining the direction the delusions take.]

The Influence of Morbid Self-Assurance on Conduct.

Self-assurance is a very useful attribute. It is helpful in every walk of life. The self-confident man steps to the front while his brother, much more highly gifted, perhaps, but lacking his self-assurance, is left behind. Who does not know of men who have achieved success through sheer cheek, and of others whose reserve and diffidence have prevented them from attaining the position to which their abilities entitled them? Doubtless the success of the self-assured man is largely the outcome of the sense of well-being and exuberant energy accompanying it. These attributes run well in harness: the energy impels a man to be up and doing, while the self-confidence gives promise of victory. I have in my mind the case of a man whose energy and self-assurance have brought him to the topmost rung of the ladder. He is up working at five in the morning and hard at it all day long. He sometimes thinks it rather a nuisance, but he cannot help it, he says, and he is right; he is impelled by the hand of fate.

How powerfully the two attributes—energy and self-assurance—make for success is well shown by what occasionally happens in the early stage of general paralysis of the insane before the intellect is disturbed, when, indeed, its activities may be heightened in consequence of the general exaltation of nervous function. I am acquainted with the case of a man who possessed a stall at a place of public entertainment. His business was flagging and he could scarcely make it pay. Gradually the poor fellow drifted into general paralysis and he developed the restless energy and the morbid self-assurance which so often appear at the onset of this disease. He began to think himself a very fine fellow and his goods to be much better and more valuable than they really were, and so impressed was he with the belief, and so impelled by his abundant energy, that he actually succeeded in increasing his business fourfold in a very short space of time.

Another and similar instance is afforded by one of the most remarkable political personages of the century, who appeared, meteor-like on the political horizon. Scorning tradition, he by indomitable energy and self-assurance, backed up of course by real ability, won his way to the front and became the leader of a great political party, only to languish all too soon in the grip of general paralysis of the insane.

THE CASE OF DR. LAMONT.

The Parish Council of South Uist seems to have been very much upset by the recent parliamentary proceedings regarding its former medical officer, Dr. Lamont. At a meeting held on August 22nd, it passed a series of resolutions which contain accusations of such a nature that we should hesitate to print them excepting from the fact that they have already appeared in the daily newspapers, and that the reproduction of them here affords us the opportunity of printing for comparison some extracts from the official report (1) of the Local Government Board; (2) of its Special Commissioner, Sheriff Campbell; and (3) of the Medical Officer of Health for the County of Inverness, Dr. Ogilvie Grant. In doing so we are glad to acknowledge that we only follow the example of the *Glasgow Herald*, which has gone to the original documents, and so has enabled its readers to judge of the value to be attached to the extraordinary charges made by the Parish Council. The resolutions of the Parish Council are as follows:

(1) That the correspondence with the Right Hon. A. J. Balfour be approved in respect to the clerk's action therein, and public inquiry into the whole circumstances be insisted on. (2) That the alleged inquiry into the alleged epidemic, which did not exist, was not public, but was private and partial; that the notices of it issued by the Commissioner of the Local Government Board were grossly misleading as to its true scope and aim, as his report ultimately reveals that the parish council never knew its conduct in regard to any alleged dereliction of duty was in question in any way; that thus individuals were taken in ignorance and at disadvantage, and that the clerk, who necessarily would be the most material witness in any question about the parish council, tendered his evidence to the Commissioner and it was declined; and that the report in itself contains misstatements of fact such as to make it obvious the inquiry of the Local Government Board was incomplete and its conclusions untrue in fact and erroneous in law. (3) That the alleged certificate to Dr. Lamont was never communicated to the council, whose servant Dr. Lamont was, and in the execution of whose work solely in connection with the illness and interment of an old pauper woman for the council it is alleged to have been earned by Dr. Lamont; that the council, aggrieved at the unfair use against it to which that certificate, in its essence so unwarranted by the actual facts, is put, resolves to place on record regarding it the council's solemn protest against such high approval of what was disgusting, brutal, and inhuman conduct, and to engross in its minute the following facts: That during the first six days of this pauper's illness Dr. Lamont neglected the regulations of the Local Government Board, of which he had a copy, directing him to at once inform the parish council of her state and requirements whenever he discovered it, and no pressure of work existed to prevent him from doing so. That in consequence of his neglect the parish council was kept in ignorance of her state, and she was not attended to in her illness as she ought to have been and would have been had the council received intimation. That, by an arrangement with the inspector of poor, Dr. Lamont undertook to see to the interment of the body, and but for this undertaking the inspector of poor would himself have interred the body. That Dr. Lamont did not prepare the body for burial or conduct the coffining as the parish council would have expected. That, in this connection Dr. Lamont entered the deceased's home along with another man, where they found the body of the deceased lying on a bed,

clad only in a short chemise and two socks. That Dr. Lamont then tied a rope to the right leg of the corpse, and roughly dragged it, feet foremost, by the rope out of bed on to the earthen floor, and then the other man dragged the body on its back by means of the rope along the floor through two inner doors, Dr. Lamont guiding it with his feet, and freeing the spreading and draggling limbs of the body as they jammed in the doorways, the chemise getting rolled up around the neck, and in this manner the nude body was roughly dragged by the leg out of the house on to the ground in front of it, and into the open view of a crowd of men and women standing at hand. So revolting was the sight presented by the body thus treated that the men in the crowd turned away a short distance from the bare sight, and, with their backs to the corpse, knelt in prayer till the coffining was over. That the body was dragged along the ground in this unheard-of manner, and roughly huddled, dirty and naked, with the rope attached to the leg, into the coffin, and the lid closed. (4) That the council deeply deplores the atrociously revolting and indecent way in which the burial was thus executed, and desires to record its abhorrence and its own sense of conscious freedom from all blame in the matter; and the council directs its clerk to transmit a copy of this minute to the First Lord of the Treasury, to the Secretary for Scotland, and to the Lord Advocate, and empowers him to take such other steps as he may deem advisable to enforce upon their sense of justice the necessity for granting a public inquiry as the council demands.

Turning now to the official reports above mentioned we quote (1) from the last annual report of the Local Government Board for Scotland:

In the autumn of 1897, during an epidemic of infectious disease in the parish of South Uist, our attention was drawn to the death of a pauper named Mary M'Innes, under circumstances which rendered it clearly imperative that an inquiry should be held. We therefore, in November, appointed Sheriff Campbell, Stornoway, our Commissioner, "to inquire into the conduct of the parish council and officials in the recent outbreak of infectious disease in South Uist." Sheriff Campbell held an exhaustive inquiry on the spot, the result of which showed that while the conduct of the medical officer under the parish council who attended the case was praiseworthy in the extreme, that of the inspector of poor and members of the council could not be held to be blameless. We accordingly wrote in the beginning of the year to the inspector, severely censuring him; to the chairman of the parish council, stating that we could not absolve him or the members of the council from neglect of duty; and to the medical officer expressing our high appreciation of his conduct in the case.

* * * * * *

In view of the evidence submitted to us regarding the conduct of the officials in connection with the outbreak, and in pursuance of our powers under the Act, we dismissed the local sanitary inspector in respect of his failure to discharge the duties of his office. At the same time we recorded our high appreciation of the services of the local medical officer, Dr. Lamont, who, in the case of Widow M'Innes, found himself hampered at every turn by the want of hospital provision and nurses as much as by the inhuman desertion of the patient by her relatives and neighbours.

(2) We quote next from the summary of Sheriff Campbell's report:

DR. LAMONT.

This gentleman entered on his duties on August 10th. He was an absolute stranger to the parish, and to the people and their habits. He got no instructions, information, or guidance from the parish council or inspector as to the health or condition of the people or paupers, or any specific duties he was expected to undertake in face of this notorious and fatal epidemic at Eriskay, etc. He was on duty practically night and day, in frequent storms and rains, over moors and across dangerous fords all over the parish, from the Island of Eriskay in the south to the Island of Benbecula in the north—38 miles apart. Notwithstanding this, he paid six visits to the deceased Mary M'Innes during the twelve days she lived after his first visit. He ministered to her professionally and in many menial services without aid, and on her death he also, practically unaided, prepared her body for interment under extraordinary and exceptional difficulties.

When he satisfied himself that her case was typhoid he should have at once "intimated in writing to the inspector the description and extent of relief which he considered necessary for the proper treatment" of Mary M'Innes, in terms of Rule 4 for medical relief of the poor, even although he did this verbally. Notwithstanding the omission, I am of opinion that in the exceptionally trying circumstances he had to contend with, Dr. Lamont deserves credit for all he did in this unfortunate case.

THE INSPECTOR OF POOR.

This official did not furnish the medical officer with a list of the aged and infirm poor persons in receipt of parochial relief in the parish. When he was informed verbally by the doctor and chairman on August 17th of the case of Mary M'Innes, and of the treatment necessary for her and failed to procure a local nurse, he was not entitled to throw further responsibility on the medical officer, or to rely on the absence of more specific instructions from the chairman. He "failed to furnish the relief prescribed or any part of it," and in my opinion he, as the responsible statutory executive officer of the parish council for the relief of the poor, is accountable for such failure.

The doctor says that even the best nursing would not probably have saved the life of this woman, although it might prolong life for a few days, but this does not absolve the inspector from discharging his clearly-defined line of duty.

THE PARISH COUNCIL AND ITS CHAIRMAN.

There is no evidence that the outbreak in Eriskay was officially made known to the parish council or inspector. The inference is the other way.

The parish council, through the chairman and inspector, must be held to have been informed of the case of Mary M'Innes on August 17th.

I am of opinion that the chairman at that interview, as representing the council, failed to realise the gravity of the case or the responsibility of his council therein, and that he should have given more specific instructions to the inspector to telegraph for a trained nurse from the mainland, especially as the inspector informed him that he could not procure a local nurse, and as he admits that "the inspector had been frequently found fault with for neglect of duty." In these circumstances he should have taken some trouble to ascertain if this poor woman was properly and humanely attended to, or he should have called a special meeting of his council to deliberate on the case. Instead of this he did nothing in the case after the 17th, and, in my view, the only difference in the responsibility of the parish council, through its chairman and that of the inspector, is one of degree.

FATHER MACDOUGALL.

This gentleman, who is a member of the parish council and of the district committee, and resides in Benbecula, heard of this case for the first time on August 14th. He visited and ministered to her, but did not believe that she then had fever, and he left her case in the doctor's hands. When consulted by the district clerk on August 21st, he at once instructed that a nurse be telegraphed for.

I do not find any neglect on his part.

(3) Dr. Ogilvie Grant, the county medical officer, reported thus:

Eriskay during the past year came prominently under my notice for other reasons. It was visited by a severe and mysterious epidemic. Hardly a single individual out of the whole population of 460 escaped. It appeared first of all about the beginning of March and attacked a few individuals. In April Eriskay fishermen had to leave their fishing grounds and return home, and about 100 people soon became affected. The disease continued to spread until nearly all the inhabitants were affected, and in four months there were in all 19 deaths, giving a death-rate per 1,000 per annum of 123.9. In the month of July I received information from the Rev. Allan Macdonald of the alarming state of matters, and at once communicated with the district clerk and made arrangements to visit Eriskay without delay. When I arrived at Lochboisdale I found the disease had spread to South Uist, and that Father Rigg was dangerously ill, and in spite of the most careful medical attention and skilful nursing Father Rigg succumbed to the disease.

I recognised that there was more than mere influenza, and that undoubtedly, although the disease at first apparently had been influenza, owing, perhaps, to the weakened state of many of the people, typhoid fever had been developed, and that Father Rigg suffered from an attack of typhoid fever of a most malignant type, and of such an irregular form that it was difficult to decide whether it was typhoid or typhus fever. As soon as I had diagnosed the nature of the disease, prompt measures were taken to prevent its spread in South Uist, and with the exception of a few isolated cases no more occurred. About the last case was that of Widow M'Innes, a pauper, mother of Mrs. Macintyre, who died of the disease, and the circumstances of her death were publicly investigated by the Local Government Board. I may say, as a result of the inquiry, that Dr. Lamont was highly complimented by the Local Government Board on what he had done in connection with the case.

Dr. Grant also wrote:

The name of fever among many people in the West appears to scare them. They look upon it as a plague to be avoided at all hazards, and therefore sometimes seem to be unkind in their relations to one another. This state of matters can only be remedied by education and the spread of knowledge. This fear of infection I observed in a marked degree among the large gathering who assembled to attend Father Rigg's funeral. I asked for volunteers to help me to place him in his coffin, but there were none. However, it mattered not, as his brethren in the priesthood did all that was necessary. Then, in connection with the death of Widow M'Innes, Dr. Lamont graphically describes what he had to do in connection with that case: "I went on Tuesday afternoon to see the body coffined. I waited for three hours, but the coffin did not come. I went back again on Wednesday. The coffin was left about fifty yards from the door of the house of the deceased. The friends and neighbours were all collected for the funeral. I said to the people, 'Who are going into the house to bring out the body?' They said they were not going into the house; they said they were afraid of the fever. I went into the house myself to have a view as to how things were, and I found that it would be useless to bring the coffin into the house owing to the narrow space. I therefore formed a plan for breaking down a window directly opposite the bed. I got a man to assist me in breaking down the window after giving him a gill of whisky, and after working for a short time he threw down the spade. I had therefore to do the work myself. I afterwards thought it better to get the body carried out, and put it in the coffin at the door. It was by aid of a rope which I tied to the body that I got the body pulled out, and with the assistance of the joiner already referred to, I got the body put into the coffin at the door. The joiner would not screw down the lid of the coffin owing to fear. I had to do that myself. The coffin had been covered with tar. The joiner and I carried the coffin for a distance of fifty yards. The coffin had been left outside the door, and the joiner and I pulled the body and put it into the coffin. The joiner stood outside and pulled the end of the rope. The people were standing at a distance of fifty yards waiting the funeral. All these people saw what we had to do. The coffin was afterwards carried away for burial."

THE GERMAN VACCINATION LAW AND ITS ENFORCEMENT.

SOME particulars of the actual working of the German Vaccination Law will not be without interest in this country at the present time. The very noteworthy statistics regarding both vaccination and small-pox which are officially published year after year in Germany show that vaccination is taken very seriously in that country, for we read that in a single year, 1896, in a population of 53,000,000 there were

1,394,396 primary and 1,138,831 secondary vaccinations effected. We read also that in the same year there were only ten deaths from small-pox, and in the next year only five, throughout the Empire. Evidently their Vaccination Law, which we shall find to be far more severe towards the officials than towards the parents, has the moral support of the community.

The law of 1874 is comprised in eighteen sections of each of which the following is a literal translation:

THE VACCINATION LAW OF APRIL 8TH, 1874.

1. Shall undergo vaccination:

(1) Every infant before the end of the second year after birth, unless medically certified as having survived natural small-pox.

(2) Every pupil of a public educational establishment or private school, Sunday and evening schools excepted, within the year in which the twelfth year of life is completed, unless medically certified as having survived an attack of small-pox, or else as having been successfully vaccinated, during the five years previous.

2. Every child who, according to medical certificate, cannot be vaccinated without danger to life or health, shall be vaccinated within the year following the subsidence of the condition causing this danger. In doubtful cases the public vaccinator will decide as to the persistence of the danger.

3. If a vaccination be pronounced unsuccessful by the vaccinator, it must be repeated within the following year at latest, and, if it be again unsuccessful, it must be repeated again during the third year. The local authorities may order this last repetition to be done by the public vaccinator.

4. If vaccination has been deferred without legal excuse, it must be performed within an interval to be determined by the authorities.

5. Every child must be presented before the vaccinator for inspection, not earlier than the sixth day and not later than the eighth day, after vaccination.

6. Vaccination districts shall be formed in each State (of the Bund), and to each district a public vaccinator shall be appointed (*Impfarzt*).

The public vaccinator shall, during the period from the beginning of May to the end of September, vaccinate all children belonging to the district free of charge, at times and places to be previously made known. The stations for vaccination and for inspection must be so selected that no one place is more than 5 kilometres (3.1 English miles) distant from the next vaccination station.

7. In each vaccination district a list of infants to be vaccinated § 1 (1) shall be prepared by the authorities before the (annual) vaccination period begins.

Head of schools shall prepare the lists of pupils to be vaccinated under § 1 (2) (revaccination).

The public vaccinators shall state in the lists whether the vaccination has been successful or not, or whether it has been postponed permanently or for a time, and if so, the reasons.

At the end of the calendar year the lists shall be sent to the authorities.

The Bundesrath will determine as to the wording and arrangement of the lists.

8. Only medical men may vaccinate. Those who are not public vaccinators shall fill up the lists as regards any vaccinations performed, in the same way as public vaccinators (7), and shall send in the lists to the authorities at the close of the year.

9. The various States will, under the guidance of the Bundesrath, provide a sufficient number of institutions for the procuring and distribution of vaccine lymph.

These institutions shall furnish lymph free of charge to public vaccinators, and shall keep accounts of all lymph obtained and distributed.

The public vaccinators are bound to furnish vaccine lymph, so far as their supply suffices, to other medical men on request free of charge.

10. After every vaccination and the subsequent inspection a certificate shall be given by the vaccinator. This certificate shall state, in addition to the christian name and surname of the child and the day and year of its birth, either that "by this vaccination the legal obligation has been fulfilled," or that "the vaccination must be repeated next year."

In those medical certificates which exempt a child from vaccination, altogether or for a time (1, 2), it shall be stated, in addition to the individual particulars above mentioned, for what reason and for how long vaccination is delayed.

11. The forms of these certificates (10) shall be determined by the Bundesrath.

The certificates shall be given free of cost the first time.

12. Parents and guardians are bound, when officially required, to afford proof by the production of the above-mentioned certificates, that the children under their care have been successfully vaccinated, or else that vaccination has been legally deferred.

13. The heads of those schools having pupils under legal compulsion to be vaccinated (1) shall ascertain, by demand of the above-mentioned certificates, whether the legal vaccination has been performed.

They must take care that pupils who during their stay in the school become legally due for vaccination fulfil this legal obligation.

They are bound to send to the authorities, one month before the end of the school year, a list of those pupils who have not the necessary certificate of vaccination (revaccination).

14. Parents and guardians who neglect to procure the obligatory certificate shall be punished by fine up to twenty marks (£1).

Parents and guardians whose children, without legal excuse and in spite of formal requisition by the authorities, have been withdrawn from vaccination, or from the subsequent inspection, shall be punished by fine up to fifty marks, or by imprisonment for a period not exceeding three days.

15. Medical men and heads of schools who fail to fulfil the obligations entailed by § 8, § 7 (par. 2), and § 13, shall be punished by fines up to 100 marks.

16. Any unauthorised person (8) who vaccinates shall be punished by fine up to 150 marks, or by imprisonment not exceeding fourteen days.

17. Whoever deals negligently in performing a vaccination shall be punished by fine up to 500 marks, or by imprisonment not exceeding three months, in so far as the statute book does not prescribe a severer punishment.

18. The provisions of this law shall come into force on April 1st, 1875. The separate States shall adopt the necessary measures for its fulfilment. The existing regulations in the separate States as regards compulsory vaccinations on the outbreak of a small-pox epidemic shall not be affected by this law.

Under our hand and Imperial seal,
Given in Berlin, April 8th, 1874.

WILHELM.
FÜRST V. BISMARCK.

Such is the vaccination law of 1874, and very systematically it has been put in force. The certificates of primary vaccination are on red paper, and those of revaccination on green paper. Here is an example of the former. A green certificate has the word "revaccinated" in place of vaccinated.

VACCINATION CERTIFICATE.—Form I.

Vaccination District No..... Vaccination List.....
..... born ..... 18 ..... was for the ..... time successfully vaccinated on ..... 18 .....

By this vaccination the legal obligation has been fulfilled.

H. N....., Surgeon (Public Vaccinator).

On the back of this document is printed a summary of the chief clauses of the Vaccination Act, ending with the mention of "fine or imprisonment." In 1878 the Bundesrath drew up forms of the "lists" mentioned in the Act. By "lists" are meant forms of official returns of children vaccinated. They are prepared by the authorities before the vaccination period begins, and are arranged in 27 numbered columns, each under its own printed heading. Column 26 is thus headed, "To be transferred to next year's list for primary vaccination." The authorities enter the names and all particulars of the children to be vaccinated in the proper columns, and the vaccinators fill in all particulars respecting the vaccination or its postponement. The reasons of postponement occupy several columns. The authorities inscribe in the "list":

1. The names of all children in Column 26 of the previous year's list.

2. The names of all children born in the previous calendar year and residing in the district at its close, whether they have been already vaccinated during the previous calendar year or not.

3. The names of all children born in the previous calendar year, and brought from other vaccination districts during the current calendar year, and not shown to be successfully vaccinated.

Column 26 contains the names of all not presented for inspection after vaccination, of all vaccinated a first or a second time unsuccessfully, but not a third time, of all postponed cases, of all whose addresses are at the time unknown or who are absent from home, and of all who are "illegally withdrawn."

By adoption of such "returns" or "lists" as the above it is rendered very difficult for any parents to evade the law.

In 1885, after the Commission of Vaccination Experts, as it may be called, of 1884, had issued its Protocol, the Bundesrath issued an elaborate series of "General Instructions regarding Vaccination," minutely regulating the whole procedure for vaccination, and following this up in 1887 with "Special Instructions regarding the procuring and storing of Animal Lymph," which regulate the methods adopted in the State Vaccine-Lymph institutions.

The German Vaccination Law is very severe towards officials, severe enough to make the vaccinator tremble in his shoes, but the vaccinations are well done and systematically reported to the authorities.

And now as regards compulsion in Germany. The Imperial Board of Health has published at the low price of eightpence,[1] for the benefit of the general public, a comprehensive little volume on the whole subject of vaccination and small-pox. In this book we find the following (p. 96): "The Imperial law does not ordain a direct compulsion to be vaccinated (*einen unmittelbaren Zwang zur Impfung nicht vorsieht*), but only establishes the idea of a legal obligation" on the part of parents to have their children vaccinated, "and prescribes penalties if this obligation is not fulfilled." This fulfilment is made as easy and safe as it can be made. "The interval during which vaccination, whether primary or secondary, must be obtained is a long one, choice of (medical) vaccinator and choice of place are left free; and whoever desires to fulfil the obligation without expense can do so at the public vac-

[1] *Blattern und Schutzpockenimpfung.....Denkschrift.....Bearbeitet im K.K. Gesundheitsamte.* 2d Auflage. Berlin: Julius Springer. 1896.

cination stations." In practice a general notification is issued before the beginning of the annual vaccination period by the local authorities in each district, officially "requiring" the parents and guardians of all children who are due to be vaccinated, to show by the production of the legally prescribed certificate before the the end of the vaccination period (May to September) either that the child has been successfully vaccinated, or that the vaccination must be repeated the following year, or else that it has been postponed, and if so, why, and for how long. "Whoever neglects to produce the necessary certificate has incurred the penalty, even if vaccination has been successfully performed." This ensures inspection after vaccination.

As regards repeated fines, of course they are repeated if necessary. The highest tribunals have decided that the "official requirement" to negligent parents to have their children vaccinated can be repeated again and again by the author ties until the requisite certificates are produced, and the neglect of each fresh "requirement" entails a fresh penalty. Were it permitted to anyone to free himself, by a single subjection to the penalty from all further responsibility in the matter, and thus, as it were, to purchase the exemption of his child from the obligatory vaccination, the law would be only a half measure (*so wäre das Gesetz eine halbe Massregel*), and its very important sanitary aim would be unattainable." Thus only ignorance of the subject can excuse those who have asserted in this country that the German child is vaccinated by the aid of physical force, that is, by the help of a policeman. It is not so, though theoretically such a course would be strictly legal, at least in Prussia, where the police are charged with the execution of all sanitary decrees, compulsorily if necessary. Further, the law of 1874 expressly states that in times of small-pox epidemic outbreaks the existing decrees in the separate States as regards compulsory vaccinations shall remain in force; in Prussia, therefore, at such times the law of 1835 still applies, and most of the States have similar regulations authorising compulsory vaccinations during epidemic outbreaks.

Germany has concluded long ago that optional vaccination is useless, and so universal vaccination is enforced by a system of penalties. She has concluded also that a single vaccination in infancy will not prevent the occurrence of severe epidemics of small-pox though very much diminishing their severity, and so a rigid system of revaccination has been instituted for all children in schools. The result is before the world. Small-pox epidemics are unknown in Germany, and deaths from small-pox in isolated cases are becoming rare events.

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List of Presentations of Books, etc.

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NOTES ON HEALTH RESORTS.

Scheveningen.[1]—This well-known seaside resort of Holland differs from Ostend and many other resorts on the North Sea by having fine parks with shady walks in its immediate neighbourhood. Scheveningen is only a short distance from the Hague, with which it is connected by steam tramways, and the promenades on the strand and dunes may be varied by excursions to the Hague and walks in the beautiful "Scheveningsche Boschjes" and the park of the Hague. In his little book, Dr. W. Francken discusses the bracing and health-giving influence of a stay at the seaside, and Scheveningen with its comfortable accommodation deserves its popularity amongst marine reports. During the season of 1898, the mean midday temperatures of the sea and the air were found to be respectively 61.7° F. and 63.5° for June, 63.5° and 61.7° for July, 67.1° and 69.8° for August, 66.2° and 67.1° for September. For delicate persons warm baths of sea water may be obtained at the hydrotherapeutic establishment.

The Spas of Central Wales[2] and neighbouring localities are well described in a recently published guide, in which medical notes on Llandrindod Wells, Llangammarch Wells, and Llanwrtyd Wells are included, those concerning Llandrindod being contributed by Dr. Morgan Evans, one of the resident medical men. The greatest portion of the book is naturally devoted to an account of this spa, which is now so well known in Great Britain, and much interesting antiquarian information and accounts of walks and excursions in the neighbourhood are given. Altogether this profusely illustrated little work will be found useful to patients and ordinary tourists alike. Much trouble has been taken in its compilation, and it is published at an exceedingly moderate price.

Folkestone.[3]—The bracing and invigorating climate of Folkestone, together with the attention paid to the place from a medical point of view, have rendered it a very popular seaside resort, and the growth of the town in recent years has been enormous. "The air is never stagnant," Dr. Larking truly remarks, "at Folkestone; there is always a breeze," and even on the hottest days the place is not close. Dr. Larking does not claim for Folkestone that it is a place where any particular disease is cured or relieved by any special therapeutic action, but he claims: (1) Marine influences; (2) a higher mean temperature than at many other seaside resorts; (3) a small range of temperature; (4) plenty of sunshine; (5) moderately humid climate, though not relaxing; (6) exposure to south-west and westerly winds: and (7) that the western end of the town is modern and the soil porous. Dr. Larking discusses shortly the influence of marine climates such as Folkestone in various morbid conditions.

Las Vegas Hot Springs,[4] in New Mexico, U.S.A., is situated on the Gallinas River, at the entrance of a cañon, surrounded by a horseshoe formation of the foothills of the Rocky Mountains. The latitude is 35° 36′, corresponding to Northern Africa and the Sahara Desert; yet the altitude (6,767 feet) so modifies the temperature that oppressive weather is unknown. The summers are delightfully cool. Blankets are required all the year round, but owing to the southerly latitude continued extremes of cold do not occur in winter. The annual rainfall is said to be only 12.7 inches, the relative humidity 44, the mean temperature 59 07° F., and the average number is 326 days of sunshine. Dr. Bailey says it is possible to sleep in the open air throughout the year. Patients are individually advised as to their treatment, including exercise, diet, and the minutest details of habits and life. The recognised methods of treatment are employed in tuberculosis and other diseases. The hottest of the hot springs in the neighbourhood has a temperature of 144° F. The waters of the hot springs (which might be classed in the simple thermal group, like Teplitz, Gastein, etc., in Europe) are utilised externally and internally in treatment. According to the report of the Government Weather Bureau Station for the year ending May 21st, 1899, the mean relative humidity for the year has been 40.82; the lowest for any month was 21.55 for May, and the highest 73.45 for August. The total precipitation, including melted snow, was 15.87 for the entire year; of this amount, 9 inches fell during the "rainy season" (comprising June and July), and none fell during the month of January. The number of clear days was 261. The mean temperature for the year was 49.11° F., that for the summer months being 66.64° F., and for three winter months 29 99° F. On only eight days in the year did the temperature exceed 90° F., and these days were in the months of June and July. On five occasions only did the thermometer fall below zero, and each of these was at nighttime.

[1] *Scheveningen, sa Plage, ses Bains*, par le Dr. W. Francken. [Scheveningen, its Shore and its Baths, by Dr. W. Francken.] La Haye: Belinfante Frères. Pp. 62. With photographic illustrations.

[2] *Illustrated Official Guide to Llandrindod Wells, Llangammarch Wells, Llanwrtyd Wells, etc.* London: Ward, Lock and Co. Pp. 98. With map of the district, plan of Llandrindod Wells, and forty illustrations. Price 1s.

[3] *Notes on Folkestone.* By Dr. A. E. Larking. London: J. and A. Churchill. 1899. Pp. 79. With view and two plans.

[4] Information from Dr W. Curtiss Bailey, Medical Director.

AN OUTBREAK OF FOOD POISONING AT NUNEATON.

By Edward Noël Nason, B.A., M.D.Camb.,
Nuneaton.

On April 29th and 30th a considerable number of persons in the neighbourhood of Nuneaton were suddenly taken ill with symptoms which, while varying in severity, were almost identical in character. I have been able to obtain histories of 42 cases, though I believe this number by no means includes all the persons affected. The most marked symptoms were abdominal pain, vomiting, and purging with more or less collapse, muscular cramps or pains, while chills and heats, amounting in some cases to a slight rigor, were also not uncommon. It was soon found that all the persons affected in this way had eaten on the evening of April 28th or morning of April 29th what is commonly known as "chitterlings" obtained from a certain shop in the town. Chitterlings are the prepared entrails of the pig. The butcher from whom these chitterlings were bought was most anxious to assist me in investigating the cause of the outbreak, and gave me all the information he could. They came from some 16 or 17 pigs killed on April 25th, 26th, and 27th, and were prepared in precisely the same way as on other occasions, which was as follows:

After the intestines had been removed they were turned inside out for the purpose of more efficient cleansing, and were then thoroughly washed in a tub and then in a stream of water from the tap until quite clean. The water used was that supplied by the Tamworth Waterworks Company, and is excellent in quality. They were then placed in a large tub of clean water, changed twice a day, but without the addition of any preservative. This was also done with the intestines from the pigs killed on the 26th and 27th, and on the afternoon of the latter day they were all scalded together and rewashed, and then boiled for three hours. They were then placed in a tub of clean cold water, through which a stream of water from the tap was allowed to run all night. Next morning (April 28th) they were taken out, allowed to drain on a clean board, and when free from excess of moisture were divided into two portions. One-third was sold in Tamworth, and although I have made careful inquiries, I cannot find that they caused any illness. The remaining two-thirds were packed in a hamper (having above them also in the hamper some butter in hermetically sealed packages), and were conveyed by rail to Nuneaton, a distance of some 15 miles. They were all sold the same evening except 1½ pound, which was sold next morning, April 29th. The weather at the time was exceptionally cold for the time of the year.

Most of the food purchased on April 28th was eaten the same evening between 6 and 10 P.M. The premises where the pigs were killed and all the appliances used were reported by the sanitary inspector to be clean and exceptionally well kept.

In all the cases which appear in the table the food was eaten cold without being recooked from the time it was boiled on the evening of April 27th. I have not been able to find any instance in which the food failed to produce ill-effects where it was not recooked, but I have traced five instances in which the food was reboiled before being eaten, and in no one of these cases were there any ill-effects. I have not been able to

No.	Sex.	Age.	Amount Eaten.	Hour and Date when Eaten.	Number of Hours before Onset of Illness.	Symptoms.
1	F	24	3 ozs.	10 P.M., April 28th.	26 hours	Pain at first epigastric then abdominal, violent purging, chills and heats, vomiting, cold sweats. Was in bed four days; ill for a week or ten days.
2	F	2	A taste	,, ,,	—	This was the child of No. 1, who stated that the child was taken ill exactly as she herself was and about the same time.
3	M	53	4 ozs.	6.30 P.M., ,,	5½ hours	This man was on night work, and took a second helping of the food at about 12.30 A.M., when he began at once to have severe abdominal pain, retching but no vomiting, with purging to the extent of 100 times in the twenty-four hours following. The abdominal pain was severe and constant, and he was in bed a week.
4	F	31	2 ozs.	,, ,,	10 hours	Severe abdominal pain and constant purging. In bed a week.
5	M	17	4 ozs.	,, ,,	19 hours	Severe abdominal pain set in quite suddenly; no vomiting but constant purging for two days. In bed four days.
6	F	15	Very small piece	,, ,,	19 hours	Sister of No. 5. Had exactly the same symptoms but less severe. She was in bed three days. She thought the food tasted peculiar.
7	F	33	4 ozs.	9.30 P.M., ,,	32 hours	Abdominal pain came on more gradually but soon became very severe, with vomiting and cold sweats. There was great abdominal distension and some tenderness: no fever after the first two days. At first there was severe purging, then constipation for forty-eight hours. This woman was ill for about a fortnight, and her condition at one time gave rise to much anxiety.
8	M	38	2 ozs.	,, ,,	46 hours	Abdominal pain and much purging, severe headache and aching in limbs, constant sickness; ill ten days.
9	M	24	,,	,, ,,	40 hours	Abdominal pain, purging, but less severe; much sickness. Ill four or five days.
10	M	23	4 ozs.	8 A.M., April 29th	39 hours	Very severe abdominal pain, with purging and vomiting, chills and heats, and profuse sweats. Six days in bed; lost 14 lbs.
11	M	20	A taste	8.30 A.M., ,,	48 hours	The same as in Case 10, only less severe.
12	M	23	,,	8 A.M., ,,	,,	Acute abdominal pain, vomiting, and purging.
13	F	42	3 ozs.	10 P.M., April 28th	,,	Acute abdominal pain with syncope, then headache, heats, and chills, constant vomiting, and purging. Very ill for six days; slow convalescence.
14	F	17	,,	,, ,,	17 hours	Quite suddenly while walking out her legs failed her and she had to be helped home. Abdominal pain, purging, and vomiting quickly followed. Ill for several days.
15	M	47	,,	,, ,,	From 24 hours to 48 hours	All these were members of one family, and were all taken with similar symptoms namely, abdominal pain, purging, vomiting, with some collapse, at times varying from twenty-four to forty-eight hours after taking the food, and were ill for about a week.
16	M	14	,,	,, ,,		
17	F	18	,,	,, ,,		
18	F	20	,,	,, ,,		
19	F	40	2 ozs.	8.30 P.M., ,,	24 hours	Abdominal pain, excessive purging (200 times in the week), cold sweats, vomiting. This patient thought the chitterlings tasted "bitter and earthy."
20	—	—	—			
21	—	—	—			
22	—	—	—	,, ,,	About 24 hours	These five were all members of the same family as No. 19, and all suffered in the same way, though not so severely, after about twenty-four hours interval. Two others in this family did not eat of the chitterlings and had no illness.
23	—	—	—			
24	—	—	—			
25	M	24	Small piece	,, ,,	24 hours	This man had a small piece sent him by the family just mentioned. His first symptoms were pain in the legs, then in the abdomen, followed by purging, heats and chills and cold sweats, and some vomiting. He was ill a week.
26	F	20	,,	,, ,,	,,	Wife of No. 25. Her symptoms were similar to those of her husband.
27	F	30	2 ozs.	9 P.M., ,,	36 hours	Severe abdominal pain, some purging; pain in limbs, head, and back; no vomiting, but marked chills and sweats. Ill for nine days.
28	M	30	4 ozs.	,, ,,	12 hours	Husband of No. 27. Severe abdominal pain, excessive purging, sweats and chills, vomiting. Ill seven days.
29	M	14	—		—	
30	F	12	—		—	
31	F	10	—	,, ,,	—	The children and two lodgers of the couple just mentioned were all taken with the same symptoms, though some less severely than others, about twenty-four hours after taking the food.
32	M	23	—		—	
33	M	25	—		—	
34	F	42	2 ozs.			
35	M	41	—			
36	M	17	—	,, ,,	About 48 hours	This was another family in which all partook together of the chitterlings and all were taken ill. The mother's symptoms were the most severe, which were gastric pain, then abdominal pain, with vomiting and purging, etc. She was ill seven days.
37	F	10	—			
38	F	7	—			
39	M	14	Very small piece	7.30 P.M., ,,	21 hours	Abdominal pain, purging, etc.
40	F	29	4 ozs.	9 P.M., ,,	24 hours	Dizziness and vomiting, followed by gastric and then by abdominal pain. Purging severe, lasting four days.
41	M	10	,,	5 A.M., April 29th	24 hours	Sickness, severe abdominal pain, and purging.
42	M	1	6 ozs.	6.30 A.M., ,,	28 hours	Sickness, severe abdominal pain, and purging. Ill for ten days.

find that any of the pigs from which the chitterlings were taken were diseased, but about this I cannot of course speak positively. On referring to the table it will be seen that the period which elapsed between the ingestion of the food and the onset of symptoms does not seem to be influenced by the amount taken, although the severity of the attack does. The food which was eaten early in the morning of April 29th seems to have produced rather more severe symptoms on the whole than than that eaten the night before, but the interval of time before the onset of symptoms does not seem to have been lessened. There was no evidence of this illness having been conveyed from one person to another; those members of a family who did not eat the food escaped entirely. It seems probable that the chitterlings became infected (most likely with the bacillus enteritidis) immediately after their separation into two portions, and possibly from the hamper in which they were placed. This certainly gives a very short time for the development of the poisonous properties which they were found to possess; but no medium could be imagined more suitable for the growth and development of the B. enteriditis than the gelatinous, unstable material of which the chitterlings consisted.

The two points of greatest interest in these cases seem to me to be the long interval before the onset of symptoms, during which interval the individuals were in their usual health, and the fact that recooking the food removed all its poisonous properties. Both these facts point very strongly to the symptoms being caused by the ingestion of living organisms, which subsequently developed and produced powerful toxins, and not to already-formed poisons of the nature of ptomaines.

Unfortunately, all the chitterlings which were responsible for the illness had disappeared before the trouble had been traced to them, and no bacteriological evidence was obtained, but I think, as in the Oldham cases so carefully studied by Dr. Durham,[1] we must conclude that in all probability the bacillus enteritidis was the organism to which the mischief should be attributed.

In conclusion, I must thank Mr. J. M. Ranby for his assistance in obtaining notes of many of the cases.

[1] BRITISH MEDICAL JOURNAL, December 17th, 1898.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 23RD, 1899.

THE CASE OF DR. LAMONT.

We publish to-day the most recent indictment brought against their late medical officer by the Parish Council of South Uist, together with extracts bearing on the charges, from the official reports of the Scottish Local Government Board, their Commissioner, Sheriff Campbell, and the County Medical Officer for Inverness-shire Dr. Ogilvie Grant. It would be difficult to find a more remarkable example of persistent corporate rancour than has been exhibited by the parish authorities in their dealings with Dr. Lamont, while a more convincing reply to the accusations made in the Council's resolutions could hardly be asked for than is contained in the reports from which we quote—these reports, be it observed, having been written and issued before the new indictment on which they bear was published by the Parish Council.

Throughout the controversy in the newspapers, Dr Lamont has displayed a commendable reticence, but the virulence and injustice of his detractors have not failed to procure for him advocates (particularly Sir Charles Cameron, M.P.) quite able to defend his cause. In explanation of the violence which has characterised the attacks on him, several facts have to be borne in mind. South Uist is an island in the Outer Hebrides, far removed from centres of population with ordinary subjects of public interest to engage the attention of the inhabitants, and where probably nothing equal in local importance to the case of Dr. Lamont has occurred for many a long year, or may occur again for a century to come. Besides this, the ire of the Parish Council and no doubt also of other persons involved in the matter, had been aroused by the scathing exposure in Sheriff Campbell's report of the cowardice and superstitious dread exhibited by the islanders in the presence of infectious disease, the exposure being all the more grievous through its contrast with the admirable conduct of Dr. Lamont in his dealings with the epidemic. Added to all this a religious or rather sectarian element has evidently entered largely into the question, with the usual result of producing an all-round rise of temperature among the local disputants. That anxiety for the prevention of small-pox had much to do with the prosecution of Dr. Lamont no one can seriously believe. If this had been the main object the Council would have taken immediate steps to get the parents of the children alleged to be unvaccinated to submit them again to the operation. Instead, their avowed course—we do not know whether they are persevering in it—was to raise a civil action for reduction of the certificates granted, as if that could make some possible difference in the liability of the children to the infection of variola. Such legal proceedings, however, are costly, and as the money has to come from the pockets of the ratepayers, the willingness of their representatives to carry the matter this length may be thought surprising. A sidelight on this aspect of the case is furnished by a letter in the newspapers from a small minority of the Parish Council. It appears from this letter that this minority was quite opposed to the proceedings against Dr. Lamont, and that it represents all but the merest fraction of the total rental of the parish, while the majority is in exactly the opposite position. It is no part of our duty as medical journalists to discuss questions of representation and taxation, but surely it is proper that some kind of check ought to be available to prevent a public body from expending public moneys in the pursuit of such aims as appear to actuate the Parish Council of South Uist.

As we have before pointed out, the persecution of Dr. Lamont is likely to do very much to bring about a greatly needed reform in the tenure of office of parochial medical officers in Scotland. It is preposterous that the trained and educated members of a learned profession, whose relative independence of position is sometimes important for the proper performance of their official duty, should be dismissible by a parish council like that of South Uist, without any right of appeal to a higher authority. The reality of this anomaly has been strongly impressed on Parliament by the proceedings of which Dr. Lamont has been the victim, and we are sure that no one will be better pleased than himself if what he has had to suffer results not merely in the monetary compensation which Mr. Balfour has promised in Parliament, but in aiding his brother medical officers throughout Scotland to obtain that security of tenure which rightly belongs to them.

CEREBRO-SPINAL RHINORRHŒA.

The discovery of a new disease is to the aspiring physician what the discovery of a new planet is to the astronomer, or the acquisition of a new "sphere of influence" to the politician. Dr. StClair Thomson is therefore to be congratulated on the publication of a work which fully establishes the entity of an affection to which he is content to give the name which stands at the head of this article. Had the new discovery been made in another country it might have been called the "*Thomson'sche Krankheit.*"[1]

The average sensual man may believe that he could continue to exist in reasonable comfort without any further addition to the catalogue of ills that flesh is already known to be heir to; but to the scientific mind every fragment of new truth is precious for its own sake, and every point that helps us to distinguish between things having the same likeness and to trace seemingly identical effects to their diverse causes is a grain, which, however small

[1] *The Cerebro-Spinal Fluid: Its Spontaneous Escape from the Nose.* With observations on its composition and function in the human subject. By StClair Thomson, M.D.Lond., F.R.C.S.Eng., Physician to the Throat Hospital, Golden Square; Surgeon to the Royal Ear Hospital. London: Cassell and Co. 1899. Pp. 140. 5s.

it may appear to be in itself, may be fruitful of large results.

Dr. StClair Thomson affirms that the cerebro-spinal fluid can escape spontaneously from the nose, and that this flow may go on uninterruptedly for months and even years without any visible impairment of health. This somewhat startling thesis he defends with such strength of reasoning, supported by such an array of facts, that for the present at any rate he remains master of the field. A case exemplifying all the points in his description of the clinical phenomena was not long ago exhibited to the Laryngological Society, and the demonstration was so convincing that no doubt was left in the minds of those present as to the nature of the fluid which could be seen slowly dripping from the patient's nostril.

It may now be taken as proved that the subarachnoid fluid may escape from the cranial cavity through the nose, and that this occurrence may, as far as outward and visible signs can testify, be absolutely harmless to the patient. In fact, although the woman who was exhibited by Dr. StClair Thomson complained of the mechanical inconvenience caused by the perpetual dropping of fluid from the nostril, certain vague headaches from which she formerly suffered have now ceased to trouble her, but recur slightly during any temporary cessation of the flow. It is this association of a nasal flow with cerebral symptoms which gives a wider interest to such cases than the mere local phenomena would otherwise excite. Such cases have occurred before, although they have seldom been recognised—at least during life. Most of them have been described simply as "dropping of a watery fluid from the nose," and Dr. StClair Thomson's paper is a striking instance of the good use which may be made of bibliographical research.

From the dustheaps of medical literature he has been able to unearth the details of no fewer than 8 undoubted cases similar to his own, and 12 which were very probably of the same character. These cases were, as a rule, described and indexed under different titles. Their discovery is of great importance, for now, instead of having to wait till further cases are met with, it is possible to form a complete clinical picture of the condition at once. In addition to the 21 cases which have been referred to, there are, in the works of Willis and Morgagni, records of others which are suggestive of this condition, so that cerebro-spinal rhinorrhœa is no "new" disease, but one which, though undoubtedly rare, may not be so uncommon as would at first be thought.

The diagnosis of cerebro-spinal fluid from other forms of watery flux from the nose need not in future present any difficulty. The constant and long-continued escape from the nostril of a perfectly clear watery fluid should always arouse a suspicion as to its subarachnoid origin. When this fluid is found to be free from taste, smell, and sediment, when albumin and mucin are found to be practically absent from it, and when Fehling's solution is reduced by it, the suspicion becomes a certainty. It is of the greatest importance that a correct prognosis should be promptly made, for local medication in this condition can offer little hope of success, and any intranasal interference should be made with the greatest circumspection owing to the risk of giving rise to septic infection of the fluid.

As to the route followed by the cerebro-spinal fluid in its escape from the cranium, the simplest and therefore the most plausible suggestion is that it bursts through the perineural sheaths of the branches of the olfactory nerves. The only objection to this theory is that in the case which Dr. StClair Thomson personally investigated there was no loss or perversion of the sense of smell such as might have been expected from the long-continued soaking of the nerve terminals in fluid. Still it must remain at present the most likely suggestion, for it is a more natural route for the fluid to follow than for it to break through the dura mater at some other point where that membrane is intact and then to fray for itself a passage through the anterior fossa of the base of the skull. Dr. StClair Thomson seems inclined to think that behind the mere leakage of fluid there must be some pathological change in the contents of the skull, leading to increased intracranial pressure. It certainly is remarkable that out of the 21 recorded cases, no fewer that 17 should have exhibited cerebral symptoms and 8 should have shown retinal changes. In this book, *The Cerebro-Spinal Fluid*, the author gives an excellent outline of the affection known on the Continent as "hydrocephalus of adults," a condition about which little has been written in this country, and he throws out the suggestion that this form of meningitis may be at the root both of the cerebral symptoms and ocular changes, and of the escape of arachnoid fluid from the nose. The cerebral symptoms in these cases of cerebro-spinal rhinorrhœa and the clinical picture of the "hydrocephalus of adults" are, however, at present too indefinite to allow any opinion to be pronounced upon them. In some cases the dripping of fluid from the nose followed the cerebral symptoms which, as a rule, it relieved, but in other cases the dripping had gone on some time before the cerebral symptoms showed themselves.

Evidently the final explanation of the how and the wherefore of the escape of the cerebro-spinal fluid from the nose must await the observation and collection of further facts. Apparently all the facts in our possession are duly marshalled in this admirable monograph. Not only are 21 instances of cerebro-spinal rhinorrhœa described at length, but in a carefully worked out differential diagnosis, the possibility of confusion with nasal hydrorrhœa, dropsy of the antrum, escape of lymph, or other kindred conditions is given full consideration. The pathological possibilities are also so judicially considered that although the author suspends his judgment, he has considerably narrowed the question at issue, so that the hope he expresses in his preface will doubtless be realised—namely, that a perusal of this work will help to the discovery of other cases, and so complete the study of the subject.

The latter part of the book deals with observations on the composition and function of the cerebro-spinal fluid in the human subject. These were read before the Royal Society, and we have previously referred to them. They complete a book showing much original thought and observation, and one which marks a notable addition by a specialist to the general commonwealth of medicine. One immediate and important gain is, that this strange form of rhinorrhœa has been established as a pathological possibility, and Dr. StClair Thomson is entitled to the credit of

having surveyed and settled the borders of a new country, to which other explorers had approached without actually entering.

UNIVERSITY EDUCATION IN ENGLAND AND IN GERMANY.

In a paper on the Teaching University of London and its Faculty of Economics, read at the meeting of the British Association, Sir Philip Magnus drew an interesting statistical comparison between England and Germany in regard to the proportion of the population in each country that comes under the influence of university teaching. In the German empire there are 20 separate universities in addition to 11 technical high schools, besides schools of forestry and other institutions of university rank. These are for day students. During the session 1896-97 more than 31,000 students were in regular attendance at the universities, whilst over 9,800 students were enrolled at the technical high schools, giving a total of over 41,000 students receiving university education. In England, including Wales, so far as Sir Philip Magnus has been able to ascertain the number of day students, including those of Oxford, of Cambridge, and of the medical schools, would not exceed 16,000, and of these about 3,000 are women. Comparing the entire population of Germany with that of England, it would seem that in Germany one male in 1,270 of the population receives a university education, and in England one in 2,385. Moreover, it is very doubtful whether those returned as day students are receiving anything like so complete an education as the university students in Germany. As regards London, he found that during the season 1897-98 there were 1,957 men and 630 women, or a total of 2,587 candidates for the intermediate or final degree examination at the London University. This, he thinks, may be taken as the minimum estimate of the number of persons receiving higher education in connection with the University, and shows the extent of the influence the University has hitherto exercised. It affords, however, no correct indication of the number of students receiving University instruction in London. There are many regular students in London who are not candidates for a degree, and a large proportion of those who are candidates have received no academic training, or are students of provincial colleges. Correct statistics are very difficult to obtain. It would seem, however, that the number of day students, exclusive of women, who are receiving university education in London in all faculties cannot exceed 3,000. In Berlin, on the other hand, there are at least 7,000, divided between the university and the technical high school, and the population of Berlin is very nearly as 1 to 3 compared with that of London. Comparing the present population of London with that of Berlin, it would seem, having regard to the number of university students in the German capital, that London ought to be giving university education to about 20,000 male students. But such an estimate is evidently excessive, as it omits from consideration the large number of Londoners who are being educated at the older universities, and is almost as fallacious as an estimate of the number of students at Berlin, based on the number of students at Oxford, and the relative normal populations of the two cities. But if we compare the entire population of England and Wales with that of Germany, or even the male population of the two countries between the ages of 15 and 25 years of age, which is approximately as three to five, we see that England and Wales ought to be giving university education to about 24,500 students, that is, more than 11,000 above the number included in the returns obtained by Sir Philip Magnus. Passing to the consideration of the University of London, Sir Philip said it will be, as regards its constitution and its functions, unique. The Faculties would at first be eight in number. To the older Faculties of law, medicine, theology, arts, and music will be added the newer faculty of science, and the newest faculties of economics and engineering. In the new university the science faculty will occupy a prominent position; and it is hoped that the teaching of the different branches may be duly co-ordinated, and entrusted to separate professors each occupied with his own subject, but all working together in close association. The possibility of such an arrangement was one of the strongest arguments for locating the new university at South Kensington. Immediately opposite the university offices will be the new buildings of the College of Science, and in close proximity are the City and Guilds Technical College, the Natural History Museum, and the Galleries of Scientific Apparatus. These institutions already form the nucleus of a strong faculty of science; and it may, Sir Philip Magnus thinks, reasonably be hoped that some of the higher teaching now given at other colleges will, after a time, be transferred to the neighbourhood of the new university, so that students without traversing London may have the advantage of studying in the laboratories of the most eminent professors, and of pursuing their researches under the immediate direction of teachers freed from the necessity of instructing large classes in the elements of knowledge, and able to give their undivided attention and valuable help to those who are prepared to undertake advanced work.

MEDICAL ARRANGEMENTS FOR THE TRANSVAAL.

We are informed that a large number of medical officers, 80 or more, have received semi-official intimation from the Medical Division of the War Office that their services may be required for South African contingencies. A number of field hospitals will be mobilised at Aldershot, Woolwich, and Chatham, but at present no definite and distinct orders have been issued for the embarkation of medical officers or hospitals. Lieutenant-Colonel Exham has gone as Principal Medical Officer of the force under Sir George White. Majors F. Treherne and H. P. Birch embarked in the *Gaul*. Major G. Hilliard, C.M.G., R.A.M.C., left England on September 20th in the transport *Jelunga*. We understand that the Indian military contingent will be provided with its own medical staff and hospitals. The field hospitals and bearer companies will mobilise at Aldershot if necessary. The 11th, 18th, and 24th British Hospitals and sections of No. 26 are mentioned for service with the British troops from India.

TRAINS, WORRY, AND DISEASE.

The "silly season" has been put by the daily papers to better use than usual this year, in that it has been occupied by a discussion on the sins of some of our main railway companies—a discussion which, although long and wordy, has, we think, been of some advantage if only as showing how largely the use of railways enters into and complicates the daily life of most of those who take any active part in the concerns of the world, and how necessary it is, as a matter of public policy, that punctuality of train service should be insisted on. To us the matter appeals more especially as it touches upon questions of health, and we need hardly point out how serious is the injury inflicted on the users of the railways by the irregularity of the service. Common experience affords to every one of us ample familiarity with the ordinary trials of the railway traveller. The rush to the station to catch the train, which may perchance be punctual; the weary wait on draughty platforms or in stuffy waiting rooms; the dilatory journey—all these add seriously to the labour of the day even in the best of times; but when the weather is cold and damp they are still more injurious, in that they are largely responsible for those "colds" as they are called, those conditions

of depressed vitality which are the starting points of most of the acute diseases from which men suffer, and from which the elderly and the feeble die. But outside and beyond these well-recognised evils, the unpunctuality of a railway service does a daily injury to those who depend upon it as a means of reaching their place of business by adding to that nervous strain which is the really hard part of a business life. An unpunctual railway in fact hits a business man in his most vulnerable spot. It is on the crisp activity of his mental processes that his livelihood depends, and the evil effect of the unpunctual morning train is not merely that it makes him arrive late at his office, but that it causes him to begin his work weary and and annoyed. People talk about the "nervous strain" of railway travelling, which many people, even medical men, attribute to "vibration" and high speed. Perhaps in long journeys in third-class carriages, where there is no rest for the head, vibration may have something to do with it; and as to high speed, if people persist in looking out of the windows, of course they suffer in consequence of the visual disturbances produced. But it is to be noted that experienced travellers always rush to quick trains, and especially to those that stop as seldom as possible. It is the worry of delay and the anxiety as to the time of arrival, which is the great cause of nervous strain, that "tired feeling" with which most suburban-dwelling business men arrive in London. This, repeated day after day, undoubtedly has an evil and wearing effect on the nervous system. But it does harm in other ways which are less obvious but none the less effective, and this especially to people beyond middle life. The two great causes of high arterial tension in such people are worry and chill, and the one great remedy—practically the only remedy which can be got away from home—is alcohol. Thus it happens that when the city man arrives from his suburban home, chilled, worried, and late, with the stopcocks on all his blood vessels so that his brain is starved and he cannot think, the craving for a "nip" of alcohol—the only available vaso-dilator—becomes overwhelming, and this morning drug is too often the beginning of the end. The more we consider this matter the more convinced we are that the city man seeking for a suburban residence should study the punctuality of the train service rather than go by its advertised speed as described in those mendacious documents commonly spoken of as "time tables."

STREET NOISES

THE Society for the Suppression of Street Nuisances has lately published its first annual report. In this "free" country anybody seems to be at perfect liberty to make whatever discordant noise he likes in the streets at any time of day or night. Vendors of milk, of cat's meat, and of newspapers, German bands and barrel organs, all do their utmost to outvie one another in the creation of the city's unnecessary turmoil, which is highly detrimental to everyone engaged in brain work, to the sick and weary, and to all who sleep lightly. The report suggests that indiarubber tyres should be adapted to many light vehicles, especially mail carts and milk carts, and that rubber rings should be compulsorily placed on the floors of milk carts to prevent the rattling of cans; that newspaper boys should desist from shouting, and instead thereof should exhibit "contents sheets," or that newspapers shall be sold from kiosks on the pavements, as in Paris. In fact, street noises should be made the subject of reasonable regulations, and the people who make noises should be taught to be orderly and systematic. London is indeed far behind other places in the matter of by-laws for the good government of the public thoroughfares. In Eastbourne, for instance, only two barrel-organ grinders are allowed in the place, and they on sufferance; whilst the milkmen do not make a sound. In Croydon, Bath, Brighton, and the counties of Kent and Surrey no crying of goods or street music is permitted on Sunday. But although the metropolis is at present far in arrear in this matter there is prospect of amendment, as the London Government Act lately passed empowers the new municipalities to make by-laws for regulating and suppressing street noises and nuisances, and this Act will come into force in November, 1900. An appendix to the report contains notes on the regulations adopted in other countries respecting street music. These show how much better some things are managed abroad than in this country, which is the paradise of charlatans of all kinds. In Paris, for example, licences for street musicians are granted only to those who are of French nationality; they must wear a conspicuous badge, and may perform only at the places mentioned in their licence; and are not allowed to play in the public thoroughfares at all, except on public holidays and after special permission is obtained. In Italy a licence is required, and it is not given to foreigners. In Germany since 1884 a licence is necessary. The people who were street musicians before that date were not disturbed, but new licences are now refused. In Vienna licences to itinerant musicians are granted only to persons unable to earn their livelihood by any other means. In Russia street musicians of foreign nationality are not permitted to pass the frontier of the empire. In Spain, even, barrel organs have for the present been altogether suppressed. In many cities of the United States street music is entirely prohibited, whilst in others it is permitted only under very strict regulations. The Society for the Suppression of Street Nuisances in London has before it a big task; and that it may accomplish its function it should receive more generous support than was last year accorded to it when its balance sheet showed a deficit of £40. When the Society has succeeded in diminishing the "hullabaloo" in our midst, London will become almost an ideal city to dwell in.

DANGEROUS INDUSTRIES.

So accustomed have we become to the large powers possessed and constantly put in force by the Home Office in the regulation of dangerous industries that many among us have come to regard Governmental protection against trade diseases as almost one of the natural rights of man. Perhaps those who think that grandmotherly legislation, as they call it, has gone too far in England would do well to read the account of what happens in certain unregulated industries in the United States. At the recent meeting of the Rocky Mountain Inter-State Medical Association, held in Salt Lake City, Dr. W. W. Betts called attention to the terrible mortality which had taken place in connection with lung trouble induced by the dust in certain mills where gold-bearing ores were reduced to fine powder. The air in these mills was filled with an impalpable silicious dust, and so injurious had this proved that all who had worked in these mills from seven to nine months previous to January 1898 were then dead. The total number of deaths up to March of this year is believed to be 166. Of 14 cases, which he reported in tabular form, of men who, on entering the mills had been healthy, the average time they were able to continue working in the mills was thirteen months and the average time they lived after leaving was ten months. The trouble began with attacks of acute bronchitis, with inflammation of all the exposed mucous membranes. At the necropsies the lung tissue was found to be excessively firm, with great increase of connective tissue and the air cells partly obliterated. On chemical analysis the lung tissue was found to contain 2.8 per cent. of silica and the bronchial glands 3.8 per cent. In the discussion which followed the reading of this paper one speaker said that the disease was similar to that which affected the

employees in cutlery works and grindstone quarries, and to which grain shovellers were specially liable; another speaker said that all the men who left St. George to work in that mill came back with this trouble, and he added that he had not the slightest doubt that all then at work in the mill were likewise doomed. The surgeon at the works disputed the statistics, but admitted that when the disease was once contracted it was necessarily fatal. He also maintained that a similar mortality would be discovered among workers in other mills handling similar ores. This, we may suggest, however good it may be as a defence of the individual mills, only confirms the view that some form of regulation, even of adult male labour, is desirable and that in dealing with dangerous industries as the Home Office in this country now does, it is doing a good work.

INOCULATION AGAINST ENTERIC FEVER.

We are informed that a draft of 108 non-commissioned officers and men of the 2nd Battalion Gloucestershire Regiment left the Jersey station for India on September 4th. Lieutenant-Colonel Robert Batho, R.A.M.C., gave them a short address on antityphoid inoculation, and on his calling for volunteers, 59 non-commissioned officers and men responded, and underwent the operation. In each case the temperature rose in about seven hours, but in none did it exceed 101°. At the expiration of twenty-four hours it was normal. The local symptoms were somewhat severe in one or two instances, and the men were unable to wear their belts or perform any duty for four days.

MEDICAL MANNERS AMONG OUT-PATIENTS.

The *Daily Chronicle* has lately opened its columns to a correspondence on the subject of the treatment of out-patients, in which, while some of the letter writers express themselves as highly gratified at the courtesy and sympathy with which the recital of their sufferings has been listened to, others have been much upset at their long, and no doubt vivid, description of their ailments being cut short by the house-surgeon. From one point of view the most important contribution to the controversy is made by "A Medico," who says he has been a house-physician and house-physician at one of our largest hospitals, and who therefore may claim to be heard as an authority on the subject. Speaking of out-patients and the claims made for them by a previous writer, he asks:

> Does he know anything of the effect of sympathy with the class of patients he was among? It is useless and impossible; it simply leads in the majority of cases to long-winded and totally unimportant details concerning the manner they received their injuries, accounts of their families and pecuniary condition, and often even requests for pecuniary assistance and temporary lodging for two or three days in the hospital. A short and decisive manner is the only way to deal with people like this, and to keep them to the point. Doubtless Mr. Jones was giving an account of how he received his injury, the effect of which and its treatment was probably obvious at once to an experienced eye, and required no detailed account.

We quote this utterance because it so pithily expresses the light in which out-patient practice is apt to be regarded, and, indeed, is regarded by a large number of junior officials, and because it shows in how very different a spirit out-patients are regarded from that which pervades not only the consulting rooms of private practitioners, but the wards of these very hospitals in which out-patients are treated in such a "short and decisive" manner. We have all been taught to regard the "previous history" as of some importance, and in regard to surgical cases it is generally looked upon as of some use to ascertain exactly how the injury occurred. Among the in-patients such details would not only be listened to, but would be laboriously extracted from the perhaps unwilling narrator and carefully recorded. But among the out-patients all this, it seems, is "obvious at once to an experienced eye." "Medico" goes on to say:

> The two cases he cites only display Mr. Jones's surgical ignorance. The boy with the swallowed pin, unless he presented immediate and most obvious symptoms, could afford to wait considerably longer than he did, and in all probability no active treatment would be necessary, and nothing that could not afford to wait several hours. The man with the horse-kick might have been in pain, but that is no criterion of the severity of the case.

We confess we do not like to hear about a boy with a pin in his throat waiting several hours to be attended to, and if this is a necessary part of the hospital system as now developed, surely there is something in it to reform. This brings us to what is doubtless at the bottom of the whole mischief—namely, hurry and insufficiency of staff for the enormous numbers to be seen. "Medico" says:

> The want of gratitude and civility shown by patients to the house-surgeons, etc., who often have been up all night with their patients or at work almost continuously for twenty-hours, and who are generally in receipt of no remuneration, is something appalling. In fact, gratitude is so rare amongst patients that it always calls forth a remark from the medical man to his assistants. Scarcely a day passes but a patient has to be ordered out of or removed from the room for gross incivility.

But why should a patient who goes to a hospital for "the best advice"—for something which he perhaps thinks better than can be obtained from a general practitioner—why should he feel grateful when the hospital turns him over to the tender mercies of an exhausted house-surgeon who has been "up all night," or has been "at work almost continuously for twenty-four hours"? This is not the sort of attention for the sake of which patients travel many weary miles in search of hospital treatment. There is no doubt that the crowded out-patient and casualty departments form a weak spot in our hospital system, and if in defence of it the tone adopted by "Medico" is necessary, that only points all the more to the desirability of reform.

THE GERMAN PUBLIC BATHS ASSOCIATION

The English traveller in Germany, on the strength of his hotel experiences, is apt to jump to the conclusion that no German ever bathes. While this notion must of course be regarded as incorrect, it is a fact that the inhabitants of Fatherland do not bathe nearly so often as seems desirable in accordance with English ideas. Recent investigations have satisfactorily accounted for the unwashed condition of the working classes by the discovery of two facts—one is, that they have no baths; and the other, that they have little wish to bathe. The German Public Baths Association has set itself the comparatively easy task of endeavouring to have the former provided, and, with magnificent courage, is grappling with the much more difficult problem of how to arouse and foster the latter. As an encouragement, the Association has before it the successful career of the Berlin Public Baths Association. This Society began operation twenty-five years ago, with one small bath house. In 1888 it built two bathing establishments, which in the space of ten years provided no fewer than 2¼ million baths, the payments for which amounted to £25,000. As the municipal authorities, in response to this demand for baths in Berlin, have undertaken to supply them, it was thought desirable to convert the Berlin society into a national one which should apply itself to rousing and educating public opinion on this subject throughout Germany. This it proposes to do by establishing branches in the principal towns, by the issue of a journal, and by giving lectures, publishing pamphlets, etc. Aided no doubt by the recent hot weather, the interest excited in the movement is already widespread, and the first obstacle to cleanliness is being gradually removed by the erection of baths in various parts of the country. The difficult side of the problem is presented by places such as Düsseldorf on the Rhine, which, though "accustomed to baths," makes discouragingly little use of them. Still the

Society has made a good start, and in time, through its exertions and example, Germany will become a cleaner and a healthier nation.

THE ACETYLENE SEARCH LIGHT FOR WOUNDED.

According to the *Allgemeine Militär-Zeitung*, a most interesting experiment has been made with the object of experimenting with the acetylene search light, invented by Lieutenant von Kries (described in the British Medical Journal of July 1st, 1899), in searching for the wounded. This trial, directed by Surgeon-Major Zelle, was carried out on the manœuvring ground of the railway brigade behind Schöneberg. The special idea was as follows: A detachment of the medical staff has been ordered to search a very intersected piece of ground during the night, and to carry the wounded to the tents for dressing their wounds, where some very difficult operations have to be undertaken. A detachment of the guard military train and some men of the railway brigade took part in the exercise, in all 182 men. Whilst a portion of the detachment acted as wounded men, five sections with eighteen stretchers and three search lights were employed in searching for them. The search light, carried and managed by one man alone, gave good results, and lighted up the ground clearly for 80 to 100 metres. Lieutenant von Kries has also invented an acetylene lamp of 60-candle power to light up the operating tent, and it is said the light will enable military surgeons to perform surgical operations as efficiently as in daylight.

THE GROVE HOSPITAL.

The latest addition to the series of hospitals erected by the Metropolitan Asylums Board for the reception of cases of fever and diphtheria is the Grove Hospital at Tooting Graveney, which has recently been opened. The site is in close proximity to that of the Fountain Hospital, which was erected with great rapidity in 1893, a time when the Board was hard pressed for beds to meet the growing number of fever cases which under the new regulations were applying for admission. The new hospital provides 518 beds for patients, 360 of these being for scarlet fever patients, 120 for diphtheria or enteric fever, and the rest for isolation and other purposes. As is the case at all the new fever hospitals under the Metropolitan Asylums Board, full provision is made for the very large staff which is required by the class of cases admitted. In this instance there is accommodation for the medical superintendent and five assistant medical officers, for a matron and about 200 nurses, and for a housekeeper and about 90 female servants. Room is also found for a steward, an engineer, and a considerable staff of male servants. The hospital conforms to the pattern which experience has shown to be best for such institutions in this climate, that is, it consists of many separate buildings linked together by a system of covered ways which have beneath them subways containing the necessary pipes, etc. Various novelties in hospital construction and arrangement have been introduced into this building, and what is at once noticed on entering is that the wards are not at right angles with the corridors. They are, in fact, arranged *en échelon*, all lying parallel to each other, but each overlapping its neighbour. This is a plan that has often been urged, and has sometimes been adopted for its supposed intrinsic merits in regard to the circulation of air, but in this case it would appear that the plan followed has had to do with the lie of the land, the object of the arrangement being to keep the long axis of the wards north and south, while at the same time retaining symmetry of plan and economy of corridors. Certainly the arrangement works out very well, and with our prevailing winds—that is, east and west, there seem to be advantages in it in regard to the circulation of air, as well as the access of sunlight. The architect is Mr. A. Hessell Tiltman, F.R.I.B.A., and the works have been carried out by Messrs. Kirk and Randall, of Woolwich. The cost works out at about £500 a bed, which, high as it seems, we are afraid will have to be accepted as the present standard for a first-class hospital.

AMERICA AND THE MALARIAL COMMISSION.

In response to the request of the Liverpool School of Tropical Diseases that the American Government should attach an official delegate to the Malarial Commission of the School now in West Africa, Mr. Milne, the Honorary Secretary of the School, has received through the United States Consul communication of a letter addressed by Mr. Gage, United States Secretary of the Treasury to Mr. Hay, Secretary of State, regretting that the invitation was not received in time to detail an officer to accompany the expedition. It is stated that the delay in sending the invitation to the American Government was unavoidable, owing to the fact that the expedition was sent out at extremely short notice, and was despatched in the end considerably before the date originally fixed, in order that Major Ross might have the full benefit of the rainy season at Sierra Leone.

THE MALARIA EXPEDITION.

Advice has (according to the *Times*) been received at Liverpool from the Malarial Investigation Expedition in West Africa that the members of the Liverpool Commission, with the assistance of the colonial medical staff and others, have now started the operation of hunting for the *Anopheles* grub in water. This is a tedious but most important task, and necessitates a very careful inspection of all the ground in Freetown. So far these grubs have only been found in a shallow puddle and two tubs of stagnant water, but it is hoped that the minute inspection that is now being conducted of the ground will have satisfactory results. Dr. van Neck, the official delegate of the Belgian Government, who started from Antwerp after the English members had sailed, has now joined the expedition. In view of the importance of completing the expedition's researches instructions have been cabled to Major Ross to use his own discretion as regards the date of his return. It is hoped that this extension of time will enable the Commission to complete its labours satisfactorily.

THE INEBRIATES ACT, 1899.

The Inebriates Act of 1899, which was hurried through Parliament towards the close of the last session, is intended to remedy a slight defect in the Act of 1898. By a curious oversight, no provision was there made for payment of the expense of prosecutions under Section II. That section, it will be remembered, gave power to the magistrate or judge to sentence a confirmed drunkard to be detained in any certified reformatory for a period not exceeding three years, "provided the managers are willing to receive him." By Section I of the new Act the necessary expenses are to be defrayed in the manner provided by Section XXVIII of the Summary Jurisdiction Act, 1878, which empowers the Court to allow the costs of prosecutor and witnesses at the hearing of the case. It would almost appear to be a waste of public time to amend an Act of Parliament which is practically a dead letter. The county councils have refused to undertake the maintenance of inebriate homes, and although it is rumoured that the Government intend to provide them, no step in this direction has yet been taken. The few private reformatories already in existence are capable of doing much good, but their rules are such as to prevent their rendering much assistance to the criminal inebriate. In a recent case the prisoner pleaded guilty to a violent assault upon her husband, and to having shamefully neglected her children. She was also found guilty by the jury of being an habitual drunkard. She was *enceinte* of a five-months child. The Chairman was anxious to send her to a home, but it was ascertained that women in her condition were not admitted. Unwilling to allow the child to be born in gaol,

the learned Chairman sentenced her to one month's imprisonment, and to confinement in a home after the birth of the child. After release from prison, this unfortunate woman will thus have an opportunity of returning to her old habits before she is made subject to the control of an inebriate home. If these establishments were under the care of the local authority, or managed by the Government, it is improbable that any objections of the kind referred to above would be raised to the admission of a criminal inebriate.

THE RETREATS LICENSED UNDER THE INEBRIATES ACTS.

The annual report of the inspector of these retreats for the year 1898 has been published. It shows that the sanitary condition of the establishments, which were fourteen in number, was maintained, and that the health of the inmates was good on the whole. Only 1 death occurred. Two new establishments for female patients were licensed. Compared with 1897 the number of admissions slightly decreased. There was, as in every preceding year, an utter absence of any retreat for the accommodation of male patients either destitute or of strictly limited means, and the inspector quotes from the report of the licensee of the Dalrymple Home, Rickmansworth, the statement that "great demand exists for such an institution, and now that legislation for retreats is materially strengthened, the way is paved and a grand field open for philanthropic enterprise in this direction." For poor males, however anxious voluntarily to submit themselves to treatment, and willing meanwhile to pay a little and work for their maintenance, there is at present no provision. The same reporter suggests that the Inebriates Legislation Committee of the British Medical Association and other cognate temperance bodies might constitute a Committee to successfully formulate and carry out a scheme for such a philanthropic institution. The ages of the 518 cases that have been treated at the Dalrymple Home, and have been discharged thence since its establishment, ranged between 20 and 60, more than half being between 30 and 40 years old. The average age of the 518 was 36·3 years. There were 35 medical practitioners amongst these 518 patients, 27 solicitors, 50 clerks, 30 manufacturers, 56 merchants, and no fewer than 124 gentlemen of no occupation. In 440 cases there was an associated tobacco habit; a chloral and tobacco habit in 6 cases, morphine habit in 6 cases, morphine and cocaine habit in 5 cases, an opium or chlorodyne and tobacco habit in 7 cases, and a sulphonal habit in 2 cases. The average term of residence in the home was about six months and a half. After discharge 169 did well, and 27 were improved, whilst 181 were not improved, and 97 had not been heard from. One reporter from a retreat remarks that for ten years no clergyman has been received there as a patient, whereas up to that period the Church was always represented by one or two inmates. The reporters discuss various defects in the Acts which have become manifest during the year; and an interesting notice of the work carried on amongst female patients at the Royal Victoria Home, Horfield, is given. A copy of the official rules for the management of retreats is added to the report as an appendix.

EXAMINATION IN PRACTICAL HYGIENE FOR SCHOOL TEACHERS.

No examination has hitherto been established suitable for school teachers desirous of showing knowledge in practical hygiene, and we learn with satisfaction that the Council of the Sanitary Institute, which has for the past twenty years been holding qualifying examinations for official sanitary appointments, has decided to arrange a thorough theoretical and practical examination which will be open to teachers and to those preparing as teachers. The syllabus includes: (1) Practical hygiene, individual and social, including the necessary physiology (students will be tested in their knowledge of foods, clothing, physical exercise, first aid in school accidents, infectious and other complaints); (2) hygiene of schools and private dwellings (structural), water supply, drainage, and disposal of house refuse, warming, lighting, and ventilation; (3) hygiene in education. The student will be required to show a special knowledge of the health laws relating to bodily condition of childhood; the laws of health relating to mental condition of childhood; the psychological working of child's mind in acquiring knowledge; the using of various senses to vary the work of the brain; the ethics of character building; the mental presentation of moral forces as an aid to character formation; details of food and clothing from youngest infancy to 6 months, from 6 months to 2 years; principle of feeding and clothing to 8 years; the purpose of a child's skin and internal organs in throwing off effete matter from the body in perspiration, refuse, etc.

A TRIBUTE TO THE MEDICAL PROFESSION.

In his speech at the opening of the Parel Plague Laboratory, His Excellency the Governor of Bombay referred in terms of cordial recognition to the help which officers of various departments of the public service had rendered during the plague. Having alluded to the fact of its being a "doctors' afternoon," His Excellency went on to say that owing to the fact that looking after epidemics and general sickness was essentially the duty of medical men, the part medical men had played in this long epidemic might possibly be somewhat overlooked. Officers of several kinds—revenue, salt department, forest, and military officers by scores, and many others—all had done splendid work, and in the case of the medical profession, whether in the highly scientific and interesting work in the laboratory, or in their careful attention to the sick in camps or hospital, or working away knee deep in slush and mud in remote villages in the rains, the conduct of the medical profession had been equally heroic and beyond all praise. But it is necessary to study with these remarks a leading article which appears in the *Times of India* weekly edition of August 12th, headed, the Medical Service and the Plague, which concludes by saying: "In an undertaking in which medical science and methods must essentially predominate, the most assiduous care seems to have been taken to keep the medical officer in the background, and with his hands tied. If failure attends upon a policy thus directed, we must not wonder." The article shows how the authority and administration of the surgeon-general were set aside.

THE CHAIR OF MEDICINE IN QUEEN'S COLLEGE, BELFAST.

We understand that Dr. Moorhead has abandoned his candidature for the Professorship of Medicine in Queen's College, Belfast, and that up to the present Dr. J. A. Lindsay is the only applicant. In addition to the marked support he has received from his own school in Belfast, Dr. Lindsay's testimonials show his claims for the chair of medicine are being strongly pushed by representative medical men in various teaching centres in the United Kingdom.

THE ROYAL VICTORIA HOSPITAL, BELFAST.

At a meeting of the Board of Management of the Belfast Royal Victoria Hospital, held on September 16th, Dr. W. Calwell was appointed Staff-Physician in place of the late Professor Cuming. Dr. Calwell has had a close connection with the hospital. In his early medical career he was House-Physician, and he was the first Registrar of that institution. He afterwards became Assistant-Physician, a position he has held for the last four years, and during the last eighteen months he has had entire charge of Professor

Cuming's wards. He is also Physician to the Throne Consumptive Hospital, where he introduced the open-air treatment of phthisis. Dr. Calwell has also been on the medical staff of the Ulster Hospital for Children for a period of ten years. He is an excellent teacher, and his advancement to the physicianship of the Royal Victoria Hospital will be of great advantage to the students of the Belfast Medical School. He is succeeded as assistant-physician by Dr. McKisack, who has been Registrar to the hospital for the last four years, and who also was for a time connected with the Ulster Hospital for Women and Children.

PROPOSED HOSPITAL FOR INFECTIOUS DISEASES IN DUBLIN.

ON Tuesday last a Conference was held in Dublin between the Public Health Committee and the various sanitary authorities in the county in reference to providing accommodation for cases of infectious disease. At present there are two principal fever hospitals—Cork Street and the Hardwicke. These have about four hundred beds. In addition several general hospitals have fever houses attached to them, and in this way provision is made for about 150 cases more. The scheme, which was laid before the Conference by Sir Charles Cameron, provides for a hospital of eighty beds at a cost of £250 each. It is proposed that all the sanitary authorities should join in the undertaking, and the meeting was adjourned for a week in order that their views may be gathered. It is, of course, of the highest importance that provision should be made for those stricken with infectious diseases. But it is ridiculous to talk of having only 80 beds in a conjoint public hospital at a cost of £20,000. It is almost certain that an expenditure of about £100,000 will be required.

OLD STUDENTS' DINNERS.

THE St. Bartholomew's old students' dinner will be held in the Great Hall of the hospital at 6.30 for 7 P.M. on Monday, October 2nd, Dr. Lauder Brunton in the chair. The annual dinner of the past and present students of the Middlesex Hospital Medical School will take place at the Trocadero, Piccadilly Circus, on Monday, October 2nd, at 6.30 for 7 P.M., Mr. Pearce Gould in the chair. The St. Thomas's Hospital old students' dinner is fixed for Tuesday, October 3rd, at 6.30 for 7 P.M.; it will take place in the Whitehall Rooms at the Hôtel Métropole, Dr. Sharkey in the chair. The annual old students' dinner of the London Hospital will be held in the College Library on Monday, October 2nd, at 7 P.M., Dr. G. E. Herman in the chair. There will be a reception in the Museum at 6.30. At Guy's Hospital, a house dinner of the Students' Club will take place at 6.30 P.M., in the College Dining Hall. The annual dinner of St. Mary's Hospital will be held on Monday, October 2nd, in the King's Hall, Holborn Restaurant, Dr. Sidney Phillips in the chair. The old students' dinner of University College, London, will take place at 6.30 on Monday, October 2nd, in the Victoria Rooms, Hotel Cecil. The annual dinner of the Westminster Hospital will take place on Monday, October 2nd, at the Holborn Restaurant, Mr. T. Bond in the chair. The Charing Cross old students' dinner will be held in the last week of October.

BOARDS OF GUARDIANS AND PHTHISIS.

REPRESENTATIVES of Boards of Guardians recently met at Leeds to consider the advisability of providing special accommodation for tuberculous patients. Dr. McCandlish presided, and, on behalf of several unions, it was urged that the municipal and sanitary authority should deal with the subject. The chairman said that one company started for the open-air treatment held out the prospect of 12½ per cent. profits. Eventually it was resolved that phthisis should be placed among infectious diseases which should be notified, and that the sanitary authority should take in hand the treatment of the disease.

ROYAL ORTHOPÆDIC HOSPITAL.

THE Committee of Management announces that the out-patient department will be reopened on September 25th, and it is expected that the wards will be ready for the reception of in-patients about one month later. It is estimated that the sanitary and architectural works which have been carried out under the direction of Professor Corfield and Mr. Keith D. Young respectively will cost nearly £2,000.

QUEEN VICTORIA'S JUBILEE INSTITUTE FOR NURSES.

THE Secretary for Scotland (Lord Balfour of Burleigh) has signified his approval of a contribution by the County Council of Lanarkshire of £50 out of the Equivalent Grant for the purpose of assisting in the training of nurses by the Scottish Branch of this Institute, as a scheme of public utility in terms of the Education and Local Taxation Account (Scotland) Act, 1892. There are already nineteen nurses at work in the county, who have been trained by it without any expense to the localities where they are stationed.

DR. VIVIAN POORE will deliver the Harveian Oration before the Royal College of Physicians on Wednesday, October 18th.

WE regret to announce the death of Dr. Jules Simon, Physician to the Hôpital des Enfants Malades, Paris, which took place a few days ago from heart disease following influenza. Dr. Simon was recognised as one of the foremost living authorities on diseases of children.

IT is announced that the first four volumes of the *Proceedings of the Twelfth International Medical Congress*, held in Moscow, will be ready for publication in the course of the present month. The remaining three volumes will, it is said, be ready by the end of the year.

THE Italian Superior Council of Public Instruction has appointed Signora de Riva Monti to the Chair of Comparative Anatomy in the University of Pavia. Signora de Riva Monti, who is a Doctor of Medicine, has published a number of papers on subjects relating to Comparative Anatomy. For one of these she was awarded a prize of the value of £120 by the Lombard Institute of Science.

ACCORDING to the *Pall Mall Gazette*, Lord Rosebery has recently discovered an interesting family relic. This is a bronze mortar in the museum at Hawick bearing the inscription "Gilbert Primros, chirvgien, 1569." This Primrose practised as a surgeon for a long time in France, where he acquired a considerable reputation. Lord Rosebery has naturally shown a great desire to secure the mortar.

A FEW days ago Her Royal Highness the Princess of Wales, the King of Greece, and several of the Russian Princes now in Denmark, visited Dr. Finsen's Light Institute in Copenhagen, and witnessed the procedure adopted there for the treatment of lupus and other affections of the skin. In connection with this subject we may mention that we propose to publish in the next issue of the BRITISH MEDICAL JOURNAL a full description, with illustrations, of the method, for which very remarkable results are claimed. The paper is by Dr. Bie, Dr. Finsen's principal assistant.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

We give here a brief account, mostly condensed from the excellent reports which have appeared in the *Times*, of such parts of the proceedings of the British Association as are likely to be interesting to medical readers.

Section of Physiology.

President's Address.—The President, Mr. J. N. Langley, F.R.S. (Cambridge), delivered an address on the general relations of the motor nerves to the several tissues of the body, and especially of those that run to the tissues over which we have little or no voluntary control. He discussed the proximate explanation of the inhibitory influence exercised by certain nerves—for example, the vagus; whether the ganglia found outside the brain and spinal cord have similar power of reflex action to those within; and the relation of the degeneration of nerve fibres to the theory of specific nerve energy. He said that in view of the conspicuous manner in which nervous impulses affected everyday life, they were perhaps apt to overestimate the character and range of the influence exercised directly by the nervous system. From the early part of this century one way of regarding the body had been to consider it as made of tissues grouped together in varying number and amount. Each tissue had its characteristic features under the microscope, and the fact which he wished to lay stress on was that in any broad classification not more than two tissues were known to be supplied with approximate completeness with efferent nerve fibres. The striated muscular tissue which formed among other parts of the body, the muscles of the limbs and trunk, received in all regions nerve fibres from the brain or spinal cord. And the unstriated muscular tissue, which formed amongst other parts of the body, the contractile part of the alimentary canal and of the blood vessels, was in nearly, and possibly in all, regions similarly supplied. According to the present state of knowledge large portions of the organism lived their own lives uninfluenced, except indirectly, by the storms and stresses of the central nervous system. No nervous impulse could pass to them to make them contract or to make them secrete, or to quicken or slacken their inherent activity. The nervous system could only influence them through the medium of some other tissue by changing the quantity or quality of the surrounding fluid. Regarding, then, the body from the point of view of the control exercised by the control of the nervous system on the other constituents, one had first to recognise that this control was in considerable part indirect only, that several tissues were in varying degree under direct control, and that different parts of one tissue might be influenced by the nervous system to different extents. Even when nervous impulses could strikingly affect the vital activity of a tissue their action was limited. They could not modify the activity in all the various ways in which it was modified by the inherent nature of the tissue and the character of the surrounding fluid. Thus the submaxillary gland, which poured saliva into the mouth, was in life ceaselessly taking in oxygen and giving out carbonic acid; it did this without pouring forth any secretion. So far as was known no nervous impulse could hasten or retard this customary life of the gland by a direct action upon it without producing other changes. The essential effect of a nerve impulse appeared to be to modify the amount of energy set free as work; usually it caused work to be done, as in the contraction of a muscle, or in the secretion of fluid by a gland; sometimes it diminished the work done, as in the cessation of a heart beat, or the decrease of contraction of a blood vessel. Other changes often went side by side with this setting free of energy as work, but there was no unimpeachable instance in which these other changes took place by themselves as the result of nervous excitation. The somatic or voluntary nervous system had in its essential feature long been known; one might, therefore, pass on to the more obscure field of the arrangement of the involuntary nervous system which presented some peculiar characters. The most distinctive of these was that the nerves, after they left the brain or spinal cord, did not run interruptedly to the periphery; they ended in nerve cells, and the nerve cells sent off the fibres which ran to the periphery. Thus all nervous impulses which passed from the brain or spinal cord to unstriated muscle or glandular tissue, passed through an intermediate station on their way. In this, as in other respects, the arrangement of the involuntary nervous system was more complex than that of the voluntary nervous system; in the latter the motor nerve fibres ran direct to the tissue, and had no nerve cells on their course. A striking feature of the involuntary nervous system was its possession of nerve fibres, which, when excited, stopped some action at the time going on. There had been a marked tendency amongst physiologists, in considering the question of these inhibitory nerve fibres, to take what might be called the view of the equal endowment of the tissues. Because some arteries had inhibitory nerve fibres, therefore it was to be held as in the highest degree probable that all had. And many would go further, and say that it was therefore in the highest degree probable that all unstriated muscle and glands, and even the voluntary muscles, had such fibres. This view seemed to be a mistaken one. There was hardly room for doubt that the motor fibres were supplied in most unequal measure to the unstriated muscle and glands of the body. There were veins in the body containing unstriated muscle, which showed no visible contraction from any nerve stimulation, and there were a number of glands which no nerve—so far as was known—excited to secretion. Since the course of the evolution of the organism a universal development of motor fibres had not occurred, it was to be expected that the development of inhibitory fibres should be still less universal; for up to a certain point the results of inhibition could be obtained in most cases without inhibitory nerve fibres, or by a simple diminution in the impulses travelling down the motor fibres. The only and the final test was, of course, experiment, but this theory of the equal endowment of the tissues had, it seemed to him, caused a number of quite inconclusive experiments to be accepted as offering satisfactory evidence for the existence of inhibitory nerve fibres. The proper working of the body depended upon an agile response by the central nervous system to what was going on in the periphery. Now, the peripheral ganglia were made up of nerve cells and nerve fibres, which differed less in general characters from some of the cells of the central nervous system than these differed from one another. The nerve cells of the brain could receive impulses from many groups of nerve cells both near and remote; they did not simply receive impulses from one quarter alone—say the cortex of the cerebral hemispheres—but from many quarters, and notably direct from the periphery. Hence it had been supposed that the peripheral ganglia had similar wide connections, that they received impulses direct from the periphery, that each was connected with other ganglia, and that impulses received from the periphery or elsewhere brought separate ganglia into co-ordinate action. And this view, which had been taken on general grounds, had been supported by microscopical observations. The evidence against this view was of two kinds. In the first case, it could be shown that in a number of individual cases the nerve cells of one ganglion had no connection with the nerve cells of another ganglion, so that anything like a universal scheme of connection was out of the question. And secondly, it could be shown that whenever an action occurred which might be referred to such connection it was an action which was bound to occur in consequence of some other known arrangement, and that therefore it was unnecessary to seek for a further cause. There was good evidence that nervous impulses set up in one spot might affect regions more or less remote by a mechanism which did not involve the presence in the sympathetic system of special sensory nerve cells with peripheral sensory nerve endings, and, so far as investigation had gone at present, he thought that all the apparent reflex actions could be explained without reference to such sensory apparatus. He therefore took the analogy of the peripheral ganglia with the central nervous system to be misleading, and considered that all the nerve cells of which they had been speaking were motor nerve cells. Thus the whole consisted of a duplication of one type; a cell in the spinal cord which branched, each branch ending in a single cell; each of these cells sent off a nerve fibre which branched, the branches ending in a group of involuntary muscle or gland cells. That he regarded as the real working mechanism, but there were two reservations to be made. All the

tissues of the body might be looked upon as engaged in a life-long process of carrying out experiments, and he was prepared to believe that there were in the body what might be spoken of as the residues of these natural physiological experiments, either the beginnings of experiments which had not succeeded, or the melancholy endings of those which once partially successful, had failed later. Such possibly might be the nerve cells which had been described in sympathetic ganglia as sending their nerve fibres to other nerve cells. Secondly, in this account he had not included the nerve cells which existed in the wall of the alimentary canal, and the cells of Auerbach's and Meissner's plexuses. These "enteric" nerve cells belonged, he held, to a system different from that of the other peripheral nerve cells. With regard to their connections he did not think anything could be said with certainty. On one other problem presented by this involuntary system a few words might be said. It was known that when a nerve in the arm or hand was cut the nerve would, in proper conditions, grow again, and the lost power over the muscles would return. The recovery was brought about by the part of the nerve which was attached to the spinal cord growing along its old track, and spreading out as before in the muscle, skin, and other tissue. At any rate there was the method for which there was most evidence. When the nerve fibres in the spinal cord were similarly injured, they did not recover function. Regeneration in the latter case implied that nerve fibres had to form fresh endings in connection with nerve cells. Recent experiments showed that the nerve fibres which ran from the spinal cord to the peripheral ganglia, that is, preganglionic fibres, reformed with ease their connection with nerve cells, so that one might probably seek in mechanical conditions for the reason of the absence of regeneration of the fibres in the spinal cord. The regeneration of the preganglionic nerves presented some very remarkable features. The nerve fibres which ended in a sympathetic ganglion were rarely if ever all of one kind, that was to say, they did not all produce the same effects. There were in the ganglion several thousands of nerve cells closely packed together, and though it would seem hopeless for each kind of nerve fibre as it grew again into the ganglion during regeneration to find its proper kind of nerve cell, nevertheless nearly all of them succeeded in doing this. The fact offered at first sight a striking proof of a specific difference between the different classes of nerve fibres and different classes of nerve cells. Through the matted mass formed by the delicate interlacing arms of the nerve cells, the ingrowing fibres pursued their tortuous course, passing between and about hundreds of near relations until they found their immediate stock. But closer observation showed that the fibres had not always this marked preference for their own stock. The nerve fibres of the cervical sympathetic did not often go astray, at any rate so far as was known, but they did sometimes, and if one turned to other nerves, great aberrations were found. An important cranial nerve was the vagus. It did not send nerve fibres to any of those structures of the head with which the sympathetic ganglion—the superior cervical ganglion—was liberally supplied, and yet if it had a proper opportunity of growing into the superior cervical ganglion, it would do so, and there establish connections with the nerve cells. Thus they arrived at results which were hopelessly at variance with the view that the nerve fibres and nerve cells of the involuntary nervous system were divided into classes fundamentally different. In other words, that theory which was spoken of as the theory of specific nerve energy did not apply there. But if this was so, how were they to account for the selective power shown by the sympathetic nerve fibres? That the different classes of nerve fibres and nerve cells with which they were dealing had not those deep and inherent differences which were required by the theory of specific nerve energy, was it seemed to him certain. Nevertheless, there might be some difference of a comparatively superficial nature which sufficed to explain the selective activity observed. They might perhaps express the facts by saying that there were different varieties of preganglionic fibres, but no species.

Other Papers.—Among other papers read were the following: Mr. J. H. TUCKETT: Auto-intoxication as a Cause of Pancreatic Diabetes; Professor SCHÄFER and Mr. SWALE VINCENT: the Effects of Pituitary Extract; Mr. A. A. GRAY: the Theory of Hearing. Mr. E. S. BRUCE gave a demonstration on a New Instrument for Measuring the Persistence of Duration of Vision. A communication was presented by Professor H. KRONECKER and Dr. F. C. BUSCH on (1) the Resonance of Nerve and Muscle; (2) the Propagation of Impulses in the Rabbit's Heart; (3) Fibrillation and Pulsation of the Dog's Heart; and one by Dr. LE M. BUNCH on the Effects of Successive Stimulation of the Viscera and Vasomotor Nerves of the Intestines. Among other communications presented were the following:—Professor KRONECKER and Dr. W. MUKLBERG: On the Innervation of the Thoracic Part of the Œsophagus; Professor KRONECKER and Dr. T. E. ESSLEMONT: Experiments on a Dog with a Vella Fistula; Professor KRONECKER and Dr. ARNOLD: On Variations in the Tonus of the Sphincter of the Bladder: Professor KRONECKER and Dr. BURGI: On Respiration on Mountains; Professor KOSSEL: On Protamines, the Simplest Proteids; Professor W. H. THOMPSON: Protamines and their Cleavage Products, their Physiological Effects; Dr. W. E. DIXON: The Vascular Mechanism of the Testis.

Nervous Vibration.—An address on this subject was delivered by Professor CHARLES RICHET. He said the forces of Nature appeared to be vibrations of substances, or of that hypothetical substance, ether, which must be assumed for the explanation of Nature. It was now a long time since the rate of transmission of the nerve impulse was discovered; curiously enough, just two years after Johannes Müller, the great comparative physiologist, had declared that its determination was impossible. It travelled along the nerve filament at the rate of only about 30 metres per second, just 1-700,000,000th of the rate of speed of light in space. Any nerve stimulus called forth an electric disturbance, and it seemed probable that the transmission was an electric undulation too. The next question was the form of the wave of transmission and its period. For the first time its period had been determined; it was the tenth of a second, and this gave the length of the wave, which was 1-300th of a metre. What the mathematicians called its "form" had also been determined. A nerve once stimulated never returned to its original condition, and though the difference was physically infinitesimal, psychologically it was enormous; for it was this permanent disturbance which constituted memory. The period of the undulation was most important; our ideas, our impulses could not be repeated more frequently than ten or twelve times a second at the outside. If we tried to think of a set of words in succession we could never pass this speed, and we could not receive a more rapid succession of sensations on the same organ. This period, then, might be called the psychological "unit of time." If the rapidity were greater, first sound, then electricity and light, would be perceived as independent undulations, not continuous sensations; were it slower we could see the motion of the hour hand of a watch and the growth of a tree manifest to our eyes. Thus our whole conception of the outer world depended on this psychological unit.

SECTION OF ANTHROPOLOGY.

Anthropometry of Criminals.—In this Section Dr. J. G. GARSON, scientific adviser and instructor in the anthropometric identification of criminals, read a paper on the Personal Equation in the Anthropometry of Criminals. He gave an account of his recent investigations into the metric descriptions of large numbers of prisoners and habitual criminals taken by about two hundred local prison officers over different parts of the country, and also described the instruments used. Care should be taken both in respect of good instruments and most careful measurements so as to reduce errors and variations of records to a minimum.

Finger Prints.—Dr. FRANCIS GALTON, F.R.S., read a paper, illustrated by lantern slides, on the Finger Prints of Young Children. By selecting the best of numerous specimens he had compiled three sets of all the ten fingers of a young child. In the first set the age of the child lay between 9 days and a month; in the second between 1 month and 6 weeks; in the third between 5 and 7 months. In addition he had a fourth set taken at 17 months, a fifth at 2½ years, and a sixth at 4½ years. The study of these prints was an excellent discipline in the art of decipherment. He had counted 68 details in the prints of these fingers that could be identified throughout all six sets, unless obliterated in some one of them by a blot. In

a majority of cases the identity was unquestionable; in others it might be trusted in narrow limits. He had, therefore, little doubt that the prints of all ten fingers of a baby, if taken as clearly as those he had dealt with, would suffice for after-identification by an expert.

Mr. E. R. Henry, C.S.I., Inspector-General of Police, Bengal Civil Service, read a paper on the same subject with many magnified lantern illustrations and practical demonstrations of the way in which the impressions were taken. Experience had shown that the "personal equation" error of measures predominated so much as to vitiate seriously the correctness of the recorded results under the Bertillon system. Finger prints on the other hand, being absolute impressions taken from the body under conditions which eliminated error in transcribing or recording the "personal equation" error, was reduced to a minimum. Taking the impressions of all ten digits occupied only a fraction of the time for measuring, while search was more exhaustive and many times more rapid. This new system had been introduced on a most extensive scale through British India. The main difficulty hitherto experienced had been that of providing an effective system of classification, but this difficulty was now overcome. A thin film of printer's ink was spread over a piece of flat tin, and each finger in turn was pressed on the film, and, after being thus inked, was pressed on paper, where a clear sharp impression was left. Fingers were impressed in their natural order of thumb, index, middle, ring, and little, those of the right hand being above, and the corresponding digit of the left hand below them. Practical illustrations were given. Mr. Henry finally gave some remarkable instances of the capture of criminals (whose finger impressions had previously been taken) from the photographs of the impressions their fingers had made on the soft paint of a window-sill, and of blood marks made by fingers on the covers of a book. It was in consequence of these remarkable identifications, which were graphically shown by the identical photographs taken, and the actual production of the book mentioned to the audience, that the Legislature in India amended the law of evidence.

Ethnology of Torres Straits and New Guinea.—Papers on this subject were read by members of Professor A. C. Haddon's Cambridge expedition, which started in the autumn of 1897 and continued its investigations for more than two years. Only those having a direct bearing on medical science are here abstracted. Dr. W. H. R. Rivers gave a general account of his observations and experiments on colour vision and estimation of time. He remarked that previous work on the psychology of savage people had been limited to deductions from their behaviour, customs, and beliefs. The special object of the psychological work of the Cambridge Anthropological Expedition was to employ exact experimental methods in the investigation of the mental character of the natives of Torres Straits and New Guinea. One general result was to show very considerable variability. Another general result, which should be of great interest to anthropologists, was that the natives did not appear to be especially susceptible to suggestion, but exhibited very considerable independence of opinion. The colour vision of the natives was investigated in several ways: 150 natives of Torres Straits and Kiwai were tested by means of the usual wool test for colour blindness without finding one case. About eighty members of other races, including Australians, Polynesians, Melanesians, Tamils, and half-castes were also tested without finding one case except among natives of Lifu. The names used for colours by the natives of Murray Island, Mabuiag, and Kiwai were very fully investigated, and the derivation of such names in most cases established. The colour vocabularies of these islands showed the special feature which appeared to characterise many primitive languages. There were definite names for red, less definite for yellow, and still less so for green, while a definite name for blue was either absent or borrowed from English. The three languages mentioned and some Australian languages seemed to show different stages in the evolution of a colour vocabulary. Several Australian natives (from Seven Rivers and Fitzroy River) appeared to be almost limited to words for red, white, and black. In Kiwai there was no word for blue, for which colour the same word was used as for black, while the name applied to green appeared to be inconsistent and indefinite. In Murray Island the native word for blue was the same as that used for black, but the English word had been adopted and modified into bulu-bulu. The language of Mabuiag was more advanced; there was a word for blue (*maludgamulnga*, sea colour), but it was often also used for green. Corresponding to this defect of colour terminology, there appeared to be an actual defect of vision for colours of short wave length. In testing with coloured wools no mistake was ever made with reds, but blues and greens were constantly confused, as were blue and violet. Numerous observations were made on writing and drawing, the former chiefly in the case of children. The most striking result here was the ease and correctness, with which mirror writing was performed. In many cases native children, when asked to write with the left hand, spontaneously wrote mirror writing, and all were able to write in this fashion readily. In some cases children, when asked to write with the left hand, wrote upside down. Experiments were made on the estimation of time. The method adopted was to give signals marking off a given interval; another signal was then given as the commencement of a second interval, which the native had to finish by a similar signal when he judged it to be equal to the given interval. This somewhat difficult procedure met with unexpected success, and intervals of 10 seconds, 20 seconds, and 1 minute were estimated with fairly consistent results. Nearly all the investigations gave some indication of the liability to fatigue and the capability of improvement by practice, but these were also the subject of a special investigation carried out by modifications of Kraepelin's methods.

Mr. C. S. Myers gave an account of his Observations on Hearing, Smell, Taste, Reaction, and Time. The general results of many experiments led him to conclude that few Murray Islanders surpassed a hyper-acute European in auditory acuity, while the majority could not hear as far. For the determination of the upper limit of the perception of tone he used Hawksley's improved form of Galton's whistle. Of the fifty-one Murray Islanders who were investigated, all save one readily appreciated the difference between the pure high note, and the noise of the blast that is inseparable from it. Experiments were also made to determine the minimum perception of tone differences. Twelve islanders were tested for their sense of rhythm; this was found to be remarkably accurate for 120 beats of the metronome to the minute, and somewhat less so for 60 beats. Most of the subjects had a tendency to vary in the direction of increasing the rate of the taps. Olfactometry was very difficult to prosecute for various reasons. So far as the experiments went, they indicated no marked superiority in the development of this sense among the islanders. Doubtless hyperacuity was more common among them, but there seemed no reason to believe that they were able to perceive such traces of odour as would be imperceptible to the most sensitive European noses. Experiments were made to determine the appreciation and recognition of the common tastes—sweet, salt, bitter, and acid. Sugar and salt were readily recognised, acid was compared to unripe fruit; the bitter was the most uncertain; evidently there was no distinctive name for it in the Murray Island vocabulary. Binet's vocabulary used for testing visual memory was employed on 28 people with interesting results. Numerous time-reaction experiments were made, more on simple auditory reaction than on simple visual reactions; a few visual choice reactions were also made. The time of the simple reaction was not sensibly longer, but probably in many cases even shorter, than would be that given by a corresponding class of Europeans.

Mr. W. McDougall read a paper on Observations on the Sense of Touch and Pain, on the Estimation of Weight and Variations of Blood Pressure. He said that the power of discrimination of two points by the sense of touch was investigated in a series of fifty adult males. On half the number of subjects the observations were made on the skin of the thumb, of the second toe, and of the nape of the neck, and on the skin of forearm on all the subjects. There was a general correspondence of delicacy of discrimination in the different parts of the skin tested in any one subject. A few of the subjects showed a very much greater delicacy of discrimination than the others, while the latter showed a fairly uniform delicacy, which was considerably greater than that shown by the short series of white men who had been tested by the same

method. Observations on the sensitivity to pain produced by simple pressure on the skin were made by means of Cattell's algometer. The sensitivity to pain seemed to be, roughly, inversely proportional to the delicacy of touch discrimination in the series of individuals, and in the whole series the sensitivity seemed to be distinctly less than in the short series of white men observed. Similar series of observations were made on thirty children. The degree of pain produced was in all cases so slight as not to spoil the pleasure and interest of subjects in the proceedings. The accuracy of localisation of touch sensations was also measured in numbers of the same subjects, and temperature spots were mapped out in a few. In the same subjects a series of observations on the delicacy of discrimination of differences of weight was made, and other series were made with the purpose of determining the degree of suggestibility of the people—the effect of size as appreciated by sight and grasp on the judgment of weight. Although the abstract idea of weight seemed entirely new to the minds of these people, and no term in their language answered to it exactly, yet their power of discrimination of difference was at least as good as our own. In the same series of people the blood pressure was observed by means of Hill and Barnard's sphygmomanometer during test muscular work, mental work, and excitement, and slightly painful skin pressure, and marked variations recorded under these conditions. No series of observations on white men under similar conditions had yet been made for a comparison.

Stonehenge.—Dr. Alfred Eddowes read a paper, entitled, Stonehenge, Some New Observations and a Suggestion, with lantern illustrations. He believed that the thirty large upright stones with their intervals indicated that the circle was divided into sixty equal parts; that the grooved stone (which was the best selected, worked, and preserved stone in the whole ruin, but had never hitherto received the attention it deserved) was used for supporting a pole in a definite and permanent manner; and that the signs of wear at the mouth of the groove, together with the two worn horizontal hollows or waists, and the dimples on the convex back of the stone, indicated not only where but how this pole was fixed. Such a pole would form the pointer of a sun dial for daily observation; or, what was more important, an indicator of the time of year by the length of its shadow. The levelled avenue (along which the sun's shadow would fall about 3 P.M.) and the flat "slaughter stone" with its arrow-head marking seemed to him to support his view.

Dr. Sebastian Evans thought that Dr. Eddowes had proved his point that Stonehenge had been used for the purposes of an observatory.

Mr. Arthur Evans somewhat dissented from Dr. Eddowes's views. Observing that Stonehenge was on the site of remains of an early bronze age cemetery, he said it ought to be regarded not alone, but in relation to a large series of other stone monuments, and he entered a protest against the attempt to introduce very precise and rigorous scientific ideas into what was, in his opinion, a rude monument.

Recent Ethnographical Work in Scotland.—Mr. J. Gray, in a paper on this subject, said that preliminary observations on the physical characteristics of the people of East Aberdeenshire, begun in 1895 by the Buchan Field Club, were summarised in a paper at the Ipswich meeting of the Association and published more fully in the *Transactions* of the Buchan Field Club. A pigmentation survey of the whole of the school children of East Aberdeenshire had since been completed. Returns were received between October, 1895, and November, 1897, from over 90 schools, comprising nearly 14,000 children. The scheme of colours for hair and eyes was practically the same as that of Dr. Beddoe; but his two darkest classes for hair were amalgamated into one. Comparison with Virchow's survey of German school children would, however, have been facilitated if blue eyes had been separated from other light eyes. The pigmentation of the school children (with that of adults added for comparison) was shown in a table of average results, and a comparison with the Continental districts whence, according to tradition and history, a large element in our population had been derived—namely, Schleswig-Holstein, Lüneberg, and Mecklenburg-Schwerin, the reputed original seats of the Angles and Saxons—was shown in another table. These tables showed that the three North-German districts were clearly more blonde than East Aberdeenshire. Germany, as Virchow's survey had shown, got more brunette and less blonde from north to south; but we must go to its extreme southern frontier—that is, to Upper Bavaria—before we found a district approximating in pigmentation to East Aberdeenshire.

The Cephalic Index.—Professor Macalister read a paper on a study of 1,000 Egyptian skulls, with 50,000 measurements, in which he showed the untrustworthiness of the cephalic index. An illustrative series of diagrams in curves was shown, divided into the old series and the new series. Professor Macalister discussed the cephalic index, and said he did not believe in its value as an indication of the cerebral index. He advocated the importance of basi-nasal length as one affording a constant racial feature.

Sir William Turner criticised Professor Macalister's position in regard to the cephalic index, and differentiated skull and brain measurements. The frontal sinuses were of importance in showing the length and breadth of the skull and not of the brain. The glabella projection over the eyes and nose was a material feature with some races—for example, the Australian.

Section of Chemistry.

The Treatment of Sewage.—A discussion on the sewage question was introduced by Dr. Rideal reading the report of the Committee on Water and Sewage Examination Results.

Professor Clowes next read extracts from a report on the Intermittent Bacterial Treatment of Raw Sewage in Coke Beds. This process was at first experimentally carried out by the London County Council for the treatment of the effluent from chemically treated sewage, but was now applied to raw sewage screened through coarse gratings. Coke of the size of walnuts was used and beds from 4 feet to 13 feet deep had been tried. One treatment on the coke beds removed all the fæcal matter and 50 per cent. of the dissolved organic matter, whilst a second treatment removed a further 20 per cent. of the dissolved organic matter. The mode of procedure was to leave the sewage in contact with the coke for three hours and then allow the coke to stand empty for seven hours for aëration. The effluent supported the life of fish, and neither it nor the coke became foul, although no bacterial improvement was brought about by the treatment, a factor that was advantageous for the final stages of purification. The efficiency of the filters fell off in time owing to clogging with the cellulose fibres derived from wood pavements, straw, etc., but much of this could be removed by a preliminary sedimentation and disposed of in a destructor. Fresh coke required five or six weeks to get into working order; in dry weather, when the sewage was less dilute, the working was less satisfactory.

In a communication on the Place of Nitrates in the Biolysis of Sewage, Mr. W. Scott-Moncrieff said there were three methods of recovering the nitrogen from sewage: the disposal of sewage directly on the land, the chemical precipitation of the sewage in the form of sludge, and the method described by Professor Clowes. The bulk and dilution were the obstacles in the first method, whilst the second was not satisfactory. The third, however, properly conducted, was good; in fact, as the late Sir Edward Frankland remarked, it was a fermentative process like brewing, and, as the author said, the method of Nature herself artificially aided. Sewage was a complex mixture, therefore different organisms had to work to break up the combinations. Hence the desirability of letting the process go on in stages.

Professor Warington, in opening the discussion on these papers, remarked that the process described by Professor Clowes was really neither anaërobic nor aërobic, but partook of both characters. It seemed to him that neither had full play.

Mr. Dibdin pointed out that the bacterial treatment, as described, was a success and could, by making a suitable bed, be made to yield an absolutely pure effluent, which was not always necessary. The important feature of Professor Clowes's communication was the successful treatment of the sludge, which in London amounted to 40,000 tons a week and cost a considerable sum to take out to sea. The sewage of Leeds had been successfully treated on the coke beds, although it contained a large proportion of chemical refuse.

Mr. Douglas Archibald questioned whether the bacterial treatment of sewage would be as efficient as the chemical treatment in destroying dangerous organisms.

The President (Dr. Horace T. Brown, F.R.S.) in proposing a vote of thanks to all the authors, remarked that the strength of the nitrified solution mentioned by Mr. Scott-Moncrieff (nine parts per 100,000) was just the proportion suitable for plant nutrition.

Symbiotic Fermentation.—Sir Henry Roscoe, F.R.S., read in English a Note sur les Fermentations Symbiotiques Industrielles presented by Dr. A. Calmette, director of the Pasteur Institute of Lille, whose absence was due to the fact that he has been commissioned to investigate the outbreak of plague in Oporto. In this paper particular attention was drawn to the conversion of starch into alcohol by means of the symbiotic existence of moulds with yeasts, and to its possible industrial application. Sir Henry remarked that this possibility had already been realised, for by the employment of pure cultivations of the two forms of organisms thousands of tons of starch were transformed into alcohol in France and Belgium. This state of things would revolutionise the industry of fermentation and distillation, inasmuch as under efficient scientific supervision the yield of spirit by the new process amounted to as much as 97½ per cent. of the theoretical yield. Moreover, the spirit was superior in quality to that produced in the ordinary way.

Professor Armstrong, F.R.S., contributed a paper entitled Symbiotic Fermentation; its Chemical Aspects. He advanced arguments in favour of the purely chemical character of symbiosis, and advocated in particular Baeyer's view that fermentative changes were due to the withdrawal of water and the subsequent addition to its elements in a different order, the function of enzymes being to bring the water to this particular condition of activity. He pointed out that fermentation was not always accompanied by degradation; for instance, in the conversion of sugar into fat a C_6 molecule became a C_{18} molecule.

Section of Zoology.

Variation and Some Phenomena connected with Reproduction and Sex.—Mr. Adam Sedgwick, F.R.S., the President, delivered an address on this subject. Speaking of the variations of organisms he said: As everyone knows, there is a vast number of different kinds of organisms. Each kind constitutes a species, and consists of an assemblage of individuals which resemble one another more closely than they do in other animals, which transmit their characteristics in reproduction, and which habitually live and breed together. But the members of a species, though resembling one another more closely than they resemble the members of other species, are not absolutely alike. They present differences, differences which make themselves apparent even in members of the same family—that is, in the offspring of the same parents. It is these differences to which we apply the term variation. The immense importance of the study of variations may be judged from the fact that, according to the generally received evolution theory of Darwin, it is to them that the whole of the variety of living and extinct organisms is due. Without variation there could have been no progress, no evolution in the structure of organisms. If offspring had always exactly resembled their parents, and presented no points of difference, each succeeding generation would have resembled those previously existing, and no change, whether backwards or forwards, could have occurred. This phenomenon of genetic variation forms the bedrock upon which all theories of evolution must rest, and it is only by a study of variations, of their nature and cause, that we can ever hope to obtain any real insight into the actual way in which evolution has taken place. Notwithstanding its importance, the subject is one which has scarcely received from zoologists the attention which it merits. After referring to genetic variation, acquired characters, and their transmissibility, he proceeded to deal with the evolution of heredity. He said: Has the variability of organisms ever been different from what it is now? Has or has not evolution had its influence upon this property of organisms as it is supposed to have had upon their other properties? There is only one possible answer to this question. Undoubtedly the variability of organisms must have altered with the progress of evolution. It would be absurd to suppose that organisms have remained constant in this respect while they have undergone alteration in all their other properties. If the variability of organisms has altered, it becomes necessary to inquire, In what direction has it altered? Has the alteration been one of diminution, or has it been one of increase? Of course it is possible that there has been no general alteration in extent with the course of evolution, and that the alteration, on the whole, has been one of quality only. But passing over this third possibility, let us consider for the moment which of the two first-named alternatives is likely to have occurred. According to the Darwinian theory of evolution, one of the most important factors in determining the modification of organisms has been natural selection. Selection acts by preserving certain favourable variations, and allowing others less favourable to be killed off in the struggle for existence. It thus will come about that certain variations will be gradually eliminated. Meanwhile, the variations of the selected organisms will themselves be submitted to selection, and certain of these will be in their turn eliminated. In this way a group of organisms becomes more and more closely adapted to its surroundings; and, unless new variations make their appearance as the old unfavourable ones are eliminated, the variability of the species will diminish as the result of selection. It would thus appear, and I think we are justified in holding this view, at any rate provisionally, that the result of continued selection will be to diminish the variability of a species, and, if carried far enough, to produce a race with so little variability, and so closely adapted to its surroundings, that the slightest alterations in the conditions of life will cause extinction. If selection tends to diminish the variability of a species, then it clearly follows that, as selection has been by hypothesis the most important means of modifying organisms, variation must have been much greater in past times than it is now. In fact, it must have been progressively greater the further we go back from the present time. The arguments which I have just laid before you points, if carried to its logical conclusion—and I see no reason why it should not be so carried—to the view that at the first origin of life upon the earth heredity was a much less important phenomenon than it is at present. Following out the same train of thought, we are inevitably driven to the conclusion that one of the most important results of the evolutionary change has been the gradual increase and perfection of heredity as a function of organisms and a gradual elimination of variability. This view, if it can be established, is of the utmost importance to our theoretical conception of evolution, because it enables us to bring our requirements as to time within the limits granted by the physicists. If variation was markedly greater in the early periods of the existence of living matter, it is clear that it would have been possible for evolutionary change to have been effected much more rapidly than at present—especially when we remember that the world was then comparatively unoccupied by organisms, and that, with the change of conditions consequent on the cooling and differentiation of the earth's surface, new places suitable for organic life were continually being formed.

Election of Sir William Turner as President.

Lord Lister proposed the following resolution:

That Sir William Turner, F.R.S., be appointed President-elect for the meeting at Bradford in 1900.

He said that Sir William Turner was perhaps the foremost human anatomist in the British islands, and was also a great anthropologist. On his shoulders had largely rested for many years the task of guiding the great medical school at Edinburgh, and he also occupied a most honourable position as President of the General Medical Council. Sir William also had long taken an active part in the work of the Association, and he was in all ways a man eminently deserving of the great honour of the Presidency of the British Association.

Sir A. Geikie seconded the resolution. He said that Sir William Turner had worked long and hard for the interests of the Association. He was not only a great anatomist, but a man distinguished in other branches of science, and it was only appropriate that a North of England man should occupy the President's chair at the Bradford meeting.

The resolution was carried unanimously.

THE BRITISH ASSOCIATION AND THE ASSOCIATION FRANÇAISE POUR L'AVANCEMENT DES SCIENCES.

A novel and interesting feature of the meeting of the British Association this year was the visit of representatives of the corresponding French Association. On Saturday, September 16th, some 300 ladies and gentlemen came over from Boulogne, where the Association Française pour l'Avancement des Sciences was also holding its annual meeting. They received a cordial welcome from Sir Michael Foster, the President of the Association, and from Lord Lister as a member of the Institute of France, and from the official dignitaries of the good town of Dover. Dr Brouardel, Dean of the Paris Faculty of Medicine and President of the French Association, in acknowledging the reception, said it was a great pleasure to them to meet so many distinguished English *savants*, men devoted to the cause of science, which had conferred so many blessings on humanity at large, and men who were the countrymen of Jenner, the great initiator of vaccination, and of Lord Lister, to whom the world owed the great discovery of antiseptic surgery. The visitors were entertained at luncheon, which is described by the *Times* as having been "as jovial as a bump supper," and after visiting various places of interest returned to Boulogne in the evening.

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE French Association for the Advancement of Science held its twenty-eighth annual meeting in Boulogne last week under the presidency of Professor BROUARDEL, the Dean of the Faculty of Medicine of the University of Paris. In his presidential address, after some introductory remarks, M. Brouardel reviewed the hygienic progress which had followed the discoveries of Pasteur. He began by paying homage to the great memory of Jenner, who had discovered vaccination not by a lucky accident but by prolonged observation. Thanks to Jenner everyone could now protect himself from small-pox, and, as Lorain had said, "The state of civilisation of a people could be estimated by the number of deaths from small-pox which occurred among it." With Jenner's great discovery the eighteenth century had come to a close; the nineteenth ended with those of Pasteur. Modern hygiene was the outcome of Pasteur's work. As showing what had been done within the space of a very few years by the means of dealing with morbid germs which bacteriology had placed in our hands, M. Brouardel referred to the annual mortality from infectious diseases in Paris, which in the six years 1892-98 had diminished by one fourth—from 24 to 18 per 1,000. With regard to typhoid fever M. Brouardel recalled the fact that at the Congress of Hygiene held in Vienna in 1887 he had maintained against the German masters of hygiene that water was the most active propagator of the disease. Comparing the mortality from typhoid in the French and German armies he found that in the former it was 28 in 10,000 from 1875 to 1888, and 12 in 10,000 from 1889 to 1896, being a diminution of three-fifths. Dr. von Köhler, the Surgeon-General of the German army, had told him a few months ago that the mortality from typhoid fever in the German Army oscillated between 1 and 2 per 1,000; there were, in fact, fewer attacks among the Germans than there were deaths among the French. The fault for this state of things did not lie with the medical officers of the French army. All barracks were supplied with Chamberland filters, and every precaution was used; but, outside, the soldier drank polluted water. The remedy was that the municipal should co-operate with the military authorities in ensuring a water supply above suspicion, as was the case in Germany. M. Brouardel said it was high time the State should interfere to compel local authorities to do their duty. After referring to antisepsis and asepsis in surgery and midwifery, to the preventive treatment of rabies, to the diminished mortality of diphtheria, and the outcome of Pasteur's discoveries, M. Brouardel went on to speak of tuberculosis, "on which he would now concentrate all the efforts of hygiene." In France it was responsible for more than 150,000 deaths each year. He quoted from a report supplied by the German Public Health Office the following statistics of the yearly ravages caused in the different countries of Europe by pulmonary phthisis alone:

Russia	More than 4,000 deaths per million of population.
Austria	More than 3,000 deaths per million of population.
Hungary	
France	
Sweden	More than 2,000 deaths per million of population.
Germany	
Switzerland	
Ireland	
Netherlands	More than 1,000 deaths per million of population.
Italy	
Belgium	
Norway	
Scotland	
England	

Accepting Grancher's statement that tuberculosis was the most curable of all chronic diseases, the Germans had taken the lead in establishing sanatoria for sufferers from phthisis to which, under the law by which assurance was made compulsory on all worthy men, they were bound to go. In France such compulsory removal of a patient from his home would be impracticable. But the example of England might be imitated, and the disease fought by sanitary betterment, particularly in regard to the removal of unhealthy dwellings and the prevention of overcrowding should be aimed at. Professor Brouardel concluded with an appeal to the intellectual leaders of the people to take an active part in the warfare against tuberculosis. They, he said, must direct public opinion; without them the hygienists were helpless.

MOSQUITOS AND MALARIA.

REPORT OF THE GERMAN COMMISSION.

THE first report of the German Commission appointed for the investigation of malaria appeared last week.[1] The Commissioners began operations in Grosseto, in Tuscany, the marshy districts of which are notorious hotbeds of malaria. The disease is present there all the year round, but becomes so virulent in July, August, and September that the inhabitants towards the end of June flee in thousands to the mountains or elsewhere.

During the five weeks preceding June 23rd, 1899, only 22 cases were admitted to the Grosseto hospital for malaria, and all of these were cases of relapse from previous attacks. In the five weeks following June 23rd no fewer than 222 cases were admitted, only 17 of which were relapses. The Commission found no cases of the mild "spring fever" spoken of by Italian writers, except in patients who had had fever the year before. No new cases were seen till the hot weather set in.

The fact that the dangerous season at Grosseto only lasts three months is important for the following reason: Researches so far have shown that outside the human body the malaria parasite which attacks human beings is only found in the mosquito. Parasites found in the blood of various animals can be distinguished from the human parasite. Each year's new mosquitos must get their supply of parasites from human beings who were infected in some previous year. These persons form a bridge from one year's fever season to another. If these people were isolated the fever would gradually die out in any given district. It is impossible to isolate them, but the Commission is of opinion that suitable treatment with quinine during the eight or nine "safe" months would render them incapable of infecting mosquitos and through the mosquitos their neighbours. In this connection it is interesting to observe that a localised outbreak of malaria, for example, at an inn, more than once dated from the arrival of a malarious person.

Most species of mosquito that occur elsewhere in Italy are found in the Tuscan marshes, no species peculiar to the place were discovered.

To be bitten by mosquitos in the daytime at Grosseto was quite exceptional, and the inhabitants hardly ever sleep in the open air, therefore the infection as a rule takes place at night and inside the houses.

In the houses only four species were regularly found: *Culex pipiens*, *Anopheles maculipennis*, *Culex nemorosus*, a "phlebotomist" species. The Commission is of opinion that the two latter have probably nothing to do with the propagation of the disease—the "phlebotomist" because it was never found to contain any parasites, and the *C. nemorosus* because it practically disappears with the advent of the hot weather. The

[1] *Deut. med. Woch.*, September 14th, 1899.

C. pipiens was almost invariably present in malarious houses. The *Anopheles* was absent so often that the Commissioners were unable to agree with Ross and Grassi in supposing that the *Anopheles* alone was responsible for malarial infection. At Grasseto both species were certainly implicated.

The fact that these mosquitos are present but harmless during the rest of the year is explained by the observations made on the proteosoma—namely, that the parasite requires a certain degree of warmth for its development. The sudden outbreak of malaria occurs three weeks after the temperature has risen to 27° C. (80.6° F.). The parasite takes eight or ten days to develop in the mosquito, and the disease has an incubation period of ten days after inoculation, thus about three weeks after the temperature has reached the right height the disease becomes apparent. That heat has a direct effect on the parasite is shown by the fact that the sickle-shaped bodies found in the poison glands of the mosquito only make their way there in hot weather. The Commission will probably proceed shortly to Java.

THE PLAGUE.

THE BACTERIOLOGICAL DIAGNOSIS OF PLAGUE.

By C. Balfour Stewart, M.A., M.B.Camb.,
Thompson-Yates Laboratories, University College, Liverpool; late attached to Plague Research Laboratory, Bombay.

The following methods are those adopted at the Plague Research Laboratory for diagnosing plague in man or animals, and for testing a plague culture. Naturally, in Bombay we had to do with recent cultures, and the following remarks apply to such. A plague culture grown for a long time on artificial media does not seem to give the same results; at any rate, a culture of plague which had been kept for a long time in a laboratory and which was given me to examine did not grow typically in broth.

Media.

Only two kinds of media are used—agar and broth; it is found impossible to work with gelatine on account of the high temperature. Ordinary agar slant tubes are allowed to dry. Should they be required for use soon after they are made it is best to place them for a few days in a drying bottle, with quicklime at the bottom, otherwise they may be dried by leaving them on their sides in a dark room for a few weeks. If plate cultures are made it is better to prepare the plate, and let it dry and make a smear culture.

Broth.

A special peptone solution and infusion of meat made out of goat's flesh is used on account of native religious prejudice against beef and commercial peptone, but ordinary broth made of beef infusion *plus* 1 per cent. peptone *plus* 0.5 per cent. salt, does just as well, or better.

The broth need not be neutralised unless very acid. I have often found the plague bacillus grow better in broth made without any addition of alkali, the reaction to blue litmus paper being a slight tinge of red. As such broth generally gives a precipitate after sterilisation and requires to be filtered and sterilised again, it is better for practical purposes to render the broth slightly alkaline, the less the better, and not more than is given by 0.2 gram per cent. of caustic soda added to the broth after being made neutral. About 100 c.cm. should be put into globular flasks of about 200 c.cm. capacity, and sterilised at a slightly lower temperature than that at which the broth was originally heated; if this is done, no further precipitate will come down.

Source of the Plague Microbe.

The plague microbe is found in the blood shortly before a fatal termination of a case of plague, so the specimen should be taken shortly before or soon after death.

The sputum of a case of pulmonary plague contains the bacilli. If the bacillus is to be sought for in the bubo, it is better to make a small incision in the skin, and push a small sterilised glass pipette into the gland, and suck up a drop or two of the juice. This should be done before suppuration has commenced.

Temperature of Incubation.

In Bombay it is found better not to use an incubator. The microbe grows best at the ordinary room temperature. By placing a large number of tubes to incubate under varying conditions, I found the best growth on those incubated at 74° F. in a cupboard. In this country an incubator would be required.

Growth on Agar.

The colonies appear in 24 to 48 hours. If numerous, they appear to the naked eye as small round points, colourless and translucent. Under Zeiss, Obj. A they are translucent with slightly greenish tinge, granular, and have slightly ragged edges.

If the colonies are scanty the individual ones may grow larger, the growth takes place in successive concentric circles round the original colony which appears heaped up in the centre and is more the colour of mother-of-pearl as it grows older.

A plague colony slips about on the surface of the agar when touched with a platinum wire.

If a dried agar slant tube is inseminated by introducing 0.1 to 0.2 c.cm. of a broth culture by means of a long thin glass pipette, and if the culture is smeared evenly over the surface with a thin glass rod or with the end of the pipette (care being taken not to dig into the agar), the so-called "ground-glass appearance" is seen after one to two days' incubation. The layer of growth should be viewed from underneath through the substance of the agar with the light coming from opposite, the eye being almost level with the slanting surface of the agar tube held about a foot off. The layer of growth looks like bright ground glass or like the back of a looking glass. The agar must be dry so that it will absorb the broth leaving the bacilli on the surface. If there is any broth not absorbed or any condensation water present the growth in contact with the liquid is smeary and somewhat milky. After inseminating the tubes it is well to leave them on their sides for a few minutes and then incubate them in the upright position. In examining them care should be taken not to allow any liquid that may be at the bottom of the tubes to flow over the surface of the growth.

This "ground-glass" appearance was first shown by Haffkine. It is a very useful method of testing the purity of a culture known to be plague, because a strange colony is generally detected at a glance. Some microbes, proteus for example, will grow in amongst the plague, when the film will no longer have a typical "ground-glass" appearance, but will appear somewhat slimy.

Neither is this "ground glass" appearance peculiar to the plague microbe alone, for I succeeded in separating a spore-forming micro-organism from the air that showed the "ground-glass" appearance after twenty-four hours' growth, but the growth became opaque after forty-eight hours' incubation coincident with the formation of spores.

Broth.

Haffkine considers the stalactitic growth of plague in broth to be characteristic of the microbe. He puts a drop or two of cocoa-nut oil or ghee (native clarified butter) in the flasks before they are sterilised, the oil globules form a thin broken film on the surface of the broth. After inoculation the flask must be incubated on a firm shelf or table. In three to six days numerous thin threads of growth are seen hanging down from the surface into the otherwise clear broth. If the flask is gently shaken, the stalactites fall down to the bottom like a fall of snow, after a time the broth becomes clear again, and in a day or two another lot of stalactites will be found hanging from the surface.

It is most important to keep the flasks still, for the slightest movement or vibration is sufficient to cause the stalactites to drop. A shelf is most convenient to rest the flasks on, because the stalactites are best seen by placing a small candle end lighted behind the flask, and looking through it. If an incubator is used, the flask should be placed on the front of the shelf so as to allow room for the light behind, and the door should be opened very gently, an incubator would have to be kept specially for the purpose. The film of oil probably acts merely as a *point d'appui*, it is by no means necessary, but it hastens the formation of stalactites.

In making broth cultivations the writer always inseminated the flasks by means of a thin drawn out glass rod long enough to project above the mouth of the flask, one end is held in the

fingers, and the rod passed seven times slowly through the flame. The other sterilised end is drawn over the culture, the rod is then passed into the flask between the cotton wool plug and the glass till the end touches the bottom, the unsterilised part of the rod projecting above the plug. If the flask is observed day by day another characteristic phenomenon may be seen: the microbe growth creeps up the glass rod till it reaches the surface, and then gradually spreads out till the surface of the broth is covered with numbers of small round colonies which grow down into the substance of the broth as "stalactites." A few whitish colonies may be seen growing on the bottom of the flask and up the sides; the broth itself remains perfectly clear.

This curious form of growth on the surface of the glass seems to be characteristic of the plague microbe; it proves a useful test because some idea can be formed before the "stalactites" have had time to grow. If the microbe is found to be growing in this way and if the broth itself remains clear, so far as the writer's experience goes it has always turned out to be plague and shows a "stalactitic" growth in a few days more. No fat or oil was used in these cultivations.

Microscopic Examination.

The plague microbe stains readily with aniline dyes, but not by Gram's method. The bipolar staining in stained specimens when the ends are found to be deeper stained than the centre is by no means a constant phenomenon and cannot be relied on for diagnosis. Mr. Watkins-Pitchford[1] considers it due to a greater collection or condensation of the protoplasm in these regions; he notes that the spots are readily visible in the living and unstained specimens, so they cannot be due to staining. The detection of the spots he considers to be a most valuable aid to the rapid identification of the germ. Dr. E. L. Marsh drew my attention to the fact that plague microbes suspended in water dry as a bluish film on a microscope slide; if he does not get this he considers it unnecessary to go on with the staining.

The bacillus is polymorphic; it is sometimes seen as a very short bacillus, almost like a coccus or diplococcus, at other times as a short stumpy bacillus with rounded ends. Very often it is found in pairs as a diplobacillus, and sometimes in distinct short chains: I have found this latter form chiefly in broth especially in the unneutralised broth.

Appointments for Plague Duty.

The India Office has now obtained the full number of twenty medical men and thirty nurses required for special plague duty. All of them have already left for India. The doctors appointed are Harry Cowper Patrick, M.D., C.M.Glasg., who was on plague duty in Bombay between 1898 and 1899, and was invalided home for enteric fever; Charles Thomas Costello, M.B., B.Sc.Dub., who served on plague duty in Madras last year; William Morrison, M.D.Edin., B.Sc. (Natural Science and Public Health), Edinburgh, who has served as medical officer in China; James William Otto van Millingen, M.D., C.M.Glasg., who served for two months on plague duty at Alexandria; Reginald A. Farrar, M.D., B.Ch., M.B.Oxon., M.R.C.S.Eng., L.R.C.P., D.P.H.Camb.; Alexander Samuel Faulkner, F.R.C.S.Edin., M.R.C.S.Eng., M.R.C.P., L.M.I., a retired surgeon-major of the Indian Medical Service; Edward Lewis Hunt, M.R.C.S., L.R.C.P., who served on plague duty in Bombay 1897 98; Henry William Beach, M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Camb., who served two years plague duty in 1898-99; John Hackett Walsh, L.R.C.P., L.R.C.S.I.; John Hanna Murray, M.R.C.S.Eng., L.R.C.P. Lond., M.B.Lond., D.P.H., formerly medical officer at the Isolation Hospital, Nottingham; William Samuel Jagoe Shaw, M.B., B.Ch., B.A.C.Univ.Irel., formerly assistant medical officer to the Stafford County Asylum; James Harry Horton, M.R.C.S., L.R.C.P.Lond., Durham prizeman at Guy's in 1881; Cuthbert Christy, M.B., C.M.Edin., who served as senior medical officer in African Field Force, Nigeria; John Edward Sandilands, M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., formerly senior house-surgeon at the Metropolitan Hospital; George Taylor, M.D.Aber., B.Sc.Edin., who took the public health medal at Edinburgh in his year; Harry Coghill, M.R.C.S.Eng., F.R.C.P Lond.; Edward Head Moore, L.R.C.S. Edin., L.S.A.Lond., medical officer Falmouth and surgeon-captain in the Army Medical Reserve; Percy Targett Adams, L.S.A., M.R.C.S., D.P.H.Eng., *pro tem.* resident medical officer to the General Post Office, London; Mark O'Brien, L.R.C.P., L.R.C.S.Edin., L F.P.S.Glasg., who was this year on the West London Hospital course; and Alexander Macbeth Elliott, M.B., C.M.Edin.

[1] *Report on Antiseptics*, Bombay, April 22nd, 1898.

The Destruction of Rats.

This country is to be congratulated upon the unceasing efforts of the sanitary authorities to place our ports and coast towns in a position to defy any serious invasion of plague.

Amongst other precautions observed, it has been repeatedly urged that rats, being extremely liable to become infected by plague virus, and hence the means of carrying the disease from place to place, constantly spreading fresh infection, should be destroyed when and wherever practicable.

Great stress has been laid on this point by the Port Medical Officer of Health for Manchester, Dr. Crocker; and when the enormous amount of shipping in the port over which he has charge is taken into consideration, there is every reason to pay due attention to his advice.

Dr. Wright Mason, the Port Medical Officer of Health to the Hull and Goole Sanitary Authority, also remarks, that not only should rats be destroyed on the ships which come from an infected port, but in the dock warehouses as well.

A letter has lately appeared in the *Times*, in which the writer records his "infinite amusement" at the crusade inaugurated against these vermin. At the same time, he observes that there cannot be any doubt as to their susceptibilities to infection! "He invariably found that they acted in India, so to speak, like a barometer, as they were always the signal of coming danger, and gave people time to put their homes in order" (*sic*). That is to say, on the appearance of dead rats the inhabitants moved out of their air tight and insanitary hovels into the purer air of the country; a very wise proceeding on their part, we allow, and one that most certainly saved many lives.

That rats do cause this disease is absolutely certain, and has been proved over and over again, not only in India, but in China; therefore, why not destroy them as being the means of creating further dangerous infection? The most effective auxiliaries we have against plague are fresh air, sunshine, and cleanliness, and these are precisely the things most wanting in an Eastern native quarter. At the same time, it is always advisable to augment these natural aids by taking steps to destroy any outside and preventable cause that might occur.

It seems a somewhat mistaken policy, when so many precautions are being taken on every side for the public safety, to minimise the risk and import of what might be the production of a considerable source of danger. It must further be borne in mind that the greatest vigilance must be exercised, not only in the present year, but most probably for the next three or four years to come.

We have not received sufficiently trustworthy information concerning the sickness in Russia, but there is very little doubt it is of the pneumonic or most virulent type of plague. There is small hope, then, if it obtains a firm hold in Russia, a country where sanitation is an almost unknown quantity, it will not make its way (as happened in the last cholera epidemic) to the Northern and North-Western ports of Europe, where only the greatest watchfulness and care will prevent it from making an appearance, if only in a sporadic form, on our shores.

Prevalence of the Disease.

Portugal.

Oporto.—An occasional case of plague continues to occur in Oporto. One case of plague occurred on each of the following days, September 9th, 11th, 12th, and 14th. On September 16th 3 suspected cases were examined at the plague hospital. The inhabitants of Oporto continue their protest against the plague measures adopted by the Government, and stones are thrown at men employed in carrying the bodies of plague victims to the *post mortem* room. The cordon regulations are being enforced with some rigour, but it is believed that it will be removed, and observation stations on the railways and main thoroughfares leading to the city instituted. A decree has indeed been signed allowing persons to leave Oporto after a medical inspection and the disinfection of their baggage; so sanitary enthusiasts recommend the withdrawal of the filthy bank notes in circulation, owing to the danger of their carrying infection. As paper money is used in Portugal for minute sums of money their number is enormous,

and the stricture recommended has some scientific foundation for its adoption.

We have no information of any other town in Portugal or Spain being infected by plague.

EGYPT.

Alexandria.—No fresh case of plague has occurred in Alexandria since September 2nd. The sanitary authorities in Egypt are to be congratulated upon the abatement of the disease, and we hope that the vigilance and wise sanitary measures which have marked their proceedings during the past summer may be in no way relaxed during the next twelve months.

INDIA.

Poona.—The plague outbreak seems to have suddenly subsided. Last week we reported over 100 new cases and deaths daily, but on September 15th we learnt by telegraph that the new cases were *nil*. Such a drop in an epidemic of plague is unknown, and it shows how much has to be learned in regard to the epidemiology of the disease. The rumour abroad in regard to the inadequacy of hospital accommodation, the paucity of doctors and nurses, and the general chaos described by certain local papers as obtaining at Poona, we are able on the best authority (Major Read, R.A.M.C.) to deny. Every European is working at high pressure, but the patients, so far from being neglected, are carefully attended to in every way. The enormity of the work may be understood when the number of plague patients is considered. Between August 1st and August 16th no fewer than 1,085 cases were admitted to the plague hospitals. Of these, 154 were discharged cured, 661 died, and the remainder continued under treatment. In the districts around Poona, however, help is badly wanted.

HONG KONG.

On September 11th the Colonial Office received telegraphic information that 13 cases of plague had occurred in Hong Kong, and 12 deaths from the disease during the previous week. Since then a slight increase in the numbers has been reported.

MAURITIUS.

For the week ending September 15th 59 cases of plague and 39 deaths are reported from Mauritius.

MADAGASCAR.

A few cases of plague are reported from Tamatave, and quarantine measures have been adopted.

PORTUGUESE EAST AFRICA.

From Lourenco Marques a telegram dated September 18th announces that at Magude suspicious cases of illness, believed to be plague, have occurred. The proximity of Lourenço Marques to Madagascar, and the landing of natives of Jullim at that port from Goa and elsewhere, cause this report to be viewed with considerable anxiety. Moreover, with the possibility of war breaking out in the Transvaal, and the proximity of a possible plague centre so near the seat of contemplated operations, it behoves the British authorities to be specially watchful of the spread of plague in this district.

PARAGUAY.

We feel bound to discredit the report, until further corroborated, that plague has attacked persons in the capital of Paraguay. Ascençion is 600 miles from the sea coast, and as no plague exists anywhere else in the Western Hemisphere, it seems impossible that this inland country could have been infected by plague.

THE PREVENTION OF TUBERCULOSIS.

LEICESTER.

As the outcome of the large meeting held in Leicester on March 22nd, an influential executive committee has been formed, with Sir Thomas Wright as chairman. The committee has drawn up a series of suggestions to be inserted into contracts made for the supply of milk. These suggestions closely follow the findings of the Royal Commission on Tuberculosis. Besides this, the committee is making arrangements for lectures to be delivered in different parts of the county on the prevention of tuberculosis. In Leicester, Melton Mowbray, and Market Harborough, addresses have already been given, and the interest taken in them leads the committee to hope that considerable benefit will arise therefrom. The desirability of erecting sanatoria is a matter that is receiving careful consideration. The suggestions for a form of contract to ensure the supply of "safe" milk are as follows:

(1) The contractor agrees that the milk shall be obtained only from cows guaranteed by a qualified veterinary surgeon to be free from disease of the udder. (2) The contractor guarantees to furnish monthly reports from a qualified veterinary surgeon that the cows remain free from disease of the udder, and are kept under proper sanitary conditions. (3) If the contractor continues to keep a cow after it has been reported to be suffering from disease of the udder, it shall be held to be *primâ-facie* evidence that the milk from it is used for the purpose of supplying milk under this contract. (4) The contractor undertakes that any person suffering from or who has recently been in personal contact with a person suffering from any dangerous infectious disease within the meaning of the Notification Acts, or who is himself suffering from consumption, shall not take part in any dairy operations. (5) The contractor agrees and guarantees that the milk supplied under this contract shall in all cases contain not less than 3·2 per cent. of fat as ascertained by analysis.

WITHERNSEA.

The sixth annual garden party in connection with the Hull and East Riding Convalescent Home was held at Withernsea on July 29th, Sir James Reckitt, Bart., in the chair. Among those present were Sir Robert M. Craven, F.R.C.S., Dr. C. A. Lee, Dr. G. F. Elliott, Dr. Arthur E. Sproulle, Dr. Hartley, Mr. J. Hutchinson, Dr. Sheldon, and Dr. Howlett. Sir James Reckitt made some remarks on the recent erection of two experimental tents for the treatment of phthisis. He said they had nearly a dozen patients under treatment, and they were doing well as a whole. The Mayor of Hull (Mr. W. Gelder) said he trusted that the new venture in the treatment of consumption would prove of such value as to become a permanent annexe of the institution. The report was carried. Sir R. M. Craven said he took considerable interest in the treatment of consumption by pure air and good food, but he should like to see the people get more pure air and good food in their youth so as to prevent tuberculosis.

COUNTY ASYLUM, WHITTINGHAM.

An interesting report of the results of the tuberculin test in connection with tuberculosis in the milking cows recently issued by Dr. Frank Perceval, Medical Superintendent of the County Asylum, Whittingham, Lancashire, has been sent to us. From it we learn that owing to an average of 84 per cent. of the cows at the farm of this asylum being affected with tuberculosis, and taking into consideration the impossibility of diagnosing the disease with sufficient certainty by ordinary methods, it was decided in August, 1897, to use the tuberculin test, and to separate those not reacting from those reacting, the latter to be milked as usual and fattened off as soon as possible. At a later stage it was resolved that the maximum period reacters were to be kept should be six months. It was also arranged that a thorough inspection of all cows by a veterinary surgeon should take place monthly. The number of cows tested was 270 (shorthorns purchased in various parts of Lancashire, Yorkshire, and Cumberland); of these 180 reacted, 85 did not react, and 5 were doubtful. Where a reaction occurred tuberculous disease was actually found in 175 out of 180 cases, or 97.2 per cent. The 85 cows that did not react may be divided into four groups. The first contains 36 cases, in none of which was any trace of disease found. The second contains 5 cases; all of these suffered from acute general tuberculosis. The third contains 8 cases, in each of which the amount of disease was very small and appeared to be inert, what we should call arrested or "cured" in the human subject. No bacilli could be found on microscopical examination, but no inoculation tests were made. The fourth group contains 34 cases. In each of these the lesions were of recent origin and of small extent, being in many instances mere points in the bronchial or mesenteric gland. Dr. Perceval is inclined to think in the large majority of the above instances the disease was contracted after injection. He says: "From these results it may be concluded that the tuberculin test is a valuable aid in checking the spread of tuberculous disease in cows, inasmuch that it enables a large proportion of the diseased beasts—namely, those that react—to be isolated, and, further, that this proportion will probably include most of those suffering from the complaint in an advanced form. I do not consider the negative evidence afforded by the test to be reliable, except possibly where elaborate measures are taken, such as are not likely to obtain under ordinary circumstances—that is to say, that cows which do not react cannot safely be considered free from the disease; but it appears that it may be expected that the lesions in a beast which has not reacted will in most cases be found to be of slight extent. As the spread of infection in the herd is chiefly due to animals in an advanced condition of the disease, it will be seen that if the opinion is correct that amongst the reacters will be found practically all the bad cases, the usefulness of the test is greatly enhanced. In considering its value we must not forget that it is an aid to the checking or elimination of the disease and not a complete remedy in itself, and that it does not lessen the necessity of keeping the animals under healthy conditions, the most important being a proper supply of pure air. So long as they are expected to do with as little as or less than a human being requires, so long will consumption be rife among them. The circulatory and respiratory organs in the cow are the same as in man, but the former being a larger animal requires more air, just as a full-grown man requires more than a child. This simple fact is generally lost sight of, and I have met with people who seemed to view the

idea that there could be so close an analogy between a man and a cow as little short of impious."

SPAIN.

A league against tuberculosis is being organised in Spain. What it is hoped will be the nucleus of a national association was recently formed at a largely attended meeting of the members of the Medical Institute of Valencia convened for the purpose by Dr. Moliner, Professor of Pathology in the Medical Faculty of the University of that city. The league in its main lines is organised on the model of our own National Association for the Prevention of Consumption and other Forms of Tuberculosis.

ARGENTINE REPUBLIC.

On the initiative of Dr. Samuel Gache a league against tuberculosis was on July 7th founded in the Argentine Republic, where consumption claims 8,000 victims each year.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at 429, Strand (corner of Agar Street), London, on Wednesday, the 11th day of October next, at 2 o'clock in the afternoon.

September, 1899. FRANCIS FOWKE, *General Secretary.*

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

EAST ANGLIAN BRANCH.—The autumnal meeting of this Branch will be held at the Orwell Hotel, Felixstowe, on Thursday, September 28th: President, E. L. Fenn, M.D. Programme of Proceedings:—11.30 A.M. Meeting of the Council of the Branch. 12 NOON. Meeting of the Branch. Agenda: The General Secretary of the Branch will make a short statement relative to the arrangements necessary for the meeting of the British Medical Association in Ipswich in 1900, and will move the following resolutions: "*a*. That a General Committee be formed to arrange for the reception of the British Medical Association, and that such Committee consist of all contributors to the guarantee fund. (*b*) That the usual spring and autumnal meetings of the East Anglian Branch be omitted in the year 1900, and that the annual meeting of the Branch be held in May instead of June." The following contributions have been promised: Mrs. Garrett-Anderson, M.D., London: Cases of Diabetes. Miss Ethel Vaughan, M.B., B.S., London: A Series of Pathological Specimens prepared by a new process. W. A. Elliston, M.D., Ipswich (President-elect of the British Medical Association): Notes of a Case of Multiple Enchondroma. F. A. Brooks, M.D., Felixstowe: Case of Tetanus treated with Antitetanic Serum. A. Dunn Turner, M.B., Felixstowe: Paper on Raynaud's Disease. T. H. Morse, F.R.C.S., Norwich: Paper on the Advisability of the more frequent use of local Anæsthesia in certain cases of Abdominal Surgery. The meeting will adjourn at 1.30 P.M. for luncheon, and resume at 2.30 P.M. Luncheon (to which ladies are invited) will be provided at the Orwell Hotel, at a charge of 3s. for each person. Members intending to be present at the luncheon should fill up the prescribed form and return it to Dr. Barnes not later than September 23rd. The members of the East Anglian Branch, resident in Felixstowe, kindly invite the members present at the meeting and ladies accompanying them to afternoon tea in the Ranelagh Gardens at 4 P.M.—EDGAR G. BARNES, M.D., Eye; MICHAEL BEVERLEY, M.D., Norwich; BENJAMIN H. NICHOLSON, M.B., Colchester, Honorary Secretaries.

BORDER COUNTIES BRANCH.—The autumn meeting of this Branch will be held in the Keswick Hotel, Keswick, on Friday, September 29th, at 4.15 P.M., under the presidency of Dr. R. Hamilton, Hawick. A meeting of the Council will be held at 4 P.M. Order of Business: Minutes of last meeting. Election of new member. The President will introduce a discussion on Hospital Abuse. Dr. Knight (Keswick) will read Notes of a Fatal Case of Leukæmia in a boy of 13.—W. F. FARQUHARSON, Garlands, Carlisle, Honorary Secretary.

BORDER COUNTIES BRANCH: COUNTIES OF ROXBURGH, BERWICK, SELKIRK, AND PEEBLES DISTRICT.—This District will meet in the Station Hotel, Newtown, St. Boswells, on Friday, October 6th, at 3.30 P.M. The Chairman, Dr. Blair, of Jedburgh, will make some remarks introductory to his second year of office. Dr. Menzies, of Galashiels, will, as arranged, open a discussion on the Etiology, Diagnosis, and Treatment of Typhoid Fever. Members who have cases to show, and all intending to be present, are requested to communicate with the Honorary Secretary, Dr. W. HALL CALVERT, The Laurels, Melrose.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the East Sussex Hospital, Hastings, on Thursday, October 5th, at 5 P.M.; Dr. Allfrey in the chair. The following communications have been promised: Dr. Allfrey: On Diphtheria and Membranous Croup. Mr. W. G. Earle: On some Fresh Details in the Disposition of the Deep Cervical Fascia. Dr. Batterham: (1) Intussusception in an Infant: Laparotomy: Recovery: (2) A Case of Appendicitis: Concretion and Tumour found in Appendix. Dinner at the Grand Hotel at 7 P.M.; charge 5s., exclusive of wine.—J. W. BATTERHAM, M.B., Honorary District Secretary, Grand Parade, St. Leonards.

SOUTH-EASTERN BRANCH: NORTH KENT DISTRICT.—The October meeting of this District will be held in the Bell Hotel, Bromley, on Thursday, October 5th, at 3.45 P.M., Dr. Ilott in the chair. Dinner at 6.45 P.M.; 7s., exclusive of wines. Members who intend dining are requested to inform the Honorary Secretary, by postcard, not later than Tuesday, October 3rd. The following papers have been promised: Summer Diarrhœa and its Treatment, by Dr. G. Newton Pitt (Guy's Hospital), and the Conservative Treatment of Pelvic Inflammation in Women, by Alban G. Doran, F.R.C.S. (Samaritan Hospital). A demonstration of surgical instruments and drugs will be given before and after the meeting. Members wishing to show cases of interest are requested to communicate with the Honorary Secretary, A. TENNYSON SMITH, M.D., The Birches, Orpington, Kent.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 12th, at 4 P.M., J. G. Ogle, M.D., of Reigate, in the chair. Dinner at 6 P.M.; charge, 7s., exclusive of wine. Agenda: 1. Minutes of Croydon meeting. 2. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., have been promised: Dr. F. R. Walters: The Modern Treatment of Phthisis. Mr. W. Bruce Clarke: Exploration of the Kidney and Ureter as a Conservative Measure. Dr. W. S. A. Griffith: The Value of the Douche in Gynæcology and after Delivery. Messrs. Down Bros. will exhibit Surgical Instruments, etc. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements and promote the success of the meeting.—HENRY J. PRANGLEY, Tudor House, Anerley, Honorary Secretary.

NORTH WALES BRANCH.—The autumnal intermediate meeting will be held at Llanrwst, in the last week of September, probably 28th or 29th. Applications for membership should be made forthwith, and it is hoped that every member will exert himself to get eligible medical men to join the Branch.—W. JONES-MORRIS, Is-y-Coed, Portmadoc; H. JONES ROBERTS, Gwyddfor, Pen-y-groes, Honorary Secretaries.

SOUTH MIDLAND BRANCH.—The autumnal meeting of this Branch will be held at Leighton Buzzard on Thursday, October 12th, 1899. Gentlemen desirous of bring forward any communications, showing specimens, etc. at the meeting, and any others wishing to become members of the Branch, are requested to communicate without delay with the undersigned.—CHARLES J. EVANS, Hon. Secretary.

QUININE IN THE UNITED STATES ARMY.—According to the New York *Medical News*, more than 125 million grains of quinine have been taken by United States soldiers during the past year. It is said that some of the military patients in the army hospitals in Cuba and Puerto Rico took as much as 300 grs. a week during several weeks. Hardly any of those who were in the service in the West India Islands failed to take some quinine during their stay. A military correspondent writing from Puerto Rico recently said that practically none of the soldiers had been entirely exempt from malarial disturbances on that island, and that while the malaria was usually not severe it was very obstinate.

SPECIAL CORRESPONDENCE.

MELBOURNE.

Registration of Female Inmates of Hospitals.—Deaths under Anæsthetics.—The Medical Curriculum at Melbourne.—The Pseudo-Tuberculosis of Sheep.—General News.

A MATTER of considerable interest has been disturbing the Committee of Management of the Women's Hospital and various public bodies as well as the press of this Colony. The Committee had determined to revive an old regulation which had apparently been held in abeyance and which was certainly not known generally to be in force. They gave notice that all applicants for admission were to be asked if they were married or single, and if married were to produce their marriage lines. Orders were given that the cards over the beds should in the case of married women bear the title of "Mrs." The general public as represented by the municipalities which largely support the institution have expressed their disapproval of this method of registration by threatening the withholding of their subsidies unless the Committee rescind this by-law. Already instances have been discovered where the talismanic marriage lines have been hired for the occasion. It is not at all unlikely that, owing to the publicity given to the present mode of procedure in the admission of lying-in cases, infanticide will become more general, especially when we consider the nervous instability of a highly sensitive woman anxious to hide her shame and who would not care to be subjected to further mortification within the walls of a public charity. Running the gauntlet of the Committee composed of ladies is understood in itself to be an ordeal to which very few care to submit, so that taking it all in all, the work of the abortionist is not likely to become less, and it is doubtful if even the interests of morality are benefited by the ukase of the Committee. On the other hand, the Committee declare that women whose husbands, owing to vicissitudes, are unable to provide proper attendance at their own homes claim the right of asserting their prefix; that no difference is made in treatment; that the object of distinction is for a purely statistical purpose; that it enables the Committee to trace cases of imposition and to ensure some subscription from husbands; that the by-law is in the interest of the single woman, as solicitude is always shown for her welfare and that of the child, and that, if she has no home to go to, it enables the Committee to obtain entrance for the mother to some institution where she and her child may be provided for.

Dr. C. H. Mollison's connection with the Melbourne Hospital as honorary pathologist has enabled him to make the autopsies on the bodies of those who have died during the administration of an anæsthetic. In many of the cases he found marked engorgement of the lungs, congestion of the trachea and bronchial tubes, and a fluid condition of the blood—the principal signs of asphyxia. The causes which brought about the asphyxia he believes to be due to carelessness or want of knowledge on the part of the administrator—that is, the tongue being allowed to fall back and the trachea closed by means of the epiglottis being carried over the entrance, and further by an overdose of chloroform being drawn into the lungs by a gasping respiration. On this would follow the failure of a heart probably already enfeebled by structural changes and depressed by the chloroform vapour. In a case of pyopneumothorax the one lung was useless and the other was embarrassed by the sudden evacuation of fluid. Dr. Mollison advises that in such cases a general anæsthetic might be dispensed with, so that the patient could have the assistance of his voluntary muscles to supplement his diaphragm. He refuses to accept the theory of primary cardiac failure as the cause of death. The imminent danger is then usually recognised when restorative measures are too late. Dilated enfeebled hearts run greater risks, not directly on account of their heart, but because they are less likely to come round if the anæsthetist is not sufficiently careful.

Some very important alterations have been suggested by the Faculty of Medicine in the Melbourne University course. The Faculty finds that the working year is too short; it is overcrowded with systematic lectures, and that consequently there is not sufficient time for practical work, particularly in the clinical side. It is stated that as the result of the present curriculum the student develops into a scientist and not into a medical practitioner. The necessity to alter the curriculum has arisen through the action of the English Medical Council who, in 1891, found that the course then in existence was deficient in the matter of clinical work. So far the first year of the Melbourne University has been a scientific year, and now the faculty wished to add to it by making the students do some practical work. It is thought that the year was hard enough as it is. Biology and natural philosophy were both subjects of the year, and required elaborate work. The first year seemed as at present constructed a year of cram, weakening and deteriorating in effect the student's mental powers by overcrowding. Dr. John Williams opposes the recommendation of systematic lectures in the fifth year, as he fully agrees with the views expressed by the General Medical Council of Medical Education and Registration that the last year of the course should be devoted and limited to clinical and practical work. The whole matter of the recasting of the curriculum has been referred to a large committee of medical men, who will report on the subject to the Senate of the University. It is not improbable that a concession will be made by leaving the attendance on lectures during the last course optional with the student.

The very careful inspection of carcasses which is conducted by Government officials at the abattoirs has recently disclosed an affection in sheep with which we were not hitherto familiar. The disease, it appears, is of bacterial origin and associated with certain tracts of country, and seems to be making considerable headway in Australia. The contagium is derived from the soil and can only invade the animal when the skin is injured. So far the disease has not received much attention. Preisz describes it under the name of pseudo-tuberculosis. The disease is characterised by swellings, which vary much in size and which occur in the lymphatic glands; no other organs are attacked, and the tumours vary in size from that of a plum to that of an orange. On section at an early stage the nodules disclose a more or less tough fibrous capsule, enclosing a greater or less amount of thick viscous material. At a later stage the contents are firmer and more friable. The contents possess usually a distinct green colour, or shades of green, which is, however, not due to pyocyamine. The microbe that causes this disease develops with a white colour in agar and a light yellow in blood serum. The tumours sometimes calcify and the superficial swellings may burst and discharge their contents leaving scars, or cavities may be left with caseous linings. No class of sheep is exempt from this disease, which prevails mostly in lands of a marshy character. The micro-organisms enter the lymphatic vessels through breaches in the continuity of the skin. By culture and inoculation methods it is shown that the disease is caused by a short oval non-motile bacillus. The bacillus varies in length from about $\frac{1}{2500}$ inch to about $\frac{1}{800}$ inch. Guinea-pigs and rabbits are susceptible to inoculation, but dogs are not. Both guinea-pigs and rabbits develop abscesses in the lymphatic glandular system, in the liver, spleen, kidneys, and lungs. If large doses are inoculated they are quickly killed. Small doses kill in from 25 to 35 days. Sheep inoculated in the feet or groin or in the axilla become lame. Abscesses quickly form, the sheep refuse to eat, and quickly emaciate. The temperature may rise to 107° F. (their normal temperature is 104° F.). Fresh pus may be inoculated without a fatal result, but stale pus, which had been kept for two months in the freezing chamber, and had been allowed to thaw, produced death within seven days. In fowls and pigeons a disease much resembling this affection prevails naturally. It is not uncommon to find large caseous tumours in these birds. The micro-organism which causes the disease in birds differs from that which causes pseudo-tuberculosis in sheep. The method of invasion in sheep is through any wound, such as a scratch, during shearing, a burn, a grass seed wound, or foot-rot.

Mr. C. G. Godfrey, M.R.C.S., has been appointed to the position of assistant to the Government medical officer, Dr. Shields. This is a new position, and the salary may reach £500.

It is proposed to transform the Perth prison into a State reformatory for inebriates.

CORRESPONDENCE.

SECRET COMMISSIONS.

Sir,—In your leading article on this subject of September 16th you say that I appear to have confused the Council of the British Medical Association with the General Medical Council, and you draw certain inferences from this blunder. In so suggesting you have entirely misapprehended what I wrote; and as I feel sure that you did so by inadvertence only, I ask you to publish these few words of explanation.

In the second paragraph of my letter I stated what the *General Medical Council* had done, and what they had not done, in reference to the case of Macdonald.

In the fourth paragraph I proceeded to inquire what was the state of knowledge of the *Council of the British Medical Association* at the time of passing the resolution set out by Dr. Thomson in his letter, that is, the resolution of that body addressed to the Chamber of Commerce, passed in this year, and when Dr. Saundby was chairman of the Council. In answering that question I say that the Council of the Association had before them the case of Macdonald, and I give the reason why in these words, "I say that they had this case before them because it was a notorious case, and because the letter of Dr. Saundby, who then presided over the Council, shows that it was in his recollection." I had therefore made it plain that I knew the difference between the two Councils, and that I referred to the case of Macdonald as before the Council of the Association as a matter not for disciplinary action but for their consideration before addressing the Chamber of Commerce.—I am, etc.,

Failand, Sept. 20th. Edw. Fry.

*** We, of course, accept unreservedly Sir Edward Fry's statement that he did not confuse the General Medical Council with the Council of the Association. But we venture to think that the very clearness of his apprehension of the distinction between these bodies makes it all the more surprising that he should have allowed himself to be betrayed into a looseness of expression which amounts to a positive inaccuracy of statement. When a trained lawyer speaks of a Council having a case "before it" he must be understood to mean that it had the facts officially brought to its notice, and had had the matter under consideration. The case of Macdonald, Son and Co., Limited, has never been before the Council in this sense, and we submit that Dr. Saundby's letter, published in the *Times* of September 15th, shows not, as Sir Edward Fry says, that the case was "in his recollection" at the time when the Council, under his presidency, passed the resolution calling on the Chamber of Commerce to substantiate its statements, but that the case was not in his mind until Sir Edward Fry recalled it to his memory.

MEDICAL ORGANISATION.

Sir,—We shall not advance medical reform by multiplying the number of conferences. In this place all efforts at progress are baulked, because we have too many societies and such a multitude of meetings that it is quite impossible to attend them all. I admire Dr. Crawshaw's good intentions; indeed it is most refreshing to find a young practitioner so eager to deliver our wretched profession from its immeasurable disabilities.

The members of the Guild are nearly all members of the British Medical Association, and I suggest that they do all they can to encourage the members of the Branches of the Association to attend the meetings regularly, take an active part in the work, ventilate their views, demand from their representatives on the Branch and Association Councils a record of their work, and further take an interest in the expenditure of the enormous wealth of the Association. In Lancashire and Cheshire alone the six councillors have "at their back" over a thousand practitioners; what weight they would have if energetically supported by the 200 members of the Guild! Further, let the Guild encourage its members to attend the annual meeting of the British Medical Association, and carefully scrutinise the financial report; in other words let the Guild push into more active motion the machinery already laid down, and for which purpose the profession finds the magnificent annual income of over £40,000.

The Guild has done splendid service locally, but I do trus it will not embark on this annual conference scheme, an undertake the work for which the British Medical Associatio exists, and is bound by its laws to do.—I am, etc.,

Old Trafford, Sept. 19th. Jas. Brassey Brierley.

Sir,—Under the above heading, in the British Medica Journal of September 16th, you say that the Medical Guil of Manchester is endeavouring to organise a scheme "to pr mote greater cohesion and better organisation amongst th general practitioners of the country, and generally to develo an *esprit de corps*." This is really too funny. The Provide Dispensary surgeons in Manchester take a leading part in th council of the Medical Guild. The provident dispensari have done enormous injury to the general practitioners, y those connected with them are endeavouring to promote "c hesion, organisation, and *esprit de corps*" amongst gener practitioners. Is one single word more necessary?—I am, et

Manchester, Sept. 19th. General Practitioner.

PHYSICAL TESTS FOR THE PUBLIC SERVICES.

Sir,—My experience as the father of a rejected Woolwi candidate may be of interest, and may act as a warning to a of your readers who contemplate the army as a career for the sons. Under the present absurd regulations, based on a utterly unscientific table of physical equivalents, the be advice to give all such is, Don't! My son passed forty-nin on the Woolwich list at the last examination in July. H went before the Medical Board in August, and, to my utt astonishment and intense mortification, was rejected on th ground of being under weight and slightly under chest girt although perfectly fit in all other respects. Now, this tab of physical equivalents is drawn up on the narrowest and mo rigidly inflexible lines. It is supposed to work automatical and no allowance is made for hereditary peculiarities and th departures from the mean as regards the details of weight an chest girth in relation to height and age that are seen in son long-lived and healthy families. In my son's case the fami history points to a weight below the average up to the age 25, with a slow, but continuous, development up to th period; and the stock is a hard, wiry, long-lived one, wh keep their health and vigour in every part of the world.

Then, again, the tables are so arranged, that a candida presenting himself on one particular day might pass th Medical Board, while three days later, if his birthday ha pened to intervene, he would be rejected, the standard weight and chest girth having taken an upward jump wi the nominal increase of age.

Rejection on totally insufficient grounds is bad enough, b why should the candidate not receive a commission as soo as he can satisfy the Medical Board without the ordeal of further competition in the literary examination? But, no the reply I receive from the War Office is that if he go before the Medical Board again he must submit himself on more to the literary test before doing so. This decision especially arbitrary and hard on a young fellow, when th severe physical strain of this test is considered, and that ve many candidates owe their rejection by the Medical Board this cause alone.

It cannot be a matter of debate that the present plan putting the literary test first is thoroughly unsatisfactory. A things are at present, the chance of a candidate's passing th Medical Board is in inverse proportion to his zeal an earnestness as a student, and this should not be. And, s things are at present, why should not an order of merit in th literary test excuse him from a repetition of that ordeal und any circumstances, and so give him a chance of passing th physical test after a few months' rest and suitable training Any attempt to touch upon the weak points in the table physical equivalents would unduly lengthen this lette Suffice it to say that it cries aloud for revision.

Your admirable leader in the British Medical Journa for September 2nd, and the letters of Dr. William Sykes an others will help to form the opinion of the profession on th important subject, and will, I trust, lead to the much-neede reforms. I am, etc.,

September 17th. J. B. C.

MIXTURE v. TABLET.

Sir,—There can be no doubt that we are "cutting our own throats" for the benefit of the wholesale chemists in prescribing "formula" tablets and other fixed preparations. That they are good things in themselves I do not doubt at all, but the same results can be obtained by the ordinary methods of prescribing without the objections mentioned by your correspondent. The cachet form is far superior to any compressed drug. It is tasteless and gives the retail chemist something more to do than his neighbour the grocer, who might just as well "dispense" such tablets and with no more special knowledge. I personally intend giving up prescribing them for the reason that I do not desire that either medical men or retail chemists should be exploited for the benefit of wholesale chemists, who do not scruple to appeal directly to the public whenever the right opportunity occurs. It is preposterous that our prescriptions should emanate, literally, from the wholesale chemist's laboratory. Why should we continue to fill these business-like firms' pockets while emptying our own? A medical man has as much right to consider his pecuniary interests as any other professional man. I sincerely trust that this subject will be taken up by others.—I am, etc.,

September 16th. Orthodox.

Sir,—It is gratifying to see "G. P.'s" letter appearing in the British Medical Journal of September 16th. I thoroughly agree with all he says. To my mind nothing has done so much to catered to the evil of self-medication amongst the public as the modern "tablet" system in pharmacy.

It is long since I have "ceased to patronise" the tablet firms for precisely the same reason as "G. P." points out, and I have no doubt that many other practitioners have done likewise.

How continually do we have to listen to patients while they relate how they had been ordered by their last physician to take "sulphur tablets," "sulphonal tablets," "cocaine tablets," "chlorate of potash tablets," "soda tablets," "pilocarpine tablets," etc. Truly it is bad enough to have to deal with one's own patient after he returns from the modern charity hospital and sends for you to "give an injection of morphine, one-third of a grain," while he probably directs you to refill his medicine bottle in which he "has been taking tincture of strophanthus, ten minims," etc.

Now it does not seem likely that we can succeed in impressing our hospital physicians and surgeons with the necessity for strictly observing the absolute use of technical terms when clinically teaching medical students, though why this custom should not invariably prevail I fail to understand; but surely every private practitioner ought to experience quite enough of these initiated patients to make him most careful to avoid doing anything personally towards increasing the number of such nuisances.

As to the "abuse" of the tablet, it would be well indeed if the sins of chemists were confined to that particular form, but we cannot fail to notice the very same evil tendency extending even within the limits of our *B. P.* preparations; as, for instance, when I ordered my last supply of tab. trinitrini I was disgusted to find, stamped on each tablet, the name and quantity of the contained drug. So, too, with the official trochisci, each lozenge was stamped with the names and quantities of the ingredients. I have also been supplied with capsules bearing in plain English the words, "nitrite of amyl, 3 minims." Needless to say I promptly returned these objectionable goods and forthwith changed my wholesale druggists. Every medical man should absolutely refuse to dispense medicine got up in this objectionable way, however "inconvenient" the process may be for the chemist.

It is with regret that one sees nowadays that even the ordinary *B.P.* preparations can scarcely be obtained without altering on the label the "dose" and further directions as to use, as the manufacturers may think necessary for the instruction of the physician in the course of his daily duties.

Are we a set of automatic slot machines in the hands of the present-day chemist—and whose advertisements we must display—that we may not be permitted to know our own professional work without being thus insultingly dictated to by these business firms?

Even in the very elementary portion of a doctor's training he is required to learn his official drugs, and certainly it ought to be quite sufficient for him when in practice to know that they are *B.P.* in order to make proper use of them. Yes, of course, this is enough for the doctor; but, then, it would be utterly insufficient for the grocer and the small shopkeeper in the country village, who are also customers of the wholesale druggist.

Verily, it is "high time that medical practitioners aroused themselves to the fact," and carefully selected the firms with whom they deal, instead of silently submitting to be overridden by the druggists whom they patronise.—I am, etc.,

September 18th. S. W. W.

Sir,—As a chemist, I would like humbly to endorse "G. P.'s" warning to medical practitioners anent the dangers of prescribing drugs in the compressed tablet form.

Being in business, I can easily see the evil arising from the custom; the quantity of these tablets sold in the ordinary manner, without prescriptions, is something enormous. And most of this has arisen from the prescribing of these tablets by medical practitioners.

No doubt it is very convenient to write "℞ Tab. so-and-so," but it is neither fair to himself nor to the dispensing chemist. The chemist qualifies himself for the purpose of being able to dispense prescriptions; but what is the use of doing so if all he has to do is to hand over a bottle of tablets? The patient soon finds out the name of tablets, because oftentimes in a prescription for these tablets no directions are given, and the chemist has perforce to leave the original label on the bottle.

I may say that lately one firm circularised chemists to the effect that they had ceased sending out their specialities in small bottles, and now send them in bulk only, thereby to try and lessen the evils mentioned by "G. P." in his letter.—I am, etc.,

September 18th. Pharmacist.

THE FREQUENCY OF SICK-ROOM INFECTION IN TYPHOID FEVER.

Sir,—I have read in the British Medical Journal Dr. Herbert Peck's views under the above heading. These accord so much with those I expressed long ago in the *Medical Times and Gazette*, that I venture to think that he and others of our fraternity may be interested in reading the same. Thirty years ago I was practising in the North of Hampshire when these cases occurred. Then, although it was clear that a deadly agent produced the disease, it was not known to be the "bacillus typhi abdominalis."

It has always been my first direction to nurses, relatives, and friends never to put their lips to the same drinking vessels used by the patients suffering from typhoid, and now that we are aware of the bacilli in this disease these injunctions should become imperative; also that all feeding vessels used by patients should be steeped in disinfectant fluid immediately after use. The gummy saliva exuded from feverish lips must hold bacilli in suspension ready to adhere to any drinking vessel, and thence to other lips that may incautiously use it. Nurses should be warned not to taste and sip the food from the same vessel as that used by the patient—a common practice with them. The fatality of the Binley nurses point to this want of care. The communion and other loving cups present a like danger as carriers in a similar way of bacilli, and should always be wiped with a napkin after use by each individual.—I am, etc.,

Bournemouth, Sept. 2nd. Thomas William Blake, M.D.

Letter I.—"Medical Times and Gazette," 1875, vol. i, p. 240.
In Sir William Jenner's interesting address to the Clinical Society, reported in your columns last week, he spoke of the importance of gleaning the history of outbreaks of typhoid fever when occurring in country districts, where, from the small area, solitary cases may be traced to their origin and probable cause. Acting upon the suggestion, I send you a brief report of an outbreak that occurred in my practice five years ago, in a small hamlet or country village called Binley, in Hampshire. An old woman, who had acted in the capacity of nurse at a case of typhoid fever at a village three miles from Binley (out of my district) was sent home stricken with the fever to Binley, where at the time there was "a clean bill of health." Two young ladies—sisters—visited the patient, being told that the fever was "not catching," taking milk and nourishment to the invalid. At the end of the week I was summoned to attend the eldest of the sisters, aged 20. Diarrhœa had set in suddenly, with abnormal temperature and febrile symptoms. I at once inquired into

the history of the illness of the old woman, who was not under my care, and found that she had suffered and died from the effects of typhoid. Her cottage was situated a considerable distance from the young ladies' abode. My patient's sister, aged 18, was the next to suffer, three days later. In both these cases the disease was in the severest form, attended with continually repeated diarrhœa and bloody evacuations. At the end of three weeks the issue was doubtful, but they ultimately recovered. They were kept in separate rooms. Their mother took her part (and too freely) in assisting the nurses; she took the disease at the end of the third week of the outbreak, and died within a few days.

Three nurses attended these patients "in turn": all of them took the disease, and one died. The household consisted of eight persons, namely, the mother (aged 60, a widow), the two daughters already mentioned, and a married daughter and her husband, both about 35, and their son, 10 years of age; also two young maidservants, besides outdoor servants, groom, etc., in the habit of drinking the ale and water used in the house. All the household used water from the same source, for drinking and other purposes. The married sister, her husband, their son, and the servants escaped the disease, although they were subjected to the same risks in the matter of eating and drinking; and only those who were exposed to the direct influence of the emanations from the sufferers contracted the disease in this instance. Every sanitary precaution was taken in the use of disinfectants and ventilation. Their dwelling was close to the rectory and surrounded by cottages (the village consisted of about thirty dwellings), but no other case occurred, and they have been free from typhoid fever from that time to this.

LETTER II.—"MEDICAL TIMES AND GAZETTE," 1875, vol. i, p. 324.

It appears to me that, while members of our profession are holding varied and hypothetical views as to the infection or non-infection of typhoid fever, the general public are not sufficiently put on their guard to have the benefit of any doubt on the subject.

The outbreak at Binley, in my practice, published in your journal a fortnight ago, convinced me of the error of maintaining the public opinion of the non-infection of typhoid fever by contaminated air. The prevailing notion that the fever poison must be conveyed into the system by some such vehicle as tainted food or water by the alimentary canal to produce the enteric attack, should not be considered by the public the only source of contracting this fearful disease.

The Binley cases occurred in the month of December, during frost and cold weather, when fresh air could not be freely admitted—as at other seasons—into the very small rooms by the windows for the purpose of diluting a fever-polluted atmosphere contained in a small space; egress of the latter by the doorways and chimneys was the only safeguard in the way of ventilation to be then safely procured. Disinfectants were freely used, bed curtains and carpets taken away, also excretions as soon as voided, the floors washed frequently with water containing Condy's fluid, and thorough cleanliness was strictly observed.

Judging from the outbreak of typhoid, which proved so fatal to the nurses, much danger exists in limited bedroom space, and in many middle-class dwellings and cottages the evil is apparent. On the other hand, my impression is that in spacious and lofty rooms, also in large hospital wards, the fever-poisoned air, being well diluted with pure atmosphere, proves to be comparatively harmless.

LUNACY LEGISLATION AS IT AFFECTS THE TEMPORARY CARE OF INCIPIENT CASES.

SIR,—As a former practitioner in lunacy who has had a long and varied experience in asylum practice, permit me to express concurrence in the opinion and suggestions of Drs. Savage, Manning, and Tuke pronounced in the discussion of the Section of Psychology at the recent annual meeting of the British Medical Association. It is, indeed, quite time the attention of the profession was called to the importance of the subject, and that legislation should be promptly invoked to prevent the treatment of mental disorders falling into the hands of unqualified and ignorant persons. When clerical papers contain advertisements from individuals willing to take charge of "mental cases," there is no doubt that many others equally unqualified assume the *rôle* of receiving and managing persons of weak minds. This is a state of things which, both on public and professional grounds, renders interference necessary. I think Dr. Tuke's suggestion that every house and medical man receiving a case of mental disease should be registered is very important, and Dr. Manning's warning that if this is neglected there is a distinct danger of falling back into the terrible system of the secret treatment of mental diseases, is one to be thoughtfully considered.

In Dr. Nicolson's admirable address he throws considerable weight on the importance of a practical knowledge of mental diseases to the general practitioner, but as this can be only obtained by devoting time to studying the subject practically while in charge of the inmates of an asylum, it is, I fear, unlikely to be realised, as it is almost impossible by a course of lectures and perfunctory visits to an asylum to gain the needful experience, and this knowledge must necessarily belong to those whose lives have been spent, for a longer or shorter period, in absolutely daily intercourse with the insane.

While admitting the value of Dr. Nicolson's remarks, and regretting the far too prevalent indifference to the subject among those qualifying for general practice, it will, I fear, continue a want not easily remedied. There are, in fact limited areas in medical science, and the complete study o mental disease requires a life's devotion to its manifol duties and complex varieties of form.—I am, etc.,

Bournemouth, Sept. 18th. J. HAWKES, M.D.

THE PERILS OF ARTIFICIAL TEETH.

SIR,—With respect to the article which recently appeare in the BRITISH MEDICAL JOURNAL under this heading, i might be of use to point out that the *x* rays are useless in th case of a vulcanite plate, as that substance is transparent t the rays. I should imagine that in this case the plate wa made of vulcanite, partly from the fact of it having becom broken and partly because the *x* rays failed to localise it. might mention that this "peril" is alarmingly on the in crease, most frequently occurring during sleep.—I am, etc.,

Harley Street, W., Sept. 13th. WM. RUSHTON.

EPILEPTIC INSANITY: AN UNPLEASANT EXPERIENCE.

SIR,—In my surgery, the other morning, I found a man be having himself so drunken-like that I was ordering him ou when he suddenly turned, threw his arms round me, and bor me beneath him backwards on to the form, where he held m so firmly that I had to call for assistance. Even then I coul only loosen myself from his clutches by dealing him a sever blow with the clenched fist under his left ear, when he relaxe his grip and dragged me across the floor, where I managed t escape from him. He then staggered backwards on to th form, where he sat in a semistupor as if he had just woke ou of a dream, and asked what was the matter, and what we ha been doing to him, betraying no consciousness of the scuffl in which he had been such an active participant. I afte wards visited him at home, and from his wife I learned tha he was a chronic epileptic, and had given her endless troubl He again denied all knowledge of the occurrence, apologise profusely for his unconscious offence, and I am perfectly sati fied of his *bona fides*. Apart from my exceptional share in th episode, the case is interesting from a medico-legal point view. It was evidently a case of unconscious cerebratio following upon a slight epileptoid seizure, and resulting in transient attack of epileptic insanity, during which he wa of course, irresponsible for his actions. And yet, during thos brief moments of moral irresponsibility, he had committed criminal offence for the consequences of which, no matte what they might have been, he could have been held liabl in the eyes of the law.—I am, etc.,

September 17th. DELTA.

TUBERCULOSIS IN CHILDHOOD.

SIR,—Travelling in the Scotch Highlands is not conducive to medical controversy, but having had the grave misfortun to be responsible for the "unwringing" of Dr. Donkin "withers," a few words are called for in reply to his letter i the BRITISH MEDICAL JOURNAL of September 9th.

1. As to the excess of pulmonary over abdominal tuberculos in children, we are fortunately agreed as to the facts, and discussion as to how far these facts are recognised is n likely to be profitable. If the teaching and writings of D Donkin and others have permeated further than I imagined, am rejoiced, but in my former letter I gave one conspicuou and very up-to-date example to the contrary. Recent literatu on the prevention of tuberculosis would I feel sure reve much to the same effect, and doubtless Dr. Donkin is awar that even since his "salad days" Professor Sims Woodhea has published statistics, based on *post-mortem* examination to prove that the mesenteric glands in children are more ofte found to be caseous than the thoracic, and that therefo tuberculous infection is more frequent through the intestin than through the lungs (I have no references available, bu believe this to be a correct statement of his position). Whe even the anatomical facts upon which a question must be d cided are still in dipute it can hardly be regarded as so abs lutely settled as Dr. Donkin seems to imagine.

2. Dr. Donkin's contention is that no one of importance no considers "tabes mesenterica" to be synonymous wit abdominal tuberculosis. I would ask him just one questio Does he or does he not agree that Sir R. Thorne was right i

assuming in the Harben Lectures that the large increase which has occurred of late in the registered deaths from "tabes mesenterica" in infants indicates a corresponding increase of abdominal tuberculosis? If Dr. Donkin agrees, we have then a clear issue to discuss; if, as I anticipate from his letter, he disagrees, considering the "tabes mesenterica" of the death certificates to bear no relationship to tuberculosis, then I think Sir R. Thorne's use of that term, and the importance rightly attached to his lectures both by the profession and the laity, fully justify my protest, and show sufficiently clearly that, so far from putting up a medical Aunt Sally which no longer even stinks, I am contending against a belief which still shows much evidence of vitality; or, if dead, as Dr. Donkin asserts, is so very recently defunct as not yet even to call for the interference of the inspector of nuisances.—I am, etc.,

Ardgour, N.B., Sept. 15th. J. Walter Carr.

CANCER IN THE LOWER ANIMALS.

Sir,—I think every student of pathology will feel grateful to Dr. McFadyean for his valuable contribution to our knowledge of cancer in the animal world; but it would be a mistake to suppose that he has exhausted the subject.

The mammary glands of many female animals are liable to be thus affected. Of 39 malignant tumours in dogs, studied by Cadiot and Roger, the mammary gland was the seat of the disease in 18—11 were cancers and 7 sarcomas (3 chondroid and 2 osteoid); in 3 cases the testis was affected, and in 3 the bones of the face. Of 5 similar cases in horses, the seats of the disease were the mamma (2), the testis, the face, and the stomach.

The following duly authenticated examples have lately been recorded:

A large cancerous cystic tumour of the mamma of a bitch, by Batt; a large cancerous tumour of the mammary gland of a mare, containing cartilaginous and osseous structures, by Scott; in the Hunterian Museum there is a specimen of melanoma of a white cow's udder; cancer of the mamma of a cat, by Spencer; squamous epithelioma of the penis of a horse, by Patteson; cancer of the testes of an Italian greyhound, Royal College of Surgeons Museum; malignant melanoma of a horse, with widespread dissemination, by Hutchinson; cancer of the prostate of a dog, by De Rouville; columnar epithelioma of the lung of a dog, by Silcock; cancer of the pituitary body of an anubis baboon, by Goodhart.

Adams and Langlois have reported examples of mammary enchondromata and osteomata in bitches, and, as pointed out by Virchow, morbid structures of this kind are, in these animals, often associated with malignant disease.

Adenomatous tumours of the mammæ are also fairly often met with in female dogs, cats, etc., and Shattock has described fibro-adenoma of the mammary rudiment of a pied rat.

Among the lower animals sarcomata are commoner and more widely diffused than cancers, and all kinds of non-malignant tumours and cysts are met with. As I have elsewhere dealt with this subject,[1] I need not enlarge upon it here.

In conclusion, it appears to me that the most important fact elicited by the study of the biological distribution of malignant and other neoplasms is that in a state of Nature these abnormalities hardly ever occur. It is exclusively among domesticated varieties, or those that have been kept long in confinement, that they are met with.—I am, etc.,

Clifton, Sept. 16th. W. Roger Williams.

[1] *Twentieth Century Practice of Medicine*, vol. xvii.

THE PREVENTION OF VENEREAL DISEASE.

Sir,—At the recent Brussels Conference, after a debate of two days, it was deemed wiser not to vote on the question whether the systems of regulation actually in force exert any influence upon the frequency and dissemination of syphilis and venereal diseases. This fact is suggestive. We may assume that two irreconcilable parties were represented at the Conference—the advocates of State control and the prevention of syphilis by sanitary measures, and its opponents who would rest their case on moral considerations. As an outsider, I should like to point out that the drawn battle between these parties emphasises the failure of both, and leads to the conclusion that both are on the wrong tack, and that we must fall back on an older and wiser mode of dealing with the problem of the prevention of syphilis.

The crux of the problem lies in the fact that any method of dealing with it, if it is to be effectual, must be so heroic as to be impracticable. Two years of isolation under treatment for every man and woman who has contracted the disease, if it could be ensured, would stamp out the disease, and would doubtless satisfy both the sanitarian and the moral reformer. It is doubtful whether anything less than this would suffice. But how is this to be ensured? Inspection, even if backed up by power to enforce this, will fail to detect a certain percentage of cases, and a further percentage of those who should be examined will contrive to evade it. Besides, to be efficient, the inspection should include the medical examination of every man entering a registered house. In short, any system of State control to be trustworthy would involve a strictness of supervision which would be intolerable and would defeat its own end. No State has yet ventured to propose a system of State control that would satisfy the requirements of sanitary science. So rigorous a system would involve an insupportable tyranny on the one hand, and on the other, by offering immunity to vice, would shock the moral sense of the country. Any incomplete system of State control fails in proportion to its incompleteness, engenders a false sense of security, and still shocks the moral sense.

But if wisdom does not lie in the direction of State control, still less is it to be found in a policy of *laissez faire*, which is practically the policy of the hard moralist, who says: "Syphilis is Nature's punishment and deterrent; let it act." Experience shows that the sexual passion is so strong that the horrors of syphilis, even when known, are not strong enough to deter some men from incurring the risk of it, while the man in the street has no conception of its manifold and far-reaching results. To rely on moral or prudential considerations for the prevention of syphilis, where marriage is disallowed, is about as rational as to rely upon an opposing wind to prevent a tide from rising.

What remains? The encouragement of marriage. To enforce celibacy is to encourage vice and increase syphilis. The history of armies is a proof of this. To encourage marriage is to diminish prostitution, and syphilis in its wake. The wisest word yet spoken on this question is that of the Apostle Paul, who, notwithstanding his own special gifts, understood human nature too well to insist on celibacy for others: "Because of fornications let each man have his own wife, and let each woman have her own husband."

An officer in the Egyptian army, writing lately on the black soldiers engaged in the Soudan war, showed that they are splendid soldiers if only allowed to marry, but are unmanageable if unmarried. Human nature is much the same under a black or a white skin. It may seem madness to propose that freedom to marry should be allowed to our soldiers, for the traditional idea is that the single scallywag is the best devil to fight, and the taxpayer would be horrified at the cost of an army of married men. Yet there is much to show that the sober earnestness of the married veteran is worth more in the battlefield than the reckless dash of the devil-may-care youngster; while against the cost of an army of married men would have to be set the present cost of syphilis to the army, and to the nation for the syphilis spread among civilians through the army. The nation would be horrified if it could see its bill for syphilis and venereal diseases. No statistician could draw it up for us even if he had the facts, for much of it cannot be expressed in terms of money. If my voice had any weight I would urge the experiment of having one regiment of married men with long service, and I believe that from a sanitary, military, and, in the long run, from the economical point of view, it would take the first place. I beg to record my conviction that the only natural, right, and effectual preventive of syphilis is early marriage, and that it is not less practicable nor more expensive than other methods of dealing with the problem.—I am, etc.,

September 18th. Malgré Malthus, M.D.

ADULTERATED FABRICS.

Sir,—In your comments on the above subject in the British Medical Journal of September 16th I observe that the inquiry directed by the Manchester Chamber of Commerce was limited to (1) The percentage of moisture held by certain fabrics; (2) the loss of weight sustained on washing the fabrics in question; and (3) the nature and the amount

of the filling. I am afraid that the dishonesty disclosed by Dr. Dixon Mann's analysis is not confined to flannelettes, Oxford shirtings, and moleskin, but that it extends to many other articles of commerce.

I have recently examined numerous samples of blue cloth sold as indigo dyed cloth. A good many contained no indigo at all, while others contained a very little with some other dyes. The following is the result of six samples, all of which were mordanted with chrome:

1. Cheviot indigo	8s. 6d. per yard	...	Indigo and some other dyestuff
2. " "	8s. 6d. " "	...	No indigo present
3. " "	10s. 9d. " "	...	Indigo and some other dyestuff
4. Worsted "	9s. 0d. " "	...	A little indigo present
5. Indigo blue	9s. 0d. " "	...	A little indigo present
6. Worsted indigo	9s. 6d. " "	...	No indigo present,

showing that none of the samples were dyed with pure indigo. The public should know this also, because all people who can afford it prefer indigo-dyed cloth, though a little dearer than the cheap and nasty and poisonous substitutes for it manufactured on the Continent.

The following simple tests will at once distinguish between pure indigo and its artificial substitutes:

1. Put a piece of the cloth half an inch square on a saucer, plate, or other porcelain dish and drop two or three drops of strong nitric acid upon it. If pure indigo a bright yellow spot with a green rim is quickly developed.

2. Place a small piece of the cloth half an inch square on a plate or in a porcelain basin and just cover it with pure sulphuric acid. The liquid becomes greenish yellow or olive, then passes through various shades of green to a deep blue. After half an hour dilute with water, when the solution assumes a bright blue colour if dyed with indigo. If alizane the solution becomes violet. If logwood and indigo are present together the solution becomes green or greenish blue. There are other tests, but the above are quite sufficient for all practical purposes and can be easily applied.

Synthetic or artificial indigo cannot at present be distinguished from the natural dye on cloth, but it is of little consequence, as it is much more expensive and not so suitable for some purposes.—I am, etc.,

Edinburgh, Sept. 18th. K. N. MACDONALD, M.D.

SYPHILIS AND GENERAL PARALYSIS.

SIR,—In a valuable paper on the Relationship between Syphilis and General Paralysis of the Insane published in the BRITISH MEDICAL JOURNAL of September 16th, Dr. Alfred W. Campbell states that he included (among others) as certainly syphilitic "all those who bore undoubted scars of Hunterian chancres." It would probably interest others besides myself to know what sign or signs Dr. Campbell relied upon as proof that the scars were those of "Hunterian chancres."—I am, etc.,

Old Burlington Street, W., Sept. 20th. ARTHUR COOPER.

"WHAT IS HOMŒOPATHY?"

SIR,—Your amusing and, on the whole, good-natured, banter under the above title in the BRITISH MEDICAL JOURNAL of September 9th, which I have only seen to-day, would call for no comment from me were it not for this passage in it: "The prophet of homœopathy did not, it would appear, teach that likes are cured by likes, but that likes should be treated by likes." But as the object of treatment is, or ought to be, to cure, it would be absurd to advise a certain mode of treatment if it were not thought that it would cure. And this, of course, is what Hahnemann has not done. He first brings together a vast amount of evidence from the medical records of all times and countries to prove that medicines capable of producing on the healthy certain morbid states or symptoms have cured diseases presenting similar morbid states or symptoms—likes are cured by likes, the Latin for which would be *similia similibus sanantur*—and thence he deduces the therapeutic rule: "In order to cure, choose, in every case of disease a medicine which can itself produce an affection similar to that sought to be cured," the formula for which is, *similia similibus curentur*, let likes be treated by likes.

Of course you know this, but it may not be known to those of your readers who act on your dictum that "there are few things that one can better afford to be ignorant of than homœopathy."

Your compliment to myself would be more appreciated if not made at the expense of my fellow-workers in the field of homœopathic therapeutics, many of whom have rendered greater services to practical medicine than myself.—I am, etc.,

Upper Berkeley Street, W., Sept. 15th. R. E. DUDGEON.

L.S.A.'s AND OPEN SURGERIES.

SIR,—At the commencement of this year I read a very elaborate article in a medical paper relating to the ungentlemanly and likewise unprofessional action of keeping an open surgery, the windows of which were decorated in a manner tasty to the vulgar eye, with coloured letters, advertising the humble occupier's trade at current prices. On further perusal I noticed that these "workshops" were supposed to be carried on by men registered by the L.S.A. diploma.

During the last two years my work has carried me over a considerable amount of ground, and I have noticed—others, I am sure, have likewise done so—that such practices are held by men that have other diplomas with or without the L.S.A. Take the majority of the "workshops" in the East End of London—how many of these men are there that have only the L.S.A. diploma? Not half a dozen, I believe; but they are held by men, I am sorry to say, with degrees even of a higher standing than that of the Conjoint Board of England.

If the latter Board could only see their way to prohibit members of their Colleges from opening these surgeries, they would be lending a helping hand to raise the tone of the medical profession in the eyes of the general public far more by such an act than by allowing a Member to be the proud possessor of a gown.

This is an age for degrees, whether good, bad, or indifferent, more especially amongst medical men, irrespective as to whether in after-life they wish to walk in that path which commands respect from the commonwealth at large.

To abuse one's medical education in order to arrive at such a low ebb in the professional world seems to me to be mostly due to "what's bred in the bone."—I am, etc.,

Birmingham, Sept. 11th. W. ROUS KEMP, L.S.A.Lond., B.A.Camb.

OBITUARY.

PROFESSOR DR. KARL STOERK,

University of Vienna.

BY the death of Karl Stoerk, who passed away on September 13th at the age of 67, the University of Vienna has lost one of its most famous teachers, and laryngology one of its most distinguished representatives. He was the son of a medical practitioner, and was born at Ofen in 1832. He studied medicine first at Buda-Pesth, and afterwards at Vienna, where he graduated Doctor of Medicine in 1858. In 1859 he was appointed Assistant Physician to the General Hospital of Vienna; in 1864 he qualified as *Privat-docent* in laryngology; in 1875 he was appointed Extraordinary, and in 1894 Ordinary, Professor of the same subject. In 1891 he became the head of the University Clinic of Throat Diseases.

Stoerk was one of the early fathers of laryngology. He was Assistant to Türck, in conjunction with whom he made some of the first researches on the use of the laryngoscope for purposes of treatment. In 1858 he gave before the Imperial Royal Medical Society of Vienna a demonstration of the direct application of remedies to the larynx with the help of the laryngoscopic mirror. He laboured with much profit in the vineyard of his speciality, and his great reputation as a teacher brought crowds of students from all parts of the world to his clinic. He gave proof of much ingenuity in the devising of instruments, and he contributed largely to the literature of the department of medicine which he had made his own. His best-known works are *Ueber Laryngoscopie* (1872); *Klinik der Krankheiten des Kehlkopfes, der Nase und des Rachens* (1876); *Klinik der Kehlkopfkrankheiten* (1880); and *Lehrbuch der Erkrankungen der Nase, des Rachens und des Kehlkopfes*, which appeared recently as part of the great work on medicine now in course of publication under the editorship of Professor Nothnagel.

Professor Stoerk came prominently before the world at large ring the last illness of the Emperor Frederick, whose case made the subject of an extraordinary deliverance, which andalised the medical profession and shocked the public erywhere, except perhaps in Germany. But after all, he ly shouted from the housetop what was being whispered at e dinner table, in the hospital, in the street, and wherever e or two doctors were gathered together.

SAMUEL PUNNETT BUDD, M.R.C.S., L.S.A.,
Bath.

TER three years of great suffering, Mr. S. P. Budd has at ngth been released by death. He was born in 1844, the son Dr. I. W. Budd, and nephew of Dr. Geo. Budd of London, d Dr. William Budd of Clifton, and, as a matter of course, followed the profession in which so many members of his mily had already distinguished themselves. He studied at . Bartholomew's Hospital, and was admitted M.R.C.S., S.A., in 1869. Soon afterwards he settled in Bath. His only troduction to practice, except the potent one in the West of ngland of his family name, was that he for a short time lped the late Dr. Falconer during that gentleman's illness. ppointed Surgeon to the Eastern Dispensary he quickly quired a large and one of the most lucrative practices in e West. In addition to his fashionable *clientèle* amongst e residents he held a foremost place as an authority on the ath waters. Mr. Budd's increasing engagements soon made necessary for him to resign his post on the staff of the astern Dispensary, the only public appointment he held. raightforward and upright in all his dealings, he won the spect of his professional brethren, whilst his ready sym- thy and striking personality gained for him the hearts of s patients. He had the rare gift of at once winning the nfidence of those with whom he was brought in contact, as ell as the family one of rapid and accurate diagnosis.

About three years ago symptoms of malignant disease de- loped, but with much fortitude he continued his practice d made light of his sufferings. An operation relieved him r a time, and he still continued to work. Though stricken th a fatal malady, no one would have suspected the fact; involuntary twitching of his face being the only sign of e pain he was suffering. A second operation became neces- ry, and later a third, and after that he was more or less nfined to his bed for the few remaining months of life. He as attended throughout his long illness by his partner, Dr. ing Martyn, and he died on September 11th at the compara- vely early age of 55.

In addition to his professional interests, Mr. Budd was a een sportsman. His holiday was usually spent stag-hunting Exmoor, and he was well known locally as a breeder of ackneys. He was a first-class billiard player, and as a rose ower he was known as a prizewinner all over the country.

Mr. Budd was a widower, and leaves an only daughter to ourn his loss. He was a member of the British Medical ssociation, but his busy life in other directions prevented s taking any active part in its work.

We regret to announce the somewhat sudden death of urgeon-Major-General Lithgow, who has been since Decem- er, 1892, Medical Superintendent of the Edinburgh Royal nfirmary. He left Edinburgh for a holiday about the begin- ng of September, became ill about a week ago and died at is own house at Fauchope, Melrose, on Wednesday, Septem- er 20th. He had had a distinguished career in the army ilitary service from 1855 onwards. He was 66 years of age nd leaves a widow and a family of two sons and two aughters.

We regret to announce the death of Mr. Robert Dex Keighley of Batley, which took place recently in his 80th ear. During the past seven years he had suffered from ndifferent health, and has been several times incapacitated om performing his professional duties. Mr. Keighley was a ative of Heckmondwike. He qualified as L.S.A. in 1842, nd the following year he started practice at Batley. When atley obtained its charter of incorporation in 1868, Mr. Keighley was among the first aldermen elected, and a year later he was appointed a Justice of the Peace, and on November 9th, 1871, he was elected Mayor of the borough. On the expiration of his term as Alderman in 1871 he was reappointed until 1877, when he retired. For some years he was on the honorary medical staff of the Batley Hospital, and some three years ago was appointed one of the Consulting Surgeons of that institution. Up to the last Mr. Keighley retained his mental powers, but weakness of the heart and general decay eventually terminated a life of usefulness. He was three times married, and leaves a widow and grown-up family.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE MEDICAL SERVICE IN SOUTH AFRICA.

While we have no doubt the army medical arrangements for South Africa have already been worked out, it is a matter of considerable outside speculation how, in the event of an army corps being sent to the Cape, the medical requirements are to be met. A considerable number of officers and men of the Royal Army Medical Corps have already been despatched; but the necessities of a large force would practically absorb nearly all the active medical officers serving at home.

Some think it may be necessary to recall those on the retired list liable to serve.

The troops now on their way from India are taking with them their hospital, and, we presume, dhoolie bearer service.

The "British" field hospitals, as they are called, on the Indian establishment, are, we understand, organised on a very efficient basis. The officers are those of the Royal Army Medical Corps, and of the subordinate medical service, while the establishment is made up of trained native orderlies and other servants.

The Indian contingent, with its native establishments, will probably be much better off in the field than the troops sent from home.

In the event of war we trust no effort will be spared to make the medical arrangements at the Cape as complete and efficient as possible. It is probable they will be supplemented by an Aid Society.

PROFESSOR OGSTON'S ADDRESS.

There can be no doubt that Professor Ogston was far from intending to injure, but desired to rehabilitate the naval and military medical services. The soundness of some of his views on the wants of the naval medical service is shown by the fact that he anticipated much that the Commission on the naval medical service has recommended. But at the same time, he in other directions over-stated his case, thereby not only endangering the reforms desired, but arousing needless irritation in both services.

He indulged in comparisons which, generally needless, often injudicious, and always dangerous, even if possessing an element of truth, are as a matter of policy better avoided.

One of our correspondents declares that "the address has caused a great deal of resentment" in the Royal Army Medical Corps, adding that "a more gratuitous and unjustifiable misstatement that even the weakest of the Indian Medical Service are of a better class than the best of the Royal Army Medical Corps, was never heard from a public platform." This statement he demands should be proved or retracted, and the only result of the address will, he thinks, be a marked diminution in the number of candidates for commissions in the corps.

Another untoward result is, that the address has been made a peg, both on the platform and in the press, on which to hang gross and outrageous statements by those who seem to take an unaccountable delight in vilifying medical officers.

As an example we need only refer to the speech of Sir Arthur Grant, Bart., at an Aberdeen military luncheon, which we at the time exposed. Had that speech come from an obscure libeller, it would have only met the contempt it deserved; but emanating from an Honorary Colonel of Volunteer Engineers, it was regarded not only as transgressing every canon of good taste and fair criticism, but as an offence against military discipline as well. We should not have recurred to it did we not find that in the columns of the *Aberdeen Journal*

the speaker not only expresses no regret for statements which might charitably be supposed to have been made when in haste, but attempts to justify them by irrelevant remarks on the unpopularity of the army in the medical schools. How could it be popular when medical officers are made the butt of such post-prandial oratory?

We venture to think this speech of an officer of volunteers comes within the reach of military discipline, and we shall be surprised if he has heard the last of it.

THE WORK OF AN AMERICAN MEDICAL VOLUNTEER SOCIETY.

THE report on *The Medical Work of the Massachusetts Volunteer Aid Association during the Spanish War*, prepared by H. L. Burrell, M.D., and twelve others (Boston, 1899. Demy 4to, pp. 51) is a handsome book, with photographic illustrations, and records the excellent services of a patriotic American Aid Association during the late Spanish war. The medical history of that war has yet to be written, but we here get glimpses which show that, when full details are known, they will not only be stirring but even harrowing, for, although the war was against a Power incapable of making a good fight, yet the suffering it involved was very great, and was sufficient to convince the American people that, with all their practical ability and unlimited resources, they, no more than other people, can successfully carry on war with an improvised army.

The war had scarce well begun when the patriotic citizens of Boston foresaw that the very limited regular medical service of the United States army was utterly incapable of affording adequate attendance or supplies for the large number of volunteers suddenly embodied, and they therefore determined to aid the sick and wounded both by land and sea, but more particularly through a well-equipped hospital ship. With admirable method a number of subcommittees, chiefly of medical men, were immediately formed to each of which were assigned specific details of organisation, and the result was a ship elaborately fitted out between May and August, 1898, in time to play an important part in the operations at Cuba and Porto Rico.

The first difficulty was with the ship, which, as an old Clyde-built fruit boat, was ill-adapted for the purpose; but this was soon overcome, and she was rechristened the *Bay State*, the first volunteer hospital ship ever fitted out under Article 13 of the Geneva Convention.

The next difficulty was that the committees had no model, and few data as regards equipment to guide them. It was true the Government was then fitting out the hospital ships *Solace* and *Relief*, but not much assistance seems to have been obtained from this source, nor does reference seem to have been made for guidance to our hospital ships, *Victor Emmanuel* of the Ashanti war of 1874, and the *Carthage* and *Ganges* of the Egyptian campaigns. An enormous advance in equipment has, however, taken place since these vessels were fitted out, such as electric lighting, cold storage, sterilizing rooms, etc. So successful, however, were the committees in their zealous co-operation that a ship was fitted out with a completeness which may well constitute her a model for future ships of the kind. She was duly authorised by the President and the Navy Department, and placed under discipline of the simplest kind, two authorities on board only being recognised: (1) Navigation under a master; and (2) medical, under a superintending surgeon. Each was supreme in his own sphere, and discipline worked without a hitch.

When the vessel arrived in belligerent waters the medical department on board immediately reported to the nearest army or navy "ranking officer" for instructions; and always received every assistance in their humane mission. The vessel made several trips with sick men from the islands to the main land, with much success.

Mention is made of the kinds and degrees of sickness treated on board; the worst cases were from Cuba, and it is stated "the sickest and sickest-looking men we had ever seen or ever expect to see" were from Santiago, which appears to have been the foulest and most insanitary of all the Spanish hotbeds of disease. Its malarial fevers were of such a complicated continued type, with diarrhœa and dysentery, that it was often impossible to say at first whether cases were not typhoid or yellow fever. Nearly all the cases received board under careful treatment and nursing soon ma wonderful progress towards recovery, so that the rep says, "the good accomplished by hospital ships in the l war, and their valued services to the sick of both the ar and navy, assure them a place in the wars of the future."

The Aid Society also sent its agents to help and report various camps of volunteers, such as at Montauk and Lo Island. There is no concealment of the deplorable state these camps immediately after their formation. The utm confusion, drunkenness, and indiscipline existed; and wonder, when it is frankly stated that it was claimed t many officers who "had arrived were political appointmen quite irrespective of their knowledge of their work"!

ROYAL ARMY MEDICAL CORPS.

MAJORS F. H. TREHERNE and H. P. BIRCH embarked at Southampton the *Gaul* for South Africa on Saturday last in medical charge of the Northumberland Fusiliers and companies of the Army Service, Ordnan and other corps, 1,051 all told.

ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON A. P. G. GIPPS, who has been placed on the Retired L at his own request from September 12th, entered the service as surge in March, 1879, became staff surgeon in March, 1891, and quite recen attained the rank of fleet surgeon. As surgeon he held various i portant appointments, and served twice in the flagships of Admiral the Fleet the Earl of Clanwilliam, G.C.B., K.C.M.G., indicating the hi appreciation which that distinguished officer had of his professio attainments. He served in H.M.S. *Inconstant* during the Egyptian w and in the hospital ship *Malacca* during the Benin punitive expeditic He was afterwards appointed for duty at the Admiralty, where recen he acted as secretary to the Committee on the Training of Medi Officers, etc. He is a Blane Medallist, and a recognised authority Mediterranean fever, its bacteriology, etc. His recent appointment Haslar for the instruction of surgeons on entry was recognised by familiar with his career as a most suitable one; and, in the interest of t public service, it is greatly to be regretted that the multifarious a onerous duties with which he found himself burdened compelled h to resign a post which he was specially qualified to fill.

THE VOLUNTEERS.

SURGEON-LIEUTENANTS J. MCMULLEN, M.B., 3rd Volunteer Battalion t King's Liverpool Regiment, and E. FARR, 2nd Volunteer Battalion t Duke of Cambridge's Own Middlesex Regiment, are promoted to Surgeon-Captains, September 20th.

VOLUNTEER MEDICAL STAFF CORPS.

MR. ALEXANDER GRANVILLE is appointed Surgeon-Lieutenant in t London Companies, September 20th.

INTESTINAL DISEASES AT ALDERSHOT.

AT an inquest held on September 14th at Aldershot touching the death Private Leslie, of the 2nd Black Watch, who died on September 11th fro inflammation of the intestines, the Coroner (Mr. Spencer Clark) said th there had been between thirty and forty similar cases in the hospit lately, most of which came from the 1st Brigade, of which the Black Wat forms part. Leslie's death was the third from the same cause in the la three weeks. A comrade stated that Leslie was taken ill on Septemb 5th, and was sent to the hospital the following day. Captain Heale R.A.M.C., said Leslie was suffering from gastro-intestinal inflammatio which developed into jaundice, and he died from failure of the heart action. Witness could not state what caused the inflammation. The was a number of similar cases under treatment at the present time. the second fatal case which had occurred the intestines of the man we sent to London for analysis. That case was identical with the presen The coroner adjourned the inquiry for four weeks to obtain the result the analysis in the preceding case.

THE NEW UNIFORM R.A.M.C.

ROUGE ET NOIR thinks the new uniform in very bad taste, and hopes will not ultimately be adopted. Especially he objects to the cher facings, and the stripes for the overalls. "Besides," he says, "we a entitled to a 'royal' red, and surely the difficulty of making a combin tion which would distinguish us from the Royal Artillery is not i superable."

ENTERIC FEVER AMONG OFFICERS IN INDIA.

THE Calcutta *Englishman* devotes an article to this well-worn subject, an in alluding to the melancholy list of deaths of officers, especially youn officers, notices the fact of the frequency with which the death-roll co tains the names of officers of British regiments as compared with office of native corps. Statistics would probably show that for every on Indian Staff Corps officer who suffers from enteric fever, at least eight ten officers in British regiments are attacked, and the writer of the artic finds the main cause perhaps for this in the difference in the manag ment of British and native regimental messes. The latter are, he co siders, not only run more economically, but managed with far greate care and efficiency than those of British corps, where the officers through ignorance of the language and "not knowing the ropes," are to great extent at the mercy of the *khansamah* (a sort of head butler) an the native *ménage*. The article does not fail to allude to a matter whic has repeatedly found a place in these columns, namely, the uncleanlines of cookhouses, cooking utensils, dishcloths, impurity of water and milk

and finally, the lack of proper European supervision over natives employed in the cookhouse and over their work generally. If the abolition of the native cook in barrack cookhouses is a possible step, it might also become so in a British regimental mess.

THE MILITARY USES OF BACTERIOLOGY.

In the *Journal* of the Military Service Institution of America appears an essay with the above heading by Captain Charles E. Woodruff, Assistant Surgeon, United States Army, in which an effort is made to translate into popular language the technical laws governing the lives of bacteria and to apply them to military uses. This is especially necessary now, the author considers, because quite a large percentage of infectious diseases in the United States army are contracted in practice marches and field manœuvres. Captain Woodruff goes further, for he says the effect of bacteriology upon military custom has been profound, and to the line officer it certainly is essential to know in considerable detail the laws of the science in order that he may "intelligently issue his orders in accordance with changed methods, and avoid the frightful preventable sickness which has so often ruined military campaigns from the death or exhaustion of the men." The essay (which was forwarded to the Military Information Division of the Adjutant-General's office, and is published by permission) gives a short space to the explanation of antiseptics, germicides, disinfectants, and sterilisation.

CAMP CREMATORIES.

The use of portable crematories for the field and camp has been strongly suggested, and their value from a health point of view is beyond all question. The chief feature of the last camp season of the New York National Guard was the practical testing in camp and on the march of portable crematories to take the place of latrines, which have always been nuisances and not infrequently sources of disease. Dr. William G. Bissell, surgeon of the 74th Regiment National Guard, N.Y., has been working for some time on a plan for burning what is left to the latrines to scatter about as seeds of disease. He got ready for a camp test a crematory weighing about 300 lbs., but one lighter in weight can be made. In the process adopted by Dr. Bissell the combustion is odourless. Standing in the heated current expelled by the crematory no offensive smell was observed while destruction was going on. The *Army and Navy Journal* of New York, commenting on the crematory, says that by a new arrangement of air ducts the outgoing draft, laden with odours, is met by an inrush of fresh air which supplies the oxygen necessary for complete combustion. The inventor maintains that when perfected the crematory will answer to the needs of several hundred men. When the two battalions of the 7th Regiment, nearly 500 strong each, made their practice march, two crematories were taken with each battalion, and gave thorough satisfaction. Dr. Bissell is sanguine as to the future of the idea, and contends that the principles of such a crematory can be applied as well to a city as to a camp, and that it is only apathy on the part of our public sanitarians that perpetuates the disgusting systems now in vogue. The attention of the War Department was called, it is understood, to the tests, and it was expected that such crematories would receive needed tests in Cuba and the Philippines or at home, and might ultimately be adopted.

RETIRED R.A.M.C.

A correspondent is informed that he should put his rank, name, and corps on his card, adding "Retired." Of course, if he is liable to recall he is entitledand expected to keep up his uniform and any other distinction of his corps.

MEDICO-LEGAL.

POST-MORTEM EXAMINATIONS IN MEDICO LEGAL CASES IN SCOTLAND.

The procedure adopted in recent years by the Crown lawyers in Scotland with regard to the *post-mortem* examinations in judicial cases is most unsatisfactory. These examinations are usually made by warrant of the Sheriff granted to two medical men who are specially retained by the Crown for this purpose. No persons except the two inspectors are allowed on any account to be present thereat, or to be represented by a skilled witness. It does not matter how deeply they may be interested in ascertaining the precise cause of death, they are sternly excluded. A medical man may have attended the case prior to death, and may be most anxious to be present at the necropsy and learn the exact cause of death. Such knowledge may be of the very greatest importance to him. He is neither allowed to be present nor to be represented. Or a person may be arrested on suspicion in connection with the death, and thereafter, on information obtained by Crown counsel from the official inspectors, may have to stand trial on a criminal charge. His agent is not even informed that such an examination is to take place, or when or where. If he does somehow learn about it in time to make application for the presence of medical witnesses on behalf of his client he has, at least in recent years, always been refused. He is told by the Procurator-Fiscal, as in a recent case, that "Crown counsel do not see any reason for departing from the usual practice of such examinations being conducted by doctors instructed by me, without the presence of doctors in the special interest of the accused."[1] The report of the inspectors instructed by the Crown is the only evidence of the *post-mortem* examination that is or can be submitted at the trial. At every other point the agent of the accused has been enabled beforehand to test and examine the evidence relied on by the Crown against his client, and to prepare his defence, but in respect of this medical evidence he can do nothing but accept whatever the Crown may bring forward. Unless there be some omission or blunder in the medical report, very little can as a rule be extracted from it for the benefit of the defence. No other observations nor alternative opinions can be obtained. The prisoner's counsel can never hope to break down this evidence, nor can he even effectually cross-examine upon it. It is obvious that this arrangement of medical testimony puts an enormous power in the hands of the prosecution, and unless a case breaks down in some other respect, must make strongly for the conviction of an accused person.

This state of matters has long been felt by many to be unsatisfactory. On December 2nd, 1893, the Faculty of Physicians and Surgeons, Glasgow, addressed a letter to the Lord Advocate on the subject and urged upon his lordship

the propriety of devising a scheme by which every reasonable facility shall be afforded to interested persons being represented at *post-mortem* examinations in criminal cases. They believe that a scheme of this kind could be so safeguarded as to be conducive to the interests of public justice as well as those of individual liberty.

To this letter the Lord Advocate replied by telegram on April 2nd, 1894:

That no further instructions have been issued in regard to the procedure at *post-mortem* examinations, but that the question whether further instructions are necessary will be duly considered.

A second letter from the Faculty to the Lord Advocate, dated April 2nd, 1895, received a similar answer.

Sir James Carmichael on February 15th, 1895, put a question on the subject to the Lord Advocate in the House of Commons. The Lord Advocate replied that such *post-mortem* examinations are conducted in accordance with suggestions made by medical men of great eminence a number of years ago, and the practice is to exclude from the examinations all persons not officially connected with them unless the consent of Crown counsel or the authority of a sheriff for the presence of other persons has been obtained. The examinations are generally held under judicial warrant, and the view adopted and acted upon has been that unless some special reason connected with public justice exists for the presence of third parties the warrant should be carried out exclusively by persons acting under public responsibility. Applications to be allowed to be represented have been granted when made on behalf of persons suspected of having caused the death or otherwise closely connected with the matter of inquiry, but they have been refused where some such quality of interest did not exist.

This statement at first sight seems to imply that where the quality of interest did exist, applications for representation at necropsies were always granted. On careful consideration, however, it is seen to be merely a statement of what had sometimes been done in the past, and committed the speaker to nothing. A prisoner's agent at Glasgow shortly thereafter applied for two medical witnesses to be present at a *post-mortem* examination on behalf of his client, and was refused. The case was that of a man arrested on suspicion of having murdered his wife. The evidence was entirely circumstantial, and it was known that the most material evidence might be obtained from the *post-mortem* examination. Nevertheless, nothing more could be obtained from Crown counsel than permission to examine the body after the official examination had been completed. On September 3rd, 1895, Mr. Caldwell in the House of Commons called attention to this refusal, and questioned the Lord Advocate on the subject. Mr. Caldwell made a very vigorous impeachment of the action of the Crown. He was surprised that in any Court of Justice in Scotland such a course should be adopted, and that the Crown should not consider it necessory that a prisoner should have special representation in his

[1] Letter of Procurator-Fiscal, Glasgow, June 3rd, 1895.

own case; that the matter would obviously not stand reasoning, for undoubtedly a prisoner was entitled to bring forward medical evidence to rebut that of the prosecution, and it was essential for the defence that they should have all the material necessary to present their case. The reply was that Crown counsel saw no reason in this particular case for consenting to the presence of two additional medical men. It was added that an inquiry was then being made as to the expediency of any modification of the practice in this matter.

It is now four years since this inquiry was set on foot, but no change in the procedure has yet been made. Nor does it appear likely that any change will be made unless public interest is more thoroughly aroused.

The Lord Advocate, in reply to the question by Sir William Priestley of May 16th, practically repeated his previous statements. He said:

No person except the medical men instructed to conduct the necropsy is allowed to be present at a *post-mortem* examination except with the consent of Crown counsel or on the order of the sheriff. Crown counsel may, in their discretion, sanction the presence of a medical man who has attended the case or in the interests of the accused, but this is done only on condition that he is to be present merely as an onlooker, and is not to interfere in any way with the Crown examination. No formal intimation is given that a necropsy is to be held, but in all cases where any person is in custody on suspicion of causing death a necropsy is made as a matter of course, so that an accused person or his advisers cannot be in doubt as to the necessity of making immediate application for permission to send a medical man to witness the necropsy if they so desire it. The quarter to which application should be made is the Procurator-Fiscal, whose duty it is in all cases of urgency to communicate by telegraph with the Crown Agent for the instructions of Crown counsel. If an independent *post-mortem* examination is desired, it can be made after the Crown examination.

The Faculty of Physicians and Surgeons, in its letter to the Lord Advocate of April 2nd, 1895, showed that:

What is wanted to remedy this grievance appears to be an instruction from the Crown Office to Procurators-Fiscal that in every case in which a *post-mortem* examination is made by judicial or other warrant, they shall as a matter of routine give timely notice to any person who, in the light of the ascertained facts or the probabilities up to that time, may in their judgment be indicated as a person interested, that an examination at which he may if thought proper on application be represented by a medical man, shall be made at a time and place specified in the notice.

A QUESTION OF FEES.

A CORRESPONDENT who had advised one of his patients to go in a public hospital for an operation, was requested by the patient to be present at the time the operation was performed, and to visit her afterwards at the hospital. On sending in his account for these services it was repudiated, on the ground that it was unlawful for the doctor to charge for any attendance on the patient while she was in the hospital.

*** We have referred our correspondent's to an authority on Scots law, who replies: "The patient employed her medical man to do a specific service, namely, to call and make sure that she was being properly treated. She cannot expect that he was to do this for nothing.....I should advise that he has a good claim in law to payment for the services he did undoubtedly render in his patient's employment, whether these services involved full professional responsibility or not. The last consideration might have some influence on the amount of the fees that could be claimed, but I do not see what defence the patient might have to a claim for some remuneration. A doctor lives by his time, and in law employment always infers remuneration, as donation either of money or time is never presumed."

ADMINISTERING ANÆSTHETICS TO PATIENTS OF UNQUALIFIED DENTIST.

JUVENAL inquires if it is illegal for a registered medical practitioner to administer gas to patients of an unqualified dentist, and, if so, under what section of the Medical Act the provision is made?

*** The Medical Acts do not in express terms prohibit a registered medical practitioner administering gas to the patients of an unqualified dentist. If, however, any such practice were brought before the General Medical Council an inquiry would, we think, be held under the provisions of Section XXIX of the Medical Act, 1858, and the result to the medical practitioner might be serious.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

CHAIR OF PHYSIOLOGY.—In addition to the ordinary five months' winter course (100 Lectures) on Physiology, the following courses on Practical Physiology will be given during the next academic year, and first during the winter session 1899-1900:

1. *Practical Experimental Physiology.*—This will be given every weekday except Saturday from the middle (17th) of October to the end of January, from 10 A.M. till 12 noon, and each student will attend on one day in the week only. The fee is £2 2s.

2. *Practical Chemical Physiology.*—This course will be given every weekday except Saturdays, from the middle of October to the end of January, from 10 to 11 A.M. Each student shall attend on one day in the week only, and the fee is £1 1s.; and second, during the summer session of 1900, there will be a class of

3. *Practical Histology.*—Each student shall attend for two hours on four days a week from the beginning of May; and the fee shall be £2 2s.

It will be obvious that these new arrangements will ensure much more effective practical teaching.

UNIVERSITY OF ST. ANDREWS.

AT a meeting of the University Court held on Saturday, September 16th, Mr. James Stuart, M.P., Rector of the University, in the chair, the Committee appointed to consider the necessary steps to be taken with regard to the erection of an adequate and suitably-equipped building for the Conjoint University School of Medicine at Dundee presented a report that they had examined plans of various sites, and had arrived at the decision that the site known as the "Church Site," situated at the back of the College, would be the most suitable. Consideration of the report was deferred pending inquiries as to the value of the site and as to the proportion of the expenditure involved in the proposed plan for the accommodation of the departments of anatomy and physiology. The following motion was agreed to: "That the University Court resolve that a qualifying course of practical materia medica shall be given at St. Andrews, under the supervision of Professor Marshall, for five years as from October, 1898." It was further resolved: "That the qualifying course in practical materia medica for the present year be carried on in the summer, and that the class be conducted by the assistant, under the supervision, as agreed, of Professor Marshall." It was unanimously resolved: "That the Court recall the appointment of the Berry and Finance Committees, and remit the whole question of the income and expenditure of the University to the Business and Finance Committee, with recommendations to bring up a report as soon as possible, and with instructions to consult the Senate as to such of the resolutions arrived at as they deem fit, in order that the whole question may be considered at the Court meeting in January." On consideration of a minute of the subcommittee on the superintendence of the Museum, and a statement by Professor Mackintosh thereupon, the meeting voted a sum of £40 per annum towards the salary of a curator.

UNIVERSITY OF DURHAM.

SECOND EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the Examiners:

Anatomy, Physiology, and Materia Medica.—Honours (Second Class): E. J. Manning, St. Mary's Hospital; J. B. Waters, College of Medicine, Newcastle upon-Tyne. Pass List: Annie Tombleson Brunyate, London School of Medicine for Women: S. C. Clapham, M.R.C.S., L.R.C.P., Guy's Hospital; H. R. Ellis, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital: W. M. Emmerson, College of Medicine, Newcastle-upon-Tyne: Ida Emilie Fox, London School of Medicine for Women; Lucy Selina Molony, London School of Medicine for Women; R. W. Nevin, College of Medicine, Newcastle-upon-Tyne; Monica Lucien Mary Robertson, College of Medicine, Newcastle-upon-Tyne; T. C. Rutherfoord, St. Thomas's Hospital; R. S. Renton, College of Medicine, Newcastle-upon-Tyne: S. D. Turner, M.R.C.S., L.R.C.P., St. Thomas's Hospital; N. B. Walker, College of Medicine, Newcastle-upon-Tyne: M. C. Wetherell, Guy's Hospital.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,877 births and 4,617 deaths were registered during the week ending Saturday last, September 16th. The annual rate of mortality in these towns, which had decreased from 26.8 to 25.2 per 1,000 in the three preceding weeks, further declined to 21.1 last week. The rates in the several towns ranged from 10.6 in Norwich, 13.5 in Croydon, 15.7 in Derby, and 16.8 in Cardiff, to 30.9 in Liverpool, 31.0 in Preston, 31.7 in Wolverhampton, and 32.5 in Salford. In the thirty-two provincial towns the mean death-rate was 22.6 per 1,000, and exceeded by 3.8 the rate recorded in London, which was 18.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 5.4 per 1,000; in London the death-rate was equal to 3.5 per 1,000, while it averaged 6.7 in the thirty-two provincial towns, among which the highest zymotic death-rates were 9.6 in Salford, 11.1 in Burnley, 11.2 in Wolverhampton, and 16.4 in Preston. Measles caused a death-rate of 1.4 in Burnley; scarlet fever of 1.1 in Bradford; "fever" of 1.0 in Sheffield, 1.1 in Halifax, and 1.4 in Birkenhead; and diarrhœa of 7.4 in Salford, 7.8 in Burnley, 8.0 in Brighton, 8.4 in Bolton, 10.0 in Wolverhampton, and 16.0 in Preston. The 69 deaths from diphtheria in the thirty-three towns included 22 in London, 10 in Leeds, 8 in Sheffield, 6.0 in Leicester, and 5 in Birmingham. Three fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday last, September 16th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,538 and 2,549 in the two preceding weeks, had further increased to 2,640 on Saturday last; 336 new cases were admitted during the week, against 225, 252, and 298 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, September 16th, 933 births and 618 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which was 24.1 and 22.6 in the two preceding weeks, fell again to 20.2, and was 0.9 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates

ranged from 11.7 in Aberdeen and 13.5 in Perth to 22.5 in Glasgow and 22.8 in Leith. The zymotic death-rate in these towns averaged 5.7 per 1,000, the highest rates being recorded in Perth and Leith. The 317 deaths registered in Glasgow included 1 from scarlet fever, 2 from diphtheria, 4 from measles and from whooping-cough, 9 from "fever," and 69 from diarrhœa. Twenty-four fatal cases of diarrhœa were recorded in Edinburgh, 17 in Dundee, and 9 in Leith.

OUTBREAK OF ENTERIC FEVER AT BURNTISLAND.

An outbreak of enteric fever is engaging the attention of the public health authorities of Burntisland, Fifeshire. Up to the end of last week (September 16th) 47 cases had been notified, 31 in the town and 16 in the urban or landward district. Fifteen patients have been accommodated in Kirkcaldy Fever Hospital; the local hospital has been reserved for emergency cases, and a staff of trained nurses has been engaged to attend to those whose circumstances admit of their being treated in their own homes. Thus far there have been no deaths. The outbreak is stated to have been traced to one of the milk supplies of the town.

AN OUTBREAK OF TYPHOID FEVER AMONG THE DUBLIN POLICE.

We learn that there has been a sudden outbreak of typhoid fever amongst the men at the depôt of the Royal Irish Constabulary and in one station of the Dublin Metropolitan Police. Some deaths have occurred. The cause is now being traced, and we learn that in one instance at least it has been proved that milk was the vehicle of infection.

A NUISANCE.

Glan-y-Mor has complained to the nuisance inspector and the chairman of the Board of Guardians of a cesspool which is near his house, close to the waterpipe supplying the village, which overflows occasionally and is otherwise a nuisance, but without effect.

*** Other means failing, he should either apply to the Local Government Board, Whitehall, London, or make a complaint before two magistrates in petty session, under Section cv of the Public Health Act, 1875.

INCREASE OF SALARY OF POOR-LAW MEDICAL OFFICERS.

In the British Medical Journal, September 2nd, 1899, p. 632, we replied to a correspondent's question on the above subject, and he has since written again to say that "the matter at issue between the Local Government Board and the guardians has nothing to do with the medical officers or their salaries," but has reference to some structural alterations in the workhouse required by the Local Government Board, but not considered necessary by the guardians. This further information leads us to recommend a petition of the medical officers concerned to the Local Government Board, setting out fully, but not at too great a length, the disadvantageous position under which they now hold office, and praying for early attention to the alleged grievance. This appears to be the only way open to approach the Local Government Board under such exceptional circumstances.

INDIA AND THE COLONIES.

HONG KONG.

Scarlet Fever and Rheumatism.—Four deaths from scarlet fever occurred on board British men-of-war. Dr. Clark remarks that "the infection appears to have been brought out from England, as this disease is practically unknown here, and does not appear to have any tendency to spread among the Chinese." A soldier died from acute rheumatism, a most rare disease in the tropics.

Infantile Trismus.—The great infant scourge of Hong Kong, trismus, caused 471 deaths. The chief number occurred at the Italian and French convents, whither the children are brought by their Chinese parents when but a few days old. When one knows the filth in which these children are born, the number of cases of trismus—a sure indication of insanitation—is not to be wondered at.

Veterinary Report.—The Colonial Veterinary Surgeon reports that foot-and-mouth disease and rinderpest were prevalent in Hong Kong and throughout South China, and that large numbers of cattle died. It is satisfactory to note that he prepared, and had used with success, an anti-rinderpest serum.

BARBADOS.

Hurricane and Pestilence.—The half-yearly report of Dr. Hutson, the Poor-law inspector of Barbados, contains an account of the severe hurricane which affected the island in September, 1898, and was the cause of a large amount of poverty and sickness. The previous health of the various districts had been very good up to the time of the hurricane, but almost immediately afterwards an epidemic of diarrhœa and dysentery began, which in a week or two spread over the whole island, carrying off a large number of persons at the two extremes of life, and involving a great increase of work at the hospital and almshouses. It was so universal that it was attributed to the pollution of the drinking water. Typhoid fever also appeared in epidemic form in some of the parishes, and lasted to the end of the year. At the hospital the wards were overcrowded during the first month after the storm, a large number of deserving cases being turned away. Typhoid fever was the most common cause of death; in spite of the large number of cases of dysentery only one proved fatal. The hospital did not suffer much from the effects of the storm, but at the lunatic asylum and leper asylum a considerable amount of damage was done. Five deaths at the asylum were attributed to psilosis. This disease was stated to be the cause of death in 41 patients in the half year in Barbados, and cases of it have also appeared in Jamaica, but some of the medical officers believe it to be rather pellagra, a form of toxic peripheral neuritis, supposed to be due to eating diseased grain.

RHODESIA.

Memorial Hospital, Bulawayo.—Mr. F. Arnold, resident surgeon at the Memorial Hospital, Bulawayo, has furnished his annual summary of admissions, diseases, etc., for the year ending June 30th, 1899, and some comments upon the more interesting features of that summary. The total number of patients admitted was 1,238, and the death-rate was 8.32 per cent. Malaria fever as usual heads the list, 472 cases having been admitted, and the death-rate was 3.6 per cent. By far the larger number of the cases were of the ordinary type, but a few cases of blackwater fever were also admitted. Both types, however, were less prevalent than last year. In the treatment of the more severe comatose forms, quinine has been administered either by the œsophageal tube, or hypodermically or intravenously. Mr. Arnold discusses the difficulty of diagnosing cases of comatose malarial fever from cases of gross cerebral disease, such as purulent meningitis, a condition which has been found more than once in patients presenting all the aspects of malaria. According to his experience, the finding of plasmodia in the blood is no guarantee that the case is one of malarial fever, since they are often found in the blood in acute specific diseases, and even in residents in apparently good health. Blackwater fever is treated on the expectant plan, as a rule, with only an occasional dose of calomel. Quinine is only given in exceptional cases. The report is accompanied by numerous tables, and by charts showing the meteorological conditions, and the incidence of malaria, typhoid, and other diseases.

NEW SOUTH WALES.

Public Health Reports.—In the beginning of 1897 the Public Health Act of 1896 came into operation in New South Wales, and the first annual reports of Dr. W. G. Armstrong, the medical officer of health to the Metropolitan Combined Sanitary Districts, and of Dr. Robert Dick, the medical officer of health to the Hunter River Combined Districts, have just been published. Dr. Armstrong deals first with the disposal and removal of refuse, and points out the improvement which is slowly taking place in this matter, but shows that much still remains to be done. The notification of infectious diseases and the compulsory disinfection of dwellings has been enforced for the first time with hopeful results. An examination of the dairies of the metropolis has revealed a rather unsatisfactory state of affairs, in many places no adequate provision being made to prevent the milk becoming contaminated with dirt and disease germs. A local epidemic of typhoid was traced to contamination of the milk by a milk vendor who was suffering from that disease. The death-rate from all causes, 15.07 per 1,000, is higher than that for the preceding four years, the increased rate being due to the extensive epidemics of zymotic diseases, scarlet fever, measles, and whooping-cough and influenza. The death-rate from tuberculous disease, 1.52 per 1,000, also shows a slight increase on the three previous years. Dr. Dick, in his report, deals at length with the notifiable infectious diseases and matters in connection therewith. Scarlet fever, while very prevalent, was of a mild type; out of 551 cases of this disease 1 only was fatal, but he calls attention to the fact that in his district there are no special isolation hospitals, hence these patients have to be treated at home, where no system of isolation and disinfection can be properly carried out. Diphtheria was most prevalent in East and West Maitland, in both of which towns the methods of dealing with refuse material and excrementitious matter are far from satisfactory. Typhoid fever prevails in all the towns embraced within the Hunter River Sanitary Districts, and in all cases can be traced to the usual defects in sanitary arrangements in a new country where there is practically no sewerage system, and the house refuse and excrement are disposed of in a most primitive way, the water supply being from tanks, often underground, and liable to contamination with sewage matter. From inquiries made, Dr. Dick found that less than 1 per cent. of children born in Newcastle District had been vaccinated, and the number of unvaccinated children and adults is steadily increasing. This, however, arises more from carelessness than any "conscientious objection" to the operation. The inspection of meat at the slaughterhouses is most imperfect in consequence of the isolation of the private slaughterhouses and the absence of public abattoirs. Several other matters of interest are touched upon by Dr. Dick.

Board of Water Supply and Sewerage, Sydney.—From this we learn that the work of extending the benefits of a permanent water supply to the newer suburbs has been vigorously carried on. With a view to preserving the purity of the water, considerable attention has been paid to the settlements on the catchment area. The analyses made by the Government analysts of the water taken from different reservoirs month by month show it to be of excellent quality, and practically free from animal and vegetable impurity. During the year some fifty additional miles of sewers were constructed, and a large increase in the number of houses connected with the sewers is reported. With the progress of the Western Suburbs Scheme the number of houses depending upon the pit and pan system is rapidly diminishing, and with the increase in the area thus efficiently drained and a purer water supply, the amount of preventable infectious disease—such as typhoid fever—has been largely diminishing. This is shown by a report on the sanitary value of the operations of the Board in reducing and avoiding the mortality from typhoid fever, and on the diminished mortality from diarrhœa and other diseases in areas now properly drained. The general death-rate in Sydney, which in 1888 was 18.92 per 1,000, fell to 13.00 in 1897.

University of Vienna.—The total number of students on the books of the University of Vienna during the last summer semester was 5,770. Of these, 1,598 belonged to the medical faculty, 1,104 being ordinary, and 151 extraordinary students, while 343 entered for special courses.

MEDICAL NEWS.

The governors of the London Hospital have received £60,000 from the executors of the late Baroness de Stern towards the establishment of a convalescent home.

The McGill University, Montreal, proposes to erect at the cost of 70,000dols. a building for its department of hygiene, pharmacology, and medical jurisprudence. In the medical department of this University Dr. T. W. Burgess has been appointed Professor of Mental Diseases.

MEDICAL VACANCIES.

The following vacancies are announced :—

BELFAST: QUEEN'S COLLEGE.—Professorship of Medicine. Applications to the Under Secretary, Dublin Castle, by September 25th.

BETHNAL GREEN NEW INFIRMARY, Cambridge Heath, N.E.—Medical Superintendent. Age from 30 to 40 years. Salary at the rate of £500 per annum, with unfurnished apartments, coals, light, and washing. Applications on forms provided to the Clerk to the Board, Bishops Road, Victoria Park, N.E., by October 5th.

BIRMINGHAM GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. Residence, board, and washing provided. Applications to the House-Governor by September 30th.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon: unmarried. Salary, £100 per annum, with board and residence. Applications, endorsed "Dispensary Surgeon," to the Secretary by October 3rd.

CAIRO: EGYPTIAN GOVERNMENT SCHOOL OF MEDICINE.—Professor of Ophthalmology. Applications, addressed "The Director, Government School of Medicine, Cairo," by October 15th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Post tenable for three months. Fee, £8 8s. Applications to the Secretary. Also Qualified Dispenser (lady). Salary, £60 per annum. Applications to the Secretary by September 30th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) Assistant Physician; must be F. or M.R.C.P.Lond. (2) Pathologist; salary, 100 guineas per annum. (3) Second House-Physician: appointment for six months; board and residence provided, and salary at the rate of £30 per annum. Applications to the Secretary by October 11th.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer, unmarried. Salary, £140, rising to £160, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, Winterton, Ferryhill, by October 3rd.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. No salary, but board, lodging, and washing provided. Eligible for senior post should a vacancy occur. Applications to the House-Surgeon by September 26th.

GEORGE HENRY LEWES STUDENTSHIP FOR THE ENCOURAGEMENT OF ORIGINAL RESEARCH IN PHYSIOLOGY. Applications to Professor Sir Michael Foster, K.C.B., New Museums, Cambridge, by October 1st.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary, £50, with apartments and board. Applications to the Secretary, 88, West Regent Street, Glasgow, by September 25th.

HEREFORD GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £25 per annum, with board, residence, and washing. Applications to the Secretary by October 2nd.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Resident House-Physician Appointment for six months and an honorarium of £25. (2) Assistant Resident Medical Officer. Salary, £100 per annum, with board and residence. Applications to the Secretary by October 10th.

HUDDERSFIELD INFIRMARY.—(1) Senior House-Surgeon; (2) Junior House-Surgeon. Salaries, £80 and £60 per annum respectively, with board, lodging, and washing. Applications to the Secretary by October 4th.

LEEDS: HOSPITAL FOR WOMEN AND CHILDREN.—Non-resident House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £125 per annum. Applications to the Secretary of the Faculty by October 7th.

LONDON LOCK HOSPITAL, Harrow Road, W.—House-Surgeon to the Female Hospital. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by October 7th.

LONDON TEMPERANCE HOSPITAL, N.W.—(1) Visiting Physician. Honorarium, 50 guineas per annum. (2) Resident Medical Officer. Salary, 100 guineas per annum, with board, lodging, and washing. Applications to the Secretary by October 7th.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary, £100 per annum, with furnished rooms, attendance, and board. Applications to the Secretary by October 5th.

MAIDSTONE: BOROUGH OF.—Medical Officer of Health. Appointment for five years. Salary, £300 per annum. Will be required to examine and look after the sources of and analyse the public waters supplied to the borough at the annual salary of £150. Applications, endorsed "Medical Officer of Health," to the Town Clerk, by September 30th.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park Place, Cheetham Hill Road.—House-Surgeon. Salary, £80 per annum, with apartments and board. Applications to the Secretary, 33, Barton Arcade, Manchester, by September 28th.

MANCHESTER: OWENS COLLEGE.—Junior Demonstrator in Physiology. Stipend, £100 per annum, rising to £150. Applications to the Registrar by September 27th.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House-Surgeon. Salary, £70 per annum, with residence, board and washing. Applications, endorsed "House-Surgeon," to the Chairman of the Board of Management by October 4th.

METROPOLITAN ASYLUMS BOARD.—Three Assistant Medical Officers (two for the Darenth and one for the Leavesden Asylums). Not exceeding 35 years of age. Salary, £120 per annum, rising to £150, with board, lodging, attendance, and washing. Applications, on forms provided, to the Clerk to the Board, Norfolk House, Norfolk Street, Strand, W.C., by September 30th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—(1) Female Assistant Pathologist: (2) Three Female Clinical Assistants. Applications to the Secretary by September 27th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—(1) House-Surgeon. Salary, £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th. (2) Assistant House Surgeon. Apartments, board, and washing to be an equivalent for services rendered. Applications to the Secretary for the former by October 9th and the latter by October 23rd.

NOTTINGHAM: HOSPITAL FOR THE INSANE, The Coppice.—Assistant Medical Officer; unmarried, and under 30 years of age. Salary, £150 per annum, with apartments, board, attendance, and washing. Applications to Dr. Tate, Medical Superintendent.

PADDINGTON INFIRMARY.—Resident Clinical Assistant and Second Assistant to the Medical Superintendent. Appointment for six months. Honorarium at the rate of £50 per annum. Further particulars on personal application to Dr. M. F. Squire, 235, Harrow Road, W., by October 2nd.

PLAISTOW: ST. MARY'S CHILDREN HOSPITAL.—Assistant Resident Medical Officer. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by September 25th.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing, etc. Applications to W. Davies, Secretary, 5, Winckley Street, Preston, by October 2nd.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Assistant Physician; must be F. or M.R.C.P.Lond. Applications to the Secretary by October 9th.

SALOP INFIRMARY.—Assistant House Surgeon. Appointment for six months, but renewable. Salary at the rate of £40 per annum. Applications to the Secretary by October 11th.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone Road, N.W.—Anæsthetist. Honorarium, £20 per annum. Applications to the Secretary by October 7th.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought).—Senior House-Surgeon at the Branch Hospital in the Royal Victoria and Albert Docks, E. Salary, £75 per annum, with board and residence, and an additional £25 per annum if certain clinical work is performed satisfactorily. Applications to the Secretary by October 9th.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Assistant Resident Medical Officer. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by September 25th.

SOUTHPORT INFIRMARY.—Resident Junior House-Surgeon and Visiting Surgeon. Appointment for six months, renewable. Honorarium at the rate of £50 per annum, with residence, board, and washing. Applications to Joseph Worrall, Infirmary Office, Cambridge Arcade, Southport, by September 30th.

SOUTHAMPTON: ROYAL SOUTH HANTS INFIRMARY.—House-Surgeon. Salary, £100 per annum, with rooms, board, and washing. Applications to T. A. Fisher Hall, by October 2nd.

STOKE ON TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Surgeon. Salary £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

TAUNTON AND SOMERSET HOSPITAL.—Qualified Assistant House-Surgeon. Appointment for six months. Honorarium of £10 10s., with board, washing, and lodging. Applications, endorsed "Assistant House-Surgeon," to J. E. W. Wakefield, Honorary Secretary, Bank Buildings, Taunton, by September 29th.

WEST AFRICA.—Assistant Medical Officer on railway staff. Salary, £30 to £35 per month; first class passage out and home. Applications, endorsed "Medical Officer," to W. Shelford, 35A, Great George Street, W.C.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard Street, Soho, W.—Third Honorary Surgeon. Applications to the Secretary by September 25th.

WESTMINSTER HOSPITAL.—Pathologist. Salary £250 per annum, and a sum of £80 per annum allowed for expenses. Applications to S. H. Quennell, Secretary, by October 1st.

YORK COUNTY HOSPITAL.—Resident Assistant House-Surgeon. Salary, £60 per annum, with board, attendance, and washing. Applications to the Secretary by September 26th.

MEDICAL APPOINTMENTS.

ANDERSON, Louisa Garrett, M.B., B.S.Lond., appointed Junior Assistant Medical Officer at the Camberwell Infirmary.

BUTTER, G., M.R.C.S.Eng., appointed House-Surgeon to the Zeehan Hospital, Tasmania.

DAVEY, Ernest L., M.R.C.S., L.R.C.P.Lond., reappointed Medical Officer of Health to the Walmer District Council.

DAVIES, W. T., M.R.C.S., L.R.C.P., appointed Medical Officer for the Llanbister District of the Knighton Union, *vice* D. W. Scott, L.R.C.P., L.R.C.S.Edin.

FORSYTH, C. E., M.B., Ch.M.Aberd., appointed Assistant Medical Officer, County Asylum, Dorchester, *vice* G. Hungerford, L.R.C.P. & L.R.C.S.I., resigned.

HITCHON, H. H. I., L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health to the Heywood Town Council.

HORROCKS, Herbert, M.D., B.Sc.Lond., M.R.C.S., L.R.C.P., D.P.H.Lond., appointed member of the Dental Board of Western Australia.

HUNGERFORD, Geoffrey, L.R.C.P. & L.R.C.S.I., appointed Assistant Medical Officer to the Wonford Hospital for the Insane, Exeter, *vice* Thomas Astbury, M.R.C.S.Eng., L.R.C.P.Lond., resigned.

MACLEAN, Madge S., M.B., C.M.Glasg., appointed House-Surgeon to the Victoria Hospital for Sick Children, Hull.

MILTON, J. Penn, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the No. 5 District of the Penzance Union.

MORSE, Edward, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health to the Torrington Town Council.

ORMEROD, E. W., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer to the Southam Union Workhouse.

PARK, J. S., L.R.C.P., appointed Health Officer for Cranbourne Shire, Victoria, *vice* Dr. M. B. Thomson, resigned.

RENTZSCH, S. H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the South District of the Stratton Union, *vice* A. H. Minton, M.R.C.S., L.R.C.P.Lond., resigned.

ROMMEIS, E., M.D., appointed Health Officer for North Freemantle, Western Australia.

STEWART, C. Parker, M.B., M.S., B.Sc.Edin., appointed Medical Officer of Health and Police Surgeon for Perth.

WILSON, T., M.B., appointed Resident Medical Officer for the Katanning District and Public Vaccinator, and Public Vaccinator for the Urban, Suburban, and Rural Districts of Katanning, Western Australia, *vice* Dr. Spencer, resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

BROWN.—On September 12th, at Woodlands, Denby Dale, near Huddersfield, the wife of George Brown, L.R.C.S.I., L.R.C.P.I., of a daughter.

HAUGHTON.—On 9th September, at 45, Lemon Street, Truro, wife of J. W. Haughton, L.R.C.P.I., of a son.

MACEVOY.—On September 19th, at 41, Buckley Road, Brondesbury, N.W., the wife of H. J. Macevoy, M.D., B.Sc.Lond., of a son.

THOMPSON.—On September 19th at 6, West Street, Scarborough, the wife of Geoffrey W. Thompson, M.D.—a daughter.

TRINDER.—On 23rd August, at Boshof, Orange Free State, South Africa, the wife of Dr. Alfred Probus Trinder, of a daughter.

WALLACE.—At his residence, 50, Park Street, Calcutta, on Sunday, August 27th, 1899, the wife of James Robert Wallace, M.D., F.R.C.S., Editor "Indian Medical Record," of a daughter.

MARRIAGES.

GLEN—BLEWITT.—On the 20th instant, at St. John's Church, South Bank, by the Vicar, the Rev. R. Roberts, John C. Glen, L.R.C.P. & S.Edin., L.F.P.S.Glasg., son of James Glen, Esq., M.D., J.P., to Louise, youngest daughter of the late Wm. Blewitt and of Mrs. Blewitt, South Bank.

GRIFFITH—WILLIAMS.—On September 19th, at St. Mary's, Risca, Edward M. Griffith, M.D., son of the Rev. E. M. Griffith, Rector of Clocaenog, North Wales, to Muriel, only daughter of the Rev. Basil Williams, M.A., Vicar of Risca, Monmouthshire.

LAING—ARMSTRONG.—On 13th September, at St. Mary's Church, Poona, by the Rev. H. Horne (Chaplain to the Forces), George Campbell Laing, M.B., C.M.Edin., Indian Medical Service, second son of Rev. G. Laing, Edinburgh, to Alice, younger daughter of the late J. S. Armstrong, Esq., Bengal Civil Service.

RICHARDSON-JONES—EVANS.—September 13th, at Holy Trinity, Chester, by the Rev. R. Richardson-Jones, Rector of Rhydycroesau, Oswestry, father of the bridegroom, assisted by the Rev. T. W. Mundy, B.A., Arthur Trevor Richardson-Jones, M.R.C.S.Eng., L.R.C.P.Lond., to Alice Annie, eldest surviving daughter of J. J. Evans, Esq., Chester.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings*

QUERIES.

P. N. asks if any reader can inform him of any compact case of instruments for the rapid performance of laryngotomy or tracheotomy?—say, during asphyxia from inhalation of nitrous oxide.

I.M.S. (1) asks if there is any apparatus for fixing sheep's eyes for the practice of the operation for cataract; if so, where can it be obtained? (2) What is the best treatment to abort a cold with running from the eyes and nose?

A MEMBER asks if any reader can tell him of a home in Scotland, not an asylum, public or private, where a patient of his suffering from incipient melancholia and who persistently refuses food could be treated. The important condition apart from the change is that he be, if necessary, forcibly fed. A fair charge could be paid.

ORTHODOX asks for any information about the use of electricity in the treatment of eczema.

DR. R. EDWD. HOWELL (Middlesbrough) would be glad of information as to a sanatorium for early cases of phthisis suitable for a head clerk who could pay from 10s. to 12s. a week.

T.B.J. wishes to know of an asylum in the North of England—private or public—taking private patients, for a lady suffering from climacteric insanity. Slightly demented; not suicidal or dangerous. Amusements and bright surroundings desirable. She can afford 30s. or £2 per week.

*** The North Riding Asylum, Clifton, near York, would probably suit the case. It is the county asylum of the district, and they take private patients.

DR. S. BELTON (Nottingham) writes: In the BRITISH MEDICAL JOURNAL of May 4th, 1895, Dr. E. Green writes about "sulphide of calcium as a prophylactic of influenza." I should be glad to know the result of extended experience in the use of this drug for this purpose.

INCOME TAX.

M.R.C.P. desires to know whether he is entitled, in making return for income tax, to deduct any portion of the rent of the house in which he lives and conducts his practice.

*** We have referred this question to the Income-Tax Repayment Agency, who write: "M.R.C.P." is entitled to deduct a proportion of the rent, rates, and taxes of the house he lives in. This should be in the proportion that the part he uses for professional purposes bears to the part he uses privately. *Income Tax: How to get it Refunded* and the special professional balance-sheets published by the Income-Tax Repayment Agency, 6, Chichester Road, Paddington, will greatly assist practitioners in making their returns, as they give full particulars as to the deductions a medical man can make from his gross receipts.

FEE FOR INSURANCE CERTIFICATE.

C. L. L., a correspondent, asks what would be a reasonable fee for giving a certificate to an employer in respect to an injury to a workman in order to enable the former to recover from an insurance society.

*** There is no recognised fee for giving such a certificate, and it probably varies with circumstances. In the case of insurance societies where the policy is for £100 or more the fee is usually one guinea, but where under that amount usually half a guinea. A reasonable fee could be recovered in county court.

ANSWERS.

NAVY BLUE should call at the chief offices of the large shipping companies in London, particularly those who have mail contracts. He will find the names and addresses of these companies in the advertisement columns in all the daily papers. We believe uniform is necessary in all the large companies.

AMICUS.—As described, there was nothing faulty in the conduct of Dr. "B." Strictly speaking, Dr. "A.'s" *rôle* would cease, as regards its inherent rights, when the relieving officer was informed; the latter would inform the justice, who in his turn would call in "a medical practitioner."

FEE FOR TAPPING A HYDROCELE.

SURGEON.—It would be impossible to specify any "usual" fee for tapping a hydrocele. If our correspondent's patients are farmers, their circumstances not unlikely vary considerably, and he is best qualified to judge what ought to be paid for such an operation, especially as the amount would probably depend in some measure on the conditions under which the operation was performed.

PARTNERSHIP.

ANXIOUS.—The facts stated by our correspondent are complicated, and the information before us is not sufficient to enable us to express any definite opinion. It may be taken as a general rule that specific performance of an agreement for partnership will not be enforced, and that the remedy for breach of such an agreement would be in damages only. If an action is brought against our correspondent under the bond, inspection of such bond could doubtless be obtained at an early stage of the proceedings. Such a bond may be valid, but without inspection we cannot say if it is so or not. It may be that an action will lie for an account, but the whole matter is involved, and the solicitor consulted by our correspondent, having all the facts and correspondence before him, will be better able to advise than we are through the BRITISH MEDICAL JOURNAL, what steps our correspondent should take in the matter.

NOTES, LETTERS, ETC.

MEDICAL OFFICER OF HEALTH AND THE PARISH MAGAZINE.

M.B., M.A. lives in a parish rejoicing in a parish magazine. He complains that the local medical officer of health utilises the print to advise the parishioners on sanitary matters, and that his signed lucubrations are copied into the local papers.

*** The medical officer of health may, we think, fairly consider himself justified in instructing the parishioners on sanitary matters, and he can hardly be held responsible for the reproduction of his articles in the local papers.

MOSQUITOS AND MALARIA.

DR. P. O'CONNELL (Stillorgan Castle, co. Dublin) writes: I concur in what is said on this subject by Lieutenant-Colonel Fairland in the BRITISH MEDICAL JOURNAL of September 9th, p. 695, and by "Retired" in the JOURNAL of September 16th, p. 760. I lived and practised for twenty five years in the Middle Western States of America, and treated many cases, some of a very severe type, of malaria, and had the disease myself more than once. I went direct from Ireland to the notoriously malarial belt of the United States, arriving in September just when malarial fevers are most rife, and hundreds in a population of 10,000 souls were suffering from these affections, chiefly tertian fever. Mosquitos were plentiful and freely bit me. In fact, newcomers from Europe are welcome guests to these nightly pests. I did not get the disease then. My first attack was in April, 1878, but during the next three years I had none. In 1882, 1883, and 1884 I had the disease. Between May, 1884, and April, 1894, when I suffered for the last time, I had no attack. The mosquito does not appear in Chicago till the end of June, and the frosts of early October kill the insect. During the summer months, when the mosquitos are such a torment at night, I was many times bitten by them, but never had the disease. I never suffered from malaria unless at night. Every attack followed exposure to night air. While driving or even walking at night mosquitos never bit me. Moreover, my wife, while bitten by mosquitos hundreds of times, never suffered from malaria. She was not exposed as I was to night air, and to this I attribute her exemption.

I know localities where stagnant pools are not found in summer time. Here mosquitos are scarce, and few persons are bitten by them, yet many suffer from malaria, and I know a tract which extends from Memphis to Vicksburg, Tennessee, a distance of about 250 miles long by 20 miles wide, on the left bank of the "Father of Waters." This valley is a heavy, rich, alluvial soil, flat and subject to overflow from the Mississippi. It is heavily wooded, and has a thick underbrush in many places. It is full of pools, ditches, marshes, and bayous. Being very fertile, it is pretty thickly settled by "whites." Here big, hungry, savage mosquitos swarm, yet malaria is hardly known there. Settlers, even newcomers there, are as healthy as elsewhere. "The trouble down here is not malaria, but malaguo," the intelligent dwellers will tell you.

With regard to the experiment lately performed by the Italian physicians, namely, having a family sleep in a cottage in a malarious locality, with windows open but protected by perforated zinc, I would say this is by no means conclusive. Perforated zinc is too close, and the cottage itself was a protection. I would suggest that the experiment be repeated by having the persons sleep in the open air in a malarious spot, with ordinary mosquito netting (consisting of open crinoline without "dressing"), or wire gauze such as is employed on windows in the United States to keep both flies and mosquitos out of houses. These protectors are sufficiently close to exclude mosquitos, but permit the air to freely circulate through them. If after a week's trial of this plan those so exposed do not develop malaria, then I should be convinced that night air in malarious districts is harmless. I am satisfied the mosquito theory does not cover all cases of malarial infection.

LIVE AND LET LIVE.

DR. J. M. CARVELL (Catford, S.E.) writes: "An Old Member," writing in the BRITISH MEDICAL JOURNAL of September 16th, very appropriately asks if the above maxim is illustrated by a large general hospital charging patients threepence before seeing the physician or surgeon of the day. Perhaps the following will help some in forming a correct opinion. A few months ago, having to visit some works in London, I noticed one of the men had a finger done up in lint; I asked him about it, when he showed me what had been a slight laceration, and said that he had been off duty some days; at the same time he produced from his pocket about half an ounce of lint, which had been given to him with some lotion. I remarked on the lavishness of the hospital in giving away so much; he replied, "I had to pay for it." I then inquired if he had a club doctor. On hearing that he had I expressed surprise that he did not go to him, and save the walk to the hospital; his explanation was, that as he had been damaged on duty the company would pay his wages, but he had to produce a medical certificate. If he went to his club doctor he would have to pay 1s. for the certificate, as the club was not connected with the works; whereas, by going to the hospital, he obtained his lint, lotion, and certificate for threepence. It certainly was mean of the man not to let his club doctor have a chance of earning a small fee. At the same time I do not think that we can blame the man for going to the cheapest market. The fault I consider lies with the hospitals—first, by giving indiscriminate relief; secondly, by entering into competition with the general practitioner.

ANTIVENENE IN SNAKE BITE.

MAJOR S. J. RENNIE, R.A.M.C. (Meerut, India), who reported a case of snake bite treated with antivenene in the BRITISH MEDICAL JOURNAL, 1896, vol. ii, p. 1501, sends us the following account reported in the *Pioneer* of August 10th, by Vindeshary Prasad Sing, Captain, Superintendent of the Maharajah's Hospital, Ramanagar, Benares: "On June

25th, Mussammat Gobindi, a Bhooja by caste, aged 30 years, was bitten by a snake 2 feet long, and a true type of cobra. She was brought to the Maharajah's hospital at 10 A.M., about one hour after being bitten. She was nearly unconscious, and people were hopeless of her recovery. Dr. Mohendra Nath Acharya, in charge of the Maharajah's Hospital, treated her with Calmette's 'antivenene,' which was bought from Messrs. Smith, Stanistreet, and Co., of Calcutta. She regained consciousness in about five minutes, and was completely cured after half an hour. She is a resident of Ramanagar, and is still enjoying perfect health."

CATERPILLAR RASH.

MISS ADA M. BROWNE (Hampstead, N.W.) writes: A microscopic examination of the hairs of the "woolly bear" will at once reveal what I believe to be the real cause of the rash. Each hair or bristle is armed throughout its length with a series of sharp spines or thorns easily detachable from the hair, and which, when the caterpillar is handled, penetrate the skin and remain embedded when the hair itself is brushed away.

The same is true of the hairs of the "palmer worm," the larva of the yellow-tail moth (Liparis auriflua), the exceedingly irritating qualities of which are pretty generally recognised, but with this difference, that in the latter the hair itself is not stiff, and the spines are curved like the thorns of a briar, to which indeed the hair presents a very close resemblance, except that the thorns are not set so closely together.

"INCOME-TAX OVERCHARGES."

THE INCOME-TAX ADJUSTMENT AGENCY (12 and 13, Poultry, London, E.C.) writes: The publicity afforded by the press to the grievances suffered by income taxpayers has resulted in an enormous increase in the amount of repayments of overcharges; but complaints are daily more frequent and bitter of the action of local Commissioners of income tax in ignoring the returns of their profits made by traders and others on the too-familiar buff form which comes with such unfailing regularity. The blue notices of charge are now being delivered, and we would ask you to allow us to inform your readers who have made returns which have been ignored, or who have been assessed for the current year at a sum greater than the average of their profits for the three years ending April 5th, 1899, that they must at once give notice of appeal in accordance with the instructions on the notice of charge. Their best course is to appeal to the "Special Commissioners," as these gentlemen are Government officials, and, not being rival tradesmen, nor influenced by personal, political, or other local feeling, may be relied upon to act with the greatest fairness. Moreover, if they find that the profits of the three years named show an average profit less than the amount upon which they paid tax for 1898-99, they should give notice of appeal in respect of that year also, and claim repayment of the amount overpaid. There is no time to lose in business appeals, while a claim to set off a loss in farming or business against income from other sources must be lodged before October 6th next. Many people are now entitled to make a claim for three years to April 5th last where the income arises from investments, even when dividends are paid "free of income tax," and the tax recoverable might amount to £38. We shall be pleased to advise your readers gratuitously whether they are entitled to any repayment, on their sending us full particulars of their incomes from all sources and a stamped directed envelope for reply.

A NEW DANGER FOR BICYCLISTS.

THE *New York Medical Journal* calls attention to a new danger for bicyclists. An extraordinary accident is reported to have happened recently at Muncie, Indiana. The pneumatic tyre of the hind wheel of a bicycle exploded, and the explosion was so severe that the rider was thrown several feet into the air and dashed unconscious to the side-walk. A physician, on reaching him, found him to be dying. The report of the explosion is said to have been audible for a great distance.

THE INDIAN OLEANDER.

MR. THOS. H. AQUINO, F.C.S., L.M.S. (Senior Inspecting Medical Officer, Bhusawal, India), writes: Speaking of the Indian oleander, I can assure Mr. Tibbles that this plant is not possessed of such subtle influence as is attributed to its European congener by Mr. Hogg in the passage quoted by him. This oleander (Nerium odorum) is a very common garden plant in India. The flowers are used by the natives as an offering to their gods, and by Europeans for ornamental purposes in vases, bouquets, and garlands. The plant—a shrub or small tree—is in blossom the whole year; the flowers are single or double, and have a dark pink, rose pink, or white colour, with a mild sweet scent—hence the name, the sweet-scented oleander. The flowers are smelled and handled freely even by children without any ill-effects, and the bungalows have often a belt of oleander bushes surrounding them, but no evil effects have been known to occur. All parts of the plant, but especially the root, are regarded by the natives as poisonous, but it has not been much employed as such for criminal or suicidal purposes. The poisonous properties are said to be due to the presence of two bitter principles, probably glucosides, namely, neriodorin and neriodorein, which have a similar action to digitalin. They also seem to exert some especial influence on the spinal cord, causing tetanic spasms, like strychnine. No alkaloid or volatile principle has been found. Medicinally the root bark has been used externally for skin diseases, such as eczema, impetigo, ringworm, psoriasis, and also for leprosy, and for chancres and ulcers on the penis; the fresh juice of the young leaves is used as eye drops for ophthalmia; the flowers bruised and kept on continuously for three days are reputed to be a cure for guinea-worm. Cattle avoid the plant, and will not even drink the water flowing from oleander plantations. It is remarkable, however, that though poisonous to men and animals the plant has no such effect upon a special kind of caterpillar which feeds upon its leaves. The plant is supposed by Hooker and other modern botanists to be a variety of the European oleander. Persian authors identify it with the oleander of the Greeks, which I suppose is no other than Nerium oleander. I have said enough to prove that the Indian oleander, though poisonous, produces its deleterious effects only when taken internally: it is not absorbed when applied to even a broken shin or the conjunctiva, nor does it give out any exhalations (the active principle not being volatile which give rise to ill-effects upon those who are exposed to its influence. The European oleander being closely allied to the Indian, if not identical with it, it may be assumed that the properties possessed by it are similar. For more detailed information I would refer Mr. Tibbles to the following works: Hooker's *Flora of British India;* Roxburgh's *Indian Flora; Pharmacopœia of India;* Drury's *Useful Plants of India; the Bombay Gazetteer*, vol. xxvi (Botany); Dr. Dymock's *Vegetable Materia Medica of Western India;* Dr. Lyon's *Indian Medical Jurisprudence;* and Dr. Chiver's *Medical Jurisprudence.*

DRUG CIRCULARS IN OPEN ENVELOPES.

F. T. M. C. complains of a circular sent him in an open envelope which states on the outside that it "contains the most recent literature on Largin, an efficient and non-irritant antigonorrhoic," and he asks what means, if any, can be used to restrain such an objectionable practice? We hope that the publicity given to this complaint will cause a cessation of a practice which is not likely to forward the interests of any firm that sends out such literature.

MEDICAL FREEMASONS.

P. M. writes: Give me space to point out to brother masons that amongst the candidates for election to the Royal Medical Institution for Girls is Iris Douglas, aged 10, the daughter of a deceased member of our profession. I would suggest that all who have votes, or can influence them, should do so solidly in her favour. We owe this to our profession.

VACCINE BLOWERS.

DR. C. PENRUDDOCKE, Public Vaccinator (Bath), writes: I am glad to find that others find the "vaccine blowers" unsatisfactory. I have given up trying to use mine, as I found it utterly useless. I now use the little glass tube, fitted with an indiarubber ball at one end, which is supplied with the stylographic pen for filling the ink reservoir, and find it answers exceedingly well.

TEMPERATURE CHARTS.

DR. REUELL ATKINSON, 50, Apsley Road, Clifton, Bristol, will be grateful to any medical men who will send him copies of temperature charts—medical or surgical.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Miss L. G. Anderson, M.B., London; Dr. R. Atkinson, Clifton; Messrs. Arnold and Sons, London; C. J. H. Aitken, M.B., Bedford; Mr. E. Archer-Brown, London **W. H.** Anderson, M.B., Birkenhead; Dr. J. Aikman, Birnam **B** Mr. T. H. Bickerton, Liverpool; Mr. W. M. Beaumont, Bath; J. W. Batterham, M.B., St. Leonards-on-Sea; Briseis Dr. H. W. Boddy, Manchester; Dr. E. G. Barnes, Eye; Mr. C. W. Buckley, London; Sir J. Crichton Browne, London; Dr. J. B. Brierley, Manchester. **C** Mr. A. J. H. Crespi, Wimborne; Dr. T. A. Clinch, Ferryhill; Cassandra; Dr. J. W. Carr, Ardgour Country Doctor; Mr. H. Crathie, Cardiff; Mr. E. R. R. Cheesman, Chewton Mendip; Mr. J. M. Carvell, London. **D** J. Dunbar-Brunton, M.B., Leatherhead; A. V. Davies, M.B., Shaws; Dr. W. H. Dickinson, Tintagel; Dr. R. E. Dudgeon, London; Delta. **E** Dr. P. Edge, Wolverhampton; Excelsior. **F** F.R.C.P.; Mr. F. E. Freemantle, London; Sir E. Fry, Clifton; Dr. W. F. Farquharson, Carlisle. **G** Mr. L. J. Grant, Edinburgh; General Practitioner. **H** Dr. J. B. Hellier, Leeds; Dr. J. Hawkes, Bournemouth; R. E. Howell, M.B., Middlesbrough; Dr. V. Harley, London; Mr. M. J. Halton, Leigh. **I** I.M.S. **J** J. B. C.; Dr. J. Johnston, Bolton; Dr. R. Jones, Blaenau Festiniog. **K** Dr. S. J. J. Kirby, Fressingfield. **M** Dr. W. Mair, Belfast; Messrs. Marshall and Elvy, London; Mr. J. C. McWalter, Dublin; M.B., C.M. Edin.; Mr. H. H. B. McLeod, Aberdovey; Malgré Malthus, M.D.; Dr. P. W. MacDonald, Dorchester; Member; Dr. K. N. Macdonald, Edinburgh; M.D.; Med. Off. **N** Navy Blue; Mr. V. H. Norman, Great Yarmouth. **O** Orthodox; Dr. P. O'Connell, Stillorgan Castle. **P** P. M.; Mr. C. Penruddocke, Bath; P. N., Pharmacist. **R** Mr. G. Q. Roberts, London; Mr. W. Rushton, London; G. L. Roberts, M.B., Carnarvon; Mr. E. J. Reid, London. **S** Dr. A. Spearing, Patricroft; Statim; S. W. W. **T** T. B. J.; T. C.; Messrs. C. Truax, Greene and Co., Chicago; T. S. **W** Mr. D. J. G. Watkins, Lincoln; Messrs. J. Wright and Co., Bristol; Mr. W. R. Williams, Clifton; Dr. H. Walsham, London; Dr J. Watson, Newbury; Mr. G. D. Wilson, London; Dr. J. K. Warry, London etc.

BOOKS, ETC., RECEIVED.

Transactions of the Dermatological Society of Great Britain and Ireland. Edited by G. Pernet, M.R.C.S., and W. T. Freeman, F.R.C.S. Vol. v. London: H. K. Lewis. 1899. 5s.

Experimental Proofs of the Rôle of Alcohol. By E. MacD. Cosgrave, M.D. London: Ideal Publishing Company. 1899.

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King's College Hospital Reports. Vol. iv. London: Adlard and Co. 1898.

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The Law relating to Infectious Diseases and Hospitals. By H. H. Cozens-Hardy. London: Hadden, Best, and Co. 1899. 7s. 6d.

A Handbook of Physics and Chemistry. By H. E. Corbin, B.Sc., and A. M. Stewart, B.Sc. London: J. and A. Churchill. 1899. 6s. 6d.

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REMARKS
ON
FINSEN'S PHOTOTHERAPY.

[With Special Plate.]

By Dr. VALDEMAR BIE,
Laboratory Assistant of the Finsen medicinske Lysinstitut in Copenhagen.

[In view of the interest excited at the Tuberculosis Congress held in Paris last year, and since then throughout the medical world, by the reports of the results obtained by Dr. Finsen of Copenhagen in lupus and some other affections by means of concentrated light, we invited Dr. Finsen to describe his methods and results in the British Medical Journal. Dr. Finsen asked his principal assistant, Dr. Bie, to undertake the task, and from him we have received the following paper. We are requested by Dr. Finsen to state that he has read the paper and fully approves of it.]

The readers of this Journal know the name of Finsen from his red-light treatment of the exanthemata of the different eruptive diseases, especially small-pox (for instance, British Medical Journal, December 7th, 1895). More recently Dr. Finsen has devised another method, applying light for therapeutic purposes; the technique of this method is now so far perfected, and it has been tried in so many cases, that it deserves to be more extensively known.

Dr. Finsen's treatment of small-pox was, as is well known, founded on the following considerations:

As the "chemical" (blue, violet, and ultraviolet) rays of light are capable of causing an inflammation (erythema solare) of the healthy skin, it might be assumed that they would equally be capable of aggravating pre-existing inflammations. In other words, if the diseased skin be protected against the injurious action of the chemical rays of light, it will be possible to diminish the intensity of the inflammation, and thus prevent suppuration. The object is therefore to exclude the chemical rays of light which are injurious to the skin. In the new way of treatment devised by Finsen these rays are now used as curative agents. The method consists in treating local superficial bacterial skin diseases by the concentrated chemical rays of light.

The experimentally proved data on which the method is founded are the following:

1. The bactericidal property of the chemical rays of light.
2. The power of the chemical rays of light to produce an inflammation of the skin (erythema solare).
3. The power of the chemical rays of light to penetrate the skin.

1. The Bactericidal Property of the Chemical Rays of Light.

The bactericidal property of light, originally demonstrated by Downes and Blunt, has more recently been studied in detail by a great many investigators. The particular question which is of the greatest interest in this connection is the following: Whether the bactericidal property is essentially attached to a single part of the spectrum or whether it resides only in the whole uncoloured light. The most trustworthy examinations have given the result that it is especially due to the blue and violet rays. This view is supported by a series of researches which I have made with the improved physical apparatus of which "Finsen's medicinske Lysinstitut" disposes. At the same time I made this subject a matter of a quantitative examination. I pointed out that only a few per cent. of the effect of the light depend on the red, yellow, and green rays, and that the ultraviolet rays have a most powerful effect, a fact not previously determined. If it is desired to employ the bactericidal property of the light therapeutically, the greatest possible number of violet and ultraviolet rays must be procured. On the other hand, the red, yellow, and green are useless.

Another condition for the advantageous use of the bactericidal property of the light therapeutically is that the bacteria are quickly killed. In nearly all the first series of researches several days, even months, elapsed before they were killed. This is, however, doubtless due to a defect in the way in which the experiments were carried out, for by using plate cultures with thin strata of nutritive media the light killed the bacteria in a few hours, and Finsen, for instance, found that on days of bright sunshine at noon in July and August in Copenhagen the sunlight killed the bacillus prodigiosus in plate cultures within one hour and a half of insolation. An electric arc lamp of 25 ampères killed a plate culture of the bacillus prodigiosus at a distance of 75 cm. from the carbon points after eight to nine hours' exposure.

Even the strongest sunlight in summer—which takes more than one hour to kill the bacteria in plate cultures, and probably still longer when they are growing in the skin—has then too slight a bactericidal property ever to be of any use for therapeutic purposes, otherwise all bacterial skin diseases would be cured spontaneously in the summer. In order to obtain a more energetic effect Finsen concentrates the light by means of apparatus, which will be described further on. It is only when the light is concentrated in such a way that it contains as many blue, violet, and ultraviolet rays as possible that its bactericidal property becomes so powerful that it can be used therapeutically with advantage. That concentrated electric light, which Finsen now uses for the treatment of patients, kills the bacteria till now examined in a few seconds when they are spread in a stratum of agar about $\frac{1}{2}$ mm. thick.

2. The Power of the Chemical Rays of Light to Produce an Inflammation of the Skin.

The old name of erythema solare (erythema caloricum) proves that this disease was supposed to be due to a too intense heating of the skin consequent on the heat that always is inseparable from the light. Widmark (Stockholm) first experimentally showed the error of this view. He concentrated the electric light into parallel rays by means of a lens of quartz, and applied them to the skin, after they had passed either through a layer of distilled water, which absorbs the ultra-red rays (dark rays of heat) or through a glass plate, which absorbs a large part of the ultra-violet rays. It turned out to be immaterial whether the light contained the ultra-red rays or not; on the other hand, the absorption of the ultra-violet rays by the glass plate prevented completely the appearance of the inflammation. The experiments of Widmark prove, then, that the ultra-violet rays are of predominant importance in regard to producing light erythema. Later researches made by Finsen have confirmed this, and further he has proved that the blue and violet rays have also the power to produce the specific photo-chemical inflammation, but in a slighter degree than the ultra-violet rays. It is still impossible to decide finally of what importance this photo-chemical erythema is in regard of treating bacterial skin diseases with concentrated chemical rays of light; but that at any rate it is not quite insignificant for the treatment of lupus vulgaris may well be considered probable, in view of the trials made of other methods of treatment which tend to cause an inflammation of the skin.

3. The Power of the Chemical Rays of Light to Penetrate the Skin.

This point has been investigated by Godneff and Finsen. Godneff with a trocar placed small sealed glass tubes with muriate of silver under the skin of dogs and cats. Then he allowed some of these animals to remain in the dark, while he exposed the rest of them to the direct sunlight. After an hour he took out the tubes; and it was invariably found that the muriate of silver was blackened in those animals exposed to the sun, but not in those kept in the dark. The chemical rays of light can then penetrate the skin. Finsen thus proved that they penetrate far more easily in bloodless tissues than those filled with blood. He placed a piece of sensitised paper on one side of a man's ear, letting the blue and violet rays of one of his apparatus for concentration of sunlight fall on the other side of the ear. After five minutes this paper was not affected; on the other hand, the paper was distinctly blackened in twenty seconds if all the blood were pressed out of the ear between two glass plates. In agreement with this is the fact that by looking into a spectroscope through an ear filled with blood you will only

discover a red stripe; if the ear is made anæmic the spectrum will consist of all the colours. Accordingly the area of the skin that is going to be treated is made as anæmic as possible; later on I shall explain how this is done.

Based as it is on these three experimentally-proved facts this method of treatment is so rational that objections can scarcely be raised against it from a theoretical point of view. In the treatment of patients sunlight is used in the summer, when the sky is bright, otherwise the light of electric arc lamps of 50 to 80 ampères. As already explained, it is only by concentration that the light becomes so powerful that its bactericidal property can be used in treatment. In order to avoid burning the skin it is also necessary to cool the light. This double object—to make the light stronger and cooler—is attained, in regard to the sunlight, by an apparatus such as is shown in

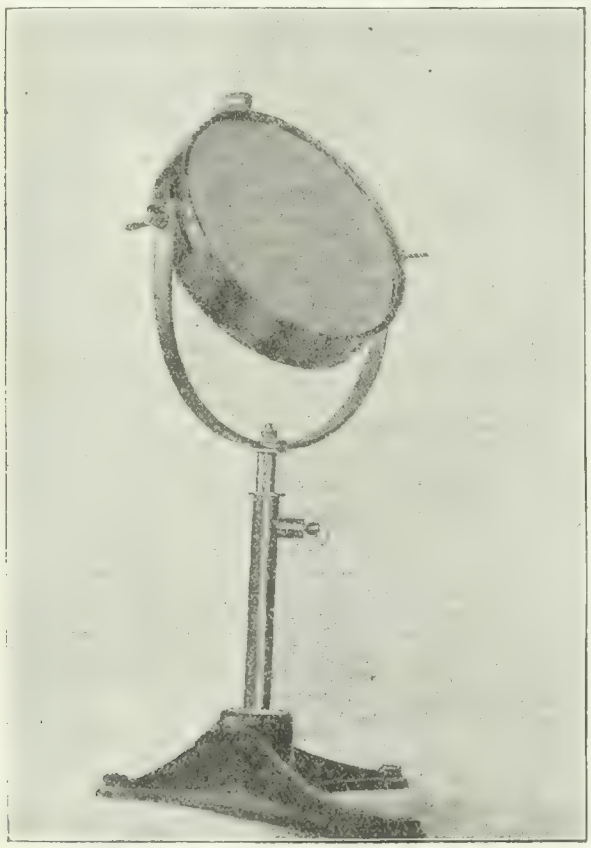


Fig. 1.—Apparatus for treatment by sunlight.

Fig. 1. It consists of a lens of about 20 to 40 cm. in diameter. The lens is composed of a plain glass and a curved one, which are framed in a brass ring, and between them there is a bright blue, weak, ammoniacal solution of copper sulphate. As one surface of the liquid is plain, the other one being curved, its optical function is that of an ordinary plain convex glass lens. By making the lens of a blue liquid instead of solid glass a considerable cooling of the light will be obtained, because water absorbs the ultra-red rays, and because the blue colour excludes a considerable amount of the red and yellow rays. These three kinds of rays have particularly strong heating effect, while their bactericidal power is insignificant. On the other hand, the blue, violet, and ultra-violet rays, which it is important to procure in as great a number as possible, are but very slightly impaired by passing throught the blue liquid. The lens hangs on a foot, made in such a way that the lens can be raised and lowered as well as turned on a vertical and horizontal axis; therefore it is easy to place the lens perpendicularly on the sun rays, and at such a distance as to make the light stike the area of skin which it is intended to treat.

Fig. 2 shows a longitudinal section through an apparatus for concentrating the electric arc light. It consists of lenses of quartz (*a*, *b*, *g*, and *n*) framed in two brass tubes (*a-e* and *c-n*), which can be moved, the one into the other, like the two pieces of a telescope. Lenses of quartz are used because this material in a far higher degree than glass allows the ultra-violet rays of shortest wave length to pass through, and it is just the ultra-violet rays that have a considerable bactericidal effect. The apparatus for concentrating the sunlight may, on the other hand, be made of glass, because all the ultra-violet rays of the sunlight have so long a wave length that they can pass through glass; those of a shorter wave length are already absorbed by the atmosphere.

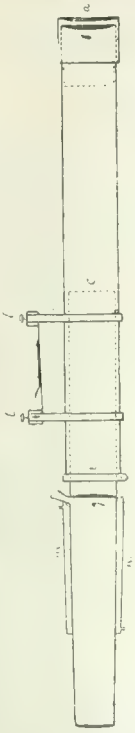


Fig. 2 (Magnification 1 : 10.)

In the part of the apparatus which faces the lamp, two lenses are placed (Fig. 2, *a* and *b*) that have together a focal distance of 12 cm.; when the apparatus is placed in such a way that the first lens (*a*) is exactly at this distance from the points of the carbons of the lamp, they consequently will concentrate the divergent rays coming from the lamp and make them parallel; these rays pass through the brass tubes, at the distal end of which they meet again with two lenses of quartz (*g* and *n*), which concentrate the parallel rays, making them convergent in such a way that they are united about 10 cm. outside *n*. Between these two lenses—*g* and *n*—there is distilled water, which cools the light by absorbing the intensely heating ultra-red rays, but does not impair the blue, violet, and ultra-violet ones. It is not possible, as in the apparatus for the sun, to make the water blue in order to cool the light further, because the extreme ultra-violet rays, which abound in the electric light, may well pass the quartz, but get absorbed by the blue colouring matters; the advantages of using the lenses of quartz would consequently be lost if the light got cold through a blue solution. Of course the distilled water between *g* and *n* gets heated by the absorption of the ultra-red rays. In order to avoid too much heating (boiling) cold ordinary water may be run through the mantle (*m m*) surrounding this end of the apparatus.

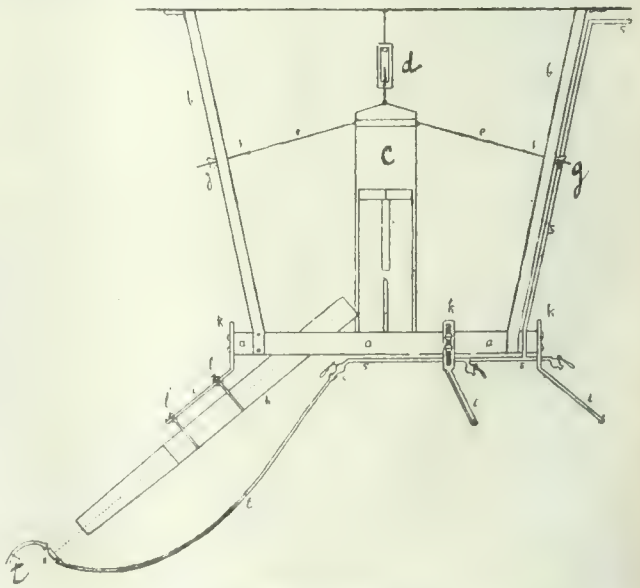


Fig. 3 (Magnification 1 : 20).

Four such apparatus for concentrating are fixed to an iron ring (Fig. 3, *a a*) round each lamp (*c*), this ring again being



Fig. 6.—Treatment by sunlight.

fixed to the ceiling by four iron supports (*b b*). The lamp is movable up and down by the mechanism *d*, and can be put exactly into the centre of the ring by the aid of four strings (*e e*), which are connected with screws (*f-g*) in the iron support. The apparatus for concentrating hangs on iron arms (*k-i*), fastened to the ring (*a a*), and hang from this at an angle of about 45°, because the lamp sends out the strongest light in this direction; the apparatus for concentrating can be put nearer to or further from the lamp by sliding on the iron arm. By this disposition the lamp and the apparatus for concentrating can be fixed so that the points of the carbons are exactly in the focus of the front lenses of all the four apparatus. The apparatus for concentrating can be revolved on a perpendicular axis and a horizontal one by three screws at *l' '*; by this they can be so placed that the axis of the apparatus gets fused with the axis of the parallel rays, so that no light is striking the brass cylinders. The distant focus can be placed at the height which suits the patient by pushing the lowest cylinder (Fig. 2, *n-c*) into the uppermost one (Fig. 2 *a-e*) of the concentrating apparatus.

Through the two forms of apparatus for concentrating already described the concentration and cooling of the light are thus affected. But the light is still too warm to be applied to the skin without hurting it; the skin must therefore be cooled in order to avoid burning. This is effected by a little apparatus (*x* in Fig. 3) shown in Fig. 4. It consists of a plate of quartz and a plain convex lens of quartz, both framed in a conical brass ring, which carries two small tubes and four arms; to each arm is fastened an elastic band, by means of which the apparatus is pressed against the skin. By making cold water run (through *s-s* and *t-t* in Fig. 3) into one of the tubes and out of the other one, the skin would be cooled to such a degree that it can stand even the strongest light. By the pressure which the plano-convex quartz lens excites on the skin this is made anæmic, so that the chemical rays penetrate it much better, as I have described already.

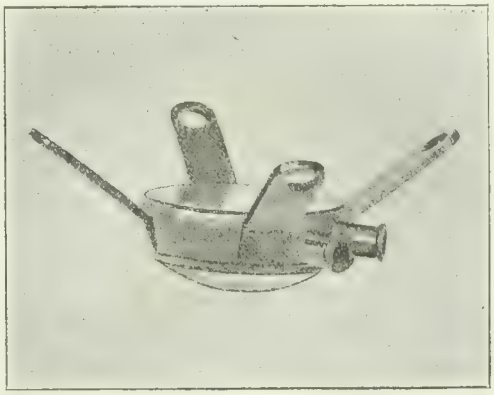


Fig. 4.

In this manner an area of skin of about 1½ centimetre in diameter is treated for one hour every day. The treated skin reddens and swells, a bulla may appear, but necrosis has never been observed. Figs. 5, 6, and 7 show the arrangement of the treatment.

We have tried to treat different skin diseases known or supposed to be of microbic origin, but it is only of lupus vulgaris, lupus erythematosus, and alopecia areata, that we have treated a number of cases large enough to estimate the value of the method.

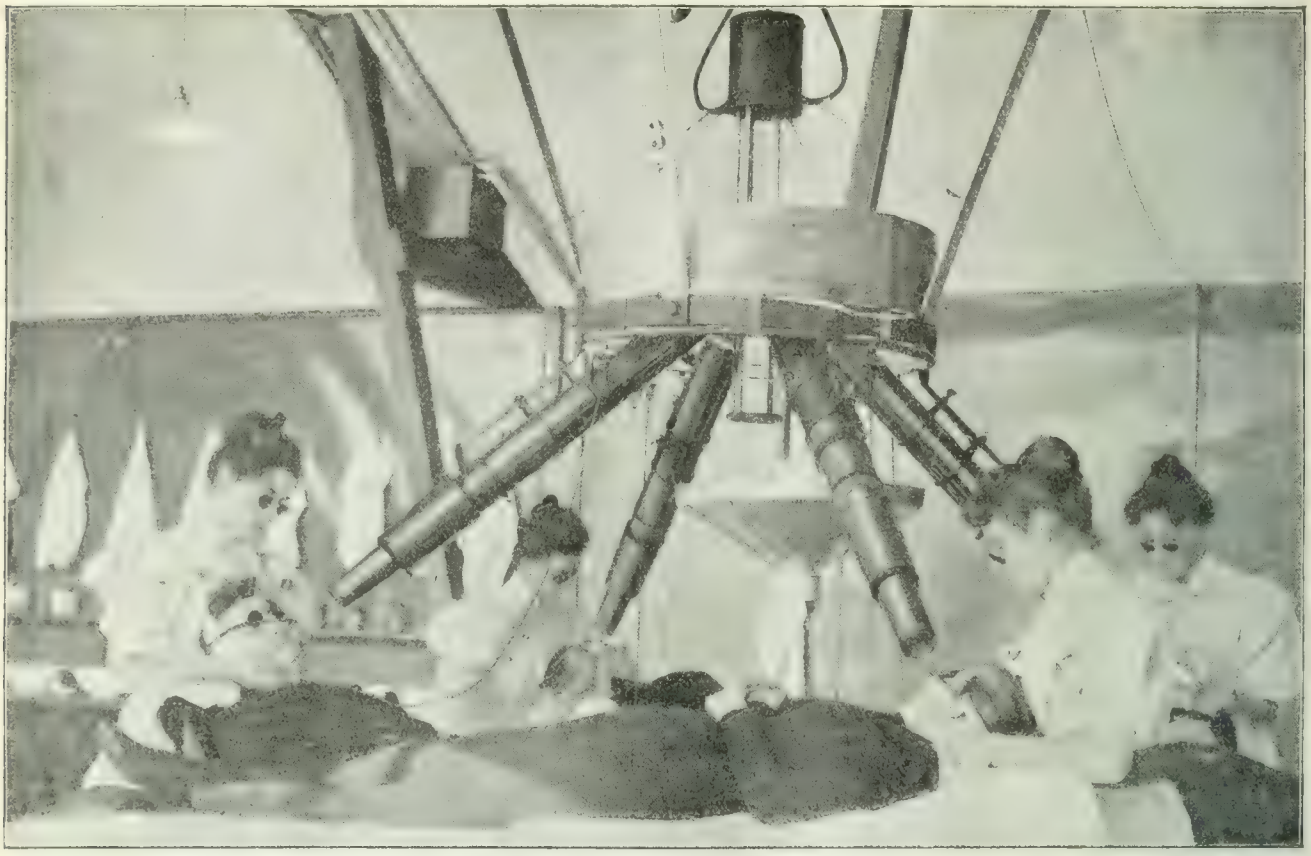


Fig. 7.—Treatment by electric light.

LUPUS VULGARIS.

Some 350 cases of this disease altogether have been treated. The first patients were treated entirely by light; the same thing is done with all the slighter cases; on the other hand, in the more serious cases the treatment by light is assisted by treatment with pyrogallic acid ointment, in order to make the skin as smooth and easily penetrable by the light as possible. While one part is being treated by light, the pyrogallic acid ointment is put on another part; when the cauterisation is healed by a zinc ointment this area of skin is treated by light; this treatment with ointment is not necessary for obtaining a good result, but it saves much time for the patient. All ulcerations are kept free from crusts by a cataplasm of a boric acid solution. The mucous membranes are touched with a solution of iodine and iodide of potassium (1 : 2 : 2), or are treated with the galvano-cautery.

For the present, at least, only the skin, the hard palate, the front part of the septum nasi, tongue, and the mucous membrane of the cheek, can be cured by this method. In none of the cases has the treatment been quite without effect, but in about 5 cases the improvement was very slow, either because the disease was progressing so rapidly that it was extending in one place while the treatment went on in another, or because the lupus was so deep that the light could only with difficulty penetrate to it. In all the 350 other cases the result of the treatment has been satisfactory. Of course it takes some time—until all the diseased tissue is thoroughly treated and the formation of scar tissue has begun—before any improvement is visible; but from the moment it begins it is continued without interruption until the last nodule of the lupus patch has disappeared. In all these 350 cases this result has been so certain and so constant that there is even reason to doubt the accuracy of the diagnosis of lupus vulgaris when this method of treatment appears to be ineffective.

I do not propose to give any statistics of the results of the treatment. Statistics are always dangerous things, and especially in this case it would be difficult not to give a wrong picture of the facts by mere numerical statement. Indeed, I think that one must not only know the number of the cases but also their nature in order to judge what excellent results this treatment of lupus yields. Among the patients that have been treated up to this time there are a disproportionally large number of severe cases, because the medical men of this country very soon gained confidence in the method, and



Fig. 5.—Treatment by sunlight.

therefore send to us a number of patients whom they had given up treating. The clinic of the institute has received all the patients who have applied except a few suffering from a very widespread lupus of the mucous membranes, and only from a localised lupus of the skin, which had nearly ceased, and had caused much destruction. Moreover, it would be



Fig. 8.—No. 192. Before the treatment.



Fig. 9.—No. 192. After the treatment.



Fig. 10.—No. 84. Before the treatment.



Fig. 11.—No. 84. After the treatment.

TO ILLUSTRATE DR. BIE'S PAPER.



Fig. 12.—No. 143. Before the treatment.



Fig. 13.—No. 143. After the treatment.



Fig. 14.—No. 177. Before the treatment



Fig. 15.—No. 177. After the treatment.

TO ILLUSTRATE DR. BIE'S PAPER.

very difficult to group the cases definitely in the categories "cured" and "not cured," if for no other reason because it is a matter of individual judgment how long a time of observation may be required. The intermedial groups: Better, much better, etc., depend too much on subjective opinion to lend themselves to mathematical computation. It must further be taken into account that until a year ago apparatus was used the bactericidal effect of which was quite insignificant compared with that of those now employed, because the lenses were of glass instead of quartz, but, of course, it would be quite unreasonable to make statistics only of the patients that have been treated during the last year.

I hope, however, that our readers will get an impression of the excellent results of the method of treatment through the following extracts of the histories, and from the illustrations.

No. 192 (Fig. 8). 30 years old. Lupus vulgaris faciei et cavitatis nasi. The patient has been suffering from lupus vulgaris fifteen years. Previous treatment: (1) cauterisation of the lupus; (2) homœopathic treatment; (3) scraping out and thermo-cauterisation during three years. The disease was progressing very slowly just before the beginning of the treatment. The extent of the disease is seen in Fig. 8. The affected places were swollen and red. Everywhere numerous nodules, partly confluent with crusts and small ulcerations, no large ulcers. A number of disseminated nodules in the healthy skin. There was an extensive but almost quiescent lupus cavitatis nasi.

June 1st, 1898. Treatment by light with a quartz apparatus and a lamp of 50 amperes one hour a day. For the mucous membrane of the nose: Compresses saturated with a solution of perchloride of mercury and touching with a solution of iodine and iodide of potassium (1 : 2 : 2) once a week.

September 30th. Steady improvement. No ulcers at present. The skin of the nose seems to be healthy. Everywhere good scar tissue; hardly any nodules visible.

October 29th. No distinct nodules. Treatment discontinued.

November 15th. (Fig. 9) Everywhere the scar tissue is smooth and but little visible. No distinct nodules.

January 19th, 1899. Letter from the patient's doctor. No relapse.

No. 84 (Fig. 10), 23 years old. Lupus vulgaris faciei, cavitatis nasi et manus dextræ, phthisis bulbi dextri; spina ventosa digiti iii sinistri. The patient has been suffering from lupus for seven years. Previous treatment: (1) ointment; (2) scraping, several times repeated; (3) touching with iodine. There was lupus on both sides of the face and of the right hand. The extent of the disease on the left part of the face was about the same as on the right half of the face, as shown in Fig. 10. The dorsum of the right hand was affected to the half of its extent, and still a part of the right fourth finger and the fifth one. The lupus consists of ulcers, covered with crusts, and of disseminated non-ulcerated nodules. The right ala nasi was almost quite destroyed.

October 18th, 1897. Light-treatment of the face, alternating every two days with lamps of 35 ampères and glass apparatus during two hours, and lamps of 50 ampères and quartz apparatus during one hour.

February 19th, 1898. Hardly any improvement.

March 8th. A slight improvement only.

April 13th. Good improvement. The apex nasi is not ulcerated. The ulcers of the cheeks are less numerous, small and superficial.

May 17th. The affection of the face is constantly improving, no ulcers, a few disseminated nodules.

June 15th. Light-treatment one hour every day with a lamp of 50 ampères and a quartz apparatus.

August 18th. The affection of the face apparently cured. No distinct nodules.

October 25th. A fine scar tissue everywhere in the face. Still a few doubtful patches. Treatment discontinued.

November 11th. The scars on the face are sound, only two small solitary nodules on both cheeks. Light-treatment a few times.

May 24th, 1899 (Fig. 11). Everywhere a smooth and pale scar tissue; the small scars are but very little marked. On the right cheek three small, fresh, and doubtful nodules; otherwise no nodules.

The right hand is treated by light (a lamp of 50 ampères and a quartz apparatus) from October 25th, 1898, till January 16th, 1899; in addition a pyrogallic acid ointment is applied five times, three days.

May 24th, 1899. The hands were covered with a smooth scar tissue still a little red, but without any nodules.

No. 143 (Fig. 12), aged 22. Lupus vulgaris faciei et laryngis. The patient has been suffering from lupus about six years. Previous treatment: (1) ointments; (2) cauterisation; (3) excision with transplantation three times; (4) scraping. The disease had been spreading quickly shortly before the treatment. The affected part was much infiltrated, of a deep livid colour. There were many irregular partly confluent ulcers, flat, with prominent granulations. The skin between the patches was thin, smooth, and shining. On the nose only a few nodules; they were somewhat more numerous on the margin on the cheeks and the lips. The greater part of the cartilaginous structure of the nose was destroyed. The upper lip was much infiltrated, the prolabium somewhat crusty, but it seemed to be free from lupus. The gums at the incisor teeth were swollen.

February 19th, 1898. Light-treatment, alternating every two days with a lamp of 50 ampères and a quartz apparatus during one hour, and a lamp of 35 amperes and a glass apparatus during two hours. Tampons with a solution of perchloride of mercury in the nose.

April 6th. Considerable improvement, less redness and infiltration, only a few ulcers. The upper lip not swollen any longer.

May 25th. Steady improvement, hardly any ulcers; the swelling and redness are disappearing; only a few nodules.

June 15th. Light-treatment every day during one hour by a lamp of 50 amperes and a quartz apparatus.

August 18th. No ulcers; only on the alæ nasi a few brownish patches; no distinct nodules. Treatment discontinued.

Next time the patient was examined, on November 15th, 1898, the skin was smooth everywhere, the scar tissue fine. There was only one nodule on the right side of the nose and one on the right cheek; these were treated a few times. Since treatment was left off in August an ulcer has developed on the right side of the prolabium of the upper lip; it is seen on Fig. 13; the photograph was taken on November 15th, 1898. The whole right part of the upper lip was swollen. This ulceration was very obstinate; it was treated during a certain time by light in December, 1898; and since then by galvano-cauterisation twice; it was also scraped once. It has now diminished to about the size of a pea.

February 2nd, 1899. A little brown nodule was observed on the left ala nasi; it disappeared by galvano-cauterisation.

May 3rd. The scar tissue of the skin is fine; there are no nodules.

No. 177 (Fig. 14), aged 65. Lupus vulgaris faciei et cavitatis nasi. The patient had been suffering from lupus for ten years. Previous treatment: scraping three times during the first year of the disease; later at irregular intervals. There was a very considerable infiltration and hypertrophied granulations. Everywhere irregular, nodular ulcers were visible, forming large, confluent surfaces, between which nodules of the size of a pea. In the neighbourhood numerous nodules and small ulcers.

April 18th, 1898. Light-treatment, alternating every two days with a quarz apparatus, and a lamp of 50 ampères during one hour, and with a glass apparatus and a lamp of 35 ampères during two hours.

From June 15th. Light-treatment with a quartz apparatus and a lamp of 50 ampères every day during one hour. The treatment was continued till October 17th. In addition pyrogallic acid ointment was used in some of the periods, when the affected parts were not treated by light, altogether six times on the right cheek, four times on the left, and once on the nose. The treatment by ointment lasted every time about three to four days.

October 17th. Treatment discontinued. There was everywhere a smooth, soft scar tissue; no distinct nodules.

December 3rd. Letter from the patient's doctor: "On the margin of the left ala nasi a tiny ulceration, covered with crusts, with doubtful nodules. The remaining part of the affected area, the nose as well as the cheeks, is covered with a smooth scar tissue."

January 13th, 1899 (Fig. 15). Note made in the clinic of the Institute. There is a smooth, rather bright scar tissue everywhere; the left cheek is the best, with only a few nodules; on the right cheek also but a few nodules; but, besides, some suspicious spots of pigmentation. On the root of the nose a couple of superficial small nodules; the soft part of the nose is a little swollen and red; there are some deep spots of pigmentation; on the margin of the left nostril a few small ulcerations. In the interior of the nose lupus still exists. Light-treatment with a quarz apparatus, and a lamp of 70 ampères one hour every day.

February 11th. Treatment discontinued.

March 19th. Letter from the patient's doctor: "Quite well at present; no sign of relapse."

The principal advantages of the method are, besides its reliability, its excellent cosmetic results, the infrequency of relapses and their slight extent, and the fact that the treatment is painless.

The good cosmetic result is due to the fact that there is no destruction of tissue, healthy or diseased. It is for the same reason that the results in respect to relapse are so favourable. One may, without harm, treat both the diseased tissue and the apparently healthy surrounding skin until one is fairly sure of having destroyed all the disease germs. When the patient has been treated till there are no distinct nodules of lupus to be seen at the moment, the treatment is discontinued, till the swelling and redness of the skin have disappeared, so that it is easier to determine whether anything is left of the disease or not. If there is nothing visible, the patient is still kept under observation. Many have, however, to be submitted to a second course of treatment. Whether the nodules which develop are the result of recurrence, or whether they could not earlier be recognised as lupus nodules, is a matter of little consequence in itself. The principal thing is that there have always till now been a few scattered nodules, which disappear after a short further course of treatment.

If the treatment is carried on for some time after the last nodule of lupus seems to have disappeared, recurrence would be more surely guarded against. The fact that the treatment is discontinued as soon as we think it justifiable to do so is due solely to the desire to save the time and the money of the patients as far as possible. Inasmuch as the efficacy of the treatment is absolutely certain, and the patients, on account of its painlessness, are very willing to submit themselves to a second course, a recurrence is not nearly so serious a matter as it is after the older methods of treatment.

LUPUS ERYTHEMATOSUS.

The treatment of this disease has in many cases given excellent results—permanent recovery and firm scars. Nevertheless, the effect of the treatment is not nearly so sure as it is in the case of lupus vulgaris. A few cases have improved

very slowly and with a constant tendency to recurrence. What the cause of this great individual difference may be it is still impossible to determine, if for no other reason because we have not a sufficiently large material (altogether only 28 patients).

ALOPECIA AREATA.

As the indication for the treatment by concentrated chemical rays of light is that the disease must be superficial, local, and bacterial, and as it is at least possible that alopecia areata is due to an infection, we have tried to treat this disease. In January, 1899, when the first experiments were published in Danish, 7 cases altogether had been cured. The following are the notes of one of the cases:

No. 65, aged 15. In the beginning of June, 1897, the patient noticed a bald spot about 1 cm. in diameter, which was steadily increasing. When the treatment began on September 3rd, 1897, there was a large completely bald spot of 6 by 4 cm. After shaving the areas immediately surrounding, the patient was treated eight times for about half an hour from September 3rd till September 24th.

October 4th. Lanugo hair on the patch.
November 5th. A normal growth of hair.
January 12th, 1898. A bald spot of 2½ by 2 cm. is seen.
Treatment five times one hour from January 12th to 16th.
January 22nd. Fine small hairs.
March 29th. The growth of hair is as vigorous as on the rest of the scalp.
October 22nd. Unchanged.

On the whole the trials made till now look promising. Whether all the fresh cases will give results as satisfactory as in that described can be solved only by further experiments. To judge from the later experiments, even the old decalvans forms seems to be curable, though only after a long treatment. Besides the practical interest attached to these experiments, they have the theoretical interest that they decidedly support the theory of the infectious origin of alopecia areata.

SIXTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899.

PROCEEDINGS OF SECTIONS.

SECTION OF ANATOMY AND PHYSIOLOGY.

Professor J. J. CHARLES, M.D., President.

THE INTERACTION BETWEEN THE OVARIES AND THE MAMMARY GLAND.

By STANLEY BOYD, M.B., F.R.C.S.,
Surgeon to Charing Cross Hospital.

THE title of this discussion is somewhat misleading; it really gives no idea of what I have to bring before you. I do not know that the breast influences the ovary in any way. Until lately I did not know that the ovary specially influenced the breast; but the cases which I am about to mention and others have shown me that the ovaries sometimes influence malignant growths starting from mammary epithelium.

In May, 1896, Dr. Beatson, of Glasgow, showed a very remarkable case, in which inoperable recurrent cancer of the breast had disappeared apparently as the result of removal of both ovaries and administration of thyroid extract. I was one of the earliest to try this treatment; but I employed the oöphorectomy alone, not giving any thyroid, at all events until the full effect of the oöphorectomy was apparent.

I will first illustrate by three cases the results of oöphorectomy in recurrent cancer mammæ.

The first case was a woman of 45, with cancer of rather chronic type. In June, 1896, in a vain endeavour to rid her of a nodule fixed to the thorax, I excised the fourth and fifth left costal cartilages, exposing the pericardium and pleura. Finding an infected gland in the anterior mediastinum, I removed it, and, feeling that the case was hopeless, I gave up the idea with which I started, of removing her great pectoral, in which there was a large nodule, and clearing out the axilla. Three months later the mass in the pectoral was larger, and the hollow left by the removal of costal cartilages had become so densely infiltrated with cancer that no cardiac impulse could be felt. Health and strength were good.

On December 22nd, 1896, both ovaries were removed, menstruation having been regular to date. Relief of pain, diminution of the general fulness of the pectoral region, and lessened vascularity of cutaneous nodules were evident after a week. In a month some skin lesions had gone, and much cancer had disappeared from the floor of the hollow over the heart, so that the cardiac impulse was again clear. The mass in the pectoral moved much more slowly, whilst some subcutaneous nodules were intermediate. In eight months all cancer seemed to have gone from the floor of the precordial depression; the last subcutaneous nodule had all but disappeared, but the pectoral nodule, reduced to the size of a filbert in its shell, seemed to be stationary. Again and again I wished I had removed the pectoral. For nearly a year it remained about the same in spite of various changes of air, excellent general health, and a short exhibition of thyroid, abandoned because it soon caused dyspnœa and palpitation. But about eighteen months after the oöphorectomy it made a fresh start and all but disappeared. In June last, twenty-eight months from the oöphorectomy, her general health and condition were perfect, and all that remained besides the scars to indicate where cancer nodules had been was a slight difference to sight and touch in the supraclavicular and infraclavicular fossæ on the bad side.

I will next describe an instance of partial success: it was one of acute cancer in a woman of 37. I removed her ovaries in February, 1897. In a week diminution of vascularity was noted, and the hindermost of the three lowest nodules was the smallest, whereas it had been the largest. Disappearance of all lesions went on quickly. In a month the gland above the clavicle could no longer be seen, and the ridge below the clavicle had subsided, because the nodule which raised it was reduced to a mere plaque. Flesh was put on and strength gained. Six months after oöphorectomy there was nothing unhealthy in her appearance, and her chest wall seemed free from cancer. But careful inspection showed faint pink spots where nodules had been; they were slightly thickened, and reddened on handling. I could feel no enlarged gland, and only indefinite thickening at the site of a nodule in the pectoral. But while improvement was occurring in many parts, it was not so everywhere; a fresh nodule had appeared near the scar. For three months a growth in the left breast had diminished markedly, and a gland above it had disappeared; it had now trebled its size, and three glands could be felt above it. She continued to gain flesh (12 lbs. in all) and strength for another two months, although recurrence was taking place in old and some fresh sites. Thyroid was now given for a month, the only obvious result being the loss of 5 lbs. She died seventeen months after the oöphorectomy, with very numerous subcutaneous nodules and growths in liver and left clavicle.

Lastly, I will describe a failure.

Mrs. B., 46, three years' growth; whole breast involved and very large, affecting the skin widely, fungating and sloughing freely, and adherent to the pectoral; the axilla blocked by a hard mass, not quite fixed to the chest wall; great weakness and cachexia; no evidence of visceral growth. I performed oöphorectomy, and removal of breast and pectoral, and clearing out of axilla. Unfortunately the wound suppurated. Recurrence took place before it healed, and although considerable improvement in health resulted at first she died ten months after the operation.

Dr. Beatson has recorded a case of complete disappearance, and Dr. Herman two cases, and marked improvement occurred in a case of Beatson's and in one of Watson Cheyne's—7 cases out of a total of 17, which includes all the cases of the surgeons mentioned as well as my own. So this atrophy seems to occur not very rarely, but the numbers are too few for any accurate estimate.

Now, in all these cases, other than my own, thyroid extract was given after the oöphorectomy, so it is necessary to consider whether it is an important factor in producing the result. It cannot be essential, because as great success can be obtained without it as with it, as I have just shown. Dr. Beatson added thyroid to the oöphorectomy as a "power-

ful lymphatic stimulant" to aid in the absorption of the cancer masses undergoing fatty degeneration as a consequence of the oöphorectomy. Does it increase the lymph flow? Does it not rather depress the heart force?

I have never seen any but the slightest evidence of its beneficial action in cancer, nor have I read of any convincing evidence. But Page and Bishop's case[1] makes me hesitate to conclude that thyroid has no effect in cancer. The patient was 61, the subject of recurrent mammary cancer. After thyroid had been taken for some months the nodules ceased to grow and seemed softer; but, later, a fresh one appeared and grew; and no nodule seems to have disappeared during the year or more that she was under observation. She was then lost sight of for a time, but continued taking the drug. At the end of eighteen months she turned up again, all the nodules having gone in the interval. Such a result, and the account given of the case, do not suggest to my mind the steadily continued or increasing action of a drug; but as the only alternative is to assume that the case was one of spontaneous disappearance I hesitate to adopt it. Assuming that the oöphorectomy is the essential factor in inducing atrophy of cancer, we have four cases of complete, or almost complete, disappearance, and three of marked diminution of cancer masses out of 19 recorded cases. A study of these cases shows:

1. The ovaries removed have usually seemed healthy.

2. That results are not uniform: some are successful, some partially so, some quite unsuccessful. Non-success seems to be connected with: (1) presence of much cancer; (2) affection of bones and viscera; (3) long cessation of menstruation, or rather with the ovarian changes indicated by this; and (4) cachexia. But there is something else required to account for some of the failures.

3. *As to Type of Disease.*—No really acute case has shown the maximum of benefit; but for six months marked improvement occurred in my case No. 2, aged 37, in whom the total known duration of the disease was two and a half to three years. The most successful cases were of four to seven years' growth up to the oöphorectomy.

4. *Age.*—The extreme ages of the patients were: 33 in Beatson's No. 1; 49 in Herman's No. 2.

5. *Relation to Menopause.*—This patient of Herman's had for six months been irregular, and for three months had seen nothing. This is the only case known to me of improvement from oöphorectomy apparently after the menopause.

6. *Influence of Seat of Secondary Nodules.*—Growths starting from mammary epithelium are not uniformly affected by oöphorectomy. Speaking generally, those in skin and subcutaneous tissue are most readily affected by oöphorectomy; then infected glands, then growths in the breast itself. Muscle nodules grow slowly, and I know of no proof that growths in bones or viscera are affected at all. Even neighbouring growths in the *same* tissue do not disappear at the same rate.

7. *Duration of Action.*—Sufficient time has not yet elapsed to determine whether any of these disappearances of cancer may be permanent. My first case showed no sign of relapse when I saw her twenty-eight months after oöphorectomy. In Dr. Beatson's No. 1 relapse began at twenty-five months. When relapse occurs there is a great tendency for nodules to reappear upon old sites, as if some cells had remained dormant at these spots. In some cases—for example, Dr. Beatson's No. 1—the recurrences have developed very slowly, as if held in check or resisted by the tissues; and I think I have noticed the same retarding influence in the case of growths which have not disappeared after an oöphorectomy. But it is, of course, impossible to be certain of this.

8. *Mode of Disappearance.*—Dr. Beatson shewed that diminished vascularity of cancer nodules, coupled with loss of pain, was the earliest effect of oöphorectomy. By excising shrinking nodules he demonstrated that they were undergoing rapid fatty degeneration.

9. *Effect upon Cancers other than Mammary.*—Uterine cancer has in several instances been treated by oöphorectomy. Diminution of hæmorrhage and of sepsis have been the most favourable results obtained. And yet one would have supposed that the association of the ovary and uterus was closer than that of the ovary and breast.

[1] *Lancet*, May 28th, 1898.

So far as I can ascertain them from the scanty material at present available, these are the chief points in the case which I have to lay before you. The practical importance of the matter is self-evident.

I think you will agree with me that *in some cases* of recurrent cancer of the breast, removal of the ovaries induces atrophy of the cancerous growths. The main question I wish to submit to you is how this may be brought about. I would particularly ask for suggestions as to the experimental solution of the problem. There is hardly anything in the abdomen which is not removed, intentionally or unintentionally, nowadays; and there can be no doubt but that a careful noting of the results of operations would convert many of them into useful experiments.

My own working hypothesis has been that the internal secretion of the ovary probably exercises an important influence upon all the cells of the body; that this internal secretion may vary in quality, pathologically if not physiologically; that when varied in some unknown way the ovarian secretion favours the growth—possibly even the action of the cause—of cancer, influencing either the invading epithelium or the resisting mesoblastic tissues. The removal of ovaries of which the secretion is thus faulty would leave the tissues unhampered, and might turn the scale in their favour, at least for a time. On the other hand, the removal of ovaries secreting normally would have no effect upon the cancer present. I am aware that this theory does not explain everything, but I will not spoil the discussion by pointing out the difficulties.

Discussion.

Dr. Maybury pointed out the importance of Mr. Stanley Boyd's paper and the necessity of further observations.

Mr. Roger Williams considered that there was no scientific basis for oöphorectomy in the treatment of cancer of the breast; it was an empirical experiment, which he thought had hitherto failed to justify itself. Inasmuch as most of the patients in whom cancer had thus been treated were past the climacteric, he held that the physiological interaction between the ovaries and the mammæ had little to do with the matter. It was evident that in certain cases of malignant disease the difficulties in diagnosis were very great. Probably some cases of alleged cure of mammary cancer after oöphorectomy were of this nature. It had also to be recognised that in certain exhaustive illnesses attended by much debility cancerous diseases were often retarded, and even appeared to wither and dry up shortly before death. Among the conditions alleged to induce this were long-continued suppuration, progressive tuberculous lesions, certain septic diseases, syphilis, and privation, as well as simple laparotomy, injections of tuberculin and of thyroid extract. Certain of Mr. Boyd's cases, he thought, probably belonged to this category.

Professor R. J. Anderson (Galway) thought that disease or destruction of the ovary in early life prevented the proper development of the mammæ; diminution in the activity of the ovary was attended with a diminution in the activity of the mammary gland.

Mr. Cantlie agreed with Mr. Boyd both on the physiological grounds of the operation and with the operation itself; the more active the ovary the more acute was the cancer; loss of the physiological function of the ovary, as in old women, was associated with a cancer of a more chronic nature. In fact cancer, when the ovary was functionally active, was a question of months; when the function was lost, a question of many years.

Dr. Pembrey referred to the effects of removal of the ovaries upon the body; such experiments showed how great was the influence of the ovary upon the growth of the body, and even in adult animals spaying produced a marked influence upon the exchange of material in the body. There appeared, therefore, to be a scientific basis for the operation of oöphorectomy in the treatment of cancer in the breast.

Professor Charles said that the disappearance of nodules of cancer from the mammary gland after oöphorectomy reminded him of the absorption of the prostate gland after castration. The cause of this interaction could not be fully explained, but it only bore out the view that every part of the body interacted to a greater or less extent on every other part. Whether this was the result of some chemical change in the blood or reflex nervous action it was difficult to say.

Mr. BOYD, in his reply, wished it to be understood, in the first place, that he did not allege cure in the cases he had quoted. With regard to the question of diagnosis raised by Mr. Roger Williams, the cases described seemed to him to be quite typical cancer, and in Case II death had occurred in the usual way, after the atrophy of cancer nodules in the breast had taken place. The atrophy could be in no way explained by debility, for none was induced by the oöphorectomy. Patient No. 1 was always well-nourished and strong, but No. 2 was much stronger and better nourished when she got up after the oöphorectomy than when she went to bed; and both patients improved steadily in health as the cancer disappeared. In Mr. Boyd's experience cancer did not cease to grow as the patient became more emaciated: and it was remarkable what excellent general health often accompanied chronic cancer. As to abdominal cancer occurring after ovariotomy, Mr. Boyd believed that these cases were due to infection; and that epithelial infection could result from an apparently simple cyst. He said that this view received strong confirmation from Dr. Lambert Lack's experiment on a rabbit, mentioned in a recent number of the BRITISH MEDICAL JOURNAL.

ON THE INTERACTION BETWEEN THE OVARIES AND THE MAMMARY GLANDS.

By AMAND ROUTH, M.D., B.S.,
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IN addition to the internal secretion of the ovary and of the mammary gland, each of these organs has a special function, ovulation and lactation respectively.

By studying these two functions separately and in combination, one may perhaps be in a position to ascertain whether there is any interaction between the ovaries and the mammary glands.

The following questions should be easily answered:

1. Can ovulation occur in the absence of the mammary glands?
2. Can lactation take place in the absence of the ovaries?

1. *Can Ovulation occur in the absence of the Mammary Glands?*

I do not know of any cases where both breasts have been removed in a woman during active sexual life, but it is probable there are such cases recorded, and it is probable, too, that both menstruation and ovulation would be unaffected.

Paul Bert's[1] experiment on two ewes proves that ovulation and conception may take place, in ewes at all events, when the breasts are removed, and it has a special bearing on the secretion of milk also.

Experiment.—Paul Bert removed the mammary glands from two ewes, and after the wounds were healed put them to a ram, and they became pregnant, proving that the function of ovulation was being duly performed. During pregnancy the urine was free from sugar, but after delivery it contained sugar for several days, and then it gradually disappeared. The urine from two normal ewes after delivery contained no sugar.

Paul Bert believed that the milk sugar is formed, not in the mammary gland, but in other parts of the body, probably in the liver.

2. *Can Lactation take place in the Absence of the Ovaries?*

Full-term gestation and lactation proceed normally after complete double ovariotomy. This is abundantly proved. Numerous instances of this are recorded, but the following will suffice:

In the case recorded by Dr. Lapthorn Smith,[2] full-term delivery occurred 267 days after operation, and lactation was normal. Two cases of Mr. W. A. Meredith[3] were also reported to the Obstetrical Society of London, where gestation lasted the full period—in one case 301 days from the last day of the last period, and the other was slightly over the nine calendar months. They both nursed their children without any evidence of abnormality. The answer to these two questions therefore seem to be, first, that the removal of both mammary glands does not interfere with ovulation; and, secondly, that the removal of both ovaries does not interfere with lactation.

A further question may now be asked:

3. *Is there any Evidence pointing to the Mammary Glands being Affected by States of the Pelvis?*

In normal physiological conditions, it is fairly certain that functional activity of the mammary glands is usually manifested during temporary abeyance of ovarian function, as in pregnancy and lactation, but that mammary-gland activity may continue while the function of ovulation is also proceeding is shown by cases of superfœtation, tubal gestation coexisting with normal gestation of a different date, pregnancies of different dates in the two horns of a double uterus, as well as by the fact that ovulation not infrequently recommences during lactation, so that conception may take place without menstruation having recurred; and Gillet, of Toulouse,[4] states that milk secreted during menstruation is more dense and more rich in fat and less rich in sugar.

In pathological states of the pelvis there is no doubt that the mammary glands are greatly affected by pelvic congestion, and evidence tends to show that functional activity, or in other cases chronic hypertrophy of the mammary glands, may occur more as a result of uterine rather than of ovarian conditions.

Several curious cases of enormous hypertrophy of the mamma have been recorded associated with uterine disease. Dr. William Aitken[5] describes one such case—Case II in his paper—where the vaginal portion of the cervix uteri was elongated and catarrhal. A somewhat similar case was described by my father, Dr. C. H. F. Routh,[6] at the International Medical Congress at Brussels in 1892, where bilateral hypertrophy of the mammæ occurred in a young woman whose infravaginal cervix was found to be 6 inches in length. The cervix was amputated and the mammary hypertrophy gradually but completely disappeared. M. Bouyer,[7] of Saintes, describes a case of enormous sudden hypertrophy of both mammæ in a girl of 15, following arrest of the catamenia. She was not pregnant. Her right breast weighed 20½ lbs., left 30½ lbs., whilst the patient herself weighed 101 lbs. Another case shown to the Académie des Sciences, Montpellier, in 1878,[8] had also enormous hypertrophy of both mammæ following a cold bath at the onset of her catamenia when 15½ years of age.

The following statement by Dr. W. S. A. Griffith has been recently published and bears on the same point: "There is a direct connection between septic conditions of the uterus and a form of mastitis, a connection which, when first pointed out to me, I was slow to admit, but of the fact I have now no doubt; and in every case of pyrexia with a blush on the breasts I would urge the importance of examining the interior of the uterus, where frequently we shall find some putrid clot or remains of placenta. The removal of this, followed by thorough irrigation of the uterus with an efficient antiseptic, leads to a rapid disappearance of the so-called 'breast symptoms.'"

Assuming, then, that there is an interaction between the uterus and the mammary gland, how is this influence initiated, and how is it conveyed to the mammary gland? I have shown how the uterine state influences the mammary glands, and the following cases tend to show that the influence is not conveyed through the nervous system, but through the circulation.

A case of paraplegia in pregnancy reported by me in *Obs. Soc. Trans.*, vol. xxxix, 1899, p. 191, proves that lactation was not induced in that case by the conveyance of nervous impressions from the pelvis to the mammary glands along the spinal cord. The woman, when six months pregnant, fractured her spinal column, and was paraplegic below the level of the sixth dorsal vertebra. She was confined about full term (261 days) without assistance, but with no sensation of pain. Involution was normal, and so also was lactation. She subsequently died, and investigations by Dr. F. W. Mott, Dr. Pembrey, and Dr. William Hunter showed that the spine had been broken completely across through the intervertebral disc between the fourth and fifth dorsal, the two broken ends overlapping at an angle of 135°. At the seat of the fracture the microscopical sections could not have been recognised as those of a spinal cord, both grey and white matter being completely disorganised and the degeneration complete.

A somewhat similar case is related by Dr. Mercier,[9] where,

though paraplegia was present due to cancer involving the dorsal region of the spinal cord, both gestation and lactation were absolutely normal.

These cases tend to show that there is a chemical or biochemical influence present between the pelvic organs and the mammary glands, and that this must be conveyed through the blood, so that it is possible that the internal secretion of the uterus may be the origin of this influence. Moreover, Michael Foster states that milk is secreted when the mamma is deprived of all connection with both the spinal and sympathetic system, though the nipples are not then capable of becoming erect.

It is known that the mammary glands are called into functional activity, milk often being secreted when an ovum dies *in utero*, even before it is expelled.

These facts tend to show that lactation is due to some chemical change in the blood which, in a normal gestation, is produced within a short time after a gravid uterus ceases to contain a living fœtus, whether it be at once expelled with its placenta and membranes, or remain for a time *in utero* as in missed abortion or missed labour.

There is more or less sudden cessation of nutritive requirements previously needed by the fœtus, and probably a correspondingly sudden absorption into the maternal circulation of waste products involved in the separation of the placenta and in the process of involution. The biochemical change is almost certainly in the uterus and not in the ovaries, and is practically an internal secretion. There seems no evidence in favour of any essential interaction between the mammary glands and the ovaries.

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[1] Sur l'Origine du Sucre du Lait, *Comptes-Rendus*, t. xcviii, No. 13, and Hermann's *Lehrbuch der Physiologie*, 10th A., 1892, S. 174. [2] *Am. Gyn. Soc. Trans.*, 1896, vol. ii, p. 79. [3] *Obst. Soc. Trans.*, vol. xxxiv, 1892, p. 239. [4] *Practitioner*, June, 1899, p. 714. [5] *Med. Times and Gazette*, April 11th, 1857, p. 359. [6] Sur quelques Maladies de la Matrice Considerées comme Causes des Maladies Sérieuses des Mamelles: Report of Gynæcology and Obstetrics, International Medical Congress, Brussels, 1892, p. 494. [7] *London Journal of Med.*, 1851, vol. iii, p. 945. [8] *Med. Times and Gazette*, November 23rd, 1878, p. 608. [9] Paraplégie Cancéreuse et Accouchement, par M. R. Mercier (de Tours), *Bulletin de la Société d'Obstétrique de Paris*, 1899, p. 164.

ON THE LOBES OF THE LIVER.

By James Cantlie, M.B., F.R.C.S.,

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The object of this paper, which has been published in the *Journal of Anatomy and Physiology*, is to demonstrate that the gall bladder occupies a central position in the liver; that on either side of it lie the true right and left lobes of the liver, and that a line from the fundus of the gall bladder to the exit of the hepatic veins divides the liver into equal portions, as shown by injections, by weighings, by developmental, by pathological, and by clinical observations. In other words, that the present anatomical division into right and left lobes by a line drawn along the longitudinal fissure (the fissure for obliterated umbilical vein and ductus venosus) is unscientific, and consequently untrue and untenable.

Professor Francis Dixon thought that Mr. Cantlie had certainly made the very best case possible from the evidence he had brought forward. The weakest points appeared to be the absence of evidence derived from a study of comparative anatomy, and from a study of the embryonic history of the human liver. There was not any evidence that the human liver was derived from two distinct outgrowths, each of which gave rise to either the right or left portions of the organ, which Mr. Cantlie had described. Again, according to the results brought forward by Professor A. Thomson at a recent meeting of the Anatomical Society, evidence was often to be found in the adult human liver, and in the livers of anthropoid apes indicating that the organ was composed of a number of lobes. These did not correspond to the right and left halves described by Mr. Cantlie. It would seem that Mr. Cantlie's results, obtained by injection experiments, were capable of explaining the surgical and pathological observations which he had recorded.

Professor Charles thought that a *primâ-facie* case had been made out in favour of a change in the nomenclature of the liver.

THE CAUSES OF THE ENTRANCE OF OXYGEN INTO THE BLOOD IN THE LUNGS.

Professor Charles (the President) opened a discussion upon this subject. It was, he said, one about which much difference of opinion existed. Many physiologists, accepting the results obtained by Pflüger and others with the aërotonometer and gas pump, maintained that the tension of the oxygen in the air of the alveoli was greater than in the blood in the lungs, and consequently that the gas passed inwards in accordance with the laws of diffusion. On the other side there was the "vitalistic" theory, supported by Bohr, Haldane, and Lorrain Smith; by these physiologists it was maintained that the tension of the oxygen in the blood of the lungs was greater than that of the oxygen in the air cells of the lungs, and that the epithelial cells of the lungs secreted oxygen from the air in the lungs, and excreted carbon dioxide from the blood. After a consideration of the various criticisms of these rival views, Dr. Charles was convinced that the entrance of oxygen into the blood in the lungs depended, first, on diffusion, supplemented and modified largely by the indirect agency of the chemical affinity of the hæmoglobin in the corpuscles; and, secondly, in all probability, on the secretory activity of the endothelial wall of the alveoli and of the capillary walls.

Dr. Maybury, Mr. Norris, and Professor R. J. Anderson asked questions upon the evidence for the rival theories.

Dr. Pembrey criticised the "vitalistic" theory; the attempt to explain difficulties by the use of a mystical term such as "vital force" or "vital activity," was, he thought, to be condemned. In the lungs there was a membrane, the physical and chemical structure of which were unknown; it was premature, therefore, to maintain that physical and chemical means were insufficient to cause the passage of oxygen through this membrane into the blood.

THE EVIDENCE FOR AND AGAINST THE TRANSMISSION OF ACQUIRED CHARACTERS.

By G. Archdall Reid, M.B.Edin.,

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The question as to whether or not acquired characters are transmissible has been debated long and hotly in every branch of biological science except the medical. The plant and animal kingdoms have been ransacked, and no single instance of the transmission of an acquired character has yet been proved. As a consequence, most people who have given attention to the subject now believe that acquired traits are not inherited; but medical men, whose attention as a body has been otherwise occupied, believe they are, and are apt to greet with real astonishment, and even amusement, any assertion to the contrary.

The question of heredity is emphatically one of physiology, and both from a practical and theoretical standpoint is probably the most important question that can be submitted to it. Nevertheless, so far as I am aware, no textbook of physiology discusses it, and not only the masses of our profession, but the leaders even, seem unaware that there has been any question at all. Very rarely has a medical man any clear idea as to what constitutes an acquired character or what constitutes transmission of it. Evidences of this unedifying state of things abound in medical literature. In a recently-published edition of a celebrated dictionary of medicine one great authority quotes, with approval, the opinion of another, who declares that, since the aged are more gouty than the youthful, therefore children born to old men are probably more liable to gout than the offspring of younger individuals. Neither of these gentlemen appears to have had the least notion that their assumption is disputed.

A writer on rejuvenescence in a principal medical journal proposes by means of electricity "faultlessly applied" to the heads of the fathers to prolong the lives of the children. One university professor explains to another that righthandedness is probably due to the greater ancestral use of the right hand

as compared to the left. An ophthalmic surgeon advises his students to pay more attention to the eyes of the young than of the old, for, says he, the old have had their children and cannot transmit their afflictions, whereas the young can. A practitioner records that a lady frightened by a hare bore as a consequence a child with a harelip. Often when one thing is acquired by the parent, and a totally different thing appears in the child, we are told it is a case of transmission; and lately a medical debater sought to prove his case by declaring supernumerary toes were transmissible. I need hardly say that supernumerary toes are as little acquired and as much inborn as heads and bodies.

Inborn characters may be defined as such as result from the constitution of the germ, in which they lie latent, so to speak. Thus, arms and legs are inborn characters resulting from the germ's constitution. A man's limbs, therefore, differ somewhat from a dog's limbs because the constitutions of their germs are somewhat different. Moreover, if the germ be so constitutionally changed by changes in its surrounding medium, the somatic cells, for instance, that it proliferates into a being different to what would otherwise have arisen, these alterations are still to be regarded as inborn. Thus, if a man's germ be so changed that as a result he has six toes instead of five, the sixth toe is still to be regarded as an inborn, not as an acquired, character. On the other hand, acquired characters may be defined as such as result from changes, not in the germ, but in its descendant cells. On the germ, therefore, can be impressed inborn characters, but after it has ceased to be a germ there can be impressed on the resulting mass of cells only acquired characters.

It is admitted on all hands that inborn characters are transmissible from parent to child. Thus everyone admits that heads and arms are transmissible. Even recent inborn characters, such as supernumerary toes, are admittedly transmissible, though with less certainty than ancient characters. The transmission of acquired characters is disputed. As I say, while nearly all medical men firmly believe in their transmission, the majority of biologists do not. If medical men are right, then, as physiologists, their chief concern is to explain how this alleged transmission occurs. So far as we are aware, the germ cells are indebted to the other cells for shelter and nutrition only. It must, therefore, be carefully borne in mind that the different parts of a man's body do not take origin in similar parts of the parent's body. His head is not derived from his parent's head, his arms from his parent's arms, and so forth, but the whole of him takes origin in a single cell of the parent—the germ.

Surely this consideration renders unbelievable the hypothesis that acquired characters are transmissible. Suppose, for instance, a man works till his arm muscles enlarge, or suppose he injures his eye, or receives such injury to his brain that epilepsy supervenes, then, if his acquired character is to be transmitted, his spermatozoon, situated far distant, must be so structurally altered, so profoundly modified in a particular direction, that, after long separation from the parent organism, it will proliferate into an organism which has inborn the peculiarity which the parent acquired. By what machinery can this modification of the germ cell be brought about? It must be clearly understood that it is not denied by anyone that changes in the soma may so influence the germs, may so change them, that the organisms into which they subsequently proliferate will be changed also. What is denied is that changes in the soma can affect the germs in such a *particular* manner as to cause them, after proliferation, to reproduce as inborn characters the peculiarities the parent acquired. Such transmission on the face of it seems impossible, and, did it occur, would be nothing short of a magical act, transcending all we know of Nature.

These matters, with very much more bearing on the subject, have been threshed out in the biological world, and, as I say, no single transmission of an acquired character has ever yet been proved. What have medical men to say to all this? Why they say, quite calmly and confidently, that the clinical experience of ages proves the transmission of acquired characters. It appears, therefore, that while the greatest scientific conflict of modern times has been raging, medical men have been sitting apart in their tents in the quiet possession of evidence f inestimable value, evidence which the greatest thinkers of modern times have sought for high and low and over the whole world.

Most of the medical evidence in favour of the alleged transmission of acquired characters has been drawn from the study of alcoholism and disease. This evidence I have not time to handle here; it can be discussed more appropriately in the Sections of Psychology and Pathology, where I hope I shall have the opportunity of dealing with it. I think I shall be able to prove that, when carefully examined, it tells decisively against the Lamarckian doctrine. Some medical evidence has been furnished by mutilations. Occasionally, for instance, we see a communication in a medical journal recording the case of a parent who, having an injured finger or eye, has for offspring a child congenitally malformed in finger or eye, the implication being that the deformity is a consequence of the lesion. Not uncommonly such a letter is followed by a second from a deriding biologist, recording a somewhat similar case in which, however, the parent sustained the injury after, not before, the birth of the child. The case for the transmission of mutilations is indeed hopeless, and has long been abandoned except by those who are not in the swim. Cases of apparent transmission of mutilations are in fact so rare, that they may all be ascribed to mere coincidence. Consider how long the mutilation of dogs and horses has been practised, and that every woman that has borne a child has had her hymen ruptured. How often are these lesions reproduced?

One matter of importance to the physiologist I may draw your attention to before I end. An amount of exercise more than ordinarily gives an extra development to the blacksmith's arm. This extra development we call acquired. But to exercise, similar in kind though less in degree, is due the development of the ordinary man's arm; for, when deprived of exercise—as by infantile paralysis or joint disease—the baby's arm does not develop into the adult arm. It remains infantile, or rather it undergoes atrophy, and even retreats from the standard attained by fœtal movements *in utero*. Therefore all that separates the infant arm from the adult arm is acquired. The same is true of the legs and brain and of most of the structures of the trunk. They grow through the strain of use, and their growth is therefore an acquirement. Consider, then, how vast are man's physical acquirements.

Again, at birth the infantile mind is blank. Subsequently how immense are man's mental acquirements. For instance, every single word of a language and all else that memory contains are acquirements. Temperament and disposition are largely moulded by the environment and are acquirements also. Man's mental acquirements, therefore, are even vaster than his physical. For him who believes in the transmission of acquirements how large, then, is the field wherein to pick and choose. But does such a one ever produce evidence from this great field? Never. He knows that here at least the baby never inherits parental acquirements, but has to make his own afresh. We are told instead of futile cases of mutilation, supernumerary toes, and so forth.

DISCUSSION.

Dr. PEMBREY agreed with Mr. Archdall Reid as to the importance of the subject to the medical student, but pointed out that the subject was a biological one, and as such was in the universities properly discussed in the lectures of the professors of zoology. He held that it was unnecessary to refer so frequently to the question of trivial mutilations such as circumcision, docking of tails, and rupture of the hymen. Such mutilations had little or no effect upon the body as a whole, and all medical men knew that they were not transmitted. The difficult cases, such as hæmophilia and diseases which profoundly affected the entire body, were the important ones to consider, and upon these Mr. Archdall Reid had said but little.

Professor CHARLES considered that as regarded the more important and difficult questions there was a great want of facts.

Professor R. J. ANDERSON agreed with Mr. Archdall Reid that the transmission of acquired characters had yet to be proved. There were, however, numerous instances of characters being hereditary. The difficulty had been to find out where and how the anomaly started.

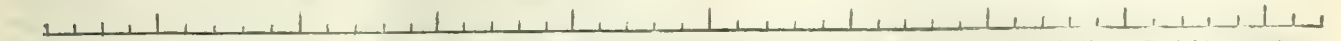


Fig. 1.—Biot's respiration. Dormouse No. 1, hibernating. The period of apnœa lasted 80 seconds before the first respiration. Rectal temperature five minutes later was 11°. Time mark in seconds.



Fig. 2.—Dormouse No. 111. Well-marked Cheyne-Stokes respiration. The respiratory movements increase in force and then gradually die away into a slight quivering movement. Rectal temperature five minutes later was 16°. Time mark in seconds.
[The tracings should be read from right to left.]

SOME OBSERVATIONS UPON CHEYNE-STOKES RESPIRATION.

By M. S. Pembrey, M.A., M.D.Oxon.,
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Since the time when Cheyne and Stokes drew attention to the form of intermittent respiration which is now universally known by their names, a vast literature has grown up in connection with the subject. It is not, however, the object of this paper to give an account of the previous work on this peculiar type of respiration, for Gibson in his monograph on *Cheyne-Stokes Respiration* has already done that excellent service. Here an attempt will be made to show, both from the observations of previous observers and from some of my own, that Cheyne-Stokes respiration can be observed under certain physiological conditions in healthy animals and men. So much stress has been laid upon the occurrence of this type of respiration in certain serious diseases, especially towards the fatal termination, that most medical men look upon it as a sign foreboding death. Further, the attempts to explain this peculiar breathing have in most cases been based upon the occurrence or supposed occurrence of pathological changes in the vascular and nervous systems. It is obvious that a satisfactory explanation must take into account the frequent, or rather under certain conditions the constant, occurrence of this phenomenon in healthy animals and men. Another question which it is necessary to consider is this: Is the typical Cheyne-Stokes respiration, with its waxing and waning of breathing, its periods of rapid and even laboured breathing followed by a complete cessation of the respiratory movements, due to similar causes as the more irregular and intermittent form of breathing, often known as Biot's respiration?

The discussion of these various points will be rendered easier if we consider the occurrence of Cheyne-Stokes respiration (1) in healthy animals, (2) in healthy men, (3) in animals and men under the influence of certain drugs, and then finally show how these facts bear upon the causes of the phenomenon.

Irregular and intermittent respiration has long been known to occur in healthy animals during hibernation. When the animal is in a condition of marked torpidity the respiratory movements are often suspended for several minutes, and this period of apnœa is broken by a series of from 4 to 14 well-marked respirations, followed by another long period of apnœa. This fact has been frequently described, but few attempts have been made to record the various types of breathing. The chief researches are those of Valentin and of Dubois, who experimented with marmots, but their published tracings of the respiratory movements do not show typical Cheyne-Stokes breathing. Mosso noticed that the hibernating dormouse showed typical Cheyne-Stoke breathing, but he did not take any graphic record of the respiration. In a research upon the regulation of temperature in hibernating animals Hale White and the writer of this paper drew attention to the well-marked Cheyne-Stokes respiration, which was constantly observed at a certain stage in the winter sleep of dormice and bats.

Since no graphic records of the respiratory movements of torpid dormice, hedgehogs, and bats appeared to have been made, this work was commenced during the last winter by the writer and his pupil, Mr. A. G. Pitts. The results show that there is a relation between the internal temperature and the respiratory movements of hibernating animals; that in the torpid animal with a temperature below 12° there are long periods of apnœa lasting several minutes and broken only by a few respirations; that in the inactive animal with its temperature rising above 13° the periods of apnœa became shorter and the respiration of Biot's type with a sudden commencement and cessation of breathing, or of the Cheyne-Stokes type with a gradual waxing and waning. These types of respiration are observed in animals upon which no operation has been performed; there is, therefore, no question of pathological conditions. The curves above, obtained from hibernating dormice, illustrate these forms of respiration.

The Biot type is generally seen when the dormouse is more torpid and has a lower temperature thon in those cases where the Cheyne-Stokes type obtains. The former, however, often passes into the latter type. There would therefore appear to be no essential difference in their causation. It is probably simply a question of degree.

As regards Cheyne-Stokes respiration in healthy men, Mosso has observed and recorded it graphically in healthy individuals during sleep. Preyer, Eckerlein, and others have noticed it in infants, especially when they are asleep. These observations I can confirm. Typical Cheyne-Stokes respiration I have observed in healthy adults during sleep, and in a much more marked degree in sleeping infants a few weeks old.

Under the action of certain drugs Cheyne Stokes respiration has been observed in animals by Traube, Heidenhain, Mosso, Leube, Filehne, and others. Similar observations have been made upon human subjects. The most effective drugs for the production of this phenomenon are those which act upon the nervous system, such as chloral, morphine, chloroform, ether, and potassium bromide.

As regards the various theories to account for Cheyne-Stokes respiration, the ones which have attracted most attention are those of Traube and of Filehne. It is impossible, however, to adequately discuss these theories in this paper. The theory, however, which agrees best with the facts briefly set forth above is that of Rosenbach. This observer insists that the explanation of the phenomenon is to be sought not in the vascular system but in the nerve cells of the central nervous system, especially in the respiratory centre in the medulla oblongata. The healthy nervous system shows, as in fact do all the systems of the body, a periodicity of activity and rest. When Cheyne-Stokes respiration is present, the whole central nervous system may be affected in its irritability; this is shown by the changes in the pupils, and in the general twitchings of the body. Periodic changes in the supply of blood to the brain are not essential for the causation of the phenomena.

Rosenbach's view is supported by the occurrence of Cheyne-Stokes respiration when the excitability of the nervous system is diminished normally by sleep in infants and adults, and by the torpidity of hibernating mammals, abnormally by drugs and by diseases which affect the nutrition of the nerve cells.

We see, therefore, that Cheyne-Stokes respiration is not diagnostic of any disease, although it throws marked light upon the excitability of the nerve cells.

The experiments which I have made upon the respiratory exchange during Cheyne-Stokes respiration are incomplete. A discussion of their bearing on this question must therefore be reserved for a future communication.

THE VALUE OF THE LARGE INTESTINE IN GENERAL METABOLISM.

By VAUGHAN HARLEY, M.D.,
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THE influence of the large intestine on general metabolism becomes now of medical interest, since it is of value to know what effect the large intestine has in the absorption of food from the alimentary canal in cases such as colotomy, and if it is essential to keep as much large intestine as possible.

In this research the large intestine was entirely removed from the dogs, the lower end of the small intestine being connected with the anus, some 4 to 6 cm. only of the rectum being left. The dogs were fed after recovery from the operation on meat and biscuit, in which varying quantities of fat were added. The meat employed was preserved by sterilising minced meat in separate weighed-out portions sufficient for each day.

In all the experiments the nitrogen and fat in the diet were analysed, and in two of the dogs quantitative analyses were made also of the carbohydrates in the fæces. The first step was to investigate the effect of an increasing quantity of fat on a staple diet in normal animals, so as to compare that with the result obtained after the removal of the large intestine, and then experiments were repeated on those dogs in which the large intestine had previously been removed.

Influence of the Removal of the Large Intestine on the Urine.

It is seen in Table I that by increasing the quantity of fat in the diet in Experiment 1 from 12.04 grams to 34.04 and 62.04 grams during three periods of each four days' duration, the average quantity of urine excreted per diem fell from 118 c.cm. to 89 c.cm. and 70 c.cm.

TABLE I.—*The Influence of an Increasing Quantity of Fat in the Diet on the Urine in Normal Dogs as Compared with those in which the Entire Large Intestine had been Removed.*

Number of Experiment.	Weight, kilos.	Duration of Observation: Days.	Diet. Nitrogen Grams.	Diet. Fat, Grams.	Urine. Quantity c.cm.	Urine. Specific Gravity.	Urine. Nitrogen Grams.
Average of Two Normal Dogs.							
1 (*a*)	4.59	4	4.82	12.04	118	1058	4.457
(*b*)	4.59	4	4.82	32.04	89	1060	3.575
(*c*)	4.63	4	4.82	62.04	70	1060	3.362
2 (*a*)	6.41	4	8.00	15.20	119	1054	6.127
(*b*)	6.41	4	8.00	15.20	108	1059	5.815
(*c*)	6.59	4	8.00	65.19	74	1061	3.858
Average after Removal of Large Intestine.							
4 (*a*)	4.05	4	6.80	9.71	191	1025	4.445
(*b*)	4.08	4	6.80	9.71	341	1014	4.374
(*c*)	4.17	4	6.80	29.71	207	1019	3.243
(*d*)	4.29	4	6.80	29.71	198	1023	2.965
5 (*a*)	6.30	5	6.26	11.57	93	1044	4.376
(*b*)	6.58	2	6.26	41.55	91	1028	2.415

In Experiment 2, in which the same method of feeding was carried out, the results correspond. One may consequently conclude that on increasing the quantity of fat in the diet, proteids and carbohydrates remaining constant, there is a decrease in the quantity of urine passed per diem. The specific gravity is seen, on the other hand, to rise with increased quantity of fat. In Experiment 1, being originally 1058, it increased to 1060, while in Dog 2 it rose from 1054 to 1061. The daily elimination of nitrogen also decreased in amount.

Turning now to two dogs in which the entire large intestine was removed (4 and 5), we see the increased quantity of fat in the food caused a decrease in the quantity of urine, although this was not nearly so marked as in the normal dogs. The specific gravity, however, did not tend to rise to any marked degree.

The daily elimination of nitrogen showed the same tendency to decrease in quantity, as was seen in the normal dogs. In Experiment 4 the average fell from 4.445 grams and 4.374 grams, when taking 9.71 grams of fat to 3.243 grams and 2.965 grams of nitrogen with 29.71 grams of fat.

We can conclude, therefore, that the increase in quantity of fat on a standard diet in dogs after total removal of the large intestine causes a decrease in the quantity of urine and nitrogen in the urine, with a tendency to an increase in the specific gravity.

The Influence on the Proteid Absorption.

In two normal dogs increasing the fat in the diet leads to an increase in the quantity of fæces passed per diem, as is seen in Table II.

TABLE II.—*The Influence of an Increasing Quantity of Fat in the Diet on Proteid and Fat Absorption in Normal Dogs as Compared with those in which the Entire Large Intestine had been Removed.*

Number of Experiment.	Weight, kilos.	Duration of Observation: Days.	Diet. Nitrogen, Grams.	Diet. Fat, Grams.	Fæces. Quantity, Grams.	Fæces. Nitrogen, Grams.	Fæces. Fat, Grams.	Absorbed. Nitrogen per Cent.	Absorbed. Fat per Cent.
Two Normal Dogs.									
1 (*a*)	4.59	4	4.82	12.04	18.61	0.351	0.733	92.71	93.91
(*b*)	4.59	4	4.82	32.04	20.42	0.412	0.971	91.45	96.97
(*c*)	4.63	4	4.82	62.04	22.70	0.469	1.264	90.26	97.96
2 (*a*)	6.41	4	8.00	15.20	32.67	0.696	0.776	91.29	94.68
(*b*)	6.41	4	8.00	15.20	33.62	0.799	0.898	90.01	94.09
(*c*)	6.69	4	8.00	65.19	36.26	0.901	2.249	88.73	96.55
Average after Removal of Large Intestine.									
4 (*a*)	4.05	4	6.80	9.71	75.55	1.064	0.777	84.36	92.00
(*b*)	4.08	4	6.80	9.71	74.71	1.081	0.605	84.11	93.77
(*c*)	4.17	4	6.80	29.71	83.78	1.088	0.769	84.01	97.41
(*d*)	4.29	4	6.80	29.71	83.49	1.098	0.873	84.14	97.06
5 (*a*)	6.30	5	6.26	11.55	74.16	1.031	(0.553)	83.54	(95)
(*b*)	6.58	2	6.26	41.55	59.38	0.606	0.819	90.33	98.03

With the increasing quantity of fat the nitrogen has increased in quantity in the fæces, for in Experiment 1, with 12.04 grams of fat, only 0.351 gram of nitrogen was daily eliminated in the fæces; on increasing the fat to 32.04 grams the nitrogen in the fæces rose to 0.412 gram, and on still further increasing the fat to 62.04 grams per diem, the nitrogen eliminated from the fæces rose to 0.469 gram. The same result is brought out in Experiment 2.

In consequence of the increase in the quantity of nitrogen eliminated with an increased quantity of fat in the diet, the percentage absorption of nitrogen tends to decrease, so that with a fat-poor diet it is 92.71, and a fat-rich diet 90.26 per cent.

In dogs in which the large intestine was removed it was found that it was impossible to increase the quantity of fat in the diet to such an extent as could be done in normal dogs, since large quantities of fat seem to cause vomiting and loss of appetite. The nitrogen in the fæces in Experiment 4 with 9.71 grams of fat was 1.064 and 1.081 gram per diem in two periods of four days. On increasing the fat to 29.71 grams per diem the nitrogen in the fæces was 1.088 and 1.098 gram per diem during two periods each of four days as before. The same results are practically brought out in Experiment 5 (*a*). In (*b*), however, only two days were analysed in consequence of the dog being sick, so the results cannot be relied upon.

On comparing this with the nitrogen in the fæces of these two dogs after the removal of the large intestine with the two normal preceding dogs, it is seen that the nitrogen in the fæces is enormously increased, being three times as great. In consequence of this, when we calculate the amount of nitrogen absorbed we find that in these two dogs the average of 84.36 and 83.54 per cent. only of the nitrogen given is made use of. We conclude, therefore, that the absorption of the proteids as indicated by the quantity of nitrogen in the fæces is very markedly influenced by removal of the large intestine.

In normal dogs, from 93 to 88 per cent. of the nitrogen given in the diet was absorbed, the quantity diminishing somewhat with the increased quantity of fat in the diet.

When the entire large intestine was removed only about 84 per cent. of the nitrogen given in the diet was absorbed, and it appears that the quantity of proteids absorbed is influenced by the increase in fat in the diet as occurs in the normal dog. One may therefore conclude that 10 per cent. at least of the nitrogen in the diet is absorbed by the large intestine, and in all probability a very much larger quantity than this is really unabsorbed, since we know by the experiments of Hermann, Ehrenthal, and Moraczewski that a considerable quantity of nitrogen-containing substance is excreted by the bowel.

Influence on the Fat Absorption.

In the normal dog we see, with 12.04 grams of fat per diem, the fat in the fæces was 0.733; on the fat taken daily being being increased to 32.04 grams, the quantity of fat rose in the fæces to 0.971 gram, while on a still further increase of fat in the diet to 62.04 grams it rose to 1.264 gram. The same results are brought out in Experiment 2.

The absorption of fat, therefore, with a fat-poor diet is 93.91 per cent., increasing the fat in the diet causing an increase in the fat absorption to 96.97 and 97.96 per cent.

On turning to the two cases in which the large intestine was entirely removed, the fat in the diet in Experiment 4, with 9.71 grams of fat per diem in the food only yielded 0.777 and 0.605 gram per diem in the fæces, on increasing the fat to 29.71 grams, it was 0.769 and 0.873 grams for the two corresponding periods. Consequently the absorption of fat after removal of the large intestine in this case was 92.00 and 93.77 per cent. with a fat-poor diet, which rose to 97.41 and 97.06 with a fat-rich diet.

It is therefore seen that the fat absorption after the total removal of the large intestine is well carried on; that the normal percentage in the absorption is from 94 to 98 per cent., varying according to the amount of fat given. The apparently greater absorption with the increase of fat in the diet is probably due to the quantity of fat normally excreted by the intestine. When the entire large intestine is removed, from 92 to 98 per cent. of the fat given is absorbed, so that it appears that the removal of the large intestine has little or no influence on the absorption of fat by the intestine.

TABLE III.—*The Influence of an Increasing Quantity of Fat in the Diet on the Quantity of Fæces and Water in the Fæces.*

Number of Experiment.	Duration of Observation: Days.	Diet. Nitrogen Grams.	Diet. Fat Grams.	Diet. Quantity Grams.	Fæces. Total Grams.	Fæces. Water per cent.
Average of Two Normal Dogs.						
1 (a)	4	4.82	12.04	18.61	12.79	70.78
(b)	4	4.82	32.04	20.42	13.79	67.95
(c)	4	4.82	62.04	22.70	14.32	67.87
2 (a)	4	8.00	15.20	31.67	19.90	63.26
(b)	4	8.00	15.20	33.62	22.03	64.60
(c)	4	8.00	65.19	36.26	23.67	60.52
Average of Total Removal of Large Intestine.						
4 (a)	4	6.80	9.71	75.55	58.11	76.59
(b)	4	6.80	9.77	74.71	56.87	76.26
(c)	4	6.80	29.71	83.78	66.56	79.45
(d)	4	6.80	29.71	83.49	66.09	79.13
5 (a)	5	6.26	11.55	74.16	58.57	79.09
(b)	2	6.26	41.55	59.38	49.49	83.62

The Influence of the Carbohydrates.

In two dogs quantitative analyses were made of the carbohydrates in the fæces, and it was found that on a diet of biscuits, fat, and meat, no carbohydrates were to be obtained in the fæces either in the normal dogs, or in those in which the large intestine had been removed, so that it can be concluded that the removal of the large intestine has no action on the carbohydrate absorption.

The Influence on the Quantity of Fæces.

In Table III are compared the results of two normal dogs with those of two dogs in which the large intestine was entirely removed, and we see in the normal dogs 1 and 2 increasing the quantity of fat in the diet caused an increase in the quantity of fæces daily eliminated. In Experiment 1, on the fat-poor diet, 18.61 grams of fæces were passed, and on increasing the quantity of fat to 32.04 grams, the quantity of fæces rose to 20.42 grams; and on still further increasing the fat in the diet to 62.04 grams, the quantity of fæces rose to 22.70 grams per diem. The same results are borne out in Experiment 2. In the two dogs in which the large intestine was removed, the same results were borne out.

In Experiment 4, two periods with 9.71 grams of fat per diem, the quantity of fæces was 75.55 and 74.71 grams per diem, the fat in the diet on being increased to 29.71 grams caused an increase in the quantity of fæces to 83.78 and 83.49 grams per diem.

When we compare the quantity of fæces passed in normal dogs with that of those dogs after the removal of the large intestine, we see there is an enormous increase in the quantity of fæces in the latter case.

The Influence on the Quantity of Water in the Fæces.

In Table III the two normal dogs show by increasing the quantity of fat in the diet the quantity of water eliminated in the fæces tends to increase. For example, in Experiment 1 it rose from 12.79 and 13.79 to 14.32 grams of water, and on increasing the quantity of water in the diet the same result was borne out in Experiment 2.

The percentage of water is seen to do the reverse; that is to say, increasing the quantity of the fat in the diet of dogs, although it causes an increase in the total quantity of water eliminated by the bowel, causes a decrease in the percentage of water thus eliminated. After removal of the large intestine, the quantity of water eliminated in the fæces is very great. We thus see in Experiment 4 no less than 58.11 and 56.87 grams of water are eliminated by the bowel when 9.71 grams of fat were given in the diet, while on increasing the quantity of fat in the diet to 29.71 grams, no less than 66.56 and 66.09 grams of water per diem were eliminated by the bowel. The percentage of water eliminated by the bowel is also very high; in those dogs in which the large intestine was removed, no less than 76.59 was eliminated with the same quantity of fat in the diet, while it rose to 79.45 and 79.13 per cent. when the fat in the diet was increased to 29.71.

We may conclude, therefore, that in normal dogs increasing the fat in the diet causes a progressive increase in the total quantity of water eliminated in the fæces, while the percentage of water is decreased, the quantity of fæces increasing with the quantity of fat in the diet.

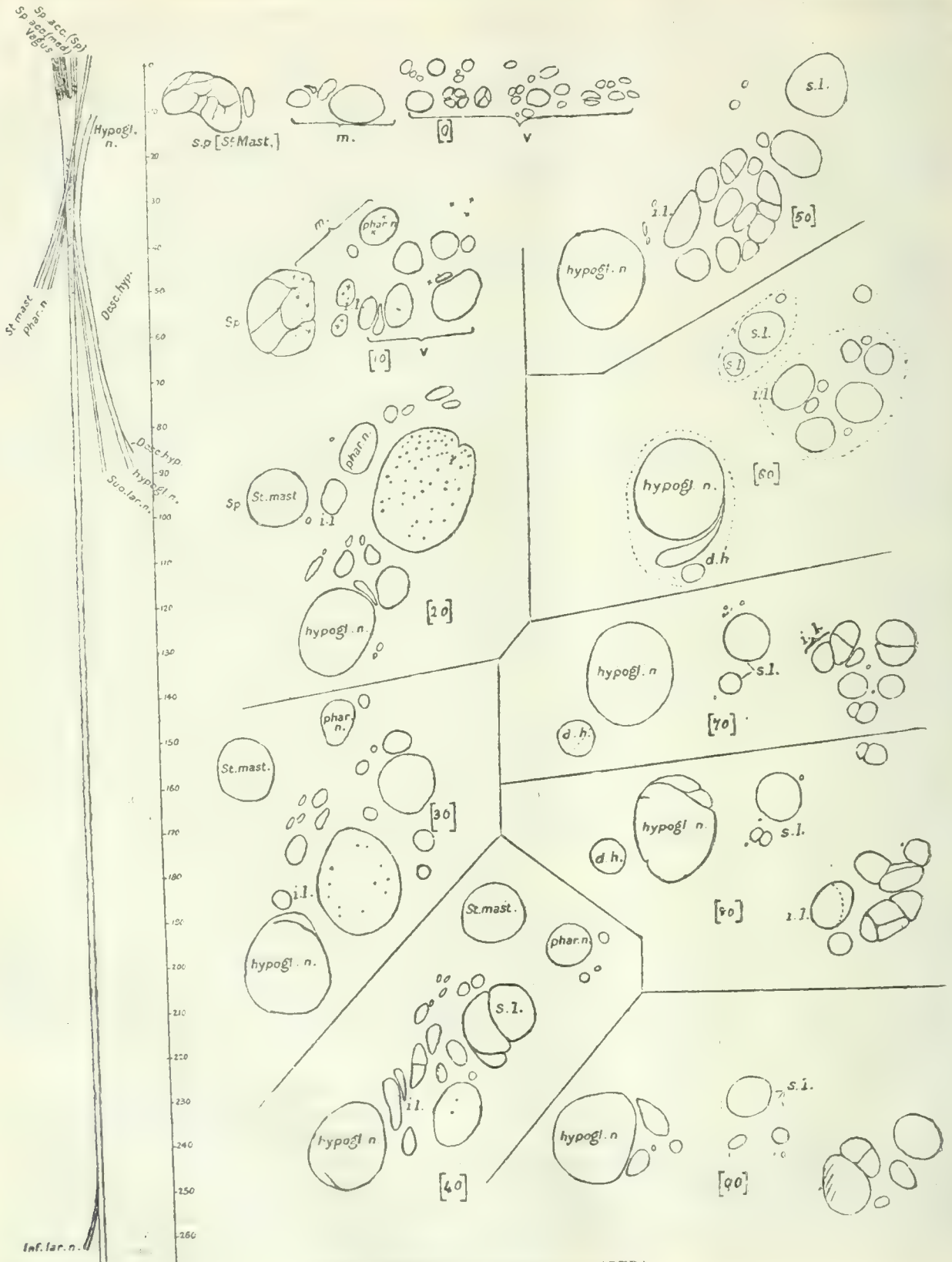
On complete removal of the large intestine, there is an increase in the total quantity of water eliminated in the fæces, with an increase in the percentage of water eliminated by the bowel, the fæces increasing in quantity with the augmentation in the quantity of fat in the diet.

It is thus seen that increase of fat causes an increased quantity of fæces in normal dogs, the increased quantity of fæces is accompanied by increase in total water eliminated, but a decrease in the percentage of water eliminated in the fæces; while in the case of removal of the large intestine, the increase in quantity of the fæces is accompanied both by an increase in the total quantity of water and the percentage of water.

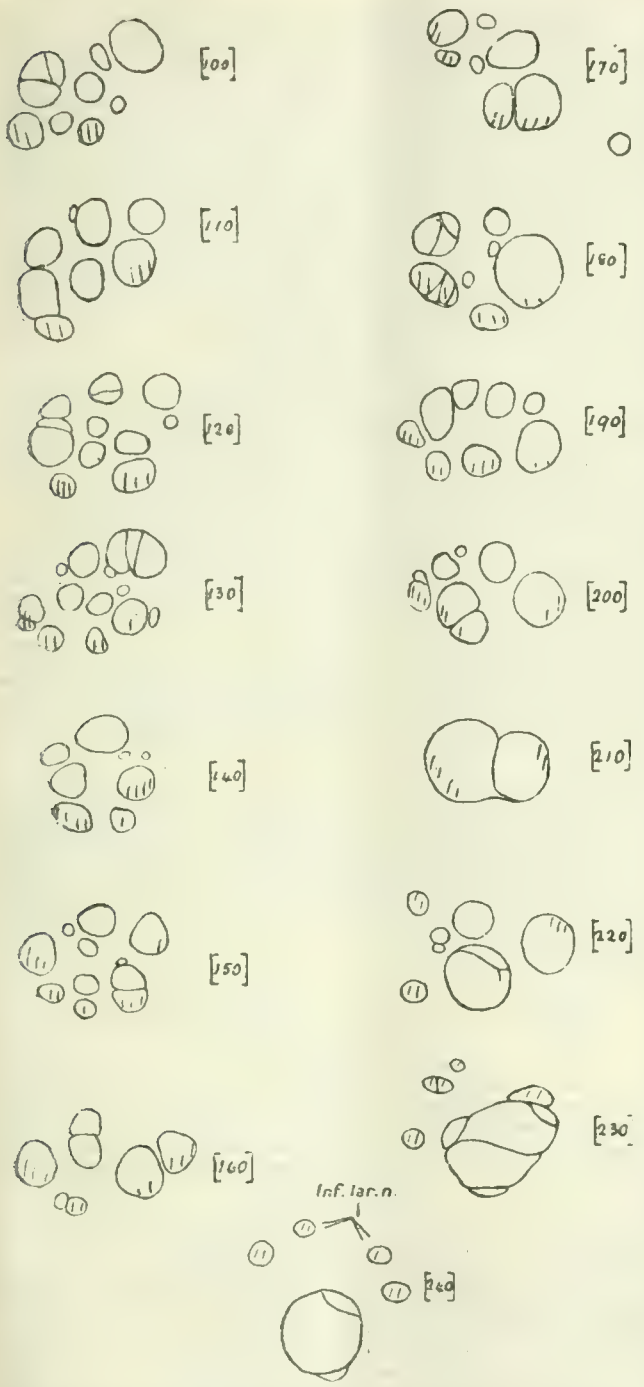
ON THE ANATOMICAL STRUCTURE OF THE NINTH, TENTH, ELEVENTH, AND TWELFTH CRANIAL NERVES.

By J. O. WAKELIN BARRATT, M.D.Lond., F.R.C.S.Eng.,
Pathologist to the West Riding Asylum, Wakefield.
[From the Pathological Laboratory of the London County Asylums.]

THE complete examination of a partially degenerated nerve, when it is desired to ascertain the exact extent of the degeneration, necessitates the separate examination of each of the chief branches of the nerve. With a view of facilitating such



(TO ILLUSTRATE DR. BARRATT'S PAPER.)



examination in the case of the vagus, an attempt was made to trace out in the upper part of the main trunk the course of the fibres, going at a lower level to the various areas of peripheral distribution. By this means it was hoped that the position of the branches in the main trunk could be mapped out, and that thus the condition of the nerve as regards degeneration could be determined from the simple examination of a few transverse sections.

To this end several vagus nerves were sectioned along a considerable part of their length, namely, from the nerve roots inside the skull to the point of divergence of the inferior laryngeal nerve at the root of the neck, and a complete series of sections selected at intervals of $\frac{1}{3}$ millimetre was mounted in each case. By a study of these sections it was possible to reconstruct the nerve, and, within certain limits about to be described, to trace the course of the various fibres of which it is composed, as well as to determine the situation and limits of its ganglia. The same method has since been applied to the glosso-pharyngeal, spinal accessory, and hypoglossal nerves. The greatest care is required in removing the nerves to avoid stretching or otherwise injuring them during the tedious dissection required to expose them in their passage through the skull and down the neck.

Immediately after removal the nerves were placed in Marchi's fluid, so that the medullated fibres might be differentiated from the non-medullated. Considerable practice is required in order that the various difficulties of cutting and mounting a complete series of sections may be overcome, so that an uninterrupted comparison of the sections from the highest level to the lowest is possible.

In four glosso-pharyngeal nerves thus examined the size and limits of the ganglia and the structure of the nerve trunk were determined and sketched to scale.[1] This nerve is made up of small medullated fibres, mostly 4 mm. in diameter. It gives off as it descends numerous small twigs, the identification of which is difficult, both on account of their number and their very small size. The upper ganglion makes its appearance in the nerve just before it receives the dura-matral sheath, and is about 2 mm. long. The inferior ganglion is situated 2 mm. to 3 mm. lower, and is about 4 mm. in length. The cells of both upper and lower ganglion are from 13 mm. to 30 mm. in diameter, and are surrounded by multinucleated capsules.

An examination of the vagus nerve showed that the superior ganglion commences close to the level of the inner surface of the dura mater of the skull, and extends downwards for about 4 mm. The nerve cells of this ganglion lie among the fibres of the medullary portion of the spinal accessory and of the vagus. The inferior ganglion of the vagus commences near the base of the skull, and is about 2 cm. long, though slender columns of cells may be prolonged from it for some distance down the main trunk. The cells of those ganglia closely resemble those of the glosso-pharyngeal ganglia in size and aspect, and in the possession of a multinucleated capsule.

The fibres of the spinal portion of the spinal accessory nerve are seen in serial transverse sections to pass into the nerve to the sterno-mastoid and trapezius. The pharyngeal and inferior laryngeal nerves arise chiefly, if not exclusively, from the medullary portion of the accessory; while the superior laryngeal appears to take its origin from the vagal nerve-roots. Some difficulty is experienced in tracing the course of the fibres on account of the large number of small nerve bundles which are encountered at the base of the skull, and the separation of the fibres by the nerve cells of the ganglia, whereby the bundles tend to lose their identity.

The hypoglossal nerve, when studied in serial transverse sections, is, like the vagus and glosso-pharyngeal nerves, readily reconstructed from the sections, and the levels at which its various afferent and efferent branches appear determined. The most interesting feature of its structure, exhibited in transverse sections, is the manner in which the descendens hypoglossi, derived from the loop between the first and second cervical nerves, joins the hypoglossal nerve, and subsequently leaves it again at a lower level to proceed to its peripheral distribution.

The fibres of the vagus vary considerably in size, large and small medullated and non-medullated fibres being present. The medullary portion of the accessory nerve consists mostly of large medullated fibres 8μ to 12μ in diameter. The hypoglossal is composed of fibres 6μ to 12μ in diameter.

The accompanying figures (pp. 838, 839) represent the appearance of the vago-accessory trunk, together with the hypoglossal nerve, in transverse sections selected at intervals of 1 cm., the highest being made 3 mm. above the level of the inner surface of the dura mater of the skull, and the lowest about 1 cm. below the point of separation of the inferior laryngeal nerve. To the left is placed a diagram of the nerve accompanied by a millimetre scale showing the levels at which the various sections, numbered accordingly, are taken. The sections are magnified 14 diameters.

The following abbreviations are used in describing the transverse sections:—*Sp.*, spinal portion of the spinal acces-

sory; *m.*, medullary portion of the spinal accessory; *v.*, vagus; *st. mast.*, nerve to the sterno-mastoid and trapezius; *i. l.*, inferior laryngeal nerve; *phar. n.*, pharyngeal nerve; *s. l.*, superior laryngeal nerve; *hypogl.*, hypoglossal nerve; *d. h.*, descendens hypoglossi. The dots in the sections represent ganglion cells. The crosses in section 10 indicate the situation of the nerve cells of the upper ganglion in the sections lying between levels 1 and 6½ on the scale. Below section 80 the situation of the large medullated fibres of the inferior laryngeal nerve is indicated by the short parallel lines.

In the figure the spinal portion of the accessory nerve is seen to pass into the nerve to the sterno-mastoid and trapezius. For a short distance at the base of the skull it is intimately connected with part of the medullary portion of the accessory nerve, separating again soon afterwards (section 10). The pharyngeal and inferior laryngeal nerves can be traced upwards (in sections 40 to 0) into the roots of the medullary portion of the accessory. The superior laryngeal nerve (section 90) cannot, however, be followed satisfactorily in these sections above level 40, its fibres losing their identity when separated by the cells of the inferior ganglion. The descendens hypoglossi joins the main trunk of the hypoglossal nerve at level 60 on the scale, and leaves again shortly below the level at which section 80 is made.

The nerve bundles making up the main trunk are small, and correspondingly numerous at the base of the skull. The subdivision and rearrangement of the nerve bundles which is constantly taking place at all levels, and which is well seen in the figures, is, however, much greater than would be imagined from a study of the comparatively small number of sections therein sketched, and introduces much difficulty in tracing out the course of the fibres passing to individual branches.

The inferior ganglion is seen in the figures to lie mainly between levels 20 and 30. It is, however, prolonged by slender columns of cells as low as level 50.

I am greatly indebted to Dr. Mott, in whose laboratory this research was made, for his kind assistance and advice.

NOTE.

[1] Some of these sketches are reproduced in the first volume of the *Archives of Neurology* of the Pathological Laboratory of the London County Asylums.

ON SOME POINTS REGARDING ASYMMETRY.

By R. J. ANDERSON, M.A., M.D.,
Professor of Natural History, Queen's College, Galway.

THE term asymmetry is chiefly reserved for a structural condition that deviates from bilateral symmetry. Asymmetrical forms are known in the inorganic as well as in the organic world. Excessive unilateral growths produce asymmetry in plants and animals, and further deviations may result from the dislocation and absorption of parts or organs. Some animal groups exhibit remarkable examples of asymmetry referable to external mechanical causes or internal action. Mechanical pressure is responsible for some unnatural deviations. Inherent or acquired skeletal weakness may be a predisposing cause. Unilateral variations in man are the result of some congenital abnormal activity in the tissues, or the result of arrest of growth in an organ or part, or the direct result of mechanical action. Unilateral variations, like other anomalies, are possibly the result of central nerve action in certain cases. There is frequently a lack of symmetry in the cranium. The table below shows the number and extent of the differences in thickness between the bones of opposite sides in 154 skulls. It is only necessary to add that 31 out of 137 skulls belonged to persons 70 years old and upwards, and 21 skulls to persons 40 years old and under.

[Professor Anderson concluded his paper by referring to an inquiry which he had made in relation to the appearance of "crooked keels" in fowls. Ordinary barndoor fowl had usually sterna with straight keels; bent breast-keels were attributed mainly to weakness from close inbreeding and the pressure of the roosts upon the growing bone.]

DISCUSSION.

Dr. A. J. H. CRESPI observed that the late Alexander Shaw mentioned that persons taking to hard work in early life had their bones twisted and thickened out of the normal to meet the requirements of their particular callings. The late Mr. Stirge, of Birmingham, was also much struck by the number of factory cripples in that town in 1822. He accounted for this by adaptation to their particular trade. Dr. Crespi observed further that a careful examination of many skeletons exhumed at West Parley, Dorset, two years ago showed that at one time—the middle of the seventeenth century—the bones were many of them enormously enlarged and curiously distorted. This had been attributed to leprosy, or malaria, or chronic rheumatism.

Dr. F. W. FORBES ROSS pointed out that in bilateral animals one side was predominant in action, so that a deflection was produced. In the case of the nose the cause was perhaps merely muscular, though the vomer was often asymmetrically placed, apart from deflection of the cartilages.

Professor A. F. DIXON believed in the view that "radial" symmetry in lower invertebrates was really secondary to the changed mode of life of the adult forms, since the free-swinging larval forms were distinctly bilaterally symmetrical, and traces of this kind of symmetry were also to be found in the adult. He noticed the occasional presence of an eighth rib in man as an example of asymmetry due to right-handedness. He could not see any evidence of "radial" symmetry in the nervous system of man.

THE FUNCTION OF THE RECTUM AS A RESERVOIR.

By J. J. CHARLES, M.D.,
Professor of Anatomy and Physiology, Queen's College, Cork.

A DIFFERENCE of opinion exists as to the function of the rectum. Some, as Stewart,[1] maintain that the rectum is empty and at rest except during defæcation, when the entrance of fæces excites the nervous process, and causes in consciousness

[1] *Physiology*, p. 291.

	Above External Angular Process of Frontal.		Parietal Eminence.		Anterior Superior Angle of Parietal Outside Longitudinal Sinus.		Posterior Superior Angle of Parietal.		Posterior Inferior Angle of Parietal in Lateral Sinus.		Middle Fossa Centre Squamosa Portion of Temporal Bone.		Occipital at Midule of the Inferior Fossa.		Occipital Superior Fossa.		Frontal Eminence.	
	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.
1. The number of cases in which the thickness on one side was greater than that on the other ...	52	46	43	74	79	41	54	50	4[illegible]	63	38	49	42	32	48	35	29	52
2. Number in which thickness on one side exceeded that of the other by ½ inch ...	10	8	10	29	17	11	16	13	14	16	10	10	13	6	20	11	11	21
3. Number where difference amounted to ½ inch	4	10	3	9	7	3	8	5	7	11	2	0	2	1	2	1	3	4
4. Number where difference amounted to ⅛ inch	4	6	2	7	13	3	4	7	4	9	0	3	1	0	2	2	1	1
5. Number where difference amounted to 1/16 inch	2	0	4	1	3	1	0	2	2	4	0	1	0	1	1	2	0	1
6. Number where difference amounted to 1/32 inch	1	2	1	2	0	1	0	0	1	3	0	1	0	1	0	1	0	2
7. Number where difference amounted to 1/64 inch...	0	0	0	0	1	0	1	0	0	2	0	0	1	1	0	0	0	1
8. Number where difference amounted to 1/128 inch or more	2	2	4	1	0	0	0	1	1	4	0	1	0	0	2	1	0	0
9. Average of all the measurements in thickness in 1/128 inch	12.5	12.7	14.5	14.3	14.4	13.7	15.2	15.2	11.4	13.1	3.2	3.16	4.57	4.4	16.6	10.4	14.8	15.2
10. Number of skulls examined...	131		153		154		150		136		134		123		105		103	

the desire to defæcate. The rectum, however, may be found full of fæces—sometimes even to the anus—in the dissecting room; and surgeons, such as Mr. Treves and Mr. Allingham, have informed me that they frequently find it in this distended state during life. Besides, the existence and arrangement of Houston's valves in the rectum and the strength of the internal sphincter indicate that the rectum—at least its supra-sphincteric portion—serves as a reservoir, and not merely as a passage for the fæces. Accepting this view, the accumulation of fæces—sometimes, no doubt, of a more irritating nature than at others—starts the reflex action, which as a rule is aided by voluntary action. The fact that defæcation can take place when the lower part of the spinal cord has been removed, as in Goltz and Ewald's experiments, would lead us to believe that the nervous mechanism may to a certain extent be local. It has been affirmed that defæcation, like the daily variations in the number of respirations and in the temperature of the body, may be a process which tends to take place in a cycle. The effect of habit in causing defæcation to occur regularly at the same time supports this idea.

THE PROGRESS OF THE TEACHING OF HUMAN ANATOMY IN NORTHERN INDIA.

By R. Havelock Charles, M.D., M.Ch., F.R.C.S.I.,
Major I.M.S.; Professor of Surgical and Descriptive Anatomy, Medical College, Calcutta; and Surgeon to the College Hospital.

The First Dissections by Hindus.

Before saying anything about the present accommodation for or the methods of teaching anatomy in Calcutta and Lahore, it will be advisable to call to mind the time when the dissection of the human body was first practised in Northern India. This brings us to the foundation of the Calcutta Medical College by Lord William Bentinck, the uprooter of Suttee, in 1835. Then, as an old report says, "The buildings comprised a very spacious and handsome theatre, capable of containing 500 persons, apartments for the purposes of practical anatomy, a laboratory, museum, and a library and hospital." The first Professor of Anatomy was Dr. H. H. Goodeve, who was also Professor of Medicine and Physician to the hospital. The foundation of the College was followed by the abolition of institutions where the Vedic and Unani systems of medicine were taught (Sanscrit College, Medical Class, the Medical Class of the Madrissa), the idea being that the Western system of medicine, instead of the Oriental conception, was alone worthy of being taught. The report (date 1839) goes on to say that "under the personal supervision of Dr. Goodeve, dissections were regularly and systematically introduced. Since that period, this most necessary part of medical education has been pursued with unremitting zeal by the students, and the *dissecting rooms of the Medical College of Bengal are not surpassed by similar establishments in any part of the world.* One of the strongest prejudices of the Hindus has thus been overcome, and the first and most important step to a rational system of medicine in the East has been accomplished." (The italics are mine.) The rooms, "not surpassed by similar establishments in any part of the world," existed till four years ago, and furnished a sad picture of what, in 1839, was considered so very fine! If these were of the best, and "not surpassed," what must have been the accommodation for practical anatomy in the minor schools during the first half of this century!

The most interesting feature is that in 1835 the Hindu prejudice against touching dead bodies first gave way, and much credit must be given to the original class of eleven students who had the courage to break through the iron bonds of caste, and engage in the dissection of the human body. I think it but right to mention the names of the students of this first class that studied human anatomy in India. They were: Umacharan Set, Dwarkanath Gupto, Rajkisto Dey, Gobind Chunder Goopto, Kallachand Dey, Gopalchander Gupto, Chummun Lal, Nobin Chunder Mitter, Nobin Chunder Mookerjee, Buddinchunder Chowdree, and James Pote. I do so for two reasons; first, to honour those who, throwing aside the trammels of prejudice, withstood firmly the strong moral pressure brought to bear on them by the outraged feelings of a kindred whose customs are the type of a crystallised conservatism; and, secondly, that although 1835 is not so very long ago, these men have practically been forgotten, and the honour of having been "the first Hindu who dissected the human body" has been given to Pandit Madusudden Gupta, who for good work as a demonstrator of anatomy had his portrait in oils presented to the Anatomical Department, where it hangs at present in the lecture room. The Pandit passed his examination in 1840, and, as I write, I have a copy of his diploma before me. The students whose names I have mentioned were examined and passed in 1838, yet the Pandit alone is remembered; his predecessors are forgotten. *Vixere fortes ante Agamemnona!*

The burden of the medical student is the examination fiend! In 1838 this fiend came to Calcutta, and operated on the eleven men aforementioned. They went through the ordeal before four inquisitors, and "each candidate was examined for upwards of half an hour by himself"..... "afterwards led to the dissecting room, where he was made to demonstrate the parts in various sections of the subject"..... "which they did most creditably," according to the report from which I quote.

The Anatomical School of Calcutta as it was.

As the methods of embalming were of an inferior kind, the bodies rapidly decomposed. By "dissection" was meant "display the muscles," "display the arteries and large nerves," "display the bones and ligaments." Topographical anatomy was unknown till introduced by Dr. O'Connell Raye a few years since.

That the conditions under which an endeavour was made to teach anatomy in Calcutta till a very recent period were highly unfavourable can be seen from the report I submitted to Government on my transfer to the Calcutta Medical College from Lahore in 1894.

(*a*) "There is a sort of barn of irregular shape, the ventilation of which is bad, in which there is not even standing room for the students, leaving out of consideration the corpses and tables."

(*b*) "There is an open straw shed with an ordinary earthen floor. The light in this is very defective. In it a *post-mortem* examination could be conducted, but not careful dissection."

(*c*) "There is a sort of oblong unventilated passage which serves as a room for the female students."

(*d*) "The superficial area of the dissecting room for the civil students is about 1,057 square feet; of the shed for the military students, 1,400 square feet. The total is 3,357 square feet."

(*e*) "Taking the number of students as 450, and allowing 3 square feet as standing room, not working room for each (a fat Babu takes more to be comfortable), this gives 4,050 square feet."

(*f*) "The tables and accessories in the room, at the lowest estimate, would take over 800 square feet."

(*g*) "To pack in the students and corpse-laden tables, like herrings in a barrel, a superficial area of 4,850 square feet is required;"

(*h*) "Whilst a filthy shed and a stinking foul room only provide a superficial area of 3,357 square feet."

These are facts. Now what questions arise from them?

1. "What is the condition of the atmosphere of these rooms by evening?—Vile; revoltingly so."

2. "When it can be mathematically shown that the students cannot get into the rooms, what occurs?—Very many never go."

3. "Are the hardworking and diligent students handicapped although desirous of learning?—Certainly, by the overcrowding and jostling, and disorder and noise."

4. "Are lazy and slothful students encouraged to remain in their sloth?—Yes, it is impossible to supervise them properly, owing to the crowded state of the place and the smallness of the staff."

5. "Is the study of human anatomy presented to the beginner in such a way as to awaken a desire for scientific inquiry in him?—No, the cutting up of the body as carried out, is a loathsome horror: the rooms are charnel-houses, reeking with a sickening stench. The only feeling a beginner can have is how best to avoid this nightmare, and scamp his work."

The Medical School of Lahore as it was.

The medical school in Lahore sprang into existence about thirty-eight years subsequently to the College in Calcutta. The anatomical work there was similar to that just mentioned regarding Calcutta, and the accommodation was no better. Well do I remember the first day I entered the dissecting-room in Lahore. The sun beat fiercely outside, within were students crowding each other as they "worked" (?) at bloated and fly-blown corpses. Yellow, blubbery fat, liquid from the heat, oozed with oily course upon the ensanguined floors. On the walls a dado of coal tar, relieved here and there with bloody smears, added its sombre hue to what was a most dismal vault, the atmosphere of which was so heavy, and reeked so of decomposition, that the pestilential effluvium almost turned my gorge!

It was apparent that in such a school only the vile part of human anatomy was seen, and careful dissection was an impossibility. The embalming was at fault, as only a watery



A, Exterior of Dissecting-room, Medical College, Calcutta. (From photograph).

solution of arsenic was used. Fevers and sore throats were very common amongst the students, as might be expected.

ANATOMICAL TEACHING AND RESEARCH IN INDIA AT PRESENT.

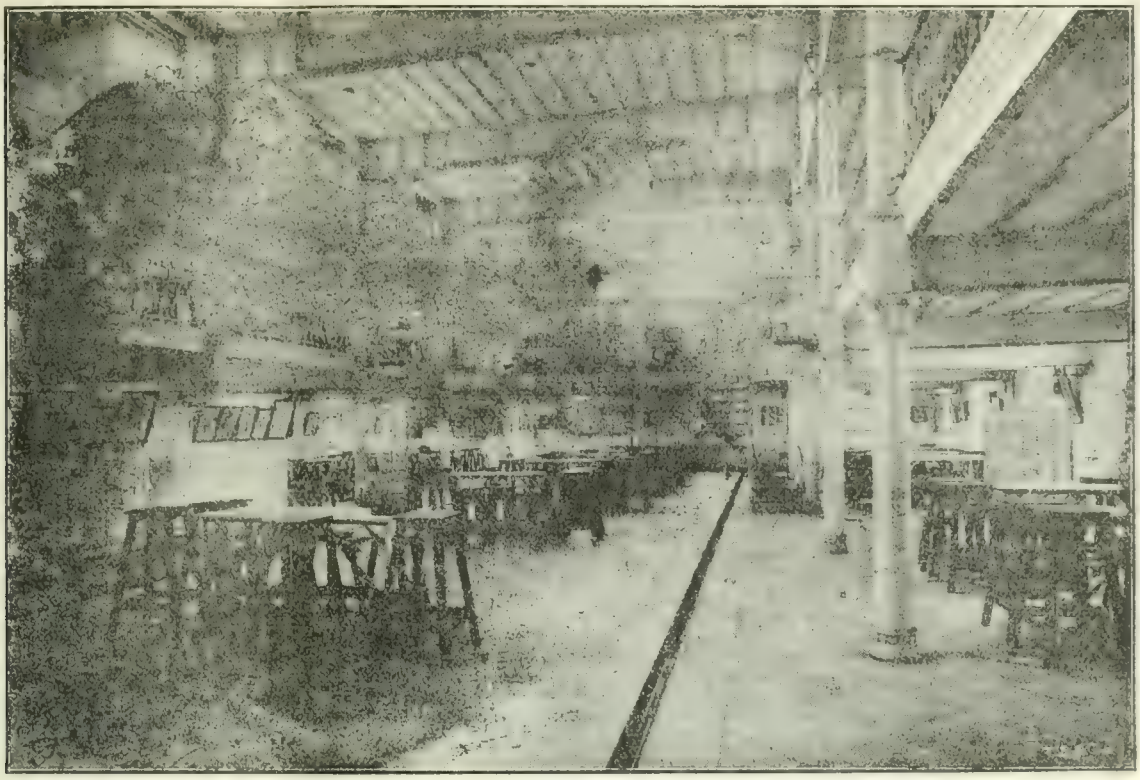
The opportunities for anatomical work in India are considerable. The supply of subjects is plentiful. In the anatomical class, which in the Medical College, Calcutta, numbers 410, every student to obtain a certificate must have completed the dissection of the body twice in his three years' curriculum. Also, for the course of seventy lectures which are delivered from June to November, twenty to thirty bodies are dissected to illustrate them.

For research there are possibilities, as the anatomy of the Asiatic has not yet been worked out. I have shown[1] that in many bones and joints there are differences from the European type, and I have certain observations, as yet incomplete, on the muscles and ligaments, to be recorded. In another place I have said, "Climate, surroundings, and usages have made the Oriental what he is; and, if ordinary habits have so acted on his skeleton as to change the configuration of the bones, how much more must certain methods of thought not have altered the bias of his mind? Mentally and physically he is dissimilar to the Western." The integument is darker, and the endo-skeleton differentiates him. Our thoughts are not his thoughts, neither are his ways our ways. It happens thus that the methods of the Asiatic are not always understood by the European, and the manners of the inhabitants of the West at times stink in the nostrils of the dwellers in Cathay. Their morphological diversities are not devoid of interest, whilst volumes could be written regarding their variances in customs, usages, and actions.

As to the necessity of a thorough anatomical course for a medical student there can be no doubt. If this be true for the neophyte of medicine in Europe, how much more does it not hold for the Indian student, who, as an Oriental, is an idealist by instinct, birth, and culture! The education of the Indian has in the past been purely an intellectual training, and consequently he is defective in scientific observation and curiosity, being marked more for his powers of subtle speculation and poetic fancy, whilst lacking that exactness of learning given by the laborious investigation of facts. As Maine puts it: "The Indian intellect stands in need beyond everything else of strict criteria of truth; it requires a treatment to harden and brace it, and scientific teaching is exactly that tonic which its infirmities call for." The Vedic and Unani systems of medicine, proper to India, whilst containing certain good, are based on a totally wrong idea of the structure of the human body. Their errors arising therefrom are hidden by philosophic disquisitions, demonstrating nothing but the windiness of words to satisfy true inquiry. In fact it is not certain that anything of a utilitarian kind, as far as modern medicine is concerned, has come out of all their abstract thinking, but the practice of the philosophy is soothing to the *amour propre* of the Indian, and, certainly, pecuniarily of benefit to the indigenous practitioner of these obsolete conceptions.

It can be understood that after a high caste student has pursued a course of practical anatomy for three years he will have broken with many of his original ideas of what is pollution to him. He will have better grasped the meaning of the saying that "that which cometh out of the mouth, this defileth the man." He will have seen the proofs before his eyes of the falsity of the anatomy which forms the basis upon which Oriental systems stand. By his individual practical examination of the human body he will be gaining a knowledge and performing an investigation utterly opposed to the intellectual abstractions and metaphysical reveries which heretofore had been the "education" of him and his forbears. It is the objective teaching and methodical mastering of details, characteristic of the study of human anatomy which do so much to prepare the student for the subsequent successful pursuit of his senior studies.

If much benefit accrues from a proper course of practical anatomy, the converse also holds true. Book anatomy or a bad course of anatomy only panders to the intellectual vices of the Indian, for whilst his memory alone is trained, he acquires slovenly habits, gains nothing of manual dexterity; his observation and curiosity, unstimulated, are left fallow, the only thing striking him being the repulsiveness of the study on which he is engaged; and his chief endeavour will be to fribble



B, Interior of Dissecting-room, Medical College, Calcutta. (From photograph).

his work, or try how best to avoid it altogether. My experience has been that he is more ready to use his head than his hands. He can parrot pages of his textbook, and repeat them off on getting his cue, and he prefers this to working diligently with his knife and forceps, endeavouring to discover for himself whether everything mentioned in the books is true or not. Of late, there has been a great change for the better, which I have no doubt will continue, now that the possibilities for anatomy have so much improved.

Obstacles.

Whilst the opportunities for anatomical work in India are considerable, there are certain counterbalancing difficulties:

1. Climate. The long hot weather enervates and affects demonstrators and students. Decomposition is facilitated, and the closest attention is necessary to prevent "parts" suffering. In Lahore, where the dissecting season runs from October till March, the average temperature is 60 degrees, and the climate is dry. In Calcutta, which is decidedly damp, there is an average temperature of 70 degrees for the dissecting season—November to March.

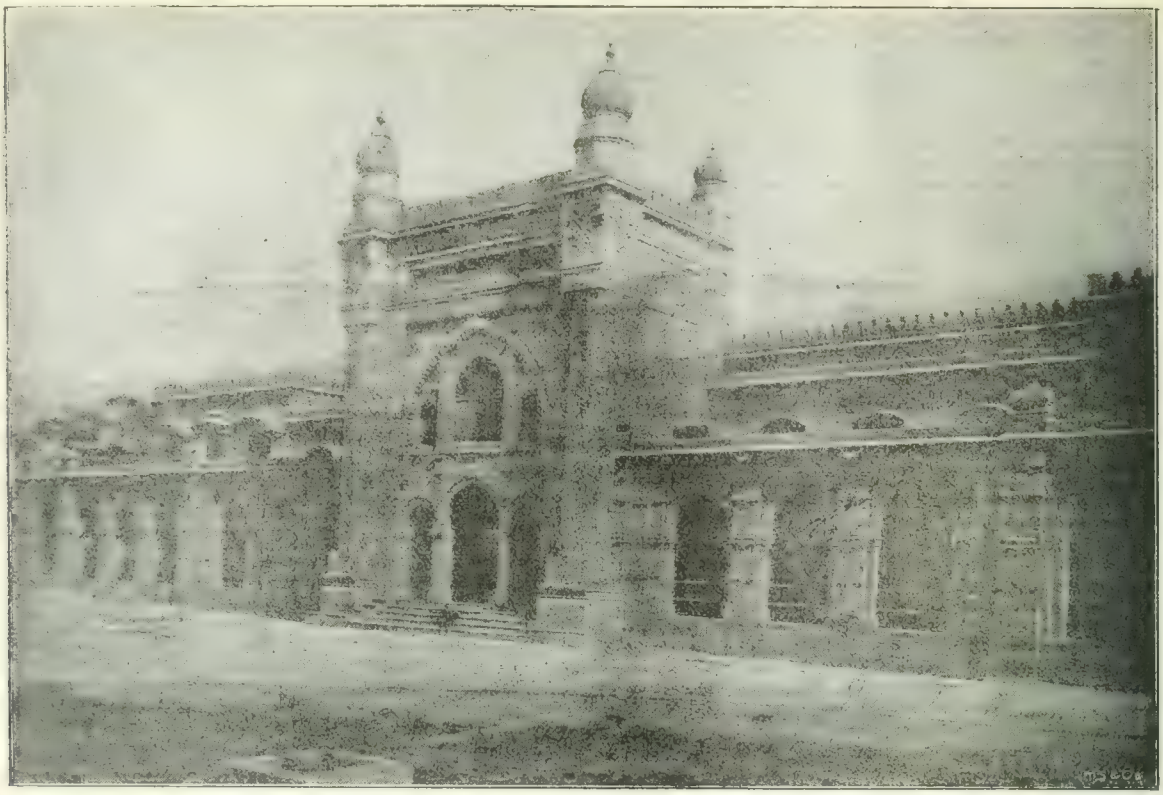
2. There is a lack of enthusiasm amongst the students and demonstrators. In Europe demonstratorships and prosectorships are sought after; in India they are received if offered, but there is no desire for original work—simply a wish to plod on in the old way, and a tendency to appear to have a grievance if asked to do more than the daily round.

3. The Professor is not a whole-time man, and has many other duties of equal or more importance to perform. He is like the juggler at the circus, who plays with the balls in the air, keeping them all up, ever on the alert, continually on the watch to prevent the action of gravity on his falling spheres. He must keep his numerous and varied occupations ever going, never slacking or coming to grief.

4. Here more than in Europe the reformer who tries to introduce methods foreign to those in vogue raises up many enemies and false friends. It has been my lot on two occasions to have to combat open opposition and veiled obstruction, to have to upset the senile argument that "men have got on well under the old system, why change?" to have to force the hand of Government, and overcoming the inertia of officialism, compel attention to the disgraceful condition of the accommodation for anatomical teaching. It was only by bearing in mind the parable of the Unjust Judge that I eventually obtained the various grants in Lahore and Calcutta for the establishment of the dissecting rooms and anatomical museums. These, I may say, will now bear comparison with those of any other country. "Truly the Kingdom of Heaven suffereth violence, and the violent take it by force!" All this, however, under the climatic conditions of India is trying. The climate is for the peaceful philosopher, and against anyone who cannot possess his soul in patience and calmly suffer with inefficiency and incompetence.

The Anatomical Department in Calcutta at Present.

This as now existing was begun four years ago. The cost has been about £10,000. The dissecting room is a lofty, well-lighted, and excellently ventilated, iron and brick building, covering an area of 9,000 square feet. It has a white marble floor, and on the walls a dado 6 feet high of white glazed tiles. A gallery runs round the whole building; it is also floored with the same material as the main room, and has a similar dado. In the building are three tiers of windows; one in the lower portion of the building, one in the gallery, and one just below the roof. They are covered with wire gauze, so that they can always be open to air the building, which is also excellently ventilated at the roof. A plentiful supply of water is laid on, and there are arrangements by which the floor and walls can be flushed with a hose as often as desired. There are six marble lavatories for the convenience of the students. The walls have brass rails running round them, suspending complete sets of Ellis's, Wood's, and Maclise's plates, and plates of Braune's sections, all framed and glazed. For the bodies there are white marble tables on white enamelled iron legs, with arrangements for catching liquids which may drip from the dissections. There is attached a special female dissecting room, got up in the same style, and a



c, Exterior of Dissecting-room, Medical College, Lahore. (From photograph).

prosector's room furnished with the necessary apparatus. The accompanying pictures poorly represent the buildings.

Adjacent to this block is the museum, a fine room with an area of about 3,000 square feet. It contains an excellent collection of wax models, plaster casts, and dissections from Paris, Dresden, Leipzig, and Berlin; they represent sections and dissections of every organ and region of the body, and number about 350. Here is the usual bone room, furnished with a very complete set of coloured osteology. Plates furnish the walls, and the specimens are so disposed with regard to diagrams and light that "he that runneth" may read. There is a collection of skulls illustrative of the craniology of Northern India. This is unique in its way, as the original owner of each skull was known during life, so that mistakes as to caste have been guarded against. The embalming yard opens off the dissecting room; it has a complete roofing of wire netting to keep off crows and kites; its floor is of polished blocks of cement. In this yard is the embalming room, where are four marble tables for the bodies, to which the injection is given by hydrostatic pressure. (We use glycerine, alcohol, and perchloride of mercury.) The colouring injection is given with a syringe, and consists of vermilion and plaster-of-paris. The bodies, after the usual cleaning and shaving, get frequent coats of crude carbolic acid externally. A good body treated thus dries up, if under dissection for five or six weeks, but never decomposes. There is practically very little *post-mortem* smell in the dissecting room. The walls of the yard are of a sort of double Venetian pattern, and while allowing excellent ventilation secure absolute privacy. I can highly recommend it.

The lecture room opens on the dissecting room, and is seated for 500. The floor is marble. In its area are the marble tables for the display of subjects during lecture. The usual arrangements as to skeleton screens for lecture diagrams are present, as well as a large revolving slate blackboard for drawings in chalks. The lighting from the roof, factory skylights, is very satisfactory; there are no shadows.

Our staff consists of four full-time demonstrators, together with two taxidermists and a menial staff numbering sixteen. There are 410 students on the rolls. Each dissects for three years, and must complete two bodies and attend two courses of lectures during that period in order to obtain a certificate. The routine is—lectures are taken out in the first two years, and the dissections in the first three of the medical course of five years. The usual textbooks for the dissecting room are Ellis and Cunningham, and for lecture—Gray, Quain, and Morris. The methods of dissection are the same as in Europe.

The Anatomical Department in Lahore at Present.

In Lahore the anatomical buildings compose a very handsome and spacious pile. There is a dissecting-room, with a superficial area of 7,800 square feet. The floors are of Portland cement, and there are good arrangements for flushing them. There is a large and roomy lecture room, a professor's workroom, and student's bone room.

On taking up the Chair of Anatomy in 1886 I found the state of things as I have already pictured it. After many efforts I was able to leave Lahore on transfer to Calcutta in 1894, with the magnificent rooms just described in full working order.

Conclusion.

I have occupied your time with this retrospect, showing what human anatomy and its accommodation in Northern India was, and again what it is now. I think it will be admitted that the money Government has spent upon it in Lahore and Calcutta will be in the end amply repaid, not only by the influence for good that a proper course of practical anatomy always has on students; but will help, by example, in furthering the building of laboratories and museums for the various branches of medical study, as the benefits derived in the anatomical side become manifest even to those who will not see.

Reference.

1 *Journ. of Anat. and Phys.*, vols. xxvi-xxviii; Scientific Memoirs by Medical Officers of the Army of India, Part viii, *Journ. Asiatic Soc. of Bengal*, vol. lxiii, Part 3, No. 1.

DEMONSTRATIONS.

The Form of the Empty Bladder and the Prostate.

Professor A. Francis Dixon (Dublin) gave a demonstration on this subject. The empty bladder, he said, removed from subjects whose viscera have been hardened *in situ* by strong solutions of formalin is found to possess a very definite form or shape. Its form is that of an inverted tetrahedron, the apex of which corresponds to the point where the urethra leaves the bladder. The base of the tetrahedron is directed upwards, and corresponding to the superior surface of the bladder looks into the cavity of the pelvis. This superior surface of the bladder is triangular in outline, its angles corresponding to the points where the urachus leaves and the ureters reach the organ. These three points might be called the anterior and lateral angles of the empty bladder. The superior surface of the bladder is bounded by a posterior and by two lateral borders. The posterior border stretches between the two lateral angles, while the lateral borders reach from the lateral angles to the anterior angle or bladder apex. On the under aspect of the empty bladder three districts or areas are marked off from one another by rounded borders, one of which extends from the anterior angle of the organ to the urethral orifice, while the other two lie between the lateral angles of the bladder and the urethral orifice. These areas might be called the infero-lateral surfaces and the posterior or basal surface. Each of them is triangular in outline. The infero-lateral surface looks downwards and outwards, and lies against the levator ani and obturator internus muscles. It is bounded superiorly by the lateral border of the bladder, while internally at the middle line it meets the corresponding area of the other side along a rounded border extending from the bladder apex to the internal urethral orifice. Posteriorly the infero-lateral area is separated from the basal or posterior surface by the border which extends from the lateral angle of the bladder to the urethral orifice. The basal surface looks downwards and backwards, and rests against the seminal vesicles and the terminal portion of the vas deferentia. Immediately around the urethral orifice the under aspect of the bladder is flattened by contact with the upper surface of the prostate; indeed, in this region the two organs—prostate and bladder—can only be artificially separated. The lateral borders of the bladder are sharply marked while the organ is empty, but as the organ becomes filled these borders became converted into lateral surfaces. Similarly the posterior border, which is sharply marked in the empty organ, becomes converted into a surface when the organ is distended. The prostate removed from hardened subjects has a very constant shape, and possesses three free areas or surfaces meeting at its apex. Two of these surfaces look for the most part outwards and downwards, while the third is directed backwards and downwards against the rectum. The urethra leaves the prostate at a point a slight distance in front of the apex. The upper surface of the prostate is for the most part structurally continuous with the under aspect of the bladder; a small part of it is, however, free on each side, and forms the prominent lower limit of the deep groove which separates the bladder from the prostate.

Vascular Abnormalities.

The President exhibited a specimen of Absence of the Radial Artery and a specimen of Persistent Left Superior Vena Cava, the Right Superior Vena Cava being in great part a Fibrous Cord. These specimens, which are now preserved in the Anatomical Museum of Queen's College, Cork, are fully described in the *Journal of Anatomy and Physiology*.

The Nuclei of the Sixth and Seventh Nerves.

A model, designed by Professor D. J. Cunningham, F.R.S., to illustrate the Relative Positions of the Nuclei of the Sixth and Seventh Nerves, and the Directions taken by the Fibres of these Nerves within the Brain, was shown by Professor Dixon.

Certain Points in the Histology of Red Blood Corpuscles.

Dr. F. W. Forbes Ross gave details of the results of observations upon red blood corpuscles treated with various strengths of formalin. He found that all the corpuscles which had burst or opened had done so by splitting in a plane parallel to the discoidal surface, through the peripheral substance on to the free edge of the corpuscle. In the blood of the newt and frog treated with formalin it was noted that the nucleus of the corpuscle passed to the pole of the corpuscle, and emerged in a plane parallel to the discoidal superficies.

Ossification of the Upper End of the Femur in Different Animal Groups.

Professor Francis Dixon gave a demonstration on the mode of ossification of the upper end of the femur in different animal groups. It was of interest, he said, to note the persistence of a special centre of ossification for the third trochanter, even in animals in whom a distinct projecting process was no longer present, as well as in animals in whom the process was well developed and formed by an extension of ossification from the shaft of the bone. The replacement of an epiphysial process by a shaft ossification was also in some animals to be observed in the case of the small trochanter. The reduction in the number of special epiphyses at the upper end of the femur by a fusion of the great and third trochanters, or by the fusion of the great trochanter and the head of the bone, was of interest, as it recalled the arrangement which obtained in the case of the upper end of the humerus.

The Course of the Taste Fibres.

Professor A. Francis Dixon gave a demonstration of lantern slides, to show that embryological, comparative anatomy, and experimental evidence were entirely in favour of the seventh and ninth nerves being the nerves of taste. The development of these nerves and their branches was described, and the observations of O. Strong were noted. The results of Krause, MacTiffany, and Lynn Thomas in cases of intracranial section of the fifth nerve roots were quoted.

The Second and Third Divisions of the Fifth Nerve.

Mr. J. Lynn Thomas, exhibited a number of photographs showing the anæsthetic areas in two patients in whom the second and third divisions of the fifth nerve were cut intracranially. Especially noteworthy was the persistence of the sense of taste all over the tongue after section of these nerves.

Sectional Anatomy of the Brain of Orang and Chimpanzee.

Professor D. J. Cunningham, sent for exhibition a number of sections illustrating the sectional anatomy of the brain of the orang and chimpanzee. Among the points dealt with were: (1) The relationship of the caudate nucleus to the island of Riel; (2) the formation of the opercula of the island of Riel; (3) the arrangement of the fibres of the corona radiata; (4) the component parts and the course of the fibres of the anterior commissure; and (5) the course of the fibres which compose the optic radiation. These latter fibres could easily be traced backwards in the occipital lobe to the outer side of the posterior horn of the ventricle lying between the tapetal fibres and those of the inferior longitudinal fasciculus.

The Reaction of the Intestinal Contents.

The President (Professor Charles) referred to the investigations of Moore and Rockwood, Gillespie, and others. He had himself made observations on "subjects" before they had been injected, and had found the reaction of the contents of the small intestine to be acid for the most part, whilst that of the large intestine was alkaline. The fæces in health were alkaline.

National Registration of Plumbers.—The ninth annual public meeting of registered plumbers in the counties of Aberdeen, Kincardine, and Banff was held recently at Aberdeen, Professor Matthew Hay presiding. The report of the Council for the year was submitted and adopted, and the following resolution was carried unanimously: "That this meeting renews its expression of warm approval of the Plumbers Registration Bill, being of opinion that the passing of the Bill is essential to the continuance of the registration movement—a movement which, it is generally admitted, is rendering important services to the public health."

SECTION OF OPHTHALMOLOGY.

SIMEON SNELL, F.R.C.S.Edin., President.

ENOPHTHALMOS.

By E. TREACHER COLLINS, F.R.C.S.,
Assistant Surgeon, Royal Ophthalmic Hospital, Moorfields.

ENOPHTHALMOS, or displacement of the eyeball backwards in the orbit, is a symptom which, though not frequently met with, may be brought about in a variety of ways. Having during the last few years had several cases in which it was present come under my observation, some of them exceptional ones, I thought it would be interesting to bring them together and compare them with the various theories which have been put forward to account for its causation.

First of all, the cases may be divided into those in which the sinking of the eyeball has resulted from some severe injury to the face and those in which no history of such injury could be obtained. I will consider the latter cases first.

NON-TRAUMATIC CASES.

In paralysis of the cervical sympathetic, together with contraction of the pupil and slight drooping of the lid, there is sometimes sinking of the eyeball in the orbit. I have met with 3 cases presenting the pupillary and lid symptoms of paresis of the cervical sympathetic; in 2 enophthalmos was present, but had to be carefully looked for before it was noticed. In the other cases no displacement of the eye backwards could be detected. The cases are of interest in that in none of them could any very definite cause for the affection of the sympathetic be discovered.

CASE I.—F. B, aged 22, came first as an out-patient to the Moorfields Hospital on March 11th, 1896, complaining that for the last twelve months her left eye had looked smaller than her right. On examination the palpebral aperture on the left side was seen to be narrower than on the right, due to drooping of the upper lid. The left pupil was smaller than the right; both acted well to light and accommodation. When excited or nervous she sweated profusely on the left side of the forehead, the area over which the sweating occurred being limited by a very well-defined line in the centre. Enophthalmos was at this time not specially looked for or noted. When she again attended a year later it was found to be present to a slight extent. V.=R. $\frac{6}{9}$ Hm. 1.25 $\frac{6}{9}$ J. 1, L. $\frac{6}{9}$ Hm. $1\frac{6}{9}$ J. 1. The right pupil measured 5 mm., the left 3 mm. Application of cocaine to the left eye did not produce any dilatation of the pupil or any alteration in the position of the upper lid. When a child she had swellings on both sides of the neck, and two years ago had some swollen glands on the right side. She states that when she eats she feels something slip down from near the condyle of the jaw on the left side. On pressure behind the ramus on this side a tender spot is detected. Twelve years ago she had diphtheria, after which when she swallowed fluid it came through her nose. For a time also her sight was defective and she had to wear glasses; as she got stronger she gave up using them. I have seen her at intervals since she first came; there has been no alteration in her condition.

CASE II.—Mr. T., aged 35, came to consult me in June, 1899. His left eye had been watery since 1895. He had been treated by several surgeons with various antiseptic and astringent lotions without benefit. He had noticed that his left upper lid drooped, more so sometimes than at others. On examination there was seen to be slight ptosis on the left side, the lid moving, however, with the globe. The left pupil was smaller than the right; both acted normally to light and accommodation. The eyeball was displaced slightly backwards in the orbit. There was some congestion of the palpebral conjunctiva. The application of cocaine produced no dilatation of the left pupil or retraction of the upper lid. V = R $\frac{6}{9}$ no Hm. L. $\frac{6}{9}$ Hm. $5\frac{6}{9}$. No history of injury to neck or of any swelling there could be elicited. Patient had had an attack of syphilis eight years ago.

The next case which I have to bring to your notice is one which has for several years been under the care of my friend Dr. Galloway, suffering from morphœa in the course of the right fifth nerve. He has kindly permitted me to make use of his notes concerning her.

CASE III.—E. G. came first under the care of Dr. Galloway as a patient at the Great Northern Hospital, on May 29th, 1889. She was then 22 years old, and suffering from morphœa which affected the right median side of the scalp, the cheek, and the side of the nose. She stated that the disease had commenced eight years previously, just above the right eyebrow, and at a spot 7 inches vertically behind it. The two patches gradually extended, the one forwards and the other backwards, until in about a year's time they met. About four years ago a patch began to form on the right side of the nose, and subsequently one below the eye in the region of the infraorbital nerve. The patch on the brow, at the time she came under observation, measured 7 inches in length and 1 inch in breadth. It extended backwards from above the right eyebrow in the course of the longer branch of the supraorbital nerve. The affected area was quite hairless, and below the level of the surrounding hairy scalp, it seemed hard and adherent to the periosteum. There was some capillary dilatation in the patch, as well as its margins. Sensation over the patch seemed unaltered. When she first attended in 1889 it was noticed that her right eye was sunken deeper in the orbit than the left. Since then the amount of depression has increased. The patches of scleroderma have not altered in size since 1889; they have, however, become somewhat less firmly adherent to the subjacent structures. On January 14th, 1899, V. of R. eye = $\frac{6}{6}$ Hm. $3.5\frac{6}{9}$. L. eye = $\frac{6}{6}$ Hm. $3.5\frac{6}{9}$. There was marked displacement of the right eye backwards in the orbit. On looking upwards as far as possible the lower margin of the right cornea appeared slightly lower than



Case 3.—Morphœa in the course of the right fifth nerve, accompanied by enophthalmos.

the left. On looking to the left she had crossed diplopia, on looking up the image seen with the right eye was higher than that seen with the left.

In this case I think there can be little doubt that the process of sclerosis, which had affected the skin and its subjacent tissue, had likewise affected the cellular tissue of the orbit, and so caused the sinking back of the eyeball. I have been unable to find any case recorded that is quite like it. It is tempting to assume that the change is the result of some loss of trophic nerve influence, but on this point I believe dermatologists are as yet not agreed.



Case 4.—Analgesia of right fifth nerve, accompanied by enophthalmos.

As another case of enophthalmos arising without injury, and in connection with an affection of the fifth nerve, I may



(A)



(B)

Case 5.—Enophthalmos of left eye which became exophthalmos on stooping; *A*, patient in erect posture; *B*, patient directly after stooping.

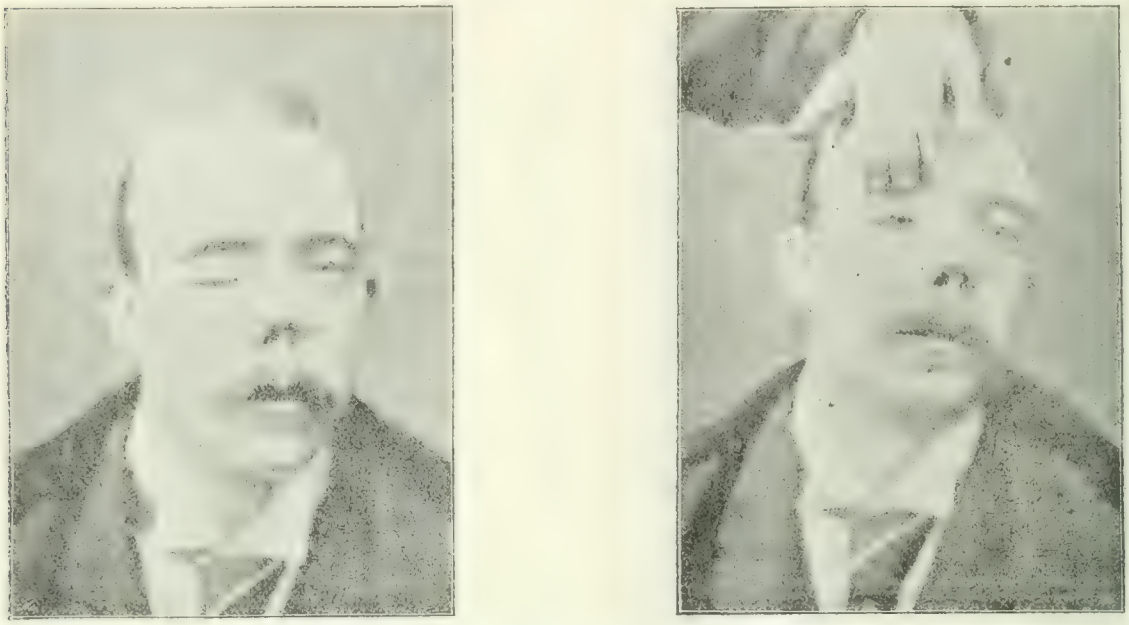


(C)



(D)

ase 6.—Congenitally defective movements of left eye, with enophthalmos; *C*, patient looking to his left, showing defective movement eye outwards; *D*, patient looking to his right, showing narrowing of left palpebral aperture and retraction of eyeball.



Case 10.—Traumatic enophthalmos and ptosis, with scars at margin of orbit.



Case 11.—Traumatic enophthalmos and ptosis, with scars at the margin of orbit.

mention one which I recorded with Dr. Mott in the Ophthalmological Society's *Transactions*, vol. xvi, p. 354.

Case iv.—A man, aged 31, had analgesia of the right fifth cranial nerve and enophthalmos with slight drooping of the upper lid on the same side. He gave a definite history of a chancre and secondary symptoms four years previously. A year before coming under observation he had a "stroke," after which for some time his eye was turned inwards, and the right side of his mouth was drawn downwards to the right side. He also had great difficulty in swallowing, and a feeling of numbness in the right hand and foot. Dr. Mott diagnosed that there had been syphilitic thrombosis of the pontine vessels. The pupils of the two eyes were equal, and acted normally to light and accommodation. The right pupil dilated with cocaine to the same extent as the left. There was no defect in the movement of the eyes, but there was slight rotatory nystagmus in each, most marked in the right.

In this case the accompaniment of the enophthalmos with slight drooping of the lid suggests at first that there was paresis of the sympathetic, the absence of any alteration in the pupil, and its dilatation on the application of cocaine is, however, opposed to such an explanation. There was some affection of the fifth nerve, as shown by the analgesia, and it might be suggested that there was atrophy of the contents of the orbit through loss of trophic nerve influence. If such was the case it is peculiar that enophthalmos is not a more frequent accompaniment of fifth nerve palsy.

I have met with one case, of which now several have been recorded, where one eye was displaced backwards in the orbit, but when the the patient stooped or when his jugular vein was compressed it became exophthalmic. My case, which is recorded in full in the *Transactions* of the Ophthalmological Society, vol. xv, p. 240, is briefly as follows:

Case v.—A youth, aged 17, had noticed for a year that "on stooping his left eye seemed to give and bulge out." There was no history of injury to the eye, but he had received a blow on the top of his head from a cricket ball five years previously. Enophthalmos on left side when standing erect, on stooping for a minute left eye becomes more prominent than the right, and the upper lid droops over the eyeball. Vision of the two eyes equal. No tumour or abnormal pulsation to be felt in the orbit. Protrusion of the eye can also be produced by compression of the jugular vein on the left side.

A similar case without any history of traumatism has been recorded by Lang and A. H. Thompson in the *Transactions* of the Ophthalmological Society, vol. xvii, p. 250, where references to several others will be found.

There seems to be a general consensus of opinion that the symptoms in these cases are best explained by the presence of a new growth of the nature of an angioma, which has caused absorption of orbital contents and sinking of the eyeball, and that when the growth becomes engorged with blood by stooping or compression of the jugular vein the eyeball becomes proptosed.

In the *Transactions* of the Ophthalmological Society for 1896, Mr. Maclehose describes one of a series of cases which he has seen presenting the following symptoms:

Inability to move one eye outwards (usually the left); narrowing of palpebral fissure; retraction of the globe when the patient looks away from the paralysed side, and in some of the cases slight weakness of the internal rectus. In one of his cases the retraction of the globe (enophthalmos) was permanent. The condition was apparently congenital, and Mr. Maclehose said he was unable to offer any satisfactory explanation of the symptoms.

The following case is one of a similar character.

Case vi.—H. P., aged 20, came as an out-patient to the Moorfields Hospital on May 26th, 1838. He stated that his left eye had always appeared smaller than his right, and that he saw double on looking to his left. He was quite certain that the condition of his eye was not of recent origin but had been present since birth. Six years previously he had a blow from a stone on his left eye, which has left two superficial scars of the skin under the brow. The palpebral fissure on the two sides appear equal, but the integument between the left eyebrow and the left upper lid has a relatively full and puffy appearance. The left eyeball is more deeply situated in the cavity of the orbit than the right. On the patient being directed to look to the left there is only the very slightest movement outwards of the left eye. On being directed to look to the right, the left eye moves inwards a certain distance, and then turns somewhat upwards with a wheel movement of the vertical axis of the cornea outwards; at the same time the eye becomes sunk a little deeper in the orbit, and drawn away a short distance from contact with the inner surface of the lids; the palpebral fissure also becoming slightly narrowed. The movements of the left eye upwards and downwards are unrestricted, and appear, on account of the sunken condition of the eye, a little more extensive than those of the right, a larger part of the left cornea being brought under cover of the lids. On looking to the left of the median plane the patient has homonymous diplopia, and to the right crossed diplopia. In the extreme upward position the false image (that seen with the left eye) is scarcely so high as the true image, and in the extreme downward position the false image is scarcely so low as the true one, but in no position is there any inclination of either image from the vertical plane. The levator palpebræ acts normally, there is no facial paresis, no anæsthesia of the face, and the tongue is protruded in the middle line. There is no marked difference between the two sides of the face; if anything, the right is the more prominent of the two, and the bridge of the nose projects decidedly more on the right side than on the left. The pupils of the two eyes are equal, and act normally. V. of each eye = ⅔ and J. 1, from 5 to 20 mm. Nothing abnormal detected in the fundus of either eye. The patient's general health has always been good, and there is nothing in the family history of importance.

In these cases the enophthalmos is apparently congenital and associated with a congenital defect in the movement of the eye. Heuck had the opportunity of making a dissection in a child who had congenital defective movement of the eyes, complete double ptosis, loss of upward and downward movement, and defective lateral movement. He found that the defective movements of the globe were due to the abnormal shortness of the muscles and to their insertion too far back in the sclerotic, some of them being displaced back as much as 2.5 mm. The defective movement of the eyes in the cases now under consideration is probably due to the same cause.

The recti muscles arising from the apex of the orbit and inserted into the globe in front of its equator would on contraction tend to draw the eyeball back into the orbit, were it not for the resistance offered by expansions of Tenon's capsule passing between the sheaths of the muscles and the walls of the orbit, which are termed the check ligaments.

Dr. Thomas Dwight, in Oliver and Norris's *System of Diseases of the Eye*, vol. i, p. 100, says, in speaking of these expansions of Tenon's capsule: "Their effect is partly to steady the eyeball, and to resist the backward pull of the recti."

Maddox, in his book on the *Ocular Muscles*, says, p. 14: "It is evident that the check ligaments, by acting on the posterior hemisphere of Tenon's capsule, help to draw the eye forward against the backward traction of the recti." And again: "By their direct attachments to the recti they moderate the power of backward traction, even with respect to the muscular tone in the absence of voluntary contraction."

Now in the absence of any definite anatomical evidence to show the cause of the enophthalmos in these cases.

I would suggest that, in addition to there being a congenital shortness of the muscle and insertion of it too far back into the sclerotic, there is an absence, or insertion too far back, into the walls of the orbit of the check ligaments; so that the unrestricted muscular tone causes some permanent retraction of the globe, which is much increased on contraction of the unsupported muscle.

Traumatic Cases.

I have met with 5 cases of traumatic enophthalmos, the notes of which are appended. I propose to compare these with the different theories which have been put forward to account for the symptom.

Schapringer[1] suggested that some of the cases might be due to a lesion of the cervical sympathetic, and he records one case in which this seems probable. It was that of a little girl, aged 7, who struck her right temple against an iron grating. She did not lose consciousness, but bled from the nose and ear. Two hours later drooping of the upper lid and a sunken appearance of the eye were noticed.

The ptosis was not due to paralysis of the levator, as the lid moved upwards in association with the globe. The pupil of the right eye was round, active, and equal to its fellow. The tension was diminished. The sensibility of the skin, its capillary circulation, and its temperature showed no difference on the two sides of the face.

The day following the accident the symptoms had partly subsided, and two days later had entirely disappeared. The immediate onset of the enophthalmos and ptosis after the injury in this case, and its rapid disappearance, certainly suggest a temporary muscular paresis.

Schapringer says a small hæmorrhage involving the sympathetic root of the ciliary ganglion would explain all the symptoms. The diminished tension he attributes to secretory disturbance in the eye; and the non-affection of the pupil to the fact that the pupil dilator fibres do not pass through the sympathetic root of the ganglion. In none of my cases is it known that the enophthalmos came on directly after the injury, and in all of them it was permanent.

In two there was ptosis due to paralysis of the levator palpebræ muscle (Cases x and xi), and in one of the others there was slight drooping of the upper lid (Case viii). In

Case x the pupil is noted as being inactive to light, and only feebly active to accommodation. In all the other cases the pupils were active and equal.

Beer, who has recorded 2 cases of traumatic enophthalmos[2] attributes the symptom to atrophy of the orbital tissues from lesion of the sympathetic or fifth nerves. In 2 of my 5 traumatic cases (Cases VIII and XI) defect in sensation in the course of the fifth nerve was present. In Case XI, which I was able to watch for some time, the anæsthesia over the face and brow, at first complete, gradually disappeared. If we accept this explanation as the cause of the sinking of the eye, as I have already said in speaking of the non-traumatic cases, it is strange that enophthalmos is not a frequent accompaniment of lesions of the fifth nerve.

Gessner[3] recorded from Nieden's clinic 3 cases of enophthalmos of traumatic origin, in all of which there had been penetrating wounds into the orbit, leaving scars at its margin. He suggests that the wound in these cases gave rise to inflammation of the cellular tissue and periosteum of the orbit, which led to contraction of its contents and consequent displacement backwards of the eyeball. The defective movements of the eye in some of the cases might also be accounted for by the implication of the muscles and formation of adhesions. Gessner, however, thinks they are more likely the result of laxity of the muscles due to the sinking of the globe.

In 3 (Cases IX, X, and XI) out of my 5 traumatic cases there were scars at the margin of the orbit, and had evidently been wounds penetrating the orbital tissues.

In Case VIII, though there was no external wound, it is noted that extensive swelling followed the blow, which was a very severe one, against a pony's head.

It is very probable that fracture of the walls of the orbit occurred, causing a communication between it and one of the neighbouring air sinuses, which resulted in an orbital cellulitis. The same explanation might possibly apply in Case VII, which is a very exceptional one, in that the blow was received on the cheek of the side opposite to that on which the sinking of the eye subsequently occurred. The patient's statements on this point are very definite. I have several times questioned her on the matter and she always adheres to it that the blow was on the opposite side.

In Cases VII and X there was obvious defect in the movement of the eyeball, in Case VII outwards and in Case X in all directions. In Cases VIII and XI, though there was no apparent defect of movement, in certain positions the patient saw double.

Lang attributes traumatic enophthalmos to depressed fracture of the wall of the orbit allowing of increased space for the orbital contents, the eyeball becoming depressed back by the pressure of the external air.

In two cases recorded by Becker and Tweedy an injury with a cow's horn seems to have driven the eyeball through the floor of the orbit into the antrum of Highmore.

In none of my 5 cases can the presence of fracture be excluded. In Case X there certainly was some fracture of the margins of the orbit, for several pieces of bone were removed. In Case VII it is difficult to conceive how a blow on the right cheek could produce a depressed fracture of the wall of the left orbit.

In conclusion I may add that though it is unnecessary to assume that in traumatic enophthalmos the sinking of the eye is always brought about in the same way, it seems to me that the 5 cases I have met with are best explained by the theory which attributes the sinking of the eye to the contraction of inflammatory products the result of an orbital cellulitis.

CASE VII.—S. R., aged 37, came to the Moorfields Hospital on February 2nd, 1894. Her right eye was then seen to be much less prominent than the left. It had the sunken appearance of a glass eye. She was unable to move the right eye outwards; its movements in other directions were normal, as also were those of the left eye. There was no difference in sensation of the skin of the face or brow of the two sides. V. = R. $\frac{6}{9}$ Hm. $1\frac{6}{18}$ L. $\frac{6}{5}$ Hm. $1\frac{6}{5}$. She stated that she was "cross-eyed" when a child, but that it passed off as she grew up. Three years before she had had a severe blow from a stick on the left cheek bone, after which the left eye was discoloured and swollen for about three weeks. Some weeks after the blow she noticed a twitching sensation in the right eye, and she thought the sight of it became defective. Twelve months after the blow her friends noticed that her right eye appeared sunken; the amount of sinking she thinks has increased since then. She has suffered a good deal from headaches, and did so for many years before the blow. She has never seen double. She has been married nineteen years, and had five children and one miscarriage. Four of the children are living and in good health; one died of croup. Her menstrual periods are frequent, and she loses much at them. I have seen her at intervals since she first attended, and her condition has remained unchanged. She complains of some trouble from the collection and overflow of tears caused by the want of close apposition of the lachrymal puncta to the sunken globe.



Case 7.—Enophthalmos on right side, following blow on left cheek.

CASE VIII.—Captain G., an officer in the Indian army, on January 17th 1895, while playing polo received a severe blow from his pony's head on his right eye. This was followed by much swelling of the lids and discoloration of the skin. After the swelling subsided the eye seemed to sink and at times he found he saw double. He came to consult me on July 6th, 1895. The palpebral fissure on the right side was then seen to be narrower than on the left, due to slight drooping of the upper lid. The right eyeball was less prominent than the left, being displaced backwards. The pupils of the two eyes were equal and acted normally to light and accommodation. There was no apparent limitation in the movements of the eyes, but the patient had crossed diplopia on looking upwards and to the right. There was numbness of the skin over the right brow and right side of the face, sensation being less acute there than on the opposite side. On pressure of the two eyeballs back into the orbit less resistance was offered by the right than the left V. = R. $\frac{6}{9}$ J. 1, L. $\frac{6}{5}$ J. 1. Ophthalmoscopically the right fundus appeared healthy.

CASE IX.—Miss D., aged 23, came to consult me on December 30th, 1896. For a considerable time both she and her friends had noticed, that there was a dissimilarity in the appearance of her two eyes. She had always been shortsighted, but had never worn glasses. When four years old she had a severe blow on the left eye from falling against the handle of a saucepan, which had left a scar. This scar was about an inch in length, and extended vertically downwards from about the outer extremity of the left brow to a little below the outer canthus. The left eyeball was displaced backwards in the orbit to a slightly deeper level than the right. The palpebral fissures on the two sides were equal in size. There was no defect in the movements of the eyes; she did not complain of diplopia, and none could be detected. The pupils of the two eyes were equal and active to both light and accommodation. Ophthalmoscopically the fundus of each eye appeared normal. V. = R. $\frac{6}{18}$ J. 1, $\bar{c}$ — 0.75 $\frac{6}{9}$; L. $\frac{6}{36}$ J. 1, — 1 $\frac{6}{9}$.

CASE X.—H. M., aged 26, a marine, was on February 3rd, 1896, struck in the face, on board a man-of-war, by an armoured hatchway weighing 15 cwt. It caused an extensive wound of his right upper lid, nose, and lip. Subsequently three operations were performed for the removal of bone. He came as an out-patient to the Moorfields Hospital on August 20th, 1896, when his condition was as follows: There was extensive scarring of the upper lip, right side of the nose, and right upper eyelid. The scar in the upper eyelid extended right across it parallel with and just beneath the upper margin of the orbit. There was complete ptosis. On the lid being raised he saw double. The right eyeball was much displaced backwards in the orbit; he was unable to move it outwards. There was marked defect in the vertical movements, and slight limitation in the movement inwards. The pupil was inactive to light, and only acted feebly to accommodation. In other respects the right eye appeared healthy; the left eye was normal. V. = R. $\frac{6}{9}$ Hm. 1.5 $\frac{6}{9}$ J. 1; L. $\frac{6}{5}$, J. 1. I saw him again on January 10th, 1898. His condition was then much the same. He had developed some entropion of the lower lid, and he complained of a swelling forming in the region of the lacrymal sac, which was due to its distension with fluid, and which on pressure emptied itself down his nose. That there had been considerable loss of bone at the upper angle of the orbit could be distinctly felt. There was no difference in sensation on the two sides of the face.

CASE XI.—H H*, aged 30, came to the Moorfields Hospital on March 30th,

1899. He stated that five weeks previously his face had been injured by the explosion of a copper cylinder containing gas. For twenty-four hours after the accident he was unconscious. His nose and left upper lid were cut. Since the injury he had been unable to raise the left upper lid. At first he had loss of sensation over the whole of the left side of his face this has since partly returned. On examination a triradiate scar was seen starting on the left side of the nose and extending across the bridge, downwards to the left ala, upwards to the inner side of the left eye, and more than half way across the left upper lid. His left upper lid drooped over the eye, and he was unable to raise it except by the use of his occipito-frontalis muscle. He had complete anæsthesia over his left brow; he could feel when touched on the left cheek, but said it was numb, and different to when he was touched on the other side. When his left upper eyelid was raised his left eyeball was seen to be displaced backwards in the orbit, being at a distinctly deeper level than his right. No defect in the movement of the eye could be detected, but on looking to his left side he had homonymous diplopia. The pupils of the two eyes were equal and acted normally. I have seen him at intervals of a month since his first visit. On July 17th he had acquired considerable power in raising the upper lid. The diplopia had entirely disappeared, and he had acquired normal sensation over the left side of the face and brow. The eyeball was still displaced backwards in the orbit.

References.

[1] *New York med. Monatschrift*, June, 1890; and *Ophthalmic Review*, vol. ix, p. 294. [2] *Arch. of Ophth.*, vol. xxii, 1. [3] *Arch. f. Augenheilk*, Bd. xviii, Hft. 3.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

UNUSUAL DYSPNŒA IN THE URÆMIC STATE.

A plumber, aged 31, was lately under my care for severe Bright's disease. Very tense radial and tortuous temporal arteries were present. His urine deposited abundance of albumen. The heart was hypertrophied, though there was no evidence of valvular lesion. The lungs were healthy.

On December 18th, after he had been under observation for five weeks, the respirations were observed to follow the Cheyne-Stokes rhythm during sleep. The cycle consisted of eleven respirations, each increasing in intensity up to the fourth and decreasing after the eighth. The pause lasted 17 seconds; he was then sleeping quietly, and did not appear conscious of any disturbance. On December 19th he began to complain greatly of distress of breathing, though there appeared little to account for it. The respirations were regular, and their frequency not markedly increased; but he nevertheless panted, and drew his breath in gasps, and when he tried to speak talked like a man who has been running hard. Air entered the lungs freely. There was no cyanosis.

This condition of breathlessness, though it varied in intensity, never once really left him, but gradually got worse. It was not proportionately aggravated by exertion, and was always worse at night.

In a few days the Cheyne-Stokes rhythm manifested itself in the daytime, and persisted to the end; and it soon became obvious that the only periods of respite that he was destined to obtain from the increasing dyspnœa were the short apnœic periods of the Cheyne-Stokes rhythm. Thus he became not only conscious of this phenomenon, but the cycle in his case was accompanied by the most intense suffering. In the pauses, which seldom exceeded twenty seconds, he would drink, speak in monosyllables, and often lie back and compose himself for sleep, but only to spring up again on the first sign of returning respiration, and throw himself forward and from side to side in all the agonies of suffocation as the more stertorous respirations supervened.

Chloral hydrate, in 15-gr. doses, gave some relief, and the administration of chloroform still more. He died in uræmic convulsions.

A case is elsewhere related[1] where the apnœic state alternated rhythmically with the dyspnœa attendant on heart and lung disease. In the case I have described, however, the condition of the heart and lungs, as evidenced by physical signs, gave no reason to suspect that they contributed to the dyspnœa, though in the absence of a *post-mortem* examination one is not justified in asserting that they may not have done so.

Windsor. Charles R. Elgood, M.D.Lond.

[1] *Lancet*, vol. ii, 1880, p. 691.

A CASE OF FISTULA IN ANO TREATED BY SUBCUTANEOUS EXCISION.

M. P., aged 23, single, consulted me on July 3rd for a chronic abscess 1 inch outside the right labium majus and level with its middle. She had suffered from it for two years. There was no history of its connection with the rectum, and it seemed rather in a position to have originated from abscess of Bartholin's gland.

She was admitted, and on trying to dissect out the sac it was found to run into the rectum by a distinct tube. This was clearly defined and lined with smooth mucous membrane. It struck me as possible to dissect this out without dividing the sphincter ani. I dissected out as much as possible from the external incision, and then passed a suture into the rectum through the tube and tied the remaining end of the suture to the portion of duct dissected out. I then dragged the tube through itself into the rectum, and finally snipped it out with its rectal opening, putting in a circular suture to close the rectal end and some buried catgut sutures to close the rest of the track. The sphincter ani and skin were thus not divided, and the parts healed by first intention.

It may be said that if the sphincter ani had been divided and sutured carefully it would have healed, as in any case of repair of complete perineal laceration. And this is so; but still I submit that it is judicious to avoid division of the sphincter ani whenever possible. A condition of such complete isolation of the sinus and absence of branches or complications is rare; but if a simple case be met with, perhaps it may be worth repeating my manœuvre.

Wolverhampton. Fred Edge.

OBSTINATE HICCOUGH AFTER OPERATION.

The following case resembles that reported by Dr. Christmas in the British Medical Journal of March 11th, 1899, in that it followed, and was perhaps caused by, an operation or the use of an anæsthetic.

The patient was a Mussulman, aged 35. On November 4th, 1894, I performed lateral lithotomy under chloroform. Whilst still on the table, and semi-conscious, the patient began a violent hiccough, which continued at 5 to 7 seconds' interval for 15 days. No treatment had the slightest effect except morphine, in doses large enough to produce profound narcosis, during which the hiccough still continued, though at longer intervals. Antispasmodics, narcotics, emetics, purgatives, counter-irritation to the epigastrium and over the phrenic nerves in the neck, in fact every line of treatment described in textbooks proved useless.

No cause whatever could be detected for the hiccough. The wound was healing satisfactorily, but the patient became greatly emaciated, and it seemed as if the life would be jerked out of him, when, on November 29th, the hiccough stopped as suddenly and as unaccountably as it began. He had taken a dose of chloral hydrate a few minutes previously, but I in no way attribute his cure to that drug. I met him a few months ago. He said he had not been since troubled by hiccough.

Kalain, Cachar. Arthur Powell, B.A., M.Ch.

CASE OF PERFORATED GASTRIC ULCER.

Mrs. F., aged 25, came to me on May 2nd, complaining of nausea and pain after food, but without actual vomiting. The pain was not severe, and the symptoms had troubled her for some months. I treated her for chronic dyspepsia until May 9th, when she discontinued her visits, being much improved. She, however, continued the morphine that had been ordered, as the pain returned on leaving it off.

I was called to see her at 12.15 A.M. on May 24th. She had been out all the previous day holiday making, and three hours after taking a supper of cold mutton, bread, etc., was seized with sudden abdominal pain and vomiting. The abdomen was tender, but not tense; the temperature and pulse were normal, and the bowels had acted freely that day. I ordered her hot fomentations and morphine. I saw her again at 10 A.M., the pain was relieved, but the abdomen was tense and tender. She was anxious and somewhat collapsed. Her condition got steadily worse during the day, and at 7 P.M. I consulted with Dr. A. E. Morison, who advised an operation at once as her only

chance, her condition at this time being one of extreme collapse. We opened the abdomen, and found a small perforation on the anterior surface of the pylorus, which we sutured: the peritoneal cavity contained about a pint of fluid, but there was hardly any peritonitis. The patient died about four hours after the operation from exhaustion.

The points which strike me especially in this case are:

1. The presence of a gastric ulcer with no other symptoms than those of chronic dyspepsia.

2. The entire absence of hæmatemesis.

3. The danger of giving morphine when there is the possibility of an ulcer existing, as it merely masks the symptoms without interfering with the process of ulceration. The lesson to be learnt from the case is the danger of delay as regards operative procedure when there is only a suspicion of a perforation.

ARNOLD ROCHFORT MCCULLAGH, L.S.A.Lond.

West Hartlepool.

THE USE OF ANTISTREPTOCOCCUS SERUM.

CASE I.—A boy, aged 9, was brought to me on account of a discharge from the ears, which had been present since infancy.

On examination, both membranæ tympani were found to be perforated. There was a polypus in the right ear, and a quantity of greenish pus in both.

In spite of careful treatment, extending over more than six months, the discharge persisted. I therefore determined to try the effect of the injection of antistreptococcus serum. I began with injections of 5 c cm. twice a day. On the fifth day he had a rigor with slight vomiting and a rise of temperature. There was also a rose rash commencing at the site of the injection and rapidly spreading over the whole body. These symptoms lasted 48 hours.

I repeated the injection of 10 c.cm. on the seventh day, and on the tenth day with exactly the same result. The left ear had now ceased to discharge. The polypus in the right ear had become much smaller, the discharge very much thinner and quite inoffensive. All local treatment had been stopped while the serum was being used. I now recommenced antiseptic treatment of the right ear, and 3 weeks later, although there was still slight discharge, the polyp had disappeared. I gave another injection of 10 c.cm. of serum. This was also followed by rise of temperature, *malaise*, and rash. A week later the discharge had entirely ceased in both ears, and 2 months later both membranes had cicatrised. There has been no discharge or any trouble in either ear for more than a year.

CASE II.—Mrs. B., aged 29, who had been operated upon for suppurative salpingitis, came to me about two months after the operation on account of constant discharge from a sinus in the median incision. I had before long to open an abscess in the left iliac region, but could not produce any cessation of discharge, which was very foul and often fæcal in odour. After carefully treating her for about three months by ordinary methods without much improvement, I injected 20 c.cm. of antistreptococcus serum every other day for a week. There was never any rash or rise of temperature. The discharge rapidly decreased in quantity, becoming thinner and inoffensive. A month later it had entirely ceased, and the wound had cicatrised. After twelve months she is in excellent health, and has had no recurrence of the discharge.

In the otitis case the discharge was examined by Mr. Bokenham, who found only staphylococci. The serum used was supplied by Messrs. Burroughs and Wellcome. I used in the second case serum from the same supply that I had obtained for the first case. It had been kept in a cool dark place for nine months, and apparently acted as perfectly at the end of that time as when first received.

Ashby-de-la-Zouch. RODERIC LOGAN, M.R.C.S.

A CASE TREATED WITH ANTITYPHOID SERUM.

M. W., a girl aged 14, was taken ill on May 18th, 1899, with diarrhœa. She was not perceptibly ailing before then, and had been at work at Leeds on May 17th. The relatives did not think her ill enough to send for medical aid until May 21st, when she was seen by my partner, Mr. R. Haygarth. Her temperature was 105.1°; she lay on her back, with flushed cheeks and pale face; she was apathetic, and only roused to speak with difficulty, although she was delirious at night. The abdomen was tumid, the tongue furred, except at the tip and edges. Respirations were rapid, between 30 and 40 to the minute, the pulse was small and weak, and about 110, the spleen was distinctly enlarged. There was nothing in the lungs save a few scattered bronchitic *râles*, such as are commonly found in enteric fever. No rash was observable on the trunk or limb. The motions were quite fluid, described by the aunt in attendance as being "like coffee with milk in it"—a description which turned out to be fairly accurate, save that the colour was more yellow than coffee. There was gurgling in the right iliac fossa, and the patient complained when deep pressure was made there. My partner and I were in perfect agreement as to the diagnosis of typhoid fever. The symptoms during the next 40 hours continued the same in kind but gradually aggravating in degree. By May 23rd she was almost comatose; the temperature was always tending above 105°, the abdomen was still more distended, the diarrhœa remained nearly as frequent. There was still nothing in the lungs, and feeling certain of the diagnosis we determined to use the specific serum, for the pulse was flagging and the case seemed to be getting desperate, more especially if this was the first week of the disease. On the morning of May 23rd I injected 10 c.cm. of antityphoid serum (obtained from Messrs. Burroughs and Wellcome), and again the same dose at 8 P.M. The temperature in the morning was 105.4°; in the evening, when the second injection was made, it was 103°, though there was little difference else. Next morning at 10.30 the temperature was 101°. The patient was distinctly alive to what was passing round her; the diarrhœa had stopped. She had passed water, which she had not been able to do for 56 hours before. I gave her another injection of 10 c.cm., and by night the temperature was normal, nor has it passed the limits of health since that date. Her convalescence, which was slow for 2 or 3 days, was uninterrupted, save that on the tenth and eleventh days there was heard in front at the base of the right lung a localised crepitus of a somewhat metallic quality. There was no loss of resonance, and the whole thing cleared up in three days.

The only treatment adopted was at first Dover's powder, gr.v, every four hours, which did not stop the diarrhœa; followed by 1 grain of carbolic acid in gentian every four hours after we left off the serum.

Three weeks after the last injection the blood was tested for Widal's reaction, with negative results. We waited so long in order that there should be no fear of the serum influencing the test. But clinically the case was certainly enterica; I do not think any medical man would have hesitated to diagnose it so. And if, as we believe, it was a severe case of typhoid, beginning acutely, and aborted in the early stage, there is nothing remarkable in the failure of the blood to react. If the case has no other value, it at least points to the harmlessness of the remedy, and emphasises what I have noticed in another case—the markedly antipyretic power of the serum.

Halton, near Leeds. B. BASKETT, M.D.Oxon.

THE SO-CALLED ABORTIVE TREATMENT OF TYPHOID BY CALOMEL.

IN a large percentage of cases the diagnosis of typhoid fever is extremely difficult, especially in the early stage. Taylor, in his *Practice of Medicine*, makes no note of its great similarity to that of malaria. The differential diagnosis may be summed up in favour of malaria thus: Previous attacks, nature of the district, suddenness of onset, and height of temperature. In my own case the temperature was 105.6° in twenty-four hours from the onset. Even with these facts the following case may illustrate the difficulties:

A Boer of 50 years, prematurely old, was seen by me suffering from all the evidences of malaria. Calomel, 6 gr., followed six hours later by magnesium sulphate 1 ounce in cold saturated solution was given. The temperature, which at first was 104.4° F., was normal in 36 hours and remained so. About six weeks later I was again called to see him. His symptoms were precisely the same, but the temperature was only 101.7°. The above treatment was again adopted, but without any effect on the temperature, which varied from 101° to 103.4° for the following week in spite of quinine, when the distinctive symptoms of typhoid developed, and the case ran its usual course to convalescence. Some two months later I again saw him with precisely the same symptoms, the temperature being 104.8° F. Calomel was again given as above, and the temperature was normal in 24 hours. A week later he had a pretty severe attack of the cold stage (temperature 101.4° in the mouth), with limb and head pains. Quinine was ordered, and now (3 months later) he has had no recurrence.

In this case there were undoubtedly two attacks of malaria

with typhoid intervening. On the Continent calomel has obtained a certain amount of notoriety as being an abortive in the early stages of typhoid fever. In England that action does not seem to have been followed by a similar success. I do not think the reason is far to seek. In England there is practically no malaria, although it is more or less prevalent on the Continent. Taking the above case it will be readily seen that the difficulty of differential diagnosis is often extreme, so that if a case of malaria be wrongly diagnosed as typhoid fever, the so-called abortive action of calomel can be easily explained. The only difference in the attacks above mentioned was that in the typhoid onset the patient had been feeling out of sorts for about a week previous to his sending for me, and in the others he was hard at work—at least as hard as a Boer does work—and feeling all right twelve hours before the onset.

In conclusion let me draw attention to the almost specific action of calomel and magnesium sulphate given as quoted in the acute stage of malaria.

South African Republic. James Boyd, F.R.C.S.Edin.,
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REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

BRISTOL ROYAL INFIRMARY.

A CASE OF LOCOMOTOR ATAXY AND RIGHT HEMIPLEGIA.

(By F. H. Edgeworth, M.B., B.A.Cantab., B.Sc.Lond., Assistant Physician to the Infirmary.)

R. T., aged 30, married, came as an out patient to the infirmary on April 25th, 1899, complaining of difficulty in walking. On examination it was found that she presented the symptoms of tabes and right hemiplegia. The pupils were of medium size, and reacted to light, but not on accommodation, nor did they dilate on skin stimulation. The optic discs were normal in appearance. Both fields of vision were contracted. Static ataxy was present, slight when the eyes were open, considerable when they were shut and the feet placed together. There was no ataxy in the movements of the arms. Neither knee-jerk could be obtained, even on reinforcement. The patient said that she had had incontinence of urine for about a year, but not of fæces.

The right side of the face was much smoother than the left, and the lower part did not act nearly so well as the left side on voluntary movement, though but little difference could be detected between the two sides on emotional expression. The movements of the eyeballs were normal, as were also those of the right orbicularis palpebrarum and frontalis. The tongue deviated slightly to the right on protrusion. The movements of the right arm were very feeble when compared with those of the left, and the right leg dragged considerably in walking. There was no contracture of the muscles of the right arm or leg. The biceps and triceps jerk were well marked in the right arm, whilst none could be elicited in the left arm. The plantar reflex in the right foot was active and of the extensor type, whilst that in the left foot was slight and of the flexor type.[1]

On inquiry into the history, the patient said that she had had six children and two miscarriages; of the six children three are now living, whilst the others had died of convulsions within four months of birth. Four years ago (on April 26th, 1895) she was admitted to the infirmary under Dr. Shingleton Smith with right hemiplegia. The notes on the case state that this hemiplegia came on in the early morning of April 26th, 1895, after a few days headache.

On admission, later in the day, it was found that though articulation was defective no aphasia was present. The mouth was drawn to the left, and she could not move the lower part of the right side of the face, but could with an effort close the right eye. The right arm and leg were almost totally paralysed, and the left arm and leg seemed a little weak. Both knee-jerks were absent. The thoracic and abdominal viscera were normal. The urine was of specific gravity 1024, and contained no albumen; the temperature was normal; defæcation and micturition were involuntary.

By April 28th the left arm and leg had completely recovered, and the right leg and arm a little; and on May 11th (fifteen days after the onset of the right hemiplegia) it was noted that the right knee-jerk was present, and in excess.

At the present time the patient presents clear evidence of tabes and right hemiplegia. The probability is that they are both of syphilitic origin, indirect and direct, the hemiplegia being due to syphilitic endarteritis and thrombosis.

It is, further, probable that the tabes had already begun before the attack of hemiplegia, as both knee-jerks were absent when the patient was first admitted four years ago. At the present time, whereas both knee-jerks are absent, the right biceps and triceps jerks are present and active. The progress of the tabetic process in the lower part of the spinal cord has again abolished the right knee-jerk, which the hemiplegia caused to reappear for a time, whereas if there be any atrophy of posterior root fibres entering the cord from the arms it is not sufficient, so far, to prevent the reinforcement of the tendon jerks in the right arm brought about by the degeneration of the right pyramidal tract.

Hughlings Jackson and Taylor published records of a similar case in 1891 and 1894,[2] a case in which a tabetic patient had an attack of right hemiplegia, which resulted in a return of both knee-jerks. They then wrote: "as the posterior sclerosis increases the presumption is that the knee-jerks will once more be lost." They re-examined the patient four years later, and found, as they had foretold, that there was no knee-jerk on the left side, and a slight one, obtained with difficulty only, on the right (hemiplegic) side.

The case recorded above is one by which the evidence in favour of their view is carried to completion—a case of tabes where the knee-jerk which had reappeared on the paralysed side has again altogether disappeared.

Such cases as these are of interest from another point of view; it may be inferred from them that in tabes it is very long before the posterior root fibres are all destroyed. It is to the education and development of the central connections of those which are left that the success of Frenkel's exercise treatment of locomotor ataxy is probably due.

[1] *Vide* Collier, *Brain*, 1899.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, BIRKENHEAD.

IRREDUCIBLE HERNIA OF FALLOPIAN TUBE AND OVARY IN A CHILD: OPERATION: RECOVERY.

(Under the care of J. Pinkerton, M.D.)
[Reported by F. S. Pitt-Taylor, M.B., Ch.B.Vict., House-Surgeon.

W. H., aged 16 months, was brought to the hospital on March 27th, 1899, on account of a swelling in the upper part of the left labium. Her mother said that it first appeared six months previously after an attack of crying, and that she had been able to reduce it until three months ago, when it would not go back. Since then it had gradually increased in size, and had become very tender. For the last week the child had cried incessantly. The swelling, on admission, was the size of a walnut, hard, non-fluctuating, tender, and extending upwards to the external abdominal ring. All attempts at reduction of the hernia having failed, on April 3rd chloroform was administered. Reduction was again unsuccessful, so an incision was made over the upper part of the swelling. On opening the sac the contents were seen to be the left Fallopian tube, greatly distended, and on tracing it upwards it narrowed, until at the neck of the sac its circumference was not greater than that of a lead pencil. A silkworm-gut ligature was tied round the tube at this point, and the tube cut away upon its distal side. The proximal end, containing the ligature then receded into the abdomen through so small an opening that no suture was considered necessary to obliterate it. The wound was then close by silkworm sutures, and a cyanide dressing applied.

On making a section of the portion of tissue removed, it was seen to consist of a swollen Fallopian tube, filled with caseous material, the walls of which were gelatinous and presented the

[2] British Medical Journal, July 11th, 1891, and June 23rd, 1894.

naked-eye appearances of tuberculous salpingitis. The left ovary was found to be intimately adherent to the wall of the Fallopian tube, but was otherwise healthy. The superficial portion of the wound healed by first intention, and the stitches were removed on the fifth day. Recovery was interrupted a week later by a small deep abscess which formed and burst through the wound, leaving some induration of the surrounding tissues, which soon disappeared. The difference in the child's general condition after the operation was very marked, all the irritability and fretfulness having vanished.

Remarks.—This case is of interest on account of its rarity. That the child had not been weaned until admission may have made it especially susceptible to the attack of the tubercle bacillus. The family history was good.

REVIEWS.

RECENT BOOKS ON OBSTETRICS AND GYNÆCOLOGY.

The popularity of American textbooks in this country is one of the features of recent years. This popularity is probably chiefly due to the great superiority of their illustrations over those of English textbooks. The illustrations in Dr. Hirst's volume[1] are far more numerous, and far better executed, and therefore more instructive, than those commonly to be found in the works of writers on obstetrics in our own country. A series of photographs of nude pregnant women, both black and white, in the erect posture, at various stages of pregnancy, seems useless for teaching purposes, and the work would have gained by their omission. But the great majority of the illustrations will be found to be invaluable to both the student and the teacher, for no verbal description, however skilfully written, can ever carry the clearness and conviction of an accurate illustration. The first section is concerned with the physiology and pathology of pregnancy. The chapters dealing with development are the least satisfactory in the book, being fragmentary and ill-arranged. On most subjects, however, the author displays an almost encyclopædic knowledge, enforced by copious references to literature. The chapter on vesicular degeneration of the chorion, a condition which has been the subject of numerous researches of late years, is excellently written, though badly illustrated. In treating of diseases of the kidney in pregnancy the author lays down very clear and precise lines of distinction between the "pregnancy kidney" and chronic or acute nephritis. So much is he impressed with the importance of detecting such conditions early, that he advocates a fortnightly examination of the urine of all pregnant women from the beginning of pregnancy to the end. The chapters on the mechanism of labour are illustrated largely from sectional anatomy, a method which is much to be commended. The textual description sets forth ten "steps" in the mechanism of labour, a modification of the classical description which does not possess any apparent advantages, and indeed seems rather to complicate a necessarily difficult subject. The subject of fœtal monstrosities in relation to labour is treated in a very complete manner, and freely illustrated with many interesting photographs. The last section deals with obstetric operations. The author condemns the use of Champetier de Ribes's bag in inducing labour, as likely to cause rupture of the lower uterine segment, and expresses a preference for the intrauterine bougie. He does not advocate the use of axis traction forceps except in difficult cases, thinks well of symphysiotomy, and is prepared to extend the indications for the Cæsarean operation in consideration of its greatly reduced mortality in expert hands. The greatest credit is due to the publishers for this handsome and lavishly illustrated volume.

In the preparation of the *Practice of Obstetrics*[2] the editor, Dr. Jewett has secured the services of several American and Canadian writers whose names are well known to English students. Whitridge Williams writes on Puerperal Infection; Chalmers Cameron and Clarence Webster, on Anomalies of the Mechanism of Labour; Hunter Robb, on Cæsarean Section and other Obstetric Operations; and Edward P. Davis, on Version and Embryotomy. Some of the best sections, however, are the work of men whose names are at present unfamiliar upon this side of the Atlantic. The anatomical chapters, which are from the pen of Dr. William W. Browning, of New York, deserve careful attention. They are illustrated with many original dissections, and present a very clear and complete account of a somewhat difficult subject. The plates illustrating the lymphatics of the uterus and appendages in pregnancy, and the venous plexuses of the pelvis, if really drawn *ad naturam*, are instances of unusual dexterity in the use of scalpel and forceps. The levator ani muscle receives a great deal of attention, and has been much dissected from various aspects. An unusual amount of space is devoted to the subject of development which, is undertaken by Dr. Walter P. Manton of Detroit and is illustrated by seventy-three figures and five coloured plates. Some quite unaccountable errors appear in this section. Thus on p. 86 in describing the development of the fœtal membranes the author says, "the cavity between the two layers (of the amnion) is called the amniotic cavity and is later filled with fluid." It is well known to the senior student that the amniotic cavity is the space between the inner layer of the amnion and the dorsal surface of the embryo. It is remarkable that the plate illustrating this point, which is taken from Hertwig, did not show the author his error. On the same page occurs the statement that the liquor amnii "amounts to 16 or 18 ounces at term and is derived by transudation from the maternal structures." This is certainly an understatement of the amount of the amniotic fluid and a misstatement of its origin in so far as this point can be said to be settled. A practical chapter by the editor on the management of normal labour is full of suggestion. He treats the well-worn subject of abdominal palpation with the familiarity which is the mark of experience and with lucidity of expression. The normal puerperium is discussed by Dr. Hunter Robb, and we welcome a short paragraph headed "There is no such thing as milk fever." The importance of aseptic midwifery is well recognised by both these writers. The chapter on puerperal infection contains the most complete account of the bacteriology of the subject with which we are acquainted and a well-balanced criticism of the published results of the serum treatment. As in the case of most works compiled by numerous authors, inequality is a marked characteristic of this latest addition to obstetric textbooks, but the parts that are good seem to us to be very good indeed. The illustrations are numerous and the volume has been handsomely produced by the publishers.

We reviewed Dr. Jellett's work[3] on its first appearance in our issue for July 3rd, 1897. The early requirement of a second edition shows that the book has been appreciated by the medical public. The chief changes consist in a rearrangement of the contents and about sixty pages of additional matter, giving much fuller information as to the phenomena and the management of natural labour. The use of abdominal palpation in the diagnosis of the presentation and position is well described, and its great importance insisted on. There is given in an appendix the statistics of the Rotunda Hospital for the last nine years. These new features add to the interest and importance of the book.

Dr. Piering's pamphlet[4] is designed to supplement the descriptions of abortion found in standard textbooks which, as the author justly remarks, usually devote too little space to the consideration of a condition which the practitioner is called upon to deal with so frequently, and which often taxes his resources to the utmost. Hegar has estimated the frequency of abortion as 1 to every 8 or 10 full-time labours, a statement which sufficiently indicates the practical importance of the subject. Dr. Piering has dealt with his material by a systematic method. Upon the causes of abortion he has much to say that is interesting, and his classification is clear and comprehensive. He falls, however, into a curious error in defining "missed abortion" as "*die Retention eines abges-*

[1] *A Textbook of Obstetrics.* By Barton Cook Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. London: The Rebman Publishing Co. 1899. (Royal 8vo, pp. 846, 653 illustrations. 28s.).

[2] *The Practice of Obstetrics by American Authors.* Edited by Charles Jewett, M.D., Professor of Obstetrics and Diseases of Children in the Long Island College Hospital, New York. London: Henry Kimpton. 1899. (Roy. 8vo., pp. 768. 25s.)

[3] *A Short Practice of Midwifery, embodying the Treatment adopted in the Rotunda Hospital, Dublin.* By Henry Jellett, B.A., M.D., etc., late Assistant Master, Rotunda Hospital. Second Edition. London: J. and A. Churchill. 1899. (Cr. 8vo, pp. 404. 6s.)

[4] *Ueber den Abortus.* Von Frauenarzt Dr. Oscar Piering in Prag. Berlin: H. Kornfeld. 1899. (Demy 8vo, pp. 44. M.1.)

Corbenen Fötus über die normale Zeit der Schwangerschaftsdauer hinaus" (the retention of a dead fœtus beyond the normal termination of pregnancy). Matthews Duncan, to whom we owe the term "missed abortion," expressly stated that the dead ovum was almost invariably cast off before the normal limit of pregnancy had been reached. The account of the naked-eye appearances of the expelled ovum at different periods contains a great deal of information not to be found in textbooks, and is supplemented by tables taken from Schultze and Landois illustrating the development of the human ovum. The treatment of abortion is fully dealt with. Dr. Piering has little that is new to say upon this subject, but he has described such procedures as vaginal plugging and digital evacuation of the uterus with great care and practical insight. Short chapters on the indications for the artificial induction of abortion and on tubal abortion add completeness to a very interesting and valuable essay.

The second edition of Dr. BALDY's *Textbook*[5] contains much new matter. Strong, as before, in illustrations, the additions, like the original, are of varied quality. The series of photographs of a total abdominal hysterectomy, taken during the operation, are instructive and original. Total abdominal hysterectomy for uterine fibroids is favoured, and it is said that "when considering the intraperitoneal operation, and in view of the ease with which the vagina may be rendered sterile, the question suggests itself, 'Why not go a little farther and remove the cervix, too?'" The writer admits that in the retroperitoneal operation, where the cervix is left and covered with the sutured edges of the peritoneum, the ureter is exposed to danger, which an expert knows how to avoid, whilst the ordinary surgeon will succumb to it not infrequently. We may add that the "ordinary surgeon" will "succumb to it" much more frequently if he attempt to remove the cervix as well. Even experts occasionally meet with an accident of this kind during total hysterectomy. Great attention is properly paid to diseases of the bladder, urethra, and ureters. Gynæcology is not all operative surgery, and cystitis certainly demands more attention than need now be bestowed on certain well-known diseases grave or deadly if left alone, but readily cured by surgical measures which require care rather than phenomenal dexterity. The chapters on technique and after-treatment have been well revised. The author finds that the treatment of vaginal hysterectomy is very tedious, great care in regard to details being necessary. All will agree with the latter proposition, but many seem to write as though the after-treatment was a mere trifle as compared with the operation.

The third volume of VEIT's colossal "Handbook"[6] is not yet complete, as we are informed on the title-page of the present instalment that the second part of its "second half" will appear immediately and will finish the series—we cannot accurately apply any other term than "series" to so great a literary undertaking. As we have said before, however, it is only as to the misleading name "Handbook" that we have any fault to find with Professor Veit's editorial feat. The present volume, or fraction of a volume, is of high value, as it includes diseases of the pelvic cellular tissue and that terrible theme, cancer of the uterus. The former subject is admirably handled by Rosthorn, who, like every unbiassed observer, agrees in the main with the theories of Virchow and Matthews Duncan on the distinctness of parametritis from perimetritis. At the same time he admits that the extremely dogmatic tone in which some of the disciples of those great authorities laid down the law on the subject has done harm to gynæcology. The pathology has been established: effusion of inflammatory material in the connective tissue of the pelvis is plainly one thing, and inflammation of the pelvic peritoneum is quite another matter; but it is a great mistake to teach that they are manifested—like intracapsular and extracapsular fracture of the neck of the femur—by clinical symptoms so sharply distinctive that any student can recognise them. The fine plates illustrating the distribution of the connective tissue of the pelvis may be commended to teachers and demonstrators. Four hundred pages are given to cancer of the uterus, including deciduoma malignum. Winter, of Königsberg, contributes a valuable paper on the pathology, and especially the morbid anatomy, of this disease. Professor Frommel's monograph on the Clinical Symptoms, Diagnosis, and Radical Treatment of Uterine Cancer deserves high praise, especially for the temperate manner in which the relative value of different operations is discussed. The principle of each modification of hysterectomy, rather than its mechanical details, is explained and thoroughly criticised. Frommel does not reject vaginal hysterectomy, but maintains that it is the best operation when the new growth is clearly confined to the uterus, so that there is no insuperable mechanical difficulty in the way of removing all trace of the tumour. For after all it is total extirpation of the cancer, not total extirpation of the uterus, that we seek. The latter proves too often insufficient. Hence we are not surprised to find Frommel inclining to abdominal hysterectomy after Freund's method, in every case in which limitation of the cancer to the uterus is doubtful. He dwells on Clark-Kelly's method, which includes very thorough clearing of everything attached to the uterus that can possibly be cut away without actual prejudice to the patient's life. To insure against such risk a catheter is passed into each ureter, so that the operator can dissect away without fear all suspicious tissue in its vicinity. If uterine cancer be like mammary cancer, where the radical operation is almost universally admitted to be necessary, then such a radical abdominal operation as the Baltimore school practise would seem to be the only sound surgery. This practice has not as yet become sufficiently generalised to enable its results to be judged fairly. If when the manipulative difficulties are overcome by nerve and practice (we speak of operators in general, not of Freund, Kelly, and other experts), recurrence, notwithstanding speedy recovery from operation, be quick or inevitable, as Halliday Croom and others believe to be the case after the vaginal operation, then surgeons will be inclined to think that uterine cancer had best be left alone altogether. Frommel consistently urges us to try the value of the more radical methods. Gessner contributes a paper on the Palliative Treatment of Inoperable Cancer; Sarwey writes on Cancer and Pregnancy. The editor concludes the series with a useful summary of the literature of Deciduoma Malignum. It makes that anarchical subject almost clear. Unlike some other authoritative writers on deciduoma he not only gives a fair and full report of Dr. Eden's important negative evidence and opinion, but practically admits the theory of that English authority, as supported by Kanthack. In short, Veit concludes by saying: "I assume pre-existing disease in the mother, and hold that disease to be sarcoma" (*Ich nehme eine präexistente Erkrankung der Mutter an und deute dieselbe als Sarkom*). Can the prophecy ventured in a leader in the BRITISH MEDICAL JOURNAL of April 11th, 1896, p. 927, when it was suggested that "the disease known as deciduoma malignum may yet prove to be but a rapidly-growing sarcoma," be about to be fulfilled?

The treatment of diseases of women by massage and gymnastics is expounded by Dr. STAPFER in a small volume with a ponderous title.[7] Many women might be improved in health by gymnastic exercise of the limbs: this is so obvious that we need not discuss it. Massage of the pelvic organs, as recommended by Dr. Stapfer, is done for two purposes—diagnosis and treatment. If, as it seems, diagnostic massage simply consists in protracting a bimanual examination long enough to tire out the resistance of the abdominal muscles, we have nothing to say against it. But the practice of treating female diseases by prolonged rubbing and kneading of the genital organs seems most objectionable, and we find in this book no evidence that it is good. The author is so easily satisfied as to its therapeutical effect that we think his judgment worth little. He stops short of claiming that by massage he can remove fibroids and ovarian tumours; but he does say that his rubbing "favours the indispensable surgical inter-

[5] *An American Textbook of Gynecology, Medical and Surgical, for Practitioners and Students.* Edited by J. M. Baldy, M.D. Second Edition, Revised. London: The Rebman Publishing Co.; and Philadelphia: W. B. Saunders. 1898. (Roy. 8vo, pp. 718; 341 illustrations in the text, and 38 coloured and half-toned plates. 34s.).

[6] *Handbuch der Gynäkologie.* [Handbook of Gynæcology.] Herausgegeben von J. Veit, Leiden. Band iii, Hälfte 2; 1ste Abteilung. Wiesbaden; J. M. Bergmann and Glasgow: F. Bauermeister. 1899. (Royal 8vo, pp. 595; 15 plates, and 88 woodcuts. 16s.)

[7] *La Kinésithérapie Gynécologique. Traitement des Maladies des Femmes par le Massage et la Gymnastique (Système de Brandt).* [Gynecological Kinetic Therapeutics: The Treatment of the Diseases of Women by Massage and Gymnastics (Brandt's system).] Par H. Stapfer, Ancien Chef de Clinique Obstétricale et Gynécologique de la Faculté de Paris, etc. Paris; Masson et Cie. 1899. (Demy 8vo. Pp. 40. Fr. 1.25.)

vention." We could as soon believe in all the therapeutical effects claimed for the sugar-of-milk globules sold by homœopathic chemists as think that a course of rubbing the abdomen affects the result of subsequent ovariotomy or hysterectomy. The author remarks that gynæcological kinetic therapeutics is not represented at the Royal Institute of Stockholm, although its inventor was a Swede. This he attributes to the jealousy of the Swedish medical faculty. We think it is creditable to them, and an evidence that the true scientific spirit exists in Sweden. This form of meddlesome gynæcology seems to us to tend more than any other to lower the profession in the estimation of the public, and therefore we hope it may never become commonly employed by English practitioners.

NOTES ON BOOKS.

Reports and Transactions.

Mittheilungen aus der gynaekologischen Klinik des Professor Dr. Otto Engström in Helsingfors. [Reports from the Gynæcological Clinic of Professor Engström.] Vol. ii, Part II, p. 113 to p. 197, and vol. ii, Part III, p. 198 to p. 289. (Berlin: Karger. 1899. 3s. each part.)—To the second part of the second volume of these *Reports* Professor Engström himself contributes two papers. The first is of much importance now that abdominal section is so frequently performed, as it relates to the treatment of injuries inflicted during peritoneal operations. In one case, after separation of intimate intestinal adhesions and removal of a malignant ovarian tumour, influenza set in and the abdominal wound yielded on the twelfth day. A coil of damaged ileum was fixed to the abdominal wound so that its serous coat, much injured, might adhere to the parietal peritoneum. Two years later the patient was still living, though the remaining ovary had become cancerous and was quite irremovable. There was no trouble from the abnormal position of the damaged ileum. Engström further contributes an interesting case of enucleation of a myoma from the back of the uterus during pregnancy at the beginning of the sixth month. Delivery occurred three months later, twins being born; the patient did well but both children were lost. There are in the same Part two other papers, one on ventrifixation of the prolapsed uterus, by Dr. Boije; the other on a second tubal pregnancy in the same subject, by Lindebloem. In the concluding part of the second volume are one or two articles of importance on uterine cancer and pregnancy by Engström and Elmgren. The former's report of two cases of cancer of the over-involuted uterus after the puerperium is of value in relation to several recent theories. On *a priori* reasoning it might be argued that removal of the uterus under the circumstances would be useless, as recurrence would be very rapid; but in one case where this was done the patient is yet alive, twelve years after the operation. Thus, if carcinoma were really present during pregnancy, it is clear that gestation did not increase the malignancy of that new growth, as is generally believed. The theory of Eden and Veit relating to deciduoma malignum is, on the other hand, unaffected by Engström's experience, since it relates to sarcoma, not carcinoma, during pregnancy. Professor Engström, indefatigable in reporting any case of in his wards, further contributes a monograph on gynatresia, with retention of menses. Huttunen writes on cases of old complete rupture of the perineum treated by Lawson Tait's operation, of which he has the highest opinion. The unprejudiced, says Dr. Huttenen, must be surprised to find how simple and free from all difficulty is Tait's flap-splitting procedure.

The first part of the *Bulletin* of the Belgian Royal Society of Public Health and Medical Topography contains the mortality statistics for the four quarters of 1897 for the cities of Antwerp, Brussels, Ghent, and Liége, together with reports of meteorological observations and reports on various subjects, including one on the treatment of sick children, which contains a recommendation for the establishment of convalescent homes on the model of those which exist in England.

The tenth volume of the *Transactions of the American Pediatric Society*, edited by Dr. Floyd M. Crandall, contains the report of the meeting held in Cincinnati in June, 1898. Among the matters before the Society was the report of a Committee on Scurvy. Three members of this Committee—Dr. J. P. Crozier Griffiths, Dr. Charles C. Jennings, and Dr. J. L. Morse—reported that the cases investigated indicated that the further a food is removed in character from the natural food of a child, the more likely its use is to be followed by the development of scurvy. A minority report was presented by Dr. Augustus Caillé, who expressed the opinion that scurvy was a chronic poisoning due to the absorption of toxins, that the prolonged use of improper food and abnormal intestinal fermentation were predisposing factors, and that sterilising or cooking of milk food was not *per se* responsible. He agreed, however, that a change of food and the use of fruit juice, together with the treatment of any underlying cause, were the rational therapeutic procedures.

The *Transactions of the American Laryngological Association* for 1898 contain the report of the proceedings of the meeting in Brooklyn. Among a number of interesting matters, there is a well-illustrated report of a case by Dr. Roe, in which great deformity due to a recent fracture and depression of the anterior wall of the maxillary antrum was remedied by operation. There is also a good coloured portrait of a case of leprous ulcer of the lip in a middle-aged man, a smoker, who had lived for some years in China. The nature of the ulcer was only recognised by the discovery of the characteristic bacilli on microscopical examination, and Dr. Wagner, who reports the case, points out that it may illustrate one means by which the disease may be communicated.

Part I of Mr. K. M. Nadkarni's *Essentials of Modern Treatment of Disease* (Madras: N. K. Rao and Co.; and London: Baillière, Tindall, and Cox. 1899. Crown 8vo. Pp. 462. Rs. 5) was reviewed in the British Medical Journal of December 17th, 1898, p. 1825. The observations then made apply equally to Part II, which completes the work. If employed with discretion, the information so diligently collected and systematically arranged may prove of material service to the practitioner for whose use it has been compiled.

The first of the lectures which Dr. Thomas D. Savill has brought together in *Clinical Lectures on Neurasthenia* (London: Henry J. Glaisher. 1899. Demy 8vo, p. 144. 5s.) was delivered as part of the post-graduate course which was organised at the Paddington Infirmary in 1891. The subsequent lectures were given at the Hospital for Diseases of the Nervous System, Welbeck Street. The author is of opinion that medical men, as a rule, take an unjustifiably hopeless view of the curability of nervous diseases in general, and of functional disorders of the nervous system in particular. He lays down certain rules for treatment, and throws out hints which are suggestive and of considerable practical value. He is evidently well versed in the literature of the subject, and illustrates his points by reference to numerous cases which have from time to time been under his care. The book is well and pleasantly written, and is deserving of study.

Mr. John Jackson has published an exercise book under the title *Left-hand Writing* (London: Sampson Low, Marston, and Co.), which is intended to facilitate the acquisition of the power to write with the left hand. The cover carries a grooved tablet for training the fingers to perform the unaccustomed exercise. As a matter of fact, a little practice will show that the art can be acquired without very much difficulty, and those of our readers who have patients who have lost the use of the right hand, or who are suffering from writers' cramp, may be glad to have their attention directed to Mr. Jackson's volume.

A pamphlet by Dr. F. Schenck, *Privatdocent* in Würzburg, entitled *Physiologische Characteristik der Zelle* (Würzburg: A. Stubers. 1899. Pp. 123), dedicated to Professor E. Pflüger, adds but little to our knowledge of the "physiological characteristic of cells." It is a critical essay, and is in many parts ultrapolemical in its tone. It deals mainly with the relationships of the cell to the physiological individual, and protests against the doctrine that the cell, except in unicellular animals and plants, is to be regarded as an elementary organism. Dr. Schenck also objects to cellular physiology being identified with general physiology.

Messrs. Charles Griffin and Co. have published the sixteenth annual issue of the *Year-book of the Scientific and Learned Societies of Great Britain and Ireland*. It contains a

list of the papers read before the Societies during 1898, together with lists of the officers. The volume has a well-established reputation as a convenient work of reference.

Another part of the *Catechism Series*, published by Messrs. E. and S. Livingstone, of Edinburgh (1s.), has been issued. It consists of *Examination Questions in Practice of Medicine, with Answers*. The subject specially dealt with is fevers. It professes to be adapted for those preparing themselves for examination, but we must confess that the value of such books seems to us very doubtful. Notes of this kind ought to be made by the student himself.

A second edition of Mr. C. B. Lockwood's *Aseptic Surgery*, which was reviewed in the British Medical Journal of April 8th, 1899, page 855, has been called for. The volume has been revised, and some of the directions given have been made more explicit, but the alterations are inconsiderable.

Dr. Arnold Pollatschek, of Wiesbaden, continues his self-imposed task of compiling a year-book of treatment, *Die therapeutischen Leistungen des Jahres, 1898*. The number of subjects dealt with is enormous, and in each case a brief abstract of the paper referred to is given. The volume has two indices, of authors' names and of subjects, and has evidently been compiled with great care.

The edition for 1899 of the *Annual Charities Register and Digest* (price 4s.), prepared under the direction of Mr. C. S. Loch, Secretary to the Council of the Charity Organisation Society, and published by that Society and by Messrs. Longmans, Green, and Co., has been received. The general scope of this book has already been indicated on several occasions, and further experience in its use confirms the opinion that it is of very great value as a work of reference.

The *Calendar of the Royal University of Ireland* for the year 1899 (Dublin: Alex Thom and Co. London: Longmans, Green, and Co.) contains full particulars as to the various faculties and lists of graduates. The papers set at the examinations in 1898 are published in a separate volume, and form a supplement to the calendar.

The new edition of B. Bradshaw's *Dictionary of Bathing Places and Climatic Health Resorts* (London: Kegan Paul, Trench, Trübner, and Co. Price, 2s. 6d.) does not appear to differ materially from previous issues. The table professing to show the places where diseases are most effectually treated may be of use as help to the memory. The glossary of technical terms and phrases still remains in need of revision.

We have received from Messrs. J. and J. Paton, 143, Cannon Street, London, E.C., the second annual edition of their *List of Schools and Tutors* (price 1s.). The book is a good deal of the nature of an advertisement, but there is a classified list of scholarships and exhibitions which may be of use to parents.

Seven years have elapsed since we noticed the first edition of Professor J. Arthur Thomson's *Outlines of Zoology*. In its third edition (Edinburgh and London: Young J. Pentland. 1899. Crown 8vo, pp. 840. 15s.) it has increased in number of pages by some 30 per cent.; the paper of the present issue, however, though good and strong, is thin, so that there is no loss of handiness in the volume. Whilst the general style of the work and its peculiar excellencies remain unaltered, some of the weaknesses to which attention was called in these columns when the first edition was reviewed have been remedied. The illustrations are now printed in their places in the text, and are on the whole clear and good, though some of the outlines are rather coarse and rough. There are still a few details in which improvement is possible: for example, to illustrate the description of the crayfish, taken as the type of the crustacea, we have figured the appendages of Nephrops, the eye of Mysis, and the ommatidium of Homarus. In the same way the figure of a squid (Loligo) serves to illustrate the description of the cuttle-fish (Sepia). We note, too, that the term external gills is applied equally to these organs in the amphibia, and to the filaments of the embryo skate, which are by no means homologous. Professor Thomson is at his best in summarising complex and difficult theories, and his students at Aberdeen will have the advantage of a textbook full of interesting matter set forth in a picturesque and suggestive style.

The Pocket Casebook for Private and District Nurses (London: Scientific Press. 1899. 32mo. 1s.) consists of a set of pages for noting observations on patients, under various headings, compiled by a physician, and is intended to ensure accuracy in giving the report. For the private nurse it would be of use, and also for the district nurse as containing a record of the patients who are visited by her; but it can hardly take the place of the daily written report which the district nurse leaves for the medical attendant. Some of its usefulness has been sacrificed to its size, so that would not be much help in a long case.

The second edition of the *Manual for the Church Lads' Brigade Medical Corps* (London: Church Lads' Brigade. Crown 16mo. Pp. 122. 2 illustrations. 6d.) is a much fuller abstract than the first of the *Manual of the Royal Army Medical Corps*. It is divided into sections and subsections, and there is a very good index, so that the pupils under instruction will have no difficulty in turning up any part of the subject on which they require information. It unfortunately came out just before a new edition of the *Army Book*, so that the old stretcher drill, which is nothing like so simple as the new, is described. It would be well if the subsections relating to this were modified and published as a separate pamphlet.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

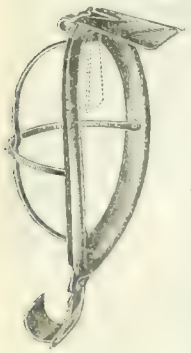
Cycle Back Clip.—The Elswick Cycle Company, Newcastle-on-Tyne, have made what they call a "medical carrier," for carrying a small handbag on the handlebar of the cycle. It consists of two clips which are easily adjusted and the bag can be quickly removed. The manufacturers speak of the clips as adapted to carry "the standard medical bag of the profession," but bags vary in size and the clips would be more generally useful were the arms of the clips made adjustable.

Pocket Spittoon.—In the crusade now so actively waged against consumption, the first plank in the programme of the propaganda is the proper disposal of the sputum. It is no longer utopian to say that every phthisical patient should be supplied with a pocket spitting pot. In the designing of such an article there is full scope for inventive talent, but so far little improvement has been wrought in the form of the one designed by Dr. Dettweiler of Falkenstein. A slightly modified and improved shape is now being made by Messrs. Maw, Son and Thompson in two sizes, the price being 3s. each either large or small. It consists of a dark blue oval flask, holding about 3 ozs., but easily carried in the pocket. The cap at one extremity opens with a spring and the neck of the bottle is fitted with a collar to prevent the sputum from splashing against the inner surface of the lid. The top can be unscrewed, and the bottom of the glass also screws off, so that the whole arrangement can be kept thoroughly clean and antiseptic.

Poison Bottles.—The New Poisons Regulations require poisonous substances to be stored in bottles distinguishable by touch from those in which ordinary non-poisonous substances are kept. The Regulations also require that liniments, lotions, and embrocations shall be dispensed in bottles distinguishable by touch from ordinary medicine bottles. The poison bottle in general use is fluted or ribbed, and those used for dispensing are of some distinctive shape and colour. Messrs. Kilner Bros., King's Cross, London, N., have devised a new poisons-storing bottle—a blue fluted bottle in which the fluting is concave—not convex, at hitherto—a greater distinction to touch being thus obtained. A sample of a poison bottle for dispensing purposes has been sent by Hearns, Limited, Eclipse Glass Works, Chatsworth Road, Clapton, N. The characteristic of this bottle is its peculiar shape. It is contracted in the centre, so that it could not easily be mistaken for a medicine bottle. Dr. Fraser, Sandown Lodge, 299, Brixton Road, S.W., has designed and registered a poison bottle of unique form. The bottle is made in cobalt blue glass, and is cigar-shaped, a cylindrical funnel-like neck rising from the centre. The word "poison" occurs on both

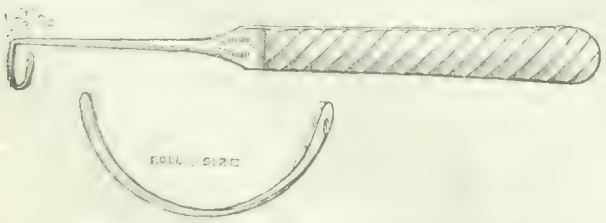
sides. Patients are not likely to make a mistake with this bottle.

Improved Chloroform Mask.—Mr. J. SANDISON CRABBE, L.R.C.P. and S. Edin. (Birmingham), writes: In using the Schimmelbusch mask I found it difficult to keep the instrument in position on the face and at the same time hold the chin up and drop the anæsthetic on the lint. I therefore had the following improvements added: (1) A folding chinplate (see diagram) attached to the frame in such a manner that it would not interfere with the lint-holder catch and at the same time be rigid enough to stand considerable traction on the inferior maxilla. (2) On the spoonlike handle (see diagram) a curved fingerplate by which the pull may be made. I thus had one hand entirely free to drop the anæsthetic, note the pulse, etc. With this improvement it is easy to have the head turned to one side and still keep the chin up and the mask in position. Mr. F. Ash, Edmund Street, Birmingham, made the alterations in a very satisfactory manner.



A Crêpe Bandage.—The new "Eureka" bandage, supplied by Vincent Wood, Victoria House, Albion Place, Blackfriars Bridge, is evidently well adapted to fulfil the objects that can reasonably be expected from appliances of this kind. The material of which it is composed is light, porous, and very comfortable. It can also be washed without losing its elasticity. This, like other porous bandages, seems to be too light to take, in most cases in which firm pressure is required, the place of a good elastic stocking or of a rubber bandage. It will be found useful as a retaining appliance for dressings of an operation wound, but to its extended use in this respect, certainly in hospital practice, there cannot fail to be objections on the score of economy.

A Needle for Vaginal Hysterectomy.—Dr. RALPH WORRALL (Gynæcologist to the Sydney Hospital) writes: Now that vaginal hysterectomy, for cancer at all events, is giving way to the more radical operation by the abdomen with ligature of the internal iliac artery, it may seem late to bring forward a needle for its performance; but as this operation will always be selected in a certain number of cases, and as this needle is greatly superior to others, I venture to lay it before surgeons. I believe one trial will convince anyone that this needle will carry through the ligature with remarkable ease and quickness, making, in fact, the ligature almost as rapid as the clamp operation. As a brother surgeon tersely put it, "the advantages which the needle gave were a revelation." Of course, there is nothing new or original in the principle of a slot, but it has not, so far as I know, been used in the operation for which it is peculiarly fitted—vaginal hysterectomy. The same needle, but shorter and blunter, has proved more satisfactory than any other as a pedicle needle in abdominal hysterectomy and ovariotomy, also in the radical cure of hernia. One shorter, finer, and sharper is the best needle for trachelorrhaphy and resection of the cervix uteri. One point should always be observed—namely, the notch should be the size of the material to be used as ligature or suture. Messrs. Down Bros. are the makers. The accompanying illustration makes a written description superfluous.



An Anæsthetic Facepiece for Edentulous Patients.—Mr. WALTER C. MAYO, M.R.C.S., L.R.C.P. (Leeds), sends an account of a facepiece which he has designed for administrating gas or ether to thin edentulous patients, and to men with big moustaches and beards. He writes: Often in giving anæsthetics to this class of cases I have had great difficulty in getting a mask to fit, and have had recourse to the expedient of using a piece of lint or wool to block up the hollows in the cheeks of the former cases, and the rather unpleasant method of putting vaseline or soap on patients' moustaches or beards



(to prevent leakage between the hairs) in the latter ones. The new shaped facepiece will I think get over these difficulties. The sides are elongated down, so as practically to cover the cheeks and reaching well on to the rami of the lower jaw, covering up either a hollow cheek or big moustache. The frame is made of soft pliable metal instead of leather, and easily moulded to any shaped face. Messrs. Barth and Co., 54, Poland Street, Oxford Street, W.C., kindly made the mask for me.

A Goniometer.—We have received from Mr. Gradon, of Oxford, an instrument called the Gradon goniometer and combination rule, which has been introduced for the purpose of finding the axis of a cylinder in a spectacle lens. It consists of a boxwood rule with a German silver arc, which is marked off in degrees of a circle. Fitted to this is a grooved pointer, which serves for the purpose of holding the spectacles, while its end indicates on the arc the number of degrees through which it has been rotated. The method of use is as follows: A straight line is looked at—such as the frame of a window—and when a cylindrical lens is held before it with its axis out of the perpendicular the straight line appears to be broken and tilted. If now the lens be rotated until the line be made to coincide with the part seen above and below the glass, the indicator will point to the axis at which the cylinder is placed. Thus it will be seen that the instrument is essentially an axis finder rather than an angle measurer, as its name would suggest. The instrument is not very convenient to use, owing to the fact that the spectacles, the rule, and the grooved holder have all to be manipulated at the same time. The lens spectacle holder was suggested by Dr. Maddox, and without this the instrument must have be extremely difficult to use. We have certainly seen less complicated and more handy instruments for the purpose. To many people the use of the correcting lens would be preferred, as the instrument tells nothing but the axis, and other methods would have to be adopted if the strengths of the lens were required to be known. As has already been said, it forms an optician's rule, and for the purpose of measuring the space between the centre of the glasses in a frame and also the height of the bridge it is convenient. Although opticians may find it useful, it will be of doubtful value to the surgeon.

THE BODY TEMPERATURE OF ANIMALS.— It may not be generally known that the normal temperature in Australia of a horse is about 100° F.; of the cow, dog, and cat is about 101° F.; of the pig 102.3° F.; of the sheep 104° F.; and of the fowl 106° to 107° F. External circumstances have a good deal to do with elevating and depressing the normal temperatures of animals. It has often been observed in Australia that the temperature of cattle exposed in open fields in summer may rise 4° or 5° without any disturbance of the health of the animals.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 30TH, 1899.

THE SPREAD OF VACCINATION.

The new Vaccination return, of which we print an abstract elsewhere, can certainly not be pleasant reading to the Antivaccination League. In the half-year ending June 30th, 1899, the total public primary vaccinations were no fewer than 355,987, as compared with 278,588 in the corresponding half of 1898. This is equal to an increase of 27.78 per cent., and goes far to show that vaccination is not nearly so unpopular in England as the League is anxious to believe and to make the public believe. The increase is due, in very great measure, to the fact that Boards of Guardians are administering the new law in many districts in which the old law was a dead letter. It appears, indeed, from the return, that the increase would have been even greater had all the Boards of Guardians got fairly under weigh by the beginning of the year.

We have always urged that a very large part of the vaccination default which existed in the later years of the old system was due not to active opposition but to mere indifference, and to the fact that the need for vaccination had never been officially brought before parents in many parts of the country. The present return bears out this contention. No doubt something is also due to the other fact, that the wildly exaggerated statements which were constantly being circulated regarding the evils of humanised lymph are not so easily made and are not nearly so easily credited with regard to calf lymph. Domiciliary visitation by public vaccinators must also be allowed some share in the improvement.

Mr. Chaplin is not to suppose, however, that the very gratifying statistics which he is now able to publish are to be looked on as relieving the Government from its duty of fulfilling its promises concerning revaccination. That is a question with regard to which Ministers should certainly be urged to introduce legislation early next session. The renewal of the vaccinal protection at adolescence is quite as necessary under the new system as under the old, and, as has been repeatedly pointed out in the British Medical Journal, the existence of the conscience clause affords a natural and logical opportunity of establishing a national system of revaccination.

Meanwhile, we observe that Mr. Chaplin has caused the *mandamus* to be served on the Leicester guardians. Under the circumstances in which he finds himself, this is no doubt the proper course for him to take, on the principle that it is always right to choose the lesser of two evils. He could not afford to allow the Leicester guardians permanently to defy him. Yet he may very possibly find that through his present proceedings he is playing into the hands of the opponents of vaccination. Since the passing of the conscience clause and the introduction of glycerinated calf lymph, the League has been very badly in need of a new battle cry, and it evidently thinks that Mr. Chaplin and the Leicester guardians are the people who are going to help to find it. Very astutely have they endeavoured to bring to the forefront the question not of vaccination but of local government. It is protested that the central authority has no right to control or direct the proceedings of public servants locally appointed and locally paid, and that it is the violation of this principle—as it happens with regard to vaccination officers—against which a stand is being made. Antivaccination is thus, as it were, struggling to get itself into good company, and it need not be questioned that its advocates, by posing as champions of local government, may get much more sympathy than if they appeared only in their ordinary character of irreconcilable antivaccinists. The Government has itself to thank for the dilemma in which it has placed Mr. Chaplin.

Had the Act of last year been anything like a complete measure, it would in it have properly grappled with the question raised in these proceedings, as with various other questions which for convenience sake it left untouched. Meanwhile, however, it is to be hoped that other Boards of Guardians and the public in general will be sufficiently clear-sighted to perceive the real meaning of the opposition which the Leicester guardians are offering to the appointment of a vaccination officer, and that the efforts of the guardians to revitalise a dying agitation will not meet with the success for which they hope.

PRISON ADMINISTRATION.

The Commissioners of Prisons and Directors of Convict Prisons, in their report issued recently for the year ending March 31st, 1899, refer at some length to several great and far-reaching changes which will result under the new code of rules based on the Prisons Act of 1898. Sufficient time has not elapsed since the rules came into force on May 1st last to enable the Prison Board to judge of their practical effect in checking crime, but there can be little doubt that their general tendency is in accordance with the spirit of the age, and in the direction of a more rational adaptation of prison treatment to the nature of the offence committed and the criminality of the offender. Hitherto it has been the custom to include in the generic term "crime" trivial offences and breaches of police regulations so that, as the Commissioners state, "the man who rides a bicycle on a footpath, or forgets to muzzle his dog, finds himself cast into the same net with the criminal who has been guilty of fraud, violence, or other disgraceful act." In future differential treatment is to be applied to these cases, and it will rest with the Court to determine to which of the three divisions prescribed by the Act the prisoner shall belong. This power to classify criminal offences cannot be exercised by the prison authorities, but, if it is wisely exercised by

the Courts, it will vastly simplify their administration, and relieve them of the odium of treating all alike, a course which they have hitherto been by law compelled to pursue.

Boards of visitors for convict prisons have been appointed with powers analogous to those of the visiting committees of local prisons—to hear complaints, investigate grievances, and punish prisoners for serious offences. This change introduces for the first time into convict prisons an element of unofficial control, and it is satisfactory to learn that leading local magistrates and gentlemen are zealously co-operating with the prison directors, and undertaking these duties for the public advantage.

Other changes laid down in the rules are—associated labour for local prisoners where practicable, various restrictions as to corporal punishment, the abolition of punishment cells deprived of light, power for local prisoners to earn remission of sentence, the reduction of the period of separate confinement for convicts from nine months to six, and various privileges to be granted or extended to prisoners in regard to letters, visits, library books, instruction, etc. On the other hand, debtors are in future to be compelled to work, and are not to be allowed any longer to obtain their food from outside.

The average daily population of the local prisons for the year was 14,957, as compared with 14,225 in the previous year. A table on page 11 shows a steady decline in the numbers since 1878, when they amounted to 20,833. Serious crime, as represented by indictable offences, shows an actual decrease since 1885 of 16.5 per cent., and relatively to the population, of 30.1 per cent., while minor crime represented by summary convictions shows an absolute increase of 1.8 per cent., but a decrease relative to population of 14.6 per cent. This rise is obviously due to a large extent to new offences, 26,519 convictions arising from the Rabies Orders in Council alone in 1897.

The statistics also show a steady decline in the numbers of juvenile offenders committed. Prisoners between the ages of 16 and 21 continue to swell the prison population, and differential treatment is recommended for them with a view to their reclamation before they reach the age at which the criminal habit becomes fully formed.

Under the head of punishments it is noted that out of 157,573 males, 146,328 incurred no punishment for prison offences, showing that the bulk of prisoners conform to the rules.

The Medical Inspector reports the death-rate of the prisons for the year at the very satisfactory ratio of 5.9 per 1,000 of the daily average population. The number of releases on medical grounds (exclusive of pregnancy) was 27, and the total number of deaths 89.

The total number of cases of insanity was 137, as compared with 150 in the previous year. Of this number 85, or more than 62 per cent., were of unsound mind on reception, while 20 of the others showed symptoms within a month of reception. Of the remaining 32 the cause of the insanity is specifically given in 12 cases, and in no instance is imprisonment returned as a cause by any of the medical officers of the local prisons in which they occurred. The statistics, indeed, tend to show that imprisonment was an incident in, rather than a cause of, the insanity in each case. One of the most significant features of the statistics of crime is the decline of the convict population from 10,299 in the year 1880, to 2,730, at which it now stands. For a population of 31 millions of people it must be admitted that these present figures are highly satisfactory.

A striking change in penal principles and practice has resulted from the recent appointment by the Secretary of State of a Committee to inquire into the question of prison diet. The reference to this Committee laid down the principle that "ordinary prison diet is not to be regarded as an instrument of punishment." The Committee accordingly recommended the abolition of Classes I and II of the old scale, and have substituted for them an improved diet of plain, wholesome food, adequate to maintain health and strength, so as to enable prisoners to leave prison better fitted to perform hard work.

The appointment of a medical member on the Prisons Board, which we have so strenuously advocated in our columns, has also been at last attained, and should result in fostering that more scientific study of the physical and mental peculiarities of the criminal which modern criminologists hold to be essential both to his reclamation and to the reduction of crime in general.

All these changes mark real progress, and, whatever may be the effect of improved prison fare on the numbers of petty offenders who incur a few days' imprisonment, there is no reason to anticipate any increase or recrudescence of serious crime from reforms which are based on reason and justice.

LONDON'S LUNACY.

The report of the Asylums Committee of the London Council for the year ending March 31st, 1899, has just been been issued to the public, and forms a formidable volume of 170 pages, bristling with tables and statistics. On January 1st, 1899, the County Council was responsible for 14,645 persons of unsound mind as against 10,100 on January 1st, 1890. This increase of 4,545 in nine years is serious in itself, and has caused the Asylums Committee much anxiety in expanding the accommodation available for the reception of certified patients. In addition to the five older asylums at Colney Hatch, Cane Hill, Banstead, and Hanwell, and the magnificent asylum at Claybury, opened by the Council a few years ago, there are in course of completion two new asylums, one at Bexley, the other at Horton, each to accommodate some 2,000 patients. It is estimated that by January 1st, 1901, some 16,538 beds will be available, which should leave a margin of accommodation at that time for some 620 patients. This, according to the Committee's estimate, is about equal to the increment of one year.

A special sub-committee has, we learn from the report, been engaged during the past year in considering the possibility of devising a better and less expensive method of housing and treating the insane. The only outcome of the inquiry up to the present appears to be a decision to set apart a portion of the large Horton estate for an epileptic colony of some 300 males to be lodged in villas. This departure in the direction of villa accommodation in lieu of the too customary barrack system is doubtless to be welcomed as an experimental step in advance, but whether its adoption in general would prove more economical in

construction and maintenance remains to be demonstrated. It appears from the report that the estimates for building the two new asylums will be exceeded considerably, but it is satisfactory to learn that the maintenance rate per head remains at the relatively low sum of 9s. 11d.

A proposal to establish receiving houses in London for the reception, classification, and distribution of patients is still engaging the consideration of the Committee. If by some such method the present procedure of certification, whereby the stigma of pauperism is often added to that of lunacy, can be superseded, real progress will have been effected.

The Pathological Laboratory at Claybury, to which we have from time to time called attention, has continued to thrive under the direction of Dr. Mott, and we gather that the first-fruits of its investigations will in a few days be published as Volume I of the *Archives of the Claybury Laboratory*.

We note with satisfaction that an inter-relationship has been established between some of the London hospitals and certain of the county asylums for the purpose of clinical teaching, St. George's students being allocated to Hanwell, and those of the London School of Medicine for Women to Colney Hatch.

Dr. Claye Shaw of Banstead suggests the desirability of attempting isolation of all cases of tuberculous disease in one ward, but has encountered administrative difficulties in carrying out the idea. Dr. Robert Jones of Claybury assigns a definite figure to the proportion of cases referable to intemperance, namely, 18 per cent. Dr. Seward reports from Colney Hatch that the annual death-rate was the lowest on record with one exception since the asylum was opened, and on the male side the rate was absolutely the lowest. Those acquainted with the able administration of the asylum will rejoice at the complete restoration of Dr. Seward to health after a very severe illness. Attention is called by Dr. Mott to the prevalence of ulcerative colitis among asylum patients. Figures are given which suggest that about a third of those who die in asylums have at some time or other suffered from this disease. Experience derived from prisons and other places where large numbers of persons are congregated in residence indicates a relationship between colitis and institutional life. Further investigation is needed, and we understand that the matter is receiving careful consideration.

We cannot close our notice of the report without expressing our sense of the value of the work done by the Asylums Committee of the London County Council or under its direction. Much credit is due to the self-denying labours of the Councillors, while the Clerk of the Committee, Mr. Partridge, and his staff may be congratulated on the manner in which they discharge their heavy responsibilities.

THE TEACHING OF PRACTICAL ANATOMY IN INDIA.

It is not generally known that the ancient Hindus practised a rough description of dissection of the human subject. One of the six sections of the *Ayur Veda*, a medical treatise compiled about 600 years before the Christian era, was devoted to anatomy, and the more recent authorities, Charaka and Susruta, who either reproduced or amplified the knowledge contained in that *Veda*, furnish elaborate anatomical details which, though in many respects erroneous and fanciful, give indications of having been founded on inspection and dissection of the subject. Dr. Thomas Wise, an Indian medical officer, in his learned *History of Medicine*, makes this sufficiently clear. Charaka insists that "a practitioner should know all the parts of the body, both external and internal, and their relative positions with regard to each other; without such a knowledge, he cannot be a proper practitioner." Susruta, whose treatise is mainly surgical, gives minute directions for the selection and dissection of the subject. The body should be young and its organs undamaged by organic disease. It should be enclosed in basketwork to prevent destruction by animals. It should be macerated in water for seven days and nights, and then dissected with a brush made of reeds, hair, or bamboo bark, the structures thus displayed being noted as the dismemberment proceeds.

As the caste system became established and prejudices regarding touching the cadaver became stronger, these practices were discontinued, and the physicians and surgeons of India were content to accept and transmit the venerated traditions of the *Vedas*. Anatomical science made no advance, if it did not lapse into neglect and oblivion, and medical science degenerated into superstition and formalism. The revival of anatomical teaching and research in India took place in the second quarter of the present century, as is related in Dr. R. Havelock Charles's interesting paper printed on another page. There was a phase or stage of this revival which Dr. Charles does not mention. A school of medicine was founded in Calcutta in the year 1822. It was called the Native Medical Institution, and was intended for training native doctors for service in the army. It was under the superintendence of Dr. Tytler, an officer of the company's medical service. Anatomy was taught in this school by means of tracts and plates, the dissection of sheep, and demonstrations of the human body at the general and native hospitals. Parts of these were gradually introduced into the lecture room, and displayed in illustration of the oral teaching.

Thus the way was paved for the further and final step, which was taken after the Calcutta Medical College had been established and got into working order. The incidents of the conquest of prejudice in the interests of medical science are narrated in Dr. Charles's paper, and it constitutes an era in medical education in India. Since then practical anatomy has formed an initial and fundamental element in the curriculum of study in all Indian medical schools, the educative advantage and necessity of which it is impossible to overrate. The material for this purpose is abundant; but the climate imposes difficulties in the pursuit of practical anatomy, and the arrangements for dissection have not always been such as to render the work easy and agreeable. Rapid decomposition rendered rapid dissection needful, and the display of one set of structures at a time advisable. Improved methods of delaying putrefaction have permitted of more deliberate procedure, and more careful display and thorough study of parts in relation. The Indian medical student is a neat and skilful dissector, and we have been informed by a gentleman, who for many years examined in anatomy for the University of Calcutta, that the practical knowledge and

manipulative dexterity of the students were of a high order. The reforms in accommodation and appliances obtained by Dr. Charles at Lahore and Calcutta will conduce greatly to the comfortable and successful prosecution of the study of anatomy, and he is entitled to much credit and praise for having procured them.

MEDICAL ARRANGEMENTS FOR THE TRANSVAAL.

Major Dodd, R.A.M.C., embarked with other officers from Aldershot on September 23rd. He will be embarking and disembarking officer at Durban. He is accompanied by Quartermaster H. S. Brook, R.A.M.C. Miss M. Russell, Superintendent Army Nursing Service, and a staff of nurses left for South Africa on the same date. Nursing Sister Hill has been placed under orders for Natal, to leave at an early date. The Secretary of State for War has been unable to accept the services of a large number of men of the Volunteer Medical Staff Corps who had volunteered for employment with the Army Medical Service in South Africa. The Red Cross has notified its willingness to place its aid and resources at the disposal of Her Majesty's forces in South Africa, and the Order of St. John of Jerusalem is ready for ambulance duty if required. In India the medical and other branches are prepared to move as soon as definite instructions are received from the War Office. The Army Medical Corps is ready to form, according to an Aldershot correspondent of the *Daily Telegraph*, eleven field hospitals and seven bearer companies. These would be formed from the companies at Aldershot, Netley, Portsmouth, Devonport, Colchester, Chatham, Dover, Woolwich, Dublin, York, Edinburgh, Belfast, Cork, the Curragh, London, and Chester. The Press Association says it is a matter of comment that many officers who have been selected for service in connection with the Transvaal were employed this summer during the manœuvres on Salisbury Plain, and gives, amongst the names of other officers, the name of Colonel T. J. Gallwey, Royal Army Medical Corps. Majors H. L. Battersby and R. C. Cottell, R.A.M.C., accompanied the Brigade Division Royal Artillery, which embarked for the Cape from Birkenhead. According to the Press Association the Admiralty have communicated with the Union Steamship Company, with a view to ascertaining what vessels they had available for transport purposes to the Cape as hospital ships. The Admiralty were furnished with the requisite information, and decided to take over from the company the steamers *Trojan* and *Spartan* to serve as hospital ships in South African waters and for other purposes. The work of fitting up these vessels as hospital ships has already been commenced at Southampton, and they are expected to be completed in a week. In all probability when finished they will steam out to Cape Town with a view to being utilised between there and Natal in the event of war breaking out. The ships *Kinfauns Castle* and *Gaika*, from the Royal Arsenal Dockyard, Woolwich, will embark two field hospital companies with medical equipment on a war scale.

ASSOCIATION OF PORT SANITARY AUTHORITIES.

One outcome of the recent Sanitary Congress at Southampton has been the establishment on a firm and permanent basis of an Association of Port Sanitary Authorities. A year ago this society was formed, mainly through the efforts of Drs. Fraser and J. Wright Mason, of the Hull and Goole Port Sanitary Authority. At this year's conference the authorities which had previously held aloof—namely, London, Liverpool, Cardiff, and Newcastle, all joined the Association, of which Dr. Fraser, of Hull, was appointed President; the representative of the City of London Authority, Vice-President; Mr. T. C. Turton, of Goole, Treasurer; Dr. J. W. Mason, of Hull, Secretary. The primary object of the new body will be to approach the Chancellor of the Exchequer, and obtain, if possible, that the cost of the precautionary measures adopted by the authorities shall be an imperial instead of a local charge.

TYPHOID FEVER IN DUBLIN.

There is, we believe, no longer any doubt that the outbreak of typhoid fever in Dublin has had its origin in milk. The dairy is not within the city, but the Local Government Board has made inquiries which lead to the conclusion indicated. But when the general increase of the death-rate in the city to over 40 is kept in mind, it is obvious that an urgent duty of inquiry and remedy rests with the sanitary authorities. We note that Dr. Charles Moore, in a letter to the papers, applies to the present circumstances of Dublin the Prince of Wales's question, so often asked since he first put it, "If preventable, why not prevented?" We entirely agree with him in thinking that much of the frequent zymotic outbreaks in Dublin is due to the neglect of the Corporation. We have for years protested against the existence of large dairy yards, dungheaps, and unclean slaughterhouses in Dublin. If in addition to these we add the miserable tenement houses in the slums, we cannot wonder that typhoid fever and diseases that thrive upon filth are too common. But the Dublin Corporation does nothing to remove dairy yards, slaughterhouses, and manure heaps from the city. The councillors are believed to be afraid of exciting the hostility of the powerful dairy owners by taking action, and so the nuisance continues year after year. What is the use of a new hospital when the true remedy lies in prevention? It seems to us that the Local Government Board will share the odium and responsibility if it does not insist upon the Corporation doing its duty.

THE SANITARIAN IN THE VEGETABLE GARDEN.

Readers of that most unsavoury of M. Zola's novels, *La Terre*, will doubtless remember the old lady who grew vegetables that were the wonder of the market place by methods of cultivation sufficiently indicated by the nickname of "La Mère Caca" which they earned for her. One of the most distinguished of our sanitarians, Dr. Vivian Poore, has with conspicuous success applied what is practically the same method, though with scientific refinements which raise a crude process to the height of a fine art. He gave a demonstration of his method and its results to a number of members of the Sanitary Institute during the congress recently held at Southampton. At his invitation they visited his garden at Andover, which is situated in a back street and is less than an acre in extent. He explained that sixteen years ago he bought the property, keeping the garden for himself. He found, however, that the house was almost unletable owing to the stench from the privies attached to the cottages near. These he was fortunately able to buy, and he turned all the privies into dry earth closets which were scavenged into the garden every morning. The excreta were buried just below the surface and there was no smell. To show that no great extent of ground was wanted for disposing of the excreta in this way, Dr. Poore showed his visitors a plot of ground that measured about 17 yards by 45, and which had taken the excreta of one hundred people for a year. It was not wise to sow seed on this newly-treated ground, but one could safely plant vegetables of the cabbage order, and these could be followed by other crops. When he first began these experiments his agricultural friends told him that if he applied the stuff to the land at once he could not succeed; they said he must first place it in a heap and let it, as they termed it, ripen. He was however, a sanitarian and had two objects, one being to get rid of it at once, so he proceeded to bury it as described. Owing to the drought of the previous season he

was unable to plant this plot with cabbage, so he let it lie fallow, and in the spring of this year had some winter onions pricked out, and they saw the result, a fine crop. By burying it at once it was out of the reach of those insects which deposited their eggs in excreta, thus filling the garden with grubs. He pointed to a bed of Brussels sprouts, some of which were 4 feet high, which might be objected to; but they showed that the stuff was a good fertiliser, while all the leaves gave off oxygen, and they therefore had the air freshened by them. He also pointed to the result on the fruit trees which bore heavy crops, and mentioned that he had sold eighteen bushels of currants this season from the bushes. Dr. Poore then took his guests to the well in the centre of the garden. This was lined with concrete pipes on the side, and had a high parapet to exclude surface water. It had never been cleaned out, and the gravel at the bottom was clearly seen after having been in use ten years. He had had both chemical and bacteriological analyses made, and they showed the water to be practically pure, proving that the treatment of the garden by his process did not affect the water. Before leaving the visitors had an opportunity of testing for themselves the quality of the fruit from the garden, which was pronounced to be of excellent flavour.

THE BRITISH ASSOCIATION AT BOULOGNE.

In spite of a foolish proposal on the part of a few members of the British Association to boycott the sister Association of France as a protest against the treatment of Captain Dreyfus, the British men of science paid a return visit to their French brethren at Boulogne on September 21st. Some 250 of them crossed the Channel and were received at Boulogne by Professor Brouardel, President of the Association Française pour l'Avancement des Sciences and Dean of the Paris Faculty of Medicine; M. Gariel, General Secretary of the Association; Professors Bouchard and Hanriot; Dr. Loir, Director of the Pasteur Institute and a nephew of the illustrious investigator whose name it bears, with other officials and notabilities. The visitors looked in at the Sections and in some instances took part in the proceedings. They were afterwards entertained at a splendid luncheon. The Mayor of Boulogne proposed the health of the two Associations, to which Sir Michael Foster responded in the name of the British, and Dr. Brouardel on behalf of the French, Association. Dr. Brouardel said the French men of science were particularly gratified to have among them Lord Lister, whose beneficial discovery had been of incalculable value. Operations in surgery which were once critical could now be performed with facility. It might be estimated that at least 200,000 persons owed their lives to Lord Lister's great antiseptic system. The members of the French Association had carried away with them very pleasant memories of their visits to Dover and Canterbury. In honour of these three *réunions* of the two Associations they had caused to be struck a commemorative medal executed by M. Rotz, a member of the Institute and of the Académie des Beaux Arts. One medal they desired to present to the Mayor of Boulogne, and another they hoped Sir Michael Foster would accept on behalf of the British Association. An address was afterwards delivered in the Théâtre Municipal by Dr. Brissaud, Professor in the Paris Faculty of Medicine, on Duchenne of Boulogne, in memory of whom a monument has been erected on the Boulevard du Prince Albert. A commemorative tablet to Thomas Campbell, the poet, was afterwards unveiled. The tablet, which is of black marble, is fixed over the door of the house where Campbell died in 1844. M. Léon Morel delivered an address in which, after dwelling on the merits of Campbell as a poet, he reminded his hearers that Campbell had been one of the most efficient workers in the cause dear to them all, of the advancement of science. The founding of the University of London entirely originated with him. It was his strong faith and his powerful eloquence that gathered round the scheme the necessary helps and co-operation; it was his indomitable energy that carried it through all obstacles; it was his strong, honest common sense, and his true view of the conditions of a scientific spirit that secured for it then, and which now still are efficient in preserving for it, its distinctive character among British universities—that of a purely secular institution, hostile to none, but independent of all religious creeds.

A VENERABLE MEDICAL MASON.

An interesting ceremony took place at Newport on Sunday, September 24th, when the three Freemason Lodges of the town celebrated the ninetieth birthday of Dr. W. W. Morgan by the presentation of an illuminated address. The presentation was made at Dr. Morgan's residence by the Provincial Grand Master of the Province of Monmouth, Colonel Charles Lyne, who was accompanied by a number of prominent members of the craft. Colonel Lyne said he could speak not only for the Freemasons of the district, but for the inhabitants generally, when he said that Dr. Morgan was respected by one and all, rich and poor. Dr. Morgan, in acknowledging the presentation, said he had been for more than sixty years a member of the order, and had a long innings in the cricket game of life; but he was still standing, bat in hand, at the wicket. On the following day the Newport borough magistrates also presented their congratulations to Dr. Morgan. Dr. Morgan was a student of the old Webb's School of Anatomy and of Guy's and the London Hospitals. He was admitted a Member of the College of Surgeons and a Licentiate of the Society of Apothecaries in 1835, obtaining the M.D. degree of St. Andrews in 1862. He took part in the formation of the Seventh Volunteer Rifle Corps at Newport, and was for many years its surgeon. Dr. Morgan's father was a Mason for more than fifty years, and the continuous Masonic life of father and son covers a period of 101 years. We venture to join Dr. Morgan's brother Masons and magistrates in hearty greetings on his attainment of so patriarchal an age and in the expression of a hope that the health and strength which he now enjoys may long be continued to him.

THE "OPEN-AIR" TREATMENT AT HAMPSTEAD.

The Committee of the North London Hospital for Consumption at Hampstead has printed a report by the Medical Registrar, Dr. J. J. S. Lucas, on the results of the treatment of consumptive patients in the hospital from January, 1899, when the "open-air" system was adopted, to July. The hospital stands at an elevation of 300 feet, close to Hampstead Heath, and has grounds stocked with trees, and sheltered from the north and east. Patients now remain for nine weeks, and in some instances this period has been extended. The number of cases of phthisis treated during the period under consideration was 205, and of this number 183 were treated by the open-air method, that is to say, by rest in the open air, graduated exercise, and good feeding under strict supervision. No window in the open-air wards is ever closed, and during the cold weather the patients are kept warm with extra clothing and artificial heat. In addition some medicinal treatment has generally been found necessary. The general conclusion drawn in the report is that practically all the early cases improved considerably. Taking all the cases thus treated, 43.7 were much improved, a large number thus classified showing no signs of lung trouble on leaving the hospital. In addition, 32.3 per cent. were distinctly improved, that is to say, there was increase of weight, diminution of fever, and marked signs of a decrease of the active mischief in the lungs. Slight general improvement, diminution of fever being the most marked sign, was noted in 7.6 per

cent.; in 4.3 per cent. there was no improvement, and 7 patients (3.9 per cent.) died. The cases as a whole are believed to have been decidedly worse than those admitted to most sanatoria. Some of the patients went to convalescent homes on leaving the hospital, and nearly all eventually return to work, if possible in the open air. A large number of the patients have been traced, and all who improved markedly in the hospital, and have endeavoured to follow out the hygienic principles inculcated there, have shown no sign of relapse, although many have left the hospital some months. The tone of the report is thus distinctly hopeful and encouraging, although the period which has yet elapsed is too short to allow any positive conclusions to be drawn. Subsequent reports will be awaited with interest, and it would be well if in them some indication of the extent of the mischief present on admission, especially as to whether one or both lungs were involved, could be given.

OCEAN BACTERIA.

WHILST nothing that concerns the dwellers on the earth is regarded as sacred by the enthusiastic bacteriologist, the bacteriology of the ocean has not yet been very thoroughly studied. The groups of bacteria concerned in the phenomena of phosphorescence have been studied, as has also the effects of sea water on various pathogenic microbes and on sewage. Professor Fischer (Kiel) and Dr. Bassengo have, however, investigated at different times a section of the Atlantic stretching from 60° north lat. to 8° south; and Professor Fischer has published some of their results.[1] Near land, as might be expected, the number of bacteria was greatest, and diminished rapidly further out to sea. On the edge of an ocean current, and and especially where a current came up from below, they were more numerous again. The idea suggested by this observation—that they might be more numerous in the depths than on the surface—was confirmed by actual experiment. Bacteria were found down to a depth of 1,100 metres (about 596 fathoms); at a depth of from 200 to 400 metres (about 100 to 200 fathoms) they were regularly found in considerably larger numbers than at the surface. This comparative paucity at the surface is attributed to the germicidal effects of sunlight. On the whole the number of different sorts found was small; some kinds, however, were very widely spread. The micro-organisms found consisted chiefly of bacteria. Hyphomycetes were only found near land. Blastomycetes occurred so abundantly and at such distances from land that it is certain they develop in the sea. Typical cocci and bacilli were practically never met with on the high sea. The ocean bacteria were remarkable for great variations in size and shape. Twisted forms were very frequently seen which at first sight resembled comma bacilli. At other times spheres and rods—long, short, or even threadlike—were seen. Zoogloœa masses were frequently found, and still more commonly the so-called involution forms. In none of these species was spore formation observed, though some of them were cultivated for two years and a half. All the sea bacteria were capable, in certain stages of development, of spontaneous movement. In some this was effected by a bunch of flagella at one end; they did not stain by Gram's method. Some were facultative anaërobes, and some developed various colours during cultivation. Among the luminous bacteria were some which would grow at a temperature of 0° C. It is probable that the sea bacteria play a part in the way of decomposing dead organic matter, etc., similar to that of the land bacteria. In some ways the conditions that hold in the sea are curiously different to those that obtain on land. Repeated research has shown that the Arctic ocean in summer is richer in plankton than are the tropical seas. To account for this the theory has been advanced that the "denitrifying" bacteria—that is, those which decompose the nitrogenous compounds setting free the nitrogen—are incapable of carrying on their destructive work in the temperature of the polar seas, but are at work all the year round in tropic climes. The object of the research was to get a general view of the question of sea bacteriology, and the work naturally only touches the fringe of a very interesting subject.

[1] *Deut. med. Woch.*, September 14th, 1899.

THE CYCLE AS AN INSTRUMENT OF DIAGNOSIS.

WE believe that there is a law against scattering poison broadcast, even though the excuse may be that it is only meant for rats. So far, indeed, has the general doctrine that it is illegal to do even a legal act if it is likely to do injury been carried, that the scattering of tin-tacks on the high road has become a punishable offence, lest, perchance, some cycle tyre may thereby be pricked; and we cannot but feel that if the same principle could be put into operation against those reckless persons who give advice on medical topics, absolutely destructive and poisonous advice, in the lay press, much good would be done. The following pernicious bit of advice seems to have originated in a periodical called *Wheeling*. It was then copied into the *Wheelman*, from which we take it, and no doubt by this time has been reproduced in every cycling journal all round the world. All sorts of people are anxious about their hearts. To anæmic girls and bashful youths, to atheromatous old gentlemen and flatulent ladies, to the foolish and the wise, the question not infrequently arises, Is my heart sound? and this is the way in which *Wheeling* would have them solve the question:

> The cyclist who has doubts as to the strength of his heart, may easily put the matter to the test by riding up a steep hill as far as possible, and if there is any heart weakness a sharp pain will strike him in the back between the shoulders. If the pain does not appear, the cyclist may take it that his heart is practically sound.

Could anything be more absurd? and could anything be more dangerous? The occurrence of such a pain would not be the slightest proof of the existence of either disease or "weakness" of the heart, and if it sent a few anxious anæmics and dyspeptics to the doctors no harm would be done. But when there is reason to suspect "heart weakness"—which means heart disease if it means anything—to test it "by riding up a steep hill as far as possible," and by the endeavour to produce a symptom which, if cardiac at all, can only mean strain and probably permanent injury to the heart muscle, would be absolutely suicidal. And all for nothing: for there are fifty ways in which a man, even though suffering from heart disease, may be pulled up without the production of this wonderful sign; so that he may go away rejoicing that he is "practically sound," although he may be actually diseased. When one considers the care which has to be exercised by even the most skilful physician to ascertain the soundness of the heart, and when one remembers that in cases where the heart is not quite right, although fully capable of doing good work for years with reasonable care, such an experiment as is suggested by *Wheeling* would be likely to set up a dilatation never to be recovered from, and to bring on all the miseries of premature heart failure, we find it difficult to discover fitting words to describe the wrong done to thoughtless people by the reckless dissemination of such advice.

A SANATORIUM FOR CONSUMPTION IN EGYPT.

IN the paper on Climate in the Treatment of Tuberculosis, read by Sir Hermann Weber at the International Congress in Berlin, and published in the BRITISH MEDICAL JOURNAL of June 3rd, that eminent physician said that both patient and the medical practitioners who send them to Egyp trust too much to the mere climate, and he mentioned tha there were no sanatoria in that country. It appears, how ever, that Dr. A. J. Bentley, formerly of Mena House, Cairo

had before this complaint was uttered taken steps to supply the want indicated by Sir Hermann Weber. We learn that the commencement of next season will see the opening of a large sanatorium at Helouan, built and fitted on the latest principles. The palace of the late Khedive, situated in the northern and most elevated portion of the town, has been chosen for this sanatorium. It is completely open on all sides to the desert. The palace itself will be used chiefly for reception and consultation rooms, whilst an entirely new wing, so contrived as to catch the maximum of sunshine, is now in course of construction. This new wing will have three storeys, and on the roof there is to be an exceptionally fine winter garden of some 800 square metres. According to present arrangements, the sanatorium will be capable of accommodating about seventy patients, and each room will be fitted according to the latest requirements, bath rooms, etc., being attached to every chamber. The windows are on the casement principle, with a pivoted ventilating glass reaching to the ceiling above the windows proper. This ensures constant movement of the air in the room, and practically patients while indoors will be living in the open desert air. The sanatorium, which we understand will be under the direction of Dr. Bentley, will be open to receive visitors by the commencement of November.

THE FRENCH UNIVERSITIES BUDGET.

The fifteen universities of France together have a total of 27,080 students, of whom 12,059 belong to Paris. The total expenditure is 13,859,500 francs, so that the average cost of the education of each student is 511 francs (a trifle over £20). To meet this expense the universities have revenues amounting collectively to 2,093,700 francs; legacies, donations, etc., amount to 1,511,600 francs; therefore a deficit of 10,524,200 francs (equivalent to nearly £15 for each student), has each year to be made up by the State.

HYPNOTISM IN ANIMALS.

It has long been known that certain animals could be "hypnotised." The well-known experiment of Father Kircher, who described in 1646 how a hen could be induced to lie prostrate and to place its beak on a board when a chalk line was drawn from the point where the beak touched the board to a more distant point away from and in front of the animal, has been copied into our text-books of physiology, together with the woodcut illustrating this curious phenomenon. Dr. Max Verworn,[1] Professor of Physiology at the University of Jena, has made a number of experiments on this condition in various animals, such as birds, frogs, serpents, and guinea-pigs. The experiments were carried out with great care and in large numbers, and the observations carefully compared and classified. Dr. Verworn reviews the various explanations which have been given of the phenomena observed, one of these being the view which attributes the results to "animal hypnotism." This view, however, is not confirmed by Dr. Verworn's experiments. To understand the various factors involved in this rather difficult question it is necessary to pay attention to the habitual attitudes and acts of the animal and to the state of its muscular system. The body, when placed in certain positions, has certain characteristic modes of holding itself therein, and there are also certain facile and well-organised reflexes by which it can pass from unusual or constrained positions to normal and less constrained attitudes. When such reflexes have been accomplished, the muscles of the limbs and body have a tendency to remain in a state of relative contraction, whereby the attitude thus attained is maintained. This persists until a fresh impulse to movement (either "spontaneously" aroused in the brain or reflexly evoked by some stimulus) comes into operation. Even in animals from whom the cerebral hemispheres have been removed these phenomena of resting attitudes and changes of attitude may be observed. Except for the fact that the movements for change of attitude are not capable of any very considerable elaborateness in brainless animals, they are in fundamental features the same in both uninjured and in brainless animals. These movements are accompanied by an increased rate of heart beat and of breathing, which subsides to a lower level when a habitual resting attitude is once more attained. In daily life it can often be observed that when we receive a strong impression from the senses there is temporarily produced an inhibition of voluntary movements or actions. This is what happens in the so-called "hypnotism" of animals. Such phenomena, however, have not the same significance as hypnotism in human beings which is entirely the product of suggestions. The latter plays no part in "animal hypnotism." The only thing in common is that in both conditions processes of inhibition are present, but it is of course not justifiable to call every such process hypnotic.

[1] *Die sogenannte Hypnose der Thiere* Max Verworn, Jena, 1898.

DANGEROUS LUNATICS.

A medical correspondent writes to say that while travelling from Scotland recently in a corridor railway carriage he was attacked by a powerful man suffering from homicidal mania. This very unpleasant experience leads our correspondent to suggest that any future lunacy law should contain a clause to protect the public from such experiences as he and some others had during their journey. In the absence of any particulars as to the history of the individual we assume that the attack was made by a lunatic who suddenly and unexpectedly revealed himself as such in the crowd of travellers. No clause in any lunacy law could be devised which would effectually prevent the possibility of recurrence of an incident of this kind, any more than a clause in a statute could have prevented the possibility of an accident to the same railway train. Many cases are not suspected or known to be either insane or dangerous until they commit some illegal act, and sometimes not even then. At the same time it must not be forgotten that the Legislature, as a consequence of public agitation, has made the certification and placing under control of the insane more difficult; hence it is sometimes impossible to get dangerous cases under control as early as desirable.

HOSPITAL ABUSE IN WESTERN AUSTRALIA.

The newly-formed Branch of the British Medical Association in West Australia has at once set to work to attempt to remedy some of the urgent professional abuses in that colony. We have received a letter from Dr. Herbert Horrocks, Honorary Secretary of the Branch, covering a resolution recently passed by it, dealing with the subject of hospital abuse in the country districts. The resolution is as follows:

> That the various Branches of the British Medical Association in Australasia be communicated with in regard to the delusive advertisements promulgated by the subsidised hospitals of this colony, and that the honorary secretary be requested to write to the Editor of the British Medical Journal in regard to the same subject.

We referred in a recent number of the Journal to the hospital abuse at Bulong in West Australia, and it would appear from Dr. Horrocks's letter that the same abuse is now spreading to other hospitals in the mining districts, and has already been the cause of some well-established practitioners being robbed of their practices. In some of the mining districts which are too poor to support both a hospital and medical man a hospital has been established, and is subsidised by the Government to the extent of £1 for every £1 raised by private subscriptions. The latter are made up largely of one-shilling-a-week contribution by

all classes of the community, which enables them to secure medical attendance and medicine at a lower rate than can be obtained through the friendly societies. Thus the whole of the practice in these towns is vested in the hospital doctor, who is paid a salary of £300 a year, and is the slave of the local committee, and liable to dismissal at a moment's notice. The specious offer of £300 a year and "private practice" (of which under the circumstances there is none) may be an attraction to some. But such appointments are obviously most undesirable in the interest of the profession at large, and a system which practically converts the State into a huge friendly society dealing out medical attendance and medicine to all and sundry at a shilling a week, is one which should be severely condemned and actively opposed by all who are concerned with the welfare of the profession. We earnestly hope that no member of the British Medical Association will lower himself by taking an appointment which can only mean degradation to himself and to his profession.

THE ETIOLOGY OF BERI-BERI.

As the Secretary of State for the Colonies has decided to found a pathological laboratory in the Malay Peninsula, especially with a view to the investigation of beri-beri, Dr. Laurent's further note on the Beri-beri Epidemic of 1898 in the Poulo-Condore Penal Settlement[1] is not without interest. It has already been pointed out in these columns [2] that the absence of fat in the dietary plays an important part in the production of the disease. In the present note, Dr. Laurent is able to give a more detailed account of the Poulo-Condore epidemic from the report supplied by Dr. Andrieux, the medical officer in charge of the convicts, which demonstrates the good results which followed the inclusion of fat pork in the dietary, and confirms the views originally put forward by Dr. Brémaud. Briefly, the facts of the case are as follows: The mortality in the Poulo-Condore Settlement had been very high. During the fourteen months the epidemic lasted, the mortality, which had previously been 10 per 1,000 per month, rose in November, 1897, to 39; in December, to 58; reaching 130 and 148 per 1,000 in January and February respectively. In these last two periods beri-beri was responsible for 72 and 67 deaths among 767 and 499 prisoners respectively. Steps were then taken to improve the hygienic conditions and, to some extent, the dietary. This led to a decrease in the mortality—namely, 8 and 18 deaths among 335 and 323 convicts in the following August and September respectively; but it soon rose again to 25 and 30 in October and November, notwithstanding the fact that there was a continued decrease in the number of prisoners. In October Dr. Laurent visited the island on his way home to Saïgon from Sidur. He then took the opportunity of informing Dr. Andrieux of the good results he had obtained when dealing with the Chantabun epidemic by the inclusion of fat pork in the dietary of the Annamite troops. Representations on the point were made to the Lieutenant-Governor of French Cochin-China, who himself visited the settlement, accompanied by Dr. Simond, of the Saïgon Bacteriological Institute. On November 16th an alteration was ordered to be made in the rations, which for the future were to include 250 grams of fresh pork per diem, except on two days a week, when 350 grams of fresh fish and 50 grams of pork fat were to be substituted, vegetables and condiments being of course retained and given out as usual. Besides this, certain hygienic measures were also decided on and carried out. Following on this, the number of cases of beri-beri diminished from day to day. In December there were only 4 cases—1 fresh case and 3 relapses. No fresh case had occurred, according to Dr. Andrieux's report, since December 7th. Moreover, it is significant that a fresh batch of 16 prisoners was landed on November 15th; they were very anæmic, and in a condition very favourable to be attacked by beri-beri. They were not isolated from the rest of the convicts, but were at once placed on the fat pork dietary. Not one developed beri-beri, whereas all previous batches had markedly suffered from the epidemic malady. Dr. Laurent considers that the decline in the incidence of the disease and its subsequent disappearance is chiefly due to the improved dietary. He again insists on the importance of the fat element.

[1] *Arch. de Méd. Navale et Coloniale*, August, 1899, No. 8, p. 140.
[2] BRITISH MEDICAL JOURNAL, 1899, p. 487, col. 1.

THE "ETHICS OF VIVISECTION."

THE current *Edinburgh Review* contains an article entitled, "The Ethics of Vivisection," in which the question of experimental physiology and of the effect of the Cruelty to Animals Act of 1876 is dispassionately discussed; it will well repay perusal by those who are interested in the question. The writer points out that there has been no evidence of the Act of 1876 having been evaded. "Physiologists do not for the most part like it, for the regulations imposed on them give trouble and take time; but they have submitted loyally, and on the whole it has been less unpopular than it was expected to be." Nevertheless, a Bill is projected by the opponents of vivisection to amend the Act of 1876 in the direction of still further stringency. The writer allows that "both in England and on the Continent much that can only be described as reckless disregard of pain has been shown by some physiologists." But he adduces abundant grounds for the belief that physiological research on living animals can be accomplished without torture, and that the operator can minimise suffering to a point not out of proportion to the advantage to be gained. Moreover, he considers that the Act has, since it was passed, actually produced this gratifying result in the United Kingdom. It made private vivisection a penal offence; experiments can now be made only in registered places and by licensed people, who must be qualified for research work. A licence is limited in the following ways: (1) The animal must be completely anæsthetised; (2) it must be killed before it can recover from the anæsthetic; (3) the experiment cannot be used to illustrate class teaching; (4) it must not be a mere repetition of what has before been done; (5) the animal must not be a cat or a dog; (6) it must not be a horse, mule, or ass. Each of these restrictions can be removed: for instance, some operations may be done without anæsthetics, but they are only inoculations and the giving of drugs or poisons. Similarly, with the other restrictions, they are removed only when it can be clearly shown that the resulting pain will be quite trifling. The article adduces numberless examples of pain inflicted upon animals for the sake of man's luxury, amusement, and vanity, and for his service in various ways, and argues that man is justified in killing them, and even in giving them pain, for an adequate cause, and with careful avoidance of recklessness as to the pain inflicted. He maintains that the attainment of physiological knowledge is worth the small amount of suffering now imposed upon the animal world, and that it is lawful and right. An enormous number of advances in scientific surgery and medicine have resulted from work done by physiologists and biologists working in the way indicated by Bacon and Harvey. Whilst, if medicine is still further "to improve and take its place as a science it can only be by toiling along the stony and weary path of experimental investigation. Nor need we fear that too many people will press into this path. Human nature is mostly indolent and ease-loving. Research by experiment is difficult and costly; it requires almost infinite patience, infinite hopefulness. It brings in a mere pittance of income; it requires a degree of absorption which prevents any other work being done. There need be no fear of too many people undertaking it." The

writer concludes by warning all who desire to form a wise judgment on the difficult subject of vivisection to submit to the most careful inquiry for date, address, and other particulars all narratives of cruelty or torture inflicted upon animals by any one of the small body of experimenters licensed in this country, and he rightly emphasises the point that "to no one is the absence of pain on the animal's part more advantageous than to the operator."

THE JOHN USHER INSTITUTE OF PUBLIC HEALTH, EDINBURGH.

The plans for the John Usher Institute of Public Health, the money for which—a sum of £20,000—was some time ago given by Sir John Usher, of Norton, to the Court of the University of Edinburgh, have just been passed by the Edinburgh Dean of Guild Court. The site for the building is on the south side of Warrender Park Road, and a considerable piece of ground has been found on Sir George Warrender's property there, the available ground at the medical school having been found to be too confined. An additional advantage in going to the Warrender Park district is that ample light from the north can be obtained. A continuation of Spottiswoode Street to the south will run alongside the building on the east side, and a new street—Lauderdale Street—will bound the ground on the west. The institute has been planned after careful examination of similar buildings in this country and on the Continent. The front of the building will stand back a considerable distance from the street. The building will consist of three storeys, in which will be provided a museum, large chemical and bacteriological laboratories, three research rooms, balance, optical, and dark rooms, water and gas analysis rooms, three workrooms, observation, disinfection, and incubating rooms, a reading room, a large lecture theatre, the professor's private laboratory and retiring room, a class room for senior students, a caretaker's house of three apartments, etc. The basement will contain accommodation for heating an incinerator and a water storage tank. The ventilation will be by extraction to the roof by fans, and the building generally will be heated by hot water. The flooring throughout will be fireproof. The exterior has been designed in a phase of classic Renaissance, and takes the form of two end blocks connected by a recessed centre part; the principal elevations are to be built of grey stone ashlar lined with hollow brick. The roofs are to be covered with red tiles. The contracts having been arranged the work will be commenced at once; the total cost will be about £20,000, the amount given by the generous donor. A considerable portion of the ground, which altogether is about 250 feet in length and 110 feet in breadth, will be reserved for extensions.

A SANATORIUM FOR CONSUMPTIVE SOLDIERS IN AMERICA.

According to the New York *Medical Record*, the United States are taking measures to secure proper treatment for such of its soldiers as may become consumptive, orders having recently been issued authorising Surgeon-General Sternberg to establish a sanatorium for the treatment of officers and enlisted men of the army suffering from pulmonary tuberculosis at Fort Bayard, New Mexico. Henceforth enlisted men suffering from this disease will be transferred to the new hospital on the recommendation of medical officers of the army, and discharged soldiers so suffering, if entitled to the benefits of the United States Soldiers Home at Washington, may be sent to the sanatorium by the Board of Commissioners of the home. All this is as it should be. There are certain diseases, notable among which are phthisis and dysentery, which are not only common among soldiers, but by which they are apt to be permanently disabled, and it is to be feared that only too often the risk of suffering from these diseases is entailed upon soldiers by the conditions of the service. It always appeals to us as a matter of rank injustice that the country should wash its hands of such cases when they are no longer fit for service. No country can be expected to discharge its soldiers in the same condition as it enlists them. "Fair wear and tear" must always be allowed for; but consumption caught in barracks is not "fair wear and tear," and such cases should not be turned adrift.

THE DEATH OF MR. JOSEPH WHITE.

We regret to have to record the death on September 24th, after an illness extending over many months, of Mr. Joseph White, F.R.C.S.Ed., formerly of Nottingham, who was President of the British Medical Association in 1892. The meeting at Nottingham was extremely successful, and the geniality and tact with which Mr. White occupied the presidential chair will be remembered by all who took part in it. Mr. White was for many years Surgeon to the Nottingham General Hospital, and on his retirement was appointed Honorary Consulting Surgeon. He settled in London some four or five years ago, and occupied some of his leisure by acting as Honorary Secretary for Cases of the British Medical Benevolent Fund, an office to which he devoted himself with much assiduity, and for the duties of which his sympathetic nature peculiarly qualified him.

THE PUBLIC HEALTH CONGRESS AT BLACKPOOL.

The Congress of the Institute of Public Health was held at Blackpool from September 21st to 28th. The proceedings were opened with an address from the President, the Marquis of Lorne, who surveyed the world of medicine from toxins to telepathy. Though here and there he showed a tendency to be what dull people call "flippant," he was on the whole commendably orthodox in his views as to vaccination, plague, rabies, and the other matters as to which your freeborn Britain is apt to show his independence by talking nonsense. Coming down in the course of his extensive flight to the treatment of sewage the President had a word to say in praise of the septic tank system now in use at Exeter. The four Sections opened with addresses of their respective Presidents, who were as follows: Section A (Preventive Medicine and Vital Statistics), Dr. E. W. Hope, Medical Officer of Health for Liverpool; Section B (Chemistry and Meteorology), Mr. A. E. Fletcher, late Chief Inspector under the Alkali Acts; Section C (Engineering and Building Construction), Mr. Benjamin Sykes, M.I.C.E.; Section D (Municipal and Parliamentary), Mr. T. Loftos, Town Clerk of Blackpool. Papers were read by various members on questions appertaining to the public health, and freely discussed. There was also a conference of ladies on domestic hygiene, held under the presidency of the Mayoress of Blackpool (Mrs. J. Heap). Among the matters discussed was cremation, which was resolved to be "the most sanitary method for disposal of the dead." The subject of tuberculosis, which is now always with us, was well handled by Dr. Ransome, who showed how local sanitary authorities could do good service against tuberculosis, and blessed the banners of the National Association for the Prevention of Consumption in its crusade against the scourge. Dr. Arnold W. W. Lea of Manchester urged the adoption of a system of medical inspection of schools as a means of preventing the spread of infectious diseases. The Chief Rabbi contributed a paper on the Sanitation of the Mosaic Law. Dr. Rogers McNeill, County Medical Officer for Argyleshire, presented a paper dealing with the importance of teaching domestic science as an aid to the improvement of the public health; the science included the theory and practice of cooking, laundry-work, dressmaking, and housewifery. Mr. C. J. Whittaker of Church dealt with the purification of sewage by microbes. He said that at the present moment thousands of acres of land in the country were lying sewage stricken; not only

useless, but a great menace to the public health; and there could be no doubt that the cast-iron land rule of the Local Government Board was largely responsible for this unsatisfactory state of things, a statement which was received with loud applause. Dr. W. Graham, Medical Officer of Health for Middlesbrough, discussed the problem of smoke abatement. He said existing methods might be sufficient, but the law was lax, and a better administration of the Public Health Acts should be provided for. To bring about this determined pressure on the part of the community was required, and he hoped we should not see the present century end without reasonable protection from such a great evil. At the Ladies' Conference on Domestic Hygiene, Mr. R. E. Thomas (Leeds) read a paper entitled Physical Training a National Necessity, in which he urged that if Britons were to maintain their superiority as a nation, it was their duty to see that they were physically fitted for the work they have to perform. He complained that very little had been done by the State or by local governing bodies to provide for the physical needs of the people generally. Miss Edith Johnson, M.B. (Blackpool) read a paper on the Care of Children during Infancy, in which she strongly denounced the dummy teat, which she said should be banished from every house. Sir Charles Cameron introduced a discussion on the composition of brandy, in which he said the brandy now being produced on the Continent was largely artificial. He argued that, however manufacturers might endeavour to imitate genuine brandy, the medicinal properties could not be the same. These statements were endorsed by Dr. W. R. Smith, the President of the Congress. A Health Exhibition was held in connection with the Congress, and the meeting was a distinct success in every way.

A BACTERIOLOGIST FOR THE CITY OF GLASGOW.

THE Corporation of Glasgow has taken an important step in the development of the Health Department of the city. Some time ago it was decided to appoint a bacteriologist in connection with the Health Department, who would work in conjunction with the medical officer of health and the medical officers of the fever hospitals. There has been considerable competition for this post, and the appointment has just been given to Dr. R. M. Buchanan, a graduate of Glasgow University, who was formerly assistant to the Professor of Pathology in the University, and more recently Professor of Medical Jurisprudence and Public Health in Anderson's College. Dr. Buchanan will devote his whole time to his new duties, and will have a suitable laboratory at his disposal in the Sanitary Chambers.

THE MEDICAL SOCIETY OF LONDON.

THE hundred and twenty-seventh session of the Medical Society of London will commence on Monday, October 9th, when an address will be delivered by the incoming President, Dr. Frederick Roberts. After the address, a discussion will take place on Personal Experience in relation to Serumtherapeutics and Antitoxin Treatment, in which Dr. Mitchell Bruce, Dr. G. A. Heron, Dr. Sidney Martin, F.R.S., and Dr. J. W. Washbourn are expected to take part. The Lettsomian Lectures on Cancer of the Breast will be delivered in March and April by Sir William Mitchell Banks, and the Oration in May by Dr. Kingston Fowler.

OBSTETRICAL TERMINOLOGY.

ON the proposal of Dr. Bar the Obstetrical Congress recently held in Amsterdam appointed an International Committee to consider the question of obstetrical nomenclature. The members of the Committee are Drs. Treub (President), Bar, La Torre, Rapin, Queirel, de Rein, Davis, Edwards, Simpson, and Freund. Dr. Bar is the Secretary of the Committee, and will present a report on the subject to the Obstetrical Section of the International Medical Congress to be held in Paris in 1900.

HOSPITAL REFORM ASSOCIATION.

WE are informed that in addition to the gentlemen whose names have already been published, the following have promised to take part in the forthcoming Conference: Dr. T. W. Hime, representing the Bradford and District Medical Union; Dr. Cooke, representing the Wigan and District Medical Guild; Mr. William Rathbone, Dr. Isaac Holmes, and Mr. William Griswood, representing the Liverpool Central Relief and Charity Organisation Society.

"A 'STRIKE' OF COLLIERY SURGEONS".

REFERRING to the article which appeared under this heading on page 619 of the issue of the BRITISH MEDICAL JOURNAL of September 2nd, we are requested on behalf of the gentleman who is said to have accepted the appointment of surgeon to the Wigan Miners' Society to state that he did not go to the district on the invitation of the Society.

LECTURES will be delivered in Gresham College, Basinghall Street, E.C., on October 3rd, 4th, 5th, and 6th, at 6 P.M., by E. Symes Thompson, M.D., F.R.C.P., Gresham Professor of Medicine, on Earth, Air, Water, and Insects in Relation to Disease.

THE honorary degree of D.C.L. of the University of Durham was on September 23rd conferred on Dr. Francis Charlewood Turner, Physician to the London Hospital.

THE degree of Doctor of Pharmacy has just been conferred by the University of Paris for the first time. The recipient is M. Lacourt, who presented a graduation thesis entitled, Historical, Chemical, and Bacteriological Study of the Versailles Water.

THE first meeting of the Clinical Society of London for this session will be held on October 13th, and the first meeting of the West Kent Medico-Chirurgical Society will be held at the Royal Kent Dispensary, Greenwich Road, on Friday, October 6th, at 8.45 P.M., Dr. Morgan Dockrell, President, in the chair.

THE London School of Tropical Medicine in connection with the Hospitals of the Seamen's Hospital Society will be opened to students on Monday, October 2nd. The prospectus covers the whole field of tropical disease. A travelling scholarship of £300 will be offered to students of the school.

AT a meeting of the Council of the Society for the Promotion of the Study and Cure of Inebriety, held on September 26th, Dr. William Wynn Westcott, Her Majesty's Coroner for North-East London, was unanimously elected President of the Society in succession to the late Dr. Norman Kerr, who was the founder.

The *Polyclinic*, which is the journal of the Medical Graduates' College, London, states in its October number recently issued that the number of medical practitioners who have joined the College is now 521.

THE King's College Old Students' Dinner will be held at Limmer's Hotel on Monday, October 2nd, Mr. Edmund Howlett, F.R.C.S., in the chair.

THE MALARIA EXPEDITION TO SIERRA LEONE.

ANOPHELES AND ITS HABITS MALARIOUS FOCI LOCALISED.

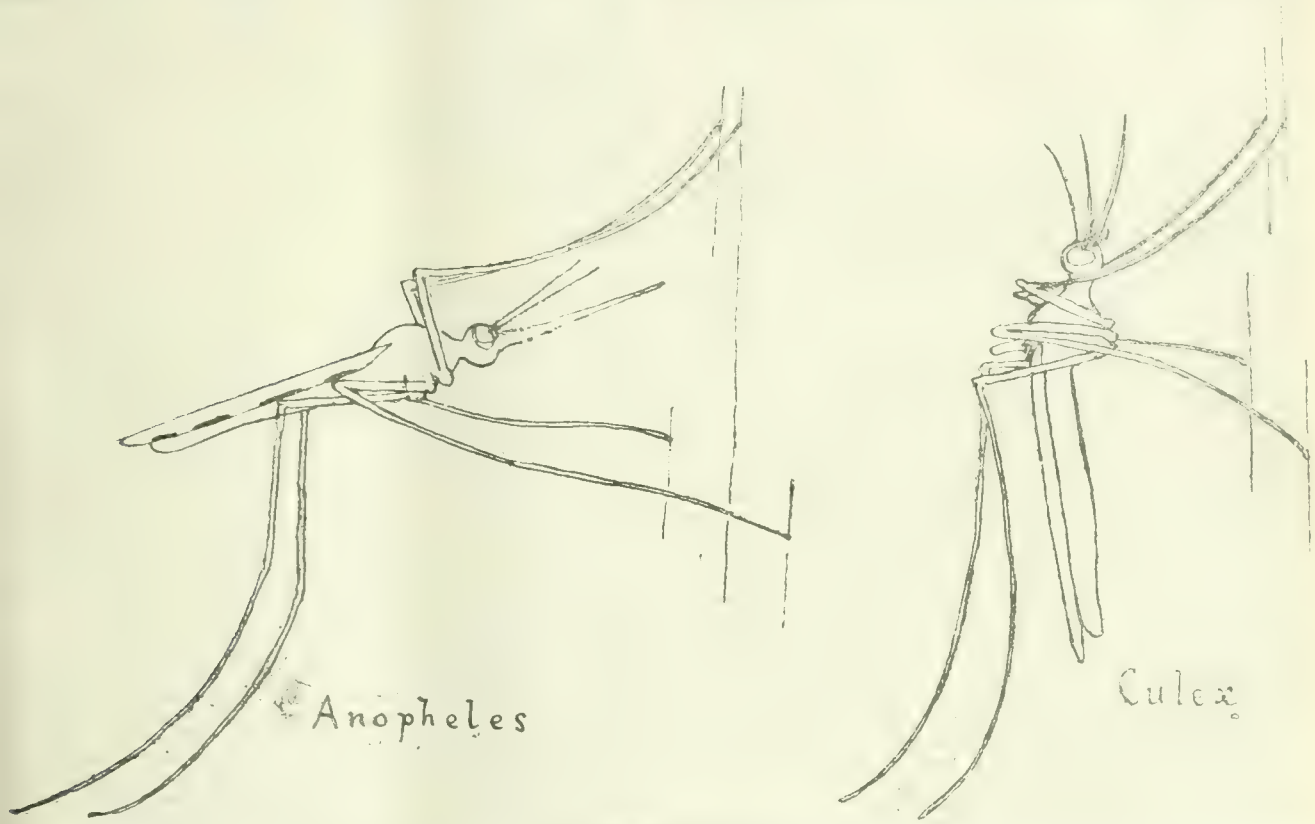
[From a Correspondent.]

In my last letters I described how the local species of *Anopheles* had been proved to carry malaria. In the last ten days the members of the expedition have been studying the habits and distribution of the larvæ of this kind of mosquito. The results, which are most interesting, enable us for the first time to localise precisely the sources of "malaria" in a place, and also explain many of the old theories regarding emanation from the soil and so on. I propose to give such a description of these investigations as will enable medical men in the tropics to repeat the work for themselves—a matter of no great difficulty.

First of all, it must clearly be understood that genus *Anopheles* differs much from genus *Culex* in the adult, in the larva, and in habits. In the second place it is no less important to note that anyone, even the most ignorant native, can easily distinguish between the two kinds if told how to do so. The principal zoological difference is, of course, that in the female *Anopheles* the palpi are long, whereas in the female *Culex* they are short; bnt this will not be of much assistance to the public, who do not know what the palpi are. Fortunately there is a more striking difference—in the attitude which the insects adopt when seated on a wall. In *Anopheles* the axis of the body is almost vertical to the wall, while in *Culex* it is parallel to the wall. The rough sketch above will suffice to show this. Hence anyone who looks at a mosquito when it is seated—the time when it is best seen, of course—can tell at a glance to which genus it belongs. Popularly described, the tail of *Anopheles* is said to "stick outwards," while that of *Culex* points downward, or even a little toward the wall. In short, *Anopheles* when seated looks somewhat like a thorn affixed on a surface by the point. In *Anopheles* the proboscis is directed towards the surface on which the insect happens to be; in *Culex* it is directed parallel to that surface.

Another striking difference is that in *Anopheles* the wings generally have several dark spots along the anterior edge (to use popular language), while in *Culex* the wings are generally plain. Ross says that this difference holds in all the mosquitos seen by him, so that it must be a pretty general difference; but nevertheless there are some known species of *Anopheles* without spotted wings, and some known species of *Culex* with them. A third difference is that in *Anopheles* the proboscis appears peculiarly thick and long, giving the insect a pelican-like appearance. This is due to the palpi being held close to the proboscis.

Anopheles vary much in colour—from a light fawn colour to a dark-greenish black. Individuals vary in size too, from about 3 mm. to 5 mm. in length, not counting the proboscis. The local species seem to bite at night, and are to be found asleep on the walls during the daytime. They can then easily be caught, simply by placing a test tube or bottle slowly over them. If any sudden dash be made at them, however, they generally manage to escape by a rapid side movement. The test tube is stopped with a light plug of cotton wool. In about forty-eight hours after feeding the stomach becomes empty again, and the eggs are laid. The insect is then ready to feed again. This can be effected simply by placing the mouth of the test tube on the skin of a man; the *Anopheles* presently "lays hold" and gorges itself. More than gorging itself, it voids blood while it is sucking. The insects can be got to bite in the daytime in this manner as well as at night.



Mosquitos seated on a wall.

So much for the adult *Anopheles*. I think anyone will be able to recognise them from the description. Needless to say, there is danger of malaria wherever *Anopheles* is to be found in houses, barracks, and hospitals; and when this is the case malaria patients should always sleep in good mosquito nettings, in order to avoid communicating the disease to other inmates.

As regards larvæ also *Anopheles* differs largely from *Culex*.

Culex larvæ always have breathing tubes close to the tail fins. When a *Culex* larva comes to rest at the surface of the water the point of the breathing tube is thrust upward into the air, and the larva thus hangs head downward, suspended by its breathing tube, as it were. The *Anopheles* larvæ have a very important difference, which enables anyone to recognise them at a glance—they have no breathing tube, and when at rest they do not float head downwards, but lie flat on the surface like sticks. Instead of the breathing tube there are merely two respiratory apertures near the tail, so that the *Anopheles* larva is apparently compelled to adopt the horizontal position when at the surface. There is another important difference. *Culex* larvæ, when disturbed, immediately wriggle down to the bottom of the water. On the other hand, *Anopheles* larvæ can move, not only in this manner, but with a few rapid jerks along the surface; indeed, this seems to be their more common kind of progression unless much disturbed, when they sink to the bottom. These details, trifling as they may appear to be, are probably of first importance as regards tropical sanitation, because it follows that pools which contain flat-floating surface-moving mosquito larvæ may be considered to be foci of malaria. As anyone can distinguish these peculiarities after once having seen them, they are by no means to be despised.

The eggs are boat-shaped and are laid separately. They are not found as "rafts of eggs," such as are laid by *Culex pipiens*. They attach themselves to each other or to floating objects or to the rim of the water, and then often float in characteristic triangular patterns, each egg constituting the side of a triangle. They require about twenty-four hours or more to hatch out—in artificial conditions.

We now approach the all-important subject of the habits of the *Anopheles* larvæ. What kind of water do they live in? Where may we expect to find them? May we hope to destroy them on a large scale?

Culex larvæ live everywhere in warm countries—in almost every pot, tub, well, cistern, broken bottle, empty sardine tin, or anywhere where a little water lodges. It must be observed, therefore, that the sources of *Culex* cannot well be removed by drainage of the soil, being dependent more on slovenly domestic arrangements than on anything else. In fact, the common species of *Culex* are essentially domestic animals. Neither are they very dependent on rain, slop-water, drains, garden tubs, etc., being found at all seasons. Now, as Ross has pointed out, malaria is amenable to drainage and is largely influenced by the rainfall, while its distribution is very local and not nearly so general as that of at least the commoner species of *Culex*. Hence his inference that malaria depends on a kind of mosquito which breeds, not in pots of water, but in puddles on the ground.

The recent work of the expedition has given ample confirmation of this view. *Culex* is essentially a pot-breeding mosquito; *Anopheles* a puddle-breeding mosquito—or even a stream-breeding mosquito. Hence the familiar laws of the prevalence of malaria. But *Anopheles* not only requires puddles to breed in; but puddles of a certain kind. Hence the practical importance of the subject.

For several days search for *Anopheles* larvæ was quite fruitless. Numbers of pots and tubs of water were examined in vain; they contained only *Culex* larvæ. A number of puddles, too, were searched; they also gave negative results. At last a few *Anopheles* were found in a shallow roadside puddle containing water weed in the middle of the town; then some in a tub. But these finds were very scanty, and could not account for more than a few insects. The principal sources of *Anopheles* yet discovered consist of numerous little pools lying in two small flat areas in the town. Here the larvæ are in large numbers; and are evidently in presence of the conditions most suitable to their existence.

It is easy with a little practice to detect *Anopheles* puddles almost at sight from a distance, but not so easy to say exactly how we recognise them. It is best to begin with a list of the places in which *Anopheles* larvæ are not found—at least generally. These are: (1) Very evanescent rain water puddles; (2) puddles free of green weed, fungus, or algæ; (3) puddles in watercourses and other localities which are apt to be scoured out by heavy rain; (4) large pools which do or may contain minnows; (5) rapid streams, drains, or runnels; (6) wells, cisterns, pots, tubs, etc. This list is a long one, and evidently excludes most collections of water—at least in Freetown. On the other hand, the larvæ are often—or, indeed, generally—found in: (1) Small, slow runnels flowing on soil and containing algæ (green, flocculent waterweed; (2) small puddles containing algæ, and frequently replenished by the overflow during rain of the above; (3) stagnant and fairly permanent collections of rain water containing algæ or green fungus, and not capable of being scoured out during rain.

The reasons for this selection are quite obvious. The larvæ obtain their food from the soil or from algæ, and must therefore live in puddles on the ground as a rule. They also require a week's existence in water in order to hatch out into the mature insect, and during this period they must be secure against (*a*) drying up, (*b*) being swept away by rain, and (*c*) being eaten by minnows. Their frequent association with algæ is clear evidence of this. Algæ also must be secure against drying up and being torn away by torrents. What suits the algæ suits the larvæ; and, indeed, the latter can be seen basking in large numbers on the surface of the still water in which the algæ flourish. Doubtless the mature insect returns to the spot where it was born in order to lay its eggs, so that the places I have attempted to describe remain the permanent haunts, at least during the rains, of *Anopheles*. But there is more than a mere association between the larvæ and the algæ; the former eat the latter. It has been found that larvæ hatched from the egg will not grow unless given large quantities of algæ, which they are seen to devour rapidly, while the crops of the larvæ caught in the puddles are found crammed with the same weed. Hence it would appear as if *Anopheles* is, in the larval stage, essentially an alga-eating insect, and an insect which generally, if not always, breeds in association with that vegetable.

From a theoretical point of view these observations are of interest because they satisfy and explain some long-known laws of the diffusion of malaria—such as the connection of the disease with rainfall and stagnant water, its disappearance on drainage of the soil, and so on. The supposed influence of turning fresh soil may be explained as being due to the formation of *Anopheles* puddles. From a practical point of view, however, the observations just given are still more important because they enable us to avoid draining a whole malarious area, a thing which few towns in the tropics can afford; and, by teaching us how to indicate with scientific certainty the precise foci of malaria, enable us to reduce the cost to a minimum by dealing only with the actually dangerous spots. This is well illustrated in Freetown. The city lies on and between the slopes of several hills facing the sea, and there are few areas of absolutely level ground.

Now, a little consideration will show that level ground is almost a necessity for pools containing algæ, at least in the season of heavy rains. At present, when a heavy tropical shower falls almost every six hours, all the watercourses with any slope are scoured out so deeply that the bare rock is exposed, while after the shower, because of the same slope, all the water, except in a few pools in the rock, drains away almost at once. Mosquito larvæ can never live in such places.

Again, even on level ground rain-water puddles soak into the soil and dry up in a few hours as a rule, and it is only where springs ooze from the higher ground and flow slowly over flat areas that suitable pools are formed. Such pools must be and are comparatively very rare. In fact, though much of the town has been searched, *Anopheles* puddles have only been found as yet at six or seven spots. Of course it may happen that when the rains begin to cease, as will occur a few weeks hence, many puddles which are now subject to scouring will be found capable of harbouring *Anopheles*. This remains to be seen. In the meantime the scarcity of *Anopheles* puddles here at present augurs well for the future as regards the extirpation of malaria.

I understand that experiments with oil are shortly to be made. It has been found that *Anopheles* larvæ, owing probably to their floating flat on the surface of the water, are killed very rapidly by kerosene oil.

Anopheles puddles are scarce here on account of the hilly nature of the place. Will they be found to be more numerous in flat countries? It is doubtful, because in flat countries minnows find their way into even the smallest collections of water during the rains.

How far from their breeding pools can the adults distribute themselves? Is *Anopheles* common enough to explain all the malarial fever here? I hope to give some observations on these points in my next letter.

P.S.—The following experiment has just (September 8th) been completed: A drachm of kerosene oil was poured on a puddle about a square yard in area. All the *Anopheles* larvæ were found dead after six hours.

REPORT OF THE COMMISSIONERS IN LUNACY FOR 1898.

Increase of Pauper Lunatics.

The opening paragraph of the Commissioners' report discloses the fact that on January 1st, 1899, there were 105,086 lunatics in England and Wales under their official cognisance, being an increase of no fewer than 3,114 upon the number on January 1st, 1898. This is the largest annual increase ever recorded, and considering the steady rise year after year in the number of the insane in the British Isles it becomes a serious question for the ratepayers to consider how this accumulation of nervous breakage can be best provided for, having due regard to economy, and to the scientist and alienist physician as to what steps can be taken to check the progress of the various forms of mental disease. The class chiefly affected is without doubt the inmates of the county and borough asylums, the pauper lunatics as they are called, where the increase stands at 2,868 for the twelve months.

Private Patients.

Private patients—that is, those in private or in public institutions, or in single care—not supported by the rates, only increased by 231, and criminal lunatics by 15. As showing the tendency of later lunacy legislation, it is stated that the number of private patients received into county and borough asylums has increased by 180. In many cases where the means of the patient and his friends admit a laudable effort is made to pay for his maintenance as a private patient rather than allow him to be branded as a pauper, and this proper feeling is now largely encouraged by the Committees of these asylums providing the necessary accommodation at a very reasonable rate, as they are empowered to do by Act of Parliament.

Criminal Lunatics.

With regard to criminal lunatics the Commissioners comment strongly upon their being sent to "county or borough asylums, where they of necessity mix on equal terms with the ordinary patients," which, they say, is very generally felt to be a hardship to the latter, while it often introduces an element of danger, strongly militates against the order and discipline of the asylum, and, moreover, induces among the other patients a feeling of being detained for punishment. The Commissioners express the hope that, as Broadmoor is fully occupied, such additional accommodation may be provided by the State as will enable the worst cases of criminal lunacy (those criminals who after conviction for serious crime, and being sentenced to penal servitude or long terms of imprisonment become insane) to be treated elsewhere than in an ordinary asylum.

Rate of Recovery.

The rate of recovery is 36.87 per cent. of the total number of admissions as compared with 38.35 per cent. in 1897. This however is not so unfavourable as would appear at first sight when we consider that the total fresh admissions (not recurring cases) in 1898 exceeded those of 1897 by 488 and exceeded the annual average numbers in the ten years ending with 1898 by no fewer than 1,715. Again, in this connection it must be borne in mind that the recovery rate is largely influenced by the nature of the cases admitted, among whom the curable are still but a small proportion. It is a fact that in the majority of our asylum reports attention is drawn to the small number of curable cases in the institutions and the very unfavourable nature of the cases admitted, many of them being in an advanced state of disease other than mental or precluded from all hope of recovery by their great age, or by being congenital and hereditary cases, or chronic lunatics sent from workhouses. The general health of the various asylums throughout the country has been satisfactory and the death-rate during the year (including deaths in idiot establishments) was 9.45 per cent. of the average daily number of patients. A favourable point worthy of mention is the fact that according to statistics the ratio of general paralytics to the general population is decreasing, as in 1887 it was 9 per cent. to the total number of patients admitted, while for the five years 1893 to 1897 it had fallen to 7.8 per cent.

Suicides.

The number of deaths by suicide in institutions for lunatics was 18, which the Commissioners consider to be small in comparison with the total number of patients under treatment, a large proportion of whom were affected with melancholia.

Cost.

The average cost per head per week shows little variation, being 8s. 10d. in county asylums and 9s. 10⅝d. in borough asylums. This being reduced by the Government grant of 4s. per head per week shows the advantage financially to the Poor-law guardians in removing as many patients as possible to the county asylum rather than in retaining them in workhouses even though they are not suitable cases for the former institution.

Further Accommodation Needed.

The question of providing more asylum accommodation is pressing hardly upon many counties and boroughs. Seventeen are building or contemplating the erection of new asylums, fifteen are making additions or proposing to make them, and the Commissioners state they have been reluctantly compelled to consent to the erection of temporary iron buildings for accommodation of patients at seven others in order to relieve pressing requirements. It is no use attempting to meet these requirements (which are becoming more and more urgent throughout the country) by half measures. Far better would it be to endeavour by enlightened methods not merely to put up huge blocks to hold accumulations, but to provide proper institutions for the cure and treatment of recent cases fitted with every modern appliance, and at the same time to make ample arrangements for the less costly care of the chronic and incurable.

Medical Staff.

The lines indicated by experience are to provide an ample estate of from 300 to 400 acres to give scope for outdoor occupation, amusement, and exercise, and upon this estate to erect a hospital for mental diseases fully equipped for 400 patients (200 males and 200 females), with an adequate medical staff sufficient to procure for each case distinct individual treatment, as in a general hospital, with every means for pathological research as well as clinical investigations, and with an out-patient department. The medical staff should devote its whole time to the study of insanity in all its forms, and not be trammelled with questions of administration, farming, gardening, and the like, or the details of organisation. All these would fall under the duties of the medical director, who would be the head of the asylum, and who would reside in a separate house midway between the hospital and a chronic block which would be erected purely for the care of the chronic and incurable, for say 1,000 or 1,500 patients. These by their labour would reduce the cost of the curative establishment. By some such scheme as this, more rapid advance might be expected in the knowledge and treatment of mental diseases and in the education of the medical profession generally. Any case in them found to be incurable would not be retained in the hospital proper beyond twelve months, but would be drafted off to the chronic block. Attached to the chronic block there would be an infirmary for the treatment of general diseases and chronic paralytics, etc. The knowledge and experience thus gained by such a continuous, systematic, and individual investigation of each case would point the way to prevention and cure, and would thus do more to arrest the ever-swelling numbers of our insane patients than the mere herding of them together for care and their prospect of cure.

Presentation.—Dr. E. W. Orton has been presented with a carriage clock, and Dr. McGlashan with a reading lamp, by the members of the male and female classes in ambulance of the Bedworth Science and Art Classes, as a mark of their esteem and appreciation of the services rendered in instructing the classes.

THE NEW VACCINATION ACT IN OPERATION.

PRIMARY VACCINATION UNDER THE NEW ACT.

A RETURN showing, in respect of each Poor-law union in England and Wales, the number of certificates of successful primary vaccination received by the vaccination officer or officers during the periods between January 1st and June 30th (both days inclusive), in the years 1898 and 1899 respectively was issued as a Parliamentary paper on September 26th.

The total number of certificates of successful primary vaccinations received by the vaccination officers in the first six months of 1899 was 355,987 as compared with 278,588 in 1898.

There were, therefore, 77,399 more primary vaccinations in the first six months of the year 1899 than in the corresponding portion of the year 1898, being an increase of 27.78 per cent.

Of the 646 unions from which particulars have been received, 479 show an increase, 165 show a decrease, while in 2 the numbers of successful primary vaccinations were the same in the two periods under consideration.

In a number of the more important cases in which primary vaccinations in the six months from January to June, 1899, fell distinctly short of those in the corresponding six months of 1898, the Local Government Board caused inquiry to be made into the matter. The explanations obtained show that owing to the appearance of small-pox in 1898 in or near to certain unions, a large number of persons in those unions, some being immigrants from other unions, were vaccinated during January-June, 1898, who should have been vaccinated previously, and for the same reason numbers of children whose vaccination would, in the ordinary course, have only become due after the commencement of 1899, were vaccinated before that date. This applies, for example, to the South Shields Union as well as to those of Stockton and Middlesbrough.

In other unions the guardians had not, by January 1st, 1899, agreed, either with the vaccination officers or the public vaccinators, or both, as to the fees to be paid to them; and in the circumstances the scale of fees had to be determined by the Local Government Board. During the interval there was often delay in the issue of the necessary forms which have to precede the domiciliary visit of the public vaccinator. Even where the fees have been settled, there were instances of much delay in making the necessary arrangements for carrying the provisions of the Vaccination Act, 1898, into effect, some of this delay being due to alterations in the districts of the officers concerned.

Of the 43 union counties in England, no fewer than 40 show an increase in the number of certificates of successful primary vaccination, and in some instances the increase has been remarkable. In Bedford, Buckingham, Cornwall, Derby, Gloucester, Leicester, and Northampton the number of certificates is more than double the number received during the first half of 1898, and it is interesting to note that Gloucestershire stands near the head of the list with an increase from 2,892 to 6,115, while Leicester shows a rise from 234 to 1,977. In other counties where the increase has not been proportionately so large it has in some instances been substantial; thus in Lancashire the increase has been from 41,770 to 53,333, in London from 38,673 to 47,541, in Staffordshire from 9,731 to 17,335, and in the West Riding of Yorkshire from 25,036 to 31,670. Only three counties show a decline, and one of these is Durham, where the number of certificates of successful primary vaccination in the first half of 1898 was 16,470, whereas in the first half of 1899 it was 15,214. This is no doubt to be accounted for by the reason mentioned above—namely, the large amount of vaccination consequent upon the epidemic of small-pox in Middlesbrough and Stockton in 1898. The other two counties which show a decline are Devon, from 6,027 to 5,719, and the North Riding of Yorkshire from 4,902 to 4,190. In the case of the last-named county union the large number of vaccinations which took place in 1898 in consequence of the epidemic at Middlesbrough more than accounts for the falling-off.

Of the 12 union counties in Wales, 7 show an increase in the number of certificates of successful primary vaccination received in the first half of 1899 as compared with the first half of 1898, and 5 a decline, which, however, was in no instance great except in the case of Flint, where the numbers were 454 in 1898, and 297 in 1899. On the whole, however, the increase in Wales was much less conspicuous than in England, but the return affords no materials for forming an opinion as to the reason for this difference.

The figures in the return are complete so far as they go, with the exception that for some unexplained reason no return has been received from the St. Albans Union, in Hertfordshire.

The increase in the number of certificates received in London appears to have been pretty general. In St. George, St. Giles, and in the City of London the numbers were almost the same in the two periods; in St. Marylebone there was a slight decline, part of which is attributed to the increase in the number of children not vaccinated before leaving Queen Charlotte's Lying-in Hospital; in Whitechapel there was a decline from 1,350 to 1,022; in Poplar from 848 to 701; in Paddington from 1,212 to 1,123; in Mile End from 410 to 386; in the Strand from 185 to 141. The largest decrease is noticed in St. Pancras, where the number of certificates received in the first half of 1898 was 2,637, while in the corresponding period of this year they numbered only 1,662.

In Lancashire, both Liverpool and Manchester show a considerable decrease (from 2,340 to 1,830 in the first, and 2,196 to 1,309 in the second), whereas Salford shows an increase of from 2,490 to 3,455. In Staffordshire the increase is pretty evenly distributed over the county. In Warwickshire, there is a slight decrease in Birmingham, from 3,348 to 3,183; with a substantial increase in Aston, from 3,062 to 4,015. In the West Riding of Yorkshire in which, as has been already stated, there was a considerable increase, the increases and decreases are very unevenly distributed; thus in Leeds there was a slight decline, whereas in Halifax the number was six times as many as in the corresponding period of 1898, although the total, 696, is not large.

THE Marquis of Lorne, in his inaugural address before the Health Congress at Blackpool, made special reference to vaccination, while both here and at the Sanitary Congress in Southampton stress was laid upon the importance of systematic popular education in regard to this, as to other sanitary matters.

Birmingham in November last protested against the minimum fees fixed by the Local Government Board, and now again protests, thinking it a very unjust thing apparently that when the public vaccinator's work and responsibility are increased, his remuneration should also be increased.

Leicester guardians were on Tuesday served with the long-expected mandamus, calling upon them "forthwith" to appoint a vaccination officer. They "forthwith" adjourned the discussion until Monday next, which is what one would expect from a town where those who have conscientious objections to vaccination have been advised and entreated to "conscientiously object" to claim exemption certificates. There appears, however, to be a growing sentiment in favour of obeying the order, which has found expression in the columns of the *Leicester Mercury*. The Belper guardians negatived a resolution of sympathy with the Leicester guardians in their struggle.

At Luton and King's Lynn the public vaccinators have sent in their accounts for six months' work done, and the guardians have refused to pay. Lynn also refuses to appoint a vaccination officer.

Rugby, having failed to obtain applicants for the post of vaccination officer at the minimum fees, has been instructed by the Local Government Board to advertise at a higher rate of remuneration.

The Wandsworth and Clapham guardians have reduced their clerk's estimate for vaccination during the second half of the year from £1,000 to £400.

We notice that leading newspapers still call public vaccinators "medical vaccination officers." In view of the attitude of some local authorities the public vaccinator would be very glad to be made an "officer" instead of being under contract with the guardians, liable to twenty-eight days' notice, without appeal or superannuation.

PUBLIC VACCINATORS AND DOMICILIARY VACCINATION.

DR. J. G. WATKINS.—If a mother brings her child to the public vaccinator's surgery, and requests that it be vaccinated by him in his official

capacity, he has no power so to vaccinate it, except at the child's home, nor can he charge any fee to the guardians if he vaccinates at the surgery. The only relaxation of the rule of domiciliary vaccination is by special order of the Local Government Board. Government teachers of vaccination have the right to receive payment for cases vaccinated at their educational stations by an order of June 19th, 1899; and by Section VII of the Act of 1898, "the Local Government Board may by order, if in their opinion it is expedient by reason of serious risk of outbreak of small-pox or of other exceptional circumstances, require the guardians of any Poor-law union to provide vaccination stations." Revaccination is not subject to such restriction.

LIMITS OF DUTIES OF PUBLIC VACCINATORS.

DELTA.—In the case of every child resident in his district as to whom he has received the requisite notice or request, the public vaccinator "will visit the home of the child within two weeks after the receipt of the notice, and offer to vaccinate the child. . . . . and if his offer is accepted will thereupon (or after such postponement, if any, as may in his opinion be necessary) vaccinate the child" Any second visit of the public vaccinator, therefore, is contingent upon the acceptance of the offer to vaccinate; if the offer is refused his duty ends with the notification of such refusal to the vaccination officer. In the case in point, assuming the facts to be correctly stated, A. appears to have exceeded his duty.

PRIVATE VACCINATION BY PUBLIC VACCINATORS.

PUZZLED.—Under the new Act a public vaccinator may undertake to vaccinate privately in whatever manner and whatever place he pleases, and may make any terms as to fee with the parent or guardian of the child. If, however, he receives any fee from the parent, he cannot legally charge any fee to the guardians. Section XXII of the Act of 1867, which is untouched by subsequent legislation, reads as follows: "No fee or remuneration shall be charged by the public vaccinator to the parent or other person.....for any vaccination done under his contract, nor shall he be entitled to payment under his contract for any vaccination in respect of which he shall have been paid by the parent or other person for whom or on whom it is performed; and if he should have received payment under his contract, he shall not be entitled to recover payment for the vaccination from any other person."

PRISON COMMISSION FOR SCOTLAND: REPORT ON PRISON DIETARIES.

THE report on Prison Dietaries, by Dr. J. C. Dunlop, Interim Medical Adviser to the Scottish Prison Commission, and just issued as a Bluebook (c. 9514) treats exhaustively of the subject both from the practical and the scientific point of view.

Dr. Dunlop, at the beginning of his report, explains how he was instructed by the Prison Commissioners that prison dietaries "should, as regards the amount of nutriment, be in no sense penal." Starting with that principle, he enters at some length into what are the food requirements of an ordinary prisoner, and formulates a standard. This he does by stating that a male prisoner doing an ordinary task should have a diet containing 120 grams of proteid, an energy value of 3,100 calories, not more than 550 grams of carbohydrate, and at least 38 grams of fat. A diet of that value has been found in the present Scottish prison diet, No. 4, and consequently Dr. Dunlop advises that diet to be retained as the standard for male ordinary prisoners. To corroborate his conclusion that No. 4 diet is sufficient and not excessive, Dr. Dunlop gives a convincing series of observations including an elaborate series of metabolic observations. This No. 4 diet essentially consists of full allowance of porridge and butter-milk night and morning, with a ration of soup and bread, or potato and milk, midday.

Having fixed the standard for the male ordinary prisoner, Dr. Dunlop considers the requirements of special classes of prisoners, as he insists on the facts that all prisoners do not require and cannot use the same quantity of food, and that to secure that no cases of underfeeding occur, it is necessary either to give a maximum to every prisoner—a wasteful course—or to classify prisoners according to their requirements. The special classes of prisoners he selects, and his reasons for doing so, are as follows:

1. Women. Dr. Atwater's estimation for the requirements of women has been adopted—namely, that the food they require is seven-eighths of the quantity required by a man. Prison diet No. 3 supplies that quantity of food. Observation shows that women are sufficiently fed on it, and Dr. Dunlop advises that it should be the standard diet for all female prisoners.

2. Prisoners of more than average size. Dr. Dunlop expresses a decided opinion that, if the average man or woman gets food sufficient, but no more than sufficient, were a large man or large woman put on the same diet, then that diet would be insufficient, and the large man or large woma would be subjected to a dietary punishment, which the average-sized prisoner is not. That the insufficient feeding of this class of prisoners is taking place is well shown in the following table, taken from the report, page 66. In it will be seen how on diet No. 4, the standard for male prisoners, light and average-sized prisoners maintain their weight, while the heavy prisoners lose weight. The table also shows how diet No. 3, a smaller diet, is sufficient for light men but not for average men, while diet No. 2 is insufficient for all men:

Table comparing Loss of Weight by Heavy Men with Loss by Average Men.

	Rate II.		Rate III.		Rate IV.	
	Per Cent. Losing.	Average Loss.	Per Cent. Losing.	Average Loss.	Per Cent. Losing.	Average Loss.
Under 9 stone..	75	2.9 lbs.	11	1.6 lbs.	10	2.6 lbs.
10 to 11 stone ...	81	4.1 ,,	63	3.8 ,,	15	2.6 ,,
Over 12 stone ...	90	6.0 ,,	70	5.0 ,,	70	6.2 ,,

To correct this inequality of treatment Dr. Dunlop advises that a small addition of food be given to all prisoners of more than average size. Making any special allowance for prisoners of more than the average size is entirely new to all prison rules, but with the observations recorded in this report such seems not only desirable but absolutely necessary if the principle is adopted that the punishment of crime by imprisonment shall not include the punishment of partial starvation.

3. Nursing mothers. The report discusses what the special requirements of these women are, and how they can best be met.

4. Juveniles. It is interesting to note that no age-limit is included in the Scottish Prison Regulations, below which a prisoner is to be classed as a juvenile and above which as an adult, but the decision of that is left to the governors—a wise precaution considering the late development of many of the weeds who find their way into the criminal classes. In the report Camerer's standard for youths of 15 is taken as the standard, and it is shown that Rate 3, the standard diet for women, is more than ample to supply their wants.

5. Unemployed prisoners. It is an established fact that idle persons require less food than those actively employed, and accordingly it is advised that decrepit prisoners and others unable for work should be fed on a lower scale than those working.

6. Prisoners who at the time of their reception are unable to take a full diet. The vast majority of prisoners in Scotland are convicted on charges of drunkenness or of some crime committed when drunk; many of these are as a result of recent debauch unable to take a full diet, and consequently it is suggested that they should be put on a limited diet for two days to allow their digestive organs time to recover, and at the same time to avoid waste of food.

7. Ordinary prisoners with long sentences. It has been found in prison that the monotony of the diet tells on the energy and digestive power of the prisoners after a time. To obviate this, it is suggested in the report to change the nature of the supper after nine months' imprisonment; this is intended not to unnecessarily increase the quantity of food given, but simply by relieving the monotony to give the prisoner more relish.

8. Convict dietaries. Convicts, prisoners serving sentences of penal servitude, require a diet different from that which suffices for ordinary prisoners, and do, on account of their different surroundings, their harder day's work, their being more exposed to climatic influences, and their long periods of service. Dr. Dunlop advises a reconstruction of the convict dietaries, and gives full reasons and many observations showing why that is necessary. In this section of the report (page 93) an interesting table is given, showing a seasonal variation of the weights of convicts; it is pointed out how two influences are present which might influence this: the one the longer day's work in summer, the other the greater

utilisation of food material to supply warmth in winter; of these, the figures given show that amount of work has the greater influence, while the temperature has also a marked influence.

9. Punishment diets. The report considers these, compares them to standard of food requirement of a man at rest, and considers the time during which they may safely be used.

10. Dietaries for criminal lunatics. These dietaries are for use in the criminal lunatic asylum at Perth, and seem amply good enough for use in that institution. They are intended to be "liberal and sufficiently varied to be pleasing."

It is on this classification given that Dr. Dunlop suggests the new prison dietary regulations. Sex, size, amount of labour, climate, lactation, and youth are used for classification, while the older arbitrary classification according to length of sentence is not used. Every diet intended to be sufficient to nourish properly the class of prisoners for which it is intended. The pernicious system of "progressive dietary" has never been the rule in Scotland, so is hardly mentioned in the report.

There are many details given by Dr. Dunlop in the report that cannot be extracted into a short summary. These must be read in the report itself: but special attention might be directed to his elaborated metabolic observations, to his analyses of food stuffs, to his tabular statements showing the composition of the dietaries, and to his analyses of the weight records of prisoners.

The author must be congratulated on turning out a report which, while being thoroughly practical, is full of scientific observation and thought, and which may well and safely be taken as a model for any future reports that may have to be prepared regarding the dieting of our public institutions.

In an appendix to the report, Dr. Dunlop gives a few remarks regarding Scottish poorhouse dietaries and prison dietaries of other countries, his remarks regarding the former (the poorhouses) are well worthy of careful consideration by the authorities, for if civilisation is now so far advanced that it is considered cruel to punish crime by underfeeding, it surely must also be considered cruel to punish pauperism in that manner.

All the chemical analyses entailed in the preparation of this report were made in the Research Laboratory of the Royal College of Physicians of Edinburgh, and Dr. Dunlop desires to thank the Laboratory Committee for putting at his disposal the accommodation, apparatus, and chemicals necessary for carrying out the research necessary for this report.

DANGEROUS TRADES.

FINAL REPORT OF THE COMMITTEE.

THE issue to the public of the final report of the Dangerous Trades Committee of the Home Office must come not less with a sense of relief than as a cause of gratification to the members of the Committee. Since the appointment of the Committee 295 factories have been visited and 259 witnesses have been examined. It was an instruction by the Secretary of State that the inquiry should be directed into the conditions of work as they affect the health of operatives in 22 trades. Four years have been spent in accomplishing this. While some of the industries investigated have been small, others have been most important. In our large iron works and in factories where machinery is run at rapid speed there will always be the ordinary dangers to life and limb incidental to the use of steam. Provision already exists in our factory legislation for accidents occurring under these circumstances. It was to investigate some of the more subtle influences upon health of workers engaged in particular industries that the Committee was called into existence. It has recognised the difficulty there sometimes is in tracing the causes of death to dangerous employments judging from the death certificates given by medical men. The fatal illness is often attributed to natural causes. Since, for example, in the case of plumbism death is often ascribed to kidney disease, the Committee make the suggestion "that if all deaths among workpeople who have been employed at any time within three months immediately preceding death in a trade in which special rules are established were to be compulsorily reported to the coroner, many facts of great intrinsic and statistical value might be ascertained and such light might be shed upon some of the occupations which give rise to industrial disease that conditions could be established by which much of the injury and suffering now unhappily endured might be mitigated, if not absolutely averted." How far experience would confirm this optimistic expression it is impossible to say. The suggestion was made in evidence given to the Committee by the coroner for Manchester and one of Her Majesty's inspectors of factories. The three months' limit referred to would be too short to throw light upon all forms of industrial disease, but it would cover anthrax and the acute forms of lead poisoning that occurs in the potteries and white lead factories.

The dangers of millstone building are dealt with at considerable length by the Committee. Although not a large industry, it is admittedly a most unhealthy occupation. The raw material, or "buhr" stone as it is called, comes from Epernon in France, and has to be chiselled and smoothed. The wedge-shaped masses thus prepared are fixed together by cement to make a millstone. Buhr stone is one of the hardest stones known. In dressing it a man will knock the point off ten steel tools in a quarter of an hour. The work is carried on for the most part in the open air, and the risks run are two—namely, injury to eyesight and pulmonary phthisis. We are familiar with ordinary stonemason's phthisis and its causes—inhalation of dust and exposure. Risky as this occupation is, it is little compared to that of the French millstone builders. The men who follow this avocation are not such a high class of workmen as house masons. They are as well, if not even better, paid, but they are intemperate and apt to be heedless of their health. How far their illness is due to want of care and how much of it to the industry it is difficult to say. They are a shortlived class of men. A good many of them die before the age of 30, and nearly all from severe hæmorrhage from the lung and fibroid phthisis. The dust given off when the men chisel the stone is partly metallic particles from the steel tools they use, as is evidenced by the numerous blue marks on the skin of the arms, and grit from the buhr stone. It is extremely heavy, a circumstance which makes its removal rather difficult, even with fans, although the provision of such, and the wearing of spectacles and respirators, are recommended by the Committee.

The "manufacture and use of emery wheels" is considered. The risk to life and limb, it would appear, lies less in the manufacture of the wheels than in their being run at great speed and breaking. When such an accident happens, the fragments are hurled far and wide in a crowded workshop. The fixing of guards to the wheels is recommended. The speed at which the wheels should be allowed to run is also dealt with. According to their diameter, so should be the number of revolutions per minute, a circumstance that ought to be stated upon each emery wheel when sold.

Basic slag, or the refuse which is removed from the converter in iron works where steel is manufactured by the Gilchrist-Thomas method, is in many parts of the country, owing to the large amount of phosphates it contains, ground down to form manure. It is evidently one of the dustiest trades known, for the slag has to be ground so fine that 80 to 85 per cent. of the dust will pass through a mesh 10,000 to the square inch. Until within the last few years this material was pulverised in open mills. The dust under these circumstances must have been very considerable, for at the present time, when the process is carried on in closed machinery, owing to the weight of the materials employed for breaking and crushing the slag, and the extreme vibration, the joints of the machinery soon get loosened, and there rises into the atmosphere a fine impalpable dust, which primarily irritates and subsequently clogs the respiratory passages of the workmen. It is the cause of bronchitis and asthma. Intemperate habits on the part of the men probably contribute to the result. In the outbreak of pneumonia which became epidemic in Middlesbrough eleven years ago, basic slag workers suffered so very severely that Dr. Ballard, who was sent down by the Local Government Board to inquire into its causation, reported that "the slag dust, to which the epidemic had been attributed, was not the cause of the pneumonia, but that when from any cause pneumonia becomes epidemic, persons largely exposed to the inhalation of this dust may and do

suffer more than persons not so exposed, and that the disease with them is of high fatality."

The conditions under which the industry is carried on have been improved within the last few years, but notwithstanding this the Committee consider the trade a dangerous one, and in need of further safeguarding. In Germany things are even worse in basic slag works than they are in this country. The inspector for Dortsmund found in one works that 5 deaths from inflammation of the lungs occurred in one year. The mills were compulsorily closed for four weeks, during which the exhaust ventilators and dust towers were cleaned out with the most satisfactory results to the men on resuming work. In another mill there were 6 cases of pneumonia and 24 of bronchial catarrh out of 71 cases of illness. It is interesting to note that during humid weather the amount of sickness diminishes in the phosphate department. In Germany no young person is allowed to work, and adults are obliged to submit to a preliminary and periodical medical examination. The recommendations made by the Dangerous Trades Committee concern the packing of the manure, the use of fans, wearing of veils or respirators, and care in the storage and transit of the finished product.

Silicate of cotton, which is obtained from molten slag, the manufacture of salt, work in flour mills, use of metallochrome powder in lithography, use of lead in print and dye works, and the process of dyeing with arseniate of soda are dealt with in the report.

Some time ago Miss Anderson, Her Majesty's Principal Lady Inspector, found that the practice of licking labels for reels in thread mills was followed by the development of swollen submaxillary glands. This unhealthy practice is not confined to the thread industry alone, but is seen in the silk, aërated water, and other trades. The Committee visited works in Manchester, Leek, Bolton, Chesterfield, and Paisley. Dr. Thomas Oliver deals in the report with this subject from the medical point of view, and shows that as the practice is generally indulged in by young persons and children at a period of life when growth is active and the system requires all its digestive secretions, the daily loss of saliva cannot be otherwise than prejudicial to health. Apart from the loss of saliva, the individual runs the risk of being poisoned by the coloured labels he puts into his mouth. Several of these were found to contain lead and copper, and although in the adhesive part of the labels Professor Thorpe, the Government analyst, found only gum, yet since it is known that substances of an animal nature, blood serum for example, are occasionally substituted for gum, the risk to health becomes exaggerated. Under any circumstances label licking is a disgusting practice, and since it is known to have been followed by inflammation of the salivary glands, and was found by Dr. Gibb, of Paisley, to be a fruitful cause of dyspepsia, there is every reason why label licking in factories should be compulsorily stopped and the use of mechanical dampers encouraged. The need for this is apparent. In one factory the Committee found 12 full-timers who licked from 40 to 50 gross of labels per day, and 35 half-timers who accomplished 20 to 30 gross. One woman told the Committee that she could lick 90 gross of labels a day. It would have been no wonder had the streams of salivary secretion dried up altogether in this woman.

The final report of the Dangerous Trades Committee contains many useful observations. Many of the opinions expressed, and the recommendations made ought to be of great assistance to Sir Matthew White Ridley and his colleagues at the Home Office in future factory legislation. Work of the kind undertaken by the Committee, although extremely honourable, carries with it great responsibilities, especially at a time when international industrial competition is keen, and there is on the part of factory owners a growing inclination to resent State interference with their methods of production. An industry should be to each worker not only his means of making a living but of his being healthily employed, and not, as it sometimes is, the cause of ill-health and shortened life. Occupations that are unhealthy should be so safeguarded that risk to health is reduced to a minimum. A nation acts with prudence when it exhibits a care for its wage earners. As Britain was first afield in its efforts to improve the conditions of life and labour in the factories, it is only right that as time goes on and new industries keep developing, her maternal care for the workers should keep pace with advancing civilisation. The final and previous reports of the Dangerous Trades Committee are records of an honest attempt to cope with problems that have necessarily arisen in the course of the industrial progress of our time, and form material for the guidance of the Legislature. The task assigned to the Committee has been accomplished, and so far as we can see it has been discharged equally in the interest of the employer and the welfare of the worker.

The report is signed by H. J. Tennant, May Tennant, Thomas Oliver, M.D., and H. P. Smith.

ASSOCIATION OF CERTIFYING FACTORY SURGEONS.

THE annual meeting of the members of this Association was held in Bolton on September 21st. There was a fair attendance, though perhaps not quite so large as usual, this being doubtless due to the Congress of the Royal Institute of Public Health being opened at Blackpool on the same day.

The retiring President, Dr. EAMES, took the chair, and, in his opening address, alluded to the beneficial influence which the Association had been the means of bringing to bear upon recent modifications of the Factory Acts, and more particularly upon the regulations which are issued from time to time by the Home Secretary. He also pointed out the necessity of formulating suggestions for embodiment in the Bill for consolidating the various Factory Acts, which it is the intention of the Government to bring in at an early date.

Dr. BARCLAY (the Honorary Treasurer), in presenting his financial statement, pointed out the advisability of finding some satisfactory mode of investing the surplus funds.

It was decided that a special general meeting should be held in Manchester, early in October, to consider the action of the Association with respect to the new Factory Bill, and to decide the question of investments raised by Dr. Barclay. Dr. J. Holmes, whose position as Honorary Secretary for some years past has brought him into great prominence in connection with factory matters, was unanimously elected President for the year. The post of Honorary Treasurer was again accepted by Dr. Barclay, the new Honorary Secretary being W. F. Dearden, M.R.C.S., L.R.C.P., D.P.H., of Crumpsall, Manchester. Dr. F. C. Moore was elected Corresponding Secretary for Ireland, and Dr. Miller Corresponding Secretary for Scotland.

The annual dinner was subsequently held at the Swan Hotel, Mr. Tinker, the Factory Inspector for the Bolton District, being the guest of the evening.

HOMBURG.

DR. HOLMAN has sent us the following interesting notes on Homburg:

Another season has come and gone. Patients began to arrive early this year and a fair sprinkling of Germans put in an appearance in May. The earlier part of the season was somewhat wet, but July and August were simply perfect. Although the thermometer marked high at midday there was always a pleasant breeze.

Throughout the past five months there has been a preponderance of the German element amongst the visitors and certainly a decidedly diminished number of English, especially of that class to whom the waters are so eminently beneficial—hard-worked Ministers, judges, barristers, medical men, and merchants, men with constant anxieties and responsibilities, whose meals have to be taken irregularly, often in haste, and still more frequently upon a stomach whose nerve power has been exhausted by hard brain-work, and whose digestive nerve force was too tired adequately to fulfil its function. It is well known that the position of certain people in Society compels them to live *en évidence* in the social life of London and elsewhere. This year these persons have stayed away because they could not get the social rest they needed.

Late hours and high feeding are not the fitting concomitants of the "Homburg cure." Patients come to be cured of the results of the strain of London life, and if dinner parties and balls are of almost daily occurrence, no fault should be found

with the waters because adequate benefit does not follow from drinking them. Practically London life has been transferred to Homburg, to the great injury of the prestige of this most important Spa. Years since, the dining hour was 6 or 6.30 P.M. and people went to bed at 10 P.M. and rose at 6 or 6.30 A.M. Now the invitation dinner is 8 P.M or later—the hospitable instincts of the host having added to the *menu* and provided the choicer brands of wine—and then follow the dance and *petit souper*. The appearance at the springs in the morning is proportionately late and the time devoted to exercise is curtailed to hurry home to breakfast.

The invitation dinner must be followed by a return invite, and so the wheel revolves; and no real rest is obtained to compensate for the whirl of London life. The old wholesome plan, if it was thought desirable not to dine at the *table d'hôte*, was for a few friends to "set their tables together," and ordering their own wine, pay their own "scot and lot," and as soon as the meal was over adjourn to the Kursaal to listen to good music or to talk with friends; and to bed in good time. Patients appeared at the springs at seven o'clock, and an hour and a half was devoted to exercise before breakfast.

It is matter of common knowledge that several people accustomed to visit Homburg have this year stayed away because neither men nor their wives could secure the rest from social strain they so much needed.

In 1851 Dr. Hoffman analysed the water from the bore of the "Soolsprudel spring," and wrote: "The Soolsprudel is so rich in carbonic acid and chlorides that it most probably can only be used as a gas and bathing spring, but if thus applied it will surely render great service."

No means of proper storage or means for applying it for bathing purposes existed until the new Kaiser Wilhelm's Baths were built. The water contains double as much carbonic acid as the Nauheim spring, and half as much iron. It would appear that by making use of the details of the treatment pursued at Nauheim a most important addition may be made to the therapeutic resources of Homburg.

Already a considerable number of cases have been under treatment and observation, quite large enough to prove that many cases of cardiac disease may be greatly benefited by treatment. Efficient means exist for warming the water without in any way disturbing its chemical constituents, and it can be advantageously mixed with the water from the Kaiser or Ludwig's, when this is considered advisable.

It is intended that as soon as a sufficient number of well-observed cases have been under treatment to publish the results.

Dr. Rudiger and other friends are engaged in keeping up exhaustive quantitative analyses of the chemical constituents of this spring, so as to show that the water remains at a stable equilibrium at its present depth.

VACCINATION IN THE ITALIAN ARMY.

THE BRITISH MEDICAL JOURNAL of May 27th, 1899, contained a letter by Dr. Ruata, Professor of Materia Medica in the University of Perugia, on the above subject, strongly criticising an elaborate paper by Dr. Livi, of the Statistical Bureau of the Italian War Office, which appeared in the same JOURNAL on April 29th. The field of battle has been transferred by the combatants from Italy to this country, as Dr. Livi has already replied to Dr. Ruata by publishing a pamphlet in Italy containing some reprints on both sides of the question.[1] According to Dr. Ruata, vaccination is a practice "which has no scientific basis, is founded upon a wonderful sequence of errors, and in short constitutes one of the gravest and saddest mistakes into which medicine has fallen." This pretty strong language is taken from an inaugural discourse by Dr. Ruata delivered in the academic year 1898-99 in the University of Perugia, in his capacity of Professor, and it was followed by an article in *La Salute Pubblica* of December 15th, 1898. In this the army statistics were impugned, hence the intervention of Dr. Livi.

But to return to Professor Ruata's letter. To begin with, Dr. Livi is charged with "several substantial mistakes." Dr. Ruata says: "It is not a question of interpretation of facts, but of error of facts themselves." But on reading the letter through, not a single error of fact is brought forward; and Dr. Livi is only charged with one error of inference. The rest of the letter is occupied with Dr. Ruata's own conclusions and his grave indictment of errors of fact falls to the ground. The erroneous inference has regard to small-pox in the "not yet vaccinated in the army." It appears that conscripts in Italy pass some days in their respective recruiting towns before joining their regiments, and therefore before vaccination in the army, unless a small-pox epidemic is in progress. The average time thus spent is nine or ten days. But inasmuch as some recruits join too late for vaccination, and have to wait a year before being vaccinated, while others are removed to hospital for illnesses of various kinds, Dr. Livi, in order to concede as far as possible to anti-vaccinists, has placed the average at fifteen days. There are always some unvaccinated soldiers in the army, and Dr. Livi estimated their average number as 2,838 in an army of about 203,000 strength. The actual number cannot be ascertained, but what is known is that during the sixteen years 1882-97 there were 225 cases of small-pox amongst this class "not yet vaccinated in the army," with 23 deaths, a class which Dr. Livi estimates at 2,838. Professor Ruata does not attack this estimate itself, but, strange to say, he objects to the 225 cases about which there is no doubt. The Professor wrongly opposes them to the 2,838 of which they are a part; and they certainly differ in the important particular that the 225 had small-pox and the rest of the 2,838 remained free from it; and then he assumes that the whole 225 cases occurred in recruits before joining, whereas many of the cases might have occurred after joining. The next link in the chain is that the whole 225 must have been infected at their homes before joining the army, and perhaps this was true of many of them. In the next place, they must have marched or travelled somehow to their respective recruiting towns during the stage of incubation: hence they were attacked by small-pox under unfavourable circumstances, worn out in body by fatigues and excesses, and depressed in mind from having to leave their homes; hence, lastly, the increased small-pox mortality amongst the class not yet vaccinated in the army. Thus, Dr. Ruata argues, it is an erroneous inference of Dr. Livi that the increased small-pox mortality in this class is due to the want of vaccination.

But it cannot be the sole fact of being exhausted recruits which caused a small-pox fatality of 19.2 per cent.—that is, nearly five times as much as in all the small-pox cases together (4 per cent.), and more than eight times as great as that of the vaccinated in infancy, and afterwards in the army with good results (2.3 per cent.), and which conferred on all the individuals never vaccinated at any time a receptivity towards small-pox 60 times greater than that of the whole army (290 and 4.8 respectively per 10,000), and a mortality 294 times greater (55.8 per 10,000), because if this were the case recruits would present a similar contrast to established soldiers in other infectious diseases, whereas they do not.

It is interesting to note that Professor Ruata originally emphasised the statement that all recruits were vaccinated immediately on arrival, and quoted an official rule in support of this. He did not apparently perceive that the more he exaggerated the number of vaccinated in the army and diminished that of the unvaccinated, the more he was showing the vulnerability of the latter class towards small-pox, until Dr. Livi pointed this out.

Then Professor Ruata jumps away to the period 1867-78 in order to find a contrast—a period when, as the statistics show, vaccination was not so efficiently performed in the Italian army as in later periods, ignoring here his own table which shows a far higher fatality among the non-vaccinated than amongst the "vaccinated with good results." The source of this table is not given, but taking a single column in it, namely, the number of vaccinations each year from 1882 to 1897, we find the numbers different from Dr. Livi's every year,[2] though this is to some extent compensated by wrong addition of the column, no doubt inadvertently. Again, according to Professor Ruata, all the cases of small-pox in the class "not vaccinated in the army," occurred in recruits on joining

[1] *La Vaccinazione nell' Esercito e L'Antivaccinismo.* Roma: Enrico Voghera, 1899.

[2] See BRITISH MEDICAL JOURNAL, April 29th.

their regiments, whereas many escape vaccination for a year, and must furnish a certain proportion of the attacks.

We now pass on to the second and third points together in Professor Ruata's letter—namely, the attack-rate and death-rate respectively in the vaccinated and unvaccinated in the army. We are told that "the proportion of the attacked in soldiers (vaccinated in the army) with good results and in those with 'no results at all,' is at least the same." It is nearly the same, but this calculation takes no account of vaccination in infancy, and besides, the expression "no results at all" is an incorrect expression. As to the remote anamnesis, we find that in an army of 203,000 strength the average number of the class never vaccinated nor "variolated" is only 56, and yet this small class furnished 26 cases with 5 deaths during 1882-97, that is to say, an attack-rate of 290 and a death-rate of 55.8 per 10,000 strength. In contrast to this, the non-vaccinated in the army who were vaccinated or "variolated" in childhood furnished corresponding rates of 42 and 3 respectively. Thus previous vaccination makes an enormous difference. Now, as to the expression "no results." An editorial footnote in Dr. Livi's letter[3] explains that in the Italian army all cases of imperfect pustule after vaccination are put in the same category as those of no results at all under the head "*negativo*." In Dr. Ruata's table the term "bad results" is used, but in the text of his letter the term "no results at all."

The next point in the Professor's letter is an attempted contrast between small-pox in the army and small-pox in the civil population of the same age-period, 20 to 22 years, an here Dr. Ruata appears to defy all usual methods of statistical procedure. He takes the three years 1887-88-89, and especially the year 1888, for the civilian statistics, and flies off for a contrast to the year 1871 for the army, and then jumps to some monstrous conclusion about England—namely, that if 18 millions of vaccinations were yearly performed here, we should have 6,000 small-pox deaths yearly. This is arrant nonsense, unless the Professor thinks that vaccination causes or predisposes to small-pox itself, because with the vaccination which we have already the average small-pox mortality per million yearly is something under 20 for the ten years 1886-95. How more vaccination could change this 20 into 6,000 the Professor does not explain.

The last objection in Professor Ruata's letter is the comparison of the small-pox mortality of men with that of women before and after the age of 20. Military service is obligatory on all young men in Italy with few exceptions, and as they are all vaccinated in the army the whole male population after the age of 20 ought to have much less small-pox mortality than the female population above 20. But it actually shows more. Such is the argument, and we have heard it before. The answer is that there is more small-pox in men than in women after the age of 20 because they are more exposed to the contagion, and not because vaccination predisposes to small-pox, as the argument must necessarily imply. For if this greater exposure be denied, and vaccination be at the same time declared indifferent, why should the mortalities differ? Other infectious diseases show the same phenomenon, in particular the statistics of measles in Italy as brought forward from official sources by Dr. Livi. For the five years, 1887-91, there were 888 cases of measles in males and 498 in females at the age of 20 and upwards. Thus the increased proportion in males is still more marked in the case of measles than in small-pox.

Having finished with Professor Ruata's letter, we should like to draw attention to some remarks on varicella in Dr. Livi's pamphlet. Italian army statistics begin with the year 1867, but for some years small-pox, varioloid, and varicella were all included together in one class. From the year 1877 onwards varicella is classed apart, but the recent and remote anamnesis as to vaccination is known as to every case just as if varicella were allied to variola. This relationship is denied by most pathologists, and Dr. Livi does not directly assert it, but he observes that there is a diminution of varicella *pari passu* or very nearly so with the diminution of small-pox according to the increase in vaccination. Dr. Livi's words are as follows: "He who has never been vaccinated is infinitely more disposed to it (varicella) than a vaccinated person, and the intermediate categories between these two extremes show among themselves the same gradation in receptivity towards varicella as in that towards small-pox."

With regard to an assumed decline in mortality from infectious disease generally, the table of the absolute deaths from small-pox, measles, and scarlatina respectively during the years 1875-1895 shows that while small-pox has declined remarkably, measles and scarlatina have each of them increased, especially the latter. This table is taken from the *Statistique Médicale de l'Armée pendant l'Année 1895* (Paris: Imprim. Nation. 1897.) Dr. Livi's own statistics amply prove his two statements: First, that small-pox attacks the non-vaccinated far more than the vaccinated; secondly, that when attacked the non-vaccinated are in far greater danger of death than the vaccinated.

[3] British Medical Journal, April 29th, p. 1017.

THE PLAGUE.

Prevalence of the Disease.

Portugal.

Oporto.—Since the commencement of the outbreak of plague in Oporto 75 cases and 30 deaths have occurred. Unfortunately, since a fall in temperature set in the number of cases seems to have increased. Three fresh cases occurred on September 18th, 1 on September 21st, 4 on September 23rd, 1 on September 25th, and 4 on the 26th, making 13 fresh cases of plague during the week. The lock-out of hands from the factories was withdrawn on September 21st, and the despatch of goods from Oporto after subjection to disinfection will be resumed. Whilst proceeding to a *post-mortem* examination on September 19th the doctors in their carriages were stoned and two Portuguese doctors were slightly injured. No other cases of plague are reported from any other part of the Peninsula.

Yersin's Serum.—The French mission to Oporto for the purpose of testing the effects of Yersin's serum prepared in the Pasteur Institute, Paris, is favourably reported upon. No death occurred amongst the plague patients operated upon. We are glad to hear that Yersin's curative serum, which up to the present has been rather discredited, is likely to prove useful.

Egypt.

Alexandria.—We regret to have to record the fact that 2 fresh cases of plague occurred at Alexandria on September 23rd. There had been no death or new case of plague since September 2nd, and after three weeks the sanitary authorities, in accordance with the recommendations of the Vienna Conference, were justified in removing or modifying the Quarantine Board regulations in force. The medical inspection of passengers embarking is being resumed, and also the accommodation on bills of health of the existence of plague. The care taken, and the magnitude of the work done in Alexandria in connection with the outbreak of plague may be best gathered from the fact no fewer than 800 men have been employed by the sanitary department during the prevalence of the disease. Under the capable management of Pinching Bey every sanitary measure has been thoroughly and wisely executed, and in no town in which plague has occurred recently has a more efficient system of dealing with an outbreak of plague been witnessed.

India.

Bombay.—In the city of Bombay 89 deaths from plague occurred during the week, September 19th. Throughout the Bombay Presidency the numbers show little change.

Poona.—The last news from Poona was to the effect that a sudden drop in the number of plague cases had occurred, and, from being at the rate of over 100 cases a day, the number fell to *nil* within a week. This week the report is that the condition of affairs in Poona and district has much improved, but on the other hand plague is stated to be increasing amongst Europeans. This is but a repetition of the history of plague in every town; during the first outbreak it is quite exceptional for plague to attack Europeans, but during a recurrence Europeans contract plague in increased numbers, although in no Asiatic city have they suffered severely.

Calcutta.—Forty-four deaths from plague occurred in Calcutta during the week ending September 19th. Calcutta affords perhaps the best example of the occurrence of plague in a chronic as contrasted with epidemic form. There has been no scaring epidemic of plague in Calcutta, but for well-nigh eighteen months deaths from plague have persistently occurred.

Hong Kong.

Sixteen cases of plague and 16 deaths from the disease occurred in Hong Kong during the week ending September 25th.

Mauritius.

For the week ending September 21st, 71 cases of plague and 38 deaths from the disease are reported from Mauritius.

Portuguese East Africa.

According to a telegram from Lourenço Marques, dated September 22nd, 12 cases, believed to be plague, have occurred at Magude. Two of the cases have proved fatal. The village of Pombacas has been isolated, and infectious dwellings burned.

Russia.

Astrakhan.—Prince Alexander of Oldenburg, President of the Plague Commission, has recommended the municipal authorities to establish night camps and huts capable of accommodating 1,000 persons in view of the outbreak of plague.

Turkey.

The whole of the Syrian coast has been placed under quarantine regulations on account of reported plague in several of the seaports.

Paraguay.

Asuncion.—The sanitary authorities in Monte Video, Uruguay, have re-

ceived a report from the special commissioners sent to Paraguay to investigate the reported outbreak of plague in Asuncion, to the effect that "the symptoms displayed in the cases in question confirm beyond all doubt the suspicions entertained as to the character of the disease." We presume that, in the belief of the commissioners, plague does exist at Asuncion. As this is the first time plague has ever visited America, and as the isolated spot in which it has developed is some 600 miles from the sea coast, we must still hesitate to accept the existence of plague there as being conclusively proved.

PRECAUTIONS AT FALMOUTH.

Falmouth being usually the first port of call for vessels from the Portuguese coast, special precautions are being taken to inspect the passengers, goods, etc., as they arrive. Dr. Buchanan, of the Local Government Board, has been engaged for some time inspecting the sanitary measures in force at the port.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at 429, Strand (corner of Agar Street), London, on Wednesday, the 11th day of October next, at 2 o'clock in the afternoon.

September, 1899. FRANCIS FOWKE, *General Secretary.*

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The autumn general meeting of this Branch will be held in the Royal Hotel, Stirling, on Wednesday, October 11th, at 3 P.M. Dr. Byrom Bramwell will be present and read a paper. The annual dinner will take place in the hotel at 4.30 P.M. All members of the Association resident in the Branch district are cordially invited to the meeting and dinner.—J. E. MOORHOUSE, Honorary Secretary, 1, Glebe Avenue, Stirling.

DORSET AND WEST HANTS BRANCH.—The next meeting of this Branch will be held at Sherborne on Wednesday October 4th. Dr. Whittingdale, Grosvenor Lodge, and Mr. Williams, The Cedars, will be pleased to see any members or friends at their residences to luncheon before the meeting. The business meeting will be held at the Yeatman Hospital at 2.30 P.M. Agenda: Election of new members of the Branch. Election of officers for 1900. Place of the May meeting. Dr. Lush will move: "That a donation of ten guineas be granted to the British Medical Benevolent Fund." Adjourned consideration of the communication from the Honorary Secretary of the Devon and Cornwall Branch of the National Association for the Prevention of Consumption and other forms of Tuberculosis, inviting the combination of the County of Dorset. The President will open a discussion on Some Obscure Phases of Gout. Dr. Whittingdale: Notes on Cases, with exhibition of the patients. Dinner at the Digby Hotel at 5 P.M.; charge, 6s. each, without wine. Members intending to be present are requested to inform Mr Williams, Sherborne, on or before Monday, October 2nd. Messrs. Bayer and Co., Limited, will exhibit some of their pharmaceutical preparations at the hospital.—WILLIAM VAWDREY LUSH, M.D., Weymouth, and C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

BORDER COUNTIES BRANCH: COUNTIES OF ROXBURGH, BERWICK, SELKIRK, AND PEEBLES DISTRICT.—This District will meet in the Station Hotel, Newtown, St. Boswells, on Friday, October 6th, at 3.30 P.M. The Chairman, Dr. Blair, of Jedburgh, will make some remarks introductory to his second year of office. Dr. Menzies, of Galashiels, will, as arranged, open a discussion on the Etiology, Diagnosis, and Treatment of Typhoid Fever. Dr. W. L. Muir, Glasgow, will speak on behalf of the Scottish Poor-law Officers' Association, and bring the grievances of the Poor-law Medical Officers before the members. Messrs. Parke, Davis and Co. will exhibit some new specimens of pharmaceutical preparations. Members who have cases to show, and all intending to be present, are requested to communicate with the Honorary Secretary, Dr. W. HALL CALVERT, The Laurels, Melrose.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the East Sussex Hospital, Hastings, on Thursday, October 5th, at 5 P.M.; Dr. Allfrey in the chair. The following communications have been promised: Dr. Allfrey: On Diphtheria and Membranous Croup. Mr. W. G. Earle: On some Fresh Details in the Disposition of the Deep Cervical Fascia. Dr. Batterham: (1) Intussusception in an Infant: Laparotomy: Recovery; (2) A Case of Appendicitis: Concretion and Tumour found in Appendix. Dinner at the Grand Hotel at 7 P.M.; charge 5s., exclusive of wine.—J. W. BATTERHAM, M.B., Honorary District Secretary, Grand Parade, St. Leonards.

SOUTH-EASTERN BRANCH: NORTH KENT DISTRICT.—The October meeting of this District will be held in the Bell Hotel, Bromley, on Thursday, October 5th, at 3.45 P.M., Dr. Ilott in the chair. Dinner at 6.45 P.M.; 7s., exclusive of wines. Members who intend dining are requested to inform the Honorary Secretary, by postcard, not later than Tuesday, October 3rd. The following papers have been promised: Summer Diarrhœa and its Treatment, by Dr. G. Newton Pitt (Guy's Hospital), and the Conservative Treatment of Pelvic Inflammation in Women, by Alban G. Doran, F.R.C.S. (Samaritan Hospital). A demonstration of surgical instruments and drugs will be given before and after the meeting. Members wishing to show cases of interest are requested to communicate with the Honorary Secretary, A. TENNYSON SMITH, M.D., The Birches, Orpington, Kent.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 12th, at 4 P.M., J. G. Ogle, M.D., of Reigate, in the chair. Dinner at 6 P.M.; charge, 7s., exclusive of wine. Agenda: 1. Minutes of Croydon meeting. 2. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., have been promised: Dr. F. R. Walters: The Modern Treatment of Phthisis. Mr. W. Bruce Clarke: Exploration of the Kidney and Ureter as a Conservative Measure. Dr. W. S. A. Griffith: The Value of the Douche in Gynæcology and after Delivery. Messrs. Down Bros. will exhibit Surgical Instruments, etc. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements and promote the success of the meeting.—HENRY J. PRANGLEY, Tudor House, Anerley, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The autumnal meeting of this Branch will be held at Leighton Buzzard on Thursday, October 12th. Gentlemen desirous of bringing forward any communications, showing specimens, etc., at the meeting, and any others wishing to become members of the Branch, are requested to communicate without delay with the undersigned. The following papers, etc., have been promised: Dr. F. B. W. Phillips: Two supposed cases of Erythromelalgia. Mr. W. Gifford Nash will exhibit a series of Gall Stones. Dr. Buszard: A Paper. Mr. Johnstone D. J. Harris (Linslade) and Mr. E. H. Wagstaff (Leighton Buzzard) will be proposed as new members of the Association and Branch.—CHARLES J. EVANS, Northampton, Hon. Secretary.

SHROPSHIRE AND MID-WALES BRANCH.—The annual general meeting will be held at the Salop Infirmary on Tuesday, October 31st at 3 P.M. Members who wish to bring forward any business, to read papers, or show cases or specimens, or to propose any new members are requested to communicate with the Honorary Secretary not later than Friday, October 20th —HAROLD H. B. MACLEOD, Honorary Secretary, Clive House, Shrewsbury.

CORRESPONDENCE.

OUTFIT FOR SOUTH AFRICA.

SIR,—At the suggestion of several officers of the R.A.M.C., lately ordered to South Africa, I beg to offer the following advice and suggestions as regards outfit, kit, etc., for service in that country:

The first point to remember is that the seasons are exactly the reverse of ours and that summer is now commencing. The next point is to make it understood that the climates of the Cape Colony and Natal are very different. In the former the weather during summer is dry and hot, in fact, somewhat like the North-West Provinces of India in March, whereas in Natal the wet season is during the hot months, and the air is warm and very damp.

As regards outfit, the less taken the better. A very light cork mattress and portable bed, with a waterproof ground sheet, and blankets should be taken. A good air pillow with a cover made of

soft Turkish towelling is also useful, all to be packed in a valise. A few enamelled iron plates, cup and saucer, and other odds and ends that can be packed up in the bedding valise will be useful. A canteen is cumbrous and hard to carry. A small "Etna" for making tea or heating soup will be useful.

As regards clothes let the outfit be as limited as possible: 2 cotton khaki coats, 1 woollen khaki coat, 1 pair cotton khaki trousers, 1 pair woollen khaki trousers, and 1 pair pantaloons of thin Bedford cord, double-seated and strapped with leather inside the knees, 1 pair brown "Elcho" boots, 1 pair of brown shooting boots with spare soles and heels for each, and a pair of canvas shoes; underclothing of light flannel, with a few very light cotton shirts and short drawers. For head dress the regulation helmet must be taken, but a good brown felt broad-brimmed soft hat, with a khaki pugree, should also be carried; this can be folded flat and placed in the valise. A khaki service cap will also be required. For saddlery, a good hunting saddle and bridle, the former with small tree, a pair of wallets, and lots of D's to which to hang havresacks, etc. A small supply of horse clothing should be taken. For arms, of course, the regulation sword with "Sam Browne" belt, and a "Mauser pistol" being far more serviceable than a revolver, as it can be used either as pistol or sporting carbine.

A small supply of compressed soups and a few compressed drugs will be found useful. The smallest amount of "mufti" clothes, and no cloth uniform; the latter could be sent out later if wanted.

I would also strongly advise all officers going out to leave their families behind till matters are settled. Hotels will be found crowded, and other accommodation almost impossible to procure.

I have written this very hurriedly, so may have omitted various points, but I shall be happy to advise any officers of the R.A.M.C. further, either through your columns or privately.—I am, etc.,

J. B. Hamilton,
Surgeon-General (retired pay), late P.M.O., South Africa.
Junior United Service Club, London, S.W., Sept. 27th.

ILLEGAL CERTIFICATES.

Sir,—Being away on my holiday, I did not see until too late for immediate reply the further letter of Mr. Jackson and his friends. The attack they made upon me in their penultimate letter was that in my attitude on the midwifery question at the Stratford meeting I had violated my election pledges. They omitted to tell your readers that I took the precaution of reading my election pledges on the subject to that very meeting, and further that I proved in their presence that my action in regard to the matter had remained unaltered from the time I had taken the subject up long before my election to the General Medical Council.

Having again in my last letter reminded my critics of these facts, I certainly expected that some expressions of regret for having so seriously misrepresented my position would have appeared in their last communication. I can only suppose that just as they forgot to mention that I read my election pledges to them at Stratford, so they have accidentally forgotten the usual procedures of courtesy, though I note that they begin by oddly saying they "welcome" my letter. They do, however, now admit the unquestionable fact that just before my election in September, 1897, I circulated to every member of the profession my views in full on the midwifery question.

Instead of showing, as they were in honour bound to do, that I have in any way or at any time acted contrarily to that document, they now endeavour to ride off on a different route, and assert wholly unwarrantably that my general approval of one of a brief set of questions addressed to me by Mr. Jackson a few days after he had received my election pledges bound me to the novel policy of "blank negatives" which Mr. Jackson now adopts.

I will deal with this side issue while waiting for Mr. Jackson and his friends to refresh their memories by rereading my election pledges, and for them to candidly and frankly acknowledge to your readers that my present position is precisely what I stated in 1897 in those same election pledges. It is the fact as stated twice over by Dr. Tomlin in the British Medical Journal of September 16th, that Mr. Jackson sent me a brief list of suggested reforms which we are all agreed are advisable, as I told him in my reply of October 4th, 1897. Let me, however, remind Dr. Tomlin, who was present at the Stratford meeting, and actually led the attack on me, that he did not explain, as he suggests in the British Medical Journal of September 16th, the "cause" of the Stratford meeting to be my reply to Mr. Jackson two years before. On the contrary, Dr. Tomlin attacked me at Stratford for supporting some Bill which he did not specify. On my challenging him as to which among the numerous Bills on the subject he was referring to I obtained no satisfactory answer. On my suggesting that he meant the Bill of the British Medical Association, he acquiesced.

If he will kindly refresh his memory by the aid of your report of that meeting, he will discover his error in thinking and asserting that Mr. Jackson's letter was the foundation of his attack upon me. The only hint of violation of election pledges was first made by him and his friends in their penultimate letter a month ago.

Mr. Jackson's question to me in 1897 ran as follows:

"Whilst opposing the registration of midwives will you support

"6. The insertion of a provision in any Act of Parliament for the training or registration of nurses that whereas such nurses have no medical training, their presence in no way relieves those who may be concerned of any responsibility to provide medical attendance, and that by undertaking or pretending to undertake any medical care of any case, or to render medical attendance on any case, any such nurse renders himself or herself responsible in the first degree for any injurious consequences of such interference, or of any delay thereby occasioned, besides any disciplinary consequences for misconduct as a nurse.

"7. The insertion of a provision into any such Act that whereas the successful treatment of patients and their efficient nursing require the teaching, training, and control of nurses by medical men, any Council or other body or bodies to be created for the purpose of regulating such teaching, training, and control consist of registered medical practitioners only, and be brought under the authority of the General Medical Council.?"

To this I replied that I was quite willing to support the introduction in any Bill (proposed by Mr. Jackson or anybody else) of provision to secure the pre-eminence of medical practitioners over nurses, and I am still ready to fulfil that and the second provision respecting the training of such nurses through the General Medical Council. Nay, more, while Mr. Jackson has done nothing to push forward the adoption of his own proposals, I have fought for them in the Association and in the Council.

To assert, therefore, that I have not acted up to my general acquiescence in Mr. Jackson's propositions, is like the other assertions of my critics—the outcome of very treacherous memories combined with a serious lack of precise knowledge of the facts.

But Mr. Jackson and his friends having chosen to raise this new side issue in order to press the adoption of their new cry of "no legislation at all," and their new policy of "blank negatives," must now answer for their own change of front.

Mr. Jackson's question begins by saying: "Whilst opposing the registration of midwives," will you support certain alterations in an Act of Parliament for nurses? What does this mean? It means, first, to indirectly assume that I opposed the Bill then before the House of Commons for the registration of midwives. I certainly did, and do still, and did in my election pledges which Mr. Jackson had before him while writing his questions, so that he knew precisely what my position was. But what means the reference to an Act of Parliament for nurses? This refers really to a Bill which was actually put forward by Dr. Rentoul and the Association of Incorporated Practitioners for the registration of all nurses, midwifery or otherwise.

Mr. Jackson has forgotten, I think, when he now boldly and incorrectly charges me with having altered my views on this subject, and when he now says there must be no legislation at all, that he and his Association, of which he was once President, stood committed to perhaps the most cumbrous and futile proposals for a Registration of Midwives Bill that were

ever drafted. That Mr. Jackson has perhaps forgotten and certainly changed his policy of two or three years ago does not qualify him for making grave charges of inconsistency against myself, whose opinions have never altered at all.

I observe that the draughtsman of Mr. Jackson's last letter asks when and how I was requested to sign the memorials which were the origin of this correspondence. I have much pleasure in answering this or any other question of major or minor importance. The memorial was brought to my house by Mr. R. B. Anderson for my signature, and after I had signed it he called and took it away. It may perhaps be of assistance to his memory if I remind him that about the same time he visited a colleague of mine for the same purpose.

I further note that my critics who charge me with breaking "election pledges" and with "insincerity" say in their last paragraph that they are not by their letters "attacking" me. Doubtless this is meant sincerely, and I can only suppose that either they have forgotten all that they have said or that this is another triumph of their secretary's draughtsmanship. Personally I feel inclined to recommend to their captain, Mr. Jackson, that he should change his bowler.—I am, etc.,

Rustington, Sept. 24th. VICTOR HORSLEY.

MEDICAL ORGANISATION.

SIR,—I am surprised to find my friend Dr. Brassey Brierley throwing cold water on a scheme which seems to many practitioners likely to meet the wants of the present day. I am a warm admirer of the way in which the Lancashire and Cheshire Branch conduct their voluminous business, but at the same time I humbly submit that it is quite impossible for a Branch with a thousand members to deal in a practical manner with the grievances of the profession. As to Dr. Brierley's recommendation to attend the annual meeting of the Association, I would merely make this remark, that until the Association determines to bring about some drastic reforms in its way of arranging the business at such meetings it is not probable that his recommendation will have much weight with the members generally. As Dr. Brierley is a member of the Council I would recommend him to use his influence in bringing about a practical scheme for the better government of the Association. When he has succeeded in establishing an executive committee of the Council; and when he has succeeded in abolishing the life appointments of non-representative members of the Council, he will be in a better position to offer advice to gentlemen who are doing their best to promote the better organisation of the profession.—I am, etc.,

Cardiff, Sept. 23rd. T. GARRETT HORDER.

SIR,—The circular issued by Dr. Crawshaw comes at a very opportune moment. The medico-political platform is a very good one and embraces subjects which are burning questions for many of us in the North of England. We are looking forward to a conference shortly to be held in the North, when topics of great importance to the profession will be discussed. I hope that in Manchester a similar conference may be held at an early date.

As I have said before, each county should have its medical union for defensive and offensive purposes (by defensive I mean the protection of doctors; by offensive I mean asserting proper rights and rewards, and putting down the unqualified practice of medicine). The building up of a proper conference must begin from below and not from the top. When the county unions are formed then they may be invited to send their delegate to a named conference.

If the British Medical Association is as rich as Dr. Brierley asserts perhaps he could persuade the Council of the Association to make a grant of £10,000 towards the furtherance of the above organisations. The Association would not lose, but considerably gain by so doing.—I am, etc.,

Durham, Sept. 26th. EDWARD JEPSON,
President County of Durham Medical Union.

THE INFECTIOUS DISEASE (NOTIFICATION) ACT AND ITS SHORTCOMINGS.

SIR,—Since the passing of the Infectious Disease (Notification) Act more than one difficulty has arisen as to the proper construction of some of its clauses. A point of common contention is whether, when more than one practitioner has been called to a case notifiable under the Act, each is required to notify to the sanitary authority; and whether in event of more than one so notifying, the authority is bound to pay every practitioner who so notifies. There can be little doubt that the better interpretation of the Act is that the authority is bound to pay every practitioner who notifies a case of infectious disease notifiable under the Act, but there is another point which up to the present has not received much attention, namely, as to the legal obligation of a practitioner, who has been called to a person whom he finds dead on arrival, to notify, where from the history of the case it is clear that the cause of death was one of the notifiable diseases. Such a case has occurred to my knowledge, and the practitioner there notified to the sanitary authority, and at the same time pointed out the difficulty to the medical officer of health and to the clerk to the authority. It was decided in this case to pay the usual fee, but that does not settle the legal point. It is clearly of great importance for the protection of the public that such cases should be notified, but strictly speaking the words of Section III:

> Every practitioner attending on or called in to visit the patient shall forthwith, on becoming aware that the patient is suffering from infectious disease to which this Act applies, send to the medical officer of health a certificate, etc.

can scarcely be said to apply to a person found dead, whom the practitioner has never seen alive. It is not even competent for him to certify as to the cause of death. In such a case he can only express an opinion before a coroner's jury, and it is their verdict, endorsed by the coroner's certificate, that constitutes the only legal notification as to the cause of death. Some time, however, must elapse before this can be brought to the notice of the sanitary authority, and it is evident that there is the utmost necessity for an early notification. Although the body is usually removed at once to the public mortuary to await the inquest, as the rapidity of the death presupposes virulence of the disease, a prompt disinfection of the premises is urgently required. It does not seem then, as the Act now stands, that a practitioner is under any legal obligation to notify such a case; neither is it clear that a sanitary authority is empowered to pay for such notifications. This is a blot that ought to be remedied when the first opportunity arises of amending the Act. There should be no doubt as to a practitioner's obligations under such circumstances.—I am, etc.,

Hackney Road, N.E., Sept. 24th. MAJOR GREENWOOD.

ALCOHOL AND ITS RELATION TO HEREDITY.

SIR,—I have read Dr. Reid's address with great interest. Without going into the vexed question of heredity and the transmission of acquired characteristics, I would like to point out what appears to me to be a great oversight in Dr. Reid's evolutionary theories, which entirely vitiate any conclusions which might be drawn from his arguments. I am so thoroughly convinced of the truth of evolution, and that it is of almost universal application, that I think it is highly desirable so important a question should be viewed from the evolutionary standpoint, but I object that Dr. Reid's evolution is not sufficiently thorough; he confines himself to physical evolution, and ignores a moral, instinctive, and sentimental one.

I will accept his four propositions: (1) Individuals differ in their liking for alcohol; (2) alcohol is a poison; (3) races, like individuals, differ in their liking for it; (4) those nations who have longest used it crave least for it. This Dr. Reid attributes to the elimination of those who indulge to excess; but he leaves out of consideration the evolution of public opinion. Those nations who have had a long and sad experience of alcohol tend to evolve a public sentiment against its excessive use, just as lower animals evolve an instinctive objection to eating poisonous herbs, the result of experience of their injurious effect.

Thus custom and fashion are quite as potent in preventing the acquired taste, as Dr. Reid's "natural method" is in eliminating the hereditary tendency to excess.

The last twenty years has effected a great change in our people, and yet this is much too short a period for elimination to act. Is it not rather a moral and sentimental evolution preventing acquired taste re-enforcing an hereditary tendency?

Dr. Reid says "temperance reform is antagonistic to Nature." Here I disagree. Temperance reform simply tends

to evolve a sentiment against the custom of drinking; it is chiefly directed against the acquired taste, and leaves Nature by selection to get rid of the hereditary tendency. In fact, temperance would do what Dr. Reid says religion has done among Mohammedans, Buddhists, and I think he must admit the reversion to ancestral type has not proved more powerful with these people than religion and custom.

The same objection can be raised to Dr. Reid's explanation of the fact that natives of India do not indulge to excess in opium as do those nations who have not been so long accustomed to its use. He forgets long experience produces a social and moral evolution against excess, though I admit his "natural method" acts also, but much more slowly.

Dr. Reid points to 5,000 years of temperance failure, though he admits temperance has been successful among Chinese and Mohammedans—a large proportion of the human race. The reason temperance reform has not been so successful in England as one would wish (though the habits of the people in this respect are much improved) appears to me to be due to the faulty methods pursued by the temperance advocates on the one part, and to the great vested interest of the brewer and publican on the other. The temperance preacher tells men they should be heroes. Men are not heroes. They prefer to do as their fellows do. Men are by nature (not drunken but) gregarious; they desire the society of their fellow men; they get it in the public-house, with warmth and light, and the only condition or restriction is, that they drink; thus is the habit acquired. I firmly believe, after years of close observation, that nine out of ten men would prefer coffee to alcohol if it was procurable at the same price and quality as beer is. The publican through his licence has a monopoly; let us compel him to furnish good coffee and drinks at the same price as beer, and of the best quality. In this way you will do more for temperance than by sermons and meetings, which only appeal to sympathisers as a rule.

I wish again to express my obligation to Dr. Reid for his lucid and excellent address, but wish to point out omissions which vitiate conclusions which would naturally be drawn from his arguments.—I am, etc.,

Porlock, Sept. 26th. JOHN HOPE POTTER.

THE PREVENTION OF VENEREAL DISEASE.

SIR,—The contribution of "Malgré Malthus, M.D." on the above subject, in the BRITISH MEDICAL JOURNAL of September 23rd, is most interesting, and his suggestion that "early marriage is the only natural, right, and effectual preventive of syphilis," is still more curious; but has he considered the economic result of his panacea? I think it may at once be seen that in the British army, at all events, such an alternative to syphilis, if it really be one, could not be accepted for a moment; the expense would be enormous, to say nothing of service objections. Conceive a regiment 800 strong, with (say) 800 wives present; and an average of two children in each family—1,600 children! One of the chief points of value in modern armies is the mobility of the units; but a regiment of infantry as above constituted would hardly possess much power of mobility, though all its members might certainly be free from syphilis. Think of the barrack accommodation needed—at least 800 rooms; think of the baggage train; think of the misery of the families on the march! But, above all, think of the economic problem how to find work for the enormous population raised by the early marriages of all our youths and maidens. This is hardly the doctrine we are accustomed to associate with the name of Malthus. Is the suggestion a stupendous joke, or is it meant to be a *bonâ-fide* contribution to a most vexed question?—I am, etc.,

September 27th. E. F.

DICHOTOMY IN THE UNITED STATES.

SIR,—My attention has just been called to an editorial note in your issue of July 1st, 1899, in which I am accused of having "a regular custom of giving one-third of the fee to practitioners who send patients." Feeling that my many friends who are readers of the JOURNAL may be led to believe me drifting towards unprofessional conduct if the note goes unchallenged, I beg to call your attention to the fact the statement is a garbled extract from an address made by myself at a late meeting of the St. Louis Academy of Medical and Surgical Sciences.

At the beginning of my address I stated as emphatically as possible my disapproval of the "commission" method of securing business, saying:

> To the broad question, Should commissions be paid for business sent to the specialist? it seems there can be but one answer: An emphatic No. If universally accepted and practised, the logical course of events under the plan, so far as concerns the physician himself, would be: That very soon the least competent operators would offer the best "commissions," and have the highest death-rate, thus hurting the family doctor at last far more than he could possibly gain, not to mention the injustice to the patient; better specialists would have to "compete" or starve; and the ultimate result would be deplorable from every standpoint.

Does that look as if I am in favour of a straight "commission business" between general practitioner and specialist? Further than this, I said:

> If a patient is affected by an ailment beyond the skill of the average practitioner, it is nothing but right that he should be sent to the specialist, with a letter explaining previous condition and treatment, ability to pay, etc.; and that the specialist shall do the best he can for him, accept the fee, and thank the doctor, returning the patient to his usual family attendant at the earliest possible moment; not taking the general practice of the man's family himself (as has frequently been done in this and other cities by "specialists"), nor turning it to some friend. This is the ideal relation between specialist and doctor, where the specialist for the time assumes sole charge and the whole responsibility. There should be no "commission" paid in such a case, no "division of the fee" mentioned. Nor should there be when the specialist is called in "consultation." Then he goes to the patient with the doctor, makes his examination, gives his opinion and advice to the attendant, receives his honorarium, and leaves the case to the family doctor. Here also it would be the height of absurdity to offer or to ask a division of the consultant's fee. Only dishonest, disreputable men would think of such a thing. So on general principles it may be at once said, and should be universally accepted, that for "referring a case" and for "consultations" it is not ethical nor honest to accept or offer a "commission."

Certainly it seems to me condemnation of the "commission evil" could scarcely be made more positive; yet in the face of all this I am accused of offering a commission of one-third the fees to all practitioners sending patients to me.

Why am I so accused? Probably because my critic did not take the pains to read my entire remarks, jumping to the conclusion that I belong to the commission sharks simply because I point out the injustice often done the general practitioner by the specialist who fails to inquire into the circumstances under which the patient is sent. I maintain that a division of the fee is not only proper, it ofttimes is imperative, if an injustice is not to be done the family doctor! The consultant in any particular case must determine if circumstances are such as to make such division a matter of necessity; if he finds, as is often the case, that the patient has paid him the sum total of available money for his operation, and has nothing left with which to pay his medical attendant for subsequent treatment, is it wrong for the surgeon to give the attending physician one-third or one-half of the sum received? Possibly such a division of the fee may not be "according to the code of ethics," but I claim it is right.

In illustration of this point I cite in my address the following incident:

> I have known a most kind, skilful, humane physician, poor as the proverbial "Job's turkey," who canvassed the county in which he lives in order to secure by subscription the sum of 125dols. to pay the expenses of an operation for ovarian tumour, the poor woman herself being able to raise only enough money to purchase her railroad ticket, with 1.75dols. for "incidentals." This worthy doctor borrowed money for his own ticket to and from the city, accompanied the patient to the hospital, paid 25dols. for her three weeks' care there; boarded at a "15-cent restaurant" for three days, until the patient was out of danger; and then paid the operator the fee previously agreed upon, 100dols. As he did so he briefly (and all too modestly) explained the situation to the surgeon. Did the latter "strain the code of ethics" and divide the fee? No, he invited the doctor to have a cigar.

If "division of the fee" under such circumstances would have been a violation of either the spirit or letter of the code of ethics, the quicker the medical profession changes its conception of ethics the better it will be for mankind.

Such a condition of poverty, however, is not essential to create a situation such that a less-pronounced injustice is done the medical attendant. Take a case of appendicitis, for example. If a surgeon is called to a country town 300 miles away to operate for appendicitis his time and expenses amount, we will say, to 150dols., counting time-value at the rate of 100dols. a day. The people are able and willing to pay this, *plus* 200dols. for the operation, a total of 350dols., of which 300dols. represents the surgeon's profit. The attending physician assists in the operation, and attends the case afterwards, making probably 20 visits at

1.50dols. or 2dols. a visit—possibly 40dols. all told; if he charge more than 25dols. for his assistance at the operation he will for ever lose the patronage of the family, as it is generally presumed that the fee paid the operator ought to cover all expense, save after-treatment. The attending doctor receives, then, at most (if the case does well) 65dols. for his entire services in the case, covering two full weeks of care, worry, and anxiety. He has shared all of the responsibility equally with the operator; indeed, he has more than his share, for if the patient die he gets the blame instead of the city operator. Is it fair, then, that the surgeon receive 300dols. for his work, and the doctor but 65dols. for his? If the average individual were sufficiently liberal, sufficiently just, he would be glad to pay the attending doctor more for his services than he does: but as men are now constituted he will not; and I therefore hold that the surgeon does exactly right who presents the doctor with 100dols., one-third of his fee. This may not be "ethical," but it is just.

In conclusion, I wish to mention another example: A patient of a country doctor has—we will say—a cancerous growth. He consults his regular medical attendant many times about an operation—spending hour after hour in the office talking of the case before deciding to "have something done." Does he pay the doctor for his time and advice? No; people in the country pay for medicine, not words; most of them would be insulted if the physician charged for mere advice. So week after week the doctor works with the patient until he finally consents to surgical treatment. Then, though he may be fully as competent to operate as is the city surgeon, he accompanies the patient to the hospital—seeing that he does not fall into the hands of a surgeon other than the one deemed most skilful—and assumes his share of the responsibility as to results; after sacrificing the fee he himself might have receipt for doing the work at home. And what does he get for his advice, trouble, and sacrifice—all that he may secure the best possible results for his patient? Probably his expenses and 10dols. to 25dols. for loss of time while away. Under such circumstances is he to be adjudged "unethical" for accepting a part of the large fee paid the operator? Or the surgeon criticised for offering it? I say No; decidedly No.

Such situations are not the only ones; many similar ones will readily occur to the thoughtful man, be he specialist or practitioner. From a serious study of these various conditions I am led to the conclusion that it is the duty of every specialist to ascertain whether or not the regular attendant has already been, or will be, paid sufficiently well for services rendered; if not, then to divide the proceeds equitably.

Just so long as the doctor and the specialist are both honest there will be no trouble about the proper division of the fee, and no injustice to the patient.

I may say that since the publication of my address I have received nearly 2,000 letters, all commendatory of my utterances save three—one from a would-be competitor in the field of surgery; two from ophthalmologists.—I am, etc.,

St. Louis, Mo., U.S.A., July 22nd. EMORY LANPHEAR.

THE REGISTRATION OF THE DENTAL AS A MEDICAL STUDENT.

SIR,—With your permission, I should like to draw the attention of dental students to an important regulation of the General Medical Council which will soon come into force.

On and after January 1st, 1900, a dental or medical student will be required before registration to produce a certificate of having passed the first-class College of Preceptors Examination (or its equivalent), whereas until the above named date the second-class certificate will suffice.

It is probable that a large number of men now registered as dental students only with the lesser certificates may subsequently desire to take medical qualifications; and the question is, Will the first-class certificate be demanded by the Council, or will the dental student registered before January 1st, 1900, be exempted?

I have interviewed the Registrar of the General Medical Council, and he has promised to lay the matter before the Educational Committee at an early date, and he says they will probably meet in November.

In order to avoid any difficulty arising, I would advise all dental students registered with second-class certificates, and who do not intend entering a medical school during this year, to take out a course of chemistry from October next at one of the recognised institutions throughout the kingdom, and forthwith to become registered as medical students.

Apart from the consideration of medical registration, a course of chemistry is necessary for the dental licence, and the instruction and examination in this subject are best taken during pupilage.—I am, etc.,

Hanover Square, W., Sept. 22nd. W. A. MAGGS.

CANCER IN THE LOWER ANIMALS.

SIR,—May I add another example to those mentioned by Mr. Roger Williams in the BRITISH MEDICAL JOURNAL of September 23rd? In May, 1897, I received for microscopic examination a piece of tissue from a growth on the prepuce of a pony, which had originally been of warty nature but was then a sloughing mass. It showed the microscopic appearances typical of epithelioma. I was present when the growth was removed by a veterinary surgeon. It was extensive, and had the usual characteristic aspect of an ulcerated epithelioma. The growth recurred in the inguinal glands, and the animal died in less than two years from the operation.

I may add, as in accord with the last sentence of Mr. Roger Williams's letter, that the animal in this case was a "pet," and used by children.—I am, etc.,

Plymouth, Sept. 24th. H. W. WEBBER.

SIR,—In the BRITISH MEDICAL JOURNAL of September 23rd, I noticed a few comments under the above heading by Dr. W. Roger Williams. I feel somewhat at a loss to harmonise the title he gives the article with that of its contents. It is not my desire to belittle the good work done by Professor McFadyean in his researches into this subject; on the contrary, this, as in all other branches pertaining to our profession which attract his attention, has received his admittedly gifted considerations; nor do I wish to reflect upon the merits or demerits of Dr. Williams's article, but should like to offer a correction.

I notice the Doctor cites a case recorded by me in the *Veterinarian*, vol. lxviii, July, 1895, and holds it up as a duly authenticated example of cancer in equines, along with some others. At once I may claim that the case in question was not a cancer, and I cannot do better than quote from my article a description of the tumours as recorded *in toto:* "The growth weighed 9¼ lbs. In circumference it measured 32 inches by 19 inches. In consistence it was quite hard and fibrous. On section the cut surface showed slight convexity, and in appearance was pale yellow. Towards the centre of the tumour were two well-marked cysts containing a yellow mucoid fluid. One of these cysts showed a darker coloured fluid than the other, which when examined microscopically proved to be due to extravasated blood. In this fluid there were found distinct spiculæ of cancellated bone, to all appearance as well as pieces of well-organised cartilage. The cartilage as well as the bone was adherent more or less to the wall of the cyst. So much for the macroscopical appearances. Parts of the gland were prepared for microscopical examinations in the usual way, and from a careful study of sections I concluded he had an adeno-fibroma or scirrhous adenoma to deal with. The acini or spaces were much occluded, and it was only here and there one could see a vacant space. In fact, the sections made one rather suspicious of a carcinomatous origin, had it not been for the fact that there was a well-marked basement membrane limiting the glandular epithelium." Without further comment it will be noticed that my case was not a case of cancer—at least as we interpret the term. And that leads me to another point.

One would understand from Dr. Williams's paper that sarcomas (chondroid and osteoid), mammary enchondromata, and osteomata in bitches, adenomatous tumours and fibro-adenoma were each and all typified carcinomata. So far as my knowledge goes, veterinary surgeons are taught to classify these non-inflammatory new growths as neoplasms, and that there are well-recognised differences to be found in sarcomata, adenomata, and carcinomata, both microscopically and clinically.—I am, etc.,

Bridgwater, Sept. 27th. WM. M. SCOTT, M.R.C.V.S.

THE EYESIGHT OF PILOTS.

Sir,—In the British Medical Journal for August 12th, in your report of the proceedings of the Sections at the last annual meeting, I notice in the Section of Ophthalmology that Deputy-Surgeon-General Cayley is stated to have said that "for the English pilot service no test was enforced, while in the Indian pilot service strict tests were applied." Again, in your detailed report of his paper in the Journal of September 23rd it is again stated: "For our English pilot service no standard of vision is required, and their eyes are not examined; except in a few ports a superficial examination is made. Pilots probably require more perfect sight than any other class of seamen to enable them to carry out their duties safely, and it is hardly credible that in England men can be and are registered and certified as pilots who have defective sight and are perhaps colour-blind."

Now I do not know from where Deputy-Surgeon-General Cayley obtained his information respecting the above portion of the subject of his paper, for, from whatever source derived, it is quite erroneous in respect of all pilots who are registered and certified as pilots by the Honourable Trinity Corporation, and as a statement of this nature made at such an important meeting, and published in the Journal, is likely to mislead a large number of people, I must point out the following facts. For many years the Trinity House authorities have made a special appointment of a medical officer to the Pilotage Committee, whose duties are to examine all candidates for the pilotage service as to their physical fitness, and especially as to their acuteness of vision and colour perception. I have held that appointment for the last four years and normal vision is required and full colour perception before a candidate is passed as a Trinity pilot; he also must be physically fit for the duties.

Recognising fully, and quite agreeing with Deputy-Surgeon-General Cayley that "pilots probably require more perfect sight than any other class of seamen to enable them to carry out their duties safely," a very careful examination is made of the vision of every candidate, and as there are many more candidates than vacancies, none but those with practically normal vision in both eyes and normal colour perception are accepted. So that as far as Trinity pilots are concerned the remarks made by Deputy-Surgeon-General Cayley do not apply. I might also add that all the officers and men employed by the Trinity Corporation in their lighthouses, light vessels, and steam vessels have to undergo a similar examination.—I am, etc.,

Poplar, Sept. 23rd. James Godding.

ANTITYPHOID INOCULATIONS.

Sir,—I would strongly advise any medical officer who may contemplate giving these inoculations to men proceeding abroad, to obtain from the men's commanding officer a guarantee that the men shall not be warned or taken for any duty for four clear days from the date of inoculation. The amount of discomfort produced by the injection varies considerably in different cases; and unless the men can be assured that they will be let off all duties for the time I have mentioned, I am perfectly certain that many who would otherwise have volunteered for it will not come forward. The same remarks apply to the second injection.—I am, etc.,

Colchester, Sept. 23rd. F. J. W. Porter, Captain R.A.M.C.

THE TABLET SYSTEM.

Sir,—A short time ago I was spending the evening with a neighbour worth about £50,000. His daughter had been a good patient with her headaches, neuralgias, etc. On the evening in question she asked me to send, when I got home, some of her usual headache mixture. A young lady friend who was present said, "Oh, don't take medicine; try some of my tablets which Dr. So-and-so prescribes for me." The advice was taken. Since then I have had no further demand for headache mixtures. *Verbum sap.*—I am, etc.,

September 25th. Member B.M.A.

London Hospital Medical College.—The following entrance scholarships have been awarded: Price Scholarship in Science (value, £120), Mr. R. Milne; Price Scholarship in Anatomy and Physiology for Oxford and Cambridge students only (value, £60), Mr. A. W. S. Fisher; Entrance Scholarships (value, £47 10s.) each to Mr. G. A. Soltau and Mr. T. W. Smith.

OBITUARY.

DAVID COLLINGWOOD, M.D., B.S., F.R.C.S.,

Late of Sydney, New South Wales.

We regret to announce the death of Dr. David Collingwood, who was for several years one of the leading members of the profession in Sydney, and indeed in Australia. The announcement must have come as a shock to his many friends both in his native country and in the great colony where his career had been so brilliantly successful till he was forced by ill-health to leave the race to others.

David Collingwood was the son of Mr. William Collingwood, a well-known member of the Royal Society of Painters in Watercolours, and was born at Liverpool on April 7th, 1858. He was educated at the Liverpool College, and matriculated at the University of London in the winter of 1875-76. He began his medical studies in the School of Medicine at University College, Liverpool (then the Royal Infirmary School of Medicine), where he took the Junior and Senior Medals for Anatomy and Physiology. In 1877 he entered University College, London, where he took the silver medal for medicine, graduating as M.B. and B.S.Lond. with first-class honours in 1882, and M.D. in 1883. He had been admitted a Member of the College of Surgeons in 1880 and obtained the Fellowship in May, 1883, being then just at the minimum age for admission. He served as House-Surgeon, House-Physician, and Obstetric Assistant at University College Hospital, and Clinical Assistant at the Victoria Hospital for Sick Children. He was also Assistant to the Professor of Medicine, Senior Demonstrator of Anatomy, and Assistant Teacher of Practical Surgery at University College, London. In 1884 he went out to Sydney to join Dr. Twynam, and while in New South Wales he held the positions of Honorary Physician to the Prince Alfred Hospital, Visiting Medical Officer to the Infant Home, Ashfield, and Honorary Surgeon to the Women and Children's Hospital, Petersham.

Dr. Collingwood had one of the largest practices in Sydney, and his professional activity was prodigious. Eight horses hardly sufficed to enable him to get through his daily round of work. He took his meals hurriedly and irregularly; to use his own expression, he did not feed but "stoked"—and, indeed, he worked his body as if it were an engine made of materials that would not wear out.

Dr. Collingwood had had some threatenings of tuberculosis before he went to the Antipodes. In Australia, however, he became robust and put on flesh to such an extent that at one time he weighed nearly 15 stone. He thought he had quite got rid of his constitutional delicacy. He returned to England in the summer of 1898, and in the following autumn contracted a cold which quickened the slumbering disease into activity. He tried Briska, and was afterwards for some time an inmate of the sanatorium at Hohenhonnef. But he steadily lost ground, and the end came through hæmorrhage on September 23rd at Ringwood. He leaves a widow and two children to mourn his loss.

To those who knew David Collingwood intimately his vigorous personality, his tenacity of purpose, and his kindly disposition made him attractive in life, and will continue to endear him to their memories. His gift of teaching—or rather his power of imparting to others what he himself knew—was remarkable. The "why" or the "wherefore" was what he sought for first, and then he could group facts together in a manner given to few; there are many old students in England and the colonies who would acknowledge he had shed a strong light where before all had been confusion and darkness.

In his work he was indefatigable; no journey was too long, no message too late. He thought it his duty to go, and he went, often at great expense to his constitution, but he positively revelled in work, and there are hundreds—nay, thousands—who this day will acknowledge that his cheery confidence, sound judgment, and kindly sympathy have been the means of carrying them through their darkest hours. He was a type of the sound all-round general practitioner, ready for any emergency, obstetric, surgical or medical. When once he had made up his mind it was very hard to alter his opinion, unless facts were placed before him in a new light which brought conviction to his judicial mind. If he found he was

wrong, he was ever ready freely to acknowledge his error. Having made a friend, he grappled him to his soul with hooks of steel, and shut his eyes to his faults. Genial and hospitable, he ever loved to have his friends about him, and nothing he could do for them was too much. By his patients he was trusted and liked, by his friends he was beloved, and by his family he was held in fondest affection.

Dr. Stanley De Butts, who died somewhat suddenly in Scotland on September 20th at the age of 34, was the third son of the late Major-General De Butts of the Royal Engineers, and received his education at Cheltenham College and St. Mary's Hospital. After qualifying, he held resident appointments at St. Mary's Hospital, the East Suffolk Hospital, and the Chichester Infirmary, and was for some time surgeon to the Union Steamship Company. Having obtained the post of Inspecting Medical Officer to the Army and Navy Stores, he commenced practice in Eaton Terrace. Directing his attention especially to the administration of anæsthetics, he held the post of Anæsthetist to the Grosvenor Hospital for Women, the London Lock, and Royal Ear Hospitals. His skill in this department of work was exceptional. By personal charm he endeared himself to all with whom he came in contact and he leaves an unusually large circle of friends to mourn his loss.

We regret to record the death of Dr. Charles Goodall, who, during a recent visit to London, was selected to represent the Victorian Branch of the British Medical Association. He was a graduate of the Melbourne University, and was one of the founders of the Melbourne Medical Graduates' Society, which takes a prominent position in all medical matters. He was the life at all social gatherings of the profession, and he greatly distinguished himself in the manufacturing of humorous verse descriptive of medical idiosyncrasies. He exhibited great promise in the practice of his profession, and in debate he displayed a marked degree of brilliancy which indicated a complete knowledge of his subject. He died at the early age of 36 years, deeply mourned by all who knew him.

We regret to announce the death of Edgar Hogben, B.A., M.D.Dub., M.R.C.P.Lond., who died on September 4th of the consequences of a bicycle accident. At Trinity College, Dublin, he took five first-class honours in classics, a sizarship, and a classical scholarship on the Foundation. While continuing his studies he maintained himself by discharging the duties of tutor in Latin at the Military Academy, Dublin, and Classical Master in Corrig School, Kingstown. He was besides Secretary to the Dublin University Biological Association, to the *Transactions* of which Society he contributed several papers. Entering on the study of medicine he took the M.B., B.Ch. in 1885, and in the summer of that year he obtained the post of Medical Tutor in Queen's College, Birmingham, which he held till 1888. In 1886 he became one of the Visiting Physicians to Queen's Hospital, Birmingham, which post he held till 1889, when his health broke down from stress of work. After taking an assistantship in Fife, he settled in the village of Strathmiglo, Fife, where he soon won for himself a considerable professional reputation, and took a leading part in everything that concerned the social welfare of the community. Death came to him suddenly and painlessly, and at the earnest request of those for whom he had laboured so earnestly and well, he was buried in the quiet village churchyard, leaving behind him a widow and two sons. Of his original writings the most important were his study of the Pathology of Brass Founder's Ague, published in the *Birmingham Medical Review* of 1887, and the Enlargement of the Liver in Rickets, published in the same journal in 1888, whilst his last work was that upon the Condition of Pauper Lunatics in Private Dwellings in Scotland, published in the British Medical Journal in 1898. A man of wide information, well read in the "humanities" and in general literature, his quiet reserved manner concealed a nature tenderly sympathetic to those in suffering; and in the few years of active practice he made, and has left, a wide circle of friends who mourn the loss of one who, with health and strength, might have made for himself a great name.

At the weekly meeting of the Edinburgh Royal Infirmary on Monday, September 25th, before beginning the business on the billet, the Lord Provost referred to the death of Surgeon-Major-General Lithgow. They met, he said, under the shadow of a great calamity, because Dr. Lithgow had the confidence of every one of the managers. He was liked—he might say loved—by all the staff, and his warm sympathy was never withheld from the suffering patients within those walls. That he did his duty well they all knew, and they had often let it be known how much they appreciated his valuable services to the institution. The Lord Provost moved that they record in their minutes their deep sense of the loss which the institution had sustained by the death of Surgeon-Major-General Lithgow, and that an extract of the minute be sent to his widow and family. The Rev. Rowland Ellis, in seconding the resolution, said it was impossible for them to meet as a Board without giving expression to the feeling of the loss—the heavy loss—the infirmary had sustained by the death of Surgeon-Major-General Lithgow. In him the institution had presiding over its administration a very distinguished officer, one who had in former days seen much service in India, Egypt, and elsewhere, and who brought to bear upon the work to which he had devoted his life no ordinary skill, ability, and earnestness. What they knew of his former career showed how thoroughly he did his work, climbing step by step, by administrative skill, to the highest rung of the ladder of his profession. Nearly seven years ago he was appointed Superintendent of the Royal Infirmary, and they knew how thoroughly he threw himself into the work, and how he brought his powers to bear upon that work to try to make the institution what they all wished it to be, one of the foremost in the land. He had a keen eye for economy. He felt that the funds entrusted to the Board ought not to be needlessly frittered away, but it was economy combined with efficiency. One who knew their departed friend well had said that the outstanding note in his life was that he was thoroughly just in his dealings with all with whom he came in contact, while at the same time he was kind and courteous. That was a very high tribute. For seven years he sat at their Board, quiet, unassuming, unostentatious, always ready to assist with his advice whenever asked. They missed the courteous gentleman, and would always think of him with kindly thoughts, and would always revere his memory.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Balbiani, Professor of Comparative Embryology at the Collége de France, aged 75; Dr. Fernando Gonzalez del Valle, for many years Professor of Surgery in the University of Havana, at a very advanced age; Dr. C. P. Kowalowsky, Professor of Hygiene in the University of Warsaw, aged 45; Professor Borysiekiewicz, Director of the Ophthalmological Clinic of the University of Graz; Ignaz Kraus, Magister Chirurgiæ and one of the oldest practitioners of Bohemia, aged 94; Dr. Libert Defalle, Senior Physician to the Hôpital des Anglais, Brussels, aged 59, and Dr. Mauricet, Secretary of the Morbihan Council of Hygiene and author of numerous contributions to the literature of hygiene and epidemiology, aged 66.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

HIGHER RANKS IN THE MEDICAL SERVICE OF THE ROYAL NAVY.

The following is the text of an Order in Council bearing date August 8th, 1899, relative to the higher ranks of the medical service of the Royal Navy:

Whereas there was this day at the Board a memorial from the Right Honourable the Lords Commissioners of the Admiralty dated 5th day of August, 1899, in the words following, viz.:

Whereas by your Majesty's Order in Council of 1st April, 1881, the numbers of medical officers in your Majesty's navy of the ranks of inspector-general and deputy-inspectors general were fixed as follows:

4 inspectors general
12 deputy-inspectors-general.

And whereas we consider it desirable, in consequence of the increase in your Majesty's navy and the growth of the naval medical establishments, to add to the existing number of inspectors-general and deputy-inspectors-general, from which a selection can be made of suitable officers to fill appointments at the various medical establishments, and also in order to

afford greater facilities of selection, to modify the restrictions contained in Paragraph 2 of the above-mentioned Order in Council:

Now, therefore, we beg to recommend that your Majesty may be graciously pleased by your Order in Council to sanction the numbers of inspectors-general and deputy-inspectors-general being increased to 19, of whom not more than 5 may be inspectors-general, and that the conditions of promotion to the rank of inspector-general shall be as follows, and shall be applicable to present and future deputy-inspectors-general, viz.:

"An inspector-general of hospitals and fleets to be selected from amongst deputy inspectors-general who have in that rank three years full-pay service, and who have not at any time declined foreign service except for reasons which the Lords Commissioners of the Admiralty regard as good and sufficient."

"The Lords Commissioners of your Majesty's Treasury have signified their concurrence in this proposal."

Her Majesty, having taken the said memorial into consideration, was pleased, and with the advice of her Privy Council, to approve of what is therein proposed. And the Right Honourable the Lords Commissioners of the Admiralty are to give the necessary directions herein accordingly.

A. W. FITZROY.

This important Order in Council is a great incentive to zeal in the medical officers of Her Majesty's navy. Seniority attained by "having done nothing to merit supersession," as the Government of India expressed it, in regard to their medical officers, will not now secure access to the higher ranks of the service, but a naval medical officer in the future must have proved himself meritorious and to possess administrative ability to secure such promotion, or must content himself with the retirement of his attained seniority.

The reduction of the qualifying full-pay service for the promotion of a deputy inspector-general to the rank of inspector-general, formerly three years abroad, four years of home and foreign service, two of which must have been abroad, or five years of home service preventing him, in the opinion of the Lords of the Admiralty, from serving abroad, is, in our opinion, wisely altered to three years full-pay service under the conditions specified. Able administrators in the junior rank can thus hope to attain promotion to the rank of inspector-general at an age permitting them to hold their appointments for the customary period of three years, and not for a little over a year, as recently at Haslar.

Administrative and professional ability, and not war services if not associated with such qualifications, will in future be requisite for advancement to the higher ranks of the Naval Medical Service.

The late establishment of 16 medical officers of inspectorial rank has now advanced to 18; the delay in completing their number to 19, as now established, is much commented on, but as yet not explained.

THE RETIREMENT OF FLEET-SURGEON GIPPS.

In explanation of the retirement of Fleet-Surgeon Gipps, to which allusion was made in the BRITISH MEDICAL JOURNAL of September 23rd, we are informed that, in addition to the instruction laid down by the Admiralty Committee on the Training of Medical Officers for the newly-appointed instructor for the course at Haslar, Fleet-Surgeon Gipps was directed, subsequently to his acceptance of that instruction, to act as curator of the museum, to remount the old and mount new specimens, now directed to be sent from abroad. Our readers will probably agree that the task, to be performed efficiently, was beyond the power of one officer.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A CAPTAIN, R.A.M.C., home last trooping season, March, 1899, is willing to exchange out to India (Madras Presidency preferred) this trooping season. Address No. 624, BRITISH MEDICAL JOURNAL, 429, Strand, W.C.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—CHARLES S. WOODWRIGHT, Staff-Surgeon, to the *Britannia*, September 29th; GEORGE WELCH, Staff-Surgeon, to the Admiralty Medical Department, September 25th; EDGAR R. DIMSEY, D.S.O., Staff-Surgeon, to the *Boscawen*, for Sick Quarters, Portland; ALEXANDER G. WILDEY, Staff-Surgeon, to the *Alexandra*, September 25th; PERCY W. BASSETT-SMITH, Staff-Surgeon, to Haslar Hospital, October 1st; EDWARD H. MEADER, Staff-Surgeon, to the *Ganges*, October 1st; BEAUCHAMP F. PARISH, Surgeon, to Malta Hospital, September 25th; GERALD T. S. SICHEL, Surgeon, to Haslar Hospital, to assist in conducting a course of instruction for newly-appointed surgeons, September 25th.

ARMY MEDICAL SERVICE.

SURGEON-GENERAL JAMES M. S. FOGO died at 14, Palace Gardens Terrace, Kensington, on September 20th, aged 77. He was appointed Assistant-Surgeon, March 5th, 1844; Surgeon, April 13th, 1855; Surgeon-Major, March 5th, 1864; Deputy-Surgeon-General, June 19th, 1872; Surgeon-General, August 21st, 1879; and was granted retired pay, May 7th, 1882. He was with the Royal Artillery in the Crimea from the April bombardment of 1855 until the final evacuation, and was in medical charge of the left siege train at the fall of Sebastopol, receiving the medal with clasp and the Turkish medal.

ROYAL ARMY MEDICAL CORPS.

MAJOR A. W. P. INMAN, M.B., is seconded for service as Physician and Surgeon, Royal Hospital, Kilmainham, August 7th.

Captain J. W. JENNINGS, D.S.O., from the Seconded List, is reappointed Captain, *vice* J. A. Murison, resigned, September 5th. Captain Jennings was seconded for service with the Egyptian Army, January 1st, 1897.

THE VOLUNTEERS.

SURGEON-LIEUTENANTS J. R. HARPER, Royal North Devon (Hussars) Yeomanry, and S. McC. BOYD, 2nd Cinque Ports Artillery (Eastern Division, Royal Garrison Artillery), are promoted to be Surgeon-Captains, September 27th.

MILITARY HOSPITAL ASSISTANTS IN INDIA.

THE scheme sanctioned by the Secretary of State for the improvement of these assistants of the Subordinate Indian Medical Service takes effect from April 1st next. The grade of senior hospital assistants is divided into two classes, the first carrying relative rank of "subadar," with a salary of Rs.100; the second the rank of "jemadar," with Rs.80 per mensem. The grade of sub hospital assistants is abolished, and native military pupils will be admitted as third-grade assistants. All three grades will be granted warrants by the Government of India, and receive definite military status. Other advantages as to accommodation, travelling by rail or sea, etc., are given. The scheme provides an initial expenditure of something over 2 lacs of rupees to Government.

NURSING IN ARMY HOSPITALS.

THE *Times of India* devotes a leading article to this subject, but advances nothing new. Through the columns of this journal repeated comments have been made for long past as to existing defects. Both from a humanitarian and a utilitarian point of view there is an urgent need for reform. The *Times of India* considers that 500 n.c.o.'s and men of the R.A.M.C. would be enough for the whole of India. Some ninety station hospitals are maintained by the Government. A large majority of the hospitals have no sisters of the Army Nursing Service attached to them, and even in those that have, the rest of the nursing *personnel* is too ignorant and inefficient to afford them that support and assistance which the onerous nature of their duties so urgently demands.

MEDICAL OFFICERS' REWARDS.

AN important despatch, dated June, 1873, from the Secretary of State for India, ruled that a medical officer may, as an exception to the general rule, receive purses and other such testimonials from communities, but may not receive an address unless the Government under which he serves has previously permitted its presentation. These orders are embodied in Rule 5 of the rules republished with the resolution of May, 1898. The rule mentions pecuniary recognition only, and the point has been raised whether it should also be made to cover cases in which either the donors or the medical officer himself prefer that the presentation shall take some other form than a gift of money. The Governor-General is of opinion that the exception is meant to apply to such cases, and directs that Rule 5 be altered as follows: "Medical officers are not prohibited from receiving pecuniary or other gifts in recognition of their services from a community or a body of persons which may desire to acknowledge these, but the previous sanction of the local Government or the Administration must be obtained by medical officers before receiving any public complimentary address."

THE PHYSICAL FITNESS FOR WAR SERVICE OF YOUNG OFFICERS.

IN the *Army and Navy Gazette* of September 23rd "Fair Play" writes pointing out the urgent necessity of subjecting young officers warned for service to a strict medical examination instead of a cursory one as is, he says, "often the case through mistaken kindness on the part of the medical officers." "Fair Play" argues that young officers are often quite as immature as young soldiers, and asks, Why, then, should not the same care be taken with the former's medical examination as with the latter's? The immature officer who on service knocks up, or is an early victim to disease, is a source of great trouble to the authorities and expense to the country, besides throwing extra work on his brother officers. The subject is one to which attention might at present be fittingly directed.

P.M.O.'S IN INDIA AND THEIR CLERKS.

THE Principal Medical Officer, Punjab Command, recently addressed the Government of India in the military department for an increase in the clerical establishment of his office on account of the increase of work during the last two years. The reply points out that as there has been a comparatively small addition to the number of the troops in the command during the period in question, "it would appear that the absence of a general registry, as well as other causes which might perhaps be controlled, must have contributed" to the enormous growth of work. The request for an increased clerical establishment is accordingly refused, and it is suggested that "efforts be made to reduce correspondence, decentralise work, and improve office processes."

THE R.E. AND R.A.M.C.

A SOMEWHAT futile correspondence has lately taken place in the columns of our contemporary the *Morning Post*, which began in a letter of invidious comparisons between the work, pay, and pension of the two branches of the service. We deprecate such comparisons which, being originally unequal, do not admit of logical contrast. We do not think the Royal Engineers get more pay and pension than their good work and high attainments entitle them to; but even if they were underpaid, what has that to do with the remuneration

of medical officers? The latter have very different duties to perform, and enter the service under entirely different circumstances from the Royal Engineers. But the true test of comparison lies in the supply and demand; if the medical service are overpaid for light duties, why should there be a lack of candidates for commissions? It is becoming yearly more evident that junior medical officers are underpaid for hard conditions of service. At all events a sufficient supply apparently cannot be got for the money. It is otherwise with Royal Engineers, who have candidates, as a correspondent expresses it, "tumbling over each other for commissions."

PENSION FOR ASSISTANT SURGEONS OF THE INDIAN MEDICAL SERVICE.

The scheme for providing for assistant surgeons invalided before the completion of twenty-five years' service now required for pension has been sanctioned by the Secretary of State for India. It grants pensions of their rank to senior assistant surgeons and medical warrant officers who have over fifteen years' service when invalided on account of sickness.

POISONING AT ALDERSHOT.

The medical authorities at the Cambridge Hospital, Aldershot, have received the report from the Government analyst upon the contents of the stomach of one of the soldiers mysteriously poisoned recently. The report attributes the illness to some cheese found in the stomach which contained poisonous matter. There are now more than a score of men in the hospital seriously ill from the effects of food purchased, it is supposed, from hawkers.

STERILISATION OF MILK FOR BRITISH TROOPS IN INDIA.

The question as to the necessity or otherwise of providing British troops in India with milk which has been sterilised or pasteurised having been under consideration, His Excellency the Commander-in-Chief in India has directed that in the case of milk issued from the Government dairies there is no necessity either for sterilisation or pasteurisation. If necessary families can boil it when received from the dairy, and that for the use of the men can also be boiled in barrack kitchens before distribution. In the case of milk from regimental dairies, however, in which the cattle belong to a contractor, and in the case of milk bought from native dairymen, boiling should be insisted upon before the milk is used.

THE I.M.S.

The military authorities have adopted a revised form of commission for officers of the Indian Medical Service appointed as medical officers to volunteer corps in India, and the form of commission hitherto employed will be used only in a case of civilian medical practitioners.

"GROWING POPULARITY."

Cassandra writes: The "growing popularity" of the R.A.M.C. of which you speak in your article on Study Leave as being hindered by the undermanned condition of the service is not discernible in the last examination of candidates. It is not so much the lack of opportunities for good clinical work in the service as the utter want of facilities for the same. Each hospital should have a room provided for such work; even such a routine duty as testing urine has to be done in the surgery or in some passage of the hospital. Not the smallest encouragement is held out to rise above a dull monotonous routine. The pay in India is very inadequate and far inferior to that of any other body of specially trained officers, engineeers, ordnance, or commissariat. It is little wonder candidates are scarce, with long periods of badly-paid service in India, and short periods of uncomfortable service at home. The inducements to enter the service are not good enough. Sir George White said at Netley he had, as Commander-in-Chief in India, recommended almost as many medical officers for the V.C. as all others combined; but he did not add that in only one case had his recommendation been acted upon.

GOVERNMENT "SWEATING" OF THE MEDICAL PROFESSION.

A correspondent writes: The military authorities are now trying to induce members of the medical profession to accept duty with troops at half the "contract rates" specified in the Pay Warrant; that is, they offer payment for one-half of the entire number of persons entitled to medical attendance at the public expense. That sum is 1d. per week per head; in other words, the Government compete with the remuneration offered by the much-condemned "medical clubs." And they actually get medical men to do work at this price.

*** The terms mentioned are no doubt for medical men "doing duty," that is, sharing the duty with a regular medical officer; but this remuneration is so scandalously low that we are surprised that self-respecting medical men should accept it from a public service. The authorities cannot expect really good service for the terms they offer.

MEDICO-LEGAL.

AMBULANCE LECTURES AND MUSEUM SPECIMENS.

Query asks if, when giving a course of ambulance lectures, he is within his legal rights if he takes a dissected specimen from a museum and demonstrates the same to his class.

*** Subject to the approval of the museum authorities, it does not appear that there would be any objection to the course proposed to be adopted. The Acts dealing with the dissection of human bodies do not apply

MEDICAL APPRENTICESHIP.

J. A. asks for information on the following points: (1) What is the law of procedure relating to medical apprenticeship? (2) Is it feasible and right to ask a premium from a gentleman in good circumstances? (3) What should be the amount of such premium, if any?

*** (1) The law as regards medical apprenticeship does not differ from that of ordinary apprenticeship. It would be desirable to have proper articles of apprenticeship prepared defining the rights and duties of the master and pupil. (2) and (3) It would certainly be right to ask that a premium should be paid, the amount of which would vary according to the length of the apprenticeship and whether or not it included board and lodging.

RESTRICTIVE CLAUSE IN DEED OF PARTNERSHIP.

M. B. M. A. asks if it is unreasonable to expect to have a partnership deed signed that does not contain a clause prohibiting the introduced partner from ever practising in opposition to the introducing partner.

*** It appears from the legal decisions on this point that a restriction from practising though unlimited in point of time would be held to be a reasonable stipulation, provided that such restriction was limited as regards locality, that is, that the person entering into the agreement should not practise at or within a certain distance of the district where the introducing partner was at the time of the agreement carrying on practice.

RESPONSIBILITY OF PRACTITIONERS RECOMMENDING NURSES.

G. D. W. states that he recently attended a midwifery case and recommended a nurse who had previously borne a good character, but since then he has been informed by his patient that she was repeatedly under the influence of drink while nursing the case. The patient suffered from an abscess of the breast and attributes this to the nurse's neglect, and on account of our correspondent's recommendation the patient has refused to pay his bill. G. D. W. now asks if he can in any way be held responsible for the conduct of the nurse?

*** As our correspondent appears to have done nothing more than merely recommend the nurse, he cannot be held responsible for any neglect on her part. It seems curious that the patient should not have complained of the nurse at the time.

FEES PAYABLE TO MEDICAL WITNESSES AT THE CORONER'S COURT.

H. W. B., medical officer of a union workhouse, raises the question as to his legal right to obtain a fee for giving evidence and making a *post-mortem* examination in a case in which an inquest was held, the deceased person having died in that portion of the workhouse designated the hospital. Our correspondent contends that as such an institution is not supported "by endowments or voluntary subscriptions," it does not come within the meaning of Section xxii of the Coroners Act, 1887.

*** We would refer our correspondent to the British Medical Journal of September 16th, p. 741, where, under the title Medical Men as Witnesses, we have quoted in full the section in the Coroners Act bearing upon the present question. He will there see that the words referred to are evidently meant to apply to other kinds of medical institutions and places for the reception of the sick over and above all those rate-supported establishments, like lunatic asylums, workhouse infirmaries, and hospitals. In a case, similar to that to which our correspondent refers, taken before the county court judge, it was decided that the medical officer was not entitled to a fee, the patient having died in the infirmary in connection with the workhouse; that it was a place set apart for the reception of the sick; and that it was a public infirmary within the meaning of the Act. The workhouse proper is not in itself a medical institution, and the provisions of the section referred to do not apply to such a place or to prisons.

With regard to a further question asked, *re* Poor-law Pension Fund and vaccination fees, we would advise that the course adopted with regard to our correspondent is legal, and that such fees being included as part of general salary tend to increase the amount of the pension, which is based on the annual gross amount received during service.

MENTAL CASES IN PRIVATE HOUSES.

A Reader asks: Kindly tell me if I can legally receive a certified mental case into my house, as I have two uncertified cases living with me, and my house is not licensed.

*** Yes, if neither of the present patients is being in any way taken charge of, received, or detained as a lunatic.

"COVERING."

A man is being attended by an unqualified practitioner for typhoid fever. A qualified practitioner, the medical officer of health for the district, when visiting the premises, is asked to see the case professionally, but on being told who is in attendance on the patient declines. Later on the unqualified attendant, fearing the case is likely to have a fatal termination, intimates his intention of retiring. The practitioner, who had at first refused to attend, is again approached, and believing that the unqualified man has retired, agrees to accept the case. Is he liable to a charge of "covering"?

*** A medical practitioner taking charge of a patient under such circumstances could not properly be charged with "covering."

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF DURHAM.

THIRD EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the examiners:

Honours—Second Class.—R. Thorne-Thorne, St. Bartholomew's Hospital; C. O. Bodman, University College, Bristol; R. S. Hindmarch, College of Medicine, Newcastle-upon-Tyne; H. Reah, College of Medicine, Newcastle-upon-Tyne; A. Parkin, College of Medicine, Newcastle-upon-Tyne.

Pass List.—C. C. Adeniyi-Jones, College of Medicine, Newcastle-upon-Tyne; E. B. Appleby, College of Medicine, Newcastle-upon-Tyne; F. Clarkson, St. Thomas's Hospital; T. S. Coates, College of Medicine, Newcastle-upon-Tyne; C. H. Gibson, College of Medicine, Newcastle-upon-Tyne; I. H. S. Hawes, St. George's Hospital; A. E. Hodge, College of Medicine, Newcastle-upon-Tyne; H. W. Horan, College of Medicine, Newcastle-upon-Tyne; K. Manson, College of Medicine, Newcastle-upon-Tyne; F. R. Scott, College of Medicine, Newcastle-upon-Tyne; R. T. Vaux, College of Medicine, Newcastle-upon-Tyne; J. C. Velenski, College of Medicine, Newcastle-upon-Tyne.

QUEEN'S COLLEGE, BELFAST.

ANNUAL REPORT.

THE usual annual report of the Queen's College, Belfast, has just been issued by the President, Rev. Thomas Hamilton, D.D., LL.D. The number of students attending each faculty in the session 1898-99 was as follows: Arts 126, Law, 16, Medicine 206, and Engineering 14. Total 362. Of this number 326 came from the province of Ulster, 13 from the rest of Ireland, 7 from England, 5 from Scotland, and there were representatives from Canada, the United States, Belgium, Spain, Syria, and Buenos Ayres. The conduct of the students was uniformly good, no case of discipline having come before the Council during the year.

The College continues to take a high place as regards academic distinction. At the summer examinations of the Royal University last year there were 64 honours and exhibitions awarded to students of the Queen's College, being much the largest number obtained by the alumni of any college in Ireland. At the autumn examinations of the same university the Junior Fellowship in Mathematical Science was gained by Mr. W. A. Houston, the University Studentship in Ancient Classics by Mr. R. M. Henry, and the Studentship in Pathology by Dr. Thomas Houston—all students of the Queen's College. At the King's Inns examinations the John Brooke Scholarship was won by Mr. Robert T. Park, being the seventh occasion in eight years upon which this distinction has been obtained by a student of the Queen's College.

It was decided during the year to found a new Lectureship in Tropical Diseases in pursuance of a communication from the Secretary of State for the Colonies, suggesting the desirability of providing instruction in the diseases of tropical countries to such students of medicine as contemplated entering the Colonial service of the State. It is hoped that the new Lectureship will shortly be in operation. Professor James Andrew Strahan resigned the Chair of English Law during the year, and has been succeeded by Mr. W. Newell Watts, LL.D.

The number of works added to the library during the year was 757. It is estimated that the library now contains about 55,000 volumes. The capacity of the natural history museum was considerably increased by the erection of a new gallery, fitted with wall cases. Some valuable presentations were made to this museum during the year. The rearrangement of the medical museum has made great progress under the direction of Professor Symington. Several useful type collections of fractures, etc., are being formed. A new museum of hygiene and sanitary science has been founded during the year, and is being gradually fitted up with the necessary specimens and appliances.

The College Union has had a prosperous year, and continues to be of great utility to the College.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, September, 1899.—The following candidates passed in:

Surgery.—N. H. Bonnerjee (Sections I. and II.), Royal Free Hospital; A. F. Carlyon (Sections I. and II.), Middlesex Hospital; A. McC. Dallas (Section I.), Bombay and Guy's Hospital; E. F. Lamport, Royal Free Hospital; A. Orme (Section II.), London Hospital; W. Rigby (Sections I. and II.), Manchester.

Medicine.—W. P. Allen, Birmingham; A. F. Carlyon (Section I. and II.), Middlesex Hospital; F. Elias, London Hospital; F. Marriott, Edinburgh; H. J. Pickering (Section II.), St. Bartholomew's Hospital; W. Rigby (Sections I. and II.), Manchester; L. L. G. Thorpe, University College Hospital; H. E. Weston (Section II), St. George's Hospital; H. Whittaker, Cambridge.

Forensic Medicine.—W. P. Allen, Birmingham; A. F. Carlyon, Middlesex Hospital; R. F. Ellery, St. Bartholomew's Hospital; F. Marriott, Edinburgh; W. Rigby, Manchester; L. L. G. Thorpe, University College Hospital.

Midwifery.—F. P. Bush, Guy's Hospital; W. Rigby, Manchester; W. C. Stanham, London Hospital; G. H. Watson, St. Bartholomew's Hospital.

The diploma of the Society was granted to Messrs. N. H. Bonnerjee, A. Orme, W. Rigby, A. F. Carlyon, and L. L. G. Thorpe.

HOSPITAL AND DISPENSARY MANAGEMENT.

EDINBURGH ROYAL INFIRMARY.

THE following appointments were made for the ensuing winter and summer sessions: Clinical tutors—Dr. J. Lamond Lackie to Dr. J. Halliday Croom, Dr. J. W. Dowden to Professor Annandale; Dr. Scot-Skirving to Dr. P. H. Maclaren, Dr. David Waterston to Dr. C. W. Mac-Gallivray, Dr. R. Purves to Mr. Cotterill. Appointed for six months from September 1st, 1899: Resident Physicians—John Jeffrey, M.B., Ch.B., to Professor Sir T. Grainger Stewart, Henry Wade, M.B., Ch.B., to Professor Fraser, W. J. Barclay, M.B., Ch.B., to Professor Simpson, John D. Comrie, M.B., Ch.B., to Dr. J. O. Affleck, James Miller, M.B., etc., to Dr. Alexander James, Frank R. Seager, L.R.C.P.&S.Edin., to Dr. Bramwell, Andrew Cassels Brown, M.B., Ch.B., to Dr. Gibson. Resident Surgeons—Alfred Shearer, M.B., Ch.B., to Professor Annandale, James Mackie Cuthbert, M.B., Ch.B., to Professor Chiene, J. D. Lithgow, M.B., C.M., to Dr. P. H. Maclaren, A. W. Limont, M.B., C.M., to Mr. Cotterill, Thomas D. M'Laren, M.B., Ch.B., to Mr. Cathcart. Non-resident House-Physician—William Hope Fowler, M.B., Ch.B., to Dr. W. Allan Jamieson. Clinical Assistants—William James Stuart, M.A., M.B., Ch.B., to Professor Fraser, William Macrae Taylor, M.B., F.R.C.S.E., to Dr. Bruce (Ward 6), A. Hill Buchan, M.B., C.M., to Dr. Bruce (medical waiting room), F. Mayes Willcox, M.B., C.M., to Dr. R. W. Philip (observation ward), A. H. Macpherson, L.R.C.P.&S.Edin., to Dr. R. W. Philip (medical waiting room), John Eason, M.B., C.M., etc., to Dr. William Russell, G. W. Simla Paterson, M.B., C.M., to Dr G. Lovell Gulland, John W. Simpson, M.B., etc., to Dr. J. J. Graham Brown, Robert Cumming, M.B., Ch.B., to Dr. P. M'Bride. J. A. Thomson, M.B., C.M., was appointed resident medical officer at the Convalescent House for six months. Mr. W. S. Caw has been appointed interim superintendent pending the election of a successor to Surgeon-General Lithgow.

DERBY BOROUGH ASYLUM.

THE daily average number of patients in this asylum during the year 1898 was 319. On January 1st of that year there were 318, and on December 31st 324, showing an increase in the total number of 6. In the annual report the Committee state there are no vacant beds at present, and the female patients are 6 in excess of the accommodation of the asylum, and yet this is an asylum only some ten years old. In a careful summary of the ten years of its history Dr. Macphail gives some interesting figures with regard to the question of the alleged increase of insanity in the borough from which it is observed that the estimated population of the borough was 91,733 in 1889, and in 1898 it had risen to 104,834; in 1889 the ratio of first admissions per 10,000 of the population was 5.15, and in 1898 it was 5.91, with fluctuations between bringing the average down to pretty much the same. At the same time he remarks that since the asylum was opened in 1888 the number of lunatics detained in the Derby Union Workhouse has decreased nearly 50 per cent. Included in the total number of patients treated during the year are 21 private patients on a reasonable rate of board. The total number of patients admitted was 82; 51 were discharged and 25 died. The causes of death call for no special remark, says Dr. Macphail, except that nearly one-half were due to diseases of the chest. The recovery rate was 42.6 per cent. The general health of the asylum was good, and the chief improvement was the installation of the electric light, which is now being adopted in most modern asylums.

DOWN DISTRICT ASYLUM, DOWNPATRICK.

THE Inspector of Lunatics, Sir George Plunkett O'Farrell, at his visit to this asylum in December last, states that the governors of the asylum will hand over next year to their successors, the Asylum Committee of the County Council, an institution in excellent order of which they may well feel proud, and expresses the hope that these successors will take as liberal and as practical interest in the success of the asylum as their predecessors have always shown. The annual report for 1898 states that the average daily number resident was 561, the total number under care 677, the admissions 126, and the discharges and deaths 115. The average recovery rate for thirteen years is 42 per cent. Of the cases admitted Dr. Nolan records 40 as of an acutely melancholic type, in 50 a history of hereditary taint, while the number of senile cases had increased owing to the emigration of the young and wage-earning. He further mentions that the Lunacy Commissioners for New York District report that no less than 35.5 per cent. of the insane in the asylums of that State were born in Ireland. Speaking of the general health, he says that 600 were under medical treatment during the year, the most prominent disease being consumption, which caused no less than 39.6 per cent. of the deaths, for which the latest lines of treatment were practised.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,381 births and 4,506 deaths were registered during the week ending Saturday last, September 23rd. The annual rate of mortality in these towns, which had decreased from 26.8 to 21.1 per 1,000 in the four preceding weeks, further declined to 20.6 last week. The rates in the several towns ranged from 8.5 in Swansea, 10.6 in Huddersfield, 13.7 in Derby, and 14.7 in Wolverhampton, to 27.2 in Salford, 27.6 in Newcastle, 27.9 in Liverpool, and 28.6 in Sunderland. In the thirty-two provincial towns the mean death-rate was 21.7 per 1,000, and exceeded by 2.8 the rate recorded in London, which was 18.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 4.4 per 1,000; in London the death-rate was equal to 3.1 per 1,000, while it averaged 5.3 in the thirty-two provincial towns, among which the highest zymotic death-rates were 7.4 in Portsmouth, in Manchester, and in Sheffield, 8.0 in Hull, 8.4 in Preston, and 8.8 in Burnley. Measles caused a death-rate of 1.4 in Burnley; "fever" of 1.1 in Nottingham, 1.6 in Sheffield, 1.7 in Salford, and 2.5 in Portsmouth; and diarrhœa of 6.0 in Hull, 6.4 in Bolton and in Manchester, 6.8 in Sunderland, and 8.0 in Preston. The mortality from scarlet fever and from whooping-cough showed no marked excess in any of the large towns. The 87 deaths from diphtheria included 42 in London, 11 in Sheffield, 8 in Leicester, 5 in Liverpool, and 3 in Leeds. Three fatal cases of small-pox were registered last week in Hull, but not one in any other

of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday last, September 23rd. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,538, 2,549, and 2,640 in the three preceding weeks, had further increased to 2,758 on Saturday last; 364 new cases were admitted during the week, against 252, 298, and 336 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, September 23rd, 976 births and 581 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 22.6 and 20.2 per 1,000 in the two preceding weeks, further declined to 19.0 last week, and was 1.6 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 10.8 in Leith and 14.2 in Paisley to 21.7 in Edinburgh and 22.0 in Perth. The zymotic death-rate in these towns averaged 4.8 per 1,000, the highest rates being recorded in Greenock and Perth. The 271 deaths registered in Glasgow included 3 from measles, 6 from scarlet fever, 5 from "fever," and 50 from diarrhœa. Two fatal cases of measles, 2 of "fever," and 19 of diarrhœa occurred in Edinburgh; 16 deaths from diarrhœa were recorded in Dundee, 9 in Greenock, and 3 from "fever" in Paisley.

PRACTITIONERS AND PAUPER PATIENTS.

ON further consideration of the statements on both sides as to the question which was referred to under the above heading in the BRITISH MEDICAL JOURNAL of September 16th, p. 756, we are of opinion that the correspondent who in the first instance submitted the case to our judgment has no cause of complaint against the other practitioner.

FRACTURE OF FEMUR IN A PAUPER PATIENT.

A CORRESPONDENT asks whether it is usual to charge the full fee of £3 for attendance to a fracture of the neck of the femur in a pauper patient.

*** The district medical officer is entitled to this fee, provided the patient survives more than thirty-six hours after his attendance on the injury, and provided also several subsequent attendances are made on the patient; otherwise he is only entitled to half the above fee.

SPECIAL FEE FOR ATTENDANCE ON A CASE OF WHITE LEG AFTER CONFINEMENT.

MEDICAL OFFICER writes saying that he was instructed by a relieving officer to attend a case of white leg shortly after the patient's confinement. He asks whether he is entitled to the special fee for such attendance.

*** If this case involved "long" attendance, we consider our correspondent would be entitled to the special fee under Article 183 of Consolidated Order of July 24th, 1847, which is as follows: "Provided that in any special case in which great difficulty may have occurred in delivery, or long subsequent attendance in respect of some puerperal malady or affection may have been requisite, the medical officer shall receive the sum of two pounds."

INDIA AND THE COLONIES.

INDIA.

SANITATION IN INDIA.—The Government of India has sanctioned improvement of the water supply of the Cherat cantonment at a cost of one lakh and a half of rupees and detailed estimates are being prepared. Enteric has been prevalent at Cherat, the sanatorium near our frontier station, Peshwar. A scheme for the sanitary improvement of the Quetta cantonment is at present under the consideration of the Government of India and a sum of 10,000 rupees will probably be sanctioned in this connection. A few months ago we announced a very heavy mortality from enteric among the troops at Quetta, Baluchistan. At Ahmednagar (Bombay residency) enteric has caused a large mortality among the artillery and the Welsh Regiment.

THE COUNTESS OF DUFFERIN'S FUND.—A brief report of the progress of the National Association for Supplying Female Medical Aid to the Women of India during the five years 1894-98 has been prepared by Lieutenant-Colonel E. H. Fenn, R.A.M.C., honorary secretary. During this period the Countess of Elgin and Kincardine held the office of Lady President and Colonel B. Franklin, I.M.S., of honorary secretary. The three objects of the Association are recapitulated, namely: (1) The education of women as doctors and midwives; (2) the provision of hospitals and dispensaries for the treatment of women and children; and (3) the supply of trained female nurses and midwives. In 1894 there were 241 students under training; in 1898 there were 324. Since the commencement of the scheme 121 assistant surgeons, 191 hospital assistants, and over 1,400 nurses, midwives, and compounders have been certified as qualified to practise in the capacities indicated by these titles. The grant of scholarships to students has been a valuable aid, and a further grant of money to enable selected officers of the Association to proceed to England to undergo additional instruction has proved a success; 250 hospitals and dispensaries have been built at a cost of 24 lakhs of rupees, and 35 lady doctors, 75 assistant surgeons, and 257 hospital assistants were employed in 1898 in relief work. The number of patients treated in 1894 was 894,200, and in 1898, 1,484,900. The invested funds of the Association amounted in 1894 to 18 and in 1898 to 22 lakhs of rupees, subscriptions and donations being in these years 54,600 rupees and 274,500 rupees respectively. These figures indicate substantial advance along the whole line of operations and are worthy of hearty congratulation.

MEDICAL NEWS.

THE VACCINE OF YELLOW FEVER.—The Brazilian National Academy of Medicine has had under consideration the work of the late Dr. Domingos Freire in regard to the etiology of yellow fever, and has recorded an emphatic protest against the practice of preventive vaccination against that disease recommended by him. The method is characterised as useless and dangerous.

GOVAN FEVER HOSPITAL.—At a meeting of Govan Combination Hospital Board, on September 18th, Miss Augusta Boyes, M.B., Ch.B., was, by a majority of seven votes to five, appointed Resident Physician at Merryflatts Fever Hospital, Shieldhall, South Govan. Several Scotch newspapers in reporting this appointment, add: "This is the first lady doctor in Scotland who has been elected to such a post," an absolutely inaccurate statement.

MEDICAL ABSTAINERS IN GERMANY.—The Association of Medical Abstainers held its fourth annual meeting at Munich on September 17th. Addresses were delivered by Professor Kraepelin on Recent Physiological Researches on the Effects of Alcohol; by Dr. Colla on Recent Clinical Researches on the Effects of Alcohol; and by Dr. Bunge on the Increasing Inability of Women to Nurse their Infants, and on the Connection between that Inability and Alcoholism.

BY the will of the late Mr. Frederick Rothwell the Manchester Clinical Hospital for Women and Children receives £150, the Manchester Royal Eye Hospital £200, and the Hulme Dispensary £300.—The late Mr. Ashley Gibbings has bequeathed £100 to King's College Hospital, £100 to the Dental Hospital, Leicester Square, £100 to the British Medical Benevolent Fund, and £100 to the British Dental Benevolent Fund.

DEATH FROM STRYCHNINE POISONING.—The lamentable death of a young practitioner in Eastbourne as the result of drinking a quantity of a mixture to which a large quantity of strychnine had been by some error added points a very obvious moral. It appears to be highly probable that Dr. Dick, in making up a mixture for a club patient, filled up the bottle from a solution of strychnine instead of with chloroform water. Dr. Henry Colgate, who with Mr. Wheeler Taylor attended the deceased gentleman, said that the two dispensing bottles in Dr. Dick's surgery were almost identical. The moral, as has been said, is very obvious; it is that all poisonous drugs should be kept in bottles of such a form or provided with such a stopper that the attention of the person dispensing is automatically called to the fact.

INTERNATIONAL CONGRESS ON HYPNOTISM.—The second International Congress on Hypnotism will be held in Paris from August 12th to 16th, 1900, under the presidency of Dr. Jules Voisin. The questions proposed for discussion are: (1) The formation of a vocabulary concerning the terminology of hypnotism and the phenomena connected therewith; (2) the relations of hypnotism with hysteria; (3) the application of hypnotism to general therapeutics; (4) the indications for hypnotism and suggestions in the treatment of mental disease and alcoholism; (5) the application of hypnotism to general pædagogy and mental orthopædics; (6) the value of hypnotism as a means of psychological investigation; (7) hypnotism in relation to the (French) law of November 30th, 1892, as to the practice of medicine; (8) suggestion and hypnotism in relation to jurisprudence; (9) special responsibilities arising from the practice of experimental hypnotism.

MEDICAL SUPPLIES FOR THE AMERICAN ARMY IN THE PHILIPPINES.—An idea (says the *Boston Medical and Surgical Journal*) can be obtained of the magnitude of the work of the medical department in the Philippines from a requisition for medical supplies made by the chief surgeon of the troops now serving in those islands. The requisition, recently received and filled, included 540 items, among them being 10,000,000 quinine tablets, 7,500,000 grains of quinine in bulk, 20 tons of Epsom salts, 5,000 bottles of paregoric, 3,000 bottles of iodoform, 8,000 bottles of collodion, 5,000 bottles of chloroform, 2,500 tins of ether, 10,000 quarts of whisky, and 7,000 quarts of alcohol. There were also 600,000 compound cathartic pills, 1,000,000 tablets of strychnine, 1,600,000

tablets of salicylate of soda, 12,000 yards of mustard plasters, 3,000 yards of adhesive plaster, 50,000 yards of plain gauze, 5,000 yards of unbleached muslin, 50,000 sterilised bandages, 96,000 roller bandages, and 4,000 pounds of absorbent cotton. The order also included 5,000 pieces of each kind of crockery and cutlery necessary to equip hospital mess tables.

Durham University Medical Graduates' Association.—The annual meeting of this Association was held recently in London, when the following officers were elected for the year 1899-1900:—*President:* Mr. T. H. Openshaw. *Vice-Presidents:* Dr. W. C. Beatley, Dr. F. S. Palmer. *Council:* Dr. W. D. Arnison, Dr. W. M. Abbot Anderson, Dr. T. Beattie, Dr. J. Clay, Dr. F. W. Cock, Dr. C. C. Cripps, Dr. E. W. Diver, Dr. J. W. Hembrough, Dr. J. Thoresby Jones, Dr. W. G. Richardson, Dr. F. Spicer, and Dr. W. G. Walford. *Honorary Treasurer:* Dr. W. S. Plummer. *Honorary Secretaries:* Mr. H. B. Angus, Dr. R. H. Milson. After the meeting the members dined together at the Hotel Cecil, Mr. T. H. Openshaw, President, being in the chair. Amongst those present were Mr. Edmund Owen (the President of the Medical Society of London), Dr. J. F. Payne (the President of the Pathological Society), Mr. John Langton (the President of the Clinical Society), and Mr. Christopher Heath. A selection of vocal and instrumental music was given under the direction of Mr. Arthur E. Godfrey. A particularly pleasant evening was spent, and an enthusiastic reunion enjoyed by the graduates and their friends.

Ophthalmic Diseases at Jerusalem.—The annual report of the administration of the British Ophthalmic Hospital at Jerusalem (belonging to the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England) shows that the work of the last year, as compared with that of its predecessor, was almost stationary, mainly from the cause that it was as much as Dr. W. E. Cant alone could by any possibility accomplish. The applicants for admission were 1,182, the in-patients admitted 598, the new out-patients 4,481, the attendances on out-patients 12,080, the operations 1,330 and the administrations of anæsthetics 683. Treatment at the hospital was, as in former years, greatly appreciated both by the inhabitants of Jerusalem and by the fellaheen of the surrounding country districts; and the Chapter of the Order of St. John has since the issue of the report sanctioned the appointment of an assistant-surgeon to Dr. Cant, so that out-patients may be seen six days a week. We observe that of the 598 in-patients 364 were admitted for trichiasis with superficial keratitis, and that of the 1,330 operations 917 were Snellen's operation (extended) for trichiasis of the upper lid. There were 43 extractions of senile cataract. Amongst the 4,441 out-patients 712 had superficial keratitis, 696 keratitis with trichiasis, 437 chronic organic conjunctivitis, 422 adherent leucoma with cicatrix, and 170 were cases of cataract. The work done at the hospital certainly seems to merit generous support.

The Relationship of Provincial Medical Examiners to the Officials of the Head Office.—At the last meeting of the Life Assurance Medical Officers' Association held on July 5th Dr. Harris of Manchester read a thoughtful paper on the relationship of provincial medical examiners to the officials of the head office, and he put forward three points for discussion: 1. That it is desirable that the provincial medical examiners be appointed in all cases by the head office after consultation with their London physician. 2. That the provincial medical examiner should receive intimation from the head office of his appointment, and be informed as to whether he is to send his reports direct to the head office or to the branch manager. That reports should never be sent to anyone who is only a local agent and has not the management of a branch office. 3. That facilities should be afforded for the provincial medical examiners, especially in the large towns, to become acquainted with the actuaries and the London medical advisers of the particular insurance office. A lengthy discussion followed the reading of the paper and there was a very general agreement with the propositions put forward by Dr. Harris. As regards the question of what was expected of the provincial examiner in his recommendation, the feeling of the meeting was in favour of the view that he should give his opinion of the life as to whether it is a first-class or a life which should be taken with an addition or be declined, but that it is not expected that he should state the exact addition to be made.

MEDICAL VACANCIES.

The following vacancies are announced:—

AYE COUNTY HOSPITAL.—House-Surgeon. Appointment for one year. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary by October 6th.

BETHNAL GREEN NEW INFIRMARY, Cambridge Heath, N.E.—Medical Superintendent. Age from 30 to 40 years. Salary at the rate of £500 per annum, with unfurnished apartments, coals, light, and washing. Applications on forms provided to the Clerk to the Board, Bishops Road, Victoria Park, N.E., by October 5th.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon; unmarried. Salary, £100 per annum, with board and residence. Applications, endorsed "Dispensary Surgeon," to the Secretary by October 3rd.

CAIRO: EGYPTIAN GOVERNMENT SCHOOL OF MEDICINE.—Professor of Ophthalmology. Applications, addressed "The Director, Government School of Medicine, Cairo," by October 15th.

CARLISLE: CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Junior Assistant Medical Officer; unmarried. Salary, £160 per annum, with board and residence. Applications to the Medical Superintendent.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Post tenable for three months. Fee, £8 8s. Applications to the Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) Assistant Physician; must be F. or M.R.C.P.Lond. (2) Pathologist. Salary, 100 guineas per annum. (3) Second House-Physician; appointment for six months; board and residence provided, and salary at the rate of £30 per annum. Applications to the Secretary by October 11th.

COLCHESTER: ESSEX AND COLCHESTER GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, washing, and residence. Applications to the Secretary by October 14th.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer, unmarried. Salary, £140, rising to £180, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, Winterton, Ferryhill by October 3rd.

FULHAM PARISH.—Resident Medical Superintendent of the Infirmary and Medical Officer of the Workhouse; between 25 and 40 years of age. Combined salary at the rate of £300 per annum, with residence (partly furnished), fuel, light, and washing. Applications on forms provided to be sent to the Clerk to the Guardians, 75, Fulham Palace Road, Hammersmith, W., by October 7th.

GREAT NORTHERN CENTRAL HOSPITAL.—Junior House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging, and washing. Applications to the Secretary by October 16th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House-Surgeon. Salary £30, with board, residence, and laundry. Applications to the Honorary Secretary.

HEREFORD GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £25 per annum, with board, residence, and washing. Applications to the Secretary by October 2nd.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Resident House-Physician. Appointment for six months and an honorarium of £25. (2) Assistant Resident Medical Officer. Salary, £160 per annum, with board and residence. Applications to the Secretary by October 10th.

HOSPITAL FOR DISEASES OF THE SKIN, 52, Stamford Street, Blackfriars, S.E.—Honorary Pathologist. Applications to the Secretary by October 10th.

HUDDERSFIELD INFIRMARY.—(1) Senior House-Surgeon; (2) Junior House-Surgeon. Salaries, £80 and £60 per annum respectively, with board, lodging, and washing. Applications to the Secretary by October 4th.

HULL: THE ROYAL INFIRMARY.—Senior House-Surgeon; must be Fellows, Members, or Licentiates of the College of Surgeons of England. Salary 100 guineas per annum with board and furnished apartments. Applications to the Chairman of the House Committee by October 3rd.

LEEDS: HOSPITAL FOR WOMEN AND CHILDREN.—Non-resident House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £125 per annum. Applications to the Secretary of the Faculty by October 7th.

LONDON HOSPITAL MEDICAL COLLEGE.—Assistant Demonstrator of Anatomy. Salary, £90 per annum. Applications to the Warden by October 7th.

LONDON LOCK HOSPITAL, Harrow Road, W.—House-Surgeon to the Female Hospital. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by October 7th.

LONDON TEMPERANCE HOSPITAL, N.W.—(1) Visiting Physician. Honorarium, 50 guineas per annum. (2) Resident Medical Officer. Salary, 100 guineas per annum, with board, lodging, and washing. Applications to the Secretary by October 7th.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary £100 per annum with furnished rooms, attendance, and board. Applications to the Secretary by October 5th.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House-Surgeon. Salary, £70 per annum, with residence, board and washing. Applications, endorsed "House-Surgeon," to the Chairman of the Board of Management by October 4th.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House-Surgeon. Honorarium at the rate of £50 per annum, with board. Applications to G. W. Fox, Honorary Secretary, 53, Princess Street, Manchester, by October 6th.

NORTH-EASTERN HOSPITAL FOR CHILDREN.—House-Surgeon. Appointment for eight months. Salary at the rate of £50 per annum. Applications to the Secretary, 27, Clement's Lane, E.C., by October 17th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—(1) House-Surgeon. Salary, £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th. (2) Assistant House-Surgeon. Apartments, board, and washing to be an equivalent for services rendered. Applications to the Secretary for the former by October 9th and the latter by October 23rd.

PADDINGTON INFIRMARY.—Resident Clinical Assistant and Second Assistant to the Medical Superintendent. Appointment for six months. Honorarium at the rate of £50 per annum. Further particulars on personal application to Dr. M. F. Squire, 235, Harrow Road, W., by October 2nd.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing, etc. Applications to W. Lavies, Secretary, 5, Winckley Street, Preston, by October 2nd.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Assistant Physician; must be F. or M.R.C.P.Lond. Applications to the Secretary by October 9th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Resident Medical Officer. Appointment for six months, when re-election is required. Salary at the rate of £100 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £40 per annum, with furnished apartments, board and washing. Applications to the Secretary by October 11th.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone Road N.W.—Anæsthetist. Honorarium, £20 per annum. Applications to the Secretary by October 7th.

SANITARY INSPECTORS' EXAMINATION BOARD.—Four Examiners. Applications to W. R. E. Coles, Honorary Secretary, 1, Adelaide Buildings, London Bridge, E.C., by October 10th.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought).—Senior House-Surgeon at the Branch Hospital in the Royal Victoria and Albert Docks, E. Salary, £75 per annum, with board and residence, and an additional £25 per annum if certain clinical work is performed satisfactorily. Applications to the secretary by October 9th.

SOUTHAMPTON: ROYAL SOUTH HANTS INFIRMARY.—House-Surgeon. Salary, £100 per annum, with rooms, board, and washing. Applications to T. A. Fisher Hall, by October 2nd.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications to the House-Surgeon.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Surgeon. Salary £120 per annum, increasing by £10 per annum,

with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

VICTORIA UNIVERSITY.—External Examiner in Anatomy. Appointment for three years. Applications to the Registrar by November 1st

WAKEFIELD: WEST RIDING ASYLUM.—Fifth Assistant Medical Officer. Salary, £100 per annum, rising £10 annually to £150, with furnished apartments, board, washing, and attendance. Applications to the Medical Director by October 11th.

MEDICAL APPOINTMENTS.

ARMITAGE, Edward, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health to the Grimsby Rural District Council.

BAKER, W. J. T., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer for the South District of the Sheffield Union, *vice* M. Leach, M.R.C.S.Eng.

BOVEY Thos. W. W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the Abbotsbury District of the Weymouth Union, and for the Long Bredy District of the Dorchester Union, *vice* W. Hawkins, resigned.

BROADBENT, F. W., M.B., C.M.Edin., appointed Clinical Assistant to the Chelsea Hospital for Women.

BROWN, E. Archer, M.B.Edin., M.R.C.S., L.R.C.P.Lond., appointed Second Assistant Medical Officer to the St. Marylebone Infirmary, Notting Hill, *vice* Dr. Mallins, resigned.

BUCHAN, A. Hill, M.B., C.M., appointed Non-resident Clinical Assistant to the Out-patient Department of the Victoria Hospital for Consumption.

BUCHANAN, Robert MacNeil, M.B., C.M.Glasg., F.F.P.S.Glasg., appointed Bacteriologist to the Corporation of Glasgow.

CALWELL, Wm., M.D., M.Ch.R.U.I., appointed Staff Physician to the Belfast Royal Hospital

DALY, J. C., L.R.C.P., L.R.C.S.Edin., appointed Workhouse Medical Officer of the Borrisokane Union, *vice* H. A. Sampson, L.R.C.P., L.R.C.S.I.

DUFF, J., M.D., M.B., C.M., appointed Medical Officer of the Infectious Hospital, Chester.

ENSOR, Edwin T., M.D.New York, L.R.C.P.I., L.F.P.S., L.S.A., appointed Medical Officer for the Workhouse for Able bodied Men and for the Casual Wards by the Kensington Board of Guardians, *vice* Dr. T. Liddard, superannuated.

FERENCH, E. G., M.B., Ch.B.Edin., appointed House-Surgeon to the Royal Alexandra Hospital, Brighton.

FRASER, D., M.B., C.M.Edin., appointed Medical Officer for the First District of the Hawarden Union, *vice* W. O. Evans, L.R.C.P., L.R.C.S.Edin., resigned.

HUTCHINSON, F. A. S., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Dunmow District of the Dunmow Union, *vice* R. C. Lyle, L.R.C.P., M.R.C.S.

KIRBY, Samuel John James, M.D.Brux., L.R.C.P., L.M.Edin., M.R.C.S.Eng., L.S.A.Lond., reappointed Medical Officer of Health to the Hoxne Rural District Council.

LLOYD, A. P., M.B.Durh., B.S., appointed Medical Officer for the Newhottle District of the Houghton-le-Spring Union, *vice* J. T. Hutchinson, L.R.C.P.Edin., L.M., resigned.

LOXTON, Arthur, F.R.C.S.Edin., appointed Honorary Surgeon to the Birmingham and Midland Hospital for Skin and Urinary Diseases, *vice* Leslie Phillips, M.D., resigned.

MCKISACK, H. L., M.D.R.U.I., appointed Assistant Physician to the Belfast Royal Hospital.

SOLOMON, Charles, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health to the Skiriaugh Rural District Council.

THOMSON, G. D., M.R.C.S., L.R.C.P.Lond., reappointed Medical Officer of Health for Ruskington.

WINDSOR, C. W., M.D., appointed Medical Officer to the Workhouse of the Royston Union, *vice* D. B. Balding, F.R.C.S.Eng., resigned.

WATSON, Anne Mercer, M.B., Ch.B., appointed Resident Physician to the Victoria Hospital for Consumption, Edinburgh.

DIARY FOR NEXT WEEK.

WEDNESDAY.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by the President, Dr. William Duncan, and others. Papers: Dr. Williamson: The Pathology and Symptoms of Hydatidiform Degeneration of the Chorion. Dr. Herman: Two Cases in which Life appeared to have been Saved by Antistreptococcic Serum.

THURSDAY.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Lees: On Rheumatism in Children.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

ACHESON.—On September 22nd, at Birkdale, St. Ronan's Road, Southsea, the wife of Surgeon J. H. Acheson, R.N., of a daughter.

BATTERSBY.—On September 26th, at 14, Balby Road, Doncaster, the wife of J. H. Battersby, M.D., of a daughter.

BYASS.—On September 22nd, at Dorchester, Wallingford, Berks, the wife of Thomas Spry Byass, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

HOYLE—TUPPER.—On September 16th, at the Parish Church, Margate, by the Rev. Charles C. Hoyle, M.A., Curate of Clerkenwell and Chaplain to the Worshipful Company of Paviors, James Collings Hoyle, M.B., B.S., etc., Medical Officer of Health, Rangoon, Burma, to Catharine Maude, fourth daughter of Lewis Clarence Tupper, Esq., of Worcester. No cards.

MARSH—CREW.—On September 27th, at Prestbury Church, by the Rev. H. Bonsey, John Healey Marsh, M.R.C.S., L.R.C.P.Lond., Medical Officer of Health for Macclesfield, eldest son of the late John Marsh, of Sale, to Florence May, youngest daughter of Thomas Crew, of Park Villa, Macclesfield. No cards. At home (Cumberland House, Macclesfield) October 24th, 25th, 26th.

MONRO—STANLEY.—On September 21st, at Glasgow, by the father of the bride, assisted by the Rev. Alex. Monro, M.A., F. C. Monmuir, David Duke Monro, M.B., C.M., Stranraer, to Augusta Josephine, elder daughter of the Rev. Canon Stanley, LL.D., British Chaplain, Antwerp.

OGILVIE—CUNNINGHAM.—On September 23rd, at Edinburgh, Walter Holland Ogilvie, Indian Medical Service, third son of the late Ogilvie Bey, M.D., of Egypt, to Ruby Cunningham Hannay, only daughter of the late Surgeon-Major R. W. Cunningham, Indian Medical Service.

SKYRME—BENNOCH.—On September 12th, by the Rev. Canon Skelton, Rector of Hickling, Christopher Ralph Skyrme, M.B., B.C.Cantab., of Bexhill-on-Sea, to Ella Mary Bennoch, daughter of the Rev. A. J. Bennoch, Vicar of Colston Bassett, Notts.

DEATH.

WHITE.—On September 24th, at 8, Lansdowne Terrace, Eastbourne, Joseph White, F.R.C.S.Edin., D.C.L., of 6, Southwell Gardens, Queen's Gate, S.W., late of Nottingham, aged 77.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

L. asks for information as to the causes of obstruction of the thoracic duct.

J. S. writes: Have statistics been made recently of the proportion of cases of gonorrhœa which are attended or followed by epididymitis, or its relation to the locality where infection was obtained?

STATIM will be grateful for information as to the best books on (1) the duties of house-surgeons, ships' surgeons, etc.; (2) German-English, French-English phrase books for men practising amongst foreigners, and who desire to give them accurate and fairly full medical directions without interpreters. These should be small for the pocket.

PHYSICIAN would be obliged if any member would say if he knows of a home in England or Scotland where a woman, aged 50, with chronic bronchial asthma and debility could go. She could help with her room and do a little housework between her attacks. She is a widow without family and was lodgekeeper in the service of a peer for a number of years. Could pay probably 5s. a week.

BRISEIS asks for information as to what is best to be done in the following case: A lady, aged 22, married about three months, consulted me because her husband complained of the difficulty he had in effecting intercourse with her. On examination I found the vagina small, but nothing unusually so. The cervix uteri is elongated, soft and freely movable, and it was impossible to feel an orifice with examining finger. I did not use a speculum. Her history before marriage is that at 17 she first menstruated, and the flow lasted only two days. For two years after she saw nothing, and was treated for anæmia to no effect. At the end of that period she had a similar discharge to the first for two days, then twelve months before marriage again for a day or two. She has never suffered any pain whatsoever on account of her menstrual condition beyond a slight backache, which has occurred only a few times, and could hardly be referred to that. At present she is in the best of health and spirits, and enjoys sexual relationship. What is the probable condition in this case of the uterine appendages? Is there a likelihood of conception taking place?

*** The difficulty spoken of may be removed by an operation to enlarge the vaginal orifice. The patient seems not to require treatment for any other reason. Fertility is unlikely, but possible,

OLD PARTNERS AND OLD PATIENTS.

SHAY.—The senior member of a firm sells his share of the practice to the remaining partner and buys another practice fifteen miles distant, and in the deed of dissolution there is a clause forbidding the outgoing partner to practise within seven miles of his former residence. Shortly afterwards one of the old patients of the retiring partner, being dissatisfied with the professional opinion of the successor, sought out his old doctor at his new residence. The latter attended him and gave a different diagnosis from that given by his late partner. The late partner thereupon wrote to the other and objected to his seeing any of his old patients except with the former's consent. To this the other declined to consent. Was the conduct of the retiring partner in accordance with medical etiquette?

*** A clause forbidding an outgoing partner to practise within seven miles of his former residence does not bind him to refuse to attend such of his old patients as prefer to follow him to his new address, though it prevents his going to them so long as they reside within the prescribed limits.

THE STERILISATION OF MILK.

A CORRESPONDENT writes: Will you kindly let me know how milk should be sterilised for patients in hospital? Is there any particular appliance you can recommend for the purpose?

*** In the *Yearbook of Treatment* for 1897 an account will be found of several methods which are in vogue for sterilising milk. If, however, it is a question of putting up an apparatus dealing with a considerable quantity of milk, it might be well to make inquiries from some of the well-known dairy companies in regard to the most efficient apparatus or dealing with such large quantities on a commercial scale. It is to be remembered that the sterilisation of milk is not merely a matter of raising the temperature to a certain level, and keeping it there a certain ime. The flavour of the product will be found to vary considerably according to the exposure to the air and the time taken in heating and cooling the milk, and it is in this that the chief difference lies between dealing with large and with small quantities. It must be borne in mind that even the best process is no protection against contamination after sterilisation, and that where it is a matter of dealing with infants there is much to be said in favour of the use of Soxhlet's apparatus, or one of its various modifications, in which the milk is placed in bottles before being sterilised, each "feed" remaining unopened until it is actually required Much information on the subject of sterilisation may be gathered from a little pamphlet published this year by Masson et Cie' *Hygiène de l'Allaitement*, par le Docteur Henri de Rothschild.

ANSWERS.

T. H.—We have no information on the subject.

M.D.—We do not think the method of removing superfluous fat, referred to by our correspondent, likely to be of any use.

JUVENAL.—There is no law in this country fixing the ordinary fee of a physician or other practitioner.

AMBULANCE.—(1) We are not acquainted with the composition of the tooth powder mentioned. (2) *Our Secret Friends and Foes* (Society for Promoting Christian Knowledge, 1893) is the title of a small popular work by Professor Percy Frankland.

J. T.—We regret to be unable to give details of the "dynamite treatment" of asthma. We venture, however, to suggest that our correspondent has mistaken one explosive for another, and has really nitro-glycerine in his mind. Nitro-glycerine and sodium nitrite are sometimes employed with advantage in asthma. See article Asthma by Professor Leech in *Encyclopædia Medica*, vol. i, p. 396.

CARL.—The name of the reputed author of the pamphlet sent by our correspondent was removed from the *Medical Register* by order of the General Medical Council in 1881. It does not appear on the *Register* of the current year. Whether under the existing state of the law any action could be taken against this person we are not prepared to say, but we would advise our correspondent to send the documents to the Chairman of the Penal Cases Committee of the General Medical Council, 299, Oxford Street, London, W.

OPEN-AIR SANATORIUM FOR THE WORKING CLASSES.

DR. ROBERT REID.—We are not aware of any open-air sanatorium existing at present for the reception of patients of the working class. The principles of the "open-air treatment" are carried out at the Hampstead, Ventnor, and Bournemouth Consumption Hospitals, which are administered for the class of patients to which our correspondent refers.

NOTES, LETTERS, Etc.

M.B. has omitted to authenticate his communication with his name.

THE LATE DR. G. F. CROOKE.

MR GILBERT BARLING (87, Cornwall Street, Birmingham) and MR. J. T. J. MORRISON (3, Great Charles Street, Birmingham), Honorary Secretaries of the fund, write: In announcing our intention to close the Crooke Fund at an early date, we would again remind the many friends of the late Dr. Crooke, who were associated with him at Edinburgh, Guy's, Leeds, Birmingham, and elsewhere, of his misfortunes and early death, by which his widow and child are left in poverty. Whilst grateful to those who have already subscribed, we shall be glad to add other names to the lists. Since our previous notice the following contributions have been received by the Treasurer, Dr. Arthur Foxwell, 22, Newhall Street, Birmingham:

	£	s.	d.		£	s.	d.
Mr. C. J. Symonds ...	3	3	0	Dr. W. S. Nason ...	1	1	0
Mr. George Heaton ...	2	2	0	Dr. S. H. Perry ...	1	1	0
Dr. E. R. Mansell ...	2	2	0	Mr. W. B. Russell ...	1	1	0
Dr. F. B. J. Baldwin ...	1	1	0	Dr. T. B. Young ...	1	1	0
Dr. H. C. Brown ...	1	1	0	Mr. Wooldridge ...	1	0	0
Dr. H. S. Chavasse ...	1	1	0	Dr. W. Downing ...	0	10	6
Dr. J. C. Griffiths ...	1	1	0	Dr. F. G. Gardner ...	0	10	6
Dr. Chas. St. Johnston ...	1	1	0	Dr. W. J. McCardie ...	0	10	6
Dr. H. P. Motteram ...	1	1	0	Dr. Nugent Smythe ...	0	10	6

THE HUNTER FUND.

MR. RIVERS WILLSON, Treasurer (Oxford), writes: Permit me to acknowledge the receipt of the undermentioned additional subscriptions, making a total of £108 14s. 3d. At the same time allow me, on behalf of the committee of this fund, to thank you for all your kind assistance.

	£	s.	d.
Mr. W. Armstrong, Buxton	0	10	6
Mr. T. L. Gentles, Derby	0	10	0
Dr. William J. Mackie, New Zealand	2	0	0

INSANITARY HOUSES IN ST. PANCRAS: A CORRECTION.

MR. JAMES TIMEWELL (Member of the St. Pancras Vestry) writes: Under the above heading you refer in the BRITISH MEDICAL JOURNAL of September 16th to the evictions which recently took place in Seaton Street, and speak of the rent as "relatively low, being 3s. or 3s. 6d. per room." You have evidently taken the amount paid for rooms in the little cottages built on the back yards of the Seaton Street houses, the same street numbers being used for both. Your figures should have been 5s. and 5s. 6d. per room for these particular houses.

MOSQUITOS AND MALARIA.

DR. W. ROUS KEMP (Birmingham) writes: It seems hardly possible to realise that malaria fever can in any way be connected with mosquito bites, when we know and hear of so many individuals being bitten daily by these insects without showing some signs of the disease. Dr. P. O'Connell in the BRITISH MEDICAL JOURNAL of September 23rd, p. 823, attributes his attacks of the fever to "night exposure." I consider that "night exposure," more especially in a low-lying marshy district, to be the chief factor giving rise to the disease. When I was in India (1885-87) up in the Terai, at the foot of the Himalayas, known as the malarial belt of that country, I noticed that all those engaged in work upon the tea estates, especially the natives, were very punctual in retiring to their respective homes, situated high up in the hills, before sunset, knowing

well to their cost that if they were exposed for any length of time at night in the low-lying district the result would probably end in "dengue" fever. Again, during a four months' camping out in British Columbia in 1891, a country where mosquitos abound, I never came across a case of malaria, neither did I hear of such cases occurring in the districts I visited at any season of the year, although a good many of the ne'er-do-wells were very often exposed to the open air and mosquitos at night, having to lie on mother earth for a bed. From these observations it seems very clear that the persons who are liable to fall a victim to the fever in question are those "exposed at night" in any low-lying marshy district. The greater the variation between the midday and midnight temperatures in these districts, the greater are the chances of being stricken with this fever.

Dr. P. O'Connell. (Stillorgan Castle, co. Dublin), writes: In the short article from me on Mosquitos and Malaria, published in the Journal of September 23rd, page 823, a few printers' errors occur. In the first paragraph, line 5 from the bottom, the sentence, "I never suffered from malaria unless at night" should be "I never suffered from malaria unless out at night." In the second paragraph the tract mentioned should be "from Memphis, Tennessee, to Vicksburg, Mississippi;" and in the last line of the same paragraph the word "malaguo" should be "malagua."

University of Edinburgh: Practical Work.

Mr. James Cameron (Edinburgh) writes: In the British Medical Journal of September 23rd the new arrangements of the Physiological Department are noticed. May I suggest to those who arrange the subjects of the medical curriculum in the University the inclusion of a short course of "practical" organic chemistry in the "First Professional" course of study? To the student with some previous knowledge of practical organic chemical methods the further study of chemical physiology is profitable and attractive, and I am sure the above-suggested addition in the first year of study would materially lessen the student's later difficulties in chemical physiology, materia medica, and the newer developments of bacteriological and clinical chemistry.

Notice in Indian Hotel.

I. M. S.—The notice to which our correspondent calls our attention is evidently intended for the benefit and guidance of military officers travelling through Bombay who are entitled to the services in sickness of the Presidency surgeon in question for themselves and their families without payment. These gentlemen are often at a loss to know whom they are entitled to call in on emergency, and where he lives. The notice was no doubt issued with the knowledge and consent, perhaps at the suggestion, of the Presidency surgeon, in view, probably, of inconvenience or hurtful delay arising from the want of the knowledge conveyed by it. We do not think the notice can be looked upon as an advertisement, but rather as an act of consideration and kindness.

Vaccine Blowers.

The Jenner Institute for Calf Lymph (Church Road, Battersea, S.W.) write: Referring to the communication from Dr. Charles Penruddocke, Bath, will you kindly allow us to state that we made vaccine blowers with indiarubber bellows nipple in the way he describes, and sent many hundreds of them to the profession without charge, the latter end o last year. They were noticed in the British Medical Journal on December 10th, 1898.

Dr. Wm. A. S. Royds, Public Vaccinator (St. Mary Bourne, near Andover) writes: I have for some time past solved the difficulty of the vaccine blower by doing without one altogether. I find that a large part of the lymph in a L.G.B. tube readily flows out on the ends being broken off, and much of the rest can easily be shaken on to the lancet. It speaks well for the method, and for the quality of the matter, that I do not fail to get a good result from all my four insertions.

Administering Anæsthetics to Patients of Unqualified Dentists.

Mr. J. Maclean Carvell, (Catford, S.E.) writes: With reference to your answer under the heading "Administering Anæsthetics to Patients of Unqualified Dentists," page 820 in the British Medical Journal of September 23rd, would it not be better to use the term unregistered instead of unqualified? as there are many dentists (some doing large practices) whose names no not appear in Churchill's *Medical Directory* because they do not hold an L.D.S. qualification; but who are on the *Dentists' Register* in consideration of having been in practice before 1878.

A Protective against Fleas.

Dr. Fred Edge (Wolverhampton) writes: Although the point I wish to draw attention to may appear trifling and perhaps unsavoury, I think it worth noting in the cause of comfort. If there is a flea upon any of my out-patients it at once changes its host upon being brought into my presence, and I have often been secretly troubled in my mind as to whether this was a proof of my tissues being "higher" than the average. Lately I have been chewing some sulphur lozenges, and I noticed that since then several fleas have run about my skin merely tickling me, but not biting. So I write to ask those who suffer from being too much appreciated by the smaller beasts of prey to try the effects of impregnating all their excretions with sulphides, which the fastidious insects abominate.

Gowns for Medical Practitioners.

Dr. J. Swain Scriven (Abberley, Stourport) writes: Allow me to add a word in favour of Members or Licentiates of the Colleges of Physicians and Surgeons being granted a distinctive gown. There is no reason why it should not be given; in the law solicitors wear gowns, but different to barristers. It would be well if a distinctive badge were worn—red or dark blue for England, light blue for Scotland, and green for Ireland—the gown to be of black stuff. I trust the grant will soon be made. The sneers of opponents to the gown are not in good taste. The objections need not be at the expense of buying one nor of wearing one.

Chloroform after Tartar Emetic in the Reduction of a Dislocation.

Dr. Henry Appleton (Kidsgrove) writes: The following experience single-handed in country practice is instructive: I was called to a labourer, who had fallen a distance of 20 feet from a roof into an empty railway truck, and from thence through an opening on to the ground. He escaped with a dislocation (subglenoid) of the shoulder. I failed to reduce after several attempts at the scene of the accident. At his own home a few hours after I gave him 2 grs. of tartar emetic. As this, however, failed to lessen the strong muscular rigidity to allow of reduction, about twenty minutes after the vomiting had ceased I administered chloroform. Very little was required to produce rapid anæsthesia, with a brief excitement stage; the hard, rigid muscles soon became flaccid, and reduction was easily effected in a few minutes from the commencement of inhalation. The patient was a broad-shouldered, powerful workman, or I should have hesitated to administer chloroform so soon after a full dose of antimony.

The Effects of the Roentgen Rays on Man.

Dr. Albers-Schönberg, of Hamburg, editor of the *Fortschritte auf dem Gebiete der Röntgenstrahlen*, proposes that a collective investigation should be made as to the effects of the Roentgen rays on the human organism. He therefore invites all medical practitioners who have made researches in this province of medical science to send a brief report of their results and observations to him at 38, Esplanade, Homburg. The material thus collected will be put in order and prepared for publication. It is hoped to submit the whole mass to the German Surgical Congress, when it might form the basis of a discussion. The investigation is intended to be complemental to that begun by the Roentgen Society of London.

LETTERS, COMMUNICATIONS, Etc., have been received from

A Dr. H. Appleton, Kidsgrove; Ambulance; Assistant; J. Aymer, M.B., Bervie. B Mr. S. Bolton, Nottingham; Mr. R. A. Bayliss, Bath; Mr. T. W. W. Bovey, Abbotsbury; Mr. G. H. Broadbent, Manchester; H. G. Barling, M.B., Birmingham. C C. J. T.; Mr. A. J. H. Crespi, Wimborne; Caveat Actor; Dr. W. H. Calvert, Melrose; Mr A. H. Cheatle, London; Mr. J. M. Carvell, London; Dr. J. Cameron, Edinburgh; Mr. W. A. Creedon, London; C. J. W.; D. R. Crow, M.B., London; Carl. D Mr. L. de Fonblanque, London; Dr. C. E. Douglas, Cupar Fife: Mr. W. F. Dearden, Manchester; Sir D. Duckworth, London; The F. A. Davis Co., Philadelphia. E Mr. S. Edgecumbe-Rogers, London; Mr. R. Evans, London. F Dr. T. Fisher, Clifton. G Mr. J. Godding, London; Mr. G. T. Gifford, Darwen. H Dr. W. Hutchinson, London; Mr. P. J. Hart, Ventnor; Dr. T. B. Hyslop, London; Mr. T. G. Herder, Cardiff; Dr. J. P. Henry, London: Mr. T. Holmested, St. Heliers. I Inquirer. J Mr. J. B. James, London; Jenner Institute for Calf Lymph. Manager of, London; Mr. H. J. Jennings, London; J. S; Dr. E. Jepson, Durham; Juvenal. K Mr. W. R. Kemp, Birmingham; Mr. F. Kinton, London. L Dr. W. G. V. Lush, Weymouth; Mr. J. S. Lucas, Bristol. M Mr. P. Michelli, London; Mr. W. A. Maggs, London: Mr. J. McKay, London; Mr. F. C. Melhado, London K. W. Monsarrat, M.B., Liverpool; Medical Coroner; Member; Dr. R. H. Milson, London; M.B.; M.O.H.; Dr. C. F. Moore, Dublin: Dr. J. E. Moorhouse, Stirling Member B.M.A.; Messrs. J. Maclehose and Sons, Glasgow. O Mr. W. B Orme, Port Said; Dr. P. O'Connell, Stillorgan. P Dr. F. Page, Newcastle-on-Tyne; V. Pendred, M.B., London; Physician; Puzzled; F. M. Pope, M.B., Leicester; P. S. C. S.; Dr. J. F. Porter, Helmsley; Mr. J. H. Potter, Porlock. Q Query. R Reader; Mr. E. J. Reid, London: Mr. R. Reid, Whiteabbey; Mr. W. A. S. Royds, St. Mary Bourne; Mr. T. Richmond, Glasgow. S Mr. H. Stubbs, Madeley; St. Mary's Hospital Medical School, Secretary of, London; S. Stephenson, M.B., London; Rev. J. Stratton, Wokingham; St. Thomas's Hospital Medical School, Secretary of, London; Mr. W. M Scott, Bridgwater; Dr. J. S. Scriven, Stourport; Messrs. Street and Co., London; Messrs. Shaw and Sons, London. T Mr. J. Timewell, London; F. Taylor, M.B., London; Dr. J. Thomson, Portrush; Mr. G. E. Twynam, London. W Dr. J. P. B. Wills, Bexhill-on-Sea; Dr. H. W. Webber, Plymouth; Dr. R. Wise, London; Dr. R. Willson, Oxford; Dr. A. S. Wohlmann Bath, etc.

BOOKS, Etc., RECEIVED.

Surgery. By T. Pickering Pick. London: Longmans, Green, and Co. 1899. 25s.

Atlas und Grundriss der Bakteriologie und Lehrbuch der speziellen bakteriologischen Diagnostik. Von Dr. K. B. Lehmann und Dr. R. O. Neumann. Teil I and II. Zweite Auflage. Munich: J. F. Lehmann. 1899. M.16.

Atlas und Grundriss der Gynäkologie. Von Dr. O. Schaeffer. Zweite Auflage. Munich: J. F. Lehmann. 1899. M.14.

Ten Shillings a-Head per Week for House Books. By Mrs. C. S. Peel. London: A. Constable and Co. 1899. 3s. 6d.

Overpressure. By S. de Brath and F. Beatty. London: G. Philip and Son. 1899. 3s. 6d.

Nugæ Canoræ; or Epitaphian Mementos (in Stonecutters' Verse) of the Medici Family of Modern Times. By Unus Quorum. Portsmouth: Holbrook and Son. 1899. 3s. 6d.

Natural and Artificial Methods of Ventilation. London: R. Boyle and Son. 1899.

Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1898. By J. Calvert, M.D., A. E. Garrod, M.D., and H. J. Waring, M.S. London: C. Skipper and East. 1899.

Pneumonomykosis aspergillina. Von Dr. F. Saxer. Jena: Gustav Fischer. 1900. M.11.

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OPENING OF THE MEDICAL SCHOOLS: INTRODUCTORY ADDRESSES.

MASON UNIVERSITY COLLEGE, BIRMINGHAM.

By Sir William T. Gairdner, M.D., K.C.B., F.R.S.,
Professor of Medicine in the University of Glasgow.

TWO DISCIPLINES IN EDUCATION.

Not very many weeks ago I had the opportunity of spending a long summer day in the country with a friend who, if I were to name him to you, would be recognised by many here as one of the foremost men and one of the greatest authorities in medical science; and along with this old friend we had one of the very foremost physicians of the American continent, a guest for the day like myself, in a most beautiful country within easy hail of London amid the downs of Surrey. The occasion was one which might have led to discussion of some of the points I intend dealing with in the present address. I do not remember that there was much, if any, discussion of that kind among us, and yet I have something like an instinct that you may take what I shall deliver to you as being substantially in harmony with the views and opinions of these eminent colleagues. One thing, however, I may here mention as having taken some hold upon my own mind, that of a lifelong teacher of medicine. This was a lecture given by our host in the afternoon to a mixed audience of all ages and ranks, within an "educational museum" that owes its existence in this sequestered village to the energy and restless fertility of resource that characterise my friend alike in his professional career and in his relaxations—if so they may be called. This lecture was one of several carried on at intervals during the summer and autumn, under the auspices of a local committee with whom the museum is vested as a trust. It goes without saying that the lecture was no common one—it could not have been so, considering the lecturer—but as it is with the method more than with the matter of the discourse that I am concerned at present, I will venture to use it as an illustration, without too many details.

One thing, however, particularly struck me, in the very commencement of this altogether remarkable lecture. It had been announced that the first twenty minutes or half hour would be given to some common object or objects freshly provided, while the remainder of the discourse was to be upon "Whales." In this first portion the keynote, as it were, was struck by presenting to an intelligent little maiden of perhaps 12 years old, sitting near the lecturer, a severed branch of a fir tree just imported from the adjoining woods, and asking her, "What is that brown object growing in the cleft of the branch there?" "A pine cone?" "No, it is not a pine cone, though it may look a little like it. You see it has some of the green leaves growing out of it. Now, take this knife, and cut what you supposed to be a cone down the middle." This cut being performed revealed an insect inhabiting the woody growth, and this led to a few minutes' discourse on these animal parasites, or galls, in their more general relations. Then followed an exhibition of potato blooms, so recently recovered in our fields after many years of almost entire absence; with some remarks on the possible causes of these changes; but, as I have said, the details of the lecture being of less consequence for my present purpose than the method of it, I will pass over what was said upon this subject. Interest being thus thoroughly aroused, alike among old and young hearers, by this dealing with common objects, the main subject of the lecture as announced was proceeded with, and proved to be a most philosophical, though by no means too abstruse, discourse on dried specimens in the museum, of the structure of certain whales and their congeners, the dolphins, narwhals, etc., following out the lessons to be derived from the modifications of the skeleton and the dental apparatus in different tribes of animals more or less resembling each other, as viewed in the light of Darwinian principles by a thorough and experienced student of Nature. It was a lecture which, from plain and simple, very visible and very tangible facts, presented in the first instance objectively (to use a comparatively modern philosophic word), extended up to very general and somewhat recondite laws of Nature; but above all, it was a lecture which had "Nature" for its groundwork and its basis, observation of Nature for its primary method; and which thus tended to quicken, or educate, in an equal degree, the faculties of observation and those of reflection.

The Method of Science.

In the course of hearing this admirable exposition, and noting at the same time the very vivid and unfeigned interest displayed in it by old and young alike, I was led into some considerations which were not by any means new to me (as you will presently find), but which I have since thought might be turned to account as a fitting basis for the present address. Observe, once more, that it is the method, and not the matter, of this teaching on which I desire your attention to be fixed as students of medicine. It would be going too far, perhaps, to affirm that the method here in question is the exclusive method of medical science or of any other science. But it is, in a broad and general sense, the method of science, as distinguished from literature and philosophy, which in days not very long past well-nigh monopolised the field of education, and seemed to many generations of our ancestors to comprehend, if not to exhaust, all the available faculties of the human mind. My desire is not to disparage literature and philosophy, much less to insist upon these, or any department of them, being supplanted by newer methods in education; but to show that what I have already called the objective method has, and ought to have, a quite definite place in all education, from the infant school up to the university; and that to refuse or deny to it this proper place is practically to arrest the growth of certain faculties which are at least as important in the evolution of an educated human being as are those which have for ages been subjected to the disciplinary methods commonly called scholastic, inasmuch as these methods have had almost the undisputed possession of the schools, and therefore of the minds trained in them. My argument will be, not that the scholastic discipline is bad of its kind, but that it is, or at least has been, defective: not that its results, so far as attained, were otherwise than most important and valuable, but that other results, which should have grown up side by side with these, and in perfectly harmonious association with them, have been artificially withheld and denied the opportunities of development which they might have had, and would have had in a complete and well-balanced educational system.

This complaint is not new. The late Professor Huxley, in the course of a long and busy life devoted in almost equal proportions to science and to controversy, omitted no opportunity of urging the claims in education of the kind of discipline here referred to; and in his case the brilliancy of his own literary gift, and the luminous powers of exposition which he applied to certain philosophical topics, forbade the idea often—and perhaps in some cases justly—entertained of the mere scientist, that in the riding of his own hobby he would willingly ride over, or at least would be utterly careless of, everything else that came in the way. Moreover, in his lecture—On a Piece of Chalk—Huxley has left to us a practical and outstanding illustration of the kind of wide scientific outlook that may be based even upon a very common object, and of the singular attractions which such an exposition may have—and ought to have—for all minds that have not been already fatally distorted by overmuch and exclusive training in book-lore, and the merest pedantry of current educational systems. And almost, or quite a generation before Huxley, when, indeed, that brilliant and combative genius may have been (for aught I know) among the early entranced child-listeners at the Royal Institution, Michael Faraday was experimentally unfolding and expounding the Chemistry of a Candle to audiences which, although the simplicity of the treatment was such as to fascinate children in their Christmas holidays, and was in the first instance intended for them—came to include also many of the most gifted statesmen, philosophers, and adult persons of social eminence, in London.

Faraday on English Education.

These lectures at the Royal Institution, by one who is confessedly one of the greatest scientific investigators of the present century, were probably responsible in some degree for the first effective protest against the one-sidedness of the scholastic methods as then pursued; for in 1855, Faraday

(although with characteristic modesty he confessed himself to be "not an educated man") affirmed, in presence of Prince Albert and a large assembly of highly-cultivated and socially notable persons, his clear conviction that the most highly-educated minds in this country were often entirely undisciplined in the merest elements of the knowledge of things as opposed to words and abstract ideas, and that these minds, even in mature age, remained impermeable to truths which, to one with any scientific discipline at all, were all but axiomatic.

Faraday was not only assured by his own experience as a teacher that very young minds were open to receive, and ready in apprehending, the data and inferences resulting from well-conducted experiments, but he had also had before him the fact that in the most highly-cultivated classes in English society persons were to be found on whom experimental and physical evidence failed to make any impression at all, when brought into contact with an *a priori* conviction, however foolish and absurd. The crude impostures of table-turning, spirit-rapping, and other quasi-supernatural manifestations were at this period in full flow of their fashionable popularity; and Faraday, who was withal a man of the most sincere and profound religious faith, maintained without hesitation that these materialistic communications, alleged to be from the spirit world, were as such wholly unreal and misleading. As regards some of them, he proved to demonstration, by physical experiments of a remarkably simple kind, that this was so. But still the great world, and the fashionable world of society, went on believing and furnishing converts to wholly-exploded fallacies. Faraday was thus led to the conviction that there was a grave deficiency in the scholastic discipline of very high-born and distinguished Englishmen in his day; and in 1862 he obtained the opportunity of explaining and impressing this opinion more at large before the Public Schools Commission of that date.

When addressing the British Medical Association from the President's chair, in Glasgow in 1888,[1] with special reference to the demands of medical education, I had occasion to cite this testimony of Faraday at some length, with the view of showing that although some response had even then been made to his modest representations, supported as they were generally by the Public Schools Commission already referred to, and still further by a later Commission on Scientific Instruction in Public and Endowed Schools, in 1875, there was still much to be done before the lessons read to the first of these Royal Commissions by this great master in science could be said to have had their just effect. Faraday was himself fully aware of the difficulties, and even dangers, of prematurely urging, or rather forcing, the claims of science teaching; and no one could be less open than he to the reproach of having made revolutionary proposals in favour of science, to the detriment of the older and more established scholastic discipline. Others were no doubt much more impulsive, or less restrained, or less unwilling than he was, speaking always, as he did, in the character of one who was "not an educated man," to carry war into the camp of the humanists. In the admirable Romanes Lecture recently published by my former colleague, Professor Jebb,[2] I find generally that the Sixties—that is, the years immediately following the report of the Public Schools Commission—are referred to as being the critical moment, "a moment in this century when the attack upon the humanities was somewhat formidable." It is very satisfactory to note that, as the result of his whole investigation of the subject, Professor Jebb considers that the humanities have successfully weathered this storm, and are now, towards the close of the century, in a stronger and more secure position than they were before. "In the Sixties," he writes (p. 35), "considering the strength of the attack both from without and from within, the position of humane studies was certainly more seriously imperilled than it had ever been before.....The danger was lest the powerful alliance between insurgent men of science and disaffected humanists, aided by the legions of Philistia, should force on a movement for imposing restrictions in a spirit altogether favourable to the new studies, but unfriendly to the old; with the result that classical studies might be so narrowed, so hampered, so maimed, as to lose nearly all their educational virtue; and, after languishing for a time, might gradually die out of the schools."

The other side of the question is stated not less candidly, though not, perhaps, with the same fulness of knowledge as regards scientific results and methods, by Professor Jebb, as follows (p. 37):

"In the last thirty years the position of the humane letters, relatively to other studies, has been altered in several important respects. The study of the natural sciences is now firmly established in schools and universities; it can no longer be said that a haughty and exclusive humanism keeps them out of the educational field; indeed, there are not a few seats of learning where they hold a clear predominance.....This establishment of the modern studies is, so far as I have seen, viewed by humanists generally with cordial satisfaction. The spirit of humanism, indeed, wherever it is not a narrow pedantry, is one which welcomes every accession to the domain of sound knowledge. Meanwhile, the claims of humanism itself, sifted by a period of controversy, and illustrated by larger views of liberal education which now prevail, are usually stated with more discrimination than formerly, and are more willingly and more widely acknowledged."

THE "ATTACK" ON HUMANISM IN THE SIXTIES.

This is surely a very satisfactory result, so far, of a controversy in which, as I have all along held and maintained, the two parties that have appeared as jealous rivals in the educational field ought in reality to have been the best of friends; inasmuch as each of them was pursuing an end quite necessary in itself, and one which, rightly understood, so far from excluding or being incongruous with the other, ought rather to have been considered as giving it the support and assistance required in working out a common purpose—the all-round evolution, or education, of the faculties of the human mind. But I am by no means convinced that the "attack" (to use Professor Jebb's expression) on humanism, which is attributable to the introduction of the methods of natural science into education, has by any means exhausted itself, even now. All the more, therefore, I am grateful to the Romanes lecturer for making it clear to me and to all men that the danger which was so seriously apprehended in the Sixties has been averted, or (as I should put it) shown to be really no danger at all; and that everything in humanism that is most of its essence, and therefore of most abiding value, has not only survived this "attack," but has become stronger and more broadly and truly human, through the trials to which it has been exposed. Partly by getting rid of certain pedantic and deeply engrained defects of method, and partly by the development of quite new kinds of interest in the old and traditional studies, the classical and other pursuits which constitute humanism have been strengthened, rather than weakened, by the intrusions of the new or more modern elements in education. As Professor Jebb himself puts it (page 34), "the humanistic studies have, during this century, become wider and more real. They have gradually been drawn out of a scholastic isolation, and have been brought more and more into the general current of intellectual and literary interests. So far from losing strength or efficiency by ceasing to hold that more exclusive position which they occupied two or three centuries ago, they have acquired a fresh vigour, a larger sphere of genuine activity, and a place in the higher education which is more secure because the acceptance on which it rests is more intelligent."

DANTE—PETRARCH—ERASMUS. THE ITALIAN RENAISSANCE.

It would be very unbecoming in me to attempt to add anything new to the force of these words, carefully set down as the result of a lifetime of experience and research by perhaps the greatest of our living humanists, a friend and—I am glad to recall the fact—an ex-colleague of my own in the University of Glasgow. But I may be permitted to remark that this hopeful and tolerant attitude of mind towards the changes in our educational policy that have been gradually taking place since the early Sixties has been by no means universal; and that the admission of the new methods and new forces of scientific training into our educational system has been very grudgingly and often inadequately conceded by those who, themselves trained on the older lines, and being officially masters of the situation, have treated all innovations as hostile, and their authors as enemies to culture instead of friends in disguise. Perhaps there may also have

been a spirit of undue aggression and even contempt on the other side, among those who have written and spoken as if the so-called "modern" studies were all in all in this nineteenth century of ours. To such over-zealous partisans the *apologia* of Professor Jebb may be commended as a temperate, careful, and I need scarcely say thoroughly well-informed historical and argumentative statement of the claims of *Humanism in Education*. He attributes to Petrarch the honour of being the pioneer in "that great movement which we call the Renaissance." Dante, who was 39 years old when Petrarch was born in 1304, was the last great (and perhaps the greatest) figure of the middle age "standing in the borderland between the darker ages and the revival, when he shows us a keen intellect and a sublime imagination moving within the limits, and obedient to the forms of mediæval thought." "At the further verge of the Renaissance" (and at quite two centuries distance from Dante) we have "Erasmus, the lifelong antagonist of the schoolmen, who makes so vivid to us the contrast between the intellectual atmosphere of scholasticism and that which the humane letters had created" (p. 6). And in these two centuries no one surely will now attempt to deny that the human mind awoke as from a slumber, and entered on a new course of life and activity, as a consequence of the Italian revival in the fourteenth century. "Petrarch's ideal of humanism," says Professor Jebb (p. 7) "as a discipline which aims at drawing out all the mental and moral faculties of man, pervades the whole course of the Italian Renaissance."

That this ideal was not always attained; that it was "often obscured by affectations or puerilities;" and "not seldom belied by evil living"—a kind of revived Paganism, in short—Professor Jebb frankly admits. But, all the same, it was "a real force, which comes out more or less in all the greater and nobler of the humanists." To all this, considered as the history of a great movement which began more than 500 years ago, and has had an abiding influence on the educational methods of all European countries, one can readily assent, while maintaining, with Faraday, Huxley, and all the great scientific authorities of the present century, that the discipline of humanism requires now to be supplemented by a newer and different discipline; and this, not merely and not chiefly on account of the utilitarian value of the latter, but in obedience to the very principle attributed to Petrarch, that education, in the large and liberal sense of the word, should be such as to "draw out all the mental and moral faculties of man."

It is with a view to this distinction, that I have ventured to give this address the title of The Two Disciplines, and I hope to show you, before I have done, that without at all disparaging the first, or older discipline, that of the Renaissance, commonly called Humanism; the second, which finds its objects in the physical facts of Nature, and its methods, generally, in those of what we call physical and natural science, must be firmly upheld and pressed home, until it permeates every phase of education, as I said before, from the kindergarten school up to the university.

What the Renaissance failed to do.

The great men of the Italian Renaissance, owing to the very fact that they were so exclusively and completely preoccupied by the revival of learning, and mainly of classical learning, could not be expected to perceive that learning, even if we include in it philosophy as well as literature, and mathematics as well as philosophy, does not by any means exhaust the cycle of human faculty. It would have been indeed marvellous if, in an age when astronomical science, founded in genuine and on the whole exact observation of Nature thousands of years ago in Chaldæa, and methodised (though erroneously) by Ptolemy, had degenerated into astrology; when chemistry (whatever there may have been of it) had passed into the visionary search for the philosopher's stone and the elixir of life; when biology, pursued at least on a large basis of observation by Aristotle, had become absolutely inept, and a mere repetition of verbiage attributed, and often ignorantly attributed, to the ancients; when anatomy, founded at least on something like personal observation in Galen's time, and carefully pursued by Erasistratus and others in the Alexandrian school, had altogether perished, and was, indeed, forbidden by authority; and when the science and art of medicine, so necessary at all times for the preservation of life and health, had become a mere craft, with such learned equipment as we read of as Chaucer's "Doctour of Physike";—in such an age as this, it would have been more than human, if the pioneers of the Renaissance had ever thought of placing the discipline of science, or of any kind of observation of Nature, upon their programme of an all-round education of human faculty. In their revival of classical learning, they had the support and patronage of Popes and of Medicean princes, even when the trend of the new studies seemed to be in the direction of sheer paganism alike of thought and of life. It was safe enough to denounce, or to ridicule, the pseudo-sciences of the time; and this (according to Professor Jebb) the humanists did, and did effectually, especially as regards astrology; for "from Petrarch onwards," he says (p. 15) they "made open war on this flourishing imposture." But the discipline of true science (or of natural and physical phenomena) was a very different thing from this negative attitude towards its counterfeits; which may, however, be placed to the credit of the humanists. From no Pope or Medicean patron in those days could any effectual assistance have been expected, either in genuine and fruitful investigations of the *arcana Naturæ*, or in teaching the methods of "science" as we now understand them. The fate of Roger Bacon, in the century immediately preceding Petrarch, and of Copernicus and Galileo later on, remain for us as standing monuments at once of the dangers that waited upon the pursuit of physical science in mediæval times, and of the small share that the movement called the Renaissance can claim in advancing these pursuits to a place in the education of humanity.

Notable Phrase of J. C. Scaliger.

There was, however, at least one humanist of the later period of the Renaissance who, by a single brief epigrammatic phrase, has managed to show that he at all events was not wholly insensible to the value of a discipline such as Faraday advocated and practised, and such as we are now considering in this address. The Scaligers, though they bear a name of distinction, were not perhaps in the front ranks of the humanists, and certainly did not do very much in their day for the advance of science. But the elder of the two, Julius Cæsar Scaliger, was trained as a physician, and I believe practised as a physician; and in writing to another and perhaps more eminent physician, Jerome Cardan, somewhere about the year 1557, in the course of a long, desultory, and somewhat unreadable dissertation,[3] *De Subtilitate*, he has formulated the following very notable phrase, pointing, as he seems to think, to something wanted in the educational tendencies of his time. The special subject in view is rock alum, and the fallacies current in respect to it; and I am certainly not here to allege that the reflections of Julius Cæsar Scaliger on rock alum have any kind of resemblance to those of Mr. Huxley on A Piece of Chalk. But it is something, surely, to have compressed into seven brief words of Latin an idea so foreign to the humanism of the Renaissance as the following: *Rerum ipsarum cognitio vera e rebus ipsis*. If Julius Cæsar Scaliger had been Michael Faraday, and if he had lived in the nineteenth century instead of the sixteenth, he could hardly have given a more complete and condensed expression than we find in these words to the defect in the purely humanistic programme of education on which Faraday so strongly insists in his evidence before the Royal Commission in 1862. What Faraday deplored as being defective in the most highly-educated Englishmen of his day was the knowledge of things as opposed to words and abstract ideas of things—or, in the phrase of Scaliger, a true cognition of the things (or objects) themselves taken directly from the things themselves. The argument of the highly-educated grammarian of the sixteenth century was that the want of this direct knowledge of things led to some curiously distorted views about rock alum and many other natural phenomena. The contention of the "uneducated" philosopher of the nineteenth century was that the "want of judgment in natural things" and the "great deficiency in the power of giving the reason why" were such among the educated class as often to defeat the ends of justice in courts of law, and to lead to the most humiliating exposures of confident ignorance and presumption in matters of fact; and all this in the case of persons

who had received every advantage, and who in all kinds of learning and in the discipline then provided in the schools stood in the front rank of Englishmen. And here it was that the almost unique experience of Faraday—unique at least at that time—came to his aid; for he had found personally, in the course of his lectures in the Royal Institution, that the elementary ideas of the "judgment in natural things" were not only easily conveyed into the minds of children, but had a peculiar fascination for them. "The young mind," he says, "as I find it ..... is very observant and asks most acute questions. I do not find it, generally speaking, backward to understand a statement I make in simple language; and if I tell him this or that.....and then shape it into a question, he can generally answer me. I must confess to you that I find the grown-up mind coming back to me with the same questions over and over again.....Their minds are not prepared to receive or to embody these notions, and that is where you want education; to teach them the A B C of these things.....I never yet found a boy," he says in another place, "who was not able to understand by simple explanation and to enjoy the point of an experiment."

I am repeating, gentlemen, in these quotations from Faraday's evidence, and in some of the remarks attached to them, the very words that formed part of my address to the British Medical Association in 1888. But I think you will concede to me that the words are worth repeating. Here is a master in science, if ever there was one; but one who, nevertheless, proclaims himself "not an educated man" according to the conventional views of education in this country. He does not, however, express any resentment at the current discipline, or any desire to attack or destroy it. "I should be very sorry," he says, and evidently with conviction, "that the introduction of science should be an injury to any other branch of knowledge." All the same, however, he insists with the confidence of one who thoroughly knows what he is speaking about on the disastrous effects of an omission which he finds in the highest and most coveted English disciplines of his own day. And this omission is practically identical with that foreshadowed by the man of the Renaissance, Julius Cæsar Scaliger, in 1559—*rerum ipsarum cognitio vera e rebus ipsis*.

In thus insisting on this old and half-forgotten expression, I do so not because it had any considerable effect at the time, or because it had much apparent significance in relation to the career either of Scaliger or his correspondent Cardan; but because it formulates for us now more exactly and more briefly than any other words I can devise, the kind of discipline and method which in the commencement of this address I had it in view to illustrate, and which it was Faraday's object to introduce more largely into education. The essential difference of the "two disciplines" (as I have ventured to call them by way of contrast) is that one is based upon ideas which have already received expression in human speech; while the other is concerned chiefly with objects, that is, with phenomena occurring in external Nature. The former discipline accordingly is (whatever else) necessarily preceded by and mainly founded on linguistic studies, and keeps close to them throughout, inasmuch as language is not only the vehicle of ideas, in respect of their intercommunication; but (as Max Müller has so cleverly put it) the λόγος is at once the word and the thought, the one being in a practical sense inseparable from the other. Hence the trend of this discipline is towards humanism—that is, towards the discovery and highly elaborated study of the best models and examples alike of thought and of expression; the noblest and most inspired ideas of the most outstanding men, clothed in the most appropriate and (if it may be so) beautiful, but at all events fitting and luminous, words. The men of the Renaissance found this kind of perfection in the literatures of Greece and of Rome, and directed all their energies to the revival of these, and to living over again and thinking over again the best ideas of classic antiquity. Nor is there anything to be said against this noble humanistic ideal, as it presented itself to Petrarch in the fourteenth, or to Professor Jebb in the nineteenth century, except what the latter indeed frankly admits. Humanism may be "obscured by affectations or puerilities," it may be "belied by evil living," founded on the too admiring familiarity with Pagan practices and habits of thought; or it may, as a discipline, become much too technical, as sometimes in its grammatical developments, to be a good all-round education, even for a humanist; for, as we read in the Romanes Lecture (p. 27), "the modern specialist in certain branches of classical study may come perilously near to passing out of the province of humanism."

Λόγος AND Φύσις.

Such, then, are the leading characteristics of what we may call, historically, the older and, until recently, paramount scholastic discipline, founded mainly on language, and including in its widest range philosophy and mathematics, which are also, as studies, only to be compassed through verbal symbols and definitions, underlying their whole argument. This discipline begins in the individual man with the actual A B C, or rather with the first spoken words of the child, and is methodised and expanded in the school and university either into humanism of the classic and renaissance type, or into some other variety of literary and philosophic evolution founded on this, but more largely permeated by modern ideas. Having in view the contrast I am about to present to you, and also the large and comprehensive interpretation placed upon the word by Max Müller, I am disposed to indicate the whole of this discipline in one Greek word, and call it the discipline of λόγος.

But now let us revert for a moment to the other discipline, which occupied our attention in the beginning of this address—and which, instead of calling it by the ambitious title of the discipline of science (although it deserves to be so called) I prefer now to consider under its simpler and more universal aspects, as the disciple of φύσις—that is, of Nature and natural phenomena. I have already employed this expression for it in my former address, and have had occasion to point out that by a very ancient tradition embodied in the name *physician*, the medical art and its professors of the higher order have been all along supposed (sometimes it is to be feared erroneously) to be specially imbued with this discipline, or at least to have a quite special interest in it as the only fruitful method of medical science. It is, moreover, true at least of Hippocrates, the father of Greek medicine, that he anticipated by some two thousand years the well-known expression of Francis Bacon, by indicating the true position of the healer as being ὑπηρέτης φύσεως—the servant (or minister) of Nature. And, if further evidence were required, the very foundation of what we now call biology, pursued in relation to the art of healing, came to be spoken of at a very ancient date as physiology—the doctrine, or λόγος of φύσις—a designation which it has retained till our own day. There is thus a reasonably good traditional ground for the position in which we stand to-day—in this flourishing medical school of a nascent university—pleading for the more ample recognition of the discipline of φύσις in relation to general education.

It is perhaps worthy of note here that, in the natural order of evolution of human faculty as regards the individual, the discipline of φύσις is first, that of λόγος second. The latter commences with the first words spoken or apprehended by the infant, followed up in time by the A B C. But the A B C of φύσις begins in the cradle, in the very first hours of conscious life. The whole existence of the infant is a discipline—sometimes a painful, oftener a joyous one—in the wide school of natural phenomena. His very primordial instincts—the play of hands and feet and lungs and voice, tutored and guided by experience, are a part of that natural discipline. To learn that fire burns, and that water cools and cleanses; that iron is hard and heavy, while wool is soft and light; that colours, sounds, tastes, and smells differ, and may mean good or evil, help or hindrance, in particular circumstances: these are the first steps in the discipline of φύσις, and are learned as a rule with great ease and confidence, though not without mistakes, from experience, long before the A B C of the other discipline has begun to be thought of. In the admirable kindergarten schools of recent times, moreover, the discipline of φύσις is often attended to and aided by well-contrived efforts and experiments, increasing both knowledge and power without any sense of task-work, or fatigue of body or mind, and with the clearest proof of enjoyment on the part of the child. But, so soon as the discipline of λόγος comes in, monopolising the attention and making drafts upon the intellect in the shape of memory and task-work, the more natural discipline is apt to be thrown aside or even severely

repressed, as being unprofitable in a scholastic sense. At the very least, it fails to be methodised and expanded, and is not turned to account either in a scientific or any other direction, as the discipline of λόγος is when it carries off all the tangible rewards, and in fact becomes exclusively what is called "education" on the lines of humanism, as we have just seen.

Fortunately for the human race, however, the discipline of φύσις is not confined to the schoolroom. The fisher learns a good deal of it in this commonest of sports, in studying the habits of the *salmo fario*, or even the minnows in the pool in childhood, and does not dignify what is so learned with the name of "science." The child addicted to bird-nesting, the collector of flowers, or of insects, of seaweeds, or any other natural productions, acquires a hold thereby upon one or other corner of abounding "Nature" which may or may not be wisely cultivated. In every kind of sport, in almost every occupation pursued in the country, φύσις will have her votaries, and, up to a certain point, successful students. A Gilbert White will indulge to the full his wonderful instinct for the observation of Nature even in a quiet country parsonage, and will give us the *Natural History of Selborne*. A Hugh Miller of Cromarty, combining a fine literary instinct for "humanism" with native scientific genius, will tell you years afterwards that the best part of his early education at the parish school was on the days when he "played the kip," that is, the truant, and devoted himself to long walks, taking in slowly the lessons which afterwards came out in *The Old Red Sandstone*, and *The Testimony of the Rocks*. But such brilliant aberrations of scholastic discipline only bring to mind the old Latin proverb—*Naturam expellas furcâ tamen usque recurret*. Faraday's principle is that the great natural aptitude which most boys display for observation and experiment ought to be fostered, and not hampered, in a general scheme of education. No doubt the more recondite and abstruse generalisations of "science"—especially those which involve mathematical considerations—are beyond the scope of most boys at school, as they are of most men at a later period. But that is no reason for rejecting the discipline that arises from much more simple and easy demonstrations of φύσις. The lectures on the Chemistry of a Candle were of this description, and they have been published. They were intended to show, and did show, that most important scientific generalisations, resulting from experiment, and actually demonstrated in presence of a juvenile audience, could be made perfectly clear to the minds of school children, if presented in simple language by one who was a master in the subject.

Faraday's Difficulty—to find the Teachers.

It was at this point, however, that Faraday did not fail to foresee a difficulty which is even now perhaps not unlikely to endure for some time to come. Where are the masters to come from? In his own days he said, "I am often asked what men to recommend to spread a knowledge of natural physical things. I cannot recommend such; such men hardly exist at present. They want the A B C of science, not the X Y Z; they want the first elements." Faraday was well aware that a mere scheme for teaching "science" among a lot of what are commonly called "modern subjects" would not work. "It is not the matter," he said, "it is not the subject so much as the man. You want men who can teach (science), and that class has to be created." Faraday knew well (though he did not put it exactly in these words) that "science" (so-called) might be taught out of a textbook by rote like anything else, and in such a way as not to have the smallest relation to the discipline of φύσις. The one essential point in that discipline, as distinguished from that of λόγος, is that the teaching must be real of its kind, founded on experiment and observation directly, and not doctrinal. It must be, in short, *rerum ipsarum cognitio vera e rebus ipsis*.

Now in the actual teaching of a medical school in these days, gentlemen, we do our very best to make this kind of teaching yours as far as we can. You are taken into the dissecting-room and are expected to learn for yourselves (with assistance of course), and to make yourselves practically familiar with the anatomy of the human body, by the work of your own hands and senses. You have to undergo a similar discipline in the chemical and physical laboratory, and again in the physiological, and again in the pathological laboratories, and in many others. In the great practical departments, you have your clinical work in the hospitals, which, if well managed by competent men, ought to be all a part of the discipline of φύσις and nothing else. A certain amount of dogmatic instruction by lectures and textbooks, it is true, is absolutely indispensable, and I am not here to disparage it, as I have long practised it myself, and have fully discussed elsewhere the need that still exists for it.[1] But every systematic teacher of any eminence or effectiveness will tell you that if he were deprived of his practical service, his teaching, even as a systematic and more or less doctrinal lecturer, would inevitably degenerate. Here, again, therefore, *rerum ipsarum cognitio vera e rebus ipsis* is the true note of the discipline of φύσις. If general doctrines and conclusions must needs be taught, they should be taught as much as possible in the light of instances; and the more these can be freshly provided and brought before the senses of the learner, the better.

But the question which I am here to discuss to-day, though it is one of medical education, is also one of general education, as this will, I trust, come to be largely moulded and dominated by the Midland University of the future. Would not medical education be greatly improved, and rendered easier as well as better in quality, if the well-nigh lost discipline of φύσις were to be restored, in some appreciable measure, to the "grammar school"? Nay, would not the discipline of letters itself be improved were it to become a fundamental principle in all education, from first to last, that λόγος and φύσις should go hand in hand, each of them, of course, in a measure suitable to the advancing intellect and general growth in faculty of the child or adolescent? My argument is that this ideal, though perhaps difficult of complete attainment now and for some time to come, is not impossible, nor yet in any true sense injurious to the older discipline. I take it on the authority of Professor Jebb that the "attack" on humanism in education in the Sixties has not been really disadvantageous to the latter; but rather, by purging humanistic studies of pedantic excrescences and methods, by drawing them out of a scholastic isolation, and bringing them more into the general current of intellectual and literary interests, has actually strengthened their position by making them "wider and more real." Now, if all this be true as regards the higher education, why should not the same principle, and with a like result, prevail also in the grammar school? Observe that I purposely avoid the use of the words "science" or "scientific teaching" here, because we may be dealing (as Faraday said) only with the A B C, and not with the X Y Z; and further, because "science" may be crammed out of a textbook after a fashion that makes it no more a discipline in φύσις than are the rules of prosody, or the genders of Latin nouns, or the declination of Greek irregular verbs. But when the proper kind of teachers can be obtained (and that is the greatest difficulty now, as it was in Faraday's time) the discipline of φύσις will make as great and as beneficent a change in the grammar school as it has already, in part, done in the universities and seats of the higher and more advanced learning.

On this point I find little to alter in the language I employed in 1888, a few sentences of which you will perhaps excuse me for repeating, as I cannot find any other or better terms now for expressing the changes which I have in view. "Our present programme of school discipline is still too largely founded on the idea that at 6 or 7 years old, as the case may be, a child may be withdrawn, in a great measure, from this strictly natural, wholesome, and all-round education of the faculties—that is, that of babyhood and of kindergarten school—to have his nose buried for ten long years in books and papers, and mental and other arithmetic, till his little eyes become myopic, and his little brain suffers a corresponding deformity. Athletic sports, as a counterpoise, are no doubt good, and industrial training better in some cases, especially among the children of the poor; but they do not supply the missing link, which can only be found in the early discipline of φύσις, pursued in the very spirit of Faraday." To which I should only wish now to add, in parting with that great man on the present occasion, a few words from his evidence on this very point in reply to a question as to what he thought of the ordinary grammar school discipline in this respect. "It does not blunt the mind," he said, "but it gives the growing mind a certain habit, a certain willingness to

accept general ideas of a literary kind, and to say that all the rest is nonsense.....It takes up the general impression that a certain kind of knowledge, what I call the real knowledge, the knowledge of things, is of no importance."

A QUESTION FOR THE GENERAL MEDICAL COUNCIL.

I will close with a single remark, which may have the effect, considering that my audience is chiefly concerned with medical education, of showing you that the higher orders of schools are even now awakening to the demands that may be made upon them in this respect; and that some at least of the medical examining bodies are not indisposed to encourage this movement in advance. I was obliged to separate myself at the last meeting of the General Medical Council from, I I believe, all or most of my Scottish and Irish friends, and to vote in a minority with the representatives of the English corporations. The occasion was this. You are aware that the medical curriculum has been within the last decade extended to five years; and even with this extension it is still overcrowded, and likely to become more so as the demand for special practical subjects to be included in the curriculum increases. Now, Mr. Huxley many years ago suggested—in the interest, of course, of scientific education as he conceived it—that the strictly medical training of the university and medical school proper might be lightened by getting some of the early discipline in elementary physics, chemistry, and biology into the schools, to be pursued side by side with the more ordinary scholastic discipline, before the usual age of commencing strictly medical studies. Although this suggestion was not taken up at the time, at least to any very appreciable extent, it now appears that a good many English schools of the higher kind have, by engaging science masters, and providing sufficient laboratories and apparatus, been placing themselves in a position to claim that this kind of instruction may be communicated to their pupils to such an extent as to enable them to pass either the whole or some portion of the first professional examination. The English Colleges therefore determined to recognise, after due investigation, such schools as appeared to them to be capable of giving, or rather to be actually giving, such instruction as is real and valuable in these subjects. The Irish Colleges, on the other hand, objected to this new departure, on the ground, apparently, that "grammar schools" are not, and should be practically debarred from becoming, schools of "science" in any sense such as should form part of a medical curriculum. Observe, that it is conceded on all hands that five complete years after registration as a medical student must be devoted to professional studies conducted at a medical school. The attempt, therefore, to anticipate by a year the acquisition of some of this preliminary discipline does not in any way encroach on the time or attention to be given to more strictly medical or technical studies, but rather, by clearing the way for these in advance, permits the year's passed at the medical centre to be more fully occupied by the studies proper to the medical art. I am far from assuming that no errors have been committed, or that there is not a good deal to be said on both sides; but from what I have already laid before you in this discourse, you will be prepared for the statement that I could not approve of anything that would tend to discourage the teaching of elementary science in English schools; and on this ground I voted with the minority on this occasion. I think the future is with the English Colleges in this matter, and I trust they will persevere.

I have now only, gentlemen, to congratulate you on your appearance in a school so well furnished in all its departments as Mason College, with whose origin and early progress one of my oldest friends, the late Dr. Heslop, was so closely associated that my interest in it may be said to date back to a period when I was still an Edinburgh man, an extra-academical teacher and hospital physician, and not a Glasgow University professor. I most cordially hope, for you, that the great scheme of a midland university, with which this school is destined to be ever associated, may be successfully carried out; and meanwhile, I would join in the welcome extended to you by all your teachers, in the anticipation of a prosperous and successful session.

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YORKSHIRE COLLEGE, LEEDS.

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THIRTY-FIVE YEARS OF MEDICAL PROGRESS.

[AFTER some introductory remarks Dr. Byrom Bramwell proceeded]:

After consideration it seemed to me that as my remarks are intended for the medical students who are to-day commencing the work of another winter session, it might not be uninteresting to glance at some of the chief advances and developments which have taken place in the art and science of medicine during the past five-and-thirty years, and to direct attention to some of the points of contrast between the position of the medical student when I commenced the study of medicine in the year 1865 and the position of the medical student of to-day.

It is unnecessary to say that in every department of medicine great developments have taken place, and it is impossible in the time at my disposal, even if I had the necessary knowledge and ability, to attempt to review the whole field. I shall limit myself, therefore, to one or two of the more important points.

ANTISEPTIC SURGERY.

To my mind the most striking fact, and I venture also to think the most important advance—whether we look at it from the point of view of the surgeon and general practitioner or from the point of view of the patient—is the increased safety of surgical procedure. This has of course resulted from the adoption of rigid antiseptic methods, and this great advance, which has saved innumerable lives, which has caused a diminution in suffering which is quite incalculable, which has relieved the surgeon and the general practitioner of an enormous amount of anxiety and mental distress, and which has vastly extended the sphere of activity and the usefulness of the surgeon, by rendering safe and of every-day occurrence operations which were either previously undreamt of or which were formerly so hazardous that they were never attempted except as a last resource, this great advance is, I need not say, chiefly due to one man—the illustrious Lister.

For those of you who are commencing the study of medicine to-day, and who see the results of surgical operations performed under modern (aseptic) methods, it will be difficult, perhaps impossible, to realise the conditions which were present in the surgical wards of our infirmaries in the year 1865, and the incalculable benefits which this great advance has conferred upon the human race. When I commenced the study of medicine in the Edinburgh Royal Infirmary in the year 1865 healing by "first intention" was the exception; healing by the long, exhausting, and often painful, process of granulation and suppuration, with all its attendant constitutional disturbance and grave dangers of septic absorption, pyæmia, and death, was the rule. Then operations which are now considered trifling were not unattended with danger; I remember that while I acted as dresser in the wards of the late Professor Spence, one of the ablest and most successful surgeons of his time, one of my patients died from pyæmia after amputation of a finger, and another after removal of a loose cartilage from the knee-joint. In the Edinburgh Royal Infirmary and the Newcastle-on-Tyne Royal Infirmary, the hospitals with which at that time I was personally acquainted—and they were in no way exceptional, for as a matter of fact in all of our great hospitals the results were practically the same—the mortality from septic absorption and pyæmia was terrible to contemplate. Then surgeons were loth, except under the pressure of dire necessity, to open the cavity of the cranium or the cavity of the peritoneum. Now, as you are aware, all this is changed; and I could give you no more

striking illustration of the change than the remarkable results which have been obtained by Mr. Mayo Robson in the surgical treatment of gall stones and allied conditions.

I know not whether I am right in thinking that the aseptic treatment of wounds has almost reached the utmost limit of its possibilities, but when the conditions for its application are satisfactory and when it is faithfully and carefully carried out, the results are so perfect that to me—a physician, and consequently to some extent an outsider—such appears to be the case. No doubt in the future some antiseptic will be discovered which is as powerful as corrosive sublimate, but which is innocuous when absorbed into the human system. This would be a great improvement. Or what, perhaps, would be a still further advance, some substance, possibly an an antitoxin or the product of some micro-organism, will be discovered which when injected into the human subject is innocuous, but which is capable of preventing the development of suppurative and septic processes. Such a remedy would be of incalculable benefit not only to the surgeon but also to the physician, for it would enable us to deal effectively with such grave conditions as ulcerative endocarditis, puerperal peritonitis, and some forms of meningitis,—to give only one or two illustrations.

It seems to me to be an important and instructive lesson for those of you who are studying medicine to-day—for it shows the process by which all great advances in the healing art will in the future almost necessarily be effected and worked out—to remember that the evolution and development of the antiseptic system of treating wounds, which to-day is so simple and so satisfactory, was a gradual process, the result of minute and elaborate investigations and observations both in the laboratory and at the bedside, and of indomitable perseverance and hard work.

In the early stages of its development, the antiseptic treatment met with considerable opposition and criticism. This was only what might have been expected, for it is natural and also eminently desirable, that any new departure in the way of treatment should be very rigidly tested and proved before it is adopted by the profession. Every step in the process was keenly criticised. Let me give you one illustration:

When I was house-surgeon to the late Professor Spence, a vigorous controversy took place in the Edinburgh Royal Infirmary as to the merits of the antiseptic catgut ligature. The case which gave rise to this controversy was that of a man who was admitted to Professor Spence's ward suffering from aneurysm of the carotid artery. Professor Spence decided to ligature the vessel. Antiseptic catgut had just previously been introduced by Professor Lister, who was then in Glasgow, and I, at Professor Spence's request, obtained from Professor Syme, who was a very strong supporter of Professor Lister, a properly-prepared catgut ligature. The artery was duly tied; shortly after the operation the patient became hemiplegic, and, in the course of a few days, died. The parts were removed and carefully examined. Professor Spence maintained that the catgut had softened and given way; he was, consequently, inclined to distrust antiseptic catgut. Professor Syme affirmed that the knot had been badly tied—in short, that the slipping of the ligature was the fault of the surgeon and not of the catgut. The specimen was submitted to several different observers; some of them took one view and some the other, and others—if I remember rightly—could not make up their minds as to which view was correct, or cautiously declined to give any opinion.

Subsequent experience has, of course, shown that antiseptic catgut is an admirable ligature; and in support of this proposition, and also since no more remarkable illustration could, I think, be given, of the splendid results which may be obtained by aseptic methods in the hands of the expert and skilful surgeon, I may perhaps be allowed to cite the following case:

Some two years ago a man was admitted to the Edinburgh Royal Infirmary, under my care, suffering from Jacksonian epilepsy. Drug treatment having failed to give any relief, the operation of trephining was performed by Mr. Cotterill. A portion of bone the size of the palm of the hand was removed. The dura mater was then freely opened. No gross lesion was detected, though the brain was explored in various directions with a trocar. The large wound in the dura was brought together by a series of catgut ligatures. The portion of bone which had been removed was then carefully replaced, and the scalp wound closed in the usual way, of course under rigid aseptic precautions. The wound healed by "first intention," and in the course of a few days the patient had completely recovered from the operation without the slightest pain, fever, or constitutional disturbance. Some three months after the operation the patient died in a fit. On subsequent examination it was found that the portion of bone which had been replaced was firmly and accurately united, the inner table being perfectly smooth and natural. The inner surface of the dura mater was to all intents and purposes absolutely normal. The catgut sutures remained *in situ* in a perfect state of preservation; indeed, they looked as fresh as if they had been introduced the day before. The wound in the dura was united so perfectly and accurately that it reminded me of a beautiful piece of needlework. I doubt whether the most expert seamstress, working with dead tissues (silk, etc.) outside the human body, could have produced a more perfect result.

Well, gentlemen, it is something to have seen and lived through this great advance; and you—the medical students of to-day—are to be congratulated, since, as soon as you commence practice, you will be in a position to deal with your surgical cases with a safety and security quite impossible, even for the most able and experienced surgeon, thirty years ago.

Bacteriology and Preventive Medicine.

The second great development which has taken place since I commenced the study of medicine is in connection with our knowledge of the all-important part which micro-organisms and their toxins play in the production of diseases of an infective, contagious, and septic kind.

Bacteriology is, practically speaking, a new science. In the hands of Pasteur, Koch, and a host of other brilliant and distinguished workers, most elaborate and beautiful methods of staining, cultivating, identifying, and differentiating micro-organisms have been worked out and perfected; the special micro-organisms which are the cause of a large number of infective, contagious, and septic diseases have been identified; the life-history of many of these micro-organisms has been followed out; further, in many cases the manner in which they gain access to the human body and in which they produce their injurious effects has been established; and, what is of still greater importance in some cases, methods have been discovered by which these injurious effects may be prevented or counteracted. In short, a mass of knowledge which is of inestimable importance for the prevention, diagnosis, and treatment of disease has already been accumulated. And all this, you must remember, has, practically speaking, been effected in the brief space of the last fifteen or twenty years. It is not too much to say that the science of bacteriology is as yet in its infancy. It is not too much to hope that this great advance will continue, and that even more brilliant discoveries will be made during the next five-and-thirty years. It is no extravagant expectation to suppose that effective means of preventing or combating such diseases as a common cold, influenza, pneumonia, tubercle in all its forms, typhoid fever, puerperal fever, ulcerative endocarditis, and other septic processes—to give merely a few illustrations—will, sooner or later, and perhaps before very long, be discovered.

But, further, it must be remembered that the definite knowledge which bacteriologists have furnished us with regarding the nature and life-history of many of the poisons which are the cause of the contagious and infectious diseases—although it may not as yet have been attended with the discovery of a special, and, so to speak, specific method by which these diseases can be prevented or arrested (such as a preventive inoculation or an antitoxin plan of treatment)—has had, and is having, a most important and far-reaching influence in stimulating the profession, the sanitary authorities, the Government, and the public to adopt and carry into effect the general sanitary measures which are of so much importance for the well-being of the community and for the prevention of diseases of an infective and contagious kind. In this connection I need only refer to the so-called "crusade against phthisis." The very basis of that movement, which is attracting so much attention in this and in almost all parts of the

civilised world at the present time, is the fundamental fact discovered by Koch that phthisis and, in fact, all forms of tuberculous disease are due to the introduction into the body of a specific micro-organism—the tubercle bacillus; coupled with the knowledge that phthisis is, if properly dealt with in its earlier stages, a much more curable disease than was at one time supposed.

But although preventive medicine has made, and is making, great and rapid strides, the recent legislation on vaccination (notwithstanding the fact that there has been a large increase in the number of primary vaccinations during the past half-year) is, in my opinion, an unfortunate retrogression. If there is one one fact in preventive medicine which is more clearly proved than any other it is this: that by means of successful vaccination and revaccination small-pox may be either altogether prevented or greatly modified in its severity. It cannot be doubted that if any considerable proportion of the community are allowed to grow up unvaccinated, a rude awakening will, sooner or later, take place. The pity of it is that the sufferers will be not the conscientious objectors themselves, but their innocent and unprotected children.

While I am referring to bacteriology and preventive medicine, let me express, gentlemen, the hope that some of you whom I address to-day may take an active part in what appears to me to be one of the most promising fields of professional labour. But while expressing this hope, let me at the same time point out to you that the subject of bacteriology is one which cannot be lightly taken up or easily mastered. The methods are so elaborate and technical, and the observations demand such minute care and such extreme accuracy, that in order to do good and reliable and original work in this department, a prolonged training and apprenticeship are absolutely necessary. But in this respect bacteriology does not differ from any other department of science or of medicine. In our every-day work of clinical observation and investigation exactly the same qualifications which go to form the competent bacteriologist are required. I cannot too forcibly impress upon you the necessity of acquiring, during your student days, a minute and thorough knowledge of the elaborate methods of clinical observation and research; of cultivating your powers of observation; of training yourselves in the accurate and painstaking observation of minute details; and, above all, in teaching yourselves to avoid loose and exaggerated statements, and of having, even in the simplest observation, the most scrupulous regard for truth.

THE FUTURE OF ORIGINAL RESEARCH.

And, while speaking of original work—whether clinical or more purely scientific—let me point out that the original observer of the future must start on a much more advanced platform of knowledge, and with a much more thorough grounding and more detailed and elaborate scientific training than the original investigator of five-and-thirty years ago. In clinical medicine and clinical surgery, for example, the rough work of discovery, observation, and description has, for the most part, been already accomplished. It is hardly reasonable to expect that the same number of new diseases will be differentiated and described during the next five-and-thirty years as have been differentiated and described during the past five-and-thirty years. In this respect the work of the clinical observer in the future may, I think, be compared with that of the gold miner in the Transvaal: the surface reefs are easily got at and easily worked, but to reach the deeper reefs and to work the deep level mines is a much more difficult matter, and will be a much more costly process. But—and this is the point to which I am leading up—there is every reason to believe that the gold is there. And it cannot be doubted that in the future as in the past, the patient and diligent clinical observer will continue to reap a rich harvest of practical and scientific knowledge. It seems to me that the harvest will be most abundant, and especially rich, in the all-important subject of medical treatment and therapeutics.

Further, let me point out to you that every practitioner of medicine has, in the every-day work of his profession, abundant material at hand for the prosecution of original research of a most important and valuable kind. Every medical student has the opportunity, during his student career, of training himself to be an original clinical observer. I would earnestly beg of you to make the most of these opportunities, and to determine, as soon as you get into practice, and have the necessary material at hand, to carry on some original clinical research. I would advise you to take up the study of some particular disease or of the diseases of some particular organ; and whatever may be the subject which you select to go on studying it and making observations on it. You will find that original clinical work of this description will be a constant source of pleasure and interest to you; it will do much to lighten the drudgery and routine of your ordinary professional work; it will sharpen your powers of observation; it will give you a deeper insight into disease generally; and it will be of great advantage both to yourselves and to your patients.

NERVOUS DISEASES.

The third great advance which has taken place since I commenced the study of medicine in the year 1865, may, I think, be fairly said to have occurred in connection with our knowledge of the diseases of the nervous system. While in every department of physiology, pathology, and practical medicine great developments have taken place, the advance has nowhere, I think, been so marked as in the department of neurology. Five-and-thirty years ago we knew comparatively little, for example, of the position and course of the nerve tracts in the spinal cord and in the higher parts of the central nervous system; of the localisation of function in the brain; of the diseases of the peripheral nerves. Now, our knowledge of all of these subjects and of an immense variety of other questions connected with neurology which were at that time very ill-defined and obscure, is wide and elaborate, though at the same time very *very* far from complete. And I would wish to point out that the contributions to our knowledge which have been made, in this country at all events, have been largely due to the labours of practising physicians and surgeons, or at all events of men who, since their observations were made, have become great practising neurologists and clinicians—such men as Hughlings Jackson, Ferrier, Bastian, Gowers, Victor Horsley, and Risien Russell. And in this connection I would emphasise the immense importance of clinical, or rather clinico-pathological, observation as a means of elucidating the functions of the nervous system in man.

The development of our knowledge of the structure and functions of the nervous system and of nervous disease which has taken place during the past five-and-thirty years has been chiefly the result of three great methods of research, namely:

1. Histological investigation. Improved methods of preparing and staining nerve tissues have enabled us to trace out the course of fine nerve fibres, to differentiate nerve tracts as they are successively developed (during the process of their evolution) or as they are picked out by degeneration and disease (during the process of their dissolution), to determine some of the structural changes in nerve cells which result from different morbid processes, and even some of the functional changes which are due to different forms of irritation and stimulation.
2. Experimental observations on the lower animals.
3. Clinical and clinico-pathological observations of cases of disease in man.

The value and significance of the results obtained by the last-named method are, I venture to think, often greatly under-estimated. There seems to be an impression that, from a scientific point of view, the results obtained from the observation of the effects of disease in the living man are on quite a different, an inferior, platform to the results obtained from the observation of the effects of experimental lesions in the lower animals. It seems too frequently to be thought that because an observation is made on man, and because it is clinical, or rather clinico-pathological, it is of comparatively little value. Generally speaking far more importance seems to be attached to the experimental observations made in laboratories on monkeys and dogs, or even on guinea-pigs and rabbits, than to the clinical and clinico-pathological observations made in hospitals on man.

Against this way of looking at the matter I desire to enter an emphatic protest. Far be it from me to appear to undervalue even in the slightest degree the importance of the experimental method. The great advance which has taken

place in our knowledge of the nervous system during recent years has been largely due to the experimental observations of such men as Ferrier, Schäfer, Sherrington, Victor Horsley, Beevor, and Risien Russell in this country, and of numerous distinguished physiologists and experimentalists abroad. It cannot be doubted that experimental observations on the lower animals have vastly increased our knowledge of physiology, of pathology, and of therapeutics, and have thereby, either directly or indirectly, been of the greatest service to the physician and surgeon both in the way of diagnosis and treatment, and consequently of the greatest benefit, not only to sick and suffering men and women, but also to diseased animals. But what I do claim is that a higher value should be attached to the results obtained by clinical and clinico-pathological observations on man than up to the present time would appear to be the case. For the purposes of human physiology, clinical and clinico-pathological observations on man are of the greatest importance. It is only by these methods that we can hope to elucidate some of the most difficult and intricate problems connected with the physiology of the human brain, such, for example, as the localisation in the cerebral cortex of the impressions connected with the sense of movement, the working of the nervous mechanisms connected with speech, thought, and all the higher intellectual operations.

No doubt the time will come—though it has not as yet been by any means reached—when experimental observations on the lower animals will have done all that they can possibly be expected to do in elucidating the physiology of the human brain. Any further advance beyond a certain point—which is perhaps within measurable distance of being reached—in the understanding of the working of the human brain must necessarily be made by observing the effects of brain disease in man, since man is the only animal who can communicate his feelings, sensations, and thoughts by means of speech. The highest aim of physiology nd pathology is, I suppose, to elucidate the manner in which the human mechanism works, and to give us the data by means of which we can rationally and scientifically deal with the diseases to which man is liable. And the physiology and pathology of the human brain are, I take it, the highest departments of physiology and pathology.

Further, it must be remembered that clinical and clinico-pathological observations in man are beset with difficulties. It is only in a comparatively small number of the whole mass of cases observed that the results can be relied upon, and satisfactory deductions drawn therefrom. The experimentalist makes his observations under conditions which are easy and simple in comparison with the conditions under which clinical and clinico-pathological observations in man must necessarily be carried out.[1]

In the lower animals localised lesions can be produced with the greatest exactitude, the symptoms which result from those lesions can be noted and studied in their simplest and most isolated form, and the animal can be killed and the exact extent and position of the lesion can be verified at any period of the case. In man the experiments produced by disease are usually much more complicated, and the interpretation of the results—the symptoms—is consequently much more difficult. In man we have to wait until death takes place before we can determine and verify the exact position and extent of the lesion. In some of the most important cases our clinical observations are altogether valueless, since the opportunity is denied to us of following up our observations after death. In many of the cases in which this opportunity is afforded us the lesions are at the time of death so advanced, and have become so diffused and complicated that it is difficult or impossible to draw reliable and satisfactory conclusions as to the relationship between the lesion and the symptoms which we desire to elucidate. It consequently happens that an immense amount of detailed and patient clinical observation is altogether unproductive, so far as any direct scientific results, in individual cases at all events, are concerned. I do not say that such labour is wasted, or that it is grudgingly given—indeed, the very reverse is the fact. Every difficult case which is carefully studied adds to our experience, and makes us more able to unravel the complicated phenomena of future cases. And clinical observers are only too willing cheerfully to carry out such elaborate investigations, since they know that it is for the great advantage of the patient that every detail of the disease should be exhaustively and carefully studied; and in the hope that information may be gained which will be of value to future patients; and with the expectation that in some few of the many cases which they study clinically facts may be elicited, either during life or after death, which will add to our scientific and medical knowledge.

The great difficulties under which clinical and clinico-pathological observations on man are carried out, the complicated nature of the conditions with which the clinician and human pathologists have to deal, and the immense amount of unproductive labour which must necessarily be expended before any reliable results can be obtained, instead of being a reason for discrediting such observations should rather, in my opinion, be a reason for crediting them with additional value in those cases in which the symptoms are sufficiently defined, and in which the lesions are sufficiently localised to enable reliable deductions to be drawn from them, always of course provided that the observations are made by competent and reliable clinicians and pathologists. I mention the personal equation because it seems to me that there are three reasons why too little value has been attached to the results of clinical and clinico-pathological observations in man. One is the fact to which I have already referred—namely, that the conditions of the experiments made by disease are in many cases so complicated that reliable deductions cannot in the nature of things, except in, comparatively speaking, few instances, be drawn. Another is that until recently it was, perhaps not unnaturally, thought that the observations of clinicians were, in many instances at least, for the purposes of pure science, less exact and reliable than the observations of physiologists and pathologists who had been trained in laboratory methods. And the third is that in consequence of the great development in physiology which has taken place of recent years, the teaching of physiology has necessarily and rightly been handed over to specialists, who have consequently, in some cases at least, lost touch with clinical medicine and with clinicians.

Had time permitted, I should have liked to have referred to some of the other departments of medicine in which important discoveries and deve'opments have taken place—such, for example, as the increase of our knowledge regarding the functions of the ductless glands, and particularly of the thyroid gland; to the treatment by animal extracts, more especially to the treatment of myxœdema by thyroid extract—one of the most remarkable therapeutic achievements of this or any other age; also to the elaboration and discovery of new methods of diagnosis and research, such as the employment of the Roentgen rays both in surgery and in medicine; to the value of photography to the clinical physician and surgeon, and in the teaching of medicine, etc. But it is impossible to enter into details with regard to these and many other points.

Hospitals and Medical Schools.

The fourth great advance to which I desire to direct attention is the remarkable improvements which have occurred in our hospitals and medical schools, and the increased facilities which have thereby been afforded both for the treatment of patients and for the study of disease and of the various subjects, such as anatomy, physiology, pathology, and therapeutics, which will always be the main foundations on which an intelligent comprehension of disease and the rational treatment of disease must be based. And no better illustration of the advance in these directions could be given than your splendid Leeds Infirmary and your most admirable medical buildings. The improvement, too, in the *personnel* of our nurses and in the nursing arrangements both in our hospitals and in private practice is a striking feature of the period under review.

Students and Examiners.

In consequence of the great development which has taken place in every department of medicine and the allied sciences, it necessarily follows that the medical student of to-day has much more to learn than the medical student of five-and-thirty years ago. But against this, which may appear to you to be a disadvantage, you must remember that the facilities for learning are now much greater, and the methods of instruc-

tion are much more complete and satisfactory. Further, the very increase of our knowledge, by explaining many things which were previously obscure, has made the process of learning much easier, provided always that you pursue your studies in the right manner; and here I would say, avoid cramming as you would avoid the Evil One; try to understand the "whys" and "wherefores" of things; be practical, do not be content with a mere book knowledge; guard yourselves against acquiring facts in a routine and parrot fashion; bring your intellect and reasoning powers to bear upon everything which comes before you, and be thorough.

But the question arises whether teachers and examiners and Examining Boards should not recognise the fact that some definite limitations should be placed to the amount of knowledge required of the average medical student for the purposes of the ordinary pass examination, in some of the subjects of the curriculum at all events. It seems to me that, notwithstanding the addition of an extra year to the curriculum, there is still a danger of the preliminary and scientific subjects crowding out the more practical and clinical subjects. One must never forget that the end and object of the medical curriculum is to give the medical student the knowledge which will enable him to practise his profession; that medicine is an art as well as a science; that for the purposes of practice mere scientific knowledge and book knowledge are of infinitely less importance than practical knowledge gained in the dissecting room, in the laboratory, in the *post-mortem* theatre, and above all in the wards of the hospital. I never neglect an opportunity of impressing upon medical students the paramount importance of clinical study and the desirability of their making themselves familiar, during their student career, with all the methods of diagnosing disease, and, so far as their opportunities in hospital and dispensary practice permit, of dealing with diseased men, women, and children.

Well, gentlemen, from what I have said you will have gathered that, in my opinion, the medical student of to-day enjoys many advantages which were lacking to the medical student of five-and-thirty years ago. As I have already stated, you are, I think, to be congratulated, inasmuch as you are joining the profession at a most hopeful and encouraging time, so far as the prospects of scientific discovery and practical developments and improvements in the diagnosis, prevention, and treatment of disease are concerned.

The Prospects of the Young Practitioner.

I wish I could say the same regarding your prospects of finding satisfactory openings for practice and of making a decent livelihood during the earlier years of your career as practitioners. In these respects the prospects of the young practitioner of the present day are, in this country at all events, inferior to those of the young practitioner of five-and-thirty years ago. The average age at which the medical student obtains a qualification to practise is, nowadays, somewhat older than it was in my student days; and the young practitioner, however fully qualified, finds it more difficult to get an independent practice. The fact is that the profession is over-stocked and that competition is keener than it has ever been before.[2]

The same statement applies, I suppose, to almost every profession and to every form of business, but, perhaps, more forcibly to the profession of medicine than to any other. And while the fees of the general practitioner have not increased, indeed, in some districts have, perhaps, decreased, while patients are more difficult to get, the standard of living is higher and professional expenses are as great as they were before. It consequently happens that under the arduous struggle for existence, methods of practice are sometimes resorted to which are anything but satisfactory and which are much to be deplored. This will no doubt appear to you to be a gloomy picture. But I would counsel you to be of good courage and to remember that "every cloud has its silver lining." The profession of medicine has many and great advantages. It is a noble profession; it is, notwithstanding some recent strictures, an honourable, perhaps the most honourable of all professions; it is concerned with questions of the highest scientific interest, and affords unlimited intellectual enjoyment for those who choose to cultivate it in the right way, and unlimited opportunities for studying human nature—a most fascinating study; there is no man in any walk of life who is more respected and beloved than the trusted family physician; no profession—not even the clerical profession—affords greater opportunities for doing good to one's fellow-men; and looking merely at the material benefits, there is, it seems to me, no profession in which a modest livelihood may, in the course of time, be so certainly acquired, provided only that the practitioner is possessed of the necessary qualifications, amongst which I would place good health, a sound knowledge of his profession, steadiness, perseverance, and industry. Further one must never forget that in practising medicine one has not merely to deal with cases of disease, but with living men, women, and children of like passions and feelings as ourselves, and that the great qualities of tact, gentleness, kindness, and sympathy are quite as important qualifications for success in practice as mere ability and professional knowledge. Let me beg of you, gentlemen, to do your best to cultivate these qualities, and, after you get into practice, to remember the golden rule "to do to others,"—both your patients and your professional brethren,—"as you would desire to be done by." Spare no pains to do the best that you can for each and every one of your patients, whether rich or poor; act straight; hold high the standard of professional honour; and endeavour, in however humble and limited a way, to do something to add to professional and scientific knowledge.

Notes.

[1] This is, of course, a general statement. In one respect some of the experimental observations on the brains of the lower animals—I refer more especially to the observation of the effects of lesions of the sensory centres—are more difficult than the corresponding clinical and clinico-pathological observations in man; or rather, I should perhaps say, the interpretation of the results is much more difficult in the case of the lower animals, since man is the only animal who can exactly describe the effects (the symptoms) which result from the lesion, by means of speech.
[2] I do not refer to assistantships, for in consequence of the suppression of the unqualified assistant, many practitioners have found it difficult to get an assistant or a *locum tenens* during the past year.

OWENS COLLEGE, MANCHESTER.

By Sir James Crichton-Browne, M.D., LL.D., F.R.S.,
Lord Chancellor's Visitor in Lunacy.

THE QUEST OF THE IDEAL.

One of Manchester's most gifted sons, who has embellished our literature by his stately rhetoric, and so used our language as to add to its polish and beauty—Thomas De Quincey—born near this spot in 1785, has described his native town as "gloomy and of repulsive exterior, mud below and smoke above," but he has added that it contained a population with strong hearts, of noble moral qualities and infinite perseverance, and "as yet not much alloyed with Celtic adulteration."

At the time of which De Quincey wrote—100 years ago—the torch of improvement had not been lit in Manchester or carried through its slums and alleys, and could he revisit the glimpses of it to-day he would have to recall his "repulsive" adjective, admit that the gloom has been pierced if not scattered—as perhaps it never can be altogether where a teeming and steam-drudging population closely congregates—and he would have to redouble even his fervid approbation of the enterprise and resolution of its inhabitants with or without Celtic admixture! On all hands he would discover growth and evolution, unmistakable and marvellous signs of progress, enrichment, refinement, philanthropy, and, in this institution, under the auspices of which we are assembled here, he would recognise not the least admirable of the many great public works to which the spirit of Manchester of the nineteenth century has given birth.

Standing here, as I do this afternoon, an alien though a well-wisher, it would be idle for me to repeat to you your own family history, which you probably know already better than I do, and I shall not therefore attempt any detailed account of the rise and triumph of your College and School. It would be idle for me even to try to do justice to the feelings with which you regard them, as I am not steeped in your local legends and traditions, and am unacquainted with your catch-words, but it may not be unprofitable that I should tell you how your School and College strike a casual visitor, and what an impartial outsider thinks of their position and prospects.

Well, gentlemen, the primary impression on the Uitlander

surveying your College and School is one of wonder at their early maturity and youthful lustihood. They are of yesterday, and yet the vigour of centuries is in their veins. At the period to which I have already alluded, one hundred years ago, when De Quincey was learning Greek, to some purpose, in your grammar school, then 330 years old, there was no serious thought of a college in Manchester. No doubt some vague schemes for providing training for those entering the learned professions and commerce had been put forth, but these had been speedily snuffed out by the practical men, who argued that higher education spoilt boys for commerce, and that to be successful in business men must be kept intellectually lean and hungry, and it was not until 1825 that the first successful effort was made to establish an institution for systematic teaching in any of the higher branches of knowledge. Before that there had been isolated courses of lectures on anatomy and chemistry, so that the claims of science were beginning to be felt, and in 1814 Mr. Jordan had essayed to organise a medical school, but it was not until 1825 that a properly-equipped and co-ordinated school of science was commenced, and I think we must be gratified to remember that that school was the work of the medical profession. It was Mr. Turner who founded it, and that action of his seems to me to have been the germinal vesicle of the magnificent organism, Owens College, in which we now rejoice. This school, which was provided with lecturers on anatomy, chemistry, materia medica, surgery, midwifery, and botany, was the first provincial medical school in England, and in consideration of that fact and of its public usefulness it was permitted in 1836 to add the prefix "Royal" to its name.

It is only three-quarters of a century—a man's life—since Mr. Turner's first step was taken, but in that brief span of time there has been incessant movement and steady advance in educational affairs in Manchester—advance marked here and there by momentous and memorable events, such as the foundation of Owens College in 1846 and the incorporation of your medical school with it in 1871.

Now I venture to believe that the advent of Owens College—of Owens College or a college of its character—in Manchester was inevitable in the nature of things. Manchester has all along headed and guided the industrial revolution which began in England in the middle of the eighteenth century, and which has substituted the factory system for home handicrafts. She has been a pioneer in invention which has multiplied human production a hundredfold, in the application of mechanical power to the service of man, and in the construction of internal communications to meet the ever-increasing demands of trade and commerce. Her population, her wealth, her industries have advanced by leaps and bounds; she has become not merely a hive of manufacture, but a world warehouse and mart; and while this vast material expansion has been going on it is certain that her wits and moral attributes have not stood still or remained narrow and contracted. The needs, the faculties, the aspirations which gave the first impulse to her development have themselves drawn sustenance from the prosperity they have created, and have grown with her growth. Her thoughts have "widened with the process of the suns." She may not have fully realised Kant's dictum that not a web of cloth can be properly woven where metaphysics are neglected, but she has come to know that intellectual training has a money value—that there are mental as well as physical forces to be reckoned with in the world—and she has gradually awakened to a sense of the higher obligations which wealth entails. With canals and railways connecting her with the four corners of the earth, it became impossible for her to adhere to the old pack-horse system of education. The free circulation of goods involved the free circulation of ideas, and the emergence in her midst of a seminary of science and culture was not less unavoidable than the transition from the borough reeve and his constables who so long ruled over her to her present system of municipal government.

A college in Manchester had been in the air for some time before the notion condensed itself in the benevolent brain of Mr. John Owens, and indeed in 1836 an attempt to establish such a college only failed owing to the impossibility of reconciling the claims of two rival medical schools. Mr. John Owens gave noble expression to what the citizens of Manchester had long been thinking, but it is interesting to note that it was not only the stirring in him of the spirit of the age, but a more particular motive which precipitated his action. His bequest had attached to it the special condition that the education given in the college he projected, while similar to that at the English universities, should be free from all religious tests; and it is therefore allowable to speculate that had the Act of 1871, which abolished subscription to the Articles, declarations of religious belief, and compulsory attendance at public worship in the Universities of Oxford, Cambridge, and Durham, been passed thirty years sooner, your Manchester College might not have enjoyed the bounty of Mr. John Owens. It almost seems as if, in this instance, the march of learning had been expedited by the shackles which bigotry had fastened on her limbs.

But, whatever prompting may have been operative in the inception of Owens College, it speedily justified its existence. Based on John Owens's legacy, which yielded £97.000, and buttressed by generous donations from many sons of the city, it has dispensed good gifts around it, has attained widespread reputation, and become the prototype of kindred institutions in other parts of the country. It has housed itself in buildings which must be called palatial, and provided itself liberally with the paraphernalia of science, and by its amalgamation with the Manchester Royal Medical School has completed and consolidated its constitution. That amalgamation, which appears to me, from my exoteric standpoint, the crowning incident in the career of Owens College, has proved a happy and well-assorted union, and been blessed with a numerous progeny. When it was consummated in 1871, there were 99 students enrolled in your medical school, whereas last year the entries numbered 423, and although I do not want to see the medical profession swamped in its own superfluity, I hope that that figure will be exceeded by the number of entries in the session which we begin to-day. I do so because I am convinced that here at any rate the medical student will be thoroughly and honestly prepared for his life task. You have class rooms, laboratories, museums, and libraries, unsurpassed in their arrangement and fittings; you have, in the medical charities affiliated with your school, an unlimited supply of object lessons in medicine, and surgery, and in every speciality into which medicine and surgery have branched out, and above all you have a body of teachers, learned and skilled in their respective departments, earnest in purpose, jealous of the fair fame of the Manchester School, which has already won renown and assumed a distinctive character, and which will probably be more enduring than that transient phase of political opinion which has hitherto borne the name. In the presence of some of these teachers here this afternoon, it would be disconcerting were I to divulge to you the estimate which I, as a stranger within your gates, have formed of their merits individually. Let me just say that they are one and all men whose eminence in their vocation is recognised far beyond the county of Lancaster, and who are worthy successors of the professors and lecturers who have in the past given lustre to your school—of men like Sir Edward Frankland, for whose death our sorrow is still in the green leaf, and Sir Henry Roscoe, chemists of the finest calibre, of my friend Dr. Arthur Gamgee, a born genius in physiology, of Mr. Lund and Mr. Southam, past masters in surgery, of Dr. Morgan and Sir William Roberts, deep-seeing and judicious physicians.

The shell of your school—the buildings designed by Mr. Alfred Waterhouse—must arrest the attention of all your visitors, as they have done mine, by their amplitude and nice adaptation to their purpose. Severely plain in outward appearance, as economy demanded, they are rescued from meanness of aspect by the treatment of the gables and parapet and by the commanding tower, while a tall chimney shaft that surmounts them is an appropriate feature in a Manchester edifice. Goethe's dying words, "Light, more light!" both in their literal and figurative sense, are an excellent motto for a medical school, and seem to have been borne in mind in the planning and fitting of your buildings, for their elevation shows an altogether unusual proportion of window to wall space, while their special research laboratories intended for the use, not merely of ordinary students, but of advanced students, original investigators, and medical practitioners, furnished with all the most approved apparatus for chemico-

physical, histological, bacteriological, and pathological inquiry, cannot fail to prove inlets of scientific illuminations.

Your school buildings have cost the College authorities upwards of £70,000 since the School and College joined hands, that is to say, during the last twenty-five years, and this, I see, is frequently referred to as a munificent expenditure! So it may be if measured by the standard of what has been done elsewhere, but so it is not if measured by the requirements of science in these days, or by the duties and resources of this great city. My address this afternoon is in the nature of a runaway ring, and therefore I need not mind if it startles anybody; but I have no wish to startle, but use the words of soberness when I say that the £70,000, although adequate so far, does not exhaust the pecuniary claims of the medical school on the community, and that if in the future it asks twice that sum to meet the educational calls made upon it, and to keep pace with science which is now so mobile and so expensive, Manchester should cheerfully put its hand in its well-lined pocket and produce the money, knowing that after all it is only a judicious investment in life assurance. In this same last quarter of a century during which this £70,000 has been doled out, Lancashire has spent in enlarging her already existing costly pauper lunatic asylums £979,250, besides becoming liable for £335,000 for the erection of the new asylum at Winwick, and only the other day the Asylums Committee of the London County Council asked for a cheque for £360,000 to provide a sixth leviathan asylum for London. Upwards of a million and a quarter for asylum extension in Lancashire—£360,000 for one asylum in London! Just reflect what sort of a college and medical school these sums would have secured! £70,000 spent on a great medical school in a quarter of a century evokes pæans of praise. £360,000 at one fell swoop on a pauper lunatic asylum induces scarcely a grumble. I have no protest to utter against the outlay on lunatics. It is necessary and humane, and not a penny of it is extravagantly thrown away. I merely wish to indicate how much more easily money is obtained by automatic rating than by voluntary effort, to contrast the expenditure on lunacy with that on learning, and to suggest that if we were to spend a little more on the latter we might have a little less to pay for the former. It is unhappily true that insanity is increasing amongst us in a manner well calculated to create anxiety. The recently published report of the Commissioners in Lunacy administers the *coup de grâce* to the official and statistical optimism on this subject by which the public has been so long lulled to rest. The big annual increment of lunatics necessitating the constant and portentous extension of asylum accommodation cannot any longer be explained away. No juggling with figures will get rid of it. It is now certain that—as a few of us, voices crying in the wilderness, have long contended—the balance between the effects of these conditions of modern life that are preventive of mental disease and those that are causative is on the wrong side. Mental and nervous diseases are the diseases of the future, and we have as yet no protective serum to employ against them. All the more important is it, therefore, that they should be diligently studied and scientifically investigated, and this brings me to the point where I can connect an apparent digression with my proper theme.

In the early days of your school the lunatic hospital of Manchester formed part of the General Infirmary, and then, for good reasons and with excellent results, it was moved out to Cheadle, where it now is, and where Mr. Mould successfully presides over it and utilises it for clinical teaching. The Cheadle Hospital admirably supplies a clamant public want, but I confess I hope the day will come when another lunatic hospital will spring up in Manchester, an asylum organised in all respects like an ordinary hospital, and near to your school so that you may have daily access to it. In the lunatic hospital of my imagination the medical staff, consisting of consulting, visiting, and assistant physicians, aided by specialists of several kinds, would be exempt from all the administrative and clerical work which now weighs so heavily on asylum medical officers, and would thus be free to devote themselves to their purely professional duties, to research and to teaching. Resident house-physicians and clinical clerks would maintain constant observation and keep the medical records, while psycho-physical and pathological laboratories would afford facilities for experiment and demonstration. Courses of lectures on psychology, neurology, and mental and cerebral pathology would enable students to benefit fully by the work in the wards, which their critical presence would always maintain at a high pitch of thoroughness, and prepare them to deal in their own practice with a prevalent and obscure group of diseases, while an out-patient department would bring under skilled treatment cases of mental derangement in their incipient and most curable stage.

I am not inappreciative of what is being already done in the way of science in our asylums in this county, and especially in the department of pathology, often under disheartening and adverse circumstances; but I say deliberately that until we obtain in London, Manchester, or elsewhere a lunatic hospital organised somewhat on the lines I have indicated, the great problems, social and medical, in connection with insanity, which press for solution, cannot be adequately dealt with. Perhaps some still hiddenly-purposed benefactor of your school and lover of his species, perhaps the county council, tired of building costly receptacles for decayed and damaged mind stuff, may bestow such a genuine lunatic hospital upon you, and thus vastly extend your usefulness and heighten your prestige.

I am, I admit, heavily requisitioning the future on behalf of the Manchester Medical School, and it may be that in doing so I have not sufficiently acknowledged what Manchester has already done for it. No doubt the medical school has owed much to Manchester, but, on the other hand, Manchester has owed much to the medical school. In the central coil and in every purlieu of the city its influence has thrilled; there is not a sumptuous mansion or a miserable tenement in which some emanation of its virtues has not been felt, for a brisk and efficient medical school not only trains medical students, but raises the whole tone of medical practice in its vicinity, especially when, as in your case, it affords opportunities to medical men engaged in practice to renew their studies from time to time, and so to keep abreast of all advances made in our knowledge of disease, its nature, causes, and effects. I do not know any surer blessing which a populous district can enjoy than to have a medical school in its midst. The best medical and surgical skill and science of the period will then always be available for the people. This radiant influence of a medical school, if I may so call it, cannot be weighed or measured, but it is real and substantial enough, and, of course, it will be most potent just where the conditions of life are most insanitary and provocative of disease. And so in Manchester in the past it has had free scope and sway. When the Queen visited the city in 1851, her keen and sympathetic eyes noticed, as she has set down in her diary, that the crowds in the streets both of Salford and Manchester were made up of "a very intelligent but painfully unhealthy population." And about the same time Mrs. Gaskell, whose writings did much to awaken kindly feeling and break down the barriers separating employers and employed, pictured the mill hands in lugubrious colours. The men, she said in *Mary Barton*, were of stunted growth and fragile build, and had wan, ashen faces, telling of scanty living and grinding toil, and the women, lacking in beauty and symmetry, showed pinched and sallow countenances, in which acuteness and intelligence contended with care and debility.

All that has been changed. Manchester crowds to-day present no such saddening spectacle. Your proletariat is as winsome and robust as that of any other large manufacturing town. Your death-rate has dropped. Yet much—infinitely much—remains to be done before you can be said to have reached a level of public health that can be pronounced even tolerably satisfactory. In some of the slum districts of Salford, now happily to be cleared away, the death-rate has in recent years reached 100, and even 104, per 1,000; in one district it has never fallen below 60 per 1,000 for the last six years. In some parts of Manchester—for instance in Hulme—shocking overcrowding prevails. At a recent meeting of the city council it was stated that in one case there a father, mother, and six children, all slept in one room 8 feet by 6 feet, without a fireplace, and with windows that would not open. In another case a father and mother, short of work

and so of food and fuel, occupied, with their two children, a small room, the fireplace and windows of which were papered up to keep out the cold. Little wonder that one night the youngest child was asphyxiated. It is clear that still cheek-by-jowl with your opulence and refinement are pinching poverty and squalid debasement; and that those indefatigable promoters of disease and degradation—overcrowding, overpressure, overdrinking, underfeeding, underbreeding, underthinking—are still busily doing their deadly work amongst you. Strenuous efforts are still required of Manchester to raise its submerged masses into decent habits and health, and in these efforts it will, I am sure, draw inspiration, guidance, and support from this centre of medical science. In what has been already done to raise the masses your medical school has had some share, for whatever ameliorations have been secured have been due, not solely to economical changes, but also to the sound doctrine of sanitary reform which has here been preached. Your school has diffused around it just methods of thinking on medical and sanitary matters, and I question whether, but for the atmosphere it has created, those wise measures for the prevention of tuberculosis, which Dr. Niven and Dr. Delépine have advocated would have been adopted by your civic authorities.

I have already referred to what is no doubt a just source of pride to all connected with this school, and that is the steady arithmetical progression in the number of entries of students from year to year, a progression all the more gratifying because it has been, as the registers of the General Medical Council show, proportionately greater than that in the other medical schools of Great Britain. It is thus evident that the advantages you offer are attracting students from beyond your own proper fief or territory, and that you may in time become no longer a county palatine, but a cosmopolitan institution. It is not, however, by its entries, but by its exits, that a medical school is to be judged, not by the raw material, but by the finished article; and in that respect you have, I think, no reason to be ashamed, for, having looked over the list of your associates and of your graduates in the Victoria and London Universities, I observe that for so comparatively young a school you have sent forth quite a remarkable number of men who have already made their mark in their profession. They have won a good name for your school; and it is for the men I see before me to live up to the standard they have set, and, with ampler opportunities than they enjoyed—for your school is always improving its machinery—to better their example.

It is to impress that obligation upon you that I am here to-day, for an introductory address such as I am called on to deliver is meant, I believe, to be stimulating rather than instructive, to emphasise the claims of duty rather than to convey exact information. The occasion is one charged with emotional significance, for the start on a new career, or on the second, third, fourth, or fifth lap of an arduous race, with much depending on the issue, is a critical point, when those making the start are peculiarly susceptible to affinitive impressions, and when those standing by are moved by generous sentiment. Reverting to my own student days, I can recall amidst the "dreary drip" of routine lectures, the awakening splash of an inaugural address by Goodsir, that illustrious anatomist, which is echoing still down the long colonnade of years. I should consider myself fortunate if I could say any word this afternoon that might stir one or two present to more vigorous endeavour in the work before them; that might heighten in a few their conception of their errand in life; that might bring home to the many an enhanced sense of the responsibilities they are undertaking.

In considering how I might best in some small measure achieve this, it has occurred to me to improve the occasion by warning you against certain dangers which will assuredly beset your path, dangers not generally recognised, but to my thinking real enough. Do not apprehend a sermon or a disquisition on morals. The dangers I allude to are not ethical, but mainly intellectual. I assume that you are fully alive, without admonition of mine, to the profitableness of the cardinal virtues, justice, prudence, temperance, and fortitude. I am confident I should merely bore you by bestowing my platitudinous blessings on industry and punctuality, or by depicting the temptations that will assail you, and stripping them of their fascinating disguises. I do not propose to speak to you *in loco parentis*, but merely as one who, having gone before along the road you are about to travel, is familiar with its windings and able to caution you against certain tendencies which are incidental to the route, and which, from my point of view, are sometimes lamentable and disastrous in their results. I allude to these tendencies to materialism, which regard mind as a mode of motion, or to its congeners, naturalism which subordinates spirit to mechanism, and sets up unchangeable law as supreme, and agnosticism which ignores both mind and matter and confines its attention to phenomena, tendencies the influence of which you are all certain to feel, and to which some of you are not unlikely to succumb.

Most of you, I presume, have come here with some ideal conceptions, vastly varied, no doubt, in colour and intensity, but still dominating you more or less. You have passed, in all likelihood, through the petty scepticisms that come like exanthems in boyhood and youth; you have revolted against some old and worn-out superstitions, and emancipated yourselves from dogmatic dictation; but you have still retained a belief in something in the universe higher and greater than man, in humanist as superior to utilitarian aims, in a Divine Mind behind Nature, in the exalted destiny of the human soul, in the principle in the mind, distinguishing between the noble and the base, the false and the true, the fair and the ugly, the saintly and the self-indulgent, in the majesty of will, or in the truths of a revealed religion. With many of you in whom they are hereditarily ingrained or deeply engraven by educational piety, your ideals, whatever they be, will remain intact and secure, but with others not thus protected they will not improbably be shaken on their pedestal, pitched into the limbo of indifference, or thrown down or broken altogether by the intellectual commotions that accompany your medical studies.

It is human bodies with which you are in your medical studies concerned. You dissect the cadaver, brood on its parts, tease out its tissues, handle its organs until the men and women whom you meet in the streets become to you mere animated corpses. You plunge into physiology, and find that it is a complex of physical, chemical, mechanical, and electrical forces that has to engage your attention, and that these have to be measured by instruments of precision of various kinds. You proceed to medicine and discover that it rests entirely on observation and experiment, and is a system of truths capable of demonstration, prediction, and verification. You enter upon practice, and go about with the ophthalmoscope at your eye, the stethoscope at your ear, the thermometer in your hand, and a pocketful of drugs, and almost fancy you can create life, for in a body that is practically dead you are able by artificial respiration to relume the vital spark. You are, in your medical studies, introduced into a vast circle of empirical knowledge, in the whole scope of which—so hidebound by law, so closely packed with facts is it—there seems to be no room for any ideal. As you advance in these studies your range of vision is apt to become more and more restricted to what is purely physical and material.

Your teachers can supply no corrective to the materialising agencies which will operate upon you in the laboratories and hospitals. The increasing specialisation which the rapid growth of medical knowledge has brought about necessitates a far greater limitation of view than was formerly customary. Our medical professors half a century ago indulged in large and sweeping generalisations; but to-day they have to confine themselves to small corners of the field of science, and have no need to oversee it all and define its frontiers. The absence from their lectures or treatises of all reference to the supernatural or metaphysical is only a consequence of the attitude they are obliged to assume and no proof that they deny it.

But if your local teachers supply you with no antidote to the materialistic virus, the great catholic teachers to whom all who are interested in medical and biological science are obliged sooner or later to turn will inject it into your veins with tenfold virulence. Herbert Spencer is certainly responsible for a widespread diffusion of materialism. The splendid cogency of his argument that the whole procession of phenomena in the universe, the vast array of nebula and star, of sun and planet, of planet and moon, of rock and crystal, of

plant and animal, is deducible as a physical and mathematical corollary from the simple fact that the quantity of force in the universe is fixed and unchanging, and that it exists under the antagonistic forms of attraction and repulsion, dazzles the intellect and disposes to the purblind acceptance of his deliverances on all other subjects. And thus it is perhaps that his theories as to the evolution of mind, which notwithstanding his admission of an Unknowable as a necessary datum of consciousness, are pure and undiluted materialism, have obtained such ready currency. He insists that mind arises out of the molecular vibrations of matter, just as do light, heat, and electricity, and that the only difference between the commonest sensation and the most transcendent emotion lies in the number and complexity of the molecular vibrations of nerve substance. He does this with a subtlety and ingenuity that almost inevitably command for his propositions the assent of those whose daily experiences impress them with the constant and intimate connection between brain states and mental manifestations, and so his philosophy has dashed to pieces the ideals of many medical postulants.

But if Herbert Spencer has done much to scatter broadcast materialistic ideas in medical circles, Huxley has done more, for in spite of his repudiation of the title "materialist" as a reflection on his agnostic orthodoxy, there are few recent writers who have better deserved the designation. He invariably leans towards the primacy of the physical side in phenomena. He has said that the history of science has "in all ages meant, and now means more than ever, the extension of the province of what we call matter and causation, and the concomitant gradual banishment from the region of thought of what we call spirit and spontaneity." He has taught that molecular changes in the brain are the causes of all states of consciousness. Volitions, he affirms, do not enter into the chain of causation at all, voluntary acts being as purely mechanical as reflex action. High thinking, in his alembic, turns out to be merely increased resistance and friction in certain nerve circuits. He has reduced our species to conscious automata. Consciousness, according to him, is a collateral product of the working of the organism, and cannot under any circumstances in man or brutes be the cause of any change in the motion of the matter of the organism. With a matchless power of lucid exposition, with relentless logic, he has pressed home these views, and the weight of his authority as a scientific investigator, added to the charm of their simplicity and roundness, has given them potency and popularity, and helped them to swell that great tide of materialistic thought which surges through our medical schools to-day, and sweeps away many precious and ennobling ideals.

As I have already hinted, the materialistic tendencies of the hour, dispersed everywhere but focussed in our medical schools, have not even in them by any means undisputed dominion. They are resisted by those who are by constitution or training fortified against them, or who by wrestling with them have overcome them. And those who escape them are by no means the weaklings of the flock. It would not be difficult to quote a long list of truly eminent members of our profession, alive and dead, who have repudiated materialism and all its ways. And in the fold of science generally some of the most conspicuous figures are those of men who have been loyal to ideals. Speaking only a few weeks ago, Sir John Lubbock denied that there is any antagonism between the discoveries of science and religious truth, and mentioned that the four great men of science whom he had helped to carry to their last resting place in Westminster Abbey—Lyell, Herschell, Spottiswoode, and Darwin—had all done something to promote the cause of true religion.

The ways by which materialism is avoided and faith reconciled with science are many and various. Sometimes it is not reconciliation but only cohabitation that is arrived at. Faraday kept his faith and his science firmly locked up in two different compartments of his mind, and allowed by-communication between them, so that his science was not restrained by his faith, or his faith crippled by his science. Cuvier appears to have done much the same thing, and to have been not less daring than devout; but for most men such a separation is impossible; their faith and their science are indivisible and interfuse each other. Finally, they must either dwell together in happy harmony, or the one must suppress the other, or even strangle and expel it altogether.

The victory of science over faith is indisputably sometimes the advent of peace. There are men with minds so constituted that they can recline at ease on a cold and stony materialism, or find satisfaction in an outlook of blank know-nothingness. There are others again—and they are many—to whom an expectant attitude affords composure. Concluding that the faculties of man in his present stage of evolution, with his limited number of senses and their restricted swing of action, although equal to the practical problems of life, are incompetent to explain the nature of things—they are content to await what shall be revealed hereafter. Entertaining preliminary hypotheses of all kinds, whether derived from Spencer or Hegel, Kant or Comte, Emerson or Schopenhauer, Buckle or Newman, they reserve judgment, taking the universe *ad avizandum*, and wholly busying themselves in the reality that lies around them.

But this attitude of mind and the declared materialistic attitude, even when they secure complacency, are seldom reached without pain and tribulation, while to a large majority of those who embrace it materialism is no haven of rest, but a rocky and wreck-strewn shore. To most men it is an anguish to be compelled by their fealty to truth to abandon their old and long-cherished hopes and beliefs; and if you wish to contemplate moving pictures of that tragic epoch in a man's life, you cannot do better than turn to Carlyle's chapter, "The Everlasting No," in *Sartor Resartus*, where he shows "the foredone soul, bereft of faith, drowning slowly in quagmires of despair"; to Goethe's description of the same black phase of nightmare in his own pilgrimage, when he determined to end it all by suicide, from which only a happy accident saved him; to Tolstoi's confession of the dark and ominous doubts that invaded him, bringing his life, as it were, to a sudden stop, and leaving him long trembling on the very verge of the precipice of self-destruction; or to Dr. Beattie Crozier's powerful sketch of the heaviness and misery that the perusal of Herbert Spencer, when he was a medical student, brought on him. The last-named writer, a member of our profession, who, as members of our profession have at all times done, is to-day taking a brilliant part in philosophical discussion, who in analytical skill is only inferior to Spencer, whom in intuition and literary style he excels, has thus described what one volume of the *Principles of Psychology* did for him. "It blotted out my ideal. My mind, bereaved of what had been its life, settled into a deep and, what for a year or two threatened to be a permanent intellectual gloom.....Wherever I looked the bright landscape of life turned itself into a desert, around and about which I wandered as in a dream, ever and again to wake up and ask myself in a moan of bereavement and despair, Where is now that bright ideal of life which encompassed me in the days when, with my philosophic friend, I walked radiant by the sweet-smelling pines by the river's bank as in the groves of Academe?"

The four great men I have referred to struggled up again, by different routes of ascent, from "the everlasting no" to new and diverse pinnacles of "the everlasting yea." Their throes were Titanic, but vast multitudes in a minor degree participate in them, for most thinking men have at one stage in their growth to encounter the world problem, and if they cannot solve it have to endure pains and penalties. Do what they may, they cannot avoid the question, What is the meaning, the nature, the object, the destiny of human life—the whence, the where, the whither of us poor mortals? And unless they can brush that question aside, or find an answer to it that will satisfy the needs of their individual hearts and minds, they will lead a maimed existence, be haunted by melancholy, tortured by an unappeased thirst, vexed by the emptiness of success, and overwhelmed by the finality of failure. The loss of the ideal is a personal calamity. "That way madness lies," as those engaged in my special department of practice are not seldom made aware; and the loss of the ideal is inevitable, if no solution of the world problem can be arrived at, or if that solution be materialism. For materialism reduces all things to the pull of opposing atoms. Under its interpretation intellect is the activity of nerve cells; immortality is a delusion; virtue, honour, duty, are forms of selfishness, and heroism becomes a kind of disease.

When the stewardess of the *Stella*—glorious woman!—took off her lifebelt and gave it to an affrighted being beside her, and bravely sank, commending her soul to God, her act was not conducive to the preservation of the individual or the species. It was an expression, we are told, of the abnormal over-functioning of a certain portion of her brain. Does not the heart sink and the gorge rise at such revolting nonsense?

Of course the sufferings, the forfeits, the penalties attached to materialism, agnosticism, or any other solution of the world problem must not deter from its acceptance if it appeals to us as truth. There is intellectual as well as moral heroism, and that at any cost seeks out and embraces the eternal verities, and clings to them with all their asperities, eschewing that which is false notwithstanding its seductive smoothness. But the momentous consequences that hinge on our choice of a solution of the world problem may well hold us back from any rash decision, and encourage us to thorough examination. To drift into materialism from indolent acquiescence, or callous sensuousness, or out of deference to scientific authority, to adopt it in defiance or bravado; to rest in it without testing its credentials again and again in the new lights that the changing years bring to us, is the height of folly. To let the ideal slip from us by clutching it loosely, or by neglecting to supply it with the necessaries of its life, is to sacrifice our most precious birthright. I cannot help thinking that in our medical tribunals we are too apt to allow judgment to go in favour of materialism by default, and to let blatant assertion, like that of the French General Staff at Rennes, pass for proof. The battle is not ended, it is scarcely begun; and if I discern the signs of the times aright, there are hard knocks in store for materialism, naturalism, and gnosticism.

It is not for me in the time that remains to me to combat these three formidable giants who are always lying in wait to devour medical students—materialism, naturalism, and agnosticism. I should be confounded in the attempt. I dare not even stop to indicate all their vulnerable points, for you would run away, not from the giants, but from my long-winded demonstration. What I have to say is simply an exhortation to hold fast, as your sure refuge, by idealism, which in one shape or another and however smothered up, still dwells in each of you, and with that exhortation I would associate suggestions that the assumptions of science which exclude an idealistic view of the world, as well as the prepossessions against anything beyond solid facts and their material explanations which your studies may have engendered in your minds, are still open to doubt and refutation.

Let me remind you then that, vast as the sphere of science is, it is still limited in all directions. On no side does it begin at the beginning or end at the end, for, as Max Müller has said, "Our minds are not so made as to grasp either beginnings or endings." Everywhere it is possible to leave the confines of science behind and to come on unexplored regions, where the ideal is supreme, and where poets and philosophers may expatiate at large. The range of the senses is, as you know, a narrow one. Beyond the red and the violet of the spectrum are rays of wave lengths to which the retina does not respond. Hearing holds good only from 30 up to 40,000 vibrations a second. And smell, taste, and touch go but a little way in revealing to us the properties of matter. It is certain that there is an uncircumscribed physical universe of which we have no direct cognisance but in which we must believe. And it is equally certain that in the mental universe there are boundless areas beyond our apprehension which may be appriately designated by contradictory terms, as our entrance to them is on every side barred by self contradiction in thought. We can conceive neither of boundless space nor of space without bounds, of an ultimate atom that is not both divisible and indivisible at one and the same time. It is certain that what we call our intellect rests on belief and not on knowledge. Physical science can do nothing do demonstrate the existence of an outer material world, which we believe in nevertheless although our knowledge of it is derived from certain affections of the senses. Physical science can never prove to us the existence of mind in our fellow men, and yet that is one of our most rooted convictions. And physical science is equally incapable of substantiating that the quantity of force in the universe is fixed—the first principle without which science is impossible, and which we have to take on trust.

In these and in other instances which might be adduced, it is seen that our whole mental fabric is built up on beliefs, lying deeper than science, in regions into which, with all its modern acuteness and instrumental aids, it cannot penetrate. These regions are called metempirical; but it is not on their shadowy immensities I wish for the moment to touch, but on certain unfathomable chasms that yawn well within the bounds of recognised science, and the existence of which is inconsistent with the materialistic hypothesis.

First, there is the chasm between the organic and the inorganic. Astronomical physics bring us down gently, as has been said, from the incandescent gas of a nebula to this round earth; but when we begin to examine the earth's surface we are pulled up with a jolt at the cleft between the lifeless and the living. There is no tenable physical theory of the origin of life which in our experience never arises except through the mediation of life already existing. Abiogenesis is an exploded myth. Virchow's phrase, *omnis cellula e cellulâ*, is an axiom in biology. The volumes of Herbert Spencer's philosophy, which should have traced out the connection between inorganic and organic evolution, are, strange to say, still wanting. Darwin never entertained the notion of a mechanical derivation of life, but wrote: "It is mere rubbish thinking at present of the origin of life; one might as well think of the origin of matter;" and Lord Kelvin, notwithstanding what has been called his "forlorn hypothesis" of the meteorite, a skin graft from another world, has declared that "the only contribution of dynamics to theoretical biology is absolute negation of the automatic origin of life."

Secondly, there is the chasm between the physical and the vital, for if the origin of life is wrapped in obscurity so is its maintenance. Physiology has, in its materialistic fervour, vaunted itself on having banished vitalism, and established the identity of all vegetable and animal functions with physical forces. In 1889 Sir John Burdon Sanderson, in his address to the British Association, declared that "the word vital, as distinctive of physiological processes, must now be abandoned altogether," but in view of recent researches I question whether he would to-day repeat that statement.

With reference to absorption, which is the chief function of the alimentary mucous membrane, and on which nutrition depends, it was taught, not so long ago, that the processes of diffusion, osmosis, and filtration afforded a complete explanation of it; but since more has been learnt about the powers of cells, these crude physical theories have broken down, and it is now admitted that, while absorption is aided by physical processes like osmosis, it is at bottom the work of cells with a selective power peculiar to their living tissue, and ordered and governed by laws which must be called vital. In connection with secretion and excretion or the extrusion of waste products, and the deportment of certain tissues on bacterial invasion, there are features which we cannot on mere physical principles understand. In several branches of physiology a return to vitalism, or a belief in a kind of energy not physical, chemical, or electrical, guiding and controlling the various forms of motor and molecular energy, may be noted, while our leading physicists tell us that to apply physical methods to biological problems is a gigantic extrapolation. In spite of chemical similarity, living and non-living substances cannot be identified with each other, but can be distinguished by differences not only physiological but physical. The use of dyes in our histological investigations has shown this and the latest observations on the ganglion cells have proved that, apart from staining, differences between living and no longer living parts are visible. The once-favoured theory that the human organism is a mere machine or steam engine *in excelsis* has been discarded. "The living substance is entirely distinguished from the dead machine," says Professor Strassburger of Jena, quoted by Professor Ward, "by its ability to provide itself with the energy needful for its work, to set itself in motion, to keep itself going, to repair itself within certain limits, and above all by the fact that it constructs itself. In short, the organism, in contrast to the dead machine, is a living machine, one that does not depend on external impulses for its movements, one that regulates its own course and continues going as long as the environment will allow." The organism is not an individual, but a social organism made up of regions, organs, tissues, and ultimately of a congeries of cells. It is not one

but many mechanisms combined. Yes; but where does the social arrangement come in? How do the secondary mechanisms come to be assembled together, and not promiscuously but in a well-ordered hierarchy? Under what direction do they co-operate, and how do progress and development in them admit of any mechanical explanation?

Thirdly, there is a chasm, the widest of all and the most fatal to materialism, between mind and matter. And it is just this chasm which, as young medical scientists, you are most likely to overlook, for the dependence of the mind upon the brain is a presupposition of much of your work, and is obtruded on your attention in your clinical, physiological, and pathological studies. Even those of you only entering on their curriculum will be prepared to affirm that thought is a function of the cerebral cortex, for the accredited proofs of that proposition are patent to all. The intelligence of animals is on the whole proportionate to the size and differentiation of their nerve centres. In the different races of mankind a correspondence is observed between mental power and brain bulk and elaboration. In the individual man from birth to maturity the mind evolves as the brain grows, and it fails when that organ falls into senile decay. With a small or deformed brain there goes idiocy; with a large and well-balanced one commanding intellect. When the vital activity of the brain is diminished in sleep the mind faintly flickers in dreams. When the blood supply of the brain is cut off, the mind goes out "like the flame of a lamp without oil." When the brain is poisoned by bad blood, loaded with narcotics or toxins, the mind wavers and splutters in its socket in delirium. After a blow on the head causing concussion of the brain, mental manifestations are temporarily suspended; and with organic lesions of the brain, such as hæmorrhagic clots or tumours, there is permanent lameness and weakness of the mind. And more than that, there is not only a general but a detailed correspondence between mind and brain, for various kinds of thinking seem to be functions of different portions of the brain. If one occipital lobe of an animal be removed, there will be blindness of one-half of the retina of each eye, with inability to see objects in one-half of the field of vision, or the condition called hemianopia, and if both occipital lobes be extirpated there will be total blindness; whereas if the occipital lobes be stimulated by electricity, movements will arise such as are associated with the use of the eyes in vision. It is thus shown that visual sensations are located in the occipital lobes, and by similar experimental methods, aided by pathological observations, it is made in the highest degree probable that auditory sensations are located in the superior temporo-sphenoidal convolution, tactile sensibility in the limbic lobe, and speech in the third left frontal or Broca's convolution.

All this sounds like materialism with a vengeance. And yet there is not a physiologist amongst us who will say that the dependence of mind on brain is the same kind of dependence that exists between function and organ in other instances. The brain during its functioning produces creatin, lecithin, cholesterin, and carbonic dioxide, but it does not produce mind in the same sense, and Cabanis's mischievous epigram, "The brain secretes thought as the liver secretes bile," is false and misleading. The most material theory of mind production now fashionable may be stated thus: Nerve currents set up by external impacts travel up the nerves and through the ganglia, and reach the cortical cells of the hemispheres, where they find a set of nerves and cells not so accustomed to this special change. The currents encounter resistance, and in overcoming this they cause the cells to glow, like the carbon filament in an incandescent lamp. The white-heating of the cells we call consciousness; consciousness, in short, is nerve glow. But this is merely to shirk the materialistic difficulty, to take shelter under a metaphor, to blink the chasm which gapes huge and impassable as ever. Of nerve cells at a white heat or in a glow we know nothing; but if by these terms are meant the molecular changes in nerve cells when functionally active, it may be pointed out that these changes are purely physical, and that they are not transmuted into consciousness by giving them figurative appellations. Neural facts we know and mental facts we know; but there is no bridge between them, and they cannot be identified any more than can a telegraph wire with the meaning of the message it transmits. We cannot conceive of mind as a mode of motion. An idea and a vibration in nerve molecules are as essentially different as the multiplication table and the slate on which it is jotted down. The series of neural events that goes on in the brain, being physical, is already closed and complete within itself, each neural state being wholly the effect of the neural state immediately preceding it, and entirely the cause of that directly following; and to assume that a neural event could become a mental one would be to violate the master generalisation of modern science—the conservation of energy—by holding that energy could appear or disappear in one form without at once reappearing or disappearing in another to a precisely equivalent amount. Brain changes cannot be transformed into sensations or volitions into brain changes without a breach of physical continuity. Psychological analysis pushed never so far will bring us no nearer to molecular motions, and, however much we may lay bare the brain, thought will remain intangible and inscrutable as before. No man has seen thought at any time, and no man has seen neural process. It is only in their effects that we can follow them from point to point—that is to say, in sensation and movement. Thus it is that Du Bois-Reymond has said that it is hopeless to resolve thought into a physiological process, and that Wundt has delivered himself to the effect that the action of mind on matter, if it existed, would be in the nature of a miracle. Thus it is that modern science has repudiated crude materialism as regards the relations of mind and brain, and fallen back on an agnostic theory called psycho-physical parallelism, which is now in the ascendant.

According to this theory, it is admittedly vain to attempt to resolve thought into physical changes. All that can be done is to trace coexistence and succession between facts of mind and facts of body. We have, on the one hand, a series of physical changes or brain processes, on the other a series of psychical changes or mind processes, each undulating at the rate of 10 per second, the two clocks of Leibnitz without intercommunication, but so constructed that they perfectly accord in action. These two series are utterly disparate and incommensurable, and cannot be identified, and the relation between them is purely one of concomitance—of concomitance, however, of the most detailed and exact kind. The correspondence between neural and conscious states is complete as regards complexity, intensity, rhythm, and time order, and amounts to close and undeviating parallelism, a pre-established harmony beyond which we cannot go. There is, it is alleged, a duality of mind and matter, a duality in which neither is "afore or after other, neither greater or less than another."

This theory avoids a shallow materialism by propounding an enigma; but in spite of its professions of the equality of the psychical changes and their physical counterparts, it very soon appears that those who adopt it give precedence to matter. It leads us back in the doctrine of conscious automatonism, and represents mental manifestations as epiphenomena or collateral products of brain processes, like the shadows of a moving train, mere symbols in consciousness of changes that are going on automatically in the organism. Grasped and applied, it takes the zest out of life just as much as pronounced materialism. It postulates a rigorous concatenation of all physical changes into one vast undeviating process without psychical influx which knows nothing of spontaneity, worth, or purpose to which mind is secondary and episodic, in which there is only uniformity of space and time and persistence of energy. It owes its rise, of course, to the upholders of the mechanical theory, and not to the physiologists and pathologists, for they have generally inclined to the opinion that the connection between mind and brain is one of mutual influence or interaction of some sort. To them parallelism has seemed a highly artificial hypothesis, an everlasting dilemma, even more inconceivable than interaction; for they have failed to see why ignorance of the connecting links between physical and psychical states should be a ground for asserting their absolute independence, and have remembered that science would have been but backward indeed had the same principle been applied in other cases of coexistence. They have preferred to believe that there must be a still undiscovered medium connecting the two, for invariable concomitance and causal independence seem incompatible positions.

The philosophical objections to psycho-physical parallelism are numerous and convincing, and Professor Ward, who has most ably set these forth in his Gifford Lectures, has likened this system of dualism to "a hatchet chopping the world in two by a murderous stroke which leaves two dead halves instead of a living whole, two sets of abstractions instead of one reality." It is impossible for me here to enter on these philosophical objections, but I venture to submit to you that we have empirical grounds for demurring to the parallelistic position. The correspondence of neural and mental states, which is its key, is by no means complete; and, indeed, when the matter is closely looked into, it appears that for only a few psychological processes has the physiological substratum been actually demonstrated. How far does the parallelism extend? Where does it begin and end? On the one hand, I need scarcely remind you that, to say nothing of the sympathetic system, the whole of those neural processes which are constantly going on, in what Hughlings Jackson has called the lowest level of the nervous system, including the sensory and motor centres of the spinal cord, medulla oblongata, pons Varolii, and aqueduct, representing the whole body in detail in the most strongly organised and vitally essential manner, are carried on independently of consciousness, and without psychical concomitants. On the other hand, I need scarcely remind you that the very highest centres of the brain are, as far as physiological demonstration goes, purely sensori-motor, and that while correspondences of a precise kind have been shown to exist between changes in them and sensations and movements, we have no proof that they vary coincidently with the higher complexes in the psychical series. The gaps between the already defined sensory and motor centres, gaps which form a large area on the surface of the brain, have been called association centres; and Flechsig has, with scanty evidence, localised in them the intellectual functions; but the moment we go beyond sensation and movement we are plunged in depths of conjecture; and we are certainly not yet entitled to deny that as at one end of the scale there is neural process without psychical concomitant, there may be at the other end psychical process without neural concomitant. The direct application of an electrical stimulus to certain areas of the brain induces movement and sensation, but never, as far as we know, an idea or the phantom of a thought. The individual mind is rooted in brain certainly. Its radicles are an intricate network in brain substance, and stretch down into the subsoil of other tissues, their spongioles, tips, and hairs spreading in myriads on the cutaneous surface in the organs of special sense and in the viscera, and supplying mental nutriment. But the root, although essential, is not everything to the plant, which needs also air, moisture, room, and sunshine; and it may be that mind—though planted in brain stuff and nourished by nerve fibres—can only bud, blossom, and come to fruit when subjected to influences more subtle than any derived from these sources.

The range of the psycho-physical parallelism fluctuates from time to time. In moments of high mental strain or morbid erethism, we become conscious of things of which in our ordinary state we have no cognisance; while at periods of exhaustion or drowsiness things that are commonly included in consciousness vanish out of it; and this points to something outside the parallelism regulating its compass.

The mechanism of the brain, as histologically and experimentally revealed to us, seems scarcely equal to all the functions that modern science would impose on it. For the highest reflexes, or sensori-motor operations, it is plainly, exquisitely adjusted; but it must be allowed that there is some difficulty in understanding how its uniform structure can adequately support mental states of infinite diversity in rank and quality, supplying a special process for every possible variation; and how emotions, associations, memories, judgments, reasonings, volitions can be described in terms that run parallel with the monotonous interplay of molecules in the grey matter of the brain. A neural process in the brain does not differ in quality from a neural process in the spinal cord, which has no psychical accompaniments. And an isolated ganglion cell from the prefrontal lobe could not be distinguished by the most expert microscopist from one from the lumbar enlargement. True, the intercommunications and possibilities of claspings, of the arborisations, are much more numerous in higher than in lower centres, and in the cerebrum the nerve cells vary in size and shape in different regions; but this merely means a wider transmission of sensory excitations and structural modifications analogous to those seen in the lowest reflex arcs, corresponding with predominant sensory and motor functions. Sir William Gowers has said that all we know for certain about the nerve cell is that on it depends the vitality of the fibres. And as regards the nerve cells of the cortex, which have been somewhat hastily designated psychical neurons, it may be hazarded that their dendrites and ascending fibres distributed in the molecular layer, as pictured by Ramon y Cajal and displayed by the method of Golgi are more reminiscent of a periphery than of a central terminus. Any histological theory of mind activity, founded on the observations of Lugaro of Florence, which are still unconfirmed and present many sources of fallacy, would be quite unjustifiable, and indeed, if accepted, these observations would not bring us any nearer that manifoldness of structure and function which is requisite if we are to have a physiological process corresponding to every variation of the contents of consciousness. In the expansion and contraction of gemmules or dendrites, which are uniform throughout the brain mass, it is impossible to recognise any more than in the local difference of nerve cells and the quantitative differences of their excitements an explanation of the kinds, intensities, vividness and values of sensations, to say nothing of higher mental powers. It would seem necessary, therefore, to acknowledge that the physiological transport, as at present known to us, can scarcely keep pace with its psychological convoy.

In disease, too, as you are aware, the pathological changes we meet with in the brain have only partial correspondence with mental symptoms. There is abridgement of manifestation owing to breakdown of mechanism. In all coarse alterations of cerebral texture it is dissolution, blocking, or negative affections of consciousness we have to deal with, from the absolute dementia that means destruction of the highest centres down to some slight loss of relation, associated with a small local lesion; while for positive symptoms, for example, for delusions and hallucinations, which have no discoverable brain cause, we ascribe them to over-action going on in parts that disease has spared and emancipated from control. A microscopic study of the cells and nerve fibres of the brain can never give us the remotest inkling of a man's mind and character, any more than a study of the fasciculi of muscle can acquaint us with his manners and aptitudes. Mind and character are to be appraised by the reactions which a man's words and deeds have on our minds. They cannot be made visible or palpable to the outer senses, but through their body mask they may be discerned clearly enough by the light which our own minds reflect on them. Brain physiology with its gyri, cells, and fibres has as yet given no assistance to psychology, which existed, long before it came to the front and alone made it feasible.

Let us, however, notwithstanding the limited number of empirical observations yet available, save ourselves from the charge of being out-of-date scholastics by acknowledging in the amplest manner the wholeness of the connection between physical and psychical facts. Let us grant, as a logical necessity, that every mental process without exception has its cerebral equivalent, and that psycho-physical parallelism is complete. Are we then landed back in what is practically materialism? Does this necessarily imply conscious productive function in the brain? Must we resign all our ethical and ideal values? By no means. There are outlets from such dire extremity of woe, and one of these has been clearly pioneered for us by Professor James, of Harvard University, who has shown that there is nothing in the facts of concomitance incompatible with the theory of transmissive function of the brain; nay, that that theory fits these facts better than the alternative productive theory.

"Suppose," says Professor James, "that the whole universe of material things should prove a mere surface veil of phenomena, hiding and keeping back the world of genuine realities. Suppose that our brains are thin or transparent places in the veil, through which gleams from the outer sunlight of absolute light may shine, is it not clear that the light will break through our brains in the restricted forms and with all the imperfections that characterises the medium of transmission?"

Brain, like a dome of many-coloured glass,
Stains the white radiance of eternity.

The music of the brain organ is made up of the tremblings of the columns of air as they emerge from its various pipes, but the air is not engendered in the organ, and the millions of individual minds around us may be regarded as but rills flowing forth from the great ocean of thought, and individualised by the nature of the channels through which they flow. Our conception of the universe depends on the psychological unit.

"According to the state in which the brain finds itself, the barrier of its obstructiveness to transmission may be supposed to rise and fall. It sinks so low when the brain is in full activity that a comparative flood of spiritual energy pours over. At other times only such occasional waves of thought as heavy sleep permits get by. And when finally a brain stops acting altogether or decays, that special stream of consciousness which it subserved will vanish entirely from this natural world. But the sphere of being that supplies the consciousness would still be intact."

This transmissive theory still leaves mind in literal strictness the function of the brain, for, according to it, the brain is the independent variable to the variations of which mental manifestations must correspond. But the independent variable does not produce mind, but merely curtails its display. Thus when a cerebral injury is followed by loss of consciousness, it is not the generator of consciousness that is destroyed, but the apparatus by which consciousness is exhibited; and when after cerebral injury faculties which have been in abeyance for a time are recovered, not by renewal of the damaged part, but by the compensatory action of adjoining parts, it is consciousness that has been constituting a new apparatus in substitution of that which was lost.

Professor James truly remarks that, by this transmissive theory, "the fangs of cerebralistic materialism are drawn," and he goes on to point out that by this theory the strict dependence of our soul's life, as we know it here, is not incompatible with a supernatural life beyond the veil—that is to say, immortality. It must be observed, however, that the immortality which the transmission theory leaves to us is not in itself of the kind that can satisfy the passionate and universal cravings of the human heart, for it amounts merely to reabsorption or disappearance of the individual rill in the great ocean of impersonal mind, and promises no retention of personal identity or continuity of the present life with the life hereafter, unless, indeed, there should be many individual minds behind the scenes, each one harnessed for the time to one particular brain. A doubly transmissive or confluence theory seems to meet this objection. Suppose that rays from the world of mind not only constantly shine down through the brain, but are constantly reflected to it from the world of matter; suppose that the outcoming currents from the psychical universe are blended in it with ingoing currents from the physical universe, or are woven together into a concrete unity, then in their varied and unique combination in every individual brain we have a personal identity which may be carried over into the unseen universe when this life is ended. No two men have had the same experiences, physical or psychical; no two have the same psychical nucleus or apperceiving subject round which these experiences gather, and it does not seem a bit more incomprehensible that this monad, with its accretions, a single indiscernible entity, should survive the body in which it has had its nursery and home, than that a single spermatozoon—a microscopic speck—should carry down into a new generation not only the express image of the father, but a long line of reminiscences, human and animal, extending up to the first syllable of recorded protoplasm. Standing on the borderland between mind and matter, we are "in the misty mid-region of Weir, the ghoul-haunted woodland of Weir." We are in the realm of mystery, of paradox and miracle, and need not be frightened out of our scientific propriety by the last word; for psycho-physical parallelism would be itself a miracle; and a greater miracle still would be the generation of consciousness in the brain. Wundt, the ablest apostle of psycho-physical parallelism, whom I have quoted as stating that the action of mind on matter, if it existed, would be in the nature of a miracle, yet strenuously, if inconsistently, maintains that the soul shapes the body, and that voluntary impulses are the prime movers in organic development, and he has even formulated a law of increase of spiritual energy directly opposed to that of conservation of energy in physical things.

Sensations, be it borne in mind, are one and all intrusions and interferences in the mental series, while volitions are not less intrusions, and interferences in the bodily, while both sensations and volitions once experienced are apparently indestructible, for our occasional sudden and unexpected glimpses of a long-buried past, and the results of experimental psychology alike indicate that nothing is ever forgotten wholly and beyond recall. A nerve or nerve cell once stimulated can never again be as it was before. There is indestructibility of mind as well as of mass.

But there are other escapes from psycho-parallelism and fall that it involves beyond any theory of transmission, confluence, or interaction. The connected objects in this parallelism, the psychical objects on the one hand and the physical on the other, do not, it may be said, belong to reality, but are merely theoretical constructions for special logical purposes. We have two abstractions but one reality. Psychological description and explanation of mental facts do not therefore, as is generally supposed, express the reality of our inner experiences, but are truly a transformation of them, effected for special logical purposes with a practical aim. Professor Münsterberg, who has so ably endeavoured to establish a scientific synthesis of ethical idealism with physiological psychology, says, "Psychology has the right and the duty to consider everything from the psychological standpoint, but life and history, ethics and philosophy have neither the duty nor the right to accept as a picture of reality the impression which is reached from the psychological standpoint. Natural science has put in the place of perceivable objects unperceivable atoms, which are merely products of mathematical construction, quite unlike any known thing, and yet are scientifically true, as their construction is necessary for that special logical purpose; and so psychological science has metamorphosed mental facts into psychical elements, and as the transformation is logically valuable, the psychical elements and their associative and inhibitory play are scientifically true, but these psychical constructions have as little reality as the atom of the physicist. Our body is not a heap of atoms; our inner life is still less a heap of ideas, feelings, emotions, volitions, and judgments, if we take these as contents of consciousness made up from psychical elements. In the real life we are willing subjects where reality is given in our will attitudes, in our likings and dislikings, lovings and hatings, affirmings and denyings, agreeings and fightings; and as these attitudes overlap and bind one another, this willing personality has unity. The world of not existing but valid will relations is the only world which history and society, morality and philosophy have to deal with. Our life is will, and the will has its duties."

Psychology is thus, according to Münsterberg, a special abstract construction which is entitled to consider everything from its own point of view, but has nothing to assert in regard to the appreciation and interpretation of our real freedom and duty, values and ideals. If it does not understand that it works only from one side, and that the other side, which can never be an object of psychology or natural science, is the primary reality it degenerates into unphilosophical psychologism, just as natural science does into materialism. The conceptions of psychology must be kept separate from those of real life. We may turn from the speculations of advanced psychologists who regard physical attractions, affinities, undulations, molecules, atoms, and ether as the true realities, and mental conditions as merely symbols; and those of advanced physicists who invert the motion, and regard only mind states as real and physical phenomena as symbols, we may turn from both of them to the ethical idealism which leaves our æsthetical, practical, educational, social, and historical views undemolished. Thus may we attain a belief in the unity of personality stronger than any confidence felt in the decompositions of science.

But it is not any abstract psychological system—invaluable though that may be in its own sphere—that interests you as medical men, but the real life and its ideal element; and my firm belief is that your professional success will largely depend on the manner in which you combine realism with idealism. Ideal inspiration must be blended with active virtues if lasting prosperity is to be attained, for without the

ideal the will lacks aim and purpose, and without the will the ideal remains dreamy and inert. It is a mixture of realism and idealism in his nature that makes a man powerful amongst his fellow men. To possess an acute sense of realisation which penetrates swiftly to the core of a difficulty, and suggests a remedy combined with an instinctive longing for higher possibilities of life, for progress, for moral advancement, and a belief in a revelation far transcending our present knowledge, that is to be endowed with far-reaching human influence.

About your realistic fidelity there can be no doubt. The bias which has led you to choose medicine as your profession, the whole trend of your studies, your daily toil amidst the actualities of life, the hourly call on you for analytical insight, will ensure its primacy.

It is for your adherence to the ideal that I plead. Material prosperity will not content you. "The cash nexus, and the Devil take the hindmost," of Carlyle, will leave you alienated from your kind. It is not by dissolving the universe into its atomistic elements, and explaining them by natural laws—without regard to their moral meaning and value—and this has been the great achievement of the nineteenth century—that satisfaction and peace will be secured. After all, it is the meaning and value of the world that mainly concern you, and these are to be found in realms that natural science has not yet reached. If you would see and appreciate them, you must quicken that spiritual sense that apprehends deeper relations than any that physical science can disclose, that takes cognisance of truth, beauty, goodness, justice, and omnipresent power, and that knits together the scattered threads of being. To the outer senses all is diversity. In the understanding this diversity becomes harmony. By the spiritual sense this harmony is translated into unity. It is in this unity you will find the ideal by which you must live and work.

Manifold have been the settings, multiform the phases of the ideal from Mosaicism and Platonism downwards, but all of them have seemed futile that have not involved belief in soul, free will, and immortality.

It is the conception of the ideal, standing as the representative of a power outside the world and the mind, something which is in the mind but not of it—that is perhaps the most important distinction between man and the lower creation, besides being at once the bedrock and cement of our civilisation, for deprived of it we should before long fall back on Nietzsche's primal animal power, and become a herd of "blond beasts," as he has called mankind.

I trust that nothing I have said this afternoon will be regarded as an incitement to the medical students of Owens College to neglect their proper work, or as a lure to draw them into the cloudy regions of abstruse philosophical speculation. That would be an ill service done to them. It is concentration and practice that perfect function, and the function of a medical man is of such a nature that intense concentration and diligent practice are necessary if it is to be performed with acceptance and success. Your calling permits of no divided allegiance. Medicine as an art consists no longer of an almost stationary body of established principles that have to be applied day after day to the same or similar cases. It moves, it expands, it modifies its methods from hour to hour in conformity with the new discoveries that are flashed upon us, the new tools that are put in our hands. Medicine as a science is so vast and progressive that the most capacious mind and the longest lifetime cannot embrace it all; while persistent, patient, earnest investigation is demanded of anyone who would open up new ground even in the smallest of the special allotments into which it is split up. You cannot be too devoted in your attentions to the mistress of your choice, and I would be the last to entice you to interrupt the voyage on which you have embarked by tacking into unknown and treacherous seas. And, if I were foolish enough to do so, my siren voice would be of little avail, for there are straits ahead of you—the examination straits—which will prevent any serious deviation from your course. But as you voyage along, cosmic thoughts and dialectical difficulties, misgivings, perplexities, hopes and fears must come; reflective epiphenomena must illuminate or shadow the visible phenomena which will form your daily food, and it will be impossible for you altogether to avoid the considerations to which I have been referring. And in my judgment much of your happiness and usefulness in life will depend on the manner in which you meet them, on your steadfastness and intrepidity in passing through the materialistic Slough of Despond, and on your coming out of it still holding aloft the ideal.

How is the ideal, whether it is in the mind innately or has been won by sore travail, to be fostered and nourished and kept alive? By all those observances and ordinances that the wisdom of ages has consecrated, and that in these hurried and luxurious days we are too apt to neglect. By the assumption of an attitude of reverence and sympathy, which will incline our ear to the whisperings of the infinite, and afford us glimpses of the inner impulses by which other men shape their lives. By the practice of manly discipline and of that self-renunciation for which our profession affords the finest scope, for in ministering to the wants of others, even at the sacrifice of our own, we mount to blessedness. By deep draughts from the refreshing fountains of art and by inhaling the pure atmosphere of a delicate and tender home life.

In many trivial ways—trivial apparently, but not really unimportant at many points in the career of the medical student—idealism may be encouraged. Take our dissecting rooms, for example. In my earliest recollections of them they were odious, squalid places. Nowadays an architectural sense of fitness controls their construction, and they have become spacious, well-ventilated, and well lighted; but in many of them there are long whitewashed walls unbefitting a building dedicated to a noble purpose. These walls clamour for decoration. How easy were it at small cost, by plaster-of-paris friezes, reliefs, and medallions, to keep in perpetual remembrance of those who work in these rooms the beauty, grace, and dignity of the human form.

Familiar relations with Nature is life blood to the ideal. The tasks of the medical student are of a kind that make this intercourse peculiarly desirable for him, but the conditions of his lot are such, especially when his school is in the middle of a big city, that he can but sparingly indulge in it. The motor leisure he can command is dedicated to the service of the rather than the receptive centres. Football, cricket, hockey, lawn tennis, gymnastics, make exacting claims on him, and I would not say a word to disparage the benefit of these salutary exercises; but at the same time the calls of the perceptive faculties should not be ignored, nor the wholesome and soothing effects of the contemplation of natural scenery overlooked. A sense of joy and tranquillity that is not otherwise to be secured does flow in during a walk in the country with open heart and eyes, and communion with our mother earth in all her changing moods and garments is not only a sedative to irritable nerves and a restorative to jaded powers, but a stimulant to idealism. To turn from the scalpel and the test tube to "the light of setting suns, the round ocean and the living air" is to get away from dead facts to breathing ideals, to approach, to invite, often to realise the sublime conception of one divine spirit interpenetrating the world, shining resplendent in the mind of man and twinkling in the wayside flower.

But unless richly gifted with poetic faculty we are all the better in our study of Nature, as in the study of anatomy, of having our professor or interpreter with us. He removes obstacles, suggests analogies, quickens insight. The poet is the interpreter of Nature, and in our poets we have guides more or less trustworthy in our wanderings in her demesne, for if they are true poets they transcend scientific analysis, and not merely put forth beautiful visions, but anticipate and create. The great masters of poetic literature should not therefore be unknown to the medical student who aims at the ideal, of which also art and music and the drama may be powerful auxiliaries. Excursions into the pages of history will also help him to an inner understanding of the world, and disclose to him in ages, nations, and social groups, the reign of ideals, the operation of over individual qualities and will influences, necessarily involving ideal governance.

I can express no better wish for you, gentlemen, than that, while immersed in the realities of life, you may be rewarded in your quest of the ideal, for it is a talisman that, once seized and pressed to the breast, will enable you to say to pessimism "Avaunt!" and to beneficence "Open, sesame!" Negation is a

barren wilderness, belief a teeming garden. "To yield reasonable satisfaction to the religious sentiment in man," exclaimed Tyndall, "is the problem of problems of the hour." Lord Bacon said he would rather believe all the fables of the Talmud or the Koran than deny the being of the Universal Mind; and Newton concluded his *Principia* with these words: "The whole diversity of natural things can have arisen from nothing but the ideas and will of one necessarily existing being who is always and everywhere, God, supreme, infinite, omnipotent, universal, absolutely perfect."

Our little systems have their day:
They have their day and cease to be;
They are but broken lights of thee.
And thou, O Lord, art more than they.

We have but faith; we cannot know.
For knowledge is of things we see;
And yet we trust it comes from thee,
A beam in darkness; let it grow.

ST. GEORGE'S HOSPITAL.

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MEDICINE, OLD AND NEW.

IN the present day more ways of employing life are open to an Englishman than ever before presented themselves; English commerce traverses every sea; all round the world men of our race stand on the frontier of civilisation, and impart to the surviving aborigines their drink, their expletives, and something of their knowledge of firearms. Putting aside the thousand ways of life which the nineteenth century offers to the Anglo-Saxon, I will touch only upon the services and the learned professions. The army and navy may be briefly though respectfully dismissed. A calling of which the purpose is to destroy life appeals less to the sympathies than one of which the aim is to save life, though we must unwillingly admit that our efforts to destroy are more constantly successful than our efforts to save. As to the "three sisters of old"—Law, Physic, and Divinity—I think that those have done well who have decided to attach themselves to the medical member of the family. I tremble to touch on Divinity, but may at least say this: Among the purblind race of miserable men are many whose narrow field of vision is better fitted to comprehend natural knowledge than supernatural, the finite than the infinite. Such have chosen wisely who have found their calling in medicine. With this the law compares unfavourably in this respect. Medicine is wholly beneficent, at least in intention. The opponent is disease, and is always in the wrong. The advocate is bound to a side which may not be that of justice. His endeavour may be to make the worse appear the better cause. The process is on the whole useful; truth may come out by contention; but yet it must be allowed that if one counsel is right the other must be wrong, and may be doing his best in the cause of iniquity. No such partisanship directs the efforts of the physician; if he is confronted with another, it is in order that both may work together against the common enemy. All rejoice in his success and agree in lamenting his failure.

Our purpose is nothing less than the good of the human race. Our ideals are as lofty as are permitted to man, but endeavour is one thing and accomplishment another. If we look at what has been achieved, we shall find that that is little compared to what is to be hoped for. Our retrospect will take us through the valley of humiliation; let us hope that at last we may discern some glimmer of the lights of the desired haven.

Forty centuries have brought us indeed a cornucopia of drugs, while they have presented to our view a doleful procession of theories which were erroneous and practices which were injurious. The past abounds with warning, and suggests the melancholy reflection that our ancestors would on the whole have lived longer had they had no physicians among them. "We may lay it down as an axiom," says Addison, "that when a nation abounds in physicians it grows thin of people"; and in another place he founds a practical suggestion on this rule. "I must confess," says he, "for the good of my native country I could wish that there might be a suspension of physic for some years that our kingdom, which has been so much exhausted by the wars might have leave to recruit itself." Literature abounds with sarcasms directed against the profession of medicine, and it must be allowed that in the last century, and especially in the earlier part of this, they were by no means without justification; but we may trust that few, and those only the most harmless, are applicable at the present day.

The practice of our ancestors, mostly injurious, was actuated by faith as fervent as ever comforted a martyr, though here the faith was in one person and the martyrdom in another. Nature is much-enduring. No sort of treatment excepting that employed by the law kills everybody. Those who survived were thought to have been cured; the patient was grateful to the physician who did his best to kill him; and the physician, "bold in the practice of mistaken rules," looked upon himself as a public benefactor when he was no better than a public nuisance. Now the old faith has gone from us or been transferred from Art to Nature; and medicine has become a comparatively harmless occupation. A few superstitions still remain, but they are less exacting and unreasonable than once they were.

"The old order changeth, yielding place to the new." But the old order has not quite passed away, nor the new fully arrived. We are in a period of transition. Medicine is ceasing to be empirical and becoming scientific. The reign of science has not yet been completely established, but it casts its shadow before; and we may look forward to a time when the physician, already deprived of half his terrors, shall be as beneficent in act as he always was benevolent in intention.

Up to recent times the progress of medicine has been irrational and unscientific, not always contrary to reason and science, but not necessarily guided by them. First came the accidental discovery that certain vegetables and minerals produce certain effects on the human body. This mode of enlightenment dates from the earliest times, is common among savages, and is in vogue with those who do not so regard themselves. To this we owe opium, cinchona, colchicum, digitalis, mercury, iodine, and, indeed, most of the drugs which we could least spare. Some of them we term specific, a word which in itself is a confession of ignorance. As to most of them, we know little more than that they produce certain effects, we do not know how. How they were found out so to do is a mystery—not by any process of scientific deduction, probably largely by haphazard experiments, directed, if at all, by erroneous theories; but empirical as was the system, if system it may be called where system was none, it was not unfruitful; it has been at work from remote antiquity, and it would be strange if among the accumulations of many ages and many countries there were not some things worth retaining. Much has been discarded.

Time hath, my lord, a wallet at his back
Wherein he puts alms for oblivion.

That wallet is stuffed with unsavoury drugs, dead men's skulls and all uncleanness, mummy powder, foxes' lungs, blackbirds' dung, and other repulsive objects, but not all repulsive, for we discern among them the eyebright, whose resemblance to the human eye declared its use in diseases of that organ; and the red rose, a sovereign remedy for hæmorrhage. But oblivion has not grasped everything. Much has escaped and been handed down to our refined and critical age. The empirical use of medicaments so obtained formed the greater part of prescientific medicine. By empirical I mean, as the dictionary has it, "practised only by rote, without rational grounds." But let us not be ungrateful to our forefathers because we have acquired methods which we think superior to theirs. The debt which medicine owes to empirical therapeutics must be acknowledged as long as medicine is practised.

But if the medicine of former days was largely empirical or irrational, not so was surgery. Surgery as compared with medicine is a rude and simple art. If an eye offend thee, pluck it out; if there be a tumour, eradicate it; if a bowel be strangulated, cut the bonds; if there be a collection of pus, make a hole for its escape. All this is simple, but it is eminently scientific. The fundamental mischief is recognised and intelligently dealt with. Hence it comes that most of our successes have, up to a recent date, belonged to the depart-

ment of surgery. I say most, not all, for vaccination—perhaps the greatest of them—must be regarded as a matter of medical reasoning rather than surgical manipulation. To this I shall revert.

The advances of modern medicine may be considered under three heads:

1. We have learned that many of the processes which constitute disease cannot be controlled by drugs; they run their course regardless of pills, potions, and plasters, and cannot be brought to an end by such means except it be to an untimely one.

2. We have learned to enlist in our service the influences of external Nature, and with their aid are able, in certain diseases, to secure results which to more narrow therapeutics were impossible.

3. We have learned to trace many diseases and morbid conditions to minute organisms which were not only unknown to our forefathers, but impossible to be known by them, because they did not possess the instruments necessary to their detection. We may carry a pestilence in a test tube and the means of destroying the army of Sennacherib in a waistcoat pocket. But these malign creations have a redeeming quality, for some of them are protective against themselves, while others are capable of indirectly generating their own antidote and curing the mischief themselves have caused. To each of these lines of progress I must briefly revert.

First, as to the respect due to Nature, and the wisdom of not meddling where we are likely to mar. Great is the *vis medicatrix Naturæ*. In how many disorders where our ancestors tried to cure are we content to wait for recovery! I can recall the old ferocious and fallacious treatment of pneumonia with bleeding and blisters, calomel and antimony, and wonder alike at the assurance of the physician and at the patient's tenacity of life. The swing of the pendulum, which acts in medicine as well as in politics, caused the depleting system to be succeeded by its opposite—that of saturating with alcohol—which had at least this good result: it showed that exhausting measures could be dispensed with in the treatment of acute inflammation. Similarly with typhoid and many other disorders. Typhoid patients used, at one time, to have periodic doses of grey powder. Later saline draughts were chiefly relied on, haustus ammoniæ citratis 4tis horis with cruel punctuality, as if more important than sleep or food. Great Nature's second course is sleep; and food more germane to the matter than all the citrates of the Hesperides.

Among other modes in which our fathers played an active part where we are content to be passive I may refer to an attitude of the old physician which is occasionally to be discovered among his successors. The poet tells us that "whatever is is right;" the physician of a bygone but unforgotten age was apt to say "whatever is is wrong." Nature and the physician played the parts of the Government and the Opposition; whatever one did the other opposed. If purging occurred in the course of cholera, obediently to some natural law whereby poisons are expelled, the physician was ready with his opiates and astringents to forbid the discharge. We have not to go back many generations to find that there were those who forbade water in cholera for no other reason which is known to us than that Nature called for it by creating thirst.

In recent days antipyretics have come into fashion which if ever useful I take leave to think are more often injurious. If Nature raises the temperature of the body Art is invoked to lower it, as if the danger lay in the temperature rather than in the condition which caused it. No doubt a very high temperature is in itself injurious, but it is more to the purpose to say that a person has a high temperature because he is ill than that he is ill because he has a high temperature. I have known the body heat to reach 111° and recovery to occur without the employment of any special means to make it less. Let us not be in haste to attack the temperature as if it constituted the whole or chief danger. I regard it not so much as a danger as a sign of danger. Antipyretic drugs are as a rule depressing; it may be that some who might have survived their disease have succumbed to the combined effects of the disease and its treatment. Increased temperature represents increased combustion and occurs especially when there is a poison to be got rid of. I have often asked myself whether this destructive process is not also a purifying one, whereby offending matters in the body are burnt and purged away.

Looking back upon the energetic attempts to cure what would recover if left alone, and at the contradictory tendency to oppose with general uniformity processes not uniformly injurious, we may contrast the vain confidence of the past with the humility and subservience which for the most part characterise the methods of to-day. Without affecting to be superior to our ancestors—I am not sure indeed that we are in all respects their equals—we are necessarily wiser, for we have had certain generations of additional experience. Time is on our side. Pathology has become a science, and the course of disease recognised as subject to natural laws. Much of our progress has been negative in the abandonment of what was injurious, but we may count positive gains.

Foremost among these is the trust we have learned to repose in the influences of external Nature. The treatment of disease by climate has probably been practised from time immemorial, though never to the extent which our wide dominion makes now possible or in the manner which our present knowledge directs. When we consider that different organs possess different degrees of activity in different temperatures, that different diseases prevail in different regions, and that an organ which is prone to disease in one place is exempt in another, what can be more obvious than the wisdom of adjusting our geography to our infirmities, and carrying a failing structure to a place where it is relieved of this stress or the tendency under which it is broken down?

"Hot and cold and moist and dry" are at our choice. The globe presents infinite variety, and could it speak, might say with the Apostle, "I am made all things to all men that I might by all means save some."

To touch upon tuberculosis, much as we have recently learned of the intimate nature of this disease, we can no more deal directly with the organisms on which it depends than we could before they were discovered. The bacillus has as yet defied germicides. It seems to be more resistant in structure and more tenacious of life than the tissues among which it lies. We might, as the old song puts it, "Miss the blue-bottle and hit the Mogul." But without attempting to kill the bacillus *in situ*, it is open to us to forbid its further admission and to fortify the tissues against such as have obtained entrance.

The treatment of tuberculosis by climate is nothing new. For over one hundred years scrofula, or tuberculosis not of the lung, has been treated at Margate by exposure to the air of the North Foreland with a success which has not been attained elsewhere. Pulmonary tubercle has also long been dealt with climatically, but with a less bold appeal to fresh air. The desiderata for this condition were, in the minds of our predecessors, warmth and equability. This was distinctly formulated by "the great Thomas Young," and represented the practice of 1815 and many subsequent years. Consumptives were accordingly sent to low-lying and sheltered places on the sea coast, and were crowded into hospitals in towns where, if some of the desired conditions were present the most important were assuredly wanting. Protection from catarrh is essential; here we are at one with those who preceded us; but we recognise what they did not—the paramount influence of virgin air. High altitudes and ocean expanses, together with an open-air life, even though somewhat careless, accomplish what was not attained when the chief aim was protection from cold, and the invalid was surrounded with precautions lest the winds of heaven visit his face too roughly. Now for tuberculosis of every kind we make alliance with the Powers of the Air, whether on the historic North Foreland or where the North Atlantic pulverises itself on the Cornish cliffs, or on the lofty levels of South Africa, where the invalid may walk in warmth and comfort at an altitude greater than the summits of Snowdon and Ben Nevis.

I might give other examples of the tendency of the present age to enlist in our service the great forces of the external world rather than placing our chief reliance upon the druggist. Bright's disease is a case in point.[1] I take a modicum of credit to myself, as one who has little to spare, for having been, so far as I know, the first to suggest the climatic mode of treating this disorder, founded on its observed infrequency in subtropical regions and on the principle that cutaneous activity must promote renal quiescence. Later and general experience has justified this appeal to the influences of the

atmosphere and shown that in this respect, as in others, we can utilise the great powers of Nature which we cannot control.

To those who are in populous cities pent, change of the the town for the seashore or the open country, of foul air for fresh, comes nearer to a panacea than anything else we know of. It does good indiscriminately to all to whom it is possible to do good. The influence of atmosphere is beginning to be recognised and convalescent hospitals to multiply, but among the hopes for the future is a great increase in the receptacles for chronic disease where the feeble efforts of Art shall be reinforced by the over-ruling powers of Nature.

The third line of progress to which I must revert is the most striking example which we possess of the substitution of scientific for empirical methods. A new era is opening to us: we have learned to recognise and isolate the essential principles of many diseases and morbid processes, and have compassed achievements, mostly in prevention but to some extent in cure, which we ourselves must wonder at and which our forefathers would have regarded as impossible. Much as has been done, this is little in comparison with what will surely follow. The great series of discoveries relating to objects which are infinitely small and leading to results which are infinitely great is due to minute observation, reasoning and experiment, and marks the replacement of empiricism by science.

The first discovery in this field was that of the bacillus of anthrax, which was recognised in 1850, though its full relation to this disease was not demonstrated until 1873. In this year was revealed the spirillum, the conspicuous organism of relapsing fever. Subsequently the essential bacilli of suppuration, erysipelas, tubercle, diphtheria, tetanus, cholera, glanders, typhoid, influenza, plague, and leprosy have been exposed to view. While these intruders from the vegetable kingdom were successively showing themselves the animal kingdom was delivering up secrets of scarcely less importance to the human being. The filaria, a worm whose element is the blood, with the mosquito as *particeps criminis*, turns out to be at the bottom of some of the gravest and hitherto most incomprehensible of the diseases of the tropics. Malaria has been traced to a protozoon which obtains entrance into the blood corpuscle, and the essential cause of this ancient scourge is at last made clear. Dysentery, too, has given up its organism in the shape of the amœba, which is carried in the course of the circulation from the bowel to the liver, and thus explains the direct connection between hepatic abscess and dysentery, which has long been maintained and long disputed.

The organic generators, for such there must be, of small-pox, typhus, scarlatina and measles are as yet hidden, but we may be assured that they will not long remain so. It scarcely admits of doubt that every specific fever, most epidemics, every form of tuberculous disease, and all malarial disorders originate in living organisms introduced from without. It seems not improbable that cancer may ere long be added to the list. It may be roughly estimated that, putting aside diarrhœa, which may be due to many causes of which organic intrusion is one, nearly a quarter of the dwellers in these islands, and probably a larger proportion of the race as a whole, owe their deaths to the intrusion of some of these forms of low life. These organisms, so low in the scale of creation that to call most of them vegetables is a compliment, seem to make use of the exalted human body merely as a fertile region in which they may flourish and multiply irrespective of the harm they do to the field of their choice.

As to the origin of disease in extraneous organisms, one point needs to be insisted on and even emphasised. We have to reckon not only with the seed, but the soil. The tissues may be receptive or resistant. There is natural immunity and natural predisposition. Some persons are proof against small-pox or scarlet fever. Some are invulnerable to tuberculosis, while others are peculiarly susceptible to it. Though the seed fall alike upon several individuals, as, indeed, it falls upon us all more or less, it will grow in some and not in others according to the suitability of the ground. The suitability to grow tubercle may be hereditary or may be engendered by circumstances, among which we recognise low nutrition, inflammatory action, and alcoholism, all of which fit the tissues for the entertainment of the bacillus. Let us therefore not regard the imported organism as if it were the only thing to be considered in the generation of disease.

With this proviso we may return to the bacilli and how far we can prevent or control the morbid processes with which they are connected.

Three methods present themselves:

1. Killing or excluding the microbes.
2. Establishing immunity in the individual.
3. Employing antidotes in the shape of the antitoxins.

The use of antiseptics in surgery affords a typical instance of the first method. Suppuration depends on specific organisms introduced from the outside, and may be prevented by keeping them out or killing them. Hence has arisen a practical improvement so great that only anæsthetics can be mentioned beside it, and even these must take a second place, for it must be esteemed greater to save life than to forbid pain. This great discovery, be it noted, was no result of chance; it was in no sense empirical, but was based upon minute research and scientific deduction. In Listerism, as it is called, we see not only a triumph of surgery but a triumph of scientific, as contrasted with empirical, procedure.

Much as has been done by the use of germicides in surgery, it must be admitted that as yet we have had no corresponding success in medicine, nor have we learned to cure any of the constitutional disorders by directly attacking their bacilli. Phthisis, in which these can be reached by inhalation, appears to offer the best chance, but as yet little has been achieved. But if our present knowledge does not enable us to cure zymotic disease, it has provided us with means of prevention which have done much and promise more.

Here open upon us the extensive subject of immunity and the great discovery of Jenner. It has long been known that certain infectious diseases, small-pox, scarlatina, measles, and the like, do not, as a rule, occur more than once in the same person; they smite once, and smite no more; one attack confers a protection against others. Then, it seems to have become common knowledge in the dairy farms of Gloucestershire that persons who had had cow-pox did not afterwards contract small-pox. This led to the scientific practice of vaccination, to the possible extinction of small-pox, and to remote results in the field of preventive medicine which we can partly see in the present, and confidently discern in the future. How a disease protects against its own recurrence is not perfectly known, and could not here be adequately discussed. Vaccination is but another manifestation of the law under which certain diseases having occurred once do not occur again. Cow-pox is a miniature small-pox; small-pox weakened by its passage through the cow. Thus a person who has had cow-pox has virtually had small-pox, and cannot have it again. The use of attenuated and comparatively harmless infections, as protecting against the more malignant, has recently received a development which would probably fill Jenner with astonishment could he look down on Pasteur's Institute and his own. Immunity from rabies is produced by the introduction of minute doses of the poison modified by passage through the rabbit, and this can be accomplished better late than never, though the treatment be not begun until after the bite has been inflicted. It appears that plague can be prevented by inoculation with its own products modified by heat, and similar preventive treatment has been applied to typhoid, though it is as yet to early too speak confidently of the results. The same may be said of cholera. Not only can a disease be prevented by its diminutive—small-pox by cow-pox—but it may also be prevented, as in the case of rabies, by establishing a tolerance of the poison without necessarily giving rise to any disorder analogous to that which it is sought to prohibit.

How great a scope is here presented to us it is impossible to estimate; but there is nothing new under the sun. When we administer a small dose of poison to protect against a larger, or one less virulent to protect against one more virulent, we but imitate the practice of Mithridates, who, as we were taught in our youth, treated himself with small doses of poison until he was able to defy larger; and, if the tales be true, discerned on the banks of the Euphrates some of the laws of prevention which are now receiving attention on the banks of the Thames. It is said that the snake charmers of

India protect themselves from the effects of snakebite by drinking snake poison.

An advance on the same field by a different process, one which deserves to be classed among the marvels of modern medicine, is to be found in the discovery of antitoxic serum, serum made prohibitive of a disease by acting upon it with material which that disease has generated. To put this briefly, and in reference to a typical case, a certain bacillus causes diphtheria; the same bacillus secretes something which indirectly cures diphtheria. The secretion is not itself antidotal, but it imparts an antidotal property to serum, which becomes effective both for prevention and cure.

When we look at what has been accomplished, and in how short a time, in tracing diseases to their sources in foreign organisms, and at the possibilities in the way of prevention and cure which are implied, we are filled with wonder and with hope. It is not too much to predict that before long every zymotic disease, and perhaps many which we do not consider so, will be found to have an extraneous origin, and if further practical results are not obtained, the future will not fulfil the promise of the past.

What with Jenner's fundamental discovery, the superadditions which modern science has built upon it, and the new modes of creating antidotes to disease by the use of its own products, we see a wide prospect of relieving the ills of mortality, limited though it be by the prejudice of the vulgar and the subservience of politicians who value the votes of their constituents more than their lives. This brings us within sight of the "conscientious objector," though one does not see how conscience is concerned in a matter which is not one of religion or morality, but of expediency. The conscientious objector is himself to be objected to as one who presumes without special knowledge to decide upon a question where special knowledge is required. Ignorant he necessarily is, but he is less to blame than his betters, who have endorsed his ignorance and allowed it to influence legislation. Liberty is an excellent thing, but to give liberty to spread small-pox may be thought to be carrying it too far.

Looking back over the last half-century, I have shown how much has been done and how much undone; how we have learned to abstain from mischievous interference, how we have found in external Nature remedial agencies which our predecessors very imperfectly discerned, and to how great an extent we have superseded empiricism by science.

The progress of the age has shed its light upon medicine which, in addition to being an art, has become a science. As an art, it is no longer of worse than doubtful utility. Without claiming that even yet it is always productive of good, since we must allow for human imperfection, it has ceased to be actively mischievous, and become in certain definite particulars of prevention and cure actively beneficent. Most that has been done and all that is to be confidently predicted is due to the association of medicine with science which has only recently become possible. Old medicine, comprising as it did much random observation, false theory, and empirical practice, has given place to new medicine with its minute investigation, exact experiment, logical deduction, and rational procedure.

The chief means of modern advance has been the microscope, only of late made effective among the minutiæ of pathological life. Modern progress has been morphological rather than chemical, having to do with shape rather than with material, with organisms rather than with the elements. Liebig and his followers did much; it was not their fault that they did not see what was not then in sight. Born in later days, we have discovered a new world of the existence of which they had no conception, and of which the limits are hidden from ourselves. Let us fully recognise that the end is not yet. What we deem to be advanced knowledge the next generation may regard as antiquated error. Many of our views can be regarded only as provisional, some to be developed, others to be replaced. The physician of the future may look back upon us with something of pity, as those whose endeavours have fallen short in achievement, but let us hope that in his tolerant retrospect he may find that we have done something towards laying foundations on which he has erected a glorious superstructure.

Regarding medicine as a science, if that can be called a science which is a quintessence of many, it is of all the most progressive, and is that which of all others tends most directly to the benefit of mankind. Those are to be congratulated who have chosen this calling, whether it be looked upon as an intellectual pursuit or as affording opportunities for doing good.

REFERENCE.
1 *Pathology and Treatment of Albuminuria*, 1867, chap. 17.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

By Elizabeth Garrett Anderson, M.D.,
London.

THE METHOD OF STUDYING MEDICINE.

[Abstract.]

An introductory address should give to new students a word of welcome and some indication of the method to be pursued in the study of medicine. Speaking broadly, the work in a medical school might be divided under four heads: the study of the healthy body; the study of disease; the study of all the methods for investigating or curing disease; and the art of applying these methods. The study of the problems of life and of disease was no longer a matter of learning from books and repeating from memory. The experimental method had revolutionised the teaching of physics, chemistry, physiology, and pathology. Large and costly laboratories were now absolutely necessary if the students were to keep up with what was required of them by examiners. There could be no doubt that the experimental method of teaching was the true one, whether much or little of any subject was wanted as a foundation for the scientific study of medicine. This method in physiology did not necessarily include vivisection. At this school there never had been any vivisection. The tissues of many animals retained their vital properties for some little time after death, and also after all power of receiving sensation had been destroyed.

The study of pathology, or the causes and effects of departures from health, ought if possible to precede work in the hospital wards. The student should know what disease was before she attempted to recognise it in individuals. All honest quackery was based upon complete ignorance of pathology; dishonest quackery on the conviction and the hope that the patient was completely ignorant of it also. In studying how to investigate the meaning of symptoms in a patient the best rule was to look at everything and to guess at nothing. In the words of Sir William Gull, "We make many more mistakes by not looking than by not knowing." The organisation of the Royal Free Hospital as a teaching hospital had made great progress in the twenty-two years since women were admitted as students. It was a very difficult and complex business to change a hospital that had been without students into a first-class hospital school. Students wanted a great deal, and it was no easy matter to provide properly for them. When they were no longer students they wanted from their hospital the opportunity of gaining experience as practitioners. Much was being done at the Royal Free Hospital in this direction. The influence of competition was now beginning to be seriously felt by the schools that admitted women, and it was an influence that would be felt more and more as time went on. Students would naturally and properly do the best they could for themselves in choosing a school. They would be guided in their choice partly by what they wanted—for example, London University degree or something less ambitious—partly by what they could afford, and very much by the facilities for hospital practice and experience offered by the various schools. As to the cost of a medical education, people got as a rule what they paid for, neither more nor less, and if a medical student wanted a great deal of the best teaching it would cost more than the minimum of teaching of a less ambitious type would. The hospital that gave resident posts to women graduates would be noticed very favourably by students.

The London School of Medicine for Women was now being rebuilt. The Council believed that no finer set of laboratories and lecture rooms could be shown at any school of at all the same size in the United Kingdom; £15,000 had already been spent on the building, and £12,000 more had

to be spent. The wing now begun would contain seventeen sets of students' rooms, besides common room, refectory, and library. It was to be hoped that the work would be completed next year, and that the debt on the building would be gradually extinguished.

No apology was necessary at this time of day for the study of medicine by women. It was generally recognised now that women had exactly as much right to practise medicine and to support themselves by doing so as men had. They were doing excellent and highly skilled work in medicine proper, in surgery and midwifery, in almost all parts of the world, and so long as their work continued to be good they were sure to prosper.

CHARING CROSS HOSPITAL.

By J. Mitchell Bruce, M.D., F.R.C.P.,
Physician to the Hospital.

THE OUTLOOK IN MEDICINE AND ITS LESSONS.

[Abstract.]

The introductory address was delivered by Dr. Mitchell Bruce, who at once advanced the proposition that the outlook in medicine as a useful art was hopeful at the present time. The first evidence which he submitted in support was that the scientific method was now being pursued in every department of it. Beyond the so-called medical sciences—chemistry, anatomy, and physiology—the most promising and fruitful department of the medicine of to-day and the immediate future was etiology. Without a knowledge of the causes how could we ever hope to understand, prevent, or remedy trouble unless it were by pure empiricism? Men had never been so dull as to miss this point. From time immemorial they had never ceased to search for causes, but unhappily in vain. The supernatural and other equally occult assumptions were believed to account for most diseases until comparatively recent times. Scientific etiology now recognised, first, efficient causes, harmful natural influences proper, that is, substances that fell upon us or entered our bodies and worked us evil—such as poisons, unsuitable food, extremes of temperature, violence, and the countless kinds of living structures that preyed upon us and each other in the struggle for existence, of which the latest to be recognised were micro-organisms. The discovery and study of the relations of micro-organisms to disease were unquestionably the most important features of the medical sciences at the present time, for the more we applied the results and were guided by its teachings of bacteriology, the more fully were its truth and value demonstrated; and, as a natural consequence, preventive medicine—public health—had received from it an enormous impetus. It appeared to be now practically certain that not the living organisms but the chemical products which they manufactured were the immediate causes of infection: poisons steadily formed by the bacteria and continuously passed into the blood; and these poisons had been separated as definite substances which could be shown and tested—not the hypothetical influences of five and twenty years ago. From this new position which scientific medicine had won the whole field of pathology was being resurveyed. It was a position unassailable by ignorance or prejudice; and from which we were starting afresh with assurance of further discovery, and more rapid progress in the immediate future. But, in the second place, the doctrine of bacteriological pathology had widened and cleared our view of the second factor in the origin of disease, namely, individual susceptibility. Many theories, and not a little romance, had been indulged in over this mysterious factor in the production of disease, which determined that "one shall be taken and the other left." Science, and particularly the study of micro-organisms and their effects on the body, had now taught us that the maintenance of health consisted in a resistance to the efficient causes of disease, which were universal; that the vigour of this natural resistance was differently developed in different individuals; that disease did not arise unless the natural resistance was overcome by the efficient cause, whatever that might be. The germ, the seed, was but one factor of the origin of disease; the soil was the second, and had also to be reckoned with. How lofty was this generalisation compared with our former notions of the origin of disease! The prevention and treatment of disease, inspired by such a view of its nature, wore an entirely different aspect. Now we knew that man need not be the passive victim of disease, and that the incidence of the causes of disease was not indiscriminate. We had within us a natural disposition to keep well which, if cultivated, would preserve us from evil when others others who neglected the laws of healthy living were struck down around us. The body was automatically guarded against the incursion and action of injurious influences which were capable of being cultivated, strengthened, and artificially reinforced. Many of these were anatomical and physiological arrangements, which must be kept in perfect working order, for, however well the boiler and cylinder and piston and wheels of an engine might work, a breakdown was imminent if the safety valve or the automatic brake were out of order. More powerful and complex, however, than these was the provision for combating destructive micro-organisms, the discovery and study of which had inaugurated a new era in medicine, in respect both of prevention and treatment. The microbes of disease did not have it all their own way in the human body. From the moment of their invasion the ultimate cells of the blood and organs rose against them and produced a chemical antidote to their poisons—antitoxins to the toxins; and by-and-by, if the patient survived sufficiently long, the antitoxins increased sufficiently to destroy the toxins, and recovery was the result. Naturally it had occurred to the pathologist to ask the physician: Why should we not hasten the formation of antitoxin in the blood, so that an infectious disease shall terminate, not after a week, but after a day? This question had been answered practically by the injection of the antitoxins of diphtheria and other diseases, which saved the lives of so many persons every year. These antitoxic serums were obtained from the blood of animals that were slowly, steadily, and safely to themselves infected with the different diseases, until after so many months their blood serum was laden with the antidote and fit for injection into the human patient. Further, these serums were not only remedial, but preventive in their effect. Thus the prospect of good that had been opened by these researches and considerations was one of practically unlimited extent. It was not only what we had actually gained; it was the position of advantage that had been won. What might not be done in the near future with serum treatment? Which of the worst of diseases might not be prevented by timely inoculation? An entirely novel order of remedies promised to take the place of the many drugs which had fallen into disrepute because of their inertness.

Passing on to the facts, events, and processes of disease "in being," the lecturer pointed out that, in the first place, what was called the destructive factor of disease—the damage, the derangement of function, the waste of energy, the degeneration and tendency to death—which characterise all illnesses, could now be combated far more successfully because of our better knowledge of the nature and natural history of the agents of destruction at work. In its application, this better knowledge practically signified the antiseptic system, which had entirely revolutionised and reconstituted treatment. Lister's immortal discovery had not only enabled us to perform all the old operations with a vastly increased assurance of success—that is, with an incalculable saving of life and diminution of suffering and disappointment; it had also permitted us to deal with injuries and diseases which a few years ago had to be left to run their unhappy course. And this enormous and permanent advantage, afforded by a position securely gained, was the complement of that other historical achievement of medicine in the nineteenth century, the use of anæsthetics. The prevention of pain during operations was of itself an unspeakable blessing to mankind, but it was only one of the benefits of anæsthesia, which was equally useful by permitting operations to be undertaken which from their magnitude and duration would otherwise have been intolerable and impossible.

But, in the second place, we were now able to appreciate, as we never could before, in addition to the destructive factor of disease, the character and power of the other factor of disease, the constructive factor, which took the forms of repair and convalescence. Just as the body possessed provisions for resisting the causes of disease, so it possessed provisions for

arresting its beginnings, for repairing the damage that had been done, and for compensating the disabilities left behind, quite spontaneously—that is, without the help of the surgeon or physician. This was an enormous stride forward: to know on unquestionable evidence that, speaking broadly, one-half of what we called disease was a spontaneous attempt, more or less successful, at recovery; and to be convinced that we must understand and respect the conditions of its recuperative factor as well as of its wholly morbid factor, in order to attack disease rationally and with hope of success. Who could fail to see that this conception of disease and death, of life and recovery, was pregnant with further increase of knowledge, and with further advance in treatment?

So far the lecturer had spoken of the hopefulness of the outlook of medicine when viewed from the professional side. But it had also a non-professional side. In the matter of carrying out reforms, whether personally, in their homes, or comprehensively, by framing and administering sanitary laws, the public was the ultimate support of preventive medicine. Did the present and prospective disposition of the public towards medicine augur well for both? After gratefully acknowledging the liberality of the public to hospitals, particularly Charing Cross Hospital, Dr. Mitchell Bruce pointed out that with support of hospitals, if hospitals were properly served, went support of scientific medicine, and indirectly the support of pure science itself. There were many signs of increasing public interest in medical science and its practical applications. In one great provincial city after another hospitals had become teaching hospitals; these had grown into colleges, the colleges were being bound together by grants of local universities; and with their charters had come endowments, the inhabitants taking an intelligent interest in these noble institutions, at once an evidence and a means of intellectual and social improvement. Would London ever do the same in a concerted and successful fashion? When had we heard of an Owens or a Whitworth immortalising his name by a noble gift to the University of London? The metropolis appeared to possess no municipal pride in this direction.

But there was another and more intimate way in which the non-professional community were taking a rapidly increasing interest in medicine. The character of recent advances in medicine, and the directions in which it might be expected to advance in the future, showed that the public were becoming more and more deeply concerned with it in their every-day life. Our vastly-extended knowledge of the efficient and predisposing causes of disease meant in its practical applications prevention on a large scale—that is publicly; that the causes of disease must be directly controlled by public sanitary administration; that if the human body was to be enabled to resist the incursion and development of morbific germs, every provision that it possessed for this purpose must be kept in perfect order by the enjoyment of healthy habits and surroundings; and that the sick and wounded must be treated with full appreciation of the great natural influences which promoted repair as well as maintained health—cleanliness, pure air and water, and proper food. Now, sanitation meant public action, public health, and this meant public money, and municipal, county, and parochial government. We were heavily taxed to secure a sufficient supply of pure water, to provide for the public inspection of our milk, meat and bread, and other food, to supervise the erection of every new house in the town, to carry out the Factory Acts, to maintain the removal of sewage and dust and rubbish efficiently, and to provide public baths and washhouses and parks; and many of these sanitary measures were discharged by the district authorities under our own corporate control.

What was of more concern to the intelligent Briton, whose house is his castle, the current of sanitation had already carried medical officers of health into his home and threatened his individual liberty. Prevention meant interference with the healthy man, a very grave step socially; and when he was smitten with typhoid fever his case was notified by the doctor, his house was inspected (in some countries it was publicly proclaimed to be infected), and he might even be carried off bodily to the isolation hospital. All this was now compulsory. Thus, directly and indirectly, by influences that reached themselves and their most cherished privileges, their pockets, and their domestic and family interests, the public were now compelled to learn for themselves what sanitation and the laws of health and disease meant. Purely professional interests were converging with strictly public interests along the social plane. This was a matter full of promise to medicine if it were correctly appreciated, the convergence of the profession and the public socially. The more intelligent part of the public began to understand it. At the meeting of the British Medical Association the Bishop of Winchester, in his eloquent sermon, said that never in England so markedly as now did intelligent people listen to the man, or the pupils of the man, who had unlocked hidden secrets of physical life; that if the age in which we had grown to manhood, and spent our earlier energies was to be known in history as an age of physical science, it seemed not unlikely that social science, in the widest meaning of the term, might be the distinctive imprint of the years with which another century began; and that for guidance, as that age opened, people would look to the men who had stamped their "character" upon the popular thought and teaching of the last few decades. The Vicar of Portsmouth reminded the Association that it was being recognised more and more, not only by the profession but by the public, that disease and its treatment was a social question, and that the causes and remedies of disease could not be separated from questions of social and public policy.

These statements were evidences of the increasing recognition of the place and power of medicine, and public acknowledgments of the duty of the public to meet us halfway and give us intelligent and loyal assistance. It was clear, then, that the position of the profession as a profession, and the work of each of the students would be something very different from those of their predecessors. They were contracting new obligations to others, and therefore new obligations to themselves as students, as men about to enter a career involving the management of a multitude of complex and delicate social duties. Twenty years ago students learned medicine with a view to practising it as successfully and scientifically as they could; to become the trusted and faithful friends of sick persons of every rank of life who might ask their assistance; to take an honourable place in the community, wherever their lot might be cast; and to play an active and useful part in social reforms, like their neighbours, when the occasion arose. How different was the prospect before each of them now; how much greater the authority and powers they would wield when they became practitioners: how much more grave their responsibilities; how much need for increased intelligence, tact, patience, consideration, high sense of duty, and therewith the development of the faculties demanded in the conduct of public business! How did these considerations bear upon their course of study?

First, they must learn to have patience with the public, which had to be educated. The public had done well on a large scale, having learned the costliness and miseries of bad health and disease, and the financial value to the country and the blessings generally of health and bodily soundness; but they constantly forgot the laws of health in the details of daily life. This was due mainly to ignorance, prejudice, evil habit and poverty. How were these to be collectively combated as indirect causes of disease? Unquestionably by beginning with the young. We must let hygiene enter into the existence of the child along with his letters; not by requiring him to master textbooks on hygiene, but by taking care that his school at least, if not his home, was clean, its atmosphere pure and fresh, its furnishings pleasing or even beautiful, by providing him with abundance of water of which he might drink and in which he might wash, and with sufficient open space for wholesome recreation. A child who spent several hours a day in the enjoyment of such surroundings could not fail consciously or unconsciously to loathe dirt, disorder, and ugliness at home, and would surely grow up with the spirit of cleanliness within him. Then the profession had many opportunities of educating the adult members of the community in the ways of health. As we came to make more and more use in treatment of pure air, suitable food, cleanliness, and perfect nursing generally, surely the lesson would be brought home to patients and their friends that what was so beneficial in the treatment of disease must be essential for the maintenance of health.

In connection with the present movement in support of the open-air treatment of tuberculosis, would it not presently occur to people that, if consumption could be arrested by means of fresh air, it might be prevented by the free enjoyment of fresh air; and not only consumption but a host of other diseases? One of the chief benefits of the present stir in this direction, and the cry for sanatoria at the expense of the public, would be that individual men and women would be convinced of the value of a pure atmosphere to themselves individually, and let a little fresh air and light into and through their houses. The real difficulty was to bring the matter home to them in the commonplace routine of daily life. Sanitation was like religion in this respect: people might profess it as a body, but be moved by it and practise it very little personally. When they came to have patients and to enter their houses on their daily rounds, they would discover that the word "sanitation" conveyed to most people the notion only of drains. How few windows were to be seen open! He often wished, when he entered the sick-room of a poor person smitten with typhoid fever or consumption and read the illuminated texts over the bed, that there were also written up a few sanitary commandments, such as "Cleanliness is next to godliness," or the words of the immortal Florence Nightingale, "Windows are made to open; doors are made to shut."

Again, how did women of fashion respond to the recommendations which were formulated by Dr. Pye-Smith, our representative at the recent International Conference on Tuberculosis, and published with universal approval in the daily papers? They received them with a feeling of great relief, convinced that the "white fiend could now be fought," and—added several inches to their gowns, with which they might be seen sweeping the floors and the streets! When they considered all this, how plain became their duty to practise as well as preach the gospel of hygiene, that is, to give practical demonstrations of its applications, whether as medical officers of health or as family doctors. In order to do so they must cultivate certain qualities and qualifications. First, everything suggested a long and careful training in work of a practical character; everything called for a practical acquaintance with recognised methods, measures, regulations, and laws. Medical study was now a matter of using hands, eyes, ears, heads; of standing at a bench; of using test tube and microscope and the more advanced methods of exact clinical and pathological investigation, including bacteriology; of examining patients under the eyes of an instructor; of visiting the wards of a fever hospital and a lunatic asylum; of measuring drain pipes; of inspecting traps and ventilators; of analysing water and food.

Secondly, they must be prepared to take part in the social life of the community, and they would have many opportunities of doing so at Charing Cross Hospital, with its medical society and its different branches—the athletic, cricket, football, musical, debating, and photographic—where they could attend business meetings and social meetings along with their seniors; take an active part in the proceedings, accustom themselves to speak in public and, in a word, prepare themselves to become men of public spirit and public usefulness.

Lastly, there was no reason why the student of chemistry and biology should not open his mind at the same time to the elevating and refining influences of literature, of history, of modern languages, and of the fine arts—those parts of his mental equipment which enabled a man to enter with success into the discussion and management of the affairs of his personal, domestic, and social life; which endowed him with what were known as judgment, intelligence, tact, and clear-headedness; which contributed so much to the formation of high character and sound moral principles; and which secured for him public respect and confidence.

MIDDLESEX HOSPITAL.

By JOHN MURRAY, F.R.C.S.

THE STUDENT AND HIS WORK.

[ABSTRACT.]

AFTER a few words of welcome to the students, Mr. Murray offered his congratulations to those who had recently joined the hospital on their choice of a profession. He proceeded to say that, although the amount of work that would be required of them was great, and not without difficulties, they would find ample compensation in the absorbing and ever-increasing interest of the work. He pointed out that the medical profession was one which presented so many different phases and opened up such innumerable possibilities that anyone liking the work could not fail to find a means of practising his profession under favourable conditions, and in this way the career they had chosen had in his opinion greater advantages than any other. That whether subsequently their interests should lie in the direction of practical work or of purely scientific research, they would find ample scope for developing their talents in either direction, the object in each case being the same—the prevention and cure of disease and the alleviation of pain and suffering. He dwelt upon the importance of attaining a high standard of general education before commencing professional study, and on the important bearing that a general culture had on medical training. By such an education the tastes and character of the students were formed and the intellectual faculties more fully developed, so that he was better able to assimilate what he learned, and to take an intelligent interest in his work. He urged those beginning their medical studies to take up each subject in its proper place and at the appointed time, and warned them of the difficulties that would arise if they once allowed their work to get behind. He went on to say that anatomy and physiology formed a fundamental basis on which all their future knowledge had to be built, and that if they neglected these subjects they could not expect to take a prominent place in their profession. He insisted on the importance of practical work and of the value of knowledge gained by their own observation, drawing attention to the increased facilities now afforded to them in this direction by the improvements and additions which had recently been made in the school buildings. He pointed out that the early years of study would be spent in acquiring facts and committing them to memory, but that when they commenced their hospital work they would begin to apply those facts which they had learned, and they would be called upon to exercise and develop their powers of observation. He urged upon them the importance of cultivating the habit of observing accurately and of drawing correct conclusions from their observations, and advised them to accustom themselves to rely on their own efforts, and to acquire the art of thinking for themselves, since facts thus gained were infinitely more valuable than knowledge obtained in a condensed form from others; quoting the words of Emerson, "Insist on yourself; never imitate. Your own gift you can present every moment with the cumulative force of a whole life's cultivation; but of the adopted talent of another you have only an extemporaneous half possession." The lecturer then pointed out the benefit that the students would derive by devoting all their available time to practical work in the wards of the hospital when acting as clerks and dressers; and while recommending reading in conjunction with their work, called their attention to the advantages to be gained by careful and systematic note-taking. He advised students to seize every opportunity of investigating cases for themselves, but always with due regard to the feelings and susceptibilities of the patients, and warned them against the needless anxiety that might be caused by thoughtless discussion in the presence of a patient. He concluded by saying that everyone connected with the hospital contributed in some way or other towards the reputation of the institution to which he belonged, and that it was the duty of all to endeavour to the utmost to uphold the honour and prestige of his hospital.

UNIVERSITY COLLEGE.

By G. F. BLACKER, M.D.,

Assistant Obstetric Physician to University College Hospital.

UNIVERSITY COLLEGE HOSPITAL: ITS PAST AND ITS FUTURE.

[ABSTRACT.]

I FEEL sure that the original founder of the custom of delivering introductory addresses, whoever that foolish person was,

nust have felt the need of an occasion upon which to deliver
vhat was practically a sermon to his students. Can one doubt
hat he wanted an opportunity to descant upon the merits
f himself or the virtues of his colleagues or the glories of his
articular school, and at the same time to paint in lurid lights
he entire absence of all the virtues in the persons of his un-
ortunate listeners? If we but consider the sinister reputation
f the medical student of sixty years ago, when everyone com-
ined in painting him as a rowdy of the worst kind, it is
bvious that all the introductory lecturers of that date should
ave adopted the exhortatory moral style. Such an occasion
as no doubt necessary enough at that time, but at the pre-
nt day what did we want with an opportunity of calling
tention to our own virtues, or the glories of our particular
hool, or the many good and noble qualities of our medical
udents? surely they must be patent to all the world! The de-
lopment of all his present moral qualities upon the part of the
edical student has undoubtedly had its effect upon the style
the introductory address. The lecturer at the present day
longer feels it necessary to admonish his students as to
eir morals and manners, but allows himself a wide range
er a great variety of subjects.

As the deliverer of the introductory address I cannot but be
utely conscious of my unfitness for such a task, but there is
e pleasing duty laid upon me which I feel I can at least
lfil as well as anyone else, and that is to bid you welcome.
the name of my colleagues, then, I welcome those of who
already sharing with us the trials and pleasures of our
rk at the hospital, those of you who are returning to yet
other session of work at University College, and those of
u who are appearing amongst us to-day for the first time.
r school at the present moment may be said to be passing
rough one of the crises of her history; we are uncertain
ether the medical school of University College will con-
ue to be associated with the College in which, during all
past years, its work has been done, and we are equally
certain what is to be our exact position with regard to the
University from which we hope so much. We therefore
l we owe a specially hearty welcome to those of you who
e not been afraid to join us at a time of such unrest and
certainty, and who are strong in the conviction that
ether our work is still carried out within the precincts of
s building with its many associations, or whether it be
ried out in a new school in another place it will yet retain
hose characters for zeal and thoroughness which have ever
n its distinguishing features in the past. While it is still,
I say, uncertain what will be the future habitation of
medical school, it is quite certain that in a short time we
ll be bidding good-bye to the old hospital building in
ch our clinical work has been carried on for the last 65
rs. Such being the case it may be well for us to look back
a few minutes at the history of that building, which to
y of us will recall memories of some most delightful days
t within its walls, and at the same time the memories of
e whom we delighted to honour during their lives, and
se names we shall ever revere now that they are dead. It
od to pause awhile in the hurry of modern life, and study,
be but in a few particulars, the lives of some of the men who
gone before us. Youth is ever a little intolerant of the
ator temporis acti: and, indeed, I have no patience with
e who hold that the past is ever better than the present.
the traditions of a school are not to be lightly neglected,
we may well feel that we should be lacking in respect to
elves and our Alma Mater if we were content to remain in
ignorance of some of those well worthy of remembrance
have preceded us in our work here.

fter describing the foundation of the North London Hos-
in conjunction with the University of London, Dr.
ser gave a short account of the lives of Elliotson, Thom-
Carswell, Samuel Cooper, Liston, Richard Quain, and
s, who formed the staff of the hospital at the time that it
irst opened. He then continued:]

eh is a short account of the men who helped to make the
ation of University College Hospital, a reputation which
r new hospital we shall find it impossible to excel, and
will require all our zeal and energy if we are to equal.
ime when it can be but a matter of a few short months
e our old hospital is razed to the ground to make way
at magnificent new building so soon to take its place,
and when it is quite possible that University College will again be merged into the University of London, it is, I think, fitting that I should recall to you some of the influences that University College and University College Hospital have exerted in the past, and the memories of some of the men who played so important a part in founding its reputation. As I have already pointed out the influence of our College and Hospital in their early days upon medical education was of the very highest. For many of the advantages they now possess, for many of the advances in the methods of medical education, and most important of all for the abolition of that disgraceful monopoly of hospital appointments by money and family connections, medical students will ever have to thank "the low place in Gower Street."

Some of you may complain that I have devoted no part of my address to advising you as to how you should perform the new and novel duties upon which you are entering. I will at once admit my omission, but I felt I could place before you no better incentive to work than a recital of some of the memories and traditions of our school. I would have you remember that it is not possible for us to ever rely upon the traditions of the past. It is necessary for us to build up traditions of our own. The staff of the North London Hospital in 1834 could never have brought our school to the high place it then held among the medical schools of the metropolis if they had not received loyal support from their students. Hard work and enthusiasm on the part of the teacher is of little avail unless it be accompanied by similar qualities upon the part of the taught. London is a city poor in public monuments, but our hospitals are monuments of charity and generosity such as no other city in the world can show, and our new hospital will be an example of private munificence well worthy of being placed alongside the magnificent foundations of Guy's, St. Thomas's, and St. Bartholomew's. It will be our duty, gentlemen, to see that we make a good use of the opportunities afforded us by that magnificent building when it is completed, and it will be our duty to make our work in that new building worthy of those traditions of University College and our present hospital, some of which I have inadequately attempted to lay before you. I would remind you that as medical men you are called upon to play a twofold *rôle*. It is your duty not only to acquire as complete a knowledge as you can of purely professional matters, but you should also seize every opportunity of improving your general education and of acquiring a knowledge of the world. Your success when you take your place in life will depend as much upon the latter as upon your professional attainments. You are commencing your career under the most favourable circumstances, and though no doubt the competition in the medical profession is ever increasing, yet the opportunities afforded you of fitting yourselves to emerge successfully from the struggle are greater now than they ever were. At the same time you must remember that more is expected of you, since the education of the general public in scientific matters is much higher than it was a few years ago. It would be impossible at the present time for such an exhibition of ignorance to occur as took place at the British Association meeting in Oxford in 1860. Huxley, who was reading a paper made the innocent remark "that the blood of guinea-pigs crystallises in rhombohedrons," whereupon the Bishop of Oxford, who was present, sprang to his feet, and exclaimed with great heat "that such statements led directly to atheism." If you will but make good use of the opportunities afforded you, you will have no difficulty in acquiring a sound knowledge of medicine and surgery, but at the same time you should make it part of your education to cultivate a healthy interest in all the many details of life that you will meet with outside your profession. It is by no means certain that a man's business is the most important part of his life, says Robert Louis Stevenson in his most fascinating *Apology for Idlers*. Perpetual devotion to what a man calls his business is only to be obtained by perpetual neglect of a great many other things. It is well to remember the old saying, which tells us that "if a man read too hard he will have but little time for thought," and Robert Hall's summary of a certain learned but dull personage—"he had so many books upon his head that they pressed too much upon his brain." He is but a poor doctor whose sole attainment is his knowledge of physic. "There is a certain chill and arid knowledge," says Stevenson, "to be found upon the

summits of laborious science, but it is all round about you, and for the trouble of looking you will attain the warm and palpitating facts of life. Sainte-Beuve, as he grew older, came to regard all experience as a single great book, in which to study for a few years before we go hence, and it seemed all one to him whether you should read in Chapter XX, which is the differential calculus; or in Chapter XXXIX, which is hearing the band play in the garden."

If it were but possible one would wish to endow you all with some of the clinical insight of Elliotson, the manipulative dexterity of Liston, the capacity for long-continued work of Samuel Cooper, the learning of Thomson and the powers of observation of Sir Richard Carswell. But even if it were possible to make of you such paragons of all the professional virtues, yet your success in life would be by no means certain. It is sufficient to look at the lives of Elliotson and of Liston to demonstrate the truth of what I say. Who can doubt but that if Elliotson had been endowed with a little more common sense he would never have fallen a victim to the impostures of the O'Keys and other charlatans in mesmerism who led him to his ruin; while if Liston had been but a better exponent of the Art of Living he would not have given way to those petty jealousies and personal quarrels which did so much to embitter his life and to spoil his reputation as a man. If we are to draw a lesson from the lives of these two most eminent members of the first staff of our hospital, it is that while you should strive with all your might to emulate their skill and professional attainments you would do well to avoid those faults of character and temper which did so much to mar their otherwise brilliant careers. I could wish for you, gentlemen, no better results of your labours here than that you should set out with steadfast steps along the straight highway which leads to professional eminence and professional success, and that you should yet have found time to dawdle for a while in the pleasant by-path called Commplace Lane, and thus have early attained to the Belvedere of Common Sense.

ST. MARY'S HOSPITAL.

By H. G. PLIMMER, M.R.C.S., F.L.S.,
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SOME MOTIVES AND METHODS IN MEDICINE.

[ABSTRACT.]

THE honour of opening the medical session at St. Mary's this year has, by the invitation of my colleagues, fallen to my lot, and I have chosen a general theme which is suggested by the present occasion, upon which to speak to you, that, namely, of the study of medicine generally, and on some of its motives and methods in particular.

The study of medicine is divided into two great divisions: the first relating to practical usefulness, and the second to scientific investigation; and each of these divisions can be attractive to men who are entering life, according to their disposition of mind. These dispositions of mind are both equally noble, because each really is, or ought to be, exclusive of selfishness; and each furnishes a man with a motive incitive to work above and beyond the immediate object of making a living. It is usual to tell students that the profession of medicine is the best and noblest of professions; but it is not in itself so. It is only as noble as you choose to make it, which is quite a different thing.

The individual result of these dispositions of mind are as follows. From the first, the desire to lead a life which shall be of utility and good to one's fellow men; and, from the second, the desire to investigate the phenomena of Nature, and to discover their order, and their relation to each other, quite apart from any idea of utility.

Now, with regard to these two great divisions of medicine. I shall say but few words concerning the first, because it is better and more intimately known. Its object is the care for the bodily health of man, its main point the maintenance of health or the restoration to health. We come into contact with it from outside, from our childhood's days of powders onward, whenever we come under the care of the doctor; and its results are more recognised, dealing as they do with utility, and with the doing of obvious good to others. Moreover, you will principally be trained in this especial division of medicine; because most of you, from preference or f necessity, will have to practise it. Your method of learn will be roughly but essentially this. First, there will b foundation laid in you of anatomy and physiology, wit much of related sciences as is necessary; then you will be to study sick people and their diseases, and the method treatment. In this part of your work you will be guided what you do principally by what is called clinical experie —that is, by a collection of information about sick people their diseases, which is derived, according to your pow from your own observations, but principally from the recor observations of others, and which you will have to carry ab with you in your memory.

This clinical experience is the chief point in your educa as physicians. You will learn to sharpen your senses touch, sight, and hearing, and will learn to recognise appearances of disease. You will then have to learn to we these appearances one against the other, and to sepa essential from accessory facts; you will have to think an think inductively, about the seat of the disease, its cause secondary consequences and appearances—in short, you have to make a diagnosis. To-day it is truer even t when it was written: *Qui bene diagnoscit bene medebi* and the power of making a true and accurate diagnosi principally what separates the cultivated physician from quack.

Later on you will come into contact with patients, first the hospital, and then in either what is called consultin general practice; and here you will meet them on quite a ferent plane. Most of you will necessarily have to go into gen practice, at any rate for a time, and you must remember t it is not well to learn to despise it, for it is to the general p titioner to whom above all others the privilege is grante really serving the sick.

It is in this relation of doctor to patient that your chara will be formed, and in which all that is good in it will c out, and this is entirely independent of any scientific kn ledge or attainments, which is a question rather of talent t of character.

You know that medicine consists of an art as well a a science, and it is in practice only that you can acquire art of medicine, because no student can be sent out equip as an artist from any school; he cannot be sent out q complete—like Pallas Athene from the head of Zeus—in art of medicine. To this art of medicine he can only deve according to his potentiality, by practice. The founda only can be laid in the schools, and here the knowing i itself not the only thing, it is the right directing of knowledge to single cases, to different conditions of bo and mental formation and function that makes the art and for this is necessary the power of thought, of induc and deduction, and the correct drawing of conclusi You will have to acquire, for any success to be given you accurate knowledge of human nature, and you will find t it is quite as important for the doctor to know the patien to know the disease. But beyond this there is still so thing you must possess—beyond the knowledge of disease of its treatment, beyond the knowledge of human natu you must have a boundless sympathy, not of the maudli weak kind, but of the strong and noble kind; and this a will enable you to fulfil all that the great teachers, suc Hippocrates, have insisted on with regard to the relatio doctor and patient, which may be summed up thus: T each of us should be all that one man can be to anothe time of sickness and trouble.

This brings me in sight of the second of the great divis of medical study which I mentioned earlier to you, nam the investigation of the phenomena of Nature, in its scien aspect, apart from utility, or at any rate direct utility. must remember that the most useful parts of science l been investigated for the sake of truth, and not for t usefulness.

I want now to direct your attention more particularl this scientific side of medicine, and to some of its motives methods: and to indicate to you a little of the work that already been done in this region, and the infinite possibil there are in it for future work.

In olden times—that is, until quite recently, for the p genesis of medicine is younger than many of us—man

looked upon as the purpose and centre of the universe, whereas now he is known to be only a part and a product; so that all the older medicine directed its efforts towards man, from that point of view, and it is only during very recent years that what we might call medical science, apart from utility, could be at all possible. But, at present, for the greater number of students, it is certainly not possible that they should be equally equipped as well on the scientific as on the practical side, so that in technical training they cannot reach that certainty and completeness which, not only for their own credit, but in the interest also of their patients, they should do.

So there are many and great reasons for adding science to our practicalities, one of the most important being the fact that so much of our modern knowledge is derived from science, and not from observation; another is the fact that everyone—even the most practical of men, unless he be mentally somnolent or dead—must speculate, more or less, as to the causes of disease.

The present importance of examinations for everything under the sun damps down that condition of mind which would make for science, for there are two conditions of mental development necessary, and neither of those conditions is able to be fostered under our present environment. The first condition is that the attitude of the student's mind should be creative rather than acquisitive, or at any rate creative as well as acquisitive; as Clifford said: "Intellectual food should go to form mental muscle not mental fat"; and the second condition is plasticity of mind, the power to divest oneself of conventions, the power to swallow formulæ, of both of which medicine is full. It is not so full of conventions and formulæ as it used to be, for science has already swept away a lot of them, and there is the potentiality in the new medicine of its becoming scientific. At present it is in the stage of "becoming."

The ambition of this medical science is the same ambition as that of John Hunter, "the experimental analysis of life in health and disease." There is no better expression of it than those words of his.

The object of experimental methods in pathology is to simplify its many problems, and one of the greatest advances made in modern times is the recognition of the fact that disease must be studied by experiment. It has taken several centuries since Bacon's era to discard fancies and theories, and to bring the experimental method into this branch of science.

Up to quite recently, simple observation has been almost the only method employed in the study of the causation of disease. As a matter of fact, during the Christian era, between the time of Hippocrates and a few years ago, the science of the etiology of disease retrograded rather than progressed. This result was a necessary consequence of the methods employed. Disease in either man or animals is an extremely complex phenomenon. We must be almost always doubtful of many of the essential factors, so that there can be no possibility that simple observation will be ever able to establish pathology on a really scientific basis. Simple observation does furnish a number of valuable hints and suggestions, but nothing more; and it would be quite as senseless and impossible to try to establish a system of scientific etiology from the examination of a dead body as to try to establish the principles of mechanics by looking at a broken machine. All sciences have had to pass through a stage when their principles rested on observation, and every science has had to have recourse to experimentation for its advance, and has had to control its observations by experiment. In pathology, owing to the complexity of the conditions, experiment is most necessary, since a simple pathological observation can never carry conviction into anyone's mind unless it be supported by experiment.

The etiology, for instance, of those diseases only which can be reproduced at will can be accurately regarded as known. This brings us to the logical conclusion that our ignorance of etiology must be very great, especially about those diseases which cannot be reproduced by any means at present in our power, even when the symptoms and pathological anatomy of such diseases is well known. As an example, think of the difference in our exact knowledge of two well-known diseases—namely, tetanus and cancer.

In tetanus the conditions of its occurrence are fully known, its pathological physiology has been worked out, means are at hand to prevent its appearance even in an infected animal, and this is simply because the bacillus causing the disease has been isolated, and because the disease can be experimentally reproduced. In cancer, in spite of an enormous literature, our knowledge is minimal, because it is a disease which cannot yet with certainty be reproduced in animals. All that observation can do in cancer has been done, and our only hope is in patient and continuous experimentation, and there are already indications that the experimental work that is being done all over the world on this grave question will eventually bring us the truth. Now at last it is becoming recognised that medicine has the possibilities of a science in it, of an experimental science, and that it is dependent for its progress on laboratory work, and especially on experiments on animals.

You know that on this subject in England there is a very strong feeling and that in consequence all experimental work is surrounded with much difficulty. It seems reasonable to say that man has, at any rate, as much right to use animals for science as for food or war; and their use for these latter purposes is not made the reason, as in the former case, for a virulent crusade, in which truth is completely swallowed up by false sentiment, and by even what is worse, by untruth. The partisans of this crusade, however, do not apparently object to experiments on man. What more gigantic experiment, for instance, could we find than that which, thanks to agitators, is now being tried on thousands of English children with regard to small-pox? The experiments of fanaticism and ignorance are made on a large scale, truly, and with an almost total disregard of human life. Moreover, these ghastly lessons are repeated over and over again, as the public will never learn lessons from them.

But the experiments which scientific medicine has undertaken are of a different order. By experiment the *contagium vivum* of many of the most deadly diseases has been isolated, and thereby is fulfilled the first condition for the great ideas and principles of prophylaxis.

If I may take another instance of what the experimental study of medicine has done, it would be to go back only so far as my own student days, and to remember a few of the things I was taught about inflammation, for instance.

We had several lectures on Dr. So-and-So.'s theories of inflammation, full of every kind of subtle guesses, all of which were wrong. Then came the experimental work on the subject, and the whole of the theories—that is a euphemistic word for guesses—have vanished like ghosts at cock-crow. Now we have to look on inflammation not as a disease, but as a reaction of the body to disease, as one of our greatest safeguards and defences. Our knowledge of the process has been worked out experimentally, and it has taught us besides a large generalisation: namely, that this reaction process, the reaction of a cell, or of an organism in the presence of a disease agent, or of a foreign body, is essentially of the same nature throughout life.

Again, take pneumonia. I was taught that the following were among the causes of the disease: age, bad hygiene, drink, convalescence from other diseases, cancer, retention of effete matters, poverty, injuries, etc. Of the real cause nothing was said, because the organism which we now know produces the disease had not been discovered; its discovery, and its connection with pneumonia being, again, due to the experimental method.

I might multiply instances almost *ad libitum*, but I think I have said enough to convince you of the necessity and of the value of experiments. If you will think what experimental science has done for diagnosis, you will agree that I am not speaking too strongly. Think of the present methods of localising diseases of the brain; think of what the chemical examination of the renal and gastric secretions has done; think of the use pathological histology is in the diagnosis of doubtful tumours; think of what help bacteriology gives by the recognition of specific pathogenic micro-organisms, and by the application of subtle tests, such as the agglutination reaction in typhoid, and you will, I think, agree that experimental science has done more for the advance of accurate diagnosis than centuries of simple observation.

The great facts of the origin of infectious diseases, and of

antiseptic surgery, did not come from observation at the bedside, but from experiments in the laboratory; the great fact that the same micro-organism will produce different lesions according to its mode of inoculation came also, not from observation but from experiment.

If you will think for a moment of what has been done in in this part of medicine during the last twenty years, what I have said will not seem exaggerated. Many of the causes of some of the most terrible scourges of man and of animals have been isolated, and can be grown and dealt with as easily as any ordinary plant. The organisms of phthisis, tetanus, pneumonia, erysipelas, diphtheria, and many more are now accurately known to us. We can study their habits, their functions, and we know exactly how they can be killed outside the body. Think of the practical importance of this in one case only—that of phthisis. Since we have known the tubercle bacillus the mortality from phthisis has steadily diminished, simply from the fact of our knowing of its existence, and of knowing how to destroy it, and to avoid it in a few gross ways.

Again, this branch of work has shown us to what the various symptoms of infectious diseases are due; experiment has shown us that the symptoms are due to the poisons produced by the bacteria, and that these symptoms can be reproduced by the poisons alone with marvellous accuracy. Experiment has also shown us the extraordinary properties of these poisons, and that their effects may be produced weeks, or even months, after the poisons have left the body. These facts are stirring chemists to investigate the nature of these extraordinary bodies, so that pure vaccines and antitoxins may be made scientifically, which we can use as protective or curative agents against the specific microbes. These curative and protective methods, which have been the outcome of the experimental method in medicine, have been the means already of saving countless lives of both animals and men. The results of the vaccination of animals against anthrax, against quarter-evil, are alone sufficient to place this work in the very highest place amongst man's achievements. In hydrophobia also, in which disease the cause has never yet been seen, experiment has been the means of reducing the mortality in certainly proved cases to less than 1 per cent.

There is one name in connection with this work which must be mentioned, that of Pasteur, whose career is almost without parallel. Here was a man, who is the best example of a scientific man, who worked primarily for science without any ultimate practical object. He knew no medicine and no surgery, yet he taught us what infectious disease is, and he opened infinite fields of work for the biologist, the chemist, and the scientist. He has laid the foundation of a branch of science which has already revolutionised medicine, surgery, and chemistry. He has taught us medical men what great results can be got from exact experiments when applied to medicine. He conquered himself, almost single-handed, the scourges of anthrax, of quarter-evil, of rouget, of fowl-cholera, and hydrophobia; he wrestled with the phantasm of the spontaneous generation of life, and laid that spectre for ever at rest. The heroic patience of his work in the face of the bitter attacks of his contemporaries, the accuracy of his results, the absence of self-seeking in all he did or attempted, should be an ever-living example to all of us who would undertake scientific investigations. We are proud that some of the seed he sowed in such amazing quantity fell here in England on good ground, and that by following and applying Pasteur's methods, Lord Lister was able to teach us how to banish the diseases which formerly followed so constantly on wounds and operations. Through aseptic operation methods operative therapeutics have made a greater advance than almost any branch of our work. The knife can now go deeper, the operations can be more and more complex, and the circle which the knife can control is becoming wider and wider.

The extraordinary stimulus Pasteur gave to scientific investigations in disease was of so profound a character that medicine has been, as I said, revolutionised; and you, young gentlemen, will shortly know much more than Pasteur did, so rapid has been our progress. "Young men, young men," said Pasteur late in his life, "put your trust in those powerful methods of which we yet know only the first secret." Those "powerful methods" are those of experimental methods in medicine to which I have endeavoured to call your earnest attention, and which were the secret of Pasteur's own success. I have also tried to show you that our progress must be along those lines which he has laid down, and on which his own work in connection with medicine was done. These methods, too, are essentially for you, for the younger men; they are a trust bequeathed to you to carry on and advance; they are essentially, I say, for you whose minds are plastic, rather than for the great men of the present time, and it is to you that the world will look for carrying on and developing to the uttermost the work begun by Pasteur.

I will conclude, gentlemen, with a winged word of Renan's which might well be written over the door of the temple of science. Renan says, "La raison triomphe de la mort, et travailler pour elle, c'est travailler pour l'éternité." That is to say reason—in the widest sense of the word—Reason leads death in triumph, and the work done for her is done for eternity.

LONDON SCHOOL OF TROPICAL MEDICINE.

By PATRICK MANSON, M.D., F.R.C.P., LL.D.,
Physician Seamen's Hospital Society.

THE NEED FOR SPECIAL TRAINING IN TROPICAL DISEASE.

I HAVE been deputed by my colleagues to welcome you to the London School of Tropical Medicine. It is hardly necessary for me to say that we are glad to see you. You are welcome for many reasons, but more especially because you are the first instalment of what we hope will grow in the course of years into a numerous and important band, a band that shall not only leave its mark in the history of tropical medicine, but shall exercise an influence for good in the development of the empire. You are welcome, also, because your presence here is substantial evidence that an idea, long cherished by some of us, has taken firm root in the country, and has at last grown into a vigorous plant, which, we trust, will become by-and-bye not only vigorous but also fruitful.

You will find in the introduction to the syllabus which has been placed in your hands a short sketch of the constitution of the school to-day inaugurated, of the reasons why, and of the means by which, it was initiated. It is unnecessary, therefore, for me to enter at length on these matters. The project has been subjected to a good deal of criticism, favourable and unfavourable. One significant and to us satisfactory feature about this criticism is that on the whole the opinions of those best qualified to judge—that is to say, of the men who have themselves done battle with disease in the tropics—has been distinctly favourable, at all events so far as concerns the desirability, I might say urgency, for such a school. It would be difficult to understand how it could have been otherwise. Many old and experienced tropical practitioners in discussing the subject have bemoaned to me the absence among the medical institutions of their student days of such an institution. I myself, when I recall the years I spent in the East, the many avoidable mistakes in diagnosis and therefore in treatment which I made, and the many opportunities which I missed, cannot but regret that in my younger days I had no training such as will be offered to you here. Many have expressed surprise that, considering the enormous tropical interests of this country, such a school had not been established years ago.

Those about to undertake special work, to do it well, must have special training. Men with tropical experience know very well that there is much that is special in tropical medicine. This being the case, it follows that tropical medicine requires special study; and, because the subject is a very extensive one and is daily becoming more extensive, special teaching and special teachers; and, because the teaching material is to be found in sufficient abundance at only one or two places in the country, special schools at these places.

There are, or there were, some who while fully recognising the necessity for a school of tropical medicine, have cavilled at the selection of this particular place as its site. Some have said that the Albert Docks Hospital, 20 to 25 minutes from Fenchurch Street Station, is too far from the centre of London; others that the clinical material likely to be available is inadequate; others that there are better places elsewhere;

others that tropical medicine is already efficiently taught at the military school at Netley, and that therefore a second school is unnecessary. One and all of these objections have already been fully and satisfactorily met. I have no intention of reopening the subject. Suffice it that the school at the Albert Docks is to-day an accomplished fact; that the student who finds the distance from London too great a tax on his time can be lodged within the walls of the school—a privilege which I am pleased to see has been fully availed of; that the hospital, which ere another session is over will be much enlarged, affords a good and sufficient supply of tropical cases, quite enough for much useful practical work; that Netley has not been opened to the public, and, were it opened, in consequence of the remoteness from the metropolis it certainly could not and would not be used by many who could and will come to a school in or near London. The objections I have mentioned were carefully considered at the time of the inception of this scheme, and the distinct verdict of those who had worked longest and hardest to carry the scheme into effect was that, *all things considered*, although it may not be in every respect an ideal spot, the Seamen's Hospital at the Albert Docks is by far the most suitable place in the United Kingdom for a school of tropical medicine. However this may be, and whatever may be said or thought about the site, about the curriculum, or about the clinical material, we—that is, my colleagues and myself—have determined to make the best of the opportunities provided for us by the Colonial Office, the Seamen's Hospital Society and the public, in the conviction that if we work hard and earnestly, and pull together, this school will sooner or later prove a great boon to many, and, we believe, play no unimportant a part in advancing tropical medicine and in helping our countrymen to carry out some of the duties imposed by circumstances on our race; that is to say, that it will attain the object for which it was established.

Tropical Medicine a Special Study.

I have said that there is much that is special in tropical medicine. Why should this be? The answer lies at the root of our future studies. To know the cardinal facts of what is special in tropical medicine, to apprehend their bearing, and to be able to give a rational explanation for them is the first, and a most important, step in the science and practice of this department. It has occurred to me, therefore, that a few remarks on one or two aspects of the subject would form a suitable introduction to the course of studies before us.

The principles of pathology, of diagnosis, and of treatment are the same the world over. That is quite true; but it is equally true that the details of tropical pathology, diagnosis, and treatment, and consequently the application of these principles to practice, differ widely from those obtaining in temperate climates. It is with the science and practice of medicine as with the science and practice of agriculture: success or failure in the application of principles depends in great measure on knowledge of detail. A scientific Aberdeenshire agriculturist may be a successful grower of turnips in Aberdeenshire; but without special training and experience I suspect, notwithstanding all his science, he would be a failure as a coffee planter in Ceylon. Just so with medicine. It is the knowledge of detail, special experience, special training, in addition to scientific apprehension of principles, that enables the tropical agriculturist to succeed in his special climate at his special work; it is equally the knowledge of detail, the special training and the special experience, *plus* a scientific apprehension of principles, that will enable the tropical practitioner to deal successfully with tropical disease. A physician may be competent to deal with diseases in England but sadly incompetent to deal with disease in Africa.

Etiology a Branch of Natural History.

It is well to remember that pathology is, in the main, but the study of a certain fauna and flora—a fauna and flora that inhabit the human body—and the study of the reaction of the human body in the presence of these organisms. In the main, the etiology of disease is but a branch of natural history. Climate, that is, temperature, influences pathology mainly, if not only, inasmuch and in so far as it influences the distribution of the pathogenic flora and fauna which, just as in the case of the ordinary fauna and flora, are markedly regulated by atmospheric conditions.

At first sight it is not very evident how pathogenic organisms could be so influenced by any atmospheric condition. The medium in which those pathogenic plants and animals live when they function as disease agencies, that is to say, the human body, is practically the same in all climates. The temperature of the body in health is the same everywhere; it would be hard by chemical analysis to distinguish between the body of a negro and that of a European, and still harder, I opine, to distinguish between the body of an Englishman in India and the body of an Englishman in England. Viewed as culture media for pathogenic organisms, the negro and the Esquimaux are identical, just as are the king and the beggar. Nevertheless it is a fact that the plants and animals haunting the human culture medium in the tropics are in many instances different to those haunting the same medium in temperate climates. Why is this? How can atmospheric temperature influence diversely organisms apparently so uniformly conditioned?

Geographical Distribution of Bacteria.

When you come to look into the geographical distribution of those diseases whose germs reside in the blood or deeper structures—I say deeper structures as opposed to the integuments, which I purposely exclude—you will be struck by the following facts: (1) Except in a very limited class, bacterial diseases are cosmopolitan—that is to say, they can be acquired anywhere or everywhere; (2) diseases of limited geographical range are entozoal. I do not say that all cosmopolitan germ diseases are bacterial, for we know that many entozoal affections also have a cosmopolitan distribution. But I say that all bacterial diseases, so far as we know them, with the exceptions alluded to, are cosmopolitan. Neither do I say that all entozoal diseases have a limited geographical range; not a few are cosmopolitan. But certainly diseases of the blood and deeper tissues, having a limited geographical range, so far as we know them, are entozoal. It is of the highest importance to the student of tropical medicine, who is a student of what is really a special class of disease having a limited geographical range, that he should at the outset of his studies apprehend the facts on which these two generalisations are founded and understand the reasons for them, for on them depends many of the special features of tropical medicine.

That bacterial diseases should be cosmopolitan is easily understood; the germ passes from host to host without metamorphosis, and practically uninfluenced by the usual media of transmission. It is not killed by a short exposure to ordinary atmospheric conditions. Thus the tubercle bacillus can flourish in every country; plague, leprosy, glanders, influenza, pneumonia, cholera, typhoid, and a host of other bacterial diseases, when social and other surrounding conditions are favourable, may be acquired at any time and in any climate.

The only exception to the generalisation propounded lies in those bacterial diseases whose germ is a bacterium which, though usually existing as a saprophyte in culture media having a special range of temperature, may, under certain circumstances, become parasitic. In tropical pathology there is at least one well-authenticated instance of such a bacterium—the micrococcus melitensis, the cause of Mediterranean fever, or, as Hughes calls the disease, febris undulans. There is yet another example from tropical pathology, which, if Sanarelli's recent work is accepted, may also be quoted—the bacillus icteroides, the germ of yellow fever. It is interesting to remark that, whereas the bacterial diseases as a rule are readily and directly communicable, those bacterial diseases which depend upon a saprophytic bacterium are not infectious in the usual acceptation of the word.

Geographical Distribution of Tropical Disease.

In this respect, and as regards their geographical peculiarities, the saprophytic bacterial diseases are a sort of half-way house to the study of the more extensive group of tropical diseases, those caused by animal parasites, of which malaria may be considered the type. The geographical limitations of the animal parasitic diseases are undoubtedly, in many instances, determined by atmospheric temperature. But

although high temperature may be an indispensable and ultimate determining factor in their distribution, temperature does not usually operate directly on the causal germ; its operation is usually an indirect one, acting probably through many channels. One of these channels we know.

Most entozoa require at least two hosts, a definitive and an intermediary; without both the germ would die out. Thus in malaria we know, thanks to the recent revolutionising discoveries in which Ross plays so brilliant a part, that a particular genus of mosquito is the necessary definitive host, whilst man, and possibly other mammals, fill the less dignified *rôle* of intermediary. Recent investigation would suggest the conclusion that without insect definitive and mammalian intermediary there would be no malaria. Consequently, wherever one or the other is absent there is no malaria. Wherever there are no mosquitos of the appropriate kind there the disease cannot be acquired. One indispensable biological condition for the mosquito in question is a high atmospheric temperature. This is a principal reason why malaria is a disease more especially of the tropics, but also of the warm season in higher latitudes.

The same or similar explanations hold good for the geographical distribution of those great groups of tropical diseases included under the terms filariasis, dracontiasis, endemic hæmaturia, endemic hæmoptysis, and a crowd of others already known, and probably also of many as yet unrecognised, or, if recognised, etiologically imperfectly understood diseases.

The peculiar distribution, therefore, of a large class of tropical diseases depends, in the first place, on the fact that they are entozoal diseases; in the second place, that the entozoa concerned require intermediary or definitive hosts; and, in the third, that one or other of these hosts requires a high atmospheric temperature—in other words, are natives of warm climates only.

In a limited number of tropical diseases, although an animal intermediary is a necessary or, at all events, a usual agent in transmitting the germ, this animal intermediary plays but a passive *rôle*. Such is the case in that important disease affecting the horse, ox, and other domestic animals in Africa and India, trypanosoma disease (fly disease, *surra*), which, from an economic point of view, is of such vast importance, especially to the Dark Continent. In fly disease the germ is transferred, as if by an inoculating lancet, on the mandibles of the tsetse fly when this blood-sucking insect, after feeding on a sick, feeds on a healthy, animal. Although the fly cannot be said to be a necessity, seeing that its passive office can be discharged by a dozen other agents, yet, as under natural conditions the fly is practically the only transmitting agent, the disease is dependent on this particular insect, at all events in Africa. Now as the tsetse demands tropical conditions, is an inhabitant of tropical countries only, the disease it subserves is necessarily tropical also.

In at least one other tropical disease high temperature acts on the germ in a somewhat different and more direct way. In ankylostomiasis the immature germ, after leaving the human body, in order that it shall become properly qualified for re-entrance into another human host, has to undergo certain developmental changes. As these developmental changes can be effected only in a warm medium, ankylostomiasis is, on this account, necessarily a disease peculiar to warm climates.

I have no time to point out and explain how it is that certain skin diseases are affected in their distribution by atmospheric temperature. Suffice it to say that the parasitic causes of some of them require high temperature and a moist atmosphere in order to flourish on the surface of the body; others, being acquired from plants or animals limited to tropical climates, are necessarily similarly confined.

That the distribution of the germs of the more important diseases is not in any way dependent on the influence of temperature on the human body is proved by the fact that once established in the human body the germ will flourish therein in the coldest as well as in the warmest climate. Thus, for example, a malaria parasite acquired in tropical Africa may remain alive for months, perhaps for years, after its human host has come to live in England. The same may be said of the filariæ, of the ankylostoma, and of many other parasites; proving that temperature regulates the distribution of disease by directly or indirectly acting on the germ during its passage from human host to human host, and not by any direct influence it may have on that host. This is the first lesson, and a most important one it is, that the student of tropical medicine should learn.

ANIMALS AND THE TRANSMISSION OF DISEASE.

This fact, brought out by these remarks, that the lower animals, especially, I would add, those that are intimately associated with man, play an important part in the transmission of human disease is only now becoming properly appreciated. In this matter I would point out that, for once in a way, science is vastly in advance of practice. Our sanitarians and the public do not fully recognise all that the community of interest, as regards disease germs, of man and beast means in the spread of disease. At all events if they do understand it they certainly do not act as if they appreciated it.

PLAGUE A RATBORNE DISEASE.

To turn for an illustration to a subject which at the moment is of pressing importance—the extension of plague. This disease, no longer, as it had been for some two hundred years, of academic interest merely, in one of those recrudescences, the explanation of which is still obscure, is again threatening to spread over the world. It is even now knocking at the door of Europe. What have sanitarians done with the mass of fact about this disease, which has been accumulated for them by etiologists and pathologists during recent years; more especially, what have they done with the demonstrated fact that bacillus pestis is a parasite of rats? Judging from the recent history of the disease in Hong Kong, Bombay, Poona, Mauritius, and other places, plague goes on as if there were no such thing as sanitary science. The reason for this, it seems to me, lies in the fact that the sanitarian, like other mortals, is slow to depart from traditions and custom, slow to adopt new ideas, slow to adapt himself to novel circumstances. He has been active and willing enough, but not active in the right direction. Like some physicians, he has only one remedy for every disease. In his efforts at preventing and stamping out plague, he has simply followed old and stereotyped lines applicable to certain other diseases, but not applicable to plague, and has disregarded, practically ignored, the well-attested fact that the ubiquitous rat contracts plague before and more readily than man. From the fact that the rat is attacked by plague before the disease appears in epidemic form in a human community, the inference is indicated that rats are a principal agency in preparing any given place for the epidemic outburst in man; and it also suggests that if the rats in any given place were destroyed, although plague might be introduced, the disease would not spread as an epidemic among the people; at all events, that its chances of so spreading would be enormously reduced.

I would illustrate what I conceive to be the position of the rat in epidemic plague by a simile. I would compare a plague-threatened, but as yet not invaded, city, to a grate in which the fire is laid all ready for lighting. There is the refractory though combustible coal on top, there is the greasy paper and dry resinous inflammable wood underneath, and there is the lighted match ready to be applied. Drop the match on the top of the coal it flickers for a second and goes out—the coals do not catch fire; but apply it to the paper and sticks underneath; in a moment there is a blaze, the sticks are consumed, the coals catch, and in a little while the fire burns merrily. The coals will now burn by themselves, or if they threaten to go out another stick or two will quickly revive the fire. In my simile the coals stand for the human inhabitants, the sticks for the rodent inhabitants, and the lighted match for the plague germ that has dodged the quarantine intended to protect that threatened city. No sticks, no fire; no rats, no plague epidemic.

As regards communicability, plague cannot be said to be a very infectious disease—certainly not nearly so infectious as small-pox, scarlet fever, or even typhus. The attendants on plague cases, provided they exercise a reasonable and by no means irksome care, do not contract the disease. Man-to-man infection, therefore, cannot be the only, or even the principal, means by which this disease is conveyed; were it so plague would not have spread as it has done in the recent and current epidemics in China, India, and elsewhere. Did its

evalence depend on man-to-man infection, considering the nitary measures that have been put in operation, sanitary easures which have proved so effective in typhus—a much ore communicable disease than plague, it would have died t long ago. There is certainly some way other than man-to-man fection by which plague epidemics are started and kept going. my opinion that way is the rat. This animal is not included , and is not affected by, ordinary disinfection operations. It nnot be isolated or segregated like the human being. It ns about from house to house unrestrained, infecting other ts and spreading the disease. It is completely indifferent Orders in Council, to sanitary authorities, to Acts of Parliaent, and even to men in uniform. We know all this; but is e knowledge acted on in that energetic and efficient manner nich a lively belief would imply and ensure? Certainly not. ttention in plague epidemics is principally directed against an-to-man infection; hardly at all against the more nportant rat-to-rat and rat-to-man infection. I believe were ts exterminated in any place, plague could not become tablished in that place.

We know what the pole-axe policy has done to protect the erds of this country from certain epizoötics of a highly infecous nature. The same policy would doubtless be as effecte against plague could it be carried out. We cannot as a ractical measure, of course, pole-axe human beings in anticiation of plague, but we can kill the rat. It seems reasonable the light of the facts mentioned to ask why is this not gularly, and systematically, and efficiently done in every wn and village threatened with plague? If you diminish by little only the chances of survival of a parasite, you will ssibly, very probably, extinguish it altogether. No matter w potent and indestructible they may be when once estabshed in the human body, before effecting an entrance parates are feeble and helpless, and a little matter turns the ale against them; diminish their chances of survival or proagation by this little and you may stop their epidemic diffuon. Therefore, as the rat supplies the best, and most probly the initial, opportunity for bacillus pestis, removal of is opportunity would most likely arrest the threatened epiemic diffusion of plague. Were I asked how I would protect State from plague, I would certainly answer—exterminate e rats as a first and most important measure; but, in makg this recommendation, I would stipulate that the measure taken in anticipation of the advent of the disease, not when e disease had already shown its presence and the rats are ying by thousands. It is too late then—the mischief has en done. An epidemic in full swing is hard to stop.

I do not know that London may not be again smitten with e plague. Some, relying on the proved efficiency of our easures for the prevention of cholera and on our elaborate nitation, believe that there is no danger. But I would oint out that cholera is not on all fours with plague, and that hat applies to the former does not necessarily apply to the tter. There is this important difference between the two, ecially important from a sanitary point of view: cholera is waterborne disease, plague is a ratborne disease. We have ken precautions that our water supply may not be infected th the cholera vibrio; have we taken similar precautions at our rat supply does not become infected with bacillus stis? Suppose that a single rat infected with plague should cape into the sewers of London from one of the many ships nstantly arriving from plague ports. What would be the nsequence? The rat would die. Ten chances to one its dy, teeming with plague bacilli, would be eaten, as is the abit of rats, by other rats, or the fleas infesting it would ansfer themselves to those other rats, and with them p'ague cilli. These other rats in turn would become infected with ague. The fat would then be in the fire, and we should ve, before very long, an underground epidemic of plague in ndon. Who can say that the disease would remain underound? At the present juncture, were I the responsible nitary head of any town in Europe, in anticipation of a ssibility, compared to which in horror and in destructiveess a general European war would be a trifle, I would do my most to have every rat and, if possible, every mouse in my strict promptly exterminated. This done, I should contemate the approach of plague with equanimity, relying then, t only then, on isolation and disinfection to stop man-to-an infection.

It seems to me that the present measures of plague prevention are like bolting the window against a thief whilst the front door is left wide open; moreover they are exceedingly expensive, exceedingly irksome, exceedingly unpopular, and exceedingly inefficient. Compared to the least of them, the destruction of rats would be a cheap measure. In the carrying of it out, no one except the rat-catcher need be seriously put about. Efficiently carried out, it would certainly enormously diminish the risk of an introduced plague becoming a pestilence. If ever a sanitary measure was indicated by common sense, it is the destruction of rats in anticipation of threatened plague.

It requires considerable courage to speak of so insignificant a creature as the rat in connection with the diseases and dangers of so dignified a creature as man. Those who think and speak as I have done expose themselves to the raillery of the irresponsible smart writer and such like. I have had some experience of this. I well remember the fun poked at me by the facetious scribe, now many years ago, when I advocated the claims of the mosquito as being a responsible agent in one section of tropical disease; and again, more recently, when I advocated the claims of the same insect as a responsible agent for the propagation of another and more important set of tropical diseases. And now, by advocating the claims of *ridiculus mus*, I fear I run the risk once more of exposing myself to similar gibes. I have my consolation. As regards the mosquito, the laugh is now on my side; as regards the rat, I anticipate the same.

We have high authority for believing that "facts are chiels that winna ding" and that if we but stick to them they will bring us right in the end. For the prevention of cholera the facts indicate the policy of a pure water supply; for the prevention of malaria the policy of drainage, cultivation, and other methods of mosquito extermination; for the prevention of plague the policy of the rat-catcher. This for these three diseases is my sanitary creed. But, I would emphatically point out, to be effective these measures must be employed in anticipation. When our springs are polluted with cholera vibrios, when the house is full of malaria-charged mosquitos, when the rats are tumbling about the floors drunk with plague, it is too late for general prophylaxis. Then we must fall back on the less desirable measure—personal prophylactics; for cholera the teakettle; for malaria, the mosquito net and quinine bottle; for plague, Haffkine's injections. I would repeat, to prevent epidemic plague in human communities you must kill the local rats *before* they are attacked.

The Underlying Principle of Tropical Disease.

In making these remarks about plague, I have wandered somewhat from my subject. In excuse, I would point out that as a hospital we have a special interest in this disease, for when the first line of our national defence against bacillus pestis has been broken through, this hospital, as, indeed, has already happened, is the first medical institution likely to know it; moreover, what I have said accentuates the importance of that great underlying principle of tropical disease, and, indeed, of much disease elsewhere, namely, the interdependence of man and beast in the matter of pathogenic germs. Year by year the progress of medical science makes this more apparent; year by year the scientific study of disease becomes more and more a matter of natural history and less a a matter of theory, or, as it often used to be, of metaphysics. The discovery of the bacterial cause of many diseases concentrated too exclusively for a time the medical mind on that particular class of germ. To-day the protozoon and the helminth, at all events as regards tropical pathology, are in the ascendant. In this school, although the bacterium will not be neglected, necessarily a large share of your time will be occupied with animal parasites, a subject which I fear has not been sufficiently studied hitherto in our medical schools. One of our principal objects will be to make you thoroughly familiar with all the tropical disease germs so far as they are known—bacterial, protozoal, and helminthic; to teach you how to demonstrate these germs, how to grow them, and how to kill them; in other words, how to study them scientifically and practically, that is, from the standpoint of natural history and of practice. We feel assured that this is the only way to arrive at sound methods for the prevention and treatment

of the diseases these germs give rise to, as well as for fostering and securing the further advance of tropical medicine.

The Establishment of the School.

Before concluding, I wish to avail myself of the opportunity this occasion affords publicly to thank on behalf of the profession, of my colleagues, and of myself, those who have contributed in any way to the establishment of the London School of Tropical Medicine. To the Secretary of State for the Colonies (Mr. Chamberlain) we are under very great obligations. Without his initiative, and without his sympathy and active support, the hopes of some of us would not have been so speedily and so effectively realised. Apart from philanthropic and scientific considerations, as a piece of practical statesmanship, I confidently predict that the future will prove that of the many public measures Mr. Chamberlain has instituted and advocated this school is by no means the least important or the least promising.

Almost equally indebted are we to the governing body of the Seamen's Hospital Society, who so promptly fell in with Mr. Chamberlain's suggestions and invitation, and who have entered with heart and soul into the enterprise, and who, notwithstanding considerable opposition, have pushed it through to a happy conclusion. They may be sure that the charity they administer will not suffer by being linked to a teaching institution like this. Simply as a matter of financial policy the connection, I venture to say, will turn out to be a wise one for the charity as it certainly is for the school. As a means of forwarding the main object this Society has in view, the healing of the sick, especially of the sick sailor, the connection of school and hospital, to-day commenced, cannot but have a favourable influence.

When the public were appealed to for funds to carry out this scheme, the appeal was promptly and, so far as present wants are concerned, fully responded to. For this generosity we are deeply grateful. In consequence of an almost unexpected liberality we are now in a position to begin work, on a modest scale, it is true, but efficiently furnished with apparatus and free from debt. We look forward, however, to the time when our institution will expand, when our library will grow, our museum prove too extensive and our classes too large for the present building. Indeed, already we feel that the accommodation at our command is small for our wants. The residential principle seems to be much appreciated; in the near future we anticipate that additional rooms for resident students will have to be provided. A lecture room, too, is needed. To supply these and many minor wants funds will be required; we trust that they will be forthcoming. Although, thanks to the liberality of Sir Henry Burdett, a scholarship of £300 a year, tenable for three years, is in the gift of the school, no provision has been made for up-keep, or for the remuneration of the teachers. The present generation of teachers may be willing to work for nothing; we have no right to assume from this that our successors will be content to work on the same terms. The school requires an endowment. We look to that good fairy the public, which has already been so generous, and for whose generosity we are so deeply grateful, to provide this.

Lastly, I would thank the lay and medical papers, particularly the organ of the British Medical Association, for their valuable advocacy of the school, and for their discriminating and loyal support during a somewhat troubled and anxious period.

Gentlemen, while bidding you a welcome to the school, although feeling assured that we will have something substantial to offer, we would at the commencement of our career crave a little indulgence. We anticipate that the teaching machinery we have devised will work not quite smoothly at the outset. As the session proceeds doubtless gaps and defects will become apparent. These we trust a little experience will enable us to recognise and rectify. In a short time we hope that all important requirements will be understood and efficiently met; but whatever our initial shortcomings may be, we are confident that by the end of the session you will have learnt at least something worth knowing. And we trust that in after-life, when the experience of actual practice has taught you to appreciate and apply the knowledge acquired within these walls, you will recall with satisfaction, if not with pleasure and gratitude, the few months you are to pass with us, and that you will feel that the time had not been altogether wasted.

ROYAL VETERINARY COLLEGE.

By G. Sims Woodhead, M.D.,
Professor of Pathology in the University of Cambridge.

THE TRAINING AND THE WORK OF THE VETERINARY SURGEON.

[Abstract.]

Professor Woodhead referred to the many pleasant associations he had in connection with the veterinary profession. He said that he felt that he could speak with some knowledge of what was required by veterinary students, although he might have to speak as an outsider. He drew attention to the fact that the period had gone by when a knowledge of the points of a horse and the ability to blister, bleed, or seton an animal was considered sufficient qualification for a veterinary surgeon. The veterinary surgeon was now necessarily a well-trained practical and scientific man who, in his four years' curriculum, had the opportunity of gaining a thoroughly sound knowledge of his profession. To-day it was essential that the preliminary training should be such that a man who passed the preliminary examination was, in some degree at any rate, prepared to profit by the instructions of his teachers, and although there might perhaps be no greater men in the profession now than there had been hitherto, the average man, even in the lecturer's experience, had improved, and there were not so many weaker men coming up for examination. He pointed out that they came there, not so much to be drilled in facts as to learn how to work and to be trained in methods: how to use symptoms and physical signs as indications of the nature of lesions in disease and to learn to be able to trace the course of these lesions from mere functional alterations to the forms in which they are met with on the *post-mortem* table, and to determine how treatment might best be applied in curing disease; though he thought that a great part of the work that would fall to their lot would have to be in connection with prevention rather than with cure. After giving illustrative examples of what he meant by the study of the principles of pathology and therapeutics and their application to clinical medicine, the lecturer begged them to take an interest in the great problems that were affecting alike medical men and veterinary surgeons. They had a great part to play in connection with the stamping out of such conditions as swine fever, anthrax, rabies, pleuropneumonia, and tuberculosis. He maintained that the veterinary surgeon only should be retained to do the clinical, pathological, and hygienic work in connection with the prevention and stamping out of swine fever, and until such work was committed to their care he was afraid that there was not very much prospect of the extinction of this fearfully expensive disease. Veterinary administrators had been able to get rid of foot and mouth disease, and he believed that, with the assistance of a larger veterinary staff, the Board of Agriculture would in time be able to stamp out swine fever. As regards tuberculosis they, along with medical men, had a duty to perform to the public: to convince them that there could be no tuberculosis without the tubercle bacillus, but that the tubercle bacillus might exist without always producing tuberculosis, though its presence must always be a source of danger. If they could once bring this home to the general public and to those interested in the breeding of cattle and the supply of milk; and if, too, they could demonstrate to farmers and others that it was impossible to feed tuberculous stock economically, it would scarcely be necessary to insist upon the danger that existed in the presence of a tuberculous herd in the dairy. They, as coming veterinary surgeons, had their part to play, but if they played it well they would receive the well-earned thanks of those who looked to them for guidance and advice. In conclusion, the lecturer wished them a very pleasant and profitable session, and said that they might be sure of this if they would work when it was time to work, and then, when they felt they had done their duty, instead of loafing play with all their mind and body. Without health they could not get the best work out of their brains, nor would they do their full share of work in the honourable profession that they had elected to follow.

SCHOOL OF PHARMACY OF THE PHARMACEUTICAL SOCIETY.

By D. J. Leech, M.D., D.Sc., F.R.C.P.,
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THE EVOLUTION OF PHARMACY.

[Abstract.]

After some introductory remarks, Professor Leech said that as civilisation advanced amongst ancient communities the number of substances reputed to possess a curative influence increased. With this increase pharmacy became more complex, and Egyptian papyri gave us a good idea of the medicine and pharmacy of an ancient civilised community. The "Papyrus Ebers," written about 1500 B.C., contained several hundred prescriptions with directions for the use of the medicines. The ingredients of the prescriptions consisted largely of some form of food or condiment, as, for example, honey, dates, figs, and coriander. But potent medicines of mineral and vegetable origin were also included, as copper salts, juniper berries, and aloes. In addition many gruesome substances were included, as the blood, brain, and fat of many animals. The prescriptions contained from one to eighteen constituents; in some cases decoctions and infusions were described. Very commonly, however, directions were given for the solid ingredients to be mixed and taken in beer, milk, or wine Sometimes a kind of confection was prescribed with honey; at others the constituents were made into cakes. Plasters, ointments, and collyria were ordered, and inhalations also, which were made by pouring fluid on a hot stone. There was no definite evidence that pharmacy was separated from medicine in Egypt, though there must have been in these times dealers in drugs. There was reason to believe, too, that many people kept drugs and prepared their own medicines.

In Greece, in the time of Hippocrates, there were special classes who collected and sold drugs—the rhizotomists and pharmacopolists. The former gathered roots and herbs, and expressed the juices of plants for medicinal purposes. The pharmacopolists dealt in drugs; they were to be found in public places, vaunting their wares and their knowledge, dealing in cosmetics and curiosities as well as drugs. In addition there was another class, cultivators of medicinal plants, about whom little is known. The physicians seemed to have prepared their own medicines. In the establishment of separate classes collecting and dealing in drugs, we had the first step to the separation of medicine from pharmacy, which was rendered necessary by the increased number of drugs and the altered conditions of social life.

In later times the Greek and Roman physicians continued to prepare their own compounds. Galen, who lived in the second century of the present era, certainly seemed to have done so, but Pliny says that some of them were unable to compound their own prescriptions and bought ready-made medicines. Dealers in drugs and medicines, both in the East and West, in Alexandria and Rome, seemed to have abounded, but they all appear to have conjoined other functions with the preparation and sale of medicinal compounds.

The pharmacopolists dressed wounds and seem to have trespassed in other ways on the functions of medical men. They earned, however, a bad reputation. Then there were "Unguentarii" and "Pigmentarii," who sold salves and pigments, but also dealt in drugs and other things. The "Seplasiarii" were shopkeepers who kept drugs, toilet accessories, and cosmetics chiefly, and there were some apparently who conjoined the sale of a great variety of articles, including wine, with that of drugs. In later times still the dealers in spices, "Aromatarii" and the "Confectionarii," seemed to have been more specially engaged in dealing in medicines.

As time went on there was no doubt an increasing tendency on the part of physicians to employ outside help in the preparation of medicines, but the change in this direction became more marked when the Eastern physicians took up the work which fell from the failing hands of those of the Western world. The Arabian physicians added largely to the list of medicines used, and devoted much attention to the preparation and combination of medicaments, and owing to this pharmacy was constituted as a separate work. According to Haeser, the true apothecary appeared first amongst the Arabians.

Medicine sank to a low ebb in Europe after the fall of Rome, and when a revival took place the influence of the Arabian physicians on both medicine and pharmacy was very plainly seen. The custom of committing pharmacy into special hands spread from the East into Europe. Saladin, of Ascalon, physician to the Prince of Tarento, wrote a book about the middle of the twelfth century, for the use of the "Aromatarii," one of the names by which the compounders of medicine seem to have been known at this time; and in the thirteenth century the Emperor Frederick II made regulations ensuring the competence of the "Confectionarii," who acted as pharmacists at Salerno. Certainly in the thirteenth century we find in many parts of Europe the apothecary preparing the medicines which the physicians ordered. The earliest record of the apothecary in England seems to be of one Richard Fitznigel, who acted in that capacity to Henry II. In 1345 there was in Rymer's *Fœdera*, a grant of sixpence a day, to one "Coursus de Gangeland, Apothecarius, Londoniæ," for his care of King Edward III.

In Chaucer's time, a century later, the apothecaries were represented as vieing with one another in preparing the medicines of the physicians. The doctor of physic who is sketched in the *Canterbury Tales* had his apothecaries—

> Full ready had he his apothecaries,
> To send his drugges and his lectuaries.
> For each of them made other for to win,
> Their friendship was not newe to begin.

The apothecaries held an intermediate position between the simple traders in drugs and the physicians. The majority dealt not only in drugs, but in other commodities, like the pharmacopolists of Greek and Roman times.

The practice of medicine was to some extent regulated during the sixteenth century by Acts of Parliament, but pharmacy was in a deplorable condition until the early part of the seventeenth century. The apothecaries were in a subservient position, and their proper work, that of selling drugs and medicinal compounds, was much interfered with, for there were other classes who dealt in drugs and medicines. The grocers also sold them, and in the sixteenth century we find distillers and sellers of waters and oils and dealers in simples known as druggists, who supplied many forms of medicine. Another class connected with pharmacy had also arisen—the chemists. The introduction of chemical processes by the Arabs and the activity in research, due in part to the dawn of a scientific spirit, but largely also to a belief in alchemy, led to the production of many chemical substances having medicinal properties.

In 1617 a great change took place. There was a feeling of dissatisfaction amongst the physicians with the condition of pharmacy, and a petition was addressed to King James the First, praying him to incorporate the apothecaries separately. In compliance with this petition a separate charter was granted in 1617 to 114 apothecaries who had been selected by the College of Physicians as the best instructed of the grocer-apothecaries. It was set forth that no one should compound medicines in London unless he had served seven years to an apothecary and been examined and approved by the master and wardens of the Company, and a year later the first *Pharmacopœia* was published by the College of Physicians, which the apothecaries were ordered afterwards to use as their standard and guide in the compounding of medicines.

The constitution of the Apothecaries' Society had in several ways an important influence both on the practice of medicine and pharmacy. By it the apothecaries were made at first, at least, more useful to the physicians, to whom they to a certain extent acted as assistants, for besides supplying the medicines ordered they often aided in carrying out treatment; but in consequence of the establishment of this increased connection with treatment they became in time recognised medical attendants. This devolution of function went still further in the eighteenth century, for, as stated at a meeting of apothecaries in 1794, the establishment of druggists engaged in the sale of medicines, but supporting themselves also with the sale of other articles, had spread throughout the land, and there could scarcely be found a village or hamlet without a village or hamlet druggist.

The physicians complained that the druggists not only

dealt in drugs, but compounded medicines without having had any education fitting them for this work, and that they even gave medicines for ailments, and thus competed with them in the matter of treatment, which the apothecaries thought was a very wrong proceeding. Attempts were made to prevent the apothecaries practising, but they were defeated by a judgment in the House of Lords in 1704, and ninety years later a proposal made by a Society of Apothecaries to limit the compounding of prescriptions and vending of pharmaceutical preparations to the apothecaries by legislative means was found to be impracticable.

Professor Leech said he would not enter into the history of the movement which culminated in the passage of an Act in 1868 preventing the dispensing of poisons, and the assumption of the titles of chemist and druggist by unqualified people, and necessitating, therefore, the due education of those devoting themselves to pharmacy. But, as a member of the medical profession, he desired to congratulate the Pharmaceutical Society on the honourable part it took in initiating and urging forward legislation, which has been advantageous alike to pharmacists and the public. The Act of 1868 was rendered possible by that which the Pharmaceutical Society obtained in 1852, and by the establishment of a museum, laboratories, and examinations in Bloomsbury Square, and when the Society of Chemists and Druggists joined forces with the Pharmaceutical Society the dislike which so many legislators seemed to feel to enactments compelling education was at length overcome. The General Medical Council, by representing to Her Majesty's Government the necessity of regulating the practice of pharmacy, and by a report issued in the following year gave material help to those who were engaged in pressing forward a Pharmacy Act.

Professor Leech next dealt with the pharmacopœias, commencing with that of the Royal College of Physicians of London in 1618. The first English pharmacopœias showed the position in pharmacy which had been attained by the Greeks and Arabians, for a large number of the formulæ were taken from the works of their leading physicians. The catalogue for the first *Pharmacopœia* contained 1,254 articles for which the apothecaries were liable to be called upon. In 1632 not fewer than 180 simple and 27 compound waters were official, whilst there were formulæ given for 80 syrups and preparations of honey, 46 plasters, and 55 ointments, exclusive of sundry oils. One of these deserves quotation.

The pharmacopœias of the eighteenth century showed a marked advance in both pharmacology and pharmacy. Chemical products increased in number, and the account of their method of preparation kept pace with the advancing knowledge of chemistry. Almost all the substances of animal origin disappeared, and the electuaries, powders, and other preparations containing a large number of ingredients were replaced by the simpler infusions and extracts.

In the first pharmacopœias of the nineteenth century there were indications of a coming change, which greatly added to and altered the duty of the pharmacists. Previously only the mode of preparation of the various substances had been given, but in the pharmacopœias of the London College of Physicians published in 1809 and 1824 a few details were added with regard to the specific gravity which some of the chemicals should have. It was not until 1836 that short descriptions of chemical substances were given in the *Pharmacopœia*, by which they might be recognised, and by which to a certain extent their freedom from adulteration might be ascertained. In 1836 several alkaloids were made official. In 1851 a further step was taken, and the compounders of medicines were furnished with an official description of some of the vegetable as as well as some of the chemical drugs. In the production of the *British Pharmacopœia of 1864*, issued by the General Medical Council, the aid of the Pharmaceutical Society was sought, and a very great advance was made in the value and completeness of the tests and descriptions given. The tests and descriptions were made still more stringent and exact in the addition of 1885, and in this *Pharmacopœia* an advance of the greatest importance to pharmacy as well as to medicine was initiated.

Speaking of the future of pharmacy, Professor Leech said that as time went on some of the cruder tests would be replaced by others requiring more chemical knowledge and more expertness for their performance, histological examinations would be increasingly relied on in the detection of the sophistication of vegetable drugs, and hence a wider and deeper knowledge of physics, chemistry, and botany would be called for.

There could be little doubt that an important feature in the next *Pharmacopœia* would be the increased number of drugs standardised. Between standardisation and the use of active principles, instead of crude drugs, there was only a short step, and though for many a day the Galenical preparations which had been in vogue for centuries would be used, still they would, he thought, be to a large extent gradually edged out by the active principles. The process had indeed already begun; the large number of granules, tablets, pilules, etc., now employed, containing fractions of a grain of active principles, pointed to a coming change, and the *Pharmacopœia of 1898* had recognised this to some extent by laying it down that the drugs contained in the new forms must answer to the ordinary tests for purity.

Another feature of the pharmacy of the present day was the great increase in the number of chemical preparations; a few of proved utility had been incorporated in recent editions of the *Pharmacopœia*, but an immense number built up chiefly by the German chemists, and supplied with the necessary recommendations, were being sent over for use by English doctors, who for the most part administered them simply on the faith of these recommendations. A large proportion would, he believed, be found less useful than the older remedies, and some had already been abandoned. For the intelligent employment of these compounds an idea of their chemical structure and the reason of their value was most desirable, while for their combination it was imperative. The pharmacist was often called upon now to give explanations of chemical points, and unless the present system of medical education was altered, and a real knowledge of chemistry and pharmacology made compulsory, a time must shortly come when the functions of the pharmacist would be greatly widened, and in addition to being an intermediary between the manufacturing chemist and the doctor for the supply of the new compounds, he would be an intermediary also for explaining to medical men who used these compounds (which were constantly increasing in complexity) the chemical reasons for their introduction and value, the changes which they might undergo inside and outside the body, and the dangers which might arise from these chemical changes. To fill this *rôle* the pharmacist would be obliged to have not only an advanced knowledge of chemistry, but some idea of physiological action.

The older methods of administering medicines by infusions, tinctures, pills and powders would be less used, and the newer forms would increase in favour. So far the production of the latter seemed to have been largely in the hands of wholesale manufacturers. We sometimes wondered whether it would not be possible for what were sometimes called the elegant forms of administration to be more freely made on a small scale. At the present time a medical man who desired to order medicine in one of these forms was often in doubt whether the preparation he desired could be obtained in reasonable time, unless it corresponded exactly to one of those on the lists of wholesale producers, and sometimes on this account he was driven to order other combinations than he would wish, and by naming the special producer to give the pharmacist much trouble for little profit.

Professor Leech concluded with a few remarks on the question of education and examination in pharmacy.

A good deal has been heard of the encroachments of the modern nurse on the field of legitimate medical practice, but if we understand aright a somewhat mysterious editorial article in the *Occidental Medical Times* the tables have been turned in California. For some reasons, which it is hinted are of a political nature, "no California nurse is wanted" at the Divisional Hospital under the control of the National Government. It would appear that the California women who were first on the ground, who have by hard and faithful service brought order and cleanliness out of chaos and filth, have been dismissed and replaced partly by nurses from eastern States and partly by women physicians—homœopathic and regular.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, OCTOBER 7TH, 1899.

THE REMAKING OF THE UNIVERSITY OF LONDON.

The Statutory Commission which, under the University of London Act, 1898, is engaged in transforming the Imperial Examining Board of Burlington Gardens into a Teaching University for an area within thirty miles radius of the university buildings, prefers to do good by stealth and then blushes to find it fame. It issues "confidential" draft statutes to various bodies, some of which discuss them *in camerâ*, others in public meeting, and others in meetings the minutes of which are purchasable by the public. From such sources we were able in the British Medical Journal of September 2nd to give our readers a partial outline of the constitution of the new university. We now gather from a cryptic document entitled an "interim report by the Special Committee of Convocation appointed to make representations to the London University Commission" that another set of draft statutes relating to the schools and teachers of the University has been issued to certain privileged parties "under the same conditions of strict confidence as applied to the earlier draft." Representations in respect of these statutes are receivable up to October 14th.

The Special Committee, whose report is signed by Dr. Napier, appears to realise the absurdity of the situation which is thus created. They say: "Your Committee regret that, owing to the confidential character of the draft statutes, it is impossible that they should be here reproduced, and it is therefore rendered extremely difficult for members to follow clearly the criticisms made by the Committee on many points, but they trust that the general drift at least of their representations to the Commission will be understood from the letter that was finally adopted and sent by them on July 4th to the Commissioners."

We confess to having perused the letter referred to with a feeling akin to the perplexity with which one approaches the solution of a Chinese puzzle, and we rise from the task profoundly impressed with the unwisdom of the Commission in attempting to invest these draft statutes with a "confidence" which is alike indefensible and unattainable.

Clause 4 (3) of the Act, which constituted the Commission, directs the Commissioners to take such steps as are in their opinion best adapted for facilitating the making of representations by any body or person affected before any such statutes are framed. If the object aimed at by the Commissioners is to secure adequate consideration of their draft statutes by those who are, or will be, affected by them, why all this unnecessary secrecy?

The draft statutes, which we learn incidentally now include over 118 sections, are highly complex and in some cases controversial. Take the elementary question of the matriculation examination. We learn from Appendix B of Dr. Napier's report, that it would be regarded by a large party in Convocation as a breach of the arrangement or compromise upon which the Act was based, if the nature of the matriculation examination for external students were to be determined without reference to the Council for external students, upon the advice of a Board controlled by London professors, with the addition, probably, of some representatives of secondary schools such as appears to be contemplated by Section lxxxii of the draft statute. "This feeling," Dr. Napier's Committee think, "would probably result in a renewal on the Senate of a controversy which it had been hoped was closed," and no one should be a better judge than Dr. Napier on such a matter.

Again, we gather from such light as is thrown upon "Draft Statute No. II," by the representation made to the Commission so recently as September 27th, that it is by no means clear whether teachers of the University will be *individually* recognised as such, or whether a teacher recognised as a University teacher in one school will be recognised to teach in *any* school of the University. Again, it appears from Section cxviii of the new draft "that the instruction given by teachers of the University shall be open to external as well as internal students." Considering the whole plan of the "compromise" was to construct a two-faced University under one Senate, we confess in this and other provisions we foresee difficulties in separating the interests and graduation of the internal and external students respectively. This may be the end desired by those concerned to promote a Teaching University, but it will render nugatory the elaborate machinery provided by the schedule of the compromise.

We look in vain for any guiding light as to how the medical student will fare when the new body is finally got to work at South Kensington. His matriculation may be modified, or, if he be treated as an internal student, perhaps dispensed with, or some "other test of fitness" may be substituted. His Preliminary Scientific Examination will be supervised by a special Board of Studies. The professional examinations may be in certain parts held in common with those of the Conjoint Board as adumbrated in the report of the Cowper Commission. But on all these matters we are not as yet vouchsafed much information. We trust that the representations made by the medical schools will receive adequate consideration. The so-called "medical grievance" played no inconsiderable part in the agitation which led to the appointment of the Commission, and it would be surprising if one of the results obtained were not a medical degree accessible to London students on terms less exacting than those hitherto characteristic of London University.

IDEALISM IN LIFE.

IN the conduct of life all are perforce guided by the chance of a livelihood, but it is too much forgotten that for happiness, board and lodging, even of the palatial variety, are not sufficient without some room for the satisfaction of fancy, and Sir James Crichton-Browne has done well to remind us of this side of the shield. Each—at any rate when he is young—has Himself as well as his body to reckon with, and though the former is not of much use to him unless he can keep the latter alive, yet the performance of this charitable task does not fulfil the aspirations of which Himself is as full as an egg of meat. Himself feels that he has parts and powers, and imagines these in exercise and activity—imagines situations where they may have their swing, and difficulties which to his lasting fame they shall overcome. As his peritoneal fat increases, Himself is very apt to atrophy, and about the time when the elasticity of the arteries begins to wane, the elasticity of the mind too often begins to suffer too. At this time, like the fox who lost his tail, the man begins to look upon the powers which he has suffered to decay as a dangerous and useless possession, and to impress upon his son now growing up those lower views of life, that degraded form of contentment, which he himself at that age did, and which his son, to his disgust does, find intolerably dull. With the degenerated self there is no need to deal, but for the satisfaction of the young and healthy self a sense of effort and of struggle is the chief necessity of life. As the Australian millionaire remarked, it is not the money that makes life worth having, it is "the little game."

It is the great evil of the system of contract upon which our society rests that with the growing organisation of labour the largest class of men are debarred from any imagination in their life. It is not impossible that, as labour becomes more able to dictate its terms to capital, the labourers will recognise that this and not money is the great lack of their lives. If they do so, they will claim changes so great that none can foretell either their nature or their effects.

What is true of practical life is true also of the intellectual. Herein, too, imagination needs must play its part, and leaves life without interest by its absence. It is upon the general ideas that the mind forms, not upon the mere observation of unconnected facts, that the charm of science depends. Without the vivid pleasure of a theory science would be about as amusing as the *Post Office Directory*. No one who could get fresh air and exercise as a crossing-sweeper would drudge his life out in a laboratory, were it not that in the invention of experiment and in the formation of theory he finds satisfaction for the imaginative part, which is himself. The mere record of facts is as dull as ditchwater; witness the meetings of scientific societies. It is when the theorist comes forward with his general idea that the chairs fill. It is then that "the little game" begins, and is fought with as much ardour and as much delight as any game of football on the green. It is not the money he is making; it is hardly even the fame that he has of greatest knight—

> Pleasure to have it none; to lose it pain—

it is the actual doing of the work that brings these, the exercise of the powers of his mind upon the raw material, the moulding of the facts into a form as a sculptor kneads his clay, that makes life worth the living. This is his "little game."

And passing from the lower to the higher, from the narrower to the wider truths, the same holds good. Happiness is what men seek and will seek. They will not find it by dwarfing imagination or by cramping fancy. It is not thus that science has advanced in things within her range, and it will not be so in the things beyond. But here we speak no longer of imagination; where verification is impossible, we call it faith. Men say that faith is dead; but never was greater error made, never was a time when faith was deeper or entered more into the life of man, never was a time when it was more vital to himself. Wherever men live for duty, wherever they live for knowledge or for art, wherever they refuse to rest on things visible, and recognise that science never can say No, wherever they refuse to listen to

> Der Geist der stets verneint—

and turn to the unknown with hope and trust, there is faith as true, as steadfast, and may be as glorious as ever won a crown.

OYSTERS AND COCKLES.

THE report, so-called, of the House of Lords Committee on the Oyster Bill has been published. It is, in reality, not a report in the ordinary sense of the term, for the actual report merely submits a small volume of evidence; but the nature of the questions put by the members of the Committee shows clearly that we in no way exaggerated matters when we announced that the Lords Committee had wrecked the Bill. The main change they introduced into it was to substitute the Sea Fisheries Committees for the county councils and boroughs as the administrative authorities under the Bill; and this, although they admitted in advance that the matter was one of public health and not of protection to be afforded to fish; and although they were informed again and again that the jurisdiction of the Fisheries Committees did not include the principal oyster layings on our coasts. It will be unnecessary at present to refer to this question anew; but it is quite certain that before the Bill is again submitted to Parliament an understanding must be come to as to whether the interests of the public health or those of the trade in fishing are to take precedence in this matter.

Two new points may, however, be referred to. Sir Richard Thorne declared that the Sea Fisheries Committees had done nothing to protect the public health against oysters contaminated by sewage. This was much resented by a member of one of the Sea Fisheries Committees, who gave an instance of the intervention of his Committee to prevent sewage contamination of an oyster bed; and he in turn declared that the Local Government Board were favouring the disposal of sewage in such a way as to pollute an oyster bed.

These two statements call for some comment. In the first place the action of the Fisheries Committee referred to is quite recent; and the allegation that in the past they have had regard to trade interests and not to those of public health can need no confirmation for anyone who has read Dr. Bulstrode's report. We know that since the

issue of the report, and in view of the effect it has produced upon the public mind, Fishery Committees and others have done all they can to remove the public prejudice, but this hardly affects the traditions of bodies which have long been in existence, and under whose eyes the conditions described by Dr. Bulstrode have either grown up or have long been allowed to remain in existence. But the allegation as to want of support from the Local Government Board is one that is even more important if it could be shown to apply to a date subsequent to their issue of the official report on oyster layings; for, as was pointed out by one witness, it would indeed be an anomaly if the Local Government Board, after having indicated the danger which is incurred by reason of sewage effluents flowing over oyster beds, were now to sanction schemes of sewage disposal whereby that very result would be brought about anew.

The case in point was stated to be that of a town on the Kent coast; but we are inclined to think that the accusation was premature, for we cannot ascertain that any loan for such works has been sanctioned near any Kent oyster beds, and this is the only form of sanction in which the Local Government Board is involved. The point is, however, one that cannot be lost sight of. Towns on the coast and on tidal rivers have special statutory rights as to sewage disposal, and it is also claimed for modern methods of sewage disposal that all injurious matter can be easily and continuously removed from sewage effluents. These considerations must necessarily come to influence sanctions to the disposal of sewage on our coast line, but none the less should every effort be made to prevent any further pollution of oyster layings, whether this result be attained by avoiding tidal rivers and the sea as places of outfall for imperfectly-purified effluents, or by buying up oyster layings that might be contaminated.

Meanwhile the city of Exeter has had a somewhat serious outbreak of enteric fever, the following particulars concerning which are taken from the official reports of its medical officer of health and sanitary inspector. From July 1st to September 11th 85 cases of enteric fever, of which 5 were fatal, had been notified—namely, 3 under 5 years of age, 46 at ages 5 to 15, 24 at ages 15 to 25, and 12 over 25 years of age. The water supply of all these patients with one exception appeared to be above reproach. Four cases were supplied from one dairy, but subsequent investigations excluded milk supply as a source of infection.

Suspicion was first drawn to cockles by the fact that nearly all the cases in the early part of August were of children who had been with school treats on July 11th and 20th to Exmouth, where each one who was ill had eaten raw cockles, whereas other members of the same family who visited Exmouth but had not eaten raw cockles remained well. Of the total 85 cases notified during the period above mentioned 58 had eaten raw cockles either at or from Exmouth. 9 others had only visited Exmouth without eating cockles, 1 case had partaken of other shellfish, while 17 cases had not been out of Exeter or taken cockles.

On making a local investigation at Exmouth it was found that a sewer was discharging its contents over the mudbanks from which the cockles are taken, and it was admitted that the excreta from several cases of enteric fever were being discharged into this sewer, and had been for some time previously. Boys were actually watched gathering or washing cockles at the mouth of the outfall of the sewer. Specimens of cockles examined bacteriologically showed the presence of the bacillus coli communis. Portions of paper and of disintegrated fæces were found on the mudbanks. The facts thus briefly outlined make out a very strong indictment against the Exmouth cockles, and although we cannot go so far as the Town Clerk of Exeter in his letter to the Clerk of the Exmouth District Council, that "this proves to demonstration that the cause of the disease was the partaking of these unwholesome cockles," a strong probability is established, a probability which would be more obvious to anyone knowing the circumstantial details of each case connected with the outbreak. In investigations into the origin of disease we have to be contented with probabilities. There is no such thing as certainty in actual life. The only problems capable of actual proof or demonstration are mathematical. It is our practice and our duty in daily life to decide each problem as it arises in accordance with the balance of probability.

The outbreak at Exeter raises the general question, What can be and what is being done to protect the public against disease caused by the ingestion of shellfish contaminated by sewage? It is well known that cockles and muscles, as well as oysters, are freely eaten in an uncooked condition; and that the public is, in regard to them, in an even less protected condition than it is in regard to oysters. Its condition in regard to all forms of molluscs is such that only the very independent will venture to eat any form of uncooked mollusc without further guarantee than can at present be secured by most persons. The present state of matters is therefore bad for both oyster producers and oyster consumers. The former did their cause much harm by the evidence they gave before the Committee of the House of Lords. Their attempt to withdraw the control of oyster layings from county councils and to give it to the Fishery Boards, thus creating a new sanitary authority, was contrary to all the principles of good local government; and from this standpoint we think that Mr. Chaplin was amply justified in dropping the Bill as thus amended. But in the meantime the oyster trade languishes, and some of those members of the public who are foolish enough to eat shellfish without knowledge of their source suffer from enteric fever. We hope that in the next session Parliament will provide a really efficient remedy for a great and serious evil. And we particularly urge that this remedy should not be restricted to oysters but extended to other molluscs.

THE CENTRAL BRITISH RED CROSS COMMITTEE.

Lord Wantage, as Chairman of the Central British Red Cross Committee, has issued an appeal for public subscriptions in view of the aid societies being required in a South African campaign. Already Lord Rothschild, as a member of the committee, has raised the sum of £10,000 as the nucleus of a fund, which we trust the public will generously support. Hitherto no little waste of both money and effort in the field has resulted from the independent and disjointed action of aid societies. In future, by the happy inspiration of Lord Lansdowne, who has brought the three chief societies, the English Red Cross, the St. John

Ambulance, and the Army Nursing Service Reserve, to join hands in mutual co-operation, this will be avoided. Efficient administration is guaranteed by such names, representing these societies, as Lords Wantage and Rothschild, Sir William MacCormac, Sir John Furley, Viscount Knutsford, Colonel Hon. F. Stopford, H.R.H. Princess Christian, and Miss Wedgwood. When with these are associated the following names representing the Army Medical Service—Surgeon-General Skey-Muir, Lieutenant-Colonel Gubbins, and Major Macpherson—success seems assured. The position of aid societies in the field in relation to the Army Medical Service is now thoroughly defined in the regulations, so that both work under one authority in perfect harmony. The work of the Committee in the event of war in South Africa will no doubt be regulated by the necessities of the case. But it is proposed to fit out a hospital transport vessel for the conveyance of invalids from the seat of war. This is a most legitimate enterprise, but would not of course exhaust the energies of the Society, whose aid would no doubt be needed in the shape of ambulance railway trains, etc., on a long line of communications. In the event of a ship being fitted up, we would strongly recommend the committee to read the report of the Medical Work of the Massachusetts Volunteer Aid Association during the Spanish War. Therein is detailed the fitting out, with marvellous despatch, in the most complete up-to-date fashion, of a hospital vessel called the *Bay State*, which did admirable service on the coasts of Cuba and Porto Rico. Especially would we commend the administration on board this vessel, the efficiency of which was only equalled by its simplicity.

ST. LUKE'S DAY.

St. Luke's Day, October 18th, will be celebrated in the usual manner by the Royal Colleges of Physicians of London and Ireland. At the Royal College of Physicians of London Dr. G. Vivian Poore will deliver the Harveian Oration at 4 P.M., and subsequently the Fellows will dine together. At the Royal College of Physicans of Ireland, the annual stated meeting of the President and Fellows of the College takes place in the afternoon, and in the evening the President and Fellows entertain a numerous party of guests at dinner in the College Hall, a pleasing feature of the banquet being a courteous interchange of congratulatory telegrams with the sister Royal College of Physicians of London. At the annual stated meeting the election of a Fellow for the office of President for the ensuing year is the first question put for the decision of the College. When elected, the Fellow chosen for this high office, if present, immediately makes the usual statutory declarations, including the oath of allegiance to the Queen, and takes his seat as President. The election of Censors and other officers of the College is then proceeded with, as well as the chartered officers, the representative of the College on the General Medical Council, the representatives of the College on the committee of management under the conjoint scheme with the Royal College of Surgeons in Ireland, the two examiners in midwifery, the additional examiners, the librarian, the agent to manage the trust estate, the law agent, the architect, and the standing committees, who are annually elected on St. Luke's Day. This year but few changes in the officers are likely to take place. Dr. J. W. Moore will probably be re-elected President, and Dr. Lombe Atthill representative on the General Medical Council. Dr. James Craig, the popular and efficient Registrar of the College, will doubtless be continued in office.

JOHANNES MUELLER.

A memorial to Johannes Müller will be unveiled in Coblentz on October 7th. The monument has been erected near the house in which Müller was born, and opposite the old buildings of the school which he attended before he became a university student. Professor Virchow will deliver a commemorative address, and the ceremony will be attended by the Rectors of the universities of Berlin and Bonn. Müller was born on July 14th, 1801, and his father, who was a shoemaker, made great sacrifices to ensure that his son received a good education. Müller entered the University of Bonn in 1819 at first as a theological student, but he soon entered the medical faculty. In 1824 he became a *Privat-docent*, in 1826 an extraordinary, and in 1830 an ordinary Professor in the University of Bonn. In 1833 he became Professor of Anatomy and Physiology in the University of Berlin. He died in 1858. Some idea of Müller's energy and industry, and also perhaps of the state of biological science at that time, may be gathered from the fact that he taught human and comparative anatomy, physiology, embryology, and pathological anatomy, and that he was at the same time director of the anatomical and zoological museum. The energy with which he worked at all these subjects was extraordinary, and both in physiology and in histology he opened up new fields of research, and he was no less great as a comparative anatomist. He was not only a great worker himself but inspired others, for among his pupils were numbered Schwann, Henle, Du Bois-Reymond, v. Helmholtz, Remak, and Virchow, who is spared to inaugurate the memorial next Saturday at Coblentz.

THE WORCESTERSHIRE COUNTY COUNCIL AND SCIENTIFIC MEDICINE.

The Worcestershire County Council, under the chairmanship of Mr. J. W. Willis Bund, guided by the late Sir Douglas Galton and its energetic county medical officer Mr. G. H. Fosbroke, has long been recognised for the liberality of its sentiments in all matters relating to the public health. The last report of the Sanitary Committee shows that the council is striving to promote sanitary measures by employing the latest methods of scientific medicine. It has established and equipped a very complete laboratory, which has been duly licensed for experiments, and has been provided with a supply of guinea-pigs and rabbits for purposes of inoculation in suspected cases of phthisis and other diseases. The report of the county analyst shows that the work of the laboratory has increased very largely during the period September 30th, 1898, to June 30th, 1899, as no fewer than 875 analyses have been made, of which 582 were chemical and 293 bacteriological. The work still increases, and between March and July of this year additional skilled assistance has been engaged to cope with it. The quarterly report of the county analyst, after detailing the chemical analyses which have been made during the three months ending June 30th, 1899, states that 130 bacteriological examinations were carried out, namely: 3 for tuberculosis, 3 for typhoid (blood), 96 for diphtheria, and 28 water. The work has appeared to be so important to the Worcestershire County Council that a further sum of £250 has been voted for the purposes of the laboratory in addition to the salary of the analyst, whose entire time is now devoted to the service of the county. It is not often that the wisdom and foresight of a public body reap so prompt a reward as in this case; but the organisation of the County of Worcester is so good that it has defeated the strenuous opposition of Warwickshire, and by a recent Act of Parliament has secured to itself a retransfer of the parish of Yardley, which became a part of Warwickshire for police purposes as long ago as 1840. Yardley is one of the residential suburbs of Birmingham, and the value of the victory may be estimated by the statement that its ratable value is equal to one-fourteenth part of the whole of Worcestershire. The County Council of Worcestershire has recognised the valuable services of its servants in this contest by ordering "that a copy of the vote of thanks under the seal of the council should be sent

with a letter from the Chairman acknowledging the council's obligation" to Mr. Thorneley, the clerk of the peace; to Colonel Carmichael, the chief constable; to Mr. Moody, the finance clerk; to Mr. Garrett, the county road surveyor; and to Mr. G. H. Fosbroke, the county medical officer of health. It is worthy of note that amongst the reasons for the retransfer of Yardley were certain difficulties which arose in connection with the administration of the Contagious Diseases (Animals) Act, as well as in the granting of licences and other matters connected with the local government of the parish.

WOMEN STUDENTS AND THE OWENS COLLEGE MEDICAL DEPARTMENT.

The half-yearly meeting of the Court of Governors of the Owens College was held on Tuesday, October 3rd, when an important resolution upon the subject of women students was presented on behalf of the Council of the College. The Victoria University possesses the power to grant its degrees to persons of either sex, but hitherto none of its affiliated Colleges have given facilities for the education of female medical students. Applications for admission to the Manchester Medical School have recently been made by women, and the Council of the College instituted inquiries as to the practicability of such a course, obtaining information from the various British medical schools which admit both men and women, and ascertaining the views of the professors and lecturers of the Medical Department of the College. This information was laid before the Court of Governors, and it was then proposed by Sir Ughtred Kay Shuttleworth and seconded by Dr. Ward that, subject to such arrangements as the Council should make for the teaching of some subjects in separate classes and rooms, women should be admitted to the advantages of the medical school. It was explained that a separate dissecting room would be opened for women, and that certain courses of lectures, or parts of such courses, would not be delivered before mixed classes. The question of clinical education was not considered. Some opposition was offered to those proposals, but they were eventually carried by a large majority.

THE EPILEPTIC COLONY AT MAGHULL.

We have received an interesting illustrated pamphlet describing the work of the colony for epileptics at Maghull, near Liverpool, which has been in existence ten years. The idea of the promoters is to provide a home where sane epileptics can live and be treated under the best possible moral, physical, and sanitary conditions. The evils which have been anticipated from the aggregation of epileptics have not been realised; on the contrary it is found that the presence of other sufferers removes the sense of isolation which the epileptic feels in the society of the healthy. Treatment in the home is attended with marked improvement in the great majority of cases, as regards both the frequency of the attacks and the general condition of the sufferers. The attempt to make the colony self-supporting has been partially successful. All inmates make a contribution according to their means, and a large proportion of them are employed in useful and remunerative work in the house and on the farm. The inmates at present number 120, and the yearly average of new admissions is about 25. There is naturally much diversity as regards the frequency of the fits in different patients, some passing a whole year without one, but the number of attacks occurring during the year in the institution reaches the enormous total of over 26,000. Only 22 deaths have taken place in it during the ten years of its existence. The managers hope that, by the help of this and other institutions founded on similar lines, many epileptics who are now a burden on their families may be placed in a position to earn their own livelihood, and they are issuing an appeal for funds to enable them to extend the work.

LAWSON TAIT AND AMERICA.

Dr. Charles A. L. Reed, of Cincinnati, Ohio, recently delivered before the American Association of Obstetricians and Gynecologists at Indianapolis, an eloquent memorial address on the life and character of Lawson Tait. Dr. Reed dwelt on the striking personality of Mr. Tait. Our Transatlantic colleague speaks glowingly of the hospitality which he received on the occasion of a visit to Mr. Tait in Birmingham. "All the genial sympathy was enhanced by the captivating frankness with which the host discussed the personal aspects of his great struggle. 'No,' said he, 'far from disliking the Americans I am really fond of them. I owe them a debt of gratitude that I cannot easily repay, for if it had not been for the recognition and support they gave me, and are yet giving me, I could not have succeeded in my fight against English conservatism.'" He owned to a grievance against certain countrymen of Dr. Reed's. "This grievance was against those who, while spending months at other hospitals, would run up to Birmingham for a day, 'just to see Tait operate.' The material at Birmingham was always so abundant that they were generally gratified. They saw a simplicity that was strikingly in contrast with the complex procedures they had seen elsewhere, and they saw a celerity of operation that in contrast with the usual slowness of uncertain workers looked much like recklessness. They tarried only to satisfy their curiosity, and went away without knowing the man or understanding his methods, or familiarising themselves with his results. These people generally constituted themselves his public critics, and printed animadversions that were generally coloured by the London prejudice (*sic*) to which they had willingly subjected themselves. If Mr. Tait did not call these people 'tramps,' he ought to have done so, for no word in the language so aptly defined their leading characteristic." It was only natural that Lawson Tait should object to criticism based on a single visit to his operating theatre.

AN ISOLATION HOSPITAL IN DUBLIN.

A further conference of sanitary authorities was held in Dublin on Tuesday last in reference to the proposal to provide an isolation hospital for Dublin and the surrounding districts. Circulars had been sent to all the neighbouring district councils to learn how far they would aid in the project. The most important of these—Pembroke, Clontarf, and Rathmines, did not take part. It was pointed out by a member that Cork Street Hospital could be extended if it received funds, and it was urged by others that there was no necessity to put the city and the district to enormous expense if the present accommodation could be somewhat extended. It was then agreed to find out the number of beds actually available for infectious cases, and to gather other information—a step which might very well have been taken long ago. Finally, it was agreed to obtain a provisional order to enable the sanitary authorities to unite in providing an isolation hospital for infectious diseases.

GENERALISATION OF SALT INFUSIONS.

The subcutaneous infusion of salt solution has proved of great benefit in the treatment of collapse after severe operations. The practice, it may be said, developed from two sources: the new method of transfusion where water, instead of another person's blood, is injected into the patient's veins; and flushing of the peritoneum, introduced by Lawson Tait. After flushing, much of the fluid left in the peritoneum is absorbed into the circulation, greatly to the patient's advantage. Dr. Clement Penrose has tried the effect of subcutaneous salt infusions as a last extremity in severe cases of pneumonia. He continues this treatment with inhalations of oxygen. He has had experience of three cases, all considered hopeless, and succeeded in saving one. In the other two the prolongation of life

and the relief of symptoms were so marked that Dr. Penrose regretted that the treatment had not been employed earlier. Several physicians have adopted Dr. Penrose's method, and with the most gratifying results. The cases are reported fully in the *Bulletin of the Johns Hopkins Hospital* for July last. The infusions of salt solution were administered just as after an operation. The salt solution, at a little above body temperature, is poured into a graduated bottle connected by a rubber tube with a needle. The pressure is regulated by elevating the bottle, or by means of a rubber bulb with valves; the needle is introduced into the connective tissue under the breast or under the integuments of the thighs. There can be no doubt that subcutaneous saline infusions are increasing in popularity, and little doubt that their use will be greatly extended in medicine as well as surgery.

VANILLA POISONING.

A CERTAIN fearful interest attaches to accounts of poisoning by substances in common use, and the interest becomes almost painful when we learn how difficult it is to provide against its occurrence. Vanilla is a case in point. Fortunately, thanks, apparently, more to luck than anything else, cases of poisoning from this cause are rare. Nineteen persons, one of whom subsequently died, suffered severely, Wassermann tells us,[1] from the effects of eating some vanilla "cream." This was composed of milk, eggs, sugar, and flavoured with vanillin (the commercial article prepared from coniferin). The dish had been cooked in the evening and allowed to stand, uncovered, in the dining room till noon next day. Investigation showed that the eggs and sugar were good, that the milk alone was harmless, and that the vanillin was pure. The fact that the cook and landlady, who had merely tasted the dish, had also become seriously ill, suggested the idea that the poisonous agent might have undergone further development after being swallowed—that is, that it was bacterial. Wassermann boiled three flasks containing respectively plain milk, milk flavoured with vanillin, and a solution of vanillin in water, then let them stand eighteen hours at a temperature of 37° C. (98.6° F.). Some of the contents of each flask were injected into mice. The milk flavoured with vanillin was poisonous, the other two harmless. Filtration through a Berkefeld filter rendered this poisonous milk inert, while a mixture of milk and vanillin kept for eighteen hours on ice, instead of at a temperature of 98.6° F., was harmless also; 0·02 to 0·1 per cent. crystalline vanillin added to culture media was found (1) to inhibit the growth of aërobes (Klebs-Loeffler, pneumococcus, etc.), (2) to assist that of anaërobes (tetanus, anthrax, etc.), (3) and to have no effect either way on facultative aërobes (typhoid, coli communis). It was therefore concluded that the milk had been contaminated with anaërobic bacteria, whose development had been assisted by the vanillin. The exact variety of bacterium was not discovered. The symptoms were choleraic: low temperature, great prostration, lassitude, and headache, severe vomiting and diarrhœa, cramps in the calves and thighs, frequent micturition, thirst, etc. Recovery took place gradually. Wassermann quotes several other cases of vanilla poisoning in which the vanilla pod and not vanillin had been employed. As regards prophylaxis, the only thing to be done is to see that the milk and other ingredients of the dish are pure; as these anaërobic bacteria resist boiling, precautions against contamination must begin at the dairy.

SOME OF THE MENTAL CONDITIONS IN FASTING AND ABSTINENCE.

IN a recent *Thèse de Paris* Dr. Lassignardie deals at some length with certain interesting questions regarding fasting and abstinence, and investigates the mental conditions resulting from total or partial abstinence from food. There are several sorts of abstinence to be distinguished from one another. First, there is the voluntary abstinence which may be undertaken by anyone for "exhibition" purposes, and among instances of this sort should be classed the experiments of professional fasting men such as Succi and Merlatti in recent times. A second category includes enforced abstinence from food during illness, as in the case of patients suffering from acute fevers, hysteria, and acute insanity. Another group includes cases of enforced privation, either from poverty and want, from shipwreck and absence of provisions, or from accidental entombment in mines, etc. A fourth class includes the rare instances where fasting has been determined on by persons with suicidal intent, as in the cases recorded of Viterbi and Guillaume Granie. Finally the fifth and last group includes fasting as a religious observance. One of the most interesting chapters in the thesis is devoted to a study of the temporary mental delirium which may be produced by enforced privation, as in cases of shipwreck without provisions. A *confrère* of the author, Dr. Maire, was one of the unfortunate sufferers in the shipwreck of the French vessel, *Ville-de-Saint-Nazaire*, and a very full account is given of his narrative regarding the *délires d'inanition* observed by Dr. Maire both as a personal experience and as observed among his fellow-sufferers. The mental conditions produced by abstinence from food are summarised as follows: (1) There is noticed an activity of the intellectual faculties, and particularly of imagination if the abstinence has not been too prolonged, and especially if it is voluntary and habitual. (2) In cases where abstinence has been pushed to a greater degree, there is found a change in character and in conduct, which may express itself in the forms of irritability of temper, excessive egoism or selfishness, and even cruelty. At the same time there may also be present distinct intellectual disturbances such as diminution or partial loss of memory and of volition and self-control, and a tendency to sudden and irresistible impulses which are of an instinctive nature. (3) In more marked or grave cases there may supervene nocturnal mental trouble, such as disturbance or loss of sleep, distressing dreams and nightmares, illusions and hallucinations of the senses, delusions and dangerous impulses. (4) Diurnal mental disturbances, when present, indicate a most serious and grave state of affairs. Such disturbances may take the form of agitated dreams, illusions, impulse, and delirium sometimes of an acute and dangerous type. (5) Finally, under the influence of hallucinations, of delirium, and of irresistible impulses, the patient may be impelled to deeds of danger and of violence, which may have bearings of medico-legal importance. In such cases the estimation of the person's responsibility should be naturally dependent upon the consideration of the mental disturbances present, and on their gravity. It is possible to establish a parallel between the mental state resulting from abstinence and that from auto-intoxication. The differences met with are but slight; the same general alterations and disturbances of intelligence, of morality, and of conduct, the same nocturnal disturbances, and in marked cases the same diurnal mental troubles are found in both classes of cases. Clinical and experimental facts accord in showing that the phenomena of auto-intoxication exactly resemble those resulting from abstinence and deprivation of food.

[1] *Zeitschrift f. diätet. und physik. Therapie*, 1899, Bd. iii, Hft. 3

SEA-SICKNESS.

TOURISTS have had a large experience of this interesting but distressing malady during the past few weeks, and it is one of the chief reasons why so many Britons forego the advantages of a visit to the Land of Washington. "The travel across the Atlantic," says Dr. De Vries in the *New York Medical Journal*, "would be considerably multiplied

were it not for the terrors of sea-sickness." This authority (for Dr. De Vries has had long experience in transatlantic steamers) rejects the theory that sea-sickness is beneficial. He finds that, on the contrary, it is entirely injurious. After an attack there is a sense of relief for a time, but always much exhaustion. If it were not for the tonic effects of the sea air the sufferer would continue sick even after setting his feet on the welcome shore. Scientifically there is no more reason for seeking sea-sickness than for seeking diphtheria. In all his fifty-eight voyages De Vries has never come across a passenger who benefited by the plan of taking very large doses of sodium bromide for a week before embarking, the dose being continued at sea till all danger be past. The effect of this treatment usually was bromism, extreme loss of appetite, nausea, and vomiting just as the steamer entered an area of rough water. This is caused by the intensely irritant action of the bromide on the sensitive stomachs of hyperæsthetic and nervous patients. In short, the treatment fails just when it is wanted and weakens the nervous system of an already nervous patient. De Vries prescribes calomel or a saline purge before embarking, followed by twenty grains of sodium of bromide at 7 A.M. on the day of sailing. The dose is repeated one hour before the vessel sails. The passenger should remain on deck constantly during the passage across, save for meals and bed. Dr. De Vries claims markedly good results from this treatment. Vichy and Apollinaris water should be taken freely throughout the voyage. In the case of patients taken sick at sea not having previously undergone this treatment, aromatic drinks, lemonade, and champagne, with ginger beer *ad libitum* are of great value. He objects to the spinal icebag as it compels the patient to remain in a close cabin or state-room. He suggests no scientific explanation of sea-sickness. It seems to be a functional disorder of the central nervous system, but those who attempt a more precise explanation usually experience that hopelessness which Dr. De Vries finds to be the constant accompaniment of the disease itself.

MYSTICISM AND INSANITY.

Mysticism has roots which spring from a borderland close to insanity. A. Marie[1] shows in a special memoir devoted to the above subject how in the eighteenth century epidemics of religious delirium replaced those of a demoniac form. In the Middle Ages Christianity triumphed over old polytheistic superstitions. No more epidemics of lycanthropy were to be seen. The crude anthropomorphism of polytheistic worship with its many gods to whom sacrifices were offered, gave way to a hemianthropomorphism where the dominant belief was centred round one powerful God, man's friend and protector. The insane, says Lemerie, ignorant of this principle, imagined or created simpler hypotheses than those they refused to accept, taking up long abandoned theories and ideas. So long as it was believed that gods came upon the earth, Jupiter, Mercury, Apollo, Diana, Venus were frequent visitors to the insane. They thought they were married to Satyrs, to the god Pan, snakes, and bulls. In the unreasoning imaginations of man, angels and devils took the place of gods. Demons in the form of the incubus, the succubus, and the vampire, were believed in. Marie brings out in an interesting manner the different ways in which Catholicism and Protestantism—the two great divisions of the Western Church—appear to operate in regard to mental disease. According to Marie, religion greatly influences a man's insanity. As a general rule the Catholic is uneasy about his soul, is apprehensive of punishment from heaven, is afraid and in despair. The Protestant's mysticism is a pretension of understanding and explaining the symbols and revelations of the Scriptures. Pride and prophetic exaltation with lofty denunciation of the world are its leading features. One is a sinner, and doomed; the other is a prophet and a messenger of heaven. This, according to Marie, is the explanation of the fact that religious megalomania is found chiefly among Protestants, while religious melancholia prevails among Catholics. Superstition is present as an unconscious element in the normal brain, but unnoticeable—hidden, so to speak—by complete development of intelligence. Should the mind become affected in some way, then superstition may become a prominent feature; whence we may appreciate to the full the dictum of Meynert, that religious delirium is "the appearance of a subconscious superstition in the developed brain." The medico-legal points brought forward by Marie have also a special interest. From the medico-legal aspect the insanities may be looked upon as "divergent," that is, directed to hurt others; or "convergent," that is, upon the patients themselves. A few cases are reported by Marie in illustration of his statements, and he comes to the conclusion that religious insanity is the most dangerous kind of mental disease (medico-legally) to the patient and to society. On account of their suicidal and homicidal tendencies they should not be sent out on parole or discharged from asylums. Religious paranoia or insanity being very contagious, patients should be sequestrated in asylums, and strictly prevented from spreading the mischief. Mental epidemics are referred to which in centuries past have spread and involved entire towns and even larger communities, and produced incalculable mischief owing to the absence of restriction of such dangerous megalomaniacs and paranoiacs. Detention and treatment in lunatic asylums are the only efficient medical and legal therapeutic measures for these cases.

[1] *Archives de Neurologie*, No. 8, 1899.

HYDROTHERAPEUTICS IN NEURASTHENIC CASES.

In neurasthenia, when there is exaggerated irritability, hydrotherapeutic measures must be adopted, so as to exercise a calming influence. Dr. H. Determann[1] thinks that when the irritability is at its greatest only lukewarm baths of 32° to 35° C. (about 90° to 95° F.) are to be used, but that later on a gradual transition to colder applications will help to increase the power of resistance, dull the pathological sensitiveness, and probably modify the basis of the disease by promoting the circulation, the sanguinification, and the metabolism of the body. Sometimes water, with 6 or 8 per cent. common salt, or equal portions of brandy and water, may be employed for rapid local washing of the body before the patient gets up in the morning. Each part of the body thus treated must be rubbed dry at once, and covered up again. Occasionally the skin is so sensitive that one has to be contented with merely drying it, and often the drying may be altogether omitted. There is a large class of neurasthenic patients with general debility who easily become tired and exhausted from any sort of active occupation. The weakness may show itself in various ways; the patient's muscular power or his mental power may be chiefly affected; sometimes it is the capacity for quiet work, sometimes for quick dealings, and sometimes for social duties, which is especially diminished; but in other cases the debility may involve all the functions. In such cases the vitality of the different organs of the body must be improved by increasing both the supply and removal of blood. The hydrotherapeutic processes must be of short duration in order to avoid tiring the patients—rapid forms of cold water treatment according to the individual power of reaction. Warmth may be employed before the cold in order to produce a preliminary dilatation of the cutaneous vessels. In occasional cases, when the patient cannot take sufficient exercise after the cold application, and when in spite of the ordinary rubbing,

[1] *Zeitschrift. diet. und physik. Therapie*, 1899, Bd. iii, Hft. 4.

etc., the reaction remains insufficient the shock of a very short hot bath (36° to 42°C.) of four to twelve seconds may be employed, if there be no special contra-indication. When selecting hydrotherapeutic methods for neurasthenia the medical man must always consider what the disturbance in function is which he wishes to remedy and the means he decides upon should be prescribed (best written out on paper) with the greatest exactitude. No unnecessarily violent or cold measures should be used, and in severe forms of neurasthenia especial care is required. Generally only one or two applications should be prescribed for a single day. The methods employed must be changed according to indications. As a preliminary to any cold application the patient must be warm, and a proper reaction must be obtained afterwards. Generally the head and eye must be cooled to prevent congestion. In chronic cases of neurasthenia the course of hydrotherapy should not last less than six or eight weeks, and the treatment, Determann thinks, should be afterwards continued at home in a modified form. Contra-indications, such as very old age, arterio-sclerosis, organic diseases, tendency to apoplexy, etc., must always be considered.

CIVILIAN PRACTITIONERS FOR ARMY SERVICE.

We understand that a number of civilian medical practitioners have been selected for service with the forces in South Africa. As will be seen from our advertising columns the War Office is also about to appoint civilian practitioners to fill up the vacancies in the United Kingdom caused by the departure of so many officers of the Royal Army Medical Corps to South Africa. The home appointments are for six months, the salary offered being £270 a year. Candidates must be under 40 years of age and are to apply to the Director-General, Army Medical Department, 18, Victoria Street, S.W.

PARTURITION IN SAVAGES.

In the course of some ethnographical notes on the Murray Islanders contributed by the Rev. Archibald E. Hunt, of the London Missionary Society, to the *Journal of the Anthropological Institute* some interesting particulars are given with regard to the conduct of childbirth and the production of abortion in natives of these islands which are situated at the eastern end of Torres Straits. They illustrate among other things the widespread belief in the existence of a certain sympathy between the father and the mother of the child about to be born. Mr. Hunt states that as soon as a woman felt the labour pains she would send for a female relative, who would act as midwife, and the two would go to some secluded place near by where the child would be born, the mother preserving a kneeling posture during the whole time. If the birth was delayed, the husband would seek the aid of a sorcerer, who would take some sacred object—for example, a spear, and put it in the sea, when the child would be born; or the husband himself would be sent by the midwife to stand in the sea, and as soon as his legs felt cold the child would be born. The sister of the husband would receive the child as soon as it was born, and the navel string having been cut with a bamboo knife, the mother would go down and sit in the sea until the afterbirth came away. If the placenta did not come away the woman was taken back to the house, where she would drink only water and at sunset would return to the sea. If that was unsuccessful she returned again at sunrise. If it did not come away, "then the mother died at sunset." Should the afterbirth come away the mother rested quietly in the house, and burnt *nargai* leaves were placed on the abdomen to cause contraction of the uterus. The woman was not considered unclean after childbirth, nor was any ceremony necessary for her readmission into society. In case of twins the first child born was preserved and the second was destroyed. Triplets were unknown. In the case of stillbirth the body of the child was dried and hung up in the wind. Sometimes it was painted. Birth marks were supposed to be caused by the pregnant woman eating a certain kind of fish (*komsar*), the juices of which touched the child and caused the mark (*komsar gole*). The greatest number of children by one mother was eleven. After a certain number had been born all succeeding children were destroyed, lest the food supply should become insufficient. If the children were all of one sex some were destroyed from shame, it being held proper to have an equal number of boys and girls. Abortion was very common for various reasons; sometimes (as in the case of a single girl) from shame, sometimes to save the mother the trouble of child rearing. For the purposes of abortion the leaves of certain trees were chewed. The leaves of the *sesepot*, *mad leuer*, *ariari*, and *ap* were sometimes mixed with cocoanut milk and drunk. This caused little or no pain. Failing that the leaves of the *tim*, *mikir*, *sorbe*, *bok*, *sem*, and *argerger* were chewed together. This medicine caused great pain, but was believed to kill the child. When medicine failed harsher measures were resorted to. Sometimes the abdomen would be beaten with big stones, or the woman would be placed with her back against a tree, when two men would take a long pole and, taking either end, would place it against her abdomen and by sheer pressure crush the fœtus. It need scarcely be added that such treatment frequently killed the woman as well.

The Bradshaw Lecture of the Royal College of Physicians will be delivered by Dr. A. Foxwell, of Birmingham, on Thursday, November 2nd, at 5 P.M. The subject of the lecture is the Causation of Functional Heart Murmurs.

At the first meeting of the session of the North London Medical and Chirurgical Society, which will be held at the Great Northern Central Hospital, at 9 P.M., on October 12th, the chair will be taken by the President of the year, Dr. C. E. Beevor, and Dr. Champneys will deliver an address on the Natural History of Uterine Fibroids.

Dr. Robert P. R. Lyle, at present senior assistant master of the Rotunda Hospital, Dublin, has been appointed Lecturer in Midwifery and Diseases of Women and Children in the Durham University College of Medicine, Newcastle-on-Tyne, in the room of the late Dr. T. C. Nesham.

The first Hunterian Society lecture for the session will be delivered on Wednesday, October 11th, at the London Institution, Finsbury Circus, by Dr. Sansom, at 8.30 P.M. The subject of the lecture will be The Effects of Influenza on the Heart and Circulation, their Clinical History and their Treatment. Members of the profession are invited to attend.

Dr. Alexander Robertson, Senior Physician, Glasgow Royal Infirmary, and Professor of Medicine, St. Mungo's College, Glasgow, was on September 30th—on the occasion of his retirement from the staff of the Royal Infirmary—presented with a silver salver with inscription by his assistants (both of the Infirmary and of the Glasgow Town's hospitals), residents, and nurses. The presentation was made by Dr. John Ritchie, in the presence of a representatative gathering of medical men and nurses.

AN INAUGURAL ADDRESS

ON

THE PROPER OBJECTS AND NECESSARY LIMITATIONS OF MEDICAL EDUCATION.

Delivered at the Opening of the Winter Session of the Nottingham Medico-Chirurgical Society on October 4th, 1899.

By ROBERT SAUNDBY, M.D., LL.D., F.R.C.P.,
Professor of Medicine, Mason University College, Birmingham.

I APPRECIATE from the bottom of my heart the compliment you have paid me by inviting me to open your winter session, but the pleasure I feel is alloyed by many considerations. I cannot but ask myself what qualifications I possess to justify me in accepting this honourable office, and finding no sufficient answer from my self-examination, I am obliged to leave with you the responsibility for your choice, and to trust that you will credit me with doing my best to serve you should you not derive all the pleasure and profit you expect from what I have to say here to-night.

Upon these occasions nothing gives the orator of the evening more anxiety than the choice of his subject. By far the most easy theme is some department of practical medicine to which he may have happened to give special attention, but in spite of its advantages there are obvious objections to this course, and therefore I have decided to direct your attention to a matter in which, as members of the great corporation of medicine, we are all interested, but which comes home especially, not only to those who are engaged in teaching, but to all who have sons entering or about to enter upon their medical studies.

During the century which is drawing so near its end, great and in fact fundamental changes have taken place in the method of medical education in England, and although some of the alterations are of recent date, we may reckon that for the last forty years the new system has prevailed, and that it is not too early to review the results achieved, and to attempt to appreciate how far the movement has been in the right direction, to what extent the main objects have been kept in sight, and whether we may safely leave matters to develop along the lines in which they seem to have settled, or whether fresh efforts may be needed to bring our educational system into better relation with the requirements of the times.

The great departure from the old to the new, which I date approximately as having occurred forty years ago, was the abandonment of apprenticeship and the transfer of medical education from the surgery of the general practitioner to the universities and hospital schools.

We are accustomed to hear very severe things said of the old apprenticeship system, and I do not think it would have been given up if it had not had serious faults, but it still has its advocates who allege in its favour that it provided a kind of training which has little or no place in modern medical educational schemes.

This controversy is interesting because the contending parties represent the two sides of medical education, each of which contains much that is good, much that is essential, and which it is and has been the object of medical educationists to endeavour to combine.

A passage taken from the *Life of Thomas Wakley* admirably describes the state of medical education in England, so far as the general mass of the profession was concerned, during the first half of the present century: "A large proportion of the medical men in the country were what nowadays would be termed 'unqualified.' They possessed qualifications to practise, certainly; for example, they had generally served several years of apprenticeship to men grown grey in the pursuit of the healing art, and they were mostly sound obstetricians, expert prescribers, and accurate dispensers, but of all standing derived from the successful endurance of the tests of examination they were guiltless."

It is possible that this passage errs on the side of generosity, but while allowing them to have been "expert prescribers," it says nothing about their skill as diagnosticians; yet need we not readily believe that the men of those days were deficient in practical bedside knowledge. With a very limited nosology, without any practical knowledge of morbid anatomy, without the clinical thermometer, little acquainted with clinical chemistry or with auscultation, trusting to the pulse, the skin, the tongue, and the mere inspection of excreta for the indications of disease, they were at enormous disadvantage compared with the men who began to be turned out of the schools fully equipped with the new methods derived from the teaching of Laënnec and Bright.

The persistent advances made by scientific medicine since that time, the extension of our knowledge of pathology, the invention of new instruments for clinical research, and the constant improvements in methods of treatment, have united to make it out of the question for the apprenticeship system to compete with the teaching of the schools. The enormous advantages of the modern hospital system, in which every means is employed to improve the practice of our art; the development of specialisation by which an extraordinary amount of attention is devoted to each department of practice; the remarkable precision in diagnosis and skill in treatment of particular diseases thereby attained, have rendered it hopeless for the general practitioner to hold his ground as a teacher.

But the advocates of apprenticeship do not ask that it should take the place of time spent in a medical school. If it is not to do this, it must be precedent or concurrent. If precedent, it may be said to interfere with general education. If concurrent, it must be only in the last three years of the curriculum that any new scheme of apprenticeship can find its place.

Preliminary Education.

Before the enormous advance began which has characterised the present century, it was not altogether unreasonable to regard the profession of medicine as one which required little preliminary education, and for which a practical training would suffice, but when physiology and pathology had grown into formidable dimensions, and their bearings upon practical questions could be no longer gainsaid preliminary education became of greater importance.

We cannot pretend that we have yet settled satisfactorily what amount of evidence shall be required of preliminary studies. It is certain that it is still possible to become registered as a medical student with very little knowledge of English grammar and spelling, and with the most imperfect acquaintance with other branches of polite learning.

Professor Jebb has summarised the reasons given by the Berlin Philosophical Faculty for retaining classical education as a training for professional studies:

1. Ignorance of Latin and Greek is a positive obstruction to the pursuit of many branches of study.
2. The ideality of the scientific sense is cultivated by studies which have not an immediate bearing upon daily life.
3. An interest in knowledge for its own sake is promoted by them.
4. The power of thinking receives a varied general exercise in these studies.
5. They are of historical value as illustrating the foundations on which so much of modern thought and life has been built.

These reasons may not appear to be very forcible in their application to the general run of students who are not likely to become more than practitioners, and reasons 2, 3, and 4 would apply equally to mathematics, while the others are much diminished in importance when we reflect that good translations exist of every work which the average student would desire to study. Acquaintance with French and German would probably help him much more in extending his professional knowledge after he has taken his degree.

But our system of secondary education in England is so firmly rooted in classical studies that any change is attended with great and grave difficulties. For the training of the boyish intellect it is of more importance to teach one thing pretty thoroughly than to consider what that thing shall be, and as our public schools appear to be capable of teaching Latin and Greek only with any degree of thoroughness we must accept them as the educational groundwork.

But if this is to be our conclusion ought we not to exact

from our candidates a higher standard than at present they exhibit or should we adopt two standards, namely, a university standard for those who aspire to the best professional education, and another permitting access only to a modified course in which throughout the examination tests should be less exacting, the end in view being the training of men to fill the ranks of ordinary practitioners?

This division of the profession into higher and lower strata actually exists in England, but is made the object of constant attack on the part of those who resent any mark of inferiority. In France and Germany the inferior grade also exists in law, but not in fact, no candidates having come forward of late years for the lower qualifications.

We must therefore recognise that the tendency of the age is towards the obliteration of these distinctions. The cry for "one portal" is the expression of the democratic longing for uniformity whether by levelling up or by levelling down. In this instance it is probable that those who cry out do not want to level down, but it is practically impossible to bring the general standard higher than the level of average attainments. If this were done there would be a deficiency in the supply of qualified men and a forcible lowering of the standard would result in the end.

The proper standard for the preliminary examination is that attained by average boys on leaving our public or grammar schools at the age of 18. There should be no difficulty in getting schoolmasters to determine what this is. If our public schools would take a lesson from Germany and hold "leaving examinations," such certificates would become the best passport to the special studies required for the learned professions. The present standard, which is that of a boy of 14, is far too low. It is to be hoped that the General Medical Council, which has submitted the consideration of this subject to a committee, will introduce a real reform, the basis of which should be the attainment of the standard of the average boy leaving a public or grammar school at the age of 18. Upon this principle no subjects should be made compulsory which do not form a necessary part of the education given in such schools, for to do so is to encourage cramming, and can serve no useful purpose either as a test or as education. I am very sorry that this view, which seems to me so indisputable, is far from being generally accepted. Only a few months ago I served upon a committee engaged in drawing up the Regulations for Graduation in Medicine in the future university of Birmingham, and for the reasons given I objected to the inclusion of mechanics in the medical preliminary examination. The answer which prevailed against me was that medical students ought to know mechanics, and that arrangements could not be made for teaching this subject as part of the medical curriculum. It seems to me that there is scarcely any subject which might not be included by similar reasoning, and that there is less to be said for mechanics than, for example, for German. The object of the preliminary examination should be to test the previous education of the student, and the examination itself ought to be limited by the conditions of education as they exist in the secondary schools of this country.

PRELIMINARY SCIENCE.

After the medical aspirant has successfully surmounted the barrier of the preliminary examination, and has been admitted to the register of medical students, he should enter at once upon his medical studies.

It is not assuming too much if we suppose that the subjects set before him should be those and those only which are necessary for his equipment as an accomplished medical practitioner; but the designers of medical education have taken a singularly broad view of what is needful. In no other profession is the student asked to acquire a knowledge of half a dozen preliminary sciences before being allowed to attack the subject matter of the profession which he hopes one day to practise. Is an engineer made to learn geology, metallurgy, and chemistry, or a lawyer to study sociology and political economy, or a clergyman theory of music, and principles of ecclesiastical law, architecture and archæology? The value of such studies may be freely admitted, and all may be willing to grant that breadth of culture benefits all professions, but in framing a scheme of professional education only those subjects should be insisted upon which are essential in practice.

There will always be some men possessed of more time and money, or impelled by thirst for knowledge, who will extend their education beyond the prescribed limits, and as the better educated men probably reach the most eminent positions in life, there will be inducement enough for it to be quite safe to leave such studies to take care of themselves.

At present the average student regards these subjects without interest, he acquires just so much as may enable him to satisfy the examiners and then dismisses them from his mind. There is no real grasp of principles, and the process is without any educational value, the thin varnish of scientific knowledge being sloughed off completely like a snake's skin. The actual courses of study are too brief, the opportunities for practical work too limited, the examination standard too low, and the whole scheme of scientific study too superficial to be anything but a sham and make-believe.

Botany, geology, chemistry, and physics will be ultimately removed altogether from the medical curriculum as compulsory subjects. In the universities every facility should be provided for teaching these subjects to those students who are able to afford to devote two years to purely scientific studies before commencing their strictly professional education. Such a change would not alter the value of these subjects, but they would rest solely upon their merits. We may believe such a scientific training to be an excellent thing when properly acquired, greatly adorning its possessor, and bearing fruit of the richest sort, but yet be unconvinced that the time now spent by the average Conjoint Board student upon science subjects produces anything to justify the system. If these subjects were of the importance which it seems to be an article of faith to maintain they would not be so soon forgotten, and that they are generally forgotten everyone who has had to do with the teaching and examining of senior students must admit.

Mr. Teale has suggested that such subjects should be excluded from the examinations but still taught in the schools. This would be very unsatisfactory, as unless attendance were compulsory the classes in smaller schools would be neglected, and the teachers discouraged, and if compulsory it would be for the greater part of the men sheer waste of time.

If the preliminary examination were confined to its proper functions as a test of the educational fitness of candidates for professional studies, and if the science part of the curriculum were struck out entirely so that these would become only optional subjects, the student who desired to enter directly upon his professional work would be in a very much better position than at present. He would begin anatomy and physiology at once, and would be able to devote all his time to them, without a thought of anything intervening as at present.

Anatomy is, and ought to be, the scientific basis of medical education. It has the enormous advantage from an educational point of view that it consists of a fixed series of precise data not so extensive as to require other than its natural limitations, whilst it keeps everywhere in touch with the whole superstructure of medical knowledge. Further, it can be taught throughout in the best possible way, by personal investigation; and each student may—and in fact does—verify for himself most, if not all, of the details he has to commit to memory. It therefore possesses all that is wanted as an intellectual scientific training, and is calculated to steady the mind and produce the best type of medical practitioner.

If anatomy deserves our thorough confidence and respect, and must be regarded as the very central pillar of medical education, its sister science physiology, stands in a very different position.

Physiology, as taught to medical students, should be confined to well-digested doctrines, demonstrable by experiment, and as far as possible demonstrated to the class. It should be the complement to anatomy in teaching the functions and mechanism of the apparatus whose structure is revealed by the latter.

But the great facts of physiology—the discoveries of Harvey, Hunter, Charles Bell, Cl. Bernard, giants whose names will stand for ever as the founders of scientific medicine—nowadays run a risk of being buried under an indescribable accumulation of so-called researches, which contradict one

another and themselves and are constantly changing the surface of things. This, it may be said, is an unavoidable condition of progress in a science dealing with vital phenomena, but the explanation, even if satisfactory, leaves it still more than doubtful whether a science which is constantly changing its data can be a good intellectual training for students.

Physiology compares unfavourably with anatomy, not only by the absence of finality in its doctrines, but in the want of relation too often existing between the details upon which teachers and examiners insist the most and the practice of medicine.

Admitting that it is impossible to foresee the ultimate bearing of a given scientific research, would it not be better to omit those points from class teaching which are either still unsettled or of doubtful application? If this rule were followed students of physiology would have great and much-needed relief. Finally, the subject cannot be worked out by the student himself to the same extent as is possible in anatomy; and although there is a very general recognition of the importance of personal laboratory work, there is considerable room for improvement in the arrangements made for it, especially in the matter of supervision and the help afforded to students thus engaged.

To sum up this criticism, the teaching of physiology should be limited to what is definitely known, and to what is applicable to medical studies; practical work should be better organised, extended, and more efficiently supervised.

Hospital Attendance in First and Second Years.

Ought the student to go to hospital while he is working at anatomy and physiology? As it is impossible to acquire a proper knowledge of these subjects in less than two years, such a contention seems impracticable, but it is also inconsistent with a sound conception of professional education which should never lose sight of the paramount importance of bringing the student as early as possible face to face with the practical realities of his professional work.

I confess that there is a great deal of time wasted about hospitals, and that the attendance at them of students might be much better organised than it very often is. In the case of junior students especially there should be no waiting about. Classes for first and second years' men should be arranged in the shape of demonstrations of clinical cases by bringing patients one by one into a room and pointing out their chief features, a method of teaching which is of the highest utility and is far too little employed. Attendance twice a week for an hour a day at such case demonstrations would be sufficient for first year's men, but the second year's men should also attend twice a week at *post-mortem* examinations or demonstrations of recent specimens of morbid anatomy. By these means the minds of students become early familiarised with the aspect of a great many of the subjects which they will be later on called to study more closely, and they insensibly acquire the groundwork of a practical education which consists, above all, in daily familiarity with its subject matter.

Practical Subjects.

When anatomy and physiology have been mastered the foundations of medical education have been securely laid. The student has now to be taught medicine, surgery, and obstetrics, and we have to consider how these can best be taught, and how much of all that is included in them shall be attempted in the three years remaining of the curriculum.

Let us enumerate the subjects of which the student is expected to learn more or less, and review the means of instruction afforded him by the present system. He is in the first place expected to learn the symptoms, pathology, and treatment of about five hundred diseases included under the heading of medicine, of about as many more under surgery, to know the mechanism of normal and abnormal parturition, and the diseases incident to that state and the other special diseases of women; to acquire some knowledge of lunacy, diseases of the eye, ear, throat, and skin, of venereal diseases; to become acquainted with all the drugs in the *Pharmacopœia*, their composition, uses, and doses; to practise dispensing medicines; to perform surgical and obstetric operations; to dress wounds; to learn the clinical use of the stethoscope, ophthalmoscope, laryngoscope, and microscope; to test urine, to examine blood, to make *post-mortem* examinations; and to familiarise himself as far as possible with diseases of all kinds by attendance on practice in the wards and the out-patient rooms of the hospital. In addition he must devote some of his time to the study of the principles of medical jurisprudence, the rules of public health, and the practice of vaccination.

This formidable list is not at all exaggerated, and might easily be extended. It appears appalling when set out in this way, and one ceases to wonder at the difficulties students find in satisfying their examiners.

The means used to convey as much as possible of this tremendous total are in the first place systematic lectures. The course of medicine takes two years and even in that time it is difficult to deal adequately with the subject. Surgery takes as long. Pathology and bacteriology, systematic and practical, form at least sufficient for one winter and one summer course. Obstetrics, gynæcology, lunacy, ophthalmology, materia medica, therapeutics, medical jurisprudence, public health, operative surgery, and operative midwifery are taught in as many three months' courses, ten in all. The methods of medical examination and the use of clinical instruments of research, urine testing, the dressing of wounds, putting up fractures, the use of surgical instruments, dispensing, the performance of *post-mortem* examinations, and practical midwifery are taught at the hospital, or at least the student has opportunities of learning them there with more or less supervision. The diagnosis and treatment of disease are also taught in clinical lectures, in ward classes, and in the practice of the wards, the operating theatres, and the out-patient rooms.

All our hospitals have, in addition, to the wards devoted to medical and surgical cases, special departments with or without beds for obstetrics, gynæcology, diseases of the eye, the ear and throat, and the skin. Each of these departments is in charge of one or two specialists.

Students are compelled to serve for varying periods as ward clerk, surgical dresser, and *post-mortem* room assistant, to attend personally a certain number of cases of labour and to dispense medicines, but the whole of this compulsory service does not occupy more than eighteen months out of three years, and for the remainder of the time the student attends pretty much as he pleases upon the practice of the hospital.

There is no regulated proportion between the number of students and the size of the hospital, so that in the most popular schools there is a good deal of crowding and the less able or less energetic students suffer. This is partly compensated for by the better tone of these schools, where the competition begets a keenness of interest that is sometimes lacking where the opportunities for everybody are abundant.

The special hospitals, which possess most valuable material for clinical teaching, are scarcely made use of at all for teaching purposes.

The systematic and practical College classes occupy as much time as can be spared from the hospital during at least two of the three years. Materia medica has lately been taken earlier in order to relieve the pressure upon this period.

The Advantages and Disadvantages of Systematic Lectures.

When books were scarce and very dear, systematic lectures were absolutely necessary, and the professorial chair was for the student almost the sole available source of knowledge, but the abundance and cheapness of modern publications have so altered matters that the justification of their continuance is not easy. An advocate for them may urge: (1) that they offer a careful digest and selected summary of the subject; (2) that oral instruction impresses itself strongly upon the memory; (3) that the mind of the student is aided by the personality of the teacher, his voice and gestures; and (4) that the lesson is illustrated by examples, drawings, and museum specimens.

Yet they are notoriously unpopular and neglected, few students attending with perfect regularity; and it must be confessed that the gift of lecturing is not possessed by all the occupants of our chairs. The lectures themselves are often diffuse essays read from manuscript, without art or charm of style or voice, and illustrations are neglected. Moreover, all our subjects grow year by year more unwieldy. If science is

an arranged description of facts, and if these facts are being annually added to, as time goes on the lecturer must find himself less able to deal adequately with his subject in the time allotted to him. If he limits himself so as to treat fully of certain parts which he deems of greatest importance, his course becomes incomplete, while if, on the other hand, he aims at comprehensiveness, he must omit many details, and be open to the charge of superficiality. No one seems to be prepared to increase the number of lectures, yet unless this is done they must become still more discredited as full and fair presentations of their subject matter.

Great and powerful interests are no doubt involved in the maintenance of the principal chairs, but it seems inevitable that they will in time pass away or be largely modified. It is probable that less formal conferences upon cases and specimens will ultimately take the place of systematic lectures.

Practical Classes.

During the past twenty-five or thirty years there has been a marked tendency to supplement systematic lectures by practical classes conducted by tutors or class assistants, and without doubt these constitute a most valuable feature in modern medical education. Auscultation and percussion, the use of the laryngoscope and ophthalmoscope, bandaging, and the treatment of fractures, minor and major surgical operations, urine testing, operative midwifery, morbid anatomy, bacteriology, and pharmacology are taught in small classes, which are provided with all the needful appliances. Our schools are competing with one another by extending their laboratory accommodation and multiplying their assistant staffs, thus showing plainly the direction in which medical education is tending. This movement deserves every encouragement, and in spite of opposition from vested interests, from conservatism, from apathy, from want of money, and from insufficient structural accommodation, its steady progress shows that it is fulfilling the requirements of the times.

Hospital Teaching.

The most important and most essential part of professional education must be that in which the student is trained and practised in his work by watching or assisting experienced masters, and performing personally under their supervision the varied duties which he will be required to do when he comes to practise his profession. Medical education must have for its object to form medical practitioners who will be able to recognise a case of pneumonia, pass a catheter, apply forceps, put up a fracture, or dress a cut head. Knowledge of anatomy, physiology, and pathology is barren, and avails nothing if this end is not attained. As already indicated, under the old order of things medical practitioners were not expected to be able to do much, and if the above enumeration represented the extent of the requirements of modern practice a country surgery would often afford sufficient opportunities for practical medical education. Skilled special advice, consultants of all sorts are becoming every year more accessible so that the general practitioner is not thrown so much as formerly upon his own unaided resources, and it would not be impossible to sketch out a course of practical instruction which would be more useful for the training of a general practitioner than the present system, which aims at universal knowledge, and is constantly becoming larger and more complex by the growth of old specialities and the splitting off of new ones. The only limitations to this process seem to be time and the capacity of the human brain. It is now impossible for a student to acquire an adequate knowledge of each of the specialities of medicine and surgery, but if the specialists had their way each would be made the subject of a three or six months' course of study, with a special examination to be conducted by specialists. However, as I propose to say a few words about examinations later on, all that need be said here is that it is to be feared that the course of practical study is more strictly determined by the requirements of the examining Boards than by those of practice, or, to put it another way, that the examinations and the requirements of practice are not so completely in harmony as might be thought desirable.

The plans followed in hospitals differ so much that it is not possible to describe except in broad outline the course of instruction which the student receives. As a rule, the work of a hospital is chiefly carried on in the morning or in the afternoon, and occupies two to three hours of the day. This work consists in ward visits, out-patient practice, surgical operations, *post-mortem* examinations, clinical lectures, and tutorial classes. Many of these must be going on at the same time, and unless the work of the student is mapped out for him he is likely to get little benefit from desultory attendance upon so many things.

Clinical Lectures.

The ideal clinical lecture is that which is conducted in a well-lighted theatre, into the arena of which one or more patients illustrating a particular disease or group of diseases is introduced, and the case of each in turn thoroughly described and commented upon. But apart from the fact that many cases, especially medical cases, are not easily brought into the theatre, and when there show little that can be appreciated by a seated class, such lectures require some preparation and previous thought. I find teachers disposed to shirk them, or to substitute for them a systematic lecture or a ward visit. They are, perhaps, most needed in crowded schools with large classes, but if done well they are most valuable as a means of instruction. They should be as much clinical demonstrations as possible, and should have as little as possible of the lecture character, in other words, they should be shows not sermons. With a little more organisation it would be possible to improve this part of our teaching very much. On each clinical lecture day, not one member only, but each member of the medical staff on medical days, or surgical staff on surgical days, should be invited to present a case. An exhibition of cases for junior students might be supplied from the out-patient department by the assistant physicians and assistant surgeons, both medical and surgical patients being shown on the same day, those cases being selected which present well-marked objective signs. No doubt to arrange such demonstrations would involve some trouble, but we see how well they are managed at the London Post-Graduate College and at several of the hospitals where post-graduate instruction is given, which point the way to a decided improvement in our present system of hospital instruction for students.

Ward Visits.

In the ward visit students have the opportunity of seeing a greater variety of cases, but the opportunities for learning and the instruction afforded vary greatly. Many of us have followed among a crowd of fifty students, of whom only a few could see or hear anything; but in small schools, where the visiting staff take pains to teach, the ward visits are extremely useful. Where the notes of the case are read over, and all its features demonstrated, opportunity being given as far as possible to the students to verify the observations for themselves, the form of instruction cannot well be improved.

It is to be regretted that students do not see the advantage of watching cases to their terminations, but are disposed to wander about from one member of the staff to another, from medicine to surgery and so on, by which plan they pick up a good deal of information, but of a somewhat superficial kind.

Dressers and Clinical Clerks.

The compulsory attendance of students as surgical dressers and as clinical clerks affords the only opportunity in our modern scheme of education for that personal training which was the most valuable feature of the apprenticeship system. Although in a large school, where each member of the staff has as many dressers or clerks as he has beds, this personal relation must approach zero; yet in most schools it is a powerful educational influence. So far as possible students should be allowed to choose the member of the staff under whom they are to serve, but there ought to be a limit to the number serving under any one man.

The training received by a dresser or a clinical clerk cannot be over-estimated. He is brought into intimate relation with a considerable number of cases, he is made to observe them closely, to be responsible for recording their history and progress, to take part in their treatment, and to watch their termination. If a proper system of case-taking is insisted upon, he learns to take a broad view of his cases, to care for details, and to appreciate a diagnosis based upon a comprehensive knowledge of all the facts. He has abundant opportunities

for practising methods of examining patients and for becoming expert in many manipulations. The cases he watches are indelibly impressed upon his memory, and form the groundwork of his professional experience. He sees rare diseases, with which in the course of his subsequent practice he will seldom meet, and never under such favourable conditions for study; when he encounters them in later life he will know that but for his hospital experience he would have mistaken or overlooked them.

The system is so good that it should be extended so as to compel all students to serve during the final three years under some member of the medical staff or with an outside practitioner. This would restore the best part of the pupil system. It is possible to learn much in hospitals, but many things required in private practice cannot be learned there, and the fully-fledged graduate who has received no training outside a hospital makes at first a poor assistant.

Resident Hospital Appointments.

Under the present system only a small minority can occupy resident hospital appointments, but there are vast storehouses of clinical material in our Poor-law infirmaries which might be utilised for medical education with advantage to those institutions if they would increase the number of resident unpaid assistantships.

Of late years the tendency has been to make these appointments tenable only by qualified men, so that they hardly count at all as means of education for the student before graduation.

The Final Examination.

The object of medical education should be to turn out well-trained practitioners, but so long as the examinations are fixed by one set of men and the teaching conducted by another, education must be mainly directed to the examination as an end in itself.

Any system of State examinations would only increase and render permanent this evil state of things. It is not quite easy to understand what object the advocates of the one-portal State examination seek to gain. If it were established there would be a tolerably uniform minimum standard examination for England, another for Scotland, and another for Ireland. It is unlikely that differences would not continue to exist between the examinations conducted in London, Edinburgh, and Dublin, and if the centres were multiplied these differences would be more marked, unless it were possible, which it would not be, to employ the same set of examiners all over the country. It is probable that there is no better qualifying examination than that of the English Conjoint Board, but it is doubtful if its standard could be maintained were it the only portal to the profession. If those who advocate a single portal would realise the truth that the standard of such a portal must be that of the average student and therefore a low one, we should, perhaps, hear less about the supposed advantages of uniformity.

Constant pressure is exerted by those interested in the teaching of special subjects to increase the range and multiply the subjects of the examinations. There is a demand for more special papers and for specialist examiners which cannot be satisfied with justice to the student. It is quite sufficient to examine in the three great departments of medicine, surgery, and obstetrics. Specialities must be left to post-graduate study, and every encouragement should be given to the development of the movement for providing due facilities for such study.

The paper part of the final examination does not give satisfactory results, as most candidates appear to be unable to write answers to questions in such a way as to do justice to themselves. Doubtless students might do much better if they would practise writing such answers, but it is questionable if the system is a fair one which makes so much depend upon the answers to half a dozen questions upon as many subjects, selected out of such a great field as medicine, for example. In Germany and Austria, and, I believe, in France too, there are no papers in the final examination, which is entirely oral and practical.

It is impossible to defend the very short allowance of time given to the oral and practical parts of the final examination. We may admit that any considerable extension of the time allowed to each candidate would entirely upset the present system of such an examining body as the English Conjoint Board, which already has as much as it can do to get in all the work that has to be done at the Examination Hall.

Most of the examiners would agree that the present percentage of rejections at the Conjoint Board is too high, but they can only give marks upon the answers they receive. When the unsuccessful candidates reach nearly 50 per cent., either medical education or the examination must be defective. As the examiners are almost in all cases teachers, they are able to look at this subject from both standpoints, and as an examiner and a teacher myself, I am of opinion that the fault does not lie wholly with the teaching, but that the present examination is not a fair test of the student's knowledge.

Longer oral and practical examinations would involve an addition to the work of the examiners, or an increase in the examining staff, without any prospect of obtaining further funds to defray the extra cost, as the present high fees paid by students could hardly be raised.

The only practical solution of the problem is the multiplication of examining centres. At these local centres the examinations would be conducted by local examiners under the supervision of an assessor or inspector appointed by the qualifying body or by the General Medical Council.

The Conjoint Board already selects many of its examiners from the provinces, and there is no reason to believe that any difficulty would be found in getting suitable men, both able and willing, to devote the necessary time to the examination. As they would not have to deal with large numbers of students, the demand upon their time would not be very great, even if the number of minutes allotted to each student were increased to double that of the present system.

Conclusion.

I have traversed a good deal of ground—perhaps somewhat superficially—and I have expressed with freedom, but I hope pardonable freedom, a good many opinions which I cannot expect will find universal favour. I have advocated raising the standard of the preliminary examination to that of well-educated boys of 18, abolishing preliminary science, the gradual conversion of systematic lectures into less formal conferences and demonstrations, better organisation of hospital teaching, more exhibition of cases, closer and more constant personal relationship between students and teachers, including under the latter heading outside practitioners, the further development of post-graduate instruction to supply better training in special subjects, longer and more practical examinations, and the multiplication of examining centres.

I believe the changes advocated are not only desirable but inevitable, and that anyone who reads the signs of the times aright will recognise that this is the case.

I have attempted to deal with ordinary medical education, and do not presume to suggest that the universities should adopt those limitations which are reasonable in the training of the average man who seeks only a qualification to practise.

In conclusion, permit me to thank you again for the honour of being allowed to address you. I trust I have neither offended nor wearied you, and I beg you to accept my best wishes for the prosperity of your Society and for the success of the session which is inaugurated to-night.

The Antirabic Institute of Rome.—The statistics of the Antirabic Institute of Rome show that in 1896 of 166 patients treated, 2 died. Both were children who had been severely bitten in a number of places, and who were brought to the institute sixteen days after the infliction of the bites; the disease developed within a fortnight after the course of inoculations. In 1897, of 212 cases treated, death occurred in 1; in this case, also, the bites were multiple and deep, and the disease developed on the nineteenth day of treatment. In 1898, of 171 patients treated, 3 died, all during or within fifteen days of the completion of the treatment. From June 1st, 1895, to the end of April, 1899, the total number treated was 630, with a mortality of 0.16 per cent.

We regret to hear that Mr. George Scudamore, the active and public-spirited secretary of the Samaritan Free Hospital and the Marylebone Female Protection Society, has been compelled to resign both appointments in consequence of prolonged ill-health.

OPENING OF THE WINTER SESSION IN THE MEDICAL SCHOOLS.

THE beginning of the winter session in the medical schools in London and the provinces this week has been marked, according to custom, by some ceremonies, or at least by some social gatherings which have brought together old students of the various schools to make the acquaintance of their successors, and to renew friendships interrupted, perhaps, since student days.

The tendency towards the abandonment of the introductory address, which seemed to be growing, appears to have been checked, and this year the schools in which such addresses have not been given form a small minority. We publish elsewhere reports of these addresses, which possess an interest of their own as indications of the subjects which are now particularly occupying the thoughts of medical teachers and of the trend of opinion with regard to them. In the following pages we give some reports of the social functions which have marked the opening of the schools.

GUY'S HOSPITAL.

STUDENTS' DINNER.

THE winter session began on Monday, when an excellent house dinner of the Students' Club took place in the College Dining Hall. Dr. Pye-Smith, F.R.S., Consulting Physician to the Hospital, and President of the Students' Club, occupied the chair, and was supported by Mr. Cosmo Bonsor, M.P., Treasurer of the Hospital, Sir Samuel Wilks, Bart., several other members of the staff, and very many past and present students of the hospital. The only toasts were those of "The Queen," and "Prosperity to the Students' Club," both briefly given from the Chair; and "The Health of the Chairman," proposed by Dr. Fawcett.

SIR SAMUEL WILKS ON THE MEDICAL LIFE.

The company then adjourned to the Physiological Theatre in the new school buildings, where Sir Samuel Wilks, Bart., F.R.S., Honorary President of the Physical Society, presided at a meeting of that Society. The minutes of the previous meeting having been read and confirmed, Sir Samuel Wilks, whose rising was the signal for great applause, offered his congratulations to the new students who had chosen Guy's as their Alma Mater. As an old man, he might say that the little bickerings and disappointments of life were to him now past; and he hardly remembered them. What he chiefly remembered was the time he had spent in the hospital, its noble museum, and laboratories, helping to educate the students of the school. The medical life offered an immense field calculated to excite the interest of intelligent men. Its daily duties, the cases one saw day and night, all brought anxiety; but where in life was any real pleasure without some accompanying anxiety? Think how doctors, too, were interested in the subjects of the day, in the organic life going on all around them. They could look intelligently at the stars, or dig down into the earth and see how it had been constructed from the earliest day, and how the gradual development of life on its surface had proceeded. In any town in which they might settle they could interest themselves in all the movements of the place, and at the end of life be some of its most prominent citizens—a chance that belonged to few other men. This was possibly the rosy side of the case; there were also failures to be deplored, but they had various causes. Some of those who failed ought never to have been in the profession at all. One of such he remembered who, when remonstrated with for his laziness, remarked, "the very sight of a book makes me sick." Some men passed examinations, but then failed to achieve any success in practice. Many of these were "cranks." Their failure was not due to the medical profession, but was inherent in the men themselves, who would have equally failed at the Bar or in any other profession. If a man worked honestly and faithfully at medicine there was sure to be room for him. The phrase "our long-suffering profession" was often used by writers and speakers. He himself did not know what it meant. Those who used it seemed to think we wanted protection from the Government. The time for that, however, was past. Parliament would not suppress quackery; it had done what it could in placing medical men on a register. The General Medical Council could further remove men from the *Register* if they did wrong in a professional sense; but reform in the profession must come from within. A man who sold himself to a trading company was doing a disgraceful thing. Again, if a post were vacant, and the doctors in a place said it should have a certain emolument, and another took it and undersold his services, he would thereby be doing a shabby and underhand thing. Men who succeeded in practice often did so because of their power of impressing their neighbours in various ways. The words of Addison written in the *Spectator* of March 20th, 1710, were as true now as then: "This body of men in our own country may be described like the British army in Cæsar's time; some of them slay in chariots and some on foot. If the infantry do less execution than the charioteers, it is because they cannot be carried so soon into all quarters of the town and dispatch so much business in so short a time. Besides this body of regular troops there are stragglers without being duly listed and enrolled, do infinite mischief to those who are so unlucky as to fall into their hands. There are besides the above mentioned innumerable retainers to physic who, for want of other patients, amuse themselves with the stifling of cats in an air-pump, cutting up dogs alive, or impaling of insects upon the point of a needle for microscopical observation; besides those that are employed in the gathering of weeds and the chase of butterflies, not to mention the cockle-shell merchants and spider-catchers." Probably the profession of that day did deserve a good deal of this criticism. Although the moral of life is that "the weak ones go to the wall," there was nevertheless a good and useful life awaiting those who worked well. Again, a man owed something to his profession; his profession did much for a man, and he himself could not be independent of it. Nor should a man forget the place of his education, such as Guy's Hospital, which had a world-wide celebrity; he should do nothing to disgrace it. He would end by reading a few words from an introductory lecture given at Guy's Hospital in the year in which he (the speaker) was born by Mr. William Allen, a distinguished chemist, and Professor at the Royal Institution: "The profession you have assumed is one of the most respectable of which man is capable. Having carefully studied the nature of our frame, you have undertaken to soften the miseries to which it is liable. May you, though in an inferior degree, endeavour to imitate the great example of Him who went about doing good, healing all manner of diseases. In a world so full of woe, to a noble and generous mind the opportunity of smoothing the brow of care and drying up the tears of sorrow are the most gratifying offices which it is called upon to fulfil. Upon you will the anxious eye of the maternal head of a family be fixed in all the anguish of grief while the support of herself and helpless infants is stretched upon the bed of languishing; and if poverty be added to her affliction, I trust you will rise nobly superior to sordid views, and find your richest recompense in the sweet satisfaction of attempting at least to diminish the weight of that misery which perhaps from the nature of things you cannot wholly remove. I am aware that in the line of your profession you will be sometimes placed in difficult and delicate circumstances, but never, I entreat you, sacrifice your sense of propriety, your feeling of the eternal obligation of right and wrong, that on which your present and future peace of mind depends, to any prospect of sinister advantage. So will you in your different circumstances be the instruments of most extensive good; you will be a blessing to your country and honoured by those whose good opinion is of value."

GEOLOGY AS A HOBBY FOR MEDICAL MEN.

Dr. Wheelton Hind (Stoke-on-Trent) read a paper with this title. After a few preliminary observations he remarked that the subject could naturally be approached from two points of view; the necessity or desirability of a hobby and the suitability of geology as the subject for a hobby. A change of occupation, recreation, and rest seem to be absolute necessities for every worker; and nearly everyone who is worth his salt in every rank of life has some hobby for his leisure, either some form of mental or physical culture, or the care and breeding of pet animals. The hardest workers seem to find the most time to devote to extraneous

pursuits, and that change of subject forms a quite sufficient and absolute form of rest. Monotony is always fatiguing, whether it be monotony of work or idleness; and the life to strive for is a many-sided one, every moment of which is occupied by subjects of diverse interests. Geology and its cognate subjects—on account of its many-sidedness, its breadth of view, and its depth of interest—form a hobby admirably suited for medical men, with their scientific training in chemistry, physics, and biology. Geology and medicine also have at least this in common, that the would-be student must have a knowledge of the laws of nearly all other branches of science before he can approach either of them; and, therefore, in taking up the study of geology medical men start ready equipped for their work so far as elementary scientific knowledge, which forms the basis of such a study, is concerned; whilst a man may specialise in any direction in the wide and still untilled fields of geological work which appeals to him. Chemical analysis, synthesis, and microscopical research may be employed with advantage in numberless directions. Fossils, too, have a great attraction for most people, and have often, by the interesting problems for solution which they present, evolved the student from the mere collector of natural curiosities. In fact, there is an almost universal cult of stones. They naturally demand answers to the questions "What? How? and Why?" and beguile the questioner into the absorbing study of geological phenomena. In palæontology probably many forms of fossils have never yet been unearthed from the rocks containing them, and any chance blow of the hammer in fossil hunting may reveal an organism never known or seen before. There is, moreover, the sentimental side of the question. In fossil hunting there is all the pleasure of the chase, without the suffering of the pursued, and the excessive physical exertion necessary to most of the so-called sports; the healthy out-of-door exercise, the escape from crowded haunts to the green and rocky slopes of the hill-side, or the pleasant shady glen and the streamlets, amidst an environment whose charm is inimitable. There are also higher and more intellectual pleasures in observation and discovery, the increase in actual knowledge, and the development of geological science. Further, the fossil has to be properly freed of its matrix, classified, mounted and labelled for the cabinet, and studied—an occupation for leisure hours at home. Geology is a grand stimulus to out-of-door exercise; it gives an object to each walk, it encourages active recreation, which many medical men, especially the older ones, are apt to dispense with altogether, to their detriment. It adds zest to the annual holiday, enabling a man to forget all about his work and practice. To some men a holiday without a definite object and occupation is a miserable time, and productive of bad temper; and, as members of the community, they feel they have a duty to the world of science and intellect, and may not waste in doing nothing the opportunities for special work which they more perhaps than any other class of men possess. For the young country practitioner, too, with plenty of spare time on his hands, geology is the best of pursuits; it necessitates a daily constitutional, and the specimens collected can be afterwards examined and worked out at home. The local scientific societies welcome the active membership of an intellectual man, who is thereby brought into contact with other intellectual persons; and who, if he reads papers himself, or in debate criticises the papers of others, has the strongest stimulant to original work. Certain questions of public health are intimately dependent on a correct appreciation of geological phenomena; those, for example, relating to the construction of a system of drainage and water supply for any area. The underground water supply is naturally contained in porous rocks, such as sandstones. In the choice of sites, also, for public and private buildings, the nature of the ground should be accurately known. Drains laid in a porous rock are most liable to contaminate the water held in the pores, and become a very fertile source of danger. The great questions of water supply from the least to the greatest are all absolutely dependent upon accuracy of geological knowledge. Density of population, too, is governed by geological factors. The strata containing coal and iron have naturally the densest population. Easily disintegrated rocks form the agricultural lands and only support a medium number; while the older harder rocks, forming mountain and hill districts, have the smallest population of all. An exception to this statement, however, is the London area. The position of all large towns and seaports is primarily due to geological phenomena, depending on harbours naturally formed by rocks, the proximity of water-bearing rocks, areas for food supply and the production of fuel in some form or other. All springs of medicinal waters are naturally dependent on geological structure. The following is an illustration of empirical therapeutics based on sound geological facts: Bath, Buxton, Matlock, and several other places are the resorts of patients suffering from rheumatism and allied ailments. Most of these places are situated on limestone, which is full of joints, and soluble in water containing CO_2 in solution. The rock being thus full of fissures the streams flow underground, and even after heavy rain the ground soon dries, and the air over such a soil contains less moisture than the air of other districts. The skin consequently acts more readily, the amount of perspiration is increased, whilst the amount of moisture given off by the lungs and kidneys is diminished. In chronic bronchial catarrh a trip to a limestone area soon relieves wheezing and other discomforts. In rheumatism the increased action of the skin is supplemented by baths and administration of local waters, which keep up the diuretic action of the kidneys and increase the action of the intestinal mucous membrane, so that elimination from all the excretory glands is much increased. Rainfall is considerably affected by the geological structure of a country, and the presence or absence of forests is absolutely dependent on the constituents of the soils, which are formed by the breaking up of the rock below. In short, a knowledge of geology is very useful and necessary to the medical man. Finally, geology has not ceased to attract a fair number of medical men, many of whom have made their mark in the history of the science; these include James Hutton, the fourth, sixth, eighth, and ninth Presidents of the Geological Society, founded in 1807; in fact, forty-seven persons who have held that office, eight were doctors, amongst whom was the late Mr. J. W. Hulke (Surgeon to the Middlesex Hospital). Huxley, Owen, and Flower—all had medical training Geology seems thus to be pre-eminently suited as a hobby for medical men: the mental training of original scientific work, the tracing of effect to its cause, the practice of inductive and deductive methods of reasoning, the education of the eye to observe small differences, the training of the hand to skilful manipulations, cannot but react on the individual and on his medical work, rendering his preceptions more acute, and his judgments more accurate and subtle.

Mr. F. E. Walker proposed a hearty vote of thanks to Dr. Hind. He thought that a country practitioner without a hobby should always go about with a certificate of lunacy in his pocket. One of the great claims of geology was that it necessitated open-air employment and active work.

Mr. H. W. Bruce seconded the proposition, which was carried unanimously.

Sir Samuel Wilks said that every medical man should have a hobby, whether to collect blue china, walking sticks, or snuff boxes. Dr. Henry Hicks, a Guy's man, was the last President but one of the Geological Society; and Dr. Babington, a former physician of the hospital, helped to form the Society, and was one of its first presidents.

Mr. F. E. Fremantle, in proposing a vote of thanks to Sir S. Wilks for presiding, said that Guy's men all over the globe naturally thought on that day of their Alma Mater. At the hospital students chiefly cultivated the scientific side of medicine and surgery; afterwards, in practice, they were equally concerned with the artistic side of the subject. Sir S. Wilks kept up the *esprit de corps*, and his example taught the students to go and do likewise.

Mr. W. Ramsden seconded the vote, which was carried with acclamation.

Sir S. Wilks briefly returned thanks, saying that as long as he lived he should retain his great interest in the Physical Society of Guy's Hospital.

Exhibition.

The company next adjourned to the Physiological Laboratory, where a collection of microscopes and microscopical specimens, surgical instruments, and medical books was on view.

UNIVERSITY COLLEGE HOSPITAL.

DINNER OF OLD AND PRESENT STUDENTS.

THE annual dinner of old and present students of University College Hospital was held at the Hotel Cecil, London, on October 2nd. The chair was taken by Dr. T. D. Griffiths (Swansea), and there was a large attendance.

After the toast of "The Queen" had been duly honoured, the Chairman gave that of "Success to University College." He spoke of the affection with which old students regarded their Alma Mater, and of the pleasure with which they saw a new hospital rising to replace the old building which had become gravely deficient for the needs of a great hospital. He mentioned some of the students of the hospital who had become distinguished in after-life, and suggested that in the angle which the cruciform plan of the new hospital would open to the front of the College, a statue of Lord Lister, the most distinguished of its students, should be erected to commemorate the fact that the founder of the antiseptic system had been a pupil and a house-surgeon in the old hospital. In conclusion, Dr. Griffiths referred to the loss which the hospital and the school were about to sustain by the retirement next March of Dr. Ringer and Mr. Christopher Heath, the Senior Physician and the Senior Surgeon.

The toast was coupled with the name of Mr. Heath, who, on rising, was very warmly received. He confessed that he felt great regret at the thought of the approaching termination of his active service of thirty years with the hospital, but had willingly concurred in the resolution adopted some years ago to fix an age limit, for he felt that it was better to retire while in full health and vigour and ready to continue to work, than to hang on until old age made it necessary to retire not only from hospital, but from private, practice. The new hospital building, in the planning of which he desired to claim no credit, would be unique, and, according to the lights of to-day, perfect. How long it would continue to be esteemed perfect was another matter; but however that might be, the hospital would soon possess a fine building containing 300 beds, and thoroughly adapted to its purpose. This was due to the munificence of Sir J. Blundell Maple; but it ought to be clearly understood that the donor of the building thought, and very naturally thought, that in giving the building he had done all that he need do, and had not endowed the hospital. He had left to the public the duty of finding funds for carrying on the hospital from year to year, and Mr. Heath appealed to his hearers to use their influence with individual members of the public to give annual subscriptions for maintenance. The task of meeting current expenses had always been difficult, and with the increased number of beds which the new building would afford would be still more onerous. The appeals now made to the charitable public were more numerous than formerly. It was a question whether the funds—the Hospital Sunday and the Prince of Wales's Funds—had not done more harm than good to the finances of the hospitals; and it must also be remembered that Guy's Hospital was appealing to the public for a large sum of money, and that even St. Thomas's now had the temerity to make a like appeal. Then there were many hospitals in their own neighbourhood — the hospital which took to itself the title Temperance, though other hospitals did not encourage intemperance, and the Royal Free Hospital, which made much capital out of its title Free, though their own hospital and most other general hospitals were for all practical purposes free. The claims of University College Hospital needed to be brought more prominently before the charitable public, and he appealed to his hearers, the old students of the Hospital, to give their aid in this direction. Dr. Poore then proposed the health of the Chairman, and Dr. Griffiths in reply recalled that it was just forty-one years since he had come to London to enter as a student at University College. He had on many occasions since taken part in gatherings such as that over which he was now presiding. Such gatherings served a most useful purpose. There was, he regretted to have to admit, too much illegitimate specialism and professional quackery. The tendency to the increase of such abuses was best checked by the cultivation of a feeling of union and good fellowship among medical men. The British Medical Association had done and was doing much to promote such union, and these annual gatherings of the old students of the same hospital were also useful to the same end. After the health of Dr. Rose Bradford, who with Dr. Batty Shaw was responsible for the arrangements, had been given and acknowledged, the company separated.

ST. BARTHOLOMEW'S HOSPITAL.

OLD STUDENTS' DINNER.

DR. LAUDER BRUNTON, Physician to the Hospital, took the chair at the annual dinner of old students, and 167 persons were present. Amongst the guests of distinction were Sir Norman Lockyer, Mr. Briton Rivière, R.A., the Presidents of the Royal Colleges of Physicians and Surgeons, the Master of the Society of Apothecaries, the Director-General of the Army Medical Department, Professor Clifford Allbutt, and the Secretary of the Royal College of Surgeons of England. The toast of "The Queen" was proposed by the Chairman. Sir Dyce Duckworth proposed the toast of "The Army, Navy, and Reserve Forces." and Surgeon-General Jameson, C.B., the Director-General, replied. Professor Clifford Allbutt proposed "The Hospital and School." The Chairman replied, and drew attention to the want of laboratories in London. "The Chairman and the Hospital Teaching Staff" was proposed by the Treasurer. Sir Trevor Lawrence, Bart., and the Chairman replied. Lastly, Sir Thomas Smith proposed "The Health of the Honorary Secretary of the Annual Dinner, Mr. Bruce Clarke," who replied.

KING'S COLLEGE HOSPITAL.

OLD STUDENTS' DINNER.

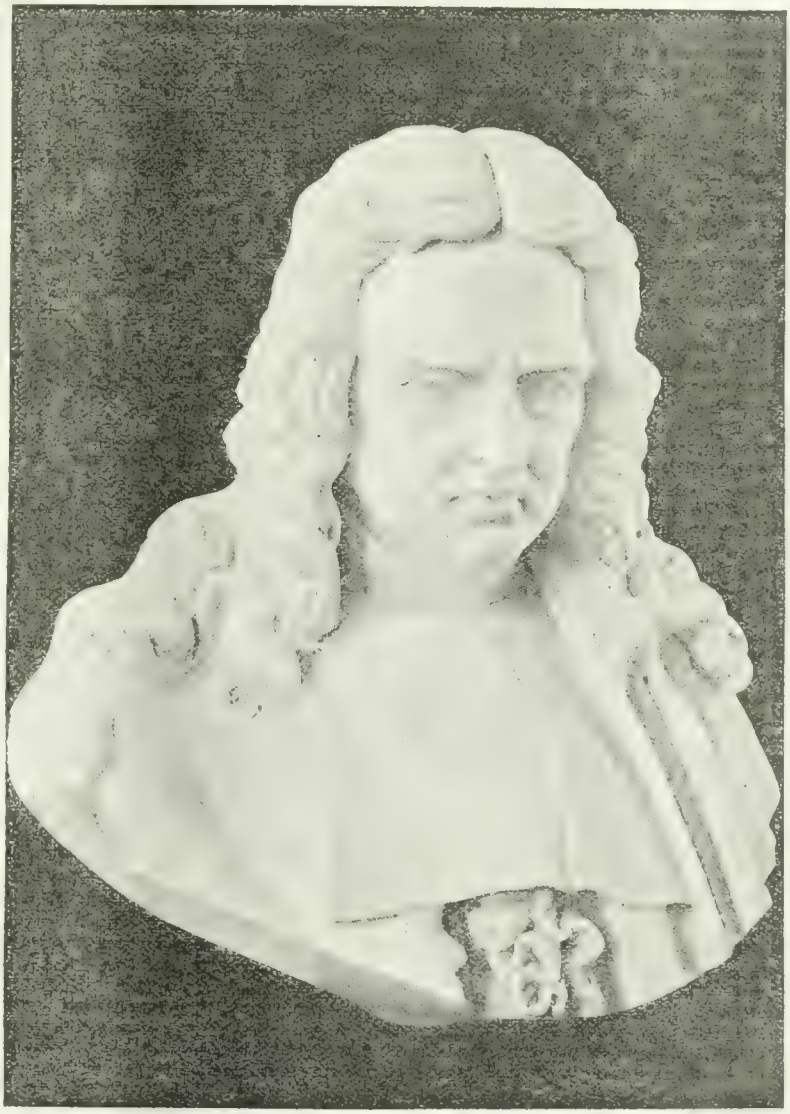
UNDER the chairmanship of Mr. E. H. Howlett, F.R.C.S., Surgeon to the Hull Infirmary, the old students of King's College Medical Department dined together on October 2nd at Limmer's Hotel. The number present was somewhat larger than last year, and far in excess of that of a few years ago. The Chairman was supported by the Principal of the College, the Rev. Dr. Robertson, as well as by his predecessor, the Rev. Canon Wace. Amongst the representatives of the Staff were Professors Rose, McHardy, Pritchard and Hughes, with Drs. Curnow, Dalton, John Phillips, Sir Hugh Beevor, Silk, Crawfurd and Whitfield, and Messrs. Carless, Burghard, Lenthal Cheatle, Vernon Cargill, and Arthur Cheatle. Amongst old King's men from the provinces were Dr. Walters (Reigate), Dr. Carline (Lincoln), Dr. Bateman (Richmond), Dr. Allfrey (St. Leonards), Dr. Lynam (Oxford), Dr. East (Malvern), and Dr. Deville, who was a Demonstrator in the dissecting room at King's as long ago as 1850, and who had come from Paris on purpose to be present at the dinner. Town friends were represented by Drs. Buzzard, St. Clair Thomson, Dent, Priestley, Matthews, and others. In responding for the Navy Inspector-General Sedgwick, R.N., reminded his hearers that on board ship they had always to be content with artificial light, artificial ventilation, and limited space. Besides, the working of a ship could not be made subservient to the medical department. He thought the Admiralty were always willing to do what they could, and if young fellows would bear in mind that a man did not go to sea for comfort, they would find the service a very good one. Major Hill-Smith (Bimbashi Smith) was warmly received not only for his own sake but as being the son of a former popular professor of surgery. He related some of his experiences at Fashoda, and gave an excellent account of other fellow students who were now in the Royal Army Medical Corps. The Reserve Forces were not forgotten, and were responded to by Dr. Carleton Jones, who is visiting the country to study the organisation of the medical department at Aldershot in order to remodel that of the Dominion on the same lines. He mentioned that in the event of a war in South Africa it was intended in Canada to offer to send a bearer company to the Cape, not with the idea of "helping" the mother country, but to show that the imperialistic idea was as strong in the Greater Britain over sea as it was here. The toast of "The School" was responded to by the Principal, and that of "The Hospital" by Mr. Awdry, the Treasurer. A selection of music was interspersed by Mr. Schartau, not omitting the well-known hospital chorus:

> Here's to our Hospital, long may it last;
> And in after-years, when we think of the past,
> Bright may our thoughts be when memory brings
> The days that we spent there when students at King's.

ST. THOMAS'S HOSPITAL.

Presentation of Bust of Morgagni.

On the occasion of the Introductory Address and distribution of prizes at St. Thomas's Hospital, a beautiful marble bust of Morgagni was presented by his Excellency the Italian Ambassador, to the Medical School, and formally accepted by the Treasurer of the Hospital, The presentation was made on behalf of an Italian committee, which includes as its honorary Presidents a long list of distinguished University professors and others, amongst whom appear the names of Baccelli, Bizzozzero, Foà, Golgi, Lombroso, Marchiafava, Profeta, and Tizzoni. The bust has been reproduced after the statue by Salvino Salvini, which was presented to Forli, the birthplace of Morgagni, by Professor C. Versari, of the University of Bologna, and, as the accompanying photograph will show, it is an admirable and impressive work of art.



The Ambassador, who spoke in French, in making the presentation, said: Mr. President, Gentlemen,—I have the honour to offer you in the name of an Italian committee a bust in marble representing Giovanni Battista Morgagni. It is with a feeling of patriotic pride and of gratitude towards you that I fulfil this task. If, on the one hand, I am proud to see honoured the memory of the founder of morbid anatomy by giving him a place in this Pantheon of science, on the other I cannot forget that the first idea of doing so came from the body of illustrious men which composes the staff of St. Thomas's Hospital, through the kind intervention of Mr. Shattock, director of this museum. The homage which you have done to the genius of a great Italian need not surprise us. For a long time we have known how strong are the bonds of sympathy which link together our two countries. We know also with what largeness of mind English science acknowledges and honours every noble manifestation of foreign genius, without mean jealousy as without interested object. At all times famous Italians have found in this classic land of liberty and progress the most affectionate welcome. Without mentioning others, I need only recall two names dear to science and to art which still live in the memory of all—those of Antonio Panizzi and Baron Marocchetti. But where especially friendship appears to me to have become transformed into active alliance is to-day in the field of medical science. Thus I am happy to note that in the field of malaria it is the labours of English and of Italian physicians that have most contributed to the knowledge, so important to the human race, of this scourge of the world. Gentlemen, there is no need for me to tell you about the work done by Giovanni Battista Morgagni, not alone as physician, but as archæologist, philologist, man of letters, mathematician, and naturalist. The physician who first left the beaten track of his time, and would have no other master than Nature; the man who first saw that pathogeny could then have no better guide than the examination of the tissues after death, does not need to be recalled to your memory. Your ancestors before you honoured Morgagni by electing him a Fellow of the Royal Society of London. You have now his portrait. It will be in its place among the celebrated men who formed the immortal genealogy of St. Thomas's Hospital. In this temple where is venerated the memory of Richard Mead, that Mead whom Morgagni in his work *De sedibus et causis morborum* several times refers to, calling him "Anglorum medicus doctissimus"; in this hospital, where Cheselden has left the great memories of his science, the portrait of Morgagni will be among his peers. Justly have you thought him worthy of this museum, where so many illustrious men of science keep always aglow the flame of its glory; where the *genius loci* bears the name of Sir William MacCormac, whose life and whose genius have made for him throughout the world a fame so pure, so well deserved, so honourable. Mr. President, Gentlemen: I express in the name of my compatriots our profound sense of the honour which you have paid to our great fellow-countryman.

Dr. J. F. Payne then said: Mr. Treasurer, Your Excellency, Ladies and Gentlemen,—I have been asked to take part in the proceedings of this day by giving some account of the great man whose memory is honoured by this fine work of art, and in this presentation. Now, Sir, the eminence of Morgagni is so incontestable that if this were a purely medical audience, any such remarks would be unnecessary; his name alone would suffice. But to an audience such as this, it may be desirable to show what manner of man the great pathologist was, and how he comes, as by a kind of royal right, to take his place in our hospital and museum. John Baptist Morgagni was born at Forli, February 25th, 1682, seven years before the

death of Sydenham. He was a precocious scholar, and began the study of medicine in Bologna at the age of 15. Here he was the assistant as well as the pupil of the celebrated Valsalva, a name well known in anatomy, and while still an undergraduate took the professor's place with much success, during his occasional absence. He afterwards studied and finally graduated in 1701 at Padua. This university was the scene of his untiring and fruitful activity in science, and here he spent the greater part of his long life. When only 24 he published a work which at once gave him an important position among anatomists—namely, the first part of his *Adversaria Anatomica*. Five years later he was appointed Professor of Medicine, and in 1715, at the age of 33, he was placed in the world-renowned Chair of Anatomy in the University of Padua. In all this we recognise great precocity, but Morgagni had other gifts of nature not always found in the same individual, endurance and longevity, the latter being one—as it turned out in his case—of no small importance. We must, however, pause for a moment to consider what it meant to be Professor of Anatomy at Padua. That great school in a small city was for more than a hundred years the centre of anatomical teaching in Europe. It was there that the illustrious northern teacher Vesalius, enjoying the hospitality and cordial admiration of the Italians, revolutionised the science of anatomy. Out of his teaching modern anatomy arose, and his work was worthily carried on by his eminent successors Colombo and Fallopio. How many of the greatest European anatomists were educated in Padua is well known. Our own Harvey, the most memorable of all medical students of that school, received there under Fabricius the training which enabled him to make his immortal discoveries. A long line of eminent professors sustained the traditions of the anatomical school at Padua; and the munificent patronage of the Venetian Senate (under whose political rule the city lay) supplied it with ample material resources, including that beautiful amphitheatre built for Fabricius which is to this day a marvel of interest to the medical traveller. It was, therefore, no small honour that was conferred upon the young Morgagni when he was chosen to continue this unexampled succession of great anatomists. Nor did he fall short of his responsibilities. True, it was no longer possible to be a Vesalius or a Colombo—the science of anatomy was too far advanced to permit of startling discoveries, and the scientific impulse which radiated from Padua had led to the foundation in all European countries of well-equipped and flourishing schools of anatomy. But what Morgagni did he did thoroughly; and his purely anatomical works, containing numerous discoveries of detail, would have sufficed to give him enduring fame, even if he had never produced the great work by which he will be for ever illustrious. For more than fifty years Morgagni occupied the chair of Anatomy, being at the same time an active practising physician. His reputation steadily increased, and when he had reached only middle life had become European. Our own Royal Society of London was the first of the greater academies of Europe to recognise his eminence by electing him in 1724 one of its Fellows; and other distinguished societies honoured both him and themselves in the same manner. He received special marks of distinction from three successive Popes and from more than one crowned head; while cultivated foreigners who visited Italy never failed to seek his acquaintance and give him proofs of their esteem. Among his pupils were the foremost anatomists and surgeons of Italy, of whom it may be sufficient to mention the great Scarpa. It was not merely Morgagni's anatomical researches and teaching which procured him this universal tribute of praise. He was a man of varied learning and accomplishments; he had found time to discuss the medical classics, and even points of classical history not medical; to edit the works and perpetuate the fame of his predecessor Gulielmini and his master Valsalva; and to produce other works which would take too long to mention. Besides these things it was also his noble and attractive character which conciliated universal respect and affection. Now all these labours and honours might seem enough for one man. Morgagni as he approached old age might reasonably have felt that he had done a good life's work, and reached the pinnacle of his fame. But the extraordinary fact about his career is this: that the most notable part of his story remains to be told. His most important labours were unknown to those who had showered honours upon him. He had not yet admitted the world to see any part of that great monument which he had silently built upon in many years of unremitting industry, and which chiefly was destined to preserve his memory. The great work which constitutes the real monument of Morgagni, entitled *De sedibus et causis morborum per Anatomen indagatis* ("On the seats and causes of diseases as investigated by Anatomy") was not published till 1761, when the author was in his 80th year. It is, I suppose, a fact unparalleled in the history of science that the *magnum opus* of any philosopher should appear so late in his life. We must not suppose, however, that this was the work of his old age. The observations upon which it was founded had been accumulated during the whole of his professional life, some going back even to the year 1708 before he was Professor, while the latest is dated 1760. Moreover, the mere compilation of these records must have been the work of years. But no part appears to have been published previously. With a patience and reticence rare at all times, and especially astonishing to us in these days, when early publication and priority are such important questions, he allowed his material to collect for fifty years before he gave the results to the world. For ten years longer Morgagni was permitted to enjoy the satisfaction of work well accomplished, and the increase of his already high reputation. He died in 1771, in his 90th year. At that time, to give another landmark in the history of medicine, John Hunter, our greatest British pathologist, was 48, and his nephew, Matthew Baillie, more distinctly a worker in the same line as Morgagni, was a boy of 10. Morgagni's life must be pronounced an eminently happy one, if, as the Greek philosopher laid down, happiness consists in the continued activity of the soul in accordance with the laws of virtue. No better account of it could be given. Nor did he lack that other condition which Aristotle thought indispensable to happiness, that life should be long or complete; and it is fortunate that it was so. A lifetime which spanned the whole interval between Sydenham and Baillie was prolonged beyond ordinary limits. Yet had it reached only the three score years and ten assigned by the Psalmist, Morgagni's career would have lacked its highest distinction. Not only to himself, but to science, was it a great gain that Nature had moulded his frame of such enduring stuff. And now, Sir, it may be expected that a few words should be said to show why the effigy of this great man finds its appropriate place in a pathological museum, and to recognise the special significance of this gift as coming from our Italian medical brethren. First, Morgagni's fame chiefly rests on his work in pathology, or more strictly morbid anatomy, as recorded in his great work of which I have spoken. It is a book which can only be described by the somewhat clumsy epithet "epoch making." It established once and for ever the position of morbid anatomy as a distinct science, and has been the model which all succeeding workers in the same field have imitated. It would not be correct to say that it was quite the first of its kind. Its plan had been anticipated by the great though very unequal work of Bonetus, the *Sepulchretum*, and even before his time observations in morbid anatomy had been made by numerous workers in Italy and other countries. Indeed, in our own St. Thomas's Hospital, about the time Morgagni was born, such observations were made, and have been brought to light, though they cannot be said to be of much importance. All, however, that had been done in morbid anatomy before Morgagni's time is recorded with scrupulous fairness in the pages of his own book. But this work forms so colossal a monument in the history of the science, that looking backward it is difficult to see beyond it. To contemporaries the work on the seats and causes of disease seemed an extension of the science which had occupied the greater part of its author's life; it was regarded as a contribution to anatomy. But at the present time we can see that it had a far higher significance. Although observations on the anatomy of disease formed the basis of the work, every such observation was accompanied by an equally accurate record of the symptoms and course of the disease during life. Apart from the anatomy these massive volumes constitute a vast clinical museum. In the combination of the two methods was its eminent, and at that time unique, merit. Morgagni had a keen eye in

selecting the essential and neglecting the trivial. He evidently saw that while clinical medicine without a basis of anatomy would often be unsubstantial, morbid anatomy without clinical observation would be unfruitful. It is needless to point out how this two-fold method of observation was carried out by Morgagni's successors in all European countries, and has been through a great part of the present century the most potent means by which the science of medicine has been advanced. We honour Morgagni not only as the prince of morbid anatomists, but as a great clinical physician. It is evident then that this beautiful work of art will be most appropriately placed in a pathological museum. In a certain sense no special memorial of him is needed there, as every such museum is a monument to Morgagni. We might borrow the epitaph inscribed in his own masterpiece to the architect of St. Paul's, and say among the crowded shelves of any pathological museum, "If you ask for the monument of the great Morgagni, look around!" And there is also an additional fitness in the fact that our museum is attached to a great hospital. Morgagni was, I believe, a hospital physician. At all events the greater part, though not the whole, of his material was derived from the hospital. Were he still among us he would feel as much at home in the wards as in the museum. In each department we may derive some encouragement in our work by recalling the memory of one who was so great a master of both sides of medicine. And now, Sir, I particularly address myself to his Excellency the Italian Ambassador, while I venture to point out why this graceful gift of his countrymen is especially welcome to Englishmen, both physicians and others. The alliance of Italian and English science has always been cordial and at times very intimate. In former days many English physicians studied and graduated in Italy. Linacre, the founder of our College of Physicians, was among the earliest, and brought home to England the first fruits of the revival of learning in Italy. A curious story is told of him which shows how warm was his feeling of gratitude to his Italian teachers. On crossing the Alps on his homeward journey and taking his last view of that favoured land, Linacre (a staid and sober man as we suppose) was moved to a poetical outburst and bade farewell to Italy, apostrophising her as "Sancta Mater Studiorum." Such must have been the feeling, if not expressed in such words, of many a transalpine student. He was followed by a long line of English and Scottish students, the names and escutcheons of whom may still be seen on the walls of the *aula* of the University of Padua, such as John Caius of Cambridge, a contemporary of Vesalius, and the great Harvey, to whom I have already referred. Among others who took degrees at Padua I should especially mention two physicians of St. Thomas's Hospital, Eleazar Hodson, one of the earliest, and Richard Mead, the most distinguished. Mead was at Padua at the end of the seventeenth century, and took his degree only three years before Morgagni, so that they might have been fellow students. He is frequently referred to by Morgagni, and always in flattering terms. Passing from medicine to science in a wider sense, I need only mention the name of the great Italian naturalist Malpighi. He dedicated several of his works to our Royal Society, which in its admiration for the author caused them to be printed. In our own time the same feeling has been maintained by the interchange of courtesies between the English and Italian universities. The celebration by the University of Padua in 1892 of the tercentenary of Galileo's appointment to a professorship was attended on the invitation of the University by delegates from our College of Physicians, the Royal Society, and the Universities. And in the next year, on the occasion of the tercentenary celebration of Harvey at Caius College, Cambridge, the Senate of the University of Padua very gracefully presented a copy of the tablet commemorating Harvey's residence in that University, which the diligent researches of their professors had brought to light. I need hardly allude to the International Congresses of Medicine, held, as in other capitals, in Rome and in London, which have had so good an effect in making the medical profession of different countries better known to each other, and contributing to the progress of medical science. We have now, Sir, in this beautiful and significant work of art a fresh proof of the cordial sympathy of our Italian brethren with science and medicine in England. This feeling we warmly reciprocate, and in thanking you for your gift we hope that this mutual regard and sympathy may continue and grow and be not only a sign of increasing amity among nations but contribute to the actual progress of science. For, as the President of the British Association has lately reminded us, the promotion of science is becoming more and more an international work. It is no longer possible for each nation to limit itself to the promotion of science within its own borders. There must be mutual help and co-operation as well. Of this co-operation there are already, as Sir Michael Foster said, many promising signs. There will be more when we recognise that science in the widest sense is not the work of each nation individually, but of all civilised nations united together and striving towards one common end.

To this Mr. S. G. Shattock adds: Morgagni is honoured as the founder of morbid anotomy in the sense in which this is at present understood. There had been observations, of course, before his time; there was extant, too, the work of Bonetus, the *Sepulchretum* or *Anatomia Practica*, but Morgagni raised morbid anatomy into a system, and clearly discerned the vast resources of this new organ for extending the boundaries of medical science. It is true that as an instrument of research it no longer holds the first place. The rich mine has been so assiduously worked that it has yielded up the chief part of its treasure. But without it the more recent developments of pathology, whether bacteriological, experimental, or chemical, would have been impossible; they would have been premature in the order of medical evolution, and fruitless. To Dr. Soffiantini, of Milan (the Italian representative at the International Congress of Dermatology, held three years ago in London), especial thanks are due, for on my urging the wish felt by so many that we might have such a memorial, he organised the Italian committee, and carried the project to its successful issue. Although the memorial comes in this way to be located in the Pathological Museum of St. Thomas's, it is a gift not to this school merely, but to the metropolis, and one which cannot fail to excite the interest and admiration of all engaged in the teaching and study of Medicine.

Opening of Session.

The winter session was then formally opened by Professor Clifford Allbutt, M.D., F.R.S., Regius Professor of Physic, University of Cambridge, who said that in addressing the students of a great clinical school such as this of St. Thomas's Hospital, he had the pleasure of knowing that in no inconsiderable part he was addressing Cambridge students. By virtue of an unwritten pact between the University and the great clinical schools, they divided their labours. In Cambridge they threw all their strength into work they could do better than it could be done elsewhere, or, at any rate, wherein they could reach the highest standards of their day. In the department of clinical medicine—in the field of practice—they could not compete with the schools of great cities, and this for obvious reasons. Why, then, did they undertake any part of medical education? To declare fully the quality and function of university education as compared with those of a great technical school such as this would lead one far; but, in view of the foundation at last of a University of London, he would try to set forth the main lines of the difference. Because this difference was one of large and vital factors Oxford and Cambridge had earnestly desired to see university foundations established, not in London only, but also in other great cities of the kingdom; for in a generous zeal for the highest standards of knowledge, research, and wisdom, the old universities were jealous; in the noble rivalry of sister universities there was no jealousy. Broadly speaking, the end of university methods was to make education more theoretical. It was needful in his opinion that universities should concern themselves with practical arts such as medicine and mechanism for one reason, concerning the graduate, that the pursuit of theory without touch with practice was apt to become intolerant, and was apt to lose its usefulness. For another reason, concerning the undergraduate, unless he were one of the rarer spirits, who, fortunately perhaps, were few, he needed some visible bridge between the truths of abstract thought or theory, and the needs of the art to which his life had probably to be devoted. A university was not an educating machine only; it was not only a treasure house of

gathered lore; it was also a factory of new knowledge. Whatever its pretensions, a university which did not produce new knowledge was no university; whatever its humility, a technical school which created new knowledge, even in one department only, was so far a university. The university should take up so much of the practical arts as enabled it to theorise more soundly; the technical school should be conversant with so much theory as to explain the principles upon which current workmanship depended—to explain, that was, the theoretical basis of knowledge empirically obtained. The ground was now prepared for us to understand the practical man among us who flouted theoretical teaching. In the Englishman it was not a fault, but a virtue to have a keen and watchful sense of perturbations and contingencies. Even in dealing with Nature he had empirically learned, by way of having his knuckles rapped, that general laws were interfered with so incessantly and so largely by laws of less and less generality that the general law or laws might often appear to be of less account than empirical maxims made in practice. Day by day, indeed, rule of thumb was usually far more valuable to the sailor than knowledge of these fewer general laws. The Englishman was by natural bent an opportunist in all his arts; there was with him a continual sense of the frequency and relative extent of interferences, and by this natural bent to rule of thumb he had done mighty works which men versed rather in the wider sweep of more general laws could not have achieved. The failure of the opportunist was not only that he was blind to the broader principles, but that he was blind also to the truth that all secondary and tertiary perturbations were themselves of the nature of law. That a proposition might be "theoretically true but practically false" was a mischievous saw; a theoretical statement which turned out false in application was itself incomplete; its completeness had not been tested again and again by ordinary practice, or by that artificial practice which was called experiment. The moral of this homily was that he would urge upon medical students generally to learn all their sciences, including pathology and pharmacology, at a university, and to learn the more intimate details of practice at a great hospital, such as that of St. Thomas's. In conclusion, the speaker congratulated the medical profession upon the maintenance of its high ethical standard, and upon its active intellectual progress. So long as physicians performed no more than private and personal services the profession could not win a high public position, but, like the navy and army, the church, and the law, medicine was now an arm of the public service, an arm which grew stronger and commanded more respect and obedience every year. Even in country practice, too often the squire and the modern parson were losing touch with the parish, and with the best religious and intellectual life of the day, whilst the physician was becoming more and more the leader and the wise counsellor of the people.

PRIZES.

The following is a list of prizes for the winter session, 1898-99: *First Year's Students:* G. C. Adeney, The William Tite Scholarship, £27 10s., and Certificate of Honour; C. M. Roberts, College Prize, £20, and Certificate of Honour; C. H. Latham, College Prize, £10, and Certificate of Honour. *Second Year's Students:* C. U. Ind, The Musgrove Scholarship, £38 10s., and Certificate of Honour; W. H. Harwood-Yarred, College Prize, £20, and Certificate of Honour; J. E. Adams, College Prize, £10, and Certificate of Honour. *Third Year's Students:* C. N. Sears, College Prize, £20, and second tenure of Peacock Scholarship, and Certificate of Honour; A. F. Miskin, College Prize, £15, and Certificate of Honour.

Prizes for Summer Session, 1899:—*First Year's Students:* F. W. W. Smith, College Prize, £15, and Certificate of Honour; C. M. Roberts, College Prize, £10, and Certificate of Honour. *Second Year's Students:* C. U. Ind, College Prize, £15, and Certificate of Honour; H. W. Sexton, College Prize, £10, and Certificate of Honour.

Medals.—Practical Medicine: R. J. Horton Smith, The Wainwright Prize. Surgery and Surgical Anatomy: H. T. D. Acland, The Cheselden Medal, founded by the late George Vaughan, Esq. Pathology and Morbid Anatomy: H. D. Singer, The Bristowe Medal. For General Proficiency and Good Conduct: J. Gaff, The Treasurer's Gold Medal.

OLD STUDENTS' DINNER.

The annual dinner was held at the Whitehall Rooms of the Hôtel Métropole, on Tuesday, October 3rd, Dr. S. J. Sharkey in the chair. There were 178 present. The first toast, that of "The Queen and the Royal Family," was proposed by the Chairman, and loyally responded to. The next, the chief toast of the evening, "St. Thomas's Hospital and Medical School," was proposed by Professor Clifford Allbutt in a speech full of wit and quaint reminiscences of his varied experiences as an examiner. He felt that he was expressing the feelings of examiners of to-day when he said that it was no longer the candidate who was afraid of the examiner, but the examiner who dreaded the candidate, so great was the advance that had taken place in medical education. He referred to the museum of St. Thomas's as second only to that of the Royal College of Surgeons. The toast was coupled with the name of the Treasurer (Mr. J. G. Wainwright), who spoke of the improvement in the finances of the hospital that had taken place during the ten years that he had been Treasurer. Considering the fact that he was spending large sums of money on the operating theatres, surgical wards, sanitary arrangements, and two new children's wards, he would still boldly ask for further support, especially as owing to the depressed state of agricultural property the income of the hospital in that particular direction had diminished. He would like to acknowledge the support which he had received from the governors and other officials. The Dean (Dr. H. P. Hawkins) responded on behalf of the staff and the lecturers. He commented on the steady and satisfactory work done in the school. As regards athletics, the results during the past year had not been very good, but, as usual, the shooting cup again adorned the club. He referred to the few changes which had occurred in the staff and the lecturers. Mr. W. F. Brook responded on behalf of the past students, who, scattered over the world, might be considered as a greater St. Thomas's. Sir William Mac Cormac proposed the health of the Visitors, mentioning among others Professor Clifford Allbutt, Surgeon-General Jameson, Sir Henry Norbury, and the Italian Ambassador, Baron de Renzis. The Ambassador, replying for the Guests, said that times had much changed since Molière had made the empirical practitioners the victims of his facile pen: he raised his glass to English Science. The health of the Chairman was proposed by Mr. G. C. Franklin, who referred to the days when he met Dr. Sharkey abroad as Radcliffe Travelling Fellow, and to the good influence exerted by him on St. Thomas's and its students. Dr. Sharkey referred to the loyalty and enthusiasm of both staff and students to their Alma Mater. The staff endeavoured to keep the hospital in the van of progress, and at the same time were not forgetful of the creature comforts of the students. He commented on the harmony existing between the staff, the Treasurer and Governors, and referred especially to the debt of gratitude due to the Treasurer. A vote of thanks to the Honorary Secretaries, Mr. Cuthbert Wallace, and Dr. Box, proposed by Dr. T. G. Nicholson, brought to a close a most successful evening.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

ANNUAL DINNER.

THE commencement of the winter session was marked as usual by the annual dinner of past and present students and of the athletic clubs, held on October 2nd, at the Holborn Restaurant, Dr. Sidney Phillips in the chair. It was attended by one of the largest gatherings of St. Mary's men ever assembled, including the majority of the staff, and many old students who had made long journeys in order to be present. Among the company were Sir William Broadbent, Colonel A. T. Norton, C.B., Dr. W. B. Cheadle, Mr. Edmund Owen, Dr. Lees, Dr. H. A. Caley, Dr. Maguire, Dr. F. St. Geo. Mivart, Dr. Spicer, Dr. Luff, Dr. Handfield Jones, Dr. Danford Thomas, Mr. Malcolm Morris, Mr. G. Anderson Critchett, Mr. Silcock, Mr. Plimmer, Mr. Juler, Dr. William Hill, Mr. H. S. Collier, Mr. George P. Field (Dean), Mr. A. J. Pepper, Fleet-Surgeon T. J. Preston, R.N., Colonel Rahilly, Mr. B. Thornton, J.P., Mr. J. R. Walker, Mr. A. S. Brown, Dr. Havell, Major A. C. Preston, Dr. Hardwicke, Dr. G. G. Bird, and Mr. Thomas Ryan (Secretary).

In proposing "St. Mary's Hospital" the Chairman briefly reviewed the rapid growth and remarkable progress which had

established for the hospital a reputation second to none for efficiency and good management. He attributed this success, both of the hospital and school, mainly to the great qualities of their Dean, Mr. George P. Field, and referred in appreciative terms to the valuable services rendered for many years to the hospital, and more recently to the school, by the Secretary, Mr. Thomas Ryan.

In replying to the toast, the Dean, Mr. George P. Field, said that it would be the last he would deliver, as Dean, at the annual dinner, as after sixteen years he was about to quit the helm. The dominant note of his speech was not retrospective, as was common in such circumstances, but a confident prediction that the days in the far future, when Dr. Caley and Mr. Collier, now respectively their youngest physician and surgeon, had become the seniors, the hospital would be even more progressive and successful than now. He referred to their great successes during the past year, mentioning specially the winning by Mr. Dodgson and Mr. Lawrence of the highest honours of the year at the University of London, the Gold Medal, and the Scholarship and Gold Medal in the M.D. and M.B. examinations respectively. He heartily endorsed the Chairman's appreciation of the great value of Mr. Ryan's services both to hospital and school.

In a witty speech, which drew a reply not less witty from Dr. Sidney Phillips, Mr. Edmund Owen proposed "The Chairman," and the dinner terminated with some excellent music.

MIDDLESEX HOSPITAL.

Dinner of Past and Present Students.

The past and present students of the Middlesex Hospital held their annual dinner on October 2nd at the Trocadero Restaurant. The chair was taken by Mr. A. Pearce Gould. The gathering was a very large one, the guests numbering more than 200. The toasts of "The Queen" and "The Royal Family" having been appropriately received, the Chairman proposed "The Services," and after referring to the fact that the nation was on the brink of an outbreak of a very serious war, remarked that the medical departments of the Services had always showed themselves to be quite to the front in medical matters, citing as an instance that in the last campaign in Egypt not one single case of septic disease had arisen in connection with that expedition. This toast was greeted with the utmost enthusiasm, the entire company joining in the singing of "Rule Britannia." Surgeon-Major Cooper Rose responded. The toast of the evening, "The Middlesex Hospital Medical School," was next given by the Chairman, who said that the period of three years which was first of all decided for the union of the Medical School and Hospital had now passed over, and it had left the school very much stronger and better, with a splendid equipment both in regard to buildings and plant. This union of the School and Hospital had been a combination not in name only, but it had also brought together more closely than had ever been known before those most actively associated with the Hospital and School. They had recently acquired a bacteriological department, and they were at the present time preparing a new cancer ward which would thereby set free some valuable space for other purposes. Though the school was furnished with buildings and plant, that alone did not ensure a thriving prosperous school because the human element must be the dominant partner and the most important factor in the achievement of success, and they had nothing to be ashamed of on that account; there was every reason to believe that *pari passu* with the improvement in accommodation there had been a corresponding effort on the part of all concerned to do their utmost for the hospital. Sir Ralph Thompson, K.C.B., replied, and in the course of his speech pointed out the great importance of the special cancer investigation which had been set on foot. Dr. Pasteur (Dean of the hospital) also spoke to this toast, and after congratulating the meeting on the large number present suggested that on future occasions the orators should be supplied with speaking trumpets. After stating the many distinctions secured by Middlesex students in the past year, Dr. Pasteur concluded by saying that at the present time the entry of students for this year was already in excess of the total number returned as entering last year. Dr. Caley then proposed the toast of the "Past and Present Students." This speech was received with loud and prolonged applause by the guests sitting at Dr. Caley's end of the hall, but was quite inaudible to many of the company present. Mr. D. B. Balding having responded for the "Past" and Mr. Thomas for the "Present" Students, Sir R. Douglas Powell, Bart., next proposed "The Visitors," coupling with the toast the names of the Rev. N. Hart-Smith (headmaster of Epsom College) and Mr. Wilhelm Ganz). Mr. Hart-Smith, in replying, dwelt upon the close connection that existed between the public schools and the medical schools. Mr. Wilhelm Ganz was well received, the audience appreciating the excellent musical programme rendered in the course of the evening under his direction. A humorous speech from Dr. Sidney Coupland proposing "The Chairman" brought the business of the evening to a conclusion.

ST. GEORGE'S HOSPITAL.

The Medical School Dinner.

St. George's Hospital Medical School dinner took place on Monday, October 2nd, when Mr. T. Pickering Pick, Consulting Surgeon to the hospital, presided over a numerous and enthusiastic gathering of past and present students of the hospital. The Whitehall Rooms at the Hôtel Métropole were filled by the large number of diners (141), the record gathering that had previously met at the hospital dinner being 135.

After the royal toasts the Chairman gave the toast of the evening, "The Medical School," in which he compared the present state of the school and its fifty odd teachers with its condition when he entered to the instruction of some eleven preceptors. Dr. Isambard Owen, the Dean of the Medical School, acknowledged the toast in an able and amusing speech, and reviewed the events of the past year. The Governors of the hospital were eloquently toasted by Dr. William Ewart, who paid a deserved tribute to the labours of Mr. Timothy Holmes, both as a Surgeon in the past, and as Treasurer of the hospital at the present time. In his reply Mr. Holmes dwelt on the constant improvements that had and were being made in the hospital buildings. Mr. W. H. Bennett proposed the health of the orator of the day, Dr. W. H. Dickinson, who had delivered the introductory address in the afternoon.

The toast of the Past and Present Students was proposed by Mr. T. Clinton Dent, and replied to by Dr. E. J. Spitta and Dr. E. A. Houseman. The Chairman's health was proposed by Mr. Warrington Haward. The arrangements of the dinner were admirably planned by Dr. Penrose and Messrs. Ball and Cahill.

LONDON HOSPITAL.

The Annual Old Students' Dinner.

The winter session was inaugurated at the London Hospital in the customary manner by the Old Students' annual dinner, which was held on Monday, October 2nd, in the College Library. The chair was taken by Dr. G. E. Herman, and about 130 gentlemen were present, including a large number of the staff. During dinner an excellent programme of music was performed by the Red Band.

The loyal toast having been duly honoured, the Chairman proposed the toast of "The London Hospital and Medical College." Having remarked on the illustrious men who had been trained at the London Hospital, Dr. Herman said that the present was a critical time in medical education, as this year marked the end of the present constitution of the London University. With regard to its future, there would be no objection from London Hospital men to the proposed centralisation, provided that their hospital were one of the centres. From its position, its size—the greatest hospital in London,—its splendid College—which has been so recently added to—its systematic arrangements for teaching, and general careful attention to the welfare of the students, they had every right to expect that the London Hospital should be the centre in East London.

In reply to the toast, Mr. W. D. Hoare urged the mutual value of hospital to college and college to hospital, and mentioned the magnificent efforts of the Hon. Sydney Holland,

which were now culminating in the extensive schemes of rebuilding and enlargement.

Dr. F. Daly also replied, and, looking back over the thirty-six years since he first came to the London Hospital, averred that it was second to none both as regards its medical and its nursing staff.

In proposing the toast of "The Guests," Mr. E. Hurry Fenwick remarked on the differences between an infirmary and a hospital, the former being a refuge difficult of access, the latter a place famed for its ever-ready hospitality; so to-night they invited visitors with their healthy criticisms, and in the name of hospitality welcomed their guests. He coupled the toast with the honoured name of Mr. Haffkine, and wished him all health and success in his great work. Mr. Haffkine, who was very warmly received, created some amusement by declaring he was a great baby in English. He was aware he was addressing one of the most important medical gatherings of the world, and he might have wished to make some disclosures concerning the plague. He would, however, copy a distinguished statesman, who stated he had nothing to declare concerning the state of affairs in the Transvaal, and that if he had he wouldn't. The plague was a most fascinating subject, so much so that the less said the better. He would, however, share his experiences concerning grappling with plague, in case any present might also have to fight it. He urged that every author of a new plan of treatment should be obliged to test his plan exhaustively on himself, which always seemed to be more than enough for him. There was no better way of suppressing acrimonious discussion than to gather the opponents at such a dinner as they had had to-night. He hoped they would find his methods the least controversial.

Mr. Morice, a member of the House Committee, proposed the Chairman's health, and Dr. Herman briefly replied. Mr. T. H. Openshaw then proposed the health of the Honorary Secretaries, Dr. F. J. Smith and Dr. Hadley, to whose efforts the success of the evening was largely due. A *conversazione* was subsequently held in the museum.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.

OLD STUDENTS' DINNER.

THE dinner of the Westminster Hospital Medical School was held at the Holborn Restaurant on Monday, October 2nd. The chair was taken by Mr. Thomas Bond, B.S., F.R.C.S., Consulting-Surgeon to the hospital, and he was supported by members of the House Committee, the staff of the hospital and school, and past and present students. After the usual loyal toasts that of "The School" was proposed by the Chairman and responded to by the Dean, Mr. A. H. Tubby, who alluded to the steady progress made by the school in all departments of teaching and to the recent decision of the House Committee acting upon the recommendation of the staff to build a pathological and clinical laboratory, and to appoint a pathologist whose entire energies would be devoted to dealing with pathological and clinical problems arising in the practice of the hospital and to lecturing on pathology in the medical school. The toast of "The Old Students" was proposed by Colonel Sparks, a member of the House Committee, and was ably and humorously responded to by Dr. Batterham, of Hastings. Dr. T. Colcott Fox proposed the health of "The Visitors" and Dr. J. B. Potter that of "The Chairman." This was carried with musical honours. Mr. Bond, in reply, said that he regretted that he was no longer on the active staff of the hospital, and at the same time expressed his hearty appreciation of all the friendship which he felt existed towards him among his colleagues and the students.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

DISTRIBUTION OF PRIZES.

THE opening address at the London (Royal Free Hospital) School of Medicine for Women by Mrs. Garrett Anderson, M.D. (see p 915), was listened to by a large gathering of students and their friends in the fine new block which forms the first two wings of the new building. On the platform were many friends of the cause, notably Miss Cock, M.D. (Dean of the School), Miss Elizabeth Blackwell, M.D., Mrs. Scharlieb, M.D., Mrs. Stanley Boyd, M.D., Mr. Charles Birt, Professor Buchanan (Glasgow), Mr. Prideaux, Mrs. Flemming Baxter, and others.

After the address Mrs. Garrett Anderson proceeded to give away the prizes gained during the summer and winter sessions 1898-1899. The entrance scholarship, value £30, for October, 1899, was awarded to Miss Sommer. The Mackay prizes (first and second), value £20 each, were awarded respectively to Miss H. G. Jones and Miss Naylor.

At the conclusion of this ceremony Professor Geo. Buchanan said that he had much pleasure in proposing a vote of thanks to Mrs. Garrett Anderson for her interesting and very useful address. He had been called upon quite unexpectedly, for he had attended as a visitor to listen to the address of his friend Mrs. Anderson, whose progress he had watched with the greatest interest since the time when he was an extern examiner for degrees in the University of St. Andrews, while Mrs. Anderson was just entering on medical study. Now he congratulated her, and he congratulated his hearers on the fact that the pioneer of the medical education of women in England had attained such a distinguished position in the profession. He had the good fortune to be the professor of Clinical Surgery in the only university of Great Britain which had a special college for the separate examination of women apart from men. It was an integral part of the University of Glasgow, the students were alumnæ of the university with all the rights and privileges of men students. From personal experience he could bear testimony that the lady students had been successful in a proportion larger than the men in obtaining the degrees of Bachelor of Medicine and Bachelor of Surgery, and their numbers were yearly increasing. In conclusion, Professor Buchanan said that he esteemed it a favour to have been invited to be present at the opening of the very spacious class-rooms and perfect laboratories in that handsome new building. Mr. Charles Birt seconded the vote of thanks, and called for a cheer for Mrs. Garrett Anderson, which met with a hearty response. He was delighted to endorse all that had been said, and on behalf of the Committee of the hospital to assure the students of its entire sympathy and of its wish and intention to do all that was possible to increase their opportunities. He congratulated them on their new school buildings, and on the courageous way in which they had undertaken the work, and, alluding to the energy with which the students had entered into the task of raising the necessary funds, said that evidently "the girls were the boys for this purpose." He spoke of the increasing difficulty of providing students with an all-round training in general hospitals, owing to the tendency to multiply institutions for the treatment of special diseases. The proceedings then terminated, and tea was provided for the guests in the School Common Room.

OWENS COLLEGE, MANCHESTER.

INTRODUCTORY ADDRESS.

PRINCIPAL HOPKINSON presided at the meeting at which Sir J. Crichton-Browne delivered the introductory address, which will be found at another page. Before the delivery of the address the Dean of the medical school, Professor Young, made a statement in the course of which he said that the total number of students attending the classes during the year 1898-99 was 428. This was the largest number in the history of the school; of this number 215 were preparing for the examinations of the Victoria University. He enumerated the principal distinctions won during the year by students of the medical school, and in conclusion referred to the great loss which the College had sustained by the death of Sir William Roberts, who had occupied the Chair of Medicine in the College for thirteen years, and had been for a still longer period one of the physicians to the Royal Infirmary. In both positions he proved himself a brilliant teacher, whilst his numerous contributions to scientific therapeutics and to practical medicine had shed a lustre not only on the medical school of Manchester, but also on English medicine as a whole.

ANNUAL DINNER OF THE MEDICAL SCHOOL.

The annual dinner of the Manchester Medical School was held on the evening of Monday, October 2nd, at the Albion Hotel, Manchester. The chair was taken by the Principal of the Owens College (Mr. Alfred Hopkinson, Q.C., M.A., B.C.L.), while among the guests were the Lord Mayor of Manchester (Alderman Vaudrey), Sir J. Crichton-Browne,

the Chairman of the Board of Management of the Manchester Royal Infirmary (Mr. Edward Heywood), the Treasurer of the Owens College (Alderman Thompson), and the President of the Manchester Odontological Association (Mr. George Campion). The majority of the teaching staff of the Owens College and Manchester Royal Infirmary were present, as were many former students of these two institutions, which together constitute the Manchester School of Medicine. The toasts included the Lord Mayor and Corporation of Manchester, the Owens College, the Manchester Royal Infirmary, and the Visitors. In responding to the last-named toast, Sir J. Crichton-Browne contrasted the educational advantages enjoyed by the medical student of to-day with those open to his predecessors, and incidentally repudiated strongly the strictures recently passed upon the profession by Lord Justice Fry in connection with the alleged receipt of commissions from undertakers and other tradesmen.

YORKSHIRE COLLEGE, LEEDS.

Introductory Address: Distribution of Prizes.

The winter session, which constituted the sixty-ninth of the Leeds School of Medicine, was opened by an address given in the Library of the school by Dr. Byrom Bramwell. The address, which will be found at another page, was appreciatively listened to by a large attendance of the teaching staff, of the students, and of the general public. At the conclusion of his address Dr. Bramwell presented the medals, prizes, and certificates to the successful students, and the names of the successful candidates for scholarships were announced.

Professor Griffith, in proposing a vote of thanks, said that Dr. Bramwell had most happily made a strong appeal for earnest and thorough clinical work. The opportunities afforded to Leeds students in this respect were exceptionally favourable, while of late years the laboratory accommodation had been perfected and modernised by the opening of the new Medical School.

Emeritus Professor Eddison seconded the vote of thanks, and congratulated the students on having had an address of such practical utility.

Dinner.

Under the presidency of Professor Barrs, Dr. Byrom Bramwell was entertained at dinner at the Hôtel Métropole by a large and representative gathering of the medical men of Leeds and district numbering about 100.

MASON UNIVERSITY COLLEGE, BIRMINGHAM.

Inaugural Meeting of the Winter Session.

The inaugural meeting of the Queen's Faculty of Medicine in Mason University College, Birmingham, took place on Monday evening, October 2nd, in the College Buildings. The gathering was a large one, and included the Principal and several members of the Council of the College, the various members of the professional staff, and a large number of medical men, old students of the College, besides large numbers of present students.

A reception was first held by the Dean of the Medical Faculty (Professor Windle), and from thence the guests passed into the Large Medical Theatre of the College, where the inaugural address of the session was delivered by Sir William Gairdner, K.C.B., M.D., F.R.S. His address—a masterly and thoughtful one—entitled the Two Disciplines, a full report of which is published elsewhere in the British Medical Journal, was listened to with rapt attention. At its conclusion a hearty vote of thanks to Sir William Gairdner was proposed by Dr. Saundby, and seconded by Mr. Priestley Smith, and carried with acclamation. Sir William Gairdner briefly responded.

At the conclusion of the address, the audience distributed themselves about various parts of the building. In the Brewing Laboratory an exhibition of medical and surgical instruments and appliances was given by Messrs. Southall and Co., Messrs. Ash, and Messrs. Salt and Son.

The new Pathological Laboratory and Bacteriological Research Laboratory were opened for the first time, and in them Professor R. F. C. Leith, the newly-appointed Professor of Pathology, gave a series of interesting demonstrations. These included (1) a naked-eye series of cultures of the most important pathogenic organisms; (2) a microscopic demonstration of flagellated bacteria; (3) the life-history of the malarial parasite in man; (4) coccidia in the bile duct and tissues of man; (5) amœbæ in the wall of a hepatic abscess.

The new Dental Museum, which has been considerably enlarged and reorganised, was also thrown open, together with the museums of anatomy and materia medica, while the Pathological Museum was converted for the evening into a spacious refreshment room.

ST. VINCENT'S HOSPITAL, DUBLIN.

Opening Meeting.

The session was opened in this hospital on Tuesday by Mr. R. F. Tobin, who delivered an address. Mr. Swan, President of the College of Surgeons, was in the chair. The address was mainly directed to a consideration of the relation between the profession and the public. To preserve their status and attract suitable men to the profession they had to put a high price on their services. The difficulty with regard to the poor was met by giving gratuitous service to all whose ability to pay did not reach a certain standard. Free trade in medicine would induce a kind of competition amongst practitioners that would drive all men of honour and of high principle from its ranks.

Mr. Justice O'Brien moved a vote of thanks to Mr. Tobin, which was seconded by Mr. Patterson.

A vote of thanks to the President was proposed by Dr. Cox, seconded by Mr. McArdle.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.

Conversazione.

Instead of the usual introductory meeting the winter session was this year opened by a *conversazione* held at the College on October 2nd. The whole of the College buildings were used, and there was a concert in the great hall, followed by a dance. The museum was changed into a refreshment room, the dissecting room into a smoking room, and demonstrations with the microscope and the lantern were given in the laboratories. The prizes were arranged in the Council room, and will be handed to the successful students without a public ceremony. The Warden of the University, with the President and members of the College, received the guests, about 800 in number, including the Mayor, the Sheriff, and other public officials.

ENTRANCE SCHOLARSHIPS.

The following entrance scholarships and certificates have been awarded in connection with the opening of the winter session:

Guy's Hospital Medical School.—Senior Science Scholarship for University Students, of £50, to Mr. P. N. Blake-Odgers, Lincoln College, Oxford; and Certificates to Mr. G. E. Malcolmson, Owens College, Manchester; Mr. F. H. Parker, Pembroke College, Cambridge; and Mr. H. Robinson, Trinity College, Cambridge. Junior Scholarships in Science: £150 to Mr. H. F. Bell-Walker, £60 to Mr. J. H. Clatworthy, and Certificates to Messrs. G. Russell and H. H. Carter. Entrance Scholarships in Arts: £100 to Mr. F. Wood, Roan School, Greenwich; £50 to Mr. H. S. Knight, Bancroft's School, Woodford Wells; £30 (Dental School) to Mr. O. Black, Foyle College, Londonderry; and Certificates to Mr. E. J. N. Aston, Jesus College, Oxford; and Mr. H. A. Watney, Trent College, Derbyshire.

University College (London) Medical Faculty.—The Bucknill Entrance Scholarship (for proficiency in Science), value £30 a year, for four years, to Mr. G. Hall. Two Entrance Scholarships (for proficiency in Science), value 55 guineas each, to Mr. A. Ferrière and Mr. E. Mapother. Two Exhibitions (for proficiency in Anatomy and Physiology), value 76 guineas each, to Mr. C. S. Parker and Mr. T. L. Llewellyn.

Charing Cross Hospital Medical School.—Livingstone Scholarship, 100 guineas, to Mr. Philip Rees. Huxley Scholarship, 55 guineas, to Mr. R. Huxtable. Universities Scholarships, each 60 guineas, to Mr. A. E. Taylor and Mr. H. F. Skrimshire. Entrance Scholarships have also been awarded to Mr. L. Maitland, 60 guineas; Mr. Harold Smith, 40 guineas; and Mr. H. W. Farebrother, 30 guineas.

St. Thomas's Hospital Medical School.—Entrance Science Scholarships: C. M. Roberts, First Scholarship, £150, and Certificate of Honour. C. H. Latham, Scholarship, £60, and Certificate of Honour. The University Scholarship, £50, to Mr. Arthur Cyril Hudson, B.A., of Trinity College, Cambridge. The Natural Science Scholarship, £150, to Mr. Lacey Bathhurst. The Natural Science Scholarship, £60, to Mr. Leonard Craske. Messrs. E. H. Burnett Bailey and F. A. Broadribb obtained marks qualifying for a Scholarship.

INTERNATIONAL CONGRESS OF MEDICAL OFFICERS OF LIFE ASSURANCE COMPANIES AT BRUSSELS.

[FROM A CORRESPONDENT.]

IT was a bold move on the part of the Organising Committee of the first International Congress of Medical Officers of Life Assurance Companies to issue invitations for a meeting of delegates in Brussels. Though this city claims to be the birthplace of most of the international Congresses—in fact to be the city of Congresses—life assurance seems to be a form of business for which Belgian insurance companies have but little liking. The Caisse d'Assurances annexée à la Caisse Générale d'Epargne et de Retraite, under Government guarantee, corresponds to our Government Insurance and Annuity Department in connection with the Post Office. In addition to this, three Belgian companies only have life assurance branches; the bulk of this form of business goes to foreign companies, especially American, English, French, German, and Dutch.

Though lacking somewhat in what I may call the practical element, owing to the absence, for some unexplained reasons, of both English and American delegates, the Congress proved a distinct success.

OPENING CEREMONY.

The inaugural meeting was held on September 25th, in the large hall at the Palais des Académies, under the presidency of his Excellency Baron MAURICE VAN DER BRUGGEN, the Minister of Agriculture, who welcomed the members in a complimentary speech, in which he was careful to mention that the Belgian Government, though full of goodwill for the Congress, was unable to give it the usual official recognition owing to its very special character.

MEDICAL REPORTS.

After the transaction of the usual routine business the Congress met again in the afternoon in a much smaller and more convenient room, in which the Belgian Academy of Medicine meetings are held.

Dr. VLEMINCKX, the President of the Organising Committee, took the chair, and

Dr. POELS, the Secretary-General, proceeded to read his paper on The Advantages of a Universal Medical Form of Report. After referring to the very primitive medical certificates which so recently as 1825 were considered sufficient in some companies, and comparing them with the much more complete forms which had now to be filled up by both the proposer and the medical examiner, Dr. Poels thus summed up the uses of a form: (1) The form is useful as a guide to the medical examiner; (2) it specifies the points to which his attention should be specially directed; (3) it allows a proper estimate to be made of the proposer's health; (4) it enables the risks to be classified; (5) it gives useful indications for reassurance; and (6) it serves as a basis for statistics.

In the discussion which followed all the delegates were of the same opinion, but the view was expressed that the report forms both for the proposer and the medical examiner, as used by different companies in different countries at the present time, needed revising, and that a universally recognised and adopted form would be of the utmost advantage both for national and international purposes. A Committee was proposed for the purpose of drawing up a model form of report to be submitted to the next Congress.

PROFESSIONAL SECRECY.

Dr. J. VAN GEUNS, Chief Medical Adviser of the Algemeine Maatschappy van Levensversekering of Amsterdam, then read his report on Medical Secrecy in its Relations to Life Assurance. This subject is of the utmost importance to English companies transacting life assurance business on the Continent, and it gave rise to a most interesting discussion between the French and Dutch delegates. Dr. Van Geuns thus summed up his report: (1) Professional secrecy does not allow (forbids) the proposer's medical man to deliver a certificate relating to the present state of health and the previous illnesses of his patient to a life assurance company; (2) it does not forbid the proposer's medical man to answer definite questions concerning his patient's health if these answers would tend to cause a proposal to be accepted when it would otherwise have been rejected; (3) it does not forbid the medical attendant of the assured to mention in the certificate of the cause of death required by a life assurance company the exact cause of death; (4) with one single exception there is no case in which there can be any excuse for not delivering this certificate; this is the case of suicide in which certain companies refuse to pay the amount of the assurance; ..... (8) every effort ought to be made to overcome the objections of certain medical men who believe that professional secrecy forbids their mentioning the cause of death.

These conclusions were vigorously attacked by the French delegates and those of the French school of thinking. According to them:

1. A medical man is only authorised to deliver a medical certificate to the proposer himself, and even then only at the proposer's written request.

2. This certificate should not contain any reference to any family particulars, such information being liable to prove hurtful or prejudicial to some members of the family.

3. That every policy should contain a specific clause, to be signed by the proposer, authorising the medical man, who should attend him on his death bed, to deliver a certificate of the cause of his death to the company.

Even this went too far in the opinion of some of the members, who thought that such a certificate should be delivered not to the company, but to the family only, and that the medical attendant, even in this case, ought to refuse to deliver a certificate in the event of the cause of death being of a nature to bring discredit on the family—that is, suicide, madness, etc.

The extremist view that assurance companies were not entitled to communicate to one another the medical reports on a proposer's life in a case of reassurance or refusal of a proposal met with but little support. In connection with this subject I may mention that an insurance periodical distributed at this meeting gave the report of a case in which a life assurance company, which had admittedly been defrauded, was sentenced by the Cour de Cassation to pay the amount of the policy on the ground that the assurance company could only prove the fraud by means of a medical certificate, and that this certificate ought never to have been given.

ANTHROPOLOGY AND LIFE ASSURANCE.

The next paper was one by Professor HOUZÉ, of the University of Brussels, on Anthropology in Relation to Life Assurance. The result of his observations and measurements of the height, the circumference of the chest, and the xiphoid angle among the Flemings and Walloons had been to show him the extreme value of what Goldstein calls the index of vitality or the proportion between the circumference of the chest and the height. He finds that the average height of tuberculous individuals exceeds that of the race to which they belong, but that the circumference of their chests is smaller. The index of vitality of phthisical persons is very much inferior to that of healthy individuals. The xiphoid angle is very acute in the phthisical. In addition to its value in showing the tendency to disease, anthropology was a certain method of identification and for the detection of fraud. Professor Houzé proposed that in all cases of life assurance the medical reports should include answers to the following questions: (1) Length of left foot; (2) length of left middle finger; (3) length of left little finger; (4) special marks on the skin, nævi, cicatrices, etc., their size, shape, and direction; (5) height (without shoes); (6) circumference of the chest over the nipples; (7) index of vitality; (8) anomalies (malformations). This paper did not give rise to a lengthy discussion. One of the French delegates stated that, though

illy admitting the value of the different measurements for ie purposes of preventing fraud or personation, he thought iat the assurance companies had a far simpler method than ie one proposed—that of appending a photograph of the roposer to the proposal. He added that he did not believe iat the French courts would ever order the exhumation of ie body in a case of suspected fraud in connection with a life ssurance policy. This question was finally referred to the ommittee for the proposed report form for consideration and r report to the next congress.

The Examination of the Heart.

The first part of the morning sitting on September 26th as devoted to the discussion of the report on the Examinaon of the Heart for Life Assurance Purposes by Dr. E. foritz, a Russian State Councillor and Chief Medical Officer) La Rossia Assurance Company of St. Petersburg. His exerience, derived from personal observation and from the exmination of thousands of medical reports, tended to show iat Russian medical men held very different views with reard to the normal position and relations of the heart and of ie various abdominal organs in health. This he attributed specially to the fact that some Russian universities followed ie school of Berlin, others the Viennese school, others again ere imbued with the views held by the Paris school. As a roof of these differences of opinion, Dr. Moritz distributed a cheme which he had had printed showing the heart and ver dulness according to the recent works of Chr. Jacob, ebove and Achard, and Weill. Heidenreich. His own inical experience, and the results of thousands of *post-ortem* examinations which he had made, enabled him to ome to the conclusion that there were many heart anomalies hich were not revealed by any objective symptom; that iey occasionally gave rise to subjective symptoms of a ery doubtful character, but that they might, nevertheless, e the cause of sudden death or of a fatal illness of very short uration. The cardiac dulness and the heart shock might ary so much in area and force in the healthy human being, ccording to his age, the shape of the thorax, and the thickess of the integuments that the medical examiner might asily make a mistake and regard as an anomaly what in ie given case was perfectly normal and *vice versâ*. In every iedical report a note should be made of the shape of the iorax, and especially of the relative length of the anteroosterior and transverse diameters, that was to say, of what as known as the "thoracic index" or "coefficient." Irregular nd intermittent action of the heart and transient palpitations n young persons were not as a rule of very great importance. he heart should always be examined first when the proposer as standing and then while he was in a recumbent position. slight attack of faintness occurring during the course of the xamination if the proposer were standing was not a sufficient eason for refusal. To enable the chief medical officer of a ompany to come to a right conclusion as to the value of a eport, he ought to have a thorough personal knowledge of the iews and medical training of the local referee.

Several of the members present confirmed the views held y Dr. Moritz as to the absolute necessity of coming to some greement upon these points, if the results of examinations ere to be of any use for statistical purposes. The Committee or the drafting of the proposed Report form was requested to ee whether it would be possible to reconcile the different iews held by the standard authorities on heart affections.

Early Diagnosis of General Paralysis.

Dr. René Verhoogen, of the Brussels University, followed vith a paper on the Early Diagnosis of Progressive General aralysis. He believed that in a case of syphilis, in which he symptoms had appeared in such a mild form as almost to ave escaped notice, if the patient presented the peculiar spect caused by paresis of the upper branches of the facial, nd if the patellar reflexes were markedly increased, he night be put down as affected with progressive paralysis in ts early stage. The diagnosis between commencing general aralysis and some forms of neurasthenia was not always asy. Psychical changes were but slightly marked in the arly stages of general paralysis, they increased very slowly nd gradually, whereas in cerebrasthenia they appeared lmost suddenly. In the discussion which followed on this paper the French delegates especially confirmed Dr. Verhoogen's views as to the increasing frequency of general paralysis among the assured, the increase in France having even been shown to be greater among the assured than in the general population within the last few years.

Diabetes.

The admissibility of persons affected with glycosuria was the subject of the report presented by Dr. Le Boeuf, of the Brussels hospitals. In his opinion, in every case of suspected diabetes the presence of sugar, even if shown by means of Fehling's solution, must be confirmed by the fermentation test. Well-marked cases of diabetes should be rejected. The most difficult cases to decide upon were those in which the urine did not contain any glucose at present, but in which it was known to have done so at some former period. If all danger of a relapse could be excluded, if the proposer was in perfect health, and if the glycosuria was known to have lasted only a very short time, the proposal might be accepted provided the proposer could be proved to have been in perfect health for the previous five years, and provided also that his urine presented absolutely physiological characters and his family history were good.

THE COUNTY OF DURHAM MEDICAL UNION.

The readers of the British Medical Journal are already familiar with the fact that the medical practitioners in the county of Durham, especially those holding contracts with miners, have organised the County of Durham Medical Union for the purpose of obtaining more equitable remuneration. The various stages of the controversy have been reported from time to time in these columns, but the following summary, which has been furnished to us by a correspondent, gives also the present position of affairs.

In consequence of the low scale of payment received from the miners and other workmen in the county of Durham the medical men who have colliery and working-class practices determined to consider means for obtaining more adequate remuneration. For the last fifty years it has been customary to contract with all classes of workmen in colliery districts to attend them at the rate of sixpence a fortnight. This payment was not taken from every individual, but in most cases from householders alone, the household including not only wife and family, but also in many cases two or three lodgers as well. For this pittance the doctor had to supply not only medicines but also medical and surgical attendance, the only extra being in many cases midwifery, which was paid for, except in some few districts, at the rate of 10s. a case. Colliery accidents, certainly, are paid for by the colliery owners, who for each colliery appoint their own surgeon, and pay him for attendance on accidents happening to men whilst at work, that payment being in a great number of cases ridiculously inadequate, but as the appointment usually carries with it the privilege of having the men's subscriptions deducted from their wages at the colliery office, its value is increased.

The cost not only of drugs but of surgical appliances and dressings, and also of assistance having increased materially during the last few years, the payments have not been sufficient for the patients to have justice done to them, and as the miners' earnings have increased about 75 per cent., and other workmen's wages proportionately since the scale of payment was fixed, it was thought to be high time that something should be done. Individual action being out of the question, a meeting of medical men was held in Durham on December 8th, 1898, and was pretty well attended. An association was formed, which was named "The County of Durham Medical Union." Dr. Jepson of Durham was unanimously elected President, Dr. Armstrong of South Shields Vice-President; a Council of twelve was formed, and Messrs. Graham and Shepherd, solicitors, of Sunderland, were appointed legal advisers and secretaries. Resolutions were carried fixing the new rate of payment to be at the increased rate of 9d. a fortnight for each adult workman, and naming a day for the increase to take place. It was also thought that as the majority of the men whom the increase affected were miners, the best way to get at them was through their union, and Messrs. Graham and Shepherd were

instructed to write to the Miners' Union Lodge Secretaries to ask them to bring the matter before the members of each Lodge, when, in case of the majority disagreeing, a deputation would be sent from the Medical Union to discuss the question. The miners' lodges, with few exceptions, ignored the application.

The next move was to appoint committees for each district with chairman and secretary to issue circulars signed by all the medical men in the district. In some districts this was done at once, but in others considerable difficulty was found in bringing the medical men into line. The issuing of the circulars to the miners was the signal for war to be declared by them, and in nearly every instance where a medical man has "stuck out" for ninepence new medical men have been employed. To try to prevent men from applying for such posts as were advertised by the miners, a counter-advertisement was inserted in the medical papers and also in several local and Scotch papers warning medical men that this struggle still continued, and advising them before applying to communicate with Messrs. Graham and Shepherd.

This advertisement was the means of preventing many medical men from applying to the miners, and the success of the new practitioners has not, as a rule, been such as seriously to endanger the hold of the resident practitioner on the practice, so that although he has lost money, still he is not ousted, and in every district but one where the medical men have commenced the fight, all who have signed the circulars have loyally stuck together. In the one instance mentioned, very strongly organised opposition was brought to bear by the men, and threats to import new medical men have apparently frightened the majority of the local members of the County of Durham Medical Union, so that two only of the local committee are still fighting the battle.

Of these two, one is now face to face with his second, and the other with his eighth opponent, and in both cases it is believed that the result of the contest will be favourable to the old practitioner, and that this favourable issue will not be long delayed.

In one district the original medical man has now a greater number actually paying him 9d. a fortnight than he had when working for 6d. Some collieries in the districts just south of the Tyne consented with very little trouble to pay the increased rate, the north-western portion of the county being the seat of the most determined opposition. In South Shields the advance has already been obtained, both from the miners and from other classes of workmen formerly paying 6d.

In Sunderland notices have been given that the ninepenny rate is to commence on January 1st, 1900, and also another very important item in the union's work, the "Battle of the Clubs," is to begin there on the same day. The friendly societies have been paying 3s. a head a year, but on and after that date no members of the Union will take a club at a lower rate than 4s. This is the first step in the fight against friendly societies in the county, but it is expected that all other districts will follow the example. Great activity in the work is being shown in all the towns throughout the county, and several of the medical societies not formed on a purely scientific basis have become affiliated to the union *en masse*.

The fact that it is possible for miners and other bodies of men to obtain qualified men to undersell their brother practitioners shows the urgent need of organisation of the profession. It seems a deplorable thing that professional men, numbering among them many university graduates, can be found to work under a committee of working men, to be at their beck and call, and liable to be censured by them on the slightest provocation.

The Council of the County of Durham Medical Union are arranging a conference with Drs. Brown, Glover, and Horsley, with a view to get them to help the union in the General Medical Council. The County of Durham Medical Union is glad to have as members some of the honorary staff, both medical and surgical, of the Royal Infirmary, Newcastle-on-Tyne, the Sunderland Infirmary, and the Durham County Hospital, and many other medical men, who, although they have no contract work themselves, are willing to do all they can to raise the status of the club practitioner, the first step being to secure for him adequate remuneration for his work, which can only be effected by working together shoulder to shoulder.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

PORTUGAL.

Oporto.—Fresh cases of plague continue to occur in the city of Oporto. On September 26th 4 cases occurred; on September 27th 2 cases and 2 deaths; on September 28th 3 cases and 1 death; on September 29th 5 cases and 1 death; and on October 2nd 3 fresh cases and 1 death. It is reported that several soldiers engaged in duty with the military cordon have developed plague. Further, outside the military cordon altogether, 10 cases and 5 deaths occurred at two villages. In consequence of these outbreaks the cordon of troops has been extended. This is the old story: the cordon serves but to spread the disease, and is a form of quarantine which ought to be discredited and forbidden. During September there were 17 cases of plague altogether in Oporto and 4 deaths from the disease. There is no news of plague in any other part of the Peninsula.

FRENCH PRECAUTIONS.

The plague epidemic at Oporto continues to cause anxiety to the French Government. All along the coast, from Brest to Hendaye, warnings have been issued to the fishermen to refrain from visiting the northern ports of Spain and Portugal, whither they are accustomed to go in search of bait. Not a single death has occurred among the patients who were inoculated with the serum from the Pasteur Institute, and Dr. Metchnikoff declares that France need have no fear of an epidemic, and that it was only due to the stupidity of the Portuguese authorities that the epidemic was continuing to prevail.

EGYPT.

Alexandria.—No sooner had the disappointment caused by the occurrence of two cases of plague on September 23rd, after three weeks' immunity, been recovered from, than another case is reported. On October 1st it was stated that Egypt was once more free; the last plague patient being discharged from the hospital on September 27th. We learn by telegram that a fresh case of plague occurred on October 3rd. It is this persistency of sporadic cases which causes plague to be looked upon as behaving in a manner peculiar to itself, and of admitting of no parallel in its epidemiology.

INDIA.

During the second week in September the total plague mortality amounted to 4,004 in the Bombay Presidency alone, and of these well nigh one-fifth occurred in the city of Poona. In the Nassik, Belgaum, Dharwar, Bijapur, and Kolapur districts plague shows evidence of a tendency to increase; whereas in the Satara district a decrease in mortality from plague obtains. In Calcutta during the period referred to 45 deaths occurred. In the Mysore State and in the Central Provinces plague still prevails, but the mortality is not severe. In Poona the virulence of the epidemic is expended and the city is beginning to resume its normal appearance. Several officers of the Royal Scots Regiment have suffered from plague in Poona.

Inoculation.—Consignments of Haffkine's prophylactic serum have been despatched to London, Russia, Cape Colony, and Mauritius. The calls upon the laboratory is causing the officials an immense amount of hard work.

MAURITIUS.

On September 24th the Governor telegraphed that 55 fresh cases of plague and 47 deaths from the disease had occurred during the week ending September 28th, on the island of Mauritius.

HONG KONG.

Two fresh cases and 2 deaths from plague are reported as having occurred in Hong Kong during the week ending September 30th.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at 429, Strand (corner of Agar Street), London, on Wednesday, the 11th day of October next, at 2 o'clock in the afternoon.

The following Committees will also meet:

Tuesday, October 10th, 1899.—2.0 P.M., Premises and Library Committee.—2.30 P.M., Conciliation Board Committee.—3.0 P.M., Joint Committee on Fees to Medical Witnesses.—4.0 P.M., Arrangement Committee. *Wednesday, October 11th, 1899.*—10 A.M., Journal and Finance Committee.—5.0 P.M. Parliamentary Bills Committee.

October, 1899. FRANCIS FOWKE, *General Secretary.*

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended to be eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council shou

apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

North of England Branch.—The autumn meeting of this Branch will be held at the Star Hotel, Alnwick, Northumberland, on Tuesday, October 17th, at 4.30 P.M. Dinner at 6.30 P.M.; 6s. 6d., exclusive of wines. Members desirous of bringing forward any communication, reading papers, showing cases or specimens, or of proposing new members, are requested to communicate at once with Thomas Beattie, 26, Ellison Place, Newcastle-upon-Tyne, Honorary Secretary.

West Somerset Branch.—The autumn meeting of this Branch will be held at the London Hotel, Taunton, on Thursday, October 26th, at 2 P.M. Professor H. Gilbert Barling (Mason College, Birmingham) will read a paper on a Modern View of Malignant Disease. Members having any communications to bring before the Branch should send notice on or before October 7th to R. Liddon Meade-King, Taunton, Honorary Secretary.

Oxford and District Branch.—The next meeting of the Branch will be held at the Radcliffe Infirmary, Oxford, on Friday, October 20th, at 3 P.M. Members willing to read papers or show cases are requested to communicate at once with the Honorary Secretary, Wm. Collier, M.D., St. Mary's Entry, Oxford.

South Midland Branch.—The autumnal meeting of this Branch will be held at the Swan Hotel, Leighton Buzzard, on Thursday, October 12th. The meeting will begin at 12.30 P.M., and an adjournment will take place for luncheon at about 1 or 1.30 P.M., at 2s. 6d. per head, exclusive of wine, etc., after which the meeting will be resumed. Gentlemen intending to be present at the luncheon are requested to inform the Secretary not later than October 8th. All qualified medical men are welcome visitors at the meeting and luncheon. The following gentlemen will be proposed as new members:—Johnstone D. J. Harris (Linslade), E. H. Wagstaff (Leighton Buzzard), Waldemar S. West, M.D. (Aylesbury). The following papers and cases have been promised:—Dr. F. B. W. Phillips: Two supposed cases of Erythromelalgia. Mr. W. Gifford Nash will exhibit a series of Gall Stones. Mr. R. A. Milligan: Some cases of Colotomy for Chronic Obstruction. Dr. A. H. Jones: Notes on some cases of Lead Poisoning. Dr. Buszard will also read a paper. Gentlemen desirous of bringing forward any communications, or showing specimens, etc., at the meeting, and any others wishing to become members of the Branch, are requested to write without delay to the Honorary Secretary. It is earnestly hoped that every member will exert himself to get eligible medical men to join the Branch. Members whose subscriptions still remain unpaid will oblige by forwarding the same to the Honorary Treasurer, Mr. R. A. Milligan, No. 1, Billing Road, Northampton.—C. J. Evans, Northampton, Honorary Secretary.

Stirling, Kinross, and Clackmannan Branch.—The autumn general meeting of this Branch will be held in the Royal Hotel, Stirling, on Wednesday, October 11th, at 3 P.M. Dr. Byrom Bramwell will be present and read a paper. The annual dinner will take place in the hotel at 4.30 P.M. All members of the Association resident in the Branch district are cordially invited to the meeting and dinner.—J. E. Moorhouse, Honorary Secretary, 1, Glebe Avenue, Stirling.

South-Eastern Branch: East Surrey District.—The next meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 12th, at 4 P.M., J. G. Ogle, M.D., of Reigate, in the chair. Dinner at 6 P.M.; charge, 7s., exclusive of wine. Agenda: 1. Minutes of Croydon meeting. 2. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., have been promised: Dr. F. R. Walters: The Modern Treatment of Phthisis. Mr. W. Bruce Clarke: Exploration of the Kidney and Ureter as a Conservative Measure. Dr. W. S. A. Griffith: The Value of the Douche in Gynæcology and after Delivery. Messrs. Down Bros. will exhibit Surgical Instruments, etc. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By doing so they will very materially facilitate arrangements and promote the success of the meeting.—Henry J. Prangley, Tudor House, Anerley, Honorary Secretary.

Shropshire and Mid-Wales Branch.—The annual general meeting will be held at the Salop Infirmary, on Tuesday, October 31st at 3 P.M. Members who wish to bring forward any business, to read papers, or show cases or specimens, or to propose any new members are requested to communicate with the Honorary Secretary not later than Friday, October 20th.—Harold H. B. Macleod, Honorary Secretary, Clive House, Shrewsbury.

EAST ANGLIAN BRANCH.

The autumnal meeting of the East Anglian Branch was held at Felixstowe on September 28th, 1899; Dr. E. L. Fenn, President, in the chair.

New Members.—The following gentlemen were elected members of the Association and Branch: Webster Adams, Ipswich; Lieutenant-Colonel W. A. Gardiner, R.A.M.C., Ipswich; S. S. Hoyland, M.D., Ipswich; C. K. Moseley, Ipswich; A. Young Pringle, Ipswich; J. R. Staddon, Ipswich; A. Dunn Turner, M.B., Felixstowe; Frank Fowler Ward, M.B., Ipswich; Walter Waring, Norwich. The following members of the Association were elected members of the Branch: J. E. A. G. Becker, M.B., Colchester; J. Hamel, M.B., Felixstowe; G. Blake Masson, Fincham; Hy. Skey Muir, M.D., Deputy Director-General, A.M.S.; J. C. Reynolds Robinson, Harleston.

Representative on Council of Association.—Dr. Edgar G. Barnes was elected representative of the Branch on the Council of the Association in the place of Dr. W. A. Elliston (made President-Elect, British Medical Association), resigned.

Ipswich Meeting, 1900.—Dr. Barnes made a short statement relative to the arrangements necessary for the meeting of the British Medical Association in Ipswich in 1900, and the following resolutions were adopted:

(*a*) That a General Committee be formed to arrange for the reception of the British Medical Association, and that such Committee consist of all contributors to the Guarantee Fund.

(*b*) That no Branch meetings be held in 1900, and that all existing officers hold office for two years.

(*c*) That the Council be empowered to make a donation of 50 guineas towards the Guarantee Fund.

Vote of Thanks to Dr. Elliston.—Dr. Fenn proposed, and Dr. Brogden seconded, and it was unanimously resolved:

That the best thanks of this Branch be accorded to Dr. Elliston for his valuable services as one of the representatives upon the General Council of the Association during the past twenty-two years.

Communications.—Dr. Dunn Turner read a paper on Raynaud's Disease. The President, Mr. Jeaffreson, Dr. Holden, and Mrs. Garrett Anderson, M.D., took part in the discussion.—Dr. G. F. Hulme called attention to the Suffolk Society for the Prevention of Tuberculosis.—Miss Ethel Vaughan, M.B. (Pathologist to Royal Free Hospital), showed 12 very interesting Pathological Specimens fixed by the formalin process.—Dr. F. A. Brooks read a paper, Case of Tetanus treated with Antitetanus Serum.—Dr. W. A. Elliston read a paper, Notes of a case of Multiple Enchondroma.

Diabetes.—Mrs. Garrett Anderson read a paper in which she said the statement that diabetes was rapidly increasing and the suggestion that this was due to the cheapness of carbohydrate foods should not be accepted without due consideration. The materials for accurate comparison of the past with the present rate of mortality from diabetes in this country did not exist. The improved means of communication and the much larger amount of medical literature brought all cases of interest before a much larger circle of observers than was the case fifty years ago. The Scotch peasantry still lived mainly on oatmeal and the Irish on potatoes; both suffered very little from diabetes. A general survey of the statistical evidence so far as it was worth anything pointed to diabetes being more common in the well fed and luxurious than in those who depended mainly on carbohydrates for their food. The main distinction to be made in every class of glycosuria was whether the sugar in the blood was due to functional liver disturbance or to failure in the chemical changes of the carbohydrates in an earlier stage of their digestion. In severe and pancreatic diabetes something happened which prevented the carbohydrates from being assimilable and from being capable of being transformed into fat and glycogen. Minkowski's experiments were in accord with clinical experience as to the importance of the pancreas in the process of rendering the carbohydrates assimilable,

but there were many facts on record which showed that the fault might be apart from atrophy of the pancreas. If every case of true diabetes could be investigated after death by experts in the microscopical examination of nerve ganglia the riddle would in time be solved. Possibly the failure of the pancreas to secrete that which was wanted to render the carbohydrates assimilable was often a form of descending degeneration consequent upon disease of nerve cells. True diabetes often began with extreme acuteness, not as it would from a slowly-developing cause. Mrs. Anderson had now under observation a case of diabetes in a patient who had myxœdema six years ago, and who had been kept well by the constant use of thyroid tabloids. Probably the co-existence of failure in the two glands was a mere coincidence. There was no reason to suppose the thyroid and the pancreas were in any way linked together as to function. The knee jerk in diabetes was usually absent towards the end of life. Did it depend upon the presence or absence of peripheral neuritis? Probably the absence of knee jerk should be regarded less as a diagnostic mark than as an indication of the amount of injury inflicted on the peripheral nerves by the poisonous influence of sugar in the circulation. In treatment the problem was how to adjust the diet to the amount of power the patient still possessed for assimilating carbohydrates. It was fully as important to think of what could be given as of what must be excluded. In true diabetes death often came from inanition, and the difficulty of getting any food assimilated was an increasing one. Theoretically, levulose and inulin might replace the dextrose of cane sugar. Dahlias were not much more difficult to grow than potatoes; it might be worth while to try to produce inulin on a large scale. Butter, cream, and all fats should be given as freely as possible. Diabetic breads should be tested for starch, and tried one by one, the excretion of sugar and the body weight being carefully watched till it was found which agreed best. Of drugs, the serviceable ones were opium (by preference in the nepenthe form), Carlsbad salts, and salicylate of soda. Warm baths, massage, and open-air exercise were valuable helps. But in true diabetes the progress was a downward one. The triumphs of therapeutics were found only in cases of glycosuria.—Dr. Cooper Pattin, Mr. Jeaffreson, Dr. Beverley, Dr. Holden, Dr. Barnes, and Dr. Fenn took part in the discussion which followed; and Mrs. Garrett Anderson replied.

Luncheon.—The members adjourned for luncheon, thirty-four members and ladies being present.

Afternoon Tea.—After the meeting the members of the East Anglian Branch resident in Felixstowe kindly entertained the members present and ladies accompanying them to afternoon tea in the Ranelagh Gardens.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

The 152nd meeting of this District was held at Ramsgate on September 22nd, Dr. Styan in the chair. Thirteen members and visitors were present.

Confirmation of Minutes.—The minutes of the last meeting (annual) held at Canterbury in May were read and confirmed.

Chairman of the November Meeting.—On the motion of Dr. Eastes, seconded by Dr. Halstead, it was resolved that Dr. Pittock (Margate) be appointed Chairman of the meeting to be held at Canterbury in November.

Treatment of Incipient Insanity in General Practice.—Mr. Isacke's paper on the treatment of incipient insanity in general practice was read by the Honorary Secretary in the unavoidable absence of the author. Mr. Isacke advocated the establishment of lunacy hospitals for the treatment of such cases where patients could not be treated without certification. He thought that this system would give acute cases a far better chance of recovery than could be secured under the present system of sending them to asylums to be treated among chronic and incurable cases. He was of opinion that it was highly important to treat sleeplessness and refusal of food early in the course of the disease, and not to allow the patient to become exhausted before having recourse to special treatment. He had found paraldehyde in full doses the safest and most satisfactory hypnotic to use. He concluded from his experience that feeding with the nasal tube was to be preferred to other methods of forcible nutrition. He held that these cases were best treated away from home, unless suitable quarters and really efficient nursing could be provided. A discussion followed.

Infantile Diarrhœa.—Dr. Halstead (Ramsgate) read a paper on the treatment of infantile diarrhœa. He advocated the importance of emptying, and keeping empty, the bowels by such remedies as castor oil, whilst but little food, and that of the simplest character, was to be given, such as white of egg beaten up in plenty of water. He demurred to the employment of astringent drugs. A discussion followed, and Dr. Halstead replied.

Shock and Infectious Disease.—Mr. Raven read a paper on shock in the etiology of infectious diseases. Under the term "shock" he included both bodily and mental impressions. Having discussed some of the divergences exhibited by various infectious diseases, he gave instances of the occurrence of many cases of infectious diseases under the influence of chill, trauma, and mental shock.

SPECIAL CORRESPONDENCE.

SHEFFIELD.

The Medical Department of University College.—Open-air Treatment of Phthisis at the Royal Infirmary.—Dr. Duncan Burgess.

There has this year been no formal opening of the Medical Department of the University College, an occurrence which is much regretted in many medical circles. The idea appears to have been to have had one inaugural ceremony for the College as a whole. For some reason or other this arrangement has also fallen through. In a similar manner the annual medical school dinner has been allowed to lapse, and an attempt has been made for a College dinner to take its place. This may be regarded, perhaps, from the medical aspect as unfortunate, as the annual dinner was always looked forward to as a reunion of the medical practitioners of the city and district and those connected with the medical school. It is possible that the lay element of the College does not sufficiently grasp the importance and value to a medical school of keeping the profession well in touch and sympathy with it. A means to this end has been the yearly inaugural address, delivered by someone of recognised standing, and the dinner of the medical profession which followed it with success for many years.

The open-air treatment of phthisis is being carried on with considerable success at the Royal Infirmary. The old founders of this institution were wise in their generation, for they provided a large area of land when more than 100 years ago they erected the, at that time, small infirmary. Thus it comes that to-day the infirmary, situated as it is in a thickly populated district, has abundant land and air space. The lawn is now dotted over with deck chairs, on which recline the phthisical patients, and a shelter is also provided in which patients may be protected in bad weather. The treatment was commenced last year and has been pursued during many months of the present year with greater zeal. As far as possible it will be continued during the winter. The experiment is claimed to have been successful. The patients have become insatiable for fresh air, they have put on flesh, and have lost the hacking cough.

Dr. Duncan Burgess has recently received tangible evidence of the esteem in which he is held by his professional brethren. On retiring from the office of Secretary, which he had held for seven years, to become President of the Medico-Chirurgical Society, a desire was expressed that some recognition of his services to the Society should be made. The response to an appeal to the members for funds for this purpose was most cordial. A handsome gold watch with a suitable inscription was selected as a present agreeable alike to the donors and the recipient. The presentation was made at a well-attended meeting of the subscribers on September 21st. Mr. Snell, Treasurer of the Society, presided, and made the presentation.

LIVERPOOL.

Annual Inspection of the City Hospitals.—Inauguration of the Session at University College.

The annual inspection of the Liverpool city hospitals by the members of the Hospitals Committee of the City Council

took place last month. It is about twelve years since the municipality undertook to provide hospital accommodation for persons suffering from infectious diseases, such provision as existed previously, apart from that supplied by the Poor Law, being limited to the voluntary hospital in Netherfield Road. In the matter of hospital provision of this kind Liverpool was for many years inferior to several towns of less importance; but since it has been taken in hand by the council it has been steadily growing in extent and in the confidence of the public and the profession. The beneficial results of efficient isolation and treatment in hospital, both as regards the sufferers and the community at large, are proved by many facts beyond dispute. Five years ago only 25 per cent. of the cases of scarlatina were treated in hospital, while last year 60 per cent. were treated there. Along with this there has been a striking diminution in the prevalence of the disease. In typhus fever there has been a notable improvement; fifteen years ago the deaths from this disease numbered upwards of 500 a year; last year they were only 25. It is a remarkable fact that while there has been this great improvement in regard to typhus and scarlatina, for which hospital provision has been made, there has been no diminution in the mortality from measles and whooping-cough, the two common zymotic diseases for which no adequate hospital provision exists. Dr. Thomas Clarke, the chairman of the committee, in the course of his remarks at the inspection, appealed to the medical profession generally to send cases of infection to hospital the moment they were diagnosed and before the disease had an opportunity of spreading. He pointed out that though Liverpool was free from any outbreak of disease it was threatened with the terrible bubonic plague, which was within four days' journey—a period less than the incubation period of the disease. On the other hand, he was happy to assure his hearers that the port sanitary authority was thoroughly alive to the dangers of the situation, and was well equipped to deal with any such risk as the importation of the plague. What was especially needed was medical inspection of all vessels coming from an infected port before they entered the docks.

The formal inauguration of the winter session of the Medical Faculty of University College will take place on October 14th, when the prizes obtained last year will be distributed by the Rev. S. A. Thompson-Yates, the munificent donor of the laboratories which bear his name, who will also deliver an inaugural address.

CORRESPONDENCE.

THE PLAGUE IN RUSSIA.

Sir,—The following additional facts concerning the outbreak of plague near the mouths of the Volga are of interest.

On September 3rd (15th) a representative meeting was held in St. Petersburg to discuss the nature and origin of the outbreak. A list of those present, fifteen in number, is before me, and it includes the names of most of the leading members of the profession in the Russian capital. As a result of the discussion it was found that opinions were divided. A minority of six (which included the names not unknown to English readers of Professors Sklifosovski, Lukianof, and Remmert) regarded the disease as the pneumonic form of plague. A majority of nine, on the other hand (among whom were Professors Pashutin and Kudrin, and Dr. Ragozin) considered the facts brought forward insufficient to justify a definite conclusion as to the nature of the disease. In view of this division of opinion the meeting decided to send three of its members (Drs. Vinogradof, Raptchefski, and Shidlovski, respectively the professor of pathology, the director of the bacteriological laboratory, and the acting professor of hygiene in the Imperial Army Medical Academy) to make further investigations on the spot, and report fully on their return.

The alarm recently caused in Samara by the appearance there of a fatal and unusual form of disease appears to have subsided. The town was visited by the Prince of Oldenburg and two other members of the Plague Commission, who recently published the result of their inquiries. The cases were limited to 8, 4 of which proved fatal; and the disease is stated to have been "a particularly severe form of malaria, accompanied by secondary infection from the alimentary tract, with croupous inflammation of the lungs and erysipelas, and having nothing in common with bubo plague." The precautionary measures have therefore been abandoned, and Samara declared plague free.—I am, etc.,

London, Sept. 30th. Frank G. Clemow.

ILLEGAL CERTIFICATES.

Sir,—The documents Mr. Victor Horsley signed (as well as Mr. George Brown) were the Petition of Fellows and Members R.C.S.Eng. to the College Council, about March, 1898, and their immediately subsequent declaration claiming the right to elect the College Member of the General Medical Council; as to which Mr. Horsley is quite correct in saying that I went to his house on one occasion and obtained his signature; but these have no connection with the memorials to the General Medical Council against the illegal certification of unqualified by registered practitioners, of November, 1898, and March, 1899, the subject of the present discussion, which Mr. Victor Horsley was certainly not asked by me, or officially, to sign, and which, so far as I am aware, he did not sign, being himself a member of the body memorialised. I am sure Mr. Horsley would prefer to be bowled out in any inaccuracy, and would not, as a cricketer, desire to choose the bowlers of those who, I hope only for the moment, are on the opposite side.—I am, etc.,

Montague Place, W.C., Oct. 4th. R. B. Anderson.

Sir,—Having been present at the Stratford meeting, we desire to corroborate Mr. Victor Horsley's statement that he there proved his action in the matter of the proposed registration of midwives to have been consistent with the policy laid down in his election address. We may regret that Mr. Horsley has not taken a firmer stand in this matter, but we cannot on that score charge him with inconsistency.

With regard to the memorials presented to the General Medical Council on the question of illegal certificates, having heard the documents read by their author, we endorse every word of Mr. Horsley's criticism on their form, and can only regret that that criticism was not received in a better spirit.—We are, etc.,

P. Napier Jones,
Percy Rose,
Harold S. Beadles,
Barking Road, E., Oct. 4th. Francis E. Bromley.

MEDICAL ORGANISATION.

Sir,—"General Practitioner," in the British Medical Journal of September 23rd, has hit a point which occurred to me in reading Dr. Crawshaw's letter on page 750. He might have extended his remarks by saying not only that "the provident dispensary surgeons in Manchester take a leading part in the Council of the Medical Guild," but that these gentlemen are the most active members on the staff of the dispensaries. Some of the medical officers have for ten or fifteen years been in receipt annually of £400 and upwards without any wage limit. Hence "General Practitioner's" remarks that the provident dispensaries have done enormous injury to the general practitioners. Now that Dr. Crawshaw's letter appeals to the medical societies in the whole of the country, it is important that strangers to the Guild should be made aware of these facts, and that they should know whom they are most likely to meet in these conferences.

To Dr. Brierley's scruples as to "the annual conference scheme" I do not attach much weight, neither to his gratuitous allusion of "Young Practitioner" to a gentleman who has been actively engaged in professional work for fifteen years, and is not connected with a provident dispensary, whereas Dr. Brierley has shut his eyes so persistently to the injury done by such an institution that he has sat on the Committee of the Medico-Ethical Association for many years in company with several who have been and still are connected with it. I do not see that he will ever win over the 200 members of the Guild to back him up in the Lancashire and Cheshire Branch of the British Medical Association, as at present constituted, with the same energy and sympathy they have manifested to the Guild. Even the £40,000 he

mentions will not draw them. I have heard prominent members say that the Council of the Branch was too fossilised, and was too much in the hands of a clique; and that many of the members, by simply putting in the requisite number of attendances, could not very easily be thrown off, as they are nominated perforce, and according to the rule as it stands, by the Council; in other words, they practically nominate themselves year after year.

What is wanted is greater elasticity in the constitution of the Council, and for the members of the Branch to have more confidence placed in them to nominate their own men, and so to enlist their sympathy and interest in the Branch.

As to the Medical Guild, it would be a magnanimous act for the benefit of that institution if the whole four of the provident dispensary medical officers on its council were to resign their seats or sever their connection with the dispensaries. We should then be on a sound basis, and more normal general practitioners would join and assist in its work who at present, as I know for a fact, hold aloof from it on account of its apparent sympathy with provident dispensaries.—I am, etc.,

Manchester, Sept. 23rd. G. H. BROADBENT.

EYESIGHT OF PILOTS AND RAILWAY SERVANTS IN SCOTLAND.

SIR,—In the BRITISH MEDICAL JOURNAL of September 30th there is a very admirable letter from James Godding of Poplar. In that letter Deputy-Surgeon-General Caley is proved to have made a blunder when, in speaking of eyesight tests, he said that for the English pilot service no test was required.

My object in writing is to ask your readers to make the observations of Mr. Godding regarding the Trinity Board of London and its tests for pilots as equally applicable to the Clyde Navigation Trust of Scotland and its Pilot Board, and also to the Caledonia Railway Company. These bodies for more than twenty years have demanded from all candidates for the pilot and railway services certificates from a specially-appointed medical officer, of their health, their physical fitness for the services, and especially as to their acuteness of vision and colour perception.

In the Caledonia Railway Company alone, about eight or nine hundred young men are examined and reported upon annually before they enter the service, and from the Clyde Navigation Pilot Board no candidate receives his licence to serve as a Clyde or deep-sea pilot till he passes an exhaustive and satisfactory examination.—I am, etc.,

Glasgow, Oct. 2nd. JAMES DUNLOP, M.D.

VISUAL TESTS IN THE MERCANTILE MARINE.

SIR,—On page 767 of the BRITISH MEDICAL JOURNAL I observe that Surgeon-General Caley states that "some large shipping companies guard themselves by having their own rules and vision tests." In the Cunard Steamship Company the surgeon is required to examine the eyesight of the officers and of all men who may be placed on the look-out, both for near-sight and far-sight and for colour vision. He must also examine the hearing of the same men—a most important point considering the frequency of fog in the North Atlantic. This examination must be made prior to every voyage.—I am, etc.,

September 30th. EX-SURGEON CUNARD SS. CO.

OBITUARY.

JOSEPH WHITE, F.R.C.S.EDIN., D.C.L.,

Consulting Surgeon to the Nottingham General Hospital; Vice-President of the British Medical Association.

MR. JOSEPH WHITE, whose death occurred on September 24th, and was recorded last week, was the only son of Joseph and and Isabella White, and was born at Goose Gate, Nottingham, in the year 1822. His father was a surgeon who practised latterly in Queen Street, Nottingham, and died in early middle life.

Mr. White went to the University of Glasgow, and was admitted a Licentiate of the Royal College of Surgeons of Edinburgh in 1847; he obtained the Fellowship in 1866. In 1847 he also became a Licentiate of the Society of Apothecaries of London. On his return to Nottingham, Mr. White obtained the post of Assistant at the General Dispensary; and in the following year (1848) was elected Resident-Surgeon-Apothecary to the General Hospital near Nottingham, a position he continued to occupy with very great success until July, 1857. His immediate predecessor was the late Dr. Francis Sibson, F.R.S., who did much of his work for his well-known *Medical Anatomy* in the Nottingham General Hospital, and who afterwards had such a distinguished career as a physician in London.

Mr. White was taken into partnership by the late Mr. Booth Eddison, one of the Honorary Surgeons to the General Hospital, and in 1859 was elected to fill the newly-made appointment of Fourth Surgeon to the hospital.

His geniality, kindness, and good nature, combined with a remarkable power of work, soon enabled him to acquire a large and lucrative practice, and caused him to be beloved by a wide circle of friends. He was never known to do an unkind action, or say an ill-natured or harsh word, while time and trouble were always at the disposal of friends needing his help.

He married a daughter of the late Mr. Patterson, of Nottingham, by whom he had two daughters, who together with his widow survive him. He never took an active part in politics or public affairs, but devoted a large amount of time to his hospital work, and for many years was Secretary of the Medical Board.

In 1855 he published Statistics of Amputations (*Med. Times and Gaz.*), and in 1857 wrote on the Action of Chloroform (BRITISH MEDICAL JOURNAL), a subject in which he took much interest and had great experience. In 1895, after retiring from practice, he wrote a more extensive monograph upon the same subject.

In 1880, after twenty years upon the honorary surgical staff, he placed his resignation in the hands of the Board of the General Hospital, and was appointed Consulting Surgeon and Honorary Medical Governor for Life. He continued to be an active member of the Weekly Board and afterwards of the Monthly Board (of which he was the first vice-chairman) until he left Nottingham for London in 1894. For many years Mr. White was a member of the Committee of the Nottingham Nursing Association, and in 1893-94 was Chairman. He was twice President of the Nottingham Medico-Chirurgical Society.

When the British Medical Association held its annual meeting in Nottingham in 1857, Mr. White acted as local secretary. At that time there were no Sections, and all the meetings were held in one small room. He was a most active and popular Secretary of the Midland Branch for a long period until he was called to preside over its meetings. He continued to take an active interest in the work of the Association and Branch, and as President-elect of the Association contributed very greatly by his zeal, experience, and popularity to the success of the Nottingham meeting, of which he was President in 1892, and which will be ever memorable for the passing of the resolution admitting ladies to the membership of the Association. At the Newcastle meeting in the following year the degree of D.C.L. was conferred upon him by the University of Durham.

For many years before his retirement he occupied a leading position in the best class of family practice, and his opinion was also much sought in consultation. Few names have been more widely known or more generally respected in connection with the medical profession in Nottingham. The announcement of his removal to London was received with universal regret, and was felt as the severance of long and pleasant associations. As a mark of the esteem in which he was held, his professional brethren presented him with a handsome piece of plate on the occasion.

For more than two years he had been in gradually failing health, and his death at the ripe age of 77 was not unexpected.

SURGEON-GENERAL SIR CHARLES A. GORDON, K.C.B., Q.H.P.

WE regret to announce the death of this distinguished officer—the senior but one of the Army Medical Service—which took place at his London residence on September 30th.

He was born in 1820, and studied in Edinburgh. He took

the diploma of L.R.C.S.Edin. in 1840 and the degree of M.D. St. Andrews in 1849. He entered the Army Medical Department in 1841, as assistant-surgeon in the Buffs; in the same rank, with the 16th Lancers, took part in the Gwalior campaign of 1843, and was one of the last surviving officers of the Battle of Maharajpore, for which he obtained the bronze star. In 1847-48 he accompanied the West African Coast expedition against Apollonia. As surgeon of the 10th Regiment, which played such a glorious part in the suppression of the Mutiny, he was in a number of actions, culminating in the siege and capture of Lucknow, for which he received the C.B. and medal and clasp. In 1860-61 he was in medical charge of Sir C. Staveley's force at the occupation of Tientsin (medal).

During the Franco-German War of 1870-71 he was sent as the War Office Medical Commissioner to the French Army, and was in Paris throughout the siege and bombardment. He was present at several of the fierce engagements outside the fortifications and received the Legion of Honour for his services.

He was an able administrative officer, and as Surgeon-General of the Madras Presidency published several reports on enteric fever, and was also the author of other monographs on various medical subjects. He retired in 1880, obtaining a distinguished service pension; was made a Queen's Honorary Physician, and a K.C.B. at the jubilee in 1897.

Surgeon-General Gordon was a man of much energy and public spirit, and after his retirement took an active part in various philanthropic objects. He was a past-President of the Hamilton Association for the Supply of Male Nurses, and took a leading part in drafting the rules of that body, when it was constituted in 1885. At the time of his death he was the President of the Army Medical Officers' Friendly (Widows') Society, and a trustee of the Benevolent Society.

He was a man of splendid physique, looking very much younger than his fourscore years; of very courtly and polished manners, a strong foe, and a very fast friend.

We regret to have to record the death on September 30th of Deputy-Surgeon-General Charles Moore Jessop, M.B. He was the son of the Rev. Thomas Jessop, D.D., of Bilton Hall, Yorkshire, and entered the Army Medical Service as Assistant Surgeon in 1855. He served with the Scots Guards in the Crimea from June, 1855, and received the medal and clasp and the Turkish medal. He was present with the Royal Artillery at the capture of Canton on December 28th, 1857, and for his services in that engagement received the medal with clasp. He became Surgeon in April, 1868, Surgeon-Major in 1877, Brigade-Surgeon in March, 1881, and Honorary Deputy-Surgeon-General on retirement in April, 1884. He was in the Punjab in 1875-76 during a severe cholera epidemic, and did excellent work. On his retirement from the army he resided first in London, and was a Vestryman and Guardian of St. Pancras. He was also Physician to the St. Pancras and Northern Dispensary, which he attended regularly up to within the last nine months, when the state of his health compelled his resignation. He was then made Honorary Consulting Physician to the dispensary. He was the author of a report on Asiatic cholera published in 1883, and of numerous papers published in various medical journals. About six years ago he went to reside at Redhill, but did not practise there. He had been in failing health for over twelve months, and the immediate cause of death was syncope complicating chronic Bright's disease.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MEDICAL ARRANGEMENTS FOR THE TRANSVAAL.

The following is a complete list of the Royal Army Medical Corps hospitals, etc., ordered to South Africa since June. All the details will be landed at the Cape or Natal by October 12th: No. 1 Stationary Hospital, No. 12 Field Hospital, Sections A and B 26 Field Hospital, 18 Field Hospital, 11th and 24th Field Hospitals, No. 3 Field Medical Store Depôt. The details of the force, Army Corps, are given as Cavalry Division (6 regiments) with 10 machine guns, a Bearer Company and Field Hospital; 3 Infantry Divisions (24 battalions) and machine guns; 6 Bearer Companies and 6 Field Hospitals; Divisional Troops 3rd Brigade Division Royal Field Artillery with 3 Field Hospitals, and 1 Brigade Division Royal Horse Artillery, and 2nd Brigade Division Royal Field Artillery, and 1 Field Hospital.

Lieutenant-Colonel Grier and Major Alderton, R.A.M.C., and Nursing Sister Rose Innes, Army Nursing Service, were placed under orders on September 28th for South Africa. The Army Medical Corps, for hospital service, with 4 companies Ordnance Corps, embarked on the *Braemar Castle* on October 6th. From Woolwich we understand that Miss A. Garrick, Superintendent Army Nursing Service, has received intimation to be ready with several nursing sisters to embark on October 7th and 16th for South Africa.

By the *Kinfauns Castle* on September 30th from Southampton embarked Lieutenant-Colonel R. W. Mapleton for duty with stationary hospital; Majors R. L. Dove and B. W. C. Leeble for field hospital duty; also Captain T. J. Lenahan and Lieutenant J. M. Sloan; Lieutenant and Quartermaster P. Macintosh for duty with stationary hospital; and Lieutenants G. W. Jones and A. Bruce (Quartermaster) for field hospital work; also No. 1 Stationary Hospital and No. 12 Field Hospital. From Southampton, 1 sergeant-major, 28 men, and 4 officers of the Belfast Division of the Royal Army Medical Corps left for the Transvaal on September 29th.

From the Scottish District 4 medical officers are under orders, and a field hospital will also be sent if necessary.

The Indian arrangements for the despatch of their contingent have been rapid and satisfactory. Some 24 vessels have been engaged for the conveyance of troops; most of these belong to the British India Steam Navigation Company. Some embarkations take place from Bombay, and some from Calcutta. The 11th Field Hospital embarks from the latter station. A native field hospital will be sent for the treatment of the Indian Establishments which will accompany the Indian troops. We have already mentioned the medical officers who are nominated for the different brigades from India, namely, Major J. Donegan, R.A.M.C., as Senior Medical Officer of the Cavalry Brigade; Lieutenant-Colonel Carter, R.A.M.C., as Senior Medical Officer of the Infantry Brigade; Major Kerin, R.A.M.C., as Senior Medical Officer of the Brigade Division Field Artillery. In addition to these officers the following officers of the Royal Army Medical Corps proceed to South Africa with field hospitals: Majors Pope, Porter, and Holt; Captains Forde, Cameron, McDermott, Milner, and Marder, and Lieutenant Martin. Of the Indian Medical Service, Major Elliott and Captain Frost will proceed with the native field hospital.

As already announced, Lieutenant-Colonel Exham will be Principal Medical Officer of the force at the Cape. The following medical officers of the R.A.M.C. proceed with the regiments from India: Major Minniece, with the 2nd Dragoon Guards; Major Forrest, with the 9th Lancers; Captain Ward, with the 19th Hussars; Captain Walker, with the Gordon Highlanders; and Captain Slater, with the Royal Artillery Brigade.

A large force of the Royal Army Medical Corps is being concentrated at Portsmouth from Aldershot, Dover, and the Southern Military District. These will furnish the general hospital in the field, and will also provide a detachment for service in the hospital ship. Lieutenant-Colonel Anthonisz, stationed at Gosport, has been placed in command of the corps, which will leave Southampton for Cape Town on October 7th.

The *Dilwara*, embarking troops for Bombay and India generally to replace those sent to the Cape on active service, will take out several officers of the Indian Medical Service who have recently completed the course of instruction at the Army Medical School, Netley.

Three hundred tons of camp equipments for field hospitals, etc., have been despatched from Woolwich within the last few days. The 33rd and 36th Companies Royal Army Medical Corps, under Captains McCormick and Wellman, are to leave Portsmouth early on Friday for Southampton, where they will embark on the *Braemar Castle* for Durban. The Field Hospital for the 1st Cavalry Brigade and No. 1 General Hospital also leave Portsmouth on Friday. Indeed, 149 officers, 68 warrant officers, and 1,225 men, including over 1,000 men of the

Army Service Corps and General Hospital Staff, are to leave in the ship above named and on the day noted.

HORSES AND FIELD KIT FOR THE R.A.M.C.

ALL units except cavalry and artillery will be provided with horses in South Africa "at cost price"—that is, officers will pay the cost of the horse to Government. This, of course, is a boon. But nothing is said about the price of the horse when an officer has to leave South Africa on being ordered elsewhere—say to India or to Ceylon, West Indies, etc.—when the horses will sell for about one-tenth of what the cost was to the officer. Under such circumstances the Government should either repurchase the horse or should rule its conveyance free of charge to India or elsewhere wherever the officer may be ordered after the campaign. It is stated that two medical officers sent to Crete from Egypt had their horses carried there free of charge; but when the disturbance at the former station terminated, and the medical officers left Crete, they could get no transport for the horses, and had to sell them locally for a mere trifle, obtaining no compensation for the loss. The present regulation hits the R.A.M.C. officers hardest, for they beyond all other branches are moved frequently and have short home service. It would thus only be fair if Government would sell them horses at cost price everywhere, and when medical officers go abroad or are moved from colony to colony, or to India, the horse should be transported free or repurchased at a valuation.

There is also another subject connected with active service, and that is the "field kit." This should be sold to officers out of the Government stores at "cost price." Mess tins, Sam Brown belts, water bottles, camp beds, sleeping valises, etc., and even khaki uniform costs a great deal too much when bought privately from outfitters' or other shops. They would cost but a small and reasonable figure if provided by contract. Indeed uniform might easily be so provided. But, apart from this, all field articles should certainly be so. Regimental saddlery is also a heavy item in a medical officer's equipment when purchased from saddlers. Why not let it be supplied from Government stores?

There are some complaints on the head of the "New Army Pocket Case." It is considered a very heavy article, and by no means a good one. It costs £3 7s. 6d., even at the Stores, and could be supplied for about, at most, £2. It has a heavy thermometer, a useless article on the field of battle. It should be in the medical companion which always accompanies each corps.

These are all matters which should be taken into careful consideration at the Medical Division of the War Office, whose duty it is to see that the incomes of army surgeons are not unnecessarily taxed, for the constant moves to which they are subjected entail great expenses, and it is with some difficulty medical officers pay their way. Reform in the direction here suggested would materially reduce the expenses of the Royal Army Medical Corps officers, although it might even be placed before the War Office as a general army question.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A CAPTAIN, R.A.M.C., home last trooping season, March, 1899, is willing to exchange out to India (Madras presidency preferred) this trooping season. Address No. 1,003, BRITISH MEDICAL JOURNAL, 429, Strand, W.C.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: R. HUGHES, G. M. O. RICHARDS, T. MARLES-THOMAS, A. H. PRICHARD, H. L. GEOGHEGAN, B.A., M.D., and S. J. HAYLOCK, Surgeons, to the *Duke of Wellington*, for disposal, October 28th; J. P. H. GREER-HAIGH, M.B., J. H. JONES, A. J. LAURIE, J. W. ROBERTSON, M.B., J. H. LIGHTFOOT, and P. G. WILLIAMS, Surgeons, to the *Vivid*, for disposal, October 28th; H. M. HART-SMITH, B.A., M.D., L. A. BAISS, and C. R. NICHOLSON, Surgeons, to the *Wildfire*, for disposal, October 28th; E. T. BURTON, N. J. ROCHE, and A. W. NOURSE, Surgeons, to the *Pembroke*, for disposal, October 28th; RAMSEY M. RICHARDS and MERVYN W. FALKNER, Surgeons, to the *Doris*, for disposal, October 2nd.

ARMY MEDICAL SERVICE.

MAJOR E. M. WILSON, Royal Army Medical Corps, is appointed Deputy Assistant Director, Army Medical Service, *vice* Major W. G. A. BEDFORD, R.A.M.C., whose period of service in that appointment has expired, October 1st. Major Wilson joined the department, July 30th, 1881, becoming Surgeon-Major twelve years after. His war services comprise the Zulu war of 1879 as Civil Surgeon (medal with clasp); the Nile Expedition in 1884-5 (medal with clasp and Khedive's bronze star); the Egyptian Frontier Field Force, 1885-6; the expedition up the River Gambia in 1891-2 (medal with clasp); the Ashanti Expedition in 1895, in charge of the Base Hospital (C.M.G. and star); the Soudan campaign in 1898, including the Battle of Khartoum (mentioned in despatches, D.S.O., British medal, and Khedive's medal with clasp).

ROYAL ARMY MEDICAL CORPS.

MAJOR ROBERT N. BUIST is placed on temporary half-pay on account of ill-health, September 26th.

Quartermaster and Honorary Lieutenant WILLIAM H. BARTON is dismissed the army by sentence of a general court-martial, September 2nd.

Sergeant-Major HARRY SPACKMAN is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Honorary Lieutenant W. H. Barton, October 4th.

Lieutenant-Colonel W. B. SLAUGHTER, who is serving in the Bengal command at Lucknow, has been appointed to officiate in the administrative medical staff of the army with the temporary rank of Colonel, from August 23rd, *vice* Colonel M. B. Major, invalided.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT A. D. DUCAT is promoted to be Surgeon-Captain, October 4th.

Surgeon-Lieutenant JAMES P. BROWN, M.B., 5th Volunteer Battalion Princess Louise Argyll and Sutherland Highlanders, is appointed Surgeon-Lieutenant, October 4th.

THE VOLUNTEERS.

SURGEON-LIEUTENANT W. K. PAULI, 3rd Volunteer Battalion the Royal Fusiliers (City of London Regiment), has resigned his commission, October 4th.

Surgeon Major D. THOMSON, M.D., 3rd Volunteer Battalion the Bedfordshire Regiment, is promoted to be Surgeon-Lieutenant-Colonel, October 4th.

Surgeon-Lieutenant G. G. OAKLEY, 1st Volunteer Battalion the Duke of Wellington's West Riding Regiment, is promoted to be Surgeon-Captain, October 4th.

Surgeon-Major F. H. APPLEBY, 4th Volunteer Battalion the Derbyshire Regiment, is promoted to be Brigade-Surgeon Lieutenant-Colonel on appointment as Senior Medical Officer to the North Midland Volunteer Infantry Brigades, October 4th.

INDIAN MEDICAL SERVICE.

IT is officially notified that an examination for some appointments to Her Majesty's Indian Medical Service will be held in London in February, 1900. Copies of regulations for the examination, with other information, may be obtained on application to the Under Secretary of State for India, India Office, London, S.W. The exact date of the examination and number of appointments to be competed for will be announced hereafter.

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

THE winter work of the School commenced on Monday last, October 2nd, at the headquarters of the London Rifle Brigade, when two unusually large classes paraded for instruction under Brigade-Surgeon-Lieutenant-Colonel P. B. Giles, Senior Medical Officer. One class consisting of men already in possession of the Army Ambulance Certificate is being instructed in the use of the roller bandage and the duties of hospital orderlies. The other class, consisting entirely of untrained men, is being taken through the ordinary course of first aid, stretcher, and wagon drill, as laid down for regimental stretcher bearers in the new manual for the Royal Army Medical Corps. Among the corps well represented in both classes are: The London Scottish Rifle Volunteers, the London Rifle Brigade, the 3rd Volunteer Battalion the Queen's Regiment, and the 1st Cadet Battalion King's Royal Rifles. The competitions take place on November 27th and December 4th, and the official inspection on December 11th.

VOLUNTEER MEDICAL ASSOCIATION.

SURGEON-CAPTAIN J. HARPER, V.M.S.C., Honorary Secretary, Proficiency Class Volunteer Medical Association (South Kensington, S.W.), writes: I have just seen (on returning from my holiday) the paragraphs under the above title in the BRITISH MEDICAL JOURNAL of August 12th and 19th, or I would have written sooner to express my regret for having inadvertently included the four names in the pass list from the Volunteer Medical Association Proficiency Class. I shall check succeeding lists more carefully. May I take this opportunity of stating that the next course of instruction (both lectures and Correspondence Class) will commence about the second week of November, and I shall be happy to give any information and receive the names of intending candidates before that date.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

REPORT ON NEW DRAFT STATUTES.

AT the meeting of Convocation, to be held on Tuesday, October 10th, at 5 P.M., the Special Committee appointed to make representations to the London University Commission as to points in the scheme of the Commission in which modification might be desirable, will present an interim report on the distribution of Faculties in the reorganised

University, and the allocation of the representatives of Convocation on the Senate. The Special Committee has also considered the proposed statutes of the Commissioners relating to the Schools and Teachers of the reorganised University, and considers them, on the whole, satisfactory, and in accordance with the report of the Royal Commission, and recommends alterations only in some minor points.

Respecting the distribution of Faculties, the Committee agrees with the proposals of the Cowper Commission as far as they concern the establishment of separate Faculties of Arts, Law, Medicine, and Theology. Discussing the question whether there ought to be one Faculty of Science or several Faculties (Engineering, Agriculture, and, possibly, Architecture, for example), each concerned with a portion only of the very wide area covered by this great subject, the Committee comes to certain conclusions: (1) There should be only one Faculty of Science with adequate representation on the Senate and the Academic Council; (2) Engineering should be a distinct branch of the one Faculty of Science, and not a separate Faculty, but degrees should be given in Engineering bearing a distinctive name; (3) no distinctive name should be given to degrees that may hereafter be taken in any other distinct branch of the Faculty of Science; (4) the Art or Profession of Teaching should find its place as a branch of the Faculty of Arts; (5) the Committee favours also the constitution of a new and separate Faculty for Economic, Commercial, and Social subjects. The Committee suggests the following as a fair distribution of the 16 representatives of the Faculties on the Senate and Academic Council: Faculty of Science, 5; Arts, 4; Medicine, 3; Law, Theology, Music and Economics, 1 each. The Medical Faculty it is noted will also from the first have direct and independent representatives in the Senate through the Royal Colleges of Physicians and Surgeons.

With regard to the allocation of the representatives of Convocation on the Senate, the Committee concludes (1) that it is desirable that no Faculty shall be entitled to separate representation on the Senate until the number of its registered graduates shall amount to at least 50; (2) that the representatives of Convocation on the Senate should be allocated as follows: 4 to the Faculty of Arts, 3 to Laws, 4 to Science, 3 to Medicine, and 1 additional representative to the Faculties of Arts and of Science respectively, until the graduates in Theology, and any one other Faculty that may be created, amount to 50.

The Committee makes other suggestions, amongst which are the following: That the restriction of the amount of the property to be held by the University to an annual value of £10,000, should, if possible, be removed, and that there should be vested in the University the freehold or leasehold interest in any buildings occupied by the University, the copyright in all printed matter published by the University, and the right of managing all funds received by the University for fees or otherwise, and of disposing of the surplus, if any, from its income over its expenditure.

The Committee recommends that the power to fix the days on which the ordinary meetings of Convocation are to be held should be vested in Convocation, and not as at present in the Senate; and, further, that Convocation should prescribe the form and manner in which the election by Convocation of the Chancellor and members of the Senate shall take place.

UNIVERSITY OF DURHAM.

At the Convocation held on Saturday, September 23rd, the following Degrees were conferred:

Doctor in Medicine.—J. C. Anderson, M.B., Durham; A. J. Dale, M.B., B.S., Durham; J. L. Frazer-Hurst, B.A., M.B., B.S., Durham; R. N. Lishman, M.B., B.S., Durham; T. Lund, M.B., B.S., Durham (*in absentia*); N. McCall Smith, M.B., B.S., Durham; W. L. W. Walker, M.B., B.S., Durham; W. H. Whitehouse, M.B., B.S., Durham.

Doctor in Medicine (Practitioners of Fifteen Years' Standing).—O. Baker, L.R.C.P. and S. E., R. H. Browne, M.R.C.S., L.R.C.P. W. G. Dickenson, M.R.C.S., L.R.C.P., D.P.H., D. C. Embleton, M.R.C.S., L.R.C.P., S. Hassan, M.R.C.S., L.R.C.P., D.P.H., H. N. Holberton, M.R.C.S., L.R.C.P., D.P.H., J. S. Hooker, L.R.C.P. and S. E., L.S.A., J. C. R. Husband, M.R.C.S., L.R.C.P., H. Knowles, L.R.C.P., L., L.R.C.S., E., H. R. Leech, L.R.C.P. and S. ; E., L.S.A., G. B. W. Messum, M.R.C.S., L.R.C.P., G. Sinclair, L.R.C.P. and S. E., T. H. Smith, L.R.C.P. and S. E., H. G. Sworn, M.R.C.S., L.R.C.P., J. A. Webster, M.R.C.S., L.S.A., N. T. Wood, M.R.C.P., L.R.C.P., M.R.C.S.

Bachelor in Medicine (M.B.).—N. C. Bailes, College of Medicine, Newcastle-upon-Tyne; L. J. Blandford, College of Medicine, Newcastle-upon-Tyne; M. F. Cahill, L.R.C.P., L.R.C.S.I., Royal College of Surgeons, Ireland; S. Cross, College of Medicine, Newcastle-upon-Tyne; H. B. Fawcus, College of Medicine, Newcastle-upon-Tyne; R. D. Fisher, M.R.C.S., L.R.C.P., London Hospital; E. Gofton, College of Medicine, Newcastle-upon-Tyne; R. B. Greaves, L.S.A., University College, Sheffield; J. R. Halliday, College of Medicine, Newcastle-upon-Tyne; W. J. Harrison, College of Medicine, Newcastle-upon-Tyne; W. C. Hayward, M.R.C.S., L.R.C.P., Charing Cross Hospital; J. T. Johnson, College of Medicine, Newcastle-upon-Tyne; H. H. Markham, College of Medicine, Newcastle-upon-Tyne; R. O. Mather, L.R.C.P. and S.Eng., University College, Liverpool; J. Muirhead, College of Medicine, Newcastle-upon-Tyne; E. F. Pratt, L.R.C.P.Lond., Mason College, Birmingham; M. Richards, L.S.A., London Hospital; N. Roberts, College of Medicine, Newcastle-upon-Tyne; R. L. Routledge, College of Medicine, Newcastle-upon-Tyne; E. N. Threlfall, College of Medicine, Newcastle-upon-Tyne; C. W. von Bergen, College of Medicine, Newcastle-upon-Tyne; D. H. Weir, College of Medicine, Newcastle-upon-Tyne.

Bachelor in Surgery (B.S.).—N. C. Bailes, College of Medicine, Newcastle-upon-Tyne; L. J. Blandford, College of Medicine, Newcastle-upon-Tyne; S. Cross, College of Medicine, Newcastle-upon-Tyne; H. B. Fawcus, College of Medicine, Newcastle-upon-Tyne; R. D. Fisher, M.R.C.S., L.R.C.P., London Hospital; L. Fothergill, M.B., College of Medicine, Newcastle-upon-Tyne; E. Gofton, College of Medicine, Newcastle-upon-Tyne; R. B. Greaves, L.S.A., University College, Sheffield; W. J. Harrison, College of Medicine, Newcastle-upon-Tyne; W. C. Hayward, M.R.C.S., L.R.C.P., Charing Cross Hospital; J. T. Johnson, College of Medicine, Newcastle-upon-Tyne; H. H. Markham, College of Medicine, Newcastle-upon-Tyne; J. Muirhead, College of Medicine, Newcastle-upon-Tyne; E. F. Pratt, L.R.C.P.Lond., Mason College, Birmingham; M. Richards, L.S.A., London Hospital; N. Roberts, College of Medicine, Newcastle-upon-Tyne; R. L. Routledge, College of Medicine, Newcastle-upon-Tyne; E. N. Threlfall, College of Medicine, Newcastle-upon-Tyne; C. W. von Bergen, College of Medicine, Newcastle-upon-Tyne; D. H. Weir, College of Medicine, Newcastle-upon-Tyne.

ROYAL UNIVERSITY OF IRELAND.

FIRST EXAMINATION IN MEDICINE.—The following candidates have passed this examination:

Anna E. Adderley, Catholic University School of Medicine and Royal College of Science; *Lily A. Baker, Royal College of Science; J. Brady, University College, Dublin; *M. Cagney, Queen's College, Cork; *J. J. Clarke, University College, Dublin; *W. M. Crofton, University College, Dublin; *J. Dowling, Queen's College, Galway; E. Fitzgerald, Queen's College, Belfast; *M. FitzGerald, University College, Dublin; *D. Gillespie, Queen's College, Belfast; *Marie E. Hayes, Royal College of Science; *C. G. Lowry, Queen's College, Belfast; J. Morris, Queen's College, Cork; *M. J. O'Flynn, Queen's College, Galway; P. Power, Queen's College, Cork; *J. J. Rogers, University College, Dublin; *F. C. Sampson, University College, Dublin; *D. H. Vickery, Queen's College, Cork.

SECOND EXAMINATION IN MEDICINE.—The following candidates have passed this examination:

UPPER PASS.—*S. H. G. Blakely, Queen's College, Belfast; *T. Carnwath, Queen's College, Belfast; *R. H. Caughey, B.A., Queen's College, Belfast; *J. P. I. Harty, Queen's College, Cork; *W. R. Hayden, Queen's College, Belfast; *H. M. Johnston, Queen's College, Belfast; *T. Killen, Queen's College, Belfast; *J. Shipsey, Queen's College, Cork; J. K. Small, Queen's College, Belfast; *W. Warnock, Queen's College, Galway.

PASS.—J. D. Buchanan, Queen's College, Belfast; A. A. Chancellor, Queen's College, Belfast; W. Cummings, Queen's College, Belfast; P. F. Dolan, M.A., Catholic University School of Medicine; R. J. Dwane, Catholic University School of Medicine; A. J. Foote, Queen's College, Cork; J. J. Gillis, Queen's College, Belfast; A. W. Hamilton, Queen's College, Belfast; S. T. Irwin, Queen's College, Belfast; J. W. Killen, Queen's College, Belfast; J. F. McDermott, Queen's College, Cork; T. McFeteridge, Queen's College, Cork; F. A. McOstrich, Queen's College, Cork; P. J. Murray, Catholic University School of Medicine; W. F. O'Connor, Queen's College, Cork; D. J. Rottantree, Catholic University School of Medicine; C. E. Suffern, Queen's College, Belfast; T. H. Suffern, Queen's College, Belfast; A. T. Swan, Catholic University School of Medicine; J. Thompson, Queen's College, Belfast; Margaret Tonar, Queen's College, Belfast; J. W. A. Wilson, Queen's College, Belfast.

Candidates marked thus (*) may present themselves for the further examination for honours.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,490 births and 4,186 deaths were registered during the week ending Saturday last, September 30th. The annual rate of mortality in these towns, which had decreased from 20.8 to 20.6 per 1,000 in the five preceding weeks, further declined to 19.1 last week. The rates in the several towns ranged from 12.6 in Bradford, 13.4 in Norwich, 14.3 in Croydon, and 14.4 in Halifax, to 25.8 in Hull, 26.0 in Salford, 26.5 in Liverpool, and 27.9 in Preston. In the thirty-two provincial towns the mean death-rate was 20.8 per 1,000, and exceeded by 4.1 the rate recorded in London, which was 16.7 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.3 per 1,000; in London the death-rate was equal to 2.2 per 1,000, while it averaged 4.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 5.5 in Bolton, 5.7 in Portsmouth, 6.2 in Preston, and 6.4 in Sheffield. Whooping-cough caused a death-rate of 1.0 in Bolton, 1.2 in Leicester, and 1.6 in Portsmouth; "fever" of 1.4 in Portsmouth, in Salford, and in Sheffield, and 2.3 in Birkenhead; and diarrhœa of 3.6 in Salford, 3.7 in Birmingham, 3.9 in Gateshead, 4.0 in West Ham, and 5.3 in Preston. The mortality from measles and from scarlet fever showed no marked excess in any of the large towns. The 95 deaths from diphtheria in the thirty-three towns included 44 in London, 13 in Sheffield, 8 in Leeds, 6 in Birmingham, and 3 in Leicester. One fatal case of small-pox was registered in Hull last week, but not one in any other of the thirty-three towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday last, September 30th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,538 to 2,758 at the end of the four preceding weeks, had further risen to 2,886 on Saturday last; 409 new cases were admitted during the week, against 298, 336, and 364 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, September 30th, 873 births and 562 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had decreased from 24.1 to 19.0 per 1,000 in the four preceding weeks, further declined to 18.4 last week, and was 0.7 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.1 in Leith and 15.6 in Paisley to 19.4 in Dundee and 24.8 in Greenock. The zymotic death-rate in these towns averaged 3.7 per 1,000, the highest rates being recorded in Dundee and Greenock

The 261 deaths registered in Glasgow included 2 from measles, 4 from scarlet fever, 3 from whooping-cough, 6 from "fever," and 40 from diarrhœa. Three fatal cases of diphtheria, and 15 of diarrhœa were recorded in Edinburgh; 2 deaths from measles and 2 from diphtheria occurred in Greenock, and 11 from diarrhœa in Dundee.

MEDICO-LEGAL.

BOROUGH CORONERS.

MEDICAL CORONER writes as follows: In the absence of the coroner and his legal deputy from a town, who can hold an inquest, and what is the form to go through?

*** We do not find that there is any legal provision made for such a contingency, but we have been advised that the mayor of the town in case of such an emergency occurring would be justified in appointing a deputy *pro tem.* for the purpose of holding the inquest, and probably he would nominate one of the adjoining county coroners.

MEDICAL WITNESSES.

S. L. C. M. states that he has attended on three different days at the police-court to give evidence in a case of alleged murder, and is now bound over to appear at the Central Criminal Court in the same case. He wishes to know what fees he is entitled to, and when and how they will be paid.

*** Our correspondent is entitled to receive for each attendance at the police-court a sum in the discretion of the magistrate not exceeding 10s. 6d., and at the Central Criminal Court a sum not exceeding £1 1s. per diem. The fees will be paid by the Treasury at the conclusion of the case. In criminal cases no preliminary tender of fees is necessary.

BONDS NOT TO PRACTISE.

PHYSICIAN.—We are not aware whether our correspondent's question refers to England or Scotland, but, assuming it to be the former, we consider that the bond, so far as we can judge from our correspondent's letter, is valid, and that in the absence of a time limit the assistant is unable to practise in the district, even after the death of his former principal. We venture to remind our correspondent that questions of this kind will be far more satisfactorily dealt with by his own legal adviser, before whom the full facts of the case can be laid.

UNSTAMPED RECEIPTS.

MEMBER.—The receipt would be valid, but would not be receivable as evidence of payment without being stamped, and the giver of such a receipt renders himself liable to a penalty of £10.

INDIA AND THE COLONIES.

THE QUEEN'S DAUGHTERS IN INDIA.—This is the title of a book which has been extensively circulated, describing the working of the Contagious Diseases Acts in India. The descriptions are supplied by pious and philanthropic ladies, who, under strong religious influence and fixed abhorrence of "State encouragement of vice," sought and obtained their information from prostitutes on whose traffic in vice and disease these Acts placed some measure of restriction. That this class should respond to partial and fervid denunciation of interference with their liberty to spread loathsome disease is not surprising. We have been favoured with a reprint of an excellent letter written upon this subject by a staff surgeon, who points out that these ladies were blind to all but one side of the question; that the amount of venereal disease in the army, and the sickness, incapacity, and evil arising therefrom are unquestionably extensive and serious, and affect civil as well as military communities; and that the amount and severity of disease undoubtedly increased after the repeal of the Contagious Diseases Acts. He shows that the practice at present in force of making these diseases notifiable, and, as regards diseased women, of insisting on their treatment in hospital or departure from cantonments, promises some preventive benefit, without restoration of the objectionable features of the old Acts, while efforts for moral reformation may simultaneously be resorted to.

HOSPITALS AND DISPENSARIES OF THE HYDERABAD ASSIGNED DISTRICTS.—The report submitted by Lieutenant-Colonel C. L. Swaine, M.D., is a triennial one, including the years 1896-97-98. There are 47 institutions in operation in these districts, in which in 1898 304,987 patients were treated. The attendance of patients has been falling off since 1893. This is attributed to various causes, including famine and plague; but the resident inclines to impute it to lack of zeal and energy on the part of the staff. To the same cause he ascribes a falling off in the number and importance of surgical operations. The financial condition of the institutions is satisfactory. A system of levying fees for treatment and medicines from those able to afford it is in force in this province, and Rs.2,807 were realised on this account. The system, however, tends to diminish subscriptions. The year 1898 was a healthy one. The famine of 1897 nearly doubled the number of indoor patients treated, but reduced the outdoor. 1,233 packets of quinine were sold, against 861 in 1897, indicating increased popularity of this measure.

HOSPITALS AND DISPENSARIES OF THE CENTRAL PROVINCES.—It is a curious fact that in India while a moderate increase of sickness among the native population such as occurs in an unhealthy season causes increased resort to hospitals and dispensaries, a great and overwhelming disaster such as a serious famine or an unusual visitation like plague, causing panic, diminishes the attendance on, and impairs the usefulness of these institutions. The people become demoralised, are too weak and ill to travel, and special measures have to be adopted for their relief. Such was the case in the Central Provinces in the famine year 1897. There was, according to the report for that year submitted by Colonel G. Hutcheson, M.D., a decrease of 32,998 patients treated in the Government dispensaries; but the report includes for the first time the figures relating to 22 Feudatory States and 4 Zamindari Dispensaries, which raised the total to 1,526,659, while 607,949 patients received medical treatment at famine institutions. The same causes which diminished the attendance also reduced the number of surgical operations and the revenue. The death-rate among indoor patients was high, amounting to 13.44 per cent. of treated. There was a large increase of cases of malarial fever and of diseases accompanying famine, such as dysentery, diarrhœa, and ulcers; 1264 packets of quinine were sold through the agency of the post-office.

MEDICAL NEWS.

THE lectures at the National Hospital for the Paralysed and Epileptic, Queen Square, will be resumed on Tuesday next, at 3.30 P.M., when Dr. Beevor will give a lecture on Cerebral Localisation. The lectures are free to medical practitioners and senior students.

THE lectures at the Hospital for Sick Children, Great Ormond Street, were resumed on Thursday, October 5th, when Dr. Lees gave a lecture on Rheumatism in Children. Subsequent lectures will be given on succeeding Thursdays down to December 14th, with the exception of November 9th, when no lectures will be given.

The Chelsea Hospital for Women will be reopened on October 9th. The operating theatre has been enlarged, and with its adjacent rooms brought into condition to fulfil the requirements of modern surgery. The electric light has been installed, a new hot-water service and electric lift have been provided, and the interior of the hospital has been thoroughly cleaned and painted. The Convalescent Home at St. Leonards-on-Sea is also being cleaned and painted, and will also be reopened next week.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—A meeting of the Northern and Midland division of this Association will be held at the West Riding Asylum, Menston, Leeds, on Wednesday, October 11th. Dr. MacDowall and staff will show members round the asylum at 2.30 P.M. The question of trained nurses for the insane in Union workhouses will be discussed and a paper will be read by Dr. C. K. Hitchcock on the disadvantages of hypnotics in the treatment of the insane. Dr. MacDowall invites members to dine at the asylum at 6.30 P.M.

THE annual service in St. Paul's Cathedral, organised by the Guild of St. Luke the Evangelist and Physician, to emphasise the working together of the two professions of religion and medicine for the good of humanity, will take place on Thursday, October 19th, at 7 P.M., when the Bishop of Stepney will preach. All the members of the profession in London have been invited to attend, and admission to the cathedral will be by ticket only. The offertory will be, as far as possible, transferred to the fund for providing medical missionaries to other lands—a work which is earnestly engaging the attention of St. Luke's Guild.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM AND MIDLAND SKIN AND URINARY HOSPITAL.—Assistant Surgeon. Applications to the hospital by October 18th.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, with furnished apartments, board and washing. Applications endorsed "Assistant House-Surgeon" to the Secretary.

CAIRO: EGYPTIAN GOVERNMENT SCHOOL OF MEDICINE.—Professor of Ophthalmology. Applications, addressed "The Director, Government School of Medicine, Cairo," by October 15th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) Assistant Physician; must be F. or M.R.C.P.Lond. (2) Pathologist; salary, 100 guineas per annum. (3) Second House-Physician; appointment for six months; board and residence provided, and salary at the rate of £30 per annum. Applications to the Secretary by October 11th.

COLCHESTER: ESSEX AND COLCHESTER GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum with board, washing, and residence. Applications to the Secretary by October 14th.

EDINBURGH ROYAL INFIRMARY.—Superintendent. Salary, £500 per annum, with free house, coal, and light. Applications to Mr. W. Caw, Treasurer and Clerk, by November 15th.

GREAT NORTHERN CENTRAL HOSPITAL.—Junior House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging, and washing. Applications to the Secretary by October 10th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Resident House-Physician. Appointment for six months and an honorarium of £25. (2) Assistant Resident Medical Officer. Salary, £100 per annum, with board and residence. Applications to the Secretary by October 10th.

HOSPITAL FOR DISEASES OF THE SKIN, 52, Stamford Street, Blackfriars, S.E.—Honorary Pathologist. Applications to the Secretary by October 16th.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Appointment for six months. Salary, £30. Applications to the Secretary by October 21st.

KING'S COLLEGE, LONDON.—Sambrook Surgical Registrarship. Applications to the Secretary by October 13th.

LAGOS RAILWAY, West Africa.—Two qualified Assistant Medical Officers, aged 25 to 40. Salary, £30 to £35 per month, with free quarters, first class passages out and home. Applications, endorsed "Assistant Medical Officer," to Messrs. Shelford and Son, 35A, Great George Street, Westminster, S.W.

LEICESTERSHIRE AND RUTLAND LUNATIC ASYLUM.—Assistant Medical Officer, unmarried. Age 25 to 30. Salary, £150, rising £10 yearly to £200 per annum, with board, lodging, washing, and attendance. Applications to W. I. Freer, Clerk to the Committee of Visitors, 10, New Street, Leicester, by October 9th.

LINCOLN COUNTY HOSPITAL.—House-Surgeon; under 30 years of age and unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by October 26th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers at the Fever and Small pox Hospitals; unmarried, and not exceeding 35 years of age. Salary, £160 per annum during the first year, £180 the second year, and £200 the third and subsequent years with board, lodging, attendance and washing. Applications on forms to be obtained at the office of the Board, Norfolk House, Norfolk Street, Strand, by October 14th.

NORTHAMPTON: ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES.—Junior Assistant Medical Officer; unmarried and not more than 30 years of age. Salary, £110 per annum, increasing £25 per annum to £200, with board, apartments, and washing. Applications to the Medical Superintendent by October 19th.

NORTH-EASTERN HOSPITAL FOR CHILDREN.—House-Surgeon. Appointment for eight months. Salary at the rate of £50 per annum. Applications to the Secretary, 27, Clement's Lane, E.C., by October 17th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—(1) House-Surgeon. Salary, £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th. (2) Assistant House-Surgeon. Apartments, board, and washing to be an equivalent for services rendered. Applications to the Secretary for the former by October 9th and the latter by October 23rd.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—House-Surgeon. Appointment for six months. Salary at the rate of 50 guineas per annum, with board and residence. Applications to the Secretary by October 24th.

POPLAR HOSPITAL FOR ACCIDENTS.—First and Second Assistant House-Surgeons. Appointments for six months but renewable. Salary at the rate of £65 per annum, with board, and residence. Applications to the House-Governor by October 20th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—(1) Assistant Physician; must be F. or M.R.C.P. Lond. (2) Resident Medical Officer. Appointment for six months, when re-election is required. Salary at the rate of £100 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

ST. MARY, ISLINGTON.—Resident Assistant Medical Officer at the Workhouse and Infirmary, St. John's Road. Salary, £80 per annum, with rations, apartments, and washing. Applications on forms provided to be sent to the Clerk, Guardians' Offices, St. John's Road, Upper Holloway, N., by October 16th.

SALISBURY INFIRMARY.—Assistant House-Surgeon; unmarried. Salary, £50 per annum. Applications to the Secretary by October 19th.

SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £40 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 11th.

SANITARY INSPECTORS' EXAMINATION BOARD.—Four Examiners. Applications to W. R. E. Coles, Honorary Secretary, 1, Adelaide Buildings, London Bridge, E.C., by October 10th.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought).—Senior House-Surgeon at the Branch Hospital in the Royal Victoria and Albert Docks, E. Salary, £75 per annum, with board and residence, and an additional £25 per annum if certain clinical work is performed satisfactorily. Applications to the secretary by October 9th.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Surgeon. Salary £120 per annum, increasing by £10 per annum with furnished apartments, board, and washing. Applications to the Secretary by October 9th.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, washing and lodging. Applications, endorsed "Assistant House-Surgeon," to the Honorary Secretary by October 20th.

TOTTENHAM HOSPITAL.—(1) Honorary Physician to Out-patients. (2) Honorary Gynæcologist to Out-patients. (3) Resident Medical Officer. Salary, £60 per annum, with board, residence, and laundry. Applications to the Chairman of the Joint Committee for the first two appointments by October 24th, and for the latter October 17th.

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Clinical Assistant. Board, residence, and laundry provided. Applications to Dr. Parry, Resident Medical Officer.

VICTORIA UNIVERSITY.—External Examiner in Anatomy. Appointment for three years. Applications to the Registrar by November 1st.

WAKEFIELD: WEST RIDING ASYLUM.—Fifth Assistant Medical Officer. Salary, £100 per annum, rising £10 annually to £150, with furnished apartments, board, washing, and attendance. Applications to the Medical Director by October 11th.

WESTMINSTER GENERAL DISPENSARY.—Honorary Surgeon. Applications to the Secretary, 9, Gerrard Street, Soho, by October 23rd.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £110 per annum, with board, lodging, and attendance. Applications to Mr. W. Draper, De Grey House, York, by October 18th.

MEDICAL APPOINTMENTS.

CROOKE, T. L., L.R.C.P., L.R.C.S.Edin., appointed House-Surgeon to the Christchurch Hospital, New Zealand, *vice* W. Fox, M.B., Ch.M.Glasg., resigned.

DOUGLAS, Archibald E., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Resident Medical Officer to the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, Lancaster, *vice* T. Telford-Smith, M.A., M.D., B.Ch., Medical Superintendent, resigned.

EVANS, D. E., M.B., B.S.Lond., appointed Anæsthetist and Pathologist to the Swansea Hospital, *vice* E. Reid, M.R.C.S., L.R.C.P.Lond.

FOWLER, C. H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Second Division of the Third District of the Newhaven Union, *vice* J. P. Pearce, M.R.C.S.Eng., resigned.

HALL, H. S., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Workhouse of the Leigh Union.

HAYES, A. Herbert, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the East London Hospital for Children, Shadwell, *vice* W. C. Ambrose, M.R.C.S.Eng., L.R.C.P. Lond., resigned.

INGRAM, A., M.B., C.M.Edin., appointed Assistant Medical Officer to the Aston Union Workhouse, *vice* V. N. Chitali, F.R.C.S., L.R.C.P.Edin., resigned.

JOYCE, R. C., M.B., C.M.Edin., appointed Medical Officer for the Cymmer District of the Pontypridd Union, *vice* H. N. Davies, L.R.C.P.Lond., M.R.C.S.Eng.

JUKES, G., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Longridge Urban District, *vice* E. Eccles, M.R.C.S.Eng., resigned.

KELYNACK, T. N., M.D.Vict., M.R.C.P.Lond., appointed Medical Registrar to the Manchester Royal Infirmary, *vice* R. T. Williamson, M.D., resigned.

KENNY, T. H., M.R.C.S., appointed Resident Surgeon at the Hospital, Gympie, Queensland.

LYLE, Robert P. E., M.D.Dub., B.Ch., appointed Lecturer in Midwifery and Diseases of Women and Children in the Durham University College of Medicine, Newcastle-on-Tyne, *vice* T. C. Nesham, M.D.Edin., deceased.

MIDDLEMIST, Robert C., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the Rybill District of the Stamford Union.

PARRY, Edward James, M.R.C.S.Eng., L.R.C.P.Lond., L.S.A., appointed House-Surgeon to the Torbay Hospital and Eye Infirmary, Torquay.

PATTERSON, J. H., M.B., Ch.M.Edin., appointed Medical Officer of Health and Public Vaccinator for the Traralgon Shire and for Toongabbie Riding of Rosedale Shire, Victoria, *vice* J. P. Montgomery, M.B., Ch.B.Melb., resigned.

POWELL, Cecil, M.R.C.S.Eng., L.R.C.P.Lond., appointed Junior Assistant Medical Officer to the Wandsworth and Clapham Union.

QUILTER, J., M.B.Melb., appointed Government Medical Officer and Vaccinator for the District of Moruya, New South Wales, *vice* Edward Boot, M.R.C.S.Eng., resigned.

RABY, Leonard, M.D.Durh., M.R.C.S.Eng., appointed Medical Officer for the First District of the Devizes Union, *vice* E. N. Carless, M.D.Aberd.

RICHMOND, R. T., M.A.Cantab., M.R.C.S., L.R.C.P.Lond., appointed House Physician to the Royal Hants County Hospital, Winchester.

SHELLEY, P. W. G., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Cruwys Morchard District of the Tiverton Union, *vice* G. F. Welsford, M.B.Camb., M.R.C.S.Eng.

STANWELL, St. John. M.B., C.M.Edin., appointed Medical Officer and Public Vaccinator for the Barnet District of the Stamford Union.

SUTHERLAND, D. S., M.B., Ch.B.Glasg., appointed Resident House-Surgeon to the Cumberland Infirmary, Carlisle.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8 P.M.—General meeting; 8.30 P.M. ordinary meeting. Opening address by the President, Dr. Frederick Roberts. Discussion on Personal Experience in relation to Serum Therapeutics and Antitoxin Treatment, by Drs. Mitchell Bruce, G. Heron, Sidney Martin, and J. Washbourn.

TUESDAY.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street W., 4 P.M.—Dr. T. D. Savill: Clinical Demonstration—On the Diagnosis of Disorders of the Nervous System, with typical cases of the principal divisions.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. Beevor: On Cerebral Localisation.

Hospital Reform Association, St. Martin's Town Hall, W.C., 4 P.M.—Conference.

WEDNESDAY.

Hunterian Society, 8.30 P.M.—Dr. Sansom: The Effects of Influenza on the Heart and Circulation—their Clinical History and their Treatment.

Hospital Reform Association, St. Martin's Town Hall, W.C., 4 P.M.—Conference.

THURSDAY.

British Gynæcological Society, 8 P.M.—Specimens will be shown by Dr. Macnaughton-Jones, Mr. Charles Ryall, and others. Paper—Mr. J. Furneaux Jordan: On the After-results of Operations on the Uterus and Appendages.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Dr. J. Mitchell Bruce: Cases in the Wards.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Penrose: Demonstration of Selected Cases.

North London Medical and Chirurgical Society, Great Northern Central Hospital, 9 P.M.—Dr. Champneys: On some points in the Natural History of Uterine Fibroids.

FRIDAY.

Clinical Society of London, 8.30 P.M.—Dr. Rolleston: A case of Acute Streptococcal Meningitis supervening in the course of Chronic Nephritis. Dr. Churton: Aneurysm of the First Part of the Arch of the Aorta projecting into the Axilla. Dr. F. J. Smith: A case of Obstinate Anæmia in a Young Girl associated with Peculiar Trophic Disturbances and with Doubtful Thrombosis of the Superior Longitudinal Sinus. Mr. H. Betham Robinson: Acute Intestinal Obstruction due to an Intussusception of Meckel's Diverticulum.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

GALLOWAY.—On October 1st, at 54, Harley Street, W., the wife of James Galloway, M.D. F.R.C.P., of a daughter.

LAWSON.—At 46, Leytonstone Road, Stratford, the wife of H. A. Wellesley Lawson L.R.C.P. & S.Edin., of a daughter.

MARRIAGES.

ADAMSON—JOHNSTON.—At Corstorphine House, on October 3rd, by the Very Rev. James MacGregor, D.D., St. Cuthbert's, Edinburgh, Charles Henry Adamson, M.B., C.M., F.R.C.S.E., Russell House, Edmonton, London, to Margaret Fraser, only daughter of the late Thomas Johnston and Mrs Johnston, Corstorphine House, Midlothian.

FFENNELL—GRAY.—On September 28th, at All Saints Church, Annesley, Notts, by the Rev. W. H. Kynaston, B.A., Vicar, Edward Barrington Ffennell, M.D., B.Ch., etc., T.C.D., of Nuncar Gate, Kirkby, Notts, formerly of Enniskerry, co. Wicklow, to Frances, elder daughter of the late William Gray, and niece of Henry Lewis, of the Larches, Annesley, Notts.

MORETON—HATHERELL.—On October 3rd, at St. Anselms, Davies Street, W., by the Rev. E. S. Richardson, B.A., Vicar of St. Matthews, Bolton, Lancashire, assisted by the Rev. B. N. Atkinson, M.A., Curate of Tarvin, Chester, and the Rev. C. G. Wyche, Rector of Beeston with Ashmanhough, Norfolk, T. W. Earl Moreton, B.A.Cantab., M.R.C.S. and L.R.C.P.Lond., Tarvin, Chester, to Katie, youngest daughter of Mrs. Hatherell, Banwyll, Somerset.

MUIR—BARNES.—On October 4th, at St. James's, Hatcham, S.E., by the Rev. Edwin Davies, Vicar of St. Paul's, Birkenhead, assisted by the Rev. E. J. Kennedy, Vicar of the Parish, and the Rev. W. H. Parsons, Curate-in-Charge of St. Michael's, Hatcham, Robert Douglas Muir, M.D.Brux., M.R.C.S.Eng., L.R.C.P.Lond., to Edith, daughter of Mr. and Mrs. George Barnes, of 60, Erlanger Road, New Cross Gate.

SUTHERLAND—GAIRDNER.—On Thursday, September 28th, at the University of Glasgow, by the Very Reverend Dr. Story, Principal of the University, assisted by the Reverend Dr. Strong, Hillhead Parish Church, and the Reverend Dr. Reith, Free College Church, Lewis Robertson Sutherland, M.D., Professor of Pathology in the University of St. Andrews, to Helen Christian, elder daughter of Sir William Gairdner, K.C.B., Professor of Medicine in the University of Glasgow.

DEATHS.

HUNTER.—At Jebba, Niger Territories, of malarial fever, on September 13th, Andrew Hunter, M.B., C.M., Medical Officer in the West African Frontier Force, and late of 173, King Street, Aberdeen, aged 31 years.

SHURLOCK.—On September 27th, at Eldridges Chertsey, Manwaring Shurlock, M.R.C.S., L.S.A., aged 85. Funeral at Chertsey Church on September 30th at 12.30. No flowers.

WATSON.—On September 29th, at Blackrock, Dublin, George Alexander Watson, M.B. Lond., D.P.H., M.R.C.S., L.R.C.P., eldest son of W. Tyndale Watson, M.D., of Tottenham, Middlesex, aged 31.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 2.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 2.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1, Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Tu., 2.30; Throat, M., 1.30 F., 2; Dental, M. Tu., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 1.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrician, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 3; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

C. J. W. asks to be referred to any literature relating to "Baron Liebig's Pneumatic Chamber."

DIPHTHERIA ANTITOXIN.

DOUBTFUL writes: I understand that some practitioners have recently had excellent results in diphtheria by using injections of antitoxin *per rectum.* Is there good authority for this method, and is it at all general?

AGENTS' CHARGES.

A CORRESPONDENT complains of the commissions charged by certain medical agents for procuring appointments as assistants. The amount appears to be a percentage of salary for a year, even when the post has not been held more than a few months.

*** The charges, though excessive, are in accordance with the terms set out on the circular enclosed. If this circular was shown to our correspondent at the time he sought the assistance of the agent, he will be bound by these terms.

ELECTROSTATIC MACHINE.

X. DESIRES to know what is the best form of electrostatic machine for x ray and therapeutic uses; also, what should be the number and diameter of plates of a really effective machine for the above purposes?

*** The best form of electrostatic machine is Wimhurst's. Twelve plates, 24-inch diameter, give excellent results. Cost about £52 10s. Messrs. Newton and Co. make a compact portable Wimhurst machine with vulcanite plates instead of glass, of above size, but slightly more expensive.

NOTES, LETTERS, Etc.

OBJECTIONABLE METHODS OF ADVERTISEMENT.

WE have again received a communication from a correspondent inquiring whether anything can be done to stop the practice prevalent among certain American drug dealers of circulating advertisements of a sensational or otherwise objectionable form in unclosed wrappers. We have already protested against this method on several occasions, and it is difficult to see why the advertisers should be so blind to their own interests as to continue a practice which is distasteful to the great majority of medical men in this country. To issue a pamphlet with a picture on the cover of a young lady in gala costume labelled "uterine weakness" is not the way to commend the drug described within to the attention of serious men. The usual effect on the recipient is to make him tear up the whole pamphlet or burn it unread.

LETTERS, COMMUNICATIONS, ETC., have been received from **A** Messrs. Allen and Hanburys, London; Dr. R. J. Anderson, Newry. **B** B.; Messrs. C. Barker and Sons, London; Dr. J. M. Bruce, London; Dr. G. F. Blacker, London; Mr. G. H. Broadbent, Manchester; Dr. F. W. Burton-Fanning, Norwich; Dr. E. G. Barnes, Eye; Dr. T. Beattie, Newcastle-on-Tyne; E. P. Baumann, M.B., Glasgow; Banker; Dr. G. Buchanan, London; Dr. Blake, Stockport. **C** Messrs. A. Constable and Co., London; Dr. W. C. S. Clapham, Rotherham; Dr. W. Collier, Oxford; Dr. F. G. Clemow, London; Mr. W. R. B. Coles, London; Dr. F. C. Coley, Newcastle-on-Tyne; S. Crawshaw, M.B., Ashton-under-Lyne. **D** Doubtful; Dr. A. Duke, Cheltenham; Dr. J. Dunlop, Glasgow; W. B. Drummond, M.B., Edinburgh. **E** E. F.; Eyemes; Ex-Surgeon Cunard Ss. Co. **F** Fellowship; F. M.; P. C. Fenwick, M.B., Christchurch, N.Z.; Dr. W. F. Farquharson, Carlisle. **G** Mr. C. A. Gourlay, Glasgow; Sir W. T. Gairdner, K.C.B., Glasgow; Mr. J. Grimshaw, Blackpool: Dr. J. Glaister, Glasgow. **H** Dr. G. A. Hansen, Bergen; H.; Mr. M. H. Hall, Frant; Dr. H. Handford, Nottingham: Mr. J. Humphrey, London; Dr. J. Harper, London; Dr. A. Heath, Reepham. **I** Mr. R. E. Ingram Johnson, Chester-le-Street. **J** Junior Captain I.M.S.; Mr. H. H. Jennings, London. **K** Dr. T. N. Kelynack, Manchester; Dr. S. J. J. Kirby, Fressingfield. **L** L.; Dr. W. J. Lawrie, Ayr. **M** J. Murray, M.B., London; Dr. J. W. Martin, Dumfries; I. D. Mackay, M.B., Knaresborough; Dr. R. L. Meade-King, Taunton; Mr. G. H. Morley, Birmingham; Member; Dr. R. McNeill, Oban; Mr. J. McKay, London; Mixed; M.D.; Mr. J. J. de Z. Marshall, Teddington. **N** N. B. U. **O** Officer of the R.A.M.C. **P** Mr. H. G. Plimmer, London; P. V.; Paterfamilias; Mr. J. F. Palmer, London. **R** Mr. C. B. Rossiter, London; Mr. T. Richmond, Glasgow; W. B. Russell, M.B., Colwyn Bay; Mr. R. T. Richmond, Winchester; Mr. T. F. Raven, Broadstairs; Mr. D. C. Rees, London; G. A. O'B. Reid, M.B., Southsea. **S** Dr. J. A. Shaw-Mackenzie, London; Dr. G. H. Simmons, Chicago; S. L. C. M.; Mr. R. E. Sleman, London; Mr. A. B. Soltau, London. **T** Mr. J. Thomson, Portrush; Dr. T. Telford-Smith, Lancaster. **W** Dr. E. Walford, Cardiff; Mr. W. R. Williams, Clifton; Dr. S. E. Wells, London; Dr. F. Wilcocks, London; Mr. J. F. Wilkinson, Manchester; Mr. C. H. Whiteford, Plymouth; W. M. M. **X** X.; etc.

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N.B.—It is against the rules of the Post Office to receive letters at *Foreign Stations* addressed either in initials or numbers.

SIXTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899.

PROCEEDINGS OF SECTIONS.

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

George Granville Bantock, M.D., President.

A DISCUSSION ON THE TREATMENT OF FEVER FOLLOWING DELIVERY

(WITH SPECIAL REFERENCE TO SERUMTHERAPY).

I.—Herbert R. Spencer, M.D., B.S., F.R.C.P.,
Professor of Obstetric Medicine in University College, London; and Obstetric Physician to University College Hospital.

When I received the honour of an invitation to open the discussion on the Treatment of Fever following Labour, with special reference to Serumtherapy, I was at first rather alarmed at the wide range included in the subject; but on consideration I felt that for the purpose of a practical discussion the officers of the Section had exercised a wise discretion in leaving the title somewhat vague, and I have construed it as meaning the treatment of "puerperal fever" (by which I mean fever during the puerperium caused by microbic infection from without), and of fever in the puerperium resembling "puerperal fever." From this point of view fever following delivery arranges itself in four classes.

The first class has been styled "one-day fever." It is well known to all of you that about the third day of the puerperium a slight elevation of temperature, rarely surpassing 102°, is met with not uncommonly. Whether this is due to the commencement of lactation (though "milk fever" does not occur in an absolutely normal puerperium) or whether it is due to copræmia is not always clear, but the treatment of this form of fever is simple; indeed, it almost treats itself, the usual mild aperient given on the third day being generally followed by the fall of the temperature to normal. In this class of one-day fever one meets sometimes with a very considerable rise of temperature in the puerperium from purely emotional causes; thus I have known the temperature to rise to 105° within half an hour owing to the patient being startled by a cracker thrown against her bedroom window, and I have also known a temperature much higher (107.6°) as an immediate result of the reception of a letter containing disquieting news. This emotional fever is, however, temporary, subsiding of itself.

The second class of fever met with in the puerperium is due to complications which are not referable to the labour. The lying-in patient is liable to any of the diseases which may attack her apart from that condition. The treatment of these complications embracing the whole field of medicine I shall, of course, not attempt to discuss. There are, however, certain complications which very closely resemble puerperal fever, from which the diagnosis is sometimes very difficult, and yet is necessary before we can treat the patient rationally or even safely. Amongst these are influenza, scarlet fever, acute phthisis, and typhoid fever.

Influenza is more frequently diagnosed than met with in the puerperium; it has been defined as the refuge of the destitute diagnostician, and is certainly sometimes used as a balm to the conscience of the practitioner who is not thorough in his application of antiseptics. It should be the last thing diagnosed in the puerperium. Cases so diagnosed are generally due to septic infection; nevertheless, I saw in the severe epidemic years ago a good many cases of undoubted influenza; of these two, in which the disease was at its height when labour took place, terminated fatally.

Scarlet fever is a very rare disease in the puerperium, what is mistaken for scarlet fever being generally septicæmia accompanied by a scarlatiniform rash.

Acute phthisis also closely resembles pneumonia due to sepsis; the existence of fever during labour, of previous tuberculous disease, and the discovery of the bacillus will help in the diagnosis. Both forms of disease are equally unamenable to treatment.

The last instance of this class I shall mention—typhoid fever—presents great difficulties in diagnosis in cases in which the temperature rises in the early days of the puerperium. In the last twelve months I have seen two instructive cases of this class. In both I could find nothing in the pelvis pointing to septicæmia, and regarded them as probably typhoid; two general physicians who saw these cases were also doubtful as to the diagnosis, one inclining to the diagnosis of typhoid, the other to septicæmia. Widal's reaction was tried and gave positive results. Both patients died and the pelvic organs were found normal, and there were typhoid ulcers in the intestines. I mention these cases as indicating the importance of Widal's test, which, when applied by an expert, gives positive results in the great majority of cases of typhoid fever; its importance may be further illustrated by a case published by von Rosthorn, who, diagnosing by the clinical signs a case as septicæmia, adopted the bold treatment of removing the uterus, only to find at the *post-mortem* examination that the patient had suffered from typhoid fever.

The third class of fever met with in the puerperium is due to infection from pre-existing lesions, such as ovarian and fibroid tumours, cancer, stone in the bladder or ureter, pyosalpinx, appendicitis, etc. The treatment of these cases consists in examining the patient during pregnancy and removing these lesions from the pelvis by manipulation, or altogether by operation before, during, or after labour, according to the special circumstances of the case.

The fourth class of fever in the puerperium is due to external infection, and is what we understand by "puerperal fever." Since Pasteur discovered his vibrio in 1877 much interest has been shown in the bacteriology of puerperal fever; the disease was thought till lately to be due to the streptococcus pyogenes, although Brieger (1888) showed that it could also be caused by the staphylococcus, and von Franqué (1893) by the bacillus coli. Recent bacteriology of "puerperal fever" shows that it may have its origin in a number of micro-organisms (see Döderlein, Strünckman, and Whitridge Williams). Thus Whitridge Williams, in investigating 26 cases, found streptococci in 8 cases, staphylococci in 3 cases, colon bacilli in 6 cases, gonococci in 2 cases, anaërobic bacilli in 4 cases, diphtheria bacilli in 1 case, gas bacilli in 1 case, typhoid bacilli in 1 case.

Clinically, fatal puerperal fever is met with under three forms: acute septicæmia, which terminates fatally within a few days owing to the virulence of the infection (I have known it to kill in 30 hours in a case examined by a doctor who had just left a case of erysipelas); lymphatic septicæmia, the usual form, characterised by a rigor at the onset and by septic peritonitis; and venous septicæmia, characterised by a succession of rigors and by septic phlebitis, and frequently by secondary deposits. A sloughy condition of the placental site is generally, and abscesses in the uterine wall are sometimes, met with in both the latter forms.

Mild cases of puerperal fever are met with, as sapræmia or poisoning by the chemical products of micro-organisms (this form in practice is often not to be distinguished from true septicæmia) and local infection of the peritoneum, cellular tissue and the veins (perimetritis, parametritis, and phlebitis).

Treatment of Puerperal Fever.

The most important part of the treatment of puerperal fever consists in the prophylaxis. Although much is still unsettled in the scientific aspect of the subject, the value of prophylactic treatment has been conclusively proved by abundant clinical experience. Here I venture again to recommend the routine examination of every patient towards the end of the pregnancy. Only by this means can contracted pelvis and tumours and purulent foci be discovered and measures taken to prevent the dangers to which they may give rise during labour. It is most important to avoid all

unnecessary injury during labour, by too frequent examinations, by unnecessary forceps operations, or, on the other hand, by allowing the labour to be unduly prolonged. Abdominal palpation should to a great extent take the place of vaginal examination.

Careful management of the third stage of labour is of the highest importance, and particularly is it necessary to make sure that no placenta or membranes or clots are allowed to remain in the uterine cavity.

An equally important feature in the management of the labour is the thorough disinfection of the hands and vulva. The experiments of Döderlein have shown that in normal cases vaginal injections, so far from preventing the growth of micro-organisms, rather favour it, but in every case of labour the vulva should be washed with soap and water, rinsed with water and swabbed with 1 in 1,000 perchloride of mercury. The hands (of which the nails should always be short), wrists, or forearms should be thoroughly scrubbed with soap and hot water, rinsed with water, and soaked in 1 in 1,000 perchloride of mercury solution (in place of this some prefer alcohol). The safest lubricant is a solution of perchloride of mercury in glycerine of the strength of 1 in 1,000; instruments, if kept bright, require no lubricant, but should be immersed in a solution of carbolic acid (1 in 20). All instruments should be of metal or glass, and should be disinfected by boiling. I would add a word on aseptic clothing. The ideal clothing is white washable material. In private practice this is not always available, and a compromise may be effected between it and the ordinary black coat by drawing up the sleeves and pinning round the forearm a clean linen towel. In this matter even old Smellie 150 years ago was ahead of us, for he used to slip a nightgown over his clothing, and no doubt he found it very convenient when he took to his bed, as seems to have been his custom when tired by a difficult labour.

The question here presents itself as to whether it is necessary for a doctor who has attended a case of puerperal fever to abstain from practice for a time. Those who give the advice that it is necessary are generally those who are themselves engaged daily in examining septic cases. Mere abstention from practice will not prevent the carrying of infection when practice is resumed; thorough disinfection will immediately enable a practitioner to attend another lying-in woman with safety.

As regards the actual treatment of puerperal fever, when it has arisen, it is necessary, in the first place, that a thorough examination of the patient and of the uterus be made. The necessity of examining the uterus in these cases has been insisted upon by Dr. Cullingworth; and although my experience does not coincide with his as to the frequency with which portions of the placenta are found in the uterus in these cases, and the researches of Bumm show that more harm than good is likely to result from removal of minute adherent particles, yet I am convinced of the advisability of carrying out an intrauterine examination in nearly every case. In many cases, apparently almost hopeless, as a result of this examination I have removed putrid portions of placenta with recovery of the patient, and in three cases I have removed fibroid tumours by enucleation with an equally satisfactory result.

In order to avoid infecting the hands in examining a septic case I can strongly recommend the wearing of rubber gloves which I have used for the last four or five years in examining syphilitic and septic cases and in extraperitoneal operations. The gloves I have used are the ordinary *post-mortem* gloves, but the thin rubber gloves which have lately been made in Germany are far preferable for the purposes of examination, as they scarcely interfere with tactile sensation, and cause less discomfort to the patient than the uncovered finger.

Speaking generally, a septic substance found in the uterus should be removed, but there are some rare exceptions, of which I may mention strongly adherent pieces of placenta unattended by severe general symptoms (though often by high fever and foul discharge); these cases will often do better if the elimination of the substance be left to Nature than if violent and generally ineffectual attempts be made to remove them. But, speaking generally, the uterus should be completely emptied by the finger, occasionally by large, blunt-ended forceps, and, I think, never by means of the curette after labour at full term.

I have found *post mortem* the uterus so soft that the finger and thumb could pulp the organ like a fatty liver, and I have known the finger to be forced through the wall of the puerperal uterus during life; how much greater is the danger associated with a sharp instrument like the curette!

After emptying the uterus, in all cases where there is a foul discharge I usually irrigate the uterus once with a solution of iodine (1 drachm of tincture of iodine to the pint), or a weak solution of perchloride of mercury or carbolic acid or boracic acid, or by a large quantity of salt solution. Continuous irrigation of the uterus (first recommended by Schücking in 1877) is certainly useful in cases where some adherent tissue has to be left behind. Nevertheless, it is very irksome to the patient, and the tube is apt to cause by its pressure troublesome sores, and has even been known to perforate the uterus (see Pinard and Wallich), so that I have almost entirely abandoned continuous irrigation, and even oft-repeated irrigation, unless beneficial results of the first irrigation are marked.

The best intrauterine tube is, I think, Budin's catheter made of glass. In order to clean the septic endometrium Upshur has advised the employment of peroxide of hydrogen, which is very useful in cleaning up sloughy wounds, though I have no experience of its use in the uterus.

All forms of intrauterine irrigation and even vaginal irrigation are attended with some risk—risk of injury by the antiseptic employed, risk of perforation of the uterus, and, particularly, the unavoidable risk of embolism, of which I have seen two cases within the last twelve months, which gave rise to the greatest anxiety for a few hours after its occurrence, though, somewhat to our surprise, they both recovered. In order to drain the endometrium iodoform gauze has been employed; this also is not unattended with the risk of air embolism. I rarely employ it for draining the puerperal uterus, inasmuch as discharges are apt to be more copious than the iodoform gauze can well deal with.

An interesting modification of the gauze drainage is that proposed by Carossa—namely, the introduction of a catheter into the uterus, packing absorbent cotton or gauze around the catheter, and the introduction through the catheter of three teaspoonsful of 25 per cent. alcohol every hour.

The treatment of general septic peritonitis has been much discussed of late years. It has been proposed to open the peritoneum either by the abdomen or the vagina and even to remove the whole uterus. A number of successful cases of both methods of treatment have been published. Prior has advised the opening of Douglas's pouch and isolating the uterus from the general peritoneal cavity by means of iodoform gauze. The difficulty about the treatment of diffuse peritonitis lies in the uncertainty of the diagnosis until the condition is well advanced. In cases where there is clearly septic fluid in the peritoneum there is no doubt that operation is indicated. For my own part I have always waited until there has been evidence of localisation of the fluid, and then have opened the collection either through the abdominal wall or through Douglas's pouch. The milder forms of localised sepsis (perimetritis, parametritis, and phlebitis) are treated on the general principles of rest, hot and anodyne applications, etc.

With regard to the removal of the uterus in puerperal sepsis, it is satisfactory to learn that a patient can survive this operation, but the cases for which it is suitable appear to me to be very few, such as a uterus infected by carcinoma or by a fibroid which cannot be enucleated.

Other methods of remotely influencing puerperal fever are the nuclein treatment, which aims at producing an artificial leucocytosis, the fixation abscess of Fochier produced by the injection of turpentine into the cellular tissue (von Zwiccicki, Thierry), saline infusion into the cellular tissue or its administration by mouth (Zwiccicki) or rectum, intravenous injections of antiseptics (v. Kézmárszky), and ligature of infected veins. The last two methods do not commend themselves to my judgment, and the last in the few cases in which it has been tried has been unsuccessful.

With regard to the medicinal treatment of puerperal fever, there is not much to be said. Though in mild forms of infection aperients sometimes do good, they are not unattended with danger in the severe forms, being apt to set up diarrhœa which is very difficult to control. I know of no drug which beneficially influences the temperature in puerperal fever, and

I would most strongly deprecate the use of antipyretics for this purpose; though they will lower the fever, they also reduce the strength of the patient. Quinine may be given as a tonic, as an antipyretic I believe it is useless. I have given 80 gr. in a few hours without producing any effect upon the fever.

Puerperal fever patients need tonics and stimulants (alcohol, strychnine, digitalis, etc.), but the depressant antipyretics should, in my opinion, never be employed; cold packing is a much better method of reducing the temperature.

Fresh air is very necessary in the treatment of septicæmia. The beneficial effect of the removal of a poor patient from the close, hot atmosphere of the house to a well-ventilated hospital ward is often very striking.

With regard to the diet, the administration of food at regular intervals in quantity as great as the patient can take is, in my opinion, the most important part of the treatment, and alcohol may be given in large quantities with benefit. Where vomiting occurs rectal feeding with peptones should be employed.

Serum Treatment.—One of the first to suggest the treatment of puerperal fever by antitoxin was Dr. Watt Black, whose admirable address on puerperal fever is to be found in the *Transactions* of the Obstetrical Society for the year 1891. Since Marmorek (1895) stated that he could cure puerperal fever with antistreptococcus serum it has been employed in the treatment of a very large number of cases (over 350 cases were collected by the Committee of the American Gynecological Society up to April 1st of this year). Some observers regard it as beneficial, others as useless or harmful. Speaking generally, it may be said that those of the greatest experience are least impressed with its value. *A priori* it does not appear to be a scientific treatment for a disease which we have seen is by no means generally associated with a streptococcus to administer an antitoxin produced by that organism. This does not mean that it may not be beneficial in cases due to streptococcus, which were the only cases for which Marmorek recommended it, yet the experience of the Committee of the American Gynecological Society showed that the mortality was 33 per cent. after its use in cases in which streptococci were positively demonstrated. It is doubtful whether the natural mortality is as great as this. A. Fischer found that of 60 cases of one of the severest forms of septicæmia, namely, pyæmia, observed in the Berlin Women's clinic, 32 died, 19 were cured, and in 9 cases the result was unknown; nor is the treatment free from danger. Bar and Tissier and Baldy have seen death apparently caused by it, and B. Norris has seen it followed by erysipelas, Bar by albuminuria in 2 cases, and Dubrisay by dyspnœa. Wallich reported at the Moscow Congress (1897) that the morbidity and mortality rate had not been altered by the methodical employment of Marmorek's serum, even in large doses up to 750 c.cm. The report of the Committee of the American Gynecological Society on antistreptococcus serum in puerperal sepsis, of which a full account is given in the Epitome of the British Medical Journal for June 17th of this year, states that "the Committee find nothing in the literature, clinical or experimental, or in their own experience, to indicate that its employment may markedly improve the general results in the treatment of the condition."

The experience of the majority of observers is that the serum lowers the temperature of the patient; yet Baldy saw the temperature rise to 106 4° after the first injection, and later the thermometer registered considerably higher; others have had a similar experience. Many observations in favour of the serum have been published, but I regard the unfavourable reports as of more value, for in medicine as in religion

> What damned error but some sober brow
> Will bless it and approve it with a text?

In judging of the effect of this treatment, one must bear in mind the difficulty of prognosis in septic cases, the apparently hopeless sometimes recovering.

The conclusion to which the study of the subject of serum-therapy has led me is: (1) That as usually applied it has not a scientific basis; (2) that it has not lowered the mortality of puerperal sepsis; (3) that it usually lowers the temperature, and sometimes improves the general condition; (4) that its use is not free from danger. Whether it will prove of value in the treatment of pure steptococcic infection (detected by the examination of the uterus or the blood) remains for the future to show, but the results given above do not point in that direction, and I think the remark of Olshausen is justified, "We obstetricians have derived no benefit from serum-therapy."

In bringing before the meeting this brief and necessarily incomplete account of the treatment of fever following labour, while I have read either in the original or in abstract nearly every treatise which has appeared upon the subject during the last ten years, and have endeavoured to incorporate in my address the chief points with which they deal, I have not hesitated to give my own opinions upon the subject, not for the purpose of forcing on your notice personal views unless they are supported by arguments which commend themselves to your judgment, but rather the more readily to elicit the opinions of other members of this Association, which is the object and the chief merit of an opening address.

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TWO CASES OF PUERPERAL SEPTICÆMIA DUE TO STREPTOCOCCIC INFECTION.

A BACTERIOLOGICAL investigation in all cases of puerperal infection is of great importance, since in this way only can an accurate appreciation of the value of our methods of treatment be obtained. This is the more essential since the introduction of the serum treatment. It is well known that the streptococcus pyogenes is the pathogenic organism in many of the severe cases, but numerous other organisms (the staphylococcus pyogenes, the gonococcus, diphtheria bacillus, typhoid bacillus,[1] bacterium coli commune, and various anaërobic bacteria) may also cause severe, and even fatal, infection. Further, it is at present impossible to deduce from the clinical evidence or physical signs what particular organism is the cause of the symptoms in any individual case. The two cases described in this paper were examples of streptococcic infection of the endometrium, in which the diagnosis was made by cover glass and culture preparations of the secretion from the interior of the uterus, and from the blood. It was further confirmed by microscopic examination of the uterine mucosa and decidua removed by the curette. The infection in each instance occurred during natural delivery, the patients being attended only by midwives. Case I was seen on the third day and curetted; the patient made a rapid recovery, without the use of serum. Case II was not seen till the seventh day, and curetted; only temporary improvement occurred. Antistreptococcic serum was given, but the infection had become generalised, as shown by examination of the blood, and the patient died on the thirteenth day. The notes are as follows:

CASE I.—2-para, aged 26. Natural labour. Attended by midwife. No laceration of soft parts. Twenty-eight hours after delivery severe rigor. Temperature 105°, pulse 120. Uterine douche given. No good result. Fifty hours after delivery the condition was as follows: Temperature 105.2°, pulse 160, respiration 36 per minute. The patient was delirious, and for twelve hours had suffered from severe diarrhœa. The complexion was greyish, the tongue dry. The abdomen showed slight general distension. The uterus reached the umbilicus, and was tender and soft. The lochia were very scanty and sanguineous. No milk in the breasts. The vagina showed no laceration or evidence of local infection. It was decided to thoroughly explore and curette the uterus, as the patient was evidently suffering from severe septicæmia. Chloroform was given. The vagina and cervix were thoroughly cleansed. The uterine secretion was removed for examination by the introduction of a sterilised glass tube attached to a syringe. A uterine douche was now given. Nothing came away. Exploration with the finger revealed a large flabby uterus, walls smooth, and mucosa swollen and soft, except at placental site, which was roughened and covered by fibrinous exudation. The uterus was now thoroughly curetted by a sharp flushing curette, with the object of removing the whole of the infected mucosa and decidua. The cavity was then swabbed with perchloride solution (1 in 1,000) to remove any shreds; carbolic acid (50 per cent.) was now applied, and the cavity packed with sterlised gauze. Four hours later the temperature was 102.4°, pulse 120. The gauze was removed and ergotin given every four hours. Fourth day, temperature 101.4° in the morning, 101° in the evening, pulse 120. Patient felt much better. No diarrhœa. The uterus was firmly contracted, reaching only 3 inches above the symphysis. Fifth day, temperature 98.6° morning, 101° evening, pulse 88. Uterine douche given. Lochia scanty and purulent. Sixth day, temperature now became normal, and remained so. The patient made a rapid and complete recovery.

Bacteriological Examination.—Cover-glass preparations of the uterine secretion showed streptococci in large numbers, also some bacilli of doubtful nature. Cultures were made on agar and gelatine. They revealed pure growth of streptococcus pyogenes; no other bacteria could be isolated; anaërobic cultures were not carried out. A specimen of the blood was removed at the time of operation. Cover glass preparations and cultures on agar and gelatine were made; no streptococci were discovered. Sections of the uterine mucosa were made and stained by Gram's method. The surface showed a deposit of blood and fibrin in which a large number of streptococci were seen. The glandular epithelium was swollen and granular, and some streptococci were observed in the gland spaces. The deeper layer of the mucosa showed round-celled infiltration of the stroma with streptococci between the cells. The vessels were much dilated but did not apparently contain streptococci. No organisms were recognised in the deeper layer of the mucosa. The antistreptococcus serum was not given in this case, so immediate improvement followed the local treatment. Further, since the examination of the blood was negative the use of the serum was unnecessary.

CASE II.—2-para, aged 29. Natural labour, attended only by midwife. The perineum was lacerated, and sutured some hours after delivery. Third day, the patient had a severe rigor; temperature 103°. A uterine douche was given and the sutures removed. The pyrexia, however, continued for three days in spite of a daily uterine douche. On the seventh day the patient was seen for the first time. The condition was now as follows:—Temperature 104°, pulse 130; general appearance fairly good; the abdomen tender; the uterus had not involuted; it reached the umbilicus and was very sensitive; the perineum showed greyish exudation over its surface; the abdomen was not distended. There was no evidence of general peritonitis. *Per vaginam* the uterus was mobile, but some slight swelling was detected at the base of the right broad ligament. Chloroform was given. Cultures were taken of the uterine secretion and also of the blood. Exploration with the finger showed a large cavity containing small clots and abundant decidual *débris*. No placental remains were discovered. The uterus was curetted, and treated precisely as in the previous case. Eighth day, temperature 103° morning, 102° evening; pulse 120. The patient fairly well. Uterus much diminished in size; uterine douche given, also injections of ergotin every four hours to promote muscular contraction. Ninth day, temperature 102° morning, 102° evening; pulse 118. Tenderness was observed in the left iliac region, and *per vaginam* fulness in the left lateral fornix. General condition much improved. Tenth day, temperature 101° morning; pulse 100. In the evening, however, a sudden rise to 104.4° occurred. Injection of antistreptococcus serum 10 c.cm. Eleventh day, temperature 102.4°, evening 102°; pulse 120. There was now more evidence of left pelvic cellulitis, and some general abdominal distension. Injection of 10 c.cm. serum repeated. Twelfth day, patient became much worse. Uterus examined with finger and *débris* again removed. No improvement followed, and the patient died on the thirteenth day, the temperature rising before death to 109.8°. No necropsy could be obtained.

Bacteriological Examination.—The uterine secretion showed on cover slip preparations numerous streptococci. Culture on agar and gelatine gave pure growths of streptococcus pyogenes. Culture of the blood on agar showed abundant growth of streptococcus pyogenes. Microscopic sections of the uterine mucosa were made and stained by Gram's method. Streptococci could be recognised invading the whole thickness of the mucosa, and also occupying the smaller blood vessels. There was abundant

[1] Williams, *Centralblatt für Gynäkologie*, September 10th, 1898.

infiltration of the connective tissue stroma with round cells, and the organism could be recognised in the cellular spaces.

In this case temporary benefit occurred after curetting. At this time, however (seventh day) the streptococci, as shown by culture, had already invaded the blood stream. The injections of serum also effected temporary improvement, but were powerless to check the disease. Its use was undoubtedly commenced at too late a period, and it is possible that a larger dose might have had a more decided effect. The case was one of the lymphatic type of infection, as shown by the swelling and exudation in the broad ligaments. It is possible that vaginal hysterectomy, if undertaken after the curetting had failed, might have been successful, but this is very doubtful, since the blood stream was invaded by the streptococci.

A great amount of attention has been directed during recent years to the local treatment of puerperal infection, but there is still great difference of opinion as to its value; and the results obtained have been very variable. In a large proportion of cases a cure can be effected by local measures; in some a uterine douche repeated or not, as required, may suffice to check the disease; in others, exploration of the uterus by the finger or curette is of striking benefit. In most of these cases the infection is purely local, and often due to saprophytic anaërobic organisms, leading to putrefaction of retained clots, decidua, or placental tissue. If, however, virulent pathogenic organisms have invaded the uterus, the results of these modes of treatment are by no means so uniformly good.

The majority of severe and fatal cases of puerperal infection are due to streptococcic invasion of the endometrium and placental site. It is essential, however, that a bacteriological investigation of the uterine secretion should be made to enable us to estimate the value of the various forms of local treatment. This can be readily carried out in practice. After careful cleansing of the cervix a fine capillary tube may be passed into the uterine cavity, and secretion obtained. It is better, however, to use a small bent glass tube and syringe, by means of which a sufficient quantity of the discharge can be obtained for examination and culture. The ends of the tube can be readily closed by heat or sealing wax, and it can then be carried safely. The pathological anatomy and microscopical appearances in puerperal infection must form the basis of rational treatment. This has been carried out by Widal,[2] Bumm,[3] Gärtner,[4] Krönig,[5] and Pourtalès,[6] and others.

All research shows that the placental site is the usual seat of infection, and from this the whole of the endometrium may be invaded. The fibrinous masses and thrombi at the mouths of the venous sinuses and lymphatics form a very suitable medium for the growth of the organism. The infection is at first purely local. The rapidity of growth and the spread of infection depend upon two factors, (1) the virulence of the streptococcus, (2) the resisting power or vital reaction of the patient. In favourable cases the organisms remain superficial at the placental site or in the endometrium, and beneath this a well-marked layer of round-celled exudation is seen on section. This is the result of phagocytic reaction of the tissues. In other cases this zone is incompletely formed or entirely absent. The cocci are then observed entering the venous thrombi, rapidly producing a general blood infection; or they may pass into the lymph channels of the deeper layers of the mucosa and penetrate between the muscular fasciculi of the uterine wall. They may enter the broad ligament, giving rise to diffuse cellulitis, or more frequently they invade the peritoneum, causing fatal peritonitis. If the streptococcus is the sole infecting agent the lochia may be suppressed or profuse and sanguineous, but are never offensive. If, however, putrefactive bacteria or bacilli coli communis are associated with it the secretion is often very offensive, and these mixed infections are probably very common.

Sometimes a great amount of necrotic material may be produced in the uterus as the result of infection. This, even after removal by the curette, is rapidly formed again. In other cases, especially if the organisms are very virulent, there may be little evidence of local reaction, the uterine mucosa being quite smooth, but often soft and swollen. The rapidity of the invasion of streptococci varies according to their virulence. By experiments on animals Schimmelbusch and Bumm[7] have shown that after inoculation of the uterine mucosa they may penetrate 2 cm. in six hours, and can even earlier be detected in the blood. In the human subject invasion is probably rarely so rapid as this, but in such cases local treatment would be clearly useless. We have at present no means of judging as to the virulence of the streptococcus present in any case, except by artificial inoculation of animals, which is obviously impracticable on a large scale. We can only form an opinion from the severity of the symptoms.

The mortality of streptococcic infection of the uterus is very high. There is as yet no large series of cases in which the diagnosis has been confirmed bacteriologically. Williams[8] has collected 48 cases in which this was done, and of these, in spite of the use of anti-streptococcic serum in all the cases, 20 died, giving a mortality of 42.5 per cent.

The local treatment of streptococcic infection presents great difficulties. It is, in the first place, a wound infection, and remains local for a short time, possibly only a few hours. In the worst cases the organisms may have penetrated the mucosa and the uterine wall at the time of the initial rigor, and their complete removal is hence impossible. Frequently, however, the invasion is not so rapid, the organisms remain limited to the superficial layer of the mucosa or decidua, and if at this stage a radical mode of treatment be adopted, the spread of further infection may be prevented. The uterine douche is of very little value in these cases. Bumm[9] has shown that antiseptics used in this way have very slight penetrating power. Krönig[10] found that streptococci were just as abundant and virulent in the uterus a few hours after a uterine douche as before its use. Exploration of the uterus with the object of removing any contents such as clots, placental tissue, or decidua, is certainly indicated; but at this point opinion differs as to the wisest course to pursue. Doléris,[11] Pinard and Wallich,[12] Dührssen, and others advise that in severe infection the sharp curette should be used with the object of removing the greater part of the uterine decidua, which is assumed to be infected. Fritsch,[13] Bumm,[14] Menge,[15] Fehling, and most English textbooks are opposed to the routine use of the curette for this purpose. They hold that it is often unnecessary, that wound surfaces are produced which may facilitate the entrance of organisms into the circulation, and thus a purely local infection may become generalised.

Whitridge Williams[16] advises that if streptococci are discovered in the uterine secretion we should desist from further local treatment, after removing any *débris* by the finger or blunt curette, and should rely on the resisting power of the tissues to combat the infection. A similar view is also held by Moran[17] and others. In Case I, as the infection was evidently very severe, an attempt was made to remove the whole of the infected mucosa with a sharp curette, as the patient was evidently unable to withstand the infection, and, as the case was seen early (third day), the result was altogether favourable. It is important, however, after curetting to apply a strong antiseptic with the object of sealing the mouths of any opened-up vascular channels, and to promote uterine contraction by gauze packing and hypodermic injections of ergotin.

In Case II, in which the same treatment was carried out on the seventh day, the improvement was only temporary; the infection had become generalised and ended fatally, in spite of the use of serum, which, however, should have been commenced earlier if any good result was to be obtained.

The danger of curetting, though real, can generally be avoided by care. Pinard advises that it should never be carried out before the third day, owing to the risk of air embolism from opening up of venous sinuses. He records 38 cases of curettage in puerperal infection with 4 deaths; 1 only (from air embolism) could be attributed in any way to the operation.

In a personal experience of 33 cases of exploration of the

[2] Widal, *Etude sur l'Infection Puerpérale*, Paris, 1889.
[3] Bumm, *Archiv für Gyn.*, Bd. xl, 1891.
[4] Gartner, *Archiv für Gyn.*, Bd. xliii, 1893.
[5] Krönig, *Bacteriologie des weiblichen Genitalcanales*, p. 208, 1897.
[6] Pourtales, *Archiv für Gyn.*, Bd. lvii, 1898.
[7] Schimmelbusch and Bumm, *Centralblatt für Gyn.*, p. 977, 1893.
[8] Williams, *Practice of Obstetrics*, Jewett, p. 604.
[9] Bumm, *Centralblatt für Gyn.*, p. 971, 1893.
[10] Krönig, *Ibid.*, p. 979.
[11] Doléris, *Nouvelle Archiv. d'Obst. et de Gyn.*, 1897.
[12] Pinard and Wallich, *Traitement de l'Infection Puerpérale*, 1896.
[13] Fritsch, *Zeitschrift für Geburt. und Gynäk.*, Bd. xli, p. 456.
[14] Bumm, *Cent. für Gyn.*, 1893, p. 975, *et seq.*
[15] Menge, *Ibid.*, p. 980.
[16] Williams, *System of Obstetrics*, Jewett, 1898.
[17] Moran, *American Journal of Obstetrics*, June, 1899.

uterus followed in many instances by curetting, no bad effects have been observed.[18] In 5 cases a temporary rise of temperature with a rigor immediately followed the operation, but in each instance the temperature rapidly fell, and the patient recovered completely.

In 4 cases the progress of the disease was not checked, and the patient died of septicæmia. In each of these, however, the operation was performed at a late period, namely, on the seventh, eighth, ninth, and nineteenth days respectively. Unfortunately none of these cases were examined bacteriologically.

If there is undoubted evidence of infection of the pelvic cellular tissue or peritoneum, or if streptococci are present in the blood further local intrauterine treatment is of no value, and may be harmful. In these cases, or if curetting entirely fails, total extirpation of the uterus *per vaginam* may be successful. As yet, however, no cases have been recorded in which the diagnosis of streptococcic infection as the cause of the symptoms was confirmed bacteriologically.

It is, however, of the greatest importance that in a disease with so high a mortality (40 per cent. at least) definite rules of treatment should be formulated, and valuable time should not be lost in inefficient measures.

Antistreptococcus serum should only be used if infection is caused by the streptococcus, and it is very desirable that a bacteriological diagnosis should be made in every instance, as in this way only can we hope to come to definite conclusions as to its real therapeutic value. Cover-glass preparations of the uterine secretion may be made and the streptococci recognised, if present, without any difficulty, though the diagnosis should always be confirmed by culture.

III.—R. H. ANGLIN WHITELOCKE, M.B., C.M.Edin., F.R.C.S.,
Oxford.

DR. WHITELOCKE said he had recently seen two cases of septicæmia following delivery in primiparæ. The first patient had suffered from relapsing appendicitis, and labour was terminated by the high forceps operation. Fever began on the first day of the puerperium, and the serum was employed from the fourth to the tenth day, 20 c.cm. being used daily in two injections. He believed the serum did good, causing sleep and profuse sweating. Notwithstanding its use, however, the temperature on three occasions reached 107° F., and was at once reduced three or four degrees by rubbing the body with ice. The patient also developed an abscess over the left sacro-iliac joint about the fourteenth day, which was opened and irrigated, and ultimately the patient recovered. In the second case, labour was natural, but the temperature began to rise on the evening of the first day, and for the next six weeks it never fell below 100° F. The use of serum was then resorted to, beginning with 11 c.cm. in twenty-four hours, and gradually increasing to 20 c.cm., when it was discontinued because the temperature had come down to normal. In the ninth week an abscess formed in the left shoulder-joint, and the temperature again rose; the abscess was opened and drained, and the joint recovered perfectly, with no impairment of movement. In addition to the serum, all the other usual remedies were employed to meet the various symptoms as they arose.

IV.—MURDOCH CAMERON, M.D., F.F.P.S., Glasg.
Regius Professor of Midwifery and Diseases of Women, University of Glasgow.

DR. CAMERON said he had no hesitation in saying that some of the cases mentioned were not cases of acute septicæmia. Cases of acute septicæmia were generally met with in the practice of certain practitioners, and the infection was always from without. Cases of sapræmia and localised conditions of the cellular tissue and tubes generally recovered under appropriate treatment. It was quite different with acute septicæmia, as these cases generally went from bad to worse, and here Dr. Cameron relied on the use of the curette, douching with perchloride solution, or the application of camphor and carbolic acid. It was good to give a sleep, say with bromidia. As regarded the use of serum, he had never had any satisfactory results from it, but had observed frequently serious complications due no doubt to its use. This also had been the experience in Belvidere Fever Hospital in cases of puerperal fever, the physicians having failed to obtain any definite results.

[18] *Medical Chronicle*, August, 1899.

V.—J. A. SHAW-MACKENZIE, M.D.,
London.

DR. SHAW-MACKENZIE thought that the obvious causes of sepsis from retention of membranes or from "without" had been duly emphasised, but he felt it right to submit the predisposition to sepsis in syphilitic cases in childbed and in operative procedure. In the cases of puerperal fever in which serumtherapy failed, there was no mention of inquiry into the previous history of patients or family. It was known that infected women relapsed during pregnancy or after delivery, and showed local lesions which were foci of streptococcus invasion, and, as Dr. Spencer emphasised, it was necessary during late pregnancy to attend to local lesions, but Dr. Shaw-Mackenzie thought the question of syphilis and general treatment should be thought of. The failure of serum treatment might be possibly explained by the untreated basis of syphilis, and possibly hypodermic administrations of mercury might be tried in acute cases. Cases of fever occurring some ten days after delivery were not due to sepsis, but to some general constitutional cause.

VI.—C. E. PURSLOW, M.D., M.R.C.P.,
Honorary Obstetric Officer, Queen's Hospital, Birmingham.

DR. PURSLOW said that he had to see in consultation six to eight cases of puerperal fever on the average in each year, and had used the antistreptococcus serum in some dozen cases. It would never be possible to make any authoritative statement or give definite statistics on the value of the serum treatment for the reasons that puerperal fever had various forms, differing greatly in severity, and that the prognosis was always doubtful. The most severe forms of fever, presenting the symptoms which usually pointed to a fatal termination, sometimes recovered even without any treatment other than by drugs. Another reason was that reliance was never placed on serum treatment alone; one was always anxious to use every means in one's power, and the result was that curetting, or at least washing out the uterus with administration of drugs, almost invariably accompanied the injection of serum. On the whole he had formed a favourable opinion of the effects of serum treatment, and could say certainly that he had never found unfavourable symptoms, either local or general, follow the injections. As regarded the curette, he had seen severe hæmorrhage follow its use in cases of puerperal sepsis, and would not use it unless there was a fœtid discharge present, and that was not a symptom usually present in severe cases. With regard to the danger of carrying infection, it was most important when called in to see a case of sepsis to remove one's coat, turn up one's shirt sleeves, and thoroughly lubricate one's hands before making any examination of the patient. It was possible to disinfect one's self by taking thorough measures after seeing a case; but when a medical man was himself douching a patient daily or oftener, he ought to discontinue attendance on other cases.

VII.—J. INGLIS PARSONS, M.D., M.R.C.P.,
Physician to the Chelsea Hospital for Women.

DR. PARSONS thought there were many cases where it was not easy to differentiate a local from a general infection. When the former occurred he made it a rule to explore and curette the uterus, and had always been rewarded by finding remnants of placenta and decidua. The whole cavity should then be thoroughly douched with chinosol 1 in 500, and the uterus swabbed with tinct. iodi. No bad result had ever followed from this in his experience. In dealing with general septicæmia he had not used any serum. Quinine appeared to him to have a beneficial effect in large doses when administered by the rectum. It was absorbed better thus than through the stomach and did not disturb the digestion. He was very glad that Dr. Spencer was opposed to the use of antipyretics, for a high temperature was the expression of resistance to injury whether by bacteria or other means, and Dr. Parsons considered it bad practice to treat it unless it was so high as to threaten life *per se*, and then the cold bath was the proper treatment as in typhoid. The cause of the fever must however be also at-

tacked. The difficulties of preparing pure serum were very great, for being an organic compound it could itself become easily infected and its composition was not very stable. Before any conclusion could be arrived at they must be sure that the infection was due to the staphylococcus and not to other bacteria, that the serum was pure, and that they were dealing with a general and not a local infection. He did not think the time had arrived for a final expression of opinion on the serum treatment.

VIII.—T. More Madden, M.D.,

Obstetric Physician, Mater Misericordiæ Hospital, Dublin.

Dr. Madden said that the treatment of fever following delivery was a subject on which every practitioner of any long standing in midwifery practice must unfortunately have had but too extensive experience, for they were still almost as far as ever from the long-desired disappearance of puerperal fever. Before referring to the employment of serumtherapy in such cases, it should be borne in mind that fever following delivery or so-called puerperal fever was not one distinct form of disease due to a specific bacterial infection; if it were, then might we easily accept the theory of its general amenability to a specific serumtherapy. But his experience had shown that so-called puerperal fever was not one distinct disease, but a name applied to many forms of pyrexial infectious disease consequent on parturition, sometimes originating in local inflammatory conditions; sometimes in decomposition of retained placental or other *débris;* sometimes in *ante-partum* as well as *post-partum* exposure to some form of infective disease; and, lastly, to direct infection with a specific micro-organic germ. These different forms of puerperal disease obviously required very different treatment, and no one antitoxin could be applicable to all of them. In the most frequent form of pyrexia consequent on childbirth no modern method had yet superseded in general efficacy the old-fashioned combination of quinine and grey powder which Dr. More Madden had long recommended as the best of germicides and antipyretics in such cases; with its use, conjointly with uterine irrigation with any suitable antiseptic solution, the best results might be hoped for in the general treatment of many cases of puerperal fever. In some cases turpentine also acted as a good germicide, reducing temperature and improving the local conditions. As to the curette, its use should be restricted to cases in which there was evidence of some retained placental or other *débris*, otherwise it was more likely to do harm than good. As to serumtherapy, there were not as yet sufficient data to formulate any final conclusion, and until further evidence was adduced, he should himself, as a rule, prefer the older methods.

IX.—J. W. Byers, M.D.,

Professor of Midwifery and Diseases of Women, Queen's College, Belfast.

Professor Byers desired to emphasise the importance of a rise of temperature after delivery as a sign demanding the most careful examination of the patient. As a rule the patient was infected through the uterus, and there were two types—(*a*) putrid and (*b*) septic endometritis. In the first the os uteri was as a rule patulous; the finger felt a mass in the uterine cavity, which was soft and broke down on pressure, and there was at times a foul discharge. Here clearing out the uterus with the finger or curette, followed by a mild antiseptic douche and packing with gauze, were the indications for treatment. When the uterine wall was smooth no local measures were needed. As to the serum treatment, unless a specimen of the uterine contents could be examined bacteriologically no scientific value could be placed upon it. If there were streptococci present, then the antistreptococcic serum was indicated; but if the bacteriological examination showed no septic organisms present, then serum treatment was not required. The whole question of serum treatment in puerperal fever was in its infancy, and the time had not yet come to dogmatise, and the resisting power of the patient herself must not be forgotten.

X.—Major F. S. Peck, R.A.M.C.,

Professor of Midwifery and Obstetric Physician, Medical College, Calcutta.

Major Peck called attention to one point in Dr. Spencer's paper—namely, the use of antipyretics. Coming from India, he claimed to have seen a good deal of pyrexia and had used a number of antipyretics. In certain cases, no doubt, the usual antipyretics were very badly borne, and might doubtless cause a dangerous degree of exhaustion and depression. In other cases, however, they diminished the danger and discomfort of high temperature, and placed the patient in a better condition to weather the storm. He remembered a case of his own that occurred in India a few years ago. The treatment was practically confined to the administration of antifebrin whenever the temperature reached 104°. The case was a bad one, and the patient's condition remained critical for ten days. She experienced extreme discomfort and exhaustion whenever her temperature rose, and the administration of antifebrin reduced the temperature and enabled her to take nourishment and obtain rest until the poison had all been eliminated.

XI.—J. W. Draper, M.R.C.S., L.R.C.P.,

Huddersfield.

Mr. Draper stated that he had had most trouble from high temperature after labour in cases where there had been no fœtid discharge or other cause of fever in the uterus. Such cases rarely occurred in his practice since he had used solution of perchloride of mercury for soaking the hands before making vaginal examinations. He illustrated the other causes of fever after labour by a case in which he found a diphtheric membrane on the cervix uteri during the puerperal fever, and another case in which premature delivery occurred followed by puerperal fever, in a house where diphtheria had just previously been present. In the latter case he injected 1,500 units of antidiphtheritic serum, because he had used it for the cases of diphtheria occurring in the house very successfully, and because he thought the puerperal fever might be due to the diphtherial poison. He had never seen the antitoxin do harm, if it did no good. He was unable, at present, to say that it had acted beneficially, the patient being still under treatment. His testimony was strongly in favour of cleanliness *plus* soaking of the hands in solution of perchloride of mercury, and using them quite wet.

XII.—Edgar Barnes, M.D.,

Eye.

Dr. Barnes said that one important factor in the reason for the increased prevalence of febrile conditions after delivery amongst the upper classes was to be found in the fact that the upper class patient occupied the recumbent position exclusively for ten to fourteen days after delivery, whilst the lower class patient from the commencement was in the habit of raising herself in bed for the purpose of relieving the wants of Nature, and this position facilitated the escape of possibly septic discharges from the interior of the uterus. With regard to antiseptics he ventured to express the opinion that absolute cleanliness was of far more importance than the particular antiseptic used.

XIII.—John W. Taylor, F.R.C.S.,

Surgeon, Birmingham and Midland Hospital for Women.

Mr. Taylor said he should like to carry on the remarks of Professor Byers to their logical conclusion and plead for a greater collaboration between the laboratory and the bedside. There were strong reasons to believe that acute puerperal septicæmia might be due to various organisms, and until serum was prepared adapted to infection by the staphylococcus and the bacterium coli communis (as well as that due to the streptococcus) they could not even begin to use the term treatment in the disease scientifically. At present if any organism other than the streptococcus were found no suitable serum was available for treatment.

Reply.

Dr. Herbert Spencer, in reply, said he wished to draw attention to the disadvantages of the use of strong iodine to the uterus after delivery as recommended by Dr. Parsons. He had himself used it formerly, but had become convinced of its danger by having seen high fever ensue, apparently due to thrombosis produced in the sinuses by the application of the iodine. Spiegelberg had drawn attention

to this danger, and he was glad to hear Professor Byers allude to it. Dr. Spencer had drawn attention in his address to the value of abdominal palpation, and had written some papers on the subject, but he did not go so far as those foreign practitioners who had entirely discarded vaginal examination in labour. Personally he should entirely give up vaginal examination in labour when he had attained to the degree of skill which would enable him to diagnose pelvic contraction, tumour in the small pelvis, and presentation of the cord by abdominal palpation.

RUPTURE OF THE UTERUS AT FULL TERM, MISSED LABOUR, AND DELIVERY NINE WEEKS LATER.

By MURDOCH CAMERON, M.D., F.F.P.S Glasg.,

Regius Professor of Obstetrics and Gynæcology, Glasgow University; Physician for Diseases of Women, Western Infirmary; and Consulting Obstetrician, Glasgow Maternity Hospital.

RUPTURE of the uterus is rare during labour, and is still more so as you approach the earlier periods of gestation. After four months the uterus appears above the brim, and so becomes exposed to injury. In some cases the uterine wall is so thin that it cannot resist the pressure during a uterine contraction. Rupture may be complete or incomplete according as it extends through the thickness of the uterine wall in whole or in part, and during labour may be spontaneous, or it may result from manipulation during operations such as version. Spontaneous rupture is most frequently met with in multiparæ, in many of whom a kind of fatty degeneration of the uterine muscle has been observed.

Some have urged that rupture only takes place after the membranes have been torn, but this is not always so, as there are well recorded cases in which rupture took place whilst the membranes were entire. The laceration may vary in extent from a simple perforation to a tear measuring several inches, and usually occurs at some weak point in the tissue. Sometimes the uterus is almost completely detached from the cervix, whilst at other times the tear may extend upwards from the inferior segment to the fundus, or downwards from the cervix into the vagina. As a rule, the liquor amnii has escaped. Barnes mentions a case in which the body was separated from the cervix, and came away with the placenta. This case resulted in a charge of malpraxis. In another case, where a charge of malpraxis was made, the evidence showed that the rupture was due to the presence of a fibroid. Usually rupture takes place during a contraction or during some obstetrical manipulation without warning of any kind. The patient feels acute pain and cries out, as it is quite different from a uterine pain, being accompanied by a sense of tearing. If the rent is large enough to permit the passage of the fœtus, the woman is cognisant of a displacement. The labour pains cease rapidly or suddenly, and in their place is a continuous pain in the lower part of the abdomen. If the fœtus is in the peritoneal cavity its limbs may be felt distinctly. As a rule there is an escape of blood *per vaginam*. The presenting part may be found to have receded, or another part may present, and the examining fingers may detect the laceration. When the fœtus passes into the peritoneal cavity the hæmorrhage may in great part be concealed.

The following case is of interest from its remarkable history:

The patient had ten of a family, and had no trouble in her previous confinements. From the birth of her youngest child she menstruated regularly for three years, that is, till February 2nd, 1897, when she became pregnant. On November 9th, 1897, that is, at full term, she had labour pains which were very severe. There was a profuse discharge of water. An unqualified assistant attended and remained all night with her. Next day she was seen by the assistant and his employer, and was told that the womb had opened to about the size of a crown piece. There was a fairly free, bloody discharge. She remained in this state for about two weeks, during which time she had regular pains of more or less severity. About this time she was seized with acute pain in her left side, which lasted for a day or two. It was accompanied by marked general enlargement of the abdomen. The labour pains now ceased, and she lay in bed unable to rise for another three weeks. She mentioned to her husband that something had gone wrong, as she felt as if the child or swelling had dropped from its position. She continued ill and unable to do anything, and was regularly visited by her medical attendant. On January 9th, 1898, she walked about a mile, but next day there was a return of the bleeding, and then another doctor was called in.

He found there was pain upon pressure over the left side, and a round swelling was felt through the abdominal wall. He was told that she had not been delivered of a child which was due about November 9th. On examination *per vaginam* he had great difficulty in reaching the os, but felt a hard, smooth, round body lower down and in front. Being pressed for a diagnosis he gave the opinion that she was probably suffering from a tumour or an extrauterine pregnancy.

On January 12th he again examined her, and found that the body in front was made up of two smooth, hard saucer shaped bodies. He then got assistance and put the patient under chloroform. After dilating the os he made out a child's head with the parietal bones approximated. No trace could be found of any part of the child's body or limbs, but a membranous wall was made out which prevented the entrance of the hand. After pulling the flattened head downwards, he failed to extract it, but succeeded in passing his hand close to the body, and after seizing the feet, performed version and delivered the child. When he introduced his hand again to extract the placenta his arm passed freely into the passage, but he could feel neither placenta nor uterus. Thinking that he had to do with a case of uterine inertia, pressure was made over the abdomen, and then he found that the abdominal wall alone came between his hand and that of his assistant. He failed to find any trace of the cord or placenta. The child's head was greatly flattened, the parietal bones lying close together, the brain substance having disappeared. The body of the child was soft and almost like putty, but showed no sign of decomposition. The umbilical cord was ruptured close to the abdomen, and this must have taken place previous to birth, as there was no trace of fresh separation.

I was called in two days later and saw the child's body. It had a macerated appearance, whilst the head was as already described. On examination I had no difficulty in passing the hand into the abdomen and succeeded in snaring the cord with long pressure forceps. It was firmly adhering to the anterior wall for about 2 inches. After freeing it, the cord came down readily, and I was able to trace it to the placenta, which was attached to the right iliac region. Upon removal it was found to be well organised, and must have escaped with the child's body from the uterus nine weeks previously at the time of the rupture. The woman died three days after delivery.

Briefly the points are these: The woman fell pregnant on February 2nd, and labour ensued at full term, namely November 9th, at which date rupture took place. The body and placenta escaped into the abdominal cavity, whilst the head was retained *in utero*, the organ contracting round the neck.

There can be no doubt that many cases of rupture resulted previously from the imprudent use of ergot, the result being that powerful irregular contractions were set up whilst the child remained impacted. Other cases have been due to ill-timed and unskilful interference. In this case no doubt a little well-timed assistance would have been sufficient to avert the accident. Knowing what we know now it would have been better to have left the placenta and trusted simply to plugging the vagina with iodoform gauze.

The treatment of this class of cases might be divided into preventive and curative. The former might be placed under a few heads:

1. The avoidance of the use of ergot in impacted labour, if not in all cases.
2. In any weakness of the uterine walls to recommend the use of a binder, to avoid tedious labour, to correct malpresentations, and to combine external manipulation with version.
3. To make version as far as possible an operation of election, and not leave it till forceps have been tried.
4. To avoid undue traction with forceps, especially when the child is dead.
5. Puncture of a hydrocephalus.
6. Careful examination, so as to decide whether the case can be left to Nature, or if forceps, version, induction of labour, or Cæsarean section may be necessary.

As regards curative treatment, a very important point is to be able to decide after rupture has taken place what is the best treatment:

1. When the head still presents forceps may be advisable, but if not version is preferable.
2. If the child is alive abdominal section should be performed, and keeping in view the likelihood of blood having escaped into the peritoneal cavity, this would be all the more needful.

Even with abdominal section you may have to determine whether the laceration should be stitched or the uterus removed. Taken all together the result in these cases is very unfavourable.

THE Royal Mail Steam Packet Company, 18, Moorgate Street, E.C., has issued a handbook of tours in the West Indies. It is well illustrated, contains a map, and in an appendix a reprint of the Remarks on Winter Holidays for London Doctors, which the late Sir Spencer Wells published in the BRITISH MEDICAL JOURNAL some years ago. Full particulars with dates of the tours arranged for the coming winter are given.

A DISCUSSION ON THE NATURAL MENOPAUSE COMPARED WITH THE MENOPAUSE PRODUCED BY REMOVAL OF THE UTERINE APPENDAGES AND THE MENOPAUSE PRODUCED BY THE REMOVAL OF THE UTERUS WITHOUT REMOVAL OF THE APPENDAGES.

I.—J. Bland Sutton, F.R.C.S.,
Assistant Surgeon to the Middlesex Hospital; Surgeon to the Chelsea Hospital for Women.

Happily for me, those who are responsible for the conduct of this Section have framed the "subject of discussion" with such admirable conciseness as to spare me the duty of defining its scope or of making arbitrary definitions.

It so happened that at the time I was asked to introduce this subject to the Section, I was quite fresh from a very careful study of the matter from a practical point of view, the results of which are embodied in an address to the Medico-Chirurgical Society of Brighton, and published in the British Medical Journal of April 8th, 1899 That address really serves as a prologue to my observations here, and enables me to put the subject before the meeting in a convenient form.

It is a striking fact that though we are familiar with the phenomenon of menstruation, and accept unreservedly the view that the endometrium is the menstrual organ and the ovary the controlling body, we are absolutely ignorant of the cause of menstruation. Thus, at the very outset of the discussion it is essential to consider the relation between the ovaries and menstruation.

The Ovary.

The ovary, apart from being ovigerous, fulfils other duty: in this respect it does not differ from secreting glands in general, for no organ in the body is restricted to a single function. In 1889 I urged that the ovarian follicle could be regarded as a modified mucous crypt, and the ovary as a ductless gland. Although ova are conveyed to the uterus by the Fallopian tubes, morphology teaches clearly that these ducts do not belong originally to the ovaries, and that the Müllerian ducts from which they are derived have undergone a most extraordinary change of function.

The ovary is not only remarkable from the fact that it belongs to the class of ductless glands, of which the thyroid is the type, but it must be included in that peculiar group of temporary glands of which the thymus is the best representative. Thus the ovary is a temporary and ductless gland, its period of activity being coincident with menstrual life; the incidence of which is termed puberty and its natural cessation we conveniently call the menopause.

The incidence of menstruation indicates that the individual is sexually mature, that the ovaries and the uterus are functional, and that she is nubile. If the environment be favourable she will conceive; should the conditions remain propitious she may continue to produce offspring during a definite period.

In Great Britain puberty begins at the fifteenth year, and as cohabitation is not legal till three years later, and as marriage is usually deferred for prudential reasons a few years beyond this, it comes about that the important child-bearing period of a woman's life is from the twenty-fifth to the thirty-fifth year (Matthews Duncan). Menstrual life, however, represents a period of thirty years (15 to 45) and as sexual life and menstrual life are concurrent it is clear that the procreative period of a woman's life only involves about one third of the sexual cycle; and experience demonstrates that this period may occupy any position in the thirty years cycle of sexual life, its incidence depending entirely on the occurrence of a suitable environment.

When we seek a material basis to account for this, we find it in the ovaries, for this cycle of thirty years represents the period during which these glands are in full vigour. The truth of this is demonstrable in two ways: At the full period of menstrual life the ovarian follicles are numerous, large, and contain active epithelial elements—the membrana granulosa. On the natural termination of menstruation (the menopause) the ovaries atrophy, and diminish to one tenth of their weight at maturity. This change is coincident with the disappearance of the secreting elements of the ovaries (the ovarian follicles).

When both ovaries are completely removed from a sexually mature woman, the result is an abiding amenorrhœa, and the individual exhibits other peculiarities characteristic of the menopause, apart from amenorrhœa, so that to speak of the arrest of menstruation induced by complete removal of both ovaries as an artificial menopause is not euphemistic, but absolutely correct. Moreover, should all the ovarian tissue, save a portion weighing about a gram, be removed from a woman during menstrual life, providing that portion be healthy and contain ovarian follicles, menstruation will continue unchecked and climacteric phenomena will be in abeyance.

The Uterus.

This organ is secondary and certainly subservient to the ovaries. Its period of greatest development is coincident with that of the ovaries. Structurally it is a hollow muscle, an incubation chamber for the reception and development of oösperms. Its chief peculiarity among hollow muscles, apart from serving as a temporary resting place for the embryo, is the remarkable cyclic changes exhibited during menstrual life by the mucous membrane (endometrium) lining that portion of the organ known as the cavity of the uterus. The most careful inquiries, aided by modern histological methods, have demonstrated that the blood which escapes from the genital passage and which is the most obtrusive manifestation of menstruation, issues from the endometrium, and exactly represents that portion of the endometrium which produces the decidua. That these extraordinary changes depend on the ovaries and not on the uterus is proved by the fact that after complete removal of both ovaries the regular periodical decidual formation and loss of blood are permanently arrested.

It is important to realise that the part played by the uterus in menstruation is merely secondary; it is true that it is the source of the menstrual discharge, but this is at best merely a disagreeable accompaniment of menstruation. When from one of various causes a woman has no loss of blood at a natural menstrual period she usually experiences what we conveniently call vasomotor disturbances, or, in the terminology of ancient medicine, a menstrual molimen, and among these signs an increase of the sexual appetite is not the least important.

The Normal Menopause.

This it will be convenient to define as the cessation of menstruation in consequence of the natural atrophy of the secreting tissue of the ovaries. In Great Britain it may happen at any age after 35, but the average age for its occurrence is the 45th year. The menopause is not only declared by the cessation of a monthly loss of blood from the uterus, but by the peculiar cutaneous phenomenon known as "flushing," which has been defined by Campbell as "a nerve storm in which a rush of blood to the skin and a sense of heat are generally the most obtrusive manifestations." He then states that in a fully developed flush the patient at first feels hot, some portion of the skin being flushed with blood immediately afterwards or in a very short time sweating occurs; finally while the sweat is still on, or while it is diminishing or actually after it has disappeared, the patient feels cold or may shiver.

The occurrence of nerve disturbances is not only declared by such signs as flushing, but by irritability of mind, nervousness, and occasionally erotomania. In a small proportion of women these conditions become so intensified as to terminate in disaster. In the greater proportion however the storm quickly subsides and the genital organs gradually enter on what may be called the "resting stage" and slowly atrophy. In very many women the menopause supervenes upon an active life as gently as twilight intervenes between the bright glory of a summer day and the delightful reposefulness of night, and though it may cause sighing yet is unaccompanied by regretfulness.

The Artificial Menopause.

Throughout these opening remarks it has been my steadfast endeavour to make it clear that menstruation consists of some-

thing more than the mere monthly escape of blood from the uterus. To those who accept this view it must be obvious that in order to produce an artificial menopause it is necessary to do more than simply arrest this periodical loss of blood; as the source of bleeding is demonstrated beyond all doubt to be the endometrium, it is certain that the removal of the uterus is a direct way of effecting this object, and it is undeniable that complete extirpation of the uterus entails an abiding amenorrhœa as surely as permanent visual blindness ensues upon the removal of both eyeballs. The belief in vicarious menstruation has at last found a place in the list of popular errors and foolish superstitions.

Although removal of the uterus from a mature woman produces amenorrhœa and sterility, it does not induce a complete menopause. On the other hand, complete removal of both ovaries from a sexually mature women is followed by amenorrhœa, sterility, and in a fair proportion of cases by "flushings," which in some women occur as frequently as fifteen times an hour after an artificial menopause. As time goes on they gradually lessen in intensity and frequency until they cease to be inconvenient, and finally subside. These signs do not supervene after removal of the uterus alone, and it was the view of avoiding the production of an artificial menopause that induced me, whenever it was practicable and prudent, in performing hysterectomy to spare at least one ovary, and to remove the uterus in many grave conditions in preference to the sacrifice of both ovaries. I have had sufficient opportunities of obtaining evidence in relation to this matter to be able to state positively that the loss of the uterus alone does not entail an artificial menopause. In some very striking instances in which I removed the uterus for myomata on account of profuse menorrhagia from women of 48 and upwards, in whom one or both ovaries were preserved, they began to complain from eighteen months to two years afterwards of flushing, and then passed through the usual disturbances characteristic of the normal menopause.

Many of us are extremely interested to know the changes which occur in ovaries which are left after "conservative hysterectomy." So far no opportunity has occurred to me of obtaining evidence. Facts in this direction will therefore be very valuable, especially if supported by careful microscopic examination.

The Artificial Menopause and Nubility.

This is a question of some social importance. When I am called upon to give counsel in regard to it, I feel that if both ovaries have been removed, there is little prospect of a happy union, and generally advise against marriage. On the other hand, if a woman has had her uterus removed and possesses at least one ovary, she may be regarded as nubile if the intended husband clearly understands that the marriage will be sterile.

The question of the sexual passion after an artificial menopause is a very difficult one to answer. The problem is as curious and variable after a menopause of any kind as it is in an assembly of healthy women. My view in regard to it, after a very full and careful consideration of the matter, is this:—It would be easier for me to convey hither Mount Ararat than to define something that cannot be weighed, measured, or estimated by scale; yet this inexpressible something is concerned in maintaining animated nature, and, so far as mankind is concerned, whether savage or civilised, governs the world.

II.—J. Stuart Nairne, F.R.C.S.Edin., F.F.P.S.Glasg.,

Surgeon to the Glasgow Samaritan Hospital for Women.

Mr. Stuart Nairne said he had done a considerable number of hysterectomies without removal of the ovaries, and was inclined to do this operation more readily on account of two facts which seemed quite fairly established from his experience. First, the shock of removal of the uterus was much less than that of removal of both ovaries; and, secondly, the removal of the uterus was not necessarily followed by the entire cessation of menstruation. The bearing of these considerations on the incidence of the menopause was a practical question, and he had himself no hesitation in saying to patients that menstruation would have a chance, or probability, of continuing in spite of the removal of the uterus (the ovaries being left), and that the menopause would come on in a natural manner.

III.—John W. Taylor, F.R.C.S.,

Surgeon to the Birmingham and Midland Hospital for Women.

Mr. Taylor, speaking on the clinical aspect of the subject, said it seemed to him that no special symptom or set of symptoms appeared to be peculiar to either of the three varieties of menopause. Further, although most women passed through the natural menopause without much trouble, yet, so far as his own experience went, the very worst cases of nervous and mental disturbance were occasionally met with in cases of the natural menopause, and therefore in cases in which the ovaries were intact; consequently these disturbances could not be due solely or mainly to removal of the ovaries. The chief way in which the artificial induction of the menopause sometimes compared unfavourably with that produced naturally was the prolonged character of the nervous disturbances which might follow either oöphorectomy or hysterectomy when this was done during the middle of the period of sexual activity. When the operation had to be done in early life these disturbances were often happily "conspicuous by their absence." Somewhat later, at about 30 years of age, when operation was necessary, subsequent disturbances were too often prolonged for years, and did not completely disappear until 49 or 50 years of age, so that the patient, instead of having a limited "climacteric" of only one or two years' duration, appeared to suffer from an extended affection lasting some twenty years. Mr. Taylor finished his remarks by commenting on the difficulty of estimating the value of symptoms, and on some of the special ways in which mental attention and suggestion might affect gynæcological practice.

IV.—J. Macpherson Lawrie, M.D.,

Gynæcological Physician to the Weymouth Sanatorium.

Dr. Macpherson Lawrie said he should like to ask Mr. Stuart Nairne if he felt justified in assuring patients that after removal of the uterus, menstruation would continue as before? This seemed to Dr. Lawrie a very bold opinion to give and one that would certainly not be endorsed by most gynæcologists, although there might be occasional exceptions to the usual rule.

V.—J. D. Malcolm, F.R.C.S.Edin.,

Surgeon to the Samaritan Free Hospital, London.

Mr. Malcolm agreed with Dr. Macpherson Lawrie that the complete removal of the uterus would be expected to produce a cessation of menstruation. The difficulty of discussing Mr. Sutton's paper was increased by the very lucid way in which he put forward his views. Mr. Malcolm wished to support Dr. Taylor's remarks that the menopause, however induced, varied in severity, probably in accordance with the peculiarities of the patient. After double ovariotomy for tumours the menopause varied greatly in severity. Mr. Malcolm had had several cases—young women from 17 to 23 years old—in which the menopause gave very little trouble. On the other hand he had had one case, aged 22, in which the menopause after a very difficult double ovariotomy, was the most severe in his experience; very severe symptoms occurred every month, although the periods ceased. Mr. Malcolm felt some doubt as to whether it was certain that complete removal of both ovaries always produced cessation of menstruation. He remembered one case in which it seemed certain that both ovaries were removed, but menstruation showed no sign of ceasing until between three to four years later.

VI.—Charles A. L. Read, M.D.,

Cincinnati.

Dr. Read said it was worth a voyage across the Atlantic to hear Mr. Bland Sutton's able paper, for which he wished to tender him his sincere thanks. He had long been impressed with the fact that the menopause could not be recognised as either a physiological or pathological entity with uniform characteristics. On the contrary, he was quite convinced that it was one of the phenomena of sexual life that never squared itself to regular rules of conduct. Happily work such as was being done by Mr. Sutton was tending to a clearer understanding of a heretofore indifferently understood subject. The acute menopause induced by the complete ablation of the uterine appendages was, however, generally so stormy

that he had sought to mitigate its severity by conservative measures. He had left parts of an ovary, a whole ovary, and at times both ovaries. He was compelled to admit, however, the frequency with which he had had to perform secondary operations for the removal of ovaries or parts of ovaries left behind. He had, therefore, drifted back to the position of the late Mr. Lawson Tait, who favoured the practice of bilateral ablation of these organs. He regretted that in emphasising the *rôle* played by the vasomotor system in the menopause, Mr. Bland Sutton had not considered the effect of these nerve perturbations upon the hæmatogenetic function. He (Dr. Read) had been conducting a series of observations upon this point, but his ascertained facts were yet too meagre to justify final conclusions. He was convinced that there was a very constant leucocytosis, reaching at times fifteen to twenty thousand, and that there was a very constant oligochromæmia, reducing the hæmoglobin at times to 70 per cent. His observations, however, had been restricted chiefly to the artificial menopause, in which this form of anæmia with its fat-forming tendency often persisted through the first three months, and at times throughout a year.

VII.—The President.

Dr. Bantock wished to remind Mr. Bland Sutton that during the reign of the clamp in the treatment of the ovarian pedicle menstruation not infrequently occurred through the stump of the pedicle, and this fact, in addition to the recognised occurrence of hæmorrhage within the Fallopian tube apart from the accident of tubal fœtation, would seem to establish the fact that the endometrium alone, as defined by Mr. Sutton, was not the only source of the menstrual fluid. With regard to one of the effects of removal of the appendages, and even the uterus itself, Dr. Bantock recollected a case in which the sexual passion seemed to have been intensified by this operation, and the late Mr. Lawson Tait often gave evidence to the same effect. And in the matter of the symptoms associated with the menopause careful attention to the subject and repeated inquiry had failed to furnish any conclusive evidence such as would enable him to state any essential difference. A very puzzling condition was the occurrence of menstruation presenting all the characters of normal menstruation after the absolute removal of both ovaries and tubes. Of this several cases had come under his notice.

Reply.

Mr. Bland Sutton, in reply, said menstruation, being a natural physiological process, exhibited wide variations in different individuals, but the general condition could be expressed in mean terms. This was true of most things in nature; the tiny terrier which a lady could hide in her muff belonged to the *Canidæ* as surely as the huge mastiff, and equally wide variations occurred in the manifestations of the menopause, for in some individuals it caused very slight disturbances, whilst in others it produced a very profound and far-reaching upset of the nervous system. It would be interesting to obtain reliable statistics concerning the liability to insanity of women after an acute menopause due to complete removal of both ovaries in comparison to their liability after a normal menopause, childbirth, removal of a mamma, or amputation of a limb. The influence of healthy ovaries on metabolism was very great. This was demonstrated by the results of complete double oöphorectomy in osteomalacia—a proceeding which Fehling, of Bâle, had placed on a sound basis of ascertained physiological and pathological facts—and was supported by Curatulo's observations on the variation in the output of phosphates in the urine of mice after experimental removal of both ovaries. Mr. Sutton was at present deeply interested in the comparison of the thyroid and ovarian glands. Structurally they consisted of closed follicles, lined with epithelium, and the ovary was liable to form colloid material in great abundance. The ablation of the thyroid or ovarian glands profoundly modified metabolism as well as disturbed the vasomotor system, and in each instance the disturbance was controlled by the administration of thyroid and ovarian extract respectively. The liability of the two glands to pathological changes was singularly similar; either might atrophy prematurely and set up recognisable clinical conditions peculiar to each gland. The adenomata (bronchoceles) of the thyroid and the cysts and adenomata (multilocular glandular colloid cysts) of the ovaries were homologous growths, and that very remarkable condition known as "general thyroid malignancy" had a parallel in a peculiar form of generalised epithelial tumour arising in the ovary. The pathological parallels of the thyroid and ovarian glands was an engrossing study, to which he (Mr. Sutton) was at the present time giving very close attention.

SIXTEEN CASES OF PROCIDENTIA AND TWO OF PROLAPSE OF THE UTERUS TREATED BY A NEW METHOD.

By J. Inglis Parsons, M.D., M.R.C.P.,
Physician to the Chelsea Hospital for Women.

It is now two years since I treated my first patient by this method, and I am glad to know that she is, if anything, better than ever. At the age of 61 she came to the hospital with the uterus outside, and a large ulcer on the cervix from friction; no pessary would keep it up. Since the injection in 1897 she has been at work and earning her living as a cook, the continual standing being a very good test of the efficacy of the treatment. The enormous cystocele which she had is much improved, and is easily kept up with a pessary. The uterus, which is in good position, shows no sign of descent on straining. Of the remaining nine cases already published in the *Lancet*, February 4th, 1899, I am able, in most of them, to give the subsequent history. The uterus has kept up in all of them except one, patient No. 2, where the procidentia has recurred. Another injection of a stronger solution than I used at first for her is no doubt required. What has pleased me most about the majority of the patients is that they have been able to earn their living by work or do their household duties, and are once more useful members of society.

With the eight further cases now reported good results have also been obtained, and no return of the procidentia has occurred. No. 11 was not so good as the others. She was unable to work without a bearing-down pain, so I took her into the hospital again and repaired the pelvic floor, a proceeding which has only been necessary in one other of the eighteen cases. Patient No. 13, W. B., aged 29, is now pregnant five months, so it is evident that the operation does not interfere with pregnancy up to this term, and is just as suitable for young women as for old. In order to test the treatment thoroughly I selected all the worst cases I could find, and for some time refused any patient in whom procidentia had not occurred.

The condition of the 18 cases before treatment was as follows: Procidentia had occurred in 16, and ulceration from friction in 4. Various pessaries had been tried in 17 cases without any benefit. Most of the patients suffered from bladder trouble. The pelvic floor had been repaired in 2 instances, with only temporary benefit. The uterus was enlarged in all cases, and measured from 3 to 3½ inches. There was but little supravaginal elongation of the uterus, but well-marked hypertrophy of the cervix in all cases. It consisted of a general enlargement without much elongation. The shape resembled very much that of a large mushroom before it has unfolded. All the patients had more or less extensive erosion and profuse cervical discharge from chronic congestion.

Although I have succeeded beyond my hopes in these forlorn cases, the question is not so much, Can one hold up the uterus in chronic procidentia of many years' standing? but Can one prevent procidentia from ever occurring by operating on cases of prolapse at an earlier stage, before the pelvic floor, vaginal walls, and ligaments have been stretched out of all shape, and when other treatment has failed? With my experience now of two years with the worst cases, I feel justified in answering this question in the affirmative, and would even venture to say that, if the treatment is applied soon enough, such a thing as procidentia would become a rare condition.

There are many cases of prolapse where other measures are sufficient, such as repair of the perineum or the use of a pessary for a time, to enable the tissues to recover their tone, etc. When all ordinary means have failed, and the uterus still comes down I should then advise injection.

I need hardly say that the list of cases includes all that I have done up to date. In any future publication the same

rule will be followed of publishing every case without fear or favour.

The principle of the treatment is very simple, and consists in taking advantage of Nature's reparative powers. We all know that when dislocation of a joint takes place it is followed by a swelling round the injured part. This swelling consists of an effusion of lymph. It is the first step on the part of Nature to repair the damage. At the end of a month or two most of the swelling has gone down, the lacerations in the ligaments have been repaired by new fibrous tissue, and the lymph has carried out the duties imposed upon it.

When falling of the womb takes place the process is very gradual, and may be going on very slowly for months and even years before marked symptoms occur. As a consequence there is no stimulus for the formation of lymph like that produced by the sudden dislocation of an ordinary joint. After thinking the subject over, I decided to supply this stimulus in the treatment of prolapse of the uterus, and trust to Nature to carry out her part of the work by repairing the overstretched broad ligaments. The choice of a reagent to effect this purpose required great consideration. It must be antiseptic; the effect should be entirely local; and if any absorption takes place it should be harmless to the general system. The sulphate of quinine suggested to me by Dr. Aikman fulfilled as nearly as possible all these conditions. When injected into the cellular tissue of the arm it appears to be precipitated, and causes an effusion of lymph, which remains for some weeks. It is strongly antiseptic, and a tonic to the general system. The broad ligaments on each side of the uterus, enclosing a space filled with cellular tissue into which a needle can easily be passed from the vagina, are evidently intended to be injected. There is no other ligament in the body which presents similar facilities. Under normal conditions the broad ligaments take an important part in holding up the uterus. Dr. J. C. Webster[1] tells us "The peritoneal covering is of very little practical importance in supporting the uterus. Within this covering is fibro-muscular and elastic tissue, which can be traced as bands in several places running from the uterus to the pelvic walls. If the slightest downward pressure is made on the uterus in the cadaver, it is found that a line of resistance is formed in the broad ligament running from the cervix upward and outward towards its upper parietal attachment." My own clinical experience entirely coincides with Dr. Webster's statement. There are numerous gynæcological operations which require downward traction on the cervix. When prolapse is absent, a band can be felt on the stretch in each fornix, running from the cervix upwards and outwards to the side of the pelvis. Sir William Turner also recognised the value of the broad ligaments, and calls them the lateral ligaments of the uterus. Dr. H. Savage[2] assigns considerable importance to the broad ligaments in holding up the uterus.

All this evidence, showing the importance of the broad ligaments in holding up the uterus, lends great weight to the method of treatment brought forward. We are not attempting to produce a new ligament, but to strengthen and repair an already existing band of fibro-muscular and elastic tissue, which under normal conditions plays an important part in preventing prolapse.

The uterine arteries and veins lying on the inner side of the broad ligament are not in the way if the needle is inserted at the right point in the vagina. The same may be said of the ureters; while the outer two-thirds of the lower half of the broad ligament contain no veins or arteries of any size or importance, and can be freely laid open from the vagina without having to tie a single vessel. I say this with conviction, because I had the opportunity of examining this space on numerous occasions when doing other operations. It is necessary to lay stress on this point because many of the illustrations in the textbooks give the impression that the space is filled with a plexus of veins. The operation only takes a few minutes, and appears to be free from risk if done with precision, proper care, and antiseptic precautions. It is essential that the point of the needle should be within the folds of the ligament and in the cellular tissue. An anæsthetic is an advantage because it ensures immobility, but it is not a necessity. The patient is placed in the lithotomy position. The vagina, which has been thoroughly douched for some days before, is washed out with a solution of hydrarg. perchlor., 1 in 2,000. The rectum has, of course, been emptied as well as the bladder. The posterior wall of the vagina is pressed down with a Sims's speculum, while the anterior is held up by a retractor. Even then, in some of these severe procidentia cases, such as Case x in the list, the extreme dilatation of the vaginal walls will allow them to roll together in folds and block the view of the cervix. Under these circumstances two lateral retractors are required as well as the other two. The injection is now made on each side through the vaginal wall, taking care that the direction of the needle is perpendicular to the base of the broad ligament. The syringe which I employ has a long, straight, rather thin, but rigid nozzle, so that when it is passed into the vagina the light is not excluded. The needle is about an inch in length and rather thicker than a hypodermic. Before the injection is made it should always be tested, because the quinine solution is very apt to cause corrosion, and it may then snap off short. If the patient has not taken an anæsthetic she will hardly feel the prick of the needle, but as soon as the injection of quinine begins some pain is felt for a few minutes, the severity of which varies in different individuals. This might be obviated by an injection of eucaine. The operation is now over. Before the patient is lifted into bed, the uterus should be well anteverted bimanually. A cup and stem indiarubber pessary, secured by tapes and a band round the waist, is inserted so as to keep the uterus well up until the effusion of lymph has taken place. It can be removed at the end of four or five days, as the uterus is then held up by the effusion. The strength of the sulphate of quinine solution is important. If too strong it will cause suppuration, and if too weak it will not give sufficient stimulus to repair the ligaments. I began with a strength of 1 in 4, that is 1 grain of sulphate of quinine to 2 minims of acid sulph. dil. and 2 minims of water. This I found was a little too strong; I then tried 1 in 6, and this was rather too weak, and accounts for the recurrence of procidentia in Case II. For the past twelve months I have used a solution of 1 in 5. The amount of this, which is injected, will vary of course according to the severity of the case; but the average amount which I use is 30 and 40 minims for each injection. There is always more reaction after a second injection than the first, although the amount of fluid injected is precisely the same. When more than one injection is required an interval of at least three weeks or a month should be allowed before the second is made. If done earlier there is likely to be a rise of temperature and more local disturbance than is required.

After the operation most of the patients have practically no pain. For the first few days there is a slight aching in the pelvis, which then passes off. Nor is there any inflammation in the majority of cases. The temperature usually remains normal. For instance, after thirty injections there was no rise in 23 cases, a slight temporary rise in 6 cases, and a high temperature after one injection only.

At the end of four days, the pessary can generally removed as there is usually enough effusion to keep up the uterus. On examination *per vaginam* the effusion can be felt in both fornices. It is firm and resilient, not hard, and feels like a hand passing from the uterus to the pelvic wall. The uterus is held up but not fixed and still has mobility.

There can, I think, be no doubt that the sulphate of quinine is deposited. None of these patients have ever had the least sign of cinchonism, although in most instances as much as 12 grains has been injected at a sitting.

When, however, the effusion of lymph has taken place, the next, a very important, point for consideration, is this: What treatment shall we adopt to secure organisation and prevent absorption? With all the magnificent work done by physiologists and pathologists, none of them that I am aware of have ever thrown any light on this subject. It is a matter of very great importance and constantly crops up in practice after attacks of pleurisy, pericarditis, peritonitis, parametritis, synovitis, and all injuries to joints. A study of the latter gives us some empirical knowledge on the subject. If an injured joint is kept at rest too long, more fibrous tissue than is necessary for the repair of the ligaments is likely to take place and impairment of movement follows. On the other hand, if passive movements are practised at an early

date and massage is used to increase the circulation through the injured part, this does not occur; repair takes place and the superfluous lymph is absorbed. If we now apply this lesion to the treatment under consideration, the indications are to keep the uterus at rest as much as possible, and restrain the circulation through the pelvis in order to promote organisation and avoid absorption. This is best done by keeping the patient at rest, lying down for one to two months. It is, however, never possible to keep the uterus completely at rest, owing to the filling and emptying of the bladder, and the movements of the abdomen in respiration, etc. Out of the eighteen patients organisation was quite satisfactory in sixteen, but not as much as I should have liked in the other two, Nos. 2 and 11.

The benefit derived by these patients when the uterus is well held up, although very apparent when they are allowed to get up, is more marked in most cases at the end of three or four months. The uterus becomes smaller owing to the absence of the chronic congestion to which it was before exposed. This is particularly observed in the mushroom-shaped enlargement of the cervix. In several cases I have seen the cervix diminish to nearly half its previous size. At the same time the large erosions and profuse cervical discharge gradually clear up. An improvement also takes place in the vaginal walls. Being held up by the uterus they have some chance of recovering their tone. The minor cases of cystocle and rectocele appear to get quite well, while the severe cases which at first ballooned out of the vaginal orifice on the least provocation are, to a great extent, kept in place by a ring pessary and contract to a quarter of their former size. I am now trying Dr. Granville Bantock's diaphragm pessary instead of a ring. I think it will give much better results in keeping in place these large cystoceles. The pessary is made like a Hodge, but the anterior half is bridged over by a thin diaphragm, and prevents the cystocele from bulging through. The whole pelvic floor improves in tone, as one would expect, when it is relieved of three-fourths, if not all, of the downward pressure to which it had before been subjected. In only two of these 18 cases have I found it necessary to do colpo-perineorrhaphy after the broad ligaments had been injected. The bearing-down pains and bladder irritation also disappeared.

In the consideration of each individual case an estimate must be formed of the amount of strengthening required to hold up the uterus.

For a case of severe prolapse such as we meet in private practice, but which has not reached procidentia, one injection of 30 to 40 minims into each broad ligament ought to be sufficient.

Among the working classes, when we have to deal with a patient who has chronic procidentia, enlarged uterus, dilated vaginal walls, over stretched pelvic floor, and weak general health, who will have to do hard work and constant standing after the treatment is finished, two or even three injections may be necessary to produce a satisfactory result. Our opinion will also be influenced by the reaction of the patient to the injection. The healthy, well-nourished woman will effuse and organise more lymph than the thin, anæmic, and exhausted mother of a large family.

The fact that patient No. 13, who is now pregnant, has progressed to the fifth month without interruption, although during all this time she has been doing her work as a cook shows that the treatment so far does not interfere with pregnancy. This is only what I expected. When we remember that the normal mobility of the uterus is not impaired, and that the ligaments which are strengthened already exist in all women who have borne children, we should expect pregnancy to go on as usual.

Further Report of the First Ten Patients, Published in the "Lancet," February 4th, 1899.

No. 1.—M. H., hospital patient, aged 61; prolapse for seven years; complete procidentia for four months, with ulceration from friction. Extensive cystocele and rectocele. One injection, June, 1897. Pessary for cystocele. In June, 1899, two years after operation, the uterus keeps up in good position, and she is earning her living as a cook, Cystocele and rectocele much less.

No. 2.—E. W., hospital patient, aged 37; prolapse for ten years; complete procidentia for three years; unable to hold a pessary. Two injections were given in February and July, 1898. No rise of temperature. September, 1898. the uterus is in good position. June, 1899, the procidentia has recurred.

No. 3.—E. W., hospital patient, aged 30; prolapse for two years; complete procidentia for a month. Cannot retain a pessary; incontinence at times. One injection, February, 1898; no rise of temperature. March, 1899, a year and one month after operation; patient has been working in a laundry. The uterus keeps up well.

No. 4.—E. P., hospital patient, age 44; prolapse and complete procidentia on and off for fifteen years. Cannot retain a pessary. Two injections were given in February and August, 1898, and colpo-perineorrhaphy was performed. Pessary for cystocele. June, 1899, one year and five months since first injection, the uterus keeps up; she feels much better.

No. 5.—A. J., hospital patient, aged 29; complete procidentia for one year and eight months. Pessaries of no avail. One injection, March, 1898. June, 1898, uterus keeps up well. I have not been able to trace this patient since.

No. 6.—J. B., hospital patient, age 46; prolapse for seven years and procidentia four years. Pelvic floor repaired three years ago; it has given way again. Two injections given, March, 1898. Temperature normal. February, 1898, no return of prolapse; she is able to work.

No. 7.—A. C., hospital patient, age 55; prolapse for one year; procidentia for four months; she cannot retain a pessary. Two injections were given in March and April, 1898. June, 1899, a year and two months after, she is standing most of the day at her work, and feels very well. The uterus is in very good position. No pessary.

No. 8.—M. R., hospital patient, aged 51; prolapse for ten years; complete procidentia for three years. Unable to retain pessaries. Three injections given in March and April, 1898. Pessary for cystocele. June, 1899, a year and two months after, patient is very well and able to work, and is much stouter. Uterus in good position, no descent.

No. 9.—Mrs. S., private patient of Dr. Aikman, of Guernsey, aged 66; prolapse for twelve years; complete procidentia for six years. One injection, April, 1898. June, 1898, one year and three months after operation, Dr. Aikman wrote: "Mrs. S. is quite well, walks about, does her work, and is very grateful."

No. 10.—L. A., hospital patient, aged 65; prolapse for thirty-six years, and complete procidentia for twenty-five years. Incontinence of urine. Cannot retain pessaries. Three injections were given in April and May, 1898. June, 1899, one year and one month since injections, she feels very well, and is able to do some work. The uterus is in good position.

Eight Additional Cases.

No. 11.—A. Y., hospital patient, aged 32, four children. Prolapse for nine years; complete procidentia for two years. Cannot retain pessaries. Pelvic floor very lax. May 19th, 1898, under ether, injection of mxxxv of quinine solution (1 in 5). June 2nd, 1898, under ether, injection of mxxx of same solution; passed some blood in the urine for three days. Temperature normal. June 23rd, 1898, feels very well; uterus held up. Pessary for cystocele. March, 1899, uterus keeps up, but if she works she has bearing down pain, the pelvic floor being quite useless. April, 1899, Colpo-perinæorrhaphy was performed. May 7th, good union. May 18th, under ether, mxxx were injected on both sides. June, 1899, uterus is well held up; cystocele gone; no pessary required. Feels very comfortable.

No. 12.—P. H., hospital patient, aged 45. Three children. Very delicate woman. Prolapse for thirteen years. Complete procidentia for three years; cannot retain pessaries. Last year colpo-perineorrhaphy was done with only temporary benefit. Uterus bulky. Cystocele. June 16th, 1898, under ether, injection of mxxx of solution. June 23rd, no rise of temperature. Effusion slight. July 4th, injection as before. July 12th, pain in right side of pelvis. Some pus in the urine; high temperature. Examination: parametritis on right side. August 25th, much better. No pain. Uterus held up. Going home. June, 1899, uterus keeps up well; no cystocele. She is quite well, and can walk some distance, and can do her work. No descent of the uterus on straining, and no cystocele, no pessary required.

No. 13.—W. B., hospital patient, aged 29 (from Dr. Whitcombe). Complete procidentia occurred two years ago after labour. Pessaries do not relieve her. Uterus bulky. Cervix eroded. Much discharge. Large cystocele. Has had to give up her work. July 14th, 1898, under ether, injection of mxxx of solution. August 1st, no rise of temperature. August 24th, uterus held up; ring for cystocele July 3rd, 1899, since September, 1898, she has been at work as cook. The uterus has kept in good position; no prolapse. She is now pregnant five months.

No. 14.—A. C., hospital patient; delicate, feeble subject, aged 50, four children. Prolapse for ten years. Complete procidentia for three years. Colo-perineorrhaphy was performed two years ago. She was better for twelve months, and then procidentia recurred. Cystocele pronounced. Uterus bulky. Cervix eroded. Much discharge. July 14th, 1898, under ether, injection of mxx of solution. July 20th, uterus held up. Temperature 100.2 for one day. September, 1898, no prolapse on straining. Pessary for cystocele. June, 1899, the uterus keeps up.

No. 15.—A. H., hospital patient (from Dr. Whitcombe), aged 55, six children. Prolapse for ten years. Complete procidentia for over a year. Micturition frequent. Cystocele and rectocele present, pelvic floor flabby and weak. January 10th, 1899, under ether, injection of mxxx of solution. January 23rd, effusion moderate. No rise of temperature. February, uterus held up. July, 1899, she is doing her work and standing a great deal. No descent. Uterus in good position. Pessary for cystocele.

No. 16.—A. W., hospital patient from Dr. Jago, aged 31. Prolapse for six years. She has not been able to do any work (or a long time. Pessaries do not remove symptoms; pelvic floor relaxed. March 2nd, 1899 under ether, injection of mxxx of solution. No rise of temperature. May, 1899, No descent of the uterus on straining. No pessary.

No. 17.—H. M., hospital patient, aged 40. Eight children. Prolapse for six years; complete procidentia for three years. Uterus enlarged, cervix eroded, pelvic floor and vagina flabby and relaxed. Large cystocele. March 16th, under ether, injection of mxxxv of solution. March 20th, effusion slight; no rise of temperature. April 20th, under ether, injection of mxxx of solution. April 25th, uterus held up; no rise of temperature. June, uterus keeps up well. Has been doing washing and household work. Pessary for cystocele.

No. 18.—C. J., hospital patient, aged 36; five children. Prolapse for four years. Pessaries give no relief. She is unable to do any work. Uterus

bulky: large erosion of the cervix; profuse discharge; irritable bladder. April 3rd, Dr. Berkeley curetted uterus. April 24th, under ether, injection of 1/2 of solution. April 29th, no rise of temperature. Good effusion. June, 1899, no prolapse on straining. Pessary for cystocele.

REFERENCES.

[1] *Researches on Female Anatomy*, p. 88. [2] *Anatomical Illustrations of the Surgery of the Female Pelvic Organs.*

The PRESIDENT said that he felt that it was due to Dr. Parsons that he should say that Dr. Parsons had done him the honour of showing him some of the cases referred to in his paper, and it was strong testimony to his good faith that the first case he exhibited was, as Dr. Parsons had already told them, a complete failure. But in several cases the result was all that could be desired, and he had to congratulate Dr. Parsons on the introduction to their notice of a method of treatment that held out a distinct promise of benefit in a very distressing and hitherto very intractable class of cases.

Major PECK, R.A.M.C., remarked that in India the hypodermic method of administering quinine had been abandoned on account of the fact that tetanus had been known to follow it, and he asked Dr. Inglis Parsons whether he had considered the possibility of such an occurrence in his cases.

Dr. WALTER TATE wished to know the amount of exudation which Dr. Inglis Parsons found after his injections, and also the condition of the parts as regards mobility at the end of three and six months respectively. He was surprised at the permanence of the results, for in many cases of parametritis following delivery the exudation was completely resolved, and no evidence of past inflammation remained. He would also like to know whether Dr. Parsons's results were better in the two cases in which suppuration followed injection than in the others, as one would expect the results to be more lasting where suppuration had occurred. Dr. Tate did not understand why Dr. Inglis Parsons referred to parametritis as having occurred in only one case, as it seemed to him that this was the condition produced in all the cases as the result of the injections.

Dr. INGLIS PARSONS, in reply, said that as tetanus was a bacterial disease there need be no fear of its occurring if thorough antiseptic precautions were taken. Another point was that during malaria the general health was very much depressed, whereas in prolapse it was often very good. In answer to Dr. Tate, he said that the exudation was about one-fourth of that which occurred in acute parametritis. He was entitled to say that exudation and not inflammation occurred because in three-quarters of the cases there was no rise of temperature.

FIFTY CONSECUTIVE CŒLIOTOMIES FOR DISEASES OF THE UTERUS AND APPENDAGES, WITH FORTY-EIGHT RECOVERIES.

By J. MACPHERSON LAWRIE, M.D.,

Physician to the Weymouth Sanatorium for Diseases of Women; Vice President of the British Gynæcological Society.

IN 1897 I published a series of 32 consecutive cœliotomies with 30 recoveries; the present series includes 50 further cases, 48 of which recovered. I have included here only operations on the uterus and appendages, together with 2 cases illustrating complications that may be met with. I hope to give details in a later publication of cœliotomies undertaken for the purpose of dealing with pathological conditions of the intestines, kidneys, etc.

It is with pleasure that I place on record my indebtedness to Mr. F. Bowreman Jessett, who, when on a visit to Weymouth, very kindly gave me his valuable advice and assistance in four of my operations, namely, Cases 30, 32, 33, and 34 in the table.

The cases I propose to consider may be classified as follows:

	Cases.	Deaths.
Group 1.—Ovariotomies, 8 cases:		
7 For ovarian and broad ligament cysts	7	0
1 Exploratory incision for ovarian cystoma	1	1
Group 2.—Salpingo-oöphorectomies, 28 cases:		
22 For salpingitis and ovaritis	22	0
4 For suppurating tubes and ovaries	4	0
1 For myoma of the uterus	1	0
1 For ectopic gestation	1	0
Group 3.—Abdominal hysterectomies, 4 cases:		
4 For fibroids of the uterus	4	1
Group 4.—Vaginal hysterectomies, 8 cases:		
4 For cancer of the uterus	4	0
3 For fibroids of the uterus	3	1
1 For prolapse of the uterus	1	0
Group 5:		
2 Secondary operations for complications	2	0
Total	50	3

For convenience of reference I have drawn up a table, in which the cases appear in outline in their chronological order. The numbers which appear in the remarks on the cases correspond to the serial numbers in this table. Want of space forbids my giving details of each individual case, but I hope to publish these details later.

GROUP I.—*Operations for Ovarian and Broad Ligament Cysts.*—In this group there were 8 cases, all of which recovered. These cases illustrate the wide differences that are found in the ease with which ovarian and broad ligament cysts can be dealt with. While one case occupied less than twenty minutes, others took from one and a half to two hours. The two chief causes of difficulty were adhesions, especially those involving bowel, and oozing from denuded surfaces. I need hardly say that the time occupied in dealing with these complications must be regarded as an unavoidable feature of such operations: any attempt at hurry must lead to serious disaster, either at once from tearing of bowel, or later on from from secondary hæmorrhage. In Case XVII, where the adhesions were universal, the course adopted, though less heroic, was undoubtedly safer for the patient, who has been able to go on up to the present time in comparative comfort. A radical operation might have meant a fatal issue from damage to bowel, from hæmorrhage, or from the shock of prolonged operation. When dealing with broad ligament cysts, it will be found, I think, that the best plan is the one I adopted in my cases—namely, enucleation of the cyst, the securing of the base of the broad ligament with a chain of sutures, and the bringing together of the edges of the peritoneal flaps. The last-mentioned step provides that no raw surfaces shall be left to which bowel could adhere, and so safeguards against subsequent ileus. It also obviates in some cases the necessity for drainage. Some of the varying symptoms to which ovarian and broad ligament cysts may give rise are also illustrated in this group of cases; thus we have abdominal pain, dysmenorrhœa, menorrhagia, prolapse of the bladder (cystocele), frequent micturition, and pressure on the nerves of the lower extremities, causing pain and numbness. The absence of mortality in a series of cases where serious complications were present is a commentary on the beneficent effects of modern antisepsis and asepsis.

GROUP II. *Salpingo-oöphorectomies.*—These operations were 28 in number, without a death. They fall naturally into four classes. (*a*) Removal of appendages for chronic salpingitis or ovaritis; (*b*) removal of suppurating tubes or ovaries; (*c*) ectopic gestation; (*d*) removal of diseased appendages in a case of myoma uteri. The cases enumerated in Class *a* illustrate a condition that is fairly frequent. On examination it may be that little is found beyond some thickening of tubes or enlargement of ovaries, but the symptoms are out of all proportion to the anatomical changes. Thus we find pains in the back, abdomen, ovarian regions, and down the thighs; dysmenorrhœa, frequent micturition, menorrhagia, inability to walk or stand for long, or to carry on the daily duties of life. Some of these patients had been under treatment for periods ranging from two to ten years. The question of justifiability necessarily arises when abdominal section is undertaken for the relief of a condition which does not threaten life; and so it is proper that I should remark that I seldom operated on these cases unless the conditions had been a long time in existence and had incapacitated the patient, nor until palliative treatment had been thoroughly tried, whilst in one-third of the cases I removed the appendages of one side only. Now with these provisos against hasty operating I contend that patients are entitled to relief, if this can be obtained with comparative safety, even if the condition from which they suffer affects only their comfort and usefulness and not their life. If the conservative spirit were to still maintain that these operations were not justifiable, then I would ask

what it has to offer in their place, or whether it would be content to sit with hands folded and preach patience to those whose suffering prohibits their earning their daily bread? On this question I need only remark further that every patient in this class recovered from the operation, and that many of them are now going about in comfort and able to follow their respective occupations.

Case 28 illustrates an operative difficulty that may be met with when friability of the structures is associated with much matting and adhesion. Cases 41 and 45 are examples of cases in which the inflammatory troubles of the appendages dated from parturition. It is probable that in these cases there had been an antecedent salpingitis which labour had awakened to fresh activity. Case 46 is of particular interest. The association of appendicitis with inflammatory conditions of the appendages of the right side has been demonstrated not infrequently, and whilst it is difficult to be positive as to the part played by the appendicitis, there is considerable ground for believing that it was the etiological factor. When the tubal and ovarian mischief is associated with fixation of a retroverted uterus it is highly desirable that the uterus should be freed from its adhesions and fixed to the anterior abdominal wall. This was done in Cases 35 and 48. In some of these cases it may not be necessary to remove the appendages of both sides, and in Case 48 those of the right side were alone removed.

The propriety of operating on cases such as those in Class *b*, where there is suppurating disease of tubes or ovaries, is not open to question. It is one of the primary canons of surgery that collections of pus should be evacuated, and when the pus is contained in tubes and ovaries their removal is the best course, for their function has almost invariably been already destroyed in such cases. When salpingitis is non-suppurative, it is a proper procedure to leave one ovary and tube when those of one side only appear to be affected; but when pus is found in one tube its companion should be removed at the same time, even if to the naked eye it should appear healthy. Failure to do this, as in Case 14, will in many cases necessitate a second operation later on, and in the case referred to this course was found necessary (Case 19). Apart from the disadvantage to the patient of the repetition of such a grave procedure as abdominal section, it is a disadvantage to the surgeon also to have to adopt such a course, for in many cases adhesions have formed which add considerably to the difficulty of the second operation. This is the general rule; in my case there was, however, no special difficulty the later procedure. With regard to Case 50, I, of course, recognise the fact that oöphorectomy is not now generally considered to be the best treatment of myoma; it was rather the disease of the appendages than the uterine condition which led me to adopt this course. The sequel must show how far it is likely to be successful; in not a few cases of this kind it has been found necessary later on to remove the uterus. If this should prove necessary in my case, a vaginal hysterectomy will be the best operation, and will probably present no great difficulty. The case of ectopic gestation calls for no special comment beyond this, that it is one of those cases which would probably have been formerly described as an ovarian pregnancy. We now know that practically in every instance an ectopic gestation is primarily tubal.[1]

Group III.—*Abdominal Hysterectomy for Myoma.*—Uterine myoma is frequently complicated by other pathological conditions, and this fact receives exemplification from this group, though it embraces only 4 cases. Thus in Case 33 there was an ovarian tumour, in Case 34 diseased appendages and old peritonitis with adhesions, and in Case 38 pyosalpinx. These 3 cases all made uninterrupted recoveries, and were operated upon by the abdominal subperitoneal method. Case 4 was the only one of uncomplicated myoma; the operation presented no unusual difficulties, nevertheless the patient died on the third day of shock. This operation was done by the combined vaginal and abdominal method; and as this is only one case in a series, it is hardly fair to lay the blame on the operation method. But it is a question whether the combined method, as a procedure of choice, offers any advantage over the ordinary abdominal way, and I should feel disposed to restrict its use in my own practice to cases in which an operation was begun *per vaginam*, with the intention of finishing it in the same way; and in which that intention was frustrated by unforeseen circumstances, such as adhesions high up or too firm, or a tumour that was too large. The subperitoneal method of operating by the abdomen is very nearly perfect as a surgical procedure in an ordinary case; the technical difficulties of the operation have been gradually surmounted, and the results are becoming better every year. For extraordinary cases no general rules can, of course, be laid down; but even here the subperitoneal method is generally applicable, with sundry modifications in the securing of vessels, separation of adherent structures, and apposition of peritoneal edges.

Group IV.—*Vaginal Hysterectomies.*—In this group are 8 cases, the operation having been done four times for uterine cancer, three times for fibroids, and once for procidentia. The question often arises how far the mobility of a uterus affected with cancer may be impaired by adhesions without precluding operative interference. This group of cases may be regarded as a contribution to this question; for in Case 5 the mobility was distinctly diminished, although the uterus was not quite fixed, and in Case 22 there were strong adhesions in Douglas's pouch. Yet in both of these cases the uterus was removed successfully and with a reasonable prospect of freedom from recurrence. In answering the above question, we must always bear in mind the two things affected by the presence of adhesions, namely, first, the possibility of the complete removal of the uterus; and secondly, the likelihood of recurrence in the vaginal vault. Bearing this twofold aspect in mind, I consider that as long as there is any mobility of the uterus left, an attempt to extirpate the disease should be made. Even if the broad ligaments are affected so that ligatures will not hold satisfactorily, the vessels can be secured by means of pressure forceps, as in Cases 18 and 21; and as regards the question of recurrence, Leopold has shown, in his reports of the Dresden Frauenklinik, that a certain proportion, even of cases in which there is some infiltration of surrounding structures, remain free from recurrence for several years, and perhaps altogether. If the separation had to be done through the actual growth there is little doubt that recurrence would be certain and early; but in many cases the thickened areas result from products of inflammation and not from actual new growth. As long, then, as there is a reasonable prospect of freedom from recurrence, the patient ought to have the chance of relief. For small fibroids there is no doubt that the vaginal route presents several advantages; there is less shock, a quicker convalescence, and no risk of subsequent ventral hernia. In the two cases in which the operation was done as a matter of choice, the result was very satisfactory, even though in one of them the fibroid was undergoing malignant degeneration. Case 27 belongs to a somewhat different category; the original intention was to dilate the canal and remove the polypoid growth; but when it was found that the base of attachment extensively involved the posterior uterine wall, there was nothing left but to proceed to hysterectomy. Unfortunately the collapsed state of the patient, which was the urgent ground for early operation, was also the factor that led to a fatal issue. Hysterectomy for prolapse is not, and is never likely to be, a common operation, but in cases where milder measures have been ineffectually tried, and where the patient has arrived at the menopause, there is no valid reason that can be adduced against the removal of a troublesome and useless organ. The operation commonly presents no difficulties.

Group V.—This group includes 2 cases; one was a secondary operation on account of a swelling in the broad ligament subsequent to hysterectomy, caused by a buried ligature. An incision was made to the right of the former one. The omentum was generally adherent, and had to be separated. After packing the bowels out of the way, a fusiform swelling was found in the right broad ligament. This structure was transfixed below the swelling by a double ligature, which was tied on each side, and the swelling was cut out. On cutting into the tumour a Chinese silk ligature was discovered in its centre. The second case was one of chronic partial obstruction of the bowel and omental herniæ in the cicatrix, following abdominal section in 1892 by another operator. I made an oval incision through the skin, enclosing the old cicatrix, and on dissecting up the skin found two separate omental herniæ protruding through the deep fascia. I opened the abdomen above these places, and found the omentum generally adherent. After

Table of Cases.

No.	Name.	Age	S. M. W.	Date of Operation.	Disease.	Features of Operation.	Result.
1	S. R.	28	S.	July 25, 1897	Chronic partial obstruction of bowels, and omental herniæ in cicatrix of former abdominal section	Two omental herniæ; omentum generally adherent; separated adhesions and excised omentum	Recovered.
2	E. V.	50	W.	Aug. 15, 1897	Large ovarian cystoma	Universally adherent; pedicle twisted; free hæmorrhage from adhesions to broad ligament; much exhaustion; operation two hours; flushing and drainage	"
3	A. Z.	27	S.	Aug. 17, 1897	Double broad ligament cysts	Cysts dissected out of broad ligaments	"
4	Mrs. M.	32	M.	Aug. 22, 1897	Fibroid tumour of uterus	Panhysterectomy by combined method	Death.
5	Mrs. L.	59	W.	Aug. 24, 1897	Advanced cancer of uterus	Vaginal hysterectomy; uterus extremely friable	Recovered.
6	L. B.	32	S.	Sept. 19, 1897	Cystic disease of ovaries; salpingitis	Salpingo-oöphorectomy; left ovary advanced cystic disease with one predominating cyst, which ruptured during extraction	"
7	Mrs. H.	24	M.	Sept. 21, 1897	Cystic ovarian disease: salpingitis	Salpingo-oöphorectomy	"
8	Mrs. G.	49	M.	Nov. 5, 1897	Fibroid tumours of uterus	Vaginal hysterectomy; flaps sutured	"
9	Mrs. W.	44	M.	Nov. 14, 1897	Procidentia of uterus	Vaginal hysterectomy	"
10	G. B.	36	S.	Dec. 28, 1897	Swelling in right broad ligament, subsequent to hysterectomy	Swelling excised; contained a ligature	"
11	K. S.	37	S.	Jan. 9, 1898	Salpingitis; ovarian disease	Both ovaries extensively adherent and cystic, ruptured in removal	"
12	Mrs. M.	30	M.	Jan. 30, 1898	Salpingitis and cystic disease of ovaries	Right ovary much enlarged; tubes matted and sealed up	"
13	A. H.	33	S.	Mar. 13, 1898	Salpingitis; suppurating and adherent ovaries	Dense adhesions which were separated with difficulty	"
14	Mrs. B.	35	M.	Mar. 22, 1898	Salpingitis; abscess of left ovary	Left appendages removed; right appendages left	"
15	A. C.	35	S.	Mar. 27, 1898	Hydro-salpingitis; cystic ovaries	Salpingo-oöphorectomy	"
16	Mrs. B.	21	M.	April 1, 1898	Broad ligament cyst	Exploratory incision; wound closed and cyst emptied *per vaginam*	"
17	Mrs. G.	53	M.	April 3, 1898	Large ovarian cystoma	Extensive adhesions; albuminuria; exploratory incision	"
18	Mrs. G.	54	M.	April 17, 1898	Cancer of uterus	Vaginal hysterectomy	"
19	Mrs. S.	30	M.	May 22, 1898	Salpingitis; cystic ovaries	Right ovary much enlarged	"
20	Mrs. H.	32	M.	May 22, 1898	Salpingitis and cystic ovaries	Ovaries much enlarged	"
21	Mrs. S.	60	M.	May 24, 1898	Cancer of uterus	Vaginal hysterectomy	"
22	Mrs. P.	54	W.	June 20, 1898	" "	" "	"
23	Mrs. A.	35	M.	July 3, 1898	Salpingitis and ovaritis	Left salpingo oöphorectomy	"
24	Mrs. B.	30	M.	Aug. 4, 1898	Salpingitis and ovarian cyst	" "	"
25	Mrs. L.	28	M.	Aug. 7, 1898	Salpingitis and cystic disease of ovaries	Salpingo-oöphorectomy	"
26	Mrs. K.	56	M.	Aug. 9, 1898	Large multilocular ovarian cyst	Ovariotomy	"
27	Mrs. C.	33	M.	Aug. 19, 1898	Fibroid tumour of uterus with severe metrorrhagia	Vaginal hysterectomy; patient was in very bad condition from prolonged hæmorrhage	Death
28	Mrs. O.	40	M.	Aug. 23, 1898	Chronic ovaritis and salpingitis	Right ovary and tube concealed in thick-matted omentum and removed; left appendages left	Recovered.
29	Mrs. V.	28	M.	Aug. 27, 1898	Salpingitis and ovarian cysts	Salpingo-oöphorectomy	"
30	Mrs. F.	45	M.	Aug. 31, 1898	Large broad ligament cyst Left ovarian tumour Subperitoneal uterine fibroid Retroversion of uterus	Dissected out of broad ligament Ovariotomy Myomectomy Ventrifixation of uterus	"
31	Mrs. D.	31	M.	Aug. 31, 1898	Menorrhagia and dysmenorrhœa from salpingitis and cystic disease	Salpingo-oöphorectomy	"
32	Mrs. S.	57	M.	Sept. 2, 1898	Large right and left broad ligament cysts	Cysts dissected out of broad ligament	"
33	Mrs. P.	52	M.	Sept. 4, 1898	Large fibroid tumour of uterus; ovarian cystoma	Subperitoneal hysterectomy; ovariotomy	"
34	E. B.	44	S.	Sept. 6, 1898	Large subperitoneal fibroid tumour	Myomectomy	"
35	J. M.	30	S.	Sept. 13, 1898	Salpingitis; adherent cystic ovaries; retroverted adherent uterus	Salpingo-oöphorectomy; ventrifixation of uterus; uterus and ovaries densely adherent to pelvic structures	"
36	Mrs. W.	35	M.	Sept. 25, 1898	Ectopic gestation	Sac and contents removed	"
37	E. C.	23	S.	Oct. 23, 1898	Salpingitis and cystic ovaries	Left salpingo-oöphorectomy; adhesions of right appendages separated and structures left	"
38	Mrs. S.	40	M.	Nov. 6, 1898	Fibroid tumour of uterus and pyosalpinx	Subperitoneal hysterectomy	"
39	Mrs. J.	28	M.	Nov. 13, 1898	Fibroid tumour of uterus undergoing malignant degeneration	Vaginal hysterectomy	"
40	A. L.	34	S.	Dec. 29, 1898	Salpingitis; cystic ovaries	Salpingo-oöphorectomy	"
41	Mrs. L.	28	M.	Jan. 8, 1899	Ovarian cysts and salpingitis	" "	"
42	Mrs. D.	44	M.	Jan. 10, 1899	Salpingitis; ovarian abscess	" "	"
43	M. C.	31	S.	Jan. 15, 1899	Pyosalpinx; ovarian abscess	" "	"
44	Mrs. M.	50	M.	Jan. 22, 1899	Multilocular ovarian tumour	Ovariotomy	"
45	Mrs. J.	30	M.	Feb. 2, 1899	Salpingitis; cystic disease of ovary	Left salpingo-oöphorectomy	"
46	Mrs. W.	45	M.	Feb. 5, 1899	Appendicitis; ovarian disease	Adhesions separated; right appendages removed; appendix left; left appendages not interfered with	"
47	Mrs. H.	38	M.	Feb. 19, 1899	Salpingitis and cystic ovaries	Salpingo-oöphorectomy	"
48	R. H.	30	S.	Feb. 26, 1899	Salpingitis; ovaritis and adherent retroverted uterus	Right salpingo-oöphorectomy; ventrifixation of uterus; left appendages not interfered with	"
49	Mrs. B.	30	M.	Mar. 12, 1899	Right salpingitis and cystic ovary	Second operation (see Case 14)	"
50	A. T.	38	S.	Mar. 14, 1899	Fibroid tumour of uterus and menorrhagia; ovarian cysts	Salpingo-oöphorectomy	"

separating all adhesions the two hernial portions of omentum were ligatured off, and the wound was then closed with two deep layers of Chinese silk and a superficial layer of silkworm gut. I have no data as to the method that was employed in the first operation in this case, but in 1892 the triple method was hardly known, and so we may presume that the plan of sewing up in one layer was the one adopted. This complication is of great importance, as it may give rise to much greater pain and discomfort than was caused by the original condition for which operation was undertaken; a small ovarian cyst, for instance, may cause so little trouble as to be discovered merely by accident, and if such a case be operated upon with the subsequent occurrence of hernia, the patient exchanges a possibly more serious, but certainly less disturbing, condition for one which is highly distressing and which may become grave. Hence from her point of view the exchange is by no means satisfactory. The importance of any measure that safeguards against ventral hernia following abdominal section cannot be overestimated.

Usually the first question that arises in relation to a series of cases of abdominal section is concerning the mortality. The mere statement of the percentage

of deaths is of comparatively little value when a series includes several groups of conditions, some of which may be represented by only three or four cases; all it does is to give a general indication as to the care or the want of it bestowed upon one's work. The mortality in this series amounted to 2 deaths in 50, or 4 per cent.; and I think I can claim that this mortality is low, because the cases were in no way selected, but included serious and slight ones alike. I have no hesitation in ascribing this satisfactory result mainly to the scrupulous adoption of the principles of asepsis and antisepsis; there were no cases of death from sepsis. The germ theory of disease has been recently adversely criticised by one of our leading gynæcologists; for my own part I do not profess to treat of the matter from the standpoint of the bacteriological expert; but until some better explanation than that of the germ theory is advanced to account for the notable absence of septic infection when Listerism is adopted, I am content to hold by the Listerian doctrine in theory and to carry it out in practice. I feel sure that the principal factors on which good results in abdominal surgery depend are: First, asepsis; and, secondly, careful hæmostasis. To these may be added as secondary, but still very important points, reasonable speed in operating, absence of unnecessary handling of intestines, etc., and careful after-treatment. I may add a word as to the duration of operations. With the principle of breaking records, and triumphantly showing specimens removed in so many minutes or seconds, I have little sympathy; by such procedures care is likely to be sacrificed to time. Neither do I approve of the opposite extreme, in which time is needlessly lost over unimportant details; such "pottering about" is sometimes mistaken for carelessness. Time is not everything in an operation, but neither is it an unimportant factor; for, other things being equal, the shorter the operation the less is the tendency to shock. The ideal is to lose no time, but to know exactly what one wants to do, and to do it expeditiously. Indeed, the matter is admirably summed up in Doyen's dictum, *Opérer vite et bien*.

It is not necessary that I should dwell here on the principles of technique and of after-treatment which I follow in the performance of abdominal sections; for these were set forth at some length in the previous communication to which I have already referred. My aim has been rather to set forth a brief account of my later work. Some of the cases are of great interest; others present no special features, but are included for the sake of completeness, and because I feel that the ends of clinical gynæcology are best served by such brief records of individual work as I have here endeavoured to present to my medical brethren.

Dr. Warden thanked Dr. Lawrie for his interesting paper, and referred to the value of vaginal section, as in one of the cases of salpingitis for which Dr. Lawrie had been obliged to open the abdomen twice. In cases of very friable uterus, in one of which Dr. Lawrie was obliged to have recourse to forceps left on the broad ligament, Dr. Warden pointed out the value of Doyen's method of ligature by means of his powerful clamp forceps, which allowed a thick structure like the broad ligament to be reduced to the thickness of a sheet of paper, thus reducing the risk of any secondary hæmorrhage to a vanishing point.

Dr. Tate wished to congratulate Dr. Lawrie on the excellent results he had obtained. Any surgeon could well be satisfied if his mortality in a large series of cases did not exceed 5 per cent. Dr. Tate agreed with Dr. Lawrie's views as to the desirability of operating in cases of salpingitis where the patient was a constant sufferer and unable to perform her household duties. Moreover, one usually found the amount of disease present greater than was expected after a careful bimanual examination. As regarded operating by the combined vaginal and abdominal methods, he would restrict this operation to cases of malignant diseases of the uterine body in which the tumour was too large to be removed by the vagina, and also to cases of submucous fibroid tumours in which it was found impossible or inadvisable to remove the tumour by enucleation, and the whole uterus had therefore to be removed by the vaginal route or the combined method according to the relative size of tumour and vaginal passage. With regard to operating in cases of cancer of the uterus in which there was impairment of mobility of the uterus, great care had to be exercised. He was of opinion that in some cases the operation might be undertaken as a palliative measure, but only where it could be performed without any great difficulty. Unless the uterus was sufficiently mobile to be drawn well down towards the vulva, it was questionable whether any relief would follow operative measures. As Dr. Martin of Berlin had said: "When vaginal hysterectomy for cancer is an easy operation, it is a good operation; and when it is a difficult operation, it is a bad one."

Mr. John W. Taylor congratulated Dr. Lawrie on his record of work. He recommended the combined operation in certain cases of hysterectomy for myoma when the operation was carefully planned and performed aseptically throughout. The duration of intraperitoneal manipulation was materially shortened by this method, and the operation rendered easier. He advocated vaginal section for many diseases of the appendages which had hitherto been usually treated by abdominal section, and insisted on the importance of the investigation recently reported by him to the British Gynæcological Society, which appeared to show that gonorrhœal salpingitis was largely under the control of mercury and iodides when persistently administered.

Note.

[1] This case was reported at a meeting of the British Gynæcological Society (see *Medical Press and Circular*, February 22nd, 1899).

ON THE TREATMENT OF UTERINE CANCER.

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In a branch of surgical science undergoing such rapid development as gynæcology the occasional rediscussion of even the most familiar questions connected with its practice becomes unavoidable. More especially does this appear to be the case at the present time with regard to uterine cancer, the increasing prevalence of which has been strikingly apparent of late years, whilst its treatment is still largely debatable. Hence, although I have brought this subject under consideration, there are some points on which I would desire to elicit, if possible, the views of the Obstetric Section of the British Medical Association, and venture, even at the risk of some reiteration, to submit here the following summary of a somewhat extended clinical experience of the various curative and palliative measures now available in cases of malignant disease of the uterus.

Of such instances more than a hundred have come under observation in my wards in the Mater Misericordiæ Hospital, Dublin, where their proportion has risen to 3 per cent. of all the gynæcological cases. In the majority of these the disease originated in the cervix, following on parturient lacerations, and remained localised therein for a sufficient time to admit of effectual curative treatment by the early removal of the affected parts. Thus, of 54 of the cases of this kind of which I have sufficient notes, in 47 the disease commenced in the cervix, 37 of these patients being multiparæ and only 15 nulliparæ or unmarried women; whilst the influence of age as a predisposing factor in such cases was sufficiently shown by 37 cases in women between 40 and 50 years of age, in 10 cases beyond 40, and in only 8 under that age.

I have already observed that in the large proportion of these cases the disease originated, and for a time remained localised, within the cervix: hence the vital importance of its early recognition. This may, I think, be very frequently accomplished before the occurrence of any of its generally described objective symptoms, such as pain, hæmorrhage, or fœtid discharge, by careful local examination in all cervical lesions, especially in those traceable to traumatic or parturient lacerations, and by subsequent microscopic investigation. If such examination be made thus the margin of the os uteri will generally be found hard, and often red, and in the situation of the muciparous glands small and distinctly defined projections, somewhat like grains of shot under the mucous membrane are felt, pressure on which causes pain and nausea. The circumference of the os feels indurated or turgid, and is of a deep crimson colour, or, if eroded, presents some

slightly projecting points, which bleed readily. These nodules when excised show microscopically malignant characteristics. Hence the curette should be used in every case where any possibility of cancerous or œdematous disease may exist.

TREATMENT OF UTERINE CANCER: HYSTERECTOMY.

In the modern treatment of uterine cancer too exclusive attention is given to hysterectomy as a curative procedure in contradistinction to early amputation of the cancerous cervix, on grounds that it seems to me yet remain to be established. In so saying I, however, of course fully recognise, and in my own practice act on the fact, that in some instances where the disease has distinctly originated in the fundus or body of the uterus, or as a palliative measure in advanced cases, hysterectomy may be an unavoidable necessity. Nor can anyone for a moment question that its immediate mortality, more especially by the vaginal procedure, has been now reduced to a very small proportion of the cases operated on. None the less do I still maintain that these successful immediate results in no way represent the ultimate or curative consequences so obtained, and that they afford no ground *per se* for the adoption of those operations as a general rule of practice in malignant disease of the uterus.

We have superabundance of statistics to show in how many cases of uterine carcinoma hysterectomy has been performed, and in how large a proportion of cases the patients were discharged, apparently convalescent, from hospital shortly afterwards. Such statistics, however, cannot be accepted as proof that the patients in question were cured by the operation, or even that they lived longer than would otherwise have been the case unless this be distinctly shown. The accuracy of the results published by Leopold and others of patients considered cured a few months or even a year or two after hysterectomy is in no way questioned by the refusal to accept the conclusions as to its ultimate effects thus arrived at. For if in such statistics be included, as is possibly the case, the majority of instances of uterine cancer—namely, those in which the diseases is located in the cervix, there need be no marvel in the present advanced stage of intraperitoneal and pelvic surgery at the immediate results so obtained. And I venture to think that no less beneficial consequences, to say the least of it, might have been obtained with less risk by the timely removal of the affected cervix.

But if, on the other hand, they refer to cases in which the upper regions of the uterus were extensively implicated by cancer, I must only confess my incompetence to realise how structures of such intense vascularity and intimate connection with lymphatic plexuses emptying into the vessels of the broad ligaments, as the fundus or body of the uterus, can long be the seat of cancerous changes without as a general rule abnormal fixations and inevitable extension of the disease beyond possibility of capture by the surgeon's knife. Hence, under such circumstances, the ultimately successful or curative results of hysterectomy must, I fear, be regarded as largely fortuitous and exceptional, although in some cases the fatal issue may be thus staved off for a time.

Any extension of life and immediate relief from suffering are obviously justification of whatever measures may afford the best chance of such results. On these grounds, therefore, and merely as a palliative, I have resorted to hysterectomy in a few of the many cases of carcinoma affecting the upper portions of the uterus that I have seen within the long period referred to, and in only one of these was the patient apparently perfectly free from any recurrence of the disease at the expiration of two years and a-half after the operation.

THE RESULTS OF EARLY REMOVAL OF THE CANCEROUS CERVIX.

With regard to the immediate consequences of cervical removal for cancer, I can speak with some certainty from my own experience, having so far seen no mortality whatever directly consequent on this operation. Whilst as to the subsequent recurrence of the disease in the uterus or elsewhere, I may again mention that, of 31 cases in which I amputated the cervix for supposed cancer, and was able to trace the result, in one instance the disease returned in the uterus within four months, in 5 cases it returned there or elsewhere within a year, in 2 cases within two years, in 1 within three years, and in 1 the patient came back four years after discharge from hospital with labial cancer. On the other hand, in 10 cases there was no return of cancer within four years, and some patients I operated on more than ten years ago have since remained free from it. In 5 other cases the information procurable was limited to two years, and in 6 cases to one year after operation, and indicated no recurrence of the disease within those periods.

These results may, I venture to think, be favourably contrasted with those obtained by the probably bolder, but not necessarily more successful, surgeons, who unhesitatingly and as a general rule advocate and practise the complete removal of the uterus in every case of carcinoma localised in any part of that organ. For, as just shown, the immediate mortality of the amputation of the cancerous cervix in my cases was *nil*. Moreover, of the patients so operated on two-thirds were apparently free from cancer at the end of the subsequent periods referred to, and as far as I know have since continued so.

The method of amputating the cancerous cervix which was followed in these instances is somewhat different from that more generally adopted, and may, perhaps, be here briefly referred to. With the exception of some instances in which either supravaginal amputation or the vaginal flap operation with the knife was resorted to, in the great majority of cases I have relied on the infra-vaginal removal of the primarily affected neck of the womb either by the steel wire *écraseur* or by thermo-cautery. But before this was done we invariably in the former instance transfixed the cervix above the supposed limits of disease by a steel wire ligature so as to prevent retraction of the divided part and to allow of its being drawn down for that subsequent thorough and deep cauterisation with the actual cautery of the stump which, when the thermo-cautery had not been used for its separation is, I think, always essential, and frequently successful in preventing any recurrence of cancer in the dense fibrous cicatricial tissues thus left. It need hardly be added that the necessary measures were taken to secure patency of the uterine orifice in these cases.

NON-OPERATIVE TREATMENT OF CARCINOMA UTERI.

Believing, as I still do, in my formerly expressed opinion that once this disease has extended upwards so as to implicate the superior uterine zone and its glandular connections or where it has originated in, or largely affected the fundus or body of the uterus, any treatment must as a general rule be regarded as merely palliative, I cannot here omit some reference to the modern methods by which life may be prolonged or symptoms be mitigated and pain allayed in inoperable cases of this kind although in so doing I must perforce reiterate my experience of the methods now available for these purposes.

ELECTROLYSIS IN UTERINE CANCER.

As alternatives to the older escharotics, the galvano cautery or the negative electric current were tried in several cases of carcinoma uteri in my wards, by the methods suggested by Drs. Apostoli of Paris, Byrne of Brooklyn, and Parsons of the Chelsea Hospital. The effects, according to the latter authority, produced by the passage of the current directly through the cancerous structure consist of a cessation of growth, gradual subsidence of pain, shrinking and hardening of the tumour, followed by improved nutrition and improvement of constitutional condition. In the few cases in which I endeavoured to follow the directions published for the latter procedure, some benefit was for a time evinced. But possibly from inexperience or insufficiency of perseverance I was not myself enabled to secure the more marked and permanently good results hoped for from this practice.

ACTUAL CAUTERY.

In two instances of advanced cervical cancer with glandular complications and considerable discharge and hæmorrhage I destroyed the diseased surface by deep cauterisation with the actual cautery as a local palliative. In the first instance the eschar sloughed out, leaving a cleaner and comparatively healthy-looking small ulcerated surface. In this case the cauterisation afforded marked relief from pain, hæmorrhage, and discharge, as long as the patient remained under observation. In the second case no benefit was produced.

Potential Cautery.

In some cases where the disease is beyond removal by operation, or where it is returning in the cicatrix after operation, or where by the destruction for a time of the cancerous tissues we can hope to afford relief from pain, discharge, or hæmorrhage, and so prolong life and render death more easy, escharotics may be usefully employed. Of those which I have myself thus tried, including nitric and chromic acids, acid nitrate of mercury, ethylate of sodium, and chloride of zinc, I have found the last the most effective, safest, and least painful.

In more than one instance of cancerous disease of the fundus or body of the uterus, even when the patient's strength was greatly exhausted by the accompanying hæmorrhage and fœtid discharge and pain, I have apparently assisted in prolonging life for a considerable time, and in relieving the symptoms by thoroughly curetting away as far as possible the cancerous structures and freely cauterising the parts with chloride of zinc.

Celandine or Swallow Wort.

This very old remedy having been again recently reintroduced into practice in the treatment of cancer cases, was employed in some cases of malignant disease of the uterus in my wards. In three of these in which the celandine extract was locally applied and administered internally, the condition of the cancerous ulceration was rapidly and distinctly improved for a time, in two no change was produced, but in none of them was any permanent curative effect produced.

Local Injections of Absolute Alcohol,

as recommended by Schultz, were employed in some of my inoperable cases of cervical cancer. In one of these the first injection of alcohol was followed by such local pain and constitutional disturbance as to prevent its repetition. In two other cases similar but deeper parenchymatous injections, repeated at intervals of two or three days, were attended with some diminution in the amount and fœtor of the discharge, and apparent shrinkage in the diseased structure. In neither of these cases, however, did the patient remain sufficiently long under observation to warrant any conclusion as to the probable duration of these effects.

Methylene Blue.

Several years ago I called attention to the value of this agent as a local analgesic in pruritus and other gynæcological cases, and since then I have frequently employed it in this way and to relieve the pain of uterine cancer. In cases of inoperable cervical carcinoma, a pledget of sterilised gauze saturated in a 5 per cent. solution of methylene blue will occasionally not only allay pain, but also cleanse and temporarily improve the condition of the parts, whilst the injection of a similar solution by the needle into the substance of a medullary growth may for a time cause some diminution of its size and abatement in the amount and fœtor of the discharge.

Deodorisation of Cancerous Discharge.

In many cases patients in an advanced stage of uterine cancer suffer from the fœtor of the vaginal discharge as much as from the accompanying pain or hæmorrhage. The mitigation of this source of discomfort is therefore a matter of great practical importance. Mere syringing with warm water is *per se* almost useless for this purpose, whilst some of the deodorants, such as iodoform and ichthyol suppositories, are only less offensive in their own odour than the discharge, the fœtidity of which they are designed to mask. Nor is the desired object sufficiently effected by antiseptic solutions of izal, carbolic or boric acid, etc. Of such agents one of the most effective is peroxide of hydrogen, which even for some hours after its use leaves the patient free from this horrible addition to her miseries. But as the cost of this agent is a bar to its general use by hospital patients, in such cases, we may be enabled to overcome the characteristic smell of cancerous vaginal discharges almost as effectually by the use of one or other of the cheaper deodorants—namely, first, chloride of sodium in the proportion of a couple of drachms to a quart of hot water; or, secondly, by a 1 per cent. solution of formalin; and, thirdly, by the use of turpentine.

The latter can be employed by putting half an ounce of pure turpentine with a spoonful of magnesia into a quart of boiling water, and then pumping the mixture with the syringe from one vessel into another until the temperature be reduced to blood heat when the turpentine, being at the same time thus mechanically subdivided, will remain diffused through the fluid for a sufficient time to allow the vaginal passage to be washed out before the oil comes together again. No deodorant or styptic application in general use appears to afford more distinct respite from the fœtor as well as hæmorrhage of cancerous uterine discharges than this. In some cases very similar effects can be produced by applying a small tampon saturated in a mixture of pure terebene and glycerine to the cancerous surface when it may be left *in situ* for several hours.

Relief of Pain in Inoperable Cases of Uterine Cancer.

This in a large proportion of such instances unfortunately still remains our chief function. For that purpose, however, although I have found none of the newer hypnotics or analgesics, with the exception perhaps of orthoform, so effective in the pain of uterine cancer as the older fashioned preparations of opium, such as Battley's and the acetum opii, I would nevertheless venture to deprecate their too frequent exhibition. In the advanced stage of uterine cancer, with extension of the disease, more especially to the bladder or uterus, sedatives are not likely to be required, opiates or morphine cannot be habitually used without such increase in their dosage as to derange the digestive functions and the nervous system, and thus probably accelerate the fatal issue.

Moreover, under these circumstances I have noticed a special intolerance of morphine and have seen what under ordinary conditions would have been a perfectly safe hypodermic injection of this agent followed by that "sleep which knows no waking." Hence, in the cases referred to we have in the hospital, as a rule, endeavoured and generally succeeded in affording sufficient sleep and mitigation of pain by ringing the changes in succession on the various old and new analgesics as each in turn loses its effect. Amongst those thus employed were the bromides of potassium and sodium, trional, chloral, sulphonal, belladonna, conium, and lastly, the newest and probably one of the most effective pain allayers in uterine cancer cases, namely, orthoform, on the general safety of which, however, in such cases some apparently well-founded doubt has been thrown by recent casualties.

THE CAUSES WHICH RENDER DIFFICULT THE LABOURS OF CIVILISED WOMEN.

By G. Archdall Reid, M.B.
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At the Montreal meeting of 1897, Professor Sinclair, the then President of the Section, contrasted the frequency with which forceps are used by the present generation of medical men with their much less frequent use a generation or two ago, and assumed that the change had its origin wholly in fashion. No doubt this assumption is largely—very largely—founded on fact. I think, however, that there is reason to believe the change is due in part at least to necessity—that in fact it is due in some degree to a gradually increasing disproportion between the fœtal head and the maternal pelvis.

Dr. Sinclair quoted a number of statistics. It appears that early in this century forceps were used once in 608 times in the Rotunda Hospital. At the present time, even where forceps are used with the least frequency, as in a certain Continental hospital he mentioned, they are used as often as a fraction more than once in a hundred cases—in other words more than six times as often as they were used early in this century at the Rotunda. At the other extreme, Dr. Sinclair told us of private practitioners who used forceps in as many as 75 per cent. of their cases.

In one respect Dr. Sinclair's statistics, and therefore his arguments, seem to me incomplete, and consequently faulty. Forceps are not the only surgical means with which difficult labours are assisted. Apart from such simple methods as pressure on the abdomen, which may be practised by any midwife, no matter how ignorant, we resort also to version, Cæsarean section, craniotomy, and other more or less severe surgical operations, the successful accomplishment of which

requires a high degree of skill. Now it is quite possible that in one hospital or with one practitioner version, for example, may find greater favour than the use of forceps. In the former instances, the proportion of instrumental cases would be greatly reduced, though the severity of the surgical interference, and the consequent danger of injury or death to the mother or child would be pretty much the same. Professor Sinclair did not tell us anything concerning these differences of procedure; he did not, in fact, take all the factors into account, and therefore I think his statistics have not the value they might otherwise have had. One thing, however, he made sufficiently plain. He considers modern midwifery much too meddlesome, and would therefore condemn the practice of the obstetrician who resorted to surgical aid in 10, 20, and 30 per cent. of his cases. To meddlesome midwifery he attributes the majority of the injuries which women receive in labour, and especially the numerous cases of ruptured perineum which furnish so large a part of his practice as a gynæcologist.

My own obstetrical experience leads me to conclusions very different—to conclusions which, judging by the controversy that followed Professor Sinclair's address, I share with a good many others. Speaking in round numbers, I have seen in my own and in my friends' practices about 1,000 labours during the last ten years. In all these cases I have seen only three deaths: One woman died of apoplexy ten days after her confinement; another of scarlet fever three weeks after; in the third case the woman had placenta prævia, and was bleeding to death when we interfered and delivered her, first of the placenta, and then of a dead child by version. The woman subsequently died of septicæmia, in spite of all antiseptic precautions.

I have seen many cases of ruptured perineum, but most of these occurred when forceps were not used, and resulted from the too forcible expulsive efforts of the mother. Where these expulsive efforts could be modified by an anæsthetic, rupture has been so rare that I have attributed it generally not to the use of forceps, but to reprehensible lack of skill and patience in the medical attendant. In about 20 per cent. of the cases seen by me in my own practice and in that of my friends, forceps or other surgical means have been adopted, and in no single instance in all those cases have I heard of a patient seeking the aid of a gynæcologist to repair the injuries inflicted by us. So far as I am able to judge, therefore, a gynæcologist's practice would sink to very scant proportions indeed were he to depend merely on the errors, not to say crimes, of his brothers in general practice.

Professor Sinclair spoke only of forceps, but I do not suppose he intended to imply that an obstetrician's aid was needed in only about 1 per cent. of cases. Unless an obstetrician meddles I do not quite see of what use his presence is at a labour; and I take it that even Professor Sinclair will admit that on the average the doctor's meddling is needed in a good many more than 1 per cent. of the labours he attends. In other words, the labours of civilised women are so severe that, in the absence of skilled aid, a very considerable proportion of cases would perish or suffer grievous harm; and even in milder cases, in which surgical aid is unnecessary, delivery approaches in severity a major operation, the effects of which the woman feels for a fortnight or a month.

It is different with savage women. Many accounts tell us how safe and easy are their labours. In some instances they do not lie up even after delivery, but at once resume their usual habits. Why are the labours of savage women so much less difficult than those of civilised women? Presumably all races are derived from a common stock, and we know that every civilised race had a savage ancestry. It appears, therefore, that civilisation in some way renders delivery difficult; but how? Many guesses have been hazarded by different authorities. It has been said that the conditions of civilised life are unnatural. But speaking precisely, and not in abstract terms, what is there in civilised life that can render labour difficult? Labours are difficult because the fœtal head is too big, or the pelvis is too small; or, more seldom, and generally in minor cases, because the soft parts are too rigid. How can an unnatural method of living—such as civilisation is said to be—bring about such results? Some authors say that rich women have difficult labours because they lead indolent lives, but poor women who do not lead indolent lives have labours just as difficult. Others declare that the labours of poor women are difficult because the lives they lead are hard, but savage women—who lead lives as hard—have the easiest labours of all; and rich civilised women—whose lives are far from hard—are not helped by the luxuries of their surroundings. Sir James Simpson's guess—I really cannot give it a better name—seems to have obtained wide acceptance. He supposed that education enlarged the parent's head, and that this acquired trait was transmitted to the child, the result being that in the process of ages the fœtal head has grown too big for the maternal pelvis. But the absurdity of Simpson's guess is at once seen when we ask ourselves how such enlargement of the head, as education may produce in a man, can so affect his spermatozoön that, after long separation from him, it will proliferate into a child which has a head larger than it would have had if the man had not been educated. This initial difficulty lies at the root of all belief in the transmission of acquired traits, and, as a matter of fact, though biologists have sought both in the plant and animal kingdoms and throughout the world, no instance of such transmission has yet been proved. Simpson's guess, therefore, may be dismissed as founded on an exploded theory of heredity.

Whence, then, this difference between savage and civilised women? I think an explanation may be given which seems feasible, and is at any rate in accordance with modern theories of heredity. We know that, while children tend to inherit the peculiarities of their parents, they tend also to vary somewhat from them. Thus, for example, big or fair people tend as a rule to have big or fair children; but each child, generally speaking, is bigger or smaller, fairer of darker, than the parent. It follows that women with large or small pelves tend to have daughters with a like peculiarity also; and that people, who at birth had large or small heads, tend to transmit this peculiarity also. Now savage women, generally speaking, have large pelves, and bear children with small heads, hence the ease of their labours. When, however, a savage woman varies from her parent in such a manner as to have a small pelvis or to bear a large-headed child, her life is endangered. A really difficult labour requiring surgical aid of course to her means death. Among the lowest nomadic savages, a labour even as difficult as is normal among civilised races would be fatal. The race is thus strictly purged, generation after generation, of all narrow hips and large heads, and the right proportion between head and pelvis is from age to age secured.

But with the rise in civilisation greater care is bestowed on lying-in women; those who would have otherwise have died are preserved, and thus the just proportion between head and pelvis is gradually lost. First natural labours become difficult, though not impossible. The severity of the labour exhausts the woman, and makes her so ill, and liable to septic infection from tears, abrasions, and crushings, that under more savage conditions she would perish. In any case she is incapacitated from labour or movement for some days. In the highest civilisation such as our own, labours are so difficult that many of them are terminated only by surgical interference. How important this surgical interference is every skilled obstetrician may judge for himself. Let him think how many small-hipped women and large-headed children he saves annually. Suppose they perished, would not the average difficulty of labour among the circle of his patients be appreciably ameliorated in the next generation? What happens in his own circle happens in the world at large. Here, then, I think we have the reason why the labours of civilised women grow increasingly difficult as our surgical skill improves, an increase of difficulty which to some small extent explains that increase of instrumental interference which Professor Sinclair so grievously deplores. About the end of the twenty-first century I think it not improbable that another gynæcologist will denounce the obstetricians of his day, and point out that, while their grandsires used forceps in only about 75 per cent. of their cases, degenerate contemporaries use them in at least 99 per cent. In the not very remote future it seems to me probable that normal labour will be the exception, not the rule. Injuries will then be very numerous, and gynæcologists very busy.

I owe Professor Sinclair an apology. Without very seriously attempting to controvert him, I have used his address as a

peg whereon to hang an essay. I am sure he is right in thinking that the increasing use of forceps is due mainly to a change in fashion, though I am equally sure he is mistaken in deploring the change. My real object in this and other papers has been to awaken interest in certain problems of heredity which I think ought not to be devoid of interest to the scientific medical man. My experience as regards those problems has been somewhat unfortunate. I have been accused by imaginative opponents of inciting to wholesale murder. May I protest that in this particular instance I do not advocate the euthanasia of all women with narrow hips and all children with large heads? The remedy I should feel disposed to suggest would be very different, and since it is wildly outside the range of practical politics I need not mention it.

Dr. Purslow (Birmingham) thought that the prolonged and tedious labours of civilised as compared with savage women were more often due to deficient power in their expulsive muscles, the result of less exercise, and probably also of the wearing of corsets. He also thought position had something to do with it, the savage woman almost invariably assuming the squatting position as in defæcation, whilst civilised women assumed some form of the recumbent position. He quite agreed that rupture of perineum was more common in unassisted labours.

THE SYPHILITIC FACTOR IN THE DISEASES OF WOMEN.

By John A. Shaw-Mackenzie, M.D.Lond.
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The prevalence of pelvic inflammatory disease in parous women, often associated with minor syphilitic sequelæ, and for the most part with previous abortions, and the inadequate explanation usually given of gonorrhœa or primary sepsis, have compelled me in the last few years to direct attention (1) to the somewhat overlooked presence of syphilitic disease in women; (2) to the syphilitic factor in the etiology of pelvic inflammation; and (3) to the importance of mercurial treatment as opposed to surgical interference.

The usual clinical diagnosis of sepsis or gonorrhœa, and the tendency to attribute everything which is not obviously syphilitic in women to gonorrhœa is partly due to the non-appreciation of the fact that syphilis, both in its primary and consecutive manifestations, may be modified from various causes; that primary genital lesions may be of a suppurative character, or so slight as to escape careful attention as contrasted with the obvious indurated sore, and that consecutive manifestations in women may be so slight as to escape attention, or be mainly limited to secondary erosions of the uterus or genital tract with purulent discharge, as contrasted with the usually recognised secondary or consecutive throat symptoms and skin eruptions.

With regard to the first or primary lesion in women, while induration is met with in sores involving true skin, for example, the perineum and external labia, suppurating or ulcerative sores without induration are met with just within the vulva or concealed in mucous folds, suppurating in accordance with the rule that when syphilitic virus is implanted upon mucous membrane the sore is not indurated but soft. Apart, however, from situation, numerous facts and views exist in favour of the modified and suppurative form of primary syphilis, and of the syphilitic nature of blenorrhagia with erosions or excoriations, or of a specific blenorrhagia alone, either of the male urethra or female vulva, os uteri, or upper vagina.

Ricord and his followers, as is well known, held that inoculation of the patient was the distinguishing character of syphilitic discharge or pus, and that a purulent discharge which cannot be so inoculated is not syphilitic. It is not so well known that the late Mr. Henry Lee,[1] while considering that ordinary gonorrhœa is not in itself syphilitic considered Ricord's reasoning inconclusive. "To conclude," said he, "that no urethral discharge unaccompanied by ulceration and which cannot be inoculated is syphilitic is entirely a different question," and by the same reasoning the non-inoculability of the primary hard sore, mucous tubercle, or secondary lesion would prove their non-syphilitic nature; and so also with the chancre or *érosion larvée*; it no doubt explains some cases—and even then is for the most part a suppurating superficial lesion—but it does not explain all. It is in many cases a hypothesis, like so many hypotheses in syphilis, which the dualist is compelled to take refuge in to explain inconvenient and stubborn opposing facts. "Too often," wrote Langston Parker[2] (without multiplying testimonies) "the *chancre larvé* has been presumed, not demonstrated; there do occur from time to time cases of secondary syphilis in no way to be distinguished from those which succeed to the chancre, with discharges only apparently in no way different from common gonorrhœa, and on examination of the urethra either during or after the disappearance of such discharges, no vestige of contraction, cicatrix, or any condition incompatible with a healthy organisation can be detected. Surely if a concealed urethral chancre had been present its healing must have left some mark behind."

By others the non-protective nature of gonorrhœa from syphilis is held sufficient to distinguish the two, but this reasoning is again inconclusive from the fact, first pointed out by William Wallace[3] of Dublin that a system already contaminated is capable of inoculation by a less exhausted virus. Denying that the venereal disease has undergone changes in the course of centuries, admitting "its nature is the same as it has ever been," and that much improvement is due to better treatment, by no one is the influence of the system in modifying the qualities of syphilis, and the syphilitic nature and origin of certain discharges with or without erosions, and with or without constitutional symptoms, more clearly maintained than by the latter authority. Starting with preconceived notions of plurality of poisons as taught by Carmichael, he soon appreciated and demonstrated clinically and by experimental inoculation on healthy subjects the modification of syphilis by natural transmission and inoculation with the matter of secondary sores. In this way he proved that the exanthematic primary hard sore and papular eruptions were a modification of the excavated pustular hard or Hunterian sore with its suppurative secondary symptoms; and "frequently excited catarrhal non-ulcerative primary syphilis" or "one form of so-called gonorrhœa.....by the matter of such exanthematic sores."

Making allowances for sores other than syphilitic he taught that every syphilitic sore was not followed by constitutional symptoms, and that the virus ultimately lost its power of causing any form of syphilitic disease except the superficial exanthematic sore, catarrhal discharge, or even condylomata, in which last the virus was nearly exhausted, and furthest removed from the original excavated indurated pustular sore. He further regarded these results as distinct diseases, because although they have had the same origin their secretions produced effects on the system which are specifically different, which varieties once produced remain distinct or possess the character of species. He considered that this modification of virus by propagation from one to the other, either hereditarily, or by constitution, or climate, reinfection, age of or exhaustion of virus, facilitated the conception which he did not regard as "speculative," that the disease called gonorrhœa might be "a product of the venereal poison, the same virus in fact as the pustular sore, although by direct inoculation you cannot produce such a sore or *vice versâ*." He nevertheless while still leaning to modification of syphilitic virus in one species of gonorrhœa thought it right later to state: "We must not think of attributing to this poison all or even a majority of the discharges of this kind which we meet with in practice."

With regard more especially to local suppurative lesions at the present day, while admitting their non-syphilitic nature in many cases, facts exist which demonstrate the syphilitic origin in others. "That constitutional symptoms will follow 'soft' or 'simple' sores, and that well-marked induration may not be followed by secondary symptoms, are facts too well known to admit of dispute."[4]

Apart from these it is impossible to suppose, and the contrary has been proved, that amongst the numerous cases of chancroid none are of a syphilitic origin. In the same way it is impossible to suppose amongst the numerous cases of local blenorrhagia, loosely diagnosed as, or asserted to be "gonorrhœa," none are of syphilitic origin.

I am fully aware that this view, namely, that the syphilitic

virus, which from one cause or another has undergone such modification as to have acquired the disposition only to excite on transmission to a healthy subject a local sore, catarrhal discharge, or gonorrhœa, is not generally accepted. The evidence of authors is at variance. Ricord was doubtful and inclined to the view, which is generally held, that the obviously syphilitic soft sore, that is, the soft sore produced in previously infective subjects by inoculation of syphilitic virus, is not transmitted to a healthy subject locally, but as an infecting sore. On the other hand facts and testimonies are not wanting in the past that they may be transmitted as local disease; J. L. Bidenkap (Christiania) reports one such definite observation.[5]

Moreover in 1874 (March 7th) attention was drawn in the BRITISH MEDICAL JOURNAL to Mr. Morgan's (Dublin) paper on modified syphilis and to his "valuable experience on some of the most important facts bearing on the doctrine of syphilis," and which supports attenuation of virus.

May 9th, Surgeon-Major W. S. Oliver, with sixteen years' service, writes:

I entirely concur with Mr. Morgan in his views as to the modification of syphilis by descent. I desire to further assert that it is syphilis in this modified form that the army medical officer has to deal with in 70 per cent. of the cases of so-called "primary syphilis" which come under notice. I am most firmly convinced that not more than 30 per cent. of these cases, if so many, can be considered true primary syphilitic chancre at all, but merely the primary local evidences of the transmission of secondary syphilis from one person so infected to another not previously contaminated.

On June 13th Mr. Morgan writes:

I believe it to be the fact that syphilis is capable of modification by descent, and that the vast majority of primary sores are not derived from sores, but from the inoculated discharges of constitutionally infected women.

On July 25th, Surgeon-Major J. F. Porter, Professor of Military Surgery, Netley, writes entertaining the same opinion as Mr. Morgan.

Conversely, the same may be true in women. It is not uncommon to meet with slight cases of excoriation and leucorrhœa in married women whose husbands have suffered previously from syphilis. The lesion may be only a coincidence explainable in other ways, but I am inclined to think it is in some cases more than this. A man who has had syphilis will, as is generally known, after appropriate treatment or from the mildness of his attack, recover, and no ill-consequences will accrue to himself, his wife, or progeny. If the disease is of recent date, on the other hand, he may frequently return with a well-marked local sore more or less indurated, or with a superficial crack, abrasion, herpetic eruption, balanitis, with undue moisture of glans and inner prepuce, with or without condylomata, or urethral discharge, which may be repeated. In many cases he has exposed himself to fresh infection, and he laments his constant and individual misfortune. In such cases the manifestation may be a secondary or relapsing sore, or urethritis, the modified result of reinfection[6] or genuine acquisition of true gonorrhœa. In other cases he has not exposed himself to fresh infection. He is not untruthful always, nor if married is his wife at fault. Marriage intercourse or a depressed state of health in himself may determine the lesion. Nor may it appear at once. The first child, I submit, is frequently healthy and the mother free. If conception does not occur in the wife, she may be infected, or some local transmission more or less evident takes place analogous to the local lesions acquired by men from the inoculated discharges of constitutionally infected women. Wallace noted this preternatural moist state of the glans and inner prepuce in the male syphilitic, also the freedom of some women from disease for a considerable time after marriage. "Was their constitution, although exposed to infection able to resist it for this time and did they subsequently become sufferers from the disease because of a change in their susceptibility to the virus? . . . or are we to suppose that the constitutions of the fathers in the cases which I have mentioned were free from disease, and that it was by a morbid local discharge that their wives were infected?" It has been contended that to accept the maternal origin of inherited syphilis as opposed to the paternal it must be supposed that a man in whom no active syphilitic symptoms are actually present can convey a primary disease, whereas in favour of the maternal origin I submit these local lesions in the male often associated with some other minor manifestation are not infrequent in later life after the usual period of transmission is generally regarded as over. Wallace further records a remarkable and suggestive case of reinfection of the husband by the less exhausted virus of the wife. It is the case of a man who obviously infected his wife with syphilis. Separated from her and undergoing proper treatment, his symptoms subsided, but on resuming cohabitation he acquired fresh disease of a modified primary character followed by constitutional symptoms. He adduced this case as analogous to the reinfection of mothers by their own syphilitic offspring and from other inoculation experiments in support of immunity being dependent upon acquisition of disease. Colles, as is well known, did not note exceptions. As I have elsewhere noted,[7] it is probable that priority of those observations usually credited to Colles, and known as "Colles's law," should by right be accorded to Wallace. The latter undoubtedly noted the fact that the nursing mother does not usually contract disease from her affected infant, and not only noted, but offered an explanation and admitted exceptions.

If the only object was the proof that different names were loosely applied to the same local disease, or the demonstration that the term "gonorrhœa" is a misnomer in certain cases, little good would have been achieved. But it is more than this. In the first place, it is not uncommon for obvious syphilitic sequelæ to be noted in both sexes in whom there is no history beyond a previous and sometimes forgotten soft sore, erosion, or gonorrhœa. Obviously the term "gonorrhœa," meaning a local disorder under such circumstances, is misleading, and urethritis, vulvitis, vaginitis, or endocervicitis more applicable.

The question has been raised in the past,[8] and is important at the present day, whether in the local syphilitic lesion the virus can assume, and under what conditions, "the lost property of infecting the system"? Under one cause, namely, the stimulus of conception in the woman, I submit that it can. Conception may determine her infection. If a woman acquires genuine syphilis in early pregnancy the primary lesion is usually severe. If a woman has suffered from syphilis, her latent syphilis becomes again active in pregnancy or manifest after delivery. She suffers in subsequent pregnancies from repetitions of eruptions or genital lesions of a secondary nature. Her disease "awakes." Diday noted them, Lancereau confirmed them, and this latter authority rightly stated that to be convinced of them, one had only to consult the literature of syphilis. Such facts are not only of importance in support of the view that the virus in a local non-infecting syphilitic lesion may be intensified and prove infecting under the stimulus of conception, but are important in many theoretical and practical questions. For instance, in repeated manifestations in consecutive pregnancies, are they relapses, or, in the light of Wallace's work, reinfections, and do they not support the view of the maternal origin of syphilis in the offspring as opposed to the paternal, as also transmitted immunity to, or increased resistance in, the offspring? Practically they serve to differentiate and explain erosions of the os uteri during pregnancy, and subsequently to delivery.

On two occasions I have been able to differentiate such erosions with induration in early pregnancy from an expressed suspicion of commencing malignant disease, in the wives of men who had in early life suffered from syphilis. Again, the fact of such lesions should, I think, be borne in mind in any question of traumatic injury or neglect on the part of the accoucheur, and as foci for septic invasion in cases of puerperal fever.

In the question of diagnosis and treatment, from all time the chronicity and intractability of many of these local discharges in both men and women have been noted. By many the chronicity has been held to point to something more than a simple gonorrhœal invasion. It was the opinion of the late Mr. Henry Lee[9] that in the male many of the cases of urethritis which in their chronicity went on to stricture, were of syphilitic origin. At the present day as in the past "we can never with perfect security rely" upon initial diagnosis in these suppurating lesions. Time only, and conception in women, may prove the infecting nature; or chronicity indicate mercurial or iodide treatment. I have myself no hesitation in bearing testimony to the value of mercurial treatment in cases of urethritis in the male, leucorrhœa, vaginitis, and

endometritis in the female, which have resisted the usual gonorrhœal remedies. To explain the exceptions to the non-infecting nature of suppurating lesions, that is, when such were indubitably followed by constitutional symptoms, the "ingenious theory" or dogma of "mixed chancre" or mixed blenorrhagia was adduced in the past. To the dualist it "explains away all difficulties."[10]

The double source introduced the "local effects of the non-infecting with the constitutional results of the infecting ulcer" or discharge; "lesions" presenting a convenient amount of duplicity of character to explain any break in the chain of proof as to duality of the venereal[11] lesions. Others, ignoring clinical and pathological identity, do not hesitate to "lay all the errors of diagnosis to the want of discerning power on" the part of the observer, or his ignorance of bacteriological differentiation. But while admitting the soft sore and discharge due to transmission of the streptococcus or staphylococcus, the question is whether mixed acquisition is always the result of coexistent micro organisms in the giver. It has been pointed out that every infecting syphilitic chancre which from one cause or another suppurates freely is a mixed chancre, and can be produced by irritation or modification, apart altogether from acquisition of a soft chancre. I am compelled therefore to submit the natural association or predisposition in syphilis to secondary pyococcal invasion, or the conversion of non-pathogenic germs in the parturient canal into pathogenic under the local or constitutional stimulus of syphilitic virus, in addition to dual acquisition.

This association or predisposition to sepsis is apparent, especially in syphilitic women, in childbed, in the purulent vaginal discharges of acquired or hereditary syphilis, and in the suppurative affections of the tubes and ovaries, and is not, it seems to me, an indication for the neglect of antiseptic measures, but it justifies the consideration of sepsis originating from "within" as well as from "without."

In the same way, while admitting the propagation of the gonococcus by contact, as proved by experimental introduction of pure cultures into the male urethra and the usual local clinical effect of this organism, the origin and *rôle* of the gonococcus, especially in women, are entirely different questions. Its frequent association with syphilis, coupled with the fact that in certain cases the gonococcus is found in purulent discharges which are not apparently due to acquisition by transmission, compels me again to question whether its presence is always to be explained by transmission, and whether mixed syphilis and gonorrhœa are always the result of dual acquisition from coexistent previous disease in the giver. In certain cases of vulvitis in female children, which condition, I may add, is also noted in congenital syphilitics; in salpingitis and pyosalpinx of virgins in which the gonococcus of Neisser has been conclusively demonstrated, it has been admitted by more than one observer, after due inquiry, that no evidence of acquisition by contact has existed. The acquisition by extra-genital or genital transmission has been in these, and is in other cases, hypothetically assumed. In the past the impression of many authorities was that gonorrhœa communicable by contact and also syphilis might arise *de novo* in the woman, the term *de novo* being used in the sense of promiscuous sexual intercourse amongst few women in proportion to men: of aggravation of virus or acrimony by venery, filth, and drink; or of admixture of different virus.

In the same direction I would emphasise S. Lustgarten's article on the Etiology of Urethritis, in Morrow's *System of Genito-urinary Diseases:* "The normal male urethra is inhabited by a variety of micro-organisms. Three of these deserve special attention: (1) A pyogenic coccus, the staphylococcus aureus, which explains the presence of acute inflammatory processes without an infection from outside; (2) a bacillus which shares with the tubercle bacillus the morphological and the usually applied tinctorial qualities probably identical with the smegma bacillus; (3) one of special species of diplococci, which resembles completely Neisser's gonococcus in shape and tinctorial qualities, especially in being decolorised by Gram's method. As these pseudo-gonococci exist they may, for instance in a traumatic urethritis, be included by pus cells, and thus simulate true gonorrhœa. We must, therefore, with all due respect to his great merit, contradict Neisser's assertions of the pathognomonic value of the gonococcus. The same uncertainty applies to pus obtained from the vagina." Currier, in the same work, while subscribing to transmission, nevertheless confesses that his "faith in the influence of the gonococcus is less firm than formerly." If non-pathogenic diplococci similar morphologically to Neisser's microbe, and differing very little in their cultures, have been demonstrated and exist in the vagina or in pus (Bumm), "a diagnosis dependent upon such a basis is always open to doubt; therefore until bacteriologists can reach something like settled conclusions in regard to the part played by microbes.....we must depend upon clinical phenomena in determining our diagnosis." He records the cases of six little raped girls noted by Bordas (Paris) in whose genital discharges diplococci morphologically and bacteriology identical with the gonococcus of Neisser were demonstrated, though the men who committed the criminal assault were free from gonorrhœa. Such considerations seem to favour the impression or "speculation" that the gonococcus may not always be due to transmission, or associated syphilis and gonorrhœa be due to dual acquisition, but that the gonococcus may originate in the woman in promiscuous intercourse, in irritative causes, in decomposing seminal and genital secretions, or that in the same way as other pyogenic germs it may arise under the irritation of syphilitic virus, acquired or inherited, affecting the genital mucous tract, or by conversion of the non-pathogenic saprophytic germs (so like the pathogenic) in the healthy parturient canal or urethra into pathogenic.

The possible presence of the gonococcus in traumatic urethritis or vaginitis independently of syphilis, and the saprophytic existence of similar organisms in the healthy vagina or urethra, preclude the question at least of identity but altered virulence of the germ of gonorrhœa and syphilis, a question which the acknowledged activity of the gonococcus in pregnancy, coupled with its frequent association with syphilis, and absence of acquisition as it seemed to me by transmission in certain cases, influenced me—I admit in error—to suggest previously. On the other hand, its presence when apparently alone obviously may not be pathognomonic of a simple non-infecting or always transmitted gonorrhœa, and does not preclude the question of associated syphilitic infection, which in any doubtful case can only be determined *ex post facto*, and especially in women subsequently to later conception. The transmissibility also of syphilis does not preclude, it seems to me, the older impression that it may also arise *de novo* in promiscuous intercourse under similar circumstances which give rise to the gonococcus, or that syphilis, in conformity with the older impression (gonorrhœa virulenta) may be due to the "correlation and interaction of more than germ," which individual constituent, as in the case of the gonococcus, is capable of isolation or transmission simply. The microbic theory of syphilis seems to me to be supported by the reappearance and repetition of symptoms from one cause or another in both sexes, and under the stimulus of conception, and at the menopause, in women. In the further view that a germ may at one time produce its specific effect, and at another time its suppurative, the syphilitic germ (?) itself may be the cause of suppuration alone; and in cases of pyosalpinx in which the pus is sterile, it may be unnecessary to assume that the gonococcus has been present, but has disappeared.

1. With regard to constitutional symptoms, it is admitted generally, and especially in women, that these may be modified from various causes and "so trifling that they may be missed." Secondary symptoms after obviously acquired primary syphilis are modified by full pregnancy; erythema pharyngitis may be absent or slightly marked, while manifestations may be limited to glandular induration, papules around the genitals or anal region.[12] Mothers of syphilitic infants, contrary to general teaching of freedom from disease, do often suffer from ill-health, minor as well as ostensible symptoms of syphilis, pelvic inflammation, abortions, subinvolution of the uterus, leucorrhœa with erosions of the os uteri and vulva, with or without any outward manifestation of primary or secondary syphilis.[13] The constant association of pelvic trouble dating from previous abortion or delivery is noteworthy and well known. Full pregnancy, delivery, and lactation seem to remove or eliminate obvious manifestations of syphilis in women in a remarkable way—facts which apparently throw a light upon natural cure, as

well as support the view that immunity in the mother may be gained by processes in herself rather than by acquisition from the fœtus *in utero*. Non-pelvic peritonitis of syphilitic origin hereditarily and acquired has been authoritatively noted.[14] Obvious manifestations in later life and at the menopause (at which time relapses are not infrequent) are met with without any history whatsoever of primary or secondary disease. A history of previous syphilis in the husband, and not always of gonorrhœa, is often forthcoming.

I desire to draw attention to cases of pelvic disease in young women in whom evidence of congenital disease is present, or acknowledged disease in the father before marriage is volunteered or suggested. The symptoms, often dating from puberty, are liability to catarrhal affections of mucous membranes of mouth, tongue, throat, nose, and intestinal tract; leucorrhœa, erosions of the os uteri, menstrual irregularity, menorrhagia, or amenorrhœa with anæmia in virgins; aggravation of pelvic symptoms in later life, or on marriage, dyspareunia, sterility, abortions, premature births, delicate children succumbing to "tuberculosis" (?), purulent discharge through pregnancy, and difficult labours, pelvic inflammation subsequently with more or less fever; history in the patient's mother of pelvic trouble, abortions, premature births, delicate and diseased children, floodings in parturition, or puerperal fever with subsequent pelvic inflammation. Similar conditions and histories in sisters, while the patient herself may have been a 7-month birth. Typical Hutchinson's teeth may be sometimes noted in adult young women, but often the central incisors are unfortunately wanting in later life, and this confirmatory sign is absent. Similar cases in the past were clinically recognised under the diagnosis of "strumous inheritance." It is difficult, however, in such cases to eliminate the question of acquisition. While in some of these there may be modified acquisition or modified reinfection of the congenital syphilitic, in others no such acquisition can be reasonably suspected. It is impossible here to do more than mention the above points in favour of the view that vaginitis, endometritis, salpingitis, ovaritis, and pelvic peritonitis may be amongst the secondary, consecutive or inherited symptoms of syphilis, or due to pyogenic invasions secondary to the same.

Nor can I do more than ask your consideration of more than two cases which I have appended. Both demonstrate, I submit, the unrecognised syphilic factor, and whatever view may be taken of the first, both demonstrate the value of the mercurial treatment. I select the former case because it has been asserted that this particular case is one of "gonorrhœa," that my plea generally for mercurial treatment in obscure cases is "dangerous" teaching, "an undesirable adjunct to introduce into general practice," and that notwithstanding my deliberate statement that all genital and pelvic lesions in the parous woman are not syphilitic, that I have not scrupled to use the observations of others, even when it is necessary to assume a different diagnosis from the original observers in order to back up my theory of, and bias in favour of, syphilitic infection in many cases as opposed to gonorrhœa. The second case, adduced by me for the first time, illustrates the probable syphilitic nature of the primary vaginal discharge, the later appearance of obvious syphilitic manifestations under the stimulus of conception and delivery, the syphilitic factor in uterine disease, the ultimate use of and cure by mercury, and it seems to me the hereditary origin of vulvitis in the infant. Notwithstanding also my denial, I have in one or two cases been reproved for mistaking the curability of disease by mercury as proof of syphilis. Anyone with the least knowledge of authoritative syphilitic literature must be aware that such an error was refuted from early times. I might with equal reason retort that the curing of disease without mercury is no evidence of its non-syphilitic nature. In many cases of erroneous diagnosis no doubt the cure by mercury is fully explained. In others of a problematical nature, the beneficial effect of mercury in whatever way administered is very suggestive. Matthews Duncan relied on small doses of the liq. hyd. perchlor. and iodide of potassium, but gave no explanation of its efficacy. Whichever view, whether syphilitic, gonorrhœal, resolvent, or bactericidal is taken, the value of mercury, and of iodide in combination with mercurial treatment, or with iron preparations, in certain cases is undoubted. The cases in which it has given me the best results are cases of subinvolution of the uterus after previous abortion and delivery, of syphilitic and doubtful origin, associated with endocervicitis, leucorrhœa, and hæmorrhage, cases in which the curette is usually recommended. I have found mercury and iodide often immediately successful in stopping discharge and hæmorrhage, reducing the size of the uterus, and restoring the patient to health, when large doses of ergot persistently given have proved absolutely useless. Cases of early ovaritis and salpingitis are often much benefited. Erosions of the os uteri and those distressing and common cases of relapsing vulval erosions and excoriations with dyspareunia are alleviated.

It should be recollected that subinvolution, in spite of ordinary accepted methods of treatment with curettings, is the initial stage in many chronic pelvic conditions of later life in parous women. I am inclined to think that if the possible constitutional origin of subinvolution and of chronic lesions is borne in mind and mercurial treatment employed, there will be less necessity for the curette, and we shall hear less of chronic pelvic inflammation and subsequent surgical treatment. Far from considering the advocation of mercurial treatment dangerous or useless, I consider it is the duty of the practitioner to afford his chronic pelvic invalid this and every therapeutic advantage, as mainly opposed to manipulative and surgical procedure, in the full belief that the use of mercury in many cases short of suppuration is beneficial. I do not believe in these days the practitioner will abuse the drug, or that there is usually any need to clinch a diagnosis by indiscreet inquiry into previous venereal histories. It is not to be supposed that mercurial treatment is satisfactory in every doubtful case, or that it will remove advanced inflammatory and suppurative lesions, any more than mercury is beneficial in uncomplicated cases of gonorrhœa; or the full beneficial effect of mercury be evident in neglected, long-standing syphilis, or imperfect courses of treatment; but if initially made use of in cases which resist simple treatment, I submit it may be prophylactic against chronic invalidism, and pronounced lesions in later life. As far as my own opportunities for observation have been concerned, obvious syphilis and its sequelæ are especially to be seen in out-patient gynæcological departments and women's hospitals, and amongst married women of the respectable poor. Little or no provision is made, or is perhaps possible under existing circumstances, for the admission and systematic mercurial treatment of such cases as in-patients. Many are the cases, however, which would enter if facilities for admission and inducements to voluntarily remain existed. I venture to think there is room for the extension and advancement of therapeutic measures as mainly opposed to surgical, and that the question of reception of such cases into special wards in existing hospitals or affiliated homes is deserving of immediate consideration, not only in the interests of patients themselves, but in the furtherance of general prophylaxis. With regard to hysterectomy for hæmorrhagic endometritis in cases which neither ordinary therapeutic treatment or repeated curettings benefited, I have examined two such uteri, and in December, 1897, drew attention to the purely chronic inflammatory and fibrotic condition of the mucous layer. In similar clinical cases, though not so severe, I have further noted amongst other causes the gonorrhœal and syphilitic origin of the menorrhagia and metrorrhagia, as well as the beneficial effect of mercurial treatment in syphilitic cases, symptoms and treatment which I have since found were noted by Wallace. Not so long ago protest was made against the removal of fibrotic ovaries and healthy ovaries for hæmorrhage, and bearing in mind the constitutional origin of hæmorrhagic endometritis in certain cases, the chronicity of such cases, I would in the absence of full mercurial treatment protest against the removal of uteri for hæmorrhagic endometritis or that pathological condition of inflammatory fibrosis of the submucous layer. In face of the extirpation not only of diseased tubes and ovaries, but of the uterus itself, at the present time for inflammation consequent on "gonorrhœa" and mixed infections, the syphilitic factor, and at least the use of mercury in pelvic inflammation, seems to me eminently deserving of consideration. I should be ungrateful indeed if I did not take this opportunity of gratefully acknowledging the great encouragement I have already received in the many kind notices of my published views and cases, and

none more so than in the Journal of this Association. The present paper is largely founded on the confirmatory testimonies I have in the last eighteen months become acquainted with in numerous authoritative works, while only recently the "syphilitic" factor in pelvic inflammation and the successful mercurial and iodide treatment of pelvic inflammations as well as of gonorrhœa and its sequelæ in women has been independently testified to.[15]

Appendix.

The following is an abstract of two cases published by James Whitehead in his work *Hereditary Diseases*, 1851:

Two Cases diagnosed as "Gonorrhœa" with "Hereditary Transmission," demonstrating the Syphilitic Factor and Value of Mercurial Treatment.—Mr. ——, aged 27, contracted gonorrhœa April, 1849. Recovered in a month. Suffered from two relapses, but remained well for three months before marriage seven months after primary attack. Never had chancre, bubo, or secondaries. Three months after marriage relapse of purulent discharge, not having exposed himself to fresh acquisition. His wife, now pregnant, suffered from vulvitis, purulent vaginal discharge, external soreness, vesical irritability, and abdominal tenderness. Delivery two or three weeks before term. A male puny infant, but apparently healthy. In seven days bilateral raised blotches to side of the nose coalescing into a large flat tubercle similar to mucous tubercle. Subsequently purulent ophthalmia, balanitis, papular erythema, a few dark red spots about the anus and on breech, emaciation and death in thirty-seven days. The mother progressed until the fourteenth day, when gonorrhœal arthritis of three joints supervened, and three days later a brown offensive leucorrhœal discharge reappeared. I have seldom seen a case so continuously unimpressionable to medicine as this. The only relief was obtained from opium and small doses of calomel. A course of mercury was then commenced, and the symptoms began to subside only when the effect of this drug on the mouth became evident. Her recovery progressed steadily but extremely slowly. January 25th, 1851, specular examination showed purulent and offensive discharge, prominent and fissured os uteri, with angry suppurating intensely red surfaces. The husband broke out in scaly blotches on the forehead, which disappeared under a course of alterative treatment.—Mrs. —— soon after marriage contracted gonorrhœa from her husband. Both were apparently cured in a month. A few months later she had several sores about the external parts. Her first delivery of decayed child at the seventh month followed by vaginitis, seropurulent discharge, and flat pudendal tubercles. Her second delivery of female child at the eighth month. On the second day the child suffered from vaginal hæmorrhage, and a few days later purulent discharge. The eyes, nose, and voice were affected, anal erythema appeared. Death occurred in ten days. One month after delivery the mother was examined. The os uteri was surrounded by a suppurating surface, and vaginal roof inflamed. Under a mild but prolonged course of mercurial treatment a cure was completely effected.

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REMARKS ON THE TREATMENT OF PUERPERAL INFECTION.

By A. A. Warden, M.D.Glasg. and Paris,
Paris.

Dr. Warden regretted that he was unable to lay before the Section details of the treatment of puerperal infection by antistreptococcic serum in the hospitals of Paris. The conclusions reached, however, by the Parisian accoucheurs, was similar to that of the Section in one of their previous discussions on this question, namely, that up to the present, results do not justify the recognition of any streptococcic serum as a specific in the treatment of puerperal infection. Undoubtedly cases have been published, both in English and foreign journals, in which a remarkable and favourable change has taken place in the patient's condition after the use of Marmorek's or other serum, but many other instances are known in which the serum appears to have exerted little or no influence upon the ultimate result. One is, therefore, forced to adopt one of two hypotheses: either in such successful cases recovery would have taken place with or without the use of the serum, or that we have chanced to choose the serum appropriate to that particular case, but of the conditions that should determine that choice we are still in ignorance. When we recall the pathology of puerperal infection, now universally admitted to be due to the invasion by pyogenic microbes of the mucous membrane of the muscular wall of the uterus, it is natural that our treatment should be local, early, and energetic. The points I wish to lay stress upon are prompt recognition of the infective state and immediate local treatment.

In such cases a routine treatment is highly advisable, and to take refuge in the familiar adage of "treating each case upon its merits" seems to me but darkening counsel with many words. Just as in every maternity hospital there should be a routine procedure for the reception, preparation, and delivery of every woman, so it seems to me there should be a routine in the measures to be taken upon the first signs, or even suspicion, of infection. What that routine is in the schools of London, Edinburgh, and Dublin I do not know, but looking back on the days when I was resident medical officer in the Glasgow Maternity Hospital three or four years ago, I think we were a little inclined to look upon a slight rise of temperature on the third or fourth day as more or less a matter of course, and to fall in with the nurse's suggestion that a little castor oil was all that was wanted or that the patient had been excited by some trivial matter. Next day, if the temperature were still slightly elevated, calomel, quinine, hot cloths to the abdomen, and only perhaps an intrauterine douche, would be called for. It is against this pernicious expectant treatment by which time, which certainly in the early days of a case of puerperal infection, means life, that I wish to protest. We should put before us the ideal of a puerperium of perfectly normal temperature, and should look upon a rise to say 100° F. on the second, or third, or fourth day with grave suspicion, and unless its cause be obviously elsewhere, should at once give an abundant intrauterine douche.

That this ideal is realisable has been abundantly proved by the records of many maternity hospitals, at home and abroad. We dare not wait for the classical signs of infection as indicated by headache, continuous lumbar pains, rigors, sweating, elevated temperature, and quickened pulse. The uterus may be sensitive, and the lochia need not be fœtid. If you wait for these signs the patient is in the full tide of puerperal fever, may not escape with her life, and will certainly not escape with an unimpaired genital apparatus.

We must recognise the conditions favouring infection:

1. Absence of antiseptic care before the confinement.
2. Early rupture of membranes with exposure of ovum.
3. After hæmorrhages.
4. In long, protracted labours.

And an intrauterine douche should be given as well.

5. After any intrauterine manipulation or instrumentation.
6. In cases of dead fœtus.
7. In retained membranes.
8. In abortions.

If the temperature rises on the second or third day, an intrauterine douche should be given at once. If the temperature falls to normal this suffices, if it fall to 100° F. or below, a second injection should be given. If the temperature remains above 100° F., with a pulse of 100 to 120, and the end of the third day is reached, the uterus should be thoroughly curetted with a blunt curette. If it is only the second day, continuous intrauterine irrigation with a weak antiseptic or sterile water should be tried, if necessary, during twenty-four hours.

Of 123 infected women thus treated in the Clinique Baudelocque 85 were cured by the intrauterine injections, only 38 having to be curetted. Professor Pinard considers that the second day after delivery is too early to curette, owing to the danger of the entry of air into the veins, that by the fifth or sixth day it is as a rule too late, and that the most propitious moment is on the second elevation of temperature, the first not having yielded to intrauterine irrigation.

Of the 38 cases thus curetted the temperature fell in 12 to normal, continuous intrauterine injection having been practised in 7 of these. The gauze packing is removed 24 hours later and a final douche given.

If the temperature does not fall at once it may do so gradually within a week or so, in which case an intrauterine douche may be given daily, one curettage sufficing; 11 of the 38 cases curetted subsided in this way, the operation of curettage being therefore successful in 23 of the 38 cases. Curetting may be repeated in those cases in which it fails to reduce the temperature, but after one thorough curettage more hope may be placed in continuous abundant intrauterine douching. Of the 15 cases left 11 gradually recovered.

In the last resource we can only rely on stimulants and tonics, oxygen, salt solution, etc. A method I should not hesitate to apply in grave cases would be an abundant venesection followed by a large intravenous or intracellular injection of saline solution. This has been proved of value in apparently hopeless cases of pneumonia, typhoid fever, as well as the particular intoxication at present under consideration.

Dr. TATE drew attention to the fact that at the London schools digital exploration of the uterus was considered a better means of treatment in cases of fever following delivery than intrauterine douching. Secondly, he asked, in cases where the douche failed to bring down the temperature, should exploration of the uterus be carried out in all cases, or be confined to cases in which there was an offensive lochial discharge, or conditions suggesting local mischief inside the uterus?

Mr. CHILDE did not think in cases of slight fever following delivery it was justifiable to interfere at once with the interior of the uterus in the absence of any local symptoms whatever. A large number of cases of slight fever following delivery were not due to septic infection at all, and it was not justifiable to assume that all such cases were infective, and to act on that assumption.

SECTION OF LARYNGOLOGY AND OTOLOGY.

E. CRESSWELL BABER, M.B.Lond., President.

A DISCUSSION ON CHRONIC SUPPURATION OF THE FRONTAL SINUSES: DIAGNOSIS AND TREATMENT.

I.—CHARTERS J. SYMONDS, M.S., F.R.C.S.,
Surgeon to, and in charge of the Throat Department at, Guy's Hospital.

CLASSIFICATION OF CASES.

TAKING a purely clinical aspect of the subject, it may be said that suppuration in the frontal sinus comes before us in three forms.

I.

First and most commonly there is purulent discharge from the nose, with, as a rule, abundant formation of polypi. The complaint of the patient is of polypus and nasal discharge. There is no pain in the great majority of these cases; in fact, it may be said that pain is absent. In one of my cases, where a very little pus was present, the pain was undoubtedly of a nervous character, while in ten other cases there was no pain.

II.

Secondly, those where there is distension of the sinus, absorption of the anterior wall, and with a visible prominence. Here, when there is no nasal discharge, the fluid is mucoid largely, with thin pus. These cases come most commonly under the care of the ophthalmic surgeon, and form one extremity of the series.

III.

Thirdly, those where there is nasal discharge together with distension of the sinus. In one of my cases there was a history of ten years; for the first seven of pain in the forehead, and for the last three of nasal discharge. The patient came with destruction of the anterior wall bulging at the inner corner of the eye with profuse purulent discharge. When opened the posterior wall was found destroyed and the dura mater exposed.

As rhinologists the first and third varieties claim our particular attention.

DIAGNOSIS.

Let us first consider the diagnosis in this class. In all my cases polypi existed, associated with pus. On examining a nose and finding creamy pus between and over the polypi everyone now recognises the fact that this indicates suppuration in one or more of the sinuses. One may go further and say that the polypi in such cases are secondary to the suppuration. One so frequently sees patients, both in private and hospital, who have had polypi removed over and over again without this cause being eliminated, that the association cannot at present have become so widely known as it should be. The great fact is to recognise the pus and remove the polypi, all the while searching for the source of the pus.

In some cases there may be only one or two small polypi in the middle meatus, in others large numbers. At this stage of the case it cannot be decided from which of the sinuses the pus is coming. Having removed the polypi and the granulations from the middle meatus, and especially that cushion on the outer wall so constantly present in suppuration in the antrum, we can now ascertain the source of the pus, which can be seen as a creamy head or collection.

In the great majority the diagnosis rests between the maxillary sinus and the frontal sinus. In many, however, both these sinuses are affected. In 11 of my cases this double affection existed. It is not necessary to dwell at length on the diagnosis of this now well-recognised complaint. It will be sufficient to say that granulations in the middle meatus, especially those forming a ridge below the meatus, on the outer wall, are, with a line of creamy pus, seen between the middle turbinal and this cushion of granulations, almost characteristic. The reappearance of pus when the head is held forwards decides the question. I have not seen these two signs in pure frontal sinus disease.

Again, when the middle meatus is wide, a cannula or probe can be inserted into the orifice of the antrum. In several instances I have in this way cleared up doubtful cases.

Again, when the granulations are pressed outwards, and pus flows freely, empyema of the antrum exists almost to a certainty. Transillumination becomes unnecessary, but this method has a definite value, especially in the milder cases.

Thus far we have settled whether there is suppuration in the antrum or not. If found, it does not exclude the frontal sinus. Two lines of procedure are open—first, to drain the maxillary sinus, and later settle the question of the frontal sinus; secondly, to pass a cannula into the frontal sinus at once.

Personally, I think the better plan is to drain the antrum in the simplest way, that is, by an alveolar socket, where available, or through the incisor fossa, in both cases by simple puncture under gas. In eleven of my cases I have proceeded in this way, and in four on both sides.

Until we can be certain that no other sinus is affected, I hold it unwise to open the maxillary sinus widely, for in a good proportion of cases the pus from the frontal sinus runs down into the antrum, this latter cavity being but a receptacle. This was made clear to me in 1894 and 1895 in two cases. Through the opening in the forehead lotion could be syringed into the antrum and out through the opening in the alveolus. In several of the cases this last observation—now well known—has been made, and, moreover, in one case a probe was passed from the frontal into the maxillary sinus. If after the antrum has been drained pus still comes, and polypi recur, then there must be disease in the ethmoidal or frontal sinuses.

In pure frontal sinus cases the granulations are less numerous in the middle meatus, or it may in mild cases be quite free, as it is in the slight and non-infective varieties of antral disease. Notably, the cushion of granulation material on the outer wall is absent. The most characteristic feature noted in an uncomplicated case is the formation of granulations at the anterior end of the middle turbinal, and over this the pus flows. Such an appearance implies that the meatus is wide, the middle turbinal lying well towards the median line.

The final and conclusive sign is the evacuation of pus by the cannula. Hartmann's instruments I have had in constant use since my visit to his clinic in 1889. The question is, in what proportion of cases the sinus can be entered through the natural aperture by way of the infundibulum.

Much depends upon the arrangement of the middle turbinal. When this bone lies well inward, so that the meatus is wide, the probe and cannula can be passed with facility.

When the bone lies well outwards, as a whole, or when its anterior fourth is sharply curved outwards so as to touch the outer wall, an entrance cannot as a rule be effected. Then this small portion of bone must be removed. Oftener than not it is polypoid, and soft, and well out of the way. For its removal I prefer to use punch forceps, especially those suggested by Delavan, as being accurate, rapid, and causing as

little pain as any other instrument. Moreover, it does away with the necessity of dragging on the bone, and the consequent danger of injury to the cribriform plate. I find Delavan's instrument more handy than that I introduced for this purpose some years ago.

It is not infrequently easier to introduce the probe than the cannula, as its curve can be altered. One must have at least two sizes in probes and cannula as the aperture varies much in size.

It may be impossible to insert a probe, because the meatus cannot be seen, owing to a deflection or spur of the septum. This, when possible, must be removed, and the meatus exposed.

On passing the probe it is common to encounter bare bone just at the point of entry, a ring in fact round the orifice. I take this to be bone exposed secondarily and not necrosed. It does not demand removal, for I have seen it become covered when the pus has been removed. It may, however, have this special value, namely, that it indicates the existence of granulations within the sinus, and therefore the necessity of making an external opening.

Finally, if we fail to exclude the frontal sinus, and suppuration still continues, we logically must explore from the outside. This is a very small matter indeed, and leaves no visible scar. By firmly stretching the margins of the wound with small-toothed retractors bleeding is arrested. Then the bone is removed by a small ($\frac{5}{8}$-inch) gouge, and the diagnosis made through a small opening.

When the frontal sinus has been dealt with, ethmoidal suppuration may still remain; and in looking over my cases I find several in which all three groups of sinuses were involved.

I think enough has been said upon the question of diagnosis and the method to be pursued. To summarise, it may be said: that where polypi are numerous and pus abundant the maxillary sinus is usually diseased; that when the frontal alone is involved the polypi are fewer, the pus less, and rarely if ever foul; that in pure frontal cases pus does not reappear on hanging the head forward; that in pure frontal cases, with a wide middle meatus, granulations are confined to the anterior extremity of the middle turbinal, and the appearance of pus here with a free meatus is diagnostic; that in most cases a cannula can be passed into the sinus, and the cavity washed out, though this may necessitate removal of the anterior extremity of the middle turbinal; that when this last observation cannot be made exploration must be conducted through the brow.

Where suppuration in the nose and an external swelling exists (as in one of my cases), the diagnosis is obvious. When again, as in three of my cases, suppuration exists in the nose, and there is an external and spontaneous opening, no doubt can exist.

The above, and those cases where the infundibulum is closed and distension alone occurs, call for notice in this discussion only under the head of treatment.

Treatment.

If our methods of diagnosis have improved, it must be acknowledged that the question as to the best method of treatment is still one of some doubt. We may divide our treatment into intranasal and extranasal. We will confine our attention for the moment to those cases comprised in the first class, where there is pus in the nose with polypi, but no distension of the sinuses.

Intranasal.

In all cases—and here I expect there will be general accord—we must first clear the nasal cavity of polypi and granulations, removing portions of the middle turbinate if necessary. Gradually we must work up to the infundibulum. It now being possible easily to irrigate the sinus, we can employ this method, using various antiseptics. We are met here by the great difficulty that patients cannot irrigate the cavity themselves, as in the case of the antrum. A daily irrigation is almost impossible to obtain in private, and in hospital practice is quite out of the question. Still, where patients can manage to attend with moderate frequency, irrigation should be tried, and in the simple cases will meet with success. Irrigation in the vertical position is obviously imperfect, especially when we come to the application of such reagents as iodoform.

Macdonald's suggestion—to fill the nasal cavity with lotion while the head hangs over the end of a table—I have tried without success. I have, however, modified this by first introducing the cannula and washing in the vertical position with boric acid solution, then laying the patient on a table or sofa with the head well over and filling the cavity through the cannula with iodoform emulsion. In this way I have also used formalin (1 in 1,000 and 1 in 500). The success will depend upon the condition of the cavity.

In one instance half an ounce or more of old and thick pus was removed from the left sinus. This was removed on February 20th, 1899. Irrigation was frequently employed in March and April with a variety of materials—boric acid, nosophen, and weak formalin—and great improvement resulted. But, as some pus existed on April 20th, 1 drachm of iodoform emulsified with glycerine only was introduced without inconvenience, as the patient, like most others, had lost the sense of smell. In two days a few scales were washed away without pus. On May 6th the application was repeated, and on the 8th no pus was removed. Formalin was introduced (1 in 1 000) with the head overhanging on May 9th. On June 8th, as a few flakes of pus were removed, iodoform was again inserted. On July 14th the washing was perfectly free. I may add that, after the insertion of the iodoform, the cannula was removed and the head held in position for half an hour. A skiagraph showing the cannula in position was exhibited. In this case it is also to be noted that solutions forced into the left side came away partly through the right, indicating a communication between the two sides.

In a second case no improvement took place, and here the sinus was later found to be filled with polypi.

In another bilateral case no improvement has followed, and the sinuses are to be opened.

One successful case is insufficient upon which to dogmatise but sufficient to suggest this intranasal plan. As the amount of pus removed was greater by far than I have ever seen, except in one case of antral disease, and was, moreover, old and somewhat foul, there is every prospect that it will prove successful in simple cases.

There are cases of suppuration in the maxillary sinus of long standing curable by a few irrigations, and so there may be of the frontal sinus, as this case indicates. I must add that the maxillary sinuses did not participate in this case as they did in both the others which failed. I have used the intranasal method of application in 3 cases only. I think of using other agents (such as spirit and carbolic acid) with the object of destroying the polypi. It will obtain a greater range of usefulness, and is at least worth trying before resorting to operation. All attempts to enlarge the opening into the frontal sinus from the nose by gouges or other instruments appear to me fraught with unwarrantable risk.

Having failed to effect a cure by intranasal methods, what is the next step? The patient may decline an external operation; if so, what risk does he incur? I would say myself that if the drainage be free the risk is slight. In most cases one or two polypi, requiring removal from time to time, grow below the orifice, the sinus being irrigated on the same occasion. I believe that so long as there is no pain and no retention of pus the risk is slight, and does not demand strong measures on our part provided the patient is prepared to take this risk. I know of patients who have had suppurating frontal sinuses, one for eight years, and another for seven and probably longer.

Our position is very different if the ethmoid be involved; it is from here that extension to the brain occurs. In considering this question of intranasal treatment and of the association of frontal and maxillary suppuration I must refer to the possibility of the former being produced by the treatment adopted for the latter. In one of my cases the cautery had been extensively used over a period of seven years for the cure of ethmoiditis. There was, and had no doubt been empyema of the antrum, and I fear the employment of the cautery may have determined frontal disease. Personally I never use the cautery in the treatment of any of these cases. It is most unreliable, that is, you cannot be sure of the limit of your work. I prefer a blunt-ended nasal knife and Hayman's and Delavan's forceps.

Extranasal.

In all cases with distension of the sinus, with or without pus in the nose, and in those where an external opening has formed, some external operation must be undertaken. We can therefore consider all cases together. It is generally agreed that the incision through the eyebrow is adequate as commanding the sinus and giving a direct vertical passage into the nose. Whether the bone should be removed by a trephine or a gouge is not so

settled. Personally I prefer a narrow gouge till the sinus is entered and then a wider one for enlarging the opening. Having opened the sinus we find either pus alone or pus with polypoid masses. There may be also bare bone, but I have not in twelve sinuses found loose bone, nor bone that I should say would separate as a whole.

Now a variety of plans are open to us, and here there is much room for discussion, and the experience of all who have treated these cases will be valuable. I must be understood just for the moment to be considering the septic cases only, that is, those where there is pus flowing into the nose.

Having found pus and enlarged sufficiently to obtain command of all parts—that is, having made an aperture a quarter to three-eighths of an inch in diameter, we may:

1. Remove polypoid growths and pus, clean the cavity, insert iodoform, ascertain that the passage to the nose is free, then close the external wound, irrigating from the nose during the next two or three days to remove blood clot. This plan was followed in one case by complete recovery; there were no polypi, but in several others it has failed.

2. We may put a rubber drain into the nose, retaining the upper end by a wire passing through the incision. I have not found this plan give good results, the channel narrowing, though a tube the size of a lead pencil moved freely up and down. Moreover, rubber tends to produce granulations, and therefore if the plan be tried a silver or aluminium tube should be used.

3. We may enlarge the opening into the nose and close the wound. This can be safely accomplished by Volkmann's spoons. When the cavity has become dilated before operation, this enlargement can be easily effected, as the length of the track is diminished and the bone is thin. It is more difficult when unaltered bone is dealt with. An obvious objection is that the mucous membrane is removed, and contraction is liable to occur. I have enlarged sufficiently to meet the two little fingers, one introduced into the cavity and the other into the nose, and yet seen so large a space close and the discharge persist, notwithstanding free removal of the ethmoid at the same time. Still, this plan of enlarging the orifice from above, together with removal of the anterior part of the middle turbinal from below, offers a good prospect of success. I have been disappointed, however, to find some pus still remaining in such cases when watched for from one to four years.

4. We may open and then stuff the cavity with gauze. In one of my cases this was done after failure to obtain a result by drainage into the nose. A large part of the wall was also removed. Later, as the orifice contracted, a small curved silver rod was retained, to enable the man to syringe the cavity. He completely recovered, having worn the rod for about a year. This plan is long, and leads to a good deal of disfigurement.

5. The anterior wall may be removed more or less completely, and the wound closed, with or without the insertion of a support. Of this plan I have no personal experience, but I think by obtaining a fair opening into the nose we shall be able to dispense with so extensive a measure. The case first cited approached very closely to this method, except that the cavity was stuffed with gauze.

6. A modification has been recently advocated by Dr. Walker Downie, of plugging the cavity after removing most of the anterior wall, and closing the wound, the end of the gauze being brought out through a counter opening above the inner canthus. The success Dr. Downie has achieved highly commends his plan. In one case in which I have tried the method, the gauze had to be removed in four days because of the irritation. I had passed it into the nose. Though no pus was washed from the sinus at the end of a week, it is yet too soon to speak of the result. Where the discharge persists after one or other of these methods, reopening of the wound to insert a silver or aluminium style, of the size of a No. 3 catheter, will be found valuable. The patient can, through the opening thus maintained, irrigate the sinuses as in the case of the antrum. Such a plug is hardly conspicuous. In two cases, after long use, the patients have recovered.

Where the fronto-nasal aperture is closed, as in the ophthalmic cases, and the dilated sinus contains muco-pus, it is essential to establish a free passage into the nose, and to conduct after-treatment either by stuffing the cavity or irrigating intranasally.

Conclusions.

In summing up the treatment I am disposed to say that in the simple cases, where intranasal methods have failed, it will be sufficient to carefully wipe out the pus and clean the walls, to insert iodoform and close the wound, the fronto-nasal aperture being not enlarged.

When polypi are found, I think we must enlarge the orifice as well. I have employed a Volkmann's spoon for this purpose, though the use of this instrument is not without its risks. A better would be a probe-ended knife with a limited chisel edge, like that used for the anterior antral wall. Then we may close the wound and irrigate intranasally for a few days; or if this method of irrigation cannot be carried out, we can introduce a silver or aluminium style into the cavity. This is removed for irrigation, and withdrawn finally at the end of a week. It will not be found to cause disfigurement. If Dr. Downie's plan be found on a wider trial to be successful for the bad cases, it will be a better one. As I have said above, his method seems more suitable for the simpler cases and those where there is distension only.

II.—E. J. Moure, M.D.,
Professor of Otology in the University of Bordeaux.

Diagnosis.

Diagnosis is sometimes fairly easy; at other times it offers some difficulty. Although habitually associated with empyema of the antrum, it may occur alone, as I have several times observed.

Probable signs are: (1) Unilateral discharge of pus, seen on rhinoscopic examination after the antrum has been thoroughly cleaned by irrigation; (2) growths in the upper part of the infundibulum in the direction of the naso-frontal canal, and dilatation of this canal giving free access to the sinus, supra-orbital pains, spontaneous or on pressure.

Certain signs are: (1) Temporary or permanent swelling over the frontal sinus, or the presence of a fistula in that region; (2) the flowing away of pus after irrigation (when that is possible in the frontal sinus); (3) darkness on transillumination as compared with the opposite side (absence of the sinus, fortunately rare, also gives rise to this sign). The differential diagnosis between frontal empyema and that of the anterior ethmoidal cells may be difficult, but injection and transillumination will generally suffice to solve the difficulty, and it is worth remembering that ethmoidal growths are generally situated further back than those coming from the frontal sinus.

Treatment.

The treatment adopted must depend on whether the case is one of the simple mucous form, or complicated with growths or fistula. In all cases it is necessary to ascertain the condition of the antrum, and if found diseased it must be treated before the frontal sinus.

The treatment of the mucous form is purely medical, and consists in inhalations, oil sprays, antiseptic or caustic, the air douche, simple or medicated, administered with Politzer's bag, irrigation through the naso-frontal canal where this is possible, taking care to avoid the making of a false passage.

The treatment of the suppurative (fungous) forms varies according to the severity of the case. In the milder forms the infundibulum and naso-frontal canal may be cleared of growths with the curette, and direct irrigation may be practised when the conditions admit of it.

Dieffenbach and Schaeffer's method of opening the sinus from the interior of the nose I consider dangerous. Finally, when more radical measures are required, one must have recourse to external operation by the methods of Kuhnt or Jansen, or, better still, Ogston-Luc. If the sinus be thoroughly curetted, and care be taken to avoid peripheral infection, the last-named operation seems to me to be an almost ideal procedure for the radical cure of frontal empyema. If the sinus be exposed and rendered aseptic, and free communication be established with the nose, no drainage tube is necessary, and washing out should as far as possible be avoided, as it is liable to reinfect the curetted cavity. The operation is suitable also for cases in which there is bone disease with external fistula, or even intracranial fistula. Of late years this method

has yielded excellent results in my hands. None of my patients have relapsed, and the scar is so concealed by the eyebrow as to be unnoticed.

III.—Dr. Luc,
Paris.

A Fatal Case of Frontal Empyema.

Dr. Luc related a case of progressive inflammation of the maxillary and frontal sinuses, which in spite of repeated operations finally terminated fatally by intracranial suppuration. The earlier history of the patient was communicated to the French Society of Otology last year.

Abstract of Case.

The patient, a robust young man, aged 20, who presented no evidence of syphilis, tuberculosis, diabetes, or albuminuria, began to notice a purulent discharge from the left nostril in 1893. In 1894 the frontal sinus was opened externally by Dr. Lermoyez by the Ogston-Luc method, the alveolar wall being simply perforated. In July, 1897, the maxillary and frontal sinuses were opened and curetted. Though some retraction of the sinus occurred after this, nasal suppuration persisted in spite of an energetic attempt to open and curette the ethmoidal cells from the nose. In August, 1898, it was found that the infection had extended to the frontal and maxillary sinuses of the right side, and in November both the maxillary and frontal sinuses were opened and the frontal sinuses transformed into a single cavity and curetted. Seven weeks later an attempt to wash out the frontal sinus by a long curved probe passed through the left nostril was followed by the appearance of a fluctuating swelling in the inferior frontal region; this was laid open and brownish pus evacuated. In January, 1899, subcutaneous infection spread rapidly over the forehead, and, an incision being made, the frontal bone was found rough and covered with fungating granulations. It was curetted and treated with strong solution of zinc chloride. A week later a subperiosteal abscess was detected over the external half of the left eyebrow.

Early in February a second subperiosteal abscess appeared over the right eye, and in the middle of February a third above the frontal wound. The patient's general strength now began to fail. Early in March he suffered from painful rigidity of the muscles of the nape of the neck, and a few days afterwards he had paresis of the left leg. This was attributed to suppuration, either without or within the dura mater, and a flap operation was performed which exposed the frontal and right parietal bones and a part of the left parietal. All these bony surfaces were rough and uneven; they were disinfected, and a rectangular piece of bone removed, when two purulent deposits were found on the dura mater. As the membrane was fungating it was curetted and treated with strong solution of zinc chloride, but was not opened. The following day the patient's condition was much worse, and he died on the second day after this final operation. A *post-mortem* examination was not permitted.

In commenting on this case, Dr. Luc said: This is the most difficult and severe case of frontal empyema I have hitherto met in my practice. In the other patients whom I have treated and operated upon for the same affection, numbering 13, recovery was generally obtained after a single operation, sometimes after a second one; in the present case four successive operations, as thorough as possible, and accompanied by a complete and careful cleansing of the diseased cavities, proved powerless not only to stop the infection, but even to prevent its reaching first the opposite side and then the cranial cavity. For this exceptional gravity the young man's general constitutional condition cannot possibly account, as he looked extremely strong and healthy, and it had not been possible to detect in him the least signs of such diseases as tuberculosis, syphilis, diabetes, or albuminuria.

If I try to recognise the mistakes I may have committed in the course of that long treatment and which might be responsible for the fatal issue, I think my behaviour was only censurable in January last when, on finding a purulent collection under the skin of the frontal region which escaped under pressure into the left nasal fossa, I abstained from giving it at once a free exit by means of a large frontal incision and applied a compressing bandage on the forehead in the hope of furthering the regular discharge of the pus into the nose. Unfortunately the most rational treatment is not always practicable; the patient, who had already endured three great operations under chloroform, showed such an aversion to any further surgical proceedings that I considered it my duty to do my best in order to spare him the pain of a fourth operation.

You have heard the sad consequences of my attempt to evacuate the pus through the nasal fossa. The infection spread over the parts compressed by the bandage and reached the hairy scalp, and from that moment, in spite of numerous and extensive incisions, in spite of the care I took to leave the infected cavities widely open and to cleanse them every day, it became evident that the frontal bone had become the seat of a diffuse septic osteitis. This was proved by the successive development at various points of the surface of the bone of three subperiostal abscesses, completely independent of the great primitive frontal abscess.

The time came, as could easily be foreseen, when a similar collection formed on the internal surface of the bone, between it and the dura, and as its seat corresponded exactly to the motor cortical centre of the limbs attention was immediately directed to this grave complication by the development of a crural monoplegia on the opposite side, soon followed by an extension of the paralysis to the arm and to the lumbar muscles.

An ultimate surgical attempt was made under those desperate circumstances as rapidly as possible, and the skull laid open on the day following the first appearance of the crural monoplegia; but the event proved that in this last operation we had not at once gone deep enough, and that besides the purulent pachymeningitis externa detected under the bone, there was already a deeper purulent deposit, either on the pia mater or in the cerebral tissue of the motor centre, since the nervous disorders followed their fatal course in spite of the disinfection of the dura.

I fully believe that the course adopted under those circumstances was perfectly justifiable, since it was supported by the experience of other similar facts previously observed by me. I had seen a few months before in a young man operated upon by Stacke's method for a chronic otorrhœa, a sudden attack of coma, accompanied by epileptiform convulsions and high fever, appear in consequence of an infection limited to a small area of the dura overlying the tegmen tympani, and a complete recovery take place after a simple disinfection of that membrane. Was it not then prudent and advisable in the present case, knowing the gravity of opening the dura in the vicinity of an infectious focus, to respect that membrane for the time, and to decide not to lay it open except in case of persistence of the nervous symptoms and of the fever?

The further course of the intracranial infection was unfortunately such a rapid one that the patient seemed already irretrievably lost when the failure of our first intracranial attempt became evident. It is, I think, unquestionable that the case I have related must be considered as having been quite abnormally severe. It appeared to me all the more advisable to publish it; such an example, even if isolated and exceptional, being likely to impose a certain reserve upon us, when asked to state our opinion about the prognosis of a given case of frontal empyema, and before assuming the responsibity of its treatment.

IV.—Dr. Röpke,
Solingen, Germany.

Operation for Chronic Fronto-ethmoidal Suppuration.

Many of my patients are employed in steel and iron factories as grinders. The mortality in the case of those at Solingen is very high; 80 per cent. die at an early age from diseases of the organs of respiration. Last year I and a colleague were directed by the Government to examine 1,250 grinders, being 30 per cent. of all the grinders working in Solingen and the neighbourhood. We found only 12 per cent. in good health; the others were almost all affected by diseases of the throat, nose, or lungs. The results of this examination were published in the *Zeitschrift für Hygiene*. I mention these facts in order to show that I see many cases of diseases of the antrum of Highmore, of the ethmoidal cells, and of the frontal sinus. In most cases of chronic frontal empyema, I believe the ethmoid to be also affected; and most authors have had regard to the ethmoidal cells in their published methods of operation.

During the last two years I have operated for chronic fronto-ethmoidal suppuration in the following manner: Exactly following the well-known method of Kuhnt, I make the subperiosteal resection of the whole anterior wall of the frontal sinus and scrape out the diseased mucous membrane. The horizontal incision is two-thirds of the length of the supra-orbital ridge, the vertical incision joins it at right angles, and the whole flap, including periosteum, having been reflected, the anterior wall of the sinus is chiselled away. Then the meatus fronto-nasalis is enlarged by breaking away a part of the inferior wall of the sinus as far as it is necessary to overlook the ethmoidal cells.

By scraping out the diseased mucous membrane of the ethmoid I obtain a large communication between the frontal sinus and the nose. The large cavity is stuffed with a strip of iodoform gauze, and the flaps are sutured except a little part for placing the strip through the skin wound on the inferior supraorbital ridge.

If there is suppuration of both sinuses the horizontal incision is made from one to the other side of the supraorbital ridge in the manner described; the vertical incision joins the horizontal at right angles in the middle. In these cases the anterior wall of both sinuses, the septum and the nasal process of the frontal bone are chiselled away. Only through one side a strip of gauze is introduced; the other wound is closed. Three days after the operation the strip is taken away and is not renewed, because the secretion of the cavity can flow off through the nose.

I have operated on 25 patients in this manner, 13 of whom were affected on one side, 12 on both sides. All were cured of their affliction. The cases healed in from ten days to six weeks. Two patients having had abnormally large cavities were considerably disfigured; the others were not disfigured by the scars, as you may see from the photographs I show you.

Finally, I wish to remark that of course I do not operate until I have exhausted conservative methods, but I believe that most chronic cases can only be cured by radical procedures.

NOTE.

A more complete account of Dr. Röpke's method of operating upon the frontal sinus may be read in the *Archiv f. Laryngologie*, Bd. viii, Heft 2, and also in the report of the seventieth meeting of the Deutsche Naturforscher und Aerzte Gesellschaft.

V.—HERBERT TILLEY, M.D., B.S Lond., F.R C.S.Eng.,

Surgeon London Ear and Throat Hospital, Golden Square.

A FATAL CASE OF CHRONIC FRONTAL SINUS EMPYEMA.

THE following case shows the risks which may arise after opening the frontal sinus:

The patient was a young woman, aged 22, with almost complete bilateral nasal obstruction associated with the discharge of large quantities of pus from the nostrils and into the throat. The former was found to be due to mucous polypi, which were removed during a period of some three months at her weekly visits to the hospital. The discharge of pus continued very free, and as the maxillary antra were shown by exploration to be almost free from the same, it was concluded that the frontal sinuses, and probably the ethmoidal cells, were the seat of disease. The patient was very anæmic and in bad health, but suffered from no headache.

Operation.—An incision was made under the inner half of right eyebrow; the soft parts and periosteum retracted, and the right sinus opened by means of a small trephine. A perforation in the sinus septum rendered it possible to curette the right and left sinus from the former. Both sinuses were full of pus and large polypoid granulations. The posterior wall of the right sinus appeared at the operation to consist of a healthy and necrosed portion separated by a distinct line of demarcation. The right fronto-nasal passage would only admit a small probe. It was enlarged by means of a Krause's trocar, but the speaker wished he had made an even larger opening into the nose. A Luc's drainage-tube was inserted, the outside wound closed by three silk stitches, and covered with an antiseptic dressing. Three times daily the sinus was syringed out through the tube with warm 1 in 3,000 mercury perchloride solution, or 1 in 60 carbolic lotion.

Second Operation.—In ten days' time free suppuration occurred, the wound broke open, and it was decided to reopen the right sinus, make a much larger opening into the nose, and also to perform the radical operation on the left sinus. This was accomplished without difficulty, drainage tubes were inserted, and again the superficial wounds stitched up, and syringing with antiseptic lotion three or four times daily, carried out as before.

Third Operation.—In about seven days' time œdema of the left eyelid, puffiness about the lower median portion of the forehead, and great tenderness on pressure in this situation was noticed. Twenty-four hours later the right sinus wound was opened, and a median vertical incision made into the afore-mentioned swelling of the soft parts; a subperiosteal abscess was thus relieved, which was then dressed antiseptically.

Fourth Operation.—Four days later a similar swelling appeared over the left parietal eminence, which was also opened, bare bone being felt at the base of the abscess. Similar swellings made their appearance from time to time at different points on the frontal and parietal bones, until at length the scalp was practically undermined, drainage tubes having been inserted in four or five different places to drain away the pus coming from the bone, the outer table of which became necrotic in large patches, portions of which gradually loosened and came away.

Fifth Operation.—As a last resort a transverse incision was made completely across the scalp from ear to ear, beyond the œdematous soft parts, in the hope of checking the spread of the disease, but the septic phlebitis of the diploic veins continued, and ultimately, after some nine months' illness, which was curiously free from pain (except for a period of intense neuralgia for some ten days or a fortnight), the patient died from pneumonic symptoms, associated with those of chronic septic intoxication and pyæmia. Optic neuritis of one eye was noted during the later stages of her illness. The pus from the scalp was examined from time to time, and found to contain a virulent streptococcus.

Post mortem examination revealed the following conditions: Necrosis of vault extended a little below level of torcula; inner wall of frontal bone healthy. Dura mater intact throughout, except that it was adherent all over the vault, which it practically held together (*vide* specimen). Longitudinal sinus, which was visible during life (through one of the large incisions) unaffected. Both sigmoid grooves filled with pus, and about ten abscesses the size of hazel nuts scattered through the grey and white matter of the cerebrum, some appearing on the surface of the cortex, as yellow patches. Cerebellum and medulla healthy. Petrous bone necrosed with a subdural abscess just below the apex of temporo sphenoidal lobe, right and left side. Subdural pus and necrosed bone at apex of right petrous. Pus around cavernous sinus and abscess of hypophysis. Large abscess around the left Eustachian tube and carotid passing down to form a large postero-lateral pharyngeal abscess, the pus escaping into the throat by the Eustachian orifice. It was evident that pus got underneath the dura mater when the infective process reached the parieto-squamosal fissure: in this way the roof of the tympanum and sigmoid grooves became affected, and necrosis of the petrous followed. The left mastoid antrum and sigmoid groove were thrown into one cavity, through a large hiatus. The bases of both lungs were consolidated, and contained a large pulmonary abscess. The kidneys and liver were normal.

Had this been the only case of its kind, I should have blamed myself for want of care or skill in the operation or after treatment. I took, however, great pains with the case from the beginning, and Dr. Luc (Paris) whose skill and experience in these matters are well known, has to-day recorded a similar case. Only three days ago I saw a third case of the kind under the care of a well-known young surgeon, who is nothing if not antiseptic, and notes of a fourth case have just been sent me from Glasgow.

Possibly too severe curetting of the sinuses may have opened up some of the diploic spaces, which eventually became septic; especially might this occur at the upper borders of these cavities.

The condition is a most grave one, and when once the septic osteomyelitis has started, the only treatment which can save the patient would be to turn the soft parts well off the bone in which the suppurative process had shown itself, and then, by a large trephine or chisel and mallet, remove the outer table well into the healthy regions, and by constant antiseptic dressings get at the actual source of mischief in the septic thrombosed diploic veins.

With regard to the general run of cases, perhaps some of the milder may be amenable to intranasal treatment. In cases where there is profuse suppuration, with granulations and polypi in the middle meatus, the antrum and ethmoidal cells are often involved also, and the external operation is best: it tends to prevent intracranial and other complications.

Having traced the pus by exclusion to the frontal sinus and ethmoidal cells, the next step is to remove the anterior half of the middle turbinal, thus exposing the hiatus, favouring drainage, and rendering the fronto-nasal passage more accessible. Polypi and granulations ought then to be removed, and antiseptic douches employed for a week or ten days, after which the external operation may be performed as follows:

1. The naso-pharynx should be tightly plugged with a sponge.

2. The skin incision should be made under the inner third of the eyebrow and carried downwards to just above the internal palpebral ligament.

3. An opening large enough to admit the point of the index finger should be made into the nose to prevent occlusion by granulations.

4. The sinus and its recesses should be well curetted and swabbed with chloride of zinc (40 grs. to ℥j).

5. The external wound should be closed at once and a compress dressing applied.

I prefer a drainage tube, extending from the sinus to the anterior naris, and keep it in for 5 or 6 days, as it prevents the growth of granulations. When it is removed it is possible to see right into the sinus and wash it out. In bilateral cases I advise the performance of two separate operations, as the disfigurement is less than after a median incision, large enough to treat both sinuses at one operation. If both antrum and frontal sinus be involved I differ from Dr. Moure, of Bordeaux, in treating the frontal sinus first, placing a temporary alveolar drain in the antrum at the same time. If the antrum is treated first it is apt to be reinfected by the frontal sinus. A vertical median incision, in addition to those mentioned, could only be required in the case of very large sinuses. Schäffer's method of breaking into the sinus from the nose is to be unreservedly condemned.

VI.—Ernest Waggett, M.B., B.C.Camb.,
Assistant Surgeon, London Throat Hospital.

Mr. Waggett enunciated the following propositions: (1) Acute frontal empyema is exceedingly common, and nearly always ends in spontaneous recovery. (2) According to Zuckerkandl, "If after a general involvement of the accessory sinuses the pathological process ceases, it is the frontal sinus which first returns to the normal." (3) The normal orifice is admirably situated to ensure natural drainage and spontaneous recovery. (4) Consequently the mere fact that a frontal empyema is chronic is in itself presumptive evidence that (*a*) either the natural orifice is abnormal, unsuitable for purposes of drainage, or (*b*) that some serious lesion (polypus, caries, etc.) exists in the sinus, incurable by mere irrigation; thus chronicity necessitates a cutting operation. (5) Inasmuch as the external operation is safer, easier, and more effectual than any operation performed through the nose, it is desirable that all chronic frontal empyemata should be treated by external operation.

VII.—J. Sargent Snow, M.D.,
Syracuse, N.Y.

Dr. Snow felt that he could add little to what had been said except in the way of emphasis. He attached great importance to the removal of overgrowths and other pathological conditions in the nose. When this was done thoroughly the frontal sinus could often be efficiently drained through the infundibulum and a cure obtained. In several cases lately he had found no difficulty in laying the anterior superior ethmoidal cells and the frontal sinus into one cavity, operating through the nose, and using cutting forceps and a small Buck's ear curette slightly bent at the end. From personal experience he had great and growing confidence in intranasal methods. To prevent the recurrence of polypoid overgrowths of the mucosa he strongly recommended the application of 8 per cent. chromic acid once or twice a week. Cases in which the frontal sinus was filled with granulation tissue were, he thought, suitable for the external operation.

VIII.—W. J. Chichele Nourse, F.R.C.S.Edin.,
Anæsthetist, Central London Throat and Ear Hospital.

Mr. Nourse said that the main intention of the external operation was to secure drainage. The operation itself was by no means free from risk, and he thought that the same object could generally be attained by intranasal treatment. For the passage of the infundibulum he recommended a cannula curved at an angle of 80 degrees. With this instrument the posterior wall was not pressed upon. When once the point had found the entrance, if the proceeding was going to succeed, the cannula glided on easily till it met the front wall of the sinus. In one case he had passed a rubber drainage tube along a probe curved at an angle of 80 degrees, with a successful result. Polypi or granulations or part of the middle turbinal might first require to be removed. He deprecated as much as anyone the employment of force or groping in the dark with sharp instruments. Intranasal methods ought, he thought, to have an exhaustive trial before resort to external operation.

IX.—Mayo Collier, M.B., B.S.Lond., F.R.C.S.Eng.,
Senior Assistant Surgeon, North-West London Hospital.

Mr. Collier said that Mr. Charters Symonds had omitted the latent forms first described by Ogston; he thought they were the parents of all the other forms. Chronic headache was the principal symptom, worse at night or on stooping, with tenderness on percussing the frontal region. The objects of treatment were to establish communication with the nose and deal with the diseased mucous membrane. He strongly advocated external operation through a median incision in all cases.

X.—J. H. Bryan, M.D.,
Washington, D.C.

Dr. Bryan said the headaches were generally worse in the early morning, passing off about 10 or 11 o'clock, when there was a discharge, but persisting more or less continuously when there was none. He thought the fronto-ethmoidal cells were affected in all bad cases, and were the source of the trouble. He preferred the Ogston-Luc operation. Caries was most frequent on the floor of the nose and in the cells, and thorough curetting was necessary. He had abandoned tubes, and used gauze packing, drawing it out through the nose, and closing the external wound. Intranasal treatment was useless when there was caries. He described a fatal case of extensive frontal and ethmoidal disease, in which *post mortem* the sphenoidal sinuses were found to be diseased, especially along the line of the sphenoidal fissure. He thought it was a case of direct extension.

XI.—Dundas Grant, M.A., M.D., F.R.C.S.,
Surgeon to the Central London Ear and Throat Hospital.

Dr. Dundas Grant confined his remarks to a few points. Frontal pain might be caused by empyema in the sphenoidal or in the maxillary sinus, as well as the frontal, and was therefore of very slight diagnostic value; but tenderness on pressure was more pathognomonic. Spontaneous recovery probably occurred at times, and the pus might find vent into the maxillary antrum. Retention of pus in the sinus might be due to anatomical tortuosity of the fronto-nasal duct, which could not be removed, but also to pressure by the middle turbinated body, which could be removed. He believed this to be an important element in treatment. He strongly advocated intranasal treatment in a hopeful way before operating externally. If the infundibulum were curetted at all, a very free opening into the nose should be made, so as to avoid obstruction from adhesions forming.

XII.—Wm. Hill, M.D.Lond.,
Aural Surgeon to St. Mary's Hospital.

Dr. Hill thought that if the frontal sinus was known to be diseased, it ought to be opened; it was an exploration, not a serious operation. Probably the very serious cases which had been described were cases of ethmoidal and sphenoidal as well as frontal disease. Relapse was often due to the coexistence of ethmoidal disease. He deprecated the performance of such extensive operations as Röpke's. He used no drainage tube nor any substitute, and considered them evils to be avoided whenever possible.

XIII.—Soanes Spicer, M.D.Lond.,
Surgeon in Charge of Throat Department and Lecturer on Diseases of the Throat, St. Mary's Hospital.

Dr. Spicer said with regard to Mr Waggett's point that he would operate from the outside, but would deal with the nose first. Many cases recovered after breaking away the ethmoidal cells, and it was often difficult to say with certainty that the frontal sinus was diseased. He thought Dr. Woakes deserved great credit for directing attention to chronic inflammatory conditions about the middle turbinal and the necessity for treating them. In complicated cases he first treated the nose internally and then operated, doing all the sinuses at once if possible.

XIV.—P. Kipp, M.D.
New York.

Dr. Kipp said his experience was almost limited to ophthalmic cases, and in such he considered the radical operation the only satisfactory one. He operated by a method somewhat similar to Röpke's, removing the whole anterior wall, but leaving the upper orbital margin, which prevented deformity. He hoped in the future to do without either tube or gauze.

XV.—Dr. Rudloff,
Wiesbaden.

Dr. Rudloff related the history of a fatal case of frontal empyema which occurred in his practice.

A patient, aged 40, had suffered from nasal polypi for over twenty years. When she came to Dr. Rudloff he found that she was suffering from multiple empyemata involving both antra, both sphenoidal sinuses, and probably both frontal sinuses. There was caries of the sphenoidal cells and polypi. The maxillary antra were operated upon successively through the canine fossæ, some ethmoidal disease being removed at the same time.

Some months later the sphenoidal sinuses were opened, and then (the diagnosis being now certain) the left frontal sinus was freely opened from

the outside, the infundibulum enlarged, and the cavity packed with gauze. The patient was relieved by the operation, the temperature was normal, but the wound looked unhealthy, and a few weeks later caries of the posterior wall of the sinus was found. A second operation was performed; the whole of the diseased posterior wall was removed and at the same time the right sinus was operated upon.

Some days afterwards the temperature rose and symptoms of extradural abscess appeared. An effort was made to check the infective process by removing all the infiltrated part of the frontal bone, but the temperature rose again, aphasia appeared, followed by facial paralysis, and Dr. Rudloff concluded that there was suppuration involving more or less directly the third left frontal convolution; (either extradural abscess, purulent leptomeningitis, or superficial cerebral abscess). He accordingly trephined, and on incising the bulging dura a considerable quantity of pus escaped from the subdural space. The patient died on the second day.

Post mortem, purulent leptomeningitis over left hemisphere: ulceration of third frontal convolution and its vicinity; maxillary antra healed. Sphenoidal sinuses healing.

The bacteriological examination was made by Dr. Bartholdy, First Assistant, Town Hospital, Wiesbaden, and revealed the presence of (1) micrococcus roseus Eisenberg, and (2) bacillus mesentericus vulgatus.

This mixed infection explained the intractable nature of the case.

XVI.—A. Logan Turner, M.D.,
Edinburgh.

Dr. Turner limited his remarks to the question of transillumination in the diagnosis and treatment of empyema of the frontal sinus. There was a difference of opinion as to its value in the diagnosis of pus. Dr. Moure in his remarks had spoken in its favour, and in a recent paper by Drs. Lubet-Barbon and Furet, of Paris, the existence of opacity on the suspected side was considered by these authors to be of some importance. Dr. Turner had carefully studied the subject on a large number of crania, forming part of the magnificent collection contained in the anatomical museum of the University of Edinburgh, and kindly put at his disposal by Sir William Turner. Briefly, some of the results obtained were as follows: Of 500 skulls examined 357, or 71 per cent., had both frontal sinuses present; 80 skulls, or 16 per cent., had both sinuses absent; 63, or 12.5 per cent., had one sinus absent, the right in 45 skulls, the left in 18 skulls. All these skulls (500) were illuminated, the lamp being placed first under one supraorbital margin, and then under the other, the illuminated areas when present being mapped out in ink upon the frontal bone. The following facts were ascertained: In no skull where a sinus was absent did the frontal area illuminate. Of the 357 skulls in which both sinuses were present 98 failed to illuminate on one side. Of the 63 skulls in which one sinus was absent 40 illuminated on the opposite side; while 23 were negative to illumination on the side with the sinus. In a number of skulls the intensity of the illumination varied on the two sides. Dr. Turner illustrated with photographs some of these points.

XVII.—Dr. G. Mink,
Zwolle, Holland.

Dr. Mink demonstrated his apparatus for auscultating the frontal sinus. It consisted of two parts: (1) A vulcanite cannula bent at about a right angle, and attached to a Politzer's bag; (2) an auscultation tube, one end of which was held by a spring against the patient's frontal sinus, whilst the other end was introduced into the surgeon's ear. The vulcanite cannula was passed into the nose, and so manipulated that the end of it fitted into the hiatus semilunaris. The bag was now compressed, and the air stream rushed up the infundibulum into the frontal sinus, causing a bubbling sound if pus or mucus were present. This sound was readily conveyed to the surgeon's ear along the auscultating tube.

XVIII.—StClair Thomson, M.D.Lond., F.R.C.S,
Physician Throat Hospital, Golden Square.

Dr. Thomson wished to submit two questions: First, Was transillumination of any value in the living subject? Secondly, What exactly was meant by the phrase "free curetting? Did it mean the removal of the entire muco-periosteal lining? He thought that such eradication was impossible, and that to attempt it was dangerous, and might account for some unfavourable results. He thought it sufficient to remove simply the redundant polypoid degeneration.

XIX.—Cresswell Baber, M.B.Lond.,
President of the Section.

Mr. Baber said that fatal cases showed the importance of early operation, and he agreed with Mr. Waggett as to an external operation as soon as the diagnosis was certain. Early diagnosis was, however, often difficult when the discharge was slight. Tenderness was a fallacious sign, and led him upon one occasion to open a healthy sinus. He had not found transillumination reliable. Kuhnt's operation was sometimes very satisfactory, and left little deformity. He raised the question of the appearance of a frontal light triangle on the screen, and showed a radiograph of a patient in whom it was absent, and in whom the internal walls of both maxillary antra were very thick. He thought the general feeling of the meeting seemed to be in favour of Mr. Waggett's proposition that in chronic frontal empyema the external operation should be adopted.

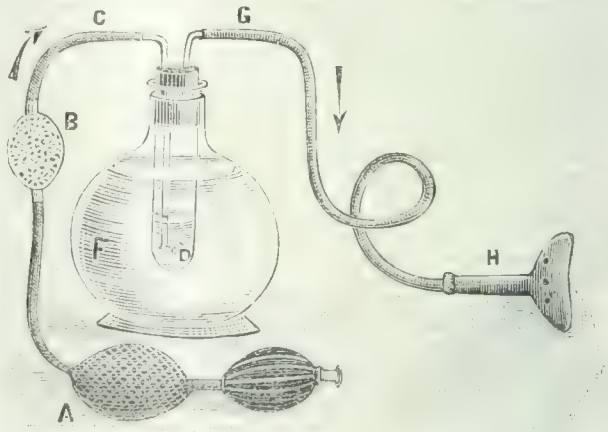
Reply.

Mr. Charters Symonds thought the discussion had shown that there was very general agreement upon certain points: (1) That a free external opening was necessary in all bad cases; (2) that removal of the anterior part of the middle turbinated body was a very useful measure; (3) that attempts to break open the sinus from the nose were very dangerous. There was evidently some considerable balance of opinion in favour of intranasal methods, and these might suffice for the simple cases, no force being used. As regarded free curetting, he did not himself attempt to remove all the mucous membrane. In reply to Mr. Collier's remarks on latent cases, he wished to say that he had confined himself to cases in which there was purulent discharge from the nose.

AN APPARATUS FOR INHALATIONS: ITS APPLICATION IN THE TREATMENT OF TUBERCULOSIS OF THE LARYNX.

By P. Lacroix, M.D.,
Paris.

Up to the present time the inhalation of air impregnated with therapeutic agents has rarely been prescribed by laryngologists, yet this method of treatment is simple and natural, and yields excellent results when employed scientifically. I have devised the apparatus shown in the accompanying drawing, and have employed it daily for the last two years.[1]



It consists of: (1) A glass bottle, F, filled with hot water, the temperature of which varies between 50° and 100° C. (120° and 212° F.). (2) A glass test tube, D, introduced into the bottle and containing the mixture to be inhaled. The latter is thus heated and brought up to a temperature of nearly 100° C. without undergoing any further change. The curative principles of the mixture, volatile only when heated, are freed and distilled, and concentrated nearly to a maximum. The apparatus is employed in the following manner: The bellows A being squeezed with the hand, drives air in the direction of the arrows as in the diagram. This air, after having

been filtered in the glass ball B, passes through the test tube D, and finally into the mouthpiece H. The inhaler is simple and easy to sterilise, as each piece is either of glass or of metal; the mouthpiece H particularly, which is in nickled copper, may be disinfected with boiling water. It does not cause any fatigue, as the patient receives plenty of gas without any effort and need not aspirate at all. It gives, also, their full effect to the medicaments employed.

The apparatus often gives good results in the treatment of diseases of the nose, throat, and larynx. On this occasion, however, I only wish to speak of its application in the treatment of tuberculosis of the larynx.

I am in the habit of employing the following formula in the treatment of laryngeal tuberculosis: Formalin, from 5 to 30 grams; bromoform, 10 to 20 drops; water, sufficient to obtain 30 grams of liquid. Put the above preparation into the test tube D, and add menthol, 1 gram. It is always better to begin with a weak solution, that is to say, 5 grams of formalin and 25 of water, and then to diminish by degrees the quantity of water, and at last to use the formalin undiluted. In some cases the patient must become accustomed to the formalin by inhaling menthol and water only for a few days.

This medicated air produces on the throat a smarting but not disagreeable sensation which soon passes off, even while the inhalation is going on. The first inspirations may sometimes be interrupted by a slight cough, which usually ceases very soon. Finally, when the inhalation is over, after an average of fifteen minutes, the patient feels relief in his larynx and chest. The examination of the patient's throat with a laryngeal mirror shows that under the action of the inhalation the mucous membrane has become more humid, more sensitive, but not at all congested.

The therapeutic results are analgesic and antiseptic. Its analgesic properties are mainly due to the menthol which is deposited on the folds of the mucous membrane of the larynx and trachea. Its antiseptic value is due to the associated properties of formalin, menthol, and bromoform.

The best results are obtained in the early stages of tuberculosis of the larynx, and I could produce several patients whose laryngeal tuberculosis was lessened and even cured when the lungs were not too far affected. The following bacteriological experiments demonstrate the germicidal action of the gas inhaled.

Experiment 1. Two test tubes are taken, each containing 20 grams of veal broth, the whole duly sterilised. Each tube is inoculated with a drop of pus taken from an abscess in the ear. Test tube No. 1 is not further treated, but through the broth in the test tube No. 2 the gaseous stream from the inhaler is passed for 45 minutes; then the tubes are both kept at 37° C. After 15 hours test tube No. 1 shows three white spots of commencing cultures, whereas No. 2 is clear, and has undergone no change. After 48 hours No. 1 presents the usual cloudiness of flourishing cultures, and No. 2 is still perfectly clear. This experiment proves the germicidal action of the inhaled gas upon the microbes of suppuration.

Experiment 2.—The test tubes are inoculated with staphylococcus albus. The result is the same as in Experiment *1*.

Experiment 3.—Sputum known to contain tubercle bacilli was carefully crushed and mixed with sterilised veal broth, and filtered through cotton-wool and diluted with an equal part of water. To ascertain whether the tubercle bacillus could be killed by the gas of the inhaler, I passed this gaseous stream through the above broth for about five hours. Then a month and a half ago I inoculated a guinea-pig under the skin of the inner side of the right leg with half a cubic centimetre of the broth. The guinea-pig is still in perfect health, and has even increased in weight. The only local trouble was a small scar now quite healed.

NOTE.

[1] I have already shown it (in April, 1899) to the Laryngological Society of Paris, and it is described in the *Archives Internationales de Laryngologie*, 1899, No. 2.

LARYNGITIS SECONDARY TO NASAL DISEASE.

By Dundas Grant, M.A., M.D., F.R.C.S.,
Surgeon, Central London Throat and Ear Hospital.

Without for a moment refusing to the larynx the right of being primarily affected on its own account, there is little doubt that in a very large number of cases—in my experience a considerable proportion—the laryngeal trouble is associated with or even caused by some form of nasal disease. There are several ways in which nasal disease may induce inflammatory changes in the larynx.

Forms of Nasal Disease.

Nasal obstruction as such may oblige the patient to breathe through his mouth, and consequently to inhale air unwarmed, unmoistened, and unfiltered. In this way the production of the slighter forms of laryngitis is readily intelligible, and it is sufficient to induce hoarseness and vocal disability, especially if the voice be subjected to an amount of use or wrong use which, under other circumstances, would be innocuous.

In ozæna or, to be more exact, chronic, fœtid, atrophic rhinitis, the larynx is notoriously apt to be affected, so that a condition described as ozæna laryngis is produced. Whether from an extension downwards *per continuitatem* or from the inhalation of crusts and discharges, the surface of the laryngeal mucous membrane becomes altered, and, as a rule, thickened. It looks sticky rather than moist, and it is here and there beset with adherent flakes of dirty, yellowish, muco-pus in varying stages of dryness. These occasionally become suddenly impacted between the vocal cords, and the voice, habitually hoarse, becomes for the moment extinct. The pharynx is dry and glazed, the breath offensive.

In chronic suppurative inflammation of the nasal sinuses more particularly the sphenoidal and posterior ethmoidal, the most usual complaint is of a dryness in the throat with hoarseness or loss of voice. This is due to the laryngitis produced by the inhalation of infective muco-pus. The laryngeal appearance is that of a somewhat macerated mucous membrane, the epiglottis is comparatively unaffected, the ary-epiglottic folds lose their smoothness, and are bathed in a sticky muco-pus which extends over the ventricular bands, and particularly the inter-arytenoid mucous membranes. The latter swells up into the form of a beefy cushion, the vocal cords lose their polish, and acquire a red swollen appearance like raw beef.

In simple chronic rhinitis of the moist variety the larynx becomes affected in a very characteristic manner. As the result of maceration by non-infective nasal secretion the mucous membrane in the most exposed parts acquire a swollen and pale—as if "sodden"—appearance suggestive of the skin of a washerwoman's hand. This is particularly the case in the interarytenoid fold. The cords also lose their lustre and the fineness of their edges, acquiring a sort of cloudy, swollen character, as if there were—as I believe there is—a proliferation of the superficial epithelium.

Many users of the laryngoscope must have been perplexed by these bizarre appearances as of laryngitis "gone wrong," until they traced them to their origin, as results of various forms of rhinitis. Very often from the mere appearance of the larynx one is able to state with confidence that there is present some form of rhinitis, and even its nature before extending one's investigation to the nasal cavities.

Pathology.

As I have already stated I believe there is in the cases I am describing a proliferation of the superficial epithelium, although for the present I can produce no microscopic evidence to confirm a view which will, I believe, be readily accepted. The source of initiation being from the outside of the mucous membrane the surface would be naturally the part first affected. In this respect, then, it differs from those diathetic forms of laryngitis and from those occasioned by misuse of the voice, in which vascular and inflammatory changes take place primarily in the submucous tissues.

Diagnosis.

Diagnosis is not, as a rule, difficult if the nature of the cause be kept before the mind and the appearance of the changes induced by maceration be realised. In some cases rhinitic laryngitis may simulate tuberculosis of the larynx, especially when the irritation set up by a purulent discharge has led to swelling of the ary-epiglottic folds. There is, however, absence of involvement of the epiglottis, there is less translucency than is seen in the earlier steps of tuberculous infiltration, there is little or no pain in swallowing, but there may be cough, disturbance of digestion, and even considerable deterioration of the general condition. The case is usually cleared up by the discovery of the rhinitic cause, and by the remarkable improvement which takes place under treatment if this includes the cleansing of the nasal passages.

The forms arising from chronic atrophic rhinitis may be mistaken for syphilis, especially when the swelling in the arytenoid space is considerable, and is covered by an adherent

greenish crust. The foreshortened view then obtained is very much that of a gumma. It is distinguished therefrom by the easy clearance of the crust by coughing after the use of a soda spray or by brushing, as also by the effect of nasal medication. It is to be remembered that tertiary syphilitic disease in the nose may produce as the result of inhalation of pus a non-specific laryngitis.

From the description above given it may seem that the condition may greatly resemble some of the forms of pachydermia laryngis. In my opinion they are forms of pachydermia, or in other words many cases of the less typical pachydermia of the larynx are really the superficial laryngitis which results from nasal suppuration.

Scleroma of the larynx is another condition which it may simulate, but this is usually accompanied by characteristic changes in the nose.

Treatment.

The treatment follows from the diagnosis, and takes two directions. I need hardly say that first and foremost the source of irritation must be removed by treatment of the nose. Thus, in congestion from simple nasal obstruction we may have to use an alkaline spray or wash, pin down the turgescent inferior turbinated body by the galvano-cautery or some equivalent, remove occluding septal outgrowths or portions of the turbinated bodies. In cases of ozæna, free irrigation and the application of some stimulating and antiseptic spray, as a 5 to 10 per cent. solution of chloride of zinc, gives the best results I have yet seen. Empyema of the various sinuses calls for the appropriate treatment which cannot here receive detailed description.

As regards local laryngeal treatment, much depends on the nature of the condition.

In the chronic congestive conditions, the local application of astringents (preferably the 10 per cent. solution of chloride of zinc in rose water) by means of a brush or spray is desirable. A temporary anæmia is produced by means of a spray of cocaine (10 per cent.) which may be prolonged by the subsequent use of antipyrin, or the antipyrin may be preceded by eucaine, so as to avoid the toxic effects of cocaine. Errors in voice production and respiration should be corrected. The voice should as a rule be kept at rest, but I believe that the decongestionising is favoured by the cautious use of the "pmawing" exercises devised by Curtis.

Where the mucous membrane is simply sodden, rapid subsidence takes place when the nasal condition is removed, and such an astringent as chloride of zinc is applied.

If, however, the white swelling of the mucous surface indicates proliferation of the epithelium there is a local remedy of the greatest value—namely, salicylic acid. This may be used in strengths increasing from 1 to 5 per cent. in such a form as the following: Salicylic acid, 5 to 25 gr.; rectified spirits, 5 drachms; glycerine, 3 drachms.

The throat should be anæsthetised by means of cocaine or eucaine, at all events for the first few times, and the application should be made by means of a very small pledget of wool securely twisted on a Smyly's laryngeal wool holder. It should be confined as much as possible to the affected part, which it rapidly blanches, leaving the normal mucous membrane very slightly whitened, at all events when the weaker solutions are employed. This remedy is to be used with precaution, as it is necessarily irritating. It may be taken as a rule that the greater the amount of epithelial proliferation the greater is the indication for the use of salicylic acid; the better it is borne, the greater should be the strength and frequency of the application. When the epithelial thickening is removed, the acid is apt to produce a rawness or even an erosion of the surface, which, however, soon subsides when its use is discontinued. In cases in which there is no epithelial hyperplasia this same untoward result is apt to ensue and the remedy is contraindicated. In cases of epithelial hyperplasia in the interarytenoid space the remedy is peculiarly indicated and most easy to apply.

For those who have employed salicylic acid or the so-called "cannabine" in the treatment of corns this use of the remedy will seem most natural, and they will be only surprised that it should be so little in vogue. I have tried this salicylic acid treatment in the case of recurrent papillomata of the larynx with definitely good results, such as have been recorded of its use on warts on the surface of the body.

CASES OF RHINITIC PACHYDERMOID LARYNGITIS TREATED WITH SALICYLIC ACID.

CASE I.—Mr. G., aged 59, music hall attendant, came under my care on the advice of Dr. Barragry on account of a stuffy feeling in the throat and extreme hoarseness, which had lasted for about four months, and was getting worse rather than better. The cords were partially concealed by very swollen ventricular bands; they were obviously less tense than normal, and on their edges was what looked like a layer of desquamating epithelium. The rest of the cords was red and succulent, and in the interarytenoid space the mucous membrane was swollen and sodden looking. The nasal mucous membrane was in general hypertrophied, and there was considerable excess of mucous secretion. The patient was advised to give up all alcoholic drinks (in which he usually indulged somewhat freely), and once a week, in gradually increasing strength, an alcoholic solution of salicylic acid (15 gr. to the oz.) was applied to the thickening in the larynx. After two applications at intervals of a week the voice became practically clear. At the same time he was ordered an alkaline lotion to wash out his nose, and though the swelling has not altogether disappeared, the whitish thickening on the edges of the cords is no longer perceptible.

CASE II.—Miss B. came under my care in October, 1896, complaining of pain in the throat after the slightest use of the voice, and also during swallowing. Her trouble was of two months' duration, and she had been practising singing for operatic purposes. Both vocal cords were thickened and rough; there was considerable hypertrophy of the inferior turbinated bodies and a small crop of adenoids in the naso-pharynx. The turbinated bodies were reduced by operation, the adenoids were removed, and a slight improvement took place, but off and on the patient has been troubled with regard to her voice, so that she has been unable to use it for vocal purposes. The irrigation of the nose was freely carried out, and various astringents from time to time applied to the larynx. About two months ago a solution of salicylic acid was applied for the first time. The application, it must be admitted, was followed for several hours by some discomfort in the throat, and in the evening of the same day there was rather increased difficulty in the use of the voice. The next day the voice was clearer than it had been before while under my treatment, and it has steadily improved ever since. I believe that at times I applied the acid too frequently, but on the whole the result has been exceptionally striking.

DISCUSSION.

Dr. LUC (Paris) agreed with Dr. Grant as to the similarity of the laryngeal picture in the cases described to that of tuberculous laryngitis. He also directed attention to the suffocative dyspnœa sometimes seen in ozæna laryngis from the impaction of crusts in the glottis, and he concluded by emphasising the necessity of always examining the nose before diagnosing tuberculous laryngitis.

Dr. PEGLER asked Dr. Grant to specify more exactly the form of rhinitis to which he had referred.

Dr. GRANT replied that he referred to the chronic non-purulent form, the one by far most frequently seen.

NOTES OF A CASE OF EXOPHTHALMIC GOITRE: OPERATION: CURE.

By J. POLLARD, M.R.C.S., and R. LAKE, F.R.C.S.

THERE are practically two forms of Graves's disease, at any rate from the purely surgical point of view; that is to say, those with, and those without, enlargement of the thyroid gland.

The surgical treatment is also very different. In the former, excision of a portion of the diseased gland seems in most cases the proper course to pursue; in the latter it is excision of the cervical sympathetic ganglia, preferably on both sides, that has latterly been stated to yield the most satisfactory results.

Excision of the ganglia previous to removal of the gland itself is said to render this latter operation less dangerous. Be this as it may, it cannot be denied that the large scars likely to remain visible are a serious drawback to this line of treatment, to say nothing of the fact—and fact it is—that it is the anæsthetic that constitutes the most serious drawback to the operation. In this connection we would call attention to Kocher's results obtained through infiltration anæsthesia, a full description of which method by A. E. Barker will be found in the *Lancet*. The danger of a fatal result is not confined to the operation: it exists, though in a rapidly diminishing degree, for about the first three days afterwards. This danger is one quite peculiar to operations on the thyroid gland, more especially those under consideration; it consists in an absorption of an excess of thyroid juice, in other words auto-toxication. It does not follow that these juices are poured out from a cut surface, indeed Kocher seems to lay great stress on the avoidance of all unnecessary handling of the gland itself, as likely to stimulate it to increased activity.

The subject of the present note was a lady who came under the treatment of one of us in July, 1897. At this time she was 31 years of age.

Previous History.—She suffered from an attack of diphtheria at about the age of 7, she had scarlet fever at the age of 12, a severe attack of tonsillitis at 18, jaundice at 22, and four separate attacks of influenza between the years 1891 and 1896. It was to these attacks of influenza, and especially to the effects of the first, that the exophthalmos was attributed. This took place in Australia, when, although ill herself, she dragged herself round to attend to the rest of the household, who had all succumbed to the complaint. This was in the beginning of 1892. Swelling of the neck was first noticed in the winter of 1892, and steadily increased in size. In 1894 the patient wasted a great deal, became pallid and despondent. The exophthalmos seems to have been so gradual that its onset passed unnoticed, and in consequence only an approximate duration can be given. From July, 1897, to May, 1898, she was kept under treatment; in fact, external applications even were not neglected, but nothing was of any avail. The so-called "Indian" treatment was tried.

Condition in May, 1898.—The patient is most distressingly nervous, trembling at the least thing. She has marked thyroid enlargement with exophthalmos. Stellwag's sign is well marked. The neck measures 14 inches at the largest part, a trifle less than last year, if there is any difference. The pulse is rapid, varying between 160 and 130 per minute. She complains of distressing palpitation, severe, almost constant, frontal cephalalgia, intense nervousness, and constant tremors, great dyspnœa, and tachycardia; she can only go a few steps without the feeling of dyspnœa, and bad fainting fits add to her anxieties. Diarrhœa and sickness are not present.

Operation.—May 18th, 1898. The anæsthetic employed was ether, which was administered by Mr. Woodhouse Braine; and although the operation was protracted, lasting nearly two hours, the patient never exhibited in the slightest degree any untoward symptom. The incision extended from the right angle of the lower jaw to the sterno-clavicular joint, and was about 5 inches in length; the dissection was of more than usual difficulty, the parts were exceptionally vascular, a large part of the lobe being hidden beneath the sterno-mastoid muscle, part dipping down behind the trachea, and the lower angle reaching beneath the sterno-clavicular joint. The inferior thyroid artery was more than double its natural size; the carotid sheath was laid bare for upwards of 2 inches. As the isthmus was merged into the enlarged right lobe a careful dissection enabled one to separate it from the left lobe without the necessity of using a double ligature. The wound was closed by buried as well as cutaneous sutures, and it is to these sutures in the layers of the deep fascia that the almost total absence of scar must be attributed.

After-History.—The temperature only once rose as high as 100°. This was on the second day. On the first day there was a convulsion with cyanosis, cyanotic attacks occurring several times within the first week. There was also some contraction of the flexors of the digits during the first day, and pain in the throat especially on swallowing for the first four days. The dressings were changed on the third day and the stitches removed on the fifth; digitalis and strophanthus were administered from the first.

The after-results are most gratifying. The intense cephalalgia never reappeared; the pulse-rate fell in the first week to 98, and now, though still a quick one, is not excessive; the protrusion of the eyes is gone, as is the tachycardia; in fact, the patient can cycle freely and take active exercise. The only portion of the scar visible is 1 inch at the upper part, whence some of the buried sutures escaped.

We had intended using saline injections in the event of any sign of thyroid intoxication, but fortunately it was not required, so we can only put it forward as a suggestion. The antiseptic used was formalin, 1 per cent.

Discussion.

Dr. Watson Williams (Bristol) said that he had observed a case of Graves's disease in which removal of one lobe of the thyroid had been followed by marked amelioration of the symptoms. The patient was not cured, however, some exophthalmos tremor and tachycardia persisting. It must be remembered that the disease was primarily of the nervous system, although no doubt excessive thyroid activity aggravated the symptoms, just as starch and sugar in the diet usually aggravated glycosuria though they did not cause diabetes. The occurrence of unilateral Graves's disease was in favour of these views. He congratulated the authors on their successful result, but desired to emphasise the desirability of treatment by drugs and rest first, reserving operation for those very grave cases which did not improve under other modes of treatment; and this, first, because a large number of cases were amenable to treatment by drugs and eventually recovered; secondly, the operation was attended with a very high mortality; and, thirdly, it did not afford a cure.

Dr. Herbert Tilley (London) agreed in the main with the previous speaker. He described a bad case now under his care at the hospital, in which the patient was anxious for operation. He, however, warned her of the risks, and under treatment with bromides and belladonna, etc., she improved so enormously that she was able to return to her work as a domestic servant. He asked what was the experience of others as to the effect on this disease of operations performed on the nose and throat. He knew of 3 cases in which such operations had been immediately followed by great relief of the symptoms of Graves's disease, and on the other hand he had heard of a case in which Graves's disease developed immediately after an operation for nasal polypi. Such effects were not very surprising when the important part played by nervous disturbances in the causation of the disease was remembered.

The President quoted a case of Semon's in which symptoms of Graves's disease followed a polypus operation, and said he had had a somewhat similar experience after removing the inferior turbinated body. He attributed the symptoms to irritation of the fifth nerve. Hack had recorded a case showing the effect of applications of the galvano-cautery to the nose on the enlarged thyroid.

Dr. Sargent Snow (Syracuse, N.Y.) said he had had 3 cases in which nasal disease was associated with some degree of thyroid enlargement, and also with the presence of lymphoid hyperplasia at the base of the tongue. In two of the cases his attention was called to the diminishing thyroid by the patients themselves, who stated some months after their nasal treatment that their "necks were getting much smaller." In the third case he treated the nose and pharynx with a view to influencing the thyroid enlargement, and no other measures were employed. The results were good in all the cases, but he was not prepared to make any general recommendation.

Dr. Pegler said he had had a case of nasal obstruction associated with thyroid enlargement which was benefited by the nasal treatment.

THE LOCAL USE OF FORMALIN IN THE TREATMENT OF ATROPHIC RHINITIS (OFTEN CALLED OZÆNA).

By Adolph Bronner, M.D.,

Senior Surgeon to the Bradford Eye and Ear Hospital; Laryngologist to Bradford Royal Infirmary.

In late years much has been written on the pathology and treatment of atrophic rhinitis. I do not intend to enter into any controversy on these points, and only wish to report a new remedy which in my hands has proved most useful in these cases. I refer to the so-called atrophic (or dry) non-fœtid, and to atrophic (or dry) fœtid rhinitis.

The first indication in the treatment of atrophic rhinitis is to thoroughly cleanse the nares and remove the inspissated mucus and crusts. The second indication is to alter the nature of the secretion of the mucous membrane, and thus prevent the formation of the crusts. This can, I claim, be most satisfactorily achieved by formalin.

I generally order an alkaline lotion for removing the crusts to be used with a Higginson's enema, and with as much force as possible without causing serious discomfort. If there are any patches of hypertrophy of the mucous membrane, I remove them with the galvano-cautery or trichloracetic acid.

Innumerable sprays and insufflations have been recommended in the treatment of atrophic rhinitis. I have for some time used formol or formalin. In bad cases I prescribe a 1 in 1,000 to 1 in 2,000 solution of the liquid formalin with water, to be used with a small nasal syringe; or a 1 in 500 to 1 in 1,000 solution, with a little glycerine added to be used with a coarse spray three or four times a day for a few days, and then two or three days in the week for a few weeks or months. If the application is painful the solution should be diluted with water. Formalin has a most powerful action on the glandular tissues, how I do not know, but I believe that it acts directly on the cells of the glands. It is therefore very important that the solution should not be too strong, or used for a very lengthy period of time.

Formalin has also a powerful deodorising action. In cases of fœtid atrophic rhinitis, or, as some call it, ozæna, it is most useful in removing the most disagreeable and penetrating smell. If it only did this and nothing else, it would be a godsend to many a poor wretch.

In many cases of atrophic rhinitis the accessory nasal cavities are affected, particularly the maxillary antrum. Until these have been treated and cured, any local treatment of the nares must necessarily be futile.

In my small experience the maxillary antrum or antra are affected in about 25 or 30 per cent. of all cases of ozæna.

In the after-treatment of atrophic rhinitis I have recently tried insufflations of tannoform (a combination of tannin and formalin) with boric acid, and found it most useful.

In conclusion I should like once more to state that atrophic rhinitis, fœtid or non-fœtid, has nothing whatever to do with syphilis.

Discussion.

The President (Mr. Cresswell Baber) recommended a Higginson's syringe for cleansing the nose, followed by a spray of mercury perchloride. He agreed with Dr. Bronner that empyema of the antrum was present in a certain proportion of cases of ozæna, and that it was sometimes overlooked.

Dr. Jobson Horne considered formalin superior to mercury perchloride in diseases of the throat and nose, more especially in infectious cases such as diphtheria, in which it was important to prevent the patient from infecting others.

Dr. Pegler insisted upon the importance of thorough cleansing of the nose. He advised the mechanical removal of crusts by free douching with warm water injected through an Ingram syringe, before applying alkaline or other antiseptics; and he pointed out that directions for home treatment were often very loosely given and imperfectly carried out. He had not used formalin, being quite satisfied with Mandl's iodine solution, preferably that of medium strength.

Dr. Herbert Tilley (London) confirmed Dr. Pegler's remarks as to the importance of thorough cleansing of the nasal cavities, and recommended a strong rubber ball syringe of about 3 ounce capacity, with several openings in the nozzle, made by Krohne and Sesemann. This should be used at least twice a day with an alkaline antiseptic wash. The clumsiest of patients could use this instrument, and he had never known otitis to follow its use.

Dr. Chevalier Jackson (Pittsburg, Pa.) had found a finely-powdered preparation of carica papaya very effective in softening crusts, by virtue of its solvent action on dead animal tissues. It had no action whatever on living tissues. He removed the softened crusts next morning by mopping with hydrogen peroxide, and then douched with an alkaline solution.

Dr. Watson Williams (Bristol) had tried weak formalin solutions in ozæna some years ago, but found that its action in removing fœtor and dryness of the mucosa was very transitory, unless it were used strong enough to cause at least considerable discomfort. Equally good results could, he thought, be obtained with alkaline solutions containing carbolic acid or some non-irritating antiseptic. He had not observed any frequent association of true ozæna with antral disease.

Dr. Kipp (New York) uttered a warning against the use of formalin in young children. He had seen symptoms of gastric irritation from the employment even of a weak spray. The dangers of douching in ozæna were by no means imaginary, for he had seen many cases of otitis thus produced. A coarse spray of weak alkali, followed by Condy's fluid, had yielded him good results.

Dr. Bobone (San Remo) said he could not get his patients to persevere with formalin on account of the pain and irritation. He recommended nascent silver iodide applied with a cotton wool brush. Refined petroleum was a good application after the crusts were removed.

Dr. Lamb (Birmingham) asked Dr. Bronner how he arrived at his percentage of cases in which ozæna was complicated with antral empyema.

Dr. Bronner, in reply, said that he preferred to use formalin as a weak spray, stopping short of strengths that caused irritation. The risk of otitis was, he thought, much greater with the nasal douche, in which the pressure was continuous, than with any syringe in which it was intermittent. He had punctured the antrum from the lower meatus with Lichtwitz's trocar in cases in which he suspected empyema.

CEREBELLAR ABSCESS SECONDARY TO SUPPURATIVE OTITIS MEDIA: EVACUATION: RECOVERY.

By Ernest Waggett, M.B., B.C.Camb.,
Assistant Surgeon, London Throat Hospital.

As the number of cases is small in which a diagnosis of cerebellar abscess has been made *ante mortem* and established by operation, it seems desirable that the details of every instance should be reported. The present case is made the more interesting by reason of its fortunate issue in complete recovery. Such an issue is extremely rare, and while Acland and Ballance in their admirable paper on the subject published in 1896 were able to find not more than 10 instances of recovery, I have been able to discover but 2 cases recorded since that date—the cases of Secker Walker, of Leeds, and Bechmann, of Berlin.

Condition when First Seen.—The patient, F. B., aged 26, a young man of slender build, looking sallow and ill, presented himself at the out-patient department of the London Throat Hospital on January 24th, 1899, complaining of pain in the right ear and of a slight sense of giddiness. For as long as he could remember he had been subject to a discharge from the right ear, which was totally deaf, and he had occasionally experienced pain; but the vertigo, which had commenced some three weeks previously, was a new symptom to him. On examination I found an abundant fœtid discharge and a large fimbriated polypus, which almost filled the right meatus. Evidence of mastoid disease was wanting. The polypus was removed with the snare, and proved to spring from the posterior region of the tympanum. The membrana tympani and ossicles were wanting. A routine antiseptic treatment was ordered (hydrogen peroxide, boric syringing, and boric spirit drops), and the patient sent away, to return in a few days' time with the ear in a much improved state.

Facial Palsy: Schwarze-Stacke Operation.—On February 14th—that is, three weeks after the first visit—he returned in great pain. On examination I found he had thrust a plug of wool deep into the meatus, and the collection of pus pent up behind this obstruction was exceedingly foul. To avoid further indiscretion he was admitted into the wards. Two days later, when his pain had subsided under careful antiseptic treatment, he suddenly developed right facial palsy involving all branches of the nerve. Although other symptoms of deep-seated disease were wanting, an operation was undertaken on the following morning, with the purpose of preventing permanent damage to the nerve by pus infection. The ordinary Schwarze-Stacke operation was performed under ether, the patient exhibiting no unusual respiratory symptoms while under its influence. The mastoid proved to be eburnated, and the antrum, filled with pus and granulations, was no larger than a field pea. A small sequestrum was removed from the floor of the aditus and antrum, and this was taken as being an immediate factor in the causation of the facial palsy. No muscular twitchings in the face were noted during this proceeding. The operative cavity (antrum, aditus, and tympanum) was left freely exposed by the removal of a quadrangular flap from the meatus, and the operation seemed to be very satisfactory.

After-History.—The pain was relieved, the temperature was normal, and as the patient lay quiet in bed everything seemed to point to a good result, though the facial palsy showed no real sign of improvement. It was clear, however, that rapid convalescence was not taking place, in spite of the excellent condition of the ear; and on the tenth day the temperature rose to 100.5, and some neuralgic pain was complained of behind the left ear, which was seen to be normal in appearance. The patient lost his appetite, and felt "liverish," the bowels being constipated, and the breath unpleasant. The optic discs were examined, and noted as being slightly pink, and somewhat indistinct near the edge, but the same had been observed at the routine examination on admission. For nine more days the case was watched with growing suspicion.

Onset of Vertigo and Vomiting.—At the end of that period (19 days from the operation) his health had clearly declined in spite of the satisfactory state of the ear, and for several days past he had been increasingly unwilling to move in his bed and to sit up, complaining that rapid movements of the head caused him to feel very giddy. On more than one occasion this vertigo had been followed by actual vomiting. Vomiting had also occurred after food on two occasions without premonitory nausea. The neuralgic pain had now become persistent, and had shifted to the right occipital region, where, however, no local tenderness could be made out. Once or twice I noticed that the right pupil was somewhat larger than the left for a few minutes at a time, and slightly sluggish in reacting to light. This phenomenon might, however, be explained by the presence of a degree of conjunctivitis on the right side, due, no doubt, to the exposure of the eyeball resulting from the facial palsy. This ocular symptom was, in fact, typical of all the symptoms present, in that some explanation other than the correct one was always forthcoming. It is clear, on revising the case, that at the period of which I am speaking (19 days after the mastoid operation) it was fully ripe for diagnosis and exploration, but I venture to think that no surgeon, seeing the case for the first time, would have arrived at a positive conclusion from the symptoms exhibited, and one must remember that symptoms are apt, when vague and transient, to receive a fictitious distinctness when recorded on paper. This remark does not, however, apply to the temperature and pulse-rate. The former had now, for two days, remained a degree below the normal, while the latter had fallen from about 80 a minute to between 60 and 65.

Diagnosis of Intracranial Abscess.—Two days later—March 11th, the twenty-first after the operation—the diagnosis of intracranial, and in all probability of cerebellar, abscess could be said to be definitely established. My notes for that day were to the following effect: Vomiting had become habitual after food and without premonitory nausea. Vertigo was marked even on quiet movement of the head. The gait was distinctly staggering on attempting to walk, though a tendency to fall to one or the other side could not be determined owing to the extremely weak state of the patient. The grasp of the right and left hands were equal, but some inco-ordination was noted on the right side when attempts were made to bring the forefinger to the tip of the nose. The knee-jerks were exaggerated, a condition which had been present since it was first tested a week previously. The right pupil was widely dilated and very sluggish in reacting both to light and accommodation. The optic discs remained as before, slightly hyperæmic and indistinct at the edge. There was no nystagmus or diplopia. The temperature had remained for four days a degree below normal,

touching 97.2 on two occasions, while the pulse-rate was at one time as low as 54 to the minute. The bowels were very constipated and the breath foul. Cerebration was slow but quite clear and the slowness had been present in some degree from the onset of the case. More distinctly local evidence of disease in the posterior cranial fossa was to be found in the severe and persistent occipital pain localised in the middle line, unaccompanied by torticollis or stiffness of the back; there was also the presence of a lesion involving the facial nerve presumably in the Fallopian canal or internal auditory meatus. It may be added that at no time since the mastoid operation had the tuning fork been heard by bone conduction, but before that operation the test had not been applied; and I should also mention that the patient had for many days persisted in lying curled up on his left side, but this evidence of disease in the right cerebellum loses its significance when it is considered that a tender healing wound was present on the right side. No carious bone could be detected by the probe in the direction of the middle fossa or the sigmoid sinus. The *tâche cérébrale* phenomenon was present in a marked degree.

Exploratory Intracranial Operation.—The symptoms, though in some respects deficient and inconclusive, were on the whole sufficiently exact to render an exploration of the cerebellum and possibly of the cerebrum imperative. Accordingly, with Dr. Law's kind assistance, I performed Dean's operation, applying a $\frac{7}{8}$ inch trephine immediately over the course of the lateral sinus at a point $1\frac{1}{2}$ inch behind the centre of the meatus and $\frac{5}{8}$ inch above it. On removing the button the meninges were found to be bulging without pulsation both above and below the exposed lateral sinus. The latter appeared to be perfectly healthy, and on accidental puncture of its outer wall by a bone splinter the blood spirted at high pressure. In consequence of this hæmorrhage I had to slit open the vessel and pack with gauze, which was left in position until the eighth day, when firm aseptic clotting was found to have taken place. I enlarged the hole in the bone upwards and downwards. On incising the dura mater the pia was found to be free from inflammation in both the middle and posterior fossæ. I then explored the cerebellum in ten different directions with Horsley's large-sized pus seeker, attacking, as one would suppose, every part of the right lobe. The instrument was introduced as deeply as possible short of piercing the fourth ventricle, and was carried forwards and upwards to the posterior aspect of the petrous bone 3 inches from the trephine hole on two occasions. No evidence of pus was obtained, and a similar thorough but fruitless exploration was made of the temporo-sphenoidal lobe in ten different directions.

After-History.—The patient was put back to bed to await events, the trephine wound being merely packed with gauze. During the next three days little change took place in his condition. The pain was slightly less evident, and he lay curled up on his left side with the hand under the occiput. Some wandering occurred at night, the temperature remaining subnormal, falling on the third night to 96.8°, and remaining at that point for thirty-six hours. On the fourth day he seemed better, the temperature reached normal, and the pupils reacted again to light. The brain, however, bulged into the wound and did not pulsate. This day for the first time a complete absence of the knee-jerks, previously exaggerated, was detected. The grasp of the right and left hand were noted as equal.

Onset of Optic Neuritis.—On the fifth day, March 16th, the condition had undergone a marked change for the worse, and indeed the patient appeared to be dying. The optic discs had been examined almost daily, but now for the first time marked swelling and choking of the left disc was present. Cerebration was clear, but the patient's memory was now a blank as to this period of his illness. The wound of the previous operation appeared to be quite aseptic. Pulsation was wanting over both the cerebrum and cerebellum, but bulging was apparent now only in the cerebellar region.

Second Exploratory Intracranial Operation.—I now felt convinced of the presence of cerebellar abscess, and determined to explore until this was found and evacuated. I enlarged the wound and explored with the pus seeker in all directions, but without success. I then inserted my left index finger into the cerebellum in the direction of the internal auditory meatus. The œdematous tissue was no more perceptible to the sense of touch than is warm water, and nothing was felt until the posterior aspect of the petrous bone was reached. I withdrew the finger and again inserted it forwards, upwards, and inwards. When the whole length of my finger (that is, $3\frac{1}{2}$ inches) had entered the wound. I felt between its tip and the pentorium above it a well-defined elastic body, of the consistency of a boiled egg with the shell removed. It was clear from the situation that the pus seeker must on more than one occasion have met with and displaced this compressible body. I now passed the instrument along the finger track, and on opening the blades about an ounce and a-half of greenish fœtid pus came away. A considerable amount of hæmorrhage was taking place at the time, and the pus could not be measured. Dr. Potter, who was administering the chloroform, noted that the pulse-rate immediately rose in frequency. Two decalcified bone tubes, 3 inches long, were inserted side by side into the abscess cavity. While inserting the second of these, a gush of clear amber-coloured fluid (2 2 drachms) came away. The antiseptic employed throughout this and the former operation was biniodide of mercury 1 in 4,000, and it is worthy of note that there was at no time any evidence that the extensive interference with both cerebral and cerebellar tissue was in any serious degree harmful to the patient.

After-History.—On March 17th, the day following the operation, the outlook was very unfavourable, for the patient was very restless and irritable, and complained of very severe pain all down the back. In view of the presumed rupture of the fourth ventricle, this seemed to be as serious a symptom as one could have. A well-marked lateral nystagmus was now present for the first time, the eyes moving together slowly to the left and returning rapidly to the right. The temperature, which was 96° immediately before the operation, had risen in eight hours to 100°. By gently syringing the abscess cavity with boric lotion through a small tube passed up one of the drains, the patient experienced a humming tinnitus. The mental condition was that of irritation rather than torpor. In spite of this discouraging commencement, within two days of the operation the patient's general condition had very much improved, the change in symptom being very great weakness, which was met by free dosing with brandy. The bowels remained constipated, but vomiting had ceased except on one or two occasions. The temperature ranged about normal and the pulse was full and 80 to the minute. The right external rectus was now found to be paralysed, and the lateral nystagmus appeared to be no longer constant, as during the first day or two, but was always induced by attempts at fixation. The patient began to lie occasionally on his right side. On March 20th, four days after the operation, the swelling and venous engorgement of the left optic disc had quite disappeared, the disc being merely red and devoid of edge; and it may be said that this subsidence of the swelling is considered the best evidence of the successful evacuation of an intracranial abscess. During the next ten days the patient made slow progress towards recovery. The greatest difficulty experienced was with the bowels, which were difficult to move both with drugs and enemata, the evacuation having a peculiarly foul odour. On two occasions the administration of enemata was followed by a burning sensation of the skin accompanied by an evanescent crop of urticaria. The same phenomena were experienced six months previously. Vomiting occurred occasionally after drinking.

Convalescence.—During the course of convalescence the bone drain tubes became softened and collapsed more than once, causing retention of a few drops of pus; but it was never evident that the abscess cavity secreted any great amount of pus, the discharge consisting mainly of small pieces of necrosed brain tissue which had a peculiar phosphorus-like odour. The decalcified bone tubes seemed when new to be of a very suitable consistency for the purpose in hand, not being extruded by the pulsating brain as is often the case with rubber tubes and causing less pain during insertion than the silver tubes which at one time I employed. By March 30th, a fortnight after the operation, the nystagmus had entirely ceased, except when attempts were made to look to the right. The right external rectus was again at work, and some outward movement of the eyeball beyond the middle line was possible. At the end of the third week the patient was in a fair way to complete recovery, but as a precaution I did not finally remove the drains until another ten days had passed. By April 18th, a month after the operation, the patient had for some days been walking about the ward. His appetite had (as in Acland and Ballance's case) become ravenous, and he was reported as "eating seven dinners a day." He put on flesh and gained in strength, making a rapid return to good health. His general condition is now excellent and he is at present actively engaged in his trade of harness making.

I should mention here that thanks to the assiduous care of our house-surgeon, Dr. Lewis, and the nursing staff, the cranial wound never caused a moment's anxiety on the score of sepsis, although it was kept open for nearly a month. I subsequently closed it by a small plastic operation.

I have made little mention of the nervous phenomena during convalescence in order to avoid reiteration in giving a summary of their course throughout the case.

Cerebration was at no time in abeyance, though slow during the period prior to the evacuation. Three months later he complained that he was still unable to keep the attention fixed for any length of time.

Cranial pain ceased within a week of the operation. The vertigo so prominent a symptom, particularly on movement, in the early stages practically ceased on the evacuation of the cerebellar abscess. Syringing of that cavity caused its momentary return, and was accompanied by a subjective humming sound.

Vomiting occurred on drinking fluid for some days after the operation, and constipation was prominent for several days. A slight degree of optic neuritis was present from the first, but actual swelling and engorgement only occurred a few hours before the final operation. This swelling rapidly subsided, leaving no evident impairment of vision. The right pupil remained larger than the left for two months.

Lateral nystagmus was seen for the first time on the morning following the evacuation, and the paralysis of the right external rectus was noticed two days later. The former phenomenon ceased during the first fortnight of convalescence, but the paralysis and diplopia still persists, though in a very slight and diminishing degree.

Slight ataxia of the right hand was present in the early stages, and two months after the operation slight ataxia of the right foot was detected by a skilled neurologist. A month after the evacuation there was decided weakness in the grip of the right hand, but during the early stage the condition of the patient allowed of no very satisfactory experiments in this direction. For the same reason no evidence of a tendency to fall to one or other side was forthcoming, though the gait was very staggering in character before operation.

The *knee-jerks* were exaggerated until the period between the two explorations, when they suddenly became extinct. They remained so for two months, but at the end of the third month that on the left was re-established, and that on the right was with difficulty detected. At this period the plantar reflex was normal. The facial palsy remains complete in spite of galvanic treatment, but no paræsthesia of the tongue can be made out. Evidence of hearing by tone conduction on the right side has never been forthcoming.

Dr. Dench (New York) referred to the importance of optic

neuritis as a sign, and mentioned two cases of his own in which it appeared to him that the gauze packing had produced congestion of the disc, and appearances closely resembling optic neuritis. For removing bone from the skull he preferred the gouge and *rongeur* to the trephine. He quite agreed with Mr. Waggett as to the value of digital exploration of the brain.

OPERATIVE TREATMENT OF CHRONIC SUPPURATIONS OF THE ATTIC.

By Dr. ARISTIDE MALHERBE,
Chargé de la Consultation d'Otologie, Laryngologie, et Rhinologie à l'Hôpital Bichat.

THE most obstinate suppurations of the ear are those caused by the lesions of the attic. Owing to their unfavourable anatomical situation and their tendency to become widespread these suppurations may cause dangerous complications; hence the necessity of treating them radically and as early as possible. It is no longer permissible to drag along with treatments of more or less merit. The only rational choice is surgery. Nevertheless, if it is absolutely necessary to relieve the patient of a suppuration which is a constant menace to his life, it is also of great importance that there be nothing detrimental in the operation itself. The defects of Stacke's operation are that it removes important parts unnecessarily and causes much subsequent deformity. I practise a radical cure of the attic lesions by scooping out the petro-mastoid, or posterior atticotomy. My method consists of the following stages:

1. Incision of the skin and periosteum simultaneously in the retro-auricular groove.
2. Stripping off the periosteum and displacement forwards of the auricle along with the cartilaginous external auditory meatus, whose posterior wall is divided for half its circumference.
3. Excision of a portion of the posterior wall of the external auditory meatus, in order to allow the passage of a strip of gauze or of a tube.
4. Free opening into the antrum by means of a gouge and mallet. When the antrum has thus been sufficiently enlarged and cleansed, I make a canal by working through the aditus with a hand drill furnished with a bit, and then enlarge this canal with a borer mounted on the same drill. In this way I hollow out a large and free communication between the antrum and the attic. In doing this there is no danger of wounding the facial nerve, and all splintering is reduced to a minimum.
5. Through this enlarged canal I introduce small cutting instruments (rugines) intended to divide the membranous bands, and fine curettes for thoroughly scraping and cleaning this part of the tympanic cavity.
6. If the ossicles are found bare or carious nothing is simpler than their removal by means of small hooks. The incus is the bone most frequently affected and this method permits of its removal while leaving the malleus untouched. The following is the way in which I remove the incus: Having completely freed the upper part of the attic I seize this bone with a cutting hook. Introducing another rectangular blunt hook through the bony external auditory meatus, I catch the handle of the malleus so as to fix and steady it. I now make traction movements with the sharp hook passed through the antrum until the incus is detached and withdrawn. The entire tympanic cavity is then thoroughly cleansed and curetted and touched with a bit of gauze soaked in a solution of chloride of zinc 1 in 10.
7. Then according as the lesions have caused less or more bony sclerosis and slight or more marked alteration in the hearing, I either simply place a piece of gauze in the tympanum passing through the antrum and emerging through the orifice prepared for it in the wall of the external auditory meatus, or else I use a U shaped celluloid tube through which a strand of gauze is passed and which guarantees the pneumatic functions of the ear. Another strip of sterilised gauze is placed in the meatus to preserve its shape.
8. The operation is finished by uniting the auricle and the posterior lip of the wound with six or seven silkworm-gut sutures.

After-treatment.—The dressing, which is of sterilised gauze, is left untouched for eight days. On the eighth day the sutures are taken out and the strips of gauze are removed from the meatus and tympanum. A fresh piece of gauze is then put into the meatus to secure drainage for the slight oozing which comes from the antrum and from the site of the U-tube. The second dressing, which is then put on, is removed after two or three days. If after this some degree of oozing is found to continue, dressings and cauterisations are made by means of bits of gauze introduced through an aural speculum which I have had constructed, and which I now show you. This speculum, in addition to being self-retaining, gives a large field of vision and room for manipulation because its blades keep parallel when separated.

The procedure which I have described under the name of "scooping out the petro-mastoid bone" (*évidement pétro-mastoidien*), and which allows manipulation through the antrum, seems to me to provide for the principal requirements of treatment.

The antral road allows us to curette freely the cavities of the antrum and aditus, which are almost always diseased; it permits us to clean out the attic, to explore the ossicles, to remove the malleus and incus (if they are carious), or the incus alone without sacrificing the malleus. It does not interfere with the membrana tympani, which plays an important part in protecting the tympanic cavity. By not touching the bony insertion of this membrane, that is to say, by leaving the posterior wall of the osseous external auditory meatus intact, there is no fear of injury either to the facial or to the chorda tympani nerve. This is exactly the reverse of what takes place when the ossicles are removed through the meatus or when simple atticotomy is practised.

Perforations in Shrapnel's membrane begin to heal rapidly when the cavities of the middle ear have been thoroughly cleansed, hence we do not find prolonged suppuration as a sequel to this mode of operating.

Drainage is effected either by a strand of gauze or by a U-shaped celluloid tube opening into the external auditory meatus. The patient recovers without any visible deformity.

Scooping out the bone by this method is the most certain way of preserving the hearing if it is still good, and of improving it if it is deteriorated.

DISCUSSION.

Dr. RUDLOFF (Wiesbaden) pointed out that Dr. Malherbe was mistaken on several points with regard to Stacke's operation, namely: (1) It was reserved for cases of "otherwise incurable" suppuration; (2) it did not involve the removal of important parts from the ear; and (3) it caused no disfigurement.

Dr. LUC (Paris) said that cases of attic suppuration might be divided into those in which the ossicles alone were affected, and those in which there were other bony lesions. In the former case it seemed to him best to remove the ossicles through the meatus, as that was a simple method and free from uncertainty. What would Dr. Malherbe do if the antrum could not be found? In the second class of cases he advised Stacke's operation as the best. It was radical and satisfactory, and caused no disfigurement, especially if the retro-auricular wound were closed at once.

Dr. MOURE (Bordeaux) said the malleus without the incus was of no value; he saw no advantage in Dr. Malherbe's method.

Dr. MALHERBE said his operation was not intended to replace Stacke's, but was suitable for cases of obstinate suppuration, with a small perforation above the short process. It was no more serious than the ordinary ossiculectomy as performed through the meatus, and it was impossible to say in advance whether the ossicles alone were affected in any given case. Above all, his method preserved the tympanic ring, which had a certain importance for hearing. He had never observed any loss of hearing power after removing the incus alone; quite the contrary. His object was to preserve the membrana tympani intact, and to be able to treat, in one and the same operation, every part of the middle ear which might be diseased.

THE DIAGNOSIS AND TREATMENT OF EPIDURAL ABSCESS.

By EDWARD BRADFORD DENCH, M.D.,
New York, U.S.A.

[ABSTRACT.]

AN epidural abscess is a common complication of middle-ear suppuration. While occasionally recognised prior to operation upon the mastoid process, it is frequently found at the time of the mastoid operation. The statistics show that the purulent focus is usually located in either the middle or posterior cranial fossa. In the former instance it is the result of infection through the roof of the tympanum, while in the latter the infection occurs through the posterior wall of the mastoid.

In those cases accompanying mastoiditis, the lateral sinus is not infrequently involved. In some instances, however, the purulent collection may lie directly over the lateral sinus without serious involvement of the blood vessel itself. A localised purulent meningitis of this character is not an essentially grave condition provided it is recognised before either a general meningitis or an infection of the brain substance itself takes place.

This naturally leads us to a consideration of the surgical

procedures to be adopted for the relief of the condition. Such a localised meningitis is an effort on the part of Nature to prevent general infection of the cranial cavity, the purulent focus being shut off by firm adhesions between the dura and the inner wall of the cranium.

In operating upon these cases the strictest antiseptic precautions should be observed, both as regards the preparation of the field of operation, the instruments, and the hands of the operator.

The mastoid is first entered in a typical manner, at a point just below and behind the spinum suprameatum. After this the entire cellular structure of the mastoid is broken down with the curette, gouge, or *rongeur* forceps, as may be most convenient. The carious internal table is then carefully removed and the pus evacuated. Care should be taken not to break up any adhesions which may have formed between the dura and the cranium. When the operation is completed the wound should be packed with iodoform gauze, and the ordinary external dressing applied. In 14 cases in which I have operated in this manner, all have recovered.

Where the focus lies in the posterior cranial fossa over the sinus, the walls of this vessel are almost always thickened. Under these circumstances the sinus should be exposed for a distance of not less than three-quarters of an inch. It should then be incised, as a small thrombus may have formed on the wall of the vessel, without interfering seriously with its patency. If the blood current from the sinus is not perfectly free, the lumen of the vessel should be curetted, and any thrombus present should be removed. The hæmorrhage following the procedure is easily controlled by packing with a strip of iodoform gauze.

In all these cases it is my practice to shut off either the exposed dural area or the sinus wound, as the case may be, from the infectious focus in the middle ear and mastoid, by packing each portion of the wound separately with iodoform gauze, a third strip of gauze being inserted between these two packings. The same precaution is observed at the primary dressing, the mastoid wound being dressed first, after which the dural area receives attention. In this way every possible chance of infection is avoided.

Mr. Damer Harrisson (Liverpool) asked Dr. Dench if he had ever observed disturbances of equilibrium in epidural abscess. According to Bruce, it was only when there was pressure upon Deiter's nucleus that such disturbances occurred, but for his own part he had seen them occur in a lesion of the temporo-sphenoidal lobe.

Dr. Dench, in reply, said that he had never noticed any disturbance of equilibration in epidural abscess. He felt sure it must be excessively rare, if, indeed, it ever occurred.

ANOMALIES OF THE AURICLE

By Dr. F. Rohrer,

Lecturer on Aural Surgery in the University of Zürich.

Dr. Rohrer observed that the axis of the auricle is a line connecting Darwin's tubercle with the anterior aural fissure. By the secondary foldings of the fœtal ear cartilaginous ridges are formed, which run either parallel to this axis or at right angles to it.

The following varieties were described and illustrated:

A.—From Excessive Folding.

(*a*) A supernumerary crus running from the antihelix to Darwin's tubercle.

(*b*) A supernumerary crus running forwards and downwards from the antihelix to the cymba, and corresponding to the crista antihelicis anterior of the monkey's ear.

(*c*) A crus running forwards and upwards from the base of the antihelix, separating the concha and the cymba.

(*d*) A cartilaginous ridge running from the antitragus through the concha in the direction of the antihelix.

(*e*) Fossa navicularis and triangularis abortive and separated from the cymba by a cycloid cartilaginous bulging (macacus ear).

B.—Folding Abortive.

(*a*) Margin of helix thick, and not excavated (macacus ear).

(*b*) Margin thin, largely developed, and turned forwards (pithecus ear).

(*c*) Margin thick and turned forward excessively, with a point on the horizontal superior helix (satyr ear).

(*d*) Helix atrophied, antihelix very prominent (Morrell's ear).

Dr. Rohrer considered that these variations were not accidental, but were the result of a law subject to mathematical and physical conditions; and he sketched a mathematical plan of the foldings of the antihelix, consisting of "spherical trigonometric cycloid lines, following exactly the prominent cartilaginous walls of the auricle" both in normal and abnormal cases.

A CASE OF PARATHYROID TUMOUR CAUSING SYMPTOMS OF MALIGNANT DISEASE OF THE LARYNX AND ŒSOPHAGUS: REMOVAL: RECOVERY.

By P. R. W. de Santi, F.R.C.S.,

Senior Assistant Surgeon and Aural Surgeon to Westminster Hospital.

M., aged 58, was sent to me on June 5th, 1895, by Dr. Eliot, of Southampton, for hoarseness.

History.—Ten months before I saw him he had bronchial catarrh and cough; hoarseness set in shortly afterwards; his cough, which was brassy, continued, and he had occasional inspiratory stridor. Thirty years previously he had had a simple parotid tumour removed on the right side; he had a recurrence two and a half years ago and the growth was removed freely by Dr. Eliot. It was connected with the parotid and was considered by Dr. Eliot to be malignant. Later, Dr. Eliot noted on the left side of his cheek and ear a sore looking like a rodent ulcer, but evidently not rodent, and which healed up under ordinary treatment. Dr. Eliot further reported:

In March the patient had an attack of ague and sore throat which pulled him down considerably. He has never had any pain or difficulty in swallowing, no expectoration of blood, and has kept his weight. No history of syphilis. Dr. Mitchell Bruce examined the patient's chest, but no signs of aneurysm or malignant mediastinal growth could be detected. He was treated with various medicines, including a course of potassium iodide, but without relief.

On June 5th, 1895, I found uniform redness and tumefaction of the right vocal cord, and impaired mobility, especially in abduction. There was no ulceration or neoplasm visible; the rest of the larynx was normal. The voice was very hoarse, but talking was not painful. There was no history of alcoholism or excessive smoking. The nose and pharynx were not affected. There was no glandular swelling in the neck. Scarring over the left cheek suggested syphilis. I looked upon the case as one of probable early malignant intrinsic carcinoma, with an alternative of syphilis, with pressure on the right recurrent laryngeal nerve from some deep-seated gland secondary to the parotid mischief. I advised continuance of potassium iodide, and careful watching. In September, 1895, while away for my holiday, the patient became much worse; his voice was almost a whisper, and he lost flesh. He was seen by my friend and colleague Mr. W. G. Spencer. The right carotid was noticed to be pulsating very visibly, and to be pushed forwards by a small indefinite glandular swelling deep in the neck. Mr. Spencer considered the case probably of syphilitic nature, and urged large doses of potassium iodide. The condition of the larynx was unaltered. In October, 1895, he was apparently going down hill, but at the end of the month rallied and improved very much. When I saw him in December the glandular swelling was less, the voice stronger, and there was a gain in weight of several pounds. By February, 1896, he had gained 1 stone (since September). The swelling in the neck was freely movable and softened. He remained in excellent general health until February, 1899. His voice was stronger, the right vocal cord more mobile, but hoarseness persisted, and the small lump in the neck never disappeared.

Later History.—On February 10th, 1899, he had an attack of dyspepsia, followed by difficulty in swallowing solids; this increased, and when I saw him on March 29th, 1899, he had lost half a stone in weight since February 6th, and was unable to swallow even fluids properly; he had regurgitation of food and considerable discomfort, but no actual pain. He located the obstruction opposite the upper border of the sternum. I found increased redness and greater fixity of the right vocal cord, but no other alteration; the lump in the neck was much larger than previously, and was firmly fixed. I passed an œsophageal bougie, and found obstruction opposite the episternal notch. I took a grave view of the case, and considered the growth in the neck to be the chief trouble. I thought it was compressing the œsophagus, and that there was no disease of the œsophagus itself; also that the recurrent laryngeal nerve was involved. I advised exploration locally of the neck, and if the growth proved to be

malignant and irremovable, gastrostomy. Patient consented to the exploration but not to gastrostomy.

Operation.—On April 27th, 1899, the patient being anæsthetised, and Dr. Eliot kindly assisting, I made an incision over the anterior border of the right sterno-mastoid muscle from the level of the top of the thyroid cartilage to the sterno-clavicular articulation. The deep cervical fascia was exposed and divided; a large tumour was felt deep in the inferior carotid triangle. I could not feel the carotid vessels. By careful dissection the tumour was defined, and found to pass downwards behind the sterno-clavicular articulation, outwards under the sterno-mastoid muscle, inwards on to the trachea and œsophagus, and upwards to above the cricoid cartilage. By careful tracing and dissection I defined its outer border; the carotid artery and internal jugular vein were found pushed far to the right of their proper position. The upper border was next dealt with, and I then found the tumour to be encapsuled. In order to free the lower and inner parts I had to make a cross incision dividing the sterno-hyoid and thyroid muscles. The tumour was very vascular. I eventually freed the whole tumour, and found it pressing on the œsophagus and right recurrent laryngeal nerve; it was attached by fascia to the trachea. I removed it whole, encapsuled; it contained a largish cyst in the centre, tissue like thyroid forming the rest of the tumour. No connection with the thyroid gland could be made out. Microscopically, the tumour was found to be innocent and parathyroid in nature. At the operation the right subclavian artery and carotid vessels, dome of the pleura and phrenic nerve, were all seen. The œsophagus felt as if there was some fibrous infiltration opposite the spot where the tumour compressed it. I closed the wound all but its lowermost angle, which was drained for a day or two. Though the operation was most extensive, and a large cavity left, the wound healed by first intention; and in a fortnight the patient was downstairs.

After-History.—The difficulty in swallowing at once improved, and the patient has now resumed his usual life. He has at times occasional spasm of the muscular tissue of the œsophagus, which causes some difficulty in swallowing, but it is only temporary. When last seen in July, 1899, he was quite comfortable, and in every way well. There was still some hoarseness of voice.

A CASE OF GLANDULA THYREOIDEA ACCESSORIA OF THE BASE OF THE TONGUE.

By W. POSTHUMUS MEYJES, M.D.,
Lecturer at the Amsterdam University.

History.—Since her infancy, and especially since the age of puberty, Miss R., aged 24, has felt as if she had a potato sticking in her throat. She comes of a healthy stock, and has never been ill herself. Her only complaint is that every now and then she brings up small quantities of bloody phlegm, which she thinks is the result of clearing her throat too hard when the swelling is more than usually irritating.

Description of Physical Signs.—Her health seems to be good, and intellectually, too, she gives me the impression of being normally developed. On examining the throat, I actually found the "potato" in the form of a semiglobular tumour occupying the right half of the base of the tongue, beginning behind the papillæ circumvallatæ, and extending about 3 centimetres downward. The surface is a little darker than the surrounding parts, and some swollen blood vessels run over the tumour. On palpation the tumour appears without motion and painless, the surface smooth and firm, without any indication of fluctuation. I estimated the diameter at 3 cm., the height at 2.5 cm.

Diagnosis.—The absence of fluctuation precludes a cyst, the long duration of the development a malignant neoplasm. We cannot, therefore, but suppose that we have to deal with an accessory thyroid gland; accessory because the gland itself is not to be found in its normal place, although this of course may not be considered as an absolutely certain proof that the gland does not exist in an early phase of embryonic development. The patient, who has a great aversion to operations, will not hear of an experimental incision, let alone an operation, at least at present. The reason why I do not strongly insist upon an experimental incision is this: The gland is contained in a rather thick capsule, and in order to reach the tissue proper a considerable wedge would have to be removed. We know from experience that this is attended by copious bleeding and after-bleeding, and that the whole of the tumour might be removed with the same amount of trouble. In any case, however, I would leave a small portion behind, in order to prevent eventual myxœdema which would be sure to set in if, after all, the tumour should turn out to be really accessory.

Remarks.—In view of the development of the thyroid gland it is quite possible that a thyroid gland which grows from the tractus intestinalis may be found at the base of the tongue. Baurowiez,[1] of Cracow, in discussing a case of thyroid gland in the trachea, controverts the theory mooted by von Bruns, that the gland might have grown from a germ which got astray in the embryonal period and developed during the age of puberty. Basing his arguments on five analogous cases, in some of which *post-mortem* examinations were made—one of the patients dying of erysipelas after operation—he arrives at the conclusion that the theory of von Ziemssen, who says that the thyroid glands found in the larynx must be considered as offshoots of the gland in its normal place is true, as the glands in the larynx have never been found isolated, but always connected with the mother gland. In a paper published on a subsequent occasion von Bruns admits the truth of this theory, which further confirms my opinion that the so-called accessory thyroid glands, in the larynx at least, do not really deserve this name, but must be considered as offshoots of the mother gland. However, the thyroid gland, having developed in this case on the base of the tongue, may be accessory, because, in view of the anatomical relations, it would not do to assume that there is any connection whatever between this gland and the thyroid gland found under normal circumstances in the neck.

NOTE.

[1] *Archiv für Laryng.*, vol. viii, 2.

NOTES ON THE USE OF SUPRARENAL EXTRACT IN RHINOLOGY.

By MACLEOD YEARSLEY, F.R.C.S.,
Assistant Surgeon to the Royal Ear Hospital; Surgeon-in-Charge of the Department for Diseases of the Throat, Nose, and Ear, Farringdon General Dispensary.

SUPRARENAL extract as a vaso-constrictor in rhinology has been in use for some little time. Most of the investigations have been made in America, and the paper of Newcomb of New York[1] gives a good review of the subject. The experiments on living animals of Schäfer, Oliver, Cybulski, and Szymonowicz showed that the results of intravenous injections of extract of the suprarenal medulla are as follows:

1. Extreme contraction of the arteries, peripheral in origin.
2. Rapid rise of blood pressure, despite powerful cardiac inhibition and augmented by section of the vagi or paralysis of the cardiac inhibitory nerves by atropine.
3. Pronounced central nerve stimulation.
4. Great acceleration and augmentation of the auricular and ventricular contraction after section of the vagi.
5. Only slight affection of respiration, which becomes more shallow.

As a therapeutic agent in diseases of the nose suprarenal extract was first used in America by Bates of New York. Later Swain, in a paper before the Congress of the American Laryngological Association at Brooklyn in May, 1898, stated that the aqueous extract of suprarenal gland was a powerful local vaso-constrictor and contractor of erectile tissue, and could be used in very considerable amounts without dangerous or deleterious effects, local or constitutional. Newcomb[2] says: "It is really remarkable to notice how the redundant tissue so often met with in the nose will shrivel and become pallid when the solution is applied." Mullen[3] of Texas gives the notes of 7 cases (of turbinectomies, removal of spurs, and operation for deviation of the septum) in which he used the extract. In his opinion suprarenal extract is a valuable aid to nasal surgery as a hæmostatic and analgesic.

He used a solution of 5 grs. to the drachm. Lermitte[4] and Peters[5] have also recommended this drug.

Method of Use.

The chief difficulty which I found in using the drug lay in obtaining a solution at once reliable and capable of keeping. Lederman[6] of New York has recommended a glycerine-watery solution, and for a short time I used a preparation made after his directions. Recently, however, Messrs. Burroughs and Wellcome have introduced some 5-gr. "soloids" which are very convenient and efficient. In my first cases the solution was 5 per cent., made by dissolving a 5-gr. "soloid" in 100 minims of sterilised distilled water. Later I found it better to use a stronger solution of 5 grs. to the drachm. Pledgets of cotton wool soaked in the solution are adjusted by forceps and probe. In no instance has a spray been made use of.

Effect of the Drug upon the Normal Nose.

The extract was used to ascertain its effect upon the normal nasal tissues in a few cases in which there was practically no obstruction to natural nasal respiration. In all, after the introduction of a 5 per cent. solution for from five to fifteen minutes, the turbinal bodies became shrivelled and pallid, the ischæmia being so marked as to give a clear view of the posterior pharyngeal wall. All patients experienced a sense of dryness in the nasal chambers. The effect lasted for periods varying from half an hour to two hours. In one or two instances slight smarting was complained of, but this was never a prominent symptom.

Uses in Diagnosis.

The extract was used in some forty cases as an aid to diagnosis, and the marked ischæmia it caused was most useful in revealing causes of obstruction. Turbinal hypertrophies, growths situated posteriorly or hidden by turbinal turgescence, posterior spurs, etc., became easily visible. In a case in which the inferior turbinal was very œdematous and pressing upon the septum, the swelling was reduced by one-half, so bringing to light a single polypus growing down into the inferior meatus, and a large posterior spur.

As a Hæmostatic in Operations.

I have made trial of the drug as a hæmostatic in about thirty instances, using it in some cases more than once. The operations in which it was employed were: (1) Anterior turbinectomy; (2) removal of polypi; (3) removal of spurs; (4) division of adhesions; (5) removal of a foreign body. Besides the increased room which the ischæmia affords, hæmorrhage is greatly lessened. Operations usually attended with a fair amount of bleeding become almost bloodless. The advantage of its use in nasal operations is therefore threefold, there is greater room by reason of the ischæmia, the loss of blood is far less, and the field of operation is not obscured by copious hæmorrhage. In no case have I found any post-operative hæmorrhage, such as sometimes follows the use of cocaine. The anæsthetic used was a 10 per cent. solution of eucaine. In no case was the extract of suprarenal gland found to have any anæsthetic effects.

Suprarenal Extract in Nasal Disease.

Hay Fever.—Solis Cohen[7] found that the extract of suprarenal capsule controlled the symptoms of hay fever in his own case. He first used a glycerine extract of sheep's suprarenal capsule, freshly prepared in doses of from fifteen drops to one teaspoonful thrice daily. Later, he found it necessary to either increase the dose or to repeat it more frequently. As a tendency to nausea was produced with this extract, he substituted for it tabloids. On the average he took five 5-grain tabloids daily, the last one being taken at bedtime, with the result that the night passed without his suffering from any of the usual symptoms.

Cases of Hay Fever.—In the three cases under my care the drug was not used internally, but relief was afforded by plugging the nostrils with cotton wool soaked in the solution (5 grains to the drachm). The plugs were retained for from ten minutes to a quarter of an hour, and the relief lasted for from two to four hours.

Case of Epistaxis.—The case of epistaxis in a hæmophylic was seen by me in consultation with Mr. P. B. Spurgin, of Portsea, who wrote to me as follows regarding the action of the extract: "Taking the result of the suprarenal extract a very marked improvement is noticeable, due to two causes, I think: (1) Contraction of vessels; (2) increased coagulability of the blood. The tonic action is not so very transitory, but judging from symptoms lasts over several hours. I have been using a 5-grain soloid to a drachm of a 25 per cent. glycerine solution."

Case of Paroxysmal Sneezing and Rhinorrhœa.—A labourer, aged 45, had suffered from continual running from the nose for twelve months. The discharge was a clear watery fluid, and he generally "soaked" three or four handkerchiefs a day. Its onset and subsidence were sudden, and accompanied by moderate sneezing. There was much true hypertrophy in both nasal chambers, which was reduced by snare and cautery. After the operative treatment his rhinorrhœa was much diminished, but the dusty nature of his work appeared to prevent its complete cessation. Recently he was given some soloids, and directed to use them as already described, with the result that the discharge ceased within about ten minutes of its application, and is relieved for from three to five hours.

References.

[1] *The Laryngoscope*, January, 1899, p. 36. [2] *Loc. cit.* [3] *International Clinic*, vol. iv, 7th series. [4] British Medical Journal, February 25th, 1899. [5] *Ibid.*, July 8th, 1899. [6] *The Laryngoscope*, April, 1899. [7] *Philadelphia Medical Journal*, August 13th, 1898.

THE OPERATIVE TREATMENT OF POST-INFLUENZAL SUPPURATIVE MASTOIDITIS.

By W. Milligan, M.D.,

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Suppurative inflammation of the middle ear of influenzal origin is characterised by the intensity of the inflammatory symptoms, by the severity of the accompanying pain, and by the tendency which exists to rapid destruction of tissue.

Inflammation of Tympanic Cavity.

In the early stages the membrane presents a markedly congested or even livid appearance, and may at times be seen to pulsate as a whole before the stage of perforation has been reached. In certain cases small hæmorrhagic bullæ may be seen dotted over its surface. These tend to coalesce, and may form one large bleb situated between the fibrous and dermic layers. At other times, rupture of the over-distended tympanic blood vessels may occur, with the result that the middle ear becomes distended with blood—a true hæmorrhagic otitis media. Even when perforation does occur, and tension is thereby relieved, pain may still persist, and the same is true after the performance of a free paracentesis, in marked contrast to what happens in inflammatory cases of non-influenzal origin.

Inflammation of the Mastoid.

The same virulent tendency exists when the inflammatory process has spread to the interior of the mastoid cells. Here again very marked congestion of the mucosa lining the cells is prone to take place. Sero-sanguineous fluid is thrown out from the distended capillaries; rapid ulceration of the mucosa ensues, followed in a very short time by an acute caries of the bony partitions between the cells, and the formation of a cavity filled with broken-down detritus, purulent exudation, and succulent granulation tissue. For reasons not very well understood, this purulent subcortical collection is most frequently found in the neighbourhood of the mastoid apex constituting a subcortical abscess. Should such a collection exist for any length of time, the risks of intracranial involvement become great, owing to the tendency to rapid destruction of bone already spoken of. The symptoms of its presence are first localised pain near the apex—a pain markedly increased on pressure and percussion, and more especially when pressure is made upon the inner and anterior aspect of the process, bulging of the posterior meatal wall often along its whole length, rise of temperature, severe subjective noises, and the objective evidence of a specially acute middle-ear inflammation. The path of infection in such cases is from the middle ear by way of the *aditus ad antrum* to the mastoid antrum, and thence to the subcortical apical cells, but why the antrum itself should so frequently be found free from purulent exudation, and why this exudation should tend to collect about the apex I am unable to explain.

Treatment.

In the treatment of the condition I am inclined to advise early operation for two reasons—(1) to arrest the rapid destruction of bone with its many dangerous consequences and (2) to help to preserve the integrity of the structures

within the middle ear itself. The immediate and salutary effects upon the middle ear which follow opening of the mastoid cells are so well recognised as to require no commendation. In such cases mastoidectomy should not be delayed for more than forty-eight hours for a trial of active antiphlogistic treatment. In influenzal cases it has been recommended that all that is necessary is to tap the subcortical abscess without opening up the antrum, and the object of this short communication is to advocate not merely an opening up of the subcortical collection, but a clearing out of all bony tissue between the subcortical abscess and the antrum. Opening up the cavity of the middle ear I hold is neither necessary nor desirable, but the clearing away of the path of infection between the antrum and the apical abscess I think highly desirable.

I am quite aware that cases operated upon by merely tapping the apical abscess frequently get well without further interference; but, on the other hand, the process of repair is slower, and the chances of a fistulous tract remaining at the bottom of which small areas of bare bone may be felt must not be overlooked; while, again, the more rapidly we can arrest disease within the mastoid the more sure are we of obtaining complete restoration of hearing power.

I have seen several cases where such fistulous tracts have remained after operation, and when operated upon a second time have revealed a localised carious area between the antrum and the apical abscess. Hence I believe that we are called upon in such influenzal cases to lay bare the whole track of infection from the apex up to the antrum, forming a deep gutter with smooth and healthy walls, which can be easily packed, which drains well, and which will be found to fill up rapidly with healthy granulation tissue.

SYPHILITIC ULCERATIONS OF THE TRACHEA.

By WALKER DOWNIE, M.B. F.F.P.S.Glasg.,

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IT has fallen to my lot to see a considerable number of cases of syphilitic ulcerations of the trachea, and as several of these have been of more than passing interest to me, a short account of some of them may be of interest to you. In considering the subject I shall confine my remarks chiefly to three cases which terminated fatally, in each of which a *post-mortem* examination was permitted, and by which I am enabled to demonstrate the position and extent of the local lesions by means of photographs taken from the specimens, which are now preserved in the Pathological Institute of the Western Infirmary of Glasgow.

Syphilitic ulcers of the tracheal wall are considered to be of rare occurrence. In the majority of textbooks on surgery and on diseases of the throat, no mention whatever is made of the lesion; and Sir Morell Mackenzie in his very comprehensive work on *Diseases of the Throat and Nose*, states that according to his experience the affection is rare, and that he had seen "only 3 cases amongst 1,145 patients suffering from syphilis of the pharynx, larynx, and trachea." Prior to his observations a few cases had been recorded, and others have been reported, more or less fully, since. When we think of the frequency with which ulcerative lesions due to syphilis are met with in the upper respiratory tract, however, the proportion of cases in which the trachea is affected is certainly small, although I am of opinion that it occurs more frequently than is usually supposed.

In none of the 3 cases which will be described in detail was there any lesion of the fauces or pharnyx. In one only was the larynx involved, and in it the ulceration had been extensive and had resulted in serious stenosis of the larynx; in the same case there was a perforation of the soft palate; in another case there had been extensive destruction of the septum narium, while in the third case neither the palate, the nose, nor the larynx had suffered.

Two of the 3 cases were latterly under the care of Professor Sir William Gairdner in the Western Infirmary, from whose summary of the dictated reports, descriptive of the physical signs and symptoms as they presented themselves from time to time, I quote with his permission. I feel fortunate in being able to do so, as both of those cases presented many difficulties in diagnosis, which were puzzling even to one with his wide clinical experience and which were only elucidate a the *post-mortem* examination.

CASE I.

History.—On July 8th, 1896, I was consulted by David T., aged 44, a gilder, employed at the Corporation Art Galleries, who complained of a frequent cough, accompanied by mucous expectoration and of attacks of noisy breathing, of fully eight months' duration. He stated that when in bed he breathed with perfect ease and his respirations then were perfectly quiet. Also while running he breathed quietly, but when he stopped running he experienced great difficulty in breathing, which was somewhat relieved by grasping a fixed object, and his respirations were then accompanied by a snoring noise. Again, while at work if he stopped, and particularly if he attempted to lift a weight, the noise of his respirations became audible to those around and the difficulty in breathing became alarming. The snoring, as heard by me at my first examination of him, had a peculiarly hollow sound and a wavy character, the rhythm of which was regular and synchronous with the pulse. This peculiarity was more clearly audible during expiration than during inspiration. Throughout life he had enjoyed good health. Three years ago he was confined to bed for one month with sore throat, but there was no evidence that it was due to syphilis, and he denied having contracted any form of venereal disease, and there was no history of strain or injury.

Examination.—The patient looked strong and healthy. His pupils were equal, and responded to light and in accommodation. The pulse (72) was full and strong, and there was no appreciable difference between the two sides. The cardiac sounds were normal in every respect. The respiratory murmur was harsh, but full and free over the whole chest, both front and back, and was unaccompanied by *rale*. Vocal resonance and vocal fremitus showed nothing abnormal. There was no dysphagia, and the trachea occupied its normal position. Tracheal tugging was present to a distinct degree. The septum narium was partially destroyed, the perforation involving not only a large portion of the septal cartilage, but also the anterior third of the central plate of the ethmoid. There was in addition great hypertrophy of the posterior ends of both inferior turbinals. The fauces, pharynx, and larynx were healthy in appearance, and though abduction of the vocal cords was somewhat incomplete, yet both vocal cords moved equally, and met accurately in the middle line, and voice was unaffected. At a distance, which was calculated to be about one inch above its bifurcation, there was a distinct narrowing of the trachea, and the anterior wall of the trachea at this level was seen by the laryngeal mirror to pulsate. This pulsation was not only seen at my first examination, but I was able subsequently and on several occasions to demonstrate the movements to Professor Gairdner's class. His cough varied considerably, being sometimes of a peculiar wheezing, unfinished character, while at other times it was in no way abnormal, and, in particular, it gave the impression of a perfectly closed glottis. The expectoration was scanty, and only at rare intervals had it been accompanied by a streak of blood.

After History.—For a time the patient appeared to improve under iodide of potassium, but early in October he again called on me. The attacks of dyspnœa were occurring more frequently, but respiration was now accompanied at all times by the snoring noise, and its wavy character was more marked. That he might obtain complete rest, and be under more or less constant observation, I had him taken to the Western Infirmary (admitted October 5th, 1896), where he was placed under the care of Professor Gairdner. The report of his condition, general and local, was then very similar to that noted above, except that while he could breathe without any difficulty in the prone position, the respirations were of a harsh snoring character, and the sound produced was readily heard by those around the bed, conveying the impression of some intralaryngeal obstruction. From that date the stridor in breathing gradually increased, so that while the patient was lying in a restful sleep, the snoring sound could be heard at a considerable distance. Later, sudden spasms of breathlessness appeared, during which the breath sounds indicated considerable obstruction to the passage of air, both on inspiration and on expiration, but chiefly the former, and he had great difficulty in expelling the mucus which collected in the air passages. These severe spasms (during which he became cyanosed, and during which the movements of the vocal cords were unaffected) recurred at varying intervals, and for the relief of these nitrite of amyl, nitroglycerine, chlorodyne with hot water, etc., were employed. As their severity increased, and suffocation was threatened, intubation, though not on my recommendation, was resorted to, at first with apparent benefit; but on October 23rd intubation failed to give relief, and tracheotomy was performed by a house-surgeon. This was of little service; the breathing continued to be laboured, and at the end of six hours he died.

Post-mortem Examination.—The thoracic aorta was found to be markedly atheromatous, calcification having occurred in at least one or two small patches. Over an area about the size of a shilling, immediately posterior to the orifices of the great vessels, the aorta and trachea were intimately adherent, and the aortic wall, viewed internally at this part, showed numerous small furrows and depressions. Just above the bifurcation of the trachea there was a general matting of the tissues. On the anterior aspect of the inner wall of the trachea was an ulcer, the area of which was something less than that of a sixpence, beneath which portions of two cartilaginous rings were absent. The lining membrane of the trachea, from this level upwards, for a distance of nearly 2 inches, was replaced by scar tissue, and similar cicatricial tissue was found to extend for fully one inch into each bronchus. At the level of the bifurcation there was a sudden and distinct narrowing of the trachea, due to contraction of the cicatricial tissue which marks the site of healed ulcers.

CASE II.

History.—On April 2nd, 1898, I visited Paisley Infirmary, on the invitation of Dr. Gibb, and there saw M. C., aged 17, who had suffered from huskiness and dyspnœa for several months. When she was admitted to hospital—January 21st, 1898—she had great difficulty in breathing, and there was almost complete aphonia. By 8 P.M. the dyspnœa had become so extreme as to necessitate tracheotomy, the performance of which gave her great though not complete relief. Six days later the tube was removed and the patient breathed freely, but on February 5th dyspnœa recurred and the

tube was again inserted. Notwithstanding the presence of the tube, however, attacks of dyspnœa occurred at intervals, and these gradually became more frequent and more distressing. I saw her on April 2nd. There was a perforation with healed edges, about the size of a threepenny-piece, through the soft palate. On laryngoscopic examination stenosis of the larynx was observed, the result of post-ulcerative cicatrisation, and the presence of blood in the very copious expectoration caused us to suspect ulceration of the tracheal wall, possibly from pressure of the distal end of the tracheal cannula.

Operation.—Laryngotomy was agreed upon with the object of restoring the patency of the larynx, and this operation was performed by Dr. Gibb on April 6th. He found the interior of the larynx occupied by granulations and by gristle-like scar tissue, which he pared away carefully and then applied chromic acid to the raw surfaces. A long piece of ½ inch rubber tubing was introduced through the tracheal wound, one end of which was brought out through the mouth and the other extended a short distance below the tracheal opening, and a window was cut in the front of the tube corresponding to the tracheotomy opening. The laryngeal incision was closed with sutures. For two weeks the patient breathed freely; then symptoms of stenosis again set in, and the larynx was dilated by means of a Macewen's tube.

After-History: Death.—On April 19th the patient felt well, breathed with comparative ease, and was able to be out of bed, but at 3 A.M. on the 20th, she had an attack of coughing, not so severe as many previous attacks, but within 4 minutes she was dead, artificial respiration being of no avail.



Fig. 1.—Case II. Extensive post-ulcerative stenosis of the trachea (syphilitic).

Post-mortem Appearances.—The specimen shown in Fig. 1 has been divided slightly to the right of the middle line, so as to show the left half of the larynx and trachea, and the incision passes through the tracheotomy wound. The interior of the larynx is represented by a ragged contracted cavity with ulcerated walls. The epiglottis and vocal cords are scarcely recognisable, being in great part destroyed, and the trachea below is contracted and ulcerated for a distance of 3 cm. The narrowing of the lower portion is extreme, and the contracted portion contrasts in the preparation with the wider normal trachea below.

Case III.

History.—Mrs. P., aged 38, was admitted to the Western Infirmary on October 8th, 1889. The complaint made by the patient on admission was that of frequent cough, shortness of breath, and a variable degree of difficulty in breathing.

Condition on Admission.—"She was very ill, and became worse afterwards, owing to a peculiar, and to a considerable extent paroxysmal, dyspnœa, which, accompanied as it was by noise or stridor in inspiration, was considered to be suggestive of pressure on the air passages, or on the motor nerves of the larynx: while at the same time the greatest difficulty was experienced in determining the actual seat of the lesion. The report in detail gives the results of an elaborate examination, with a view to detect, if possible, aneurysm or tumour, but with negative results. Observations made during the paroxysms (and even to a certain extent at other times) led to the probable inference that the larynx was implicated to the extent of slight spasm of the adductors or, alternatively, paralysis of the abductor muscles, thus controlling the indraught of air more or less, but no corresponding laryngoscopic changes were found by Dr. Walker Downie, and no aphonia was observed at any time. While, therefore, it was impossible to exclude altogether a laryngeal element in the case, it was held to be probable that this was altogether secondary and subordinate, and accordingly no question at all was raised as to tracheotomy being performed, even as a measure for obtaining temporary relief. It was also observed during laryngoscopic examination that the upper third of the trachea had an unbroken mucous membrane; the only morbid appearance, either there or in the larynx, being hyperæmia, possibly due to the respiratory difficulty and the frequent cough. In one of the severest paroxysms, pale lividity was notably present, and also a considerable amount of swelling at the root of the neck, probably venous; the urgency of the symptoms being such as to threaten immediately impending death by suffocation. There was no absolute dysphagia, but the act of swallowing either solids or liquids was sometimes apt to induce spasm as respects the breathing. Vomiting had also been a symptom, at one time of considerable urgency. The illness was of three to five months' duration, and the frequent attacks of coughing brought up frothy expectoration, often tinged with blood, but there had been no considerable hæmoptysis. On several occasions, after a prolonged fit of coughing accompanied by difficulty in breathing, but without any considerable expectoration, she would suddenly throw back her head, as if to straighten the trachea, when a considerable amount of sputum welled up without apparently expulsive effort, giving relief to the breathing for the time.

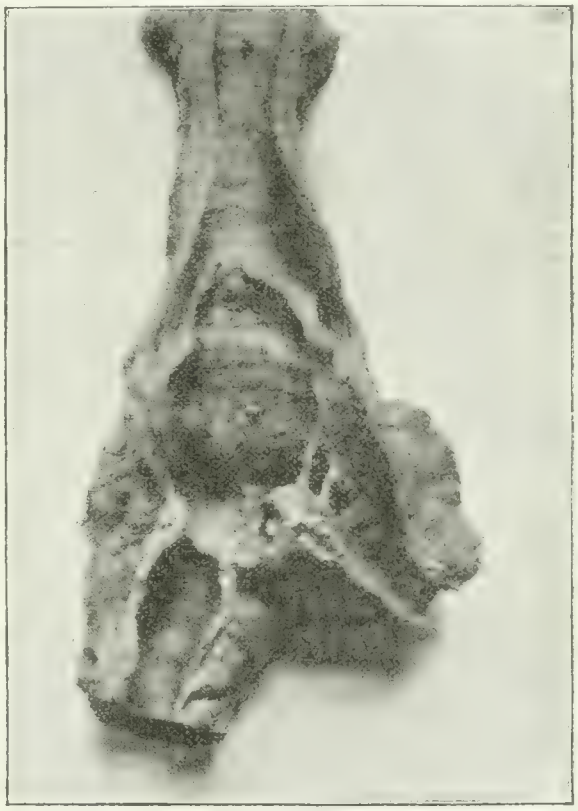


Fig. 2.—Case III. Extensive syphilitic ulceration affecting trachea and both bronchi.

Treatment.—Nitrite of amyl and iodide of ethyl appeared to have some appreciable amount of control over the spasms, and were therefore used a good deal, being afterwards replaced by sulphuric ether and inhalations of steam. The treatment in other respects was entirely by expectorants with digitalis, and also some alcoholic stimulant.

After-History.—The temperature inclined to be febrile, but in no case exceeded 102° F. Little over a fortnight after admission very great improvement was noted as regards all the more urgent symptoms described; a certain amount of stridor, however, continued, being almost always present in inspiration, and sometimes also in expiration. About 8 ounces of sputum, collected in twelve hours, showed nothing very definitely characteristic; there was no blood and no tubercle bacilli. Advantage was taken of this comparative quiescence to renew detailed observations on the physical diagnosis, but without any further result as regards the precise locality of the lesion, that is, the seat of tumour or of the pressure on the air passages or nerves.

Death.—The patient died about three weeks later (November 21st) very peacefully and without any new accident, except that she had been some-

what delirious at night, and had been steadily losing flesh and strength. During the day she was quite sensible, and did not appear to suffer much from dyspnœa. Intermittent diarrhœa, however, had been present for some time, and the immediate cause of death was probably septicæmia. It may be added that the patient being an apparently very respectable married woman, and no obvious history or signs of constitutional or specific disease being present, the question of syphilis was not raised during life. A few days before her death, however, her husband stated that both he and she had been drinking to excess for some time before her illness commenced.

Diagnosis.—At the *post-mortem* examination Professor Gairdner renewed to his class his original statement in the summary appended to the report in the ward journal, that the symptoms were such as to indicate with great probability a narrowing or obstruction in the course of the air passages, but that no clear evidence could be obtained of tumour, and that the precise seat and the nature of the lesion remained alike obscure to the last.

Necropsy.—The *post-mortem* examination was performed by the late Professor Joseph Coats, from whose report the following is taken: "A large ulcer occupies the lower part of the trachea, and extends into the main bronchi. It measures from its upper extremity to the bifurcation $\frac{3}{4}$ inches, and it extends beyond the bifurcation for about half an inch into each bronchus. Its transverse measurement varies. Beginning above with an abrupt edge, which is slightly undermined, it is here narrow, but expands considerably till just above the bifurcation it almost completely surrounds the trachea. The ulcer is one essentially of the anterior wall, extending more or less round from that. At its margins it everywhere undermines the mucous membrane, and in several places there are bridges left with passages beneath. This is seen especially in the right bronchus, but also in the trachea. For the most part the ulcer confines itself to the wall of the tube, but on the left side, near the bifurcation, it has penetrated the wall, so that pigmented gland tissue presents inside. This deeper penetration extends into the left bronchus, where the ulcer is deep and has a very abrupt edge. The ulceration of the trachea is peculiar, and I have not seen a similar condition before. It is evidently an infective ulcer, and is not tuberculous. The gummata met with in the liver show it to be certainly syphilitic. The condition of the lungs is that which is seen when putrid juices are insufflated, there being isolated centres of lobular condensation, with a more general œdema." Fig. 2 is a reproduction of a photograph of the specimen.

Symptoms.

The symptoms consequent on ulceration of the trachea are so various, that this lesion is not only apt to be, but frequently is, confounded with other diseased processes.

The cough, which is often frequent and irritating, and which was present in all the cases narrated, and in other cases which I have seen, though it may not always be a marked feature, may lead to the suspicion of some pulmonary lesion, and this, taken along with the expectoration of blood, which was also present in varying quantity in each of the three cases, strengthens such a suspicion.

The sudden onset and the severity of the respiratory difficulties, together with the noisy character of the breathing, which was present in a marked degree in all of the cases, and which proved fatal in two of them, somewhat resemble the symptoms associated with laryngismus stridulus; while in others the spasm may be so severe as to suggest angina pectoris as the cause. When the difficulty is constant, that is, when cicatricial contraction has occurred, chronic laryngitis may be diagnosed.

After the exclusion of phthisis, aortic aneurysm and mediastinal tumour are perhaps most frequently looked for to account for the symptoms, as the character of the cough and the respiratory difficulties, especially those on and after exertion, simulate in some respects those symptoms which result from interference by pressure with the innervation of the larynx. The use of the laryngoscope should go far to negative this suspicion by demonstrating the non-impairment of the intralaryngeal muscles.

In those three cases which I have just detailed the voice was unaffected in two, and unless the larynx has participated in the ulcerative process, as in the second case, its function is unimpaired.

There was more or less cough in each case; in some it was "wheezy" and in others "croupy" in character; while in others neither term would describe it, and yet it partook of the character of both. There was entire absence of the "metallic" or "brassy" sound which is usually associated with cases of aneurysm of the aorta, causing laryngeal paralysis through pressure on the recurrent nerves.

Mucous expectoration was for the most part abundant, while the blood expectorated was small in quantity, usually in small clots, and accompanied by a variable proportion of pus. There was no complaint of pain made by any of the patients, though the discomfort and distress consequent on the tracheal and bronchial spasms, was manifest in most. In Cases I and III the palate, fauces, pharynx, and larynx bore no trace of any present or former lesion, a fact further tending to lead one away from the suspicion of syphilis being the cause. In Case I, as has been stated, a considerable portion of the septum narium was absent. Although necrosis of this structure is in many cases caused by syphilis, it is not of necessity a syphilitic lesion, and this patient informed me on inquiry that, as a boy, he had the habit of picking the nose, causing it to bleed frequently, and this he ascribed as the cause of the perforation. There was no history of any active ulceration within the nose during ten years previous to the time I first saw him.

In the third case I considered the lesion to be an evidence of the tertiary stage of syphilis contracted by the individual. In the other two cases, on the other hand, I feel sure the lesion was a manifestation of congenital syphilis; and I am inclined to think that ulceration of the trachea occurs most frequently in those who have had the misfortune to inherit this disease.

Prognosis.

Syphilitic ulceration of the trachea must, in my opinion, be looked upon in every case as a grave lesion. So long as there is a breach of surface, that is so long as the ulcer is present, the destructive process may continue to spread, as is the tendency with superficial tertiary sores, when an extensive area may be involved as in Case III; or the ulcerative process may penetrate deeply, leading to necrosis of cartilage, as in the first two cases. There is also the additional risk in the latter event of important neighbouring structures, such as the aortic arch, being involved.

Again, the perils of a patient so affected are not removed when the ulcer heals; they are rather altered in their character. The healing process is slowly followed by contraction of the scar tissue and this leads to a gradual narrowing of the lumen of the trachea, as in Cases I and II, accompanied, it may be, as in the first case by a similar narrowing of the bronchi.

When contraction occurs at a high level a low tracheotomy may serve to ensure the patency of the airway and prolong life; but when it occurs low down one must depend solely on the help obtainable from the administration of antisyphilitic remedies.

DIAGNOSIS AND ENDO-NASAL TREATMENT OF EMPYEMA OF THE FRONTAL SINUS.

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[ABSTRACT.]

THE diagnosis of frontal sinus empyema was, up to a few years ago, extremely difficult. We are now, however, able to make in most cases an exact diagnosis with nearly absolute certainty. The subjective symptoms may be suggestive, but they are not in themselves to be trusted. There are three methods by which we may arrive at an exact diagnosis:

1. The examination of the nose; this may give a suggestion.
2. Exploratory syringing through the nasal opening may in certain conditions confirm the diagnosis.
3. Exploratory puncture from the interior of the nose; this makes the diagnosis absolutely certain.

After discussing the appearance of pus in the nose, the writer refers to the uncertain results obtained by transillumination of the frontal sinus, as according to Vohsen the frontal sinus is wanting on both sides in 14 per cent. of cases, and in one side in 20 per cent. Hence the obscurity of one frontal sinus, associated with pus in the front of the middle meatus on the same side, might raise a suspicion, but would not do more than this. He then refers to the use of the Roentgen rays, and to the probing and washing out of the sinus through the infundibulum. He states that it is always difficult to know when the frontal catheter had actually entered the sinus, and had not strayed off into one of the infundibular cells.

This brings him to the advantage of his special method, which practically consists in so controlling the position of a probe by means of the *x* rays that he does not hesitate to drill an opening from the nose into the frontal cavity. The writer employs a drill about 3 mm. thick, worked by electricity. The operation is thus executed. After thorough application of cocaine this drill (3 mm. thick) is introduced into the nose, if

possible as far as the nasal roof. Then the room is darkened; the direction and position of the drill is verified on the Roentgen screen. The drill must be directed exactly to the centre of the frontal sinus, avoiding also the anterior wall. As soon as the drill is in motion one easily sees on the Roentgen screen how it advances slowly until it has entered into the open cavity of the frontal sinus. The boring is interrupted from time to time in order to prevent the drill getting too hot. The operation is claimed to be not very severe, and to be executed in a few seconds. Dr. Spiess has operated on ten cases without observing any hæmorrhage. He thinks that puncture of the frontal sinus by boring under the control of the *x* rays could be done easily, quickly, and with absolute certainty, so that a diagnosis can be made every time, and as regards treatment he considers that the endo-nasal trephining ought to be first employed in every case, and an external operation should only be employed if success is not obtained by his method, or if the patient insists upon operation. So long as the external operation does not give absolutely certain results, Dr. Spiess cannot conscientiously advocate it.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

AN OPERATION FOR HAMMER-TOE.

Apart from amputation, which has the serious drawback that it usually leaves a hallux valgus, which is only to be cured by fitting on an artificial toe to replace the one removed, two operations are now practised for hammer-toe. These are: (1) the subcutaneous operation of Mr. Wm. Adams; and (2) excision of the head of the second phalanx through a lateral incision, as described by Mr. Wm. Anderson.

In my experience both these operations are followed for a day or two by an amount of pain disproportionate to the extent of the operation. I have lately excised the head of the bone by a curved dorsal incision over the prominent head of the second phalanx, opening the joint, dividing the lateral ligaments, and removing the head and a little more of the second phalanx. The divided expansion of the extensor tendons is reunited by a fine catgut stitch, and then a portion of skin, including the site of the centre of the corn previously removed by treatment, is cut away on the proximal side of the incision, so that, when the wound is sutured in the straightened position of the toe, there is no tension, as is the case in the two other operations referred to. So far my hope in avoiding pain by this method of operating has been fully realised.

Old Cavendish Street, W. J. Jackson Clarke.

QUININE AS AN ANTIPYRETIC.

The following case, showing the value of quinine in rapidly reducing the temperature, may prove of interest to some of your readers. On Monday, 11th inst., at 8.30 A.M., Mrs. S. was seized with vomiting and violent fits of shivering, in which condition she continued until 11 o'clock when I was sent for, and on my arrival shortly after I found her suffering from intense headache, with face flushed and eyes suffused, her temperature registering 105.4° F. and pulse 130. I gave her 5 gr. of quin. sulph. to be followed by 2½ gr. every hour. At 2 P.M. her temperature had fallen to 100.2 and her skin was perspiring freely. I therefore lengthened the period to three hours. At 9 P.M. temperature and pulse were normal and have remained so since. In all 17½ gr. of quinine were taken.

Edward R. R. Cheesman,
Medical Officer No. 5 District, Wells Union.

The Royal Orthopædic Hospital.—The improvements in the sanitary arrangements and in the wards of this hospital commenced last midsummer are now approaching completion, and it is hoped that the out-patient department will be reopened on October 25th, and that the wards will be ready for the receipt of in-patients about a month later.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL MINERAL WATER HOSPITAL, BATH.

RHEUMATOID ARTHRITIS, FOLLOWED BY COLITIS, PERICARDITIS, PLEURISY, BRONCHO-PNEUMONIA: DEATH.

(Under the care of Dr. Bannatyne.)

[Reported by R. A. Bayliss, late Resident Medical Officer.]

S. M., aged 57, was admitted to the Royal Mineral Water Hospital on October 30th, 1897, suffering from rheumatoid arthritis, which she had stated started twelve months before, though fourteen years previously to this she had had an attack of rheumatism (which, however, did not confine her to bed), followed by occasional pains in the joints. She was married and had had nine children, and with the exception of the illness above-mentioned had always enjoyed good health.

State on Admission.—A pale and rather careworn-looking woman, complaining of pain and swelling in her ankles, knees, fingers, and wrists, which presented all the typical signs of rheumatoid arthritis. The phalangeal joints were swollen in a fusiform manner, the wrists stiff and enlarged, and there was considerable wasting of the muscles on the extensor surface of the hands and forearms. The knee-joints were decidedly thickened and movement in them was impaired, and the ankles too were increased in size and tender to the touch. There was some pain and stiffness of the temporo-maxillary joints. A soft systolic *bruit* was audible over the heart's apex. Nothing abnormal was detected in the lungs or in any abdominal viscera. The urine was acid, with a specific gravity of 1012, and contained no albumen. The temperature was 98.8°.

The patient did not improve much under treatment, and on November 26th, owing to the increased pain in the joints and general feeling of weakness, she was ordered to bed. The temperature gradually rose, and on November 30th the morning record stood at 101.8°. This was followed on December 4th by acute abdominal pain in the region of the colon associated with diarrhœa, the stools containing much mucus. She rapidly became weak, with a thready pulse of 124, in spite of the fact that she took nourishment well. After remaining in an almost collapsed condition for two or three days she improved, the diarrhœa being controlled by a mixture of bismuth, chalk, and chlorodyne, and the cardiac weakness by the frequent administration of digitalis and nux vomica along with stimulants.

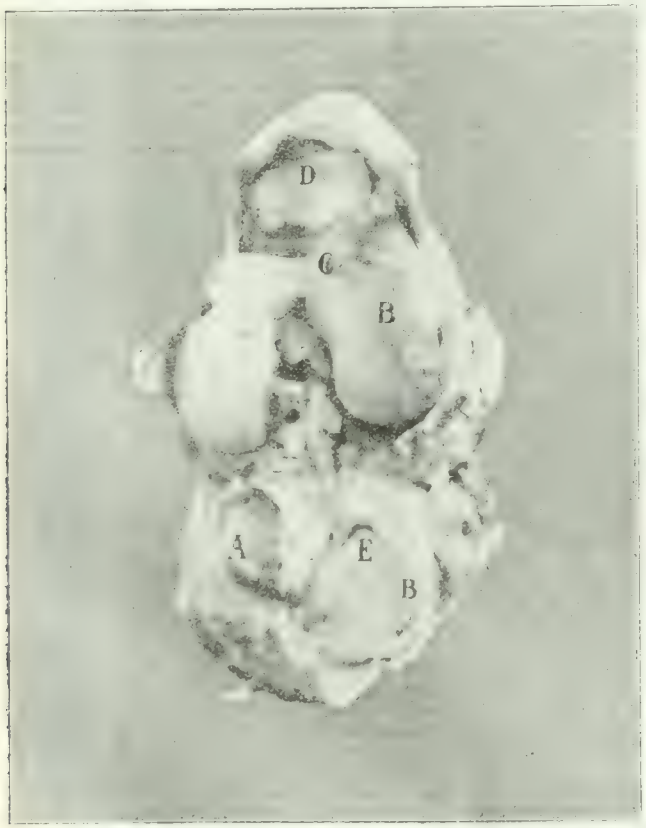
At 1 A.M. on December 12th she was suddenly seized with acute pain in the precordium, and, on examining her shortly afterwards, a distinct pericardial murmur could be heard in the third left interspace. A blister was applied to the chest over the region of the pain, and the digitalis continued. The temperature during the next twenty-four hours was slightly elevated, reaching 100.2°, but subsequently and for several weeks following it remained practically normal. The cardiac dulness gradually increased in area, though never to any great extent, and the sounds at the apex became muffled. The pulse-rate varied from 84 to 136, and respirations averaged 32. The patient's condition remained about the same, practically no improvement being recorded until January 3rd, 1898, when she complained of acute pain in the right side. On examining the chest pleural friction could be heard over an area about the size of a two-shilling piece. The pericardial murmur was also still audible, but less rough in character.

On January 13th, 1898, there was marked dulness at the right base, and the voice sounds were ægophonic in character over a localised area. Aspiration was accordingly performed, and 4 ounces of fairly clear serum withdrawn. The temperature rose in the evening to 100.2°, and she had a bad night, the pulse next morning being 144, and the respirations 36. By January 16th she had developed a troublesome cough, with frothy expectoration, and coarse crepitations could be heard over the left base.

On the evening of January 21st the condition of the patient took a material change for the worse, the pulse being weak and irregular, while the dulness, with tubular breathing

and ægophony, was more marked at the right base. Champagne was administered freely, and during the next twenty-four hours she rallied. After this she slowly but gradually began to mend and on January 31st the condition of the lungs having very much improved, though the pericardial murmur was still loud, she was allowed to sit out of bed for a short time daily. By this time the cough and expectoration had practically ceased, though the joints, especially the knees and shoulders, were now and again very painful. In spite, however, of the stimulating and nourishing diet, of which the patient partook freely, she seemed quite unable to regain her strength, and remained in a weak and debilitated condition.

By March 3rd she had become gradually very much worse again. The cough was almost incessant and hacking, and the expectoration scanty. Bubbling *râles* could now be heard over the base of both lungs, associated on the right side with tubular breathing as high up as the angle of the scapula. The temperature rose to 101.8°. Two days later bronchial sounds could be heard all over the front of the chest as well, the respiration became more and more embarrassed, the pulse rapid, feeble, and she eventually died on March 6th. Unfortunately permission was obtained only for a partial *post-mortem* examination, and attention therefore had to be confined to one knee-joint. This externally was swollen and pulpy, and on opening into it it was found that the capsular membrane and ligaments were much thickened and matted together, thus limiting to a great extent the movements of the joint. The joint cavity contained little or no fluid. The synovial membrane was thickened, vascular, and friable, and here and there small villous outgrowths were noticed. In one place the membrane had grown inwards between the condyle of the femur and semilunar cartilage to such an extent that only a small portion of the articulating surface of the latter could be



seen (A in Fig.). This sort of fringe or veil was not adherent to the cartilaginous surface, but arose from the synovial membrane, and there was no ulceration underneath, except at the margin of the cartilage. The crucial ligaments were much thickened. The cartilages were redder than usual, and ulceration was noticed both on their surfaces (C D E in fig.) and margins (B B in fig.), this latter being specially marked. It was noticed that where the synovial membrane had formed the edge of the cartilage pouches or recesses the ulceration was most marked; in fact, it practically extended right round all the articulating surfaces in a band the third of an inch wide. On the cartilaginous surface of the patella there were distinct patches of ulceration, as there were on the condyles of the femur and semilunar cartilages, but it was noted that the patches on one surface did not correspond with the patches on the opposing one. The ulcerations had a coarse honeycombed appearance, and were filled with *débris*, and they extended through the cartilage, involving the subjacent bone. The bone was reddened, and broke down on scraping. The marked ulceration at the edges suggested that ulceration occurred most in those areas where the *materies morbi* would most likely lodge and be least likely to be disturbed by movement of the joint. The synovial membrane had by overlapping formed regular pouches or recesses where any virulent material might easily lodge. The ulceration was least where two opposing surfaces were in contact, and where one is taught it is most likely to occur.

Remarks by Dr. Bannatyne.—Although this case had been going on for months I would point out that there was absolutely no outgrowth or thickening of either cartilage or bone; in fact everything pointed most forcibly to the fact that an acute destructive disease had been at work and that there had been no attempt at reparation. This fact I have always tried to emphasise, as it lies at the root of all etiological questions in regard to rheumatoid arthritis. Acute rheumatoid disease is a disorder of very destructive nature, and when death occurs in the acute stage no bony or cartilaginous enlargement is found. This is a fact that cannot be too strongly insisted upon. When enlargements do occur the disease is chronic and very possibly not true rheumatoid. As to the actual relationship between the rheumatoid disease and other complications nothing definite can be said. Colitis, pericarditis and pneumonia do occur in rheumatoid arthritis as we know,[1] but in this case the diarrhœa which preceded the chest complications rather points to an origin apart from the joint condition. It seems to me most probable that they arose from some infective process having its origin in the intestinal canal and not from any rheumatoid action. The chief interest is not in the clinical history however, but in the very interesting joint changes, a photograph of which is here reproduced.

PETERBOROUGH INFIRMARY.

CASE OF ACUTE TRAUMATIC TETANUS: RAPID AND FATAL TERMINATION.

(Under the care of Dr. L. Cane, Physician to the Infirmary.)

[Reported by Mr. V. C. Bensley, M.R.C.S., House-Surgeon.]

R. B., aged 51, was admitted on April 21st at noon, with symptoms of tetanus following a compound dislocation of the terminal phalanx of the left ring finger, caused by a horse treading on his hand on April 14th.

The first symptoms, rigidity of the neck and trismus, appeared on the morning of admission. There was no further development until 8 P.M. of the same day, when there was a severe general spasm, during which respiration entirely ceased and the pupils became widely dilated. The spasm was followed by profuse sweating. The next spasm occurred at 1.45 A.M.; after that eight more, which increased with rapidity and severity, the last proving fatal at 9.30 A.M. on April 22nd.

The temperature never rose above 98.6° F., falling to 96° shortly before death. On admission the finger was freely incised, 10 c.cm. of antitetanin (from the Jenner Institute) were injected into the skin of the abdomen at 1 P.M. and 7 P.M. on April 21st, and at 1 A.M. and 6.30 A.M. on April 22nd. The first injection used was of old serum, but the latter ones were fresh. Any attempt at feeding brought on a severe spasm, so nutrient enemata, containing chloral and bromide, were given four-hourly. An attempt was made to give chloroform during the spasms.

Remarks.—The termination was, I think, unusually quick; chloroform during the spasms was useless, as the respiration ceased. I should be inclined to give larger doses of antitetanin in another case.

[1] British Medical Journal, 1898, p. 138, vol. i.

OPENING OF THE MEDICAL SCHOOLS:

INTRODUCTORY ADDRESSES.

YORKSHIRE COLLEGE, LEEDS.*

By Howard Marsh, F.R.C.S.,
Surgeon to St. Bartholomew's Hospital, London.

THE MEDICAL STUDENT AND HIS ENVIRONMENT.

I am fully aware that, having accepted an invitation to deliver the address at this opening of your medical session, I have incurred a heavy responsibility: for to-night many of you are entering upon the profession to which you propose to devote yourselves, and in so doing are making one of the most important steps that can possibly be before you in the whole course of your life; and anyone who takes any part in such an occasion has an opportunity of helping you which he ought to do his best to turn to good account.

But I am also conscious of other and more agreeable feelings. All who are familiar with the history of our profession are aware of the position which Leeds has always held as a medical school. By the term the Leeds School of Medicine we mean not merely the institution where the work of medical education has been carried on, but the men who have been teachers here, the work they have done, their contributions to knowledge in their day, and the influence which each in his turn has exercised in promoting the development and growth of medicine and surgery. In this sense your school has, ever since its foundation, occupied, as it assuredly occupies to-day, a foremost place.

Coming, as I do, from the hospital and school which had Harvey for a physician and teacher, and Hunter for a pupil, and whose other sons have included Pott and Abernethy, Lawrence and Paget, and thus standing on common ground with you, it has been a great pleasure to me to accept the honour which your Committee conferred upon me when they selected me to invite you to emulate those who have won for your school the renown which is on every side accorded to it.

The choice of a profession is often very much a matter of chance; a man follows his father, or some other relative; he is impressed with the success of someone whom he knows, or who started out, years before, from his immediate neighbourhood, and has now returned rich and famous; or he is influenced by a vague idea or anticipation that he should like to be a soldier, a lawyer, or a doctor; in short, he is led by some quite superficial bias.

Now probably many of you are in this position to-day, and to such an inaugural address would seem to offer some promise of usefulness when it is given by one who has himself been over the ground and has watched many others traversing the same path. I hope I may be able to say something that may be useful even to those who, although they are advanced students, have as yet but little experience of the profession which they are intending to follow.

It may be of service if I point out what are the particular qualities and acquirements which, in the future, will be of greatest value to you, and which therefore you should develop and cultivate as far as your present circumstances will allow. Thus each man may become a careful student of himself as well as of his future calling, and may by degrees qualify himself in all respects for the special work that he will have to perform.

In medicine, as in every other occupation, men naturally fall under different types which differ widely from each other, and it behoves every student to beware of the the direction in which he is moving and of the type to which he is ultimately to belong. It must be remembered, in other words, that in the profession you have adopted, as in every other occupation, a man gradually finds his level and settles down into his place: and to one who has frequently had the opportunity of observing the process the result is interesting and sometimes surprising. Such a one sees some fail who ought to have succeeded, and some succeed who had apparently but little chance. Thus often it is said of one man, "How has he managed to succeed?" and of another, "How is it that he has failed?" But let each one of you take this early to heart. Success is always in the long run the result of the reaction between the individual and his environment; and in the great majority of instances it is the qualities, mental and personal, of the man which determine the place he takes. There is much less chance in it than the inexperienced might suppose. The result in every case alike lies at the end of a chain, the links of which represent the succession of causes which have led up to it.

I remember a remark made by a philosophical physician to the effect that there is no such thing, apart from accident or poisoning, as sudden death. He was speaking of death from heart disease. From one point of view, of course, this is absurd. A man who is living and apparently well one minute and dead the next has obviously met with sudden death; but in a certain sense there is much truth in my friend's seeming paradox. The heart in many instances is gradually giving out, and for months the life of the individual, though he is perhaps unconscious of it, is hanging on a thread; at last this gradually attenuating thread snaps, and death comes as the inevitable result of causes that had been long at work. It is much the same with a student who, when he presents himself at an examination, meets with an unexpected collapse. His downfall is not really sudden, but is due to the fact that, owing to some defect of which he has been ignorant, instead of rising to success he has long been sliding down to failure. But was not all this put clearly enough in those old familiar words: "What a man soweth that shall he also reap"?

Of course, in not a few instances some controlling agent comes into a man's life, so to say, from the outside. He meets with what is termed good or bad luck. Now it is good luck which alters a strong man's life much more than bad. Good luck lifts him forward and helps him on his road. Bad luck does not throw a strong man back to anything like the same extent. On the contrary, it often rouses him to a more strenuous effort, and inspires him to a degree of obstinate labour which, without this check or rough awakening—unless he has naturally great ambition, or unless the dawning of success after failure has begotten an ambition of which he was before unconscious—he would have been incapable of.

The opening which favourable circumstances give a man is essential to success of the highest order in all but the master spirits of an age, who are able to subvert the old and establish a new order of things by some great and far-reaching discovery, or whose genius and iron will enable them to carry everything before them, But still in almost every instance his environment helps a man.

Take Lord Lister as an instance: Lord Lister began the work which rendered an imperishable service to the human race, and made his name immortal, in an environment created by the discoveries of Pasteur. Now although, in a sense, Lister's work was even more splendid in its results than Pasteur's, yet without Pasteur, Lister's work at the time he performed it could not have been done. Indeed, to borrow an expression from Sir Michael Foster, Pasteur and Lister were two of "many servants of an impulse which was at work long before them and would work long after them."[1] In the fulness of time the hour had come when a disclosure fraught with momentous and far-reaching consequences was ready to be made, and these two were the agents through whom it came. Without Pasteur, as I have said, Lister would have been impossible, while on the other hand, without Lister as a coadjutor, Pasteur's discoveries could not have borne their richest and most valuable fruit. Thus, each was necessary to, and complementary of, the other: each was, so to say, the other's environment, and their names must ever stand side by side in the temple of fame.

I have remarked that a single event may change a man's whole life and suddenly raise him to a higher place; but it must be remembered that such events are not to be had for the asking—they cannot be reckoned upon. There are imaginative beings who indulge in the beatific vision that something will turn up which in some mysterious way will make their fortune for them, and they cherish this idea until it acts as a kind of enchantment which keeps them from that strenuous work by which alone they can attain success. These grand strokes of luck, these unearned increments, come only to the few, and each man must, while he is ready to be thankful if they come, make up his mind to do without them. He must work on steadily and must, with Lord Beaconsfield,

* Delivered to the Yorkshire College Students' Union.

nerve himself with the belief that he can do everything but fail.

Leaving all these external influences out of account, a man who is planning his future must, as early as he can, form an estimate of his own powers and endowments; and taking the usual run of men, competition for prizes shows, I believe, with considerable accuracy "who is who" and enables each man to gain some very useful information personal to himself. One student sees himself altogether outpaced, while another has the joy of finding that he is the best man of his year. Whilst allowing that some men can get prizes who can do nothing else, I have always felt, speaking generally, and taking one case with another, that the man who gets the most prizes is the ablest man all round. Thus each man after a prize competition begins to see how things stand. Then let the brilliant man recollect that he is, at this stage, only the embodiment of mere potential energy—of possibilities not yet realised; and that, looking at the history of brilliant students and judging by the law of probability, it is more likely that he will fail that that he will succeed. For is it not true that a large proportion of brilliant men, through over-confidence or some other defect, run to waste and come to nothing? While let the man of comparatively poor endowments not lose heart, for after all prizes are not the only test, and if he works on he may be sure of at least average success.

Proverbs, I think you will agree, are very often only half truths; many (perhaps the majority) are true only in certain aspects, while from other points of view they are misleading, or even quite untrue. There is one especially which, taken literally, is so aggravating in its untruth that I always feel it ought to be kicked. I mean the saying that "Genius is the capacity for taking pains." Many a man who took pains, and took them long enough, could paint a signboard or perhaps write a respectable ode; but is it conceivable that he could, even after centuries of plodding, venture into the presence of Michael Angelo, or even of Shelley, or of Keats? Yet this proverb is a strong one, which must always remain, one of the most useful sayings in our language. It serves to remind everyone who is competing in the race that, if he is to attain the greatest success of which he is capable, whatever his natural gifts and endowments may be, he must take pains to use them with unremitting perseverance.

With the strong and brilliant man, who is to achieve his best, as with the dull man, as Huxley says: "It's dogged as does it." Thus, to work is certainly the only way in which the average man can attain more than average success, and so distance his rivals.

I once heard a man say of a friend, who had very poor brain power, that he never knew anyone who had turned such abilities as he possessed to so good an account. This appears to me the highest praise that any man could receive; and remember that the success which is attained by strenuous effort is more solid and stable than that which is reached by more brilliant performances; it is more readily maintained under changed circumstances, for it is the man himself, and what he has made himself, rather than his mere knowledge or acquirements on which success ultimately depends.

Before I pass on there is one other reflection in regard to success which I would ask you to make a note of. Many a man has worked up to a certain point and then given up. But that has been just when success was within his reach, and when, without knowing it, he had the race in hand. I recollect a man who retired from an examination at the University of London because he thought he could not do the chemistry paper. We knew in the school that he was well up, and we sent him back and obtained a *viva voce* examination for him—which was, no doubt, under the circumstances, much more severe than the paper—with the result that he came out in the first division. Many a man who has thought himself below the standard has come out high up. Let every man, therefore, whether he is a genius—or so believes himself—or the reverse strenuously do his best and await the result.

Let me now try to indicate the main characteristics and acquirements which you should specially cultivate. As to personal character, there are two fundamental elements which you must carefully cherish—honesty and magnanimity—using the latter term in its widest signification.

In commerce in all its higher departments men are guided by the strictest code of honour; but in its lower strata the man who is the least honest is often the most successful, in the sense that he makes the most money.

As to the law, although its ranks have always been adorned by men who are the embodiment and best exemplars of unimpeachable honour, in the lower ranks ingenious suppression and distortion of the truth have not rarely been more successful than honesty and candour.

In the arts—music, painting, and the rest—success depends on the amount and quality of the artistic faculty; and provided a man has that faculty, whatever his other characteristics may be, he may become one of the glories of his country. Take such an illustration as Benvenuto Cellini, whose genius was indeed splendid and noble, but whose personal character had a very seamy side. And some imperishable contributions have been made to our literature by men who, as to personal character, were very weak mortals or very sad dogs.

Now, although what I have said of commerce, the law, and the arts, is often true of medicine—Heaven knows we are not without our black sheep—yet you must not regard these things as patterns to imitate, but rather as examples to deter.

There is no profession or calling in which personal character and the principles which guide a man are more important than in ours, and for this reason. In commerce and on the Stock Exchange men meet each other in open competition, and each knows that he must guard his own interests as jealously as he can; moreover, such transactions are carried on in an atmosphere of publicity, which affords considerable guidance and protection. A client is by common consent very much in the hands of his lawyer. But, after all, cases in which a lawyer is consulted generally rest upon matters of fact, the consideration of which, by a person of common sense, even although he has no legal training, affords some protection. A dishonest doctor, however, in the privacy of his consulting room can trade to almost any extent upon his patient's ignorance, his fears and his credulity; he can persuade him that he is suffering from some bogus disease, and treat him with bogus remedies.

I need, I think, say no more to prove that honesty, that is, the determination to represent things exactly as you believe them to be, and not put a false face upon them in order to serve your own ends, must be the first, that is, the most fundamental element of character in the members of our profession. And the next is magnanimity, that faculty or that element of character which enables a man to see the difference between big things and little things in all the various relations of business and social life, and to deal with these according to their true proportion to each other, a mental attitude which raises him above that which is mean and petty in his dealings with those with whom he is brought into contact.

In our profession, the jealousies and the dissensions which are apt to spring up from the friction of competition, and which are aggravated by the gossip and misrepresentation that fill the air in most towns and country districts, are the bane of many a man's life. Let me commend to you the Shakesperean injunction, "Beware of entering upon a quarrel." This may seem a trite saying yet it is one which is only too often disregarded. Set your face hard against all quarrels. Treat your rivals fairly and frankly and they will soon trust you, and thus you will generally find them your very good friends, and you will be able to mutually serve each other. Undoubtedly you may meet with some who are unworthy and who do unworthy actions. Such individuals, however, are not worth quarrelling with. Leave them to themselves, and your attitude towards them will be enough to show that you know the difference between right and wrong, and that you make this difference the guiding principle of your life.

If we now turn from these elements of character which are demanded in a worthy practitioner of medicine to the mental qualities which are necessary in such a man, it may be safely said that there is no single faculty or attribute of a cultivated mind that is superfluous, while all the chief constituents of an intellect however strong and however versatile find ample scope.

I would place first the imaginative faculty—the power, that is, of grasping those things that are beyond and around that

which is already conceived and ascertained. This faculty, "which bodies forth the form of things unknown," must be possessed by all those who are to attain to new discoveries or inventions. But some share of this gift of seeing what things mean, and what they lead up to, is required by everyone who, in his capacity of a practitioner of medicine, is often face to face with biological problems of a highly complex nature, for the solution of which no mere rule of thumb can be sufficient. Without imagination a man has no enterprise and no initiative, and thus he never leaves the beaten track, for he can make no way in unravelling the "inexhaustible meaning" of things.

And then there is the scientific spirit—the desire to know for the mere sake of knowing, apart from any immediate necessity or any ulterior object. Such a spirit and temper of the mind was the overmastering characteristic of John Hunter. He spent his life in a strenuous and unflagging effort to find things out; he was always striving to know; he did not confine himself to research in any special direction which might lead him to an ultimate conclusion on some particular subject, but his rapacious, almost morbid, appetite made him devour everything that came, or that he could bring, within his reach. We shall not see many John Hunters; but each of you, keeping his example and his great achievements before you, must constantly bear in mind the scientific foundation of your calling, and learn while you are students here to make yourselves students throughout your whole career, for it is only in this way that you can keep alive and turn to good account the higher parts of your mind.

The next faculty I would mention is that of observation. In dealing with individual cases in your future practice there will be, to put the matter in its briefest form, two main problems that you will have to solve—first, what is the matter with the patient? and, secondly, how is he to be treated?

Now, if you were a law-abiding clergyman, your guide, when a difficult question arose, would be the Prayer Book or some ruling laid down by the heads of the Church; while if you were a lawyer your course would be to find out what had been held in some parallel case by one of the judges or by the Court of Appeal. Thus in both the Church and the Law, when a case has to be decided, certain data are accepted as matters of fact, and on these, as they stand, whether they are right or whether they are wrong, judgment is pronounced. How often do we not hear a man who has lost his case protest that the counsel on the other side gained the verdict by distorting the facts. This may be perfectly true, yet the result will hold good unless he can get it reversed on appeal.

In medicine it is very different; the result, in every case, will be in absolute accordance with the facts which underlie it, and unless you succeed in ascertaining what these facts really are—in other words, if you misread the facts—you cannot arrive at a correct conclusion, and your treatment is likely not only to be wrong but mischievous, or even fatal to your patient.

But there are numerous instances in which to arrive at a correct conclusion is a matter of very great difficulty, and in which you can avoid mistakes only by the closest observation and study, not merely of facts which are on the surface, so that they at once meet the eye, but of facts which can be established only by a process of reasoning, and by putting two and two together—that is, by synthesis. In other words, it often happens that by comparing together, or contrasting two facts, you arrive at a third, which is highly important, or even conclusive.

But let me remind you in how untrained and rudimentary a stage our various faculties remain unless they are continually enlarged and cultivated. Did you ever reflect on the extent to which the power of observation is developed in some of the lower animals? There are many birds, for instance, the keenness of whose observation is their chief means of protection; try to come near them and they are sure to detect, that is, observe, your approach; it is almost impossible to get at them. It is the same with many animals; indeed, both animals and birds employ sentinels, who scrutinise the whole neighbourhood for a long distance around with an eye—or some with a nose—the sharpness of which nothing can escape.

This faculty of observation is developed to an extraordinary degree in many men whose calling brings it out. Spend an hour with a geologist, who is hunting in some pit or cutting for specimens; he will tell you what to look for and give you the most likely corner; but, at the end of the time, he will have had a rich find while you will have completely failed. Or take the case of a great painter. Did you ever think how marvellous his powers of observation must be, with what accuracy he must have *seen* every feature in the landscape or the face he has undertaken to reproduce? There was a story in the papers only a few days ago, which seemed to me when I read it to convey a very useful lesson. A witness in one of the law courts described a man, whom he had seen only for a minute or two, so precisely in regard to his features and all the details of his dress, that a suspicion arose in the mind of the presiding judge that he was romancing, and he was asked how it was that he could give such a minute description of an individual whom he had seen for so short a time. He replied, "My lord, I am a portrait painter."

It would, if he could afford it, be a good thing for every medical student to work for a time not only in a carpenter's shop, in order to train his hands, but also in an artist's studio, where he would find that in order to draw correctly it was absolutely essential that he should cultivate accurate observation.

Much might be said about training the different senses—sight, touch, hearing, etc.—but time allows me only to remark that our senses, like our mental faculties, are in a rudimentary condition; yet they can be developed and trained to a high degree of excellence. Witness the marvellous handicraft of a great violinist, or engraver, the maker of scientific instruments, or even those artists—many of them ladies—who with such wonderful dexterity and rapidity paint flowers and other designs on china. All these workers have acquired a degree of manipulative skill in their particular lines far beyond that which a surgeon can approach except by developing his powers by long and careful practice.

Let me advise you, in order to cultivate both observation and handicraft, to devote a great deal of time to dissection, working with your head as well as with your hands, keeping your mind active and inquisitive, and paying critical attention to the structures you meet with; not merely searching out their form and relations to surrounding parts, but going a step further and trying to ascertain their functions also; going, that is, from the "it is" to the "why is it?"

Dissection, as some perform it, is a mere clumsy mutilation, the work, as it were, of a bull in a china shop, in which the "cleaning of a muscle" means the cutting away of all its fascial connections and expansions till it is completely isolated and nothing but its fleshy substance remains. But what a senseless act is this, what ignorance! A muscle is not an isolated structure whose function is simple and independent. It is rather a component of an elaborate motor apparatus, and so takes part in an almost infinite series of movements by entering into different combinations with other muscles, and it can do this only by means of processes and connecting bands with which it is fitted up. To destroy these is, as I have said, a mere mutilation. Anatomy should be regarded as the handmaid of physiology, as an examination of structure in connection with function, an inquiry first into the facts and then into their interpretation. Thus pursued it serves two important purposes. As a means of education it encourages close observation, develops the reasoning faculty, and trains the mind in those two main divisions of logic—analysis and synthesis; analysis, so far as the separation and examination of the various structures are concerned, and synthesis when the functions of these structures in their different parts, and as a whole are considered. No better illustration than the scientific study of anatomy could be found of the dictum of Sir William Hamilton, that "analysis and synthesis, though commonly treated as two different methods, are, if properly understood, only the two necessary parts of the same method, each as the relative and correlative of the other."

In the second place, you must regard anatomy as an important preliminary study, for it is a matter-of-fact, precise, and, in a manner, finite. In surgery—and even more so in medicine—on the other hand, you will have to deal with complex and obscure problems, involving excursions into departments of biology, pathology, and clinical research, where knowledge is as yet very imperfect, and where the mind is apt to drift away from the concrete into the abstract, from

terra firma towards the clouds, and to trust unduly to speculation and inference. In such an atmosphere, the habit you will have acquired during your study of anatomy, of keeping within touch of facts, will be a useful check and corrective.

I have alluded to your duties and responsibilities within your profession, but you may wish to hear something as to your own prospects and of your chances of success and prosperity.

There is a tradition of a highly dramatic incident which took place early in this century at St. Bartholomew's Hospital. Mr. Abernethy, on entering the theatre to give an introductory address, surveyed the crowd of students whom he saw before him, and exclaimed: "Good God! what will become of you all?" And with Abernethy's question in his mind, Sir James Paget, some years afterwards, wrote a paper entitled, "What Becomes of Medical Students."[2] In this paper he dealt with 1,000 students who were at St. Bartholomew's Hospital between 1839 and 1859, and of whose history he had the particulars. Let me advise you all to read this paper—and may not everyone of you well say in regard to such a record, *nihil a me alienum?*

Of these 1,000 men:

23 achieved distinguished success,
65 considerable success,
507 fair success,
124 very limited success,
56 failed entirely,
96 left the profession,
87 died within twelve years of commencing practice.
41 died during their pupilage.

You will see that 596—not a great many more than half—were really successful, while 124 achieved only very limited success. Of the remainder, as many as 128 died either as students or soon after they began practice, while 152 either failed entirely or left the profession. The list of failures included no fewer than 5 suicides, and 1 (Palmer the Rugeley murderer), who was hanged.

A similar analysis at the present day would show much more favourable results. In the first place I am glad to say that no student of St. Bartholomew's has been hanged since Palmer's time—that is something. But apart from such assuring evidence as this, there can be no doubt that the lot of medical students is now far more propitious and happy than it was forty or fifty years ago. They enjoy, to begin with, the great advantage of a better start. To put it shortly, they are better born and better bred. A large and increasing proportion come from the universities or the public schools; they are, therefore, men of better education and better taste; and thus, being better judges of the differences between wisdom and folly, they instinctively turn away from many things which often landed their predecessors in trouble and disrepute.

Again, students of to-day have profited largely, in regard to their own personal safety, by the advances that have taken place in surgery and medicine. No student at present is likely to die of septicæmia contracted in the hospital wards. Yet formerly, such a calamity was far from rare. And, while a student with tubercle of the lung formerly died of "galloping consumption," nowadays he usually completely recovers after a voyage to Australia, or a couple of trips to the Cape.

On the whole, too, those whose experience enables them to judge, will tell you that the position accorded to the practitioner of to-day shows a great improvement, partly because his better services are fully appreciated and cordially acknowledged, and partly because his personal qualifications naturally win for him a higher place.

Yet there are some directions in which matters are worse than they were in the Forties and Fifties. As in all others, so in the instance before us, new conditions bring new dangers to the front, and there are at the present time two strong influences which combine to produce very undesirable results—I mean keen competition and the attitude which the public in the large centres of commercial activity naturally assume towards the profession.

As to the first, I need only say that a man who is pressed by close and ever-increasing competition is constantly exposed to the temptation to win at any cost, and to use any means that are likely to secure his end; hence come underselling, cheap dispensaries, and special hospitals run by single individuals purely for private ends. All these degrade our calling.

Secondly, there is the attitude of the commercial public. In all large manufacturing centres the spirit of trade reigns supreme and governs every transaction. Business men know little, and many of them care less, for the ethical side of our profession, and it seems natural to them to contract for our services just as they do for anything else they want, and they look for the usual reduction on taking a quantity. They therefore form themselves into medical aid societies, and invite a doctor to undertake to attend them, so to say, at wholesale prices. From the standpoint of the trading public this view of the matter is perfectly natural. It is for us, however, to remember that ours is a profession and not a trade, that the distinctions between the two are fundamental, and that to break down these distinctions would in the long run be even more disastrous to the public than to us. There is no objection to making screws or brass-headed nails by machinery at the rate of so many thousands a day, and selling them wholesale at so much a hundredweight: but these are not the lines on which a doctor should attempt either to diagnose or treat obscure cerebral or abdominal cases, or even cases which, on hurried inspection, seem to be trivial, but which, as everyone knows who has had much experience, may be in reality very much the reverse. These are matters which you will have to bear in mind, and in regard to which you must act with great caution, and sometimes, as it may seem to you at the moment, with a good deal of self-denial.

There are many other directions in which the spirit of trade tends on its own behoof, and sometimes cunningly disguised, to intrude itself into medicine; for instance, when some remedy or some appliance is being pushed and when it is necesarry to get it "recommended by the faculty." Those who give their names under these circumstances, to be used in trade advertisements, appear to forget that they are sharing their diplomas, which they well know they are bound in honour to guard, with unqualified persons, whom they are virtually enabling to practise surgery.[3] I, in common with many others, have found that in the eyes of an enterprising tradesman a surgeon's name is no longer his own property, but a commodity which can be either bought or used, whether he likes it or not, to puff some article which, though this makes no real difference, is very likely as useless as the gross of green spectacles of which we read in the pages of the *Vicar of Wakefield*. You may remember the proud and stern line:

The hand of Douglas is his own,

and in the same spirit you may have to let it be known that your name is strictly private property.

Cases at the present time could easily be mentioned in which laymen have taken up a quasi-surgical appliance, or some method of treatment, and are doing a large and profitable trade by treating cases of which they know nothing, and to which their method is often calculated only to do harm. All this does not immediately concern our profession. The public have a complete right to choose for themselves. Your part will be not to interfere until you are asked to do so. Then, as you will have become directly concerned, and therefore responsible, you must give *bonâ fide* such advice as shall seem to you to be right. It is a case of *noblesse oblige*.

You will perhaps wonder that I allude to this subject to-night, for it may appear to you to concern those who are already in practice rather than you who are just becoming students. But your student days will, after all, soon be over, and you will find yourselves in practice almost before you know where you are. Moreover, it is desirable that you should acquire a knowledge of your future duties as soon as possible, so that you may build up your principles and formulate your creed as to ethics and general conduct at the same time as you are passing through your professional curriculum. Let me, therefore, now, while you are at the threshold of your career, put it clearly before you that, practise where you will and let the pressure of competition be what it may, whenever you yield to temptation and mix yourselves up with trade, however your action may be disguised, you are breaking your parole and sapping not only your own honour but the honour of your profession and of this great School, whose traditions and example should have taught you a more excellent way.

Well, gentlemen, let me before we part wish you *bon voyage*. And this, I feel confident, is no mere cordial hope, but, in the case of all of you who have good health and will work hard, a prophecy which in due time will be fully realised. Assuredly no one who remembers what surgery was till the new era dawned can be *laudator temporis acti*. His gaze will not be backwards, but forwards towards that future in which, happily for you, your life will lie, and which we may be confident has knowledge to unfold and secrets to disclose which, though they cannot eclipse, will yet rival those that we have lately witnessed, and be tributary streams to that knowledge which will gradually be vouchsafed to us, and which at length shall cover the earth as the waters cover the sea.

NOTES AND REFERENCE.

[1] The quotation is taken from the following sentence in Sir Michael Foster's most able and admirable presidential address at the recent meeting of the British Association at Dover—an address, as the *Times* said, of singular literary grace. It would well repay you all to read it carefully: "It is because each man of science is not his own master, but one of many obedient servants of an impulse which was at work long before him and will work long after him, that in science there is no falling back..... In science there is only progress." [2] *St. Bartholomew's Hospital Reports*, vol. v, p. 238. [3] It has been asserted that commissions are paid for this and other forms of assistance, and in connection with the sale of instruments. If this is a fact, nothing could be more completely unworthy and discreditable.

CARDIFF MEDICAL SCHOOL.

By ALFRED W. HUGHES, M.B., F.R.C.S.,
Professor of Anatomy and Dean of the Medical Faculty in King's College, London.

THE PRESENT CONDITION OF MEDICAL EDUCATION.

[AFTER some introductory remarks, and a reference to the adoption of the five years' curriculum, Professor Hughes proceeded:]

When the history of medical education in this country is written it will probably be found that the most revolutionary period will be comprised in the past quarter of a century, both as regards medical and surgical teaching, as well as the methods of training medical practitioners.

It has occurred to me, now that this epoch or transition stage is passed, we might with advantage consider what changes have been brought about in the scheme of medical education, and what are the evident results; in other words, how does the present system compare with the past as regards efficiency?

I would wish it understood that I am discussing at present the training requisite for the ordinary qualifications to practise, and not for University degrees or higher qualifications.

Thirty years ago a period of pupilage or apprenticeship to a medical practitioner was almost universally recognised as an essential part of medical training. At that time attendance at a medical school during three winter and two summer sessions satisfied the requirements of the diploma-granting bodies. Two winter sessions and one summer session were devoted almost exclusively to the subjects of anatomy, physiology, and chemistry, hospital being attended, and some surgical dressing learnt during the same period.

Gradually, owing to an increase in the amount of necessary work, the curriculum is extended to a minimum of four winter and four summer sessions, and with increasing demands made on the time of students during their first two or three years, by the inclusion and expansion of such subjects as biology, chemistry, and physiology, it was thought that hospital attendance was inadvisable until the student had passed his examinations in anatomy and physiology. As an inevitable result of these changes, and the keeping away of students from early hospital work came the discovery that at the end of a four years' curriculum students were found to be unfit to receive diplomas to practise, owing mainly, as was repeatedly pointed out, to a want of practical knowledge, especially in clinical work.

To remedy this it was decided that a fifth year be added to the medical curriculum, and I wish to point out that up till quite recently the first two years of the ordinary curriculum were devoted exclusively to anatomy, physiology, chemistry, and some hospital work, no examination in biology or physics being required. The fifth year was solemnly declared to be for the purposes of clinical work.

Such, briefly, is the history of the late transition period in medical education, and I would like to glance at some of its effects and results. I would again emphasise the fact that I am not discussing the training of university graduates, whose course usually extends to six years, but I am endeavouring to examine the training of ordinary students who are honestly attempting to fit themselves thoroughly for the medical profession as general practitioners.

While I do not consider that the period of five years is too long for the thorough training of a medical practitioner, still I firmly believe that the time of medical students is not at present employed to the best advantage, and that the educational result is not commensurate with the expenditure of time and energy on the part of students preparing for a professional career.

I have pointed out that the additional fifth year was originally intended to be devoted exclusively to clinical work, but with the addition of work and the expansion of subjects during the first year and the consequent delay in passing the examination in anatomy and physiology, this is frequently rendered impossible. Not only have additions and expansions taken place in the earlier subjects of the curriculum, but even greater expansions and subdivisions are found in subjects of the later stages of the curriculum, and attendances formerly optional are now included amongst the compulsory parts of a medical course.

In the study of pathology especially, and the allied subjects of bacteriology, more time is demanded of the student, and no one will attempt to question the value of time spent over such important subjects. Operations have to be performed on the dead body, instruction has to be received in certain special subjects as ophthalmic surgery, mental diseases and insanity, and in infectious diseases—all subjects of immense importance to the student; but fears are justly entertained lest the time at the disposal of students should be so fully occupied in the study of special departments as to interfere to a dangerous extent with the main branches of the curriculum.

Owing to the addition and subdivision of subjects a plethoric condition has resulted, which has greatly affected the training obtained in some, and of all the subjects in the curriculum the one which has suffered most is anatomy, wedged in as it is between the additional early studies of biology, chemistry, and physics on the one hand, and the greatly expanded and enormously subdivided final subjects on the other.

Year by year my conviction becomes firmer that, speaking generally, the average student of the present day has not the same grasp of the fundamental facts of anatomy which his predecessor acquired under the old regulations. I have frequently been told by surgeons that students attending hospital and preparing for their final examination who have already passed their anatomical and physiological examinations are frequently found deplorably ignorant of some of the most salient points of anatomy. This unsatisfactory state is partly due to the congested condition of the curriculum, and partly to the unfavourable position in which anatomy is placed with reference to the other subjects.

Some have attempted to lay the blame at the feet of the teachers of anatomy of the present day, who are accused of ignoring in their teaching the practical applications of anatomy, which must appeal most forcibly to the student of medicine. In other words, that human anatomy is taught at present from a morphological rather than a practical and applied standpoint.

It is true that during recent years enormous changes have taken place in anatomical teaching owing partly to the influence of improved methods of anatomical investigation, and partly from the fact that anatomy has been studied more and more in the light of embryological and morphological discoveries. So profoundly have these influences affected the subject, that, during the past quarter of a century, descriptive anatomy has been revolutionised to an extent quite unparalleled during any similar period in the history of the subject.

Side by side with these developments changes have taken place in the *personnel* of the anatomical teachers in this country. Until quite recently most of the teachers of

anatomy, excepting those at some of the universities, were at the same time practical surgeons, and, under such circumstances, we may rightly expect that points of practical interest were forcibly presented to the student. Gradually the teaching of anatomy has drifted into the hands of pure specialists, and there are grounds for fearing that the all-important applications of anatomy are being treated with less respect than morphological speculations, highly interesting to the specialist but of questionable utility to the practical surgeon. It will veritably be a gloomy day for medical training when anatomists cease to recognise that the dissecting-room workers of to-day are the practitioners of to-morrow.

The time at the disposal of students for the study of anatomy is so utterly inadequate that I fully sympathise with them when I am told they have no time for that most necessary revision of their work. Without this the amount of anatomy which they have hurriedly acquired is soon forgotten, and that mental skiagraph of the human body which should be the possession of every student is not obtained. He gains a mere passing impression of the subject, which is blotted out soon after the examination is over.

When we consider that anatomy is being gradually squeezed almost out of existence between the aggressively assertive preliminary scientific subjects, biology, chemistry, and physics on the one hand, and the gradually expanding and progressively budding final subjects on the other, can it be wondered at that teachers of anatomy and surgery are compelled to look upon the existing state of things as grave?

The main factor which to my mind has caused this great interference with anatomical work is the expansion of and additions to the early medical studies. In former years the first year of the curriculum was devoted almost entirely to anatomy and chemistry, the second year mainly to anatomy and physiology, and students were able to gain a thorough mastery of these subjects. At present the first year's student studies chemistry, physics, biology, pharmacy, and anatomy. During his first year he is examined in chemistry and physics, biology and pharmacy, but not in anatomy; and I would ask in all seriousness what chance has anatomy of being studied during the first year under such circumstances?

If biology is to be a subject of examination during the first year, I would ask, in the interests of your future surgeons, that some part of anatomy be included also; and I have never been able to find any satisfactory reason why the old examination in elementary anatomy was discarded, excepting that licensing bodies and that autocratic institution, the General Medical Council, sometimes move in most mysterious ways and draft regulations after wondrous fashions, which are past finding out.

There are comparatively few who will at the present time seriously maintain that the smattering of biology required for the examinations of the various Conjoint Boards is of any real value to the student either as a scientific training or as an introduction to human anatomy. To my mind its inclusion in the ordinary curriculum merely encourages the student to trifle slovenly with a subject, and to waste time which should be devoted to the study of subjects intensely important from a professional point of view.

In determining the character of the education required for university degrees the case is widely different, as here the nature and amount of preliminary scientific training should be matters of great importance, but in prescribing courses of instruction required for ordinary licences to practise medicine and surgery, preliminary scientific subjects should be found in such proportions only as are considered necessary and conducive to the proper study of the more professional subjects.

Unless some additional time can be found for the study of anatomy during the early part of the curriculum, I am firmly convinced that the class of operative surgery, attended by final students, should be largely extended and made to include a substantial amount of applied anatomy, which should be studied not merely from books but *practically* in the dissecting room.

Anatomical work of such a kind could not fail at this stage to interest the student, and the knowledge thus acquired would be so practical, and applied in its character as to be of real and permanent service to him in after-life.

I trust, gentlemen, nothing I have said has created an impression that I look with disfavour on the thorough teaching of preliminary scientific subjects, for I believe that the advantages of such a training are enormous, and the good effect of a thorough grasp of these subjects is inestimable; but what I do mean is this, that when we are admittedly engaged in the task of training practitioners of medicine in a limited time, we should endeavour to do so to the best possible advantage, and that rather than offer them a wide smattering of endless branches of subjects, we should at least put them in the way of mastering the great fundamental facts of anatomy, physiology, and pathology, which, when applied to the great subjects of medicine and surgery, will logically guide them in solving the great problems of disease which they will encounter in after-life.

What a man requires in his profession—whatever it may be—is a clear grasp of the fundamental principles on which it is based, and an accurate knowledge of the facts with which he has to deal. These are obtained to-day, as ever, on the broad highways, and not by *dilettante* excursions into sidepaths, before the student has mastered the general chart of the country.

So far I have discussed questions which concern medical schools generally; I would now ask you to consider some points of home policy which concern your own medical school. Up to the present the functions of the school have been strictly limited to the training of students in the earlier subjects of the curriculum, with some hospital work, and I have already referred to the great success which has attended these efforts. The question will soon arise, how long should the Cardiff Medical School confine itself to this limited sphere of work? I am fully aware that I am now approaching a very debatable subject, and I wish to do so with all due caution, hoping that it will be understood that I am merely expressing my own personal views, without consultation of any kind with college authorities or members of the medical profession in the district.

From a full consideration of all sides of the question I give it as my earnest opinion that the time has arrived when steps should be taken to complete the Cardiff Medical School. A number of subjects would have to be provided for, as medicine and clinical medicine, surgery and clinical surgery, obstetrics and gynæcology, and public health, and certain special departments, especially that of ophthalmic surgery.

Anyone acquainted with this district will readily recognise that you have at your very doors men who would worthily fill teaching positions in these subjects, and of whom any medical school might well be proud, and further the occupancy of a teaching position in a medical school tends to stimulate the energies of a teacher to keep fully abreast of all recent developments in the subject he professes to teach. It is unnecessary to dwell on the effect of such stimulation in further establishing for Cardiff a reputation as a great medical centre.

Financial considerations need not interfere seriously with the necessary arrangements for the efficient teaching of these subjects, as the teachers devote only a small part of their time to teaching and the cost of apparatus is slight in these subjects; but one subject is on quite a different footing from those mentioned, I refer to the subject of pathology and the allied subject of bacteriology.

While the other subjects mentioned can be undertaken by practitioners of surgery or medicine without any serious financial sacrifices, in the case of pathology, owing to its character and extent, the entire time of a specialist must be applied exclusively to the department. Hence it follows that before your college authorities are justified in embarking upon this further stage in the development of the medical school some provision in the form of an endowment becomes necessary in order to relieve all anxiety as to such an important subject as pathology.

I know of no such opportunity which offers itself to any public-minded citizen anxious to advance medical learning, as is offered in such a connection as this, and speaking from a fairly extensive knowledge of the medical conditions in this country, I can say most emphatically that I know of no position in which more good could be extended to suffering humanity than by establishing a pathological department in this school. It would be of incalculable value to countless sufferers, whose advisers are at present debarred from privi-

leges and advantages enjoyed by those in close proximity to a complete medical school.

It is fortunately barely possible to suppose that in this important district such aid will not be forthcoming, if we only consider what has been done during recent years in other provincial towns, towards medical and scientific training. Any anxiety as to sufficiency of clinical material should be promptly dispelled by an acquaintance with the surrounding district of Cardiff, and especially with the resources of the Cardiff Infirmary and the high character of the work done therein; and while there is a prevalent idea that all students should proceed to London to study medicine and surgery, I would point out that the clinical material there is split up among some 14 or 15 general hospitals, and that a great proportion of special cases are drafted into the almost innumerable special hospitals into which students rarely enter.

I would further point out that with the introduction of final teaching a great increase in the number of illustrative cases would inevitably follow, the hospital would become more and more a consultative centre, and almost every possible variety of disease would be represented, and available for teaching purposes.

The fifth year, which has been so solemnly allocated for clinical work, might with advantage be utilised in visiting other hospitals in London or elsewhere; such experience, obtained after the ordinary curriculum work was over, would be of great value by bringing the student into familiarity with the practice of two or more institutions. It would give breadth to his experience, and avert an affection which has been designated the concentration of provincialism.

Lastly, I would point out that this University College is one of the constituent colleges of the University of Wales, which stands alone amongst the universities of the United Kingdom in not possessing powers to grant degrees in medicine. When once this College possesses a complete medical school then the University could justly claim powers through a supplemental charter to grant degrees in medicine, and take up a position in relation to medical teaching and research which would in my opinion be advantageous to the University and beneficial to medical science, and by encouraging medical and surgical advancement in this great industrial centre would confer indirectly a blessing on the medical profession throughout the Principality.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.

By John William Moore, M.D.Dub., P.R.C.P.I.,
Physician to the Hospital.

THE ADVANCE OF MEDICINE.

[Abstract.]

After some introductory remarks, Dr. Moore said: Almost precisely twenty years ago, on November 3rd, 1879, it was my lot to deliver the introductory address to the session in this hospital, and I chose as my subject, The Microcosm of Disease. The term "bacteriology" was not then in use, but it was what I meant. Look how rapid and how conducive to the welfare of mankind has been the march of knowledge in regard to the bacterial origin of disease. Think of the triumphs of modern aseptic surgery, more glorious because more beneficent than any triumphs the world ever saw before. Nor has medicine lagged behind. Day by day we are learning more of the intimate nature of contagion in relation to the infective diseases; our diagnostic powers have been reinforced by microscopic investigation of stained bacteria, by observation of the altered behaviour of certain pathogenic micro-organisms in the presence of infected blood—witness the Widal test for typhoid or enteric fever; and one fell disease at least has been robbed of its terrors by the serum or antitoxin treatment—namely, diphtheria.

The Fever Process.

The nature of the fever process is now far better understood than it was even a few years ago, and we have learned that "fever," or elevation of bodily temperature above the standard of health, or "normal," serves a useful purpose, provided that it is properly controlled. Fever, in a word, purges the system. I would raise a warning voice against the pernicious doctrine that in fevers the temperature must be reduced as quickly as possible to what is popularly called "normal." It cannot be too often or too emphatically and authoritatively declared that such a procedure is very likely to destroy life. The so-called antipyretic medicines, or heat reducers, should never be used by unskilled hands. The employment of such remedies, even by the skilled physician, calls for the utmost caution and the most anxious consideration. The danger lies in an interference with the production of body heat, while the escape of heat from the body in many ways, while it does not interfere with heat production; rather, indeed, does the use of cold water internally and externally encourage the evolution of heat in the body.

[After characterising the notion which he said was rife among medical students, that alcoholic stimulants are a sheet-anchor in serious disease, and adding that if one wished to be a good physician it was necessary one should also be a good cook, Dr. Moore proceeded to speak of pulmonary tuberculosis. He said:]

The hospital treatment of consumption—by which is commonly understood pulmonary tuberculosis—is an anxious question, and one that is difficult of solution. Year by year the conviction grows stronger that in treating this fell disease in the wards of a general hospital we are committing a grave hygienic error.

In an address on the Prevention and Cure of Tuberculosis, delivered before the Section of Medicine at the Carlisle meeting of the British Medical Association in 1896, I pointed out that theoretically the air of a hospital ward, however clean and well-ventilated that ward may be, is unsuited for a consumptive. In it his surroundings are calculated to depress. The dietary may not coax his appetite. And then to look at the question from the point of view of the other patients—the presence of the consumptive may be no more than tolerated. He keeps them awake at night with his hacking and racking cough; he resents open windows, yet may pollute the air in the ward to an extreme degree. If his expectoration is not destroyed or disinfected he may even infect his fellow-sufferers with his own disease.[1] He occupies month after month a bed which otherwise would accommodate many generations of patients labouring under less chronic and more curable maladies. Lastly, the hospital treatment of tuberculosis breaks down because of its utter inadequacy to cope with so universal and so tedious a disease. In a week every bed in every hospital in the United Kingdom might be filled with consumptives, and even then thousands upon thousands of cases would be left without hospital accommodation, so widespread is the plague of phthisis.

The hospital treatment of tuberculosis should resolve itself into providing of—

1. Consumption hospitals, or sanatoria, in which the disease could be treated in its earlier and more hopeful stages.
2. Special consumption wards in general hospitals, into which tuberculosis, and that disease alone, should be received.
3. Refuges for those far advanced in, or dying of, consumption. The German name for such an institution is very expressive—"Friedensheim," or "Home of Peace."

The providing of special wards in, or adjacent to, our general hospitals would meet to a certain extent some of the objections I have advanced to the treatment of consumption in hospitals. In such wards consumptives in a more advanced stage of the disease could be treated, the separate principle being carried out wherever possible, a ward in any case being planned to contain never more than three or four patients, and provision being made for inhalations of ozonised oxygen, as suggested and carried out by Dr. Ransome.

[1] Geo. Allan Heron, The Relation of Dust in Hospitals to Tuberculous Infection, *Lancet*, January 6th, 1894.

The annual dinner of the British Gynæcological Society will take place at the Café Monico, London, W., on the evening of Thursday, November 16th.

At the opening meeting of the Charing Cross Hospital Medical Society on Thursday next, at 4.40 P.M., Dr. Eden will read a paper on Ancient and Modern Quackery.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

F. T. ROBERTS, M.D., President, in the Chair.

Monday, October 9th, 1899.

THIS being the first meeting of the session, the PRESIDENT delivered the usual inaugural address, taking for his subject the Changes which the Practice of Medicine has Undergone during the Present Century.

SERUM THERAPEUTICS AND ANTITOXIN TREATMENT.

Dr. HERON initiated a discussion on this subject. He referred to the experience which he had recorded before the Society in 1891 on the treatment of tuberculosis and lupus by tuberculin, observing that there was no important statement therein contained which he would wish to withdraw at present. He recalled that though all the cases of lupus had improved under treatment, they had all relapsed, while in respect of the 32 lung cases the latest information he had was that 8 had died, 1 remaining at work till 1897 when the disease recurred, 10 were still in fair health, and he had lost sight of the remaining 13. In a post-graduate lecture delivered in 1898, he had referred to 9 cases of lung tuberculosis and 1 of lupus treated by the new tuberculin. Of the 9, 2 had died, but both were from the first hopeless cases; 1 indeed was evidently dying, and *post mortem* they found an absence of recent tuberculosis which was interesting in view of Virchow's pronouncement that the old tuberculin was apt to be followed by excavation of the diseased part of the lung. In no case in his experience had any untoward results followed the treatment from either the old or the new serum. They had made over 2,000 injections at the hospital without so much as a superficial abscess. The remaining 7 did fairly well in hospital, and left at their own request. As recently as last summer, 4 of these 7 patients were at work in fairly good health. The lupus patient had had no recurrence for eighteen months after leaving hospital. During the present year he had had 10 cases of pulmonary tuberculosis under treatment by the new serum; in 2 the treatment was discontinued because they had high temperatures which remained high, and in such cases they might take it that there was a mixed infection. Others came up at intervals for the injections, all of whom had improved in health. He recalled that Koch himself had laid it down that the cases most likely to benefit from the treatment were those in which the temperature had not risen above 99.4°, and in which only a small portion of one lung was affected, and not one of his last 10 cases came under this category.

Dr. WASHBOURN confined his remarks to the diphtheria antitoxin, the antistreptococcus serum, and the antipneumococcus serum. As to the first named, he thought that its beneficial effects were no longer open to question in view of the statistics from all parts of the world. He discussed the way in which the antitoxin acted, adopting Ehrlich's theory that all toxins, and, indeed, poisons of any kind, produced their injurious effects by combining with certain molecules in the cells. Antitoxin, by combining with the toxins, prevented their entering into such a combination and so averted their harmful effects. The fact that antitoxin did not cure all cases was due to the fact that certain tissues, for example the nervous system, had, in some instance, a stronger affinity for the toxin than had the antitoxin, so that it could extract the toxins from their combination with the antitoxin. He held out the hope, if this explanation were correct, that in future it might be possible to prepare antitoxin from other animals than those at present employed, and so obtain an antitoxin which should display a greater affinity for the toxin than that manifested by the nervous system. He pointed out that patients who died in spite of the treatment developed a certain train of symptoms suggestive of paralysis of the vagus. He urged that as antitoxin was not an absolutely harmless substance it should not be employed in very mild cases, in cases with marked cardiac affection, and in cases seen for the first time on the fourth or fifth day in which no constitutional symptoms had so far supervened. Nevertheless he said it was a good general rule to administer antitoxin unless there were some special reason to the contrary. In respect of antistreptococcus serum this, he observed, would not produce a beneficial effect in every case of streptococcic infection, though its effects were very marked in some. At present no means were available of distinguishing between the two classes of cases. Of the antipneumococcus serum, which he himself had been the first to prepare on a large scale, he spoke more doubtfully. Its beneficial action was strongly based on numerous experiments on animals, and in some cases of his own it had seemed to have a good effect. On the whole, while he urged that it merited a larger trial in this country, he was not prepared to express a definite opinion until he had had further experience.

Dr. HUBBARD limited his remarks to the therapeutical effects of the various serums viewed as coagulating agents. He had made use of this coagulating power of serums in aneurysm, menorrhagia, and hæmophilia. He related a case of aortic aneurysm in which pain was the prominent symptom which yielded at once to injections of serum, and curiously enough it did not seem to matter what particular serum was used. After a time, the pain recurring, he put the patient on the classical treatment, and coagulation being again produced, relief from pain followed. He also referred to another case of aneurysm, but in that case the aortic valves were greatly involved, and it was impossible to achieve much. He had tried it in a refractory case of menorrhagia with singular and immediate success after three injections. Lastly, he had tried it in a case of obstinate hæmophilic epistaxis which had resisted surgical treatment, and with prompt success. He pointed out that this use of the coagulating power of serums was novel, and might conceivably lead to further good results. He had been unable to satisfy himself that the coagulating effects of normal serum were equal to those of those of the antitoxin sera.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The Society held the first meeting of its eighteenth session at the West London Hospital on October 6th, when the PRESIDENT (Dr. J. B. Ball) delivered an inaugural address on The Progress of Rhinology. He said that the history of rhinology was really contained in the last forty years. In the middle of the present century, with the methods then in use, no proper inspection of the nasal cavities was possible. In 1854 Manuel Garcia discovered laryngoscopy. In 1857 and 1858 Türck and Czermak made observations and experiments based on Garcia's work; and in 1859 Czermak published an account of his methods of examining the posterior nares. In 1868 Thudichum (a former President and a member of the society) published some papers in the *Lancet* On Some New Methods of Treating Diseases of the Cavities of the Nose; shortly afterwards Duplay and Fraenkel devised new forms of nasal specula. The next great step was the introduction of cocaine by Freud, and its use for the throat and nose by Jellinek. Examinations were rendered more easy and many more operations made possible. The first great landmark in the progress of modern rhinology was the discovery of adenoid vegetations by Meyer in 1868; but it was not until ten or twelve years afterwards that his discovery received widespread recognition. In 1880 Ziem demonstrated the great frequency of suppuration of the antrum, and in 1889 Heryng introduced the method of electric transillumination. After referring to the great lack of warmth shown by physicians and surgeons to the new methods of diagnosis and treatment, and the widespread scepticism that prevailed, Dr. Ball said that we ought not to forget the name of Morell Mackenzie, who had done so much for the progress of rhinology in this country. A vote of thanks to the PRESIDENT for his address, proposed by Dr. J. W. THUDICHUM and seconded by Dr. S. D. CLIPPINGDALE, was carried by acclamation. Dr. J. B. BALL briefly replied.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—The first meeting of this Society for the coming winter session was held in the Faculty Hall on October 6th, when there was a large attendance to hear the address of the PRESIDENT (Mr. Henry E. Clark), on The Changes in Surgical Theory and Practice in the Last Quarter of a Century. The subject was treated in a interesting somewhat racy style, and interspersed with a number of anecdotes. The period of

time referred to corresponded with Mr. Clark's connection with the Royal Infirmary of Glasgow, and his account of the progress of surgery during that time was freely illustrated by statistics from the records of that infirmary. At the outset he indicated the great improvement that had been achieved in the condition of the nursing staff, and also in the infirmary itself, which, though badly in need of the reconstruction which was at present proposed in commemoration of the Diamond Jubilee, had still kept well up with the times. In discussing the surgical statistics and the great increase in the number of operations that were now performed, Mr. Clark brought out the fact that amputations were now more frequent than formerly; but this was explained by the greater number of cases passing through the surgeons' hands, and also by the fact that severer operations were now attempted than formerly. The mortality from amputations was shown to have been very much reduced; but, on the other hand, there was shown to be a considerable increase in the mortality in surgical cases generally; explained, again, by the increased turnover of cases, and by patients staying longer in the infirmary, and permitting more severe and dangerous operations. The development of antiseptic methods was touched upon, and also the influence of pathological and bacteriological inquiries on surgical practice. Mr. Clark then shortly discussed the progress surgery had made in certain regions which till recently had been considered forbidden grounds, particularly referring to the surgery of the abdomen and of the brain. A cordial vote of thanks to the President was passed, on the motion of Dr. Alexander Robinson.

Clinical Society of Manchester.—At the annual meeting of the Society held on October 2nd, 1896, the following were elected office-bearers for the session 1899-1900: *President:* J. S. Bury, M.D. *Vice-Presidents:* T. A. Helme, M.D.; E. S. Reynolds, M.D. *Honorary Treasurer:* C. H. Braddon, M.D. *Honorary Secretary:* J. E. Platt, M.S. *Honorary Librarian:* J. W. Smith, M.B. *Auditors:* H. G. Brooke, M.B.; R. G. Heathcote. *Committee:* Alfred Brown, M.D.; J. G. Clegg, M.D.; R. Crean, M.D.; J. Daniel, M.D.; J. W. Hamill, M.D.; J. Holmes, M.D.; C. F. H. Kitchen; M. P. Ledward, M.D.; C. T. B. Maisey; R. T. Parkinson, M.D.; T. Porter, M.B.; J. Rust; Graham Steell, M.D.; F. H. Westmacott; J. P. Williams, M.D.

REVIEWS.

The Soluble Ferments and Fermentation. By J. Reynolds Green, Sc.D., F.R.S., Professor of Botany to the Pharmaceutical Society of Great Britain. Cambridge: University Press. 1899. (Demy 8vo, pp. 494. 12s.)

The first great step in the evolution of our knowledge concerning the fermentation process was the discovery incepted by Theodor Schwann, and completed by Pasteur, of the cause of the alcoholic fermentation. This was followed later by the grouping together of various micro-organisms producing analogous changes in various chemical substances. Later still it was recognised that with these actions must be included the activities of the soluble ferments or enzymes, processes in which the presence of living cells is not necessary; and until quite recently the two main groups of ferments have been spoken of as the organised and the unorganised.

It has, however, long been suspected that the distinction was one without a difference; the separation of invertin or invertase from yeast cells, and of urease from the micrococcus ureæ showed that in all probability the real way in which the organised ferments do their work was by the formation of enzymes, much as the gastric cells do theirs by the formation of pepsin. The main stumbling block in the way of a full acceptance of this view was the failure of numerous investigators to separate from the yeast plant any enzyme which would decompose sugar into alcohol and carbonic anhydride. At last, now that Buchner has accomplished the feat, we are on the threshold of a new era in our knowledge, and it is impossible to doubt that with time other micro-organisms will yield to the researcher the secretions by means of which they accomplish their multifarious duties. Professor Reynolds Green's book appears at this opportune moment, and we find in it not only a discussion of these general questions, but also a description in detail of each of the numerous ferments that are at present known to science. The historical portions of the work are especially valuable, and add much interest to the reading. The author is specially qualified to undertake such a task, for before he devoted his studies to vegetable physiology he was a demonstrator of animal physiology at Cambridge, and in both these departments of biology has done valuable original work.

Looking to the future one can only hope that as knowledge increases it may be possible to drop the word "ferment" altogether. At present physiologists have to make use of a number of convenient words—as, for example, "vital"—to express what they do not understand; the word "ferment" comes very much into the same category; we are no doubt further than we were when Pasteur began his work, but a perusal of the concluding chapters of Professor Green's book will indicate how much further we have yet to travel. We do not yet know what a ferment is; whether it is a force, as Liebig supposed (a view of which Maurice Arthus is the most recent exponent), or a chemical entity, which is the view that is now rapidly gaining ground, especially since the investigations of Emil Fischer and Croft Hill have been published. In a chapter on the nature of enzymes, the present author argues very cleverly—though not convincingly—that enzymes cannot be proteids; the reader is apt to imagine that Professor Green is leading up to some such conclusion as that arrived at by Arthus, that there are no such actual things as ferments: but in the end he has to confess that if they are not proteids they are their first cousins, the nucleo-proteids.

The book is written in an interesting way; the information given covers a wide field. It is, as a rule, up to date; it includes, for instance, a very lucid account of Emil Fischer's work, and contains a good chapter on the oxidases, the most recently-discovered group of enzymes. There are, however, indications that the author is more at home in the botanical side of his subject than in its physiological and chemical aspects. For instance, the doctrine of Kühne, that we have to deal with hemi-products and anti-products of proteolysis is still given as if it were unquestioned. Kühne's theory held the field undisturbed for many years, but the majority of physiologists are now beginning to doubt whether it has any foundation in fact. The account given of the celluloses is very scanty, and does not include a good deal of recent work. One would imagine from the mention of Schiff's peptogens on page 372 that these were exclusively nitrogenous in nature. Protein-chromogen and the substance which gives a pink colour with bromine and chlorine are one and the same substance; in the account of them given in the chapter on pancreatic digestion, they are spoken about as if they were different; and though Nencki did some work at protein-chromogen, he can hardly be called its discoverer. The statement that the ptomaines all belong to the pyridine group is incorrect (p. 367), so also is the definition of a leucomaine in the preceding sentence; the leucomaines originate by metabolic not by microbic processes. Amides and amido-acids are not interchangeable terms.

It is desirable in works on chemistry that some uniformity of nomenclature should be adopted. It is a little too much to expect international uniformity, but all writers in English should try if possible to adopt the terms and spelling laid down by the Chemical Society of London. It is after all a point which is not of superlative importance, but it nevertheless breeds confusion, especially to students. It may seem a very small matter to omit the final *e* in leucine and tyrosine, or to spell indol and phenol with the same termination, but there is after all a reason for even these little things; our author too is not always consistent; for instance, he sometimes writes mannite and sometimes mannitol. He has adopted the universal termination *ase* for enzymes; this is in accordance with modern usage, and is to be entirely commended.

On the other hand, it cannot be denied that the disappearance of old familiar names is often to be regretted; there is no special reason why the well-known dextrose and levulose should be replaced by glucose and fructose respectively, especially as the distinctive prefixes (*d*- or *l*-) are usually omitted; it also appears confusing to speak of the disac-

charids as polysaccharids, or by the clumsy circumlocution biose-polysaccharids. One might easily multiply such examples, but we will be content with mentioning only one more example of confusing nomenclature—the principal proteid of milk is spoken of as casein and of cheese as tyrein. We believe these terms were originally introduced by Sir M. Foster, but they never caught on, and as they are now universally replaced in physiological textbooks (Foster's included) by caseinogen and casein respectively, it would be better that Professor Green likewise should conform.

The present volume is one of the Cambridge natural science manuals which are being edited by Mr. Shipley, and we understand from an editorial note that Professor Green does not approve of an index being added to his book. We can quite understand this disapproval if he had seen the index, which is so insufficient as to be nearly useless. We must, moreover, entirely disagree with the author if his objection to an index is a matter of faith with him. The usefulness of the present volume would be immensely increased if a full and trustworthy index were added.

THE USE OF THE SPHYGMOGRAPH IN CLINICAL MEDICINE. By GRAHAM STEELL, M.D., F.R.C.P. Manchester: Sherrat and Hughes. 1899. (Crown 8vo, pp. 57, 105 figures. 2s.)

WHATEVER comes from the pen of Dr. GRAHAM STEELL may be taken not only seriously but also thankfully. This book is on similar lines to that on the pulse by Sir William Broadbent, and, although much smaller, may well rank with it; it is small, but a masterpiece.

The author truly remarks in his introductory chapter that the best educator of the "finger" in developing a *tactus eruditus* so as to detect slight variations in the pulse is the sphygmograph. The succeeding chapters treat of the pulse in aortic disease of the heart, in mitral stenosis, and in mitral incompetence, and, lastly, of irregularity and intermission of the pulse generally. Among the 105 tracings some are of necessity of greater interest and rarity than others; three portray the changes in the pulse accompanying the muscle failure of the heart due to alcoholism; others that occurring in the later stages of Bright's disease, and others the characters of the pulse in pernicious anæmia, in exophthalmic goître, and those associated with Cheyne-Stokes respiration. There are, in fact, few of the more important conditions of disease whose pulse characters are not either referred to in the text or graphically displayed in tracings.

The author asserts the comparative unimportance of adherent pericardium as contrasted with rheumatic myocarditis in producing circulatory disorder, and he calls in question the causal relationship of high arterial pressure to angina pectoris. Having quoted these views, it is unnecessary to do more to establish the fact that the book is not a *réchauffé* of the opinions of other writers. The book is, in short, a valuable contribution to clinical medicine, quite apart from any special bearing on the sphygmograph or even on the pulse, and although this statement may seem hardly complimentary, it is meant as high praise.

A HANDBOOK OF SANITARY LAW FOR THE USE OF CANDIDATES FOR PUBLIC HEALTH QUALIFICATIONS. By B. BURNETT HAM, M.R.C.S., L.R.C.P., D.P.H.Camb. London: Ash and Co., Limited. 1899. (Fcap. 8vo, pp. 122. 1s. 6d.).

THIS handbook, as appears from the preface, is designed mainly for the use of those who are desirous of taking the diploma of public health. All the Acts of Parliament relating to sanitary law have been carefully digested, and the effect put into popular language, while at the same time the correct legal interpretation has been retained.

The subject is a difficult one to deal with in a satisfactory manner, owing in a great measure to the number of statutes and parts of statutes which have to be consulted, but this difficulty has been overcome in Mr. HAM's little book, and he is to be congratulated upon the result he has achieved in condensing the matter into such a small compass.

The various headings, and the points to which attention is more particularly wished to be drawn, are printed in leaded type, and this is a considerable aid to the reader when he is searching for information upon any particular branch of the subject.

To some of the most important sections of the Acts upon which judicial decisions have been given, the author has appended a note embodying the substance of such decisions; for example, the effect of the decisions upon the much-vexed question as to the difference between a drain and a sewer.

A full and well-arranged index completes a book which ought to be of great assistance in helping those candidates who may not have the time or opportunity to consult the text of the statutes to overcome a difficult and complicated subject.

CHEMICAL AND MICROSCOPICAL AIDS TO CLINICAL DIAGNOSIS. By CARSTAIRS C. DOUGLAS, M.D., B.Sc. Glasgow: J. Maclehose and Sons. 1899. (Crown 8vo, pp. 258, 33 illustrations. 4s. 6d.)

THIS book is one of a group of which that by Von Jaksch is the type and head. We are not prepared to admit that there is urgent need for such a work at the present time, but we are free to state that this work is concisely and clearly written, and that it contains all, or nearly all, the more valuable and more practically useful chemical and microscopical methods needed by the medical practitioner in the diagnosis of disease or by the student of medicine in his preparation for the later examinations.

Rather more than half the book is devoted to a consideration of the examination of the urine; the methods of the qualitative recognition of its abnormal constituents and the quantitative estimation of its normal and morbid elements being described in sufficient detail. We have, however, some difficulty in understanding the reason for including in the text a description of the means whereby "artificial pathological urines" may be prepared.

The latter half of the book contains chapters on the analysis of the gastric fluids; the examination of the sputum and saliva, including the essential bacteriological methods; the clinical examination of the blood, the fæces, and various fluids, such as ascitic fluid, cyst contents, and cerebrospinal fluid; and, finally, a chapter on the diagnosis of the parasitical diseases of the skin and hair. The illustrations are taken from trustworthy sources; there is a satisfactory index, and some bibliographical tables that are likely to be useful to the readers for whom the book is primarily written.

Although this volume contains nothing new of first importance, yet it may be recommended as a convenient and up-to-date summary of existing knowledge on the subjects of which it treats.

ATLAS OF URINARY SEDIMENTS, WITH SPECIAL REFERENCE TO THEIR CLINICAL SIGNIFICANCE. By Dr. HERMAN RIEDER. Translated by Dr. F. C. MOORE. Edited and annotated by Professor A. SHERIDAN DELÉPINE. London: Charles Griffin and Co. 1899. (Demy 4to, pp. 111, with 36 plates comprising 167 figures. 18s.)

THIS *Atlas* is the only important work of its special nature in the English language. The letterpress consists of a translation of Dr. RIEDER'S text, skilfully executed by Dr. F. C. MOORE, with valuable annotations and additions, both textual and pictorial, by Professor SHERIDAN DELÉPINE.

The various urinary deposits are grouped under two headings—the unorganised and the organised. In the former group are included the different crystalline deposits, the pigment bodies that are sometimes deposited in the urine, and such occasional artificial sediments as urea nitrate and phenyl-glucosazon; the latter group of sediments includes the different varieties of epithelial cells from the various portions of the urinary tract, blood corpuscles, tube casts, tumour cells, and vegetable micro-organisms. In the case of each deposit, its character, its mode of occurrence, and its pathological significance are plainly discussed; and in the case of those crystalline deposits whose form alone is an insufficient guide to their precise nature, their more important microchemical reactions are given wherewith to clinch the diagnosis.

Dr. Rieder's work was greatly facilitated by his position as

assistant in the medical clinic of Professor von Ziemssen, who placed the material of the clinic at his disposal. To the results of his own investigations he has made judicious additions from such standard German works as that by Salkowski and Leube, and that by Neubauer and Vogel.

Professor Delépine's contributions, which are kept distinct from the original text, are based upon his own work on urinary deposits prosecuted during a period of eight years, and represented by the analysis, with microscopical drawings of the deposits, of over 4,000 specimens. Of the 20 new figures added to the English edition, 16 are derived from Professor Delépine's original observations.

An outstanding feature of Dr. Rieder's *Atlas* is the attention given to the differences in the form under which the various crystalline substances may occur in the urine.

A valuable chapter, consisting of an almost verbatim translation of Dr. Rieder's text alone, is that which contains a summary of the characters which are peculiar to the sediments that are found in such conditions as cystitis, pyelitis, hydronephrosis, and the different forms of inflammation of the kidney.

There are useful chapters on the accidental contamination of urinary sediments and on their permanent preparation. It is almost needless to observe that the specimens from which the drawings have been made are characteristic and well chosen, and that their execution is excellent; their description, moreover, is concise and lucid.

To the English edition have been added an index of authors, a short bibliography, and an alphabetical index, materially increasing the worth of the book. The work in its English dress will, we are confident, prove a great help to the British practitioner in regard to diagnosis, and likewise an efficient aid to the British medical student from the examination point of view.

Manual of Bacteriology. By Robert Muir, M.A., M.D., F.R.C.P.Edin., Professor of Pathology in the University of Glasgow, and James Ritchie, M.A., M.D., B.Sc., Lecturer on Pathology in the University of Oxford. Second Edition. Edinburgh and London: Young J. Pentland. 1899. (Crown 8vo, pp. 584; 126 illustrations. 12s. 6d.)

The second edition of a book, unless it has been exceedingly well thought out in the first instance, often presents very marked alterations from the first, or, on the other hand, it is so little altered that it is not always thoroughly brought up to date. Those who have already had experience of Muir and Ritchie's work on *Bacteriology* will quite expect to find that little alteration has been made in the excellent plan on which the first edition was based, and in this they will not be disappointed. On the other hand, the authors, who have kept themselves thoroughly abreast of contemporary work, have so far altered their descriptions and rearranged their detail that we have in this second edition a work not unduly increased in size, yet thoroughly well brought up to date. In no part is this more evident than in that dealing with the general principles on which recent bacteriological work has been based. The details are as accurate as in the former edition, and the methods described are usually the best that can be utilised for the end in view.

It may be noted that in addition to the ordinary bacteriological descriptions, four very excellent appendices—one on small-pox and vaccination, a second on hydrophobia, a third on malarial fever, and a fourth on dysentery—give just such information as the medical student requires in order to be able to understand the relation of these subjects to medicine and their practical application in treatment.

A Junior Course of Practical Zoology. By the late A. Milnes Marshall, F.R.S., [and the late C. H. Hurst, Ph.D. Fifth edition; revised by F. W. Gamble, M.Sc. London: Smith, Elder, and Co. (Demy 8vo, pp. 486, illustrated).

The previous editions of this work have rendered the names of "Marshall and Hurst" household words wherever zoology is studied and it is therefore needless to dwell upon the special characteristics of the book or to show wherein its excellence consists.

Comparing this with previous editions we find that it contains exactly the same number of pages, and we congratulate Mr. Gamble on having resisted the temptation to extend it by the incorporation of new matter. We note, however, that it has been brought up to date in various important respects. The introductory section treating of technique has been materially improved as regards the directions for the use of stains and the cutting of sections, though the vacant page (p. 36) might have been profitably occupied by an account of the microtome and the preparation and study of serial sections. These play such an important part in modern investigations that even the elementary student should be acquainted with them, and the omission is the more noticeable inasmuch as reference is made to their use in the chapter on *Amphioxus*.

In describing the figure of the fowl's skeleton Dr. Hurst promulgated the theory that the digits of the wing correspond to the third, fourth, and fifth of the normal vertebrate hand—a view which has not met with general acceptance. The editor has wisely alluded to these digits simply as preaxial, median, and postaxial; a method which does not imply any theoretical conclusions or the decision of a moot point without the possibility of presenting evidence. Some changes, based on recent investigations, will be found in the description of the cranial nerves of the dogfish, and there are one or two minor modifications in the account of the skull of the fowl. In a book of this kind innovations are dangerous; the reviser has done well to make so few alterations, and we believe that wherever they do occur the change has been for the better.

An Introduction to the Study of Zoology. By Miss B. Lindsay. London: Swan Sonnenschein and Co. 1899. (Demy 8vo, pp. 376, 124 illustrations. 6s.)

Miss B. Lindsay says in her preface that this little book is a kind of guidebook for readers who are about to begin the study of zoology, and it must be admitted that on the whole it is well calculated to fulfil its purpose—as, indeed, is vouched for by the fact that a second edition has been called for in four years. The first section of the book is devoted to "general principles," with chapters on "the distinction between animals and plants," "the cell and its structure," "embryology and reproduction," etc. Part II treats of systematic zoology, and opens with a well-written chapter on "classification," in which modern theory and practice are very clearly explained and illustrated. We must, however, demur to the retention of the term "*Molluscoida*," as being too antiquated even for an elementary textbook. Why furnish the beginner with something he will only have to unlearn? Nor can we see what good purpose is served by referring again to the exploded theory that the pteropods are closely related to the cephalopods, a statement which we do not believe any zoologist would now maintain. Miss Lindsay's "advice to students" in Part III is, on the whole, sound and judicious, though we think that even the solitary learner should be urged to study real animals from the very outset, and not be encouraged to read even the smallest elementary manual without checking its statements by practical work. We are in thorough sympathy with the spirit shown in Miss Lindsay's argument that even the dead body of an animal, whatever its kind, should be regarded with a certain reverence, and with her chapter on "animals as fellow creatures." It is a pity that such feelings are not more commonly inculcated in zoological textbooks.

Organic Chemistry. By Victor von Richter. Edited by R. Anschütz. Translated by Edgar F. Smith. Vol. i. Third American from the eighth German edition. London: Kegan Paul, Trench, Trübner and Co. 1899. (Cr. 8vo, pp. 625. 15s.)

That Professor Richter's *Organic Chemistry* should, after twenty-three years' existence, require yet another edition in spite of the great number of works of similar scope which are now in the field, is evidence of the great care with which the book was originally planned. In the earlier editions the whole of organic chemistry was included in one small volume, but

now we have a volume of 600 pages dealing with the fatty compounds only. It is not a book which should be put into the hands of a beginner, for when we find complicated formulæ like that of itaconic acid discussed as early as p. 53, while a simple body like acetic acid is not described till p. 245, it becomes evident that a fair general knowledge of the subject is expected from the reader.

A very comprehensive account of the methods of formation and properties characteristic of each group of compounds, such as hydrocarbons, alcohols, and acids, is followed by a short statement of the properties and reactions peculiar to the more important members of the group. In other words, theory precedes experiment, whereas in a book intended for beginners no step should be taken without reference to experiment. We notice that on p. 146 ethyl sulphonic acid is misprinted ethyl sulphuric acid, a name which, of course, belongs to a totally different body.

The translation is well done, but we doubt whether the English reader would recognise the common currant under the title of the St. John's berry. The book is well brought up to date, and we even find many of the names of compounds proposed by the Geneva Convention given within brackets, but we fancy it will be a long time before such names as "ethanol" for alcohol and "propantriol" for glycerine are in general use.

A Textbook on Practical Obstetrics. By E. H. Grandin, M.D., and G. W. Jarman, M.D. Second Edition. Philadelphia: The J. A. Davis Company. 1899. (Roy. 8vo, pp. 476. $4.)

This work has been thoroughly revised since the appearance of the first edition in 1895, "in view," as the authors modestly state in their preface, "of maintaining its position as the leading exemplifier of practical obstetrics from the modern standpoint." The aim of the work is stated to be that of "enabling the practitioner at a distance from the medical centres to acquire his knowledge clinically." Such fair promises cannot be said to be fulfilled, for among much matter that is undoubtedly good, we find methods recommended which we hope English obstetricians will not copy. In the chapter on version the authors state that when the after-coming head is delayed at the pelvic outlet, two fingers should be passed into the child's mouth, so as to admit air, and allow respiration to become established, and a photograph of the manœuvre is supplied. This is quite impracticable, and even if practicable would be absurd, for obviously the better plan would be to extract before respiration became established. In the same chapter, while discussing rotation in occipito-posterior cases, they recommend the passage of the entire hand into the uterus, so as to grasp the trunk of the child, and rotate it above the pelvic brim. The same result can be equally well attained by rotating the head, and at the same time pushing the anterior shoulder across the middle line by pressure through the abdominal wall. The risks attending intrauterine manipulations are thus obviated, and there can be no doubt that it is the better plan. The most valuable feature of the book is the painstaking and thorough manner in which the details of asepsis are set forth and insisted upon.

NOTES ON BOOKS.

The new (1899-1900) edition of *The Guide to South Africa*, edited by Messrs. A. Samler Brown and G. Gordon Brown (London: Sampson Low and Co.; Cape Town: Juta and Co., demy 8vo, pp. 412, price 2s. 6d.), appears at an opportune moment, when the thoughts of all and the feet of many are turned towards South Africa. In noticing previous editions we have praised the book, and no one who examines it can fail to agree that it is a thoroughly practical guide for the emigrant, tourist, sportsman, and invalid. It contains, in addition to detailed information as to the mode and cost of travel in South Africa, general articles on the constitution and history of the States and colonies and on the climate. We notice that the short note on precautions against malaria is in need of revision. The mosquito theory has now advanced so far that the authors, even if they are not prepared to subscribe to it, should at least mention it, and a paragraph on that subject might replace the last paragraph of the section, which, after recommending the habitual use of a respirator when passing through a fever belt, adds the astonishing statement that the traveller ought also to put wool in his ears to keep out infection!

INTERNATIONAL CONGRESS OF MEDICAL OFFICERS OF LIFE ASSURANCE COMPANIES AT BRUSSELS.

[from a correspondent.]

(Continued from p. 953.)

Statistical data Concerning the Mortality among the Assured.

Dr. Ferrand's paper on this subject was based on his experience as medical examiner for the Compagnie des Assurances Générales de Paris. The return extended over a period of twenty-one years, from 1878 to 1898, but of a total of 13,743 deaths from general causes, 3,953 were due to chest affections, 1,787 to gastro-intestinal and hepatic diseases, 1,439 to heart affections, 2,491 to brain affections, 829 to urinary diseases, 234 to typhoid fever, 163 to suicide, 43 to puerperal affections; accidents and unascertained causes claimed 2,674 victims. The number of policies in force on January 1st, 1878, was 29,527, whereas it had risen to 56,774 at the same date in 1898.

Traumatic Neuroses in Relation to Assurance.

Dr. Crocq (Brussels), after explaining the theories of Erichsen, Vibert, Brodie, and Charcot, went on to give a very full and documental exposition of the views held on the subject by authors of the present day. It was admittedly, however, more a study of the subject in its medico-legal aspects rather than in relation to life assurance. The meeting seemed to consider that the question of accident assurance was rather outside the sphere of the present Congress, so that this paper did not give rise to a very long discussion.

Syphilis and Assurance.

A report by Dr. Bayet (Brussels) on Syphilis and Life Assurance, dealt especially with the relation of the disease to other affections, and especially with its tertiary or late nervous sequelæ. Dr. Bayet would refuse:

1. Any proposer showing signs of active, secondary, or tertiary syphilis.
2. Any proposer who had had syphilis less than three years earlier.
3. Syphilitic proposers who showed signs of intemperate habits.
4. In some cases syphilitics, also suffering from malaria. If the malaria had not marked its impress on the syphilis in any very special form, if the proposer had been well treated, and if he lived under good hygienic conditions, the malaria *per se* might be disregarded as an aggravating factor of the syphilis.
5. Syphilitics who presented symptoms pointing to implications of the nervous system during the early stages of the illness, such as transitory paralysis, diplopia, epilepsy, apoplectiform deafness.

In the case of syphilitics who had undergone a proper course of treatment, Dr. Bayet would be prepared to admit them on the same conditions as those on which he would allow them to marry—that is, that they had been carefully and thoroughly treated, and that they had shown no sign of syphilis for a year at least. The care of syphilitics who had only undergone a partial or insufficient course of treatment was more difficult. Dr. Bayet thought that if the disease had been contracted over six years earlier, and if the patient had presented no symptom of any kind for more than a twelvemonth, he might be considered to be practically safe as far as cerebral affections were concerned. According to Fournier's statistics of 79 cases of tabes dorsalis, 73 followed attacks of syphilis which had been treated for less than a year. It must also be remembered that most of the cases of tabes had

been met with between the sixth and twelfth year after the infection. In the case of syphilitics who had not been treated at all the proposal should only be accepted if 15 years had elapsed since the infection, and if the proposer had during the whole of this period shown no sign of nervous implication, and if for a long time he had presented no symptom of unexpended infection. The only objection that was made to any of these conclusions was that a period of three years after infection, even when the proposer had been thoroughly treated, was insufficient. Dr. Bayet admitted that the longer the treatment the better he would consider the life; he had fixed three years as the necessary duration of treatment because in practice he found it very difficult to get patients to submit to a longer cure.

Neurasthenia.

Dr. Mahillon (Brussels) then read his report on What Neurasthenics may we Accept, which ought we to Decline? He adopted the classification proposed by Gilles de la Tourette.

1. Constitutional neurasthenia, including patients with a distinctly nervous family history.

2. Accidental or acquired neurasthenia, which may be further subdivided into: (*a*) traumatic neurasthenia, following on some accident, especially cases of railway spine; (*b*) symptomatic neurasthenia, the outward expression of the presence of a morbid condition of which the affected person either suspects the danger or of which he exaggerates the importance (hypochondria); (*c*) idiopathic or essential neurasthenia, which is a true breakdown of the nervous system as a result of exaggerated tension brought about by excessive excitations or by mental overwork.

The proposals of persons coming under the first class—constitutional neurasthenia—ought to be absolutely rejected. Those of proposers coming under the class of accidental neurasthenia ought to be either rejected or adjourned according as to whether the family history be neurotic or the reverse.

Though differences of opinion were expressed as to the classification given there seemed to be a perfect consensus with regard to the points which the examiner should carefully weigh in coming to a decision as to the acceptance or rejection of a proposal from a neurasthenic person. These are in the order of importance: The proposer's hereditary history, the nature of the causative injury, the proposer's general health, and the nature of his surroundings and occupation.

Tuberculosis.

As was to have been expected, the two rival schools of contagonists and hereditarians had a great fight at the morning sitting on September 27th over the paper on Tuberculosis in Man by Dr. Jules Meyer of Strassburg. Dr. Meyer stated at once that he did not attach much importance to the influence of heredity in tuberculosis, but that he was a firm believer in the contagious nature of the disease. He was one of the few reporters who made use of the statistics of life assurance companies in support of their views. The conclusions he had arrived at were as follows:

a. Any strong healthy person of a normal constitution might be accepted, even if his parents were the subject of tubercle.

b. Life assurance companies should decline (1) any person who has, or who might have been at any time affected with tuberculosis in any form. (2) Any proposer with a family history of tuberculosis who might be suffering at the time, or who might have had at some previous period of his life, pleurisy, hæmoptysis, chronic bronchitis, scrofula, or curvature of the spine. (3) Any person with a history of tuberculous pleurisy, hæmoptysis, congestion of the lungs, or recurring attacks of bronchitis. (4) Any dyspeptic person, the issue of tuberculous parents, if he did not get well after a course of appropriate treatment. (5) Any proposer with a family history of tuberculosis, or living under unfavourable hygienic conditions, if the circumference of his chest and his weight were much below the normal. (6) Any proposer under 35 or 40, if both his parents were tuberculous, and if he were not of very strong constitution. (7) Any proposer, who by his antecedents or his constitution, might be looked upon as a candidate for tuberculosis. (8) Any proposer, the issue of a tuberculous parent, who lived in intimate contact with a consumptive person. If the tuberculous husband or wife had been dead for two or three years, and the proposer were well, there was no risk whatever in accepting the proposal.

Several of the delegates in the discussion which followed dwelt upon the frequency of fistula in ano as a precursor of general tuberculosis. The difference of opinion on the subject of tuberculosis between the school of contagionists and non-contagionists seemed to be more apparent than real. All the speakers were unanimous on the one point at least: that the medical examiner ought to exercise the greatest caution in the examination, as well as in forming an opinion of the value of the life of a proposer whose family history was the least suspicious with regard to tuberculosis.

Fraud in Matters of Life Assurance.

Dr. Weill-Manton (Paris) mentioned as examples of the frauds that are occasionally perpetrated in matters of life assurance the two following cases: The first was one in which Dr. Motet was asked to examine a man in consultation. The conclusion he arrived at was that the patient was in the early stage of general paralysis. The family were cautioned to take the necessary legal steps to safeguard their worldly possessions. Shortly afterwards the patient was admitted to Dr. Motet's private asylum; the disease made rapid progress, and the patient died at the end of the third year. It then appeared that a heavy assurance had been contracted on the life of this patient a few days only after his first consultation, and that the company had made no difficulty in paying the amount of the policy. The second case was one which occurred in his own practice. A proposal for a large amount had been made to his company by a manufacturer holding a very high social position in one of the French provinces. Everything appeared to be straight and above board; the proposer's answers were perfectly satisfactory, and the medical referee had given a favourable report. The company was on the point of granting the policy when a telegram arrived informing them that the proposer was reported to be suffering from cancer of the œsophagus. A second most careful examination of the proposer by Dr. Weill-Manton and the local referee revealed no suspicious features or signs of cancerous affection. The examiners did not consider themselves justified in passing an œsophageal sound. The proposal was accepted, and the proposer died a few weeks afterwards. The subsequent inquiry revealed the fact that for several months past the proposer had been living on semi-solid food, and that he had presented most of the classical symptoms of œsophageal cancer, for which he had undergone treatment at the hands of a specialist. The forms of fraud were multitudinous, and the medical referee should always be on his guard for their detection. The commonest, perhaps, were the substitution of the urine of a healthy person for that of a diabetic or albuminuric proposer.

A most interesting point was incidentally raised in the discussion of this paper. It was this: How far is a medical referee justified in insisting upon making a vaginal examination in a case of suspected fraud in a female? Instances of cancer of the cervix were mentioned in which the disease had only been discovered quite accidentally by the company's referee. Most of the speakers were of opinion that no rule could be laid down, but that the examiner must be guided by his own professional knowledge and by his experience as a man of the world. One medical examiner mentioned as an example of fraudulent reticence on the part of proposers the fact that, of over 10,000 proposals that had passed through his hands, hardly more than a dozen contained an admission on the part of the proposer that he had had syphilis, whereas, according to Fournier, over 15 per cent. of the population have suffered from this disease at some period of their lives. It turned out, however, that the formulary which the candidate was requested to fill up contained no specific question with regard to venereal diseases. The logical conclusion to be derived from the debate on this subject was that the questions put to the proposer should be of as searching a nature as possible.

The Symptomatology of Constitutional Defects.

At the morning sitting on September 28th Dr. Verriest, Professor at the University of Louvain, read a paper On the Continuance of Morbid Conditions Through Life: A Contribution to the Symptomatology of Constitutional Defects.

He endeavoured to trace a large number of constitutional defects and malformations met with in the adult to their starting point in early infancy, the initial cause being, he endeavoured to prove, dyspeptic attacks in the first years of life. The examiner should be on the look-out for these stigmata, and he should attach due importance to them when he came to consider the value of the proposed life. This discourse appeared to be a trifle too learned for the majority of the members of the Congress, and no one rose to discuss its statements or conclusions.

CHRONIC ALCOHOLISM.

Dr. DEBOECK, of the Hôpital St. Jean, of Brussels, followed with a paper on Life Assurance and Chronic Alcoholism. Relying almost entirely on the statistics of English companies, he showed the great differences in the rates of mortality among abstainers and the general population at all ages. Alcohol had a tendency to bring on prematurely senile changes in most organs. Great importance should also be attached when estimating the vital capacity of any given individual to the hereditary history with regard to alcohol. The hereditary taint in children was in direct proportion to the age of the parents or to the length of time during which they had been given to intemperate habits. Dr. Deboeck stated incidentally that he knew of no sure sign by which the early stages of intemperance could be detected. He had given a great deal of attention to the examination of the urine of intemperate patients, but so far he had been able to discover no certain test for the by-products of alcohol in any of the human excreta. As a proof of the difficulty to be met with in the diagnosis of intemperance, he mentioned a case which had occurred in his hospital practice quite recently. A man, in whom he could detect none of the objective signs of drink, and whose family denied that he was in any way intemperate, died almost suddenly. At the *post-mortem* examination most of the classical changes in the tissues caused by alcohol were found in the organs.

The discussion which followed the reading of this paper showed that very different views were held even by medical men as to the exact amount of alcohol required to constitute intemperate habits, and that in estimating the value of a proposer's answers with regard to his drinking habits, the medical examiner should always bear in mind the views current on this point in the class of society to which the proposer belonged.

ALBUMINURIA.

Should Persons affected with Albuminuria be admitted to the Benefits of Life Assurance? is a somewhat free translation of the title of a paper read by Dr. WYBAUW of the Brussels University. After considering the various forms of albuminuria usually met with, he proceeded to the discussion of the various tests for albumen. He stated that he considered as amply sufficient for all practical purposes (1) Heller's ring by means of nitric acid in the cold, (2) acetic acid, (3) acetic and heat, (4) acetic acid and ferrocyanide of potassium. He did not think there was any very practical use, for life assurance purposes at least, in the differentiation of the various forms of albumen. The presence of albumen in the urine as a constant feature ought to be a bar to life assurance. In the same way he would reject a proposer whose urine contained albumen six months after an infectious illness. It was best to examine the urine passed at about 11 A.M. There were more chances of detecting cyclical albuminuria at this time of day than at any other. Persons affected with cyclical albuminuria, if under 30, might be admitted at a higher rate for a short period only provided the urine did not contain more than 0.5 per cent. of albumen. If the cyclical albuminuria were found to last for over five years the company should decline to renew the policy.

The interesting discussion which followed this paper showed how very little was really known as to the influence of albuminuria on the probable duration of life. Several of the members present mentioned cases in which, to their own knowledge, patients had passed large amounts of albumen regularly every day, and were yet apparently still in the very best of health. This led one of the delegates to ask the meeting to endeavour to fix some rule for the admission of persons suffering from albuminuria. The French delegates especially were averse to this proposal as being outside the province of the medical examiner's duties, and an actuary present stated that to his certain knowledge the attempt to insure impaired lives had proved a disastrous failure. Opinion seemed to be practically unanimous that so far the medical profession had no data to go upon to enable it to come to any conclusion on the subject.

EAR DISEASE.

Next followed a paper on the Importance of Suppurative Affections of the Ear in Relation to Life Assurance, by Dr. COOSEMANS, of Brussels. The conclusions he arrived at were that in case of a proposer suffering from suppuration of the middle ear, if after proper treatment extending over a period of several weeks or even months the suppuration ceased, the parts healed, and the perforations closed, the proposal might be admitted at the ordinary rate. If the suppuration ceased, but if a large perforation of the tympanum remained, the proposal might be accepted at a higher premium. If the suppuration still persisted with or without caries of the bones, the proposal ought to be definitively declined.

One of the members present asked what course should be adopted in the case of a proposer who had undergone an operation for the removal of the ossicles and carious bone, and in whom all symptoms of disease had disappeared. No satisfactory answer could be given to this question.

SKIAGRAPHY.

Dr. MAFFEÏ, head of the Radiographical Department of the Brussels Hospitals, delivered a short address on the subject of Radiography in connection with Life Assurance. The most important points to be gathered from the learned discourse appeared to be that by means of radiography it was possible to obtain positive proof of the existence of certain diseases, more especially of the osseous system; and that for these skiagraphs to be of any value two, at least, must have been taken of the same subject in different positions. A clever photographer could so easily touch up the plates that the examiner should always be present when the negatives were developed. The lecturer omitted to state the cost of this additional form of examination.

CONCLUDING PROCEEDINGS.

Dr. VLEMINCKA, the President, then called upon the Secretary-General for his final report.

After congratulating the Congress on the success of the meeting, and thanking the members for their assiduous attendance and for their valued reports, Dr. POELS stated that the Council of the present Congress proposed to found an institute or international society of medical officers of life assurance companies, the present council to act as the temporary committee.

This proposal was adopted *nem. con.*

The meeting decided that the next Congress should be held at Amsterdam in 1901; also that among the subjects to be discussed at that meeting should be the universal form and the subject of universal statistics.

Dr. SIRIDEY (Paris) asked that a special report should be presented on the subject of the examination of female proposers; also on the conditions on which diabetic proposers should be admitted.

Dr. WEILL-MANTON asked that the subject of appendicitis in connection with life assurance should not be omitted.

Dr. MAHILLON proposed as additional subjects for consideration at the next Congress the hereditary character of cancer and the diagnosis of alcoholism in its earliest stages.

This terminated the official proceedings of the Congress.

ENTERTAINMENTS.

The Committee had not overlooked the necessity of social gatherings for the success of the Congress. On September 26th the civic authorities received the members of the Congress and their wives at the Hôtel de Ville. There was a gala performance at the Opera on September 27th, and a subscription banquet on September 28th. An excursion to Antwerp, where the members were shown over the Vandyck Exhibition and the Plantin Museum, brought a very pleasant meeting to a close.

ENTERIC IN INDIA.—A report has been called for by Government on the prevalence of enteric fever amongst the troops in India, and on the measures which have from time to time been taken to combat the disease.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, OCTOBER 14TH, 1899.

MEDICAL EDUCATION.

About this time of year questions concerning medical education occupy much of our attention. Medical pulpits are, as will be seen in our columns, teeming with speakers upon the subject. Sir William Gairdner urges the importance of science as part of mental discipline, Dr. Byrom Bramwell discourses on the blessings which the previous generations of students did not enjoy, and Dr. Saundby at Nottingham attacks many parts of the curriculum at present in use. With all these much sympathy will be felt. Our own position we have seen no reason to change. We hope to see students come to the medical schools with a general education up to the level of the usual entrance examination at one of the older universities, or of a similar grade in the rather different training which now in some schools has replaced the old classics. This is impossible until the General Medical Council has raised its requirements above the Junior Local Examinations which are framed for boys under 16.

Next, we hope eventually to see chemistry and physics completed before the study of anatomy and physiology is begun. This ought to be done at school, and we are in entire agreement with Sir William Gairdner in lamenting the dearth of efficient science teaching throughout the country. It ought to be as much a part of a gentleman's education to understand the common objects of his daily life—in other words, to know the principles of physics and chemistry—as to be able to read Virgil. Sir William quoted most pertinently the criticism of Faraday upon cultivated ignorance, and much of that criticism is still unfortunately true, though some steps in the right direction have been taken. We are again in entire agreement with him as to the value of the humane studies, and have no wish to oust these, but rather to supplement them by adding the others to them. That this is impossible we entirely refuse to believe, but unfortunately there are at present no grounds for thinking that it is as yet satisfactorily carried out.

As regards anatomy and physiology there is undoubtedly a great deal of truth in Dr. Saundby's contention. Physiology as at present taught is not only to a large extent a useless extravagance, but is not even a good discipline. The wood is hidden by the trees, and in the devotion to detail the student loses sight of the groundwork of the science. Anatomy however does not itself afford a full discipline, since it exercises observation alone and gives little or no room for inference. In both the examinations are faulty. The examiners are for ever complaining that the students have no common sense, yet though they are themselves the teachers they seem unable to impress the student by their teaching with the necessity for exercising common sense. In the afternoon they criticise the system which they have been doing their best to perpetuate all the morning. The same may be said of the chemical examinations. The examinations at the Conjoint Board in England have, we are told, lately been of a higher standard than those of the preliminary scientific examination of the London University. Now that we have specialists teaching and examining in chemistry, physics, and physiology they appear to forget that our students do not intend to be chemists or physical philosophers or physiological investigators, but medical practitioners.

In the later stages of the course some points are open to criticism. Pathology is fast becoming a special science, and there is considerable danger that students may pay more attention to the varieties of sarcoma, or to the cultivation of staphylococci than to the explanation of the symptoms from which the patient suffers. In various ways we are at present suffering from the great advances lately made in the sciences ancillary to medicine, and from the increasingly high demands made by the profession of medicine on those who undertake its pursuit. We have absorbed more than we can yet assimilate, and until we have more thoroughly digested the mass of knowledge crowding on us we shall not reduce our present system of education to order and common sense.

The *Spectator* in an article on introductory addresses expresses regret at their tone: "All of them are full of thought and penetrated with philanthropic feeling, but we could wish to have seen more stress laid on the advantage of liberal culture to the whole profession." While it is admitted that the members of the medical profession have shared in the general advance of education, it is asserted that "the rank and file still need a caution that power of thought is as valuable to a physician as experience, and that if he has to 'mix his medicine with brains' the brains must be cultivated as well as the faculty of perception. The tendency is still towards a concentration of thought upon science, and especially science as applied to the cure of disease, which makes of doctors more of a caste than the members of any other profession, except the Navy."

It may be a surprise to many of us to be told that medicine makes so distinct a mark on a man; but it is a good thing sometimes to see ourselves as others see us, and in this case the eyes are certainly not unfriendly. But the writer goes further, and asserts that there is "a certain latent cleavage between doctors and other educated men which is most injurious to both—to the doctor because it thins alike his interests and his knowledge, to the others because they fail in the sympathy with medicine, which if it existed would double the doctors' beneficial influence." In support of this assertion we are asked whether, when any epidemic is present, we do not find the difficulty of driving our ideas into the heads even of the educated almost maddening. There ought to be no such difficulty, and there would

not be, we are told, were it not for "a certain difference in ways of thinking, produced by a difference of culture, which we contend ought not to exist." We have here the other side of the shield to that shown to us by Sir W. Gairdner in his address at Mason College, an address which we cannot help suspecting the writer in the *Spectator* had not read.

In the particular instance quoted it is open to us to retort that the difficulty is so great, not because the doctor has not learnt the humanities, but because the other has not received even so much education in science as to be able to understand its point of view. The retort will not convince an opponent, but the contention finds support in the facts, as we believe them to be, first, that the difficulty referred to is less to-day than it was ten years ago, very much less than a generation ago; and secondly, that the difficulty is slight when the persons to be convinced are members of another scientific profession—chemists, for instance, or engineers.

We cannot admit that the medical profession is asking that aspirants for admission to it should have a less broad education than others, least of all on one of the grounds assigned that "the mind predisposed to scientific inquiry is not, as a rule, interested in the humanities, and therefore wastes time in studying them." If such a ground has ever been taken, it certainly is not taken at the present day It is true that we have had to let Greek go, mainly for the reason that so little was really learnt either of Greek language or literature that it seemed wiser to give that little up in the hope of getting more Latin and modern languages. Whether the failure with Greek was due to want of time or to bad teaching who shall say? At any rate, the medical schools have to take the product of our secondary schools, where a love of the humanities ought to be instilled. We venture to say that the cause of the cleavage which our contemporary perceives dates from an earlier period than that at which university or technical teaching begins. In the case of the majority of boys intended for the medical profession the necessity for economy is a main consideration. A school must be chosen not because it is the best, but because it is within the parents' means. Therefore it is that we have ventured frequently to express in these pages the belief that the organisation of secondary education which the Government has taken in hand is a matter which very nearly concerns the medical profession. That others perceive a line of cleavage between the medical and other professions is, even though we may not agree with them that the cleavage is altogether due to a falling away on our side, a serious matter for our consideration, for it must tend to alienate the sympathies of those who ought to be our strongest allies, and so intensify the evil influences which at the present day are working to diminish the influence and the material rewards of the medical life.

THE ROENTGEN RAYS IN SURGICAL WORK.

WE have now, perhaps, had a sufficient experience of the Roentgen rays in surgical work to be able to estimate with some degree of exactness the measure and range of help that we derive from their use. The chief, and we think the most needed, gain has been in the localisation of metallic foreign bodies—bullets, needles, and the like—embedded in either the bones or the soft parts. At the outset of our experience the use of the *x* rays for this purpose was not infrequently misleading. The shadow of the embedded substance was enlarged, indistinct, distorted, and not localised with more than an approximate degree of accuracy. The more recent improvements in materials and equipment have, however, overcome with tolerable completeness the former roughness of the method. At the recent meeting of the Association at Portsmouth Mr. Clement Lucas showed skiagraphs of bullet wounds of the skull from two of his cases. The help derived in these cases from the use of the *x* rays was considerable, and in civil life we are now hardly likely to attempt the surgical treatment of any injury where a bullet is retained without an appeal to this method. In military practice the *x* rays will be of enormous advantage. Major Beevor has spoken of their use in the Tirah campaign, where, in spite of the innumerable difficulties of transport inseparable from warfare in a hilly country and against uncivilised races, the gain was considerable. Indeed, it may be safely asserted that no medical equipment for active military service will, in future, be considered complete unless an *x*-ray apparatus is included.

So far as other foreign bodies are concerned, the benefit is, at present, very doubtful. It is true that calculi can be seen, and have been seen in many cases. But biliary calculi are very frequently transparent to the rays, and renal and vesical calculi may not be large enough or dense enough to cast an unequivocal shadow. Glass, very fortunately, is opaque to the rays, and its detection and localisation is therefore as easy as in the cases of metallic bodies, but the results of the examination of cases of calculi are on the whole, disappointing.

Our chiefest expectation from the use of the rays was, however, in the elucidation of fractures, fracture dislocations, supposed fractures, or, in fact, any injuries, and some diseases of the bones or joints.

An atlas recently published,[1] containing a series of 80 illustrations of various fractures and dislocations, shows that in the depicting of these injuries we are very nearly approaching perfection. But the question naturally arises To what extent and in what degree are we aided by seeing the precise limits of the injury to the bones? So far as fractures are concerned it must, we think, be admitted that the practical gain is quite inconsiderable. No doubt in some cases our knowledge of the exact nature and extent of the fracture has been increased, especially in injuries to the wrist, knee, and ankle. In Colles's fracture, to take an example, it is now positively demonstrated that the line of the fracture is rather lower than was generally thought, that the carpus preserves its relationship with the radius, that comminution of the lower fragment is common, that associated fracture of the styloid process of the ulna, though occurring, is not usual, and that the amount of backward displacement of the carpus is by no means so great as we had, from clinical examination alone, been led to believe.

[1] *Skiagraphic Atlas of Fractures and Dislocations, with Notes on Treatment, etc.* By Donald J. Macintosh, M.B., Medical Superintendent, Western Infirmary, Glasgow. London: H. K. Lewis. Eighty illustrations. Roy. 8vo.

We have also learnt, what was impossible for us to elicit without the rays, the frequency and the precise delimitation of a fracture of the coronoid process associated with the graver lesions of the elbow. In all these particulars our knowledge is certainly more precise, but our capacity for effectively dealing with these fractures has not thereby been increased to any appreciable extent. By a careful examination of any fracture either with or without an anæsthetic, we can elicit all the knowledge which is essential to the successful treatment of the case. With the *x* rays we can learn more intimately the extent, the exact line of a fracture, the precise amount of comminution or displacement, the degree of associated injury, and so forth; but we use the same splint in the same manner to "set" the broken limb. And we have, moreover, still very much to learn from the new light. Many appearances produced in *x*-ray photography have been, and are, misinterpreted and it is almost essential that we should have in all cases a normal standard with which to compare the shadow of the injured member. Many appearances we can neither adequately appreciate nor explain. In fact, the dictionary of *x*-ray photography has yet to be written.

Perhaps it is not wholly unnecessary to call attention to the fact that there are certain disagreeables attaching to the indiscriminate use of the new light. A fracture that has passed undiagnosed, or a fracture that has resulted in some deformity after union is complete may be found in a patient who is only too ready to turn the law against the practitioner responsible for the treatment. And again the fact, by no means generally recognised, that the callus, both provisional and definitive, is for some length of time transparent to the rays, may give rise to misrepresentation and inconvenience. There is nothing to prevent any patient who has recently suffered from an injured limb, submitting himself to the skiagrapher. If the picture of a united bone proves then to show less than the perfection of result, the seed of ill-content is at once planted in the patient's mind, and may lead him to make unwarranted imputations on the skill of the surgeon.

The benefits then accruing from the new light are not unmixed. Certainly our material gain falls far short of reasonable expectations, and the disadvantages of the general use of the *x* rays by patients themselves we cannot afford to ignore.

"PHYSICIAN" AND "SURGEON."

In another column will be found an important letter from the Clerk to the Society of Apothecaries, from which it will be seen that the Society desires to obtain a judicial decision upon the question raised in the Hunter case. It will be remembered that in that case the Queen's Bench Division of the High Court quashed the conviction of the late Mr. Hunter, who had styled himself Physician and Surgeon, on the ground that he had not done so wilfully and falsely, but that the judges went on to pronounce the opinion that as a Licentiate of the Society of Apothecaries he had not the right to use the title of Physician. The question of his right to use the title of Surgeon was not discussed by the judges, inasmuch as he had not been proceeded against before the magistrates on this ground, and the point was not thus before the High Court. The Society of Apothecaries has now obtained an opinion from Sir Edward Clarke to the effect that an L.S.A. who has obtained his diploma since 1886 is entitled to describe himself as Physician or Surgeon, or both, and that the judgment in Hunter *v.* Clare would not of necessity be held to be a binding authority, inasmuch as the conviction of the appellant was quashed on other grounds, so that the opinions expressed by the Court as to the rights of the L.S.A. were, under the circumstances, immaterial to the issue. From remarks which fell from the judges, it was clear that they regarded the case as a friendly suit brought with the object of settling the question of the right to the title of Physician, and if Sir Edward Clarke's opinion is to be accepted, went out of their way to make a pronouncement on this point more or less as an act of complacency.

Many will be disposed to think that it is unnecessary to pursue the matter further, for the discussion which took place at the last session of the General Medical Council made it abundantly clear that the Council at least would not again allow itself to be brought into the position of proceeding against a registered practitioner for making use of titles which both custom and common sense justify him in using. On the other hand, some other body or some individual might do so. The Society of Apothecaries, in view of the instruction issued to their Licentiates, considers itself to be under an obligation to obtain a judicial decision which shall not be open to exception, and upon this point of policy it has the right to form its own opinion, and may well demand that facilities should be afforded it to attain the object in view. At any rate the Society has now invited the co-operation of the General Medical Council in having the issue retried in some form so that the question, which we have always contended ought never to have been raised, may be finally and formally set at rest. It is probable that not a few members of the Council will be indisposed to fall in with this suggestion, for though as a matter of fact the question was raised by action taken in the name of the Council, the discussion made it quite clear that the particular issue never would have been raised had it been clearly placed before the Council. The Council voted the prosecution under a misapprehension, as has been practically admitted. But having thus been placed in a very unfortunate position, it would appear to be under some obligation to do what now lies in its power to meet the views of the Society of Apothecaries, which, on the question of expediency, must be the best judge. The application from the Society will doubtless be discussed at the next session of the Council, when the representative of the Society will be able to give full expression to the views of that body, and explain the motives by which it is actuated in taking the course indicated in the letter from the Clerk.

PLAGUE DUTY IN INDIA.

When plague made its appearance in India and caused an enormous amount of sickness and a large mortality, first in Bombay and then in other cities, it was generally recognised that the Indian Government was not only fully justi-

fied in adopting unprecedented means for dealing with this new danger, but under a distinct obligation to do so. It was hoped, moreover, that this difficulty would be of comparatively short duration. Very vigorous measures were taken, and it must be confessed by all that they have not met with the success which was hoped. Plague has not disappeared, and it is now impossible to say when the country may be free from it. Whether any measures which could have been taken would have been successful in stamping out the disease is of course open to doubt, but in looking back upon what was actually done, it is seen that various mistakes, some of them of great magnitude, were made. Among these mistakes was the initial error of withdrawing the organisation of the measures for the prevention of the spread of the disease from the jurisdiction of the Indian medical authorities, and vesting them in lay plague commissioners. These have been either civil servants or military officers, no doubt able and competent men in their own sphere, but very unlikely to have any adequate sanitary or hygienic knowledge or training. By no stretch of complaisance could they be considered the best men to direct an essentially sanitary fight, for it will hardly be credited that the medical service was wholly unrepresented on the Commission, although without medical advice it was powerless to effect proper sanitary work. This looks like a repetition of the old folly, which excluded medical officers from mixed sanitary Boards, but which could effect nothing without the advice of "attending medical witnesses." Of course we are not questioning the prime necessity of having the civil power, duly armed with magisterial authority, on the Plague Commission, because it was the proper arm to carry out measures which involved interference with civil rights and property. It is not, however, easy to see why temporary magisterial power could not have been conferred on medical officers doing the actual sanitary work, as well as on officers of the Staff Corps nominally doing it. The Indian Government could hardly be afraid to trust medical officers with such power, seeing that not a few of the very best administrators and political agents India has known have been medical men. Instead of utilising the sanitary skill of their medical administrators, the Government took the control of medical officers on plague duty out of the hands of the Surgeon-General of Bombay, and placed it in those of two civil servants, with enormous pay, each aggregating that of half-a-dozen executive medical officers! Well might a writer in the *Asiatic Quarterly Review* ask whether the services of even an eminent Bombay civil servant as plague superintendent on Rs.4,000 a month, could be worth that of a dozen medical men combined? At Bangalore it was the same; a very young civilian was made plague commissioner on a high salary, while there were several capable and experienced medical officers, who could have done the work far better. Even, therefore, on the lesser score of expense, the Plague Commissions were organised on mistaken lines. The special plague duty pay of medical officers has also been wholly inadequate for the severe nature of the work and the high risks run, in this respect in marked contrast to the splendid emoluments of the civilians, who had of course much less personal risk. We are well aware of the very good work done, and the splendid devotion, often amounting to heroism, displayed on plague duty; but since the disease still continues it is not unreasonable to inquire whether radical changes in plague administration are not called for; and whether these changes should not include placing the officers employed much more fully under the direct control of sanitary experts. The recent appointment of Colonel Wilkie, I.M.S., to be special Principal Medical Officer for plague operations in Bombay appears to indicate that the Government is beginning to recognise that this must be done. We hope that this may be taken as an indication of a change of policy.

THE LEICESTER BOARD OF GUARDIANS.

IT will be recollected that some months ago the Local Government Board applied for a writ of *mandamus* to compel the Leicester Board of Guardians to appoint a vaccination officer. It was then urged on behalf of the guardians that the Local Government Board themselves had power to appoint a vaccination officer, and that they should pursue that course instead of endeavouring to force the guardians to make the appointment. This objection, however, was overruled, and the writ was granted. The solicitors of the Local Government Board have now attended a meeting of the guardians, and have served each member with a notice requiring them to make a return to the writ of *mandamus* of the High Court. A minority of the guardians strongly urged that if they appointed an officer they would be able to insist on his obeying their instructions, and the leaders of the minority moved that the *mandamus* be endorsed to the effect that the local Board would take steps to fill the vacancy. On the other hand, Mr. J. T. Biggs moved that a resolution not to appoint an officer be endorsed on the *mandamus*, and then returned to the High Court. By a majority of 26 to 20 the motion of Mr. Biggs was carried. It will be remembered that in 1891 a rule *nisi* was obtained against the Kettering Board of Guardians for the purpose of enforcing the appointment of an officer, but their obedience to the rule rendered further proceedings unnecessary. Should the guardians at Leicester fail to purge their contempt, it is clear that they expose themselves to penalties incident upon a writ of attachment; such a writ would even lie against the inhabitants of a parish (R. *v.* Wix, 2 B. and Ad. 203). The general rule is that all those to whom the writ is directed are liable to attachment for disobedience, but in the case of a corporation attachment will not issue save against the particular persons who refuse to obey the *mandamus* (R. *v.* Poole, 1 Q.B. 616). The twenty advocates of the appointment of an officer will therefore go unharmed, whatever be the final result of the proceedings. The course now to be pursued by the Local Government Board will be watched with interest by all concerned, but in the circumstances it is not easy to see any alternative to the imprisonment of the recalcitrant guardians, who, as it happens, are not wholly confined to the sterner sex. No doubt the Anti-vaccination League will do its utmost to make capital out of the punishment of the guardians, self-inflicted though it be. But the comparative narrowness of the majority by which the policy of Mr. Biggs is now upheld, and the repeated transference of supporters from him to the opposition, is a strong indication that even in Leicester there is great doubt as to the wisdom of the proceeding of the more extreme party amongst the guardians. The *Leicester Post* is against Mr. Biggs, and the whole drift of the discussion gives ground for hope that the efforts of the Antivaccination League to encourage disobedience of the law may achieve only a minimum of success.

THE ARCHIVES OF NEUROLOGY.

THE first number of the *Archives of Neurology from the Pathological Laboratory of the London County Asylums, Claybury, Essex*, has been presented to the Asylums Committee, though it is not yet officially published. A scholastic metaphysician would have described the situation by saying that, although the volume exists *materialiter* it does not yet exist *formaliter*. Materially considered, however, it is a work of very solid substance, comprising 550 octavo pages, with numerous illustrations. The editor is Dr. F. W. Mott, F.R.S., Pathologist to the London County Council Asylums, who contributes valuable papers on the relation of brain syphilis to organic brain disease and insanity; on juvenile general paralysis; on the changes in the brain, spinal cord, muscles and other organs found in persons dying after prolonged epileptiform convulsions, and other subjects. Among the other contributors are Dr. Hamilton

Wright, Dr. Wakelin Barratt, and Mr. Cecil F. Beadles. A communication of special interest from more than one point of view is one by Mr. Herbert E. Durham, on the etiology of asylum dysentery. A preface is contributed by Dr. W. J. Collins. We hope to give a more extended review of this important publication, which is to appear annually, in an early issue.

THE JENNER INSTITUTE OF PREVENTIVE MEDICINE.

At the opening of the winter session of the Jenner Institute on October 9th, Dr. Macfadyen delivered an address upon the Institute and its work. He said that it was only of late years that bacteriological inquiry had received any encouragement or support in this country, while the work initiated by Pasteur and Koch had found immediate recognition on the Continent. In Germany the hygienic institute was an essential feature of every university town, and a centre of active research in bacteriology and preventive medicine. In France bacteriological inquiry had always received encouragement. The Pasteur Institute recently opened at Lille was supported by the Government, the municipality, and the manufacturers of the district. The results of bacteriological inquiry were not only of importance to medical men; they had a direct practical bearing on the work of the brewer, chemist, and agriculturist, and the commercial interests of a country. The British Institute of Preventive Medicine was founded in 1891, and a public appeal for funds and the response made showed that the idea of a national institution for the study of bacteriology met with wide approval. An event of far-reaching importance was the public announcement of Lord Iveagh's intention to devote the sum of £250,000 to the promotion of the objects for which the Institute was founded. The new Articles of Association—a condition of the gift—had just been confirmed by the Court. The Institute had already published two volumes of *Transactions* embodying work carried out in its laboratories. The antitoxin department was engaged in preparing various therapeutic serums, notably the antidiphtheria serum. The primary object of the Institute was research, but facilities were afforded for post-graduate instruction in preventive medicine and bacteriology. The diagnosis of infectious diseases was constantly being carried out for the main parishes of London, as well as the investigations of questions affecting the public health on behalf of sanitary authorities. The Chemical and State Medicine laboratories would find much to do in connection with water, sewage, food, poisons, etc. A notable addition had been made to the resources of the Institute in the Hansen Laboratory for the study of the practical application of bacteriology to industrial and technical processes, and the most important results might be anticipated in the future from this branch of investigation. We may add that a second volume of the *Transactions of the Jenner Institute of Preventive Medicine* has just been issued, and bears eloquent testimony to the excellence and the extent of the work carried on by the Institute.

THE NEW ST. MARY'S HOSPITAL, MANCHESTER.

On October 9th the Countess of Derby laid the foundation stone of the new St. Mary's Hospital and Manchester and Salford Lying-in Hospital and Dispensary for Women and Children which is being erected in Gloucester Street, Oxford Street, Manchester. Amongst those present were the Countess of Derby, the Lady Mayoress (Mrs. W. H. Vaudrey), the Bishop of Manchester (Dr. Moorhouse), the Dean of Manchester (Dr. Maclure), Sir John William Maclure, Bart., M.P.; Sir William Agnew, Mr. W. J. Galloway, M.P.; Alderman Gibson (Deputy Lord Mayor), Dr. Roberts, and Dr. Walter. The new buildings have been rendered necessary by the growth of the work and usefulness of the institution. The committee states that the appeal for funds has met with a liberal response, including a donation of £1,000 from a lady who wishes to remain anonymous, but a considerable sum is still required. The Earl of Derby briefly sketched the history of the institution from its foundation in 1790. This was one of the first hospitals in which lectures were given upon the subjects specially connected with the hospital, and one of the first where scientific instruction was given to nurses. He hoped that the stone which Lady Derby had laid that day would be the memorial of a building started in good hope and carried forward successfully and well. Mr. Matheson, Chairman of the Board of Management, moved a vote of thanks to the Countess of Derby and to the Earl. Dr. Lloyd Roberts, in seconding, said the house of Stanley had been associated with St. Mary's Hospital from time immemorial. Its members had been especially kind to the hospital on many occasions almost without the asking. He should like to mention his lordship's immediate predecessor, the late Lord Derby, who was conspicuously good and generous on more than one occasion. To Lady Derby and Lord Derby they were deeply grateful. The resolution was carried with applause. On the conclusion of the ceremony the Earl and Countess of Derby drove to the Town Hall to lunch with the Lord Mayor and Lady Mayoress. Among those invited to meet them were Sir J. W. Maclure, Bart., M.P.; Mr. W. J. Galloway, M.P.; Dr. and Mrs. Lloyd Roberts; Sir William Agnew, Bart.; Dr. and Mrs. Walter; Dr. and Mrs. Donald; Dr. and Mrs. Nesfield; and Dr. and Mrs. Cullingworth. After proposing the health of the Earl and Countess of Derby, the Lord Mayor proposed the health of Mr. Duncan Matheson, through whose efforts it was that the hospital was being built. He had collected over £40,000 for the purpose, and he was devoting the greater part of his time to the successful issue of the transfer of St. Mary's Hospital from its present site to the more suitable site on which the Countess of Derby had that day laid the foundation stone.

WOOD PAVEMENT.

The mind of Harley Street is at present much exercised on the subject of wood pavements. The inhabitants of that classic thoroughfare are wont to complain that it is the muddiest and the most highly rated in London. At present the authorities are picking up the macadam and laying down wood pavement, an innovation which might have been expected to be regarded as an improvement, as it would have the effect of diminishing the noise, if not the mud. But the residents are not showing the gratitude expected. It is objected on their behalf that the wood used is not properly prepared, and that wood pavements are unhealthy. The two objections must be considered together, for the healthiness or otherwise of wood pavement depends to some extent on the quality of the wood blocks used. Mr. Mason, the Engineer of the St. Martin's (Strand) Vestry, in a paper read at the Congress of the Sanitary Institute a couple of years ago, expressed the opinion that wood was the material best suited for town pavement (1) if the roadway were properly constructed in the first place; (2) if the wood blocks used were of hard wood, or of wood thoroughly creosoted *in vacuo*; (3) if the surface were carefully maintained and frequently renewed, and (4) if it were well scavenged. The failures of wood pavement had, in his opinion, often been due to too little attention having been given to the contour of the road so as to allow a natural fall to the gullies. He insisted further that many of the complaints that had been made with regard to wood pavement had been due to inefficient scavenging. Comparisons to the disadvantages from the hygienic point of view of wood pavement have generally been made with asphalt, and there can be no doubt that asphalt properly laid is the most healthy road

surface, where the traffic is heavy, provided that it be kept thoroughly clean; but until the horse has been replaced by the motor the slipperiness of asphalt is a serious objection. The comparison has usually to be made between a street which is macadamised or laid with granite setts, and one which has a wood pavement. There are not many data for such a comparison, but the experiments of Polak quoted in the BRITISH MEDICAL JOURNAL some time ago[1], appear to show that the amount of pollution of the atmosphere produced by stone setts is far greater than by wood pavement, and that the whole matter really depends upon the relative ease with which the various kinds of paving can be cleansed, and the zeal of the local authority in scavenging.

"CHANGE OF ADDRESS."

AT this season of the year it may be opportune to call attention to the notice issued by the General Medical Council in the advertisement which has recently appeared in our columns. The advertisement, among other things, points out that it is of great importance that every registered practitioner should be careful to send to the Branch Registrar, by whom he was originally registered, immediately notice of any change of address, in order that it may be inserted in the *Medical Register*. The Medical Act, Section XIV, enacts that if a registered practitioner fails to answer a letter of inquiry he is liable to have his name erased from the *Medical Register*, and it would appear from statistics published in the last edition of the *Medical Register* that in 1898 no fewer than 400 names were removed from the *Register* under this section. Practitioners registered in England or Wales should communicate any change of address to Mr. H E. Allen, LL.B., Registrar, General Medical Council Office, 229, Oxford Street, London; if resident in Scotland, to Mr. James Robertson, Registrar of the Branch Medical Council for Scotland, 48, George Square, Edinburgh; and in Ireland to Mr. S. Wesley Wilson, Registrar of the Branch Medical Council for Ireland, 35, Dawson Street, Dublin.

THE PURIFICATION OF THE RIVER LEE.

AN arrangement recently concluded between the Corporation of Hertford and the East London Waterworks Company should achieve something towards allaying the heartburning which has centred round this subject. The river Lee first becomes navigable at Hertford; and, while no part of its course above this point can be adjudged immaculate, the list of sanitary sins accumulated during its sluggish flow into Bow Creek—that *cloaca fœtida* by which it debouches into the Thames—has been proclaimed appalling. Despite its exoneration by the late Mr. Justice Williams in the trial of 1884, the town of Hertford is still regarded in some quarters as one of the worst offenders. The local difficulties have, no doubt, been considerable. The sewers bequeathed to the Corporation by the New River Company when they sewered the borough on condition that its Corporation undertook the responsibility of properly and effectively treating the sewage pursue in many cases an undulating course, and are so far from being watertight that the sewage proper is diluted by from four to five times its bulk of subsoil water before it reaches the works. The character and disposition of the ground in the neighbourhood render it unsuited for irrigation, and would make the expense of any effective pumping scheme very heavy indeed. Confronted with such difficulties on the spot, and perpetually reminded that they would be expected very shortly to undertake their share of some great scheme for the sewerage of the whole Lee Valley on an enormous scale, the City Fathers may feel justified in congratulating themselves on the caution which prevented them from too precipitately meddling with that system of sewage treatment which the Legislature had sanctioned, and which furnished an effluent of which it could at least be asserted that it contained no organism which was absent from the water of the reputable New River. Now their anxieties are set at rest by an agreement according to which their sewage works are leased to the East London Waterworks Company for a term of thirty years, with power of extension for another thirty years if desired, at an annual rental of £1, the Corporation paying £700 per annum to the company (including the £600 which it now receives under the old agreement from the New River Company), and an additional £100 a year as soon as the population of the borough exceeds 15,000. On its part the East London Company will efficiently treat and dispose of all the sewage sent into the works, and undertakes all the liabilities and duties of the Corporation in connection therewith. The arrangement is one which should be satisfactory to the Corporation in view of the relief which it affords to them in connection with a matter of primary local importance, bristling with peculiar difficulties, and always attended with anxiety. It can scarcely be unsatisfactory to any of those who are directly interested in securing the purity of the river throughout its course. While the public at large will not disapprove of an arrangement by which the company which has acquired the statutory right to divert and to sell a large amount of the water of the Lee assumes a direct share in the burden of keeping the river free from pollution.

[1] Vol. ii, 1898, p. 653.

THE HANBURY MEDAL.

AT the opening of the School of Pharmacy on October 2nd, Mr. W. Martindale, President of the Pharmaceutical Society of Great Britain, made the formal presentation of the Hanbury Medal which had been awarded to Dr. Albert Ladenburg, Professor of Chemistry of the University of Breslau. Mr. Martindale said that Dr. Ladenburg was best known to English pharmacists by his synthetic work in the production of homatropine. By splitting up atropine he obtained tropic acid and tropine as derivatives; the latter he combined with amygdalic acid to form a compound which is easily converted into oxy-toluyl-tropeine or homatropine, an artificial alkaloid which, with its salts, has proved of the greatest service to ophthalmic surgery. His mathematical method of treating synthetic formulæ, and his prismatic benzene ring, placed him in the first rank of chemists as a theorist, while, as regards his practical work, the long list of communications to scientific societies and literature at home and abroad included articles on the Valency of Nitrogen, on Synthetic Alkaloids, on the Relationship between Hyoscyamine and Atropine, and the Conversion of one Alkaloid into the other, on Hyoscine, on the Mydriatic Alkaloids occurring in Nature, on the Synthesis of Coniine, and on the History and Constitution of Atropine, in addition to the compilation, with other collaborators, of a dictionary consisting of more than a dozen volumes treating of inorganic and organic chemistry. Few equalled him as an indefatigable worker and investigator. The medal was formally received by Baron von Mirbach, representing the German Embassy, and a letter was read from Dr. Ladenburg expressing his thanks for the honour done him, and regretting that he had been unable to be present to receive the medal personally.

AS OTHERS SEE US.

IN the *Concours Médical* of October 7th, Dr. P. Lacroix gives an interesting account of the annual meeting of the British Medical Association held at Portsmouth, which he was privileged to attend in the capacity of an "invited guest." He says the welcome extended to the foreign visitors far exceeded in its cordiality the limits of ordinary courtesy. He is allowed to take part in the work of the Sections, and is admitted to all the functions and entertainments, a good place being everywhere reserved for

him. Often, indeed, the British practitioners, with truly charming freedom and kindness, open wide the doors of their homes to their foreign brethren, and hospitably entertain them for a whole week—a feature in our national manners which naturally strikes a Frenchman, who is jealous of admitting strangers within his gates. Dr. Lacroix was much struck by the business-like way in which the meeting was organised, and by the perfection of the arrangements for the guidance and comfort of members and visitors. He was also much impressed by the many proofs which he saw of the fact that the municipal, military, and naval authorities, and the inhabitants, looked upon the visit of the Association as an honour done to their town. Dr. Lacroix was present at some of the general meetings, and was greatly interested by the extensive view with which the Association surveys mankind, everywhere watching over the honour and interests of the profession, whether it be in regard to the grievances of practitioners in Jamaica or to threatened legislation as to midwives at home. In reference to this last point, he has something to say of the oratory to which he listened in the course of the discussion, "often good-tempered and witty, sometimes also, it is true, couched in a warmer, more acrimonious tone." He specially notes the *âpre éloquence* with which one speaker denounced the Bill and everything connected therewith. The scientific work of the meeting Dr. Lacroix leaves for a further article.

JOHANNES MUELLER.

On October 7th a monument to Johannes Müller was unveilled at Coblentz—the place of his birth—with due ceremonial. Rudolf Virchow, the great pupil of the great master, was the principal speaker. He said that the promoters of the movement had found it difficult to choose an appropriate inscription. The simple one chosen by the sculptor: "To the great anatomist and physiologist," would perhaps hardly satisfy all concerned. Strictly speaking, Johannes Müller was a biologist, a naturalist whose aim was the study of life itself in its universality. He was the first to use the microscope in researches on living beings; he was the first to disclose to us the fauna of the seas. His example inspired the deep-sea researches of our own day, of which the German scientific station in Naples formed a centre. "For what purpose," said Professor Virchow, "is all this? What is the sum of all these problems? It is the knowledge of the interdependence of things, and here we come to the difficult that separates, and will long continue to separate, humanity. We old pupils of Johannes Müller think his method pre-eminent. Müller's method was observation; he put things into the right positions for exhibiting their action, and then registered his observations. This is called the objective method. When Müller was a young man the reigning method was the subjective." The subjective natural philosophers endeavoured to find truth by the method of inductive thought. At the time of Müller's youth it was believed that from inanimate nature, from atoms, from matter, or substance, new combinations might form themselves, which finally might lead to the generation of living organic forms, that in short plants and men might be evolved from dust. In modern times this had been named spontaneous generation. Johannes Müller warned against such hypothetic conclusions. He said: "We cannot generate living substance, and as long as we cannot do so, as long as we have no proof, we must put these theories aside; and (said the speaker) that is the standpoint of resignation, of submission, that is the true position for a naturalist, such as Müller was." Professor Virchow went on to say that in Coblentz, where the eye fell upon so many monuments of warriors, this was the first public monument erected to a man of pure peace. Johannes Müller was no politician; he shared the position of Goethe as a man of science and of peace. His monument would exercise the greatest influence if it incited youth to emulate Müller's example; it was a testimony of the heights of human knowledge to which simple objective thought could rise. Professor Koester, Rector of Bonn University, speaking as the representative of the Monument Committee, then handed over its charge to the mayor and municipality of Coblentz. Professor Waldeyer, Rector of the Berlin University, made the closing speech as the delegate both of the Berlin University, where Müller's chief teaching years were spent, and of the Prussian Academy of Sciences. In these two institutions, said Waldeyer, Johannes Müller had raised a monument to himself that no time could destroy.

THE PROPOSED DUBLIN ISOLATION HOSPITAL.

A special meeting of the Dublin Corporation was held on Monday to consider the proposal to erect an isolation hospital for the city. It was stated that 140 beds would be sufficient because enteric fever and pneumonia might continue to be treated in the existing hospitals in the city. In opposition it was urged that the Corporation had not sufficient information. At the outset there were two opinions as to cost. The proposer said that 100 patients could be provided for at a cost of £10,000; while Sir Charles Cameron said it would cost £20,000 to house 80 patients, and that estimate did not include furniture. The Edinburgh hospital had cost £250,000, and there was a huge annual expenditure. If the scheme of housing the working classes were carried out it would reduce the death-rate by 15 per 1000. The death-rate was not due to epidemics, but to the wretched condition of the tenements. Until the lanes and alleys were cleansed they would have a high death-rate. Finally, an amendment was carried postponing further consideration of the question until a full statement of the proposed scheme could be laid before the Council.

MOTOR CARS FOR MEDICAL MEN.

The *Autocar* published, on October 7th, a special number containing a series of articles on autocars for medical men. The writers speak from personal experience, and are more or less enthusiastic on the merits of self-propelled carriages. The general impression to be gathered from the articles is that assuming that a good machine is bought in the first place and that it is sent out in good order, which it would seem is not always the case, there is a considerable saving of time, because in the first place the car is ready to start at a few moments' notice, can travel continuously at a good pace, and does not tire. With regard to cost it appears pretty plain that the economy will not be conspicuous unless the owner takes pains to understand his machine and have sufficient mechanical skill and knowledge to adjust parts which get out of order and at least to supervise the execution of minor repairs. If the owner will not take this trouble, or has not the necessary aptitude, the expenses both for the wages of the the man who looks after the car and for repairs are apt to mount up. Some of the writers speak very favourably of the motor tricycle, but the rider is, of course, more or less exposed to the weather so that on the whole for ordinary country work a covered motor would be necessary. The advice given by Dr. Edward Phillips (Coventry) seems to be particularly sound. He says: "I am certain no doctor would ever regret buying a motor car, but it should be an English-made one, suitable for English roads, possess a long wheelbase, four equal-sized wheels with Dunlop pneumatic tyres, a body specially made with space for carrying the necessary equipment for country practice: everything should be of the best workmanship, and the price should not be extravagant." On the other hand the advantage of the motor car in a town practice is not so evident, and one correspondent, who has such a car, states that he does not use it except for country work or for

amusement. As to cost, one correspondent estimates that the initial expenditure would be from £150 to £170 for the car, while another estimates the upkeep at from 5s. to £1 18s. 6d. a week, comparing it with the initial cost for a horse, carriages, and harness of £135 to £165, and upkeep for forage, coachman, and stable rent, at £2 8s. a week. The great difference in the estimates for the upkeep of the motor car is accounted for by the question whether a special mechanic is or is not employed to look after and drive the car. We should certainly recommend any of our readers who are thinking of going in for a motor car to obtain this number of our contemporary.

THE LONDON COUNTY COUNCIL.

The London County Council resumed its sittings last Tuesday, the Chairman, Lord Welby, presiding. The resignation of the Earl of Onslow, the leader of the Moderate party, of his position as county alderman was received with general regret. The Council then settled down to work on an agenda paper of some 88 pages. Several matters of medical interest came up for consideration. The Asylums Committee recommended the provision of four receiving houses in London to which persons deemed to be lunatics, but not under certificate, might be consigned instead of sending them to the lunacy ward of a workhouse. The Council after discussion approved the principle of the report. The same Committee received sanction to the making of preliminary investigations as to the site of yet another county asylum. The Health Committee's recommendation to represent to the Local Government Board that the vestry of St. Pancras was in default in regard to its sanitary administration, especially in the number of inspectors employed, was carried after a discussion in which Dr. Collins drew attention to the close relationship between the housing problem and sanitary supervision, evidencing the case of Seaton Street, St. Pancras, to which attention has been directed in these columns. The same Committee also received the approval of the Council to drop further proceedings in the case of the Rowton Houses, but to appeal against the magistrate's decision that the Salvation Army shelters did not come within the definition of a common lodging-house.

THE MEDICAL CLASSES IN EDINBURGH.

We understand that Sir Thomas Grainger Stewart, guided by his medical advisers, has applied for and obtained leave of absence from his professorial duties during next winter session. He is greatly improved in health, but it was felt that it would be unwise, so soon after his recent illness, to face the heavy strain of teaching. His many medical friends are at one as to the wisdom of this step. It is understood that the Medical Faculty of the University has recommended that Dr. John Wyllie should be appointed to the duties of the Chair of the Practice of Physic, and Dr. Alexander Bruce to the duties devolving on Sir Thomas Grainger Stewart as one of the Professors of Clinical Medicine. These two appointments have yet to be ratified by the University Court, and in the case of the latter, also by the Board of Managers of the Royal Infirmary. It is believed that the ratifications are now merely formal.

HOLIDAYS FOR DISPENSARY DOCTORS.

The Irish Poor-law Guardians do not take kindly to the new law by which the dispensary doctor is entitled to have four weeks' holidays yearly, his substitute being paid by the Board. In many districts they have always been callous taskmasters and they deeply resent any curtailment of a power which they have used in too many cases with great harshness. Of course there is much vehemence of protest, and we note that the Donegal guardians have unanimously passed a resolution in which they charge the Local Government Board with having "allied themselves with the medical conspiracy to rob the ratepayers" and "written deliberate falsehoods with a view of misleading the guardians." Finally they have instructed their solicitor to take counsel's opinion upon the Local Government Board's action and the best course to pursue to restrain that body "from improperly interfering with and inciting their officers to defy the authority of the guardians." Perhaps one ought to expect this attitude in such a remote district as Donegal; but we find the Belfast guardians also in hostility. They object to the four weeks' holiday and to the payment of substitutes. We are surprised to find the guardians of such a wealthy community as Belfast, which is a great commercial and educational centre, fretting and fuming over a small question like this. They do no credit to themselves or their city.

A NEW DHOOLIE.

The easy and rapid transport of the wounded, especially in hill warfare, is a problem which has been attracting much attention recently. One of the latest contrivances for facilitating this object is a dhoolie designed by Major A. G. Kay, R.A.M.C., which is now under the consideration of the army medical authorities. The designer claims that his invention will increase fourfold the efficiency of field hospitals.

AN INTERNATIONAL SCIENTIFIC LANGUAGE.

On the invitation of the Prussian Academy of Sciences, delegates of all the European scientific academies have met in Wiesbaden for the discussion of some questions of international importance. Opinions are to be taken as to the possibility of establishing a uniform scientific language, and a uniform language for general intercourse—Latin for the former, English for the latter. Whether this result will be attained by the Wiesbaden meeting, whether it is attainable at all in our present multinational civilisation, is very questionable. But the fact that distinguished and eminent representatives of science have come together from all European States and from America for the purpose of seeking a way towards the realisation of more complete mutual understanding, thus forming, so to speak, a peace conference of science—this fact in itself is of the highest significance.

We are requested to state that so many civil practitioners have applied for temporary employment with troops in the United Kingdom that no further applications can be considered.

The Middlesex Hospital Medical Society will hold its first meeting this session on Thursday, November 2nd, at 8 P.M., at the hospital, when an introductory address will be given by Sir J. Burdon Sanderson. All past or present students of the hospital are invited.

The annual meeting of the Society of Anæsthetists will be held on Friday, October 20th, at 6.30, at the Café Monico. The meeting will be followed at 7.15 by the annual dinner, the President (Dr. Dudley Buxton) in the chair; R. T. Bakewell and E. H. Grant Morris, Honorary Secretaries.

The annual address to the North-West London Clinical Society will be given by Dr. T. Lauder Brunton, F.R.S., on Tuesday, October 24th, at 6.45 P.M. The subject of the address will be Biliousness and Gall Stones, and it will be given at the Trocadero Restaurant, Piccadilly Circus, where the second annual dinner of the Society, at which Dr. Lauder Brunton will preside, will take place immediately after the conclusion of the address.



Anopheles Puddles in Grassfields.

THE MALARIA EXPEDITION TO SIERRA LEONE.

HABITS OF ANOPHELES CONTINUED.—POSSIBILITY OF EXTIRPATION.—EXPLANATION OF THE OLD LAWS OF MALARIA.

[From a Correspondent.]

In my last letter I gave some of the habits of *Anopheles* here as ascertained by the members of the expedition. I am now in a position to add some more interesting facts.

Effect of Desiccation on the Larvæ.

The principal breeding pools have now been under observation for some weeks. Between the showers of rain they, of course, tend to dry up. The larvæ then collect in the deepest parts of the puddle. If a puddle dries up without complete desiccation of the mud at the bottom the larvæ survive, and spring into activity again when another shower falls. This has been confirmed by experiments *in vitro*. As, during the rains here, showers fall several times daily as a rule, it follows that the larvæ may continue to live indefinitely in very small puddles. When, however, the rain holds off for some days (as happened a week ago), complete desiccation occurs. It was interesting to observe the result in the principal haunts of the larvæ in Sackville Street. When rain fell once more after four days' fine weather, the puddles filled again immediately; but not a single larva, large or small, could be detected, showing that they had all been killed by the drought. In twenty-four hours, however (the rain continuing), a fresh crop of newly-hatched larvæ was found, and in a few days the pools were as thickly inhabited as before. Evidently either the unhatched eggs had withstood the desiccation, or the adult insects living in the neighbouring houses had laid eggs in the freshly-filled puddles, or both events had occurred. Assuming that the eggs can withstand prolonged desiccation, or that the adults can hibernate throughout the dry season—and there are observations to prove both points—it is easy to explain the continuance of the species in a locality.

The same Puddles are constantly occupied by the Larvæ.

This fact has been repeatedly verified, except, of course, after complete desiccation. Of two puddles side by side one may constantly contain larvæ, and one may never do so. The reason for this selection can generally be ascertained at a glance—the negative puddle dries too quickly, or is apt to be scoured out. The inference is that the adults lay their eggs as a rule in the puddle in which they themselves were born.

Anopheles Puddles lie Close to Houses.

In not a single case have the breeding pools been found far from human habitations. The females must pass frequently between the pools where they lay their eggs and the houses where they obtain their food. It must therefore be convenient for the one to be as near the other as possible. If we find adult *Anopheles* in a house, we may generally assume that the breeding puddles are close by.

Larvæ in Marshes.

Morasses are generally supposed to be the home of malaria. This is probably not strictly true. Where the water in a morass is continuous small fishes are present, and larvæ cannot exist; while adults cannot obtain food in spots far from habitations, or at least cattle. At any rate much marshy land at a distance from houses has been examined here, and found to contain no larvæ at all. On the other hand, swarms of larvæ have, as I have said, been discovered in flat areas in Grassfields and Sackville

Street, where there are numerous small, discontinuous pools fed by runnels oozing from the soil, but all these pools are in the midst of houses. The inference is that it is the small puddles round houses, and not the large marshes at a distance from habitations, which are the true sources of what is called malaria.

Mangrove Swamps.

A mangrove swamp was searched for larvæ. None were present, and every pool contained fish. This is interesting, because mangrove swamps are popularly supposed to be very dangerous. It appears doubtful whether they are so in reality, not only on account of this observation, but because they do not seem to provide the larvæ with the conditions necessary to their existence.

Do Anopheles Fly Far?

On Tower Hill, in the centre of the town, not a single adult *Anopheles* was ever found. Yet the hill is only about 250 feet above and 500 yards to leeward of the numerous breeding pools in Grassfields. This suggests that the adults do not travel much; but in this case there were many houses intervening where they could obtain food. Perhaps *Anopheles* can go further afield in case of necessity—that is, where the nearest pools suitable for larvæ are at some distance from houses or stables. They can certainly fly out some distance to sea.

Source of the Wilberforce Anopheles.

I have described how the fever among the troops at Wilberforce is now being caused by the *Anopheles* there. Search has repeatedly been made for their breeding pools, but without success. The barracks are surrounded by numerous small houses, areas full of vegetation, and, on another side, by slopes covered with brushwood. Exhaustive search here in the short time at the disposal of the expedition has been impossible; but this instance is an illustration of the difficulty which may often be experienced in discovering the source of the insects at a given spot surrounded by much vegetation. It is interesting to note that its source must probably be in the close neighbourhood in this case, because the insects are reported as being generally much more numerous in one of the sheds than in the others. The swamps more than a mile below Wilberforce have always been condemned as the cause of the fever here; but they were searched, and, as I have said, were found not to contain larvæ.

Number of Anopheles Pools in Freetown.

The most important recent work of the members of the expedition has been to map out all the *Anopheles* pools which they could find in the area of Freetown itself, street by street. Of course this cannot be done with entire accuracy, because the number of pools depends to some extent on the weather, and it is impossible to mark every small puddle which contains a larva or two; but, roughly done, about one hundred pools are entered on the map. The large majority of these are aggregated at several spots, such as in Grassfields and Sackville Street, where water oozes from the ground and escapes over flat rock or soil. Isolated pools, however, are to be found here and there by the side of the streets, in the ditches left for "drainage." These occur where the section of the road is perfectly level, and often contain large numbers of larvæ; but, owing to the hilly nature of the ground, are not numerous. A more correct notion of the number of the puddles in the place will be given thus: the members of the expedition think that, in order to have every puddle in the whole town oiled twice a week, the services of only one man would be required.

The Size of the Puddles.

The puddles (*See* Fig. p. 1033) vary in size from a few square yards to a few square inches; but the smaller pools are almost almost always close to the larger ones, of which they probably represent the overflow. There are few pools in Freetown large enough to be called ponds, and in these no larvæ have ever been found.

Destruction of Larvæ and Drainage of the Pools.

It is obvious from the foregoing that there will be little difficulty in dealing with the larvæ wholesale. Many of the puddles could be swept out in a minute with a broom; others could be evacuated with a stroke or two of a spade. As I mentioned in my last letter, kerosene oil has been found very effective, and the members of the expedition have discovered a rapid and economical method of employing the oil by "painting" the puddle with it by means of a rag tied on the end of a stick—a process which instantly produces a fine film on the surface of the water. They also recommend the trial of tar as a "culicicide." If it destroy the larvæ at all, it should have a more permanent effect than oil; and should be useful for pools which are fed by running water, and for which oil would be of no service. Needless to say, many other culicicides may be tried. It would appear very likely that if these simple measures were to be employed steadily for some months, a very great effect would be produced on the prevalence of the insects in Freetown; it is even possible that they would be practically exterminated for the time, and would not regain their former numbers, even were the measures to be then discontinued, except after a long interval.

Of course, drainage is the proper method of dealing with the situation. The cost would be far removed from that of draining the whole area of the town, and would probably not exceed a few hundred pounds. Certainly this is demanded for the larger pools or collections of pools. If combined with a systematic destruction of the larvæ in the small isolated pools it would result in the removal of what must certainly be looked upon as the principal or even possibly the only source of malaria in the town.

Anopheles at Lagos and Opobo.

Dr. Strachan, Chief Medical Officer of the important Colony of Lagos, further down the coast, travelled out with the members of the expedition. On arrival at Lagos he found numbers of *Anopheles* at once, and also discovered swarms of their larvæ in roadside puddles, which he has at once commenced to treat with oil. Specimens of the Lagos *Anopheles* sent here appear to be identical with the large variety found in this place, and may therefore be pretty safely incriminated as carriers of the human parasites. We may venture to congratulate Dr. Strachan on being perhaps the first British medical man who has taken up this subject independently. He is an experienced naturalist, and, we hope, will shortly have important results to show.

Dr. Wigglesworth, of the ss. *Fantee*, caught some mosquitos which came on board his vessel at various places on the coast. One of these insects, caught at Opobo, is an *Anopheles* of the large kind found here. Hence it is highly probable that this species exists all down the coast, and also that it is the principal cause of the deadly West African fever which has so long paralysed the development of the country.

Dr. Fielding-Ould, who is to continue the work of the expedition on the coast, arrived here a few days ago. As work of leading importance has been completed here, he will proceed at once down the coast to Accra, and then to Lagos, perhaps further. I believe his principal duty will be to ascertain the distribution of larvæ in various places with a view to extirpation. It must be confessed that Liverpool has acted with highly commendable energy in sending him.

Mr. Austen was attacked with fever a week ago, but is now convalescent. The æstivo-autumnal parasite was detected immediately. There was no sign of rigor or even chill, and the fever was continuous, though owing to treatment never high. Mr. Austen had unfortunately slept without a mosquito net about a fortnight before the attack, but has no memory of having been bitten. This will be a frequent experience, since a person can certainly be bitten without consciousness of the fact, especially during sleep. The other members of the expedition are quite well.

Concluding Remarks.

The expedition starts for England on September 27th, after a brief but very fortunate campaign. I propose to conclude with a short summary of results for the use of the many medical men who are now interested in the subject.

The discovery of the fact that two species of *Anopheles* in Sierra Leone can be the definitive hosts of the human *Hæmamœbidæ* is of both general and local interest. Following previous results in India and Italy, it suggests that *Anopheles* is the culpable genus everywhere. Locally, the discovery at least fixes, wholly or in part, the source of the West African fever.

The fact that *Anopheles* breeds in pools of a certain kind, and not, like *Culex*, in vessels of water, is of the greatest import-

ance, both theoretical and practical. Theoretically, it gives an almost complete explanation of many old observations regarding malaria. Thus it is an old theory that malaria rises from stagnant water: *Anopheles* breeds in stagnant water. Again, malaria depends on rainfall: *Anopheles* requires pools constantly filled by rain. Malaria can be obliterated by drainage of the soil: effective drainage must remove the breeding pools of *Anopheles*. Malaria rises from disturbed soil: disturbing the soil, as in making roads, railways and so on, must often result during the rains in the formation of puddles suitable for *Anopheles*. Malaria springs from decaying rock: *Anopheles* larvæ are often found in the hollows of old worn rock. Good examples of all these relations have been found here by the expedition.

These old observations, then, were perfectly correct. But we were in error on one point; we used to infer that the germ itself rises from stagnant water, damp soil, and so on. This inference implied that the germ is a free-living organism, occasionally capable of parasitism, an idea much opposed to many zoological principles. We now see that it is not the germ itself which rises from the soil or water, but the carrier of the germ, a much more satisfactory conclusion. The germ merely passes from man to man, like many other parasites, through the agency of an intermediary host; and it is this intermediary host which, so to speak, springs from the soil.

And it will be observed that this fact destroys the force of arguments which have been advanced in favour of the view that the disease may be acquired by other means than through the mosquito—arguments based for the most part on the known connection of the disease with the soil. This connection is now otherwise explained by the mosquito theory. Indeed, very little can now be said for this hypothesis, which, by the way, would imply another cycle in the already complex life-history of the *Hæmamœbidæ*. We may as well maintain that tapeworm can be acquired otherwise than by swallowing cysticerci.

It is interesting to note that had *Culex* proved to harbour the human parasites as *Culex pipiens* harbours *Hæmamœba relicta*, the old laws of malaria would not have been satisfied. *Culex* cannot be said to be connected with the soil as *Anopheles* is, at least, as a rule; drainage of the soil would not banish *Culex*. Conversely, the pot-breeding habits of *Culex* suggests that this genus is not concerned in the diffusion of human malaria—most fortunately for mankind. This point, however, requires exhaustive study—which cannot be given to it in the space of six weeks.

But it is from a practical point of view that the habits of *Anopheles* appears so important a matter. We are now in a position to indicate exactly the sources of malaria in a given locality; to drain those sources at a small fraction of the cost which the drainage of the whole area would involve; and even to destroy the culpable insects wholesale at an exceedingly trifling expense. If we cannot yet promise that such measures will entirely banish the chances of infection in a place, we can certainly promise that they will diminish them.

In conclusion, I am in a position to state that in response to an invitation from the Governor, a report has been submitted to him on the prevention of fever in Freetown; and that a man has already been placed under the orders of one of the Colonial medical officers for the express purpose of destroying *Anopheles*.

It is to be hoped that the medical profession in the tropics will not let the grass grow under their feet before attempting the practical application of recent advances in our knowledge of malaria. The slackness exhibited in using the discovery of Laveran for the purpose of more exact diagnosis and treatment in the tropics may already be subjected to somewhat severe criticism. An attitude of careless scepticism towards the new discoveries is still less justifiable.

A LAW rendering insurance against illness and accidents compulsory in Switzerland has been adopted almost with unanimity by the National Council. It is proposed that the Federal Government should subsidise the insurance by a sum of about eight and a-half millions francs yearly. If the Bill passes the State Council it will probably be submitted to the Referendum.

HOSPITAL REFORM ASSOCIATION.

A CONFERENCE on "the inquiry system," "payments by patients," and on "provident dispensaries," convened by Dr. Garrett Horder, Honorary Secretary of the Hospital Reform Association, was held at St. Martin's Town Hall, Charing Cross Road, W.C., on October 10th and 11th.

THE INQUIRY SYSTEM.

At the first meeting, on the afternoon of October 10th, the chair was taken by Dr. KNOWSLEY SIBLEY, who introduced the question of the inquiry system, and traced the history of the institution of some system of inquiry as to the suitability of patients to receive advice at the different hospitals.

Mr DOUGLAS DENT (Bristol) defined hospitals as institutions which charity establishes for the free medical and surgical treatment of the poor for whom no other adequate provision is made. He deprecated muddling up charity and expediency. There was an alarming increase in the number of hospital patients, threatening to lead to the bulk of the population demanding free treatment. In Bristol the number of out-patients had increased to 440 per 1,000. It had been said that, if it were once enacted that whilst every hospital is free to the deserving poor, no patient would be permanently retained in a free bed unless he could satisfy the authorities that he was entitled by his circumstances to free medical relief, then hospital abuse would cease. Hospital authorities were satisfied, as a rule, by the mere fact of application for free treatment. Lately some had become more strict, for they looked by deputy at the applicant, forgetting how deceitful appearances are. Others displayed notices that only those who could not pay were entitled to treatment, and some even went beyond this and asked questions, but few went to the length of testing the truth of the answers received. By the methods followed by the Charity Organisation Society inquiry could be easily and completely made. Some of the charitable public urged that inquiry was hard and unjust to the poor, but the Society's inquiry was conducted in a kindly spirit, and was not resented by the honest applicant. In this way the suffering poor would come by their rights, and the charity of the medical profession would be established on its true basis. Further, the money of the charitable public would not be misapplied for the benefit of those who were otherwise provided for or could provide for themselves. It was time to restrict the benefits of charitable medical relief to those for whom they were intended, and to recognise that hospital inquiries were not difficult but easy, and involved no hardship to the applicant.

Sir WILLIAM BROADBENT said that as a hospital physician he recognised that with both out-patients and in-patients one saw from time to time that services were given to cases which were not really proper subjects for charitable societies. The physician felt quite helpless, however, for it was not for him, when he saw a patient, who apparently or from his own knowledge he was aware was not a proper subject, to take upon himself the duty of protesting and making inquiry. The methods which had been started by the Charity Organisation Society were not only efficient and trustworthy, but also kindly and just. Through the work of that Society he had come to entertain some hope that hospitals might be relieved from work which was not their own. The malversation of charitable funds, for it amounted to that, might be prevented and so the poor might come by their rights. That was the plan in view, and they were hopeful and confident that the thing could be accomplished. A complete system of inquiry alone could stop the abuses which prevailed to a greater or less extent. The bad cases of hospital abuse that existed almost amounted to a scandal, and while cases of the worst kind were exceptional, there were many in which people were well able to pay and would be the better themselves for paying. The inquiry at St. Mary's Hospital was conducted by an inquiry agent, who selected out of a certain number of the out-patients those who were apparently unsuitable cases for the hospital. Those cases were referred to a committee which conducted the inquiry in a careful and sympathetic manner. Unless, however, inquiries were made at all hospitals, and on a uniform system, the result would be simply to shift the undeserving cases which some hospitals continued to be willing to accept, thus defeat-

ing the efforts made. It was only when the inquiry was made complete that a solution of the question would be reached.

Colonel Montefiore read a paper pointing out that in the out-patient and casualty departments of the hospitals many patients were admitted who could be far better treated in their own homes by local general practitioners. Many denied the existence of hospital abuse, and among these were a number of people connected with the hospitals; but abuse certainly did exist, and deprived outside medical men of their remuneration. Colonel Montefiore then described the different manner in which several hospitals conducted these inquiries, some hospitals referring the applicants to their medical advisers for certificates of eligibility. It had been said that medical men did such bad work that it was unfair to the patients to make them rely upon such advice, and it was also said that provident dispensaries were only a means of sweating their medical officers. The General Medical Council was responsible that the former did not occur, and the medical profession must combine to defeat the latter. The plan of inquiry which would work best of all was that carried on at the Royal Free Hospital.

Mr. Hawkins-Ambler (Liverpool) read a paper in which he said that the consultant regarded the general practitioner as the greatest cause of hospital abuse; while the general practitioner declared that the hospital men were to blame. He considered that they were both in fault, and advocated a better interprofessional feeling. The profession needed educating into the idea of professional unity. The charitable man consulted specialists for himself, and when paying his subscription to a hospital felt that it entitled him to exploit the time of men who had a living to earn by giving them the care of all who might choose to inflict themselves upon the hospital consultants. The infamous imposition of the public on all branches of the medical profession was a crying abuse. The vitality of hospital abuse lay in the fact that there was no public opinion against it; it was quietly accepted. It should be possible to compel those who defrauded hospitals to pay when their deceit was discovered. While he regarded an inquiry system as a necessity to prevent fraud, he valued it also as an essential feature in teaching the public what hospitals were for.

Dr. Arnold Lea read a paper in which he contended that all patients should be seen by an inquiry officer, that first aid should be given in all cases, that personal visits should be undertaken to the homes of doubtful patients, and that a subcommittee of the hospital board should have the control of the matter.

Dr. Lorimer Hart contended that the fault really lay in the present condition of the General Medical Council, which required to be reconstituted and until that were done reform was not possible.

Dr. Isambard Owen thought that the more the London hospitals united with one another the better would the inquiry system work, and if the work were done by some one organisation then adequate inquiries might be made. The real mass of hospital abuse seemed to him to lie in the casualty practice of the hospitals. The casualty patient did not intend to have his case treated seriously, but simply thought it would be an advantage to get a bottle of medicine out of the hospital. The rate of remuneration from general practice in London had been reduced by some 50 per cent. since the last generation, and this was accounted for by the enormous casualty practice of the hospitals.

Dr. Dennis Vinrace objected to what he called fictitious arithmetic, and declared that if the Charity Organisation Society were to have their rules put into strict operation there would practically be no hospital patients at all.

Mr. Thomas Beaven, Vice-Chairman of the Distribution Committee of the Hospital Saturday Fund, urged that hospital inquiry was quite unnecessary, and stated that the contribution to St. Mary's Hospital was now in abeyance in consequence of the somewhat unsatisfactory arrangements found to exist at that hospital in regard to the inquiry system.

The Conference then adjourned till the evening.

The Conference having reassembled in the evening, with the Rev. A. G. Russell Wakefield in the chair, Dr. Garrett Horder, the Honorary Secretary, read a communication from Captain Acland, Chairman of the Dorset County Hospital, concerning the system in force for checking misuse of hospital charity. Excepting emergency cases, patients were admitted by a subscriber's letter, and were first seen by the medical officer, who passed them on to a committee called the "Weekly Board" for a decision as to whether admission should be accorded or not. This "Weekly Board" laid down no hard-and-fast laws as to social position, wages, etc., and it was an extremely rare occurrence for any patient to be sent away, the system having continued for so many years that those who were unsuitable very rarely presented themselves.

Payments by Patients.

The Conference then passed to the consideration set down for the evening meeting, namely, payments by patients.

Dr. Waring (Brighton) delivered a short address entitled The Effort to Suppress Hospital Abuse in Brighton and Hove. In the autumn of 1895 Dr. Waring drew public attention to the fact that with a population of 150,000 over 38,000 hospital tickets had been issued. In 1894, out of 3,704 births, one lying-in institution had attended 1,240, over one-third of the number. In 1896, with an increased population, there were fewer members on the books of the provident dispensary that in the year 1876. This was caused by the hospital abuse, which demoralised the people. Some of the hospitals supplied subscribers with letters for paying patients, thereby injuring the young practitioners. In other cases the patients had to pay sixpence for each letter. He objected to the system of hospitals taking any payment, because it was entering into an unjust competition with the medical practitioner, and advocated the establishment of bureaus where the necessitous poor could apply for tickets.

Dr. Rogers (Bristol) read a paper entitled Is the Payment by Patients at a Charitable Institution a Desirable Thing? In his opinion any hospital that received money in payment from patients was at once removed from the charity list. He was wholly opposed to the fee system with one exception only, and that was the payment in certain cases by persons for their maintenance in a hospital when a severe surgical operation was necessary, and in some cases of prolonged illness. It had been asked, Is it worth all this fuss about such small payments by patients to the hospital? but the question only reminded him of the story of the young woman who, on being reproved for misconduct in having an illegitimate baby, excused herself by saying that it was such a very small one. The most serious abuse arising from this system of payment was the unfair competition created with the medical men living in the district. To admit, as most hospitals did, all classes to come for advice, and undersell by charging what was in some instances a fairly high charge, was not fair dealing. He felt perfectly justified in referring to the pecuniary loss inflicted on medical men. One result of these payments was that the very persons who should benefit by the hospitals—the poor—were excluded because they could not pay. No fee should be charged a hospital patient, but proper discrimination should be used in refusing admission to those who could afford to pay some fee to a medical man.

Mr. Loch (of the Charity Organisation Society) considered that those who advocated payments by patients were bound to produce proof that these small payments were not prejudicial to the interests of the practitioner.

Dr. Vinrace considered that the hospital abuse affected the income of the general practitioner, and totally condemned the system of letters given out to subscribers.

Mr. Grisewood (Liverpool) did not consider that twopence or threepence as a charge was any system of payment at all. The basis of payment should be on what the patient was able to afford.

Mr. Bunn (Secretary of the Hospital Saturday Fund) said that two of the large London hospitals advertised that they required payment by patients, and made it the basis of their appeal to the public. The people paid cheerfully, giving in gratitude for the benefit they received.

Mr. Sydney Holland (Chairman of the London Hospital) explained that the charge of threepence made by the London Hospital was not for treatment; it was merely for the medicines and bandages, and where no medicine or bandages were supplied the threepence paid was given back; thus it would be seen that there was no payment for medical advice at all.

The meeting then adjourned.

Provident Dispensaries.

The Conference held its concluding sitting on October 11th, when the chair was taken by Mr. Timothy Holmes, who said that ever since Sir Charles Trevelyan had brought the matter of provident dispensaries before the public he himself had been more or less at work as an official in the Metropolitan Provident Medical Association. There were now a large number of provident dispensaries which were self-supporting, in which the medical officers received a remuneration making it worth their while to give their services year after year. When Sir Charles first set up the scheme, his intention was to provide the poor with what the rich can provide for themselves——namely, a family doctor. The poor wanted some one to act towards them as as a family friend and doctor, and that they got by joining these provident dispensaries. In order that these institutions might succeed in carrying out that leading idea they must have free play, and that they could not have in the neighbourhood of large free hospitals. He had long tried to get people to see that the hospitals ought to be the head of an organised body of medical institutions in their neighbourhood. His own hospital (St. George's) so far acted with the provident dispensaries that they put up their names in the out-patient room, but no active steps were taken to induce patients to belong. There was a great difficulty in getting a sufficient contribution from the persons interested, as the poor had not been in the habit of contributing for medical advice. The clubs in the country were not exclusively founded for medical relief, and the idea was to get the relief as cheaply as possible. The most objectionable feature in the competition with the provident dispensaries was the want of proper inquiry in the hospital out-patient department. Hospital charity was pitched out broadcast into the street for anyone to scramble for. It was not the slighest degree satisfactory to ask an out-patient how much he earned, for the question that ought to be asked was, Is any particular case one which can be relieved by hospital treatment or not? and on that essential feature of all enquiry no one ever thought of making investigations.

Mr. Warren, Secretary to the Metropolitan Provident Medical Association, read a paper describing the organisation and objects of that society.

Mr. A. Smith contended that the constitution of the provident dispensaries was one of the grievances with which the medical profession had to deal. The provident dispensaries were frequently only sweating institutions, sweating their profits out of the doctors' work to pay for their buildings, their secretaries, and their managers. All manner of people made profit out of the work that the medical men did, and when it came to sharing money the share to the medical man who did the work was small indeed. Where the medical profession had organised itself, as, for instance, the Public Medical Service of Coventry and the Eastbourne Provident Medical Association, matters were very different. In France, under the Vosges system, a club member paid a subscription to his society, which was, as a rule, a benefit society, and the society paid the doctor so much for each visit.

Mr. Grisewood, a member of the Council of the Charity Organisation Society of Liverpool, said that provident dispensaries had not been able to make much progress in that town. In his opinion a system of gratuitous medical relief when it was not required was injurious to the poor.

Mr. Bousfield, President of the Metropolitan Provident Medical Association, said that Mr. Smith's criticisms were drawn from facts concerning unreformed and badly-organised provident dispensaries. It was not desirable that the ordinary attendance on the working classes should be done by hospital physicians or by hospital students, and it was by hospital students that a large amount of this medical treatment was done at the present time. The help of provident dispensaries was of enormous use in bringing the working class families to the medical practitioners.

Medical Contract Work.

Dr. Garrett Horder then read a paper by Dr. W. Richardson Rice, of the Public Medical Service, Coventry, on Reform in Medical Contract Work. Dr. Rice contended that a strong tide of injustice had set in against the medical profession, and a vigorous attempt must be made to stem the torrent, otherwise medical men would be reduced to the position of mere professional hacks. In the majority of cases provident dispensaries were conducted on lines resembling those of a co-operative store where the genuine spirit of co-operation was set at defiance. A confusion seemed to exist in the medical mind between the work of the friendly societies, provident dispensaries, and medical aid associations. A benefit or friendly society existed solely for the mutual support of its members in distress, but the medical aid associations were simply trading concerns. In many respects Dr. Rice considered that the provident dispensaries were infinitely worse and more degrading to the medical profession than the medical aid associations, and quoted facts concerning the Coventry Provident Dispensary in support of his contention. The General Medical Council had given a judicial opinion declaring it to be conduct infamous in a professional respect for any medical practitioner to cover an unqualified assistant; why could it not go a step further and pronounce infamous the conduct of a practitioner who covered a lay committee? Dr. Rice concluded his paper with a brief sketch of the work done at Coventry by the Public Medical Service which had sprung up under professional control, and was for the co-ordination of contract work. Following this a communication was read from the medical staff of the Coventry Provident Dispensary to the effect that so many untrue statements had been published about that institution that they felt justified in laying before the Conference some facts concerning it. No canvassing or advertising had ever been allowed by the institution. No one made any profit whatever out of the institution, and there was no wage limit, but, instead, an "admission book" was submitted monthly to the medical staff. There were no more "thousands a year" and "carriage people" in their club than in any of the other medical men's clubs in Coventry. The medical staff failed to see that the remedy lay in resigning their appointments, which would be immediately filled, with the final result that they would be praised in the medical journals for a week and then left to starve.

The Chairman pointed out that if the Coventry Provident Dispensary had been open to all medical practitioners who chose to join, as was the case with the metropolitan provident dispensaries, all jealousy would have been avoided.

Dr. Vinrace said that, though the medical officers were on the committees of these dispensaries, if they were in opposition their places were very soon filled up. He asked the Secretary of the Metropolitan Provident Medical Association if local practitioners were at liberty to have themselves placed on the staffs of those institutions.

Mr. Warren replied that practically their rule was that if any medical man in a district expressed a wish to be on the staff he was appointed.

Sir William Broadbent, in proposing a vote of thanks to the Chairman, expressed his opinion that the provident dispensaries afforded a solution of the problem. When every medical practitioner of good standing was allowed to take his share in the provident dispensary work of his neighbourhood and his share of the emolument that came out of it, then he considered the difficulty would be met.

The proceedings of the Conference then terminated. The attendance at the meetings was small.

THE MEDICAL SICKNESS AND ACCIDENT SOCIETY.

The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held on September 29th at 429, Strand, W.C.

There were present Dr. de Havilland Hall (in the chair), Dr. J. B. Ball, Mr. William J. Stephens, Dr. J. Pickett, Mr. J. Brindley James, Dr. M. Greenwood, Dr. Alfred S. Gubb, Dr. W. Knowsley Sibley, Dr. F. J. Allan, and Dr. J. W. Hunt.

The accounts presented showed that the sickness experience of the Society during the summer had been considerably below the expectation, and had nearly balanced the unusually heavy sickness lists experienced during the early part of the year. In every year since the business was first started, in 1884, the Medical Sickness and Accident Society had been able to add to its reserves a larger amount than was anticipated when

the tables of contributions were calculated, and there was every reason to hope that the accounts for the current twelve months would show that 1899 was no exception to the rule. During the summer the bulk of the large surplus that was shown to exist at the valuation of last year had been distributed to the members. The account is still open, and, owing probably to the fact that many of the members have spent their holidays out of the United Kingdom, a considerable number of the bonus cheques have not yet been cleared. The Committee would be glad if members now holding these bonus cheques would pay them in as soon as possible. Although the total of the sickness claim list is satisfactory, the number of those members who are drawing sick pay with little or no hope of being ever able to resume professional work still increases. When the Society was founded it was felt that what might be to men engaged in ordinary avocations only temporary disablement would in many cases be to medical men a permanent incapacity from professional work. A system of giving permanent benefit in such cases was accordingly arranged, and the large amount which has been expended by the Society in this way showed how great a need there was for some such scheme to be adopted.

Prospectuses and all other information on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, W.C.

THE SEWAGE EXPERIMENTS AT CROSSNESS.

A little more than a year ago[1] we drew attention to the preliminary inquiry by Dr. Houston into the flora, especially the bacterial flora, of the London sewage. We have now before us a further report of Dr. Frank Clowes, the Chemist of the London County Council, on the results of certain experiments with bacterial tanks at Crossness, with which are incorporated the results obtained by Dr. Houston in his bacteriological examinations of the effluent after biological treatment.[2]

Amongst the objects of the inquiry were to ascertain the effect of using the coke in fragments about the size of a walnut; that of increasing the depth of the layer of coke beyond the usual limit; the extent to which raw sewage was purified by the treatment, and the practicability of maintaining the use of raw sewage without deteriorating the bed or the effluent.

Ten months' experience warrants Professor Clowes in saying that, as compared with the finer breeze usually employed, the use of ordinary gas coke in pieces about the size of a walnut enables the bed to hold a larger volume of sewage, to be more rapidly filled, and more completely emptied and aërated. Experiments with beds 4 feet and 6 feet deep give nearly identical results as regards purification, though the deeper beds had of course greater capacity. Sewage roughly screened so as to be free from grosser "filth" and heavier road detritus, but retaining other suspended matters, flowing with the ordinary accepted intermissions over such beds not only had all its suspended matters removed, but the dissolved oxidisable and putrescible matter was removed to the extent of 51 per cent. by passage through the bacterial bed. The effluent thus produced remains free from objectionable odour if kept in either open or closed vessels. Neither effluent, nor the beds themselves, become foul, once its process was fully set up. The coke showed no tendency to break up. The surface of each piece became coated with soft matter, consisting mainly of fine coke particles, together with some find sand, woody and vegetable tissue, cotton and woollen fibre, and diatoms. No sand had penetrated a couple of millimetres below the surface, the coke below being perfectly hard. The sand was not granitic road detritis. The ash in the coke had diminished. The capacity of the beds had fallen in ten months from 50 to 33 per cent. of the volume of the empty tank. This seemed chiefly owing to fragments of chaff and straw probably from horse dung, and woody fibre from the pavements. This loss in capacity is not recovered by rest. Slight preliminary sedimentation of the sewage seems the best manner of preventing this inconvenience.

[1] British Medical Journal, August 20th, 1898.

[2] Bacterial Treatment of Crude Sewage. Second Report. By Dr. Clowes and Dr. Houston. Presented to the Main Drainage Committee of the London County Council. P. S. King and Co., Great Smith Street, Victoria Street, S.W. Price 2s.; parcel post, 2s. 3d.

It was also desired to ascertain the amount of sewage which could be treated per acre of bed. After the reduction in capacity, to which reference has just been made, the four-foot bed will probably in two fillings deal daily with 740,000 gallons per acre, the five-foot bed with 1,346,800. Dr. Clowes holds out hope of the practicability of even deeper beds.

While fish die at once if put in the present effluent from the chemical precipitation tanks, not only gold fish, but roach, dace, and perch have lived months in the first effluent from the biological tanks.

The bacteriological examination of the effluent, of which we may say more again, is less satisfactory, but a wide field for discussion here arises. While a purification amounting to a decrease of half the readily putrescible organic matters in solution in the crude sewage and the removal of all its suspended matters takes place in a single tank, the purification of the effluent is carried still further in the second tank. It has to be remembered that this measuring of the removal of impurities is by the permanganate process, and measures only the soluble solids oxidisable in four hours in an acid permanganate solution at a temperature of 80° F. At the same time it should not be forgotten that the first work done by the bacteria in the coke beds is the dissolving of the suspended matters in the crude sewage. There is therefore a double process going on—an oxidation or nitrification of the dissolved, and a solution of the suspended solid, matters. We leave out of account mineral *débris* of the harder cellulose particles, which are of course little affected, and should be kept out of the beds by screening or sedimentation, or both.

Dr. Houston's portion of the report not only contains a brief reference to the findings of his previous investigation, but a short summary of the history of the biological treatment of sewage. The changes which take place in the bacteria in the effluent are chiefly quantitative. The single four-foot coke bed lessens the total number of bacteria some 28 per cent. The spores are reduced 38 per cent., the liquefying bacteria only some 11 per cent. The spores of B. enteritidis suffered practically no reduction, while the colonies of the bacillus coli also were practically as numerous in the effluent as in the crude sewage. "In comparing the cultures, no distinct difference could be made out, as regards the species of microbes, between the cultivations made from the crude sewage and those from the effluents." It is contended that the effluent from a single bed is better chemically than that from precipitation processes, and that the bacteria with which it is charged, though not desirable for a potable stream, carry on the process of purification in the river itself. The Crossness effluent, of course, goes into a brackish river miles below the lowest intake of any of the London water companies.

The bacterial examinations of the effluent from the twice-treated sewage of the second bed were too few to allow of any deductions. Bacteria were further diminished, but were still plentiful. The scope of the experiments has been already alluded to. It was largely narrowed to a consideration of the condition at Crossness. The work, however, and especially the bacteriological work, is valuable as far as it goes. The report is freely illustrated by charts and photographs, and reflects credit on the enterprise of the County Council, and the industry and ability of their chemical and bacteriological experts. The value of the material is perhaps greater from the promptness of its publication. *Bis dat qui cito dat.*

OPENING OF THE WINTER SESSION OF THE MEDICAL SCHOOLS.

UNIVERSITY COLLEGE, CARDIFF.

The annual address to the medical students of University College, Cardiff, was delivered by Professor A. W. Hughes, of King's College, London, who formerly held the Chair of Anatomy in University College, Cardiff, on the evening of October 6th, in the theatre of the South Wales Institute of Civil Engineers. There was a large attendance, and Mr. J. Ll. Treharne, who occupied the chair, warmly thanked Professor Hughes for his visit, and for his continued interest in the school which owed him so much. A report of Professor Hughes's address is published in another column. At its conclusion a vote of thanks, proposed by Dr. Alfred Sheen,

and seconded by Professor Dixon, was carried by acclamation. The proceedings terminated with a vote of thanks to the Chairman.

During the last year accommodation in the chemical and physical laboratories has been much extended, and a new lecture theatre has been built for the Department of Physics. We are glad to learn that Professor Berry Haycraft has completely recovered from his indisposition, and has resumed work in the medical school. Owing to the illness of Principal J. Viriamu Jones, Professor C. M. Thomson has been appointed Acting Principal for the session.

PROFESSOR KOCH ON MALARIAL PARASITES.

Professor Koch has published[1] a report of an investigation which he carried out, with the assistance of Professors Kossel and Pfeiffer, with regard to the life-history of *Halteridium* and *Proteosoma*. The report shows that, while little that was new was discovered, valuable work was done in the way of elaborating and confirming the discoveries of others.

According to Koch, all the parasites known to be those of malaria are comprised in the following group:

A.—Human:

1. Parasite of quartan fever.
2. That of tertian.
3. Those of tropical malaria, with which the "summer-autumn" fevers of the Italians are identical. All the other parasites which have been described as occurring in man—*Hæmamœba præcox*, etc.—belong to this section.

B.—Animal:

4. Parasite found in monkeys. This closely resembles that of tertian fever.
5. *Proteosoma* (birds).
6. *Halteridium* (also in birds).

In the future additions to this list will doubtless be made—for example, the parasites found in cattle by Kölle and in bats by Dionisi may prove to be malarious, but at present the above alone are to be regarded as true malaria parasites. The members of this group, says Koch, show such remarkable analogies in the processes of their development that the laws which govern the development of one variety may, *mutatis mutandis*, safely be assumed to hold good in that of the others. For instance, if *Halteridium* forms vermiform bodies at one stage in its growth, it is tolerably certain that the human parasite will some day be shown to do likewise.

Halteridium.

Halteridium is found in a good many birds, but these are practically all "perchers." Only once was it found in another class (partridge). It is common in sparrows, finches, jays, and small birds of prey, and particularly so in pigeons, tame and wild. Its distribution is curious. In tropical and subtropical countries most of the pigeons examined were infected. At Rome the pigeons from the Campagna were affected; those from Rome itself were healthy. In North Germany, where the *Halteridium* was frequently found in other birds, it was never found in a pigeon. Of the sparrows sent from the Campagna, 50 per cent. were malarious; while of 74 caught near Berlin none were infected, although chaffinches and tree falcons caught at the same time and place were infested with halteridia. In the winter the parasites become less numerous, and may even disappear altogether.

The best way of watching the growth of the parasite is to make a mixture of 10 parts of blood serum (taken from a bird) and 90 parts of a 0.6 per cent. solution of sodium chloride, to place a drop of this on a cover-glass, and add a drop of the infected blood. This can be examined as a hanging-drop culture at the temperature of the room, or dried and stained. Romanowsky's is the best staining method.

Professors Koch and Kossel had completed their work on the *Halteridium* before the appearance of MacCallum's paper on the same subject,[2] and thus they are able, from quite unbiassed observation, to corroborate his statements.

Proteosoma.

In the adult stage the *Proteosoma* can easily be distinguished from the *Halteridium* by the fact that the latter does not alter the position of the nucleus of the red blood corpuscle, while the former pushes it to one side. The *Proteosoma* has not, with the exception of one doubtful instance, been found in Germany. The birds—sparrows and thistle-finches—with which Koch and Pfeiffer experimented were sent to them from Rome. Even these infected birds were found only in small numbers and at a few places. German sparrows, when infected, showed great differences in susceptibility. With similar doses some were scarcely ill at all, while others died quickly. In the case of sparrows there was an incubation period of four days. The disease reached its height in about a fortnight, and subsided gradually in another two or three weeks. Canaries were very susceptible, and in these the disease ran a more acute course, and ended somewhat abruptly between the tenth and fourteenth days. One extremely interesting observation was made. One hundred canaries were inoculated and all contracted the disease. Four weeks later twelve of these were reinoculated, ten remained healthy, while two had a second attack, showing that an attack of proteosoma malaria confers a certain amount of immunity. Thistle-finches reacted towards inoculation in the same way as sparrows. Crossbills were only moderately susceptible. Robins could be easily infected, but did not become seriously ill, while all the other birds that were tried (pigeons, thrushes, crows, chaffinches, titmice, larks, shrikes) resisted infection. One monkey was inoculated, but remained well.

Koch's researches confirm those of Ross as regards the development of *Proteosoma*, while by his discovery of the "vermiform" stage and of the sickle-shaped bodies in the coccidia-like spheres, Koch was able to complete the life-history of this parasite. He gives a summary of the development of both *Halteridium* and *Proteosoma*:

1. Young parasite composed of chromatin nucleus and very scanty plasma, no pigment. Lives in or on red blood corpuscles.
2. Adult, chromatin, pigment, and relatively considerable increase in plasma.

From this point development may proceed in two ways:

3. *Endogenous* (that is, in body of principal host, birds, etc.). Simple division into numerous small particles which commence their cycle afresh, abandoning the pigment in the mother cell.

3. *Exogenous* (that is, in body of intermediate host, mosquito). Parasite leaves the blood corpuscle and can be differentiated into male and female.
4. Formation of spermatozoa and impregnation of female.
5. Conversion into vermiform bodies which
6. Pass through the stomach walls and form coccidia-like spheres, in which
7. Sickle-shaped bodies develop.
8. Passage of these into the poison glands and possibly into other organs.
9. Infection of principal host.

Human Malaria.

The young parasites of tertian and quartan fevers resemble the adult parasites of tropical fevers so closely as to be indistinguishable. The condition of the patient is an aid to diagnosis. If at the beginning of an attack, when the temperature is high, the parasites are young, and the specimen is one of the tertian or quartan fevers. If, on the other hand, the temperature is low, the parasite has reached maturity, and the case is one of tropical malaria.

Careful investigation, says Koch, is needed to determine whether coccidia, etc., found in mosquitos, really belong to human parasites—for example, sickle-shaped bodies were found in the poison glands of *Anopheles maculipennis* several times; but as this occurred either in non-malarious districts or during the cold season, he came to the conclusion that they were not the parasites of human malaria.

[1] *Zeitschr. f. Hyg. und Infect.*, 1899, Bd. 32.
[2] *Journ. of Exper. Med.*, 1898, Bd. iii, No. 1

THE PLAGUE.

Prevalence of the Disease.

Portugal.

Oporto.—The plague bulletin for last week is the worst yet issued. During the week ending October 3rd there occurred 28 cases of plague in Oporto and 3 deaths from the disease. Since the outbreak of the epidemic 148 cases of plague have occurred and 44 deaths. It is further announced that one of the attendants at the Oporto Civil Hospital has been attacked by plague. The Sanitary Commission has prohibited the holding of theatrical performances and public balls. This indicates a serious state of affairs, and it is inadvisable when the depressing influences of an epi-

demic are about to prevent means of amusement to a community. The sanitary officials have much to contend with in face of the prejudice of the populace. Their beliefs indicate an Orientalism which, to those who do not know the Portuguese, will seem surprising. The people believe that the disease is the invention of the doctors, and that patients are taken to the hospital only to be made away with. We look for such opinions in India and China, but scarcely believe it possible in Western Europe. The work of even the authorities is not carried on with that degree of enlightenment one would expect. One example will suffice. In a low part of the town of Oporto a boy died of plague. Policemen were stationed at the street door of the house and at the door communicating with the flat in which the boy died to prevent the inmates, to the number of 9, coming out. There these people were incarcerated in a manner worthy of mediæval times. To those who know Portugal these reports are not surprising. Orientalism tinges many of their beliefs and customs, and, seeing that three-fifths of the nation are wholly illiterate, one is quite prepared for outbursts of an almost fanatical nature. Even Dr. Jorge, the enlightened medical officer in charge of plague, summed up his opinion of the state of certain quarters of the town as "*une ville Orientale.*" The opinion of Dr. Calmette is that the number of plague cases is much more considerable than the official statistics indicate. The majority of the poorer classes never send for a doctor, and many prefer to die rather than enter a hospital. The proportion of fatal cases to those attacked is satisfactorily small. This hopeful state of things may be due to the use of the serum prepared at the Pasteur Institute, which, according to all reports, is efficacious both for preventing and curing attacks of plague, when rightly employed.

EGYPT.

Alexandria.—Since October 1st no fresh case of plague has been reported from Alexandria. In all 92 cases of plague, 47 of which were cured, have occurred in the city. The victims, with 3 or 4 exceptions, have been the poorest natives and Greeks. Every possible vigilance is being exercised by the authorities. So satisfied are the French maritime authorities with the *regime* practised in Egypt that they are imposing only a medical inspection on arrivals from Egypt. This is an example that other European countries would be wise to follow.

MAURITIUS.

For the week ending October 5th 98 fresh cases of plague occurred in the island and 58 deaths from the disease. The outbreak seems particularly virulent and the death-rate much higher than in Egypt or Oporto. We hope soon to have information before us of the various methods of treatment in vogue in the different parts of the world, so that some estimate may be formed of the cause of the widely divergent death-rates recorded.

HONG KONG.

Two cases of plague and two deaths occurred in the week ending October 7th.

INDIA.

Bombay.—The total number of deaths from plague throughout the Presidency of Bombay continues from week to week about the same. In the city of Bombay itself there seems a tendency for the death-rate from plague to increase.

Poona.—Considerable improvement is reported from Poona, the total deaths there for the week ending September 17th falling to 607. In Dharwar, Ahmednagar, and Nasik districts, the plague death-rate is declining. In the Belgaum and Satara districts, and the Southern Mahratta States, a rise in the death-rate is recorded. In Calcutta the number of plague deaths per week vary between 20 and 50. The reappearance of plague in the Madras Presidency is still confined to Salem.

ASSOCIATION INTELLIGENCE.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

NORTH OF ENGLAND BRANCH.—The autumn meeting of this Branch will be held at the Star Hotel, Alnwick, Northumberland, on Tuesday, October 17th, at 4.30 P.M. Dinner at 6.30 P.M.; 6s. 6d., exclusive of wines. Members desirous of bringing forward any communication, reading papers, showing cases or specimens, or of proposing new members, are requested to communicate at once with THOMAS BEATTIE, 26, Ellison Place, Newcastle-upon-Tyne, Honorary Secretary.

WEST SOMERSET BRANCH.—The autumn meeting of this Branch will be held at the London Hotel, Taunton, on Thursday, October 26th, at 2 P.M. Professor H. Gilbert Barling (Mason College, Birmingham) will read a paper on a Modern View of Malignant Disease.—R. LIDDON MEADE-KING, Taunton, Honorary Secretary.

OXFORD AND DISTRICT BRANCH.—The next meeting of the Branch will be held at the Radcliffe Infirmary, Oxford, on Friday, October 27th, at 3 P.M. Members willing to read papers or show cases are requested to communicate at once with the Honorary Secretary, WM. COLLIER, M.D., St. Mary's Entry, Oxford.

SHROPSHIRE AND MID-WALES BRANCH.—The annual general meeting will be held at the Salop Infirmary, on Tuesday, October 31st at 3 P.M. Members who wish to bring forward any business, to read papers, or show cases or specimens, or to propose any new members are requested to communicate with the Honorary Secretary not later than Friday, October 20th.—HAROLD H. B. MACLEOD, Honorary Secretary, Clive House, Shrewsbury.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The first meeting of the session will be held at Hackney Town Hall on Thursday, October 19th, at 4.30 P.M. Mr. Bryant, President of the Branch, will give A Communication on Cysts of the Breast, their Frequency and Treatment. Visitors are invited.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will be held at the Gravesend Hospital on Thursday, November 2nd, at 4.15 P.M., Mr. R. J. Bryden in the chair. Members wishing to read papers, or show cases or specimens, are requested to communicate with the Honorary Secretary as soon as possible.—LUDFORD COOPER, St. Bartholomew's Hospital, Rochester, Honorary Secretary.

BORDER COUNTIES BRANCH.

THE autumn meeting of this Branch was held at Keswick on September 29th. The PRESIDENT (Dr. J. R. Hamilton, Hawick) occupied the chair, and twelve other members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

New Member.—William Beckton, M.R.C.S., L.R.C.P. (Windermere), was elected a member of the British Medical Association and Branch.

Attendances of Members of Council.—Dr. GRAHAM (Carlisle) gave notice that at the next meeting of the Branch he would move:

That at each annual meeting of the Branch the number of attendances of each member of Council at Council meetings held during the preceding year be formally announced.

Hospital Abuse.—The PRESIDENT introduced a discussion on hospital abuse. He submitted a copy of the recommendations proposed by the Hospital Reform Association, and read letters received from Dr. Garrett Horder asking the Branch to send a delegate to the forthcoming meeting of this Association. The points he laid before this Branch meeting were two: (1) Do we approve of the recommendations of the Hospital Reform Association? (2) Shall we send a delegate to the meeting?—Drs. MACLAREN, MURIEL, HARRISON, MITCHELL, THOMSON, OGILVY-RAMSAY, GRAHAM, and CRERAR took part in the discussion. Most of the speakers were agreed that there did not seem to be much abuse of hospitals in the smaller provincial towns, but that there was considerable abuse of larger hospitals in the great towns.—The following resolution, moved by Dr. CRERAR, and seconded by Dr. MURIEL, was carried unanimously:

That it is the opinion of this meeting that abuse of hospitals does exist, and that an effort should be made to remedy these abuses.

—Dr. OGILVY-RAMSAY proposed that a delegate be appointed to attend the meeting of the Hospital Reform Association.—Dr. HAMILTON seconded.—Dr. WILSON moved an amendment that no delegate be appointed.—Dr. BOWSER seconded.—On a vote being taken 5 members voted for the amendment and 5 against.—The matter was then allowed to drop.

Communications.—Dr. KNIGHT (Keswick) showed a male patient, aged 65, with a large Abdominal Tumour. Dr. KNIGHT read Notes of a Fatal Case of Leukæmia in a boy of 13. Time, unfortunately, did not allow of discussion on this paper.

Tea.—The Keswick members of the Branch kindly provided tea for those attending the meeting.

BORDER COUNTIES BRANCH: ROXBURGH, BERWICK, SELKIRK, AND PEEBLES DISTRICT.

The District met at Newtown, St. Boswells, on October 6th, Dr. Blair (Jedburgh) in the chair.

Address by Chairman.—The Chairman made some remarks introductory to his second year of office. He gave an interesting account of the annual meeting at Portsmouth, and referred to the masterly Address in Surgery by Professor Ogston of Aberdeen. From what he saw at Portsmouth he came to the conclusion that Professor Ogston was right in his contention that the Army and Navy Medical Services did not receive sufficient encouragement from the Government. Dr. Marr moved a vote of thanks to the Chairman for his instructive address, which was unanimously accorded.

Etiology of Typhoid Fever.—Dr. Menzies read a paper on the etiology of typhoid fever. He dwelt first on the various predisposing causes—age, sex, season of the year, etc.—then he spoke of the immediate cause. Formerly it was held to be bad drainage primarily and contamination of the water supply secondarily, the latter again often contaminating the milk supply. Now a bacillus (the B. typhosus of Eberth) was held to be the immediate cause. This would be proved if the disease could be produced by inoculation of the bacilli, but this did not occur in healthy animals—it was only after prolonged exposure to the emanations of sewers and cesspools that the typhoid inoculation had any result. Again it was affirmed that the bacilli were universal, and only affected man in a virulent manner under certain insanitary conditions. All such statements were to be taken *cum grano salis.* More light was needed to the proper elucidation of the subject, and such might be obtained by continued investigation and research. Dr. Oliver gave an account of Dr. Robertson's experiments with typhoid bacilli, one of which proved that liquid sewage was necessary to their existence. In reply to a question by Dr. Fleming, he said typhoid was not generally air-borne, but might be. He did not think it right of some practitioners to inform the friends that the disease was absolutely non-infectious. He instanced the fact that on one occasion a considerable number of the nurses in the typhoid ward of Leeds Hospital developed the disease. On investigation, it was discovered they were in the habit of taking glasses of milk to the ward, where they stood until they were consumed by the nurses during the night. This was put a stop to; they were ordered to leave the ward, wash their hands, go downstairs and drink the milk there. From that time no nurse had developed the disease. Dr. Young pointed out the difficulty, very often the impossibility, of diagnosing between typhoid and tuberculosis. Dr. Blair pointed out that it was the contamination of the water supply by sewage which produced typhoid. Bad drainage pure and simple caused diphtheria.

Scottish Poor-law Officers' Association.—Dr. W. L. Muir, of Glasgow, spoke on behalf of the Scottish Poor-law Medical Officers' Association. He showed the injustice under which they laboured in not having the protection of the Local Government Board. At present the medical officer was at the mercy of his parish council, and could be dismissed without appeal. He asked the Section to authorise the Chairman and Secretary in their behalf to sign a petition to be presented in favour of a Bill the object of which was to sanction the dismissal of medical officers only after the consent of the Local Government Board had been obtained. Dr. Fleming proposed that the Chairman and Secretary be authorised to sign the petition. Dr. Young seconded, and the motion was carried unanimously.

Womb-stone.—Dr. Fleming showed a most interesting specimen—a womb-stone which had been turned up by the spade in an old churchyard (Sprouston) near Kelso.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

A clinical meeting was held at the Cardiff Infirmary on September 29th. The President (Mr. W. W. Leigh), of Treharris, was in the chair, and there were about thirty members present.

Communications.—Mr. J. Lynn Thomas showed: (1) A man, from whom the Gasserian Ganglion was excised; (2) a man, who had recovered from Aphasia and Hemiplegia after the evacuation of a cerebral abscess; (3) specimens of Parenchymatous Goîtres (weighing 15 ozs. and 16 ozs.) removed under cocaine anæsthesia.—Dr. Herbert G. Cook showed a case of Hydatid of the Liver treated intraperitoneally. The patient was a boy, aged 15, who had for two years pain and swelling in the right hypochondrium. Bond's operation was performed. The sac was opened and its contents evacuated thoroughly; a large number of cysts, varying in size from a pea to an orange, were removed by irrigation. The adventitious cyst was then sewn up and returned within the abdominal cavity, which was closed. The patient made an uninterrupted recovery. Remarks were made to show the advantages of Bond's operation over Lindemann's, the method usually adopted in this country.—Mr. A. William Sheen showed: (1) A female child, aged 2, in whom the Left Upper Arm and Thigh had been simultaneously amputated three hours after a railway injury. The rarity of such a case was commented upon. (2) A patient, aged 75, in whom the Penis was amputated for Epithelioma in January, 1896. Recurrence took place, and in November, 1896, the remainder of the organ as far back as the triangular ligament and the crura penis were removed. The patient is now well and free from recurrence, three years after the operation. (3) Dissected specimen from a case of Ruptured Popliteal Aneurysm which caused gangrene of the leg, necessitating amputation.—Mr. Brook showed the Sac of a Strangulated Ventral Hernia removed by operation from a woman aged 78. The contents had been small bowel and omentum. In the sac wall was a small solid body, suggesting in its shape and size an atrophied testis, while from it ran a cord-like fold of peritoneum entering the abdomen at the lower border of the ring, and traceable downwards over Poupart's ligament. The position of the hernia was 1 inch above the horizontal line connecting the anterior superior spines, and 2 inches internal to the left spine. Mr. Booth suggested that, pending a microscopic examination, which might or might not decide whether the small body was a testis, an ovary, or neither, it should be looked upon as a so-called congenital oöphorocele. The position of the hernia, though, was difficult to explain, as it was so far above the usual site of the internal ring. Mr. Brook also read notes of a case of Gastro-jejunostomy performed by a modification of Woelfler's method for advanced malignant disease of stomach involving pylorus. The growth, which occupied the pyloric two thirds of the greater curvature and the lower third of the anterior and posterior surfaces, was so extensive as to render it impossible to turn the stomach up; consequently, the posterior operation which had been contemplated, had to be abandoned. Similarly, owing to the undue traction involved in carrying the loop of jejunum round the colon and omentum to a point sufficiently high on the stomach wall to clear the disease, the anterior operation was found impracticable. In lieu of abandoning the operation, a vertical slit was made in the mesocolon and gastro-colic omentum, and the jejunum drawn through and fixed with a Murphy's button without the slightest tension to the stomach wall well above the level of the growth. The colon was then rotated forwards, and carried upwards above the level of the gastro-jejunostomy, and fixed by means of three sutures through the lower band to the peritoneum of the abdominal wall, the hole in the mesocolon being adjusted round the button. The patient lived for twenty-three days, but during that time was free from all vomiting and symptoms of obstruction. At the necropsy the wound was sound and healed, and the organs just as they had been left at the operation. The liver showed extensive malignant disease. The operation had been successful in preventing death from starvation but had been undertaken too late. Mr. Brook hoped that it might be found of service in cases in which the disease turned out to be so extensive as to render the usual procedures impracticable.—Dr. A. Sheen showed a man, aged 66, who had extensive Disease of the Roof of the Mouth supposed to have been due to the end of a pipe he was smoking being driven in ten weeks ago. The case was thought to be epithelioma in accordance with the view of Dr. Sheen, but it was suggested that the disease probably existed before the accident.

DORSET AND WEST HANTS BRANCH.

THE autumn meeting of this Branch was held at the Yeatman Hospital, Sherborne, on October 4th, under the presidency of Mr. GEORGE WILLIAM GRAHAM. Nineteen members and one visitor were present.

Election of Officers.—The following were elected office-bearers for the ensuing year:—*President:* Mr. Decimus Curme (Child Okeford). *Vice-President:* Dr. Frank Winson Ramsey (Bournemouth), and Dr. John Flasby Lawrence Whittingdale (Sherborne). *Honorary Secretaries and Treasurers:* Dr. William Yawdrey Lush (Weymouth) and Mr. Charles Henry Watts Parkinson (Wimborne).

New Members.—The following were elected members of the Branch: Charles Edwin Percy Forsyth, M.B. (Dorset County Asylum), and William Thomas Gardner, M.B. (Bournemouth).

Next Meeting.—It was resolved to hold the May meeting at Weymouth.

Grant.—A donation of £10 10s. was voted to the British Medical Benevolent Fund.

National Association for the Prevention of Consumption and other forms of Tuberculosis.—A Committee was appointed for the purpose of calling a public meeting at Dorchester with a view to the formation of a Branch for the county of Dorset.

Discussion.—A discussion on Some Obscure Phases of Gout was opened by the PRESIDENT, and taken part in by Dr. MACDONALD and Mr. CURME.

Communications.—Dr. WHITTINGDALE exhibited the following patients: (1) A case of supposed Cerebral Tumour; (2) three cases of Pseudo hypertrophic Paralysis, including a brother and sister of the same family; (3) a case of Myxœdema.—Mr. CURME exhibited a Skiagraph of Injury to the Shoulder.

Dinner.—The members dined together at the Digby Hotel.

SPECIAL CORRESPONDENCE.

INDIA.

The Plague.—Terrible Mortality in Poona.—Plague Research Laboratories. — Threatened Famine. — Inoculation Against Enteric.—The Services.—Research Laboratories for India.

INDIA seems once again entering upon troublous times. What with no abatement of the plague, but rather the reverse, a threatened famine, the despatch of troops to South Africa, and frequent raids on the frontier, the outlook is anything but rosy. Plague still carries off from 70 to 100 persons a week in Bombay city, and from 3,000 to 4 000 in the whole Presidency.

In Poona, however, it has reached a height which far exceeds what it has ever been in Bombay itself, for during the whole of the month of August more than 1,000 persons were carried off weekly, equalling a mortality of over 300 per 1,000 per annum, while Europeans have not been spared by it. Happily there was a distinct fall last week in the death rate, so it may be hoped that this much-afflicted city has seen the worst of the outbreak. This outbreak, however, disposes of the comfortable theory that the disease will not attack a place for more than two or three years, and that its intensity will become less each year, for the case mortality has exceeded anything previously recorded. In Calcutta the disease continues to linger on without markedly increasing, about fifty deaths being reported weekly, but it remains to be seen if there will be a recrudescence during the ensuing cold weather. A theory to account for the mildness of the disease in the Eastern capital has recently been put forward, to the effect that malaria is antagonistic to plague, but apart from the many facts against this ingenious suggestion it remains to be seen if the disease may not yet greatly increase in Calcutta. The disease is also present in Mysore, Belgaum, and is on the increase in Hyderabad, Scind; but Karachi and Madras report only a very few cases. There is, then, no tendency for the epidemic to die out of India, and the impression that it will remain for many years is becoming more general. The objections of the people to any measures of interference are fatal to the rapid suppression of the disease.

The Government has recently issued orders regulating the sending of plague cultures to other countries. A new and well-equipped plague research laboratory has been opened at Bombay, and large quantities of Professor Haffkine's prophylactic are being turned out, 25,000 doses having been sent to England to the Local Government Board in view of the outbreak of plague at Oporto, while more will be sent to Africa. The Bombay Government is also doing everything in its power to render inoculation against plague popular amongst the natives, all who hold a certificate of inoculation within six months being free from segregation and other measures. Colonel Wilkie, I.M.S., has just been appointed Special Principal Medical Officer for plague operation in Bombay, so that at last the plague operations will be under the control of a medical officer.

The monsoon, which began unusually early, and was very steady up to near the end of July, then suddenly and unexpectedly withdrew, and has been absent for about two months. The crops in Bombay Presidency have for the most part completely failed, while Rajputana, and to a less extent the Central Provinces, are in nearly as bad a plight, fodder having given out in the former, and the cattle are dying in large numbers. The North-West Provinces are better off, but more rain is also needed there in order to allow of the winter crops being put in. Fortunately, during the last few days some rain has fallen in most of the parts which were in greatest need of it, and the famine area will probably be considerably restricted by this timely fall, but relief works are already being started in Bombay and Rajputana, while there will also be some distress in the Central Provinces owing to this bad year coming on the top of several unfavourable seasons.

The inoculations against enteric fever, which, to the number of upwards of 3,000, Professor Wright carried out while he was in India with the Plague Commission, having demonstrated that the method was at least without danger, the prohibition of its use has been withdrawn, and inoculations are being carried out in considerable numbers, so that in a year or two further valuable evidence on the question should have accumulated.

The recent address of Professor Ogston at the meeting of the British Medical Association at Portsmouth has given rise to a good deal of comment in India, the general opinion being that his strictures on the Royal Army Medical Corps were not warranted, although his advocacy of study leave is fully appreciated. Unfortunately the failure to secure the number of candidates required at the last entrance examination will aggravate the already very serious deficiency of numbers in the service, and will render it still more difficult to give the desired study leave. The serious falling off in the competition for the Indian Medical Service, and the low marks of many of the successful candidates, seem to indicate that the discontent in this branch of the Medical Service is also coming to a head; while the recent announcement that the civil appointments, which have always formed the main attraction to its members, are to be reduced, will hardly conduce to restore its waning popularity. The deprivation of staff pay until after the language examination is passed, which often takes from one to two years on account of frequent moves and the difficulty of getting good teaching in many small stations, and the reduced pay on entering civil employment, although private practice in small stations is now practically *nil*, are, perhaps, the grievances most keenly felt. In contrast to this treatment it may be noted that military veterinary officers on entering the civil department get from Rs.150 to Rs.600 a month extra pay. Possibly the five years' medical curriculum may have had some effect in lessening the competition for the public services, but it is quite certain that they are not as attractive as they were and should still be.

A scheme for the establishment of research laboratories in various parts of India is under the consideration of the Government. It is proposed that the present laboratory at Muktesar should be further developed and the staff increased, so as to convert it into a central research laboratory for India. Other laboratories will be placed at Calcutta, Madras, Bombay, Agra, and Lahore, and will ordinarily be placed under the charge of selected officers of the Indian Medical Service. It is hoped that a pathologist of high standing will be obtained for the central institute. The scheme, which has been submitted to the Government by Surgeon-General Harvey, should do so much to advance scientific research work in India, and in due time will doubtless bear fruit.

CORRESPONDENCE.

THE HUNTER CASE.

Sir,—I am directed to state that the Society of Apothecaries has obtained the opinion of Sir E. Clarke, Q.C., M.P., on this case, and to inform you that he "is of opinion that the L.S.A. (1886) is entitled to describe himself as 'Physician' or 'Surgeon,' or both, and that the Society of Apothecaries is justified in so advising its licentiates, notwithstanding the decision in the case of Hunter *v.* Clare."

Sir E. Clarke "is further of opinion that, should the question again be raised in the courts, the case of Hunter *v.* Clare would not of necessity be held to be a binding authority on this point, inasmuch as the conviction of the appellant was quashed on other grounds, and the opinions expressed by the Court as to the rights of the L.S.A. were under the circumstances immaterial to the issue."

The Society of Apothecaries had previously obtained the opinion of Mr. Haldane, Q.C., M.P., that the decision of the Queen's Bench Division of the High Court was erroneous.

In view of the opinions of these eminent counsel, who concur in regarding the present state of things as unsatisfactory, the Society has addressed an official communication to the President of the General Medical Council inviting the co-operation of the Council in having the questions at issue retried in some form to be agreed upon, and the matter authoritatively set at rest.—I am, etc.,

Society of Apothecaries, London, Oct. 9th. James R. Upton.

ILLEGAL CERTIFICATES.

Sir,—We "welcome" Mr. Horsley's letters because we hope for mutual understanding from a controversy which, on our part, has not been unfriendly; and we disclaim the imputation of "attacking" him because we have written in necessary self-defence from the charge he brought against us, that our memorials to the General Medical Council were so ill-advised that they hampered his resistance to the illegal certification of unqualified, by registered, practitioners.

This charge he has not supported by a single instance or quotation; and it now appears that his strictures referred to totally different documents.

It is, besides, obvious that Mr. Horsley could quite well have moved to rescind the illegal proceedings of the General Medical Council sanctioning the certification of midwives, and by inference, of opticians, had he so desired, or if he considered them illegal, without or notwithstanding any memorials.

No doubt many medical men and societies, with the best intentions, have tried to find working solutions for this problem of the injuries and deaths caused by ignorant midwives; and probably none of such solutions have been entirely free from error, but the present questions are not matters of recrimination or of personality; they are of present practical consequence, and are in effect:

1. Was Mr. Horsley's support of the Draft Midwives Registration Bill of the British Medical Association a cessation (as expressed in the Wood Green and East Suburban resolutions) of Mr. Horsley's opposition to the recognition at law of medically unqualified practitioners?

2. Was his support of that measure consistent with his election pledges in 1897?

3. Was his support of that measure not rather consistent with his inaction on our memorials, which, for the first time, challenged the legality of the Council's sanction of the certification of such medically unqualified practitioners?

Mr. Horsley's active support of the principles of the Medical Acts between the present time and next year's meeting of Parliament, is, we believe, the most important question of that period for the interests of the profession and the public welfare in this respect.

The Wood Green resolution could refer to no other Bill than that of the British Medical Association, for that was the only Bill of such a nature Mr. Horsley was supporting; and Mr. Horsley himself said, at the West Ham meeting, "I shall therefore assume that the only Bill referred to is that of the British Medical Association" so that his present doubts and questions seem scarcely necessary.

That meeting certainly did not consider that Mr. Horsley proved his propositions; for, after hearing him with interest and keen attention, it unanimously adopted a resolution "That this meeting thanks Mr. Horsley for his interesting address" . . . . "pledges itself to support the direct representatives in uncompromising resistance . . . . to any Bill that will recognise the attendance on any case of labour, of any person not medically registered, and regards the Bill of the British Medical Association as a dangerous and unnecessary concession to a mischievous agitation."

In one paragraph of the circular Mr. Horsley refers to, the visit of a medical man within twenty-four hours of labour is stated as an adequate provision; a subsequent paragraph suggests that medical practice by midwives ought to be suppressed by a Medical Act. These views do not consist with each other, or the former of them with his letter to Mr. Jackson.

The questions which now concern us most are these:

1. The attendance of medical men on normal labour is medical practice, requiring the full curriculum and medical registration.

2. We hold the certification of persons not medically registered as competent to render that attendance in normal labour to be a "covering" of such unqualified practitioners.

3. We hold any Bill that will legalise the certification or recognise the competency of persons not medically registered, to render the attendance now rendered by medical men in normal labour (or the certification of other persons, for example, opticians, as competent to practise a department of medicine, surgery, or midwifery) to be a retrenchment of the principles, and partial repeal, of the Medical Acts, contrary alike to the public safety and to the rights of the medical profession conferred by these Acts.

We trust, on his letter to Mr. Jackson, and his own election addresses, already quoted, that Mr. Horsley shares those views; but, if so, his action in support of the Draft Bill of the British Medical Association was not consistent therewith, inasmuch as t' at Bill will:

1. Legalis attendance (certainly of the nature of medical practice) on normal labour by persons without medical curriculum.

2. Legalise all the now illegal certificates which have been illegally sanctioned by the General Medical Council.

3. Confer a right to practise even on the unlicensed midwives now practislng.

We think on these points some more definite pronouncement of Mr. Horsley's views is desirable than has yet appeared, as well as some better reasons than our memorials afford (to which it now appears his censures did not apply) why he has not taken action to rescind his Council's sanction of the licence of the London Obstetrical Society.—We are, etc.,

George Jackson.
Jas. A. Myrtle.
T. Granville Hockridge.
F. Lorimer Hart.
R. F. Tomlin.
Tom R. Taylor.
Bedford Square, W.C., Oct. 9th. J. Higham Hill.

MEDICAL ORGANISATION.

Sir,—I regret that pressure of work prevented me replying to Dr. J. Brassey Brierley's letter in time for the British Medical Journal of September 29th, but the fact that two prominent practitioners in widely-separated localities have replied shows, I think, that the scheme suggested in our circular is meeting with widespread acceptance. This view is further supported by the favourable replies received from other quarters. Whether we shall get sufficient adherents to enable us to go on with it I do not yet know, but as the first meeting of most societies is held in the month of October, we shall be in a position to decide this in another three or four weeks.

Referring now more particularly to Dr. Brierley's letter, I may say that the course of action suggested by him has been discussed by the Medical Guild. The conclusion arrived at was that a very considerable time would be required to effect the necessary change in the attitude of the British Medical Association to medico-political questions, and that even if

that were the best method of procedure, probably the quickest way of effecting it would be by the holding of such a conference as we suggest. At any rate, we thought that the future course of action would be best decided at it.

The first essential in deciding which is the best method is to have a clear idea of what we want the organisation to be capable of doing. It ought to be capable of gathering up and reflecting the opinions of the profession throughout the country upon any difficulties that may beset it, and of shaping the policy of the profession to overcome them. And its policy should be so evidently in accord with professional opinions that every member of the profession would feel bound to accept it. It should be capable of advising and assisting the General Medical Council in its deliberations on questions of medical politics, and in regard thereto of securing the proper presentation of the wishes of the general practitioners. Further, it should be capable of making representations to the Government regarding the influence of any proposed legislation likely to affect the public health generally, or the well-being of the profession particularly, and might even, under certain circumstances, suggest legislation. It ought also to be a body capable of securing direct representation of the profession in Parliament.

Now, can the British Medical Association as at present organised be said to be capable of doing this work? Would its decisions necessarily be acceptable to and binding on the profession at large?

The annual conference of the British Medical Association consists of persons who go to it of their own free will, and consequently of persons who represent no one but themselves, so that outside its own membership its decisions cannot be said to have any authority or binding force. And when it is remembered that the predominating influence there is that of the consulting branch of the profession, who, speaking generally, know absolutely nothing of the difficulties with which the general practitioner has to contend, and who do their best to taboo discussion of these difficulties and regard questions of politics as quite beneath their dignity, is it any wonder that the average general practitioner has little faith in its deliberations and is not at all prepared to consider himself bound by its decisions?

It may be argued that this condition of affairs is the direct result of the apathy of general practitioners, and that it could be easily altered by their shaking off the apathy, joining the Association, and swamping the consultants. I presume this is what Dr. Brierley wants. Well, suppose they did, it would still be true that as long as it possessed its present organisation it would represent only its immediate members—not a single member of the profession outside it would regard it as having any authority over him. Indeed, it would not have influence sufficient to carry out the work I have indicated as being desirable and needful until it possessed a fair majority of the members of the profession. And fancy, if you can, anything so unwieldy as a conference of 10,000 or 12,000 members.

What is it that gives our municipal councils and parliament their undoubted authority over their respective constituencies, though numbering but a small fraction of those constituencies? Not by any means the personal pre-eminence or cleverness of their members, but the simple fact that they are elective bodies—bodies composed of persons elected to represent their fellows. And I contend that such a body is needed to thoroughly represent and decide the policy of the 20,000 members of the profession in this country. Hence, we want a number of local associations embracing practitioners in each particular district—say Poor-law union or group of unions. From each of these a delegate should be elected to attend an annual conference, at which all questions of policy should be thoroughly threshed out and the decision of the profession made known. The conference should elect a President, Vice-President, Treasurer, Secretary, and an Executive Committee to look after the interests of the profession in the intervals between the conferences, to make arrangements for the holding of the next conference and prepare the agenda, and to call special conferences when occasion requires.

For the better protection of purely local interests the local associations might be affiliated together into county unions as Dr. Jepson suggests, but each local association should have independent representation at the annual conference. Such an organisation would without doubt be capable of doing efficiently the work which I indicated at the commencement of this letter, and would be far more likely to receive the support of general practitioners than any society organised on the lines of the British Medical Association, for the very simple reason that it is so much easier for them to attend meetings of their local branches and discuss these questions there, and then vote for the delegates they prefer, than to leave their practices for days together and travel to a distant part of the country.

Now, can the organisation of the British Medical Association be so altered as to become a strictly representative body of this kind? Well, I suppose it could if the general practitioners were determined, but would it be wise? The British Medical Association has done an immense amount of really valuable scientific work, and serves a very useful purpose in keeping general practitioners more or less up to date in this respect, and I am sure that they will be very loth to alter its constitution in any way calculated to render it less capable of doing this work. To reorganise it on the lines I have indicated as being absolutely needful for political work would most assuredly destroy it for scientific work, for it is evident that the majority of the men who have made it successful as a scientific body, that is, the consultants, would at once be excluded.

What better course, therefore, can we adopt than that of starting a new organisation for purely political work on the lines I have sketched out? This would leave the British Medical Association to continue its hitherto extremely successful course as a purely scientific body unhampered with questions of ethics and politics.

It may be possible to affiliate the two organisations in some way, but I do not at present see how, neither do I see the necessity. I am, however, convinced that totally different methods and totally different sets of men are needed to prosecute the two kinds of work, and the sooner the profession as a whole recognises this the better. I do not see that there need be the slightest antagonism between the two bodies, since each would have a separate and distinct sphere of influence.

The British Medical Association has a large income, derived, I believe, to a great extent from general practitioners, and I think it might fairly be asked to grant a sum to aid in establishing the political organisation. But that is a point on which I should lay no great stress.

In conclusion, Sir, I fear this letter may have reached a rather inordinate length, but I crave your indulgence for it on account of the importance of this question of organisation to general practitioners. To destroy any institution which has proved itself of value in any respect to the profession is the last object I should ever dream of attempting. My desire is to inaugurate an organisation which shall be the complement, not the rival, of the one of which your JOURNAL is the organ. This to some may seem very presumptuous in a young practitioner, but as I have been engaged in general practice on my own account for almost fifteen years, I may claim to have some knowledge, born of experience, of the needs of my fellows.—I am, etc.,

S. CRAWSHAW, M.B.,
Secretary of the Conference Committee
Ashton-under-Lyne, Oct. 3rd. of the Medical Guild.

SMALL-POX MORTALITY STATISTICS.

SIR,—In the Report of the Registrar-General for 1897 the deaths from small-pox are returned at the exceptionally low number of 25. Of these, 6 are stated to have been "vaccinated" and 5 unvaccinated. No fewer than 14, or 56 per cent. of the whole number, appear under the head of "no statement." But though only 25 deaths are returned as having occurred from small-pox, there were 103 certified as having occurred from "chicken-pox." These statistics, which are only a repetition in form of those of preceding years, call for very serious attention. They exhibit three defects, which make them almost worthless and certainly grossly misleading. The first is the use of the term "vaccinated." To use this word alone is only to play into the hands of the opponents of vaccination, who adduced these statistics to justify their assertion of the uselessness of vaccination. If it be possible to ascer-

tain whether a person has been vaccinated or not, it is certainly possible to discover when he was vaccinated, so far at any rate as to be able to add the words in the case of adults "only in infancy." If this were done we should no doubt find, as the statistics of all epidemics show, that of the 6 "vaccinated" deaths of 1897, the large proportion, if not all, were over 10 years of age.

As to the 14 cases of "no statement," they are absolutely inexcusable. If, as is sometimes the case, it be really impossible to obtain any evidence as to the vaccinal condition of a person attacked by small-pox, the proper course is to state this by using the words, "no evidence of vaccination." This would at least show that inquiry had been made into the matter, and it would justify the assumption embodied in the old legal phrase, *De non apparentibus et non existentibus eadem est ratio*. I shall, no doubt, be told that in order to enable small-pox mortality to be classified in this way, it is necessary that the form of death certificate should be rectified, and that this cannot be done except by Act of Parliament. This may be so, but a good deal can be done in this direction whilst waiting for this necessary measure. Surely the Registrar-General could instruct the local registrars of deaths that whenever they receive notice of a death from small-pox, in which the vaccinal condition of the deceased is not stated, they should immediately communicate with the certifier and ask for specific information on this point. If it should not be at once forthcoming, a communication should be addressed to the local medical officer of health, asking him to inquire into the matter. If both of these efforts should fail to elicit information, there would then be full justification for placing these deaths under the head, not of "no statement," but of "no information obtainable."

The third defect in the present statistics is an equally serious one. It is not credible that 103 persons, probably most if not all of them children, can have died of chicken-pox pure and simple in 1897. Probably the experience of most of those who have had any in this matter is like my own. During twenty-six years in which I have had to deal with the death records of a large district I have only had three from chicken-pox, all of them more than twenty years ago and all of them complicated with other diseases. To record such deaths as from "chicken-pox" only is gravely misleading. Here the course which the registrar should take in a case of alleged uncomplicated chicken-pox is to communicate with the local medical officer of health. I can scarcely think that any such official would decline to respond to the invitation to assist in clearing up one of these cases. At any rate the effort should be made, and only in case of failure should the death be recorded as from "chicken-pox," with the addition "but whether uncomplicated or not there is no information."

I do trust that the Registrar-General will see his way to take such action as I have suggested in this matter without delay, so that we may have no more misleading statistics on the subject of small pox and vaccination in his annual reports. It is bad enough to get such statistics from those who issue them for the purpose of discrediting vaccination, but it is little less than a scandal that vaccination should be thus wounded in the house of those who may be assumed to be its friends.—I am, etc.,

Francis T. Bond, M.D.Lond.,
Gloucester, Oct. 9th. Hon. Secretary Jenner Society.

THE TRANSMISSION OF ACQUIRED CHARACTERS.

Sir,—I notice some very flippant remarks on other people's opinions with regard to the above question in Dr. A. Reid's paper in the British Medical Journal of September 30th. It seems to me simply preposterous to state that "not only the masses of our profession, but the leaders even, seem unaware that there has been any such question at all." Before making such a sweeping assertion, and implying that he knows more than anyone else amongst us, Dr. Reid might surely have dipped a little more carefully into professional literature than he has done. I, for one, have discussed this question in my book *On Failure of Brain Power* (5th edition, London, 1898 pp. 97-121), and I should like to know how Dr. Reid will explain the case of acquired transmission mentioned by me on p. 104, or how he will disprove my remarks on the influence of parental alcoholism and syphilis on the offspring.

Dr. Reid also states in his paper that I have proposed "to prolong the lives of children by applying electricity to the heads of the fathers"; and I consider that, by turning and twisting about some remarks made by me in my paper on old age on the eventual possibility of the eradication of a certain type of premature senility, he has exceeded the limits of fairness. The wish to appear smart at other people's expense is too conspicuous in Dr. Reid's paper.—I am, etc.,

Queen Anne Street, W., Oct. 8th. Julius Althaus, M.D.

Sir,—It seems, indeed, incredible that, in the present day, any man, woman, or child, let alone any member of our profession, should be unaware of the existence of this controversy. Dr. Archdall Reid's indictment of general ignorance, however, is very specific, and, although probably too sweeping, would, I fear, take some considerable time and research to disprove. When, however, he suggests, as I think he does, that the subject has not been discussed in medical works or by medical writers, I would venture to remind him that a hundred years ago, long before the present controversy was heard of, the matter was very fully gone into by John Hunter. Speaking of the hereditary nature of diseases he says:

> I do not know that we have an instance of observation which proves that the circumstance of a person's having had the disease renders him more liable to communicate that susceptibility to his offspring than if he had only the susceptibility for the disease, without the action taking place. If it was a fact that the parents, having simply had the disease in some degree entitled their offspring to it, the human species would soon become extinct in those places where such diseases arose; and if the parents having had the disease increased the susceptibility in the offspring, both small-pox and lues would have become incurable by this time. So that the immediate cause, whatever this may have been, does not in consequence of its having had its full effect either give or even add to the disposition for such action (*Hunter's Works*, Palmer's edition, p. 358).

If any proof is to be found of such transmission of acquired characteristics, it will be in the nervous system. The education of parents certainly appears to have some effect on their offspring. I have been told by a great authority—one whose experience in educational matters is, perhaps, unsurpassed—that he had never known a great classical scholar whose father was not in some degree a classical scholar before him. The part of the question Hunter found it difficult to explain was that of insanity. "It would be worth while," he says, "to see whether people in a state of nature ever go mad; if they do not, then the state of mind in the civilised state is the immediate cause." This, too, is practically the only stronghold of Mr. Herbert Spencer's view. It is difficult in such cases to eliminate the acquired element.—I am, etc.,

Royal Avenue, S.W., Sept. 29th. J. Foster Palmer.

THE IRISH DISPENSARY DOCTOR'S POSITION UNDER THE NEW LOCAL GOVERNMENT ACT.

Sir,—Some time ago I wrote a lengthy letter on the above subject, which was printed in the *Irish Times* and some of the provincial papers. I hoped my letter would have provoked some discussion, but none of the other 799 dispensary doctors in Ireland seemed to take any interest in the subject. My letter was principally directed to the matter of our four weeks' annual vacation. I drew attention to the way in which Boards of Guardians were interpreting the Act to our disadvantage. Many Boards have promptly refused to give their medical officers more than two weeks' leave, and in almost all cases have refused to pay a *locum tenens* more than £2 2s. a week. I write now to ask Irish Poor-law medical officers to stand together and insist on being fairly treated. If we do so the Local Government Board will see that we are so treated. I constantly read in the provincial papers, in the proceedings of the different Boards of Guardians, where the medical officers have accepted the two weeks where they were legally entitled to four weeks; also where some medical officers have taken the *locum tenens* into their own house, and given him the use of a horse and trap, in order to secure a man at £2 2s. a week, and so obtain their holiday. Now, the Local Government Board have clearly laid it down that we are entitled to the full four weeks if we choose to have them; and, more than that, if we give the Board of Guardians sufficient notice, the onus of finding and paying a substitute is thrown on them.

My own experience is as follows: Some weeks ago I applied for four weeks' vacation, naming a neighbouring medical man who was good enough to undertake to do my work at £3 3s. a

week. I received a reply in due course to the effect that the Board of Guardians had granted me two weeks' leave and would pay my substitute £2 2s. a week. I forwarded this reply to the Local Government Board and I am pleased and grateful to be able to state what action they took. They sent the following letter at once to the board in question and a copy to me for my own information:

Sir,—With reference to the proceedings of the Board of Guardians of the ——— Union on the —— inst., the Local Government Board for Ireland desire to express their approval of the employment of Dr. ——— at a remuneration of £3 3s. a week as temporary medical officer of the ——— Dispensary District during the absence of Dr. ——— on his vacation. Dr. ——— is also now at liberty to avail himself of the full period of four weeks' vacation to which he is entitled under Article 28 of the Dispensary Rules.—I am, Sir, your obedient servant,

Acting Secretary.

Nothing could be plainer or more satisfactory than that, but there are very many other points of equal if not of more importance to us which we should agitate to obtain. One of the greatest injustices to my mind to which we have to submit is the fact that we are supplied with no means of locomotion. We are placed in charge of large districts with all the sick poor to visit and attend to, and we are paid £100 a year for that, and out of that £100 we have to purchase and keep up a horse and vehicle and pay a man. Not counting the purchase of the turn-out and the annual wear and tear, the mere keep of the horse and man comes to half our income. Of course, the answer to this is, "Oh, you must keep a horse and trap in any case for your private practice." Certainly, those of us who have any private practice must do so, but if we do, the guardians know well that for every nineteen dispensary cases we use it for, we use it once for private practice. Now I should like to put this case to the Local Government Board and to the Boards of Guardians: Suppose I have been busy all day and my horse tired out, and late on in the day a messenger comes with a "red line," say from a distance of five or six miles; the case is an urgent one, possibly hæmorrhage, or some case where delay means probable death. Having no horse fit for the journey, I start and walk the distance, to find on my arrival the patient dead. Now who is to blame? Surely those who will neither pay us a fair salary, nor supply us with any means of locomotion.

Contrast our position with that of any other public servants who are in charge of large districts, and far better paid than we are; for instance, district inspectors, county inspectors, and resident magistrates, all of whom not only are well paid, have much less continuous work, are practically sure of their night's rest, and yet are all liberally allowed for the keep of a horse and man.—I am, etc.,

A NORTH OF IRELAND DISPENSARY DOCTOR.

September 17th.

TUBERCULOSIS IN CHILDHOOD.

SIR,—Permit me a few words in reply to Dr. Carr's question put to me in the BRITISH MEDICAL JOURNAL of September 23rd, which I have but just seen. I do not think that Sir R. Thorne, or anyone else, would be right in assuming that an increase of cases registered as "tabes mesenterica" indicates a corresponding increase of abdominal tuberculosis, for we all know that all kinds of intestinal and other disorders are constantly styled "tabes mesenterica" by those who fail to cure them. But I fail to see, even should Sir R. Thorne or some others here and there hold the view attributed to them, that my point is in any way touched when I maintain that what Dr. Carr has said on the matter is as notoriously not new as it is manifestly true. However, I am so entirely in accord with Dr. Carr's belief that I must congratulate him on the skilful transmutation of his Aunt Sally into a most life-like marionette.—I am, etc.,

Carnarvon, Oct. 6th. H. B. DONKIN.

CANCER IN ANIMALS.

SIR,—Notwithstanding their excellent opportunities, veterinarians have hitherto contributed very little to the advancement of the science of tumour diseases in animals.

It is easy to understand this when we see the confused and unscientific way in which cases are only too often reported, of which Mr. W. M. Scott's contribution is a striking example. His interpretations of histological appearances are so obviously erroneous that it is a pity he did not get his sections examined by some competent pathologist before publishing.

It is a question of the nature of a mammary tumour in which glandular epithelial elements abounded. Mr. Scott describes it as fibro-adenoma or "scirrhous adenoma," whatever that may be. In support of this he says that on microscopical examination "the acini or spaces were much occluded, and it was only here and there one could see a vacant space." Well, perhaps Mr. Scott is not aware that appearances of this kind are of common occurrence in carcinoma, and that they are hardly ever met with in fibro-adenoma; for I suppose Mr. Scott could not mistake cysts filled with intracystic growths for cancerous alveoli! Yet he seems to have had an inkling that, somehow or other, his interpretation was not quite as it should be, for in the next sentence he refers to the quasi-carcinomatous appearance of the sections: They "made one rather suspicious of a carcinomatous origin." This reasonable reflection is, however, set aside because "there was a well-marked basement membrane."

Here Mr. Scott assumes that the presence of a basement membrane negatives the diagnosis of cancer; but I can assure him that this is an error. Many cancerous structures are provided with a well-marked basement membrane.—I am, etc.,

Clifton, Sept. 30th. W. ROGER WILLIAMS.

SIR,—Respecting tumours of lower animals, it may interest your readers to have an account of a malignant growth in a Welsh terrier of mine. In November, of 1896, I noticed a blackish growth by the side of the scrotum of the dog. In less than a fortnight it spread rapidly and threatened to ulcerate through the skin. I could find no enlarged glands. The dog gave signs of being ill and refused his food. Under chloroform I removed the growth, which was then larger than a hen's egg. The animal recovered rapidly, and although he bit out all the stitches, two months afterwards one could not see the scar. Sections of the growth were cut and the pathologists of St. Mary's and University College Hospital both declared the growth a typical melanotic sarcoma. I have a slide by me now. The dog remained in apparently perfect health for twelve months, when I noticed a recurrence at the same spot. This grew most rapidly. In less than a week I operated again, but found the peritoneum involved, so gave the poor creature an overdose of chloroform. The recurrence also was melanotic.—I am, etc.,

Hillsdon, Devon, Oct. 4th. G. A. LEON, M.D.Brux.

THE EYESIGHT OF PILOTS.

SIR,—With reference to Dr. Godding's letter in the BRITISH MEDICAL JOURNAL of September 30th, the statement made in my paper at the British Medical Association that no examination is generally made of the eyesight of pilots would not apply to the pilots employed under the Honourable Trinity Board, who, as Dr. Godding points out, are examined as to their acuteness of vision and colour perception, and it is very gratifying to know that such is the case. At the same time my statement was quite accurate. The majority of the pilots employed in and around the ports and coasts of England are entertained by local pilotage authorities, and from returns and information received by the Marine Department of the Board of Trade, it appears that more than half the pilotage authorities do not impose any sight test at all; in cases where examinations are held they are not conducted on any uniform principle.

The careful examination of the eyesight of pilots made by the Pilotage Committee of the Trinity Corporation and some other authorities only emphasises the necessity for all classes of pilots being required to undergo a similar examination. It is also very gratifying to hear from the letter of Dr. Dunlop in your issue of October 7th that the pilots under the authority of the Clyde Navigation Trust are carefully examined by a specially appointed medical officer. I cannot, however, admit that "I was proved to have made a blunder" in my statement, which is substantially correct, and in no way weakened by the exceptions which have been brought forward.—I am, etc.,

Weybridge, Oct. 7th. HENRY CAYLEY.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MEDICAL ARRANGEMENTS FOR THE TRANSVAAL.

Since our last report the following are the items to be noted connected with the probable operations in South Africa. The *Lalpura* transport arrived at Durban on October 2nd with a field hospital, which goes to Glencoe; and the transport *Secundra* reached Durban on October 3rd with a medical detachment.

Among the departures of officers on October 6th by the *Braemar Castle* were Lieutenant-Colonel A. H. Anthonisz, in medical charge; Lieutenant-Colonels A. Grier and R. D. Hodson; Majors P. W. Barnes, R. W. E. H. Nicholson, and Elderton, the Royal Army Medical Corps, and No. 1 General Hospital. Of the Army Nursing Service there were on passage Superintendent Miss Garrick, who has been more than thirteen years in the service, and was promoted in July from Sister to Superintendent; and the following sisters: Miss Rose Innes, who has had experience at Aldershot; Miss Neale, at Canterbury; Miss A. C. L. Anderson, at the Military Hospital, Rochester Row; Miss Nixon, at Woolwich; Miss Murphy, in Dublin; Miss Snowdon, at Devonport; and Miss Guthrie, at Chatham. The experience these nursing sisters have had at our large military hospitals will insure that this department will be well represented at the base and other hospitals or hospital ships to which they may be allotted.

The orders calling up the requisite number of reservists apply to certain units, and among these to Sections A. B. and C. Royal Army Medical Corps. The men will be directed to join by October 15th.

Colonel A. W. Duke, principal medical officer of the North-Western District, has been appointed to the charge of No. 2 station hospital, Natal.

The officers and men numbering 130 attached to No. 1 General Hospital for service in South Africa were paraded for inspection at the Station Hospital, Portsmouth, under the command of Lieutenant-Colonel Anthonisz. The men, who were drawn chiefly from the Southern District and brought up to strength by a draft from Dover, were in marching order with helmets covered with khaki. Surgeon-General Cuffe, C.B., the principal medical officer of the Southern District, first inspected the company and afterwards they were inspected by Lieutenant General Sir Baker Russell, who approved of the fitness of the men for active service. The company embarked at Southampton on October 6th.

The War Office has chartered the *Spartan* and the *Trojan* as transport ships for the sick and wounded. The probability is that the chief fighting will take place, at any rate at first, on the Natal border, and the sick and wounded will be moved down from the front first to Pietermaritzburg, and afterwards to Durban, but the climate of Durban is not healthy at this season of the year, when the temperature and the rainfall heavy. The country rises rapidly in a series of plateaus from Durban to Charlestown and Laing's Nek on the Transvaal border; Pietermaritzburg, 70 miles from Durban, is at an elevation of 2,218 feet; Ladysmith, 189 miles from Durban, is at an elevation of 3,285 feet; and Charlestown and Laing's Nek are over 5,300 feet. Apart, therefore from the temperature and moisture, the sudden change from a high elevation to the sea level might be expected to have a depressing effect upon sick and wounded men. The *Spartan* and *Trojan* will be used for transporting the sick and wounded from Durban to the chief base hospital at Capetown. The climate at Capetown, though hot at this season of the year, is dry. The *Spartan* is under orders to sail early next week, and the *Trojan* will probably be ready a week later. The hospital ship to be fitted out by the Central British Red Cross Committee will be used to supplement the War Office transports, and will probably proceed in the first instance to Capetown. The hulls are painted white with a large red cross on either bow and either quarter. The *Spartan* has three sick wards on the main deck containing some 60 swinging cots—cheerful, airy, and commodious. Special cots are provided for officers. Electric lamps, stationary and portable, and also electric fans are provided. An operating ward and Roentgen apparatus are also provided. Lifts will also be in use for lowering or hoisting sick to and from the wards. The vessels can work refrigerating machinery to make ice sufficient for requirements. A plentiful supply of drugs and stimulants will be at hand. Nothing, in fact, will be lacking to place the sick and wounded under the best possible conditions for successful treatment.

With reference to the statement that Home authorities have been in correspondence with the Government of India regarding the provision of two hospital ships of 500 beds each for the troops in South Africa, it is understood that the P. and O. steamer *Sutlej* has been already engaged for this purpose. She will remain at Durban after discharging her military passengers. The second vessel had not been selected when the last mail left India. The under-mentioned medical officers have been detailed for duty with the Field Hospitals and Brigade Divisions Field Artillery under orders for South Africa with the Indian contingent: No. 24 British Field Hospital—Major Martin, Major Porter, Major Holt, and Lieutenant Martin, all of the R.A.M.C.; No. 26 British Field Hospital, Sections A and B—Major Kerin and Captain Warder, R.A.M.C.; Brigade Division Field Artillery, Captain Slayter, R.A.M.C.

The Italian Red Cross Society has decided to send to the Transvaal and the Orange Free State a specially equipped ambulance for the succour of the sick and wounded during the approaching war; while Mr. Hoffman, the member of the Assembly for Paarl, is organising an ambulance corps for the Transvaal. The Italian Red Cross ambulance will sail immediately after the declaration of war. The services of these ambulances will be in great request if, as the war correspondent of the *Daily Telegraph* states, the medical arrangements of the Boers are practically *nil* and their transport little better.

FIELD FORCE.—SERVICE ABROAD.

The following is the full Official List of Officers of the Royal Army Medical Corps who are detailed for duty in connection with the military operations in South Africa:

*Table showing Officers, Royal Army Medical Corps, detailed for Regimental Units.**

Unit.	Present Station or Place of Mobilisation of Unit.	Medical Officer.	District or Station of Medical Officer.
1st Cavalry Brigade.			
6th Dragoon Guards ...	Shorncliffe	Major H. J. Barratt	Canterbury.
10th Hussars	Aldershot	Major E. V. A. Phipps	Warley.
12th Lancers	Aldershot	Major T. J. O'Donnell	Aldershot.
"R" Battery, R.H.A. ...	Aldershot	Lieut. A. L. A. Webb	Aldershot.
2nd Cavalry Brigade.			
1st Dragoons	Hounslow	Major E. Eckersley	Home.
2nd Dragoons	Edinburgh	Major A. F. Russell	Scottish.
6th Dragoons	Curragh	Major H. J. Wyatt	Curragh.
"O" Battery, R.H.A. ...	Aldershot	Lieutenant A. L. Scott	Aldershot
1st Infantry Division.			
1st Brigade.			
3rd Bn. Grenadier Gds.	Gibraltar	Captain C. W. Profeit	Gibraltar.
1st Bn. Coldstream Gds.	Gibraltar	Captain A. W. Hooper	Gibraltar.
2nd Bn. Coldstream Gds.	London	Captain A. F. Heaton	London.
1st Bn. Scots Guards ...	London	Captain S. G. Moores	London.
2nd Brigade.			
2nd Bn. Royal W. Surrey Regiment	Portsmouth	Major A. B. Hinde	Southern.
2nd Bn. Devonshire Rgt.	Aldershot	Lieut. P. H. Faulkner	Aldershot.
2nd Bn. West Yorkshire Regiment	Aldershot	Lieut. J. I. W. Morris	Aldershot.
2nd Bn. E. Surrey Regt.	Woking	Major J. Hickman	Home.
Divisional Troops.			
Brigade Div. Staff, Royal Field Artillery (7th, 14th, and 66th Batt.)..	Aldershot	Lieut. E. T. Inkson	Aldershot.
17th Co., Rl. Engineers	Aldershot	Lieut. A. A. Seeds	Thames.
2nd Infantry Division.			
3rd Brigade.			
2nd Bn. Ryl. Highlanders	Aldershot	Lt. H. E. M. Douglas	Scottish.
1st Bn. High. Lt. Inft. ...	Devonport	Lt. T. C. MacKenzie	Devonport.
2nd Bn. Seaforth High.	Fort George	Major G. E. Moffett	Scottish.
1st Bn. Argyll and Sutherland Highldrs.	Dublin	Captain J. E. Carter	Dublin.

Unit.	Present Station or Place of Mobilisation of Unit.	Medical Officer.	District or Station of Medical Officer.
14th Brigade			
2nd Bn. Scottish Rifles	Glasgow	Major A. S. Rose	Scottish.
3rd Bn. King's Ryl. Rifls.	Kilkenny	Major J. J. Gerrard	Cork.
1st Bn. Drhm. Lt. Infty.	Aldershot	Lieut. J. J. W. Prescott	Dublin.
1st Bn. Rifle Brigade ...	Parkhurst	Lieut. R. D. Jephson	Southern.
Divisional Troops.			
Brigade Division Staff, Royal Field Artillery (62nd, 64th, and 73rd Batteries)	Aldershot	Lieut. H. M. Nicholls	South-Estrn.
11th Field Company, Royal Engineers ...	Aldershot	Lieut. A. Chopping	South-Estrn.
3RD INFANTRY DIVISION.			
5th Brigade.			
1st Bn. Inniskling Fusiliers	Mullingar	Major J. H. Brannigan	Mullingar.
2nd Bn. R. Irish Rifles...	Belfast	Major J. M. F. Shine	Cork.
1st Bn. Connaught R. ...	Athlone	Major J. H. Curtis	Cork.
1st Bn. R. Dub. Fusiliers	Curragh	Lieutenant L. N. Lloyd	Curragh.
6th Brigade.			
2nd Bn. Royal Fusiliers	Aldershot	Lieut. H. F. Hart	South-Estrn.
2nd Bn. R. Scots Fusil'rs	Aldershot	Lieut. H. B. Onraët	North-Estrn.
1st Bn. R. Welsh Fusil'rs	Pembr'ke Dk	Major B. L. Mills	Western.
2nd Bn. R. Irish Fusil'rs	Colchester	Major C. W. Johnson	Eastern.
Divisional Troops.			
Brig. Div. Staff, R. Field Art. (74th, 77th, and 79th Batteries)	Coventry	Lieut. E. E. Ellery	Cork.
12th Field Comp., R.E.	Aldershot	Lieut. O. W. A. Elsner	North-Wstn.
CORPS TROOPS.			
13th Hussars	Aldershot	Major F. J. Lambkin	Southern.
Brig. Div. Staff, Royal Horse Artillery ("G" and "P" Batteries) ...	Woolwich†	Lieut. G. G. Delap	Cork.
Brig. Div. Staff, Royal Field Artillery (4th, 38th, and 78th Batts.)...	Woolwich	Lieut. L. E. L. Parker	Woolwich.
Brig. Div. Staff, Royal Field Artillery (37th, 61st, and 65th Batts.)...	Woolwich	Lieut. W. W. Scarlett	Woolwich.
"A" Pontoon Troop, Royal Engineers ..	Aldershot	Lieut. S. G. Butler	South-Estrn.
26th Co., Rl. Engineers	Alder-hot	Lieut. L. F. F. Winslow	Thames.
1st Bn. Royal Scots ...	Belfast	Mj. R. P. Hetherington	Dublin.
LINES OF COMMUNICATION.			
2nd Bn. Nrthmbld. Fus.	Portsmouth	Major W. B. Day	Southern.
2nd Bn. Smrstshr Lt. In.	Portland	Captain R. H. E. Holt	Southern.
2nd Bn. D. of Cornwall's Light Infantry	Devonport	Lieut. H. S. Anderson	Devonport.
1st Bn. Welsh Regiment	Aldershot	Lieut. L. Wood	Thames.
2nd Bn. Nrthmptush Rt.	Aldershot	Lieut. E. L. Munn	Belfast.
2nd Bn. Shropshr Lt In.	Aldershot	Lieut. E. P. Connolly	Dublin.
1st Bn. Gordon Hlndrs.	Edinburgh	Captain P. J. Probyn	Scottish.

* The following units to wh ch medical officers are allotted in War Establishments will not have any detailed in the present instance:
Divisional Supply Columns, Corps Troops, Headquarters Cavalry Regiment, Ammunition Park, Supply Column, Field Bakery, and Supply Park.
General Officers concerned will make the necessary arrangements for their medical charge.

† Mobilises at London.

WAR OFFICE, MEDICAL DIVISION,
October 1st, 1899.

Table Showing the Officers of the Royal Army Medical Corps detailed to Bearer Companies and Field Hospitals.

Unit.	Allotment in Field Force.	Names of Officers.	Whence Obtained.
A.—BEARER COMPANIES.			
2nd Cavalry Brigade Bearer Company	2nd Cavalry Brigade	Major E. North ... ... Major R. J. Copeland Captain H. J. M. Buist	Woolwich District (No. 12 Comany).
No. 1 Bearer Company	1st Brigade	Major H. J. R. Moberly ... Captain T. B. Beach Lieutenant J. E. Hodgson	Home District (No. 18 Company).
No. 3 Bearer Company	3rd Brigade	Major R. G. Hanley ... ... Captain C. W. R. Healey Lieutenant M. H. G. Fell	Aldershot District (No. 1 Company).
No. 4 Bearer Company	2nd Brigade	Major J. D. T. Reckitt ... Lieut. A. O. B. Wroughton Lieut. F. J. Palmer	Aldershot District (No. 2 Company).
No. 8 Bearer Company	5th Brigade	Major S. Townsend ... ... Captain E. M. Morphew Lieutenant G. C. Phipps	Cork District (No. 16 Company).
No. 9 Bearer	4th Brigade	Major E. O. Milward ... ... Lieut. J. W. Houghton Lieut. J. W. Langstaff	Dublin District (No. 14 Company).
No. 11 Bearer Company	1st Cavalry Brigade	Major A. B. Cottell Major H. C. Thurston Captain H. D. Mason	Eastern District (No. 9 Company).
No. 12 Bearer Company	6th Brigade	Major L. Haywood ... ... Captain J. D. Alexander Lieutenant T. C. Lauder	Curragh District (No. 17 Company).
B.—FIELD HOSPITALS.			
No. 1 Field Hospital	1st Brigade	Surgeon-Lieut.-Colonel J. Magill Surgeon-Major E. N. Sheldrake Surgeon-Major W. R. Crooke-Lawless Surgeon-Major W. C. Beevor Quartermaster and Honorary Captain T. Phillips	Home District (No. 18 Company).
No. 3 Field Hospital	2nd Brigade	Major J. C. Culling ... Captain H. J. Parry Captain J. W. Jennings, D.S.O. Lieute ant J. W. Leake Quartermaster and Hon. Lieut. H. Spackman	Aldershot District (Depot, Royal Army Med. Corps).
No. 6 Field Hospital	2nd Cavalry Brigade	Major T. W. O'H. Hamilton Major F. J. Greig Captain H. E. Dowse Lieutenant G. H. Irvine Quartermaster and Hon. Lieutenant E. Thowless	Southern District (No. 6 Company).
No. 7 Field Hospital	Divisional Troops, 1st Division	Major F. A. Harris ... ... Major R. P. Bond Lieut. G. M. Goldsmith Lieutenant R. S. Rodger Quartermaster and Honorary Lieut. J. H. W. Beach	North Western District (No. 19 Company).
No. 9 Field Hospital	4th Brigade	Major G. T. Goggin ... ... Major F. S. Heuston Lieutenant J. G. Gill Lieutenant G. J. A. Ormsby Quartermaster and Honorary Lieutenant R. Adams	Dublin District (No. 14 Company).
No. 10 Field Hospital	3rd Brigade	Major S. C. B. Robinson ... Major H. J. Peard Lieut. N. J. C. Rutherford Lieutenant H. D. Packer Quartermaster and Hon. Lieut. J. C. B. Whitehorn	North-Eastern District (No. 8 Company).
No. 11 Field Hospital.	1st Cavalry Brigade	Major D. L. Irvine ... ... Major A. E. Tate Captain F. J. W. Porter Lieutenant H. K. Palmer Quartermaster and Hon. Lieutenant C. F. Dear	Eastern District (No. 9 Company).
No. 15 Field Hospital.	5th Brigade	Major G. H. Younge ... ... Major F. T. Wilkinson Captain E. N. Pilcher Lieutenant D. Harvey Quartermaster and Hon. Lieutenant J. Hirst	Thames District (No. 10 Company).
No. 16 Field Hospital	Divisional Troops, 3rd Division	Major A. T. I. Lilly ... ... Major F. W. H. D. Harris Lieutenant L. Humphry Lieut. V. J. Crawford Quartermaster and Honorary Lieut. D. Dallas	Western District (No. 7 Company).

Unit.	Allotment in Field Force.	Names of Officers.	Whence Obtained.
No. 17 Field Hospital	6th Brigade	Major C. W. Thiele ... ... Major J. B. W. Buchanan Capt. N. Faichnie Lieutenant D. E. Curme Quartermaster and Honorary Lieut. M. Hewitt	South-Eastern District (No. 11 Company).
1st Corps Troops, Field Hospital	Corps Troops, 1st Army-Corps	[1]Major A. Baird ... . Major J. Paterson Captain F. W. Begbie Lieutenant R. H. Lloyd Quartermaster and Honorary Lieut. E. Lines	Netley, Southern District (No. 5 Company).
2nd Divisional Field Hospital	Divisional Troops, 2nd Division	Major H. W. Murray ... ... Major G. Coutts Lieut. G. H. Goddard Lieut. R. A. Cunningham Quartermaster and Honorary Lieut. A. Finley.	Aldershot District (No. 3 Company).

[1] From the Woolwich District. [2] From the South-Eastern District.
[3] From the Royal Arsenal.
[4] From Netley. [5] From the Aldershot District.
[6] From the Western District.

STAFF LINES OF COMMAND.

Principal Medical Officer: Colonel W. F. Stevenson.
Secretary: Major G. H Sylvester.
No. 1 Stationary Hospital: Lieutenant-Colonel R. W. Mapleton in command.
No. 2 Stationary Hospital: Major H. D. James in command.
No. 3 Stationary Hospital: Major T. A. P Marsh in command.
No. 4 Stationary Hospital: Major R. Kirkpatrick in command.
No. 1 General Hospital: Lieutenant-Colonel A. H Anthonisz in charge; Lieutenant-Colonel H. Grier, Registrar and Secretary.
No. 2 General Hospital: Colonel A. W. Duke in charge; Major C. J. Addison, Registrar and Secretary.
No. 3 General Hospital: Lieutenant-Colonel O'G. Wood in charge; Major A. Keogh, Registrar and Secretary.
No. 4 General Hospital: Colonel J. A. Clery in charge; Major T. R. Lucas, Registrar and Secretary.
No. 1 Base Depôt, Medical Stores: Major R. J. McCormack in charge.
No. 2 Base Depôt, Medical Stores: Major R. C. Thacker in charge.

THE RETIREMENT OF FLEET-SURGEON GIPPS: A PERSONAL EXPLANATION.

FLEET-SURGEON A. G. P. GIPPS (Stevenage) writes: With reference to the articles which appeared in the BRITISH MEDICAL JOURNAL of September 23rd and 30th, regarding my retirement from the navy immediately after my promotion and appointment to Haslar Hospital, I wish to state exactly the facts which led to my so doing. Whilst acting as Secretary to the Committee which sat on naval medical subjects generally, I expressed a wish to have the newly-created appointment at Haslar, as Lecturer on Tropical Diseases, to have charge of wards, to instruct in the Roentgen ray work, and as Demonstrator of Bacteriology to the hospital. The instructional part of the work was for the surgeons on entry into Her Majesty's navy. I was appointed on or about August 18th, and on my appointment being made I applied to the Medical Director-General for permission to be relieved by the beginning of September, in order to enable me to make the necessary domestic arrangements for my family before, as had been previously arranged, joining the Royal Albert Dock Hospital on October 1st, this necessitating my return to London on that date. I asked for leave from September 1st, and this being refused I asked for half pay for the month of September. This was equally refused. I then asked for half September on half pay, which was equally not granted. I must here state that very urgent domestic reasons (health) necessitated my having a house to put my family into, and this very urgent reason was well known to the Director-General, and repeatedly explained by me to him, and he knew that reason had existed for over two years. What made it more strange was that he actually wrote and offered the appointment I was vacating to an officer in England, who gladly accepted it before the end of August, but no further steps were taken until nearly the end of September to appoint him, and I most emphatically say that no service reason dictated this delay, as if it had been wished I could have been treated as simply as if I were on leave till September 30th.

In addition to the above extraordinary treatment, when the question of a residence for me arose, the Director-General suggested vacating the house now held by a surgeon, which I occupied 16 years ago as a junior surgeon, for me to live in, but before doing so he called for a report from the Inspector-General at Haslar as to its suitability, who reported against it altogether. In spite of this he still recommended that "when vacant I should be put into this house, until which time (?) I should have lodging allowance." I had told him over and over again that as the house had only three bedrooms in it I should virtually not have room to live in it; this I told him long ago, in spite of which he persisted in trying to force me into an impossible house, which I had explained there was no room in; and had been reported as unfit for that purpose. Besides, he knew that for the domestic reason already given, I could not live in lodgings for an indefinite period. Lastly, after a somewhat sarcastic description of the antiquities of Haslar Museum, as exhibited at the British Medical Association meeting at Portsmouth, I was told I was to do curator of the Museum. I inquired at my old hospital (St. Bartholomew's) all about the modern processes used, and decided, with all the other work, that I should not be able to undertake it.

I wrote a letter to the Director-General, in which I said that as I could have neither leave nor half-pay in September, as he had recommended I should be put into a house I could not live in, and had occupied as a junior surgeon over fifteen years ago, and as for the reasons (domestic) I had given I could not go into lodgings indefinitely, or live in the house in question; and lastly, on account of the added museum duties, I must decline the appointment and retire. To show how I was kept in the dark, on September 30th, the day I left the Admiralty, he informed me that he had been trying to get a man specially for the museum, that he had inquired at St. Thomas's Hospital about it, but "that he had never mentioned this to me!"

I have no hesitation in saying that it was being met by a *non possumus* all along the line, which forced me to retire, as my request for only half September on half-pay would have saved it, and the house and museum questions might have been adjusted. I have reasons for knowing privately that the house would not have been allotted to me—other authorities would have prevented this. But it shows one how lightly long and good services are valued, and that it will be easy to unpopularise the Naval Medical Service. I had done a very large amount of major surgical operative work at the naval hospitals, and, without being egotistical, know that my surgical work had been valued; but when it came to granting such a small request as that for which I asked, it was found better to let me retire than give the slightest of favours.

I have stated the facts in their bare and bald conditions as they actually occurred, and I have neither added nor detracted from them in any way. Numbers of naval medical officers to whom I told these facts as they arose and occurred could corroborate this, and I also mentioned them to the clerical staff in the office in which I served.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: JAMES O'B. WILLIAMS, M.D, Fleet-Surgeon, to the *Magnificent*, October 17th; ROBERT W. WILLIAMS, Fleet-Surgeon to the *Vivid* and for R.N. Barracks, October 17th; STEWART F. HAMILTON, Staff-Surgeon to the Royal Marine Artillery, Eastney, October 19th; HERBERT CANTON, Staff-Surgeon, to the *Jupiter*, October 19th; OCTAVIUS W. ANDREWS, M.B., Staff-Surgeon, to the *Tamar*, October 7th; ALFRED J. PICKTHORN, Staff-Surgeon, to the *Magdala*, October 6th, WILLIAM G. STOTT, M.A., M.B., Staff-Surgeon, to the *Marathon*, October 10th; FREDERICK A. CAPPS, Surgeon, to Haslar Hospital for dental duties, October 3rd

Mr. J. HUSKIE, M.B., a civil practitioner, has been appointed Surgeon and Agent at Blundellsands, October 6th.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN C. C. FLEMING, M.B., D.S.O, from the Seconded List, to be Captain, *vice* H. A. Berryman, placed on temporary half-pay, August 22nd. Captain Fleming was seconded for service with the Egyptian Army, September 5th, 1896.

Captain J. F. MCMILLAN, half-pay, is granted retired pay, September 22nd. He joined the service as Surgeon-Captain, August 1st, 1885, and was placed on half-pay on account of ill-health September 22nd, 1894. He has no war record in the Army Lists.

The following officers are detailed to embark from England during the season 1899-1900: By the *Dunera*, October 5th, Majors R. E. MOLESWORTH and D. R HAMILTON, Captains C O'C. HODGENS and T. P. JONES. By the *Simla*, October 20th, Majors J OSBURNE and R. J. GELDES, Captains E C. ANDERSON and B. W. LONGHURST. By the *Dilwara*, November 3rd, Colonel J. F. WILLIAMSON, Major T. DU B. WHAITE, Captain H. W. K. READ. By the *Nubia*, November 11th, Majors R. F. O'BRIEN and F. R NEWLAND, Captain E. H. CONDON. By the *Dunera*, December 8th, Major W. ROWNEY, Captain C. J. HEALY. By the *Simla*, December 21st, Majors S. C. PHILSON and F. S. LE QUESNE, Captain A. G. THOMPSON. By the *Dilwara*, January 3rd, Colonel F. W. TREVOR, Major J. J. C. DONNET, Captain H. A. STALKARTT. By the *Nubia*, January 17th, Majors A M. DAVIES and C. S. SPARKES, Captain H. P. JOHNSTON. By the *Dunera*, February 9th, Majors A. E C. SPENCE and R. L. R. MACLEOD. Captain H. A. HINGE. By the *Simla*, February 20th, Major G H. BAREFOOT, Captain H. S. THURSTON. By the *Dilwara*, Majors G. J. COATES and J. M NICOLLS, Captains J. H. FARMER and C. T. SAMMAN. By the *Nubia*, March 17th, Colonel P. J. DEMPSEY, Major M. J. SEXTON, Captains J. J. MCNAUGHT and R. F. E. AUSTIN.

INDIAN MEDICAL SERVICE.

CAPTAIN W. MOLESWORTH, M.B., Madras Establishment, is appointed Surgeon to the Governor of Madras.

THE VOLUNTEERS.

MR. WALTER W. NUTTALL is appointed Surgeon-Lieutenant in the Leicestershire (Prince Albert's Own) Yeomanry, October 11th.

Brigade-Surgeon-Lieutenant-Colonel P. H. WATSON, the Queen's Rifle Volunteer Brigade, the Royal Scots (Lothian Regiment), has retired, October 11th; he retains his rank and uniform, vacating at the same time his appointment as Senior Medical Officer to the Forth Volunteer Infantry Brigade.

Surgeon-Major J. B. RONALDSON, 7th Volunteer Battalion the Royal Scots (Lothian Regiment) is promoted to be Surgeon-Lieutenant-Colonel, October 11th.

Surgeon-Captain W. E. CROZIER, 1st Volunteer Battalion the King's Liverpool Regiment, has resigned his commission, October 11th.

Brigade-Surgeon-Lieutenant-Colonel J. S. LOE, 3rd Volunteer Battalion the Prince of Wales's Own West Yorkshire Regiment, has retired, October 11th, retaining his rank and uniform and vacating his appointment as Senior Medical Officer to the West Yorkshire Volunteer Infantry Brigade, October 11th.

VOLUNTEER MEDICAL STAFF CORPS.

QUARTERMASTER W. J. SAVFALL, the Maidstone Company, is granted the honorary rank of Captain, October 11th.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From	To
Colonel E. Townsend, M.D., C.B.	Bengal	South Africa.
,, J. H. Moore	Belfast	Bombay.
,, W. E. Saunders, C.B.	Bombay	York.
,, W. J. Charlton	Punjab	Aldershot.
Lieut.-Col. R. Exham	Devonport	Natal.
,, R. W. Mapleton, M.B.	York	South Africa.
,, G. A. Hughes, M.B., D.S.O.	Canterbury	Netley.
Major H. L. Battersby	Dover	South Africa.
,, R. W. Barnes	—	Parkhurst.
,, R. L. Love, M.D.	Dundalk	South Africa.
,, W. G. A. Bedford, M.B.	War Office	Home District.
,, C. A. P. Mitchell, M.D.	Leith Fort	Edinburgh.
,, T. B. A. Tuckey	Malta	Cork.
,, F. A. B. Daly, M.B.	Dublin	South Africa.
,, G. W. Brazier-Creagh	Dover	Woolwich.
,, H. O. Trevor	Canterbury	South Africa.
,, R. J. L. Fayle	Malta	Devonport.
,, S. Westcott	Dublin	South Africa.
,, D. Semple, M.D.	Netley	Punjab.
,, B. W. C. Beeble	Enniskillen	South Africa.
,, H. J. Wyatt	Newbridge	Dublin.
,, A. Dodd	Aldershot	South Africa.
,, H. P. Birch	Horfield	Natal.
,, J. F. Bateson, M.B.	Finner Camp	South Africa.
,, J. Fallon	Mauritius	Leeds.
,, T. H. F. Clarkson	Crete	Malta.
,, R. Caldwell	Kilworth	Cork.
,, R. C. Thacker	Dublin	Newbridge.
,, R. E. Kelly, M.D.	Tower	Woolwich.
Captain J. W. Jennings, D.S.O.	Egyptian Army	Dublin.
,, J. C. Connor, M.B.	Limerick	Jamaica.
,, T. J. Lenehan, M.B.	Birr	South Africa.
,, G. J. Buchanan, M.B.	—	Cork.
Lieutenant M. P. Corkery	Shoeburyness	Bengal.
,, E. Brodribb	Aldershot	,,
,, R. D. Jephson	—	Portsmouth.
,, G. W. G. Jones	Belfast	South Africa.
,, W. B. Winkfield	Dover	,,
,, D. E. Curme	Lydd	Brighton.
,, D. Harvey, M.B.	Preston	Netley.
,, J. M. Sloan, M.B.	Inchkeith	South Africa.
,, G. C. Phipps	Cork	Ballincollig.
,, H. D. Packer	Nwcstle.-on-T.	York.
,, F. J. Palmer	—	Aldershot.
,, G. H. Irvine	—	Portsmouth.
,, R. A. Cunningham, M.B.	—	Aldershot.
,, V. J. Crawford	—	Devonport.
,, G. G. Delap	—	Cork.
,, O. Challis	—	Dover.
,, W. A. Woodside	—	Portsmouth.
,, H. Simson	—	,,
,, H. H. Norman	—	Devonport.
,, W. R. Blackwell	—	Dublin.
,, H. M. Nicholls, M.B.	—	Dover.
,, H. B. Onraët	—	York.
,, A. Chopping	—	Dover.
,, H. F. Hart, M.B.	—	,,
,, A. L. A. Webb	—	Aldershot.
,, S. G. Butler	—	Dover.
,, L. F. F. Winslow	—	Chatham.
,, J. J. W. Prescott	—	Dublin.
,, P. H. Faulkner	—	Aldershot.
,, H. E. M. Douglas	—	Edinburgh.
,, E. C. Ellery	—	Cork.
,, O. W. A. Elsner	—	Chester.
,, J. W. Langstaff	—	Dublin.
,, J. I. W. Morris	—	Aldershot.
,, E. T. Inkson	—	,,
,, A. A. Seeds, M.B.	—	Chatham.
,, H. S. Anderson	—	Devonport.
,, H. Ensor, M.B.	—	Dublin.
,, L. N. Lloyd	—	Curragh.
,, J. Wood	—	Chatham.
,, E. L. Munn	—	Belfast.
,, T. C. Mackenzie	—	Devonport.
,, E. P. Conolly	—	Dublin.
,, J. H. R. Bond	—	Chester.
Quartermaster A. Bruce	Belfast	South Africa.
,, P. Macintosh	Cork	,,
,, G. H. Painton	—	Woolwich.
,, H. S. Brook	Shorncliffe	South Africa.

Lieutenant-Colonel A. F. Elliot, M.D. (retired pay) has relinquished the medical charge of troops at Bodmin, and has been succeeded by Lieutenant-Colonel J. Latchford, M.B. (retired pay), who has been transferred from Galway.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

APPOINTMENTS.—Dr. W. E. Dixon, late Salters' Research Fellow in Pharmacology and Demonstrator of Physiology at St. Thomas's Hospital, has been appointed Assistant to Dr. Bradbury, Downing Professor of Medicine. Dr. Laurence Humphry has been appointed Assessor to the Regius Professor of Physic. Mr. J. S. E. Townsend, who entered the University as an advanced student in Physics, has been elected to a Fellowship at Trinity College.

UNIVERSITY OF LONDON.

A MEETING OF CONVOCATION was held on October 10th at the University Building, Burlington Gardens, to receive an interesting report from the special committee appointed on June 27th to make representations to the London University Commission. Mr. E. H. Busk, LL.B. Chairman of Convocation, presided. The report, of which an abstract was published in the BRITISH MEDICAL JOURNAL of October 7th, p. 960, referred in considerable detail to the communication which the special committee had had with the Royal Commission.

Sir W. Thiselton Dyer, B.Sc., K.C.M.G., moved the reception of the report, and said that the Committee, which did not represent any particular party, had devoted a great deal of consideration to the draft statutes, and had felt justified in recommending some improvements of the terms in which the statues were framed. External candidates too often worked with obsolete books, and it would be of service to them if they could obtain information on the books, etc., to be studied from tutors sitting at the University.

Dr. Heber Hart, LL.D., seconded the motion for the reception of the report, and regretted the Chairman of the Commission had not thought it expedient to give Convocation a better opportunity of examining the Draft Statutes.

In answer to a query Sir W. T. Dyer stated that he had been informed, unofficially, that the recommendations of the Committee had in some matters had much weight with the Commission; notably, in regard to the Brown Bequest, which, as the Committee thought, ran the risk of lapsing altogether unless they had drawn attention to it, and in regard also to the future endowment of the University. The Committee was strongly of opinion that the sum of £10,000 per annum was ridiculously small for the endowment of a Metropolitan University.

Dr. H. Hart, in reply to another member, stated that the Committee thought it undesirable to grant degrees for teachers on the ground that it would multiply degrees unnecessarily.

Dr. Burton Brown protested against the inadequate representation given in the draft statutes to medical graduates on the Senate and in the Academic Council. Medicine should have an equal number of representatives with arts and science.

The Chairman explained that the word "faculties" had unfortunately two meanings; sometimes it referred to graduates' faculties, sometimes to teachers' faculties. In the place referred to by Dr. Brown, it evidently meant the teachers' faculty.

Dr. H. Hart said that medicine was also represented on the Senate and the Academic Council by the Presidents of the Colleges of Physicians and Surgeons; whereas the Faculties of Arts and Science were not similarly represented by external bodies. Again, there would probably be very few external graduates in medicine, only those, in fact, from provincial schools, which was another reason why they had fewer representatives than arts or science.

Mr. Hill thought it a pity that no degrees in education (or pedagogy, as he preferred to term it) had been recommended.

It was resolved:

That the report of the Committee be received, subject to the reconsideration by the Committee of such points, if any, as this House may deem advisable.

Mr. F. W. G. Foat, M.A., then moved:

That Paragraph 8 of the report be reconsidered with the view to recommend the establishment of a faculty and a degree in pedagogy.

Mr. Hill seconded the proposal.

Mr. G. Eastes, M.B., deprecated the settling of such a wide subject in that very small meeting, and said that the resolution, if passed, would open the way for the establishment of degrees in many other subjects, to which he was opposed.

Sir W. Thiselton Dyer considered that the establishment of degrees in small branches of knowledge was very inadvisable.

Dr. H. Hart thought it better, if the teachers wished to have a degree, that fifty of them who were graduates should send in a memorial on the subject to the Commissioners. It would have great weight with the Commissioners, and was more likely to receive attention than a resolution from that meeting. Men received degrees for what they knew, not for their capacity of imparting their knowledge to others.

After further discussion the resolution was put to the vote and lost.

It was resolved to recommend to the Commission "that all Committees of the future University should be simply advisory and have no executive functions whatever; executive functions should be assumed only by the Senate."

The House then adjourned.

UNIVERSITY OF GLASGOW.

FIRST PROFESSIONAL EXAMINATION FOR THE DEGREES OF BACHELOR OF MEDICINE (M.B.) AND BACHELOR OF SURGERY (CH.B.).—The following have passed the examination in the subjects indicated (B., Botany; Z., Zoology; P., Physics; C., Chemistry):

R. Adam (B., P.), S. C. Adam (B., P.), A. C. Amy (P.), H. G. Anderson (B., P.), J. W. Arthur (B., Z., P., C.), J. Bain (Z., P.) T. Bennett (Z., C.), A. G. Bisset (Z., P.), D. Blackley (B.), A. Blair (B., Z., P., C.), W. T. Bolton (B., P.), R. G. Bradford (B., C.), T. M. Campbell, M.A. (B., C.), A. E. (B., P.), R. H. Campbell (C.), T. G. Copestake (C.), W. S. Craig Clarke (B., Z., C.), A. Connal (B.), T. G. Copestake (C.), W. S. Craig (B., P.), J. Cross (C.), W. B. Cunningham (B., P.), D. Dickie (B.), T. T. M. Dishington (B., P.), D. G. Dykes (B., P.), J. Eadie (B., P.), C. C. Finlator (B., P.), J. Forsyth (B., Z., P., C.), W. W. George (P., C.), W. Gilchrist (Z.), W. M. Gilmour (C.), J. Glover (B., Z.), G. M. Gray (B., P.), L. J. Greig (B., P.), J. Hanson, M.A. (B., P.), J. C. Henderson (B., P.), L. Hislop (Z.), M. Hutton, M.A. (B., Z.), A. Innes (B., P.), A. (B.), L. Hislop (Z.), M. Hutton, M.A. (B., Z.), A. Innes (B., P.), A. Jamieson (Z.), J. M. Kelly (B., P.), A. Leggatt (B.), R. T. Leiper (B., P.), A. Leitch (Z., C.), J. Marshall (B., P.), G. Millar (B. P.), P. Millar (B., P.), D. R. Mitchell (B., P.), J. B. Morton (B., P.), G.

Muir (B., P., C.), J. Muir (B., P.), J. Murdoch (B., P.), J. B. M'Cabe, (P.), D. C. M'Cormick (B., P.), J. F. Macdonald (P.), N. M'Dougall (B., P.), J. B. M'Ewan (B., P.), H. A. Macewen (B., P.), J. D. Macfie (B.), R. C. M'Guire (B., P.), J. M'Houl (B., P.), A. S. M'Millan (C.), J. A. Macvea (B.), J. C. Pairman, M.A. (B., Z.), W. R. Pirie (Z., C.), J. Porter (B., P.), G. Raeburn (B., P.), B. H. Robertson (B., Z.), R. T. C. Robertson (C.), C. Ross (B., P., C.), W. G. Shand (B., P.), J. M. Smith (B.), J. A. Somerville (C.), J. B. Stevenson (B., P.), N. B. Stewart (B., P.), W. Stewart (C.), J. W. Sutherland (B., P.), M. R. Taylor (B., P.), W. Templeton (B., P.), G. D. Turner (Z., C.), J. Walker, M.A. (B., C.), W. L. Walker (B., Z.), G. Wallace (P.), R. Watson (B., C.), W. N. W. Watson (C.), R. T. Wells, M.A. (P.), G. Wilson (Z., P.), R. M'N. Wilson (B., Z.), E. Wright (B., P.), J. Wyper (B., P.), H. Young (B., C.), J. Young, Glasgow (B., Z.), J. Young, Mount Vernon (B., P.).

Women.—H. S. Baird, B.A. (P., C.), A. W. Cameron (B.), M. C. Cameron (B., Z., P.), J. Campbell (B.), E. L. Chapman (P., C.), J. G. Duncan (B., Z.), M. T. Gallagher (B., Z.), J. R. F. Gilmour (B., Z., P.), K. R. M. Lucas (Z., C.), M. Hardy (B.), A. P. Martin (B., Z.), M. W. Millar (B., Z.), E. J. Miller (B., Z.), I. D. Mitchell (B., Z., C.), J. E. Munro (B., Z.), A. W. Maclean (Z., P.), C. R. Park (B., Z.), J. M. Stewart (B. Z., C.), E. T. Talbert (P.), J. G. Waddell (C.).

Second Professional Examination for the Degrees of Bachelor of Medicine (M.B.), and Bachelor of Surgery (Ch.B.).—The following have passed in the subjects indicated (A., Anatomy; P., Physiology; M., Materia Medica and Therapeutics):

J. Anderson (M.), T. Anderson (M.), W. Archibald (A., M.), R. W. Auld (M.), J. S. Barr (M.), A. Baxter (M.), E. C. Burnett (A., M.), P. T. Cairns (P.), S. J. Cameron (M.), J. J. Y. Campbell (P.), R. D. Campbell (M.), E. S. Chapman (P., M.), G. H. Clark (A., M.), J. B. W. Cook (M.), E. H. Cramb (P., M.), A. Currie (M.), J. S. Dale (A., P. M.), D. B. Davidson (M.), G. H. G. Davie (A., M.), W. Dick (M.), A. Doig (M.), H. M'M. Donaldson (M.), G. H. Downie (M.), R. N. Dunlop (M.), W. Elder (P.), W. W. Farrar (M.), G. Ferguson (M.), D. J. Fletcher (P.), W. Gemmill (M.), A. Gow (M.), A. P. Granger (P.), J. Gregor (M.), L. C. B. Head (M.), F. J. Henry (M.), M. Hunter (M.), W. J. Isbister (M.), P. Jones (A.), D. R. Kilpatrick (M.), W. H. Kirk (M.), D. Kyle M.A. (A., P., M.), J. Lambie (A. P.), A. Linn (A., M.), J. P. Lusk (A., P.), W. A. Masson (M.), J. G. Millar (P., M.), R. J. Mills (A., P., M.), A. D. Mitchell (A., M.), S. J. Moore (A., P., M.), J. Morison (A., P.), A. H. Muir (M.), C. M'Donald (M.), W. F. M'Glashan (M.); A. Maclean (A., P., M.), H. A. M'Lean (M.), A. M'G. M'Millan (A., P., M.) G. W. M'Millan (A., M.), R. Orr (M.), J. Paton (M.) J. N. Prentice (M.), R. Ramsey (M.), T. H. Rankin (A., P.), A. Reid (A., M.), J. W. Renton (P., M.), T. Richmond (M.), W. Robertson (M.), T. R. Rodger (M.), W.G. Rodger (M.), N. C. Rogers (M.), A.T. Ross (P., M.), J. C. Ross (A., P., M.), M. B. G. Sinnette (P., M.), D. Spence (A.), D. Steele (M.), J. Stewart, M.A. (A., M.), J. B. Stewart (M.), R. R. Swan (M.), J. N. Todd (M.), J. G. Tomkinson (M.), J. Turnbull (P.), J. W. Turner (A., P., M.), J. Unsworth (P., M.), R. W. Valentine A., P., M.), J. Walker (A., P., M.), G. S. Wallace (M.), H. F. Warwick (M.), R. G. White, M.A. (M.), A. S. Wilson (P.), D. A. Wilson (P., M.), J. Wilson (P.), J. Wilson (A., P.), R. Wylie (M.).

Women.—M. E. Bryson (A.), J. B. Higgins (A., P., M.), J. T. Miller (A., P.), A. Moorhouse (M.), E. N. M. Ross (A., P., M.), A. B. Sinclair (A.), A. B. Sloan (A.), E. M. Sloan (A.), H. F. Young (M.).

Third Professional Examination for the Degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.).—The following have passed the Examination in the subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):

M. Aikman, M.A. (M.), T. T. Bathgate (M.), A. Binning (M.), A. Birch (P., M.), W. H. Brown (M.), J. D. Brownlie (M.), E. P. Cathcart (M.), R. Clark (M.), F. L. Dickson (P., M.), J. Downie (M.), J. P. Duncan, B.Sc. (P., M.), L. Findlay (M.), J. Forrest (P., M.), A. Fraser, M.A. (M.), D. G. S. Gartshore (P., M.), W. Girvan (P., M.), C. A. Gourlay, M.A. (M.), J. D. Gourlay (P., M.), J. Gracie (P., M.), C. H. Gunson (M.), C. M. Hope (P.), T. H. Jack (P., M.), W. B. Kerr (P., M.), A. King (P., M.), J. D. Laidlaw (P., M.), J. F. Lambie (P.), A. Leitch (P., M.), J. D. Lickley (M.), D. M'F. Livingston (M.), A. Logan (M.), D. Longwill (P., M.), J. Mains (M.), A. Mair (M.), A. Martin, M.A., B.Sc. (M.), R. M'N. Marshall (M.), W. A. Mills (P., M.), A. R. Moir (P.), D. Morrison (P.), A. Monro (M.), A. M'Culloch (P., M.), J. W. M'Dougall (P.), W. J. M'Feat (P.), G. S. M'Kinnon (M.), J. Mackinson (M.), W. B. I. Pollock (M.), D. Russell (M.), D. Shannon (P., M.), A. Stewart (P., M.), R. B. Thom (P., M.), A. D. Thompson (P., M.), J. S. Townley (P., M.), J. C. Turnbull (M.), A. E. Wainwright (P.), W. D. Walker (P., M.), G. White (M.), H. P. Wright (M.), J. Young, Glasgow (M.).

Women.—D. A. M. Clark, B.Sc. (P., M.), L. T. Fraser (P., M.), H. M. Gordon (P., M.), L. S. Greig (M.), M. Hardie (M.), M. E. Potter (P., M.), M. M. Ritchie (P., M.), M. A. T. Ritchings (P., M.), M. Talbot (P., M.).

ROYAL UNIVERSITY OF IRELAND.

Third Examination in Medicine.—The following candidates have passed this examination:

Upper Pass.—J. Armstrong, Queen's College, Belfast; J. H. Gill, Queen's College, Belfast; H. E. Richards, Queen's College, Galway; W. A. Sandys, Queen's College, Galway; C. F. White, Catholic University School of Medicine.

Pass.—T. A. Carson, Queen's College, Belfast; Adeline English, Catholic University School of Medicine; W. J. B. Fergus, Queen's College, Belfast; R. W. Fisher, Queen's College, Belfast; J. Gillespie, Queen's College, Belfast; J. Knox, Queen's College, Belfast; M. J. Laffan, B.A., Catholic University School of Medicine; R. McCardless, Queen's College, Belfast; F. H. McCaughey, Queen's College, Belfast; A. McCloy, Queen's College, Belfast; H. M. McCrea, Queen's College, Belfast; E. J. McKenna, Queen's College, Cork; L. T. Moore, Catholic University School of Medicine and Queen's College, Cork; D. S. A. O'Keeffe, Queen's College, Cork and Catholic University School of Medicine; W. C. Oram, B.A., Trinity College, Dublin; W. Rodgers, M.A., Queen's College, Belfast; E. F. Scott, Queen's College, Galway; R. A. Stewart, Queen's College, Belfast; J. Twohig, Queen's College, Cork; J. S. F. Weir, Queen's College, Belfast; J. A. Williams, Queen's College, Cork.

CONJOINT BOARD IN IRELAND.

Preliminary Examination.—Candidates have passed this examination as undernoted:

Honours—F. A. O'Donnell, E. L. Mulligan, F. R. Clonting, G. P. A. Bracken, J. R. P. Allen.

Pass.—T. A. Bennett, P. M. A. Black, T. S. Blackwell, H. E. Bolton, jun., A. J. Bracken, W. I. Cowell, J. Daniel, V. S. Delany, P. V. Dolan, T. J. Golding, C. Gordon, G. A. D. Harvey, M. J. Heriot, H. Horsha, H. Hosty, A. L. Mansfield, P. M. Moore, W. Mulcahy, J. Munnane, J. C. Murphy, E. F. Nyhan, S. H. Robinson, N. E. Sampey, Miss M. M. Staunton, F. J. Strahan, J. Vasquez.

First Professional Examination.—Candidates have passed this examination as undernoted:

Completed the Examination.—S. Clare, J. Clarke, D. E. Crosbie, G. F. H. Davison, J. Farrell, H. E. F. Hastings, J. Hayes, J. H. R. MacManus, A. L. O'Keeffe, J. O'Meara, D. M. O'Sullivan, E. J. Phillips, T. J. Ryan.

In Anatomy.—H. V. Kenny, J. Moran, J. M. Moriarty, R. A. Murphy, J. P. M'Loughlin, E. Walsh.

In Biology.—J. M. Moriarty, R. A. Murphy, R. McElroy, J. V. O'Hagan, J. M. J. Rhatigan.

In Chemistry and Physics.—R. A. Murphy, R. McElroy.

In Pharmacy.—J. Moran, R. McElroy, E. Walsh.

SOCIETY OF APOTHECARIES OF LONDON.

Primary Examination, Part I.—The following candidates have passed in:

Chemistry.—T. D. Bright, Aberdeen; A. J. Nicholson, Edinburgh and Cork; C. H. Sugden, Manchester.

Materia Medica and Pharmacy.—D. Mann, Royal Free Hospital; S. S. Menzies, Birmingham; S. H. Sugden, Manchester; H. O. Sutcliffe, Cambridge; M. L. Tyler, Royal Free Hospital.

Primary Examination, Part II.—The following candidates have passed in:

Anatomy.—F. D. S. Barker, Royal Free Hospital; J. A. Bartlett, Bristol; C. W. S. Boggs, Leeds; A. B. Gosse, Royal Free Hospital; W. P. A. Hardwicke, Durham; S. S. Menzies, Birmingham; E. E. Naggiar, St. Mary's Hospital; P. D. Ramsay, St. Mary's Hospital; H. Round, Birmingham.

Physiology.—J. B. Bradley, Birmingham; T. J. M. Clapperton, King's College Hospital; W. Garton, St. George's Hospital; A. B. Gosse, Royal Free Hospital; F. H. Hand, St. Mary's Hospital; S. S. Menzies, Birmingham; D. E. Naggiar, St. Mary's Hospital; P. D. Ramsay, St. Mary's Hospital; H. Round, Birmingham; G. B. S. Soper, Guy's Hospital; C. J. Taylor, Bristol.

MEDICO-LEGAL.

MEDICAL ETIQUETTE.

At the Market Drayton County Court on October 9th Dr. Yates, a medical practitioner in the town, sued George Lewis, a cheese factor, for half a guinea professional fees. According to the summary of the evidence in the *Daily News* it appears that in May last the defendant sent for Dr. Yates to attend a man in his employment named Downes, who had met with an accident. Dr. Yates at once went, taking his assistant with him, a distance of some six miles. When he arrived, however, he found that the patient had already been attended by another doctor, and that the accident, a broken leg, had been sustained two or three days previously. On ascertaining this Dr. Yates at once returned. He sent in his account for 10s. 6d. to defendant, who refused to pay except through the court. For the defence it was contended that the doctor had not fulfilled his contract, and had left the house without treating the patient. His honour, Judge Wharton, however, held that professional etiquette was parcel and part of a doctor's profession, and Dr. Yates could not have done otherwise than come away when another doctor had the case in hand. A verdict for the plaintiff was given, with costs.

A "BLACK LIST."

H. asks whether or not it is illegal for the medical practitioners in any neighbourhood to circulate among themselves a "black list" of those inhabitants who are known to be bad payers. Would the circulation of such a list amount to publishing a slander, or would it be legal as being for the practitioners' defence?

*** The question put does not appear to have been legally decided in England, but Dr. Blake Odgers, in his work on *Libel and Slander*, speaking of the somewhat similar case of a trade protection society issuing printed weekly circulars to its subscribers, states that he thinks that the circulation of such a list would be held to be justified as being a reasonable and usual method of conveying to the subscribers information which they needed for the safe conduct of their business.

FEES AT CORONER'S INQUESTS.

Justitia sends the following question: In September last I left a provincial hospital in England where I had been house surgeon for fifteen months, and went to reside in another county. Directly I arrived I was summoned back to attend an inquest on a patient who had been under my care. I attended the inquest and charged first-class return fare. The coroner refuses to pay me first class, and offers me third-class, although the attendance lost me two days and a night. Am I entitled to charge first-class fare and anything for the two days and a

night so lost? I may mention that the coroner wrote to me and asked if I would attend without a subpœna being served on me, and added, "Of course your expenses and the usual fee will be paid"; and to save him trouble I wired that I would attend. The jury at the inquest brought in a verdict of manslaughter, and I was bound over to appear at the assizes in the sum of £100 on November 11th, and I thus lost an appointment I had obtained on a passenger steamer starting on October 6th. Can I obtain any compensation in respect of this loss?

*** As our correspondent attended the inquest not on a formal summons from the coroner under Section XXII of the Coroners' Act, 1887, but by virtue of a private agreement between the coroner and himself, which agreement distinctly states the terms of remuneration, he would appear to be entitled to be paid on those terms, that is, to receive the usual fee of £1 1s. and his actual reasonable out-of-pocket expenses. With regard to the second part of our correspondent's question, we are afraid that he cannot obtain any compensation for doing that which he is legally bound over to do, even though it incidentally involves him in loss.

RESPONSIBILITY FOR FEES.

W. M. M. was called to attend a boy, who had broken his leg, by the grandfather. After doing what was necessary, "W. M. M." suggested that, as the place was out of his district, the family should employ their own doctor. There was a difference of opinion between the grandfather, who objected to this proposal, and the father, who was disposed to accept it; the grandfather, however, carried the day. The boy was removed to his father's house, and "W. M. M." continued to attend the boy. Both the father and the grandfather now refuse to pay "W. M. M.'s" account.

*** So far as can be gathered from our correspondent's statement, both grandfather and father would appear to be responsible for payment of the account—the former as having made and insisted upon the engagement and practically put himself *in loco parentis* as regards the injured boy, and the latter as having ratified the engagement by subsequently sanctioning continued attendance on the boy in his home.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

LEEDS WORKHOUSE INFIRMARY.

THE Medical Officer of the Leeds Infirmary in his report, which was presented to the meeting of the guardians on October 4th, makes out a very strong case for the rebuilding of this infirmary. The ward space does not come up to the very low standard of the Local Government Board, and yet in times of pressure "additional beds are made up by using small rooms which are really wanted for ward offices." The offensive cases have only 600 cubic feet, "the ventilation, heating, and sanitary arrangements leave much to be desired." After further comment of a like nature, Dr. Allan remarks, "this is not a building that a city of the size and importance of Leeds should be content with as a hospital." Of course, this means a new infirmary, and we are sure that when the ratepayers of Leeds grasp the situation they will not shirk their responsibilities. Wakefield has done well by its sick poor, Bradford has laid out large sums on improving its infirmary, so that Leeds, now that the medical officer has spoken out, is not likely to lag behind its rivals. There were the usual objections on the part of certain of the Board, but we are convinced that having so discharged their conscience, they will see that in the face of the increasing population and wealth of Leeds, no other course is open to them.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,677 births and 4,104 deaths were registered during the week ending Saturday last, October 7th. The annual rate of mortality in these towns, which had decreased from 26.8 to 19.1 per 1,000 in the six preceding weeks, further declined to 18.8 last week. The rates in the several towns ranged from 12.1 in Swansea, 13.6 in Huddersfield, 13.8 in Oldham, and 13.9 in Halifax, to 24.0 in Manchester, 24.2 in Newcastle, 24.7 in Liverpool, and 25.3 in Salford. In the thirty-two provincial towns the mean death-rate was 19.3 per 1,000, and exceeded by 1.4 the rate recorded in London, which was 17.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.4 per 1,000; in London the death-rate was equal to 1.9 per 1,000, while it averaged 2.8 in the thirty-two provincial towns, among which the highest zymotic death-rates were 4.0 in Hull, 4.1 in Wolverhampton, 4.5 in Salford and in Sheffield, and 7.5 in Preston. Measles caused a death-rate of 1.1 in Nottingham; "fever" of 1.1 in Portsmouth and in Halifax, 1.2 in Sheffield, and 1.6 in Bolton; and diarrhœa of 2.0 in Hull and in Gateshead, 2.1 in Sunderland, 2.9 in Wolverhampton, and 5.8 in Preston. The mortality from scarlet fever and from whooping-cough showed no marked excess in any of the thirty-three large towns. The 113 deaths from diphtheria in the thirty-three towns included 55 in London, 10 in Leeds, 10 in Sheffield, 9 in Leicester, and 7 in Birmingham. No fatal case of small-pox was registered last week either in London or in any of the thirty-two provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday last, October 7th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,538 to 2,886 at the end of the five preceding weeks, had further risen to 3,003 on Saturday last; 461 new cases were admitted during the week, against 336, 364 and 409 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, October 7th, 692 births and 534 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had decreased from 22.6 to 18.4 per 1,000 in the four preceding weeks, further declined to 17.5 last week, and was 1.3 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 12.8 in Paisley, and 13.5 in Perth, to 18.6 in Edinburgh and in Aberdeen, and 18.8 in Dundee. The zymotic death-rate in these towns averaged 3.2 per 1,000, the highest rates being recorded in Glasgow and Dundee. The 248 deaths registered in Glasgow included 9 from measles, 5 from scarlet fever, 4 from diphtheria, 10 from "fever," and 27 from diarrhœa. Two fatal cases of scarlet fever, and 8 of diarrhœa were recorded in Edinburgh; 2 deaths from measles were registered in Leith, 2 from diphtheria in Aberdeen, and 11 from diarrhœa in Dundee.

DISTRICT MEDICAL AND VACCINATION APPOINTMENTS.

GENERAL PRACTITIONER writes to say that he has been a district medical officer and public vaccinator for 36 years, and his age is 63. He asks whether he can resign the district appointment and retain the position of public vaccinator. He says, "Of course, I should expect to be entitled to the pension of 36 years' service as district medical officer."

*** Our correspondent can resign his district appointment without giving up the public vaccination, but if he were to do this the guardians would probably give him a month's notice to end his contract as their public vaccinator. We do not see on what grounds our correspondent can, at 63 years of age, claim a pension, as he does not appear to be incapacitated for further practice, as indicated by his desire to retain his vaccination appointment.

A "SUFFICIENT" WATER SUPPLY.

M.O.H. asks if he is justified in certifying that a new house has a sufficient water supply under the following circumstances: The new house replaces one burned down. The proposed water supply is, we gather, the same as that which proved "sufficient" before—namely, a rain water tank holding 1,000 gallons. The water passes through a gravel filter.

*** Taking five persons to the house, and 12 gallons a head as their daily consumption, the family would have an insufficient supply if a fortnight passed without rain. Dirty people doubtless often make shift with less than 12 gallons a head (even as little as 4), but the experiment is not one to be recommended. Our correspondent must be, of course, to some extent guided by the possibilities of obtaining a proper and adequate supply. If the difficulty is merely in the reluctance of the owner to pay the district water-rate we should be inclined to let the house remain empty till his reason returns.

OBITUARY.

WILLIAM TALBOT CLINDENING, M.R.C.S.ENG., L.S.A.LOND.

DR. CLINDENING, of Adelaide, South Australia, one of the oldest and most respected members of the profession in that city, died on June 7th. He was born in Dublin in 1825, and educated at Trinity College. He emigrated to South Australia in 1853, and practised in country districts before settling in Adelaide, where he soon obtained the post of Honorary Surgeon to the Adelaide Hospital. Upon his retirement from active service he was elected Consulting Surgeon to the hospital. Since about 1884 he had been Medical Officer to the Asylum for the Destitute and to the State Children's Department of South Australia, and his kind and conscientious manner of performing the responsible duties of that office gained for him the esteem and affection of his many patients. He was one of the medical men who earliest joined the volunteer forces of the colony, and after serving in the various grades of the medical department, he for years held the post of Principal Medical Officer of the Defence Forces of South Australia, and retired with the rank of Deputy-Surgeon-General. He was one of the original members of the South Australian Branch of the British Medical Association, which was the first Branch in Australia. He was its third President, and was for years a most regular attendant at its monthly meetings. He was a typical Irishman—genial, courteous, and held in the highest respect by all classes of citizens with whom he came in contact. His funeral was attended by Ministers of the Crown, very many medical practitioners, and other friends and neighbours.

THE death is announced, at the age of 81, of Mr. THOMAS GREENISH, a past President of the Pharmaceutical Society of Great Britain. Few men did more to raise the standard of scientific education in pharmacy, or to improve the tone of the practitioners of that art. After an apprenticeship passed in

Brecon, he came to London, and in 1841, the year of the foundation of the Pharmaceutical Society, he became associated in business with the firm of Godfrey and Cooke. He early became a member of the Pharmaceutical Society, and from the first took great interest in its proceedings, and contributed numerous papers to its journal, his favourite subject being the application of the microscope to pharmaceutical research. He became a member of the Council of the Society in 1871, Treasurer in 1878, and President in 1880. After his election to the governing body of the Society Mr. Greenish distinguished himself as a strong advocate of improved education of pharmacists, insisting not only upon a better technical education, but also upon the necessity for a more liberal preliminary education.

INDIA AND THE COLONIES.

INDIA.

The Tezpur Lunatic Asylum.—The Province of Assam has only one lunatic asylum at Tezpur, to which the insane of the Bramaputra Valley are sent, those of the Surma Valley being sent to Dacca. It contains about 220 inmates, of whom about one-third belong to the class of criminal lunatics. Females constitute a little less than one-fourth of the population. Part of the asylum was destroyed by fire in 1898, and was rebuilt on improved principles. The death-rate of the year was only 4.03 per cent., against a decennial rate of 11.24. Industries and amusements are employed for purposes of treatment, and it is evident that the institution is under careful and humane management.

MEDICAL NEWS.

The opening lecture of the winter session of the Hospital for Consumption will be delivered by Dr. Green. The subject of the lecture will be Hæmoptysis. All students of the hospital and qualified medical practitioners are admitted free.

The opening meeting of the Chelsea Clinical Society for the session will be held in the Holy Trinity Parish Hall, Pavilion Road, Sloane Square, S.W., on Tuesday next at 8.30 P.M. The President, Dr. J. Foster Palmer, will give an address on Variations in Nature and their Clinical Bearings.

The lectures at the Post-Graduate College, West London Hospital, will be resumed on Monday next, when Dr. A. E. Saunders will give a lecture on The Clinical Examination of the Blood. Subsequent lectures will be given on Mondays and Thursdays until December 12th. The out-patient department of the hospital has been remodelled and enlarged, and will be opened next month.

The specimens added to the pathological museum of St. George's Hospital will be on view in the museum during the month of October. Among the specimens exhibited are a series preserved in formalin solution so as to retain the natural colour. We understand that the curator, Dr. Lazarus-Barlow, who attends from 1 till 4 P.M. daily, will show the specimens to visitors interested in the process.

King's College, London.—The following Entrance Scholarships have been awarded: Medical Entrance Scholarship, 70 guineas, A. J. Wigmore. Two Sambrooke Medical Exhibitions, £60, E. L. Holland; and £40, T. H. Jones and J. James (equal). Two Clothworkers' Company Science Exhibitions, £30 for two years, P. C. Kingsbury; and £20 for two years, F. C. McCombie. Engineering Entrance Exhibitions, £15, W. J. Marlow; £10, A. H. Imber; £10, W. A. Sadgrove.

Medico-Psychological Association.—The autumn meeting of the S.E. Division will be held at Bethlem Hospital, London, S.E., on Monday next, October 16th, at 3 P.M. After the general business Dr. Hyslop will read a paper on Some Rare Forms of Skin Affections in the Insane; Dr. Craig a Note on the Value of Erythrol Tetranitrate in the Treatment of Certain Cases of Melancholia, and Dr. Stoddart a paper on Metabolism of the Nerve Cell. The members will dine together at the Café Monico, Piccadilly Circus, at 6.30 P.M.

Railway Accidents.—It appears from the report of Mr. F. J. S. Hopwood, Assistant Secretary of the Railway Department of the Board of Trade, that during 1898, 128 passengers were killed and 1,238 injured in this country, as compared with 115 killed and 1,315 injured in 1897. The exact proportion which these figures bear to the number of passengers carried cannot be ascertained as it is impossible to estimate the number of journeys made by season ticket holders who number over a million and a quarter, but excluding these it appears that one passenger was killed in about seven millions, and one injured in about half a million. During the same period 504 servants were killed and 4,149 injured. Of these casualties no fewer than 2,293 occurred during shunting operations. The report of the Royal Commission under the chairmanship of Lord James of Hereford, appointed to consider the means for preventing accidents to servants of railway companies, is awaited by the Board of Trade before promoting another Bill to deal with the matter.

A "World Congress" of "Antivacks."—A "world congress" for the consideration of the vaccination question was held in Berlin on September 24th and 25th. Some 240 "antivacks" assembled in council, the bulk of them being Germans, and the "world" being represented by a sprinkling of Austrians and Swiss. The "consideration" consisted of a repetition of the stock statistics and "facts" which are made to do duty at such gatherings as arguments against vaccination.

Sanitary Inspectors' Association.—The report presented to the sixteenth annual meeting of this Association which was held in London, on October 7th, stated that a Bill was to be presented next year to Parliament to give fixity of tenure to sanitary inspectors, who at present can be dismissed without the sanction of the Local Government Board being necessary. Reference was also made to the proposal to obtain a system of superannuation for sanitary inspectors. The report expressed regret that sanitary inspectors had not been able to secure representation of the new Sanitary Inspectors' Examination Board.

Military and Civil Sanitation.—The New York *Medical Record* notes that according to a report from Havana the number of deaths from yellow fever in that city last August was far less than during any August in the last ten years. In that month in every year from 1889 to 1898 the number of fatalities from yellow fever was from six to twenty-six times as many as in August 1897, when only ten deaths occurred. This improved condition is due to the better system of sanitation introduced by the United States authorities. Our contemporary complains that, on the other hand, there are thirty or more new cases of yellow fever reported in Key West, Florida, every day and the statement is made that nothing can be done and "the fever must take its course." In such a pest-hole as Havana was under Spanish rule the United States authorities can establish regulations and see that they are enforced, whilst in Key West the municipal authorities, the military authorities, and several other less defined authorities must consent before the orders of the Marine Hospital officers can be executed, that is to say, if they can be executed at all. If Key West, our contemporary adds, were attacked by a material foe, the supreme military authority would have to be obeyed. There ought to be an equal power granted to the national sanitary authority when the city is attacked by a microbic foe. These remarks apply to British as well as to American sanitation. In some of our dependencies the natives have the power to oppose officers of health, with results only too well known.

World's Temperance Congress.—The World's Temperance Congress is to be held in London from June 9th to 18th, 1900. Among the organisations which have expressed approval of the Congress is the British Medical Temperance Association. The aim of the conveners of the Congress is that it may present the exact condition of the temperance movement throughout the world at the close of the century. Papers giving historical surveys and dealing with the condition of the movement at the close of the century will be given in the following and other suggested groups:—(1) Great Britain and Ireland; (2) the United States and South America; (3) British North America; (4) Australasia and the South Sea Islands; (5) India, Ceylon, and the Far East; (6) the Continent of Europe; (7) Africa (and the Native Races Question).

The subjects for consideration may be included under the following among other suggested topics:—(1) Scientific Theories and Conclusions concerning Alcohol; (2) Temperance Instruction in Colleges and Schools; (3) Ethical and Religious Incentives to Aggressive Effort; (4) Abstinence as a Factor in Promoting Health and Longevity; (5) Industrial and Commercial Aspects of Temperance; (6) The Development of the Public house without the Drink; (7) The Province of Prohibitory and Restrictive Legislation; (8) Woman's Place and Power in the Temperance Reformation; (9) Drink Consumption during the Nineteenth Century; (10) Temperance Reform in Relation to other Social Questions; (11) The Place of Literature in Modern Temperance Work; (12) The Influence of Juvenile Work upon the New Century; (13) Methods of Propaganda in International, National, Local and Individual Effort.

University College Hospital: Presentation to Sister Cecilia.—All students of University College during the last thirty years came more or less within the sphere of influence of Sister Cecilia. So identified indeed had she become in their minds with their old hospital that it will be difficult for them to picture it without her gracious presence in the foreground. But *novus rerum nascitur ordo*, and with the building of a new hospital, a change is to be made in the nursing administration. The Sisters of All Saints Home, Margaret Street, who have had charge of the nursing since 1862, have recently given it up. During the period of her connection with the hospital Sister Cecilia worked as a Ward Sister for twelve years, and afterwards for seventeen years as the Lady Superior of the nursing department. It was felt that she should not be allowed to retire without some recognition of her self-sacrificing labours and devoted service on behalf of the hospital. Accordingly, on October 4th, the members of the Hospital Committee and of the medical and surgical staff assembled in the board-room of the hospital, and presented Sister Cecilia, as representing the All Saints Community, with a copy of a "Madonna" of Raphael, to which was attached the following inscription:

The Sisters of All Saints undertook the Nursing of University College Hospital in 1862, and for 37 years devoted themselves to this work of Charity.

In Grateful Remembrance
of their long association with the Sisterhood, the Committee and staff of the Hospital present to Sister Cecilia, who has been Sister Superior for 17 years, this copy of a well-known picture by Raphael.

Presentation.—The jubilee of Dr. James Morris's residence as a medical practitioner in Dunfermline has been celebrated recently by the presentation to him of a handsome clock and pair of fine Sèvres vases at the eighteenth annual meeting of the Fifeshire Medical Association. The clock bore the following inscription: "Presented to Dr. James Morris, Dunfermline, by the members of the Fifeshire Medical Association, on the completion by him of 50 years' practice in Dunfermline, September 29th, 1899." The meeting at Kirkcaldy, at which the presentation was made, was a full one, and was presided over by Dr. H. W. Laing, who said that the gifts marked the deep respect with which his professional brethren throughout the district regarded Dr. Morris. That gentleman, on rising to reply, was received with much applause. He reviewed the medical history of Dunfermline in respect of zymotic diseases during the last half century which witnessed in 1849 an outbreak of cholera and of typhus in 1865. The death-rate of 25 per 1,000 in 1849 had been since reduced to about 15 per 1,000. During his 50 years of practice he had attended 50,000 patients, performed 10,000 vaccinations without any evil effects, administered chloroform 10,000 times with absolute immunity from fatal results, had 5,000 births (1,000 consecutive cases without a death), made about 1,000,000 visits, and travelled about 500,000 miles. The annual dinner of the Association afterwards took place when the health of Dr. Morris was drunk with great enthusiasm, and in his reply he detailed reminiscences—some highly humorous—of his long professional career.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM AND MIDLAND SKIN AND URINARY HOSPITAL.—Assistant Surgeon. Applications to the hospital by October 18th.

CAIRO: EGYPTIAN GOVERNMENT SCHOOL OF MEDICINE.—Professor of Ophthalmology. Applications, addressed "The Director, Government School of Medicine, Cairo," by October 15th.

CAMBERWELL HOUSE ASYLUM, Peckham, S.E.—Junior Assistant Medical Officer. Unmarried, and under 30 years of age. Salary to commence £120, with board, residence, and laundry. Applications to the Medical Superintendent.

CARLISLE: CUMBERLAND INFIRMARY.—Assistant House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. Applications to the Secretary by October 24 h.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House-Surgeon. Unmarried. Salary, £80 per annum with board, lodging, and washing. Applications to the Honorary Secretary by October 17th.

EDINBURGH ROYAL INFIRMARY.—Superintendent. Salary, £500 per annum, with free house, coal, and light. Applications to Mr. W. Caw, Treasurer and Clerk, by November 15th.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. No salary; board, lodging, and washing provided. Applications to the House-Surgeon by October 24th.

GLAMORGAN COUNTY COUNCIL AND CARDIFF CORPORATION.—Bacteriologist to the Joint Committee and Lecturer on Bacteriology in the University College, Cardiff. Salary, £380 per annum. Applications to W. E. R. Allen, Clerk to the Joint Committee, Glamorgan County Offices, Cardiff, by November 6th.

GREAT NORTHERN CENTRAL HOSPITAL.—Junior House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging, and washing. Applications to the Secretary by October 16th.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to J. F. Wintringham, Honorary Secretary, St. Mary's Chambers, Great Grimsby, by November 18th.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Appointment for six months. Salary, £30. Applications to the Secretary by October 21st.

KING'S COLLEGE, LONDON.—Sambrooke Surgical Registrarship. Applications to the Secretary by October 23rd.

LANCASTER COUNTY ASYLUM.—Assistant Medical Officer, who shall act as Pathologist. Unmarried; not more than 30 years of age. Salary, £125 per annum, increasing to £250, with board, etc. Applications to the Medical Superintendent.

LINCOLN COUNTY HOSPITAL.—House-Surgeon; under 30 years of age and unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by October 26th.

LIVERPOOL STANLEY HOSPITAL.—Senior House-Surgeon. Salary, £80 per annum, with board, residence, and washing. Applications to the Chairman of the Medical Board by October 26th.

LONDON THROAT HOSPITAL, 204 Great Portland Street, W.—(1) Surgeon on Senior Staff. (2) Anæsthetist. (3) Assistant Anæsthetist. Applications to the Honorary Secretary before October 25th.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Medical Superintendent. Salary, £150 per annum, with furnished rooms, lighting, warming, and attendance, and a share of fees of classes he may be appointed to. Applications to the Secretary by October 27th.

MIDDLESEX HOSPITAL, W.—Assistant Physician. Must be F. or M.R.C.P.Lond. Applications to F. Clare Melhado, Secretary Superintendent, by November 2nd.

NEWCASTLE-UPON-TYNE: CITY HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Assistant. Salary, £60 for the first year, and if reappointed £80 the second year, with board, lodging, and washing. Applications to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, by October 24th.

NORTHAMPTON: ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES.—Junior Assistant Medical Officer; unmarried and not more than 30 years of age. Salary, £100 per annum, increasing £25 per annum to £200, with board, apartments, and washing. Applications to the Medical Superintendent by October 19th.

NORTH-EASTERN HOSPITAL FOR CHILDREN.—House-Surgeon. Appointment for eight months. Salary at the rate of £50 per annum. Applications to the Secretary, 27, Clement's Lane, E.C., by October 17th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—(1) House-Surgeon. Salary, £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th. (2) Assistant House-Surgeon. Apartments, board, and washing to be an equivalent for services rendered. Applications to the Secretary for the former by October 9th and the latter by October 23rd.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—(1) Honorary Anæsthetist. Appointment for one year, but eligible for re-election. (2) Resident Medical Officer. Appointment for six months. Salary, £50 per annum. (3) Assistant Resident Medical Officer. Appointment for six months, eligible for election to the senior post. Candidates must attend the meeting of the Medical Committee on November 2nd, at 5 P.M.

NOTTINGHAM GENERAL DISPENSARY.—Senior Resident Surgeon. Unmarried. Salary, £180 per annum, increasing £10 annually to £200, with coal, gas, and furnished apartments. Applications to the Secretary.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—House-Surgeon. Appointment for six months. Salary at the rate of 50 guineas per annum, with board and residence. Applications to the Secretary by October 24th.

PARISH OF HAMMERSMITH.—Medical Officers and Public Vaccinators for the Second and Fourth Districts. Salary for No. 2 District £90 per annum, and drugs to the value of £25; No. 4 District £25 per annum, and drugs to the value of £5 and usual fees. Applications on forms provided to the Clerk, 75, Fulham Palace Road, Hammersmith, W., by October 21st.

PONTYPRIDD GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Commencing salary, £130 per annum, with furnished rooms, fire, light, and attendance. Applications to the Secretary by November 11th.

POPLAR HOSPITAL FOR ACCIDENTS.—First and Second Assistant House-Surgeons. Appointments for six months but renewable. Salary at the rate of £65 per annum, with board, and residence. Applications to the House Governor by October 20th.

PRESTWICH: COUNTY ASYLUM.—Assistant Medical Officer. Unmarried, and under 35 years of age. Salary commences at £125 increasing to £250, with board, apartments, washing, etc. Applications to the Medical Superintendent.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner in Dental Surgery. Must be registered under the Dentists Act of 1878. Applications to the Secretary by November 1st.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Two House-Physicians. (2) One House-Surgeon. (3) One Casualty House-Surgeon. Appointments for six months. No salary, but board, etc., provided. Applications to the Secretary by October 30th.

ST. MARY, ISLINGTON.—Resident Assistant Medical Officer at the Workhouse and Infirmary, St. John's Road. Salary, £80 per annum, with rations, apartments, and washing. Applications on forms provided to be sent to the Clerk, Guardians' Offices, St. John's Road, Upper Holloway, N., by October 18th.

SALISBURY INFIRMARY.—Assistant House-Surgeon; unmarried. Salary, £50 per annum. Applications to the Secretary by October 19th.

SUSSEX COUNTY HOSPITAL.—House-Physician. Unmarried, and under 30 years of age. Salary commencing at £50 per annum, with board, residence, and washing. Applications to the Secretary by November 1st.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £80 per annum with board, washing and lodging. Applications, endorsed "Assistant House-Surgeon," to the Honorary Secretary by October 20th.

TOTTENHAM HOSPITAL.—(1) Honorary Physician to Out-patients. (2) Honorary Gynæcologist to Out-patients. (3) Resident Medical Officer. Salary, £60 per annum, with board, residence, and laundry. Applications to the Chairman of the Joint Committee for the first two appointments by October 24th, and for the latter October 17th.

VICTORIA UNIVERSITY.—External Examiner in Anatomy. Appointment for three years. Applications to the Registrar by November 1st.

WEST BROMWICH DISTRICT HOSPITAL.—House-Surgeon. Unmarried. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary.

WESTMINSTER GENERAL DISPENSARY.—Honorary Surgeon. Applications to the Secretary, 9, Gerrard Street, Soho, by October 23rd.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Surgical Registrar. Must be M.R.C.P. or M.R.C.S. Eng. Appointment for twelve months. Salary, £50 per annum. Applications to the Secretary by October 24th.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £110 per annum with board, lodging, and attendance. Applications to Mr. W. Draper, De House, York, by October 18th.

MEDICAL APPOINTMENTS.

BUXTON, Edward, M.D., F.R.C.S.E., M.R.C.P.E., D.P.H., appointed Medical Officer of Health to the Little Crosby and Hightown Districts, *vice* Wm. Rowlands, M.R.C.S., deceased.

FAULKNER, Hugh, M.B., Ch.B.Edin., appointed Assistant House-Physician to the General Hospital, Birmingham.

FORBES, W. J., M.B., B.Ch., B.A.O., R.U.I., appointed Medical Officer of Health for the Knaresborough Rural District, *vice* J. T. Hislop, resigned.

MCLEAN, W., M.R.C.S., appointed Surgeon R.M.S. "Dunottar Castle," Castle Mail Packets Company.

MITCHELL, Arthur M., M.A., M.D., B.C.Cantab., D.P.H.Camb., appointed Honorary Assistant Medical Officer to the Royal Surrey County Hospital, Guildford.

MOORE, F. Craven, M.D., M.Sc.Vict., appointed Pathological Registrar to the Royal Infirmary, Manchester.

PERN, A., L.R.C.P.Lond., F.R.C.S.Eng., reappointed Medical Officer of Health to the South Stoneham District Council.

SOUTHALL, Stephen, M.B., Ch.B.Edin., appointed House-Surgeon to the General Hospital, Birmingham.

THORP, Harold, M.R.C.S.Eng., L.R.C.P.Lond., appointed Junior House-Surgeon to the Warrington Infirmary and Dispensary.

WARD, J. A., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Grays Urban District Council.

WEBB, A. B., M.B., Ch.B.Melb., appointed Health Officer for the Shire of Ballan, Victoria, *vice* E. W. Plews, L.S.A.

DIARY FOR NEXT WEEK.

MONDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Dr. Saunders: The Clinical Examination of the Blood. (Lecture I.)

TUESDAY.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street W., 4 P.M.—Dr. T. D. Savill: Clinical Demonstration.—On the Diagnosis of Disorders of the Nervous System, with typical cases of the principal divisions.

Pathological Society of London, 20, Hanover Square, W., 8.30 P.M.—The President (Mr Watson Cheyne, F.R.S.) will deliver the opening address. Dr. Mott, F.R.S.: The Investigation of the Nervous System in Two cases of Congo Sleeping Sickness illustrated by the Magic Lantern and by Microscopical Preparations. Dr. Patrick Manson: Short description of the above two two cases of Congo Sleeping Sickness, and remarks on the etiology of the disease. Card specimens by Drs. F. W. Andrewes and H. Morley Fletcher.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. James Taylor: Tabes Dorsalis.

Chelsea Clinical Society, Parish Hall, Pavilion Road, Sloane Square, S.W., 8.30 P.M.—Opening address by the President, Dr. J. Foster Palmer, on Variations in Nature and their Clinical Bearings.

WEDNESDAY.

Royal Microscopical Society, 20, Hanover Square, W., 8 P.M.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Green on Hæmoptysis.

Royal College of Physicians of London, 4 P.M.—Dr G. Vivian Poore: The Harveian Oration.

THURSDAY.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr F. E. Batten: The Pathology of certain Nervous Affections in Children.

Charing Cross Hospital, Post-Graduate Course 4 P.M.—Mr. Waterhouse: Demonstration of Surgical Cases.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Saunders: The Clinical Examination of the Blood. (Lecture II.)

Ophthalmological Society of the United Kingdom.—Cases and Card Specimens at 8 P.M. Chair at 8.30 P.M. Introductory Address by the President (Mr Anderson Critchett). Papers: Mr. R. W. Doyne: (1) Notes on the value of Radiant Heat in Eye Disease. (2) Notes on Recurrent Superficial Necrosis of the Cornea. Mr. J. B. Lawford: Keratitis in Acquired Syphilis.

Harveian Society of London, 8.30 P.M.—Clinical evening.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

LILWALL-CORMAC.—On October 4th, at 51, Branstone Road, Burton-on-Trent, the wife of J. Lilwall-Cormac, L.R.C.P.E., L.R.C.S.E., etc. (and third daughter of Dr. Mackechnie, J.P., formerly of West Hartlepool) of a daughter.

MARRIAGES.

BALLANTINE—HAMPSON.—On October 4th, at St. Cuthbert's Parish Church, Darlington, by the Rev. F. W. Mortimer, Vicar, assisted by the Rev. Hartley Jennings, Vicar of Startforth, Robert Ballantine, M.B., C.M., Birstall, Yorkshire, to Ethel Margaret, second daughter of J. Beresford Hampson, Esq., of Burleigh Place, Darlington.

HOLFORD—LOVELL.—On October 3rd, at All Saints' Church, St. John's Wood, by the Rev. J. Richardson Eyre, assisted by the Rev. H. Courtenay Atwool, uncle of the bride and the Rev. G. Oliver, Herbert Frank Stanley (of 2bis, Bvd. D'Inkermann, Paris), eldest son of Frank Holford, of Brighton, to Bessie, only daughter of the Honble. Francis Lovell, C.M.G., Surgeon-General, of Trinidad.

OLIVER—RALPH.—On October 5th, at Tamerton Foliott, S. Devon, Thomas Oliver, M.R.C.S., L.R.C.P., of Crown Hill, S. Devon, to Mabel, eldest daughter of Captain G. Spiluff Ralph, R.N., of West Park, Tamerton Foliott.

SWAIN—HARRISON.—On October 3rd, at St. Paul's Church, Clifton, by the Rev. Canon Brindley (cousin of the bride), Principal of Codrington College, Barbados, and the Rev. W. E. Haigh, the Vicar, Jas. Swain, M.D., M.S., and F.R.C.S., of 4, Victoria Square, to Hilda May, daughter of A. J. Harrison, M.B.Lond., J.P., of Fairland Lodge, all of Clifton.

DEATHS.

SWALLOW.—On October 9th, at Clifton Lodge, Clarence Road, Clapham Park, S.W., Eliza Jane, the beloved wife of James Dodd Swallow, M.D., aged 58. Her end was perfect peace.

YOUNGE.—On September 29th, at Oldtown, Rathdowney, Queen's Co., John Mosse Younge, J.P., in his 50th year.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F., 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 3; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9. Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

THYROID desires to hear of a home where a female cretin of about 12 years of age could be taken in for 25s. to 30s. a week.

AJAX desires to have the experience of any member who has followed the method of treatment of the morphine habit by bromide, recommended by Dr. Neil Macleod in the JOURNAL of July 10th, 1897, and April 15th, 1899. He is desirous of placing a lady under care for treatment in this way.

J. A. W. would be obliged if any member would give him information as to the cause and treatment of the following case: A lady, aged 46, has for years been subject to the periodical appearance of large patches of ecchymosis on her upper and lower limbs, especially the thighs, disappearing after a few days. She is in perfect health, and her catamenia are regular.

"THE GRAPE FRUIT."

J. A. T. wants to know about the "grape fruit" said to come from the Bahamas, and to grow as large as a melon; whether it can be got in London, and if it is of any use in chronic cystitis as has been alleged.

TREATMENT OF COLITIS.

C. T. G. asks for suggestions for the treatment of the following case: A young woman has suffered for more than two years from catarrhal enteritis of the large intestine, passing large mucous casts almost daily. The ordinary remedies have been tried and consultants appealed to without success.

MEDICAL AID ASSOCIATIONS.

F. M. B. asks whether the holding of the appointment of medical officer to a medical aid association is illegal.

*** The holding of such appointments is not illegal, but having regard to the recent resolution of the General Medical Council with reference to such bodies, we think it would be well not to accept such an appointment.

ANSWERS.

SQUINT.—We do not believe that there is the slightest risk of the baby contracting the defect.

LONDON.—Our correspondent was perfectly justified in asking any question he thought necessary to explain the case.

VERAX.—Our correspondent has our sympathy, but we are very much afraid there is no remedy for the trouble of which he complains. In buying a practice which consists principally of appointments, it is usual to make the price depend upon the appointments being obtained. There can be no means of preventing competition for the appointments, and we can only hope that he will be able to secure them.

LIEBIG'S PNEUMATIC CHAMBER.

DR. E. HUGH SNELL, M.D. (Medical Officer of Health, Coventry) writes: In answer to the query of "C. J. W." in the BRITISH MEDICAL JOURNAL of October 7th as to literature relating to Liebig's pneumatic chamber, I would refer him to Liebig's book *Der Luftdruck in den pneumatischen Kammern und auf Höhen, vorn ärtzlichen Standpunkt* (Braunschweig: F. Vieweg and Sohn, 1898). A review of the book appeared in *The Practitioner* for August last. Other valuable observations on the therapeutic use of compressed air will be found in Vivenot's writings.

NOTES, LETTERS, Etc.

LAURIA FUND.

MR. JOHN H. BARRS, 6, Wandsworth Bridge Road, S.W., and Mr. EDWARD B. HARTNELL, 1, Ryecroft Street, Fulham, Hon. Secs., write: We desire to acknowledge the receipt of the following amounts in aid of the above fund:

	£	s.	d.
Mr. Henry Butlin	2	2	0
Mr. Howard Marsh	1	1	0
Dr. T. W. Pattinson...	0	10	6
Dr. G. Caldwell Stephen	3	3	0
Dr. J. J. Edwards	1	1	0

The sum of £2 2s. previously acknowledged as from "I. O. W." should be from Dr. L. P. Gibson.

MALARIAL EYE AFFECTIONS: A CORRECTION.

MAJOR M. T. YARR, F.R.C.S.I., R.A.M.C. (Victoria Street, S.W.) writes: My friend, Dr. Sulzer, writes to me as follows: "J'ai lu avec beaucoup d'intérêt votre travail sur les 'Malarial Affections of the Eye.' Le chapitre traitant de la 'malarial neuritis' contient le passage suivant qui me concerne. 'Sulzer believes that a certain proportion of the cases have malaria as a predisposing cause only, the exciting cause being the indirect action of sunlight, and adduces.....' Mon travail insiste partout sur le fait que la névrite malarienne est une affection directement paludique. Il dit tout le contraire de ce que vous me faites dire. La genèse de l'erreur est la suivante: A la fin de mon travail je décris des cas de chorio-rétinite maculaire centrale (semblables à celles qu'on observe à la suite de l'observation des éclipses solaires) survenues chez des impaludiques qui ont été exposés à l'action de la lumière solaire, réfléchie par l'eau. Il serais le premier à combattre l'opinion que vous me prêtez si un autre l'émettait. Je prends donc la liberté de vous prier de bien vouloir, par quelques mots adressés au *Journal de Tropical Medicine*, remettre les choses en ordre."

As the original paper appeared in the BRITISH MEDICAL JOURNAL as well as in the *Journal of Tropical Medicine*, I shall be obliged if you will kindly insert this correction. I have quoted Dr. Sulzer's own words, as they explain exactly how my error arose.

THE MEMBER'S GOWN.

MR. JOS. WM. GILL, M.R.C.S. (Liskeard, Cornwall) writes: I read a notice that the annual medical service in state of the Guild of St. Luke will take place this year at St. Paul's Cathedral on Thursday, October 19th, at 7.30 P.M. It is expressly desired that academical costume should be worn, and mention is especially made that Fellows R.C.S. should wear their gowns. It goes on to say that "It is trusted that those not wearing robes will not be deterred from attending, as all are equally welcome." Well, Sir, I think this clearly proves the necessity of instituting a Member's gown, for how can a Member feel anything else but belittled under such circumstances? The student's aspiration is to become a surgeon, and his natural goal is, if possible, the Membership of the College, and yet, when this is obtained, he finds himself in a decidedly back seat amongst his professional brethren. It is easily remediable without indulging in any such clownish humbug as suggested by your correspondent "Sartor Resartus."

LETTERS, COMMUNICATIONS, ETC., have been received from

A Aggrieved; Dr. J. Althaus, London; Ajax; Mr. A. Atkinson, London; Mr. H. E. Allen, London; Messrs. S. Allsopp and Sons, Burton-on-Trent; Mr. W. J. Addison, Glasgow. B Dr. A. H. Bampton, Ilkley-in-Wharfedale; Mr. P. D. Barker, Mansfield; Mr. F. M. Beckett, Ely; Mr. T. F. I. Blaker, Hove; Messrs. Brand and Co., London; R. C. Bailey, M.B., London; Bute; Mr. L. A. Bidwell, London; Messrs. Burroughs, Wellcome, and Co., London; Mr. J. H. Barrs, London. C Messrs. H. W. Cox, Ltd., London; T. Carwardine, M.B., Clifton; Deputy Surgeon-General H. Cayley, Weybridge; Dr. W. H. Calvert, Melrose; Mr. L. Cooper, Chatham; Dr. A. E. Cooper, London. D Dr. H. B. Donkin, Carnarvon; A. F. Dixon, M.B., Cardiff; A. V. Davies, M.B., Shaw; D. A. Davies, M.B., Swansea; Miss M. B. Donie, London. E Ernest; Enquirer. F Mr. L. Fletcher, Hoxne; Fever; W. J. Forbes, M.B., Knaresborough. G Mr. P. G. Glenton, London; General Practitioner; Dr. A. E. Giles, London; G. T. G.; Miss G. H. Giffen, Edinburgh; Dr. J. H. Galton, London; Mr. J. W. Gill, Liskeard; G. P. H Dr. S. L. Haynes, Malvern; Dr. J. Highet, Workington; J. B. Hall, M.B., Bradford; Dr. J. P. Henry, London; Mr. J. B. Hogg, Goodna; Mr. E. G. Hebb, London; J. McK. Harrison, M.B., Ledbury; Dr. S. H. Habershon, London. J Justitia; J. A. T.; J. A. W. K J. L. Kirk, M.B., Pickering. L Dr. G. A. Leon, Sidmouth; London; Mr. W. Lloyd, London; Dr. W. G. V. Lush, Weymouth; Dr. W. J. Lawrie, Ayr; Mr. H. Lawrence, London. M Mr. D. M. Macdonald, London; Messrs. Marshall and Elvy, London; Mr. W. More, Llanrwst; Mr. W. Mollean, London; Dr. F. C. Moore, Manchester; Dr. W. A. Mackay, Southport; Mr. J. Miller, Motherwell; Mr. J. J. de Z. Marshall, Teddington; Dr. C. J. Morton, Walthamstow; Medicus; M. D., T.C.D.; Dr. W. Milligan, Manchester; Musical. O Mr. W. Odell, Torquay. P Dr. J. E. Platt, Manchester; E. Phillips, M.B., Coventry; Public Vaccinator. R Reformer; Mr. A. E. Russell, London; Rowland; Dr. D. L. Roberts, Manchester. S Mr. A. Smith, London; Mr. G. P. Sauter, London; Dr. E. H. Snell, Coventry; Messrs. Street Brothers, London; Dr. W. P. Spratling, Sonyea, New York; Squint; Dr. T. D. Savill, London; Mr. R. V. Somerville, London; Dr. E. M. Skerritt, Bristol. T Mr. J. B. Thomas, London; Mr. R. Turner, Liverpool; G. Templeton, M.B., London; Two Assistants; Thyroid; Mr. W. T. Thomas Liverpool. V Verax. W Dr. F. J. Waldo, London; Dr. F. Willcocks, London; D. C. Watson, M.B., Edinburgh; Mr. N. Wood, London; Mr. H. Waddington, Mexborough; Mr. A. N. Wilkinson, Tamsui, Formosa; Workhouse Medical Officer; Westmoreland; A. Wauchope, M.B., Glasgow. X X. Y Mr. N. E. Yorke-Davies, London; etc.

BOOKS, ETC., RECEIVED.

Specielle Pathologie und Therapie. Herausgegeben von Dr. H. Nothnagel. XIX Band, II Haelft. Wien: Alfred Hölder. 1899. M. 5.50.

An Outline Sketch of Psychology for Beginners. By H. M. Stanley. London: Kegan Paul, Trench, Trubner and Co. 1899. 2s.

Raynaud's Disease. By T. K. Monro, M.A., M.D. Glasgow: J. Maclehose and Sons. 1899.

Introduction to the Outlines of the Principles of Differential Diagnosis, with Clinical Memoranda. By F. J. Smith, M.A., M.D., F.R.C.P. London: Macmillan and Co. 1899. 7s. 6d.

Die Erkrankungen des Nervensystems nach Unfällen mit besonderer Berucksichtigung der Untersuchung und Begutachtung. Von Dr. H. Sachs und Dr. C. S. Freund. Berlin: H. Kornfeld. 1899. M. 15.

The Pathologist's Handbook. By T. N. Kelynack, M.D., M.R.C.P. London: J. and A. Churchill. 1899. 4s. 6d.

Textbook of the Embryology of Invertebrates. By Dr. E. Korschelt and Dr. K. Heider. Translated from the German by Matilda Bernard. Revised and Edited by M. F. Woodward. Vol. III. London: Swan Sonnenschein and Co. 1899. 14s.

Handbuch der Larvengologie und Rhinologie. Herausgegeben von Dr. P. Heymann. Lief. 30. Wien: Alfred Hölder. 1899.

A Farmer's Year. By H. Rider Haggard. London: Longmans, Green, and Co. 1899. 7s. 6d.

Igiene della Pelle. Por Dr. A. Bellini. Milan: Ulrico Hoepli. 1900. L. 2.

Gli Infortuni della Montagna. Por Dr. O. Bernhard. Milan: Ulrico Hoepli. 1900. L. 3.50.

*** In forwarding books the publishers are requested to state the selling price.

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SIXTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899.

PROCEEDINGS OF SECTIONS.

SECTION OF SURGERY.

H. T. Butlin, F.R.C.S., LL.D., President.

A DISCUSSION ON THE DIAGNOSIS AND TREATMENT OF GUNSHOT WOUNDS OF THE ABDOMEN.

I.—Colonel Stevenson, R.A.M.C.,
Professor of Military Surgery, Netley.

The first duty which devolves upon me on this occasion is to thank the President of the Surgical Section for the honour he has conferred upon me by inviting me to open a discussion at this meeting of the British Medical Association on the diagnosis and treatment of gunshot wounds of the abdomen. The importance, from the military surgeon's point of view, of the subject for discussion can hardly be overrated, while for the surgeon in civil practice it carries an almost equal interest. If by this statement I should appear to suggest that cases of abdominal injury by gunshots are of greater importance to the army surgeon than to his colleague in civil life, it is only because in the latter case the lines on which they should be treated are clear and undisputed, while in the former the conditions under which warfare is carried out always render the treatment of such injuries, according to present day ideas, difficult and sometimes even quite impossible; I refer, of course, to treatment by operative interference.

Civil surgical practice has now for some years been freed from the dread of the results of interference with a serous membrane, and operations implicating the peritoneum are carried to a successful issue with as great certainty as are others formerly considered of a less serious nature. But it has been only in the most recent campaigns that any systematic efforts have been made to treat gunshot wounds of the abdomen according to the promptings of modern scientific surgery, and it is only just now that one expects to find in the official report on the surgery of a war a table detailing the number of laparotomies done for gunshot wounds, and the percentages of deaths and recoveries following them as surely as one always has been able to rely on obtaining from it similar data for such operations as excisions of joints and amputations of limbs. This naturally follows from the fact that in preantiseptic days surgeons had but little expectation of success from operations on the contents of the abdomen, and it has only been since that great epoch in surgery, when the teaching and practice of Lord Lister proved that a wound of the peritoneum was not an almost certain cause of death, that wounds of the abdomen have been treated otherwise than by rest and opium, the expectant method under which nearly all proved fatal. But military surgeons have been slower in recognising the capability of modern surgery to come to the rescue of soldiers who had received gunshot wounds of the abdomen in battle, and the reasons for this delay were, perhaps, sufficiently forcible. It must be remembered that, if these cases are to be treated by operations, the necessary procedures must be carried out in field hospitals, which are mere temporary resting places for wounded men, and which may require to be evacuated within a few hours in order to be ready to advance with the army, thus necessitating transport of the wounded towards the base of operation. The *personnel* of the field hospitals is kept as low as possible, and the work done in them during the first hours of battle is performed at extremely high pressure, large numbers of wounded men arriving for treatment almost simultaneously.

Again, men may have to be left on the ground for a long period before they can be picked up by the bearer companies, a factor which is against success in operations for wounds of the intestines. And lastly, the military surgeon's mind must naturally be influenced by the feeling that the "greatest good to the greatest number" is the goal for him to aim at, and he knows quite well that, as regards the saving of life and limb and suffering, the time spent on one or two abdominal sections might be more profitably expended if devoted to cases less fatally injured. These difficulties are so well recognised by M. Delorme, of the French Military School of Val-de-Grâce, that, while admitting the soundness of the view that operative interference is necessary for the cure of gunshots of the abdomen, he is of opinion that only under exceptional conditions can this method be employed on active service.

Penetrating wounds of the abdomen when treated merely by rest and opium were probably the most fatal class of injury met with in civil or military hospitals; the death-rates of these cases in the English and French armies in the Crimea were over 92 and 91 per cent. respectively; during the American war of 1861-65 it was 90 per cent., and the chances are that penetration had not really occurred in the 8 or 10 per cent. of cases which recovered. These were the days of the expectant plan; the surgeon did nothing but supply opium, and Nature was expected to work a cure, an expectation which was seldom realised, not, perhaps, in as many as 1 per cent. of cases.

When a projectile traverses the abdominal cavity we may rely, with practical certainty, on the occurrence of one or both of two very serious conditions—the extravasation of the intestinal contents, or a hæmorrhage which will not cease until mechanical means are employed to control it. In the latter case death may be looked for at an early period, and in the former at one but little more remote, but the fatal issue is almost certain in either. With these premisses granted—and few surgeons will, in these days, deny them—the indications for the treatment are quite distinct: the abdomen must be opened, the hæmorrhage treated by the usual means, the perforations in the intestines closed by suture, and the peritoneum cleansed. Even when so treated, a large number of these cases will die, but the fatal result will occur less often than when the expectant plan is employed, and they will die in spite of the best that scientific surgery can do for them; at all events, they will not have been permitted to pass to certain death while the surgeon did nothing but hope that the unaided efforts of Nature might work a miracle for their cure.

Some few cases of gunshot of the abdomen had been treated by operations previous to 1885, but it has only been since about that time that this important subject has been seriously taken in hand. No doubt it is true that some injuries of this class have got well without operations, but they are so few that they may be disregarded, or set down as the exceptions which go to prove the rule that operation is the proper method to employ.

When the results obtained by the antiseptic methods of wound treatment made it evident that wound of the peritoneum did not necessarily mean death to the patient, but that, on the contrary, the peritoneum could be cut and sewn, under proper precautions, without danger to life, and that exploratory laparotomy was an operation the death-rate of which could be expressed in small fractions per cent., surgeons began to consider the possibility of the treatment of gunshots of the abdomen by operation. In 1881 Marion Sims read a very important paper on this subject before the New York Academy of Medicine, which Parkes of Chicago referred to as an "appeal for operative interference" in these cases instead of treatment on the expectant plan, which had hitherto been followed by such a high mortality-rate. Marion Sims suggested the proposition that, as extensive operation involving the peritoneum could, with antiseptic methods, be recovered from, it was possible that active treatment by operation might afford better results than the expectant plan in penetrating gunshot wounds of the abdomen.

Parkes accordingly took the matter up, and carried out a series of experiments on dogs by firing small calibre bullets through their abdomens, and immediately performing laparotomies for the repair of the visceral lesions found within. Parkes did not deal with the subject of the treatment of abdominal injuries in general; he confined himself altogether to the discovery of the best methods to employ for the repair

of such visceral lesions as were likely to be present in cases which survived long enough to reach the hospitals for treatment.

The two principal causes of death in these cases are hæmorrhage and peritonitis. About 15 per cent. of the killed and wounded in battle are found to have received injuries of the abdomen; of these 11 per cent. are found dead on the field, and only 4 per cent. reach the field hospitals; thus the large majority of men wounded in the abdomen never reach the field hospitals at all, because they die where they fall from hæmorrhage. This result necessarily follows when the larger vessels are lacerated; but even when none but the smaller vessels are severed, hæmorrhage into the peritoneal cavity is curiously persistent and profuse. There seems to be little or no tendency to the formation of clots in the cut ends of vessels within the abdomen; Nature's hæmostatic process appears to be almost in abeyance in this situation. Whether or not this depends on the looseness of the tissues preventing tension being set up on the cut ends of the vessel by the effused blood, or the absence of the effect of air on the tendency of blood to form clots, I am unable to say, but the fact remains that when the abdomen is opened a large amount of blood is found extravasated, even when only small vessels are ruptured, and the bleeding is still going on. The indication towards treatment to be deduced from this is quite distinct, and goes to show that operation must be had recourse to. Hæmorrhage is a sure and rapid cause of death; the hæmorrhage in this case is persistent, and Nature is incapable of coping with it. To control it, therefore, the usual mechanical means must be employed, and to employ them nothing but an abdominal section will suffice.

The other common cause of death following abdominal wounds is peritonitis from extravasation of the intestinal contents. When a projectile is known to have traversed any portion of the abdominal cavity it is futile to expect immunity of its contents from serious injury; it is practically certain that one or more of the solid organs will have been ruptured, vessels lacerated, or the hollow viscera perforated. In the latter case extravasation of fæcal matter will have occurred, and septic peritonitis must be the result, no matter how small may be the aperture in the intestinal wall. As in the case of hæmorrhage, so here also no other means but abdominal section can give access to the torn gut, and enable the surgeon to repair the damaged parts and cleanse the peritoneum of matter which, if left, will produce the most fatal inflammatory process known in surgical practice.

I have already said that no expectation can be entertained and no reliance can be placed on the safety of the abdominal viscera once the cavity has been traversed by a bullet; neither can any hope be held that extravasation will not occur once the intestine has been opened even in smallest extent. No single exception to this statement was noted by Parkes in his experiments on dogs, where several hundreds of perforations were observed. The experience of the American war of the rebellion was to the effect that minute punctures may not permit of extravasation, but that wounds exceeding 4 lines in length were usually fatal; Delorme, of the Val-de-Grâce, holds a similar opinion. But wounds by bullets are very unlikely to be of this simple character, and even if some of them were so, intestinal wounds from gunshot are nearly always multiple, and others of much greater extent are certain to be found which must give rise to extravasation. Hernia of the mucous coat has also been supposed to prevent extravasation, but in Parkes's cases this was not effective for this purpose in a single instance.

Minute punctures in the intestinal wall caused by bullets must be extremely rare. A bullet most often punches out a piece of the gut equal to the area of the bullet's cross section, and even when striking tangentially it is practically certain to make an aperture of a size quite unlikely to be plugged by hernia of the mucous membrane, or to offer any resistance to the escape of the contents of the tube.

It is, indeed, almost waste of time and words to insist on the great probability of visceral lesion and extravasation when a bullet is known to have traversed the abdomen; the rate per cent. of such an occurrence might be expressed by a very small fraction. Malgaigne disbelieved in it; Baron Larrey states that he only saw one such case, and he had a vast experience of gunshot wounds. Still, that it may happen has been put forward as an argument against the necessity for operation in gunshot wounds of the abdomen, and in favour of waiting for the onset of symptoms indicating that no other means can save the patient's life. I, on the other hand, agree with Sir William Mac Cormac, who says, "the bowel is nearly always perforated, fæces are extravasated, and very frequently there is some other complication as well;" that, in fact, once penetration of the abdomen by a bullet has been clearly ascertained, we may rely on the existence of visceral lesion; and when the intestinal tube is opened, even in the smallest degree, we may assume extravasation of its contents and peritonitis as certain to occur. The deduction to be made from this is self-evident—that all penetrating gunshot wounds of the abdomen should be treated by immediate laparotomy. The causes of the two fatal conditions present in these cases are amenable to no other means of treatment than abdominal section; extravasation is the immediate cause of the most fatal disease known to surgeons when left to Nature's efforts alone. Reclus, Bech, Tillaux, and other surgeons recommend waiting for symptoms of internal injury before proceeding to operation; while Nussbaum, Trélat, Greig Smith, Lucas, Mac Cormac, and many others, considering hæmorrhage or peritonitis as certain to supervene, advise immediate operation for the repair of the injuries which are certain to be found within the abdomen.

The two complications, then, which so often bring these cases to a fatal termination can only be treated by means of operative procedures. Only when the abdomen has been opened can the conditions within be ascertained, then only can hæmorrhage be controlled by ligature, apertures in the gut closed by suture, excisions of portions of the tube performed, and the peritoneum cleaned. It may even happen that solid organs, as the spleen or kidney, may be so damaged as to require removal. Unless these measures be carried out the patient will surely die from hæmorrhage or peritonitis. If, on exploration, the case prove to be the exception to the rule, and nothing is found which requires any of the procedures just mentioned, no harm will have been done, for the death-rate following explorations of the abdomen is almost *nil*. That there are some few cases on record which have recovered without operation does not lessen by a grain's weight the force of this line of reasoning, and even if the risk run were far greater than it is, we should still be justified, from all points of view, in incurring it rather than expose the patient to the much more serious consequences of non-interference, and unfortunately there is no "happy mean" we can console ourselves by adopting; it is laparotomy or nothing. In civil practice there would, of course, be no doubt as to the treatment of a case of this kind; there would be nothing expectant about it, neither should there be in military hospitals. On active service, as much as in civil practice, although under more trying conditions, laparotomies are indicated for penetrating gunshot wounds of the abdomen. If from any cause—the overcrowded condition of the field hospitals, the want of antiseptic materials, or for other reasons—these operations cannot be carried out in warfare, then only is the expectant plan justified; unaided Nature must then be given her chance of working the impossible. But Nature, assisted by the skilful manipulation of the surgeon, is more likely to bring these cases to a successful issue.

When once penetration of the parietal peritoneum has been definitely ascertained, diagnosis should be set aside, and treatment should be proceeded with immediately; every half hour's delay lessens the patient's chance of recovery, already, indeed, sufficiently precarious. Coley's statistics in this connection show that the mortality for cases operated on within 12 hours was 53.9 per cent., while for those operated on at a later period it was 77.3 per cent., and the more experience we gain in this matter the stronger is the evidence in favour of early interference.

But penetrating gunshot wounds are not the only injuries of the abdomen seen in warfare and in civil practice in the treatment of which the surgeon must be ever watchful for indications pointing towards the necessity for operation. Many cases of apparently simple contusion, without wound of the soft parts, are of this nature. These may be caused by unexploded shell or by the smooth surface of a large fragment of shell striking the abdominal walls at a low rate of velocity, or

in an oblique or tangential direction. In some of these cases there may be no signs of abrasion of the skin nor ecchymosis of the surface, and yet the injuries to the contained viscera may be of a most fatal character.

Cases of an absolutely similar character are also seen in civil hospitals—"buffer injuries" to railway men, and cases of injury to the abdominal walls by the sudden application of any violence over a large area; these also may show little or no outward sign of importance, and yet, like the former, be accompanied by rupture of large vessels, of the solid organs, or of the intestinal tube, and require operative treatment for their cure.

The differential diagnosis between simple contusion and contusion accompanied by visceral lesion is of the first importance both to the surgeon and to the patient; to the patient that his life may be saved, and to the surgeon that he may know when to undertake those procedures so necessary for its preservation. In the main, diagnosis of visceral lesion must be made to depend on the three primary symptoms common to both kinds of cases—shock, vomiting, and pain. And yet the degree in which these symptoms may be present varies greatly in different cases. Shock is usually very marked in all cases of abdominal injury, but it may be slight or even almost entirely absent. Vomiting, too, is nearly always observed, but mere nausea may take its place. Pain is usually of extreme severity, at first localised, but later extending all over the abdomen.

The more or less marked degree in which these symptoms are observed is no criterion either of the violence of the blow or of the amount of internal injury which it may have produced. Cases in which they are most profound often rapidly recover and become convalescent in comparatively few hours, and others in which they are slight may have received rupture of some of the hollow or solid organs within the abdomen.

Yet upon these primary symptoms only, I contend, should the surgeon base his decision for or against the necessity for operation; not upon their extent, but upon their duration; if he wait for others to appear his services may almost be dispensed with. During the first hours of the case it is impossible to do more than suspect visceral lesion, but a careful consideration of the course these symptoms follow is all-important. In the cases of mere contusion they tend steadily to diminish and pass away, no matter how profound they may have been at first, while in those accompanied by internal injury they persist and become more marked as time goes on, no matter how slight they were during the early periods of observation. No reliance can be placed on the severity of these symptoms soon after the receipt of the injury; but when they continue and increase in severity, then the surgeon should begin to consider what steps he must take to repair the damage which has probably occurred within the patient's abdomen, to suture ruptured gut, to control hæmorrhage from vessels or from a solid organ, and to purify the peritoneum. The order of frequency with which the abdominal viscera are injured from contusion probably is as follows: liver, spleen, kidneys, stomach, small intestine, large intestine.

When hæmorrhage takes place within the abdomen, and is not so severe as to cause death almost immediately, the symptoms of its occurrence rapidly show themselves; the patient soon becomes blanched and almost pulseless, he is very restless, constantly throwing himself from side to side in bed; the respiration is sighing; dulness on percussion appears in both flanks if the patient be lying on his back, in the dependent one if on either side; added to these are the signs of constitutional shock. The hæmorrhage usually proceeds from a rupture of one of the solid organs, though it may be due to laceration of any of the arteries or veins, but it seldom occurs to any great extent from the vessels of a ruptured intestine.

When the internal injury is a rupture of the intestine the primary symptoms, shock, vomiting, and pain continue and become more marked, and, if sufficient time is allowed to elapse before operation is had recourse to, those of peritonitis are superadded to them; the pain becomes more general, and distension, tympanites, and rigidity of the abdominal walls make their appearance.

One symptom in these cases has been frequently referred to which would be valuable if only it were trustworthy—tympanites caused by the escape of the intestinal gases into the general cavity of the peritoneum. Otis, the writer of the surgical history of the American war, refers to "sudden meteorism as an important sign of wound of the bowels." Mr. Treves considers "free air in the cavity as a sign of no value." It is impossible to distinguish between tympanites from air free in the abdominal cavity from a like condition due to air still retained in the intestinal tube. The occasional disappearance of the normal liver dulness caused by free air within the peritoneum is also of no certain value; this sign sometimes appears to be present when no rupture has occurred, and it is not always apparent when one has.

The symptoms, then, of visceral lesion in cases of contusion of the abdomen are far from being pathognomonic, but a careful consideration of the course they follow is, in view of the importance of the issue, sufficient to warrant the surgeon in deciding for or against operative interference, and the surgeon must always remember that on the accuracy with which he reads them and the promptness with which he acts upon them will the lives of patients injured in this way depend.

In the treatment of a case of contusion of the abdomen the first thing to attend to is the recovery of the patient from the condition of shock and collapse, which is usually so profound, by the employment of the usual means. The position in bed should be with the shoulders and knees raised with pillows in order to relax the abdominal muscles; compression of the abdominal walls by means of a bandage over a thick layer of elastic cotton-wool tends to relieve pain, or hot fomentations may be used for a similar purpose if there be no signs of internal hæmorrhage. The pain in these cases is sometimes very severe, but nevertheless opium should not be given if its use can be avoided. It must be insisted on that the first twelve to twenty-four hours of the treatment of these cases is a period of watchfulness for the appearance of symptoms pointing to the existence of grave lesions within the abdomen, and that opium in any form masks the signs of their development, and hides from the surgeon's observation those conditions of his patient which indicate the necessity for the only method of treatment which is likely to save his life—namely, a laparotomy at the earliest moment after it has become evident that it is required. If the pain be so intense that some narcotic must be given, then a hypodermic injection of $\frac{1}{3}$ gr. morphine will be preferable to the routine administration of opium by the mouth which used to be the practice under the circumstances alluded to. Thirst is nearly always a distressing symptom, and should be treated by the administration of teaspoonfuls of hot water, but as seldom as may be.

If the primary symptoms lessen in severity, and if no signs of peritonitis show themselves during the first twelve or twenty-four hours, it may be considered as practically certain that no visceral lesion has occurred, and the treatment may be continued. If, on the other hand, it is seen that, after say six hours, the primary symptoms have not diminished, visceral lesion should be strongly suspected; and if, after further waiting, these symptoms should become more marked and have distension and tympanites added to them, or if an accumulation of blood in the flanks be discovered by percussion, then no further delay should be permitted, because internal injury is almost certain, and the abdomen should be opened to enable the necessary repairs to be carried out.

Coming now to the diagnosis and treatment of penetrating gunshots of the abdomen, I have already sufficiently indicated my opinion that immediately the diagnosis of penetration is definitely made the abdomen should be opened. This is the advice given by the vast majority of surgeons of the present day.

But, if the fact of penetration of the abdomen by a bullet be considered insufficient grounds to warrant operative interference, we must depend on the symptoms of visceral lesion as laid down in the textbooks on surgery. The signs of internal hæmorrhage have already been referred to, and need no further discussion. The symptoms of perforation of the intestine, besides shock, pain, and vomiting, are, for the most part, of little assistance in determining the necessity for operation, because they are of late occurrence. The escape of fæces or of intestinal gas, by the external wound, is, of course, proof positive of perforation of the gut, but both are of rare occurrence; if the intestinal gas escape at all in this way it

does so immediately on the receipt of the injury, and is not observed by the surgeon, and the escape of fæces is exceptional, and it seldom occurs before the lapse of 24 to 48 hours; therefore the more frequently early laparotomy is resorted to for these cases the less often will it be noted. Mac Cormac only saw it in 1 case in 48; Bernard in 3 out of 36 cases. Obliteration of the liver dulness I have already mentioned as a sign of little value. The appearance of blood in the stools, when it occurs, is a late sign, and therefore useless for diagnostic purposes. Tympanites and distension of the abdomen are signs of the existence of peritonitis from extravasation, and will certainly make their appearance if waited for sufficiently long, but such delay will almost certainly render any treatment ineffective. Emphysema of the tissues of the abdominal walls has been suggested as a sign of intestinal perforation; but it is of no diagnostic value, because it may occur when no rupture has taken place if the wound be valvular; moreover, it seldom occurs.

Colonel Senn, of the United States Army, is one of those who advocate early operation in the treatment of penetrating gunshot wounds of the abdomen in the field as in civil practice, but only on distinct evidence of visceral lesion. If this evidence be otherwise wanting he employs his method of inflation of the intestinal tract with hydrogen gas. The gas is generated from pure zinc and sulphuric acid, and collected in a rubber bag holding 4 gallons; the bag is connected with a metal nozzle by means of a rubber tube. The gas is forced into the rectum by pressure on the bag, and Senn states in an article in the *Indian Lancet*, February 1st, 1899, that a pressure of 2½ lbs. to the square inch is sufficient to overcome the ileo-cæcal valve, and is harmless to the coats of the intestine. If, then, there be no perforations in the intestine, the whole tube from the anus to the stomach is inflated; whereas, if perforations exist, the gas escapes and causes a free tympanites in the abdominal cavity, or issues through the wound in the parietes. Senn has used this method experimentally, and on cases in hospital and in his hands it has never failed to demonstrate perforations when they were present, and it never did harm. Hydrogen is used because it is sterile and it is rapidly absorbed; the operation requires the use of an anæsthetic. I am not aware that this plan has been used in this country or on the Continent. It takes time; it must increase shock; it is conceivable that it may not always act effectively, but for those who are not willing to assume the existence of visceral lesion on diagnosis of penetration it may be useful; for those who hold the other view it is unnecessary.

The prognosis in cases of penetrating gunshot wounds of the abdomen treated on the expectant plan is extremely bad, the death-rate being about 90 per cent. In the Crimea, out of 120 cases in which penetration was believed to have taken place only 9 recovered. The death-rate in the American war was 90 per cent., and in the war of 1870-71 it was 76 per cent. Incised and stab wounds are not so fatal, these being less certain to be complicated by visceral lesion; 51 per cent. was the death-rate in these cases in the American war. Wounds of the small intestine are the most fatal, wounds of the transverse colon coming next, and those of the ascending and descending colons, sigmoid flexure and rectum probably in that order.

In the American war, as recorded by Otis, not a single case of wound of the small intestine recovered; whereas 59 cases in which the large intestine was believed to be injured ended in recovery. That wound of the large intestine should be less fatal than that of the smaller bowel may be explained by the facts that, in certain parts of its course, the injury may be extraperitoneal; that the large gut is more fixed and its contents less fluid; and that it is more closely applied to the abdominal walls, all of which conditions tend to prevent contamination of the peritoneum by the escape of its contents.

The treatment of penetrating gunshot wounds of the abdomen, when known to be complicated by perforations of the intestinal tube, or when internal hæmorrhage is taking place, is quite agreed upon in the present day; all surgeons admit that under these circumstances an abdominal section gives the only prospect of recovery. But in the treatment of cases in which penetration is evident and symptoms of visceral lesion are still absent some surgeons do not consider operation called for, and are content to await events until such symptoms arise as in their opinion warrant surgical interference. If visceral lesion occurred only in 4 or 5 per cent. of penetrating gunshots of the abdomen this delay would be sound surgery, and no one would be justified in operating before he was certain that his interference was required. But, in fact, these proportions are about reversed; or, more accurately still, to say that in 5 per cent. of cases of penetrating wounds the viscera will escape injury is to place the ratio too high. Delay in performing operations in these cases, or, worse still, not performing them at all, has hitherto been the cause of a death-rate at least 30 per cent. higher than it need have been. About 90 per cent., putting it at the lowest, has been the death-rate in cases not treated by laparotomy; while, on the other hand, Morton of Philadelphia has published records of 234 cases operated on in Europe and America with a death-rate of only 58.9 per cent. Even with laparotomy the death-rate in these cases is high, but it is less than that following the expectant plan.

The proper time for performing laparotomy is the earliest moment after diagnosis of penetration has been arrived at, if the patient's general condition be such as to permit of surgical interference. After twelve hours the chances are against recovery, and after twenty-four to forty-eight hours the case is almost hopeless; where peritonitis has fully developed the apertures in the gut may not be found, or, if found, the tissues will not bear suturing.

Profound shock and collapse may be considered as contra-indications for operation in these cases, or rather these symptoms should be looked upon as indications for delay until sufficient recovery from them has taken place. If it be apparent that the collapse is due to internal hæmorrhage, an additional risk must be incurred and the operation proceeded with, for the patient will not respond to warmth and stimulation, and the collapse can only end in coma and death if the bleeding be not controlled. A long interval having elapsed before the patient comes under the surgeon's notice is also a contraindication for operation, because peritonitis will have fully developed, and success is unlikely; or, on the other hand, if symptoms have not by this time appeared, this goes to show that the case is of the exceptional kind which requires no operation.

The urgent matter to be attended to when the patient first comes under treatment for a gunshot wound of the abdomen is his recovery from the marked condition of shock and collapse, which is nearly always present, by the application of external warmth and stimulation. The subcutaneous injection of ether or strychnine, or of both together, is better than the administration of diffusible stimulants by the mouth, for the less fluid put into these patients' stomachs the better. If there be no probability of wound of the lower bowel, stimulant enemata and enemata of hot water may also be used with good effect. While recovering from shock the patient should be kept as quiet as possible, and the wound or wounds in the parietes should be covered with gauze wrung out of an antiseptic lotion. If there be signs of hæmorrhage going on, and if it be considered that the symptoms are due to this cause, operation must be proceeded with even while they are present.

It is, of course, unnecessary that I should refer to the details of the precautions which must be taken to prevent contamination of the peritoneum by micro-organisms; we are all familiar with them, and we all admit their vital importance. When the patient has recovered from the primary shock of his injury the wound should be examined to determine the fact of penetration or otherwise, for all modern treatment depends on this one point. In most cases the aperture will have to be enlarged for this purpose; incisions should be made upwards and downwards from the edge of the wound, for half an inch in each direction and down to the peritoneum, and the finger inserted, no instruments being used. In this way there can be no difficulty in the diagnosis, and if it be found that penetration has occurred the operation should be proceeded with at once.

In the vast majority of cases the incision should be made in the middle line, or a little to one side through one of the recti muscles. The exceptions to this general rule are the cases in which the situation of the wound points to injury to the liver, or to the stomach, when the aperture in the abdominal wall is well over to the left side. The incision should be of suffi-

cient length to afford ample room for the necessary manipulations within the cavity.

Immediately the abdomen has been opened the effused blood should be removed, and the bleeding points carefully sought for and ligatured. It is often extremely difficult to find them, and Senn has lately suggested compression of the abdominal aorta through the incision as a useful means towards this end. Colonel Whitehead, in his report of the surgery of the late Tirah campaign, shows that of the five laparotomies done on that expedition four proved fatal from hæmorrhage, the cause of which had not been ascertained, and only one from peritonitis. When the hæmorrhage has been controlled the wounds in the intestine should be attended to. No correct idea of the number of the latter can be formed until the intestine has been examined; the perforations may vary in different cases from one to a dozen or more. Eighty-one cases, as recorded by Greig Smith, gave an average of 5.4 perforations. They may be few or many; they may be close together or far apart; but the more nearly the bullet has travelled from side to side the greater is the number of apertures likely to be.

It is most important, considering the great differences observed in the number and situation of the visceral lesions in different cases, and the fatal result to be expected from overlooking even one perforation, that the whole intestinal tract should be inspected from end to end. MacCormac, Nancrede, Senn, and many others consider that the gut should be examined from the cæcum to the stomach and to the rectum. McGraw, of the United States, and Greig Smith suggest that it is sufficient to examine the viscera which lie in the track of the bullet. The complete examination takes considerable time, and adds greatly to the shock of the operation, but the numerous cases which have proved fatal in consequence of a perforation having been overlooked are powerful arguments in its favour. The examination should then be complete if possible, but if the patient's condition will not permit of a prolonged operation, it may be necessary, though at some risk, to omit it, and to take it for granted that viscera which apparently do not lie in the track of the bullet are intact.

Each perforation in the intestinal wall should be dealt with as it is discovered, either by simple suturing by Lembert's method, or by a resection, as the size and position of the injury may indicate. Resections are necessary under certain conditions: (*a*) when the loss of substance in the tube will cause a diminution of its calibre by one-third; (*b*) when several perforations are found close together; and (*c*) when the mesenteric edge is implicated.

When injuries requiring resections are found within a foot or even more of each other, it is better, as reducing the shock and duration of the operation, to excise the portion of intestine between them, thus enabling one circular enterorrhaphy to restore the continuity of the tube.

Simple suturing of apertures in the intestine suitable, as regards size and position, to this method should always be performed at right angles to the length of the tube. By this means the calibre of the gut is increased rather than diminished, and the same idea is carried out as is recommended by Heineke and Mikulicz for non-malignant stricture of the pylorus. Cases in which simple suturing of the apertures is all that is required are comparatively easy of treatment; but not all, or nearly all, cases of penetrating gunshots of the abdomen are of this trivial nature. Many of them will demand complete excisions, and in some this operation will be required at more than one situation. The prognosis in these latter cases is most grave, in consequence of the time the operations take, the amount of shock they produce, and the difficulty in making a watertight seam in such extended lines of suturing.

The best material for suture of the serous coat is fine China-silk thread, rendered sterile by prolonged soaking in 1 in 20 carbolic solution, and thin catgut for the mucous coat. The milliner's round needle is the best to use, and Mr. Greig Smith recommended that its point should be somewhat blunt, as this facilitates the making of the ideal Lembert stitch by taking up some fibres of the tough submucous layer.

In closing simple perforations of the intestine the edges should be well turned in and about ten Lembert stitches to the inch inserted, the line of the seam being, as already stated, transverse to the length of the gut.

For a circular enterorrhaphy, where complete excision has been performed, the Czerny-Lembert suture should be employed, thin catgut being used for the first line and China silk for the second.

The major operations on the intestines required in cases of gunshot wounds of the abdomen are nearly always excisions of portions of the tube and end-to-end anastomoses. Various methods, methods almost beyond count, have been suggested for carrying out this procedure, and that the ideal means have not yet been discovered is almost proved by the fact that new operations are being recommended from week to week. The two important ends to be kept in view in selecting the method to be employed are a water-tight seam throughout the whole circumference of the tube and an operation which requires only a short time for its performance. The great drawback to almost all operations for end-to-end anastomosis is the time they require, while to carry them to a successful issue the surgeon must have had considerable practice in their details and be possessed of considerable manipulative skill.

It would be impossible, as indeed it would be uncalled-for at a meeting of this character, for me to give a summary of the various means suggested for repairing the continuity of the tube after an excision of a portion of the intestine; every surgeon will select that with which he is best acquainted and in which he has greatest faith.

Of the direct methods of end-to-end anastomosis, no mechanical supports being used, Maunsell's is that which can be most rapidly performed, because the stitches pass through all the coats of the intestine, and can be quickly inserted. The material used is horsehair, the only suture which can be applied through the whole intestinal wall without causing contamination of the peritoneum by capillary action. A strong watertight seam is obtained by this method, and the procedure can be rapidly performed. Its one objection is the additional incision which forms a part of the operation; but in gunshot cases, where many apertures are sure to require simple suturing, this need hardly be taken into consideration Maunsell's method has been modified and improved by Mr. Barker, Mr. Jessett, and others.

Indirect methods of restoring the continuity of the tube after resections have been carried out with the aid of mechanical supports of almost every conceivable shape and material, some of which are left within the lumen to be absorbed or passed *per anum*, and some are removed through a fresh incision after the suturing has been finished. It is now probably agreed that the only material suitable for absorbable bobbins is decalcified bone, and of these Mr. Mayo Robson's bobbin and Mr. Greig Smith's have given excellent results.

The objections to the use of all forms of bobbins are that they may obstruct the lumen of the gut, and that the handling necessary in the performance of the operation may cause important damage to the intestinal wall.

The main objects to be attained by the use of bone bobbins and cylinders in intestinal anastomosis are to ensure contact of serous membrane with serous membrane, either by invagination or otherwise, and to supply a support for the ends of the gut so that accurate suturing may be facilitated. The newest and most ingenious piece of mechanism for these purposes is the metallic button of Dr. Murphy of Chicago. It has been in use now for some six or seven years; it has been thoroughly tested, a considerable mass of literature has been devoted to it, and it may be concluded that its dangers as well as its advantages are now well understood. The only suture its author intended should be used with it was a purse-string of silk at the edges of the resection and through all the walls of the gut. This is easily and rapidly inserted, and is for tying the edge of the intestine round the stem of each half of the button after insertion into the tube. Many surgeons have recommended and practised the application of re-enforcing safety stitches on the Lembert pattern, while others, on the contrary, have found these not only useless but dangerous; and certainly their application tends to obviate one of the great advantages of the button, namely, the rapidity and ease with which it completes the continuity of the canal. For the most part the manipulation of Murphy's button is quite simple, but in determining the degree of pressure to be exerted on the intestine between the two portions of the instrument want of personal experience is likely to cause mishaps; if

pressed too firmly together sloughing may occur too soon and over too great an area, and if not firmly enough good union may not take place.

The button, so far as the operative procedures are concerned, is an almost ideal instrument for intestinal anastomosis, but it has its weak points: Its weight may cause obstruction by producing a kink in the gut; obstruction may also be caused by the button itself by impaction of fæces in its canal, this being more probable in the colon than in the small intestine; the sloughing process by which it is set free may extend further than is intended, and leakage may occur; some of the instruments now sold are badly made, and are unreliable; and lastly, it may fail to be passed *per anum*; but this latter accident does not seem likely to cause dangerous results, as in many cases the button has been retained for many months, or even years, without causing symptoms.

It is, I presume, admitted by all surgeons that the time required for an abdominal operation is an important matter; most of the newer methods have been proposed with the view of shortening it. If, when only one end-to-end anastomosis has to be performed, as nearly always happens in ordinary cases, it be considered advisable to employ a rapid method, how much more must the time factor be taken into account in lapa otomies for gunshot injuries, where multiple perforations are certain to be found, and often more than one resection and anastomosis required. I would therefore suggest in gunshot cases that for the direct anastomosis Maunsell's operation should be employed, and that indirect union should be carried out by means of Murphy's button.

As in the vast majority of these cases contamination of the peritoneum by fæcal matter is certain to have occurred, free irrigation of the cavity is necessary before the abdomen is closed. What the nature of the irrigating fluid may be is a matter of little importance so long as it is sterile and at a temperature of about 105° F. A glass tube of half an inch calibre, the end of which has been smoothed with a flame and blow pipe, should be fixed in the tube of the irrigator, and several gallons of the fluid should be available. The glass nozzle should be directed into all parts of the abdominal cavity, and especially towards both flanks and into the pelvis, while at the same time the intestines are gently moved from side to side by the hand. Most of the fluid can be made to flow out by slightly turning the patient to one side, but if some of it be retained it will do more good than harm, as has been suggested by Mr. Greig Smith. Sometimes mere irrigation will not remove all the extravasated fæcal matter from the abdomen, in which case it must be supplemented by the use of sterile sponges or pledgets of wool wrung out of a weak antiseptic solution.

In all cases in which perforations of the intestines have been found, drainage should be provided during the first twenty-four or forty-eight hours, either by means of Keith's tubes or by capillary gauze drains.

The best suture material for closing the incision is silkworm gut inserted with a strong-curved needle having the eye in the point, and fastened in a handle affording a good grip to the hand. Silkworm gut permits of no capillary action, is easily sterilised, and it is unirritating.

As regards the results obtained from laparotomy for gunshot wounds in the later campaigns, Senn reports that all the cases operated on in the American army during the late Spanish-American war died. In the Græco-Turkish war Mr. Abbott reports that one operation, done on account of hæmorrhage, recovered, and also one for injury to the liver. One case in which the small intestine, bladder, and rectum were perforated, admitted on the ninth day, died. Three other cases of wound of the intestine were seen, but the patient's condition was too bad to admit of interference.

In the report on the surgery of the Tirah campaign, Colonel Whitehead details 8 cases of gunshot wounds of the abdomen; 5 cases were operated on and all died—4 from hæmorrhage, and only 1 from peritonitis. Three cases in which no operation was required recovered. One was in a native; the bullet passed from side to side across the front of the abdomen, making an aperture through which omentum protruded. Another was an extraperitoneal wound of the large intestine through which fæces passed freely for some time; and the third was a gunshot of the right lobe of the liver much bile being passed into the dressings.

In conclusion, perhaps I may be allowed to suggest that the two most important points to discuss and to obtain the opinion of this meeting on are:

1. Does the diagnosis of mere penetration warrant surgical interference?

2. What are the best means to employ for restoring the continuity of the canal after excisions?

II.—J. Ward Cousins, M.D., F.R.C.S.,

President of the British Medical Association; Senior Surgeon Royal Portsmouth Hospital.

The chances of success mainly depend on early operation as soon as the diagnosis of internal injury has been made out. Diagnosis is not always easy. Perforation with very little extravasation may not cause urgent symptoms. On the other hand, severe contusion of the abdominal wall may be followed by great collapse. Every case must be left to the judgment of the surgeon. In most cases of perforating wound when operation is decided on it is a good plan to make the incision through the point of entrance and when necessary to apply silk-thread retractors, which are far better than any other form of retractor. Charred tissue must be excised, and the part injured secured with fingers or forceps and drawn out, surrounded by gauze or sponges, and dealt with by suture or excision as the case requires. It is very satisfactory to know that in some cases where multiple injury has occurred operation has been completely successful. When flushing is employed for the removal of foreign matter or extravasated fluid, some clean water left within the cavity often has a very beneficial effect. In hepatic injury often the chief difficulty is hæmorrhage. This, however, can be stopped by pressure with or without perchloride of iron or suture. Wounds of the intestine can be treated expeditiously by the aid of some sort of contrivance; but of all the mechanical instruments introduced I must give the palm to Murphy's very ingenious button.

III.—Arthur Barry Blacker, M.D., B.S.,

Superintendent, *X*-Ray Department, St. Thomas's Hospital.

I do not feel certain whether I am in order in speaking of the examination of the abdomen with the *x* rays for bullets and the difficulties attending such an examination, in a discussion on the diagnosis and treatment of gunshot wounds of the abdomen. As an aid in the diagnosis of gunshot wounds, the application of the *x* rays may be of service, for by their means it may be possible to indicate the position of the metal, and in conjunction with the wound of entry to estimate the probable course which the missile has taken; moreover, exact localisation in some cases may be useful in considering the amount of damage it has caused in its course through the tissues. I say, *may* be of service, because it is not always easy in my experience to find the bullet within the abdomen, although large and undoubtedly present, and it is my object in confining myself to observations on this one point to obtain the result of the experience of other *x*-ray workers who may have had more chances of observation than I have had. That a mass of metal may be embedded within the abdomen without being visible on the fluorescent screen or on the developed film is known to most of us, and the reason for this is that the spent projectile, having only sufficient force to penetrate the abdominal wall and to become embedded in some of the many soft structures which occupy the cavity, moves very freely with respiration, the blurring effect of which is much greater than anyone not accustomed to work with the fluorescent screen would imagine, the length of the shadow thrown depending to a great extent on the distance of the foreign body from the film, on the movement which takes place during respiration, and on the movement of the intestines in the neighbourhood of the substance. We were familiar with the movement which takes place in the abdominal cavity during examinations for foreign bodies which have entered either through the alimentary canal or through the abdominal walls, which renders *x*-ray examinations difficult, and failures in examining for nephritic calculi did not appear hard to understand, considering that, in addition to this movement, search was being made for a substance

which, according to its composition and size, might or might not throw a shadow on the sensitive surface, but with a metallic substance which, as a rule, gave a dense shadow, it did not at first seem conceivable that the blurring of the shadow caused by the movement could be sufficient to render its discovery difficult and its localisation impossible, without definite precautions being taken. Such, however, is the case. In the case of all opaque substances it is customary now to examine during one phase of respiration only; this to a certain extent does away with some of the difficulties which attend movement, but it is difficult even with a mechanical arrangement denoting the position at which the exposure is to be effected at each succeeding respiration, to prevent some blurring of the shadow caused by action on the part of the abdominal contents, for even if the relative position of the bullet can be made out the exact localisation is rendered very difficult. The chief difficulties, speaking roughly, which present themselves when examining an abdomen with the *x* rays for the localisation of a bullet are: (1) The distance of the substance from the sensitive surface of the screen or film; (2) possible astigmatic action of the tube; (3) movement of the bullet with the tissues within the abdominal cavity, which may be caused by (*a*) respiratory movements; (*b*) intestinal movements; (*c*) pulsation, arterial or other, in the vicinity; (4) involuntary movements on the part of the patient during exposure; (5) effusion of blood if the case be one of recent origin, or presence of dense inflammatory material in old standing cases. In order to as far as possible obviate these difficulties it is necessary in making the examination to place the sensitive surface as near as possible to the supposed position of the bullet and to direct the rays so that no opaque tissue intervenes between the tube and the foreign body or between the foreign body and the sensitive surface either of the screen or of the photographic plate; by carefully examining the tube for astigmatism before exposure, respiratory movements can be controlled to a certain extent by exposing only during a phase, intestinal movements may be controlled by the exhibition of drugs, and involuntary movements on the part of the patient can always be controlled by an anæsthetic. For the purposes of exact localisation, however, there may still be opaque tissues obscuring the shadow which cannot be avoided, such as adipose tissue, bones, and well-developed muscles, pulsation in the neighbourhood, and effusion of blood. These remarks apply to bullets embedded in the movable tissues of the abdominal cavity, those which are embedded in fixed positions present no particular difficulty in an *x*-ray examination.

In my own practice, of the 66 or more bullets which have been examined, 3 had penetrated into the abdominal cavity, and it was the extreme difficulty which was experienced in finding one of them which has caused me to suggest the advisability of taking special precautions in all those cases in which apparently no bullet can be found, and when the localisation of the bullet is, in the opinion of the surgeon, of importance in the treatment of the case. Briefly, the notes of the case were as follows:

A young woman of 24, said to have been examined seven times with the rays with a view to finding a bullet which she was certain was in the body somewhere, as a revolver had been fired at no great distance directly into her back, presented herself for examination. The scar caused by the entry of the bullet was present, but there was no wound of exit, and no bullet had been found. At the first examination nothing was detected; at the second the bullet could be seen during the cessation of respiration, and with difficulty the shadow caused by the bullet could be seen moving over the screen for a distance of two inches and a half action. On exposing a photographic plate the shadow on the film was visible as a considerably longer diffuse shadow; and even when, on the second attempt, every precaution was taken, the shadow was very blurred. Rough measurements were taken both from the film and from the screen, and could only then be considered as approximately correct, which, however, has the advantage of placing the patient as regards position and the abdominal cavity in the condition more nearly approaching to those under which an operation would be undertaken, should such be deemed advisable. Posterior view, $2\frac{3}{4}$ in. from top of iliac crest; $2\frac{3}{4}$ in. from last rib, $4\frac{1}{4}$ in. from middle line and $2\frac{1}{4}$ in. from external surface of skin. Anterior view, $4\frac{3}{4}$ in. from anterior superior iliac crest, and $2\frac{5}{8}$ in. from free extremity of the last rib.

IV.—Major Beevor, R.A.M.C.

In face of the two very able opinions expressed by Colonel Stevenson and Mr. Ward Cousins, it is not my intention to discuss treatment of gunshot wounds of the abdomen in detail. I merely wish to bring out a few points in illustration of the consideration as to whether laparotomy is advisable or not. As regards military surgery, there must be circumstances which at times preclude the chance of performing a truly aseptic operation. To quote from Colonel Whitehead's report on the Tirah campaign: "We make take the action of Dargai as an example of the difficulties experienced by military surgeons in the aseptic treatment of wounds. The dressing station in this engagement was situated in the small village of Chagru Kotal, just below the heights of Dargai, the only position that could be selected, for military reasons. Water was only obtainable from a small village pond, which was fœtid in the extreme, and contained, no doubt, the urine and fæces of men and animals. The boxes containing the surgical dressings were covered with dust after the march, and the dressings were obliged to be handled by men whose hands were dirty." You may ask, Why was there no sterilised water carried in the equipment? but I beg to inform you that it was impossible for the mules bearing the hospital equipment to climb the hill. This is a nice picture indeed for the surgeon anxious to carry out aseptic surgery! Later on in the campaign we obtained good water, and carried on aseptic surgery with an almost unprecedented success. I quote one case which will illustrate what the peritoneum will stand under certain conditions. A native dhoolie bearer was shot in the middle abdominal line about an inch above the umbilicus. A piece of omentum, about the size of a walnut, protruded; there had been collapse, which however had passed off before we reached him. He was attended to temporarily, and sent on in a dhoolie. Later in the day the force with which he was carried became surrounded by the enemy, and he was deserted by the dhoolie bearers; he got out of the dhoolie and ran away with the rest of those who deserted; he walked three miles to a place of safety, remained out all night without food in a temperature of 22 degrees of frost, walked into camp eight miles off the next day, and presented himself for treatment; there was then a piece of omentum the size of a fist presenting; it was rendered as aseptic as possible, ligatured, and the pedicle returned into the abdomen. The cavity was irrigated with sterilised water, the wound dressed aseptically, and he made a good recovery." I do not bring this case forward to advocate the "expectant treatment"; on the contrary. My experience leads to the conclusion that directly perforation with visceral injury is a certainty, operation is the only justifiable treatment. It has several advantages, even if the patient subsequently dies; first, you can irrigate the abdominal cavity—before, during, and after the operation—if symptoms present themselves indicating hæmorrhage and extravasation. In this connection I beg to bring to your notice the advisability of irrigating the abdomen before operating through the wound or wounds in the wall if the patient is suffering from collapse. You will find it a wonderful restorative to irrigate the abdominal cavity with hot sterilised water of a temperature from 105° to 110°F., and it can be done before, during, and after operating, whenever a condition of collapse occurs. There are many points of great interest I would like to touch upon, but time will not permit; with the President's kind indulgence, however, I would like to say that experience of many cases has illustrated to me the immense value of searching the abdominal cavity with *x* rays, aided by Dr. Mackenzie Davidson's localiser in place of probing for the detection of lodged foreign bodies and injuries to the spine and pelvic bones. Dr. Mackenzie Davidson will shortly demonstrate his invention, and I strongly advise all who are able, to take the opportunity of thus verifying its value.

V.—Damer Harrisson, F.R.C.S.Edin.,

Surgeon to the Northern Hospital, Liverpool.

Mr. Harrisson agreed with Colonel Stevenson as to the importance of prompt operative interference in cases of gunshot wounds of the abdomen when the initial shock has been recovered from and the diagnosis of perforation of the abdominal wall has been made. The difficulties of diagnosis of perforation of intestine are such that it involves a delay in operating until operation is too late. The absence of liver dulness is not to be relied upon as a point in differential diagnosis. This was well shown in a case of typhoid fever which, in addition to

vomiting, pain, and collapse, also showed an abscence of liver dulness. Laparotomy was performed by Mr. Harrisson who found the cause of all the symptoms was a volvulus of the small intestine. Mr. Harrisson then referred to a case of bullet wound of the stomach operated upon successfully by the late Mr. Arthur Wilson, who found and sutured two bullet wounds, one in the anterior, the other in the posterior, wall of the stomach.

VI.—R. Clement Lucas, B.S., F.R.C.S.,
Surgeon, Guy's Hospital; Consulting Surgeon, Evelina Hospital.

Mr. Clement Lucas thought that the meeting was very much indebted to Colonel Stevenson for his scientific paper, whilst the practical experience of Major Beevor showed how difficult it was to carry out exact aseptic surgery on the field. He was struck with some remarks which fell from the President which accorded with his own experience—that bullet wounds in civil life were greatly on the increase—and he would move a resolution with a view of limiting by law the sale of revolvers and pistols. Referring to the author's statistics, it appeared that only 10 per cent. of perforating wounds of the abdomen in war recovered. It was their duty to reduce as much as possible the mortality from these terrible injuries. Colonel Stevenson suggested nothing but laparotomy for abdominal hæmorrhage. The speaker had found subcutaneous injection of ergotin of value in cases of ruptured kidney, and suggested it might be used as a temporary measure on the battlefield to check internal hæmorrhage. He thought improvement in military surgery would follow arrangements for the more rapid removal of the wounded to the rear, and the better supply of aseptic requisites at the field hospital. He commented on the difference in the symptoms due to hæmorrhage and ruptured intestine, and advocated strongly free washing of intestines after laparotomy for perforation, quoting a case to show that the pulse rises during the washing out of the abdomen with warm boiled water from absorption of the fluid. He ended his remarks by moving the following resolution:

In consideration of the great increase in the number of bullet wounds due to the free sale of revolvers and pistols, this Section desires to impress upon the Council of the British Medical Association the importance of furthering a Bill in Parliament for the restriction of the sale of small arms.

The resolution was seconded by Mr. Bush, and carried unanimously.

VII.—James Murphy, M.A., M.D.,
Lecturer on Medical Jurisprudence, University of Durham College of Medicine; Surgeon, Sunderland Infirmary.

Dr. Murphy urged the great importance of immediate operation in cases where the diagnosis was made, and it should be the rule to operate in doubtful cases. Opium should be avoided before the diagnosis was decided on. The resonance over the liver was deceptive, as air might enter by the abdominal wound. Wounds of intestine must be treated in different ways, according to their extent and nature. His experience of his namesake's button was most favourable, its greatest advantage being the rapidity with which it could be applied—a most important factor.

VIII.—J. Paul Bush, M.R.C.S.,
Surgeon, Bristol Royal Infirmary.

Mr. Bush considered the physical sign of "diminished hepatic dulness" to be most doubtful, in fact in some cases to be absolutely misleading. With regard to the means adopted for producing anastomoses, he had in several cases used Murphy's button, and he was inclined to think by its use the length of operation was cut down to the lowest possible time. The greatest difficulty he had experienced was in deciding if there were any more perforations after having discovered and closed one or more, and he hoped to hear that day the experience of others who had used other means.

IX.—Surgeon-General O'Dwyer,
Aldershot.

Surgeon-General O'Dwyer said he did not come to make remarks, but merely to learn what could be done to reduce the mortality following gunshot wounds of the abdomen in war, and from the discussion he concluded that those operated on were in a worse condition than those who had not been operated on. He would say, "Operate, by all means, provided you can surround the patient with fairly suitable conditions, and let us in the meantime in the army endeavour so far as practicable to bring our hospitals in the field into such a condition as will approach as near as possible those which exist in civil life."

LOCALISATION OF BULLETS BY X RAYS.

By R. Clement Lucas, B.S., F.R.C.S.,
Surgeon to Guy's Hospital; Consulting Surgeon to the Evelina Hospital for Children.

Removal of a Bullet and of a Detached Fragment from the Interior of the Skull after Localisation by X Rays.

The following case illustrates the great value of the Roentgen rays in determining the exact site of bullets which have penetrated the skull and remained embedded in the brain or meninges. There are at present few such cases on record. In this instance it would have been quite impossible to have guessed at the position of the bullet except by the aid of the skiagraph, which not only showed its position, but also that of a detached fragment, both of which, the bullet and the fragment, were successfully extracted.

The patient was one of the three victims of an attempt at triple murder by revolver shooting, which took place in Camberwell on June 17th of this year. The circumstances may be still fresh in the memory of many, as it is not yet two months since the tragedy happened. A man who had maltreated his wife for years, and who was addicted to drink, had become more violent of late, whilst his wife had to work to keep him, herself, and children. On one occasion he had stabbed her in the shoulder, and almost every night for a fortnight previous he had attempted to strangle her. On Saturday, June 17th, the man was standing talking to his wife and two children, when he suddenly drew a revolver and fired twice at his wife. The first bullet struck her just above the right eyebrow, but glanced off, only tearing up the soft tissues. The second was lodged in the left side of her neck below the mastoid process as she ran away. He then shot his elder daughter in the forehead, and as the younger child, aged 10, ran away, he fired and struck her in the back of the head.

The three victims were all brought to Guy's Hospital and placed under my care. In the case of the elder girl, who was shot in the forehead, the bullet did not penetrate the dura mater, and was extracted from the wound by the medical man who first saw the case. The skull was, however, broken in, and it became necessary to remove some splintered fragments, after which the wound healed without fever, and except for a pulsating spot where the bone is deficient, this child has not suffered from the injury inflicted.

The younger child, F. F., aged 10, who was shot in the back of the head, is the patient to whom this paper has special reference. She was admitted in a state of collapse, the surface of the body being cold and pallid, and the pulse absent at the wrist. Respiration rapid, 32, and sighing. She was with difficulty roused, and had passed her fæces under her. There were, however, no symptoms of compression present. The pupils were equal and reacted to light. There was a circular wound over the upper part of the occipital bone, about a quarter of an inch in diameter, and rather to the right of the median line. The edges of the wound were clean cut and raised. Brain substance was found protruding from the wound and pulsating. It was concluded that the bullet had passed into the brain causing a punctured wound of the skull, without fracturing the bone around the aperture. Ten minims of brandy were injected subcutaneously, after which the pulse could be just detected at the wrist. She moved a little after this and asked for water. She vomited two hours after admission, and then vomiting continued at intervals, and when any milk or fluid was given by mouth. The head was shaved around the wound, which was cleansed with lysol lotion and a gauze pad applied soaked in this antiseptic. On the following day she had reacted from the collapse, and her temperature rose to 100° F. She would speak a few words if roused, but quickly tired. She was restless and irritable, and vomited every time any fluid was given her to drink.

The vomiting continued for three days, and it became necessary to feed her *per rectum*. No paralysis or any indication of damage to motor centres was present. On June 20th, after careful examination to determine the exact situation of the bullet by means of skiagraphic shadow, I determined to attempt to remove the bullet from the interior of the skull. The skiagraph showed that the bullet had separated into two pieces, one of which was lying near the hole in the skull, the other about an inch and a-half or two inches further on. The main portion of the bullet had apparently cut through the brain and had become lodged near the vertex, taking a course forwards, upwards, and towards the median line, whereas the smaller fragment was left behind just within the aperture.

A.C.E. having been administered, a large triangular flap was made so that the bullet wound would be near the base when reflected. The inner arm of the triangle commenced half an inch to the inner side of the bullet wound, and was carried forward two and a-half inches slightly towards the median line, and the outer arm extended outwards and backwards from the anterior end of this. All the structures of the scalp and the periosteum were reflected with the flap, and a good view of the bony aperture was thus obtained. The dura mater was seen torn, and several small depressed fragments of bone lay within the bony apertures and were removed from the brain substance. Among these at the upper and outer edge of the perforation was found the piece of bullet shown in the skiagraph, which was easily removed with dressing forceps.

A square piece of bone was now mapped out by means of an angular chisel and mallet anterior to the bullet aperture. When this piece of bone was elevated the dura mater projected and looked blue as if there were blood beneath. It was opened anteriorly, when some contused brain escaped with a few small clots. A probe was used to discover the bullet without success, so the little finger was introduced and the bullet could then be felt anteriorly close to the vertex. A triangular piece of bone was then removed and this exposed the bullet, which had there struck the vertex after ploughing the brain. It was easily extracted. The dura mater was sewn up with fine silk, and two pieces of bone removed were replaced, the periosteum and scalp being adjusted over and secured by horsehair continuous suture.

The immediate effect of the operation upon the child's condition was most marked. Previous to it she had vomited everything she took and was rapidly emaciating, but from the time the bullet was removed the vomiting entirely ceased. The child took her milk with relish, and soon began to ask for more nourishment. The incision made for the operation also healed primarily, but the track of the bullet showed signs of suppuration and an irregular temperature occurred for some weeks. This might have been due in part to two sloughs on the arm, which occurred where brandy was injected during the collapse. A little clear fluid and some flakes of brain substance came away through the bullet track, but her intelligence was in no way impaired and no paralysis followed the operation, her only complaint was hunger owing to her restricted diet. The temperature quieted down and she was nearly convalescent when I left town.

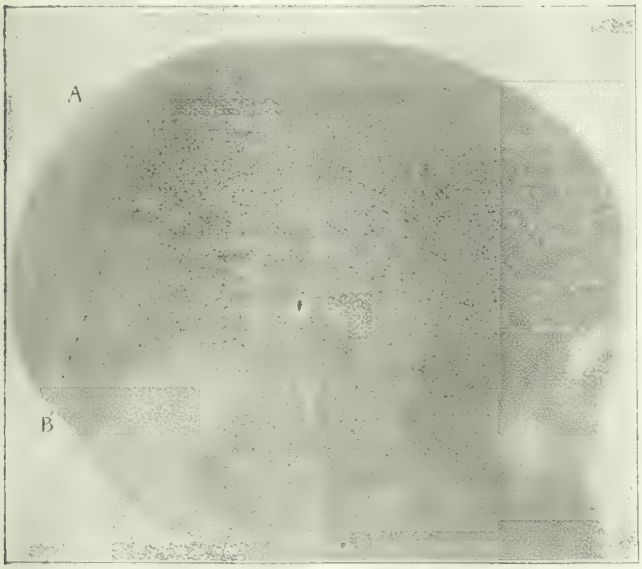


Fig. 1.—Bullet and fragment removed from the interior of the skull; A, bullet; B, fragment of bullet at seat of penetration.

Removal of a Bullet from the Front of the Second Cervical Vertebra after Localisation by X Rays.

R. F., aged 36, was admitted into Guy's Hospital on June 17th, 1899, under the care of Mr. R. Clement Lucas. She had been shot at twice by her husband shortly before admission. The first bullet glanced from the forehead, simply making a flesh wound over the right eyebrow, the second entered the left side of the neck. There was a small round aperture, about ½ inch in diameter, situated over the sterno-mastoid muscle, and about 1½ inch below the mastoid process. The skin around was blackened for a radius of 1 inch from the wound, and there was considerable swelling of the tissues in the vicinity of the wound. The patient experienced great pain in moving her neck. Temperature 99° F., pulse 88, respirations 24.

The skiagraph showed the position of the bullet to be to the left side of the body of the second cervical vertebra.

Operation.—On June 22nd it was determined to attempt to remove the bullet; and from the shadow obtained from the Roentgen rays it was thought that it ought to be felt through the mouth. When the patient was under the anæsthetic with the mouth gagged open, a very distinct prominence could be felt to the left of the median line at the back of the pharynx, just about the size and shape of a bullet. This was cut down upon through the pharynx, and an attempt made to move it with forceps and elevator. As it was found firmly fixed, a strong reflected light was thrown into the pharynx, and with the edges of the small wound retracted it was found that an exostosis growing from the left side of the body of the second cervical vertebra had been exposed—a very curious and exceptional condition to meet with, which had deceived us in searching for the bullet.

The patient was now placed on her side, and it was resolved to follow the course of the bullet. A probe was passed into the wound for 2½ inches, but the bullet could not be felt. An incision 3½ inches in length was made along the anterior edge of the sterno-mastoid muscle, and another from the centre of this horizontally backwards across the aperture made by the bullet. The bullet was found to have penetrated the sterno-mastoid muscle, and in order to follow its course the muscle was divided transversely. The deep vessels and nerves were thus exposed, and were pressed forward, the bullet having passed behind them. After a little search an aperture was found in the rectus capitis anticus major, and this being enlarged the bullet was discovered lodged against the side of the body of the second cervical vertebra, from which position it was easily extracted by means of forceps. The sterno-mastoid was united by buried silk sutures, and the wound closed and covered with sterilised pads.

The temperature, which had been as high as 100.4° F. before the operation, did not rise to 100° F. after, and the wound healed without suppuration. She left the hospital soundly healed on July 12th. There remained only some induration about the neck, and stiffness and pain on attempting to move the head. From this she has since completely recovered.

Note.—The skiagraphs were taken by Mr. Shenton of Guy's Hospital.

TWO CASES OF PRIMARY SARCOMA OF THE TONGUE: ONE PEDUNCULATED, THE OTHER INTERSTITIAL

By Walker Downie, M.B., F.F.P.S.G.,
Lecturer on Diseases of the Throat and Nose, Glasgow University.

Primary sarcoma of the tongue is sufficiently rare to warrant the publication of two cases which I have had under my care. The rarity of the lesion, as judged by the paucity of recorded cases, may be illustrated by quoting a paragraph from our President's Clinical Manual on *Diseases of the Tongue* published in 1885. He says: "Even if these cases"—three in all of which he makes mention, but none of which he had seen—"are admitted to have been true cases of sarcoma, it is still very evident that primary sarcoma of the tongue must be regarded as an exceedingly rare form of tumour, and equally certain that it is quite useless to attempt to write an account of it which shall be useful."

Since that date other cases have been put on record, but I do not think that the number exceeds 30 in all.

This neoplasm appears under two distinct forms—the interstitial, and the pendulous or pedunculated variety. The former is the more common; of the latter some five cases only have been recorded.

My second case, in point of time, will be described first and in detail, as I have the tumour and sections with me, and as it is of the rare pedunculated form. The other was an interstitial growth, and will be referred to chiefly by way of contrast.

Case 1.—M. C., a mechanic, aged 34, was referred to me by Dr. Gilmour, of Duntocher, and first seen by me on March 17th, 1899, when he gave the following story of his illness. Five weeks previously his throat became sore, he felt feverish, and had considerable pain and some difficulty in swallowing. He supposed the discomfort to be the result of a "cold," and he made hot applications to his neck at intervals for one week. These gave him no relief, and as he felt unfit for work he consulted his doctor, who, while examining the throat, discovered the presence of a swelling over the pos-

terior aspect of the tongue. A gargle was prescribed, and during the second week of illness the pain in the throat became less severe and he could swallow more readily. At the end of the second week the swelling "burst," when a quantity of blood, and blood only, was discharged. A few days later, though still feeling ill and weak, he returned to work. Towards the end of the third week the swelling was larger and appeared to fluctuate on palpation, and his doctor incised it. Free bleeding followed the incision, and the patient thought that the size of the swelling, of the presence of which he was now conscious, was lessened. Shortly after this, however, the throat again became inflamed and sore, and, while there was no interference with respiration, deglutition became almost impossible. Poultices were applied and again the pain and difficulty in deglutition subsided, so that he could partake of even solids without discomfort. During those three weeks, however, he had been conscious of gradually increasing weakness and loss of flesh. One week before presenting himself at the hospital he had had a rigor, followed by profuse perspiration, which slowly passed away, leaving him, however, more enfeebled. On March 17th, when first I saw him, he had no difficulty in swallowing, and he could breathe freely. His voice was clear, but his speech was thick and resembled that associated with hypertrophy of the faucial tonsils. He felt feeble, a short walk had exhausted him; his temperature was 98.8° F., his pulse 80, and he stated that during the past five weeks he had lost 2 st. in weight.

Examination.—With the mouth widely opened and the tongue on the floor of the mouth, the tumour had the appearance of a smooth swelling of the left side of the dorsum of the tongue, and it was the more readily noticeable, as it was smooth and free from fur, while the surface of the tongue generally was thickly coated. When the tongue was protruded, the growth was caused to rise, and its full size and relationships could then be observed. It sprang from the centre of the left half of what may best be described as the post-circumvallate area of the base of the tongue (that part of the base of the tongue situated behind the line of the circumvallate papillæ). The size of the tumour was somewhat larger than a walnut; its surface was smooth and shining, like the palate, and its colour was similar to that of the palate. There was a small protrusion or outgrowth on its upper aspect, marking, I think, the site of the incision referred to.

The tumour was firmly attached to the tongue, although the area of attachment appeared to be only about one-half of the circumference of the growth, half an inch away from the tongue. It was thus pedunculated, and as a consequence it was freely movable in all directions. When the tongue was protruded, the tumour filled up the greater part of the faucial isthmus, and its upper border lay in contact with the soft palate; and when the tongue was withdrawn into the mouth the bulk of the tumour fell back, and lay in the glosso-epiglottic fossa. On palpation the growth was found to be highly elastic, and near to its upper border the sensation conveyed so closely resembled that of fluctuation that to eliminate any possibility of doubt a fine trocar was introduced, through the cannula of which blood alone escaped.

There was absolutely no glandular enlargement, though there was a slight fulness below the angle of the jaw on the right side, due to a chronic hypertrophy of the right tonsil. There was here a large elastic tumour, of rapid growth, with rapid systemic involvement, resulting in general prostration and serious emaciation, with absence of glandular implication, all of which pointed to sarcoma, and I resolved to excise the growth without delay.

Operation.—On March 22nd the patient was placed under chloroform, the left cheek was split by an incision extending from the angle of the mouth to the edge of the masseter muscle. A stout ligature was passed through the tongue, by which that organ was drawn well forward; but even firm traction on this did not raise the growth into the mouth, so a second ligature was passed through the body of the growth, and by this means it was brought well into view. The portion of the tongue from which it sprang was removed along with the growth; the cutting was done by means of scissors, and the incision, elliptical in form, included a wide margin of tongue tissue. No secondary nodules were found, and the cavity in the tongue was closed by numerous silkworm gut sutures. The incision through the cheek was closed by a double row of sutures, the mucous surface with horsehair, and the skin with silkworm gut. A cyanide-iodoform dressing was applied externally; small pieces of ice were given to suck, and a boric acid mouth was used freely. On the following morning his temperature was 101° F.; he indicated that he could not swallow, and he was given 20 ounces of peptonised milk through a stomach tube. Later on in the day, while he was cleansing his mouth, he accidentally swallowed some of the boracic solution, and as this had occurred without causing pain his fears were allayed, and the tube was not again required. On the second morning after the operation the temperature was normal, and it remained so thereafter. On the fourth morning several stitches were removed from the cheek, this wound having healed by first intention; and three days later all remaining stitches, including those in the tongue, were removed.

Result.—On March 31st, that is nine days after operation, the patient was sent to a convalescent home, from which he returned at the end of three weeks feeling very well, and having gained 14½ lbs. in weight in that time. He again reported himself on May 23rd. He was then the picture of health, felt exceptionally well, and had gained 7½ lbs. since last report. On July 14th he visited the hospital. He had been at work regularly since date of last note, and there was no evidence of recurrence of the disease.

Size of Tumour.—The tumour after removal weighed 28 grams; it measured 13 cm. in circumference and 4.3 cm. from the surface of the tongue to its upper border. The surface of the growth was smooth, with two small outgrowths, situated one above and one posteriorly, and on section the growth was seen to have a firm capsule.

The following is a detailed description of the microscopic characters of the tumour (a spindle-celled sarcoma), by Dr. Alec. R. Ferguson, Acting Pathologist to the Western Infirmary during the illness of the late Professor Coats:

Microscopic Characters.—Speaking generally, the tumour has the structure of a rather richly cellular fibrous tissue. The degree of cellularity varies greatly, however; in some parts being no more than sufficient to give the character of fibrous connective tissue, while in others the character and amount of the cellular element confer appearances of a sarcomatous nature. These highly cellular areas are generally, but not entirely, found in the vicinity of the vessels, which, of comparatively small size and well-formed in character, are numerous.

The nuclei in the more highly cellular areas are pretty uniformly spindle-shaped, bulky, with granular, faintly-staining protoplasm, contrasting with the more deeply-stained and pointed linear nuclei of the fibrous tissue in the vicinity.

The intercellular substance is either distinctly fibrous or finely reticulated in character. No mucous tissue can be detected by the use of toluidin blue. The tumour has a well marked capsule of scantily nucleated fibrous tissue, which separates it from the muscular substance of the tongue. No infiltration, either of the capsule or of the tongue, can be detected; the muscular fibres of the latter, however, show slight hyaline degeneration. A good deal of hæmorrhage has occurred round the tumour in the substance of the tongue.

Dr. Melchior-Robert in the *Revue de Chirurgie* for April, 1899, gives particulars of a case of pedunculated sarcoma of the tongue, which is the fifth case of such in order of publication, and he contrasts it with the other 4 recorded cases. Some of the points in common in those cases of pedunculated sarcoma are:

1. *Rapidity of Growth.*—Of the 5 cases grouped in Melchior-Robert's paper, in his own case the tumour had been present about two months and a half prior to surgical interference; in another (Mikulicz), three months; in Perman's, four months; Berger's, six months, and in one only, that recorded by Mercier, had the growth been present for some years.

In the case I have described the growth, as far as could be ascertained, had been present for five weeks only.

2. *State of the Glands.*—Of the 5 recorded cases in 2 only were glands affected, and in both the enlargement was of a purely inflammatory nature. In my case the glands were unaffected.

3. *Non-Recurrence.*—Recurrence after the removal of a pedunculated sarcoma of the tongue is the exception. In 4 of those 5 cases no recurrence had taken place after several years, and this to me appears the more astonishing as the growth of the tumour is usually so rapid.

CASE II.—A young medical man, aged 23, residing some distance from Glasgow, called on me in September, 1895, and stated that two months previously, while from home on holiday, a fishbone appeared to become impacted in his throat. From that time on he had had more or less discomfort in the throat, and at the base of the tongue; and shortly before seeing me, he had had a hair probang passed with the hope of dislodging the foreign body. When he called on me he had both pain and difficulty in swallowing, the pain being almost entirely confined to the right side of the tongue and throat. He had been slowly losing flesh and strength, presumably from the difficulty he had in taking nourishment. His pulse was good and his temperature normal. On examination, the right tonsil was found to be enlarged, as compared with its fellow, and inflamed; but no foreign body could be seen or felt projecting from its surface. The right side of the tongue was swollen, chiefly towards its base. Its right border lay in contact with the teeth, and the right side of the base was pressed against the epiglottis. Here again no foreign body could be seen or felt. There was slight enlargement of one cervical gland on the right side at this time. The presumption, chiefly based on the history, was, that the fishbone had penetrated the substance of the tongue and had led to deep inflammation of that organ, and the hope was that it might go on to suppuration.

One month later the swelling appeared to be less general, and about midway between the tip of the tongue and its base on the right side a localised swelling about the size of a marble was felt in the substance of the tongue. No fluctuation could be observed, but the patient himself felt sure that this was an abscess; and shortly afterwards an exploring needle was introduced, when blood alone escaped.

On November 18th Professor Macewen saw the patient with me. The tongue was then much more swollen, the œdema was much more extensive, and ulceration of the right border had occurred from pressure against the molar teeth. These latter were removed. As a result of the consultation, tubercle was suspected to be the cause of the condition; but the true nature of the growth was ascertained by the removal of a section of the tongue a few days later.

That the condition might be more closely observed, he was taken into a private nursing home in Glasgow, and Professor Macewen kindly took charge of him. After considerable delay, occasioned chiefly by the unsatisfactory state of the patient's chest, Professor Macewen removed the whole tongue, together with neighbouring structures, which had become infected.

As it is the intention of Professor Macewen to publish this case in detail, I will not further anticipate that communication, except to say that the growth proved to be a small round-celled sarcoma.

When we compare those two cases, we find that:

1. In the first, the early discomfort was supposed by the patient to be due to a simple catarrhal inflammation of the throat; while in the second, it was considered to be the result of injury.

2. The pedunculated growth did not involve the tissue of the tongue to any depth, while the tumour in the second case was situated deep in the substance of the tongue.

3. The growth of the neoplasm was in the first case rapid,

and unaccompanied by œdema; while the interstitial tumour was of comparatively slow growth, and its presence was accompanied by considerable œdema of the organ.

4. The disease in the first case was confined to the tongue, while in the second case several secondary growths appeared at an early stage.

A PLEA FOR MORE EXTENSIVE OPERATIONS IN THE TREATMENT OF MALIGNANT DISEASE OF THE JAWS.

By J. Paul Bush, M.R.C.S.,
Lecturer on Operative Surgery, University College, Bristol; Surgeon, Bristol Royal Infirmary.

I have ventured to bring before your notice to-day the following cases of malignant disease of the jaws; they are, I think, interesting not only on account of the magnitude of the operations, but also because they were looked upon by some as cases too extensive for operative interference.

M. W., a young woman aged 16, was sent to me from the country for consultation at the end of last year. The history was shortly this: Some nine or ten months previously she first noticed pain in the upper jaw, and a month or so later her friends noticed that the upper lip appeared swollen. It was then seen that the upper jaw was enlarging in size; the pain then ceased.

Six weeks before I saw her she had been admitted into a hospital, where a small tumour the size of a hazel nut had been removed from just to the left of the middle line. The history was that the wound had healed, but at the end of a couple of weeks the tumour was seen to be growing again, and now rapidly; the growth had been examined under a microscope and diagnosed as sarcoma. Four weeks after this first operation she was seen at the same institution, when it was growing so rapidly that it was decided that nothing more could be done for the poor girl. When she came under my notice there was a moderately firm swelling situated more to the left, but invading also the right superior maxillary bone, extending from above the first left molar, across the middle line to above the first bicuspid tooth on the right side; this growth, which was pushing forward the nose markedly, was also extending into the mucous membrane of the floor of both nares, considerably narrowing these openings; there was also marked bulging down of the palate on the left side. The tumour was not growing from the margin of the gum and the teeth, but had all the appearances of growing from within the antrum. I kept her under observation for ten days, as it was thought we could do very little for her, during which period the swelling increased in size, the teeth became loose, and pain became extreme. At the earnest request of herself and her friends I decided to operate; this I did by the usual incisions on each side of the nose and division of the upper lip in the middle line; after cutting through the vomer I was able to turn the nose upwards; I then sawed through the lower portions of the nasal processes downwards and outwards to immediately in front of the first molar on each side; having previously cut through the mucous membrane of the palate with the knife, I chiselled through the line of articulation of the palate with the superior maxillary in the mouth, and so removed the bodies of both superior maxillary bones, together with the tumour.

There was considerable hæmorrhage, which was stopped by a large plug of iodoform gauze. The nose was fixed into position, and the divided lip sutured.

She made an uninterrupted recovery, and went out of hospital the end of February. About three weeks after operation my colleague, Mr. W. R. Acland, made her a temporary upper jaw; this she only wore for some hours in each day, to prevent the upper lip and nose from falling in. In March last there was no sign of any recurrence, and I redivided the upper lip, and performed a modified operation as for harelip, as the mucous membrane had got drawn upwards in the cicatricial tissue in the nose; an excellent permanent jaw with teeth was now fitted by our dental surgeon, and thanks to his manipulation the girl's appearance is so good that she has obtained a situation in a fashionable drapery establishment in the West of England; very few would notice anything wrong in her appearance.

She came to see me a few days ago, and presented me with her photograph.

Under the microscope the tumour was evidently a rapidly-growing small spindle-celled sarcoma.

This case, at any rate to me, is most instructive, as it was doubtful whether I ought to attempt removal; so many months have now passed, and the patient is so well that I have every reason to believe there will be no recurrence.

On examining the specimen you will see that the tumour is situated almost in the middle line between the right and left bones, and I should like to suggest that perhaps it commenced in the premaxillary bone.

J. J., a man aged 60, came to see me at the Bristol Royal Infirmary last April with a history that he had had a sore tongue for six months; he had seen several doctors, but they all advised him that nothing could be done to relieve his cancer, as it was too far advanced. When I saw him I found an extensive epitheliomatous growth involving the anterior half of the tongue, the whole of the floor of the mouth, both submaxillary glands were evidently affected, and there was a large mass of glands leading from these into the lymphatic glands of the neck on both sides. The pain was extreme and the patient could not talk or move his tongue, and could only swallow liquids with difficulty and great pain. Under chloroform I made a central incision through the lower lip down to the hyoid bone and then carried it horizontally on each side of the neck to just below the angle of the jaw, by these incisions I was able to tie first one and then the other lingual artery close to the hyoid bone. I then sawed through the lower jaw on each side in front of the angle, and having tied several vessels in this position I cut away the entire tongue from its attachments to the epiglottis, and cutting freely with the scissors cleared the muscles attached to the hyoid bone, thus taking away the body of the jaw, to which was firmly attached a large mass of infected salivary and lymphatic glands on each side of the neck. I further cut away all doubtful tissue and skin. At this stage of the operation considerable difficulty was experienced on account of the patient ceasing to breathe, but this was remedied by passing a silk suture through the soft parts immediately in front of the epiglottis, and by an assistant holding it forwards and upwards; a large number of vessels were ligatured and the remaining skin was brought together in the middle line and sutured. A large tube was placed in the cavity and brought out immediately above the hyoid bone. Thus the whole of the tissues above the level and the hyoid bone as far as the epiglottis posteriorly were removed.

On being put to bed it was found that the glottis became closed unless dragged forwards continually; my dressers remained for some hours with the patient, gently pulling on the silk suture above referred to. The patient was carefully fed with a tube, and no nourishment was allowed to get into the mouth cavity. The difficulty in the breathing ceased by the end of forty-eight hours, and in less than three weeks he was being fed with soft solids, and he went home some six weeks after operation.

He came a four hours' journey to see me a few days ago, when he told me he was as "jolly as a sandboy," and doing some work. He has grown a moustache and beard, which help to hide his deformity. There is as yet no sign of recurrence; he is absolutely free from pain, and is talking fairly distinctly; he has put on 2 stone in weight, and is taking plenty of nourishment; he says he much prefers feeding himself with a short big tube, as it makes him cough sometimes when he feeds without one. Under the microscope the growth was a typical epithelioma. I know in this case it is as yet too soon to be certain it will not recur, but even should it do so we have given this man some months of comfortable enjoyable life.

I have seen both these cases since this paper has been in type; they still remain free from any recurrence.

FOUR CASES OF BULLET WOUNDS OF THE CHEST, WITH REMARKS.

By A. R. J. Douglas, B.S., F.R.C.S.
Assistant Demonstrator of Anatomy, St. Bartholomew's Hospital.

These four cases were all admitted to Sitwell Ward, St. Bartholomew's Hospital, under the care of Mr. Butlin, during the months of March to October, 1898.

A series like this coming under the care of one surgeon in such a short period of time is uncommon in civil practice, at all events in those more civilised parts of the world where men do not habitually carry revolvers. In studying the accounts of similar injuries, as recorded by various well-known military authorities after some of the wars of the last half century, no fair comparison can be made as regards statistics between these four cases and those cases of gunshot wounds of the chest, for example, recorded by Otis in the American war of the Rebellion, on account of the difference of conditions and of the weapons employed; yet the diagnostic value of the different symptoms, and the treatment of gunshot wounds of the chest is practically the same both in civil and military practice.

Mac Cormac, in his *Notes and Recollections of an Ambulance Surgeon*, written after the Sedan in 1870, says: "It cannot be truly said that there is much that is mysterious or unknown to the exoteric surgical world, in either the principles or practice of military surgery further than this, that the greatest care and tact are oftentimes needed for the accurate diagnosis and prognosis of gunshot injuries."

Case I.—A. W. G., aged 28, a salesman.

History.—About 5.45 P.M. on March 1st the patient was shot with a revolver at a distance of 6 feet. There was very little external bleeding. A doctor placed a pad on the wound, injected some strychnine, and sent him round to the hospital in an ambulance. On admission patient complained of great pain in the chest, especially on breathing. He was much alarmed. Temperature, 97°; pulse, 94; respiration, 24. Patient was much relieved by a small hypodermic of morphine.

Local Condition.—A small round wound was discovered about 2 inches to the right of the sternum over the seventh rib. A probe passed about half an inch towards the middle line. On percussion no abnormal area of dulness was found: no abnormal breath sounds. During his stay in the hospital patient occasionally complained of pain in "in the pit of his stomach," which eventually passed off. There was never any evidence of injury to any of the thoracic contents. The wound suppurated, but eventually healed. Discharged quite well on March 25th. On March 10th skiagraph taken but no sign of the bullet.

In this case, as in all gunshot wounds of the chest, the question to be decided is, whether the wound is a penetrating or non-penetrating one; and, if a penetrating wound, what is the injury to the thoracic contents. It is very important in judging of these points to know what the weapon was like with which the injury was inflicted.

Cases I and II were both shot with the same revolver. Unfortunately I have not been able to see the revolver, but am informed by the police that it was a six-chambered one, firing a conical bullet about three-quarters of an inch long. The shot was fired from right in front of the patient. In this case there is no evidence of penetration of the chest wall. The viscus most likely to be injured, taking into account the situation of the external wound and the line of fire, would be the liver. This patient was skiagraphed recently by Dr. Mackenzie Davidson, but again no signs of a bullet could be found. Of course the bullet may have fallen out or been drawn out of the wound when his clothes were taken off; but, if this was the case, it seems difficult to account for his illness and his requiring to be kept in hospital for over three weeks merely by a superficial wound of the chest wall. It is just possible that the bullet is lodged in the liver, in which case it would be more difficult to show it with a skiagraph, but against this is the fact that for such a serious injury as this his symptoms were too slight.

Otis says that in the American war even small wounds of the liver caused by pistol bullets often caused fatal hæmorrhage. In those cases in which the injury was not immediately fatal a local hepatitis was the result around the bullet track, and therefore, as would be expected, jaundice was not usually a symptom. He quotes 32 recoveries after undoubted gunshot wounds of the liver. This patient was last seen in June, 1899, quite well. It seems very doubtful whether the bullet is still present.

CASE II.—E. P., aged 30, admitted March 1st, 1898, suffering from bullet wound in the chest and left arm.

History.—Patient was standing talking, when he was shot with a revolver at a distance of about 9 feet. The bullet passed through the fleshy part of his left arm, and entered his chest; he was brought to the hospital, and on admission was suffering from shock.

Local Condition.—The wound in the chest was on the left side, about 2 inches external, and ¾ inch below the level of the nipple over the fifth interspace. The heart was found to be normal. Some impaired resonance at the base of the left lung. No abnormal sounds. Both sides of the chest moved well.

For one day, the day following his admission, he spat up blood-stained sputum, and for five days his temperature was raised, varying from 98° to 100°. His wounds gradually healed, and he left the hospital on March 28th quite well.

This man was shot by the same revolver, and on the same occasion as the patient mentioned above. Here, again, we have a wound of entrance, but no wound of exit. The revolver was fired at a slightly greater distance (9 feet), and from the left side. The interest of this case lies in the question of whether the left lung was injured or not.

The symptoms of lung injury in this case are shock, dyspnœa, and blood-stained sputum; but, as is well known, all these signs occur with non-penetrating wounds of the chest, and most well-known writers on gunshot wounds have considered the value of hæmoptysis as a diagnostic sign, and noted that it may occur without injury to the lung being present.

In the Crimea, Fraser states that of 9 fatal cases of lung shot only 1 had hæmoptysis, and that of 7 fatal cases in which no injury to the lung was found 2 had hæmoptysis. There is a case published in the *Transactions of the Pathological Society* of perforation of the base of the right lung without hæmoptysis. Patient died on the seventh day. The presence of hæmoptysis in non-penetrating wounds of the chest has been explained by rupture of the smaller vessels of the lungs or small tears of the visceral pleura being caused by contusion. The only sign of the lung having been injured in this case was the blood-stained sputum. This in itself is of little value, but, taken in conjunction with the situation of the wound and the direction of the bullet, the evidence is perhaps in favour of the left lung having been injured. This patient was also recently skiagraphed by Dr. Mackenzie Davidson, but no bullet could be seen. He is now in good health, and has no trouble with his chest. This again suggests the possibility that the bullet has dropped out.

CASE III.—G. F., aged 26, marble polisher, admitted April 2nd, 1898, suffering from bullet wound of the chest.

History.—Patient was shot in the chest, about an hour before admission, with a six-chambered revolver. The weapon was discharged from right in front of him at a distance of about 3 feet. Patient says that immediately he was shot he coughed up some blood and "felt a wound bleeding in his chest." He was able to walk into the public-house outside which the injury was inflicted, and he lay down for half an hour, feeling weak, with severe pain in the chest, but quite conscious. He was seen by a doctor and sent to the hospital in a cab. He is a fairly robust man. On admission he was suffering from shock. Temperature 98.9°; respirations 32; pulse 120.

Local Condition.—Exactly over the junction of the manubrium and gladiolus and in the middle line is a small, well defined wound. In size it would admit an ordinary No. 9 catheter. The surrounding tissue is not bruised. There is no aperture of exit. The direction of the wound and its depth have not been ascertained, as a probe has not been used. No air or blood from the wound. Patient complains of stabbing pain in his chest, which is aggravated on taking a deep inspiration or on coughing. He has a severe cough, with expectoration of blood-stained mucus. The respiratory movements are restricted but symmetrical. Patient for upwards of two weeks had pain in the chest, and spat up blood-coloured mucus. His temperature was also raised. There were no signs in the chest other than those of bronchitis secondary to mitral disease, which has troubled him for some time. Patient went out quite well as regards the bullet wound, May 9th.

For some months after this he attended as an out-patient on account of his heart disease. He has since also been in the London Hospital and in the City Road Chest Hospital recently under the care of Dr. Gilbart Smith. While in the London Hospital he was skiagraphed; the note was as follows: "The bullet is at the left costal margin rather deeply situated, and resting on the diaphragm." I may remark in passing that it is not uncommon in penetrating wounds of the chest for bullets to drop down and rest on the diaphragm, and cases are recorded where patients could sometimes feel the bullet move when they altered their position.

In this case the question is again raised as to whether the lung is injured or not. The wound is situated just about the level of bifurcation of the trachea and in the middle line. Immediately he was shot he coughed up some blood, and he continued to split up blood-coloured sputum for the next fortnight. Taking into consideration the situation and direction of the wound and the symptoms, the evidence is in favour of one lung having been injured. In this case the blood he coughed up would scarcely be accounted for by a mere contusion of the lung.

CASE IV.—C. P., aged 15, bookbinder, admitted October 31st, 1898, with bullet wound of the chest. Patient shot himself accidentally with a revolver (he said he had been knocked down by some roughs, and then shot). He walked down to the hospital. He appeared to be in great pain. His shirt and vest were found to be singed, and also to have a circular hole in them. On removing them a circular wound, blackened around, was found situated in the fifth intercostal space, and about half an inch internal to the nipple line on the left side. The direction of the bullet could not be ascertained with a probe. There was no increase of cardiac dulness or dulness in the side. Abdomen kept very still in the upper half. On admission patient was collapsed, the pulse at the wrist scarcely perceptible. Respiration 40, very difficult and catchy.

November 1st. Patient skiagraphed; bullet seen in the chest, but not accurately located. His breathing is catchy, and about 40 per minute. Dr. Hensley examined the patient. No signs of fluid in the pleural cavity. He expressed the opinion that the bullet was probably in the abdominal cavity, possibly lodged in the liver.

November 4th. Patient's breathing became worse, and he showed signs of fluid in the pleural cavity. November 5th. Left side of chest aspirated; ʒviij of fluid, mainly blood, taken away. November 7th. Left side of chest aspirated again; ʒxv of similar fluid drawn off.

November 10th. Again aspirated; ʒxiv of dark blood-coloured fluid drawn off. The left side of the chest fell in as the patient improved, and breath sounds could only be heard at the apex of the lung on that side. Patient left the hospital December 16th. The movement on the left side was much better: the patient looked quite well. No attempt was made to extract the bullet. He has since joined the Royal Navy. The bullet gives him no trouble.

In this case it seems certain that the bullet penetrated as far as the pleural cavity, but it is a question whether the lung was injured or not, and the wound is complicated with hæmothorax. For the first three days of the patient's stay in the ward there were no signs of hæmothorax, but on the fourth day his breathing became more difficult, and he showed signs of fluid in the pleural cavity. After this the patient was simply kept quite still, and his chest aspirated on three occasions, and as seen above he gradually recovered. In most cases of hæmothorax produced by gunshot wounds the hæmorrhage is primary and hæmothorax is a common immediate cause of death, but in a few cases, as in this, the hæmorrhage is secondary and the hæmothorax does not occur until some days after the injury. A somewhat similar case is recorded by Mr. Herbert Page in the *Lancet* for 1877. This was a case of hæmothorax following a bullet wound. Patient was in hospital for about 5 months and went out in good health.

It seems impossible to say whether the lung has been injured in this case (Case IV) unless localisation by the *x* rays shows the bullet to be embedded in the left lung. Again, in this case it is interesting to note that the boy has no trouble at present from the bullet, and is able to do his work in the Royal Navy.

In connection with all these four cases, but especially with the last two, the prognosis is of considerable interest. In the first two cases there is some doubt as to whether the bullets are still in. If the bullets are not now present of course they will most probably have no more trouble. On examining the literature of gunshot wounds it is found that in a few cases bullets may become encysted and remain for years embedded in the chest wall or inside the chest, in some cases encysted in the lung itself or even, as in one well-known case, where the the bullet was embedded in the heart for eleven years. In some of these cases the bullet may give rise to no trouble; in others the patients have suffered from vague and uncertain chest symptoms; again, in some cases the bullet has been found in a localised abscess cavity. But as a rule bullets in the chest set up irritation sooner or later, giving rise to local abscesses, and either making their way out or having to be removed by operation, or in some cases being expectorated from the lungs.

A case is quoted in the *Lancet* for 1847 of a ball lodged in the chest for fifty years. It was found after death. It had given rise to considerable trouble during the patient's lifetime.

Cases are recorded in the *Medical and Surgical Reporter*, Philadelphia, of expectoration of bullets after seven weeks and after three years, with recovery. It may be of interest to give some figures by Otis. He says, in 33 out of 88 cases of lodgment of balls in the chest the foreign bodies were extracted either immediately or within twenty days in 11 cases, and at a period of one to twenty-one months in the remainder; 20 out of 33 recovered. Of the 20 that recovered, 7 were non-penetrating wounds; 7 perforated the chest, and were removed from lodgment beneath the integument and scapula; 1 was removed from the mediastinum; 5 were wounds of the lung.

Conditions have changed since these statistics were published. It will be interesting to watch the future of the 4 cases reported above, and to see whether the necessity for operation will arise.

I am indebted to Mr. Butlin for permission to publish these cases, which were under my care while I was his house-surgeon.

A CASE OF GUNSHOT WOUND OF THE LEG SEVERING THE ANTERIOR TIBIAL NERVE: SECONDARY SUTURE TWO MONTHS LATER: RESTORATION OF FUNCTION.

By Philip de Santi, F.R.C.S.,
Senior Assistant Surgeon to the Westminster Hospital.

Major H., of the Indian Staff Corps, was on April 8th, at the battle of Atbara, shot in the outer side of the left leg, the bullet entering at the upper third, impinging on the fibula, 2 inches of which bone were splintered, and, travelling downwards, finally passing out behind the tibia about 2½ inches below the centre of the popliteal space. He was attended by Captains Spong and Dunn, R.A.M.C. Both these gentlemen were present in London when I subsequently operated on the patient, and they told me that a number of splinters from the fibula had to be removed; that there was a good deal of hæmorrhage and considerable laceration of the calf muscles. Under their care he progressed very favourably, and towards the end of May was invalided home, and on his arrival in London went into St. Thomas's Home.

He was examined there by Dr. Turney, Assistant-Physician to St. Thomas's Hospital, who found that the tibialis anticus, extensor longus digitorum, extensor proprius pollicis, and peroneus tertius muscles were paralysed, the reaction of degeneration being well marked. The patient had a dropped foot, inability to extend the foot, and wasting of the anterior tibial group of muscles. The cutaneous sensation corresponding to the distribution of the anterior tibial nerve was but very slightly impaired. The cutaneous sensation of the musculo-cutaneous nerve and the reactions of the peronei muscles were perfect.

I saw the patient on June 8th, 1898, with Captain Dunn, R.A.M.C., and Mr. Edmunds, and found a wound of entrance and exit as already described, healing well, but with still a discharge of pus. It was quite obvious that the anterior tibial nerve had been shot away or else become embedded in dense cicatricial tissue.

A prior opinion had been given as to the uselessness of trying to find and reunite the nerve, but I strongly urged an operation. (1) Because there was no danger in it; (2) because there was a distinct chance of finding and suturing the nerve; (3) because the consequences, if left alone, would be permanent paralysis and invaliding out of the service.

The patient readily consented to an exploratory operation, and on June 10th Mr. Edmunds, Captains Spong and Dunn being present, and assisted by my house-surgeon, Mr. Evans, I proceeded to operate. An Esmarch's tourniquet being fixed over the thigh, I made a long incision parallel with the tendon of the biceps cruris, exposed the external popliteal nerve, and traced it down to the site of the bullet wound; there it became thickened, adherent and embedded in dense cicatricial tissue. With considerable care I proceeded to separate it from this tissue. The nerve was then found to have been divided just at its division into the anterior tibial and external cutaneous. The latter nerve was defined, and found to be intact. I could not see the distal end of the anterior tibial nerve. I therefore proceeded to make another incision as for ligature of the anterior tibial artery in the upper third. I defined the partition between the anterior tibial muscle and the extensor longus digitorum, separated them widely, and after a short search found the divided anterior tibial nerve. Its cut end was adherent to scar tissue, soft and purplish in colour. I very carefully freed it. An interval now existed of about 2½ to 3 inches between the proximal and distal ends of the anterior tibial nerve. By pulling on the external popliteal nerve with the finger from above, and by bending the knee into the flexed position, I was able easily to approximate the two ends. They were then carefully pared and united accurately with two small chromicised catgut sutures passed through the substance of the nerve ends with a small round needle. I had to divide part of the origin of the extensor longus digitorum muscle to expose the nerve ends, and I sutured the muscle together with kangaroo tendon. The whole of the parts were then cleansed, the wound closed with silk sutures, and an antiseptic dressing applied. The limb was fixed on a MacIntyre's splint flexed to its greatest extent. The operation lasted an hour and a half. The progress of the case as regards healing of the operation wound was uneventful. Temperature never rose beyond 99.4° (day after operation).

On the 13th I ordered massage of muscles to be commenced. On the 20th I removed all the stitches, the wound having healed by primary union.

On July 13th he was up and about on crutches. Extensor muscles seem to be a good deal fuller; inversion of the foot is possible, and there seems to be some action of tibialis anticus. The patient left the home at the end of July.

On August 3rd, 1898, Dr. Turney wrote me:

> The electrical examination I have just made is extremely satisfactory. The anterior tibial muscles react to the faradic current, and though the contraction is sluggish and requires a larger current than normal, this is a great advance. To the galvanic current there are still signs of degeneration. A.C.C. at 7; K.C.C. at 2.5 to 3 m.c., and the contraction is notably sluggish. Of course the peronei are all right. I think complete recovery of function will eventually occur. I ordered continuous massage and electricity.

On November 17th he was reported to be doing extremely well; he walks about and gets up and down stairs with ease. There was still no power to flex the ankle or to extend the toes, but a good mass of muscle was found in the anterior tibial region. The bullet wounds were quite healed. There was a little flexion of the knee due to cicatricial matting of the calf muscles. In October the patient was anæsthetised at Manchester, and Mr. Wright and Mr. Mann attempted to straighten the limb completely, but this was found impossible.

On March 6th, 1899, he was in every way immensely improved; good muscular development and nutrition of limb. He got about quite well, and could bicycle. He had only a very slight limp. Dr. Turney reported:

> I have just examined Major H. electrically, and am glad to be able to give a satisfactory report. The anterior tibial muscles react to a strong faradic current, and much more briskly than they have done hitherto. Although there is no appearance yet of voluntary power, still there is no doubt that function is present potentially, both in nerve and muscle, and it is only a matter of time when this becomes apparent.

In July, 1899, the patient had a strong mass of muscles. He was able to get about very well, and rode daily. The electrical reactions were much brisker, but power to extend the toes and flex the ankle had not yet returned. He walked with but a very slight limp.

A DISCUSSION ON THE PREVENTION AND TREATMENT OF SYPHILIS IN THE NAVY AND ARMY.

I.—Deputy-Inspector-General E. E. MAHON, R.N., C.B.

DEPUTY-INSPECTOR-GENERAL GRIFFITHS, who was to have addressed you to-day, having been appointed to Malta, I have been called upon to take his place, which I have reluctantly consented to do at such short notice. I say reluctantly, as though I consider the honour a great one, not having been actively employed lately, I feel that it would have been much better for all of us if the matter had been left in his hands. However, from some notes he has given me, and from information derived from the Statistical Returns of the Health of the Navy, I am enabled to give you some idea of the extent of venereal diseases existing in Her Majesty's navy on the home station in former years, before the passing of the Contagious Diseases Act, while they were in force, and since their abolition.

I may here remark that the home station includes the officers and men of the Channel Squadron, and of all ships stationed in the United Kingdom, and marines afloat. The Contagious Diseases Act was passed in 1864, and was applied to Plymouth, Portsmouth, Chatham, Sheerness, Woolwich, and Aldershot; and in these towns the admissions per 1,000 for syphilis I had been reduced to 266 per 1,000 in 1870, as compared with 504 per 1,000 in 1864, before the Acts were in force (Dr. Balfour's Report before the Commissions in the House of Commons, 1871).

As regards the navy, in 1860, when no Act was in force, the ratio per 1,000 men suffering from syphilis I and II was 76.8. In 1869, after about four years' working of the Acts, it was only 41.84 per 1,000. However, in 1880, the Acts still being in force, the ratio had increased to 57 00 per 1,000, and in 1897 to 74.67 per 1,000. The Acts were abolished in 1885.

As regards gonorrhœa, the ratio per 1,000 was as follows: In 1860, 20.03; 1880, 66.74; 1897, 70.27. From these figures it appears that the prevalence of this disease was little altered during the working of the Acts, and even that before their enforcement there was not half as much as subsequently. But my impression is that in the old days men did not present themselves sick when suffering from gonorrhœa to the same extent that they do now.

In 1880 the average strength of officers and men on the home station was 22,370. In 1897 it was 43,900, or nearly double. In 1880 the loss to the service in number of days' sickness from syphilis I, syphilis II, and gonorrhœa was as follows: Syphilis I, 32,223; syphilis II, 12,859; gonorrhœa, 40,392; average strength, 22,370. In 1897 the loss to the service in number of days' sickness from the same was: Syphilis I, 76,335; syphilis II, 49,764; gonorrhœa, 77,054; average strength, 43,900.

According to these figures the loss to the service, except in the case of syphilis II, does not seem to have increased much when the increased number of men is taken into consideration. But still the figures as they stand show what an enormous loss there is to the country through the prevalence of these diseases, which are surely preventable to a great extent.

It is impossible to hope that the Contagious Diseases Acts will ever be enforced again, and, even if they were, it would be useless, unless they were universally enforced. But this, I consider, would be the quickest and most effective way of dealing with the question. Failing this, the moral elevation of the men themselves must be attempted, and the encouragement of sobriety in particular. I am certain that intemperance is responsible for a larger number of the admissions to our venereal wards, and that if men had kept sober they would never have fallen victims to the awful-looking creatures who ply their trade in parts of Portsea and Portsmouth, and other places at home and abroad. In order to effect this, Dr. Griffiths suggests:

1. Good naval barracks to be substituted for depôt ships in all the principal ports, and recreation grounds provided for the men, in order to attract them from public-houses of low character.

2. Advice to be given to young sailors in regard to personal cleanliness, and the importance of immediately reporting themselves if they suspect there is anything the matter with them.

3. Early marriages to be encouraged, which might be done by offering pensions to widows of seamen. The money saved by the non-enforcement of the Acts might be devoted to this purpose.

4. Pensioners in good health, and not suffering from the sequelæ of venereal diseases, to be given preference for employment in civil establishments of the Admiralty as writers, messengers, labourers, etc., and their children also given preference if physically fit.

As regards treatment of syphilis, the absolute necessity of a mercurial course prolonged for upwards of two years is, I think, almost universally recognised. The question of how to administer it must be decided by the idiosyncrasy of the patient. Personally I have rarely seen ill effects follow administration of hyd. c. cretâ c. opio by the mouth, if the effects are carefully watched. This failing, there is inunction and fumigation to fall back upon. The comparatively new treatment by intramuscular injection I have as yet had no experience of, so will leave it to others to speak about it.

Gentlemen, I will detain you no longer, but ask you to consider how best mitigation, and if possible prevention, of this horrible scourge can be obtained. It is not only a service question: the baneful effects are as evident in civil life as in Her Majesty's services, and the question is a national one, including India and our colonies.

II.—Major W. DICK, M.B., C.M., R.A.M.C.,

Assistant Professor of Clinical Surgery, Netley.

AFTER the interesting remarks we have heard from Deputy-Inspector-General Mahon on the subject of syphilis in the navy, the duty falls upon me to say a little regarding the prevention and cure of the same disease in the army.

In the first place I would direct your attention for a few minutes to some statistics. I have not attempted to draw any practical deductions from figures as to the prevalence of this disease at home stations, as the source of the disease is the same for the soldier as the civilian, and no legislative attempt has been made to deal with the subject, except for a limited period when a Contagious Diseases Act was applied to isolated districts, and which probably was quite useless. I shall, therefore, restrict myself to statistics obtainable from the army abroad, and especially in India—as obtained from the reports of the Army Medical Department. The period taken is from 1880 to 1897.

	Total Admissions for all Diseases in India.	Total Admissions for Venereal Diseases in India.	Per-centage.	Strength of Troops in India.	Per-centage.
1880	87,616	12,329	14.00	50,136	24.59
1881	82,415	13,397	16.25	57,344	23.36
1882	92,151	13,136	14 25	58,588	22.42
1883	73,847	13,242	17.93	56,190	23.56
1884	82,586	14,362	17.39	55,252	25.99
1885	87,000	17,580	20 20	57,165	30.77
1886	91,630	18,595	20.29	61,757	30.11
1887	86,392	16.380	18.96	63,942	25.61
1888	94,489	19,427	20.56	68,139	28.52
1889	103,119	25,046	24.28	68,545	36.54
1890	102,337	25,395	24.81	67,456	37.65
1891	91,811	21,005	22.87	66,178	31.74
1892	108,870	21,756	20.94	68,045	31.97
1893	98,983	26,151	26.42	69,865	37.43
1894	106,967	30,999	28.88	70,983	43.66
1895	99,766	32,116	32.19	68,331	47.00
1896	97,738	31,325	32.05	70,484	44.44
1897	96,824	27,268	28.16	64,531	42.25

It will be seen that in the years 1885 and 1886 there was some increase in the proportion of admissions for venereal disease to the total admissions for all diseases, and also of

the percentage of admissions to strength of troops in India; but in the last four years about 30 per cent. of all admissions to hospital have been for venereal disease, and for every 100 of strength there have been over 40 admissions for venereal disease. Some objections may be taken to this method of working out statistics, as of course it shows the admissions irrespective of the persons, and therefore one man may show several admissions in a year for the same disease, but it must be borne in mind that this applies to all diseases—for example, ague and malarial diseases as well as to the venereal. There are probably fewer admissions credited to syphilis than there ought to be, as frequently joint affections and diseases of the eye are shown as such, from difficulty in getting a true history, when in all probability they are cases of secondary syphilis.

The following, I think, however, is satisfactory. The figures are for the years 1882, 1887, 1892, 1897; 1897 is the last year for which statistics are available, and the others are earlier by five years each from the other:

	Average Numbers constantly Sick from all Diseases.	Average Number constantly Sick from Venereal Diseases.	Percentage.
1882 ...	3,806.37	910.74	23.66
1887 ...	4,505.00	1,200.79	26.65
1892 ...	5,707.81	1,766.51	30.94
1897 ...	6,541.90	2,543.37	38.71

It will be seen that in 1897, in every hundred sick amongst the soldiers in India in hospital, and therefore inefficient, 38 were so from venereal disease, whilst in 1882 there were 23, an increase of 15 per cent.

A striking commentary on the increase in recent years of venereal disease in the British army serving abroad is afforded by the following table, which shows the numbers of venereal cases invalided home and received into the Royal Victoria Hospital, Netley.

Number of Soldiers Invalided from Abroad for Venereal Disease received into the Royal Victoria Hospital, Netley.

Year.	Cases.	Year.	Cases.
1880	86	1889	185
1881	65	1890	226
1882	55	1891	234
1883	69	1892	220
1884	46	1893	246
1885	79	1894	382
1886	66	1895	420
1887	93	1896	449
1888	137	1897	804

It will be seen that until 1888 the invalids suffering from venereal disease never reached 100, while from that year onwards they steadily increased, until in 1897 they reached the total of 804, not very far short of one-third of the total invalids treated for that year in the hospital. These statistics appear to show that from that time some cause has been at work which has tended to increase the prevalence of the venereal disease in the army abroad. This increased number invalided home also points to an increased severity of disease, as these men are considered unfit to remain longer in tropical climates. A very large number of these men are eventually invalided out of the army as unfit for further service. They return to their native places, where their appearance, some crippled and others terribly disfigured, must have a very depressing effect on recruiting, certainly not rendering a service very attractive from which such specimens come home, the men no doubt trying to make out that their condition is the result of service in the tropics, and not of their own indiscretions.

The prevention of syphilis is a very difficult subject to deal with. Of course there is the usual moral suasion and appeal to men's better instincts, and the effect produced by seeing the consequences of immorality in the ruined constitutions of their comrades. In barrack rooms, where numbers of young men are congregated, perforce celibate, with strong passions, especially in a tropical climate, amongst an alien population, with very little restraining influences such as do to a certain extent act at home, continence I am afraid, is not to a great extent to be expected. No doubt, however, some good might be done if a higher standard of morals could be attained, and I am sure that those in authority do their very best to further this object. I am afraid, however, that this is a very theoretical means of prevention. Venereal disease is so common amongst the rank and file that except occasionally there is very little feeling of shame at having this kind of disease. Again, as a large proportion of the men who acquire disease appear to recover after a time in hospital, some do not mind getting it; again men who are habitually immoral often escape, and the fairly moral man who only falls once in a way is often caught.

2. Hygiene of the individual may do some good, such as personal cleanliness, use of disinfecting lotions, etc.; but as the great majority of men go with prostitutes rather on the spur of the moment than with premeditated intention, the means of carrying this out are not at hand, and if they were, a very large number of the men would not make use of them. In this connection, I may say that in the years 1892-93 I was stationed in Singapore, and a special ablution room was provided for the men, where there was a plentiful supply of water, soap, and towels, but I am bound to confess that very little use was made of it. Still, I think that some good could be done by having well-lighted lavatories of this sort in connection with the urinals, so that men could go there without the purpose for which they went being suspected, and where the materials for drying—such as clean pieces of rag, or even latrine paper—could be easily got rid of, and the chance of a man infecting himself from a dirty towel abolished.

The third, and probably the only, means from which much good can be expected must be applied by the authorities, and consists in (1) rendering a man's life as pleasant as possible in his barracks, and so to some extent prevent him seeking his pleasures abroad in the evenings; and (2) in men being in every way encouraged to come to hospital the moment they themselves detect anything suspicious, so that the very first appearance of disease may be detected, and the individual man prevented from spreading it.

As to the women, as we have abolished Contagious Diseases Acts, some stringent means must be found of preventing solicitation and open prostitution, and especially of preventing diseased prostitutes from plying their trade. The means of carrying this out I cannot clearly see, as the difficulties in the way are numerous, but the great amount of venereal disease and its progressive increase calls for early and thorough inquiry, when probably some feasible scheme might be suggested. The terms in which I refer to this subject are purposely general, but probably gentlemen taking part in the discussion may be able to indicate lines on which such an inquiry might proceed.

As to treatment, we in the army are principally concerned with primary and secondary syphilis, the age of the men and short service making the observation of tertiary syphilitic cases very rare. I shall accordingly here limit myself to the treatment of primary and secondary syphilis. Here again I think that the encouragement of the men to report sick on the slightest suspicion of disease is a great aid to treatment as well as to the prevention of the spread of the disease to which I have already referred. On the first appearance of disease the man would be ordered to hospital and early treatment begun. I have been in the habit of always applying pure carbolic acid or a 10-per cent. solution of chromic acid locally, then dressing with black wash or iodoform, then putting the patient on a course of mercury either by the mouth or by inunction.

I do not think that too much attention ought to be given to the character of the sore, as to the probability of its being syphilitic or not. Latterly, mercury is the only drug I have used, and in hospital I prefer administration by the mouth or by inunction to intramuscular injection. I think that a course of mercury of from three to four months in a large proportion of cases prevents secondaries altogether. Inunction cannot be carried out except in a hospital, where the orderlies are trained to rub, or the patients taught to do so to each other.

The Aix system is the best, where the ointment is rubbed into different parts of the body in regular rotation, with daily hot bathing, and careful attention to dieting and the state of the alimentary canal. Of course, administration by the mouth is the easiest method, and is usually efficacious. The cases in which intramuscular injection is useful will be better told you by my brother officer, Major Lambkin. They seem to me to be that very large class in which the men have already undergone a mercurial course by one of the other methods in hospital, and been discharged to continue treatment, or that equally large class in which there is recurrence of symptoms not necessitating a man leaving his duties, but in those cases in which the symptoms are severe I prefer to have the man in hospital under daily personal supervision.

In whatever way mercury is given there must be the greatest attention paid to the toilet of the mouth, by the frequent use of astringent washes, and cleaning of the teeth after each time food is taken. For the last few years my experience has been almost entirely of advanced secondary syphilis amongst invalids from India and the colonies. These men have all had a sea voyage before they arrive at Netley, and this seems to do them a great deal of good. They have all been treated by mercury in one way or another. Nearly all of them improve quickly after landing, under generous dieting, tonics, mercury, and probably the sea air. The large number invalided out of the service have no active signs of the disease, but probably have stiff joints which render them unable to perform the duties of a soldier, or are so disfigured by the results of the disease as to render it inadvisable to retain them in the service. However, a large number return to their duties apparently free from disease.

III.—C. R. DRYSDALE, M.D.Lond.,

Formerly Physician to the Rescue Society of London.

THE PREVENTION AND TREATMENT OF VENEREAL DISEASES IN THE ARMY AND NAVY.

IT seems to me advisable in speaking on this subject to state what the speaker's views are concerning venereal diseases. My opinion is that syphilis, soft sores, and gonorrhœa are each as distinct from the others as small-pox is from measles and scarlet fever. I hold that those who consider soft sore as a part of syphilis are quite in error, and that their errors have rendered many British statistics valueless, and notably the army medical statistics in former years.

As to the prevention of venereal diseases, this must depend on the natural history of the disease. It is held usually, although I disagree with this, that gonorrhœa may arise *de novo*, although my experience tells me that faithful husbands of faithful wives are almost without exception exempt from it. There is no gonorrhœa without the gonococcus. Gonorrhœa, then, it is supposed, could not be stamped out, because it would be revived by certain conditions of health not yet clearly indicated. I have sometimes thought that gonorrhœa causes greater evils than syphilis—for example, stricture in the male and sterility; severe uterine, tubal, and ovarian affections in women, with blindness in infancy and sterility in many women. But syphilis and soft sores never arise *de novo*, and are far more preventable than scarlet fever or measles, since these viruses can only be conveyed by contact, usually of mucous surfaces. I believe that gonorrhœa never arises *de novo*. If, then, suddenly every patient affected with syphilis, gonorrhœa, and soft sore could be sequestrated from society for a shorter or longer time, these pests could be got rid of, and would not return. But soft sores are so easily cured and are such slight affairs after all that can be said about them, that it is doubtful whether it is worth while to take much trouble to get rid of that form of contagion which is now far rarer than formerly. Gonorrhœa in the male is a curable disease. Syphilis is the formidable contagion which it is our duty to endeavour to stamp out if that be possible, and if we are not too lazy to try to do so.

The Continental or French system of regulating prostitution and examination of women alone has, in my experience, caused the increase of syphilis wherever it is enforced; and notably in Paris, where my friend M. Mauriac has shown by statistics the utter uselessness of that system, which has increased true syphilis and gonorrhœa. Soft sores alone are now rarer in Paris than formerly, but that means that people are not so abjectly poor and so careless of personal suffering as they were at the beginning of this century.

The Contagious Diseases Act 1866-69, when it was enforced in this country, resulted also in an increased amount of syphilis and gonorrhœa, and the history of these Acts in Hindustan show that they have increased the amount of syphilis to an alarming extent among our unfortunate celibate troops. The system of Britain, which affords medical advice, although grudgingly, in dispensaries and voluntary hospitals to the poorer syphilitic men and women, gives, in my experience, far better results than the police authoritative treatment of the Continent. In short, voluntary charitable assistance of disease is far more useful than prison hospitals like St. Lazare, which drive women into despair and allows all male contagion bearers to go free. A positive law might and ought to be enacted, punishing with a fine all who carelessly infect their neighbours with such diseases, and with imprisonment when they knowingly and maliciously infect any other person with syphilis, whether males or females. Syphilis should be made a notifiable disease. With regard to the query, "Is it possible to lessen the spread of syphilis and venereal contagion by social efforts?" I would point to the fact that there is an almost complete absence of such contagions among the native troops in Hindustan. This is due to the fact that these troops are married, as they are enjoined to marry by their religion. This shows that venereal diseases are not necessary evils, but merely parasitic on promiscuity. The early marriages of Hindus unfortunately lead to large families and destitution, but if families were restricted by these couples as they are in France, where 100 medical men are found only to have 150 legitimate children, economy and hygiene might be reconciled. Universal marriage and small families, with short periods of service, might solve the problem and protect the officers of our Indian army from further accusations in the keeping of disorderly houses, which are the hot-beds of venereal contagion, and acting as procurers which have been launched against them.

It is well known that the amount of venereal disease in the German army is much less than that which exists in the Indian army and even among our own troops at home. Dr. Max Nordau has explained that this arises from the fact that the German soldiers to a great extent live maritally with working women to whom they are as faithful as they would be if married. So much for prevention.

As to the treatment of syphilis, I will take first the splendid remedy for tertiary syphilis, potassium iodide, because there is no one of any experience in the treatment of syphilis who does not recognise the miraculous powers of that drug in gummy infiltrations and ulcerations. Its discovery as a remedy is due to Wallace of Dublin, who by this gift to medicine has quite changed the dreadful features of syphilis before 1834, when diseases of the bones and nostrils were as frequent and so fatal. The great battlefield in the treatment of syphilis is found in its mercurial treatment. There can be not the smallest doubt that at the commencement of this century syphilis was rendered far more fatal and severe by the quantity of mercury that was used for its cure. Those who doubt this should read Dr. Fergusson's experiences in 1812 in Spain, where the Spaniards who used no mercury looked with horror on the profuse salivation inflicted on our unhappy troops.

When I first studied medicine mercury was used for a perfect host of diseases—in peritonitis, in pericarditis, in iritis, and in strangulated hernia. The late Dr. Chowne once said at the Harveian Society that when in doubt what to do he invariably prescribed mercury. All this is now changed and, except in iritis and in syphilis, mercury is well nigh abandoned both by London physicians and surgeons. In syphilis the voice of the leading practitioners of England is nearly unanimous in recommending the use of very small doses of mercury in some form in primary and secondary syphilis. I, personally, have treated syphilis with and without mercury, in the Rescue Society's Hospital and elsewhere, and did not notice much difference when the small doses of mercury, such as ½-gr. doses of mercury and chalk, and ½-gr. doses of green iodide of mercury were used several times a day. My experience has been that not more than about 10 per cent. of syphilitic patients have tertiary lesions, and these are far better treated by large doses of potassium iodide than by mercury. If, then, mercury must be used, care should be

taken not to inflict too much of that rather dangerous drug on our patients. My own experience has been that some practitioners, as, for example, those of Aix-la-Chapelle, and some of the Dublin school, give too much mercury, and I greatly prefer the small doses recommended by the late Mr. Henry Lee and Mr. Hutchinson, although I cannot follow them in saying that such small doses often cure syphilis and prevent the occurrence of secondary symptoms.

The Edinburgh school of medicine, following on the teachings of the great surgeon, Mr. Syme, and of Dr. Hughes Bennett, has been rather less enthusiastic in its advocacy of mercury in syphilis. In London the English ideal of compromise is followed out in mercury as it is in religion and in politics; and nowadays it cannot be said, I think, that practitioners are heroic in the treatment of the disease. For this reason syphilis is now far less severe than formerly, and we rarely hear of destruction of the nostrils or of extensive bone disease, although diseases of the nerves are common enough. In the army and navy there is no reason why the disease should be more severe than it is in London.

Gonorrhœa should be most carefully treated in both sexes by injections very frequently carried out, and in women by the constant presence of small bags of alum inserted as far as the uterine orifice. In men rest and frequent urethral injections should be carried out very carefully, so that orchitis and stricture may be prevented, both of which are severe diseases.

IV.—Major Lambkin, R.A.M.C.

In the remarks which I intend to make on this most important subject as regards prevention of syphilis in the navy and army—further than to say that I consider some legislative measure, such as the Contagious Diseases Act, absolutely necessary—I intend to confine myself solely to the question of the treatment of the disease.

I take it that the majority of us are agreed that syphilis is a curable disease, but that, to bring this about through treatment, the latter must be continued over a prolonged period, long after all active signs of disease have disappeared. What this period should be of course we cannot be in any way certain, but clinical observation teaches us that it ought probably not to be less than one year.

Taking this latter for granted, then the question arises, Do syphilitic cases in the navy and army—and, indeed, I would say those in the lower classes of civil life—receive treatment for this period, or for any time approaching it in length? I fear I must answer it in the negative, and I fancy that there are few at this meeting who will question my decision. Let us see what the usual course of treatment of syphilis is in either of the above spheres of life.

The patient, on his first contracting the disease, is admitted into hospital, when, under the usual modes of giving mercury, the primary and secondary signs disappear, in probably most cases in less than two months. He is then discharged from hospital. Now, what happens? He might be given pills or mixture to take whilst out of hospital, and advised to do so for an extended time, this he might possibly do for some time, but the probability is that in 99 cases out of 100 he would not take them for a day, as long as he remained free from troublesome symptoms. The consequence is that from the day he leaves hospital until he is readmitted for a fresh outbreak of the disease, he gets no further treatment, and, never receiving the prolonged treatment which we know to be absolutely necessary, he never gets rid of the disease, and should the patient be a sailor or soldier he goes to the tropics, and is then a prey to malaria or an easy victim to enteric; or, if he is a civilian, he goes to swell the wards of our charitable institutes, suffering from some ailment which is either directly or indirectly due to uncured syphilis.

This is a very serious state of affairs, but it is none the less true; and why has it existed? The truth is, that under the older methods of giving mercury it is impossible to continue treatment with outside patients, for reasons it is not necessary to go into here, so that unless we are prepared to keep our patients in hospital for an indefinite period after all signs of the disease have disappeared, treatment has to cease once they leave hospital.

But what I wish to bring forward is that through the intramuscular method of giving mercury, treatment of syphilis can be continued when patients have left hospital for as long a period as is thought necessary, with little or no trouble to the patient. The custom I have carried out and recommended is that after the patient has got rid of his primary and active secondary symptoms, he is discharged from hospital in the usual way, but he comes up once a week for further treatment, which is given in the form of an intramuscular injection. Thus he can be kept under treatment for as long as the surgeon wishes, and the latter can watch the effect of the treatment minutely.

There is no time to go into the details of the intramuscular treatment, further than to say that during the last eight years I have given nearly 20,000 injections with only one accident, namely, an abscess which occurred after an injection of a solution of hyd. perchl. The solutions which I use are either a mercurial cream, composed of hydrarg. ℥j, lanolin pur. ℥ij, ol. carbol (1 in 20), ℥iv, or one of sod. iodi grs x; hydrarg. sozoiodol, gr. v, aq. 200 ℳ. On the whole, I prefer the former.

In conclusion, I would say that the intramuscular method of giving mercury gets us over a very great difficulty, namely, being able to continue treatment among outside patients, and thus syphilitic patients both in the navy and army, and in the lower classes of civil life, can and ought to get that prolonged and thorough treatment which we know to be absolutely necessary with any hope of curing the disease, but which was, and is, almost impossible to give by any of the older methods.

I do not wish to compare the different modes of giving mercury, but I will say that although it may have its drawbacks, still the intramuscular method is at present the only one by which we can be certain of carrying out the treatment of syphilis when our patients have left hospital.

V.—Surgeon-Major W. Niven, M.D., I.M.S. (Retired).

Surgeon-Major Niven said it was generally admitted that by washing the external genitals, especially the glans and prepuce, immediately after the sexual act, or even after the lapse of a few hours, the risk of infection was very much diminished. If the washing was carried out within two hours the infection would be prevented, and even after the lapse of four or five hours the virulence of the syphilitic poison would be much lessened. What he wished to bring before the Section was whether the military authorities in India and elsewhere could be induced to make come additional lavatory arrangements in barracks whereby a special lavatory room should be fitted up near or in proximity to the ordinary latrines and washing places where such private washings could be carried out by the soldier. Modesty alone would not permit the young soldier to perform such operations in places where he could be stared at by his comrades, and therefore he went about his duties for days while the poison was maturing in a mass of filth and corruption until he was compelled to report himself at hospital with swollen glands. It was nearly twenty years since he was actively engaged in military medical work, but when so employed at Poona and Kirkee he was often struck with the meagre appliances for carrying out the operations necessary for personal cleanliness provided for the use of soldiers. The extraordinary increase both in the amount and virulence of venereal disease had often occupied his mind since those days. He would confine his remarks to two points only, (1) washing, (2) providing the accommodation for private and non-public washings. How to approach the Government in order to submit the proposal or idea was a question for discussion. He considered the idea opened out a large and wide field for discussion and for further proposals on some such lines. It was difficult to account for the increased virulence of the disease amongst the white soldiers in India during the last few years. One cause of this increase had been hinted at with bated breath, and it was this—that secret religious societies in India sent women afflicted with a virulent form of the disease into the garrison towns, no doubt with the idea of disabling the soldiers and rendering a portion of them unfit for military duties. This might be a possible cause, although it could not at present be proved or disproved. Still it should be considered as possible in such a country as India.

VI.—George Ogilvie, M.B., M.R.C.P.,
Physician, Hospital for Epilepsy and Paralysis, Regent's Park.

In accepting the invitation to take part in this discussion, I feel conscious that from personal experience I have nothing new to lay before you concerning this important subject, but I gladly seize this opportunity to remove some misunderstanding which seems to have arisen about a former communication of mine regarding syphilis among British troops, and also to bring prominently forward some points which, perhaps, have not received the full consideration they deserve.

A.—Fergusson's Explanation of Severity of Syphilis in Portugal in 1812.

The similarity between the recently-reported severity of syphilis among the British troops in India and that reported from Portugal by Fergusson in the beginning of this century led me to inquire into the probable causes of the latter. My task was greatly facilitated when I became acquainted with Fergusson's article on Syphilis, published in his *Notes and Recollections of a Professional Life*. In this paper he, with admirable candour, takes upon himself the responsibility for the sufferings of the British troops in Portugal. He says that he had been "destroying instead of saving patients by murderous and unnecessary courses of mercury," and that "the error lay in the abuse, not in the use, of the mineral."

Certainly no more thorough confession could have been made by even the most penitent and contrite malefactor. Yet it did not emanate from antimercurial fanaticism, and to the last he considered mercury the "very best remedy that ever has been discovered."

The causes of the aggravation of syphilis are up to now only incompletely known, but from clinical considerations it seems certain that there are various factors at work to produce the so-called malignant forms of syphilis. Under these circumstances an experience like that of Fergusson's is of considerable value, because it positively points to at least one of these factors. In drawing a parallel between his experience and that recently made in India, I did not mean to insinuate that the cause of the calamity was the same in both cases, but I only wanted to point out one direction in which the explanation, and with it the redress of this lamentable occurrence, might possibly be found. Without an exhaustive inquiry into the details of the whole treatment, and the hygienic conditions, an inquiry into the causes of the severity of Indian syphilis will never be complete.

B.—The Part Malaria Plays in the Production of Malignant Syphilis.

Great stress has been laid by some writers on the part which malarial fever plays in the production of malignant syphilis. There seems, no doubt, that with regard to tropical malignant syphilis, this factor is deserving of the greatest consideration. Fournier's personal experience on the subject—published quite recently—is of considerable interest at the present moment. In his private practice he has seen 59 cases of syphilis in patients who had in different degrees suffered from malaria. In 37 out of these syphilis ran a more or less severe course, and in at least 18 of them it manifested the malignant ulcerative form. It would thus appear that in malarial patients syphilis becomes of a malignant character in about 30 per cent. This proportion seems rather high, and would probably be considerably reduced if the inquiry were extended over a larger number of cases. On the other hand, we would require statistics with regard to the frequency with which malaria can be traced in the previous history of those who suffer from malignant syphilis. On this point we possess up to now, as far as I know, little or no reliable information. It would be of especial interest if some of those best able to speak on this point, from their own experience, would give us the results of their observations. It would also be of importance to have exact information about the frequency of malignant syphilis in districts free from malarial fever, and in malarial districts not situated in the tropics. There seems to be no doubt that some of the regions in which malignant syphilis is still most frequently met with are not also haunted by malaria. But even if malarial fever should prove a still more important factor in the production of malignant syphilis than up to the present it has been shown to be, the question of mercurial treatment would again become of foremost importance. In cases of this kind the ordinary routine treatment by mercury, given in ordinary doses by the mouth, might in itself constitute a further factor of aggravation. In patients suffering from malarial fever, or from its cachectic effects, the most careful administration of mercury is necessary. It must be adopted to the individual requirements and peculiarities of each case, as all routine treatment is as likely to do as much harm as good. As the official report declares that the malignancy of Indian syphilis among British troops is such that it "can be witnessed nowhere on the Continent," it is not probable that malarial infection can alone be responsible for this excessive malignancy. When by previous malarial infection the constitution has a tendency to react in a malignant form on the introduction of the syphilitic virus, the greatest care and precaution has to be used with regard to the administration of mercury. While the effect of bath treatment, local applications, fresh air, and appropriate diet may be greatly assisted by a judicious mild mercurial course, adapted to the individual case, all wholesale mercurial treatment, according to a fixed pattern, may be greatly detrimental and an additional source of malignancy.

C.—What is meant by the term "Malignant Syphilis,' and how variously it is used.

It would be of considerable advantage for the discussion of the whole problem if those who report observations of malignant syphilis would exactly state what they understand by this term, or, better still, give full details with regard to the seat, the nature of the lesions, and the time of their appearance. Perhaps it would be best to restrict the term "malignant syphilis" to the secondary, ulcerative progressive, often phagedænic, affections of the skin and the mucous membrane. From the official report it seems to me that the cases upon which it is based belong to this category, but I should be glad to be enlightened on this point by any of the gentlemen who have had such cases under their care. By many writers no difference is made between this malignancy of secondary symptoms and the precocious appearance of tertiaries; by some also cases are classed as malignant syphilis in which organs of great functional or even vital importance are attacked by a syphilitic process of otherwise average intensity. Even the appearance of tertiaries at the usual period of the disease—which, according to an approximate estimate, is put down at about 10 per cent. of all syphilitic cases—has in itself been considered by some as sufficient proof of the malignant character of the disease. In Fournier's table, for instance, the first three forms of syphilitic symptoms all appear as evidence of the malignant action of malarial fever.

On the other hand, some French writers have tried to establish a clear distinction by introducing the term "*syphilis maligne*," "*syphilis tertiare précoce*," and "*syphilis grave*." By the first the progressive ulcerative secondary forms are to be understood, by the second the early appearance of tertiaries, and by the third those cases in which organs of great delicacy or importance are involved. You will thus see that the word "malignancy" is frequently used in utterly different senses. For instance, it is often applied to a phagedænic ulceration of the skin, which may heal without any detriment to its bearer, and it may also be applied to a circumspect lesion of the yellow spot, which, although not ulcerative, and not of a progressive character, still leaves considerable damage to sight in consequence of its localisation. Unfortunately no classification of this kind has yet been generally accepted, yet such a distinction has to be made, if we are all to understand the same thing by the same words. At present considerable confusion exists in this respect. To plead, therefore, for its "*éclaircissement*" is not a mere stickling for words, because these different forms of malignancy are evidently due to different causes, and if one attempts to investigate the causation of the malignancy of syphilis, one ought first to know in what this "malignancy" really consists.

For want of a generally accepted nomenclature it would be desirable that the exact nature, seat, and time of appearance should be precisely stated in all these lesions which are considered to determine the malignant character of the disease. If this were done subsequent official reports might, I venture to hope, bring us valuable and more complete information.

VII.—John A. Shaw-Mackenzie, M.D.,

London.

The pathology and treatment of syphilis, its varying and comparative intensity and explanation, have from early times been the subject of much controversy, and as regards the Services, of much report and inquiry.

Allowed to lapse on the repeal of the C. D. Acts, 1886, the whole subject of syphilis has come to the front again in view of the aggravated form of disease in British troops invalided home from India, as well as by the growing feeling that syphilis in the community is a subject necessitating immediate inquiry. With regard to the former, as in the past, so now inefficient treatment and the abuse of mercury have been advocated as responsible for this aggravated form of syphilis, and it seems surprising to me, while not denying the mitigating effects of improved hygiene and treatment, that these have been supported as principally responsible for the mitigation of syphilis, to the exclusion of those natural causes of mitigation of syphilis which have been authoritatively acknowledged in the past irrespective of treatment.

One of the most remarkable papers which have been written on the subject of syphilis in the army and which affords a key to the present state of syphilis and to which may be attributed very largely the modified mercurial treatment of syphilis, is that by William Fergusson, Inspector-General of Hospitals in Portugal, during the Peninsular war in 1812. It is this original paper which I have been permitted to direct attention to in the last year, not only as it seemed to me in justice to his work but in favour of the natural causes of mitigation and aggravation of syphilis.

Fergusson noted that the disease in the bulk of the Portuguese inhabitants who used little or no mercury was extremely mild in comparison with the British soldiery. He inferred from this at this time that the disease amongst the bulk of the people was self-exhausted from long continuance amongst them and from general diffusion, unresisted by mercury, or modified by the alternative mitigating effect of a warm climate. He did not note extinction of syphilis, but mitigation of disease.

Wallace, whose works seem to have escaped the notice of modern observers, by inoculation experiments and clinical observation in 1836 not only demonstrated the mitigation of disease by reinfection of those previously affected, but recognised the influence of the system and climate in modifying the disease, as well as modification by virus, exhausted by age or propagation and transmitted to those not previously affected. He pointed out that the excavated pustular indurated sore was the true Hunterian, and this together with pustular secondaries was the natural type of syphilis; and that which we regard as genuine syphilis or indurated sore, with papular eruptions, as the exanthematous or modified form, the result of inoculation with the matter of the secondary pustular eruption. He further taught that the syphilitic virus exhausted in different ways, produced various grades of syphilis down to the local sore or chancroid, the condyloma, and one species of gonorrhœa which he frequently had excited from the matter of exanthematic sores.

He did not teach the attenuation of syphilitic virus through ages, but the constant generation of virus anew, and while fully alive to the aggravating effect of mercurial abuse, he nevertheless taught syphilis was modified by propagation, insomuch that but for the constant generation of syphilis anew, it would long since have ceased to exist.

The names of Ricord, Colles, the late Mr. Henry Lee, and others, are associated with the local forms and suppurative appearances which syphilis may assume in reinfection, transmission, or under hereditary influences. Especially Morgan, of Dublin,[1] emphasised modification by descent from the inoculated discharges of constitutionally-infected women, and Surgeon-Major Oliver went so far as to express the opinion that 70 per cent. of sores were merely the local primary evidence of transmitted secondary syphilis to one not previously contaminated. In the leading articles in the British Medical Journal it was further stated, "It will hereafter be acknowledged that it is much more in keeping with the natural history of syphilis as written on the bodies of men to describe the disease as modified in many ways. Previous infection: hereditary influence; length of time in a people; age; sex; climate; temperament; coexistence of other disease, etc."[2] "Such persons are very much in the same condition as the Portuguese to whom Fergusson so pointedly refers, and are, as a rule, subject to that variety of syphilis which does not infect the constitution, or if they get the other variety it appears in them in such a modified form as not to require any particular specific treatment."[3] I have thought it right to redirect attention to these because at the present time it has been sought to show that these modified forms of syphilis are the natural type of syphilis uncomplicated by bad treatment, and because it is not generally recognised that many—I do not say all, nor have I ever said all—of the suppurative and non-infecting genital lesions in both sexes may be of syphilitic origin.

With regard to aggravation of syphilis the similarity of the present outbreak to that depicted by Fergusson in British troops in Portugal was originally pointed out by myself in favour of the natural causes of aggravation. This similarity has been taken, without acknowledgment, to support the theory of defective treatment and mercurial abuse, by reason of the fact that Fergusson in later years substituted "idiosyncrasy" for "attenuation," and admitted the mercurial abuse factor in accounting for the aggravated state of the disease amongst British troops in Portugal. But idiosyncrasy does not explain why mercury is necessary in many cases he admitted, and not necessary in others; nor did he admit mercurial abuse alone. He advanced the views of climate with its febrile affections—diet, intemperance, and transplantation of the mitigated virus of the native into the virgin soil of the foreigner. That mercury was not the sole cause is supported by the fact that under the same treatment the British soldier in Portugal suffered more than the soldier at home, as well as by the fact he noted that one section of the Portuguese themselves suffered severely, though insignificant doses of mercury were used, and reserved till the bones were affected. It has also been authoritatively admitted that severe symptoms may occur without a particle of mercury having been administered.

Wallace, the originator of iodide of potassium treatment, deliberately stated he was not going to "dispossess mercury of its well-earned high rank as a most valuable remedy in the treatment of syphilis, but that we have in iodide of potassium a heroic remedy, completing our circle of therapeutic remedies."

The aggravating effect of climate and malaria seems to be an important factor. Guthrie, an equally prominent Peninsular surgeon, confirmed Fergusson in this respect. J. A. Marston, of the Royal Artillery, in 1863 noted the same febrile factor in the Mediterranean in the summer months. Over and over again improvement could not be effected till the winter, or removal of the patient to England; while drugs in the former circumstances were of no avail, though beneficial in the cooler months or at home. Fergusson also noted the inefficacy of mercury, except in enormous doses, in syphilis complicated with fever.

The late Mr. Henry Lee taught that malaria complicated and aggravated syphilis. In the opposite direction, or certain cold climates, syphilis is known to exist in fifteenth century endemic intensity, for example, in parts of Russia and the shores of the Baltic.

Famine is another factor equally noted as an aggravating factor. Transplantation of virus from the native to the foreigner has been confirmed independently, and appears worthy of consideration in the present instance.

Epidemic virulence seems to be another factor which the present outbreak emphasises in relation to previous similar ones. We have the intensity of disease at the end of the fifteenth century, which by many is regarded as aggravation of pre-existing disease; then Larrey's account of the French in Berlin after the battle of Jena; the British severity in Portugal; and, as noted in the Journal of this Association, that syphilis in 1864 was in the Pacific station twice as prevalent and more virulent than twenty to thirty years before, and that "neither the neglect nor the abuse of mercury therefore can be the cause of the great amount of secondary and tertiary

[1] British Medical Journal, 1874.

[2] *Ibid.*, September, 1864.

[3] *Ibid.*, February 6th, 1864.

disease which is shown to be prevalent in both Services." (August 6th, 1864).

Youth is another aggravating factor, and possibly the short service system, emphasising disease for the first time in the young soldier, may explain some of the present virulence.

I do not think I can be accused of denying or underrating the value of scientific treatment in mitigating the severity of syphilis. On the principle of elimination of syphilis through the skin and excretions, exemplified in the mitigated disease of mild climates, the late Mr. Henry Lee advocated the external methods of administration of mercury—namely, calomel fumigation, and inunction, entailing indoor or hospital treatment. Having had the privilege of assisting him for some years, naturally as well as from conviction I have always advocated the same systematic methods of treatment, and urged the need for provision for hospital in-patient treatment.

With regard to the problem of the Contagious Diseases Acts it is admitted by both sides that the non-infecting sores were reduced under the Acts. About obvious syphilis there was a difference of opinion. In Malta, police regulations under Deputy Inspector-General of Naval Hospitals Armstrong blotted out syphilis, while in India both the prevalence and severity of disease was reduced under the Acts. While restrictive measures appear to be necessary in the virulent disease of foreign climates and their aggravating conditions, in England the improvement under the Acts appear to have been largely due to hospital provision for both sexes rather than the machinery of the Acts; and it seems to me at the present day provision for hospital in-patient treatment, voluntary as opposed to compulsory, is, in the absence of such, requisite.

In attempting, however, to form a true estimate of the value of treatment, or explain its success or failure, the varying intensity of syphilis under different conditions of constitution, time, place or climate must be taken into consideration, and as regards the present outbreak of virulence, it would be unjust, in face of Fergusson's alternative causes of aggravations, "if it were to go forth without contradiction" that the deplorable state of British troops invalided home from India was the fruit of defective treatment at the hands of army surgeons, "to whom we are indebted for much of the knowledge we possess of the pathology and treatment of syphilis."

VIII.—A. H. Ward, F.R.C.S.,
Surgeon to Out-patients, London Lock Hospital.

Mr. Ward said that the cases of severe syphilis in the army were attributed to several causes. Among them was the intensification of the virulence of the microbe supposed to be present in the coloured races. He had not been able to convince himself that any increased virulence was present among those who had acquired the disease in this way. Other causes, such as malaria and chronic alcoholism, no doubt bore their part, but he was of opinion that the real reason lay in the difficulty of carrying out continuous treatment for the proper period of at least a year and a half. The hypodermic method of treatment advocated by Major Lambkin seemed to be the best possible under the circumstances. It might be that the collection of mercury injected might remain encapsuled for long periods, so that the patient carried his treatment with him for some years. This could be investigated by the *x* rays.

IX.—Colonel F. H. Welch, R.A.M.C.

Colonel Welch summarised his conclusions as follows: (1) That the army is a reflex of the condition of the community generally as to incontinence and disease, and that the moral advance and reduction of disease in the community will be reflected in the services; (2) that the Contagious Diseases Acts, despite defects in administration, brought about a reduction in disease, and especially much moral good in rescue work, reduction of prostitution, reduction in solicitation and temptation, and improved state of our streets; (3) that the present state, especially abroad, is such as to require measures of prevention; (4) that all public measures of prevention must lie in the control of prostitution; (5) that the authorities abroad should be allowed a free hand in meeting the local conditions which pertain; (6) that voluntary hospitals, while in themselves good for cure, are inadequate for prevention.

X.—Lieutenant-Colonel H. Grier, R.A.M.C.

Lieutenant-Colonel Grier added his testimony to the efficacy of the intramuscular method of administering mercury in the army. He agreed with Major Lambkin that it was the only method by which treatment could be carried out for the prolonged period admitted to be necessary. The results of 15,000 injections had been carefully watched. No ill-effects had occurred except in one case, where a small localised abscess had formed at the site of injection; and in a second, where a certain amount of inflammation surrounding the needle puncture had been observed. He fully agreed with all Major Lambkin's statements.

XI.—Theodore Maxwell, M.D.,
Woolwich.

Dr. Maxwell pointed out that, with regard to the Home Army Service, there has been a steady reduction in the number of admissions per 1,000 for all forms of venereal disease; that whereas in 1880 there were 246 admissions per 1,000 men, that number was now reduced to 140 per 1,000. He also drew attention to the notable and encouraging fact with regard to the civil community, that whereas of the 50,000 men coming up annually as recruits for medical examination in 1878, 151 per 10,000 recruits were rejected for venereal disease, in 1897 only 35 per 10,000 were thus rejected. He called attention also to the Registrar-General's Report, published in March, 1899, that whereas in the ten years 1878 1887 on an average 82.4 persons per million died yearly of syphilis, in the years 1888-1897 only 67.5 persons thus died. Dr. Maxwell protested against the statements being circulated in this country during the last twelve months that we were face to face with race deterioration and national degradation, and insisted that the very contrary was the case, and that syphilis was both less prevalent and less severe than in former years, and that at present it was still decreasing.

XII.—Surgeon-General O'Dwyer,
Aldershot.

Surgeon-General O'Dwyer said he could corroborate the statement of Deputy Surgeon-General Mahon that the Contagious Diseases Acts had little or no action on the prevention of gonorrhœa. He derived this experience from Malta when the Contagious Diseases Act was in force and could be effectively carried out. As regarded night lavatories, they existed at Aldershot, but the soldiers would not use them. With reference to the prevention of the disease, he urged that the soldier should be made comfortable in his barrack room, and be given bright rooms, well lighted, spacious recreation rooms, comfortable and cheap canteens, amusements as much as practicable, on the lines of the taverns outside. This would tend to retain him in barracks and away from temptation. At Aldershot they wanted an Act of Parliament to enable the military authorities to treat those who had no business in the camp as trespassers, and for this the support of the public was necessary. As regarded the moral measures he left them to the clergy, and would merely remark that they would have a good uphill battle. He did not treat patients himself. It was his duty to see how other officers did so, and he had rather a fancy for the subcutaneous injection of mercury as described by Major Lambkin. He should say it reduced the hospital population by about 10 per cent., and so far as his experience went did not cause any bad results.

ON THE RATIONAL TREATMENT OF SYPHILIS.

By A. H. Ward, F.R.C.S.Eng.,
Surgeon to the London Lock Hospital.

We shall all be prepared to admit that syphilis must be the result of a microbic invasion of the organism. This, indeed, is the only theory which explains the phenomena of the disease. The process of cure, then, must also be that by which microbic infections are eliminated—namely, the production of an antitoxin, the gradual acquisition of toleration, and the encapsulation and destruction of the microbes by the phagocytes. This being so, rational treatment must be calculated to aid and facilitate this natural process of cure. This paper is the result of an effort to follow in thought the steps of this natural process as evidenced by the phenomena

observed, and to trace the influence upon it of the known properties of those drugs which experience has shown to be undoubtedly effective. By this means a clear idea of the action of treatment and the ends attained by it can be arrived at, and a selection can be made, among the multifarious methods advocated, of those best calculated to bring about the desired end. Some such guidance of the reason is most desirable, when we consider the extraordinary varieties of the methods of administration of the salts of mercury and of the combinations of that drug with iodine which are recommended; all of which, we are assured, meet with the greatest success in the hands of their several sponsors. Only one inference can be drawn from this unique consensus; it is this: that as long as enough mercury gains access to the system, it does not matter in the least how it gets there. Essentially one method is as good as another. This is precisely the conclusion arrived at by those who have impartially tried all these methods; but there are important secondary considerations which lead to a selection of certain methods, and for these definite reasons can be found. The rational treatment of syphilis, then, will be that selection among approved methods which will agree with the theory of causation and natural cure.

Since this question of the action of treatment, as assisting the natural cure, is bound up with the theory of the causation of syphilis, I must briefly state my conclusions on the latter question. These have already been published under the title of The Toxin Theory of Syphilis in the *Lancet* for June, 1896. For the details of the argument I must refer those interested to the pages of that journal. The conclusions I have come to are these:

All the phenomena of syphilis are due to one cause—the action of a toxin formed by the growth of colonies of the specific microbe in the tissues. This toxin, like all such such bodies, is a diffusible irritant possessing chemotaxic power. Locally, it causes inflammation and cell infiltration of the tissues among which the microbes are growing. Generally, after it has diffused into the blood and accumulated there, it causes general poisoning, shown by degenerations of the blood and other tissues. This accumulation of the toxin in the blood I call the toxin tide. It is low when only one colony of microbes exists, as in the primary stage, or when an isolated gumma is present; it is high when countless colonies of microbes are present, as in the early secondary stage. All the infinite gradations seen in practice lie between these two extremes, and there is a definite relation between the character of the local lesions and the amount of toxin in the system. In this way, when only one or a few colonies of microbes are forming toxin, the tide is low, and the fresh toxin continually formed diffuses freely from the colonies which make it; consequently, the signs of local irritation are not marked; but, inasmuch as diffusion is accompanied by the exposure of circulating leucocytes to the chemotaxic power of the toxin, marked cell infiltration of the colony of microbes occurs. The consequence of this dense infiltration and overcrowding is necrosis and ulceration; hence ulceration is the marked feature of a single microbic colony and low tide, as is seen in the primary sore; the same features are prominent when a few colonies are active, as in rupia.

We know from observation that in this condition of rupia, the fewer the colonies, the larger the lesions tend to be, and the more extensive the ulceration; when many rupial lesions are present, they are individually smaller and less ulcerated; till, by insensible gradations, we come to generalised rashes without ulceration, but showing inflammatory reaction in the microbic foci. In this way we arrive at the opposite extreme of multiple foci and high toxin tide, the early secondary condition. In consequence of the high tide, diffusion of the toxin continually formed in the colonies, is impeded on the law of osmosis; and local inflammation is set up, with less marked cell infiltration. When ulceration occurs under these circumstances it indicates very severe disease, and is due, I think, to necrosis of the tissue elements from direct toxin poisoning, and not to mechanical overcrowding of leucocytes, as in the primary lesion, or in rupia. The outbreak of secondaries is the direct result of the high toxin tide reacting on the secondary foci in this way, so that they are all revealed, large and small alike, as a polymorphous eruption. The colonies are of different sizes, because they have been developed from microbes shed off from the primary focus at different dates. At the same time, the high tide shows itself generally by high temperatures, anæmia, and *malaise*, and when prolonged, by profound and rapid degenerations. Thus all the phenomena of the constitutional stage are explained, special symptoms depending on the anatomical situation of the inflammatory lesions. The same process is at work all through, but when lesions are few and the tide low, cell infiltration and necrosis are the leading feature; when lesions are many and the tide high, inflammation and pigmentation are the marked characteristic. With a low tide, general degenerations are not apparent or very slow, when the tide is high they are marked and may be very rapid.

When the secondary stage is established the process of cure will begin. An antitoxin will be formed which will enable the phagocytes to attack and encapsule the microbes. Three issues are possible in the campaign thus commenced—victory of the phagocytes, victory of the microbes, and a kind of armed truce more or less prolonged. Victory of the phagocytes will result in a disappearance of the lesions, a destruction of the microbes, and a return to permanent health. Victory of the microbes will result in progressive lesions with sloughing, and prolonged high toxin tide with rapid general degenerations—malignant syphilis in short, ending in death. Both these extreme conditions are rare; the armed truce more or less prolonged is the rule. This corresponds to all the intermediate types of cases which shade into each other by infinite gradations, according to the control exercised by the phagocytes of each individual. Three classes can be distinguished, however. The first and most common shows recurrent outbreaks of lesions, with intervals of apparent latency. I explain it thus: After the first outbreak, the antitoxin aids the phagocytes, and they encapsule and restrain the microbes for a time. Then the production of toxin largely ceases, and the tide falls, consequently the lesions disappear. But with the fall of the toxin tide the antitoxin will decrease. Then the control of the phagocytes will slacken, and the microbes resume growth and form more toxin. The tide will then rise and the lesions reappear. Again antitoxin will be formed, again the phagocytes will attack, and again control the infection, and again another period of apparent latency will supervene; and so on. But at each outbreak the phagocytes will gain toleration and destroy more microbes. The lesions will get fewer and the tide lower, with the result that the lesions will become infiltrated and tend to ulcerate. All the varieties of rupia will be produced. At the end of about two years lesions will cease to appear, and the disease will be cured or become really latent.

In the next class of case the "armed truce" is more prolonged, the control of the phagocytes more effective. After the first outbreak there is no recurrence of overt lesions, the microbic activity is insufficient to raise the toxin tide high enough. But there is some microbic growth going on and a low tide, which shows itself by causing slow and insidious degenerations to creep over the patient; he becomes anæmic, wasted, and perhaps ataxic. This is the most deadly form of syphilis; no lesions are present to warn the patient, who does not realise that his ill-health is due to the disease. Probably irreparable damage is done to his tissues before marked symptoms lead to inquiry and treatment. I have seen a striking case of this kind in which mercury was given for one month twice a year for three years; just enough to scotch the snake and not kill it. The patient is now ataxic. This class of case may end by arrest of the degenerations, and so far in cure, or the disease may become really latent.

The third class of the "armed truce" cases presents this real latency. The phagocytes encapsule the microbes, and cannot quite destroy them, but cause them to go into the spore state. Toxin then ceases to be formed, all lesions vanish, and complete health is restored. But the spores remain resting in the phagocytes. When these cells disintegrate, the spores are set free, and are taken up by the fixed connective tissue cells, and those forming the walls of the blood vessels. So the train is laid for the development of gummata perhaps many years later.

These three classes of cases characterised by recurrent outbreaks, chronic poisoning, and sporing with subsequent gummata, are in my judgment associated with the treatment pursued during the secondary stage. Very imperfect treatment

favours recurrent outbreaks ending in sporing. On-and-off treatment favours chronic poisoning ending in sporing. More thorough treatment favours sporing as against cure; and we have to admit that in a small percentage of susceptible cases, the best and most thorough treatment may end in sporing, though I fully believe that cure is the rule. Treatment, indeed, can but reinforce the vital energy of the phagocytes, and when this is poor, or reduced by injudicious living, our best endeavours in the way of treatment may fail to bring about a perfect result. All the more reason, then, to seek out if possible the methods by which our patients may have the very best chance; we shall then have done our utmost, and must leave the result upon the knees of the gods.

When the period of real latency with resting spores comes to an end, a gumma is developed. Some local depression of vitality as injury, overwork, or senile change permits a few resting spores to germinate. This is the spark that fires the mine. Toxin is again formed, and diffuses. It thus depresses the vitality of contiguous spore-bearing cells; their spores develop, and so on, till a whole organ or tract of tissue is affected. There is free diffusion of toxin, and consequently dense cell infiltration, and, according to the acuteness of the process, necrosis or fibrosis results. Thus the theoretic distinction between a secondary and a tertiary lesion is, that in the secondary lesion the microbes are growing between the fixed tissue cells, while in the tertiary one they are growing in those cells. Those cells also being more or less tolerant from exposure to the toxin during the secondary period. This point bears on the difference of treatment adopted empirically. I shall refer to it later.

Thus very briefly and imperfectly I have tried to follow out the theory of the causation of syphilis, and of its cure through the interaction of toxin and antitoxin, microbe and phagocyte. It will now be plain that any treatment, to be rational, must be directed to the assistance of the phagocytes, to the depression of the microbes, and to the elimination or destruction of the toxin. Mercury we know to be a very potent germicide, and this property of the drug is amply sufficient to account for its action under the circumstances, without assuming for it any mysterious or specific power. If a solution of mercury is introduced into any microbic culture, the growth will be retarded, arrested, or destroyed, according to the strength of the mercurial solution. Each local colony growing in the tissues in a case of syphilis will be similarly affected when a solution of mercury is made in the patient's blood; could that solution be made strong enough the microbic growth would be destroyed. But, unfortunately, the test tube which contains the culture medium in this case is a living one, and if we get the solution of mercury too strong, we shall begin to poison it; further, the mercury is continually running out of our living tube, so we have to be continually adding fresh to keep up the strength of the solution. In the first place, then, mercury acts by depressing the vitality of the microbe. Again, it will act by permeating the substance of the phagocytes, and assisting their vital energy in destroying the encapsuled microbes. It is now easy to see that an overdose of mercury will defeat its own object, by poisoning the phagocyte and reducing its vitality. Experience shows that in all ordinary cases the phagocytes and other cells of the body can tolerate the presence of a certain amount of mercury without suffering; but in debilitated persons this margin of toleration may not exist, hence the necessity for great caution in the use of mercury in such cases, and for making every effort to improve the general health. When this has been done the system will tolerate mercury in the usual doses.

This is the first point I would make as bearing on rational treatment. Mercury restrains the microbic activity and reinforces the phagocytes, therefore as much mercury as the phagocytes can tolerate should be given and maintained. It is not enough to give sufficient to cause the disappearance of lesions only, for sporing instead of destruction of germs may be taking place. Only by pushing the mercury to the point of toleration, and keeping it there, can we insure the maximum possible control of the infection, and so give our patient the best possible chance.

The second point of treatment is this. Since each microbe can only be destroyed by a phagocyte, and we have a means of controlling microbic growth, we should employ that means at the earliest possible moment. As soon as we are certain that the primary lesion is undoubtedly syphilis, treatment should be begun. For to wait till the vast multiplication of microbes, necessary to establish the secondary outburst, has taken place, is to throw a far greater amount of labour on the phagocytes, and to run a greater risk of their failure to do their work. We should try to shut the door before the steed is stolen, not afterwards. It is my experience that when treatment is begun early, and the mercury kept at toleration point, most cases develop only the slightest signs of the secondary outbreak; the toxin tide does not rise high enough, the secondary colonies are not sufficiently developed. If carefully looked for, however, a very few lesions can generally be found at the period when the secondary outbreak should be at its highest activity. Such being the case, I believe that treatment controls the disease and modifies its intensity, but that it does not stop it altogether.

This brings me to the third point. Since the natural evolution of syphilis extends over about two years, and our treatment controls it only, we have no ground for assuming that the phagocytes will accomplish their task any more rapidly. Further, experience shows that the best results accrue when treatment is continued for two years. Hence our efforts should not be relaxed, or our vigilance diminished, till the natural limit of the disease is reached. Our patient will have the best possible chance by going through with a two years' course, whether he sees any symptoms or not. This can be perfectly well done without the patient's constitution suffering and without his leaving his affairs. I have proved it over and over again.

This brings me to the fourth point. If treatment must go on so long it must be made easy for the patient, so that he may form the habit of taking his doses as a daily routine. There is really only one way of doing this—to give mercury in the form of pills or tablets. Patients will not be bothered with bottles of medicine for two years, and still less will they continue with injections, fumigations, or frictions for so long a time. All these methods will be gradually allowed to slide when overt symptoms have passed off and the patient has got over his first fright. What happens then is this: the mercury in his system slowly runs out, the infection gets out of hand, the phagocytes lose power, and one of the three "armed truce" conditions occurs. Either a recurrent outbreak, or the more insidious chronic poisoning, or the most insidious sporing of the microbes, takes the place of their destruction. So, often enough, the last case of the man is worse than the first.

It will be objected that to give mercury by the mouth for so long will upset the digestion. It will, if the soluble forms of mercury are used. All the salts are more or less irritating, and we cannot wonder if a dose of corrosive sublimate, or green iodide three times a day, does irritate the stomach. The most tolerant organ must resent such a bombardment sooner or later. But it is my experience that mercury in a finely-divided metallic form—as grey powder or blue pill—does not set up any gastric disturbance. Why should it? The mercury will mix up with the contents of the stomach and be gently rubbed into the walls of the intestines all the way down. We rub it into a man's skin, why not into his mucous membrane? The latter method affects the system more quickly, and can be better controlled. I have used the blue pill at the Lock Hospital for years with every satisfaction. The grey powder is a little more active dose for dose, and a little more inclined to cause diarrhœa, but the patients seem to get used to it in a few days and rarely need any opium or astringents; 6 grs. a day is about the average dose of either form. I do not give tonics as a routine, but keep them in reserve should the patient show signs of flagging.

This brings me to the fifth point. The patient must never be allowed to run down in health, or in spite of treatment he may get into terrible messes. Any ill-health means enfeebled phagocytes and a lowered mercurial toleration point. Both favour microbic activity. I saw a startling case once in which starvation was the cause of debility. The patient developed a profuse bullous eruption in spite of continued treatment; he completely recovered in hospital under proper feeding.

Any other cause of lowered vitality will work in the same way, and the one to be most carefully guarded against is

incipient mercurial poisoning. This may easily threaten through some change in the rate of elimination, and the consequent accumulation of the drug beyond the toleration point. Therefore the patient should be seen at regular intervals, even if he seems quite well. The toleration point is indicated by the slightest touching of the gums when otherwise healthy. When the hygiene of the mouth is neglected the gums are affected by a smaller dose of mercury, so the maximum control possible is not gained. The teeth should always be seen to at the beginning of a case, and antiseptic tooth-powders used throughout, night and morning. This is usually sufficient in my experience. When the mouth is sound I think it possible to push the mercury rather too far before it touches the gums; hence it is necessary to weigh the patient regularly. Any loss which cannot be otherwise accounted for may be due to over-dosing, and immediately indicates a reduction of dose. We can be sure that the toleration point is reached when the healthy gums are touched and the weight constant; these two signs together tell us exactly where we are. The general health must be kept up throughout the course with the utmost care. Malaria, which is so often a depressing element in cases from abroad, must be appropriately treated; the question of alcohol is perhaps doubtful. When the organism is accustomed to it, the occurrence of a severe infection may not be the moment to cut it off altogether; anyway, patients will not do this. I compromise by forbidding spirits, because it is so fatally easy for a man to take too much alcohol in that form, and by "too much" I mean, not more than his head can stand at the moment, but more than his liver can comfortably dispose of in the course of the day—a very different matter. Anyway, the strictest moderation must be observed, because a condition of chronic alcoholic poisoning must be one of the worst depressants of the vitality of the phagocytes possible; hence the old saying, "If you want to keep your syphilis preserve it in alcohol."

The sixth point I wish to make concerns the place of the iodides in the rational treatment of syphilis. Iodine has been used as a means of attenuating the diphtheria toxin by, I understand, oxydising it. There are reasons for thinking that this is the way the iodides act in syphilis, by attenuating or breaking up the toxin, and so reducing the irritations and infiltrations caused by that body; this view of their action fits in with the facts of experience. For instance, the iodides given during a secondary outbreak cause the lesions to disappear, but when withdrawn the toxin soon reaccumulates and the lesions are re-established. They cause gummata to absorb, and in this case, since the microbes are growing in the fixed cells, which are more or less tolerant, the removal of the toxin enables the cells to reassert themselves and reimpose the spore condition, the *status quo ante* being re-established. Not infrequently however the lesion re-forms when the treatment is stopped, while the chances of the formation of a gumma elsewhere are not affected. During the secondary stage when the microbes are being encapsuled by the phagocytes, the toxin is the cause which attracts the phagocyte to the microbe; if we remove the cause the process of cure by encapsulation must be suspended, hence we are marking time as long as the iodides are in use. This must be the case even when mercury is being taken as well. At the same time the iodides facilitate the elimination of mercury, hence if the dose is not increased it will fall from the toleration point. So theory agrees with practice in deprecating the mixed treatment in the constitutional stage. One exception may, I think, be made when inconvenient or dangerous lesions are present. The mixed treatment does seem to remove them more rapidly than mercury alone, and so can be used temporarily with benefit. Afterwards mercury only is best relied on, since the iodides will hinder the process of natural cure. In the treatment of gummata mercury may well be combined with the iodides, and continued alone for a mild course afterwards, with a view of aiding the microbe-ridden cells to destroy the germs rather than to reimpose the spore state; in this way the affected part may perhaps be freed from the infection, while the general mercurialisation of the organism may retard the possible outbreak of resting spores elsewhere. That any treatment can affect the resting spores I do not believe: once spores always spores. This is why I hold that so much care should be taken in the early stages to prevent the occurrence of sporing, by which the organism is rendered potentially syphilitic for life.

There is one other method of eliminating the toxin which theory suggests; it is to wash it out of the system by causing the patient to take large quantities of water. The toxin is diffusible, consequently more will be excreted when the flow of water through the kidneys is accelerated. Further elimination of the toxin should be assisted by the increased oxidation caused by massage, hot baths, and exercise. The Zittmann treatment, which consists of causing the patient to drink four pints of a certain decoction daily, while he remains sweating in a room with a temperature of 80°, is a method which causes the most intractable ulceration to heal. Again, we know that iodides seem to be more active when given with large quantities of water. Further, water drinking, together with baths and massage, is a feature of a celebrated cure; all these methods combining to eliminate the toxin. The increased amount of water taken daily is the common feature in these successful systems. Why should it not then be taken daily as an adjuvant to ordinary treatment in bad cases?

I have tried it in the following case with striking success. A woman has been in the Lock Hospital for the last six years with one short intermission; she has suffered throughout with a tendency to persistent ulceration. Every conceivable treatment has been tried, iodides to 180 grains a day, two courses of Zittmann's treatment, dieting, general treatment, tonics—everything has failed to prevent recurrence of the ulceration in less than two months. When she came under my care in December last she was anæmic and feeble; there were several callous ulcers on each leg, her body was covered with scars from head to foot; in one popliteal space was a mass of indurated scar tissue contracting the knee so that the foot could not be brought down; she had to get about on crutches. She was taking 30 grs. of iodide three times a day, and was not improving. As a forlorn hope, acting on the above theory, I ordered a pint of hot water three times a day one hour before meals, and 5 grs. of iodide instead of 30. In three weeks the legs had healed; three weeks later the iodide was left off. She has continued the water alone till the present time; no further ulceration has occurred, she is much improved in health, has a better colour, and gained in weight. The contracted knee has given to the extent of allowing her to walk with a stick. This is a very suggestive case, the water being the only change in treatment with a reduction and subsequent withdrawal of iodide; the only alternative view is that the change of treatment coincided with a sudden cessation of the tendency to ulceration which had existed for six years. The patient has remained well till now—a period of eight months.

I have given the water in conjunction with treatment in a good many severe cases since, and they have done certainly well—but the first was the only one in which I felt justified in dropping all drugs. Considering the effect of Zittmann's treatment, and tracing it to the water, I feel justified in strongly recommending anyone who has an intractable case of syphilis, to try water as an addition to ordinary treatment. Water can be got anywhere, and can hurt nobody. It should be taken an hour before meals, so as to be absorbed before digestion begins; it can be taken hot or cold, but best hot in debilitated cases, to save the energy expended in warming it to blood heat.

To sum up my conclusions, I should say that the following selection from the accepted rules of treatment appear to be rational:

Mercury should be used alone in primary and secondary syphilis, unless severe lesions are present. Treatment should be begun at the earliest possible moment. The drug should be given in a form easy to take, and not irritating to the stomach. It should be carefully pushed to the toleration point indicated by slight touching of the healthy gums, with constant weight. When the toleration point is reached, the mercury should be kept up to that point throughout the course: never higher, lest the patient be poisoned; never lower, lest sporing instead of destruction of the microbes occur. The course should continue for two years, that being the period of natural cure or real latency. Iodides should not be used as routine treatment in the primary and secondary stages, because by removing the toxin, the phagocytes will be no longer attracted to the microbes, and encapsulation and destruction

will be hindered. Iodides together with mercury to be used in increasing doses in the gummatous stage, later a mild mercurial course is advisable. In intractable cases, with chronic blood poisoning and severe lesions, a large quantity of water taken daily facilitates the excretion of the toxin, and in the shape of Zittmann's decoction is undoubtedly very effectual.

Finally, it is my conviction that the point of central importance in the treatment of syphilis is to push the mercury to the toleration point, and to keep it there throughout the case. This is the final sum of my experience.

NOTES ON TWO RECENT OPERATIONS UPON THE GASSERIAN GANGLION AND THE SECOND AND THIRD DIVISIONS OF THE FIFTH NERVE FOR NEURALGIA BY THE HARTLEY-KRAUSE METHOD.

By J. Lynn Thomas, F.R.C.S.Eng,

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There is nothing of very special interest in the history of these cases, apart from the fact that no extracranial operation had been previously performed upon the patients. In both cases life was a misery, and one of them was threatening suicide as a means of relief to his sufferings. The neuralgia had lasted between two and three years in each case, and both had been under the usual medical treatment nearly the whole time without much benefit.

In both patients the operation was done in one sitting; in the one I replaced the bone: in the other I could not do so because the middle meningeal artery got injured in the early part of the operation, and I had to promptly open the skull and remove the bone in order to attend to the hæmorrhage. This accident taught me the lesson of the desirability of dividing the posterior limb of the bone before attacking the front part, where the artery is liable to be injured. The deformity in the case in which the bone was replaced is scarcely noticeable, whilst in the other there is the usual sinking in of the temple with pulsation of the brain. The frontalis muscle and the corrugator supercilii are paralysed, and Fig. 2, p. 1081, shows very well the resulting unilateral smooth creaseless forehead when the patient raises his brow, as in the expression of surprise. This deformity can only be obviated by making a short anterior limb to the horseshoe skin incision, so as to avoid dividing the branches of the facial nerve which supply the muscles.

The preliminary openings in the skull were made by Doyen's perforatorium, and the flap of bone was cut by Van Arsdale's circular saw. I find these instruments are very useful in operations upon the skull.

A New Method of Preparing the Scalp for Operation.

The scalp undoubtedly possesses one of the most difficult surfaces to render surgically clean. I have not yet come across the barber who can shave the scalp perfectly smooth; the surgeon has to use the razor after him in order to remove the surface epithelium, the sebaceous matter, and the stubbly hair that is always left behind. Mr. Munday, a Cardiff chemist, drew my attention to a powder he has prepared for removing hair. I have used it on many occasions for removing the hair off the whole scalp and also from the pubes. The powder does not give rise to any subsequent irritation of the skin. In addition to dissolving the hairs it also affects the surface epithelium and presumably all the micro-organisms contained therein. The powder takes about four minutes to remove the hair from the scalp and about two and a half minutes from the forearm. The scalp being wetted, the powder is dusted on and rubbed in until a thick moist coating covers the surface; at the end of four minutes one can shave the scalp with a spatula, the result being a perfectly smooth clean surface. The only other preparation I have applied to the scalp before operating is a warm carbolic fomentation for one hour to prevent further contamination of the field of operation. All the cases in which the above method of preparation of the scalp and skin has been used have healed by first intention and without suture irritation. The active ingredient of the powder is sulphide of barium. Its only drawback is its disagreeable odour. The powder will act only in the presence of water. It will not act with soft soap or vaseline.

The Importance of Blocking up the Foramen Rotundum and the Foramen Ovale after Operation upon the Gasserian Ganglion on its Second and Third Divisions Intracranially.

Mr. Rose has lately, in the *Practitioner*, emphasised the importance of tearing out according to Thiersch's method the distal portion of the nerves after their section, the result being that no reunion can possibly take place. Unfortunately it is not possible to get sufficient hold of the second and third divisions of the fifth nerve inside the skull to tear out their distal part, but we can effectually block up the foramina so that no subsequent union can occur. In both the cases I am now recording, after pushing the ends of the divided nerves into their respective foramina, I blocked them up with pieces of Horsley's wax, and afterwards coated the adjacent bone and the bed of the Gasserian ganglion with a lining of the same material. The advantages of the wax are (1) the ease with which it can be used, and (2) the firmness with which it adheres to the bone. If experience shows that the wax gets absorbed or eaten up by phagocytes, it will then become necessary to block up the foramina with a more lasting material, such as mercury amalgam used by dentists for stopping teeth. I may remark that in one case where I had to plug the posterior palatine canal with Horsley's wax to stop hæmorrhage, I found the wax *in situ* and unaffected six months later, when I had to remove the upper jaw.

In Case I I did not remove any definite portion of the Gasserian ganglion owing to the difficulty arising from the oozing of blood; in the second case I excised the outer part of the ganglion with comparative ease. Both patients have been completely relieved from pain up to the present time (July 25th).

The areas of the anæsthesia consequent upon section of the trunks of the second and third divisions of the fifth nerve are shown in the photographs on p. 1081. The sense of taste is normal in both cases. One of the men made an interesting observation to me one morning; he said "that when the rasher of bacon I had for breakfast this morning got crosswise on my tongue it was most funny, because I could only feel one-half of it, although I knew it was there all right by the taste."

I think the advisability of completing the operation either in one or two stages depends a great deal upon the length of time taken in exposing the base of the skull, and also upon the amount of shock the patient is suffering from at that time; in both my cases the shock at this particular moment was not noticeable, and I therefore completed the operation.

Case I.—S. V., aged 51, married, blacksmith, was sent to me by Dr. Jenkins of Pontypridd. He has had severe neuralgia of the right side of the face for two and a-half years. It came on suddenly during one night in the bridge of the nose. At the beginning the neuralgia involved the three branches of the right fifth nerve, but after the lapse of a few months it left the ophthalmic division completely. From June 16th to July 8th, 1898, I had him under observation at the Cardiff Infirmary, and he improved very much under chloride of ammonium, gelseminum, iodide of potassium, and galvanisation. The neuralgia—of a shooting, stabbing character—affected the inferior dental, the infraorbital, and the temporal nerves. The patient is 6 feet in height, powerful in build, and presents no history of rheumatism, gout, or syphilis; he used to be a heavy beer drinker.

Senses over the neuralgic area were as follows: Tactile, normal; heat and cold, normal; pain, normal.

Tongue.—Senses of taste, touch, heat and cold, and pain are the same on both sides of the tongue. His sense of taste is not acute; he has been a heavy smoker.

On August 22nd, 1898, the patient was readmitted under me, suffering from his neuralgia as bad as ever, and was very anxious to submit to any operation which promised any prospect of relief.

Operation on September 2nd by the Hartley-Krause Method in One Sitting.—After temporarily arresting the circulation through both temporal arteries by means of thick silk passed under them and tied firmly, an osteoplastic horseshoe-shaped flap was turned down by Doyen's perforatorium and Van Arsdale's circular saw; oozing of blood from the edge of the cut bone was stopped by Horsley's wax. After dividing the second and third branches of the fifth nerve at their foramina, and excising a portion of the second nerve with the adjacent portion of the ganglion, it was found impossible to deliberately excise the whole of the outer portion of the ganglion owing to the welling up of blood. The ends of the divided nerves were pushed into their foramina, which were then plugged

with Horsley's wax. After coating the adjacent bone and the depression in the temporal bone for the Gasserian ganglion with wax, the field of operation was bloodless until retraction of the dura mater in the immediate neighbourhood of the Gasserian ganglion caused an immediate gush of blood, which is decidedly alarming the first time it is seen. I made three or four attempts to dissect out the outer portion of the ganglion, but each attempt brought on the gush of blood, which I think, judging from the quantity, its suddenness, and the direction from which it came, must have sprung from one of the sinuses, probably the cavernous. Elevation of the head and the removal of the brain retractor immediately stopped the hæmorrhage. The osteoplastic flap was replaced, the scalp closed with a continuous silk suture, a small glass drain put in the posterior angle of the wound, and the rest was sealed with a strip of gauze and collodion. The drain was removed in forty-three hours and the stitches on the ninth day. It ran an aseptic course. The patient got up every day after the second day. On September 28th, 1899, Professor Dixon and I examined his sense of taste, and it was found to be the same as it was before the operation.



Fig. 1.—Case I: S. V., aged 51, intracranial division of the second and third trunks of the right fifth nerve. The area of complete anæsthesia is within the area marked on the side of the face and temple.

Up till July 29th, 1899, he has been quite free from neuralgia.

I may mention that since the operation I removed an epithelioma from the right half of his lower lip, and the patient did not feel anything during the operation on account of the anæsthesia. My best thanks are due to Drs. Rhys Griffiths and Frank Cresswell for their help at the operation.

Case II. January 18th, 1899.—T. D. M., collier, aged 34, was sent to me by Dr. Thomas, Nantymoel, for inveterate tic douloureux. His first attack came on three years ago, quite suddenly, on a Sunday evening when getting ready to go to chapel; it lasted half an hour, and "the pain was maddening." The second attack did not come on for several weeks, and since this attack he has not had much relief from pain for more than a week at a time. For the last four months he has been in "constant spasms of pain night and day." Is never free from pain for more than half an hour; he has had about "thirty bad bouts" to-day. He has had five teeth extracted from the right upper jaw, and six from the lower. The lips are not tender. Says he has not put any food to the right side of his mouth for two years on account of the fear of bringing on the attacks. Can take three morphine pills without the least relief. His sense of taste is acute, and is the same on both halves of the tongue. Salt and sugar dissolved in water were tried on the protruded tongue after drying it. Senses of pain, touch, heat, and cold are the same on both sides of the face and of the tongue. He has lost 14 lbs. in weight since last September. During my examination and notetaking of his case he had seven attacks of neuralgia, in one attack the excruciating pain involved the right infra-orbital nerve and the corresponding area of his face got flushed during the attack. In another attack the pain darted along the terminal branches of the right inferior dental nerve, and then radiated into the right temple as a dull, "rapidly-throbbing," boring pain.

Operation of Excision of Outer Portion of the Gasserian Ganglion and the Trunks of the Second and Third Divisions of the Fifth Nerve at One Sitting.—February 9th, 1899.—The patient was anæsthetised at the Cardiff Private Patients' Hospital by Dr. Mitchell Stevens, and I had the able assistance of Mr. Morland at the operation. In dividing the bone of the anterior limb of horseshoe incision the middle meningeal artery was divided, and on that account I had to remove the bone promptly in order to stop the bleeding. After two or three attempts I was enabled to get a good view of the Gasserian ganglion and excised its outer portion, together with the trunks of the second and third division of the fifth nerve. The round and the oval foramina were cleared of the stumps of the nerve trunks by push-



Fig. 2.—Case II: T. D. M., February 9th, 1899, excision of outer portion of the Gasserian ganglion together with the trunks of the second and third right divisions of the fifth nerve. The area of anæsthesia (complete) is within the dark outline on the face, the parallel lines within the dark line show the increase of sensibility to pain since February last (July 15th, 1899).

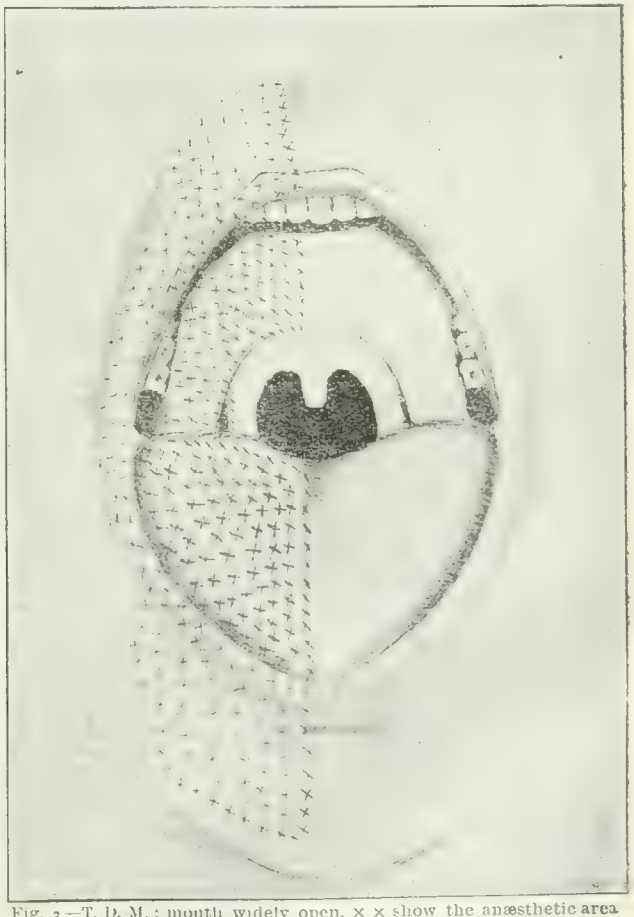


Fig. 3.—T. D. M.; mouth widely open, × × show the anæsthetic area on tongue and hard palate. From a drawing by Miss Barford.

ing them outwards, the foramina were then blocked up by forcibly pressing Horsley's wax into them. The adjacent surface of bone was also coated with a lining of the same material. The wound was closed and dressed in the same manner as in Case I. The drain was removed at the end of forty-four hours, the stitches removed on the seventh day, and the patient went home on the fifteenth day after operation with the wound soundly healed up.

Up to the present time the result is perfectly satisfactory. The areas of the anæsthesia are shown in the photographs on p. 1081 and the sense of taste is the same as it was before the operation, the diagram with crosses shows the anæsthetic area inside the right side of the mouth, tongue, and hard palate, and was kindly drawn for me by Miss Barford, the matron of the private hospital.

NOTE.—The senses of touch and pain are normal in the posterior two-thirds of the soft palate.

A RELIABLE WASHING TAP FOR OPERATION ROOMS.

By J. LYNN THOMAS, F.R.C.S.,
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THE proper method of preparing the surgeon's hands for operating is a subject upon which authorities are not agreed, and yet every operating surgeon without exception, it matters not whether he is a disciple of or an unbeliever in the the scientific aspect of his calling, thinks that it is absolutely necessary to wash his hands. The most popular practice of washing hands is that of doing so in hand basins, and I think one is bound to say that it is not in accordance with the elementary principles of removing surgical dirt. It is so because after the first swill of the hands in the water in the basin the remainder of the hand-washing is done, from a surgical standpoint, in septic or dirty water until the basin is sterilised and refilled with clean water.

Dr. Kelly, in his *Operative Gynæcology*, states that "the most glaring inconsistency in the aseptic arrangement of most operating theatres is the impossibility of thoroughly sterilising the hand basins, which are contaminated at every washing, and are liable to hold grease" (p. 9, vol. I), and in order to overcome this objection he has got his hand basins set on pivots for removal and sterilisation, and the flow of hot or cold water is controlled by foot taps on the floor. I should like to add that Dr. Kelly states that the equipment of the operating room must be simple. Most of the foot taps I have seen in use are frequently out of order, and sometimes do not respond to the gentle stimulus of the foot, and in one case where a doctor was trying to convince me of how very easily these taps work when you thoroughly understand them, the machinery of the pedal tap refused to stop the flow of the hot water, and to my knowledge it was running for over an hour, because the plumber who put it up could not be found. I do not know whether such mishaps are of daily occurrence, or whether it is necessary to keep an expert plumber on the premises or not; at any rate I do not consider them simple.

I think it would be a great improvement if surgeons condemned hand basins as dangerous appliances in any operating theatre, and adopt a simple and reliable shampooing tap, such as I have here for washing purposes. This tap should be fixed in the wall at about the level of the surgeon's shoulders, over a sink or trough, to carry the water away. The sink or trough should not be less than eighteen inches below the tap, in order to allow the surgeon to hold his elbow under the rose without touching the sink. When the surgeon has completed his washing, he can turn off the water by means of the metal shield, which is always surgically clean, by keeping it in carbolic lotion, 1 to 20.

I am told by barbers that the life of a shampooing tap is about 15 to 20 years,

There is one practical point which must be attended to in fixing up the taps. If the taps are connected with hot and cold water tanks or cisterns in the hospital, they will work admirably; but if they are connected, as is commonly the case in hospitals, directly with the mains and circulating hot water supply, we must put in a high-pressure diaphragmatic valve in both the hot and the cold water pipes that supply the shampooing tap. By this means the surgeon can regulate the water supply to the tap without any extraneous aid, and he can manage the whole apparatus himself without any anxiety of scalding his hands or infecting them at the end of washing.

After washing the hands with soap and water, the surgeon is fully prepared to do any aseptic operation by wearing a pair of sterilised thread gloves, so as to protect the instruments and ligatures from disturbing the resident microbe (staphylococcus epidermidis albus) of the skin during manipulation.

A METHOD OF ATTACHING THE MUCOUS MEMBRANE TO THE SKIN AFTER PERINEAL EXCISION OF THE RECTUM.

By LEONARD A. BIDWELL, F.R.C.S.,
Senior Assistant Surgeon to the West London Hospital.

THE use of incisions to relieve tension is well recognised in closing wounds involving the removal of a great amount of skin, but as I do not know of the application of this method in cases of excision of the rectum, I venture to bring this short note before the meeting.

The advantages of obtaining primary union between the cut end of the rectum and the skin are manifest, since as the fæces do not pass over any raw surface the risk of septic absorption is diminished, the pain caused by dressing is reduced to a minimum, the chance of cicatricial contraction is greatly lessened, and the period of convalescence is reduced by at least two thirds, in fact, the condition of the patient is much more comfortable both during convalescence and afterwards.

The method employed is briefly as follows. After excision of the rectum by the ordinary racket-shaped incision round the anus, two transverse incisions about two inches long are made on each side of the original incision, about one inch apart; the flaps so formed are dissected up and attached by silkworm gut sutures to the cut edge of the rectum; in most cases this can be done without any tension, but should there be any, a longitudinal incision in the posterior surface of the rectum will enable the union to be effected. Finally the posterior part of the wound is lightly plugged. The following case illustrates the method:

A man, aged 60, was admitted into the West London Hospital in May last, suffering from carcinoma of the rectum. The growth encircled five-sixths of the bowel, and extended about four and a-half inches above the anus. After the usual racket-shaped incision extending to the tip of the coccyx the bowel was completely freed to a point one inch above the upper margin of the growth, and was divided at this point, the bleeding vessels being ligatured. The peritoneal cavity was freely opened, and about two square inches of gut covered by peritoneum were removed. The opening in the peritoneum was closed with fine silk sutures. Transverse incisions were made on each side of the site of the anus, and the margins of the flaps were united to the cut ends of the rectum without any tension; a light plug was placed in the posterior part of the wound. The stitches all held with the exception of the anterior corner of one flap, where a small slough formed; the wound, however, rapidly healed, and one month after the operation only a small granulating surface remained, and the patient left the hospital.

The method of attaching the rectum to the margins of the anus after perineal excision is condemned on account of the unsatisfactory results, since it is practically impossible, if several inches of the gut have been removed, to bring the parts together without a considerable amount of tension; my method, however, brings the skin up to the rectum, and so reduces the tension. I may point out that even if all the stitches do not hold the amount of cicatricial contraction will be infinitely less, and the period of convalescence shorter than if the wound had simply healed by granulation in the ordinary way.

I must admit that the results of Kraske's operation, when the upper and lower ends of the rectum are completely united, has even a shorter period of convalescence than this; but as this state of affairs is seldom possible the perineal method ensures a much shorter period of convalescence than a Kraske's, where rectorrhaphy is not possible; moreover, in the only case of Kraske's operation where I was able to perform a complete anastomosis, very considerable cicatricial contraction resulted.

I have employed a similar procedure in making a permanent suprapubic opening into the bladder, and in two cases of tracheotomy where the opening was required to be permanent, one for malignant disease and the other for leprosy, I attached a skin flap on each side to the mucous membrane of the trachea, with the result that complete union had taken place when the tube was removed for the first time.

A SUCCESSFUL CASE OF RESECTION OF THREE-QUARTERS OF THE STOMACH FOR MALIGNANT DISEASE.

By Charles A. Morton, F.R.C.S.,
Professor of Surgery in University College, Bristol; Surgeon to the General Hospital; and Surgeon to the Hospital for Sick Children and Women, Bristol.

There are now on record a few successful cases of complete removal of the stomach for carcinoma by Continental and American surgeons, and also several of resection of very extensive portions of the organ, but I cannot find any record of a successful case of such extensive resection as I now record published by any surgeon in this country.

F. A., aged 39, was sent to me at the Bristol General Hospital by Dr. Tivy, on April 27th, 1899, with an abdominal tumour. For a month, at the beginning of the year, the patient had been in a large provincial hospital, and the tumour had then been recognised, but no operation had been proposed.

The history of his illness was that for eight months he had suffered from pain after meals in the left hypochondriac and left side of the epigastric regions, and also from pain in the corresponding area of the back, which had been very severe at times, when no food had been taken. During the first month that he suffered from the pain he also vomited frequently, but since then he had only vomited occasionally after taking medicine. He had never vomited blood. He told us on admission that he had not been vomiting, and it was only on further inquiry after the operation that we discovered there had been vomiting in the early stage. He first noticed a lump in the abdomen in January. Although he says he continued to take a fair amount of food he lost 36 lbs. in weight in the eight months.

He was extremely emaciated, and his skin was a pale yellow colour, but there was no jaundice. He was able to take fish and other kinds of solid food, and only vomited once after admission, and this was after an enema. In the left side of the abdomen, reaching from slightly above the umbilicus to considerably below it, was a large hard irregular mass, which was clearly a growth. It did not move much with respiration, but shifted its position from day to day. One day it reached to quite a finger's breadth above the level first observed, and on another occasion lay almost wholly below the level of the umbilicus, and reached downwards to the level of the anterior superior spine. I felt in considerable doubt as to the locality

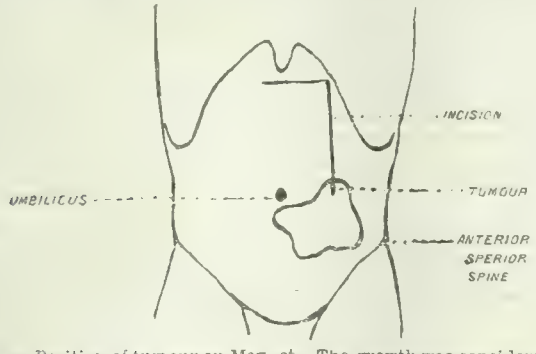


Fig. 1.—Position of tumour on May 1st. The growth was considerably higher when the operation was performed on May 5th.

of the growth, but was inclined to think it might be in the transverse colon, or have started in the omentum and secondarily involved the colon. The varying level of the tumour was suggestive of a connection with some gas-containing organ, but the absence of a history of vomiting and the low level of the growth (which never reached up to the epigastric region) seemed to me to make the gastric connection of the tumour unlikely. On the other hand there was no history of symptoms of partial intestinal obstruction at any time. I decided to explore the growth, and the patient expressed a desire to have it removed, even at considerable risk; and I was prepared, should it turn out to be a large mass of carcinoma of the stomach, to excise the whole organ if necessary, as complete removal of the stomach had been successfully performed.

I operated on May 5th. Ether was administered by Dr. Freeman. When the patient was under the anæsthetic the growth could be felt extending quite out into the left loin. It did not extend into the right side of the abdomen. A 2-inch incision was made in the left semilunar line, over the mass, and revealed a hard nodular growth, but not the structure with which it was connected. The incision was then extended to 4 inches, and the growth was found to involve the greater portion of the stomach. No lumps could be felt in the liver and no enlarged glands; I therefore determined to remove as much of the stomach as was necessary, and prolonged the incision up to the costal margin, and from there across the left rectus to the middle line so as to form a large rectangular opening. The involved portion of stomach was thus exposed, and a further examination for secondary growths on the liver and enlarged glands gave a negative result. I then proceeded to resect the portion of stomach which was involved in the growth. Only the cardiac end was free from growth, for the pylorus was invaded, the growth thus extending slightly into the duodenum. I first tied the great omentum between the stomach and transverse colon in sections, and then divided it, and turned up the stomach. It was then seen that a piece of the transverse mesocolon, the size of a half-crown piece, was involved by the growth, and had to be detached from the rest of the mesocolon and left in the stomach. This left a gap in the mesocolon, but it was 3 inches from the bowels, and therefore not in the most dangerous area for interference with its vascular supply. I then divided the tissues on the under surface of the first portion of the duodenum, clamping before and ligating after division, and then the gastro-hepatic omentum where attached to the duodenum and the pylorus, in the same way. The duodenum, thus freed, was secured with Arbuthnot Lane's clamp on the intestinal side, and towards the pylorus was tied across, and then divided; and in this way the stomach, with the involved portion of duodenum, separated from the rest of the duodenum. The remainder of the attachment of the gastro-hepatic omentum was then divided between pressure forceps and the portions of tissue in the grip of the forceps afterwards ligated, until the whole of the involved portion of the stomach was free. The upper part of the abdominal cavity was then shut off with sponges, and the stomach opened by a very small incision just beyond the growth. Its contents (about 1 oz.) were received in a bowl. It was then freely opened and a sponge pushed up towards the œsophagus and the portion involved by the growth divided from the cardiac extremity with a good margin of healthy stomach wall. The bleeding from the cut wall of the



Fig. 2.—The shaded portion shows the amount of stomach removed.

stomach was not great, but there was some trouble in catching the vessels, as the mucous membrane immediately became everted over them. After the removal of the diseased portion of the stomach there was a very large gap left. I united the mucous membrane with a continuous suture of fine silk, and the muscular coat and peritoneum with interrupted fine silk sutures, by Lembert's method. The security of the suturing was made evident by distension of the remaining portion of stomach by gas. The line of suturing was 3 to 4 inches in length. The final step of the operation was the junction of the duodenum to a fresh opening, made in the under surface of the remaining portion of the stomach by means of a Murphy's button. One rubber drainage tube was placed against the sutured stomach, and another against the union by Murphy's button.

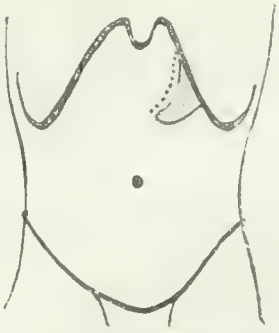


Fig. 3 shows the way in which the portion of the stomach to which the duodenum was united projected below the left costal margin after the union and removal of sponges. The lower portion of the line of suture is represented by the dotted line; the upper portion had retracted under the costal margin after removal of the sponges.

The incision in the abdominal wall was united in three layers, the deeper ones with silk, and the skin with fishing gut.

He did not suffer severely from shock, and at the end of the operation his pulse was very good, but his lips very pale. Dr. Freeman says there was some amount of cardiac failure when the extensive division of the stomach was made. Certainly very little blood was lost, as all vessels but those in the stomach wall were clamped before division, and those in the stomach wall did not bleed very much, as so many of the vessels supplying them had already been tied. The complete removal of the stomach would have been a simpler operation, for the extensive suturing of the stomach was a lengthy proceeding, and provided the œsophagus could have been dragged down sufficiently, a direct union to either the duodenum or jejunum would have been easier. In the recorded cases of complete resection of the stomach it is remarkable how the gastric end of the œsophagus can be brought down without much difficulty. The excised portion of the stomach, which seemed to be about three-quarters of the organ, had been converted into a hard mass of carcinomatous growth, with very little cavity remaining.[1] Microscopic examination of a piece of tissue taken from the margin of the growth and healthy mucous membrane shows throughout nearly the whole section only round-celled growth, and in one small area alone is there any similarity to an alveolar arrangement of the cells. The cells are seen penetrating the bundles of muscle fibres. There is no trace of any gland structure such as adenoid

cancer would present, except in the mucous membrane itself, which is cut obliquely at one edge of the section. I am therefore inclined to regard the growth as one of those rare cases of sarcoma of the stomach, and the sarcomatous nature of the growth would account for the absence of glandular infection, which would be rather remarkable with so large a cancerous tumour. One of the cases of complete removal of the stomach, recorded in America, was for sarcoma.[2] It was not a successful case, the patient only lived 36 hours after the operation.

He had no symptoms after the operation to make me anxious as to his condition. In the first four days he was fed wholly by the rectum, but on May 9th, in addition to the rectal feeding, he began to take 2 drachms of peptonised milk every quarter of an hour by mouth, and on the 11th this was increased to ½ oz. every quarter of an hour, with 2 beaten-up eggs and 2 oz. of brandy in the twenty-four hours, and on the 14th it was further increased to 1 oz. of milk every twenty minutes and an additional ounce of brandy by mouth in the twenty four hours, and the nutrient enemata were stopped. Up to May 14th only a little serous fluid

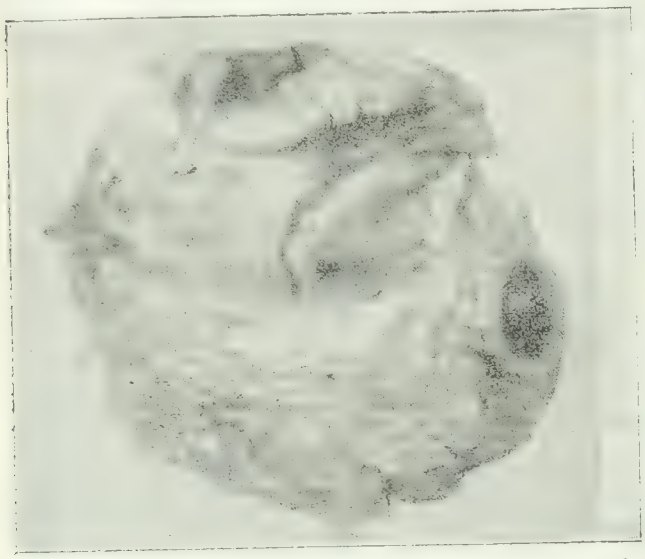


Fig. 4.—I have taken the photograph of the portion of the stomach removed from the posterior aspect, as this shows the two openings best; the one at the top is where the stomach was divided, the one to the right is in the duodenum. The formalin in which the specimen was preserved has caused it to shrink very much, so that the whole specimen is much smaller than at the time of removal, and the cut surface of the stomach is much nearer the duodenum than it was, from shrinkage of the lesser curvature. The everted mucous membrane is seen at the upper opening. An inch measure is photographed at the side of the specimen.

had escaped from the drainage tubes, and at that date the one lying against the sutured line of stomach was removed, but in case of leakage during the separation of the button the other tube which passed down to the button junction was left in, and it was very fortunate that this was done, as on the 10th—that is, just a fortnight after the operation—a discharge of bile-stained fluid occurred from it. The tube was then removed, and the discharge ceased in a week, and by May 28th the opening had closed. Directly the discharge began I increased the amount of milk taken by mouth to 4½ pints in the twenty-four hours, and rectal injections of milk and eggs were also administered, as I was afraid that he might suffer from the leakage of nourishment, but it so quickly diminished in amount and so soon ceased that there was very little serious loss. However, he took this large quantity of milk so well that it was continued after the enemata were stopped on May 28th, and he was then given custard for the first time, and on June 5th minced fish. A week later pepsin was prescribed with the fish, but he had had no discomfort after taking it. The milk was then given every hour in quantities of 3 oz., and he began to take tea and bread and butter. He also began to get up on June 12th. He fed well, and steadily gained a stone in weight before July 23rd. There had been a few points of suppuration in the scar from time to time, and minute silk knots had been removed from them before they healed. These were some of the sutures used for the junction of the abdominal aponeurosis. He was discharged on July 23rd. No swelling could then be felt in the abdomen, and he had no discomfort after food. The button had not been passed, and it had not been discovered on rectal examination, nor could it be seen in a skiagraph, but there had been more than one occasion on which it might have passed unobserved.

It is probable that the portion of stomach left will dilate into a fair-sized organ. There is a record of a case[3] in which only a portion of the cardiac end, the width of two or three fingers, was preserved and united to the duodenum, and this had dilated in two and a-half years to the capacity of 500 c.cm. A fair-sized portion of the duodenum had by gradual dilatation taken part in the formation of the new cavity.[4]

NOTES AND REFERENCES.

[1] The specimens were shown at the meeting. [2] *Journal of the American Medical Association*, March, 1898, p. 523. [3] *Archiv für klinische Chirurgie*, Bd. lvii, Heft 2. [4] October, 1899. I have this month seen the patient. He is gaining flesh, has no signs of recurrence, and takes ordinary food without discomfort.

TWO CASES OF FATAL VENEREAL PHAGEDÆNA.

By WALTER G. SPENCER, M.S., F.R.C.S.,
Surgeon to the Westminster Hospital.

PHAGEDÆNA infected and proved fatal in two not otherwise unhealthy individuals. The disease commenced in the case of the man from the time of inoculation. As the woman was in bed in hospital for a month before the disease lighted up, the phagedæna must have been acquired some time before.

CASE I.—An unmarried man, aged 61, was reported to have frequently exposed himself to venereal infection, but not to have drunk to excess. There was no evidence of his having had syphilis, and no signs of past syphilis were found on him except a superficial ulceration of the outer canthus of one eye. A friend called upon him and found him sitting in his room obviously ill, and the foul odour which was noticed led to an explanation as to his illness. Following upon exposure to venereal infection a week previously a black spot appeared upon the dorsum of the penis, from which gangrene rapidly spread. When I saw him he was only partly conscious. A most foul odour was given off from the genitals. There was moist gangrene of all the skin of the penis except a narrow strip along the dorsum, the rest of the penis and the urethra were not attacked. The whole of the scrotum was gangrenous except the testicles and the cords, which were only partly involved. The skin and superficial portions of the perineum as well as a patch on the anterior wall of the rectum, were gangrenous, but not the muscles surrounding the urethra. The skin over the pubes and the external abdominal rings was also involved, whilst inflammatory œdema extended outwards over the crests of the ilium. The extent of the gangrene resembled that caused by advanced extravasation of urine, but there was no swelling nor ammoniacal odour.

Nearly all the gangrenous structures were cut away, the remaining sloughs being removed at subsequent dressings. Seven incisions were made through the skin of the abdomen and over the crests of the ilium in the inflammatory zone beyond the margins of the gangrene. Pure carbolic acid was freely rubbed into all the extending margin of the gangrene, all the antiseptic being subsequently washed away. At the following dressings strong permanganate of potash was freely used, and the dressings of iodoform gauze were frequently changed.

At the end of a week all sloughs had separated, vascular granulations covered the surface, most of the two testes had to be cut away, leaving part of the epididymis as well as the cord. A small portion of the anterior wall of the rectum having sloughed, a fæcal fistula occurred. The patient was delirious and extremely difficult to nurse, exhausting himself by struggling during the necessarily frequent dressings. However, he took food well, his pulse and temperature tended to become normal, and his urine was unchanged. Recovery was still possible until after a week. Then signs of broncho-pneumonia appeared, and he died on the tenth day from the operation, about two weeks and a-half from the infection.

CASE II.—A woman, aged 35, had married young and had had one child. She had separated from her husband, had been kept by a man, and other men had visited her. She was generally healthy except for the local disease, and there were no signs of past syphilis. She had perhaps taken alcohol and morphine somewhat freely. Menstruation had been regular and normal, lasting about two days. She had had an attack of pelvic trouble called peritonitis about eight years before, and again five years before. During last year she felt quite well until a fortnight before admission to the hospital, when she was taken with cold shivers and pain in the hypogastrium, which obliged her to go to bed, and prevented her from moving. At the same time there was painful micturition and gushes of "blood which smelt badly" twice a day. She had also some attacks of vomiting after taking food. On admission the abdomen was slightly tympanitic but not tense, there was fulness in the hypogastrium and inguinal regions, with dulness to percussion. The tongue was thickly coated with fur, the pulse was 108, the respirations 32, and the temperature 103° F. There was a blood-stained foul discharge escaping by gushes.

After rest in bed, aperients, and vaginal douches, the abdomen relaxed and the vaginal discharge was reduced to a minimum, but there was still much pain and rigidity of muscles upon pelvic examination. Above the right vaginal fornix some induration, and over it a fluctuating swelling, could be felt which extended up in the right inguinal region above the crest of the ilium; it was dull on percussion, and fluctuation was obtained. On the left side the conditions were similar except for more induration and less of a fluctuating tumour. The uterus was fixed. Whilst under observation for three weeks her general condition remained about the same, the temperature varying between 102° and 99° F., and the pulse between 90 and 100.

After being anæsthetised a further vaginal and rectal examination was made. The uterus was found to be fixed with induration on either side, and, as the fluctuating swellings could not be reached *per vaginam*, an abdominal operation was performed. The intestines were well pushed back and covered, and a double pyosalpinx was exposed. In separating adhesions the sac ruptured, and exceedingly foul pus escaped out of the abdomen. It was impossible to extirpate the whole sac on account of the dense adhesions, therefore a ligature was placed on the tube close to the uterus and another upon the inflammatory mass in which the ovary was buried on the lateral wall of the pelvis. A small portion of abscess sac was left in the grasp of the ligature. The sac cut away consisted of the distended tube, which had held about a pint and a half of pus. The state on the left side was much the same, except that the distended tube held about half a pint of the same foul pus. The pelvis was wiped out, and the stumps

well scrubbed with carbolic acid. The pelvis was then packed with iodoform gauze, and the rest of the abdominal wall sutured. For the next five days the patient seemed to be recovering very well. On the sixth day the pulse varied between 104 and 98, the respirations between 24 and 16, and the temperature between 99.6° and 98.6° F. The lower part of the abdominal wound had been dressed daily, and a small plug of gauze reinserted. The track had become smaller and shorter, and only a very little, yet still foul, discharge came up from the pelvis. The tongue was cleaning, the bowels freely open, and the abdomen soft. There had been no vaginal discharge. Menstruation, which had previously occurred six weeks before, now set in, at least, there was a blood-stained vaginal discharge without odour but with pain. The pulse and temperature at the same time commenced to rise, reaching on the ninth day—the pulse 148, the respirations 30, and the temperature 103° F. The abdominal wound, which had hitherto been healing well, was now found to be discharging foul fluid through the suture holes. On removing the sutures the abdominal wound gaped, exposing its inner surface covered by phagedæna; all the previously healthy exudation was sloughing, and the floor of the wound was formed by adherent intestines. The disease did not infiltrate the abdominal wall to any extent. Pure carbolic acid was swabbed and rubbed in most freely, being afterwards completely washed away, and the wound dressed with gauze soaked in a strong permanganate solution. As far as the surface was concerned these measures arrested the phagedæna, the sloughs separated, and vascular granulations began to appear; but there was a continuous foul discharge from the pelvis, and on the thirteenth day fæces also escaped, indicating a perforation of the intestines by the phagedæna, and the fæcal flow went on increasing until the patient died on the fifteenth day after operation. The urine throughout was normal.

At the *post-mortem* examination no further lesion was discovered; the kidneys were healthy; no internal syphilitic lesion was met with. The abdomen and the pelvis were the site of phagedæna, with stinking sloughs, and a coil of small intestines lying in the pelvis had been perforated. Both stumps of the tubes were gangrenous, the body of the uterus was embedded in a mass of inflammatory tissue, and the uterine cavity contained muco-pus, but the phagedæna had not attacked the body of the uterus nor the vagina. The general peritoneal cavity had not been affected at all except for slight sticky peritonitis of recent origin. There was no retro-peritoneal infiltration nor suppuration.

With regard to the pathology of phagedæna, matters have not advanced much beyond the well-known observations regarding its superficial extension by gangrenous ulceration and sloughing, yielding a peculiar foul odour. Under the microscope abundance of organisms, bacilli, and cocci are found, and some work has been done with the object of identifying a bacillus as the cause, but the disease is a difficult or impossible one to reproduce in animals. Lingard, in 1888,[1] found in ulcerative stomatitis or cancrum oris, a bacillus which caused gangrenous lesions in animals; but Lingard's results have not been widely confirmed. Vincent and Coyon, in 1896[2], made some observations upon hospital gangrene, a disease inoculable in man, which appeared to them to be caused by a bacillus.

References.
[1] *Lancet*, 1888, vol. ii, 159. [2] *Annales de l'Institut Pasteur*, 1896, T. x, p. 489, 661.

NOTES OF A CASE OF EXTENSIVE TRANSSACRAL EXCISION OF THE RECTUM FOR CANCER, FOLLOWED BY PERFECT SPHINCTERIC CONTROL.

By Charles Ryall, F.R.C.S.,
Surgeon, Cancer Hospital, Brompton.

C. V., aged 40, married, was admitted into the Cancer Hospital on June 15th, 1898, and gave the following history:

For the last three years she has had a discharge of blood and mucus from the anus with an occasional attack of diarrhœa, though on the whole she has suffered a great deal from constipation. More recently there has been pain, but not of a severe nature. She has noticed no marked loss of flesh, and has felt fairly well in her general health. She thought all along that the symptoms were due to piles, and the real nature of her trouble was only diagnosed shortly before admission, when she consulted Dr. Sutherland of Bexley Heath, who advised surgical treatment without loss of time. She had been healthy up to the time of her present illness, and is the mother of one child now aged 16 years.

The family history revealed nothing of interest.

On examination she appeared a healthy and well-nourished woman. *Per rectum* a hard carcinomatous growth could be felt just within reach of the tip of the finger, but this gave her so much pain that ether had to be administered to allow of a thorough examination. It was then found that the growth was about the size of a clenched fist, that it involved the whole circumference of the bowel, though more extensive anteriorly, and that it was mobile, but its upper limit could not be reached. There was no evidence of involvement of the pelvic organs nor of metastatic deposits in other parts, so the case was deemed a suitable one for radical treatment.

The patient was prepared during the week preceding operation by keeping the bowels open with aperients, washing out the rectum daily, and restricting the diet to the most digestible food.

Operation, July 12th, 1898: The patient was placed on her left side in the semiprone position, with the thighs well flexed on the abdomen, and the skin in the field of operation was rendered as aseptic as possible with strong antiseptics. A median incision was made from the middle of the sacrum to within 2 inches of the anus, the coccyx and lower end of the sacrum were freed from their muscular and ligamentary attachments, and the middle sacral vessels were separated from the bone. The sacrum was then divided with pruning forceps, and its lower two segments with the coccyx were removed. It was decided to save the anus and lower part of the rectum which were healthy, and therefore the next step in the operation was the separation of the bowel above this healthy part from the surrounding soft structures, which was easily effected, and the peritoneum on each side of the rectum was then incised, thus opening into the pouch of Douglas. On introducing the hand into the abdomen through this wound it was found that the disease extended for a considerable distance upwards, but was quite free from adhesions. To free and bring down the bowel was the next step, and this was carried out by ligaturing the mesorectum in sections, and dividing it, but, owing to the extent of the disease and the necessity of bringing healthy bowel down to the external wound, part of the sigmoid had to be freed by carrying out the same procedure on the meso-sigmoid. Thus a large coil of gut measuring over 12 inches in length, and containing all the apparent disease, was lying external to the wound. As stated above, the lower three inches of the rectum, which was healthy, had not been separated from its attachments. At this stage of the operation the patient suffered from severe collapse, and it was therefore deemed inadvisable to submit her to further shock, so the loop of bowel was drawn well out of the wound, and the abdomen was closed by suturing the peritoneum of Douglas's pouch to the anterior surface of the bowel. The external loop was then secured to the skin with sutures, dressings were applied, and the patient was put to bed. During operation the collapse was treated by hypodermic injections of strychnine and a transfusion of 4 pints of normal saline solution, and after her removal to bed similar measures soon made her rally.

Next day the bowels acted after administering 5 grs. of calomel, and after this the patient gave no further cause for anxiety. The external loop of gut was washed out daily *per anum*; the wound healed without any trouble, and a week after operation this loop was cut off level with the skin. She was thus left with two openings similar to a colotomy, and on fitting her with a pad and plug to block the upper opening she was able to keep the bowels under control, and was discharged from hospital. On November 4th, 1898, she was readmitted into hospital in an excellent state of health, but complaining very much of the inconvenience of wearing the sacral pad, and she requested that something might be done to relieve her of it.

On examination there were the two openings mentioned above, and which resembled the openings left after inguinal colotomy. From the upper opening the bowels acted and the lower one led to the 3 inches of the lower rectum and to the anus, which had been left at the time of operation. Between the two openings was a narrow bridge of scar tissue, and on introducing the fingers the upper and lower portions of bowel were found to suddenly diverge from one another. It was thought that the fæcal fistula might be closed, and that if the upper and lower segments of bowel were brought into continuity the anus and lower remaining part of the rectum might be made use of.

On November 8th, 1898, a second operation was performed, its object being to convert the two openings into one and bring the upper and lower segments of bowel into line. This was effected by dissecting away the superficial scar tissue between the openings and then dividing the intervening spur in the same axis as the bowel, and by the aid of sutures the two segments were brought into line, and good anterior and lateral walls for this new rectum were thus formed. There

was now only one opening or fistula left, and it was decided to close this at a subsequent operation, so the wound was plugged with gauze, the patient was put back to bed, and the bowels were kept confined for four days, with the result that good union took place.

On November 29th, 1898, the last operation took place, and the fæcal fistula was closed. On this occasion the left edge of the opening was trimmed so as to expose raw surface, and from the opposite side a flap of skin was dissected up, leaving its edge attached to the opening. This was turned over and sutured to the freshened edge on the opposite side so that the raw surface of the flap was uppermost and its cutaneous surface turned inwards and towards the bowel, and made to act as mucous membrane. In order to strengthen this another flap was dissected up on the left side with its attached edge away from the opening, and this flap was drawn over so that its raw surface came in contact with the raw surface of the first flap, and thus was it sutured in position. The rectum was then plugged *per anum* with gauze and dressings applied to the wound. The plug was left in for five days, after which the bowels were made to act with an aperient and an enema. The wound healed well, though a minute fistula, just capable of admitting a fine probe, persisted for a fortnight, but healed without any further operative treatment.

The bowels acted then with the aid of an aperient, and very soon even this was found unnecessary. The patient made a rapid recovery, and was discharged from hospital on December 24th, 1898.

At the time of writing she is in a very healthy condition, and has gained considerably in weight, can pass her motions naturally and without an aperient, and there is no evidence of a recurrence of the disease.

The case is of interest, first, because of the extent of bowel removed, which measured over 12 inches, and secondly, because of the means adopted to close the fæcal fistula.

I am indebted to my friend and colleague, Mr. Bowreman Jessett, for his invaluable help and suggestions during the various operations.

THE SURGICAL TREATMENT OF UTERINE CANCER.

By W. Roger Williams, F.R.C.S.
Clifton.

Few surgical procedures have undergone such remarkable fluctuations as those which have been devised for the treatment of uterine cancer. Twenty years ago the only kind of intervention in vogue was the removal of such of the disease as projected into the vagina. This was effected with the knife, scissors, wire snare, *écraseur*, curette, actual cautery, or with chemical caustics. Even these limited operations were seldom undertaken. The disease was regarded as hopeless and *laissez faire* was the order of the day.

The stagnation of this period was broken by the introduction of Schroeder's method of supravaginal amputation of the cervix in 1878, which was gradually accepted as the standard operation for uterine cancer, and it has probably been done more frequently than any of the more modern methods. This procedure was by no means a novelty, for as early as 1801 Osiander had successfully extirpated the cancerous cervix; and he subsequently did many such operations. Although his example was not followed in Germany, the operation was taken up in France on a larger scale, especially by Dupuytren, Lisfranc, Récamier, and Delpech; but each of these surgeons, having done a series of operations, abandoned the procedure, so that after a time it fell into oblivion, until, as just mentioned, it was revived by Schroeder.

The popularity of Schroeder's operation was soon eclipsed by the growing desire for more radical methods, which the excellent results obtained by bold attempts at completely eradicating the disease from the breast and other parts of the body, had suggested. Under these circumstances, thanks to the labours of Hennig (1875) and Czerny (1879) vaginal total extirpation came into vogue some fifteen years ago, and it has since enjoyed a considerable measure of popularity. Modern modes of operating are the outcome of procedures elaborated mainly by Czerny, Schroeder, Martin, and Péan. Here again we have to do with the revival of an operation that, after a brief period of popularity, had been abandoned and forgotten for more than half a century. Langenbeck (1813), Sauter (1822), Blundell (1828), and Récamier (1829) are the chief of these early pioneers.

We now come to the present time, when the conviction seems to be gaining ground that the disease cannot be eradicated *per vaginam*, for the object of modern operations is total extirpation of the disease, rather than of the uterus itself. Hence the revival of abdominal total extirpation with which the names of Mackenrodt, Rumpf, Clark, Ries, and Werder are more particularly associated.

Recent operative experience has taught us that, but for dissemination, chiefly of the local and latent kind, malignant tumours would be as curable as their non-malignant congeners; hence the after-results of operations for cancer have improved *pari passu* with the thoroughness of operating. In short, pathological doctrine and surgical experience point so emphatically to the desirability of extirpating the disease as completely as possible that modern surgeons have concentrated their attention almost exclusively upon this point; hence earlier and more thorough operations than have hitherto been customary are now the order of the day.

In what follows I propose to discuss the requisites of a satisfactory thorough operation for uterine cancer, and then to refer briefly to the best means for putting these into practice.

1. In the first place, the whole uterus must be removed, whether the primary disease be of the portio, cervix, or corpus. This is necessitated by the freedom with which the blood vessels and lymphatics—so abundant in this organ—intercommunicate. Moreover, lymph currents are readily set up in directions other than the normal, owing to the inefficiency of the valvular apparatus. Hence the whole uterine lymph system may be injected by inserting the syringe into almost any part of the organ. The anastomoses by which the lymphatics of the corpus, cervix, and portio intercommunicate are especially free within the musculature and along each lateral border of the organ, while inferiorly they are joined by vaginal offsets. It is generally believed that cancer of the uterus has special tendency to remain localised; but on this subject there has been much exaggeration. According to my experience the disease always disseminates sooner or later. In fatal cases that have run their entire course without interruption, I have almost invariably found more or less local dissemination. Leopold and Mackenrodt have arrived at similar conclusions. Of 127 cancerous uteri removed *per vaginam* Leopold found local dissemination in 68, or in 54 per cent. Similarly Mackenrodt—on microscopical examination of the apparently healthy tissues divided by the surgeon's knife—found in them numerous cancerous foci, showing that the removal of the disease had been but incompletely effected. Cancer of the inferior uterine segment tends to spread downwards, forwards, and outwards, towards the anterior vaginal wall and the base of the bladder, probably because of the greater freedom of the lymphatic channels along these lines; and in the corpus the disease tends to spread towards the peritoneum; but its extension is by no means limited to these particular directions. In many instances primary cancers of the cervix and portio are associated with cancerous foci in the corpus and elsewhere. Seelig has shown that the communications between the lymphatics of the inferior uterine segment and those of the corpus are much freer through the numerous large branches within the musculature than through the much smaller ones uniting the mucosa of the two uterine segments. He believes that most cases of multiple uterine cancer are due to dissemination of the disease along these lines rather than to multiple origin. In addition to the foregoing, the mucosa of a cancerous uterus is never in a healthy condition; it is thickened throughout from hyperplasia, which is often a precancerous indication. These various considerations show the necessity for removing the whole organ.

2. The union between the inferior uterine segment and the upper part of the vagina is so intimate that in operations for the extirpation of cervical cancer the upper part of the vagina should always be removed as well. In cancer of the inferior uterine segment the adjacent part of the vagina is nearly always invaded. Thus, of 78 necropsies for this disease I found extensive infiltration of the vagina in 72, and in the other 6 cases less obvious signs of dissemination were notice-

able on careful examination. Moreover, after vaginal hysterectomy, recurrence in the vaginal scar or its immediate vicinity is of common occurrence, hence the necessity for extirpating the upper part of the vagina *en masse* with the uterus in every case of operable cancer of the inferior uterine segment.

3. The parametric tissues, especially those in the vicinity of the cervix and the upper part of the vagina, should be freely extirpated, as far as possible *en masse* with the ablated utero-vaginal canal, for this is a favourite locality for dissemination and recurrence. Thus Hofmeier found that of 47 operated cases, in which recurrence took place during the first year after partial vaginal hysterectomy, the initial manifestations were in this vicinity in no fewer than 45. Winter and others have corroborated these important observations.

4. In operative procedures for uterine cancer it is important to recollect the frequency with which the disease disseminates in the broad ligaments, tubes, and ovaries. When the neoplasm originates in the fundus or its vicinity, dissemination along this track is of special frequency. Of 78 necropsies for cervical cancer I found secondary deposits in the broad ligaments in 5 cases. In the same series the ovaries were invaded in 13 cases, both in 8, left in 3 and the right in 2 cases. Kiwisch found the tubes cancerous in 18 out of 73 necropsies. The observations of others fully confirm these data. Hence removal of the ovaries, tubes, and broad ligaments is an essential requisite of every thorough operation for uterine cancer.

5. Although a considerable number of uterine cancers run their entire course without causing any obvious dissemination in the adjacent lymph glands, yet it would be a mistake to suppose that lymph gland dissemination is rare in cancer of the cervix, for, as a matter of fact, the adjacent glands are invaded in the great majority of *post-mortem* cases. Thus of my 78 necropsies, lesions of this kind were noted in 56, or in nearly 72 per cent. In 28 per cent., however, there was no obvious glandular affection; a much higher percentage of immunity than is met with in cancers of most other localities. Peiser reports having found glandular dissemination in over 50 per cent. of his cases, and Winter in from 20 to 30 per cent.

There are, however, good reasons for believing that lymph gland dissemination is comparatively rare in the early stages of the disease. Surgeons have seldom met with infiltrated glands in extirpating cancerous uteri, and after extirpation glandular recurrence is relatively infrequent. Nevertheless, in a certain proportion of cases cancerous glands exist, even in the early stages of the disease, and if such are left behind they will become fresh centres of morbid activity; hence the necessity of carefully examining those localities where morbid glands are most likely to be met with, and of effecting their removal when found.

The lymphatics of the inferior uterine segment emerge at numerous points of its surface, and, after anastomosing in the parametric tissues, they converge to form two, three, or four large trunks on each side of the cervix. Most of these pass outwards, in the base of the broad ligament with the uterine blood vessels, to a group of glands (ileo-pelvic) situated between the external and internal iliac blood vessels, which are commonly described as the internal iliac or hypogastric glands. It is the three upper glands of this series that, according to Poirier, receive most of the cervical lymphatics. The next succeeding gland of the series is situated over the great sacro-sciatic foramen, in close proximity to the great sciatic nerve. Poirier describes these glands as receiving lymphatics from the upper and middle parts of the vagina; but, according to Cruveilhier, these are the glands usually affected in cancer of the cervix, and they are often the only ones implicated. Peiser describes some of the cervical lymphatics as passing backwards in the sacro-uterine ligaments to the posterior pelvic wall, there to terminate in the lateral sacral glands, near the bifurcation of the common iliac veins.

The efferent branches from the corpus converge to form two large trunks on each side, which enter the upper part of the broad ligament with the utero-ovarian blood vessels, whence they pass beneath the ovary to the upper part of the broad ligament, there to be reinforced by numerous offsets from the ovary and tube, which anastomose with them higher up. Thence they follow the course of the utero-ovarian blood vessels to terminate in the lower lumbar glands. Some lymphatics from the corpus go with the round ligament directly to the glands in the groin.

6. Lastly, I cannot refrain from again mentioning the great advantage of operating early. Leopold's data serve to illustrate this: after 59 early vaginal operations there was recurrence only in 14, or in 23.7 per cent.; whereas after 68 similar operations in advanced cases, recurrence occurred in 45, or in 66.1 per cent. Krukenberg's and other statistics are of similar import.

In conclusion, it now remains for me to point out that abdominal section is the only method by which such indications as those I have mentioned can be satisfactorily carried out. This operation—which had been elaborated by Freund in 1878—was subsequently abandoned on account of its high mortality. This defect is, however, now remediable. Total extirpation of the uterus—for non-cancerous affections—has lately been effected on a large scale, with a mortality no greater than that of ovariotomy. Hence it may be safely asserted that, with modern experience and technique, abdominal total extirpation of the uterus is not *per se* a particularly dangerous operation. In confirmation of this I can point to 51 such operations lately done for uterine cancer (Ries, Jacobs, Irish, etc.), with a mortality of only 7, or less than 14 per cent. As this mode of operating has hitherto met with hardly any recognition in this country, I have availed myself of the present opportunity of calling the attention of the profession to it.

THE WISDOM OF SURGICAL INTERFERENCE IN HÆMATEMESIS AND MELÆNA FROM GASTRIC AND DUODENAL ULCER.

By G. E. Armstrong, M.D.,
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Hæmatemesis, although a common symptom in gastric ulcer, is rarely sufficiently large in quantity to cause anxiety, yet the mortality from hæmorrhage in this condition of the stomach is not inconsiderable. Leube estimates the mortality to be about 5 per cent., and Welch at from 3 per cent. to 5 per cent. The question of the propriety of surgical interference in certain cases has received considerable attention of late, from surgeons as well as physicians, and the general tone of the medical press at the present time is very conservative indeed. It may be said that while there is, perhaps, a fairly general consensus of opinion that the surgeon should be consulted in cases of frequently repeated small hæmorrhages, which, in spite of rest, abstinence from stomach feeding, and medical therapy, continue to occur and threaten the patient's life: yet it is as a last resource, and that in the presence of large copious hæmorrhage, surgery is of little or no avail. There seems to be two very good reasons for this opinion in the fact that the large majority of cases recover under medical and dietetic treatment, and that surgery up to the present has not been particularly successful. Mikulicz has operated four times, and three of the four patients died, and adds that he only knows of two successful cases, the one of his own and one of Roux. Hartman[1] has collected 12 cases of operation, only four being successful; and would be inclined to trust to rest, strict diet, and the application of ligatures to the four extremities, with the addition of intravenous injection of normal saline solution.

On the other hand, Dieulafoy strongly urges immediate operation in every case of hæmatemesis in which the loss of blood equals or exceeds half a litre, especially if it recurs within twenty-four hours, and reports a case of hæmorrhage from a superficial ulcerated patch, in which he gathered up into a fold the ulcerated mucous membrane and ligated it, with recovery. Keen, in his Cartwright lectures, takes the conservative view of Mikulicz and Hartman and would abstain from operative measures except in cases of repeated small hæmorrhages which will almost surely finally destroy life. Leube says surgical interference is absolutely indicated by repeated small hæmorrhages, especially if accompanied by dilatation of the stomach, and relatively indicated by a large hæmorrhage, yet never by one single vomiting of even a large quantity of blood.

My attention was particularly directed to this subject by

the following case, successfully operated upon and which I will report very briefly:

On July 21st, 1898, I was asked by Dr. George Wilkins (Montreal) to see with him a lady, 35 years of age, who had had repeated copious hæmorrhages from the stomach for seven days. Previous to this her health had been good and she had not had any of the symptoms of gastric ulcer. Her present illness began just one week prior to my first visit. Her family history was negative. I found her blanched, mucous membranes and finger-nails white, and the slightest exertion was followed by dyspnœa. She had been treated by absolute rest in bed, rectal feeding, only small bits of cracked ice being given by the mouth, also hypodermic injections of morphine and ergotin, large doses of bismuth and acetate of lead, without any apparent lessening of the quantity of blood vomited, nor did temperature in emulsion succeed any better. Her temperature was 100° F., and her pulse rapid, very compressible and shabby. On the following day we decided that operative treatment alone gave any chance of recovery, and had her removed to the Montreal General Hospital. Her temperature on admission to the hospital was 102½° F., pulse 136, respirations 44. As soon as possible I exposed the stomach, through an incision in the median line, drew the stomach well forward, and after carefully packing around to protect the peritoneal cavity, opened through the anterior wall. After washing out some blood clots a careful search was made for the bleeding point. No deep excavated ulcer was found, but blood was seen oozing from three different places, which looked like linear fissures in two instances, and in the third like a stellate fissure. Around the fissures, over an area of about 1 cm, there was apparent a superficial loss of surface epithelium. From the stellate fissure blood seemed to come from three small vessels. The flow of blood was completely arrested by the application of the Paquelin cautery, and the stomach and abdominal incisions closed without drainage. The subsequent course of the case was one of uninterrupted convalescence. The nausea disappeared, no vomiting occurred after the ether or subsequently. I began stomach feeding the following day, and from that time on she took nourishment by the mouth, although rectal feeding was continued for four or five days. While I was operating an assistant gave an intravenous injection of forty ounces of normal saline solution. The woman is now quite well, not anæmic, has perfect digestion and assimilation, and is living an active life.

I have permission to report the following very instructive case:

On February 6th, 1899, I was asked by my colleague, Dr. Elder of Montreal, to see with him a lady aged 42. This lady, on returning home that afternoon after doing a little shopping, and without having had any previous symptoms referable to the stomach, vomited a large quantity of blood—I can safely say 10 ounces—and notwithstanding complete abstinence from food by the stomach, absolute rest in bed, ice over the epigastrium, and the administration of such drugs as morphine and ergotin hypodermically, acetate of lead and turpentine, the vomiting of blood in considerable quantities continued to occur at intervals during the following day and night. Early on the morning of the third day, or about forty hours after the first hæmatemesis, she was removed to the Montreal General Hospital. As she felt somewhat better after getting to the hospital she was allowed to rest. No vomiting occurred until a little after three o'clock in the afternoon, when she brought up about 12 ounces of blood. At 5 P.M. she was placed upon the table, ether administered, and Dr. Elder brought forward the stomach through a median incision. After carefully packing round about, the anterior wall of the stomach was opened, and a large, deeply-excavated ulcer about 1 inch long by 1½ inch wide was at once seen. It was situated on the lesser curvature 5 cm. below the œsophagus. In the centre of the base was an open artery, from which the blood poured freely. The vessel was secured by a catgut ligature carried through the base of the ulcer, just beneath the opening in the wall of the vessel on a curved needle. This arrested the hæmorrhage completely. A row of additional sutures was carried across the floor of the ulcer in such a manner that the floor of the ulcer was somewhat elevated and the edges approximated. After closing the opening in the anterior wall of the stomach the abdomen was closed without drainage. Unfortunately this patient died from acute anæmia the following day at 1 A.M. Among other things 1½ litre of normal saline solution was administered subcutaneously, and an equal quantity *per rectum*. At the necropsy it was found that no bleeding had occurred after the operation.

The following evening when I sat down quietly for that period of retrospection and introspection that, I fancy, is not foreign to the experience of any surgeon, I came to two conclusions: First, that this woman's life would in all probability have been saved if she had been operated upon after the second hæmorrhage; and, secondly, that the tone, the advice, given to-day in the medical and surgical literature was responsible for the delay. I felt that had I another similar case early operation would save it. But, as Carlyle says, "It is easy to be wise behindhand."

With a view to getting further information on this question of the operability of these cases, I asked Dr. Wyatt Johnson, Pathologist to the Montreal General Hospital, to give me extracts from the reports of all necropsies performed on patients who had died from gastric hæmorrhage. From Dr. Johnston's report I find that in a series of 2,000 necropsies, 15 or 0.75 per cent. died from hæmorrhage from the stomach. Of these 15 cases, in 5, or 33⅓ per cent., the hæmorrhage was from a gastric ulcer; in 4, or 26⅔ per cent., from an ulcer in the duodenum; in 1 from rupture of an œsophageal varix, secondary to thrombosis of the portal vein, atrophy and sarcoma of the liver; in 1 to rupture of an œsophageal varix secondary to cirrhosis of the liver; in 2 to leucocythæmia; and in 2 to aneurysms rupturing into the lower end of the œsophagus.

Now I will in as few words as possible state just the condition found in each of these cases of gastric and duodenal ulcer:

CASE I.—Female, aged 40. Fatty and cirrhotic liver, atrophic spleen, no ascites, fibroid kidneys. About the middle of the lesser curvature an ulcer, almost circular, three-quarters of an inch in diameter, with sharply cut edges which are not raised. In the centre of the floor is an open artery, not plugged, and readily admitting a small probe.

CASE II.—Male, aged 50. Chronic ulcer of the stomach, perforation, and hæmorrhage. In the peritoneal cavity is half a gallon of thick dark-red fluid. Three inches from the pylorus is a large perforation in the anterior wall of the stomach, occurring in the base of an ulcer 6 cm. long by 2 cm. wide. A branch of the gastric artery ulcerated through having an orifice into which a small probe can be passed.

CASE III.—Female, aged 20. Lower two-thirds of the œsophagus dilated, and on cutting it open a number of irregular elongated losses of substance are seen; the strands of tissue between these look cicatricial. About the middle of the posterior wall of the stomach is a yellowish slough 6 mm. by 10 mm. in size, and extending 3 mm. to 4 mm. deep, reaching into the muscular coat. No plugged vessels detected.

CASE IV.—In the fourth case there was found an oval loss of substance on the lesser curvature, three inches from the pylor s; size, 3 cm. by 2 cm. Edges round and clean cut, base made up of dense fibroid tissue. In this the ends of obliterated as well as open vessels are seen—the latter very numerous, four of these presenting gaping orifices. On injecting water into the gastric artery it flows in a free stream from the largest of these orifices.

CASE V.—The necropsy report of Dr. Elder's case, already sufficiently reported.

CASE VI.—The report of a duodenal ulcer, unfortunately mislaid.

CASE VII.—Duodenal ulcer, oval in shape, situated immediately outside the pyloric ring, 1 in. long in the axis of the gut and ¾ in. wide; deep, with rounded edges, which are much undermined. Immediately in the centre of the floor is a small dark elevation, blood-stained, and consisting chiefly of fibrin. On injecting water through the hepatic artery, small clots are washed out from this, and the water flows freely from the floor of the ulcer.

CASE VIII.—Male, aged 72. Immediately below the pyloric ring is an irregular ulcer extending through the greater part of the gut.

CASE IX.—Stout middle-aged woman. In the stomach, which is of large size, is found about 30 ounces of blood mixed with remnants of food. Mucosa dark and blood-stained, otherwise unaltered. Immediately outside the well-marked pyloric ring is a large ring, 3·5 cm. by 1·5 cm. in size, partly blocked with clot, which, when removed, allows the insertion of two fingers as far as the second joint into an oblong cavity, the size of a small orange, beneath the liver and gall bladder. The edges of the orifice are smooth and rounded. A probe passed into the right branch of the hepatic artery enters the cavity, and on slitting it open the wall of the artery is seen to be ulcerated across. The loss of substance on the vessel wall is about 2 mm. by 3 mm. The wall of the sac is partly formed by the wall of the gall bladder, which is sloughing in places.

Dr. Wyatt Johnston adds that, "The pathology of gastric and duodenal hæmorrhage as illustrated by *post-mortem* examinations shows the following conditions to be the commonest:

"1. Bleeding from an eroded surface, or from an eroded vessel in the base or wall of an ulcer.

"2. Bleeding from passive congestion, as in cirrhosis of the liver or other forms of portal obstruction, or in heart disease. In most of these cases the serious hæmorrhages come from œsophageal varices.

"3. Abnormal states of the blood, as in leukæmia (usually associated with portal obstruction), also rarely in hæmophilia, etc.

"Besides this, from reflex causes, such as vicarious menstruation, the blood may come, not from the stomach or intestine, but from some adjacent organ, as in aneurysm. Traumatic causes are rare.

"It must be remembered that an addition to hæmorrhagic conditions, properly speaking, we frequently find minute ecchymoses and hæmorrhagic erosion of the mucosa whose pathological significance is doubtful and which have no well-recognised clinical correlation. These often represent merely terminal or even agonal changes. The dilated venules of the stomach mucosa are distinguishable from ecchymoses on careful examination, but the difficulty of interpreting the finer *post-mortem* changes in the stomach mucosa is increased by the rapidity with which softening and autodigestion occur in it. It is often impossible to recognise blood in the gastro-intestinal canal by ordinary microscopic or spectroscopic tests, though the hæmatoporphyrin spectra are unusually obtainable. Concentrated carbolic acid makes a good solvent for blood so altered. Preliminary hardening for twenty-hours in Mueller's fluid has been recommended as a means of recognising *post-mortem* the otherwise invisible points of hæmorrhage in newborn children. It is difficult for a pathologist to see why the operative treatment of eroded varices at

the œsophageal ring should offer any insuperable difficulties. Gastric ulcers differ from ordinary ulcers by the small amount of granulation on the surface and of superficial inflammatory exudation at the margins, so that the degree of vascularity is relatively small."

We learn from the *post-mortem* reports, in addition to the fact that in some instances serious complications resulted from what may fairly be termed an unduly prolonged period of progressive disease, that the hæmorrhage was in every instance arterial, that there was loss of substance by ulceration in an artery of sufficient size to cause death from hæmorrhage. This observation is quite in accord with the statement made by Orth in the fifth edition of his *Pathologisch-anatomische Diagnostik*, pp. 500, namely, "that with reference to the origin of gastric hæmorrhage we must remember that the blood supply comes from the deeper layers, and that the arteries, while still in the deeper parts of the mucosa, break up into capillaries, so that on the surface of the mucosa the only vessels are venous capillaries and small venules."

Clinically, we divide cases of hæmatemesis into two distinct classes, those in which occur frequently repeated small hæmorrhages, and those in which the loss of blood is in larger quantities, and it would seem that each class has a distinct pathological lesion, and this should be borne in mind in the consideration of the treatment of hæmatemesis, medically or surgically; and, however efficient hypodermics of morphine and ergotin may be in small hæmorrhages coming from the capillaries and small venules of the surface of the mucosa, it may not, I trust, be considered rank heresy to question their therapeutic value in the presence of a considerable lesion in the wall of a considerable artery. It is also to be noted that the bleeding point in the case which I have reported was in every instance accessible, situated in a part of the stomach wall that could be readily come at, or, if duodenal, in every instance it was put outside the pyloric ring.

If, then, we can exclude aneurysm, which should generally be possible, and leukæmia, which should be possible with the aid of the microscope, and cirrhosis or other cause of portal obstruction, I hold that the surgeon's duty is to interfere in suitable cases; and if you will permit me I will offer as a definition of suitable cases those first of frequently repeated small hæmorrhages, which persist in spite of medical and dietetic treatment, and which threaten to destroy the life of the patient; and, secondly, in all cases of a large hæmorrhage which, in spite of medical and dietetic treatment, recurs. In these cases I advocate operation after the second hæmorrhage.

For hæmorrhage occurring in cirrhosis, and portal obstruction, I do not think that the surgeon can accomplish any good. In these cases the hæmorrhage is generally from a varicose œsophageal vein, a part difficult of access, and secondary to a pathological lesion but little amenable to any form of treatment.

In the case of gastric and duodenal ulcer, however, the conditions are totally different. The lesion is primary and local, and in addition to the securing of the bleeding point, a more smooth and rapid convalescence is secured, the likelihood of perforation removed, and if found advisable the performance of a gastro-enterostomy or pyloroplasty secures to the stomach that rest which so favours the healing of the ulcer and ensures against the subsequent occurrence of narrowing and obstruction at the pylorus.

REFERENCE.
1 *Scm. Méd.*, 1898, pp. 7, 8.

ON THE VERMIFORM APPENDIX IN RELATION TO EXTERNAL HERNIA.

By J. HUTCHINSON, JUN., F.R.C.S.,
Surgeon to the London Hospital.

ONE of the most interesting features of hernia of the appendix, distinguishing it from hernia of other abdominal organs, is the frequency of inflammation and suppuration within the sac, complications which give rise to a relatively high mortality. There is no doubt that many of the cases recorded as strangulation of the appendix are really examples of acute appendicitis which happens to occur within a hernial sac. In some the pressure of a truss or the irritation of repeated taxis is attributed as the cause of this inflammation, but other factors more probably come into play. Once the appendix has become the permanent inmate of a hernia its contents will be apt to stagnate and decompose at the lower end, and micro-organisms, in particular the bacillus coli, will have a greater chance of invading the wall of the appendix when the blood supply of the latter is interfered with by kinking or direct pressure at the neck of the sac. Occasionally also a foreign body, such as a fishbone, a pin, or a hard concretion leads to perforation of the appendix within a hernia. Of this the following case is an example:

In 1892 I operated for "strangulated" inguinal hernia (on the right side) on a middle-aged man. A loop of small intestine was present in the sac, but considerable difficulty was found in returning this, although the aperture leading into the abdomen seemed large enough. An obstacle was found in the inguinal canal in the form of the vermiform appendix, which on being drawn down was seen to be inflamed and swollen at its base, with a small gangrenous patch over a sharp substance within the appendix itself. The latter was then carefully excised and its base sutured. On opening it a foreign body, the nature of which could not be exactly ascertained, was found to be impacted. The foreign body was a circular disc, like the very hard scales seen on certain fish, with a sharp spine projecting from its centre. The spine had become fixed in the wall of the appendix, and thus led to perforation.[1]

Some writers have questioned whether true strangulation of the appendix ever occurs; but it must be remembered that, together with the fat investing it in some persons, the appendix may be even larger than a loop of small intestine, and the nature of its blood supply—that of a terminal organ—especially favours its complete obstruction by a hernial



Fig. 1.—Dissection of a right inguinal hernia containing only the inflamed and perforated vermiform appendix, suppuration around which led to death. The upper part of the appendix is inseparably matted to the wall of the sac. (Specimen in the London Hospital Museum.)

ring. Fig. 1 illustrates the occurrence of suppurative appendicitis within a hernial sac, showing the cæcum, which was fixed at the neck of an inguinal hernia, owing to the vermiform appendix being inseparably united to the wall of the canal, only the lowest inch of the appendix being free in the sac. The patient was an old man, admitted into the London Hospital with a large abscess in the right scrotum, who died from pyæmia due to the suppuration. Several sinuses are seen, due to a perforating ulcer in the wall of the appendix, 2 inches from its extremity. There had been throughout no symptoms of strangulated bowel, nor had either fæces or gas ever escaped from the abscess cavity.[2]

It will be seen that the appendix in this case illustrated the conditions mentioned before in being dependent and unable to empty itself owing to the extensive adhesions towards its upper part; further, its orifice leading into the cæcum was at the very lowest point of the latter.

In many cases of hernia of the appendix death has resulted from extension upwards of the suppuration, and sometimes from the return by the surgeon of the inflamed organ into the peritoneal cavity. We have then to think of septic inflammation as a not infrequent and dangerous sequence of hernia of the appendix, whilst sometimes the latter becomes the seat of many relapsing attacks exactly like those met with in the iliac fossa.

The fact that occasionally such an attack has preceded the development of the external hernia has been noted by one or two observers. Thus Mr. W. H. Battle,[3] in recording a case of radical cure of an inguinal hernia which contained the appendix and omentum, writes: "There had been catarrhal inflammation of the appendix, and it was probable that the protrusion occurred after the inflammatory attack." But I do not think anyone has yet put forward the view that inflammation of the appendix is a direct cause of its becoming engaged in the femoral or inguinal ring. We know, however, that the inflamed appendix may become swollen, stiffened, and elongated; it is, in fact, under certain circumstances, an erectile

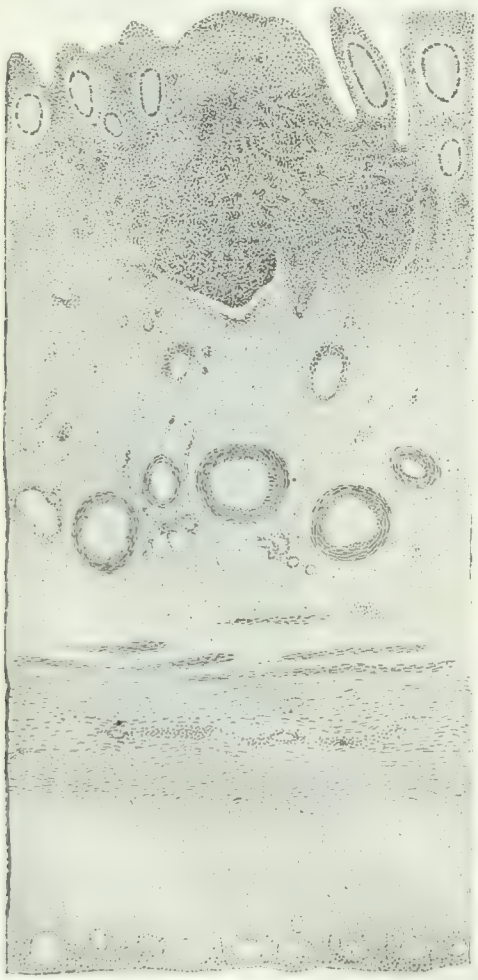


Fig. 2.—Transverse section through the wall of an acutely congested vermiform appendix, excised when in a state of erection. There is moderate cell infiltration of all the coats, the dilated vessels in the subperitoneal and submucous layers are well shown.

organ. Fig. 2 is taken from the section of such an appendix, which at the operation for its removal projected forwards, deep red in colour, and as firm as one's little finger. The section shows the dilated arteries and veins alike in the submucous coat and in the subperitoneal layer. The appendix, when free, is often directed forwards with its apex just behind Poupart's ligament. What is more likely than that such an appendix, if inflamed, should protrude into and become adherent to one of the small pouches which, especially in adults, occupy the femoral and inguinal rings? Many points in the history of cases of hernia of the appendix could be adduced to strengthen this view.

The theory now advanced that an attack of appendicitis may, and in a good many cases does, lead to the first protrusion of the hernia seems to clear up several hitherto obscure points, such as the recurrence of inflammatory attacks in cases where the operator finds not the slightest cause for strangulation in the hernia. The cases in which the tip of the appendix alone is found adherent to the wall of the sac are thus explained, as well as those in which the history has been that of pain in the iliac fossa with sickness preceding the formation of any obvious hernia. The fact that a clear history of prior appendicitis may not be obtained does not in the least disprove the theory. The last few years we have begun to realise how extremely common appendicitis is, and how slight its symptoms may be so long as actual suppuration does not occur. It is certain that many people go through an attack without "laying up" or seeking medical advice, and it is equally certain that repeated attacks may leave the appendix apparently in a healthy condition. A striking instance of the latter fact was afforded by a man who had gone through over forty typical and sometimes severe attacks of appendicitis. I excised his appendix, which to the naked eye presented absolutely nothing abnormal; in particular there were no adhesions, and the microscopical changes were of the slightest. Bearing this in mind, the frequency of appendicitis may be roughly guessed at from the fact that nearly 20 per cent. of adult subjects (who had died from other causes) examined on the *post-mortem* table at the London Hospital showed signs of old disease of the vermiform appendix. According to one writer the percentage is higher, 40 to 50 per cent. Believing that an inflamed appendix may readily insinuate itself into the femoral or inguinal ring, I think hernia of this process would be a more common occurrence but for two facts:

1. In 40 per cent. the appendix has no mesentery, and is anchored down, and even when comparatively free, in a good many cases, it is directed upwards, behind, or at the side of the colon, and (2) it may be so short, perhaps only an inch in length, that it is impossible for it to enter the hernial rings.

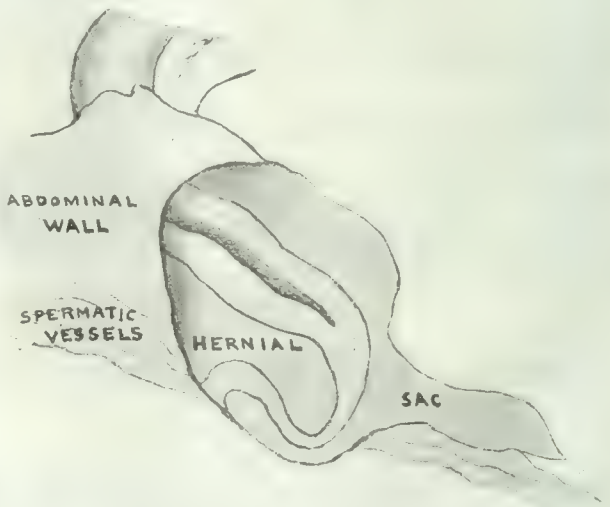


Fig. 3.—Dissection of a right inguinal hernia, containing only the vermiform appendix, which probably protruded when inflamed, and became adherent at its tip to the sac. The mesentery of the appendix is seen above the internal ring, and the lumen exposed within the sac; the last inch or so of the appendix being blind. (Specimen in the museum of the Royal College of Surgeons).

The Diagnosis of Hernia of the Appendix.

Inflammation of the appendix, when the latter has entered a hernia, leads to such changes in its shape, etc., as may render it almost unrecognisable at the time of operation. One of the most remarkable of these changes is that of cystic dilatation. There is a specimen of this in St. Bartholomew's Hospital museum, and Wölfler,[4] Weir,[5] Guttmann,[6] and others have recorded examples. It would be difficult to believe that these large cysts, four inches or more in diameter, have merely originated from the appendix; but examples of its occurrence undoubtedly have been proved within the abdomen, where the appendix has been found dilated to the size of the small intestine, and containing many ounces of mucoid fluid. In fact, one expects that some day a dilated vermiform appendix will be operated on as an ovarian cyst.

Fig. 4 illustrates another factor which may render it difficult to detect the vermiform appendix in a hernia—the overloading of this process with fat. The figure is exactly the natural size, and was obtained from a case of right inguinal hernia in which the appendix formed a ball-valve, preventing the return of the small intestine in the sac below. It was only after excision of the process at its root that I was able to reduce the rest of the hernial contents.

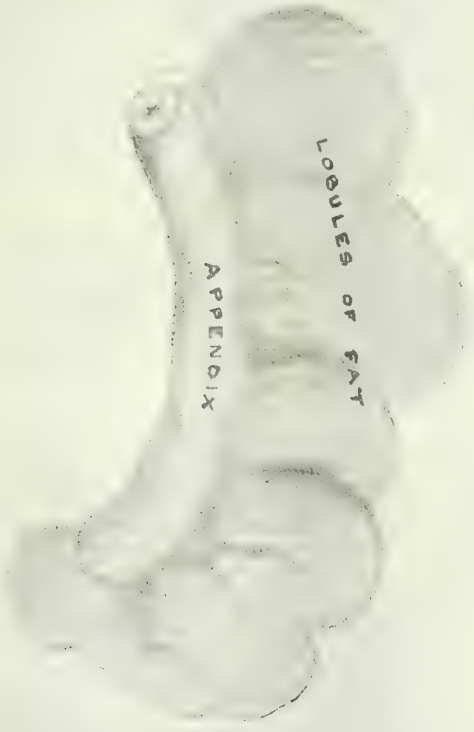


Fig. 4. Appendix, removed from an inguinal hernia, which was overloaded with fat. Natural size.

In dealing with a case of hernia of the appendix, supposing that the latter has not been inflamed and the sac wall is thin, the characteristic worm-like form may be recognised (in several cases of congenital right inguinal hernia in young adults that I have examined the appendix could be plainly recognised through the skin and made to return into the abdomen).

In the more important cases of adherent and inflamed appendix the difficulty of diagnosis may be very great. The symptoms of strangulated intestine may not be present, or only ill-marked, and the hernia, especially if femoral, may be only the size of a walnut. On incision the sac is usually found to be greatly thickened; in one of my cases it appeared to have so firm a layer of muscle that I suspected it was the wall of the cæcum.

In other cases no sac has been recognised, merely an abscess cavity opened, at the bottom of which lay a dusky, swollen body, the inflamed appendix. The latter may be buried in adherent omentum, though it is remarkable in what a large proportion of cases the appendix is the sole inhabitant of the sac. In the female sex the swollen appendix may resemble exactly the Fallopian tube, the following case being a good example:

An old woman, aged 85, was admitted into the London Hospital with the diagnosis of strangulated right femoral hernia. The tumour was the size of a hen's egg, and tense; there was no impulse, but the symptoms of strangulation were only mild. Her tongue was fairly clean; there had been slight sickness only, but considerable pain about the hernia and in the abdomen. She had known of the hernia for a long time, and had worn a truss. The operation showed the contents of the sac could not have been really reduced. The operation was performed within a few hours of her admission, and the sac was found to be remarkably thick and rigid, part of the wall having the appearance of muscular tissue; the suspicion arose as to its being intestine, for example, cæcum; however, this was not so; the contents of the sac consisted of nearly pure blood. Far back in the sac a solid, lobulated body was felt, forming a ridge which somewhat resembled a cock's comb. This measured about 3 inches from the very narrow femoral ring to a firm old adhesion at the end of the ridge. Between these two points the body was free, and was made out to consist of a tube 1 cm. or less in diameter, alongside of which were purple or black lobulations, evidently fat covered with peritoneum.

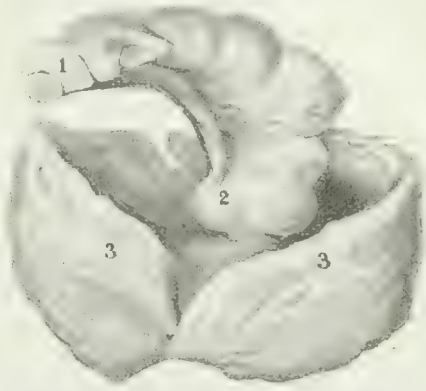


Fig. 5.—The vermiform appendix (1) with a lobulated ridge of fat, making it resemble a Fallopian tube, adherent at its tip (2) to the sac of a femoral hernia (3). Natural size.

As already mentioned, the tube was firmly adherent at its end, and seemed to be continuous with the sac wall. The nature of the hernia now became clear, in so far that the tube could only be an elongated and thin vermiform appendix, or the right Fallopian tube with its broad ligament. In favour of the tube being the appendix was the fact that no trace of fimbriæ could be found, against was the fact that the tube was of such very small dimensions (1 cm. or less in diameter). Improbable though it seems, hernia of the Fallopian tube alone in the femoral canal undoubtedly may occur; Dr. Tischendorf operated on one such case, and was able to collect records of four others (*Proceedings of the Leipzig Obstetric Society*). A double silk ligature was made to encircle the pedicle close to the femoral ring, and the whole sac and its contained tube excised after transfixion and ligature of the former at its neck. Altogether 2⅔ inches of the tube were removed. It will be noted that the chief points in the case were: (1) An extremely thick sac wall; (2) the fluid contained being nearly pure blood; (3) the only solid contents being an inflamed long tube with peritoneal appendages. Mr. Ewan Frazer made a careful microscopic examination of the tube. Its wall was formed of two regular layers of muscular tissue, the outer longitudinal and the inner circular; inside these were areolar tissue, fat, and vessels, but no distinct lumen could be found. (See Fig. 6.) On the whole, looking at the regular layer of longitudinal muscle fibres, and the failure to prove the presence of fimbriæ, there can be but little doubt that the tube was the degenerated vermiform appendix. The patient made an excellent recovery, and no truss was required afterwards.

In an inguinal hernia in the male the appendix has been mistaken for the inflamed spermatic cord. It may be impossible to distinguish between a Meckel's diverticulum in a hernia and the appendix, and there is a remarkable specimen in the London Hospital Museum showing a diverticulum from the large intestine which had made its way surrounded by fat into an inguinal hernia and become adherent to the sac. Meckel's diverticulum has no mesentery, whilst the vermiform appendix in about 50 per cent. of cases possesses one, but in a hernia it may not be obvious (see Figs. 3 and 5). I operated last year on an elderly woman with a hernia of Meckel's diverticulum in a right femoral sac. The process was 2 inches long, had no mesentery or fat upon it, and was directly continuous above the ring with small intestine. There was no reason for excising the process, and a radical cure was successfully performed in the usual way.

Instances could be quoted in which the herniated appendix has been mistaken for small intestine or for part of the

bladder, if distended; for an epiplocele or for lymphatic glands if simply inflamed.



Fig. 6 (copied from Wölfler).—The upper section represents the normal vermiform appendix in early life, with its tubular and lymphoid glands and well-marked lumen. The lower section, from an elderly subject, shows a degenerated appendix in which the lumen has practically disappeared, whilst only traces of the tubular glands can be detected. The submucous layer is laden with fat. The drawing might have been made from the appendix described above. (See Fig. 5.)

The Treatment of the Appendix in a Hernia.

So long as there is no evidence of septic inflammation it is usually safe to return the appendix after separating any adhesions which exist, and some surgeons advocate this method even if the appendix is somewhat inflamed at the time. But provided that its root can be got at and a proper excision carried out (whenever possible by the "coat-sleeve method" with use of fine silk sutures), the best course is certainly the removal of the appendix, and this is borne out by one's belief that the appendix first protrudes in many cases when inflamed, and hence will probably remain liable to recurrent attacks.

The more serious cases where the appendix is acutely inflamed, or perhaps gangrenous, are much more difficult to deal with. If the appendix be left in the hernia a fæcal fistula may persist for long (over a year in a case recorded by Mr. Durham[7]), whilst an operation undertaken to cure this fistula subsequently may prove fatal (case recorded by Hektoen[15]).

Septic peritonitis may spread up from the sac if the sloughing appendix has been left, whilst the return of an acutely inflamed appendix has obvious dangers illustrated by several of the recorded cases. In one unpublished case a single ligature was put round the neck of the inflamed appendix, and the stump returned, with the result of fatal fæcal extravasation. The best course to adopt seems to be:

1. If the lower part of the appendix alone is inflamed and a healthy portion can be reached by traction, it should be excised as near the cæcum as possible, and with as much care in suturing as in a formal "appendectomy." It is doubtful if it is wise to fix the stump at the neck of the sac, since this prevents a proper radical cure of the hernia being performed. This course has, however, been frequently followed with success, and is certainly not open to the grave objections against plugging a hernial ring with omentum. The infected sac and any omentum which may happen to be present should, of course, be ligatured and excised.

2. If the appendix has become ulcerated high up at the neck of the sac (as has occurred in many cases), the danger of general peritonitis is increased, and it would seem to afford the best chance if a second incision be made above Poupart's ligament, through which removal of the appendix with disinfection and drainage may be facilitated.

3. When, owing to inflammatory adhesions, the operator has left an inflamed or perforated appendix within the hernial sac, as soon as the local condition has improved, a formal excision of the organ should be carried out and a constant source of danger thus removed.

The chief points in connection with hernia of the appendix in a femoral sac have been already touched on; its occurrence is confined to adult life, and many of the cases have been in patients of very advanced age. This is not true of protrusion of the appendix down the inguinal canal, which may occur at any age, and which presents several features deserving further consideration. Although extremely rare, it has been met with in women; thus MM. Dujarier and Castaigne[8] record the dissection of a right inguinal hernia in a woman in which there were two sacs, one empty, the other containing the thickened and adherent vermiform appendix, partially obliterated, and forming nodosities which could be detected through the skin.

The cases in males must be divided into those of congenital and acquired origin. Mr. Bilton Pollard[9] operated successfully in one (in which the appendix was inflamed and was excised) on an infant only 6 weeks old; in one of my own cases the patient was 83 years of age. The latter case illustrated a point of interest, the hernia was of considerable size and contained small intestine and omentum; the swollen vermiform appendix lay in the upper part of the sac and by acting as a ball valve for some time prevented the return of the intestine (see Fig. 4).

Congenital Inguinal Hernia of the Appendix (with or without the Cæcum).

It is well known that this form may be associated with abnormalities in the development and descent of the testis. The admirable work of Mr. Lockwood[10] and others has shown that occasionally peritoneal bands and even muscular fibres from the gubernaculum testis may be attached above to the cæcum, the appendix, or to the mesentery of the small intestine. I cannot, however, adduce any evidence in favour of the belief that muscular traction is an important agent in producing the descent of the cæcum or appendix into a hernia. The frequency of a connection between the descending right testis and the cæcum has been certainly exaggerated, since to judge from some authors at one period of fœtal life the two are always related. From the dissection of a considerable number of fœtuses of various ages my own conclusion is that in nine out of ten subjects the testis has at no period any connection whatever with the cæcum or the vermiform process. At the time the testis passes into the inguinal canal an ascending band or ridge of peritoneum usually covering the spermatic vessels will be found in about 10 per cent.: its upper attachment varies; generally it is to the under surface of the mesentery of the small intestine near to the end of the ileum; less commonly it is to the cæcum or the vermiform appendix. In the latter case the band may go to the tip of the appendix (a case operated on by M. Lyot is figured in Clado's article on the appendix[11]) to its whole length, or to its root. The latter attachment seems to have been present in the case now illustrated.

The subject was an adult who had on each side the testis retained at the internal ring, and on each side a tubular pouch of peritoneum reaching to the bottom of the scrotum. Firmly attaching the back and upper part of the right epididymis to the root of the vermiform appendix was a short band of peritoneum and fibrous tissue. Death was due

apparently to suppuration in the right hernial sac, which may well have started in connection with the appendix, but as the subject was one obtained in the operative surgery room I could not ascertain details as to this point. A similar condition to the above may well have been present in a case briefly recorded by Dr. William Osler,[12] in which a lad died from an abscess round the end of the appendix which was situated near the right sacro-iliac joint; the root of the appendix and the cæcum were down in the sac of a right inguinal hernia, the appendix of course doubling on itself.



Fig. 7.—From an original dissection in the London Hospital Museum, showing a peritoneal band between the root of the vermiform process and the back of the epididymis, in a case of retained testes.

Occasionally when the testis is wholly retained the appendix may descend the inguinal canal and be mistaken for the former, as in a case successfully operated on by M. Tillaux;[13] in this case the appendix was inflamed and enlarged to the size of "a thumb" (and M. Tillaux's thumb is not a small one). Of quite as frequent an occurrence in the fœtus and young child as the ascending band of peritoneum already mentioned is one which runs from the lower surface of the mesentery obliquely downwards to the right iliac fossa, limiting a pouch below the cæcum (the subcæcal fossa). The illustration (Fig. 8) shows well how the vermiform appendix may descend into this fossa and perhaps even pass into the scrotum behind the spermatic cord and in a distinct peritoneal pouch from the vaginal process.

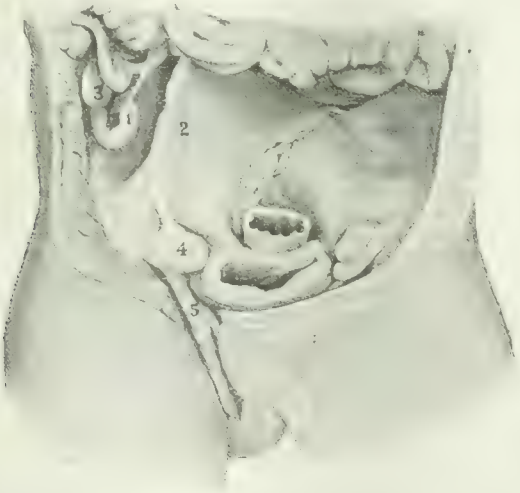


Fig. 8.—Original disection showing how a hernia of the vermiform process (1) may occur in a pouch formed below the cæcum (3) by a peritoneal fold (2) connected above with the mesentery and below with the iliac fossa; (4) the testis at the internal ring; (5) the funicular process opened showing the gubernaculum. The condition shown in this figure is a rare one.

Mr. Lockwood has drawn attention to the possibility of this occurrence, and has placed a fine specimen of it in the museum of St. Bartholomew's Hospital. As in the cases of "landslip of the cæcum" into a hernia the vermiform appendix may come down only partially invested with peritoneum, a feature which may embarrass the operator both in the diagnosis and treatment.

In considering the occasional formation of peritoneal folds connecting the testis with the cæcum or vermiform appendix, mention should be made of the more frequent ones met with in the female sex which pass upwards from the ovary, the Fallopian tube, and the broad ligament. I believe this ascending band to be present in 50 per cent. of all the subjects, and this proportion comes out in the examination both of fœtuses and of adults. The ovarian vessels, like the spermatic ones, are covered by this fold, which above either ends at the mesentery (in 30 per cent. out of the 50), or at the cæcum or vermiform process (in the remaining 20 per cent.). Fig. 9 shows an unusually fine example of the appendiculo-ovarian band or ligament which I happened to obtain.

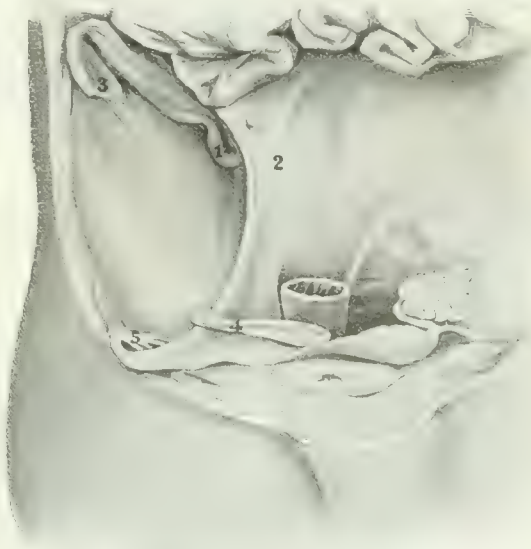


Fig. 9.—Original dissection showing an instance of the appendiculo-ovarian ligament (2) connecting the appendix (1), which is buried behind the peritoneum, with the ovary (4) and Fallopian tube (5). In both this and Fig. 8 the small intestines are drawn up and the sigmoid flexure removed. The cæcum is shown at (3).

On the left side of the abdomen in both sexes a corresponding band or fold of peritoneum is often present connecting the sigmoid flexure or its mesentery with either the broad ligament or the left testicle. Here one may be allowed to enter an emphatic protest against the absurd complexity which some writers have lately introduced into the description of the peritoneum and its fossæ. One instance will suffice. Close to the cæcum are two insignificant, inconstant, and wholly uninteresting fossæ. Will it be credited that these have already received fifteen distinct names? The immortal Mr. Wemmick once exclaimed, "Hullo, here's a church; let's have a wedding." The peritoneal specialist in the same way exclaims, "Hullo, here's an abdominal cavity, let's have a christening," and at once proceeds to name a few fresh fossæ or bands. There is so much individual variety in the exact arrangement of the peritoneum that no proceeding is easier or more futile. To

find a parallel to some recent writings on the subject one would have to turn to the labours of eminent dermatologists grappling with a rare form of skin disease. I have myself observed two hitherto undescribed peritoneal fossæ and three new bands, but have stowed away their names and descriptions in an ultra-secret *dossier*.

HERNIA OF THE CÆCUM AND APPENDIX ON THE LEFT SIDE.

The following case illustrates this unusual occurrence:

A man, aged 37, was admitted into the London Hospital with a huge left inguinal hernia, which had developed first at the age of 15. It now hung halfway down the thigh, measuring 11 inches long and 6 in diameter. It completely buried the penis, and had been irreducible for at least a year, causing much inconvenience, with occasional attacks of pain and vomiting. At the operation I found the cæcum, the vermiform appendix (which was of remarkable length), and many feet of small intestine in the sac, but succeeded in reducing them all. The sac was ligatured high up and excised, the inguinal canal being narrowed by buried sutures. The patient made an uninterrupted recovery.

This was certainly not a case of transposition of viscera, but merely an instance of wandering cæcum; no doubt both it and the ascending colon were wholly free of any connection with the right loin. I can endorse the statement of Mr. Lockwood, that this permanent persistence of an early stage of cæcal development is especially met with in "monster" fœtuses, having observed it in two full-term anencephalic ones, and also in one with a large spina bifida. Nevertheless, it is not very rare in subjects otherwise perfectly normal, and a German writer gives the comparative frequency of right and left-sided hernia of the cæcum and appendix as being 72 and 28 per cent. The latter number is probably considerably over the mark.



Fig. 10.—Whip-like appendix (drawn exactly half the natural size), covered with lobules of fat, in the sac of a left inguinal hernia.

It is noteworthy that the appendix in those cases, in which the cæcum travels over to the left side of the abdomen and may descend into a left inguinal hernia, is always of exceptional length. Fig. 10 is taken from a specimen placed by Mr. Treves in the museum of the Royal College of Surgeons. It shows a whip-like appendix measuring no less than 8 inches. The cæcum in this case retained the early fœtal form, and, together with almost the entire intestine, was lodged in a left inguinal hernia. Lenander has recorded the dissection of a lad, aged 16, in whom the cæcum lay against the spleen, the appendix measuring 9 inches, which is practically a record length.

The vermiform appendix is, of course, frequently met with in an umbilical hernia, especially in the congenital form. In one remarkable case in an adult recorded by M. Tuffier,[11] it described a semi-circle at the neck of the sac, and was the actual cause of strangulation.

Finally, it may be noted that the appendix, although normally placed within the abdomen, may cause infection and suppuration in the sac of an inguinal hernia situated immediately below it. This complication is of particular interest with regard both to diagnosis and treatment; two examples of it occurred in the London Hospital in one year.

In a case under my observation at the London Hospital, some few weeks after a perfectly successful operation for radical cure of a right inguinal hernia, the patient was seized with acute appendicitis, which proved fatal. Presumably this was only a coincidence.

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ENTERORRHAPHY WITHOUT MECHANICAL AIDS.

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AT present surgical opinion would seem to be somewhat sharply divided on the question of the best method of uniting the divided surfaces in operations on the intestinal tract. On the one hand we have those who enthusiastically advocate the routine use of clamping buttons, such as Murphy's, in all cases; on the other we have those who look with disfavour on all mechanical devices intended as substitutes for stitching.

I am one of those who, while recognising the existence of cases in which the use of, say, the Murphy button constitutes the least risky course, have not become converted to the routine use of that very ingenious device, and believe that, in cases of circular enterorrhaphy as encountered in practice, deliberate and accurate suture gives better results. And, from a study of published records and of the house records of two large hospitals to which I have had access, I am inclined to believe that the explanation of the present divergence of opinion may be what my own experience has suggested, namely, that the cases in which intestinal operations are performed are of two distinct and widely different classes, and that, in contrasting the results of the different methods of operating—button and suture—the necessity for differentiating the cases operated on has not always been evident to the writers. The two classes of intestinal cases requiring operation are: (1) Those with the gastro-intestinal tract gorged—cases, that is, of acute intestinal obstruction; and (2) those in which the gastro-intestinal tract has been purposely emptied beforehand—that is, cases of chronic intestinal affections.

These clamping buttons have for the most part been introduced on the strength of laboratory experiments on the lower animals. The experimental investigator operates on a healthy animal with an empty intestine. Where the clinical surgeon has worked under similar conditions the results have been to some extent comparable, as the records of cases of gastro-enterostomy or of resection of intestine for carcinoma by the Murphy button prove. In such cases the patient is not acutely

ill, and the gastro-intestinal tract has been carefully cleared previous to operation.

Where the button has been employed for resection in cases of acute intestinal obstruction, on the other hand, the mortality has been of the highest. In these cases the patient is profoundly toxæmic from autoinfection by absorption of the contents of the obstructed and gorged intestine, and presents a condition which speedy evacuation alone can relieve. The intestine above the seat of obstruction is gorged with contents—solid as well as fluid—pints of which may have to pass the line of union. Returning peristalsis forces these contents down on the line of union, and, if that depends on a "button" of massive bulk and small lumen, the results which not infrequently follow can hardly be matter for surprise. These results include obstruction of the lumen of the button by impaction of solid masses—intussusception, produced by the bulky button being carried downwards before the descending intestinal contents, and dislodgment of the button by the pressure of these moving contents with consequent escape of the imprisoned intestinal margins, in whole, or at one or more points merely. So much impressed, indeed, have certain former advocates of the use of the button become with the risk of the occurrence of this last result that they now advise that "the line of union be fortified by a row of sutures placed external to the button."

In contrasting the results of button and suture operations, another point appears to be overlooked by certain writers. In experimental operations the intestine dealt with (of rabbits, and to some extent, dogs and cats) is so thin that successful suture—that is, suture without perforating all the coats of the bowel, is a matter of great difficulty. Under such conditions it is not surprising that the comparative results of suture and button operations should be so decidedly in favour of the latter. In man, on the other hand, the intestinal coats are sufficiently thick to make successful suture comparatively easy, even in normal intestine, and still more easy in the congested and thickened intestine of many of the cases operated on.

The one claim which may be seriously advanced for the button is that of speed. That speed is attained in cases of acute intestinal obstruction, with gorged intestine, at the cost of introducing the risks above indicated—namely, of obstruction and of displacement of the clamped bowel margins. Most surgeons will admit that there are cases in which speed is the prime or the only consideration; and that in the case of an utterly collapsed patient or of operation at the hands of an unskilled operator the button, with all its risks, affords a means of completing the operation while life remains. In the hands, however, of an operator of average dexterity the time required for a suture operation—particularly when continuous suture is employed—does not greatly exceed that required for the button operation; and where the button is reinforced by an external line of suture the time required is probably, as a rule, not less than that occupied by simple suture.

The following three cases, occurring within the past nine months, have been selected from a number of cases of intestinal obstruction with which I have dealt as illustrating the fact that simple suture, even under more than usually difficult conditions, may be as readily accomplished as union by the button.

Case I. *Resection of Eight Inches of Small Intestine, Followed by Circular Enterorrhaphy by Suture Without any Assistance: Recovery.*—Master J. K., aged 7, operated on by me in the McAlpin Nursing Home in September, 1898, for fæcal peritonitis. Two incisions were made, one in the middle line and one over the cæcum, and drains inserted. Deep in the abdomen, under the median incision, was an intestinal perforation. During the winter the boy's health improved; the lateral wound closed; the median wound diminished to a fistulous tract, from which pus and intestinal contents escaped. On June 11th symptoms of acute intestinal obstruction set in, and by June 13th the site and cause became evident in the presentation in the median wound of a prolapsed portion of intestine. The patient's doctor, Dr. Jas. G. Connal, gave him chloroform. I enlarged the aperture in the parietes by median incision, and pulled up the prolapse and the portion of intestine containing the aperture through which it had occurred. The prolapsed portion was gangrenous. I therefore isolated it by gauze packed into the abdomen, resected it, united the ends by continuous Czerny-Lembert suture, returned it to the abdomen, and sutured the parietes, having had no assistance whatever in the operation. The illustration shows the portion resected. The boy made a perfect recovery, and is now, two months after operation, on holiday in Ayrshire, and in perfect health. Fig. 1 is a photograph of the portion of intestine removed.

Case II. *Resection of Twelve Inches of Small Intestine in an Infant of Seven Months for Acute Intestinal Obstruction: Immediate Relief of Obstruction: Death within Ten Hours from Toxæmia.*—Baby B, aged 7 months, was seen

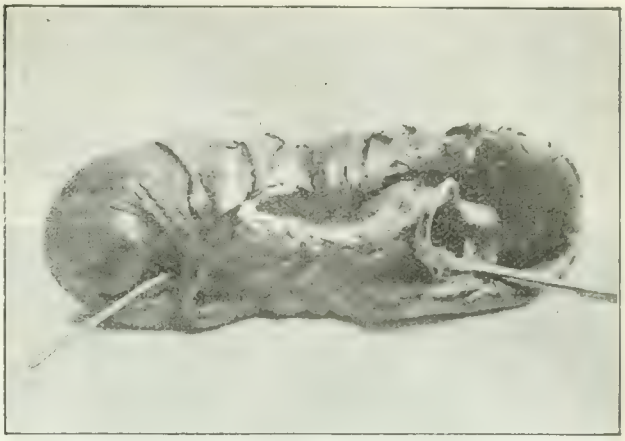


Fig. 1,

on July 8th, 1899, by Dr. McBryde. He found that acute intestinal obstruction had been present for two days. Enemata having cleared the lower bowel, Dr. McBryde detected by palpation an intussusception in the left side of the abdomen, and at once had a consultation with Dr. Gemmell, when it was decided that immediate operation offered the only chance of saving life. The child was at once conveyed to the Central Nursing Home, where I operated. By this time the child exhibited all the usual symptoms of profound toxæmic collapse, including the usual pinched grey face, "sweet hay" odour of breath, thready rapid pulse and cold extremities, with hiccough and fæcal vomiting. On opening the abdomen I found I could not reduce the intussusception. Dr. McBryde "clamped" the intestine above and below with his fingers, while I resected the intussusception which forms the illustration (Fig. 2), and united the ends with Czerny-Lembert suture. The intestine above the lesion was gorged, that below quite empty. Under small hypodermic doses of strychnine and hot water enemata the child rallied considerably, the bowel acted, and repeated motions were passed. After a few hours, however, collapse again appeared, and proved fatal at the end of ten hours.



Fig. 2.

It is now a surgical commonplace that the collapse in these cases is the product largely, if not wholly, of toxæmia the result of autoinfection from the intestine, and that the one measure capable of relief is the prompt evacuation of the bowel. This the operation in this case effected, though the relief, despite Dr. McBryde's prompt measures, came too late to save life. With the experience of some of the results I have seen follow its use, I should have found it very difficult to persuade myself that it was justifiable to place in the tiny intestine of that child, in front of the pent-up contents, a mass of metal of the bulk of a Murphy's button, even had I been convinced that its employment was to effect an appreciable saving in time.

CASE III. *Resection of Five Feet Two Inches of Small Intestine for Acute Intestinal Obstruction, followed by Circular Enterorrhaphy by Suture: Recovery.*—Miss A., aged 20. I saw in consultation with Drs. A. MacLennan and Middleton on the morning of September 28th, 1898. She presented all the usual symptoms of acute intestinal obstruction of twenty-four hours' duration. She was at once conveyed to the McAlpin Nursing Home, and at midday I operated. The cause of obstruction was found to be the intussusception shown in the illustration (Fig. 3). It consists of a nævoid tumour of the intestinal wall enclosed in a double intussusception involving over 5 feet of small intestine. Attempts at reduction, even after incising the two outer tubes, failing, I resected the whole, and united the ends by Czerny-Lembert continuous suture. The patient made an uninterrupted recovery, and is now—nine months after operation—in perfect health.



Fig. 3.

The specimen, which was shown to the Glasgow Medico-Chirurgical Society in November, 1898, is now in the museum of the Pathological Institute of Glasgow University.

In performing circular enterorrhaphy I have, for the most part, made use of the Czerny-Lembert suture, and latterly I have employed this by the continuous method.

In certain cases, however—namely, those presenting much congestive thickening of the intestinal coats and large fæcal accumulations above the lesion—there is a method of performing circular enterorrhaphy which I believe has certain advantages over the Czerny-Lembert. In January, 1896, in bringing forward a case in which it had been employed, I described this method to the Glasgow Medico-Chirurgical Society. A ring of mucous membrane is removed from the distal end into which the proximal is passed (with or without removal or roughening of its peritoneal coat), and there secured by suture, either looped or continuous, the whole procedure being carried out without the aid of any mechanical support.

The principle of the method would seem to be good, for it appears to have suggested itself to at least four independent workers who have carried it out with variations in details: Robinson of Toledo (by means of a rubber bobbin, experimentally in the dog), published in the *Annals of Surgery* in 1891; Harris of Chicago (making temporary use of needles for fixation until the suturing is completed), published in the *Chicago Medical Recorder* in 1892; myself, *Glasgow Medical Journal* and *Transactions of Glasgow Medico-Chirurgical Society* in 1896; and Skelly of Pekin, U.S.A., in *Annals of Surgery*, 1898; Skelly and myself making use of no mechanical aid whatever in addition to the sutures. While not prepared to claim for the method all the advantages which others of its sponsors appear to believe it possesses, I am of opinion that in cases presenting the features above indicated it has advantages over other methods of suture with which I am familiar. In cases other than those I have indicated, I believe it is in no sense superior to, and in some respects not so good as, the continuous Czerny-Lembert suture.

It will be noted that nothing in this paper has any bearing on the value in practice of mechanical devices employed as auxiliaries to suture. The comparison indicated is between simple suture and the use of apparatus intended as substitutes for suture.

THE TREATMENT OF URETHRAL STRICTURE.

By JAMES H. NICOLL, M.B.,
Assistant-Surgeon, Western Infirmary; Extra Surgeon, Sick Children's Hospital, Glasgow.

IT is not my intention to treat members to a dissertation on the comparative merits of the various methods of dealing with urethral stricture. I merely wish to submit the results of investigations on certain points in the subject—personally carried out—and to draw attention to certain details in technique which accumulating experience has led me to adopt.

It is, perhaps, therefore necessary to offer some apology for the fragmentary nature of this paper.

The Curability of Stricture.—The dictum, "Once stricture, always stricture," would seem to have a wide acceptance. Like every general rule, it is believed to have exceptions. While it is unwise to dogmatise, I have a conviction, which each year of practice strengthens, that the exceptions are sufficiently numerous to invalidate the rule, which appears to have been formulated prior to the time when Bigelow demonstrated, in connection with lithotrity, the great distensibility of the normal urethra. A case in point will illustrate my meaning:

In 1892 a patient suffering from stricture was brought to me by a business friend in Glasgow. For seven years previously he had been under the necessity of calling on another surgeon from four to six times a year. Each of his visits was necessitated by recurring narrowing of the stream and nocturnal frequency, and at each visit the surgeon dilated up to No. 10 or No. 12. I had the patient anæsthetised and dilated up to No. 20 (English). Once a week, for several weeks, I repeated the No. 20, without anæsthetic, then once a fortnight, then once in three weeks. At the end of six months I discontinued all treatment. From that time to this—a period of seven years—the patient has been entirely free from all symptoms of stricture. Three weeks ago I asked him to call, and I then passed a No. 16 (English), which practically "dropped into his bladder of its own weight."

I could cite other similar cases. Permit me, instead, to quote a passage from a paper I read to the Glasgow Medico-Chirurgical Society in 1893, subsequently published in the *Glasgow Medical Journal:*

"*Bougies.*—I believe that a good deal of the teaching still current in regard to stricture is to the effect that, given a case of stricture, if the surgeon dilates it up to No. 12 and keeps it at that, he has done all that is necessary or desirable for his patient. Indeed, instrument makers as a rule make bougies and catheters in sets ranging from Nos. 1 to 12 only, and higher numbers have to be specially made if required. Such practice and teaching is doubtless responsible for much of what is said and written regarding so-called 'recurrent strictures.' For No. 12 is about equal to the calibre of a normal urethra very moderately dilated, as in micturition. At this calibre the fibrous tissue forming the stricture is originally laid down in the urethral walls, and from that it proceeds to contract till it has reduced the urethral lumen to a very narrow tube. Now, the passage of a No. 12 bougie merely stretches the fibrous tissue to its original dimensions, leaving it to contract afresh. Were a surgeon to treat club-foot by simply correcting, and not overcorrecting, the deformity before applying the fixed apparatus, or were he to attempt the removal of any deformity due to scar or fibrous contraction by merely stretching the adhesions till the deformity disappeared, and not forcing and keeping up the traction till he produced a temporary deformity in the opposite direction, no one needs to be told what sort of ultimate results he would obtain. In the treatment of stricture the same holds good. If we are to attempt the cure of stricture we must dilate up to No. 16, 17, 18, 19, or 20 (English scale), as the case may require.

"For some time I worked with two sets of bougies, one with parallel sides, the other with conical ends, that is, Lister's pattern, both running up to No. 20 (English). There is one decided disadvantage in such instruments, however, which is that the meatus, normally the narrowest point of the urethra, grasps the larger numbers firmly, so that, with the point in the grasp of the stricture, and the stem in the grasp of the meatus, it is impossible to tell how much of the resistance is meatal, and how much is due to the stricture. This leaves

the surgeon at a loss to decide how much pressure he may safely employ, and whether the instrument is too large to pass without bruising or laceration of the mucous membrane. In order to avoid this difficulty, therefore, I had these bougies made some years ago, and in designing them I attempted to obviate at the same time several minor disadvantages of the more usual types (Fig. 1). They are largely



Fig. 1.

modifications of Lister's pattern, from which they differ, as you will observe, in several respects:

"1. The head (point) is smaller and more pointed, to facilitate introduction into a narrow stricture. The advantage of this difference is best seen in comparing the head of the largest bougie of the set with the largest of this extended set of Lister's, a No. 17 to 20, in which the head is a bulky obtuse knob, little likely to enter a stricture without a good deal of force applied and bruising of the face of the stricture.

"2. The increase in calibre from the head to the part of maximum diameter is considerably greater. Lister's rise—three sizes from the head to the thickest part—for example, No. 8 to 11, or No. 9 to 12. These have a much sharper and more extensive rise, as will be seen from the scale (see below). The object of this is to avoid repeated introduction and withdrawal of instruments in dilating a stricture. With these bougies, once the point has been got through, a pretty full dilatation can be secured by simply pushing the instrument home. The advantage of this is too obvious to need comment, and will become at once evident to anyone who has to deal with a tight tortuous stricture, with a congested, readily-bleeding face, in the highly sensitive urethra of a patient given to 'shivering fits' after instrumentation. I may say, however, that personally I should not think of using the three smallest bougies in the set for any tight stricture while I had a reliable soft instrument at hand. They have been added to make the set complete, in case at any time I should be unsupplied with other instruments.

"(3) Lister's bougies are pyramidal, being thickest at the hilt (handle), and therefore being more tightly grasped at the meatus than at the stricture, giving rise to the difficulty I have mentioned. These are 'bellied.' From the head the calibre increases along the neck, reaching a maximum on the hilt side of the shoulder. The part of maximum thickness has a length of 1½ inch, after which the diameter rapidly lessens towards the hilt. The advantage is that in using one of the set, say the largest, No. 9-20-12, while the thick part, the belly, is being passed through the stricture, the portion at the hilt, which in this bougie has a calibre of No. 12, is practically 'wobbling' free in the meatus already dilated to No. 20 by the passage of the 'belly,' and the surgeon knows exactly what he is doing with the stricture.

"The set consists of eight, of which this is the scale:

2 6-5	4-10-7	6-14- 9	8-18-11
3-8-6	5-12-8	7-16-10	9-20-12

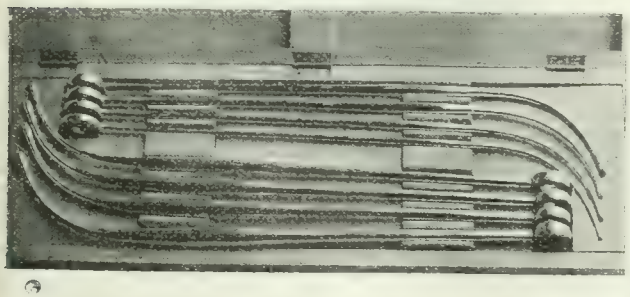


Fig. 2.

"(4) The handle is in the form of a ring to permit of the bougie being easily tied in if desired.

"Allow me also to draw attention to the case I have had made for these bougies. It is of plain oak and can be washed or soaked in any antiseptic lotion, and lined with fresh lint or gauze frequently." (Fig. 2).

These bougies, which were originally made by Hilliard and Sons, of Glasgow, are now kept by a number of firms in this country and abroad; and the scale will be found in Messrs. Down Brothers' catalogue.

The treatment of old indurated strictures, which are complicated by periurethral abscess, fistula, or chronic cystitis, or all three: Without fear of contradiction it may be laid down that for many of these cases external urethrotomy with drainage of the bladder constitutes the most efficient treatment. The drainage may be carried out in two ways: (*a*) By a catheter tied in the urethra and bladder and kept in while the divided urethra closes over it. For this purpose I am in the habit of using a catheter (Fig. 3) such as this: Short of beak and large of eye and of as great calibre as possible, in every respect similar to the catheter piece of a lithrotrity evacuator.

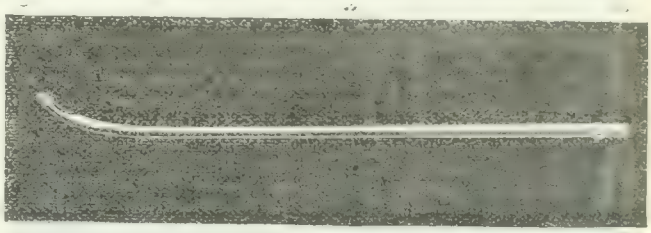


Fig. 3.

(*b*) In bad cases, however, it is well to give the purulent bladder more free drainage than the catheter affords, and at the same time to give the diseased urethra a complete rest for a time. This is attained by the use of a perineal drainage tube. For the past ten years, for all cases of perineal cystotomy, I have been employing these tubes for the purpose. (Fig. 4). They combine what have appeared to me to be

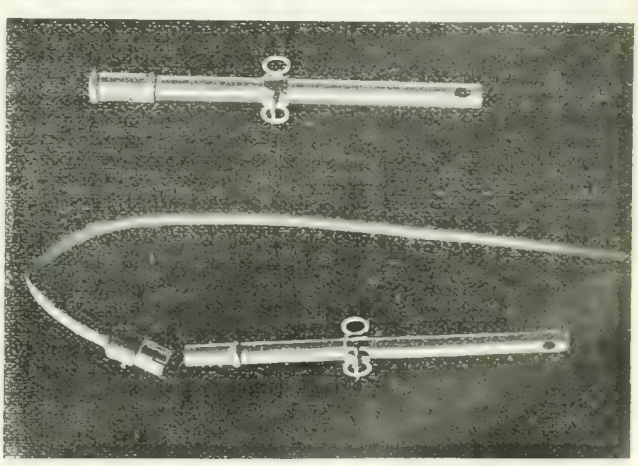


Fig. 4.

the good points of several somewhat similar tubes. I believe they have the following advantages over the ordinary red varnished tube: (1) The tube may be sterilised in a couple of minutes by boiling water and replaced fresh; (2) by means of the socket joint, when the drainage apparatus becomes choked by vesical muco-pus or blood clot, the tubing (which hangs over the bed into a vessel) is readily detached for cleansing, leaving the tube free for douching the bladder through its lumen; (3) lastly, by adjusting the collar (to the eyes of which the retaining tapes are tied) the inner end of the tube may be kept at the level of the floor of the

bladder, thus acting as a drain of the whole viscus. The old red tube is fixed by a piece of wire in more or less haphazard fashion, and frequently in such a way that the internal aperture projects far into the cavity of the bladder, leaving the urine (flowing from the ureters at a lower level) either to accumulate in the lower part of the bladder or find exit alongside the tube.

The treatment of tight strictures, or strictures in which there is difficulty in passing an instrument. In 1892 I read to the Glasgow Medico-Chirurgical Society a paper on the use in such cases of soft bougies, amongst others of Reginald Harrison's "whip" bougies, and of Bang's whalebone bougies. In that paper, in affirming my belief in the great advantages in cases of tight stricture possessed by soft over metal instruments, I made reference to the two objections I have heard urged against them. These objections are (*a*) that the surface of these fine filiform soft instruments is so restricted as to afford lodgment to but a very small quantity of the lubricating oil—so little, in fact, that it is wiped off on the urethral meatus and walls anterior to the stricture, the result being that the instrument reaches the stricture devoid of oil, and, therefore, little likely to pass easily. The validity of this criticism must be admitted. The remedy of the defect is, however, easy, and lies in the time-honoured device of covering the face of the stricture with the lubricating oil previous to passing the instrument. For that and other purposes in the urethra I have found this syringe (which is a modified Guyon syringe made of metal) useful (Fig. 5).

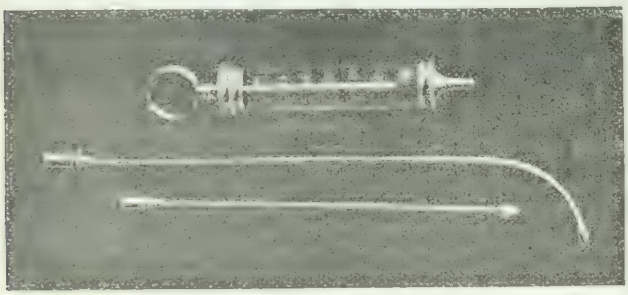


Fig. 5.

It is made of "cold-drawn" silver (to permit of the use of nitrate of silver solutions without damage), it comes to pieces for boiling after each occasion of use, and it is fitted with two catheter pieces—one straight and short for the anterior urethra, the other long and curved for the prostatic urethra, and for the introduction into the bladder of cocaine previous to cystoscopy.

(*b*) The second objection raised to the use of soft instruments is one which I am not inclined to admit. It is that soft instruments tend to be septic, or are not so readily cleansed as are metal ones. And, in referring to that in the paper mentioned, I have the following passage, which may be briefly quoted. It has reference to two points. These are:

(1) The condition of the gastro-intestinal tract from mouth to anus. This is constantly occupied by the most septic contents without detriment to the health of the patient. The most trivial wound of any part of the mucous membrane, however, is apt to result in the production of septic mischief, frequently of the most rapidly fatal kind.

(2) The fact that the larger numbers of strictures are not mere annular constrictions, but long tortuous narrow channels, often with eccentric openings, and with sharp angles and curves, of the direction and position of which the surgeon is ignorant.

(The following diagrammatic representations of common varieties of stricture I have been in the habit of using for teaching purposes. In 1892 I made use of them in a publication in the *Glasgow Medical Journal*, and since then they have been reproduced by several authors.)

"Along such a channel it is manifestly never easy, and is frequently impossible, for the surgeon to pass a rigid metal instrument of a calibre of the necessary smallness without abrading the surface of a curve or ploughing up an angle,

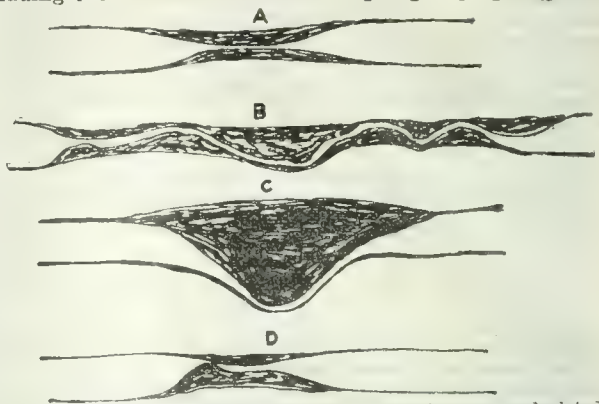


Fig. 6.—A, simple stricture; B, long tortuous stricture; C, deviated stricture produced by periurethral thickening; D, stricture with eccentric opening.

even though he may successfully ultimately enter the bladder without the formation of an actual false passage. Through such a channel, on the other hand, fine or small-sized soft instruments, held lightly between finger and thumb, may be wriggled without damage, the pliable point and neck adapting themselves mechanically to the curves and angles of the channel, anything like abrasion or tearing being impossible.

"Let it, for the sake of argument, be assumed for the moment that this statement—namely, that soft instruments are less readily or certainly rendered pure than are metal ones—is absolutely true in fact; it will not be difficult to prove that the argument based on it, even if its truth be assumed, is specious.....Given a case of tight, tortuous, or oblique stricture, with swollen congested surface covered with muco-purulent, gleety discharge, and with possibly cystitis and purulent urine in addition. Take to treat it a soft instrument, filthy and septic. In the majority of cases you can gently wriggle this through, and that without abrading any part of the mucous membrane, thus dilating the stricture and giving free exit with the urine over the intact mucous membrane, not only to anything septic you may have introduced, but to the discharge in the urethra and the pus in the urine. Take, on the other hand, a small No. 1, 2, or 3 steel bougie or catheter, carefully sterilised, and in passing that through make but the slightest abrasion, and you establish a condition of affairs in which it is not your fault if septic mischief does not ensue.....What I have for the moment admitted for the sake of argument, however, I do not in any sense admit as an actual fact—namely, that soft instruments, when intelligently managed, tend more to be septic than metal ones."

And this brings me to the last point I wish to notice, namely:

The Sterilising of Urethral Instruments.—In the June number of the *Annals of Surgery* is an article which contains an account of a series of experimental tests which I carried out on this point. A fuller account was previously published in vol. i of the *Glasgow Hospital Reports*. The results detailed in these papers cannot be reproduced here. The series is a lengthy one, is on certain points inconclusive and on others not yet completed.

Broadly, the conclusions reached up to this time may be summarised thus:

(*a*) *Bougies.*—That soft, gum-elastic or whalebone, bougies when sound in surface, that is, free from cracks, may be as readily sterilised as are metal bougies. That treatment by antiseptic solutions, especially carbolic, defeats its own object by destroying the polish of the surface, removing the varnish, and producing roughness and stickiness. That the best method of sterilising soft bougies is the simplest—washing with warm water and soap, rinsing in tepid or cold water, and rubbing dry with sterilised gauze or towel, or a towel fresh from the laundry. In the papers referred to will be found evidence, founded on detailed tests, in support of these conclusions.

(*b*) *Catheters.*—That with soft catheters the case is different. That the red rubber catheters, known as Jacques's, may be sterilised by boiling or steaming, like metal catheters. That of the various kinds of gum-elastic catheters, black or red, it may be stated that there is no means of efficient sterilisation which is not more or less rapidly destructive. (The various tests detailed in the papers above quoted bear out this statement).

(*c*) That, whatever may be the case with reference to the normal urethra, and, as will be seen, my observations on this are not yet completed, the urethræ through which in practice instruments have to be passed, that is, the urethræ of patients with stricture, prostatic enlargement, etc., abound in germs.

(*d*) Lastly—and this is a side issue which opened up in the course of the investigation—it is extremely doubtful if we possess any means of distinguishing the so-called gonococcus from the other diplococci found in the normal urethra. This may appear a bold statement in face of the positive assertions to the contrary of many writers, but my results leave me no alternative.

In the papers referred to are illustrations of two catheter holders which I had made a number of years ago, and which are now in use in a number of hospitals. They are fitted with either metal or rubber stoppers (Fig. 7). No. 1 is for the

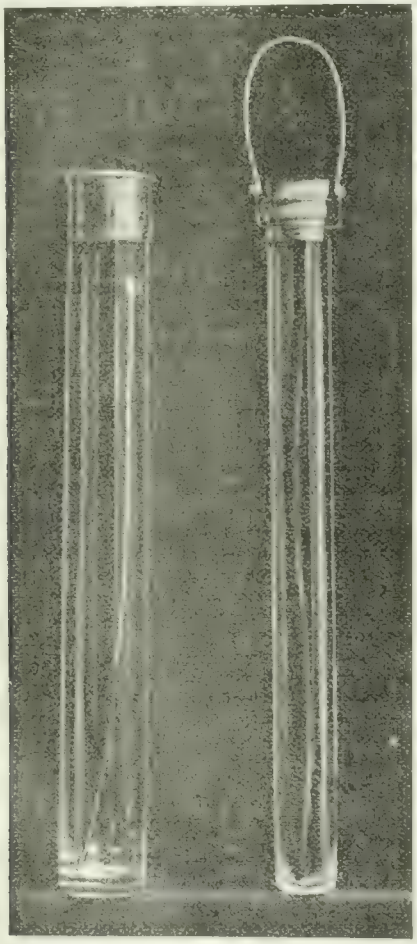


Fig. 7.

storage and carriage of soft bougies or catheters after these have been sterilised. No. 2 is for the use of prostatic patients who regularly use a catheter. Filled with solution it is employed for the regular storage of the catheter; emptied it serves as a receptacle for the catheter in travelling. In 1893, on the suggestion of my old teacher, Mr. Mansell-Moullin, I had added the metal "handle" in order to have the holder hung on or near the bed.

PERIOSTITIS ALBUMINOSA.

By George Henry Edington, M.D., M.R.C.S.,
Senior Surgeon, Glasgow Central Dispensary; Extra Surgeon, Western Infirmary Dispensary.

The following observations have, on account of the rarity of the subject with which they treat, a certain interest not only for practical surgeons but also for the general practitioner. Patients are only too ready to cast blame on a medical man when, as they put it, a swelling "has been opened too soon, before matter has formed," and I must confess that I had come to the conclusion that the case I had to deal with was one of abscess, and I had expressed myself to the patient as of that opinion.

While conducting the out-patient clinic at the Western Infirmary in the early part of this year I was consulted by a woman, aged about 45, on account of numbness and peculiar sensations in the tip of one of her fingers. On examination I found a linear somewhat depressed scar on the palmar aspect of the terminal phalanx. This cicatrix, which apparently, by implication of the digital nerve twigs was the cause of her symptoms, was the result of a whitlow which had been incised about twenty years previously. She told me that her case was peculiar, inasmuch as "clear jelly" had been evacuated by the incision, and that her medical attendant at the time had expressed the opinion that the condition was in his experience unique. I rather doubted her statement, and advised the students to accept it with reserve.

Within ten days I had occasion to open a swelling which was situated around the matrix of the finger-nail of a woman, aged 79, who consulted me at the Central Dispensary. I was greatly surprised to find clear gelatinous material escaping through my incision. Its physical characters were precisely those of the contents of a simple ganglion. The patient stated that the swelling, never very painful, had been present for three months, was not increasing, and, in spite of poulticing followed by puncture with a needle, had not "gathered." The skin over it was slightly reddened, but there was little or no tenderness. Fluctuation was distinct, and I was of opinion that I had to deal with an ordinary paronychia, which had gone on to suppuration. Healing took place without incident. Subsequent examination of the jelly-like material showed it to contain mucin—the addition of acetic acid bringing down a precipitate. A film preparation stained with methyl blue showed degenerated cells of flattened form, with here and there the appearance as of cocci arranged in chains. When the nature of the contents of the swelling had been demonstrated I was puzzled to account for the condition. I at first thought of a ganglion, but against this view was the fact that there was no tendon sheath in the near vicinity. On chatting over the matter with my friend Dr. Rutherfurd, he suggested that swelling might be due to a chronic bursitis. This, however, does not agree with the description of the sites of the bursæ on the dorsum of the fingers. Bursæ over the terminal joints of the fingers are described as occurring only in second and fourth fingers, and even there are not constantly present.[1]

Later Dr. Rutherfurd gave me a reference to a paper by Garré of Tübingen (in Kocher's *Festschrift*, 1891) on Uncommon Forms of Acute Infective Osteomyelitis. On pp. 46 *et seq.* this author describes a condition associated bacteriologically with infective osteomyelitis, but in which serous or mucous contents are found in supposed subperiosteal abscess cavities. This he terms "periostitis albuminosa." According to him this condition was first described by Poncet in 1874 from an observation of Ollier's. Poncet considered it to be an affection *sui generis*. Other writers soon followed, but the list of cases continues a small one. Various names were applied to the condition—"cyst," "serous osteoperiostitis," "plastic periostitis," "periosteal ganglion," till bacteriology shed light on the etiology, and it is now properly classed in relation with acute infective osteomyelitis. Garré records the case of a boy, aged 17, who, four years previously, had suffered from acute osteomyelitis, for which incision of abscess and sequestrotomy had been performed. Subsequently he was treated for supposed abscesses deeply situated at the upper and lower ends of the thigh. The swellings, on being tapped, were found to contain sero-purulent fluid. Three months later, incisions showed them to contain no pus, but a thick

mucous secretion, only slightly turbid. This secretion was highly albuminous, but contained no mucin. Cultures of staphylococcus aureus were obtained. Microscopic examination showed pus cells and fatty granular globules.

Schlange's view is that the inflammatory process is not of sufficient intensity to form phlegmonous pus.

Vollert's is that we have to deal with a degeneration of pus, and with this view Garré agrees. At the same time he does not exclude the possibility of the staphylococci having a modified virulence at the time of infection.

I regret that cultures were not made from my patient, but even with this omission I think that the case must be added to the bibliography of periostitis albuminosa.

REFERENCE.

1 *Handatlas der Anatomie des Menschen*, His u. Spalteholz. Second Edition, Part II, p. 324.

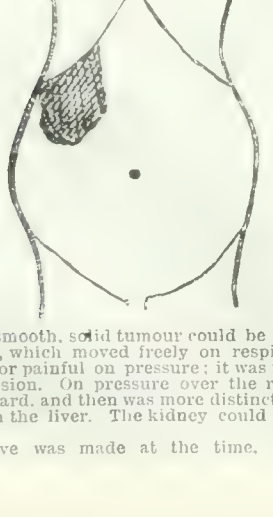
THREE CASES OF REMOVAL OF THE SUPRARENAL CAPSULE.

By A. W. MAYO ROBSON, F.R.C.S.,

Senior Surgeon to the General Infirmary at Leeds; Emeritus Professor of Surgery in the Yorkshire College of the Victoria University; Hunterian Professor of Surgery and Pathology, Royal College of Surgeons of England.

A SHORT leader in the BRITISH MEDICAL JOURNAL for May 10th, 1899, on a paper by Dr. Otto Ramsay in the *Johns Hopkins Hospital Bulletin*, has drawn my attention to a sin of omission on my part, for in breaking new ground in any line of medical or surgical work, the early report of cases becomes a duty not only to oneself but to the profession at large. My excuse is that in neither case was a diagnosis of suprarenal tumour made before operation, and I had hoped that by waiting for more experience I might be able to formulate something more definite as a guide in the future. As a matter of fact my first case, which was operated on in April, 1891, and which, so far as the operation is concerned, was successful, has been referred to in my small book on *Gall Stones* (p. 80) published in 1892; but the second case, operated on December 22nd, 1897, has not been reported, and as the patient is and has been well since the operation, there is some advantage in the delay, as I am able to report the complete success of the treatment.

CASE I.—Mrs. L., aged 47, was sent to me on March 23rd, 1891, by the late Dr. Kebbell of Flaxton, with the history that she had suffered from pain over the liver and at the right shoulder-tip for two years, the pain coming on in paroxysms and being accompanied by sickness and headache. She had never had an attack of jaundice, but at times "looked yellow in the eyes." Three weeks before seeing me, a tumour had been noticed below the right costal margin, since which time there had only been one attack of pain. Her general health had signally failed, and she had lost flesh. Throughout her illness there had been no urinary trouble, but great depression and loss of strength.



On examination a smooth, solid tumour could be readily felt below the right costal margin, which moved freely on respiration, and was not tender to the touch or painful on pressure; it was resonant on deep, but dull on light, percussion. On pressure over the right loin the tumour could be moved forward, and then was more distinctly felt, and it seemed to be connected with the liver. The kidney could not be felt separately from it.

The diagram above was made at the time, and was thought to represent its position and size. Although the absence of tenderness and the want of right shoulder-blade pain rendered the diagnosis of enlarged gall-bladder from obstruction of the cystic duct improbable, it was felt desirable to apply Ziemssen's test in order to clear up the diagnosis. The colon was therefore inflated through the anus, with the result that the tumour was pushed upwards towards the liver, with which it then appeared to be continuous.

This test satisfied both Dr. Kebbell and myself that the tumour was gall bladder, and on April 23rd, 1891, I explored the abdomen through an incision in the upper part of the right semilunar line; the tumour was then found to be free from the liver and gall bladder, which were seen to be normal. It was found to be growing from the upper part of the kidney, to which it was firmly adherent. The colon passed in front of the kidney but below the projecting tumour, which was thus pushed up when the bowel was inflated. After adhesions had been detached, the tumour with the kidney was brought forward, and the renal as well as numerous other vessels were ligatured. The mass was then removed. No drainage was employed.

On April 15th I had a letter to say that the sutures had been removed, and that the wound had healed and all was progressing satisfactorily. She was on the sofa in the third week. The tumour removed was found to be a sarcoma originating in the right suprarenal capsule, and invading the top of the kidney secondarily.

Her respite was only a short one, as at the end of May she began to fall off, and died from exhaustion.

CASE II.—Mrs. F., aged 57, was sent to see me by Mr. Herbert Rowe, of Leeds, and Mr. Mais, of Thorner, on June 2nd, 1893, with the history that she had suffered from spasms for many years, but that after an attack more than usually severe eight weeks previously she had noticed a swelling below the right costal margin, which had gradually increased. A distended gall bladder with gall stones in the cystic duct was diagnosed, and on June 6th cholecystotomy was performed, and half a pint of clear fluid was removed from the gall bladder, and three calculi the size of filberts from the cystic duct. The gall bladder was drained for a week, and recovery was uninterrupted.

She remained quite well in every respect for three years, and in the meantime changed her address. The case is No. 71 in my book on *Diseases of the Gall Bladder and Bile Ducts*, published in 1897.

On December 20th, 1897, I was asked by Dr. Wilson, of Kirkby Overblow, to see a patient on whom I had operated before. It proved to be Mrs. F., now aged 62, who had a tumour beneath the right costal margin, which had been noticed a month. She said that she began to have spasmodic pains and indigestion about a year previously: the pain passed to the right shoulder tip and down the inner side of the right arm, but the attacks were different from the old gall-stone seizures, and were neither associated with jaundice nor vomiting. The pain was more aching and neuralgic in character, and not so severe. Flatulency was much complained of and indigestion. She was much depressed mentally, and had lost weight and strength very markedly.

The tumour presented all the signs described in the last case, but Ziemssen's test was not applied, as the diagnosis of gall-bladder tumour seemed quite clear.

December 22nd, 1897. An incision through the old cholecystotomy scar was made, and the gall bladder and bile ducts were found perfectly healthy. A tumour of the right suprarenal body was found the size of a small orange. It was quite soft and semi-fluctuating, and did not appear to infiltrate the kidney, though it was fixed to the top of it, nor was it firmly attached to the surrounding parts. The kidney with the tumour on the top of it was pushed through the wound, and a wedge from the top of the kidney was removed together with the tumour. The bleeding was easily controlled by opposing the cut surfaces and edges of the incision in the kidney by means of deep catgut stitches.

Dr. F. Gairdner, who assisted me with the operation, examined the tumour both macroscopically and microscopically, and thought it to correspond in every particular with "struma lipomatosa suprarenalis" described by Virchow.

The wound healed by first intention, and the patient rapidly regained her lost flesh and strength. She remains well, and has had no return of her trouble.

In neither of these cases were there any of the classical symptoms of Addison's disease, nor were there any special signs, general or local, by which the tumour could have been diagnosed with certainty.

The subsequent history of the first case was too short to know if the removal had produced any pathological phenomena, but in the second case the recovery has been so perfect that one may say that the patient has been in no way inconvenienced by the removal of the right suprarenal capsule.

For permission to publish the following case I have to thank my colleague, Mr. Ward, and for the notes I am indebted to Mr. Hartley.

CASE III.—D.R., aged 10 months; admitted to Leeds General Infirmary February 7th, 1899, under the care of Mr. Ward.

History.—Had failing health and wasting for two months before admission. The child was brought to the infirmary on account of an umbilical hernia, which was increasing in size. In the course of the examination it was discovered that there was also a mass in the left side of the abdomen.

On Admission.—There was extreme feebleness and emaciation with marked pallor. Bowels loose, amounting almost to diarrhœa. Specimen of urine not obtainable, but there is no appearance of blood-staining in the urine-soaked napkins.

A reducible umbilical hernia about size of a walnut is present. Abdomen enlarged, but bulging more on the left side. There is a tumour occupying the left side of the abdomen, extending to one inch beyond the middle line. It has the physical signs of a solid renal tumour. It is irregular, largely lobulated, elastic, but not fluctuating and not actually hard anywhere. The descending colon can be felt and seen in peristalsis

passing down the anterior surface just to the left of the umbilicus with a direction somewhat from left to right.

Operation.—February 17th (under chloroform). Long incision in the left semilunar line and a large tumour exposed in a capsular investment; colon stretched over anterior surface. The capsule was opened and its contents scooped out with the fingers, four silk ligatures were placed on bleeding parts of the pedicle and the capsule cut away. The kidney was then discovered to be quite separate from the tumour and lay upon its posterior aspect. Drainage tube left in cavity, and wound closed. The child never rallied from the shock, and died about three hours after the operation.

Pathological Report.—Round-celled sarcoma of adrenal.

I have no doubt that many cases operated on as sarcoma of the kidney, or as perirenal sarcoma, are truly diseases of the suprarenal capsule, the operation for removal has therefore probably been more frequently performed than the few recorded cases would lead one to suppose.

The cases I have been able to gather increase the number of operations from 6 to 9, which probably represents all the noted cases, as with the kind help of Mr. J. Y. W. MacAlister a search through the literature of the subject in the library of the Royal Medical and Chirurgical Society fails to bring to light other cases.

The results of operative treatment are not very brilliant, as only five patients out of nine operated on recovered, but it must be borne in mind that the disease is a necessarily fatal one without operation, therefore every recovery is a life saved.

The true secret of success lies in operating at an early stage of the growth, and if all cases could be handed over to the surgeon as early as in my second case, where the neighbouring viscera had not become involved in the disease, the results would probably be extremely favourable.

While describing the cases I have operated on I will take the opportunity of mentioning a case that I watched along with the late Mr. Hey for some time in 1875, before abdominal operations had become so common or safe as they are at present, and which was verified by a *post-mortem* examination, and I do this for the special reason that I think the symptoms of that case were so characteristic that they may be useful in enabling a diagnosis to be made in other cases.

No.	Operator.	Reference.	Date of Operation.	Sex.	Age.	Nature of Growth.	Result.
1	Knowsley Thornton	*Harveian Lectures*, 1899 (Chas. Griffin and Co.)	1889	F	53	Sarcoma	Recovery (well six years later)
2	Mayo Robson	*On Gall Stones* (Cassell and Co., 1802, pp. 80)	1891	F	47	,,	Recovery
3	Howard A. Kelly (Baltimore)	*Johns Hopkins Hospital Bulletin*, January, February, March, 1899	1896	F	53	,,	,,
4	J. M. T. Furney (Baltimore)	,, ,,	1896	M	53	,,	Died
5	Howard A. Kelly (Baltimore)	,, ,,	1897	F	64	,,	,,
6	Dr. Roberts (Philadelphia)	*International Clinic*, Series III, vol. i, p. 203	1897	—	—	,,	,,
7	Mayo Robson	Here reported for first time	1897	F	62	Struma lipomatosa suprarenalis (Virchow)	Recovery (patient well at present time)
8	A. F. Jones (Omaha)	*Annals of Surgery*, April, 1898	1897	F	24	Chronic diffuse inflammation probably tuberculous	Recovery
9	Edward Ward (Leeds)	Here reported for first time	1899	F	1	Sarcoma	Died

The symptoms of this case, which occurred in a woman aged 52, were at first loss of flesh, depression of spirits, slight pain on the left side of the abdomen, and a periodic nocturnal neuralgia passing down the back of the left hip and thigh. Vomiting was a marked symptom, and it occurred quite independently of food. The abdomen became tympanitic, but was not tender, and, though there was constipation, there was no obstruction of the bowels. The urine was unaffected throughout, and there were no renal symptoms. During the last three months the pain was referred to the left loin and left shoulder tip, and not to the hip or thigh as at first.

The tumour was discovered three months before death, and was thought to be connected with the spleen, as the dulness reached from the ninth rib to an inch below the left costal margin; but it could easily be felt in the loin by palpation in the costo-vertebral angle, and could be pushed forward into the hollow of the palpating hand in front of the abdomen. Death occurred from increasing exhaustion, consciousness being preserved to the end.

I would draw attention to the following symptoms:

(*a*) Shoulder tip pain; this was so well marked in all the three cases that I think it could not have been a mere coincidence, but was probably dependent on the disease. It may be explained by the fact of a small branch of the phrenic nerve passing to the semilunar ganglia.

(*b*) Pain radiating from the tumour across the abdomen and to the back, not along the genito-crural nerve.

(*c*) Marked loss of flesh.

(*d*) Nervous depression with loss of strength.

(*e*) Digestive disturbance, flatulence, and vomiting.

(*f*) Presence of a tumour beneath the costal margin right or left, at first movable with respiration, but soon becoming fixed; it can be felt in the costo-vertebral angle posteriorly, and can be pushed forward into the hollow of the palpating hand in front of the abdomen.

(*g*) Absence of urinary and of gall-bladder symptoms.

It will be noticed that these symptoms are common to all the cases, so that when taken together they form a basis on which to make a probable diagnosis. In none of my cases was the peculiar bronzing of the skin characteristic of Addison's disease present, probably because only one organ was affected.

As to the technique of the operation: In the cases that I have operated on, a vertical incision through the outer margin of the rectus enabled the tumour to be thoroughly explored and at the same time served for its removal; and seeing that the diagnosis in these cases must generally be uncertain, I should always feel it wise to perform the operation in such a way that an efficient exploratory operation might be performed before removal is attempted, as it is clearly unwise to attempt the removal of a malignant growth if it has infiltrated and become adherent to neighbouring organs, not only because a partial removal can do no good, but from the fact that the hæmorrhage in such a case would be most difficult to control, and the result from every point of view would be disastrous.

Having exposed the tumour, it, if removable, along with the kidney to which it is attached, can be brought forward into or through the wound, when it can be deliberately excised, either with the kidney, as in my first case, or, if more limited, as in my second case, with only a wedge-shaped piece of the kidney. Drainage, if thought advisable, may be effected either through a lumbar stab wound or through the original incision.

AN ANALYSIS OF ONE HUNDRED CASES OF ABNORMAL CURVATURE AND OTHER AFFECTIONS OF THE SPINE.

By J. Jackson Clarke, M.B.Lond., F.R.C.S.,
Surgeon to Out-Patients at the North-West London and City Orthopædic Hospitals.

The value of a record of any given number of spinal cases is, I think, enhanced if the collection is made to include all kinds of affections of the spinal column. The cases that are classified in the tables [handed round] are taken from among those that have come to my notice during the past three years, and in their selection I have been guided by desire to make the list as fairly representative as possible of the various phases of spinal conditions that come to the notice of the surgeon; for this purpose I found that 100 cases were as instructive as a much larger number.

The various groups into which the cases seemed to me to fall most naturally are as follows:

Group I, consisting of 35 cases of scoliosis (lateral curvature) of the ordinary type, that is, those cases of scoliosis that cannot at the time that they are brought to the surgeon be referred to any obvious morbid condition such as rickets or rheumatoid arthritis. It is, however, to be observed that in several of the cases of this group slight rickets or rheumatoid arthritis were recognisable when the patient was

first brought to my notice, and there is no doubt that had the whole course of the affection been watched closely from the beginning the proportion of cases in which rickets and rheumatoid arthritis could have been recognised would have been much larger.

Group II consists of 7 cases of scoliosis traceable to pronounced rickets. Of these 2 came to my notice in private practice, an illustration of the fact that rickets is not confined to the poorer classes. The patients in these 2 cases were both girls, aged 6 years. It is worth mention here that rickets as it affects the spine is by no means confined to the period of infancy.

Group III consists of 7 cases traceable to rheumatoid arthritis; 4 of these cases occurred in private practice. The ages of the affection were respectively 4, 17, 21, 32, 34, 55, and 62 years. It is thus evident that rheumatoid arthritis is no more confined to middle and advanced age than rickets is confined to infancy. One very noticeable feature in the cases of rheumatoid arthritic cases is that when the condition becomes troublesome for the first time in middle or advanced age, one can usually ascertain that a slight spinal curvature developed during infancy or childhood. This fact I have observed very frequently, and it is some evidence that the phenomena of rheumatoid arthritis show themselves in early life more frequently than we realise at present.

Group IV comprises 20 cases of deformity of the spine other than scoliosis, tuberculosis, and traumatic conditions. The types of the deformities included in this class are chiefly kyphosis and lordosis; a glance at the list of shows that the general conditions that predispose to these abnormalities are similar to those that predispose to scoliosis; anæmia, rickets, and rheumatoid arthritis occurring frequently in the tables. The particular variety of deformity is due to the special exciting cause or causes.

Group V consists of 20 cases of tuberculous disease, and Group VI of 11 cases of traumatic and secondary spinal affection. By this method of tabulation I hope that attention may be drawn to the pathological basis of spinal deformities.

The mode of treatment adopted in the various cases is indicated, together with the results. With regard to the latter, in the case of scoliosis and some other non-tuberculous affections the important deduction is that deformity can be cured in its earlier stages, and that in most cases a combination of instrumental with gymnastic treatment is necessary for this purpose. Each case must be carefully studied before any treatment is adopted.

A CASE OF SECONDARY THYROID GROWTH.

By A. WILLIAM SHEEN, M.S., M.D., F.R.C.S.,

Senior Assistant Surgeon, Cardiff Infirmary.

THE following case is interesting on account of its rarity:

The patient, a married woman, aged 58, was admitted to the Cardiff Infirmary on May 24th, 1898. Her mother's sister's daughter had had a large goitre. Her condition on admission is shown by the illustration. She is a pale, somewhat emaciated woman. She has had the bronchocele for thirty-eight years, and it does not inconvenience her. It is large, trilobate, the left portion—where the growth started—being of calcareous hardness, the remainder tense and elastic. Over the left occipital region is a tumour the size of a cocoanut. This has existed for four years and a half. Its growth, at first slow, has for the last year been rapid and accompanied by aching pain, troublesome pulsation, and a murmur in the left ear. On detailed examination the tumour is found to be ovoid in form, with the larger axis directed transversely; it can be manipulated freely without much pain, is firmly fixed to the deeper structures, and appears to have a thickened border of bone at its upper and inner margin. It is soft and fluctuating, and shows pulsation, which can be easily seen and felt, and appears to be expansile. There is a faint murmur to be heard over the tumour.

On June 14th the left external carotid was ligatured. At the time of ligation the pulsation in the tumour was immediately much lessened, but was still just perceptible. Two days later it was noticed that the tumour had become markedly softer and slightly smaller. Subsequently, although the patient expressed marked relief from the aching pain and buzzing in the left ear, the tumour remained about the same—soft, and with a feeble but distinct pulsation. Its tenseness and vigour of pulsation seemed to vary from time to time.

On August 15th an artery in the position of the left occipital, which could be felt pulsating at the border of the swelling, was cut down upon and ligatured under local anæsthesia. No difference followed this.

On September 14th, under chloroform, a flap was turned down from the scalp exposing the tumour, which was found to have a thin fibrous covering, to be soft, very vascular, and of a purplish-red colour. The bone at the circumference of the tumour encroached slightly on to its surface terminating in a rough, "bitten-out" margin. The periosteum, traced to the surface of the tumour, was continuous with and lost in its thin fibrous covering. The base of the tumour seemed to rest upon bone, but the fingers could not be dipped sufficiently deeply into it to be certain. Accidentally a small perforation was made in the tumour and there was troublesome hæmorrhage, which was eventually stopped by underrunning and pressure.



Case of secondary thyroid growth. (From a photograph.)

The wound healed by primary union, and on October 5th the patient was discharged. She had gained eleven pounds in weight whilst in the hospital.

REMARKS.

The tumour was at first thought to be an aneurysm connected with the occipital artery, or possibly a very vascular sarcoma. Removal of a piece for microscopical examination was inadvisable on account of its vascularity. Acting upon the valuable suggestion of my colleague, Mr. Lynn Thomas, who was watching the last operation, I began to consider the possibility of the tumour being a secondary thyroid growth, and was able to find references to similar cases in Mr. Bland Sutton's work on *Tumours*, where a case similar to my own is figured and quoted. It was originally put on record by Mr. Henry Morris in the *Transactions of the Pathological Society*. The patient, a woman aged 44, died with a large pulsating tumour over the left parietal bone; there was also a tumour in the sternal end of the right clavicle and in the upper end of each femur. The tumour on the skull had existed for six years. Its structure was that of the thyroid gland. Several similar cases are referred to, the tumours in each case being multiple, and occupying the skull, long bones, and vertebræ.

I believe my case to be of a similar nature, differing only in the tumour being solitary. The growth originates either in the bone of the skull vault or beneath the pericranium. It has existed for five and a half years, and for at least the last year has not enlarged, and the patient's general health has improved.

The distressing symptoms were much alleviated by the ligature of the external carotid, but the other operative procedures were of no value, and might have been avoided if a correct diagnosis had been arrived at earlier.

THE HARVEIAN ORATION

Delivered at the Royal College of Physicians of London on October 18th, 1899,

By GEORGE VIVIAN POORE, M.D., F.R.C.P.,
Physician to University College Hospital.

[After a reference to the foundation of the Harveian Oration and to benefactions to the College during the past year, Dr. Poore said:]

The Science of the Ancients.

We meet upon the day dedicated by the Church to the memory of St. Luke, "the beloved physician," the medical companion of St. Paul.

Without entering upon the vexed question of the precise identity of "Luke, the beloved physician," it may be well to dwell for a few moments on the condition of medicine in the first century. Of the state of medical knowledge at this time we are in no doubt. Of two of the best known ancient medical writers—Celsus and Galen—one lived shortly before the Christian Era, and the other about 150 years after it. From their works, therefore, we are able to judge as to the probable attainments of a decently educated physician who lived at a period equidistant from both.

Alexandria was at this time the chief centre of learning, in which every department of literature and natural knowledge was provided for. In this famous "teaching university" of the Ptolemies not only had all the wisdom of the ancients been collected, but the students of mathemics, physics, astronomy, geography, zoology, and medicine were furnished with all the practical instruction possible. Anatomy, the groundwork of medicine, was in an advanced state, and was taught by dissection of the human body. The practice of embalming had been followed in Egypt for centuries before the time when, as we read in Genesis, the body of Jacob was embalmed by the physicians; and it is not surprising that a knowledge of anatomy and disease should have first attained exactitude in a land where "*post-mortem* examinations were of hourly occurrence."

It is impossible not to believe that these frequent observations of the dead must have led to the accumulation of facts which were of value to the living.

In the centuries immediately preceding and following the Christian Era there was an enthusiasm for natural knowledge, and the great ones of the earth vied with each other in the collection of books and the provision of facilities for students. In Pergamos, the birthplace of Galen, was a famous library and medical school; and Galen, we are told, studied not only here but also at Alexandria, Corinth, and Smyrna, where (as probably elsewhere) similar facilities existed.

The reader of Celsus cannot fail to be struck with his accurate records of cases, and to be convinced that by this author (as probably by his contemporaries) observation counted for much and mere authority for little. It is well to remember that the physician of the first century could treat a fracture or dislocation with splints and bandages very much on modern lines; that he could cure a cataract, trephine the skull, and boldly cut for stone without the aid of anæsthetics.

Soot of frankincense was a favourite antiseptic, and his frequent mention of wine and oil for the treatment of wounds bids us remember that Celsus and the "good Samaritan" were trained in the same school.

St. Luke tells us of the woman who "had spent all her living on physicians," an echo possibly of the well-known fact that, in the Roman Empire, specialism in medicine and surgery had, for purposes of gain, been pushed to ridiculous extremes.

It must, however, be remembered that the leaders of medicine at this time were men of wide cultivation. Celsus and Galen had "taken all knowledge for their province," and regarded medicine as one branch merely of natural knowledge in the pursuit of which the best intellects were engaged, and of which, as we learn from Pliny, the literature was enormous.

The physician of the first century had probably mastered Euclid's elements; and Euclid, be it remembered, was a natural product of his time, and his work is an eternal monument to the inexorable logic of facts.

Greek philosophy and Greek medicine as a part of it was grounded on the solid basis of observation. It was the product of sane minds trained in the pure atmosphere of liberty, and nurtured in sound bodies developed by manly exercises. To the mind's eye it stands out, simple in form, faultless in beauty, eternal in strength; like the temple of Pallas Athene on the rock of the Acropolis, which, mangled though it be, still rears its noble form to check our tendency to mental arrogance and to inspire us with the hope that there be things which may outlive the ragings of man and the warring of the elements.

Darkness gradually overwhelmed the enlightenment of the Greeks. Philosophy gave way to mysticism, reason was swallowed up by superstition, and inquiry was strangled by authority. Men engaged in endless speculations, and tried by fire and sword to settle questions which could not be solved by reason—questions which now barely serve to furnish a little damp ammunition for the political pyrotechnist.

Intellectual training was almost limited to dialectics, and men could argue so nimbly and with such faultless logic from phantom premisses, as to justify the later witticism that language was given us to conceal our thoughts. Under these blighting influences medicine withered almost to death, and the physicians of the fourteenth century were more ignorant than those of the first century. It is tolerably certain—to take a concrete example—that the beloved companion of St. Paul had a more extended and more scientific grasp of medicine than the immediate predecessors of Vesalius and Harvey.

Science and Handicrafts.

But if science in the Middle Ages stood still, the handicrafts progressed, and found ultimate expression in buildings marvellous for their engineering skill and matchless beauty, which enshrined all that the most cunning hands, impelled by artistic imagination and devotional enthusiasm, could produce. Science can never know what it owes to the handicrafts. Not only has it been largely recruited from their ranks, but it is obvious that science cannot progress without the craftsman to furnish it with instruments of precision. Chemistry could not exist without the glassblower; astronomy and microscopy owe their very existence to the optician, while medicine and physiology have advanced *pari passu* with the power of recording and measuring. All branches of science must unite in doing homage to the printer who made the Renaissance possible. Further, let us never forget that the Middle Ages were not without their high ideals, and that the mediæval priests were indefatigable in preaching charity. Many of our asylums and hospitals owe their existence to the exhortations and piety of ecclesiastics. To take only one example, let us not forget that St. Bartholomew's Hospital owes its existence to a mediæval prebend of St. Paul's, and that Rahere, by providing a place in which our Harvey subsequently observed disease, must be allowed to have some share in Harvey's great discovery.

Harvey's Life.

In briefly reviewing Harvey's life and work we must, in order to rightly estimate his genius, take into consideration the circumstances in which he lived.

Harvey was born at Folkestone in 1578, into a world distracted by religious dissension. Queen Elizabeth was excommunicate; the massacre of St. Bartholomew was still fresh in the memory: the Netherlands were fighting Spain for life and liberty; Mary of Scotland was a prisoner waiting her tragic end.

While Harvey was still at his mother's knee he must have learned how Drake had accomplished his circumnavigation and had returned laden with treasure; and as a lad of 10 he may have stood upon the cliffs of Folkestone and have seen how his countrymen, then as now, could sink minor differences in the face of a common danger, as, led by the patriotic Lord Howard of Effingham, our fleet drove the Spanish Armada to its destruction.

Upon this great victory there followed a period of peace, prosperity, and extended commerce. The manor house was tending more and more to replace the fortified stronghold

of the feudal chieftain, a certain evidence of advancing civilisation; men found leisure for contemplative work; and the judicious Hooker began to teach that God revealed himself in the natural laws of the world as well as in the letter of the Scriptures. Agriculture flourished, and accordingly we find that the promising son of the prosperous Kentish yeoman is sent from the King's School at Canterbury to Caius College, Cambridge. From Cambridge he goes to Padua, where alone in Europe he could receive anything like adequate instruction in anatomy, and where Fabricius ab Aqua Pendente held the torch which Vesalius had kindled, and from which our Caius had brought a vitalising spark to England. At Padua Harvey must have lived in a scientific atmosphere, and may occasionally have formed one of an audience of 2,000 persons who hung upon the words of Galileo Galilei, the immortal professor of mathematics. After graduation in 1602 Harvey settled in London, married Elizabeth Browne, the daughter of the King's physician, became a Fellow of our College in 1607, succeeded to the post of physician at St. Bartholomew's in 1609, was appointed our Lumleian lecturer in 1615, and in 1618 was made physician extraordinary to James I. It was not until ten years after this that Harvey in 1628, at the age of 50, published in its final form his ever-famous essay on the Circulation of the Blood.

The thirty years which intervened between the commencement of Harvey's studies at Padua and the publication of his essay (1598-1628) was a period of comparative political tranquillity in which Harvey, occupied with matters purely medical, found leisure in the intervals of practice for that brooding of the mind which is necessary for the effective incubation of all fertile ideas.

The intellectual and literary productiveness of these thirty years was such as must strike our special wonder. In this period Shakespeare produced *Hamlet*, *Macbeth*, *Othello*, *Lear*, and other plays, admittedly the greatest creations of the human mind; Gilbert published his work, *De Magnete*; Galileo's discoveries were bringing him into conflict with the Holy Office at Rome; Kepler enunciated his laws; Napier announced the invention of logarithms, and Francis Bacon was busy in issuing his pregnant thoughts.

From 1629 to 1649 Harvey's life was less settled. First, he is appointed by the King to travel with the young Duke of Lennox; next he attends his Sovereign in Scotland, and then goes with Lord Arundel on an embassy to Vienna. This brings us to the year 1636, and three years later we find him appointed Senior Physician in Ordinary to the King, with whose fortunes thenceforward he is closely and personally associated. Harvey was in charge of the young Princes at the battle of Edgehill in 1642, lived with the King at Oxford while that city served the functions of a Court and barrack, as well as of a university, and was Warden of Merton College from April, 1645, to May, 1646, when the city finally capitulated to Fairfax.

This made an end of the semblance of Court life. The King was now practically a fugitive and the Royal Household all adrift.

When the King's cause reached its final catastrophe in 1649, it must have brought to Harvey a deep sense of personal loss, for we have abundant proof that the physician enjoyed the absolute confidence of Charles, who at Edgehill confided to his keeping those that were dearest to him, and who chose Merton College as a safe asylum for his Queen at a time when Harvey was its Warden.

From 1649 Harvey, who was now a widower, was without a home of his own; but we find him in the City or at Roehampton, or at Coombe, as the welcome guest of one or other of his brothers, who had so well managed his worldly affairs that he was, despite the troublous times, very well off. He still retained the Lumleian lectureship. It was in 1650 that Ent, in a famous interview, obtained from Harvey the manuscript of his work on Generation. In 1651 Harvey expressed his intention of building a library and museum for our College, which was open in 1653; and the year following he excused himself, on the score of age, from assuming the burden of our presidency. In 1656 he resigned the Lumleian lectureship, which he had held for forty years, and in doing so gave us his estate at Burmarsh; and on June 3rd, 1657, he died at the age of seventy-nine.[1]

Harvey was a born naturalist. He could not help observing. He was, in this respect, like Aristotle or Pliny, Nehemiah Grew, White of Selborne, John Hunter, and Charles Darwin. Like all men who have learnt to distinguish words from facts, his literary style was simple and direct. With him "brevity is the soul of wit." His essay, "De Motu Cordis," the result of twelve years of study, meditation, and experiment, is so simple and direct, and written with such attention to method and logical sequence, that it cannot fail to convince the unprejudiced mind. There is in it scarcely a redundant word, and it may be read in a few hours.

Harvey's passion for observation is made evident by several passages in his life. In his study of the circulation he made use of every living thing within his reach that had a visible heart. When absent with the Duke of Lennox in France in 1631, he writes to Lord Dorchester that, "by the way, we can scarce see a dog, crow, kite, raven, or any other bird, or anything to anatomise." When in attendance upon the King in Scotland in 1633, Harvey escapes from the pomp of courts and ascends the Bass Rock to study for himself this procreant cradle of the sea birds. When he was travelling with Lord Arundel we learn how Harvey (whom the Ambassador styles "Little Doctor Harvey" and "Honest Little Harvey" "would still be making observations of strange trees and plants, earths, etc., and sometimes like to be lost."

After the outbreak of the Civil War, we find Harvey stealing a few hours from duty to visit Percival Willoughby at Derby; and during the occupation of Oxford by the King, Harvey finds time to be with Bathurst at Trinity College, and study, by the observation of eggs, the progress and way of generation. In short, Harvey's statement to Ent in 1650 that "the examination of the bodies of animals has always been my delight" is abundantly justified by the scanty facts of his personal history.

In the pursuit of natural knowledge Harvey never tired, because "the labour we delight in physics pain." He seems to have risen superior to the political violence of the time, and to have felt that the establishment of the facts of Nature was of more importance than the ephemeral questions by which professional politicians seek ascendency. No man can successfully interrogate Nature unless he be constitutionally honest, and it is not therefore surprising that Harvey should have earned the entire confidence of the King and Lord Arundel. It must be admitted that, considering the rancour of the times, he suffered singularly little at the hands of the Parliamentary party. His papers appear to have been destroyed by a mob which visited Whitehall, but no harsh treatment was ever meted out to Harvey by Cromwell or his subordinates. This fact is probably due not only to the guileless simplicity of Harvey's character but to the sanity of the reformers. Cromwell could recognise a wise man when he met one; and, although he knew the uses of fanaticism, he was not one to tolerate the mastery of a mob. One cannot but contrast the safety of Harvey with the fate of Lavoisier, who, a hundred and fifty years later, was hurried to execution with the cry that "The Republic has no need of *savants*."

The Experimental Method in Medicine.

I have next, by Harvey's bidding, to exhort my brethren to search out the secrets of Nature by way of experiment.

If knowledge is to advance, investigation is a necessity. Not only is it true that, as Aristotle pointed out, the greatest pleasure in life is contemplation, but the philosophic mind is never dull, and the joys of the successful investigator are probably the greatest which this world has to give.

We are told how Archimedes, when the idea of "specific gravity" flashed upon him, was overcome by a paroxysm of delight.

Surely, also, we may surmise that the sight of the New World on October 12th, 1492, must have more than compensated Columbus for all his toil.

One wonders what must have been the feeling of Horrocks, the gifted contemporary of Harvey, the parish priest of Hoole in Lancashire, who at the age of 20, having foretold a transit of Venus, which Kepler had overlooked, verified his prophecy by actual observation, on Sunday, November 24th, 1649, in the short and precious interval between matins and evensong.

One can well credit what is recorded of Newton, that when the goal of his great discovery was in sight his mind

was so moved that his calculations had to be finished by a friend.

In like manner, the modern investigator, who by infinite pains turns a disease from a word into a fact; and who by careful isolation, cultivation, and inoculation, draws back the veil of mystery, and points the way towards the prevention and cure of a pestilence, surely experiences an unsullied joy such as the victorious general, the idolised plutocrat, the the lucky gambler, and the adroitest of parliamentary hands have no knowledge of.

The soul is invulnerable. The well-stored mind soars above the whips and scorns of time. When, after a period of civil strife unequalled in the history of this country, Ent sought out Harvey in 1650, and asked "if all were well with him," "How can it be?" was Harvey's reply, "when the Commonwealth is full of distractions, and I myself am still in the open sea." "And truly," he continued, "did I not find a solace in my studies and a balm for my spirit in the memory of my observations of former years, I should feel very little desire for longer life. But so it has been that this life of obscurity, this vacation from public business which causes tedium and disgust to so many, has proved a sovereign remedy to me." Here we have from Harvey's own lips precious testimony to the content which is to be found in searching out the secrets of Nature.

> Happy is the man that findeth wisdom;
> Her ways are ways of pleasantness, and all her paths are peace.

Nature is omnipresent, and the study of her affords the best discipline for the mind, for she only yields her secrets to the man of truthful spirit who works with patience.

All that can be said under this head is to be found in the Book of Wisdom, written probably at a period not very distant from the Christian era, when, as we have seen, there was an enthusiasm for natural knowledge. Of wisdom this writer says:

> He that riseth up early to seek her shall have no toil, for he shall find her sitting at his gates. Her true beginning is desire of discipline, and the care for discipline is love of her; and love of her is observance of her laws; and to give heed to her laws confirmeth incorruption; and incorruption bringeth near unto God; so then desire of wisdom promoteth to a kingdom. If, therefore, ye delight in thrones and sceptres, ye princes and peoples, honour wisdom that ye may reign for ever.

That the wisdom of which this writer speaks is such as is got by "searching out the secrets of Nature by way of experiment" is scarcely open to doubt, for he says (and it might be Aristotle who speaks):

> For himself gave me an unerring knowledge of the things that are; to know the constitution of the world and the operation of the elements; the beginning and end and middle of times; the alternation of the solstices and the changes of seasons; the circuit of years and the position of stars; the nature of living creatures and the ragings of wild beasts; the violence of winds and the thoughts of men; the diversities of plants and the virtues of roots.

The establishment of facts is now recognised to be of such importance that the highest scientific honours are rightly reserved for the disciplined worker who helps in ever so small a degree to increase the sum of the verities. No man of science thinks less highly of a discovery because its practical utility may not be apparent. Generalisations can only be made after the accumulation of many facts, and the fortunate man who demonstrates some far-reaching law of Nature must recognise that he owes his discovery to the patient disciplined workers who have made his generalisation possible.

The great generalisations of modern times, such as the laws of gravity, the doctrine of evolution, and the correlation of the physical forces are associated with the names of Newton, Darwin, Joule, Grove, and others, but these great men all recognised that the stones of which their edifices were built had been quarried, squared, and set by an army of workers, without whom the genius of the architect could not be manifested.

Harvey's discovery was not a great generalisation applicable to the whole visible universe, and its importance was appreciable only to a specially educated class.[2]

Harvey's discovery was nevertheless the first of a series which have exercised enormous influence over human welfare.

Before we possessed a fair knowledge of the physics of the circulation, a proper appreciation of the symptoms of the varied diseases of the circulatory organs, such as syncope and asphyxia, thrombosis and embolism, was impossible. Sufferers who are now treated rationally instead of being tormented empirically have to thank those who have sought out the secrets of Nature by way of experiment.

The fact of the systemic and pulmonary circulations being established, men began to search out the reason of this double circulation, but it was not until Priestley and Cavendish and Lavoisier had founded modern chemistry that the relationship of circulation to respiration was fully established. The necessity of fresh air and the quantity needed for the healthy working of the body are now commonplaces. The working classes of this country have shown themselves ready to support politicians who have legislated for more light and air in the house and in the workshop, and some day they will recognise that this advance is really traceable to the quiet workers who have been engaged in searching out the secrets of Nature by way of experiment, among whom Harvey must ever stand pre-eminent.

The microscope has informed us of the various cellular elements which circulate with the blood, and we have learnt, and are still learning, to differentiate various forms of anæmia, to attribute to each its true proximate cause, and to indicate the direction in which relief is to be found. The spectroscope, again, is informing us as to the influence of inspired gases on the blood, and the precise dangers incurred by workers in noxious places. This knowledge has suggested preventive measures and measures of recovery, for which thanks are due to those who have been busy in searching out the secrets of Nature by way of experiment.

The great advance of the latter half of this century has been the discovery of microscopic parasites in the blood and tissues. It is but fifty years since Davaine demonstrated the bacillus anthracis in the blood, and the facts of a similar order since accumulated have bewildered us by their number and variety. To take only one example: we have attained to a certain knowledge of the physical cause of the plague, which in times past has numbered its victims by hundreds of millions. This disease has been isolated and cultivated. It has been sent half round the world in a tube, and has been reinoculated in animals. Some of these animals accidentally transmitted the disease to their keeper, who in his turn infected his medical attendant and nurses. The disease manifested all its ancient virulence, but a knowledge of the cause enabled the plague to be stayed. The much-honoured and lamented victims of Vienna have demonstrated to the world at large how the pestilence which walketh in darkness has been illuminated by the full light of science.

We are full of hope as to the good which will follow on the discovery of the malaria parasites in the blood, and their transference by means of mosquitos. The part which insects play in the causation of the diseases of men and animals is proving to be a fertile field of research, and it is not impossible that those who are called upon to take up the white man's burden in the tropics may learn to appreciate the labours of those who have sought out the secrets of Nature by way of experiment.

There can be no doubt that the rational and methodical observation of disease, assisted by experiment, has had an enormous influence for good on manners and morals. It is to the leaders of medicine that we owe the recognition of the fact that conduct which we once regarded as sin, calling for cruel and revengeful punishments, is in reality disease, which must indeed be controlled with firmness, but firmness tempered with mercy rather than vengeance. It is probable that one of the causes which has led to the decrease of our prison population and the increase of our asylum population has been the gradual appreciation by the educated public that much disorderly conduct is, in reality, disease. We are more ready now than heretofore to "forgive those that trespass against us." There can be no doubt that our increased power of recognising the early stages of brain disease, a power which we largely owe to those who have sought out the secrets of Nature by way of experiment, has made for mercy.

The average man regards medicine as merely the art of curing disease, and judges of its progress by the degree to which it enables him to enjoy life, often in defiance of common sense and morality. The higher aim of medicine, however, is to point out man's true relationship to his surroundings in this world. Our relationship to our fellow men, the lower animals, vegetation, the atmosphere, sunlight,

water, and earth, can only be determined by the study of "the things which are," and by searching out the secrets of Nature by every means which human ingenuity can devise.

The great causes of strife and uncharitableness have been found in questions which are insusceptible of proof. So soon as proof is furnished by an appeal to experiment, all excuse for quarrelling is gone. Who now thinks of vituperating his neighbour because of his views as to the movement of the earth or its probable age?

Our study of the things which are makes for good morals. In relation to the purity of air and water, the one thing essential is that we love our neighbour as ourself, and that we do unto others as we would they should do unto us. Until the individual reaches this stage of civilisation there can be no permanent advance.

I may, perhaps, here be permitted to state my belief that our relationship to the earth is definite and inexorable, and until this is recognised by the individual, and the individual is encouraged to act as his moral sense directs, we shall be in danger of unnecessary overcrowding, sterile soil, polluted rivers, putrid estuaries, and poisonous molluscs.

It is our neglect of duty in this respect which (among other things) is bringing ruin to many of our endowed charities and seats of learning, which, while they derive a diminished income from their estates, are being crippled by the burden of local taxation, much of which is levied with the express object of carrying fertilising matter to the sea.

Great as are the positive gains of research, the negative advantages are scarcely less important. When a question is moved from the region of conjecture to the region of fact, we not only increase the sum of knowledge but we diminish the stock of error. The need of controversy vanishes, and we cut the ground from beneath the feet of the quack. Those who now "fall into the hands of the physician" are at least not subjected to treatment which has been proved to be useless. This is a negative gain. I do not claim for medicine any monopoly of quackery. That would not be correct. The money changers are ever in the temple, and false prophets abound. There are plenty of theological quacks, political quacks, legal quacks, and commercial quacks. There is no quack more dangerous to the commonwealth than the enthusiastic politician posturing as a philanthropist, ever eager to incorporate each new scientific fledgling in an Act of Parliament, and who forgets that the authority of the law may check progress as surely as did the authority of mediæval theology. We used to say, *De minimis non curat lex*: but this maxim is scarcely applicable to modern legislation, much of which leads mainly to wasteful litigation, the infliction of trumpery fines and considerable costs, and the maintenance of social parasites.

There have always been two schools of thought in regard to scientific inquiry. One school, fearful lest inquiry into proximate causes should lessen our reverence for the ultimate cause, protests that "all is vanity," and "he that increaseth knowledge increaseth sorrow." The other school finds in wisdom a spirit "clear in utterance.....unpolluted.....loving what is good.....beneficent, loving toward man, steadfast, sure, free from care.....all-powerful.....an effulgence from everlasting light, and an unspotted mirror of the working of God." It is quite impossible not to admit that our increased knowledge of the laws which regulate the visible universe has increased our living faith and added to the glory of God, while it has made it more difficult for men to make gods after their own image, and use them for their own purposes. Modern medicine is teaching us that much bodily suffering is due to man's wilful neglect of the beneficent laws of Nature. That diseases are due to ignorance and disregard of law, and are not "sent" as scourges by a petulant and capricious deity is clearly a doctrine which in no way dims the glory of God.

That "the steadfast searching out of the secrets of Nature by way of experiment is the most promising path to social progress," is a doctrine which at no time has commanded universal assent. There have always been fatalists, who have argued that we must accept, without question, what is sent us; that we must bow in submission to a "will" without really seeking to find out what that "will" is.

There have always been trustful souls—saved and half-saved—persons with *idées fixes* to whom mental progress is painful; who see sin where none is, and who find blasphemy in the simplest acts; for, as Shakespeare says, "there is nothing either good or bad but thinking makes it so." Puschmann records how the nuns of Bologna were offended by the skill and enterprise of Tagliacozzi, the great master of plastic surgery, who, as they alleged, had been guilty of blasphemy by presuming to alter the human form. These poor souls were tormented by voices which repeated the words "Tagliacozzi is damned," and it is recorded that their frenzy was not quieted until the body of the surgeon had been exhumed and reinterred in unconsecrated ground. It is barely half a century since the use of anæsthetics for the relief of the pangs of labour was denounced as an impiety and contrary to Scripture, and nowadays there are those who object to the simplest and most obvious measures for preventing syphilis, and in the name of purity denounce any attempt to mercifully restrain those whose profession is to traffic in impurity. The plain practical duty of the physician, however, is to prevent, cure, or alleviate disease by the most direct methods. Those who hesitate to relieve suffering on metaphysical grounds should change their profession.

So, with regard to another burning question, there be those who apparently hold the view that a guinea-pig is of more value than many babies, and that operations on the lower animals, no matter how carefully they be done, if done for the purposes of research, diagnosis, or relief, and not with the object of making mutton tender, pigs fat, or horses quiet, are to be denounced as atrocities. With such as these it is useless to argue. But seeing that many honoured members of our profession have themselves been vivisected by the envenomed tongues and sharp pens of a few noisy people, it may be well to point out that no conviction for cruelty or breach of law has ever been obtained, and that hearsay and the misinterpretation of physiological writings is not evidence, at least on this side of the Channel. The money collected by these strange apostles of mercy is not spent in the law courts, where mutual cross-examination would be possible, but in attempts to institute a sort of medical excommunication, and in efforts to dam the stream of charity by sophistical utterances such as Tennyson pronounced to be "ever the blackest of lies."

Meanwhile it behoves the medical profession to bear a wary eye lest fanatics should seek to impose immoral tests upon applicants for hospital appointments, tests, be it remembered, which would have excluded Harvey from the service of St. Bartholomew's.

No hospital governor who coquets with tests of this kind can possibly command the respect of our College, nor can we admit that such an attitude towards research can no anything but harm to the cause of the suffering poor.

In this country we have always wisely recognised the uses of opposition. The stability of our political organisation has been largely due to the fact that the party in power is subjected to the ruthless criticism of the Opposition, "the toad ugly and venomous" which "wears yet a precious jewel in its head." So it has been in medicine, where scientific advance has been checked not only by the criticism of the learned, but occasionally by the clamour of the prejudiced and ignorant. We have seemed at times to lag behind our neighbours, but our advance, if occasionally slow, has generally been sure. The party of scientific advance is necessarily always a small one, and it is possible that the relatively ignorant may cause some temporary discomfort to the learned few. But this is the extent of their power. The true spirit of inquiry, like the divine afflatus of the poet, is not subject to human control, and the laws of Nature are more permanent than Acts of Parliament.

NOTES.

[1] Some eight or ten generations of men have passed away since Harvey's time, a period which appears long to the individual but which is but a brief span in the history of a nation or the history of human progress. In connection with Harvey there are facts which show the continuance of our national life, which seem to bring us nearer to him, and which are not without interest. Our gracious Queen is but eighth in direct descent from James I, to whom Harvey was physician-extraordinary. Our Prime Minister comes in the direct line from Burleigh, the great Minister of Queen Elizabeth, and Cecil, the great Minister of James. It was Elizabeth who pensioned Dr. Gilbert; it was Burleigh who befriended John Gerard. Queen Victoria has shown her regard for science by calling two successive Presidents of the Royal Society to the House of Peers, a gracious act which has certainly met with the approval of the Prime Minister, the scientific and philosophic qualities of whose mind are

perhaps to be traced to the circumstance that Cecil was grandson of Sir Anthony Cooke, who was also the grandfather of Francis Bacon. Again, it is not without interest to remember that the most unsparing critic of Harvey's great discovery among his own countrymen was Dr. James Primrose, the collateral ancestor of another living statesman distinguished for his wit, learning, and patriotism, of whom it may be justly said that he is nothing if not critical. Sir John Spencer, who was Chairman of the Court when Harvey was elected to St. Bartholomew's, had been Lord Mayor, and was the father of that Elizabeth Spencer who eloped with Lord Northampton, and from whom is descended a well-known living enthusiast for municipal government. Lord Arundel, with whom Harvey travelled, and with whom he was on the best of terms, is only seven generations in the direct line from the present Postmaster-General. Two of the witnesses of Harvey's will, Mr. Heneage Finch and Sir Edward Dering, were his nephews by virtue of marriages with Elizabeth and Mary Harvey respectively, the daughters of Daniel Harvey of Coombe. The present Earl of Winchilsea is only fifth in direct descent from Elizabeth Harvey; while the present holder of the Dering baronetcy is eighth in direct descent from Mary. [2] Although Harvey had probably taught the doctrine of the circulation for ten years before Bacon died, that philosopher gives us no hint that he was aware of it. Harvey's treatise was not finally published until two years after Bacon's death, so that Bacon's silence about Harvey's discovery is not very astonishing. But it points to the isolation of scientific workers before the establishment of the Royal Society, which has served as an invaluable exchange and mart for commodities, compared with which all the gold of the earth is "as a little sand." Our late President once remarked to me that Shakespeare's appreciation of our profession was not very flattering. This is not to be wondered at, for the doctrine of the circulation was certainly not taught until the year of Shakespeare's death (1616), and before the establishment of this doctrine rational medicine or rational biology was impossible.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

DUPUYTREN'S CONTRACTION OF THE PALMAR FASCIA.

An interesting case of Dupuytren's contraction of the palmar fascia came under my care recently. The patient, a tailor aged 71, said that about 10 years ago he first noticed that the palm of each hand became somewhat hard and stiff; and shortly afterwards contraction, beginning simultaneously in the little finger of each hand, gradually spread to the other digits. The condition of the left hand (a sketch of which I enclose) was marked by the fact that the second finger was



Condition of the left hand in a case of Duputryen's contraction of the palmar fascia. The right hand, with the exception of the ring finger, was similarly affected.

quite spared, while the right hand was similarly affected, with this exception that in the case of the ring finger the disease was only just commencing. The thumbs were partially implicated, so that the movements of abduction could not be performed to a greater extent than that illustrated in the diagram. The skin of the palms was considerably wrinkled from the presence of adventitious furrows, as well as the usual creases which were deeply exaggerated.

Wimpole Street, W. E. Archer Brown, M.B.

ANKYLOSTOMIASIS IN DOGS.

The ankylostoma duodenale is usually believed to be peculiar to man. The following instances of this parasite occurring in dogs may be of interest:

1. June 26th, L—— Tea Garden. The manager, Mr. R—— informed me that one of his dogs, a valuable foxhound, had just died after a brief illness from what he believed was dysentery, the motions consisting of pure blood. The fact was mentioned that the dog had been seen eating human fæces. *Post-mortem* examination showed the presence in the intestines of blood and blood-stained mucus, and enormous numbers of ankylostomata. Death had resulted from hæmorrhage.

2. July 5th, M—— Tea Garden. *Post-mortem* examination of an unhealthy-looking "pariah" dog revealed numerous ankylostomata in the intestines.

3. July 8th, H—— Tea Garden. I made a *post-mortem* examination of a healthy-looking "pariah," and found a very few ankylostomata present.

The above instances show that the dogs which frequent tea garden lines in Assam suffer from ankylostomiasis. The tea-garden coolies are well known to suffer from the disease. Ample evidence of this is afforded, first, by *post-mortem* examination; secondly, by microscopic examination of the fæces; thirdly, by discovering the parasite in the fæces after the administration of thymol; fourthly, by the prevalence of anæmia. The coolies who are imported into Assam from various parts of India live in rows of dwellings known as "lines." They deposit their fæces in the immediate neighbourhood of their dwellings. Dogs, pigs, cows, etc., may be seen eating their fæces. The soil is probably infected with the eggs and embryos of the parasite, which probably survive a long time in the moist warm earth. Little or nothing is done to combat the disease. The use of latrines by the coolies and the disinfection of their fæces would be an effectual way of rendering the disease less prevalent; but the scepticism of the planters, the apathy of the Government, and the prejudicies of the coolies are obstacles to their use. Unfortunately there is no other way of keeping the disease in check.

Assam. Robert W. Gray, M.B., C.M.

SUPPRESSION OF URINE FOR FIVE DAYS.

I am indebted to the courtesy of Dr. Brittin, whom I met in consultation, for the permission to publish the notes of this case.

H. M., aged 56, had been ailing for some months with occasional attacks of abdominal pain. He was suddenly seized with suppression of urine. His condition was as follows: The abdomen is extremely distended, and tympanitic all over, even in the flanks. The umbilicus is protruded, and hard, and of a dark purple colour. Liver dulness normal. A catheter was passed, and the bladder found to be empty. Cystoscopy showed the bladder walls to be fairly normal. The left ureter appeared to be blocked with a plug of greyish mucus. From the right ureter a flame-shaped clot was protruding. Cancer of the kidney was diagnosed, whilst it was conjectured that the left kidney was either absent or destroyed.

The suppression lasted for five days and a few hours, and the patient at last consented to operation. Just before operating he passed seven ounces of urine, and the operation was postponed. During the next 48 hours he passed 62 ounces, the third day he passed only 3 ounces, and the abdomen was then opened. The intestines were empty, and of an unhealthy purple colour, the peritoneal cavity was filled with milky fluid. The left kidney was hard and enveloped in a stony mass of growth, the right was soft, but its ureter was apparently being compressed by a mass of hard nodules in the mesentery. The patient was sent back to bed, and in the next 24 hours he passed 169 ounces of clear urine. For the next seven days he passed an average of 100 ounces, the urine then decreased rapidly, and he died 11 days after operation.

On *post-mortem* examination the mesentery was found to be converted into a hard mass of carcinomatous growth, the intestines were not involved, the left kidney was completely destroyed, and could hardly be separated from the surrounding mass of cancer, the ureter was a mere fibrous cord, which could be dissected out from the general mass.

The right kidney was not involved except at the commencement of the ureter and a small portion of the pelvis. The ureter was patent, but had been apparently squeezed by the hard carcinomatous mass into which the mesentery was converted. Perhaps the manipulation during the operation had lifted up this compressing agent, whilst the evacuation of a large quantity of peritoneal fluid had given more room for the kidney and ureter to work.

It had been suggested that the peculiar congested colour of the umbilicus was due to compression of a persisting umbilical vein. This was found to be correct, and at the necropsy I was interested to find a large vein filled with clot, passing upwards from the umbilicus to the liver.

P. CLENNELL FENWICK, M.B.Lond., M.R.C.S., L.R.C.P.,
Surgeon to the Christchurch Hospital, N.Z.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

NEWCASTLE ROYAL INFIRMARY.

ENCYSTED VESICAL CALCULUS.

(By FREDERICK PAGE, Surgeon to the Infirmary.)

MY object in reporting this case is that it admirably illustrates the point laid down by Mr. Bruce Clarke in his excellent paper published in the BRITISH MEDICAL JOURNAL of May 13th—namely, where symptoms of cystitis persist, resisting all ordinary methods of treatment, even where the presence of a stone is not revealed by sounding, suprapubic exploration will frequently result in the discovery of an encysted calculus.

A man, aged 47 years, was admitted into the Newcastle Royal Infirmary in June, 1899. Ten years previously a stone was removed by lateral lithotomy. Six months ago his bladder symptoms returned, as indicated by the passage of a large quantity of blood by the urethra. Since this occasion there has been no repetition of the bleeding, his complaint being frequency of micturition, great pain on defæcation, and, after excretion or straining, intense pain at the end of the penis. On examination of the urine it was found to be neutral, and contained a considerable amount of pus, but no blood. On rectal examination there was great tenderness on either side of the prostate, and on the right side a hard, irregular nodule could be felt. The bladder was sounded on several occasions, and no calculus detected. With rest and irrigation of the bladder the symptoms subsided, but returned in about a fortnight.

Under an anæsthetic, the bladder was again sounded, and no stone could be felt. A suprapubic opening was therefore made for purposes of exploration, and a small irregular calculus, about the size of a small bean, was found encysted behind and to the right of the prostate. On further examining the base of the bladder with the finger, a sharp point was detected near the site of the stone already removed, and this turned out to be the point of a stone in shape exactly like an ordinary tin tack, the whole of which was embedded in the substance of the bladder with the exception of the projecting sharp point. This curious calculus was enucleated with the finger. All symptoms ceased, and the man left the hospital free from any inconvenience, and he continues to be well.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

W. WATSON CHEYNE, F.R.C.S., F.R.S., President, in the Chair.

Tuesday, October 17th, 1899.

AFTER an introductory address by the PRESIDENT, pointing out the advantage attaching to the cultivation of pathology in all its aspects and the disadvantages that come from extreme specialisation and isolation, a communication upon two cases of Congo sleeping sickness was made by Dr. Patrick Manson and Dr. Mott.

SLEEPING SICKNESS.

Dr. MANSON briefly recalled the clinical characters of this disease. It was limited to certain parts of Africa, yet cases occurred, widely scattered in consequence largely of migration. Its period of latency was remarkable. The negroes held its latency to extend over seven years, and probably correctly. Clinically there were three stages: First, one of physical and mental languor; secondly, one of sleep and of indifference, though from this the patient admitted of being temporarily roused; thirdly, to this there succeeded tremors, emaciation, convulsions, and invariably death. In one of the two cases death was attributable to hyperpyrexia; in the other to a series of epileptiform seizures. There was no impairment of reflexes and the eyes were in all respects normal. In most cases there was a general enlargement of lymphatic glands and the appearance of itching papules. It was stated that at times the hair, naturally dark black in the negro, would turn light and red. The blood in this disease had always been found to contain the filaria perstans, and the distribution of this parasite was strictly confined to the areas where the disease was endemic. Yet against a causal relationship it was to be remembered that this parasite in such districts was so common that it was present in half the negroes. In the Indians of British Guiana filaria perstans was frequently present in the blood, but the evidence as to the occurrence of sleeping sickness amongst them was imperfect. Not only did the embryos of F. perstans and F. nocturna differ, but the adult worms did also; that of F. perstans had a bifid tail. No evidence that the disease was bacterial was forthcoming.

Dr. MOTT related the results of the investigation of the central nervous system in these two cases of Congo sickness, which he illustrated by means of lantern slides and microscopic specimens. The brain and spinal cord, pituitary body and spinal ganglia were examined. To the naked eye the tissues in Case I presented but little change beyond some slight thickening of the pia-arachnoid. The cerebral convolutions were complex and not atrophied; the brain weighed 54 ozs. The two hemispheres were of equal weight, and there was no excess of fluid. In Case II (the younger patient) the dura mater was found adherent to the calvaria. A considerable quantity of cerebro-spinal fluid was present. The pia-arachnoid was somewhat thickened and opaque over the convolutions. The base of the brain likewise showed thickening and opacities of the pia-arachnoid. The weight of the brain was 36 ozs. Neither of the brains showed flattening of the convolutions, erosions on stripping the membranes, or dilated ventricles with granular ependyma. The nervous tissues before mentioned were removed so soon after death as to avoid *post-mortem* fallacies. Portions of different parts of the hemispheres, cerebellum, pons, medulla, and cord, as also the spinal ganglia, were stained by the Nissl, Marchi, and Marchi-Pal methods after suitable fixation. The microscopical examination of these sections exhibited in both instances similar conditions. There was a lepto-meningitis and encephalo-myelitis. Throughout the whole central nervous system, but especially in the medulla and base of the brain, sections showed all the perivascular limits distended with mononuclear leucocytes. The left cerebral hemisphere in Case II showed this condition in an especially marked manner, which very probably accounted for the right-sided fits from which this patient suffered towards the end of life. Sections were also stained for micro-organisms by Gram's, Pfeiffer's, and other methods, but with negative results, in this agreeing with the negative evidence obtained by Dr. Bullock, who examined the blood and lymphatic glands removed from Case II during life. Some of the cerebro-spinal fluid removed from Case II after death yielded on culture various organisms, but this evidence was of no value, since rigid precautions were not taken in obtaining the same; moreover, a large bedsore existed over the sacrum. The general and special appearance of the nerve cells was as follows: In Case I the outline of the nerve cells and their arrangement appeared fairly normal, neither was it considered that the neuroglia cells were markedly increased. The columns of Meynert in the cortex cerebri were distinctly evident, thus contrasting with the appearance of the brain in general paralysis. The cells themselves throughout the whole nervous system showed a uniformly dull, diffuse, staining reaction, and in none of the cells were the Nissl granules evident. This change was undoubtedly due to the hyperpyrexia during the last hours of life. In Case II the cells for the most part presented a normal outline and exhibited Nissl granules on the dendrons and in the body of the cell. In the medulla, however, a considerable number of cells showed chromolytic changes, and to a less degree changes were found in the motor cells of the anterior cornua. The cells in the left hemisphere showed degenerative changes in sections of the motor

area, Meynert's columns were not distinctly visible, and many of the cells seemed atrophied and broken up. Fibres: Sections of the brain and cord were stained by Marchi and Marchi-Pal methods. Nothing abnormal was found in Case I except perhaps that the tangential fibres were not so numerous as in the normal cortex cerebri. In Case II there was obvious wasting of the tangential fibres in both hemispheres but especially of the left. There was slight sclerosis of the crossed pyramidal tracts of the cord, more marked on the right side, and also a number of recently degenerated fibres were exhibited by the Marchi method. The arteries of the central nervous system exhibited no trace of endarteritis. In the choroid plexus there were numerous microscopical psammomata. The central canal of the spinal cord was filled up with proliferated glia tissue. The posterior spinal ganglia showed the same appearances around the vessels, but the ganglion cells in Case I only showed the diffuse staining of hyperpyrexia, and in Case II exhibited a fairly normal appearance. Could the changes above referred to account for the symptoms? The changes in the left cerebral hemisphere of Case II together with the evidence of degeneration in the opposite crossed pyramidal tract agrees with the convulsions of the right side observed during life. No doubt these convulsions were the expression of the increased irritability prior to death of the cortical motor neurons. The symptoms which were, however, present in both patients, and characteristic of the disease—namely, progressive drowsiness and lethargy, and the progressive weakness in body and mind, without any distinct paralysis or mental disability—could best be accounted for by supposing that the metabolism or functional activity of the neurons as a whole was affected injuriously either by some toxic product circulating in the blood or existing in the cerebro-spinal fluid; that this toxic agent, whatever it might be, occasioned great proliferation of mononuclear leucocytes beneath the pia-arachnoid and in the perivascular lymphatics. It might, however, be supposed that the functions of the nervous system were affected by an interference with their nutrient lymph supply, owing to the perivascular lymphatics becoming filled with leucocytes. The liver, kidneys, lungs, pituitary body, spleen, lymphatic glands, and duodenum, were also examined. The results were for the most part, with the exception of the duodenum and lymphatic glands, negative. The lymphatic glands were much enlarged owing to great increase of lymphocytes. Sections of duodenum showed a large number of lymphocytes, and a proliferation of the same in the lymphoid nodules. These facts were of interest in contrasting this affection with general paralysis, which by many authorities was still considered to be a primary meningo-encephalitis; yet, although the appearances of inflammation in this disease were as intense, and certainly more widespread, than any case of general paralysis which the speaker had seen, yet the cellular changes were, in comparison with those of general paralysis, slight; an argument in favour of the view that progressive paralysis of the insane was a primary disease of the neuron associated with secondary inflammatory changes.

Dr. William Hunter hardly thought the hyperpyrexia (in one of the cases recorded) due to the pulmonary abscesses, since the largest of these was no bigger than a filbert (Dr. Manson explained that one of these contained a dead parent worm; the others had probably a similar origin).

Dr. Harford-Battersby from what he had seen of sleeping sickness, remarked that the enlargement of the lymphatic glands was one of regular occurrence, and by the negroes was regarded as in some way causing the disease, for which reason some kind of native operation was carried out upon them. He thought, however, that the successful cures after such procedures rested upon the removal of glands enlarged from other causes. He had never heard of Europeans being attacked. The accessions of fever accompanying the disease were not malarial, since they were not benefited by quinine.

Card Specimens.

Dr. F. W. Andrewes and Dr. H. Morley Fletcher: Organs from Cases of Human Plague.—Mr. S. G. Shattock: Cultures of B. Coli, B. Typhosus, etc., rendered permanent by means of formalin vapour.—Dr. F. Toogood: (1) Hydronephrosis; (2) Aneurysm of Aorta perforating the Œsophagus.

Clinical Society of London.

Sir R. Douglas Powell, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, October 13th, 1899.

New Volume of Transactions.

On assuming the chair for the first time, the President remarked that he would defer making a formal address until he had witnessed more of the work of the Society. He presented the volume of *Transactions* just being issued, which contained the proceedings of last session, and he considered it an eloquent proof of the good work done by the Society. A third of the volume was occupied by the descriptions of cases exhibited on the clinical evenings.

Acute Streptococcal Meningitis Supervening in the Course of Chronic Parenchymatous Nephritis.

Dr. Rolleston described the case of a man, aged 22, admitted on the eighth day of his illness with a temperature of 103°, but without any definite evidence as to the nature of his illness, which had begun with tonsillitis. He was quite free from headache on admission, but the next day had two fits, passed into a condition of cerebral irritation, and died within 24 hours. The necropsy showed extensive purulent meningitis, due to streptococcal infection, and an acute nephritis on the top of chronic parenchymatous nephritis. No streptococci were visible in microscopic sections of the kidney, so the acute renal changes might have been toxic. But, inasmuch as cultures were not made from the spleen or heart's blood, it could not be certainly said that the streptococcal infection was confined to the meninges of the brain. Terminal infections in renal disease were known to be common in the lungs, pleura, and pericardium, but not in the meninges. In Flexner's statistical study of terminal infections in chronic heart or kidney disease, the few cases of meningitis that occurred were almost always due to pneumococci. Flexner had shown that in chronic renal disease the bactericidal power of the blood was diminished, and that terminal infections were therefore very liable to occur. This case was remarkable for the unusual site of the terminal infection, and for the latency of the meningitis. The tonsils were possibly the source of infection.

In answer to the President, Dr. Rolleston stated that the amount of urine passed was fairly copious.

Dr. Fred. J. Smith remarked that cases of purulent meningitis from such a cause were extremely rare; he had never seen one of the kind in the *post-mortem* room. But whilst purulent meningitis rarely supervened in the course of renal disease, pericarditis and pleurisy were common. Considering that tuberculous meningitis, commencing at the tonsils, was fairly common, no other trace of tubercle, except that in the tonsils and cervical glands, being sometimes found in the body, it was probable that in this case the tonsils were the actual seat of the streptococcal invasion.

Aneurysm of the First Part of the Arch of the Aorta Projecting into the Right Axilla.

Dr. T. Churton (Leeds) related the case of a man, aged 53, admitted June 15th, 1898, with a painful swelling on the right side of the chest, extending from the mid-axillary to the nipple line, half the size of a cocoanut, the seat of well-marked expansile pulsation. It was first noted two years before, but he only left off work three months ago on account of pain in the right arm. He had been confined to bed for a fortnight, was feeble, and had anginal attacks. Aneurysm was diagnosed. An aortic regurgitant murmur was heard over the fourth costal cartilage. Syphilis was denied. The aneurysm had been thought by a surgeon to be of axillary origin, but a resident believed it to be aortic, the diagnosis turning upon the effect of pressure upon the subclavian artery. On palpation, however, a slight heaving could be felt from the tumour to the sternum, and this area was dull. The heart's impulse was felt in the sixth space, $1\frac{3}{4}$ inch external to the left nipple line. The *bruit* was fine and whiffing, not suggesting a large regurgitation. There were no other marked pressure signs. The patient died on July 5th with symptoms of internal hæmorrhage. *Post mortem* the heart was found enlarged, chiefly the left ventricle; the mitral valve was normal, the aortic cusps were rather thick, but presented no

marked deformity. The cavity was not much enlarged, but the muscle was thick. The first inch of the aorta was fairly good, but beyond it was greatly dilated, even within the pericardium. Beyond the pericardial attachment the first part bulged outwards and downwards. Just outside the pericardium on its outer aspect was a long narrow slit leading into a sac measuring 5½ by 4½ by 3½ inches, having a thick lining of solid clot. At the upper and inner part of the sac was a small opening ¾ inch in length, from which blood had escaped into the pleura at the upper and posterior part of the thorax. The third and fourth ribs appeared to have been broken in the anterior axillary region, and the remains of the broken and separated parts were apparently contained in the wall of the sac. The ribs were intact as to their outer surfaces for two or three inches. The aneurysm lay wholly in front of the lung, the inner face of the upper lobe being closely adherent thereto. He pointed out as an unusual feature the point of projection of the aneurysm projecting into the right axilla, of which he had been unable to find another example.

Dr. F. J. SMITH thought that the loudness of a *bruit* was not commensurate with the amount of regurgitation, which was proportionate, not to the amount of *bruit*, but to the severity of the clinical symptoms. He asked what was the weight of the heart, and doubted if an aneurysm of the arch or descending aorta *per se*, and apart from valvular disease and regurgitation, had any effect on the weight of the heart. Did Dr. Churton consider that the aneurysm alone had led to hypertrophy of the heart? The direction of the aneurysm was an anatomical accident, so to speak.

Dr. CHAPMAN referred to Gross's dictum that in the *bruit* of aortic regurgitation, if the second sound far exceeded the first, the regurgitation was extensive; but this rule did not apply to mitral regurgitation.

Dr. ROLLESTON said there was much difference between regurgitant murmurs of the mitral and aortic valves. In the former case there was little or no relation between the loudness of the murmur and the amount of the lesion; but the relation between the two conditions was usually fairly proportionate in aortic regurgitation. In the absence of renal and cardiac disease aortic aneurysm did not, in his opinion, lead to hypertrophy of the heart.

Dr. PERCY KIDD also agreed that the loudness of the *bruit* was not proportional to the loudness of the regurgitation, but that the severity of the latter could be estimated by the clinical symptoms, and especially by the pulse. He had now under his charge at the London Hospital a man in whom the aneurysm bulged from the posterior wall of the arch, causing paralysis of muscles served by the recurrent laryngeal nerve, while there was a pulsating tumour over the scapula. In that case there was granular kidney.

The PRESIDENT said it was curious how large an amount of bone might be absorbed in these cases without the production of much suffering. He cited a case in which there was pulsation through the scapula, the swelling being just beneath the skin, with very little suffering. He agreed that the amount of *bruit* gave one very little idea of the severity of the valvular trouble unless the clinical symptoms were also taken into account. He thought it was pretty well settled that aneurysm of the aorta did not of itself cause cardiac hypertrophy.

Dr. CHURTON, in reply, quite agreed that hypertrophy of the heart did not always follow aneurysm. There were two signs which he considered indicative of severe aortic regurgitation, namely, obvious enlargement of the heart downwards and to the left, so that the regurgitant *bruit* was heard loudest not over the third or fourth costal cartilage, but over the fifth or sixth left cartilage. Bad kidneys or bad arteries alone did not always produce hypertrophied heart, although either condition usually had that effect; but he believed the combination of the two conditions invariably caused hypertrophy.

OBSTINATE ANÆMIA ASSOCIATED WITH PECULIAR TROPHIC DISTURBANCES AND WITH DOUBTFUL THROMBOSIS OF THE SUPERIOR LONGITUDINAL SINUS.

Dr. F. J. SMITH described the case of a girl, aged 19, who first came under observation in 1895, when she improved under iron. In 1896, while taking large numbers of Blaud's pills she developed features of peripheral neuritis. In 1898 she suffered from warts on one hand, which showed peculiar phenomena of growth and decay. In 1899 she became much worse, and was admitted with a grave degree of anæmia, and while in hospital developed most peculiar nervous symptoms consisting of (1) a prolonged condition of serious interference with the respiratory mechanism, with periods of hours of rapid breathing (66 or more per minute), alternating with hours of very slow breathing; (2) intermittent fits of unconsciousness with convulsive movements of face and right arm and leg. No treatment seemed of any avail, but the patient gradually improved until headache and pain in the legs were her only complaints. Incisions down to the bone of both tibiæ relieved the latter; nothing had touched the former. Dr. Smith summarised the points of interest in the case as follow: (1) Its extreme intractability; (2) nervous phenomena, apparently peripheral; (3) nervous phenomena, apparently of central origin.

In answer to the PRESIDENT, Dr. Smith stated that the incisions over the tibiæ revealed no effusion of blood or pus nor any tumours.

Dr. KIDD had seen the case in hospital and considered it very puzzling; he had inclined to consider the symptoms due to thrombosis.

Dr. NORMAN DALTON formerly thought thrombosis rare in anæmia, but this year he had seen three cases. A young woman with anæmia died last December, and he found thrombosis of all the cerebral sinuses. This year another girl, markedly anæmic, had great pain in the arm, and the veins of the part contained a thrombus. Whilst only this week he had seen a woman, aged 23, with persistent headache over the longitudinal sinus, and numbness and movements of the left arm. These symptoms he thought might be due to thrombosis of the longitudinal sinus. In that case, as in other cases of anæmia which did not readily yield to treatment, there was a suspicion of congenital syphilis.

Dr. ROLLESTON suggested that the case resembled one of Stokes-Adams disease.

Dr. SAVILL related the case of a boy, aged 15, with extreme anæmia, a little œdema around the ankles, a persistent loud double cardiac murmur, and intermittent high temperature. These symptoms persisted for seven or eight months, and he died. At the necropsy nothing was found to account for the symptoms until the head was opened, when on the front of each cerebral lobe near the longitudinal sinus a gumma was discovered. Striæ were then found upon the corneæ, and examination of the bones revealed several gummata. The case was evidently one of congenital syphilis.

Dr. C. R. BOX said that two years ago a case was admitted into St. Thomas's Hospital, under Dr. Payne, in the last stage, as it was supposed, of pernicious anæmia. The red corpuscles were considerably under a million, and there was a great increase in the eosinophile cells. A serpiginous ulcer was detected on the soft palate, which gave the indication for treatment, and, under iodide of potassium, the patient in the course of a month left the hospital quite well. He related another case with some thickening of the tibia, but on examining the blood no increase in the eosinophile cells was found. That patient died, and the ordinary signs of pernicious anæmia were found *post mortem*.

Dr. SMITH, in reply, admitted that the possibility of syphilis had not occurred to him; he would examine the patient again, bearing in mind the suggested diagnosis, and would give antisyphilitic remedies if the case proved suitable for their administration. The patient certainly always had spongy gums, but her teeth and nose were good. He promised to exhibit the patient at a clinical evening, and to add a postscript to the present report of the case before its publication in the *Transactions*.

OBSTETRICAL SOCIETY OF LONDON.

ALBAN DORAN, F.R.C.S., President, in the Chair.

Wednesday, October 4th, 1899.

HYDATIDIFORM DEGENERATION OF THE CHORION.

Dr. WILLIAMSON read a paper in which he reviewed briefly the earlier views of the pathology of the condition. He described the development of the chorionic villi, and the changes which occurred in them when undergoing myxomatous degeneration, the changes as observed by himself agreeing almost entirely with those previously described by other

observers. The "myxoma fibrosum" of Virchow was described, and the author gave his reasons for regarding this condition as closely allied with hydatidiform mole. The question of the priority of the degeneration of the chorion or the death of the embryo was discussed, and the conclusion arrived at that degeneration of the chorion usually preceded the death of the embryo. The relation of hydatid moles and deciduoma malignum was discussed. The author gave reasons for doubting the doctrine of Spiegelberg with regard to the fœtal origin of the hydatidiform disease, and quoted cases of repeated hydatidiform molar pregnancies occurring in the same woman. The usual naked-eye appearances of the mole were described. The author endeavoured to ascertain (1) the frequency of the occurrence of the condition, and (2) the effects of (*a*) age, (*b*) multiparity, (*c*) rapid child-bearing upon its production; concluding that: 1. Its approximate frequency may be once in 2,400 pregnancies; 2, that hydatidiform pregnancy may occur at any time during the child-bearing period, the age of the woman having very little influence; 3, that the condition is more frequent in those who have borne few children than in those who have borne many; 4, that it is not the rule for previous pregnancies to have followed upon one another with great rapidity. An inquiry was then made into the presence or absence of the usual signs and symptoms of normal pregnancy under the following heads: (1) Amenorrhœa; (2) vomiting; (3) activity of breasts; (4) blue coloration of vaginal mucous membrane; (5) softening of cervix; (6) uterine tumour; (7) uterine tumour and fœtal heart sounds. The conclusion was that all these symptoms and signs were usually present excepting the uterine *souffle* and fœtal heart sounds, but sometimes these might be heard; whilst, on the other hand, the only sign which was constantly present was enlargement of the uterus. The distinguishing features of the condition were then described under the following heads: 1. The size and other physical characters of the uterus, two classes of cases being shown to exist: (1) those in which the uterus was larger than would be expected from the probable duration of the pregnancy, (2) those in which the uterus was smaller, another feature sometimes present and of importance was uterine tenderness; 2, vaginal discharges, with or without the cysts; 3, hæmorrhage. The author then discussed the diagnosis, the conditions likely to be mistaken for hydatidiform mole being: (1) Concealed accidental hæmorrhage and placenta prævia; (2) the discharge of a pelvic hydatid through the vagina; (3) hydramnion, especially if combined with hydrorrhœa gravidarum. Cases in which difficulty had arisen were recorded. The complications met with were described: 1. Albuminuria, a frequent complication, in which two forms were to be distinguished: (*a*) one form in which the prognosis was good in which blood and epithelial casts were not present in the urine, (*b*) one form in which the prognosis was bad and in which these structures were found in the urine; 2, hæmorrhage, seldom fatal in itself; 3, sepsis—sapræmia, septicæmia, and pyæmia all being frequent complications. Prognosis: The mortality of the whole 25 cases was 20 per cent. The mortality of the 10 consecutive cases from St. Bartholomew's Hospital was 30 per cent.

Dr. Herman thought Dr. Williamson's analysis of his cases was exceptionally valuable, but he was surprised at the high mortality reported He did not think the mortality among cases of this disease in the London Hospital anything like so high. His own experience was that in most cases when the cervix was dilated and ergot administered the mole was expelled, and that patients got well. He did not remember ever having had to perform any intrauterine manipulation to get away such a mole. In a few cases the existence of myxomatous degeneration had been suspected, but in most it had not been thought of until the characteristic vesicles had been seen in the discharges.

The President called attention to the frequency of uncontrollable vomiting in association with hydatidiform mole; cases illustrating this had also been published by Brindeau and Bué. Keiffer traced vesicular mole to proliferating arteritis, which modified the development of the products of conception; this pathological change he attributed to the abuse of emmenagogues early in pregnancy. Neumann, Marchand, and Ludwig Fraenkel brought forward strong evidence that deciduoma developed from relics of hydatidiform mole. Marchand was also a strong supporter of the molar theory as to the origin of deciduoma, dissenting from the opinion freely expressed at a meeting of the Obstetrical Society in 1896, and since then supported by Veit.

Dr. Griffith referred to the rarity of myxoma fibrosum as in his opinion more apparent than real, the condition being easily overlooked in cases of fleshy mole unless carefully looked for. He asked if any Fellow present could say he had diagnosed, not merely suspected, a case in the absence of the extrusion of the characteristic cysts. He referred to the danger of perforation during attempts to remove the mole entirely.

Dr. Hubert Roberts asked whether Dr. Williamson considered the condition to be of maternal or fœtal origin, and whether he regarded it as a new formation or as a degeneration. He referred to Dr. Eden's observations, and pointed out that vascular degeneration had been found in the villi of a normal placenta. He asked whether any such changes had been observed in the stems of the degenerated chorionic villi. He thought that Dr. Williamson had not considered fully enough the possible relation of hydatid moles to deciduoma malignum.

Dr. Herbert Spencer said that Dr. Williamson's method of determining the frequency of hydatidiform degeneration by comparison with the number of cases of midwifery attended from the same hospital as that in which the moles occurred was a very fallacious one, and the proportion thus obtained was of no value whatever in estimating the rarity of the affection. The diagnosis from accidental hæmorrhage and placenta prævia was sometimes very difficult, and in the absence of the cysts (which were rarely passed) was generally of the nature of a guess. He regarded abdominal *ballottement* as of some value in the diagnosis, a fœtus being rarely present in cases of hydatidiform mole.

Dr. John Phillips wished to emphasise the difficulty of diagnosis between concealed hæmorrhage and vesicular mole. He had seen several cases treated, and was not aware of any septic complications, whether treated by tents or artificially emptying the uterus. He had never met with a case in which the cysts were passed in the discharge during any period of the illness.

Dr. Ludwig Fraenkel (Breslau) thanked the Society for having permitted him as guest to hear Dr. Williamson's interesting communication. The author had only briefly touched upon the relation of hydatidiform mole to deciduoma malignum. If he understood the author rightly he agreed with the opinion expressed in the form of a resolution at this Society four years ago, that deciduoma malignum was an ordinary sarcoma of the uterus pregnancy, and, like Virchow, regarded the disease as myxoma of the chorionic villi. On the other hand, the great majority of German authors regarded it as surely proved that deciduoma malignum arose from the epithelium of the chorionic villi, because the connection of the growth elements with the epithelial covering of the villi had been in several cases directly observed under the microscope. Hydatidiform mole was, according to recent researches, not a true myxoma, but a myxomatous degeneration of the stroma of the villi, with great overgrowth of the chorionic epithelium; it was really a chorio-epithelioma benignum. If the remains of hydatidiform mole underwent malignant development, there occurred a chorio-epithelioma malignum. Dr. Fraenkel referred to a case of his own, and another of which he had read, of the association of hydatidiform mole with double ovarian cystoma.

Dr. Heywood Smith said he thought there was a specimen of hydatidiform degeneration of the chorion at the Hospital for Women, and as far as he remembered it was diagnosed as such.

Dr. Williamson replied.

Specimens.

The following specimens were shown: Mr. J. B. Sutton; (1) A case of Rotation and Impaction of a Myomatous Uterus; (2) a Tumour of the Mesometrium, weighing 22 lbs; (3) a Myomatous Uterus, weighing 26 lbs., successfully removed from a woman, aged 74.—Mr. Robert Wise: A photograph of a very stout woman, aged 49, with Large Pendulous Uterine Tumour and a Lipoma as big as a Melon below the Right Breast.

LIVERPOOL MEDICAL INSTITUTION.

W. MACFIE CAMPBELL, M.D., President, in the Chair.

Thursday, October 5th, 1899.

USE AND ABUSE OF THE MIDWIFERY FORCEPS.

THE PRESIDENT delivered an address on the midwifery forceps as used and abused. Whatever theories might be held as to the proper use of the midwifery forceps, there could be no question that their invention was the greatest advance in the obstetric art up to the beginning of the seventeenth century. One could picture for oneself what practice must have been without them by the study of the older books on midwifery, when the instruments must have been in use tentatively for half a century. The practitioner could only resort to Paré's dreadful hooks or the *tire-tête*—involving certain death to the child and injury to the mother—or to the crochet. The invention of the forceps was alluded to and its development down to the axis-traction forceps of modern days was traced. For a long time artificial aid was looked upon as the opprobrium of midwifery, and there was a real fear of blame to the surgeon whether the child was dead or alive and injured. Writers of early times spoke of the midwives' strictures with awe, and dreaded to be called butchers. The patients, taught by the nurses, gave up hope when a surgeon was called in, so that it became common to use instruments secretly. Mauriceau quoted as a saying of his day, "When a man comes in one or both must die." Smellie gave elaborate instructions as to how best to elude observation. The forceps were carried in the pockets, and the patient was covered with a sheet, the instrument brought out under its cover and laid on the bed. Then surreptitiously under the sheet they were introduced, used, and as secretly removed, being placed dirty in the same pockets, all without the watchful midwife or the equally suspicious friends knowing what had been done. How different from modern practice, when the suggestion of artificial aid often came from the patient or her anxious friends. The question when aid should be given was an early controversy, and still continued. After giving the opinions of many writers, he alluded to his own practice by stating that (1) a prolonged first stage was always safe to mother and child, provided the membranes were intact and the presentation natural; (2) during that stage it was seldom necessary or advisable to give an anæsthetic; (3) if a malpresentation were diagnosed it might be necessary to correct it by manipulation, or if the corrected presentation did not remain permanent, to rupture the membranes and possibly turn or apply the long forceps; (4) that exhaustion was sometimes found in a protracted first stage, especially where the waters were lost prematurely, and it might be needful to dilate and extract, or dilate in extracting by the forceps. When the second stage was fully entered upon, and voluntary efforts accentuated the pains, anæsthetic (chloroform invariably) was given with each pain. If during one hour in multiparæ, or an hour and a half in primiparæ, there was evident progress, things were left to Nature *plus* chloroform, chloroform being pressed only when the head stretched the perineum. If, however, during that time (1) no progress was made, (2) the mother's pulse became rapid, or (3) the child by its movements or its pulse showed signs of exhaustion, then he applied Braithwaite's short forceps and delivered. These forceps were extremely handy, very light, and could be applied with a minimum of fuss. It was possible to pass them without even bringing the patient to the edge of the bed: the lower blade first, then the upper posteriorly, and gradually edging it round; but this manœuvre was seldom required. The head could be brought down slowly or quickly according to need, and when the head was on the perineum the extracting power could be applied by the left hand between the patient's thighs, with as little separation of the thighs as possible. He deprecated flexion and abduction of the thighs by the nurse, being convinced that the proceeding would render the perineum more tense and rupture more likely. When the vertex had well filled the vaginal orifice he removed the forceps and allowed Nature to finish if not too boisterous. If delay then occurred, a modified "Ritgen" manipulation pressing post-anally upon the face or chin was employed. He did not look upon such a case as requiring an after-douche unless for special causes, such as meconial discharge or a dead child, and was content to rely upon a boric acid or iodoform pessary inserted twice daily. He had conducted 243 such cases, with the loss of two children and no maternal death; consultation cases were excluded in which, of course, the mortality was higher. He attacked the statement that "gynæcology had become so largely surgical as the direct result of surgical interference in midwifery practice," made some time ago by a professor of midwifery, and produced opinions and statistics to controvert it. In conclusion he stated that with forceps many evils immediate and remote were avoided with anæsthesia; they must be more frequently used, and with asepsis and antisepsis their safety was increasing day by day.

Mr. JOHN NEWTON proposed a vote of thanks to the President for his able address. This was seconded by Dr. CATON, and carried unanimously.

SUPPER AND SMOKING CONCERT.

The members were entertained by the President at supper, which was followed by a smoking concert, and a very enjoyable evening was passed by those present.

MANCHESTER MEDICAL SOCIETY.—A meeting of this Society took place on October 4th, Mr. W. THORBURN, F.R.C.S. (Vice-President) in the chair.—Dr. WILD gave a short communication on the Etiology of Tuberculosis of the Skin.—Mr. SOUTHAM showed a girl, aged 7 years, who four years and a-half previously had sustained a Simple Fracture of the Tibia and Fibula at the junction of the middle and lower third. It was treated in hospital in the ordinary way by means of splints, and a plaster-of-paris bandage was afterwards applied, but osseous union did not take place. The child had been under treatment continuously since the receipt of the injury, the fragments having been rubbed together and hammered several times under anæsthesia, and on two occasions the ends of the bones had been resected and wired. At the present time the union, though still fibrous and allowing of slight movement at the seat of fracture, was decidedly stronger than it was six months ago; it was not, however, sufficiently firm to allow any weight to be borne on the leg, which was somewhat wasted and about 2 inches shorter than its fellow. No cause could be found either locally or constitutionally to account for the want of bony union.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The opening meeting for the session 1899-1900 was held on October 5th, Dr. R. H. PARRY in the chair. There was a large attendance of members. Dr. C. E. ROBERTSON, the representative of the Society to the Victoria Infirmary, gave an interesting account of the work done by the Board of Directors during the year, dwelling particularly on the improvements carried out at the Bellahouston Dispensary. At the conclusion of his address the Treasurer, Dr. W. MCMILLAN, presented his financial statement for the year, which showed a surplus of over £25. The Society then proceeded to the election of officials in room of those retiring, and as now constituted the list of office-bearers of the Society was as follows:—*Honorary President:* William Macewen, M.D., LL.D., F.R.S. *President:* Hugh Kelly, M.D. *Vice-Presidents:* Thomas W. Jenkins, M.D., William Watson, M.D. *Treasurer:* William McMillan, M.B., C.M. *Secretary:* John Fraser Orr, M.D. *Editorial Secretary:* Andrew Wauchope, M.B., C.M. *Seal Keeper:* John Stewart, M.D. *Extra Members of Council:* Robert Pollok, M.B., C.M., Alexander C. McArthur, M.B., C.M., Duncan McGilvray, M.B., C.M. *Court Medical:* Robert H. Parry, M.D., John Dougall, M.D., Robert W. Forrest, M.D., Edward McMillan, L.R.C.S.Edin. *Representative to Victoria Infirmary:* Charles E. Robertson, M.D.

FORFARSHIRE MEDICAL ASSOCIATION.—At a meeting held on October 6th in the University College, Dundee, Dr. GRAN (Glamis), President, in the chair.—Dr. J. W. MILLER asked leave to propose the following resolution:

That this meeting of the Forfarshire Medical Association desires to record its deep sense of the loss which the Association has sustained by the death of Dr. Johnston (Kair) at the advanced age of 85, and its appreciation of the benefit which the Association derived from his constant and active support since its foundation.

In doing so he mentioned that Dr. Johnston had been

President twice, was one of the original members of the Association, and was present at its first annual meeting held in Dundee, in July, 1859. Dr. Templeman, Vice-President, seconded this resolution, which was unanimously adopted, and it was also agreed that an excerpt of the minutes be sent to Dr. Johnston's niece at Kair House.—Dr. Foggie showed a patient, aged 28, who at every pregnancy except the first suffered from an Affection of the Nails which he thought most resembled psoriasis.—Dr. Gray showed Three Casts of Congenital Deformities in an adult and also one of the Hands of a child in which the fingers were found at the apices and a cast of a large double inguinal hernia.—Mr. Greig showed a cast of Congenital Suppression of Digits.—Professor Kynoch showed (1) Uterus removed from a patient, aged 56, suffering from prolapse which had resisted other treatment and stated four months after the hysterectomy a cystocele existed; (2) a Multilocular Ovarian Cyst removed from a patient aged 31; (3) a Papillomatous Ovarian Cyst removed from a patient 4½ months pregnant, with no bad symptoms after operation; (4) specimen showing Early Vesicular Degeneration of the Chorion; (5) Stratz's speculum.—Dr. Buist showed: (1) Ovaries with subperitoneal cysts removed for persistent pelvic pain follow gonorrhœa; (2) a Collection of Ovarian Cysts in one of which there were some solid parts showing medullary cancer on microscopic examination. Dr. Buist gave the further history of two symphysiotomies which had been reported in the British Medical Journal, September, 1898. The first patient, aged 27, had had three confinements, but the children were stillborn in the first two, and the child lived sixteen hours in the third in which labour had been induced at seven and a-half months. At her fourth pregnancy in February, 1897, Dr. Buist performed symphysiotomy by Frank's method and a live child was born, which however died of bronchitis fourteen days later. In August, 1899, she was confined normally of twins, both living. The second patient, aged 21, rachitic, was delivered of a healthy child still living after symphysiotomy by Ayre's subcutaneous method in March, 1898, after having been in labour for two days. On July 5th last, after being in labour thirty-six hours and with her pulse at 120, she had chloroform and was put in Walcher's position and a healthy child was born naturally. Both had done well since. Professor Kynoch in discussing the paper thought it was very important that the further history of successful symphysiotomies should be reported, as there was evidently a feeling against this operation. Dr. Buist, in reply, said he thought that in the poorer classes, where good nursing was not available, symphysiotomy should be carried out in preference to induced premature labour.—Mr. Greig read a paper on Ankylosis of the Temporo-maxillary Articulation and its Relief by Excision of the the Neck and Condyle of the Lower Jaw. He reported 4 successful cases, of which 1 was bilateral, and photographs of these cases were shown with the limelight. He recommended an incision, keeping the entire facial fibres and superficial temporal artery in front, and showed how the operation could be completed without the injury of any important structures. He advocated the use of the chisel to divide the bone at the condyle or if necessary at the coronoid process, and claimed that by his incision the bone could be removed as low as the inferior dental foramen with no resulting facial paralysis. Professor Macewen spoke, and Mr. Greig replied.

Association of Registered Medical Women.—At a meeting held on October 10th, Mrs. Scharlieb, M.D., M.S.Lond., in the chair, after the transaction of preliminary business, Miss M. M. Sharpe, L.R.C.P.and S., showed a case of Psoriasis of many years' standing, now under treatment by *x* rays, and in which great improvement had taken place.—Miss Aldrich Blake, M.D., M.S.Lond., read notes of a case under her care of Complete Prolapse of the Rectum in a girl, aged 17, treated by circular excision. The patient was admitted to the New Hospital for Women on April 10th with a history that six weeks before admission the protrusion had suddenly come down; she had had no previous rectal trouble. Apparently no attempt had been made to replace it, and she sought no advice until extensive sloughing caused such an offensive discharge that the attention of others was attracted to her condition. On admission a conical tumour, 4 inches in length, and marked by deep transverse folds, was found protruding from the anus. The external surface of the tumour was directly continuous with the surrounding parts without the existence of any sulcus. The whole of the mucous coat, and in places the muscular coat, of the external layer of the prolapsed portion was sloughing, whilst the mucous membrane of the internal layer appeared healthy. The mass was irreducible. The day after admission circular excision of the protrusion was performed. The peritoneum was carefully sutured where the cavity was opened on the front of the mass, and the upper segment of the bowel united to the lower by several interrupted sutures close to the anal margin. The patient made an uninterrupted recovery, and was discharged on May 10th without difficulty in defæcation, and with no incontinence of fæces.—Mrs. Garrett Anderson, M.D., read a paper on Diabetes.

Bristol Medico-Chirurgical Society.—The annual meeting was held in University College, Bristol, on October 11th, Dr. Roxburgh and afterwards Mr. Harsant in the chair.—The President (Mr. Harsant) gave his inaugural address, taking as his subject Medical Bristol in the Eighteenth Century. The address was full of interesting old customs, and many amusing professional anecdotes were related. He had derived most of his information from some old manuscript volumes, by Richard Smith, in the possession of the Committee of the Bristol Royal Infirmary, and he gave a graphic description of some of the physicians and surgeons of the infirmary a hundred years ago. Mr. Paul Bush (Honorary Secretary), Dr. B. Rogers (Editorial Secretary), and Mr. L. M. Griffiths (Honorary Librarian), read their respective reports for the year, the latter mentioning that the Society's Library contained 8,177 volumes, and received regularly 188 periodicals, and that the Bristol Medical Library, of which it formed a part, had altogether 19,982 volumes, with 224 current periodicals. The following officers were elected: *President-Elect:* Dr. D. S. Davies. *Honorary Secretary:* Mr. Paul Bush. *Committee:* Dr. Michell Clarke, Mr. J. Dacre, Dr. B. Rogers, Mr. Munro Smith, Mr. J. Taylor, Dr. H. Waldo.

Pathological Society of Manchester.—The annual meeting was held on October 11th, Dr. R. B. Wild, President in the chair. The following were elected officers for 1899-1900: *President:* W. Thorburn, B.S. *Vice-Presidents:* E. S. Reynolds, M.D., A. Brown, M.D. *Treasurer:* T. A. Helme, M.D. *Secretary:* T. N. Kelynack, M.D. *Research Secretary:* F. C. Moore, M.D. *Committee:* J. G. Clegg, M.D., W. E. Fothergill, M.D., J. E. Platt, M.S., A. W. W. Lea, M.D., F. C. Moore, M.D., W. A. Renshaw, E. J. Sidebotham, M.B., J. W. Smith, F.R.C.S. *Auditors:* F. J. H. Coutts, M.D., F. H. Westmacott, F.R.C.S. *Specimens.*—The following specimens were shown: Dr. Brooke and Dr. Wild; Photographs of Skin Affections.—Mr. Burgess: (1) Duct Papilloma of Breast; (2) Carcinoma of Body of Uterus; (3) Uterus five days after Delivery.—Dr. Delépine: Series of Cultures of Micro-Organisms.—Dr. Fothergill: (1) Encephalocele; (2) Exomphalos.—Dr. Helme: (1) Myomatous Uteri Removed by Abdominal Hysterectomy; (2) Ovarian Cysts removed from Subjects over 65 years of age.—Dr. Orr: (1) Rupture of Left Ventricle; (2) Tumour of Brain; (3) Sarcoma of Liver; (4) Chronic Renal Disease with Impacted Calculi.—Mr. Whitehead: Sarcoma of Undescended Testicle.—Dr. Eurich: (1) Melanotic Sarcoma; (2) Kidneys and Suprarenals from Two Cases of Addison's Disease.—Dr. Powell White: Liver from Case of Pyelophlebitis.

Glasgow Pathological and Clinical Society.—At a meeting held on October 9th, Dr. Thomas Barr (President) in the chair, Dr. Rutherfurd showed a specimen of a Meningocele from the Occipital Region, and the child from whom it had been removed. He considered the prognosis interesting on the question of the ultimate benefit to the child from the operation. The patient was imbecile, and he looked on the meningocele as merely a part of a general defect in the brain formation. As regarded the method of operation, upper and lower skin flaps had been raised and the pedicle transfixed and tied with interlocking sutures. The cyst was then cut away and the flaps sutured. Healing took place *per primam.* In reply to a question by the President, Dr. Ruther-

furd stated that he considered the mouth-breathing of the child concomitant of imbecility, apart from nasal obstruction, which might exist. Dr. Rutherfurd also showed a specimen of Œsophageal Stricture of Valvular Form from a woman aged 30. The symptoms were vomiting, without relation to kind of food, the vomited matter varying in appearance from clear watery to greenish material, evidently from the small intestine. The case was at first thought to be gastric, but a bougie was stopped at a point 12½ inches from incisor teeth. Gastrostomy by Witzel's method was performed, but fluid introduced into the stomach was immediately vomited. She died thirty-six hours after the operation. The stricture was caused by a valvular fold situated within 2 inches of the cardia, and above it was a pouch containing a quantity of grumous material. Death was caused by incessant vomiting, and this was difficult to account for save on the "reflex" theory. She had suffered from gastric symptoms for six years, more pronounced during the last six weeks. The stricture was probably traumatic in origin.—Dr. W. L. REID exhibited a specimen of Cancer of the Cervix for which vaginal hysterectomy had been performed. The broad ligaments were ligatured by means of Dr. Reid's modification of Jessett's pedicle needle. Dr. ALEC. R. FERGUSON read a report of the pathological appearances.

REVIEWS.

BURDETT'S HOSPITALS AND CHARITIES, 1899. By Sir HENRY BURDETT, K.C.B. London: The Scientific Press. (Crown 8vo, pp. 954. 5s.)

WE welcome the appearance of this most valuable annual record of our hospital system, after an accidental delay for which its author apologises. We have no need to dwell on the merits of Sir H. BURDETT's labours in the cause of hospitals, nor need one share all his opinions in order to be sensible of those merits. For instance, he seems to be in favour of extending the "pay-system" to all existing hospitals—a doctrine to which we cannot assent. Still, in most of the main departments of our voluntary hospital system Sir Henry will prove a safe guide to the philanthropist, first, and above all, because he would keep that system a *voluntary* one, and would not bind these great institutions in the fetters of official control. Then, again, he is an advocate of liberal expenditure, as, indeed, has become necessary in these days of improved and more scientific treatment, and yet he deprecates that recklessness which shows itself in too luxurious buildings and too numerous a staff of nurses, etc. He believes that the income of the metropolitan hospitals, taken in a lump, has increased since the Prince of Wales's Fund was started, and is increasing, though we are not told that this increase is in a greater ratio than that of the population of the districts served by the hospitals. Of course, to this average increase there are exceptions in individual cases, which are dealt with in this work to some extent; but, on the whole, we think the author proves his assertion that the Fund has not hitherto had any injurious effect on the income of the metropolitan medical charities. But, as we have often contended, much still remains to be done, before the benevolent intentions of His Royal Highness are carried out, by the creation of a new class of small subscribers, and by raising the yearly income, distributable among the charities benefited, to between £100,000 to £150,000, and by obtaining this income from such new subscribers without interfering with the sums raised from old subscribers. To promote this laudable end, the "League of Mercy" has been instituted, and our author tells us that its progress "has been most satisfactory" up to July last. We shall look with interest for the result of the present year's proceedings, both in regard to this League and as to the maintenance of the general fund.

Many general maxims are laid down in this work, as to which no doubt much discussion might be raised such as the proportion to the total income which the cost of administration ought not to exceed—and which is here fixed at 15 per cent. for metropolitan general hospitals, containing 100 beds or more, 10 to 12 per cent. for those in the provinces, the same percentage for special hospitals of the same size, and a maximum of 20 per cent. for smaller special hospitals. We take it that Sir Henry Burdett deduces these estimates from his large experience. There is nothing here to prove them, though we think the author's conclusion a very probable one, that every hospital spending on administration more than a fifth of its income should be regarded as suspect, apart from a proper explanation by the managing body.

We will end with one quotation: "No metropolitan hospital of repute need suffer severely from want of funds providing sufficient energy and capacity are exhibited by those who are responsible for its administration" (p. 82). The doctrine is a comforting one to managers who are conscious of possessing the requisite qualifications.

The book needs no recommendation of ours to ensure it a wide popularity, and as far as we can judge the present issue is up to the usual level of its excellence.

A TEXTBOOK OF ANATOMY. Edited by F. H. GERRISH, M.D., Professor of Anatomy in the Medical School of Maine, Bowdoin College. London: H. Kimpton. 1899. (Roy. 8vo, pp. 917, 950 illustrations. 27s.)

THIS work on anatomy, written entirely by American anatomists, is published in the belief that students of anatomy "should neither be encouraged to depend upon pocket manuals nor be compelled to resort to encyclopædias." The facts throughout the work are generally accurate; here and there, however, one meets with teaching which is not approved by English anatomists. The special feature of the book is the illustration. Many figures are copied from Testut, but a large number have been specially executed for this work. A very vivid and ingenious method of illustrating the origin, course, and insertion of the muscles is most effective. A large proportion of the figures are coloured, and photography has been used for the representation of special subjects.

In the section dealing with the muscular system a novel and scientifically accurate classification has been adopted. Muscles are grouped with reference to their actions upon joints. The change of nomenclature is incorrect and unnecessary. Of all the sections, that most worthy of special commendation deals with the brain, and has been written by the editor. In describing the peripheral nerves we think that use might have been made of Kocher's plates. The relationship between the segments of the cord and the cutaneous distribution of nerves is surgically, and indeed medically, of the utmost value and importance. Kocher's work is probably the most accurate and most complete dealing with this subject.

The description of the lymphatic system is, on the whole, good, and is illustrated by some excellent figures which have already appeared in Dennis's *System of Surgery*. Where the surgical anatomy of the lymphatics is so supremely important as in the breast and tongue and elsewhere, the description might have been more complete. Justice is not done to the work of Heidenhain and Küttner.

NOTES ON BOOKS.

City of Sheffield: Special Report on the Prevalence of Tuberculosis and the Measures for its Prevention. By JOHN ROBERTSON, M.D., B.Sc., Medical Officer of Health. (1899. Sheffield: Loxley Brothers).—This admirable report was presented recently to the members of the Health Committee of Sheffield, and the corporation of that city is to be congratulated on having a medical officer of health who is able to state the case for the crusade against consumption in such clear, simple, temperate, and conclusive terms. The report begins by a general statement of the present scientific position of the question, written in such a terse and clear way that any non-medical reader could rapidly grasp the principles which we now have to guide us. This is followed by some statistics which are not overwhelming but are quite convincing. The diagrammatic charts bring out much clearer than figures can do the wholesale annual slaughter wrought by the bacillus tuberculosis in contrast to the comparatively insignificant death roll due to, say, scarlet fever or small-pox. One table shows clearly the progress which has already been made in reducing the mortality to its present rate. The annual

mortality from phthisis, at all ages, has declined 45 per cent. n 45 years. This reduction, Dr. John Robertson points out, s due to general sanitation, and indicates to him that if pecial efforts are made a much larger reduction may be anti- ipated in the near future. A section is given to the subject f tuberculosis in the lower animals, and then the interesting ubject of notification is dealt with. Dr. Robertson is a strong upporter of the policy of compulsory notification, and certainly e advances cogent reasons for the faith which is in him. The amphlet contains a copy of the instructions issued by the ational Association for the Prevention of Consumption, and ives a list of "more pointed instructions" for distribution to ases which have been notified, when and if, that comes into peration. Short and simple directions are given under the eading of Disinfection after Recovery, Removal, or Death. inally, the subject of tuberculous milk is considered, sugges- ons are put forward for checking the sale of infected milk, nd a copy is given of what is often referred to shortly as the rewe Milk Contract, which was published some time ago in he Journal. Enough has been said to show that in these octavo pages an amount of information is concentrated hich should be of the greatest help to all interested in the uestion of tuberculosis from the point of view of prevention. his pamphlet should be serviceable to medical officers of ealth who are trying to educate their sanitary authorities on he subject, and will prove a small mine of information to hose who wish to give public lectures on the subject.

PARLIAMENTARY BILLS COMMITTEE.

MEETING of the Parliamentary Bills Committee was held the office of the Association, 429, Strand, W.C., on Wednes- ay, October 11th, at 5 P.M. Present:

Dr. J. Roberts Thomson, President of Council, in the Chair.
Mr. Andrew Clark, Treasurer.

r. S. H. Agar, Henley-in-Arden.
r. R. W. Batten, Gloucester.
r. R. L. Bowles, London.
r. T. R. Bradshaw, Liverpool.
r. George Brown, London.
r. Colin Campbell, Saddleworth.
r. W. A. Carline, Lincoln.
r. Alfred Cox, Gateshead-on-Tyne.
r. G. W. Crowe, Worcester.
r. W. Douglas, London.
igade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, London.
r. George Eastes, London.
r. Bruce Goff, Bothwell.
r. David Goyder, Bradford.
r. Ogilvie Grant, Inverness.
r. Major Greenwood, London.
r. J. Groves, Carisbrooke.
r. J. D. Harries, Shrewsbury.
r. Holman, London.
Mr. Evan Jones, Aberdare.
Dr. J. C. McVail, Glasgow.
Dr. C. W. Marriott, Reading.
Dr. C. H. Milburn, Hull.
Dr. J. W. Miller, Dundee.
Dr. John W. Moore, Dublin.
Mr. W. Jones Morris, Portmadoc.
Dr. W. Newman, Stamford.
Mr. C. H. W. Parkinson, Wimborne Minster.
Dr. F. M. Pope, Leicester.
Mr. A. Brown Ritchie, Hulme.
Dr. John Rolston, Devonport.
Dr. A. W. Sandford, Cork.
Dr. G. E. Shuttleworth, Richmond.
Dr. R. Somerville, Galashiels.
Mr. C. R. Straton, Wilton.
Dr. A. R. Urquhart, Perth.
Dr. Martindale Ward, Twickenham Common.
Dr. Dawson Williams, London.

On the motion of Mr. George Eastes, the President f Council took the chair, and, on the motion of Dr. olman, seconded by Mr. George Eastes, Dr. Farquharson, .P., was re-elected Chairman for the ensuing year.

The resolution of the Council appointing the Committee as read, and the minutes of the last meeting were taken as ad and confirmed.

Letters of apology for non-attendance were read from Dr. arquharson, M.P., Dr. D. B. Balding, Dr. Bridgwater, Dr. J. Gooding, Dr. A. J. Harrison, Surgeon-General T. F. Dwyer, and Dr. Woodcock.

The Royal Army Medical Corps.

A communication from a captain of the Royal Army Medical orps as to the Royal Army Medical Corps was read.

Dr. Milburn proposed:

'hat a Subcommittee be appointed to inquire into the reasons why the yal Army Medical Corps is unpopular, and to report upon the best ans to adopt to induce candidates to enter.

e said they had a Subcommittee before whom the question rank came up, and the result of the work of that Committee s very satisfactory. If another Subcommittee were ap- inted, the Committee need not take any decisive action until eport on the reasons why the service was unpopular had en received and considered.

he resolution was seconded by Dr. Brown Ritchie.

Dr. J. W. Moore said it would be impolitic to take the action proposed. They had wrung from the Government after years of earnest work poor justice, and they had recently thanked the Government for what they had done. It was quite premature to decide whether the reform which had been effected would not render the service more popular.

Dr. Miller said he had read the letter carefully, and he sympathised with the writer. He had not the smallest doubt that there was a great deal to be done to make the service popular, but it would be a great pity to take action prematurely. He moved that the letter lie upon the table. Mr. Parkinson seconded the amendment, which after some discussion was carried.

Practice of Pharmacy and Sale of Poisons in Seychelles.

A draft ordinance to regulate the practice of pharmacy and sale of poisons in Seychelles was submitted, and was referred to the Medical Acts Amendment Bill Subcommittee.

Reappointment of Subcommittees.

The Subcommittees were reappointed as follows:

1. *Subcommittee to consider the Medical Acts Amendment and Midwifery Nurses Bills.*—Dr. A. G. Bateman, Mr. George Brown, Dr. Major Greenwood, Mr. Victor Horsley, F.R.S., Dr. C. H. Milburn, Dr. A. Brown Ritchie, and Dr. S. Woodcock.

2. *Subcommittee on Incipient Insanity.*—Dr. Maury Deas, Dr. W. Douglas, Mr. George Eastes, Dr. W. J. Mickle, Dr. G. E. Shuttleworth, and Dr. A. R. Urquhart, with power to act with the Medico-Psychological Association if necessary.

3. *Vaccination Subcommittee.*—Dr. R. W. Batten, Mr. George Brown, Dr. Colin Campbell, Dr. A. E. Cope, Mr. J. Groves, Dr. J. C. McVail, Mr. Jones Morris, and Dr. J. C. Thresh.

4. *Public Health Subcommittee.*—Dr. J. S. Cameron, Dr. Ogilvie Grant, Dr. J. Groves, Dr. J. C. McVail, Mr. C. H. W. Parkinson, and Dr. J. C. Thresh. (This Subcommittee was previously named the Subcommittee to consider the question of the Superannuation of Medical Officers of Health.)

The General Secretary reported that the following resolutions, passed at the general meeting and in the Sections of the annual meeting at Portsmouth, had been referred to the Parliamentary Bills Committee by the Council at its meeting on that day:

Amendment of the Medical Acts.—That any Draft Bill for the amendment of the Medical Acts shall contain *inter alia* provision for further direct representation of the profession on the General Medical Council and for the establishment of a one-portal system of qualifying examination.

Control of Schools.—That it be a recommendation to the Council of the British Medical Association that representations should be made to the Local Government Board and the Education Department that powers may be given to sanitary authorities enabling them to control the condition of all schools (private or otherwise) with regard to overcrowding and other sanitary arrangements similar to those they possess over workshops under the Factory and Workshops Acts.

Inspection of Schools and Scholars by the M.O.H.—That the Council of the British Medical Association be requested to make representations to the Education Department, Whitehall, urging upon the Department the necessity from the standpoint of the public health of authorising medical officers of health to inspect all school premises, and to inspect or secure the inspection of scholars when the prevalence of infectious disease was judged by him to make such an inspection desirable.

Seats for Shop Girls.—That this Section recognises the evil effects of long standing upon the health of women, and urges the Council to promote the passing of the Bill as to providing seats for shop girls (Scottish Section).

The resolution with reference to the Medical Acts Amendment Bill was referred to the Subcommittee which had the matter in hand.

The two resolutions passed in the Section of State Medicine having reference to schools were referred to the Public Health Subcommittee, and the last—with reference to seats for shop girls—was ordered to lie on the table.

The Nursing Staff of the Army.

Dr. Groves called attention to the fact that the nursing staff in the army hospitals were not allowed any refreshment during the night, even though they had to be on duty to watch patients, while if they had been on sentry go they received suitable refreshment.

After a good deal of discussion it was resolved to ask Dr. Groves and Inspector-General Turnbull, R.N., to present a statement on the present system of nursing in military and naval hospitals.

University College, Cardiff.—The Samuels Brothers (of Cardiff) Medical Scholarship, has been awarded to Mr. T. Lewis. In connection with the award Messrs. G. W. Rogers and J. K. Shepherd received honourable mention.

ASSOCIATION OF CERTIFYING FACTORY SURGEONS.

A SPECIAL general meetfng of this Association was held at Manchester on Thursday, October 12th, Dr. JAMES HOLMES, President, in the chair.

The first subject discussed was the question of the investment of surplus funds, and it was resolved that a reserve fund should be created and invested in the names of three trustees—Drs. Eames, Barclay, and F. M. Pierce.

A report was presented from a special committee containing a series of recommendations with regard to the alterations and modifications in clauses and schedules of the Factory Acts relating to the duties of certifying surgeons. The report led to a good deal of discussion, and letters bearing upon the subject were read from Dr. J. W. Miller (Dundee), Dr. Charles F. Moore (Dublin), Dr. Baines (London), Dr. Machin (Birmingham), Dr. Aspinall (Haslingden), Dr. Mayor (Bristol). The clauses of the report were taken seriatim, and amended and adopted as follows on the motion of Professor Wright (Leeds), seconded by Dr. F. M. Pierce (Manchester):

1. *Annual Report.*—That a fee, arranged on a sliding scale according to the number examined during the year, should be paid. The minimum to be fixed at 5s. and the maximum at 3 guineas.

2. *Reporting of Accidents.*—That the minimum fee for this duty should be fixed at 5s., the usual excess rate to be paid when the surgeon is compelled to travel over three miles.

3. *Trade Poisons.*—That a minimum fee of 7s. 6d. should be paid for each report of an investigation into cases of trade poisoning (lead, anthrax, etc.), with payment for extra mileage as suggested in the case of accidents.

With regard to the last subject, it was also agreed that any inquiry should be considered incomplete without a personal interview with the patient when this was at all possible.

As the labour involved in compiling an annual report had never yet been recognised by any payment, and as a surgeon was at present compelled during the course of his investigations to visit both the works and the patient preparatory to writing out a fairly lengthy report to the department for the minimum fee of 3s., the opinion was generally expressed that the recommendations would be favourably received.

The meeting was well attended. Further information can be obtained from Dr. W. F. Dearden, Honorary Secretary, Crumpsall, Manchester.

THE NEW VACCINATION ACT IN OPERATION.

EXPERIENCE OF A PUBLIC VACCINATOR.

A P.V. writes: I send you for publication my experience of the nine months' working of the new Vaccination Act in a small manufacturing town and a rural district in the Midlands. The visiting at the homes and the use of calf lymph has certainly made the vaccination of infants more popular—that is, it is more willingly accepted by the parents. I have only met with a few objections, and a little persuasion has overcome the opposition. The most frequent objection made is in these words: "It is very cruel to 'munch' the poor little thing." I have met with one exemption certificate only. The conscientious objection as stated to me by the mother was "that the child was such a very healthy one she objected to having any poison or 'nasty stuff' put into it." I have performed a few more primary vaccinations during the last nine months than in the corresponding period of the last two years; no revaccinations.

I, however, regret to say that in consequence of the want of efficacy and uniformity of the Royal Vaccine Establishment lymph, the number of failures and imperfect results has been larger during this period of nine months than I have met with in the whole course of my twenty years' experience as a public vaccinator. I give here the result of my last experience (by no means a solitary exception) in the use of the vaccine (glycerinated calf lymph) supplied me by Government. No. 243, used within a week of receiving it—10 primary vaccinations, 4 insertions in each (scarified and rubbed in): 4 complete failures, 2 producing one vesicle, 2 two vesicles, and 2 three vesicles. Thus only 2 children out of the 10 are efficiently protected against small-pox, though 6 are certified as successfully vaccinated. If my experience in this particular is also that of many other public vaccinators, it becomes a subject for very serious consideration, inasmuch as, should small-pox become prevalent in the country, it is very probable that a large number of those certified as successfully vaccinated will contract the disease, and this result would be used as a strong argument in support of anti-vaccination. These failures, too, inflict considerable hardship on the public vaccinator, for without extra pay he has to do double the work, besides lessening his chances of receiving the triennial grant. I may here say that in several cases of failure with the National Vaccine Establishment lymph I have immediately vaccinated again with glycerinated calf lymph, which I have purchased, and with complete success. The summary of the results of my last nine months' vaccinating experience is:

1. Vaccination is more popular as now conducted and more vaccinations take place.

2. That the quality of lymph supplied by the Government to public vaccinators is most unsatisfactory.

In conclusion, I am of opinion that the new Vaccination Act would have been nearly perfect if, in the place of a conscientious objection clause, one had been introduced encouraging, if not enforcing, adult revaccination, and if the Government had undertaken to provide a perfectly efficient and uniform vaccine lymph.

THE LYMPH OF THE NATIONAL VACCINE ESTABLISHMENT.

DR. ARTHUR HEATH, (Reepham, Norfolk), writes: Of the last lot of six tubes I have received the results have been no vesicles, red scratches, and much disappointment. At the beginning of the year the lymph from the same source produced really bad arms. One woman declared that "her neighbour said" (a favourite expression in Norfolk) "that I had put enough stuff into her child's arm to rot it off." For the last three months the results have been just the opposite—two or three miserable vesicles or none at all. In the country this means two journeys, sometimes 8 miles away, and across ploughed fields, without either thanks or remuneration. Not only is it bad for the temper, but the parents object to a second vaccination, especially where there is some slight and imperfect result, and thus vaccination itself gets into discredit. One almost feels some sympathy with the old grandmother, herself pitted with small-pox, who wished she could make the laws, and who would do away with vaccination, for she "has 'ad the small-pox when she was young," and she "'olds with the small-pox." Surely this state of things is unnecessary, and if this particular lymph is experimental, could it not be tried at less cost?

PAYMENT OF VACCINATION FEES.

BANKER.—As all contracts for public vaccination are invalid until approved by the Local Government Board, and are determinable at their discretion, according to the Vaccination Act, 1867, Section IX, any failure to comply with the terms of the contract on the part of the guardians should be first reported to the Local Government Board. We do not think that the guardians can shirk their liability under the circumstances mentioned.

REDISTRIBUTION OF DUTIES.

N. B. U.—The Vaccination Act, 1867, Section XI, enacts: "Where a district shall have been assigned to a vaccinator, he shall not be entitled to be paid a fee in respect of the vaccination or revaccination of any child of other person resident out of his district," except in certain cases which do not apply in the present instance. Our correspondent cannot make any claim for vaccinations which he has not performed, and until we know the nature of the "mistake" which transferred part of his district to another public vaccinator, it is impossible to say whether he has any redress at all.

VACCINATION AT SURGERY.

MIXED writes: It is not quite clear what one is to do under circumstances such as the following: Notice is sent to a man 5½ miles off, and very bad road, of the public vaccinator's intention to call and offer, etc. He does so call, and is refused flatly. The vaccination officer is notified of the refusal, and sends the "warning" papers. The woman changes her mind, and determines to have it done. Must the public vaccinator again call and offer? As a matter of fact he does not, and she is allowed a little rope. She comes to the surgery in about a fortnight, and has her child vaccinated. She is told to come back in a week to "show" the arm. She does not turn up on the appointed time, nor has she done since about 3 weeks ago. She has been again served with papers, but has taken no notice. Was the public vaccinator bound to go to the house after her refusal in the first instance? Allowing she had come have the child's arm inspected as arranged, the operation and inspection would both have been at the surgery, was the public vaccinator then only entitled to his 5s., or would he have justly charged 10s. 6d., seeing he went to the house in the first place?

*** The public vaccinator was bound to go within a fortnight of the request being made, even though at his first visit vaccination had been flatly refused. No fee whatever could be charged for the vaccination at the surgery, even supposing that the child had been brought back for inspection.

ANGLO-AMERICAN NURSING HOME IN ROME.—We understand that the proposal, to which we have already referred, to establish an Anglo-American Nursing Home in Rome is likely to be carried out. The need for such an institution has been felt by many British and American practitioners in Rome. A sum of £1,000 has been subscribed for a building fund, and negotiations are on foot for the purchase of a house. The home when established will receive cases of illness of any kind, including typhoid fever.

THE PERILS OF ELECTRIC LIGHTING.—M. Regnier, in the *Progrès Médical*, gives a long catalogue of the accidents due to the electric method of illumination which have occurred in Paris alone during the past ten years. He distinguishes between the variety of injury caused by the currents. The continuous current from a broken badly isolated wire burns the tissues very deeply, and is fatal if the shock be violent. The alternating current also burns, but less severely. When the shock is violent it causes dangerous syncope, but the patient may be revived by artificial respiration or rhythmical traction on the tongue.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, OCTOBER 21ST, 1899.

MEDICINE AND LIFE ASSURANCE.

We live in an age of congresses, and the tendency to subdivide subjects and thus to multiply these assemblies is to have full swing next year in Paris, where a perfect deluge of talk is to be let loose. Even this year has seen an addition to the already long list of these international gatherings, but the result of the Congress of Medical Officers of Life Assurance Companies recently held at Brussels will confirm the opinion which has already found expression that it is possible to specialise a congress too much. In this country at all events the medical officers to life assurance companies regard life assurance as part, and probably only a small part, of their daily work. There are no specialists in this subject. It was for this reason perhaps that so few of these British and American practitioners who take a special interest in questions connected with life assurance felt impelled to put in an appearance at Brussels. As it is, a congress of life assurance medical officers at which no English-speaking delegate spoke was too much like the play of *Hamlet* with the Prince of Denmark omitted. It may safely be affirmed that everything that relates to the science and practice of life assurance has been more thoroughly considered among the English-speaking peoples than among the rest of the world, and consequently the proceedings of the Section of Medicine in Relation to Life Assurance at the annual meeting of the British Medical Association last year were of great interest and practical value. But the Committee of the Brussels Congress appears to have acted on the assumption that very little if anything of value had been done up to the present time as to vital statistics and medical science in connection with life assurance. Most of the papers were absolutely lacking in the practical character which might have been expected from the medical officers of companies.

In no respect was the absence of British delegates more felt than in drawing up the suggestion for a universal proposal form. Those who have much practical acquaintance with the working of life assurance know that if the proposal form be too long and contain too many questions, its object will be defeated. There is already a tendency to err in this direction on the other side of the Atlantic; and if the forms to be laid before the next meeting of the Congress include all the questions looked upon as essential by some of the speakers at the Brussels Congress, they will greatly exceed the American standard. The proposal form issued by the Life Assurance Medical Officers' Association of London is probably as full as is desirable, and it is to be hoped that the Committee appointed to draw up a model form of report for presentation to the Congress which is to be held in 1901 will take an opportunity of studying this form.

The discussion on professional secrecy brought out the difference between the view commonly held on the Continent and that usually received in this country. Here it is considered that the applicant for assurance, in supplying to the company the name of his medical adviser, tacitly authorises that person to give any information which the company may require. We would lay some stress on this point, as we are frequently consulted as to the position to be taken up by the family doctor under these conditions. In France, on the other hand, as will be seen from our report of the meeting,[1] the most extreme views as to the nature of professional secrecy are defended, and it is difficult to see how life assurance can reach its full development in that country until a more rational opinion is entertained. All thinking persons must agree that life assurance is one of the most beneficial results of modern civilisation, and anything which tends to prevent its fullest extension is contrary to the public weal. This being the case, any individual drawback must give place to the general good.

In the opinion of the majority at the Congress, the sole duty of the medical examiner was to distinguish between good and bad lives, and it was held that he was not called upon to assist the companies in appraising the value of any individual life; in other words, it seemed to be assumed that "loading" did not come within his purview. In recent years the acceptance of impaired lives has constituted an important part of life assurance work in this country, and it seems to us that one of the most useful things which a congress could do would be to discuss the factors which require to be considered in "loading" a life. The mere acceptance or rejection of a life is comparatively easy, but the estimation of how far an applicant for assurance departs from the normal, either on account of personal or family history or defective health, will exercise the utmost skill of the examiner, and on this very important question the Congress has practically given us no assistance.

Dr. René Verhoogen's paper on the early diagnosis of general paralysis was important in view of the increasing frequency of general paralysis among the assured, for the condition is one which is very apt to be overlooked in its early stages. Neurasthenia is another subject which has not received much attention from the assurance world, hence Dr. Mahillon's paper will be read with interest. One of the most complete papers was that by Dr. Bayet on syphilis and life assurance, and the conclusions he arrived at are practically those which are adopted in this country. On the whole, however, we cannot say that the Congress has added much to the knowledge which may be gained by reading one of the manuals on life assurance published in this country or America. Still, if it furthers the spread of assurance, and leads to more reasonable views on the relation existing between the family medical attendant and the company, definite good will have been achieved.

[1] British Medical Journal, October 7th, 1899, p. 952.

A RECENT PRONOUNCEMENT ON ETHER.

The narrative of the introduction, declination, and revival in the use of ether as an anæsthetic in England is one of the most curious in the history of medical thought in the nineteenth century. Mr. Pridgin Teale's article on Ether in the recently-issued *Encyclopædia Medica* presents us with his view of the subject as an operating surgeon. In the opening pages of this article Mr. Teale traces the story of the revival of ether, attributing it to the well-known paper of Joy Jeffries, Ether in Ophthalmic Practice, the stimulus which set the pendulum of English surgical opinion in motion, and caused it to swing back from the almost universal advocacy of chloroform to the adoption of the older but then obsolescent anæsthetic. At first ether had been vaunted, and, as the pages of contemporary journals show, used by all sorts and conditions of men with small regard to its peculiar properties, and scanty knowledge of its possibilities and limitations. It was the first volatile anæsthetic appealing for surgical suffrage, and was handled with a diffidence almost amounting to fear by those who gave it, and looked upon somewhat askance by the operator unaccustomed to deal with humanity in a condition of semi-anæsthesia or profound narcosis. In the one case the delirious shouts and struggles were discomposing, and in the other the death-like calm gave rise to misgivings. The various kinds of apparatus invented during the first year or so of ether-giving were appalling in their complication and bulk, and in most instances were extremely ill-adapted for the purpose for which they were designed. Then came stories of difficulties and failures. The pundits of surgery declared ether was unreliable, and probably unsafe.

At the critical moment when the more thoughtful minds were studying and attempting to improve the means of administering this recalcitrant vapour, came Simpson with a pocket handkerchief and a vial of the new anæsthetic chloroform. All dangers and difficulties were to be removed, and the operating theatre, passing through what Simpson himself called the "shambles" stage and the bear-garden experiences of imperfectly-given ether, became calm. The surgeon could do his work without let or hindrance, and with a free mind. The unhappy death, however, which occurred under the new anæsthetic within three months of its introduction put an end to the sense of security which at first reigned supreme. Then, as now, many persons contended that the anæsthetic was less to blame than the method employed in giving it, but the increasing mortality under its use gave rise to an increasing anxiety, and prepared the way for a revival of the popularity of ether. The Committee of the Royal Medical and Chirurgical Society was appointed to reinvestigate the case of chloroform *v.* ether, and, although admitting the perils of the former, the Committee declared the slow action and imperfect methods of using ether an insuperable difficulty.

This is, of course, ancient history, and Mr. Teale's work lies not in traversing such a judgment. Clover's apparatus and the teaching of the modern anæsthetists have done that already and have shown that ether can be given more rapidly than chloroform and without any of the drawbacks of former days The whole question has at present assumed an entirely new phase. Given the best methods of administering chloroform and of ether the conflict is still waged between the rival camps as to which is the best all-round anæsthetic. Mr. Teale after twenty years' experience of chloroform adopted ether, and now after two more decades in which he has used that anæsthetic affirms unhesitatingly that ether is safer, and if properly given, quite as serviceable as chloroform.

The object of his paper is to teach how this proper method can be acquired, but as his directions are practically those found in the special manuals on anæsthetics we need not pause to consider them in detail. It is interesting in view of recent discussions before the Society of Anæsthetists to learn from Mr. Teale that he, as a surgeon, has found ether wholly satisfactory in abdominal surgery, in throat work, and for young children and aged persons. Those who heard the eloquent advocacy by Mr. Warrington Haward of the use of ether for all sorts and conditions of men, women, and children in one of those discussions will find in Mr. Teale's pages a whole-hearted agreement upon this subject.

The two stock objections urged by those who use chloroform in preference to ether has recently been its after-perils, that is, bronchitis, pneumonia, etc., and the less profound narcosis which causes rigidity, hurried breathing, and so on. These, Mr. Teale's experience goes to show, are more theoretical than real. He has never seen ether bronchitis, and agrees with those anæsthetists who regard it as being most rare, and, when present, commonly due to exposure of the patient to cold before, during, or after the operation.

That surgeons like a patient to be profoundly anæsthetised is natural, but whether the condition, always one of extreme risk, is often desirable from the patient's point of view seems fair matter for argument. We trust Mr. Teale's useful directions will obtain a wide hearing, as they focus in a small space his great experience. It is, perhaps, a pity that Mr. Teale's space did not allow him to emphasise the keen sense of responsibility which should exist in those who undertake to give anæsthetics. It is a matter of regret that this frame of mind is not always met with in the occasional anæsthetist, and its absence is a risk both to the surgeon and to the patient.

THE WAR.

We published last week an official list of the officers of the Royal Army Medical Corps detailed for duty in South Africa, together with a list of the field hospitals and the hospitals on the lines of command. It will have been noticed that there will be twelve field hospitals, four stationary hospitals, and four general hospitals, each with its complete staff, so that there will shortly be in South Africa an adequate establishment for dealing with a large number of sick and wounded. The distribution of these hospitals will be determined by the officers commanding in South Africa, and must depend upon the manner in which the military operations develop. Attention has been drawn by a contemporary to the fact that no sanitary officer has been appointed to the Army Corps. We presume that the Principal Medical Officer will make sanitary arrangements on the spot when the plan of campaign is developed. Should the advance be made, as seems probable, in more than one column, it may be thought desirable to appoint a separate sanitary officer for each

column. Particulars with regard to the dates of despatch of the hospital staffs from this country, so far as at present available, and some further details as to the medical and ambulance arrangements, will be found at page 1141.

PLAGUE ON AN INDIAN LINER.

The P. and O. Company's steamship *Peninsular* arrived at Plymouth on October 14th flying the yellow flag, owing to the fact that a coal trimmer had developed plague five days previously. The vessel was immediately visited by Dr. F. M. Williams, Port Medical Officer of Health at Plymouth, to whom we are indebted for the following notes of the case: On October 9th, at 10 A.M., Pharos Hassam, coal trimmer, reported himself to the ship's surgeon suffering from great pain in the left inguinal region, which he stated had come on suddenly. The surgeon observed that his eyes were bloodshot and the pupils dilated. The tongue was tremulous and furred in the centre, but clean at the margins. There was difficulty in articulation at times, with involuntary contraction of the facial muscles. In the left groin there was a glandular swelling, tender to the touch, and of the size of a walnut. The pulse was weak and rapid; the temperature was 102°. On the following day the patient's condition was much worse; the temperature was 103°, the pulse feeble and rapid, twitchings of the facial muscles were very marked, there was increased difficulty of speech, and he was very drowsy. The swelling in the groin was extending into the femoral region and towards the abdomen. On October 11th his condition was about the same. On October 12th he was not so drowsy, but his general condition was about the same. On October 13th marked improvement was noticed; he was brighter, and the glandular swelling had not increased. The condition of the patient when I examined him on October 14th was as follows: The pulse was feeble and intermittent. The temperature was 99.5°, there was general prostration, and the patient, who was drowsy and somewhat stupid, did not answer questions readily. The conjunctivæ were injected, the pupils dilated, the tongue much furred, the skin dry, and the urine was scanty and high-coloured. There was no diarrhœa. The femoral glands on the left side were enlarged and hard, with considerable infiltration of surrounding tissue. I had him and his native attendant removed to the *Pique* hospital ship, where his condition has improved. Every precaution had been taken by the surgeon, the patient being isolated in a deck cabin. This was disinfected under my supervision immediately the patient was removed, and instructions were given that after a lapse of twelve hours the cabin was to be opened and scrubbed with carbolic solution. The ship's surgeon, who is familiar with plague, had the assistance of Dr. L. W. Richards, who has been on plague duty in Bombay and Poona for the past two years, and who was a passenger by the vessel. He also saw the patient with me, his diagnosis being that it was an undoubted case of plague of a mild type. No satisfactory explanation could be given of the origin of the infection, it may have been that the period of incubation was abnormally prolonged. The crew were all shipped in Bombay and medically examined before embarking. The *Peninsular* left there on September 23rd, calling at Aden, Suez, and Port Said, arriving at Marseilles on October 9th, a period of sixteen days. There is a possibility that the patient did not report himself at the commencement of his illness, nor was his condition discovered at the daily medical inspection of the crew. He may have been infected after leaving Bombay by inoculation from the dejecta of infected rats on board the vessel, although there is no direct evidence of this. Search has been made, but no dead rats have been found about the vessel. The patient is at present convalescent, the glandular swelling in the left groin is inclined to suppurate, and at night there is a rise of temperature of 1°. At my visit on October 17th the temperature was normal, the condition of pulse had improved, and the patient was taking his nourishment well. The urine was normal in quantity, but contained a slight trace of albumen. The treatment followed was the administration of brandy (℥ij) in milk every two hours, milk, beef-tea, fish, and custard pudding. A mixture containing strychnine and carbonate of ammonia was given every four hours, and boric acid fomentations were applied to the glandular enlargement. Free ventilation is maintained, and the body is sponged twice daily with carbolic solution. All dejecta are treated with disinfectants.

HOUSING OF THE WORKING CLASSES.

At the meeting of the London County Council this week a very important series of recommendations were submitted by the Housing of the Working Classes Committee dealing with schemes for clearances of notoriously insanitary areas in St. Luke's at a cost of £175,750, in Holborn at a cost of £220,500, and in Southwark at a cost of £187,950. These, together with a smaller scheme in Poplar, involving a cost of £16,500, will be dealt with by the Council at its next meeting. At the same meeting, the Council approved certain applications recommended by the Highway Committee, under the Light Railways Act, 1896, for the extensions of the tramway system to the boundaries of the county. The advantage of facilitating locomotion for the industrial population and its bearing on the housing problem was emphasised in the course of the debate.

THE INEBRIATES ACT, 1898.

At the weekly meeting of the London County Council on Tuesday the Special Committee on the Inebriates Acts, of which Dr. Collins is chairman, presented a further report, which was adopted unanimously by the Council. It will be remembered that the Committee as a temporary measure made arrangements with the Duxhurst House Reformatory at Reigate, and the St. John's Reformatory for Roman Catholic Women at Ashford, to receive women, under which immediate accommodation was secured for 16 Protestant and 56 Roman Catholic women. The Committee, however, was unable to make arrangements for the reception of male inebriates, and have now recommended the Council to establish a reformatory of its own, as they believe that such a course is justified both by the requirements of London and the probable benefits of such an institute to inebriates. They recommend that an institution for 40 patients should be forthwith provided, and that an estate of 374 acres at Charlwood near Horley should be acquired. The Government inspector has already visited the premises, and has reported that in his opinion they are suitable for the purposes proposed, and can without difficulty be adapted to comply with the requirements of the Home Office. The estimate of the cost of the site, of making the necessary structural alterations and additions to the premises, and of furnishing them, will not exceed £14,250. The annual cost in respect to up-keep and interest, if the payment is spread over sixty years, would be about £500 a year. The average weekly cost of maintenance was estimated by the Departmental Committee at 15s. 9d.; the Committee of the London County Council state that in practical working it appears, judging by the terms of contribution towards maintenance they have received, that the actual cost would work out at 14s. a week, which, as the Government contributes 10s. 6d. a week, would leave the actual cost to the Council at 3s. 6d. a week. There is, however, they add, a possibility of some recoupment of maintenance charges from the property of inmates, since the Act gives a power of recovery where there is more than sufficient to maintain the family of an inmate, and of still greater recoupment from the labour of inmates. Looking

to the fact that the majority of the patients will have some knowledge of a trade or profession, that they will in most instances be, to a large extent, physically rehabilitated within a comparatively short time of their admission, and that their conditions of labour will be made as encouraging as possible, and afford them the opportunity of earning for themselves as well as the institution, the Committee believe that the recoupment from labour is likely to be not inconsiderable, and that the charge for maintenance may not in the end greatly exceed that in the prisons or asylums. In the prisons the average rate per head, after deductions for labour, etc., is 9s. 1d. per week, and the charge for maintenance in the London asylums is 9s. 11d. per week.

THE VACCINATION OFFICER AND HIS DUTIES.

A CORRESPONDENT of the *Times*, who signs himself "M.D.," has called attention to the pressing importance of this question, which, as will be seen from the article in the BRITISH MEDICAL JOURNAL of September 30th, is rapidly becoming a burning one in some localities. The leading case of Leicester is prominently before the public, and the Government will shortly have to consider the legislation they will introduce next session. The Act of 1898 was passed under conditions which, as we have more than once indicated, bind the Government to complement that admittedly imperfect measure by further legislation on the subject of revaccination. But the writer of the letter referred to urges that, however great may be the need for legislation in furtherance of the revaccination of children about the time they leave school, the reconstruction of the machinery for the local administration of the vaccination law is even more important. We cannot go so far as this with him, but we heartily agree that both questions are ripe for legislation. It is useless to make laws, or even to ordain facilities for the promotion of vaccination, if the machinery provided for the purpose will not work. The investment of Boards of Guardians with the duties of vaccination authorities may have been unavoidable and even unobjectionable in 1840, when the first Vaccination Act was passed; their maintenance in that position at the present time is an anachronism, and "M.D." argues that even if the constitution of Boards of Guardians were such as to qualify the class of persons who are generally elected to them for undertaking important sanitary work, such as the local administration of vaccination is, it is essentially absurd that that this branch of sanitary organisation should be divorced from all other local sanitary work, and be retained in the hands of bodies who have no sanitary duties or interests whatever, and who were only intended to deal with the relief of destitution. It is unnecessary to labour this side of the question, for no one disputes the anomaly. There is some reason for thinking that the indisposition the Government has shown hitherto to deal with this subject is due to the objection which has been pressed from some influential quarters that if the local administration were transferred from Boards of Guardians to District Councils, who are the most appropriate bodies to carry it on, little would be gained in the way of defeating the organised agitation now carried on against vaccination, which has lately sought to find a new vantage ground for itself by embroiling Boards of Guardians with their vaccination officers. District Councils, it is said, are elected by the same constituencies as elect Boards of Guardians, and in rural districts, at any rate, these bodies are composed of practically the same persons. "M.D.," however, suggests that it is neither necessary nor expedient to transfer the whole local vaccination machinery *en bloc* to District Councils. The legal element of the machinery, he thinks, should be separated from the medical, and the latter alone transferred to the local sanitary authorities. The legal work of vaccination, together with that of registration, could be provided for in another way, but care would, of course, have to be taken to keep the sanitary authority in touch with the registration machinery, so that that body and its officers would be promptly informed of all that they need to know for the protection of the public health, in the same way as is now done in the case of general mortality and infectious sickness. The suggestion is that prosecutions should be left to the police, as in the matters of dog licensing and muzzling, and that they should be placed under the general supervision of the Registrar of Births and Deaths. This official is generally a lawyer, and holds a very independent position. As he is in touch with the local subregistrar of births, in whose hands it will probably be found convenient to leave the work of vaccination registration, this arrangement might probably work satisfactorily. If this course were adopted, it is difficult to see who could object to it. Indeed, from a reply from a "Poor-law Guardian," who is, he says, a member of the Antivaccination League, it appears, rather strangely, that even this body would not oppose the change. There is every reason to believe that most Boards of Guardians would be very glad to be relieved of what is now a constant bone of contention, which interferes greatly with their proper work. There is, however, one consideration which should be kept in mind by those who are disposed to urge this view. It is this. The Government has made a promise regarding revaccination. It has made no promise regarding the other matters, and it is a question whether if it were asked to go beyond the subject of its promise it might not use the request as a reason for delaying all further legislation until the end of the five years to which the recent Act is limited. In its own interest it should proceed in the next session of Parliament to deal both with revaccination and with the arrangements for prosecutions, but in the public interest it would certainly be better that it should take up the former question at once rather than leave both to the end of the quinquennium.

FOOD POISONING.

A SERIES of cases of "food poisoning" is reported to have occurred at Sheffield on October 11th. No fewer than 23 individuals were affected and the ages ranged from 2 to 89 years. With the exception of one who went under the care of her own medical man all the cases were treated at the Royal Infirmary by Dr. Barker, house-surgeon, and as far as can be ascertained they all had partaken at their midday meal of corned beef purchased at the same shop. The tin from which the meat was taken had been opened by the shopkeeper that morning. He states that he did not detect any smell, neither did the appearance lead him to suppose that it was unfit for food. In all the patients sickness and purging were the initial symptoms, followed by giddiness and prostration. At the infirmary the patients were promptly treated by the stomach pump and emetics. Nine were enabled to return to their homes, but 14 were detained. With one exception, a child of 3, the cases have recovered. The child died the next day, and the coroner has adjourned the inquest, which he opened on October 13th, until a bacteriological report which is being prepared by Dr. Robertson, Medical Officer of Health, is ready.

THE INFLUENCE OF ZADIG ON THE PROGRESS OF MEDICINE.

SUCH was the title of the address delivered by Dr. G. W. Balfour at the inaugural meeting of the York Medical Society for the present session. He characterised Zadig's philosophy, which was also that of Sherlock Holmes, as the application of common sense to matters of everyday

observation; and described the great change that had occurred in the practice of medicine within the last fifty years. At the middle of the century bloodletting was the chief remedy for diseases, especially those of an inflammatory character; on the other hand it had lately fallen into such disuse that few doctors now living had seen this method of treatment practised. For a time, however, the overturning of the old beliefs was followed by a period of comparative chaos, and this again by the promulgation of an entirely new system of pathology and of perfectly novel methods of treatment, which promised to have unheard-of influence on the life-history of mankind, not only as regarded the cure of disease, but still more as regarded its prevention. The method of Zadig had played no unimportant part in the discoveries of Pasteur, who became convinced that behind the phenomenon of fermentation there lay some great general law. His conclusions were legitimate deductions from observations made by himself, and every step was proved by careful experiment before it was accepted as truth. Pasteur's ideas had been paraphrased in these words:

> All changes, naught is lost; the forms are changed,
> And that which has been is not what it was,
> Yet that which has been is.

Dr. Balfour described the experiments and reasoning by which Pasteur laid the foundation of the germ theory of disease, of curative antitoxins, and immunising vaccines, and discussed Lord Lister's application of the theory to surgery and medicine, and the enormous benefit thereby accruing to mankind. Thus, in spite of much opposition, advance had been made, under the influence of Zadig and the guidance of Pasteur, within the limits of one generation from a stage in which knowledge was dark and chaotic into one where light and order prevailed. Many diseases, the scourges of the last generation, such as septicæmia and pyæmia, had been all but banished from surgery. By appropriate vaccines protection could now be attained against plague, typhoid fever, and other fatal disorders, and the mortality from diphtheria had been enormously reduced. Thus, by a strict following of Zadig's method, medicine had attained its present development, whilst a vista of possibilities undreamt of fifty years ago was opened up. What had been achieved was a mere beginning, and, as Pasteur had said, "You will see how it will all grow by-and-by. Would that my time were longer." A vote of thanks to Dr. Balfour, proposed by Dr. Ramsay, and seconded by Mr. E. T. Wilkinson, was carried by acclamation and duly acknowledged. In the evening the members of the Society and their guests dined together at the Station Hotel, York, under the presidency of Mr. Henry Foster, the President.

A RARE MEDICAL BOOK

In the *Glasgow Medical Journal* for October, Professor Henry E. Clark gives an account of an old work, the *Supplementum Chirurgiæ, or the Supplement to the Marrow of Chyrurgerie*, by James Cooke, "practitioner in Physick and Chirurgery," London, 1655. The book is extremely rare, and Professor Clark has found it mentioned only in the catalogue of the British Museum, which possesses two copies. James Cooke, of Warwick, was a well-known surgeon in the seventeenth century. His *Mellificium Chirurgiæ*, or Marrow of Surgery, passed through many editions, and in England appears to have taken the place of Maister Peter Lowe's *Discourse of the Whole Art of Chirurgerie*. Cooke was born in 1614, and died in 1688, thus living through one of the most critical periods of our rough island story. He had a very large practice, chiefly among the nobility and gentry in the Midlands. He had a powerful patron in Lord Brooke, and was probably himself a Roundhead. While at Stratford-on-Avon in 1642 he bought some manuscripts and books that had belonged to Dr. John Hall, who married Shakespeare's eldest daughter Susannah. Mrs. Hall was then a widow, and there seems to have been a little difficulty in the transaction, which is recorded by Cooke as follows: "Being in my art an attendant to parts of some regiments to keep the pass at the bridge of Stratford-on-Avon, there being then with me a mate allyed to the gentleman that writ the following observations in Latin, he invited me to the house of Mrs. Hall, wife to the deceased, to see the books left by Mr. Hall. After the view of them she told me she had some books left, by one that professed physick, with her husband for some money. I told her, if I liked them, I would give her the money again. She brought them forth, among which was this [to wit, *Select Observations*, to be more particularly referred to presently], with another of the author's, both intended for the presse. I being acquainted with Mr. Hall's hand, told her that one or two of them were her husband's, and showed them to her. She denyd; I affirmed, till I perceived she began to be offended. At last I returned her the money." Professor Clark shows that Mr. Sidney Lee has fallen into error in assuming that the negotiation did not end in a "deal." An English translation of one of the manuscripts bought by Cooke was published by him in 1657, under the title of *Select Observation of English Bodies; or Cures both Empiricall and Historicall performed upon very Eminent Persons in Desperate Diseases*. The work is described on the title-page as "First written in Latin by Mr. John Hall, physician, living at Stratford-on-Avon in Warwickshire, where he was very famous, as also in the countries adjacent, as appears by these Observations drawn out of several hundreds of his choicest." It has been conjectured that among the papers sold to Cook by Mrs. Hall there may have been some unpublished writings of Shakespeare. Professor Clark, however, thinks this very improbable, on the ground that Cooke, though a Puritan, was too good a man of business to destroy what Mr. Wemmick would have called "portable property" which even at that time must have had a considerable money value. In the *Supplementum Chirurgiæ* he treats of fevers, small-pox, measles, etc. The book contains one of the earliest descriptions of rickets in the English language. "This disease," he says, "is as new; so, as peculiar to children, it hath received several names, as *Pædesplanch nosteocaces*; this I saw in print, in a Thesis long before the Doctor's [Glisson] Tract on the subject [published in 1650]; others *Cachexia Scorbutica*, and Doctor's the *Rachitis*, nearly bordering on the vulgar name *Rickets*, and signifying the spinal disease, the spine being the first and principal, amongst the parts affected in this evil." One may venture to express thankfulness that among the numerous burdens and grievances under which the medical profession groans to-day, it has been mercifully delivered from the affliction of such a term of art as "Pædesplanch nosteocaces."

MEDICINE AND SCIENCE AT CAMBRIDGE.

Dr. Alex Hill, Master of Downing College, in his speech to Congregation on resigning the office of Vice-Chancellor of the University of Cambridge, stated that the amount already received towards the Benefaction Fund instituted at the meeting over which the Duke of Devonshire presided at Devonshire House amounted at the end of the financial year to £50,000. It had thus been made possible to consider the erection of new buildings for law, medicine, botany, and archæology. The response, however, had not been sufficient to warrant any of the new developments of University work which many friends of the University desired. In the interests of national progress, Dr. Hill said, it was greatly to be desired that laboratories of applied science should not be isolated, but should be established in connection with schools which were already strong in pure science. Technical training in any limited sense of the expression was impossible. In every subject of practical

application—whether it were to a learned profession or an industrial art—success depended upon breadth of knowledge of the sciences upon which the profession or art was based. Advances in technology were almost invariably due to the application by practical men of principles discovered by those who carried out investigations in pure science. Conversely the strength and vitality of a school of pure science was largely increased when opportunities were afforded to students of passing on to its applications. The remarkable progress of natural science in Cambridge was closely associated with the growth of the medical school. During the past twelve years a larger number of students had entered for the Natural Science Tripos than for any other examination for honours, notwithstanding the fact that but few students were in a position to allow their prospects in life to depend upon the discovery in themselves of a special aptitude for pure science. Almost all those who had since distinguished themselves in various branches of science had commenced their career by preparing to qualify for a profession. The majority of the graduates, for example, who were at present prosecuting researches in the physical, chemical, botanical, zoological, physiological, anatomical, and pathological laboratories, making, to the great credit of the University, additions to knowledge which were not exceeded, if they are equalled in amount, by any other university in the world, entered as medical students.

DANGERS OF THE GASOLIER.

THE fatality which occurred recently in Norwich once more draws attention to a household danger of which practically everyone knows, but which not a few who admit its existence are too careless to prevent. A young lady, before retiring to bed, went into the library to obtain a book, and drew down the sliding gasolier in order to light the gas. She turned out the gas, but omitted to push the gasolier up again before going to her bedroom, which was situated immediately above the library. As a result, the escaping gas accumulated below the library ceiling, and found its way in large volume into the bedroom above. The next morning the lady was found unconscious, and continued so until her death on the afternoon of the succeeding day. Such accidents emphasise the importance of seeing that the space between the two tubes of every sliding gasolier is converted into a shifting "gas-tight" joint by keeping it filled with liquid. Water is commonly used for the purpose, but is open to the objection that it is liable to evaporation—rapid in the high temperature attained in the upper part of a gas-lighted and ill-ventilated apartment—while the gas can itself pass through it more slowly by continuous solution. The difficulty can be met fairly well by covering the surface of the waterseal by an inch or so of oil; or by using some hygroscopic liquid, such as glycerine, in the place of water. It is important to see that the glycerine is not acid in reaction; and a good class of "heavy" paraffin oil—such as that used for high-class machinery—should be used rather than ordinary oils, which are prone to damage the metal work or to become "gummy" by oxidation in course of time. There is, however, another point which is far from being generally understood. The ordinary plaster ceiling is, after all, only a porous diaphragm, permeable by gases with considerable freedom. The air of a gas-lighted sitting-room, occupied for five or six hours in the evening, becomes, especially in its upper strata, highly charged with the effete products of human respiration and of combustion. Not a little of this passes through the ordinary ceiling into the room above; and if this latter be a bedroom the result is not to the advantage of its occupants. Let any sceptic compare his bodily and mental sensations after sleeping in such a room and in one situated over a similar room well ventilated and not occupied or illuminated by gas during the evening. The substitution of incandescent electric lamps for gas or oil would avoid a part of the mischief, and it is not impossible to make ceilings and floors practically impermeable to gases. But this is very seldom accomplished in practice. Since economy forbids our houses being built of one storey only, the sanitary alternative would consist in sleeping on the ground floor, and living, working, and cooking in rooms on the upper floors, where the light and air so needed during working hours are much more easily obtainable. Such a revolution in our acquired habits may seem difficult, but there is not a little to commend it. Amongst other considerations we might suggest that the burglar would be less attracted to a house whose inhabitants would be so much more easily aroused by an attempt at illegitimate entrance.

PAINLESS EXECUTION.

OUR American cousins are—in spite of an occasional "deviation from humanity" in the direction of lynching—a tender-hearted people. For a long time they dropped the tear of sensibility over murderers who were subjected to the barbarous procedure of being "worked off," to use the classic phrase of a great artist in that line. In deference to this delicate sentiment hanging was some years ago abolished in New York State, and victims of the law were helped to shuffle off their mortal coil with ease and despatch by electrocution. But still the Transatlantic philanthropist is not happy. Electrocution is said to be uncertain in its action; and, indeed, it has even been suggested that the *post-mortem* examination which is made immediately after the sentence of the law has been carried out, is intended to be the *coup de grâce*, or at any rate to "mak' sikkar." Moreover, it is believed that in some cases at least electrocution causes pain. With the view of making execution painless, therefore, it was recently suggested in a paper read before the American Association for the Advancement of Science to inflict the last penalty of the law by the administration of hydrocyanic acid under conditions that will ensure death being painless. For this purpose the criminal is to be taken to a "death chamber," which is to be connected by pipes with retorts generating the poisonous vapour, and some time when the patient is asleep the lethal gas is to be turned on, and he will quietly be absorbed into the infinite. The plan only requires the addition of a little slow music to make it realise the aspiration of the poet who prayed that he might drift through sweet sounds to a dream, and through a dream to death. To prevent any needless harrowing of the criminal's feelings by the contemplation of a steadily approaching end, the date of execution is not to be fixed, but is to be left to the discretion of the authorities within certain limits, extending over a period of several months. The idea does the greatest credit to the humanitarian sentiment to which it owes its conception. The plan appears to us, however, to have one trifling drawback: the prospect of so luxurious an exit from the stage of this dull world is likely to lead to a large increase of capital offences. Who, indeed, some may be disposed to exclaim, would fardels bear to grunt and sweat under a heavy life when he might find such a quietus by the easy and pleasant method of sticking a bare bodkin into some one whom he disliked?

SANATORIA FOR CONSUMPTIVES.

THE erection of sanatoria in Germany for the "open-air" treatment of phthisis proceeds apace. One of the latest to be opened is the Edmundsthal at Geesthacht, near Hamburg. Situated in a little pine wood, some 90 feet above the Elbe, the sanatorium is sheltered on three sides by hill and wood, while to the south it faces a little valley. It is an H-shaped edifice, consisting of a basement and two storeys, and provides accommodation for 100 male patients. The more southerly of the two long buildings is given up

entirely to patients. In the basement are baths, lavatories, etc., at its extremities are wards, while the spacious corridors adjoining them form day rooms. Outside each corridor is a verandah. In the basement of the short connecting limb of the H are kitchen and offices, above them a dining hall. The ends of the other long limb of the H also form wards. The latter are of three sizes. Three small wards have a single bed apiece, the next holds four, and the largest twenty beds respectively. The large wards are divided into sections by T-shaped wooden partitions, 5 feet 6 inches high, covered with linoleum. A "comfortable corner" is thus provided for each bed, and a certain amount of privacy ensured. It is said that the partitions are not high enough to interfere appreciably with the ventilation. The total cost of building, laying out grounds, etc., amounted to nearly £17,300, no less than £12,500, of which was given by Herr Siemers, of Hamburg. The Hamburg authorities presented the site, and are to contribute £3,000 a year for five years towards the expenses. The sanatorium has already made a good start, and will, we hope, soon be able to do without this contribution. This happy combination of private generosity and public support is worthy of the consideration of our countrymen. The foundation stone of the German Sanatorium at Davos will be laid on October 22nd. The estimated cost is 186,000 marks, and the funds already in hand for the maintenance of free beds amount to 96,200 marks.

MARK TWAIN ON CHRISTIAN SCIENCE.

Mark Twain has fallen among the Christian Scientists, and relates his experiences in the October number of *The Cosmopolitan*. Last summer, on his way back to Vienna from the Appetite Cure in the mountains, he fell over a cliff and "broke some arms and legs and one thing or another." He was taken to a neighbouring village, where there was no surgeon. There happened, however, to be a lady from Boston, who was a Christian Science doctor, and could cure anything. So she was sent for. But the shades of night were falling, and she could not conveniently come; she sent word, however, that it did not in the least matter, as she would apply "absent treatment" and call in the morning. In the meantime the sufferer was bidden to make himself tranquil and comfortable, and remember there was nothing the matter with him. The patient was in some doubt whether the diagnosis had been made with sufficient care, but he tried to make himself believe that his pain was a delusion. Morning brought the Christian Scientist, who declined even to listen to the recital of his symptoms, assuring him that there is no such thing as feeling, and that nothing exists but mind, which cannot feel pain. "You should never," said she, "allow yourself to speak of how you feel, nor permit others to ask you how you are feeling; you should never concede that you are ill; nor permit others to talk about disease, or pain, or death, or similar non-existences in your presence. Such talk only encourages the mind to continue its empty imaginings." On the unfortunate sufferer pleading that he was full of imaginary tortures, which could not make him more uncomfortable if they were real, and asking what he could do to get rid of them, he was told that there was no occasion to get rid of them since they did not exist, but were mere illusions propagated by matter which itself had no existence. Mark Twain attempted to argue this point, since, as he put it, if there is no such thing as matter, how can matter propagate things? In pity for his dulness of perception the Christian Science priestess condescended to inform him that it was quite simple: "The fundamental principles of Christian Science explain it, and they are summarised in the four following self-evident propositions: (1) God is All in all. (2) God is good. Good is Mind. (3) God, Spirit, being all, Nothing is Matter. (4) Life, God, omnipotent Good deny death, evil, sin, disease." By way of further elucidation she added: "Soul is God, unchangeable and eternal; and Man coexists with and reflects Soul, for the All-in-all is the Altogether, and the Altogether embraces the All-one, Soul-Mind, Mind-Soul, Love, Spirit, Bones, Liver, one of a series, alone and without an equal." Here Mark Twain was moved to reflect on the effect which Christian Science has upon the verbal bowels; it made him think of a dictionary with the cholera. The lady went on to inform him that Mrs. Eddy, the "revered and sacred Founder" of Christian Science is distinctly referred to and her coming prophesied in the twelfth chapter of the Book of Revelations where it is said that "there appeared a great wonder in heaven—a woman clothed with the sun and the moon under her feet, and upon her head a crown of twelve stars." Further on it is stated that "the woman fled into the wilderness, where she had a place prepared of God," the said place being considerately explained by this newest biblical commentator to be Boston. When the inspired writer goes on to say, "And I saw another mighty angel come down from heaven clothed with a cloud, and a rainbow was upon his head, and his face was as it were the sun, and his feet as pillows of fire; and he had in his hand *a little book*," is it not plain that he referred to Mrs. Eddy's latterday bible, *Science and Health*? Mark Twain read this work, and the effect of it upon his mind may be gathered from his statement that "of all the strange and frantic and incomprehensible and uninterpretable books which the imagination of man has created, surely this one is the prize sample." Our readers have already had an opportunity of forming a judgment on this extraordinary production, and nothing more need be said of it here. Mark Twain believes that the book was written by someone for Mrs. Eddy, as that otherwise gifted lady cannot write English; but that is a small matter, for if it be true, the revered and sacred Founder of Christian Science is by no means alone among prophets of healing in needing the help of mortals with a tincture of grammar to translate their inspired revelations into human speech. Mark Twain admits, as everyone who knows the healing power of faith must admit, that cures are wrought in certain cases by Christian Science as well as by the Mind Cure, the Faith Cure, the Prayer Cure, and the Mental Science Cure; but he believes that it might be shown that all the "mind" sects, except Christian Science, have "lucid intervals—intervals in which they betray some diffidence, and in effect confess that they are not the equals of the Deity; but if the Christian Scientist even stops with being *merely* the equal of the Deity, it is not clearly provable by his Christian Science Amended Bible. In the usual Bible the Deity recognises pain, disease, and death as facts, but the Christian Scientist knows better. Knows better and is not diffident about saying so.

IMPORTANCE OF TEACHING DOMESTIC SCIENCE.

At the recent Congress of the Institute of Public Health, Dr. Rogers McNeill, County Medical Officer, Argyllshire, contributed a paper in which he contended that "domestic science" should be taught as an aid towards the improvement of public health. Under the head of "domestic science" he included the elements of hygiene and physiology, the theory and practice of cooking, laundry work, dressmaking, and housewifery or general household management; in fact, "all the duties of a woman in charge of a house and family," "so as to keep herself and all the other occupants, from the youngest to the oldest in a healthy state of body and mind"; and this, too, "at the lowest possible cost or least possible waste." The difficulty at present is apparently to find capable teachers of domestic science; there are a few in towns, but in rural districts they are very scarce. Very few mothers can teach their daughters, themselves not having sufficient knowledge or capacity, time or inclination for the purpose. But, wherever it is taught, domestic

science is said to stimulate the intelligence of the pupils and to make school life brighter and more pleasant. It is a subject of primary education in Germany, especially in Baden, where the present system dates from 1891; in Switzerland and Belgium also great attention is given to the subject. In London some progress has been made, but at seven centres only. The course covered three stages in three years, commencing in Standard V, and taking Standards VI and VII in the second and third years. The lessons, which are both theoretical and practical, comprise in the first year elementary food and cookery, clothing, and laundry work; in the second year they include food and cookery again and elementary housewifery; and during the third year housewifery and home nursing. Outside London very few School Boards have as yet taken up the subjects in this systematic manner. In fact, housewifery has only been recently recognised as a grant-earning subject. In some counties schools of domestic economy have been founded, which are assisted by grants from county technical education funds; also in London and elsewhere continuation schools teach domestic science. But all school authorities should strive to obtain instruction for those under their charge in this most important subject. When this comes to pass, we may expect that, as Dr. McNeill observes, "in the aggregate the nation will be enormously strengthened to work out its destiny in the ages to come."

DIPHTHERIA BACILLI IN HEALTHY PEOPLE.

Among the knotty problems which have yet to be solved by bacteriology two of great importance are those of the identification of the Klebs-Loeffler bacillus and of the significance of its occurrence in healthy persons. While Kober's work[1] does not solve these problems it throws valuable light on some points in connection with them. In the matter of distinguishing the Klebs-Loeffler from the pseudo-bacilli Kober relies on four tests: (1) Microscopic examination of the serum culture six hours after it is made. Stress is laid on the importance of this early examination. At this time the development of the Klebs-Loeffler bacillus is at its height and the majority of the bacilli are of the shape described by Loeffler as typical; later on they assume a variety of forms, spindle, pear, dumbbell, lancet, and half-moon-shaped. At this early period the pseudo-bacilli are relatively undeveloped and therefore not so likely to be mistaken for the Klebs-Loeffler. Of the xerosis group, for instance, only an occasional bacillus is "plump," the majority are thin and easily distinguished from the true diphtheria bacillus. While Kurth and others found that occasionally pseudo-bacilli were encountered which took up (2) Neisser's double stain, Kober asserts that this does not take place with young bacilli (that is, from a culture six hours old). (3) The pseudo-bacilli either produce no acid or much less than is formed by the Klebs-Loeffler. (4) The effect on animals is not a trustworthy test where negative, as numerous instances have been known of true Klebs-Loeffler bacilli proving non-virulent in animals. Kolbe examined the throats of 600 healthy school children, and found diphtheria bacilli in 15; 10 of these 15 had been in contact, more or less remotely, with diphtheria patients, for example, by playing in the same playground, etc. Injected in guinea-pigs the bacilli from 5 of these proved to be virulent, 10 were harmless. Of 128 persons brought into closer connection with patients, the diphtheria bacilli were found in 15, and in every case the guinea-pigs inoculated died. Little is known about these variations in virulence. At the Breslau Laboratory for the Investigation of Diphtheria, of 139 persons who were in attendance on diphtheria patients, and whose throats were not quite healthy, the Klebs-Loeffler bacilli were found in 69.7 per cent. According to the literature on the subject, says Kober, the percentage in people with healthy throats in similar positions is 18.8, but according to his own researches it is only 8.1 per cent. The length of time the bacilli are found in the throat varies apparently with their virulence. In the 15 (out of 600) children, the average for the virulent was 10.2 days, for the non-virulent 6.3 days. In the case of the other 15 persons the average was 16.8 days (it ranged from 11 to 28 days). While the bacilli may cling for a long time to articles used by the patient, Kober agrees with Reger in thinking that inanimate objects play only a secondary part in the spread of the infection.

[1] Max Kober, *Zeitsch. f. Hyg. und Infect.*, July 31st, 1899.

THE MEDICAL PROFESSION IN HUNGARY.

A Congress of Hungarian medical practitioners was held last month at Grosswardein, for the consideration of questions affecting the interests of the profession. Some 350 practitioners attended. The Congress, which was presided over by Professer Kétli, was formally received by Cardinal Schlauch, the Burgomaster, and other officials and representatives of the local Medical Committee. Resolutions were passed asking that the Public-health law should be modified so as to safeguard the moral and material interests of the profession; that quackery should be suppressed; and that the conditions of hospital assistance should be reformed.

THE PATHOLOGICAL SOCIETY OF LONDON.

During its coming session an important new departure will be made in regard to the meetings of this Society. Four of the fifteen meetings which have hitherto been held at the rooms of the Royal Medical and Chirurgical Society are to be held at different London laboratories, in connection or not, with medical schools, the object being that demonstrations may be given which it would be extremely difficult or impossible to carry out elsewhere. This is the realisation of a proposal made some years ago by the late Professor Roy. The advantages likely to accrue from such laboratory meetings are obvious, for it is a matter of great moment that the resources of scientific education should be within the reach of all members of the profession who may care to avail themselves of such. It is only in this way that the scientific advance of medicine and surgery can be ensured. It has, moreover, been determined that the report of an author's communication or demonstration given at any of the four laboratory meetings shall be made public only if the author himself so wish. The chief reason for this regulation is that the work being carried out at laboratories may be at such a stage of progress when brought forward that its publication would be premature and injudicious. The next meeting of the Society will be held at the Jenner Institute of Preventive Medicine on November 7th, and subsequent laboratory meetings will be held at University College, London (February 6th), at the Laboratories of the Royal Colleges of Physicians and Surgeons (March 6th), and at King's College (May 1st).

Professor Clifford Allbutt will give an address on Local and Constitutional Disease at a meeting of the Medical Society of University College, London, on Wednesday, November 1st, at 8 P.M.

The muzzling order has been revoked in the West Riding of Yorkshire, and in Worcestershire, Warwickshire, and Staffordshire by order dated October 16th.

Care of Insane in Workhouses.—At the recent meeting of the Northern and Midland Division of the Medico-Psychologial Association at the West Riding Asylum, Menston, Leeds, the question of the care of the insane in workhouses was discussed, and it was unanimously agreed by the members present that in union workhouses in which insane persons are detained nurses properly qualified and trained in mental nursing should be employed.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The New Session of Parliament opened on Tuesday last with a remarkably large attendance for an autumn sitting. Quite a crowd accompanied the Speaker to the Lords to hear the Queen's Speech read, and they did not seem at all disappointed that it touched practically on only one subject—the troubles in South Africa. When the Address in answer to the Speech was debated in the Commons the benches were crowded, and there was evidently a good deal of electricity in the political atmosphere. It lessened after the speeches of Sir Henry Campbell-Bannerman and Mr. Balfour, and for a moment the debate seemed about to close, when Mr. Dillon intervened with an amendment which occupied the rest of Tuesday. In the Lords the Prime Minister and Lord Kimberley delivered speeches of great interest.

The Debate on the Address is likely to occupy the remainder of the week. Mr. Stanhope's amendment criticising the conduct of the negotiations with the Transvaal will not be disposed of before Thursday, and it is possible other amendments may be put down that will require discussion. Of those already placed on the notice paper there is one which deals with the important question of the housing of the poor.

The Business of the Session will be confined to the Military Estimates and the expenditure necessitated by the outbreak of hostilities in South Africa. Mr. Balfour carried his resolution, taking the time of the House on Wednesday, and consequently no private Bills can be introduced, and members not in the Government will only be able to ventilate grievances either on the Address or on the Appropriation Bill, or by the method of questions. This will of course make the proceeding of much less general interest, but the mind of the House is so absorbed by the war question that other matters have little or no chance of attention.

The Length of the Session, as regards the autumn sitting, is likely to be prolonged some days over the anticipated fortnight by the mode in which the Government propose to raise the necessary money for the military operations. The Army Estimates will be introduced, and the extra money required up to March 31st voted by the usual procedure of Ways and Means. This, it is thought, will give greater opportunities for debate, although there will be no serious opposition to the Government proposals.

Questions to the number of some three dozen were put upon the paper at the first sitting. Among the matters raised by them are the supply of tinned foods and stores for our troops more especially from our colonies, the stamping out of rabies, and the action of the Irish Local Government Board in encouraging dispensary medical officers to take four weeks' holiday. There is also a question asking the Government to extend the Blind and Deaf Education Act to dumb children.

OPENING OF THE MEDICAL SCHOOLS.

EDINBURGH.

The University and Extra-Academical Medical Classes were opened for the winter session on Tuesday, October 17th. The custom which prevails so much in the English medical schools—inviting some notable outside figure to give a formal introductory address—does not hold in Edinburgh; not only so, but formal opening orations are more and more coming to be dispensed with save in the case of new professors, and the various teachers plunge at once into the serious work of the session. This mode has certain obvious disadvantages. It would be a stimulus at the beginning of the session were students oftener to see some of the leaders of the medical and scientific world, and to hear of their successes and failures.

Address by Professor Schäfer.

The centre of interest on Tuesday last was the induction of Professor Schäfer to the Chair of Physiology, and his introductory lecture. So many wished to see and to hear that the large class-room of the department was quite inadequate in space, and an adjournment had to be made to the McEwan Hall, a unique event. Principal Sir William Muir presided, and he was accompanied on the rostrum by the Dean of the Faculty of Medicine (Professor T. R. Fraser), and by almost all the other medical professors. The fact that they had to meet in that Hall, said the Principal, was evidence of the interest which students and graduates felt on this great occasion.

Professor Schäfer took as the subject of his inaugural address The Makers of Modern Physiology. He began by paying a tribute to his predecessor, William Rutherford, as a distinguished physiologist and an eminent teacher, and spoke of the loss which the university and the whole scientific world had sustained by his death in the month of February last. He sketched his character, his career, and his scientific work. He then went on to speak of a few of the men who had laid the foundations of the edifice known by the name of Physiology. He admitted that the corner stone had been placed by Harvey, and he did not forget other eminent men who had done their share of the building, but he would begin his study with Johannes Müller, who was professor of physiology in Berlin from 1833 to 1858, and who had a true claim to be regarded as the father of modern physiology in Germany. Of Müller's pupils and successors who were concerned in laying the foundations of physiology in Germany, Virchow was still with them, and he would only mention three others—Karl Ludwig, Du Bois-Reymond, and Helmholtz. Then there was Claude Bernard in France. The position of Müller in Germany was taken in this country by a man no less remarkable—namely, William Sharpey. The seed that Sharpey first sowed fell on stony ground. Physiological institutions had been established all over Germany for many years before physiologists in this country were regarded as a distinct class of workers. Professor Schäfer gave biographical and other notes of the various men he alluded to. The pupils of Müller had passed away, while the immediate disciples of Sharpey were still among them, and had extended the influence of his teaching into all parts of the English-speaking world. It was not a little curious that the whirligig of time had brought back to Edinburgh the pupil and successor of Sharpey and Burdon Sanderson in University College, London. Professor Schäfer was enthusiastically received.

The Chair of Medicine.

In opening the class of Practice of Physic, Dr. John Wyllie made kindly and sympathetic reference to the illness of Sir Thomas Grainger Stewart, and said his recovery had for a number of weeks been so unbroken and so satisfactory as to give good ground for the hope that when the summer session came round it would find him so restored as to be able to undertake his duties once more without the risk of overtaxing himself. Dr. Wyllie then explained the course he intended to give, and made some general remarks about disease.

UNIVERSITY COLLEGE DUNDEE.

The winter session of University College, Dundee, was formally opened on Wednesday, October 11th, with an inaugural address by Professor Marshall in the Chemistry Class Room, on The Origin of Medicine, which he said was lost in antiquity, like the origin of man. Both were probably coeval. There would be pain in primitive man and alleviation would be attempted. Hence the healing art. Some one in the community would be more skilful than others, and he would become the primitive physician. There were those who thought that animals first suggested medical treatment to man; but that he doubted, as also the theory that medicine had a religious origin, because that also required an advanced stage of civilisation. He referred to the records of medicine among the Asiatic peoples and the Greeks. He then referred to the fact that in Dundee they now had for the first time in the history of the university a completely equipped medical school, and to recent changes in the teaching staff of the College, and in its relation with the University of St. Andrews.

ENTRIES AT THE MEDICAL SCHOOLS AND COLLEGES IN ENGLAND.

We are enabled by the courtesy of the Deans, Wardens, or other officers of the various schools mentioned below to publish the following particulars with regard to the number of students who have entered in England this session for the whole curriculum, and those who have joined for the various special courses.

Under the agreement whereby joint cards of admission are issued to the clinical instruction of the following hospitals and schools of medicine, namely, Charing Cross, Guy's, King's College, Middlesex, St. George's, St. Mary's, St. Thomas's, University College, and Westminster—83 qualified men have entered since the corresponding date of last year; of these 38 came from the United Kingdom, 26 from the Colonies, and 19 from foreign countries.

The number of students who have joined for the full curriculum is shown in the first column, A.

	A.	B.	C.	D.
St. Bartholomew's Hospital	115	52	—	17
Charing Cross Hospital	26	34	26	5
St. George's Hospital	27	20	—	1
Guy's Hospital	79	18	52	29
King's College	21	235	—	10
London Hospital	83	60	—	9
St. Mary's Hospital	50	63	—	3
Middlesex Hospital	24	43	10	—
St. Thomas's Hospital	59	7	—	11
University College	35	52	—	32
Westminster Hospital	17	26	1	7
London School of Medicine for Women	17	—	—	10
Cambridge University	141	—	—	—
Oxford University	‖	—	—	—
University of Durham College of Medicine	32	50	4	65*
Bristol University College	23	2	3	10
Owens College, Manchester	76	50	24	47
University College, Liverpool	58	41	13	28
Yorkshire College, Leeds	26	8	—	25
Mason College, Birmingham	20	22	12	6
University College, Sheffield	5	—	1	2
University College of South Wales, Cardiff	12	2	2	7
London School of Dental Surgery		—	40	—
National Dental Hospital	—	—	—	
School of Tropical Medicine	13		—	—

A. Number of students who have joined for the full curriculum
B. Number of students who have joined for special courses.
C. Number of dental students.
D. Number of students who have joined classes for preliminary instruction.
* At College of Science.
† None besides those entered for full curriculum
‖ Incomplete.

THE JENNER INSTITUTE OF PREVENTIVE MEDICINE.[1]

Thanks to the enlightened munificence of Lord Iveagh, the Institute of Preventive Medicine, so well-named after our great Jenner, bids fair, though somewhat late in the field, to prove no mean rival to its sister Institute in Paris. It is encouraging for the future of England that the value of scientific investigation has at last been recognised. Too long has this country been a laggard in this respect. Wiser than ourselves, Germany especially, and even little Denmark, have long ago taken care to foster the pursuit of science, with what results are too well known to need repetition here.

But, apart from the prizes in the way of inventions and new industries, the cultivation of science, or the knowledge of causes, for its own sake, forms a valuable asset in the economy of a nation, especially one called upon to play so important a part in the affairs of the world as the English. A review of the historical development of the experimental sciences, such as physiology, shows that this country has done its share of pioneer work. Given the opportunities, there will be no lack of willing, intelligent, and honest investigators.

In its new home on the Thames Embankment, no longer "cabin'd, cribbed, confined," the Institute offers every facility for research in various directions, such as public health, the etiology and treatment of the infectious diseases not only of that paragon of animals, man, but of his dependents, the domestic animals, and so forth. There are also laboratories for private research and for the preparation of glycerinated calf lymph by the Local Government Board Bacteriologist, together with chemical and photographic laboratories, museum, and lecture room. The Hansen laboratory is equipped for instruction in the processes of fermentation, which will obviate the necessity of students going abroad as heretofore. The second volume of the *Transactions* bears ample testimony to the many important channels in which research is being directed, and to the activity of those engaged.

Taking a general survey of the various papers, it may be said at once that they are concise and to the point—a feature which might well be imitated in and out of England. The large amount of labour involved in experimental work and the investigation of biological processes may not be apparent to the inexperienced reader, but let him be undeceived on this point, for a short paper oftentimes represents the upshot of many months' grappling with difficulties and disappointments.

Diphtheria.

The opening paper has been contributed at the request of the Director by Professor Ehrlich, of Berlin, who treats of the constitution of the diphtheria toxin. In it he has brought together the results already reached in this important investigation. Apart from this, however, all the other papers in the volume represent work carried out in the laboratories of the institute. Dr. William Bulloch, in a thoughtful paper, also deals with the subject of diphtheria toxin, and insists on the importance of the study of the toxoids in the estimation of the antitoxic value of serum for clinical purposes. The details essentially concern experts in this line of research.

Streptothrix and Actinomycosis.

The contribution of Mr. George Dean, entitled, "On a New Pathogenic Streptothrix," is chiefly interesting as confirming the view that the streptothricæ are more nearly allied to the bacilli, such as the diphtheria and tubercle bacilli, than to the moulds; and further, that actinomycosis is a disease due not to one specific micro-organism, but to a number of allied species. He isolated the organism from a growth about the angle of the jaw of a horse. Clinically the affection might have been described as actinomycosis. The organism, however, differed from the ordinary actinomyces. It presented a bacillary form, which experimentally gave rise to nodules, in which filaments with lanceolate and club-shaped processes were developed.

Bacteriology of the Conjunctiva.

Mr. Arnold Lawson gives the results of the bacteriological examination of the normal conjunctival sac in 200 cases, and their practical bearing on the utility of antiseptics in ophthalmic surgery. He concludes that antiseptics in ophthalmic surgery should be abolished, the strongest antiseptic being the healthy conjunctiva itself. The only factors, therefore, to consider are perfect asepsis on the part of the operator and a healthy condition of the conjunctival sac.

The Bacillus Enteritidis Sporogenes.

This bacillus, described by Klein, has been studied as occurring in ulcerative colitis and in the normal dejecta, by Dr. Richard T. Hewlett, who concludes that the organism is probably an inhabitant of the normal digestive tract. It is frequently found in the dejecta, and as it has been isolated from road and laboratory dust, water, and milk, he considers it is probably ubiquitous.

Photogenic Bacteria.

Mr. J. E. Barnard contributes an interesting paper on the photogenic bacteria, especially as regards their power of producing and emitting light. His observations, which have been carried out independently of the results obtained by others, were directed chiefly to ascertaining the cause of the phosphorescence and the conditions necessary for its production. In addition to the cultural and other experiments described in the present volume, the author is also engaged in studying the subject from the physical and chemical standpoints. He has also isolated a phosphorescent organism obtained from polyzoa dredged at a considerable depth outside Plymouth breakwater. As it cannot be identified with any of

[1] *Transactions of the Jenner Institute of Preventive Medicine* (late British Institute of Preventive Medicine). Second Series. London: Macmillan and Co. 1899. (Demy 8vo, pp. 270, with plates and illustrations, 6s.)

those already described, Mr. Barnard proposes to name it photobacterium liquefaciens Plymouthii.

Pseudo-diphtheria Bacillus.

Dr. Alfred Salter has carried out investigations concerning the pathogenicity of the pseudo-diphtheria bacillus and its relation to the Klebs-Loeffler organism. He has found that the weakest of the diphtheritic organisms, known as Hoffmann's or the pseudo-diphtheria bacillus, and representing the most attenuated form of the Klebs-Loeffler bacillus, is capable of killing only certain highly susceptible small birds of the finch tribe. By exaltation of its virulence, however, it proved fatal to more resistant small birds of the bunting family, larger birds such as the *Merulidæ*, and even guinea-pigs. He also made further experiments of interest on the products of metabolism of the organism.

Fermentation of Sugar by the B. Coli.

Turning to still another field of research, Mr. Arthur Harden has investigated the fermentation of sugars by the bacillus coli communis and allied organisms.

The Structure of Bacteria.

Mr. Sydney Rowland's observations on the subject are interesting; his remarks on the cell wall, the cell granules, and the cell plasma bear the evidence of painstaking diligence in a difficult line of study, but one which lies at the root of the problems which confront us with regard to these minute organisms.

Thermophilic Bacteria.

Not only are the luminous bacteria discussed, but also the thermophilic bacteria. These have been further studied by Drs. Macfadyen and Blaxall since their earlier and pioneer paper on the subject was published (1894), and their exhaustive experiments and observations are of the greatest interest. In this place a few points only can be touched upon. The spontaneous heating of hops is associated with an organism, the bacillus lupuli perdi. The spontaneous heating of hayricks to 50° to 60° C. arises from the action of bacteria, chemical processes being thereby started which lead to the production of further heat and inflammable bodies. The enormous amount of manure constantly undergoing decomposition must furnish a favourable nidus for the thermophilic organisms; cellulose becomes completely disintegrated under their influence.

Other Papers.

Besides the foregoing, the *Transactions* contain many other contributions of importance, such as the technical application of bacteriology, by Dr. Harris Morris, dealing with industrial and agricul ural matters; the pathology of cancer, by Dr. Lambert Lack; Neisser's diagnostic stain for the diphtheria bacillus, by Dr. Hewlett; an instance of that remarkable phenomenon known as symbiotic fermentation, by Dr. Macfadyen; observations on the bacillus coli communis group, by Mr. Joseph Lunt; and the action of hydrogen peroxide, by Mr. Harden.

In the Laboratory Notes and Notes on Apparatus which close the volume are several points well worth reading—a case of bacillus prodigiosus infection, for instance, in which an innocent person was accused of dusting meat with a "red powder." The volume contains a number of well-executed photographic plates, and altogether reflects great credit on the Jenner Institute.

The present survey has necessarily been rapid, but sufficient has been said to show the many-sided and excellent work which is being carried on. The future of the Institute is full of promise. Year by year it will go on gathering strength, for many unknown and unexplored fields are awaiting the hand of earnest workers.

LITERARY NOTES.

Messrs. J. and A. Churchill announce a second edition of Mr. Butlin's *Operative Surgery of Malignant Disease*, and a *Student's Handbook of the Surgery of the Alimentary Canal*, by Mr. A. E Maylard.

Messrs. Macmillan announce a series of manuals dealing with medical and surgical subjects. These manuals are described as being adapted to the requirements of the practitioner and senior student; they are to be issued at a net price of ten shillings and under, and will be of a convenient size, and, when necessary, fully illustrated. *An Introduction to the Outlines of the Principles of Differential Diagnosis, with Clinical Memoranda*, by Dr. F. J. Smith, has already appeared. Among the volumes in preparation are a *Manual of Medicine*, in four volumes, to be edited by Dr. W. H. Allchin; a *Manual of Surgery*, in three volumes, to be edited by Mr. C. Stonham; ; *A Manual of Diseases of the Skin*, by Dr. Colcott Fox; *A Manual of Hygiene*, by Dr. Leonard Wilde; *A Textbook of Surgical Pathology*, by Mr. G. Bellingham Smith; *A Student's Guide to Surgical Diagnosis*, by H. Betham Robinson, M.D.; *The Application of Physiology to Medicine*, by Professor A. E. Wright; *The Application of Medicine to Surgery*, by Mr. D'Arcy Power; a *Manual of Chemical Physiology and Pathology*, by Dr. T. G. Brodie; a *Manual of Surgical Anatomy*, by Mr Francis C. Abbott; *Diseases of the Nose, Throat, and Ear*, by Dr. Dundas Grant; *The Essentials of Morbid Anatomy*, by Dr. B. Abrahams; *The Principles of Pathology*, by Dr. B. Abrahams; and *Medical Diseases of Childhood*, by Dr. J. A. Coutts.

Climate is the title of a new "quarterly journal of health and travel," which is edited by Dr. C. F. Harford-Battersby, Principal and Secretary of the Livingstone College for the instruction of fore gn missionaries in the elements of practical medicine and surgery. The aim of the journal is said by the editor to be "to collect and record facts and opinions from trustworthy observers in all parts of the world in such a way as to furnish in time a compendium of information on health questions which may be available for intending travellers in all climes." Among the articles in the first number are an interview with Mr. F. S. Arnot entitled Across Africa; one on Climate and Travel in Labrador, by Mr. W. T. Grenfell, M.R.C.S.; and one on House Building in Tropical Africa, by Mr. A. H. Nye, of the Congo-Balolo Mission. A practical feature of the number is a Uganda Outfit List, drawn up by the Rev. G. K. Baskerville and the late Mr. G. L. Pilkington. The periodical, which is well printed and copiously illustrated, seems to us likely to fulfil a very useful purpose.

THE PLAGUE.

Portugal.

Oporto.—Matters are proceeding from bad to worse in Oporto, and plague seems to be getting a marked hold upon the city. During the week ending October 15th, 30 fresh cases of plague occurred in Oporto, and 7 deaths from the disease Since the commencement of the outbreak 161 cases of plague are known to have occurred This may appear an insignificant total, but the worst feature of the epidemic is that in spite of sanitary precautions, the use of a prophylactic and curative serum, and of every measure known to science in Portugal, the number of fresh cases has increased largely during the past fortnight. It is some consolation to know, in the event of the possible spread of plague beyond Oporto, that the general consensus of opinion is that in no town in Portugal can plague find a more congenial home. It is difficult to find a place quite as bad all round as Oporto; the overcrowding is excessive, sometimes as many as 15 to 20 people occupying a single apartment. When a case of plague occurs in such an abode, and the work of disinfection is proceeded with, there is no place for the occupants to go to except the street, and, as a rule, they remain there until their home is disinfected. It must not be imagined that the Portuguese are altogether a dirty race; their apartments are neater and cleaner to all outward appearance than in British towns, but overcrowding is rife, and their public sanitation is primitive and inefficient. Many Spaniards reside in Oporto, and it is noticable that the earliest ascertained cases of plague occurred amongst them. The Spaniard is much less cleanly than the Portuguese, both in his person and in his household, and were plague to spread to Spain the bacillus would find a much more congenial atmosphere than in Portugal. The costly amusement of the military cordon around the city goes on, but the cordon is no barrier against the extension of the disease; already 9 cases, with 5 deaths, have occurred in a village situated some 12 miles from Oporto, and it is feared the rest of the kingdom will be attacked. The local authorities in Oporto are endeavouring to raise a loan of £1,000,000, whereby to effect radical sanitary reforms. If this energetic spirit prevails we may soon hope to hear of Oporto rehabilitating itself in an improved sanitary condition.

Egypt.

Alexandria.—No cases of plague have been reported in Alexandria during the past week.

Mauritius.

In the week ending October 12th, 63 fresh cases of plague occurred in Mauritius and 47 deaths. There is no indication of an improvement in number of those attacked by plague in the colony, which has now suffered from plague for several months.

India.

Bombay.—For the past eighteen weeks the mortality has remained almost stationary the numbers ranging between 50 and 96. The quiescent period this year has proved of longer duration than during the

previous plague years, so that there is encouragement in the delay, and hopes that the appearance of the fourth epidemic may be averted. In the Bombay Presidency the total reported plague deaths number up to the present 4,700. The Poona city outbreak is still lessening in its virulence. In Nassik, Satara, Ahmednagar, Dharwar, and Surat districts plague is increasing, but in the Belgaum district and in the Southern Mahratta States it is decreasing. Deep regret is expressed locally at the death of Miss Bay Burnett, daughter of General J. C. Burnett commanding the Poona district. Miss Burnett died of plague on September 24th.

HONG KONG.

It is with great satisfaction that we record the fact that there have been no cases of plague in Kong Kong during the past week. Since the commencement of the present epidemic there have been 1,500 cases of plague and 1,400 deaths in the colony.

ASSOCIATION INTELLIGENCE.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the London Hotel, Taunton, on Thursday, October 26th, at 2 P.M. Professor Gilbert Barling (Mason College, Birmingham) will read a paper on a Modern View of Malignant Disease. There will be a lunch at the London Hotel at 1.15, price 3s. Members intending to be present should inform the Honorary Secretary before October 22nd.—R. LIDDON MEADE-KING, Taunton, Honorary Secretary.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this District will be held at the County Hospital, Guildford, on Thursday, October 26th, at 4 P.M. Dr. Morton (Guildford) will preside. Agenda: Minutes of Godalming meeting. To decide where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Mr. D'Arcy Power: The Prognosis and Modern Treatment of Appendicitis. Dr. A. E. Giles: The Treatment of Uterine Displacements. Members desirous of exhibiting specimens or reading notes of cases, are invited to communicate with the Honorary Secretary at once. Dinner at the White Lion Hotel at 6.30 P.M. Charge 6s., exclusive of wine. All members of the South-Eastern Branch are entitled to attend, and introduce professional friends. The Honorary Secretary would be much obliged if members would kindly inform him whether they intend to remain to dinner. By so doing they will materially facilitate arrangements.—ALEX. HOPE WALKER, The Common, Cranleigh, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this Branch will be held at the White Hart Hotel, Lewes, on November 30th. Dr. Fawssett will preside. Members are requested to send notice of papers or other communications to the Honorary District Secretary,—J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will be held at the Gravesend Hospital on Thursday, November 2nd, at 4.15 P.M., Mr. R. J. Bryden in the chair. Members wishing to read papers, or show cases or specimens, are requested to communicate with the Honorary Secretary as soon as possible.—LUDFORD COOPER, St. Bartholomew's Hospital, Rochester, Honorary Secretary.

BATH AND BRISTOL BRANCH.—A meeting of this Branch will be held at the Medical Library, University College, Bristol, on Wednesday, October 25th, at 7.30 P.M., under the presidency of Mr. A. J. Harrison. The following communications are expected:—Dr. Walter C. Swayne: Treatment of Puerperal Sepsis, especially by Curetting and use of Strepto-antitoxin. Mr. E. W. H. Groves: Four Cases of Pelvic Tumour treated by Laparotomy. Dr. Theodore Fisher: Rheumatic Disease of the Heart Muscle. Mr. C. A. Morton: A Successful Case of Double General Empyema, and one of Drainage of a large Abscess of the Lung. Dr. P. Watson Williams: The Clinical Significance of Purulent Discharge from the Nose (lantern slides). Dr. J. Michell Clarke: The Early Stages of Degenerations of the Spinal Cord in Anæmia (lantern slides).—J. MICHELL CLARKE (Clifton), W. M. BEAUMONT (Bath), Honorary Secretaries.

OXFORD AND DISTRICT BRANCH.—**The next meeting of the Branch will be held at the Radcliffe Infirmary, Oxford, on Friday, October 27th, at 3 P.M. Members willing to read papers or show cases are requested to communicate at once with the Honorary Secretary, WM. COLLIER, M.D., St. Mary's Entry, Oxford.**

SHROPSHIRE AND MID-WALES BRANCH.—**The annual general meeting will be held at the Salop Infirmary, on Tuesday, October 31st at 3 P.M.**—HAROLD H. B. MACLEOD, **Honorary Secretary, Clive House, Shrewsbury.**

PERTHSHIRE BRANCH.—The next meeting of this Branch will be held in Perth on November 3rd.—A. R. URQUHART, James Murray's Royal Asylum, Perth, Honorary Secretary.

STAFFORDSHIRE BRANCH.—The twenty-sixth annual general meeting of this Branch will be held at the North-Western Hotel, Stafford, on Thursday, November 2nd, at 4.45 P.M. Business: Introduction of new President (Dr. J. B. Spence); Address by the President; Report of Council and Ethical Committee; Financial Statement; To decide place of holding next annual meeting; Election of Officers and Council for the ensuing year. Dinner at 6.45; charge 5s.—F. MILNES BLUMER, Stafford, General Secretary.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of this District was held at Hastings on October 5th, Dr. ALLFREY (St. Leonards) in the chair.

Diphtheria and Membranous Croup.—The CHAIRMAN read a paper on this subject. He said that when he commenced practice in West Kent in 1863, where diphtheria was at the time, as it had been for several years, very prevalent, he was struck by the occurrence of cases in which only the larynx was affected in association with cases of undoubted throat diphtheria, in the same house and under the same conditions and circumstances. He came to the conclusion, which Dr. Hillier had previously arrived at, that diphtheria and membranous croup were one disease. Although this opinion had been steadily gaining ground, more especially since so much light had been thrown on the subject by bacteriological research, many men of great authority have clung to the old doctrine, and some, even now, believed in it. The author referred to the fact that the Klebs-Loeffler bacillus varied much in its virulence, that it would live for months in a gelatinous medium, which, however, was unfavourable for its cultivation; this suggested that the bacillus found the condition necessary for its growth and development only on a damaged tissue. He alluded to the opinion of sanitary experts as somewhat opposed to that suggested by the general experience of practitioners—that diphtheria was not traceable to insanitary conditions, and suggested that this apparent discrepancy of opinion might be reconciled by regarding the insanitary conditions as providing the necessary soil for the accommodation of the bacillus by giving rise to tonsillar and other congestions of the throat. In this way the frequent occurrence of scarlatina in association with diphtheria and the frequent coincidence of season in which they respectively prevailed might be accounted for by considering the congestion of the scarlatina throat as affording the necessary soil. The Klebs-Loeffler bacillus had frequently been found in healthy throats, and the author mentioned an instance in which diphtheria having been accidentally introduced into a scarlatina ward in the Hastings Isolation Hospital, it was found in the throats of several of the convalescents, who developed no symptom of diphtheria. Whilst holding this definite opinion that croup and diphtheria were essentially one disease, the author was quite prepared to admit the occurrence of what Osler had called "diphtheroid" exudations, and that ordinary laryngeal inflammation might be complicated by membranous exudation. It would be unreasonable to do otherwise in face of the fact that these exudations, morphologically indistinguishable from those of diphtheria, could be produced traumatically, as by heat or corrosive substances, and that they occurred in various situations in most of the acute fevers, in plastic bronchitis, and under septic influence. The author, however, thought it was extremely unlikely that an inflammation of sufficient intensity as to cause such exudation—practically a necrosis, for that is its

morbid anatomy—without further constitutional disturbance than was evidenced by a rise in temperature of no more than 102° or 103° F., as was the case in diphtheria. He suggested the known low temperature of diphtheria, which was primarily a local disease, as an argument against the laryngeal cases being due to cold and atmospheric influences as in non-membranous inflammatory croup, when it is remembered how sensitive the temperature of young children was. The moral was that all cases of membranous inflammation of the larynx should be treated as if the diagnosis of diphtheria had been definitely made, and that if they were not actually isolated, they should be carefully watched, and all precautions taken to guard against possible infection. That all doubtful cases should be considered as if the diagnosis were certain, and treated early with antitoxin. Not only did statistics show a most satisfactory result from such early treatment in amelioration of symptoms and reduction of mortality, but the results of tracheotomy, once the "forlorn hope" of diphtheria, were excellent. In evidence of this the author mentioned two cases of tracheotomy in the practice of the East Sussex Hospital in which the convalescence after the serum treatment had been phenomenally rapid. Both were cases which would formerly have been called "croup," and in both was the diagnosis of diphtheria confirmed by the discovery of the Klebs-Loeffler bacillus. The great advantage of the treatment appeared to be the way in which it facilitated the detachment of the membrane and prevented its reformation. Dr. Allfrey concluded by showing a specimen taken *post mortem* from a patient on whom tracheotomy had been performed in the East Sussex Hospital. The patient, a woman, aged 40, had been attending as an out-patient for seven weeks with what was diagnosed as tuberculous laryngitis, with no evidence of any acute disease. She suddenly became worse, and was admitted one evening in a collapsed and cyanosed condition. Tracheotomy was promptly performed, but death quickly ensued. The diagnosis of tuberculous laryngitis was confirmed *post mortem*. There was extensive ulceration; the larynx, however, was filled with a thick, partially-detached membrane. There were traces of old phthisis at the right apex, but nothing recent, and no other sign of tubercle in either lung. There were several isolated abscess cavities in both lungs. The specimen was sent up for examination to the Clinical Research Association. The report was as follows: "This is unquestionably diphtheritic membrane lining the interior of the larynx, trachea, and bronchi; but as the specimen is fixed in formalin it is useless to make a bacteriological examination. The ulceration of the larynx and back of the epiglottis is typically tuberculous, and many of the lymphatic glands are affected." Dr. Allfrey said that he failed to understand how, apart from a bacteriological examination, the formation could be pronounced to be "unquestionably diphtheritic" in face of the chronic course which the laryngeal symptoms had taken. He was disposed to think that the exudation was the result of septic influence, though of course it was possible that the Klebs-Loeffler bacillus might have been grafted on the more chronic trouble, and been the more immediate cause of the fatal issue.

Communications.—Dr. Harris showed a case of Multiple Melanotic Sarcoma of the Skin, with microscopic section of an excised nodule.—Dr. Batterham read notes of a fatal case of Perforative Appendicitis, and showed the appendix, which contained a concretion as large as a hazel nut and a new growth of the same size. The latter exhibited the microscopic characters of soft carcinoma. He also related a case of Laparotomy successfully performed for the relief of an ileo-cæcal intussusception of three days' standing in an infant of 11 months.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.

The autumn meeting of this Branch was held at Stirling on October 11th, under the presidency of Dr. Mackintosh.

New Members.—Dr. Charles Begg (Bridge of Allan) and Dr. John H. Mains (Stirling) were elected members of the Branch.

Election of Vice-President.—Dr. Fergusson (Alloa) was appointed Vice-President and Dr. Linton (Grangemouth) a member of Council.

Ethical Committee.—The following members were appointed to the Ethical Committee: Drs. Haldane, Linton, Currie, Strachan, McVail, Mackintosh, and Moorhouse.

The late Dr. Milne.—The Secretary intimated that he had received a letter from Mrs. Mair—sister of the late Dr. Milne (Alloa)—acknowledging the letter of condolence sent on behalf of the Branch.

Address.—Dr. Byrom Bramwell delivered an address on the Consideration of Syphilis and Phthisis in the Examination of Candidates for Life Assurance. The address was discussed by the President, Drs. Strachan, Begg, Currie, and Moorhouse; and, on the motion of the President, the sincere and unanimous thanks of the members were accorded to Dr. Bramwell.

Dinner.—After the meeting the guests and members dined together at the hotel.

SOUTH MIDLAND BRANCH.

The autumnal meeting of this Branch was held at Leighton Buzzard on October 12th, about twenty members and visitors being present.

Confirmation of Minutes.—The minutes of the last (annual) meeting at Kettering were read and confirmed.

The late Dr. E. Lawford.—The Secretary read an obituary notice of Dr. Edward Lawford of Leighton Buzzard, who had died recently at a ripe age. He had been for many years a member of the Branch, but latterly had retired. He was President of the Branch in 1866 when the autumnal meeting was held at Leighton, and he entertained the members at luncheon at his private house when the Branch met again there in 1881. He also generously offered a prize of ten guineas for the best essay on Enteric Fever: Its Causes, Nature, Mode of Propagation, and Treatment, Dr. W. O. Marsham being appointed arbitrator. There was, however, no record of an essay having been sent in by any member of the Branch. On the motion of the President, a resolution of sympathy and condolence was unanimously passed by the meeting, and the Secretary was directed to forward the same to the surviving member of Dr. Lawford's family.

Report of Representative of Branch.—Mr. R. H. Kinsey, the representative of the Branch on the Council, gave a full and interesting report of the meeting of the Council which he had attended since his election to the office. A few appropriate remarks were made by the Chairman and others, and Mr. Kinsey was thanked for his report.

New Members.—The following gentlemen were admitted members of the Association and Branch: Drs. J. D. J. Harris, Linslade; E. H. Wagstaff, W. H. A. Sandell, Leighton Buzzard; Fred. H. Allfrey, Bedford County Hospital; W. G. Weaver, Aylesbury, and F. J. Stuart, Berry Wood, Northampton.—The following were elected members of the Branch only: Drs. W. H. Square, Leighton; W. S. West, Aylesbury, and E. H. Gonin, Towcester, North Hants.

Communications.—Dr. F. B. W. Phillips reported two supposed cases of Erythromelalgia; Drs. Jones, Nash, and Wagstaff made some remarks, and Dr. Phillips replied.—Mr. W. Gifford Nash read an interesting paper on Gall Stones, illustrating it by a very fine collection of specimens, which were much admired by the members present. He remarked on the varieties, causes, and treatment of gall stones, mentioning that they were more common in women than men, and rare in children. Drs. Jones, Milligan, Allfrey and others joined in the discussion which followed.—Mr. R. A. Milligan showed a specimen—a Small Calcified Body about the size of a small bean—which he had removed from the sac of a large inguinal hernia. He described the body, and believed it to be unique.—Dr. A. H. Jones read Notes on Some Cases of Lead Poisoning, with tables showing the food taken. He stated that no poisoning ever occurred from the external application of lead lotions, etc., and only rarely from the internal administration of lead in medicines. Remarks were made by Drs. Nash, Emerson, Symington, and Weaver; and Dr. Jones replied.

Vote of Thanks.—A cordial vote of thanks was passed, on the motion of the Chairman, to the readers of papers and cases, for their kind help in bringing subjects for discussion before the meeting, and for exhibiting specimens, etc., and also to the President for his conduct in the chair, on the motion of Dr. Phillips.

PROCEEDINGS OF COUNCIL.

At a meeting of the Council held in the Council Room of the Association, 429, Strand, on Wednesday, October 11th, 1899. Present:

Dr. J. Roberts Thomson, President of the Council, in the Chair.

Dr. J. Ward Cousins, President.

Dr. W. A. Elliston, President-elect.

Mr. Andrew Clark, Treasurer.

Dr. E. G. Barnes, Eye.
Dr. James Barr, Liverpool.
Dr. Rayner W. Batten, Gloucester.
Dr. Thomas Beattie, Newcastle-on-Tyne.
Dr. Michael Beverley, Norwich.
Dr. J. Brassey Brierley, Old Trafford.
Dr. W. Calwell, Belfast.
Mr. James Cantlie, London (Hong Kong Branch).
Dr. Alfred H. Carter, Birmingham.
Dr. H. Radcliffe Crocker, London.
Brigade-Surgeon-Lieutenant-Colon'l E. F. Drake-Brockman, London (South Indian and Madras Branch)
Dr. G. W. Crowe, Worcester.
Dr. T. M. Dolan, Halifax.
Dr. W. Dyson, Sheffield.
Mr. George Eastes, M.B., London.
Professor David W. Finlay, Aberdeen.
Sir Walter Foster, M.D., M.P., London.
Mr. R. S. Fowler, Bath.
Dr. John H. Galton, Upper Norwood.
Dr. A. Godson, Cheadle.
Dr. Bruce Goff, Bothwell.
Dr. C. G. Gooding, London (Barbadoes Branch).
Dr. David Goyder, Bradford.
Dr. J. Groves, Carisbrooke.
Dr. Henry Handford, Nottingham.
Dr. John D. Harries, Shrewsbury.
Dr. T. A. Helme, Manchester.
Dr. Holman, London.
Mr. T. Vincent Jackson, Wolverhampton.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Mr. H. R. Kinsey, Bedford.
Mr. Jordan Lloyd, Birmingham.
Dr. Roderick Maclaren, Carlisle.
Mr. N. C. Macnamara, London.
Dr. John C. McVail, Glasgow.
Mr. H. J. Manning, Salisbury.
Dr. C. H. Milburn, Hull.
Dr. J. W. Miller, Dundee.
Dr. John William Moore, Dublin.
Dr. C. G. Drummond Morier, London (Adelaide and South Australia Branch).
Mr. W. Jones Morris, Portmadoc.
Dr. James Murphy, Sunderland.
Dr. Isambard Owen, London.
Mr. C. H. W. Parkinson, Wimborne Minster.
Dr. Charles Parsons, Dover.
Dr. R. W. Philip, Edinburgh.
Dr. Frank M. Pope, Leicester.
Dr. G. E. Rennie, London (Sydney and New South Wales Branch).
Mr. H. Betham Robinson, London.
Dr. John Rolston, Stoke, Devonport.
Dr. A. Brown Ritchie, Hulme.
Dr. Arthur W. Sandford, Cork.
Dr. R. Saundby, Birmingham.
Dr. L. W. Sedgwick, London.
Dr. Alfred Sheen, Cardiff.
Dr. G. E. Shuttleworth, Richmond.
Dr. E. Markham Skerritt, Clifton.
Dr. R. Somerville, Galashiels.
Mr. Henry Stear, Saffron Walden.
Dr. W. J. Tyson, Folkestone.
Dr. A. R. Urquhart, Perth.
Mr. T. Jenner Verrall, Brighton.

The minutes of the last three meetings held at Portsmouth having been printed and circulated, and no objection received, were taken as read and signed as correct.

The President of Council reported that since the last meeting two members of the Council had died, viz.: Prof. James Cuming and Mr. Joseph White.

Resolved: That the Council desires to express its sorrow at the death of its distinguished Vice-President, Prof. James Cuming, and to record its sympathy with the family in their bereavement. Prof. Cuming presided over the annual meeting of the Association held at Belfast in 1884 with marked ability, dignity, and tact. His many excellent qualities and the charm and courtesy of his manner will cause him to be long remembered by his colleagues.

Resolved: That the Council deeply regrets to learn of the death of Mr. Joseph White, who presided so ably over the meeting of the Association held at Nottingham in 1892, and desires to offer its sincere sympathy with the family in their bereavement. His kindness and geniality endeared him to all with whom he came in contact, and his loss is deeply mourned by his colleagues on the Council.

Read letters of apology for non-attendance from Dr. Henry Barnes, Dr. Bridgwater, Mr. H. Langley Browne, Dr. Maury Deas, Surgeon-General T. F. O'Dwyer, Dr. Freeland Fergus, Professor G. H. Philipson, and Dr. S. Woodcock.

The following new members were introduced to the Council, namely: Dr. Edgar Barnes (East Anglian Branch), Dr D. Goyder (Yorkshire Branch), Dr. T. A. Helme (Lancashire and Cheshire Branch), Mr. H. R. Kinsey (South Midland Branch), and Dr. A. Brown Ritchie (Lancashire and Cheshire Branch).

The President of Council reported that since the last meeting of the Council Sir Edward Fry had written to the *Times* upon the question of secret commissions in the medical profession and the action of the Council thereon, and that Dr. Saundby and himself had written to the *Times* in reply.

Resolved: That the action of the President of Council and Dr. Saundby be approved, and that no further action be taken in the matter at present.

Read letter from Mrs. Hemming acknowledging the Council's resolution of condolence upon the death of the late Mr. Hemming.

Read reply from the Colonial Office in reference to minute of Council 4380, in which Mr. Chamberlain promised to amend Law No. 22, respecting the Notification of Infectious Diseases Act, 1898, by which the local Legislature of Jamaica passed a law which compelled medical practitioners to notify infectious diseases, under a penalty of 40s. fine, but provided no pay for the duty thus imposed.

20390/99.

Downing Street,
August 8th, 1899.

Sir,—With reference to the letter from this department of the 4th of February last, I am directed by the Secretary of State for the Colonies to transmit to you, for your information, a copy of a law which has been received from the Governor of Jamaica on the subject of Infectious Diseases.

I am, Sir, your obedient Servant,
Edward Wingfield.

Robert Saundby, Esq., M.D., LL.D.

JAMAICA—LAW 10 OF 1899.

A Law to Amend the Infectious Diseases Notification Law, 1898.

[July 8th, 1899.]

Preamble.—Be it enacted by the Governor and Legislative Council of Jamaica, as follows:—

Short Title and Incorporation with Law 22 of 1898.—1. This law may be cited as "The Infectious Diseases Notification Amendment Law, 1899," and shall be read as one with Law 22 of 1898, hereinafter referred to as the principal law.

Medical Practitioners' fee on certificate.—2. The local authority shall pay to every medical practitioner for each certificate duly sent by him in accordance with the principal law, a fee of two shillings and sixpence, if the case occurs in his private practice, and of one shilling, if the case occurs in his practice as a district medical officer.

Limitation of actions.—3. No action shall be brought against any person for anything done in pursuance or execution, or intended execution of the principal law, unless the same shall be commenced within three months after the date of the thing complained of.

Notice of action.—4. Notice in writing of any such action, and of the cause thereof shall be given to the intended defendant, one month at least before the commencement of the action.

Plaintiff must prove malice, carelessness, or ignorance.—5. The plaintiff shall not recover in any such action unless he shall prove that the act complained of was done maliciously, or through gross carelessness or ignorance.

Costs.—6. If a verdict be given for the defendant, or the plaintiff becomes non-suit, or discontinues the action, or if otherwise judgment is given against the plaintiff, he shall pay the defendant his full costs as between attorney and client.

Resolved: That a letter of thanks be forwarded to Mr. Chamberlain for his action in regard to the questions of the Jamaica Law.

The President of Council reported that in reference to minute 599 of the Parliamentary Bills Committee which requested the Council, as a matter of urgency, to communicate with the Colonial Office on the subject of a new medical ordinance which the Administrative Government of Southern Rhodesia had drafted and passed, that Dr. Saundby had communicated to the Colonial Office the following letter:

429, Strand, W.C.,
July 17th, 1899.

Sir,—I am authorised by the Council of the British Medical Association to draw your attention to the Ordinance relating to the practice and sale of medicine, and practice of dentistry in Southern Rhodesia.

This Ordinance is now awaiting confirmation by the High Commissioner, Sir Alfred Milner, before becoming law. The Council of the Association earnestly requests that in consequence of the strong local opposition alleged to be manifested to it, the confirmation of the Ordinance may be postponed in order to give the Council time to consider the objections to it, and to communicate again with you upon the subject.

I have the honour to be, Sir,
Yours obediently,
Robert Saundby, M.D., LL.D., F.R.C.P.,
President of Council.

The Right Honourable J. Chamberlain, M.P.,
Secretary of State for the Colonies,
Colonial Office, London, S.W.

Downing Street,
September 14th, 1899.

Sir,—With reference to the letter from this department of August 8th, I am directed by Mr. Secretary Chamberlain to inform you that he has now received a despatch from the High Commissioner for South Africa dated August 14th on the subject of the "Medical and Pharmacy Ordinance" passed by the Legislative Council of Southern Rhodesia. Sir A. Milner states that, as at present advised, he cannot see that there is any urgent necessity for the Ordinance, which appears to be open to objection in several respects, and that subject to any representations which he may receive from the Administrator, it is his intention formally to disallow the Ordinance before the next meeting of the Legislative Council, so as to leave the whole matter open for reconsideration by that body.

I am to add that a copy of your letter of July 27th, with its enclosure, has been sent to the High Commissioner.

I am, Sir,
Your obedient servant,
EDWARD WINGFIELD.

The President of the Council of the
British Medical Association.

Read report from Dr. Saundby, who was appointed by minute of Council 4557 to act as delegate to the International Conference on Syphilis and Venereal Diseases:

140B, Great Charles Street, Birmingham,
September 18th, 1899.

To the Council of the British Medical Association.

GENTLEMEN,—At your meeting in July last you were pleased to appoint Dr. Ward Cousins and myself to be delegates of the British Medical Association at the International Conference on the Prophylaxis of Syphilis and Venereal Diseases.

I regret that Dr. Ward Cousins was kept at home by indisposition, and that I was in consequence deprived of his valuable co-operation and assistance.

In discharge of my duty I attended the meeting, which was held in Brussels on Monday, September 4th, and extended over the four succeeding days.

The business of the Conference consisted in the discussion of the following series of questions which had been framed by the promoters of the meeting:

1. Have the systems of regulation actually in vogue had any influence upon the frequency and the dissemination of syphilis and venereal diseases?

2. Is the present system of medical inspection of prostitution capable of improvement?

3. From a purely medical point of view, is there any advantage in keeping up recognised brothels, or should they be suppressed?

4. Is the administrative organisation of police supervision capable of improvement?

5. By what legal measures can the number of women living by prostitution be diminished?

6. Apart from prostitution, what general measures can be taken to wage war effectively against the spread of syphilis and venereal diseases?

As no votes were taken the debates did not determine any of the issues raised. The inconclusive character of the proceedings is further attested by the resolutions which were finally adopted, translations of which I append.

The attention of the Council is particularly directed to Resolution 6, which is in substance the resolution your delegates were asked to submit to the Conference, and accords the desired support to the memorial sent by the Council to Lord Salisbury.

In concluding my report I desire to thank you for the honour you conferred upon me by sending me as your representative to this important Conference, and I trust that in what I have done I have been able to give effect to your wishes.

I am, Gentlemen, your obedient humble servant,
ROBERT SAUNDBY.

Translations of resolutions unanimously adopted by the Conference:

1. Proposed by MM. Fournier and Lejeune: The Conference desires to see the various Governments employ all their powers to suppress absolutely prostitution among girls under age (*en état de minorité civile*).

2. Proposed by Professor Fournier: The Conference desires to see the present meeting used as a basis for the foundation or a society for sanitary and moral prophylaxis, having its home in Brussels, and which will show its existence: (*a*) By the creation of a quarterly journal for the publication of reports and papers of interest to the said society; (*b*) by Congressional meetings. The Conference decides that the next Congress shall be held in Brussels in 1902. A provisional Commission is nominated to act with the powers of a permanent Committee until the next meeting—this Committee to be composed of—President, M. Lejeune, Minister of State; Vice-President, M. Beco, Secretary of the Department of Sanitation and Public Health in the Ministry of Agriculture; General Secretary, Dr. Dubois-Havenith, General Secretary of the International Conference for the Prophylaxis of Syphilis, Extra Professor to the University of Brussels. This Commission is requested to present to the next Congress laws and by-laws for the organisation of the Society. It is empowered to take such provisional measures as may be required to provide ways and means necessary for the working of the Society and the publication of the quarterly journal. The Conference recognises the principle of an annual subscription. Authors may publish their papers in English, French, or German, but they are begged to supply with each a very succinct short abstract. This abstract will be translated into the two other languages under the direction of the General Secretary.

3. Proposed by MM. Fournier, Pavloff, Jonathan Hutchinson, Doutrelepont, Lesser, Petersen, de Stürmer, Neisser, Wolff, and Mracek: The Conference, considering that a profound knowledge of venereology forms one of the best means for effectually combating the spread of venereal diseases, recommends urgently to the various Governments to provide for the education of truly competent medical practitioners by the institution in every University of complete and compulsory courses, the subject of which shall form part of the State examinations. The Conference requests that the examiners may be specialists.

4. Proposed by Dr. de Stürmer: (*a*) For the better protection of orphan children guardians should not only be anxious to defend the material interests of the children committed to their charge; but, above all, to assure their morality. (*b*) Whoever has charge of the education of young people should apply all his care to the moral development of his pupils; he should teach them temperance and respect for women in every class of life.

5. Proposed by Dr. Commenge, and amended by Professor Fournier: The Conference asks for the utmost rigour of the law against men living upon prostitutes (*souteneurs*)

6. Proposed by the British Medical Association and moved by Dr. Saundby: The Conference requests the various Governments to constitute in each country a commission charged: (*a*) To determine the frequency of venereal diseases among the civil population apart from temporary variations; (*b*) to inquire into the institutions actually in existence for the treatment of venereal diseases, the distribution of hospitals, the number of beds available in different places, and to propose the most efficacious measures for the treatment of these diseases; (*c*) to collect opinions as to the best means for preventing and limiting the spread of venereal diseases among the civil population, and to formulate conclusions upon this subject.

7. Proposed by Professor Lassar (Berlin): The various Governments are requested to seize every favourable opportunity for drawing public attention, and especially that of young persons, to the danger resulting from prostitution to the health of the young of both sexes, and to the terrible consequences of venereal diseases.

8. Proposed by MM. Pierson and Fiaux: The Conference desires to see the venereal statistics of all countries arranged upon uniform bases.

Resolved: That the best thanks of the Council be, and are hereby, given to Dr. Robert Saundby, for representing the British Medical Association at the International Conference on Syphilis and Venereal Diseases held in Brussels last September.

Resolved: That the Contagious Diseases Committee be reappointed, with the addition of Dr. Saundby and Dr. H. R. Crocker, namely, the President of Council, the Treasurer, Dr. Barr, Dr. Groves, Mr. Macnamara, and Mr. Parkinson, and that Dr. Saundby's report of the International Conference be referred to the Committee.

Read the following resolution passed at the annual general meeting held at Portsmouth:

Midwives Bill.—That this meeting records its appreciation of the attitude of Mr. T. P. O'Connor and Mr. W. J. Galloway towards the Midwives Bill recently before Parliament, and begs to assure these gentlemen that in the main their objections to the proposals (as reported in the *Times*, April 13th, 1899) are shared by a large majority of the medical profession.

That this meeting regrets the course adopted by Sir William Priestley during the second reading debate upon the Midwives Bill recently before Parliament as reported in the *Times* of April 13th, 1899) in stating that "it was quite true that there was a certain amount of opposition to the Bill among a certain section of the medical profession, but the danger likely to arise to the interests of medical practitioners had been greatly exaggerated. The object of the Bill was to secure that women of the poorer classes should have the assistance of properly skilled midwives."

It was moved and seconded: That a copy of the first paragraph of the resolution on the Midwives Bill be forwarded to Mr. T. P. O'Connor and Mr. W. J. Galloway.

The motion having been put from the Chair the same was declared to be lost.

It was moved and seconded: That the second paragraph of the resolution on the Midwives Bill lie on the table.

Whereupon an amendment was moved and seconded:

That a copy of the second paragraph be sent to Sir Wm. Priestley.

The amendment having been put from the Chair the same was declared to be lost.

The original motion having been put from the Chair was declared to be carried.

Read resolution passed at the Annual General Meeting held at Portsmouth:

Teaching Midwifery.—That this meeting condemns the action of those members of the British Medical Association who continue to lecture to persons other than duly recognised medica students—upon midwifery and the diseases of women and children—and records its displeasure at the free distribution, by certain unauthorised examining bodies, of certicates and diplomas to these irregular persons, asserting that the holders of such documents are "skilled" in the practice of midwifery.

Resolved: That the resolution lie on the table.

Read resolution passed at the annual general meeting held at Portsmouth:

Amendment of the Medical Acts.—That any Draft Bill for the amendment of the Medical Acts shall contain *inter alia* provision for further direct representation of the profession on the General Medical Council and for the establishment of a one-portal system of qualifying examination.

Resolved: That the resolution on the amendment of the Medical Acts be referred to the Parliamentary Bills Committee.

Read resolutions passed at the annual general meeting held at Portsmouth:

Registration in India.—That having regard to the fact that persons possessing no knowledge of medicine are by law allowed the same right to practise in India as fully qualified practitioners, this Association considers it advisable that there should be a system of registration to protect the public from the mischievous machinations of charlatanes; it further undertakes to do all in its power to carry this resolution into effect.

Resolved That the resolution lie on the table.

Coventry Provident Dispensary.—That the Council be requested to ascertain whether any of the present medical officers of the Coventry Provident Dispensary are members of the British Medical Association, and, if so, that they be called upon to explain why they still continue to give their services to that institution.

It was moved and seconded: That the resolution respecting the Coventry Provident Dispensary lie on the table.

Whereupon an amendment was moved and seconded:

That the resolution respecting the Coventry Provident Dispensary be referred to the General Practitioners and Ethical Committee.

The amendment having been put from the chair the same was declared to be carried.

Read resolution passed at the annual general meeting held at Portsmouth:

Expenditure of the Association upon its Journal.—That inasmuch as the President of the Council, and subsequently the Council itself, have ruled that the members of the Association have no right to discuss in general meeting the question of the expenditure of the Association upon its JOURNAL, this meeting strongly disapproves of the action of the Council.

Resolved: That inasmuch as neither the President of Council nor the Council itself has ever ruled to the alleged effect, this paragraph do lie on the table.

Read resolution passed at the annual general meeting held at Portsmouth:

Exclusion from the Journal of Matters of Interest.—That the attention of the Council be invited to the exclusion by the Editor of the BRITISH MEDICAL JOURNAL of matters of interest to the Association and to the profession, especially in reference to the memorials to the General Medical Council against the certification of unqualified persons by registered practitioners, and to his silence on such matters obstructing reform.

It was moved and seconded: That the resolution upon the exclusion from the JOURNAL of matters of interest lie on the table.

Whereupon an amendment was moved and seconded:

That the resolution upon the exclusion from the JOURNAL of matters of interest be referred to the Journal and Finance Committee.

The amendment having been put from the Chair, the same was declared to be lost.

The original motion having been put was declared to be carried.

Read resolution passed at the annual general meeting held at Portsmouth:

Medical Defence.—That the Council be requested to appoint a committee for the purpose of formulating and, at an early date, reporting upon a scheme of collective defence of the interests and consistent maintenance of the honour of the medical profession, in accordance with the provision of paragraph 3 of the Memorandum of Association.

It was moved and seconded: That the resolution lie on the table.

Whereupon an amendment was moved and seconded:

That the Council nominate a committee to consider the question of Medical Defence.

The amendment having been put from the Chair, the same was declared to be lost.

The original motion was then put and declared to be carried.

Read resolution passed at the annual general meeting held Portsmouth:

Midwives Bill.—That the Council be requested to cause representations to be made to the Lord President of the Privy Council to the effect that this meeting of members of the British Medical Association deprecates the adoption of the Bill promoted by the Midwives' Institute, and brought into the House of Commons by Mr. J. B. Balfour as a Government measure.

In reference to the foregoing resolution, the President of Council reported that the following letter had been forwarded to the Duke of Devonshire by the then President of Council (Dr. Saundby):

429, Strand, London, W.C.
August 8th, 1899.

My Lord,—You will, no doubt, remember that a mixed deputation of lay and medical men and women waited upon you on the 22nd of July last, to urge upon the Government the desirability of taking up, as a Government measure, the Registration of Midwives Bill, which has been repeatedly pressed upon your Lordship. As President of the Council of the British Medical Association, I was empowered, at a numerously attended meeting of members, held in the Town Hall, Portsmouth, on the 1st August last, to represent to your Lordship the strong objections there are to the Bill as brought into the House of Commons, and to pray, in the name of the Association (an Association numbering between 18,000 and 19,000 medical practitioners), that the Government would take no steps in the matter without giving the British Medical Association an opportunity of being heard by a small deputation.

I have the honour to be,
Your obedient servant,
ROBERT SAUNDBY, M.D., LL.D, F.R.C.P.

The Right Honourable
His Grace the Duke of Devonshire, K.G.
Lord President of the Council.
Privy Council Office, Whitehall, S.W

Acknowledgment from the Duke of Devonshire:

Privy Council Office,
August 10th, 1899.

Dear Sir,—I am directed by the Duke of Devonshire to acknowledge the receipt of your letter of the 8th inst., and the statement forwarded therewith, which will have his best attention.—I am, yours truly,
RIVERSDALE WALROND.

R. Saundby, Esq., M.D.

Resolved: That the matter be referred to the Parliamentary Bills Committee, with a request that they take subsequent action.

Resolved: That the minutes of the Arrangement Committee for the annual meeting be received, approved, and the recommendations contained therein carried into effect

The minutes of the Arrangement Committee contain a recommendation that the scientific business of the Association be carried on in thirteen sections, namely, Medicine, Surgery, Obstetrics and Gynæcology, Public Medicine, Psychology, Physiology, Pathology, Ophthalmology, Diseases of Children, Pharmacology and Therapeutics, Laryngology and Otology, Tropical Diseases, and Navy, Army, and Ambulance.

Resolved: That there be three addresses, namely: Medicine, Surgery, and Obstetrics.

Resolved: That the suggestion for holding the first general meeting on the morning of the first day of the meeting and the suggestion for commencing the meeting on the Monday, be referred to the Arrangement Committee for consideration.

Resolved: That the annual meeting be held on July 31st, August 1st, 2nd, and 3rd, 1900.

Read resolution passed in the Section of Psychology at the annual meeting held at Portsmouth:

Legislation for Inebriates.—"That the Psychology Section respectfully suggests that the Council of the Association be asked to consider the advisability of procuring early legislation for the well-to-do inebriates, and to refer the question to the various Branches of the Association for their opinions."

Resolved: That the resolution on legislation for inebriates be referred to the Inebriates Legislation Committee, to report to the next meeting of the Council.

Read resolutions passed in the Section of Medicine, at the annual meeting held at Portsmouth.

Physical Examination for the Army.—"That the Council be requested to communicate to the War Office that it is the opinion of this Section that the physical examination of candidates for the army should precede the educational."

Service in the Tropics.—"That the Council be requested to communicate to the War Office that it is the opinion of this Section that soldiers ought not to serve in the tropics before the age of twenty-two (22)."

Admission to the Services.—"That the physical standard for admission to the public services requires reconsideration, and that the Council be also requested to communicate this resolution to the War Office, the Admiralty, and the other Governmental bodies interested."

Resolved: That copies of the foregoing resolutions be forwarded to the War Office.

Read resolution passed in the Section of Ophthalmology at the annual meeting held at Portsmouth:

Colour Tests for Witnesses.—"That the Ophthalmology Section of the British Medical Association begs to express its profound belief that it would prove of great public benefit if the Board of Trade could see their way to include in their regulations the twelfth recommendation of the Royal Society's Committee: 'That in case of judicial inquiries as to collisions or accidents, witnesses giving evidence as to the nature or position of coloured signals or lights should themselves be tested for colour and form vision,' and suggests its application in every case of judicial inquiry upon accidents at sea."

Resolved: That the resolution on colour tests for witnesses be referred to the Railway Servants' and Mariners' Eyesight Committee.

Read resolution passed in the Section of Tropical Diseases at the annual meeting at Portsmouth:

Resolution of Thanks to Mr. Chamberlain, M.P.—"That the Council of the British Medical Association be asked to convey the thanks of the Association to the Right Hon. Joseph Chamberlain, M.P., Her Majesty's Secretary of State for the Colonies, for the interest he has shown in forwarding the study and teaching of tropical diseases in Great Britain, and especially for the active part he took in establishing the School of Tropical Medicine, London."

Resolved: That a letter of thanks be forwarded to Mr. Chamberlain.

Read resolution passed in the Section of Surgery at the annual meeting held at Portsmouth:

Sale of Firearms.—"That in consideration of the great increase in the number of bullet wounds in consequence of the free sale of revolvers and pistols, this Section desires to impress upon the Council of the British Medical Association the importance of furthering a Bill for the restriction of the sale of small arms."

Resolved: That the resolution lie on the table.

Read resolutions passed in the Section of State Medicine at the annual meeting held at Portsmouth:—

Control of Schools.—"That it be a recommendation to the Council of the

British Medical Association that representations should be made to the Local Government Board and the Education Department that powers may be given to sanitary authorities enabling them to control the condition of all schools (private or otherwise) with regard to overcrowding and other sanitary arrangements similar to those they possess over workshops under the Factory and Workshops Acts."

Inspection of Schools and Scholars by the M.O.H.—"That the Council of the British Medical Association be requested to make representations to the Educational Department, Whitehall, urging upon the Department the necessity from the standpoint of the public health, of authorising medical officers of health to inspect all school premises, and to inspect or secure the inspection of scholars when the prevalence of infectious disease was judged by him to make such an inspection desirable."

Seats for Shop Girls—"That this Section recognises the evil effects of long standing upon the health of women, and urges the Council to promote the passing of the Bill as to providing seats for shop girls (Scottish Section)."

Resolved: That the resolutions as to Control of Schools, Inspection of Schools, and Seats for Shop Girls be referred to the Parliamentary Bills Committee.

Read resolution passed in the Section of State Medicine at the annual meeting held at Portsmouth:

Decay of Teeth.—That, in view of the early decay of teeth prevalent in Great Britain, this Section requests the Council of the British Medical Association to appoint a Committee of not fewer than three persons to inquire into the subject, and to report thereon to the Council in twelve months from the date of appointment.

Resolved: That a Committee be appointed to consider the resolution of the annual meeting, consisting of the Treasurer, Dr. Kingston Barton, Mr. Graham Campbell (Dundee), Mr. Cantlie, Mr. Geo. Eastes, Mr. Macnamara, Mr. Tomes, and Dr. Urquhart, with power to add to their number.

Resolved: That Dr. McVail be requested to prepare a memorandum on the subject of revaccination for presentation to the next meeting of the Council, prior to being issued to the Branches.

Read communication from the Local Government Board asking the Association to appoint two witnesses to tender evidence before a Departmental Committee appointed to inquire into the use of Preservatives and Colouring Matters in Food:—

Local Government Board,
Whitehall, London, S.W.
August 7th, 1899.

Dear Sir,—As you are aware, a Departmental Committee has been appointed by the President of this Board to inquire into the use of Preservatives and Colouring Matters in Food.

The precise terms of reference are "to enquire into the use of preservatives and colouring matters in the preservation and colouring of food, and to report (1) whether the use of such materials or any of them, for the preservation and colouring of food in certain quantities is injurious to health, and if so, in what proportions does their use become injurious, (2) to what extent and in what amounts are they so used at the present time."

Sir Herbert Maxwell, the Chairman, has asked me to inquire whether the British Medical Association would desire to nominate two witnesses to tender evidence before the Committee, on the lines of the reference above quoted.

If so, I shall be glad if you will kindly let me have the names and addresses of the witnesses selected; and if you will also communicate with them with a view of procuring for me a synopsis of the evidence which they are prepared to tender on the lines of the reference above quoted, such synopsis to be in my hands not later than mid-October.

I am, Dear Sir,
Yours faithfully,
CHAS. J. HUDDART,
Secretary of the Committee.

Resolved: That Dr. Spottiswoode Cameron and Dr. Handford be nominated witnesses to tender evidence before the Departmental Committee appointed to inquire into the use of Preservatives and Colouring Matters in Food.

Read petition from the Colonial Medical Service of British Guiana to the Secretary of State for the Colonies respecting the reduction of the medical service in that colony in reference to minutes of Council 4464 and 4539.

Resolved: That a copy of Mr. Chamberlain's letter on the subject of May 9th, 1899, be forwarded to the petitioners.

Read letter from the Queensland Branch asking the Council to agree to the amalgamation of the Queensland Medical Society with the Queensland Branch.

Resolved: That a reply be forwarded to the Queensland Branch, stating that the by-law which they propose is not *ultra vires*, but that the candidates must fill up the necessary form of application for election according to the by-laws.

Read letter from the Secretary of the West Australian Branch giving particulars of the successful work of the Branch, and several points of medical interest.

Resolved: That the cordial congratulations of the Council be offered to the West Australian Branch for their active and successful work in the interest of the profession in West Australia, and for the prosperous condition of their Branch.

Resolved: That the Committee on Fees to Poor-law Medical Officers be reappointed, consisting of Mr. Langley Browne, Dr. J. Ward Cousins, Dr. T. M. Dolan, Mr. T. Vincent Jackson, Mr. Jordan Lloyd, Mr. W. Jones Morris, Dr. A. Sheen, and Dr. Woodcock.

Resolved: That Messrs. Price, Waterhouse and Co. be reappointed Public Auditors for the ensuing year, in accordance with By-law 26.

Resolved: That the 100 candidates whose names appear on the circular convening the meeting (together with those provisionally elected at the annual meeting), be and they are hereby elected members of the British Medical Association.

It was moved and seconded.

That a full report of the proceedings of the Council and of Committees be published in the JOURNAL on the Saturday following such meetings, provided that they be held not later than the Wednesday of that week.

The motion having been put from the Chair, the same was declared to be lost.

It was moved and seconded,

That Councillors shall be paid the sum of 2 guineas a day if living within fifty miles of the place of meeting, and 3 guineas a day if over that distance, when they have to attend a Committee or a Subcommittee meeting on any day other than that on which the Council sits.

Resolved: That the question be referred to the Journal and Finance Committee.

It was moved and seconded:

That the railway fares shall be paid for attendance at the Council meetings held during the annual session of the Association.

Resolved: That the question be referred to the Journal and Finance Committee.

Resolved: That the question of the duties in station hospitals of the non-commissioned officers and privates (orderlies) of the Royal Army Medical Corps be referred to the Parliamentary Bills Committee.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain the accounts for the quarter, amounting to £9,312 10s. 7d., and auditor's report.

Resolved: That the minutes of the Premises and Library Committee of the 10th inst. be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Premises and Library Committee contain a petition to St. Martin's Vestry, and a report upon the action taken by the Association in opposing the proposed construction of an underground lavatory outside the Association's offices, the Librarian's report, accounts for the quarter, and resolutions ordering the purchase of certain volumes for the Library.

Resolved: That the minutes of the Conciliation Board Committee of the 10th inst. be received, and that the following be added to the Committee, namely, Dr. Groves, Mr. Parkinson, and Dr. Brown Ritchie.

Resolved: That the Conciliation Board Committee meet and report to this Council in January if possible.

Resolved: That the minutes of the Joint Committee on Fees to Medical Witnesses of the 10th inst. be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Joint Committee on Fees to Medical Witnesses contain a memorial of the British Medical Association, praying the Home Secretary to increase the scale of fees payable to medical witnesses, and a resolution authorising certain action being taken through the public press with a view to bringing the matter under general notice.

PRESENTATION.—Dr. J. B. Isaac, on the occasion of his retirement from the office of Deputy-Superintendent of the Criminal Lunatic Asylum, Broadmoor, after twenty-four years' service, has been presented with a gold hunting watch, inscribed with his monogram and bearing a suitable inscription, by the staff of the asylum as a mark of their esteem and respect. The presentation was made by Dr. Brayn, the superintendent of the asylum.

SPECIAL CORRESPONDENCE.

BIRMINGHAM.

Proposed University for Birmingham: the Endowment Fund.—The Clinical Prizes.—Address by Professor J. Chiene.—The Edinburgh University Club.—The Chair of Pathology and Bacteriology at Mason University College: Introductory Address of Professor Leith.

The minimum amount required for the endowment of the proposed new "Birmingham University" has now been subscribed. A meeting of the Canvassing Committee was held on Friday, October 13th, under the presidency of the Lord Mayor of the City. The Lord Mayor was then able to announce that the minimum amount of £300,000 necessary to secure a generous donation of £37,500 from an anonymous donor had now been exceeded, and that the Committee had now subscriptions promised amounting to £315,000. It will be remembered that the Birmingham University Fund was formally established at a public meeting held on July 1st, 1898, at which donations amounting to £95,658 were announced. This sum was quickly raised by a Canvassing Committee to £135,000. An anonymous donor then wrote to Mr. Chamberlain promising £25,000 on condition that a total of £250,000 was raised. Towards this sum, on May 12th, 1899, Mr. Andrew Carnegie most generously promised the magnificent sum of £50,000, and the anonymous donor then expressed his willingness to increase his donation to £37,500 on condition that a total of £300,000 was reached. The Committee were enabled to reach this sum at their last meeting, mainly owing to the generosity of Mr. Charles Holcroft, of Kingswinford, a retired Birmingham manufacturer, who wrote to Mr. Joseph Chamberlain promising a sum of £20,000. Several other large sums were also announced at the same meeting, including second donations of £1,000 each from the Lord Mayor, the Right Hon. Joseph Chamberlain, Mr. John Corbett, Mr. W. Kenrick, M.P., Sir John Holder, and Mr. Charles Harding. Mason College at present possesses an endowment of £200,000, which it is intended to hand over to the University, so that the latter when incorporated will have an endowment of about half a million. But this sum can only be looked upon as a minimum sum, and something nearer a million is hoped for by a gradual increase of the endowment fund. A charter for the new University has already been prepared some months ago, and has been presented to the Privy Council, but it is not likely that the charter will actually be granted until April or May next year.

The clinical prizes presented by the Clinical Board of the Birmingham Medical School were presented to the successful students on Friday, October 13th, in the large Lecture Theatre of the New General Hospital. Professor John Chiene, F.R.C.S., President of the Royal College of Surgeons of Edinburgh, was invited to give an address to the students and present the prizes. Invitations were issued by Mr. Thomas F. Chavasse, President of the Clinical Board, and a large company, including many of the professional staff at Mason University College, representatives of the various hospitals, and other leading members of the profession, as well as past and present students of medicine, attended in the Board Room of the hospital, where tea was served. The prize distribution took place in the large Lecture Theatre. Mr. Chavasse, after introducing Professor Chiene, announced the winners of the various clinical prizes, which were handed to the successful students by Professor Chiene. Mr. C. H. Bullen won the Senior Surgical Prize, Mr. W. Billington the Senior Medical Prize, while Messrs. H. E. Braun and E. C. Hadley were equal for the Prize in Midwifery.

Professor Chiene then gave a most instructive and interesting address. It was addressed to students and practitioners, and contained a number of very valuable hints and suggestions for the young qualified medical man on his entering practice, and was also full of sound advice to the student of medicine while engaged in his hospital studies. At the close of Professor Chiene's lecture a hearty vote of thanks was proposed by Professor Malins and seconded by Mr. Marsh, and carried by acclamation.

The Edinburgh University Graduates' Club of Birmingham held its annual dinner at the Grand Hotel on October 13th. The chair was taken by T. Edgar Underhill, M.D., the Vice-chair by Edward Vaudrey, M.D., of Derby. The guest of the evening was Professor Chiene, who, in replying to the toast of "The University," recalled many happy memories to those present, many of whom he knew well as students. Professor Chiene also made a touching reference to the loss of two prominent figures in the academic life of Edinburgh—Professor William Rutherford and Mr. John Duncan. Songs were given by Drs. Morton, Poole, and Briggs, and recitations by Dr. Ratcliffe. The secretaries (Mr. Christopher Martin, M.B. and Dr. Douglas Stanley) were able to report a very satisfactory increase in membership.

On Monday, October 9th, Professor Leith, on taking the new chair of pathology and bacteriology at Mason University College, delivered his introductory lecture. Dr. Windle, the Dean of the Medical Faculty, presided, and there was a large attendance of medical men and students. Dr. Windle, in introducing Professor Leith, said that his appointment was a matter of considerable local importance, apart altogether from the interests of the medical school, for as head of the department he was also the head of an important organisation connected with the health of the midland counties. Bacteriological examinations were made in his laboratory not merely for Birmingham and the surrounding health authorities, but also for the counties of Staffordshire and Shropshire and other districts in the Midlands. He felt sure that one of the results of Professor Leith taking up that position would be that the laboratory would eventually become the central bacteriological establishment for the entire Midlands. Professor Leith chose for the subject of his address the Advance of Bacteriological Science in the Diagnosis and Prevention of Disease, and gave a masterly summary of the various great advances made in bacteriology. At its close Mr. Haffkine, who was present to do honour to Professor Leith, proposed a vote of thanks to the lecturer, which was seconded and carried.

LIVERPOOL.

Distribution of Prizes, and Address by the Rev. S. A. Thompson-Yates.—The Progress of the School.—The Resignation of Principal Glazebrook.—The Question of his Successor.—Deaths from Infected Food.—The Condition of St. Martin's Market.—Suggested Corporation Bacteriological Department.

The prizes gained by the students in the Medical Faculty of University College were distributed on October 14th by the Rev. S. A. Thompson-Yates, whose name is honourably known in the medical school in connection with the splendid laboratories which he has established. Mr. Thompson-Yates, in his address, pleaded eloquently for greater individualism in national life and less reliance on help from legislation. He urged the students not to be satisfied with knowledge merely professional, but to cultivate in some degree the study of philosophy, poetry, history, and literature.

Professor Paterson, the Dean of the Faculty, submitted the annual report, which showed that the entries and the number of students on the books continued to increase. Among the successes gained by students of the Faculty during the year was a gold medal awarded by Victoria University to Dr. Annett, Demonstrator in Tropical Medicine, for his thesis for the degree of M D. During the year three new donations had been received by the Faculty, including a Research Fellowship in Pathology, established by Dr. William Alexander, of the value of £100 a year, for five years.

At the meeting of the Court of Governors of the College, Principal Glazebrook alluded to his impending resignation in consequence of his having been appointed Director of the National Physical Laboratory. He said that it was a matter of very great regret to him that he should have to sever his connection with the College, but the calls of science were very strong, and he felt that he had a duty to the Royal Society which had entrusted him with an important work, no less than to University College. It was pointed out that the original estimates of £20,000 and £25,000 for the anatomical and physical laboratories respectively would have to be increased by 25 or 30 per cent. in consequence of the

enormous rise which has lately taken place in the cost of materials. The treasurer announced that he had received cheques for £5,000 from Mrs. George Holt and Miss Emma Holt in aid of the proposed physics laboratory. These ladies last year gave £2,000 for the medical school and £3,000 for the anatomical school. Mr. Ralph Brocklebank, Chairman of the Royal Infirmary, has also given £2,000 to the medical school. It is hoped that the comparatively small sums still needed for these necessary buildings will soon be subscribed. The authorities of the College will soon have to face the question of the selection of a principal to succeed Mr. Glazebrook. The College has hitherto been singularly fortunate in its principals, but as it grows in complexity and extent it will probably become more and more difficult to find satisfactory candidates for the office. In view of the active part which was taken by the medical profession in establishing the College, and the great preponderance of its medical and scientific schools, it would not be inappropriate to offer the appointment to a member of the medical profession. It would be easy to name one or two medical men who from their long and ardent participation in the work of the College, their scholarship, and the general esteem in which they are held, appear to be pre-eminently fitted for the office.

An inquest was lately held by the deputy coroner concerning the death of five women, which took place after eating some fish exposed for sale at a stall in St. Martin's Market, which is situated in Scotland Road, one of the poorest and most crowded parts of the city. A *post-mortem* examination was made in one case, and showed extensive inflammation of the bowels and the presence of the bacillus enteritidis sporogenes, which had doubtless been introduced with the food. It was stated that the fish, which was eaten by all the sufferers, and is believed to have been the morbific agent, was salted and to all appearance sound, and had only been two days in the possession of the stallkeeper.

The condition of St. Martin's Market has naturally excited a good deal of interest since this occurrence. The building is an old one and badly constructed, and it was proposed some years ago to abolish it and erect a public gymnasium on its site or lay it out as a recreation ground. It is stated that the vendors in certain of the approaches to the market—where the food under suspicion was sold—remove their wares from the stalls at night and bring them back in the morning. It is not positively stated where they are kept during the night, but it is hard to see where it can be except in their crowded dwelling-houses—it may be in rooms that are slept in. The health authorities are fully alive to the danger to public health arising from such a condition of things, but it is obvious that it is much easier to point out the danger than to guard against it. The grinding poverty, overcrowding, and squalor which are not yet eradicated from the neighbourhood make attention to the most elementary requirements of decency and sanitation all but impossible to many, and any measures which would be likely to raise the price of the necessaries of life would inflict great suffering on the poor.

The question of forming a bacteriological department under the Corporation has been mooted, and commands the full sympathy of the Health Committee; but it cannot be entertained until the necessary statutory powers are granted to enable the Corporation to take action in the matter.

CORRESPONDENCE.

MEDICAL EDUCATION.

Sir,—There are one or two points in your excellent article on Medical Education on which I ask your leave to say a word.

You very naturally resent the opinion of the *Spectator* that there is "a certain latent cleavage between doctors and other educated men which is most injurious to both"; but is there not almost some justification for this opinion in your own subsequent remark that "the cause of the cleavage which our contemporary perceives dates from an earlier period than that at which the university or technical teaching begins? In the case of the majority of boys intended for the medical profession the necessity for economy is a main consideration. A school must be chosen not because it is the best, but because it is within the parents' means." What grounds, I venture to ask, are there for the assertion that economy is a main consideration in the case of the education of boys proposing to enter our profession, and that schools other than the best have therefore to be chosen for them? Who is there who will say that there is or ought to be any difference in this respect between boys about to enter the profession of medicine and boys who aspire to the professions of the law or the Church? I know of no valid grounds for any such difference myself, but I think we go a long way towards encouraging the belief in it when we continue to keep the cost of medical education itself so ridiculously low. The curriculum has been lengthened, the equipment of the schools for medical education, in physiology, pathology, and many other subjects has been immensely increased at great expense, but the cost to the student remains almost the same as it was years ago, and we thereby positively invite boys of slender means to enter our ranks—boys, that is to say, for whom a school has been chosen, not because it is the best, but because it is within the parents' means. And such is the rivalry amongst the several schools to obtain students that joint action towards raising the fees has invariably come to nothing.

Do not, I beg you, Sir, for one moment imagine that in my opinion means and mental capacity necessarily go together, or that the poor student of ability is not to be enticed by scholarships or other aids into our profession. It is the general culture of the whole body which has to be considered. Put up the cost of medical education, so that it may approach the level of that for other professions, and boys will soon be drawn from the best schools, and something will have been done towards improving, in the rank and file of those who enter the profession, the general standard of education which in the opinion of everyone is so deplorably low. Much has been done already. As Mr. Howard Marsh says in his admirable address:

> The lot of medical students is now far more propitious and happy than it was forty or fifty years ago. They enjoy, to begin with, the great advantage of a better start. To put it shortly, they are better born and better bred. A large and increasing proportion come from the universities or the public schools; they are therefore men of better education and better taste.

Surely this state of things is to be encouraged. Can it be encouraged when the belief is fostered that our profession is specially open for those amongst whom the necessity for economy has been a main consideration in the choice of a school, and who come to us without having enjoyed those advantages of education which the best schools provide? Then, also, when the standard of the preliminary examinations had been raised in all parts of the United Kingdom, we shall find this ensue, that our students will of necessity begin their medical career at an older age than is at present common, and insomuch they will be better equipped for their new work, and less time will be wasted in learning how to begin it.—I am, etc.,

October 18th. NEMO.

Sir,—At the conclusion of Dr. Saundby's admirable address upon medical education, he says "I have expressed with freedom, but I hope with pardonable freedom, a good many opinions which I cannot expect will find universal favour."

There can be no question that Dr. Saundby's trenchant criticisms of the existing system of medical education in this country will not find favour with one class—the class who have for years had the entire teaching in their own hands. Long ago, when I was a student, I came to the conclusion that the medical schools were run for the benefit of the teachers rather than the taught, and now that my sons are medical students I find myself driven still more to the same conclusion.

When I was a student I had to attend lectures on and get a smattering of information about many subjects which have never been of the smallest use to me as a practitioner, while the subjects which would have been of use to me I was left to pick up from such observations as I was able to make. I refer to the practical part of a general practitioner's daily work. I was never taught how to treat a common cold. I was never taught how to distinguish and deal with the protean forms of dyspepsia. I was never taught how to write a presciption, how to apply the forceps, how to feed an

infant. All these and much more of the same sort I should have been taught, and would have had plenty of time to learn while I was attending lectures on chemistry, botany, zoology, etc., and all these and much more which I should have been taught I had to learn for myself in after-years at the expense of my patients, and now I find that my sons are being taught in the same old style, and that the extraction of lecture fees is still the main business of our medical corporations.

It would be useless to go over again the ground so fully covered by Dr. Saundby, with every word of whose address I am in full agreement. All honour to him for so boldly raising the standard of revolt.

A writer in a contemporary says: "We wonder when the common sense of the main mass of the profession will insist upon the rational education and examination of medical students." So do I. Certainly they will have little chance of obtaining such reform while the regulation of medical teaching and examination is practically altogether controlled by those who represent vested interests, and are elected not by the mass of the profession, but by the office holders of the corporations. In fact, the whole tendency seems to be to add on more lectures and more fees.

There can be no objection to making the student of medicine pay handsomely for his education, but let it be an education which will fit the majority for the work of their lives, and not a sham attempt to create ambulatory encyclopædias of superficial knowledge.—I am, etc.,

October 10th. M.D., T.C.D.

VOLUNTARY AMBULANCES AND NURSING IN SOUTH AFRICA.

SIR,—Before there is a general advance against the Transvaal and the Orange Free State there will be 100,000 British troops and levies in the field. Judging by previous experience 10 per cent. of these, or 10,000, will suffer from wounds or sickness; this is, if anything, a low estimate. I do not think our existing organisations are prepared to meet such a strain.

Just now it is a sickly season; malaria, dysentery and enteric fever will be prevalent. Such cases are essentially nursing cases, and do not stand transport well. If reasonably comfortable arrangements can be made they should be nursed on the spot. If is perfectly certain that existing organisations will do everything that lies within their power, but it is my belief that their efforts will require to be supplemented if our men, troops, and levies, are to receive the necessary attention.

A large and varied experience has taught me that in such circumstances the best work is done by independent ambulances that are sent out fully organised and equipped; and though acting under the orders of the military authorities are at once self-contained units, with their own *personnel*, material, and transport. These ambulances should above all be supplied with an ample staff of nurses, especially those who understand "sick cookery."

Ambulances such as above indicated were seen in the Stafford House organisations in Turkey and in South Africa in 1879-80. It seems to me that the present crisis demands such services again.

With more especial reference to the wounded, it must be remembered that in a month or two the climate in the uplands of South Africa will be all that can be desired, and on that account it is a matter of the first importance that sufficient medical aid and skilled nursing should be available in the immediate neighbourhood of the operations. Where climatic conditions on the spot are favourable for treatment, it is obviously not desirable to subject the wounded to the disadvantages of a long transport to the seaboard.

It is not an uncommon experience that the aid of civil ambulances is more readily accepted by the sick and wounded of the enemy than that of the more essentially military organisations. A good deal of racial animosity at present exists in South Africa, and anything that tends to mitigate that feeling makes for peace and better relations when the war is over. Though this may seem to some a trivial idea, I think that it might be made to bear great fruit in the future.—I am, etc.,

Hertford Street, W., Oct. 17th. GEORGE STOKER.

MEDICAL ORGANISATION.

SIR,—Dr. Crawshaw, while advocating in the BRITISH MEDICAL JOURNAL of October 14th, p. 1043, his scheme of medical organisation, lays much stress on the inadvisability and impossibility of getting the British Medical Association to do the work that the proposed new society would do. He considered that it would take a long while to make the Association change its attitude in regard to medico-political questions, and that a separate organisation would more quickly obtain the support and opinion of the whole profession; but the Association is the profession, at least 52 per cent. of the profession, and it has taken more than half a century to grow to its present size. Is it likely that a new society would grow to anything like that size in the time that it might take to change the methods of the older society? Moreover, the energy spent in forming the new society would, I believe, if applied to the older one, start it into fresh life and bring it so large an access of members as to make its numbers more nearly 90 per cent. than 50 per cent. of the profession.

There may be difficulties in the way, but they are not insuperable. The Association would certainly require alteration of its present organisation before it would be capable of acting in the name of the profession; but these alterations, to my mind, would rather improve than otherwise its opportunities for scientific work. As I pointed out in the JOURNAL of July 15th, the present mixture of science and ethics at Branch and general meetings spoils both, and if it were arranged practically to separate them so that the scientific meetings were, in Dr. Crawshaw's words, "unhampered with ethics and politics," it would undoubtedly be to the advantage of both.

It is an error to suppose that the Association was intended to be a purely scientific body, one of its objects, as stated in the Memorandum of Association, being "the maintenance of the honour and the interests of the medical profession." Neither do I think it should be considered necessary for the "two kinds of work" to be prosecuted by "totally different sorts of men." There will be many who care only to interest themselves in scientific questions to the exclusion of all political questions, and *vice versâ*; but the man who is interested in both will take the widest view and probably give the soundest advice; and in this respect I do not consider the dreaded presence of a goodly proportion of consultants in the Association by any means a disadvantage to the general practitioner. Many consultants have been general practitioners and held appointments as club surgeons, parish doctors, etc., and had to fight their way as hard as if not harder than other medical men, and the qualities which enabled them to gain their position and the experience they gleaned in their fight must mark them as likely to be good and valuable counsellors. I doubt whether their influence exists to the extent suggested. Even if the ratio of consultants to general practitioners is greater in the Association than in the whole profession, their actual number does not in any way approach a majority.

Nobody, I suppose, considers the annual general meetings to be either representative or, except for merely formal business, effective. But the Association has, in theory, at any rate, a representative body, the Council, the members of which are for the most part elected by the various branches. The members of Dr. Crawshaw's society would, I take it, elect a representative council in much the same way. Neither in the Association any more than in the proposed new society is there any need for medical men to leave their practices "for days together," as they can express their opinions at the usual Branch meetings.

No doubt though, as a matter of fact, the Council is not representative, and that apart from the presence of the vice-presidents, who would be removed by the resolution of a general meeting; but this is the fault of the members of the Branches, who will not take the trouble to elect men who really represent their views, or rather, I should say, to a custom which has grown, and under which representatives on the Council have come to be looked on by the Branch as permanent, that is, their annual election is taken as purely a matter of form. It probably seems ungracious to suggest the displacement of members who have been long on the Council, but if any progress is to be made in the organisation and

powers of the Association in the direction under consideration, it will surely have to be brought about by this means.—I am, etc.,

Freshford, Oct. 15th. CHARLES E. S. FLEMMING.

ALCOHOLISM IN RELATION TO HEREDITY.

SIR,—Dr. Archdall Reid's well-known views on the subject of alcoholism in its relation to heredity, to which he gives expression in the BRITISH MEDICAL JOURNAL of September 16th, raise questions of great practical importance. While agreeing in the main with Dr. Reid's argument, I think there are several points in his paper to which exception may be taken, and that his conclusions on the subject of temperance reform are altogether fallacious.

Admitting that acquired characters are not inherited, the proof to the contrary having broken down, are we therefore bound to Dr. Reid's assertion that "to say that children are drunken because the parents drank is to affirm the transmission of an acquired trait?" Not necessarily, I think. Dr. Reid seems to neglect the possible direct effect of the alcohol upon the development of the germ cells. Yet it is hardly possible to believe that a poison which produces marked nutritive (degenerative) changes in almost all the tissues of the body should produce no effect on the development of the spermatozoa. Yet if possible damage to the germ cell be admitted, it must also be admitted that this will affect the offspring in some way. Because the germ cell has suffered, the offspring must also suffer physically, mentally, or morally. Let it be granted, nevertheless, that this "suffering" need not necessarily take the special form of increased craving for alcohol, though it might do so. And remembering that the offspring is supposed by the argument to inherit a tendency to inebriety, it is by no means inconceivable or even improbable that the simple fact of the offspring being somehow below par as the result of his development from a damaged germ cell might make it more difficult for him to overcome his inborn tendency. In this way I believe it is at least possible (I do not say it has been proved) that children may sometimes be drunken because the parents drank, even though acquired characters cannot be transmitted as such. The admission of this possibility is of very great practical importance, because Dr. Reid's views would, I fear, tend to weaken the resolution of many a man who is at present assisted in his effort to combat his craving for drink by the fear that indulgence might injure his unborn children.

But this is all theory. What are the facts? What effects, if any, are actually produced on the offspring by alcoholic indulgence on the part of the parents? I fear our real knowledge on this subject is practically *nil*. We can easily produce statistics to prove that alcoholic parents have drunken, insane, or epileptic children; but these, as Dr. Reid quite legitimately argues, "demonstrate merely that the inborn capacity to delight in drink is transmissible"; or rather that the tendency which manifests itself as drunkenness in the parents is transmitted to the offspring, and asserts itself as drunkenness, insanity, or epilepsy. The evidence is wholly negative. It does not, in fact, prove that the offspring is in any way affected by the parents' intemperance, not even in the way for which I have myself been arguing. The real facts would be very difficult to ascertain, but there is one way in which I believe we could obtain very valuable information. If alcoholic indulgence has any direct effect upon the offspring, that effect ought to become more and more manifest in the case of parents who become alcoholic during the time they are getting their family. In fact we ought to find exactly the opposite of what we find in the case of syphilis, where, with a disappearing poison, successive children are more and more healthy. This is a subject which I venture to suggest would well repay collective investigation on a large scale.

For this investigation we would require a long series of histories of families of drunken parents, arranged in three groups, according as the father, the mother, or both parents were intemperate. If a sufficiently large series of such histories should show that the later offspring of alcoholic parents are to a marked degree more frequently intemperate, epileptic, or insane than the earlier, we might conclude that intemperance on the part of the parents has a direct influence upon the offspring. In any case we should gain information not at present at our disposal, so far as I am aware, for we should be able to eliminate the fallacy that vitiates (for this purpose) our present statistics, namely, that the drunkenness, etc., of the offspring may be due simply to the transmission of the parents' inborn defect.

In conclusion may I make a few remarks on Dr. Reid's views as to temperance reform? Dr. Reid contrasts Nature's plan of temperance reform—"the elimination of the drinkers, and the consequent breeding out of the capacity for delight in drink"—with the reformer's plan, greatly to the disadvantage of the latter.

It may be admitted that Nature is, after all, the great temperance reformer. Natural selection does tend to fit the organism to its environment, and would no doubt in time fit mankind to live soberly—sufficiently soberly at least to continue to propagate the species, which is all Nature cares about—in an environment of gin palaces. Therefore, argues Dr. Reid, let us leave Nature to carry out her perfect work. It might, however, fairly be argued that this environment for which Nature is benevolently striving to fit us is, after all, none of her producing, and the temperance reformer, accused of frustrating Nature's plans may well ask, Must our environment always remain unchanged? Must it always be that a great part of our people are to find no rest from their labour, no place of amusement or social intercourse except in the gin-palace? If so, by all means let Nature have her way. But some of us have visions of better things. But even if we admit that the reformer's plan places Nature's in abeyance, what then? More than once in the past our forefathers put Nature's plans in abeyance, and that without being worsted. Once upon a time Nature set herself to bring forth a race of men strong and hardy, able to endure cold and wet. So she sent forth the East wind, the rain and snow, to eliminate the weakly. In the far South she succeeded in her endeavour. In Tierra del Fuego, Darwin tells us that he saw a naked woman with a young infant, who came and stood watching for a long time out of mere curiosity, although a cold wind was blowing and the sleet was falling and melting on her bosom and on her naked child; and when the English sailors were shivering round an enormous fire, the natives gathered at a distance to watch them, stark naked, yet perspiring profusely at the heat of the fire. In this part of the world our ancestors fought against Nature's designs, and so successfully, that to-day, instead of the wild joy of battling naked with the East wind, we are forced to wrap ourselves in woollen garments and to live in warm houses, and even then we must keep fires burning for half the year lest we perish of cold. In a word, by artificially altering our environment we have caused Nature to alter her plans, so that instead of breeding Fuegians in the North as she has done in the South, she has bred Englishmen.

Dr. Reid's arguments in favour of non-interference with Nature's plan are mainly directed against one aspect of the temperance reformer's endeavour—namely, the elimination of drink. Now the plan of the temperance reformer is simply a plan for altering our present by no means ideal environment, and it may be said of every effort at social reform, every effort which aims at weakening the attractions (and the numbers) of the licensed houses, or of providing counter-attractions in the form of more comfortable dwellings, of greater facilities for recreation or social intercourse, of stimulated interest in literature, science, art, or music, that they interfere with Nature's scheme of eliminating the drunkard. No doubt they do; but does Dr. Reid seriously mean that therefore we should hold our hand, and make no effort to improve an environment we have ourselves to a large extent created? This is what he seems to say.

Again, what are we to do with the children of the drunkard? Shall we not try by careful training to rouse in them a moral ideal to which drunkenness shall seem a hideous thing, by education persuade them that for them at least even moderate drinking must be taboo, by suitable discipline to stimulate and strengthen their power of will? If by such means we succeed in making sober citizens of some whom Nature had marked out for destruction, Dr. Reid will give us little praise for our success. Here again we are fighting against Nature, for this acquired moral ideal, this acquired strength of will cannot be transmitted to posterity. We have succeeded in saving these children only to enable them to

pass on to future generations their own inborn and undiminished tendency to drunkenness. Yet have we really been doing wrong? Surely Dr. Reid's arguments prove a little too much. This Dr. Reid seems to see for himself, for he concludes his paper by remarking, "I must not be understood as meaning that we should poison unfit people, or permit unfit people to poison themselves." Yet what else can he mean by urging us to follow the laws laid down by Nature, for this is just her method of eliminating those whom the craving for alcohol has rendered unfit?—I am, etc.,

Edinburgh, Sept. 30th. W. B. Drummond.

THE ROENTGEN RAYS IN SURGICAL WORK.

Sir,—Having listened with inexpressible delight to the masterly address of Professor Chiene, F.R.C.S., on the occasion of the distribution of the clinical prizes of the Birmingham Clinical Board, it was with a feeling somewhat akin to disappointment that I perused your leader on the Roentgen Rays in Surgical Work. The keynote of Professor Chiene's advice to surgeons was embodied in the two words "Don't touch." He followed this up by saying: "When you touch a patient in surgery make your diagnosis if possible painlessly;" and again: "Crepitus as a diagnostic sign of fracture is the forlorn hope of the surgeon." Contrast these wise sayings with the following from your leader: "By a careful examination of any fracture, either with or without an anæsthetic, we can elicit all the knowledge which is essential to the successful treatment of the case. With the *x* rays we can learn more intimately the extent, the exact line of fracture, the precise amount of comminution or displacement, the degree of associated injury, and so forth (without giving the patient the slightest pain or even discomfort), but we use the same splint in the same manner to 'set' the broken limb." And why? Because we have yet to learn that a different splint, applied in a different manner (with the aid of the fluorescent screen) would produce better results. "So far as fractures are concerned," says the writer, "it must, we think, be admitted that the practical gain is quite inconsiderable."

With this statement I beg to entirely disagree. The practical gain is very considerable and the fact that it is not taken full advantage of is no argument against the use of the *x* rays, but rather against those who refuse to accept the inevitable and use a different splint in a different manner. The time will come when every fracture will be "set" with the accurate aid of the *x* rays and with a special splint specially adapted for its special requirements.

Our methods of dealing with fractures are clumsy and old fashioned, and in the new light thrown upon them by means of the *x* rays they will have to be dealt with in a far more scientific manner before we can be said to have reached anything approaching finality.

That many appearances produced in *x*-ray photography are misinterpreted is certain. No charge however can be laid against the *x* rays, but rather against the want of skill and knowledge of the interpreter. Much has been done to hamper the progress of surgical radiography (especially in London) by members of our profession, who have allowed the practice to drift from its proper sphere into the hands of wholesale chemists and manufacturers of apparatus. Many of our large hospitals have recognised surgical radiography as a legitimate branch of our profession and have appointed medical men to superintend their *x*-ray departments. This is a step in the right direction, but the whole profession must recognise it before we can reap the full benefits which is certain to accrue from an extended and systematic application of the *x* rays.

The proper interpretation of radiographs can only come by continued observation, aided by improvements in our methods. The production of stereoscopic pictures is an important advance, as we are enabled to at once see the relation of the parts to one another.

Taking it as granted that the keynote of Professor Chiene's address, "Don't touch," is a generally accepted axiom, I have no hesitation in saying that in the *x* rays we have an instrument of precision of incalculable value.

The benefits accruing from its application will, when full advantage is taken of them, be a boon alike to both patients and surgeons. They have already rendered useless and obsolete the dangerous probe for finding foreign bodies, and have rendered it possible to diagnose fractures and dislocations without our having to resort to painful, dangerous, and unnecessary manipulation.

The sooner we alter our methods of treatment to meet the requirements imposed upon us by the new knowledge gained, the sooner we shall acknowledge that Professor Roentgen's discovery is a heavenly gift for the amelioration of pain.—I am, etc.,

John Hall-Edwards,
Surgical Radiographer, General Hospital,
October 16th. Birmingham.

ILLEGAL CERTIFICATES.

Sir,—I must ask forgiveness for not answering before the portion of Mr. Horsley's last letter which personally attacked me. I have not done so because I was so much astounded by Mr. Horsley's statement that Mr. Anderson had obtained his signature to the memorials presented by us to the General Medical Council that I waited for Mr. Anderson's answer, which duly appeared in the British Medical Journal of October 7th; and then again I waited expecting Mr. Horsley's reply in to-day's number, which reply has not appeared. After that failure to reply I trust Mr. Horsley in the future will be more careful in making charges of forgetfulness, which forgetfulness seems according to his last letter to be imputed as wilful on my part, when he charges me with only lately having said the "expression of regret" which was passed by the Wood Green and East Suburban Societies was founded on his reply to Mr. Jackson's letter. I deny that statement *in toto*. At the Stratford meeting in my address I first read the vote of regret and then gave as my reason for my action the question addressed by Mr. Jackson to the candidates, and Mr. Horsley's reply to that gentleman. The Secretary of our Society has the address as I read it, and I shall be pleased to show the same to Mr. Horsley or to anyone appointed by him—preferably yourself—in proof of my statement. But as a further proof I will refer him to the report of his speech in the *Lancet* of June 24th, 1899, on page 1732, lines 18, 19, and 20, in the second column, which reads, "and reference has been made by Mr. R F. Tomlin to a letter which I wrote to Mr. Jackson." I think this is sufficient answer to his charge.—I am, etc.,

Wood Green, N., Oct. 14th. R. F. Tomlin.

Sir,—I observe that Mr. Jackson and his friends think it right to repeat with a great deal of circumlocution and with the aid of numerous baseless hypotheses, the attack which they made upon me, namely, that my action in regard to midwifery legislation is contrary to my election pledges. Not only have I fully exposed in my previous letters the slanderous character of their misrepresentation, but they have also been convicted of the same offence in your columns by some other practitioners who were also present at the meeting at Stratford, where I read the election pledges in question and discussed the whole subject. For the sake of medical reform and progress I am sorry to note that their sense of truth and honesty has failed to prevent them from again promulgating their false accusations against my public sincerity.

Everything that I have ever said or done on midwifery legislation is and has always been in print in the British Medical Journal, and if Mr. Jackson and his friends are really in ignorance, as they now profess, of my views on this subject I recommend them to look up the back numbers of the Journal.—I am, etc.,

Cavendish Square, London, W., Oct. 17th. Victor Horsley.

HOSPITAL ABUSE.

Sir,—According to my view the Hospital Reform Association meeting on October 10th and 11th does not appear to have brought to light any scheme for limiting hospital abuse. In this town, the population of which is about 37,000, a medical man seldom sees any interesting cases, for the simple reason that they go to a London hospital before they come to us, and if one happens to see such a case and fails to cure it in about two visits off they go to a London hospital. A short time ago I met a patient of mine, a fairly well-to-do man, who informed me he had been to a London hospital the previous day and was told he had to come as an in-patient on the following day. He happened to have met an influential man in the town who casually inquired after his health, and hearing he was not

well recommended him to go at once to a certain hospital, as he could supply a letter for it. Now I know for certain that this man could have paid a consultant's fee and he has always hitherto paid my fees when suffering from minor illnesses. Would it not be possible to arrange some scheme by which no patient is seen at a hospital without a subscriber's letter which is also signed by a medical man? I am sure no medical man would object to sign the letter gratuitously if he thought the person was a suitable case both from a medical as well as from a charitable point of view. I admit this method would free the casualty and out-patient departments from a good number of paltry cases, but it would not diminish the in-patients.

The authorities of this town are now endeavouring to obtain cheap fares for anybody to go up to London hospitals, thus endeavouring also to still further impoverish the unfortunate general practitioner.

What with (1) a medical dispensary run by the Amalgamated Friendly Societies, who have two medical men working for them and which absorbs between 6,000 and 9,000 of the people, very many of whom can afford to pay good fees; (2) medical aid societies, which absorb another 4,000 to 5,000 people, and (3) London hospitals, which take up about half the rest, it is very hard for a medical man to make a living here.—I am, etc.,

October 16th. X. Y. Z.

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

Sir,—In the report of a Conference, recently convened, of the Hospital Reform Association, the chairman, Dr. W. Knowsley Sibley, is reported to have said: "He was sorry that the managers of the Prince of Wales's Fund were rather adverse from inquiry, maintaining that their functions were purely administrative. He believed the Fund would become much more popular if its managers followed the example of the managers of the Hospital Sunday Fund, and gave preference to the hospitals who adopted the inquiry system."

We should be glad if you would kindly permit us to correct this.

The visitors of each hospital specially report not only whether any attempt is made to ascertain the social circumstances of the in-patients, but also whether there is an almoner or inquiry officer for the out-patients.

The Distribution Committee carefully consider the reports of the visitors, and allocate their awards after reviewing all matters connected with the hospital, including the question of inquiry.—We are, etc.,

S. Crossley, } Honorary
J. G. Craggs, } Secretaries.

Bank of England, E.C., Oct. 14th.

REGISTRY OFFICES FOR NURSES FOR THE SICK.

Sir,—It must have struck many a busy practitioner that something would soon have to be done to prevent the constant and increasing interruptions forced on medical men by nurses calling on them in solicitation of cases. Of course it is impossible for all nurses, whether well qualified or otherwise, to identify themselves with, or become the inmates of, recognised nursing homes. I know several excellent nurses who are widows, for whom a connection with an ordinary "home" is an impossibility. Their only means of obtaining employment necessitates frequent calls on the doctors in their neighbourhood, which course is often as distasteful to them as to the practitioner. There are others, too, who for various reasons cannot associate themselves with the ordinary nursing institutions. For all these, I would like to see established in every populous district a Registry Office for Nurses for the Sick, where such nurses desirous of obtaining engagements in maternity, medical, surgical and general cases, could enter their names and obtain employment at a small cost. It would be the duty of the person in charge of such office to require a recommendation in every case from one or more medical men, as well as particulars as to training and experience.

Such an institution would not interfere or compete with existing "homes," for its aim would be to deal only with this special class. Besides, it would tend to concentrate the body of such nurses, and thus be a convenience to medical men, and at the same time a means of ascertaining the eligibility of nurses for special cases. I have already suggested an office or centre for the South of Liverpool, and I hope soon to see another centre established for the north end of the City. I should be glad to learn whether other large communities are not in need of some such movement.—I am, etc.,

Liverpool, Oct. 14th. G. Walter Steeves.

OBITUARY.

ALEXANDER WALLACE, A.M., M.D.Oxon., M.R.C.P.Lond.,

Colchester.

Dr. Alexander Wallace, who died at Colchester on October 1st at the age of 70, after an illness of some months' duration, was born in London, and was educated at Winchester, at Trinity College, Oxford, and at St. Bartholomew's Hospital, London. He took the degrees of M.B. and A.M. in 1858, and that of M.D. in 1861. He was for a time Physician to the Metropolitan Free Hospital and the St. Pancras and Northern Dispensary; but more than thirty years ago he went to reside in Colchester, where he was elected Physician to the Essex and Colchester Hospital. He was a great authority on the cultivation of orchids and lilies, and introduced into England many new varieties of these plants. He was the author of a standard work on lilies, and in his younger days had been a keen entomologist, writing books on the subject, besides making a valuable collection of insects. In his youth he was a great cricketer, and played for Oxford University and for the Gentlemen of England. He also excelled at chess. Besides his book on lilies, he wrote two prize essays of the Entomological Society of London in 1865-66. He was also a frequent contributor on medical subjects to the *St. Bartholomew's Hospital Reports* and other publications. He has left a widow, six sons, and a daughter. The funeral took place at Colchester on the 4th inst., and was attended by the local *confrères* of the deceased and a large body of friends and patients.

JOHN THOMAS MOULD, F.R.C.S.,

Brompton.

We regret to announce the death of Mr. John Thomas Mould, of Onslow Crescent, a much respected member of the profession, who took a very active part in the management of some of the most useful of our medical charities. He was the son of Mr. John Mould, who was in his day a well-known practitioner at Oundle, Northamptonshire. Mr. Mould received his early education at a school at Alford, Lincolnshire, under the superintendence of his stepfather, the Rev. Felix Laurent, rector of Alford. Having made up his mind to enter the medical profession, he was apprenticed to a practitioner in Nottingham. In due course he proceeded to London, where he was a student of St. George's Hospital. He became a Member of the Royal College of Surgeons of England in 1840 and a Licentiate of the Society of Apothecaries in 1841. He was elected a Fellow of the College of Surgeons in 1856.

Mr. Mould's professional career was very successful. His patients had the greatest confidence in his skill, and loved him for his genuine kindness of heart and unfailing urbanity of manner. He was for many years a life governor of St. George's Hospital, and was a regular attendant at meetings of the Committee. He was a vice-president of Epsom College, with which he had been connected since its foundation. He showed the liveliest interest in the welfare of the College, was a member of its Council, and took an active part in the work of its Committees. He was also a member of the Committee of the Medical Benevolent Fund, of which body he was Chairman for some years, till failing health compelled him to resign. Moreover, he was Vice-President of the Society for the Relief of the Widows and Orphans of Medical Men.

In addition to his numerous professional engagements, Mr. Mould found time for much other useful work. He was Vicar's Churchwarden of Holy Trinity, Brompton, for forty-three years, and on his retirement was presented with a handsomely illuminated testimonial. In the early days of the Volunteer movement he enrolled himself in the 2nd Middlesex Rifle Corps, under Lord Ranelagh. He was also a member of the

British Archæological Society, and each year, as long as he was able to do so, attended the various provincial meetings.

Mr. Mould's many-sided activity was cut short some four years ago by a stroke of paralysis, from which he never completely recovered. His constitution was gradually undermined, and he sank slowly but surely till the end came on October 10th. He was in his 82nd year.

Mr. Mould, who married a daughter of Mr. Robert Gray, an old and greatly esteemed practitioner of Brompton, leaves a widow and four children. His loss is also mourned by a large number of patients and a wide circle of personal friends.

PHILIP B. C. AYRES, C.M.G., M.R.C.S.

MR. PHILIP BURNARD CHENERY AYRES, C.M.G., M.R.C.S., L.R.C.S.Edin., formerly Colonial Surgeon, Hong Kong, died on October 12th, at Blackheath, Kent, in the 59th year of his age. Mr. Ayres qualified M.R.C.S.Eng. in 1864, and L.R.C.P. Edin. in 1865. Shortly after qualifying, Mr. Ayres went to India to take up an appointment as surgeon to railways then being constructed. Mr. Price, Director of Public Works in Hong Kong, had been associated with Mr. Ayres in India, and when in 1873 a vacancy in the colonial surgeoncy occurred in Hong Kong Mr. Price, knowing Mr. Ayres's capabilities and value, persuaded him to take the appointment. It was no light task that fell to Mr. Ayres's lot when he arrived in Hong Kong, but in conjunction with his friend, the Director of Public Works, an immense amount of useful work was done, and the sanitation of Hong Kong was completely reorganised. Great improvements were made in hospital accommodation, a staff of English nurses was introduced into the Civil Hospital where before coolies served; a Sanitary Board was created, over which he for some time presided; a medical officer of health was introduced to the colony, and a colonial veterinary surgeon was appointed. A vaccine institute and numerous other improvements for the public good were instituted under his enlightened guidance. For many years Mr. Ayres was engaged in private practice, but as the colony increased in size and importance he had to confine his attention wholly to his official duties. For some years the effects of his long residence in the East had been telling upon him, and it was plain that his physical powers were decreasing. His friends—and they included every individual in the colony—were grieved to see his failing strength proclaim the fact that they must part with their "Doctor." Generous, kindly of speech, and untiring in the interests of the sick, never was a medical man regarded with more affection than was Mr. Ayres. He left the colony some eighteen months ago in a state of health which caused great anxiety to his friends. In 1895 he was made C.M.G. in recognition of the great services he had rendered in the cause of public health in Hong Kong, and especially for his work in connection with the outbreak of plague in 1894.

EDWARD LAWFORD, J.P., M.D.ABERD., F.R.C.S.ENG.

BY the death of Dr. Lawford at the age of 79 on October 2nd, Leighton Buzzard was deprived of one of its most prominent citizens. He had borne a long illness and much suffering with exemplary patience and fortitude. His father was William Robinson Lawford, a medical practitioner of Leighton Buzzard, where Dr. E. Lawford was born in 1820. His medical education commenced at the Salop Infirmary, Shrewsbury, and after three years there was continued at University College, London. When qualified at College and Hall he returned to his native town in 1844, obtained the degree of M.D.Aberd. in 1853, and was elected F.R.C.S. in 1875. Early in his career he published several papers in the BRITISH MEDICAL JOURNAL, and was elected President of the South Midland Branch of the British Medical Association in 1866. During the last twenty years he had turned his attention to the archæology of Leighton and its district, and was elected a Fellow of the Society of Antiquaries of London. He was Physician to the Leighton Buzzard Dispensary for many years, and Certifying Factory Surgeon.

After forty-four years of constant medical work, in which he won the love and respect of rich and poor alike, he retired in 1888, retaining the post of Consulting Physician to the dispensary. He was for some years visiting justice to the asylums in Bedfordshire, a member of the school board and the urban council, trustee of many charities, and vicar's churchwarden. For years, too, he held a Bible class for youths who from age had discontinued attendance at school. He was a great benefactor to the parish church, restored its porches, gave clerestory windows to the nave, and had presented to the parish a house in Beaudesert as a residence for one of the curates. Kind, courteous, and most estimable in his private character, he had naturally won for himself a large circle of friends.

The burial took place in the family vault at All Saints' Churchyard amidst signs of widefelt sorrow, and very many townspeople were present.

THE RT. REV. J. W. HICKS, M.D., D.D., F.R.C.P.

DR. JOHN WALE HICKS, Bishop of Bloemfontein, died at Maseru, Basutoland, on October 11th. He was born in 1840, and passed through the usual medical curriculum at St. Thomas's Hospital. He took the B.A. of the University of London in 1861, gaining honours in Chemistry, Physiology, and Botany, the B.Sc. degree with honours in Chemistry and other subjects in the following year, and the M.B. in 1863, when he obtained the Gold Medal in Obstetric Medicine. He became M.D. in 1864, and a Member of the Royal College of Physicians of London in 1865. Subsequently he entered as a foundation scholar at Sidney Sussex College, Cambridge, and in 1870 he was placed Senior in the Natural Science Tripos, and was at the same time 2nd Senior Optime. He was Demonstrator in Chemistry in the University for eleven years, and became a Fellow of his College in 1874. In 1871 he took Holy Orders, and after holding several cures became Dean of his College. In 1881 he was elected a Fellow of the Royal College of Physicians. In 1892 he was consecrated Bishop of Bloemfontein. His diocese included the Orange Free State, Basutoland, Bechuanaland, and Griqualand West. In his early days he wrote a textbook on inorganic chemistry. He always retained his interest in the medical profession, and was present at one of the meetings of the Royal College of Physicians during his last visit to this country. There are two other Bishops who hold the M.D. degree, the Bishop of Rangoon and the Bishop of Likoma.

DR. GERHARD WESTFELD, of Stockholm, Physician in Ordinary to Queen Sophia and to the Queen-Mother Josephine of Sweden, died recently at the age of 71. He entered the University of Upsala in 1848, and supported himself while a student by acting as a private tutor. He graduated as Licentiate in Medicine in 1852. In 1893, on the occasion of the celebration of the jubilee of Upsala, that university conferred on him the degree of Doctor. Dr. Westfeld held a very high position in the profession of Sweden, and did much for the promotion of temperance in that country.

MR. THOMAS IREDALE, M.R.C.S., L.R.C.P., of Leeds, died at his residence, Albion House, Spencer Place, after an illness of two months' duration. Mr. Iredale, after a successful career as a chemist in the town, elected to take up the study of medicine. With characteristic energy and persistence, he rapidly prepared himself for his new vocation. He was unvaryingly punctual at all lectures, and in the hospital spent all his time in the careful personal examination of patients. His acquisition of sound clinical knowledge was, therefore, unusually swift. After a short time spent at St. Bartholomew's Hospital, he qualified in 1887, and immediately began practice in Leeds. He was a man with a deep insight into the character of the class of people who formed his practice. With a happy knack of eliciting the confidence of his patients, a sound clinical method, and a wide knowledge of the properties of drugs, he soon attained a considerable practice. He was a member of the Yorkshire Branch of the British Medical Association. During the last few months of life symptoms of heart disease became increasingly troublesome, and owing to the onset of complications the disease proved fatal. He leaves a widow, one son in the profession, and five daughters.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Hermann Blaschko, of Berlin, a distinguished hygienist and collaborator with Professor Eulenberg in his *Encyclopædia of Hygiene*, aged 74; Dr. Giuseppe Puglia, some

time Professor of Physiology in the University of Modena; Dr. Theodore Puschmann, Professor of the History of Medicine in the University of Vienna; and Dr. Domingos Freire, formerly Professor of Organic Chemistry in the Medical Faculty of Rio de Janeiro.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MEDICAL ARRANGEMENTS FOR THE TRANSVAAL.

As regards the arrangements for the treatment of the sick and wounded soldiers in South Africa, it is now proposed that patients not likely to be fit for duty within one year should be sent direct to England, and the hospital-ship accommodation for the treatment of other cases might then be reduced to 200 beds instead of 500 as originally proposed.

Twenty-nine N.C.O.'s. and men of the Royal Army Medical Corps left Devonport on October 10th for Southampton, Netley, and Aldershot, to bring the bearer companies which are being mobilised up to strength. The 16th Field Hospital Company at Devonport, numbering between 70 and 80 officers and men, is under orders to embark early in the week. Reservists are coming in with remarkable promptitude. The Army Medical Staff serving in Dublin garrison left on October 10th for Southampton; the *Spartan* hospital ship sailed on the same date. The 1st Scots Guards, it is stated, are somewhat largely affected by medical rejections, and men in hospitals together numbering about 100, and it is probable the battalion will need 300 reservists to make up the strength of 1,112 of all ranks required. The war correspondent of the *Daily Telegraph* wires that 150 invalid soldiers were sent to Pietermaritzburg on the evening of October 11th. A meeting of Afrikanders has been held in Paarl in Cape Colony, at which it was resolved to organise a Red Cross service for the Transvaal. The Dutch Red Cross Society will on October 28th send an ambulance corps under Dr. Lingbeck to the Transvaal *viâ* Lourenço Marques.

The Royal Engineers and other soldiers at Chatham ordered on service to South Africa are being inoculated against enteric fever. The same procedure is being adopted at Aldershot with officers and men.

The 18th British Field Hospital, of which Major Donegan, R.A.M.C., will have charge, was mobilised at Bangalore early in September for service with the cavalry brigade. The following medical officers and assistant surgeons I.M.S. (Submedical Department) have joined for duty: Captain W. D. Erskine, R.A.M.C., and Assistant Surgeon C. B. Green, from the Madras District; Captain T. McDermott, R.A.M.C., and Assistant Surgeon A. W. Thomas, from the Southern District; and Assistant Surgeons J. A. S. Connor, J. Gibson, A. A. S. Hart, and P. T. Duckworth, from the Bangalore District. The whole of the Army Hospital Corps Establishment of the Field Hospital will be provided from Secunderabad, and join it at Bombay. No transport or transport establishment, and no ambulance, tonga bullocks, or drivers will accompany the hospital from India.

A party of non-commissioned officers and men of the 10th Company R.A.M.C. left Chatham on October 11th for Aldershot to join the body under orders to embark for South Africa on the 13th from Southampton. Major-General Fraser, commanding the Thames District, inspected the men on parade at Fort Pitt Hospital, and congratulated them on their smart appearance, and wished them success and a safe return. The remainder of the company left Fort Pitt on October 13th, and the medical work of the hospital will be transferred to local civil practitioners, whilst the Lancashire Fusiliers will furnish ward attendants.

No. 4 Stationary Hospital (Edinburgh) will embark on October 21st; No. 2 General Hospital (Netley) on October 29th from Southampton; the Staffs for two hospital trains will embark on October 23rd.

The St. John Ambulance Association is forwarding stretchers, hampers, and other ambulance material of the value of several hundred pounds to its South African Centre. It has been decided that ambulance waggons, watercarts, etc., shall embark with the various units of the army corps instead of being issued in South Africa. The 4th Stationary Field Hospital mobilises in Edinburgh, from whence 10 con-commissioned officers and men of the Royal Army Medical Corps left on October 10th to join the 3rd General Hospital forming at Aldershot.

It is stated that at Mafeking Dr. W. A. Hayes, the Medical Officer to the Railway and to the Police, had organised an ambulance service; a number of houses had been converted into hospitals, and several ladies had volunteered to remain and act as nurses. The Roman Catholic Bishop telegraphed to the Superior of the Convent at Mafeking, granting permission to the Sisters to leave, but they elected to stay and nurse the wounded.

Several members of the Army Medical Corps now doing duty with the Royal Artillery at Leeds are under orders for the Cape, and left for Aldershot last week. Early last week about 27 men of the R.A.M.C. left Portsmouth for Southampton, having been detailed for duty with the hospital ship *Trojan*.

The medical units for the 1st Division go to South Africa on Friday, October 20th.

Medical officers on the retired list have been communicated with from the Medical Division, War Office, for employment in military hospitals in the United Kingdom, should their services be hereafter needed.

The following is the arrangement for conveying the medical corps to South Africa: The detachment No. 2 Bearer Company R.A.M.C. proceeds in the *Yorkshire* on October 20th, while on the same date in the *Rosslin Castle* proceed No. 2 Company R.A.M.C., Depôt Companies R.A.M.C., and civilian medical officers. In the *Harlech Castle* a detachment, depôt companies, field hospital; in the *Lismore Castle* also a detachment, depôt companies, field hospital; and in the *Manila*, depôt companies R.A.M.C. Both these vessels also leave Southampton on October 20th. On October 21st, the *Nubia* takes No. 18 Company R.A.M.C., field hospital; the *Gascon*, No. 18 Company R.A.M.C., Bearer Company, and No. 19 Company Field Hospital R.A.M.C.; the *Ghoorka*, a detachment No. 18 Bearer Company R.A.M.C. On October 22nd the *Malta* freight ship takes a detachment No. 18 Company Field Hospital R.A.M.C.; the *Pavonia*, No. 17 Bearer Company R.A.M.C. On October 23rd, the *Oriental* takes No. 11 Company, Bearer Company, R.A.M.C.; the *Hawarden Castle*, No. 17 Company (Bearers) R.A.M.C.; the *Aurania*, No. 1 Company (Bearers) R.A.M.C.; the *Armenian*, detachment No. 19 Company Field Hospital R.A.M.C.; the *Nomadic*, detachment No. 9 Company (1st Cavalry Brigade Field Hospital) R.A.M.C. On October 24th, the *America* embarks at Tilbury a detachment No. 9 Company (Bearers) R.A.M.C. Each transport proceeding with troops to South Africa will thus have a detachment of the R.A.M.C. detailed either for field hospital or bearer company duties, and for any medical service required on board ship. Medical officers appointed to field hospitals or bearer companies will no doubt proceed with their respective detachments. The offer of a fully-equipped field hospital from the New South Wales Medical Staff has been accepted.

It has been thought advisable that the force shall be accompanied by an expert in bacteriology and chemical analysis, and accordingly Captain M. L. Hughes, R.A.M.C., has been selected to be at the disposal of the Principal Medical Officer whenever a careful investigation may be considered desirable. His services will be especially useful with reference to the sources of drinking water and the occurrence of enteric fever.

Horses and Field Kit.

Referring to our article on the provision of horses and field kit which appeared on October 7th, a correspondent of some standing in the service detailed for duty with cavalry in South Africa writes:

"The horse question is the more serious. It means a financial catastrophe to a medical officer to be attached to a cavalry regiment for the campaign. The special regulations state that he is to have two horses, which means an expenditure at the very least of £100, and in a few months he may, if fortunate, recover from £20 to £25 by the sale of the two. It should be stated by the War Office what the intention is about horses for medical officers after the campaign. Should the present order be allowed to stand as it is the horses will be sold at a great loss in South Africa. The suggestion offered, therefore, of repurchase by Government at a valuation, or pro-

vision of transport to a new station after the campaign, is worthy of carrying out. Medical officers attached to cavalry should be entitled to get one troop horse under the same conditions that cavalry and mounted infantry officers obtain them (*vide* Paragraphs 624 and 625 Allowance Regulations). There is no reason why medical officers should be differently treated."

THE MILITIA AND THE MILITIA RESERVE.

Notice is given that the Militia is to be embodied, and the Militia Reserve Force, or so much as may be necessary, called out for permanent service. The latter force was instituted in 1867, and the men in it are enlisted for six years or for the remainder of their Militia engagement. The reservist remains for all purposes a militiaman until called out for permanent service, but when so called out he becomes for all purposes a soldier in the regular forces, and can be appointed to any corps, of which he then forms an integral part.

The medical arrangements for the Militia are as follows:

There are a few Militia medical officers still left who are in medical charge of their battalions. No new commissions have been given for many years.

When a Militia regiment is out for training, if at a station or depôt where officers of the Royal Army Medical Corps are available, it is dealt with in the same way as a line regiment—that is, its sick are sent to the station hospital, and are seen in the first place at a medical inspection room by the R.A.M.C. officer. Where they are at a distance from hospital in camp an officer of the R.A.M.C. is detailed to look after them if available, and in other cases a civil practitioner is detailed and paid at army contract rates. In case of embodiment the same system would be followed.

The Militia Medical Staff Corps is largely composed of Militia reserve men, who would join the R.A.M.C. The remainder, if called out, would be posted to their territorial hospitals.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—PATRICK B. HANDYSIDE, M.B., Staff-Surgeon to the *Warspite*, for Esquimalt Hospital, October 17th; HENRY W. G. GREEN, Surgeon to the *Vivid*, for Plymouth Hospital, October 17th; SAMUEL H. FACEY, Surgeon to the *Hibernia*, for Malta Yard and R.N. Hospital, October 17th; THOMAS W PHILIP, Surgeon for the *Jackal*, October 17th.

ARMY MEDICAL SERVICE.

SURGEON-MAJOR EDWARD YOUNG KELLETT died at Southsea on October 8th, aged 68 years. He was appointed Assistant Surgeon, April 28th, 1854; Surgeon, June 20th, 1865; and Surgeon-Major without date. He retired on half pay, April 5th, 1880. He served in the Crimea from October 1st, 1854, to May 20th, 1856, including the siege and fall of Sebastopol, and in medical charge of detachments from Balaklava that took part in the battle on October 25th, 1854. He was in medical charge of Russian wounded prisoners after Inkerman, and of the General Field and Cholera Hospitals of the Third Division (medal with two clasps and Turkish medal). He was also in the New Zealand war in 1863-65, and was in medical charge of the 14th Regiment at the battle of Rangiriri (mentioned in despatches, medal).

ROYAL ARMY MEDICAL CORPS.

CAPTAIN H. A. DE LOM, half pay, is placed on retired pay, September 28th. He entered the service as Surgeon-Captain, August 4th, 1883, and was placed on half pay on account of ill health, September 28th, 1894. He was in the Nile expedition in 1884-5, and received a medal with clasp and an Egyptian bronze star.

Mr. L. B. CHRISTIAN has been appointed to the medical charge of the troops at Hounslow.

ARMY MEDICAL RESERVE.

SURGEON-MAJOR DAVID THOMSON, M.D., resigns his commission, October 18th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL W. H. CADGE, Bengal Establishment, retires from the service from November 15th. He joined the department as Surgeon, March 31st, 1876, and became Surgeon-Lieutenant-Colonel, March 31st, 1896. He was in the Afghan war in 1879 with the Peshawur Valley Field Force, and was mentioned in despatches.

The promotion of the undermentioned Lieutenants to be Captains, from July 29th, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen: *Bengal*—H. J. Walton, H. Ainsworth, A. E. H. Pinch, J. S. Stevenson; *Madras*—J. W. Cornwall, A. Miller, F. A. L. Hammond, H. R. Brown, W. G. Richards, S. P. James, A. N. Fleming, P. Dee, F. O. N. Mell, F. D. Browne, M. Dick; *Bombay*—F. A. Smith.

The retirement from the service of Major A. G. E. Newland, Madras Establishment, also previously announced in these columns, has likewise received the Queen's approval.

THE VOLUNTEERS.

SURGEON-LIEUTENANT W. K. CLAYTON, 1st Volunteer Battalion the King's Own Yorkshire Light Infantry, is promoted to be Surgeon-Captain, October 18th.

Surgeon-Major A. BAKER, 1st Volunteer Battalion the Princess of Wales's Own Yorkshire Regiment, resigns his commission, and is granted the rank of Surgeon-Lieutenant-Colonel, retaining his rank and uniform, September 27th.

Surgeon-Captain E. H. DOUTY, M.B., 3rd (Cambridgeshire) Volunteer Battalion the Suffold Regiment, resigns his commission, September 27th.

UNIVERSITIES AND COLLEGES.

CAMBRIDGE.

APPOINTMENTS.—Mr. W. L. Duckworth has been appointed University Lecturer on Physical Anthropology in connection with the anatomical department. Sir Michael Foster has been reappointed for five years a Manager of the Balfour Fund.

GENERAL MEDICAL COUNCIL.—The election of a member to serve for the next five years will take place on October 23rd. Dr. MacAlister is re-eligible.

DEGREE.—On October 12th, Mr. J. K. Murphy, M.A., of Caius College, was admitted to the M.D. degree.

UNIVERSITY OF EDINBURGH.

UNIVERSITY COURT.

THE Court met on October 16th, when there were present the Right Hon. Lord Balfour of Burleigh, in the chair; Principal Sir William Muir, the Hon. Lord Stormonth Darling, Professors Sir William Turner, Alex. Crum Brown, Butcher, and Laurie; Messrs. J. Hope Finlay, A. Taylor Innes, and Andrew Mitchell; Sheriff Æneas McKay; Drs. Joseph Bell and P. Heron Watson.

University Assistants.—The recommendations by the respective Professors of University Assistants—which had been received since last meeting—were approved for the current academical year.

The Institute of Public Health.—The Committee on the Sir John Usher Institute of Public Health reported that they had accepted tenders for the erection of the building, and had authorised the architects to proceed at once with the work.

Chair of Medicine.—During the absence of Sir T. Grainger Stewart, Dr. John Wyllie was approved to take his place in the class of Medicine, and Dr. Alexander Bruce in the class of Clinical Medicine.

The Moray Endowment.—On the recommendation of the Senatus the Court approved of grants being made from the Moray Endowment to Professor Schäfer for purposes of research on the Central Nervous System, and to Dr. John Malcolm for purposes of research on the alterations in bone marrow produced by nucleins and their allies.

Extra-Academical Teachers.—The Court granted recognition to George M. Robertson, M.B., and Theodore Shennan, M.D., Edinburgh, as Extra-Academical Teachers, whose course of instruction in Mental Diseases and Pathology respectively shall qualify for graduation in medicine in the University. The Court continued recognition to Dr. R. F. C. Leith as an Extra-Academical Lecturer on Pathology on change of teaching premises from Edinburgh to the Mason University College, Birmingham.

The University of Harvard.—The University of Harvard, U.S.A., was recognised as a University whose Medical Degrees qualify for entrance to the Examination for the Degree of Bachelor of Science in the Department of Public Health in the University of Edinburgh.

ROYAL COLLEGE OF SURGEONS IN ENGLAND.

THE CALENDAR.

THE annual Calendar has just been published by the Council of the College. It shows that there are 1,215 Fellows on the roll of the College against 1,195 last year), 1,078 of whom obtained the Fellowship by examination, 19 were elected as Members of twenty years' standing under Section V of Cap. 15 Vict., 111 by election, and 2 are *ad eundem* Fellows. There are 17,384 Members (as compared with a total of 17,199 last year, an increase of 185), and 562 Licentiates in Midwifery, the examination for this special licence having been discontinued since 1876. The Licentiates in Dental Surgery are stated to number 1,396 (an increase of 83 over last year, and 188 over 1897), and the Diplomates in Public Health to number 336.

During the past collegiate year only 3 candidates presented themselves in Elementary Physiology, all of whom passed; 376 candidates presented themselves in Elementary Biology, of whom 287 passed and 89 were referred. Of 425 candidates who presented themselves in Chemistry, 231 passed and 194 were referred; in Materia Medica, of 37 candidates, 21 passed and 16 were referred; in Practical Pharmacy, of 337 candidates, 264 passed and 73 were referred. The proportion of the fees paid by candidates for these examinations receivable by the College amounted to £1,908 18s., the examiners elected by the College receiving £189 5s. The examiners in Elementary Biology are appointed by the Council of the College, those in Elementary Physiology in conjunction with the Royal College of Physicians of London, and those in Chemistry, Materia Medica, and Practical Pharmacy by the Royal College of Physicians of London, under the Scheme for an Examining Board in England.

The examiners in Anatomy and Physiology for the Second Examination are appointed in conjunction with the Royal College of Physicians of London; they have conducted the Primary Examination under the Old Regulations, as well as the Second Examination of the Examining Board; 616 candidates presented themselves for examination in Anatomy, of whom 395 passed and 221 were referred; 613 presented themselves in Physiology, 366 of whom passed and 247 were referred. The proportion of fees paid by candidates to the College for these examinations amounted to £2,830 10s., of which the examiners received £1,605 13s. 4d.

The Board of Examiners in Anatomy and Physiology for the Diploma of Fellow, elected annually by the Council of the College, held two meetings for the examination of 191 candidates, of whom 75 passed, whilst 116 were referred. The fees paid by candidates amounted to £1,254 15s., of which the Board of Examiners received £764.

The Court of Examiners, 10 in number, are elected by the Council from the Fellows of the College for a period of five years. They conduct the Third or Final Examination in Surgery of the Examining Board in England as well as the Second or Final Examination for the Diploma of Member under the Old Regulations, and the Pass or Final Examination for the Diploma of Fellow. During the past collegiate year the Court held two examinations for the Fellowship and four for the Membership. At the former there were 85 candidates, 41 of whom passed: 42 were referred for six months and 2 for one year. For the Membership 886 candidates presented themselves in Surgery, of whom 509 passed; 377 were referred. The fees paid by candidates for these examinations amounted to £9,923 11s. 3d., and the fees paid to the Court of Examiners and the Examiners in Midwifery amounted to £3,464 19s. The Examiners in Medicine, under the Scheme for an Examining Board in England, are elected by the Royal College of Physicians of London. Of 689 candidates who presented themselves, 477 passed and 212 were referred. The examiners in Midwifery are appointed in conjunction with the Royal College of Physicians of London, and have examined 887 candidates, of whom 548 passed and 339 were referred.

The Board of Examiners in Dental Surgery under the Old Regulations have held two meetings for the examination of 141 candidates, 85 of whom received the Licence, and 56 were referred. The fees received from candidates amounted to £892 10s., of which the examiners received £588. Under the New Regulations in Preliminary Science four examinations have been held, at which 33 candidates presented themselves, of whom 15 passed and 18 were referred. (This examination is identical with Part I of the First Examination of the Examining Board in England, and is conducted by the Examiners in Chemistry appointed under the Conjoint Scheme.) The fees received for these examinations amounted to £103 19s., of which the Examiners received £24 15s.

The Examiners in Public Health appointed in conjunction with the Royal College of Physicians of London examined 40 candidates for Part I, 26 of whom passed and 14 were referred: in Part II, of 34 candidates, 24 received their Diploma and 10 were referred. The fees received by the College for both parts of the Examination amounted to £182 14s., and the amount paid to the Examiners to £111.

With regard to the finances of the College it appears that the income for the year amounted to £24,711 1s. 1d., the largest item being derived from fees paid by candidates for the Diplomas of the College, viz., £17,097 3s., the next largest being dividends on the Erasmus Wilson bequest, £4,915 2s. 8d., investments £851 6s. 10d., rent from chambers adjoining the College produce £750, hire of rooms, sale of questions, etc., at the Examination Hall, £750 10s. 2d., incidental receipts at the College £45 9s. 9d., receipts from trust funds £291 6s 6d., dividends from sinking fund for Savoy Estate £10 2s. 2d.

The expenses for the year amounted to £23,558 16s. 8d., leaving a balance at bank and in hand at Midsummer day, 1899, of £1,152 4s. 5d., the largest item being (as in the receipts) in connection with the examinations, viz., Examiners Fees, £8,147 12s. 4d., half-expenses at Examination Hall for the purposes of the examinations £3,939 17s. 10d. (this amount includes rent, rates, taxes, and insurance, which absorbs the no small amount of £1,889 3s.), expenses of the Fellowship and Dental Examinations £448 1s. 3d., expenses of Public Health Examinations £29 4s. 11d., half-expenses of the Scientific Research Laboratories on Victoria Embankment amount to £708 4s. 8d. (This does not include any part of the rent, rates, taxes, insurance, fuel, and light). At the College, rates, taxes, and insurance stand at £1,388 11s. 6d., extraordinary expenses, that is installation of electric light, Hunterian festival, etc., £546 13s. 3d., fees to Council £244 13s., salaries, Wages and Pensions in the three departments—Museum, Library and College £4,718 11s. 2d., law expenses £475 18s 4d., stationery, printing, postage, etc., £304 17s. 6d., fuel and light £367 7s., repairs, painting, furniture, etc., £434 12s. 4d., purchase of books £7 7 11s 10d., printing and binding calendar £98 1s. 3d., lectures, catalogues, specimens, etc., for Museum £464 8s. 10d., trust funds £302 4s., miscellaneous items £202 15s. 9d.

The Secretary's report contains an abstract of the work done by the Council and Committee at the College, the Committee of Management of the two Royal Colleges, the Research Laboratories on Victoria Embankment, also reports of meetings of Fellows and Members, elections, etc.

MEETING OF COUNCIL.

A quarterly meeting of the Council was held on October 12th, 1899, Sir William MacCormac, Bart., K.C.V.O., President, in the chair.

MUSEUM CATALOGUE.—The Council adopted the recommendation of the Museum Committee that Dr. G. Elliot Smith, of St. John's College, Cambridge, be employed to compile a descriptive catalogue of the vertebrate brains in the museum for an honorarium of £100.

REPORT TO THE FELLOWS AND MEMBERS.—A draft copy of this, to be presented at the annual meeting of Fellows and Members on November 16th, 1899, was approved.

VICTORIA DENTAL HOSPITAL OF MANCHESTER.—A letter of September 5th, 1899, was read from the Dean of the Victoria Dental Hospital of Manchester asking for the recognition of the hospital as an institution for instruction in mechanical dentistry, and inquiring whether the preliminary science examination for dental students, as well as the instruction for that examination, may be taken prior to registration. This was referred to the Board of Examiners in Dental Surgery to deal with as it thought fit.

BRADSHAW LECTURE.—The President stated that this lecture would be delivered by Mr. H. G. Howse, and that the subject would be a Centennial Review of Surgery.

ALTERATION OF LECTURE HOUR.—The lecture hour for the year 1900 was fixed at 4 P.M. instead of 5 P.M.

CENTENARY OF THE COLLEGE.—The date of the celebration was fixed, for various reasons, to be June 26th, 26th, and 27th.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary comitia was held on Thursday, October 12th, the President, Dr. W. S. Church, in the chair.

The report of a committee on the further draft statutes communicated as a confidential document by the London University Commissioners was considered and after some discussion adopted.

A communication was received from the Colonial Office, forwarding a communication from the Government of the Straits Settlements, inviting research scholars to investigate in the Colony the disease known as beriberi, and offering a free passage, quarters, and other assistance. (See BRITISH MEDICAL JOURNAL, September 2nd, 1899, p. 608.)

Communications were also received: (1) From the University of Edinburgh announcing the award of the Murchison Scholarship in July last to Mr. Alfred Charles Sandstein, M.B.Edin: (2) from the Secretary of the College of Surgeons, reporting certain proceedings of the Council on June 29th and July 27th.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT a stated meeting of the College, held on Friday, October 6th, Mr. E. Gibbs Smith was admitted as a Licentiate in Medicine.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

A SCHOLARSHIP of £90 will be awarded in July, 1901, by the Council of the London (Royal Free Hospital) School of Medicine for Women on the results of the Preliminary Scientific Examination of the London University. Particulars to be obtained from the Secretary of the School, Miss Douie, M.B., 8, Hunter Street, W.C.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen have passed the Second Examination of the Board in the subjects indicated:

Anatomy and Physiology.—H. G. Daft and Leonard Daft, School of Medicine, Sheffield; H. Round, J. Wells, H. W. Plant, and W. H. Flint, Mason University College, Birmingham; Mr. T. Ascough, C. W. Forsyth, A. E. Bird, and C. W. Turner, Owens College, Manchester; J. Jenkins, University College, Cardiff; G. W. Miller and H. J. Slade, St. Bartholomew's Hospital; J. S. Paton, Melbourne University and Surgeon's Hall, Edinburgh; T. H. Bishop, Edinburgh University; W. H. Neil, University College, London; G. F. G. de Laubenque, Middlesex Hospital; F. D. Parbury, J. M. Plews, E. O. Hughes, G. C. J. Acres, T. H. Fowler and R. J. Hanbury, St. Bartholomew's Hospital; R. B. Coare, Cambridge University and St. Bartholomew's Hospital; A. J. Urquhart, P. W. Hamond, W. C. Lewis, J. B. Copland, and C. E. Bartlett, Guy's Hospital; H. F. Everett, G. F. Rudkin, and T. E. Blunt, London Hospital; G. B. McKean, University College, London; P. D. Ramsay, St. Mary's Hospital; T. Richards, University College, Cardiff, and Mr. Cooke's School of Anatomy and Physiology; R. S. W. FitzHenry and E. R. Griffiths, Middlesex Hospital; H. G. K. Young, Cambridge University and Middlesex Hospital; J. R. L. Woods, St. Thomas's Hospital; M. Eager, King's College, London; J. C. O. Bradbury, Cambridge University and Mr. Cooke's School of Anatomy and Physiology; F. B. Pinniger, H. McG. Newport, and F. Cock, Charing Cross Hospital; T. W. Jeffery, H. J. H. Graves, and G. B. Davies, London Hospital; H. B. Mylvaganan, Ceylon Medical College and London Hospital; J. H. Le B. Page, F. C. Lambert, E. E. Naggair, St. Mary's Hospital; C. Battle, R. H. Bridges, and G. H. Lathom, St. Thomas's Hospital; C. N. Davis and R. C. Wilmot, St. Bartholomew's Hospital; C. L. Medwill, Cambridge University and St. Bartholomew's Hospital; C. J. Blasson, F. M. Matheson, and O. W. A. Lowe, University College, London; A. W. Iredell, P. P. Piggot, H. L. Shelton, and C. H. Denyer, Guy's Hospital; C. J. Pinching, Oxford University and Guy's Hospital; R. M. Nanji, Grant Medical College, Bombay; and A. A. C. Moller, Newcastle-upon-Tyne School of Medicine and Mr. Cooke's School of Anatomy and Physiology.

Anatomy only.—J. Ewing, Yorkshire College, Leeds; E. J. H. Bowen, University College, Cardiff, and Mr. Cooke's School of Anatomy and Physiology; and G. L. J. Wilson, St. George's Hospital.

Thirty-eight gentlemen were referred in both subjects, and four in physiology only.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VITAL STATISTICS OF LONDON SANITARY DISTRICTS DURING THE THIRD QUARTER OF 1899.

[SPECIALLY REPORTED TO THE BRITISH MEDICAL JOURNAL.]

In the accompanying table will be found summarised the vital statistics of the forty-three sanitary areas of the metropolis based upon the Registrar-General's returns for the third or summer quarter of the current year. The mortality figures in the table relate to the deaths of persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the public institutions of London among the various sanitary areas in which the patients had previously resided.

The 32,460 births registered in London during the three months ending September last were equal to an annual rate of 28.6 per 1,000 of the population, estimated at 4,546,752 persons in the middle of this year; this rate was 0.9 per 1,000 below that recorded in the corresponding period of last year, and was 1.3 per 1,000 below the average rate in the third quarters of the ten preceding years, 1889-1898. The birth-rates in the various sanitary areas showed, as usual, wide variations, owing principally to the differences in the sex and age distribution of the population. In St. George Hanover Square, Westminster, Hampstead, St. Martin-in-the-Fields, Strand, and London City the birth-rates were considerably below the average; while they showed the largest excess in St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Poplar, and St. Olave, Southwark.

The 22,824 deaths of persons belonging to London registered during the three months ending September last were equal to an annual rate

of 20.1 per 1,000, against 18.9 in the third quarters of each of the two preceding years; in the third quarters of the ten preceding years the death-rate in London averaged 18.2 per 1,000. The lowest death-rates in the various sanitary areas were 11.2 in Hampstead, 12.0 in St. George Hanover Square, 13.9 in Stoke Newington, 14.5 in St. James Westminster, 14.9 in St. Martin-in-the-Fields, and 15.2 in Paddington; the highest rates were 27.1 in Shoreditch and in St. Olave Southwark, 28.7 in St. Saviour Southwark, 29.9 in St. George Southwark, 30.0 in St. George-in-the East, and 31.6 in St. Luke. During the quarter under notice 5,151 deaths resulted from the principal zymotic diseases in London; of these, 1 was referred to small-pox, 530 to measles, 87 to scarlet fever, 432 to diphtheria, 295 to whooping-cough, 1 to typhus, 165 to enteric fever, and 3,640 to diarrhœa. These 5,151 deaths were equal to an annual rate of 4.55 per 1,000, against an average rate of 3.76 in the corresponding periods of the ten preceding years, 1889-1898. In the third quarter of the three preceding years the zymotic death-rates were 4.20, 4.49, and 4.29 per 1,000 respectively. The lowest zymotic death-rates last quarter were 0.99 in St. Martin-in-the-Fields, 1.14 in London City, 1.47 in St. James Westminster, 1.49 in St. George Hanover Square, 2.20 in Hampstead, and 2.48 in St. Giles; the highest rates were 6.27 in Bermondsey, 6.87 in St. Luke, 7.04 in Poplar, 7.79 in St. Saviour Southwark, 8.09 in Shoreditch, and 9.21 in St. George Southwark. Measles showed the highest proportional fatality St. Saviour Southwark, St. George Southwark, Newington, St. Olave Southwark, Bermondsey, and Greenwich; scarlet fever in Fulham, Clerkenwell, Bethnal Green, St. Saviour Southwark, St. Olave Southwark, and Rotherhithe; diphtheria in Shoreditch, St. George Southwark, Newington, St. Olave Southwark, Bermondsey, and Rotherhithe; whooping-cough in St. James Westminster, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and St. Saviour Southwark; enteric fever in Fulham, Chelsea, Shoreditch, Bethnal Green, Whitechapel, and St. Olave Southwark; and diarrhœa in Fulham, St. Luke, Shoreditch, Poplar, and St. George Southwark. The fatal case of small-pox belonged to Lewisham, and the death from typhus to St. George-in-the-East.

During the third quarter of this year 1,796 deaths from phthisis were registered in London, equal to an annual rate of 1.58 per 1,000, against 1.60 and 1.51 in the corresponding periods of the two preceding years. Among the various sanitary areas the lowest phthisis death-rates last quarter were recorded in Paddington, St. George Hanover Square, Hampstead, Stoke Newington, Lee, and Lewisham; and the highest rates in Westminster, St. Giles, St. Luke, St. George-in-the-East, St. Saviour Southwark, and St. George Southwark.

Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 277 per 1,000 last quarter, against 228, 242, and 259 in the corresponding periods of the three preceding years. Among the various sanitary areas the rates of infant mortality were lowest in St. George Hanover Square, St. James Westminster, Marylebone, Hampstead, Stoke Newington, and St. Martin-in-the-Fields; while they showed the largest excess in Fulham, Westminster, Strand, Shoreditch, Limehouse, and St. George Southwark.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,514 births and 4,080 deaths were registered during the week ending Saturday last, October 14th. The annual rate of mortality in these towns, which had decreased from 26·8 to 18.8 per 1 000 in the seven preceding weeks, further declined to 18.7 last week. The rates in the several towns ranged from 11.5 in Norwich, 12.4 in Leicester, 12.8 in Halifax, and 13.2 in Derby to 20.9 in Hull, 21.3 in Salford, 21.9 in Manchester, and 25.5 in Liverpool. In the thirty-two provincial towns the mean death-rate was 18.6 per 1,000, being 0.2 below the rate recorded in London, which was 18.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.0 per 1,000; in London the death-rate was equal to 1.9 per 1,000, while it averaged 2.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 4.0 in Preston, in Sheffield, and in Hull, and 4.2 in Bolton and in Burnley. Measles caused a death-rate of 1.1 in Hull and 1.4 in Birkenhead; "fever" of 1.1 in Nottingham and in Sunderland, and 1.3 in Bolton;

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions during the Third Quarter of 1899.

SANITARY AREAS.	Estimated Population middle of 1899.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Phthisis.	Deaths of Children under 1 year of age to 1,000 Births.
LONDON	4,546,752	32,460	22,824	28.6	20.1	4.55	5,151	1	530	87	432	295	1	165	—	3,640	1,796	277
West Districts.																		
Paddington	128,794	786	488	24.5	15.2	3.43	110	—	1	1	5	3	—	5	—	95	34	252
Kensington	172,899	894	751	20.7	17.4	2.90	125	—	12	2	4	6	—	9	—	92	59	294
Hammersmith	108,785	725	517	26.7	19.1	3.97	108	—	—	3	5	5	—	3	—	92	44	313
Fulham	130,720	1,113	723	34.2	22.2	5.86	191	—	3	8	6	5	—	8	—	161	61	332
Chelsea	96,721	574	422	23.8	17.5	2.85	69	—	3	1	3	1	—	6	—	48	33	274
St. George Hanover Sq.	80,876	336	241	16.7	12.0	1.49	30	—	3	1	1	1	—	1	—	23	19	179
Westminster	52,117	240	290	18.5	22.3	3.62	47	—	6	2	4	1	—	—	—	34	40	354
St. James Westminster	21,827	118	79	21.7	14.5	1.47	8	—	—	—	—	3	—	—	—	5	7	153
North Districts.																		
Marylebone	140,139	1,010	625	28.9	17.9	3.17	111	—	6	4	2	8	—	5	—	86	68	195
Hampstead	80,252	376	225	18.8	11.2	2.20	44	—	2	—	4	3	—	3	—	32	12	210
St. Pancras	244,548	1,577	1,200	25.9	19.7	4.48	273	—	17	4	14	25	—	10	—	203	87	295
Islington	348,085	2,430	1,574	28.0	18.1	4.12	357	—	30	9	47	33	—	11	—	227	120	256
Stoke Newington	35,187	192	122	21.9	13.9	2.73	24	—	3	—	1	—	—	2	—	18	3	208
Hackney	222,571	1,543	1,007	27.8	18.1	3.88	216	—	12	3	18	5	—	8	—	170	81	265
Central Districts.																		
St. Giles	37,196	264	168	28.5	18.1	2.48	23	—	1	—	1	1	—	—	—	20	23	212
St. Martin-in-the-Fields	12,142	48	45	15.9	14.9	0.99	3	—	—	—	—	—	—	—	—	3	6	167
Strand	23,016	92	123	16.0	21.4	3.13	18	—	3	—	1	—	—	—	—	14	12	348
Holborn	29,621	186	171	25.2	23.2	2.72	20	—	—	1	1	—	—	—	—	17	16	274
Clerkenwell	66,068	474	393	28.8	23.9	4.66	77	—	5	5	5	4	—	3	—	55	35	323
St. Luke	40,868	451	322	44.3	31.6	6.87	70	—	9	1	4	5	—	2	—	49	44	268
London City	27,986	73	130	10.5	18.6	1.14	8	—	—	—	—	1	—	1	—	6	14	274
East Districts.																		
Shoreditch	121,071	1,041	817	34.5	27.1	8.09	244	—	15	4	22	13	—	8	—	182	46	359
Bethnal Green	128,938	1,115	818	34.7	25.4	5.01	161	—	8	5	10	7	—	9	—	122	69	271
Whitechapel	81,391	709	434	34.9	21.4	3.25	66	—	12	—	5	7	—	6	—	36	42	233
St. George-in-the-East	48,560	462	374	38.2	30.9	6.12	74	—	10	1	2	8	1	—	—	52	32	329
Limehouse	58,807	444	383	30.3	26.1	5.87	86	—	9	—	7	8	—	2	—	60	29	360
Mile End Old Town	113,161	939	610	33.3	21.6	5.25	148	—	7	1	17	14	—	2	—	107	37	277
Poplar	170,606	1,484	1,040	34.9	24.5	7.04	300	—	28	1	15	27	—	6	—	223	71	288
South Districts.																		
St. Saviour Southwark	24,207	166	173	27.5	28.7	7.79	47	—	12	1	2	5	—	—	—	27	24	331
St. George Southwark	60,536	493	452	32.7	29.9	9.21	139	—	30	—	18	2	—	—	—	89	38	357
Newington	124,166	1,003	769	32.4	24.8	5.65	175	—	40	1	25	4	—	5	—	100	74	309
St. Olave Southwark	11,098	100	75	36.1	27.1	5.41	15	—	7	1	3	—	—	1	—	3	4	220
Bermondsey	85,835	739	532	34.5	24.9	6.27	134	—	37	1	10	4	—	3	—	70	34	296
Rotherhithe	41,050	295	227	28.8	22.2	4.50	46	—	3	4	8	1	—	2	—	28	13	298
Lambeth	308,108	2,303	1,598	30.0	20.8	5.27	405	—	67	5	41	24	—	10	—	258	131	269
Battersea	174,996	1,294	794	29.7	18.2	3.47	151	—	17	3	10	7	—	9	—	105	61	263
Wandsworth	209,655	1,348	824	25.8	15.8	3.74	195	—	11	1	16	9	—	1	—	155	57	269
Camberwell	264,817	1,854	1,258	28.1	19.1	4.91	324	—	39	5	41	10	—	11	—	218	90	269
Greenwich	182,513	1,413	975	31.1	21.4	5.68	258	—	44	4	15	13	—	5	—	177	59	291
Lee	40,219	239	177	23.8	17.7	3.89	39	—	7	1	3	2	—	2	—	24	8	268
Lewisham	91,027	736	399	32.4	17.6	4.44	101	1	1	1	15	2	—	3	—	78	21	238
Woolwich	41,542	305	216	29.5	20.6	5.42	55	—	9	—	7	5	—	1	—	33	14	239
Plumstead	64,031	476	263	29.8	16.5	3.50	56	—	1	2	5	5	—	—	—	43	24	218

and diarrhœa of 1.4 in Cardiff and in Burnley, 1.5 in Gateshead, 1.6 in Bolton, and 2.7 in Preston. The mortality from scarlet fever and from whooping-cough showed no marked excess in any of the large towns. The 101 deaths from diphtheria in the thirty-three towns included 57 in London, 10 in Sheffield, 6 in Leeds, 4 in Portsmouth, and 4 in Liverpool. Four fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-two provincial towns or in London; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday last, October 14th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,538 to 3,003 at the end of the six preceding weeks, had further risen to 3,217 on Saturday last; 455 new cases were admitted during the week, against 364, 409, and 461 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, October 14th, 932 births and 553 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had decreased from 24.1 to 17.5 per 1,000 in the six preceding weeks, rose again to 18.1 last week, and was 0.6 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 16.0 in Edinburgh, and 16.9 in Dundee and in Perth, to 18.9 in Paisley, and 19.3 in Glasgow. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Aberdeen and Perth. The 273 deaths registered in Glasgow included 14 from measles, 2 from diphtheria, 2 from whooping-cough, 5 from "fever," and 15 from diarrhœa. Three fatal cases of scarlet fever, and 3 of whooping-cough were recorded in Edinburgh; 2 deaths from "fever" were registered in Leith, and 2 from whooping-cough in Aberdeen.

MEDICO-LEGAL.

POISONING BY HYDROFLUORIC ACID.

An inquest was recently held at Wimbledon with reference to the death of a man, named Joseph Wilson Hollyer, aged 51 years. As a sign writer and glass embosser, he had completed some work and retired to a public house for some refreshment, having with him his tools and indiarubber bottle of hydrofluoric acid, used in his employment. The witnesses on this occasion described him as being quite sober, but "fooling about," the barmaid, with whom he was joking, stating that he first told her that he had some scent, and then that he had some glycerine in the bottle, and would give her some for her hands if she would give him a glass. After a time he seems to have poured out a tablespoonful or "a half-quartern" of the acid into a glass and diluted it with water. Thereupon he held it up, remarking to the barmaid, "This is as harmless as the liquor you sell," and put it to his lips, but did not drink it until he had added more water. Shortly after he was seen to be looking very white and clammy, and assistance was obtained. He was able to speak, and said that he had taken it before, but now had taken too strong a dose, and asked for milk to kill the acid. This was given him, but without effect, and after some vomiting, he was removed to the Cottage Hospital, where he died about an hour afterwards, previously stating that he had taken it "for foolery."

His wife, in evidence, stated that she had heard her husband say that one drop of the acid was good when taken medicinally, but he knew it was a deadly poison; he had never threatened suicide.

Medical evidence showed that death was due to shock and collapse caused by the acid, and *post mortem* examination revealed the following appearances:—

Blood: Very tarry, but without clots; *lips* very charred; *tongue*: Sides denuded of papillæ, dorsum brownish, but not much burnt, by back part, with the epiglottis and fauces a deep red colour, congested and ecchymosed; *pharynx*: Purplish slate colour, ecchymosed and congested, tissues round, reddened and ecchymosed; *œsophagus*: Much congested. The whole of a slate colour, with deep red patches; *stomach*: Cardiac portion markedly ecchymosed, slight ecchymosis towards the pyloric orifice. No perforation and no denudation of mucous membrane of stomach; *intestines*: Nothing abnormal could be detected; *lungs*: Both very much congested and almost black in colour.

The jury found that death arose by misadventure.

MEDICAL WITNESSES.

Public Vaccinator states that the vaccination officer of his district has approached him as to the necessity of subpœnaeing him or not as a witness in prosecutions under the Vaccination Acts, and also as to the fee or fees at each court he attends. Our correspondent states that he is not inclined to give evidence unless subpœnaed in each case (there may be one, three, six, or thirty cases) in order to make sure of a fee in each case; of course, only expecting travelling expenses as for one case.

*** Having regard to the fact that the fees payable to medical witnesses in these cases are in the magistrate's discretion, and as it is highly probable that if the cases were at all numerous the magistrates would decline to give more than a very moderate fee in each case, it might perhaps be as well for our correspondent to come to terms previously with the vaccination officer.

Soldiers and First Aid.—In consequence of the excellent results obtained at Santiago through the knowledge possessed by the soldiers of the United States Army of the principles of antisepsis and first aid to the injured, a small handbook on this subject, couched in the most simple language, is to be issued to the American troops. It is understood that the first issue, comprising 15,000 copies, will be largely distributed among the company and non-commissioned officers.

MEDICAL NEWS.

The late Mr. Martin Pratt of Croydon has bequeathed £300 each to the Seamen's Hospital Society, the London Hospital, and the Croydon General Hospital.

An institute for the study of malaria and other diseases prevalent in man in Merv has been established as a department of the St. Petersburg Institute of Experimental Medicine. The staff consists of a director with three assistants.

The dinner of the Liverpool Medical Institution, which is usually held every second year, will take place on Saturday, October 21st, at 7 P.M., in the Exchange Station Hotel. Among the guests who have accepted invitations are the Right Hon. the Lord Mayor, Mr. Warr, M.P., and the Principal of University College.

King's College Hospital.—The opening of King's College Hospital after the reflooring of all the wards was the occasion on October 18th of an interesting ceremony in the Wigram Ward. Viscount Dillon, who took the chair, addressed a few words to the large assembly, and stated that in order to carry out the work of reflooring and of installing the electric light, the hospital had been closed for ten weeks only. The reflooring had been undertaken because it was felt to be necessary. The Visiting Committee of the Prince of Wales's Fund also quite recognised the desirability of the work being done, for as an earnest of their approval they had granted a special donation of £475 for the new floors. The total cost of this work and of lighting the wards with electricity amounted to £3,000, of which £800 was paid, leaving a deficit of £2,200. Referring to the question of abuse of charity in hospitals, he expressed the opinion that at King's College Hospital there had been no appreciable abuse, and that the necessary inquiries into the patients' circumstances had been made without in any way trenching upon the sacredness of the privacy so precious to English people, a privacy which was respected everywhere, even in the pawnshop and the drinking bar; anyone who trenched upon that privacy would do more harm than good. He next discussed the proposal that had been made for the removal of hospitals to purer air in the country, and declared the idea a perfectly unworkable one. Hospitals, he said, must be where the hospitals were wanted. Further, the medical staff who devoted valuable time to their duties could not give the hospital the advantage of their help if the institution were placed at a distance from London. Mr. Audry, Treasurer to the hospital, said that though the floor had been laid and the electric light installed they had not got the money to pay for it. The company then separated to inspect the electric lighting arrangements and the new parquet flooring of the wards.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN UNIVERSITY.—(1) Examiner for Graduation in Surgery (including Clinical Surgery); (2) Examiner for the Diplomas in Public Health. Applications to the Secretary of the Court by November 6th.

BETHLEM HOSPITAL.—Two Resident House-Physicians. Appointment for six months. Apartments, board, and washing provided, and honorarium of £12 12s. per quarter. Applications, endorsed "House-Physicians," to the Treasurer, Bridewell Hospital, New Bridge Street, E.C., by November 6th.

BIRMINGHAM CITY ASYLUM.—Senior Medical Officer. Unmarried, and not more than 30 years of age. Salary, £150 per annum, with board, apartments, etc. Applications to the Medical Superintendent.

BIRMINGHAM: GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. No salary; residence, board, and washing provided. Applications to the House-Governor by October 28th.

BRIGHTON, HOVE, AND PRESTON DISPENSARY (Northern Branch).—House-Surgeon. Salary, £160 per annum, with furnished apartments, coal, gas, washing, and attendance. Applications to the Assistant Secretary, 113 Queen's Road, Brighton, by November 1st.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," to the Secretary.

CARLISLE: CUMBERLAND INFIRMARY.—Assistant House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. Applications to the Secretary by October 24th.

CARLISLE: CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Junior Assistant Medical Officer. Unmarried. Salary, £100 a year, with board and residence. Applications to the Medical Superintendent.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Board and residence provided. Candidates must attend at the Hospital on Thursday, November 9th, at 4 P.M.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Post tenable for three months. Fee, eight guineas. Applications to the Secretary.

COUNTY OF LONDON: MANOR ASYLUM, Horton, Epsom, Surrey.—Dispenser. Salary, £110 per annum, rising £10 a year to £150, with dinner daily. Applications, on forms provided, to the Clerk of the Asylums Committee, 6, Waterloo Place, S.W., by October 21st.

DOUGLAS, NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Unmarried. Salary £72 a year, with board, and washing. Applications to F. B. Fleming, Honorary Secretary, 5, Athol Street, Douglas, by November 2nd.

EDINBURGH ROYAL INFIRMARY.—Superintendent. Salary, £500 per annum, with free house, coal, and light. Applications to Mr. W. Caw, Treasurer and Clerk, by November 15th.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. No salary; board, lodging, and washing provided. Applications to the House-Surgeon by October 24th.

FRENCH HOSPITAL AND DISPENSARY.—Resident Medical Officer; unmarried. Salary £80 per annum, with full board. Applications to the Secretary, 173, Shaftesbury Avenue, W.C.

GLAMORGAN COUNTY COUNCIL AND CARDIFF CORPORATION.—Bacteriologist to the Joint Committee and Lecturer on Bacteriology in the University College, Cardiff. Salary, £300 per annum. Applications to W. E. R. Allen, Clerk to the Joint Committee, Glamorgan County Offices, Cardiff, by November 6th.

GREAT YARMOUTH, COUNTY BOROUGH OF.—Medical Officer of Health, Medical Officer of the Borough Isolation Hospital, and Port Medical Officer of Health. Not exceeding 35 years of age. Salary, £400 a year. Applications, endorsed "Medical Officer, etc.," to A. H. Miller, Town Clerk, Town Hall, Yarmouth, by November 8th.

HALIFAX: ROYAL INFIRMARY.—Dresser. Board and residence provided. Applications to the Secretary.

KING'S COLLEGE, LONDON.—Sambrooke Surgical Registrarship. Applications to the Secretary by October 23rd.

LINCOLN COUNTY HOSPITAL.—House-Surgeon; under 30 years of age and unmarried. Salary, £110 per annum, with board, lodging, and washing. Applications to the Secretary by October 26th.

LIVERPOOL STANLEY HOSPITAL.—Senior House-Surgeon. Salary, £80 per annum, with board, residence, and washing. Applications to the Chairman of the Medical Board by October 26th.

LONDON THROAT HOSPITAL, 204 Great Portland Street, W.—(1) Surgeon on Senior Staff. (2) Anæsthetist. (3) Assistant Anæsthetist. Applications to the Honorary Secretary before October 25th.

MANCHESTER: CHORLTON-UPON-MEDLOCK DISPENSARY.—Resident House-Surgeon. Unmarried. Salary £120 per annum, with furnished rooms and attendance. Applications to the Honorary secretary by October 31st.

MANCHESTER: MONSALL FEVER HOSPITAL.—Third Medical Assistant. Salary £100 per annum, with board and lodging. Applications, endorsed "Appointment of Medical Assistant," to the Chairman of the Sanitary Committee, Public Health Office, Town Hall, Manchester, by October 27th.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 23, Chenies Street, W.C.—Medical Superintendent. Salary, £150 per annum, with furnished rooms, lighting, warming, and attendance, and a share of fees of classes he may be appointed to. Applications to the Secretary by October 27th.

MIDDLESEX HOSPITAL, W.—Assistant Physician. Must be F. or M.R.C.P.Lond. Applications to F. Clare Melhado, Secretary Superintendent, by November 2nd.

NEWCASTLE-UPON-TYNE: CITY HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Assistant. Salary, £60 for the first year, and if reappointed £80 the second year, with board, lodging, and washing. Applications to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, by October 24th.

NORTH STAFFORDSHIRE INFIRMARY AND ERIC HOSPITAL, Bartshill, Stoke-upon-Trent.—(1) House-Surgeon. Salary, £120 per annum, increasing by £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by October 9th. (2) Assistant House-Surgeon. Apartments, board, and washing to be an equivalent for services rendered. Applications to the secretary for the former by October 9th and the latter by October 23rd.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—(1) Honorary Anæsthetist. Appointment for one year, but eligible for re-election. (2) Resident Medical Officer. Appointment for six months. Salary, £50 per annum. (3) Assistant Resident Medical Officer. Appointment for six months, eligible for election to the senior post. Candidates must attend the meeting of the Medical Committee on November 2nd, at 5 P.M.

NOTTINGHAM: HOSPITAL FOR THE INSANE, The Coppice.—Assistant Medical Officer. Unmarried, and under 30 years of age. Salary, £150 per annum, with apartments, board, attendance, and washing. Applications to Dr. Tate, Medical Superintendent.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—House-Surgeon. Appointment for six months. Salary at the rate of 50 guineas per annum, with board and residence. Applications to the Secretary by October 24th.

PONTEFRACT GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Commencing salary, £130 per annum, with furnished rooms, fire, light, and attendance. Applications to the Secretary by November 11th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner in Dental Surgery. Must be registered under the Dentists Act of 1878. Applications to the Secretary by November 1st.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Two House Physicians. (2) One House-Surgeon. (3) One Casualty House-Surgeon. Appointments for six months. No salary, but board etc., provided. Applications to the secretary by October 30th.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Demonstrator of Physiology. Applications to Dr. Waller.

SUSSEX COUNTY HOSPITAL.—House-Physician. Unmarried, and under 30 years of age. Salary commencing at £50 per annum, with board, residence, and washing. Applications to the Secretary by November 1st.

VICTORIA UNIVERSITY.—External Examiner in Anatomy. Appointment for three years. Applications to the Registrar by November 1st.

WAKEFIELD: WEST RIDING ASYLUM.—Junior Assistant Medical Officer. Salary, £100 per annum, rising £10 annually to £150, with furnished apartments, board, etc. Applications to the Medical Director.

WESTMINSTER GENERAL DISPENSARY.—Honorary Surgeon. Applications to the Secretary, 9, Gerrard Street, Soho, by October 23rd.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Surgical Registrar. Must be F. or M.R.C.S.Eng. Appointment for twelve months. Salary, £50 per annum. Applications to the Secretary by October 24th.

YORK DISPENSARY.—Resident Medical Officer. Unmarried. Salary, £110 a year, with board, lodging, and attendance. Applications to Mr. W. Draper, De Grey House, York, by October 25th.

MEDICAL APPOINTMENTS.

ADDENBROOKE, Bertram, M.D., B.S., M.B., B.Hy., M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Surgeon to the Kidderminster Infirmary and Children's Hospital, *vice* E. H. Addenbrooke, resigned.

ADDENBROOKE, E. H., M.R.C.S.Eng., L.S.A., appointed Honorary Consulting Surgeon to the Kidderminster Infirmary and Children's Hospital.

BAILEY, Reginald Threlfall, M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident Medical Officer to the Ashton Street Department (Lock) Royal Infirmary, Liverpool, and House-Surgeon to the Ophthalmic, Laryngological, and Aural Departments, Royal Infirmary, Liverpool.

BEATTIE, James M., M.A., M.B., C.M.Edin., appointed University Tutor in Clinical Medicine, Royal Infirmary, Edinburgh.

DAVIDSON, W., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Sixth District of the Beverley Union, *vice* H. Hine, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

EVANS, J., M.R.C.S.Eng., appointed Medical Officer of the Children's Homes of the Cardiff Union.

GUY, William, F.R.C.S., L.R.C.P., L.D.S.Edin., appointed Dean of the Edinburgh Dental Hospital and School.

HANTON, R., M.B., C.M.Edin., appointed Medical Officer for the West Hartlepool and Stranton District of the Hartlepool Union, *vice* S. Gourlay, M.D.Glasg., resigned.

HUTTON, Eustace, M.R.C.S.Eng., L.R.C.P.Lond., appointed Visiting Surgeon to the Stockport Infirmary.

LUCKHOFF, J., M.B., Ch.B., appointed Clinical Assistant to the Chloroform Hospital for Women.

MOORE, H. C., M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health to the Local Town Council.

MUIR J. C., M.B., B.C.Camb., appointed Second Resident Assistant Medical Officer at the Crumpsall Workhouse, Manchester.

OLIVER, Charles P., M.D.Lond., D.P.H., appointed Medical Officer of Health to the Maidstone Urban Rural District Council, *vice* M. A. Adams, F.R.C.S.Eng., L.S.A., resigned.

PERIGAL, A. F., M.B., Ch.B., appointed a Clinical Assistant to the Chelsea Hospital for Women.

PERNET, George, M.R.C.S.Eng., L.R.C.P.Lond., appointed Pathologist to the Hospital for Diseases of the Skin, Stamford Street, Blackfriars.

QUENNELL, A., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Mountnessing District of the Billericay Union, *vice* F. Johnson, L.R.C.P., L.R.C.S.Edin., resigned.

RAYNER, H. E., F.R.C.S.Eng., appointed Medical Officer of the Frimley District of the Farnham Union, *vice* C. E. Paterson, M.D.Edin., resigned.

REED, John Arthur, M.B., Ch.Vict., appointed House-Surgeon to the Stockport Infirmary.

REEDE, A. Keppel, L.R.C.P.Edin., L.M., L.R.C.S.Edin., appointed Medical Officer of the Yarcombe District of the Honiton Union.

SCATTERTY, Wm. M.D.Aberd., appointed Medical Officer of Health to the Keighley School Board.

SISSON, A. T., M.B., B.Ch., appointed Junior Resident Assistant Medical Officer at the Crumpsall Workhouse of the Township of Manchester, *vice* J. C. Muir, M.B., B.C.Camb.

TROTTER, Edward, M.B., Ch.B., appointed House-Surgeon to the Hospital for Women and Children at Leith.

WILLIS, E. E., L.R.C.P.Edin., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer of the Seventh District of the Downham Union, *vice* A. H. Copeman, M.R.C.S., L.R.C.P.Lond., resigned.

Leith Hospital.—The following appointments to the Resident Medical Staff have been made:—House Physician.—Edith Hudson, M.B., C.M. House-Surgeon.—Arthur D. Yule, M.B., C.M., B.Sc. Assistant House-Physician.—Harriet A. Biro, M.B., Ch.B. Assistant House-Surgeon.—John C. Carr, M.B., Ch.B. Surgeon in the Outdoor Department.—Robina McGregor, M.B., Ch.B.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M.—Dr. J. W. Washbourn and Mr. Fellingham Smith: The Infectivity of Malignant Growths.

TUESDAY.

North-West London Clinical Society, Trocadero Restaurant, Piccadilly, Circus, 6.45 P.M.—Presidential address by Dr. T. Lauder Brunton on Biliousness and Gall stones. 7.45 P.M.—Annual Dinner.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. Tooth: Spinal Cord Localisation (Lantern Demonstration).

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street W., 4 P.M.—Dr. Barry Campbell: On the Motor Tract, with Cases of the different Types of Paralyses.

WEDNESDAY.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 P.M.—Dr. Radcliffe Crocker in the chair. Informal exhibition of cases at 4.30 P.M.

Gunterian Society, 8.30 P.M.—Clinical evening. Cases will be shown by Sir H. Beevor, Dr. F. J. Smith, Dr. Ross, Mr. Barnard, and other Fellows.

THURSDAY.

Neurological Society of London, 4 Chandos Street, W., 8.30 P.M.—Clinical meeting. The following cases will be shown: Dr. F. E. Batten: Unusual case of muscular Atrophy. Dr. T. Buzzard: Myasthenia Gravis. Dr. James Taylor and Dr. Wilfrid Harris: Two cases of Myopathy of Landouzy-Déjerine Type, and other cases.

British Balneological and Climatological Society, 20, Hanover Square, W., 8.30 P.M.—Address by the President (Sir E. H. Sieveking): A Retrospect and Forecast.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Penrose: Demonstration of selected cases.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Mr. Galloway: Dermatological Demonstration.

FRIDAY.

Clinical Society of London, 8.30 P.M.—Clinical evening. The following cases will be shown: Dr. Leonard Guthrie: Cerebellar symptoms relieved by Trephining. Mr. G. R. Turner: A case of Actinomycosis in Process of Cure. Mr. G. R. Turner: A case of Osteitis Deformans. Mr. J. Jackson Clarke: A Patient in whom Krause's Operation was performed, with specimen. Mr. Watson Cheyne, F.R.S.: Old-standing Dislocation of the Hip with Fracture of the Acetabulum reduced by Operation. Other cases will be shown. Patients will be in attendance at 8 P.M.

British Laryngological, Rhinological, and Otological Association, 11, Chandos Street, Cavendish Square, 4 P.M.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

LLOYD.—At Woodstock, Abergavenny, on October 16th, the wife of T. E. Lloyd, M.D., C.M., of a daughter.

MACKAY.—At 20, Drumsheugh Gardens, Edinburgh, on October 14th, the wife of George Mackay, M.D., F.R.C.S.E., of a son.

ROBERTSHAW.—On October 15th, at Belmont, Stocksbridge, near Sheffield, the wife of Walter M. Robertshaw, M.B., C.M., of a son.

MARRIAGES.

BRADFORD—ROBERTS.—On October 17th, at St. Philip's, Alderley Edge, by the Rev. J. W. Constantine, M.A., John Rose Bradford, M.D., F.R.S., to Mary (May) daughter of the late Thomas Foulkes Roberts, J.P.

CAMPBELL—BISHOP.—On October 18th, at Calne, Wilts, by the Rev. R. G. Wheeler, M.A., assisted by the Rev. F. G. Howland, Donald Campbell, M.D., to Mary, widow of John Dommett Bishop, surgeon.

CREIGHTON—KENNY.—On October 12th, 1899, at Lorrha Parish Church, by the Rev. Edward B. French, Rector, George E. Howe Creighton, L.R.C.P. and S.I., eldest son of Richard Creighton, Valeview, Gorey, to Lydia Florence Edith (Florrie) second daughter of Thomas Kenny, Kilcarron, Borrha, co. Tipperary.

FLEMING—SINCLAIR.—At the Royal British Hotel, Edinburgh, on October 11th, by the Rev. W. Williamson, Duncan Fletcher, L.R.C.P. and S.Edin., L.F.P. and S.Glasg., to Elizabeth Jean, eldest daughter of Robert Sinclair, Factor, North Harris.

DEATHS.

HUTTON.—At the Manse, Oldhamstocks, East Lothian, on October 12th, William Menzies Hutton, M.D., F.R.C.S.Edin., of 23A, Mitre Street, Edinburgh, younger son of Rev. William Menzies Hutton, M.A., aged 29 years 6 months.

TORRANCE—At 16, Bruce-nue Place, Edinburgh, the house of his sister, Mrs. Wilson, on October 20th, after a lingering illness most patiently borne, Dr. Robert Torrance, F.R.C.S.Edin., late of Newcastleton-Tyne.

WALLACE.—Killed by a landslip on the disastrous eclipse and floods at Darjeeling, in Bengal, on Sunday morning at 2 o'clock, September 24th, 1899, Ruth Elizabeth, aged 9 years, and Phoebe, aged 8 years, the much-loved daughters of James Robert Wallace, M.D., F.R.C.S.I., Editor "Indian Medical Record," Calcutta.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Attendances.*—Daily, 3. *Operations.*—Tu. W. F., 2.

Central London Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily.

Central London Throat, Nose, and Ear. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

Charing Cross. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 3.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

Chelsea Hospital for Women. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

City Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

East London Hospital for Children. *Operations.*—M. W. Th. F., 2.

Great Northern Central. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

Guy's. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

Hospital for Women, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

King's College. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 3; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

London. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

London Temperance. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

London Throat, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

Metropolitan. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

Middlesex. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

National Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

New Hospital for Women. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

North-West London. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

Royal Ear, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

Royal Eye, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

Royal Free. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

Royal London Ophthalmic. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

Royal Orthopædic. *Attendances.*—Daily, 2. *Operations.*—M., 2.

Royal Westminster Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

St. Bartholomew's. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 3 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Laryngol, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

St. George's. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

St. Mark's. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

St. Mary's. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 3.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Opathalmic), F., 10.

St. Peter's. *Attendances.*—M., 2 and 5; Tu., 3; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

St. Thomas's. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 3; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

Samaritan Free for Women and Children. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 3.30.

Throat, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

University College. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th. 2.

West London. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

Westminster. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the current week's Journal should reach the Office not later than Midday on Wednesday. Telegrams can be received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

Original articles and letters *forwarded for publication are understood to be offered to the* British Medical Journal *alone, unless the contrary be stated.*

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look at the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any circumstances be returned.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal, and not at his private house.

Telegraphic Address.—The telegraphic address of the EDITOR of the British Medical Journal is *Aitiology, London.* The telegraphic address of the MANAGER of the British Medical Journal is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

S. R. would be glad to be informed as to the cheapest means of obtaining efficient Nauheim treatment.

Oxonian would be glad to be recommended to a good debt-collecting agency.

Musical would be glad to know of any books, treatise, pamphlets, or personal experience of music relative to medicine, in whatever way it may have been considered.

Cottage Hospitals.

Durham asks whether medical men attending their patients in a cottage hospital are entitled to send in a bill to the patients for that attendance.

*** It would be contrary to precedent to do so.

Acne Rosacea.

Dr. Clark Laird (Milngavie, N. B.) would be glad to be informed if any readers of the British Medical Journal have used injections of alcohol in cases of acne rosacea, and what their experience is of such treatment.

Examination for the I.M.S.

G. D. asks: (1) Is the same standard of vision required in the case of candidates for the Indian Medical Service as for the Army Medical Service? As the examinations in French, German, and Hindustani are *viva voce* as well as written, are there practical as well as written examinations in botany, zoology, and the other science subjects?

*** The standard of vision is the same for home and Indian. (2) There are *viva voce* examinations in French, German, and Hindustani. (3) There are no practical examinations in botany, or zoology, or science subjects, but there is a *viva voce* examination in chemistry and pharmacy.

Expression of the Placenta and Rupture of the Perineum.

Westmoreland writes: I should like to elicit an opinion from some engaged in midwifery practice as to whether expression of the placenta is not a frequent cause of rupturing the perineum. I have been struck at the frequency of a torn perineum after having observed the fœtus expelled head, shoulders, and hips with an intact perineum. There seems to be no other explanation. I was taught and have practised no other method than expression, but this seems to be a serious drawback to it over the older method of drawing upon the cord.

ANSWERS.

M.—It is generally recognised that the vendor of a practice has the right to send out circulars introducing the newcomer to his former patients, but such circulars should not be sent to other persons.

E. L. C.—There could not, we think, be any objection to the insertion of an advertisement of the institution, suitably worded, in the *Medical Directory.*

India.—Most married couples follow their own inclination in the matter, without asking for "permission." We think our correspondent may safely let his patients do the same.

Fiat Justitia.—We sympathise with the candidate in his disappointment, but we do not feel that any opinion can be expressed on an *ex parte* statement. The only body which could take any useful action would be the Senate of the University.

M. M. (Middlesex Hospital).—Our correspondent does not state the kind of secondhand medical works he particularly requires. He might try Kimpton, Wardour Street, W.; H. K. Lewis, Gower Street, W.C.; or Williams and Norgate, Henrietta Street, W.C.

Medicus.—The Technical Education Committee in a village or connected with an urban district council often organise first-aid lectures, provide the appliances, find the room, and pay the lecturer. The chairman of the parish council or district council, or county council might be approached on the subject.

Bute writes: I had occasion recently to stay up all night alone with a delirium tremens patient, that is, for at least seven hours. What is to be reckoned a fair charge for so prolonged a visit, the patient being in moderate circumstances?

*** We are advised that two guineas would be a fair remuneration.

Medical Advertising.

Two correspondents have sent us papers circulated by a printer with attached specimens of surgical labels intended to be placed upon bottles of medicine sent out by practitioners who dispense their own medicines. These labels in each case contain the name and address of the practitioner, and our correspondents draw attention to this, and complain of such labels as a form of advertisement. On a previous occasion our attention was drawn to the case of a practitioner who supplied bottles to his patients upon which his name and address were moulded in the glass. Every week complaint is made to us of some fresh form of advertisement, and we think it high time that the General Medical Council was asked to lay down some rules in the matter. At the present time, the only check is the action taken by some of the qualifying bodies, but such action is the exception rather than the rule.

Medical Men and the Lay Press.

Aggrieved.—A correspondent sends us a copy of a local paper published in Scotland and draws attention to the first column upon the first page which contains a directory where amongst such information as the places of public worship, libraries, and reading rooms, there is a list of four medical practitioners whose names, qualifications, and

addresses seem to be given in full. In turning to the list of resident practitioners given in the *Medical Directory* we find that this includes only a minority, and it is presumable, therefore, that the majority object to such publicity. We think it is to be regretted that all do not follow their example.

We have also received a cutting from another Scottish paper containing an advertisement of "Dr. ——'s East End Dispensary," which is "now open." This is an additional example of the way in which medical men allow themselves to be advertised more or less openly in newspapers. As we have said above, the whole matter is one which should be considered by the General Medical Council.

MEDICAL MEN AND THE PHARMACY ACT.

IN pursuance of the statutory powers conferred upon them by the Pharmacy Act, 1868, the Pharmaceutical Society at the commencement of this year prescribed, with the consent of the Privy Council, certain regulations as to the keeping and selling of poisons which were substantially to the effect that all scheduled poisons should be kept in vessels specially corked or secured, or in bottles of a distinctive make, or kept in a special room or cupboard, and that in selling poisons, all liniments and lotions containing poison should be sent out in special bottles and with a label that the contents were not to be taken internally. These regulations having been thus duly made under statutory authority have to be observed by those persons who come within the provisions of the section of the Act under which they are made, under a penalty of £5, and a correspondent writes asking how far, if at all, medical men are bound by them. It appears to be quite clear, having regard to the Pharmacy Act Amendment Act, 1869, that these regulations do not apply to any legally qualified practitioners.

Since the regulations prescribed by the Pharmaceutical Society are such as appear to experienced men to be necessary for the safe custody and handling of drugs, it is obvious that the members of the medical profession would do well in their own interest to adhere to them.

NOTES, LETTERS, Etc.

A CORRECTION.

IN the discussion on Chronic Suppuration of Frontal Sinuses, published in the BRITISH MEDICAL JOURNAL of October 14th, Mr. W. J. Chichele Nourse, F.R.C.S.Edin., was incorrectly described as Anæsthetist to the Central London Throat and Ear Hospital, instead of Assistant Surgeon.

VACCINE BLOWERS.

PUBLIC VACCINATOR writes: I find the blower supplied by "the Association for the Supply of Pure Lymph" most effective. The expulsion can be graduated to a nicety, and if too much is expelled in one place, a little can be drawn back into the tube and applied to another spot.

THE RESERVISTS AND THE WAR IN SOUTH AFRICA.

DR. FREDERICK W. COLLINGWOOD (21, Old Square, Lincoln's Inn) writes: I wish to respectfully suggest to the numerous practitioners in the British Empire that should they have occasion to engage coachmen, grooms, pages, women servants etc., in their establishments, they should give preference to near relatives of soldiers and reservists who may have to shed their blood on behalf of their country; for there must of necessity be many homes which will be deprived of their breadwinner.

TREATMENT OF OBSTINATE HICCOUGH.

MR. GEORGE PERNET (Upper Gloucester Place, W.) writes: From time to time cases of hiccough are recorded, in which a great variety of remedies have been tried and found useless. I do not remember to have noticed a pinch of good Scotch snuff mentioned in the list. The use of sternutatories is no new idea; it is at least as old at Hippocrates, who considered "sneezing was good for the hichett" (Sir Thomas Browne's *Vulgar Errors*, chap. ix). I have come across a similar reference in Jowett's *Plato*, but I cannot recall the passage. In so distressing a complaint, such a simple remedy would be worth a trial.

A HINT FOR VENTILATION.

OCULIST writes: Now that the importance of opened windows at night is becoming recognised, the following suggestion may be of service to some possessors of sensitive eyes who prefer to sleep with their blinds drawn. As things are arranged at present, a drawn blind, if other than "Venetian" practically blocks up the open space of the window; while, on the other hand, as soon as air begins to move the blind is buffetted by the incoming current, and sucked out of the aperture by the outgoing air, in a manner not exactly conducive to peaceful slumber. My suggestion is to have a second pair of sockets for the roller 6 or 12 inches below the ordinary pair, so that, whenever desired, the roller can be lowered to that amount—a very easy matter with the simple blinds of the present day. This arrangement permits the blind to be drawn down without obstructing the noiseless current of air above it. Should even the small amount of light admitted at the same time be undesirable, a rectangular piece of zinc should be affixed to the lintel of the window outside, sloping down like a short sunblind, or like the eave of a house, and be painted to match the wall.

THE NATURAL ENEMIES OF THE MOSQUITO.

DR. HORACE DOBELL (Parkstone Heights, Dorset) writes: At the present time, when the question of how to destroy the larvæ of malaria carrying mosquitos has attained such importance, the following passage, which I have just read in Mr. J. Muir's book on *The Mountains of California*, 1894, may be worth considering. Speaking of the water-ouzel, he says (p. 283): "He seems to be especially fond of the larvæ of mosquitos, found in abundance, attached to the bottom of smooth rock channels where the current is shallow." The question is, Can the water-ouzel, which abounds in California, be transplanted into malarial districts in other parts of the world?

LETTERS, COMMUNICATIONS, ETC., have been received from A Azoic Surgical Dressing Company, Bromsgrove; Dr. J. Aitchison, Newcastle-on-Tyne; Mr. W. J. Addison, Glasgow; Mr. H. E. Allen, London; Anxious; B. Addenbrooke, M.B., Kidderminster; Associate; A. M. R.; Acne Rosacea. B Bacillus; J. Bell, M.B., Lockerbie; Dr. A. J. M. Bentley, London; Messrs. Burroughs, Wellcome, and Co., London; Mr. J. W. Burrowes, London; Mr. P. M. Braidwood, Aylesbury Mr. J. P. Bush, Clifton; Mr. L. Browne, London; Mr. J. B. Blackettt, London; B. S. J. W. Batterham, M.B., St. Leonards-on-Sea; Mr. R. T. Bailey, Liverpool; Mr. R. D. Boase, Penzance; Dr. E. H. Brien, Rock Ferry; F. M. Blumer, M.B., Stafford. C Sir S. Crossley, Bart., London; Club Doctor; Dr. W. C. S. Clapham, Rotherham; Mr. T. S. Chapman, London; Dr. F. C. Coley, Newcastle-on-Tyne; Mr. F. W. Collingwood, London; Clinical Society of London, The Secretary of the, London; Dr. J. Calvert, London; Dr. W. T. Cocking, Sheffield. D Dr. E. Peaness'y, Wolverhampton; Dr. A. T. Davies, London; Messrs. Downer and Small, St. Albans; Mr. A. W. Dalby, Frome; Dr. R. B. Dobell, Parkstone; Dr. C. R. Drysdale, London; J. S. Dick, M.B., Manchester; A. F. Dixon, M.B., Cardiff; Mr. W. R. Dovey, Sydney, N.S.W.; Mr. W. F. Dearden, Manchester; Dr. W. Darley-Hartley, Cape Town; Durham; Dispensary Doctor. E Dr. H. M. Evans, Lowestoft; Dr. G. H. Edington, Glasgow. F Fiat Justitia; Mr. W. T. Freeman, Reading; Mr. C. E. S. Flemming, Freshford; Folkestone Medical Society, The Secretary of the, Folkestone; Dr. V. H. Fisher, Howden. G Mr. F. H. Glen, London; Mr. A. Gilbert, London; Dr. W. H. Gimblett, Buckhurst Hill; Dr. A. E. Giles, London; G. E. A.; Mr. W. Guy, Edinburgh. H G. Halley, M.B., Dundee; Dr. H. P. Hawkins, London; Miss A. Hadwen, Gloucester; Mr. J. L. Hamilton, Brighton; Mr. J. F. Hall-Edwards, Birmingham; Mr. V. Horsley, London; Mr. W. F. Haslam, Birmingham; Mr. J. T. Hague, London; Mr. T. S. F. Hudson, Tipton; R. Howden, M.B., Newcastle-on-Tyne. I India. J Dr. G. P. Johnson, Stoke-on-Trent; Mr. G. W. Johnstone, Labuan; Jaundice. L Messrs. Leete and O'Connell, London; H. C. Lloyd, M.B., Dublin; Dr. J. A. Lycett, Wolverhampton. M Dr. H. W. G. Macleod, London; M.B.; G. B. Mathiesen, M.B., Doune; Dr. R. L. Meade-King, Taunton; M. R. T.; C. Martin, M.B., Birmingham; A. M. Martin, M.B., Newcastle-on-Tyne; M.B., C.M.; Mr. T. E. Mansfield, Bristol. N . E Newton, M.B., Litcham; Messrs. Nicolay and Co., London; Mr. W. J. C. Nourse, London. O Oculist Mr. W. Odell, Torquay; Oxonian; Obstetrical Society, The Secretary of the, London; Mr. T. B. O'Connor, London; Dr. I. Owen, London. P Dr. J. W Paton, Rock Ferry; Pathological Society, The Secretary of the, London; Pudor; Dr. W. Pasteur, London Mr. J. F. Pink, London. R Mr. C. Roberts, Eastbourne; Dr. J. B. Ridley, Bromley G. A. Reid, M.B., Southsea; Mr. G. S. Reid, Glasgow; Mr P. C. Rees, London; Mr. G Rendle, London. S Mr. E. G. Salt, Edinburgh; Mr. M. Scott, London Dr. G W. Steeves, Liverpool; Dr. H. Snow, London; Mr. B. Sykes, Leeds; Mr. T. Scattergood Leeds; Messrs. Street Bros., London; Dr. S. Sunderland, London; Mr. W. P. Stocks, Manchester; Mr. J. E. Square, Plymouth; Mr. M. A. Smale, London. T Mr. R. F Tobin, London; Messrs. Thorn and Hoddle, London; Dr. M. Thomas, Glasgow Dr. D. G. P. Thomson, Penrith; Mr. R. F. Tomlin, London; Mr. J. Thomson, Portrush; Mr J. L. Thomas, Cardiff. U Dr. A. R. Urquhart, Perth; Uitlander. W Messrs. J Wright and Co., Bristol; Dr. A. O. Ward, London; Mr. A. H. Walker, Cranleigh W. P. P.; Dr. H. Walsham, London; Dr. F. Willcocks, London; Dr. S. R. Wells, London; W. H. P.; Mr G. H. Ward-Humphreys, London; D. C. Watson, M.B., Edinburgh Mrs. J. White, Eastbourne. X X. Y. Z. Y Mr. E. M. Yates, Lond A. H. Young, M.B., Manchester. Z Mr. M. Zitter, Vienna, etc.

BOOKS, ETC., RECEIVED.

A Guide to Urine Testing. By M. Robinson, L.R.C.P., L.R.C.S. Bristol: John Wright and Co. 1899.

Hygiène et Prophylaxie des Maladies dans les Pays Chauds. L'Afrique Française. Par Dr. J. Brault. Paris: J. B. Baillière et Fils. 1900.

A Manual of Surgery. By W. Rose, M.B., B.S., F.R.C.S., and A. Carless, M.S., F.R.C.S. Second Edition. London: Baillière, Tindall, and Cox. 1899. 21s.

Marriages of the Deaf in America. By E. A. Fay, Washington, D.C.: Volta Bureau. 1898.

Practical Nursing. By Isla Stewart and H. E. Cuff, M.D., F.R.C.S. In Two Vols. Vol. I. Edinburgh and London: Wm. Blackwood and Sons. 1899. 3s. 6d.

Dermato-histologische Technik. Von Dr. M. Joseph und Dr. G. Loewenbach. Berlin: Louis Marcus. 1900. M. 8.

A Manual of Modern Gastric Methods. By A. L. Gillespie, M.D., F.R.C.P.E., F.R.S.E. Edinburgh: Oliver and Boyd. 1899. 5s.

Optics, a Manual for Students. By A. S. Percival, M.A., M.B. London: Macmillan and Co. 1899. 5s.

The Doctor; a Study from Life. By H. de V. Stacpoole. London: T. Fisher Unwin. 1899. 6s.

Paul Rees, a Story of the coming Reformation. By Augustinus. London: Simpkin, Marshall, Hamilton Kent, and Co.

Chirurgie de la Plèvre et du Poumon. Par F. Terrier et E. Reymond. Paris: Felix Alcan. 1899. Frs. 4.

Tubage et Trachéotomie en dehors du Croup chez l'Enfant et chez l'Adulte. Par Dr. A. Sargnon. Paris: J. B. Baillière et Fils. 1900. Frs. 10.

Erkrankungen der Gefässe. Von Prof. L. Schrötter. 1 Hälfte. Erkrankungen der Arterien. Wien: Alfred Hölder. 1899. M. 9.50.

Handbook of Optics. By W. N. Sutter, B.A., M.D. London: Macmillan and Co. 1899. 5s.

Architectural Hygiene; or Sanitary Science as applied to Buildings. By B. F. and H. P. Fletcher. London: "The Builder" Office. 1899.

Arabic Self-Taught (Syrian). By C. A. Thimm, F.R.G.S. London: E. Marlborough and Co. 2s.

*** In forwarding books the publishers are requested to state the selling price.

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SIXTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899.

PROCEEDINGS OF SECTIONS.

SECTION OF MEDICINE.

JOHN MITCHELL BRUCE, M.D., President.

A DISCUSSION ON THE PREVENTIVE AND REMEDIAL TREATMENT OF TUBERCULOSIS.

I.—T. CLIFFORD ALLBUTT, M.D., F.R.S.,
Regius Professor of Physic in the University of Cambridge.

ON March 21st, 1899, a meeting was held in Portsmouth, the Mayor being in the chair, our President, Dr. Ward Cousins, and the Medical Officer of Health being also present, to consider the problems of the prevention and cure of tuberculosis; for the subject of to-day's discussion this borough is thus happily prepared.

The death, by cholera, of an old lady in North London, who had been in the habit of sending for her drinking water to the Broad Street pump, and the rest of the evidence which, as interpreted by Snow, revealed in that fountain the source of a pestilence, brought to a head the gathering belief among physicians, and even among some thoughtful members of the lay public, that many diseases are produced and disseminated by minute organisms. The discovery about the same time of the like propagation of enteric fever so strengthened this belief that, on analogy almost alone, a microbic diffusion of infectious diseases gained a strong place in men's minds, although no such microbes had been described precisely. And the argument from analogy was pressed far, farther than more cautious thinkers were disposed to go; for the superstructure built on this analogical reasoning was no doubt very broad. Not only were common epidemics attributed to the activity of "germs," but contemplative men, such as Mr. Hutchinson and others, proposed also to bring into the same field diseases of long and variable course which, like syphilis for example, are certainly contagious, or, like tuberculosis, are at any rate continued fevers. Then—for I do not pretend here to observe the actual order of time but rather that of the impulses of men's thought—Robert Koch began his brilliant career with those remarkable observations on the development, culture, and qualities of the B. anthracis, which may be said to have established the modern study of medical bacteriology. Ample was the sphere still left to analogical argument, yet the inductive key to a highly complex set of morbid phenomena was now in our hands, and its conversion into a master-key, to open the secrets of an ever-enlarging class of communicable diseases, appeared to be but a matter of time and skill.

Our eyes are turned to-day to a particular advance in this study, an advance again due to the genius of Koch, which carried us into the secret of tuberculosis, and revealed to us the bacillus of this disease whereby not only was tuberculosis proved to be a communicable disease, but also by an unerring test were united for us many kindred affections, such as scrofula, lupus, pearl disease, and so forth, as terms of one series, as members of one pathological group. Though here I do but allude to this part of the progress of medicine, I would not omit to mention with reverence the names of Pasteur and Lister.

THE COMMUNICABILITY OF TUBERCULOSIS.

To return to tuberculosis. Long before phthisis pulmonalis was known to be a part of the devastations of the B. tuberculosis, the disease was said—very strongly said by some persons, as, for instance by Italian physicians—to be catching. This opinion, strangely enough, did not gain ground with clinical teachers in other countries; a few observers asserted it even with vehemence; others denied it, and the sceptics were by far the more numerous and influential body. Yet that the disease, like leprosy, is somehow or other communicated is to-day generally admitted. Those physicians who denied the propagation of phthisis by infection, direct or indirect, from person to person asserted rather that the malady and its congeners are propagated by heredity, and break out on some innate proclivity in certain strains of mankind and in certain races and in certain families within racial divisions. Now the discovery of the bacillus as one of the causes of tuberculosis has thrust this doctrine of hereditary causation so far into the background that of late we hear little of it; or, rather, we have been witnesses of laborious researches to prove that congenital tuberculosis, if not unknown, is too rare a sequence to affect our practical conclusions. But those clinical observers who accentuate the hereditary bent to tuberculosis do not, or for the most do not, rely upon transmission of a virus, dead or alive, from parent to child. Their conception is rather of a certain openness to consumption; of patients, in the first instance, not so much possessed of the disease as obnoxious to it. The ports are undefended, and certain congenitally feeble links of intimate organisation are prone to rupture under certain stresses; and they do not hesitate to indicate some of these stresses. Buchanan showed that phthisis frequents damp places; and other social observers indicate with some positiveness that certain trades, crowding in narrow and murky streets, deficiency of food, crosses in love, and so forth facilitate the inroads of the disease. Nor should I forget the belief, rooted, perhaps, more strongly in the minds of the public than in the minds of its physicians, that phthisis often takes its rise in neglected pulmonary catarrhs, a belief which, whether true or not, had for many a year a lamentable effect upon methods of treatment then current. Some particular countenance, indeed, was given to this opinion by the researches of Mr. Haviland on the geography of disease, researches which in the case of pulmonary consumption seemed to find the disease prevalent in climates in which pulmonary catarrhs also prevail. Happily, however, the general progress of municipal and personal hygiene in England had led, almost imperceptibly, to a well-marked diminution in the death-rate from this plague, an advantage which this country still holds and improves. How much yet remains to be done by the indirect methods of preventing phthisis Sir Hugh Beevor has lately proved to us in a series of laborious investigations.

THE HEREDITARY TENDENCY TO TUBERCULOSIS.

That pulmonary phthisis consists, in part at any rate, in some such intimate frailty as I have suggested, a frailty transmitted, as a visible feature may be transmitted, from parent to child, had, I confess, an overmastering influence on my own mind; and the evidence of direct personal infection seemed to me to prove the possibility indeed, but the rarity of direct infection; nay even yet, in the light of our new knowledge, such evidence seems curiously weak. While individual instances are readily explained away, the results of careful observation of large bodies and successions of persons much exposed to direct infection, such as the nursing staff of consumptive hospitals, seem opposed to the doctrine of immediate propagation from person to person. Dr. Turban tells us that of 207 healthy companions received in his institute at Davos not one has happened to contract tuberculosis (1899). Moreover, every physician engaged in practice among the classes in which family history can be accurately ascertained is morally convinced of the bias of many families to tuberculosis, however healthy their circumstances may appear; a bias often revealed in each of their members on the attainment of a certain age. In the laboratory the widely various susceptibility of animals not only to ordinary infection but also to inoculation, and even of exclusively vegetable feeders, such as the cow and the goat, is a matter of everyday experience.

Were man as a guinea-pig in his susceptibility to tuberculosis, I should not be addressing a large congregation of mankind to-day. In the guinea-pig the susceptibility is so over-overwhelming that environment goes for little; in these animals susceptibility is so far above contingencies that it may be measured directly by bodily weight; in the less susceptible man, on the other hand, environment counts for much, and often indeed, dominates the position. In some

families, no doubt, the proclivity is so strong that environment again becomes subordinate; however favourable the conditions, member after member of the family is struck down. But the other day I saw a member of such a family, who, at the age of 50, seemed to have escaped the household doom; yet in him symptoms of obstruction in the region of the cæcum, which we had set down as malignant, turned out on operation to be due to old and very limited tuberculous disease which had slowly tightened its grip during many previous years of apparent health. To speak of the bacillus as if it summed up in itself the causation of cases of tuberculosis is as misleading as it would be in typhoid fever or in tetanus. The factors which constitute bias cannot be neglected. The bacillus, though always a cause, is, perhaps, rarely the immediate cause of tuberculosis.

THE DISSEMINATION OF THE TUBERCLE BACILLUS.

Yet that the means of direct transmission of the tubercle bacillus from person to person are in action is definitely proved. How the microbe is delivered in the sputum we all know now; and, with the mind's eye, we see it dried and scattered, as motes are scattered, in the air. Wherever the sputum falls there tubercle may lie, dry, and take flight. Now is this pestiferous dust received directly as such by the bystander, or does he receive it indirectly after its dissemination and maturation in some intermediate state? It seems certain that the bacillus, as expectorated, if it obtain access to the seat of its operations, proves active and virulent. Indeed, it is little less certain that such immediate transference—a transference without any mediate metamorphosis—is not only a possible means of its development, but is also within limits the only one. Those who fail at first to recognise the general frequency, if not the rule, of direct infection, find themselves face to face with the observations on the life of this microbe which indicate that it must find some swift conveyance to new soil, or soon wither and cease to exist: a fate which too often it successfully evades. Dr. Nuttall tells me that it may be taken as assured that the bacillus does not form spores, and that long survival of individuals is very precarious. The bacillus is, indeed, so far composed of fat that it resists desiccation and starvation better than many other microbes, yet Dr. Ransome, Professor Marshall Ward, and all other observers are agreed that it is very perishable, especially in the daylight. Dr. Nuttall thinks that although, if involved in tenacious spittle, and concealed in damp and shady places, it may survive for weeks or even months, yet that in light, clean, and airy houses no such persistence is probable.

The recent researches of Flügge make it probable indeed that the virulence and active diffusion of the microbe is secured more by the spray of the spittle than by the heavier and more voluminous parts of it. His experiments on the survival of the bacillus in the dry handkerchiefs of the consumptive patient went to show that therein lurks less peril than in what I may call the spindrift of the cough, some of which, caught on slides hung before him, has proved very virulent. The practical inference is that the spittoon should be used near the mouth and that spittoons in living rooms, if not carried about, should stand on pillars some four feet high. Thus the nets of the experimenters seem to be driving the school of non-infectionists out of their position; and so far from tuberculosis being not directly infectious, it would seem that the law may be—no direct infection, no disease; that if infection may at times appear to be mediate, the mediation is rather incidental than essential, rather an accidental protraction of the crossing than a secondary or tertiary mode of transmission. How abundant the tetanus bacillus must be around us, yet happily how rare the disease! We are probably bombarded by bacteria every moment of our lives as certain heavenly bodies are said to be bombarded by aërolites, and many of them, no doubt, get home to us; yet, thanks to the sleepless vigilance of our defence, we escape and ignore our perils.

That the bacillus may have some saprophytic existence is suggested by our continuous cultivation of it outside the body; but the conditions of its artificial cultivation are so peculiar that what Dr. Johnson might have called its potentialities of saprophytism are, if any, a negligible quantity, they are not the means by which its survival is secured. If then we may work upon the hopeful proposition of no tuberculous animal, no tubercle—that the bacillus is found only about tuberculous animals—we open out the amazing prospect of abolishing tuberculosis as, in our own country, we have virtually abolished leprosy.

Antiseptic surgery will turn out to be but an aspect of an antiseptic life; and, as some of Lister's pupils have shown, the ordinary results of antisepsis may perhaps be attained without a machinery so complex and difficult as to be impracticable. When I was a boy fleas, and even bugs, were common enough in every London tavern: even thrifty housewives were not ashamed to bring their bedsteads into the croft and beat them with staves to jar out these pests; yet under no very oppressive rule of cleanliness they have vanished, and about our cleaner firesides even cockroaches and crickets find it hard nowadays to get a living.

The sphere of the tubercle bacillus is, then, round about the tuberculous animal; by what channels does it issue, and by what channels does it enter again? Its entrance by the skin is probably seen only in certain rare cases, such as surgical inoculations, pathologist's warts, lupus, and the like diseases which at present we need not mind. The bulk of tuberculous disease enters into the body by way of the throat—that is to say, by nose as well as mouth, by tonsil as well as by gullet or windpipe. It is inhaled with the air, or swallowed with food, chiefly with milk. It were an interesting task to consider how it is that one of these channels—namely, the bowel—brings about infection rather in early life; that in youth, while the bowel may still be infected, the parts about the pharynx, nose, ear, and cervical glands are liable to suffer, as they do in pigs, and by other means the bones in later life the tendency to tuberculosis is seen chiefly as pulmonary tuberculosis, probably due to direct inhalation. But this comparative study cannot now be ours. The change of diet with changing years may in part account for this change of mode, though not altogether. Milk, the staple food of children, is taken less freely in adolescence and Kanthack and Sladen showed that, of the milk consumed with comparative impunity in the colleges in Cambridge—milk supplied by honest and careful purveyors, as their conduct during the investigation showed—nearly three-fifths contained tubercle bacilli. Nevertheless, the changes of the vital machinery must enter more or less into the explanation such as varying phases of glandular activity, or of the defensive apparatus in this part of the body and in that.

ESTABLISHMENT OF PULMONARY TUBERCLE IN MAN.

The lungs are attainted by the bacillus in three modes of convection: (*a*) by the blood, (*b*) by the lymph, (*c*) by the air. In view of the brief space of time before me, I shall confine my thoughts at present to ordinary phthisis, as opposed to diffusion of tubercle in the lungs by way of the blood or lymph. How do the investigations of anatomists bear on the establishment of disease by inhalation? Some work done by Professor Birch-Hirschfeld, of Leipzig, seems to me to illustrate this part of the case, and I made it my business to visit Professor Hirschfeld in order to see for myself what these researches come to. With your permission I will now give you his account of the nature and seat of the primary affection in pulmonary tubercle.

But first let us be agreed upon the values of such names as "caseous pneumonia," "catarrh of the apex," and "interstitial tubercle." Are we not now all convinced, in spite of Niemeyer's and even Virchow's dualism, to believe that "caseous broncho-pneumonia" is but tuberculosis under another name? In this matter Charcot and Baumgarten have brought us back to Laënnec. As Baumgarten says, the difference between caseous pneumonia in its various forms and the "typical miliary tubercle" is but one of degrees and of time: that it is not essential. Indeed, attacks of so-called croupous pneumonia are rare in phthisis, and in it are by no means very terrible misadventures. Again, to assure a patient that he is suffering only from a slight catarrh of the apex is bad pathology and doubtful honesty; "catarrh of the apex" is tuberculous phthisis, and the sooner the patient knows this the better.

Cornet thinks that "caseous pneumonia" is set up by the draught of bacilli into the alveoli; and this may occur in secondary aspiration-pneumonia. Some morphological diffe

ence between granuloma and caseous pneumonia there is, it is true, but this probably depends upon the mode and channel of entry, or on the site of the development. Koch seems to suppose, though he speaks with no certainty, that pulmonary tuberculosis is initiated in the lungs as interstitial granuloma, and that caseous pneumonia arises from the conglomeration of miliary tubercles established in the interstitial tissues of the lung. The artificial tuberculisation of the animal lung in inhalation chambers seems to differ somewhat from the incidental process in mankind, yet there is an intimate affinity between the two series of events; the differences are superficial and contingent. The difficulty is to ascertain the seat and form of the earliest changes, yet it is only by the detection of these earliest changes, as in men killed by accident or by acute intercurrent disease, that the first settlement of the disease can be made out, for I think it fairly certain that the results of the artificial pulmonary tuberculosis of animals gives no anatomical clue to the ordinary mode of invasion in man. Dust, even coarse dust, is readily inhaled into the lungs, even into the finest channels of the organ. By the mind's eye we may perceive a cloud of particles constantly drifting into the inner parts of the lung, to be as readily swept out again by the action of the epithelium, of the mucus, and of the expiratory machinery; yet not all of it, for, by the blackening of the lung in townsmen, we see that no inconsiderable part remains; much that is inert, some perchance that is more perilous. At present our thoughts are engaged with the tubercle bacillus; and that bacilli may pass through the normal mucous membrane into the blood streams or into those of the lymph I may take for granted. We may see still further, with the eye of the mind, the blood and other juices invaded by tribes of microbes, or by streams of toxins, which in health are as quickly neutralised, by defensive cells or by chemical antitoxins, so that no harm results. I have published elsewhere instances of the prolonged use of tuberculous milk by many persons, old and young, without ill consequences. But this immunity depends, of course, on the constancy of the defensive machinery of the body; so long as we retain the command of our own inland sea—a figure of speech I have often used to my pupils—we are safe: unless, indeed, the inroad of microbes or of toxins be enormous in volume or virulence, or conveyed into the circulation with strange suddenness. So long as we retain command of the sea, then, the blood is sterile; even in septic febrile states we often—nay, usually—fail to find cocci in it—and tubercle bacilli, I think, never. Moreover, we know that, in many diseases at any rate, by gradual increase of the poison the defensive powers of the body may be intensified in like proportion, and safety secured. Either then by virtue of the self-cleansing of glandular filtration and destruction, or of the annulling by cellular defence of microbes and poisons which evade the outposts and enter the inland sea, or again by reconduction to the door of entry by the epithelial activities of the healthy lung, the tubercle, which no doubt often and often penetrates into the intimate parts of our lungs, may, and generally does, leave us unharmed. Indeed, by way of the central or lower channels of the lungs tubercle, which there has the freest admission, very rarely obtains a settlement in the organ. Basal phthisis is the effect of a heavy invasion, and is generally irresistible.

But when we turn to the upper parts of the lungs we hear another story; so far as the inner defences of the body are concerned one part of the lung must be as well backed up as another, yet tubercle fastens but too often upon the upper lobe. How is this? If I may draw your attention to this drawing—which I take from Birch-Hirschfeld, to whom I am deeply indebted for much of what follows—you will see with particular clearness certain mechanical disadvantages under which this part of the lung suffers. You will see, on examining the figure, that the apical bronchi in the adult take a very steep direction upwards; so that to pass from the main bronchus to the apical branches the air stream must be diverted almost at a right angle, while the course of all other tubes is either straight or at a very large angle. Moreover, the air stream passing outwards from the apical bronchi must conflict with the stronger currents from the middle and lower tubes, so that in expiration there will be a "dead point" in the main apical bronchus near the junction of these streams. Not only so, but on coughing a backward air current may be forced into these vertical branches, whereby infectious foreign bodies may be wafted into relatively inactive areas. Again, I may ask you to accept the probability, derived from Birch-Hirschfeld's fusible metal casts [photographs of these casts taken in the Leipzig Pathological Institute were handed round], and from anatomical investigation, that even in health these upward tubes are liable to sink a little, and so to increase their naturally some-



Cast of bronchial tree in fusible metal. Front view of left lung. (After Birch-Hirschfeld.)

what spiral curves, especially in weak, flat chests. Thus stagnating areas, or even kinks and pouches, may be formed in which foreign bodies or ordinary secretions may gather and form excellent media for the reception of microbes and other dust. The relative immunity of the apex of the lung in children is explained readily by the fact, demonstrated by His, that this disadvantageous position of the apical lobes is less in them; the upper part of the child's lung is relatively short and the apical bifurcation much less steep. Again, even

within the apex some tubes stand at less advantage than others; and of those especially defenceless are branches of the tree between the third and fifth magnitude in the posterior apical area.

In 4,000 necropsies taken quite consecutively at Leipzig, Birch-Hirschfeld found tubercle or traces of tubercle in no less than 40 per cent. In 826 bodies of persons who had died suddenly of accident, of acute diseases, or otherwise independently of tubercle, minute search was made for incipient tuberculous disease; and tubercle, or its traces, was discovered in 171 (27.7 per cent.): in 105 it was cicatrised, in 37 it was extensive, in 35 it was latent and circumscribed, and in 28 of these a sole tuberculous focus in its early stage was found. In doubtful cases, without slicing the lungs, careful palpation was made for any small knots in its substance; if a knot were felt, it was not cut down upon directly, but was tracked up with a director and blunt-pointed scissors from the main bronchus. In this way many specimens of tubercle were found in the earliest stages.

These investigations demonstrated the way in which tubercle reaching the lung by inhalation engrafts itself; that in a bronchus lying between the third and the fifth magnitude in the posterior apical bronchial area it settles upon the mucous membrane; that there, if circumstances are favourable, having implanted itself more securely upon the part, it breeds, and goes through the manufacture of secondary products, such as small-cell infiltration and giant cells in the subepithelial layer (tuberculous endobronchitis); a thrombosis of the tube is established; beyond the block atelectasis of the corresponding distal area then ensues, with secondary inflammatory and obliterative processes, and later with circumscribed pleurisy.[1] How interstitial and aspiration tubercle follow this insemination—that is to say, secondary miliary infection by the lymph channels, and caseous pneumonia by translation of infectious particles from one branch of the bronchial tree to another, I need not stay to describe; though I will repeat that there is no essential difference between the products of these several modes of propagation. On the hither side of the block the tube dilates, fills with degenerate secretion, and undergoes softening and ulceration until it may rupture, as shown in a third coloured drawing [drawing shown]. Of such a nature probably are most cases of the so-called "phthisis ex hæmoptoe." Such a rupture of the softened wall may well follow a muscular effort or strain, and by way of it tubercle bacilli and septic tissue products may then first be swept into the sputum, or, by aspiration, into other pulmonary areas; or, again, by better luck, the mass may be detached and expectorated; in either case, latent becomes manifest tuberculosis—instead of sudden and considerable rupture a dissecting extension may take place, probably with more or less hæmorrhage and cavity formation, as seen in another drawing. How in such a damaged area freshly-introduced microbes—tuberculous and others—will find an appropriate home needs no demonstration.

ENCLOSED TUBERCLE ("GESCHLOSSENE TUBERKULOSE").

A little consideration of this process will also bring to the mind of the hearer how for long enough, perhaps for months, the proper tuberculous process may be plugged in an enclosed area without access to the outer world. [Coloured drawing from Birch-Hirschfeld showing this condition.] In the sputum of such a patient, if sputum, indeed, there be, there may be no tubercle bacilli. Such cases are well recognised by clinical observers, who speak of them as "enclosed tubercle." The diagnosis of such an isolated knot, perhaps but the size of a hazlenut or less, and well below the surface (which at first is unchanged) although of the utmost clinical importance, is beset with difficulties. Even on the *post-mortem* table a small nodule is readily overlooked, especially if the lung be slashed in the usual way. These difficulties I shall invite you to consider presently. I need not enter into the consequent formation of secondary foci, whether as acinous clumps of miliary tubercle or as lobular caseous pneumonia; these would appear younger than the original focus. The part played in children by the bronchial glands in the production of pulmonary tuberculosis (which may in some cases be by direct ulceration thence into the lung, or by extension from the capsule to the neighbouring lung tissue) I cannot now consider. On the other hand, as the tubercle bacillus develops slowly, the patient may resist the disease, the knot may become more densely encapsulated, dry up and calcify, and the very existence of pulmonary tuberculosis wholly escape notice, a result which we know from the *post-mortem* table to be happily not very uncommon. A person may be a little "off colour" for a few weeks or months"; he is "bilious," "anæmic," or "overworked"; he coughs a little or not at all, no tubercle is found in the sputum, even if sought, and he recovers by encapsulation unaware that the shadow of the black hawk's wing had rested upon him. Von Ziemssen has probably modified his doctrine of 1888—"No tubercle bacilli in sputum, no pulmonary tuberculosis."



Incipient tuberculous endo-bronchial inoculation. Nodule laid open. Atelectasis of lobule beyond. (After Birch-Hirschfeld.

Tuberculosis of the lung established by lymphatic or blood stream is then not ordinary apex phthisis. In the former case the peribronchial and acinous distribution is often manifestly primary. How curiously miliary granuloma, secondary to an extrathoracic focus, may occur in very unequal proportion in the two lungs is a subject upon which I was consulting Dr. Kanthack shortly before his death. The variation may be due to some inequality in glandular filtration; for we know that after weak inoculation of the guinea-pig tubercle may be found in the bronchial glands, and not at all in

[1] Two coloured drawings of this initial process from Birch-Hirschfeld's paper in the sixty-fourth volume of the *Deut. Arch. f. klin. Med.* were here exhibited.

the lungs. The passage of tubercle into a vein from a local deposit has been demonstrated by Kanthack and many others.

Mixed Infections.

It is unnecessary to do more than mention that in these ulcers and cavities established by the tubercle bacillus other organisms, which no doubt enter the lungs frequently, and the blood too for that matter, find a proper soil; thus mixed infections—streptococcal, influenzal, pneumococcal, and so forth, are set up. Diagrams of temperature curves of mixed infections, reproduced from Dr. Turban's book, are on the screen. Nor is it necessary to dwell on the importance of preventing the breakdown of the tubercle knot in the apex, whether by avoidance of muscular stresses, blows on the chest, the access of the mixed infections of dusty air, catarrhs, intercurrent failure of vitality from deficiency of food, overwork, and the like, and other influences preventing the quiescence and encapsulation of the enemy. Hence the importance of early diagnosis and submission to medical vigilance in pure air.

The Physical Diagnosis of Early Tuberculosis.

When we regard at once the latency of early tuberculosis of the lung, and the urgent need of the discovery of it, I may be forgiven if I review our means of clinical diagnosis of tuberculosis of a lung in the early stages which I have described.

How important it is to detect tuberculosis pulmonalis in the early stage is shown by some of the very careful and telling statistics of Turban, who reports of 408 patients that he received only 2.7 per cent. in their first month, and of these two began under his own eye. Yet let us turn to another column—namely, to the percentage of recoveries—a percentage based upon careful reports of all the patients (12 only missing) discharged during seven years from his institution: he says of the patients received in the first stage, 84.4 per cent. were permanently relieved, if not cured; of those received in the second stage, only 48.8 per cent. Of those received in the third stage, only 4 per cent. were discharged relieved, and of these probably none recovered. Again, of the patients in the first stage, the duration of stay was 168 days, the mean stay of all cases being 222 days.

In the stage of enclosure, to examine the sputum, if any, cannot help us decisively in tuberculous endobronchitis; for weeks, months, or even a year, the bacilli may not find escape outwards. Turban failed to find tubercle bacilli in the sputum in the first stage in 59.8 per cent. of 408 cases.

Frequent estimations of the temperature are more helpful; but casual examinations will not serve; they must be as methodical as frequent. Every four hours is not sufficient; the thermometer must be used every two hours during the day—that is, from 8 A.M. to 10 P.M. Turban finds that, if the patient sleep well, without complaint of restlessness and heats, he need not be disturbed for the temperature during the night. From Dr. Turban's full, accurate, and practical work, I have taken a chart [diagram shown] of such a series of observations in a case of enclosed tubercle. When doubt still remains, it has been my own practice to test the temperature after exertion, taken between 4 and 6 in an afternoon. Turban points out that in women a good test period is about the menstrual days. I display upon the screen a chart taken from his work to illustrate this application of the test also. He points out that early tubercle in women may betray itself by premenstrual accesses of fever. This I have verified repeatedly in two cases of my own. On the other hand, some slight local pelvic inflammation may influence the temperature at such times. I remain of the opinion that to pass a thermometer into the rectum is not only a disagreeable duty, at any rate in persons not in bed, but is also unnecessary; the mouth is steady enough in its indications if no hot or cold drinks be allowed just before the instrument is inserted, nor the face exposed to external cold. The instrument should be retained in place for seven or eight minutes. If in some weak persons the lips are slack, other methods in them may be preferable.

Physical Signs.—Under this head, which I discuss with diffidence in the presence of the adepts I see before me, I may point out that pathology fortifies our clinical experience of the regions wherein to search for the initial lesion, namely, at the posterior subapical area. If phthisis be suggested by anæmia, dyspepsia, languor, loss of weight, quickened pulse, and the like, the chest must be minutely examined. The patient must, so far as possible, be removed from the damping effect of pillows, mattresses, and clothing, and should sit upon an uncushioned chair in a good light, every part of the chest being freely accessible. The scapula must be abducted by drawing the arm across the chest, so as to give access to the cage of the chest between its edge and the spine. Even in this, as in all other upper areas, light and single percussion must be used; light and single because heavier and multiple blows are confusing, and are apt to set up vibrations over a wider area than we would test—even on the other side of the chest. I believe it is better to use a pleximeter in doubtful cases, and an ordinary wooden stethoscope should not be forgotten. The utmost precision in comparison of the two sides of the chest is essential. If atelectasis distal to a bronchial thrombus have taken place some altered clang or pitch of breath or voice may reveal the consolidation. Any lagging in the expansion of either apex must be carefully noted. I rely little on jerky breathing, more on harshness of the murmur with loss of vesicular quality, or ill definition—"weak breathing." Moist sounds in these incipient cases may well be absent, but a single click may reach the ear, in which case the diagnosis is clinched. If the classical signs of phthisis be unmistakably present, the case is no longer in the early stage; the disease is far advanced, and cure uncertain.

In some few cases I have heard pleuritic friction over the posterior apex; I think all these cases did badly, as if tubercle were spreading by lymphatic channels, but there is no apparent reason why a patch of pleurisy over a lobular atelectasis should not be audible.

Although the Roentgen rays may indicate rarer spaces in an excavated lung, and denser in consolidated parts, it would seem that the superposition of denser upon rarer tracts may neutralise any distinctions of value; still the trials of Bouchard and Walsham and others encourage us to hope that early foci may thus be made manifest. I have no knowledge of these means, beyond that within the reach of us all.

Tuberculin seems to be almost a certain test of the presence of tuberculosis in its early stages; later, a tolerance of the poison seems to become established. In England, I think, most of us have been reluctant to arouse the reaction, but Dr. Turban follows other German observers, and Professor Osler, in assuring us that he has never seen any harm ensue from it, though he always keeps the patient in bed till the reaction has wholly subsided. The old tuberculin is preferred for this purpose. Of all our means of detecting early tuberculosis this may prove the most valuable.

The very interesting demonstrations of Arloing and Courmont at the Berlin Congress, on clumping in tuberculosis, need further verification; and, in any case, Professor Woodhead tells me that the process is, as yet at any rate, far too long and too difficult for clinical use.

The Hygienic Treatment of Tuberculosis.

In passing on now to the treatment of pulmonary tuberlosis, I must pass over all reference to drugs, not because I find them useless—by no means—at the present time the tendency is too much to neglect their aid, but because of the inexorable dictates of time. Unless it lie hidden in tuberculin—to which a remarkable immunity can be established both artificially in cattle and by tuberculosis in its later stages in man—we have no specific for the disease. In England for many years we have been reducing phthisis by general sanitation, and by the general prescription of cleanly and airy life; but in consumption, such is the intense individualism of our people, we have shirked the theoretical and systematic application of such means. Dr. Bodington, of Sutton Coldfield, seems to have been the first to preach the open-air treatment of consumption. Henry Bennet was the pioneer in the Riviera of the open-air treatment. At Davos, again, the open-air method was in vogue thirty years ago, when I first visited this resort. Under Dr. Ruedi, moreover, a systematic ordination of hygienic means and medical rule was more or less established; and it was a matter of regret that at the moment when the ascendency of the physician was in course of recognition, and Dr. Ruedi personally had gained great power to drill his patients, he left Davos for another sphere of labour. That at

relatively low altitudes a fresh-air life and liberal feeding would cure phthisis we knew; Hughes Bennett, who added cod oil to other nutrients, and Henry Bennet, and, at a later date, Hermann Weber and others, had shown us. What Brehmer, Dettweiler, and others have done for us and the world was to take up from its casual and individual application, a method which could only succeed on a large scale when co-ordinated and regulated after a fashion for which the Briton was not prepared, and to which he is by temperament doggedly opposed.

THE SANATORIUM TREATMENT OF PHTHISIS.

The elements of the hygienic treatment then were none of them new, but the organisation of these scattered elements into a system of government rigorously administered under continuous medical inspection, as a method, was new: and to impose such a method on any people, especially on English folk unaccustomed to dictation and drill, needed the great personal ascendency and indomitable generalship of such men as those I have mentioned, and of others such as Meissen and Walther. By them the promiscuity of single combat was raised into a campaign; the guerilla warfare of scattered combatants was formed into a strategy. Thus not only was the activity of the individual combatant regulated, but also that new enthusiasm was lighted up which is generated by trooping men together. Two things were needed, the system and the dominating and inflexible will of certain leaders. Görbersdorf was no mere embodiment of a set of rules, nor indeed of new details of therapeutic discovery. Görbersdorf was Brehmer as Falkenstein was Dettweiler, as Hohenhonnef is Meissen and Nordrach Walther. The battle is not won by the modern weapons, valuable as these may be, but by the general. This must be remembered in all movements at home to establish sanatoriums for the phthisical; a site is not enough, not the dry soil, the good water, the good and abundant food, the sunny chambers and balconies, the good nurses, the evasion of friends and gaieties, the vigilance of the physician, and all the other essential means enumerated by Dr. Rufenacht Walters in his excellent book—these things are not enough: the result will not be attained, the battle will not be won all along the line, unless the general can be found who by a certain natural ascendency over others, an inflexible will, and a clear grasp of his method, imposes his rule upon his inmates. A second-rate method thoroughly carried out is better than a first-rate method loosely administered. If it be said that such persons are not to be found in great numbers anywhere, we may comfort ourselves with the knowledge that, as the methods are worked out and fixed by the chief leaders, as they are better understood and the mind of the public thereto accustomed, the need of men of exceptional ascendency will be more dispensable. Still, at any rate in England, the ordinary patient is not yet tamed; he is yet apt to be indocile, to run after fads of his own, or to give ear to the irresponsible tea-table talk of the world, an independence fatal to success. I have not been to Nordrach, but I suspect that cranks have short shrifts there; though even Dr. Walther cannot make himself felt so far beyond his borders as to prevent amiable but ill-informed enthusiasts from making the system seem ridiculous by intemperate and ignorant advocacy. At the Berlin Congress the leaders of the movement showed themselves to be cool and clear-headed men who measured their words; and from them, and from the little instruction to be picked up by walking round some of these institutions, I learnt how cautious we must be in relying on current and unchastened reports of success. For what is meant by that glib word "cure"? Strictly it means obliteration of the disease, not mere quiescence of it. It means not only that after three to six months' treatment the disease is stayed and that the patient has returned home, but that he has returned also to his work, and that for a reasonable time—say for a year or two—he has withstood the throng, stress, and fatigue of it, much as he did before his attack. I know, however, and so does every experienced physician, how very frequent are the relapses of patients discharged "recovered" from sanatoriums. Indeed, but a few weeks at home proves too strong a test for many of them. It is in no spirit of despair that I say this, but in the interests both of scientific truth and of public confidence, for exaggerated hopes are sure to be followed by the reaction of disappointment.

Let it be known that patients in the third stage of phthisis are not certainly, but probably, incurable; that in the second stage—or that of physical signs of consolidation—the cure, if it is to be attained, can only be attained by, say, eighteen months of a long and persevering discipline, and by absolute subordination of the individual will to an exacting system; in the third, if recovery be possible, not less than two to three years will suffice to bring it about. For sanatorium treatment, these cases in the incipient stage must be rigorously selected. It is then to the patients in the first stage only—a stage very often overlooked till too late—that we can hold out a hope of anything like a definite cure within six months. To send advanced cases to a sanatorium is to hide away our failures. So far as I know, Dr. Turban is the only superintendent who has published the details of his cases consecutively, and rigorously demanded and sifted the later records of those who have passed under his hands, virtually of all of them; and I cannot too strongly urge my hearers to read his returns with care. I remain of the opinion, based on an experience of thirty years, that, whatever the explanation, for young and vigorous persons the Alpine resorts are far more potent in the cure of phthisis than those at lower altitudes. My own experience, even of the rough and tumble treatment at Alpine hotels, where everyone has done as seemed good in his own eyes, has been more favourable than, so far as we yet see, of the lowland sanatoria of Europe. Still, there are many persons with whom the Alpine high places do not agree—old persons, chilly persons, throaty and catarrhal persons, neurotic persons, persons having organic disease in other organs also, and so on; and even of those for whom these high places would be suitable, or high places in less rigorous climates, how many can go away so far—away from husband or children—even if they have the necessary pence for a long journey, a protracted residence and expensive comforts abroad. For such patients sanatoria must be provided nearer home. If in the lowland sanatorium patients be submitted to the treatment in the first stage—and they are more likely to find their way thither in the first stage than to distant resorts—the very large majority of them will do well.

The alleged overfeeding has received too much admiration. Overfeeding can never be right, but probably high feeding rather than gorging is the means intended. Much harm may be done, and is done, to-day by gross and indiscriminate fashions of stuffing the patients. High feeding, including cod-liver oil and other fats and other dietetic means, often shirked by the phthisical, has, of course, been a prominent feature in the treatment of phthisis for many years past. I rarely find dilatation of the stomach in the first stage, nor is there any evidence that the chemical or motor functions of the organ are impaired. The new and remarkable aspect of the matter was the great increase of appetite in the mountain air, the air itself and the reduction of fever soon restoring the appetite. I remember on my first visit to Davos asking Dr. Ruedi at the Belvedere *table d'hôte* where the patients were. The wan look of the febrile and cossetted *poitrinaire* is soon lost in the hills and in the light of heaven; the appetite returns, the arteries fill, and the blood pressure rises. Too much is made of increase in mere fat—this is what horsemen call "soft condition;" the disease often pursues its course unchecked; in the absence of fever regulated exercise hardens the muscles and the heart, a hard condition is to be aimed at. A certain number of consumptive patients are naturally of spare habit, and poor fanciful eaters. It is useless to force these people; they cannot endure it and indeed they rarely thrive.

It is interesting to draw from Dr. Turban's tables that, other things being equal, hereditary proclivity to tuberculosis proves to be of no great account in calculating prognosis; my own experience is that we may accept a long pedigree of phthisical ancestors with sound stomachs, and I regard a gouty habit as peculiarly favourable to arrest of the disease. The isolation from home and business seems as important in the treatment of phthisis as in neurasthenia. Indeed, only thus can the physician's powers of suggestion have full play; on the other hand I see no advantage but some moral evil in reducing the inmates of such institutions to imbecility. For children I think the sanatoria at the sea, as founded by Ewald and Baginsky, are to be recommended.

II.—Sir William Broadbent, Bart., M.D., LL.D., F.R.S.,

Consulting Physician to St. Mary's Hospital; Physician Extraordinary to the Queen; Physician-in-Ordinary to H.R.H. the Prince of Wales.

Sir William Broadbent expressed his appreciation of Professor Clifford Allbutt's address, which was so minute and complete as to leave little room for further remarks. He had, perhaps, one criticism to make on the question of proclivity and prognosis. It was quite true that patients belonging to what were called phthisical families did not necessarily do badly, but there was some reason why certain cases ran an acute and uncontrollable course whereas others progressed very slowly. This was not explained by any special virulence of the bacillus or by their number; it was not always due to deteriorated health or unfavourable circumstances; it was the result of some predisposition in the individual which must be included under the term "proclivity." He endorsed all that had been said by Professor Clifford Allbutt as to the importance of early diagnosis. He would add one physical sign to the weak breathing or harsh breathing which he had mentioned; this was a scattered fine sibilus, perhaps heard only on deep inspiration or expiration, but, even if only occasional, served to clinch the diagnosis. He agreed in the importance attached to the observation of the temperature, and there was one circumstance under which it was of special value. This was after hæmoptysis. There was a period of great anxiety after the occurrence of hæmoptysis in a previously healthy person, and it was then that everything turned on the temperature. An advantage attending the establishment of sanatoria was that the individual cases of phthisis could be more closely studied. In consumption, as in other diseases, we had to treat not the disease, not a mere name, but the patient who was suffering from it. The additional attention given to consumption in recent years had been of great service in bringing home to the profession generally the fact that in phthisis we were not dealing merely with the effects of the tubercle bacillus. Other organisms took advantage of the local lesion, or of the weakness resulting from tuberculosis, and many of the symptoms in a case of consumption were due not to tubercle itself but to complications due to secondary invasions.

III.—Sir R. Douglas Powell, Bart., M.D., F.R.C.P.,

Physician to the Middlesex Hospital, and the Hospital for Consumption, Brompton; Physician in Ordinary to H.M. the Queen.

Sir Douglas Powell had listened with great interest and instruction to the address from Professor Allbutt, and with regard to the evidences of insanitariness of houses he would mention in addition to those named the common house fly, which when observed in any numbers in a house was a sign of organic dust and garbage. He endorsed the statement that the early physical signs of tuberculosis might sometimes precede for some weeks the presence of bacilli in the sputum. There were, of course, cases on the other side, and in the earlier stages the examination should never be omitted. He was sure that the secondary infections alluded to by Sir W. Broadbent were very important, and really constituted the main objective in our methods of treatment. In regard to sanatoria they were, and would be, of great value (1) as a means of instructing the practitioner how to treat his patients at home; (2) by accommodating those many people who, with a fair working income, were at a loose end and homeless in chronic illness; (3) by instructing patients in the discipline of illness, how to control cough, to deposit sputa, and to maintain good sanitation. This which they learned in three months in a sanatorium might take three years of more irregular management of their illness. There were certain conditions to be taken into account in sanatorium treatment, and which required sharp surveillance; namely, the temperament of the patient, his digestive power, and the condition of his heart and vessels. In either of these two latter ways the patient might give out. It was absurd to say that climate had no influence in the treatment of tuberculosis; it was contrary to all that was known of the disease. He had not the slightest doubt of the value of drugs of the creosote class in the treatment of the disease, particularly in the restriction of its area.

IV.—William Osler, M.D., F.R.C.P., F.R.S.,

Professor of Medicine in the Johns Hopkins University, and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore.

Dr. Osler, after expressing his appreciation of the able paper of Professor Clifford Allbutt, said he would refer to only two points. In the diagnosis of early cases he laid chief stress on the examination of the sputum, the fever, and, if necessary, the tuberculin test. Small areas of caseation or cavities might give no signs whatever, and he had had instances of the kind in which the bacilli were found only after twenty or even thirty examinations. On the importance of a two-hourly record of temperature in these cases he was glad to hear Dr. Allbutt's opinion. In his experience early cases without physical signs (even after day-by-day examination), but in which evidence could be obtained by the methods referred to, were more common than those with tubercle bacilli in the sputum, but without physical signs. In the question of treatment the success of the sanatoria had taught us the value of method and discipline. The physician was the important factor in the treatment of tuberculosis: the man who could make the patients live according to rule. In the rapid growth of sanatoria we must not forget the 90 per cent. of those who could not leave their homes. Much might be done for them—a fixed number of hours daily in the fresh air, on the verandah, on a sofa in the garden, or in a bright room with the windows wide open—rest so long as fever was present, and a well-regulated diet, might be followed by cure in suitable cases.

V.—James Tyson, M.D.,

Professor of Medicine, University of Philadelphia, U.S.A.

Dr. Tyson said that in the last twenty-seven years there had been a falling off in the proportion of deaths from consumption to all deaths in Philadelphia—from 17 per cent. in 1879 to 9.1 per cent. in 1898, a reduction of 8 per cent. in twenty years. He could not pretend to know the exact cause of this decrease, but it seemed reasonable to ascribe it, in part at least, to the increased attention paid of late to preventive measures. Treatment in Philadelphia was for the most part hygienic, dietetic, and climatic. Of medicines creosote and carbonate of creosote or creosotol were the favourites, and he believed, from personal experience, that they had some controlling effect on the progress of the disease. Probably to a slight degree the effect of isolation might be included in the result referred to. Undoubtedly the climatic treatment was the most effectual. Colorado and New Mexico were the regions in which the best results had been obtained, although the higher altitudes of their western mountain country were everywhere beneficial. Of the districts with more intermediate altitudes, the Adirondack and North Carolina mountains were much resorted to, and many persons could reside there in comparative comfort. Treatment by special hospitals and sanatoria and by outdoor rest was in America far behind Europe, and especially behind Germany and England. But in efforts for the benefit of the poorer classes he believed they were among the first, the institution of Dr. E. L. Trudeau of Saranac Lake, N.Y., having been started in 1894. So far as he knew the Massachusetts State Hospital for Consumptives was the only one built with State aid. After referring to the different sanatoria in the United States he alluded to the Pennsylvania Society for the Prevention of Tuberculosis, whose objects were to prevent tuberculosis: (1) By promulgating the doctrine of the contagiousness of the disease; (2) by instructing the public in practical methods of avoidance and prevention; (3) by visiting the consumptive poor and supplying them with the necessary materials with which to protect themselves against the disease, and instructing them in their use; (4) by furnishing the consumptive poor with hospital treatment; (5) by co-operating with Boards of Health in such measures as they might adopt for the prevention of the disease; (6) by advocating the enactment of appropriate laws for the prevention of the disease.

VI.—C. Theodore Williams, M.D., F.R.C.P.,

Consulting Physician to the Hospital for Consumption, Brompton.

Dr. Theodore Williams said that the early physical signs of phthisis were certainly very difficult of recognition, but they were generally to be found before tubercle bacilli appeared in the sputum. He considered that signs of obstructed breathing and a slight *râle* at one apex, persisting after coughing, but without any dulness, were especially significant of early phthisis. In

regard to the temperature of the first stage, he had found that it was not infrequently subnormal or normal even in the presence of active tuberculosis, indeed almost as often as raised. In respect of contagion, he had examined the phthisis mortality of the different parishes of London, and had found that in the districts surrounding the consumption hospitals, into which phthisical out-patients thronged every day of the week, with their habits of indiscriminate expectoration, it was comparatively low. But in other more densely-populated parishes far distant from consumption hospitals it was much higher, and was highest of all in the Strand district. These facts indicated that phthisis was not at any rate strongly contagious. The following table showed the death-rate from phthisis and the density of the population in the different districts:

Death-rate from Phthisis per 1,000 Living.

	Phthisis Death-rate.	Population to the Acre.
Kensington (Brompton Hospital for Consumption)	1.44	75
Chelsea	1.81	121
Hackney (Victoria Park Hospital)	1.43	60
Strand	3.36	141
St. Saviour's Southwark	3.22	122
St. Luke's	3.11	174
Whitechapel	2.52	223

The remedial treatment involved two factors—the destruction of the poison (the tubercle bacillus and its congeners), and more important, the increasing of the resisting powers of the patient. As Metchnikoff had shown, there were phagocytes that actually destroyed the organisms; and there was the serum. He had confidence in the serum treatment of tuberculosis. It was necessary, however, he had found, in his experiments, to take the serum from the immune animal not less than six months after the immunisation was commenced if beneficial results were to be obtained; if it were taken at so short an interval as a month it produced phenomena like those of tuberculin. A third conservative element was fibrosis, which came into play in the later stages of the disease in cavity cases. The natural cure of tuberculosis was by cavity formation and fibrosis. He considered that remedial treatment was very hopeful, and he had found that in his high-altitude patients of the first stage 80 to 90 per cent. improved, and 50 per cent. were cured; but in the cavity cases 50 per cent. only improved, and a certain small percentage were cured. He was strongly in favour of sanatorium treatment, though he maintained if the local medical man were in earnest it might be carried out efficiently in a country house and garden, as he had done with many of his patients. The only fault he found with the great German sanatoria was that they did not recognise other exercises than walking, and that they did not supply enough amusement and recreation for the mind.

VII.—Arthur Ransome, M.D., F.R.S.,

Bournemouth.

Dr. Ransome said that prevention was better than cure. He called attention to the need of educating not only the public but also the local sanitary authorities throughout the kingdom, in the means of prevention of tuberculosis. These bodies had the power to prevent tuberculosis, and should be induced to exercise it. The directions in which their influence might be exerted were in the notification of cases of phthisis; in the disinfection of houses, workshops, and places of public assembly; in the closing of infected houses and the destroying of phthisis nests in large towns; and in arranging for free bacterial examinations. He was doubtful of the possibility of contagion in open places but not in infected houses, and thought that the bacillus might live, and even increase, in their dark crannies.

VIII.—Shingleton Smith, M.D., F.R.C.P.,

Senior Physician, Bristol Royal Infirmary.

Dr. Shingleton Smith alluded to the proposal that cases of phthisis should be notified, and hoped that all active steps by health officers would be avoided. The ontagion was entirely under control, and this control should be exercised by the medical attendant with as little annoyance as possible to the unfortunate patient. Any steps in the direction of quarantine of the consumptive must be strenuously resisted. With regard to the curability of phthisis, he pointed out that the surgeon, the dermatologist, and the laryngologist had little difficulty in dealing successfully with localised tuberculosis; and if, as Professor Clifford Allbutt's remarks tended to show, the early patch of tuberculous endobronchitis could be localised, there seemed no reason why it should not be dealt with by some method of local treatment, by antiseptic injection or otherwise. Many attempts in this direction had been made, but the difficulty was that the early patch could not be localised until it had become too diffuse for local treatment. Meanwhile sanatorium treatment was the fashion of the day; ordinary treatment by climatic change was ignored, altitude also counted for nothing, and the specific action of fresh air was to take the place of all other medicine. Although of value from the hygienic and prophylactic point of view, it could not be maintained that fresh air had any antitoxic action; some better antitoxin than this might yet be found, and we must look to the younger pathologists to continue their efforts in the search for immunity, which, if obtainable in the guinea-pig, should also be possible in man. We had not reached finality in this respect, and meanwhile it was comforting to know that the usual medicinal measures in the treatment of phthisis, although often disappointing, were not so useless as they were commonly represented.

IX.—Sir Hugh Beevor, Bart., M.D., F.R.C.P.,

Assistant Physician to the City of London Hospital for Diseases of the Chest, and to King's College Hospital.

Sir Hugh Beevor said that overcrowding was the most conspicuous accompaniment of excessive phthisis mortality rate in this country: it was capable of remedy, and accordingly a most proper subject for prevention. In this country it was every ninth person who might have phthisis thrust upon him by being compelled to live more than two in a room in a four-roomed, or smaller lodging. In London, it might further be said, phthisis was chiefly thrust upon those who had to pay a quarter to half of their income in rent. This applied, but happily in a less degree, to the whole country. Happily the association of phthisis with overcrowding did not appear in the children and young adults, who formed the largest proportion of the overcrowded; it was seen only after the age of 25. In London apparently about one-tenth of the population supplied about one-third of the phthisis; this section of the population alone kept up the phthisis rate of adults, so that it had become comparatively higher than formerly; the phthisis rate thus originating had abated little, if at all, and in some places it even threatened to become worse. Happily, it was not necessary to provide new accommodation for even every other overcrowded adult; new provision for one might leave his two fellows with a sufficient air supply. Mr. Shirley Murphy thought it probable that provision of air for about 30,000 would solve the problem in London; and if so, much less than 1 per cent. would have to be supplied for the whole country. Attention was too apt to be distracted from the predominant factor of overcrowding, and turned to matters of far less influence. The dilemma when rookeries were pulled down was that overcrowding was caused elsewhere, and if rents were lowered the market supply of new buildings was arrested. Of recent years a rise of 30 per cent. in the cost of building appeared to be the most serious matter. Valuable as disinfection was, there was no evidence that it could in any way eradicate phthisis; for instance, when the medical officer of health contented himself with the disinfection of the common lodging-house, he found that as many caught phthisis by day, and when the prison inspector found that the isolated died like the communities, he believed the poison was in their clothes.

X.—Woods Hutchinson, M.D.,

Professor of Comparative Pathology in the University of Buffalo, U.S.A. Lecturer on Diseases of Animals, London Polyclinic and Medical Graduates' College.

Professor Woods Hutchinson contributed a paper on the Form of the Chest in Phthisis and its Significance as eluci-

dated by Comparative Anatomy. He held that the phthisical chest was a long rounded chest, and that it corresponded in shape on the one hand with the quadrupedal form, and on the other with the adolescent human form. The apparent flatness of the phthisical chest was not real, but depended on a slipping forward of the scapulæ on the posterior wall of the chest; when the shoulders were braced back the real rounded shape became obvious. He advocated an active open-air life for persons having this type of chest, with appropriate gymnastic exercises.

XI.—J. Mitchell Bruce, M.D., F.R.C.P.,

Physician to Charing Cross Hospital; Consulting Physician to the Brompton Consumption Hospital; President of the Section.

Dr. Mitchell Bruce said that the present appeared to him to be a peculiarly proper place and time to call attention, in connection with the prevention of tuberculosis, to the prevalence of this disease in the training ships for boys in the Royal Navy, and to its probable causation. He submitted the following figures taken from the Statistical Report of the Health of the Navy for the year 1897—the latest published. The first set of figures showed that tuberculosis was very common in the vessels of the training service:

Complement of Ships of the Training Service Home Station, 1897.	Invalidings and Deaths from Phthisis.	Per 1,000.
8,065	61 + 4 = 65	8.0

He compared these figures with those relating to all ships on the home station:

Complement of Ships on the Home Station, 1897.	Invalidings and Deaths from Phthisis.	Per 1,000
43,900	205 + 15 = 220	5.0

It was evident that these figures related to the whole force on the Home Station, inclusive of the training ships, and therefore showed less difference than really existed between the prevalence of tuberculosis amongst boys and that amongst men in the service.

He then compared the frequency of invaliding and mortality from tuberculosis in the navy with the mortality from phthisis in the general population:

Mortality from phthisis in the general population (aged 15 to 45 years) England and Wales (Sir Hugh Beevor)... ... ... 2.53

Although the comparison instituted was between simple mortality on the one hand and invaliding plus mortality on the other, yet we might fairly say that the loss of useful life to the country from tuberculosis was probably three times as great in the training ships for boys in our navy as in the general population. This was a sufficiently startling conclusion, but it became more startling when we remembered that the boys whose lives are thus wrecked by tuberculosis were admitted to the navy after a strict medical test a year or two before, that is, in perfect and robust health. In seeking for the cause of this high mortality one's suspicions naturally fell upon the quarters in which the boys lived, for there had been a general agreement of opinion in this discussion on the prevention of tuberculosis that insanitation was a powerful factor in the causation of the disease. He had compared the returns of the health of the boys under two different circumstances of life: on a wooden ship and on an iron ship. The figures were as follows:

Name and Class of Ship.	Complement.	Invalidings and Deaths from all Diseases.	Percentage.
Black Prince (iron) ...	320	7 + 2 = 9	2.812
Impregnable (wooden)	1,545	66 + 11 = 77	4.98

Unfortunately these figures did not relate to tuberculosis, but to all diseases. He therefore had to ask for private information from officers of the service, and he had been told (1) that the most common cause of invaliding and death on the training ships for boys was diseases of the lungs and pleura, and one might, therefore, accept these figures as fairly correct evidence of the relative prevalence of tuberculosis on the two classes of ships; (2) that the old wooden ships were overcrowded, low decked, and wretchedly ventilated, full of decay, their timbers soaked with the damp of ages, and the cracks and crannies the most favourable places possible for harbouring and developing the tubercle bacillus. This appeared to him to be a grave state of affairs which called for remedy, and for remedy without delay. In the light of our present knowledge of the causation of tuberculosis, surely the old wooden ships as a home for boys should be at once broken up, and either iron ships substituted for them, or barracks in which the boys should sleep, if they must still drill on board.

XII.—Alfred R. Parsons, M.D.,

Physician to the City of Dublin Hospital.

Dr. Parsons laid particular emphasis on the importance of frequent examination of the sputum for tubercle bacilli in the early diagnosis of pulmonary phthisis. While admitting that there was undoubtedly a stage of the disease in which there was no expectoration, or in which the expectoration did not contain tubercle bacilli, he questioned the possibility of making a positive diagnosis of phthisis in this stage from physical examination of the chest. A cough which the patient could not shake off, a sudden hæmoptysis, some slight alteration in the breath sounds over the apex of one lung should strongly suggest tuberculosis, but for the purpose of comparing statistics it was of the greatest importance in classifying results that patients in whom the diagnosis was verified by a detection of the tubercle bacilli should be kept in a different class from those in which the bacilli were not found.

XIII.—Alfred Hillier, M.D.,

London.

Dr. Hillier said that the open-air treatment of phthisis in sanatoria and also in private houses had a special interest for him, as he had formerly been for ten years in practice in South Africa, during which time he had ample opportunities of seeing consumptives under various conditions. He had seen them at high altitudes in South Africa and on the coast, in the veldt and at sea, and the conclusion he had come to was that the benefit derived was directly proportionate to the extent to which the patient was able to obtain pure air. Of all the remedies prescribed for the consumptive, there was nothing more uncertain in its character than the ocean voyage. An ocean voyage was an empty phrase—it might mean anything. The consumptive owner of a yacht with a state cabin on deck could convert his vessel into a floating sanatorium, and enjoy the open-air treatment doubtless with real advantage, but the average ocean passenger on a steamer carrying her complement of passengers would in all probability have to put up with a cabin below, the porthole of which might have to be kept closed. A stuffy ship's cabin in which the consumptive spent some eight or ten hours out of the twenty-four was worse than a room in a city with its windows open. Dr. Hillier then discussed the question of prevention in regard to the dangerous practice of consumptives expectorating indiscriminately, and supported the widespread dissemination of papers of simple instructions for the general public in precautions against the occurrence and spread of tuberculosis.

XIV.—A. G. S. Mahomed, M.R.C.S.,

Bournemouth.

Mr. Mahomed complained that though England was the richest country in the world and phthisis common in it, nothing had yet been done to extend the open-air treatment to the poorer classes. If they wished to eradicate the disease they must begin at the bottom of the social scale. The rich they need not trouble about. It was the poor consumptive who, dwelling in overpopulated districts spread phthisis. The National Association already possessed funds, he thought, to build and equip at least two barracks where the method in its entirety could be carried out, but hitherto they had done nothing but distribute leaflets. Even rich Boards of Guard-

ians could hardly be expected to build institutions for this treatment, but he was sure few Boards would object to maintain their consumptives in such places. They would thus segregate their cases and give them the best chance of recovery.

XV.—StClair Thomson, M.D., F.R.C.S.,
Physician to the Throat Hospital, Golden Square; Surgeon to the Royal Ear Hospital, London.

Dr. StClair Thomson referred to the early diagnosis of phthisis by the laryngoscope. Tuberculous laryngitis, when once established, was, of course, easy to diagnose, and the local appearances were characteristic, but at an earlier stage we met with what he ventured to call "pre-tuberculous laryngitis." The local conditions might be only those of general catarrh; injection or granulation on one vocal cord; or slight interarytenoid thickening and ulceration. This latter was the most difficult to see, as it was not only on the posterior laryngeal wall, but also low down. When mischief was limited to one side it should always raise suspicion, for it was not likely that a laryngitis due to ordinary catarrh or voice misuse should be unilateral. These local symptoms became strongly suggestive of tuberculosis if associated with the general signs. In every such case the tubercle bacillus was not present, and he deprecated waiting for the development of more marked symptoms, or for the detection of the bacillus before initiating treatment. There appeared to be a tendency for practitioners to shirk the responsibility of diagnosis, and lay it entirely on the shoulders of the pathologist. This postponement of diagnosis might be better for the strict accuracy of statistics; but it would be worse for the patients. In the absence of treatment it often required a year or more before decided pulmonary symptoms were present or the tubercle bacillus was detected. In some of these observations Dr. StClair Thomson had had the advantage of having the confirmation of the President (Dr. Mitchell Bruce). As regarded the treatment the local medication had been limited to voice rest, cough sedatives, and finally cleansing with alkaline sprays and antiseptics. But much more important than this had been the general treatment which had been carried out with success even in London. Briefly stated, it had consisted of general hygiene, food, and air; but the greatest of these was air.

XVI.—J. Lardner Green, M.R.C.S.
Salisbury.

Mr. Lardner Green as his contribution to the discussion. read a paper on the inhalation of a very fine spray of a dilute solution of formalin as a preparation for and an aid to the open-air treatment of phthisis.

XVII.—Arthur Newsholme, M.D., F.R.C.P.,
Medical Officer of Health for Brighton.

Dr. Newsholme said that the only factor which could be attacked was that of the communicability of phthisis, and to bring this about the medical officer of health must be brought into action. It was known that there were certain houses and districts around which phthisis clung and the medical officer of health could remove these houses. He advocated early voluntary notification, as at present obtained in Brighton, and was there carried out without any friction. The houses in which the deaths from phthisis occurred were visited and treated as after an infectious disease. But it was important not to wait for death before commencing preventive measures, but to visit the houses as soon as it was known that a case had occurred, thus diminishing, say by six months, the exposure of others to desiccated sputa.

XVIII.—W. Denton Johns, B.A., M.B.,
Bournemouth.

Dr. Denton Johns described the open-air treatment of phthisis in England. He compared the sanatorium with the climatic treatment of phthisis, and said he much preferred the sanatorium treatment in the English climate to the most perfect climate without sanatorium methods. He divided sanatorium treatment into two systems, one in which the patients lived and had their meals together, and the other in which they were isolated, and recommended the system of isolation. He showed a patient looking in robust health who had been treated by this method.

XIX.—William T. Gardner, M.B.,
Bournemouth.

Dr. Gardner narrated his experience in carrying out the open-air treatment of phthisis in Bournemouth. He showed photographs of a new and convenient form of kiosk. He thought a sanatorium was not essential, but that an ordinary garden might suffice. He considered that the treatment should be continued for some months after the tubercle bacilli had disappeared from the sputum.

XX.—William Calwell, M.A., M.D.,
Physician to the Consumption Department of the Belfast Royal Hospital.

Dr. Calwell upheld the necessity of teaching the public both personal and public hygiene. If Lister attacked the seeds of disease, the hygienic treatment attacked the ground on which the seed was to be sown. He pointed out that the tendency, or the want of the tendency, to fibroid formation under the irritation of tubercle had never been explained; it was perhaps a question of "vitality." The progress depended on the existence in any case of a tendency to fibroid formation, and where it was present good results followed. In his experience the best results followed the hygienic treatment, of which undoubtedly the most important factor was the constant supply of fresh air.

XXI.—F. W. Burton-Fanning, M.D.,
Physician to the Norfolk and Norwich Hospital, Norwich.

Dr. Burton-Fanning remarked that the difference between the old treatment, in which fresh air, food, and rest were casually mentioned to the patient, and left to him to follow or not as he liked, and the present sanatorium treatment was in the seriousness with which these measures were used; now the greatest stress was laid on these details, and moreover they were exactly apportioned to the needs of each individual. He thought that, although everybody allowed that proclivity was the most practically important factor in the causation of phthisis, yet the main source of the virus was the discharge from tuberculous patients, and that the preventive measures advocated by the National Association for the Prevention of Consumption were of great importance. At Nordrach special stress was laid on the part played by the mildest forms of mental exertion or excitement in the production and maintenance of fever, and for all febrile patients complete seclusion was thought best. He had certainly seen a rise of temperature follow indulgence in a round game. In this connection it was interesting to note that Bodington of Warwickshire—the real foreshadower of the open-air treatment—looked upon the fever of consumptives as largely nervous, and treated it with frequent doses of morphine. So long as there was some reliable person to supervise the carrying out of the doctor's orders, to take the temperature regularly, and to note the slightest warnings of any unfavourable symptom, he thought that many cases could be satisfactorily treated in their own homes. He was much interested in the satisfactory result exhibited by Dr. Johns; he himself had had several cavity cases in which, after the lapse of six or more months, amphoric breath sounds and *râles* had become replaced by very weak breathing with immobile chest wall. In regard to the National Association, he would say that not only was it moving in the matter of prevention, but it was also now about to build a sanatorium for the London poor.

XXII.—S. Tristram Pruen, M.D.,
Physician to the Cotswold Sanatorium, Cheltenham.

Dr. Pruen pointed out that though diet was no more important than open air or drugs it was rarely discussed in detail. The best sanatoria had a dietary in which the proteid and fat were nearly equal to that contained in 13 pints of milk, the proteid being rather less and the fat rather more in the sanatorium diet. This diet was obtained empirically; but it was interesting to notice its resemblance to milk, as the results were the same as those obtained by a child in its diet of milk. It put on fat and muscle, increased the resisting power of its tissues to disease, and gained about one-twelfth

in weight in each month. With regard to amusements though much might be allowed in very early stages or during convalescence, in practically all the cases which came to sanatoria it was most important to stop all amusements involving excitement or violent exercise. Even whist and tennis were undesirable. A very little over-exertion or excitement sent up the temperature and sent down the weight to a degree out of all apparent proportion to the cause. The more monotonous the life the safer for the patient. Monotony had no depressing effect on the patient's mind if it were accompanied by steady improvement in the general condition and a gain in weight each week. He showed a chart which gave the constituents of various diets, and remarked that four out of five patients could, by observing certain precautions as to rest and diet, take the sanatoria diet without very great difficulty.

PAPERS ON URIC ACID AND GOUT.

I.—URIC ACID AND THE CIRCULATION;

SOME NEW METHODS OF ESTIMATING ITS EFFECTS.

By Alexander Haig, M.A., M.D.Oxon., F.R.C.P.,
Physician to the Metropolitan Hospital and to the Royal Hospital for Children and Women.

High blood pressure and defective capillary circulation are constant concomitants of the headache and mental depression due to uric acid. The headache and mental depression are known to be due to uric acid because all diet and drug treatment which relieves them diminishes the amount of this substance in the blood and urine, and swallowing uric acid will always produce them. They are directly due to high pressure and defective circulation in the skull, and these again are due to general high blood pressure. If uric acid is, as I have elsewhere suggested, the cause of defective capillary circulation and high blood pressure there ought not to be much difficulty in demonstrating the fact, and I desire to describe some methods I have devised and some results I have obtained in putting the question to the test.

I have been pointing out for years that most drugs found empirically to lower blood pressure diminish the uric acid in the urine and blood, and conversely that most drugs which raise the blood pressure increase it. Then milk diet has long been relied on as a remedy for unduly high blood pressure and it is precisely the diet I use to diminish the uric acid in the blood and urine. I have already also shown that uric acid in colloid form obstructs to a very marked extent the vessels of an excised organ through which it is passed, and may even block them completely.

Again, clinically fever lowers blood pressure, and it is easy to show that it almost clears the blood and urine of uric acid. After the fever the uric acid held back returns into the blood and urine, and the blood pressure is raised to a corresponding extent. I have pointed out as a law that the excretion of water in the urine varies inversely as the uric acid, and the simplest explanation of this fact is that colloid uric acid blocks the complex renal capillaries, and diminishes the outflow of water. Here, again, drugs that diminish the excretion of uric acid increase the water and *vice versâ*. Similarly to a certain extent the exretion of urea varies inversely with that of uric acid, for the formation and excretion of urea are dependent on freedom of of capillary circulation in the tissues, and uric acid appears to control this. Similarly, surface and deep temperatures are furthest apart at those times of the physiological day, or in those pathological conditions (as headache and mental depression) in which there is the largest excretion of uric acid in the urine. Hence surface and deep temperatures are close together in fevers and far apart in post-febrile conditions. Blood quality alters in the same way, falling with much uric acid, rising with little. Thus we can tell the onset of any fever by the clearing up of headache and mental depression, and the replacement of these by mental brilliancy and well-being, by rising urea, increasing blood decimal, increasing urinary water, increasing excretion of water from the lungs, and diminishing distance between surface and deep temperatures; all these and their variations in either direction represent the effects of uric acid on circulation and metabolism.

But all these give considerable trouble to estimate accurately, and even measuring the urinary water from hour to hour and taking the corresponding surface and deep temperatures is no light task if continued for any time. I have therefore been in search of a test which might be completed more quickly in patient after patient, without loss of time, and almost without any instruments. This test, it has long appeared to me, I might obtain if I could measure accurately the capillary circulation or its effects—in the retina, for instance; and an observation made by Raynaud led me to the more generally useful measurement of the rate of capillary circulation in the skin. Raynaud says, in a passage which I have quoted in *Uric Acid* (p. 366 of Ed. iv), that when the vessels in the skin of a finger affected by local asphyxia are emptied by pressure, as much as thirty seconds may elapse before it regains its colour, while in the skin of a normal extremity the colour returns in one or two seconds. It struck me that if there is all this difference between the normal return and the pathological return; and if Raynaud's disease is, as I have suggested, due to collæmia,[1] I might find differences in time of return of the blood corresponding to the physiological, drug action, and other pathological fluctuations of uric acid; differences not so marked as those above mentioned, but still sufficiently marked to be clinically useful. I accordingly began to measure experimentally the times of what I call the capillary reflux—that is, the time in which the colour returns in, say, a given area in the back of the hand when removed by pressure. And after a time I adopted an instrument[2] which gives a constant definite area of pressure, a definite and measurable force, the pressure being applied for a definite and constant time, measured by a metronome beating half seconds, the length of time the blood and colour take to return being measured by the same instrument.

With regard to the eye, I eventually adopted the measurement by the same metronome of the duration of a certain phase of the "after-image" produced by a constant light at a constant distance, and with a constant time of exposure. To enable me to watch and control the results of these processes I kept them in action over many months of daily estimation of the urine, all results being recorded in curves, some of which I show, and I observed at the same hours either the size of the radial artery by Oliver's arteriometer, or the blood pressure by the Hill Barnard sphygmometer made by Hicks, of Hatton Garden, and the pulse-rate, and added occasional observations of temperatures and blood granules to test the other results.

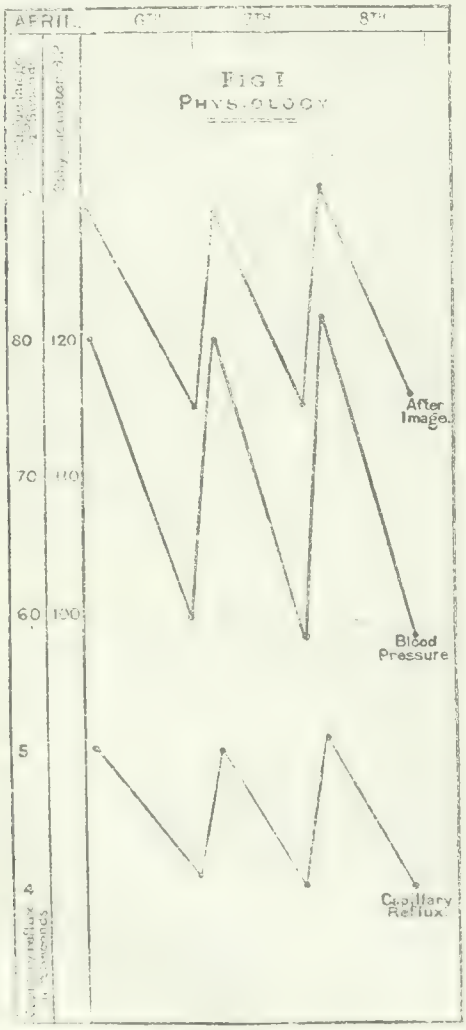
I soon found that the whole of these tests recorded in the most striking manner all the marked fluctuations in the excretion of uric acid, whether due to physiology, drug action, or pathology. Thus in physiology the capillary reflux takes in the morning (7 A.M. general time of observations) 5 to 6 half-seconds; in the evening (10.30 to 11 P.M.) 4 to 5 half-seconds or less. The after-image reaches a certain stage in disappearance in the morning in 80 to 90 half-seconds, and in the evening in 70 to 80 half-seconds. The pulse-rate, as already pointed out, in uric acid is slower in the morning (68), and quicker in the evening (72 to 76), and the arteriometer gives measurements in the morning of 1.2 to 1.3 mm., and in the evening 1.0 to 1.1 mm., and the sphygmometer records blood pressures of 120 or 130 in the morning, and 95 to 105 in the evening.

In pathology one gets capillary refluxes of 6 in a slight headache with a blood pressure of 130 up to refluxes of 8 to 10—12 or more in Bright's disease with blood pressures of 160 to 180, and arteriometer measurements of 1.8 to 2.0 mm. or above. Or, on the other hand, in fever, one gets a reflux of 2 to 3 or under 4 half seconds, and a blood pressure of 70 to 100.

In drug action it is possible to make almost any variations on the normal readings of physiology at pleasure; thus the normal curves can be inverted, making the highest blood pressures and slowest capillary refluxes in the evening instead of the morning, or the fluctuations can be diminished making the curves almost into straight lines with little variation between morning and evening; great general changes of level can be produced by the action of salicylates on excretion, or a single dose of this drug taken two or three hours before the evening observation will convert the normal fall of pressure into a rise, and cause a slow capillary reflux in place of a quick one.

It is, however, impossible to control the blood pressure and capillary circulation curves except by controlling the excre-

tion of uric acid in the urine and the number of granules in the blood, just as I have previously pointed out the possibility of controlling these latter, so now can the capillary reflux and the blood pressure be altered and controlled at pleasure. But in the observation of the capillary circulation we have a test which can be applied to anyone, at any place and time, and practically without instruments; as differences such as those between the 2 or 3 half seconds of fever, and the 5 or 6 half seconds of collæmic headache or depression, and still more the 8 to 10 or 12 half seconds of Bright's disease are sufficiently marked to be seen by anyone, and with no more accurate instruments than the point of the finger and the second hand of the watch, or even without the latter by merely counting time.



With regard to the capillary refluxes observed in the back of the hand there are only two points that must not be neglected: (1) to see that the hand is at or about the same level as the heart at the time of the observation; and (2) not to trust observations on a hand which obviously differs a good deal from the temperature of the rest of the body. With a patient in bed a hand brought out from beneath the bed clothes will probably give correct results; but if the hand is outside, and feels cold without the veins showing, the capillary reflux will be too slow. This, however, does not greatly affect such a marked condition as that of fever, as the capillary reflux will be notably fast in a febrile patient, even though the extremity is cool or cold.

The "after-image" test is not so generally useful, depending as it does so much on the training and powers of observation of the patient, and I have used it chiefly in myself to enable me to allow for the disturbing effects of cold weather on the capillary reflux of the skin. It gives, however, very marked results in all the larger fluctuations of the other circulation curves; and these results can probably be repeated by anyone after a few days' practice of the method.

Children, as a rule, are slower than adults, and there are no doubt also slight individual variations, but these are never of sufficient importance to obscure the main results in pathology, though here and there they may render physiological results less clear than in the curves I now give.

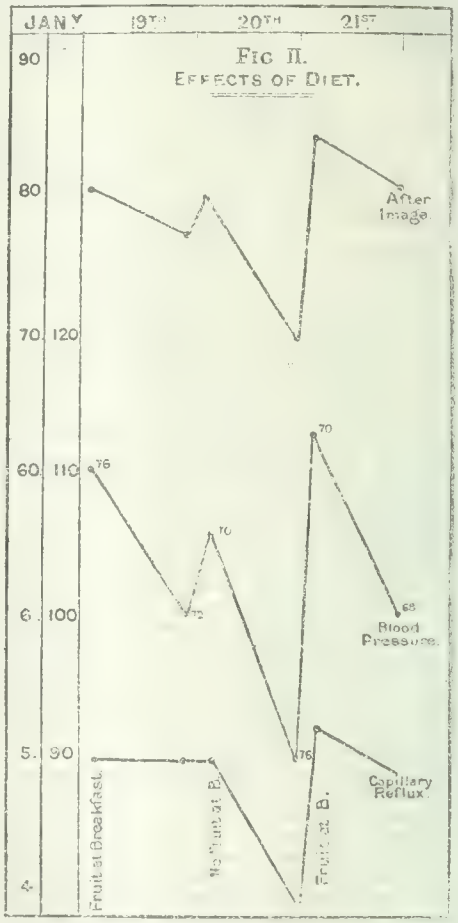
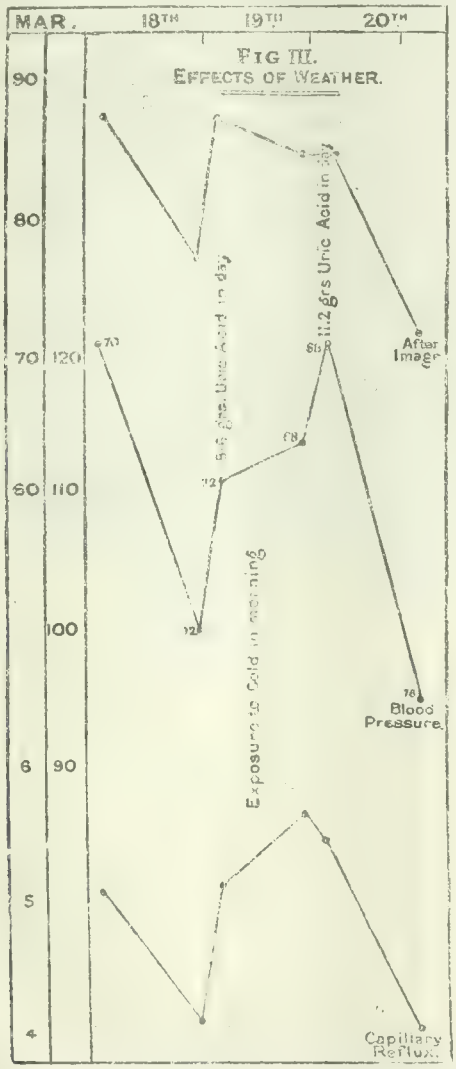
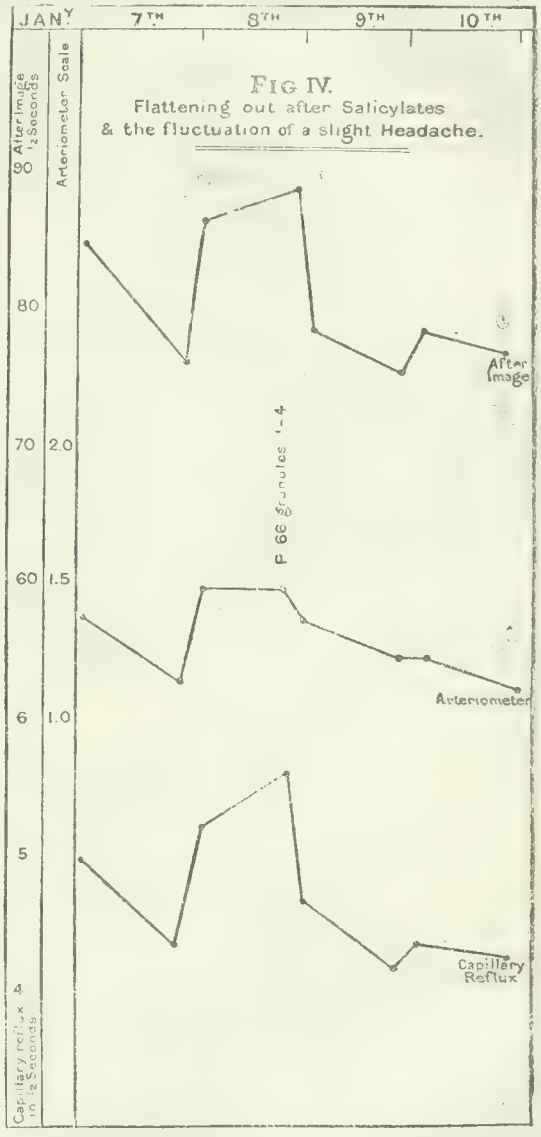


Fig. 1 shows the normal diurnal fluctuation of physiology, the capillary reflux being slow in the morning and quick in the evening, and the blood pressure being high in the morning from millions of obstructed capillaries, and low in the evening because they are freer, and the "after-image" being slower of disappearance in the morning and quicker in the evening, probably because the effects of fatigue are more quickly made good, the better the capillary circulation. The fluctuations of all three are due to and obviously correspond with, the well-known diurnal fluctuation in the excretion of uric acid and the amount passing through the blood into the urine, which, as shown either by the hourly estimation of the excretion in the urine or the granules in the blood—which I have previously demonstrated to correspond with this—is large in the morning and small in the evening. Fig. 2 shows the effects of diet on the excretion of uric acid and so on the form of the curves. Acid fruits were taken at breakfast on the mornings of the 19th and 21st, but were left out or replaced by potatoes containing alkali on the morning of the 20th. Now, the effect of taking acid fruits at breakfast is to diminish the morning excretion of uric acid during the hours following breakfast, and then the uric acid held back in the morning tends to come into

the blood in the afternoon and evening and prevent the usual evening fall of blood pressure due to quickened and freed capillary circulation. There being still a good deal of uric acid in the blood there is a less free capillary circulation and a smaller fall of blood pressure, its result. Hence, on the 19th and 21st there is but little of the normal diurnal fluctuation; on the 20th, with a normal excretion of uric acid in the morning the fluctuation is normal. I should, perhaps, point out that the acid fruit was taken at breakfast, after the morning observation had been made, so that it did not directly affect this result; it did, however, affect the evening result, and so the extent of the fluctuation for the day.



A similar flattening out of the curves can be produced by any other method of equalising the excretion of uric acid throughout the 24 hours; thus a dose of alkali at night will after a night or two diminish the excretion of uric acid in the A.M. hours, and prevent part of the morning slowing of capillary circulation and rise of blood pressure; in the same way a course of alkali or a course of salicylate will after a few days both diminish the amount of available uric acid, and more or less equalise its excretion throughout the 24 hours, and the curves follow and demonstrate these results. The first effect of a course of salicylate is to cause a larger excretion of uric acid in the evenings than in the mornings, and the capillary circulation is then slower and the blood pressure higher in the evening than in the morning, the normal curves of Fig. 1 being thus absolutely reversed; and a single dose of salicylate taken after dinner will prevent more or less the usual evening freeing of capillaries and fall of blood pressure, and some of these effects we shall see in the other figures. The effect of salicylate in slowing the capillary reflux is seen in an exaggerated degree in acute rheumatism, where a capillary reflux of 4 during the fever alters to 8, 10, or above, as the temperature falls under salicylates, thus demonstrating a large excess of uric acid in the blood as the joint pains are relieved. A single dose will produce a similar though less-



marked effect in physiology, and in both cases a proportional increase of blood granules marks the change from the quick to the slow reflux. Fig. 3 shows the somewhat similar effects of weather, for exposure to cold during the morning and afternoon of the 19th diminished the A.M. and early P.M. excretion of uric acid, and adding it on to the evening produced a slight rise or, at least, an absence of fall. The other two days are more or less normal, though the 20th is slightly affected by the altered excretion of the 19th. It will be noted that the curves in parts of this figure do not strictly correspond; I do not claim that they do so, for unavoidable errors of observation prevent it, but these errors have not been in my experience sufficient to obscure the main fluctuations, which are practically the same for all.

If we control the uric acid—and this can be shown by ex

amining the urine and blood from hour to hour—we control the curves; but if for any reason we fail to control the uric acid, we also fail to alter the curves; and such experiences have given me the most complete confidence in the reality and accuracy of the results. As I have found the curves rising when I expected a fall, or falling when I had expected a rise; and then on subsequent examination of the blood and urine I have found that some other force had moved the uric acid in the direction I least expected. Fig. 4 (p. 1161) shows the flattening out of the curves during the low excretion of uric acid which follows for some days after a course of salicylates, and a very similar effect can be produced by a course of alkali. And on the 8th it also shows a fluctuation in excretion with slow capillary circulation and high blood pressure in the evening producing a slight headache and a pulse of 66, and during this the blood granules rose to 1 to 4 red cells.[3] Such a fluctuation and headache being a common result of the oscillations in excretion which follow the use of these powerful excretants. In this figure the middle curve is that of the diameter of the radial artery, as obtained by Dr. Oliver's arteriometer in place of the sphygmometer curves in the other figures; though the sphygmometer shows the fluctuations better, and the errors with it are relatively less, as pointed out by its inventors. And in the case of the capillary slowing and high rise of blood pressure which produces a headache there is another instrument which will corroborate the results—namely, the thermometer; for this gives the test which Marey originally pointed out as the sign of contracted surface vessels (it is really the sign I think of obstructed capillaries, and of capillaries obstructed by uric acid, for uric acid will, for reasons which I hope my previous researches have made obvious, obstruct to a greater extent the vessels of the exposed surface and extremities, and to a less extent those of the deeper tissues). This sign consists of a wide separation between the temperature in the mouth and that in the rectum, and in such fluctuations of uric acid and of the capillary circulation it controls, in headache and all similar conditions of collæmia, we find a larger distance than usual separating the temperature in the mouth from that in the rectum. Thus, on a headache evening with curves similar to the above the temperature in the mouth was 97.6, and in the rectum 98.6, a whole degree apart; but on the following evening, with normal curves at the same hour, it was in the mouth 98.0 and in the rectum 98.4, less than half a degree apart.

I have long known and pointed out that I could produce a headache at will by causing similar fluctuations in the excretion of uric acid; but by watching these morning and evening fluctuations one sees much more clearly than was formerly possible the real relations of cause and effect, and obtains a power of control which is correspondingly greater and more exact. Fig. 5 shows the effect of a rise of temperature. Here on the 23rd and 24th, the curves are fairly normal curves of capillary reflux and after-image; but on the morning of the 25th the temperature in the mouth was 99.6°, and this sufficed to keep the capillary reflux as quick, or slightly quicker, than on the previous evening. Here again the thermometer would have corroborated our results, as the temperatures in the mouth and rectum are close together with rising fever, and another very common concomitant result testifying to free capillaries in the kidney is a diuresis.

I have made observations on a large number of people with regard to the physiological fluctuations shown in Fig. 1, and as all I have observed practically show the same thing I have not kept records of the results; anyone can duplicate these results, or some of the modifications shown in other figures, on themselves; and pathological conditions of high blood pressure such as Bright's disease tend to show higher blood pressure, slower pulse-rate and slower capillary reflux in the morning and lower blood pressure, quicker pulse-rate and quicker capillary reflux in the evening, and these fluctuations have no doubt exactly the same causation as the similar ones of physiology, and, like these also, can be controlled to a very large extent by diet, weather, clothing, and drugs of one kind or another which influence the quantity and solubility of uric acid in the blood.

These tests then are practically measurements of the amount of uric acid in the blood, and they are accurate enough to correspond to the well-known diurnal fluctuations in the excretion of this substance, and the modifications that can be produced in these by diet, by weather, and by drugs; and still more clearly do they show the great pathological alterations produced by Bright's disease on the one hand and fever on the other. The results obtained with these tests can be corroborated if necessary by the direct examination of the granules in the blood itself, by testing the hourly excretion of uric acid in the urine (which I have elsewhere shown corresponds from hour to hour with the number of granules in the blood) by measuring the hourly excretion of water in the urine, or the water expired from the lungs, or the distance between the temperature in the mouth and rectum. The most useful of all these tests because of its simplicity and the rapid way in which it can be used in case after case at the rate of from 2 to 4 in a minute, is the capillary reflux. For daily clinical work it practically requires no instrument, as the habit of counting half seconds with sufficient accuracy is easily acquired, and it is possible to march down the side of a ward spending less than half a minute at each bed, and to separate out on the one hand the cases of fever, and on the other those of post-febrile subnormal temperature, high blood pressure, Bright's disease, and diabetes, conditions of defective (because obstructed) capillary circulation, the defective combustion and high blood pressure being the result of this. If there were a case of Raynaud's disease the result might be still more marked than in any of the above. When using it for pathology also we must bear in mind that children are rather slower than adults, just as they have generally more granules in their blood and more uric acid in their urine than adults have. Also that the quick reflux of fever may be slowed somewhat by the presence of conditions of dyspnœa and cyanosis, as these tend to increase the uric acid in the blood and urine, thus antagonising somewhat the effects of fever, and slowing to a corresponding extent the capillary reflux. On the other hand, the slow reflux of Bright's disease and similar conditions may be quickened by venous congestion, whether local, as produced by a ligature round the arm, as pointed out by Raynaud,[4] or general, and due to cardiac or thoracic disease or obstruction.

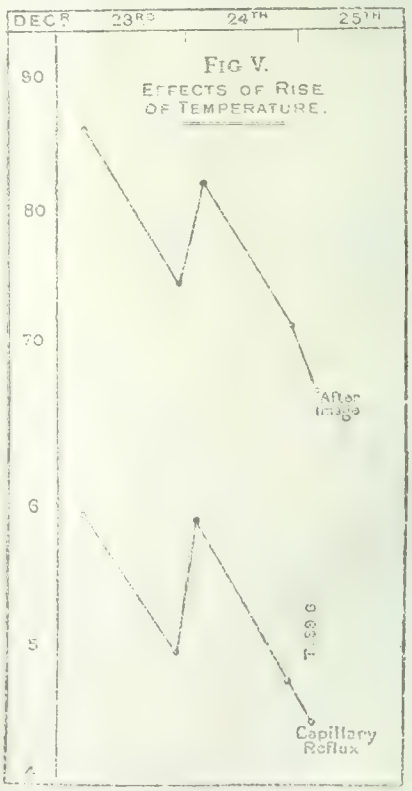


FIG V.
EFFECTS OF RISE OF TEMPERATURE.

It is clear then that we have two causes of quickening of the capillary reflex: (1) Freedom of capillaries from obstruc-

tion by collæmia, and (2) obstruction in front between the capillaries and the heart on the venous side. I had recently an extremely good illustration of this in a patient (girl, aged 10) under my care at the Metropolitan Hospital in the last stages of rheumatic morbus cordis. She had as a complication thrombosis of some of the veins on the left side of the neck causing, among other things, œdema and venous congestion of the left arm; and then the house-physician, Dr. Jenkins, noticed that her capillary reflux was slower in the right arm than in the left, and I then found that it was 9 in the right arm (that is, slow because of dyspnœa cyanosis and general failure of the circulation) and 6 in the left. Here blood pressure was low (only 70 to 80), but there were present all the conditions of capillary circulation that would have produced high blood pressure if the heart had been equal to the task. The slow reflux in the right arm was due to the collæmia of low nutrition cyanosis and dyspnœa, and this was very distinctly quickened in the left arm by venous congestion, due to the thrombosis. I use the test also with great confidence in the out-patient room, where it enables me at once to pick out cases of high blood pressure and Bright's disease, or to say when a temperature ought to be taken, or where a coated tongue, or a pulse perhaps quick from momentary excitement, are not accompanied by any fever.

The test is thus of wide clinical value quite apart from the fact that it is a guide to the blood pressure and its cause—the amount of uric acid in the blood. And when we realise that the defective circulation which we can thus see in front of us is a correct index of the condition of the whole body, from the highest capillary in the scalp to the lowest in the sole of the foot, and the deepest in the liver and kidney, we can understand, at least in part, what an immense power is thus exerted by uric acid over the circulation, nutrition, and function of the whole body and all its tissues on the one hand, and, on the other, the way in which it controls the intravascular pressure and the work of the heart; and partly through the capillaries and partly through the blood pressure, dominates also the function and nutrition of the great nerve centres. Uric acid is thus proved to be a cause not a consequence, and the uric acid headache the epitome of a wide field in pathology.

The association between a large excretion of uric acid in the urine and high blood pressure first observed in this disease is but one instance of a general law. The headache is the mechanical result of high blood pressure, and this again is the mechanical result of capillaries obstructed by colloid uric acid. The low and falling urea which accompanies the headache is the first intimation of the defective combustion (Bright's disease) in which the untreated headache ends.

The reality of our knowledge is testified by the power we obtain to control uric acid and all its effects; and we can demonstrate that its control of the capillary circulation of the body is so complete that any accurate record of that circulation is an index of the quantity of uric acid in the blood and urine.

NOTES AND REFERENCES.

[1] *Uric Acid in Colloid Form in the Blood.* [2] Capillary dynamometer made by Hawksley of Oxford Street, W. [3] 1-20 being their normal ratio at that hour. [4] See previous reference to *Uric Acid*, Ed. iv.

II.—THE GELATINOUS FORM OF SODIUM BIURATE, AND ITS BEARING ON THE PATHOLOGY AND TREATMENT OF GOUT.

By ARTHUR P. LUFF, M.D., B.Sc., F.R.C.P.,
Physician in charge of Out-paticnts, St. Mary's Hospital.

ALTHOUGH differences of opinion may exist as to the actual source or sources of the compounds of uric acid met with in the blood of gouty patients, yet there can be no doubt, from the researches of Sir William Roberts, that uric acid when first introduced into the blood exists solely therein as the sodium quadriurate. This quadriurate is, in the dissolved state, a very unstable body, and soon changes into the sodium biurate, which, however, is not at once precipitated, since it at first assumes the form of the gelatinous biurate, in which form it is a much more soluble compound than the crystalline biurate. This gelatinous modification is afterwards converted, either slowly or rapidly, according to various conditions, into the crystalline compound. The gelatinous form of the sodium biurate has been briefly studied and described by Dr. Ord and by Sir William Roberts, but owing to difficulties in connection with its preparation and manipulation, its physical and chemical properties, and its bearing upon the gouty process have not hitherto received the attention that this phase of the subject deserves. It was originally at the suggestion of the late Sir William Roberts that I undertook an investigation of this gelatinous form of the sodium biurate, and towards the expenses of the research a grant was kindly made by the Scientific Grants Committee of the British Medical Association. I do not not propose in this short communication to give details of the various ways in which I have prepared the gelatinous form of the biurate, nor do I propose to give in detail its various physical and chemical properties. Such details I reserve for a longer paper that I shall subsequently publish. In this communication I wish to describe the results of a few of the experiments that I have conducted and which apparently promise to throw some light on the means at our disposal for checking a gouty attack or for diminishing its severity.

NATURE OF THE EXPERIMENTS.

I find that the gelatinous form of sodium biurate is about five times as soluble in blood serum and artificial blood serum as the crystalline variety, and it is to a few of the experiments concerning the behaviour of the gelatinous biurate in artificial blood serum that I here wish to direct attention. The experiments were conducted in the following manner: Five bottles containing artificial blood serum at 98° F., with 1.50 per cent. of the gelatinous sodium biurate added, were treated as follows: No. 1 was left unaltered, No. 2 had its alkalinity increased by the addition of 0.1 per cent. of sodium bicarbonate, No. 3 by the addition of 0.3 per cent., No. 4 by the addition of 0.8 per cent., and No. 5 by the addition of 1.0 per cent. The bottles were kept in a warm chamber at the blood heat, and every minute a small quantity of the contents of each bottle was removed, examined under the microscope, and the time at which the acicular crystals of sodium biurate first made their appearance was noted. The results are shown in the following table:

Table I.—Showing the Time Effect of Sodium Bicarbonate on the Conversion of the Gelatinous Biurate into the Crystalline Form.

	Crystals of Sodium Biurate First Appeared in.
No. 1.—Artificial blood serum containing 1.50 per cent. of gelatinous sodium biurate ...	10 minutes.
No. 2.—The same as No. 1, but containing 0.1 per cent. of added sodium bicarbonate ...	7 ,,
No. 3.—The same as No. 1, but containing 0.3 per cent. of added sodium bicarbonate ...	5 ,,
No. 4.—The same as No. 1, but containing 0.8 per cent. of added sodium bicarbonate ...	3 ,,
No. 5.—The same as No. 1, but containing 1.0 per cent. of added sodium bicarbonate ...	2 ,,

These results show that the proportionately increased alkalinity of the serum with sodium bicarbonate proportionately accelerated the conversion of the gelatinous biurate into the crystalline variety. It was also very evident to the naked eye at the end of half an hour that the higher the proportion of sodium bicarbonate present the greater was the bulk of the precipitate. The five bottles were kept in the warm chamber for twenty-four hours, when their contents were filtered, and the respective amounts of sodium biurate remaining in solution in the gelatinous form were estimated. These results are shown in the following table:

TABLE II.—*Showing the Effect of Sodium Bicarbonate on the Conversion of the Gelatinous Biurate into the Crystalline Form at the end of Twenty-four Hours.*

	Gelatinous Biurate left in Solution. (In Parts per 1.000.)
No. 1	0.64
No. 2	0.57
No. 3	0.43
No. 4	0.24
No. 5	0.22

These results confirm those of Table I, and show that the higher the alkalinity of the serum from the presence of sodium bicarbonate the more complete is the conversion of the gelatinous biurate into the crystalline variety, and therefore the less is the amount of the gelatinous biurate left in solution.

A precisely similar series of experiments was then conducted, with the substitution of potassium bicarbonate for the added proportions of sodium bicarbonate. The results are shown in the following table:

Table III.—Showing the Time Effect of Potassium Bicarbonate on the Conversion of the Gelatinous Biurate into the Crystalline Form:

	Crystals of Sodium Biurate First Appeared in.
No. 1.—Artificial blood serum containing 1.50 per cent. of gelatinous sodium biurate ...	10 minutes.
No. 2.—The same as No. 1, but containing 0.1 per cent. of added potassium bicarbonate	17 ,,
No. 3.—The same as No. 1, but containing 0.3 per cent. of added potassium bicarbonate...	23 ,,
No. 4.—The same as No. 1, but containing 0.8 per cent. of added potassium bicarbonate ...	35 ,,
No. 5.—The same as No. 1, but containing 1.0 per cent. of added potassium bicarbonate ...	38 ,,

These results show that the presence of potassium bicarbonate in the serum delays the precipitation of the crystalline biurate, the extent of the delay being proportional to the amount of potassium bicarbonate present. It was very evident to the naked eye at the end of an hour that the greater the proportion of potassium bicarbonate present the smaller was the amount of sodium biurate precipitated. The effect of potassium bicarbonate on the gelatinous biurate is, therefore, precisely the opposite of that of sodium bicarbonate.

The five bottles were kept in the warm chamber for 24 hours, when their contents were filtered, and the respective amounts of sodium biurate remaining in solution in the gelatinous form were estimated. These results are shown in the following table:

Table IV.—*Showing the Effect of Potassium Bicarbonate on the Conversion of the Gelatinous Biurate into the Crystalline Form at the End of Twenty-Four Hours.*

	Gelatinous Biurate left in Solution. (In Parts per 1,000.)
No. 1	0.62
No. 2	0.69
No. 3	0.78
No. 4	1.01
No. 5	1.09

These results confirm those of the previous table, and show that the greater the proportion of potassium bicarbonate present in the serum the greater is the inhibitory effect on the conversion of the gelatinous biurate into the crystalline form, and therefore the greater is the amount of the gelatinous biurate left in solution.

Conclusions.

The higher the alkalinity of the blood from the presence of sodium bicarbonate, the more rapid and the more complete is the conversion of the soluble gelatinous biurate into the comparatively insoluble and crystalline form. In connection with this point it is instructive to bear in mind that mineral waters rich in sodium bicarbonate are well known to accelerate an attack of gout in many gouty subjects; and it is also of interest to mention here that from some observations that I have been conducting for the past eighteen months on the alkalinity of the blood of gouty patients, the results of which are not yet published, I have so far found in every gouty patient that I have examined that the alkalinity of the blood is higher than the average alkalinity of the blood of healthy individuals, and since this increased alkalinity is due to a higher proportion of sodium carbonate or bicarbonate, it can be understood, in the light of the present investigation, why such blood is prone to hasten and to augment the formation of gouty deposits. On the other hand, it is seen that when the increased alkalinity of blood serum is due to the presence of potassium bicarbonate, the conversion of the gelatinous biurate into the crystalline variety is delayed as regards time, and is considerably diminished as regards quantity, thus explaining the well-known beneficial effect of the alkaline potassium salts in the treatment of acute and subacute gout.

III.—AN EXPERIMENTAL CONTRIBUTION TO THE STUDY OF GOUT.

By William Bain, M.D., M.R.C.P.,
Harrogate.
[From the Physiological Laboratory, St. Thomas's Hospital.]

In approaching the study of gout from the chemical standpoint uric acid at once claims attention, because in this disease biurate is frequently found deposited in the tissues. Chiefly on account of this association the question of the normal production of uric acid has attracted considerable notice and forms one of the most interesting and intricate problems in chemical physiology. There are several ways in which it is supposed to be produced in the human body, namely, by synthesis of the ammonium salts with lactic acid in the liver, by decomposition of nuclein, and by the kidney synthetising urea and glycine. It is my intention not to discuss these hypotheses at any length, but to draw attention to one or two points arising out of an investigation upon which I have been engaged during the winter.

One of the chief arguments of the supporters of the kidney theory is that uric acid has not been found in the blood of healthy mammals. They maintain that if uric acid is formed in the liver it must be present in the blood and that if it cannot be detected in the blood its formation in the liver is disproved. This argument presupposes that our methods of separating uric acid from fluids rich in proteid, such as the blood, are sufficiently delicate to detect the excessively minute quantity which alone is required to explain the small excretion of normal animals. But the methods we at present possess are incapable of detecting such minute quantities.

Dr. Luff, who is the latest exponent of this theory, regards his own method as the best he is acquainted with, and yet when he added a known quantity of uric acid to blood he could only extract 87 per cent. of it, and this amount must be regarded as the maximum percentage of extraction. Having tried the various methods mentioned by Dr. Luff,[1] including his own, I came to the conclusion that they were all unreliable. The great difficulty in these methods is in obtaining a filtrate free from proteid or albumose without the uric acid being retained in the coagulum. One of the clearest filtrates was obtained by passing blood at a high pressure through a form of gelatine filter devised by Dr. Brodie, but this contained a small amount of proteose. The various filtrates were submitted to the Hopkins process, and the precipitates so obtained tested by the murœxide test, but not a trace of uric acid was detected in normal mammalian blood. I also equally failed by the same methods to detect the slightest trace of uric acid when small quantities of it were added to blood. Assuming that uric acid is formed by the liver the amount of quadriurate circulating in 500 c.cm. of normal blood at a given time must be extremely small, consequently until a reliable process is devised for detecting minute quantities of it in blood it is manifestly unfair to assert that healthy mammalian blood does not contain a trace of uric acid.

Notwithstanding extensive research the pathology of gout remains enveloped in a cloud of theories. In recent years important work has been done abroad on the excretion of the alloxur bases, but the conflicting nature of the results obtained somewhat detracts from its value. A probable explanation of these discordant results is that diverse methods were employed, and one of these (Camerer's) is known to be unreliable. Apart from that quantitative variations in excretion may also be a cause of difference; hence it is necessary to determine by an accurate method the 24 hours' excretion in a number of gouty cases. For permission to examine and

report the following case of chronic gout I am indebted to Dr. Payne, physician to St. Thomas's Hospital.

J. A., aged 67, chemical labourer, was admitted to the hospital on February 1st, 1899. His father died of gout at the age of 68. His first attack of gout occurred when he was 25, the great toe of the left foot being affected. Other attacks followed, the hands, feet, knees and shoulders being involved. There was no history of other illness or of alcoholism. The attack for which he was admitted began on January 26th. There was marked tenderness over the left shoulder joint, with pain on movement, but no swelling. The left wrist and hand were much swollen, the skin being glossy and œdematous. The carpo metacarpal joints were also considerably swollen, especially the fifth, which contained some fluid. Distortion, slight in this hand, was marked in the right. In the latter the fingers were deflected to the ulnar side, and flexed both at the metacarpo-phalangeal and interphalangeal joints, and there was also some enlargements of the joints. The first interphalangeal joint of the middle finger contained some fluid. The terminal joint of the little finger was very much enlarged, and there were numerous uratic deposits threatening to break through the skin. The interphalangeal joints of the thumb were quite disorganised, and showed comparatively large uratic deposits. A number of small uratic deposits existed elsewhere; in both olecranon bursæ, especially the right, where there was a tiny deposit over the internal condyle; in both prepatellar bursæ, and in the bursa beneath the tendo Achillis. Left hallux valgus was present in an extreme degree, and the right toe was also somewhat deflected. The right metatarso-phalangeal joints were enlarged and red, but not very tender. There were no tophi in the ears. The pulse was 82° and regular, but its tension was slightly increased. The arteries were in some degree thickened and tortuous. The temperature was 99° F. The urine was alkaline, and contained neither albumen nor sugar.

On February 16th, when the observations were commenced the temperature was normal, and except the slight pain in the hands the patient stated that he felt very well. The analysis of the urine included the determination of the total amount in the 24 hours of urea, uric acid, phosphoric acid, and alloxur bases. The leucocytes were counted daily at 11.30 A.M.

The urea was estimated by the hypobromite method, and the phosphoric acid by titration with uranium nitrate. For uric acid both Hopkins's and Salkowski's methods were used simultaneously throughout. In estimating the alloxur bases Salkowski's recent method was adopted: 600 c.cm. of urine were taken and the phosphates precipitated by adding ammonium and magnesium mixture. The solution was filtered, and to the filtrate was added a 3 per cent. silver nitrate solution until no more precipitate appeared. After brisk agitation this was set aside for an hour or more in a dark place, then filtered, and the precipitate washed free from chlorine and silver. The silver precipitate was now decomposed by passing a stream of H_2S through it in acid solution, then heated, filtered, and the filtrate evaporated to dryness over a water bath. The residue was treated with dilute sulphuric acid (about 30 c.cm.) brought to the boiling point, and left in a cool place for 20 hours. The precipitate (uric acid) was then collected on a weighed filter, washed with dilute sulphuric acid, dried and weighed. The filtrate and washings, amounting to about 50 c.cm., were rendered ammoniacal, silver nitrate added, the precipitate so obtained filtered, washed chlorine, silver and sulphate free, and then incinerated in a porcelain capsule. The ash was extracted with dilute nitric acid, and the silver estimated by titration with NH_4, CNS. From this silver determination the amount of alloxur base was calculated from the average amount of silver contained in the silver compounds of the different bases.

The leucocytes were counted in the Thoma Zeiss counting chamber, the diluting fluid being 0.3 per cent. acetic acid in distilled water, with methylene blue, and the amount of dilution 1 in 20.

[It is necessary to state that much reliance cannot be placed upon the leucocytic counts, as the finger was constricted in order to obtain the requisite drops of blood; and as the patient had his first meal at 5 A.M., the second at 9, and the third at 12 P.M., it was obviously inconvenient to examine the blood before the first meal of the day, when it was at its most constant point.]

During the above systematic investigation the patient was kept on a fixed diet, deviations from which are shown on the diet table given below.

February 16th.—On this date the patient was put on a fixed diet as follows: Bread and butter, 11 oz.; tea, 1½ pint; bread, 5 oz.; milk, 1½ pint; meat, potatoes, and bread, 13 oz.; pudding, 5 oz.; beef-tea, ½ pint.

March 12th and 13th.—The patient did not take his full quantity of food.

March 14th.—Milk, 2 pints; pudding, 6 oz.; bread and butter, 3 oz.; tea, 1½ pint.

March 15th.—Tea, 1½ pint; bread and butter, 5 oz.; bread, 2 oz.; milk, ½ pint; beef-tea, 1 pint; fish and potatoes, 8 oz.; pudding, 4 oz.

March 16th.—Bread and butter, 5 oz.; tea, 1½ pint; milk, 2 pints; bread, 4½ oz.; bread, fish, and potatoes, 9 oz.; pudding, 5 oz.

March 18th and 19th.—Spinach was given three times a day in addition to the fixed diet.

March 22nd.—One thymus was added to the fixed diet.

The patient remained in bed during the investigation.

In the following table the results obtained under the above dietetic conditions and by the methods already mentioned are collocated.

The urine was faintly alkaline during the period of observation except on March 13th, when it was distinctly acid. On this date it will be seen that the excretion of uric acid was at its lowest point. It is satisfactory to note that estimations of uric acid by Salkowski's and Hopkins's methods respectively were almost identical, the differences being very slight except on four occasions, when there was a marked discrepancy. On these days a gelatinous ammonium urate precipitate was encountered which greatly retarded filtration. On these occasions Salkowski's method, as compared with that of Hopkins, gave the higher result. It appears Dr. Hopkins observed a similar gelatinous precipitate in cases of diphtheria, and on estimating the total nitrogen found that his own method was more likely to be correct than the other. For this reason the Hopkins estimations have been inserted in the table.

TABLE I.—*Showing the Analytical Details of the Urine in the Twenty-four Hours and the Daily Enumeration of the Leucocytes.*

Date.		Drugs Administered.	Quantity in c.cm.	Specific Gravity.	Urea in Grams.	Uric Acid in Grams.	P_2O_5 in Grams	Alloxur Bases in Grams.	Leucocytes.	Remarks.
February	16	Fixed diet	1,500	1.015	23.361	0.485	1.60	0.0720	Not counted	Temperature remained normal until March 11
	17	,,	1,390	1.015	27.081	0.458	1 33	0.0514	10,060	There was a daily evacuation of the bowels
,,	18	,,	1,120	1.016	24.108	0.400	1.41	0.0469	11,290	—
,,	19	,,	1,500	1.014	27.963	0.371	1.30	0.0397	12,000	—
,,	21	,,	1,928	1.014	29.409	0.627	1 91	0.0782	7,500	—
,,	22	,,	1,835	1.014	30.062	0.524	1.78	0.0535	9,420	—
,,	23	,,	1,665	1.016	26 723	0 478	1.76	0.0485	10,800	—
,,	24	Vin. colch. 15 m. ter die	1,655	1.017	26.800	0.485	1.68	0.0614	11,200	—
,,	25	,,	1,777	1.012	26.079	0.549	1.83	0.0541	9,100	—
,,	26	,,	1,645	1.013	26.206	0.543	1.77	0.0653	9,800	—
,,	27	,,	1,570	1.014	25.011	0.469	1.64	0.0371	10,460	—
March	1	—	1,270	1.018	25.900	0.498	1.79	0.0381	9,870	—
,,	3	—	1,375	1.019	25.790	0.397	1.42	0.0324	Not counted	—
,,	4	Sod. salicy. 15 gr. ter die	1 760	1.017	30.168	0.651	1.93	0.0419	8,610	—
,,	5	,,	1,395	1.013	26.326	0.505	1.64	0.0378	9,600	—
,,	6	,,	1,370	1.017	26.316	0.697	1.84	0.0399	8,860	—
,,	7	,,	1,205	1.019	25.053	0.618	1.80	0.0335	8,800	—
,,	8	,,	1,370	1.018	30.960	0.643	1.85	0.0349	8,610	—
,,	9	—	1,430	1.015	30.728	0.540	1.44	0.0437	10,920	—
,,	10	—	1,245	1.020	29.196	0.682	1.71	0.0395	8,900	Felt gouty
,,	11	—	1,310	1.020	27.900	0.738	1.96	0.0479	7,800	Temperature 101.6° F.
,,	12	—	1,350	1.019	28.983	0.507	2.20	0.0536	7,400	,, 101.2° F.
,,	13	Vin. colch. 20 m. ter die	1,180	1.012	21.333	0 131	0.25	0.0711	Not counted	,, 99.4° F.
,,	14	,,	1,380	1 015	32,669	0.766	2.45	0.0639	10,280	,, 100.0° F.
,,	15	,,	1,210	1.018	31.786	0.707	2.35	0.0585	7,770	,, 99.0° F.
,,	16	,,	1,130	1.021	26 841	0.515	1.63	0.0509	8,610	,, 99.0° F.
,,	17	,,	1,660	1.014	30.367	0.729	1.16	0.0758	11.760	,, 98.0° F.
,,	18	,, + spinach	1,480	1.014	28.760	0.511	1.49	0 0647	9,240	,, ,,
,,	19	Spinach	1,250	1.014	26.872	0.492	1.41	0.0596	10,000	,, ,,
,,	20	—	1,605	1.012	28.835	0.422	1.31	0.0553	9 400	,, ,,
,,	21	—	1,540	1.013	27.813	0.560	1.39	0 0561	9,600	,, ,,
,,	22	Thymus	1,680	1.014	32,271	0.798	2.06	0.0653	11,940	,, ,,
,,	23	—	1,360	1.012	31.375	0.652	1.86	0.0604	11,200	,, ,,

I am quite aware of the advisability for exercising considerable caution in making deductions from observations relating to a single case of gout, and this is all the more necessary when the results do not show any very marked deviation from the normal. Bearing in mind this reservation the points that seem interesting will be briefly discussed. Dr. Edgecombe and I[2] have elsewhere recorded observations showing that in health an inverse ratio exists between the leucocytes and uric acid, the subject being on a fixed diet. In the case under consideration a similar ratio was observed although not well marked, and on four or five days it was absent.

If the average be taken of the uric acid and leucocytes during the period before the administration of drugs, and while the patient was taking sodium salicylate it will be seen that an increase in uric acid is associated with a diminution of the leucocytes.

TABLE II.—*Averages.*

	Leucocytes.	Uric Acid.	P_2O_5.
Fixed diet	[illegible]	0.477 g.	1.58g.
Sod. salicylate ...	[illegible]	0.622 g.	1.81g.

Horbaczewski,[3] who first advanced the theory that uric acid was intimately related to the metabolism of the white cells, found an increase in the uric acid associated with a hyperleucocytosis. Bohland[4] made a similar observation in the case of two students who were taking sodium salicylate. Dr. Fawcett[5] examined the blood of two gouty patients taking sodium salicylate, but did not find any "striking alteration" in the number of the leucocytes in comparison with enumerations made before the administration of the drug. In the light of recent research, it is my belief that uric acid is partly derived from the ingesta and partly from disintegration of tissue cells, and that if a healthy subject is kept on a fixed diet, the variations in the number of leucocytes from day to day will probably be inversely related to the variations in the amount of uric acid excreted; and, further, it appears likely that the variations in the number of leucocytes is a rough indication of normal leucolysis. The term "rough indication" is used advisedly, for, to conceive an estimate approaching exactness premises not only uniformity in the rate of leucocytic formation, but also that the white cells alone are concerned in this origin of uric acid. There are, however, several facts which tend to show that the other tissue cells, all of which contain nuclein, take part in the production of this acid. If a portion of the uric acid were derived from the phosphorus-rich nucleo-proteid of tissue cell metabolism it would be anticipated that in a healthy subject on a fixed diet the excretion of phosphoric acid would follow closely that of the uric acid. Such a relation was manifested in the case under consideration, and may be noted in the chart:

On several days the parallel variations were not maintained, but these apparent discrepancies can, I think, be partly explained on the ground of retention of uric acid. In this connection it should be borne in mind that for several days it was inadvisable to keep the patient on the fixed diet. If we turn to Table I it will be observed that on March 12th there is an alteration in the ratio of uric acid both to the leucocytes and the phosphoric acid, thereby denoting a retention of uric acid. On March 13th, notwithstanding the great diminution in the uric acid there doesnot appear to be any retention as the phosphoric acid shows a corresponding decrease. If gout is produced, as alleged, by the inability of the kidneys to execute the whole of the uric acid, the continuous retention of a portion of this substance, in the case of this patient, must have attained, in the course of forty-two years, comparatively colossal proportions, but beyond the deposits already described, there was no evidence of an unusual deposition of biurate, and further the usual signs of kidney disease were absent.

In Table III an average has been taken of the excretion of uric acid and alloxur bases before, during, and after the administration of drugs.

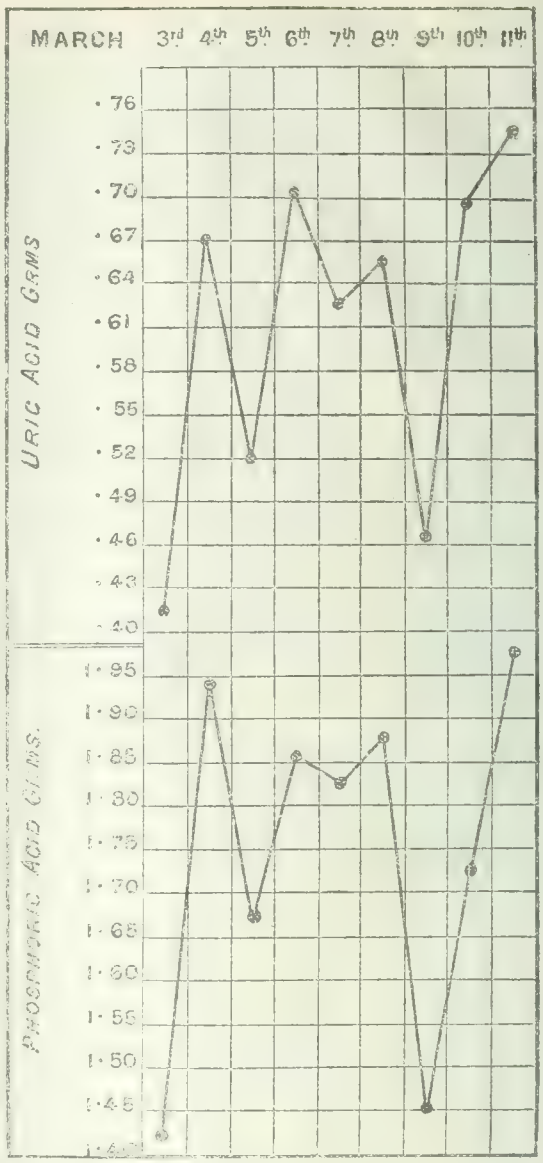


TABLE III.—*Averages.*

	Uric Acid in Grams.	Alloxur Bases in Grams.
Fixed diet (7 observations)	0.477	0.055
Colchicum (4 observations)	0.511	0.053
Sod. salicylate (5 observations) ...	0.622	0.037
Colch. (acute attack; 6 observations) ...	0.560	0.069
Spinach (2 observations)	0.500	—
Thymus (1 observation)	0.070	0.062

It will be observed that the excretion of uric acid and alloxur bases lies within physiological limits, and that the base bears a normal relationship to the acid. Kolisch[8] ascribed to the bases the all-important *rôle* of causing the various manifestations of gout, but having met him recently, he led me to understand that he had abandoned the idea. He found that the bases were increased in gout, and his results were confirmed by Weintraud[7] and Fuchter.[9] On the other hand, no such increase was observed by Schmoll,[9] His,[10] Laquer,[11] Mafatti,[12] and Badt.[13]

Colchicum does not seem to me to exercise any influence

whatever on the excretion of uric acid. This opinion is based partly on the results in this case and partly on the results of other observers. During the acute attack the uric acid was increased, but this has been repeatedly observed apart from the administration of any drug. That colchicum does exert a kind of specific action in acute gout is undoubted, but the nature of its beneficial influence has still to be discovered. The alloxur bases were increased during the acute exacerbation, but whether this was due to the influence of colchicum it is difficult to say. However, there is a fact to which some significance must be attached—namely, that on March 13th, when the uric acid was very low, the bases were increased absolutely and relatively to the acid.

The effect of sodium salicylate on uric acid excretion has already been pointed out, but its action on the bases in this case is remarkable, as most other observers have noted an increase corresponding to the increase in uric acid. Without discussing the question I may express an inclination to agree with Dr. Luff regarding the inadvisability of giving this drug in gout.

Spinach did not seem to have any effect on the excretion of uric acid. The significance of the observation lies in the fact that Dr. Luff found that the mineral ash of this vegetable had a marked solvent effect on sodium biurate in the laboratory. Probably it would have been better had spinach been given a more extended trial. Thymus was exhibited in order to test the response of the kidney to an increased amount of uric acid antecedents introduced by the alimentary canal. It produced the usual physiological results. Schmoll[9] also gave it to a gouty patient with similar intent, and in his case the uric acid attained the high figure of 1.3 gram.

It may be mentioned here that a dog used for an experiment with superheated air[14] was subsequently utilised to ascertain the effect of colchicine and sodium salicylate on the blood pressure. Half a gram of sodium salicylate in 1 per cent. saline solution was injected into the femoral vein with a negative result. Later on, at intervals, three doses of colchicine—$\frac{1}{100}$, $\frac{1}{50}$, and $\frac{1}{25}$ of a grain respectively—were injected without any effect on the blood pressure. The animal was kept continuously under the influence of chloroform.

Although it is outside the scope of this paper to discuss the treatment of gout, reference may very briefly be made to the most essential elements in the prevention of acute attacks—namely, diet and exercise. Regarding diet, foods rich in nuclein and nucleo-proteids should be forbidden unless further research proves them to be harmless. The most suitable diet depends upon the condition of the alimentary canal and its annexes, and the amount of exercise the patient can and does systematically take without fatigue. It is absurd to lay down the same hard-and-fast rules for all cases of gout, and it is certainly not necessary to abstain from meat of every description, seeing that muscle is comparatively poor in nucleo-proteid, and that vegetarians are sometimes victims. The efficacy of carefully regulated physical exercise in the prevention of gout manifestations cannot be exaggerated; and my object in referring to an agent which Sydenham considered to be of greater importance in the treatment of gout than dieting or therapeutical remedies is, because at the present time the utility of daily exercise is underestimated, and too much attention paid to the so-called uric acid solvents.

I take this opportunity of expressing my thanks to Dr. Brodie for his advice and valuable assistance with experiments.

Summary of Results.

1. That the methods in vogue for separating uric acid from blood are not sufficiently delicate for the detection of minute quantities.
2. That the phosphoric acid varies directly with the uric acid excretion, the patient being on a fixed diet.
3. That the alloxur bases in gout are not increased.
4. That colchicum does not seem to have any influence on the excretion of uric acid in gout.
5. That sodium salicylate and thymus increase the excretion of uric acid in gout.

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Discussion.

Dr. Sykes said that one of the most important questions on which there were absolutely opposing views was the use of sodium salicylate in gout. He himself had found it of the greatest value. Personally he had experienced great relief from its use when suffering from a lumbago associated with excess of uric acid in the urine which he believed to be of gouty origin.

Dr. Tyson (Philadelphia) said that a cursory study of the papers presented proved that the subject was one most difficult of discussion. He thought that, in view of the varying results of different scientific researches, we must for a time longer continue to base the selection of our remedies upon clinical experience. From this standpoint he was forced to conclude that the salicylate of sodium was the best remedy for acute attacks of gout, both for shortening the duration of the attack and diminishing the pain. As to the effect of the sodium bicarbonate as contrasted with the potassium bicarbonate, he had never made any comparison between the two remedies, but he was inclined to believe he had seen gout kept in abeyance by the continuous liberal use of the Vichy waters, of which, it was well known, sodium bicarbonate is the important alkaline constituent.

Dr. Haig, in reply, said that there were some conditions in which salicylates would not do good. One of these was where it was given in sequence to colchicum, and another was the condition of debility. If anyone would show a case of gout in which salicylate had failed, he would expect to find one of the conditions present in which he had shown that salicylates must fail.

Dr. Luff considered that sodium salicylate was of no use in the treatment of real articular gout. He was of opinion that many cases, supposed to be of gouty origin, in which it proved beneficial, were really cases of rheumatism. He thought that lumbago was generally of rheumatic origin, and was very rarely due to gout. Therefore he was not surprised to hear that Dr. Sykes found sodium salicylate useful in the treatment of lumbago. In endeavouring to ascertain whether the salicylate treatment of gout was of any use, he thought it was only fair to try it in undoubted cases of articular gout, not in cases of doubtfully rheumatic or gouty origin. He had tried salicylates in many cases of undoubted gout, but never with any beneficial results.

Dr. Bain said that sodium salicylate increased the excretion of uric acid at the expense of the leucocytes both in health and in gout, and therefore he thought it inadvisable in the present state of our knowledge to give in gout a drug which increased the amount of uric acid in the blood where it was already in excess.

ON THE RECOGNITION OF ENLARGEMENTS OF THE LEFT AURICLE BY PERCUSSION,

AND ON OTHER CLINICAL USES OF DORSAL PERCUSSION, INCLUDING PERCUSSION OF THE PELVIS.

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1. Enlargement of the Left Auricle.

At a recent meeting of the Medical Society of Cambridge (June 2nd, 1899) I submitted a "percussion map" of the back of the chest, reserving that of the lower part of the back for some future occasion. It was then demonstrated, as I believe for the first time, that in health the normal postcordial dulness contains a smaller, more accentuated dulness, which is that yielded by the left auricle itself. On this occasion I shall endeavour to show that comparative percussion will demonstrate the enlargements which occur in advanced mitral stenosis. The normal shape and dimensions of the postcordial dulness have been described elsewhere; its elongated, horizontal, triangular outline, with its apex just below the angle of the left scapula and its convex base situated to the right of the spine, forms a less acute angle

when the left auricle is enlarged. The dull area covers more space from above downwards, and at its upper boundary tends to merge into the "interscapular dulness," instead of being separated from it by wedge-shaped resonant intervals on either side analogous to the constriction in the figure 8. The cause of this upward expansion of the postcordial dulness could not be appreciated without a previous knowledge of the normal percussion outline of the left auricle. This normal outline may be demonstrated in any healthy subject.

The "left auricular dulness" is a small semilunar area, convex upwards, and including the eighth and ninth dorsal spines. These spines, particularly the ninth, are relatively dull, or at any rate less resonant, on percussion than the adjoining spines, and we rely mainly upon the quasi-dulness of the ninth spine as the landmark which serves to localise the auricle. The semilunar dulness measures about $3\frac{1}{2}$ inches in the transverse and $2\frac{1}{2}$ inches in the vertical diameter, and is strictly median in position.

In subjects suffering from mitral stenosis of moderate severity the auricular dulness may be found slightly enlarged, particularly upwards. In a case of more advanced stenosis, a considerable extension of the total cardiac dulness will be perceptible; but within it the more marked dulness of the auricle itself will occupy an increased proportion of space.

Incidentally it need only be mentioned that other less common conditions may affect the post-cordial dulness in an analogous way, and lead to a suspicion of auricular enlargement. Aneurysm is one of these. Almost the earliest case in which I traced an increase of the post-cordial dulness was that of a man in whom an aneurysm of the left ventricle had extended backwards. At that period I was not familiar with the "left auricular dulness." My examination was not critical; and the aneurysm was not diagnosed. The outline of the auricular dulness, whether the auricle be normal or enlarged, is so regular that it may in the future be possible to determine the presence of any other cause of dulness in connection with any irregularity of shape. Piorry describes and depicts [1] the dulness which he found in a case of cancer of the lower part of the œsophagus. The illustration represents the œsophageal dulness in the position of the left auricular dulness, which it also distantly resembles in shape. Differentiation between these two sources of dulness would have been called for in a case such as his; and with our present knowledge it might perhaps have been successfully carried out.

2. Alterations in the "Interscapular Dulness"

Abnormal interscapular dulnesses are of all the dulnesses in the back those which claim our closest attention. The diseases which may be indicated by them include most of the affections of the mediastinum, and it should be borne in mind that a negative result is often of the greatest value, as, for instance, in the recognition of the spasmodic nature of an œsophageal stricture.

Time does not permit a detailed account of this large subject, but it may be pointed out that an accurate percussion of this region may be of use in guiding the surgeon in the operations which are now sometimes recommended for various affections in the posterior mediastinal district. In the following case the situation of the disease was accurately determined by percussion.

CASE 1. *Carcinoma of the Œsophagus at the Infratrachcal Level: its Position Localised by Percussion.*—E. C., aged 61, a carpenter, suffering from dysphagia which had become almost absolute, was examined by me on June 17th. A tracing taken from the interscapular region showed the indications made out by percussion, namely, (1) an increase in the degree of the normal relative dulness of the right interscapular area, (2) extending downwards from the fourth dorsal spine for nearly 3 inches, a marked dulness taking the place of the right band of vertebral resonance. After death, which occurred on June 21st, a cylindrical, hard, cancerous mass, about $1\frac{1}{2}$ inch in transverse diameter and about 3 inches in length, was found in precisely the situation indicated by the abnormal dulness in the right vertebral area.

3. Enlargements of the Infratracheal Glands.

The determination of the size of the infratracheal glands and of the bronchial glands in various pulmonary and bronchial affections is an object which will appeal to every physician. In lymphadenoma the glandular enlargement is often so great that there is no difficulty in ascertaining its presence by percussion.

A recognition of the less extensive enlargements is merely a matter of care, and with sufficient experience even slight enlargements which are of daily occurrence may be identified. For this purpose I have pointed out an easy method. The fifth dorsal spine is invariably dull and may be quickly recognised by its percussion note; this normal dulness will be found to extend for a short distance on either side of the middle line, but more to the right than to the left in the proportion of one-third and of two-thirds of an inch respectively. If the size and the shape of this square patch of dulness be much modified we may suspect enlargement of the glands in question. Ch. Fernet[2] believes in the association of three diagnostic signs in early phthisis: A dulness at the apex, a dulness over the tracheobronchial glands either on the right or on the left side, and an engorgement of the base of the corresponding lung. These are represented diagrammatically in the illustration which accompanies his paper; but the interscapular dulness which he has been able to trace is not clearly localised, and no reference is made to the dulness of the fifth spine, which appears to have passed hitherto unnoticed. In connection with Fernet's statement as to the occurrence of a dulness due to glandular swelling, either to the right or to the left of the spine, I believe, for reasons explained in my previous paper, that the enlargement of the infratracheal glands considered apart from that of the other bronchial glands invariably tells by an extension of the dulness more to the right than to the left of the middle line.

Familiarity with the normal degree and size of the "fifth spine dulness" is essential to our proper valuation of any alterations they may present. We may not feel justified in attaching to them that special diagnostic significance which is urged by Fernet; but we cannot afford to ignore them, and their importance for diagnosis and prognosis, particularly in the affections of childhood, is obvious.

4. Alterations in the Percussion Note of the Back due to Changes in the Abdominal Viscera.

The normal dulnesses of the liver and spleen have been already described. The position of the two kidneys is well-known from anatomical writings, and their dulness exactly corresponds to the anatomical situation. Between them intervenes the subresonant band corresponding to the vertebral bodies and the line of full resonance special to the spines themselves. Fine percussion yields a narrow strip of partial dulness, apparently due to the pancreas, extending horizontally across the inner half of the right renal dulness to a point about 1 inch external to the left renal dulness. Below the level of the kidneys I have not hitherto identified any normal and constant dulness connected with any of the other viscera. The rule is for the entire region to be resonant on percussion, and the resonance of the lumbar spine is considerable and often tympanitic. The same applies to the sacrum and to the prominent parts of the iliac bones, but the degree of tympanitic resonance of these bones varies considerably, even in the same individual, according to the state of the intestine.

We may now pass to a consideration of the changes which may occur in the normal visceral dulnesses mentioned above, and of the dulnesses which may arise in connection with adventitious morbid conditions.

Enlargements of the spleen as well as those of the liver introduce at the base of the thorax a degree of dulness which is often obvious and referred to its proper cause. If, however, the dulness should not be identified with the organs to which it is due it is apt to be mistaken for that of a pleuritic exudation or of a pulmonary consolidation. Nay, a mistake of this kind may exceptionally occur where the post-hepatic or post-splenic dulness detected by percussion is normal.

The spleen has a greater tendency to enlarge forwards and downwards than upwards and backwards. The latter direction is, however, sometimes assumed; but, as a rule, there is no difficulty in identifying the post-splenic dull area. Its continuity with the anterior splenic dulness and its close relation to the eleventh rib and to the left renal dulness are reliable guides.

5. Extension of "Piorry's Dull Nucleus," and Alterations in the Outlines in Enlargements or Tumours of the Liver.

A general enlargement of the liver tends to increase the post-hepatic as well as the anterior hepatic dull area, but

various factors determine in each case the direction in which the enlargement will make itself the more obvious. Often the post-hepatic dulness gives us valuable indications. Simple general enlargement modifies the post-hepatic dulness in two ways: (1) it increases the vertical dulness obtained below that of the heart in the middle of the back, and gives a blunter angle at the left base; and (2) it enlarges the nucleus of Piorry in varying proportions. Decided enlargement of the liver is shown by this dulness encroaching upon the resonance which at the axillary base separates in health the nucleus of Piorry from the anterior hepatic dulness. Great uniform enlargement leads to a complete loss of this resonance and to a continuous dulness encircling the right side of the chest.

Enlargements limited to portions of the liver are of special importance from a diagnostic standpoint, and their accurate determination by dorsal percussion may therefore be regarded as indispensable. The following case is an instance in point:

Case II. *Considerable Enlargement of Left Lobe of Liver: Great Extension Upwards of Left and Central Portion of Dorsal Hepatic Dulness: Hydatid Disease of Left Lobe Diagnosed and Relieved by Operation.*—A pale, delicate-looking boy, aged 13, gave a history of epigastric swelling of several years' duration, which for the last six months had enlarged and become painful and tender. He had been obliged to give up his work as printer's assistant, but had not kept to his bed, there being no severe constitutional symptoms. During the first week of his stay in the hospital, the temperature however oscillated within 3° above the normal with an evening rise. The base of the thorax was broadened, the xiphoid cartilage pointing forwards; the umbilicus protruded. The lower edge of the liver could be felt about the umbilical level, and that belonging to the left lobe was horizontal instead of slanting upwards, and this lobe itself could be felt to be exceedingly thick.

The temperature dropped to normal during the second week, but the swelling seemed to increase, and at the centre of the epigastrium it gave an almost fluctuating feel. This was also the most tender part. The diagnosis seemed to lie between hydatid, which might be undergoing suppuration, and some sarcomatous growth. No thrill could be perceived. In this uncertainty, dorsal percussion proved of value. As in all cases of considerable hepatic enlargement, Piorry's nucleus of absolute dulness was considerably increased, and continuous with the anterior hepatic dulness. Unlike, however, the condition in uniform enlargements of the liver, the upper line of the hepatic dulness was not continued straight across to the left, but ceased to be horizontal as it approached the outer scapular line, and rose rapidly to the level of the sixth dorsal spine, which level it preserved as far as the left inner scapular line. Above this level could be made out the cardiac dulness which was considerably raised, and below it extended as far as the twelfth dorsal spine the greatly-enlarged posterior hepatic dulness. These points are shown in the actual tracing, but the illustration appended to this paper refers to the condition found in uniform hepatic enlargements. In this instance the dorsal dulness of the liver showed that the swelling mainly belonged to the left lobe, and that it had a convex upper surface. These points were corroborative of the diagnosis of hydatid.

Exploration having been decided upon, laparotomy was performed by Mr. Warrington Haward on June 17th by a median incision extending from the epigastrium to below the edge of the liver. Considerable adhesions of recent date were met with at the surface of the liver in the epigastric region. Exploratory aspiration having shown the presence of fluid at this level, the liver was incised, and a large quantity of slightly milky fluid with innumerable cysts was allowed to escape. The cavity was irrigated and drained. The patient did remarkably well and recovered without complications.

6. The Renal Dulness

was well known to Piorry, who has even given us a description of the dulness of the adrenals,[3] a point to which I have not turned my attention. Absence of renal dulness is no less important to determine than any conspicuous enlargement which this dulness may present.

7. "The Second Lumbar Spine Dulness" and the Pancreatic Dulness.

Percussion of the lumbar and sacral spines provides us with less variety; it is usually resonant throughout, but varies much in the degree of tympanitic resonance. There is but one exception, that of the second lumber spine, which I find to be normally distinctly less resonant than the others. And this normal dulness I connect with the presence of the pylorus, the first part of the duodenum and the head of the pancreas in the vicinity of the body of that vertebra. The pancreatic dulness is depicted in Piorry's diagrams[4] as a dulness extending across the lumbar region between the first and second lumbar and immediately above the renal dulness. I have been able to trace this dulness across the renal dull outlines, at the level of the second lumbar spine, and the localised dulness of the second spine may be due, at least, in part, to the pancreas. We may, therefore, add the second lumbar spine to the list of our special vertebræ and use it as a landmark, as in the case of the fifth and ninth dorsal. The normal second lumbar dulness is apt to be considerably increased in diseases of the viscera in contact with the vertebra. My opportunities for observation have been hitherto limited, but the following case points to the diagnostic value of a percussion of this region in cases of suspected disease of the pylorus, of the pancreas or of the duodenum.

Case III.—J. H., aged 45, a caretaker, had had epigastric pain for about eighteen months, and copious vomitings, the latter of increased severity lately, after a chronic dyspepsia of nine or ten years' standing. On admission to the hospital, his aspect was cachetic; the signs were those of dilated stomach and of pyloric obstruction; the vomiting, not hitherto blood-stained, became coffee-ground, and recurred almost daily, and the pain and other symptoms were aggravated in spite of medicine. The patient complained of a spot at the lower end of the sternum and of tenderness at the level of the umbilicus, just to the right of the middle line; but repeated examinations afforded no evidence of any tumour.

On June 13th, an examination having been made over the tender epigastric region—again with negative results as regards the detection of any tumour—I resorted to dorsal percussion. The second lumbar spine was found to be very dull, and a dulness of elongated and bulbous outline about 2 inches in vertical diameter extended horizontally as far as the border of the right renal dulness. There was no corresponding dulness on the left side. I regarded this dulness as due to pyloric disease, and I sought Mr. Warrington Haward's assistance for its treatment. (Fig. 1.)

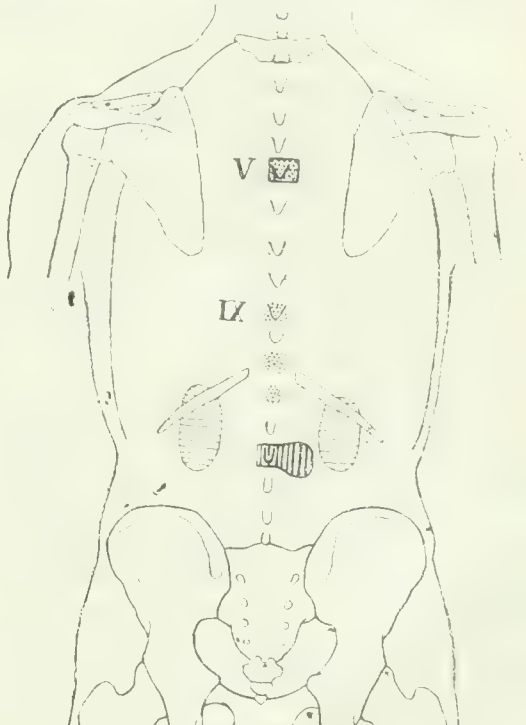


Fig. 1.—Showing the dulness of the second lumbar spine, and the patch of dulness extending as far as the right kidney, and corresponding to the mass found close to the pylorus at the laparotomy.

The patient's and friends' objections considerably delayed the operation. Meanwhile, on the evening of June 28th, he was seized with a violent pain and symptoms of perforation, and laparotomy was performed by Mr. Sheild at midnight. The perforation was sutured, but no further interference was possible. A large mass of inflammatory tissue, connected with a chronic gastric ulcer, occupied the pyloric region of the stomach. The patient almost died on the table, and only gradually recovered from imminent danger. His subsequent progress was satisfactory. The pain and the vomiting entirely ceased, and he ultimately left the hospital cured.

The interest of the case as regards diagnosis lies in the fact that the epigastric tumour which was afterwards seen and handled could not be felt from the front, and that its presence was inferred from the results of the dorsal examination.

8. The Upper Sacral or Mid-Sacral Subresonant Dulness.

Whilst the coccyx and tip of the sacrum are absolutely resonant, as well as the upper part of the spine of the sacrum, a slight dulness may be recognised for a distance of about 2½ inches in the intervening portion of the latter. Piorry de-

scribes a mid-sacral dulness as due to the normal uterus, and as becoming increased in intensity as well as in lateral extent during pregnancy. His observations seem to agree with my own to the effect that pregnancy does not obliterate the lumbar resonance; but on this point I have not made any serial examinations.

The dulness which I have recognised with great regularity in all the males examined has occupied the upper rather than the middle part of the sacral spine. It would seem to me due to the dulling influence of the bladder transmitted to the narrow area in question along some favoured lines of conduction. In his chapter on "Vesical Percussion," Piorry does not allude to the dorsal method. However it may be produced, the practical object of noticing this subresonant note present in both sexes, and not, therefore, exclusively due to the uterus, is to enable us to attach their proper significance to any dulnesses differing from it in size or in shape which may arise in connection with diseases of the bladder, prostate, or rectum. Incidentally it may be mentioned that Piorry makes a brief reference to percussion of the rectum and its clinical uses.

9. PERCUSSION OF THE PELVIS.

The pelvis is essentially a resonant region, in spite of the thickness of its bones and of the solidity of some of its contents. It transmits so much vibration from the gas-containing viscera that the resonant note prevails. Indeed, much attention is requisite to detect any variations that may arise. Some of these may be of small importance, and due to accumulations within the intestine, a contingency readily tested by re-examinations after sufficient purgation, and also by the method of examination before and after rectal injections which was practised by Piorry. Although Piorry devotes but little attention to the percussion of the rectum, he gives us an extensive account of his observations upon the cæcum, colon, and sigmoid flexure, made chiefly from the front of the abdomen.

Percussion of the pelvis will probably be turned to clinical account by surgeons more frequently than has been the case, and particularly in connection with diseases of the lower bowel or of the cæcum and vermiform appendix, in addition to necrosis and other forms of bone disease. The localisation of affections of the end of the sigmoid flexure and of the first part of the rectum may be materially aided by it. In gynæcology the uses of pelvic percussion are many and obvious, yet I doubt whether the method has been systematically employed.

Lastly, in the hands of the general physician the same method will assist the diagnosis of obscure cases in all the directions indicated. It is also of definite use in determining the presence or the absence of ascitic fluid where other methods fail. On this point I have made observations which will shortly be published.

The following case is an interesting instance of the help which surgical diagnosis may derive from percussion of the pelvis:

CASE V.—C. C., aged 65, a naval pensioner, was admitted on May 31st with a bent right knee and a history of sudden pain beginning two weeks previously, affecting the glutcal region, the knee-joint, and the front of the thigh. There was no rheumatism, gout, or excessive alcoholism in the history. There had been gonorrhœa forty years previously, but no syphilis. The patient had suffered from stricture. The urine was ammoniacal with some albumen, and micturition was frequent. The pain was only temporarily relieved by the application of ice. The temperature oscillated between 98° F. in the morning and 101° to 102° in the evening.

On June 7th a firm and globular mass was felt in the right iliac fossa, with pain and tenderness and muscular rigidity over the part. Not being satisfied as to the nature of the tumour, I percussed the pelvis from the back. Over the posterior surface of the os innominatum a limited patch of considerable dulness was found, as shown in the tracing (Fig. 2), and a provisional diagnosis was made of abscess in the right iliac fossa.

After repeated consultations Mr. W. Haward operated on the 16th during my absence. On opening the abdomen nothing was discovered but matted intestine in the right iliac fossa, and the laparotomy incision was sewn up. The patient was not much relieved; the temperature, depressed for two days, rose again, and he died on June 22nd.

The necropsy showed besides cystitis and the earliest signs of surgical kidney, the mass of adhesions previously mentioned in the right iliac fossa. This bound down a large foul fæcal abscess from which some gas escaped, but there was no general peritonitis. The abscess was situated behind the cæcum, but extended some distance along the psoas and iliacus, and also downwards, and exposed a rather large surface of bone.

In this case the chief interest lies in the definiteness with which dorsal percussion indicated the presence of some lesion capable of giving rise to dulness, whilst owing to its being so deeply situated laparotomy failed to reach it. Perhaps further surgical measures might have been justifiable if, whilst the abdomen was open, dorsal percussion could have demonstrated the persistence of marked dulness over the site of the swelling.

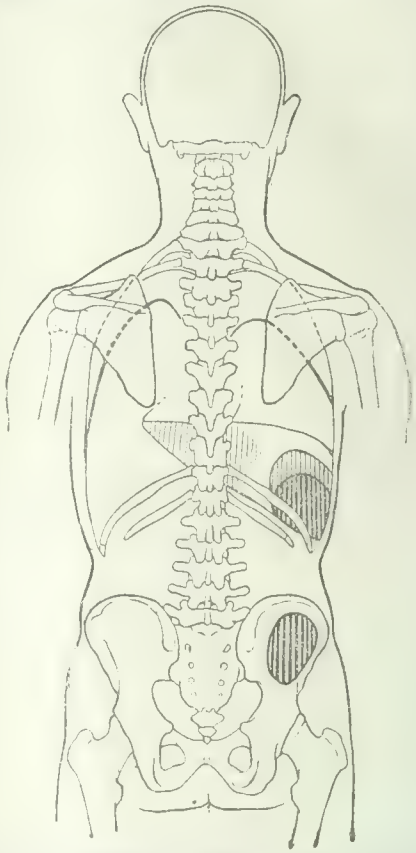


Fig. 2.—Showing the patch of dulness over part of the right os innominatum due to a deep-seated abscess. The figure also shows the dulness of a uniformly enlarged liver.

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THE RELATION OF PULMONARY TUBERCULOSIS TO MITRAL STENOSIS.

By HUGH WALSHAM, M.A., M.D.Cantab., M.R.C.P.Lond.,
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MANY valuable papers on the etiology of mitral stenosis have been written since M. Fauvel published his paper on the stethoscopic signs of narrowing of the left auriculo-ventricular orifice of the heart in the *Archives Générales de Médecine* in 1843. Since that time the following physical signs are almost universally regarded as diagnostic of mitral stenosis. A presystolic thrill at the apex, a presystolic murmur ending abruptly in a short, sharp first sound, with accentuation of the second sound at the left base; and evidence of hypertrophy and dilatation of the right side of the heart. All observers are agreed that of the several forms of valvular disease of the heart, mitral stenosis less often than the other forms owns rheumatic inflammation as its cause, but there is a wide diversity of opinion as to the proportion of the rheumatic to the non-rheumatic cases. Sir Dyce Duckworth, in a valuable paper on the Etiology of Mitral Stenosis in *St. Bartholomew's Hospital Reports*,[1] makes rheumatism responsible in 70 per cent. of cases. The late Dr. Hilton Fagge, on the other hand, would put the proportion as low as 50 per cent.

Of 81 cases of pure uncomplicated mitral stenosis under my care during the last three years at the City of London Hospital for Diseases of the Chest, 35 gave a distinct history of rheumatism, chorea, or scarlet fever, complicated with rheumatism, leaving 46 unaccounted for; but some of these cases were very probably of rheumatic origin, although no history could be obtained. The indications of rheumatism in childhood are frequently very slight; as Dr. Goodhart[2] truly remarks, a large number of children suffer from rheumatism in this way, and never go to bed at all, and are never seen by a doctor; and years afterwards, when some old valvular mischief needs explanation, there is no memory of the pre-existence of any disease. Some physicians again regard a certain proportion of these cases of pure mitral stenosis as congenital in origin; with these I cannot agree. From an experience of over six years as clinical assistant to the Hospital for Sick Children at Great Ormond Street, I should say that mitral stenosis as a congenital defect was a very rare condition. From some recent investigations of French physicians, mitral stenosis is asserted by them to be tuberculous in origin. It is with this latter assertion I wish especially to deal in this paper.

It was formerly supposed that pulmonary tuberculosis and valvular disease of the heart existing together was an extremely rare condition. In fact, some authors asserted that the two diseases never occurred together in the same patient. Rokitansky,[3] for instance, wrote as follows: "Persons labouring under enlargement of the heart, whether primary or superinduced by mechanical obstruction at its orifices, do not contract tuberculosis." This is much too sweeping a statement, as pulmonary tuberculosis and valvular disease of the heart is not infrequently found in the same patient, but this is quite a different thing from saying that the one is the cause of the other.

M. Teissier[4] has lately written a paper containing a report of a large number of cases, in which he asserts that progressive narrowing of the mitral orifice is due to tuberculosis.

Dr. Sansom,[5] in a very interesting paper in the British Medical Journal, while not agreeing with M. Teissier, says "that there is some relation between mitral stenosis and tuberculosis I quite agree."

Potain found *post-mortem* evidence of tuberculosis in 12 cases out of 35 of pure mitral stenosis, and M. Teissier brings evidence to show that this proportion is below the mark.

Dr. Sansom goes on to say that, taking the cases in Teissier's abstract with those cited by Dr. Percy Kidd[6] and others, he finds a total of 31 in which the association of tuberculous lesions with mitral stenosis was found *post mortem*.

On my appointment as pathologist to the City of London Hospital for Diseases of the Chest upwards of five years ago I determined to investigate this point as fully as the *post-mortem* material at my disposal would allow. Out of 130 *post-mortem* examinations of persons dead of acute, chronic, and miliary tuberculosis I found mitral stenosis once only in a woman aged 41. The heart weighed 13 ozs. The mitral orifice was greatly stenosed, only just admitting the tip of the little finger. The other valves of the heart were normal. The right side of the heart and the left auricle were hypertrophied and dilated. There were a few old adhesions at the apex of the right pleura. There was a cavity about the size of a small marble at the extreme apex of the right upper lobe of the lung. This cavity was cut off from the surrounding lung tissue by a fibrous capsule. There appeared to have been no attempt for the tuberculous process to spread through the lung. There were no infarctions and no other trace of tubercle in the body. Tubercle bacilli were obtained from a scraping of the cavity.

In 12 *post-mortem* cases of pure mitral stenosis the lungs were quite free from tubercle. In a series of 133 *post-mortem* examinations reported by Drs. Harris and Beale[7] mitral stenosis was found three times. In Fagge's *Principles and Practice of Medicine* (vol. i, p. 994) it is said that mitral stenosis is almost a complete bar to the development of pulmonary tuberculosis, the *post-mortem* records of Guy's Hospital supplying only 4 cases of this association in the last thirty years. Dr. Percy Kidd in a valuable paper on the association of pulmonary tuberculosis with diseases of the heart, found out of 500 *post-mortem* examinations of cases of pulmonary tuberculosis well-marked signs of disease of the heart in 27, but in only one of these was there stenosis of the mitral orifice. In the reports of the others we read of thickened mitral and aortic valves but nothing is said of stenosis of the mitral orifice. In my own series out of 130 *post-mortem* examinations on persons dead of pulmonary tubercle I found well-marked signs of heart disease in 21, mostly thickening of the aortic and mitral valves, but only once a typical mitral stenosis.

Dr. Sansom, in his article in Allbutt's *System of Medicine* (vol. v), says he has observed two cases *post mortem*, one in a woman aged 29. The mitral aperture was very narrow, with much thickening of the adjacent structures. Both lungs were studded with tubercles, some miliary, others yellow and softening. Dr. Sansom says he had also observed a well-marked case under the care of Dr. Sutton. M. Teissier admits that a search in the diseased endocardium of his cases of mitral stenosis for the bacillus tuberculosis, or of any specific tuberculous lesion, had always been negative. I suppose all who have made many *post-mortem* examinations on cases of pulmonary tuberculosis will admit that the endocardium is frequently found thickened in places, especially in the left ventricle in the neighbourhood of the aortic segment of the mitral valve, but never to the extent of producing a narrowing of the mitral orifice. I have made many microscopical examinations of these thickened patches in the endocardial lining of the heart, for the presence of tubercle bacilli or tuberculous changes, but always without result. I still think that, in this country at least, the association of mitral stenosis and pulmonary tuberculosis, as shown by pathological records, is of rare occurrence. From the clinical side of the question we cannot speak with the same degree of assurance as from the pathological, but I venture to think that clinically the rarity of the two diseases in the same patient is apparent. During the last three years I have had 1,000 cases of well-marked pulmonary tuberculosis under observation at the City of London Hospital for Diseases of the Chest without one displaying any of the signs of mitral stenosis. Also during the same period I have had under treatment 91 cases of pure mitral stenosis giving the physical signs as stated in the beginning of this paper, that is, with none of the signs of regurgitation or evidence of any of the other valves of the heart being affected. In 3 out of these 91 cases there was, on superficial examination of the chest, signs that might easily have been taken to prove the evidence of tuberculosis of the lungs.

Case I.—A woman, aged 41, had all the typical signs of mitral stenosis. There was also dulness on percussion and crepitations at the apex of the left lung. In this case I first thought I had a mitral stenosis complicated with phthisis of the left apex. The patient had had slight hæmoptysis and cough for six weeks before coming under observation. Tubercle bacilli were examined for on more than one occasion, but with a negative result. The patient remained under treatment from November to December 11th, of 1897. She improved somewhat under treatment, but the physical signs at the left apex remained. This patient came under observation again one year after in July, 1898, with cough and hæmoptysis, being now six months pregnant. The physical signs at the apex of the lung had completely cleared up.

Case II.—A woman, aged 23, who first came under treatment in March, 1899. The had never had rheumatism, chorea, or scarlet-fever. She had had a cough for four years with occasional streaks of blood in the expectoration. As in the former case, there were physical signs of typical mitral stenosis with dulness and crepitation at the left apex. This patient was admitted to the hospital. Tubercle bacilli were never found after frequent examinations of the expectoration, and during a residence of nine weeks in the hospital the physical signs completely cleared up at the left apex.

Dr. Ormerod informs me that he remembers, when Physician to the City of London Hospital for Diseases of the Chest, having under treatment a girl with all the typical signs of mitral stenosis and phthisis. The patient died in the hospital and at the necropsy no tubercle was found, the physical signs being due to pulmonary embolism. The physical signs of dulness to percussion and crepitations limited to one or other apex in patients with evidence of mitral stenosis must be received with great caution, and the diagnosis of pulmonary tuberculosis can only be made certain by the discovery of the bacillus tuberculosis. As Dr. Sansom truly remarks, many cases of mitral stenosis show signs which can be easily mistaken for those of pulmonory tuberculosis. A case which simulates pulmonary tuberculosis when mitral stenosis is present is not of the grave significance as a case in which mitral stenosis is absent. One can hardly help coming to the conclusion that M. Teissier must so have mistaken some of his clinical cases. I think mitral stenosis and pulmonary tuberculosis existing together in the same patient is so rare a con-

dition that the one cannot be regarded as the cause of the other, although not antagonistic to each other.

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PREVENTION OF TUBERCULOSIS IN EVERYDAY LIFE.

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The etiology of tuberculosis has been made so clear by the researches of Koch and subsequent investigators that we are enabled to-day to affirm that the disease is, practically speaking, neither inherited nor does it arise spontaneously. Every one of the 60,000 annual fatal cases in England and the many non-fatal cases arise directly or indirectly from a pre-existing case either in man or beast. The source of origin, the channels of transmission, and the actual paths of invasion of the tubercle bacilli have all been indicated, and certain conditions or forces of such invasion have been clearly pointed out. The facts thus established have been held in many of the civilised countries of the world, notoriously in Germany, France, and America, to point a moral—namely, that every intelligent man or woman to-day should have some knowledge of the *rationale* of the disease, and on that should base the conduct of his or her household, so as to avoid certain well-defined and avoidable risks. It is for the dissemination of this knowledge that popular societies have been formed both in the countries referred to and recently in England. But the practitioner of medicine will always have both the highest qualification and the fullest opportunity for such work. In estimating the risks in our own country the present imperfect condition of the statutory law as well as the erratic and imperfect application by local authorities of such laws as are in existence, require to be borne in mind. What modifications of the present law, and also what regulations are demanded in the interests of public safety, cannot here be discussed. But, apart from these considerations, certain measures practicable for every householder and private person are indicated by the logic of ascertained facts. The objects to be obtained may be briefly described as destruction of the seed and sterility of the soil. The direct source of danger, the vehicles by which the tubercle bacilli may be conveyed, may be said for practical purposes to be almost confined to dust, milk, including buttermilk and skim milk, butter and cheese, and meat.

Dust may be held to be any matter capable of being taken up and suspended in the air; it may be animal, vegetable, or mineral in origin, and exist either in visible particles, such as are blown before the wind in an African duststorm, or in impalpable powder faintly observed in the sunshine. It probably conveys nine-tenths of the micro-organic parasites which propagate disease. The micro organisms most likely to be conveyed vary with different climates and environments—thus, while the tubercle bacillus is under existing conditions probably the most common contagion in the dust of European cities, the pneumococcus is probably more so in certain tropical and subtropical countries, as, for instance, the towns of South Africa, where dust pneumonia is one of the most fatal diseases. At present, perhaps, not sufficient is known of the pneumococcus outside the body, to warrant a positive assertion of its presence in dust; but, arguing from analogy, and the epidemics of pneumonia associated with dust it is more than probable. The bacillus diphtheriæ is undoubtedly a dustborne contagion. To prevent the accumulation of dust in a house is highly desirable; nevertheless, where infected dust is not created within the house itself, to prevent the possibility of its entrance from outside is impracticable. Through every open door, window, or crevice dust finds an entrance. But currents of air, even if they bring dust in, also carry it out, and are far less dangerous than the unchanged air of a house soon becomes. There are a hundred other ways in which dust is carried into a house—on boots, clothes, rugs, etc. The woman's dress that sweeps the ground is a danger to her household. The rug thrown over the feet in a railway compartment is undoubtedly liable to be contaminated with tuberculous dust. The habit of expectoration on the dusty floor of a public conveyance is not yet extinct, and the consumptive is a frequent traveller.

The disposal of the sputa of the consumptive is the crux of the whole question, but will be more suitably discussed when the proper conduct of a case of phthisis is considered. While it is obvious that sputa of recognised consumptives are necessarily the greatest danger in propagating the disease, it is also certain that indiscriminate expectoration of phlegm should be put an end to, for it has been clearly established that the tubercle bacilli may be the first recognisable evidence of pulmonary disease. This fact has been so clearly recognised in France that both the Œuvre de la Tuberculose and the Ligue contre la Tuberculose have taken vigorous steps to endeavour to induce the authorities to insist upon the use of spittoons in all public schools. And, although the French Government have not yet seen their way to initiate any legislation on this subject, many inspectors of education and schoolmasters have acted on the suggestions made by these societies.

The next most important step in preventing danger from dust is the careful removal of dust itself wherever it accumulates in places such as houses, public buildings, and conveyances which are frequently filled, or at least occupied by human beings. And in the removal sufficient moisture should be used to prevent as much as possible dust flying about and settling anywhere. Thus, damp dusters and some form of dusting machine which picks up and carries off the dust, are the best articles for domestic use. In spite of all precautions, then, it is evident that tubercle bacilli may gain access to any house or room, and such a lodgment once having been effected, the important point in consideration becomes, What are the conditions which favour, and what are those which militate against the by retention such bacilli of their vitality and virulence? Fortunately the special measures demanded in a house for producing the conditions destructive to the virulence of the tubercle bacilli are those best calculated to preserve and improve the general health of the household. Thus air, light, sunlight where obtainable, and dryness, render the individual better able to resist the establishment of tuberculosis, and at the same time are conditions most destructive to the vitality of the tubercle bacillus. Air, dryness, and light are essential conditions in a healthy house. In selecting or building a house the importance of light is often underestimated. In such a climate as ours the advantage to health as well as the pleasure of a bright southern aspect, whether in town or in country, is incalculable. In building a detached house in the country it is best to make it face either south-east or south-west, so that the back rooms may have some degree of sunlight each day.

Milk, Buttermilk, Skim Milk, and Cream.

Next in importance to dust as a vehicle by which the seed of tubercle bacilli may be carried, and perhaps in children even transcending it in importance, come milk and its products. With regard to them we are, however, at this advantage as compared with dust under present circumstances: the danger from dust is only partially controllable, but the danger from milk is capable of absolute control. Milk, buttermilk, skim milk, and cream are all capable of being sterilised; if brought to the boiling point of water for the space of only a few seconds they are sterilised. The taste of boiled milk, to which a child or adult is soon reconciled, may be considerably reduced by placing milk boiled after the morning delivery in the cool for use in the evening, and treating the afternoon's milk similarly for morning use. Another point to be borne in mind in connection with the boiling of milk is that its substitution for raw milk as an article of food has not only the advantage of abolishing all danger of tuberculosis, but also that the boiling destroys all other pathogenic organisms which may find their way into milk. As long, then, as tuberculosis exists among cattle, the boiling of cow's milk is a precaution necessary in all kitchens and nurseries; but, nevertheless, the consumer very justly feels that he is entitled to expect, and that the law should enable him to demand, of the dairyman, a pure article, free from any taint of tuberculosis or other contagion. In the present state of the law the consumer's

only remedy is to obtain milk from a dairyman who guarantees that the tuberculin test is used periodically among his cattle, and that none but perfectly healthy animals are kept in his herd. Several dairies and dairy companies now offer this security, and all public institutions, hotels, etc., should be able to assure their *clientèle* that their milk is obtained from such a dairy. If public institutions as well as householders adopt this course, the present evil will in a large measure remedy itself, for the simple reason that the dairyman who does not offer the guarantee will lose his customers.

Butter and Cheese.

Both butter and cheese are milk products, and though the risk of infection from them is considerably less than milk itself which is taken, especially by children, in much larger quantities, a risk does exist. On this point investigators are agreed.

Macfadyen refers to tubercle bacilli in butter, and Bang, Gatier, Hein, and Gasperini have shown that "both butter and cheese may keep alive for a long time the tubercle bacilli which were contained in the tuberculous milk used in their manufacture." To obviate this risk the pasteurisation of milk and cream which is now in general use in Denmark, is called for. Pasteurisation consists practically in a process of heating, at a temperature short of actual boiling, for a period of time sufficient to ensure the destruction of the bacilli. A temperature of 85° C. for five minutes accomplishes this. In England a process of scalding cream is used in the preparation of Devonshire butter and cheese, which practically ensures sterilisation, and a guarantee of this or some other process of sterilisation should be demanded by the consumer from the dairy supplying him with butter and cheese.

Meat.

Dr. Sims Woodhead's evidence before the Royal Commission with reference to the possibility of tubercle bacilli deeply buried in a "joint" or "meat roll," and surviving the cooking process is well known. The risk does not appear to be a great one, but it cannot be entirely ignored, and the householder who desires to minimise it may do so by obtaining meat from a butcher who has his stock slaughtered at a public slaughter-house or abattoir where inspection is periodically carried out.

Susceptibility to Infection.

Having considered the various means by which the tubercle bacilli may be conveyed and the measures best calculated to destroy their vitality, or prevent their introduction into the human subject, it will be well to review conditions in and around the subject which favour or are hostile to the establishment of tuberculosis when once the bacillus has been introduced. There are general constitutional conditions which are held to render one individual more susceptible than another, and also certain general physical conditions of atmosphere and environment which tend to induce susceptibility. Susceptibility may then be conveniently divided into inherited and acquired or induced susceptibility.

Inherited Susceptibility.

While direct inheritance of the disease is so rare as to be practically non-existent, susceptibility may be transmitted. The extent to which susceptibility actually exists has been the subject of controversy recently, though there can be little doubt that any inherited weakness or deficient vitality of constitution probably renders the subject of it more liable to succumb to the invasion of tubercle bacilli as well as to that of any other pathogenic microbes. That there is a greater susceptibility in certain cases to the tubercle bacillus than to other microbes is a point on which no very decisive evidence is forthcoming. Special precautions against exposure to the danger of infection are, however, required in all weakly children.

Acquired or Induced Susceptibility.

As already shown, the physical conditions most calculated to favour the continued existence of the tubercle bacillus outside the body are those most active in so undermining human health as to induce susceptibility to infection.

As indicating the intimate association of tuberculosis with crowded, ill-ventilated dwellings, Sir Henry Littlejohn has quoted some statistics which directly showed that in Edinburgh the poorer the class of tenement the higher is the mortality from phthisis among the occupants. There are three forms of atmospheric impurity referred to by Dr. Kerr Chalmers[1] which specially tend to induce susceptibility to phthisis and other respiratory diseases. They are, (1) respiratory impurity of the atmosphere, (2) impurity from dust of organic origin, (3) impurity from dust of metallic origin.

As a factor which may induce susceptibility, there is little doubt that soil requires careful consideration, and the evidence that low-lying, damp, and ill-drained soils materially contribute to the production of such susceptibility is very strong. Such a soil should thus be avoided as a site for a dwelling as far as possible. In preventing the acquisition of susceptibility, there are few measures more important than the proper care of children. The alimentary tract of a child is undoubtedly far more susceptible to the invasion by the tubercle bacilli than that of an adult, and for this reason special precautions require to be taken both with reference to the boiling of milk and the cooking of beef for their consumption. The danger from raw beef juice has been specially commented upon by Sims Woodhead.

Certain anomalies exist in the dress of children which, inasmuch as they lower the vitality and increase the liability to catarrhs, may indirectly favour the establishment of tuberculosis. Pure air in abundance, both in the house and out of it, is the first consideration, but with it must be combined a rational method of clothing children, and so protecting them from exposure to cold. The custom of dressing children so as to leave them with naked legs, extending as it does to all classes of the community, is attended with discomfort and detriment to the victims of it, and may cause actual stunting of growth. Personal observation has convinced me that this custom increases the frequency and duration of catarrhal attacks among children, as well as of such diseases as croup, tonsillitis, and adenoid growths of the pharynx, all of which may become contributory causes to the establishment of tuberculosis. The practice of underclothing children is based on a false idea of hardening a child's constitution. The clothing used need not and should not be heavy, but, if made with a proper amount of wool, it will be warm. Man is born naked into the world, and for his health and comfort, requires to be covered. To only half cover a child at the most tenderly susceptible period of its existence is as unreasonable as it is dangerous.

Precautions with the Consumptive Himself.

While it is obvious in the light of our present knowledge that certain precautions against tuberculosis are desirable on the part of all parents and householders there are still further precautions which are absolutely necessary in the numerous cases of phthisis which actually exist and which are not under treatment either in a sanatorium or a hospital. Consumptives are neither isolated nor notified to the authorities. A consumptive may reside in a private house, a hotel, an ocean steamer—in fact, anywhere—and the practical conduct of his case remain entirely in the hands of himself or his friends, and when it is borne in mind that, in sputa of the consumptive the chief danger to the public health exists, it will be readily recognised how vitally important the conduct of the consumptive patient is. One of the first duties of a medical man dealing with a consumptive to day is to see that the patient is properly instructed in the measures necessary to his own and the public health by his condition. Simple printed instructions should be issued to every patient, whether treated in private practice or at the out-patient department of some hospital, instructing him as to the disposal of his sputa and other precautions necessary for his welfare as well as that of his family and his neighbours. A leaflet containing simple and clear instructions in popular language for the use of consumptives has been published by the National Association for the Prevention of Tuberculosis and other Forms of Tuberculosis.

Consumptives of both sexes and all classes should recognise that they are called upon to entirely adapt their life for the sake of themselves, their families, and their neighbours to the requirements of their disease. The precautions necessary to minimise the risk of further propagation of the disease in the consumptive and his fellows have been considered

and in order both to facilitate these and to give the sufferer the best chance of recovery, it is highly desirable that the open-air treatment should be adopted. The best introduction to this which the patient can possibly have is a residence of some months in a sanatorium conducted on the open-air principles, and it is to be hoped that ere long these will be available for every class of the community.

REFERENCE.

1 *Practitioner*, June, 1898.

THE DEFENCE OF THE CARDIAC ORIFICES OTHER THAN VALVULAR.

By D. W. SAMWAYS, M.A., M.D., B.C.Camb., M.D.Paris, D.Sc.Lond.,

Mentone.

FOR our knowledge of the sequence of events taking place in the heart during life, we are greatly indebted to Chauveau and Faivre,[1] who in 1856 published an account of a series of researches they had made on the slowly-beating heart of the horse. These experiments were continued by Chauveau and Marey[2] a short time after, and graphic records were taken of the pressure changes occurring in the heart chambers, and of the precordial movements associated with them. The curves they published were so clear and convincing that it has never since been doubted that the contraction of the auricle precedes that of the ventricle, commencing and ending before the latter begins. I venture, however, to think we should have been led nearer the truth in some respects had we accepted those curves with more reserve, had we inquired more after the numerous irregular and exceptional cases, and, indeed, had we attended to certain of the suggestive remarks made by the observers themselves. Take, for instance, the following statement of Chauveau and Faivre: "Ordinarily the duration of the two systoles is fairly equal to half the total duration of each (cardiac) revolution. But the auricular contraction does not actually occupy all the first period of each time division, it ceases before the commencement of the second period, and the ventricles on their part do not even wait for the end of the systole of the auricles to commence their contraction." This remark strongly suggests, indeed states, that in the experience of Chauveau and Faivre there was an overlapping of the first part of the ventricular contraction on the latter part of the auricular, which, however, they omitted to indicate in their diagrams.

Marey likewise makes a statement which indicates that the separation in time between the contraction of the auricles and ventricles shown in his curves from the horse is too emphatic when applied to man. He records the case of a woman in Alsace who had a congenital hernia of the heart through the diaphragm and abdominal walls, and lay only beneath loose skin in the epigastric region. Francois Franck[3] went down in 1877 to examine and report on this woman. He took graphic records of the heart beat, and published the results of his observations. Commenting on them, Marey wrote, "The great resemblance of these curves with those taken from the horse sufficiently shows that the same succession of movements existed in both." "One remarks only that for the human heart the time which separates the systole of the auricle from that of the ventricle is a little shorter than for the horse." If one examines the curves, however, one sees at once that the two contractions actually overlapped, and that they were not separated by any time at all. H. D. Rolleston[4] found that in his experiments, published in 1887, the contraction of the auricle caused in the dog no apparent rise in the intraventricular pressure curve, thus differing from the results shown by Chauveau and Marey for the horse, where the rise due to the auricular contraction was very apparent in the ventricle. Rolleston accounted for this as follows: "The explanation of this characteristic of my curves is not very difficult, for if the ventricular systole follow immediately on that of the auricle, the rise of pressure produced by the auricular systole will be continued insensibly into that due to the ventricular systole. That the delay between the systoles of the walls of the auricles and ventricles respectively is very small I have convinced myself by direct experiment."

Stronger and more positive proof that the contraction of the ventricle normally overlaps the latter portion of that of the auricle is, however, to hand. In the 44th and 45th volumes of the *Practitioner*, Professors Roy and Adami published a series of remarkable papers on the Heart-beat and Pulse-wave, in which they described the methods they adopted to "measure with accuracy the duration of the different phases of the cardiac cycle." In Section v they compared the results of most of their observations, and constructed curves to show the "relations in time of the various factors which go to make up the complicated beat of the mammalian heart." These curves are given together on p. 251, vol. 44 of the *Practitioner*, and show that in their experiments the auricular contraction was not a short event completed before the ventricular systole commenced, but that beginning before the latter, simultaneously with the commencement of the apex beat, it outlasted the first phase of the ventricular systole, the auricle remaining contracted till the time of opening of the aortic valves and outflow from the ventricle into the aorta. In their experiments, therefore, the latter part of the auricular systole was simultaneous with the early part of the ventricular, the two systoles being for a short period superposed. They remark (p. 252): "The position of the auricular contraction and expansion we obtained from simultaneous myographic tracings of the auricular and ventricular walls."

These conclusions of Roy and Adami are what we might naturally expect if we remember that the cardiac contraction is not a beat but a peristalsis, and the essential feature of a peristalsis is that the contraction is maintained in one segment while it is developing in the adjacent segment. The two contractions overlap, the first being maintained so long as it is useful to the second. It is to be expected from the very nature of a cardiac contraction that the contraction of the great veins entering the auricles should be maintained while those chambers are contracting, or at least while they are useful in preventing any regurgitation from them, and that the contraction of the auricles should be maintained, as we find it is, during an appreciable portion of the ventricular systole.

It is this overlapping of the auricular contraction with the ventricular which explains why the auriculo-ventricular valves do not close when the systole of the ventricle begins. Chauveau and Marey[5] place the closure of these valves at a point on the upstroke of their cardiac curves which almost corresponds with the time of opening of the aortic valves. A point, therefore, when the intraventricular pressure is very considerable. Dr. Galabin[6] came to a similar conclusion. Professor Potain[7] likewise considers that the auriculo-ventricular valves close not when the cardiac impulse begins but when it has fully developed or nearly so, and he makes the closure of these valves and the opening of the aortic almost simultaneous. Why do these valves, which the ventricles alone could so easily shut, remain open so late? Rolleston, unable to explain it, threw doubts on the fact of their thus keeping open. Galabin suggested that perhaps the inertia of the blood entering from the auricles might delay their closing; but Potain made the most unfortunate conclusion possible, and has spoiled his writings by advancing the theory that since the ventricle could not conceivably begin to contract without at once closing the auriculo-ventricular valves, and since these do not close till the cardiac impulse has almost fully developed, and the aortic valves are about to open, the ventricle does not begin to contract till an inappreciable interval before the aortic valves open, and the cardiac impulse must consequently be due to the auricular contraction.

The real explanation of this remarkable and well-established phenomenon is that the sustained contraction of the auricle keeps the auriculo-ventricular valves open during the first phase of the ventricular contraction. The valves are thus subjected to pressure on their ventricular aspect tending to close them, and on their auricular aspect tending to force them open. They swing like a door pressed from both sides, and are shielded by the support of the contracting auricle from the rapidly-changing pressure in the ventricle.

If it be true, as Roy and Adami have urged, that the contraction of the papillary muscles only commences towards the end of the first phase of the ventricular contraction, that would coincide with the time when the auricle ceases to support the auriculo-ventricular valves, and the tension of the chordæ tendineæ then becomes essential.

It now devolves on me to show that the auricle can thus contend successfully with the ventricle in spite of their unequal muscularity, and, while their contractions overlap, succeed in keeping open the auriculo-ventricular valves.

If it be remembered that the auricular systole commences before that of the ventricle, and that the auricle is emptying and becoming small, while the ventricle is filling and becoming large, it will be obvious that at the time their contractions are superposed and oppose one another they are very unequal as regards size, and it can be shown physically that the smaller chamber has a great mechanical advantage over the larger. Indeed, it is conceivable that what the auricle lacks in muscularity as compared with the ventricle, it has been able to make up by its decreased size. This may be illustrated by the following simple method:

Take two rubber balloons, such as are used by children, the one small and of very thin rubber, the other large and thick. Tie a short glass tube into the mouth of each, and connect these by short rubber tubes with the opposite ends of a T-shaped glass tube. If air be now forced in by the third or free limb of the T tube, instead of the small thin rubber balloon yielding, it will be found that the big, thick-walled balloon will be the weaker and will alone dilate. Further, if both be separately inflated—say to two or three times their former diameters—and then put in communication, the small thin-walled balloon will blow its contents into the large thick-walled balloon, and further dilate it. Pascal and others have taught us that the pressure each sphere can support or exert on its contents varies inversely as its diameter. Now the auricle and ventricle are subjected to the same hydrostatic laws, and since when their contractions overlap the auricle happens to be small and the ventricle large, the auricle has the same mechanical advantage over the ventricle that the small rubber sphere has over the larger one.

But this is not all. In contracting, the walls of the auricle thicken, and they thicken in a ratio inversely as the square of the diameter—that is, when the auricle has halved in diameter by its contraction, its walls become four times as thick as they were at first; and supposing the force of contraction of its muscular fibres to remain constant, the auricle when halved in diameter could exert a fourfold pressure on its contents due to its increased thickness, and a double pressure due to its decreased size—that is, eight times its original pressure.

When its diameter has decreased to one-third of what it was at first, the auricle could, theoretically, contract on its contents with a force twenty-seven times greater per unit area than at first, and the ventricle, which can never raise a pressure appreciably above that in the aorta which safety-valves it, could not resist it.

But it may be objected that if the ventricular pressure cannot rise above the aortic because it is safety-valved in that direction, for the like reason the auricular cannot rise above that in the great veins towards which it is free to leak.

Marey[9] has shown, however, that the pressure in the auricles does rise above that in the great veins entering them, and says that the auricle produces a pressure of about 13 mm. of mercury, whereas the pressure in the veins as we know is considerably below that, and indeed sometimes actually negative. Moreover, the auricles are no more free to leak towards the veins than if their common junction were valved. Auricular muscular fibres spread on to these veins, and sphincter them while the auricle contracts. Professor Parchappe,[10] whose description of the cardiac structure is in many respects the fullest I know, says: "The reflux of blood from the auricular cavities into the venous vessels must be, in ordinary circumstances, small enough. For the venous orifices are surrounded either by complete muscular rings, or by portions of muscular loops arranged in sphincters; and the contraction of these fibres, during the auricular systole, must greatly narrow, if not completely close, these orifices." A positive wave seen sometimes in the jugular veins when the right auricle contracts forcibly does not prove that it comes from the auricle. A positive way will come in an elastic water pipe, whose flow is suddenly arrested by a clamp, but it does not prove a leak through the clamp, being, indeed, a simple inertia phenomenon.

A case to my mind which rides roughshod over the presumption that the venous outlet from the auricles is inadequately guarded is given by Sir Walter Foster in his *Clinical Medicine*. It was, he considered, an instance of pure tricuspid stenosis, the tricuspid alone of the cardiac orifices was abnormal, and admitted one finger after death. The right auricle was hypertrophied, so that it measured "a quarter of an inch in thickness in many parts." Here was a case, if ever, in which marked regurgitation should occur from the auricle into the veins—severe tricuspid obstruction and auricular hypertrophy — and Foster supposed; such regurgitation existed. He wrote: "The jugular veins were distended, and a slight undulatory pulsation was observed in the right vein, occurring prior to the heart's systole." If this pulsation were negative it meant nothing in this connection, if positive a "slight undulatory pulsation" is equivalent to stating that an auricle as thick as the right ventricle was not working backwards.

It appears to me, therefore, fairly evident that the defence of the cardiac orifice is partly muscular and partly valvular. The auriculo-venous orifices are guarded by muscular sphincter fibres, quite sufficient for the purpose of closing them and keeping them closed. They may leak sometimes, just as valved orifices may; but there is no sufficient evidence to show that they are in the habit of leaking even when the auricle is severely hampered by chronic disease.

The auriculo-ventricular orifices, during the first phase of the ventricular contraction, are also guarded largely by muscular action. The valves are supported and even kept open, as I have shown, by the auricle contracting behind them.

They are thus supported while the intraventricular pressure is rapidly rising, and left to themselves only when that pressure has about reached its maximum, and will remain fairly constant as the blood escapes into the aorta. Similarly, it appears that when the ventricle has expelled its blood into the aorta during the second phase of its contraction, it remains during its third phase contracted behind the aortic valves, probably supporting them as far as possible while any disturbance in the aortic pressure is for the moment adjusting itself.

There are a few riders I would add to the propositions I have advanced:

1. In cases of mitral stenosis, when the auricular contraction is, in the opinion of many observers, prolonged,[11] the absence of regurgitation and of a systolic murmur is due to the auricular defence of the stenosed and incompetent orifice during the whole or part of the expulsive phase of the ventricular contraction, for the ventricle cannot force the blood back into the auricle opposing such regurgitation.

2. Regurgitation and a systolic murmur may, however, appear as the stenosis advances. For, when the auricle fails to expel its blood in time to become sufficiently small to resist the ventricle when its contraction opposes it, regurgitation must occur in spite of the efforts of the auricle to prevent it. Mechanical dilatation of the auricle will now commence, and with and through it the cardiac breakdown which appears sooner or later in this disease. Temporary recovery may take place with rest, and perhaps by bleeding, by diminishing the blood with which the auricle has to deal in a given time and allowing it again to become small before the ventricle contracts.

3. The auricular systolic murmur of mitral stenosis may reasonably be supposed to be presystolic and early systolic, since the auricular systole, like the murmur, runs up to and into the ventricular systole.

4. Hypertrophy of the auricle, so common in mitral stenosis, would aid or exaggerate the above results.

NOTES AND REFERENCES.

[1] Chauveau et Faivre, *Gazette Médicale de Paris*, 1856, p. 365 *et suite*. [2] Marey, *Circulation du Sang*. [3] François-Franck, *Trav. Lab. de Marey*, t. iii. [4] H. D. Rolleston, Observations on the Endocardial Pressure Curve, *Journal of Physiol.*, 1887, p. 243. [5] *Op. cit.* [6] Galabin, *Guy's Hospital Reports*, 1875. [7] Potain, *Clinique Médicale de la Charité*, 1894, p. 528. [8] R. H. Woods, "A few applications of a physical theorem to membranes in the human body in a state of tension," *Journ. of Anat. and Phys.*, vol. xxvi; Samways, BRITISH MEDICAL JOURNAL, 1897, pp. 199, 703, 767. [9] Marey, *Op. cit.*, p. 103. [10] Parchappe, *La Structure et les Mouvements du Cœur*. [11] Dr. Hilton Fagge, *Guy's Hospital Reports*, 1871, p. 269. "When the mitral orifice is narrowed, we should expect the auricle to take a longer time than usual in expelling its contents, and Dr. Hyde Salter has observed that in cases of aortic narrowing the systole of the ventricle is excessively prolonged"; Dr. Galabin, *Guy's Hospital Reports*, 1875, p. 282.

THE FORM OF THE CHEST IN PHTHISIS AND ITS SIGNIFICANCE.

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BEFORE attempting to explain the significance of the shape of the chest in disease, a brief attempt to sketch the principles which determine its form in health is necessary. Upon this point we have two lines of evidence open to us: one is the comparison of chest forms of different classes of animals, the other the study of the changes in the shape of the human chest from the embryo to the adult. These two lines as usual agree closely. In both we find an oval chest with the long diameter antero-posterior, or, more correctly, sagittal (dorsi-ventral), gradually changing to an oval, with its long diameter transverse or coronal.

The first of these we will term the quadrupedal or dog chest, the other the erect or human. The reason for the shape of the quadrupedal chest is obvious. Its aim is to secure maximum capacity with minimum width in its anterior or cephalic two-thirds, so as to permit free backward and forward swing of the anterior limbs in locomotion. This can obviously only be gained by increasing its depth. This type of chest has passed into literature as the "deep" chest of the hound or the racehorse, and it is curious to note how, by a process of unreasoning transference, terms descriptive of this form have been applied to the human torso, where they are absolutely inappropriate. My contention is that the type of vigour of the human chest is a broad flat thorax instead of a "deep" one. "Depth" is a sign of arrested development.

The other type of chest has a transverse diameter which exceeds its antero-posterior or sagittal and is found only in those widely-separated orders, the highest primates including our own species, the bats and the whales. Here the mechanical explanation again appears adequate. The three orders have absolutely nothing in common not shared by other mammals, except the fact the fore limbs are no longer used to support the body in terrestrial locomotion.

In the bat they serve as wings, in us and the anthropoids as climbing and weapon-using mechanisms, and in the whales as fins. There is no longer any necessity for the backward and forward movement in parallel lines and the great pectoral muscles become the controlling group of the shoulder-girdle and pull back the sternum toward the vertebral column. At the same time, for the sake of the much greater range of shoulder-movement required, the scapulæ roll outward and backward until the glenoid fossa faces directly outwards instead of inward and forward and the scapulæ with their muscle-masses come to lie upon the posterior wall of the chest, leaving its anterior free to expand. The bird, it may be said in passing, solves the problem somewhat differently by the development of an enormous keel or crest on its sternum, leaving the shape of chest wall but little altered.

To use a mechanical simile, the chest bellows-pump has been "turned over" from one whose flaps lie on either side and expand chiefly behind (caudal) the scapulæ, and by the descent of the diaphragm to one whose flaps lie "front and back," and move in that meridian between and ventral to the scapulæ. The flaps of the bellows move at right angles to their former swing, and the diaphragm pump plays a lesser part in chest expansion. In the quadrupedal chest the respiration is chiefly diaphragmatic and lower-rib; in the erect chest the costal almost equals the diaphragmatic. Hence the proper performance of respiration in the human chest depends very largely upon the extent to which the scapulæ have come to lie permanently upon the posterior wall of the chest or the fixed flap of the bellows, which is what they notoriously do not do in the phthisical.

An almost identical series of changes have occurred in each one of us as individuals, and part of it may be seen occurring in our child patients. The chest of the embryo at the fourth month is almost typically quadrupedal; in two cases measured by me it had an index of 110 (the adult being 70); by birth it has become almost circular (average index of four cases, 103); by the end of the first year it has reached about 94, according to the average of nineteen measurements; by the fifth year, the index is about 85; from the twelfth to the fifteenth year about 80, reaching the adult index of 71 between the eighteenth and the twenty-first year. All these statements are based upon measurements taken by myself. Tables in a condensed form are given below. Alone they would be too few in number.

TABLE I.

Normal Adults.	Breadth Index.
Internes, Buffalo General Hospital	71.5
,, Garrison ,, ...	72.6
Enlisted men (50)	73.6
2,300 Yale students	70.0
General average normal	71.0
,, ,, 82 tuberculous cases	79.5

Average Diameters.	Antero-post.	Trans.
	Inches.	Inches.
Enlisted men	8.0	11.0
Yale students	7.5	10.7
General average	7.6	10.8
40 tuberculous patients (Buffalo)	8.4	10.6
42 ,, ,, (Brompton)	8.0	10.1
Tuberculous average	8.2	10.3

TABLE II.

Series of Breadth Indices.	
Fœtal chests (6), average	102
Infants under 2 years (18), average	94
Children, 2 to 9 years (20) ,, ...	86
Boys, 14 to 10 years (12) ,, ...	81
Adults, 17 to 44 years (2,350) ,, ...	72
82 tuberculous cases	79.5
30 "flat" chests	80.0

Length Indices.	
Internes and patients at Garrison Hospital ...	89.0
Enlisted men	87.3
40 tuberculous cases (Buffalo)	80.0
42 ,, ,, (Brompton)	81.4

Abnormal Chests.	Breadth Index.
Man, 20 years, dorsal kyphosis	143.0
Girl, 18 years, rachitic dwarf (height 2 ft. 11 in.) ...	152.4
Fœtus at term, fœtal rickets	159.0
Man, 23 years, "funnel chest" (*Frichter-Brust*) ...	54.0
Flattest chest of normal series (soldier), 31 years...	61.0
,, ,, tuberculous series (male, 38 years)	66.0

to be conclusive, but all authorities who mention the point are agreed that this change takes place (Morris, Macalister, Wiedersheim), but do not give the precise measurements; and, as in the ancestral series, the earlier the stage the greater the preponderance of diaphragmatic respiration. The "prize-fighter" chest of the newly-born infant, which proud mothers are so sure is an indication of "a strong constitution," is most limited in its movements, and infantile respiration is chiefly abdominal.

Now in what way does the form of chest found in consumptive patients contrast with the normal, tranversely oval, adult form? When I began the study of this question two years ago I was astonished to find that no recognised chest index for the human species had been established. After a careful search through the literature and appeals to several prominent anatomists, I found myself obliged to make measurements for myself in order to determine this point. These were taken upon students and *internes* at the Buffalo General Hospital, and by the kindness and valuable assistance of my friend Surgeon-Major Appel upon a company of United States regulars then in garrison at Buffalo. Some months later I succeeded in finding a series of diameter measurements taken by Dr. Seager upon 2,300 Yale students. From all these taken together the average antero-posterior diameter of the normal chest would appear to be 7.6 inches, and the transverse 10.8 inches, which, taking the longest or transverse diameter as 100, gives an index of a trifle under 71. The measurements in all these were taken with calipers at the level of the nipple and in the post-respiratory pause in natural breathing.

As to the shape of the tuberculous chest, I found a surprising unanimity of statement to the effect that it is flat, almost every authority whom I consulted asserting this, some of them declaring that the antero-posterior diameter was diminished, but none giving any measurements whatever, except circumference and changes in volume. And I may frankly confess that when I began to take measurements I was fully under the impression that I should find the tuber-

culous chest an exaggeration of the normal form, with a diminished antero-posterior diameter and a low index. To my surprise, however, my first measurements showed just the opposite. Every additional measurement confirmed the first, and although I have only succeeded in collecting by slow degrees the dimensions of 82 cases of tuberculosis, yet they are a singularly uniform series. Forty of these measurements were taken in Buffalo Hospital by the courtesy of my colleagues, and 42 in the Brompton Hospital for Consumption by the courteous permission of Drs. Green, Acland, Fowler, and Kidd, and the kind co-operation of the resident medical officer, Dr. Felkin, and my friend Dr. Conner.

In the American series the antero-posterior diameter, instead of being diminished, averaged in 25 cases 8.9 inches, or 1.3 inch above the normal, the transverse 10.3 inches, 5 inches below the normal; while for the 40 cases the average index was 79.3, making the chest 7.3° rounder than the normal.

In the English series the average antero-posterior diameter was 8 inches, or 4 inches greater than the normal, the transverse 10.1 inches, or 7 inches below the normal, making the average index 79.6, as compared with the normal 71. The similarity of the indices in both series is striking, and it is matched by the uniformity of the individual measurements, for out of the Buffalo chests only 5 reached or exceeded the normal index, and of the Brompton cases only 6, or 11 out of the 82 cases. Of the 40 male Brompton cases, 25 lie between 75 and 85, or 62 per cent. There would certainly appear to be some sort of connection between this type of chest and pulmonary tuberculosis; but if the tuberculous chest is nearly round, how has it come to be universally described as flat? Simply, I think, from the position given to the shoulders in this type of chest. In the normal chest the scapulæ rest securely and easily upon the flattened posterior wall of the chest, and the shoulders are kept well apart and back. In the rounded chest there is no flat surface upon which the scapulæ can rest, and they consequently tend to roll forward upon the barrel-like surface, dragged by the weight of the arms, so that the front of the chest is made to appear flat and even hollow. Pull the shoulders of a consumptive for of a flat-chested boy forcibly backward, and you will see that his chest proper is distinctly round instead of flattened. To this resting upon a curved surface is due the well-known projection of the scapular angles, the so-called "wings" of the consumptive chest.

Is this form of chest the result of the disease or does it precede it? To this no positive answer can be given in the present state of our knowledge, as it would require a large number of measurements taken in the earliest appreciable stage of the disease, or really, to be perfectly conclusive, measurements of a large number of boys or girls between 12 and 21 years of age, and then keeping them under observation for ten years to see how many of the round-chested ones became tuberculous as compared with the normal. There are, however, several considerations which render it strongly probable to my mind that the shape of the chest precedes the disease, and is a predisposing factor.

First of all, such measurements as I have been able to take in the early stages of the disease show an already high index. Four of the Buffalo cases were in the first stage of the disease, of the Brompton series 12, and the average index of these was 79.2, only 0.4 of a degree below the general average. I think there is little question that the deformity tends to increase slightly during the disease, as the chest gets pulled up into a permanent position of extreme inspiration.

In the second place, all that is required to produce this type of chest is that its form development should be arrested at about the fifteenth year, when, as we have seen, the chest has normally an index of about 80. And as this form is present in all non-tuberculous cases of "flat" chest which I have been able to measure, some 30 in all, and nearly all backward or defective children measured, have an index distinctly higher than that normal at their age, I believe that such an arrest has occurred in most tuberculous cases.

Finally, such an arrest of development by keeping the free anterior flap of the chest bellows uncumbered at its sides, and even in front, by the shoulder masses and arms, would seriously hamper the proper expansion of the lung, and render it much more liable to the attack of the disease; while it is difficult to conceive how pulmonary tuberculosis could within a few months change a chest of normal form to one nearly ten degrees out of the normal.

The shape of the tuberculous chest also departs from the normal in another dimension, and that is its length. This is slightly but distinctly in excess of the normal both absolutely and relatively, averaging in my 82 cases 12.8 inches, and in the soldiers and students 12.3 inches. In all these the measurement was taken from the centre of the clavicle to the lowest point of the costal cartilages, intersected by a line drawn just outside the nipple. I found that the slope of the lower ribs varied so much that measurements to a certain rib or cartilage bore no constant relation to the actual length of the chest. While the absolute increase was slight the

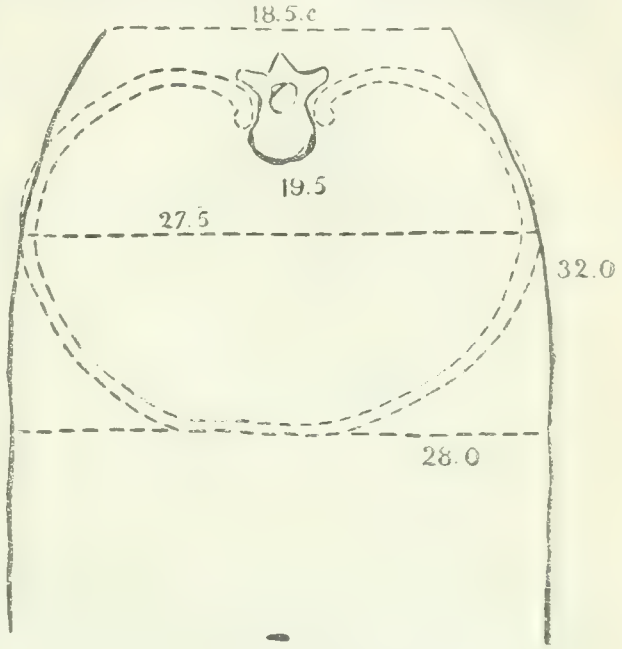


Fig. 1.—Normal.

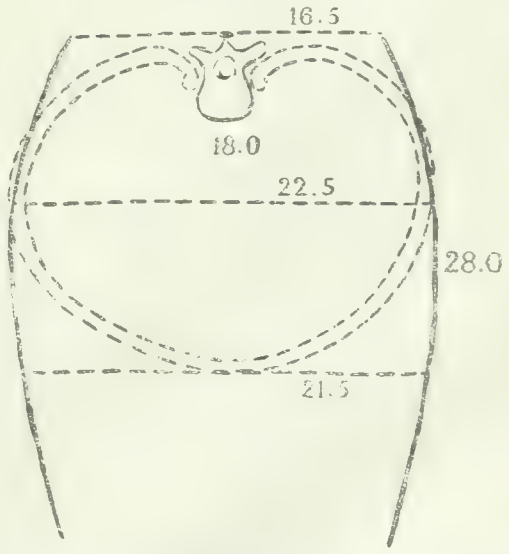


Fig. 2.—Phthisis.

relation or index excess over the normal was well marked. In the normal chests this averaged 87.5, in the tuberculous 80.5, the length of the chest being taken as 100, and contrasted with the breadth. On account of the diminution

of the transverse diameter the tuberculous chest looks longer than it really is. The meaning of this departure is quite obscure, as although the quadrupedal chest in nearly all forms is distinctly longer than our own, and the reptilian and piscine still more so and there are traces in the human embryo of at least two pairs of lumbar and one pair of cervical ribs which have been suppressed; yet the chest in the infant is short in proportion to its breadth. But it is certainly long in proportion to the stature, although I can find no measurements giving the exact proportion.



Fig. 3.—Rickets (27 months).



Fig. 4.—"Flat" (6 years).



Fig. 5.—Fœtus.
3 months. 7 months.

To sum up, then, the tuberculous chest is not only relatively but also absolutely "deeper," narrower, and longer than the normal. Instead of being flat it is round and long, or as it has been termed with grim appropriateness "coffin-shaped." In all of these dimensions it is apparently a chest arrested at a certain stage of its development.

I was much interested to learn a few days ago, in the course of my later measurements, from Dr. Felkin, the resident physician at the Brompton Hospital, that some years before Mr. R. J. Godlee had expressed a similar opinion as to the real shape of the tuberculous chest and that his own observations since had confirmed the opinion, which in view of the enormous number of cases passing under his care I regard as most weighty evidence in corroboration.

The practical bearings of these observations are of obvious importance. If an arrest of the chest form at about the period of puberty is a predisposing factor in tuberculosis, then we have an indication of the pretuberculous state of easy application and no little value. Of course by no means every chest with a breadth index of 80 or over becomes tuberculous, nor do all chests reaching 71 or less escape; but, in view of the facts that among 50 soldiers only 10 reached or exceeded the tuberculous average of 80°, and among 82 consumptives only 9 reached the normal index, the persistence of the pubertal index of 80° would certainly be a condition to be regarded with suspicion and got rid of if possible.

As for the cure, a vigorous active life in the open air, with plenty of tree climbing, ball or spear throwing, bar work, and all kinds of exercises which develop the great pectoral muscles, to pull the chest into shape, will be most effective.

My attention was first called to the shape of chest in boys by an intelligent gymnasium trainer, who consulted me in in regard to two who had extremely round shoulders. This condition she was attempting to remedy by exercises combined with pulling the shoulders forcibly back with her knee against the broad of the back. This I mildly discouraged; but she had great faith in it, and simply complained that, although she could get the shoulders back readily enough by this means, they would not remain so. At her request I tried the experiment myself, and soon discovered that when the shoulders were pulled back artificially the chest was markedly round instead of flat, and that this roundness was the cause of their rolling forward again in the anthropoid attitude characteristic of the small boy.

I found that she had located many similar cases with success, and, when I asked what form of exercises she found most useful, was amused to learn that it was climbing and ladder work.

It would almost seem as if a reversion to the arboreal habits of our ancestors was the chief requisite for proper chest development in the individual, as well as in the race. The well-marked child instinct for tree climbing ought to be regarded with respect in both girls and boys, even at the risk of torn clothing or an occasional broken bone. Follow this by the weapon-throwing exercises of our less remote ancestors, for which, again, there is a sufficiently well-defined instinct in boys, and a minimum of school or factory confinement, and we shall have far fewer "flat-chested," round-shouldered boys and girls growing up to become culture media for the tubercle bacillus. Tree climbing and war have made the human chest, and the magnificent instinct of the "natural man" and child for both, like most other human instincts, in Browning's phrase, "means intensely, and means good."

ON THE PREBALNEAR TREATMENT OF HEART DISEASE BY INHALATIONS OF CARBONIC ACID GAS, AND ON THE USES OF THE INHALATION IN CARDIAC DYSPNŒA AND IN ANGINOID PAIN.

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THE results of the clinical observations which I have made during the last two years on the inhalation of carbonic acid gas in various diseases—cardiac, respiratory, hæmic, and nervous—will be published at an early date; but this paper is restricted to its therapeutics in cardiac disease, which do not appear to have been hitherto studied. We learn from Demarquay's[1] careful historical review, and the same may be gathered from Waldenburg's writings, that whilst the inhalation of carbonic acid gas was extensively used in a few other affections at the end of the last and the middle of the present century, it was not employed for the treatment of heart disease. Although the general effects of effervescing baths, and more particularly in connection with the heart, those of the Nauheim effervescing baths have been partly attributed to the gas which they contain, it is remarkable that the inhalation of carbonic acid has never been systematically practised, nor even, so far as I know, definitely proposed as a method of cardiac treatment.

This neglected line of inquiry seemed to be almost directly suggested by the growing use, in recent years, of oxygen inhalations; and a further suggestion in favour of its consideration was the fact that the well-known properties of CO_2 identify it as a poison and probably, therefore, also as an active remedy.

The justification of the method must rest mainly upon its direct results; but a special recommendation would belong to it if, as I shall endeavour to show, these results were able to facilitate other important measures of treatment. This is not the place to discuss the relative value of the old treatment of heart disease and of the new. We are dependent upon both, and most often both must be combined; but if it be agreed that the cure of heart disease can be conducted further with the help of the Nauheim treatment, in cases where this can be applied, than without it, the advantages of the latter should be secured for as many cases as possible, and secured early. Unfortunately, various stages of the cardiac and cardio-vascular affections are unsuitable, some permanently, others for a time until sufficient progress has been made towards recovery. To shorten this unavoidable delay is

one of the objects of the inhalation treatment, for which it may also be claimed that it is an instalment of the treatment by baths; but, in addition, it is of use, and may be safely administered, in many of those cases which are absolutely debarred from the Nauheim treatment.

The Scope of the Treatment.

In a disguised form the inhalation of carbonic acid is included in the treatment by baths. When a patient lies in an effervescing bath he is inhaling the gas. The higher he is made to sit up the less of it would be inspired; but in the reclining posture, as the gas tends by gravitation to lie at the surface of the water, the dose is apt to be considerable. The share which this factor must take in the total result has not been sufficiently defined, but its importance is made clear by the results which are now obtained by the systematic inhalation of the gas whilst the patient is lying in bed.

The balnear treatment and the inhalation treatment are thus intimately associated in the Nauheim cure. Yet although it is possible to trace to the inhalation of the gas some of the benefits of the latter as well as some of its occasional drawbacks, the two forms of treatment are absolutely distinct both in their action and in their application.

First, as regards applicability, the stage for which the balnear treatment is most suitable is that of convalescence; but the chief usefulness of the treatment by inhalation belongs, although not exclusively, to the stage when an obstructed circulation and the urgent symptoms of cardiac inadequacy call for remedies which shall be active as well as safe.

Loss of compensation from any of the varieties of valvular lesion admits of tentative treatment by carbonic acid, and will respond to it in varying degrees; and, putting aside the approach of death when differences between cases are equalised and no form of treatment can avail, those cases will derive most benefit in which the elements of respiratory distress and cardiac pain predominate.

The difference in the range of applicability is yet more conspicuous when we turn to those cases, obviously unsuitable for baths, in which cardiac inadequacy is due to vascular degeneration, or in which cardiac struggle and pain are kept up by a permanently-raised vascular tension. True angina, which forbids the use of baths, may be safely treated with the inhalation; and in the minor degrees of angina or of heart pain it has hitherto never failed to afford relief. The doubtful group, in which the suitability of baths is open to question, is largely made up of cases of valvular stenosis, whether aortic or mitral. In the worst of these cases, the balnear treatment is inadmissible, but the inhalation treatment can be safely administered, and is a boon to the patient.

The Mode of Use.

The essentials are;

1. A continuous supply of pure carbonic acid gas, absolutely free from all traces of the dangerous carbon monoxide (CO).
2. An efficient means of controlling its delivery, and of ensuring the simultaneous inhalation of air.
3. A convenient length of india-rubber tubing provided with a glass mouthpiece.

If this were desired, the amount inhaled could be accurately determined by using an indiarubber bag of known capacity. I have always administered the inhalations direct from the supply,[2] merely passing the gas through a wash bottle (which, when the gas is absolutely pure, need only contain a little water) as a simple means of gauging the rapidity of outflow by the rate of bubbling.

I previously obtained the gas from a Kipps's generator; it then needed to be freed from hydrochloric acid fumes by passing it through a short column of potassium carbonate solution with which the tow filling the upper part of the wash bottle was also moistened. Kipps's apparatus is of awkward shape for clinical use, and is apt to give trouble in the working. With the kind help of Dr. Addyman Gardner and of Mr. Addyman, I have constructed a simple and easily-worked apparatus consisting of three bottles in a box, a small narrow wash bottle, and two larger bottles, each of which is provided with a neck at the bottom—these two inferior necks being connected by an indiarubber tube (controlled by a clip), through which the hydrochloric acid travels from one bottle to the other. The hydrochloric acid supply bottle, which needs to be raised, is left open whilst in use. The top of the other bottle is connected by an indiarubber tube with that of the wash bottle, which contains a thick layer of glass marbles, and above this a layer of chipped marble which is left high and dry on its glass bed when the carbonic acid pressure is sufficiently raised in the bottle by clipping its delivery tube to drive all the hydrochloric acid back into the supply bottle, where the acid can be secured by closing the clip and putting in the stopper.

The inhalation is made by holding the mouthpiece between the teeth whilst the lips remain open. This ensures a full supply of air. Or Dr. G. Stoker's nasal bulbous tube may be introduced into one nostril, the other nostril providing the atmospheric supply.

The rate of bubbling is easily adapted to the requirements of each case by altering the aperture of the screw clip. For an average inhalation the bubbles should be allowed to pass almost as fast as they can be counted aloud. When this rapidity is not exceeded no possible danger can arise from the inhalation even if continued for some time.

The Mode of Action.

The carbonic acid inhalation treatment belongs to the same therapeutical group as the balnear treatment—a group which might be termed physiological in contrast with those remedies which are purely medicinal, although this is, perhaps, a distinction more descriptive than essential. There is, however, between the modes of action a difference which may be best understood after a brief reference to the physiology of the subject.

The toxic effects of drugs and their therapeutic effects are distinct and often opposed. This is the case with carbonic acid quite as much as with strychnine or digitalis. Clinically the idea of carbonic acid has been too exclusively associated with its toxic properties. On the present occasion it would be unprofitable to dwell upon the symptoms of carbonic acid poisoning which form no part of the therapeutic action, and are not witnessed in the course of the clinical use of the gas. We are concerned with those physiological effects alone which belong to the inhalation of moderate amounts for limited periods.

It is an important recommendation of this treatment that in the form described it can always be tried with safety. In health carbonic acid can be inhaled without any harm in the proportion of 15 and even 20 per cent.; and the warning of an overdose is nothing worse than slight headache or heaviness, immediately relieved by stopping the inhalation. But with the smaller proportions inhaled therapeutically even this complication is almost unknown.

It may be mentioned incidentally that the systematic inhalation of carbonic acid has not been proved to lead to the intake of any additional quantity of the gas into the blood, but by raising the partial pressure of CO_2 in the lung it would prevent the blood from decarbonating itself to the normal extent, and would cause it to retain more of its own carbonic acid.

In a rarefied atmosphere the opposite condition might result. Mosso[3] holds that a certain proportion of carbonic acid is indispensable for the purposes of life and of the respiratory function. A reduction of this necessary amount below the normal ("acapnia," as he terms it) would give rise to symptoms, and he regards the symptoms of mountain sickness as due to this cause. Thus mountain sickness would not be an ordinary asphyxia from want of oxygen, but a difficulty arising from lack of a sufficient amount of the carbonic acid which he regards as the normal exciting agent for some of the higher centres in the medulla. It is not opportune to discuss here the correctness of Mosso's assumption that the carbonic acid percentage of the blood diminishes proportionately to its partial pressure in the atmosphere, nor his experiments in the pneumatic chamber where he was able to withstand a rarefaction of the air down to 192 mm. of pressure, owing to the presence of 21 per cent. of carbonic acid introduced into the atmosphere of the chamber; neither can we dwell upon his statement that there is a resemblance between the symptoms of mountain sickness and those of angina. According to his view, the distress of mountain sickness should be capable of relief by the inhalation of carbonic acid, and it would

be also conceivable that a relative "acapnia" might exist in certain states of disease or perverted function, when the difficulty might be met by raising the charge of carbonic acid in the blood.

Leaving, then, aside the asphyxia immediately induced by the undiluted gas owing to its irrespirable nature, and the more gradual poisoning which occurs in an atmosphere highly charged with it, the following are the physiological effects which have been noted with slight individual variations by those (as for instance by Demarquay) who have inhaled CO_2 experimentally in moderate concentration (up to 25 per cent.): (1) a feeling of internal warmth, and after a time some flushing; (2) a strong desire to breathe, and particularly to breathe out; (3) an excited state of the circulation, which may amount to throbbing or palpitation; (4) a slight giddiness and headache supervening after a while in some susceptible subjects; (5) general anæsthesia is not brought about by moderate inhalations; (6) cutaneous anæsthesia has not been obtained as a result of the inhalation, but only by the local action of the gas upon the skin.

The Mode of Action as Observed Clinically.

So much for the effects produced in health. My own observations have been entirely clinical; and in patients suffering from cardiac symptoms they have been as follows:—Subjective effects: (1) Rapid diminution, and within a minute or two cessation of cardiac distress, discomfort, or pain; (2) a feeling of increasing freedom of respiration. Objective effects: (3) a visible increase in the depth of breathing; (4) a marked improvement in the pulse; (5) an obvious improvement both in the expression and in the complexion. It is noteworthy that the advantage gained from a first inhalation lasting a few minutes is not momentary but persists for many hours. Lastly (6) the systematic repetition of the inhalations brings about progressive improvement in the patient's general condition as well as in the cardiac and respiratory functions.

A comparison of these two series of observations points to the conclusion that carbonic acid takes definite effect upon the respiration, upon the heart, and upon cardiac pain. The relief afforded to the anginal pain or to the cardiac distress is the earliest and most striking result. It occurs so rapidly that it can hardly be attributed solely to the anæsthetic property of the gas, since anæsthesia is one of the ultimate effects of carbonic acid poisoning. More probably it is the earliest evidence of an impression made upon the cardio-vascular medullary centres. The inference that the spasm of the peripheral arterioles is released at this early stage is borne out by the analogous relief of visceral pain which I have obtained in various spasmodic affections of other parts.

Marked improvement in the size of the pulse would be the direct result of peripheral vaso-dilatation, and this is not slow to follow as a second instalment of the cardio-vascular action, the third instalment being the improved contraction of the heart. Meanwhile the respiratory action of the gas, which is the first to attract notice in the healthy subject, combines with the cardio-vascular action, powerfully assists the overtaxed heart. The deeper respirations open up for the blood an easier way through the lungs, and with the increased ventilation of the latter more oxygen is supplied to the heart muscle. The same explanation applies to the fact, not readily credited unless witnessed, that the inhalation of carbonic acid relieves cyanosis in cardiac disease.

Enough has been said to bear out the statement that the mode of action of carbonic acid is physiological. This treatment resembles the Nauheim treatment in giving relief to the heart by modifying and stimulating other functions. It agrees with the Nauheim treatment in "working the heart" through the lungs and through the vascular system. But, as may now be perceived, the methods which bring this about are not identical and not suited to the same conditions.

Whilst the benefits of an increased depth of respiration, which are common to both methods, are associated in the baths and in the exercises with a strong impression made on the skin or with a definite activity of the muscular system, calculated to act as a tonic to the convalescent heart, the simple inhalation of carbonic acid gives the same respiratory advantages without entailing the least collateral effort or strain, and without introducing any element of vascular tension; it is therefore applicable to the worst stages of cardiac inadequacy, and constitutes for them the mildest possible attenuation of the mechanical treatment as practised at Nauheim. The term "prebalnear" applied to this method connotes both the analogy and the difference.

The inhalation method is a simple and uncomplicated measure of cardiac relief; it improves the failing pulse, but does not usually lower its rate and may even raise it. The effervescing bath being a mixed method is rather less certain in its application, since it combines the somewhat diverging effects of the carbonic acid inhalation and of an immersion in cool water, but its total effect is usually to increase the pulse strength and to diminish the pulse-rate. W. Edgecombe and W. Bain have recently demonstrated[4] that a strong effervescing Nauheim bath lowers the arterial pressure more markedly than a plain water bath of the same temperature, while at the same time it raises absolutely the venous pressure which the plain water bath lowers slightly.

The Clinical Cases.

Little remains to be added beyond the clinical evidence derived from the cases observed. The painful cardiac affections which have been treated were chiefly those secondary to valvular affections. True angina of severe type may not prove amenable to the inhalation. I have hitherto lacked the opportunity of making conclusive observations in these cases.

Anginal Pain.—Of the worst forms of angina the syncopal varieties are the least likely, and the spasmodic varieties, in which pain predominates, are the most likely to derive benefit from carbonic acid. Where, as in the variety of angina sometimes known as Stokes-Adams disease, the dyspnœa predominates over the pain, the inhalation of oxygen would seem to be the rational indication. I have tried carbonic acid in two cases of this kind without any marked improvement, and oxygen was regarded by one of the patients as more beneficial than CO_2. From my observations in these cases I believe that the simultaneous administration of carbonic acid and of oxygen may prove of value in them as well as in cases of true angina, but I cannot at present offer more than isolated clinical facts in support of that view.

The secondary anginoid pain and the anginal attacks which occur in the course of valvular disease have not hitherto failed to be rapidly relieved by the inhalation. Secondary anginal pain is most common in aortic valvular stenosis and in mitral stenosis. I have not had under treatment any case of the worst form of uncomplicated aortic stenosis, but I have treated several cases in which the lesion gave rise to a double aortic murmur. Most of these cases presented also a mitral affection with two murmurs, and belonged to the familiar group of the "four murmur cases," which is made up chiefly of young subjects. The following is the history of the first case in which the treatment was applied, one of the most severe hitherto treated; although the patient ultimately died, the relief obtained was sufficiently marked to establish the value of the method.

Aortic Regurgitation and Mitral Disease with Angina.—R. H.,[5] aged 22, a light packer, had long suffered from post-rheumatic valvular affection, for which he had spent long periods in the hospital during the last few years. There were four murmurs—two aortic and two mitral murmurs—and considerable cardiac enlargement. During the last of his previous periods in the hospital he had greatly benefited from a course of Nauheim treatment in spite of his combined valvular defects, and had since then been at work for about a year. On this occasion his condition was worse than ever before. There was orthopnœa, insomnia, great cardiac distress, and severe anginal pain extending down the arm. This condition persisting in spite of treatment, with progressive failure in strength, oxygen was prescribed. But the relief which I had expected not being obtained, I gave him to inhale some carbonic acid gas, which I prepared in the ward from the materials at hand (chalk and hydrochloric acid). In spite of its admixture with hydrochloric fumes a few whiffs of the gas gave immediate and remarkable relief, and the patient was able to lean back upon his pillows, and subsequently slept for a while. The relief was not permanent, but when the pain returned it was again and again relieved. The cardiac condition had, however, progressed beyond recovery, and treatment by cardiac tonics and by stimulants failed to avert the fatal termination.

Aortic Valvular Disease and Mitral Stenosis: Pulmonary Congestion and Bronchitis with slight Ascites and Anasarca: Anginal Attacks.—In this case Julia B., aged 44, the patient's age, stout and congested habit, and severe pulmonary complication, justified an anxious prognosis. When admitted into St. George's Hospital she was much exhausted, orthopnœic with bluish lips, and subject to recurring attacks of anginal pain, with increased breathlessness and faintness. She was treated at first with ether mixture, aperients and heroin, with slight relief to her symptoms, and the temperature gradually fell to a normal level. Carbonic acid inhalations, for ten minutes thrice daily, were begun ten days after her admission. From that date there was marked and progressive improve-

ment in the anginal condition and in the cyanosis. Ten days later she was able to take a Nauheim bath (half strength), which was repeated on alternate days. The temperature of the baths was gradually lowered, and their strength increased. She steadily improved, gained strength, and was about to leave the hospital in a better state and stronger than she had been for years, when she died somewhat suddenly in the night with symptoms of cerebral hæmorrhage. A *post-mortem* examination could not be obtained. This patient had had influenza seven years previously, and had never been well since. She had been in the hospital for similar attacks last year and three years ago.

Other similar, but less extreme, cases with multiple murmurs have been under treatment and have done well. As striking as any of them are two at present under treatment at St. George's Hospital. They were admitted with serious symptoms and are now so far improved as to derive great benefit from the Nauheim baths and exercises.

Double Aortic and Double Mitral Murmur: Rheumatism of the Heart.—G. H., a youth, aged 17, with four murmurs and considerable aortic leakage as judged by the absence of the second aortic sound, was, on admission, prostrate, pale, orthopnœic, with pain in the cardiac region and great throbbing of the arteries of the neck, a rapid typical Corrigan's pulse, and a high temperature. There was slight œdema of the legs, but no large effusion and no articular rheumatism, though he had previously suffered severely in the joints. The pyrexia was relieved in a few hours by sodium salicylate, and a mild antirheumatic treatment was followed for a few days. The cardiac symptoms being still severe the medicine was interrupted and carbonic acid inhalations were administered systematically. These gave much comfort, and the patient's condition rapidly improved both in complexion, which became healthy and florid (partly, perhaps, owing to iron taken internally), and as regards increased steadiness of the heart and the loss of some of its dilatation. The patient is now beginning resistance movements and mitigated baths, but is still kept at rest in bed.

Aortic Regurgitation and Double Mitral Murmur: Cyanosis.—S. K., aged 20, the subject of slight aortic regurgitation and mitral regurgitation and obstruction, (the symptoms of stenosis predominating), and of tricuspid regurgitation, was admitted in a state of much dyspnœa, with a marked tendency to cyanosis of the lips, ears and extremities, but almost free from anasarca and effusions. The heart was much enlarged, the pulse rapid and collapsing, but not of a strictly Corrigan type, and the jugular veins distended and pulsating. There was some bronchial catarrh. Carbonic acid inhalations were administered with relief and comfort to the patient, but were discontinued by my house-physician because of the blueness of the lips. As this, however, was found to persist for several days after the cessation of the inhalation, which I had not regarded as the cause, I ultimately prescribed again the systematic administration of the gas for short periods four times a day. The treatment meanwhile had been of a purely symptomatic character, and had not included any digitalis. The improvement, which had been very gradual, became rapid, and in this case a reduction of the pulse-rate and a cessation of the heaving pulsation communicated to the chest wall were distinctly traceable to the inhalation. The general improvement in strength and complexion was rapid, and is now continued under the influence of resistance movements and Nauheim baths.

A feature noticed in the cyanotic condition of this patient was its evanescent character; it was found to increase or lessen within a few minutes. This circumstance and the observation that the improvement in complexion was generally brought about by the increased activity of breathing due to excitement led me without any misgivings to put the patient again upon the carbonic acid treatment, the effects of which were found to be of the same nature.

Mitral Stenosis with Anginal Pain.—The first of several cases of this kind treated by inhalation was that of a youth, aged 18, whose valvular affection was of several years' standing. His dyspnœa was considerable and associated with pain through the chest, radiating into the left arm. There was some anasarca, and the face was slightly puffy, with duskiness due partly to the cardiac dilatation and partly to the coexisting bronchitis and pulmonary congestion. The effect of a few inhalations of carbonic acid was most marked, and he expressed himself greatly relieved. In this case the inhalation was repeated several times a day for short periods with excellent results, the patient always experiencing relief. He lost his duskiness, the bronchitis improved, and under suitable treatment he regained strength and left the hospital.

Cardiac Dyspnœa and Cyanosis from Dilatation of the Right Side of the Heart and Tricuspid Regurgitation.—This case, that of a man aged 49, was remarkable owing to the degree and the persistence of the duskiness of the face, lips, and ears. There was no anasarca, and little, if any, ascites, but the dyspnœa was considerable, being partly due to the cardiac, and partly to the pulmonary complications. The pulse was relatively strong, but the right side of the heart was found to be considerably dilated, as well as the veins of the neck. There was also considerable congestion and catarrh at the base of the lung, with little entry of air. A loud systolic tricuspid murmur was the only murmur audible. The patient's cyanotic aspect and dyspnœa warranted a serious prognosis. He was treated with moderate doses of digitalis and nux vomica, and stimulants were administered, but the cyanosis and the orthopnœa persisted. After five days, in spite of the marked cyanosis which might have been regarded as a contra-indication, I prescribed the inhalation of carbonic acid, in the hopes of relieving the heart through the lungs. The effect was most satisfactory, and during the administration, which, as in all doubtful cases, was watched by myself, not only did the patient experience great relief to his dyspnœa in connection with an increasing depth of respiration, but the gradual lessening of the cyanosis was obvious to the bystanders. The systematic inhalation of carbonic acid for a quarter of an hour four times daily was ordered, and was continued for several days, during which the patient made considerable progress. Ultimately the bronchitis and the pulmonary congestion, which I had regarded in view of the cold season of the year as an absolute objection to Nauheim baths, having subsided, he went through a course of baths and exercises, and left the hospital in good condition and fit for work, having lost his murmur and his dilatation.

This was a good demonstration of one aspect of the mechanism of relief in cardiac disease. The increased respiration induced by the inhalation, whilst lessening some of the thoracic respiratory difficulties, including muscular spasm and pain, eases the circulation through the lungs, and gives direct relief to the struggling heart.

Further cases might be adduced illustrating the relief which is derived in cardiac dyspnœa, but this would be adding unnecessarily to the length of this communication on a point which would seem to be no longer open to doubt.

NOTES AND REFERENCES.

[1] J. N. Demarquay, *Essai de Pneumatologie Médicale*, etc., Paris, 1866. [2] Small and very portable cylinders, 15 inches in length and 1¾ inches in circumference, provided with excellent gas checks, have recently been made by Messrs. Spurge, compressed gas engineers, of Greek Street, Soho, and these are charged by Messrs. Barrett, of the London Carbonic Acid Works, Dace Road, Old Ford, with pure gas liberated by heat from a solution of the carbonate formed with the impure gas. [3] Angelo Mosso, *Life of Man on the High Alps. Cf.* also a review in *Nature*, January 26th, 1899. [4] *Physiol. Soc. Trans.*, vol. xxiv, i. [5] Reference to this case has already been made in the *Clinical Journal*.

DISCUSSION.

Mr. J. F. BRISCOE expressed surprise at the deductions which Dr. Ewart had drawn from his experiments. He wished to point out that the very condition for which this novel treatment was advocated was associated with an excessive amount of carbonic acid gas in the blood, and could only be dealt with satisfactorily by a moderate bleeding. He was sure that the inhalation of carbon dioxide would not find a permanent place in cardiac therapeutics.

Dr. BARR said that this novel method of treatment of heart disease was one which did not commend itself to his judgment. Hitherto efforts had been more in the direction of attempts to get rid of the carbonic acid, and many were in the habit of frequently giving an additional supply of oxygen out of a cylinder. This latter method had also the negative merit claimed by Dr. Ewart for carbonic acid, that at least it did no harm. He had no doubt that a moderate addition of carbonic acid to a pure atmosphere might do no harm, and might produce a mental impression on the patient and doctor that this cumbersome method was affording relief; a thermometer in the armpit had occasionally a similar beneficial effect, but personally he preferred a remedy with more positive virtues, and one the effects of which were not only apparent but real. He held that the gas could have no physiological effect except by the exclusion of oxygen. Dr. Ewart had not dealt at all with the subject of the tension of gases, and as the tension of carbonic acid in the blood was much greater than in the atmosphere the flow of this gas was outwards, and its absorption could be only brought about by raising the tension in the atmosphere to a suffocative height. In cases of hanging its excretion was prevented, and its effects were not, as Dr. Ewart stated, to cause a vasomotor paresis, but the blood pressure was markedly raised both in the systemic and pulmonic systems, and the pulmonic arterioles might be so contracted that at the *post-mortem* examination the lungs might contain very little blood and the right side of the heart and liver be enormously engorged. In regard to the anæsthetic effects of carbonic acid there could be no doubt, but in Dr. Ewart's administration Dr. Barr maintained that it was not absorbed, and therefore could have no such effect other than imaginary. Dr. Ewart believed that the inhalation of carbonic acid increased the depth of the inspirations; but Dr. Barr maintained that it could only do so by stimulating the respiratory centre after absorption, and he held that it was not absorbed, nor was it administered in sufficient quantity to exclude the oxygen and so be an indirect cause of respiratory stimulation. As a respiratory stimulant he preferred strychnine or atropine. Dr. Barr said that the inhalation of carbonic acid might have all the advantages which Dr. Ewart claimed for it, but it would require much stronger evidence than that adduced before he would consider it worthy of trial.

Dr. C. THEODORE WILLIAMS thought that possibly in several of Dr. Ewart's cases the causation was cardiac neurosis. He knew of no cases treated by carbonic acid, but in a severe

instance of bronchial asthma, a pure neurosis, he witnessed the beneficial influence of the accumulation of carbonic acid on an asthmatic spasm. A young female patient had so severe an attack that she became livid and unconscious, the pulse and respiration stopping. Dr. Williams predicted that the patient would now be relieved, as the anæsthetic effect of accumulated carbonic had been reached. The patient made a long-drawn inspiration, the colour returned, and pulse and respiration were re-established, and she was free from spasm.

Dr. Primrose Wells had taken patients through the Nauheim treatment, but had used the Nauheim bath without the admixture of carbonic acid gas. In future, however, he should add it to the bath, as he was convinced from the paper of the value of the treatment upon an embarrassed heart. Its relative action upon the system generally, in addition to its action on the skin, was, he thought, a valuable element and worth a trial.

Dr. Verco said that Dr. Ewart had brought observations of facts under their notice and not merely theoretic suggestions, and this disarmed criticism from those who had no experience in the treatment of heart disease by carbonic acid gas. If his observations were not inaccurate the inhalation of the gas afforded benefit. An objection to several of the previous criticisms was that the effects of administration of a drug in small and measured quantity might be altogether different from those of the same drug when taken in large or so-called poisonous amount.

ALBUMINURIC RETINITIS.

By Samuel West, M.D., F.R.C.P.,

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In its typical form albuminuric retinitis is characteristic and pathognomonic. Yet upon many important points the statements of different authorities are very conflicting and difficult to reconcile. Kidney diseases fall into two great groups according as dropsy is a prominent symptom or not, and the kind of albuminuric retinitis most frequently met with in these two groups will, I think, be found to be different. The lesions of albuminuric retinitis consist in white patches, hæmorrhages, and exudation, variously combined with each other, and lastly quasi-inflammatory conditions.

The Exudative (Inflammatory-Extreme) Form.

In this form the changes are widespread and extreme, and closely resemble what is seen in other forms of acute neuro-retinitis. Dropsy is not very common in granular kidney, so this form of albuminuric retinitis rarely occurs in this disease, but is more frequently met with in the other group, namely, that of parenchymatous nephritis. Complicated as the question is we seem to be justified in drawing these conclusions: that this form of albuminuric retinitis is of an exudative inflammatory type, that it is probably of toxic origin, and related rather to the cellular degeneration than to the interstitial fibrosis.

If the view I am expressing prove to be correct, it follows not only that the kind of albuminuric retinitis which prevails in the two forms of renal disease is different, but that it has a different diagnostic value in the two cases. In parenchymatous nephritis the diagnosis of the disease is obvious and the albuminuric retinitis is an interesting by-phenomenon only. In granular kidney the diagnosis may be uncertain until all doubt is dispelled by the discovery of the characteristic eye changes. It is to this group that some of the cases of albuminuric retinitis of pregnancy belong. On the other hand, many more of these cases in pregnancy belong to the degenerative group and are evidence of granular kidney. Puerperal eclampsia occurs in either form; in the former rarely without dropsy, and in the latter not infrequently without.

The Degenerative Form.

The degenerative form of albuminuric retinitis consists in white patches and hæmorrhages. Of these the most characteristic are the white patches. There are, I believe, two kinds of white spots, the one forming bright spots glistening like fish scales, the other not so glistening or so sharply defined, but woolly in appearance. The former are the result of degenerative changes, and their brilliancy depends upon the presence of minutely refractive oil drops or even cholesterine crystals; the latter are often small patches of exudation only. The former are of slow development, and unlikely to disappear at all, or only slowly and after a long time; the latter, however, may come and go rapidly.

In parenchymatous nephritis the diagnosis of renal disease is usually obvious, whether there be white spots or not. In granular kidney, however, the diagnosis may be uncertain until the eye changes are discovered. The white spots, whether they be really exudative or degenerative, have, therefore, in granular kidney a diagnostic value which they do not possess in the other forms of nephritis. Early as the white patches or degenerative changes are, they are preceded by and result from still earlier changes in the vessels. Although the silver-wire arteries are no doubt ophthalmoscopic evidence of the vascular degeneration, as are also the hæmorrhages and white spots, it does not follow that the vessels necessarily show the white silver-wire streaks before the other lesions are visible.

Of the hæmorrhages which occur in albuminuric retinitis it is not necessary to say much. Similar hæmorrhages may occur in both the exudative and in the degenerative forms, but they are probably produced in different ways in each case. In the latter they are the consequence of the vascular degeneration, and are due to the rupture of the diseased arteries in the retina, as in other parts of the body. In the former they are generally due to the rupture of over-distended veins, consequent on the pinching to which the veins are subjected as they pass through the swollen disc. Paradoxical as it may seem, it is in the so-called extreme forms of albuminuric retinitis—or, as I should call them, the exudative forms—that the prognosis both in respect of life and in respect of sight is not nearly so grave as it might appear to be; for if the kidney mischief recover, the eye lesion may resolve and the sight be completely restored.

If, as in pregnancy, the cause return, the retinitis may also return, and with each succeeding pregnancy the prognosis in respect of sight of course becomes worse. In respect of life the prognosis is that of the renal disease, and all that I think the presence of albuminuric retinitis in these cases does is to show that we have a form of parenchymatous nephritis to deal with of a somewhat unusual severity. The white patches of granular kidney rarely disappear, but they are often present without much defect of sight. The ophthalmoscopic changes in the vessels are important as evidence of an arterial degeneration which is not limited to the eye, and it is a visual evidence of the risks to which the patients are subject from the disease of the vessels elsewhere—for example, in the brain.

I may bring this communication to a conclusion by summing up the facts which I think justify the drawing of a sharp distinction between the two forms of albuminuric retinitis, the degenerative and the exudative. They stand in strong contrast with each other in the following respects:

1. Of the form of disease with which they are usually associated; the degenerative with granular kidney, the exudative, especially with parenchymatous nephritis.

2. Of their nature and cause; the exudative being inflammatory and probably toxic in origin, the degenerative consequent on vascular changes, and more or less mechanical in origin.

3. Of sight; for the exudative, even in the extreme forms, may recover with little or no defect of sight, but with the degenerative, if there is any impairment of sight, it is usually progressive.

4. Of diagnostic value; the exudative being an interesting by-phenomenon of chronic parenchymatous nephritis, an affection the existence of which is obvious enough, while in granular kidney the degenerative often makes the diagnosis certain in cases which have been hitherto obscure.

5. Of risk to life; for while in both cases it indicates a grave form of renal disease which may of itself prove fatal, in granular kidney it indicates in addition all those dangers to which arterial disease exposes the patient.

I think, therefore, that the distinction is not only justified by the facts, but explains many of the apparent contradictions which are made by different authors.

ON THE ENLARGEMENT OF THE CHEST IN EMPHYSEMA AND ITS TREATMENT.

By Harry Campbell, M.D., F.R.C.P.,
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In marked hypertrophous emphysema the thorax is fixed in a position of super-extraordinary inspiration—that is to say, it is more expanded than would be possible in the normal thorax after the fullest inspiration, and it is, moreover, fixed in this position, so that it cannot be properly contracted during expiration. Two problems meet us here: (1) How comes the chest to be expanded in this way? (2) How comes it to be fixed?

1. As regards the first of these problems, the expansion might result from one of two causes: either from the chest walls being pushed outwards from within, or pulled outwards from without—in other words, from pressure of the lungs, or from over-action of the inspiratory muscles. Can it be from pressure of the lungs? Obviously not, seeing that these organs do not, except under rare conditions, press upon the thorax; on the contrary, they exert suction upon all the structures in contact with them, their stretched elastic fibres seeking to shorten and pull the surfaces of the lung away from contiguous structures. The tendency of the lungs, therefore, is to contract rather than to expand the thorax.

It is true that during expiration, especially when there is an impediment at the exit of the respiratory passages—as in coughing and straining of all kinds—the lungs may press upon the interior of the thorax; but it is manifestly impossible for the chest to expand as a whole, as happens in emphysema, while the expiratory muscles are doing their utmost to contract it. Pressure of the lungs from within may, indeed, thrust out a limited portion of the chest. Thus, in sudden and violent cough the abdominal muscles, acting as they do more powerfully upon the lower portion of the chest than the upper, may suddenly drive the air from the lower to the upper parts of the lungs; and this would tend to expand the upper part of the chest. Possibly this may have something to do with the great expansion of this region occasionally observed in emphysema; but such pressure from within is manifestly incapable of explaining the general thoracic enlargement characteristic of this disease. We are therefore driven to the conclusion that the expansion is brought about by the inspiratory muscles.

We have now to ask why the inspiratory muscles act excessively in hypertrophous emphysema. There is no doubt that diminution in pulmonary elasticity plays an important part in the pathology of emphysema. By whatever causes induced—and I do not propose to consider them here—it is manifest that such diminution must tend to cause thoracic expansion by removing a force which operates against it.

Suppose a perfectly healthy person to suddenly lose all pulmonary elasticity, and the inspiratory and expiratory muscles to continue to act exactly as before, it is clear that the effect will be to enlarge the chest; for the inspiratory muscles having no longer to overcome pulmonary elasticity will be able to devote the force usually expended in doing this to elevation of the ribs, and on the other hand the expirators being no longer aided by pulmonary elasticity expiration will not proceed to the usual limit. In order that the respiratory movements should continue as before after such a sudden loss of pulmonary elasticity, it would be necessary for the inspiratory muscles to act less and the expiratory muscles to act more than normally, the loss in the one and the gain in the other being equal to the amount of elastic force which has ceased to act. This in the case of ordinary tranquil breathing would be small, but in extraordinary breathing considerable.

It is very doubtful whether such a compensation would occur. In ordinary quiet breathing, for example, the ribs are drawn in beyond their neutral point (beyond the position they would occupy if not acted upon by any external force), and it is most unlikely that the expiratory muscles would do this after the loss of pulmonary elasticity. Wherefore we may assume that even in ordinary breathing such loss would cause thoracic enlargement. In extraordinary breathing it would lead to still greater enlargement. The total amount of elasticity force to be overcome in inspiration, as also the amount of it available as an expiratory force is in extraordinary breathing very considerable. Hence if in our imaginary case extraordinary breathing is to continue exactly the same after the loss of pulmonary elasticity as before, the inspiratory muscles will have to work much less than normally and the expiratory muscles much more, and if the only pulmonary change in emphysema were loss of pulmonary elasticity such a compensatory action might occur, and there might conceivably be a close approach to the normal movements and to the normal mean size of the chest. But as a matter of fact such loss would almost certainly lead to considerable expansion, owing to the inspiratory muscles being placed at an advantage and the expiratory muscles at a disadvantage, especially if the patient had to resort frequently to extraordinary breathing.

In our imaginary case I have assumed the loss of pulmonary elasticity to be sudden and complete; but in ordinary cases of emphysema it is gradual, and may extend over many years, and what I believe happens where the chief, or only, pulmonary change is loss of elasticity is this: As the elasticity of a piece of elastic gets worn out, it is necessary to stretch it more and more in order to get it to exert the same amount of elastic force as originally. Now it is of advantage that the elastic force exerted by the lungs shall not suffer diminution, in order that pulmonary suction may be kept up to a certain level, and with a diminishing pulmonary elasticity the necessary amount of elastic force can only be obtained by increasing the mean size of the chest, that is, by over-action of the inspiratory muscles; and I would suggest that in simple diminution of elasticity the mean size of the thorax tends to undergo just sufficient increase to keep up the normal amount of elastic traction.

Another factor has, however, to be considered in explaining the enlargement of the chest in emphysema, besides the diminution in elasticity, namely, breathlessness which is invariably present, and steadily increases with the advance of the disease. What causes this breathlessness we need not stop to discuss. Doubtless one cause is the loss of pulmonary elasticity we have been speaking of; this not only interferes with the expiratory act, but diminishes pulmonary suction—an important accessory force of the circulation. Another cause is the wholesale destruction of the pulmonary capillaries, which not only diminishes the respiratory area, but imposes extra work on the right heart.

Now breathlessness tends to excite inspiration more than expiration. Anyone may prove this on himself; let him walk quickly uphill, and he will find that, while his inspirations are full and deep, his expirations are incomplete, the mean size of the chest being increased in consequence. If he carefully examines his feelings, he will discover the cause of this—namely, that deep expirations cause oppression, which, on the other hand, is at once relieved by full inspirations. Physiologically, the facts are these: by taking very deep inspirations, and only moderate expirations, the mean size of the chest, as just observed, is increased, and, as a result (1) the mean quantity of air in the lungs at any given time is increased; (2) the mean pulmonary suction is increased, the flow of blood into the right heart being thus favoured; (3) the mean vascular capacity of the lungs is increased, the flow of blood through these organs being thereby facilitated. But apart altogether from these considerations, the expiratory act in extraordinary breathing—and in breathlessness the breathing is always extraordinary—has a decided hindering effect on the circulation, from its tendency to induce a positive intrathoracic pressure. Breathlessness, then, tending as it does to excite the inspiratory muscles more than the expiratory, and being very readily induced in emphysema, is an important factor in causing the enlargement of the chest observed in this disease.

That the inspiratory muscles do act the more powerfully in emphysema there can be no doubt. If the hand be placed above the clavicle in an advanced case, we shall find—and this even when the patient is in complete repose—that the scaleni, omohyoid, and levator anguli scapulæ muscles contract with tremendous force during every inspiration; and if we get the patient to raise the arm, so as to show up the serratus magnus, we shall discover this muscle also to be acting powerfully.

Dr. Gee has argued that one of the factors in the enlargement of the chest in hypertrophous emphysema is the disadvantage under which the expiratory muscles act as against

the inspiratory, especially as regards the upper portion of the thorax, which is abundantly supplied with inspiratory, and is defective in expiratory muscles. If this be a factor I think it must be a subsidiary one only, because, as I have endeavoured to show, the emphysematous patient does not want to expire completely. I am aware that when dyspnœa is urgent the expiratory muscles may be thrown into violent action, but in some advanced cases of emphysema I have failed, when the patient has been kept quiet in bed, to detect any abdominal contraction whatever during expiration, while the inspiratory muscles referred to have been acting with great force. I believe it is only in the later stages of the disease, when the chest has become fixed, and the abdominal muscles have little power of contracting it, that they act powerfully—the main object then being to expel the air by thrusting upwards the diaphragm, and I feel convinced that during the early insidious progress of this disease, which may last for years before dyspnœa becomes urgent, there is chronic over-action of the inspiratory muscles.

2. As regards the fixation of the chest. Having explained how the chest comes to gradually expand in emphysema, we have now to inquire why it is fixed in expansion—why the patient cannot adequately expire. This inability cannot be due to any impediment within the respiratory passages, because the air can be driven out by an upward thrusting of the diaphragm, either by external compression of the belly, or by contraction of the abdominal muscles. It must, therefore, be due to a fixation of the thorax itself, and I have little doubt that this fixation is essentially due to shortening of the inspiratory muscles, owing to their chronic overaction, just as happens in talipes; at the same time the chest gets, so to speak, set in its abnormal position, the thoracic joints, and possibly the ribs also tending to become rigid.

Treatment.

It is clear from the foregoing considerations that in treating emphysema we should endeavour (*a*) to preserve pulmonary elasticity; (*b*) to prevent as far as possible over-action of the costal elevators, and thus check the tendency to thoracic expansion; (*c*) to prevent the chest from becoming fixed.

(*a*) A potent cause of loss of pulmonary elasticity is overstretching of the alveoli, such as may result from increased intra-alveolar tension as in coughing and straining of all kinds; or from increased tugging upon the alveoli from without, as may happen in compensatory expansion of them, or from the inspiratory efforts of dyspnœa. All these causes should therefore be avoided as far as possible.

(*b*) In order to check the tendency to over-action of the inspiratory muscles, all causes of dyspnœa must be carefully avoided, while at the same time the patient must be put through a course of expiratory exercises.

(*c*) The importance of preserving the mobility of the thorax will be evident if we reflect how greatly fixity of the chest interferes with respiration by limiting the flow of tidal air. If the emphysematous patient could only empty his chest properly he would be able to inspire so much the more air. The means adopted for preventing over-action of the inspiratory muscles are also useful in checking the tendency to fixity of the chest. Even in cases of extreme fixity much may be done to lessen it by educating the patient to use his expiratory muscles properly, and by subjecting the chest to external compression. Various means will suggest themselves to the physician for effecting this. My friend Dr. Willock, of Croydon, has devised an instrument for compressing the chest during expiration. I have found it very useful in emphysema, and I believe it only requires to be known to be widely used.

In conclusion, let me insist upon the importance of beginning the treatment of emphysema as early as possible. Unfortunately the patient rarely seeks our help until the disease has reached an advanced stage.

OBSERVATIONS ON CLINICAL THERMOMETRY.

By W. Fleming Phillips, M.B., C.M.,
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What is the normal temperature of the human body as a clinical fact? In all textbooks of physiology, in all treatises on medicine, whether clinical or systematic, that I happen to have read or consulted, and presumably in the lectures of the student's curriculum, the normal temperature is stated to be either 98.4° or 98.6° F., and the former of these is the point at which, on all clinical thermometers that I have seen for many years, the normal mark is placed. As the armpit is by far the most convenient place for ordinary clinical purposes, it may, I suppose, be inferred that this normal mark means the normal temperature in the armpit. So indeed it is stated in some of the textbooks, and so perhaps it is generally understood by the profession; but there are many who seem to think it a matter of indifference, as regards the results, whether the thermometer is placed in the axilla, the mouth, or the rectum.

Apart from the slight variations due to differences of age and time of day, I have found that the readings also differ according to the locality to which the thermometer is applied, the mode in which it is used, and other circumstances unconnected with the actual temperature of the body generally. Moreover, if we accept for guidance a single normal mark at 98.4° F., we must do so with a qualification or reservation if we would not be misled. Long ago I found that the normal temperature was far more frequently than not below this mark, an observation that naturally suggests the inquiry, What are the limits of normal variation of the temperature? The statements of the textbooks on this point seem to me to need revision. Wunderlich has put the normal range at from 36.5° to 37.25° C. (say 97.4 to 99.0° F.), and other German observers quoted in Landois and Stirling's *Physiology* give a greater range than this; but as the methods by which the figures were obtained are not stated, the results cannot be regarded as either conclusive or satisfactory. On the other hand, the observations made by J. Davis (*op. cit.*), which give 36.49° C. (say 97.4° F.) as the mean of 505 persons presumably in health, are closely similar to my own. In one British *Manual of Diagnosis* it is stated that a temperature "under 97.0° or over 99.5° betokens ill-health," and in another the range is stated to be 97.7° to 99.5°. My own observations, carried on in the course of practice during the last twenty years, have taught me that the limit of normal temperature in the downward direction is probably 97.0° F., and that if, in an adult patient during rest, and not within one hour after a meal, I find a temperature of 98.5° F., the case is one that needs investigation or watching, and probably care. From 97.0° to 98.4° F. I therefore regard as the normal range in the adult in ordinary circumstances when the temperature is properly taken in the armpit. This, I am satisfied, is also the range in most children who are patients. In some children and adolescents, and even in adults with unusually vigorous circulation under the conditions emphasised above, the normal limit may perhaps be extended upward to 99.0°, but such cases are so rare in clinical observation that it is safest as a rule to disregard them. Theoretically, if we are to have one so-called "normal mark" on our thermometers, it would seem more scientific to place that mark upon the point that indicates the mean of the normal range, and that point is, in my experience, not 98.4°, but 97.4°. Practically, however, we may avoid mistake if, retaining the present marking, we bear in mind that 98.4° is the maximum limit of normal temperature, and that, as a rule, we should hesitate to decide that a patient is non-febrile unless his temperature is under this mark.

The method of applying the thermometer is deserving of more attention than it has generally received. It can hardly be questioned that to place it in the armpit is not only the most convenient method, but is also in all respects the best. But there is a right and a wrong way even of doing this. Sometimes the bulb only is inserted in the axilla, the stem standing out at a right angle to the arm as it lies against the side. A little reflection ought to show that the exposure of the stem of the instrument, and the liability to its displacement, must frequently result in a lower reading than the true one. The instrument should be placed, as perhaps is most frequently done, between the arm and the side in a position parallel to the axis of the arm, the bulb being passed into the vault as far as it will go. If the arm be now kept pressed against the side, the instrument will be entirely covered, and in contact with the skin.

To the method of putting the thermometer in the mouth there are objections that do not seem to be generally understood. There is, first, the risk of conveying infection, for it must not be supposed that the thermometer is always disin-

fected, or even washed after use, and secondly, there is the liability of the temperature appearing lower than it really is, owing to the exposure of the protruding stem and to the lips not being always closed, the consequent entrance of air into the oral cavity, and the evaporation of the moisture from the wetted portion of the instrument. It seems probable also that the temperature of the mouth is more liable to variation than that of the axilla from the ingestion of foods and drinks of widely different temperatures, from the use of condiments, from the local warming effect of mastication, and even from the varying temperature of the stomach at different periods after meals. But a far more important source of error attaching to this method of taking the body temperature I have actually observed. By placing one thermometer in the mouth and another in the armpit at the same time—both thermometers having been proved to give the same readings simultaneously in the armpits—I have in some cases obtained the same temperature in both localities, in others I have found some startling discrepancies. The greatest difference I have as yet observed was in the case of a man who had pain of a shifting character, and for a time exceedingly severe, in various parts of the body, and whose temperature in the axilla was normal (97.5° F.) while that in the mouth was 102.4° F. Having previously found in this case what I have known for some years to be the characteristic throat of influenza, I considered myself justified in concluding, as I had formerly done in a similar case, that the throat lesion sufficiently accounted for the superelevation of the temperature of the mouth. After two days' treatment of the throat by disinfectant applications and otherwise the temperatures were: Axilla, 97.0°; mouth, 98.5°; and, when the treatment of the throat had been neglected for a day or two, the oral temperature rose again.

Here, then, is a fallacy which, as far as I know, has been hitherto unsuspected, and the risk of error from this cause is greatly enhanced by the fact that the influenza throat is usually painless, and its existence therefore unobserved. In the cases I have referred to the throat was not complained of. These considerations enable us to see that while the use of the thermometer in the mouth as a means of ascertaining the body temperature ought to be abandoned, it may serve a new and useful purpose differentially in the manner just referred to by supplying pathological explanations, diagnostic data, and therapeutic guidance. But we owe it to our patients that no thermometer shall be inserted in the mouth unless it is first washed and disinfected. As regards the use of the thermometer in the rectum, I have only to say that, in the few comparative observations I have made, I have found the rectal temperature higher by 0.4° to 1.0° F. than the axillary, and that the other objections are quite as weighty as those that pertain to the oral method.

Connected with the form of the thermometer there is a point which I believe to be worthy of consideration. The bulb is often much too thin; its diameter ought to be nearly or quite equal to that of the stem. If it is much less than this, as in the so-called "half-minute" thermometers, it is most likely that, in thin patients at least, no part of the bulb—except perhaps the extremity—will be in actual contact with the skin of the armpit, assuming that the instrument is placed in the proper position. This is one reason why such thermometers should be looked on with suspicion; but there are besides good grounds for believing that the temperature cannot be taken accurately by any instrument yet made in less than three minutes in a warm room or four in a cold one. A doctor who cannot devote this amount of time to ascertaining correctly his patient's temperature has obviously too much to do, and is in duty bound to leave some of his work to others whenever and wherever that is possible.

To obtain uniformity of results, or a standard of comparison, uniformity of method is necessary. I have tried to indicate the best method in clinical thermometry in the hope that its adoption may become general. In that event it would be so understood, unless another method were specified; but until such uniformity be arrived at it would clearly be well, in reporting temperatures, to use the initial *a* for axilla, *o* for mouth, and *r* for rectum—signs that would be acceptable and intelligible in every civilised country. Thus, in a given case, "Temperature *a* 98.1° F., 4 minutes," is a statement that is definite, precise, and valuable. Similarly, "Temp. *o* 37.8 C., 3 min." is also definite and precise, though its value or significance can only be determined, as I have shown, by a simultaneous or immediately consecutive reading taken in the axilla. But the expression, "Temperature normal," is, in the present diversity of practice, simply worthless.

PAPERS ON GASTRIC ULCERATION.

I.—GASTRIC ADHESIONS AS A CAUSE OF DYSPEPSIA.

By William Calwell, M.A., M.D.,

Physician to the Belfast Royal Hospital; Physician to the Throne Consumptive Hospital; and Consulting Physician to the Ulster Hospital for Children.

The two chief means by which the stomach discharges its functions are its secretory and motor activity. In considering disturbances of its function we have allowed our attention to be perhaps too much concentrated on the minute chemical analyses of the digestive secretion, and on the minute anatomy of the secreting membrane. The mucous membrane and the muscular layers are no doubt the immediate causes of dyspepsia, but it has not been sufficiently considered how far adhesions of the serous covering affect the functions of the other two layers, and so prove a cause of dyspepsia.

Ulcer of the stomach is by far the commonest cause of adhesion; it is not necessary for the ulcer to perforate or even to reach the peritoneum before it may excite circumscribed peritonitis, with subsequent adhesion. This fact falls in with the theory of the "bacterial necrosis" origin of gastric ulcer; bacteria are found in the peritoneum overlying an ulcer whose floor is formed by the muscularis. Secondly, it explains the strictly localised tenderness. Thirdly, it accounts for the comparative frequency of adhesions found *post mortem*. It also explains those attacks of excessive gastric tenderness accompanied with fever, where one is tempted to make the diagnosis of perforation, but refrains owing to the good pulse and general look of the patient. Such cases generally run a very favourable course; or, perhaps, an abscess forms without gas, without any trace of gastric contents. In one of my cases there occurred a simple left pleurisy.

About 5 per cent. of all *post-mortem* examinations show gastric ulcer or gastric cicatrix, and about 40 per cent. of all cases of gastric ulcer present adhesions; or, roughly, 2 per cent. of all people have gastric adhesions. If we limit our statistics to the female sex between 20 and 35 years of age, this proportion is probably below the truth.

There can be no doubt as to the serious effect of extensive gastric adhesions, although many recognised authorities simply mention it, while some do not even do so. A few (Brinton, Cohnheim, and others) lay considerable stress on it. The latter says that everything which interferes with the regularity and vigour of the peristaltic movements of the stomach must prove a serious impediment to the energetic secretion of gastric juice, to the complete mixing of the food, and to its discharge into the bowel; and such an impediment would be caused by firm adhesions. Barling, in his Ingleby Lectures, in 1895, relates a case of Terrier's, reported in July, 1894, of a woman aged 62, whose symptoms of gastric ulcer were relieved by breaking down adhesions and removal of a portion of the thickening. Mayo Robson reports a case of dilatation of the stomach due to adhesions about the pylorus causing stenosis, in which he severed the adhesions and the dilatation cured itself. Adhesions about the pylorus to the under surface of the liver, to the gall bladder, to the pancreas or to lymphatic glands, are not at all uncommon and are a recognised cause of dilatation. Ludwig Pick[1] relates a case of prolonged vomiting and suffering, followed by perforation, apparently due to adhesions. One of the most instructive cases is that of Bircher.[2] The patient suffered from stomach symptoms; the examination of the organ revealed different results at different times as regards (1) its contents, (2) the position of the lower border, which was sometimes above and sometimes below the umbilicus. A fibrous band was found attached to the lesser curvature, about 4 cm. from the pylorus, and ran obliquely downward to the right to the anterior abdominal wall. When the stomach was filled with gas, and pulled from below, stenosis due to kinking followed; small quantities of food had no effect: large quantities caused complete stenosis.

Leube has long recognised the effect of adhesions[3] and has summarised the practical result by two rules, one being not to operate, or very exceptionally, and only after full trial of medicinal and dietetic therapeutics in cases where adhesions after the appearance of diseases is the probable cause of the trouble.

Hartmann and Soupault[4] recite cases where adhesions were the only apparent cause of the pyloric syndrome and dilate upon the existence of adhesions, more or less extensive, fixing the stomach in a vicious position and preventing contraction sufficient to expel its contents; they remark also that after the operation of gastro-enterostomy the movements are deficient and there is "*une hypopepsie intense.*"

Adhesions at the fundus apparently have not the same effect, as evidenced by the very extensive nature of those of Alexis St. Martin, and yet his general good health.

There is, in short, a type of dyspepsia which I venture to call the "adhesion type," which for some months often follows attacks we deem to be ulcer of the stomach; it also occurs independently of any clear history of ulcer.

The symptoms pointing to "adhesion dyspepsia" are:—

1. A history of gastric ulcer, or of some inflammatory condition in the neighbourhood of the pylorus, particularly of localised pain and tenderness.
2. Freedom from dyspeptic trouble while in bed, or while at rest with easily-digested foods.
3. The pain being of a dragging nature, and relieved by rest, but increased by exertion.
4. Frequently a history of a sharp, shooting pain on sudden exertion or stretching, such as lifting up a picture; and the intuitive avoidance of certain movements, and of heavy meals.
5. Some comfort from a fairly tight abdominal bandage.
6. The general health is good and appetite fair, but the patient is afraid to eat.
7. The pain generally does not come on till half-an-hour after food, and is thus distinct from the immediate pain of gastric ulcer and the delayed pain of more atonic dyspepsia.
8. I have not been able to satisfy myself as to any change in the gastric juice.

The treatment for the very severe form of this affection is palpably surgical; an exploratory operation should be made in all very chronic and threatening forms of gastric trouble. On the other hand, there is a very mild form, which clears up in a few months, and the patient regains perfect health; probably corresponding to those cases in which slight adhesions are elongated while still plastic by the movements of the stomach. Finally, there is the intermediate form, for which I recommend the following principles of treatment:

1. The diet, general hygiene, and medicines should be so regulated as to avoid any catarrh, or fermentation of the gastric contents.
2. The food should be of easy digestibility, and small in bulk, so that the peristaltic action should be as little excited as possible.
3. Some mechanical support in the shape of a bandage should be used.
4. In case, however, little or no improvement follows, and the patient is suffering from disability, unable to attend to business, and is sinking into hypochondriasis, an exploratory operation should be attempted; and one is the more encouraged to advocate this course when one reflects that:

1. Adhesion is no perfect safeguard against perforation. Of the cases which I have seen operated on for perforation, all had adhesions; in one the perforation had the appearance of a tear, and as it came on when the patient was in good health, suddenly, I am of the opinion that a sudden movement caused an adhesion to give way and tear a hole in the stomach, although unfortunately the mucous membrane was not seen.
2. Adhesions have evidently kept ulcers from healing. (*Vide* Brinton, etc.).
3. The implication of rather large nervous twigs have kept up a very severe gastric disturbance or dyspepsia.
4. Acute hæmorrhagic pancreatitis is frequently associated with an adherent stomach, and is due to bacterial infection therefrom.

I would, lastly, suggest that the constant annoyance and pain of such interference with free peristaltic action of the stomach, and of gratification of a healthy appetite, is probably the cause of a neurotic condition, perhaps of some of the visceral neuroses.

REFERENCES.

[1] *Zeits. f. klin. Med.* Bd xxiv, 1896, p. 452; [2] *Corresp. für Schw. Aerzte*, 1891 No. 23; [3] *Jahrb. der pract. Med.*, 1898, p. 215; [4] *Rev. de Chir.*, p. 340, 1899.

II.—THE ACCURATE DIAGNOSIS AND SUCCESSFUL TREATMENT OF PERFORATED GASTRIC ULCER.

By ALFRED R. PARSONS, B.A., M.D.,
Physician to the City of Dublin Hospital.

[ABSTRACT.]

DR. PARSONS related the case of a girl, aged 9 years, who had suffered from symptoms of gastric ulcer for eighteen months, and who was suddenly seized with violent abdominal pain one evening about 9 P.M. Dr. Winter, suspecting perforation, asked Dr. Parsons to see her in consultation, and it was decided to remove her to the City of Dublin Hospital, with a view to immediately opening the abdomen. This was done at 2 A.M. by Mr. Jameson Johnston, and the patient made an uninterrupted recovery except for the development of an attack of pneumonia on the eleventh day after operation. She left the hospital after a stay of 51 days, and has been in excellent health since. In the diagnosis of perforation of ulcers on the anterior wall of the stomach, Dr. Parsons discussed the antecedent history, mode of onset of symptoms, and the physical signs, laying particular stress on the steadily increasing frequency of the pulse, and the abolition of the area of hepatic dulness. He opposed the administration of opium till the diagnosis was established, as it tended to mask the symptoms. He attached particular importance to early diagnosis, and strongly urged the importance of operative interference.

DISCUSSION.

Dr. SARAT MULLICK said that in those cases of gastric ulcer in which operation could not be performed, diet was one of the most important factors. It was only possible to feed the patient by nutrient enemata of beef tea, milk, eggs, and brandy made up to ℥iv. It often happened that even enemata was returned. In such cases reduction of the amount and increase in frequency obviated the difficulties. Often a few drops of laudanum enabled the patient to retain the enemata. By the mouth nothing seemed to be of so much benefit as teaspoonfuls of clear beef tea every hour. Ice could be given for the dry mouth and excessive thirst. In the gradual process of improvement, thickened beef tea, scraped raw meat slightly warmed, then meat or fish panada should be given. As food by the mouth was increased the enemata could be lessened. Astringent drugs in solution or by stomach sprays in certain stages were of benefit.

Dr. ROLLESTON agreed with the remarks of previous speakers as to the great difficulty of diagnosing perforation of a gastric ulcer in an early stage. In order to save cases from death operation must be early, and he feared that few physicians who acted on this belief, and had their patients operated upon early, would escape the accident of having laparotomy performed unnecessarily. He quoted a case in which hysteria had so very closely imitated gastric perforation that he had had laparotomy performed, with the result that no gastric lesion was found. The sudden pleuritic pain of pneumonia at its onset might simulate the sudden pain of gastric perforation. As to the difficulty of distinguishing between cases of perforation of gastric ulcer and appendicitis, he believed that when a gastric ulcer or a duodenal ulcer was situated near the pylorus the extravasated matter tended to run down into the right iliac fossa, and so to imitate appendicitis, but that perforation of a gastric ulcer elsewhere was not likely to simulate appendicitis. He believed that pleurisy with effusion (or an empyema) and not pneumonia was the pulmonary complication that so frequently followed a localised subphrenic abscess secondary to perforation of a gastric ulcer. He had examined a good many of these cases after death, and these observations led him to believe that the poison readily passed through the diaphragm by the lymphatics and set up pleurisy with effusion. In a few cases, it was true, after pleural adhesions had formed this inflammation might spread into the lung substance and set up a low septic form of pneumonia, but this was rare. The physical signs at the base of the left lung were often regarded as those of pneumonia.

SECTION OF SURGERY.

H. T. Butlin, F.R.C.S., LL.D., President.

(Concluded from p. 1102.)

A CASE OF CARCINOMATOUS OMENTUM IN AN UMBILICAL HERNIA; WITH SPECIMEN.

By A. William Sheen, M.S., M.D., F.R.C.S.,
Senior Assistant Surgeon, Cardiff Infirmary.

The specimen I show, which is an umbilical tumour, was removed from a woman aged 44, who was admitted into the Cardiff Infirmary on March 29th, 1898.

Seven years previously, at the time of a confinement, a rupture appeared at the navel. The patient has worn a belt since, but the rupture came out when the belt was off. During the last three months the rupture has been getting larger and harder, and has become discoloured and painful. Since August, 1899, the patient has lost 6 stone in weight, weighing now 7 stone 12 lbs. On admission a large hard mass, 4 inches across, was found occupying the skin and deeper tissues around the umbilicus. On April 4th (under ether) the tumour was removed, and found to contain cancerous omentum. Other nodules of growth were present in the omentum and mesentery, so that a curative operation was impossible. The patient was discharged with the wound healed on May 5th, apparently fairly well and free from pain, but no fatter. After returning home her medical attendant, Dr. Lewis Hughes of Dowlais, informs me that she got rapidly worse, and died on June 3rd, a large secondary growth having formed to the left of the umbilicus. A necropsy was not permitted.

Remarks.

Microscopical examination of a portion of the omentum contained in the sac shows that it is infiltrated with a very scirrhous carcinoma, the cells being arranged in narrow lines running between bundles of fibrous tissue. The specimen shows the appearance of the tumour in antero-posterior vertical section. Its interest lies in the fact that it is mounted in glycerine jelly in the way that eye specimens are mounted. The method is described by Mr. Devereux Marshall in the Ophthalmological Society's *Transactions*, vol. xvii, to whose account I must refer you for details. Some difficulty is experienced in mounting such a heavy specimen, as it has a tendency to fall away from the glass. On the first occasion of mounting it a mould formed in the jelly, but as luckily no formalin had been mixed with the jelly, one was able to melt it and remount the specimen. On the second occasion formalin was added; this tends to preserve the specimen, and prevents the jelly melting in hot weather. It is somewhat difficult in mounting to entirely get rid of air bubbles. The colour of specimens mounted in this way is well kept, but that is not shown in this specimen, as it was some time in spirit before being mounted. I have here, however, an eye specimen (sarcoma) kindly lent me by Mr. F. Cresswell, of Cardiff, which shows the preservation of colour very well. My specimen can be examined from all aspects, and without the distorting effect of a cylindrical glass jar. It shows the omentum entering the sac, occupying it as a cancerous mass and infiltrating the skin; while in one place a small smooth-walled cavity shows the original peritoneal sac of the hernia. I would commend this method of mounting, and hope to give it a further trial.

THE TREATMENT OF BURNS AND OTHER SURFACE WOUNDS.

By G. Archdall Reid, M.B.Edin.
Southsea.

The surface wounds of a lower animal, such as a dog, heal as a rule very much better than those of a man, particularly when the former has not, and the latter has, the advantage of experienced surgical aid. I do not know that a dog has a like advantage as regards deep wounds, such as those caused by a bullet, a lance, or a sword. Certainly I think that a man deeply wounded and tended by a surgeon has a better chance of speedy recovery than a dog with a similar wound that receives no surgical aid; but not so in the case of superficial wounds. As regards deep wounds, even if the man receives no skilled aid and if his tissues have not been poisoned by alcohol, he yet recovers as quickly as the dog, as witness Turks and Afridis wounded on the battlefield. Apparently, therefore, the human being is not less capable of speedy recovery than the brute. Why, then, his slow convalescence from superficial wounds? I think the explanation is to be sought in the mistaken efforts of the surgeon.

When a dog receives a superficial wound, such as a burn or a scald, he merely licks and keeps it clean: when a surgeon has charge of a man similarly hurt, he places on it a variety of surgical dressings. But if we insert a piece of the best dressings under the skin, violent inflammation ensues. Usually we have suppuration, which continues till the foreign body is voided in the discharges. At the best inflammation leads to encystment. But when the skin is destroyed, as in the case of a burn, to these very subcutaneous or subcuticular tissues, which are so intolerant of foreign bodies, we are in the habit of applying foreign bodies; that is, surgical dressings. Surely no more unscientific procedure can well be conceived. Is it not evident that in this particular the dog is our superior in surgical science, and that, like him, we should strive to keep the wounds under our care free from foreign bodies—discharges, bacteria, surgical dressings, etc.? Is it not abundantly evident that when superficial wounds heal in man, particularly civilised man, they do so, not in consequence of, but in spite of the aid given him by helpers, professional or otherwise?

In view of these considerations, I venture to place before the profession a simple method of treating surface wounds which I believe has also been found very successful by Mr. Benson, of King's College Hospital. It is possible that this method is not in general use because small but essential details have been omitted. At most it is but a modification of the "open" system.

Briefly, the surgical dressings are not placed on the wound, but on a light wire cage or support, which thus, while permitting them to afford protection, prevents them acting as foreign bodies. The wire support is easily manufactured. If the wound be on a flat surface—as on the chest—a stout wire of suitable length is bent into such a shape that when placed over the wound it surrounds the latter, but rests everywhere on uninjured tissue. On this wire, as basis, is woven a wide network of lighter wire, so that a shallow dish of wirework, shaped somewhat like the wound, but larger, results. If the wound be on a limb, a cylinder of similar wirework is made in two longitudinal parts, which are hinged together, so that the cylinder may easily be applied to or removed from the limb. The circumference of the shallow dish and the ends of the cylinder are padded by wrapping some soft material—carbolised wool, for instance—round the thick supporting wire. When in place the apparatus may be covered by any dressings the surgeon may choose, and it is retained in place by strapping or bandages.

On one detail of the treatment it is necessary to insist with the utmost emphasis: the surface of the wound must be kept absolutely clean. It should be gently sponged daily, twice, thrice, or oftener if necessary, with some mild antiseptic fluid, such as boracic acid or weak (1 in 40) carbolic lotion. Otherwise the discharges, coagulating on the surface, form a cake under which pus is retained, and which proves in experience more hurtful than any other foreign body. In order as much as possible to prevent the discharges drying and so caking, I usually cover the supporting cage with wet lint, and the whole with waterproof. If, in spite of precautions, the lymph still coagulates, it may be softened by soaking it in olive oil and then removed.

The advantages claimed for the above method are the following:

1. It is rational, whereas the methods generally in use are pre-eminently irrational. Hitherto our advance in surgical procedure has been in the direction of substituting for irritating applications others less irritating, but still harmful. For example, we have substituted aseptic for septic dressings, and one surgeon for ordinary aseptic applications has substituted metal plates. The present method seeks to abolish altogether the use of foreign bodies as applications while retaining them for purposes of protection.

2. The apparatus is very easily made, as may be proved by anyone possessed of sufficient wire and a pair of pliers. It is, moreover, easily sterilised by boiling or immersion in an antiseptic fluid.

3. The wound is very quickly, easily, and painlessly dressed. No longer has the wretched patient—and the attendant—to endure the agony accompanying the recurrent stripping of

adherent dressings from an inflamed and exquisitely sensitive part.

4. The dressing requires no particular skill, and, therefore, this method is especially suitable to the poor when suffering, for example, from varicose ulcers.

5. Wounds heal with a quickness as delightful to the surgeon as to the patient. No longer do superabundant granulations arise; deep ulcers rapidly fill up to the level of the skin; the whole surface takes on a healthy aspect in preparation for the zone of young skin which advances uninterruptedly from all sides, till the process is completed; no longer do healed surfaces "break down," as is so commonly the case when dressings are applied directly to the surface; and seldom, so far as I have been able to observe, do thick cicatrices occur, the contraction of which is so frequent a cause of deformity. These thick cicatrices result from the formation of fibrous tissue due, doubtless, in severe cases partly to considerable tissue destruction, but more generally to the mere irritation induced by the presence of foreign bodies. They do not occur in deep wounds when there is no great tissue destruction and from which collections of pus and other foreign bodies are from the first absent, and they rarely, if ever, follow the surface wounds of animals, which I have seen of huge size abroad (namely, the saddle-wounds of horses). I take it, in fact, that the formation under dressings of a thick layer of fibrous tissue, or of tissue which subsequently becomes fibrous, is a process of the same order as that by which a foreign substance within the body becomes encysted, and is thus separated by a tissue more resistant from others less resistant.

6. The method is almost ideally aseptic. It must be remembered that the bacteria of putrefaction have their normal habitat not in living tissues, but in dead organic matter. The living tissues are germicidal. The present method aims at the quick and effectual removal of the nidus; under methods ordinarily pursued the discharges are banked up on the wounds for varying periods, and are made aseptic by poisons which, since they are inimical to the life of the bacteria, must generally be inimical to the life of the tissues.

7. Lastly, the whole treatment is very much less disagreeable than ordinary methods to the patient. The sufferer no longer feels a gradually increasing sensation of heat, pain, and discomfort as the discharges accumulate beneath the sopping dressings; nor does he behold the nauseating mess usually found when the dressings are removed. In the absence of irritation little pus is formed, the exudatation being mainly serous.

I have made a high claim for this "cage" method of treating surface wounds. But I shall be only too glad if surgeons will submit it to the severest tests possible. Let them, for instance, treat thus old and foul varicose ulcers which have defied all other methods of treatment or wounds which have repeatedly broken down. Or let them cover the whole of a wound with such an apparatus as I have described, but under the cage, on part of the wounded surface let ordinary surgical dressings be placed. Then let the difference of behaviour between that portion of the wound which is in contact with an irritating foreign body (the surgical dressing), and that that portion which is not so affected, be observed. Even when small, the portion covered by dressings will be the last to heal. Or let vaccination vesicles, which are ordinarily treated in accordance with rational principles without dressings, be covered with "protective," the commonest of surgical dressings. The surgeon will receive an instructive object lesson, as I did on an occasion when I unwittingly performed an unhappy experiment. I vaccinated a man who was about to enter one of the public services. He subsequently complained that the vesicles interfered with his work, and thoughtlessly I covered them with protective, whereupon the surrounding area underwent severe inflammation.

If the above experiments be tried, I think surgeons will come to the conclusion that surgical dressings when applied to wounded surfaces are anachronisms; relics of barbarous times, when even more pernicious dirt, that is, matter in the wrong place, was applied to such surfaces. We now strive to remove foreign bodies from deep wounds; we should strive to remove them from surface wounds also. Messrs. Allen and Hanburys, of Plough Court, Lombard Street, make the surgical cages.

INTERCOSTAL NEURALGIA.

By CHISHOLM WILLIAMS, F.R.C.S.Edin.,
Surgeon to Out-patients, City Orthopædic Hospital, London.

THE subject of this paper was a man, aged 54 years, who had suffered from pain in the left side of chest wall for over twelve years, and pain, neuralgic in character, in other parts. His occupation was that of a civil engineer. His family history was good. He had never had any serious illness before, was abstemious and there was no trace of syphilis. Five years ago I treated him for caries, dorso-lumbar region, by Chance's splint, a small abscess being aspirated twice. The boss remained, and practically all the intense pain disappeared, leaving only a patch of pain on the left chest wall. This was easily controlled by antipyrin, quinine, and other remedies. About three years ago the side pain increased, and as time passed remedies had no appreciable effect. The attacks would come on at any time, and with varying frequency. During the last eighteen months they had increased to attacks almost hourly, lasting a few minutes, and leaving behind a great amount of soreness. He habitually and almost continuously held his left hand over the affected part, and during the paroxysms pressed hard, the pressure being augmented by the right hand. As this was gradually wearing down his constitution I succeeded at last in persuading him to see a physician. On April 22nd this year he saw Dr. Seymour Taylor; he then weighed 7 st. 4 lbs., and stood 5 ft. 9 in. high; he was extremely emaciated, and of careworn appearance. His organs, etc., were healthy; could stand with eyes shut, and feet together, no trembling of outstretched hands, pupil reflexes normal, knee-jerks sluggish, no ankle clonus. He complained of intermittent pain over an area supplied by the fourth, fifth, sixth, and seventh dorsal nerves. As all medical remedies had been tried, and latterly found to be useless, Dr. Taylor advised an operation, as giving him a chance of some relief. The attacks at this time were several in each hour. He exhibited great impatience at the interval of the few days before the operation. He freely expressed the hope "to be ended or mended." On May 10th I performed the following operation. (Whilst Dr. Kitchen was preparing the ether inhaler the patient had an attack of about two minutes' duration, and when on the table another slighter attack.)

An incision was made in the line of the spinous processes and 3 inches to the left side for a length of 6 inches; the muscular structures being divided and retracted, the third, fourth, fifth, sixth, and seventh ribs were brought to view, and it was noted that the tip of one's little finger could not be inserted between them, proving the great and continual force that he had applied to the ribs for the relief of the pain. The external intercostals were seen to be much atrophied and the fibres running almost in a line with the ribs. The ribs being separated as much as possible with blunt hooks, the external intercostal muscle was divided along the upper edge of the rib below and reflected upwards; the nerves were found lying deeply underneath the lower edge of the rib above, and in a plane much more internal than they should have been, although traced for several inches; they did not seem to deviate downwards at all, but appeared to be lying on the pleura, no trace of internal intercostal muscle—even at the farthest point outwards, 5 inches from spinous processes—being seen. The lung tissue could be seen working through the pleura, which seemed particularly thin and transparent; it was pricked in two spaces, but no ill result ensued. Sections from 2¼ to 3½ inches were removed, and once the actual division was made, the patient being more deeply anæsthetised, nothing was noticed. The deeper layers were approximated and a large drainage tube inserted. The patient rallied well from the operation, and the next morning was quite comfortable, absolutely no pain of any sort being felt afterwards.

On the fifth day after operation the temperature rose to 104°; another drain was inserted and some pus evacuated. Healing was complete in three weeks, except where the drains had been, and these small spots rapidly healed over in the fourth week. Ten days after the operation the temperature came down to normal and remained there, varying to 97.2°.

During the first three weeks the following symptoms were noticed:—He became extremely melancholy, bursting into

tears at intervals without the slightest provocation. He also became excessively irritable towards his own wife and nurse, complaining of trivial things which were being done for his own welfare, was suspicious of both, became more and more restless, his memory gradually failing him. Knee-jerks were now entirely absent. No muscular weakness, but the face presented a marked want of expression; ordinary sensibility was present. In the fourth week all these symptoms were aggravated. His words were clipped short, misplaced, and some left out entirely; tongue and lips on movement tremulous; gait was uncertain but fair; micturition was normal in performance, but the patient had to be told when to perform that act. Constipation was a feature in spite of the usual remedies during the fourth week; temperature and respirations normal, but the pulse was irregular in frequency. At the end of the fourth week he got up and dressed himself, much to the alarm of his attendant, and explained himself somewhat incoherently that he had "been to Portsmouth to the regalia," and other such absurd ideas. On a later day he got to his room door and was extremely noisy, calling out for some of his relatives who had long ceased to exist; after this he never left his bed, the moral persuasion of the nurse being sufficient, and in a few days later he became quite unable to rise. By the end of the fifth week, owing to the very imperfect articulation, the patient could not make himself understood at all. He lost the restlessness and became perfectly "limp," unable to feed himself during the last few days, and remained in a more or less comatose condition, with inability to swallow, and the breathing became laboured. He remained in this state of complete dementia, with total rigidity for three days, and then died of bronchitis.

It is probable that he died of general paralysis of the insane brought on by this excessive suffering for such a long period, and most likely accelerated by the operation for its relief. Had the operation performed been undertaken a couple of years back, it would have held out a prospect of the patient's life and sufferings being saved.

A CASE OF BULLET IN BRAIN (NINE MONTHS): ABSCESS: OPERATION: RECOVERY.

By Augustus H. Bampton, M.Ch., M.D.,
Ilkley.

On Christmas Eve, 1896, a lad accidentally shot his brother with a Derringer saloon pistol. The bullet wound was just in front of the left motor area. There was no loss of consciousness, although the lad fell to the ground and shortly vomited. On the same day, Mr. Ward, of Leeds, trephined over the wound, the patient being under ether, and found on the removal of the bone that the inner table of the skull, some hair and a thin stripping envelope of lead had penetrated the brain. These were removed, but the main portion of the bullet could neither be seen, felt, nor traced.

As the bullet might have gone through the brain to the other side, or dropped down, it was considered unjustifiable to grope about the brain substance when there was no indication or symptom as to its whereabouts. It was therefore decided to close the wound after thorough cleansing and await symptoms, or the use of the *x* rays to localise the bullet.

The patient made a good recovery, being kept on the lightest of diet. Temperature kept subnormal, and pulse slow (50 to 60). If solid food was given vomiting took place. There was pain over the left orbit and constipation. There was no paralysis and no twitching.

The *x* rays were used on two occasions in two positions with negative results. It was observed that there was increased headache after each attempt to photograph. After six weeks the patient was allowed to get up and was able to go about.

Any imprudence or indulgence in heavy food on the part of the patient brought back vomiting, eyeache, and headache, necessitating his return to bed and starvation diet; at which time slight ptosis of left eyelid was noticed, and the face was slightly drawn to the left side. Under this treatment improvement invariably set in. After some eight months the patient was well enough to go to Morecambe, and there he had a convulsion, with unconsciousness, after riding on a tramway car. He was seen by a medical man, but no muscular movements were specially noticed. He returned to Ilkley, where he had two or three more convulsions, one of them being accompanied with unconsciousness; the others were Jacksonian in character. I did not see him in one, but I was told that some twitching of the left side of the face occurred; beginning in the left eye and extending to the face. The patient then rapidly became worse, with increased headache and vomiting, slow pulse, depressed temperature, great drowsiness, also paresis of muscles of right side of face. Double optic



neuritis was observed. I then felt sure that I had to deal with a cerebral abscess, which was increasing in size and giving rise to these symptoms by pressure on the motor area.

In the absence of Mr. Ward from home I sent the patient in a through carriage, in a swung hammock, to Mr. Victor Horsley. Mr. Horsley, confirming my diagnosis, operated the next day, and came upon the abscess with the bullet in the abscess cavity. The specimen was removed entire by means of two pairs of forceps, and is now in the museum of the University College Hospital. Specimen (bullet and pistol) shown.

The convalescence was eventful only owing to the cerebral hernia that formed. It became so large that Mr. Horsley found it necessary to slice off a portion. In three months the patient had sufficiently recovered to return to Ilkley, when the hernia was about the size of a peach. By the direct application in powder form of boric acid and alum daily to the brain substance, and careful dressing and bandaging, the tumour gradually shrank, and the scalp grew until it quite healed in another three months' time.

The patient kept quite well for seven months, but one day after unusual exertion he had another fit; since then there have been three convulsions, one after bathing, one after vomiting, one after measles, with temperature of 104°. But it is now nine months since the last fit, the causes being associated in each instance with sudden alteration in the cerebral circulation. The patient is bee farming, and able to enjoy life and sports.

The principal points of interest seem to me to be the tolerance of:

1. The brain substance to injury.
2. The effect of light diet in the controlling of cerebral vomiting.
3. The long delay in the formation of the abscess.
4. The absence of motor symptoms in the first instance owing to the escape of the motor area.
5. The rapid onset of acute symptoms as soon as the abscess became a certain size and encroached upon the motor area.
6. The presence of unconsciousness in epileptiform convulsion of traumatic origin.
7. The rise of temperature and pulse-rate after the operation.

Facial paralysis supervened after the operation, and persisted for some months, but eventually completely cleared up.

In conclusion, I wish to acknowledge the ready help received in the conduct of the case from my partner, Dr. Alex. Milne.

Since this case during the last twelvemonth I have seen (in the North alone) reported inquests on two fatal cases of lads being shot by these so-called toy pistols. It is an anomaly in our legislation that whereas grown men must take out a licence to carry firearms, children may and are supplied with such dangerous instruments of self-destruction without restriction of any kind, and the law supplies no remedy. Children may not fog their brains with drink, but they may be supplied with the means of blowing out their brains *en bloc* for half-a-crown.

Note on Specimen.

The bullet is seen attached on the outer side and deepest portion of the abscess wall thus, and well shows that it is not

the bullet *per se* that is the cause of suppuration, but the *materies morbi* (staphylococci) that it carries with it. And that it is not sufficient merely to remove a foreign body to avoid danger subsequently, but the whole of the track of the bullet must be thoroughly cleansed and rendered aseptic.

EXCISION OF THE RECTUM FOR CANCER BY A NEW METHOD, AND ITS RESULTS.

By THOMAS CARWARDINE, M.S.Lond., F.R.C.S.Eng.,
Assistant Surgeon, Bristol Royal Infirmary.

THE object of this paper is to bring before your notice a method of excision of the rectum which I believe to be new in several of its details, and in its after-results as nearly perfect as possible. It aims at the complete and safe extirpation of the disease and the functional restoration of the parts.

Briefly stated, there are two methods of operation in general use, the perineal and the sacral. Total extirpation of the rectum and sigmoid need not be considered here.[1]

The perineal method is limited in its application to very few cases, and it destroys the natural action of the parts. The greatest objection to it is that it is an imperfect operation. As a result of many well-known researches, it is becoming recognised that no operation for cancer is perfect unless the lymphatic area be extirpated at the time of operation.[2] The case for the breast has been well made out.[3] Our worthy President has emphasised the principle of glandular removal in operations on the tongue, and others are applying it to the cancerous uterus by removing the pelvic cellular tissue and glands. It is now time to recognise that the original perineal operation is inadequate, because it does not systematically deal with the lymphatic area.

The sacral operation of Kraske, with its modifications, is open to two great objections.

The first objection is the very serious mortality. This depends much on the selection of cases and the experience of the operator. During a period of ten years Kraske himself met with 110 cases, and selected 80 for the radical operation. Of these 15 died, an immediate mortality of nearly 20 per cent.[4] Kraske has now reduced his mortality to 10 per cent., but that of his earlier cases—which would probably represent the standard for the average operator—was 34 per cent.

Mr. Cheyne, in the Lettsomian Lectures for 1896, collected 100 cases of excision of the rectum, and stated that 61 were no better off than if they had been left alone, and not so well off, on the whole, as if they had had colotomy done, and 27 died as an immediate effect of the operation.[5] Mr. William Rose has concurred in thinking that "excision of the rectum must be laid aside as a routine procedure."[6] So grave is Kraske's method, that I think there are very few surgeons, who, knowing all the facts, would submit to the operation themselves at the hands of the average surgeon.

The second objection is the grave interference with the function of the parts. In a few cases a fair result is obtained by joining the rectum to the anus, but in the majority the result is such as to interfere with social enjoyment, and when stricture or fistula supervenes, to greatly embarrass the surgeon. Is it not pitiable to behold a man with a patent gashole in the middle of his sacrum, with an indiarubber bung to block it and prevent it contracting? This is so great a defect that Keen regards it an improvement to completely close the sacral end of the gut and leave a permanent abdominal anus.[7] Kraske states that in his method complete restoration of function was difficult to obtain, as in a number of cases a fistula formed, which was closed with difficulty or gave rise to stricture.

Before giving the steps of the operation which I propose, let me give the results in the two cases in which it has been employed. The patient first operated upon was sent to me a year ago by Dr. Avarne, of Blaenavon. He was a miner, aged 41, complaining of difficulty, pain, and bleeding on going to stool. About 2½ inches from the anus the finger reached a fungating rosette-like mass, which involved the anterior and left lateral wall and extended upwards beyond the reach of the finger. The case was of unusual interest because the growth turned out to be a spindle-celled sarcoma.[8]

You will see from the photograph taken several months afterwards that the patient has a very good natural anus in the normal position. The corrugation of the anterior half of the anus is well seen. The patient has perfect rectal sense and control over both fæces and flatus, and does not require to wear any form of dressing. He says he has "to go to W sometimes once and sometimes twice before dinner and about the same after."

You will observe a median scar running to the sacral region. At the back of the anus there is a membranous septum with a sharp edge. On either side of this the termination of a bifid caudal extremity can be felt consisting of bone regenerated from the coccygeal periosteum, ending above in a partial regeneration of the sacrum. The sphincter ani acts laterally upon the finger when introduced. There has never been the least indication of stricture. The photograph is that of a patient who a year ago had the lower part of the rectum removed, together with all the accessible presacral tissue, containing about a dozen presacral lymphatic glands. (The patient was shown.)

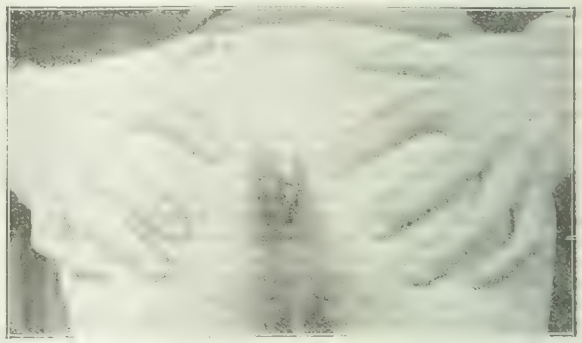


Fig. 1.—After excision of the rectum and presacral glands for sarcoma.

As this was the first case by this method, and the extent of the growth undetermined, I was desirous of excluding septic influences, and performed left inguinal colotomy some ten days before operation, so as to wash out the lower bowel from the colotomy wound. The incision healed by first intention, except close to the anus, where a small gauze drain was inserted. The closure of the colotomy wound has been successful.

The second case was treated without preliminary colotomy. He was a respectable mechanic, sent to me by Dr. Godden, of Bristol, on July 30th, 1898. He had a septate mass of craggy bleeding excrescences about ¾ inch above the anus. Twelve years previously he had passed blood, and something came down on defæcation. Under an anæsthetic the growth appeared to be malignant both to the finger and the naked eye, but a portion reserved for microscopical examination was unfortunately mislaid. On December 6th—that is, nine months ago—the tumour had recurred, and a microscopical examination proved it to be carcinoma. The whole of the lower part of the rectum, with the superficial portion of the sphincter, and all the accessible presacral tissue containing several enlarged glands were removed. Owing to the necessity for taking away part of the sphincter the anus is not quite so perfect as in the previous case, but the patient has no occasion to wear any form of dressing when at work as a mechanic, unless he has a distinct tendency to diarrhœa. He is strong, healthy, and does heavy work. In this case rectal sense was almost perfect seven weeks after operation. The sacrum is completed, and a new bifid bony coccyx has regenerated from the periosteum, the two halves of the sphincter being attached to the bifid extremities of the new bone.



Fig. 2.—After excision of the rectum and presacral gland for carcinoma.

These, then, are the results; it remains to consider the methods, taking the stages *seriatim*.

PRELIMINARY DIETING.

This is very important, particularly if preliminary colotomy be not done. The patient should be kept on a light and purely liquid diet for several days before operation to reduce the fæces to a minimum.

Preliminary Colotomy.

This would only appear to be necessary when the need for an aseptic operation is great, particularly when the growth is high up and the peritoneum may have to be deliberately opened. The method of Maydl-Reclus produces an excellent artificial anus with a good spur, provided the muscular and aponeurotic fibres be separated and not divided.

Position of the Patient.

This is similar to that for dissection of the gluteal region, and was advocated by Mr. Godlee in 1893.[3] The left knee is supported on a stool, the buttocks are at a higher level than the head, and the patient is almost prone. It is important for the buttocks to be well raised, for not only is the patient better supported thus, but the bowels also tend to gravitate away from the pouch of Douglas. With this principle in view it might well be called the inverted Trendelenburg position.

Steps in the Operation.

Subperiosteal Excision of the Coccyx and Fourth and Fifth Pieces of the Sacrum.—This is the first and most tedious part



Fig 3.—The coccyx and part of sacrum have been excised subperiosteally.

of the operation, but the labour expended is amply rewarded. A free incision is made clean down to the bone through the middle of the periosteum. A small periosteal elevator is employed and some patience is required. The denuded coccyx is levered out at its joint above, and afterwards the fourth and fifth pieces of the sacrum are denuded of periosteum and excised. Five minutes may be required for this stage, which leaves a bed of periosteum as in the figure, to which the sphincter ani, levator ani, and coccygeus remain attached.

Median Proctotomy.—This is rapidly accomplished by passing a long slender knife in at the anus, transfixing the

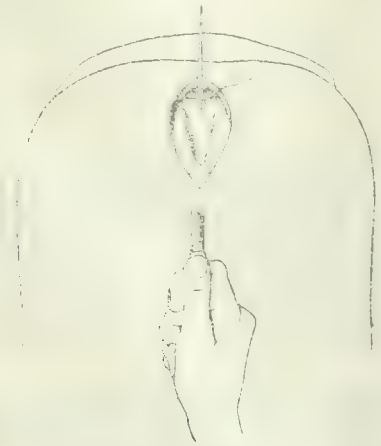


Fig. 4.—Median transfixion.

periosteum above, namely, that belonging to the fourth sacral segment, and cutting quickly through everything by a sawing movement exactly in the middle line. The bleeding is not severe, and comes chiefly from the wall of the bowel, a few other arterial points require forceps. The mucous membrane may then be slit up in the middle line posteriorly. The growth and upper part of the rectum are now freely exposed, and the extent of requisite removal is easily determined; also whether the whole circumference of the gut shall be removed or a strip of mucous membrane left.



Fig. 5.—Rectum and growth exposed.

Isolation of the Gut Below and on Either Side.—The whole thickness of the gut is divided transversely with sharp scissors some distance below the growth, leaving the mucous membrane over the sphincter intact if possible. It is also completely divided on either side. As soon as the prostatic



Fig. 6.—Rectum and growth isolated in continuity with presacral tissue.

level is reached and the levator ani is divided, the separation of the rectum becomes very easy, for it is here enclosed in a tube of the recto-vesical fascia, and the direction is indicated by several longitudinal arterial branches. The peritoneum is soon seen, and is easily distinguished by its bulging and by the respiratory movements of the gut visible beneath it. It is easily separated by getting the assistant to depress it with a sponge or finger while the operator holds the growth in his left hand and dissects it with sharp scissors in the right hand. It should be noted that by the traction of the left hand a pocket of peritoneum may be pulled down and accidentally snipped. This happened to me in the second case. The small button hole was temporarily plugged with iodoform gauze, and later on sewn up with catgut.

Isolation of the Gut above, with the Presacral Tissue and Glands in Continuity.—To this step considerable importance

must be attached. At a distance of at least an inch and well above the growth the mucous membrane alone is divided transversely, not the whole thickness of the gut wall. This exposes the perirectal tissues, and continuous with them the presacral tissue and glands. This presacral tissue will be found to be thicker and firmer than one would expect, perhaps a third or half an inch thick, and of firm fibrous character so that it will not break away, and with numerous glands embedded in it at the posterior part.

The rectum being held firmly in the left hand this presacral tissue is separated from the sacral periosteum and remaining part of the sacrum posteriorly up to the level of the hollow of the sacrum. Stage by stage the peritoneum is very easily depressed out of the way in front. One is apt to think that the peritoneum would be closely incorporated, but my



Fig. 7.—Separating the peritoneum from the presacral tissue.

experience has been that it is easily separated out of the way by blunt dissection with the forefinger. Herein is one of the great advantages of this inverted Trendelenburg position, for instead of opening the peritoneum, as in Kraske's method, it is simply peeled off the gut with the forefinger, the small intestine having receded. If the peritoneum should happen to be involved, I would suggest that it be deliberately cut away and the rest subsequently sutured, for it is here redundant, and some can be easily spared. But I am convinced that in the majority of cases the peritoneum, if uninvolved in growth, can be peeled off and left unopened.



Fig. 8.—Diagram of parts removed, the presacral tissue having been divided high up in the hollow of sacrum.

We have now a mass in continuity upon which we can exert traction with the left hand, consisting of the cancerous rectum, the presacral tissues, and all the glands likely to be involved in any ordinary case. This mass can be strongly pulled upon with the hand, and completely isolated by blunt dissection with the forefinger of the other hand high up into the hollow of the sacrum. Indeed, the sacral promontory can be felt. It only remains to divide the presacral tissue transversely as high as desired; for this scissors may be used. I have found a right-angled, triangular, double-edged palate knife a suitable instrument for the purpose.

Now the removal of the lymphatic area *in toto* with the growth is one of the features of the operation, contrasting with other methods in which enlarged glands are extricated piecemeal. In this sense the operation is pathologically perfect.

Union of the Gut Above and Below.—This may be done with confidence by means of silkworm-gut sutures. In both the cases given the union was perfect. In the first case a narrow

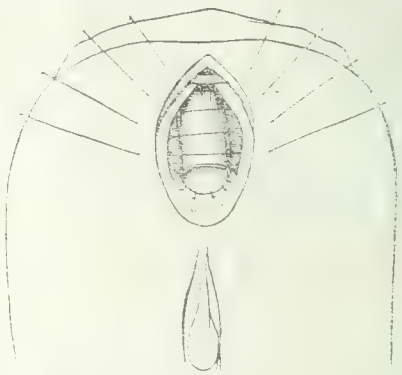


Fig. 9.—Method of uniting the gut and the soft parts.

strip of mucous membrane was left, and the rest was brought down and stitched with success. In the second case a long tube of upper rectum was brought down and stitched without any surrounding supporting tissue. It maintained its vitality and united with the anus perfectly.

Union of the Wound.—This readily took place. In the first case union was by first intention throughout, except close to

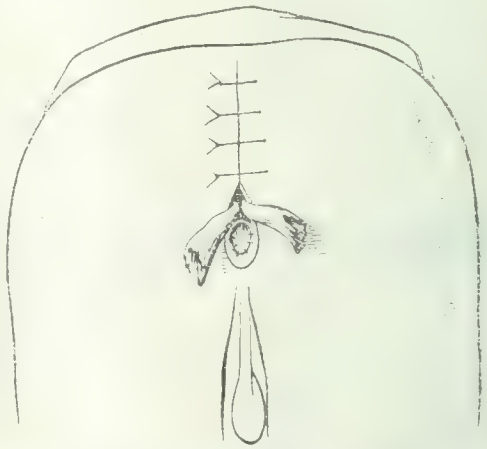


Fig. 10.—The wound closed and drained.

the anus, where a small gauze drain was placed. The course was a perfectly aseptic one, the stitches were left in nine days and then removed, and all the fæces came away by the colotomy opening. In the second case, in which no colotomy was done, rather more drainage was provided. The healing was perfect, and the stitches were removed on the ninth day. This may be contrasted with the results of Kraske, who finds that the average time for complete closure of the wound is from four to six weeks.

FINAL RESULTS.

The anatomical condition is diagrammatically illustrated in the figure. We have a corrugated contractile anus with a thick band of tissue behind uniting the lateral sphincters, and a bifid bony tail.

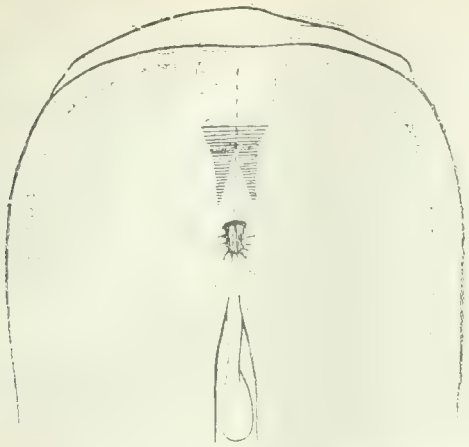


Fig. 11.—The final result, represented diagrammatically.

After-Treatment.

In each case the gauze drain was removed early and the parts were irrigated with weak iodine solution. In the first case this was done through the lower colotomy aperture, with the patient on a bedpan, so as to flush the whole of the gut below as one would flush a drain. In the second case irrigation was done *per anum*. The colotomy opening in the first case was successfully closed by the extraperitoneal method so ably advocated by the late J. Greig Smith.

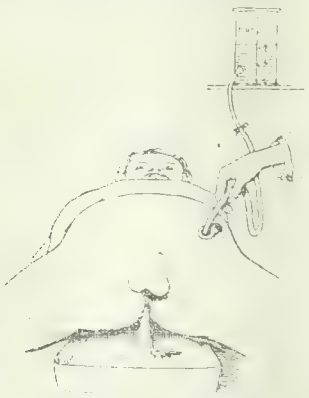


Fig 12.—Method of flushing if preliminary colotomy be done.

Data in After-Progress.

The chief points may be represented in tabular form, especially indicating the return of rectal sensation and control.

Case I.—J. B.

1898, August 9th.—Operation. Excision of rectum and presacral tissue, including about a dozen presacral glands.

August 23rd.—Operation for closure of colotomy aperture.

September 20th.—Rectal sensation and control returning.

October 11th.—Almost complete control. Coccyx partly reformed. Sphincter grips finger.

1899, July.—Perfect health and perfect control. No stricture. Does not wear any dressing. New and bifid coccyx.

Case II.—F. M.

1898, December 14th.—Operation. Excision of rectum, presacral tissue and glands, and superficial part of sphincter region.

1899, January 13th.—Y-shaped deposit of new bone at back of anus.

January 20th,—Sensation of anal skin normal; anal mucous membrane insensitive.

February 1st.—Rectal sensation almost perfect. Slight control.

March 6th.—Bowels open twice or thrice a day. Controls fæces, but not flatus.

July.—Perfect control of fæces and flatus. Occasionally a mishap when at work if motion be quite loose. No recurrence. No stricture. Does not wear any form of dressing.

These then are the results. When the profession realises that by such a method as this, when taken early, the disease and the lymphatic area may be safely and completely removed, with the restoration of the parts to a normal condition and with a fair prospect of an immunity at present impossible to estimate, then cancer of the rectum instead of being regarded as a necessarily fatal affection will become one of the curable diseases, brightening many a home and gladdening many a heart.

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1 Quénu, *Rev. de Chir.*, August, 1898. 2 British Medical Journal, 1898, ii, 993; *Ibid.*, 1899, i, June 17th. 3 *Ibid.*, 1898, i, February 26th. 4 *Ann. Surg.*, 1897, xxvi, 371. 5 British Medical Journal, 1896, i, 581. 6 *Practitioner*, 1897, July 15th. 7 *Journ. Amer. Med. Assoc.*, 1898. 8 British Medical Journal, 1898, ii, 1812. 9 *Ibid.*, 1893, ii, July 8th.

A SIMPLIFIED METHOD AND APPARATUS FOR MAINTAINING THE SO-CALLED LITHOTOMY POSITION DURING OPERATIONS ON THE PERINEUM, ETC.

By Reginald H. Lucy, F.R.C.S.,
Surgeon, South Devon Hospital, Plymouth.

Finding the crossbar of Clover's crutch to be in the way of Wheelhouse's staff and similar instruments when operating on the perineum, I have devised a simple and portable set of straps which I find in practice to be quite as efficient as Clover's apparatus: (1) A stout leather strap padded for its middle third, and furnished at either end with a strong buckle. This is placed obliquely behind the patient's neck, one end being brought over one shoulder, while the other is brought out under the armpit of the opposite side, precisely as is done with Clover's crutch. (2) The remainder of the apparatus consists of two flat bars, each four inches long, padded and furnished at either end with swivelling wire loops and at their outer ends with a padded leather strap. To apply the straps—the patient's legs being flexed on the thighs—the flat bar of one strap is placed well up into the ham, the strap on its outer end is carried round the thigh above the knee-joint, through the loop of the inner end, and thence round the leg, from within outwards, just below the head of the tibia, and its end being passed through the outer loop is buckled to the corresponding end of the neck strap. The same routine is followed with the other leg strap, and it will then be found that the more the straps are pulled taut at the neck strap buckles the more fully will the patient's legs be rotated outwards by the lever-like action of the flat bars, and the more completely will the thighs be kept flexed on the abdomen. The passage of sounds, catheters, etc., will now be found easy, there being no cross bar between the knees.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

SARCOMA OF THE EPIDIDYMIS: REMOVAL.

A boy, aged 15, had received three blows on his left testicle whilst playing at football: the first on December 26th, 1898, the second at the end of February, 1899, and the third at the end of March, 1899. The testicle slightly increased in size after the first blow, but after the third it became swollen to twice its normal size. Six days after the last injury a medical man tapped the tumour, but only obtained two teaspoonfuls of blood at the operation; subsequently the tumour increased considerably in size. The patient remained in bed for six days after the tapping, and believes that the swelling decreased a little during the rest.

Dr. Russell first saw the patient on April 2nd, 1899, and found a boat-shaped tumour about 4 inches in length occupying the position of the left testicle; it was indistinctly fluctuating; the cord was thickened, and the veins of the scrotum were distended. After a week's interval a nodule was found on the anterior and upper part of the tumour, and distinct fluctuation could be made out in the swelling above this nodule. The cord was more obviously thickened. On April 11th, 1899, the tumour was removed by Drs. Morris and Wood, and the spermatic cord was ligatured as high up as possible. The tumour weighed altogether ¾ lb.; it was roughly kidney-shaped. It was incised longitudinally, and was then found not to be testicle; the testicle, of normal size and appearance, lay at the back of the tumour, and was surrounded by the tunica vaginalis. The vas deferens was traced into the

tumour at its upper part, and the latter evidently sprang from the epididymis. The tumour consisted of a creamy-white mass, of firm consistence except at its upper part, where it was diffluent. Strands of fibrous tissue could be seen with the naked eye interlacing in all directions. Microscopical examination of a fresh section showed that the tumour was composed of cells of various sizes, with interlacing strands of connective tissue. There were numerous large round and oval cells, and many small round cells, as well as spindle cells. Sections of the hardened tumour showed the connective tissue in bundles and whorls, and the spindle cells even more clearly. There remained a swelling of about the size of half a small walnut over the site of the stump of the spermatic cord. Towards the end of June, 1899, this tumour seemed to increase somewhat in size. The patient then went to Birmingham and saw Mr. Jordan Lloyd, who advised immediate operation. The remains of the cord and some enlarged femoral glands were accordingly removed at this operation.

At this date (September 25th, 1899) the patient is in good health, and there are no signs of recurrence.

W. B. RUSSELL, M.B.Cantab.,
Colwyn Bay. F. L. WOOD, M.B.Vict.

HEMMING THE OMENTUM TO PREVENT ITS FORMING VISCERAL ADHESIONS.

THE stumps left after ligature and removal of torn omentum, being uncovered by peritoneum, are always liable to form fresh adhesions to the viscera with the usual undesirable sequelæ. As it is impracticable to cover each little stump with peritoneum, as is done with an ovariotomy pedicle, the following plan, which I have not seen advocated before, may be adopted. It consists in folding the lower inch or more of omentum forward on itself, and fixing it in position by a few interrupted sutures, thus forming a hem at its lower free border. If the ends of the ligatures used to tie off the omental tags are left long they may be utilised for fixing each little raw stump to the anterior omental surface. By this means no surface uncovered by peritoneum is left in contact with any viscus.

Plymouth. C. HAMILTON WHITEFORD.

A CASE OF POISONING BY LINIMENTUM OPII, WITH REPORT OF THE NECROPSY.

A MAN, aged 56, retired to bed about 8 P.M. in his usual state of health. Two hours afterwards he was heard snoring very loudly by his wife, who, being unable to arouse him, ultimately became alarmed and sent for me. I arrived at 12.15 A.M. and found him briefly in the following state: Deeply comatose, very pale, skin cool and moist, breathing 16, regular, but not deep; pupils very contracted and equal; all reflexes abolished; pulse 60, somewhat feeble, but regular. Inquiry elicited the fact of his having possibly taken "something." A bottle standing on a shelf near the bed contained a few drops of a liniment he had been in the habit of using for rheumatism; this smelt strongly of camphor, and looked like tincture of opium. There was no smell attached to the breath.

With the aid of the stomach tube the contents of the stomach were obtained, and it was then evident that a considerable quantity of the liniment was intermingled therewith. A solution of potassium permanganate (grs. iij to ℥j) was then introduced and again withdrawn, and the process repeated, leaving about ℥j behind. Coffee and brandy were also administered in suitable quantities, and strychnine injected hypodermically. The battery (faradic) was used for three hours, but beyond provoking muscular contractions, was of no avail. Respiration failing, had to be assisted artificially. The pulse, however, first began to cause anxiety, becoming quicker, more feeble, and irregular. This was noticed about 1 A.M., and these characteristics became more marked, until the heart's action, being almost imperceptible and extremely irregular, finally ceased at 3.30 A.M. About half a dozen respiratory efforts were noticed during the subsequent minute. I may add that artificial respiration was carried on continuously for over two hours. The patient never rallied in the slightest degree. Atropine, not being available, was not used.

Necropsy.—Thirty-two hours after death. Rigor mortis well marked. Brain: Very slight venous congestion of pia mater; cerebro-spinal fluid moderate in quantity; brain substance very anæmic; no other abnormality evident. Lungs: Somewhat congested, both apices tuberculous; calcification, caseation, cutting like leather where not gritty. Stomach: Mucous coats very anæmic, showed a few old tuberculous "punched-out" ulcers with undermined edges; no signs of irritation or congestion; contained mucus, coffee, Kidneys: Slightly enlarged and rather congested. Bladder: Full of urine. The other organs showed no abnormality bearing upon the case.

Comments.—The points of interest are: The early deep coma, the failure of the pulse primarily, and the comparatively small dose taken (about ℥ij lin. opii). That the camphor in the liniment played a part as an ultimate cardiac depressant[1] is a possibility which should not be overlooked. I need hardly add the poison was identified.

CHARLES B. ROSSITER, F.R.C.S.Ed., L.R.C.P., etc.
Southwark Park Road, S.E.

[1] Lauder Brunton, *The Action of Medicines.*

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

CORK NORTH INFIRMARY.

CHOLECYSTOTOMY FOR DISTENDED GALL BLADDER WITH REMOVAL OF CALCULUS IMPACTED IN CYSTIC DUCT BY DIRECT INCISION.

(By JEREMIAH COTTER, F.R.C.S.I.)

MRS. C., aged 35, married, with four children, suffered from hepatic colic for several years; she never had jaundice, or noticed any calculi in the bowel discharges.

Condition on Admission.—After the birth of her first child, six years ago, she observed a swelling in the right hypochondriac and epigastriac regions, which had been gradually increasing in size. For twelve months the swelling had been tender to touch, and she has had pain on exertion; she also complained of pains over the cardiac region shooting up to left clavicle. She had had no vomiting, but suffered from occasional chills. The circulatory, digestive, nervous, respiratory, and genito-urinary systems were normal. A smooth, rounded, movable tumour, about the size of the closed fist, could be felt in the situation above indicated. The tumour could be pushed well up under the lower ribs, and became more apparent when the patient was standing.

Operation.—On June 28th a vertical incision, about 4 inches long, was made in the right linea semilunaris, and a distended gall bladder exposed. There were no adhesions. The gall bladder was tapped with trocar and cannula, and a clear treacly fluid escaped, becoming purulent towards the end. The fundus of the gall bladder was then incised, and 72 calculi removed by scoop and finger. The total weight of calculi removed was 180 grains. A large calculus, about the size of a cherry (weighing 80 grains), was found tightly impacted in the cystic duct, causing complete obstruction. As efforts at dislodgment failed, and as it was found impossible without injury to the viscus to crush it *in situ*, it was removed by direct incision of the duct over the calculus, the wound being subsequently closed with interrupted silk sutures by Lembert's method. The hepatic and common ducts were patent. The gall bladder was washed out with warm boracic solution, a rubber drainage tube (removed at the end of twenty-four hours) being introduced down to the cystic duct. The fundus of the gall bladder was easily sutured to the edges of the abdominal incision, which was closed above and below by silkworm-gut sutures.

After-History.—The patient made an uninterrupted recovery, and left hospital three weeks after operation with a biliary fistula, which seemed to be gradually closing.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

F. T. Roberts, M.D., President, in the Chair.

Monday, October 23rd, 1899.

The Infectivity of Malignant Growths.

Mr. Bellingham Smith and Dr. Washbourn contributed a paper upon the subject of the infectivity of malignant growths. They first considered the various theories which had been advanced to explain the origin of cancer. The embryonic theory of Cohnheim they thought was capable of explaining such tumours as the enchondromata of bone and certain sacro-coccygeal tumours, but did not give a satisfactory explanation of malignant growths. Irritation such as was caused by a broken tooth would give rise to epithelial proliferation, but this they urged was hardly sufficient to account for the various phenomena of malignancy. Both injury and chronic irritation they considered were to be regarded only as predisposing causes. Experiments showed that embryonal cells when transplanted were capable of limited multiplication, and this gave some support to the theory of Cohnhein. If Dr. Lack's single experiment were confirmed, it would form a basis of explanation of secondary infective characteristics. The analogies existing between tubercle, a bacterial disease, and malignant growths were pointed out as suggestive of the parasitical origin of the latter. A number of incidents of accidental inoculation in the same individual from pre-existing growth were given, and the possibility of reinfection during operation was insisted upon. Reference was made to the experimental inoculation of individuals, and cases were mentioned in which there was good evidence of the accidental inoculation of one individual from another. The geographical distribution of the disease and the existence of so-called "cancer houses" were mentioned in support of the view that cancer was infective. The experimental evidence of the infectivity of cancer in animals was discussed, and it was observed that cancer had not been satisfactorily shown to be capable of transmission from human beings to the lower animals. There was, however, definite evidence of the transference by inoculation of cancer from one animal to another of the same species. Their own work upon infective sarcomata in dogs, which they briefly recapitulated, was, they thought, quite conclusive. They had succeeded in passing these growths through a series of dogs; sometimes the tumours disappeared, but sometimes they continued growing and gave rise to secondary deposits. They referred to the important observation that if the growth subsided the animal was immune to subsequent inoculation. They then discussed the direct evidence of the presence of parasites in malignant growths, alluding incidentally to the experiments of Sanfelice. The latter by inoculation of a blastomyces obtained from fruit juice produced what appeared to be carcinomata in dogs. The authors formulated the following conclusions: (1) Malignant growths may be regarded as local in origin, and as possessing the power of infecting adjacent and distant parts of the individual; (2) inoculation may take place from one part to another of the same individual apart from transference by the natural channels; (3) there is good evidence to show that one individual may be infected with growth from another; (4) there is experimental evidence to show that growths may be transferred from animal to animal of the same species by inoculation; (5) there are found in many malignant growths bodies which have a resemblance to micro-organisms, and which have been regarded as belonging either to the protozoa or the blastomycetes; (6) a new growth having the structure and also the behaviour of carcinoma has been described as occurring, at any rate in two instances, from inoculation with a form of blastomycetes: (7) these experiments are highly suggestive that the bodies found in cancer are the cause of the disease, though evidence is wanting that the two are directly associated.

Mr. J. Jackson Clarke said he was in general accord with the propositions formulated in the paper, and he regarded as especially interesting the fact that these tumours had been observed to spread in the more weakly of the subjects. In the instance referred to of infection of the peritoneum by ovarian cells, he thought the growths in the glands might be due to direct infection. He recognised that some of the conclusions at which he had formerly arrived were erroneous and he was now somewhat undecided. The formation to which he had alluded had not been explainable except as parasitic in human growths it could not be explained as due to blastomycetes. He had often found various bacteria in neoplasms far removed from the surface which he imagined had been accidentally contaminated by bacteria which had struggled along the lymphatics with the original infecting material. He referred to a view which he had once held that these malignant growths might be comparable to the tertiary growths of syphilis and might ultimately turn out to be connected with some of the common fevers.

Dr. Symes Thompson mentioned the case of two men who had married two sisters, but who were not otherwise related, both of whom developed epithelial cancer of the tongue. One man never smoked, and the other only smoked cigars, so that this factor could not be adduced. He admitted, of course, that it might be pure coincidence. He also alluded to the case of a man who several years ago had an affection of the tongue of epithelial nature which was removed. Two years later the disease returned and a further operation was necessary, after which for several years there was no recurrence; subsequently a tumour which was of a sarcomatous type formed in the neck. This was removed, and eighteen months later a similar tumour occurred lower down the neck, and this had just been successfully removed. He commented upon the singular fact of epithelial and sarcomatous growths occurring in the same individual.

Dr. Heywood Smith remarked that clinically he had never heard of one kind of cancer running into another, but he recalled a case of apparent infection under his care twenty-five years ago. He had operated on a girl, aged 14, for double malignant disease of the ovaries of a marked type. The parts removed were left in the theatre for three or four days, antisepsis not being then a strong point. A few days later he performed an ordinary ovariotomy and the woman recovered from the operation very well, but she became ill in three weeks and died within two months, and at the necropsy there was found a large malignant mass in the previously healthy peritoneum and deposits were also found in the pleura. In view of the perfectly healthy condition of the abdomen at the operation he could not resist the conclusion that there had been infection by instruments or otherwise.

Dr. Lack thought that occurrences of the kind just mentioned were by no means unknown or uncommon: in fact, they were almost repetitions of experiments which he had himself performed. When an epithelioma produced a growth in the stomach, if due to a parasite, the latter growth ought to be columnar. The only explanation was that there was no such thing as infection but really transplantation. Moreover, when a cancer of the breast ulcerated through the skin they might expect a squamous epithelioma, but no such thing had ever been recorded. He thought it was the actual cells which were conveyed. In his inoculation cases infection had occurred even when the wound had been washed with pure carbolic acid.

Dr. Auld said he had seen columnar epithelioma of mucous membrane recur as squamous epithelioma, and he thought the type of growth was dependent upon the conditions present at the site of transplantation.

Dr. Macfadyen criticised the way in which the subject had been handled, and insisted on the necessity in such a discussion of making a clear distinction between connective tissue and epithelial neoplasms. He suggested that the growths described as sarcomata might be merely the reaction of the tissues to living irritants. The cells of sarcoma of whatever type were mesoblastic in origin, and there was nothing so very dissimilar between the structure of sarcomata and many bacterial growths as to justify them in saying that it was *a priori* improbable that some of them were due to bacterial irritation. He recalled that the growths now known to be due to actinomycosis were formerly regarded as sarcomata. He accused the authors of having discussed the subject with a bias in favour of the theory of infection or of having in any case sailed somewhat lightly over the principal objections to the view that malignant tumours in general were due to a parasite. With regard to the supposed transplantation of infective

epithelium he asked whether any analogous effect could be alleged with regard to lesions which were known to be parasitic, as in tubercle for instance. Moreover there were other malignant tumours besides the epitheliomata, the adenomata for instance. He did not see how a parasite could give rise to new growth simulating the structure of a gland. He thought that there was a difficulty in believing that even all the sarcomata were infective. The history of carcinoma in the lower animals lent little support to the parasitic theory. He remarked on the fact that traumautism as a cause of cancer had not been observed in the lower animals.

Dr. Washbourn, in reply, said that they had relied almost exclusively on microscopical appearances, and many might well belong to the class of protozoa or blastomycetes. He observed that Dr. Heywood Smith's case was not conclusive, as the ovaries might have been previously diseased. He thought the nature of the growth varied according to the tissues into which the disease was inoculated. In conclusion, he remarked that veterinary pathology had not yet reached a point which enabled it to throw much light on these questions, and the occurrence of cancer in the lower animals would probably prove to be a much more frequent occurrence than was at present believed to be the case.

BRITISH GYNÆCOLOGICAL SOCIETY.

H. Macnaughton-Jones, M.D., President, in the Chair.

Thursday, October 12th, 1899.

Specimens.

The President showed: (1) Two Uteri removed by Vaginal Hysterectomy for Intractable Prolapse; (2) Fibromyoma removed by Supravaginal Hysterectomy.—Mr. Charles Ryall showed: Two Uteri with Fibroid Thickening removed by Abdominal Hysterectomy. In the discussion on these specimens Dr. Heywood Smith, Dr. Mansell Moullin, Mr. J. Furneaux Jordan, Mr. Bowreman Jessett, and Dr. J. Walker Smyth took part.

After-results of Operations for Removal of Uterus and Appendages.

Mr. J. Furneaux Jordan read a paper on this subject. His statistics dealt with 43 cases of removal of both appendages for disease, and 24 operations for myoma of the uterus. From the after-histories he investigated the following points: The severity and duration of the symptoms due to the production of the menopause, and their occurrence at fixed periods. The continuation of menstruation after operation and the occurrence of vicarious menstruation; the effect of the operation upon the body weight, the effect upon the marital functions, the condition of the scar of the abdominal incision, the state of the general health and the capacity for work, these points having reference to the first group of cases. He was led to the following conclusions: The final result of removal of the appendages for inflammatory diseases is uniformly good; the severity of the artificial menopause is most marked in young women; the mortality in severe cases of pyosalpinx treated by abdominal section is higher than one would wish; the use of the drainage tube involves a weak spot in the scar; the likelihood of leaving behind some portion of ovarian tissue is great in cases of very dense adhesions; the effect of this passes off in time. If the appendages are fully removed, menstruation ceases entirely. The necessity for and the advantages to be derived from removal of the uterus will seldom occur. Mr. Jordan laid down the following rules of practice: Be as conservative as possible, especially in the case of young women; treat the severe cases of pyosalpinx if possible by the vaginal route; do not drain unless absolutely obliged to, and then consider the possibility of draining by the vagina; do not get disheartened if the patient does not get the full benefit of the operation for some little time. In the second group of cases the points investigated were: The effect on the myoma of removal of the appendages, the severity of the menopause following this removal as compared with the severity of the menopause following hysterectomy, and the general health of the patient subsequent to operation. Mr. Jordan found that after removal of the appendages the tumour disappeared entirely, except in two cases where hysterectomy was required later, and two other cases where sufficient time had not elapsed. He found that the sufferings of the artificial menopause, when the appendages were removed for myoma, were much less, on the whole, than in cases of removal of the appendages for disease. But this he believed to be explained rather by the greater age of the former patients, whose average age was 37½, as compared with the age of patients operated on for diseased appendages, where the average age was 30. The menopause following hysterectomy was a little less severe than in cases of removal of the appendages, but again the average age of the patients at the time of operation was higher than that of the patients who underwent the operation of removal of the appendages, being as high as 40. As regards the general health of the patient after operation, on the whole, the final results were very good. On the general question of the treatment of myoma, he had come to the following conclusions: First, He found that cases occurred in which no operation was immediately called for, which under the continuous administration of ergot and hydrastis, combined with rest, might safely be kept under observation, provided that they did not increase in size. Secondly, that there were cases which distinctly called for removal of the appendages in preference to hysterectomy; this was especially the case with patients who had become absolutely blanched with severe hæmorrhage; the extra time and the extra shock entailed by hysterectomy, which in an ordinary case would not affect the ultimate result, might in these blanched and almost bloodless patients be just the turning point that might lead to a fatal issue. Thirdly, for large tumours, he believed that abdominal hysterectomy was the treatment. Fourthly, for small myomata demanding interference from their rate of growth, from hæmorrhage or from pain, he should hesitate between vaginal hysterectomy and removal of the appendages; in a stout patient he would prefer vaginal hysterectomy, in one with a small vagina he would prefer removal of the appendages.

The paper was discussed by Dr. Arthur Giles, Dr. Heywood Smith, Dr. Herbert Snow, Mr. Bowreman Jessett, Dr. R. H. Hodgson, and the President; and Mr. Furneaux Jordan replied.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

G. Anderson Critchett, M.A., F.R.C.S.Edin., in the Chair.

Thursday, October 19th, 1899.

President's Address.

In his opening remarks the President thanked the Society for the honour it had done him in electing him, and he paid tribute to the many eminent ophthalmologists who had preceded him. He had watched the Society ever since its first inception under their revered master, Sir William Bowman, and it was to him (the President) a life-long regret that his honoured father did not survive to occupy the chair. But though his name could not be enrolled among the presidents of the Society, yet it must ever hold high rank amongst the great pioneers of ophthalmology, and his memory was in safe keeping with all who knew him. The President then proceeded to deal with the evolution of cataract extraction since Daviel first attempted it in 1745. Prior to that time couching and discission were the only recognised operations. His operation was a simple extraction, and although it gained numerous adherents there were many who relied on the more primitive methods, and even as late as 1838 it was stated by Guthrie that "there are reasons which will ever prevent it being practised by the great body of the profession." The statistics, however, of cataract extractions were, notwithstanding, remarkably good. He next described in detail the old flap operation. When done with skill and success it gave an excellent result, but so often a large prolapse of iris occurred, and in these preantiseptic days primary suppurations were numerous. The dawn of a new era was foreshadowed at Moorfields, when it was found that the results of one of the surgeons less skilful than his fellows were exceptionally good. This gentleman usually accidentally did an iridectomy. The first definite change was made by Professor Schuft, whose efforts at reform were somewhat radical.

He made a slit-like opening at the corneo-scleral junction, did a large iridectomy, and then inserted a spoon with which to remove the lens, but this often caused loss of much vitreous. Then in 1864 the President's late father read a paper at the Congress at Heidelberg on the excellent results achieved by himself and Mr. Bowman at Moorfields with linear extraction, and this led to von Graefe introducing the knife, still used and always associated with his name. The operation he instituted had its dangers, and without great skill and care the operator was liable to encroach on the ciliary region, and severe cyclitis and loss of vitreous were not infrequent. Numerous modifications had been made, and the most important were associated with the names of Pagenstecher, who removed the lens with a spoon in its capsule, as also did Macnamara and Andrew of Shrewsbury. Lebrun of Brussels, and Pridgin Teale made a purely corneal section, but anterior synechiæ and astigmatism were frequently produced. Bell Taylor removed a small portion of the periphery of the iris, and left the pupil intact, but the difficulties of the operation were serious drawbacks to its adoption. Förster's artificial ripening and McKeown's irrigation of the anterior chamber were also mentioned. Ophthalmic surgeons were now divided into two great camps; on one side were the adherents of simple extraction, while on the other were those who were loyal to iridectomy. In spite of recent advances finality had probably not yet been reached, but in the hope that our future might be one of scientific progress they should retain an open mind and a well-balanced judgment, keeping steadily in view the final goal, the relief of human suffering.

Interstitial Keratitis in Acquired Syphilis.

Mr. Lawford read notes of 5 cases (4 males and 1 female). In 3 of the cases the evidence of syphilis was indubitable, in the other 2 it was open to question. In the first case the keratitis developed four and a half months after the primary lesion, which was situated on the lower lid of the eye, whose cornea became involved. In the second case an interval of eleven months elapsed between the primary sore on the penis and the delepment of the keratitis. In the other 3 a longer period separated the primary lesion and the corneal affection. Mr. Lawford drew attention to certain features in these and other previously recorded cases wherein they differed from the keratitis of inherited syphilis. In the acquired form the attacks of keratitis seemed to be of shorter duration and less severity, and in most instances only one eye became affected. The prognosis also seemed better, as in the majority of cases complete or almost complete restoration of the transparency of the cornea resulted. He considered that in 3 of his cases there was good reason to believe that the keratitis was a syphilitic affection; in the other 2 he merely noted the occurrence of an interstitial keratitis in patients who had probably had syphilis some years previously.

Mr. Lang said he recorded one such case in the *Transactions* of the Society seven or eight years ago. In a year the cornea cleared. He thought that the application of heat was beneficial and shortened the course of the disease.

Mr. John Griffith asked whether the cases were looked upon as being a secondary or tertiary manifestation.

In reply, Mr. Lawford stated that he considered them both secondary and tertiary.

Papers.

Mr. Doyne read some notes on Recurrent Superficial Necrosis of the Cornea, and also on the subject of Radiant Heat in the Treatment of Eye Diseases.

Card Specimens.

The following card specimens were shown:—Mr. Sydney Stephenson: Congenital Subluxation of the Lens.—Mr. R. E. Bickerton: A peculiar form of Affection of the Choroid.—Mr. R. W. Doyne: Paralysis of the Muscles of both Eyes.—Major M. T. Yarr, R.A.M.C.: Inflammatory Patch in the Retina (? Tuberculous).

A Munificent Gift to Nottingham.—Mr. T. J. Birkin, a Nottinghamshire magistrate, has presented Forest House, a large and handsome residence, standing in its own extensive grounds on the north side of the city, to the Nottingham Children's Hospital. The site includes land sufficient for extension, and for securing the privacy of the property.

HARVEIAN SOCIETY OF LONDON.

Clinical Evening.

H. E. Juler, F.R.C.S., President, in the Chair.

Thursday, October 19th, 1899.

Microphthalmos.

The President exhibited a case of microphthalmos in a child, aged seven years. The right eye was very small and sunken in the orbit. The cornea was clear but only measured six millimetres in diameter; the iris slate coloured, no reticulum visible; pupil very ill-defined. A whitish patch appeared just below and to the outer side of the centre of the iris. No cyst was visible in the immediate surroundings of the small eyeball. The condition must have been congenital, as there was no discharge from the eye at or after birth. No instrument was used in delivery. The contracted condition of the eye was first noticed three days after birth. The eye was quite blind. The left eye was normal. The literature of the subject showed that these contracted eyes were sometimes normal in structure, whilst others were associated with serous cysts in the orbit and eyelids, others again presented abnormalities from imperfect closure of the fœtal fissure. It was proposed to remove the eye on account of the deformity and replace it by an artificial one. Cases were on record in which the use of a glass eye over the living one had set up sympathetic irritation, or even ophthalmitis. In reply to Dr. Felce, the President agreed that evisceration would be better than complete enucleation, and in answer to Dr. Sutherland, said the child presented no other congenital defects.

Arthrodesis of Knee-Joint.

Mr. Raymond Johnson brought forward a case in which he had performed so-called arthrodesis of the knee-joint. The boy, who was 16 years old, had suffered from infantile paralysis in infancy and was left with almost complete paralysis of the muscles moving the right knee, and partial paralysis of the muscles of the leg. The knee-joint was opened and after the removal of a thin slice from the femur and tibia the two bones were pegged together. Bony ankylosis followed and the boy was now able to walk without the use of any apparatus beyond a thick-soled boot. In a considerable number of cases of infantile paralysis this operation had been performed with advantage in the knee and ankle.

Paresis of External Recti.

The President exhibited a case of paresis of both external recti muscles, with retinal hæmorrhages and staggering gait, simulating intracranial disease. The patient was a man, aged 37, who on October 4th was suddenly attacked with diplopia and vertigo. There was no history of syphilis. He had been a hard drinker, and for some time had been treated for kidney disease. On admission to St. Mary's Hospital on October 13th he had weakness of both external recti and consequent convergent strabismus. The eyes could not be turned outwards beyond the middle line, but the other movements were good. On account of the diplopia he could not walk with both eyes open; with one eye closed the gait was less unsteady. The reactions of the pupils were normal. Both optic discs were hyperæmic and slightly blurred in outline, and there were one or two torch-like hæmorrhages in the right retina. The urine contained albumen, specific gravity 1018. On the day before admission a convulsive attack had occurred, attended with loss of consciousness. The tension of the pulse was high and the heart hypertrophied. Rapid improvement occurred in the ocular symptoms, and when exhibited there was only slight weakness of the right external rectus, and no evidences of organic intracranial disease. It was therefore suggested that the ocular paralysis was toxic in origin—either alcoholic or uræmic. Ocular paralysis of alcoholic origin was very rare without signs of multiple neuritis. On the other hand, if due to uræmia, other uræmic manifestations would have been expected. Possibly the condition resulted partly from alcoholism and partly from the chronic nephritis.

Dr. Jaffe thought the symptoms were probably of uræmic origin.

Dr. Cautley asked if there was further evidence of chronic interstitial nephritis in the presence of cardio-vascular changes. He pointed out that albuminuria might occur in heavy beer drinkers, apart from renal changes demonstrable either macroscopically or microscopically. No doubt the explanation put forward was the correct diagnosis of the case.

The case was also discussed by Dr. Harris, Dr. Felce, and Dr. Ewart; and the President replied.

Laparotomy for Uncontrollable Vomiting.

Dr. Ewart and Mr. Jaffrey brought forward a case in which laparotomy was resorted to for the relief of persistent vomiting with exhaustion in a woman, aged 49, in whom a pulsating swelling, supposed to be connected with the stomach, could be felt in the left epigastrium. Mr. Jaffrey found the stomach healthy, though much dilated. The pyloric end was flattened and tightly stretched across the convexity of a fusiform abdominal aneurysm so that no fluid could pass through to the duodenum. An incision between 4 and 5 inches long was made above the umbilicus. The stomach presented in the wound; it was quite healthy, and was lying on the left side of the aneurysm. The flattening was partly due to the weight of the stomach and its contents, and of the colon and omentum. By bringing the stomach to the right of the aneurysm it was seen that the flattening was at once relieved; and as the stomach did not appear to be inclined to fall back into its former position, it was thought unnecessary to fix it in any way. Silkworm-gut sutures and dry cyanide gauze were used. With the exception of some vomiting, due, she said, to the smell of brandy, she recovered quickly, and was now able to take solid food. She still complained of some burning sensation at the epigastrium, and had general hyperæsthesia of the abdomen. The pulsating mass was now less easily felt, no doubt due to the fundus of the stomach being between the aneurysm and the abdominal wall. The stomach in this case had been occluded by its own weight, an unusual and striking instance of the mechanism described in succession by Rokitansky, Glénard, and others, and recently studied by P. A. Albrecht,[1] where obstruction was produced at the jejuno-duodenal junction by the dragging weight of the small intestine. Dr. Ewart's other female patient, aged 59, who died from pernicious anæmia, with exhaustion and persistent vomiting, exhibited the condition described by these observers, which Albrecht believed to be a frequent cause of acute gastric dilatation and of death after severe operations, which might lead to gastric atony partly as a result of the prolonged administration of anæsthetics. The empty and contracted small intestine had dropped entirely into the pelvis, stretching the mesentery and superior mesenteric artery tightly across the third portion of the duodenum, which above the occlusion was inflated and contained fæculent fluid; the stomach in this instance was not dilated, but empty and contracted. The possibility of treating this fatal condition without laparotomy and by such simple methods as posture and manipulation was the practical and important object of this communication. In all cases of persistent vomiting not traceable to some obvious cause, in marasmic and exhausted subjects, the effect of the right lateral posture, of raising the foot of the bed, and of skilled manipulation of the abdomen by the medical attendant should be tried; this might in some cases prove successful, and obviate the necessity for surgical interference.

Dr. Jaffe asked whether the stomach had been washed out before operation was undertaken for the relief of the vomiting.

Dr. Ewart replied in the negative, and said the original diagnosis was carcinoma of the stomach.

Linear Lichen Planus.

Dr. Whitfield showed a case. The patient was a married woman aged 34. She had always enjoyed good health, and had had no illness or accident immediately preceding the appearance of the skin disease. The eruption had commenced a year and a-half before on the skin over the left tibia immediately above the ankle. When shown there was a band of eruption, about 1¼ inch wide, extending from the front of the ankle-joint to the inner condyle of the left femur. At the edges of the band typical lichen planus papules, of about the size of a split hempseed, could be seen, but in the centre they had run together to form a solid, raised ridge. There were no other signs of the disease elsewhere, either on the skin or the mucous membranes. The patient was taking arsenic internally, perchloride of mercury having been tried both internally and locally without any improvement.

[1] *Virchow's Archiv*, Bd clvi, Heft 2, 1899.

Myopathy.

Dr. W. J. Harris showed a man aged 31 who was the subject of extreme myopathy of the facio-scapulo humeral type.

Paralysis of Wrist Extensors and Elbow Flexors.

Dr. Leonard Guthrie showed a man, aged 38, suffering from complete paralysis of the wrist extensors and of the elbow flexors on both sides, with the exception of the long supinators. The affected muscles were much atrophied, and did not react to faradism. The intrinsic muscles of the hands, flexors of the fingers and wrists, and the shoulder muscles were unaffected. Sensation was normal, and there was no pain or tenderness of muscles or nerve trunks. The wrist-drop had occurred two years previously, and both wrists were almost simultaneously affected. Twelve months later the elbow flexors on the left side had been involved, and eighteen months later those on the right side. The case was regarded as one of lead palsy. The patient was a shoemaker. He had never worked with lead nor suffered from colic, and had no definite blue line on the gums. But he had been in the habit of taking 4 or 5 pints of 4d. ale daily, and this beverage was said by some to be productive of lead poisoning, especially in gouty subjects like the patient.

Carcinoma of Testicle.

Mr. Mower White showed the left testicle, which he had about two years ago removed from a patient, aged 37, on the supposition that the globus minor of the epididymis contained a deposit of "tubercle." After removal dissection showed that the nodule, which measured ½ inch by ⅜ inch in diameter, was situated in the body of the testicle immediately in front of the globus minor, and entirely within the tunica albuginea of the gland proper, while the globus minor was to all appearances perfectly normal. And the microscope (specimen exhibited) demonstrated that the growth was a spheroidal-celled carcinoma. The upper end of the testicle contained a calcareous nodule (discovered before removal) as large as a hemp seed, and this was attached to the deep surface of the tunica albuginea. Mr. Mower White further stated that the patient was now in good health, and that he showed no evidence of recurrence in the lumbar glands or elsewhere.

Dr. Cautley referred to a similar instance in a man, aged 28. The case was at first regarded as tuberculous disease of the globus minor of the epididymis, but, on operating, a small tumour was found in the lower end of the testis. This proved to be a columnar-celled carcinoma. In view of the fact that secondary dissemination occurred in the glands about the cœliac axis and in other organs in eight to nine months, he asked what was the variety of carcinoma in the present case, and how the variety would influence the prognosis.

Mr. White replied.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Bennett May, M.B., F.R.C.S., President, in the Chair.

Thursday, October 12th, 1899.

Berger's Amputation.

Dr. Plummer showed a man on whom he had performed this operation. He was seen first in March, after having been under treatment for two months for rheumatism of the right shoulder. There was wasting of the deltoid and partial fixation of the joint, but no appreciable swelling. His father had died of phthisis. There was one very tender spot in front of

the bicipital groove, and tuberculous disease of the head of the bone was diagnosed. He was then sent to see Mr. Barling, who agreed with the diagnosis, and advised trephining if complete rest and counter-irritation gave no relief. At the end of April, as the patient was no better, the joint was explored, and a mass of subperiosteal growth was found enveloping the shaft and head of the bone. An attempt was made to remove this by excision, but the growth was too extensive, and as permission to amputate had not been obtained the wound was closed. The growth was a spindle-celled sarcoma. Three weeks later the limb was removed by Berger's method, as the glenoid cavity was involved. The patient made an uninterrupted recovery.

The Influenza Heart.

Dr. Saundby read a paper on the effects of influenza on the heart. These effects, although very common, had not so far been noticed by English writers upon heart disease. The milder cases presented only alterations in the force frequency or rhythm of the pulse. A weak, irregular, and intermittent pulse might persist for months after an attack of influenza, and be accountable for much of the languor of body and depression of mind so often observed in this connection. In the more severe cases the heart was dilated, and was associated with the signs of cardiac failure. For the treatment of this form Dr. Saundby emphasised the value of a course of Schott treatment, carried out either at Nauheim or at one of the many English watering places, where all the needful arrangements existed.

Surgery of the Kidney.

Dr. Deanesly read a paper on this subject, and advocated the advantage of commencing every operation on one kidney by a preliminary examination of the other kidney through a small abdominal incision.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

R. S. Peart, M.D., in the Chair.

Thursday, October 12th, 1899.

Election of Officers.

The following gentlemen were elected officers for the ensuing year:—*President:* W. Robinson, M.D., F.R.C.S. *Vice-Presidents:* G. Limont, M.B., J. Adamson, M.D., G. H. Hume, M.D., A. E. Morison, M.B. *Honorary Secretaries:* Thomas Beattie, M.D., Albert M. Martin, M.B. *Committee:* G. E. Williamson, Rutherford Morison, R. S. Peart, D. Drummond, James Drummond, James Murphy, G. R. Murray, Thomas Oliver, and Walter Ridley.

Introduction of New President.

Dr. R. S. Peart now vacated the chair, after introducing Dr. W. Robinson, who presided over the first ordinary meeting.

Open-air Treatment of Phthisis.

Dr. G. R. Murray brought forward a man, aged 38, who had suffered from phthisis in its first stage affecting the right apex, and associated with pleuritic effusion for about three months. Tubercle bacilli had been found in the sputum. For fifty-nine days he had spent an average of 7½ hours per day in the hospital garden, situated in the centre of a large town. All other special treatment had been purposely withheld, and improvement was marked by increase in weight and strength, with diminution in the amount of sputum.

Dr. Beattie showed a man, aged 35, who had been treated as a hospital out-patient. He came under observation fourteen months previously with unmistakable signs of excavation at the left apex, and at that time weighed 7st. 7 lbs. He obtained light employment, spending the whole of his time out-of-doors, sleeping with windows wide open, etc. He was gorged with food to the full extent of his circumstances, and in addition had taken creosote regularly. He now weighed 9st. 6½ lbs., an increase of 2 st., and it was impossible on physical examination to recognise him as a case of phthisis.

Quotidian Ague occurring on Tyneside.

Dr. Beattie showed an Irish lad, aged 22, from Belfast. For the past five years he had resided and worked at Hebburn-on-Tyne as a driller. He had always been employed on new ships, had never partaken of stale water from ships' tanks, nor had he been bitten by mosquitos or other insects. He had never been abroad, the nearest traceable contagion being a case of ague in man living in the same street. The attacks were severe, typical and quotidian, lasting about five hours, and anticipating each day by one hour. All other possible cause of rigor had been excluded, and the plasmodium malariæ demonstrated in the blood, slides of which were exhibited. The attacks had readily reacted to quinine. The case was brought forward to demonstrate the occurrence of ague in a district considered to be ague-free. Mosquitos had been seen on Tyneside during the past summer, and practitioners might therefore be called upon to deal with similar cases.

Dr. George Murray cited the case of a boy whom he had seen a few days previously with mild tertian ague, and in whose blood he had found the plasmodium. This boy had never been abroad, but had been in the habit of going aboard ships.

Pancreatic Cyst.

Dr. Hume showed two cases after treatment for pancreatic cyst. (1) A woman, aged 42, who had suffered for two years from pain in the gastric region, with occasional vomiting and purging. The attacks increased in severity, the last two being accompanied by jaundice, with swelling in the epigastrium. Malignant disease, gall stones, and pancreatic cyst had been considered in the differential diagnosisis, and it was only under the anæsthetic that the case became clear. The cyst was tapped, stitched to the abdominal incision, incised and drained, being kept empty by regular suction; the fluid withdrawn was digested starch and proteid. (2) A woman, aged 28, having on admission definite epigastric tumour, which did not move on respiration. In this case there was also history of attacks of gastric pain, with occasional vomiting. This case was also incised, and drained anteriorly. Dr. Hume did not think posterior drainage necessary. He alluded to the statement of Mr. Jordan Lloyd that some of these so-called pancreatic cysts were dropsies of the lesser peritoneum, but in both of these cases the fluid withdrawn was digested starch and proteid.

Pylorectomy.

Dr. Hume showed a successful case. The patient was a man with twelve months' history of gastric trouble and loss of 1½ stone in weight; had only vomited once. On palpation, a lump, the size of a walnut, in the epigastrium was freely movable in all directions. The growth, together with pylorus, had been excised. Recovery was uninterrupted, and the patient was now taking ordinary food.

Choledochotomy.

Dr. Hume showed a short stout woman with jaundice, on whom he had performed choledochotomy. The operation was done by transverse incision. A stone was found in the gall bladder, and another larger in size was impacted in the common duct. Both were removed by incision, which in the case of the common duct was not sutured; drainage by large tube packed round with gauze; recovery uneventful.

Acute Retrobulbar Neuritis.

Dr. G. V. Miller read notes of four cases of acute retrobulbar neuritis, apparently all caused by rheumatism. He reviewed the etiology of this condition, and, detailing the symptoms, differentiated between it and papillitis. Under antirheumatic remedies the cases quoted had recovered.

Functional Heart Disease with Cyanosis.

Dr. Drummond exhibited a water-colour drawing of a patient the subject of a functional nervous derangement of the heart and circulation.

Tricuspid Stenosis.

Dr. Beattie showed three specimens. The three hearts had been obtained from necropsies within the last twelve months, and illustrated the fact that right-sided endocarditis was more frequent than was generally supposed. As was usually the case, the tricuspid stenosis was associated with a similar lesion in the left heart, which considerably added to the difficulty of diagnosing the condition during life.

HÆMORRHAGE INTO CEREBRAL VENTRICLE.

Dr. BEATTIE showed a brain showing recent hæmorrhage into ventricle. The specimen was obtained from a case of alleged injury, in which the point to determine had been whether the coma was due to injury or the injury consequent on unconsciousness. During life the case had exhibited a fan-shaped hæmorrhage beneath the ocular conjunctiva on its outer side, and a Pott's fracture. Legal proceedings were probable on the allegation of injury, but the necropsy had proved the existence of chronic nephritis and cerebral hæmorrhage, involving the internal capsule and lateral ventricle, to have induced the unconsciousness which had resulted in the fall causing the above injuries. There was no fracture of the skull.

LIVERPOOL MEDICAL INSTITUTION.

W. MACFIE CAMPBELL, M.D., President, in the Chair.

Thursday, October 19th, 1899.

SACRO-ILIAC JOINT DISEASE.

MR. R. CRAIG DUN read notes of a case of acute sacro-iliac joint disease, with rupture of an abscess into the ureter or bladder. A month after the onset of acute joint symptoms pus suddenly appeared in large quantities in the urine, followed immediately by the abatement of symptoms. Pus continued to appear in the urine for two months, diminishing steadily; the joint symptoms also gradually disappeared. Eight months after the onset of disease the boy was in good health with normal urine.

The PRESIDENT doubted the explanation of the source of the pus. From the consideration of the temperature chart, where hyperpyrexia coincided with a free discharge of pus, it was probable that the fever was not due to damming up of the pus and its relief by an opening into the ureter.

Mr. F. T. PAUL thought it more probable that the abscess had opened into the bladder than into the ureter. He had met with such a condition in hip disease and in necrosis of the sacrum.

STAPHYLOCOCCIC INFECTION.

Dr. ABRAM read notes of a fatal case of acute staphylococcic infection. Apart from the rarity of the condition he drew attention to the following points: In spite of the history of symptoms pointing to gastric ulcer of eight years' duration, the stomach on *post-mortem* examination showed no signs of ulcer; further, after the initial collapse the temperature rose to 105.8° F., and spasmodic movements limited to the left side of the body were present, yet at the necropsy brain and spinal cord were healthy. The question of the diagnosis of gastric ulcer was raised, for in this case the initial collapse was attributed to perforation of an ulcer, and surgical interference contemplated but for the obviously impending fatal issue.

Dr. CARTER was of opinion that the great value of such a communication as that just made was that it must beget caution in the minds of all who heard it and repress dogmatism on doubtful matters. It was more important for the medical profession that incorrect diagnoses should be honestly reported than the brilliant and occasional successes of which one perhaps heard a little too much. On the question of the mortality from gastric ulcer he was inclined to believe, from the great number of recoveries in cases, about the diagnosis of which there seemed to be no reasonable doubt, owing to the presence of hæmatemesis in addition to all the other signs and symptoms of the disease, that it must be very low indeed.

Dr. T. R. BRADSHAW said that symptoms leading to the diagnosis of gastric ulcer were far more commonly met with in women than in men, but *post-mortem* records showed that gastric ulcer was rather more common in men. His own experience led him to believe that pyloric obstruction, and other late effects of ulceration, were also more common in men. He inferred that many cases diagnosed as ulcer were not cases of that disease.

Drs. CATON, BARR, LOEWENTHAL, HOLLAND and BUCHANAN spoke.

LIPLOMA OF PROLABIUM.

Mr. RUSHTON PARKER exhibited a baby from whom he had removed a large globular lipoma from the prolabium. The child had also double hare-lip.

Mr. PAUL thought the case quite distinct from the usual forms of malformation of the lip and palate. In this case the arrest of development affected the naso-frontal process alone. The fissure was median, and the end of the nasal septum bifid, the intermaxillary bone absent, but replaced by a globular dermoid resembling the dermoids met with in the median line of the palate and pharynx. He considered it a very rare and interesting deformity.

PAPER.

Dr. CATON read a short paper on a Visit to Nordrach.

The PRESIDENT, Professor BOYCE, Drs. CARTER, GRÜNBAUM, BUCHANAN, MARSHALL, BRADSHAW, and BARR spoke.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Professor HENRY E. CLARK, President, in the Chair.

Friday, October 20th, 1899.

FERTILISATION AND SEGMENTATION IN THE ECHINUS.

DRS. T. H. BRYCE and J. H. TEACHER gave a lantern demonstration of microphotographs illustrating the processes of fertilisation and segmentation in the echinus. The preparations had been made from specimens and cultures procured at the Marine Zoological Station at Millport, and the photographs were very successful. The first set of slides was selected to show the progress of segmentation, and was from lower power preparations. The second set was shown under a much higher power, and the photographs were actually from sections of the ova, and illustrated practically all the different stages of fertilisation. In addition to the lantern demonstration a few of the specimens were shown under the microscope.

GASTRIC SURGERY.

Dr. J. LINDSAY STEVEN showed pathological specimens from two cases in which surgical operations had been performed by Mr. Luke on the stomach. The first patient was a woman aged 54, who had had gastric symptoms for a year, and had a large and easily-felt pyloric tumour. The patient was clearly the subject of gastric cancer, and as she was rapidly sinking, owing to the severity of the vomiting, surgical assistance was sought. The disease was too extensive for excision of the mass, but gastro-enterostomy was successfully performed with immediate relief of the vomiting. The patient died three weeks later. The second patient was a man, aged 35, who for some months had intermittent and severe attacks of hæmatemesis. He was supposed to have gastric ulceration, perhaps of malignant nature, and had suffered so severely that surgical interference had been agreed to. Suddenly another severe hæmatemesis occurred, and, operation being performed as soon as possible, a simple ulcer was found near the pylorus, and adherent to the liver. This was scraped, and the stomach wall stitched together at the part, but the patient sank soon after the operation. Mr. LUKE explained the surgical procedure and the difficulties he had met with in the operations.

PURULENT PERICARDITIS.

Dr. J. LINDSAY STEVEN showed the heart of a little child, 2 years and 3 months old, who had had purulent pericarditis. The child was in the Sick Children's Hospital, and suffering undoubtedly from broncho-pneumonia, when pericarditis supervened. The only clinical evidence of the pericarditis was the percussion dulness, and there was no urgent respiratory or other symptoms. The child died, and *post mortem* the pericarditis was found to be purulent. In connection with this case Dr. Steven narrated the facts of another case of purulent pericarditis, which he had seen clinically. This patient was a labouring man, the subject of bronchitis, and after admission to the Royal Infirmary was found to have pericarditis with increasing effusion. In this case the dyspnœa was very urgent and the pulse irregular. Paracentesis was performed, and 20 ounces of pus removed, but the patient died soon after.

The PRESIDENT and Dr. W. E. DUNN spoke on these cases, but expressed their belief that surgery might tackle such cases, just as had been done with empyema.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting on October 13th, Dr. H. N. HARRINGTON, President, who was in the chair, gave his inaugural address entitled Notes on the Association of Medicine and Art. He first gave some particulars about

artists who had been members of the profession, or who had been intended and partly trained for it. Theodore Van Kessell, the great landscape painter Ruysdael, Sir Joshua Reynolds, Peter de Wint, Edmund Dorrell (an early member of the Royal Water Colour Society), our great poetical artist George Mason, the painter of "The Harvest Moon," and F. D. Millet, the American *genre* painter. He then drew attention to the humble connection with medicine of John Crome of Norwich and Paul Chalmers the Scotch painter; next speaking at some length of the brilliant etcher Sir Seymour Haden, and the influence of his scientific training upon his work. Amongst other medical amateur artists he referred to the Munro family, Sir Charles Bell, Sir Rutherford Alcock (an able sculptor), Sir Prescott Hewett, J. A. Schetray, Dr. A. Evershed, Dr. Lumsden Propert, and Sir Henry Thompson, mentioning the great influence upon art criticism of the Italian surgeon, G. Morelli, and speaking most highly of the extensive knowledge of anatomy and physiology of the great painter, Leonardo da Vinci, and how he to some degree anticipated Harvey's great discovery of the circulation of the blood. Dr. Harrington expressed the opinion that a knowledge of drawing, and especially the practice of drawing from the living model, would be of direct service to the medical student in his professional work, for it would teach him not only to see, but how to observe.—Remarks were made by Drs. Marsden, Owen Morris, Butcher, Herbert Dixon, and Wilkinson, a hearty vote of thanks being given to the President for his paper.

Folkestone Medical Society.—The first meeting of the Society for the session 1899-1900 was held in the Victoria Hospital on October 6th, Dr. Tyson (President) in the chair. The President announced that all the medical men sent in returns of the number of midwifery cases they attended in 1898, the total amounting to 544. The births in 1898 being 662, it was calculated that 118 cases were attended by so-called midwives, or, speaking roughly, rather more than a sixth of the total. He read notes of a case of a man who suffered from ankylostoma duodenale. Microscopical specimens of the worm, male and female, together with the ova, were exhibited.

West Penrith Medical Society.—At a meeting on October 11th, Dr. J. B. Montgomery (President) in the chair, two new members were elected.—An offer of Mr. W. E. Bailey, of Lynwood, Paul, to place his *x*-ray apparatus at the disposal of the members, was accepted with thanks.—A letter from Dr. Crawshaw, on the subjsct of Medical Organisation, was ordered to lie on the table.—Dr. H. M. Montgomery read a paper entitled, Rickets and Rheumatoid Arthritis: Is there an Analogy between their Signs and Symptoms? It was pointed out that anæmia and perspiration were marked symptoms in both disorders, and the glossy skin and brown patches in rheumatoid arthritis were considered in connection with the eczema of rickets. Muscular cramps, which might occur in rickets, were among the earliest symptoms of rheumatoid arthritis, in which pain in the sole, flatfoot, and burning in the palm of the hand, were often marked features. In both diseases wasting of the muscles occurs. The sciatica and lumbago of rheumatoid arthritis were compared with the tenderness and sore patches in rickets. In only 3 of 24 cases of rheumatoid arthritis personally observed was a history of acute rheumatism obtainable.—Mr. A. T. Jago read notes on a case of Non-traumatic Meningitis in a lad, aged 16 years. For the first five days of the illness headache was the only symptom. On the sixth and seventh days there was vomiting, with irritability and sullenness of manner. On the tenth day (when first seen) the temperature was 102°, the pulse about 100. On the eleventh day the patient was semi-unconscious and delirious. On the 12th there were twitchings on both sides of the body and loss of bladder control, and on the next day loss of rectal control and "picking of the bedclothes" were added symptoms. The head was now retracted, the pupils equal and rather large, reacting to light. The discs were blurred. Plantar and knee reflexes were abolished. Temperature 102°. Convulsions on both sides of the body increased, and the patient died on the sixteenth day of the illness with a temperature near the end of 105°, and an uncountable pulse. No squint or ptosis occurred throughout the illness. The drum of the left ear was observed to be almost destroyed. There had been discharge from the ears in infancy, but none since. A *post-mortem* examination showed engorged vessels beneath the skull-cap, fluid at the base between the pia mater and arachnoid, and distended lateral ventricles. There was no necrosis and no definite appearance of tuberculosis.—Dr. E. C. Edwards contributed notes of a case of Chronic Severe Neuralgia of Intercostal Nerves due to an implication in the cicatrix of a large nævus over the right infrascapular region. This was successfully treated by Mr. Victor Horsley by laminectomy and division of the corresponding spinal posterior nerve roots, the operation producing a half zone of anæsthesia in the region of the cicatrix, and transforming a much-suffering invalid into a practically healthy and happy woman.

Glasgow Southern Medical Society.—The annual dinner of this Society was held on October 19th in the St. Enoch Station Hotel, Glasgow, the President of the Society, Dr. Hugh Kelly, in the chair. There were forty-seven gentlemen present, and Professor William Macewen, F.R.S., the Honorary President of the Society, was the guest of the evening. Among others present were Sir William T. Gairdner and Professors McCall Anderson and Glaister. After the loyal and patriotic toasts had been duly honoured, Dr. Sloan proposed the toast of "The Honorary President," and in doing so referred to his acute powers of observation and to his distinguished career as a surgeon. In responding to the toast, Dr. Macewen thanked the Society for electing him their Honorary President, a position which was the most honourable in their power to bestow, and which came to him quite unexpectedly. He referred to his long connection with the Society, and maintained that in his management it was an example that other medical societies in Glasgow might follow with advantage. Other toasts followed, and speeches were made by Sir Wm. T. Gairdner, Professor Glaister, Drs. H. E. Clark, Barr, Hamilton, Grant Andrew, and others.

Wigan Medical Society.—At a meeting held on October 18th, Mr. Luther Cooke (President), who was in the chair, delivered an address on Medical Politics.—A paper on Dermato-therapeutics was read by Dr. F. H. Barendt. A discussion followed.

REVIEWS.

Scientific Memoirs by Medical Officers of the Army of India. Edited by Surgeon-General R. Harvey, M.D., C.B., LL.D. Calcutta: Government Printing Office. 1898. (Demy 4to, pp. 96. 2s. 8d.)

Part XI of these *Scientific Memoirs*, edited by the Director-General of the Indian Medical Service, contains three valuable papers. The first is on the Physiological Action of Cobra Venom, by Brigade-Surgeon-Lieutenant-Colonel D. D. Cunningham, to which is appended a note by the late Professor Kanthack. The second is on Three New Genera of Plants from the Kachin Hills, by Major D. Prain. The third is a Summary of the Deep Sea Zoological Work of the Royal Indian Marine Survey Ship *Investigator* from 1884 to 1897, by Major A. W. Alcock.

Dr. Cunningham's paper is devoted to experimental evidence demonstrating first that cobra venom does produce certain important changes in the blood of susceptible animals with which it comes into contact, either within or without the animal organism; secondly, that the power of the venom to induce such changes in the blood of different kinds of animals bears a direct relation to the degree to which the latter are susceptible to intoxication; thirdly, that the diminution and ultimate abolition of lethal property, attending the prolonged exposure of venom to the influence of high temperatures, runs parallel with diminution and abolition of capacity to give rise to hæmatic changes.

Professor Kanthack's note is an abstract of experiments executed under his direction by Messrs. J. W. Stephens and W. Myers, both of Cambridge. These experiments corrobo-

rate the results obtained by Dr. Cunningham. They show that when cobra poison is added to shed blood in a test tube its action is strongly hæmolytic, and that there is delay or complete absence of coagulation. Further, the Cambridge experiments show (*a*) that the hæmolytic action is neutralised by antivenomous serum, and the action of the latter is specific; (*b*) that for certain doses (0.1 mg.) the measure of this neutralisation *in vitro* is a measure of the neutralisation *in corpore* for guinea-pigs; and (*c*) that the action is chemical, and not cellular or vital. Dr. Cunningham concludes his paper by stating that "the evidence, as a whole, goes to show that cobrine intoxication, and probably colubrine intoxication generally, is essentially determined by the occurrence of primary hematic changes, and in this differs from acute viperine intoxication in which the symptoms unequivocally indicate the presence of primary acute nervous irritation and exhaustion."

NOTES ON MALARIA IN CONNECTION WITH METEOROLOGICAL CONDITIONS AT SIERRA LEONE. By Major E. M. WILSON, C.M.G., D.S.O., Royal Army Medical Corps, lately Senior Medical Officer at Sierra Leone. Third year. London: H. K. Lewis. 1899. (Demy 8vo, pp. 15. 1s.)

THIS very suggestive monograph is by an officer whose experience on the West Coast of Africa commands attention. Major WILSON states his facts clearly and yet undogmatically. His aim is to ascertain what effects, if any, are exerted on the malarial fevers of that region by climatic meteorological conditions. He clearly shows that such conditions affect black troops even more than white, although the latter suffer more from fever—perhaps much more proportionally—than the blacks. The West Indian Regiments always suffer much more from fever during the first year of service on the coast than in the second and third, an observation which suggests the advisability of keeping them a fourth year there. The periods of greatest prevalence of fever are the rainy months—July and August, which are also the coolest months, and agree better with the whites than the blacks. The latter cannot stand cold, but are best in the hot, dry months of December to March.

What above all things knocks over the white man is humidity; he can stand rain and dry heats but not a muggy atmosphere. This is probably a universal tropical experience; the majority of Europeans can stand the dry, hot winds of Upper India far better than the relatively much cooler but humid and muggy atmosphere of Calcutta or Bombay.

Major Wilson offers several practical suggestions as to the health of both white and black troops on the West African Coast which we commend to the attention of the military authorities both at home and in that region.

A SHORT HISTORY OF THE PROGRESS OF SCIENTIFIC CHEMISTRY IN OUR OWN TIMES. By Professor W. A. TILDEN, D.Sc., F.R.S. London: Longmans, Green, and Co. 1899. (Crown 8vo. Pp. 276. 5s.)

THE rapid development of scientific chemistry during the reign of Queen Victoria has produced more than one revolution in the theoretical groundwork of the science. It is sometimes said that modern chemists devote themselves entirely to the accumulation of facts, and that since the time of Liebig no important advance has been made in the theoretical explanation of chemical phenomena. We recommend anyone who is inclined to hold this view to look through the pages of Professor TILDEN'S admirable little book. It is the outcome of a course of lectures to working men, and is written in a style so clear and simple that, though it deals with many abstruse problems, anyone can follow the arguments without possessing more than a slight previous acquaintance with the subject.

Professor Tilden has himself been an active worker during the latter half of the present reign, and this makes his opinion all the more valuable in the discussion of disputed points as to the historical sequence of chemical theories and as to claims of priority in discovery.

The claims of Englishmen to recognition among the pioneers in chemistry are duly recognised. For instance, we find that full justice is done to Newlands and Odling in the account of the development of the periodic law, and to Waterston in connection with the kinetic theory of gases.

One might suppose that the doctrine of ionisation and the modern stereochemical theories were subjects that could not be explained in a popular way, yet Professor Tilden has not only got over this difficulty, but also leads the reader by easy stages from the theory of chemical types to graphic formulæ and the synthesis of organic compounds.

Professor Tilden believes that there is a limit beyond which man will never be able to pass in attempting to imitate vital processes in the laboratory, and he considers it improbable that any proteid will ever be synthetically prepared. When, however, we consider the great advance made in chemistry during the last sixty years, it is surely rash to predict that any definite substance will defy all future attempts.

Professor Tilden also endorses Dr. Japp's curious statement that no optically-active substance has been prepared by synthesis in a chemical laboratory without the aid of vital forces. In attempting to reconcile Pasteur's synthesis of tartaric acid with this statement, Dr. Japp explains that the hand of the chemist is controlled by "vital force" when he selects crystals of tartrate from crystallised sodium ammonium racemate. Of course, nearly every chemical operation is, on this view, more or less controlled by human "vital force," but the argument is also rendered futile by Dr. Japp's own suggestions in accordance with which a blast of wind might by chance perform the separation of the crystals without employing any living agency.

MANUAL OF HUMAN PHYSIOLOGY. By LEONARD HILL, M.B., Lecturer on Physiology, London Hospital. London: Edward Arnold. 1899. (Pp. 484, 173 illustrations. 6s.)

THIS little book is intended to meet the needs of schoolteachers and candidates for such examinations as those at South Kensington, but medical students also may find it useful as an introductory textbook.

There has been rather an abundant crop of such manuals during the last year or two, and we regard the present volume as the best for its purpose. Mr. HILL has the gift of happy expressions which fix themselves in the memory, and of putting things so clearly and so forcibly that even the non-scientific mind can grasp their meaning. The greater number of those who will read this book will never have been inside a physiological laboratory, and are not very likely ever to go there. Mr. Hill shows that it is still possible to do a good deal of real practical physiology with the common things which are around one, or are easily procurable for a few pence at ordinary shops.

In such a book the illustrations, to be really helpful, should be the best procurable; our only point of criticism against Mr. Hill's production is the entirely second-rate character of the figures. We hope that author and publisher will put their heads together to rectify this blot in the next edition.

TEXTBOOK OF THE EMBRYOLOGY OF INVERTEBRATES. By Dr. E. KORSCHELT and Dr. K. HEIDER. Translated by M. BERNARD. Edited by M. F. WOODWARD. Vol. II. London: Swan Sonnenschein and Co. 1899. (Demy 8vo, pp. 392. 12s.)

SINCE the first section of this work appeared in its English dress, a change of translators has taken place, and, as Mrs. BERNARD and Mr. WOODWARD only undertook the task about a year ago, it must be conceded that they have lost no time in giving the present instalment to the British public. In order to equalise the size of the volumes they have made a slight rearrangement of the subject matter, and placed the parts treating of the phoronidea, bryozoa, and brachiopoda before the crustacea, instead of in relation to the mollusca, which are to be dealt with in Part III. This change can cause no inconvenience, and is, on the whole, an improvement.

The proper rendering of the word "Anlage" has evidently caused them much searching of heart. Various terms, such as "blast," "fundament," "proton," and "primordium," have all been suggested for this purpose, whilst some have even tried to naturalise the alien term "Anlage" itself. None of these, however, has met with general acceptance. There can

be no doubt that the word "rudiment," if it had not been systematically misused by certain eminent zoologists, would be the proper one, and the writers have decided to adopt it in its original sense. "Why," they pertinently ask, "because Darwin unfortunately misapplied the word 'rudimentary,' should we.....ever after refuse to use the word in its common sense?" This appears to us to be the only sensible and practical view of the case, and we hope that teachers of biology will take the trouble to explain to their students the proper meaning of "rudiment," and to distinguish it carefully from "vestige," "vestigial," and correlated words.

The work of Korschelt and Heider is so well known that we need add nothing to the praises which it has already received from numerous quarters. We should like, however, to point out to the busy practitioner who still retains an interest in zoology, but has not time to follow out all the details of individual development, that the sections headed "General Considerations" give him a very readable and concise summary of recent researches, and their bearing upon the problems of animal relationships; they are the cream of the work. The translators have accomplished their task in a highly creditable manner, and we would especially commend Mr. Woodward's editorial footnotes, which show how thoroughly he has made himself acquainted with the recent literature of the subject; they are a distinct addition to the value of the book.

A Class Book of Elementary Practical Physiology. By de Burgh Birch, M.D., Professor of Physiology in the Yorkshire College of the Victoria University. London: J. and A. Churchill. 1899. (Pp. 273, 62 figures. 6s. 6d.)

The aim of this little book is praiseworthy, for it seeks to include in one volume the three principal branches of practical physiology, histological, chemical, and experimental. Professor Birch is well known to be a teacher fertile in methods, and other teachers will no doubt benefit by numerous hints respecting practical work which they will find here.

The work is marred by an extraordinarily large number of mistakes and misprints, which no doubt will be remedied in a future edition. Another fault, which might be amended in a future edition, consists in the style in which the book is written. Notebook English and abbreviations are always to be avoided in any book intended for students. They may suit the teacher's own class, who have got used to his pet abbreviations, but to others they are often practically unintelligible.

Contributions to Orthopædic Surgery. By A. Sydney Roberts, M.D., late Surgeon to the Philadelphia Hospital, etc. With a Brief Biographical Sketch by J. K. Young, M.D., Professor of Orthopædic Surgery, Philadelphia Polyclinic, etc. Philadelphia, 1898. (Demy 8vo, pp. 298, 78 illustrations.)

This work, which represents all the collected writings of the late Dr. Sydney Roberts, has been edited by Dr. James K. Young, a former pupil and friend, and now successor, as a tribute to the memory of his teacher and master. In his introduction he comments upon the rarity with which memorials of this kind are raised to those who have attained eminence in surgery and medicine. From the brief biographical sketch of Dr. Roberts it is easy to gather that he was an enthusiast in the cause of orthopædic surgery, and a man of full-hearted sympathies. In the volume are found reprints of articles on club-foot, Pott's disease, the spinal arthropathies, flat foot, chronic osteitis of the knee-joint, deformity of the forearm and hands, and clinical lectures on knock-knee and bow-legs. These papers were mostly written between the years 1884 and 1888, before their author became closely engaged in practice, and bear the impress of an original mind, and are the work of a master of the English language. The paper on spinal arthropathies, with clinical reports of six cases of Charcot's joint disease, will be regarded as a classic for a long time to come. It is much to be regretted that a man so brilliant in his sphere should have been cut off at such an early age as 41, just when the fruits of his early labour lay almost within his grasp.

A Code of Rules for the Prevention of Infection and Contagious Diseases in Schools. Issued by the Medical Officers of Schools' Association. Fourth edition. London: J. and A. Churchill. 1899. (Demy 8vo., pp. 42. 1s.)

Fourteen years have elapsed since the Medical Officers of Schools' Association issued its *Code*, the authority of which is now recognised throughout the length and breadth of the land. The new edition bears evidence on almost every page of careful revision, and it may safely be accepted by the profession as an authoritative statement of the most recent views on the subjects of which it treats. The arrangement is excellent, whilst the abundant cross headings make a reference to its pages as easy as possible. The appendices, of which there are three, contain forms of certificates for school purposes, a summary of the Infectious Diseases Act, 1889, and some most valuable suggestions on disinfection.

Handbuch der Anatomie und vergleichenden Anatomie des Central-Nerven-Systems des Säugetiere. [Handbook of the Anatomy and Comparative Anatomy of the Central Nervous System of Mammals.] Von Dr. Edw. Flatau und Dr. L. Jacobsohn. I. Makroskopischer-Teil. Berlin: S. Krager; and London: Williams and Norgate. 1898. (Roy. 8vo, pp. 594, 138 illustrations. 22s.)

The appearance of this book is another indication of the growing interest and importance of the study of the nervous system, and is a monument to the labours of the two authors who had previously issued an important *Atlas of the Central Nervous System of Man*. The present work is restricted to the naked-eye anatomy of the encephalon as a whole in various classes of mammals, and deals also in a comprehensive way with the superficial and comparative anatomy of the cerebral convolutions. The types investigated and described include the higher anthropoid apes (chimpanzee and ourang-outang) and the lower apes (macacus, cebus, hapale, and the lemurs), the bats, carnivora (including the seals), insectivora, rodents, ungulates, cetacea and sirenia, the edentates, and the lower mammals (marsupials and monotremes).

Much of the work hitherto done on isolated groups or species of animals has been brought together from original memoirs, which are scattered throughout medical literature, and in this way a most valuable service has been done. When we remember that the researches of Bischoff and of Broca, of Meynert and of Flower, of Benedikt and of Cunningham, of Turner and of Eberstaller, as well as the writings of others too numerous to mention have been all laid under contribution, and that the authors have succeeding in presenting not only a valuable digest of the facts and figures from these and other sources, but have enriched the text and illustrations with abundant material of their own, it will be seen that the value of the work is greatly enhanced. Indeed, this is at present the only work which treats at all adequately, and with sufficient accuracy and comprehensiveness, the subject of cerebral morphology. Although a compendium, every chapter shows the stamp of personal observation.

The illustrations are in nearly every case original, and of high excellence, and the descriptions given in the text are very full and complete. The portion devoted to the primates (apes and monkeys) alone occupies 200 pages with 32 illustrations in the text, and 6 exquisite photographic plates. This alone forms a piece of work which must be sufficient to establish the reputation of the authors.

The drawings given of the cerebral hemispheres show in nearly every instance the various aspects (external and mesial, and sometimes basal) of the hemisphere. In the majority of instances the outlines of the cerebral hemispheres and the fissures, the cerebellum and bulb, are depicted also in the drawings of the skull, so that the position of the encephalon as it would appear *in situ* is rendered clear. This is a feature of distinct value for the relations which it teaches as well as for the landmarks it affords for experimental investigation.

Another feature of importance is the uniformity of nomenclature which prevails throughout the work. The terms are tabulated at the commencement of the work, and their uniform application thenceforth for similar parts of the encephalon rigidly observed. Clearness of description and ease of

recognition is thus achieved by simple means, and the differences of description of different authors harmonised to some extent.

In the portions descriptive of the cerebral convolutions of the higher and lower apes, a very praiseworthy attempt is made to ascertain and to indicate homologous sulci and fissures. We find here the most extensive series of weights and measurements of the various parts of the encephalon known, and they are invaluable for reference. A bibliography of over 250 references completes the work. To the neurologist and comparative anatomist it will be invaluable both for study and reference. In nearly every case the Latin names are used throughout for the sulci and fissures.

Much of the information gathered into tables is of great value, and must have involved a large amount of labour.

Etude sur la Localisation des Corps Étrangers au moyen des Rayons Roentgen, contenant l'Exposé d'une Méthode Nouvelle [A Study upon the Localisation of Foreign Bodies by means of Roentgen Rays, containing a Description of a New Method]. Par le Dr. Adrien Sechehaye. Bale et Genève: Georg et Cie. 1899. (Royal 8vo, pp. 80. Fr. 4).

This book of eighty pages will be of interest to all who are practically engaged in surgical *x*-ray work, especially to military and naval surgeons who have charge of the Roentgen departments. It contains a short account of the various methods hitherto devised to localise foreign bodies by means of Roentgen rays, and concludes with a detailed description of a method which the author considers new. The author gives a list in chronological order of sixty-four references, which show well the wide interest Professor Roentgen's discovery has created all the world over.

First, radioscopic methods are described, the fluorescent screen being employed; then follow radiographic methods where photographic plates are required. Stereoscopic skiagraphy is also dealt with; diagrams throughout the text illustrate the descriptions of the more important methods of localisation. In many cases the description is inadequate because too short, and the summary is crowded into 21 pages.

Dr. Sechehaye devotes 44 pages to a detailed and fully illustrated description of his "new" method, the essential points of which are taken from earlier and, on the whole, much simpler methods. He gives various formulæ for calculating the depth of the foreign body, for estimating its size, etc. He describes also a graphic method for which he uses lines on a card which may be rendered aseptic, and can be applied to the patient's skin to indicate the direction in which the foreign body lies. Detailed notes are given of six cases in which this method has been successfully applied, and also of some experimental tests on cadavera.

Five skiagraphic illustrations are reproduced at the end of the book.

NOTES ON BOOKS.

Mr. Dudley Wright, in a pamphlet on *The Treatment of Hæmorrhoids and Rectal Prolapse by means of Interstitial Injections* (London; Henry J. Glaisher. 1s.), advocates the treatment of hæmorrhoids by interstitial injections of carbolic acid, and states that he has obtained much success in his own practice from the application to all forms of internal piles of the method devised by Dr. Hoyt of New York. As injection of carbolic acid and other agents has been frequently tried in this and other countries, and as Dr. Hoyt's special method has already been employed for more than twenty-five years, very strong and authoritative advocacy is needed to overcome the almost universal opinion of modern surgeons in favour of the treatment of both hæmorrhoids and prolapse by more heroic means. The milder method, however, may be indicated in certain cases, and the favourable results of Mr. Wright's experience may lead to its further trial on nervous subjects and those who cannot tolerate without risk a general anæsthetic.

As the flora of a district is largely dependent upon its geological formation, Kent, with its interesting geological character, is also a county the flora of which is well worth the careful study which Messrs. F. J. Hanbury, F.L.S., and E. S Marshall, M.A., F.L.S., have given to it in their *Flora of Kent* (London: F. J. Hanbury. 1899. Cr. 8vo, pp. 444, 2 maps. 12s. 6d.). The isolated and scattered records of plants in Kent from the very earliest publications, such as that of William Turner in 1548 down to those of the most recent observers, have been carefully collected in this volume, which is a welcome addition to the county floras. The importance of climate and soil upon the character of the vegetation is amply appreciated by the authors, who have given in the introduction an admirable account of the topography, geology, and meteorology of the county, with a very useful geological map. The authors have adopted throughout the most recent nomenclature, but the synonyms are given both in the text and in the index, so that those who are more familiar with the older nomenclature will have no difficulty in finding references to any plant. The records for the county have been carefully and critically compiled, as is testified by the long list of well-known herbaria which the authors have examined, so as to confirm the records wherever possible. For recording purposes they have found it necessary to divide the county into ten subdivisions. Altogether, this is an excellent example of what a county flora should be.

A second edition of *Constipation and Its Modern Treatment* by George Herschell, M.D.Lond. (London: Henry J. Glaisher. 1899. Crown 8vo, pp. 91. 2s. 6d.), has appeared. The text of the former edition has been carefully revised and a few slight additions thereto have been made. As the author observes, "the book does not profess to be an exhaustive treatise upon the subject of constipation, but merely to lay stress upon certain methods of diagnosis and treatment." The remarks published in the British Medical Journal of June 10th last, page 1399, respecting the first edition of the work sufficiently described its purpose and plan. They need be supplemented now only by the further observation that this second edition is a thoroughly practical treatise, no less than three-fourths of its contents being devoted to the subject of treatment, and that the suggestions under this head seem reliable and are described with ample detail. The addition of an index and of a strong cloth binding has enhanced the value of the book.

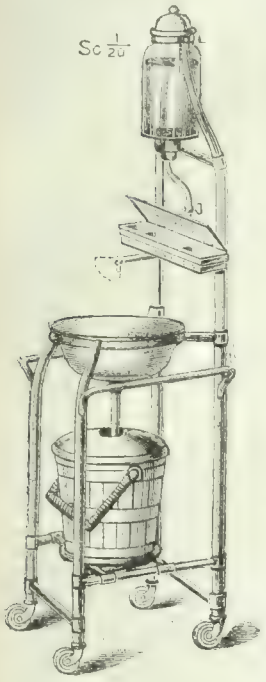
Sir Henry W. Acland, Bart., has issued in book form the address on Medical Missions in their Relation to Oxford, which he delivered before the Oxford University Junior Scientific Club. A second edition, indeed, has been published, and to it is appended an account of the Institute of Scientific Research for India, recently founded in Bombay by Mr. Jamsetji M. Tata. (*Medical Missions, etc.* By Sir H. W. Acland. London and Oxford: Henry Frowde, 1899. 1s. net.) The address, which is a noble vindication of the calling of medical missionaries and an incitement to join their ranks, had its origin in a characteristic letter addressed by Sir Grainger Stewart to Sir H. W. Acland, in which the former begged the Oxford professor to awaken an interest amongst the heads of houses and other members of the University of Oxford in the Edinburgh Medical Missionary Society, and in the whole subject of medical missions. In response Sir H. W. Acland delivered this address, urging that modern medicine in its four departments—scientific, preventive, therapeutic, administrative, but especially in the preventive and administrative parts—has much to do with education and religion, and that it offers a most inviting field for a life of exceptional usefulness. He evidently does not consider it necessary that all missionaries should have a qualifying medical education; but he is persuaded that no mission amongst the heathen is thoroughly equipped which has not a fully qualified medical man attached to it who earnestly desires the success of the objects of the mission. In his opinion a real service would be rendered to the British Empire by joining in the earnest work of improving the public health of the millions in the densely-peopled villages of India and Burmah, and he hopes that some far-sighted person or some public body will give the University of Oxford the means of erecting a perfect institution in which may be trained the medical graduates willing to undertake this great work.

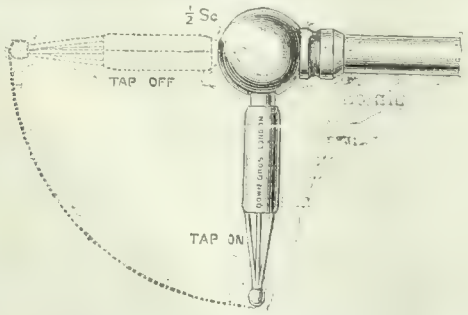
The late Mr. Henry Bruce Arnaud has bequeathed £500 to St. George's and to St. Thomas's Hospitals.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

New Aseptic Water Tap and Ward Washstand.—Mr. R. J. Pye-Smith, F.R.C.S., Senior Surgeon Sheffield Royal Infirmary, writes: The water tap and washstand here illustrated have been designed and made, on my suggestion, by Messrs. Down Brothers, London. The washstand is intended especially for a hospital ward, and I have found it very satisfactory during the year we have had it in use at the Sheffield Royal Hospital. It consists of an enamelled iron stand, with towel rails, running on four small wheels with ball-bearings and supporting a glass reservoir for warm water, to the bottom of which is attached a nickel-plated metal tube terminating in the tap to be described presently, and provided with a stopcock to regulate the size of the stream. Under the tap is a basin with a hole at the bottom from which an indiarubber tube leads to a pail. Behind the tap is fixed a box with hingelid and divided into compartments for soap, nailbrush, and an antiseptic solution (such as 0.2 per cent. mercuric iodide in spirit). The object of the washstand is to provide a ready means for frequently and rapidly washing the hands under running water. No plug, therefore, is supplied to the basin, and it is found that a very small quantity of water flowing in a small stream suffices for cleansing the hands, so that the washstand, which is very easily pushed along from bed to bed can be used by the surgeon or physician after his examining each patient, the reservoir holding enough water for perhaps a dozen washings (when it can be readily refilled), whilst the pail will hold three or four times as much as the reservoir (thus obviating its being frequently emptied). The object of the antiseptic tap is to supersede the cumbersome treadle arrangement frequently employed, while like the latter it avoids the necessity for touching a possibly septic tap immediately after washing. It consists of a metal tube with a terminal joint which is closed by being turned into line with the tube, but which allows the water to flow through it when brought down to a right angle with the tube. The end of the terminal





joint, which forms the handle by which the tap is moved, is made of three stiff pieces of wire converging into a small terminal knob. Over this handle the water flows, constantly washing it while the tap is turned on, and it is therefore quite clean when turned up in order to shut off the stream. After washing and drying his hands the surgeon can dip his fingers into the antiseptic solution. This tap could of course be adapted to the water supply pipe over any fixed basin.

FORMS FOR RECORDING THE HISTORY AND PHYSICAL SIGNS IN CASES OF PHTHISIS.

We have received from Messrs. J. Wright and Co. of Bristol specimens of a case-taking form and a temperature chart specially adapted for cases of pulmonary tuberculosis. The sheet for recording the history and physical signs of the case has spaces assigned for the more important of its clinical features, as chest measurement, the occurrence of diarrhœa, night sweats and hæmoptysis, and for the family history. Skeleton diagrams are provided for the graphic representation of the physical signs both in the lungs and heart, and space is given for the noting of the number of tubercle bacilli in the sputum on admission and on discharge. In a future issue it might be well to make respiratory capacity as estimated by the spirometer, one of the points for investigation.

The temperature chart suggested by Dr. L. Kidd is ruled for six-hourly observations. A more frequent taking of the temperature than this is certainly desirable in many cases, particularly in their early stages, even as often for some patients as every hour during the time they are awake. The charts likewise have spaces for the daily amount of sputum and the number of the tubercle bacilli that it contains for the frequency of vomiting, the occurrence of hæmoptysis, and for observations on chest measurement and body weight. These charts and forms, or others something like them, would be of distinct usefulness in the sanatorium treatment of consumption as well as in private practice.

NURSING REPORT AND DIET TABLE.

Messrs. J. Wright and Co., Bristol, have published a chart for clinical cases, designed by Dr. R. Prosser White, which has some good points. It is a sheet of two pages. On the front are ruled lines for the pulse, respirations, amount of sleep, action of bowels, and quantity of urine passed, with totals for the day, and an accompanying diet table which contains columns for milk, beef tea, alcoholic drinks, and gruels, or milk food. In these respects this sheet resembles many other nursing charts; its speciality, however, rests with the other side of the sheet, on which are printed memos. for sick nursing. These comprise the names of drinks, milk drinks, meat teas and broths, jellies, milk foods, cordials, pounded meats, and convalescents' food. The several lists are very full, and contain dishes likely to prove acceptable to invalids of all sorts. Moreover, to doctor or nurse the lists are calculated to convey many a good hint for "faddy" patients or those too ill to take ordinary diets. The prices of the charts are 22s. per 1,000, or 3s. per 100.

The Nurses' Clinical Case-Book, with daily and four-hourly temperature charts. (London: John Bale, Sons, and Danielsson, Limited, Oxford House, Great Titchfield Street, W. 6d. net.) The bulk of this book is occupied by pages ruled for half-hour intervals on which the nurse may make her reports. One page is for the day report, the second for the night report, and a summary for results accompanies each day on which may be placed the total amount of food, the number of motions, amount of urine passed, and of sleep, with the highest temperature and time at which it occurred. The book will thus report fourteen days. Two temperature charts, which are ruled also for pulse, respiration, motions, vomit, and urine are appended.

REPRESENTATIONS IN GLASS OF EYE DISEASES.

Mr. Davidson, optician, Great Portland Street, has submitted models (presumably made in Germany) of eyes blown in glass with imitations of various affections of the cornea, conjunctiva, iris, etc. While some few give a tolerably good idea of the disease indicated, others are very crude. A very opaque nebula serves for "ulcer cornea," and a patch of red running from the white of the eye on to the cornea does duty for symblepharon. On the whole, we cannot conscientiously say that we think they will be of any great use for purposes of demonstration

THE PREVENTION OF TUBERCULOSIS.

Sanatoria and the Spread of Infection.

The Council of the National Association for the Prevention of Consumption and other Forms of Tuberculosis desires to give publicity to the following expression of opinion:

"Having understood that apprehensions have been entertained as to the spread of consumption from sanatoria established for the treatment of this disease, the Council of the National Association for the Prevention of Consumption desire to express their opinion that there is no danger of communication from any well-conducted hospital for consumption, or from any sanatorium where the open-air treatment for this disease is properly carried out; and, further, that the inhabitants of houses in the immediate neighbourhood of such institutions are perfectly safe from local propagation from this source."

Cardiff.

Cardiff is setting a good example to other municipalities in the activity with which it is waging war against tuberculosis. We have received copies of leaflets issued by the medical officer of health (Dr. Edward Walford), in connection with the steps being taken for the prevention of tuberculosis by the sanitary authority. In one of these it is stated that in Cardiff out of a total number of about 2,500 deaths which occur annually from all causes, about 200 are due to phthisis. Instructions are given as to the precautions necessary to prevent the spread of infection from a consumptive person to those about him. In another leaflet issued to dairymen, cowkeepers, and purveyors of milk, instructions are given as to the means of preventing the spread of tuberculosis among cattle. Copies of contracts for the supply of milk and meat in conditions that will ensure freedom from risk of tuberculous contamination are also distributed. In all cases of death from consumption in private houses, a leaflet recommending disinfection, and intimating that this will be carried out free of cost by the sanitary authority is sent to the occupiers. Voluntary notification of cases of tuberculosis by the medical practitioners in attendance, the following circular being sent by the medical officer of health to all members of the profession practising in the borough:

Acting upon the report of the Medical Officer of Health, and with the approval of the Medical Society of Cardiff, the Health Committee of the Cardiff Corporation have decided to carry out as far as possible the recommendations contained in that report, a copy of which, if not already forwarded to you, can be obtained on application to the Medical Officer of Health. I am, therefore, directed by the Committee to ask you to be kind enough to notify to me cases of pulmonary tuberculosis which may come under your professional care, and in which you are of opinion that the action and assistance of the sanitary authority would be advisable, more particularly those cases in which sanitary defects require to be dealt with on the premises occupied by the patient, where the disinfection and cleansing of infected rooms or articles would be an advantage, or where printed instructions would be of use, as the Sanitary Committee are prepared to undertake this work free of cost. The Committee will also issue pamphlets to occupiers of houses in which deaths from consumption have taken place, calling attention to the infectious nature of the disease, and offering disinfection of infected premises and articles, and they would be glad of your co-operation in persuading such occupier to have such disinfection carried out.

I am further instructed to inform you that the Committee are making arrangements for the bacteriological examination of the sputa of patients, and that when such arrangements are complete notice will be sent to you with all necessary particulars. Forms for the notification of cases of phthisis are enclosed herewith.

Hackney.

Some time ago the Vestry, adopting the recommendation of their Public Health Committee *re* tuberculosis in milk, submitted 100 samples of milk obtained in the Hackney district to the Jenner Institute of Preventive Medicine for bacteriological examination. Of these, 17 were found to contain tubercle bacilli of virulent character; 23 animals succumbed prematurely, so that in these instances it was impossible to establish a diagnosis. Taking, therefore, the 77 samples in which an absolute test could be caried out and the 17 positive results that were obtained, the proportion of milks from the Hackney district containing tubercle bacilli was found to be 22 per cent. On this report the Committee made the following recommendations:

1. That the President of the Board of Agriculture be memorialised to introduce a Bill into Parliament to give effect to the recommendations of the Royal Commission on Tuberculosis.
2. That a copy of the report be sent to the London County Council and the local authorities of the metropolis, and that these bodies be asked to support the action of this Vestry by making similar representations.
3. That copies of the report be sent to the Prime Minister, the Leader of the House of Commons, the President of the Local Government Board, and to the members of Parliament and London County Council for the district.
4. That a circular be prepared and circulated throughout the district advising the inhabitants to boil all milk before use.

The Highlands and Sites for Sanatoria.

Referring to the movement for the establishment of sanatoria, the *Caledonian Medical Journal* for October says: "Where could these be more fittingly placed than in the Scottish Highlands? The situation considered most desirable for such establishments is one favoured with plenty of pure air, pure water, and a dry and porous subsoil at a moderate elevation, and sheltered from the cold north winds. Such sites, in close proximity to fragrant pine woods, are plentiful enough in our Highland glens. Already we learn of one company that has secured an eligible site for a sanatorium in the Deeside Highlands, and we doubt not it will be the precursor of several others."

Italy.

In Italy the movement for the prevention of tuberculosis is steadily gaining volume. Among the towns that have recently decided to associate themselves with the National League against Tuberculosis are Bergamo, Mantua, Perugia, and Trapani. At Palermo a subscription has been opened for the erection of a sanatorium for the people, and a considerable sum has already been collected. At Novara and Pisa meetings have been held in furtherance of projects for the erection of sanatoria. The question has also been debated at Salerno, the name of which is so famous in the annals of medicine.

New South Wales.

At the commission on tuberculosis sitting in Sydney, Dr. Tidswell, Principal Assistant Medical Officer to the New South Wales Government, stated in his evidence that tuberculosis alone was responsible for 3 deaths per diem all the year round in that colony. This means that out of a population of nearly a million and a half in New South Wales, 1,095 die of phthisis annually. Such an enormous death-rate (says the *Australasian Medical Gazette*) in a colony where in the early days no such disease existed, but which was lauded as affording special facilities for the treatment and then utilised as a sanatorium for patients suffering from tuberculous and kindred diseases, renders it unnecessary to inquire into the causation of this result. It, however, would be well to consider what measures should be adopted for the prevention or amelioration of this state of things.

The Mayor of the Borough of Marrickville, a suburb of Sydney, has issued the following circular, dated July 18th, 1899, to all medical practitioners in Sydney and its vicinity:

In the interests of the residents of this important and extensive borough and the conservation of the public health, I am directed by the Mayor (Alderman W. W. Clarke) to respectfully request that you will be good enough to notify this office of all cases of tuberculosis in human beings which may occur in the practice of your profession among the residents of Marrickville, particulars as to residence, age, sex, occupation, duration of disease, together with such other information you may deem necessary, will be duly registered here with a view to steps being taken by my council to minimise the spread of the disease.

The welfare of the community is the Mayor's warrant for soliciting your kind co-operation in this important matter.—I am, dear sir, yours faithfully,

Henry T. Brown,
Council Clerk.

The Mayor of Marrickville is setting an example of activity, but we fear he is somewhat in advance both of public and professional opinion.

United States.

New York.—At a meeting of the State Board of Health held recently a resolution was adopted for the establishment by municipalities of sanatoria for the care of tuberculous patients and for the securing of legislative action on the subject.

California.—The *Boston Medical and Surgical Journal* states that it is reported that the Board of Health of California proposes to establish a quarantine against all persons affected with tuberculosis, and the isolation of such sufferers. Our contemporary adds that the strict enforcement of such a regulation is neither possible nor desirable, and the danger of infection does not warrant it.

Argentine Republic.

It has already been stated that a National League for the Prevention of Tuberculosis has been founded in the Argentine Republic. More recently a proposal for the creation of sanatoria for the poor has been submitted to Congress.

ELEMENTARY EDUCATION OF DEFECTIVE AND EPILEPTIC CHILDREN.

Early Workers.

We have for many years drawn attention to the clinical study and treatment of those children who from constitutional defect or disease of the brain and the senses, or from some physical infirmity, are incapable of receiving proper instruction in the ordinary public elementary schools. The general recognition of this class of children is largely the outcome of the labours of a Committee of the British Medical Association and Charity Organisation Society, who issued a report[1] with tabulated statements and recommendations concerning 100,000 children examined individually (1888-92) by Dr. Francis Warner and other medical men; while scientific investigation has since been continued by the Childhood Society in co-operation with a Committee of the British Association. That report, with various papers that have been read before medical and scientific societies, and published works on the observation of childhood, have now placed the study of the development and brain status of children on a scientific basis, so that it has become possible to describe the physical and mental status of a child in the form of a clinical record, to which the experience gained by teachers and others as to mental ability in school work may be added, forming a statement of the child's condition leading to appropriate treatment and management. The inquiry made shows about 1 per cent. of the child population as somewhat deficient in mental power, the proportion of boys being higher than girls; this is confirmed by the reports of Departmental Committees.

The Occurrence of Feeble-mindedness.

Feeble-mindedness is not confined to any social class; cases are to be found alike in town and country, in the families of intelligent persons as well as among the pauper and lower classes. The child backward in walking and talking should be carefully examined; early treatment and care are needed to rectify conditions remediable by medical treatment, hygiene, and training.

The New Act.

The Elementary Education (Defective and Epileptic Children) Act, 1899, was framed to give effect to the recommendations of the Departmental Committee which was appointed in 1896 to inquire into the existing system for the education of feeble-minded and defective children not under the charge of guardians, and not idiots or imbeciles. The Act is permissive, but otherwise it carries out, substantially, all the recommendations of the Committee. Special classes for defective and epileptic children have already been established by the School Board for London and in other places, with good results; but the ordinary grant is not sufficient to cover the extra expense incidental to the effective management of such classes. The children to be dealt with are described as "what children in this district, not being imbecile, and not being merely dull or backward, are defective—that is to say, what children by reason of mental or physical defect are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but are not incapable by reason of such defect of receiving benefit from instruction in such special classes or schools as are in this Act mentioned," etc.

An important principle clearly laid down in the Act is that the school authority "shall provide facilities for enabling any parent, who is of opinion that his child ought to be dealt with under this Act, to present such child to the school authority to be examined, although he may not have been required so to do by that authority"; thus recognising the rights of the parent to obtain education for his child. It is further enacted that "for the purpose of ascertaining whether a child is defective or epileptic.....a certificate to that effect by a duly qualified practitioner approved by the Education Department shall be required in each case. The certificate shall be in such form as may be prescribed by the Education Department." The school authority is also required to make provision for the examination from time to time of all those children, in order to ascertain whether the child has attained such a mental and physical condition as to be fit to attend the ordinary classes of public elementary schools; a parent may claim examination of his child at periods of not less than six months' interval. A School Board that makes provision for these children in special classes or in any home of residence will have to obtain a certificate with each child, and it will become the duty of the Education Department to prescribe the form of certificate to be used. This Act will also concern children in schools under supervision of the Local Government Board and Home Office where they make provision for the feeble-minded; probably some of these cases will be transferred to the care of school boards. We speak of the importance of the certificate in each case, because large powers are given to the school authority in dealing with defective and epileptic children. The Act provides that the school authority may cause any child to be presented by the parent for examination, presumably on the order of the school attendance officer; obligation is placed upon the parent to provide education for his defective or epileptic child, and guides or conveyances to school may be provided. A defective or epileptic boy or girl is deemed to be a child until the age of 16 years, during which period school attendance is compulsory. The Education Department will certify these schools for defective children and give grants of public money, while the school authority must make such returns as are required.

Suggestions as to the "Admission Certificate."

In the working of this Act difficulties will have to be overcome in meeting the respective interests of the parents and their children, the school authorities, and the public: it will greatly facilitate the difficult task of the teachers to be informed by a medical certificate on admission of a child as to his condition and the particular defects that need attention in training. We would suggest that the admission certificate should show (1) defects in development, (2) defects in brain action, (3) physical status and health, (4) results of mental examination; facts communicated by others might usefully be added. Information thus supplied would be valuable when a defective child was admitted to a home, and would afford the opportunity of noting improvements as training proceeded.

Special Homes.

A school authority is empowered to establish special homes for defective children, but it is directed that no establishment shall be certified for boarding and lodging more than fifteen defective or epileptic children in one building, or comprising more than four such buildings. The National Association for Promoting the Welfare of the Feeble-Minded issued their third annual report this year; though the work has been carried on under the discouragement of deficient financial support they have succeeded in establishing three training homes, which are in good working order; each under the care of a matron and the superintendence of the honorary medical staff. The report says: "There is now no doubt that the conscience of the nation has awakened to the injustice and criminal folly of allowing feeble-minded boys and girls to grow up with their mental faculties undeveloped however small they may be, and their animal instincts unchecked, and this year will be a memorable one in the educational world, if only on account of the fact that the Government is at length making it possible for the school authorities of England to educate and train in the best possible way the defective children whom they have hitherto been obliged to neglect."

The Education of Teachers.

This Act of Parliament gives opportunities for the education of children defective in mental and physical power; to carry this out many additional training homes will be needed, while classes of special instruction should be established in all large centres of population. It is equally urgent that a body of teachers should be selected and trained for this special work, which calls for the best resources of education adapted to these subnormal brains in their many varieties. The direction of scientific methods of exercising and co-

[1] Published at the Parkes Museum

ordinating brain action, as well as in cultivating its general health, requires much skill in mental science based upon the observation of children; the ordinary processes of mind expansion do not occur spontaneously in defective brains, and modes of brain action must be implanted and cultivated with its growth. The subjects of study required by the teachers of these special classes are to some extent included in the syllabus of the Sanitary Institute's examination in Practical Hygiene for school teachers: this might be supplemented by a practical course of scientific instruction in the observation and description of children.

Knowledge of methods of management and treatment, as well as a widely-spread public interest, have followed the investigations of the mental and physical conditions of childhood, conducted during the last ten years on scientific principles which are equally applicable to the educational treatment of an individual child, whether normal or subnormal in brain power.

THE PREVENTION OF FEEBLE-MINDEDNESS.

At least as much importance attaches to the means of preventing mental feebleness as to the treatment of defective children. When myopia and adenoids—which not uncommonly occur together—are neglected, children are apt to be mentally backward in their school life; neglect of treatment leads to imperfect appreciation through the senses, resulting in deficient mental training. Crippled children may have good brains, though their physical defects prevent the ordinary means of education, which need to be adapted under the circumstances. Choreic children who have had several such illnesses are often delicate, but are not usually exceptionally dull if the necessary advantages are afforded them. In times past it was often thought necessary to leave the epileptic children without education; modern experience has shown that full, healthy occupation, which may be made educative, increases brain stability and tends to save mental power; while, when the fits begin to pass off, systematic education under due supervision may prevent that degree of mental inaptitude and irritability which so often follows epilepsy. Even the imbecile infant, if well trained from the earliest days, may become well behaved, of good habits and social appearance; whereas, when neglected, he is apt to grow up unsocial and a greater burden to others than needs be. In all cases of congenital defect early diagnosis and good management are necessary.

LITERARY NOTES.

DURING the last scholastic year no fewer than 671 theses were presented to the University of Paris for the degree of Doctor of Medicine.

According to the *Publishers' Circular* Messrs. W. Thacker and Co. have in preparation a *Handbook of Clinical Veterinary Surgery*, and a *Handbook of Clinical Veterinary Medicine*, both by Mr. F. T. Barton.

Among forthcoming books likely to be of special interest to members of the medical profession is the *Life and Letters of Thomas Henry Huxley* by his son, Mr. Leonard Huxley. The book, which is to be illustrated with plates and portraits, will be published by Messrs. Macmillan.

Messrs. Archibald Constable and Co. issue this month the first volume of a *Physical Atlas* which will consist of seven volumes dealing respectively with Geology, Orography, Hydrography and Oceanography, Meteorology, Botany, Zoology, Ethnography and Demography, General Cosmography and Terrestrial Magnetism.

A new review, the purpose and scope of which may be gathered from its title, *La Tuberculosis*, is to be published at Buenos Ayres. The editor is Dr. Enrique Tornú, who announces that the new periodical is intended for the public as well as for the medical profession. Five thousand copies of each number are to be printed, and the price is to be 20 cents, "the payment of which is left to the goodwill of the subscriber, who will continue to receive it anyhow, whether he pays or not." This is magnificent, but it is not business. An editor who proclaims beforehand his indifference whether his subscribers subscribe will have no reason to complain if they do not.

In the last number of the *Journal of Anatomy and Physiology* Professor Macalister contributes an excursus on the term, "tendo Achillis," which he shows to be of comparatively late origin, and, what one is less prepared to hear, of equivocal significance. Hippocrates, it appears, was aware of the "great cord," but knew not the tendo Achillis; Celsus, Galen, Ruffus, and Pollux were in the same case. The term does not occur in the works either of the classical lexicographers or of the mediæval translators. The first correlation of the tendon with the name of Achilles known to Professor Macalister is in the great work of Vesalius (1543), who, in describing the tendon of the calf muscles, points out that, on account of the projection of the heel behind the level of the tibia, this tendon is thrown backwards, and forms with the tibia a triangle whose base is the length of the calcaneal projection, while on each side of the tendon there is a lateral concavity: *Atque hæc ea demum est cavitas* (he goes on to say) *cui Homerus Achillem in Hectoris crure funem traiecisse, illumque ad currum religatum, circum mœnia Troiæ traxisse cecinit.* Columbus writing in 1559, and Valverdus in 1607 refer to the same story in connection with the tendon. In 1588 Bauhin suggested another explanation in the words *Achilles hac tantum parte mortalis erat*, where allusion is made to the story of the Greek hero having been dipped by his mother into the Styx, whose waters made him invulnerable except at the heel by which she held him. It was not till the beginning of the eighteenth century that the term "tendo Achillis" became definitely established in anatomical nomenclature. Professor Macalister decides, against the opinion of Hyrtl, that the name had its origin not in the Stygian legend but in the Homeric account of the dragging of the body of Hector by the heel and that the genesis of the term is to be found in the passage of Vesalius above quoted.

The number of so-called medical journals published in Paris which in 1897 was 186, and in 1898 had risen to 206, is now 215. A considerable proportion of these, however, are more of the nature of advertising circulars than scientific periodicals.

NOTES ON HEALTH RESORTS.

THOUGH the literature on the treatment at Brides-les-Bains and the neighbouring spa of Salins-Moutiers is already considerable owing to the writings of Dr. Delastre and others, the little book by Dr. Samways[1] will be welcomed by English readers. The mineral waters and the indications for the two spas are here described, whilst the illustrations give the reader a tolerable idea of the aspect of Brides-les-Bains and of the deep valley of the Doron de Bozel in which the place is situated. Dr. Samways remarks that health resorts may be divided into those (1) which deserve to be popular but are not; (2) those which deserve to be popular, and are; (3) those which are popular, but do not deserve to be; and (4) those which neither are popular nor deserve to be. He places Brides-Salins in the first group, but we believe that classification in the second group would already be more correct.

Schoemberg, in the Wurtemberg Black Forest, lies at an elevation of 650 metres (about 2,130 feet) between the Enzthal and the Nagoldthal, amidst extensive pine forests, with sufficient protection from excessive winds. The new sanatorium for consumptives is about a quarter of an hour distant from the village. The open-air, dietetic, and modern methods of treatment are carried out under the management of Dr. G. Schroeder, who, since the recent death of Dr. Baudach, has been medical director of the establishment. Dr. Schroeder was formerly one of the doctors at the Hohenhonnef Sanatorium.

[1] *Brides-les-Bains and Salins-Moutiers, Savoy, France.* By D. W. Samways, M.A., M.D., B.C., D.Sc. Enfield: The Graphotone Company. 1899. (Demy 8vo, pp. 48, numerous illustrations. Gratis.)

As a result of the special report recently submitted by Major Firth, R.A.M.C., on the water supply and general sanitary condition of Bannu, Punjab, measures will be taken to remove the defects, which seriously endanger the health of the garrison.

PROFESSOR BATTISTA GRASSI has gone to Grosseto in order to complete his researches on the mosquitos concerned in the transmission of malarial infection.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st, 1899. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders and Postal orders should be made payable to the British Medical Association at the General Post Office, London.

British Medical Journal.

SATURDAY, OCTOBER 28TH, 1899.

MEDICAL WITNESSES' FEES.

The Joint Committee of our Association and the United Kingdom Police Surgeons' Association has lost no time in placing before the public in the columns of the press a clear statement of the grounds on which they ask for a revision of the scale of fees fixed by Sir George Grey when Home Secretary more than forty years ago. In a letter to the *Times* reproduced at page 1217, Mr. Andrew Clark, the Chairman of the Joint Committee, has pointed out that in 1895, in replying to a deputation from the Police Surgeons' Association, Mr. Asquith, the then Home Secretary, admitted that the remuneration of a guinea a day paid to medical witnesses was altogether inadequate to indemnify them for the loss in time and money which their attendance at courts of law involved, but pleaded that the scale under which this remuneration was fixed had been framed forty years ago, and that successive Home Secretaries had been afraid to burn their fingers by touching it. He also suggested, as a logical method of settling the question, that medical men who were employed by Watch Committees in connection with the police should endeavour to get this circumstance taken into account by their employers in fixing their salaries as police surgeons. As Mr. Clark points out, however, this "logical" method of settling the matter, even if it had been satisfactory to the police surgeons, which it was not, would have left the injustice to other medical witnesses unremedied.

It would also, as we may point out, leave untouched the cases in which, notwithstanding the statutes in force on this subject and the order of Sir George Grey, medical men in certain districts in England are actually required to attend at police courts to give evidence on behalf of the Crown without receiving any remuneration whatever. A distinction is made between those cases in which the prisoner is committed for trial and those in which he is not, no fee being allowed to the medical witness in the latter case. The possibility of such an injustice being legally perpetrated arises from the wording of the order made by Sir G. Grey, to the effect that there "*may* be allowed" to witnesses being members of the medical profession a sum in the discretion of the magistrates for each attendance. The discretion of the magistrates in certain districts uniformly results in no fee being allowed out of the funds over which they have control—the committal cases being paid for out of a separate fund.

In the same order there are instructions that no witness is to be allowed for his attendance, loss of time or trouble, in more than one case in the same day. The result of this is that even when a witness has had to give evidence in as many as four or five cases in a police-court on the same day, as has sometimes happened, he is only allowed a miserable 10s. 6d. for all his time and trouble. A small matter which is mentioned in Mr. Clark's letter shows the unwisdom of the Home Office in refusing to discuss these points with a deputation; it is stated that in the Isle of Man, though a medical witness before the coroner appears to be entitled under the Coroners' Act, 1887, to a fee of a guinea, he only gets 15s. 6d.; and that though the deputation to the Home Secretary in 1895 was promised that this should be remedied, it has not yet been done. There may possibly be some local regulations in the Isle of Man to account for this, but otherwise it appears to be clearly illegal.

When we come to consider the payments made to medical witnesses in Scotland and Ireland the unequal treatment of their English brethren appears most plainly. In Scotland the medical witness is allowed two guineas a day, with one day added on, so that he gets four guineas for one day, six guineas for two days, and so on. In Ireland, if resident in the town in which the sessions are held, he gets one guinea, and if detained in court more than three hours an additional guinea. When summoned to attend from any other town two guineas a day, with travelling and hotel expenses, are allowed. Our Joint Committee asks that in England two guineas a day should be the fixed allowance, with first-class railway fare when the witness comes from a distance. We think no one who reads Mr. Clark's letter can doubt that a substantial injustice is being done to members of our profession in England who have to appear in courts of law in criminal cases, that this injustice is admitted by the Home Office itself, or that the proposal of the Joint Committee is a fair and reasonable one.

GUNSHOT WOUNDS OF THE ABDOMEN.

The discussion in the Section of Surgery at the recen meeting of the Association at Portsmouth on Gunsho Wounds of the Abdomen has, we think, put our knowledge of this difficult subject in a very much clearer light.

In the treatment of these wounds, on or ne r the field of battle, there are many points to be taken into consideration, each one of them having some influence in bringing the surgeon to a decision as to what is, not theoretically the best, but at that particular moment the most appropriate, method of dealing with the injury. The chiefest among these is the question of asepsis. Major Beevor has said that in the Tirah campaign the only water at one time available for surgical purposes contained the urine of men and animals, was brown and turbid, and quite obviously rank with putrid and septic matters. The surgical equipment at the actual moment of most desirable surgical interference may be lacking in one or more essentials. It was these considerations, we think, which led Surgeon-General O'Dwyer to state that until the measures of military practice approached more nearly to those of civil life gunshot wounds of the abdomen would be best treated on the expectant plan.

It is probable that in present and future wars, wherever occurring, there will, we may hope, be a reasonable prospect of surgical cleanliness being attained. If that is so, the question of surgical intervention will finally depend in large measure upon the powers of the surgeon to discriminate between cases which demand interference and cases which would possibly do better if treated on the expectant method. The probabilities of the recovery of a patient with an abdominal gunshot wound, with rupture of the small intestine, are very small. But we recognise that there may be gunshot wounds of this region without intestinal perforation. The question of the propriety of abdominal section is then dependent upon the powers the surgeon possesses of diagnosing the associated intestinal wound. Are there any means by which with reasonable accuracy the two classes of cases can be distinguished?

Senn's method of inflation with sterile hydrogen gas has in the hands of that surgeon never failed to give precise and reliable information. In the hands of others it has occasionally failed. This may have been from lack of skilful application, or from inaccurate observation. But from some reason, difficult perhaps to define, the method has never enlisted the active sympathies of European surgeons. Apart from it, one can only rely upon physical signs and symptoms to afford a guide. Of the physical signs that which has been most discussed is certainly the "disappearance of the liver dulness." The opinions expressed at Portsmouth, agreeing with those of the majority of surgeons in active practice, go decidedly to show that absence of the liver dulness may be demonstrated where no intestinal perforation is afterwards found, and conversely that in cases where there is some free gas in the peritoneal cavity, where large ruptures of the bowel are subsequently discovered, the normal dulness may not have disappeared. It cannot therefore be accepted as a trustworthy guide. Shock and the symptoms of hæmorrhage may exist equally with or without rupture of the gut. And other signs are equally fallacious and unreliable. We are left then in this position. An abdominal wound may or may not be complicated with intestinal destruction. Whether it is or whether it is not can only be positively proved by a careful handling of the whole bowel. If it were suggested, then, that such examination should be carried out as a routine procedure in every separate instance we should have to consider: first, whether such abdominal exploration would increase the risks of life in a patient whose intestinal canal was whole, and, secondly, whether such exploration could, in cases where rupture was found, lead to the effective closing of such rupture and the subsequent recovery of the patient. We think that so far as concerns the first question we must in fairness acknowledge that though theoretically there would be little risk of increasing the mortality in actual practice, under these special circumstances this would probably occur to some small degree. So far as the second question is concerned there can be no reasonable doubt that an enormous saving of life would be effected, a saving of such magnitude as altogether to outweigh the small losses of the first class.

The conclusion would seem, then, inevitably to be that, in all cases of gunshot wound of the abdomen, where the general circumstances are such as to warrant a major operation, the surgeon should, if even the most remote chance of wound of the gut exist, open the abdomen at the earliest possible moment; effective exploration should be carried out, and any injury found dealt with as experience and the necessities of the moment would dictate.

It is most important to prevent, and even to anticipate as far as is possible, the manifestations of shock. Major Beevor called attention to the usefulness of preliminary flushings of the peritoneal cavity, and his remarks are worthy of careful consideration. Shock or collapse may be considered surgically from two points of view—as a condition to prevent and as a condition to treat. Latterly many surgeons have anticipated the symptoms of shock by such measures as the use of a heated table, the injection of saline solutions into the veins or cellular tissue, hot injections with or without brandy into the rectum, the subcutaneous injections of strychnine in moderately large and regularly repeated doses, and, in abdominal cases, the flushing of the peritoneum with hot sterile solutions. This is, we are strongly of opinion, a far better plan than to await the onset of shock, and to apply, then, these various measures as means of restoration. Major Beevor's apt suggestion would seem to embody this principle.

It is not improbable that our information as to the prospects of treatment under carefully-elaborated and almost ideal circumstances will receive in the quite near future many important additions.

THE WAR.

THE announcement made by the Under-Secretary of State for War on Tuesday evening that Sir William Mac Cormac, the President of the Royal College of Surgeons of England, had expressed his willingness to proceed to South Africa with Sir Redvers Buller's Field Force, was received with loud cheers by the House of Commons, and has caused the greatest satisfaction throughout the country. We understand that the Director-General of the Army Medical Department felt that it would be desirable to have at the disposal of the medical staff in South Africa the services of consulting surgeons of large experience to take a share, in consultation with the medical officers in charge of hospitals or convoys of wounded, in the treatment of cases in which the question of performing major operations may arise. Decisions in such cases, which are of momentous importance to the wounded men, are matters of great anxiety and responsibility, and bear heavily on officers already subjected to great strain. Colonel Stevenson, R.A.M.C., the eminent professor of military surgery at the Army Medical School at Netley, is the Principal Medical Officer of the lines of communication; but we believe that in view of the probability that there may be several lines of communication, the Director-General felt that it would be desirable to have at least one consulting surgeon with each force, and he took the view that the emergency was one in which the co-operation of leading civil surgeons might properly be invited. The suggestion made by the Director-General, which is in consonance with the scheme of Mobilisation for Home Defence under which civilian surgeons are attached in a consulting capacity to large base hospitals, was approved by the Secretary of State for War, who naturally turned to Sir William Mac Cormac—whose experience of surgery in the field is unrivalled in this country—for his advice. Sir William expressed his approval of the plan suggested by the Director-General, and with praiseworthy patriotism offered his own services, which will be of the highest value. He first saw service during the Franco-Prussian war, when with Dr. Marion Sims and Dr. Frank

of Cannes, he organised the Anglo-American Ambulance, to which he acted as chief surgeon. The ambulance rendered excellent service at Sedan and subsequently. Sir William was also out in the Turco-Servian war with the ambulance, and was present at the battle of Alexinatz, which brought that campaign to an end. He has since taken an active part as a representative of the medical profession on every occasion on which this country has organised ambulance work in the field and is at the present time one of the representatives of the National Society for Aid to Sick and Wounded in War on the Central British Red Cross Committee. Mr. Wyndham said that the War Office would probably arrange that Sir William MacCormac should have the assistance of two specially-selected civil surgeons. These surgeons have not yet been selected, and it would be premature to publish the names of those who are mentioned as likely to be willing to place their services at the disposal of the War Office, but it may be said that among the names will probably be found some of the most experienced surgeons in the country. During the Franco-Prussian war many of the leading civilian German surgeons gave their services to the army in a consulting capacity. Thus von Langenbeck was attached to the Staff of the German Emperor, and such men as Thiersch, Volkmann, Stromeyer, and Billroth, were consulting surgeons attached to various army corps, while von Esmarch was in charge of the base hospitals in Berlin. During the Russo-Turkish war Pirogoff accompanied the Russian army, as did also E. v. Bergmann, at that time Professor of Surgery at Dorpat. An arrangement of the kind in force in the Prussian army in 1870 is, we understand, that contemplated at the present time by the Director-General of the Army Medical Department. The date of Sir William MacCormac's departure is not yet settled, but he has expressed his readiness to start at short notice.

SANITARY OFFICERS IN SOUTH AFRICA.

Truth, in a recent issue, laid stress on the fact that no mention of a sanitary officer is contained in the lists of officers named for active service in South Africa, and suggests that the omission may be due to Lord Wolseley's "contempt for sanitary officers in the field," recorded by him in print some years ago. We are unaware whether the present Commander-in-Chief has modified his views; but we cannot for a moment believe that he intended to convey the idea that sanitation is of no moment. But whatever his opinion, the importance of the subject is duly and emphatically set forth in Army Regulations (*Regulations for Army Medical Services*), a perusal of which might be profitable and consoling to the writer of the paragraph. For general information we think it advisable to give a brief summary of the Regulations, and it will be seen that sanitation does not depend on the existence of the title of "Sanitary Officer." The old sanitary officer in the field was the result of Crimean experiences and Sydney Herbert's Commission of 1858. Of course such an officer might have been very useful at the circumscribed siege of Sebastopol, but would be somewhat handicapped in a widely-extended South African or other campaign. Every medical officer from Principal Medical Officer downwards is really a sanitary officer; but the Surgeon-General of the army corps may nominate or depute a medical officer to advise on sanitary measures when specifically necessary. Captain M. L. Hughes, R.A.M.C., who has been selected as an expert to be at the disposal of the Principal Medical Officer, would be available for that kind of work. To begin with, the Director-General of the Army Medical Service is consulted on all measures bearing on health, etc., in the country to which a field force is about to be sent. He then furnishes the Principal Medical Officer of the force with instructions and information. The Principal Medical Officer is then considered to be the Principal Sanitary Officer, and it is his duty to consult with and advise the General in Command on all subjects bearing upon the health of the army. In like manner, when an army consists of several "divisions," the sanitary supervision is in the charge of the Principal Medical Officers of those divisions; and, under them, one of the officers attached to each brigade is always specially nominated (by the Divisional Principal Medical Officer) for sanitary duties. Thus there is no need to use the term "Sanitary Officer" in any list of the *personnel*, as the system here outlined will be in full working order in the South African campaign.

THE INDIAN MEDICAL SERVICE.

At the Indian Medical Service dinner, which was held at Simla on September 25th, Surgeon-General Harvey, C.B., made an interesting speech, in the course of which he said that he hoped that the strain upon the service which had recently been so severely felt was nearly over. Some 90 officers, including the new recruits from Netley, were due back in India by the end of the year, and this accession of strength should fill up gaps and allow a margin for future furloughs. There was reason to hope that the tension on the frontier would relax, though while plague persisted service conditions could not be quite normal. He then referred to the great improvements which had been effected in various directions, specifying particularly the gaol and chemical departments. The improvement in gaols now managed by medical officers was shown by the fact that the death-rate in Bengal had come down from 97 per mille in 1879 to 22.5 per mille in 1898, and he looked forward to the time when anything in excess of 15 per mille would be considered discreditable. The creation of the Chemical Department rendered expert chemists available for the advantage of commerce and for medico-legal work. He hoped before long that there would be a new alienist department which would give all the benefits of modern asylums and skilled treatment to lunatics, and also a new bacteriological department which would enable the Indian Medical Service to apply at first hand all the latest scientific discoveries, and take its proper place among the pioneers of progress. The scheme was already partly in operation, and would have the effect of providing the service with a thoroughly-trained bacteriologist every year. Hitherto an occasional enthusiast, like Vandyke Carter or Cunningham or Ronald Ross, had done good work which had redounded to the credit of the service, but it had not been possible for the busy civil surgeon to give the necessary time to the study of such duties. Though sanitation was still very backward in India, the Government was alive to its importance, and Surgeon-General Harvey hoped that the report of the Plague Commission would be helpful in this direction. A large number of officers had done devoted work in connection with plague, and Mr. Haffkine's protective serum had forced itself into such general acceptance by the profession that the laboratory could hardly cope with the demand upon it. In surgery the service continued its splendid work; a magnificent new hospital was in course of erection in Calcutta, and the new buildings of the Medical College would make that institution worthy of the capital of India. He believed that no service now possessed greater opportunities of doing good, and he was glad to think that thorough advantage was taken of those opportunities. Referring to statements to the effect that the service was becoming unpopular, as shown by the diminished number of candidates, Surgeon-General Harvey ventured on the paradox that the diminution proved the opposite. Up to a few years ago there were large numbers of candidates, because men went up again and again in the hope of ultimate success; one hero had succeeded at his tenth venture. Now only two attempts were allowed, and men did not go up unless they consider themselves really likely to succeed. The marks showed that there was no falling off in the

quality of the successful candidates, and the staff at Netley were of opinion that the last batch of probationers was as good as could be desired. This was a good omen, and Surgeon-General Harvey said that he looked forward to the future of the service with confidence. He believed that the good ship I.M.S., having weathered the storm, was gliding into smoother water essentially sound and uninjured, though strained a little perhaps, for leave could not be closed and work doubled without some grumbling and discontent. These he thought should now cease with the causes which produced them.

THE MEMORIAL HOSPITAL, BULAWAYO.

No testimony could more emphatically proclaim the beneficence of British rule over the regions of the Dark Continent—starting, too, directly that rule has been established—than the "Report on the Memorial Hospital, Bulawayo, for the twelve months ending June 30th, 1899." When one considers the few years that have elapsed since Rhodesia was incorporated, the work which this report describes is simply marvellous, and reflects the greatest credit on all concerned. It reports the additions and alterations to the hospital buildings which were completed in eight months, and comprised a Board room, nine single-bedded and one four-bedded private wards, bath rooms, a large ward of 20 beds, officials' quarters and offices, operating room, a large ward for natives, wards for half-castes (male and female), a large laundry, etc., at a cost of £12,500. The nursing is under Miss Ronaldson (trained at the London Hospital), and comprises trained and certificated nurses and probationers under a three years' engagement, as in hospitals in the old country. There is a Roentgen ray apparatus; and the Hospital Saturday Fund, organised by the Hon. Mrs. Lawley, and collected from about 700 persons on April 15th, resulted in the collection of over £2,000 for the institution. The actual cost for maintenance during the year was £9,950, the revenue £10,874; the daily average cost for natives did not exceed 5s., while that for white patients was 11s. 8½d. The patients treated during the same period were 1,238, consisting of 865 white and 373 black; and the average daily number of in-patients was 37 white and 20 black. Of the 1,238 patients 1,194 were males, only 44 females (29 white, 15 black). The diseases and injuries, nature of the surgical operations, causes of deaths, and other particulars, are all carefully tabulated, and an alphabetical list of subscribers to the Hospital Saturday Fund is appended. In fact, the report is a highly creditable production, rivalling in every respect the annual records of county hospitals nearer home.

INTERNATIONAL ASSOCIATION OF ACADEMIES.

THE final steps for the foundation of an International Association of Academies were taken at a meeting held at Wiesbaden on October 10th and 11th. The bodies represented at this meeting were the Royal Academy of Sciences of Berlin by Messrs. Auwers, Virchow, and Diels; the Royal Society of Science in Göttingen by Messrs. Ehlers and Leo; the Royal Saxon Society of Science at Leipzig by Messrs. Windisch and Wislicenus; the Royal Bavarian Academy of Munich by Messrs. von Zittel Dyck and von Sicherer; the Imperial Academy of Sciences in Vienna by Messrs. Mussafia, von Lang, Lieben, and Gomperz; the Royal Society of London by Messrs. Rücker, Armstrong, and Schuster; the French Academy by Messrs. Darboux and Moissan; the Imperial Academy of Sciences in St. Petersburg by Messrs. Famintzine and Salemann; and the Smithsonian Institute of Washington by Messrs. Newcomb, Remsen, and Bowditch. The meeting was presided over by Professor Auwers, of Berlin, and according to the report in the *Times* his knowledge of German, French, and English did much to facilitate discussion, while all the delegates appeared anxious to bring about co-operation. It is proposed to hold general meetings of delegates at intervals of three years, and on the proposal of the Royal Society of London it was determined that the first general meeting should be held in Paris in 1900. At this meeting two sections will be constituted, one dealing with mathematics and the natural sciences, the other with arts and philosophy. A council is to be constituted to carry on the business in the intervals between the meetings, and a number of scientific bodies in addition to those represented at Wiesbaden are to be invited to join the organisation. It is already joined by the Reale Accademia dei Lincei of Rome. The scheme originated some years ago with the learned societies in Munich, Vienna, Göttingen, and Leipzig, and representatives of the Royal Society of London were present at joint meetings of these bodies held in 1897 in Leipzig, and in 1898 in Göttingen. One outcome of these meetings was a scheme for an international catalogue of scientific literature which the Royal Society has already taken in hand. One of the main objects which the promoters of the Association have in view is the initiation or promotion of scientific enterprises of general interest recommended by one or more of the associated bodies, and it is intended to appoint committees of experts to advise on such projects.

WOMEN AND AGRICULTURE.

IT is rather curious to notice how public opinion in this country with regard to the employment of women in agricultural pursuits appears to be swinging over to the other side. For a generation their employment in that line of work has been condemned unsparingly, owing largely to the abuses disclosed by the Commission of which Dr. Fraser, afterwards Bishop of Manchester, was the most active member. Now ladies are taking the matter up, and Lady Warwick's Agricultural Association for Women is urging upon the sex that outdoor pursuits—farming and dairy farming, and gardening—may be found both suitable and remunerative. At the first annual meeting of the Association, which was held at Stafford House on October 19th, Lady Warwick mentioned that she was in correspondence with women in Canada, Australia, and even in India, all interested directly in agriculture, and that German, French, and Belgian ladies were also taking up the subject. It is certain, at any rate, that women do take a considerable share in field work in the French vineyards, the Swiss hayfields, and in some German farming districts, and it is not easy to see any good reason why, if woman's sphere is to extend beyond the home, the extension should be limited to the factory and the workshop. Several speakers at the meeting expressed the opinion that it is desirable that educated women living in the country should interest themselves intelligently in agricultural matters, not only for their own sake but for the sake of the farmers and labourers who need example far more than mere exhortation. The numerous convalescent homes and country holiday schemes point to the fact that the majority of the townsfolk in large cities have not even relatives in the country to whom they can send their children for change of air. By improving the conditions of life in the country, both in the way of remunerative work for the poor and interesting occupation for the educated, much may be done to check the tendency to depopulation of rural districts. A fault in agricultural colleges for women seems to be that too much work is crowded into the day in lecture rooms and laboratories, as well as in garden, dairy, or greenhouse. The meals are almost necessarily hurried, and the constant change and haste must counteract the quieting and health-giving action which would usually make medical advisers choose an open-air employment for women in preference to indoor work. As regards openings for the students who have qualified themselves at these colleges, it is to be hoped that the women's colleges at Cambridge and elsewhere will

trust their grounds to women head gardeners. Women are still rather deficient in *esprit de corps*, and very often the best help given to some new women's movement is given by men. We believe the lady who is on the medical staff at the Royal Holloway Sanatorium has already made some efforts to interest the women patients in gardening, but such work, to be successful, requires some worker entirely devoted to the subject, and there should certainly be some demand in homes and asylums for women gardeners and dairy workers to instruct and occupy the convalescents and other selected cases.

TUBERCULOSIS IN DAIRY CATTLE.

The British Dairy Farmers' Association, which represents a large and most important section of the farmers of this country, displays a thoroughly earnest intention to encourage its members and others to take their part in the prevention of tuberculosis. There is now little need to insist on the necessity for combined and organised efforts on the part of the medical and veterinary professions, assisted by the public and the owners of cattle, if the eradication of tuberculosis is to be accomplished. This necessity the Dairy Farmers' Association appears to realise, and in the last number of the *Journal* of this Association there is a valuable report on the prevalence of tuberculosis in dairy cows as revealed by the tuberculin test. The successful application of remedies, whether curative or prophylactic, necessarily presupposes ability to recognise the presence of the condition to be remedied. Tuberculin has proved a valuable means of detecting tuberculosis in cattle, and the application of this test to a large number of herds kept under various conditions has in the report before us furnished information of a very practical nature. Acting under instructions from the Council, who voted a sum of £100 for the purpose, Professor Wortley Axe, the consulting veterinary surgeon to the Association, inoculated nine herds comprising altogether 473 head of cattle. The management of dairy cattle varies in different districts and with the extent of accommodation at the disposal of the farmer. In town byres the animals are confined constantly day and night throughout the whole milking period, and between this absolute indoor life and a complete outdoor existence there are various degrees of housing and pasture. In the investigation made by Professor Axe a herd of 41 cows leading a purely outdoor life failed in every case to give any reaction to the tuberculin test, whilst in a herd of 36 animals kept in constant confinement 90.9 per cent. reacted. Under the existing conditions of sheds the cubic space allowed to each animal seemed to make little appreciable difference in the results, but this a point upon which further information appears to be desirable. This series of investigations brings out strikingly the influence of shed life on the propagation of tuberculosis, and shows also how an exclusively outdoor existence and judicious management are capable of assuring absolute freedom from the disease. It follows, as Professor Axe remarks, that the eradication of the disease in cattle is very much in the hands of the dairy farmer and stockbreeder. There are, however, considerations which cause some hesitation in the universal adoption of the tuberculin test, by which the detection and separation of diseased animals would be facilitated, and of the open-air management, which would ensure immunity from the disease. The groundless fear that the inoculation of tuberculin may communicate tuberculosis is best met by clear statements concerning the preparation of tuberculin and its constituents. The objection that the test is not absolutely reliable is more difficult to meet. The Department of Agriculture of the University of Aberdeen has published a report on an investigation with regard to the value of tuberculin as a test of the presence of tuberculosis in cattle. Out of 240 cattle tested 24 of those which gave no reaction were found *post mortem* to be tuberculous. The report confirms the generally accepted opinion that tuberculin loses its properties when kept for any length of time, but shows that when used with care and under proper conditions it is a reliable diagnostic in cattle. It may, however, fail when the tuberculous lesion is minute or when the disease has become generalised, especially in the case of aged and emaciated animals. The objection to a universal adoption of open-air management depends upon the extra requirement of food and the diminished supply of milk incidental to expose of cow-stock to a low temperature. Those, however, who adopt the open-air management aver that the shortage of milk is compensated for by its much greater cleanliness, the healthiness of the cows, and the less expense and trouble in looking after them. Both reports are very interesting and will repay perusal.

TUBERCULOSIS IN INDIA.

Lieutenant Colonel A. Crombie, M.D., of the Indian Medical Service (retired), was deputed as a delegate for India to attend the recent Congress on Tuberculosis at Berlin. In a very interesting report regarding the proceedings of the Congress, which he has presented to the Secretary of State for India, he gives a brief summary of the most recent information touching the conditions which govern the communication and development of tuberculous disease, and the measures of prevention and cure which are indicated by modern research. He also discusses the prevalence and prevention of tuberculous disease among the native population, and among troops and prisoners. As regards the general population of the Indian Empire it is impossible to obtain exact data. Death registration is still very imperfect and correct certification of death causes unprocurable. From some statistics which he quotes he infers that tuberculous disease, among both children and adults, is much less common in India than in Europe, especially among the rural population, which constitutes an overwhelming majority of the inhabitants of India. This conclusion is supported by the impressions gained by members of the Indian Medical Service who practise throughout India, and derive a considerable knowledge of Indian pathology from hospital, dispensary, and private experience. The vital statistics of troops and prisoners are registered with great accuracy, and are thoroughly reliable. As regards troops, the disturbing elements of selection and elimination render comparisons with civilians and prisoners difficult, but the following conclusions are fairly deducible from the figures: (1) Tuberculous disease is rather more common among European troops serving in India than in the home army; (2) a considerable diminution of the incidence and mortality of tuberculous disease has taken place in the European army of India as well as at home; (3) tuberculous disease is less common in the native than the European army of India; (4) there has been no diminution of prevalence in recent years; (5) the disease is more prevalent among certain sections of the native army, especially Goorkas and Dagras, inhabitants of the lower Himalayas; (6) tubercle is more than twice as fatal among the Indian prison population, which comprises a considerable proportion of aged persons; (7) the disease appears to be on the increase in prison. Thus it appears that the infection of tubercle is rife in India, but that on the whole conditions are unfavourable for its propagation, especially among the native population. When contracted, however, the disease makes rapid progress. Dr. Crombie gives a very instructive summary of the circumstances which accounts for the rarity of scrofula and phthisis among natives. He points out that tuberculosis is rare in cattle, that natives do not eat beef, boil milk, and convert butter into *ghi*; that Mohammedans, who are meat eaters, feed mainly on goats, which are refractory to tubercle; that natives live and work mostly in the open air, freely exposed to sun and air; that

children are mostly suckled by their mothers; that respiratory diseases are less common than in cold countries, and the exanthemata milder; and that generally the habits and environment of Indians are less favourable to tuberculous infection than those of Europeans. The measures required to prevent tuberculous disease in India are therefore less radical and complicated than in Europe. It is evidently in barracks and gaols and perhaps in cities that such measures are principally demanded, and in view of ascertained facts the avoidance of overcrowding, free ventilation, and exposure to the sun, warm clothing, the segregation of the sick, and destruction of sputa and soiled clothing in all institutions and houses where human beings are massed togethers are imperatively indicated.

LEICESTER AND LOCAL GOVERNMENT.

THE Leicester Board of Guardians has for some time been engaged in a controversy, first with the Local Government Board, and now with the High Court, as to what the duties of vaccination officers are under the Vaccination Acts. The issue of this controversy promises to be unfavourable to the Leicester Board, and it recently invited a conference in its city of the representatives of local authorities with the express object of maintaining the rights of local self-government, and obtaining additional powers of administration and control by Boards of Guardians and local authorities. But, whilst this was the expressed object, it soon became evident when it assembled that the real motive was the ventilation of the special grievance of which the Leicester guardians have constituted themselves the champions, the control of the vaccination officer. The chairman of the meeting, a local alderman, made a praiseworthy effort to start the discussion on what may be called a non-vaccination basis by some remarks on the benefits of local self-government; but though he was seconded in this effort by subsequent speakers—whose suggestions, by the way, were not favourably received by the audience—the vaccination officer persisted in intruding himself in most of the subsequent speeches, and it soon became evident that the "additional powers" of which the conference was in search were wanted to control that official. The rest of the speeches oscillated between protests from well-known antivaccinists against what one speaker designated the "iniquities of the Local Government Board," of which he alleged that the vaccination question is a "concrete specimen," and vague generalities on the attractive subject of red tape, as employed by the Central Board to tie the hands of earnest reformers. The two local members of Parliament, who, as in duty bound, put in an appearance at the conference, attempted to raise the discussion to a somewhat higher level, and Mr. Broadhurst especially gave the conference some useful advice as to the difficulties before them; but the wheel soon got back into its congenial rut, and eventually, after a somewhat halting decision to form an association for "maintaining the rights of local self-government," which might at this time of day be thought to be well able to maintain themselves, an unsuccessful effort was made by an unnamed lady to steal "a congratulatory vote" to the Leicester guardians for "the noble stand they had made on the vaccination question." A second and less ambiguous attempt to whip up enthusiasm on behalf of antivaccination generally and the Leicester guardians in particular was made in the shape of a subsequent conference at Leicester, at which most of the leading antivaccinists were present, with Dr. W. J. Collins as chief spokesman. In the course of his speech he protested against the alleged inconsistency of the Local Government Board in obtaining a *mandamus* in 1875 against the Keighley Board of Guardians for refusing to instruct their vaccination officer to prosecute whilst they now denied that guardians had the power to direct or control this officer. There are few who have had any experience of local administration who will not feel some sympathy for any well-intentioned and unbiassed effort to introduce a little more plasticity into its procedure. There is quite room for more freedom of action for local authorities than they at present possess. As Mr. Hazell, M.P., well put it, "In all social reform local authorities could do a great deal more than they did, but they should have more power of initiative than they had at the present time; they should have power to experiment, even if by so doing they lost money at it." But whilst this expresses very well the general feeling of all progressive politicians on this subject, the difficulty is to see how this principle can be put into practical shape except by the procedure at present employed. Few, we fancy, would be found to advocate that local authorities should be allowed to expend without any control the rates they levy from the public. Central control of some kind is indispensable, especially in the case of bodies like Boards of Guardians, which are so amenable to misleading influences. The curious thing is that at these conferences, apart from the case of the vaccination officer, no illustration of serious objectionable control on the part of the Local Government Board, whether "concrete" or otherwise, was cited. A few instances of what may not unreasonably be called fussiness in trivial matters were, it is true, referred to which might have caused annoyance at the time, but which cannot be said to have in any degree interfered with any real efforts at reform. Indeed, a representative of Wolverhampton made the important admission that they would not be united if they pressed the question of vaccination. A great deal had been said about the opposition of the Local Government Board, but he could prove in a few words that the Local Government Board had done a good deal for the people. It had been the best friends of the poor people, and had protected paupers in the workhouses of the country against the tyranny of the guardians and officials. The fact is, and it is as evident as the sun at noonday to anyone who is not determined not to see it, that the whole agitation in its present shape is raised to further the agitation against vaccination. As one of the less cautious speakers at the conference blurted out, "Vaccination had been the cause of the conference, and vaccination would have to settle this question." With such a taint so plainly permeating it, there should not be much chance that any local authorities except those which have already been captured by the League will be inveigled into joining this movement.

SOCIETY OF ANÆSTHETISTS.

THE annual meeting and dinner of the Society of Anæsthetists took place on October 20th at the Café Monico. It was resolved that in future there shall be a Vice-President of the Society, and that the annual meeting shall take place at the close of the ordinary business on the last meeting of the session, instead of being held just before the annual dinner. At the annual meeting the President, Dr. Dudley Buxton, mentioned that the second volume of the Society's *Transactions* was ready for distribution. The Council's report noted the deaths of three members, Mr. G. H. Bailey, Dr. S. B. de Butts, and Mr. Joseph White. The report of the Treasurer was read by Mr. Eastes. The following gentlemen were elected officers and members of the Council for the ensuing year:—*President:* Dr. J. F. W. Silk. *Treasurer:* Mr. George Eastes. *Elected Members of Council:* Dr. Dudley Wilmot Buxton, Mr. Robert Turle Bakewell, Mr. W. J. Stephens (Brighton). *Secretaries:* Mr. E. H. Grant Morris, Dr. R. J. Probyn-Williams. *Auditors:* Mr. H. P. Noble, and Mr. H. J. Pechell (Merthyr Tydfil). At the dinner the new President (Dr. Silk) presided, being supported by Mr. Watson Cheyne, Sir R. Douglas Powell, Bart., Dr. Poore, Mr. Doran, and about 80 other ladies and gentlemen, members or guests. The toast of "The

Society of Anæsthetists" was proposed by Sir R. Douglas Powell, and Dr. Silk responded. Dr. Dudley Buxton proposed "The Visitors." They should, he said, drink that toast with extra enthusiasm on this interesting occasion, when their Society had "taken silk." It was due, indeed, to the good work done by Dr. Silk in its earliest days that the Society had attained its present vigour. Dr. Poore said he had come to dine with anæsthetists, and had found everything quite æsthetic. The feast of reason and flow of soul and music were very good old anæsthetics; few things were more calculated to make one forget one's troubles. Mr. Doran also spoke. Mr. Eastes proposed "The Health of the late President," and of "The Retiring Secretary," to which Dr. Buxton and Mr. Turle Bakewell responded.

THE *SCOTTISH MEDICAL AND SURGICAL JOURNAL*.

We understand that a limited liability company has been formed "for the purpose of taking over and placing on a permanent basis the journal known as the *Scottish Medical and Surgical Journal*." This journal was founded in the autumn of 1896 by certain members of the medical profession in Scotland, who guaranteed for a period of three years the capital necessary for establishing and carrying it on. It is proposed to raise the necessary working capital (over and above the price which is to be provided out of the ordinary shares, of which there are 1,000 of £1 each fully paid) by the issue of 200 £5 preference shares, which shall have a claim to a non-cumulative preferential dividend at the rate of 5 per cent. per annum. It is not proposed at present to call up more than 30s. on each of the preference shares. The preference shares are offered for subscription. The total capital of the company is meanwhile fixed at £2,000. The directors are members of the medical profession in Edinburgh, Glasgow, and Aberdeen.

THE PRIMATE ON MEDICINE.

The annual distribution of prizes at the St. George's Hospital Medical School took place in the Board Room of the hospital on October 25th. The Archbishop of Canterbury presided, and presented the successful students with the awards after the Dean (Dr. Isambard Owen) had announced the names. Addressing himself to the students present, the Archbishop said that there could not be too much said in the praise of their profession and in earnest exhortation to make their studies worthy of it. The difference which had been made by the perpetual advance of science between the lives men lived now and the lives led by their forefathers, not very long ago, was enormous, and the duration of life was slowly increasing because of the progress in the studies which bore on medicine, a progress so rapid and so sure that he was tempted now and then to entertain a little doubt as to whether the art of medicine was as successful as the science of it. He did not feel quite certain that in all cases the medical man always did quite right; but he was quite certain that if all the suffering and all the practice applied to this suffering by medical science and medical skill were considered as a whole, there could not be the slightest doubt that the blessings which medical science conferred on humanity were such as to rank with the very highest of all benefits that could be bestowed on man. Most scientific discoveries in medicine had come from persistent endeavour to really understand the human body, and where accident had helped study, and where it had seemed that it was no longer science that was carrying on the splendid work, even in those cases it was always found that the discovery itself turned upon previously-acquired knowledge; it was discovered by accident, but the accident which revealed it would not have done so had not the observer had sufficient training to recognise the revelation. If a man used his brains as he ought to use them he would be gaining not only knowledge, but the power of using knowledge, a power that a man acquired by keeping his mind open while he was practising. A medical man who thought he knew all that could be taught was really beginning to go back and to lose ground, because science was ever going forward; and further, he was losing ground within himself, for he was gradually failing in that keen perception which once was with him. Mr. Timothy Holmes proposed a vote of thanks to the Archbishop, which was seconded by Mr. John Shaw Stewart, who said that the outside public had a limited view in regard to the duties of a hospital with a medical school attached. Besides relieving the sick, such an institution had to do a greater work in training the coming generation of medical men in an efficient manner, thus benefiting the whole community. Dr. Ogle having addressed the meeting, the proceedings terminated.

THE ENTRIES AT THE MEDICAL SCHOOLS.

According to the returns published last week, for which we are indebted to the officers of the medical schools and colleges in London, it appears that the total number of students newly entered for the full curriculum at the medical schools in the metropolis, excluding the London School of Medicine for Women, is 536. This is exactly the same number as in 1898, but compares with an entry of 502 in 1897. The average for the previous five years 1892-96 was 561, and for the five years 1887-91 was 653. The number of new students this year at the London School of Medicine for Women is 17, as compared with 46 last year and 28 in 1897. The new undergraduates at Oxford University who have entered for the study of medicine number 30.

THE SCIENTIFIC WORK OF DUCHENNE.

M. Brissaud gave an interesting sketch of the scientific work of Duchenne of Boulogne in an address delivered at the meeting of the French Association for the Advancement of Science, at Boulogne last month. Three years ago a small monument was erected at the Salpêtrière in memory of Duchenne, who lived and worked there during the most fruitful period of his scientific career. Duchenne never made a great noise in the world; he was essentially a modest and scientific worker. Duchenne at first applied electricity to all cases of paralysis alike; it was only later that he discovered the limitations of its use not only in the treatment but also in the diagnosis of a large number of nervous diseases. The therapeutic use of electricity had, before Duchenne's time, been limited to the administration of discharge from the Leyden jar. It was thus that Hermann Klyn is said to have cured in 1746 a paralytic of two years' standing. In 1826 the surgeon, Leroy d'Etiolles, conceived the ingenious idea of treating intestinal obstruction by the galvanic current, and a few years later Récamier and Pravaz, availing themselves of the galvano-cautery, used that instrument for the arrest of hæmorrhage. But so much quackery sprang up around the employment of electricity that a man who proposed electro-therapeusis in almost any form was speedily regarded as a charlatan. It was the good fortune of Duchenne that he should have met with such colleagues as Claude Bernard and Trousseau, Nélaton and Broca, Vulpian and Charcot. His discoveries in connection with the local application of electricity to excite contraction of individual muscles, and of the undoubted therapeutic value of the current in promoting the restoration to function of partially paralysed peripheral nerves and partially wasted muscles were eagerly followed up and adopted in practice. Duchenne's teachings bore fruit, and the field in which he did such pioneer work was further cultivated and extended by Charcot and his pupils. For more than twenty years Duchenne worked and perfected this branch of therapeutics. In 1855 he announced for publication a work on the anatomical points (points of

election) where the rheophores should be applied to produce the most distinct effects of individual or combined muscular contraction. This was carried out by him to a wonderful degree of minuteness as far as the facial muscles were concerned, and in his publication entisled *Analyse Electrophysiologique de l'Expression dans les Passions*, the first great instalment of the completed work was given to the world. Other important communications had prepared the way for this work -for example, a communication in 1850 to the Academy of Sciences on "the functions of the facial muscles demonstrated by localised electrification," and a valuable atlas with plates illustrating the anatomical facts. Duchenne also maintained the existence of myopathies, a doctrine which modern research has confirmed. He also described the well-known "progressive muscular atrophy" of the Duchenne-Aran type. He was, as stated by Erb, the "founder of modern electrodiagnosis and electrotherapy."

SERUM THERAPEUTICS.

FEW subjects are attracting more attention at the present time than the application of prophylactic and curative serums in various diseases. The discussion on Serum Therapeutics and Antitoxin Treatment, introduced by Dr. Heron at the meeting of the Medical Society on October 9th,[1] has excited great interest, and next Wednesday Dr. Herman will read before the Obstetrical Society notes of two cases in which life appeared to have been saved by antistreptococcus serum. An active discussion is expected on this subject, so important to obstetricians. A very important report on the value of antistreptococcic serum in the treatment of puerperal infection, by a Committee of the American Gynecological Society, appeared in the September number of the *American Journal of Obstetrics*.

THE SWAMPS OF THE DOMBES.

THOUSANDS of tourists on their way to Switzerland pass through the railway station of Bourg, capital of the Department of the Ain. There they are within a few miles of a district of which few of them have ever heard the name. Water-colour painters and other artists have, on the other hand, depicted the atmospheric effects seen in that district under different natural conditions. "The Dombes at Sunrise," "The Dombes at Sunset" figure in French picture books. But the Dombes lie close to Lyons, and include a wide tract of country full of shallow ponds, swampy everywhere, and very unhealthy. A Bill for its complete desiccation is under preparation. The Société Nationale de Médecine de Lyon has devoted several meetings to this question, on which its members are specially competent to speak. The matter seems simple to the foreigner who glances at the discussions published in the *Lyon Médical*. Surely the only difficulty to settle is the cheapest, and at the same time most efficient, way of draining the country. Unfortunately, on careful scrutiny of the published reports, we find that there are persons in the Dombes who look upon the swamps as beneficial, and desire that instead of being drained, they should be increased till they attain their former extent ere the much-abused Louis Napoleon's Government compelled a railway company to desiccate a large area along one of their branch lines. The Dombes were very fertile in the Middle Ages, but, owing to civil wars in the thirteenth and fourteenth centuries, the district fell out of cultivation, and for want of embankments the numerous brooks and rivulets overflowed into its low-lying meadows. The Dombes remained for centuries a byword. At length, during the Revolution, the Convention issued an edict in its usual flowery and ferocious language, commanding the desiccation of all swamps in France by the landowners under the usual penalty so freely enforced in those days. The Dombes did not profit, because there were not nearly enough hands available for such a task, and as all the landlords had run away there was nobody left for decapitation. After two generations of peasants had lived exposed to malaria, 4,000 hectares of swamp were drained between 1853 and 1858, but 15,000 hectares remained to be dried up. In 1863 permission was granted for the construction of a line from Bourg to Sathonay on condition that the company drained 6,000 hectares. This agreement worked perfectly. The medical faculty at Lyons agree entirely with the promoters of the new Bill; they have shown that the objections to it are based on pure hypothesis, and stimulated by a mere love of opposition, and that nothing but good can result from the perfect desiccation of the Dombes.

[1] BRITISH MEDICAL JOURNAL, October 14th, p. 1018.

MEDICAL LEGISLATION.

A NEW Act has just come into force in the Colony of Natal, regulating the practice of medicine and surgery, of dentistry, of pharmacy, and of veterinary surgery. It is interesting to note that, like many of our colonies, Natal has departed from the precedent set in the Medical Acts of the home country, and deals boldly not only with the assumption of medical titles, but with the act of practice. The penalties for infringement are heavy, and it is evident that our Colonial Legislatures are much more courageous and more in earnest in endeavouring to prohibit unqualified practice than are our own Houses of Parliament.

THE BERLIN CONGRESS ON TUBERCULOSIS.

THE *Transactions* of the Congress for the Prevention of Tuberculosis held in Berlin last spring has just been published. The volume, which consists of 855 pages with 16 plates and several plans, has been prepared under the editorship of Staff-Surgeon Major Pannwitz, General Secretary of the Congress, and is issued under the auspices of the German Central Committee for the Establishment of Sanatoria for Lung Diseases.

THE first meeting of the Royal Medical and Chirurgical Society for the session will be held on Tuesday, November 14th, at 8.30 P.M., when a discussion on the Open-air Treatment of Tuberculosis will be opened by Dr. J. Kingston Fowler.

A NEW physiological institute was opened in the University of Vienna on October 16th, in the presence of the Minister of Public Instruction, the Rector of the University, and nearly the whole body of the professors of the Medical Faculty. Professor Exner delivered a discourse, taking as his text the words *Doctrina artis fundamentum*, which form the inscription over the main entrance of the institute. The new institute, which is attached to the Chair of Histology, is spacious, and all the installations are on a scale adapted to the requirements of modern scientific teaching.

THE twenty-eighth annual report of the Local Government Board for 1898-99 has been issued.[1] The report contains comprehensive particulars of the multifarious work done by the Local Government Board, with the exception of the work of the medical department, which, as usual, will be embodied in a separate volume. The present volume merely gives a short summary of the proceedings of that department.

[1] To be obtained at Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C., and Westminster, S.W.; or John Menzies and Co., 12, Hanover Street, Edinburgh, and 90, West Nile Street, Glasgow; or Hodges, Figgis and Co. Limited, 104, Grafton Street, Dublin. Price 1s.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Autumn Session is, after all, to be a complete session in itself. The Attorney-General has even introduced a Bill to explain it. This when passed will be called "The Second Session (Explanation) Act, 1899, Session 2." This was necessary in order that the words "next ensuing session" in Acts already passed this year should refer to the session to be opened in 1900. The original intention of the Government was to make this session the commencement of a session to be continued next year. This course would have saved the necessity of a second Queen's Speech, but would no doubt have led to a prolongation of the debates in this autumn session. Members ventilate the grievances of their constituents and make demands for legislation on the answer to the Speech from the Throne, and if this opportunity had been lost for the meeting after Christmas, it would of course have been used now. In the interests of the economy of time and debate, the Leader of the House acted wisely. This was proved by the carrying of the Address on Thursday night and the consequent collapse of speech-making in the subsequent sittings. The Chancellor of the Exchequer's statement on Monday that there would be no new taxation contributed also to the progress of business, and the sittings will be closed on this day (Friday).

Muzzling Orders.—The President of the Board of Agriculture is so satisfied with the results of his policy of muzzling that he has decided to withdraw the muzzling order for London and also for Lancashire on October 27th. Rabies is practically stamped out now in England, and the main danger of its recrudescence comes from imported dogs.

Venereal Diseases in the Indian Army was the subject for question on Monday, when the Secretary of State for India was able to announce that the admission rate for these maladies was 363 per 1,000 in 1898, against 486 in 1897, 511 in 1896, and 522 in 1895. This is a considerable decrease, and is the more gratifying because the new cantonment rules, to which it is in doubt mainly due, had not fully come into operation at the time when the return was made. The rate was lower in 1898 than in any year since 1887, and the figures of 1898 show a greater reduction on those of 1897 than has ever been recorded in any previous year. The Secretary of State admitted that they are still sadly high, and hopes to see them much reduced under the present system.

State Inebriate Reformatories.—The great inconvenience which has been caused to magistrates desiring to send habitual drunkards to reformatories instead of prisons was the subject of a question to the Home Secretary, who is making inquiries as to particular cases. He was able to state that there would be at least one reformatory ready for the reception of males, and that he had abandoned the project of adapting a portion of one of Her Majesty's prisons as a temporary State reformatory. The cases which had been before magistrates, Sir Matthew White Ridley seemed to think, were as well qualified for committal to a certified reformatory, of which he said there were now several in existence, as to a State reformatory. He still hesitates to establish a permanent State reformatory, and consequently all persons interested in the working of the Inebriates Acts will have to rely on the certified institutions.

Civilian Medical Aid in the War.—The Under-Secretary for War, in answer to Sir Walter Foster, made an interesting statement on Tuesday to the effect that the Army Medical Staff in South Africa has been supplemented by the employment of 56 civilian surgeons and 11 nurses of the Army Medical Nursing Reserve. The civilian surgeons will receive £1 a day, with a horse, and the allowances of a captain. On the conclusion of their service they will be entitled to a gratuity of two months' pay. A nurse will receive £40 a year, with allowances, and a gratuity of £20 on cessation of duty. The Under-Secretary also said he was glad to take this opportunity of announcing that Sir W. Mac Cormac, the distinguished President of the Royal College of Surgeons, had intimated to the Secretary of State his willingness to proceed to South Africa with Sir Redvers Buller's Field Force, and to place his unrivalled skill and experience at the disposal of the sanitary authorities. He added that the Government had not hesitated to accept this generous and patriotic offer, and would probably arrange that he should have the assistance of two specially selected civil surgeons. The House received the announcement of Sir W. Mac Cormac's offer with a most expressive cheer, and emphasised its feeling again when the Under-Secretary stated the intentions of the Government. This question of supplementing the provision for the care of the wounded by employing civilian medical aid more than once cropped up in the discussions on the Army Estimates, and was especially pressed by Mr. Dillon. It was also elicited in the discussion that the Indian contingent had been instructed to leave Mark IV ammunition behind, and had been supplied with other ammunition.

The Irish Dispensary Medical Officers and their Holidays have been the subject of questions to the Chief Secretary during the last week. The Local Government Board in Dublin appear to have held that a four weeks' holiday was not an unreasonable relief from very arduous and continuous duties. Some of the Irish members have raised the difficulty that this would entail considerable expense on local authorities for the payment of substitutes, and the matter will no doubt be carefully considered by the central authority. The Chief Secretary seemed from his reply to consider the holiday none too long, and it is to be hoped that the matter will be settled so as to prevent any friction between the local authorities and the Local Government Board, and at the same time to ensure sufficient rest for a class of public officials who have very laborious and very constant work to perform under conditions of great responsibility.

THE REMUNERATION OF MEDICAL WITNESSES IN CRIMINAL CASES.

The following letter by Mr. Andrew Clark, Treasurer of the British Medical Association, and Chairman of the Committee appointed jointly by the Council of the British Medical Association and by the Police Surgeons' Association, was published in the *Times* on October 20th:

TO THE EDITOR OF THE *TIMES*.

Sir,—On January 19th, 1895, you published in the *Times* a report of a deputation from the United Kingdom Police Surgeons' Association to the Home Secretary, dealing with the above among other important matters, which, as the then Home Secretary, the Right Hon. H. H. Asquith, admitted, were of considerable importance not only to the medical profession but to the public.

In his reply to the deputation, Mr. Asquith is reported in the *Times* to have said that:

"The main grievance of the deputation appeared to be that affecting the remuneration of medical witnesses. Now, the scale upon which doctors and all other professional witnesses were at present paid for attendance at court was fixed as far back as 1858, and in all substantial respects it had remained undisturbed up to the present time. He did not say that this was conclusive evidence of the convenience or justice of the scale, but the fact showed that a number of successive Secretaries of State who had held office had been afraid to burn their fingers by touching it, and he was disposed to imitate their prudent example. He agreed with the speakers that the remuneration of a guinea (a day) for such duties was altogether inadequate, if they were to look upon the remuneration paid to witnesses as indemnifying them for the loss in time and money which their attendance at courts of law involved. The same remark might be applied with a greater or less degree of truth to every item in this scale as applied to every professional witness. If it were true that it was a condition of the medical profession to attend courts in a sense which could not be said of other witnesses, then the logical conclusion, to his mind, was not that this scale of remuneration, which was fixed by the Secretary of State for the whole of the profession, should be altered, but that medical men in their arrangements with their employers, the Watch and Joint Committees, should endeavour to get this circumstance taken into account by these bodies in fixing the remuneration of police surgeons, and they should be asked to make a provision which would supplement the inadequate payment prescribed by the scale."

It will be evident that Mr. Asquith's "logical" mode of dismissing the subject by suggesting that A. should be asked to overpay police surgeons for his part of their work because B. was in the habit of underpaying them for work done for him, even if it had been satisfactory to the police surgeons, which it was not, would still leave the injustice to other medical witnesses unremedied, and as a matter of fact complaints have continued to be made, year by year, by police surgeons and others, both in the *Lancet* and the British Medical Journal, the organ of some 17,000 members of the British Medical Association;

Last year the Council of this latter Association prepared a memorial for presentation to the Home Secretary, and asked that a deputation might be received on the subject; but their request was refused, as a similar request to Sir Matthew White Ridley from the Police Surgeons' Association had also been in 1896. Consequently a Joint Committee of the two Associations had this year been formed, and they find that the matter now stands thus:

1. A substantial grievance is acknowledged by the Home Office to exist in the inadequate payments made to medical witnesses in England who are compelled to leave their practices sometimes for a week at a time, and stay in an assize town for the purpose of giving evidence on behalf of the Crown.

2. The same injustice is not done to medical witnesses either in Scotland or Ireland, the arrangement in Scotland being that a doctor called by the Crown receives £2 2s. a day with one day added on, so that he gets £4 4s. for one day, £6 6s. for two days, and so on. In Ireland the instructions given by the Attorney-General to the Crown solicitors are that, when a medical witness is summoned to attend at sessions in the town in which he resides, the usual fee of one guinea is to be paid. If he be detained in Court more than three hours an additional fee of one guinea is to be paid. When summoned to attend from any other town two guineas a day, with travelling and hotel expenses, are allowed. What our Joint Committee asks is that in England two guineas a day should be the fixed allowance, with first-class railway fare when the witness comes from a distance. In the Isle of Man it appears that, though the medical practitioner who gives evidence before a coroner appears to be entitled under the Coroners' Act, 1887, to a fee of a guinea, he only gets 15s. 6d., and though the deputation to the Home Office in 1895 was promised that this should be remedied it has not yet been done.

3. The repeated refusal of the present Home Secretary to receive a deputation where these matters could all be fully gone into renders it necessary to invoke the powerful aid of the Press, so that an acknowledged injustice may not be perpetuated until successive Home Secretaries are no longer afraid of burning their little fingers.—I am, yours faithfully,

ANDREW CLARK,
Chairman of Joint Committee of British Medical Association and United Kingdom Police Surgeons' Association.

British Medical Association, 429, Strand, W.C., October 13th.

THE LONDON CLEARANCE SCHEMES.

NEARLY the whole of the sitting of the London County Council this week was consumed by the discussion of a report of the Housing Committee, of which Sir John Dickson Poynder is chairman, submitting four schemes for the clearance of insanitary areas under Part 1 of the Housing of the Working Classes Act. Councillors were evidently determined to resolutely deal with the problems raised, and with only three or four dissentients the schemes involving a gross cost of £600,700, or allowing for recoupment, a net cost of £500,900 received the assent of the Council.

The boldness of Councillors was the more obvious in view of a report presented by the Finance Committee, which reminded the Council of the capital charges amounting to 12½ millions of money already incurred on behalf of improvements.

Few are probably aware of what has already been done in the matter of housing the working classes and the routing out of rookeries in the metropolis. A few figures will serve to show the magnitude of the housing enterprise on which the Council has already embarked. Thus the area at Boundary Street, the clearance of which was undertaken by the first Council in 1890 has already cost £251,185. A return recently made shows that there are now works in progress of construction which have for their sole object the housing of persons earning weekly wages, the contract sum for which is £140,804. Again, the following schemes have been approved by Government departments, and the drawings are already in hand:

Gainsborough Buildings, Millbank	£20,894
Laurence and Maclise Buildings, Millbank	28,354
Landseer and Mulready Buildings, Millbank	24,724
Reynolds Buildings, Millbank	19,880
Morland and Wilkie Buildings, Millbank	29,290
Wellesley Street, Churchway, St. Pancras	20,147
	£143,298

There are in addition some works estimated by the architect to cost £87,062, but which have not yet been sanctioned by the Government Departments.

Of the four schemes approved this week, those acquainted with the slums of London will agree that the Council has scheduled some of the very worst specimens.

In St. Luke's district the miserable courts off Honduras Street, Lever Street, Roby Street, and Baltic Street have long needed such reconstruction as can alone be carried out by a powerful central body acting on behalf of the whole of London animated with a strong and liberal policy. Some 1,193 persons will be displaced, and 1,256 can be rehoused upon the cleared sites.

In Holborn, Aylesbury Place and Union Buildings, abutting on St. John Street, which have been before the Council for some nine years as hopelessly insanitary, have been singled out for demolition. Some 1,400 will be displaced, but it is satisfactory to find that even when sanitary dwellings have replaced the existing courts and alleys, the same number will be accommodated on the spot.

In Southwark the areas represented by Dr. Waldo, the active Medical Officer of Health for the district, have been under consideration. The areas known as Webber Row and King's Bench Walk, with some 903 inhabitants and a death-rate of considerably over 30 per 1,000, are to be cleared by the Council at a cost of £187,950, but another area known as Grotto Place, is, we understand, omitted, although it formed part of the representation made by the medical officer. The reason assigned for the omission is that the death-rate here is 18.9 per 1,000 only, while that of the district generally is 24 per 1,000. It may be that a death-rate on so limited an area affords but little criterion as to its insanitary condition, and from information we have received we believe the area, in consequence of its ill-arranged alleys and courts, will require a scheme for its amelioration. But Southwark has received a fair share of consideration, and the Council must exercise a comparative survey of the needs of all parts of London in deciding upon schemes the cost of which will fall upon the London ratepayers generally. Accommodation for no fewer than 1,750 persons will be available on the remodelled Southwark sites.

Dr. Alexander represented that areas in Poplar contained back-to-back houses, old and damp and unfit for human habitation. The 114 persons to be displaced will be rehoused in buildings already provided by the Council, and the cost of the scheme will be £16,500.

We congratulate the Housing Committee, which, we understand, without any party differences has continued upon a forward policy which must redound to a proportionate betterment of the health of the metropolis.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

PORTUGAL.

Oporto.—On October 18th, 5 fresh cases of plague and 3 deaths from the disease were registered in Oporto. Since then fresh cases and deaths have been recorded daily, sometimes more, sometimes less. There is no proof of other cities in Portugal being attacked by plague, although the villages immediately outside the infected city have in many instances a few cases to record.

In Spain plague is greatly feared, but we are glad to learn that the report that plague had appeared at Badajoz is declared to be untrue.

EGYPT.

Alexandria.—The last case of plague in Alexandria occurred on October 1st. Seeing that during September only 3 cases of the disease were recorded, it may be hoped that plague has been got rid of. We are sure, however, that this lull in the disease will not induce the authorities to abate their excellent sanitary measures. We have witnessed with keen satisfaction and appreciation the vigorous fight waged against the disease in Alexandria, and we trust and hope that the efforts so wisely conducted may be rewarded by the disappearance of the disease.

INDIA.

Bombay.—The weekly death-rate from plague continues between 80 and 90 for the city of Bombay. The two last weeks in September showed a recorded death-rate from plague of 94 and 82 respectively, and the first week in October 83. In the Bombay Presidency the death rate from plague averages between 4,500 and 5,100 weekly. In all plague-infected centres there is a slight increase, except in Poona city and in the Belgaum and Surat districts. Last week we had to record the sad death of Miss May Burnett from plague, and now the name of Major Tyler, of the same place, has to be added to the growing list of European deaths.

Calcutta.—The death-rate in Calcutta from plague has increased somewhat. During the first week of this month the fatal cases of plague numbered 57.

Poona.—The wards set aside for Europeans at Poona suffering from plague were full at the first of the month. English children seem to succumb very readily to plague; the adults with a very few exceptions have recovered. The "west end" of Poona—the Queen's Gardens—has been found lately to be infested by rats; dead rats are found everywhere about the dwellinghouses and outhouses.

Belgaum.—At Belgaum the Jains have been giving a great deal of trouble. They will neither submit to inoculation nor to segregation, but pitch a "camp" on ground of their own choosing, which in a short time becomes abominably filthy. Numerous native agitators have accused the authorities of harshness and "murder" in their treatment of the sick. An official inquiry ordered by Lord Sandhurst has pronounced the accusation to be absolutely unfounded.

HONG KONG.

One fresh case of plague and 1 death from the disease is recorded from Hong Kong during the week ending October 23rd.

MAURITIUS.

For the week ending October 19th, 87 fresh cases of plague occurred in Mauritius and 48 deaths from the disease.

BRAZIL.

Santos.—The medical authorities of Santos, a seaport town on the Brazilian coast, about 300 miles from Rio de Janeiro, have been much exercised over the diagnosis of a series of cases of illness closely resembling plague. The majority of medical men affirm that the disease is not plague, but a "pernicious lymphangitis." Three or four deaths have occurred, and the results of bacteriological investigations are being anxiously awaited. Meantime, the governments of Argentina and Uruguay have decreed a ten days' quarantine for arrivals from Santos and five days for arrivals from all other Brazilian ports. We hope the illness recorded from Santos may prove of the nature of the disease which appeared at Asuncion, the capital of Uruguay, and which, apparently, has disappeared. None of the South American seaports are sanitary, even in a primitive sense, and the city of Santos is one of the most filthy places known.

THE NEW VACCINATION ACT IN OPERATION.

PUBLIC VACCINATOR'S ATTENDANCE IN COURT.

ERNEST.—(1) It is within the power of the magistrates to require the attendance of the public vaccinator, and in several cases there has been an adjournment to allow of his appearance.

(2) and (3) There is no fixed fee for giving evidence in vaccination cases. By Section x of the Irish Vaccination Act, 1879, it was enacted that the guardians of any union in Ireland might direct proceedings for the purpose of enforcing obedience to the Vaccination (Ireland) Acts, and the medical officers of the dispensary district who might be required to attend, and did attend, were to receive pay not exceeding a guinea a day.

(4) It would probably not be wise to refuse to give evidence until the fee was paid, as the fee would have to come out of the vaccination officer's pocket in the first instance, and he would have to fall back upon the guardians to refund him the reasonable expenses of the case according to Article 29 of the Order.

THE LYMPH OF THE NATIONAL VACCINE ESTABLISHMENT.

H. (A PUBLIC VACCINATOR) writes: My experience of the lymph of the National Vaccine Establishment does not accord with that of "A. P. V." and Dr. Arthur Heath in the BRITISH MEDICAL JOURNAL of October 21st, and although mine is but a small district I think it only fair to state the results of my work from February 1st to the present date: Out of a total of 99 infants vaccinated from lymph supplied by the National Vaccine Establishment 6 only were unsuccessful, these included 1 infant which was twice vaccinated unsuccessfully, 2 vaccinated from lymph which the day after it had been used I was requested to destroy as it was inert. Of those vaccinated successfully, 57 had four well-developed vesicles, 17 had three, 15 had two, and 4 had one only.

ASSOCIATION INTELLIGENCE.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this Branch will be held at the White Hart Hotel, Lewes, on November 30th. Dr. Fawssett will preside. Members are requested to send notice of papers or other communications to the Honorary District Secretary,—J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of this District will be held at the Gravesend Hospital on Thursday, November 2nd, at 4.15 P.M., Mr. R. J. Bryden in the chair. Agenda: The date, place, and chairman of next meeting. Mr. L. A. Dunn: The Dangers and Difficulties in the Treatment of Strangulated Hernia. Dr. G. Steele Perkins: On Lateral Curvature of the Spine.—LUDFORD COOPER, St. Bartholomew's Hospital, Rochester, Honorary Secretary.

SOUTH-WESTERN BRANCH.—The next meeting of this Branch will be held in the Board Room of the Royal Devon and Exeter Hospital, Exeter, on Tuesday, November 14th, at 4 P.M. Mr. J. Bland Sutton will deliver an address on Cancer Infection in relation to the Surgical Treatment of Cancer. Luncheon (2s. 6d.) will be provided at the Royal Clarence Hotel from 1.30 to 2.30 P.M., and tea and coffee will be served in the Board Room of the Hospital at 3.30 P.M.—H. W. WEBBER, M.S., 4, Woodland Terrace, Plymouth, Honorary Secretary.

SHROPSHIRE AND MID-WALES BRANCH.—The annual general meeting will be held at the Salop Infirmary, on Tuesday, October 31st, at 3 P.M. —HAROLD H. B. MACLEOD, Honorary Secretary, Clive House, Shrewsbury

PERTHSHIRE BRANCH.—The next meeting of this Branch will be held in Perth on November 3rd.—A. R. URQUHART, James Murray's Royal Asylum, Perth, Honorary Secretary.

STAFFORDSHIRE BRANCH.—The twenty-sixth annual general meeting of this Branch will be held at the North-Western Hotel, Stafford, on Thursday, November 2nd, at 4 45 P.M. Business: Introduction of new President (Dr. J. B. Spence); Address by the President; Report of Council and Ethical Committee; Financial Statement; To decide place of holding next annual meeting; Election of Officers and Council for the ensuing year. Dinner at 6.45; charge 5s.—F. MILNES BLUMER, Stafford, General Secretary.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District will be held at the Royal Free Hospital, Gray's Inn Road, on Wednesday, November 8th, at 4.30 P.M. Dr. Morton will preside. Cases of interest will be shown by the staff of the hospital and discussed. The District Committee will meet at 4.15 P.M.—H. J. MACEVOY, Brondesbury, N.W., Honorary Secretary.

NORTH OF ENGLAND BRANCH.

THE autumn meeting of this branch was held at Alnwick, Northumberland, on October 17th, Dr. SAMUEL WALKER (Middlesbrough), President, in the chair.

Visit to Alnwick Castle.—Before the meeting those present were conducted over parts of Alnwick Castle, the history and architecture of which were explained.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

New Members.—Drs. J. H. Hunter and J. White (South Shields), D. F. Todd (Sunderland), A. D. Kelly (Dudley, Northumberland), E. E. Woodhouse (Willington), and J. Leech (Newcastle), were elected members of the Branch.

Communications.—Dr. G. SCOTT JACKSON brought forward:—(1) A case of Leucoderma in a man, aged 30, who exhibited patches of pigment over the face, lower part of abdomen, and to a less extent elsewhere, surrounded by blanched areæ of skin; there were also grey patches of hair over the scalp; the man was very neurotic, and it had been noted that the patches of pigment were more evident after nervous excitement. (2) A woman, aged 47, in whom the symptoms of exophthalmic goitre had gradually given place to those of myxœdema, and for a certain time in the progress of the case the two conditions had overlapped; since the myxœdema had become established thyroid extract had afforded relief. Dr. G. R. MURRAY said that he fully recognised the possibility of such cases occurring, but had not previously seen one. He thanked Dr. Jackson for bringing forward this case.—Mr. H. B. ANGUS showed a man after excision of the rectum for carcinoma; the history had extended over four years; he had removed the coccyx and part of the sacrum, opened the peritoneum, resected the part of rectum involved in the growth, and sutured together the cut ends of bowel by Bardmauer's method, which had the advantage over Kraske's of leaving the anus and sphincters intact. A small sinus left after operation had gradually closed; there was good sphincter action, and the patient had greatly increased in weight. Dr. MURPHY commended this operation and also that of Kraske; he had performed Kraske's operation nine times, in all cases very satisfactorily with one exception, in which the patient had died a year and a-half after operation; the only disadvantage was the involuntary escape of flatus. Some of his cases had now been alive three years after operation.—Dr. G. R. MURRAY read notes on a case of Acute Meningomyelitis, from which pure cultures of a pathogenic diplococcus had been obtained, and showed slides of the spinal cord. The patient after exposure had displayed the signs of an acute myelitis

affecting the lumbar enlargement, and had rapidly developed cystitis and a bedsore. *Post mortem* no cause for the myelitis was found, and the organism described had been discovered and cultivated. Dr. BEATTIE commented on the rarity of primary acute myelitis and on the probability of its dependence upon some micro-organism, but questioned whether all such cases could be ascribed to any one special infection. He thought it difficult in the presence of cystitis or a bedsore to determine the date of invasion by the organism described.—Mr. A. M. MARTIN and Dr. BEATTIE exhibited a Leg showing the late effects of Infantile Paralysis. Mr. Martin explained the deformity, and stated that the marked trophic changes with ulceration of the skin had determined him to amputate in preference to performing arthrodesis. Dr. Beattie described the pathological condition of the limb, in which no trace of muscular fibre remained, the muscles being altogether replaced by fat and fibrous tissue; the history had extended over eighteen years. He compared the deformity and trophic effects in this condition with the late effects of a peripheral neuritis.—Mr. A. M. MARTIN read a paper on the Treatment of Flat-foot.

Dinner.—After the meeting the members present dined together at the hotel.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular general meeting of this Branch was held at the Royal Society's Room, Sydney, on July 28th, Dr. E. T. THRING, President, in the chair. There were 47 members and 1 visitor present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The PRESIDENT announced the election of the following members: Drs. Bray, Simpson, Muller, Harvey, Belli, Broinowski, Caden, and Allen.

Notification of Tuberculosis.—The HON. SECRETARY read a circular from the Municipal Council of Marrickville with reference to the notification of tuberculosis and comments on the same by the editor of the *Australasian Medical Gazette*.

Case.—Dr. GLEDDEN exhibited a patient suffering from Dislocation of Both Bones of the Forearm backwards on the Humerus of three years' standing.

Proposed Alteration of Article 28.—Dr. S. H. HUGHES moved the following alteration to Article 28:

That all members of the Council retire annually, and (subject to Article 42) one-third of them to be ineligible for re-election until the expiration of two years. For the first two years following the passing of this rule, the retiring four Councillors shall be determined by ballot, and thereafter the four senior members to retire.

This rule to come into force at the next election. Dr. O'REILLY seconded the motion. A discussion ensued, in which Drs. QUAIFE, HANKINS, CLARENCE READ, CRAGO, WEST, TODD, WORRALL, THRING, GORDON CRAIG, MACDONALD GILL, BOWMAN, GOODE, and CHISHOLM took part.—Dr. MILLS proposed an amendment:

That the alteration in the Article be made to exclude the Hon. Secretary and Hon. Treasurer.

The PRESIDENT ruled the amendment out of order.—Dr. SINCLAIR GILLES moved an amendment:

That the number to retire annually be one-fourth instead of one-third.

Dr. READ seconded the amendment.—Dr. HUGHES accepted the amendment.—The PRESIDENT then put the amendment and the resolution to the meeting. They were both negatived.

NORTH WALES BRANCH.

THE autumnal intermediate meeting was held at Llanrwst on September 29th, Mr. W. JONES MORRIS, President, in the chair.

New Members.—Messrs. J. S. Mathews (Machynlleth) and Thomas Morris (Llanidloes) were elected members of the Association and Branch, and Dr. G. W. Kendall (Holyhead) of the Branch.

Vote of Thanks.—Dr. LLOYD ROBERTS proposed and Dr. JOHN ROBERTS (Menai Bridge) seconded a hearty vote of thanks to the President for his generous hospitality in giving a garden party at the recent jubilee meeting, which was unanimously passed and cordially responded to.

Inebriates Act.—Dr. LLOYD ROBERTS read a paper on this subject which gave rise to a general discussion in which great importance was attached by many members to the care and detention of the well-to-do inebriate, and it was unanimously resolved:

That this Branch regards as an urgent matter the condition of the inebriate both to himself and to society, and would bring before the county councils of North Wales the necessity of providing accommodation in an inebriate home without delay.

Communications.—Dr. W. MICHAEL WILLIAMS (Penmachno) read a paper entitled Notes from Country Practice, in which he detailed an account of two epidemics of diphtheria in his district, pointing out the sanitary defects now to be remedied by the expenditure of a large sum, although the authorities had been warned by the Local Government Board of the risks they ran, but were not convinced till the epidemic had run its course and many valuable lives lost. Dr. Williams's description of the epidemic in all its relations was vivid and practical, and his paper gave rise to an interesting discussion on the many aspects of the disease and its treatment, and was warmly thanked for his valuable contribution.—Dr. ROGER EDWARDS (Colwyn Bay) read a paper on Pleural Effusion Treated by Aspiration, founded on twenty-five years' experience.—Dr. WM. ALEXANDER read a paper on a case of Sloughing of Extrauterine Fœtation Sac and of the Pelvic Peritoneum, in which the cavity was opened and drained, and after much difficulty and unremitting care the patient was entirely restored.

Excursion.—Prior to the meeting, Dr. J. Evans Jones accompanied the members to the ancient parish church of Llanrwst, pointing out the objects of antiquity and interest connected with it; afterwards, by permission of the Earl of Carrington, he conducted them over Gwyder Castle, and after the meeting he displayed many Roman relics in his possession found in the neighbourhood, and showed some valuable old books of an early period bearing on the history of the neighbourhood and its inhabitants.

Luncheon.—The members lunched together prior to the meeting.

SPECIAL CORRESPONDENCE.

EDINBURGH.

Opening of the Medical Schools: Historical Address by Professor A. R. Simpson.—Address by Dr. Ballantyne on the Life of Dr. Elizabeth Blackwell.

IN opening the class of midwifery and the diseases of women and children on October 17th, Professor A. R. Simpson gave as his introductory lecture the History of the Chair of Midwifery in the University of Edinburgh. February 9th, 1726, was, he said, a notable day in the annals of medicine in the University of Edinburgh. On that day the patrons (the Town Council) complied with the request of Drs. Sinclair, Rutherford, Innes, and Plummer, to have the theory and practice of physic and chemistry taught in the University, and thus constituted the medical school and faculty. At that same sitting the University was for the first time authorised by the patrons to confer degrees in medicine. Thirdly, on that same day

On the petition of Mr. Joseph Gibson, Chirurgeon in Edinburgh, with a declaration under the hands of four doctors of medicine, setting forth the usefulness and necessity of instituting a profession of midwifery; as also an extract of an Act of the Incorporation of Chirurgeons, showing their approbation of the qualifications and capacity of Joseph Gibson, one of their number, for teaching the said art and science; they were fully convinced that it would be of great use and advantage to institute this profession, and being well satisfied with the ability and capacity of the said Joseph Gibson to discharge that office, they were of opinion that the Council should nominate and appoint him to be Professor of Midwifery in this city and privileges, with power to him to profess and teach the said art in as large an extent as it is taught in any city or place where this profession is already instituted; and that he should be vested with the same privileges and immunities that are known to appertain to a Professor of Midwifery in any other well-regulated city or place; but that it should be expressly provided that he should have no fee or salary from this city out of its patrimony or revenue on account of his said profession.

The Council minute goes on to ordain that henceforth no one is to presume to enter on the practice of midwifery (except such as have been actually bred to chirurgery) till once they present to the magistrates a certificate, under the hands of at least one doctor and one surgeon, who are at the time Members of the College of Physicians or Incorporation of Surgeons, whereupon a licence signed by four of the magistrates should be given. It was also enacted that all midwives

of the city should register their names in a book to be kept by the magistrates' clerk. The contraveners were to be liable in pains and penalties, and were to be prosecuted by the fiscal of the Court at the town's expense. The Town Council thus established the chair without endowing it, and the minute showed that the practice of midwifery was then mainly in the hands of irresponsibile women. Professor Simpson then discussed the question of accoucheurs *versus* midwives, tracing the history in Scotland and other countries. In the various cities and universities where students or nurses were being trained, the tuition in midwifery was conducted by independent obstetricians, sometimes physicians, sometimes surgeons, or formed part of the instruction given by the incumbents of other chairs. "In London, which was," Professor Simpson remarked, "always anomalous in its provision for medical instruction, there was room, thirteen years later, for the advent of the Scottish country doctor who migrated from Lanark to the great metropolis, and quickly gathered crowds of eager students to the lectures which he gave in his own house (perhaps in Wardour Street, Soho), with its paper lantern over the door, on which was written 'Midwifery Taught Here for Five Shillings.' For though his name is almost a synonymn for the glory of British midwifery, William Smellie was only a private practitioner." A professorship of midwifery was not instituted in Paris till a century after that of Edinburgh. It was fitting that Strasburg, first with the printing press, should be first in 1728 on the Continent with a professorship of midwifery. Strasburg was then a French city, and the man who was to occupy the first distinctively obstetric chair in Germany was only born there in May 1726, the year in which the Edinburgh chair was instituted. It was thus not till another generation that Roederer began his brilliant and too brief career in Göttingen. In Holland the work of Henry Deventer, not a professor but a general practitioner, was epoch making. In Amsterdam midwifery was taught for one month in the year by Ruysch, professor of anatomy, who was famous for having collected two anatomical museums, the first of which was bought by Peter the Great for St. Petersburg. In Belgium, Palfyn, who first gave forceps to the world, was Demonstrateur en Chirurgie at Ghent. In Italy Victor Amadeus II, of Piedmont, started the first school for teaching in Turin, in 1728, by setting apart a ward in the San Giovanni Hospital for lying-in women, where midwives should have practical instruction. At Bologna, Gian-Antonio Galli, who in 1717 was appointed professor of surgery, as he had for some time taught midwifery privately; he was nominated by Pope Benedict XIV professor of midwifery in 1757. He was succeeded in his chair by the ill-fated Salvani, illustrious in quite other spheres that that of obstetrics. It was a bold step and a great one for the Town Council of Edinburgh to establish a profession in midwifery in 1726, since Bower, concurring with a pamphleteer of the day in his statement that "the practice of midwifery in Scotland was completely engrossed by females," and in which, writing in 1817, he could add:

> The profession of an accoucheur was esteemed, little more than thirty years ago, very unbecoming for a gentleman, and so strong was the current of vulgar prejudice against those who practised it that it was only in the most extreme cases, and, in general, when they could be of little or no service, that modest women would permit them to be called in for advice or assistance.

Professor Simpson then made some remarks on the first Professor of Midwifery in Edinburgh, and wished more was known about him, where and what he taught, and who were his pupils. It was always taken for granted that he lectured only to women. He died in 1739. Professor Simpson then referred briefly to Joseph Gibson's successors, the successive Edinburgh Professors, Robert Smith, Thomas Young, Alexander Hamilton, James Hamilton, John Moir, who acted as interim Professor in 1839 40, and, finally, James Young Simpson, appointed in 1840, who "found Rome brick and left it marble." A glance at the present and the future closed an extremely interesting historical lecture. "Let us hope," said Professor Simpson, "that Edinburgh will also have the proud pre-eminence of being among the foremost to possess a Chair of Gynæcology."

At the opening of the winter session of the Medical College for Women, Dr. Ballantyne, lecturer in midwifery, commemorated the jubilee of the first modern woman graduate in medicine by devoting his inaugural address to Dr. Elizabeth Blackwell and her pioneer work in opening the profession to women. He reviewed her patient efforts against old custom and prejudice, which first gave way at the University of Geneva, N.Y., in the generous resolution passed by the whole class of men students to whom her application had been submitted by the Faculty.

> That one of the radical principles of a republican government is the universal education of both sexes; that to every branch of scientific education the door should be open equally to all; that the application of Elizabeth Blackwell to become a member of our class meets our entire approbation, and in extending our unanimous invitation we pledge ourselves that no conduct of ours shall cause her to regret her attendance at this Institution.

Thus, in 1847, the doors of the medical profession opened to receive women. Miss Blackwell followed up this success by hard work as an undergraduate, by post-graduate work in Paris and London, and by establishing a dispensary that has since grown into the New York Infirmary and Medical College for Women. Her knowledge of hygiene and medical questions of the day have been always keen and constant. Whilst passing through Edinburgh this summer her interest in antenatal pathology led to her meeting Dr. Ballantyne, through whom she afterwards addressed the following letter to the students of his class of midwifery:—

> My Dear Young Fellow Workers,
>
> On returning this summer from a memorable tour in your magnificent Highlands, I had the pleasure of making the acquaintance of Dr. Ballantyne, whose writings on antenatal pathology I had read with great interest.
>
> Dr. Ballantyne thought that a few words to his class from one who had been engaged for more than fifty years in the study and practice of medicine would be welcomed by them.
>
> I beg, therefore, to offer you my hearty sympathy in your medical studies; and I will tell you in a few words the two great lessons which I have learned in the course of my medical life; and why I look with hope to the advent of women into the medical profession.
>
> There are two great lines of thought and practice in the development of which it is my belief that women will justify their entrance into the profession as physicians.
>
> First, by working intelligently and persistently for the extension of hygiene and the prevention of disease.
>
> Secondly, by increasingly recognising the power of mind over the body, both in forming and ruling it.
>
> As they realise these great principles they will duly value the special opportunity which the practice of midwifery affords for influencing parents as to their responsibilities as the creators of fresh lives and also as to the education of these lives.
>
> Of course the curing or relieving of disease which is the popular idea of the physician's duty and the reason for his services is useful and legitimate work for the doctor. But to labour for the creation of an ever nobler race of human beings is a possible and far deeper line of work, and one that I think will more and more approve itself to the enlightened members of our noble profession.
>
> As far as we may venture to scan the grand providential design which governs this short stage of life, it is the realisation of spirit through its material expression or embodiment, which is the great lesson now to be learned. It is the great doctrine of incarnation which we must learn to realise, and which is enforced from age to age.
>
> That right is stronger than wrong is the lesson taught by the rise and fall of nations, and I know of no line of life in which the alphabet of this great providential lesson can be so effectually learned as in the medical profession.
>
> It is the large spiritual view of medicine that I hope will grow upon your minds as it has grown upon mine; and in this hope allow me to subscribe myself your sincere well-wisher and fellow student,
>
> Hastings, Sept, 30th. Elizabeth Blackwell.

The letter was received by the students with much gratification and pleasure, and a hearty vote of thanks returned to Dr. Elizabeth Blackwell through Dr. Ballantyne.

GLASGOW.

Opening of the Medical Schools.—A New Anatomical Department.—The late University Bedellus.—St. Mungo's College.—The Veterinary College.

The University and the Extra-mural Medical Schools of Glasgow resumed work for the winter session on Thursday, October 19th, and, according to the usual custom, there was but little ceremony. Though no fewer than three of the university Chairs have been filled up since the summer session, the vacancies were in the Arts Faculty, and there are few changes in the medical staff. A new appointment, however, is that of Dr. J. Lindsay Steven as Lecturer in Medicine in Queen Margaret College (the women's department).

It is gratifying to learn that the movement which has been on foot for some time to improve the facilities at the University for practical and laboratory teaching is now bearing fruit. Already good progress is being made with the building of the botanical laboratory, while the ground is being broken for the new engineering laboratory. Last week it was announced

that the trustees of the late Mr. James B. Thomson had made a grant of £10,000 to the university to be applied in reconstructing the Anatomical Department, and this, with money already in hand, should be sufficient to enable the Court to replace the present rather unsightly buildings. Still the university needs more money, for several of her other scientific departments are hampered by want of proper accommodation.

At the beginning of the new session one is reminded of the recent death of Mr. Lachlan Macpherson, the University Bedellus, and many old students will feel this as a personal loss. He had reached the ripe age of 82, and had been connected with the University for 46 years, during which time he had seen 4 principals, 16 Lord Rectors, and more than 200 professors associated with it. He was universally liked and respected, and a remarkable tribute to his memory was the large turn-out of the University staff in their robes to the short funeral service held in the Bute Hall, which was also largely attended by past and present students.

At the opening of the Faculty of Medicine at St. Mungo's College, Professor John Barlow delivered an address on How to become a Medical Practitioner, indicating to the students some of the difficulties and temptations they would have to face, but congratulating them on their choice of a profession.

The introductory address at the opening of the Glasgow Veterinary College was delivered by Professor Young of the University. He dealt with the recent progress made in veterinary science, and advocated the establishment of an institute of comparative pathology in which medical men, veterinary surgeons, and agricultural chemists might combine to carry on important original research.

ABERDEEN.

Opening of the Winter Session.—Election of Lord Rector.—The Extension Scheme.—The Finances of the Royal Infirmary.

The winter session at the University opened on October 16th, when the new lecturer on Comparative Psychology, Dr. J. L. MacIntyre, delivered his introductory address on Human and Animal Intelligence, making an analytical comparison of the senses of the brute creation with the human intelligence. The classes as a whole were well attended, and the majority of the professors entered on the work of the session without any formal inaugural address.

The election of a Lord Rector to succeed the Marquis of Huntly will take place on November 11th. It is understood that Lord Strathcona will be a candidate; but, in view of a strong feeling of the peculiar fitness of Lord Aberdeen—not only on general grounds, but also because his residence in the county would enable him to take a full share in the deliberations of the University Court—it has been determined to approach Lord Aberdeen to request him to allow his name to stand for election.

The meeting of the University Court on October 10th gave evidence of the condition of deadlock which at present exists in regard to the extension scheme. The apparent differences of opinion in the Court and between the Court and the town authorities render the early settlement of architectural and financial difficulties doubtful. The question raised by the offers of generous help depending on the retention or destruction of the old Greyfriars Church would appear to be a matter which might be adjusted if a broad view of the subject could be taken, but the whole position has become so complex in its details that it is to be feared that the present unsightly and inconvenient condition of Marischal College may continue for long unless the authorities can combine on some fresh line of action.

The appeal now being issued by the Directors of the Royal Infirmary shows that the financial position of that institution is far from satisfactory. For the first six months of the current year there is a deficit of some £1,765; and as this shortcoming is only an example of what has occurred year after year of late, the call for help is evidently urgent. Every economy compatible with good treatment has been carried out. The average yearly cost of each bed is at the low figure of £50, but as the average daily number of in-patients is some 202, it is obvious that at least £10,000 a year is required to meet expenses. The average case from the country is more serious, and entails more expense to the institution than those from within the town; and while grateful acknowledgment is made of subscriptions received from many of the country parishes, the appeal for aid is more especially addressed to residents outside the city.

LIVERPOOL.

The Corporation and Bacteriological Research.—Presentation to Mr. G. G. Hamilton.

More than a year ago the Corporation of Liverpool took the lead in this country by appointing a bacteriologist to the city, Professor Boyce being chosen for the office. Dr. Hope, the medical officer of health, was recently requested by the Health Committee to prepare a report on the work which Professor Boyce has done for the city, and on the system under which his researches are pursued. This report has now been presented. It begins by emphasising the increasing importance which is attached to bacteriological research, and points out that a great impetus was given to its practical application to the needs of the community by the establishment of the Thompson-Yates laboratories which were opened last year. For some time Professor Boyce and his assistants carried on various bacteriological investigations with regard to food, either for purely scientific purposes or at the request of the medical officer of health, and before long it was found that the work was of such value to the community that application was made to the Local Government Board for power to appoint Professor Boyce official bacteriologist to the city. The hopes which have been based on the appointment of Professor Boyce to do such work for the Health Department have been fully realised, and the work has been carried out with efficiency and economy; 438 samples were examined in 1898, at a cost of £303 10s., and the number of specimens examined during the present year already amounts to 450. The report concludes with a strong recommendation to continue the work of the bacteriologist on its present lines. It points out that it would be an exceedingly costly and difficult matter to establish an independent municipal laboratory, and lays stress upon the important consideration that many of the processes are of such a delicate and complicated nature that they can only be satisfactorily carried out by an investigator of wide experience. With this conclusion of Dr. Hope, all who are conversant with practical bacteriology will be disposed to agree.

Mr. G. G. Hamilton, one of the assistant surgeons to the Royal Infirmary, has been the recipient of a handsome presentation from the past and present students of the Infirmary, on the occasion of his marriage, which has recently taken place.

BERLIN.

The Wakambi Arrow Poison.—A People's Sanatorium for Neurotic Patients.—New Sanatorium for Phthisical Women.—Ambulance for the Transvaal.—The German Sanatorium in Davos.—Professor Virchow.

From East Africa Professor Robert Koch brought home poisoned arrows used in warfare by the Wakamba, a tribe whose domicile is near the Kilimandsharo. Professor Brieger undertook the examination of the poison, and succeeded in isolating its active principle, a crystalline body, of which the small quantity of 0.00005 gram sufficed to kill a guinea-pig 300 grams in weight in 20 minutes. Brieger's investigations showed the Wakambi-poison to be a cardiac poison, which in warm-blooded animals produced convulsions, dyspnœa, and other serious symptoms in about 10 to 15 minutes, and death shortly after. Possibly, nearer acquaintance may convert this new arrow-poison into a valuable cardiac remedy.

A people's sanatorium for neurotic patients will shortly be opened in Zehlendorf, one of the healthiest, and, as yet, quietest suburbs of Berlin. The grounds contain 26 acres, and in the building itself the best modern hygienic arrangements and appliances have been carried out, so that it bids fair to become a model institution, especially as an experienced and energetic head-physician has been found in the person of Dr. Saehr, formerly assistant at Professor Jolly's clinic.

Another large sanatorium is rapidly approaching completion—the sanatorium for phthisical women erected in the Kottbus forest by the Old-Age and Invalidity Insurance Board of the Province of Brandenburg. The building is semicircular, two storeys in height, besides the attic floor, and is to contain 100 beds. The chapel and dining hall are in separate wings, and there are special buildings for the physicians and for the general management, as well as a machine-house, laundry, etc. The *Liegehallen* are connected with the chief building.

The Central Committee of the German Red Cross Societies has voted a considerable sum for ambulance assistance to the Transvaal; a full assortment of appliances for the sick and wounded is to be sent out at once, and a delegation of surgeons and nurses will follow if they should be required. An inquiry whether similar assistance would be acceptable on the English side has not yet been definitely answered by the English War Office.

In Davos the first stone of the proposed German sanatorium for indigent phthisical patients was laid on October 22nd in the presence of the chief members of the German legation in Berne, and of Swiss Government and local official personages. The weather was brilliant, and nearly all the visitors in the place, besides a large proportion of the natives, had turned out to witness the ceremony and listen to the speeches.

An address has been presented to Professor Rudolf Virchow by the municipality of Berlin, of which he has now been a member for forty years.

CORRESPONDENCE.

MEDICAL EDUCATION.

Sir,—I have read with interest Dr. Saundby's able criticism of the curriculum of the modern medical student reported in your issue of October 7th. His standard of preliminary education for medical students brought up to that of average boys of our public schools at the age of 18 is a step in the right direction, but why he should here eliminate experimental science is to me a mystery. He states that "in no other profession is the student asked to acquire a knowledge of half-a-dozen preliminary sciences," and asks the question: "Is an engineer made to learn geology, metallurgy, and chemistry?" In answering this query I should say distinctly that an engineering student is required to study geology, metallurgy, and chemistry, and physics also. During my own scientific course I sat on the same benches with these students in all four subjects. The rapid strides in scientific knowledge of late make it imperative for a medical man to possess a sound practical knowledge of several sciences, for the reason that in medicine several sciences meet as in a focus.

Most medical authorities are agreed that pathology is the basis of medicine, that even a rational classification of diseases must rest on pathology. The relation of physiology to pathology is to every well-informed medical mind obvious. Physiology may be reasonably defined as the application of physics and chemistry to the phenomena of living organisms. If these two fundamental sciences be removed, what remains as a groundwork on which to build an intelligent system of medicine?

Dr. Saundby finds in anatomy "the scientific basis of medical education.....possessing all that is wanted as an intellectual scientific training," whilst "physiology stands in a very different position." Human anatomy is an art, and no more a science than the study of the integral parts of a complex machine may be called a science. Comparative anatomy, in affording the student material for generalisation and philosophic thought concerning problems of morphology, embryology, etc., ranks as a science, but to human anatomy as taught to the average student this position cannot be ceded. With physiology he finds fault in that it lacks in finality. I would ask what science is final? Is it not rather the glory of science that it is not final? Otherwise where would be the stimulus to further work? But, apart from the mere question of intellectual training the medical student cannot afford to dispense with the intelligent discussion of such chemical and physical problems as present themselves in physiology and pathology, seeing that these same problems, or others exactly similar in kind, will constantly exercise his mind throughout his life as a medical practitioner.

I am well aware of the amount of physiology possessed by the average Conjoint student, as lately it was my duty to teach numbers of these, and I affirm that the reason so many do not find in physiology a congenial subject is because of their gross ignorance of the most elementary principles of physics and chemistry. That such a condition of things should exist is not an argument for putting aside these subjects, but only a reflection on those charged with medical education.

I submit that every qualified medical man should be able to apply intelligently to the diagnosis and treatment of his cases a large amount of valuable assistance now within his reach, which has resulted directly from accurate work done in physiology. If this requires more brains, more time, and more money than can be furnished by certain classes of students, let such step aside and make way for those possessing the requisite essentials.

In the present crowded state of the profession it ought not to be the object of those responsible for medical education to offer an easy passage through the schools to numbers who exhibit no scientific spirit, but who merely regard their training as a necessary evil, in that it must afterwards procure for them a livelihood. But better to have fewer practitioners, thoroughly scientifically equipped, imbued with lofty ideals and possessing a genuine love for that profession, which someone has called the noblest of all the professions.—I am, etc.

Brunswick Square, W.C., Oct. 24th. David Sommerville, B.A., M.D.

ILLEGAL CERTIFICATES.

Sir,—Mr. Tomlin need not be afraid that I am likely at any time to follow the example of himself and his friends, of failing to meet the responsibilities of one's public statements. The situation is as follows: On September 16th there appeared in your columns a letter from Mr. Tomlin, which states that he based his attack on me at Stratford upon the alleged violation by me of my election pledges, for the supposed proof of which he rested on my letter to Mr. Jackson of October, 1897.

I wrote on September 30th, showing that Mr. Tomlin's statements were contrary to fact, and proved that his attack on me at Stratford was not based on the letter which I wrote to Mr. Jackson, but on my support of the Bill of the British Medical Association. In that letter of September 30th I said if Mr. Tomlin "will kindly refresh his memory by the aid of your report of that meeting, he will discover his error in thinking and asserting that Mr. Jackson's letter was the foundation of his attack upon me. The only hint of violation of election pledges was first made by him and his friends in their penultimate letter a month ago." Now Mr. Tomlin writes to say that he referred to Mr. Jackson's letter at the Stratford meeting, and again wishes your readers to believe that that letter was the basis of his attack upon me. Mr. Tomlin may have made a passing reference in his speech to my letter to Mr. Jackson, but I repeat that his fresh attempt to put this letter forward as the foundation of his attack upon me is as injurious to the truth and misleading to your readers as his original letter of September 16th. The proof of this is extremely easy, since all I have to do is to quote Mr. Tomlin's own resolution accepted by the Wood Green Medical Society on which the meeting at Stratford was held on June 15th, and to refer your readers to your admirable report of that meeting. The resolution states that the Society in question

views with regret the fact that Mr. Victor Horsley has ceased to carry on his opposition to the recognition at law of partially-qualified practitioners, in that he is at present supporting a Bill giving a legal status to midwives, and trusts that he will reconsider his position.

There is not one word here of violation of election pledges, there is not one word of reference to my letter to Mr. Jackson, there is nothing but censure of me for supporting the Bill of the British Medical Association. I am extremely sorry to ask for space to repeat my exposure of Mr. Tomlin's misrepresentation of what passed at that meeting.

Finally, it is due to your readers to point out that Mr. Tomlin even in quoting from the *Lancet* respecting this

matter is unfortunately unable to treat the subject fairly, for he has deliberately left out the last few words (italicised below) of my sentence as it stands in that journal. The sentence when unmutilated runs as follows:

Reference has been made by Mr. R. F. Tomlin to a letter which I wrote to Mr. Jackson, *and the substance of which I maintain now as then.*

As to Mr. Jackson's letter, I dealt fully with that on September 30th, p. 879.

I need hardly say that if Mr. Tomlin had ventured to accuse me at the Stratford meeting of violating my election pledges, your report of the meeting would have been very different.—I am, etc.,

Cavendish Square, W., Oct. 25th. VICTOR HORSLEY.

SIR,—If Mr. Horsley could but "pluck from the memory a rooted 'error,' namely, that we have attacked, or are attacking him, and remember that he began the controversy and is maintaining it, and not we, he would, we are sure, be less angry, at least with us, less illogical, and more polite.

In two lines of his sixth report to his constituents, he held up to the obloquy of the rest a large section of them, including ourselves, who had formulated, signed, and presented to his Council memorials against the certification of unqualified practitioners, in which memorials his Council's sanction of such certification was shown to be illegal, the rescission of that sanction prayed, and legislation to legalise such certification deprecated.

If unanswered by members of the Association chiefly responsible for the terms of the memorials, such an attack would have left the many hundreds of signatories, and the many societies which had adopted the memorials, disconcerted, divided, and discouraged from further action.

We hoped this was not Mr. Horsley's object, and strove, by seeking an explanation, to avert such a disastrous result. Our subsequent letters have been in necessary reply to unprovoked attacks, now culminating in a charge of slander, all of which attacks it is, from their injurious tendency, our public, even more than our personal, duty to repel.

To find any explanation of Mr. Horsley's attack on the memorialists we were forced to observe that his attitude to the important issues they had so effectually raised was consistent with his support of the Draft Midwives Bill of the British Medical Association, which would, if passed, irremediably legalise such certification of midwives, and the reflection followed most naturally that, neither as to that Bill nor as to the memorials, was his attitude consistent with his election pledge to Mr. Jackson to oppose the registration of midwives, on which pledge memorialists were entitled to rely.

In his replies Mr. Horsley stated he had signed the memorials (notwithstanding his utter disapproval of them); an example to others to repudiate and condemn them notwithstanding having signed them. His statement that he had signed them was absolutely disproved, but his lead has been followed by one or two new friends to whose support he is most welcome.

He declared that Mr. Brown at the West Ham meeting concurred in his views in supporting the Bill in question. We gave a few quotations from Mr. Brown's speech, delivered in Mr. Horsley's presence and reported in the *Lancet*, totally disproving this assertion. He claimed that he established at that meeting the consistency of his action with his election pledges, including that to Mr. Jackson. We pointed out that the meeting unanimously declined to adopt his views, and condemned his action, and are pained to have to remind him that his new friends were present and acquiesced in the resolutions.

We never denied that he read one of his election circulars to that meeting, but it had to be pointed out that as paragraphs 11 and 13 of that circular are in direct conflict with each other, his "action" could have "consisted" only with one of them, and it is the other one which "consists" with his pledge to Mr. Jackson, and with which his action does not "consist."

We hope there is no "circumlocution" and no "slander" in this review of arguments we had apparently failed to make intelligible to Mr. Horsley—a review to which we are impelled and entitled in self-defence from a very serious and calumnious charge.

Mr. Horsley's attack on the memorials against illegal certification of unqualified practitioners remains without any substantiation, and is, as we observed, entirely consistent with his support of a Bill to register midwives which would legalise such certification for ever.

His pledge to Mr. Jackson was directly opposed to his conduct in both respects. Mr. Jackson's question was: "Whilst opposing registration of midwives—not a particular Bill but 'registration of midwives' generally and inclusively—will you in any Bill for registering nurses support provisions (1) recognising that such nurses (midwifery included) have no medical training; (2) that by undertaking to render any medical attendance such nurses become responsible in the first degree for injurious consequences of their interference or delay thereby occasioned?" Mr. Horsley's reply was an unreserved assent.

The Bill of the British Medical Association

1. Provides for the registration of midwives, including all existing midwives and holders of existing illegal licences, thus legalising a flood of illicit practice.

2. Establishes the right to practise midwifery in so-called normal cases, which is part of a branch of medical practice.

We are at a loss to understand how Mr. Horsley reconciles his support of such a Bill with the pledge in question, and respectfully invite him to deal specifically with these manifest divergencies.—We are, etc.,

GEORGE JACKSON.
JAS. A. MYRTLE.
T. GRANVILLE HOCKRIDGE.
F. LORIMER HART.
R. F. TOMLIN.
TOM R. TAYLOR.
J. HIGHAM HILL.

Bedford Square, W.C., Oct. 25th.

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

SIR,—I have read the letter in the BRITISH MEDICAL JOURNAL of October 21st, signed by the Honorary Secretaries to the above Fund, correcting some remarks of mine when Chairman of the Conference convened by the Hospital Reform Association. I am reported to have said, in reference to the principle of inquiring into the means of hospital patients, that I "was sorry that the managers of the Prince of Wales's Fund were rather adverse from inquiry, maintaining that their functions were purely administrative," etc.

Although I am in a position to speak from personal experience as to the scope of the inquiries which have been made at hospitals in the past by the visitors of the Fund, my remarks were chiefly made in consequence of a letter published in the *Times* of August 29th, from Sir Trevor Lawrence (a prominent member of the Visiting Committee), in reply to Mr. Loch's letter in the *Times* of August 9th. He said:

With regard to the Visiting Committee, it would in my judgment be a serious mistake for that body to constitute itself, as suggested by Mr. Loch, a tribunal to report on the so called question of out-patient abuse. The functions of the Committee are to inquire into the general administration of the hospitals visited, in regard to buildings, finance, appliances, equipment, and general efficiency. It is undesirable for the Committee to enlarge its functions by taking upon itself to interfere with hospital administration in dealing with patients.

Those interested in the success of the Fund and in the question of hospital abuse will welcome the information that notwithstanding Sir Trevor Lawrence's letter the visitors of the Fund do now "specially report not only whether an attempt is made to ascertain the social circumstances of the in-patients, but also whether there is an almoner or inquiry officer for the out-patients." The managers of the Prince of Wales's Fund are indeed to be congratulated on so speedy a reform, and I shall look forward with interest to their next report.—I am, etc.,

W. KNOWSLEY SIBLEY, M.A., M.D.

Duke Street Mansions, W., Oct. 21st.

MEDICAL ORGANISATION.

SIR,—The recent correspondence under the above heading is another note of the perennial cry of the profession for some deliverance from its ever-present troubles. 'Tis human nature to seek for strength in union, and the humblest and most downtrodden member feels that if he can only form one of a well-disciplined army, his services are supported for attack and his position is well-nigh impregnable in defence. The

difficulties that surround such a consummation are surely not insuperable, when we see what the other professions have done for themselves, and what even the unprofessional labour ranks have accomplished. If we have been in the past and are at present too much the independent unit fighting a guerilla warfare, that is no reason why we should not alter our tactics and organise our forces if we mean to win.

To-day there are existent several agencies providing for medical registration, defence, assurance, and other laudable and necessary work; still there does not seem to be one which touches the whole of the wants of our many-sided professional life. The latest proposed scheme—a Medical Guild—is a bold attempt at supplying the deficiency of cohesion amongst us; why multiply the agencies and disintegrate our strength? Unquestionably the most powerful body in our midst is the British Medical Association, and its influence is as far-reaching as its powers are comprehensive: and every argument that has hitherto been adduced for the formation of a new guild is only another for incorporating its issues with those of the old Association. To take the four objects of the coming conference at Manchester, they are all included in the constitution of the Association, and they can all be better secured through existing Branches than by overlapping, and dissipating useful energy. I wish Dr. Crawshaw and his colleagues could see this, and that they would knock loud and often at the Manchester portal of the Association till it was opened to them.

General practitioners are already sufficiently distracted by the many societies they feel more or less obliged to belong to and contribute towards, and none of us are so lightly taxed that we want another to claim our time and money. Of course dissatisfaction and some disaffection will continue to be felt whilst things affecting the political and ethical side of our calling are not accorded the prominence they deserve in the deliberations of our councils; nevertheless, this is no excuse for scattering our brains. Very few of us as it is can afford the luxury of attending the various meetings and conferences held throughout the land to discuss the scientific and non-scientific problems that concern our own and our patients' welfare; and no good can come of further endeavours to impose additional attendances which only the privileged few can enjoy.

Matters ethical and political enter deeply into the status of every medical man, and should form the very foundation of every rightly constituted body that assumes to govern and control our interests. The past, and perhaps present, indolence and apathy of the General Medical Council in protecting us in affairs of vital importance has turned men's thoughts to other means of protection, and one and all see in thorough organisation amongst ourselves the surest remedy for redress; and none but will admit that in the British Medical Association we have the best possible nucleus for such a consolidated body. Branch meetings might well be divided into alternating discussions on medical and surgical and ethical subjects, or some similar division, so as to grant differing minds their different opinions, because, after all, the Association was not formed solely to hear young aspirants air their particular medical or surgical discoveries, but quite as much for the wise counsels of sober heads and the ripened experiences of trusted leaders. A round-table conference and its Advisory Board, where questions of professional and personal ethics, politics, etiquette, etc., could be freely discussed and fearlessly criticised, would contribute as much as anything in giving a living interest to our present Association meetings, and in allaying the restlessness of spirits smarting under real and ideal wrongs and seeking new ways to right them. Sooner or later the Association must take in hand medical defence on the lines of one or other of the drafts already submitted to it, and when this is done medical men will solidly band themselves under its banner, and look up to it as their parliamentary guide and social deliverer.—I am, etc.,

October 18th. A. Ll. J.

THE CONDITION OF THE ULNAR STYLOID PROCESS IN COLLES'S FRACTURE.

Sir,—In the leading article upon the Roentgen Rays in Surgical Work, in the British Medical Journal of October 14th, p. 1026, there is one paragraph which I am quite sure many of your readers in this and other countries will be at a loss to know upon what data it is founded. Whilst fully appreciating your weighty remarks upon the present value of the *x* rays in surgical work and also agreeing with your verdict that "the material gain from the use of the Roentgen rays has fallen far short of reasonable expectations," I feel compelled, in the interest of accurate pathology, to criticise the last paragraph—or, rather, the portion I underline—of the second column on p. 1026, which runs as follows:—

> In Colles's fracture, to take an example, it is now positively demonstrated that the line of the fracture is rather lower than was generally thought, ... *that associated fracture of the styloid process of ulna, though occurring, is not usual*, and that the amount of backward displacement of the carpus is by no means so great as we had, from clinical examination alone, been led to believe.

I venture to think that Roentgen photography has demonstrated positively that fracture of the ulnar styloid process takes place in more than 50 per cent. of Colles's fracture.

In the Journal of January 2nd, 1897, there appeared A Note on the Pathology of a Double Colles's Fracture, which led to some correspondence from Messrs. Clement Lucas, Haughton, and others, upon this particular subject, and in the *American X Ray Journal*, June 1899, I find that Professor Goodspeed of Pennsylvania states, with reference to the frequency of the ulnar styloid fracture, "that on looking over my collection of radiography to determine my own experience in the same line, I am surprised to find that it agrees with that of Mr. Thomas. In six cases of Colles's fracture the styloid process is fractured in four."

In the August number of the *Archives of the Roentgen Rays* there is a paper upon An Inquiry into the Condition of the Styloid Process of the Ulna in Colles's Fracture, and from an analysis of 264 cases it was found fractured in 54 per cent. I may add that since that time I have received reports of over 70 additional cases, and that in my list of over 330 cases the percentage is more than 50 per cent. Perhaps you will allow me to quote the remarks of the President of the Roentgen Society—Mr. Mansell-Moullin—in discussing the above paper:

> In spite of all clinical records, there was no general agreement, and in the one point on which there was agreement it was wrong in 54 per cent. of the cases.

It is now fifteen years since Mr. Clement Lucas tried to draw the attention of authors of surgical textbooks in the English language to the fracture of the ulnar styloid process in Colles's fracture, and up to the present time the effect is *nil*.

In conclusion, I may add that I have rejected all the evidence of reports of the fluorescent screen examinations of Colles's fractures because such testimony is unreliable, for the photographic plate will often demonstrate what the eye alone cannot see, and when every photographer will take the precaution of placing the anticathode of his Roentgen lamp over the region of the ulnar styloid when taking a radiograph, I cannot help thinking but that the percentage of the co-existence of the fractures of the lower end of the radius and that of the styloid process of the ulna will still become a little higher.—I am, etc.,

Cardiff, Oct. 16th. J. Lynn Thomas.

HOSPITAL ABUSE.

Sir,—Perhaps you will kindly republish the recommendations made some time since by my Association for the reduction of hospital abuse:

HOSPITAL REFORM.

Recommendations.

1. That in the casualty department of the general hospitals only cases of urgent importance should be attended to.

2. That in the out patient department patients bringing notes from medical men should have, *caeteris paribus*, a prior claim to treatment. That a resident physician should be appointed whose duty it shall be to see all out-patients in the first instance, and select those that require immediate treatment, and decide which do not require hospital treatment. That after patients have received "first aid" their circumstances shall be inquired into by a competent officer. That the honorary medical officers shall not be required to treat more than twenty new cases at one sitting.

3. That the circumstances of all in-patients with the exception of cases of accident, etc., should be carefully inquired into before admission.

4. That in the case of well-to-do people who are admitted to hospitals in consequence of accidents, etc., the hospitals should have the power at their discretion of recovering adequate fees for attendance.

5. In the case of small provincial hospitals that the plan adopted at the Oldham and Dorchester Infirmaries be recommended for trial.

6. That both in the large general hospitals and in the smaller ones out-patients coming from outside districts should be requested to bring notes from medical men before being treated

7. In the case of special hospitals: (*a*) That payments by patients should cease; (*b*) that the eligibility for free treatment should largely depend on the recommendation of private practitioners; (*c*) that some provision should be made outside the hospitals for people who are in a position to pay a reduced fee, but are not in a position to pay the ordinary fee of specialists.

The conference recently held dealt with specific points, and I think, when your correspondent "X. Y. Z." has had an opportunity of reading the papers that were read, he will alter the conclusion he has arrived at.—I am, etc.,

T. GARRETT HORDER,
Cardiff, Oct. 24th. Honorary Secretary, Hospital Reform Association

REGISTRY OFFICES FOR NURSES FOR THE SICK.

SIR,—I am sure that Dr. Steeves's letter upon the above subject, published in your issue of October 21st, cannot fail to elicit a responsive note from a great number of his busy fellow-practitioners both in this and in other large towns.

I imagine that most of us have suffered from the nuisance of these interviews with unattached nurses, at the same time that most of us have fought shy of committing our cases to the care of such comparative strangers. A nursing diploma, the casual mention of the names of several doctors for whom she has nursed, even the production of written testimonials does not, as experience shows, form an adequate basis for trust in a nurse's skill and reliability.

Dr. Steeves's suggestion would bring into line all this "floating population." It would do more. It would provide the medical men of any town, through their own reports to the office, with reliable information as to the limitations of all nurses on the register. Good nurses would welcome this plan, for it would soon differentiate them from the less trustworthy, and so render their employment more certain.

There is, too, the other class to whom Dr. Steeves refers—the woman with some tie, who cannot devote her whole time to nursing but is willing, for fees within the patient's means, to take charge during the day, to instruct in poulticing and other little processes of the sick room, to relieve the night watches of the weary wife or mother. How well each general practitioner knows the value of such women, and how often would a list of these reliable "nursing helps" be a relief to his own anxieties! I sincerely hope that Dr. Steeves may be encouraged and supported in the further elaboration of his excellent idea.—I am, etc.,

Liverpool, Oct. 24th. STANLEY KELLETT SMITH.

THE ALLEGED TRANSMISSION OF ACQUIRED CHARACTERS.

SIR,—Dr. Althaus thinks that "by turning and twisting" his words I have "exceeded the limits of fairness." In order that readers of the BRITISH MEDICAL JOURNAL may judge to what extent I have misrepresented him, I quote the passage I commented on. The italics are mine. "In senium præmaturum, the results of an appropriate electrical treatment of the brain are, indeed, habitually excellent.....Dr. Harry Campbell has in an able essay on the marriage of the unfit spoken of premature senility as a bar to marriage, and would urge on the children of parents who have become prematurely grey, and have shown signs of arterial degeneration in their thirties, to abstain from wedlock, so as to help towards the elimination of a prematurely senile and neurotic *type*. As such a proposal, if accepted, would condemn a large number of people to celibacy, I trust that the treatment for the improvement and eradication of the *type* which I am advising will render such abstinence in many cases unnecessary."[1] If in this passage Dr. Althaus does not propose "to lengthen the lives of the children by applying electricity to the heads of the fathers," I am sure I do not know what he proposes. He declares that he has himself discussed "acquired transmission," and refers me to page 104 of his book. In that page I find the following: "Examples of this are transmission of six fingers and six toes to the succeeding generation, or of consumption, insanity, albinism, etc. Even mutilations caused by accident may be thus transmitted." I presume Dr. Althaus does not dispute the definitions given in the fourth paragraph of the essay which has so grievously offended him, nor the further statement that an acquired character, if transmitted, must appear as an inborn trait in the child. Will he then inform us when a sixth digit or albinism is an acquirement in the parent, or when consumption or syphilis, to which he also calls my attention, is inborn in the child, that is, will he inform us when they occur in the child in the absence of the specific virus which produced them in the parent? Will he prove also that the lunatic transmits anything more than his inborn tendency to lunacy to his child? Alcoholism I have dealt with at length elsewhere.[2]

He specially calls my attention to the case of a woman who during her pregnancy nursed an injured man, and subsequently bore a child with the mutilation identically reproduced. May I ask him what acquirement was here transmitted? The mother got a mental impression. Dr. Althaus does not allege that this mental impression was inherited by the child, who, on the contrary, he supposes developed in consequence something entirely different—a physical malformation. Even if this case be considered as one of transmission—and it certainly is not—how can the element of mere coincidence be eliminated? I am not aware that the offsprings of lady doctors and nurses are particularly prone to malformations.

Dr. Palmer quotes a "great authority" who "had never known a great classical scholar whose father was not in some degree a classical scholar before him." It is always better to think in concrete than in abstract terms. What does a classical scholar acquire? A knowledge of classical languages and literature. He does not transmit this knowledge; he merely transmits his inborn power of acquiring it. I daresay Dr. Palmer believes that the father's efforts for acquirement result in an increased power of making acquirement, and that this is transmitted. But the young child's power of making acquirement is enormous, and to it is due the man's whole power of intellectual development. That power, however, constantly declines in the passage from infancy to old age. Where nothing is acquired nothing can be transmitted. Both Dr. Althaus and Dr. Palmer are indignant at my statement that the study of heredity has been neglected by medical men. Dr. Palmer hints at an appeal to medical literature. Let the appeal be made by all means. He will find, as in the instances I have just given, that, with the shining exception of Dr. Harry Campbell and one or two others, medical authors constantly confuse the inborn with the acquired, and allege transmission when nothing of the kind has occurred.—I am, etc.,

Southsea, Oct. 24th. G. ARCHDALL REID.

[1] *Lancet*, January 21st, 1899, p. 151.

THE PREVENTION OF VENEREAL DISEASE.

SIR,—Some members of the British Medical Association, myself included, have been asked to aid those ladies and gentlemen who, seeing the appalling prevalence and severity of syphilitic diseases in London and elsewhere, wish to secure their prevention. To effect this Lord Salisbury has been petitioned to appoint a Royal Commission or Departmental Committee to inquire into and report upon it. In his answer he deferred any decision until after the conclusion of the Brussels Conference, which was attended by Messrs. Jonathan Hutchinson and Alfred Cooper as representing the Royal College of Surgeons of England, and Dr. Saundby as representing the British Medical Association. This Conference has ended with the results which have been fully published in the BRITISH MEDICAL JOURNAL, and in opening your columns to the letters of "Malgré Malthus, M.D." and "E. F.," you have done good service at a very opportune moment. Each of your correspondents is to be congratulated upon the outspoken character of his letter, the first for his bold suggestion of a remedy against these diseases, the second for his exposure of the impracticability of such suggested remedy.

The proposal moved by Dr. Saundby at the Brussels Conference embodied three important points:—That all the Governments should appoint in each country a commission charged to determine: (1) The frequency of venereal diseases among the civil population; (2) as to the institutions already existing for the treatment of venereal diseases, the distribution of hospitals, number of beds, and to suggest the most effectual means for the treatment of these diseases; (3) to gather together the different opinions as to the best means of

[2] *Vide The Present Evolution of Man*. London: Chapman and Hall. BRITISH MEDICAL JOURNAL, September 16th, 1899. *Lancet*, October 14th, 1899.

preventing and contracting the propagation of venereal diseases among the civil population, and to found on this subject some definite conclusions.

Whether such inquiry will or will not take place remains to be seen. In any case these three points may be profitably discussed.

And with regard to the first it is manifest that the prevalence and severity of these diseases (especially syphilitic) must be admitted, so far at least as London and its neighbourhood is concerned. For it was the shocking condition in which so many of the applicants at "homes" and "refuges" presented themselves, which induced the ladies and gentlemen to interest themselves in this very uninviting subject. But London is not singular in this respect. In all towns and cities are to be found the circumstances which give rise to these diseases—a number of prostitutes, many of a very low class, and a large proportion of persons of both sexes to whom marriage is out of the question. Local circumstances, such as overcrowding, etc., may intensify both these causes.

2. I have recently shown in a letter which you kindly published that lock hospitals, lock wards, and beds for patients suffering from venereal diseases are each and all a diminishing quantity, though I have too good reason to know that the patients are not, but are as numerous as ever. An honest and exhaustive inquiry at our hospitals, lock and general; at our workhouses, hospital outdoor departments, and dispensaries would elicit this.

3. This last question, involving as it does opinions and not facts, is much more difficult to answer. This difficulty is increased because we are told that any suggestions we make must be totally different from the Contagious Diseases Acts, and must comprise men as well as women. Any allusion to these Acts is received with ill-concealed impatience, and there would appear to be a wish on the part of those ladies and gentlemen who wish to prevent syphilis to ignore the most powerful means by which these diseases were formerly prevented in certain parts of England, Ireland, the colonies, and are being prevented at the present time in Malta, in Simon's Town (South Africa), and elsewhere. In Oxford and Cambridge special provisions known as the "proctorial system" are applied both to the undergraduates and other members of the universities on the one hand, and to prostitutes on the other, with great advantage to both. The latter are checked in their vicious career. The former are less exposed to temptation, and knowing the proctor's powers and the terrible results of being found in a brothel or caught speaking to a prostitute in the streets they are largely safeguarded against vice and disease during their residence in these cities. These, but for the proctorial system, would be the happy hunting-ground for all the diseased prostitutes from London and elsewhere. Most heartily do I wish that it were practicable elsewhere, but to suggest this would be as chimerical as the suggestion of "Malgré Malthus" for universal marriage. In making suggestions we shall do well to remember the admirable words of the late Dr. Latham: "Let a man use his own experience as best he can for the present, but let him not upon the strengh of it rebuke the experience of all past times and dictate to the experience of all future, for if he live long enough nothing is more likely than that he may find himself fallen under his own reproof and inconveniently confronted by his own maxims."

That syphilitic diseases are largely spread by prostitutes cannot be doubted. Can we suggest the total extinction of prostitution? That has been attempted three times in the city of Berlin with results so awful that the proposed cure was found to be much worse than the disease, and the "social evil" was found to be less that those which followed its suppression. In Liverpool an attempt has been made by repeated and systematic prosecutions to close all brothels in localities where they were formally tolerated. The result has only been to scatter them all over the city and suburbs, while the number of prostitutes has not been diminished.

As surgeon for many years to the Liverpool Lock Hospital, with an equal number of beds (25) for each sex, I found that while men entered readily enough even when slightly affected, women did not come until the disease had considerably advanced. Prostitutes entered in a state so shocking that the exclamation, "Why on earth did you not come here before?" was constantly asked by my colleague and myself. Married women were special sufferers, the disease coming on so insidiously, and not being known to them till the late secondary or even tertiary stage. But the prostitutes would not stay till they were cured; they had only come into hospital because they could not pursue their calling any longer; when they no longer experienced pain or inconvenience, they insisted on leaving to resume their calling and to spread disease.

The late Mr. James R. Lane, writing in 1881, stated, "It is useless to talk of voluntary lock hospitals. I have myself assisted in carrying out the voluntary system at the London Lock Hospital for five-and-twenty years, and for ten years I have seen the voluntary and compulsory systems at work side by side in the same institution. From these exceptional opportunities for comparing the two, I am convinced that nothing but the compulsory periodic examination of prostitutes and their compulsory detention in hospital till cured, will have any material effect in diminishing the prevalence of venereal disease among the population, while to the women themselves the advantage of early surgical treatment is incalculable. This latter fact is well exemplified by the marked contrast as regards severity between the two classes of cases. The women under the Acts only exceptionally present symptoms of an aggravated character, while the voluntary patients, in consequence of neglect and delay in applying for treatment, constantly furnish examples of all the most severe forms of disease."

In Malta from the time of the Knights prostitutes were periodically inspected, and this continued until 1859, when they were suspended. This led to such serious consequences that the Ordinance of 1861 was passed, and still remains in force; the elected members of the Council, who were in a majority of eight, having refused to repeal this Ordinance when requested to do so. In 1886, Dr. Pisani, the chief Government medical officer, writing in that year, observes: "Venereal disease is not very prevalent here. Bad forms of syphilis are uncommon in comparison to what is the case in other countries and in proportion to this population. This might not be expected considering that there are here stationed several regiments, and that Malta is a naval station and lies in the route of great sea traffic. I am convinced that this exceptional relative immunity from venereal disease is due to the supervision of prostitutes which is here enforced by law. The inspection of prostitutes has been performed since immemorial time. I have in vain endeavoured to find out when it began. ..... It may, however, be confidently assumed that it came down to us as one of the many wise measures of the government of the Order of St. John."

Now mark the contrast. The origin of the Maltese law is lost in antiquity, but after being in force for an unknown time it lapsed for two years. It was re-enacted, and continues in force now. In spite of strong pressure the local government has refused to repeal it. In England, in India, and the Colonies generally the Acts were repealed practically in 1883, absolutely in England in 1885, and later on in India and the Colonies. A departmental inquiry has already been made as regards the invaliding of soldiers from syphilis in India with the results too well known. And now we are asked to make suggestions for the prevention of these diseases in England.

Were this letter not already too long I would at least make an attempt to do so.—I am, etc.,

Liverpool, Oct. 9th. FRED. W. LOWNDES.

THE LOCALISATION OF BULLETS BY X RAYS.

SIR,—In justice to Mr. Shenton I think it only right to state that the engraving intended to show the position of the bullet and fragment within the skull illustrating my paper, published in the BRITISH MEDICAL JOURNAL on October 21st, entirely fails to indicate the value of the original skiagraph. The effect of printing the block on a rapid press has been to obscure altogether the cutline of the bullet. Messrs. Kirkman and Shenton, who have taken up Roentgen ray photography with all the enthusiasm of young workers in a new field, ought not to be represented by such an unfortunate illustration.

As an instance of their good work, I may state that the case of E. P., Case II in Mr. Douglas's paper, published on

page 1063 of the JOURNAL, October 21st, has recently been brought under my notice. To indicate the position of the bullet had baffled the best known among skiagraphists, and Mr. Douglas argued that though the man had blood-stained sputum, possibly the lung had not been penetrated. Messrs. Kirkman and Shenton were able to show me this bullet lodged in the lower lobe of the right lung. We could see the shadow of the bullet on the screen fall and rise to the extent of an inch or more with each respiratory act. During deep inspiration the bullet lay between the shadows of two ribs, and by instructing the man to hold his breath in full inspiration a good photograph of the bullet was obtained. The bullet in this case had first gone through the man's left arm, and had entered the chest 2 inches external to the left nipple. It must then have crossed the left lung to become lodged in the lower lobe of the right, and it shows that a very small bullet need not cause very grave symptoms even when both lungs are penetrated and when the bullet remains lodged in one of them.—I am, etc.,

R. CLEMENT LUCAS, B.S.Lond., F.R.C.S.,
October 23rd. Surgeon to Guy's Hospital.

FIRST AID TO THE INJURED.

SIR,—May I submit a few suggestions for trial by my fellow St. John Ambulance lecturers:

1. We all know that the orthodox "broom-handle" splint for fractured thigh makes no pretence at affording the most important point in the treatment of that injury—namely, counter-extension. I would suggest: Having raised the foot of the injured limb from its helpless position, place the centre of a broad-fold triangular bandage above the inside of the knee on the injured side, cross the ends outside, tighten and knot off on the inside. Then similarly apply a bandage below the knee on the sound side. Gently draw down the broken limb until it is the same length as the sound one, and while an assistant maintains its position, knot the four ends of both bandages tightly together. The broom-handle and a couple of short splints may then be applied as usual.

2. The cross-shaped bandage which pupils are supposed to learn for fractured jaw or for keeping a pad on a wounded temporal artery is very difficult to apply with any degree of tightness; in fact, it will not retain its position for any time, especially on a man with a beard or "shock" head of hair. My pupils used naturally to ask me (in the bleeding case), "But how would you apply it in a wound here?" (pointing, for instance, to the forehead or the back of the head). The result was that I taught them to "place a pad on the wound and get the patient to hold it there. Then place the centre of a narrow-fold triangular bandage on the exact opposite point of the head, cross the ends and tighten over pad, twist and reverse the ends, knotting off over the centre of the bandage." This does for the temple (and enables the patient to put on his hat) and for a wound in any part of the head, and is far easier of application.

2A. For fractured jaw I think the two triangular bandages, one tied behind and the other on top of the head, and the four ends tied together, is the only treatment we ought to teach.

3. Concerning our method of inducing artificial respiration Sylvester's is, of course, adopted, for the chief reason, I presume, that it can be carried out by one person. It is, however, to a preliminary to Sylvester's or any other method I wish to draw the attention of your readers—namely, the method taught in the American army of evacuating the lungs of water, a part of the treatment we have long neglected in this country—namely, how best to get the water out of, before we try to get the air into, the lungs. They[1] advocate "getting astride of the patient (lying on his face), gently raise his middle by the hands clasped under the abdomen. In a few seconds the water will have run out sufficiently to permit the next step." (Here follows Satterthwaite's method of restoring breathing.) The Americans omit any pressure on the back while the patient is on his face, and I think that stage, with or without pressure, might be safely omitted altogether, and the patient at once lifted up by the middle, and the main drainage system by gravitation started immediately.

Need I say how valuable the actual experience of any medical man giving the above a trial in a real almost drowned case would be to the profession? Might I suggest to such that first of all a short trial should be given to the usual pressure on the back of lungs, the patient lying on his face with a large pad under the lower chest, observing, if not collecting, the amount of water, then "raising the middle," and observing if more, or much more, water comes away; and, finally, I would suggest a good hug by a stout assistant, and further observation as to water.—I am, etc.,

JOHN J. DE ZOUCHE MARSHALL, L.R.C.S.I.
Teddington, Oct. 3rd.

[1] *First Aid in Illness and Injury*, by James E. Pilcher, M.D., Ph.D., Captain Medical Department U.S. Army.

THE TREATMENT OF EPILEPTICS AND IMBECILES.

SIR,—I have read with much pleasure the Discussion on the Treatment of Epileptics and Imbeciles, by Dr. G. E. Shuttleworth and others, a full report of which appeared in the BRITISH MEDICAL JOURNAL of September 16th, 1899. The discussion is extremely interesting and valuable, and will aid in no small degree in bringing about better and more rational treatment of these defective and unfortunate classes.

My chief object in sending you this note is, perhaps, a little selfish so far as the Craig Colony is concerned, for the printed account of the discussion that appeared in your valuable JOURNAL contains two or three statements about the Craig Colony that I feel require a little explanation. It was stated in the discussion that the Craig Colony "contemplates providing ultimately for six hundred," which is wrong, since in reality plans have been made—each house being plotted by a landscape gardener—with a view to an ultimate epileptic population of 1,800.

Another misapprehension I have pleasure in calling attention to is this: While we have at the Colony at the present time two buildings that contain more patients than they should, we are taking pains to see that all new buildings that are going up—the old ones just referred to having been acquired from the Shakers—are of an average size to contain from 24 to 28 patients each. We are making a strenuous effort to provide for all epileptics at the Colony who can appreciate such surroundings—true and simple homes in every sense of the word.

Dr. Shuttleworth does me the honour to quote a statement that I made relative to the ultimate *per capita* cost of caring for epileptics at the Craig Colony, giving the figure at £20 ($100.00) per year. I have often regretted that it was erroneously stated when the colony idea was first agitated in America that epileptics in such a place could be made largely, if not altogether, self-supporting, and I have always felt that this statement should have been modified to the extent of saying that after the epileptics have been properly educated to perform useful labour, then such a colony might be largely self-supporting. As a matter of fact, we have two cottages at the Craig Colony to-day, holding 20 patients each, in which the *per capita* cost now averages $85.00 a year; the reason for the low cost being that there is but one hired employee in each building, the patients themselves, after three years' training, being able to do all the work, including even the cooking. Of course, there will always be a large class who, if not primarily so, will become in the course of three or four years so that it will not be possible for them to contribute anything in the way of support to the institution, and this class will aid materially in increasing the low cost of the best class; but I am still confident that to strike a general average, epileptics can be maintained on the colony plan at a cost not to exceed £20 ($100.00) a year.—I am, etc.,

W. P. SPRATLING,
Medical Superintendent, Craig Colony for Epileptics,
September 27th. Sonyea, New York.

ALCOHOL IN ITS RELATION TO HEREDITY.

SIR,—Presumably Dr. Reid desires to be taken seriously; but it is difficult to do so with an author who runs amock against facts so light-heartedly. None of his premisses are true in the sense which his argument requires; and none of his conclusions are reasonable in any sense at all.

Dr. Reid's first point is that "Acquired traits are not transmissible." This is true in the sense that if (for instance) an experimenter cuts off the tails of a pair of cats, the mutilated beasts will not produce a quasi-Manx breed. But mutilation of a single organ is one thing, injury to the whole constitution

is quite another. There are no facts to prove that parents, whose whole body has been made unhealthy by habitual use of a toxic agent, will be none the less likely to produce healthy children. There are facts which make the contrary at least probable.

Secondly, Dr. Reid asserts, "Generally speaking, men are drunken or temperate according to the strength of their desires, not according to the power of resisting temptation." He maintains that "in every drunkard's crave" an inborn and hereditary "capacity for delighting in excessive indulgence" is a necessary factor. Larger practical acquaintance with the subject of inebriety would teach Dr. Reid that what he has taken to be the universal rule is really the comparatively rare exception. Certainly there are some people who have an innate (and therefore hereditary) instability of nervous system, with which the smallest indulgence in alcohol leads to an almost uncontrollable impulse to its repetition. The known occurrence of such cases should make us very cautious in the medicinal use of alcohol. A family history of alcoholism makes such a constitution probable; but the absence of such history does not exclude the possibility of danger. But cases of the type referred to, though numerous, are after all exceptional. The vast majority of inebriates had originally an average power of self-control. They became less and less able to resist the fascination of alcohol as the result of years of insensibly increasing indulgence in it.

Dr. Reid apprehends that the person to whom drunkenness is attractive is in an abnormal condition—which is true. He assumes (and rests his whole practical conclusion on the assumption) that this abnormal condition is necessarily innate, and therefore hereditary—which is not true.

Thirdly, Dr. Reid holds that, as alcohol is a poison, its general use tends to eliminate from the race those who are naturally predisposed to alcoholic excess. He forgets that, as a rule, it does not kill its victims until late middle life, that is, after they have had time to produce children. And, on his own theory, those children are just as likely to survive (except for occasional neglect and ill-feeding) as if their parents had been life-long teetotalers—because "acquired traits are not transmissible."

But even if the general use of alcohol could eliminate all those who are constitutionally open to temptation to excess, it is far from certain that the type so got rid of is one that the world can well spare. In many instances, persons who have given terrible proof of their liability to inebriety have done such good work, both before their lapse into alcoholism and after their lasting victory over it, that it would be absurd to represent them as the pitiable refuse of humanity, whom it would be a mistake to protect from ample temptation to eliminate themselves. Dr. Reid is not alone in the notion that an habitual drunkard is not worth saving. Those who have tried know most about the disappointments which often follow such efforts; but they also know that the successes are worth more than enough to cover the failures.

Fourthly, Dr. Reid says: "The racial use of alcohol should tend in the long run towards racial sobriety, and this we see is the actual case." Unfortunately we see nothing of the kind. If there were a grain of truth in Dr. Reid's notion, inebriety should be reduced almost to a vanishing point in France, where the use of wine has been general for ages. As an actual fact, inebriety has increased there of late years to an absolutely frightful extent. How does the history of our own nation bear out Dr. Reid's assertion: "All communities which were anciently drunken are now sober, precisely in proportion to their past sufferings from drink"? Does he think that, as a nation, we are now sober enough for all practical purposes? Verily, if so, he is easily satisfied. Or does he judge that we have not suffered enough from drink?

Fifthly, Dr. Reid makes the astounding allegation that "we have knowledge of some five thousand years of temperance endeavour, and on the whole, they tell us of five thousand years of disaster." If this pronouncement is based upon anything at all, it is based upon knowledge granted to Dr. Reid, but denied to the rest of the world.

Lastly, Dr. Reid evidently shrinks from the only possible logical effect of his own theories. He says: "I must not be understood as meaning we should poison unfit people, or permit unfit people to poison themselves with alcohol or any other narcotic." But how can we refuse to permit this without interfering with what Dr. Reid describes as "Nature's plan for the elimination of drinkers?"—I am, etc.,

Newcastle-on-Tyne. FREDERIC C. COLEY, M.D.

FEEDING IN TYPHOID FEVER.

SIR,—My attention has recently been drawn to a point of some importance in the early feeding after typhoid fever. The general idea seems to be that all the food should be kept as nearly in the fluid state as possible: the bread, for instance, to be in fine crumbs diffused through milk; the rice to be finely ground, not whole; the potatoes to be well mashed, etc., all of which I take to be an error in principle.

The initial fine subdivision of the starchy food is a very small matter, as the gastric peristalsis effects this very completely when the food is well cooked and easily disintegrated. What is of importance is that the food given should be easily and completely digested; and it is this which is so hindered by the fine subdivision practised. When this is done all mastication is an impossibility, the food is necessarily either drunk or immediately swallowed, with the result that the only force we can count on to digest the starch is the pancreatic amylopsin, and some slight action of the succus entericus, the whole potent action of the saliva being escaped. Now, if the bread be given in the milk in well-boiled cubes about an inch square, and specific directions be given that these be chewed till they can be chewed no longer, a very different state of things takes place. The starch is vigorously attacked and already half digested before being swallowed. The same with whole and well-boiled rice, and with well-boiled potatoes not mashed but given in fair-sized pieces.

The point of my remarks is that what is apparently a gain in the fine subdivision of starch food is really a loss, and that the presentation of it in a form that can be well masticated is much more conducive to perfect digestion.—I am, etc.,

October 3rd M.D.

MEDICO-LEGAL.

ALLEGED ILLEGAL *POST-MORTEM* EXAMINATION.

A CASE of some interest to the medical profession will shortly come under discussion in the Court of Session in Edinburgh. An action has been brought before Lord Kyllachy by Margaret Mitchell, or Pollock, against (1) Dr. Charles Workman, 5, Woodside Terrace, Glasgow; (2) Anderson and Chisholme, solicitors, Edinburgh; (3) the Ocean and Accident Guarantee Corporation, Limited, Edinburgh; jointly and severally in the sum of £250 damages for illegal *post-mortem* dissection of the body of the father of the pursuer. The father, a gardener, died on January 29th, 1899, as the result of an accident sustained December 15th while employed at Wellshot Colliery, belonging to the United Collieries Company, Limited, a company insured in the Ocean and Accident Guarantee Corporation, and of which Anderson and Chisholme are agents. It was arranged that compensation at 12s. 6d. a week should be given. On the father's death plaintiff instructed her agents to claim compensation in respect thereof. It is alleged that on February 1st Dr. Workman made a wrongful and illegal *post-mortem* examination, without consent of anyone entitled to give it. Dr. Workman contends that he acted in good faith, and with the consent of a niece of the pursuer. The solicitors named say they gave no instructions for such an examination, but merely sent their representative to inquire into the circumstances of the death, which was registered as due to senile debility while damages were claimed in respect of accident, and that their representative considered a necropsy necessary, and instructed Dr. Workman to that effect. The Ocean Accident Corporation adopt the defences of their agents, and accept full responsibility for all acts done by their agents and by Dr. Workman under their instructions, in so far as within the scope of their authority. They contend that the action is irrelevant and incompetent, and that the pursuer has no title to sue.

MEDICINE AND PHARMACY.

G. P. sends the following question: A. has for five years been the proprietor of a chemist's shop. He has now become a qualified medical practitioner, and has put a doorplate with his hours on the private entrance to the shop premises. I should be glad to have your opinion as to the legality of this procedure—first, if he still retains his interest in the business; secondly, if he has sold his interest, but lives under the same roof.

*** A.'s conduct in either case is not illegal, though whether the best interests of the medical profession are served by such a conjunction is another matter.

MISS MAY THORNE, M.D., lecturer on vaccination at the London School of Medicine for Women, has been appointed teacher of vaccination and empowered to grant certificates by the Local Government Board. The vaccination station is at the New Hospital for Women, 144, Euston Road, N.W.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MEDICAL SERVICE IN THE FIELD.

In despatching oversea, to a far country, a larger and more complete military force than ever before left these shores in modern times; and in prospect of a war of some magnitude and difficulty, it is timely to review, for the information of those not specially conversant with military details, the medical arrangements for an army corps in the field.

An Army Corps.

To do that with precision, it is first necessary to explain what an army corps is. The term may be defined to include the largest military unit which it is considered that any one general officer can effectively control and direct in the field. The unit was unknown until comparatively recently, and originated in the great modern conscription armies of the Continent. The largest tactical units in former days were divisions and brigades, which are still retained, but grouped to form an army corps.

The lowest tactical units are regiments, batteries, troops, and companies, and from these the field units are built up as follows:—

An *Infantry Brigade* consists of four battalions or regiments, with a staff, supply column, bearer company, and field hospital.

An *Infantry Division* consists of two brigades, with an augmented staff, together with cavalry, artillery, and engineers; and an additional supply column and field hospital.

An *Army Corps* is made up of three infantry divisions, and comprises, therefore, six brigades, with all the other arms in due proportion. To an army corps is also added one or two cavalry brigades, to which are attached horse artillery, mounted infantry, ammunition and supply columns, bearer, field, and veterinary hospital service.

All these tactical units can act collectively or separately, or even be divided without destroying autonomy.

The total strength of an army corps is about 38,000 officers and men.

Medical Arrangements for an Army Corps.

The medical arrangements will now be more easily followed. To each regimental, and to some artillery and engineer units, a medical officer is attached, and accompanies them.

To each brigade there is a bearer company and field hospital; and to each division a field hospital is added.

To a cavalry brigade a bearer company and field hospital are attached.

Each division has an administrative medical staff; and with the headquarters of the army corps is the Surgeon-General-in-Chief with his staff.

The front or fighting line of an army corps requires 118 medical officers and 729 men of the Royal Army Medical Corps. This, however, does not include the medical administrative and executive staffs for the lines of communication and the base. There is thus a complete chain in the medical organisation between the van of an army and its base.

The field force now proceeding to South Africa shows a detail of 8 bearer companies and 12 field hospitals, being the due proportion for an army corps. There are also provided 4 stationary hospital for the lines of communication and 4 base hospitals. All these medical, like other tactical units, are so organised and equipped that they can be divided without injury to the autonomy of each section.

These medical units are in addition to those already on service with the forces under Lieutenant-General Sir George White in Natal and in other parts of South Africa.

The medical service in the field is worked as follows:—

The Dressing Station.

Each regiment has two men per company trained as stretcher bearers, who accompany it into action; in immediate contact with them is the bearer company, and both conjointly collect the wounded and convey them to a "dressing station," where first aid is afforded; this station is supposed to be outside the zone of fire, but, with long-range projectiles, seldom can be so.

The Field Dressing.

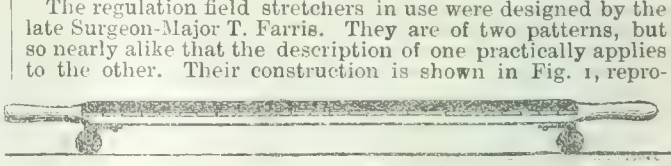
A field dressing forms a component part of every British soldier's kit on active service, so as to be available, at all times and in all places, as a first dressing for wounds. When a soldier goes on active service, the field dressing is placed in the pocket on the right side of the skirt of his frock, and thus the quantity of material required to be carried as medical stores is greatly reduced. The field dressing now in use is an adaptation of that used in the French service, and consists of an outer cover of sewn cloth, within which are two safety pins. The inside cover is of thin waterproof, cemented, air tight. The package contains (1) a piece of thin waterproof (mackintosh), 12 inches by 6 inches, which can be torn in half, and folded over the dressings, if necessary. (2) A gauze bandage 4½ yards long, folded flat. (3) A piece of gauze, 17 inches by 13 inches, folded to suit the size of the package. (4) A compress of compressed charpie of flax between layers of gauze (like Gamgee's dressing), capable of being teased out into a thick pad. The antiseptic agent used is corrosive sublimate, 1 in 1,000. Directions for use are printed upon both the outside and inside cover.

Bearer Companies.

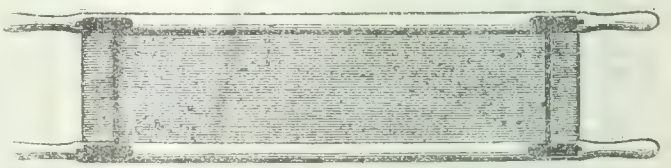
The bearer company is composed of officers of the Royal Army Medical Corps, a warrant officer, and non-commissioned officers and men. The transport is furnished by the Army Service Corps, and for all practical purposes forms part of the company.

Stretchers.

The regulation field stretchers in use were designed by the late Surgeon-Major T. Farris. They are of two patterns, but so nearly alike that the description of one practically applies to the other. Their construction is shown in Fig. 1, reproduced from the *Manual of the Royal Army Medical Corps*.[1] They consist of two poles, to which tan canvas is fastened. The poles, which are secured, are kept apart by two wrought-iron jointed bars, and a pillow and a pair of shoulder slings, are provided with each stretcher, the pillows kept in position by strings which pass through eyelet holes in the canvas. The sling is a piece of tan webbing with a loop at either end, and a buckle for adjustment of length. The poles are 7 feet 9 inches long, and the canvas 6 feet long and 1 foot 11 inches wide; they weigh 34 pounds. The full complement for the stretcher is four men. This is a stretcher squad, and four squads form a stretcher section, but the stretcher can be carried by two bearers.



a.



b.

Fig. 1.—Field stretcher; *a*, side elevation; *b*, plan, under.

Ambulance Waggons.

There are two patterns of ambulance waggons in use in the service at the present time—Mark III and Mark V. Mark III, four wheels, has accommodation for six wounded persons, two lying on full stretchers on the floor, two sitting in front, and two in the rear. The waggon consists of a wood frame body and a fore carriage mounted on steel springs; it has a covering of curtains, and a hood of canvas supported by a skeleton frame roof. Straps are fixed to the centre of the roof to carry the poles belonging to the stretchers. Under the body is a tank to hold 9½ gallons, and a movable box for wine. Mark V, four wheels, ambulance waggon, is constructed to accommo-

[1] For permission to reproduce these drawings we are indebted to the courtesy of the Secretary of State for War and the Controller of Her Majesty's Stationery Office.

date twelve men seated, or two men on stretchers and four seated; it has larger front wheels and the pull is lighter. A watercask to hold 10 gallons is secured under the rear part.

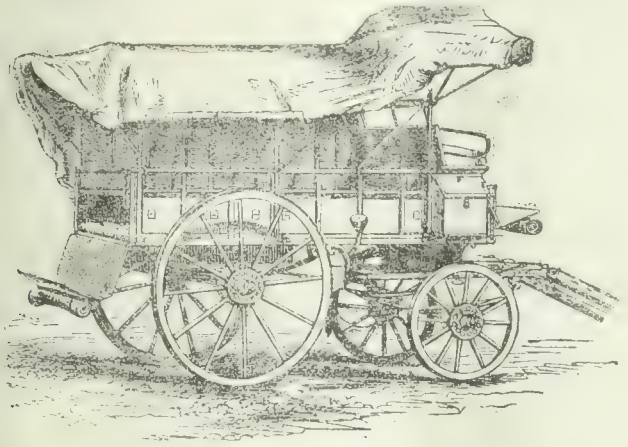


Fig. 2.—Ambulance waggon to accommodate six wounded persons, two lying on field stretchers on the floor of the waggon, two seated in front and two in rear. (From the *Manual of the R.A.M.C.*)

There is also a Mark II, two wheels, ambulance cart to carry four persons in a sitting posture, or two on stretchers. It has a canvas covering, a zinc tank for water, and a box for a small supply of wine and medical comforts.

Pack Transport.

Cacolets or folding chairs are intended for the conveyance on mules and other pack animals or patients in a sitting posture. It is, however, not probable that they will be largely employed in South Africa. A pair of cacolets of the latest pattern weighs about 56 lbs.; each consists of a folding chair with a seat, two hanging bars by which the cacolet is attached to the pack saddle, a footboard and slings, side rail and front and waist straps. The cacolets are slung over the pack saddle, one on either side of the animal.

The Field Hospital.

The wounded are placed in the ambulances—wheeled or animal—and conveyed to the field hospital. These hospitals should be outside the fire zone, and yet as near as possible to the fighting line; from the field the wounded are passed to the stationary and from them to the base hospitals.

Field hospitals are each equipped for 100 patients; they can be divided into two half hospitals (for 50 patients each) should the Principal Medical Officer of the division consider it necessary to do so. When any suitable buildings in towns or villages are available for the establishment of field hospitals they are used for the purpose, but when no such buildings are available tents are pitched. Additional tents are erected when there is great pressure on hospital accommodation. Bearer companies are associated with and camp close to the field hospitals, and when in camp render general assistance in the work of the field hospitals. Before an action the field hospitals are cleared of any sick or wounded that can be moved to the rear, and preparations are made for the reception of fresh wounded from the front. Should it be impossible to move the field hospital of a division on account of the number of sick and wounded, or want of transport, the hospital ceases to belong to the division, and comes under the direction of the Principal Medical Officer on the lines of communication. The place of the field hospital thus transferred is taken by one of the reserve field hospitals.

From this description it is evident that the great aim should be to pass the sick and wounded as rapidly as possible to the base, to keep the field hospital as free and mobile as can be, and prevent the stationary hospitals from being blocked or choked.

Lines of Communication.

Of course, in all this a victorious forward movement is assumed; a check or decided reverse would render it necessary to modify the arrangements.

While the number and strength of bearer companies and field hospitals can be fixed with comparative accuracy, it is otherwise with the lines of communication; so much obviously depends on their length, and on facilities of transit by rail, road, or water, and whether there is more than one base.

Such hospitals are, if possible, established in buildings or wooden huts at ports of embarkation, and in towns and villages along the lines of communication; where other shelter is not available marquees are erected. Separate accommodation is provided for the reception and treatment of sick and wounded officers.

The four stationary hospitals sent to South Africa will probably prove inadequate, and have to be supplemented on the spot, especially as it is pretty certain there will be more than one base, or one for each line of advance.

Transport by Train.

Facility of transport from front to base is of prime importance, and its best form is ambulance trains, fitted completely as moving hospitals.

We understand that a hospital train complete in every respect is now being built at Birmingham with all possible despatch for the Central British Red Cross Committee, but this cannot be ready before December. Meanwhile steps have already been taken on the spot to improvise transport trains for the sick and wounded. Various methods of adapting covered trucks for the carriage of wounded are in use. One of these, known as the Zavodovski, the general arrangement of which is shown in Fig. 3, has already we believe been fitted up in South Africa. Eight large hooks and rings are inserted in the sides of the waggon near the roof; by means of these four strong cables are suspended across the waggon near the roof, four stout poles are lashed to the cables, and looped ropes of suitable length to allow of two tiers of stretchers, are fixed to the pole. Two tiers of stretchers can thus be supported, four stretchers in each tier. The lower tier is made fast to small rings let into the floor.

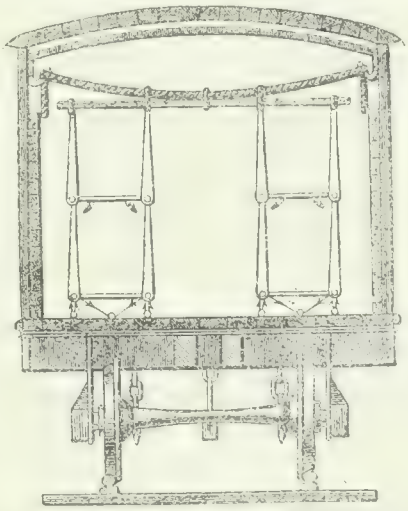


Fig. 3.—Transverse section of railway waggon fitted on Zavodovski's plan.

This system is now somewhat out of date, having been superseded by the Bréchot system (Système Bréchot-Desprez-Ameline). On this system three tiers of stretchers are suspended on frames (Fig. 4), which are made to fit into the covered railway trucks, and this we understand is the system which the Central British Red Cross Committee will adopt in South Africa. The weight of the stretchers is carried by the frames; each frame has transverse bars in three tiers, the bars are suspended by strong springs between the uprights of the frame to reduce the concussion, and the stretchers rest on the bars. There is a narrow gangway in the centre. The system can be adapted to passenger carriages by removing the internal fittings. It can also be adapted to covered carts to be used to supplement ambulance waggons.

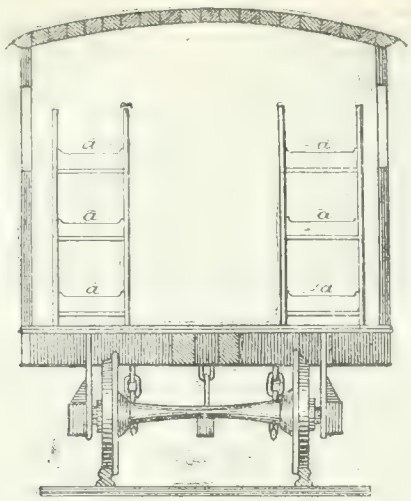


Fig. 4.—Transverse section of railway waggon with frames of Bréchot system in position: *a*, *a*, *a*, bars for stretchers to rest on, connected to frame uprights by spiral springs.

Hospital Ships.

Hospital ships probably form the best base, and are essential on hot and malarious coasts. Several ships have been fitted out, chiefly with the view of transport. True hospital ships are now elaborately fitted with every medical and surgical appliance, electrical lighting, cold storage, ice machines, etc. The Central British Red Cross Committee is at present taking steps to charter and fit such a ship.

Aid Societies.

In the front or fighting line the medical officers and men employed are regulars, but on the lines of communication and at the base civilians and aid societies can be employed, under the command of regular medical officers, with the greatest benefit.

Duties of Military Medical Officers.

It must not be overlooked that over and above professional duties, medical officers have important military duties which are of great moment in the successful carrying out of operations and movements in the field. They have necessary command and control not only of the hospital establishments and equipments, but of all officers and men passing through their hands; the kit, arms, and accoutrements of sick and wounded pass with them through the hospitals to the base. So also every medical officer must, in the nature of things, be a ubiquitous sanitary officer, prepared to advise in matters relative to camping, clothing, conservancy, feeding and drinking supplies of the force.

It is a moot point whether a chief sanitary officer is really necessary in the field; some regard him as a fifth wheel of doubtful value.

Our own field medical organisation is largely copied from that of the Germans, and in some respects—probably in equipment—is even in advance of them. It was first laid down in the Medical Regulations of 1878, and finally fully elaborated in the revised edition of 1885.

There is a tradition, founded on fact, that when this latter edition was placed by Sir William Mackinnon in the hands of Surgeon-General Roth, then the highest German authority on all matters military medical, that expert declared with much frankness: "Why, if you have copied us, you certainly have improved upon us!" Let us hope such encouraging criticism may not be belied in the present campaign.

MEDICAL ARRANGEMENTS FOR THE TRANSVAAL.

Colonel T. J. Gallwey, C.B., R.A.M.C., late Principal Medical Officer Home District, left on October 21st in the *Moor* from Southampton. He is nominated Principal Medical Officer of Major-General Sir C. Clery's Division. Major C. H. Burtchaeli, R.A.M.C., who has for some time been on duty at the Herbert Hospital, Woolwich, has also proceeded in the *Moor* for hospital duty at the front, as also Colonel E. Townsend, Lieutenant-Colonel J. D. Edge, and Majors Baptie and Twiss, R.A.M.C.

The St. John Ambulance Association has had placed at its disposal 10,000 bottles of table waters for the use of the troops in South Africa.

Canada has offered to raise a corps of army surgeons and hospital nurses, male and female, for service in the Transvaal.

It is stated that scarlet fever has broken out among the men of the 10th Hussars at Aldershot, and the departure of this regiment for South Africa may has been postponed.

The Atlantic Transport Company have offered to the Government the gratuitous use of their steamship *Maine* as a hospital ship for so long a period as the war in South Africa may continue, including the free services of the officers and crew of the ship. The Government has accepted this generous offer, and the ship is now on her way to England. This is the first time in this country that a steamship company has made such an offer. The Chairman of the company is an American.

The finishing touches were put to the *Trojan*, one of the hospital ships, fitted similarly to the sister ship the *Spartan*, and it left Southampton on Thursday, October 19th, at noon with detachments of the R.A.M.C. and nurses.

In order to fill vacancies in the R.A.M.C. at Woolwich, consequent on departures of medical officers to South Africa, the following civilian practitioners have been ordered to report themselves to the Principal Medical Officer at the Herbert Hospital: Drs. C. H. Furnivall, T. Hartigan, E. S. B. Eames, R. L. Jones, A. J. Wernet, T. W. Atkins. Captain C. E. G. Stalkartt, R.A.M.C., has joined at Woolwich for duty.

The following additional embarkations were issued from the War Office: On the *Mongolian*, October 21st, No. 8 Company R.A.M.C. Field Hospital (York), No. 4 Stationary Hospital (Edinburgh); on the *Orient*, October 22nd, No. 3 Company R.A.M.C. Field Hospital (Aldershot); on the *City of Vienna*, No. 9 Company R.A.M.C. Field Hospital (Colchester); on the *Mohawk*, same date, No. 9 Company R.A.M.C. Field Hospital (Colchester); on the *Siberian*, October 21st, detachment No. 4 Stationary Hospital (Edinburgh); on the *Jamaican*, October 21st, No. 19 Company R.A.M.C. Field Hospital (Chester); on the *City of Cambridge*, October 23rd, No. 8 Company R.A.M.C. Field Hospital (York); on the s.s. *America* No. 9 Company Bearer Company R.A.M.C. (Colchester); on the *Cephalonia*, October 24th, No. 3 Company R.A.M.C. Field Hospital; No. 6 Company R.A.M.C. Field Hospital (Portsmouth); on the s.s. *German*, October 27th, Detachment No. 3 Company R.A.M.C. Field Hospital (Aldershot); on the *Oreana*, October 23rd, No 8 Company R.A.M.C. Field Hospital (York); on the *Servia*, November 4th, No. 14 Company R.A.M.C. Field Hospital; No. 14 Company R.A.M.C. Bearer Company (both from Dublin); on the *Keldonan Castle*, October 29th, No. 3 Stationary Hospital (Woolwich), and No. 2 General Hospital (Netley); on the *Catalonia*, November 3rd, No. 16 Company R.A.M.C. Bearer Company (Cork); eleven nurses go by freight ship. All the soldiers who went out by the *Kinfauns Castle* were inoculated against typhoid on the voyage.

At the depôt R.A.M.C. at Aldershot the barrack blocks have been during the past week the scene of great activity, which reached its highest point on October 17th, when a large number of reservists came up, most of them from good positions as clerks or artisans, and bore in their set-up marks of recent military service. Nearly all were men as distinct from young soldiers. As they reported themselves they were subjected to a rigid medical inspection, and those passed "fit" received military field clothing, and posted to field service units. The total number is 165, many of whom possess the Soudan medal for 1898 and the Ashanti star. At the depôt R.A.M.C., Stanhope lines, the officer commanding (Lieutenant-Colonel Allin) has formed by drafts Nos. 3 and 4 General Hospitals for service at bases in South Africa. These have now been taken over by their respective commanding officers.

At the 3rd Station Hospital No. 3 Field Hospital has been organised for service with the 2nd Brigade. At the Connaught Hospital No. 4 Bearer Company has been formed. In all eight bearer companies and twelve field hospitals have been

completed at various stations, and are ready for transport. Sixty-three reservists have been posted to each of the general hospitals now in Aldershot.

The following is the detail of each, with some additions still to be made:

No. 3 General Hospital.—Lieutenant-Colonel Woods, Major Keogh, Lieutenant and Quartermaster Freshwater; 3 2nd class staff-sergeants, 9 sergeants, 2 lance-sergeants, 2 buglers, 8 corporals, 2 lance-corporals, and 119 privates.

No. 4 General Hospital.—Lieutenant-Colonel Clery, Majors Lucas, Hackett, and Fryer, Lieutenant and Quartermaster Brake, Sergeant-Major Exton; 3 2nd class staff-sergeants, 10 sergeants, 1 lance-sergeant, 2 buglers, 7 corporals, 2 lance-corporals, and 118 privates.

No. 3 Field Hospital.—Major Culling, Captains Parry and Jennings, Lieutenant Leake, Lieutenant and Quartermaster Spackman; 5 sergeants, 4 corporals, and 33 privates.

No. 4 Bearer Company.—Major Reckitt, Lieutenants Wroughton and Palmer, Sergeant-Major Roberts; 3 sergeants, 8 corporals, 1 lance-corporal, 44 privates, and 1 bugler.

The *Berlin Post* made the following announcement on October 21st: "At a sitting of the Central Committee of the German Red Cross Society held to-day under the Presidency of Baron Von Knesbeck Milendouck, Vice-Master of the Ceremonies to the Prussian Court, it was resolved to concert measures for the sending of a volunteer ambulance corps, together with appliances, to the seat of war in the Transvaal."

At St. George's Barracks on October 20th the Bearer Company and Field Hospital of the Guards Brigade was inspected by Major-General Trotter. The two have been formed from the 18th Company R.A.M.C. The whole number of officers and men, over 100, have been divided, those of the Field Hospital under Surgeon-Lieutenant-Colonel Magill and those of the Bearer Company under Major Moberley. These troops were paraded in marching order and wearing the ordinary clothing of the R.A.M.C., but with the white campaigning helmet.

No. 2 General Hospital has concluded mobilisation at the Royal Victoria Hospital, Netley, and is ready for sailing, but there will be some delay. They were to have sailed in the *Kildonan Castle* on Saturday, but that vessel will not be ready till Saturday week, and her departure has been postponed till then. The hospital is composed of 20 medical officers, 9 nurses, 1 quartermaster, 2 warrant officers, 11 sergeants, 15 corporals, 2 buglers, and 115 privates. The officers will be Colonel Duke, R.A.M.C., in charge; Major Addison, Secretary and Treasurer; Lieutenant-Colonel O'Connell, Majors Lougherd and McDonald, Lieutenant Norman in charge of Roentgen rays, Quartermaster and Honorary Lieutenant Hawkey. The Army Nursing Service will be drawn from Netley under the superintendence of Miss Hardement, with the exception of one lady who comes from the Royal Free Hospital, Gray's Inn Road. The first corps of the troop field hospital is also mobilising at Netley, but the date of sailing is not yet announced.

The Central British Red Cross Committee.

The Central British Red Cross Committee, of which H.R.H. the Princess of Wales is Honorary President, consists, as already stated, of representatives of the National Society for Aid to Sick and Wounded in War, Lord Wantage, Lord Rothschild, and Sir William MacCormac, Bart.; of the St. John Ambulance Association, Viscount Knutsford and Sir John Furley; of the Army Nursing Reserve, H.R.H. Princess Christian of Schleswig-Holstein and Miss Wedgewood; and of three representatives of the Secretary of State for War, Surgeon-General H. S. Muir, M.D., Colonel Hon. F. W. Stopford, C.B., Officer in Charge of Mobilisation Services, and Lieutenant-Colonel W. L. Gubbins, M.B., Assistant Director Army Medical Service. The Committee has elected Lord Wantage, K.C.B., V.C., Chairman, Sir John Furley, Honorary Treasurer, and Major W. G. Macpherson, R.A.M.C., Deputy Assistant Director Army Medical Service, has been appointed Secretary. The office of the Committee is at 18, Victoria Street, and its telegraphic address is "Brotherly," London.

The general object for which the Committee is formed is to maintain amongst voluntary aid societies in time of peace an organisation which will enable them to render prompt and efficient aid in time of war to the sick and wounded, in the manner best suited to supplement the Army Medical Service. The Central British Red Cross Committee will have no control over nor take any part in the work and objects of the societies represented on it, except in so far as these are concerned in providing and organising assistance for relief of the sick and wounded in wars in which British troops are engaged. With a view to further organisation of the work of the Committee, District Committees, consisting of three representatives of the National Society for Aid to Sick and Wounded in War, three of the St. John Ambulance Association, one of the Army Nursing Reserve, and two of the local military authorities will be appointed at the headquarters of certain military districts. As a rule, voluntary aid in the field will be confined to the base and lines of communications, and will be restricted to the provision of the following:

(*a*) Commissioners and delegates of voluntary aid societies, qualified physicians and surgeons, medical students as dressers, ward orderlies, nurses, cooks, and other employees of fixed hospital establishments.

(*b*) Sick transports in the form of sick convoys by road, rail, or water, including the formation and management of supplementary rest stations along the routes traversed by the sick and wounded. Sick convoys would include drivers and such other *personnel* as may be necessary.

(*c*) Supplementary hospital accommodation in the form of reserve hospitals, convalescent homes, etc.

(*d*) The preparation, collection, and forwarding to appointed depôts in the field of all kinds of medical and surgical material, such as dressings, utensils, linen, bedding, special articles of hospital equipment and medical comforts, likely to add to the comfort of the sick and wounded.

(*e*) The formation and management of special depôts at the base, or on the lines of communication for the reception and distribution of articles mentioned in paragraph 22 (*d*).

The district committees have not yet been formed, and their organisation will not be proceeded with until after the present pressure is over. We are authorised to state that what is needed most at present are subscriptions rather than contributions of hospital material. Such material can be more suitably purchased according to requirements as they arise.

Royal Navy Medical Service.

Fleet-Surgeon John Tyndall has been placed on the retired list, with the rank of Deputy Inspector-General, October 22nd. He was appointed Surgeon, March 2nd, 1871; Staff-Surgeon, March 2nd, 1883; and Fleet-Surgeon, May 8th, 1891. From the *Royal Navy List* we learn that he served at the Royal Naval Hospital, Jamaica, in 1876-79; volunteered in a great emergency to attend, and attended, in the Military Hospital, Port Royal, 1878, during an outbreak of yellow fever, there being no military medical officer available; narrowly escaped from death, owing to his contracting the disease when employed on this service; recommended for promotion. He was Senior Medical Officer in the Niger Expedition in 1883; mentioned in despatches.

Staff-Surgeon Joseph Crowley has been appointed to the *Cambridge*, October 25th.

Royal Army Medical Corps.

Lieutenants H. E. Haymes and F. J. Brakenridge are seconded for service with the Egyptian army, September 27th.

Colonel J. H. Moore, who has recently arrived in India, is appointed Principal Medical Officer, Sirhind District, Punjab, *vice* Colonel E. Townsend, exchanged to England.

Indian Medical Service.

Colonel D. Sinclair, M.B., C.S.I., Madras Establishment, is appointed Surgeon-General with the Government of Madras. Surgeon-General Sinclair joined the department as Assistant-Surgeon, October 1st, 1869, and became Surgeon-Colonel, February 12th, 1896. He was appointed a Companion of the Order of the Star of India on December 31st last, but he has no war record in the Army Lists.

The Volunteers.

Surgeon-Lieutenant R. C. Gayer, 2nd Volunteer Battalion the Royal Fusiliers (City of London Regiment), has resigned his commission, October 25th.

Surgeon-Lieutenant C. S. A. Rigby, M.B., 1st Volunteer Battalion the Loyal North Lancashire Regiment, is promoted to be Surgeon-Captain, October 25th.

Volunteer Medical Association.

At the Mansion House on Saturday evening, October 21st, previous to the banquet given by the Lord Mayor to the commanding officers of volunteers on the occasion of the reception of the Elcho Shield, won another year by the English eight, opportunity was taken to present the Ambulance Challenge Shield which was competed for last July, and won by the 3rd Volunteer Battalion of the Queen's (Royal West Surrey Regiment). The ceremony consisted in the winning team carrying the Shield to the Lord Mayor; having received it he handed it to Colonel Bevington, who thanked his lordship, and returned it to him for safe keeping during the year. Among volunteer medical officers present were: Brigade-Surgeon-Lieutenant-Colonels W. R. Smith and A. Clark, Surgeon-Lieutenant-Colonel J. E. Squire, and Surgeon-Captains Boyd and J. Harper.

The next Correspondence Class for the Proficiency Examination will commence in the third week of November, and the Lectures about the same time. All information can be obtained from Surgeon-Captain J. Harper, 25, Rosary Gardens, South Kensington, S.W., the Honorary Secretary for the class.

OBITUARY.

JOHN WICKHAM BARNES, F.R.C.S., L.S.A.

MR. J. WICKHAM BARNES, whose death occurred on October 12th, was born at Bath in 1830, where his father was in general medical practice for many years. His paternal grandfather was also in the medical profession, but died young. Early in life the subject of this notice took to the study of medicine, a taste which seems to have run in his family, as his younger brother also followed it later on, and his own son is a Major in the Royal Army Medical Corps, and is now serving in South Africa. In 1849 J.W. Barnes came to London and entered at Charing Cross Hospital, where he applied himself steadily to work and gained numerous prizes during his studentship. He qualified as L.S.A., 1852, and M.R.C.S., 1853, becoming F.R.C.S. by examination in 1865. During his studentship he attended the practice of the Royal Westminster Ophthalmic Hospital in Guthrie's time, and was subsequently appointed House-Surgeon there for two half-yearly periods. Of this well-known surgeon Barnes always afterwards spoke with the greatest possible respect. Guthrie also seems to have appreciated Barnes's services to the institution, as by his influence Barnes was soon after made a life governor of the hospital, and was for a long time subsequently one of the Committee of Management.

Some time after qualifying Barnes commenced practice at Aylesford, and though he there met with considerable success, yet after three or four years he decided to return to London; this he did in the year 1857, when he was appointed District Medical Officer for the Parish of Islington. He was well known at a later period of life as a resident of No. 3, Bolt Court, Fleet Street, where, for upwards of twenty years, he, in conjunction with his friend, Dr. Joseph Rogers, championed the cause of the Poor Law Medical Service by his work and energy as honorary secretary to the Poor Law Medical Officers' Association. During all this time his desire was to establish by law a pension for all Poor Law officers who had seen prolonged service, and this he lived to see brought into operation by the passing of the Superannuation Act, 1896. He was throughout life always ready to make friends, sympathised with his medical brethren in general practice and was their champion whenever he felt that a wrong had been done. This kind of work latterly engaged much of his time, and we believe that his efforts are generally known and appreciated.

He was for twenty-five years one of the medical officers of the 2nd Middlesex Volunteer Artillery, and retired as V. D. Surgeon-Lieutenant-Colonel.

About three years ago his general health began to fail, and on this account he retired to Walton-on-the-Naze, but without any benefit accruing from the change. About two months previous to his death he moved again to London, where he died.

EIGHTEEN years ago death deprived the Anatomical Museum the University of Edinburgh of the services of Mr. Stirling, the inventor of one of the earliest forms of microtome, and now we regret to chronicle the death of his successor, Mr. JAMES SIMPSON, F.R.P.S.E. He had early manifested that love of science which was the distinguishing feature of his character, and which had led him, in the scanty leisure of a business life, to familiarise himself thoroughly with the leading principles of biology, geology, and practical microscopy. In the service of the university he showed the most whole-hearted loyalty to the interests of the Museum, and the greatest ingenuity in devising new methods of preparing, mounting, labelling, and displaying museum preparations. At the Edinburgh meeting of the British Medical Association in 1898 one of the features of the Annual Museum was an extensive exhibit of Mr. Simpson's methods. Both before and during his connection with the university he had a corresponding acquaintance with a large number of the most eminent biologists of Britain and of Europe, and he published interesting papers on a variety of scientific subjects such as the presence of the reindeer in Scotland, on the fungus of the salmon disease, and on grouse disease. He was the right hand man of Sir William Turner, the Curator of the Museum, and many old graduates, to whom he was a familiar figure, will realise what a blank his death causes in his special department.

WE regret to announce the death of Dr. ROBERT TORRANCE, F.R.C.S.Edin., on October 4th, at the house of his sister, in Buccleuch Place, Edinburgh. He was the eldest son of the late William Torrance, of Camps and Burnhouse, Midlothian, and early showed a love for the medical profession. He studied at the University and Royal College of Surgeons, Edinburgh, and obtained the L.R.C.P.Edin. in 1870 and the F.R.C.S. in 1883. Twenty-three years ago he settled in Newcastle-upon-Tyne, and soon built up a large practice, and won a name as a skilled surgeon. He became Surgeon to the Newcastle Throat and Ear Infirmary, and wrote some papers on subjects connected with that speciality. Unfortunately failing health three years since compelled him to undertake a voyage to the Cape, which benefited him. Pneumonia, however, supervened a year ago, and left him so invalided that he was unable again to take up work with his usual vigour. Five months ago he retired definitively from practice, suffering from serious heart disease. He went north to visit his sister, whilst making arrangements to seek a warmer climate, but succumbed before he could carry out his intention. He was much respected and esteemed, and though somewhat reserved and retiring in manner, was genial and social. In his professional capacity he was well known and greatly loved. He was ever the friend of the distressed or afflicted, his wide sympathies endearing him to many. The funeral took place at East Calder, Midlothian, the family burying ground. Dr. Torrance was unmarried.

BY the death of Dr. JOHN MARSHALL LYNN, of Armagh, which took place on October 10th in his 94th year, probably the oldest medical man in Ireland has passed away. He was born in Glasslough in October, 1806, and qualified as L.R.C.S. Edin. in 1829 and M.D.Glasg. in 1834. In 1831 he was appointed to the Markethill Dispensary, and in 1854 was appointed Staff-Surgeon to the Armagh Militia and became Surgeon-Major in 1876. He was of a generous disposition, and being possessed of ample means he gave during the past thirty years upwards of £36,000 to religious and charitable objects. He had been a total abstainer for the past sixty years, and attributed his prolonged life and full mental powers to this mode of living. On his 93rd birthday he wrote a prescription for one of his servants who was suffering from neuralgia. He suffered for three days from cystitis, during which time he was attended by Dr. Ferrar, of Armagh, and his nephew, Dr. Kevin, of Belfast. His funeral was very numerously attended.

WE regret to announce the death of Mr. THOMAS HAMMOND, M.R.C.S.Eng., L.R.C.P.Lond., L.S.A., Deputy Medical Officer H.M. Prison, Liverpool, after a short illness. Born in Whitehaven he studied medicine at Guy's Hospital, on leaving which he obtained a special honorary certificate for the satisfactory manner in which he discharged the duties attached to the various appointments held during his curriculum. After qualifying in 1877 he was appointed House-Surgeon to the Halifax Infirmary, a post he held nearly two years and a half. After a short stay as House-Physician at the Bradford Infirmary he became Clinical Assistant at the West Riding Asylum, Yorkshire. The experience gained in these appointments, and the knowledge of mental disease acquired in the West Riding Asylum, were most useful to him in his official career. Early in January, 1883, he was appointed Deputy Medical Officer to Walton, Liverpool, a post he filled until the end of his life. He was offered promotion by H.M.'s Commissioners, but declined it as he did not wish to leave Liverpool. He was a master of the special work which he had to do, and was quick in distinguishing the genuine from the false among prisoners; in this he was never known to make a mistake. He was Surgeon-Captain in the 1st Lancashire Volunteer Artillery, taking always a keen interest in all that appertained to his regimental duties. He married in 1895, and leaves a a widow and two young children. He was cut off in the prime of life by an attack of apoplexy. The Prison Service mourns the loss of a good servant, the 1st Lancashire Volunteer Artillery a capable officer, and the widow and children a loving husband and father.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.—The following have been appointed Examiners for the First and Second M.B. Examinations:—*Chemistry:* Mr. Sell and Mr. Adie. *Physics:* Mr. Fitzpatrick and Mr. Capstick. *Biology:* Mr. Bateson, F.R.S., and Mr. Seward, F.R.S. *Pharmaceutical Chemistry:* Mr. Ivatt and Mr. Ruhemann. *Anatomy:* Dr. Barclay-Smith and Professor Cunningham, F.R.S. *Physiology:* Dr. Anderson and Professor Starling, F.R.S.

General Medical Council.—Dr. Donald MacAlister was on October 23rd re-elected a member of the Council for five years.

Diploma in Public Health.—The following practitioners have passed both parts of the examination in Sanitary Science for the diploma: G. A. Brown, M. M. T. Christie, A. L. E. Cumming, W. C. H. Forster, J. H. Godson, J. Guy, W. F. Harvey, H. E. Hewitt, J. P. D. Leahy, C. A. Lumley, H. C. McDouall, V. L. Manker, P. Padmanabhan, A. E. Porter, and C. W. Young.

Matriculation.—On October 21st, 888 freshmen were matriculated, including 12 graduates of other universities who entered as advanced students. This brings the total for the present year up to 932.

UNIVERSITY OF EDINBURGH.

General Council.

The statutory half-yearly meeting of the General Council of the University of Edinburgh was held at 3 P.M. on October 27th. The main points of general interest were referred to in the report of the Business Committee which was to this effect:

Report of Business Committee.—Two of the four officers of Assessor of the General Council in the University Court, held by Dr. Patrick Heron Watson and Dr. Joseph Bell, Edinburgh, respectively, now fall vacant, and the vacancies require to be filled up at the approaching meeting. The tenure of office is for four years. Drs. Watson and Bell are eligible for re-election. The Committee desire to record their sense of the loss which the Council has sustained by the recent death of Dr. John Duncan, Edinburgh, who for some time was a representative of the Council in the Court, and at all times took a deep interest in the University, particularly in its relation to the medical profession. The Committee received a draft ordinance of the University Court, designed to effect the separation of the teaching of the subjects of Medical Jurisprudence and Public Health in the University. This naturally arises from the recent founding of the Chair of Public Health, a subject whose importance is now fully recognised, and the Committee approve of the step. Several questions affecting the practical working of the Educational Ordinances of the late Commission, and the consequent arrangements made by the University authorities to give effect to them, have recently been more or less publicly discussed. It is suggested that the General Council should now make a remit to the Business Committee, which fills the place of the former Ordinances Committee of Council, to consider and report upon the whole subject. The present is a convenient time in which to review and adjust difficulties which have been found to arise in practice. With reference to the cataloguing of the library, alluded to in the Finance Committee's report, approved by the Council in May last, the Business Committee, keeping in view that the Council is not represented on the Library Committee, desire to express the hope that the progress made with the catalogue has been satisfactory, and that the form adopted will enable it to be published if that should be thought desirable.

Graduation Ceremonial.

The supplementary or autumn graduation ceremonial was held in the McEwan Hall on October 21st. In the absence of the Vice-Chancellor, Sir William Muir, from indisposition, Professor Sir William Turner presided, and Professor A. R. Simpson acted as Promoter. The following degrees were conferred:

Degrees of M.B., C.M.—Violet Grace Seymour Adams, Agnes Lloyd Bennett, Mary Booth, A. W. G Clark (with Second Class Honours), *in absentia*, T. M. Coutinho, J. L. Davis, H. O. Hobson, E. Laval, F. M. M'Intosh, S. H. Richards, F. W. Rigby, W. Ritchie, T. B. Unwin, P. D. Whiriskey, W. E. Williams, C. G. Wotherspoon, M.A.Oxon.

Degrees of M.B., Ch.B.—J. Anderson, J. A. Black, A. P. L. Brown, A. E. Burroughs, T. C. Caldwell, G. J. R. Carruthers, D. Fenton, A. S. Frank, J. Fullarton, C. H. G. Gostwyck, A. N. de Gruchy, G. Mackie, R. A. Macneill, W. Macniven, J. Miller, S. H. Morris, W. Purves, H. G. P. Raeburn, F. G. Ralston, T. E. Richards, D. Robertson, J. M. Ross, C. E. Smith, W. G. Williams.

After the formal "capping" Sir William Turner expressed the Vice-Chancellor and Principal's regret for absence, and conveyed his good wishes for future success of the new graduates in their profession. In these good wishes the other members of the Senatus Academicus cordially joined, and now wished them good-bye as students of the University.

The usual formal hand-shaking and the Benediction closed the function of the day.

ROYAL UNIVERSITY OF IRELAND.

M.B., B.Ch., B.A.O. Examination.—The following candidates have passed this examination:

Upper Pass.—*I. M. Byers, Queen's College, Belfast; *J. E. Clements, Queen's College, Belfast; J. Good, Queen's College, Cork; W. Hartnett, Queen's College, Cork; *W. M. Hunter, Queen's College, Belfast; *D. Kernohan, Queen's College, Belfast; *W. Lapsley, Queen's College, Cork; T. J. McDonogh, B.A., Catholic University School of Medicine; *B. A. O'Flynn, Catholic University School of Medicine; *J. W. West, Queen's College, Belfast.

Candidates marked thus (*) may present themselves for the further Examination for Honours.

Pass.—Annie H. Crawford, Queen's College, Belfast; A. W. Crawford, Queen's College, Belfast; H. L. Craig, Queen's College, Belfast; Emily M. Crooks, Queen's College, Belfast; J. H. Davis, Queen's College, Belfast; B. R. Dinnis, Queen's College, Cork, and University of Edinburgh; H. Donnelly, Queen's College, Belfast; F. A. Dreaper, B.A., Catholic University School of Medicine; D. Finnegan, Queen's College, Belfast; J. R. Gillespie, M.A., Queen's College, Belfast; G. H. Grills, Queen's College, Belfast; S. Hill, Queen's College, Belfast; Alexandrina C. Huston, Queen's College, Belfast; G. Jefferson, Queen's College, Belfast; C. Kidd, Queen's College, Galway, and School of Medicine, Edinburgh; Kathleen F. Lynn, Catholic University School of Medicine; S. McCann, Catholic University School of Medicine; E. W. S. Martin, Queen's College, Belfast; D. C. Moore, Queen's College, Belfast; P. J. Moran, Queen's College, Belfast; T. F. O'Keeffe, Queen's College, Cork, and Catholic University School of Medicine; P. M. Quinn, Catholic University School of Medicine; J. Ritchie, Queen's College, Belfast; F. Ryan, Catholic University School of Medicine; J. J. Waters, Queen's College, Galway, Catholic University School of Medicine, and School of Medicine, Edinburgh.

M.D. Examination.—The following candidates have passed this examination:

I. J. Flynn, M.B., B.Ch., B.A.O., Catholic University School of Medicine; T. Houston, B.A., M.B., B.Ch., B.A.O., Queen's College, Belfast; R. Watson, M.B., B.Ch., B.A.O., Private study.

Mr. R. A. L. Graham, B.A., M.B., B.Ch., B.A.O., has passed the examination for the Diploma in State Medicine.

CONJOINT BOARD IN IRELAND.

Second Professional Examination.—Candidates have passed this examination as undernoted:

In all Subjects.—Honours, in order of Merit: W. Ewing, C. Foley. Pass: Miss H. A. Hall.

Complete Examination.—Miss L. H. Alexander, F. J. Cahill, H. A. Cecil, A. S. Cosgrave, J. Hennessy, Miss M. E. M. Logan, A. A. W. Menick, C. R. Minor, R. H. G. Oulton, P. W. Power, F. J. Sharpe, A. L. Tyndall, G. B. Wilkinson.

In Anatomy.—D. Jones, F. J. Moore, L. C. E. Murphy.

In Physiology.—F. M. Allen, J. E. Brereton, J. Doherty, F. J. Moore, J. Murphy, J. Murray.

In Materia Medica.—C. H. Bryan, J. Harvey, D. Jones, L. C. E. Murphy, R. P. McDonnell, R. C. Nicholls.

In Histology.—T. M. Allen, J. E. Brereton, C. H. Downing, T. Farrell, W. J. Gruby, J. Murphy.

Hospital Practice.—D. Jones.

SOCIETY OF APOTHECARIES OF LONDON.

Pass List, October, 1889.—The following candidates passed in:

Surgery.—S. T. Bewsey, St. Mary's Hospital; R. Brookes (Section I), Westminster Hospital; J. W. Haigh, Leeds; H. M. Hardy, Guy's Hospital; F. S. Leech (Section II), University College Hospital; W. E. Maw, Leeds; F. C. Torbitt, Manchester and Leeds.

Medicine.—T. P. Allen (Sections I and II), Manchester; A. McC. Dallas (Sections I and II), Guy's Hospital; A. B. Dunne (Sections I and II), Leeds; C. A. W. Egan, Dublin and Charing Cross Hospital; T. R. Griffiths, University College Hospital; H. C. Holden, Guy's Hospital; H. N. Horton (Section I), Middlesex Hospital; W. E. Maw, Leeds; E. S. Pushong, Calcutta; E. C. Scarlett (Section I), Royal Free Hospital.

Forensic Medicine.—T. P. Allen, Manchester; P. Cator, St. Bartholomew's Hospital; A. B. Dunne, Leeds; C. A. W. Egan, Dublin and Charing Cross Hospital; H. Fawcett, London Hospital; A. E. Freer, St. Mary's Hospital; H. C. Holden, Guy's Hospital; H. N. Horton, Middlesex Hospital; W. E. Maw, Leeds; E. C. Scarlett, Royal Free Hospital.

Midwifery.—J. H. Beasley, Birmingham; P. A. Chillcott, London Hospital; C. J. E. Edmonds, St. Thomas's Hospital; C. H. Farquharson, St. Mary's Hospital; A. E. Freer, St. Mary's Hospital; C. A. C. Salmon, Guy's Hospital; S. R. Thomas, Guy's Hospital; A. F. Weston, St. George's Hospital.

The diploma of the Society was granted to Messrs. A. B. Dunne, H. Fawcett, A. E. Freer, J. W. Haigh, H. M. Hardy, H. C. Holden, W. E. Maw, E. S. Pushong, F. C. Torbitt, and A. F. Weston.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

At the annual stated meeting of the College, held on St. Luke's Day, the following officers were elected for the ensuing year:

President.—John William Moore, M.D., F.R.C.P.I.

Vice-President.—W. J. Smyly, M.D., F.R.C.P.I.

Censors.—W. J. Smyly, M.D., F.R.C.P.I., A. C. Drury, M.D., F.R.C.P.I., J. Murphy, F.R.C.P.I., A. N. Montgomery, F.R.C.P.I.

Examiners for the Licence in Midwifery.—E. Hastings Tweedy, F.R.C.P.I., H. T. Wilson, F.R.C.P.I.

Additional Examiners (to take the place of an absent Censor).—Medicine: J. M. Redmond, M.D., F.R.C.P.I. Hygiene and Forensic Medicine: W. L. Symes, F.R.C.P.I. Midwifery: J. H. R. Glenn, M.D., F.R.C.P.I. Additional Examiners under the Conjoint Examination Scheme:—Biology: E. MacDowel Cosgrave, M.D., F.R.C.P.I. Chemistry and Physics: H. T. Bewley, M.D., F.R.C.P.I., and E. Sapper, F.R.C.P.I. Materia Medica and Pharmacy: F. J. B. Quinlan, M.D., F.R.C.P.I., and Ninian Falkiner, M.B., F.R.C.P.I. Physiology: J. Malet Purser, M.D., F.R.C.P.I. Pathology: Wallace Beatty, M.D., F.R.C.P.I. Medicine: H. C. Tweedy, M.D., F.R.C.P.I., and E. E. Lennon, F.R.C.P.I. Hygiene and Forensic Medicine: S. T. Gordon, F.R.C.P.I.

College Examiners for the Conjoint Diploma in Public Health.—Hygiene: F. J. B. Quinlan, M.D., F.R.C.P.I. Meteorology, N. Falkiner, M.B., F.R.C.P.I. Chemistry: E. Sapper, F.R.C.P.I.

Examiners in Preliminary Education.—Language: William Kennedy Sch. T.C.D. Science: C. Joly, F.T.C.D.

Representative on the General Medical Council.—Lombe Atthill, M.D., F.R.C.P.I.

Representative on the Committee of Management under the Conjoint Examination Scheme.—J. Magee Finny, M.D., F.R.C.P.I., Sir Christopher J. Nixon, M.D., F.R.C.P.I., and James Craig, M.D., F.R.C.P.I.

Treasurer.—Lombe Atthill, M.D., F.R.C.P.I.

Registrar.—James Craig, M.D., F.R.C.P.I.

In the evening the annual banquet of the President and Fellows was held in the College Hall.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE THIRD QUARTER OF 1899.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE vital statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending September last, 84,608 births were registered in the thirty-three towns, equal to an annual rate of 29.8 per 1,000 of the aggregate population, estimated at 11,404,408 persons in the middle of the year. In the corresponding periods of the three preceding years the birth-rates in these towns were 30.1, 31.1, and 30.4 per 1,000 respectively. In London the birth-rate last quarter was 28.6 per 1,000, while it averaged 30.5 in the thirty-two provincial towns, among which it ranged from 22.8 in Huddersfield, 24.1 in Croydon and in Oldham, 24.2 in Halifax, and 24.5 in Bradford, to 34.6 in Hull, 35.0 in Gateshead, 35.9 in Liverpool, and 36.1 in Sunderland.

During the quarter under notice 62,306 deaths were registered in the thirty-three towns, corresponding to an annual rate of 21.9 per 1,000, against 19.1, 21.2 and 20.3 in the third quarters of the three preceding years. In London the rate of mortality was 20.6 per 1,000, while it averaged 22.8 in the thirty-two towns, among which it ranged from 15.6 in Croydon, 16.4 in Hudderstield, 17.1 in Halifax, and 17.5 in Bristol to 26.3 in Burnley, 27.4 in Sheffield, 27.6 in Manchester, 29.1 in Salford, and 29.9 in Liverpool. The 62,306 deaths registered in the thirty-three towns last quarter included 15,923, which were referred to the principal zymotic diseases, equal to an annual rate of 5.61 per 1,000, against 4.19, 5.73, and 4.94 in the corresponding periods of the three preceding years. In London the zymotic death-rate last quarter was equal to 4.58 per 1,000, while it averaged 6.28 in the thirty-two provincial towns, among which it ranged from 2.46 in Halifax, 3.49 in Newcastle, 3.56 in Derby, and 3.61 in Birkenhead to 8.55 in Liverpool, 8.79 in Salford, 8.83 in Sheffield, and 9.99 in Burnley. The 15,923 deaths referred to the principal zymotic diseases in the thirty-three towns during the quarter under notice included 24 which were referred to small-pox, 1,226 to measles, 359 to scarlet fever, 1,013 to diphtheria, 878 to whooping-cough, 607 to "fever," and 11,816 to diarrhœa. The fatal cases of measles, which had been 947, 1,109, and 1,529 in the three preceding quarters, declined again to 1,226 during the three months ending September last, and were equal to an annual rate of 0.43 per 1,000; in London the death-rate from this disease was equal to 0.47; while it averaged 0.41 per 1,000 in the thirty-two provincial towns, among which measles was proportionally most fatal in Liverpool, Manchester, Salford, Burnley, and Sheffield. The deaths from scarlet fever, which had been 366 and 337 in the two preceding quarters, rose again to 359 during the three months under notice, and were equal to an annual rate of 0.13 per 1,000; in London the scarlet fever death-rate was only 0.08 per 1 000, while it averaged 0.16 in the thirty-two provincial towns, among which this disease showed the highest proportional fatality in Liverpool, Oldham, Burnley, Halifax, Bradford, and Sheffield. The fatal cases of diphtheria, which had declined from 1,140 to 888 in the three preceding quarters, rose again to 1,013 during the three months ending September last, and were equal to an annual rate of 0.36 per 1,000; in London the death-rate from this disease was 0.39 per 1,000, while it averaged 0,34 in the thirty-two provincial towns, among which diphtheria was proportionally most fatal in West Ham, Swansea, Leicester, Preston, Leeds, and Sheffield. The deaths from whooping-cough, which had been 1,417 and 1,289 in the two preceding quarters, further declined to 878 during the three months under notice, and were equal to an annual rate of 0.31 per 1,000; in London the death-rate from whooping-cough was 0.26 per 1,000, while it averaged 0.34 in the thirty-two large provincial towns, among which this disease showed the highest proportional mortality in Portsmouth, Cardiff, Leicester, Liverpool, Burnley, Huddersfield and Leeds, The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of fever), which had declined from 1,004 to 352 in the three preceding quarters, rose again to 607 during the three months ending September last, and were equal to an annual rate of 0.21 per 1.000; in London the "fever" death-rate was 0.16 per 1,000, while it averaged 0.25 in the thirty-two provincial towns, and was highest in Portsmouth, Birkenhead, Salford, Sheffield, and Sunderland. The 11,816 fatal cases of diarrhœa were equal to an annual rate of 4.16 per 1,000; in London the rate of mortality from this disease was 3.22 per 1,000, while it averaged 4.78 in the thirty-two provincial towns, among which diarrhœa showed the highest proportional fatality in Portsmouth, Liverpool, Manchester, Salford, and Preston. One fatal case of small-pox was registered during last quarter in London, and 23 in Hull, but not one in any other of the thirty-three large towns.

Infant mortality in the thirty-three towns, measured by the proportion of deaths under one year of age to registered births was equal to 303 per 1,000 during the three months ending September last, against 232, 278, and 275 in the corresponding quarters of the three preceding years. In London

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Third Quarter of 1899.

Towns.	Estimated Population middle of 1899	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
33 Towns	11,404,408	84,608	62,306	29.8	21.9	[illegible]	15,923	24	1,226	359	1,013	878	607	11,816	303	1.0
32 Provincial Towns	6,857,650	54,148	38,947	30.5	22.8	6.29	10,744	23	696	272	575	583	430	8,165	318	1.3
London	4,546,752	32,460	23,359	28.6	20.6	4.58	5,179	1	530	87	438	295	177	3,651	279	0.5
West Ham	300,241	2,105	1,549	28.1	20.7	7.01	525	—	19	—	41	28	10	427	300	1.1
Croydon	127,759	769	496	24.1	15.6	3.95	126	—	3	—	3	13	—	102	274	—
Brighton	123,226	762	671	24.8	21.8	6.54	201	—	1	1	15	2	8	174	340	0.3
Portsmouth	190,741	1,257	1,064	26.4	22.4	7.83	371	—	13	3	16	24	29	286	360	0.8
Plymouth	100,637	704	588	30.5	23.4	4.03	101	—	2	2	3	6	—	88	343	0.7
Bristol	320,911	2,210	1,401	27.7	17.5	4.03	322	—	7	3	7	6	8	291	239	0.7
Cardiff	185,826	1,315	857	28.4	18.5	4.52	209	—	—		18	29	12	150	293	0.6
Swansea	103,722	722	461	27.9	17.8	3.92	101	—	6	3	26	4	3	64	234	0.4
Wolverhampton	88,821	753	502	34.0	22.7	5.43	120	—	3	[illegible]	4	5	4	103	299	0.2
Birmingham	514,956	4,371	[illegible]	34.0	24.2	7.12	914	—	39	[illegible]	37	30	18	752	334	1.6
Norwich	113,266	837	518	29.6	18.3	5.64	159	—	—	4	7	5	9	114	293	1.2
Leicester	213,851	1,535	1,067	28.8	20.0	6.76	360	—	5	11	53	28	10	251	328	2.2
Nottingham	239,384	1,757	1,410	29.4	23.6	7.04	420	—	28	12	9	3	21	347	361	1.0
Derby	106,401	783	485	29.5	18.3	3.56	94	—	6	6	2	1	1	78	254	—
Birkenhead	115,162	820	581	28.6	20.2	3.61	104	—	3	2	3	4	19	73	313	1.2
Liverpool	634,212	5,674	4,724	35.9	29.9	8.55	1,352	—	102	41	49	89	48	1,023	342	3.1
Bolton	162,221	1,153	879	28.5	21.7	6.46	262	—	3	3	5	11	11	227	301	0.3
Manchester	543,902	[illegible]	3,740	32.6	27.6	7.82	1,058	—	116	[illegible]	15	62	20	835	346	0.7
Salford	218,244	[illegible]	1,582	33.5	29.1	8.79	478	—	[illegible]	12	15	15	28	343	374	0.6
Oldham	150,772	905	739	24.1	19.7	4.15	156	—	11	15	3	7	5	112	266	0.1
Burnley	113,081	702	741	24.9	26.3	[illegible]	232	—	58	27	4	17	10	109	507	0.8
Blackburn	135,154	907	598	26.9	17.7	3.78	127	—	1	1	12	12	11	85	259	3.0
Preston	117,622	879	697	30.0	23.8	8.19	240	—	1	[illegible]	17	3	4	211	392	1.0
Huddersfield	103,464	589	423	22.8	16.4	4.12	106	—	[illegible]	4	[illegible]	19	9	76	241	1.4
Halifax	97,721	589	417	24.2	17.1	2.46	60	—	2	[illegible]	3	1	6	38	200	2.4
Bradford	236,241	1,441	1,098	24.5	18.6	4.51	265	—	1	[illegible]	4	12	8	200	284	1.4
Leeds	423,889	3,235	2,129	30.6	20.1	5.35	565	—	[illegible]	1	79	63	18	350	262	0.1
Sheffield	361,169	3,020	2,469	[illegible]	27.4	8.83	795	—	1	[illegible]	105	10	51	501	359	1.8
Hull	234,270	2,020	1,235	34.6	21.1	6.47	378	[illegible]	1	[illegible]	4	21	17	198	278	1.0
Sunderland	145,613	1,300	815	36.1	22.4	4.93	179	—	[illegible]	[illegible]	1	11	15	139	245	1.7
Gateshead	106,552	931	[illegible]545	35.0	20.5	4.33	115	—	2	[illegible]	1	6	4	97	275	1.3
Newcastle-on-Tyne	228,625	1,781	1,365	31.2	23.9	3.49	199	—	11	[illegible]	[illegible]	24	11	135	315	0.7

the rate of infant mortality was equal to 279 per 1,000, while it averaged 318 in the thirty-two provincial towns, among which it ranged from 200 in Halifax, 234 in Swansea, 239 in Bristol, 241 in Huddersfield, and 245 in Sunderland to 360 in Portsmouth, 361 in Nottingham, 374 in Salford, 390 in West Ham, 392 in Preston, and 507 in Burnley.

The causes of 611, or 1.0 per cent., of the deaths in the thirty-three towns during the three months ending September last were not certified, either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths in London did not exceed 0.5 per cent., while it averaged 1.3 in the thirty-two provincial towns. The causes of all the deaths during the quarter were duly certified in Croydon and Derby, and only one was uncertified in Wolverhampton and in Oldham; while the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Blackburn, Halifax, Sheffield, and Suderland.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,826 births and 4,160 deaths were registered during the week ending Saturday last, October 21st. The annual rate of mortality in these towns, which had decreased from 26.8 to 18.6 per 1,000 in the eight preceding weeks, rose again to 19.0 last week. The rates in the several towns ranged from 9.8 in Croydon, 10.8 in Derby, 11.5 in Norwich, and 13.1 in Brighton to 23.6 in Manchester, 23.7 in Bristol, 24.4 in Salford, and 28.4 in Liverpool. In the thirty-two provincial towns the mean death-rate was 19.7 per 1,000, and exceeded by 1.7 the rate recorded in London, which was 18.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the death-rate was equal to 1.6 per 1,000, while it averaged 2.4 in the thirty-two provincial towns, among which the highest zymotic death-rates were 4.1 in Portsmouth, 4.2 in Blackburn, and 4.8 in Salford and in Sheffield. Measles caused a death-rate of 1.4 in Burnley, 1.6 in Plymouth, and 1.8 in Birkenhead; scarlet fever of 1.0 in Salford and in Oldham, and 1.4 in Burnley; whooping-cough of 1.0 in Gateshead; "fever" of 1.0 in Gateshead, 1.3 in Sheffield and in Hull, and 1.7 in Nottingham; and diarrhœa of 1.4 in Portsmouth and in Salford, 1.5 in Blackburn, and 2.7 in Preston. The 129 deaths from diphtheria in the thirty-three towns included 60 in London, 14 in Sheffield, 13 in Leeds, 6 in Birmingham, and 6 in Liverpool. No fatal case of small-pox was registered last week, either in London or in any of the thirty-two large provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday last, October 21st. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,538 to 3,217 at the end of the seven preceding weeks, had further risen to 3,408 on Saturday last; 447 new cases were admitted during the week, against 409, 461, and 455 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, October 21st, 973 births and 527 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.5 and 18.1 per 1,000 in the two preceding weeks, declined again to 17.3 last week, and was 1.7 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.8 in Dundee and 14.6 in Aberdeen, to 17.9 in Edinburgh and 18.8 in Glasgow. The zymotic death-rate in these towns averaged 2.1 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 266 deaths in Glasgow included 12 from measles, 4 from scarlet fever, 2 from diphtheria, 2 from whooping-cough, 7 from "fever," and 16 from diarrhœa. Three fatal cases of "fever" occurred in Edinburgh, and 4 of diarrhœa in Dundee.

MEDICAL OFFICERS IN SCOTLAND.

W. P. P.—According to the interpretation of the Local Government Board of Scotland, Section xv, of the Public Health Act, 1897, not only is it necessary now for all county and burgh medical officers to hold a Diploma of Public Health, but also the same condition applies to medical officers of health of parishes or districts, however small they may be. Section xv of the Public Health Act states that the qualifications necessary are those set forth in Secton liv of the Local Government Act, 1899. This section, which until the Act of 1897 came into operation only applied to districts having a population of at least 30,000, now applies to all districts. It states that the necessary qualification is that the medical officer is registered on the *Medical Register*, and is the holder of a diploma in sanitary science. One way in which the difficulty might be got over would be that instead of being appointed medical officer of health for the parish, our correspondent might be appointed assistant to the county medical officer. This, however, necessitates the county medical officer signing all the statutory certificates.

DISTRICT MEDICAL AND VACCINATION APPOINTMENTS.

H. W. asks for information on the following case: A. has just come to reside and commence practice in the parish of S. The parish and vaccination appointments are held by B., who is non-resident. Is A. by the rules of the Local Government Board and on application to the guardians entitled to receive these?

*** Guardians are not compelled to appoint a resident as district medical officer, and if a newcomer becomes a resident they are not bound to give him any district appointment which may be vacant.

DISINFECTION REFUGES.

At the instance of the Sanitary Committee, the Court of Common Council of the City of London has resolved to erect a shelter in Golden Lane, at a cost of £10,700, for the reception, from time to time, of families whose tenements are being disinfected after an outbreak of disease.

MEDICAL NEWS.

A case admitted from Whitechapel into the Eastern Hospital of the Metropolitan Asylums Board on October 8th was certified as typhus fever on October 14th.

The Training of Backward Children.—The University of Chicago has a new and unique branch in the Chicago Physiological School for the training of nervous and backward children. It is said to be the first of its kind in the world, and is intended as a home for boys and girls who are unable to cope with normal children owing to illness or infirmity.

Westminster Hospital Medical School.—At the meeting of the School of Medicine Committee on October 18th the following prizes and entrance scholarships were awarded: Epsom Scholarship, 110 guineas, to Mr. E. H. Bennett Bailey; Arts Scholarship, £40, to Mr. L. White: Oxford and Cambridge Scholarship, £40, to Mr. W. C. Hocken; Science Scholarship, £40, to Mr. P. Farrant; Arts Scholarship, £30, to Mr. W. H. France; "Fish" Prize, £20, to Mr. W. Payne; Midwifery Prize to Mr. W. Payne: Forensic Medicine Prize to Mr. W. Payne; Materia Medica Prize to Mr. E. R. Cushing; Practical Chemistry Prize to Messrs. T. B. Hickley and C. Parker, and Physics Prize to Mr. O. P. N. Pearn.

The St. John Ambulance Association.—Arbitration in connection with the differences between the Stockport and District Medical Society and the Stockport Centre of the St. John Ambulance Association, which was accepted by the Society in July, has now been accepted by the Local Hon. Secretary and the Chairman of the Centre. The arbitrators appointed by the Central Executive Committee are: Colonel Bowdler, Sir James R. Dick, M.D., R.N., K.C.B., and Inspector-General Belgrave Ninnis, M.O., R.N. The arbitration will take place on Monday, October 30th, at 9.30 A.M.

Society for Relief of Widows and Orphans of Medical Men.—At the last quarterly court of the directors of the Society, Mr. Christopher Heath, V.P., in the chair, six new members were elected, and the death of Mr. Mould, a vice-president and at one time a very active member of the Society, was reported. The death of a widow was announced who had received £50 a year since July, 1884. A first application for a grant was read from a widow, and a grant at the rate of £40 a year made. Applications for renewal of grants were received from 48 widows, 12 orphans, and 6 recipients from the Copeland Fund, and it was resolved to distribute at the next court among them the sum of £1,201 10s. The Directors were pleased, on the report of the Acting Treasurer, to be enabled to vote a sum of £541 to be given as a Christmas present to the widows and orphans on the funds of the Society (£10 to each widow, £3 to each orphan, and £5 to 5 recipients from the Copeland Fund). The expenses of the quarter were £62 10s.

Guild of St. Luke.—The anniversary festival service of the Guild was held at St. Paul's Cathedral on October 19th. The Lord Mayor and Sheriffs attended in State, together with the chief officers and many members of the Corporation of the City of London. There was a crowded congregation, a large proportion of which consisted of medical men, many of whom wore academical costume and walked in procession to their seats, as did some ladies holding medical degrees. A choir of 300 voices was furnished by the London Gregorian Choral Association, and accompanied by silver cornets. The sermon was preached by the Bishop of Stepney from the text (Matt. ix, 35) "Jesus went about all the cities and villages, teaching in their synagogues, and preaching the Gospel of the Kingdom, and healing every sickness and every disease among the people." He considered there was not all the harmony that was desirable between the professions of the Church and Medicine. He welcomed the presence of ladies amongst the medical graduates; their sympathy with suffering, and their ability to commune more freely with some patients than men could gave them a special mission. He referred to the late Bishop of Bloemfontein as the only clergyman who was a Fellow of the Royal College of Physicians; and his death on the day when war commenced in the Free State was pathetic. The offertory was devoted to the Medical Mission College Fund.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN UNIVERSITY.—(1) Examiner for Graduation in Surgery (including Clinical Surgery); (2) Examiner for the Diploma in Public Health. Applications to the Secretary of the Court by November 6th.

BETHLEM HOSPITAL.—Two Resident House-Physicians. Appointment for six months. Apartments, board, and washing provided, and honorarium of £12 12s. per quarter. Applications, endorsed "House-Physicians," to the Treasurer, Bridewell Hospital, New Bridge Street, E.C., by November 6th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by November 11th.

BRIGHTON, HOVE, AND PRESTON DISPENSARY (Northern Branch).—House-Surgeon. Salary, £100 per annum, with furnished apartments, coal, gas, washing, and attendance. Applications to the Assistant Secretary, 113, Queen's Road, Brighton, by November 1st.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Board and residence provided. Candidates must attend at the Hospital on Thursday, November 9th, at 4 P.M.

DERBY BOROUGH ASYLUM.—Assistant Medical Officer. Salary, £100 per annum, with board and washing. Applications to Dr. Macphail, Rowditch, Derby, by October 31st.

DOUGLAS, NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Unmarried. Salary £72 a year, with board, and washing. Applications to F. B. Fleming, Honorary Secretary, 25, Athol Street, Douglas, by November 2nd.

EDINBURGH ROYAL INFIRMARY.—Superintendent. Salary, £500 per annum, with free house, coal, and light. Applications to Mr. W. Caw, Treasurer and Clerk, by November 15th.

FULHAM PARISH.—Assistant Medical Superintendent for the Infirmary, St. Dunstan's Road; unmarried. Salary, £120 per annum, increasing £10 yearly to £150, with board, etc. Applications on forms provided to be sent to the Clerk to the Guardians, 75, Fulham Palace Road, Hammersmith, W., by November 4th.

GLAMORGAN COUNTY COUNCIL AND CARDIFF CORPORATION.—Bacteriologist to the Joint Committee and Lecturer on Bacteriology in the University College, Cardiff. Salary, £300 per annum. Applications to W. E. R. Allen, Clerk to the Joint Committee, Glamorgan County Offices, Cardiff, by November 6th.

GREAT YARMOUTH, COUNTY BOROUGH OF.—Medical Officer of Health, Medical Officer of the Borough Isolation Hospital, and Port Medical Officer of Health. Not exceeding 35 years of age. Salary, £400 a year. Applications, endorsed "Medical Officer, etc.," to A. H. Miller, Town Clerk, Town Hall, Yarmouth, by November 4th.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to J. F. Wintringham, Honorary Secretary, St. Mary's Chambers, Great Grimsby, by November 18th.

HOSPITAL FOR CHILDREN, Great Ormond Street, Bloomsbury.—Resident Medical Superintendent. Appointment for one year, subject to annual re-election. Salary, £105 a year, with board and residence. Applications to the Secretary by November 21st.

JARROW-ON-TYNE: MEMORIAL HOSPITAL.—House-Surgeon, not less than 25 years of age. Salary, £120 per annum, with board and laundry. Applications to the Secretary by November 4th.

KINGSTON-UPON-HULL.—Temporary Assistant Medical Officer of Health to take charge of patients in the Small-pox Hospital. Salary, £6 6s. per week, with board. Applications, endorsed "Assistant Medical Officer," to the Medical Officer of Health, Town Hall, Hull, by November 1st.

LINCOLN: BRACEBRIDGE ASYLUM.—Junior Assistant Medical Officer; unmarried, and not over 30 years of age. Salary, £125 per annum, with furnished apartments, board, attendance, etc. Applications to Mr. W. T. Page, jun., 5 and 6, Bank Street, Lincoln, by November 25th.

LIVERPOOL STANLEY HOSPITAL.—Junior House-Surgeon. Salary, £70 per annum, with board, residence, and washing. Applications, endorsed "Applications for Junior House-Surgeon," to the Chairman of the Medical Board by November 2nd.

LONDON LOCK HOSPITAL, Harrow Road, W.—House-Surgeon to the Female Hospital. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by November 18th.

LONDON TEMPERANCE HOSPITAL, N.W.—(1) Surgical Registrar and Anæsthetist. Honorarium, 50 guineas per annum. (2) Assistant Resident Medical Officer. Appointment for six months. Board, residence, and washing provided. Honorarium at the rate of 50 guineas per annum. Applications to the Secretary by November 9th.

LIVERPOOL DISPENSARIES.—Assistant Surgeon; unmarried. Salary, £100 per annum, with board and residence. Applications to the Secretary, 34, Moorfields, Liverpool.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Honorary Aural Surgeon. Applications to the Secretary, Dispensary, Goatside Street, Manchester, by November 8th.

MANCHESTER: CHORLTON-UPON-MEDLOCK DISPENSARY.—Resident House-Surgeon. Unmarried. Salary £120 per annum, with furnished rooms and attendance. Applications to the Honorary secretary by October 31st.

MIDDLESEX HOSPITAL, W.—Assistant Physician. Must be F. or M.R.C.P.Lond. Applications to F. Clare Melhado, Secretary-Superintendent, by November 2nd.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—(1) Honorary Anæsthetist. Appointment for one year, but eligible for re-election. (2) Resident Medical Officer. Appointment for six months. Salary, £50 per annum. (3) Assistant Resident Medical Officer. Appointment for six months; eligible for election to the senior post. Candidates must attend the meeting of the Medical Committee on November 2nd, at 5 P.M.

NOTTINGHAM GENERAL DISPENSARY.—(1) Senior Resident Surgeon; unmarried. Salary, £180 a year, increasing to £200, with coals, gas, and furnished apartments, etc. (2) Assistant Resident Surgeon; unmarried. Salary, £140 a year, etc. Applications to the Secretary.

PONTEFRACT GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Commencing salary, £130 per annum, with furnished rooms, fire, light, and attendance. Applications to the Secretary by November 11th.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, washing, etc. Applications to the secretary, 5, Winckley Street, Preston, by November 8th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner in Dental Surgery. Must be registered under the Dentists Act of 1878. Applications to the Secretary by November 1st.

ROYAL EAR HOSPITAL, Soho.—(1) Anæsthetist. (2) House-Surgeon, non-resident. A small honorarium is given. Applications to the Honorary Secretary before November 10th.

ROYAL FREE HOSPITAL, Gray's Inn Road W.C.—(1) Two House-Physicians. (2) One House-Surgeon. (3) One Casualty House-Surgeon. Appointments for six months. No salary, but board, etc., provided. Applications to the Secretary by October 30th.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City Road, E.C.—House-Surgeon. Salary, £50 per annum. Applications to the Secretary by November 4th.

ST. MARY, ISLINGTON.—Second Resident Assistant Medical Officer and Dispenser of Medicine at the Workhouse and Infirmary, St. John's Road. Salary, £100 per annum, with rations, apartments, and washing. Applications to the Clerk, Guardians' Offices, St. John's Road, Upper Holloway, N., by October 30th.

STOKE-UPON-TRENT UNION.—Resident Medical Officer for the Workhouse. Salary at the rate of £130 for the first year, with an increase of £15 per annum to a maximum of £175, with board, washing, and furnished apartments. Applications to the Clerk to the Guardians, Union Offices, Stoke-upon-Trent, by November 6th.

SUSSEX COUNTY HOSPITAL.—House-Physician. Unmarried, and under 30 years of age. Salary commencing at £50 per annum, with board, residence, and washing. Applications to the Secretary by November 1st.

UNIVERSITY COLLEGE HOSPITAL.—Second Anæsthetist. Applications to the Secretary by November 7th.

VICTORIA UNIVERSITY.—External Examiner in Anatomy. Appointment for three years. Applications to the Registrar by November 1st.

WEST BROMWICH DISTRICT HOSPITAL.—House-Surgeon; unmarried. Salary, £100 per annum, with board, residence, and washing. Applications to Mr. F. Foley Balche, Honorary Secretary, Church Hill House, West Bromwich, by October 30th.

MEDICAL APPOINTMENTS.

BALCK, J. A., M.B., Ch.B.Edin., appointed House-Surgeon to Royal Hants County Hospital, Winchester.

GAMAN, F. B., M.R.C.S., L.R.C.P.Lond., reappointed Medical Officer of Health for the Caistor Rural District Council.

GODSON, Leonard J., M.R.C.S.Eng., L.R.C.P.Lond., appointed Surgeon to the Salop Infirmary, *vice* H. J. Rope, F.R.C.S., deceased.

HARRIS, Wilfred J., M.D.Cantab., M.R.C.P., appointed Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria Park, E., *vice* Dr. J. J. Perkins, resigned.

MARTIN, E. W., M.B., Ch.B., appointed Junior House-Physician to the City of London Hospital for Diseases of the Chest, Victoria Park, E.

MOORE, E. J. F., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Workhouse of the Bethnal Green Union.

PARKINSON, J. P., M.D., M.R.C.P.Lond., F.R.C.S.Eng., appointed Visiting Physician to the London Temperance Hospital.

POTTS, W. J., M.D.Lond., M.B., appointed Medical Superintendent of the new Infirmary, Bethnal Green.

PRICE, Frederick Wm., M.B., C.M.Edin., appointed Assistant Resident Medical Officer to the Brompton Hospital for Consumption.

RORIE, G. A., M.B.Edin., appointed Junior Assistant Medical Officer in the Cumberland and Westmoreland Asylum, Carlisle.

SENIOR, A., M.B., B.C.Camb., reappointed Medical Officer of Health for the Esher and Ditton Urban District Council.

STEWART, James, J.P., L.R.C.P., L.R.C.S.Edin., appointed Certifying Factory Surgeon for the Burgh of Inverary, and the Civil Parish of Inverary, in the Mid-Argyll District of Argyllshire.

THORNE, May, L.S.A.Lond., M.D Brux., appointed Teacher on the Theory and Practice of Vaccination by the Local Government Board.

WILLIAMSON, O. K., M.A., M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., appointed Pathologist to the City of London Hospital for Diseases of the Chest, Victoria Park, E.

DIARY FOR NEXT WEEK.

MONDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Dr. Beddard: Practical Demonstrations of the Local Government Board Method of Vaccination.

TUESDAY.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street W., 4 P.M.—Dr. T. D. Savill: Cases illustrating Hysteria and other Paroxysmal Neuroses.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. Ferrier: Hemiplegia.

WEDNESDAY.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by Dr. William Duncan and others. Papers: Dr. Herman: Two cases in which life appeared to have been saved by Anti-streptococcus Serum. Dr. P. D. Turner: Notes on Tuberculosis of the Fallopian Tubes and Uterus in cases of Phthisis.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Horton-Smith on Pneumothorax.

University College Medical Society, 8 P.M.—Professor T. Clifford Allbutt on Local and Constitutional Disease.

THURSDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Dr. Beddard: Demonstration of Various Antitoxin Injections.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Mr. Kellock: Tuberculous Disease of the Knee-joint.

Royal College of Physicians of London, 5 P.M.—Dr. Foxwell: The Bradshaw Lecture on the Causation of Functional Heart Murmurs.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Mr. Stanley Boyd: Demonstration of Surgical Cases.

Harveian Society of London, 8.30 P.M.—Dr. J. W. Washbourn: Cases illustrating the Value of Treatment with Antistreptococcus Serum.

FRIDAY.

Laryngological Society of London, 20, Hanover Square, 5 P.M.—Cases and specimens will be shown by Drs. Furniss Potter, Hector Mackenzie, St. Clair Thomson, Dundas Grant, William Hill, Herbert Tilley, Scanes Spicer, Mr. Richard Lake, and others.

West London Medico-Chirurgical Society, West London Hospital, W., 5 P.M.—Mr. J. G. Pardoe: Some Modern Methods in the Treatment of Chronic Urethritis. Mr. Swinford Edwards: Urinary Obstruction with cases illustrating some of its causes. Mr. McAdam Eccles will show an Enema Apparatus from Central Africa.

Society of Anæsthetists, 20, Hanover Square, W., 8.30 P.M.—Dr. Savage: The Relationship between the Use of Anæsthetics and Insanity.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

FINCHAM.—On Thursday, October 19th, at 17, John Street, Bedford Row, W.C., the wife of Ernest C. Fincham, M.R.C.S.Eng., L.R.C.P.Lond., of a son.

WALKER.—At "Las Acacias," Durazno, Republic of Uruguay, South America, on August 22nd, the wife of Herbert J. Walker, M.B.Edin., of a daughter.

DEATHS.

FLEMING.—At 3, Woodside Terrace, Glasgow, on October 24th, Annie Cole Walls, wife of Wm. James Fleming, M.D. Friends kindly accept this intimation.

KELBE.—Died at Alice, Victoria East, Cape Colony, on September 25th, 1899, Elfrida Gertrude, dearly loved wife of Walter Edward Kelbe, District Surgeon, and elder daughter of the late F. Bernard, Esq.

LIVY.—On October 24th, at the residence of his son-in-law, J. F. Knowles, of Belair, Birkdale, Southport, John Livy, M.D., F.R.M.S., and J.P. of Bolton, aged 73 years.

MACAN.—On October 18th, at Brighton, Louisa Elizabeth Rae, the beloved wife of Jameson John Macan, M.D., of Crossgates, Cheam, daughter of the late Sir John Rae Reid, Bart., of Ewell Grove, and widow of the late Spencer Croughton Wilde, of Cheam House, Surrey.

PALMER.—On October 21st, at Lancaster House, Lincoln, Edwin Charles Palmer, M.A., M.B., B.C.Cantab., in his 35th year.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

Central London Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily.

Central London Throat, Nose, and Ear. *Attendances.*—M. W. Th. S., 2; Tu.F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

Charing Cross. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S., 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

Chelsea Hospital for Women. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

City Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

East London Hospital for Children. *Operations.*—M. W. Th. F., 2.

Great Northern Central. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

Guy's. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

Hospital for Women, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

King's College. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

London. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

London Temperance. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

London Throat, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

Metropolitan. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

Middlesex. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

National Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

New Hospital for Women. *Attendances.*—Daily, 2; Ophth almic, W. S., 9.30. *Operations.*—Tu. F., 2.

North-West London. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

Royal Ear, Frith Street. *Attendances.*—M. W. F., 3; Tu F., 9.30 and 7.30. *Operations.*—Tu., 3.

Royal Eye, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

Royal Free. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 3; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

Royal London Ophthalmic. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

Royal Orthopædic. *Attendances.*—Daily, 2. *Operations.*—M., 2.

Royal Westminster Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

St. Bartholomew's. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

St. George's. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

St. Mark's. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

St. Mary's. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

St. Peter's. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

St. Thomas's. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

Samaritan Free for Women and Children. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

Throat, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

University College. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

West London. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

Westminster. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday on Wednesday. Telegrams can be received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

Original articles and letters *forwarded for publication are understood to be offered to the* British Medical Journal *alone, unless the contrary be stated.*

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look at the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any circumstances be returned.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal, and not at his private house.

Telegraphic Address.—The telegraphic address of the EDITOR of the British Medical Journal is *Aitiology, London.* The telegraphic address of the MANAGER of the British Medical Journal is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

Hygiene asks to be recommended a good work on personal hygiene, written in a popular style, free from professional technicalities.

W. would be grateful for any information as to arrangements between general practitioners who dispense their own medicine and chemists, by which the latter make up all medicines.

Dr. A. Vernon Davies (Shaw, Lancs.) asks for a house or hospital where a female syphilitic inebriate could be attended to, the syphilis being the more urgent. The people are very poor, and could only pay a small sum weekly.

General Practitioner would be glad of advice in the treatment of the following case. A lady contracted nasal and bronchial catarrh about six weeks ago. The catarrh is now cured, but has left anæsthesia of the tongue. Smell is perfect. She is at present nursing. She has a rheumatic history. The usual remedies have been tried. She is now taking liq. Eastoni and spt. armoraciæ co., but with no result.

Inquirens.—Our correspondent puts the following case to us: A., a junior practitioner in a county town, calls B., the senior surgeon to the local hospital, in consultation to see Mrs. C. Three years later, Mrs. C. having died, Miss C. consults B., and B. subsequently continues in attendance. We understand A. to ask whether the fact that B. met him in consultation upon a member of the C. family should not bar B. from future attendance upon the family or any member of it? The correspondence between the parties has been submitted to us, and we recognise with pleasure that the letters on both sides are courteous and moderate in tone.

B.'s explanation is that while seeing cases in consultation, he is in general practice, and was for some years the attendant on the C. family, although for reasons not known to him at the time his services were discontinued. When Miss C. came to him he recommended that she should remain under the care of A., B. giving his advice in consultation; but this offer was declined by Miss C. On receiving this explanation, A. complained that B. might have written a few lines to him at the time that he undertook attendance upon Miss C., by which course the misunderstanding would have been avoided. B. resents this reproach, and asks A. for an apology.

Cases such as this are particularly likely to occur where no specialised consulting class exists, and friction can be avoided only by the exercise of the greatest care. In our opinion, (1) A. has no right to consider that he has a vested interest in the C. family, any member of which is perfectly at liberty to consult any member of the profession he or she chooses; (2) B. was perfectly at liberty to attend Miss C., but appears to have felt some natural hesitation to do so, as he was aware that the family had recently been attended by his colleague A., and he seems to have done what he could to safeguard A.'s interests, short of actually refusing to see the case which, in our opinion, he was not called upon to do. (3) Whether it would have done good for B. to have written to A. depends upon circumstances, as we have known such letters evoke the storm they were intended to allay. (4) We do not think A. owes B. any formal apology, but he might very well express his regret for not having accepted in a more gracious spirit the explanation offered by B.

A Sequela of Influenza.

M.B. asks for advice in the treatment of the following case: An otherwise healthy man, aged 30, who has just passed through an attack of influenza, has, on getting out of bed, a rigor followed by profuse sweating. This state has prevailed for some weeks—to such an extent that he dreads leaving his bed. Malaria, I believe, is out of the question. His tongue is clear, pulse and temperature normal, appetite good. I may add that quinine, atropine and zinc, mineral acids, and several other drugs have been tried without affect.

Certificates of Death and Registration.

M.B., C.M. performed an operation on a woman, aged 60, for strangulated hernia, and death ensued twenty four hours afterwards. The certificate of the cause of death stated as follows: "Primary, strangulated femoral hernia; secondary, acute peritonitis." The local registrar of deaths declined to issue the "burial order" until he had first communicated with the coroner. Our correspondent inquires if this is a necessary or usual course.

*** In certain cases, where the certificate of the cause of death as given by the medical attendant shows on the face of it that the death has arisen from injury or violence of any kind, or from any unnatural cause, it is the duty of the registrar to refer the cause to the coroner before registration, as is also done in cases where there is no certificate or the cause of death is unknown; but in the present case we cannot say why he adopted that course, unless, not having any special medical knowledge, he may have thought the acute peritonitis arose from some previous injury. If the words "natural causes" had been added on the the third line of the medical certificate, it would probably have secured immediate registration of the death.

ANSWERS.

M.D. has not enclosed his card.

Club Doctor.—The question of the liability of a club doctor to attend a member for an illness which does not entitle the member to sick pay can only arise where the rules of the club are badly worded. The rule quoted ought to end "shall not be entitled to any benefit in respect of such incapacity." As our correspondent was called in as club doctor, it is to be feared that he has no means of making the member pay: and from the wording of the rule, it is very doubtful whether he could have safely refused to attend.

NOTES, LETTERS, Etc.

THE BRITISH NORTH BORNEO PUBLIC MEDICAL SERVICE.

WE regret to hear that the dissatisfaction in this service to which we alluded last May (p. 1260) still exists.

The following is a letter which has been forwarded to us for publication:

"Labuan, September 7th, 1899.

"SIR,—You have already become aware of the arbitrary measures which have been meted out to the Medical Department in Borneo.

"1. The official emoluments suddenly cut down by half, in one case case (the former principal medical officer) after seventeen years' service.

"2. Instead of half the private fees of officers being demanded by the Government to be paid into the Treasury as formerly, and which was successfully resisted, the public are practically called upon to be the main support of the profession here owing to the Government paying an inadequate remuneration for services rendered.

"3. In order to carry out this design, the Government has not hesitated to ignore seniority and length of service, a new incumbent being engaged for the premier post on 150 dollars per month official pay, whereas the last incumbent received 400 dollars, which was by no means excessive for the onerous work.

"4. To further combat any disaffection in the service here, medical cadets, so called, are being brought out on contract to do any sort of work practically but medical, such as clerking, telegraph work, etc., the cadet's medical diploma being merely a stand-by to guarantee qualified medical work when wanted by the Government, as if were, at the price of a mere song.

"5. The Straits Branch of the British Medical Association in special meeting carried by a majority the following resolution:

"'That the local Branch of the British Medical Association, having heard Dr. ——'s account of the state of medical affairs in British North Borneo, and understanding that the Court of Directors are endeavouring to lessen the emoluments of their medical officers, should if possible combine to resist the projected changes and to induce the profession in general to support them.'

"Thanking you, therefore, for the publicity you have already given this important matter in your issue of May 20th, p. 1260, we beg you will still further accord us your valuable space, and aid in giving publicity to this struggle and endeavouring to prevent other men accepting service with this Government until the profession is assured that all grievances have been removed and honourable terms accorded to the medical staff here.—We are, your obedient servants,

"THE MEDICAL STAFF."

*** We have seen a copy of the agreement under which medical men engage themselves in this service, and we would point out to those who may be thinking of joining that the contract leaves them entirely at the mercy of the company in a remote part of the world, as the agreement is liable to termination at the pleasure of the company at any moment by paying three months' salary, amounting to 600 dollars, or about £90—a sum barely sufficient to enable them to return home.

MOTOR CARS.

DR. T. PRICHARD ROBERTS (St. Albans) writes: Many medical men have written asking me if I know of any firm which will supply reliable cars and motor tricycles on the hire-purchase system. Up to a fortnight ago I was unable to give the desired information; now I am glad to say a firm in Birmingham have arranged to take one-third of purchase money down, and the rest by monthly, quarterly, or half-yearly instalments. Many would-be users of the above have been debarred from having a car by the heavy initial cost, but now this has been overcome by the above arrangement. I shall be happy to advise any medical man as to the best car or tricycle to purchase; also the name of the firm which is willing to be paid by instalments.

DR. DAWSON TURNER (Edinburgh) writes: Those of your readers who are interested in motor cars may care to have a brief account of a journey I have just made on one from Paris to Edinburgh. The car was a 10 horse power Delahaye which was ordered last April, and which was promised for August 15th, but which was not delivered until September 21st. We took eight days to cover 750 miles, and the car has given me very great satisfaction.

I carried with me a *mécanicien* from the works for the three days, as we were in France, but since then I have managed the car entirely myself. Motor cars are only carried by the night boats of the Dieppe-Newhaven service. This is a great disadvantage, for it is difficult enough even by daylight to thread one's way over railway lines to the boat's side, and to have the car safely embarked; when, however, we reached the boat the captain informed us that the sea was too rough to permit him to take the car, so that we had to return to the hotel. The next morning we drove the 92 miles to Boulogne, and after waiting there a couple of days for calmer weather, we crossed by the day boat. The arrangements for embarking and disembarking the car were quite satisfactory.

We drove north *vid* London, Oxford, Worcester, Birkenhead, Lancaster, Windermere, Keswick, Carlisle, and St. Mary's Loch. Shap Fells is to be avoided, not so much because it is steep, but because of the loose and stony state of the road, which is a disgrace to the county council. We ran on an average about ninety miles a day, and we always started early so as to be able to reach our resting place by 4 P.M. I had a Daimler car before I purchased the Delahaye. I can recommend both these makes; they are very strongly built and very reliable, but the Daimler with tube ignition is perhaps less likely to go wrong, and it is certainly to be preferred for town work, because it can be made to go so slowly; for country work and long distances, on the other hand, the Delahaye is the better car; it will travel easily at twice the speed of the standard Daimler, and will climb most hills at ten miles an hour. The Delahaye has pneumatic tyres, which have so far given no trouble whatever.

QUININE AS AN OXYTOCIC

MR. T. S. FINCH HUDSON, L.S.A.Lond. (Tipton, Staffs.), writes: In the discussion on the treatment of fever following delivery (BRITISH MEDICAL JOURNAL, October 14th, p. 965), mention was made of quinine as a tonic, antipyretic, and germicide; but nothing appears to have been said of its power of causing uterine contractions. This action alone may bring about the expulsion of infected clots, etc., and so account for a favourable result in some cases. Personally I have no experience of its use in puerperal fever, having so far had no septic case in my own practice, but I have several times used it during labour for uterine inertia, and in cases of inevitable abortion, and invariably found it an excellent oxytocic.

LETTERS, COMMUNICATIONS, ETC., have been received from

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SIXTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899.

PROCEEDINGS OF SECTIONS.

SECTION OF PHARMACOLOGY AND THERAPEUTICS.

John Buckley Bradbury, M.D., President.

A DISCUSSION ON HEADACHES AND THEIR TREATMENT.

I.—T. Lauder Brunton, M.D., D.Sc., LL.D., F.R.S.,
Physician, St. Bartholomew's Hospital.

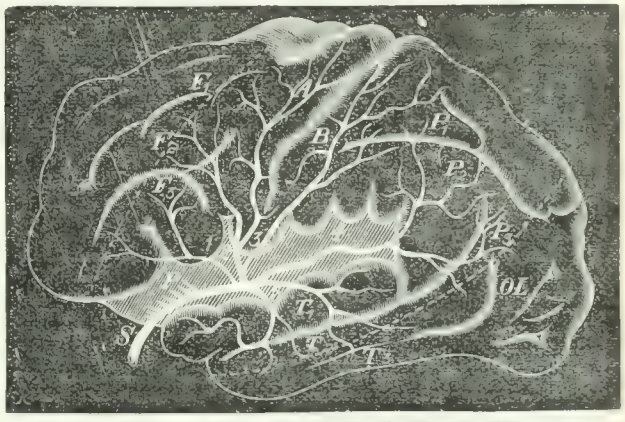
Before commencing the discussion of the treatment of headaches it will be advisable to come to an understanding regarding the meaning which we attach to the word "headache." Although it is by the brain that we perceive pain, yet the brain itself when subjected to direct irritation gives rise to no feeling of pain. It is only when it is excited through the medium of peripheral nerves that the sensation of pain is felt. This is the case with pain in the head as well as pain in other parts of the body, and to the pains which are confined to the head the name of headache is often given, but not always. We find that if pain is localised in a particular organ in the head we do not, as a rule, apply the term "headache" to it. We speak of toothache, of earache, and perhaps of eye-ache, but not of headache unless the pain is of a more diffuse character. When it is localised in a part of the head other than the eye or ear, but is of a shooting character and is limited to one particular spot, we often apply the term neuralgia to it. By headache we generally mean, then, a more or less diffused pain in some part of the head. There are two kinds of pain, however. There may be a sharp shooting pain in one particular part of the head or in one particular organ, and, associated with this, there may be a diffused pain, so that we may have at the same time a toothache and a headache. Not infrequently the headache depends upon irritation in the teeth, in the eye or in the ear, but often the cause of the headache is irritation of the nerve fibres either in fibrous structures or in vessels.

The pain which is associated with tumour in the brain is probably due to pressure of the tumour upon some of the fibrous structures within the cranium; but the headache which is associated with various nerve conditions and is known as migraine, is probably due almost entirely to the stretching of the nerve fibres within the blood vessels. Various opinions have been advanced with regard to its pathology. Some say it is due to cramp of the vessels and that the vessels during the paroxysm are firmly contracted. Others say that during the paroxysm the vessels are widely dilated. In my own case I have found that both statements are true and both are untrue, both being imperfect. The fact is that I get in migraine a dilatation of the proximal parts of the carotid artery with a contraction of the peripheral part, and that if I take off the strain from the vessels by pressing the carotid the pain is at once relieved.

Now in regard to the pathology of headache we have to consider two things, namely, (1) a general condition and (2) a local condition. The general condition renders the patient liable to pain, the local condition determines that the pain should affect his head rather than his intestines or his big toe or some other part of his body. The general conditions which lead to headache are those either of (*a*) imperfect nutrition or of (*b*) disordered nutrition. We find headache very commonly in imperfect nutrition, such as anæmia, and perhaps still more commonly in disordered nutrition, such as occurs in rheumatism, in gout, and above all in albuminuria. In all those cases the tendency to headache is more or less constant because the disorder of nutrition is more or less permanent. But in apparently perfectly healthy people we find that headaches come on now and again, and they are apt to come on with more or less regularity. Thus it would appear that in many such people there is a tendency to disordered nutrition occurring with more or less regularity and such patients are accustomed to recognise this in themselves, and to say that they are apt to become bilious. We find this regularity occurring most markedly in women, because just before, during, or after the monthly period, women are very liable to suffer from headache. But in men, where there is no monthly period, we find also a tendency to regular recurring headache, and probably in them also there is a regular alteration in nutrition.

Now, the nature of this alteration is rather hard to determine, because our knowledge of nutrition generally is insufficient. Yet, a common observation may allow us to associate this altered nutrition, more especially with one organ, namely the liver, because men and women are accustomed to say that they are liable to bilious headaches which recur every now and again. In order to understand this recurrence it is necessary to consider the functions of the liver.

The liver is a porter which stands at the gate of the organism and prevents all the deleterious substances which pass into the intestinal vessels from the intestine from reaching the general circulation. These substances are caught by the liver, they are either destroyed or transformed by the liver, or excreted by it unchanged into the intestine. From the intestine they may partially pass away with fæcal matters, but many of them may be reabsorbed, and so they go on in a continual round from the intestine to the liver, from the liver to the intestine and back again to the liver, until at last the amount of these substances becomes so great that the liver is no longer able to deal with it, and they pass through



Distribution of the arteries in the brain. After Ross.

the liver and get on into the general circulation. Now, it would appear as if there was a certain period required for this accumulation. The period will vary in different individuals, but it will also vary in the same individual under different circumstances, and more especially we know that it will occur in the same person in a less time when he is on a more highly nitrogenous diet. You know that it has been shown[1] that during the decomposition of albuminous materials in the intestine various poisons are formed, and these poisons probably accumulate in the liver until they get through it into the general circulation. By putting a man, then, upon a non-nitrogenous diet you lessen the proportion of these substances, and so you may increase the intervals between the headache more and more, until you may make the interval indefinite and prevent the headaches from recurring at all. Absorption from the liver is greatly altered by emotions. So much is this the fact that sometimes after emotions a person may become completely jaundiced, absorption having taken place so quickly from the liver that the bile actually colours the conjunctiva and the face.[2] Therefore we should expect that anything which was circulating with the bile in the liver would be rapidly absorbed in consequence of emotion. We find that anxiety,

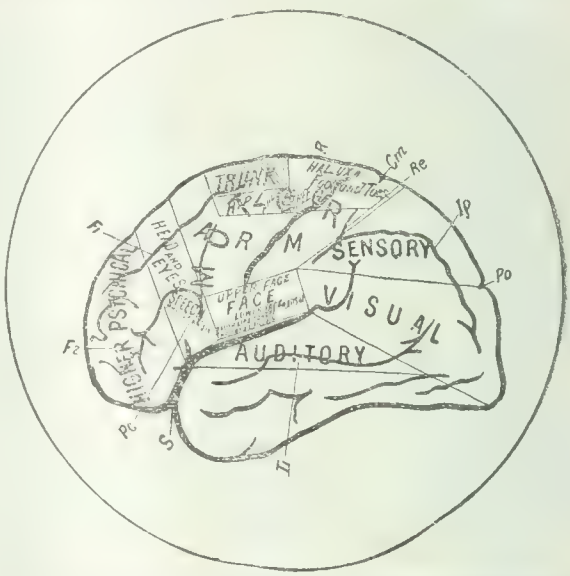
grief, sorrow, especially any depressing emotion, is apt to bring on headache. We have, therefore, very good reasons for attributing many headaches to the presence of abnormal constituents circulating in the blood. If this idea be true, we ought to be able to relieve headaches by clearing out many of the morbid products from the intestine and from the liver. Experience has shown this to be the case, because one of the best methods of relieving a headache or preventing it is to give some mercurial cholagogue, following it up by some saline aperient. A blue pill over night and a black draught next morning will very often prevent the headache from occurring at the time when the person was perfectly sure it would otherwise come on.

So far, then, for the general condition of poisoning by toxins, but there are other injurious substances even less known. Many of them are classed, I believe, under the head of uric acid and certain substances connected with gout and rheumatism are very apt to produce headache. The most powerful cholagogue that is known is salicylic acid or salicylate of soda,[3] and one of the most powerful remedies in preventing and relieving headache is the latter. We may conclude, then, that a good deal of the misery caused by headaches is due to the absorption of toxic products, and that we may prevent headaches from coming on by the use of cholagogues and aperients.

But why do toxins fasten upon the head and cause headache instead of causing man to suffer from pain in his intestines or in his big toe? The reason is that in most cases we have some local lesion which determines the pain to the head, and the most common lesions are either decayed teeth or something wrong with the eyes. The abnormality in the eyes varies a good deal. In some people it is simply a little inequality in the visual length of the two eyes; in others it is astigmatism, in others it is want of accommodation. In others it may be presbyopia, or it may be hypermetropia. In all cases of headache the first thing to do is to examine the teeth and see if any are decayed; next the eyes, and see if there be any abnormality in them. The most common cause of headache is certainly some abnormality in the eyes, but you will find that a great many patients show nothing wrong with the teeth, nothing wrong with the eyes, and then you must look for some other cause. You examine the ears, and see that there is no tenderness in them; you look at the back of the throat and see that there is no thickening of the mucous membrane of the posterior nares, tending to block the Eustachian tubes, and thus indirectly affecting the ears.

A still more frequent cause of headache, however, probably is irritation in the nose or in the cavities connected with it. A very common cause of headache in winter is irritation in the nasal mucous membrane spreading upwards into the frontal sinuses and giving rise to frontal headache. In some other cases, again, you will find that it spreads towards the antrum of Highmore in the malar bone, and you then get a one-sided headache. There is nothing to prevent the irritation from spreading to the ethmoidal and sphenoidal sinuses, and probably it does so spread, and in many cases headache, especially when felt right in the middle of the head, depends upon something wrong in the sphenoid or ethmoid, but we know less about this, and we cannot deal with them so easily. Yet it is necessary always to bear in mind the possibility of these cavities giving rise to headache in cases where you cannot find any other cause for it.

Headaches, and especially the headaches known as migraine, may be accompanied by various other symptoms. In ordinary cases migraine depends upon some spasm of the vessels outside the head, but not infrequently there may be spasm of the vessels inside the head, and then the functions of the brain may be affected. The functions of the cerebrum are, as you know, vision, sensation, hearing, and motor power, to say nothing of general sensation. The diagram (p. 1241) represents the middle cerebral artery and its branches. If spasm of this vessel should so occur as to interfere with the free circulation of blood through the cerebrum, symptoms will ensue whose nature will depend upon the position of the spasm. Supposing that spasm occurs at such a point that the occipital lobe will be deprived of a good deal of its blood, visual hallucinations will probably ensue, and these are amongst the most common concomitants of sick headache. People suffering from sick headache are very apt to get a zigzag appearance in front of their eyes. They at the same frequently experience a difficulty of seeing. They look at a book, but they cannot read; the lines waver like the air over a field on a hot summer's day. These zigzags are generally coloured, and very often amongst other colours there is a green colour, and I believe that this green colour has led really to the superstition of fairies. I have in my possession something which I think is unique—the description of fairies by an eye witness. This was written for me by an old lady who saw the fairies when she was young. I thought it was well to secure it in her own handwriting before she died, and I did so. She saw a troop of fairies passing before her. She called to her father and mother to come and look at the fairies, but they could see nothing. In old days it was supposed that the people who saw things had greater power of seeing objects which really existed, and it entered into nobody's head to think that what these people saw had no objective existence whatever. Now I believe that the fairies were simply these little zigzags modified by the imagination into the form of people; but these fairies were almost always accompanied by horses with silver bells. The fairy troops, as a rule, did not go by without noise; there was the jingling of very small silver bells. This indicates, then, hallucinations of hearing.



Cerebral cortex showing the distribution of function. After Osler.

We do not often hear of any hallucinations of smell or taste accompanying migraine, so that probably the contraction of the vessel stops nearly opposite to the ascending parietal branch. But sometimes patients may complain very distinctly of motor symptoms, and one of the most marked is aphasia, and in some cases of sick headache you will find your patient may become completely aphasic. How far this is due to the occurrence of atheroma within the arteries I do not know, but in one patient in whom the aphasia was well marked during an attack of sick headache I found after death, which resulted some years subsequently from hæmorrhage into the pons, that the cerebral arteries were studded with atheromatous patches. It would take me too long to discuss the other ideas to which this would lead and its relation to various forms of folk-lore, and I will now refer to other forms of headache.

In tumour of the brain the headache is intensely severe, but it is almost always accompanied by severe vomiting, which is of a peculiar character, unassociated with nausea. It is sudden and violent, and immediately after the vomiting is over the patient feels well again, and is able to eat. Associated with those two cardinal symptoms we find optic neuritis, and when we find a headache without the other two symptoms, the probability is that it is functional, and is not due to any tumour whatever in the brain. Another cause of headache seems to be associated

more with some of the fibrous tissues. There may be inflammation of the periosteum of the head, just as there may be inflammation of the periosteum of any other bone, and this inflammation may affect the periosteum either from gouty, rheumatic, or syphilitic irritation.

Treatment.

The first method of treatment in headaches is of course to try to supply the brain with healthy blood; to clear away any toxins that may be present in it; and one method of doing this I have just mentioned—namely, the administration of a blue pill and a black draught. But more than this, we may try to give something which may have the power of counteracting these toxins or of producing elimination from the liver, and I have found by personal experience the easiest way of getting rid of the toxins or of counteracting their effect I do not know which, is to keep up the action of salicylic acid or salicylate of soda. So that in persons who are liable to headache I generally prescribe salicylate of soda, 15, 20, or 30 grains at night, with 10, 20, or 30 grains of bromide of potassium. This mixture acts better than either salicylate of soda or bromide of potassium alone, and it will usually prevent the occurrence of a headache in the morning. If, however, the headache should still come on, I recommend that the dose should be repeated, and in the case of people who suffer from very violent and often recurring headaches I give them the salicylate of soda not merely morning and night, but three times a day in small doses, either immediately before or after meals. The salicylate of soda is apt to produce a certain feeling of depression and weakness, and in order to counteract these I generally give it along with half a drachm of aromatic spirit of ammonia. Some of my patients have taken salicylate of soda for several years without any apparent harm, but we know theoretically that all these drugs allied to salicylate of soda have a tendency to produce anæmia; and it may be advisable in some patients if you are giving the salicylate of soda regularly to give also a little iron to counteract the effect of the salicylate in producing anæmia. There is another large class of drugs that are used for relieving headache. These, I should mention, ought always to be given before the headache becomes too severe, because when it is severe absorption from the stomach appears to be arrested, and many patients will tell you that the first dose they had of antipyrin acted like magic, but the next time they took it it had no effect whatever, and you can tell them the reason why. The first time they took it was before the headache had got very bad. It was therefore absorbed from the stomach and acted upon their nerve centres. The second time they waited too long, until the headache had got so bad that absorption ceased and so the antipyrin was no more use to them in their stomach than in a bottle outside. Where you have to deal with headache it is always advisable to give your drug before the headache gets too bad. All these belong to the class of drugs which act upon the conducting fibres or cells in the cord and tend to disperse pain. I daresay you know the old story of the dirty Scotch woman. A lady came in to see her one day and found the children walking and grubbing about and she said to her: "Do you not often wash your house?" "No," said the woman. "But when the children come in with a lot of mud on their boots and they tramp all over the floor, what do you do?" "Oh, I make them knock it about until there is none." She distributed the mud equally all over the floor and then she thought it was all right. Now, that is what these drugs do to the pain. Painful impressions do not pass to the cerebrum straight up as a rule, because, as you know, pain is largely conducted up the central column of the cord, and not up through the straight fibres which conduct tactile sensation. If you can distribute your sensation so much that it will get broken up in the cord and will not reach the centre for pain in the brain, of course the patient will not feel pain, and so antipyrin, nux vomica, strychnine, phenacetin, antifebrin, and all that class of drugs relieve pain with one exception—namely, if the pain be not too severe. If the irritation of the sensory nerve is so great that it will fill up all the channels for pain, then phenacetin or antipyrin may sometimes make the pain worse than before. I did not believe this; I thought it was quite contrary to anything that could possibly be, but a patient of mine told me that the antipyrin which I had prescribed to relieve headache made him very much worse. I thought he was mistaken, but I have no doubt he was quite right, and that the reason was that the irritation was so intense, for it seemed to him that the pain had been increased tenfold by this drug. But there is another drug that is very much used, and which has a somewhat similar action, but it acts apparently more upon the posterior columns than upon the central columns—at least so far as experiment goes—and that is caffeine. In cases where the pain is so intense that these substances instead of relieving it seem to make it worse, there is perhaps no drug to which you can have recourse except the subcutaneous injection of morphine, and that relieves the pain and gives the patient quiet for the time being. But of course there is always the difficulty of the morphine habit arising, and so you put off the use of this drug as long as you possibly can. In some cases where there is continued pain in the head lasting for a length of time, cannabis indica seems to help, and this may be given either in the form of the extract or tincture. It is easier to regulate the dose of the tincture, and you may begin with 10 minims three times a day, gradually increasing the dose. You must be careful about cannabis indica. There is no danger in it, I think, but you may greatly alarm the patient's friends if you run beyond 15 or 20 minims until the patient is accustomed to it. You may bring on a state of maniacal excitement which will greatly alarm the patient himself and everybody around him, but the long-continued use of this drug will sometimes relieve these headaches when other things seem to fail.

For the relief of headache occurring through inflammation of the periosteum from gouty, rheumatic, or syphilitic irritation, it is fortunate that one remedy is very useful—namely, iodide of potassium, which should be begun in small doses, and gradually increased up to 10, 20, or 30 grains, three times a day. Where you think that the pain is not of a pure nature, not due simply to dilatation of the nerve fibriles in the fibrous tissue of the periosteum, but is associated also with some change in the vessels of a nature allied to them, which we find in sick headache, the iodide may be combined with bromide and salicylate, and in all those cases it is advisable to give some aromatic spirit of ammonia along with it in order to prevent any depressing effect of the drugs.

There is one thing more and I shall have done, and that is, whenever you get a case of intense headache which your drugs fail to relieve, always look out for glaucoma Even in ordinary headache you will be very apt to find the affected eye is rather tight, that the intra-ocular tension is higher than usual, but in glaucoma it is very much increased, and this will be permanent, and not temporary as in ordinary sick headache. In cases where this increased tension exists you must either treat the glaucoma yourself, or have the patient operated upon by some specialist so as to prevent the loss of an eye as well as to relieve the headache which is so intense, and which comes along with the disease.

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[1] For fuller accounts of this *vide* paper by the author in the *Practitioner*, October and November, 1880, and August, September, and October, 1885; reprinted in *Disorders of Digestion*, pp. 233 and 274. [2] Murchison, *Diseases of the Liver*, 3rd edition, p. 462. [3] Rutherford.

II.—Dundas Grant, M.A., M.D., F.R.C.S.,

Surgeon, Central London Throat and Ear Hospital.

Nasal and Aural Disease a Cause of Headache.

It is perhaps familiar to all how at the time when a city was threatened with siege, and a discussion was held as to the best means of protecting it, one of the councillors who happened to be a tanner expressed his opinion that there was "nothing like leather." In the face of a comprehensive symptom like headache, arising as it does from such numerous and diverse causes, every "speciality" affords its quota of causes and the corresponding means of cure. That the professors of each speciality should have their attention particularly rivetted on the factors arising in their own department is inevitable, that they should over-estimate their importance is natural, and that they have done so is undeniable. The results of this over-enthusiasm have been to unearth causes for headache which had previously been scarcely suspected, and to initiate methods of treatment which have been successful in cases otherwise incurable. As is usual in such circumstances the enthusiasm of the reporters of results has too

often outstripped their discretion, generalisations have been formulated on the strength of too few observations, and some degree of misleading has unintentionally resulted. Unfortunately the too sanguine expectations aroused by the statements of certain specialists have led to disappointment and undue mistrust. This no doubt is as true of the rhinological speciality as of all others in relation to headache. He who omits to examine the teeth, the refraction of the eye, the fundus oculi, and the urine, leaves many causes of obstinate headache undetected; and I would venture to add to this accepted list the examination of the nose. In making this claim I urge the same discretion as in the case of the other specialities, and I should be sorry to see as many subjects of headache submitted to ablation of their middle turbinated bodies as are provided with spectacles. At the same time the correction of errors of refraction has been a source of relief to untold numbers, but in not a few well-selected cases rhinological treatment has been no less operative of good. Far be it from me to suggest that cutting and burning operations in the nose with all the possible, if unusual, risks of hæmorrhage or wound infection should be undertaken as readily as the adaptation of suitable lenses.

As regards the form of nasal disease which may give rise to headache, the most common may be the first quoted—namely, *adenoid vegetations* in the naso-pharynx. It is a most usual experience after the removal of adenoids to observe the disappearance of headaches which were previously of frequent occurrence.

Hypertrophy of the middle turbinated body is another frequent cause, and that it should be so is very readily understood when we consider the comparative narrowness of the space in which it lies and the rigidity of the walls which bound that space, all being richly supplied by branches of the great sensory fifth nerve.

Cases of Intense Headache removed by Resection of the Bulk of the Middle Turbinated Bodies.—Mrs. M. came under my care at the hospital more on account of obstruction and discomfort in the nose than of any definite headache, and the hypertrophy of her middle turbinated bodies was such that I felt called upon to remove them. It was only after this operation that her elation at the relief from headaches which she had previously experienced led me to realise how marked this symptom had previously been, and to associate hypertrophy of the middle turbinated bodies with headache.—Miss A. W., aged 27, was referred to me by my colleague Dr. Savill on April 18th for examination on account of loss of voice and spasmodic cough. She also suffered from nervousness and almost continuous headache and indigestion. I found the aphonia soon disappeared. On July 13th I removed the anterior part of the right middle turbinated body, which was the seat of considerable hypertrophy with several polypoid growths. Since then, although her nervousness persists, the headache as such has entirely disappeared.

Inflammatory affections of the accessory sinuses in their chronic forms are causes of headache which are not infrequently overlooked.

Headache due to Frontal Sinusitis relieved by Irrigation through the Natural Orifice.—Captain R., referred to me by Dr. Lauder Brunton for investigation of the nose in a case of right frontal headache with discharge through the right nostril. The patient was greatly distressed by the interference with smell and taste which his malady produced. There was dulness on transillumination, and after the application of cocaine to the middle turbinated body I was able to introduce Hartmann's frontal sinus cannula through the infundibulum, thereby blowing out the contents of the sinus and subsequently injecting mentholised parolein. Relief at once followed, and the patient on the second occasion stated that at dinner on the previous evening he had been able to taste and enjoy his food just as in his normal condition.

Headache due to Empyema of the Frontal Sinus, relieved by Irrigation of the Cavity through the Natural Orifice.—An engineer, aged 28, came under my observation on June 28th, 1897, on account of left frontal headache accompanied by discharge from the left nostril. On transillumination there was found marked comparative obscurity on the left side, suggesting the presence of pus in the antrum of Highmore, but Lichtwitz's method of exploration by irrigation gave a negative result. A diseased tooth was also removed without making any difference. The anterior part of the left middle turbinated body was removed according to Grünwald's method, and for a time the symptoms were somewhat alleviated. On October 14th Hartmann's tube was passed through the natural orifice, and when air was blown through it the patient was distinctly conscious of it reaching the frontal region. A very small quantity of muco-pus presented itself round the tube, and a certain amount of relief was obtained, which was still more marked when a 1 per cent. solution of menthol in parolein was injected by means of a syringe. The headache soon diminished and almost disappeared.

Headache accompanied by Hypertrophy of the Middle Turbinated Bodies but unaffected by their Ablation. Relief afforded by opening the Left Middle Ethmoidal Cells through the Bulla.—J. H., aged 24, came to the writer in June, 1897, complaining of a dry throat, and was compelled to give up her singing lessons on that account. She had been subject to headache since the age of 12, accompanied by a thick crusting discharge from both nostrils, especially the left. The pain was most marked over the left lachrymal bone. She had attended the Ophthalmic Hospital, but was not advised to wear spectacles. The headache became very much worse after the use of an alkaline douche for the nose, and continued so for six months, when I removed the anterior extremity of the middle left turbinal and only slight relief followed. Some months later the same was done on the right side. Little or no change took place until shortly after Christmas, when I made an opening into the ethmoidal bulla on the left side, and although little or no discharge came away very considerable relief to the headache followed. Now she is unconscious of it except at intervals of not less than a month.

It is usual for chronic inflammation of a frontal sinus to cause headache localised in the frontal region, but headache in the same spot may arise from disease of any of the sinuses.

Frontal Headache due to Empyema of the Antrum, and removed by Intranasal Puncture and Irrigation of that Cavity.—Miss S., aged 51, a housekeeper, was referred to me by Dr. De Watteville, on account of pain over the right side of the head, extending from the frontal to the occipital region, and accompanied by a continuous discharge from the nose for two or three months. The latter was not, however, very conspicuous, and Dr. De Watteville was led to suspect the nose as the seat of origin of the pain by the offensiveness of the patient's breath. The nasal discharge was worse in the erect posture, and ceased in the recumbent one. There was a polypoid enlargement of the right middle turbinated body, deviation of the septum, and pus, not merely in the middle meatus, but between the turbinated body and the septum. The description of the symptoms suggested the probability of there being suppuration in the right frontal sinus. On transillumination there was found distinct darkness below the right eye, and Lichtwitz's exploratory puncture evacuated a quantity of intensely fœtid pus, with complete removal of the symptoms. On two or three successive occasions the irrigation was repeated, with the result of complete disappearance of the pus. Since then the patient has enjoyed almost continuous immunity from pain, and the discharge has totally disappeared, there being simply a slight drying of the mucous membrane.

Frontal Headache due to Disease of the Sphenoidal Cell removed by the Unintentional Avulsion of the Front Wall of that Cavity.—Miss D., aged 29, came under my care in 1888, complaining of severe frontal headache, most marked in the left side, the pain being continuous and of extreme severity. The left middle turbinated body was covered with polypoid outgrowths, which I repeatedly endeavoured to remove in their integrity, but without complete success, there always remaining a considerable amount of new growths which the snare failed to grasp. A slight degree of relief from the headache was, however, obtained. It was not until on a later occasion, when a large mass of polypoid outgrowth detached itself from the interior of the nose during syringing, and was found to be growing from a thin plate of bone which came away with it, that complete relief was obtained. There was then found a large opening leading into the sphenoidal sinus, and the plate of bone which had come away was obviously the anterior wall of the cavity. In this case the frontal headache depended on disease of the sphenoidal sinus. The more recent history of the case is of considerable interest, but does not bear upon the subject.

What should lead us to suspect that in any given case the headache is due to nasal disease? In general we should be alive to the recognition of such symptoms as indicate nasal disease. Nasal obstruction arising from adenoids, hypertrophy of the turbinated bodies, septal outgrowths and deviations, polypi and inflammatory polypoid excrescences, etc., discharges whether mucous or purulent, fœtor hardly observed by the patient in atrophic rhinitis, observed chiefly by the patient in diseases of the sinuses, etc., loss and disturbance of the sense of smell and taste, attacks of sneezing and epistaxis are among the more usual. In the presence of all or any of these a further investigation of the nose is indicated, and rhinoscopy may reveal a local cause for the nasal symptoms and for the headache. If the application of cocaine (or an equivalent) should next afford marked relief, the impression that the local condition is the cause of the headache is then almost demonstratively confirmed. The less unpleasant modes of examination should then follow, and transillumination, if not always conclusive, often gives such well-marked positive or negative results as to help us to decide upon immediate exploration by means of intranasal cannulæ or to the postponement of any other than palliative treatment. In the latter case a renewed search should be made for ocular, renal, or other than nasal causes.

Headache apparently due to Nasal Disease traced to the Area of Distribution of the Anterior Dental Nerve in the Nose and thence to a Tooth, Extraction of which was followed by Relief.—Christina M., aged 26, was referred to me to see if I could find anything in the nose to account for the occipital headache. On examination I could find no inflammatory or obstructive change in the nose, but there was abnormal tenderness on pressure on the anterior extremity of the left inferior turbinated body. This being the region supplied by a branch of the anterior dental nerve, I looked to the incisors and canine teeth. There was tenderness over the left lateral upper incisor which produced pain in the nose and also on the side of the face, and when this was extracted the occipital pain disappeared, although there still remains some general ill-defined pain.

Headache suspected to be due to Nasal Disease: Absence of such Cause on Examination: Relief on the Correction of Refraction.—Mrs. H. E. brought her coachman's son, B. H., for my advice in November, 1898, on account of headache, which was presumed to be due to disease of the nose. Nothing was to be found in the nose to account for it, but I elicited that the pain was greatest after reading at school and advised the lady to consult her oculist about it. This she accordingly did, and correction of the patient's astigmatism resulted upon the disappearance of the headache, and he is now able to attend school regularly.

Disease of the ear is not an infrequent cause of headache, and naturally, in the acute cases, it is not easily overlooked, because the symptoms pointing to it are extremely obvious. On the other hand, in *old-standing suppurations in the attic*, or in cases of *cholesteatoma* in which there may be little or no discharge, the cause may readily escape observation. It is well-known to aural surgeons, that under the influence of moisture or of sepsis, there is apt to result a swelling of the epithelial tissues or a recrudescence of the purulent exudation, both of these being accompanied by pain which, although starting in the ear is so generally diffused over the head that it is frequently described as headache, and is frequently of an intermittent character.

Under the influence of appropriate treatment, such as the adoption of the dehydrant and antiseptic "alcohol" method, a removal of the ossicles or the performance of the radical mastoid operation, it is a common experience for headaches which have been frequently a source of extreme distress to disappear entirely.

Headaches accompanying ear disease, occurring after operations in the mastoid, although generally due to these conditions, are sometimes merely coincident, and in a case under the writer's care, very considerable anxiety was felt after the performance of the radical mastoid operation, because the intense headache of which the patient complained aroused the suspicion that the pain might be due to the awakening of a latent cerebral abscess or the instance of meningitis. The normal state of the temperature and the absence of further constitutional disturbances seemed, however, to negative this alarming view, and when on account of the evidence of the gouty dyscrasia the patient was ordered a mixture of salicylate of soda and bromide of potassium, the headache entirely vanished and the anxiety was removed.

III.—T. Clifford Allbutt, M.D., F.R.S.,
Regius Professor of Physic in the University of Cambridge.

Professor Clifford Allbutt reminded the Section that contraction of blood vessels in an area for a few hours was not attended with pain in that area. The pain of Raynaud's disease had another explanation. Again, the causes of migraine were largely peripheral—ophthalmic, dental, etc.—all peripheral, perhaps, if poisons circulating in the blood were excluded; and this being so, one had to look for the mechanism of migraine within the cerebro spinal arc. Finally, vasomotor oscillations were seen in many kinds of pain, almost in any severe pain, though in various degrees, and were not a regular measure of the pain. In brief and moderate pain, vasomotor contraction, even up to the radial, might be apparent. Both in angina pectoris, for example, due probably to stress on the aorta, and in "pseudo-angina," primarily a neuralgia of the wall of the chest, these irregular oscillations of vascular diameter were generally to be observed.

IV.—Harry Campbell, M.D., F.R.C.P.,
Physician, North West London Hospital.

Dr. Campbell had little criticism to offer on Dr. Lauder Brunton's valuable remarks; he agreed with almost all of them. He believed that it would eventually be found that the blood vessels of the brain were under the control of vasomotor nerves, but he was inclined to disagree with Professor Allbutt's contention that vasomotor constriction was never accompanied by pain; in Raynaud's disease, for example, Dr. Campbell had noticed pain. Dr. Campbell would refer to three kinds of headache: (1) migraine; this headache could be removed by the kind of treatment suggested by Dr. Haig in a certain proportion of cases only; others continued unabated in spite of vegetarian diet and salicylate of soda; (2) in organic headache he recommended very large doses of iodide of potassium, giving drachm doses three or four times a day; (3) neurasthenic headache. As a type of this variety he would take the climacteric headache in women. This headache he believed to be essentially toxic. It continued after every source of peripheral irritation had been removed, and after all the usual forms of medical treatment had been tried. It was especially in these cases that suitable climate was of use. Climate played an important part in the treatment of headache.

V.—J. W. Tyson, M.D.,
Folkestone.

Dr. Tyson said: It is difficult to enter into all the causes of headache in the time allotted to one, nor is it necessary, seeing that already much has been said that one intended saying. Living at the seaside is a constant cause of bilious headache and may often be prevented by taking mercurial preparations with salines before arriving at a seaside resort. Overwork, closeness of rooms, and electric atmospheric conditions are common causes and treatment of them is obvious, and I believe that absorption of toxins from food changes either in the stomach or intestines is far more common than is commonly supposed. The old term "gastric fever" employed many years ago by our fathers and grandfathers has often been thought to be synonymous with typhoid fever. The term accurately describes the disease, that is to say, there is a fever and gastric disturbance, but the cases do not last long enough to come under the term of typhoid, nor do the symptoms generally associated with typhoid appear, these cases get well by paying attention to the alimentary canal and liver. I have found in headaches associated with high arterial tension that the association of gelsemium with salicylate of sodium is useful.

VI.—George Herschell, M.D.,
Senior Physician, Hospital for Diseases of the Heart, Soho Square.

Dr. Herschell, whilst agreeing with Dr. Lauder Brunton as to the influence of toxins in producing headache, pointed out that in addition to the defective action of the liver in admitting them into the general circulation there might be excessive production. This occurred in mild degrees of dilatation of the stomach due to atony. Here the stomach retained food for abnormal periods, and thus opportunity was given for the excessive production of toxins. This was often overlooked in practice, since the recognition of mild degrees of gastric atony was not taught in the textbooks written for students. The only certain sign was the finding of food residues when the stomach should be empty, but splashing below the umbilicus was a strong presumption. Out of 100 consecutive cases of headache taken from notes of hospital and private patients, there was abnormal splashing in 37. Conversely, out of 100 successive cases of splashing, in no fewer than 61 there was headache of some kind. He had often cured in twenty minutes cases of headache dependent upon gastric dilatation by washing out the stomach. Dr. Herschell pointed out that chronic fæcal retention was another cause of headache; the retained materials often occupied an enlarged sigmoid flexure. This could happen notwithstanding a daily action of the bowels and could often not be made out by palpation. The appropriate treatment was first complete evacuation of the sigmoid by continuous irrigation followed by faradism to restore tone. One electrode should be applied internally, and the best at present was one of Turck's gyromele cables.

VII.—StClair Thomson, M.D.,
Physician to the Throat Hospital, Golden Square.

Dr. StClair Thomson hoped that his remarks would be accepted more as suggestive than exhaustive. Fortunately an enumeration of the causes of headache in most cases comprehended the treatment, so that he would not dilate on the therapeutic side of the question. The headache of syphilis he found a useful diagnostic factor in throat affections. Some of these latter, especially in the pharynx, presented difficulties of diagnosis which were often allayed on recognising that a diffuse headache, worse at night, was of a specific character. While endorsing Dr. Harry Campbell's views with regard to iodide of potassium, he referred to cases which could not or would not take such large doses, and in whom a few inunctions of mercury would secure remarkable relief. The ear had not been mentioned in that debate. Dr. Thomson did not mean "earache," which of course was excluded from consideration; but he wished to mention certain chronic forms of suppuration and necrosis in the tympanum, chiefly in the attic; and the condition of cholesteatoma in the mastoid antrum. Attention in such cases was often not directed to the ear, for, as the perforation was generally limited to Shrapnell's membrane, deafness was

often absent, and the discharge was frequently slight. Still, if inquired for, otorrhœa was generally observable, and, as a rule, was very fœtid. As regarded the nose, Dr. StClair Thomson said we must carefully individualise: many patients with nasal trouble had no headache; while patients with healthy nasal fossæ were sometimes "cured" of their headaches by the intranasal use of a galvano-cautery. In fact, we must be careful in using the word "cure." An American practitioner had traced one case in the writings of twelve colleagues, each of whom had published the same case as "cured"! The obstruction of the nose, particularly that due to adenoids, was now generally recognised as a cause of aprosexia in children. Chronic sinusitis might be regarded as the primary or as the determining cause. One of his patients had suffered from a regular headache at every menstrual period for seven years; after being relieved of an empyema of the maxillary antrum she had passed twelve months without a single menstrual headache. A medical friend had such a regularly recurring supraorbital headache that, having lived in the tropics, he diagnosed his own case as "brow ague." Much against the patient's own faith a collection of pus was removed from the antrum of Highmore and the "brow ague" was instantly and lastingly relieved. As regarded the headache of coryza, he deprecated the exhibition of nasal lotions in acute cases, and recommended inhalations of mentholised steam. Amongst other causes, Dr. StClair Thomson mentioned the headache of cerebro-spinal rhinorrhœa. He had lately collected records of 21 such cases, and in a large majority of them any diminution in the flow was at once associated with the onset of headache, which disappeared when the flow of cerebro-spinal fluid recurred. It was difficult, he said, to refrain from personal experience, and in conclusion he referred to the benefit of blue pill in certain forms of gouty headache, and in the headache of high altitudes, such as the Engadine.

VIII.—F. M. Pope, M.B.Cantab.,
Physician, Leicester Infirmary.

Dr. Pope said he had seen several cases of migraine lately in which, after other means had failed, politzerisation of the frontal sinuses had produced immediate results, and daily repetition for three or four times had cured the headache. He also suggested that the headache following or accompanying hunger, which came on at varying times after a meal in different patients, and was relieved by food, might be due not to fatigue of nervous elements, but to suspension of the action of the liver soon after the meal. The action was restored by the cholagogue action of the fresh food taken and the headache was relieved.

IX.—Sarat K. Mullick, M.B.Edin.,
Assistant Physician, National Hospital for Heart and Paralysis, Soho Square.

Dr. Mullick wished to draw attention to a point which seemed to have been most unaccountably overlooked by previous speakers. That was the influence of malaria, dysentery, and other tropical diatheses upon the production of headache. It was the duty of every practitioner (taking into consideration their extensive commerce with the East) to carefully examine the past history of the patient, to consider the possibility of such being the case. If a tropical basis existed for the headache all medicinal means would be of no avail, unless the specific drugs were administered. Dr. Mullick agreed with Dr. Herschell as regarded atony of stomach. Dr. Mullick strongly urged the use of galvanism in neurasthenic headaches, and cited cases where nothing else was of any use, but which quickly yielded to the use of central galvanisation.

X.—Wm. Hooper Masters, M.D.,
Parkstone, Dorset.

Dr. Masters stated that he suffered from migraine for forty years, and experienced little or no relief from drugs, except from chloral, which benefited in doses of 30 or 40 grs. at first, but afterwards in doses of 40 grs. was inert unless taken when the pain was on the wane. The cerebral vessels were very full and throbbing, which persisted for twenty-four hours invariably and returned periodically every three weeks. Any amount, however small, of alcohol would cause a headache. Confinement in hot, ill-ventilated rooms or a railway journey were exciting causes. Age at last had come to the rescue and present headaches were but trifling.

XI.—David K. Draffin, M.D.,
Merthyr Vale.

Dr. Draffin said that in colliery practice and ironworks he found that men quickly developed headaches after working in extreme heat all day, in which case the arteries were dilated and very quickly contracted by immediately getting into cold air. These probably arose through more pressure on the vessels of the head, and would be relieved by the man resuming work in a hot atmosphere. He generally used antifebrin and caffein citrate, 7 and 3 grs. respectively. However, these powders must not be pushed too far, antifebrin having such a depressing effect on the vasomotor system; however, this was to some extent compensated by the caffeine citrate.

THE TREATMENT OF HEADACHES.

By Alexander Haig, M.D., F.R.C.P.,
Physician, Metropolitan Hospital.

Pain in the head as elsewhere is very commonly due to pressure, and headaches may be conveniently divided into:

1. Temporary.
2. Chronic.
3. Paroxysmal or recurrent.

Temporary headache may be due to any accidental cause, as an injury or a fever which causes for a time an alteration of pressure inside the skull or membranes; but as these pass away so does the headache, and it rarely requires more treatment than an icebag for a few hours.

Chronic headache is one which lasts with little change hour after hour, day after day, even week after week, or month after month. It may be said to be chiefly due to two causes:

1. New growth on the skull or membranes or within them.
2. Neuralgia, often only another name for inflammation and pressure about the teeth, or the structures that surround them.

The treatment of (1) is a matter of surgery and the pain and pressure are relieved by opening the skull and membranes, or in the case of specific new growths by iodides which cause their absorption.

(2) Requires attention to the teeth, with or without quinine, and purges which lower blood pressure.

The paroxysmal headache tends to return after more or less definite intervals either of weeks or months, for years, often for the greater part of the lifetime of those who suffer from it; but a given attack rarely lasts more than 48 hours. It is therefore at once distinguished from other forms of headache by history, or in the absence of history in that it lasts less than 48 hours.

It has also special characters which serve to distinguish it, namely, it is accompanied by a small hourly excretion of urinary water and a large excretion of uric acid, both relatively and absolutely; the pulse-rate during the headache is slow (often below 60) and the blood pressure high.

It commonly occurs in individuals whose blood pressure is too high, and there is a marked rise of this pressure at the time of the attack.

The capillary circulation in the skin is slow during the attack, and quickens as it passes off, and similarly the defective capillary circulation in the kidney is the cause of the scanty urine which accompanies the attack, and the improved circulation is shown by the diuresis which follows it.

The paroxysmal headache is thus shown (and the demonstration can be made absolute both by producing and removing it at pleasure) to be due to paroxysmal fluctuations (generally mere exaggerations of the normal fluctuations) in the excretion of uric acid.

It is prevented with absolute certainty by diminishing the uric acid in the body, and preventing large fluctuations in excretion.

It can be produced by swallowing definite quantities either of uric acid or bodies of the alloxur or xanthin group, and all of these produce at the time of the headache a large excretion of uric acid in the urine, excess of granules in the blood, a slowing of capillary circulation, and a rise of blood pressure.

The explanation of this paroxysmal or uric acid headache is

thus absolutely complete, and this is demonstrated by absolute power of control.

We find, also, that the uric acid headache is but one instance of a general law, that uric acid is the cause of high blood pressure not in this case only but in all conditions, and throughout life, and that it is thus the cause of a very large number of what have hitherto been considered as different diseases, though practically the whole of these are really represented in epitome, as it were, in the symptoms of the uric acid headache itself.

We now know that the central factor in this group of symptoms is the uric acid in the blood, and it is in excess in the blood at the time when it is passing in excess in the urine.

Excess of uric acid in the blood obstructs the capillaries all over the body, and causes the slow capillary reflux, which can be easily measured. Obstructed capillary circulation with a strong heart means high blood pressure between the opposing forces, and the headache is the effect of pressure inside the skull and membranes produced by the high blood pressure, so that it has an identical causation with other and more chronic forms of headache; all are due to pressure—they differ merely in the cause of the pressure.

With one or two insignificant exceptions uric acid is the cause of all high blood pressure; and as I am pointing out out in a paper also before this meeting, the diurnal fluctuations of blood pressure which occur in everyone are but the results of the normal diurnal fluctuations in the excretion of uric acid and its passage through the blood on the way to be excreted. As these fluctuations in the excretion of uric acid are the results of well understood causes, which are completely under our control, the resultant fluctuations of blood pressure can be made to take any direction or time relation at pleasure. Thus the head pain of this headache is but the representative—and often the forerunner—of the more severe pain and coma of uræmia, and the high blood pressure bears a similar relation to both.

The fits which in some sufferers replace or supervene upon the headache bear a similar relation to the fits of uræmia, and the fits of epilepsy are often, as I have shown, related to a similar fluctuation in the excretion of uric acid, and have a similar causation.

The defective capillary circulation passes through all gradations such as are met with in diabetes and Bright's disease, where the blood pressure is again high, up to the local gangrene of Raynaud's disease.

Mental depression and melancholia, so well known to be associated with high blood pressure, are again represented in the low spirits and general mental obfuscation which surround the headache.

The fall in the excretion of urea which accompanies the onset of the headache is, again, but the epitome of the more marked fall accompanying the onset of Bright's disease; and the rise which follows the headache is also represented in the rise which accompanies the cure of the Bright's disease when possible. And the fall in the blood decimal (or worth) which accompanies the headache is, again, the epitome of the more severe and extensive anæmia which follows the still more severe collæmia of chlorosis, rheumatism, or Bright's disease, all these latter conditions being associated with increase of headaches in those who suffer.

The whole of these conditions, when due to uric acid and when they have not through neglect become organic, from atrophy of important tissues (which defective capillary circulation at length brings about), are amenable to the control of the uric acid in the same way that the underlying conditions, capillary circulation, and blood pressure are so.

The treatment of the paroxysmal uric acid headache is the clearing of all available uric acid from the body and blood, and this is accomplished by:

(1) Avoiding food or drinks which contain uric acid or xanthin.

(2) Not taking more nitrogenous food than physiology requires.

(3) Clearing out stores of uric acid already in the body from neglect of (1) and (2).

(1) Means the avoidance of all animal foods except milk and cheese, and of certain vegetable substances rich in alkaloids (as tea, coffee, etc.)

(2) Means taking enough albumen to produce from 3 to 3.5 grains of urea for each pound of body weight per day, but not more.

(3) Is generally sufficiently provided for by the change of diet, but occasionally it is necessary to give a course or courses of salicylates to aid elimination.

Anyone thus completely altering his diet may expect a distinct diminution both of the frequency and severity of the headaches in a few weeks, and that they will be reduced to one-tenth or one-twelfth of former numbers in twelve to eighteen months, which, with a correspondingly large decrease in severity, amounts practically to cure; but let him again take uric acid in any form and they will quickly return.

With improvement in the headache will go improvement in the blood decimal or "worth" quickening of capillary circulation and fall of blood pressure throughout the body; and any accurate measurement of the condition of the blood and its circulation is a perfectly reliable index of the effects of the treatment.

FURTHER EXPERIMENTS WITH PANE'S ANTIPNEUMOCOCCUS SERUM.

BY

J. W. H. Eyre, M.D., Bacteriologist to Charing Cross Hospital; and Lecturer on Bacteriology in the Medical School.

and

J. W. Washbourn, M.D., F.R.C.P., Physician to Guy's Hospital; Physician to the London Fever Hospital, etc.

[This Investigation was aided by a Grant from the Royal Society.]

In a previous paper[1] we described in detail some experiments bearing upon the protective properties of an antipneumococcic serum prepared by Dr. Pane of Naples. This serum, which has been used in the treatment of pneumonia, is stated to be of such strength that 1 c.cm. neutralises the effect of 2,000 or 3,000 fatal doses of the diplococcus pneumoniæ. We tested this serum against a cultivation of the particular pneumococcus we were then working with, and found that our results practically coincided with those obtained by Dr. Pane.

It is well known, however, that antistreptococcus serum will protect animals against certain "strains" of streptococci, but not against others, these streptococci being in other respects identical. It is probably on this account that antistreptococcus serum is of great value in certain cases of septicæmia of streptococcic origin, but of no use in other cases.

We have therefore thought it advisable to extend our researches in this direction, and to test the antipneumococcus serum against several varieties of the pneumococcus derived from different sources, and we have embodied our results in the following communication:

We have adopted the same methods as in our previous experiments. One cubic centimetre of the serum was injected into the circulation of a rabbit, and immediately afterwards a multiple of the fatal dose of a living cultivation of the pneumococcus was injected into the peritoneal cavity. Control experiments, by means of which the minimal fatal dose of the cultivation was ascertained, were made in each instance.

The "strains" of pneumococcus used in these experiments has been five in number, derived respectively from—

1. The rusty sputum of a case of double basal pneumonia, which recovered.
2. The normal saliva of a healthy individual.
3. The rusty sputum (obtained during pyrexia) of a case pneumonia.
4. The pus of a post-pneumonic empyema (kindly sent us by Dr. Bulloch).
5. The lung juice and pericardial fluid (obtained at the necropsy) of a fatal case of pneumonia.

The cultivations were obtained by introducing some of the material containing the pneumococcus into the subcutaneous tissue of a mouse or a rabbit. After death, cultivations were made upon blood-agar from the heart blood. The virulence was then raised by repeated passages through rabbits, which also has the effect of rendering the virulence more stable.

Pneumococcus No. 1.[2]

Pneumococcus No. 1 was obtained by inoculating a rabbit with the rusty sputum from a case of double basal pneumonia which recovered. The cultivations from the heart blood

exhibited the characters of a typical pneumococcus. The virulence was raised by means of intraperitoneal passages through a series of eleven rabbits. The following table gives the result of the experiments made to ascertain what multiple of the fatal dose of a cultivation of Pneumococcus No. 1, one cubic centimetre of the serum protects against.

TABLE I.

	Rabbit No.	Dose of Pneumococcus.	Dose of Serum.	Result.	
Controls.	1	0.000001 of a loop* intraperitoneally	—	Death in 7 days	From pneumococcic septicæmia.
	2	0.00001 of a loop* intraperitoneally	—	Death in 30 hours	
	3	0.0001 of a loop* intraperitoneally	—	Death in 30 hours	
	4	0.0001 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.	
	5	0.001 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.	
	6	0.01 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.	
	7	0.1 of a loop* intraperitoneally	1 c.cm. intravenously	Death in 60 hours from pneumococcic septicæmia.	

* Of a blood-agar cultivation.

Results.—Omitting the first rabbit of the series, which did not die until the seventh day, and regarding Rabbit 2 as having received the minimal fatal dose (0.00001 of a loop), it will be seen that the serum in doses of 1 c.cm. protects against at least 1,000 fatal doses of Pneumococcus No. 1, but does not protect against 10,000 fatal doses.

PNEUMOCOCCUS NO. 2.

Pneumococcus No. 2 was obtained by inoculating a rabbit with some of the rusty sputum from a case of pneumonia during pyrexia. The cultivation from the heart blood exhibited the characters of a typical pneumococcus. The virulence was raised by means of intraperitoneal passages through a series of six rabbits.

In Table II are recorded the experiments made to ascertain what multiple of the fatal dose of a cultivation of Pneumococcus No. 2, one cubic centimetre of the serum protects against.

TABLE II.

	Rabbit No.	Dose of Pneumococcus.	Dose of Serum.	Result.	
Controls.	8	0.000001 of a loop* intraperitoneally	—	Death in 48 hours.	From pneumococcic septicæmia.
	9	0.00001 of a loop* intraperitoneally	—	Death in 36 hours.	
	10	0.001 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.	
	11	0.01 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.	

* Of a blood-agar cultivation.

Note.—From physical reasons we do not consider smaller quantities than 0.00001 of a loop reliable.

Results.—Taking 0.000001 of a loop (Rabbit 8) as the minimal fatal dose, it will be seen that the serum in doses of 1 c.cm. protects against at least 10,000 fatal doses of Pneumococcus No. 2.

PNEUMOCOCCUS NO. 3.

Pneumococcus No. 3 was kindly sent us by Dr. Bulloch of the London Hospital. It was obtained by inoculating a mouse with some of the pus from a case of post-pneumonic empyema. Cultivations were made from the heart blood, and the virulence of the pnemococcus was raised by means of intraperitoneal passages through a series of ten rabbits. The cultivations upon the various media exhibited the characters of a typical pneumococcus.

The following table gives the results of the experiments made to ascertain what multiple of the fatal dose of a cultivation of Pneumococcus No. 3 one cubic centimetre of the serum protects against.

TABLE III.

	Rabbit No.	Dose of Pneumococcus.	Dose of Serum.	Result.
Controls.	12	0.0000001 of a loop* intraperitoneally	—	Unaffected.
	13	0.000001 of a loop* intraperitoneally	—	Death in 24 hours from pneumococcic septicæmia.
	14	0.0001 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.
	15	0.001 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.
	16	0.01 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.
	17	0.1 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.

* Of a blood-agar cultivation.

Results.—Taking 0.00001 of a loop (Rabbit 13) as the minimal fatal dose, it will be seen that the serum in doses of 1 c.cm. protects against at least 10,000 fatal doses of Pneumococcus No. 3

PNEUMOCOCCUS NO. 4.

Pneumococcus No. 4 was obtained by inoculating a rabbit with normal saliva from a healthy individual. The "strain" of pneumococcus thus isolated was of considerable interest, and was described in detail in a paper upon Varieties and Virulence of the Pneumococcus.[3] It was of a decidedly saprophytic type, growing at first upon gelatine at 20° C., having a low initial virulence and an extremely feeble capacity for acquiring a high degree of virulence, requiring no less than 53 passages to raise it to a high pitch of virulence. It also possessed a feeble capacity for retaining high virulence, for in blood-agar cultivations the high virulence attained by repeated passages fell in a fortnight to the low initial virulence. After the 53 passages above referred to this pneumococcus was kept upon blood agar media for five months. Its virulence was again raised by intraperitoneal passages through a further series of eleven rabbits.

The following table gives the results of the experiments made to ascertain what multiple of the fatal dose of a cultivation of Pneumococcus No. 4, one cubic centimetre of the serum protects against.

TABLE IV.

	Rabbit No.	Dose of Pneumococcus.	Dose of Serum.	Result.	
Controls.	18	0.00001 of a loop* intraperitoneally	—	Unaffected.	
	19	0.0001 of a loop* intraperitoneally	—	Death in 48 hours.	From pneumococcic septicæmia.
	20	0.001 of a loop* intraperitoneally	—	Death in 48 hours.	
	21	0.1 of a loop* intraperitoneally	—	Death in 24 hours.	
	22	0.0001 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.	
	23	0.01 of a loop* intraperitoneally	1 c.cm. intravenously	Unaffected.	
	24	0.1 of a loop* intraperitoneally	1 c.cm. intravenously	Death in 72 hours.	From pneumococcic septicæmia.
	25	1.0 loop* intraperitoneally	1 c.cm. intravenously	Death in 48 hours.	

* Of a blood-agar cultivation.

Results.—Taking 0.00001 of a loop (Rabbit 19) as the minimal fatal dose, it will be seen that the serum in doses of 1 c.cm. protects against at least 100 fatal doses of Pneumococcus No. 4, but not against 1,000 fatal doses.

PNEUMOCOCCUS NO. 5.

Pneumococcus No. 5 was obtained by inoculating a rabbit with some of the lung juice and pericardial fluid from a fatal case of lobar pneumonia. The pneumococcus thus isolated was raised in virulence by means of intraperitoneal passages through a series of six rabbits. Cultivations upon the various

laboratory media exhibited the characters of a typical pneumococcus.

The following table gives the results of the experiments made to ascertain what multiple of the fatal dose of a cultivation of Pneumococcus No. 5, one cubic centimetre of the serum would protect against.

Table V.

	Rabbit No.	Dose of Pneumococcus.	Dose of Serum.	Result.	
Controls.	26	0.0000001 of a loop* intraperitoneally	–	Unaffected.	From pneumococcic septicæmia.
	27	0.000001 of a loop* intraperitoneally	—	Unaffected.	
	28	0.00001 of a loop* intraperitoneally	—	Death in 24 hours	
	29	0.01 of a loop* intraperitoneally	—	Death in 24 hours	
	30	0.0001 of a loop* intraperitoneally	1 c.cm. intravenously	Death in 48 hours	
	31	0.01 of a loop* intraperitoneally	1 c.cm. intravenously	Death in 48 hours	
	32	0.1 of a loop* intraperitoneally	1 c.cm. intravenously	Death in 48 hours	

* Of a blood-agar cultivation.

Note.—The bottle of serum used in this set of experiments was afterwards sealed, and subsequently used in testing against Pneumococcus No. 3, when, as will be seen by reference to Table III, it exhibited marked protective power.

Results.—Taking 0.00001 of a loop (Rabbit 28) as the minimal fatal dose, it will be seen that the serum in doses of 1 c.cm. was powerless to protect against 10 fatal doses of Pneumococcus No. 5.

The accompanying table gives the results of a second set of experiments made with a view to further testing the protective powers of the serum against Pneumococcus No. 5.

Table VI.

	Rabbit No.	Dose of Pneumococcus.	Dose of Serum.	Result.	
Controls.	33	0.00001 of a loop* intraperitoneally	—	Death in 36 hours	From pneumococcic septicæmia.
	34	0.0001 of a loop* intraperitoneally	—	Death in 36 hours	
	35	0.01 of a loop* intraperitoneally	—	Death in 24 hours	
	36	0.1 of a loop* intraperitoneally	—	Death in 24 hours	
	37	0.0001 of a loop* intraperitoneally	1 c.cm. intravenously	Death in 36 hours	
	38	0.01 of a loop* intraperitoneally	1 c.cm. intravenously	Death in 36 hours	
	39	0.1 of a loop* intraperitoneally	1 c.cm. intravenously	Death in 36 hours	
	40	1.0 of a loop* intraperitoneally	1 c.cm. intravenously	Death in 36 hours	

* Of a blood-agar cultivation.

Note.—This serum was from the same bottle as had previously been used for testing against Pneumococcus No. 2, when, as a reference to Table II will show, it exhibited marked protective power.

Results.—Taking 0.00001 of a loop (Rabbit 33) as the minimal fatal dose, it will be seen that the serum in doses of 1 c.cm. does not protect against 10 fatal doses of Pneumococcus No. 5.

From these two series of experiments it is clear that the serum does not protect against this particular "strain" of pneumococcus.

By careful examination of the cultivations and of the blood of the animals that succumbed we are satisfied that our cultures were quite pure. The fact that the serum used for Pneumococcus No. 3 was from the same bottle as for the first series of experiments, while that used for Pneumococcus No. 2 was from the same bottle as for the second series, eliminates any error arising from possible differences in the samples.

Pneumococcus No. 5 had all the characters of a typical pneumococcus such as we have described in "Varieties and Virulence of the Pneumococcus." It would only grow at the temperature of the body, would not grow on gelatine at 20° C., would not grow upon potato, produced a certain amount of acid in the course of its growth, and clotted milk. It was not higher in virulence than some of the other strains against which the serum would protect. Hitherto we have been unable to detect any other differences between it and typical pneumococci than the failure of the serum to protect against it.

We intend making further experiments in this direction; for the present we only wish to record the fact that Pane's antipneumococcus serum protects against four or five varieties of the pneumococcus but not against the fifth. There must then be varieties of the pneumococcus which in morphology, cultural characters, and virulence are similar, but have other more subtle differences.

We have already noted (in Pneumococcus 4) the capacity for attaining and retaining virulence to be possessed in different degrees by different varieties, and we now have in the antipneumococcus serum a reagent which enables us to differentiate a further variety.

Conclusions.

1. The serum in doses of 1 c.cm. possesses for rabbits a considerable protective power against four out of five strains of pneumococci derived from different sources.

2. It has no protective power against one strain which in morphology, virulence, and cultural characteristics is a typical pneumococcus, and which was obtained from a fatal case of pneumonia.

3. There exist varieties of the pneumococcus which at present can only be distinguished by the action of antipneumococcus serum.

Note and References.

[1] Experiments with Pane's Antipneumococcic Serum, *Lancet*, April 8th, 1899. [2] The experiments with this "strain" of pneumococcus were recorded in our previous paper, *q. v.* [3] *Lancet*, January 8th, 1899.

TOXIC CUMULATIVE EFFECT OF SULPHONAL AND TRIONAL.

By Augustus H. Bampton, M.D.,
Ilkley-in-Wharfdale.

A. M., single, aged 40, had for the last twelve months complained of great weakness, loss of flesh, dyspepsia, amenorrhœa, neuralgias, vomiting, nervousness. The patient looked so ill and anæmic as to suggest one of the wasting diseases, or even the presence of a malignant growth, but nothing organic could be made out after the most thorough and searching examinations. The urine gave no clue. At one time or another change of life and the possibility of pregnancy was thought of. Neither change of air nor the free administration of iron and arsenic availed much. All who saw her were puzzled as to the cause.

I then put her on the Weir-Mitchell treatment, with a nurse and a masseuse, and allowed trional gr. xv very occasionally to combat the insomnia, which was greatly complained about. When the neuralgia was severe small doses of phenacetin had been given.

The temperature was always subnormal, and the pulse small, feeble, and slow (50 to 60). After six weeks of forced feeding and massage, rest in bed, and iron, the patient made distinct progress. The catamenial flow, although slight, became re established. The temperature approached the normal line, and pulse beats increased. The convalescence was interrupted for a short time by a sudden attack one night of cyanosis, vomiting, and pain in the epigastrium, which was supposed to be of dietetic origin. The pulse was so feeble that I had to give strychnine hypodermically. The patient soon recovered, gained weight, got about, and went for change of air.

A few months afterwards I was called to see the patient, who complained of great pain in the left ovarian region, believed to be due to arrested menstrual flow, the result of exposure to cold and fatigue.

A small dose of phenacetin and bromide aggravated the symptoms, pain at the epigastrium being much complained of. Constipation of a most obstinate kind, accompanied by vomiting, suggestive of mechanical obstruction, persisted for a week. The urine was then examined and found to be claret-coloured, which darkened on the addition of nitric acid. This I knew to be hæmato-porphyrin, and the Clinical Research Association confirmed my suspicions, and reported the deposit to consist of broken-down red blood

discs, a few tubal casts, epithelial and hyaline, and a few tubal cells free. Oxalate of lime and phosphate crystals were present. Albumen was found (a considerable amount) and sugar a trace. Sharp shooting pains in the thighs caused great suffering, followed by numbness in the legs and perineum. Loss of power in the legs quickly supervened.

The peripheral neuritis rapidly spread from the legs to the body, both sensory and motor paralysis being complete until the patient lay a helpless log, literally paralysed from head to foot; both systemic and motor systems being involved. Sharp cardiac and thoracic spasms added to the patient's misery, after one of which death took place, on the seventeenth day of the disease.

The treatment consisted of the free administration of alkalies, including enemas and stomach syphoning, the pain of the neuritis being eased by warm alkaline baths. The urine kept its burgundy hue to the end, although no synthetic drugs had been administered for fourteen days. It was discovered that the patient had been taking from 20 to 40 gr. of sulphonal secretly almost nightly for a twelvemonth. Occasionally trional took its place. Phenacetin and antipyrin had also been taken frequently for any kind of pain. It was known that on one day six 15-grain antipyrin powders had been taken.

The crisis came when phenacetin was taken at the menstrual period. As is well known women bear these blood-destroying drugs very badly at such times. It would be interesting did we know in what organ or organs sulphonal or trional is stored, We want to know more about the secondary effects of these synthetic compounds. It is believed that the acid produced from the sulphonal which is in the blood stream causes the peripheral neuritis and the disintegration of the blood discs and other phenomena, but from where is the sulphonal suddenly set loose? And for which element of the blood disc is the affinity of the sulphonic acid so great and persistent?

I have been informed by the Clinical Research workers that it is not generally known that the only treatment of any avail for sulphonal poisoning is the free exhibition of alkalies. Where there is vomiting the difficulty is to get the alkali taken in sufficient quantity. The intravenous or interstitial transfusion of an alkaline solution might be tried. It is lamentable that such powerful drugs as sulphonal and antipyrin in bottlesful are allowed to be sold to the public for secret self-drugging purposes.

It is interesting to notice that deterioration of the blood value, whether due to drugs or diseases, produces amenorrhœa; and when we have a case of obscure amenorrhœa we must be on our guard as to the use of the synthetic drugs. The pain the patient complained of in the groin was due probably to passage of oxalate of lime and other acrid products, along the ureters, the result of the nephritis set up in the kidneys by the sulphonal.

I wish to acknowledge the great help I received from Dr. Barrs in the conduct of the case.

A DISCUSSION ON INTESTINAL ANTISEPTICS.

I.—I. Burney Yeo, M.D., F.R.C.P.,

Senior Physician, King's College Hospital and Professor of Medicine in King's College.

Sir Samuel Wilks has lately called attention to the interesting fact that so long ago as 1836, Addison, one of the greatest physicians of this century, anticipated, in a brief and clear statement (in a work on medicine which was begun but never completed) the modern teaching on the subject of Appendicitis.

"It seems," said Sir Samuel, "to have taken the medical profession a great many years to recognise the facts so clearly stated by Addison."[1]

And I would appeal to two great poets who bore testimony, a long time ago, to the value of intestinal antiseptics, for the poet Dryden says:—

"When you would have pure swiftness of thought and fiery flights of fancy, you must have a care of the pensive part, in fine, you must purge the belly."

And it is recorded that he practised what he preached; and Lord Byron remarks:

"The thing that gives me the highest spirits, it seems absurd but true, is a dose of salts, but one cannot take them like champagne."[2]

So we find, coming from a quarter we might have easily overlooked, testimony that the retention and absorption of septic substances in the alimentary canal interferes with the activity of the functions of the brain, and that sweeping away such septic matters by intestinal evacuants promotes and facilitates mental efforts.

Professor Bouchard also remarks that we physicians, like Molière's "Bourgeois Gentilhomme," who had been forty years talking prose without knowing it, have for ages past been practising intestinal antisepsis without knowing it[3].

The dose of calomel and the black draught that dissipated for our forefathers the dark clouds of a so-called "fit of spleen," and made life seem again worth living, was an example of the practice of intestinal antisepsis. It is commonly thus with the great truths of physical existence, the facts have been observed and recognised by good and careful observers, but the manner of looking at them varies with the progress of our knowledge. And we again re-echo the wisdom of Solomon and say, "There is nothing new under the sun;" what is new is the way of looking at things.

In introducing the subject of intestinal antiseptics for your discussion, it seems to me advisable to consider the subject under four heads:

1. What is the design and scope of the use of intestinal antiseptics?
2. On what scientific and experimental basis is the idea and practice of promoting intestinal antisepsis founded?
3. What are the morbid conditions in which this practice is applicable?
4. By what means can intestinal antisepsis best be carried into effect?

First, the design and scope of the use of intestinal antiseptics are, I take it, to prevent, or limit, control, and antagonise the development and absorption of poisonous substances in the intestinal canal; to antagonise the evil effects of those toxic substances which are produced by various agencies within the alimentary canal itself. Auto-intoxication is the word conveniently applied by Professor Bouchard to express the results of those processes. We may say then, in other words, that the scope of intestinal antiseptics is to prevent or neutralise auto-intoxication proceeding from the alimentary canal.

Secondly, we must inquire on what scientific and experimental basis the idea and practice of promoting intestinal antisepsis is founded.

In the first place, it is universally admitted that these septic and putrefactive processes occurring within the alimentary canal are dependent on bacterial agencies. And let me here say, we must not confuse the medical conception of antisepsis with the surgical one of asepsis.

The medical idea is that of antagonising an existing process, of limiting and diminishing its morbid energy; and in conception and in action it is relative rather than absolute.

The surgical idea is absolute—the surgeon must have his wound absolutely aseptic.

Some of the arguments which have been advanced in opposition to the medical idea of antisepsis, have been founded on this mistaken and limited view.

In medicine, if we can diminish the virulence of a process and so gain time, for the conservative forces of the organism to do their work, that is by no means a small thing to do.

Again, the medical conception of antisepsis has been misrepresented as necessarily involving a bactericidal action. Bactericidal it may be in some instances, but this idea is not necessarily involved in that of intestinal antisepsis.

We are still very much in the dark as to the precise mode of action of pathogenic microbes, but we do know that their activities and their virulence vary greatly according to their environment, and that it is not necessary to kill them in order to make them relatively harmless.

It has been shown and it is a fact of much interest to the question before us that certain pathogenic microbes can only elaborate their poison in the presence of those of putrefaction, and we know that the same bacterium, at one time

[1] British Medical Journal, July 8th, 1899, p. 96.

[2] *Disraeli's Curiosities of Literature*, Article, "Medicine and Morals."

[3] *Traité Pratique d'Antisepsie*, Paris, 1898, p. 341.

perfectly harmless, may at other times produce serious disturbance.

It has been asserted, and it is, I believe, true that the germs of sporadic cholera can elaborate their poison only in the presence of the germs of putrefaction.

The remarkable variability in the virulence of that very important and interesting organism, the bacillus coli, is of great moment in connection with the subject of this discussion. This organism always exists in the small and large intestine of both man and animals in health, and would therefore appear to be, under normal conditions, innocent and harmless.

Mr. Treves, referring to this organism, observes: "It would appear to be harmless when taken from the normal intestine; if, however, the bowels become the seat of almost any morbid change the bacillus becomes virulent at once. . . . In congestion of the intestine, in diarrhœa, in advanced constipation, and in other abnormal states, This point," he adds. "is of no little moment in the etiology of perityphlitis. In a large number of cases the attack is preceded by constipation, by the decomposition of undigested matters in the bowel, by diarrhœa, by exposure to cold, or possibly, although rarely, by injury. If measures could be adopted to render the bacterium non-virulent then a great step would have been taken in the preventive treatment of this disease."[4]

It is also known that in cases of typhoid fever the bacillus coli increases greatly in number in the intestine, and also becomes more virulent; indeed these two bacilli—the bacillus of typhoid fever and the bacillus coli—have important relations to one another. The products of the bacillus coli appear to intensify the infection of the typhoid bacillus, and, on the other hand, widely-spread infection by the bacillus coli has been found associated with typhoid fever.

Professor Dieulafoy[5] has reported some experiments he has made on the relative virulence of the bacillus coli when cultures have been made from the bacillus found in a closed cavity in the appendix, and of the same organism taken from the unenclosed mucous tract immediately adjacent; and he considers that he has proved that the simple fact of the bacillus having been retained in a closed cavity, gives it a remarkable virulence, as compared with the same organism living on the unenclosed mucous membrane adjacent. It has certainly been proved that an apparently small difference in the environment of this microbe influences in a remarkable manner its pathogenic activities.

There is another interesting observation pointing in the same direction with regard to the cholera vibrio. It is difficult to infect animals with the cholera vibrio by way of the alimentary tract, but it can be done if the acid contents of the stomach be first neutralised with alkali. Alkalinity of the environment seems to be necessary to the activity of many of the pathogenic bacteria which get into the human intestine. Reasoning, then, from analogy, we may conclude that if we can, by changing the environment of a pathogenic organism, increase or stimulate its activities, or augment its virulence, so we may, by analogous means, hope to lower its activities and diminish its virulence.

The idea, then, of the usefulness of intestinal antiseptics rests upon an experimental and strictly rational basis. The therapeutic doctrine that we should attempt to control or modify the action of putrefactive and pathogenic microbes within the intestinal canal seems, therefore, to be sound, rational, and scientific.

Many morbid conditions are recognised as arising from intestinal auto intoxication, either from the absorption of the soluble products of bacterial metabolism and food decomposition, that is, from putrefactive changes, or from the invasion of the organism by bacteria themselves, which are, under certain conditions, able to pass through membrane and attain the vessels.

We may, therefore, now pass on to the third heading, namely, What are the morbid conditions in which the use of intestinal antiseptics are indicated?

First, they are of great value in arresting the morbid fermentations which occur in cases of gastric dilatation. Practical clinical observation has proved the immense value in those cases of such antiseptics as sulphurous acid, carbolic acid, sulphocarbolate of soda, salicylic acid, menthol, and various other drugs.

Secondly, in duodenal indigestion, when excessive fermentation occurs in this part of the alimentary tract, giving rise to pain and distension soon after taking food, and exciting at times catarrhal jaundice or diarrhœa, with light-coloured offensive stools, intestinal antiseptics such as thymol or menthol, mixed with powdered rhubarb and soap, and small doses of calomel or grey powder at short intervals prove of great service. Calomel seems to be really bactericidal in such cases. Speaking generally, we may say that all morbid conditions which depend on abnormal decompositions within the alimentary canal, and attended, as they usually are, with flatulence, painful distension, diarrhœa, or irregularity of the bowels and offensive fermented stools, indicate the use of intestinal antiseptics.

Thirdly, in muco-membranous colitis intestinal antiseptics have been found of use. M. Jolly[6] advocates in these cases a mixture of benzoates, salicylates and naphthol; 15 grains of such a mixture, twice daily, is harmless, and in his hands has proved efficacious. He observes that the proof that this mixture acts as an intestinal antiseptic is given by the rapid deodorisation of the solid and gaseous discharges from the bowels.

Fourthly, in summer diarrhœa or infective diarrhœa of children, which is an acute gastro-enteritis dependent on morbid bacterial activity; in these cases intestinal antiseptics have been of great service.

Calomel and rhubarb in small doses, or calomel with tannalbin, have proved efficacious. In some cases the stomach has been washed out with solution of borax or bicarbonate of soda, one drachm to the pint.

Professor Grancher[7] cleanses the stomach in another way. He treats these cases by restricting them to boiled water, cooled to a suitable temperature, and given in small quantities every half hour. Water, he maintains, dilutes the toxic matters, washes away *débris* of decomposing food, dissolves toxins attached to formed elements, and tends to increase blood pressure.

Systematic intestinal irrigation in these cases has also been found a valuable aid to other antiseptic treatment. Dr. Booker has shown that this affection is the result of the activity of a number of varieties of bacteria, "some of which belong to well-known species and are of ordinary occurrence and wide distribution, the most important being the streptococcus and proteus vulgaris." He has also shown how, when in these cases the stomach and intestines become inflamed, a general intoxication follows, "in which other organs of the body participate, either as a result of an invasion of the body by bacteria or from the effects of poison absorbed from the intestine."[8]

This observation leads me to the enumeration of the many remote affections that have been referred to auto-intoxication from the intestinal canal, and in which the employment of intestinal antiseptics may be indicated.

Huchard[9] has described cases of dyspnœa and arrhythmia, simulating heart disease arising in this way.

Tedeschi[10] refers severe chest pain, with dyspnœa and sense of impending death, to the same cause.

W. H. Thompson[11] reports cases of persistent tachycardia cured by careful diet and intestinal antiseptics. He also noted other symptoms referable to the same cause, as vertigo, aphasia, diplopia, and severe pains in the limbs and trunk. Cystitis and pyuria have also been observed in connection with typhoid fever[12]

A. K. Bond has referred attacks of migraine and even mania to intestinal auto-intoxication.[13]

Dr. William Hunter suggests, from the large amount of aromatic sulphates excreted in the urine in pernicious anæmia, that these cases are characterised by excessive intestinal decompositions; that a hæmolytic poison is thus generated;

[4] Allbutt's *System of Medicine*, vol. iii, p. 891.
[5] *Clinique de l'Hôtel Dieu.*

[6] *Journ. de Méd. de Paris*, 1899.
[7] British Medical Journal, Epitome, 1897, vol. i, No. 258.
[8] A Bacteriological and Anatomical Study of the Summer Diarrhœa of Infants. *Johns Hopkins Hospital Reports*, vol. vi.
[9] *Journ. de Méd. et de Chir. Prat.*, July 10th, 1897.
[10] *Riforma Med.*, 1897.
[11] *Medical Review*, August 14th, 1897.
[12] Pyuria in Typhoid Fever. G. Bloomer, M.D., Johns Hopkins Hospital.
[13] *Maryland Journal*, January 20th, 1898.

and that the administration of intestinal antiseptics is the rational treatment of the disease.

In chlorosis the value of purgatives, acting as intestinal antiseptics, is generally admitted.

It has lately been suggested that uræmia may be due to toxic matters formed in the intestine, and absorbed by the blood which the diseased kidneys fail to excrete, and this hypothesis is supported by the recognised value of purges and a milk diet in this condition.

There are three other important diseases in which the use of intestinal antiseptics has been advocated — cholera, dysentery, and typhoid fever.

Of the treatment of cholera I have but little personal experience, and I will therefore leave any remarks on this part of the subject to others.

With regard to dysentery, I would only say that the evacuant and antiseptic treatment by means of the aperient sulphates seems to be gaining in favour, but I have little personal experience to refer to.

The value of intestinal antiseptics in typhoid fever has been somewhat warmly debated. The view that is taken of the value of intestinal antiseptics in this disease is probably somewhat influenced by our opinion whether enteric fever is a primary intestinal infection or a general infection with an intestinal lesion. I need not occupy your time now with the facts and arguments in favour of the former view—namely, that enteric fever is a primary intestinal infection; they have been well and forcibly stated by Sidney Martin, in his Croonian Lectures,[14] and I for my part am disposed to agree with him.

Then there is the relation of the bacillus coli to typhoid fever. In some cases, as remarked by Sidney Martin, enteric fever appears to be a pure infection of the typhoid bacillus; in other cases it is a mixed infection, and there may be infection after the acute disease is over, usually by pus organisms. The influence and operation of other pathogenic organisms—such as the bacillus coli, streptococcus, and others—in giving rise to some of the most serious symptoms of typhoid fever, have a considerable interest for us in connection with this discussion. It seems certain that in many cases the augmented activity and virulence of the bacillus coli may play a more important part in poisoning the organism than the typhoid bacillus.

In ten cases of pyuria occurring as a complication of typhoid fever, and most carefully studied by Dr. George Bloomer, in the Johns Hopkins Hospital, he observed that in two cases only was the typhoid bacillus found in the urine, one together with the bacillus coli, and in one only alone; whereas he found the bacillus coli present in seven cases, six times in pure culture, and once in association with the bacillus typhosus.

The bacillus coli seems a more energetic organism than the bacillus typhosus. In cases of appendicitis Dieulafoy maintains that when shut up in a closed cavity in the appendix it is able to pass through its membranous walls into the peritoneum, or to reach the lymphatics and blood vessels, and spread to the liver and excite hepatic abscesses. Some observers believe that the bacillis coli, under certain conditions out of the body, such as growth in sewage, etc., assumes a pathogenic character, and gives rise to a disease which is clinically indistinguishable from enteric fever. And it has been suggested, and the suggestion seems well founded, that relapses in typhoid may be, in some cases at any rate, due to a secondary infection by the products of the bacillus coli. If this be the case, it seems to enforce immensely the need of attempting intestinal antisepsis in typhoid fever.

I have myself advocated and practised intestinal antisepsis in the treatment of typhoid fever for many years, but I am opposed to advocating any routine treatment in this disease.

I have lived long enough to have learned to be very sceptical about statistics. Infective diseases vary so much in their form, phenomena, and severity, that the statistics accumulated by one observer may be inconsistent with the equally carefully collected statistics of another. I have never desired to take any part in the manufacture of statistics. I should regret extremely to begin any routine treatment of cases of so-called typhoid fever when the temperature had only reached 102° F., as the advocates of the cold bath treatment recommend.

In very many cases that I have seen, in which the temperature has never greatly exceeded 102°, I have advised no other treatment than good nursing and careful feeding. Perhaps a few drops of hydrochloric acid largely diluted with water to allay thirst.

In cases with an entire absence of intestinal symptoms, which we occasionally see in some of our London epidemics, I do not prescribe intestinal antiseptics; but in the average, or severe typical cases of typhoid fever with intestinal symptoms, diarrhœa, pain, tympanites, and foul-smelling evacuations, I invariably endeavour to carry out some form of intestinal antisepsis, and I maintain now, as I have always done, that it is a rational mode of treatment, incumbent upon us to adopt, and to endeavour to improve.

Since I first wrote in advocacy of this mode of treatment, I have received from all parts of the world, from South America, from South Africa, from Canada, and from our Australian colonies, as well as from numerous practitioners at home, an overwhelming mass of testimony in its support.

One of the most curious of these testimonies I received only a few days ago, in a letter from an eminent physician and professor of materia medica in one of our northern cities. He says:

> It was not very long after you had published your address that I was one day hastily summoned to C — by Dr. R — to see a gentleman *in extremis* from typhoid fever. As we went to the house the doctor told me that the patient's tongue was as dry and dark as burnt mahogany—I think that was the term he used—that his abdomen was much distended with flatus, his temperature high, etc. We went to the bedside: his tongue was moist, the abdomen not much distended, and the fever but moderate. We looked at each other across the bed but said nothing. Downstairs I was informed that late on the previous night—for my visit was early in the morning, that is, as early as I could get out by train—Dr. R — was advised by some young doctor who had been studying at King's, or else an advanced student, to give this chlorine and quinine mixture, he claiming for it great utility in moistening the tongue, etc. He prescribed it overnight, and had not seen the patient since doing so until we saw him together in the morning. The difference between the condition in which he expected to find him—and, indeed, in which he had found him on the occasion of his next preceding visit—and that in which he actually found him was so marked that some explanation seemed, in Dr. R—'s opinion, necessary. And I repeat to you the explanation as he gave it to me.

Before I pass on to the last division of our subject,—namely, How is intestinal antisepsis best carried into effect? I should like to bring to your notice certain cases I have seen within the last few years, in which I have suggested the use of intestinal antiseptics with remarkably satisfactory results. I refer to certain cases with which I have only recently become familiar, and which I have sometimes been inclined to think due, as Sydenham would have said, to the influenzal constitution of the atmosphere. I will mention very briefly three of these, as typical of the class of cases to which I refer.

> On October 9th, 1897, Colonel A. was brought to me by his medical adviser, for advice as to his condition. His history was that he had had some indeterminate febrile attack about three months previously, and although he had recovered to a certain extent and had been able to go about, his temperature had continued to be above normal, and had ranged between 99° and 102° since July 22nd. He had consulted with several physicians and been submitted to various treatment, but without any permanently good results. When I saw him he looked thin and weak from the protracted fever, and he was depressed in spirits. He complained of frequent perspirations, his tongue was furred, and his breath offensive; his liver appeared to be slightly enlarged. From my recent experience of cases of this kind, I ventured to predict that by means of intestinal antiseptics he would be cured. I prescribed thymol by the mouth, to be taken after food, and daily irrigation of the large intestine by an antiseptic enema composed of eucalyptol and olive oil mixed with a pint or so of soap and water, and given in the knee-elbow position. In a very short time his temperature became normal, and he was well.
>
> About this time last year I was requested to see in this county, in consultation, a gentleman about 60 years of age, with much the same history as the preceding. He had had some months before an indeterminate febrile attack of no great severity; it was doubtful whether it was typhoid or influenza, or a little of both. He had recovered to a certain extent, but remained with a temperature varying between 99° and 102°, but nothing that had been done for him had succeeded in bringing down this temperature. The patient had got very depressed in spirits, and his family were very anxious, especially as the suggestion of tuberculous peritonitis had been put forward after a previous consultation. The case appeared to me to be of the same class as the preceding, and I again ventured to predict that treated by intestinal antiseptics he would not be long in recovering. I prescribed the same treatment as in the preceding case, with exactly the same result.

Last winter I had an opportunity of testing this method in some cases under my own care in King's College Hospital, and one of them—a typical one—I will briefly refer to.

> A woman, aged 26, was admitted with peritonitis on October 26th. The

[14] *Lancet*, vol. ii, 1898, p. 73.

attack came on suddenly on October 23rd, as she was returning from seeing the decoration of Nelson's Column in Trafalgar Square. She had the usual symptoms of acute peritonitis, the temperature ranging from 99° to 103°. By November 14th she appeared convalescent in all respects but for the maintenance of a febrile temperature, with occasional sweating. There was no physical signs or sequelæ to account for this. On November 22nd, the temperature still keeping high, I determined to try the effect of irrigation of the large intestine with an antiseptic injection. An enema composed of 1 drachm of eucalyptol, mixed with 2 or 3 drachms of olive oil, and added to a pint of warm soap and water, was given every morning in the knee-elbow position. The effect was almost immediate, the temperature came down to normal in two days (that is, on the 24th) and remained at or below the normal for the rest of her stay in the hospital.

I venture to suggest as an explanation of these cases that following a febrile attack, not necessarily typhoid, the bacillus coli becomes excited into abnormal activity, and secretes a fever-producing poison, which is absorbed from the surface of the large intestine. By daily irrigation of the large intestine with this fluid, which contains a volatile antiseptic, we are enabled to cleanse this part of the alimentary canal, and fill it to some extent with antiseptic vapour, a condition which may be of some importance: while by giving such an antiseptic as thymol or menthol by the mouth, we can exert an antiseptic action on higher portions of the intestinal tract. I show you the temperature chart of this last case.

4. It only remains for me now to refer briefly to the various substances which have been employed or suggested for use as intestinal antiseptics, and to indicate those upon which I think chief reliance may be placed.

Simple water, as Professor Grancher has pointed out, may, if given frequently in suitable quantities, act as an intestinal antiseptic, and we may need nothing more. We then apply to the internal mucous tract the same cleansing agent that we daily apply to the external cutaneous surface.

Mercurial preparations and saline purgatives are no doubt active intestinal antiseptics, and are usefully employed in many cases where we wish to arrest abnormal decomposition of food substances in the alimentary canal, or to clear away the poisonous product of such decompositions.

In the commencement of typhoid fever, I consider it an advisable thing to clear out the bowels with a moderate dose of calomel. I cannot see that it can possibly do any harm, and it may do much good, by clearing away from the bowel highly decomposable material. The dose may be repeated once or twice during the first ten days of the fever. In hospital practice in London we rarely have the opportunity of doing this, as many of our cases do not seek admission until the second week, or even later, of the attack.

Dr. J. W. Moore, of Dublin, whose book on Fevers is well known and justly esteemed, recommends aperients during the first week of the fever, and considers calomel the best, in 2 to 5-grain doses.

Professor William Carter,[15] of University College, Liverpool, has repeatedly drawn attention to the value of calomel in cases of intestinal auto-intoxication. He has shown that its influence in preventing the decomposition of bile out of the body is remarkable. A few grains of calomel added to bile, in a test tube, will keep it sweet for an indefinite time, while the bile will quickly become offensive if left by itself, or with other purgatives added to it. Amongst other cases in support of his views, he quotes one—a febrile case, with constant delirium—which lasted four days, and quite disappeared immediately by the action on the bowels of 5 grains of calomel. And he mentions another non-febrile case, with intense headache, which did not yield to other measures, yet yielded immediately to a dose of 5 grains of calomel. I agree with Dr. Carter, that there can be no kind of doubt we have in calomel a most valuable intestinal antiseptic. Frequent minute doses of the perchloride of mercury have also been given by Dr. Carter, and others, with excellent effect, in the summer diarrhœa of children.

Professor Carter, like myself, is a great advocate of chlorine as an intestinal antiseptic. He writes to me:

> I abandoned all other antiseptics for it in typhoid fever ever since reading your address, now a good many years ago.

Perhaps the most remarkable testimony in its favour reached me from Dr. O'Conor, of Buenos Ayres. He says:

> For some years I have adopted your treatment in my typhoid cases, nearly 400 in all. I had a remarkable run of "luck," 100 cases with only 1 death. It was No. 81.

But I by no means limit myself to the use of the chlorine mixture I have described as an intestinal antiseptic in typhoid fever. I am guided by the character and severity of the intestinal symptoms and the nature of the evacuations.

In mild cases I often use salicylate of bismuth, which I regard as a valuable antiseptic, and as applicable in many other forms of intestinal irritation from putrefactive causes. Indeed, large doses of carbonate or nitrate of bismuth doubtless act as antiseptics, and possibly also, by coating the surface of the intestinal mucous membrane, hinder the absorption of toxic products.

Carbolic acid has been widely used as an intestinal antiseptic in typhoid fever and in other diseases, and its use was warmly advocated by the late Professor Charteris. I have not used it myself in typhoid, but I should not hesitate to do so in cases in which patients objected to the chlorine mixture, and some certainly do object to it.

I may here refer to a communication made to the *Lancet* a short time ago by Dr. Gerald Williams, of Vernon, B.C., Canada. It is a remarkable undesigned experiment made in a case of typhoid, and not without interest in our present discussion:

> On the fourteenth day of a relapse he saw his patient at 9 P.M.; he was then suffering from excessive diarrhœa, with a temperature of 104.5°, and a pulse of 90. By accident he was given at midnight two tablespoonfuls of pure carbolic acid instead of his diarrhœa mixture. Dr. Williams was sent for, and saw him about fifteen minutes after he had swallowed the carbolic acid. The patient had already drunk about a quart of milk. He was much alarmed, his mouth was terribly burnt, his lips were white, and he complained of great pain in the stomach. He was given large quantities of saccharated lime, and made to vomit by an injection of apomorphine. He was given salad oil and sodium sulphate; he vomited several times more, and then fell back in bed completely collapsed. The pulse was hard to find, and the respiration was laboured. Brandy and ether were injected, and he rallied. At 8 A.M. the next morning he was looking and feeling much better than he was before he took the acid. His temperature was normal, his pulse 96; he never had any return of the fever, and in a week was out of bed. Dr. Williams thought this a clear case of cure by carbolic acid, and adds that he would not care to try quite such a big dose.[16]

I cannot say I am partial to the use of salol as an intestinal antiseptic. I do not like trusting to a decomposition which I am told will take place in the small intestine, but which I cannot be quite sure of. Salicylic acid has been found in the urine after its use, and that no doubt is a valuable point, as the urine in many cases of typhoid needs disinfection.

Concretions of salol have been found in the stomach and intestines, as our President can testify, and I should strongly advise more caution in its use. It is one of those drugs that is given nowadays in routine fashion. Salacetol is probably a better drug for disinfecting the urine.

My view is that an ideal intestinal antiseptic should be, to a great extent, insoluble in the stomach, and that it should be to some extent volatile, so that its influence may be diffused into the gases in the intestine.

Eucalyptol, creosote, turpentine, thymol, menthol, and some others have these qualities; the three former when given by the mouth may be mixed with a powder, such as cinnamon powder, and made into a paste with a little honey or gum and enclosed in capsules. And eucalyptol when mixed with olive oil can well be used in enemas for irrigating and disinfecting the large intestine, as I have described, and no method of intestinal antisepsis can be complete that does not include an attempt to disinfect, by irrigation, the large intestine. I have used with satisfaction capsules of turpentine in typhoid fever, especially when there has been hæmorrhage. A mixture of bismuth salicylate, sodium benzoate, and alpha naphthol makes a useful antiseptic powder for internal use, if supplemented by irrigation of the large intestine.

It may be objected to the chlorine mixture I have recommended that most of it will be absorbed in the stomach; but if it be given very frequently, every hour or two, it will be found, when diarrhœa exists, to pass into the intestine, at any rate in sufficient quantity to give an odour of chlorine to the evacuations. My own impression is that a part of its value is due to the chlorine gas diffusing into the intestinal gases. It has been suggested that menthol is the best internal antiseptic for all combined purposes, as it is but slightly irritating, is not readily soluble, and is volatile. Many other substances have been put forward as intestinal antiseptics, but I have scarcely found it necessary myself to go beyond those already referred to.

In a disease like typhoid fever we cannot hope to do much

[15] The Principles of Disinfection in Medicine: An Address delivered at the Opening of the Fiftieth Session of the Liverpool Medical Institution.

[16] *Lancet*, January 6th, 1898, p. 99.

good with intestinal antiseptics unless we exercise the greatest care with regard to the food. Here again I protest against a routine treatment. In mild cases, with no great amount of fever and no intestinal complications, we may give food which would not be suited to severe cases with grave intestinal symptoms. I am strongly of opinion that too much food is commonly given in these severe cases, that such food does not become absorbed but lingers in the alimentary canal, decomposes there, and keeps up a septic condition of the intestinal contents.

The very worst case of typhoid fever I have ever seen to recover, and attended by the most severe hæmorrhage I have ever seen, was kept, by my direction, for ten days on a teaspoonful of Valentine's meat juice in a wineglass of water and a teaspoonful of brandy every three hours. Nothing whatever else but iced water was allowed to be taken, except capsules of turpentine as an antiseptic, and for the hæmorrhage. This patient made an excellent recovery, and had a rapid convalescence. My object was to give no food that could possibly disturb the small intestine, seeing the hæmorrhage was so profuse. With such an enormous loss of blood, it might have been thought that the need of food would have been greater than in non-hæmorrhagic cases. When we read of abdominal distension in typhoid being relieved by passing a long tube into the bowel, which has allowed of the escape of large quantities of foul liquids and gases, one is inclined to ask, By whose fault did these matters accumulate there?

In the preceding remarks I have attempted to mark out the lines along which this discussion may profitably proceed. I have endeavoured to show what is the object aimed at by the use of intestinal antiseptics—namely, to prevent or antagonise those auto-intoxications arising from the activities of putrefactive and pathogenic microbes in the alimentary canal.

Secondly, I have attempted to show that this object and this aim are based on a sound and rational scientific and experimental basis, since we know that the activities and virulence of these organisms are largely influenced by slight changes in their environment, and that in so accessible a situation as the alimentary canal we believe we have the power of introducing such changes.

Thirdly, I have pointed out, but by no means exhaustively, the chief morbid conditions in which these remedies are applicable, and

Fourthly, I have attempted to furnish some clinical evidence of their efficacy, and to make some approximate estimate of the value and usefulness of those with which I am most familiar. There are many newer substances introduced for this purpose, the estimation of which I must leave to others, if they think they are worthy of the pains. The manufacturing chemist has nowadays undertaken to teach the clinical physician his business. Personally, I find this intrusive and irrepressible person, with his testimonials and his samples, a hindrance rather than a help.

II.—VAUGHAN HARLEY, M.D., and FRANCIS GOODBODY, M.D.,

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THE success that has followed the employment of antiseptics in surgery has led the physician to endeavour to apply the same means in medicine.

Bouchard and others have believed that many diseased conditions can be explained by an auto-intoxication, and in clinical journals we read of varied symptoms which are considered to be the result of increased intestinal putrefaction. There can be little doubt that intestinal antiseptics would be of great value in the practice of medicine, and it is our endeavour in this paper to show how much reliable information can be gathered as to the real possibilities of disinfecting the alimentary tract.

In the first place, it is necessary to consider if under normal circumstances putrefaction only goes on in the animal body inside the intestine. The products of intestinal putrefaction are aromatic substances, such as phenol, indol, skatol, kresol, etc. Some of these when formed in the alimentary tract are absorbed, and after absorption they combine in the blood with the sulphuric acid and are eliminated as aromatic sulphates in the urine.

It was long disputed whether substances such as indol, phenol, skatol, etc., would be formed in the organism itself as well as in the intestine. It was considered in favour of the view that these aromatic substances could be formed in the animal tissues, that Salkowski[1] found indol in large quantities in the urine passed in animals fasting; on the other hand, Van den Velden found that in dogs after five or six days' fasting the aromatic sulphates were reduced to one-half. At the same time Senator[2] found in chronic inanition often an increase of indican in the urine. That the aromatic substances are not formed in the organism is also contradicted by the fact that in fever, where there is a great breaking down of tissue proteids, there is no increase of indol in the urine (Ortwieler).[3] At the same time, it seemed possible that these substances were formed in the organism itself.

Baumann[4], however, had a patient suffering from intestinal fistula in the upper part of the small intestine, and during the time that the fæces passed through the fistula, that is to say, for some weeks, there was a great diminution of aromatic sulphates and only traces of phenol and indol in the urine. Subsequently, however, when the fistula closed and the fæces passed in the normal manner the aromatic sulphates again increase in the urine.

Ewald[5] in a similar case found indol and phenol disappeared from the urine to reappear when the fistula closed. It would appear that the experiments of Salkowski and Senator that led them to believe that these aromatic substances were formed in the tissues, was due to the fact that fasting animals still form fæces in their intestines, and that long fasting pathological changes (hæmorrhage) occur in the intestine, which yield a rich material for bacterial putrefaction. It would thus appear normally the aromatic sulphates can only be formed in the intestine, and that by estimating the quantity of aromatic sulphates in the urine we are able to estimate the amount of intestinal putrefaction, and thus control our results on intestinal antiseptics.

Under normal conditions the quantity of aromatic sulphates in the urine, according to Van den Velden,[6] vary between 0.094 and 0.617 grams in twenty-fours, the average being about 0.27 grams; while G. Hoppe-Seyler[7] estimates them as 0.22 grams. According to frequent analyses made at University College, we have found from 0.09 to 0.28 grams of aromatic sulphates to be daily eliminated in the urine. If under normal circumstances putrefaction takes place in the intestines, to remove any increased putrefaction it would be necessary either to destroy the bacteria present in the intestines, or so hurry on the material there accumulated along the bowel that it no longer has time to putrefy, and thus yield products to be absorbed.

In some experiments performed by one of us (V. H.) on dogs in which the large intestine was removed the aromatic sulphates were found to be decreased in the urine to a half or less, the quantity found present in normal dogs on the same diet. The removal of the large intestine in dogs causing so

TABLE I.—*The Influence of the Removal of the Large Intestine on Intestinal Putrefaction in Dogs.*

	URINE.					
			Sulphates.			
	Duration of Observation.	Qt. c.cm.	N.	Total	Alkaline A.	Aromatic B.	Ratio.
	Days.		Grains.	Grams.	Grams.	Grams.	A : B.
Normal	4	118	4.457	0.637	0.573	0.064	9.0 : 1
,, ...	4	89	3.573	0.544	0.479	0.065	8.0 : 1
,, ...	4	70	3.362	0.521	0.465	0.056	8.5 : 1
,, ...	4	119	6.127	0.662	0.558	0.076	7.0 : 1
,, ...	4	108	5.815	0.679	0.597	0.082	7.0 : 1
,, ...	3	74	3.858	0.445	0.377	0.066	6.0 : 1
Large intestine removed	4	101	4.445	0.598	0.582	0.034	17.0 : 1
,,	3	341	4.374	0.584	0.588	0.026	22.0 : 1
,,	4	207	3.243	0.437	0.405	0.031	13.0 : 1
,,	3	247	3.510	0.468	0.432	0.035	12.0 : 1
,,	5	93	4.376	0.382	0.052	0.052	7.0 : 1
,,	3	88	2.526	0.232	0.201	0.031	6.6 : 1

great a decrease in the putrefaction occurring in the bowel as indicated by the diminution of the aromatic sulphates in the urine would lead one to believe that it would be possible in man, by washing out the large bowel to so diminish the intestinal putrefaction occurring in the bowel as indicated by the diminution of the aromatic sulphates in the urine would lead one to believe that it would be possible in man by washing out the large bowel to so diminish the intestinal putrefaction as to render this method of treatment of some use. We will now consider a case in which washing out the bowel was employed to see if there is any indication of diminution of aromatic sulphates in the urine and consequently decrease of intestinal putrefaction.

S. F. was a young man of 27 with a history of phthisis and had been treated during a year for pulmonary trouble at Falkenstein. While under treatment he suddenly developed a diarrhœa with two to four motions daily, which increased in frequency during the next five months. His lungs had improved so that his phthisis was considered practically cured and no tubercle bacilli were now to be found. After he came under our care he was put on a diet and kept absolutely in bed, during which time his metabolism was carefully investigated. The results are given in Table II.

TABLE II.—*Influence of Washing out the Intestine by High Enemata on Intestinal Putrefaction. Diet consisting of 23.8 grams N.; 176.1 grams Fat; and 191.1 grams Carbohydrate = 3294.4 Calories per Diem.*

	URINE.				
		Sulphates.			
	Qt.	N.	Total.	Alkaline. A.	Aromatic. B.	Ratio.
	C.c.	Grams.	Grams.	Grams.	Grams.	A : B.
Normal	730	18.23	2.29	2.05	0.24	9 : 1
,, ...	1,000	27.60	3.02	2.81	0.21	13 : 1
Average	865	22.92	2.66	2.43	0.23	11.1
	ENEMATA.					
Bowel irrigated	770	20.58	2.36	2.18	0.18	12 : 1
,, ,,	830	18.43	2.87	2.41	0.16	15 : 1
,, ,,	1,150	25.65	3.53	3.26	0.27	12 : 1
,, ,,	700	12.81	0.81	0.74	0.07	10 : 1
,, ,,	970	19.36	—	—	—	—
,, ,,	880	18.83	1.14	1.03	0.11	9 : 1
,, ,,	880	19.98	1.42	1.32	0.10	13 : 1
,, ,,	1,000	21.33	1.34	1.17	0.17	7 : 1
Average	898	19.62	1.88	1.73	0.15	11 : 1

It is seen that the quantity of nitrogen eliminated in the urine is high, 22.92 grams per diem being the average during the two normal days, and the quantity of aromatic sulphates was 0.23 grams per diem. However, the ratio of alkaline to aromatic sulphates was 11 to 1, not pointing to any great increase in intestinal putrefaction, since it is generally considered that the normal ratio is 10 to 1.

When we consider that at this time the patient was having four to five liquid motions a day, we can understand that in all probability there was in this case increased intestinal putrefaction to a marked extent, as the frequent action of the bowels must have helped to remove putrefactive products.

The following days by means of a long indiarubber tube the bowel was washed out with two gallons of warm boracic solution daily. During these eight days analysis were made the same as previously, and we see here that in consequence of the washing out of the bowel the average excretion of aromatic sulphates had diminished from 0.23 to 0.15 grams daily.

It would appear in this case clearly demonstrated that by washing out the bowel alone we had diminished the intestinal putrefaction, in fact, this may be regarded as a case of intestinal antiseptics. During the time of course the patient was well fed, at the same time received no drugs to stop the diarrhœa. The patient steadily gained weight, and two weeks after had entirely recovered from the diarrhœa, passing normal-formed motions.

In this case we have a very good example of where increased intestinal putrefaction occurs possibly as the result of tuberculous disease of the bowel, or anyway some intestinal catarrh, such simple means as washing the large intestine by an enema is sufficient to cause a diminution of the aromatic sulphates in the urine to almost one half, and ultimately the patient recovered. The cure of the diarrhœa in this case must, to a great extent, have been due to the diminution of intestinal putrefaction, since the treatment by rest and diet together with drugs had been previously tried in this patient while in Germany.

Having proved therefore that irrigation can diminish the intestinal putrefaction, we now come to the next question, Of what is the action of mild purgatives, or rather aperients, as intestinal antiseptics?

Bauman and Wassilieff[9] showed that fasting animals, as Salkowski had pointed out, still excreted aromatic substances in the urine; the giving of calomel for some days, however, caused a great diminution in the aromatic sulphates, and even caused them to entirely disappear. The term "calomel stool" had been applied to the copious dark green evacuations which accompany large doses of the drug. These, too, as shown by Fr. Simon,[9] contain large quantities of undecomposed bile, the bilirubin or biliverdin not having been converted into urobilin, as usually occurs. These motions have no fæcal odour, smelling more like any ordinary organic extract.

It is thus seen that large doses of calomel have caused a large quantity of bile to be found in the fæces. The explanation of this was orlginally put down to the cholagogue action of the calomel, which nowadays is known not to be the only cause. It seems that the calomel checks the putrefactive changes in the intestine, and therefore the conversion of the bilirubin into urobilin.

Wassilieff[10] showed that when calomel is added to ox bile and the bile kept in a warm room, shaken up from time to time, the bile thus treated retained its green colour during six days, and gave the usual tests for bile pigment, while a specimen of bile kept without the addition of calomel within twenty-four hours became brownish-yellow, and no longer gave the bile-pigment reaction. He still further showed that in the calomel stools of dogs no indol was present, and this was the cause of the absence of the offensive odour, but leucin and tyrosin products of the pancreatic digestions were still present, so the presence of calomel does not prevent the digestion of proteids by either the gastric or the pancreatic ferments, and it only acts on the organised ferments.

The controversy on this statement has been rather great, and some, as Müller and Gerhardt,[11] contradict these results of Wassilieff. Binz[12] well explains this by pointing out that "the essential difference may result from variations in the contents of the intestines, dependent on the kind of food and state of its digestion."

The difficulties of investigating the action of intestinal antiseptics are very great, since the majority of substances such as creosote, β-naphthol, carbolic acid, etc., when given internally are in a part absorbed or eliminated in the urine as aromatic sulphates, so that these drugs tend to increase the aromatic sulphates in the urine in spite of their diminishing intestinal putrefaction.

One of us (V. H.), in conjuncture with Dr. Surveyor,[13] has already published a paper on the action of bismuth subnitrate and β-naphthol as intestinal antiseptics, and in the present paper it was thought better that the general action of antiseptics should not be dealt with, but only the action of irrigation of the large intestine as has been already described, and to try to settle the controversy as to whether calomel in small doses, when it has no purgative action, can be regarded as an intestinal antiseptic, as indicated by estimating the quantity of aromatic sulphates in the urine.

In considering the action of mild aperients the dose was so regulated that it did not cause a repeated action of the bowels, as in that case one would get similar results to irrigation. Two cases in which the effect of a pill containing a small dose of aloes, nux vomica, and belladonna, with or without calomel, were investigated.

In the first case the patient N. B., a girl of 20, suffering from a movable right kidney, with some loss in weight, but otherwise comparatively speaking healthy, was put on a fixed diet. During the first four days the food alone was taken, and in Table III one sees the average quantity of

TABLE III.—*Influence of Small Doses of Aloes and Calomel on Intestinal Putrefaction. Diet consisted of 19.76 grams N.: 90.24 grams Fat; and 105.2 grams Carbohydrate = 2024.3 Calories.*

	URINE.				
	Qt.	N.	Sulphates.		
			Total.	Alkaline. A.	Aromatic. B.	Ratio.
	C.cm.	Grams.	Grams.	Grams.	Grams.	A : B.
Normal	1,980	18.78	3.11	2.99	0.12	25 : 1
.. ..	1,740	20.71	3.79	3.64	0.16	23 : 1
. ...	1,740	19.66	3.25	3.14	0.11	28 : 1
.. ..	1,800	23.94	4.43	4.23	0.20	21 : 1
Average	1,815	20.77	3.64	3.50	0.15	24 : 1
Calomel	1,960	19.60	3.33	3.17	0.16	20 : 1
.. ..	1,400	16.80	2.72	2.58	0.14	18 : 1
.. ..	1,960	20.19	3.88	3.70	0.18	21 : 1
Average	1,773	18.86	3.31	3.15	0.16	19 : 1
Mild	1,900	19.00	1.86	1.73	0.13	14 : 1
Aperient	1,940	17.85	1.70	1.59	0.11	15 : 1
.. ..	2,240	17.90	1.80	1.75	0.13	14 : 1
Average	2,036	16.25	1.79	1.69	0.12	14 : 1

aromatic sulphates was 0.15 gram—that is to say, there was no tendency to any increased intestinal putrefaction. During a subsequent three days she was given daily 1 gr. of calomel in three doses, ½ gr. being given after each meal. During these three days the average excretion of aromatic sulphates was 0.16 gram daily, so that practically there was no evident action whatsoever produced by the calomel, so far as the quantity of aromatic sulphates was concerned.

During a subsequent three days a mild aperient pill was given, as, although throughout the first and second periods she had one action of the bowel daily, the motions were distinctly of the "sheep type," showing a marked tendency to stagnation in the large intestine, and this was confirmed by the percentage of water only being from 62 to 66 in the fæces.

During the time that small doses of aloes were taken the aromatic sulphates fell to an average of only 0.12 gram daily, so that the more complete emptying of the bowel had most certainly led a decrease in intestinal putrefaction.

The next case we will consider is that of E. E., a lady of 30, who was suffering from very marked emaciation, weighing barely 7 stone, the result of typhoid fever four years previously. (Table IV.) On a fixed diet during three normal days the average excretion of aromatic sulphates in the urine was 0.22 gram, the bowels acting once daily. During the next three days she was given a pill containing nux vomica, belladonna and aloes; during this time the bowels only acted once daily as before, but the motions became a little bit more copious, and the average excretion of aromatic sulphates was decreased to 0.19 gram.

During a third period, in addition to the pill, calomel was added in three doses of ½ gram after each meal. The motions in this case were not increased, however, the aromatic sulphates fell to 0.16 gram.

It is of interest, therefore, to note in these two patients that in the case where the aromatic sulphates at first were high the mild aperient stimulating the bowel to act seemed to produce a diminution of the aromatic sulphates, while on the addition of calomel there was a still more marked diminution.

TABLE IV.—*Influence of Small Doses of Aloes and Calomel on Intestinal Putrefaction. Diet consisted of 21.83 grams N.: 167.2 grams Fat; and 202.1 grams Carbohydrate = 2257.12 Calories per diem.*

	Qt.	N.	Sulphates.			
			Total.	Alkaline. A.	Aromatic. B.	Ratio.
	C.cm.	Grams.	Grams.	Grams.	Grams.	A : B.
Normal	1,420	23.86	1.22	1.02	0.20	5 : 1
.. ..	1,420	24.71	0.97	0.70	0.27	3 : 1
.. ..	1,040	15.91	0.75	0.57	0.18	3 : 1
Average	1,293	21.49	0.95	0.76	0.22	4 : 1
Mild	1,020	22.95	1.13	0.92	0.20	5 : 1
Aperient	1,020	21.63	0.73	0.57	0.16	4 : 1
. ...	1,300	24.56	1.00	0.78	0.22	4 : 1
Average	1,113	23.05	0.95	0.76	0.19	4 : 1
And Calomel ...	1,320	21.52	1.26	1.11	0.15	7 : 1
.. ...	1,300	24.18	1.36	1.19	0.17	7 : 1
Average	1,310	22.85	1.28	1.15	0.16	7 : 1

As far as the ratio of alkaline to aromatic sulphates was concerned, in this case there was at first a very low ratio, only 4:1 which points distinctly according to ordinary teaching to increased intestinal putrefaction. When a mild aperient was given the ratio was not altered, but when the calomel was added there was a marked rise in the ratio to 7 : 1, so that we have here a tendency to an increase in the ratio to the normal.

In the case of N.B., on the other hand, the ratio at first was 24 : 1 and although calomel alone did not decrease the amount of aromatic sulphates, the ratio fell to 19 : 1, and when a mild aperient instead of calomel was given the aromatic sulphates were decreased and the ratio also fell to 14 : 1.

In a former paper one of us[11] (V. H.) has already shown that although the ratio may be taken as roughly 10 : 1, it is essential to estimate the quantity of aromatic sulphates; as the addition of fat to the diet is sufficient to alter the ratio, owing to the fat sparing the proteid metabolism in the organism and causing a diminution in the total sulphates with the fall in nitrogen.

This part of the subject, however, cannot be now discussed, as it would necessitate a detailed account of the effect of varied diets on general metabolism.

In conclusion, we can consider that:—

1. Estimating the quantity of aromatic sulphates daily eliminated in the urine, one is able to gain an insight into the amount of putrefaction occurring in the intestine at any given time, provided aromatic substances are not being administered.

2. That washing out the large intestine by copious enemata is capable of decreasing the aromatic sulphates in the urine, and therefore causes a diminution of intestinal putrefaction.

3. That when a mild aperient is given not sufficient to act as a purgative, but sufficient in all probability to cause a more complete emptying of the bowels, this acts as an intestinal antiseptic, decreasing the amount of aromatic sulphates in the urine, not only when they are increased owing to increased intestinal putrefaction, but even when they are only small in amount.

4. That calomel when given in small doses so as to produce no purging, does not diminish the aromatic sulphates in the urine to a sufficient extent to say that it acts as an intestinal antiseptic when the aromatic sulphates at the beginning are small. On the other hand, when, however, undoubtedly there is an increase in intestinal putrefaction, small doses of calomel seem to act as an intestinal antiseptic.

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III.—FRANK M. POPE, M.B.Cantab., M.R.C.P.,

Physician, Leicester Infirmary.

DR. POPE expressed doubt whether soluble antiseptic drugs given by the mouth were ever present in sufficiently strong solution to kill actively-growing bacteria in the contents of the intestine, but thought that insoluble drugs acted better, possibly owing to their gradual accumulation. He stated that he had never been able to satisfy himself that any real improvement had been effected on the condition of the stools in typhoid by antiseptic drugs, at any rate in severe cases. He repeated his satisfaction with the results of doses of 5 grains of resorcin to the ounce of distilled water in cases of gastric ulcer. He had now used it for ten years in very many cases, and found it to be the most satisfactory method of treating such cases.

IV.—G. HERSCHELL, M.D.,

Physician, Hospital for Heart Disease, Soho Square.

DR. HERSCHELL said: Taking into consideration the fact that some forms of functional derangement, rheum-

atism, and skin disease are undoubtedly due to autotoxis from the gastro intestinal tract, it becomes of the first importance for purposes of diagnosis and treatment to secure a clinical test which shall inform us when absorption of toxins is taking place. The estimation of aromatic sulphates is impossible in general practice. As an alternative the test for indican has been advocated chiefly by Simon, and an attempt has been made by him to guess the probable amount of putrefaction by the depth of the blue colour produced. In the way usually performed the test for indican in the urine is useless for this purpose. The amount of indican which appears to be present will vary with the degree of concentration of the urine. But in a very simple manner it may be made a scientific test, as follows: Take the whole twenty-four hours' urine of the patient and either dilute up to fifty ounces or evaporate down to that amount. Now test for indican using 10 c.cm. of urine, 10 c.cm. of HCl. and 2 c.cm. of chloroform. Then the colour assumed by the chloroform may be compared with a colour scale which has been experimentally constructed to indicate known quantities of indican. I should like to draw attention to the part played by pyorrhœa alveolans in the setting up of abnormal putrefaction in the intestine. No microbes are found in the intestine which are not present also in the mouth. This is especially the case where there is dilatation of the stomach, or in the condition accompanied by defect of the hydrochloric acid secretion. The hydrochloric acid in the stomach is the natural antiseptic provided by Nature to safeguard the intestine. It will kill most germs. In anachlorhydria or achylia gastrica its absence will permit abnormal fermentation to take place in the stomach. Likewise, when, from atony, the stomach is unable to empty itself in the proper period, fermentation will ensue. In both these cases the food reaches the intestine in a septic condition. In these cases the true method of rendering the contents of the intestine aseptic is not by attempting to sterilise them by the direct action of drugs. With all due deference to the great authorities who have preceded me, I must submit that the consensus of opinion is that no known drug can be given safely by the mouth to sterilise the intestines when full of decomposing material. The scientific method of treating these cases is (1) to destroy the disease germs in the mouth by putting the teeth in order and curing pyorrhœa; (2) to cure atony of the stomach, or in default remove decomposing matter by lavage; (3) when the hydrochloric acid is in defect, administer it by the mouth. It is best given, as Ewald has suggested, as a drink during meals.

V.—R. B. Wild, M.D., M.R.C.P.,
Assistant Lecturer on Materia Medica and Therapeutics, Owens College, Manchester.

Dr. Wild expressed the pleasure with which he had listened to the exhaustive paper of Dr. Burney Yeo, and mentioned the value of charcoal as an intestinal antiseptic in cases of putrefactive processes in the alimentary canal. It illustrated Dr. Yeo's remark that it was not necessary for a substance to be bactericidal in order for it to be useful as an intestinal antiseptic. Charcoal introduced oxygen into the alimentary canal, and possibly acted by converting the anaërobic process of putrefaction, in which toxic and offensive substances were found, into the anaërobic process which led to the formation of simpler and less objectionable compounds. Sulphur also was a most valuable intestinal antiseptic. It was insoluble, and passed the whole length of the alimentary canal; was slightly volatile, and converted in the body into powerful antiseptic substances.

VI.—Alexander Haig, M.D., F.R.C.P.,
Physician, Metropolitan Hospital.

Dr. Haig remarked that calomel lowered the blood pressure. It lowered blood pressure because it freed and quickened the capillary circulation all over the body. A free circulation in the capillaries of the intestines made for digestion and against putrefaction. The effect of calomel on blood pressure and circulation could be demonstrated. Under certain conditions salicylates might do good in the same way as calomel, that was, by their effects on circulation in the intestines and elsewhere. Calomel might fail in some cases (especially where there was diarrhœa), for this both prevented its absorption and hindered its action on the vessels.

THE THERAPEUTICS OF LIGHT AND HEAT.

By W. Knowsley Sibley, M.A., M.D., M.R.C.P.,
Senior Assistant Physician to the North West London Hospital.

In this brief communication I purpose to epitomise the results of several years' work on the treatment of numerous diseases by the local application of dry hot air. Since the publication of my articles on the subject a few years ago I have continued the investigations both in hospital and private practice, and as time has gone on I have become more and more convinced of the great advance in therapeutics which this form of treatment has brought about. The youngest patient treated was a child just three years old, a boy, suffering from epilepsy, and the oldest a woman of 93, afflicted with chronic rheumatism, especially in the hands, accompanied by a considerable amount of pain. Both these patients were treated as out-patients, and did well.

More diseased conditions than might at first sight be imagined are benefited by local hot-air treatment. My rule at the hospital for some years has been, when a patient suffering from any complaint does not improve after a few weeks' routine drug treatment, to order the hot-air treatment, and I must say that in the majority of cases improvement very quickly shows itself, often to a marked degree.

The cases for which this treatment is especially indicated are all forms of *arthritis*, whether of rheumatic, gouty, neurotic, tuberculous, or traumatic origin, particularly when the process is chronic. I can say with confidence that almost every kind of joint mischief, whether the result of injury or disease, is greatly benefited by local hot-air treatment. Under joint diseases the following would be included, gout (acute, subacute, and chronic), rheumatism (acute, subacute, and chronic), gonorrheal rheumatism, rheumatoid arthritis, scrofulous disease of joints (for example, morbus coxæ), synovitis, bursitis, periostitis, including syphilitic and all forms of adhesions.

With regard to *injuries* (recent and old-standing) synovitis, bursitis, and all degrees of stiffness, adhesions, and various conditions of immobity a few words, are desirable. Many of these cases are greatly improved simply by the local application of heat, but, of course, if severe or old, standing surgical interference by breaking down adhesions greatly increases and accelerates the cure. It is in most cases better to give a course of local treatment before any attempt is made to break down adhesions. Then an anæsthetic may be administered and the adhesions broken down and joints freely moved and placed immediately afterwards in a hot air apparatus. This frequently prevents the subsequent effusion and greatly diminishes the pain; in fact, I have notes of several cases of severe old-standing adhesions treated in this way with little or no pain or even effusion following the operation and with very satisfactory results.

Hysterical joints I have found to be amenable to this treatment:

One case occurred in a woman, aged 23, who when admitted into the hospital had been unable to walk for two years owing to contraction of the left knee joint; she had had some stiffness of this joint for five years. After two months' treatment she left the hospital able to walk.

So again, cases of either local or general *malnutrition*, especially cases of feeble circulation, due to local causes such as injuries to blood vessels or nerves, chilblains, cold extremities, and deformities due to arrested nutrition usually improve, as do most forms of localised œdema.

Most forms of *neuritis*, both gouty and those of a more directly nervous nature (such as peripheral neuritis and traumatic neuritis) do remarkably well; and also sciatica, lumbago, and allied affections, including neuralgia following herpes zoster, are usually cured.

I have had most satisfactory results in a large number of cases of *chorea*. The movements of the limb under treatment rapidly subside while under the influence of the heat, usually returning with less severity shortly afterwards.

One of the worst cases of chorea I have seen occurred in a boy, aged 13, who was carried into the hospital quite unable to stand; the head was thrown back, his tongue was protruding from his mouth, and was almost bitten in half with the movement of his teeth; there were incessant involuntary movements of almost the whole muscular system, and the respiration was greatly embarrassed, especially the act of expiration. He would take several short rapid inspirations, and then with a great effort a long expiratory one; he was almost unable to swallow, great choking being produced on any attempt at deglutition. The pupils were widely dilated, the face pale, and the child was more or less unconscious, with

high fever. The day after admission the condition became worse, and acute rheumatism set in in his knees and ankles. Within a few hours there was both endocarditis and pericarditis. Medicinal treatment seemed to have no effect, and the child appeared to be dying. As a last resource, dry hot-air baths were ordered. After the first the condition rapidly improved, and the patient left the hospital cured about three weeks later.

His temperature when placed in the first bath was 101°. In the bath it went up to 102°, and an hour after it was 100.6°.

Epilepsy appears often much benefited by treatment, in many cases combined with bromide taken internally. Some cases, however, have greatly improved both as to the duration and frequency of the fits with hot-air treatment alone.

Some forms of *paralysis*, especially lead palsy and paralysis due to injuries to the nerve trunks, do well under the treatment.

Cases of old-standing paralysis due to central lesions do not improve to the same extent, but these, especially those associated with coldness of the paralysed limb, are in time benefited, more particularly with respect to the nutrition and warmth of the part.

Ménière's disease was in 3 cases greatly relieved.

Chronic *bronchitis* (especially cases associated with Bright's disease and high tension) was greatly relieved, as were also cases of asthma and diabetes.

I have found the cough greatly relieved in some cases of phthisis, even during the active stage of the disease, and patients have gained weight and expressed themselves as improved.

A good deal might be said of the effect of the dry hot air on the *heart*; in fact, it would appear that what has been written on the Schott or Nauheim treatment might very well be applied to this. As probably the therapeutic effect of the saline effervescent baths is one primarily of gentle stimulation to the cutaneous nerves, so here again the application of dry heat is an excellent stimulus to cutaneous nerves and blood vessels, and many cases of chronic heart disease undoubtedly do very well; indeed, my experience teaches me that cases need rarely, if ever, be refused on account of heart mischief.

Many of the dry forms of *skin disease*, such as psoriasis and dry eczema, do very well, so also in cases of sclerodermia (where the patient has never been known to perspire from the affected regions) the skin becomes accustomed to sweat after persevering with the dry hot air.

Chronic ulcers and local inflammatory conditions, such as boils, are cured, as are cases of erythema nodosum.

It is frequently asked if we should administer the treatment to women during menstruation. The general effect of the heat is to increase the catamenia, and therefore in cases in which this is excessive it would not be desirable. I find that, speaking generally, cases of scanty, and especially of painful, menstruation are benefited by the application of heat to the pelvic regions.

Amenorrhœa, especially in young anæmic girls, is an especial indication for treatment at about the time the period is due.

It has recently been pointed out that many of the chronic backaches and pelvic pains of women are probably due to rheumatic changes in the pelvic and uterine ligaments and appendages. These are greatly relieved, and often cured, as might be expected by this form of treatment.

I must now allude to some cases which were not improved by the treatment.

Well-defined Locomotor Ataxy.—A few cases I have treated did not appear to be altered so far as the lightning pains or the ataxic gait were concerned.

Cases of Paralysis Agitans.—Although there was improvement in the general condition of the patient, and increased strength in the limbs treated, there was no apparent diminution in the movements, either during the process of exposure to heat, or as the result of treatment.

To *writer's cramp* the same remarks apply.

The question of the desirability of treating acute cases of gouty or rheumatic arthritis is a most important one, and I still feel unable to formulate definite opinions upon it. The doubt would seem to be particularly strong while pyrexia, considerable pain, and recent infiltration of the tissues in and around joints are present. The more localised the condition, with these symptoms, the more should I hesitate to predict the result of the first few baths.

The immediate result of the treatment in these cases is sometimes to disseminate the inflammatory process and convert what was at first a local arthritis into a general one, with the consequence that patient and doctor became alarmed and the treatment is stopped. If treatment be persevered with, and often if in the first instance heat was only applied to one limb, then a whole bath is administered when the condition has become general, the disease rapidly subsides; but the possibility of such an exacerbation of symptoms must be borne in mind from the commencement.

A similar result is commonly met with in acute gout with great tumefaction and excruciating pain in one joint. If the heat process be applied to this joint it will soon relieve the symptoms, swelling will subside, and pain disappear. Probably, however, the same condition (even sometimes more acute) will appear within a few hours or during the next day in the corresponding part of the opposite limb. This of course frequently happens in cases of acute gout when treated by drugs, but the likelihood of its occurrence after the heat bath must not be overlooked.

I now propose to mention some facts in connection with the addition of luminous rays to non-luminous radiant heat.

At the present time I am especially interested in experiments with an attempt to determine which of the light rays have the most penetrating therapeutic effect.

It is known, for instance, that the violet end of the spectrum contains the rays which produce sunburn (Bowles). By the simple means of intervening pieces of coloured glass in the light rays it is possible to cut off whatever rays are desired and to only permit rays of one or more colour to be thrown on the part under treatment. Thus with a red glass screen all the violet which are the irritating burning rays are shut off and a very comfortable soothing red heat is produced. At the same time the temperature is but very slightly affected.

Very little at present is known about the effect of the various light rays on the animal organism, but a great many experiments on this subject have been made on plants, and the results in this connection are certainly worth noting.

The hæmoglobin of the animal cell has been compared to, and has many functional similarities with, the chlorophyll of the vegetable cell.

The necessity of the human body for light and air is of universal recognition. People become anæmic when deprived of sunlight; and so also the entire life of a plant depends upon the action of the light on the cells which contain chlorophyll.

The following facts may be of interest in connection with this subject:

A.—*General.*

1. *Action of Rays of Different Refrangibility.*—The rays of different refrangibility which together constitute sunlight, and appear as variously coloured bands in the spectrum, vary in their physiological action on the processes of plant life.

Chemical changes, so far as they are in the main dependent on light, are produced chiefly or solely by rays of medium or low refrangibility (namely the red, orange, yellow, or green). This is the case for instance with the production of the green colour of chlorophyll, the decomposition of carbon dioxide, and the formation of chlorophyll, starch, or sugar.

On the other hand, the rays of high refrangibility (the blue or violet as well as the invisible ultra-violet rays) are the principal or the only ones which produce mechanical changes, so far as these are dependent on light. It is these rays which influence the rapidity of growth, alter the movements of the protoplasm, compel swarm spores to adopt a definite direction their motion, and change the tension of the tissues of the mobile organs of many leaves, hence causing movements.

2. *Action of Light of Different Intensities.*—That the action of light on plants varies with its intensity, as does temperature with its elevation, admits of no doubt, and is obvious in all physiological observations.

3. *Penetration of the Rays of Light into the Plant.*—The rays of greatest refrangibility are in general almost entirely absorbed by the superficial layers of tissue, while the red light penetrates most deeply.

B.—*Special.*—(1) *Chemical Action of Light on Plants.*

(*a*) *Formation of Chlorophyll.*—All the visible parts of the solar spectrum have the power of turning the etiolated chlorophyll granules green, but the yellow rays and those nearest

them on each side are the most powerful, and this is also the case with the exhalation of oxygen from cells containing chlorophyll.

(*b*) *The Decomposition of Carbon Dioxide.*—The influence of light upon the evolution of oxygen is greater the more carbonic acid is contained in the air; only those rays which are visible have the power of decomposing carbonic dioxide, and those which appear brightest to the eye (the yellow rays) are alone as efficacious in this process as all the others put together.

(*c*) *The Formation of Starch in Chlorophyll Granules.*—The formation of starch is a function of chlorophyll granules exposed to light, its absorption a function of chlorophyll granules not exposed to light. The formation of starch in chlorophyll granules depends on conditions which favour assimilation; and the principal feature of the process, the evolution of oxygen, proceeds vigorously in light consisting of red, orange, yellow, and to a certain extent of green rays; while the more strongly refrangible half of the spectrum, consisting of green, blue, violet, and ultra-violet rays, has only a very slight effect.

(2) *Mechanical Action of Light on Plants.*

(*d*) Without discussing the question, it may be briefly said that the influence of light on the movements of protoplasm varies according to the nature of the motion.

(*e*) *Cell Division and Growth.*—Light retards growth; but it is only the rays of high refrangibility, the blue, violet, and ultra-violet, which act in this way.

(*f*) *Action of Light on the Tension of the Tissue of the Organs of Leaves endowed with Motion.*—It is only the more refrangible rays that produce a paratonic effect, while the red rays are inert.

These few remarks on the actions of the various light rays upon plant life would seem to open up a wide field for experiment and observation with regard to the treatment of diseases by different light rays in addition to heat rays. It is probable that as we learn more of the pathology of those conditions we are accustomed to treat we shall be able to decide beforehand what particular coloured rays would be most serviceable to the treatment of any given disease. Apart from some general principle if we desire a treatment which shall not tend to produce burning of the skin, but one which will penetrate into the tissues, we shall use the red rays, and *vice versâ*. As a matter of experience, I have found the heat produced by red rays far more soothing and less irritating in its effect than using the whole of the rays of the visible spectrum together.

With regard to the general effect of the luminous rays there is no doubt that the addition of luminous rays to ordinary non-luminous radiant heat produces an increased diaphoresis. Patients who do not sweat with non-luminous heat very quickly do so when some light rays are added, and this is often noticeable even at a lower temperature than had been previously tried.

Note.—The article published in the British Medical Journal of September 30th, by Dr. Valdemar Bie, of Copenhagen, entitled Remarks on Finsen's Phototherapy, illustrates the practicability of the suggestions contained in the latter part of this paper. He illustrates the curing of superficial diseases, such as lupus, with violet rays in contrast to the treatment of deep-seated diseases with red rays as described in my paper.—W. K. S.

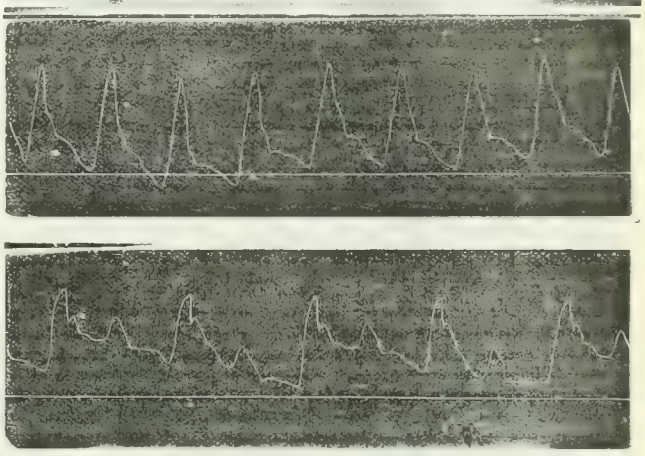
CASES TREATED WITH ERYTHROL TETRANITRATE.

By Hugh Walsham, M.A., M.D.Cantab., M.R.C.P.Lond.
Assistant Physician to the City of London Hospital for Diseases of the Chest.

The following short notes of some cases treated with erythrol tetranitrate with their pulse tracings may be of interest. From my experience I am sure that in erythrol tetranitrate we possess a vasodilator of great efficiency, and one that should be more generally known. I am glad to see the drug is included in the list of vasodilators in the last edition of that excellent work on *Materia Medica* by Dr. Hale White. In only two patients out of about a dozen treated with this drug have I found any unpleasant effect produced.

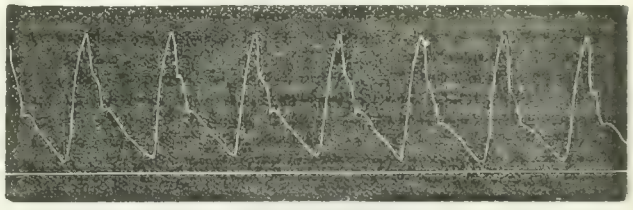
Cases Treated with Erythrol Tetranitrate.

Case I.—W. B., aged 29, a dock labourer, was admitted on November 24th, 1898, into the City of London Hospital for Diseases of the Chest, under the care of Dr. Eustace Smith. The patient was in the hospital nine years ago under Dr. Ormerod for heart disease. He never remembers having any rheumatic affection until about six months ago, when he had pain in the left shoulder and elbow. He has never had chorea or scarlet fever. He has been able to do his work as a dock labourer until three months ago, when his breath began to get short on exertion. His family history is good. Heart: apex beat is in the sixth intercostal space 5 inches from the mid-sternal line. The impulse is very powerful, with a regular irregularity consisting of an alternating single and double impulse. At times the heart becomes quite regular, and then there is heard a double murmur both at apex and base. Diagnosis: mitral and aortic regurgitation. The patient complains of severe pain in the cardiac region. Lungs normal, no œdema. The pulse is 80, collapsing. The treatment consisted in the administration of arsenic and iron, and 1 gr. tabloids of erythrol tetranitrate for the cardiac pain. The accompanying pulse tracings were taken before and after the administration of the erythrol tetranitrate. The cardiac pain was completely removed. The patient was discharged on January 5th much improved. I am indebted for the notes of the case to Dr. Melland, late Resident Medical Officer to the hospital, who at my request, and with Dr. Eustace Smith's sanction, prescribed the erythrol tetranitrate. On December 28th, 1898, he was still in hospital.

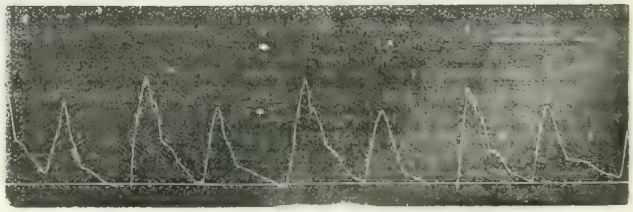


Taken before administration of erythrol tetranitrate.

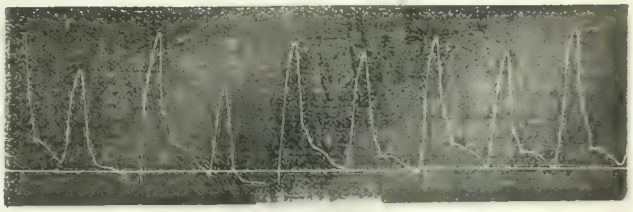
1-Grain Tabloid of Erythrol Tetranitrate at 2.30 P.M., on November 30th, 1898.



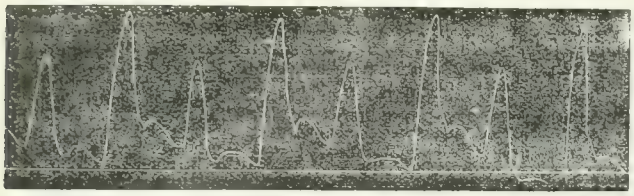
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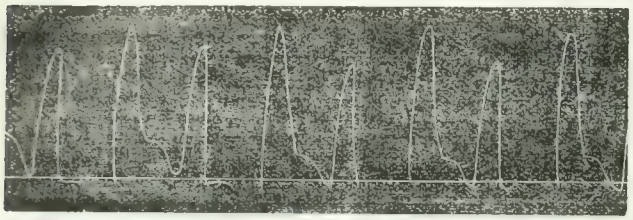
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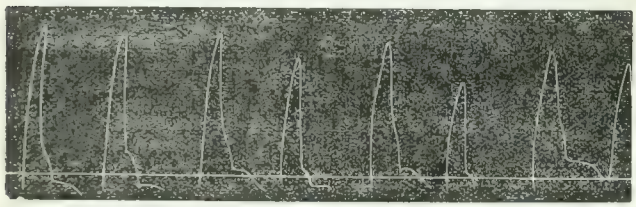
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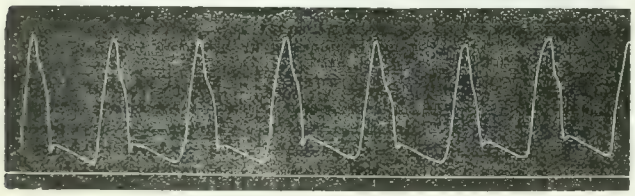
2½ hours after.



4 hours after.

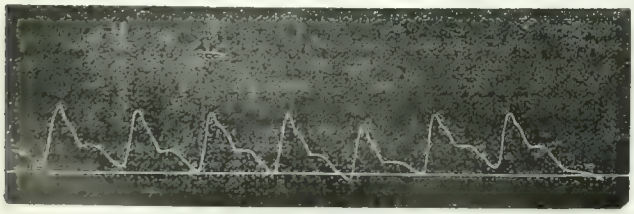


6 hours after.



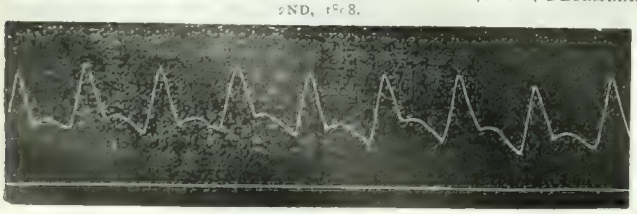
9 hours after.

CASE II.—C. C., aged 26, machinist, was admitted to the City of London Hospital for Diseases of the Chest on November 22nd, 1898, under the care of Dr. Eustace Smith. The patient had rheumatic fever fourteen years ago, and again in August, 1898. The breath has been short for many years, and is gradually getting worse. She has not much cough. She expectorated a little blood two years ago. Her feet swell—more since August last. The heart's apex beat is in the left nipple line in the fifth intercostal space. There are presystolic and systolic murmurs at the apex; aortic, systolic, and diastolic at base. There is double friction sound over the sternum. The patient complains of a good deal of pain over the cardiac region. The treatment consisted of nitro hydrochloric acid and nux vomica, and half-grain tabloids of erythrol tetranitrate. The pain in the heart region was relieved by the drug. The patient was discharged on January 5th, 1899, much improved. There was no headache or unpleasant symptom produced by the drug.

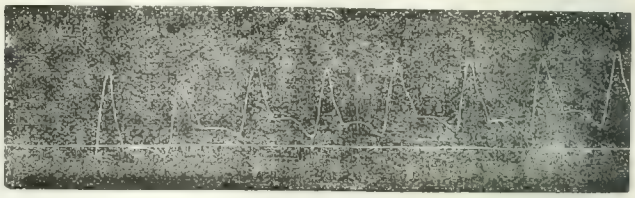


Before tabloid of erythrol tetranitrate.

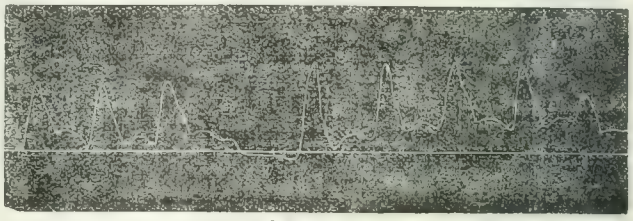
½-GRAIN TABLOID OF ERYTHROL TETRANITRATE AT 1.40 P.M., DECEMBER 2ND, 1898.



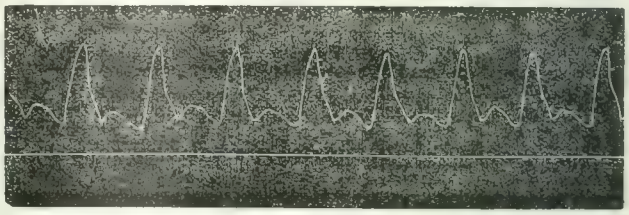
½ hour after.



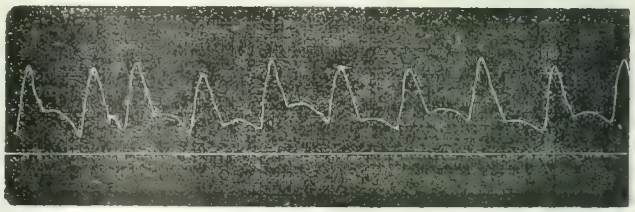
1 hour after.



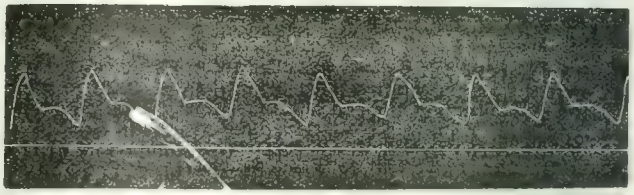
1½ hour after.



2½ hours after.

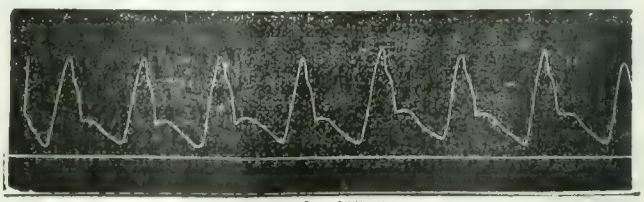


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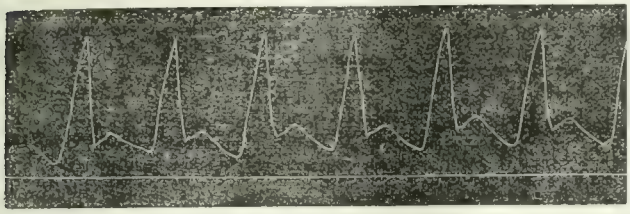
6 hours after.

CASE III.—J. F., aged 63, seaman, was admitted urgent under Dr. Harrington Sainsbury on July 20th, 1898. The patient complains of shortness of breath for the last two and a half years. He has not noticed any increase in the quantity of urine, and is not obliged to get up in the night to pass water. He has been a sailor all his life until fifteen or sixteen years ago, though for some years past he has not done any regular work. The patient has much dyspnœa, obliging him to sit up in bed all night. There is marked retraction of the lower intercostal spaces with inspiration pulse 100. Heart: Impulse is not to be felt; sounds very weak, but apparently normal. There is much œdema of lower extremities. Lungs: Rhonchi heard everywhere in front and behind. Expiration prolonged, crepitations at bases. Urine: 1028, acid, much albumen. Diagnosis: Chronic bronchitis, dilated heart, albuminuria. The treatment consisted in the administration of diuretin in 5-gr. doses. Digitalis and citrate of caffeine and grain tabloids of erythrol tetranitrate twice daily. Under the administration of the erythrol the lungs cleared up a good deal and the œdema diminished, but never quite disappeared. Early in October there was a return of the bronchitis and the patient died on the 8th. No necropsy was allowed.

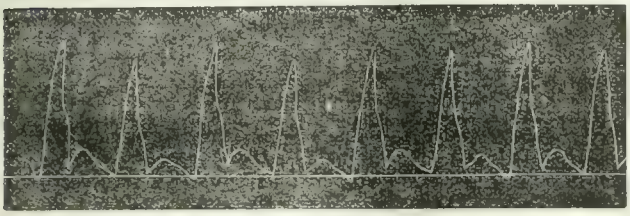


Before the tabloid.

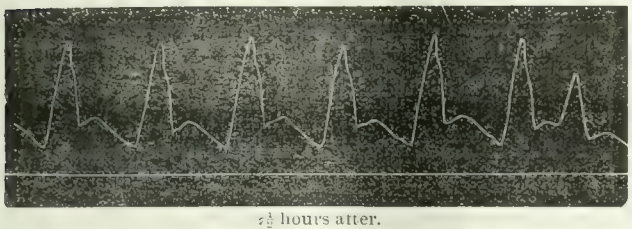
Effect of 1-Grain Tabloid of Erythrol Tetranitrate, August 1st, 1898.



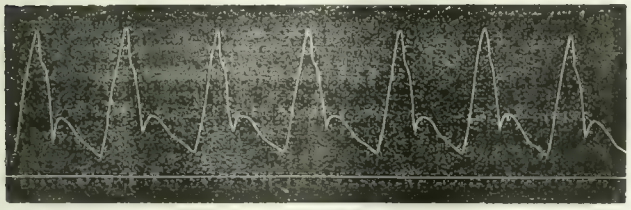
1 hour after.



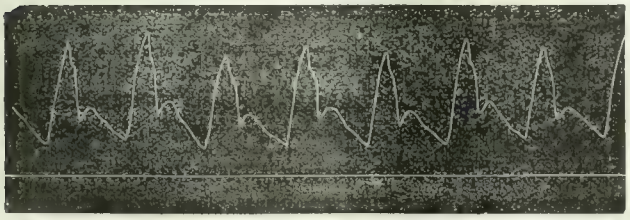
2 hours after.



2½ hours after.



5½ hours after.



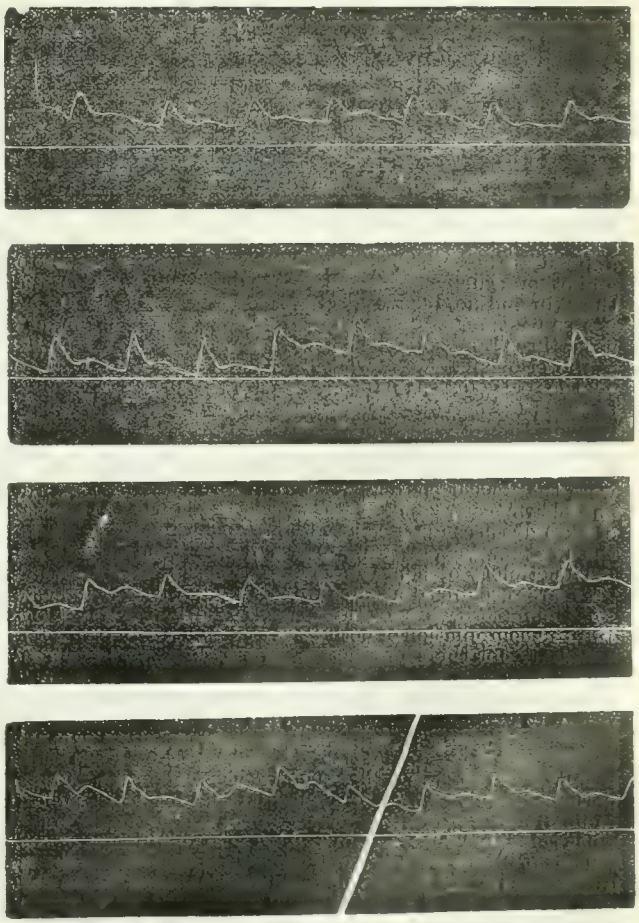
7½ hours after.

I have during the past year used erythrol tetranitrate in my out-patient room with, I think, considerable success. I have given it in 5 cases of aortic regurgitation accompanied with cardiac pain, with considerable relief to the pain in 3 of the cases. In the other 2 nitrite of amyl appeared to do more good, the erythrol producing headache. One of the latter patients, however, who is still under treatment asked to have the erythrol tabloids again, as the effects produced lasted longer than when he was under the administration of the amyl nitrite. I have also tried the drug in 3 cases of chronic interstitial nephritis with benefit in 2. The third, a woman who had uræmic eclampsia in her last confinement, and who now suffers from attacks of dyspnœa which I take to be of uræmic origin, could not be persuaded to continue the drug, although the attacks of dyspnœa were certainly relieved thereby. I have not had an opportunity of trying erythrol tetranitrate in a pure uncomplicated case of angina pectoris, a disease which is no doubt of rare occurrence in patients of the hospital class. The drug appears to have been very successful in the following case of Raynaud's disease:

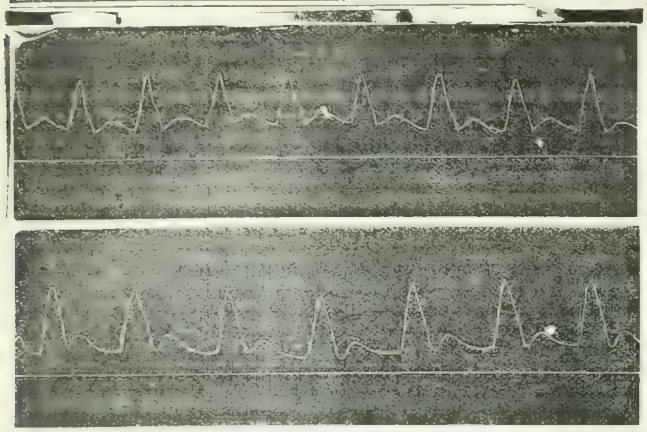
Case iv.—W. M., aged 18, shop assistant, came to the out-patient room of the City of London Hospital for Diseases of the Chest, on December 28th, 1898, complaining of "dead hands and feet." The patient gave the following history: He has always had cold hands and feet since ten years of age. Fourteen days before coming to the hospital the hands and feet became much worse, and the coldness extended above the wrists and ankles. The father of the patient also suffers from the same disease. Present condition: Somewhat anæmic lad. Both hands and feet are white, cold, numb, and partially anæsthetic. The dead white colour, coldness and numbness extends to about two inches above the wrists and ankles. The patient says this condition lasts for several hours, improving somewhat with warmth, but is as bad as ever again on exposure to cold or mental excitement. The ears are cold and livid looking. The disease never has extended beyond the first stage of local syncope. During the last year the patient has had four attacks of headache, rigors with severe pain in limbs, and at these times the fingers and toes have become dead and cold. He also noticed his urine being of a red colour after the attack. Chest normal. Urine; acid, 1015, contained a trace of albumen. Spectroscopic examination of urine *nil*.

Examination of the Blood.—Hæmoglobin, 70 per cent.; red corpuscles, 73.2 per cent.—that is, 3,660,000 cm.; no increase in white blood corpuscles; no change in the red corpuscles indicating any destructive process; fundus oculi normal.

The patient was ordered erythrol tetranitrate gr.j *bis die*, and to return to the hospital in three days. On his next visit there was a decided improvement; the drug had not produced any unpleasant symptoms. The hands and feet were warmer than at the first visit. The erythrol tetranitrate was ordered to be taken three times a day, the dose remaining the same. The patient was ordered to come again in three days' time. His condition was much improved. The hands and feet were now quite warm and of the natural colour. The patient still complains of a feeling of numbness in the two middle fingers of each hand. The erythrol was continued in the same dose, and the patient ordered citrate of iron and ammonia with liq. arsenicalis miv three times a day. He is now well, the erythrol being discontinued on February 1st, 1899. The patient comes to the hospital every fourteen days to report. The accompanying pulse tracings were taken before and after the administration of the erythrol tetranitrate



Before erythrol tetranitrate.



After erythrol tetranitrate. 1 grain *bis die*.

This patient now reports himself once a month, and the improvement up to the present time is maintained.

A DISCUSSION ON THE CONSTITUTIONAL TREATMENT OF SKIN DISEASES.

I.—Robert B. Wild, M.D., M.Sc., M.R.C.P.,

Honorary Physician to the Manchester and Salford Hospital for Skin Diseases; Honorary Medical Superintendent of the Cancer Hospital; Assistant Lecturer on Materia Medica and Therapeutics in the Owens College.

Diseases of the skin afford opportunity for the employment of more therapeutic measures than those of any other organ, hence it is not surprising that much diversity of opinion has arisen as to the relative value of different remedies and various methods of treatment.

The difficulty of estimating each of these at its true value is increased by the fact that many cases of cutaneous disease recover without any treatment whatever, a fact which has not always been sufficiently recognised.

The methods of treatment may be divided into two great classes, local and constitutional, but the division is not a sharp one, since some remedies, such as mercury, locally applied are absorbed and produce constitutional symptoms, and others, such as sulphur, taken internally are excreted by the skin and produce local effects.

As a basis for the scientific treatment of any form of disease, three kinds of knowledge are requisite: (1) A knowledge of the etiological factors causing the disease: (2) a knowledge of the pathological processes taking place in the affected tissues; (3) a knowledge of the manner in which the various remedies act.

In the case of diseases of the skin our knowledge in each of these departments is still unsatisfactory, though the good work that has been done in recent years both in pathology and pharmacology has done something to place the treatment of skin diseases upon a less empirical foundation. Probably the next few years will witness still greater advances.

The etiology of some few skin diseases is well known, and they are recognised as due to local or constitutional causes. But the majority are by no means so simple in their origin, and the combination of both local and constitutional factors is necessary for their production. At present we have not sufficient data in many cases to assess each of these factors at its proper relative value. This is more especially the case with regard to the constitutional factor, for of late years the investigation of the local causes of disease—especially the parasitic causes—has advanced so rapidly and yielded such brilliant results that attention has been concentrated on this factor perhaps unduly; and it has followed that local treatment, the indications for which are better known, has naturally obtained what some may also consider an undue prominence.

The brilliant results obtained in many cases by well-directed local treatment have undoubtedly led some dermatologists to regard constitutional treatment as of comparatively little value, and sometimes, perhaps, to mistake the relief of local lesions for the cure of the disease. Everyone knows how often it occurs in cases of eczema or psoriasis, and even in syphilis, that complete removal of lesions results from local treatment alone, but when treatment is suspended relapse after relapse occurs, to the annoyance of the patient and the disappointment of the doctor.

In these cases a cure can only be obtained by proper treatment of that constitutional factor which is responsible for the continuance of the disease, the concomitant local factors in its etiology, which probably determine the position and character of the individual lesions in each outbreak are alone amenable to local treatment. On the other hand, it must be noted that constitutional treatment alone rarely gives the patient relief from his immediate sufferings and a combination of constitutional and local treatment affords the best result both for present needs and future prospects.

For therapeutical purposes all forms of disease of the skin may be roughly divided into five groups:

1. The cases where the cutaneous lesion is symptomatic of a general disease such as one of the exanthemata or the pigmentation of Addison's disease. In these cases the treatment is that of the general disease to which the affection of the skin is completely subordinate, and does not require consideration here.

2. Those diseases of the skin resulting from absorption of toxic substances, usually from the alimentary canal, but occasionally from other parts of the body. The toxic substances may be due to the ingestion of toxic foods, to the ingestion of drugs, or may, perhaps, be formed within the body by abnormal processes of digestion. The cutaneous lesions may be either the direct result of the circulation of these toxic substances through the skin and their excretion by it, or be produced through the agency of the nervous system. The treatment of these cases consists in the prevention of further absorption and the elimination of the toxic agents from the body by purgatives and diuretics. Where the functions of the alimentary canal are deranged, or the nervous system atonic, these must be restored to a healthy state by ordinary methods, such as the gastric tonics, the intestinal antiseptics, purgatives (especially salines and cholagogues), the various nerve tonics, and the drugs acting upon the vasomotor centre and nerves.

3. Purely local diseases of the skin such as many new formations, some parasitic diseases, and lesions resulting from direct local irritation. In these cases constitutional treatment has no place, unless the patient presents some other departure from a healthy state, which is treated without reference to the cutaneous disease.

4. Many parasitic diseases of the skin which require not only the presence of the invading organism but also a suitable soil for its growth. Various constitutional conditions undoubtedly modify the tissues and fluids of the body in such a manner as as to render them a more favourable soil for the growth of parasitic organisms. For example, the presence of sugar in the blood appears to render the skin a more favourable culture-ground for the growth of pus cocci; an attack of measles often prepares the way for tuberculous infection, and the skin of phthisical patients appears to be more susceptible to invasion by microsporon furfur. Influenza also is frequently followed by a greater susceptibility to such parasites as pus cocci, and ringworm sometimes spreads with unusual rapidity amongst convalescents from scarlet fever.

In these cases of parasitic disease constitutional treatment, by modifying the soil in such a manner as to render it less suitable for the growth of the parasite, promotes the recovery of the patient and renders the local treatment more efficacious. This is particularly evident in cases of tuberculosis of the skin, chronic ringworm, and obstinate suppurative diseases, such as furunculosis and suppurative folliculitis of the face.

5. Includes many of the most important diseases of the skin, such as eczema, psoriasis, and other diseases in which our knowledge of the etiology is imperfect; but we know that both constitutional and local factors are combined in their production, the relative importance of which varies widely in different cases. It would be equally as untrue to say that all cases of this type require constitutional treatment as to assert that all are curable by local treatment alone. Each case requires to be studied by itself, and the success of the prac-

titioner will be largely proportional to his skill in estimating rightly the importance of each factor in the etiology, and modifying his treatment accordingly. The error chiefly to be avoided is that of treating the name of the disease, and because it is called psoriasis, for example, giving arsenic as a matter of course.

It is in this class of cases that the drugs known as "alteratives" are of most value; and as our knowledge of the causes of diseases and of the mode of action of our remedies increases, we may hope for a more scientific therapeutics in place of one which is still largely empirical.

To pass on to the consideration of the individual remedies which are chiefly used in the constitutional treatment of the last two classes of skin diseases. Time will only permit me to mention those of which I have had most experience, and to state the impressions I have formed from the treatment of nearly 10,000 patients who have come under my care at the Manchester Skin Hospital and the Cancer Hospital during the last seven years. I do not propose to discuss the value of remedies used rather for the general condition of the patient than for their special action upon the skin. The indications for iron, cod-liver oil, bitter tonics with acids or alkalies, and purgatives, are the same, whether there is a skin eruption or not; and they are frequently of the greatest value indirectly in the treatment of skin diseases.

Of the drugs used for their action upon the skin *arsenic* still remains one of the most powerful weapons at our disposal, and like most weapons may produce injury as well as good. It is chiefly in chronic inflammatory diseases of the skin that its use is indicated, but some acute conditions, such as pemphigus, respond quickly to its action. In acute eczema, in the early stages of a spreading psoriasis, and in the more acute forms of lichen ruber planus even small doses of arsenic frequently increase the intensity of the inflammation or hasten the spread of the eruption.

I do not propose to enter upon any of the theories regarding the mode of action of arsenic. It is notoriously an uncertain drug, and from a large experience of its use I have been led to the conclusion that the patient is a more important factor than the particular form of disease from which he suffers. Some patients respond to arsenic at once and the skin rapidly clears up, no matter whether the disease is psoriasis, chronic eczema, lichen planus, or pemphigus; other patients apparently suffering from identical forms of disease may be saturated with the drug to the extent of producing physiological symptoms without any effect upon the disease, which may even spread under the treatment; while a third class of patients cannot take even small doses of arsenic in any form.

As a rule young patients respond to arsenic better than older ones, and it is my impression that of adults thin, dark-complexioned patients respond better than stout, fair-skinned people. In malignant disease of the skin, epithelioma, and rodent ulcer, and in sarcoma, I have used arsenic largely both hypodermically and by the mouth, but have unfortunately not seen any beneficial effects upon the disease. In none of these cases have I observed any increased pigmentation, keratosis, herpes zoster, or neuritis, though some of them took the drug for months. In some cases of lupus vulgaris, lupus erythematosus, and chronic acne a course of arsenic is often followed by improvement.

Tartrate of antimony in doses of 5 to 15 minims of the wine is distinctly useful in acute and extensive inflammatory conditions of the skin. Added to a mixture containing one drachm of magnesium sulphate in each dose and given every three or four hours, a rapid and marked improvement is often produced.

Sulphur and the sulphide of calcium are of great value in many cases of seborrhœic dermatitis and psoriasis, especially the subacute forms. In acne and acne rosacea, furunculosis and chronic suppurative folliculitis either sulphur in the form of lozenges or the calcium sulphide have a controlling influence upon the suppurative process. Calcium sulphide to be of use must be fresh and given in sufficient doses, gr. j three times a day and not one-tenth or one-quarter of a grain as often given. In order to produce improvement the dose of sulphur or calcium sulphide ought to be sufficient to cause signs of H_2S in the alimentary canal and in the breath, and to many patients this is worse than the disease.

The value of sulphur in many common forms of skin disease is well known to the laity, and I believe the professional disrepute into which it has fallen is partly due to the fact that it is so often used by the patient before professional advice is sought that the cases seen by the doctor are selected cases, as it were, in which sulphur has failed to cure.

Ichthyol internally has been a very disappointing remedy in my hands. I may perhaps have been unfortunate in my choice of cases, but I cannot record any marked benefit from it in the diseases such as acne rosacea, urticaria and lupus erythematosus, for which it has been so largely extolled.

Mercury, apart from its use in syphilis, is certainly of value as an alterative. With the addition of antimony in the form of "Plummer's pill," I have found considerable benefit in cases of continually relapsing subacute eczema, some of which are the most obstinate and annoying cases we have to treat. In the form of grey powder or calomel, in small doses, it is useful in the facial eczema of children. Donovan's solution is particularly valuable in some cases of psoriasis and lichen planus, as well as in the late secondary and early tertiary syphilides. It is possible that the Donovan's solution owes its efficacy to the larger dose of mercury, for it must be noted that while the ordinary dose of the red iodide of mercury is $\frac{1}{30}$ to $\frac{1}{15}$ gr., ♏ xx of Donovan's solution, by no means an unusually large dose, contain nearly $\frac{1}{8}$ gr. of the same salt.

Iodide of potassium is another drug of value in other conditions besides syphilis. In scrofulous ulceration, and sometimes in lupus vulgaris, there is marked improvement. In those cases of psoriasis where arsenic cannot be tolerated it is occasionally of use. Sometimes potassium iodide will relieve a general pruritus, but more often it fails. It is, however, worthy of trial in those senile cases which so often baffle all therapeutic measures.

Salicylate of sodium and *salicin* are frequently of use, especially in the skin diseases supposed to be connected with a rheumatic diathesis, such as erythema nodosum, erythema multiforme, and peliosis rheumatica. The more acute varieties of psoriasis, especially the acute exacerbations which sometimes occur during the course of the chronic disease, are generally relieved by the salicylates.

Phosphorus, whatever its value as a nerve tonic, has proved of little use in such cases as chronic eczema, psoriasis, lichen planus, or malignant disease. I have chiefly administered it as a fresh, carefully made, ethereal tincture, according to the *B.P.C.* formula, and sooner or later eructations of phosphuretted hydrogen were produced. When given in pills this evidence of the unoxidised condition of the phosphorus is often wanting, and I am inclined to consider the majority of the phosphorus pills sold to be inert.

Creosote and guaiacol internally are frequently of value in cases of extensive lupus vulgaris, scrofuloderma, and even in lupus erythematosus. The dose may be gradually increased until the patient takes 20 to 30 minims per day.

Quinine, apart from its use as a general tonic, is also useful in chronic urticaria, lichen planus, dermatitis herpetiformis, some of the erythemata, and certain forms of eczema. Occasionally it relieves general pruritus.

Calcium chloride, though valuable as a hæmostatic, has in cases of urticaria, purpura, and hæmophilia proved a disappointing remedy, and in my practice has not fulfilled the expectations raised by Professor Wright's valuable researches.

Ergot, on the whole, is of less value than we should expect from its power of contracting blood vessels; it is sometimes useful in the type of rosacea frequently found at the menopause.

Atropine and picrotoxin are both of value to check excessive sweating. In several cases a single hypodermic injection of one hundredth of a grain of picrotoxin has diminished the perspiration for five or six days. From its action on the peripheral vessels atropine and the drugs containing it are sometimes useful in the various vasoneuroses.

Thyroid gland, apart from myxœdema and cretinism, has proved an uncertain remedy. Some cases of lupus and a few cases of psoriasis have improved greatly while taking the drug, others showed no success. In xeroderma and ichthyosis I have obtained no benefit. In cases of malignant disease I have administered it largely without any encouraging results, but have found that the patients lost weight more rapidly

under the drug, and trod the downhill path with greater rapidity. In some of these cases stopping the drug was followed by a gain in weight, even though the malignant growth was steadily progressing. I have therefore become extremely cautious in ordering thyroid preparations in cases of malignant growths lest harm should result in a disease of which progressive emaciation is so constant a feature.

Suprarenal gland, thymus gland, spleen, ovarian, and testicular extracts have been tried in a few cases without any beneficial effects, but as yet in an insufficient number of cases to warrant any conclusions being formed.

Apart from drugs there are several therapeutic measures of a general nature which afford valuable means of treatment in severe skin diseases, and demand a short notice.

Rest in bed is one of the most useful means of treatment at our disposal in cases of severe inflammatory disease; alone it is often sufficient to determine a marked improvement in patients who have resisted all therapeutic measures while pursuing their wonted occupations. As an adjunct to other treatment it frequently materially shortens the duration of the disease.

Diet has less influence than rest; in some cases, however, it is of great value, but I have found that, apart from any dietetic idiosyncrasy in the patient, underfeeding or overfeeding produce more useful results in suitable cases than any qualitative changes alone. Of the qualitative changes in the diet the diminution or increase of the proteid constituents of food is the change of most value. Of course any indigestion requires the ordinary dietetic treatment, and the relief of this condition will frequently produce a beneficial result.

Finally, as a last resort, a change of climate and external environment will sometimes effect a cure in obstinate cases of psoriasis, eczema, and urticaria, which have for years resisted the best directed therapeutic measures.

II.—NORMAN WALKER, M.D.,

Assistant Physician for Dermatology, Edinburgh Royal Infirmary.

DR. NORMAN WALKER agreed with nearly everything Dr. Wild had said. If there was any general disease it should certainly be treated, if not it was perfect nonsense to assume that some such was present and to put the patient on treatment. He expected to hear the old constitutional party airing their old views, but was glad to note that it was now apparently moribund.

III.—E. D. MAPOTHER, M.D., F.R.C.S.I.,

London.

DR. MAPOTHER said he had in cases of lichen never seen any drug but arsenic curative. It should be given as Fowler's solution for six to ten weeks, and he liked the appearance of the conjunctival irritation as a physiological effect. It seemed to act as atonic, and neurasthenia, if not causative, was at least concurrent in most cases with that rash. Amongst adults he had regarded eczema as a gouty manifestation, and had therefore relied on piperazin and lithia, with most copious drinking of soft water, as the most suitable treatment internally and also externally for local trouble. Anti-gout regimen was also advisable. For twenty-five years he had urged that for the treatment of psoriasis careful mercurialisation was the only remedy. He had not had 5 per cent. failures and very few recurrences. For hospital cases he used inunction and for private patients small frequent doses of blue pill. At meetings of the Association and elsewhere he had often advocated his views, but the dread of mercurialisation seemed to outweigh the relief from a distressing and recurrent disease.

THE TREATMENT OF DIGITALIS POISONING: AN EXPERIMENTAL INVESTIGATION.

BY

J. J. TAYLOR, M.A., M.D., and C. R. MARSHALL, M.A., M.D.,

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[From the Cambridge Pharmacological Laboratory.]

THE present investigation arose from a research made by one of us on the antagonistic influence of digitalis and the members of the nitrite group. In this investigation it was found that nitroglycerine and sodium nitrite were able to counteract the influence of digitalis upon the circulation, but their effect was more transient than under normal conditions. The conclusion arrived at was that the antagonism of the two groups of substances was physiological rather than chemical, that is, they did not unite to form a physiologically inactive molecule, but each tried to produce its peculiar effect upon the cardiac and vascular tissues. As nitroglycerine caused the more easily induced paralysis the resultant of the combined action was always more or less vasodilatation.

Notwithstanding that the only true antidotes are those which chemically neutralise a poison, it seemed worth while, considering the power which nitroglycerine possesses of counteracting the circulatory effect of digitalis, to investigate its curative power in animals poisoned by this drug. Hitherto no useful antidote for acute digitalis poisoning has been found. Certain substances, it is true, have been suggested (serpentaria virginica by Adelmann, etc.), but none of these are of practical value. Furthermore, saponin, delphinine, muscarine, aconitine, which are known to remove the systolic standstill of the frog's heart produced by digitalis, owing to their markedly poisonous properties, could not be used in treatment. Dobie certainly has described a case of digitalis poisoning which recovered after treatment with aconite, but the value of the treatment in this case it is difficult to estimate. The only treatment of value, and this limited, according to experiment, is intravenous injection of salt solution, and we know of no case in which this has been tried. Nitroglycerine, besides possessing a greater antagonistic influence to digitalis than any other known drug, is also relatively non-toxic—that is to say, a lethal dose is probably many thousand times greater than a physiological one, so that in two ways it possesses an advantage over other drugs. The employment of this substance in severe cases of digitalis poisoning has already been suggested by Husemann, but he regards it as only of value during the period of vasoconstriction; in the absence of this condition he believes it will be of little use.

In practice, two forms of digitalis poisoning are met with—acute and chronic. The first is seen but seldom. It has arisen from the eating of digitalis leaves as a salad, but more frequently it arises from too large and repeated doses of digitalis given medicinally. The symptoms are mainly alimentary, circulatory, and nervous. The onset is comparatively slow. In slight cases there are headache, dizziness, nausea, and vomiting, accompanied by epigastric pain and often colic and diarrhœa, muscular weakness, slowing of the pulse, precordial oppression, and dyspnœa. In severer cases the vomiting is protracted, there are severe colic and diarrhœa, marked weakness, muscular tremors, even collapse, at first diminution, later irregularity and increased frequency and feebleness of the pulse, dyspnœa, precordial pain, anuria, amblyopia, sleeplessness, often delirium and convulsions followed by coma and death; or there may be complete consciousness, and death may occur from syncope, sometimes during apparent recovery. If recovery occur it is prolonged; severe vomiting, slow pulse, and weakness usually existing for days.

In the second or chronic form, the symptoms result from the accumulation of the drug owing to the too frequent administration of small doses. It is the form most frequently seen in practice. The symptoms are essentially similar to those of the more severe form, but in part they depend upon the pre-existing disease. The more common are slowing of the pulse or increase in frequency and irregularity, dyspnœa, diminution of urinary excretion, nausea, vomiting, sleeplessness, muscular weakness, and amblyopia.

EXPERIMENTAL OBSERVATIONS.

As a preliminary to the experimental work the influence of the substances as seen by direct observation of the heart was noted.

A rabbit was chloroformed and the heart was laid bare by longitudinal division of the sternum. The heart beats (P.) and respirations (R.) were then counted. 12.15.—P., 180; R., 90. 12.25—P., 204; R., 90. 12.26 to 12.27½.—2 mg. digitalin (French) injected into jugular vein. 12.30.—P., 168; R., 84. 12.39.—P., 120; R., 132; some dyspnœa. 12.39½ to 12.40.—1 mg. nitroglycerine injected into vein. 12.42½.—P., 144, irregular; R., 84. 12.52.—P., 174; R., 84. 12.54 to 12.54½.—1 mg. nitroglycerine injected intravenously; immediate change in heart beat; increased dilatation; P., uncountable; R., 120. 12.59.—P., 144. 1.4½.—P., 120; R., 120. Subsequently digitalin (both French and German) was injected until the heart almost stopped. Nitroglycerine was again injected and produced a slight effect.

Similar experiments made on pithed frogs, with sodium nitrite in place of nitroglycerine, gave similar results. Thus the following (the numbers representing heart beats per minute) was obtained: 30; 34; 32; 30, 0.5 mg. digitalin (German) injected into dorsal lymph sac; 30; 48; 40 ... 22, 5 mg. sodium nitrite injected into dorsal lymph sac; 22; 27; 28; 28 ... 9, 5 mg. sodium nitrite injected; 14; 12; 10.

These experiments corroborate previous experiments on blood pressure and show that after large doses of digitalis nitroglycerine or sodium nitrite is able in the intact vascular system to increase the number of the heart beats. But in the case of digitalis poisoning, the symptoms are not merely the result of an action upon the circulatory system; other tissues, nervous, muscular, and glandular, are also affected—to what extent has not yet been determined. In herbivorous animals, after toxic doses, we found the red blood corpuscles crenated, the organs congested and their cells undergoing pathological changes. These, although not yet examined minutely, were such as to suggest that a vasodilator would have little beneficial influence in the treatment of acute digitalis poisoning. And this we have found to be the case.

Before investigating the antagonistic action of nitroglycerine to digitalis, it was necessary to determine the lethal dose of the digitalis compound it was intended to use.

Koppe, who experimented with substances isolated by Schmiedeberg, found that digitoxin in doses of 5 mg. killed rabbits in 24 hours; 6 mg. killed in 3 hours; 4 mg. did not kill. In cats he found 14 mg. lethal; in dogs (6 to 7 kg.) 8 to 10 mg.; 15 mg. killed in 5 hours. Digitalin was less toxic: 25 mg. did not kill a dog of 7 kg.; 40 mg. produced death in a rabbit in 2 hours. In our experiments somewhat larger doses were required to kill; but the substances used were ordinary commercial ones, and guinea-pigs and rats were mainly employed. Rats were very refractory: 3.2 mg. (0.8 c.cm., 1 in 250 solution) of digitoxin subcutaneously produced very little effect; 10 mg. of French digitalin caused death in 24 hours; 100 mg. German digitalin killed in 2 days. In guinea-pigs, 2 mg. (2 c.cm., 1 in 1,000 solution) subcutaneously caused death in 19 days (guinea-pig, 600 g.); 4 mg. (1 c.cm., 1 in 250 solution) killed in 3 hours (guinea-pig, 460 g.); 1 mg. (1 c.cm., 1 in 1,000) produced local irritation, but no other immediate effect; a month later the animal had lost 20 grams (640 grams to 620 grams), and the pulse was 50 beats per minute quicker. A similar dose (1 mg.) of French digitalin also produced loss of weight (740 grams to 670 grams), but no distinct influence on the frequency of the pulse; 8 mg. subcutaneously caused death in 46 minutes (guinea-pig 500 grams); 3.5 mg. was found to be about the lethal dose for a guinea-pig of 500 grams. If death did not occur recovery was rapid, and what was most interesting, the administration did not seem to produce an increased susceptibility to future dosage. In other words, in guinea-pigs the administration of large doses of digitalin gave rise to no cumulative effects. Thus in one experiment a guinea-pig (546 grams) was given 2 mg., 3 m.g., and 3.5 mg digitalin subcutaneously on three successive days, and a week later 3.5 mg. digitalin was given daily for eight days, with a break of one day, without any increase in the intensity of the symptoms; indeed, on some occasions these seemed to be distinctly diminished. The next day the dose was increased to 3.8 mg. and was repeated the following day; then it was increased to 4 mg. and repeated. The animal finally succumbed when the dose was increased to 4.2 mg.

The symptoms were the same whatever preparation was used. There was some irritation at the point of injection, soon followed by extreme muscular weakness, sometimes twitchings and even convulsions, dyspnœa, and, with an impending fatal termination, a fall in the number of heart beats. In cases which recovered there was also muscular weakness and dyspnœa, but no distinct change in the frequency of the pulse. In still milder cases diminution in weight after a time was the only symptom observed.

The digitalis preparation used in the experiments was the French digitalin. This is purer than the digitalin of the German Pharmacopœia, and it is more soluble in weak alcohol than in digitoxin. At first some feeding experiments were made, digitalin and erythrol tetranitrate (as being the mildest and longest acting of this class of drug) being given in small doses mixed with the food.

After a few days the animal began to eat less, and finally died. The control, which was given digitalin alone, quickly recovered. As it was found impossible to produce symptoms of chronic digitalis poisoning in guinea-pigs within any reasonable time, the effect of nitroglycerine on acute digitalin poisoning was investigated. (Nitroglycerine was chosen because it is more active, and relatively much less toxic than sodium nitrite.) No beneficial influence was seen; on the contrary, nitroglycerine occasionally increased the muscular weakness, although in some cases it tended for a short time to diminish the dyspnœa. This was seen when nearly fatal doses of digitalin were given. Nitroglycerine, however, did not seem to hasten death, nor could it be said to postpone it. In one case where two guinea-pigs, each weighing 462 grams, were given 8 mg. digitalin subcutaneously, one died in thirty-six minutes; the other, which had also received 5 mg. nitroglycerine, died in thirty minutes.

In another instance in which two similar guinea-pigs each received 4 mg. digitalin and one of them 5 mg. nitroglycerine; the latter lived 117 minutes, the other (control) died in 93 minutes. When non-fatal doses of digitalin were given the simultaneous or subsequent administration of nitroglycerine did not seem to modify the symptoms to any appreciable extent. Having regard to these results only two experiments were made on a higher animal. A cat (1,230 grams) was given 2.46 mg. digitalin subcutaneously. There was a considerable amount of sickness, some muscular weakness and tremors, and a fall in the number of the heart beats. Three days later, to the same cat, a slightly larger dose was given with 0.02 gram nitroglycerine. The same symptoms resulted, but the cat was not so ill as before. A week later it was not taking food well; soon it became very weak, and in consequence was chloroformed. Other experiments were made to determine the influence of caffeine, morphine, and chloral hydrate on animals poisoned with digitalis, but these gave no better results than those obtained with nitro-glycerine.

The treatment of digitalis poisoning must therefore be symptomatic. We know of no antidote, in any true sense of the word, to this drug. Nor do we think we shall ever know of one. Digitalis enters very slowly into the tissue metabolism; it produces distinct structural changes, and it is slowly eliminated. It therefore possesses the most unfortunate characters for the action of an antidote. Apparently all that we can do is to withdraw the drug if it is being given medicinally, to clear the alimentary canal of any digitalis it may contain, to increase the rapidity of elimination by diluents, to allay sickness, reduce arterial tension when high, procure sleep if necessary, and treat other symptoms as they arise. In other words, the condition must be treated as if it were, which it is, an ill-understood disease. For the reduction of arterial tension nitroglycerine, or an ally, is the best remedy; but with a low blood pressure, which is not infrequently present in digitalis poisoning, these substances are useless. In such cases small doses of alcohol, insufficient to produce vasodilatation, would probably prove of greater service.

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ON THE MECHANICAL TREATMENT OF CERTAIN DISEASES OF THE CHEST, WITH SPECIAL REFERENCE TO EMPHYSEMA.

By E. Hulse Willock, M.R.C.S., L.R.C.P.,
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During the last few years changes, more or less radical, have taken place in the treatment of chest diseases. The open-air treatment of phthisis and the Schott method of dealing with certain cases of heart disease have, in a measure, thrust drugs from the unique position that they held. They have emphasised the fact that something else other than pharmaceutical products has an important remedial action upon pathological conditions of the respiratory and circulatory systems. Of all the several systems upon whose uninterrupted functional activity the continuance of life depends, these two are those over which we have most mechanical control, and it is by mechanical means that we can obtain a considerable and important therapeutical effect in certain unhealthy states of the heart and lungs. The cases in which benefit may be expected from this method of treatment are:

1. Emphysema with or without bronchitis.
2. Bronchial asthma, either associated with emphysema, or
3. Spasmodic bronchial asthma when there is no evident emphysema.
4. Dilatation of the right heart, the result of impeded flow in the lung tissue.
5. A limited number of cases of phthisis.
6. Badly-developed chest independent of a diseased state of the lungs.

In all these cases respiratory exercises pure and simple are of considerable use, and a very great deal of good can be obtained from them alone: but their potential value is limited by the physical condition of the patient and it was this drawback which led me to apply an apparatus which aims at overcoming this limitation, and supplies the power that is lacking. Another advantage is that it gives the patient something tangible to deal with, and he is more likely to persevere with his exercises than if it were left to his own unaided efforts.

The apparatus consists of an adjustable jacket. From either side attached in the posterior axillary line are cords which cross to the opposite sides in front, and are here gathered up in a ring. There is a framework consisting of a flat seat, two upright posts, and a crossbar. To the upright on each side are attached two pulleys. A cord runs over these, at one end of which is a stirrup-shaped handle, at the other a hook. The

patient has the jacket adjusted, and sits down, or the seat may be placed under him in bed. The hook on the right side catches up the ring holding the left hand cords, and *vice versâ*. The handles are then grasped, a deep inspiration is taken, at the same time the hands are raised above the head, and the diaphragm relaxed; the jacket then expands.

When inspiration has reached its maximum the arms are lowered and the handles forcibly drawn down. This causes the jacket to contract and compress the chest. The diaphragm is at the same time drawn up, and a deep expiratory effort made. When the arms are raised inspiration reaches its utmost capacity. All the inspiratory and extra-inspiratory muscles, together with the diaphragm, are brought into play. When lowered the chest is compressed, and all the expiratory and extra-expiratory muscles exert their full influence. The process is simple, but the advantages gained are many.

It must be observed that the action of the apparatus is intended to supplement, and not supplant, the efforts of the patient. The object is to regenerate a condition that has lapsed from the normal, and by continued exercise to obtain what may be termed almost an exaggerated physiological action.

Let me take now the effect produced in a case of a man with emphysema associated with chronic bronchitis and some dilatation of the heart. If we look at him we find that he has a chest differing a good deal from the normal. It is enlarged, the ribs are raised, and in addition they are frequently more or less fixed in a state of inspiration. He has cough, expectoration, and dyspnœa. The alveoli are distended, probably with the septa in many cases broken down, aëration is insufficient, and the circulation is impeded, and the nutrition of the lung impoverished on account of the stretching and atrophy of the bronchial vessels. In what way can he benefit from mechanical treatment?

The chief feature of emphysema is the loss or deterioration of elastic tissue, and to a certain extent of muscular fibres. By mechanical treatment strain upon the impoverished tissue remaining is diminished, and its vitality prolonged. In addition the effect of continued movements upon elastic and muscular tissues, provided undue effort is avoided, is to develop them. By increased functional activity and increased nutrition we obtain a physiological hypertrophy, so that by these movements we may gain:

(1) By compression, compensation for loss of tissue;
(2) Prolonged vitality of remaining tissue; and also
(3) Development.

In consequence of what one may term "stagnation" in the alveoli aëration is deficient. By compression this stagnation is overcome, aëration approaches nearer to the normal, and, in consequence, not only is blood of a higher nutritive value sent to nourish the lung tissue in common with the rest of the body, but when the alveolar strain is diminished, the vessels which go to nourish the lung tissue itself have an increased circulation in them. As a result of this freer interchange of gases and acceleration of circulation the heart is apparently relieved. Another important point is the primary increase of expectoration due to the ejaculatory action of the lung. With this we have a further gain, for by clearing of the mucous membrane a sometimes great obstacle to respiration is removed.

The application of mechanical treatment to phthisis is limited to a comparatively small number of cases. It does not seem advisable to use it when excavation has commenced to any appreciable extent, or where the patient has had an attack of hæmoptysis of any severity. Benefit, however, may be gained in two ways. It must be remembered that in pulmonary phthisis tubercle bacilli usually select for lodgment a part of the lung where there is least movement. "Select" perhaps is not quite the right term to use, because in all probability they invade every nook and corner of the lung, but are expelled from the most active parts, and remain undisturbed in the quietest spots. As Payne lucidly puts it, "The process appears to be that the bacilli settle down in some portion of the lung where there is little movement, and the expulsive action of the ciliated epithelium of the bronchi is less energetic." The tubercle is first formed within the alveolus. The bacilli, when expelled into the air passages, are probably drawn back by inspiration into other parts of the lung, and set up fresh centres of infection.

Mechanical treatment aims at exercising every part of the lung tissue—even the apices, for when the arms are thrown up the clavicles are raised, and the lungs expand to their fullest capacity. The converse holds good when expiration is made. The expulsive action of the lung itself can be exerted to the utmost, and by compression from without laterally and below by the diaphragm every effort that could possible be made can be put into action. By this means lodgment of bacilli in the first case can be guarded against, and the extension of fresh foci be prevented.

Each tuberculous focus has blood vessels surrounding it, but they do not penetrate, and except in acute miliary tuberculosis, the bacilli do not appear to be conveyed by the blood stream. Now, if we can increase the circulation of a part up to the physiological limit we can get increased nutrition. By the proper amount of exercise we can do this in the lung tissue. With increased nutrition increased resistance is offered, and by this resistance it is only reasonable to hope that each focus may be either cast off or absorbed, and that coalescence or excavation may be prevented.

There is a third group of cases which will benefit by mechanical treatment, namely, those people with ill-developed chests, where the respiratory movements are feeble, where we can find no evidence of a gross or even a slight lesion, but still in our own minds we feel certain that they run a very great chance of developing some pulmonary trouble sooner or later.

The results in all the cases in which mechanical treatment has been used have, so far, been satisfactory. I have not carried the trials out over a very long period, for I only commenced them in the early part of the year, at a time when there was a great deal of ordinary work to be got through, and I experimented on as many cases as possible, instead of keeping on with one case for a long period.

The majority of cases were of emphysema and bronchitis, and I think that I may safely say that each one of them got relief, some of them considerable relief; one man used to beg to be allowed to use the apparatus more often than I had prescribed, on account of the ease that he obtained from its use.

When asked how they felt after being in it, their reply invariably was "My breathing is much easier, and I feel more comfortable." There was only one case where good results were not obtained—that was a woman, who was thin; the jacket did not fit her; she only tried it two or three times, and the treatment was not persevered with.

The experience was that at first the cough was increased immediately after use, and so was the expectoration. It came up in larger quantities than usual, and with much greater facility. After a few days the cough and expectoration diminished considerably when compared with that before treatment, and respiration was carried on much more freely. It has only been tried in one case of phthisis, and that was not a very promising one at the onset.

The man, 33 years of age, had been invalided from the army with double apical phthisis. On his discharge he went to a convalescent home at Eastbourne. He remained there for three months without gaining any advantage, and during this time his temperature rose daily to 103°, and sometimes more. Both apices were infiltrated, but there was no excavation or hæmoptysis. He had wasting and occasional night sweats. Resonance at the apices was diminished, without absolute dulness—on the right side to one finger's breadth below the clavicle, on the left to two fingers' breadth. Moist sounds extended on the right side to the third rib, on the left side to the fourth rib. There was a good deal of expectoration.

He commenced using the apparatus for five minutes twice a day, always in front of an open window, and increased the time gradually to about 20 minutes three times a day. At the end of a period of some five weeks, during which time practically no drugs were used, his condition had improved materially.

The cough had diminished in frequency, the expectoration was much less in quantity, and came up readily. He put on flesh, and was able to walk about three miles, whereas before it had been an effort to go half a mile. The temperature was reduced, and had come down from a daily maximum of 103° and 104° to one of 100°, and often less. In addition there was a marked alteration in the physical signs. Resonance was normal on the right side, and all the crepitations had disappeared. The left side still remained active, but on percussion there was less loss of resonance and the crepitations could not be heard below a point between the first and second ribs.

Unfortunately the sequel was disappointing. The man contracted influenza. The temperature went suddenly bounding up again, the cough became very troublesome, and the physical signs increased rapidly. From this point he went steadily down hill, and finally died.

But for the influenza attack I feel confident that he would have stood a fair chance of making further improvement,

possibly of recovery, in spite of his unfavourable condition in the first instance.

DEMONSTRATIONS.

Dr. Herschell (London) demonstrated (1) an apparatus for washing out the stomach, consisting of a three-way tap, the limbs of which were connected respectively with a douche can, a waste pipe, and with the stomach tube. The tap was conveniently attached to the back of a chair by a clamp carrying a jointed arm. By a simple rotation of the handle of the tap (*a*) water was introduced into the stomach, (*b*) siphonic action was established, (*c*) the stomach was emptied. (2) A simple method of administering Turck's intragastric needle bath by substituting for the Woolf's bottles used by him a single couple of Higginson's syringes joined by a Y tube, the longer limb of which was connected by a short rubber tube and a suitable mouth, with a stomach tube bearing a perforated bulb. (3) A new combined galvanic and faradic battery for use in general practice. The special points in its construction to which attention was drawn were the following: (1) All switches and other movable keys, the use of which have to be learnt by the operator, have been dispensed with. There is instead simply a metal plate provided with numbered holes into which pegs have to be inserted. A printed key fixed adjacent to it gives full directions for starting or stopping the currents or producing any combination desired. (2) A new current reverser has been designed by which the + and the — signs at the terminals automatically change when the current is altered. (3) The faradic coil is a sledge constructed in the best manner, and provided with a rheotome which cannot fail at a critical moment and does not require the accurate adjustment of several springs to make it work. There is also a rack and pinion by which the current strength can be increased without jerks or shocks in a very gradual manner. This coil is actuated by a chloride of silver cell of the latest construction, which has a continuous life of 100 hours. (4) The galvanometer is of the most modern type, and does not depend for its usefulness upon the sharpness of a needle-point or the integrity of a silk fibre. It is always ready and in working order. (5) With the ordinary dial collector, however carefully employed, it is impossible to use up the cells equally. In our battery the cells are connected up in series and the current graduated by a Willm's current controller. (6) In the ordinary type of battery the cells cannot be got at for recharging without disconnecting many wires. The replacing these usually requires a skilled workman and occupies a long time. In the improved battery, by the simple removal of three nuts with a special spanner, the lower part of the instrument in which are the cells comes right off, and they can be inspected at will. The replacement of the aforesaid three nuts absolutely restores all the connections and puts the battery again in working order.

SECTION OF PATHOLOGY.

J. F. Payne, M.D., President.

PRESIDENTIAL ADDRESS ON THE SPECIFIC CAUSES OF DISEASE.

By J. F. Payne, M.D., F.R.C.P.,
Physician and Lecturer on Medicine, St. Thomas's Hospital.

In opening this Section it will not be necessary for me to say anything in explanation of our position, or of our aims in this department of the work of the Association. It has now been for some years the custom to form a separate Section for Pathology, and I think the arrangement has been justified by its results.

Nor is it necessary to raise again the old question, What is pathology? I can only say that all the subjects included in our programme are pathological subjects. The few words for which I ask your attention were suggested by, though they do not form part of, one of these topics.

Our first topic for discussion is one which illustrates very strikingly the change which is passing over our science as regards the causation of disease. Without anticipating anything which Dr. Washbourn will tell us in introducing the discussion on infective endocarditis, I may observe that this is one of the diseases now recognised as due to the action of bacteria. Whether the attack occur in a previously healthy person, or whether it complicate a chronic condition already existing, it is clear that there is a new factor of disease entering the body, which, besides producing some general changes, injures a certain part. When this happens it is customary to call the injury inflammation, and to give it some name referring to the part affected, and usually ending in "itis." Hence this is called endocarditis. But with this all is not said. It implies merely an injured condition. But since injuries cannot happen by themselves, or, in other words, there is no such thing as spontaneous inflammation, this is a diagnosis which asks a question; and the question is, What caused the injury? Unless this question is answered the disease cannot be said to be known.

We must admit that the true or total cause of any phenomenon can never be fully known. It includes a vast and practically undefinable series of factors. What we mean is the proximate cause or that which we consider the most important. Even in this limited sense the causes of disease are very numerous. They may be internal, such as wear and tear, chronic degeneration, accumulation of small and unperceived changes which ultimately produce a definite and perhaps sudden effect; chronic intoxications, mutual reaction of organs, and so forth. Or they may be external, the result of physical forces; or, finally, they may be what we call specific, injuries which meet their victim, as it were, casually, like a bullet striking him in battle or a snake darting from the grass.

It is these specific causes, especially in their local action on organs of the body which I want to consider. We hear a great deal about the specific causes of general diseases; let us not forget that they may give rise also to diseases which appear to be purely local. An increasing number of maladies are now being referred to specific causes. Every year brings fresh instances. Some of these were formerly regarded as dyscrasic or humoral diseases, dependent upon some change of quantity or quality in the blood or humours; others, perhaps a larger number, were formerly called simple inflammations. To distinguish them from general diseases, it seemed necessary at one time to form a class of specific inflammations, but this name is hardly necessary.

Erysipelas is one of these. Eminent men have maintained, some, perhaps, still maintain, that this is "a simple inflammation" of the skin produced by the causes to which so-called simple inflammations are usually assigned—cold, heat, external injury and so forth. Not many years ago, some one, criticising the *Nomenclature of Diseases* issued by the College of Physicians, asked why erysipelas should have a distinct name? Why not call it simple dermatitis? Yet no one now doubts that erysipelas is due to a distinct microbe—the streptococcus, though there may be considerable doubt as to the relations of this microbe to other septic microbes, and of the disease to septic inflammation generally.

Pneumonia appears in our latest textbooks of medicine as a specific infective disease, though not long ago it was regarded as the type of simple inflammation of the lung.

Meningitis has ceased to be a simple expression. We have, apart from tubercle, septic, diplococcal, pneumococcal, and perhaps other forms, but none that we can call simple. One begins to wonder what, after all, simple inflammation of a part means. Can we still hold that every organ has its inflammation, to be denoted by a name ending in "itis"?

It is true that in some membranes the results of injury present a more uniform type. Peritonitis, whether set up by the bacillus coli, or by a streptococcus or by a staphylococcus, or by a combination of microbes or produced apparently by mechanical injury, seems like one and the same disease. But we know that, when injury sets up peritonitis, it is through allowing the peritoneum to be invaded by organisms, from a wound external or internal, or by an alteration in the intestinal wall which makes it permeable by microbes from neighbouring organs. Really these constitute several kinds of specific inflammations, not one simple peritonitis. The assumption of a simple, "idiopathic," or, as it was once called, "rheumatic" peritonitis, becomes more difficult every day.

Most of us must agree with Professor Osler that we have never seen a case needing to be thus defined.

Another class of diseases now transferred to the specific class comprises some formerly ascribed to functional nervous disturbance. Tetanus is an instance. Although in a sense it is a nervous disturbance, the state of the nervous system alone cannot explain it. We find the cause of this nervous disturbance in a general poisoning which originates in a specific inoculation. And this explanation accounts for the facts of local distribution, occasional communication of the disease, and others which the nervous hypothesis could not account for. The pathology of hydrophobia also has passed through a similar transformation.

Whooping-cough, again, is a disease which has given occasion for many speculations on the nature of nervous spasm, and the formation of nervous habits; so it has been treated of as a nervous disease, also as a "simple catarrh," which Oppolzer insisted on calling it. I discussed the position of this malady in the *Nomenclature of Diseases* with two eminent physicians, each of whom separately thought there could be no question about where it should be classified. But it turned out on inquiry that one thought it belonged beyond dispute to the diseases of the nervous system; the other had no doubt it was a catarrh. But we now see that neither the nervous nor the catarrhal hypothesis can explain the broad facts of contagion and periodical occurrence. There must be a specific cause, even if the identification of the microbe is not yet complete.

So, too, we have had in the case of ague theories of permanent disturbance of the heat-producing mechanism, acquired liability to chill, persistent effects of climatic extremes of temperature, and so on—all of which, ingenious as they are, vanish away, or ought to do so, with the discovery of the specific cause.

I have not referred to the most striking instance of all—that of the discovery of the specific cause of tubercle—because it is in the minds of all. But nothing could better illustrate the insufficiency of mere variations in more or less of general conditions—such as cold, moisture, overcrowding, etc.—to account for a specific disease; though if the specific cause be once present, these are important contributory causes.

Hitherto I have spoken as if this transference of diseases to the specific class were dependent merely on the discovery of bacteria as specific pathogenetic agents; but this is not altogether true. At various times theories of specific origin have been proposed for diseases classified in textbooks as simple; but they have not taken root. Mr. Poland, in Holmes's *System of Surgery*, argued that tetanus was a specific blood poisoning, but the suggestion met with little favour. With regard to pneumonia, Skoda, of Vienna, taught forty years ago or more that it was a specific general disease. At a later period, when he was still teaching at Vienna, I myself remember his pointing to a patient with the general symptoms of pneumonia, but with no physical signs in his lungs, and arguing that this proved there was a general infection of the blood before the local changes occurred. He had, of course, other reasons for regarding pneumonia as an *allgemeine Krankheit*, such as its epidemic and local prevalence and circumstances pointing to contagion, which I need not dwell on as they are now generally appreciated.

It is an interesting historical fact that Sydenham held views with regard to pneumonia not very different from those of the moderns. He maintained that pleurisy and pneumonia (not then clearly distinguished) were fevers, classing them with small-pox, scarlatina, ague, and the like. He could not accept the view that pneumonia began with a local deposit in the part affected, as was generally held. He thought of pneumonia as a malady comparable to the fevers, originating in "a proper and specific inflammation of the blood," in consequence of which the blood deposited morbid matters on the pleura or lung. Allowing for difference of language and for ignorance of morbid anatomy and auscultation, it seems to me Sydenham's view was essentially the same as Skoda's.

Sydenham, I may say, strongly believed in the specific nature of fevers. He says they are species just as plants are species, and not produced by "any combination of either principles or evident qualities." These specific theories for some reason do not seem to have met with much favour. For centuries after the conception of specific disease had been propounded physicians preferred to attribute most maladies either to faulty combinations of the humours; or, if more enlightened, to such causes as strain, overwork, errors of diet, external surroundings, and so forth. It seems as if a higher standard of evidence were required in the case of a specific theory than in the case of explanations such as I have mentioned. The propounder of a specific theory is condemned if he cannot prove his point. The adherent of vague and general theories of causation is content with a vague and general show of probability. Even now, many accepted explanations of disease lack exact proof quite as much as the explanations unaccepted. I would instance the case of rickets, the accepted theories of which seem to me to be as inadequate to explain the disease as were the old theories of consumption to explain tubercle.

These specific explanations of diseases have greatly modified general pathology. Another change which has modified our conception of disease is the increasing frequency with which local affections are shown to be part of a general disease. This has long been accepted in the case of the specific fevers, and of such general maladies as syphilis and rheumatism. We see that it is not enough to give the local lesion a name. If we want to define the disease, we must name also the general condition of which it is a part. Endocarditis, for instance, by itself tells us but little, but the terms rheumatic or infective endocarditis tells us a great deal, namely, that the local condition is part of a general disease, rheumatism, or general septic infection. In parts so little exposed to external injury as the valves of the heart, it can hardly be said that there is such a thing as simple inflammation.

So with diseases of the joints. Putting aside direct mechanical injury, nearly all synovitis or arthritis seems to result from some general condition of the blood, which may come from a general infection, or from disease of some other part. We have rheumatic, gouty, gonorrhœal, syphilitic, pyæmic, tuberculous, and perhaps other specific forms of synovitis or arthritis. Also chronic rheumatoid arthritis, of which the explanation is still obscure. But beside these, can we distinguish simple synovitis or arthritis?

This kind of explanation may be carried too far, as is often done in the case of so-called gouty affections, but it applies to a large number of local inflammations. Without attempting an enumeration, I will only ask any pathologist what he understands by simple nephritis, hepatitis, enteritis, or cerebritis. It will be found, I think, that these names, if used at all, apply only to inflammations produced by direct traumatism. And even these differ widely among themselves. Each injurious agent has its own way of working, so that instead of one inflammation there are many inflammations.

The practical conclusion would be that we should, as far as possible, give up the use of the word simple inflammation of an organ, or, what is the same thing, the use of the words ending in "itis," unless qualified by some word indicating their cause. We should endeavour to discriminate the different kinds of injury produced by each different kind of trauma, mechanical, chemical, or infective, and give to each its appropriate name. This is the moral which is suggested by a study of the different kinds of endocarditis.

If time permitted I should like to carry this principle a little further, and ask if these conclusions do not modify our conception of inflammation not only as a condition of particular organs, but as a general pathological process. The subject is, however, so large, that I can do no more than make a few brief suggestions on this subject.

It has been thought by some pathologists and strongly urged by Professor Thoma that the word "inflammation" should be discarded as a pathological term. Thoma supports this proposition on the following grounds:

1. There is no prospect of an agreement as to the definition of inflammation, but such an agreement is indispensable if the doctrine of inflammation is to continue to furnish one of the foundations of pathology.

2. The conception of inflammation is in many cases so vague and general, that it becomes almost identical with the definition of local disease, and thus has no material significance.

3. The doctrine of inflammation introduces into the conception of numerous diseases factors (*Momente*) which are not derived directly from observation, but are only the outcome of repeated inferences from analogy.

No one can dispute the correctness of Thoma's first proposition. We still find the widest divergence of opinion as to what constitutes inflammation, so that one begins to ask whether what appears to different observers in so many different forms has really any definite objective existence.

We all know the traditional definition of inflammation. Repeated attempts have been made to amend it, but I think we may fairly say that these attempts have not as yet been conspicuously successful. The method has generally been to produce some kind of artificial injury in living tissues and to study the results; it being accepted that such injuries produce the phenomena traditionally known as inflammation. Hence the majority of investigators have drawn the conclusion that inflammation should be defined as the results of injury in a living organ, ending in the more or less complete neutralisation of the injury, and repair. These investigations, extending over something like half a century, have led to the most important and brilliant results in the extension of our knowledge of the minute processes following injury. But would the results have been very different if the word inflammation had never been used?

The factors of the process may be defined as the immediate consequences of injury or damage; the machinery of defence by which the noxious agent, macroscopic or microscopic, is neutralised or eliminated; and repair, which needs no definition. Opinions differ very widely as to whether all these factors, or only a part of them, and if only a part which part, should be called inflammation. Some exclude damage, some exclude actual repair, from their definition. Some regard the end of the process—namely, repair—as the dominant factor; others repudiate entirely the conception of the end or purpose of the process as "teleological." Nearly all, however, appear to be governed by the preconceived idea that there must be something called inflammation which is different from damage, defence, or repair taken separately. But is not this belief in the objective existence of something called inflammation a mere preconceived idea or tradition? What forbids us to regard this name as a mere conception, unless it be taken merely in the old traditional sense as expressing certain obvious characters, namely, heat, redness, swelling, etc.?

It is to me, I confess, difficult to admit that there is anything in the whole process which is not covered by the three terms, damage, defence, and repair, or that the additional word "inflammation" is really required. If not required, such an additional conception, so difficult of definition, must be a source of confusion.

In the life of organised beings injury must necessarily be followed by some defensive action, ending in some sort of repair, if they are to exist at all. This is the law of their being. Damage is, of course, something abnormal, that is pathological. But, the damage once effected, all that follows is normal. The whole defensive and reparative process constitutes an arrangement for preserving the life of the organism. Why should it have a name implying something morbid or a kind of disease? It is possible that some part of the reactive process may be manifested in excess and so be morbid; but it is very difficult for us to judge what is excessive reaction. Generally speaking, what is considered excessive inflammation following injury only means that a new and more subtle form of injury—that is, from micro-organisms—has been superadded to the original gross injury. In regard to this secondary injury probably the reaction called inflammation is not excessive.

On the whole, I entirely agree with Thoma that the word "inflammation" is unnecessary, and, as involving an obscure and undefinable conception, not a definite, objective fact, is a source of confusion. If it be thought desirable to retain the word in the old sense for certain external characters, this might be; but it would then be applicable only to the higher animals and would be unimportant. At all events, the experiment might be made of studying the phenomena of injury, reaction, and repair without the use of the word, and if after that such a term should be found indispensable, let it be reinstated.

In conclusion, I must apologise for the abrupt and dogmatic tone of these suggestions, which from lack of time have to be presented without due support by argument, and I fear without adequate discussion of the opposite side of the question.

A DISCUSSION ON
THE PATHOLOGY OF INFECTIVE ENDOCARDITIS.

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Anatomy of the Endocardium.

The endocardium is a thin layer lining the inner surface of the heart. It consists of white fibrous tissue with many elastic fibres, the latter often arranged as a fenestrated membrane; it is united to the myocardium by loose connective tissue, and the inner surface is covered with a layer of endothelial cells. The valves are reduplications of the endocardium, in which the fibrous tissue is thickened. A prolongation of the muscle fibres of the myocardium passes into the bases of the auriculo-ventricular valves. Blood vessels from the myocardium are present in the loose tissue between the endocardium and myocardium, but they do not penetrate into the endocardium proper. The aortic and pulmonary valves are devoid of blood vessels, but a few pass with the muscle fibres into the bases of the auriculo-ventricular valves.

The endocardium is abundantly supplied with lymphatics, and it is supplied with twigs of nerves from a plexus situated between it and the myocardium. The endocardium is continuous with the inner coat of the blood vessels, which it resembles in structure and in its mode of development from the mesoblast.

In conformity with continuity and similarity of structure and development, the pathology of the endocardium is practically identical with that of the intima of the vessels.

Several points must be borne in mind when discussing the pathology of the endocardium.

First, the endocardium—or at any rate that portion which is usually affected by disease—is devoid of blood vessels; so that the process of inflammation resembles that which occurs in other non-vascular structures. The absence of blood vessels prevents the conveyance of bacteria through these channels to the endocardium of the healthy valves. Blood vessels may, however, be abundant in chronically inflamed valves upon which an acute endocarditis is likely to be engrafted.

Secondly, when the endothelium is injured, clotting of the blood takes place, fibrin is deposited, and thrombosis ensues.

Thirdly, the endothelial cells of the vascular system are phagocytes capable of englobing bacteria which have entered the circulation. The endothelial cells of the vascular walls of fishes are derived from motile cells on the surface of the yolk sac, so that, as Metchnikoff says, it is no wonder that they retain some traces of their ancient power of movement. Many observers have shown that, under certain conditions, the endothelial cells of the capillaries exhibit contractility—for instance, during the new formation of capillaries and during the diapedesis of blood cells.

Direct proof of their phagocytic powers also exists. Werigo showed that anthrax bacilli after injection into the circulation of rabbits at once disappeared from the blood, being englobed by the endothelial cells of the blood vessels; and this has been shown to be true for other bacteria. The endothelial cells of the blood vessels of pigeons infected with swine septicæmia are found to be crammed with bacilli; and similar phagocytic functions have been observed in other infections. We may assume that the endothelial cells of the endocardium possess similar functions, and we must look upon them as forming with the endothelial cells of the vessels a protective agency in the destruction of bacteria. In the exercise of this function the cells may succumb, and thus arises an infective endocarditis, arteritis, or phlebitis, with accompanying thrombosis, according to the part of the vascular system involved.

From such considerations it would appear that we ought to classify these three affections together, in order to obtain a true insight into their pathology. Nevertheless, for the purposes of discussion it is convenient to consider infective endocarditis alone, so that we must come to some kind of definition as to what we mean by the term

Nature of the Infection.

Infective endocarditis, then, is an infection of the endocardium by bacteria, which give rise to necrotic and inflammatory changes. It is these bacteria, the changes they

occasion in the endocardium, and the effects thereby produced which we shall have to discuss to-day.

The changes produced in the endocardium by the action of living bacteria may be brought about by other agencies, and thus an anatomical distinction between infective and other forms of endocarditis is impossible. Rheumatic endocarditis may have a similar anatomical appearance to that of infective endocarditis, but hitherto living bacteria bearing a causal relation to the endocarditis have not been demonstrated. (Bacteria have certainly been found in cases of rheumatic endocarditis, but they do not appear to be causally related. Harbitz recently examined six cases, with negative results.)

It is extremely probable that some forms of endocarditis now classified as simple, will require to be included under the heading of infective endocarditis when better methods of demonstrating bacteria have been discovered. Harbitz, for instance, found many bacteria in the vegetations of cases which, from the appearance of the valves and the presence of simple infarcts, would have been classified as cases of chronic simple endocarditis.

As several distinct species of bacteria are capable of causing infective endocarditis, the condition cannot be considered a pathological entity. Infective endocarditis includes a number of absolutely distinct conditions, and it excludes other conditions which are etiologically connected. A streptococcal endocarditis is as distinct from a pneumococcal endocarditis as erysipelas is from pneumonia. An endocarditis due to the streptococcus pyogenes ought to be classified with the other anatomical lesions caused by this micro-organism. As our knowledge advances, the term "infective endocarditis" must be dropped, and such expressions as "streptococcal infection with endocarditis" substituted, in order to show that the endocarditis is a complication rather than an essential factor in the disease.

In all forms of endocarditis, whether simple or infective, the endocardium covering the valves at the points of maximum contact during closure is the portion almost invariably affected. Thus the ventricular surface of the aortic and pulmonary valves, and the auricular surface of the mitral and tricuspid valves at a short distance from their edges are the usual sites of endocarditis. In infective endocarditis the bacteria may be conveyed to the valves in two ways—either by the blood directly in contact with the endocardium, or by means of the small blood vessels. The absence of vessels precludes the second method of conveyance with previously healthy valves, but with chronically inflamed valves this is possible. Indeed, Cornil and Babes, and others, have described plugging of the vessels with bacteria.

Morbid Anatomy.

According to Welch, the first stage, as a rule, is the invasion of bacteria from the blood in the cardiac cavities directly into the endothelial and subendothelial layers. No doubt the bacteria are taken up by means of the phagocytic power of the endothelial cells. The bacterial invasion causes necrosis of the endothelial and subendothelial cells, and as a consequence a thrombus, consisting at first of blood platelets, and later of fibrin and leucocytes, is deposited upon the surface. The nodules thus produced constitute the so-called vegetations. After a time proliferation of the subendothelial cells occurs, and leucocytes from the adjacent blood vessels invade the necrosed tissues and the thrombus. This cellular infiltration appears earlier, and is better marked on the mitral and tricuspid than on the aortic and pulmonary valves, because of the closer proximity of blood vessels to the former. Ultimately the vegetations may be converted into granulation tissue with the formation of new blood vessels. In some cases the cellular infiltration passes on to the formation of an abscess. Frequently the necrotic process is in excess of repair, and ulceration results. Thus may arise aneurysmal dilatation or perforation of a valve, and the ulceration may spread to and cause rupture of the chordæ tendineæ. The inflammation with formation of vegetations and ulceration, not infrequently spreads from the valve to the mural endocardium or to the intima of the aorta.

I have statistics of 100 fatal cases of infective endocarditis occurring at Guy's Hospital between the years 1887 and 1897, which were prepared by Mr. G. S. Simpson. In these 100 cases there was rupture of the chordæ tendineæ 19 times, perforation of the valve 19 times, endocarditis of the auricular wall 24 times, endocarditis of the ventricular wall 14 times, aortitis 8 times, and in a single instance the wall of the auricle was alone affected.

When recovery ensues, the necrosed tissues and the thrombus become replaced by granulation tissue, which is ultimately converted into fibrous tissue. The latter may undergo calcification, hyaline or fatty degeneration.

Should the bacteria enter the valves through the blood vessels similar changes to the above take place, only they start in the deeper layer, and spread to the surface instead of in the opposite direction. The bacteria, at first limited to the surface or the deeper layers of the valves, soon invade the thrombus, in which they find a suitable medium for growth. Harbitz states that necrosis of the tissues of the valves is more pronounced in staphylococcal than in other infections.

Acute Arterial Thrombosis.

Welch has pointed out that the anatomical changes in infective endocarditis are similar to those of acute venous thrombosis. He quotes a case of thrombosis of the veins complicating leucocythæmia with secondary streptococcal infection. In the intima of the thrombosed vessels there were numerous scattered foci containing streptococci. In these areas there was necrosis of the endothelial and other intimal cells, with proliferation of the surrounding cells and infiltration of polynuclear leucocytes. These foci were capped with blood platelets, fibrin, and leucocytes, the whole presenting an appearance similar to that of endocardial vegetations.

Many cases of acute arterial thrombosis also appear to be due to an infective arteritis, and, as I have already mentioned, in infective endocarditis the intima of the aorta is not infrequently affected.

In addition, these three conditions, namely, infective endocarditis, acute arterial thrombosis, and acute venous thrombosis, are all due to similar infective processes such as pneumonia and septic wounds, so that we must consider their pathology as identical. In each case bacteria which have gained access to the circulation are englobed by the endothelial cells. Whether an endocarditis, an acute arterial thrombosis, or an acute venous thrombosis ensues is a mere accident.

The Valves Infected.

In infective endocarditis the valves on the left side of the heart are more frequently affected than those on the right; but the latter are more frequently affected than in other forms of endocarditis.

The following tables give the frequency of attack of different parts of the heart:

Osler's 200 Cases from Croonian Lecture.

Right Side Alone.	Mitral Alone.	Aortic Alone.	Aortic and Mitral.	Tricuspid.	Pulmonary.
9	77	53	41	19	15

Guy's Series, 100 Cases, 1887-1897.

Right Side Alone.	Mitral Alone.	Aortic Alone.	Aortic and Mitral.	Tricuspid.	Pulmonary.
4	38	16	32	9	4

In the statistics of Guy's Hospital, which agree in the main with Osler's, the right side was affected in 14 out of 100 cases, and was alone affected in 4, equally divided between the pulmonary and the tricuspid valves.

The reason why infective endocarditis almost invariably attacks the part of the valves corresponding to the maximum contact during closure is probably lack of resistance due to strain. The more frequent affection of the left than the right side may be partly explained in the same way, but other factors must be taken into account.

In the first place, valves sclerosed from previous inflamma-

tion are much more liable than healthy valves to be attacked by infective endocarditis, no doubt on account of diminished resistance. Three-quarters of Osler's 209 cases, 61 of Goodhart's 69 cases, and 59 of the Guy's 100 cases were noted as having old valvular disease. As the right side of the heart is very seldom the site of old valvular disease, we can thus account for a considerable proportion of the cases of infective endocarditis of the left side.

Secondly, the mode by which the bacteria are conveyed to the heart must have some influence upon the part affected. Bacteria entering the body through the lungs may be carried either through the pulmonary veins to the left side of the heart, or through the bronchial veins to the right side, but entering through any other portal they would be carried to the right side. Dreschfeld, indeed, states that endocarditis following upon pneumonia more frequently affects the left side than do other forms of endocarditis; and certainly the five cases in the Guy's statistics all affected this side.

Ziegler also states that the right side is more frequently affected in endocarditis following upon wounds of the skin. Thayer and Lazear[1] state that, of 31 cases of gonorrhœal endocarditis, the right side of the heart alone was affected in 8 and both sides in 2. In the Guy's series I find that there are 13 cases where apparently previously healthy valves were affected, and in which from the history it was clear that the bacteria must have been carried first to the right side of the heart. Of these 13 cases, the right side alone was affected in 2, and the right together with the left side in 3, leaving 8 in which the left side alone was affected.

Mode of Entrance of Infection.

The bacteria causing the endocarditis may enter the body in various ways—through the respiratory, digestive, and genito-urinary tracts, or through wounds in the skin. In some cases there is a definite local lesion pointing to the mode of entrance, while in other cases no lesion can be ascertained.

Of the 100 cases at Guy's, in 30 there was clear evidence of the mode of entrance in some preceding lesion. In these 30 cases, the cause of the endocarditis was as follows: Pneumonia, 5; pneumonia and empyema together, 1; empyema alone, 1; phthisis, 3; gonorrhœa, 1; septic trouble of various kinds, 18; including suppurating fibroid of the uterus, 1; sloughing dermoid of the uterus, 1; sloughing retained placenta, 1; amputation of cervix uteri, 1; femoral thrombosis after abortion, 1; urethral stricture, 1; prostatic abscess, 1; meningitis following upon injury, 1; suppurating hip-joint, 1; periostitis, 2; necrosis of rib, 1; necrosis of bone from injury, 1; glossitis, 1; parotitis, 1; cellulitis after injury, 1; and ulcerating malignant growth, 1.

In Osler's series there was a large proportion of pneumonia—as many as 54 out of the 127 in which a definite cause was assignable. It is difficult in many instances to decide what is the cause, and what the effect of the endocarditis. For instance lobar pneumonia occurred in 4 of our cases subsequent to the diagnosis of endocarditis, and meningitis may, as in one of our cases, be a cause, and in other cases an effect of endocarditis.

Secondary Lesions.

The lesions caused by infective endocarditis may be roughly divided into three classes:

1. Lesions due to the mechanical effect of the valvular disease—dropsy, nutmeg liver, etc.

2. Lesions due to toxæmia—cloudy degeneration of the cells of the liver and kidney, enlarged spleen, etc. Acute nephritis—generally hæmorrhagic—may be especially mentioned as of toxic causation, for, as Harbitz has shown, bacteria are not present in the kidneys, at any rate in some of the cases.

3. Lesions due to emboli. If the emboli are free from bacteria they give rise to simple infarcts, which are common in the spleen, kidney, and brain, and may also occur in other parts.

In some instances, according to Harbitz, emboli coming from vegetations crowded with bacteria give rise to simple infarcts. However, in most instances emboli containing bacteria cause suppurative lesions. Thus arise multiple abscesses in the liver, spleen, kidneys, and lungs, meningitis, empyemata, hæmorrhagic patches with central areas of suppuration in the intestines and stomach, etc.

Septic emboli in middle-sized arteries may cause aneurysms by softening of the vessel wall through inflammation; and a similar condition may be brought about by an infective arteritis set up by the bacteria in the blood. In 10 out of the 100 Guy's cases cerebral hæmorrhage was found at the *post-mortem* examination. Capillary hæmorrhages are frequent. In some cases they are due to toxæmia, and in other cases to bacterial emboli.

Osler has drawn attention to the frequent occurrence of meningitis with pneumonia. In 11 of our Guy's series there was meningitis, in 5 of these the meningitis was associated with pneumonia, and in 1 with empyema. In 1 case of meningitis there was suppuration of the eyeball. Many other conditions, such as gangrene of an extremity, parotitis, pericarditis, pleuritic effusion, myocarditis, and broncho-pneumonia may arise.

Bacteriology.

I have already stated that several kinds of bacteria may produce infective endocarditis; and it is probable that almost any pathogenic bacteria may do so. Accurate statistics showing the frequency with which different bacteria produce endocarditis in this country are not forthcoming, inasmuch as complete *post-mortem* examinations do not appear to be systematically conducted.

Harbitz in 43 cases examined found the streptococcus pyogenes 17 times, the staphylococcus aureus 8 times, the pneumococcus 5 times, and other kinds of bacteria 3 times, while in 10 cases the process had healed and no bacteria were present.

Banti in 22 cases examined found the streptococcus pyogenes 7 times, the pneumococcus 8 times, the staphylococcus aureus once, streptococci and staphylococci together 3 times, and no bacteria twice. From isolated cases reported in the journals and from my own experience, I should say that the streptococcus pyogenes, the pneumococcus, and the staphylococcus aureus, in the order mentioned, are the most common causes of infective endocarditis in this country; and abroad these three bacteria are the ones most frequently found.

The following bacteria less frequently produce infective endocarditis—the gonococcus, the tubercle bacillus, the pneumobacillus, the bacillus pyocyaneus, the typhoid bacillus, a diphtheria-like bacillus, and several bacteria not found elsewhere, such as the bacillus endocarditis griseus, a coccus described by Holst, and a coccus described by MacCallum and Hastings.

The gonococcus is now well established as a cause of infective endocarditis, and Thayer and Blumer gave a full account of a case in 1886 where gonococci were cultivated from the blood and valves, and more recently Thayer and Lazear[2] in describing another case have given an analysis of 15 cases.

There has been considerable discussion with regard to the tubercle bacillus as a cause of infective endocarditis. Etienne[3] has, however, described several cases of endocarditis complicating phthisis in which the vegetations were typical of infective endocarditis and contained tubercle bacilli. Howard[4] described a bacillus in the valves and organs of a case of infective endocarditis which resembled the diphtheria bacillus in all respects except that it was devoid of virulence to animals. Holst[5] described a small coccus in the valves and organs of a case of infective endocarditis. This coccus he did not identify with any known coccus. It would only grow on media to which human blood was added. Weichselbaum described a bacillus causing endocarditis which resembled the diphtheria bacillus in morphology and the pneumobacillus in its manner of growth. He named it the "bacillus endocarditidis griseus."

Blum described a case of infective endocarditis in a child due to the bacillus pyocyaneus. MacCallum and Hastings described a case of infective endocarditis in which a micrococcus was obtained in pure cultivation from the blood during life and from the valves after death. It resembled the pneumococcus, but it peptonised gelatine, blood serum, and milk. It was pathogenic to mice, rabbits, and dogs. Carbone

[1] *Journ. Exper. Med.*, vol. iv, No. 1.

[2] *Journ. Exp. Med.*, January, 1899.

[3] *Arch. de Méd. Exp. et d'Anat. Path.*, 1re Série, Tome x, 1898, No. 1.

[4] *Bull. Johns Hopkins Hosp.*, 93, 30.

[5] *Arch. de Méd. Expér. et d'Anat. Path.*, 1897, ix, 805-815.

found the typhoid bacillus in a case of typhoid fever with vegetations on the valve.

The question arises whether it is possible to determine during life the nature of the bacteria causing the endocarditis. The condition which precedes the endocarditis is often of great assistance. For example, an endocarditis following upon pneumonia is generally due to the pneumococcus, and one following upon gonorrhœa due to the gonococcus. However, this is not an invariable rule, for in some cases other bacteria than those which cause the primary lesion may secondarily invade the valves. An endocarditis following upon gonorrhœa may be due to the streptococcus pyogenes, and one following upon phthisis to the staphylococcus aureus. The examination of the blood during life may reveal the presence of bacteria. For this purpose it is necessary to withdraw several cubic centimetres of blood from a vein, and to make a large number of cultivations. Care must be taken to thoroughly sterilise the skin and syringe; for streptococci and staphylococci are widely distributed, and unless due care is taken the blood may become contaminated. I have found pneumococci and streptococci in the blood of cases of endocarditis during life, but in a very large number of cases the examinations have yielded negative results.

Thayer, Blumer, and Lazear have found gonococci in the blood during life by making plate cultivations with a large quantity of the blood to which melted agar was added. Many observers have found streptococci and staphylococci.

In the earlier stages of the disease the bacteria are no doubt absent from the circulating blood. Unfortunately, most of the bacteria which cause infective endocarditis are not agglutinated by the corresponding serum, so that we are deprived of this method of diagnosis.

Harbitz thinks that the staphylococcus aureus generally gives rise to an endocarditis with acute pyæmic symptoms, while the pneumococcus and the streptococcus give rise to more chronic forms. However, some of the cases of pneumococcal endocarditis which I have seen have run an exceedingly acute course. Meningitis is especially common in this form of endocarditis. The gonococcus may cause a very mild or a very severe and acute endocarditis; indeed, at present it is impossible to determine from the symptoms the nature of the bacteria causing the endocarditis.

Experimental endocarditis has been produced by a large number of observers. The usual method is to injure the valve mechanically, and then to inject pure cultivations into the vein. However, in many instances endocarditis has been produced by the introduction of cultivations into the circulation or even subcutaneously without previous injury to the valves. By these methods endocarditis has been produced with many kinds of bacteria, such as the streptococcus pyogenes, the staphylococcus aureus, the tubercle bacillus, the bacillus pyocyaneus, the bacillus endocarditidis griseus, the micrococcus zymogenes, etc.

I do not consider that statistics with regard to the seasonal prevalence of infective endocarditis are of much value, inasmuch as the disease is due to so many diverse bacteria, and as it is so closely related to various other processes.

When we have sufficient data to classify all our fatal cases according to their cause, much valuable knowledge will accrue. And I would here urge the importance of making systematic bacteriological investigations at all *post-mortem* examinations. With a very little trouble, all examinations could be carried out with aseptic precautions, and thus an enormous wealth of valuable material saved. At present, in most cases, the material is collected without any precautions, and is practically useless for bacteriological examination.

II.—A. G. R. FOULERTON, F.R.C.S.,

Lecturer on Hygiene and Bacteriology, Middlesex Hospital.

BACTERIOLOGY.

MR. FOULERTON did not think that the incidence of ulcerative endocarditis was markedly favoured by a pre-existing simple endocarditis, for out of 504 cases of simple endocarditis collected from the Middlesex and St. Bartholomew's hospitals 260 occurred in males and 244 in females, whereas out of 70 cases of ulcerative endocarditis 54 were in males and only 16 in females. Further, the right heart was affected in a far higher proportion of ulcerative than of simple cases. He thought, however, that many cases spoken of as old simple endocarditis might have been really ulcerative which had recovered. One of the reasons why the right side was most often affected in ulcerative endocarditis was probably the proximity to the venous system, where septic thrombi were most common, and he thought that the lungs probably acted as a strainer for the left side. He showed, by permission of Dr. Campbell Thomson, the heart of one case out of 5 cases of ulcerative endocarditis which had occurred in Middlesex Hospital which were remarkable in that they showed a deficiency in the interventricular septum, a sixth case of deficiency having healthy valves. All the five were affected on the right side. In the case he showed the pulmonary and tricuspid valves showed numerous exuberant granulations, the valves of the left heart were free from signs of disease. There was a considerable congenital deficiency in the upper part of the interventricular septum and other abnormalities in connection with the commencement of the aorta and pulmonary artery. He had examined the blood in this case twenty-four hours before death, but no evidence of bacteria was obtained. After death very numerous streptococci were found in the granulations on the valves. In another case which had recently been examined, that of a young woman with a streptococcal endocarditis and a secondary aneurysm of the calf of the leg, a culture of streptococcus pyogenes was obtained from the blood on one occasion; two subsequent examinations, one made forty-eight hours after the first, and the other after a further interval of several weeks, gave negative results. After death extensive valve disease was found. Although he accepted the gonococcal cases of Thayer and Blumer and Thayer and Lazear, he thought that many cases of ulcerative endocarditis occurring in the course of gonorrhœa were not really gonococcal, but due to secondary infections.

III.—F. J. POYNTON, M.D.,

Casualty Physician, St. Mary's Hospital.

RELATION TO ANTECEDENT ENDOCARDITIS.

DR. POYNTON had found evidence of old valvulitis in 6 out of 7 cases of infective endocarditis which he had examined, all 6 cases having given a history of rheumatism. The symptoms and *post-mortem* appearances of infective endocarditis and rheumatism might be extremely similar, and the supposition of Achalme that rheumatic fever was due to a specific bacillus frequently associated in the body with cocci, might account for the infective endocarditis, but would hardly explain the rheumatism, for it would be difficult to decide what symptoms were due to the bacilli and what to the cocci. The theory that rheumatism was an attenuated infection, and that infective endocarditis might result from an exaltation of virulence in the infection by pus-forming organisms hardly explained the clinical entity of rheumatism. Rheumatism was a common disease and infective endocarditis a rare complication. The low virulence theory did not coincide with some of the fatal cases of rheumatism in which the virulence of infection was very severe. He had been struck with the widespread changes which he had found in the cardiac wall of the 6 cases he had examined.

IV.—WALTER C. C. PAKES, D.P.H.,

Grocers' Research Scholar; Demonstrator of Sanitary Science and Bacteriology, Guy's Hospital.

THE BACTERIOLOGY OF TWENTY-ONE CASES OF ULCERATIVE ENDOCARDITIS.

SEVERAL organisms have been found from time to time upon the valves in cases of ulcerative endocarditis, and it is probable that yet more may be added to the list. Although I am not able to describe anything that is new, an account of the bacteriology of the cases I have examined may, I think, be of interest. I have examined in all the valves of 28 cases, and I have obtained satisfactory results in 21. The unsatisfactoriness of the remaining 7 is unfortunately easy of explanation. There are still morbid anatomists who are totally unaware of the difficulties attending bacteriological research, and who make no endeavour to remove the valves for bacteriological examination under aseptic conditions, and this even when the case has been rightly diagnosed in life. It is well known that

organisms multiply throughout the body after death, and even during the last stages of life, and the B. coli communis can often be demonstrated in the spleen, liver, kidneys, etc., twelve or eighteen hours after death. When the heart is taken out and cut with the same knife which has been used for other organs, and when the valves are fingered and laid on or against a mixture of intestines, liver, etc., it can easily happen that the surface of the ulcers gets infected with this organism to such an extent that all attempts to wash it away in sterile water are futile. It has happened to me in most of the unsatisfactory cases that I have seen organisms in the microscopic preparations direct from the valves which I have been unable to recover by cultivation because every medium has been crowded out with the B. coli communis. In the 21 cases which have been satisfactory I have found six different kinds of bacteria. In 15, streptococci were present, and in 13 of these were present alone on the valves. In 1 case the streptococcus was associated with the staphylococcus pyogenes aureus, and in the other with the B. coli communis. In the latter case I satisfied myself that there was really a double infection: scrapings from the valve as well as sections showed both cocci and bacilli, the last named being decolorised after treatment by Gram's method. In 2 cases the staphylococcus aureus was present alone. In 1 case the B. pyocyaneus was present alone; scrapings from the valve showed small bacillus only, and subsequent cultivations showed this organism only. In addition to having the morphological appearances, and giving the cultural reactions, one loopful of a twenty-four-hour-old agar culture killed a guinea-pig in eighteen hours. In 1 case the pneumococcus was found, and in 1 case the gonococcus. In 1 case I succeeded in finding nothing. I say this because, although the valve had the naked-eye appearance of malignant endocarditis, I could find no organisms either in scrapings or sections of the valve even after staining with carbol-methylene blue, carbol-fuchsin, and aniline gentian violet, nor do I think it was a tuberculous lesion.

Twenty-one Cases.

Organisms Present.	No. of Times Found.
Streptococcus only	13
,, + Staph.	1
,, + B. coli	1
Staphylococcus aureus	2
B. pyocyaneus	1
Pneumococcus	1
Gonococcus	1
Nothing	1
Total	21

In four of the above cases I have had the opportunity of examining the blood in life, but unfortunately all the cases are included in the thirteen in which the streptococcus was found *post mortem*. In none of these did I succeed in finding or cultivating the organism, even though I have obtained from 1 to 5 c.cm. of the blood. In one case I examined the blood on four successive occasions at intervals of three or four days, the last occasion being only four days before death, but I never succeeded in finding any streptococci. In the same case, as well as in four others, the heart blood was examined *post mortem* (from eighteen to thirty hours after death) and abundant streptococci were found, a simple microscopic examination alone being necessary to reveal their presence. I believe it is probable that just before death they would appear in the blood, but so far my experience has not been such as to warrant the hope that when this organism produces the lesion (as it has done in 75 per cent. of my cases) it might often be found during the early stages of the disease. This is the more disappointing since my experience in streptococcal septicæmia has been so different. I have succeeded in finding streptococci in the blood of patients suffering from this disease on sixteen different occasions.

This leads one to the conclusion that the streptococcus producing ulcerative endocarditis is of much lower virulence than that producing septicæmia. I cannot say that I have thoroughly tested this, but upon the few occasions when I have done so, the above conclusion has been borne out. On two occasions streptococci which I have isolated from the valves had no effect upon mice or rabbits, even though a cubic centimetre of the sediment of a broth cultivation was injected intraperitoneally into the rabbits. If this holds true generally, the absence of the streptococci from the blood can be explained, for if any cocci escape into the blood stream from the valve the blood will have sufficient bactericidal power to kill them.

V.—Bertram Abrahams, M.B., B.Sc., M.R.C.P.,
Medical Registrar and Acting Pathologist, Westminster Hospital; Physician, St. George's and St. James's Dispensary.

Etiology.

I think that everyone will feel inclined to agree with Dr. Washbourn in saying that the term infective endocarditis does not connote a definite pathological entity. It is equally self-evident that the clinical picture is not constant, while the bacteriological results are also various. Infective endocarditis is hence an expression having the sole merit of convenience. The endocardium is but rarely the primary seat of infection; in a large number of cases it is attacked as a consequence of infective processes in other parts, and it is then that the peculiar capacity of the heart for acting as a distributive organ gives rise to the series of secondary changes to which Sir Samuel Wilks gave the by no means inappropriate name of arterial pyæmia. It does not seem to me necessary, or indeed in the absence of direct proof advisable, to assign phagocytic properties to the endothelial cells of the blood vessels. The presence of micro-organisms within them may be a result of their diminished rather than increased functional capacity. It seems to me more natural to consider that the entry of such micro-organisms betokens previous injury to the cells—as by bacterial toxins—than to attribute it to a purely hypothetical phagocytosis.

I have investigated the records at Westminster Hospital since a *post-mortem* book was started in 1880; out of a total of more than 4,000 necropsies between 200 and 300 were made upon the subjects of heart disease. Thirty-nine of these exhibited ulcerative changes in the valves; this is exclusive of those in which the ulceration was secondary to atheroma, which belong, of course, to a totally different category. Ulcerative and infective endocarditis are not the same thing; of this I shall have more to say in a moment, but as the former is a definite pathological condition and the latter not the analysis of these cases is of some slight importance. The first point which strikes one is the preponderance of males over females, 25 to 14; the latter figure includes 2 puerperal cases. It is hardly necessary to say that no such sexual selection occurs in ordinary heart disease.

As to the seat of the ulcers, the aortic valves were alone affected in 17 cases, the mitral in 16, the aortic and mitral together in 3, the aortic and tricuspid together in 1, and the aortic, bicuspid, and pulmonary in 1; in the remaining instance the ulceration affected the wall of the left auricle only. In one half of the mitral cases vegetations were present on other valves as well, the tricuspid being affected in two of these and the pulmonary in one; in only one of the aortic cases were vegetations present elsewhere, in this instance on the mitral.

Emboli were found in 25 cases out of the 39; the spleen contained them in 20 instances, the kidneys in 18, the brain in 5, the liver in 1; while in another an embolic abscess was present in the wall of the left ventricle.

Notes as to the temperature were found in 24 cases (investigation of the casebooks will no doubt increase this number): in 20 it was febrile, almost always intermittent or remittent, now and then continuous. In 3 there was no fever, and in 1 in which the mitral valve was ulcerated, and there was a caseous infarct of the kidney, the temperature was subnormal throughout an illness of four months.

Bacteriology.

Nine bacteriological examinations are recorded. In 4 of these streptococci alone were found, in 2 staphylococci, in 2 cocci indefinitely arranged, and in 1 streptococci and pneumococci. I must confess that I am inclined to attach but little importance to the results of bacteriological investigations upon *post-mortem* material, particularly when the necropsy is delayed for some hours. My own observations fully confirm Chvostek's views as to the entry of organisms into the tissues

at or about the moment of death. And furthermore, though my investigations are not yet complete, I am bound to confess that I have often found similar micro-organisms in cases of acute rheumatic valvulitis to those obtained from the so called infective cases.

Bacteriological examination of the blood during life is, to my mind, of far greater importance. I have done this in 11 cases of infective endocarditis, with the following results: No organisms found, 2; streptococci alone, 5; staphylococci alone, 3; streptococci and staphylococci, 1. Curiously enough, both the failures to detect organisms occurred in cases following empyema of pneumonic origin. I should add that in every case repeated examinations were made, and that at least 15 c.cm. of blood were removed for each.

A further contribution to the etiological problem is obtained by considering the condition of the valves in 63 consecutive cases of pyæmia occurring in the same records. In 51 of these no cardiac affection was noted, in 8 there were vegetations on the valves, and in 4 ulcers. I have in addition notes of 10 cases in which the valves were affected as the result of an acute disease; in 6 of these the vegetations were secondary to pneumonia, in 1 to enteric, in 1 to acute phthisis, in 1 to influenza, and in the remaining instance they supervened on parturition, without any evidence of sepsis. It is interesting to note that in all these cases save one there was a history of rheumatism.

Of the 39 cases of ulcerative endocarditis I have been able to work out the history as regards rheumatism in 20; 11 had had rheumatic fever (one scarlet fever as well), 2 gave a family history of rheumatism (in 1 of these the fatal illness commenced with tonsillitis), and 1 had had chorea; 4 patients had been free from rheumatism, and in the remaining 2 cases the rheumatic history was doubtful. The proportion of rheumatic histories is much in excess of that found in ordinary cardiac disease.

SYMPTOMS.

Summarising our results, the first thing which strikes one is that there is no constant clinical or pathological feature, no common factor so to speak, in the various affections grouped together under the term infective endocarditis. Thus, for instance, a hectic temperature may be present for weeks in cases of cardiac disease in which no recent valvulitis is found *post mortem*. Such a condition may, it appears, be due in some instances to caseation of infarcts. Or, again, the fever may be associated with what is apparently simple valvulitis. I wish to insist most strongly on the fact that valvular ulceration is no criterion of the infective nature of an endocarditis. Thus, in the series of cases of pyæmia to which I have already referred, vegetations were present in 8, and ulcers in 4. I believe that in the endocarditis of puerperal pyæmia it is impossible to predict from the symptoms or physical signs whether the valves will be found to be ulcerated or not.

Reverting to the question of temperature, I have already mentioned a case in which it was subnormal, and I have notes of another in which the aortic, tricuspid and pulmonary valves were all ulcerated in a girl of 17, and there was a typical embolus in the spleen, the temperature remaining normal throughout.

The statistics I have already given show that emboli may often be absent from cases which are in every other way most typical: thus in a woman of 44 whose aortic and tricuspid valves were extensively ulcerated, and who had a hectic temperature reaching eventually 108.4°, no trace of an embolus recent or old was found.

One minor point which has struck me is that the spleen in infective endocarditis is almost invariably large, even when it contains no infarctions. This is no doubt in some cases due to the fever, but it affords an interesting contrast to the general rule in cardiac disease.

We thus see that the recognition of infective endocarditis as a clinical or pathological entity can only be defended on the ground of convenience. It must be recognised that the endocardium is generally a secondary nidus of infection, and future classifications must be based on the study of the nature and source of that infection, must be in fact mainly bacteriological.

RELATION TO RHEUMATISM.

In conclusion, it will be readily understood that the relationship of infective endocarditis to rheumatism is capable of very simple explanation if the views of Sahli, Buss, Singer, and others as to the nature of the latter affection be adopted. In a recent paper before the Clinical Society of London I reviewed the evidence which these authors have brought forward and added some observations of my own in cases of rheumatic tonsillitis. According to them the cause of acute rheumatism is in many cases at least the activity of streptococci and staphylococci of a low degree of virulence, so low as to enable them to be inoculated into animals without evoking septic mischief. If this view is accepted—I do not think the evidence in its support is at present more than sufficient to justify its use as a working hypothesis—it will certainly bring the pathological data more closely in accord with clinical views as to infective endocarditis. We should have a continuous series according to the virulence of the micro-organisms extending from acute rheumatism, through infective endocarditis, to pyæmia. And if we were further to assume the possibility—amply suggested by other bacteriological experiences—of an exaltation of the virulence of these attenuated cocci by intercurrent affections, we should have a ready explanation of the occurrence of infective endocarditis when such circumstances affect rheumatic subjects. The starting point of many of my cases was the supervention of an acute disease in a patient who had had rheumatic fever.

VI.—W. S. LAZARUS-BARLOW, M.D.,
Demonstrator of Morbid Anatomy, St. George's Hospital.

ETIOLOGICAL CLASSIFICATION.

DR. LAZARUS-BARLOW thought that the condition under discussion was rather a clinical than a pathological one. Except in the earliest form of endocarditis with granulations on the valves, there was loss of substance; and though this condition was not termed ulceration, it only differed in degree from the condition met with in a typical case of ulcerative endocarditis. Ulcerative endocarditis might be divided into two great classes according as there was or was not evidence of antecedent valve mischief, and each of these classes might be subdivided into primary and secondary. In deciding the question of antecedent heart disease, the duration of the cardiac illness and the weight of the heart were of paramount importance. Where the heart's weight was normal, and where there was no evidence of old valve mischief, it was safe to conclude that it was healthy at the time of onset of the ulcerative condition. Of these four classes of cases, definitely secondary affection of a valve already diseased was by far the commonest type. Perhaps next to this came primary ulcerative endocarditis supervening on old mischief, as, for example, where exacerbations of endocarditis occurred time after time, while no attack had the clinical symptoms of ulcerative endocarditis until that final one which killed the patient. Cases in which the heart was apparently healthy previous to the onset of an initially ulcerative endocarditis were decidedly rare. The four classes of ulcerative endocarditis needed somewhat different interpretations. The simplest was that class in which the condition supervened suddenly during an acute infective disease occurring in a patient with chronic disease. Here micro-organisms entered the blood, fixed on a spot of lower resistance, and produced a severe inflammation with ulceration. Ulcerative endocarditis occurring secondarily on a previously healthy valve was also susceptible of a fairly easy explanation if the valves were the special part of the endocardium affected, by reason of the tension to which they were exposed, and the fact that they were more than any other part of the vascular system exposed to the action of the blood. Primary ulcerative endocarditis, whether the valves were formerly healthy or not, was very difficult to explain. That the condition was primary in the strict sense of the word it was, of course, impossible to believe; there must have been a local and superficial lesion somewhere and at some time. It was therefore possible that the organisms causing a given ulcerative endocarditis might have long remained latent in the body. It was also possible that they might undergo a sudden exaltation of virulence. He had found cocci and bacilli in a simple valvulitis occurring during enteric fever, streptococci in the simple valvulitis of chorea, cocci and on one occasion definite streptococci in simple rheumatic valvulitis. And others had had similar experience. It was possible that some of the so-

called "primary" cases of ulcerative endocarditis might depend upon an exaltation in virulence of micro-organisms already present on the valves, so that they were able to produce an ulcerative, whereas formerly they were only able to produce a simple valvulitis, or were without effect. With regard to micro-organisms in ulcerative endocarditis many had been found, and there was no specific organism for the condition. Probably there was no specific organism for simple valvulitis, and consequently he thought that the distinction of "ulcerative" was a better one than "infective" endocarditis, especially as it would probably be established that almost all, if not all, forms of endocarditis were infective, in the sense that they were caused by micro-organisms.

VII.—William Bulloch, M.D.,
Bacteriologist to the London Hospital.

Bacteriology.

During the last decade and a half the study of bacteriology has incontestably shown that the same group of clinical symptoms may be caused by a variety of different pathogenic bacteria, so that it has gradually come to be a necessity to specify the etiological nature of the disease. In the case of meningitis this is nowadays a dire necessity, and it may be said that such terms as pyæmia and septicæmia without a specific adjective are relics of the past. It is not startling that half a dozen different bacteria acting on the same region of the body should produce the same symptom complex, as most of these symptoms are more or less connected with the disorders of the part, if that part has to perform certain definite and important functions. Although the work of Weichselbaum, Lion, Litten, Harbitz, Thayer, and others have added considerably to our knowledge, it must be admitted that much still requires to be done. The clinical separation of infective endocarditis from other non-infective endocardial troubles, and, in fact, from other diseases altogether, seems to be anything but sharp. Many cases, too, of what one must legitimately diagnose as malignant endocarditis are, as far as the present-day bacteriological technique goes, unsolved in their etiology. In this class I have examined during life and after death six cases. They were all in adults varying from 19 to 24 years of age. Four were females. In all cases the disease lasted a long time—months at least. Fever, mostly intermitting in type, was present, often reaching 104°. In one case there was marked and regular fever, rising to 104° in the evening and and touching normal in the morning for almost nine months. Anæmia, asthenia, and profound endocardial symptoms were always present. The examination of relatively large quantities of blood (10 c.cm.) taken from the veins during life, by all the ordinary methods of culture in aërobic and anaërobic media, and by experimentation in animals was negative. In all cases the necropsy revealed the presence of an intense verrucous endocarditis always affecting the mitral valve on on its auricular surface, and extending in a sharply-defined area on the posterior surface of the auricle. The vegetations were of the nature of platelet thromboses. In three cases a similar condition was found on the ventricular aspect of the aortic valve. The distribution of the lesions strongly suggested an infective origin. In four cases the bacteriological examination of the heart blood, endocardial lesions, and splenic infarctions a short time after death yielded negative results. No cultures were obtained. It is difficult to believe that such cases are due to anything but an infection. The absorption from some other part of the body of a toxin in sufficient quantity to cause profound morbid changes in the endocardium and fever lasting for months seems unlikely. In one case where there had been intense habitual constipation a very careful examination for a breach of continuity was made of the whole intestine with a negative result.

Of seven other cases of genuine infective endocarditis which I have examined, three were demonstrated during life and after death to be due to streptococcus pyogenes. In two of these, the micro-organism was highly pathogenic for mice, the other slightly so. In two other cases staphylococcus pyogenes aureus was found in one case only in the vegetations on the mitral valve *post mortem*. In one case diplococcus pneumoniæ of Fraenkel was isolated during life, and after death capsulated cocci were also found mixed with other bacteria on the thrombotic deposits on the valves, but the attempt to isolate the organism was a failure.

In one case of acute endocarditis a micrococcus was isolated twice during life from the blood stream, and after death from the endocarditic lesions. As far as I have been able to make out, this micrococcus is identical with micrococcus zymogenes recently obtained by MacAllum and Hastings,[1] as occurring in a case of acute endocarditis. As the communication of these authors is a short note only, it is, however, impossible to compare the two micro-organisms accurately. The organism isolated by us resembles Fraenkel's coccus closely in morphological appearance. It stains by Gram's method (all modifications), also by Claudius's method. It has a marked capsule in the tissues. It grows on gelatine at 24° C., liquefying the medium in 48 hours. It curdles milk and then liquefies the curdled mass. In litmus media there is marked production of acid. Blood serum (Loeffler) is liquefied, and gas is evolved from sugar media. The organism has also been found highly pathogenic for mice, guinea-pigs, rabbits. Virulence is apparently rapidly lost outside the body in artificial media.

In three cases of endocarditis which was secondary to a definite osteomyelitic or other pyogenic process staphylococcus pyogenes aureus was found during life. All proved fatal, but no necropsy was permitted. Apart from the latter 13 cases of infective endocarditis have been examined in all with the following result: 6 cases, negative; 3 cases, streptococcus pyogenes; 2 cases, staphylococcus aureus; 1 case, diplococcus pneumoniæ; 1 case, micrococcus zymogenes. (?) The technique of the examinations was carried out as follows: The skin in the neighbourhood of the elbow was purified over a wide area by means of soap and water, carbolic acid, and then alcohol. Pressure was then made by an assistant so as to distend the median basilic vein. The blood was then drawn by means of a 10 c.cm. bacteriological syringe (Maison Luer) which had been sterilised in the autoclave or by boiling water. The needle was thrust under the skin over the distended vein and after it was well in it was thrust through the wall of the vein at a higher level. By withdrawing the piston the syringe fills with blood. Apart from the initial prick the operation is painless. The cultures were made at the bedside. In cases where inoculation experiments were made with the blood directly, the blood was injected from the syringe into tubes containing a small quantity of a sterilised solution of sodium citrate to prevent coagulation and so allow the liquid blood being introduced directly into the animal.

VIII.—J. H. Bryant, M.D.,
Assistant Physician, Guy's Hospital.

The Technique of Post-Mortem Examination.

In the *post-mortem* room at Guy's Hospital I have had the opportunity of performing necropsies in a large number of cases of infective endocarditis, a disease in which I am particularly interested. The few remarks I venture to address to you to-day will be confined chiefly to a description of the technique of my method for obtaining the vegetations in the *post-mortem* room for subsequent bacteriological examination. As Dr. Washbourn and Mr. Pakes have already pointed out, no proper or reliable bacteriological examination can possibly be carried out unless the greatest care is exercised in obtaining the vegetations free from the possibility of accidental contamination. The scientific investigation of this disease has hitherto been much hampered by the careless and slipshod manner in which the specimens have been obtained for the bacteriologist. I have found the following method eminently satisfactory and reliable, and if conducted with careful attention to detail, vegetations can be obtained from any of the valves without fear of extraneous contamination.

The requisites are: A small packing needle, threaded with fairly thick string, dissecting forceps, scissors, scalpels, searing irons, and sterile glass capsules. An assistant is indispensable. Sterilise the needle, string, and instruments, and heat the irons. Expose the thoracic viscera in the usual manner without opening the pericardial sac; sear the outer anterior surface of the pericardial sac, open with sterilised scissors, and make cultures if there are any signs of pericarditis. Then open the pericardial sac more fully, so as to fully expose the heart. Sear the apex of the left ventricle

[1] *Centralbl. f. Bakt.*, 1899, xxv, p. 384.

both on the anterior and posterior surfaces. Take up the needle with a pair of sterilised forceps, and the ends of the string with another pair of sterilised forceps; the assistant must hold this last-mentioned pair of forceps in such a manner that the string does not come in contact with the body or any other object.

Pass the needle through the apex of the left ventricle, about half or three-quarters of an inch above its extremity, and draw the string through for half its length. Now direct the assistant to hold the free and the needle ends of the string together. By this means perfect control of the heart can be obtained, and it can be firmly held in any position desired by means of appropriate traction on the string, so that the anterior, posterior, or lateral surfaces can be exposed as desired. At this stage of the proceedings it is of importance to have some idea of the valve involved, as this knowledge may save much unnecessary trouble. Suppose, for example, the physical signs during life pointed to the mitral valve, the assistant is then directed to pull the heart over to the right as far as possible, and to slightly rotate it on its long axis in order to expose the left side and part of the posterior surface. Now carefully and thoroughly sear with the heated irons a large area over the left auricle and ventricle; make a deep longitudinal vertical incision through the left auricle and ventricle, cutting through the mitral valve, and opening the cavities of the left auricle and ventricle. If the cavities are filled with blood clot, it should be picked out with sterilised forceps. It will now be possible to ascertain if there are any vegetations on the mitral valve, if they are present they should be snipped off with sterilised scissors and carefully transferred on the scissors to a sterilised glass capsule. The cover of the capsule should not be raised more than is absolutely necessary, and it should be done as quickly as possible. If the above-mentioned details are carefully attended to, the piece of the vegetation obtained will be quite free from any accidental contamination.

If the aortic or pulmonary valves are known to be affected, the assistant should pull the heart downwards, and the base of the heart, pulmonary artery, and aorta should be carefully seared. The aorta or pulmonary artery should then be opened by a vertical longitudinal incision, and after removal of the blood clot the vegetations may be obtained from the either valve.

If the tricuspid is the valve affected the heart should be pulled over to the left and slightly rotated. The method of procedure is then similar to that described for the mitral valve.

If there are no indications of any particular valve being affected, all the valves should be separately and carefully examined *in situ* as above described.

If an examination of the blood is required, the anterior surface of the right or left ventricle and auricle should be seared. A sterilised pipette drawn out to a fine point at one end and sealed, and plugged with sterilised cotton wool at the other end is taken, the sealed extremity is snipped off with sterilised scissors, and pushed through the wall of either ventricle or auricle. Blood is then sucked into it, it is withdrawn, and the blood allowed to run a little distance into it from the end, which is then sealed by holding in the flame of a spirit lamp or Bunsen burner. The pipette then contains blood quite free from any accidental contamination, and can be removed to the laboratory for bacteriological examination. (The use of this pipette was suggested to me by Mr. W. C. Pakes.)

In 3 of my cases I obtained pure cultures of the streptococcus pyogenes, and this micro-organism only was seen on histological examination of the cover-glass preparations. In one case I found the streptococcus pyogenes associated with a bacillus which had the property of very rapidly liquefying gelatine, and which also produced gas very freely in gelatine shake cultures. In another case I found the streptococcus pyogenes associated with an anaërobic bacillus which could be cultivated on agar, blood serum, and broth at 37° C., but which could not be cultivated on gelatine at 20° C. I have not yet fully worked out or identified these two bacilli, but considered them of sufficient interest to be mentioned.

My experience with regard to cases of rheumatism does not coincide with that of Drs. Lazarus-Barlow and Bertram Abrahams. I have investigated one case of rheumatic endocarditis and two of rheumatic pericarditis, and in all three my results were negative, the cultures all being sterile, and no organisms were detected on microscopical examination. My other cases have been worked out by Mr. Pakes.

Several allusions have been made to gonorrhœal infective endocarditis, and I have here a specimen from the Guy's Hospital Museum:

The patient was a male aged 19, who was admitted into Guy's Hospital under the care of Mr. Durham, on October 7th, 1874. Gonorrhœa had been contracted four months previous to admission. On admission he was found to be suffering from dyspnœa; temperature 103°. A physical examination revealed the presence of dulness over the base of the left lung, and a systolic and a diastolic *bruit* were heard at the base of the heart, and were considered to be due to aortic stenosis and regurgitation. The diagnosis made was: Septicæmia with acute endocarditis following gonorrhœa. He died on December 28th, 1874.

Post-mortem Examination.—Numerous crumbling masses of white clot, exactly similar to the vegetations on the pulmonary valves, were found in the smaller branches of the pulmonary artery. In the upper part of the left lung there was an extensive but ill-defined patch of hepatisation. The heart was not enlarged. On laying open the pulmonary artery I found that the right anterior valve was covered with a large mass of vegetations which projected and hung down some distance. The posterior valve had a considerable part of its edge neatly cut out just as if it had been done with a pair of scissors. It was not thickened in any way, and had no vegetations on it at this part, although there were some where it joined the right anterior valve. The left anterior valve was perforated with a small hole, also neatly cut; evidently they were caused by the presence of the mass of vegetations. The other valves were healthy. The kidneys weighed 21 oz., were pale and mottled, and in an advanced stage of tubal nephritis.

I bring forward this case to show that gonorrhœa was recognised at Guy's Hospital as being a cause of infective endocarditis as early as 1874. I have seen two other cases, and in all three the pulmonary valves have been the valves affected, and I have been much struck by the curious coincidence.

[Dr. Bryant showed six specimens from the Guy's Hospital Museum illustrating some of the conditions found on the valves, etc.]

IX.—H. M. TICKELL, M.D.,

Cheltenham.

CLASSIFICATION OF CASES.

DR. TICKELL thought that in describing cases of ulcerative endocarditis some classification should be adopted, and suggested one. He would divide cases, first into two groups, (1) with pre-existing cardiac disease and (2) without pre-existing cardiac disease. Each of these he would further divide into (1) without detectable source of infection and (2) metastatic group. Each of these should be further subdivided according to the onset or infection.

X.—THEODORE FISHER, M.D.,

Physician to Out-patients, Bristol Royal Hospital for Sick Children and Women.

SPREADING AORTITIS.

DR. FISHER thought that some cases of supposed ulcerative endocarditis were in reality softening of the valves due to a spreading aortitis, and several museum specimens he thought bore this out. Of course he admitted that the pathology of aortitis might be of an infective nature. The common severity of nephritis in infective endocarditis was referred to and he thought it possible that some of the cases in which streptococci had been found on vegetations thought to be due to rheumatism might be cases of septicæmia, in which the vegetations were of very recent origin.

XI.—Professor CLIFFORD ALLBUTT, F.R.S., M.D., F.R.C.P., etc.

Regius Professor of Physic in the University of Cambridge.

PROFESSOR CLIFFORD ALLBUTT wished also to bear Dr. Fisher out regarding the spreading aortitis and thought that pathologists were not sufficiently alive to this condition.

XII.—O. J. KAUFFMANN, M.D.,

Physician to Queen's Hospital, Birmingham.

TERMINOLOGY.

DR. KAUFFMANN thought that no one would be disposed to doubt that rheumatic endocarditis was a bacterial infection. He approved strongly of the retention of the term "infective endocarditis," which enunciated for these conditions a definite kind of etiological factor, even when the particular genus of pathogenic microbe could not be made out during life. He thought that the damage to the valves from attrition offered the opportunity for the circulating bacteria to attack the endocardium, and thought that ulcerative endocarditis

attacked the pulmonary valves was more frequent in those who had previously had chronic disease of those valves.

XIII.—F. J. Driver, M.B.,
Southsea.
Malarial Association.

Dr. Driver referred to the liability of malignant endocarditis to be associated with malaria in towns like Portsmouth, where a very large number of patients had resided in tropical countries. Chronic heart affections coupled with some small amount of rheumatism of the joints was very common in old cases of malaria. In such cases where acute symptoms supervene with rigors every three or four days, a temperature of 106° or 107° at intervals, profuse sweats, and marked cachexia, it was often extremely difficult to decide for some time whether the symptoms were due to a recurrence of intermittent fever of an aggravated character, or to an attack of malignant endocarditis. Such a case came under his care recently, and after many months terminated fatally from the endocarditis.

XIV.—E. F. Trevelyan, M.D.,
Professor of Pathology, Yorkshire College, Leeds.
Endocarditis and Cerebro-spinal Meningitis.

Dr. Trevelyan alluded to a series of 13 cases of cerebro-spinal meningitis, in 3 of which there was pneumonia, and in 2 of these 3 there was a vegetative endocarditis. Unfortunately there were no bacteriological examinations, but such cases further showed that infective endocarditis was a part of a general infection.

XV.—J. F. Payne, M.D., F.R.C.P.,
President.

The President was inclined to look upon the cases as instances of general infection with localised lesions, and agreed with Dr. Washbourn that they should be called, for instance, streptococcal infection with ulcerative endocarditis. He thought that the reason why the rheumatic poison attacked the left heart in adults and the right heart in fœtal life was that it would not live in venous blood, but required the arterial blood.

Reply.

Dr. Washbourn said, in reply, that all statistics, including his own, unmistakably demonstrated the predisposing influence of chronic valvular disease upon infective endocarditis. He believed rheumatic fever affected the left side of the heart, because the veins entered the body through the lungs, and thus at once gained access to this side. The preponderance of left-sided affection in infective endocarditis was partially due to the predisposing influence of chronic valvular disease, which was almost invariably situated on the left side. The small number of cases of gonococcal rheumatism recorded was in part, at any rate, to be accounted for by the difficulty in demonstrating the presence of the gonococcus. He did not believe that any micro-organism bearing a causal relation to rheumatic endocarditis had yet been found. Such vague terms as cocci of low virulence appeared to him to be unscientific. He suggested that in Dr. Fisher's case the aortitis had spread from the valves as was the fact in a considerable number of the cases in his own statistics. He quite agreed with Dr. Kauffmann that the introduction of the term "infective" in place of "ulcerative" was a distinct advance, but he considered that we should now go a step further. He thought we should use such terms as "streptococcal infection with endocarditis" to show that the endocarditis was not the essential feature of the disease.

THE PATHOLOGY OF ACUTE CHOREA.

By H. Campbell Thomson, M.D.,
Pathologist, Middlesex Hospital.

Dr. Campbell Thomson read a paper on the pathology of acute chorea, which was based upon a fatal case which he had recently had an opportunity of examining.

A girl, aged 15, who was admitted into the Middlesex Hospital on April 20th, 1899, after having for a fortnight symptoms, which gradually increased in intensity. The whole body was constantly thrown into most violent movements, which were only very temporarily relieved by inhalations of chloroform. In spite of all treatment she died early on the morning of April 23rd. The temperature, which was 100° on admission, rose as high as 104°, and was 103° at the time of death.

On *post-mortem* examination signs of recent acute endocarditis of the aortic and mitral valves were present, but there were no evident macroscopic changes in the brain except hyperæmia and a few minute hæmorrhages into the white matter.

The brain was examined microscopically by the following methods:

1. Fresh nerve cells from the motor area of the cerebral cortex were stained with methyl blue and mounted in Farrant's solution, without the intervention of any hardening processes.

2. The same method of staining was employed after the tissue had been hardened in formalin.

3. Sections of the motor region of the cortex were examined by the nitrate of silver stain, both by the ordinary method and by the modification introduced by Berkeley, which consists in aiding the precipitation of the silver salts by the addition of phosphomolybdic acid.

Pieces of the cortex and medulla were embedded in celloidin, and sections were stained with logwood, and with logwood and eosin. In addition sections of the spinal cord were examined.

The sum total of the changes found consisted of a slight loss of chromatophile substance at the periphery of the cell bodies of the brain, together with some swelling and alteration in the shape of some of the cells. With the nitrate of silver stain some varicosities of the cell processes were seen, but it was considered that they were very likely artificial, and no conclusions were drawn from them. No definite vascular lesions were found. There were no changes found in the motor cells of the spinal cord.

An attempt to obtain a cultivation from the cardiac valves kindly made by Mr. Alex. Foulerton failed, as also did an attempt to obtain micro-organisms from the blood during life. The other tissues examined were the heart muscle and the kidneys, the latter showed no change, but the former showed swelling and indistinctness of the fibres and feeble staining of the nuclei, and had evidently been affected by the same poison which gave rise to the endocarditis.

After briefly discussing the different ideas concerning the causation of chorea, the author concluded that the most reasonable one was that it is due to a toxin circulating in the blood, but considered that at present there was not sufficient evidence to warrant a conclusion that it was of bacterial origin.

Dr. Thomson then discussed the probable significance of the slight chromatolysis and swelling of the cells which he had found, and noted that the latter lesion had also been observed in five cases recorded by Dr. Charlewood Turner.[1] The changes found in the present case were not considered to account for the symptoms, since similar changes were produced by other diseases, but at the same time the author of the paper considered it important that such changes should be recorded so that one day they may possibly obtain their proper significance when more is known concerning the nature of a nervous impulse and its true relation to nerve cells.

Reference.
1 *Trans. Path. Soc.*, 1892.

MORBID CONDITIONS MET WITH AMONG THE NATIVES OF BRITISH NEW GUINEA.

By C. G. Seligmann, L.R.C.P.

A recent stay in British New Guinea, made as a member of the Cambridge Anthropological Expedition, afforded the opportunity of examining the pathological conditions noted in this paper. Some time was also spent in Torres Straits, and since these islands are peopled by Papuans, they may be usefully compared with British New Guinea.

It was on the south-eastern part of the coast line, lying about 10° south between Bulaa in the central district and Lese on the Papuan Gulf, that I had the opportunity of coming into intimate communication with the natives. For the most part this was confined to the coast people, but trips inland, of varying duration, were made from Kapakapa, Port Moresby, and Yule Island. East of Yule Island the country consists of somewhat hilly plains and plateaus, generally dry but at times low and marshy. There is not very much jungle, and the presence of large masses of primitive rock affording ready drainage constitutes a fairly dry country. West of Yule Island innumerable creeks and rivers intersect

a huge mangrove swamp, which stretches backward from the coast till Cape Possession is reached, where the country is again open with a range of hills within a few miles of the coast. The south-eastern monsoon blows constantly for about eight months of the year; this is the dry season; during the remaining four months the north-western monsoon blows, bringing with it the rainy season.

Albinism and Leucoderma.—Throughout the possession diminished pigmentation of the skin seems common; this shows itself as albinism, partial and complete, and as leucoderma. Albinism as seen in British New Guinea is never of the highest degree, for although the skin may be perfectly white the hair is tow-coloured, and the eyes are never pink. These albinos seem to be mentally duller, fatter, and less active in their movements than their normal fellow-countrymen, while they suffer far more from photophobia than does a European with apparently similar pigmented eyes. Besides this marked type, which tends to run in families, there are slighter degrees, varying from an individual with tow-coloured hair and a *café-au-lait* skin, to others in whom the skin is only a shade or two lighter than is normally the case, while the hair is black, and the eyes brown or bluish in colour. Partial albinism is rarer; the only case seen was that of a boy, aged about 3, on whose trunk there was an irregular white patch. This was associated with a diamond-shape flare on the forehead, reaching on to the hairy scalp, and with symmetrical patches on the back of the arms above the elbow, while on both legs there were white areas extending from just above the ankles to mid-thigh; dotted about these there were a few small roughly circular areas of normally black skin. Leucoderma is common, and generally distributed, tending to be symmetrical, and being essentially a disease of a middle and advanced age. The borders of the white patches are always sharp, and in only one case was the bleaching preceded by an increased deposit of pigment. In all cases the disease was limited to the limbs, beginning at the distal end, and spreading slowly upwards.

Eczema is extremely common, and when associated in children with dirt and impetigo, gave rise to a condition resembling or identical with Hebra's prurigo. Lice, which existed in all unshaven heads, caused little inconvenience, and afforded employment to the phtheirophagous natives.

Scabies was seen; though apparently of recent introduction, it is not uncommon.

Tinea imbricata is common, but by no means general in its distribution. It was introduced into Murray Island from the mainland within the memory of the present generation, and a boy covered with this disease who was staying at Yam Island will probably introduce the disease there.

Chronic ulcers of the legs are very common in both sexes. At Murray Island and at Mabuiag there was seen a series of cases of a remarkable disease characterised by the slow formation and gradual breaking down of successive crops of subcutaneous nodules in the region of the ankle and lower part of the leg. The ulcers so formed then healed in part. Meanwhile the foot became swollen and indurated, and fresh nodules formed round the ankle, the dorsum becoming slowly covered with a growth of sessile masses which had a papillomatous surface, and did not tend to ulcerate. The disease is very chronic in its course, and trauma could generally be excluded. No streptothrix was found in the pus exuding from the ulcers, nor were filariæ present in the blood.

Lupus, for the most part of a virulent type, is common both in Torres Straits and New Guinea. In the latter I have seen it in inland folk under circumstances which made it impossible for it to have been introduced by the white man. It may, however, be noted that phthisis or other manifestations of the tubercle bacillus were seen only among Polynesian missionaries, and natives more or less intimately associated with these or with white civilisation.

Tumours of all kinds are rare, sebaceous cysts and enlarged bursæ were however commonly met with.

Leprosy was seen only in the Mekeo district, and seems to be in some way associated with the valley of the St. Joseph River. This river debouches through a mangrove swamp. At its mouth is situated the village of Pinupaka (pop. 92) with two lepers; at Mohu (pop. 246), about a mile from the seashore, situated on sandy soil, but approached through a mangrove swamp there are two lepers; at Inawabui (pop. 220), at the head of the valley, there is a leper, a young girl, in whom the disease has only just made its appearance; at Waima, a series of villages containing more than 1,000 inhabitants, a case was seen. Speaking broadly, the St. Joseph Valley may be defined as a plain of eroded primitive rock covered with rich alluvial soil, sloping gently towards the sea. Fish forms but a small portion of the dietary of the Mekeo natives, and in this connection it may be noticed that no case of leprosy was seen among the Motuans, the most essentially fish-eating people in this part of the possession. All the cases were of the nervous type, progressing but slowly, and in only one were there a few small tubercles on the ears.

Yaws is commonly but unevenly distributed. At times every child in a village would be covered with the eruption, and there was no attempt made to prevent the disease spreading to adults; in spite of this I never saw an adult affected. Syphilis, which has only recently been introduced by the white man, is absolutely unknown in many villages in which yaws is common.

Malaria, which prevails throughout the whole of New Guinea, is commonly of the malignant remittent form, both in the natives and in the whites; among the latter, the hepatic and gastric forms are most common, while in the Mekeo District the Sacred Heart Mission has lost three of its members within a year with blackwater fever. Among the natives the gastric symptoms seem to be the commonest. A condition of primary malarial cachexia, with a chronically enlarged spleen, is frequent, especially in children, many of whom, aged from 6 months to 3 years, have enormously enlarged spleens without any evidence of rickets, which their almost fleshless dietary might suggest.

Dysentery, mainly of the epidemic form, is exceedingly common and very fatal. A recent epidemic at Kalo, a large village situated on the Hood Peninsula, carried off about 15 per cent. of the inhabitants. At the time of my visit Kevori, the group of villages at the eastern border of the Papuan Gulf, was completely deserted, the inhabitants, with the exception of a few old women who were too old to move, having fled to the neighbouring hills to escape the epidemic.

Rheumatoid arthritis was very common but no case of acute rheumatism was seen, nor did the natives suffer from cardiac trouble.

Acute nephritis, though rare, was not unknown, but no case of chronic fibrosis of the kidneys was ever met with, nor were the arteries of the oldest men ever hardened and atheromatous.

Pleurisy, for the most part of the dry type, was common, especially among the young. One case of empyema was, however, seen in Murray Island. Pneumonia was uncommon, not so chronic bronchitis, which was frequent in the aged.

Idiocy is not very uncommon. At Pokama there was a female epileptic idiot, and many communities have their village idiot.

Ophthalmia and corneal opacities are frequent. Pterygium of all degrees of severity, and always bilateral, was everywhere abundant, especially in Torres Straits.

Syphilis and gonorrhœa, except where recently introduced by the white man, are unknown.

A fuller account of morbid conditions met with among Papuans will subsequently be published in the report of the Cambridge Anthropological Expedition to Torres Straits and British New Guinea.

A DISCUSSION ON THE PATHOLOGY OF RENAL TUMOURS.

I.—T. N. KELYNACK, M.D., M.R.C.P.,
Medical Registrar, Manchester Royal Infirmary.

No apology is needed for the selection of the pathology of renal tumours as a subject for discussion when we remember that it is now some sixteen years since the question was prominently brought forward at a gathering of this Association. It was in 1883 at the fifty-first annual meeting, that Mr. Paul, of Liverpool, with the co-operation of several British and American pathologists, attempted to formulate a scientific classification of new growths arising in connection with the urinary system. The record of this private collective investigation acted as an immense impetus to the more thorough

examination of renal neoplasms, and it is now but seemly that we should review the results which time and numerous workers have supplied us. And yet, in spite of much research, we have still to deplore the meagreness and uncertainty of our conclusions. Many of the published cases are rendered practically useless for pathological purposes from the only too cursory and incomplete nature of the examination or description of the histological characters of the growth. Unfortunately also the days of loose nomenclature are not yet past. Only by an exhaustive investigation of every case of renal growth can sufficient material be accumulated to furnish data for formulating a reliable classification which shall indicate not only the genera of these tumours, but also their respective clinical features.

Classification.

It is manifest that any grouping at the present time must be more or less tentative. A desirable division is such that while pathologically correct it may be clinically useful. If possible it should indicate: (1) Structural characters, (2) seat of origin, (3) relation to age, and (4) local and general tendencies of the growth.

In attemping any convenient classification it is essential to recognise such well-established facts as the following:

1. A certain number of renal growths arise during fœtal life while the majority manifest themselves subsequent to birth.
2. Some few are of a simple or benign character, but most have malignant tendencies.
3. They may assume solid or cystic forms.
4. Considerable variation is shown with regard to their seat of origin; and
5. Histologically they more or less conform to the two great tumour types: (*a*) the connective tissue forms, and (*b*) the epithelial forms, although compound and complex varieties not infrequently occur.

It is, moreover, advisable in arranging any complete classification which may be satisfactory clinically to remember that certain growths arising in connection with extrarenal structures cannot, at least, in the majority of cases, and with our present limited knowledge, be distinguished during life from true renal growths.

For some time to come we shall probably be compelled to rely mainly on structural arrangement as a basis for systematic grouping.

The following I venture to submit as at least a convenient and tentative classification:

1. True renal growths...
   - 1. Originating from interlobular connective tissues ... ...
     - (*a*) Benign ... Fibroma, etc.
     - (*b*) Malignant ... Sarcoma.
   - 2. Originating from renal epithelium ... ...
     - (*a*) Benign ... Adenoma.
     - (*b*) Malignant ... Carcinoma.
2. Pelvic growths, generally malignant papilloma (epithelioma).
3. Hilum growths, generally sarcoma.
4. Capsular growths, generally sarcoma.
5. Growths arising from adrenal inclusions.
6. True adrenal growths ... ...
   - (*a*) Benign ... Adenoma.
   - (*b*) Malignant ... Sarcoma.
7. Perirenal growths ... ...
   - Fibro-lipoma.
   - Sarcoma.

General Considerations.

Primary renal tumours are by no means common. I find from an examination of our Manchester records that they are met with in a little less than ½ per cent. of all cases submitted to necropsy. This seems to be in accord with the returns of pathologists elsewhere In my experience they form from 2 to 3 per cent. of all cases of primary malignant disease examined *post mortem*. Even secondary growths of the kidney are far from common. From our pathological reports I estimate that they occur in about 8 per cent. of all cases of carcinoma and over 14 per cent. of all cases of sarcoma.

Renal sarcomata certainly seem to be the commonest form of abdominal growth met with in children.

Comparatively little is known respecting the etiology of renal growths. They are shrouded in the darkness and mystery which more or less envelops all true tumour formations. Strong evidence, however, is forthcoming to suggest that some at least may be accounted for by embryonic defects such as a faulty segmentation of the pro-vertebral somites, development of heteroplastic remnants of the Wolffian bodies, or proliferation of adrenal inclusions.

Hereditary predisposition is not a marked feature of these cases, and traumatism, although claimed by some writers, is probably a factor of no importance. Attempts have been made to show that there is an etiological connection between renal calculi and new growth, similar to that which undoubtedly exists between carcinoma of the gall bladder and gall stones.

Renal growths occur in all races in both sexes, among all classes, and at all ages. Several have been met with in negro children. As to the influence of sex on the various forms of growth, our present data is insufficient for the forming of a satisfactory opinion. Most authors claim that males are more frequently affected than females, but this is not in accordance with the returns afforded by cases which I have collected.

The influence of age is very striking. From an analysis of 160 collected cases I find that 84, or over 52 per cent., originated below 10 years of age, and of these no fewer than 74 were under 5 years. It has also been conclusively shown that renal growths may arise during intrauterine life. From the standpoint of age renal tumour may be conveniently divided into:

1. Fœtal or congenital growths.
2. Growths in infancy and childhood.
3. Growths of active adult life.
4. Growths arising in declining life.

Little need be said here respecting the general characters of renal tumours. These are best dealt with when the individual forms are under consideration. As regards actual size there is every variety. The sarcomata often reach immense proportions. The carcinomata are usually much smaller. The average weight of 24 sarcomata from subjects whose average age was 3 years, was over 124 ozs.

In perhaps the majority of cases a uniform shape is more or less retained. The variations in colour are mainly dependent on the degree of vascularity or the extent of degenerative changes. The consistency varies greatly, the sarcomata and malignant trabecular cystomata are usually soft and pliable, while the adenomata and carcinomata tend to be firm and dense. There is practically no difference in the frequency with which the different kidneys are affected; and in the sarcomata, particularly the striated-cell variety met with in infancy, a bilateral involvement is frequent.

A.—Tumours of a Connective Tissue Type.

We may now proceed to consider the growths which are conveniently classed as those of a connective tissue type. They are divided into (1) the simple or so-called benign forms; and (2) the malignant or sarcomata.

I.—Simple or Benign Growths.

These are extremly rare and of little or no practical importance. They are usually of a fibrous or lipomatous nature. A fibroma occurs as a firm, small, rounded nodule. Some of those recorded may possibly have been adenomata. Several cases have been published where large fibro-cystic or fibro-lipomatous growths were removed by operation. Probably some of these were really perirenal in origin. Lipoma of the kidney is a very unusual form. Some of the so-called lipomata have been shown to be developments of aberrant adrenal tissue. Undoubtedly some of the cases on record have originated in circumrenal structures. Angiomatous growths are occasionally met with. In some instances they closely resemble in general structure the cavernous angiomata of the liver. Sometimes more complex forms are met with. Some of the trabecular cystomata may present a strikingly vascular appearance. The other forms of simple growth of the connective tissue group are mere curiosities and call for no special note.

II.—The Renal Sarcomata.

The great bulk of the growths of the kidney are of the malignant connective tissue type. These sarcomata may most conveniently be divided according to (1) the period of life at which the growth develops; (2) its seat of origin; and (3) the histological characters.

(I.)—Sarcomata Considered in Relation to Period of Life.

1. *Fœtal Sarcoma.*—It is now generally recognised that renal sarcoma may originate during intrauterine life. Indeed it

may reach a size sufficient to produce dystocia. Probably a number of those met with early in infancy commence their development before birth. The rhabdomyomata, in particular, commence their growth at a very early period. There is much in favour of the view that at least some of these congenital sarcomata originate in Wolffian remains.

2. *Sarcoma of Infancy and Childhood.*—The first five years of life are peculiarly liable to malignant disease of the kidney, which is nearly always of a sarcomatous type. From an analysis of a large number of cases I find that over 46 per cent. of those met with in early life occur under three years of age. My numbers also tend to show that girls are a little more liable than boys. If this be so, it raises a point of much embryological interest. In about half of the cases the kidneys are involved bilaterally, thus conforming to what seems to be a more or less general tendency with growths affecting paired viscera. They nearly always grow rapidly, and often assume enormous dimensions. Usually they give rise to little or no pain, and urinary symptoms are generally inconspicuous. The ureter is not often invaded, but the veins are almost always encroached upon, and secondary deposits occur in the lungs, liver, and lumbar, mesenteric, and vertebral glands.

3. *Sarcoma of Adults.*—Sarcoma, although specially associated with the first few years of life, may develop at any age. It is, however, rare in youth when general development is particularly rapid. The years from five to thirty are peculiarly free. From my collected cases I find adult females more frequently affected than males.

(II.) Sarcomata Considered According to their Seat of Origin.

This is a practical grouping, and one of much interest both to the pathologist and to the surgeon. The following varieties may be recognised: (1) Capsular; (2) intertubular: (3) hilum; and (4) perirenal.

1. *Capsular Sarcomata.*—These spring from the renal capsule in much the same way as a sarcoma arises from the periosteum of a bone. Unless met with in an early stage it may be difficult to define its precise seat of origin. There are, however, several cases on record and some in our hospital museums which conclusively demonstrate that a renal growth may arise in this way. The kidney becomes displaced and flattened, or separated from the growth by fibrous tissue. The growth may spread beneath the capsule, encroach on the renal cortex or perforate the capsule and envelope the kidney.

2. *Intertubular Sarcomata.*—These spring from the connective tissue of the cortex and medulla, or perhaps in some cases from the perivascular and perilymphatic structures. The growth infiltrates the renal substance, and the capsule in early forms can be seen covering the growth, and often the kidney tissue can be detected surrounding or extending over the tumour. The sarcomata met with in adults seem generally to belong to this class.

3. *Hilum Sarcomata.*—These constitute a most important and interesting class. The connective tissue around the pelvis and calyces form the starting point. A large number of the sarcomatous growths in children originate from these structures. The growth at first lies outside the kidney substance, and it is only after some time that the kidney becomes encroached upon, expanded, replaced, or flattened out, so as to be hardly recognisable.

4. *Perirenal Sarcomata.*—These, strictly speaking, should not be included, since they are altogether extrarenal in origin. Clinically, however, they closely resemble the true renal growths, and hence may be mentioned. They arise in connection with the connective tissue elements of the fatty capsule of the kidney, and consist of a fibro-lipomatous tissue, with generally more or less evident sarcomatous elements. They usually develop slowly, often reaching an enormous size before death.

(III.) Sarcomata Considered in Relation to their Structure.

This is perhaps the most interesting and instructive division, and certainly the most attractive to the student of morbid histology. It suggests relationships and affinities, and already we can recognise clinical differences according to structural arrangement. The complicated combinations not infrequently met with still make the question one of considerable perplexity and uncertainty. The majority of the sarcomata consist of round and spindle cells in varying proportion. The round seem to be the most rapidly growing and malignant in character.

The striated-cell sarcoma, often spoken of as the rhabdomyoma, is met with almost exclusively in the fœtal forms and those met with in infancy. This variety is often termed the "congenital sarcoma." Mixed with the round cells are elongated and transversely striped cells. They are generally smaller and thinner than true muscle cells, and have no sarcolemma. Much variation in size and degree of striation occurs. It has been suggested that this form arises from inclusion of muscle elements due to faulty segmentation of the primitive muscle plates.

Some believe that the striated cells are derived from the muscular tissue of the renal pelvis. Others think the fibres are not to be looked upon as muscle elements at all, but merely ribbings on the surface of a tissue which is not contractile. It is suggestive to note that this curious form of cell is met with especially in hilum growths.

In many of these so-called myosarcomata duct-like structures are met with. They generally appear like sections of tubules lined by columnar epithelium. Apparently they are derived from true renal tubules, and some observers have considered them as representing stranded uriniferous tubules encroached upon and surrounded by sarcomatous tissue.

These growths, as already indicated, are very frequently bilateral, although one kidney may be much more involved than the other. I recently had the opportunity of carefully investigating a striking example met with in a child 1 year old. The right kidney formed a huge mass weighing 108 ozs.; the left kidney was much smaller, weighing only 28 ozs.

Very vascular forms or angio-sarcomata are occasionally met with. I am inclined to believe that they originate more particularly in connection with the perivascular tissues. They sometimes seem to arise in the neighbourhood of the hilum, and, encroaching on the pelvis, give rise to profuse hæmaturia.

A certain number of the sarcomata present a distinct although variable amount of glandular-like tissue mixed up with true sarcoma cells. These adeno-sarcomata constitute a very definite variety. The gland-like elements usually occur as groups of tubules lined by well-defined cubical or columnar epithelium, and more or less closely resembling the tubules of a fœtal kidney, but sometimes the epithelial elements have a less definite form and arrangement.

Compound and complex forms not infrequently occur. Alveolar sarcoma has been described, and is thought to arise in connection with the endothelial lining of lymphatic or vascular channels. Myxosarcoma is simply one of the ordinary forms in which myxomatous degeneration has taken place. Liposarcoma had been described, but I am inclined to think that it is really of perirenal organ. Melanotic sarcoma is always secondary. The kidneys are not infrequently affected when general dissemination is met with.

B.—Growths of an Epithelial Type.

This class includes the adenomatous growths and true carcinomata.

I. Adenomatous Growths.

1. *Simple Adenomata.*—These form a small and unimportant class. They may be met with as (i) single or (ii) multiple nodules, limited in extent and usually in size. According to their structural arrangement, (i) solid or glandular and (ii) cystic forms may be recognised. Some pathologists further divide them into (i) papillary and (ii) alveolar varieties.

2. *Trabecular Cystomata.*—These are perhaps best classified in this group. Transitional forms are not infrequent. Some have thought that they have relationships to growths of adrenal origin, but this seems doubtful. The simple forms appear as aggregations of minute cysts. Each cyst is lined with cubical or columnar epithelial cells.

3. *The Papilliferous Cystomata.*—These generally manifest malignant characters, and must be regarded as closely related to the carcinomata. They present papillary ingrowths, each covered with a single layer of columnar or cubical epithelium. The varying complexity of the intracystic formations depends probably upon rate of growth and adaptation to adjacent structures. The vascular character is often very conspicuous. Sometimes an almost angiomatous appearance is assumed. These growths appear to originate in connection with the urinary tubules. They give rise to secondary deposits. I have met

with a case in a woman, aged 33, where the liver presented enormous masses which closely recapitulated the structure of the primary growth in the kidney.

II. Carcinomata.

Until recently our nomenclature has been so indefinite that it is exceedingly difficult to make any use of the old records respecting "cancer" of the kidney. Undoubtedly many, if not most, were really sarcomatous. Of recent years the sarcomata have almost monopolised the attention of pathologists, and the study of the carcinomata has been much neglected. We are thus left with inadequate material for a satisfactory classification or description of the varieties of this class of renal growth. At the present time it is almost hopeless to attempt to do more than indicate approximately their general characters. Renal carcinomata probably never occur in early life. They are uncommon before middle age; after 50 they increase in frequency. They seem to occur in two chief forms: (1) the glandular type or true carcinoma originating in connection with the urinary tubules; and (2) the surface form or epithelioma, springing from the lining epithelium of the pelvis and calyces.

1. The *true renal carcinomata* assume either (1) a nodular or (2) an infiltrating arrangement Usually they are of a soft, cellular structure, although scirrhus and colloid varieties are also described. In the most typical forms an adenomatous arrangement is well marked. In size they are generally much less than the sarcomata, and usually develop more slowly. They tend to extend into the pelvis, and hence hæmaturia is frequently a marked symptom. They are practically always unilateral. Secondary deposits are not formed until late.

2. The *papillomata* occurring in the renal pelvis seem to be almost always of a malignant character. Several have been described as associated with calculi. They appear as very vascular villous growths, much resembling those met with in the urinary bladder. As might be expected, profuse hæmorrhage is a prominent symptom, and not infrequent attacks of pain resembling renal colic are experienced. Sometimes a certain degree of hydronephrosis results. A number of these growths have been subjected to surgical interference of recent years.

C.—Renal Growths and Adrenal Inclusions.

Hitherto I have only indirectly referred to the intensely interesting but most perplexing class of tumours which it is supposed originate from included suprarenal tissue. Adrenal "rests," as they are called, have been found in the periadrenal fat, in the tissues around the solar plexus, in the mesentery, in the broad ligaments, and within the kidney capsule. Is there a relationship between certain forms of kidney growth and aberrant adrenal structures? This is answered by many pathologists unhesitatingly in the affirmative. It certainly is a fascinating view, but the facts on which it rests are still meagre, and I cannot help but think that the judgment of some is only too apt to be captured by a suggestion so attractive. We have still need for diffidence and caution in treading on such new ground. Still one is compelled to admit that there is undoubtedly a group of renal tumours which presents a structure closely resembling the zona fasciculata of the suprarenal bodies. Although of adenomatous appearance they have affinities with the sarcomata rather than the carcinomata.

The number of cases on record which may fairly be considered as belonging to this class are probably under 40 in number, and hence it is dangerous to attempt any conclusions.

We are quite in the dark as to the influences which lead a so-called "rest" to take on indefinite growth. These tumours seem to be commonest in males, and usually occur in elderly adults. In 32 cases the ages averaged—males 50, females 45. Tumours considered as belonging to this class have been described as occurring in children. Certainly curious adenomatous growths are sometimes met with in young subjects, but I have not been able to convince myself that they are of adrenal origin. Usually only one kidney is affected. Generally the growth develops slowly and long remains local. Secondary deposits occur in many of the cases. Several believed to belong to this group have been successfully removed. Some pathologists believe that the so-called endotheliomata and endothelial sarcomata and probably certain forms of the angio-sarcomata are closely related to this class. There is no group of renal tumours needing more thorough investigation than the adenomatous group.

1. The *benign or simple growths* occur as the so-called "adenomata." They are met with as (1) multiple nodules, or (2) large single forms. They present a structure closely resembling the normal adrenal tissue. There is generally an abundant fine fibrous stroma, with epithelioid cells arranged in masses or in columnar form. Sometimes spaces lined with cubical cells occur, and they occasionally present papillomatous ingrowths.

2. *Sarcoma* constitutes the usual form of malignant adrenal growth. They are of rare occurrence, but I have been able to collect a fair number.[1] They occur at all periods of life, but a considerable proportion are met with at early ages. The sarcomatous elements often vary much in size, shape, and general arrangement. In some multinucleated giant cells have been conspicuous. In some of the recorded cases manifestations of a profound nutritional change have been striking clinical features.

D.—Adrenal Growths.

In considering the tumours of the kidney a word in passing must be given to the growths of the adrenals, as clinically they are almost indistinguishable from renal growths proper, while pathologically they closely resemble certain growths met with in the kidney, and by a study of the one light may be expected to be thrown on the characters of the other.

In these necessarily condensed notes, while endeavouring to indicate what has been accomplished I have more especially desired to insist on what yet remains to be done in the unravelling of the structural details of renal tumours. Each genus must receive individual study, for since each has its own particular structure it may reasonably be expected that each will present more or less definite signs and symptoms.

Possibly the time has arrived when a collective investigation might do much to further our knowledge by the gathering together of specimens, the comparison of cases, the consideration of possible relationships, the correlation of clinical histories with exact pathological features and the sifting of literary material.

Of this we may be certain, if further progress is to be made in the early recognition and effectual treatment of renal tumours more precise pathological information must be forthcoming, especially with regard to the consideration of structural features in association with clinical manifestations. Only by the accumulation of exact data can we hope to formulate directions whereby the surgeon may know when he can hopefully undertake operative measures or when he will most benefit his patient by staying his hand.

II.—W. Roger Williams, F.R.C.S.,
Clifton.

Mr. Williams thought that it was necessary to consider the renal tumours of early life apart from those occurring at later periods. The latter were of great rarity, whereas the former were the commonest form of malignant disease in infants. Of 8,371 consecutive cases of primary malignant tumours in adults, the author found that only 32 had occurred in the kidney; of 7,297 cancer, 24 were renal; and of 1,074 sarcomas, 8 were renal. The malignant tumours of adult life resembled those met with in other glandular organs, but those of infancy presented many features of special interest. They were the commonest malignant tumours of early life; of 424 sarcomas in infants, Picot found that 80 were renal. The tumours were remarkable for their malignancy, which might be partially due to the fact that they were often multiple *ab initio* and bilateral in origin. At any rate, of the very numerous cases that had been operated on, but very few survived three years afterwards. With regard to their origin, he thought the most important conclusion of recent research was the demonstration of their genesis from developmental irregularity, which had been certainly proved for the adrenal variety. With regard to those varieties in which epithelial tubules and papillary cystic formations were present, he thought the

[1] *Renal Growths, their Pathology, Diagnosis, and Treatment*, 1898, p. 172.

indications pointed in the same direction, although they might not be so convincing. It might not be necessary to go back to quite so remote a period of fœtal development for the germs of the forms as the speakers had indicated. He thought that many of these tumours arose from imperfectly-developed aberrant renal lobules not properly integrated in the process of development.

III.—J. O. WAKELIN BARRATT, M.D.,
Pathologist, West Riding Asylum, Wakefield.

DR. BARRATT said that he had carefully studied the *post-mortem* records at the West Riding Asylum, Wakefield, and in 4,118 of these the condition of the kidneys was stated. In only 8 of these was a malignant new growth of the kidney found. These cases, with one exception, had not been submitted to microscopic examination or, at any rate, no microscopic examination was recorded, so that some hesitation might be felt as to the pathological nature of the kidney condition, but in the cases of secondary growths the description of the seat and characters of the primary lesion generally served to confirm the conclusion arrived at as to the renal condition. The cases were briefly as follows: In the first case a female, 40 years of age, both kidneys contained secondary foci of melanotic sarcoma. The second case, a male, 56 years of age, presented a tumour of the size of a marble, which appeared on microscopic examination to be an adenosarcoma. In the third case, in which as in the two previous cases the tumour was primary, there was a nodule of the size of a pea in one of the kidneys, which was stated to have the characters of scirrhus. The next 4 cases were secondary. In the fifth case, male, 41 years of age, both kidneys contained secondary scirrhous nodules, the primary growth being in the situation of the pancreas. In the sixth case, a female, 43 years of age, the primary growth was scirrhus of the breast. In the next case, a male, 59 years of age, the kidneys were involved in a primary adrenal glandular epithelioma. In the eighth case, male, 40 years of age, there was carcinoma of the kidney secondary to a growth in the testis. Thus it would be seen that altogether 8 cases of renal tumour were recorded, 3 primary and 4 secondary, out of 4,118 cases, representing a percentage of 0.2, which would presumably approximate to that of the adult population in the districts from which the asylum was peopled. In addition to the above one tumour of the kidney was described as simple, namely, a fibrous tumour in a male 52 years of age. Four other kidneys were described as having a small tumour, but no information was afforded as to its nature.

IV.—W. S. LAZARUS-BARLOW, M.D.
Demonstrator of Morbid Anatomy, St. George's Hospital.

DR. LAZARUS-BARLOW said that he had examined the *post-mortem* records for the last thirty-six years at St. George's Hospital, and had found only 14 cases of primary renal growth recorded. Besides these the hospital museum held five renal tumours derived from other sources. He brought forward, therefore, 19 cases of renal tumour, and of these satisfactory microscopical examination had been made in 10, while in 2 others, although microscopical examination had been made, the results were unsatisfactory, owing to the changes undergone by the specimens during the years that had elapsed since they were first placed on the shelves of the museum. Of the 10 specimens concerning which it was possible to speak, 3 were villous columnar cell carcinomata, 3 spheroidal cell carcinomata, 3 round or irregular cell sarcomata, and 1 a rhabdo-myo-sarcoma. With regard to the 2 doubtful specimens, so far as it is possible to speak, he thought 1 was a spheroidal cell carcinoma, and 1 a spindle cell sarcoma. The 3 cases of villous columnar cell carcinoma were all found in adult men, their ages being 34 years, 48 years, and 62 years. The left kidney was affected in 2 cases, the right in 1. Of the 3 cases of spheroidal cell carcinoma 2 occurred in adult men, ages being 42 years and 52 years. Details concerning sex and age of the patient in the third case were wanting. In both of these cases the left kidney was affected. Of the 4 cases of sarcoma, 3 were in children, their ages being 13 months, 3 years, and 5 years; 1 was in a man, aged 52. In 2 of the cases the left kidney was affected, in the others the side was not recorded. With regard to sex, information on this point was given in 17 of the 19 cases quoted; of these 17, 13 were males, 4 females. It was interesting to note that there was at St. George's Hospital no record of a male under the age of 21 as suffering from renal tumour, whereas out of 4 female cases 3 were in girls under 5 years of age; the fourth was a woman aged 54. With regard to the side affected, probably it was in some measure, if not entirely, accidental; but of the 17 cases in which the information was given, 12 were on the left side.

V.—F. S. EVE, F.R.C.S.,
Surgeon to the London Hospital.

MR. EVE said he thought it was proved (from the observations and slides shown by the openers of the discussion) that certain of the congenital tumours of the kidney were due to inclusion as "rests" of the mesonephros. He pointed out the analogies between such tumours and cystic disease of the testis. The latter he had endeavoured to show was developed from remains of Wolffian body tissue lying in the hilum. The testicle was expanded by the tumour, which began near its centre. By contrast in the kidney the growth began outside the organ, and therefore invaded the hilum, bored into its substance or spread under its capsule. He pointed out the homologies between these growths in regard to minute structure. He mentioned the tendency of some renal tumours to undergo caseous change, and cited a case of growth in which at an exploratory operation it was impossible to say from the naked eye appearance if the disease were tumour or caseous tubercle. In regard to cystic disease of the kidney of adults, he mentioned an observation which tended to show that the connective tissue was greatly increased and that some of the cysts were dilated lymphatics. This was shown by injecting the connective tissue with Prussian blue. This observation suggested the possibility that there was primarily an overgrowth of connective tissue and lymphatic structures with secondary dilatation of urinary tubules.

THE PHYSIOLOGICAL ACTION OF DIPHTHERIA TOXIN.

By T. G. BRODIE, M.D.,
Director of the Research Laboratories of the Royal Colleges of Physicians and Surgeons, London.

THE object of the following experiments was to determine the more immediate effects of diphtheria toxin, and to find the causes of death when this happens within forty-eight hours after an injection. Throughout these experiments cats were the animals usually employed.

If, while the blood pressure is being recorded, a broth solution of diphtheria toxin be injected into the central end of the external jugular vein a large and rapid fall in blood pressure is produced, followed by a slower recovery to the normal height. An injection of broth in which the toxin has been destroyed causes a similar fall in pressure, but a great difference is seen in the course of the recovery. With broth alone recovery is very rapid, and if the injection be repeated a few times a condition of tolerance is soon brought about and the broth no longer causes any marked effect. With toxin broth, however, the effect is very different, recovery of blood pressure is always much slower, and, if the dose be repeated several times, may become extremely prolonged, in some cases to as much as half an hour. Though later injections of the toxin do not produce so great a fall in pressure, yet the fall is much more marked than when broth alone is injected.

This result showed that the toxin had affected either the heart or the blood vessels, and the next series of experiments were designed to investigate this point.

In perfusion experiments upon the frog's heart and the mammalian heart it was found that the force and regularity of the beat were practically unaffected, even if the experiments were continued for eight to ten hours. Later experiments, in fact, showed that the heart gave no signs of being affected until the toxin had acted upon it for at least twenty-four hours, and then it suddenly showed a loss of regularity in rhythm and force, which was soon followed by complete cessation of beat.

The cause of the late recovery of blood pressure observed during the first experiments was therefore to be sought for in the state of the blood vessels rather than in the heart. The

experiments which best showed that the blood vessels were affected, were some in which the animal was asphyxiated after toxin had been injected. In these cases no rise in pressure occurred, no Traube-Hering waves were present and the pressure began to fall very early. The whole course of asphyxia was very rapid, often only lasting one-quarter of the time usually taken by a similar experiment in an uninjected animal.

It was very noticeable throughout these experiments that even if, as in some cases, they had lasted ten or eleven hours and large doses had been injected, the blood pressure was well maintained and there was no sign of impending death.

In order to study the state of the vascular system shortly before death, an animal was injected with a dose sufficient to kill in about thirty-six hours, and towards the end of that period was anæsthetised and its blood pressure recorded. As a rule it was found to be at nearly a normal height, the only difference to be observed consisting in a few irregularities recurring pretty frequently upon the tracing. In those cases in which the animal died whilst the pressure was being recorded the pressure was found to fall very rapidly, death usually following about ten to fifteen minutes after the first sign of a fall in pressure had commenced. This fall, again, was due to relaxation of the blood vessels, and the heart continued beating strongly to the end. It was found possible, moreover, to keep the heart beating for some time time longer if it was perfused with warm defibrinated blood, though after a time—usually about one or two hours—it became irregular and finally ceased to beat. Thus, in all cases observed, the blood vessels failed before any appreciable change in the heart's action could be detected.

Another very striking point in all these experiments was that up to quite a short time before death, both the vessels and the heart were apparently in nearly a normal condition and that the first signs of failure were very rapidly followed by complete paralysis and death.

From these and other confirmatory experiments it is shown that the chief cause of death following within forty-eight hours of an injection is due to a failure of the blood vessels and consequent fall of blood pressure. Whether the failure is due to the action of the toxin on the muscular walls of the arteries or on the nerve centres or nerves is at present not decided; though, so far as they go, the experiments show that the first is the true explanation. The action on the blood vessels is further indicated by the rapid fall in temperature which is observed to take place during the few hours preceding the death of the animal.

Another organ whose reaction to the toxin was studied was the spleen. The method consisted in enclosing the spleen in an air oncometer, and recording its changes in volume by a tambour. If, while the normal splenic record was thus being obtained, a dose of toxin was injected, very characteristic contractions of the spleen were obtained. The first effect was a great increase in the extent of the usual splenic contractions, which was soon followed by a marked tonic contraction of the spleen lasting for about two minutes, and then succeeded by a gradual and persistent relaxation, the splenic curve often recording some two inches above the mean level of the first part of the tracing.

If a similar experiment were performed upon an animal which had been injected with toxin some twenty-four hours previously a different condition was observed. The spleen was always considerably engorged, of a dark purple colour, and softer to the touch. The volume record of such a spleen showed the cardiac and respiratory waves, but the waves of splenic contraction were poorly marked or even altogether absent. If now a dose of toxin were injected, the reaction of the spleen was very slight, and in some cases quite absent. The difference depended upon the time after the injection at which the record was commenced, for the later this was taken the less the spleen reacted. In one experiment in which the spleen volume was recorded for ten hours following the injection of a lethal dose the gradual disappearance of the large splenic waves was observed, and at the end of that time the tracing simply showed small cardiac and respiratory waves. Here again the action of the toxin upon the spleen seemed to be chiefly restricted to an action upon its muscular tissue.

A CASE OF GUMMATA IN THE HEART WALL.

By W. S. Lazarus-Barlow, M.D.,
Demonstrator of Morbid Anatomy, St. George's Hospital.

This specimen is interesting by reason of the rarity of the condition which it exemplifies and also by reason of the bearing it has upon the pathology of fibroid degeneration of the heart. Common as syphilitic lesions are in many other regions of the body—notably in the liver—syphilis affecting the heart is excessively rare.

The patient from whose body the present specimen was obtained was a man aged about 40, who was found by the police in Hyde Park and was brought into St George's Hospital. When admitted he was dead, and there is reason to believe that he was already dead when the police first discovered him, though a very short time previously he had been walking about. It was shown that he had lived a very irregular life for at least the last seven years.

The body was very fat, but beyond the morbid condition of the heart and great vessels, to be mentioned immediately, there was little to note in the organs. An important piece of evidence, however, was offered by the liver, for on the convexity of the right lobe there was a small depressed scar most probably denoting the former position of a gumma. There was no other evidence of syphilis in the body. The heart weighs 17 ozs. The auricles are practically normal though the endocardium is a little thickened on the right side and considerably thickened on the left. The mitral, tricuspid, aortic, and pulmonary valves are all normal. The coronary arteries at their orifices and along their courses are also normal.

The interest of the specimen lies in the conditions of the ventricles and of the aorta and pulmonary artery. The left ventricle is considerably dilated and hypertrophied. Its muscle, though pale, appears to be normal except in certain regions where there are small localised collections of a white substance. This white substance is in agglomerate masses varying in size from about a hazel-nut to a pea. The largest masses, two in number, lie in the wall of the ventricle about one inch to the left of the septum; smaller masses, four or five in number, lie still further to the left, while two or three masses are observable in the substance of the septum itself. These masses are chiefly found about the base of the heart, they are for the most part subpericardial, and in no instance are they directly subendocardial. In the case of the three largest, which are frankly subpericardial, it is seen that the pericardium is congested so that a delicate network of capillaries shows itself very clearly on the background of the white substance immediately beneath. Besides the foci to which reference has been made, there appear to be others in the ventricular wall, but the pericardium is somewhat thickened and there is a considerable deposit of fat upon the heart, so that this point must be left doubtful.

The right ventricle is the seat of a somewhat different change. Immediately beneath the septal wall, it is true, there is an agglomerate mass similar to those in the left ventricular wall, save that there is here far less capillary injection. But the principal change is a very diffuse affection of the columnæ corneæ and musculi papillares. Though the general shape of these parts is not altered, they show a diffuse mottling from the presence in them of a number of ill-defined, irregular white foci, many of which involve the whole thickness of the portion of muscle concerned. There is a complete absence of that vascularity about the white masses in the right ventricle which is so evident about the white masses in the left ventricle, and, as will be seen later, there is a corresponding difference in their nature. The right ventricular wall is thin, and the superficial fat has encroached upon it to a very considerable extent, but the ventricular cavity is not greatly dilated.

The pulmonary artery and aorta are the seat of atheroma. In the aorta the atheroma is soft and extensive, but not more extensive than is often the case. In the pulmonary artery, on the other hand, the amount of atheroma, though actually much less than in the aorta, is phenomenal. Here, as in the aorta, it is of the soft variety, but has not undergone so great an extent of fatty change, and for that reason is not quite so evident. It has involved very nearly the whole of the artery, and is in places collected into masses which project above the mean level of the intima. It was principally confined to the main artery, but extended in the form of discrete nodules in the branches until they entered the root of the lung.

Microscopical Appearances.—The microscopical appearances on the two sides of the heart are widely dissimilar, though a connection between them is easily traceable. Speaking generally the white masses in the left ventricular wall consist of small round cells with very little fibrous tissue, those in the right ventricular wall consist of well-formed fibrous tissue with relatively few round cells. In both cases there is a marked destruction of cardiac muscle, minute portions of which, with irregular edges, lie between chains or rows of small cells in the one case, strands of fibrous tissue in the other. The white masses even in the left ventricle, where they appear to be well limited, are not so in reality, for the cells and fibrous tissue stretch far into macroscopically normal myocardium until they become merged into the general structure of the heart muscle. Except so far as it is destroyed by this cellular growth the myocardium appears normal, but the interstitial tissue throughout is more cellular than normal. Numerous well-formed giant cells are present throughout the masses on this side of the heart. The white masses in the right ventricle consist of young fibrous tissue, fibroblasts and round cells being more numerous than is usual in a case of definite fibroid disease of the heart. Nevertheless there is no doubt that on this side of the heart there is fibroid disease in the usual acceptation of that term.

The condition in the left ventricle is definitely inflammatory, so that it might be spoken of as syphilitic myocarditis. As evidence of this are the capillary injection about the masses, the large number of small round cells of which they principally consist, the giant cells, and the destruction of heart muscle which they have occasioned. Moreover, the small amount of congestion and the presence of many leucocytes with little or no tendency to softening, together with the presence of newly-formed fibrous tissue, are indications of chronicity. An important point with regard to the syphilitic origin of the lesions before us is the fact that

there is a complete absence of endarteritis obliterans, and this fact probably accounts for the absence of softening or caseation.

I have examined the *post-mortem* records of St. George's Hospital for the last thirty-five years, during which almost exactly 11,000 necropsies have been made, and I have only found 8 cases in which there was reason to believe that gumma of the heart was present. The following are shortened notes of these cases:

CASE I.—Female, aged 48. "In the left ventricle.....was a large ragged outgrowth which was attached to the wall just under the aortic valves. This appeared to consist of a mass of fibrin which had commenced in the muscular tissue, protruded through the endocardium, and latterly become coated with recent vegetations. The aortic valves were completely overhung by the mass all round, so that the exit of the ventricle was reduced to a small proportion of what it had been. On making sections, in various places of the muscular wall many small patches of softened and altered tissue were discovered, which it was conjectured indicated the commencement of a very similar change. The right ventricle .....was natural." The patient was a fortnight in hospital, had several attacks of syncope, in one of which she died. There were no other evidences of syphilis. *Post mortem* and Case book, 1863, No. 30.

CASE II.—Female, aged 41. The heart weighed 10 ozs.; the walls of the left ventricle were thin. "The muscular tissue near the apex was extensively replaced by a yellow fibroid structure, and on section of the wall of the left ventricle an angry red mottling was noticeable under the pericardium covering these yellow patches. The microscope revealed the nature of the growth, which consisted of altered blood undergoing vascularisation and fibrosis." The patient died of cerebral softening, the result of atheroma of the right middle cerebral artery. Previous to death she had four slight paralytic attacks during a period of two years. She died suddenly. No other evidences of syphilis. *Post-mortem* and Case book 1879, No. 137. Specimen preserved in museum, St. George's Hospital, ser. vi, 15 H.

CASE III.—Female, aged 24. "Pericardium universally adherent.....the adhesion was especially strong at certain points where the visceral layer was thickened into opaque yellowish-white patches.....It was thought probable that these deposits were of a gummatous nature." There were numerous other evidences of syphilis. The patient died gradually in hospital. *Post mortem* and Case book 1879, No. 229.

CASE IV.—Male, aged 50. "A new growth about the size of a chestnut of an opaque yellowish-white colour and firm in consistence was found in the septum ventriculorum at the posterior part near the apex. A similar growth was found in the septum at the base. Other smaller growths presenting similar characters were found in the muscle of the right ventricle and at the base of the pulmonary artery." The patient was admitted in a state of great prostration and died quietly a few hours later. No evidence of syphilis in body. *Post mortem* and Case book 1883, No. 334. Specimen preserved in museum, St. George's Hospital, ser. vi. 15 J.

CASE V.—Male, aged 45. "A small, round, whitish mass the size of a pea in the wall of the left ventricle (gumma?)" Run over by an omnibus. Pigmented scars over the tibia, no gummata in liver or elsewhere in body. *Post-mortem* and Case book, 1888, No. 228.

CASE VI.—Male, aged 34. "In the wall of the right ventricle especially underneath the visceral pericardium but also in the musculi papillares there are firm white nodules about the size of a pea, there are very few in the walls of the left ventricle and these are quite close to the septum ventriculorum. In one place only, near the level of the auriculo-ventricular sulcus in the septum is there any softening down of these nodules. These nodules do not have any relation to the course of the coronary branches; their branches are perfectly healthy as far as they can be opened up. The septal wall of the right ventricle is densely studded with these small gummata and the overlying endocardium appears somewhat opaque." Microscopically the white masses in the heart wall were composed of small round cells infiltrating and replacing the muscular tissue of the heart. There are no spots of definite caseation. There is no fibrous tissue, so the granuloma is of a very recent date indeed. There are a few giant cells. The small arteries in the neighbourhood of these granulomata appear normal. Both testes fibrotic and a small gumma was present in the right, scar on penis, and other signs of syphilis. Patient died from accident. *Post-mortem* and Case book, 1892, No. 286; see also *Trans. Path. Soc., Lond.*, 1893, vol. xliv., p. 35.

CASE VII.—Male, aged 38. "Occupying the upper half of the wall of the left ventricle at the back of the heart is a fibrous network with gummata. The latter are of the size of small beans, of a greenish-yellow colour, and one or two of them are so soft that, on pressure, they oozed out like pus. The gummata were about five in number, and merged into the fibrous infiltration at their edges. There was no adhesion of the two layers of pericardium over the diseased region, but the surface was opaque and irregular ..... The whole back of heart was also very vascular ..... There was visible inside the left ventricle a yellowish mottling which chiefly affected the diseased area, the posterior columnæ carnæ, and the adjacent septum. On section this is seen to be due to fibrous (?) streaks and patches." Testes markedly fibrotic but no other signs of syphilis. Patient died of lobar pneumonia. *Post-mortem* and Case book, 1896, No. 202.

CASE VIII.—The present specimen. *Post-mortem* and Case book, 1899, No. 216. Specimen in St. George's Hospital Museum, Series vi, 15 K.

Besides the above cases, specimens of gumma of the heart have been brought before the Pathological Society of London by Wilks (vol. viii, 1857, p. 150), Cayley (vol. xxvi. 1875, p. 32), Burney Yeo (vol. xxvi, 1875, p. 52), Pearce Gould (vol. xxvii, 1876, p. 69), Henderson (vol. xxxiv, 1883, p. 53), Goodhart (vol. xxxviii, 1887, p. 102), Pasteur (vol. xxxviii, 1887, p. 103), Newton Pitt (vol. xlii, 1891, p. 61), Rolleston (Case vi, cited above). In addition to these, Wilks refers to 3 cases in his paper on Syphilitic Affections of Internal Organs in the *Guy's Hospital Reports* (vol. ix, 1863, p. 43). Various other specimens have been shown at the Pathological Society in which there was a greater or less probability that the cardiac lesion was syphilitic. With regard to the microscopical appearances of the condition there is, in those cases in which such examination has been made, a remarkable agreement as to the intensely cellular nature of the infiltration. Caseation is only noted in very few instances, as is also the presence of fibrous tissue. The absence of endarteritis is also noteworthy. Common as this change is in connection with syphilis, it was only noted definitely in Henderson's case; in Pasteur's case it was very doubtful, and in Rolleston's case and the present one it was definitely absent. As has been already remarked, it may be that this absence of endarteritis explains the rarity of caseation in the granulomatous deposits, but it must be noted that there was no caseation in Henderson's case in spite of the existence of syphilitic endarteritis. So far as I have found, giant cells have only been recorded in Rolleston's case and in my own.

Concerning the relation between gumma of the heart and fibroid disease of the heart the present specimen is of importance. The marked difference between the histological as well as the macroscopic appearances in the two ventricles, together with the existence of a certain amount of newly-formed fibrous tissue even in the cellular masses of the left ventricle, suggest that in the same heart we have a graduation from the one change to the other. Why the changes should be of apparently different ages in the two ventricles it is quite impossible to say.

Fibroid disease of the heart is not a common condition, but it is far less rare than gumma. During the same period (1863-1898) in the *post-mortem* records at St. George's Hospital, 20 examples are noted. It is probable, too, that this number is below the true number, for 14 cases have been recorded in the last eleven years. Probably it would be nearer the truth to say that one case of fibroid heart is met with in every 250 or 300 necropsies. Cases of this condition have been so frequently reported to Societies, and especially to the Pathological Society of London, that I shall not do more than advert to the paper entitled "A Series of Cases of Fibroid Disease of the Heart," by Hilton Fagge, in the Pathological *Transactions*, vol. xxv, 1874, pp. 64-98. In this paper Fagge discusses the question whether fibroid disease of the heart can really be of syphilitic origin, and in spite of one case (Moxon) he inclines to the belief that it is not syphilitic. To this decision he was powerfully led by the general absence of a syphilitic history or other evidence of syphilis in cases of fibroid disease of the heart. Since that time, however, cases have been brought forward in which there was known syphilis. Moreover, the cases I have quoted above of definite gumma of the heart do not show a very striking syphilitic character in other respects, except in Cases III and VI. In Cases I, II, IV, and V, it is expressly said that evidences of syphilis are absent; in Case VII the only evidence was marked fibrosis of the testes; and in the present instance the only collateral evidence was a small scar in the liver. It seems to me, therefore, that the question as to fibroid disease and syphilis can hardly be determined in this way. Open though it must still remain, I think the present specimen is an important connecting link in the chain of evidence. It certainly shows a graduation of changes from the earliest granulomatous stage to the stage of fully-formed fibrous tissue. The weak link is the small amount of collateral evidence on the point of syphilis, but here the scar in the liver is to my mind not without an important significance, especially if we take it in connection with such a case as Rolleston's, in which evidence of syphilis was abundant and indisputable.

NOTE.

Other references to the subject of cardiac syphilis are to be found in papers by Grassmann (*Münch. med. Woch.*, 1897), Lang (*Syphilis des Herzens*, Wien, 1889), Mracek (*Arch. f. Derm. u. Syph.*, 1893), Jacquinet (*Gaz. des Hôp.*, 1895), Phillips (*Lancet*, vol. i, 1897), Fremantle (*Lancet*, vol. ii, 1899, p. 839), Volnar (*Ueb. Gummata d. Herzens*, Kiel, 1893).

THE BACILLUS OF INFLUENZA.

By ALFRED C. COLES, M.D., B.Sc. (Public Health),
Medical Officer of Health to the Winton Urban District, Bournemouth.

[ABSTRACT.]

AFTER describing the morphological appearances of the organism, its cultural reactions and pathogenic properties, Dr. Coles proceeded:

Admitting that Pfeiffer's bacillus is the probable cause of influenza, the next and most important questions are: Can the organism either in films spread from sputum or in cultures be recognised with sufficient certainty to render the clinician aid in the diagnosis of doubtful cases of the disease? What are the distinguishing features of the bacillus, and with what other organism occurring in the sputum might it be confused?

It often happens that just in these doubtful cases there is no expectoration for examination. The combined examination by film preparations and cultures will, I think, give very reliable results, but cultures require time and apparatus at the command of few clinicians.

Given a specimen of sputum in which very minute bacilli are present in almost pure cultures, which stain faintly when compared with other organisms present, which may show polar staining (this in my experience is in ordinary films, by no means constantly found), and which do not react to treatment by Gram's method, then I think the diagnosis may be satisfactorily made without cultures. But if the sputum contains a large mixture of organisms, then it may be difficult if not impossible to say whether some of the bacilli present are those of influenza or not. In many cases, especially where the sputum is not examined soon after its expectoration, I find it a good plan to examine the film after staining it with carbol-fuchsin, 1 in 20, for ten minutes with a low power before using the oil immersion lens. By this means I have been enabled to pick out little groups or masses of the bacilli. I use for this purpose a Zeiss's $\frac{1}{3}$ inch apochromatic objective with a No. 8 compensating ocular, which only gives a magnification of about 250 diameters. So examined with a good condenser, ordinary bacilli or cocci appear distinctly and darkly stained, and the difference in size and staining reaction is well brought out.

I cannot do better than to quote the words of Finkler on this subject:

"Does the microscopical finding alone suffice for the demonstration of the influenza bacilli? Under certain conditions this question may be answered affirmatively. Any one who has occupied himself largely with these bacilli will rarely err when he sees them in a sputum preparation. He is perfectly justified in speaking of a typical influenza sputum, and there are many cases in which the clinical manifestations correspond to true influenza, and the bacilli are found in the sputum in pure culture. In the expectoration the bacilli often have a characteristic arrangement, lying together in long trains, so that they have been compared to schools of fish, and often they are present in such enormous masses that they cover the entire field of view. It is most desirable, however, to establish the identity of the bacilli by culture if every doubt is to be excluded, for this method leads to the certain demonstration of the influenza bacilli often more rapidly than the microscopic examination.....The colonies usually appear perfectly transparent, colourless, and structureless; only under certain conditions they have a yellowish tinge in the centre—that is, when the layer of blood corpuscles is rather thick on the plate, and the age of the cultures is somewhat advanced. Of great importance, moreover, is the lustre due to the curvature of the colony, whose contour may be regular or irregular. While a confluence of the several cultures with each other or with foreign colonies is possible, the line of separation can always be discerned under the microscope. When these several peculiarities are borne in mind, influenza colonies will hardly be confounded with others. The diagnosis becomes sometimes more difficult with the naked eye, although it can, as a rule, be made even when the plates are plentifully covered. The perfectly transparent, dewdrop appearance is occasionally found with other species of bacterial colonies (diplococci), and, on the other hand, as stated above, the influenza colonies are not always absolutely transparent and colourless. The mode of cultivation here described proves sufficient for the diagnosis in many cases in which the microscope fails. The latter may be the case either when the bacilli are too sparse, perhaps partly degenerated, and enclosed in cells, or when numerous other morphologically similar bacteria are present, as in the secretion from the mouth or neighbouring cavities."

I believe that the examination of the sputum for the influenza bacillus will prove of great assistance in the diagnosis of some cases which clinically do not present very characteristic symptoms. Finkler has pointed out that the bacillus is apt to attack those previously suffering from pulmonary diseases, and in such the influenzal infection is apt to pass unrecognised. For instance, patients suffering from chronic bronchitis or bronchial catarrh may suddenly develop acute febrile symptoms due to an attack of influenza, but which in the ordinary way would be regarded as an acute exacerbation of the previous disease, and remembering that the bacilli may remain in the bronchial tubes for a considerable time after the disease, such patients become centres of infection. Finkler considers that many of the old cases of chronic bronchitis, which frequently turn up at the hospital during inclement weather, are probably affected with influenza, and in such the typical symptoms of the disease are absent. The same condition is noticed in cases of phthisis, in which a superadded influenzal infection may light up acute pulmonary disease, not infrequently rapidly tending towards a fatal issue.

Not less important is the fact that influenza may run a chronic course, with periods of freedom from symptoms. Pfeiffer, Beck and Kruss, among others, have found the bacillus of influenza in the sputum for weeks and months. Thus Finkler records a case of a man suffering from influenza and bronchitis, in which the bacilli were found for a period extending over 3 months. Sometimes, however, they were absent for a short period.

In phthisical patients influenza often extends over a long period, and from time to time sets up inflammatory processes in the tuberculous areas. "The observation that the influenza bacillus may remain seemingly latent in patients suffering with phthisis and bronchitis, so that these patients become very dangerous carriers and disseminators of influenza, is of importance." (Finkler.) This authority also thinks it is possible that many of the cases of phthisis which terminated fatally under the tuberculin treatment might have been cases of mixed infection of phthisis and influenza.

Seeing that the influenza bacillus plays such an important part in the spread of disease, and directly and indirectly is answerable for a large number of deaths, it is somewhat disappointing that apparently so little work has been done by English observers on the value, or otherwise, of the recognition of the bacillus as an aid to diagnosis.

OBSERVATIONS UPON THE PATHOLOGY OF THE MYOCARDIUM.

By F. J. Poynton, M.D.,
Casualty Physician to St. Mary's Hospital.

In bringing forward this paper I recognise that the subject is one that has attracted the attention of many observers, and is in danger of being considered already too well worn. It seems, however, possible that a systematic examination of the myocardium in various conditions may prove of some assistance in the study of cardiac diseases. This is the more probable because pathology affords a continual assistance both by the improvements in its methods and the new light that bacteriology throws upon even well-established facts. In the clinical study of heart disease the detection of a valvular murmur or pericardial friction sound is among the surest evidences of organic heart disease, and the endocardium and pericardium accordingly take a most prominent position in the clinical history. To the morbid anatomy of the heart much the same applies, for the evidences of endocarditis or pericarditis, recent or of old standing, are more easily recognised than are similar changes in the cardiac wall itself. Possibly then it may be that overmuch has been attributed to the damage of these structures, with the result that the myocardium has been regarded rather as a passive structure than an active muscular wall, and that mechanical explanations have taken too great a part in the interpretation of the morbid results that are presented. In view of this possibility it is a suggestive statement—the outcome of experience—that in judging of the gravity of a case of organic heart disease the symptoms are of more import than the physical signs, for the symptoms are mostly determined by the failure of the circulation due to the enfeeblement of the heart wall, whereas the physical signs are determined mostly by the nature and extent

of the valvular lesion. It is suggestive also that in chronic heart disease of rheumatic origin, when failure of compensation occurs, there is not as a rule a history of mechanical overstrain, but frequently in adults and almost invariably in childhood, a history of a relapse of rheumatism.

The widest field for investigations upon the myocardium is provided by rheumatic fever, because of its frequent occurrence, and because, though it varies much in its severity, it usually gives rise to considerable resistance within the body. This resistance is apparent in the inflammation, fibrinous exudation, and fibrosis that result from its invasion.

Since these phenomena of inflammation take place in the neighbourhood of the vessels, and must be to some extent modified by the mechanical surroundings, the arrangement of the coronary circulation within the heart becomes a question of some interest. If a section is made transversely across the base of the heart through the valve rings, numerous vessels can be seen arranged in an areolar tissue beneath the endocardium around the orifices. A vertical section through the mitral valve and auriculo-ventricular junction of a heart injected with Prussian blue, shows these vessels lying in the connective tissue at the base of the valve, and in the valve itself lacunæ are also visible. A similar section through an inflamed valve shows a considerable exudation in the areolar tissue at the base of the valve in the region of these vessels. In the acute and severe cases of rheumatic fever this cellular exudation can be traced around the vessels beneath the endocardium of the auricle and ventricle, but may give rise to no visible sign upon the surface of the endocardium. If, however, the leucocytic infiltration invades the endocardium from beneath, as it may invade the valve from its base, then yellow points can be detected upon the surface. The pericardium when inflamed shows similar changes even more definitely, for there is a free surface toward the pericardial cavity, and the deep part of the visceral layer contains numerous vessels. Should the inflammation be subacute, the development of fibroblasts and the earlier stages of formation of an adherent pericardium can be readily traced. A study of the arrangement of the vessels around the mitral orifice, by vertical and transverse sections in healthy and diseased conditions, coupled with a study of the changes in an inflamed pericardium, gives perhaps the most realistic picture possible of the development of mitral stenosis as an after-result of rheumatism.

In the wall of the heart the capillaries are seen to run between the several muscular fibres, and are encompassed by muscular walls. In the intermuscular septa there is some areolar tissue, and in at any rate some cases of rheumatic heart disease cellular exudation can be traced at these points spreading through the heart wall in scattered foci. I have found these foci in a case where pericarditis was only manifested the day before death, and also in cases of recurrent rheumatism, where the pericardium was sclerosed, and not in a condition of acute inflammation. In some cases of recurrent rheumatism, also, there is an increase in the interstitial tissues of the heart wall: a fibrosis spreading from the vessels, and implicating the adjacent muscular bundles, analogous to the fibrosis of the valves or pericardium. The question arises, whether these changes in the heart wall itself, are secondary to a pericarditis, or coincident and even independent of that? At first sight, perhaps, this may seem a point of small importance, but from the clinical aspect it is a question of great interest. If the myocardial inflammation is secondary to pericarditis, then the occurrence of pericarditis is doubly grave, by reason of the injury to the pericardium itself and to the heart wall also. But if the myocardial changes may arise independently, then it is possible that many cases of acute rheumatism in which there is no pericarditis may cripple the heart in this insidious way, especially if the pericardium is already adherent. One case in which I examined the heart wall is of value in this connection. The patient, a young woman, died in the third attack of rheumatism. There was mitral valvulitis and great dilatation, but macroscopically no pericarditis. Upon microscopic examination there was evidence of myocarditis, and pericarditis was just commencing. I am aware that other observers have only found changes in the superficial layers of the heart wall immediately beneath the inflamed pericardium, and that the recent researches of Professor Hill and Mr. Bernard have increased our knowledge of the function of the pericardium as a support to the heart wall; also, too, that these observations have been utilised by Dr. Sequeira in a paper recently read before the Royal Medical and Chirurgical Society to explain the grave importance of pericarditis as a cause of cardiac dilatation. Nevertheless, there is much I believe in favour of the view that myocardial changes are not necessarily dependent upon pericarditis; and though the pericardium may have an important function in checking dilatation, I believe that dilatation, and marked dilatation, too, may occur without any weakening of the pericardium by pericarditis.

The condition of the cardiac muscle in rheumatic fever is the next point that claims attention, and is a question surrounded with difficulties. It may be generally asserted that the more specialised a tissue the more difficult it is to feel sure of the existence of morbid changes in its structure, and of their proper interpretation. This is a difficulty, too, which is enhanced by the *post-mortem* changes that occur in the tissues. Nevertheless, whatever view be taken of the actual cause of rheumatism, it is generally allowed that there is an alteration in the blood state, and this raises the possibility of the cardiac muscle suffering as a consequence. Moreover, there is considerable evidence in favour of this view. In some rare cases of rheumatism death has occurred from cardiac failure with dilatation, and no pericarditis has been found after death. Recently in two acute cases of rheumatism with pericarditis I have found general fatty changes throughout the heart, including the papillary muscles. Though this is not conclusive—for it may be rightly objected that this change is not a primary one, but secondary to the enfeebled circulation—nevertheless, it points, I think, strongly to some profound injury to the cardiac muscle, which has resulted in this circulatory failure. In a question of this kind the complexity of the chemical processes within the body requires to be remembered, and it is very possible that the particular condition, which is recognised by certain comparatively rough staining methods as a fatty change, may be the end result of widely different antecedent chemical processes. There are other alterations, too, in the cardiac muscle in acute rheumatism beside these fatty changes, such as hyaline degeneration, loss of striation, and vacuolisation. Even in children granules sometimes staining with thionin can be detected in the region of the nucleus, and the nucleus itself may also show numerous granules. I make this brief allusion to the alterations in the cardiac muscle rather with the object of showing that caution is required before pronouncing that the muscle is not affected in rheumatism, than with the intention of stating that it is invariably affected. Far more numerous observations are required to settle such a point, and experimental pathology must, I think, be requisitioned before the true value can be attached to these more obscure morbid changes in the muscle. The implication of the cardiac nerves is another important question, but I must confess to not possessing as yet the technique required for such an investigation. At the same time it is unwise to make any assumption that they are primarily affected in such a disease as rheumatic fever without actual proof. [Dr. Poynton then briefly alluded to the widespread changes that are sometimes found in the heart in infective endocarditis.] He continued:

There is one other condition somewhat rare in its occurrence but of deep clinical interest in which the myocardium may show much disease. During life the symptoms are those of breathlessness, angina, and a tendency to syncope. The end is usually quite sudden, and the necropsy shows as the most striking feature an acute inflammation of the aorta. Two such cases I examined and published fully in the *Lancet* in May, 1899. It would appear that in these cases analogous changes were proceeding in the heart and arterial wall.

In conclusion, I have endeavoured in this paper to support the view that a systematic investigation of the cardiac muscle may prove of some practical value in the study of cardiac diseases, especially if the clinical side of the question can be at the same time recorded.

(To be continued).

MEDICAL MAGISTRATE.—Dr. Patrick A. Smith, of Crosshill, has been appointed a Justice of the Peace for the county of the city of Glasgow by the Lord Provost.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

CHRONIC HYPERTROPHY AND DILATATION OF THE BLADDER SIMULATING AN OVARIAN CYST: DEATH FROM URÆMIA.

F. E., aged 55, was admitted into the Hospital for Women under my care on account of an abdominal tumour. She had had two children, and menstruation ceased five years ago.

History.—For eight or nine months the patient has remarked that her abdomen has been larger, but during the last four or five weeks it has somewhat rapidly increased in size. There has never been any abdominal pain. During the last three weeks the urine has had a tendency to run away, but prior to that she had passed it as usual.

Physical Signs.—The abdomen is greatly distended, and is occupied by a large globular swelling which arises in the pelvis and extends to the ensiform cartilage. Both flanks are resonant on percussion, but the note everywhere else is dull. Fluctuation is not very distinct. Vaginal examination: The cervix uteri is located very high. The anterior vaginal roof is pushed markedly down by a firm roller-like swelling.

There is slight œdema of both legs. The temperature and pulse are normal.

The patient was placed in the lithotomy position, and a No. 4 catheter—the largest which could be passed—was inserted, and five ounces of urine were then drawn off. The catheter was withdrawn because the urine ceased to flow. An aspirator needle was inserted mid-way between the pubes and umbilicus, and after drawing off about two pints of urine in this way a large catheter, No. 8, was inserted (the relief of tension allowing of this being passed fairly easily), and in all 10 pints of urine were removed from the bladder. The patient was seized with uræmic convulsions, and died six hours later.

The following are the *post-mortem* notes furnished by Dr. Dalton: Peritoneum, liver, and spleen normal. The bladder reached to considerably above the umbilicus, and the deflection of the peritoneum from the anterior abominal wall to the bladder was located 3 or 3½ inches above the pubes—these 3 or 3½ inches were occupied by rather thickened subperitoneal fat. The wall of the bladder was thick and firm, showing true hypertrophy. A portion of the anterior wall of the bladder was ecchymosed. The viscus contained a pint and a half of ammoniacal urine mixed with mucus and blood. There was no true sacculation between muscular bundles, but the trigone was much enlarged, and formed a pouch between its base and the urethra. The conformation of this pouch was such that the sacculated part pressed downwards and backwards on the vagina; while the base of the trigone, which was greatly thickened, formed a ridge which over-arched the sac above and in front. On either side of the vagina the bladder pouched slightly backwards.

The meatus externus was high up behind the pubes, and was surrounded by dense fibroid tissue, as if there had once been a cellulitic deposit there which had organised. The mucous membrane of the urethra was hæmorrhagic and rough, particularly at the meatus internus.

The ureters were dilated, and admitted the little finger. There was considerable hydronephrosis—double—but a fair amount of cortical substance still remained.

Gordon Square, W.C. James Oliver, M.D., F.R.S.Edin.

CASE OF LARYNGEAL TUMOUR IN AN OLD WOMAN: REMOVAL: RECOVERY.

A woman, aged 79 years, was seen by me on May 3rd, 1898, on account of cough and huskiness of voice. She had had bronchitis some years ago, but with this exception had never suffered from any illness. In February, 1898, she began to notice hoarseness, and felt at times as if she were unable to get her breath. On examination I found a tumour growing, apparently from the left side of the larynx and extending obliquely forwards and to the opposite side, preventing any view of the vocal cords. The tumour moved up and down with respiration, and apparently had a very thick pedicle. I asked Dr. Hunter Mackenzie, of Edinburgh, to see the case with me, and he advised removal of the tumour. He operated intralaryngeally, under cocaine, and removed the entire growth by one application of the laryngeal forceps. After removal it was seen that there was marked intralaryngeal thickening on the opposite side of the larynx, and also at the base of the epiglottis. The tumour was about the size of a large acorn. Microscopically, "the epithelium over the surface was enormously thickened, but did not invade the subjacent fibrous tissue." The tumour was a fibroma, and the intralaryngeal thickening was evidently inflammatory. Recovery was complete and uneventful. A month afterwards examination showed a distinct improvement in the condition of thickening, but there was a small excrescence at the site of removal. This, however, disappeared slowly, and now the patient is in perfect health, with no cough or trouble in breathing, and the larynx is practically normal.—I am, etc.,

Penrith. D. G. Pearce Thomson, M.D.

IRRIGATION OF THE INTESTINES WITH HOT WATER IN COLLAPSE DURING LABOUR.

Not being aware that hot water injections into the intestines have been previously employed in cases of collapse, I venture to put on record the following case which may prove interesting:

On July 16th, 1899, I was called in to attend Mrs. R., aged 29, in her second confinement. She appeared to be healthy, and of good constitution. When I reached her at 4 A.M. labour was advanced, pains severe and sharp, the membranes had ruptured, and the amniotic fluid drained away to a great extent. It was a head presentation occiput to the left ilium. During a sharp and long pain the woman became at once collapsed, with rapid, feeble pulse, and cold perspiration all over her body.

I had no ether to inject hypodermically, but having at hand Prof. Cantani's irrigator I injected a large quantity of hot water into the intestines. The effect was magical—the woman rallied quickly, her pulse became stronger, and she returned to the normal state in a short time. I applied at once Barnes and Simpson's combined forceps; the instrument locked without difficulty, and after three or four gentle tractions I extracted a healthy male child.

The patient convalesced without a single unfavourable symptom.

Malta. G. F. Inglott, M.D., D.M.O.

SUBCUTANEOUS EMPHYSEMA AND PNEUMOTHORAX DUE TO FRACTURED RIBS.

A coal miner, aged 45, sustained a fracture of at least two of the upper ribs on the left side, with upward dislocation of the clavicle on the right side, from the fall of a mass of coal on his chest. Emphysematous crackling, limited to the site of the broken ends of the ribs, could be felt, but there was no apparent swelling. The patient was much collapsed, but after the application of hot bottles, and the administration of a warm drink, he revived. About seven hours later the emphysema had become general, but not excessive in amount, and there were signs of pneumothorax on the left side. Free incisions made through the areolar tissue over the chest and in the right axilla quickly relieved the dyspnœa; but six hours later it again became extreme. Owing to the clotting of the effused blood and lymph, the incisions had become practically closed, and air in cellular tissue had re-accumulated. Relief was got by other incisions, and instructions were given to have the wounds roughly swabbed with lint dipped in a weak carbolic solution, when the patient continued to make a good recovery. On the eighth day, when the air in the cellular tissue and in the pleura had entirely disappeared, paroxysms of dyspnœa occurred. It appeared, however, that previous to his accident the patient had suffered from occasional attacks of dyspnœa accompanied by frequent and diminished micturition, and the urine was now found to contain albumen. The numerous incisions healed without suppuration.

This case is a somewhat rare one, as emphysema, due to fractured ribs, does not often become general, and pneumo-

thorax rarely accompanies the more common forms of emphysema due to fractured ribs. The late Professor Spence, in his lectures, described a case exactly resembling the above. When pneumothorax occurring as a complication in these cases occasioned dyspnœa, Mr. Erichsen advocated the withdrawal of the air by means of a trocar and cannula between the ribs, but Mr. Spence preferred free incisions through the areolar tissue, thus giving exit to the air in the areolar tissue and the pleural cavity at the same time.

W. CÆSAR HAMILTON, L.R.C.P., L.R.C.S.E.

Strathmiglo, Fife.

SUDDEN DEATH FROM OBSTRUCTION OF A BRONCHUS.

J. P., aged 61, was brought into St. Mary's Hospital dead, having been found lying in the G.W.R. goods yard, where he was employed as a shunter, struggling for breath and apparently unconscious, about ten minutes before. When seen his face was pale and rather cyanosed. There was no possibility of accident, nor had he ever been known to have epileptic fits or other similar attacks.

At the necropsy, in the left bronchus at its bifurcation, was found a plug of tobacco extending for a short distance into both branches. When removed it was found to be of about the bulk of a small plum, in its moist condition. The left lung was intensely congested, and the right also to a less extent. The heart was empty and flaccid, the aortic valves were rigid and calcareous, but the other valves were normal and the heart muscle was good. The liver, spleen, and brain were also engorged with blood. The kidneys were a little congested, but otherwise normal. The bladder was hypertrophied, and the middle lobe of the prostate enlarged, but there was no cystitis. No other pathological condition was present.

The man was not known to be in the habit of chewing. He had complained occasionally of pain in the cardiac region, but had never consulted a doctor for it and had always been considered a healthy man.

Sudden death from obstruction of one bronchus alone is rare, and in this case would probably not have occurred had it not been for the aortic disease, the other lung being quite normal. The shock and the violent expiratory efforts together with the additional strain thrown on the heart by the sudden pulmonary congestion appear to have caused fatal syncope.

Probably the man stumbled, and in saving himself allowed the plug he was chewing to slip into the trachea beyond the larynx, which prevented the expulsion of so large a mass.

CHARLES W. BUCKLEY, M.B.Lond.,
House Physician to St. Mary's Hospital.

PERIODIC DIARRHŒA.

W.G., aged 27, consulted me last November about attacks of diarrhœa to which he had been subject for about two months. Every now and then about five in the afternoon or ten at night he would have to run to the water-closet, and would pass a large motion, the first portion well formed, the last portion semi-solid. He was particular about going to stool every morning after breakfast. He was careful in regard to diet, and led a quiet life, taking exercise sufficient to keep himself in good condition. He wanted to know the cause of the attacks, and refused to take drugs or alter his diet until that cause was discovered, but he was willing to report himself occasionally to allow of investigation of his case. The evening before his first visit to me he had had one of his attacks at 10 P.M. He volunteered the suggestion that partaking of mushrooms the evening previous might account for it. The following week he visited me again, on the morning after another attack. Ten days had passed between the two attacks, and mushrooms had been partaken of on several occasions, but not for two days before the last attack. The bowels had not acted after breakfast on that morning.

The following week he returned, having had another attack, this time at 5 P.M. the previous evening. Ten days had again elapsed since the last attack; no food taken could account for it.

As to the character of the stools on the ten mornings, on the first morning nothing passed, on the next four mornings well formed and fairly copious motions, during the remaining five mornings the motions became less copious and hard, and on the tenth morning almost nothing was passed. He was ordered to drink a tumbler of water at bed-time and on getting up in the morning, and every ninth evening to take a dinner pill. I hoped by giving a free motion in the morning to prevent a motion later in the day. Three weeks later he returned saying the cure was as bad as the disease, as several motions followed the taking of the pill. But he had not been troubled in the afternoon or evening. He refused any further aperient medicine. I then directed that if the stool passed was not satisfactory in amount to inject half a drachm of glycerine in a few ounces of warm water. The following week he reported that the motions in the morning were increased by the injection, but at 5 P.M. on the tenth day he had had a motion, but not so copious or so urgent.

I ordered him to continue the treatment, and in addition to take 15 drops of the tincture of chloroform and morphine three times on both the ninth and tenth days, a dose to be taken after the motion, before lunch, and at 5 P.M., so that the bowels would be under the influence of the medicine from 10 A.M. till 10 P.M.

After four weeks he returned reporting no more motions at inconvenient times, and those in the morning improved. I then told him to use the injection and the mixture less often. About two months afterwards he reported that he had practically stopped the injection, and took the medicine very seldom. Now, 10 months since I first saw him, he passes good motions every morning, and has stopped all artificial aids, and the diarrhœa has not returned. When he first came to me he was so much distressed about these attacks that he was beginning to look with dread on the idea of going out amongst his fellows, and declined invitations which otherwise he would have been pleased to accept.

Diarrhœa is looked on as disease by the general public. It would seem that in this case the diarrhœa was simply Nature working at an inconvenient time. Under careful treatment the peristaltic energy which is so valuable in the preservation of health was controlled.

Bedford. CHAS. J. HILL AITKEN, M.B., C.M.

NITROGLYCERINE IN XERODERMIA.

THE following case may be of interest as indicating, what I think, is a new treatment for this affection: The patient was a boy of nine years, who had suffered from the second month of his life. For two years he had gone through a continuous course of the orthodox treatment, including even thyroid gland. For the whole of his life after that the mother had never ceased the assiduous use of emollient ointments, but with little or no result, even to the degree of palliation. When I saw him first, the skin was harsh and dry all over the body, limbs, and face. All over the trunk the skin exhibited the crocodile hide pattern; on the more exposed parts, the face, the hands, knees, and shins, there were large cakes of dry and hard epidermis that really amounted to ichthyosis.

It occurred to me that if the skin could be kept continuously flushed with blood, the condition might be alleviated, and so without any great hopes, I ordered the child mj of liq. glonoini (*B. P.*) with nitrous ether mv thrice daily. I also ordered some ung. ac. salicylic. to be used. Later, as a control experiment, I had it used on one limb only. I was gratified to find that in a fortnight's time the patient's skin was in a better condition than it had been known to be in all his life. Finding by the control experiment that the ointment made no difference, I have since discontinued it. For three months the child went on more or less steadily with the medicine; and save for slight patches on the cheeks, which more resembled dry eczema than the other condition, his skin is soft and supple, and readily perspires. I have given him since the three months a respite from the medicine for three weeks, but there has been no perceptible return of the disease.

Talking the case over with Dr. Eddison, of Leeds, he quoted a remark made to him by Hebra, which seems much to the point of the relief afforded to this patient, viz., that the silky smoothness of the drunkard's skin, so far removed from this condition, is due to the active circulation in the cutis due to the frequent imbibition of alcohol. The hint seems valuable in cases of this kind, and if the same result may be obtained by an innocuous drug it is surely worth further trial.

Halton, near Leeds. B. BASKETT, M.B.Oxon.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

UNIVERSITY COLLEGE, LONDON.

TYPHOID FEVER: ABSCESS FORMATION: RECOVERY OF TYPHOID BACILLUS: FAILURE OF WIDAL'S REACTION.

(Reported by H. Batty Shaw, M.D., M.R.C.P., Resident Medical Officer.)

An adult patient was admitted to University College Hospital in December last year under the care of Dr. J. Rose Bradford (to whom I am indebted for permission to publish the case), with a history of three days' headache and a temperature of 103° F. Typhoid fever was suspected, and on the two following days Widal's test was tried with a dilution of 1 in 50, and on both occasions the test failed.

On the seventh day of illness typhoid spots were seen and the spleen became enlarged. On the tenth day the patient called attention to tenderness of the abdomen, and an elevated area was seen in the position of the left rectus abdominis below the level of the umbilicus, tender and somewhat resonant on percussion. Typhoid spots were visible till the nineteenth day; during the third week there was delirium and incontinence. The temperature reached normal on the twenty-fourth day of the disease, and the patient soon began to improve; the mass in the abdomen was, however, still palpable.

On the twenty-eighth day patient felt a sudden sharp pain in the region of the left rectus abdominis, and the mass felt previously was found to be larger, rounded, smooth, and fluctuating, movable sideways, but not from above down. It was obscured somewhat by tightening the rectus abdominis, but it did not disappear entirely. The temperature again rose to 101°.

On the thirty-sixth day of illness Mr. Bilton Pollard opened the abscess, and several ounces of pus escaped, looking a little darker than usual and not creamy or offensive. No disorganised clot could be found. The abscess proved to be lying between the rectus abdominis and the posterior layer of its sheath; no track could be found leading elsewhere. The abscess cavity closed, and the patient rapidly convalesced, after having suffered from an illness with the characters of typhoid fever.

Bacteriology.

Cultivations were made on agar of the pus removed from the abscess. (1) The growth showed a bacillus staining readily with methylene blue, decolorised by Gram's solution; some of the bacilli were long and thread-like. (2) Cultivation in broth showed an actively motile bacillus; no scum was noticed on the surface of the broth. (3) A shake preparation in glucose agar gave no ebullition of gas. (4) No indol reaction was given by a broth ninety-six hours old. (5) Growth on potato was present but not visible. (6) The growth did not clot milk.

So far the organism recovered from the abscess appeared to be the typhoid bacillus and not the bacterium coli commune or the bacillus described by Gärtner. The next step naturally was to observe whether the patient's own blood would react and cause the bacillus recovered from the abscess to clump and become stationary. The test was made with a dilution of 1 in 200, and failed entirely, active movement being seen one hour later. Another case in the hospital which had reacted satisfactorily to another typhoid culture also failed to give the reaction with the same dilution.

The blood of Dr. Bradford's patient was then tried in a typhoid broth obtained from the bacteriological department of University College, but with a dilution of 1 in 100 gave the very slightest clumping in the twenty-four hours; the same broth used with the blood of another patient suffering from typhoid fever, with a dilution of 1 in 100, reacted in two minutes.

The interest of the case turns upon the fact that it was undoubtedly a case of typhoid fever, and yet the patient's own blood failed to bring about the Widal reaction on an organism—the typhoid bacillus recovered from an abscess in the same patient.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Clinical Evening.

Sir R. Douglas Powell, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, October 27th, 1899.

Cerebellar Symptoms Relieved by Trephining.

Dr. L. Guthrie and Mr. Stansfield Collier showed a case of gliomatous cyst of the middle lobe of the cerebellum treated by trephining and drainage. The patient was a boy, aged 9 years, who at present (18 months after the operation) was in perfect health except for blindness due to double optic neuritis. Dr. Guthrie observed that the operation ought to have been done a month earlier, for in that case he believed sight might have been preserved. He had now no uncertainty of gait, which he had before the operation.

The President remarked that if it were really a case of glioma it was surprising that there was no recurrence, as the cyst was only punctured.

Actinomycosis in Process of Cure.

Mr. G. R. Turner showed a case of actinomycosis on the mend. The patient, a coachman, aged 42, first came to the hospital with what looked like an abscess of the cheek, which had previously been incised, leaving a fistula discharging a thin serous purulent fluid which, on examination, proved to contain the ray fungus. Iodide of potassium was given in doses of 15 gr., rapidly increased to 45, thrice daily, and he bore it well. The abscess cavity had also been scraped. The result had been most satisfactory.

Mr. Slater, who had examined the secretion, remarked that the disease was more frequently found in people with carious teeth than in those with good teeth. The ray fungus was only found in animals, not in the vegetable kingdom at all. He suggested that it might be caused by more than one organism.

Mr. Barker remarked that as the disease usually occurred in some sort of connection with the alimentary canal, it was reasonable to suppose that this was the channel by which the fungus entered. He mentioned a case, however, in which the growths were located in the abdominal wall in a patient, who presumably had never come into contact with hay, he being dispenser to a country doctor.

Osteitis Deformans.

Mr. G. R. Turner also showed a man, aged 74, admitted to St. George's, complaining of swelling of the upper jaw, principally affecting the alveolar process, and most marked on the right side, of about eight weeks' duration. There was also general enlargement of the head, evidenced by inability to put on his hat. The tibiæ and ribs were also affected, and the breathing was principally diaphragmatic. He was shorter than he used to be, as his head was bent forward. No venereal history. The nervous system appeared normal, but he walked with a shuffling gait. He had improved under iodide of potassium, and could now wear his hat again.

Dr. Ewart asked if accurate measurements had been taken. He himself had often failed with the iodide.

The President asked whether there had been any loss of weight whilst he was under the treatment.

Mr. Turner replied in the affirmative, but he walked more briskly. He admitted the possibility of the development of malignant disease of the jaw.

Kraske's Operation.

Mr. Jackson Clarke exhibited a man, aged 56, on whom he had performed Kraske's operation for the removal of a cancerous growth of the rectum. He had placed the patient in the position recommended by Mr. Godlee. The important points were the preparation of the patient beforehand and the after-nursing. The patient should be on a water-bed, as

he had to lie on his side for several days after the operation. The condition was better than that left after colotomy. The looseness of the bowels was controlled by giving tinct. opii ♏ x *ter die*. The patient should be not too old, also in vigorous health. He exhibited the man as an average result after the operation; he also showed the specimen removed, which included about 5 inches of the rectum.

Mr. F. EVE remarked that Mr. Clarke had said that the bowel should be freely movable to justify the operation; he (the speaker) thought, however, the rectum might be fixed posteriorly; such fixation was due to thickening of the meso-rectum, which could be removed after the peritoneum was opened.

Mr. CLARKE said his remarks referred to anterior mobility: the tumour should not be adherent to the bladder.

OLD DISLOCATION OF THE HIP WITH FRACTURE OF ACETABULUM.

Mr. WATSON CHEYNE showed a stevedore, aged 60, who six weeks before had fallen and sustained a severe injury, for which he was treated at a hospital. When first seen by him he was quite unable to stand, and when assisted into the erect posture on one leg, the right thigh was flexed and the foot everted. Flexion and adduction, with extension, were possible, but abduction was very limited. Nine weeks after the injury he cut down on the joint and found a dorsal dislocation, plus a fracture of the posterior rim of the acetabulum, the cavity of which was filled with soft material which he cleared out. He reduced the dislocation by manipulations, and after two months the patient was able to walk well, the legs being of the same length.

CYSTIC DISEASE OF THE KIDNEYS.

Dr. SIDNEY PHILLIPS showed a man, aged 40, whose health had always been good except for occasional attacks of gout. In August, 1899, he had a fall over a cliff, after which he passed blood in the urine for a time. He had never previously passed blood. On October 2nd, 1899, he experienced pain, the left loin and back and the urine became bloody. On October 9th he came into St. Mary's Hospital under the care of Dr. Phillips for synovial effusion into the left knee and ankle-joints; he was also found to have in each flank a tumour about the size of a cocoanut, that on the left side being the larger; the tumours were ovoid in contour without pain or tenderness, nodular on the surface, and fairly movable upwards to just beneath the costal arch and downwards to the brim of the pelvis; there was no percussion resonance behind the tumours. When first seen there was $\frac{1}{20}$ albumen in the urine, which was bloodstained, but it was now clear, free from albumen, and of specific gravity 1012; an average of 64 ounces a day was passed. There had never been any pus in the urine. The patient had had no other symptoms, and had been unaware of the existence of the abdominal tumours till he came into hospital. Dr. Phillips believed the case to be one of cystic disease of the kidneys, and in the absence of any evidence of tubercle or of calculi thought the cystic disease was probably a cystic degeneration; such cases were said to be always congenital in origin, though they might take on rapid development in adult life, as appeared to be the case here. No treatment was proposed, as the patient had probably little healthy renal tissue.

Dr. CODDE ADAMS referred to the case of a boy, aged 11, who had been under his observation for two years. He had been unable to discover anything wrong. The patient was found dead in bed one morning, and *post mortem* cystic disease of both kidneys was discovered. In reply to the PRESIDENT, he said that the heart was normal.

Dr. LONGHURST asked if there was absolute proof that Dr. Phillips's case was one of cystic disease of the kidneys. Had any exploratory incision been made? Might it not be a case of malignant disease?

Dr. PHILLIPS, in reply to the PRESIDENT, said the excretion of urea was normal. In view of the history, he did not think malignant disease was likely, especially as there were no symptoms, no pain, nor tenderness, and the patient was in good health. The symptoms in the early stage depended on the amount of kidney substance destroyed by the disease. These patients usually died of uræmia.

GASTRIC DILATATION UPWARDS AND BACKWARDS IN ITS RELATIONS TO THE HEART AND RESPIRATION AND ITS TREATMENT.

Dr. EWART exhibited two male patients as a preliminary to a further communication. The cases illustrated a condition more familiarly known in its resulting symptoms than in its precise clinical anatomy. They were both instances of chronic gaseous dilatation, as opposed to acute simple distension with severe but temporary symptoms, but in the latter group also the mechanical result was the same, namely, a marked rise of the left wing of the diaphragm mechanically interfering with the freedom of respiration and especially with the heart, which might suffer from depression, arrhythmia, discomfort, pain, or even angina. The stomach as a whole might be enlarged, but there need be no sacculation of the fundus, and its contents need not be retarded in their normal progress. The patients, both young (aged 25 and 34), healthy, and free from cardiac murmurs, had been partially or entirely unfit for their work for considerable periods—two and a-half years and six years—and had become neurotic, and one of them an "air-swallower." In the latter (Case 1) the symptoms originated suddenly after an exhausting bicycle ride, and had been gastro-œsophageal and respiratory rather than cardiac. In the other (Case II) dilatation had gradually been established during the last six years as a result of dyspepsia from tender and painful stumps; more recently it had led to marked anginal attacks in addition to the general weakness and incapacity for exertion. He had been under observation only for a few days. Tracings of the surface markings of the dilated stomach and neighbouring viscera in both cases were submitted. The tracing of Case 1 showed the subsidence of the dilatation from the level of the nipple down to the normal level of Traube's gastric area. The treatment in patients otherwise healthy such as these should include, besides that applicable to others not able bodied (namely, treatment of the stomach by diet, drugs, lavage, etc.), a treatment directed to the faulty position and function of the diaphragm. The left wing of the diaphragm had to be brought down, and this was successfully accomplished in Case 1 by suitable respiratory exercises which caused the labour of respiration to be thrown entirely upon the left side, whilst the right side of the thorax and the right wing of the diaphragm were precluded by posture from taking any share in it. A further indication, partly carried out by exercises addressing themselves to the abdominal muscles with a view to strengthening the abdominal parietes, was to endeavour to reduce the capacity of the stomach and obviate its sacculation when it had been brought to a lower level by the descent of the diaphragm. For the same purpose it was important that the stomach should receive lateral support not only from above the diaphragm, but also from below from the artificial support of a suitable abdominal belt.

SCLERODERMA WITH ATTACKS OF LOCAL SYNCOPE.

Dr. HERRINGHAM showed a tobacconist, aged 30, who was perfectly well until Christmas last, since when he had complained of pains in the hands and arms, subsequently extending to the shoulders, followed in the spring by attacks of "deadness" of the hands. During the attacks the hands became white and cold, though the radial pulse was normal. Since then he had been kept in bed, and the attacks had subsided. He pointed out that local syncope was one of the forms described by Raynaud, but in this case the condition of the skin was the primary and principal disease, and it involved other parts, such as the back; the skin in these positions was hard and tense, "hide-bound." The flexor muscles of the wrist were contracted and rigid, and on movement the tendons grated in their sheaths. The feet were also involved. It was a scleroderma, not of the skin only, but also of deeper tissues. He had never had syphilis, and was the father of two healthy children. He had difficulty in sitting, and when once seated could not easily get up again.

RECURRENT CARCINOMA OF THE BREAST TREATED WITH THYROID EXTRACT AND OÖPHORECTOMY.

Mr. F. EVE showed a woman, aged 44, who in 1892 first noticed a lump in the right breast. She came to him in 1895

with ulcerated scirrhus, adherent below. The glands were not obviously enlarged. He removed the breast freely and cleaned out the axilla. She continued well till the summer of 1898, when she presented herself with nodules in the skin above the scar, and very definite infiltration at the centre of the scar. The supraclavicular glands were enlarged. He removed both ovaries, and soon after put her on thyroid extract, 15 to 20 grs. daily. Within three months the central infiltration had disappeared along with the glandular enlargement, so that in March last she was apparently quite free from disease. At present, however, nodules had formed around the scar, and the glands were enlarged in the posterior triangle of the neck. He concluded that, though the disease had been greatly delayed, it had evidently only been latent.

Mr. Stanley Boyd observed that it was very difficult for any individual surgeon to form a clear idea of the value of oöphorectomy in these cases, for while it had a marked effect in some cases, it had no influence whatever in others. Moreover, the good results were obtained in some of the most unlikely cases. He referred to a case which he had seen with Mr. Watson Cheyne, of a large recurrent ulcer over the chest in a woman of 48, who was still menstrating regularly. Oöphorectomy was performed in June, and in September the surgeon wrote to say that a cure had taken place.

Mr. Watson Cheyne referred to two other cases of his own during the present year. The first case had improved for six months, and had then gone to the bad. The second case was that of a lady whose breast had been removed six years previously. She came five years afterwards with very extensive recurrence. This he removed, but in six months she returned with enlarged glands deep down in the neck. Oöphorectomy was done in July, and when seen the other day the whole of the disease had disappeared. He also referred to a third case which came under his notice in May. The patient had had several operations for cancer of the breast, and presented herself with a large cancerous mass impossible of removal. As she had a large fibroid, and was losing large quantities of blood, he felt justified in removing the ovaries, at the same time removing as much as possible of the cancer. That was six months ago, and since that time the fibroid had disappeared, and the cancer had not yet recurred. He agreed that it was impossible to say beforehand which cases would or would not benefit by the operation.

Mr. Eve, in reply, mentioned the case of a lady, aged 43, with a large scirrhus involving the skin and the axillary glands. He operated, and then gave thyroid extract, but the disease recurred within two months, and rapidly spread over the chest. As a last resource he performed oöphorectomy, and continued the thyroid treatment, but without the slightest effect.

Splint for Fractured Clavicle.

Mr. Mouat-Biggs (Cheltenham) showed a man with severe comminuted fracture of the outer third of the clavicle, together with damage of the acromial process, treated by his specially devised splint; and he insisted on the advantages which this splint presented in securing perfect immobility of the fractured surfaces, with consequent small formation of callus. For fifteen years he had successfully treated all cases of injury of the acromion or shoulder with that splint.

CLINICAL SOCIETY OF MANCHESTER.

Judson S. Bury, M.D., President, in the Chair.

Tuesday, October 17th, 1899.

The Prognosis in certain Chronic Diseases of the Nervous System.

The President, in opening a discussion on this subject, said the tendency of wide experience was to make one more cautious regarding the prognosis of apparently trivial ailments, and more hopeful regarding diseases which, as a rule, pursued a downward path. Even a slight illness might leave behind it a weak spot which subsequently was injuriously affected by a toxin or other irritating agent, and became the starting point of chronic progressive disease—for example, disseminated sclerosis following measles, chronic neurasthenia following blows on the head, and sclerosis of the spinal cord following slight injuries to the back. On the other hand, severe organic disease was not always fatal; the morbid process might be arrested, and, exceptionally, even completely cured. Mention was made of the case of a boy who had suffered for twelve years from attacks of severe headache and vertigo, no objective symptoms, however, being detected during that period. Then temporary hemianopsia had been discovered, optic neuritis had supervened, and a diagnosis of tumour involving the middle of the optic chiasma had been thought to be justifiable. At the time of the report the patient was 25 years old, nearly blind from optic atrophy, but in fair general health. Another case was that of a syphilitic man who had had right hemiplegia and complete paralysis of all the muscles supplied by the left third cranial nerve; two years later the symptoms which had indicated a lesion of the left crus had entirely passed away. In disseminated sclerosis, locomotor ataxy, general paralysis, and other chronic nervous diseases, periods of marked improvement were frequent, and sometimes formidable symptoms, such as paralysis of a limb or of a cranial nerve, completely disappeared. To illustrate these statements the President gave the clinical histories (extending over many years) of some remarkable cases of the diseases mentioned.

Dr. Dreschfeld agreed that the prognosis in many chronic diseases of the nervous system was not so unfavourable as was usually supposed, and quoted a large number of interesting cases in support of this view.

Dr. Ledward related and showed, as bearing upon the prognosis of disseminated sclerosis, the case of a boy who had had all the classical symptoms of the disease five years previously. He had been under observation all through that period and his symptoms had undergone considerable improvement.

Dr. Railton remarked upon the difficulties which might arise in the differentiation of cases of cerebellar tumour from cases of distension of the ventricles—headache, vomiting, and optic neuritis being often present in both, and gave the histories of two cases of the latter disease. With regard to the prognosis of locomotor ataxia, he cited the case of a patient in whom fifteen years previously he had found loss of knee-jerks and pupil light reflexes, together with lightning pains. There was a history of syphilis, and the patient had been put under mercurial treatment for a prolonged period. There was now no evidence of the disease having advanced beyond the preataxic stage of fifteen years before, and although the knee-jerks were still absent the lightning pains had almost entirely ceased.

Dr. Reynolds mentioned that in workhouse infirmary practice, where patients remained in the wards for many years, one saw many chronic nervous affections improve to an extent not seen in ordinary general hospitals where the period of rest in bed was comparatively short. As regarded disseminated sclerosis, he mentioned a case in which for a year the first symptoms were apparently those of typical hysteria, and the classical signs of disseminated sclerosis came on fairly rapidly. In another case, after many years the only sign seen was hemiatrophy of the tongue, and in a third the tremors practically disappeared, leaving only spastic paraplegia not severe in character. In general paralysis of the insane he had never seen recovery if there had been Argyll-Robertson pupil and altered knee-jerks, although in such cases a remission might occur in which all mental symptoms disappeared, and the patient was apparently well except for slight physical signs; but relapse and death had always occurred in such cases as he had observed. Apparent recovery of some of the prominent symptoms of locomotor ataxia under treatment by antisyphilitic remedies was often due to the fact that the prominent symptoms in these cases were probably due largely to a diffuse syphilitic meningitis.

Mr. Thorburn referred to the evidences of regeneration of the spinal cord after traumatic and pressure lesions, and in particular to the possibilities of recovery from paraplegia due to spinal caries, tumours, gummata, and injuries. He insisted upon the position that if the cells or fibres of the cord were destroyed no anatomical or physiological recovery would occur, but that if their physiological activity was arrested by pressure lesions only, then the removal of the source of pressure left us with a good prognosis. In the paraplegia of spinal caries, extensive statistics would appear to show that more than one-half of all cases recovered almost completely, but in all cases there probably remained some clumsiness, feebleness, and especially exaggeration of the deep reflexes.

In diseases of the cord other than those above mentioned, the inferential probability was that the amount of recovery would depend mainly upon two factors, namely, the amount of destruction as opposed to pressure, and the possibility of causing absorption of sclerotic tissue, closely intermixed with nervous structures.

Dr. Wahltuch remarked that during the past twenty-five years the diagnosis of nervous diseases had made great progress, whilst prognosis showed little advance. He referred to locomotor ataxia being curable in its early stages, and when advanced often remaining stationary, with improved symptoms, for years.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Professor C. J. Wright, President, in the Chair.

Friday, October 20th, 1899.

President's Address.

The President, in his inaugural address, said that a survey of the beginning of the century showed how much we owed to those who adorned it. The Royal College of Surgeons obtained their charter in 1800, and became custodians of the Hunterian collection. Vaccination had just been discovered by Jenner; Joseph Priestley (a Leeds man) had announced his discovery of nitrous oxide and oxygen. Where would the present applications of electro-therapeutics be but for the labours of Davy and Faraday in the Royal Institution founded in 1799, and of Volta and Galvani. The same period saw the researches of Addison and Bright, of Sir Astley Cooper, Aston Key, Abernethy, and Syme; anatomy, those of Sheldon and Scarpa, and the teaching of Robert Knox at Edinburgh. Laënnec, who published his discovery of *Mediate Auscultation* in 1814, was also active as an army surgeon under the renowned Baron Larrey. The science of obstetrics was advanced by Denman and Blundell, by Rigby and Charles White, of Manchester. The life of Sir Spencer Wells and his development of ovariotomy covered a period during which the study of diseases of women had made immense strides. A sketch of Leeds at the same period was given. Of William Hey, F.R.S., second Mayor of Leeds, attached to the infirmary for forty-four years, from its foundation, who gave several courses of lectures on anatomy long before the foundation of the Leeds School of Medicine; of Thomas P. Teale, F.R.S., and one of the first Crown members of the General Medical Council; of Charles Turner Thackrah, and of Samuel Smith, surgeon to the infirmary for forty-five years. The remarkable growth of medical societies was described. The Medical Society of London was founded in 1773, the Royal Medical and Chirurgical Society in 1805. In Scotland there were societies in Aberdeen, 1789; Glasgow, 1814; Edinburgh, 1821. Now one found in London not only the headquarters of the British Medical Association, but nearly 30 other medical societies, representing every branch of practice and of specialism, besides numerous students' societies in the various hospitals. In the provinces medical societies were started in Colchester, 1774, and Plymouth, 1794. None existed in Yorkshire till that at York in 1832. At this period, too, the British Medical Association was founded, as the Provincial Medical and Surgical Association, by Sir Charles Hastings; district and county Branches were formed, and it held its first annual meeting in Leeds in 1843. The Association, with a membership of 18,185, now had 38 Branches in the United Kingdom, besides 22 in the Colonies. The history of the societies in Leeds was traced; the formation in 1834 of the North of England Medical and Surgical Association, the Medical Club—a small collection of members who held agreeable meetings at each others' houses, for whom Dr. Allbutt acted as honorary secretary for ten years; this and a larger society—the Medical Society—ceased to exist when the present Leeds and West Riding Medico-Chirurgical Society was formed in 1872; this now flourishes with 340 members. The President returned thanks for his election, and expressed the hope that the twenty-eighth session of the Society would be a successful one.

Aneurysm Simulating Sarcoma.

Mr. Ward read a paper on two cases of tumour due to injury of large arteries, and diagnosed as sarcomata.

Mr. Moynihan had seen the first case mentioned with Mr. Ward, and felt convinced that the case was one of sarcoma and inoperable. With regard to the occurrence of gangrene after ligature in the treatment of aneurysm, he called attention to the statistics of Professor Delbet, which showed that death of the limb was three times more frequent after ligature than after excision of the aneurysmal sac. The gangrene could not be due to insufficiency of the collateral circulation, as it was commonly observed that gangrene did not occur until many days after the operation. In most cases the gangrene was probably embolic. In the aneurysmal sac after ligature a loose clot was formed. On the re-establishment of the circulation by enlargement of the collateral vessels the blood passing into and through the sac washed away in its stream fragments of this newly-formed loose clot. A shower of minute clots might be carried onwards and, reaching the smaller distal vessels, become stopped. A series of embolic plugs were thus formed, which effectually cut off the circulation through many vessels at the same time, and gangrene became inevitable.

Mr. Ward replied.

Œdema Without Albuminuria.

Dr. Churton read notes of cases of œdema without albuminuria or obvious heart disease. Formerly rare, such cases were now frequent. The first case was observed twenty years ago in a child aged 2 years; she had anasarca without albuminuria or any discoverable cause. The patient recovered in three months, and was still alive, though not robust. The last case occurred in June, 1899, in a lady, aged 45, not robust but very active and zealous. The eyelids were puffy, especially in the morning; the legs were swollen below the knees, pitting deeply at the ankles. In addition to other work she spent much time in her garden and greenhouses even in the hottest weather. She had pain in some joints, supposed to be rheumatic. There was no albuminuria; no dyspnœa; the heart sounds were normal; pulse good. The diagnosis seemed to lie between "tropical" œdema and rheumatic œdema. With partial rest she recovered in a month. The first case was probably bacterial (? B. lymphagogon of Hamburger). In one case the right arm was not included in the otherwise general dropsy. So far all the cases had recovered, but in some there was a recurrence in a year or two, while in others chronic nephritis or alcoholic neuritis had subsequently occurred. One patient during the usual rapid disappearance of the œdema passed 240 ounces of urine in twenty-four hours.

Dr. Barrs discussed the paper, and Dr. Churton replied.

Specimens and Cases.

The following were shown: Dr. Hellier (1) a case of Obstetrical Brachial Palsy (Erb's paralysis). At birth the head presented, but the shoulders were arrested, and the child was delivered with very great difficulty, but without forceps. Now at 3 months old the deltoid and the flexors and supinators of the forearm were paralysed and wasted. The hand was strongly pronated and abducted to the ulnar side. (2) Specimen of Dermoid Ovarian Cyst with double Pyosalpinx. (3) Specimen showing the rare condition known as Cystic or Vesicular Degeneration of the Omentum.—Mr. Littlewood: (1) A case of Branchial Cysts; (2) specimens of early Ruptured Tubal Pregnancy; (3) Loose Cartilages from the Knee-joint; (4) a Primary Sarcoma from the Soleus Muscle.—Dr. Wardrop Griffith: A small Aneurysm on one of the secondary cortical branches of the anterior cerebral artery, which had resulted in rupture and hæmorrhage into the right hemisphere. The man was the subject of old mitral disease, and the aneurysm was probably embolic. There was no evidence of the endocarditis having been of the ulcerative or infective type.—Mr. B. G. A. Moynihan: (1) Three cases of complete Excision of the Tongue, with glands of both sides treated immediately after the operation by antistreptococcus serum; (2) a case of complete Rupture of the Intestine with intraperitoneal hæmorrhage, operation, recovery; (3) a case of Gastrostomy by Kader's method; a specimen from a similar case; (4) a case of Spinal Bifida (meningocele); patient and specimen shown.—Dr. Churton: (1) A normal Heart transfixed by a needle passed through the third left intercostal space at the junction

of the sternum with the fourth cartilage. The needle passed through the margin of the right ventricle, close to the septum, was just visible in the pulmonary conus $\frac{3}{8}$ in. below the nearest valve cusp; beneath this it passed through the middle of the aortic conus $\frac{1}{2}$ in. below the cusps, and thence through the posterior wall of the left ventricle $\frac{1}{8}$ in. below or to the left of the left auricle; (2) a Heart from a man, aged 38, who died from aortic regurgitation and dilatation of left and right ventricles. The regurgitant *bruit* had been loudest over the fifth and sixth costal cartilages near the sternum. A needle passed through the fourth space at the upper margin of the fifth cartilage, $\frac{1}{4}$ in. from the sternum, transfixed the right ventricle about $\frac{1}{3}$ in. from its left margin, the pulmonary conus 1$\frac{1}{2}$ in. from the valve (total length of distended ventricle being 4$\frac{1}{2}$ in.), the aortic conus 1 in. from the valve (length of ventricle 5$\frac{1}{2}$ in.), the anterior mitral flap near its free margin, and, passing between the chordæ of the posterior flap, perforated the posterior wall of the ventricle 1 in. from the auricle. Early aortic regurgitant murmurs were audible over the fourth left cartilage, close to the sternum—that is, immediately over the aortic conus—into which the regurgitating jet of blood flowed at a moment when the pulmonary conus in front of it was empty, so that there was a continuous solid between the regurgitant stream and the auscultating ear.—Dr. Powell White: Specimens from an Epithelioma with a Horn.—Dr. Barrs: (1) A case of Exfoliative Dermatitis; and (2) a specimen of Pylephlebitis secondary to Appendicitis.—Mr. Cammidge: A completely Calcified Anterior Tibial Artery taken from a young subject with Popliteal Aneurysm.—Mr. Secker Walker: (1) A Tumour of the Lachrymal Gland removed from a woman, aged 60, the growth proved to be a cylindroma; (2) a Non-pigmented Growth from the Choroid; (3) sections of the eye the subject of Chronic Glaucoma.—Dr. Trevelyan: (1) A case of a Crop of Papules on the Soft Palate of unknown origin; (2) a case of Diphtheritic Paralysis with Inco-ordination in a man.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Archibald Donald, M.A., M.D., President, in the Chair.

Friday, October 20th, 1899.

Specimens.

Dr. Stuart Ross showed the specimen from a case of Retroflexion of the Gravid Uterus, which terminated fatally from uræmia. The patient was pregnant three and a-half months, and had retention of urine for one week. Six pints of very fœtid ammoniacal urine were drawn off, and the uterus replaced readily. The patient, however, became comatose, and died forty-eight hours later of uræmia.—Dr. Grimsdale showed the specimen from a case of Uretero-vaginal Fistula, the result of vaginal hysterectomy. Following this operation the patient had incontinence of urine and attacks of pain in the left lumbar region. A papilla was observed in the vault of the vagina, and along this a probe could be passed which led into an abscess cavity in the broad ligament, and into this the upper end of the ureter opened. The left kidney was much enlarged, and the seat of degenerative change with pyelitis. The exact condition of the parts was only made out after an exploratory abdominal section and the introduction of a ureteral catheter. Whilst the question of a further curative operation was being considered the patient suddenly sank from uræmia.—Dr. Briggs showed a series of Gynæcological Specimens.

Tubal Abortion.

Dr. Buckley read notes of a case of tubal abortion associated with a parovarian cyst on opposite side. These were successfully removed by abdominal section.

Ovarian Tumour Complicating Labour.

Dr. Davies related a case of ovarian tumour complicating pregnancy and labour. The patient had a difficult instrumental delivery, followed by severe pyrexia and signs of general peritonitis. An ovarian tumour was diagnosed and abdominal section performed a fortnight after delivery. The tumour had undergone torsion of the pedicle and was very adherent. The patient made a good recovery.

Hydatid Tumour of Omentum.

Dr. Gemmell related a case of hydatid tumour of the omentum removed by abdominal section from a patient who had recently been delivered of a full-term child. The tumour was first discovered during labour, when it occupied Douglas's pouch and caused obstruction. It was, however, readily pushed up by manipulation.

Remarks on these cases were made by Drs. Buckley, Walls, Grimsdale, and the President.

Treatment of Uterine Displacements.

Dr. William Alexander read a note on the treatment of uterine displacements by shortening the round ligaments in cases complicated by adhesions. He pointed out that this operation was usually considered to be unsuitable for cases complicated by adhesions. In these cases he advised that posterior vaginal section should be performed and the fundus uteri liberated from its adhesions. The round ligaments could then be shortened in the usual way. He related three cases successfully treated in this manner.

Remarks were made by Drs. Davies, Briggs, and the President.

British Balneological and Climatological Society.—At a meeting on October 26th, Dr. R. Fortescue Fox (President), who was in the chair, referring to the severe illness of the Chairman of Council, said that every Fellow in the Society would have a very anxious feeling that the valuable life of Dr. Hyde, who had done so much for the Society, would be spared, and that he would soon be seen again at the meetings.—A vote of sympathy, which was seconded by Dr. Symes Thompson, was passed.—The President then introduced the President-Elect, Dr. J. Ivor Murray, J.P., of Scarborough, who, after taking the chair, referred to the lamented death of Dr. Sinclair Coghill, of Ventnor, who died a few weeks after his election as President in June last.—Votes of thanks were passed to the retiring President, the Editor of the *Journal*, Treasurer and Auditors, the Librarian, and the Council and Secretaries.—The President then delivered an address, entitled A Retrospect and Forecast, in which he surveyed the changes in medical practice during the fifty-five years of his professional career. Looking to the future he considered that the revival which had taken place in the value ascribed to the study of balneology and climatology, more especially in this country, and to which the Society might fairly claim to have contributed in no slight degree, was a matter for congratulation. Much was to be achieved by hygiene, baths, and mineral waters, and by the selection of the most suitable health resorts, and in the majority of cases this could be achieved as effectually in this country as by exiling patients to foreign parts, and that with all the home comforts so imperfectly understood abroad, but which made all the difference to the invalid and to the chances of his recovery. The Fellows should bring before the notice of the Society the advantages possessed by home health resorts, so that medical men might become acquainted with the treasures which Nature had so abundantly supplied in various parts of the kingdom, and of which in many cases they were ignorant. It was only in this way that the prejudice which still existed in the minds of the great mass of their countrymen could be overcome. The attention which had recently been directed to the prevention of tuberculosis by rational outdoor treatment was peculiarly the province of the Society to study and encourage, and so with prophylactics and means of treatment, of which balneology was not the least important, they might anticipate the time in the near future when human life, vastly extended, might be only limited by natural decay or accident.

Dermatological Society of Great Britain and Ireland.—At a meeting on October 25th, Dr. H. Radcliffe Crocker, President, in the chair, Dr. P. S. Abraham showed: (1) Generalised Sclerodermia in a middle-aged man; (2) a case of Granuloma Fungoides in a man; some of the tumours had ulcerated, some had not; (3) a woman with (?) a patch of Lichen Planus.—Mr. Arthur Shillitoe showed a case of Purpura Rheumatica (erythema purpuricum).—Mr. T. J. Hitchins showed: (1) An Affection of the Nails in a child; (2) a male

child with Dermatitis Herpetiformis; (3) a case of Leprosy in a boy.—Dr. T. D. SAVILL showed: (1) A case for Diagnosis; (2) a case of Raynaud's Disease.—Dr. P. S. ABRAHAM read a note on An Unusual Case of Molluscum Contagiosum. The treatment of leprosy was discussed by the PRESIDENT and Dr. P. S. ABRAHAM, particularly with regard to intramuscular mercurial injections. The President said that intermittent injections of an iodolate of mercury salt were less painful than were the perchloride injections. The President remarked that he believed that there were only two recorded cases of recovery from mycosis fungoides. A purgative treatment seemed to be answerable for the recovery in one of these instances. Others who joined in the discussions included Mr. PERNET, Dr. SAVILL, Mr. CAMPBELL WILLIAMS, and Mr. HITCHINS.

OXFORD MEDICAL SOCIETY.—The first meeting of the session was held on October 20th, at the Radcliffe Infirmary. It was stated that the following had been elected officers at the annual meeting in June:—*President:* Mr. H. P. Symonds. *Vice-Presidents:* Dr. Brooks and Surgeon-General Bradshaw, C.B. *Secretary and Treasurer:* Dr. Duigan. *Council:* Dr. Collier, Dr. Elsmore, Dr. Ramsden, Dr. Parker, Dr. E. Mallam, and Dr. Proudfoot. The financial report showed a balance of £20 15s. 1d.—Dr. BROOKS showed a case of Chronic Osteitis in a child aged 12, resulting in marked anterior curvature and elongation of both tibiæ. There was no deformity of other bony parts and no evidence of rickets. The teeth were indicative, though not typical, of congenital syphilis, and this was in favour of the specific origin of the bony lesions.—Dr. E. MALLAM showed a case of Osteo-arthritis in a man aged 70, with great deformity of the toes, the great toe being curved outwards so as to overlap the other toes. A discussion arose on the subject of chronic rheumatoid arthritis, with special reference to its etiology and its distinction from chronic rheumatic arthritis. A typical case of rheumatoid arthritis in a young child was exhibited, showing the disease in its acute or subacute condition. Dr. Mallam also showed a case which had been before the Society two years ago, as one of spastic paralysis in a child aged 10. The second dentition showed characteristic specific lesions, and in view of the fact that there was marked defective intelligence, associated with the spastic gait, he regarded the condition as due to a surface hæmorrhage affecting both leg areas and portions of the frontal lobes.—The PRESIDENT showed a simple Apparatus for reducing old dislocations of the shoulder-joint. It consisted of a long board, some 3 feet in width, with a large circular aperture in the centre. The board being placed on its edge, against some support at its ends, such as the legs of a table, the patient was placed alongside it on the floor, with his arm thrust through the opening. In this position he could be safely anæsthetised, and by steady traction on the arm through the opening in the board, reduction could often be effected, and without danger of injury to the axillary vessels and nerves.—Mr. FARMER showed a case of Excision of Ankle-joint, where by an external excision he had been able to remove the astragalus and os calcis, together with the lower ends of tibia and fibula. A remarkable case of Diffuse Veno-capillary Nævus in a boy was exhibited, the parts chiefly affected being the right arm and shoulder. The left shoulder, thighs and abdomen were affected to a lesser degree. Excision and electrolysis were proposed as methods of treatment. After the meeting the new operating theatre was exhibited.

READING PATHOLOGICAL SOCIETY.—The annual meeting was held in the Library of the Royal Berkshire Hospital on October 19th, when there was a good attendance of members and visitors to hear the oration on Acidity delivered by Dr. Goodhart, of London. The subject was treated entirely from a clinical standpoint, and the speaker pointed out that, although from a theoretical point of view it would seem that chemistry should be able to explain the presence of uric acid in the system and output, the inherent properties of living tissues so upset their calculations that he believed it was impossible to say what caused acidity. He condemned stereotyped treatment, including printed diet sheets, and urged the importance of individual treatment and giving more freedom to Nature.—A vote of thanks to Dr. Goodhart was proposed by the PRESIDENT, Dr. Phillips-Conn, and seconded by Mr. HAYES, for an address which was greatly appreciated.—The members and their visitors to the number of thirty-eight afterwards dined together.—During the last year a scheme of amalgamation has been elaborated between the Reading Pathological Society and the Reading Medico-Chirurgical Society. The Reading Pathological Society enjoys the distinction of being the oldest Pathological Society in the United Kingdom with the exception of the Dublin Society, which was founded a few years before. It was started at a meeting at the Royal Berkshire Hospital on July 13th, 1841, for discussion of medical and surgical subjects and of other matters connected with the profession, and a descriptive catalogue of all the morbid preparations was to be kept by the curator. In 1883 the Society transferred its meetings from a room in the hospital to the new library, and its morbid specimens to the museum which had been erected by the governors of the hospital. In the year 1844 a pathological microscope (then a rare instrument) was purchased by the Society at a cost of £56, in order to facilitate histological investigations. During its existence the Society had done much good work for its members, and questions of great interest and benefit to the town and neighbourhood had been discussed and advocated. The Bradshawe lectures were instituted in memory of one of its members, Dr. William Woode Bradshawe, M.A., D.C.L., F.R.C.S., who, after practising at Andover retired to Reading. The Medico-Chirurgical Society was established in 1824 for the purpose of forming a medical library and diffusing medical literature. Since its foundation it had collected a large library containing several rare old works, most of the newest textbooks and works of reference.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—At a meeting held at Windsor on October 18th, Mr. W. B. HOLDERNESS, President, in the chair, the following specimens, etc., were exhibited: The PRESIDENT: Typhoid Bacilli. Dr. ELGOOD: Stained specimens of Normal Blood. Dr. WATERS: (1) Splenic Leucocythæmia; (2) Malarial Crescents; (3) Brain (Malaria); (4) Skin Leprosy; (5) Filaria Lung; (6) Cholera, (Koch). Dr. R. S. MILLER: (1) Recent Amber Lens; (2) Calcified Lens; (3) Ossicles from ears of child at full term; (4) Salivary Calculus; (5) Concretions probably from Fallopian Tube; (6) Epithelioma of Skin (section). Mr. W. S. DIBBS: Series of Photographs illustrating various medical and surgical subjects.—The following patients were shown: Mr. E. WEAVER ADAMS: Lymph Varix of Scrotum in a boy. Dr. R. S. MILLER: (1) Case of severe Wound in Ciliary Region of Eye; boy, aphakia, destruction of iris, good vision; (2) man, aged about 70, Cataracts removed from eyes six and eleven years ago respectively. Dr. A. GORDON PATERSON: Lichen Planus of twelve months' duration.—The following papers were read: Mr. W. B. HOLDERNESS: Presidential Address. Dr. A. J. ANDERSON: On the Artificial Feeding of Infants, with diagrams. A discussion ensued, in which the PRESIDENT and Messrs. BRUCE, PORTER, J. BRICKWELL, and M. SEYMOUR PEMBREY took part; and Dr. ANDERSON replied. Dr. A. GORDON PATERSON: Notes on a case of Splenic Leukæmia (illustrated by a blood slide). Remarks were made by the PRESIDENT and by Mr. J. BRICKWELL.—A considerable number of members subsequently dined together at the Castle Hotel, Windsor.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—The following are the officers for the present session:—*President:* Dr. Burgess. *Vice-Presidents:* Dr. Young and Dr. Kay. *Members to complete Council:* Mr. Leach, Mr. Reckless, Dr. Porter, Dr. Sinclair White, Dr. Brown, Mr. H. Lockwood, Dr. Willey, Dr. Thomson (Retford), Mr. Shea (Chesterfield), Dr. Alfred Robinson (Rotherham). *Treasurer:* Mr. Snell. *Librarian:* Dr. Addison. *Secretary:* Dr. Cocking.—The first meeting of the session was held on October 19th, when the PRESIDENT (Dr. Burgess) delivered his inaugural address, entitled Some Recollections of Medical Cases.

THE ST. ANDREWS GRADUATES' ASSOCIATION.—Sir Charles Gage Brown, K.C.M.G., M.D., has been elected President of this Association for the session 1899-1900. The Honorary Secretary is Dr. J. M. Menzies, and the Acting Secretary is Mr. W. R. Hall, 11, Chandos Street, Cavendish Square, W.

REVIEWS.

RECENT WORKS ON SURGERY.

The first edition of Mr. Treves's well-known work upon *Intestinal Obstruction*[1] was published fifteen years ago. It was in substance the essay for which the Jacksonian prize was awarded, and had the faults inseparable from all prize essays. It was written when the author was only on the threshold of his experience, and, in its academic completeness, may be said to have expressed rather the views of others than those of its author. The present edition has been completely remodelled and almost entirely rewritten. During the last fifteen years Mr. Treves has had great opportunities for gaining experience in this subject. The result is that this volume is intensely personal, and the interest and the usefulness of it are therefore considerably enhanced. The work consists of three parts. Part I treats of pathology and morbid anatomy, Part II of the clinical manifestations, and Part III of the treatment. The alterations in Part I are comparatively few. The general pathology of intestinal obstruction is discussed, and the important experiments of Kader are briefly described. A chapter has been added on internal hernia. The section of it dealing with diaphragmatic hernia is brief but sufficient. That dealing with hernia into the fossæ near the duodenum might have been more thoroughly revised. For the fossa called by recent anatomists—Jonnesco, Brösike, Moynihan—"inferior duodenal" Mr. Treves retains the term "duodeno-jejunal." It is stated that it is this fossa which forms the sac of the hernia; but we believe that an examination of early examples has convinced many anatomists that it is in the "fossa of Landzert" that the herniated bowel lies. The description of right duodenal hernia might have been fuller for there is no mention of Neumann's case, which is especially noteworthy as being the only one recorded in which operation proved successful. In describing "pericæcal" hernia the description given by Jonnesco of the retrocolic fossæ is reproduced, and throughout this section Mr. Treves has accepted the original account given by Jonnesco in place of that author's later contributions and those of subsequent investigators. A valuable addition to this section is an article on Idiopathic Dilatation of the Colon. Two classes of disease are recognised; cases occurring in adults, and cases occurring in children. Of the former Mr. Treves says: "I think that the future will show that a careful examination of cases *post mortem* will reveal some mechanical obstruction in the tube, and [that the evidence that the dilatation is idiopathic will become less and less convincing." Of the latter, "I venture to think that there is strong evidence to support the suggestion that most cases of 'idiopathic dilatation of the colon' in young children are due to congenital defects in the terminal part of the bowel, that there is in these cases an actual mechanical obstruction, and that the dilatation of the bowel is not idiopathic." Part II deals with the clinical manifestations. The symptoms are fully and elaborately set forth and discussed. Of fæcal vomiting it is said that "it is a symptom of very doubtful existence, and is only met with in quite peculiar and rare circumstances. I have never met with an example of fæcal vomiting in any case of intestinal obstruction that I have seen." Of indicanuria it is said that it is a "pronounced symptom" of obstruction in the small intestine, but that "it is of no diagnostic value if acute peritonitis be present, or if the obstructions have been of long duration." By extracts, however copious, from this section it would be impossible to convey any just idea of the value of the whole. Suffice it to say that in the proof of large clinical experience, in descriptive power and in graphic, vivid phrase, it is alike admirable. To those symptoms which are present in the time of earliest onset of acute obstruction, symptoms due largely or solely to profound nervous disturbance, the apt word "peritonism" first suggested by Gübler has been applied. Now that this most convenient term has received the sanction and approval of Mr. Treves, we may reasonably hope to see it universally employed. In Part III the question of treatment is considered. The general treatment is considered under the following heads: (1) Rest; (2) the Administration of Morphine; (3) the Evacuation of the Lower Bowel; (4) the Question of Feeding; (5) the Use of Measures other than Operation. In the opening sentence of Section 2, Mr. Treves says, "Morphine is an absolute necessity in acute intestinal obstruction, and should be administered with as little delay as possible." Of the mischief that arises from the administration of morphine, Mr. Treves must have seen frequent and disastrous examples and he qualifies the statement quoted above by instructions as to the limited amount of morphine to be given and a statement as to the dire effects of too frequent or too large doses, for the practice except under the most rigid safeguards may lead to dangerous delays. The treatment by operation is discussed very fully and quite admirably. The counsel given as to the treatment of the many diverse forms of obstruction is exceedingly apt. The following sentence is worthy to be quoted in full: "Of the various applications in vogue for the uniting of divided bowel, I think one of the best is Murphy's button. It is very far from being a perfect instrument, but it compares at least very favourably with the forms of apparatus which compete with it." This is, perhaps, not very warm praise, but it is a clear statement of the author's present opinion, and as such it has much weight. Many other passages might be quoted which owe their value to the fact that they express views founded directly upon the author's experience. They give the personal tone to the book to which we have already referred, and this personal tone constitutes its great value. Not all the views expressed will be universally accepted, but they will stimulate thought and inquiry. The book is one which all surgeons will hasten to read, and we venture to think that it is one to which they will often recur. Its great practical value will be generally appreciated, but most, perhaps, by those surgeons who are more or less isolated and compelled to do their work away from great centres, where the successes and failures of others are constantly under observation, and knowledge, as it were, oozes into a man unconsciously.

The alterations (one cannot always call them advances) in various surgical procedures and methods are so numerous, and succeed one another with such rapidity, that the need for brief authoritative works dealing with surgical operations is perhaps greater than ever. The publication of the third edition of Professor Esmarch's[2] work is of the very greatest advantage to the student of surgery. Practically all procedures with any claim to permanency are reviewed here, and a brief but succinct and sufficient description is in each case given. The motto of the book is *Kurz und bündig*, and no better or more appropriate one could have been chosen. In spite of the 450 pages, the letterpress is nowhere copious or redundant. Space has been lavished on the illustrations, which are quite free from any elaboration, but are nevertheless clear, striking, and rigidly accurate. The book is a sound one, and as an epitome of surgical methods is the most terse and accurate of which we have knowledge.

Dr. Lardennois's[3] work is based upon a study of all the recorded cases of cancer of the large intestine, treated surgically, and several unpublished cases which have come to the author's notice; 244 cases of excision of malignant growths are recorded, with 84 deaths, as a result of the operations. The results at which the author has arrived may be briefly epitomised. The growth of cancer in the large intestine is relatively slow in the early stages, when there is neither ulceration nor any complication. Growths tend always to become circular, and a "scirrhous" form is frequent.

[1] *Intestinal Obstruction: its Varieties, with their Pathology, Diagnosis, and Treatment.* By Frederick Treves, F.R.C.S., Surgeon-in-Ordinary to H.R.H. the Duke of York; Consulting Surgeon to, and Emeritus Professor of Surgery at, the London Hospital, etc. New and revised edition. London: Cassell and Co. 1899. (Demy 8vo, pp. 565, 118 illustrations. 21s.)

[2] *Chirurgische Technik.* [Surgical Technique.] Von Dr. F. von Esmarch, Professor der Chirurgie in Kiel, und Dr. E. Kowalzig, vorm I. Asst. d. chirurg. Klinik in Kiel. Third enlarged and revised Edition. Kiel und Leipzig: Lipsius and Tischer. 1899. (Demy 8vo, pp. 458, 632 illustrations. M.12.)

[3] *Traitement Chirurgical du Cancer du gros Intestin* [Surgical Treatment of Cancer of the Large Intestine]. Par le Docteur Henri Lardennois, Ancien Interne des Hôpitaux de Paris, Chirurgien des Hôpitaux de Reims. Paris: G. Steinheil. 1899. Roy 8vo, pp. 205, 10 illustrations. F. 6.)

Generalisation is rare. Infection of the liver or of the glands is always tardy. The "terminal" arrangement of the vessels and lymphatics of the gut is fortunate as permitting the complete extirpation of the affected tissues when an early operation is performed. Cancer of the large intestine, like cancer elsewhere, is at first a purely local disease, and extirpation may be, and indeed has been, followed by permanent cure. The excision of a cancerous ring of bowel is advised, even if the operation is likely to be severe, prolonged, and hazardous, for the after-results more than compensate for the temporary risks. The mortality of these operations is steadily decreasing. There is difficulty in diagnosing malignant disease of the intestine in its very early stages. When the symptoms are at all equivocal an early laparotomy, attended by little or no risk, will clear up the diagnosis. Early diagnosis, early operation, and wide removal of all the affected areas will in the future give better results than have previously been obtained. All surgeons now are agreed as to the best treatment of cases of cancer involving the intestine. The difficulty, at present an almost insuperable one, is for the surgeon to secure the cases at a time when the growth may fairly be called "local." Patients about whom there is doubt should be seen at the earliest possible moment by the surgeon. There is a persisting belief that these patients are "medical" rather than surgical in the time of their earliest symptoms. We may be permitted to quote once again Kocher's remark at the French Congress in 1896, "Messieurs les médecins, permettez nous de guérir vos malades." The volume is a careful and comprehensive review of the literature of the subject up to the present time. The labour of compiling it must have been considerable, for Dr. Lardennois has done his work so well that it would seem that future commentators may safely neglect all earlier records.

The possibility of employing omental grafts for the purpose of strengthening a damaged portion of the intestinal wall has been, during recent years, recognised on many occasions. Senn, in his great work on *Intestinal Surgery*, first drew prominent attention to the value of the method, and there has since been an accumulation of evidence, both clinical and experimental, to show that in some cases the procedure is invaluable. Thus Mayo Robson has on more than one occasion employed an omental flap to make secure the adhesion of a small and shrunken gall bladder to the parietal peritoneum; and Bennett has recorded a case of perforated gastric ulcer in which the opening, otherwise intractable, was closed by means of an omental plug. From the experimental side the most interesting work was done by Chaput. He concluded, after a long series of experiments, that in cases of seriously damaged intestine it was safer to suture the injured segment to a neighbouring coil of intestine than to employ an omental graft. A point emphasised by him, and previously noted by Senn, was the possibility of the occurrence of volvulus after the application of an attached omental flap. In 10 consecutive cases this accident happened seven times. To other observers this has not occurred so frequently. Sundholm[4], in a small pamphlet before us, studies the subject also from the experimental side. His conclusions, which are the result of very careful, elaborate, and fully controlled experiments may be thus epitomised: (1) A detached flap of omentum, applied to a damaged intestinal wall heals quickly and very firmly. The flap lives and undergoes only slight alteration and shrinking through the contraction of newly-formed tissue. (2) If the intestine is seriously damaged, the flap prevents it from perforating, and protects also the muscular coat from extensive tissue changes. (3) Attached flaps also adhere quickly to the injured gut, but very slowly or not at all to intact serous surfaces. As a rule the behaviour of omentum is very much the same whether free or attached. (4) Omental grafts or flaps prevent perforation, quicken healing, curtail the formation of adhesions, and lessen the amount of cicatricial contraction. The formation of adhesions, however, is not a serious matter. Both Engström and Sänger have shown that adhesions have an innate tendency to lessen and disappear. This book is a record of good work, thoroughly and patiently done. The subject is approached in the true scientific spirit, and the author is evidently a carefully trained and accurate observer.

Dr. Kehr's new work[5] is supplementary to his well-known volume on the *Surgical Treatment of Gall-stone Diseases* published in 1896. An attempt is here made to find satisfactory answers to two questions: (1) How can we recognise the different forms of cholelithiasis? (2) When should we advise a Carlsbad "cure" and when operation? In order to answer the first question, Professor Kehr analyses in minute detail 100 cases of cholelithiasis that have been under his care, and uses them as an illustration of the symptoms dependent upon every possible form of gall-stone disease. The second question is thus answered:

(*a*) A Carlsbad cure is advised under the following circumstances: (1) In acute retention of bile; (2) when there are inflammatory processes in the gall bladder, with or without jaundice, when these appear neither too frequently nor too severely; (3) when there is frequent colic accompanied by persistent passage of stones; (4) in patients who are gouty, diabetic, or very stout, or when there are diseases of the heart, lungs, kidneys, or liver, or when danger is anticipated from the anæsthetic; (5) in cases that have been operated upon.

(*b*) Operation is advised: (1) In sero-purulent cholecystitis and pericholecystitis; (2) when there are adhesions between the gall bladder and intestines, omentum, and so forth; (3) when there is chronic retention of bile; (4) when there is chronic retention of gall bladder contents, causing hydrops or empyema; (5) in all cases which defy medical and hydropathic treatment, when life is rendered uneasy or unendurable; (6) in suppurative cholangitis and hepatic abscess; (7) in perforation of the gall bladder or ducts, with acute peritonitis; (8) in gall-stone morphinomania.

Under no circumstances is massage to the gall-bladder region to be used. Of this at one time much-vaunted procedure Professor Kehr says, "I cannot conceive a grosser scientific error." There is even yet considerable difficulty in diagnosing with reasonable accuracy the many forms of disease that arise from the presence of gall stones in any part of the biliary passages. The careful analysis given by Professor Kehr of his cases will enable us to appreciate many points which have previously been obscure.

The *Mechanics of Surgery*,[6] by Mr. Charles Truax, marks a new departure in the compiling of surgical instrument catalogues. It is written by a leading representative of one of the largest surgical instrument firms in America, and is the outcome of "an almost daily intercourse with physicians and surgeons extending over a number of years, frequent attendance at clinics in many parts of the world, and extensive study of books and journals." The book is, nevertheless, a surgical instrument catalogue, in which the illustrations, though accurate and copious, are altogether subservient to the letterpress. The author is a confidential adviser, who has examined into the merits of many methods and of many appliances, and gives the reader the result of his experience. As might be anticipated advice tendered in such manner and under these conditions falls, sometimes, short of the best. It can hardly be considered the province of a maker of instruments, however accomplished he may happen to be, to give advice as to the most appropriate use to be made of any special, or even of any ordinary, instrument. Intimate knowledge of the worth of instruments is not acquired by the making of them, but by the persistent use of them. And therefore Mr. Truax has set himself a task, in the compiling of this book which, in the very nature of things, he is not strictly competent to fulfil. It is, moreover, a little hard to understand who the clients of the author, in his *rôle* of confidential adviser, are likely to be. Surgeons in active practice most certainly not, and for the occasional purchaser of a novel instrument the volume has a portentous aspect. The lack of that intimate knowledge of instruments which we have referred to is evidenced in the sections dealing with tracheotomy, urethral instrumentation, and a few others. Under the heading of Artificial Testes we read: "They are employed in special cases where the patient is not advised that castra-

[4] *Heilungsverhältnisse bei Lüstonen und Ernährungsstörungen der Darmwand unter Omentbedeckung.* [The Influence of Omental Grafts in the Healing of Wounds of the Intestine.] Experimentelle Studien von Albert Sundholm. Berlin: S. Karger. 1898. (Roy. 8vo. Pp. 81. Fig. 11. M.2.)

[5] *Anleitung zur Erlernung der Diagnostik der einzelnen Formen der Gallensteinkrankheit, auf Grund eigener bei 433 Gallenstein-laparotomien gewonnener Erfahrungen für den praktischen Arzt zusammengestellt* [Guide to the Differential Diagnosis of Gall-stone Diseases, based upon 433 laparotomies for Gall Stones]. Von Prof. Dr. Hans Kehr in Halberstadt. Berlin: H. Kornfeld. 1899. (Royal 8vo, pp. 272. M.5.)

[6] *The Mechanics of Surgery, comprising Detailed Descriptions, Illustrations, and Lists of the Instruments, Appliances, and Furniture Necessary in Modern Surgical Art.* By Charles Truax. Chicago: Truax, Greene, and Co. 1899. Roy. 8vo, pp. 1,024; 2,381 illustrations

tion has been performed." Can that possibly be true? We cannot think that the need for such a work as this exists. Considered purely as a surgical instrument catalogue, however, it can justly be allowed that it is almost up to the standard of the best English catalogues. This is, we think, the fairest estimate of the work. The name of the firm with which the author is concerned is engraved in bold type on the great majority of the instruments figured, and it is, we consider, rating the volume at its just worth to look upon it solely as a generously-compiled advertisement.

Professor Lejars's[7] treatise has been written with the object of presenting in an essentially practical form the indications and the best modes of performance of the principal operations of urgency. The extensive portion of surgical work here dealt with, to which M. Lejars gives the term "surgery of urgency," includes, besides severe injuries, a long list of acute and critical affections of internal organs. A brief glance at the full index of this volume will afford a good idea of the extent of the claims now made by the surgeon to take part in the treatment of a large class of cases which until quite recently were regarded as special objects of the physician's care. In the large section of this book devoted to the surgery of the abdomen, the treatment of morbid conditions of the peritoneum and of the viscera in relation with this membrane occupies a considerable proportion of its pages. M. Lejars is evidently well fitted to prepare a work of this kind. It might be said that almost every page proves that he is a skilled and experienced surgeon, a careful clinical observer, and a painstaking student of the most rigorous details of aseptic methods. He is an advocate of prompt and energetic treatment, and in all that he teaches is thoroughly practical. He has no respect for formulas and doctrines, and regards the so-called "expectant treatment" as being in most instances a theory of *laisser faire* and *laisser mourir*, to be rejected by conscientious and earnest men. Although a keen advocate of prompt and thorough surgery, he is not an indiscriminate one, as he gives good reasons for his teaching, and here and there urges the claims of prudent and cautious conduct. Objection might be taken, however, to the statement that the surgery of urgency ought to be practised everywhere—in the country and in the cottage, as well as in the well-equipped hospital of a large town. Surely many of the formidable operations described in this volume could not justifiably be undertaken except by a practitioner possessing precise knowledge of regional anatomy, and possessed of the coolness and "nerve" that prolonged experience in operative work alone can give. The method followed by M. Lejars in discussing the different forms of injury and disease regarded as objects of the surgery of urgency is to give in the first place a report of an actual and typical case, and, after a full comment on the clinical features and therapeutical indications of such case, to conclude with a description of what he holds to be the most suitable treatment. The records of cases, being full of graphic and well-arranged details, are very interesting as well as instructive. The most important sections of the work, however, are those devoted to operative treatment. The stages of each operation are fully and lucidly described; and as an indication that these descriptions are given by one who has himself practised what he teaches, the reader will find useful hints to assist him in overcoming almost every possible difficulty and complication. The value of this portion of the book, which we are disposed to regard as an excellent, if not the best existing, manual of operative surgery for practical men, is considerably enhanced by a profusion of very good and clear illustrations, many of which have been designed for this work by a friend of the author, Dr. Daleine. There can, we think, be no more convincing evidence than that afforded by this book of the vast and beneficial changes that have been effected in all branches of surgical practice through the adoption of antiseptic and aseptic methods. Not only are many pages devoted to quite fresh subjects, such, for instance, as wounds of the heart and lung, and perforations of the gastro-intestinal canal, but we find in the interesting chapter on the well-worn subject of hernia many indications of a new order of things.

[7] *Traité de Chirurgie d'Urgence.* Par Félix Lejars, Professeur Agrégé à la Faculté de Médecine de Paris, Chirurgien de la Maison Municipale de Santé, Membre de la Société de Chirurgie. Paris: Masson et Cie. 1899. (Roy. 8vo, pp. 751, 432 illustrations. F. 22.)

NOTES ON BOOKS.

We have already had occasion to notice favourably the first edition of Messrs. Pearmain and C. G. Moor's *Aids to the Analysis of Food and Drugs.* (London: Baillière, Tindall and Cox. 1899. Crown 8vo, pp. 206. 3s. 6d.). The second edition appears to have been brought thoroughly up to date. In the articles on food additions have been made, notably in regard to poisonous metals commonly found as adulterants. The treatment of drugs has been entirely revised in the light of the new *Pharmacopœia*, and in many cases where figures have hitherto not been available, such for instance as the specific gravity and alcoholic strength of tinctures, the authors have made a large number of determinations and given them in tabular form. The work necessarily omits much detail; it is, however, a very fair abstract of what is most important to the ordinary worker, distinguished by a thoroughly practical tone. Mr. Moor has elsewhere drawn attention to the necessity of adequate food standards, so we are not surprised to find in the present book many tables and data. We would draw especial attention to that on page 14, from which it appears that the standard adopted by the Inland Revenue is the lowest of those recorded.

The second edition of *Professions for Boys*, by M. L. Pechell and James J. Nolan (London: Beeton and Co. 1899. Cr. 8vo, pp. 316. 3s. 6d.) is more than double the size of the book which we reviewed a little more than a year ago. We then noticed the author's silence respecting several vocations, "such as those of schoolmaster, artist, musician, journalist, etc., upon which readers might expect to find some information." Mr. Pechell has in the preparation of this second edition associated with himself as collaborator Mr. James J. Nolan; and the authors have not only supplied the omissions we noticed, but have added altogether twenty-two new articles on various professions, and have revised and brought up to date the information published in the first edition, rendering it still more valuable to parents and guardians.

In *A Cycling Tour in the Ardennes* (Ipswich: S. Smith and Smith. 6d.) a medical man gives a short account of a tour on wheels which he made with a party of friends in the Ardennes. They crossed over from Harwich to Antwerp, and travelled by way of Spa, Luxemburg, Arlon, and Namur. The author gives a humorous account of incidents on the road, and his slender volume is illustrated by snapshots taken by one of his companions. The example of this party may well be imitated by those cyclists who are not too enamoured of a flat road. One advantage of the district is that railways are nearly always within reach, so that any member of a party who finds himself or herself overfatigued can easily catch up more energetic companions.

The eighty-eighth number of *Lean's Royal Navy List* has just been issued. This periodical has now completed the twenty-second year of its existence, and is everywhere recognised as an extremely useful work of reference. The editor tells us that it deals with the career of some 10,000 naval officers; and we can well believe that the high standard of accuracy reached has only been attained by the exercise of most extreme care. An interesting feature of the volume is that in the list of ships, the victories of famous battleships bearing the same name are recorded, so that the volume contains a record of the war services of a large proportion of the ships of the British navy.

The third edition of Dr. R. S. Aitchison's *Medical Handbook* (London: C. Griffin and Co. 1899, Fcp. 8vo, pp. 363. 8s. 6d.) differs in no material respect from the first edition, which was noticed in the British Medical Journal of July 29th, 1893. The original plan of classifying the diseases of which its treats on a clinical basis, with its advantages and all its disadvantages, has been continued. The book is eminently adapted for the overworked general practitioner to snatch up for consultation as to the elements of some subject about which he is in doubt, but it is by no means one for continuous reading, or one that is likely to suggest new lines of thought. Its strength, indeed, lies in the usefulness of the groups of facts that the author has collected or compiled, rather than in any originality.

REPORTS AND ANALYSES

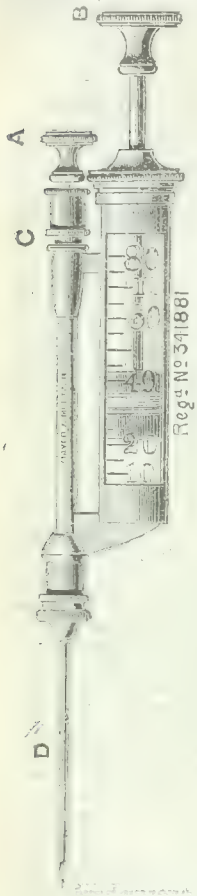
AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

An Improved Exploring Syringe.—Mr. Christopher Mayhew, M.R.C.S., L.R.C.P. (Portsmouth) writes: This syringe is designed to overcome inconveniences too often experienced when using the ordinary apparatus, such as blocking of the needle, either during its insertion, or by particles in the fluid which it is intended to withdraw. It will be seen from the sketch that it consists of a hollow needle D, fitted with a pointed trocar which passes through an air-tight stuffing box C, and is provided with a head A. This part of the apparatus, which is similar to that supplied with some aspirators, is fixed parallel to an ordinary cylinder and piston, the needle D having a clear way through to the lower end of the cylinder. When it is required to use the syringe for exploring purposes, both the trocar and piston are pushed right in by means of the heads A and B respectively. The needle is then inserted and the trocar pulled out a few inches by means of the head A, so as to leave the needle open to the cylinder. The piston can now be gradually drawn out. If, when the piston is part of the way up the cylinder, the needle should become stopped up, the trocar can be pushed down to clean it. The apparatus is so designed that it can be taken to pieces for sterilising and cleaning. Messrs. Mayer and Meltzer of Great Portland Street are the makers.



Sterilised Ophthalmic Dressings.—Mr. K. C. Chetwood-Aiken (Ophthalmic Surgeon to the Royal Cornwall Infirmary) writes: By the aid of a portable steriliser it is an easy matter in private practice to render aseptic the various instruments required for an ophthalmic operation; but to be thorough, the sponges used for removing blood, lens matter, etc., and the pads of gamgee tissue applied as a dressing, should equally be placed beyond suspicion, and this is less simply brought about. The following method will, I think, be found to answer the purpose, besides being a great saving of time and trouble. A number of circular pads of absorbent tissue are cut and placed in a tin, each pad being separated from its fellow by a leaf of paper. To these is added a tray containing "swabs" or sponges made of small rolls of lint, the whole being then placed in a suitable steam steriliser. Here a pressure of 20 lbs. and a temperature of 120° C. to 130° C. are produced and maintained for a sufficient time to ensure absolute sterilisation. The tins are then removed and hermetically sealed. The form of tin employed is similar to that used by Messrs. Wills and Co. for putting up tobacco and cigarettes, and is opened in a like manner by a cutter in the cover. Each contains twenty pads and a sufficient number of swabs for an operation. By this means the surgeon procures his dressings ready cut, sterilised and packed, a great convenience in emergency operations, the pads retain their shape and do not adhere to one another, and each can be removed singly without touching the remainder. The price of the tins is 18s. per dozen, and the makers are Messrs. Ferris and Co., of Bristol, from whom they can be obtained.

An Improved Ovum Forceps.—Dr. A. Rabagliati (Honorary Gynæcologist, Bradford Royal Infirmary) writes: The ovum forceps depicted in the accompanying illustration has been made for me by Allen and Hanburys, 48, Wigmore Street, W. I think they meet a felt want. The ordinary ovum forceps are well known, having a pair of blades which meet at a point at the end, the only place at which they are in contact, and the theory of their action seems to be that the egg-shaped ovum will fall into the oval aperture of the blades, and, lying there, be easily extracted. In fact, as all practitioners know, it does nothing of the sort. Often enough an ovum is torn in the act of extracting it, and then a portion being left, and being besides attached to the uterus, cannot be removed by the ordinary ovum forceps, which grasp it only by the extreme tips of the blades. Finding this difficulty in many of the cases in which I was asked to assist practitioners, I first got the ordinary ovum forceps flattened out, so that the blades should be in contact all the way along, and not merely at their tips. The serration of the blades gave a rather better grip, and a little more power of extraction was gained. Still, however, too often blades slipped over a portion of the attached placenta, and other means had to be used to extract it. Curetting is objectionable in many of these cases, because it injures the delicate mucosa. So I suggested the instrument shown, a kind of evolution of the ordinary ovum forceps and a considerable improvement on it. The edges of the blades, whose general curve and shape have been retained, as they required no improvement, have been bevelled, so as to avoid injury to the uterine mucosæ. After their introduction, the blades are opened and moved in the direction of the attached placental tissue, which can often be just touched, but cannot be extracted by the tip of the index or middle finger. When the blades are opened the placenta or ovum can be grasped between them, and then the protected teeth, projecting four on one side against three on the other, each fitting into the openings on the opposite side when the blades are closed, grip the ovum or placenta and extract it. I have found this instrument serve me well on several occasions. Practitioners are usually struck by its adaptability to the intended purpose, and more than once have I heard it said that it was the "very thing." Messrs. Allen and Hanburys have suggested and carried out the further improvement of an aseptic joint, which allows of thorough cleansing of the blades, each one separately after use. It is, of course, used with strict aseptic and antiseptic arrangements. By its use I have often been able to obviate the necessity of widely and forcibly dilating the os and cervix, which it is better to avoid when possible in the management of these cases.



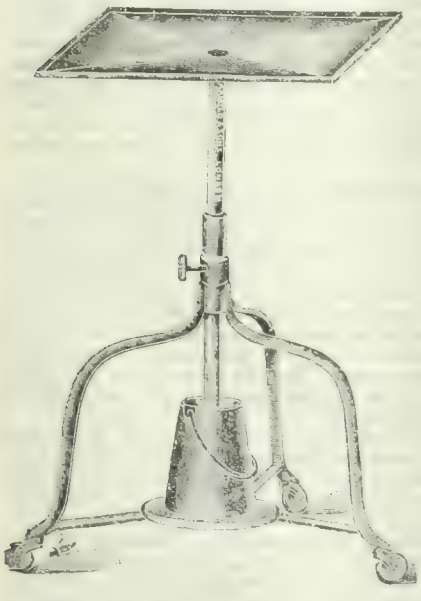
A Milk Steriliser.—Dr. James Foulis of Edinburgh sends us the following description of a sterilising can which he has had in use in his own house for ten years: This steriliser consists of a bright tin can (Fig. A, p. 1299). It has two covers—a tight-fitting lid, and a loose cover (Fig. C). These tins may be made to hold any quantity of milk, but those recommended for general use should hold one quart, two quarts, or four quarts each. The mouth of each tin should be 3½ inches in diameter, so that the hand may pass easily in when cleaning the can. At the bottom of each tin is a stout metallic rim 1 inch in depth, and pierced with six or eight equidistant

holes ⅛ inch in diameter (see Fig. A). This last arrangement, with the loose cover, entirely prevents the boiling and scorching of the milk during the process of sterilisation if the following rules are closely followed: Rules for sterilisation:—(1) The milk may be brought direct from the dairy in the sterilising can, to which is then fitted the tight lid (Fig. A). (2) When about to sterilise, remove the tight-fitting lid, and place the loose cover over the mouth of the can. (3) Immerse



the can of milk in a large pot of cold water, of any size (see Fig. B). The cold water should surround the milk can on all sides to the depth of at least 1 inch, and the pot should be filled up to within 1 inch of its brim, not higher. (4) Place the pot on a good fire to boil the water. (5) Watch carefully for the first appearance of the boiling or bubbling of the water. When this is seen allow the water to bubble hard for just ten minutes. The temperature of the milk will then be above 180° F., and it is neither boiled nor scorched. (6) Remove the can from the bubbling water, and, without removing its loose cover, allow it to remain in a cool larder until the milk is cool or required for use. The milk may at once be cooled by immersing the tin in a large tub of cold water. These rules for sterilisation, without boiling or scorching the milk, hold good in the case of the one-quart, two-quart, and four-quart tins. There is no patent in connection with these tins; any person may have them made at a tinsmith's at a trifling cost. I can recommend them to all who are in want of a thoroughly efficient and reliable sterilising can. They may be obtained ready-made from Messrs. Gardner and Son, 32, Forrest Road, Edinburgh.

A Surgical Dressing Table.—Dr. H. W. G. Macleod (Streatham, S.W.) writes: Messrs. Arnold and Sons have made for me at my suggestion an aseptic surgical dressing table, of enamelled iron throughout, for use both in the consulting room and operating theatre. It can be raised or lowered to a convenient height, and has in the centre a drainage pipe (of iron) emptying into a receiver which can easily be removed when full of fluid. The table runs on three rubber-tyred wheels, and can be readily moved about the room. I think it will be found useful in private practice for dressing wounds and cuts of the hand, etc., that frequently have to be attended to at one's writing table or desk. In operating rooms the table can be raised or lowered for the use of the surgeon or his assistants. In military practice it would, I think, be found useful both in station hospitals and in the field, as the table is portable, is easily put together, and is practically unbreakable.



MEDICAL REFORM AND THE MIDWIVES BILLS.

A joint meeting of the East York and North Lincoln Branch of the British Medical Association and the Hull Medical Society was held on October 20th, 1899, at the Royal Infirmary, Hull, to which all members of the medical profession residing within a radius of thirty miles were invited. The invitation met with a hearty response, and a large gathering was, we are informed, the result.

A deputation from the Corporate and Medical Reform Association, Limited, was received, consisting of Dr. Hime, President of, and Special Delegate from, the Bradford and West Riding Medical Union; Mr. Clark Newton, President of, and Special Delegate from, the Newcastle Medical Ethical Society; and Mr. R. B. Anderson, F.R.C.S., representative of the Corporate and Medical Reform Association.

The object of the meeting was to discuss and concert measures to resist the registration of midwives, as contemplated in the various Midwives Bills already before the profession, and to emphasise the necessity for medical reform in the direction of the undermentioned resolutions.

The following resolution, proposed by Dr. Harrison, and seconded by Mr. Hardey, was carried without a dissentient vote:

That we, the members of the medical profession in East Yorkshire and North Lincolnshire, view with grave concern and alarm the attempts to create an inferior order of practitioners as contemplated in the Midwives Bills already drafted, and we are of opinion that the passing into law of any such Bill can only be disastrous to the welfare of the general public, and will still further open the door to all sorts of irresponsible medical practice.

Dr. Hime (Bradford) detailed the difficulties occurring in his own district, which would only be accentuated by the past action of the General Medical Council. He moved the two following resolutions, which were seconded by Mr. Francis, and carried unanimously:

1. That on the grounds set forth in the memorials of the Corporate and Medical Reform Association, Limited, and on the following resolution of the General Medical Council in reply thereto of June 9th, 1899: "That as regards the issue of certificates in midwifery referred to in the memorials, the Council is of opinion that, as the Midwives Bill is now before Parliament, it should at present refrain from taking any action. As regards the certificates granted to spectacle makers, the Council exercises no jurisdiction over such opticians, but will be prepared to consider any properly substantiated charge of improper conduct made against a registered medical practitioner with reference to this subject," this meeting in the first place condemns as illegal the action of the General Medical Council in framing the certificate of the London Obstetrical Society, and in sanctioning these and other certificates in midwifery, which are now a precedent for the certification of opticians and others in breach of the Medical Acts; and, secondly, calls upon the Council to rescind such sanction, and place itself in a position to deal judicially and on like principles with charges that may be brought before it for covering midwives or opticians; and upon the President of the Council to retire from connection with the London Obstetrical Society so long as that Society issues such certificates.

2. That this meeting repudiates, as inconsistent alike with the public safety and the rights of the medical profession conferred by the Medical Acts, the General Medical Council's "recommendations" to the Privy Council on the subject of registration of midwives; by which it is proposed that, contrary to the Medical Acts, and in repeal thereof, medical attendance on poor women in so-called normal labour is to be entrusted to persons not medically educated as the law for the safety of the people now requires.

Dr. Newton (Newcastle-on-Tyne) gave an account of the action in the direction of medical reform which had already been taken by members of the medical profession in the Northern Counties. He advocated the necessity for general union on progressive lines, and concluded by moving the following two comprehensive resolutions, which were seconded by Dr. Parkin, and carried enthusiastically:

1. That whereas the General Medical Council has (1) contrary to the Medical Acts recognised the certification of unqualified practitioners as competent in branches of medical practice (midwives, and by inference opticians); (2) recommended to the Privy Council provisions to legalise the practice of midwifery by persons not medically educated; (3) in 1897 and 1899 rejected applications to recommend to the Privy Council an increase in the number of direct representatives; (4) in 1897 wilfully, and contrary to the express provisions of the Medical Acts, maintained its illegal form of return of its corporate members, thus conspiring to deprive

constituents of certain corporations of the right to choose their corporate members of the Council, and has, in 1897, refused to take part in securing any of the reforms of the Council and the Medical Acts urgently necessary in the interest of the public and the medical profession, this meeting now declares that in the above specific respects, as well as in its present constitution, the General Medical Council does not represent the medical profession or provide for the public interest, and ought to be reconstituted and reformed by an amending Medical Act.

B. That an amending Medical Act ought *inter alia* to provide: (1) That the direct representatives be increased to a numerical majority of the Council and returned by districts; (2) that the corporate members be elected by the medical constituencies of the corporations; and that the corporations contribute notably to the funds of the Council; (3) that if represented thereon the Crown contribute ratably to the funds of the Council; (4) that the disciplinary powers of the Council be extended to censure and suspension, and to cognisance of unethical conduct; (5) that provisions be included for the better prevention of fraud and crime by illicit practice, and for better protection of life and health on constitutional lines; (6) that criminal prosecutions be transferred to the police, and that in this and other respects the Council, as an advising and supervising body, be brought into more direct relation to the department of public health.

Mr. R. R. ANDERSON gave a summary of all the steps taken by the Corporate and Medical Reform Association, Limited, up to the present, both to promote the amendment of the Medical Acts in the general interest of the public and the profession, and also to suppress all kinds of illegitimate and illegal practice, existing or contemplated. He urged the necessity for the general body of the profession bringing strong pressure to bear on their direct representatives on the General Medical Council, and for the various Branches of the British Medical Association approaching their Council in an emphatic manner to secure the necessary reforms. He gave a list of the medical societies in the country which had become affiliated for this purpose, and stated that the profession was awakening to the necessity for speedy action. He concluded by moving:

That copies of the foregoing resolutions be forwarded to the members of the Cabinet, members of Parliament for the district, direct representatives of the medical profession on the General Medical Council, the Council of the British Medical Association, all the Branches of the Association in Great Britain and Ireland, medical societies in London and the provinces, and the leading medical papers, requesting their support and active co-operation.

This resolution was seconded by Mr. NELSON and carried unanimously.

The following resolutions were proposed by Dr. PARKIN, seconded by Mr. FRANCIS, and carried unanimously:

1. That this meeting learns with regret that the Councils of the British Medical Association, Medical Defence Union, London and Counties' Medical Protection Society, and Incorporated Medical Practitioners' Association have not seen their way to accede to applications to bring charges of covering against medical practitioners for certifying midwives or opticians as competent in branches of medical practice; and invites them individually or collectively to bring such charges.

2. That members of these two Societies are by this meeting earnestly invited to join the Corporate and Medical Reform Association, and support its policy; and that medical residents in this district who have not yet done so are invited to join these two Societies and the Corporate and Medical Reform Association, Limited, and thus take immediate and practical concerted action in the mutual interests of the profession and the public.

3. That a Subcommittee, consisting of Drs. Harrison, Parkin, Waters and Francis be appointed to carry out the resolutions, and to invite the direct representatives to address a meeting of the profession on their way to or return from Newcastle.

TYROTOXICON POISONING.

WE are indebted to a correspondent for the following interesting account of a series of cases of tyrotoxicon poisoning which occurred last September among troops of the Aldershot command.

Two field columns, each of a strength of 3,200, left Aldershot on August 24th last, and manœuvred for a week within a radius of twenty miles till September 1st, when they returned to the station. They lived under canvas during this period, and occupied several camps, moving from one to another every second or third day. The weather was hot and dry in the early part of the time, and coldish and wet during the latter half.

The first case of what was then considered gastro-enteritis was admitted on August 26th, and between that date and September 10th 27 men were admitted to hospital all presenting symptoms attributable to the same disease. With the exception of 4 or 5 all had formed part of the field columns.

The symptoms presented were fever, temperature ranging between 100° and 103°; vomiting, in some cases of blood, failing pulse, and in the more serious cases cramps of calves. When these symptoms continued for three or four days jaundice set in, in the more grave cases very pronounced, in the milder confined to or only to be distinguished in the conjunctivæ. In some cases, however, there was no jaundice, and such were usually of the mildest form. Three cases proved fatal, and in 2 of them necropsies were made. The skin and tissues were stained deeply yellow from bile, the stomach was acutely inflamed, and there was considerable submucous extravasation of blood with œdema. The duodenum and jejunum presented the same conditions in a lesser degree, but the congestion decreased as the colon was approached. Apart from the foregoing there was nothing to attract attention in the pathological appearances. No food could be retained in the fatal cases, so that everything in the way of nutriment had to be administered by the rectum.

The rations of the troops were of the ordinary kind, supplemented by a daily allowance of cheese, and from time to time by tinned American beef and German sausage. A very respectable firm provided the cheese, tinned beef, and German sausage. Some of the patients declared that they did not eat the cheese, but the great majority did consume more or less. The cheese, it appears was obtained from abroad, and there was nothing in its appearance or flavour to prove that it was otherwise than wholesome, and although the contractor affirmed it was supplied to other customers, there was no complaint made to him about it.

In one of the camps occupied by the columns there was a flock of twenty sheep, and after the troops marched out of the camp (Cowshot) some of the animals were seen to be feeding on the refuse left behind, such as potato peelings, onions, pieces of cheese, etc. Some eight of them sickened and six of them died in two or three days. The owner made a claim against the War Office for his sheep, and a veterinary and medical officer were detailed to inquire into the cause of their deaths. They exhumed the bodies of three of them, and found in the stomachs refuse of the kind above referred to, and the medical officer, who had previously seen the appearance presented by the stomach and intestines of the soldiers, had no difficulty in tracing the same pathological conditions in those of the sheep. Portions of the cheese in the sheeps' stomachs were forwarded to Dr. Luff, who was then acting for Dr. Stevenson at the Home Office, and his report was as follows:

"I have made complete analyses of the viscera and of the contents of the stomach of the deceased soldier Rowe. They are quite free from all metallic and vegetable poisons. The stomach, duodenum, and liver are also free from ptomaines, but in the contents of the stomach I found a small quantity of a toxic ptomaine, which was present in too small a quantity to identify. In the portions of cheese handed to me by Captain Hughes, I found tyrotoxicon present in fairly large quantity. One milligramme of this tyrotoxicon injected into a rat killed it in three hours. The symptoms from which the soldiers suffered are quite compatible with the cases being due to tyrotoxicon poisoning."

Putting two and two together, there could be no doubt that the illness of the soldiers and the deaths of the sheep were attributable to the same cause, and the conclusion arrived at was that the cause of death in both cases was tyrotoxicon poisoning, giving rise to gastro-enteritis, and that the cheese was probably the cause of the poisoning. Bacterial cultivations were forwarded to Dr. Klein and Professor Wright, of Netley, but nothing worthy of note was discovered. The sale of the cheese was prevented, and the admission of cases of gastro-enteritis soon ceased.

A long convalescence followed in several of the cases, and some of them are even now under treatment.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 4TH, 1899.

THE THERAPEUTIC VALUE OF OCEAN VOYAGES.

With the oncoming of cold nights and foggy mornings the thoughts of very many invalids in this country are turned towards the best means of getting through the winter. To those who may contemplate a long sea voyage in a warmer climate than ours, we would commend a careful study of two eminently sensible and practical papers recently published in the *Zeitschrift für diätetische und physicalische Therapie*, by Sir Hermann Weber, and in the *Berliner klinische Wochenschrift*, No. 41, by Dr. Edmund Friedrich, of Dresden. In both will be found many points of importance which have not often been put forward in so convincing a manner. That a sea voyage may prove a valuable tonic after exhaustion from any cause, and may even seem to have a curative effect upon certain morbid conditions, was well known to the ancients. A voyage on the waters of the Mediterranean was as highly appreciated by them as the Australian voyage by their descendants, but, regarded as a therapeutic agent, a long sea voyage will succeed or fail according to the discretion with which it is used. The theoretical advantages which it offers of abundant fresh air and light, invigorating winds, equable temperature, absence of exertion and complete mental rest, are all apt to be discounted by prolonged spells of bad weather. The patient who is obliged to remain between decks in a steamship, in company with uncongenial and possibly sea-sick fellow travellers, the inlets of fresh air almost entirely closed, the meals served under difficulties, and the unceasing vibration of the engines preventing real rest, is often led to change his views as to the merits of sea voyaging in search of health during the winter months. On a sailing ship there are some advantages which a steam vessel cannot offer, and amongst these the greater degree of quiet and the greater purity of air stand prominently forward. But even on a sailing ship there are periods of calm when the air on deck is hardly to be called pure, and when storms necessitate the closure of all external openings, the condition of the atmosphere between decks is often decidedly foul.

While the best as well as the worst appointed vessels are subject to vicissitudes of climate, a great difference exists between the means provided on different ships for minimising the drawbacks to the enjoyment of an ocean voyage. Sir Hermann Weber gives the very sound advice that one should no more think of taking a berth on a vessel for a long voyage without personal inspection and careful inquiry than one would think of hiring or purchasing a house on the auctioneer's warranty alone. Assuming, then, that a satisfactory ship has been selected, the question next arises whether its destination is likely to be suitable to the particular conditions of the patient. While extolling the value of short voyages such as the Atlantic passage to North American ports, or to Madeira or the Mediterranean, for simple recuperation after overwork or illness, both Sir H. Weber and Dr. Friedrich recognise the advantage of prolonged sojourn on the sea in cases of actual or threatened tuberculous disease. The latter points out that the cure, if cure it is to be, must be more complete under conditions which preclude the possibility of a premature return to the ordinary round of life.

The long voyage has its disadvantages mainly in the unavoidable monotony of the life, and especially of the diet; but in the shorter voyages, interrupted by many excursions on shore, there are other dangers, arising from personal imprudence, to which there is no temptation on board ship. Looking to the records of actual experience of ocean voyages, it would appear that for the early cases of tuberculosis in male patients the percentage of benefit is high, but that in the case of female patients the amount of benefit obtained in the long run is relatively small. It is an important fact—recorded by Sir Hermann Weber—that many of his lady patients have given expression to the view that the ocean voyage is not suitable for women.

The invalid on board ship, whether suffering from consumption or any other disease, is under ordinary conditions free to consult the ship's doctor or not as he pleases. The doctor has no disciplinary power over him. The need for such power is nowhere more clearly evident than on a well-appointed private yacht, where everything that science can suggest or wealth provide is at hand, to enable the patient to live an ideally hygienic life, but where all these provisions and precautions may be rendered of no avail, owing simply to the want of an authoritative word in season.

The necessity for discipline in dealing with consumption is now fully recognised on shore, where sanatorium treatment is becoming every day more popular, but hitherto it has not been properly recognised at sea. Why should not ocean-going sanatoria be as successful as those on shore? Rochard expressed the somewhat caustic opinion that if the right sort of ship could be sent to the right place in the right kind of weather, and laden with the right sort of patients, a great deal of good might result. At the present day it is not quite so impossible to realise these conditions as at the time when he wrote his well-known paper on the effects of a voyage to warm climates in cases of phthisis. Many of the large steamship companies have found it profitable to send out their ships on pleasure excursions to various parts of the world, and a little further enterprise alone is needed to fit out and despatch floating sanatoria properly equipped and placed under absolute medical control, as far as the patients are concerned, to any part of the world that may be thought best at each season of the year. But until such ideal arrangements can be made, the intend-

ing voyager in search of health will do well to take to heart the advice given in the two papers to which we have referred.

PLAGUE, EGYPT, PORTUGAL, AND THE SANITARY CONVENTION.

THE despatch which Lord Cromer, Her Majesty's Agent and Consul-General at Cairo, has addressed to the Minister for Foreign Affairs in this country will have been read with much satisfaction. Lord Cromer is able to state that from the date of the official declaration of plague on May 20th down to October 12th, the date of the despatch, there had been only 71 cases under observation, of which 47 had resulted in cures, while there had been 21 further deaths out of hospital. He adds that the disease has practically been confined to Alexandria, where the general mortality has been abnormally low, a fact which tends to prove that but few cases can have escaped detection. Since September 1st there have only been four isolated cases, so that in the opinion of Sir John Rogers, "all fears of a winter epidemic may now be dismissed, though isolated cases may occur." In consequence the Egyptian Quarantine Board decided on October 11th that as ten days had elapsed since the last case of plague, medical inspection and disinfection might be suppressed, and clean bills of health issued to vessels leaving Alexandria. Since the date of the despatch a telegram, dated October 22nd, has been received from Lord Cromer, stating that it was then three weeks since a case of plague had occurred at Alexandria. The last death took place on October 1st.

The practical difficulties in the way of any scheme for stamping out plague are enormous, especially among an Oriental population. A knowledge of these difficulties and of the failures which have, unfortunately, attended such efforts in other countries disposed us to fear that the confident anticipations with which the Egyptian Sanitary Department set out were somewhat too sanguine. We are, therefore, all the more glad to be able to congratulate Sir John Rogers, the Director of the Egyptian Sanitary Department, and Dr. Ruffer, the President of the Quarantine Board at Alexandria, as well as the officers, European and native, who have worked so loyally in this emergency, on the success which has attended their carefully-devised scheme for stamping out the disease in Alexandria.

The continued prevalence of plague in Oporto, and the rumours, to which it is impossible to shut one's ears, that cases of the disease have appeared in other parts of the country, make it a matter of regret that the Sanitary Convention of Venice has not yet been formally ratified. All the European Powers represented at the Conference, with the exception of Turkey, signed the protocol, but ratifications have not yet been exchanged, and until this is effected the regulations made by the Conference have no binding force upon the Powers represented. In spite of all that could be done at the Conference and repeated applications since, Turkey has obstinately refused to adhere, even in principle, to the regulations drawn up. It is probable that this obstinacy on the part of the Porte is due to various causes, but that one powerful motive is the fear of the cost which might be incurred in carrying out the regulations. We believe that fresh representations are being made to Turkey, and that if these fail, as it is to be feared they will, the chief European Powers will nevertheless exchange ratifications. It must, however, be remembered that the representatives of Portugal signed the protocol only *ad referendum*, and that the Portuguese Government may therefore consider that it is not bound to carry out the provisions of the Convention in spite of the fact that it was signed by their representatives in Venice.

The Venice Convention, it will be remembered, extended to plague with certain necessary modifications the provisions of the Sanitary Conferences of Dresden and Paris. The first among these is the obligation upon all Governments which adhere to the Convention to notify to other Governments the existence of plague within their several jurisdictions, and to communicate a statement of the measures which are being carried out to prevent diffusion. Care was taken to prevent this notification inflicting a greater damage upon the commerce of the country notifying than was absolutely necessary. The area to be deemed infected was strictly limited to the actual district or town where the disease prevailed, and no locality was to be deemed infected merely on account of the importation into it of a few cases of plague which had not led to the diffusion of the malady. Further, it was provided that any area thus notified to be infected would cease to be considered as infected so soon as it could be officially reported that no death or fresh case of plague had taken place for ten days after the recovery or death of the last case, provided that the necessary measures of disinfection had been carried out.

These provisions with regard to notification have undoubtedly operated well where they have been carried out, and the confidence inspired by such notifications has had the effect of allaying the fears of the commercial communities in other countries. France, Germany, Austria-Hungary, and Italy already carry out the provisions of the Convention, and during the outbreak, which has now happily come to an end, Egypt also acted upon it. We have reason to believe that the Portuguese Government has issued definite orders that no news is to be published, either at home or in any of the Portuguese colonies, except such as may be authorised by the Government. This may be a step in the right direction; but the wisdom of such a proceeding depends upon the nature of the motive of the Government in issuing such a decree. If it is intended thereby to prevent scare, good and well; if it is meant, however, as a mode of suppressing the truth, the Government of Portugal may find that it will be neither to 'the immediate advantage' nor to the future benefit of that country.

The absence of official plague news from Portugal for some time past would seem to indicate that the reported suppression of the plague returns is a fact.

A NEW SYSTEM AND SCHOOL OF "NERVE TRAINING."

AMERICA has given us much in the domain of "treatment" for the ills which flesh is heir to, ranging from osteopathy and orificial surgery to Christian Science and "nerve training." This last is the newest system of treatment for tired brains and jaded nerves, which finds expression in

the columns of a lay contemporary. The apostle of the new treatment is Mrs. William Archer, who has "for some years been practising with great success" the system of nerve training "already familiar in America." The primary aim of this system, however, is, we are told, not so much to cure disorder or to impart health, as to bring the patient or pupil into a condition wherein cure and acquirement become easy.

Thus it is pointed out that the stress and strain, the hurry and scurry of modern life, have much to account for in the production of nervous troubles and disorders. We have grown too strenuous; the tension of our excited days lasts on, to some degree, through our imperfect repose—in other words, we sleep only in part. All this and much more is no doubt true of a considerable number of men, and even of women, engaged in the struggle of modern life, and it is equally true, of course, that much is needed in the way of rest, recreation, and repose by those who are so employed when the day's work is over. It is, however, as easy to exaggerate the evils of life as to make exaggerated promises of remedy and reform.

We do not—at least the majority of people we fancy do not—"hold our breath or clench our teeth to write," nor do we "stiffen our shoulders to walk," nor employ upon each of our actions "more labour of mind and body than is readily demanded." This is the somewhat extreme position from which the new system starts, and having laid down these and other premisses of a like nature, the therapeutic part of the scheme is next unfolded. Thus to take the case of a patient suffering perhaps from overstain or innsomia. The system of treatment developed by Mrs. Archer is to produce, by exercises and practice, a state of total muscular relaxation such as characterises the drunken or chloroformed person. This is the first step in practice; when this has been attained the delightful results are (to quote from the same source) as follows: "Each limb grows heavy, limp, passive; the head lies back, ponderous as a cannon ball," on the couch or cushion; in fact, "a perfection of repose" is attained. "With the repose of the body comes a vast relief of mind—an ease, a depth of mental rest, which are in themselves the cure for many forms of nervous disorders." These and more are the wonderful promises held out by the system.

But the wonders of the system are not exhausted. As though "perfection of repose" were not in itself sufficient, a further perfection is aimed at—namely, to arrive at "perfection of movement." A series of exercises has to be gone through by the pupil or patient. These are intended to develop freedom, precision, and ease of movement. There is an instance given of what we are assured can be done, which certainly seems startling at first sight. "To see, for instance, a human being sink slowly backward, each vertebra seeming to drop like a bead slipping on a string, until at last the head gently and, as it were, lazily reaches the floor, is to receive quite a new idea of the flexibility of the spine." Then there are other, less curious, but more beautiful" exercises in standing, stretching, bending. After more in this strain we come upon the statement that, as the result of Mrs. Archer's "exercises," the individual "attains to a great increase of mental calm and serenity."

Truly the various means discovered by mankind of attaining an end are wonderful in their variety. A few thousands of years ago the sages and philosophers of the Orient taught and practised a simple practical method: the individual had to sit cross-legged on the ground, away from the places of noise and toil, compose his thoughts, concentrate his mind on the vanity of earthly things, and direct his gaze on his navel or on the tip of his nose. He thus attained to "mental calm and serenity." The more sensuous and artistic Greek sought for peace and quiet pleasure in the luxuries of the bath and the artistic treasures of the Parthenon. Every country and every age has its own particular ways and means. But Mrs. Archer has attempted in every-day phraseology to "go one better." Her system must put our professional contortionists and serpentine acrobats who can tie themselves into knots on their mettle. For she can not only teach perfection of movement and demonstrate quite "a new idea of the flexibility of the spine," causing each vertebra to drop backward "like a bead slipping on a string," but she can bring about that much more greatly desired consummation, the attainment of mental calm and serenity, for which in an age like the present we can scarcely be too thankful.

Nor are Mrs. Archer's ambitions content with such achievements. She enters the realm of song, and undertakes to develop and perfect the voice too. The pupil having been taught to breathe (is not Mrs. Archer here taking a leaf out of the old Italian school?), next learns to find his voice. The method of doing this is certainly interesting. "In a state of total relaxation, he produces like a man drunken beyond the power of coherence a voice and nothing more—formless, inane utterances, the mere note of the human animal." He then proceeds to shape them, to hold and sustain and to modify them; staccato speaking, modulation, etc., now follow. He is thus to be taught to recite, to vocalise, to sing.

If Mrs. Archer's performances come up to her promises, we may soon expect not only a new school of vocalists, actors, and singers, but a new man (and may we hope also a new woman?), fed on the doctrine and trained in the methods of the new system of nerve-training, which brings in its wake mental calm and serenity. The only rift within the lute is the doctrine taught by Mrs. Archer that one of the essentials of learning is that the novice should learn to practise total relaxation, first learning to produce formless, inane utterances; to reduce himself, in fact, to the condition of a *vox et praeterea nihil*. But let us hope these words are not of ominous import, or in any way applicable to Mrs. Archer's own doctrine.

THE WAR.

The appointment of consulting surgeons to the troops in South Africa has been completed this week by the nomination of Mr. Frederick Treves and Mr. G. Makins. The civil profession in this country will rejoice to know that it is to be so well represented. Mr. Treves, who is consulting surgeon to the London Hospital and surgeon-in-ordinary to the Duke of York, is well known as one of the leading operating surgeons of the day, and Mr. Makins, who is surgeon to St. Thomas's Hospital, has also won a high reputation. Sir William Mac Cormac, who sails on Saturday, November 4th, will have an interview with the Prince and Princess of Wales before his departure. Mr. Makins also will sail on Saturday, and it is anticipated that both these surgeons will probably go on to Natal. Mr. Treves, who sails on

Saturday, November 11th, will probably disembark at Cape Town and go to the front with the main advance. Each surgeon will act independently, and will have the services of a military secretary selected from the surgeons on the spot. We understand that Lord Lansdowne considered that in asking for the services of leading civilian surgeons the fee to be offered should be on a liberal scale, and that payment is to be made to each of the three consulting surgeons to the troops in South Africa at the rate of £5,000 a year, with allowances for horse, etc. This is not a moment to make a calculation of pecuniary profit or loss, but we think that the medical profession will be gratified to know that the Secretary of State for War has, entirely on his initiative, made what must be considered a generous offer.

THE RED CROSS HOSPITAL SHIP AND TRAIN FOR SOUTH AFRICA.

The *Midnight Sun* has been chartered by the Central British Red Cross Committee to serve as a hospital ship, and is now being fitted on the Tyne. The ship, which has been used as a pleasure cruiser, was very carefully surveyed before charter, and was found to be very well adapted for conversion to this special purpose. The Princess of Wales, who has desired to be personally associated with the work of succouring the sick and wounded soldiers in South Africa, has taken a deep interest in the proposal to send out a Red Cross hospital ship to South Africa, and has been able to provide the whole cost of the fitting out of this vessel from the fund of £10,000, the residue of the Soudan Fund, which is at her disposal. It is proposed that the ship shall bear her name. As soon as the fitting out is complete the vessel will be sent round to Southampton, whence she will, it is hoped, sail about November 14th. Work on the hospital train, which is being built at Birmingham for the Central British Red CrossCommittee, is being pushed on with great rapidity; 400 men are at work on it night and day. The fittings for the various cars are also being prepared and adjusted as rapidly as possible, and it is hoped that the train may be ready in the first week of next month. Sir John Furley will probably go to South Africa in charge of the train.

THE MODERN RECRUIT.

A recruiting medical officer, whose experience in this branch is certainly second to none, writes to us as follows: I have read the report of the lecture by Lieutenant-Colonel Douglas, V.C., in charge of the depôt at Perth, recently delivered at the Royal United Service Institution, with a good deal of surprise, and even some indignation. I emphatically dissent from his description of the modern recruit, and largely dispute his conclusions as to the present condition of the army in comparison with the past. The British soldier and the regiments of to-day as fighting units, which is the real test, are not inferior but even superior to what they were forty years ago; that, I think, has been borne out in recent campaigns, and, if it be true, what becomes of Colonel Douglas's disparagement of the modern recruit? As reported, he roundly declares the great majority of the recruits enlisted in the North of England and in Scotland "are sallow, downcast, nondescript youths," whom collectively he describes as "degenerates." If such a description be really just or true, let me ask him the question, How comes it that these same "degenerates" enlisted in the very districts he names—say the Northumberland Fusiliers and the Black Watch—are the magnificent fighting units they are? Are the Gordons, chiefly enlisted in North-East Scotland, who so splendidly stormed the heights of Dargai and Elandslaagte "degenerates"? He states that "want and hunger are the invisible recruiting sergeants of a great proportion of our army, and the men are too often black sheep." I entirely dispute this, as contrary to my own experience and that of many other medical officers. The motives and reasons for enlistment are, of course, many and varied, but far more recruits are led than driven to join the army. Vast numbers join through family connection with the service, love of adventure, and simple desire to soldier. He admits the great effect of "drill and discipline," but if the raw material were of the miserable kind he pictures, I maintain that no amount of military setting up would produce the soldiers we undoubtedly have. How, too, does such poor material not only develop into the fine fellows now fighting during their first period of service in the regiments in Natal, but into the grand men who have just joined from the Reserve? If the reserves had originally on enlistment been the "degenerates" and "blackguards" described by Colonel Douglas, would they have exhibited the fine physical and moral qualities which brought nearly 99 per cent. of them to the colours when summoned? I believe every man of the Reserves turned up at his own depôt at Perth. The disparaging statements and inferences of Colonel Douglas regarding recruits are not borne out by notorious facts in the subsequent history of the soldier. He apparently wants to find growing lads of 18 or 19 fully developed men, which is, of course, absurd. The true ideal is to catch your soldier, as your sailor, young, and develop him; not to keep him too long in the ranks until he crystallises into a useless old schemer, as often happened under the long service system; and to treat him well when he passes to the Reserve. It seems a great pity that a medical officer of Colonel Douglas's long service and great distinction should have spoken so disparagingly of our recruits; it is felt to be both injudicious and unfair, and, as such, has to my knowledge been already angrily resented. While dissenting from the lecturer's premisses and conclusions, I very fully endorse the opinion of his distinguished chairman, Major-General Maurice, C.B., who is reported to have said, by way of criticism at the lecture, "Give me Tommy Atkins, and let anybody else have whom he pleases to follow him."

THE MEDICAL PROFESSION IN SOUTH AFRICA.

Mr. J. F. Briscoe, Medical Superintendent, Westbrooke House, Alton, writes to point out that the patriotic enterprise shown by the President of the Royal College of Surgeons of England in going to South Africa may indirectly be productive of beneficial effects of a far-reaching kind. Mr. Briscoe gives figures showing that in all the colonies of South Africa, British and foreign, the total number of British medical practitioners is about 500. They are distributed as follows: In Cape Colony there are 268; in Natal, 60; in the Transvaal, 87; in the Orange Free State, 41; in Rhodesia, 24; in Zululand, 6; in Swaziland, 1; making in all 487. Taking the principal towns alone, the numbers of medical practitioners in those of Cape Colony are as follows: Cape Town, 38; Grahamstown, 13; Port Elizabeth, 10; Kimberley, 9: total, 70. In those of Natal, the numbers are: Durban, 20; Pietermaritzburg, 12; total, 32. In those of the Transvaal they were or are—Johannesburg 49, Pretoria 12; total 61. At Bloemfontein, in the Orange Free State, there are 7 practitioners. In these statistics medical practitioners of Dutch or other nationalities are not included; these are considerably in the minority. There is at present no medical school in South Africa, and Mr. Briscoe gives expression to the opinion that the profession as a body is not well organised, and is weakened by jealousies and internal dissensions. Within the last ten years, however, there has been a marked improvement, and Mr. Briscoe thinks that if the profession of Cape Town, East London, Port Elizabeth, Durban, Pietermaritzburg, and other important towns will take advantage of Sir William Mac Cormac's presence in South Africa to invite him to visit the hospitals at the Cape and to take counsel with him as to the arduous matters of the medical commonwealth, results of the highest importance in regard to the

future of the medical profession in South Africa may be expected to follow. Mr. Briscoe's statistics and comments are interesting, but we fear it will be some time before Sir William MacCormac is able to turn from healing the wounds of the British soldier to improving the constitution of the medical profession in South Africa.

LIVERPOOL SCHOOL OF TROPICAL DISEASES.

The Liverpool School of Tropical Diseases has entered upon its first autumn session. Seven students are attending the course, a number which must be considered highly satisfactory for a beginning. They include Professor Ribbing, Vice-Principal of Lund University, and M. Neven Lemaire, a distinguished pupil of M. Blanchard of Paris. Several officers belonging to the Army Medical Department who had entered their names for the course have been unable to come to the school in consequence of their having been ordered to the Cape. Official intimation has been received from the Japanese Government that it has appointed Dr. S. Miyamoto, Professor in the College of Medicine, Imperial University of Tokio, to proceed to England and take out the course of the Liverpool School. Dr. Miyamoto is to arrive at the beginning of next year. The Colonial Nursing Association has sent three nurses to be specially trained at the Liverpool School. The nurses in question are attached temporarily to the Royal Southern Hospital. The school has also received recognition from the United States Government, and acknowledgements of the value of its work are continually being received from foreign sources.

THE PREVENTION OF RABIES.

On Friday last the muzzling order was withdrawn in the Metropolitan Police District and also in the County of Lancashire. The only part of Great Britain where the order is still in operation is South Wales. Mr. Long justifies the step he has taken on the ground that no case of rabies has been reported since March 24th last. That the country has enjoyed such a comparatively long period of immunity from the scourge is mainly due to the courage and determination with which the Minister of Agriculture and his advisers have applied measures for stamping out the disease in the teeth of much vehement opposition and abuse. No inconsiderable share in the success which has ultimately crowned the Board's policy is attributable to the efforts of the Society for the Prevention of Hydrophobia. The Executive Committee, of which Mr. Victor Horsley is Chairman, has lost no opportunity of urging upon the authorities the paramount necessity of stringent muzzling and quarantine regulations, and it has also done much useful work in educating public opinion on these points. Replying to a question in the House of Commons, Mr. Long expressed the opinion that, as regards the permanent extinction of rabies much would depend upon the support received by his department in the enforcement of the measures taken to prevent its reintroduction from Ireland and from abroad. By an order dated May 7th, 1897, the importation of dogs from countries other than Ireland and the Isle of Man was prohibited except under special licence of the Board, and by a subsequent order, dated July 29th of the present year, the prohibition was extended to Ireland. Under the conditions of the licence, the imported dog must be detained and isolated for a period varying from three to six months on private premises approved by the Board. Supervision is exercised both by the officers of the Board and of the local authority with a view of frustrating any attempt to evade the regulations. It remains to be seen whether the latitude at present allowed by the Board with respect to the keeping of imported dogs on the owner's own premises can safely be continued. We observe with regret that, notwithstanding the recommendation of its own Departmental Committee, the Board has apparently no intention of issuing a registration and collar order. The London County Council, however, intends to require that every dog shall wear a collar bearing the name and address of its owner. The number of uncared-for and ownerless dogs seized by the Metropolitan Police when no muzzling order exists averages considerably over 20,000 a year. During the first five months of 1896, when the muzzling order was in force, no fewer than 30,000 dogs were captured within the metropolitan area alone, and of these only 6,000 were subsequently claimed. Such figures speak for themselves, and unless the Board of Agriculture is altogether to stultify its recent policy, some means must be found of clearing the streets of this army of mongrels. People who insist upon allowing their dogs to run loose in thickly populated centres must be prepared to submit to some little inconvenience. In the interests of the dogs themselves muzzling should be permanently enforced. Mr. Victor Horsley stated in his evidence before the Committee that he had proved from the records of the Brown Institution that muzzling diminished by 40 per cent. the prevalence of distemper—a disease which produces a greater mortality among dogs than rabies. It is to be hoped that when Parliament reassembles Mr. Long will avail himself of the present favourable opportunity to introduce a Bill dealing with the whole question of licensing, control, and registration of dogs, and thus complete the work he has so resolutely undertaken, and for the results of which he is entitled to the gratitude of the entire community.

THE ANALYSES OF LONDON WATER.

Last Tuesday a discussion arose at the London County Council on the question of the analyses to which the water supply of London is subjected. It appears that curious variations are observed between the analyses made by the companies' chemists and those conducted at the instance of the Local Government Board. In some cases samples in which organic matter in suspension has been reported on the strength of one analysis to be *nil* have on the same day been found to be not so innocuous by other analysts. For some time past the London County Council has had independent analyses made for it, and there is ground for believing that the filtration effected by the companies is not the less efficient on that account. A proposition to continue these analyses was, however, opposed by some councillors on the ground that they were superfluous; but the Council supported the recommendation of the Water Committee by a large majority. A proposition to reintroduce Bills next session with a view to purchase the undertakings of the metropolitan water companies as well as to introduce an additional supply from Wales was postponed for further consideration next week.

SANATORIA FOR CONSUMPTIVES IN SCOTLAND.

While Scotland has been well in the front in respect of the open-air treatment of poor consumptive patients, no attempt had, until recently, been made to provide for similar patients of the wealthier classes. During the present year, however, Dr. W. F. R. De Watteville of Kingussie has seriously taken up the matter, and made arrangements for an effective, if limited, sanatorium in what appears an ideal district for the purpose in the county of Inverness, where already excellent results have been obtained. During the present autumn there was opened, in the southern suburbs of the city of Edinburgh, by Dr. and Mrs. Mears (the latter being also a qualified practitioner of medicine), Woodburn Sanatorium, a pretty pavilion on the modern principle, which has been specially erected for the purpose, and is already full. Still more recently it is announced that a sanatorium is to be opened by the side of the river Dee, some miles from the city of Aberdeen, in a district which seems in many ways suitable for the purpose. It is to be under the medical

superintendentship of Dr. David Lawson, and we understand it is proposed that it shall be named Nordrach-on-Dee. The name seems unfortunate, as many members of the profession have already said. Why should British soil be labelled with German names? The open-air treatment of consumption was long ago advocated in Scotland by Hughes Bennett, and by others before him. It is not a product of German soil; it has not been exclusively "made in Germany." Weber's 1885 Croonian Lectures seem to be forgotten, as well as the work on the prevention of consumption published by C. Candler in 1887.

THE CONCEPTION OF DISEASE.

At the annual public night of the Medical Society of University College, London, Professor Clifford Allbutt delivered an address, in the course of which he observed that what was meant by the word "disease" was a matter on which there was, philosophically speaking, a good deal of difference of opinion. Judging from the theses presented for the M.D. degree at the University of Cambridge, a meaning was attached to the word which he could not accept. Candidates would say that such and such events occurred in the body, but they would not be disposed to give them the name of a morbid entity. In his opinion there was no such thing as a morbid entity; the term was founded upon conceptions which had long ago become in other subjects entirely exploded. Disease was merely a state in which the human body happened to find itself at one time as opposed to the state in which an average man found himself at another time. There was the same sort of difference between a healthy man and a diseased man as there was between a cold poker and a hot one. Diseases were merely an infinite number of various states of the body divided up purely for convenience under certain heads or names, and the names for states could not be regarded in any sense as separable entities. All classifications were fictions of the human mind, and classifications of diseases were particularly fictitious because the transitions between these various states were so many, and the gradations so infinite that there was no real distinction in Nature, although artificial classifications were necessary for convenience. If the various types of disease were considered, it was found that the word type had been introduced into the domain of disease from the field of biology. Biologists used types for convenience of reference, and in biology it was not difficult to do so, for it dealt with beings which had a separable and real existence. But when the use of a system of types was brought into the field of disease the difficulty was met that disease had not only no independent existence, for it was merely a state of a particular man, but that also there were never two diseases exactly identical in this world. That is to say, if there were twenty men with cirrhosis of the liver they were all different, and it was only by sinking all the differences that a type was arrived at at all. Further he contended that disease was not a positive, but wholly a negative condition. Disease was something less than should be in function, some defect in the system of movements and functions. The question would naturally be asked, how was the enormous variety of disease to be accounted for if it was merely deprivation or defect. The variety arose because man was an exceedingly complex organism. By the word "disease" was meant nothing more than that, on a fairly rough average, a particular disease was a group of symptoms. If a group of symptoms was given the name of Bright's disease, it merely meant that out of a vast variety of symptoms melting one into another but of different magnitudes, fictitious groups had been formed to which various names were for convenience arbitrarily applied. At the conclusion of the address, Dr. Poore moved a vote of thanks, and gave some interesting details concerning the historic character of the office of Regius Professor, which Professor Allbutt holds. Professor Allbutt came to them decorated with the halo of antiquity of the oldest College where medical teaching was first carried on in this country. After Professor Allbutt had suitably replied, Dr. Travers demonstrated some interesting experiments with liquid air.

CHARING CROSS HOSPITAL STUDENTS' DINNER.

The annual dinner of the past and present students of Charing Cross Hospital was held at the Hotel Cecil on October 31st, Dr. F. O. Stedman (Hong Kong) in the chair. The toast of "The Queen" was rendered with great enthusiasm, the entire company, numbering about 200, joining in "God Save the Queen" and "Rule Britannia." The Chairman next proposed the toast of "The Staff of Charing Cross Hospital and Medical School," drawing attention to the many improvements carried out at the hospital since he was a student. After referring with satisfaction to the fact that so many of the staff had received their education at Charing Cross Hospital, the Chairman made a sympathetic allusion to the great loss sustained by the death of Dr. Arkle. The next item on the programme was a song by Dr. Mott, whose spirited delivery of "Tommy Atkins" roused his audience to such enthusiasm that a collection was at once made on behalf of the "Soldiers' Widows and Orphans Fund," and the chairman later in the evening announced that the total amounted to 400 shillings. Mr. Morgan (treasurer of the Medical School) followed with a speech dealing with the the changes and additions that had occurred during the past year, among them being the appointment of Dr. Galloway, as assistant physician, and of Dr. Eden as assistant obstetric physician and teacher of gynæcology. It was, he said, in contemplation to appoint an ophthalmic surgeon to the hospital, and they were anxious to set on foot a department for the study of mental disease. Mr. Waterhouse (assistant surgeon) proposed the toast of "Past and Present Students," and stated that a sum of very nearly £5,000 had been collected from the old students towards the rebuilding of the hospital. Alluding to the number of Charing Cross men in South Africa, Mr. Waterhouse said he spoke of them in painful suspense in consequence of the sad news of the British reverse of which they had just heard. Dr. Bosanquet replied for the past and Mr. Bailey for the present students. Mr. Stanley Boyd, in proposing the toast of "The Chairman," described the work done by that gentleman and his partners in Hong Kong in relation to the establishment of a hospital on the high ground above that city; this institution was an inestimable advantage to the colony at Hong Kong, and also to those at some distance. The hospital was open to any medical man to attend and send his own patients there. The Chairman, in his reply, described the efforts made to forward the interests of the medical school for the Chinese founded at Hong Kong mainly through the efforts of Dr. Manson and Mr. Cantlie.

POST-PRANDIAL ORATORS AND THE ARMY MEDICAL SERVICE.

A short time ago we called the attention of the War Office authorities to a speech made by Sir Arthur Grant of Monymusk, at a luncheon given by the Corporation of Aberdeen to a detachment of the New South Wales Lancers. The speaker (as reported in the *Edinburgh Evening Dispatch* of August 11th) said "the medical officers of the army were ignorant and useless," graciously admitting, however, that there were certain brilliant exceptions. He went on to say that "there was many and many a man, and many and many an officer's wife, who did not dread being shot or injured in action, but who very much dreaded falling into the hands of the Army Medical Department. For himself," the gallant baronet said, "he would much rather be shot by half a dozen Boers than be

butchered by one army doctor." Sir Arthur Grant is, of course, entitled to express his own personal preferences, but we have not the slightest doubt that, like other heroes who jest at scars because they never felt a wound, he will, if he puts himself in the way of even one Boer bullet, be glad enough to avail himself of the services of the first army doctor into whose hands he may fall. His valiant declaration is, in fact, on a par with the courage which he attributes to the officers' wives who do not dread that their husbands should be shot or injured in action. Sir Arthur Grant's offensive remarks would seem to have excited the spirit of emulation in the breast of another ornament of the baronetage, Sir Claude de Crespigny, who, in responding to the toast of "Our Defensive Forces" at the Colchester Oyster Feast, said that unless Sir W. Symons was killed by the army doctors, there was every hope of his recovery. We did not know that Sir Claude de Crespigny, though he has doubtless gathered experience of many things in his variegated career, claimed to be an authority on the prognosis of bullet wounds of the abdomen. But it would be absurd to take these post-prandial utterances of ignorant and irresponsible individuals seriously. It is a different matter, however, that Major-General Abadie, the commanding officer of the Colchester district, who was present, should have allowed so offensive a reflection on the officers of a Royal Corps to pass unchallenged. As Surgeon-General Hamilton, in a letter which appeared in the *Times* of October 27th, well says: "No rebuke could be strong enough for such an ill-timed and unfair accusation." At the present time, when so many of our countrymen and countrywomen are in a fever of anxiety about relatives and friends exposed to the risks of a peculiarly dangerous form of warfare, such an attack on the officers, to whom the wounded have to look for health and relief, is not only heartless, but in the highest degree unpatriotic. We had hoped that Sir Claude de Crespigny's remarks were intended as a joke; but in the *Times* of November 2nd he makes his offence worse by asserting that his words expressed the sentiments of the majority of the combatant officers of the British Army. We therefore think that the military authorities should invite General Abadie to explain how he allowed a general accusation, which is a charge against the War Office as well as against the Medical Department, to be made in his presence without rebuke or remonstrance.

EELS AS WATER PURIFIERS

Last week a London club had its water supply suddenly cut off. On investigation being made as to the cause of the stoppage, it was found that an eel weighing 2½ lbs. had got itself tightly wedged in the service pipe leading to the meter. The situation recalls the famous problem which once puzzled a royal intellect as to how the apple got into the dumpling, and this is not the first time that a similar difficulty has arisen to perplex water engineers. The question is how do these enterprising animals find their way into the service pipe? We venture to suggest that it may be through an excess of sanitary zeal. Professor Sobrero, of Turin, has recently suggested that eels should be used as purifiers of water. All that one has to do is to put two or three eels, not very big but lively, into the domestic cistern. The reptiles devour with marvellous appetite everything which the water may chance to contain in the way of animalcules, infusoria, bird droppings from the roof, vegetable matter of any kind; nothing comes amiss to them. When the eels have fulfilled their mission, they can be eaten *à la tartare*, or they can be kept for further use as purifiers of the water-supply. Such a method of fattening eels for the family table may not commend itself to the average British stomach, though these reptiles eat worse things in their ordinary haunts than they are likely to find in a cistern, even within the area of distribution of a London company. But as water purifiers a useful sphere of action might be found for them in reservoirs, as well as in cisterns. It may be remembered that some years ago the Health Officer of Bombay in an official report vindicated the character of that much-maligned reptile the crocodile, which he showed to be a natural scavenger of the water reservoirs which he inhabits. That deserving saurian is, in fact, a friend of man, though he tries—generally with success—to hide a sentiment of which perhaps he is ashamed as a weakness. He is an active sanitarian, his special line being the purification of rivers and lakes. He destroys "living, dead, and decomposing animal and vegetable matter, and thus removes from water the obnoxious substances which must of necessity exist in stagnant waters, however large, and which no human agency or potency can ever remove, which no amount of labour can get out; which no amount of money can destroy." With such a certificate of character before them, perhaps some of our river conservancies may be stimulated to secure the services of a few vigorous crocodiles. With these in our rivers and a sufficient supply of eels in our reservoirs and cisterns, the difficult problem of water purification might be finally solved.

CELTIC MEDICINE.

In an inaugural address delivered at the opening of the thirty-eighth session of the Mater Misericordiæ Hospital, Dublin, Dr. Thomas More Madden made an interesting reference to Celtic medicine, a subject to which he has given special attention. He said the practitioners of the healing art in Ireland were the legitimate heirs of the oldest professional culture of which there was record in the living language of any European nation. It might easily be proved by incontrovertible evidence that when the lamp of medical knowledge was yet unkindled in most other countries, its light shone with comparative brilliancy in Ireland. There is, said Dr. More Madden, still extant and accessible in the libraries of the Royal Irish Academy and Trinity College, Dublin, as well as in similar collections elsewhere, a vast body of ancient Gaelic MS. documents, in many of which the distinguished history and high character of early Irish medicine are well illustrated. From these sources it can be gathered that from the oldest period of authentic Irish history the classic literature of Greek and Roman medicine was cultivated; therapeutics, materia medica, and anatomy studied; and surgery, gynæcology, and obstetrics practised in Ireland, where the professors of the healing art were then held in high honour. Further there is clear evidence to show that the employment of anæsthetics, on which we plume ourselves as the most beneficent discovery of the present age, and even the alleged marvels of modern hypnotism, were, although in cruder forms, anticipated by the ancient Celtic physicians. Amongst the numerous collegiate centres of professional as well as of ecclesiastical learning with which Ireland, the *insula sanctorum et doctorum*, was studded between the sixth and sixteen centuries—and the very ruins of many such as Clonmacnoise, Cashel, Meelick, Portumna, and Monasterboyce, still attest the culture and art as well as the piety of their founders—one at least is of special interest to us as of a distinctly medical origin and character—namely, Tuaim Brecain, near the present town of Belturbet. This College, as Dr. Healy, Bishop of Clonfert, has shown, was established by a medical practitioner of no little eminence, Saint Brecin, whose skill, more especially in cerebral surgery, is celebrated in the oldest Irish annals. All the various faculties of these Celtic Catholic Universities—for such was the character of many of them—were for long ages crowded with students from every part of Europe, who in some of them were subjected to a course extending over a period far more protracted than even that

of the modern medical student. From these institutions also were sent forth men such as Alcuin, the founder of the University of Pisa, Johannes Scotus Erigena, the first Professor of Philosophy at Oxford, and countless others to diffuse the lights of learning and science as well as of faith to the ends of the earth. Nor did that long intellectual pre-eminence cease in the sphere of medicine, at least until after the destruction of the Irish Monastic Universities in the reigns of Henry VIII and Elizabeth. Down to the early part of the seventeenth century one finds the far-extending fame of Irish medicine referred to by authorities of such eminence as Van Helmont. From the destruction of those Celtic Universities may, according to Dr. More Madden, be dated the origin of the disabilities in the matter of higher education that for three centuries pressed heavily on the majority of the Irish people, and on none more forcibly than on those of them belonging to the medical profession. It may be mentioned that Dr. More Madden has dealt more fully with the subject of ancient Irish medicine in recent numbers of the *Medical Magazine*, where readers interested in the subject will find many references to authorities and numerous interesting extracts from ancient Gaelic writings.

DEVIATIONS FROM THE NORMAL AMONGST SCHOOL CHILDREN.

WE are glad to see that the investigation of the mental and physical condition of school children, which was commenced some years ago under the auspices of the British Medical Association, continues to be prosecuted. This year a communication was made to the British Association by a committee consisting of the late Sir Douglas Galton, Dr. Francis Warner, Mr. E. W. Brabrook, Dr. J. G. Garson, and Mr. E. White Wallis upon mental and physical deviations from the normal among children in public elementary and other schools. The present report deals with an analysis of 1,120 exceptional children observed by Dr. Warner, showing the proportion of the primary groups of defect to the compound groups respectively. The main classes of defect noted are (A) defect in development of body; (B) abnormal nerve signs; (C) low nutrition; (D) mental dulness; and the coincidence of these defects (designated in this report, not very happily, correlation) at different age-groups is shown in percentages, whether occurring as A B, A C, A D, A B C, A B D, A C D, A B C D, etc. It is not quite easy to follow all these combinations and permutations in their bearings upon practical educational measures; but it is stated that they demonstrate that "much care and discretion will be needed in selecting exceptional children and in organising special classes of schools." Happily the recently passed Elementary Education (Defective and Epileptic Children) Act assigns the former duty to medical men approved by the Education Department, and these, no doubt, will be glad to avail themselves of all the information to be gleaned from this and other similar statistical reports.

IMBECILE CHILDREN IN LONDON.

WE find in the proceedings of the Metropolitan Asylums Board reference to a complaint by the Shoreditch and St. Saviour's Board of Guardians of the "grave inconvenience and annoyance" caused by the lack of accommodation for imbecile children. The Metropolitan Asylums Board deserves much credit for what it has done in the past, and the establishment some twenty-five years ago of the Darenth Schools for Imbecile Children was not only an admirable provision for a class of juvenile paupers till then neglected, but an object-lesson as to the advantage of early treatment in diminishing the proportion of permanent incapacity. Of late years, however, the demand for accommodation for such cases has been in excess of the provision made. There has been no material increase in the capacity of Darenth Schools since 1891, from which year the average number resident has been little short of 1,000, but a scheme has for a long time been under discussion for separating the more educable children (stated to be about 400) from the rest, and forming for them a distinct establishment. It is highly desirable that no further time should be lost in the practical consummation of this scheme, which, while providing for the better education of the more capable children, would set at liberty a sufficient number of beds to meet the pressing needs of the metropolitan guardians. The operation of the Defective Children's Education Act, by requiring a more rigid exclusion from the special classes than heretofore of children who are imbecile rather than feeble-minded, is likely to increase still further the demand for accommodation at Darenth.

PATHOLOGICAL SOCIETY OF LONDON.

WE are informed that the next meeting of this Society is to be held at the Jenner Institute, Chelsea, and is to be devoted to a series of short lantern demonstrations and the exhibition of microscopic specimens. A full list of these will be found in the "Diary" published at p. 1330. We understand that invitations to attend have been accepted by the Presidents of the Royal Society, the Royal College of Physicians and Surgeons, and the Royal Medical and Chirurgical and Clinical Societies. Not only are the communications in themselves likely to be of interest, but those members of the Society and visitors who do not know the Jenner Institute will have an opportunity of visiting this beautiful and fully-equipped laboratory of bacteriological and chemical research.

THE Fellows'dinner of the Royal Medical and Chirurgical Society will take place at the Whitehall Rooms, Hôtel Métropole, on Saturday, November 18th, at 7.30.

A MEMORIAL of Dr. Müller, who fell a victim to the plague in Vienna on October 23rd, 1898, was recently unveiled in the quadrangle of the General Hospital of that city. Professor Nothnagel delivered an address.

WE are requested by the Regius Professor of Medicine to remind candidates for the Oxford Diploma in Public Health that they must send their names without delay to the Secretary, Board of Faculties, Clarendon Building.

THE Right Hon. Henry Chaplin, M.P., President of the Local Government Board, has consented to attend the annual dinner of the Association of Public Vaccinators on Saturday, November 25th, at the Trocadero Restaurant. We are asked to state that any public vaccinator wishing to be present can obtain particulars from Mr. V. A. Jaynes, Honorary Secretary, 157, Jamaica Road, S.E.

DR. W. H. CORFIELD, Professor of Hygiene and Public Health in University College, London, has been appointed to the newly created post of Consulting Sanitary Adviser to Her Majesty's Office of Works. This appointment indicates a new departure on the part of the Office of Works, which has hitherto had no medical adviser. In future the Office in all difficulties affecting the hygienic condition of the Royal palaces and public buildings under its supervision will have the advantage of Professor Corfield's well-known experience and skill.

AT a meeting of the delegates "degli ordini medici" attending from all parts of Italy, held on October 24th under the presidency of Professor Durante, it was resolved to send a deputation to the Prime Minister (General Pelloux) to ask him to bring in a Bill withdrawing the right to practise, even among their countrymen, from all foreign medical men (not holding Italian degrees), whose own country did not grant Italian graduates reciprocal rights of practice. General Pelloux informed a deputation next day that he would introduce such a Bill immediately on the opening of the Italian Parliament, which has been summoned to meet on November 14th.

THE PARIS INTERNATIONAL CONGRESS OF MEDICINE, AUGUST, 1900.

The French Executive Committee have issued a notice that every member of the Congress who desires to read a paper at the forthcoming meeting must send the title and an abstract of his paper to the proper sectional Secretary on or before May 1st, 1900. To facilitate this proceeding the Executive Committee gives the following list of the secretaries with their addresses (in Paris, unless otherwise stated).

1. Comparative Anatomy: Dr. Auguste Pettit, 6, Rue Saint André des Arts.
2. Descriptive Anatomy: Dr. Rieffel, 7, Rue de l'Ecole de Médecine.
3. Histology and Embryology: Dr. Retterer and Dr. Loisel, 15, Rue de l'École de Médecine.
4. Physiology, with Biological Physics and Chemistry: Dr. Dastre at the Sorbonne; Dr. Gley, 14, Rue Monsieur le Prince; Dr. Weiss, 20, Avenue Jules Janin.
5. General and Experimental Pathology: Dr. Charrin, 11, Avenue de l'Opera; Dr. Roger, 4, Rue Perrault.
6. Pathological Anatomy: Dr. Letulle, 7, Rue de Magdebourg.
7. Internal Pathology (corresponding to our Section of Medicine in part): Dr. Rendu, 28, Rue de l'Université; Dr. F. Widal, 155, Boulevard Haussmann.
8. The Medical Diseases of Childhood: Dr. Marfan, 30, Rue La Boétie.
9. Therapeutics: Dr. Gilbert, 27, Rue de Rome.
10. Pharmacology: Dr. Chassevant, 70, Rue de Rennes.
11. Materia Medica: Dr. Chassevant, 70, Rue des Rennes.
12. Neurology: Dr. P. Marie, 3, Rue Cambacérès.
13. Psychiatry: Dr. Ant. Ritti, the Charenton Asylum, Seine.
14. Dermatology and Syphilography: Dr. G. Thibierge, 7, Rue de Surène.
15. General Surgery; Dr. Walther, 21, Boulevard Haussmann.
16. Surgery of Children: Dr. A. Broca, 5, Rue de l'Université; Dr Villemin, 58, Rue Notre Dame des Champs.
17. Urinary Surgery: Dr. Desnos, 31, Rue de Rome.
18. Ophthalmology: Dr. Parent, 26, Avenue de l'Opera.
19. Laryngology and Rhinology: Dr. Lermoyez, 20 bis, Rue La Boétie.
20. Otology: Dr. Castex, 30, Avenue de Messine.
21. Stomatology, including certain Dental Diseases: Dr. Ferrier, 39, Rue Boissy d'Anglas.
22. Obstetrics: Dr. A. Bar, 122, Rue La Boétie; Dr. Champetier de Ribes, 28, Rue de l'Université.
23. Gynæcology: Dr. Hartmann, 4, Place Malesherbes.
24. Forensic Medicine: Dr. Motet, 161, Rue de Charonne; Dr. Thoinot, 8, Rue de l'Odéon.
25. Military Medicine and Surgery: Dr. Catteau, The Minister of War, Paris.
26. Naval Medicine: Dr. Laugier, The Minister of the Marine, Paris.
27. Colonial Medicine: Mons. Kermorgant, The Colonial Ministry, Paris.

The names of those duly-qualified medical men who desire to attend the Congress, with a visiting card and the subscription of £1, should be sent to either of the Honorary Secretaries of the International Committee for the United Kingdom, Dr. Garrod, 9, Chandos Street, W.; or Mr. D'Arcy Power, 10A, Chandos St., Cavendish Square, W.

THE ST. JOHN AMBULANCE ASSOCIATION.

The inquiry on behalf of the St. John Ambulance Association by Colonel Bowdler, Sir James N. Dick, K.C.B., R.N., and Inspector-General Belgrave Ninnis, R.N., as arbitrators in the matters of difference which had arisen between the executive of the Stockport Centre of the St. John Ambulance Association and the Stockport and District Medical Society, was held in Stockport on October 30th and 31st, and occupied the whole of both of these days.

Mr. Wharton, who appeared for the Medical Society, said that the points alleged against the Honorary Secretary of the Stockport Centre were that he had mismanaged the Centre, had behaved rudely to persons entitled to ask for information, had done things which should be done only by the committee, and had not made periodical reports to headquarters as required by the rules of the Association.

Details of the controversy were set out in an article which appeared in the British Medical Journal of April 22nd, 1899, p. 992.

The first witness called was Dr. Rayner, who said that he was an original member of the local centre, and had given ten or twelve courses of lectures. He said that the dispute was a miserable dispute which ought to have been settled in ten minutes. It had arisen in consequence of a non-medical man dealing with medical matters without consultation with medical men. If the honorary secretary had taken the advice of some of the medical members of the committee no difficulty would have arisen. There had not, he said, been any allegation that the honorary secretary had made any profit out of the funds of the office for himself.

Dr. C. Porter, medical officer of health, said that in what he had done in the matter he had not acted without the authority of the Watch Committee. He had written to London with regard to a charge of five guineas for the course of lectures to the police because he had failed to obtain the information from the local secretary, Mr. Ferns, and he considered that he had been rudely treated by Mr. Ferns. He denied that he had ever said or insinuated directly or indirectly under any circumstances that Mr. Ferns was making money out of ambulance work.

Drs. Marriott, Christian, Smeeth, Rogers, and Goulden, jun., the Mayor of Stockport, and two working men also gave evidence in support of the case of the Medical Society.

Mr. Arthur Sykes said that he had become chairman of the Stockport Centre at the request of Mr. Ferns, who had been the life and soul of the Society in Stockport, as the committee very seldom met. Mr. Ferns had expressed his willingness to explain the matter to the Watch Committee, and had disclaimed any desire to quarrel with the Medical Society.

After the evidence of various other witnesses, Mr. Ferns said that he had been Honorary Secretary of the Stockport Centre since its formation in 1883. Previous to the beginning of this controversy he had assisted Dr. Porter in the formation of the police ambulance class, and he disclaimed any intention of insulting Dr. Porter. It was usual to charge five guineas to some classes which could afford to pay more than poorer classes, in order to help the latter, and he had informed the town clerk that he thought the corporation ought to pay more than ordinary classes.

The Chairman of the arbitrators said that the charge of five guineas was not unreasonable so far as the Association was concerned.

In examination by Mr. Boydell Houghton, representing Lord Egerton of Tatton, President of the Centre, Mr. Ferns denied having used various insulting expression with regard to Dr. Porter which had been attributed to him. He had not said that Dr. Porter had suppressed letters of vital importance, but if he had said so it was a remark that should be withdrawn. With reference to the statement that no balance-sheets were sent to London between 1883 and 1890, he said that it was usual with Centres when they were not doing much work not to send in balance-sheets which were in fact part of the report.

The inquiry then closed, and the arbitrators announced that they would take time to consider their decision.

THE POTTERY INDUSTRY IN FRANCE.

A report,[1] supplementary to the reports of Professors Thorpe and Oliver upon the use of lead compounds in pottery, has been presented by Dr. Oliver, of Newcastle-upon-Tyne, who was instructed by the Secretary of State to visit French potteries and to report upon the manner in which the industry is conducted, with special regard to hygienic conditions.

Pottery Manufactories.

It is not only in Britain that public attention is being directed to dangerous trades. For some time past the French Government has been quietly accumulating data with the object of improving its factory legislation. Ever since 1771, the year she began the manufacture, France has been a large producer of porcelain. In the country round about Limoges, the principal seat of pottery manufacture, there are large deposits of a beautiful white clay (*kaolin*), from which, when mixed with felspar and quartz, the finest porcelain is made. The pottery made in France is of two kinds—(1) porcelain such as is manufactured at Sèvres and Limoges, and (2) ordinary ware similar to that made in Staffordshire.

In Limoges there are 16 potteries, which give employment to 15,000 people, of whom 2,500 are children. The admission of children into factories in France is not so strictly guarded as in England. Provided with a medical certificate and one from the schoolmaster, children can commence work in the factories at the age of 12. There is apparently no difficulty in obtaining these certificates.

[1] Report to Her Majesty's Principal Secretary of State for the Home Department upon the Pottery Industry in France. By Thomas Oliver, M.D., F.R.C.P., Newcastle-upon-Tyne. Messrs. Eyre and Spottiswoode. 2½d.

Precautions against Lead Poisoning.

In the manufacture of ordinary white porcelain no lead is required. The ware is dipped in a glaze composed of silica, alumina, and potash. To this circumstance is due the greater freedom from plumbism of the French potter as compared with his Staffordshire brother. So far as porcelain is concerned it is in the manufacture of litho transfers for decorative purposes that the danger of lead poisoning arises. The powders that are dusted on and off the transfer papers contain very large quantities of lead salts. Workers in this department often suffer, and severely too, from plumbism. Porcelain manufacture has other dangers which are alluded to below. On visiting a large pottery at Montereau, where ware of a similar kind to that produced in Staffordshire is made, Dr. Oliver found fewer evidences of lead poisoning among the workers than in England. This he attributes to the dipping being done solely by men, to the glaze in which the ware is dipped containing only 7 to 8 per cent. of lead carbonate compared to the 13 to 24 per cent. found by Professor Thorpe in the glazing tubs in Staffordshire, to the exclusion of women from the recognised dangerous departments, and also to the employment of fritted lead. The use of leadless glazes has received only a very qualified support from the Staffordshire manufacturers. The subject has received the favourable consideration, however, of the French Government. Recognising that the plumbism of potters depends, among other things, upon the large percentage of soluble lead salts in the glaze, the French Government not only favours the use of the smallest amounts of lead, and that too in the fritted form, but throws in the weight of its authority in favour of leadless glazes, even going the length of supplying a formula. Lead poisoning does not appear to be so frequently met with among the potters across the Channel as among those at home, and one reason is that in France there is more porcelain produced than ordinary lead-dipped ware.

Potters' Consumption.

Another fell disease, however, haunts this industry. Consumption carries off large numbers of the porcelain makers between the ages of 30 or 40, and at an earlier age even than this others become practically unfit for work from bronchitis and emphysema. In the report the subject of "potters' rot" or pulmonary consumption is dealt with at considerable length. No new views are advanced in regard to its causation, but it is shown how the discovery of Koch's bacillus has altered medical opinion in regard to potter's phthisis. Formerly the disease was believed to be the result of the inhalation of clay dust only. Since the tubercle bacillus is now known to be present in the expectoration of the phthisical potter, much of which finds its way to the floor of the workroom, it cannot be otherwise than that some at least of the consumption that affects potters is the result of infection from diseased fellow-workmen. Greater cleanliness of the workshops and watering the floors with antiseptic solutions, teaching affected workpeople to expectorate into receptacles that can be destroyed or rendered antiseptic, and frequent medical examination of the workers, would diminish the spread of consumption. There remains these interesting facts in regard to the phthisis of porcelain makers.

It is distinguished from ordinary phthisis by the slowness of its development, the length of the duration of the illness, and the fact that it less seldom attacks the young than those of middle life and more advanced age.

Conclusions.

So far as can be learned from the report it would appear that there is less lead poisoning in France than in England, but just as much, if not more, pulmonary consumption among the potters; that factory rules are not so rigidly observed as they are in this country; and that in the large towns of France, as at home, wherever females are largely employed in factories the rate of infant mortality is extremely high.

We understand that a meeting of the medical profession is to be held in Newcastle on the evening of November 22nd, and that it will be attended by the three direct representatives of England and Wales—Dr. Glover, Mr. Brown, and Mr. Victor Horsley. The meeting of the General Medical Council is fixed by the Standing Orders for the fourth Tuesday in November—that is to say, November 28th.

INSANITY IN IRELAND.

Increase of Lunatics in Asylums.

The annual report of the Inspectors of Lunatics for the year 1898 shows that there is an increase of no fewer than 714 in the number of the insane in the various institutions under their supervision as compared with 624 for 1897, while the average for the ten previous years was only 444 per annum.

The admissions into the district asylums have increased by 184 during the year, and this increase is to some extent accounted for by the large number of transfers from workhouses, where many of the cases entered on the asylum books as first admissions had been resident for years. Notwithstanding the large number sent from the workhouses it is remarked that the number of the insane remaining in them shows no corresponding diminution.

Increased Ratio to Population.

The inspectors give statistics to prove that the number of the insane has increased from 250 per 100,000 of the population in 1880 to 447 per 100,000 in 1898, and if to this be added the number of the insane wandering at large according to the census returns of 1891, the numbers will be found to amount to the formidable total of 556 per 100,000.

On January 1st, 1899, there were in the district asylums 15,289 patients. The number admitted during the year was 3,469, and the number discharged recovered was 1,279, showing a percentage of 36.9 on the admissions. The death-rate was 7.4 per cent., calculated upon the average number resident during the year. Five of the deaths were by suicide, and 4 resulted from misadventure.

Sanitary Defects of Asylums.

The inspectors comment unfavourably upon the sanitary condition and prevalence of typhoid fever in many of the district asylums. It is an ominous sign when they refer to asylums as continuing to be in an insanitary condition, especially when so many of them are overcrowded. The accommodation of the district asylums, which in 1870 contained 6,655 patients and their necessary attendants, nurses, and administrative staffs. Year by year the number of patients has increased, until in 1898 they reached the number of 15,289. In all these institutions works of a greater or less magnitude have been undertaken to reduce overcrowding and improve their sanitary condition, while thirteen of them have been remodelled throughout. The necessary work has been executed not merely in consequence of the rapid increase in the number of inmates, but also with the view of conforming with modern ideas for the proper care and treatment of the insane.

The Insane in Workhouses.

With regard to the insane in Irish workhouses they number 4,030, and the number has remained practically stationary notwithstanding the large number transferred to the district asylums during the course of the year. The inspectors again emphasise the unsatisfactory arrangements made for the care of the insane in workhouses, "the insufficient and unsuitable accommodation, the want of proper attendants, the deficient means of employment, and the absence of any form of amusement, and of all those surroundings which tend to soothe and comfort the insane." Of these the want of properly-trained nurses, male and female, who understand the care and requirements and the protection of these poor unfortunates is a crying want in Irish workhouses, and the Medico-Psychological Association has been appealed to to strengthen the hands of those who are alive to the urgent requirements of these institutions, so that by an expression of expert opinion pressure may be brought to bear upon the authorities to provide asylum-trained nurses for the charge of the insane wards of the workhouses. If this is accomplished the condition of these patients will be immensely improved, and the responsible officials will have brought to their notice more forcibly the many other evils resulting from detaining in unsuitable institutions the helpless insane.

Medical Magistrate.—Mr. Frank Parish, Mayor and Mayor-elect of Worthing, has been appointed to the Commission of the Peace for the county of Sussex on the recommendation of the Lord Lieutenant the Marquis of Abergavenny.

LITERARY NOTES.

The National Association for the Prevention of Consumption and other Forms of Tuberculosis seems to be regarded by some worthy persons as an aggressive body, which aims at the establishment of a social tyranny, a principal element of which, one gathers, is the compulsory use of "2½ spittoons" by all Her Majesty's lieges. Nothing, however, could be less truculent in appearance than the new journal entitled *Tuberculosis*, which is to be the organ of the Association. Milder-mannered crusaders than those responsible for the conduct of this periodical there could not be. The first number, which has just been issued, contains a paper on the prevention of tuberculosis by Sir Hermann Weber, and one entitled "A Proposed New Departure in Education," by Dr. G. A. Heron. Reports from Branches of the Association and "Notes by the Way" on various matters connected with it, make up the rest of the contents.

Another new periodical devoted to tuberculosis and sanatoria for the treatment of that disease will appear with the opening of the new year. It is to be entitled *Internationale Zeitschrift für Tuberculose und Heilstättenwesen*, and will be edited by Professors von Leyden, Gerhardt, and B. Fraenkel. The publisher is to be Johann Ambrosius Barth, of Leipzig.

Messrs. J. and A. Churchill will shortly publish a *Handbook of Gynæcology* by Dr. Jellett. The work will be uniform in size with the same author's *Short Practice of Midwifery*, and will contain some fifty illustrations.

Readers interested in hospital reform will doubtless be glad to know that most of the papers read at the recent conference on the subject are published in the current number of the *Medical Magazine*.

Messrs. Rebman, Ltd., have ready for publication the first volume of *An International Textbook of Surgery*, by British and American authors, in two volumes; the editors are Mr. Pearce Gould and Dr. J. Collis Warren. The same firm also announce as in press new editions of Freyberger's *Pocket Formulary for the Treatment of Diseases in Children*, and of Bland Sutton and Giles's *Diseases of Women*.

Dr. Julius Schwalbe, editor of the *Deutsche medicinische Wochenschrift* has compiled a work entitled, *Bestimmungen über die Zulassung zur aerztlichen Praxis in Auslande*, in which he gives a digest of the laws and regulations concerning the practice of medicine in ninety-eight different communities representing practically the whole of Europe, Australia, America, Africa, and Asia.

The publication of the first volume of a great work by Professor Ramon y Cajal on the structure of the nervous system, which has been appearing in parts, has recently been completed. The book is entitled *Textura del Sistema Nervioso del Hombre y de los Vertebrados* (Structure of the Nervous System of Man and the Vertebrata). The volume comprises three sections: (1) Elements of the Nervous System; (2) Spinal Cord, Spinal Ganglia, Nerve Endings, and Physiological Considerations on the Course of Currents in the Cord; (3) Comparative Histology of the Cord and of the Development of the Nervous System.

A new and enlarged edition of Professor Arthur Thomson's *Handbook of Anatomy for Art Students* has just been issued from the Clarendon Press.

A new work by Dr. Marcus R. P. Dorman, M.A., author of *Ignorance* and *From Matter to Mind*, will be published in November by Messrs. Kegan Paul. It is entitled *The Mind of the Nation*, and is described as a critical analysis of the political thought of the closing century.

In a very appreciative and interesting sketch of the career of Sir William Roberts from the pen of Professor Adami, which has been reprinted from the *Montreal Medical Journal*, it is incidentally stated that there is "a rising young New York physician, known to many in Montreal, who upon the topmost storey of one of the Madison Avenue Palaces, keeps and feeds, and ultimately analyses a select herd of swine." We gather that most important results are looked for from these researches.

The Royal Scottish Society of Arts has awarded the Keith prize, value £15, to Dr. Dawson Turner for his paper on Localisation of Foreign Bodies in the Tissues by *x* Rays, with Experiments, which was read before the Society in December las

VACCINATION OFFICERS AND THEIR DUTIES

The Antivaccination League has had a conference at Leicester, and has sent to the Local Government Board a copy of the following resolution:

That the new instructions issued by the Local Government Board to vaccination officers, instructing them to take proceedings against defaulters under the Vaccination Acts without the direction of the guardians, violate the principles of local self-government and falsify the assurances given by the President of the Local Government Board (Mr. Chaplin) in his place in Parliament.

With the personal question of Mr. Chaplin's consistency or inconsistency we have nothing to do, but it is astonishing, or rather it is not at all astonishing, that antivaccinists persist in the repetition over and over again of utterly baseless statements or assumptions. It is simply not the case that in the Local Government Board's new instructions to vaccination officers they are instructed to take proceedings against defaulters without the direction of the guardians. A perusal of the Board's Order is sufficient to show this, and the League does not attempt to quote any article, or any part of any article, contained in the Order in support of its contention. Apparently with a well-founded trust in the credulity of its supporters, or else with sheer incapacity to distinguish fact from fiction, it prepares and circulates a resolution which simply defies easily ascertainable facts. It is true that the prosecution of defaulters is now undertaken by vaccination officers independently of Boards of Guardians. That, however, is not done under the order of the Local Government Board. It is done under the Vaccination Acts themselves, as tested in the law-courts and as read by the law officers of two Governments. And yet the leaders of the antivaccination crusade continue in the weary iteration of the misstatement that this is done by the recently issued instructions of the Board. Mr. Chaplin's reply to this part of the League's resolution is perfectly explicit: "With regard to this resolution the Board direct me to state that it appears to be founded on a misapprehension. The Board have repeatedly pointed out that the new vaccination Order issued in 1898 does not instruct the vaccination officer to take proceedings against defaulters without the direction of the guardians. That duty is imposed on him directly by a superior authority—namely, by Parliament itself. No such instructions as are referred to in the resolution have been issued by the Board...."

We cannot expect that this reply will have any effect in checking misrepresentation or misstatement of the Board's attitude. Misrepresentation and misstatement are the very breath of the nostrils of antivaccination, and without them it could not survive. Already in the British Medical Journal we have repeatedly referred to the objectionable features of the present system, and these do not require to be further commented on here.

THE NEW VACCINATION ACT IN OPERATION.

The Lymph of the National Vaccine Establishment.

P. V. for over Thirty Years writes: "H.," in the British Medical Journal of October 28th, appears to be easily satisfied. I look upon his results as a disgrace to the Local Government Board. My record since March 1st, 1899, is as follows:

Source.	Insertions.	Vesicles Produced.
National Vaccine Establishment	96 ...	55
Dr. Chaumier's	72 ...	70
Dr. Renner's	4 ...	4
Jenner Institute...	4 ...	4

The pity is that so many arms are now spoiled and left unprotected. My record for arm-to-arm vaccination for 1896-7-8 is 481 insertions 472 vesicles produced. I shall be pleased to forward my register for verification.

THE PLAGUE.

Prevalence of the Disease.

Portugal.

Oporto.—Since October 24th but scanty information has reached us concerning plague in Oporto or elsewhere in Portugal. On the date mentioned 4 fresh cases of plague were reported in Oporto, but since then no exact details have been made known. As far as we can gather the returns are never published officially by the Portuguese Government, and the number of plague cases we hear of are only from such scraps of information as can be gathered by correspondents of the British press or the agents of the telegraphic services. This is not only to be deplored but to be condemned. The question of the presence of plague in any part of Europe, more especially in a busy harbour and commercial centre like Oporto, is a matter of universal importance. Reference is made elsewhere to the moral if not to the legal obligations upon the adherents to the Venice Sanitary Convention.

INDIA.

The number of reported deaths in India for the week ending October 7th reached a total of 6,727, or over 1,000 above the total of the previous week.

In Bombay city 105 deaths were reported, being 23 above the number for the previous week; and in the Presidency the number increased from 5,178 to 5,750. It will be seen from these quotations that the Bombay Presidency is still the chief seat of plague.

In Calcutta the number of plague deaths for the week ending October 7th were 47 as compared with 51 for the previous week. On October 7th, 10th, and 12th there were 5, 10, and 8 fresh cases respectively. These numbers fairly represent the progress of plague in Calcutta from day to day, and, curiously enough, there seems little tendency to an increase or diminution according to the season of the year.

In the Indus Valley plague seems to be increasing in virulence; at Karachi there were on October 6th 2 cases and 2 deaths; on October 7th 3 cases and 3 deaths. At Hyderabad (Sind), on October 5th, 18 cases of plague occurred and 19 deaths from the disease.

In the Poona district the plague returns on October 6th, 7th, 8th, 9th, 10th, 11th, and 12th were: cases, 180, 201, 234, 189, 128, 94, 193; and deaths, 117, 130, 190, 127, 100, 83, and 143 respectively.

We regret to learn of the death of Colonel Hay, one of the medical officers on plague duty; and also that Mr. Bromley, the principal dentist in Poona, has been seized with plague. On October 12th there were 9 Europeans in hospital at Poona suffering from plague.

HONG KONG.

The Governor of Hong Kong telegraphed to the Colonial Office on October 30th that "1 case of plague and 1 death last week" had occurred in Hong Kong. This is a similar report to that sent in for the previous week.

MAURITIUS.

For the week ending October 26th, 89 fresh cases of plague and 72 deaths from the disease occurred in Mauritius.

BRAZIL.

Thirteen cases of plague are reported, by a Reuter's telegram dated Rio de Janeiro, October 31st, to have occurred at Santos. Last week we stated that the diagnosis of the cases of illness at Santos was *sub judice*, and that the Government bacteriologist was expected to pronounce an opinion in the course of a day or two. The statement now received appears to confirm the suspicion that the disease is really plague; and we can no longer shut our eyes to the fact that plague has reached the American continent for the first time. The city of Santos is filthy in the extreme, and there seems every prospect that plague will stay there.

One case of plague is reported from San Paulo, some fifty miles inland from Santos, and in frequent communication with it by road and rail. The outlook is not hopeful, for though San Paulo is better than Santos from a sanitary point of view, South American cities are but too likely to prove hotbeds for a disease of the nature of plague.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 27th, 1899, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this Branch will be held at the White Hart Hotel, Lewes, on November 30th. Dr. Fawssett will preside. Members are requested to send notice of papers or other communications to the Honorary District Secretary,—J. W. BATTERHAM, M.D., Bank House, Grand Parade, St. Leonards.

SOUTH-WESTERN BRANCH.—The next meeting of this Branch will be held in the Board Room of the Royal Devon and Exeter Hospital, Exeter, on Tuesday, November 14th, at 4 P.M. Mr. J. Bland Sutton will deliver an address on Cancer Infection in relation to the Surgical Treatment of Cancer. Luncheon (2s. 6d.) will be provided at the Royal Clarence Hotel from 1.30 to 2.30 P.M., and tea and coffee will be served in the Board Room of the Hospital at 3.30 P.M.—H. W. WEBBER, M.S., 4, Woodland Terrace, Plymouth, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District will be held at the Royal Free Hospital, Gray's Inn Road, on Wednesday, November 8th, at 4.30 P.M. Dr. Morton will preside. Cases of interest will be shown by the staff of the hospital and discussed. The District Committee will meet at 4.15 P.M.—H. J. MACEVOY, Brondesbury, N.W., Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of this Branch will be held in the Medical Institution, Liverpool, at 2 P.M. on Wednesday, November 29th, 1899. Members who wish to bring forward any business, to read papers, or show cases or specimens, are requested to communicate with the Honorary Secretary not later than Saturday, November 18th.—T. ARTHUR HELME, M.D., 3, St. Peter's Square, Manchester, Honorary Secretary.

SOUTHERN BRANCH: SOUTH WILTS DISTRICT.—The next meeting of this District will be held at the County Hotel, Salisbury, at 2 P.M., on Wednesday, November 8th, 1899. Agenda: Minutes of last meeting. Treasurer's account and balance sheet and excursion account. Election of officers. Mr. Harcourt Coates will read a paper entitled Specialists and Specialism. Dr. Williams-Freeman will show and read notes on a case of Head Injury, with complications. Dr. E. T. Fison, a case of Functional Hemiplegia for 43 years: recovery. Dr. Gilbert Kempe, a case of Rhinoplasty. The meeting will be preceded by luncheon at 1 o'clock. Members intending to be present at the luncheon are requested to send their names to the Honorary Secretary not later than November 6th.—J. E. GORDON, 52, Endless Street, Salisbury, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The autumn meeting of this Branch will be held at the Joint Counties Asylum, Carmarthen, on Thursday, November 23rd. Nominations for membership, notices of communications, etc., should be sent in on or before Monday, November 6th.—ALFRED SHEEN (Cardiff), D. ARTHUR DAVIES (Swansea), Honorary Secretaries.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE autumn meeting of this District was held at Reigate on October 12th, Dr. J. G. OGLE (Reigate) in the chair.

Confirmation of Minutes.—The minutes of the Croydon meeting were read and confirmed.

Next Meeting.—Dr. OLDMAN proposed and Dr. OWEN FOWLER seconded, and it was resolved:

That the next meeting be held at the Queen's Hotel, Upper Norwood, on the second Thursday in March, and that Dr. Burgess, of Streatham, be asked to take the chair.

Communications.—Dr. F. R. WALTERS read a paper on the Modern Treatment of Phthisis, which was discussed by Drs. OWEN FOWLER and WILLOCK.—Mr. BRUCE CLARKE read a paper on Exploration of Kidney and Ureter; Drs. GALTON, J. WALTERS, and F. R. WALTERS, and Miss ADA BROWN joined in the discussion.—Dr. GRIFFITHS read a paper on the Value of the Douche in Gynæcology and After Delivery, which was discussed by Dr. OWEN FOWLER and Dr. GALTON.—Surgical Instruments, etc., were exhibited by Down Bros.

Dinner.—After the meeting 12 members and visitors dined together.

The Action of the Council.—The account of the recent meeting of the Council of the Association was given by Dr. GALTON, after which Dr. OGLE (Chairman) proposed and it was carried unanimously:

That this meeting expresses its approval of the action of the Council, and records a vote of confidence in its representative on the Council.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

A MEETING of this District was held at Sandown on October 20th, 1899, Dr. J. M. WILLIAMSON (President) in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

The late Dr. Sinclair Coghill.—A letter was read from Mrs. Sinclair Coghill thanking the members of the District for "their kind sympathy with herself and family in their late great bereavement."

New Member.—Dr. J. B. Thomas, Brigade-Surgeon-Lieutenant-Colonel, retired, of Sandown, I.W., was elected as a member.

Deferred Agenda.—Dr. T. A. BUCK proposed the following resolution:

That when from any cause any agendum or discussion at any meeting be not completed, but deferred to another meeting, such deferred agendum or discussion shall be relegated to the bottom of the list at such future meeting—new matter to take the precedence.

This was unanimously carried.

Rhinolith.—Mr. W. E. Green showed a rhinolith he had lately removed from a girl in whom from the history it had evidently existed for years. A pair of strong polypus forceps crushed the stone, which was removed in five or six pieces, and no more could be felt. The whole cavity as far as the pharynx was full of it. Three months afterwards she came again complaining of pain and unpleasant taste and smell. Another piece was found near the back of the nasal cavity, consisting of a thin ragged plate about 1 inch long, ½ inch wide, and ⅛ inch thick; this was removed entire. Mr. Green said the case was of interest on account of its rarity. Neale's *Digest* gave reference to several cases in the periodicals. Dr. Clay (Birmingham) had been able to find a record of only 46 cases in a period extending back to 1502.

Cases of Uterine Disease.—The President read a paper on a case of sarcoma of the uterus with inversion. He showed and described the morbid specimen, and also exhibited under the microscope a section of the growth, which consisted of round and spindle cells. Dr. Buck (Ryde) gave the notes of a case of large interstitial myoma of uterus, which will be published. These two cases were for the purposes of discussion taken together, and were discussed with much interest by all.

Vaccination from its Medico-legal Aspects.—Dr. Godfrey (Ventnor) read a paper on this subject. The aim of vaccination was primarily to stamp out a disease which was a scourge to the country; secondly, if it did not eradicate it, it modified or reduced its malignancy. The former it had not succeeded in accomplishing, for reasons well known; the latter it had certainly done. Dr. Godfrey gave a summary of the legislative enactments in regard to vaccination since its discovery. He went on to say that the conscientious objector rendered null and void the whole purpose of vaccination, inasmuch as the "conscience clause" pointed out a way of escape from what the medical profession generally had always maintained the only safeguard against small-pox. The returns to hand showed that, so far, between the period between January 1st to June 30th inclusive, the total number of certificates of successful primary vaccination were for the first six months of 1899, 355,987, as compared with 278,588 in 1898, which was an average of just upon 28 per cent. They were satisfactory so far as they went, but it might well be urged whether this increase was due so much to the working of the new Act as to that official recognition which had tended to awaken the whole question from an indifference which had undoubtedly existed during recent years. However alluring these results might read, the main point remained; by making vaccination voluntary, rather than obligatory, the door was opened for epidemics that might ravage the country from end to end. Dr. Godfrey added that we should have done better to follow the example of Germany by making revaccination as well as vaccination compulsory. In England the question of revaccination had never been considered. Dr. Godfrey expressed the opinion that it was desirable that this subject should before long become a subject for legislation. Dr. Godfrey's paper was vigorously discussed so long as the time lasted.

Next Meeting.—The next meeting was fixed for the third Friday in January, 1900, at 4 P.M., at the Pier Hotel, Sandown.

BATH AND BRISTOL BRANCH.

The first ordinary meeting of the session was held at the Medical Library, University College, Bristol, on October 25th, Dr. A. J. Harrison in the chair.

Discussion.—The President announced that a discussion would be held at the February meeting at Bath on the Surgical Treatment of Diseases of the Stomach, to be opened by Mr. Lace.

New Member.—Mr. G. S. W. Ogg, M.B., L.R.C.S.Edin., Bath, was elected a member of the Branch.

Treatment of Puerperal Sepsis.—Dr. Walter C. Swayne read a paper on the treatment of puerperal sepsis, especially by curetting and the use of strepto-antitoxin. He said that any temperature over 100.5° F. during the puerperium was abnormal; cases occurring in the first three days indicated infection during labour, those occurring later meant a secondary infection. He laid stress on digital examination of the uterus, and thought that in suspicious cases cultures should be made from the interior of the uterus, and explained the best method of doing this. He advocated the use of strepto-antitoxin in all cases of puerperal fever, and discussed fully the use of the curette. Drs. Watson Williams, Michell Clarke, and Carey Coombs remarked on the paper.

Cases Treated by Laparotomy.—Dr. E. W. H. Groves read an account of the following cases treated by laparotomy: (1) Dermoid of Ovary, (2) Uterine Fibroid impacted in pelvis, (3) Double Ovarian Cyst, (4) Abdominal Tuberculosis and Pyosalpinx. Each of the cases presented points of especial interest, and Dr. Groves referred more fully to the question of drainage in abdominal operations. The paper was discussed by Drs. Walter Swayne, Stack, and Cave.

The Heart in Acute Rheumatism.—Dr. Theodore Fisher read a paper on the affection of the heart muscle in acute rheumatism. He brought forward a number of observations to show that the cardiac muscle was more frequently and severely affected in acute rheumatism than was generally received, and pointed out that although so much attention had been paid to the condition of the endocardium and pericardium in acute rheumatism, comparatively little had been given to that of the heart muscle—a most important factor in the future of the patient. He showed some fine coloured drawings of the pathological appearances in some of the hearts he had examined. Drs. Waldo, Wohlmann, Wilson Smith, Cave, and Professor Fawcett discussed the paper.

Purulent Discharge from the Nose.—Dr. Watson Williams read a paper on the clinical significance of purulent discharge from the nose, which was illustrated by stereoscopic lantern slides of the normal and pathological appearances of the nasal cavities and adjoining sinuses. These slides were most beautiful and effective, giving a very clear idea of the anatomy of the nose.

WEST SOMERSET BRANCH.

The autumnal meeting of this Branch was held at Taunton on October 26th, Dr. Macdonald (Taunton), President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Paper.—The President introduced Professor Gilbert Barling, of Mason College, who read a paper on A Modern View of Malignant Disease. The paper was followed by a discussion, and the meeting closed with a hearty vote of thanks to Mr. Barling.

Luncheon.—There was a lunch at the London Hotel before the meeting.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

The annual meeting of this Branch was held in Aberdeen on October 21st; Dr. J. Osbert Wilson (Huntly), President, in the chair.

Confirmation of Minutes.—The minutes of last meeting were read and confirmed.

New Members.—The following gentlemen were nominated for ballot at next meeting: Professor Hamilton, Aberdeen; Dr. Jas. A. Stephen, Aberdeen; Dr. A. H. Mackie, Aberdeen; Dr. Clifford T. Bell, Aberdeen; Dr. A. B. Cruicksbank, Aberdeen; Dr. Alex. Thomson, Huntly; Dr. A. W. M. Sutherland, Aberdeen; Dr. Albert Westland, Aberdeen; Dr. Ernest Bissit, Aberdeen; Dr. Cecil V. Le Fanu, Aberdeen; Dr. J. A. Tolmie, Aberdeen; Dr. Thomas Fraser, Aberdeen; Dr. Jas. D. Noble, Aberdeen; Dr. Wm. Christie, Woodside; Dr. John A. Watt, Aberdeen.

Election of Officers.—The following were elected officers and members of Council for the ensuing year:—*President:* Dr. Farquharson, M.P., Finzean. *Vice-Presidents:* G. Trail, M.D., Strichen; J. Osbert Wilson, M.D., Huntly. *President-Elect:* Professor Ogston. *Treasurer:* Geo. Williamson, M.D. *Secretaries:* J. Scott Riddell, M.B.; H. M. W. Gray, M.B. *Council:* Town: Professor Finlay, Thomas Milne, M.D., J. J. Y. Dalgarno, M.B. County: W. Fergusson, M.D., Banff; J. Middleton, M.B., Peterhead; R. Rannie, M.B., Culter.

Apology for Absence.—An apology was read from Dr. Farquharson, M.P., the newly-elected President, whose Parliamentary duties prevented him from being present.

Luncheon.—After the business meeting over thirty members of the Branch lunched in the Palace Hotel, Dr. J. O. Wilson presiding.

SPECIAL CORRESPONDENCE.

NEW ZEALAND.

The New Zealand Branch of the British Medical Association.—The Coming Annual Meeting.—The Organisation of the Branch.—Appointment of Government Pathologist.—Provision of Therapeutic Serums by the Government.—Proposed Medical Legislation.—Irregular Practitioners.

THE New Zealand Branch of the British Medical Association, which was inaugurated in October, 1896, with 25 members, has made great strides since that date, and has now 240 members on the rolls. Unlike other colonial Branches, it is divided into Sub-branches or Sections, each of the five Sections holding regular meetings at stated intervals, and combining together to meet annually in one of the large centres of the colony.

The annual meeting of 1899 was held in Auckland, but owing to its geographical position the meeting was not so generally attended as is usually the case. The meeting for 1900 is fixed for Christchurch, and, being held in a more centrally-situated place, ought to be a large and representative one. The Canterbury Section, which will have charge of the arrangements, has already set to work to make it a success from a scientific point of view, and as 1900 is also the fiftieth anniversary of the founding of the province of Canterbury, the Section intends making the meeting one of the prominent features of the year.

Since its inception the Council of the Branch has been fully occupied in organising the several Sections and getting the machinery into smooth working order; at the same time it has not forgotten that the body which it represents is one which by combined effort can do much to alleviate the sufferings of the general public from a preventive as well as a curative point of view. Keeping this in view, the Council has succeeded in obtaining from the Government the appointment of a pathologist, who is instructed to examine and report on all specimens sent to him free of charge.

Another concession from which the suffering public will eventually receive much benefit, and one which they will be more likely to appreciate, is that the Government has agreed to provide the profession with antidiphtherial, antistreptococcic, antitetanic, and other serums, but this scheme is not yet quite in working order.

Though a loyal colony, the Government has not yet seen its way to exclude the products of foreign countries in favour of the English manufactured goods; all are treated alike. Among the foreign articles introduced into the country are diplomates in medicine, and the law regulating their registration is very elastic. The introduction of a more stringent law governing the registration of medical men now occupies the attention of the Council, and if it should eventually come before the House of Representatives, it is to be hoped that some severe measures will be inserted to punish unlicensed practice. Though there is a clause in the present Medical Act providing a penalty for illegal practice, the Minister of Justice holds that it is inoperative.

New Zealand seems to be an Eldorado for cancer curers, herbalists, faith and mind healers *et hoc genus omne*, and it is an absurd fact that some members of the House of Representatives even suggested to grant some of them licences to practise. In a country so far advanced in legislation, with its female franchise, old-age pensions, etc., this would have been a decided retrograde step, but fortunately the suggestion was negatived by the Government.

LEEDS MEDICAL SCHOOL.—The number of students who have joined for the full curriculum at Yorkshire College (Medical Department), Leeds, is 27, and those who have joined for special courses 9, and not 26 and 8, as reported in the BRITISH MEDICAL JOURNAL of October 21st.

CORRESPONDENCE.

ATTEMPTED AMALGAMATION OF DEFENCE SOCIETIES.

SIR,—I am directed by the Council of the Medical Protection Society to make to you the following statement:

The usual monthly meeting of the Council of the Society was held this afternoon at its office, 12, New Court, Lincoln's Inn. Sixty candidates were elected members of the Society. £400 were set aside for investment in augmentation of the Reserve Fund of the Society, which now amounts to £1,061. The total outstanding claims against the Society are under £50.

On August 10th, 1899, a letter was sent by the Council of the Protection Society to the Council of the Medical Defence Union, of which the following is a copy:

Dear Dr. Bateman,—My Council by their unanimous vote have instructed me to inform you that it is considered that it would be of material public advantage if an amalgamation of your Society with mine could be accomplished.

My Council are willing to leave the whole terms upon which amalgamation shall be carried out to an arbitrator—say a barrister of high standing approved of by both Societies, or, failing agreement, by the President of the Incorporated Law Society; the arbitrator to have placed before him the whole of the books of both Societies, the lists of members, accounts; he to examine same and to employ an accountant of his own selection for that purpose; the arbitrator then to prepare a scheme for amalgamation, each Society undertaking to abide by and carry out the scheme recommended by the arbitrator and bearing equal share of the expenses.

I am, yours sincerely,
(Signed) HUGH WOODS.

A. G. Bateman, Esq., M.B., C.M., General Secretary,
Medical Defence Union, Limited, 4, Trafalgar Square, W.C.

The reply to that communication was received from the Medical Defence Union on September 26th, 1899, and was to-day read to the Council of the Protection Society. It was in these words:

Dear Dr. Woods,—Your letter dated August 10th, 1899, was duly brought before the Council of the Medical Defence Union on Thursday last; a copy of it having previously been circulated to each me mber o the Council.

I am directed to inform you that the Council having most carefully considered the proposals which your letter contains, regret they are unable to accede to the terms suggested.

I remain, yours truly,
(Signed) A. GEORGE BATEMAN,
General Secretary.

As you, Sir, have often expressed in the columns of the BRITISH MEDICAL JOURNAL a wise interest in the amalgamation of the two societies, the Council of the Protection Society think it right that the facts concerning the last attempt to bring about this union, so widely desired in the medical profession, should be fully laid before you.

In making to the Medical Defence Union the suggestions contained in the letter quoted above, the Protection Society was actuated solely by a desire to bring about amalgamation by means absolutely fair to both Societies, and which would give no improper advantage to either Society in the carrying out of the details of the proposed amalgamation.—I am, etc.,

HUGH WOODS,
Hon. General Secretary.

Highgate, N., Oct. 31st.

MEDICAL EDUCATION.

SIR,—Dr. David Sommerville, in a letter in the BRITISH MEDICAL JOURNAL of October 28th criticising Dr. Saundby's address, objects to his statement that

"in no other profession is the student asked to acquire a knowledge of half a dozen preliminary sciences," and asks the question: "Is an engineer made to learn geology, metallurgy, and chemistry?" In answering this query Dr. Sommerville goes on: "I should say distinctly that an engineering student is required to study geology, metallurgy, and chemistry, and physics also. During my own scientific course I sat on the same benches with these students in all four subjects."

Apparently Dr. Sommerville has no objection to the reader laying down his letter with the notion that the medical student is no more hardly dealt with than the young engineer. The real fact is that a civil engineer often studies these sciences, but they are not compulsory, and he is not required to pass any examination upon them. If the professors of these sciences could get the budding engineer in their rigid grasp to pass an examination, I suppose they would do like the professors in chemistry, botany, and natural history in the medical curriculum: insist upon the candidate loading his memory with a heap of superfluous knowledge,

wasting his time and sickening his attention before he is allowed to reach the knowledge of real value, that which comes into practical use. All knowledge may be good in one way or another, but the question is, What is the relative importance of different kinds of knowledge? In my opinion too heavy a toll is taken from the junior student. Dr. Saundby observes:

In the present crowded state of the profession it ought not to be the object of those responsible for medical education to offer an easy passage through the schools to numbers who exhibit no scientific spirit.

Similar suggestions are now and then made, sometimes in a form in no way different from selfish trades-unionism. The duty of the examiner is to find out if the candidate possess sufficient knowledge safely to practise medicine, and not to push him back to consume more of his time and money in order to diminish the amount of competition within the profession.

In conclusion, I have to thank Dr. Sommerville for directing my attention to Dr. Saundby's valuable address on the Proper Objects of Medical Education, in the JOURNAL of October 7th, which I had unwittingly passed over.—I am, etc.,

Polton, Midlothian, Oct. 31st. WILLIAM W. IRELAND.

ILLEGAL CERTIFICATES.

SIR,—I note that Mr. Jackson and his friends repeat their charge against me of violating my election pledges on the midwifery question, and, as previously, their method of attack is to conceal, under a cloud of verbiage, from your readers what my election pledges actually were, and to disingenuously misrepresent the whole facts of the case. If Mr. Jackson will call a meeting of the profession in some convenient and central place for the purpose of moving a vote of censure upon me for violating my election pledges on the midwifery question, I shall be very happy to attend in order to bring his slanderous misrepresentations of my public position to a direct issue.

In consequence of the passages in his letters relating to a so-called report in the *Lancet* of Mr. Brown's speech at the Stratford meeting I make two conditions:

1. That Mr. Brown shall also address the meeting.
2. That a verbatim report of all the statements made at the meeting shall be taken by an accredited medical reporter and published.—I am, etc.,

Cavendish Square, W., Oct. 31st. VICTOR HORSLEY.

SIR,—In the joint letter in reply to Mr. Horsley in the BRITISH MEDICAL JOURNAL of October 28th the words, "Paragraphs 11 and 13 of that circular are in direct conflict with each other" should be "Paragraphs 11 and 12 of that circular," etc.; and the words "establishes the right to practise midwifery" should be "establishes their right," etc., that is, the right of midwives when registered.

As these corrections are material, we should be greatly obliged by the favour of insertion of this letter; whilst apologising for the trouble caused by these typographical errors.

We will send a copy of this letter to Mr. Horsley.—We are, etc.,

TOM R. TAYLOR.
Bedford Square, W.C., Oct. 28th. J. HIGHAM HILL.

*** The letter was printed exactly in accordance with the typewritten "copy" supplied.

MEDICAL ORGANISATION.

SIR,—I have read Dr. Chas. E. S. Flemming's very capable and considerate contribution to the discussion on Medical Organisation in the BRITISH MEDICAL JOURNAL of October 21st, and there are one or two questions arising out of it that I should like to mention.

He states that the British Medical Association has a membership equal to 52 per cent. of the profession. While admitting that that is a larger proportion than I anticipated, I am ungracious enough to suggest that a large number are members because it is a cheap means of getting a medical paper, and not because they regard the Association as being very solicitous about the interests of the general practitioner.

On two points we seem to be quite in accord: (1) That, as at present organised, the British Medical Association is practically useless for ethical and political work; and (2) that it is not representative.

These features, I am convinced, are due to the predominating influence of the consultants on the Council (the paramount authority of the Association). How the consultants have obtained and preserve this position I need not discuss here, further than to state that it is due to numerical superiority, and to suggest that an explanation may be found by a perusal of the names of the persons who read papers and take prominent parts in the discussions at the annual meetings, and I am sure it is not needful to remind Dr. Flemming that it is always more difficult to alter the unwritten customs and traditions of such an Association than the written ones.

The important question, therefore, for consideration is, Shall we try to mould the organisation of the British Medical Association into a thoroughly representative body capable of dealing effectively with these questions, or shall we organise an entirely new body for this express purpose?

This is a moot point and one which the Conference the Medical Guild is proposing to call will have as the principal object of its deliberations. There is now every prospect of the Conference being held, and that being so the more thoroughly representative of the profession it is the more likely will its deliberations be to lead to good results and the more businesslike will these results be. I therefore strongly urge every medical society, no matter how small, to send a delegate to it. It is absolutely essential that general practitioners should have the preponderating influence at this Conference, and this can only be obtained by the small societies sending delegates.

The Medical Guild as a body is not committed to either one course of action or the other. A scheme for the organisation of a new body somewhat on the lines of the National Union of Teachers will undoubtedly be submitted to the Conference. It is also very important that those who think we should reorganise the British Medical Association should produce a definite scheme for doing so.

Both schemes would then be before the Conference; both could be discussed, and that which obtained the support of the largest number of delegates would be adopted by it, and steps would be taken forthwith to accomplish its decisions. If a new organisation were decided upon—and I don't think the Council of the British Medical Association would very much regret it, for these ethical and political questions seem to be quite a *bête noire* to it—it would, I believe, start with a membership of not fewer than 3,000. Organised on the lines of the National Union of Teachers, it would, by means of its small local branches, provide a machinery by which men could discuss these questions without leaving home for a single day, while their delegates at the Annual Conference would give practical effect to the results of their deliberations.

I believe that men would then begin to take an interest in those matters, and that consequently there would ensue a steady growth in numbers and power. The National Union of Teachers started in 1870 with a membership of 400, and to-day it numbers 40,000, and personally I can see no reason why a similarly-organised Union of Practitioners of Medicine should not produce equally good results.—I am, etc.,

S. CRAWSHAW, M.B.,
Honorary Secretary of the Conference Committee of the Medical Guild.

Ashton-under-Lyne, Oct. 29th.

SIR,—Many of your correspondents writing on the above subject seem to labour under a misapprehension as to the object of Dr. Crawshaw's proposal contained in his circular. It is inferred that the end sought to be achieved is the formation of a new society. As a member of the Conference Committee of the Manchester Medical Guild which considered the proposal and drafted the circular, I may say that the creation of a separate organisation of practitioners was not contemplated by that Committee. The members recognised the fact that throughout the country there are many separate societies seeking to advance the ethical and material interests of the general practitioner. These societies are isolated and local; their action must necessarily be isolated and local. It was felt that if these different solitary forces could be collected into one combined force, that if the personal expressions of opinion on such matters could be focussed into

one general opinion, then it was hoped an advance in the direction of general reform might be made. It was thought that a conference of delegates from the present existing societies who now idly beat the air, would afford the latter "that place," as Archimedes said, "whereon to stand, and I will move the world."

Thus all that the Committee is working for is a Conference. Whether that Conference will have such confidence in itself as to start a new organisation, or whether it will seek to ally itself with the powerful British Medical Association, is a matter for consideration by the Conference.

But, in my opinion, all practitioners anxious for the betterment of the profession, whether friends or foes to the formation of a new society, can find common ground in working for the promotion of a conference such as the Committee desires. —I am, etc.,

Queen's Park, Manchester, Oct. 30th. ALEX. FRASER.

THE COVENTRY DISPENSARY.

SIR,—As the proposer of a resolution at the Portsmouth meeting of the British Medical Association calling on the members of the staff of the Coventry Provident Dispensary to explain why they continued to act for that institution after its condemnation at the Edinburgh meeting, I should like to make a few remarks in reply to their statement made to the meeting of the Hospital Reform Association. They state that no canvassing had ever existed. Now the report of the Ethical Committee of the Birmingham and Midland Counties Branch states (paragraph 6):

> That the dispensary touts for members. Active canvassing used to exist, but since the dispensary has absorbed half the population of Coventry it is no longer required, but anyone can join, even when ill (according to the rules), if he or she can procure two healthy persons above the age of 12 years to enter at the same time, and pay one year's subscription in advance.

Surely this is canvassing, a direct inducement being offered to do so. It is admitted by the staff that there is no wage limit. How can they exclude—as they claim to do—unsuitable persons? An admission book is submitted to the staff; but of what possible benefit can that be in the face of a resolution passed at the annual meeting of the dispensary in 1893, namely, that the pecuniary circumstances of an applicant should be no bar to membership?

Then, again, with regard to sweating—a cardinal sin of such associations which the staff appear to deny exists—it would be interesting to know what becomes of the honorary fund, so called. The report of the annual meeting of the dispensary held on April 26th, 1898, showed that the receipts were £3,177 0s. 7d., and the expenditure was made up of the following items: Paid to medical staff, £1,872 9s. 8d.; honorary fund, £1,274 13s. 2d., the average rate of payment of the staff being from 13d. to 16d. per head. Surely the staff should receive all the receipts, less necessary expenditure, which could not amount to so large a sum as £1,274 odd.

It cannot be said that the staff are helping to maintain the honour of the profession by bolstering up such a state of things. By resigning their appointments and joining hands with the Public Medical Service they could do a great deal to change the present state of things, and professional opinion ought to prevent their appointments being taken by others. No doubt it would simplify matters very much if the General Medical Council would declare the holding of such appointments infamous in a professional sense, as then the present holders of the appointments need not be afraid of resigning, as none would dare take the appointments. The committee would then be compelled to grant the necessary reforms. Failing that, it seems to be almost a logical corollary for the members of the British Medical Association to pass a resolution to ask the dispensary staff—that is, such as are members of the British Medical Association—to resign their membership of the Association. This would be a very unpleasant thing to do, but I fail to see what other course can be pursued. —I am, etc.,

Plymouth, Oct. 24th. G. JACKSON.

ALCOHOLISM IN ITS RELATION TO HEREDITY.

SIR,—Dr. F. C. Coley is apparently unaware that Dr. Archdall's Reid's views on the alcohol question are not the wild dreams of a light-headed theorist, but are founded on the neo-Darwinian doctrine that acquired characters are not transmissible.

The capacity for enjoying alcohol is of the nature of an instinct—that is, it is called into activity, not created, by stimulation from without. Instincts are transmissible; hence the capacity for delighting in alcohol may be handed on from father to son; but alcohol is a poison; hence by natural selection those survive who have the least desire for alcohol, and evolution against it takes place. If Dr. Coley believes that the alcohol diathesis is only a trait acquired in the lifetime of the individual, and that this trait is transmissible, it is incumbent on him to prove that the drunkard's son is more drunken than his father, the grandson more drunken still, and so on. It is also necessary for him to offer some scientifically rational explanation of the fact that individuals and races differ in their degree of craving for alcohol.

One of Dr. Coley's statements is that alcohol is not a cause of elimination, because men do not fall victims to it until they have had time to procreate. Can it be necessary to remind him that alcoholism leads to dirt, destitution, poverty, crime, and a hundred other causes of elimination which threaten and frequently overwhelm those who are born of alcoholic parents, if they are not eliminated by the direct result of disease set up by excessive indulgence, due to the inherited inborn trait?

From a careful perusal of Dr. Coley's letter one is driven to the conclusion that his mind is not clear as to the difference between modifications and variations, otherwise the greater part of it could not have been written. Dr. Reid has never denied that the germ cells in an alcoholic person may possibly be injured by alcohol; but he denies, as I take it, that they are so injured as to lead to their proliferation, after conjugation, into beings "in whom the craving for drink is greater than would otherwise have been the case."

The conclusion at which Dr. Reid has arrived—that the only hope for universal temperance (other than by way of natural selection) is by way of artificial selection—cannot be understood, nay appears false, without a consideration not only of the difference between modifications and variations, but also of the law of retrogression. Dr. Reid's papers at the Southsea meeting were calculated to arouse professional interest. But those who are interested in the great subject of heredity will find in his *Present Evolution of Man* a scientific extension of neo-Darwinism set out with a logical precision which I feel sure Dr. Coley will appreciate. They will find light thrown not only on the subject of alcoholism, but also on many phenomena which have hitherto puzzled thoughtful members of the profession, and led them to make use of such meaningless phrases as "instability of nervous system."

The fact that the Society for the Study of Inebriety has appointed a special committee to investigate the subject—a committee which includes Professor Sims Woodhead, Mr. Victor Horsley, and Dr. Harry Campbell—will prove to Dr. Coley that in some quarters Dr. Reid is "taken seriously."—I am, etc.,

Forest Hill, S.E., Oct. 30th. H. LAING GORDON.

THE TRANSMISSION OF ACQUIRED CHARACTERS.

SIR,—Dr. Archdall Reid deplores with regard to heredity that the subject is neglected by medical men. Is not the doctrine that Dr. Reid lays so much emphasis upon the very cause of this neglect, in producing a fatalistic attitude of mind?

He follows what I venture to call the fatalistic school of Weismann in teaching that acquired modifications or variations are non-hereditable, and that only natural variations are inherited, that natural variations are those that are not due to the effects of environment; but as to where they come from or how they are produced we are left in the dark.

The medical profession is told that selection, that is, the non-propagation of the unfit, is the only solution of the question of heredity. Is it to be wondered at that little practical attention is devoted to castration, incarceration, or extermination as means of preventing the transmission of characteristics that may be considered undesirable?

I write merely to suggest one possible reason why the medical profession is rendered more or less callous to the

subject of heredity, but I also take the opportunity of asking a fundamental question.

From time immemorial was taught the doctrine of separate creations. Science in this century has taught the doctrine of evolution from a single creation, the principal exponent having been Darwin. Lord Kelvin and others have suggested that life originally came to this planet upon a meteorite in the form of protoplasm. Haeckel and others have conceived that the simplest form of the primordial organism was a single cell endowed with elementary vitality, the power of nutrition and reproduction in the most rudimentary condition.

There is a wide gulf between expecting the offspring to be born with all the characteristics of the parents at maturity, and expecting the offspring to receive none of the impressions acquired by progenitors; but would Dr. Archdall Reid kindly enlighten us as to whence and how came all those innumerable modifications or variations which distinguish man from the original primordial cell from which evolution has developed him without the influences of environment through eons of ages?

I am ready to learn, and when this question is answered we shall get along a little faster, and may hope to see again arise an expectant school more in consonance with the very slow but very certain *vis medicatrix naturæ* so long recognised in medicine.—I am, etc.,

October 30th. JOHN F. J. SYKES.

THE SECTION OF OBSTETRICS AND GYNÆCOLOGY AT PORTSMOUTH.

SIR,—The discussion on Fever following Delivery, opened by Dr. H. R. Spencer, further supports the known facts upon the pathology and etiology. As, however, prophylactic measures cannot in every respect be always ensured, in view of the wide range of etiology, so-called puerperal fever will inevitably continue to occur, and hitherto can only be treated upon a rational consideration of each respective case.

Though much was hoped to be obtained from the serum treatment, the discussion shows that its employment has not been attended with much success. Dr. Spencer states that the Committee of the American Gynecological Society showed that the mortality was 33 per cent. after its use in cases in which streptococci were positively demonstrated. He also mentioned that, of 60 cases of septic pyæmia observed in the Berlin Women's Clinic, 32 died, 19 were cured, and in 9 the result was unknown. These are terrible records. Moreover, it is stated that the treatment is not free from danger, death having apparently been caused by it. The evidence thus derived from this discussion is instructive and should become generally known to the profession.

Dr. Madden, in his paper upon the Treatment of Uterine Cancer, points out the measures which may be adopted to afford relief in inoperable advanced cases of the disease, which unfortunately are so frequently seen for the first time by the medical adviser. As an instance of this I may quote the case of a stout, apparently healthy married woman, who applied recently at the out-patient department of the women's hospital in this town, complaining only of incontinence of urine, which was found to be due to cancer, so advanced as to have destroyed a portion of the cervix and caused an opening into the bladder. Yet this women had only thought it necessary to seek advice when she realised the discomfiture from the dribbling of urine, having continued nuptial relation with her husband. In advanced cervical cancer, to relieve the fœtid discharge, hæmorrhage, and pain, also to prevent septic absorption, which materially aids in bringing about the fatal issue, I have found tannate of mercury with glycerine of great service applied daily by means of absorbent wool tampons through a large-sized toughened glass tube such as those of the late Dr. Aveling described in the BRITISH MEDICAL JOURNAL, April 26th, 1879. After curetting and removing any outgrowths, the application can generally be carried out by the patient or an intelligent friend. The solution is made by adding to the tannin and glycerine of the *British Pharmacopœia*, with or without dilution, mercury perchloride 1 to 500, and, if required, to further deodorise the discharge 2 per cent. of lysol. If there be much pain morphine may be added. On each removal of the tampon the vagina should be irrigated with a warm solution of mercury perchloride from 1 in 3,000 to 1 in 5,000. These solutions have the further advantage of being inodorous, and effectually destroying the peculiar sickly fœtor of uterine cancer. Life is thus prolonged and rendered endurable; indeed, the improvement which is manifested is remarkable; some patients have even stated that they believed they were cured. The tannin, irrespective of astringency, appears to have a special action on ulcerated cancerous surfaces in arresting the progress. Mercury has a powerful germicidal and alterative action so desirable in the treatment of these cases. I have not known salivation occur though continuously carried out, but formerly, when using the acid nitrate of mercury as an escharotic, slight ptyalism occurred twice.

The consequences of syphilis are indeed very far-reaching, and that it is an important factor in inducing many diseases in women hitherto unassociated, or only in some instances recently recognised, is ably shown in the paper by Dr. John A. Shaw-Mackenzie. In considering the possible remote association of cancer with syphilis, the following questions have an important bearing:

1. Why should cancer be more common in the white races and more frequent in proportion to civilisation?
2. Why more common in woman?
3. Why should it have a predilection for the genital organs, especially the uterus?
4. Why should the period of life influence the frequency of malignant disease, also the morbid character, and the structure attacked?

These are facts not to be ignored in etiology.—I am, etc.,

JOHN A. LYCETT, M.D., M.R.C.P.,
Senior Surgeon Wolverhampton and
District Hospital for Women.

October 16th.

POST-MORTEM EXAMINATIONS IN MEDICO-LEGAL CASES IN SCOTLAND.

SIR,—In the BRITISH MEDICAL JOURNAL of September 23rd appeared an article on *Post-mortem* Examinations in Medico-Legal Cases in Scotland. As I believe you are willing that different views should be placed before your readers, will you kindly permit me to offer some observations on the subject of the article? The article opens with a somewhat alarming statement, which if the situation were as serious as it is stated to be, would surely, long ere this, have called for attention on the part of those interested in criminal law reform. It runs as follows: "The procedure adopted in recent years by the Crown lawyers in Scotland with regard to the *post-mortem* examinations in judicial cases is most unsatisfactory." If by the word "recent" the writer means as far back as 1868, then I will not cavil at his term, but usually that word is employed to designate an event nearer the present time than the date I have given. What I desire to point out is, that for over thirty years—I believe close upon forty—the present practice has been in operation. Public opinion, or legal, has never been excited upon the subject in question; and it was not until the winter of 1893 that even medical opinion was somewhat stirred by the subject engaging the attention of the Faculty of Physicians and Surgeons of Glasgow, as your article fully narrates. Despite that discussion and the ventilation of the subject, both in Parliament and in the press, it does not appear that even yet any general desire for an alteration in the procedure has been created, or that the Scottish legal authorities having the conduct of criminal cases deem it advisable or expedient to change the practice. I took part in the discussions in the Faculty at the time, and I have not seen or heard any valid reason to change my views on the subject which I then expressed, and which I now desire to lay before your readers.

It appears to me that the movement having for its object to secure the presence of professional persons on behalf of an accused person at a necropsy which is being conducted by the Crown examiners began, and looks like to be continued, in an entire misconception of the duties and position of these officials. It would appear from the tenor of your article as if these officials, who by the way are appointed by the sheriff of the county, are *ipso facto* biassed witnesses for the Crown, or, in other words, are partisans for their employers, liable to bring prominently forward anything that may inculpate and repress what would exculpate. Throughout the previous discussion and, moreover, in your article it seems to be wholly forgotten or unknown that the examiners are independent

medical men, not appointed by or in any way under the control of the Procurator-Fiscal who conducts all criminal investigations, whose sole object it is to arrive at the truth irrespective of the Crown or the accused. To put it on the lowest possible plane, as they are in no way under the dictation of any legal official, there is no temptation for them to act otherwise. Starting from this point of view, it is not difficult to arrive at a reason why the Crown has been actuated in laying down for the guidance of the medico legal examiners certain definite regulations anent the exclusion of others than those named in the warrant for the inspection of a body. Moreover, "accidents" have been known to happen where interested persons have been present at *post-mortem* examinations. One has only to cite the conduct of Palmer in the famous Rugeley case. But, in addition, I submit there are other obvious reasons why, in the interests of justice, interested persons representing a side should be excluded during the official investigation. Let it be assumed for the sake of argument that the Crown conceded the demand that is made in your article, and that experts for the accused were permitted to be present. What would be the likely results reasonably stated? It is asking more of human, or even of medical human, nature than could successfully bear the stress to expect that experts for the accused could enter upon their task without unconsciously, if you will, assuming a biassed or partisan position in favour of the accused. Facts ascertained at the necropsy, and inferences therefrom, would tend to be tinctured of the same colour, and it would become difficult, if not indeed at times impossible, for the two sets of examiners to proceed dispassionately with the examination, or upon occasions to agree even as to facts. Assuming the latter contingency, since these facts are to be laid before a judge who knows little about surgery, and a jury that knows less, who can decide regarding their presence or absence? This sometimes happens in civil causes, and the deplorable differences in medical evidence in these has given rise to the suggestion that in the trial of such cases a medical assessor should be appointed to assist in arriving at a judgment, as, for example, in Admiralty and shipping cases. Contemplate this contingency in a criminal trial. I frankly admit that, in the above circumstances, it would be impossible for the Crown examiners to avoid sharing in similar bias or partisanship, arising out of nothing else than the average "cussedness" of mankind. Scenes in court, therefore, during the giving of testimony can be better imagined than described. I believe that justice would less likely be secured under the conditions asked for than under the present, in which having no interest to serve than that of truth the Crown examiners can calmly proceed with their investigation and with the preparation of their report.

Your article proceeds to state that:

> The report of the inspectors instructed by the Crown is the only evidence of the *post-mortem* examination that is, or can be, permitted at the trial. At every other point the agent of the accused has been enabled beforehand to test and examine the evidence relied on by the Crown against his client, and to prepare his defence, but in respect of the medical evidence he can do nothing but accept whatever the Crown may bring forward. Unless there be some omission or blunder in the medical report, very little can as a rule be extracted from it for the benefit of the defence. No other observations nor alternative opinions can be obtained. The prisoner's counsel can never hope to break down this evidence, nor can he even effectually cross-examine upon it. It is obvious that this arrangement of medical testimony puts an enormous power in the hands of the prosecution, and, unless a case breaks down in some other respect, must make strongly for the conviction of an accused person.

Now I would submit that the "whole truth and nothing but the truth" is not comprehended in the preceding sentences. In the first place, regarding the *post-mortem* examination, it would be more correct to say that while the report of it usually forms the sole medical evidence, it is by no means confined to the four walls of the report. The second paragraph of the quotation unmistakably leads the reader to believe that the medical reporters are hedged about in some way different from the other witnesses in the case. This is not so; as a matter of fact, the medical reporters may be precognosced by counsel for the defence just as are other witnesses, and their clear legal duty, if duly precognosced, is to put the defence in precisely the same position respecting what they are prepared to say as the Crown: in like manner the Crown may, if it think fit, precognosce witnesses for the defence. Respecting the medico-legal report itself, I pray your readers to take especial note of what follows. After the facts ascertained from the external and internal inspection of the body have been duly recorded in the report, the reporters proceed to give their opinion of the cause of death, adducing the reasons for the opinion so formed. In the official document embracing suggestions for the medico-legal examination of dead bodies which the Crown issues to those appointed to this duty, it is stated:

> The inspectors must deliver to the law authorities, and within two days where no further examination is required, *a distinct report containing their opinion on the case, with the reasons succinctly but clearly stated. They must understand that they cannot found their opinion on any facts represented to have been ascertained by themselves during the inspection which are not specified in their notes.*

(The italics are mine.) From the foregoing it will be apparent, therefore, that counsel for the defence may have all the material before him equally with the advocate-depute who conducts the prosecution, whereby he can test the value of the opinion arrived at by the examiners from the facts of the necropsy, and the logical sequence of that opinion from the reasons which are given, since all these would be provided him in the precognitions of the examiners. I am quite alive to the fact that, unless coached by a medico-legal expert, counsel for the defence may not be able to initiate at the trial a pertinent rebutting case; but assuming that he has availed himself of his right to precognosce the examiners—which no careful counsel would neglect to do—he will have abundance of time to submit, if he think proper, those precognitions to other medical men for critical scrutiny and suggestions. In this way other observations or alternative opinions may be obtained. Neither is it right to say that "prisoner's counsel can never hope to break down" the evidence of the Crown examiners, nor that he cannot "effectually cross-examine upon it," as has already been shown. From my own experience I am able to point to cases where prisoner's counsel upon the facts, opinions, and reasons of the Crown examiners contained in their reports, have been able to break down the inculpatory case, and that even in the major charge of murder. I venture to submit that the reason why in the bulk of cases the evidence of the Crown reporters is unassailed, is the justness and truth of their conclusions. As a matter of experience the weakest part of a medical report which is capable of being successfully attacked is usually the opinion derived from the facts and the reasons offered for the opinion. This is the part to which a medico-legal critic would first look for evidence of weakness or irrelevancy. But it ought to be borne in mind that in the bulk of cases the conditions found upon the dead body are such that a careful investigator can readily discover, and concerning which there can be no reasonable difference of opinion; hence it is difficult to conceive a well-founded reason for the demand contained in your article. I fear that it has been taken too much for granted that the opinion of the examiners in the average case falls to be formulated from pathological conditions more or less obscure, instead of lesions which are only too well-marked and definite. Moreover, the law of England does not differ much in the above respect from the law of Scotland. The former, indeed, offers less protection to the accused than the latter. The facts revealed in a necropsy performed on a coroner's warrant may afterwards figure in a capital charge against a prisoner, since it is quite competent for a coroner, under 6 and 7 Will. IV, cap. 89, s. 1, to name one medical examiner only in the warrant, whereas in Scotland, where inculpation of a person is to be founded upon medical evidence derived from the inspection of a body, such inspection must be made by two medical inspectors, and the report signed by them both.—I am, etc.,

JOHN GLAISTER,
Regius Professor of Forensic Medicine; Medico-Legal Examiner in Crown Cases in Glasgow.
University of Glasgow.

THE CLEANSING OF SURGEONS' HANDS.

SIR,—On reading Mr. Thomas's note on A Reliable Washing Tap for Operation Rooms in the BRITISH MEDICAL JOURNAL of October 21st I was struck with the view expressed in the sentence "The most popular practice of washing hands is that of doing so in hand basins...it is not in accordance with the elementary principles of removing surgical dirt...because

after the first swill of the hands in the water the remainder of the hand washing is done in septic or dirty water until the basin is sterilised and refilled with clean water."

We can easily sterilise and refill the basin by having three basins and passing from one to the other; and here it is not the water and basins, but the soap and brushes, or loofah or compresses, with which the dirt is rubbed off, which are the important factors, and must be changed at each stage. If they are not changed, washing in a sterilised Niagara will not avail.

Surgeons often use lysol or other antiseptics in the earlier washings, and rinse off in pure water before beginning the operation. Supposing any dirt, with germs, to be washed or rubbed off the hands, the germs are killed by the antiseptic agent with more certainty than those remaining in the epidermis of the hands are killed by any known process.

Professor Mikulicz, of Breslau, the pioneer of veils and gloves, and gauze drainage, has just published his method of disinfection of the hands and skin, and water has no part in it at all. He uses a solution of soap in spirit. A towel or piece of lint is dipped in the solution, and used to rub off all visible (gross) dirt, the nails are cleaned, then the hands or skin are brushed with sterilised brushes in the soap spirit solution for five minutes.

Kelly has his basins on pivots for the purpose of being able to remove and sterilise them; we have ordinary hand basins on wooden tables, and, in addition to sterilising them, we have the practical rule that whenever a hand basin is broken in the hospital the new one goes into the single wards and the broken one is replaced from the single ward.

I must uphold the claims of the ordinary entire washing basins for washing the hands before surgical operation, and object to washing in a running stream of water as imperfect, because the continuous soaking and softening of the hands is wanting, and consequently less epidermis is scrubbed away.—I am, etc.,

FRED. EDGE,
October 21st. Surgeon to the Women's Hospital, Birmingham.

PHYSICAL TESTS FOR THE PUBLIC SERVICES.

SIR,—I feel gratified that my letter has elicited from Dr. Sykes so important an expression of opinion on the subject of the physical and educational tests for the public services. As, however, Dr. Sykes's letter seems to call for some reply, I beg the favour of your again according me a short space. I would first explain that I have discussed this question purely as a member of the British Medical Association, and that I never had the honour of being connected with the Administrative Medical Department of the navy or army beyond serving for some years on the Central Medical Boards at the Horse Guards and India House. It is not for me to take up cudgels on behalf of the medical authorities or Medical Boards, and I never expressed or heard of any claim to "infallibility" on their part, and I hardly think that they are likely to feel disturbed by the tirade against them contained in Dr. Sykes's letter. I quite admit that the resolution before the Ophthalmological Section at Portsmouth, advising that the medical examination should be held after the educational, was not passed, and consequently has no force; but though it was not put to the vote, the majority of those present were in favour of it, which shows that men well qualified to form an opinion take exactly opposite views as to how the alleged evil is to be remedied. In criticising my letter, Dr. Sykes mainly finds fault with the present system of competitive examination, with which my letter was not concerned, but referred solely to the physical or medical examinations, and the periods when these should be held. On the wide question of the defects in the present system of competition, in which physical tests have no place, there are few of us who will not agree with Dr. Sykes that there is room for improvement. But while fully recognising that officers in the navy and army require high physical as well as mental qualities, the great difficulty of the problem now presents itself—that of fairly combining physical and intellectual tests in any system of open competition; and although, to quote Dr. Sykes, "the physical fitness of an officer to fight is of more importance than book cram," it is equally true that because a lad is an athlete it does at all follow that in after-years he will be better than the one who as a boy had not given much time to athletics, and that in the essential qualities of health, energy, and endurance, little men, who would be nowhere in any physical competition, are just as good as big men, and to handicap either class by competitive tests would be opposed to common sense. One might easily instance some of our most distinguished warriors and commanders, and it goes without saying that a general does not plan a campaign or win a battle with his "biceps" This problem has never yet received a satisfactory solution. To take one simple illustration. If, as has so often been recommended, riding received marks in the competition, the lad brought up in the country and accustomed to horses would be likely to get full marks, while a town lad, or one whose parents had not been able to afford horses, would likely get a duck's egg. Yet after a very short time he is likely to become just as good and plucky a rider as the other. It is well known in India that many of the best riders have virtually learned to ride out there, and to handicap such men because they had not the opportunity as boys would be manifestly unfair, and not in the interests of either the public or of the services. The same difficulties apply to every other form of physical competition. All discoverable physical defects are, of course, guarded against by the medical examinations.

Dr. Sykes is mistaken in supposing that height is not taken into account in the physical measurements. By the regulations, those above a certain height must have a higher minimum weight and chest girth than those who are below.

Most people will agree with Dr. Sykes in denouncing the bad effects of the present competitive examinations, but a satisfactory remedy has never yet been shown. I have two sons in the army and one in the navy, and I know about the anxiety caused to parents in preparing their sons for these examinations.

The principle of open competition has been settled by public opinion. If, then, there are, say, ten competitors for one prize or vacancy, if the subjects of examination are made easy so that several of the candidates can get full marks, which is to receive the prize? If the papers are made more difficult there will of necessity spring up a class of special tutors or "crammers" or special schools to prepare for these examinations, and parents will send their sons where they think they will be best worked up.

The teachers must, for their own credit, work up their pupils at high pressure, and hence the evil results we deplore, but for which an adequate remedy has not yet been devised. No comparison holds between the subjects set at the previous examination of our universities and the competitive examination for the services. The former is simply for the purpose of excluding a man who does not show sufficient previous knowledge to fit him to commence study at the University. The other is to select and give the prize to the best competitor and to reject the remainder. The result of this must be that the candidates are worked up to the utmost extent of their endurance.

I offer no opinion as to whether the subjects of these examinations are well or ill chosen, but, as far as I can understand, it makes little difference whether they are a little harder or a little easier, high-pressure work must inevitably attend competition.

With reference to the time for holding the medical examinations, as far as the interests or welfare of the candidates are concerned, it is probably quite immaterial whether they are examined immediately before or immediately after the competitive. Either method may be equally right, and in reality it is a matter of little importance. The question of holding the medical examination months or years before the competitive, as advocated by Dr. Sykes, is a much more formidable one. The object of this examination is to ensure that the candidate is fit at the time of entrance into the service. We know that many forms of disability might appear between the ages of, say, 16 to 19—for instance, injury, rupture, tubercle, heart disease, progressive myopia, and so on; so that his being fit at one time would in no way guarantee his fitness a few years, or even a few months, later. He must of necessity, therefore, be again medically examined about the time of entrance, and if one were now rejected who had at a previous examination been pronounced fit, what a flood of grievances this would give rise to!

At the time of commencing their special studies by far the

majority of youths are fit, according to the required standard; a certain number are obviously unfit. Any medical man can by careful examination say that a boy promises to be fit, or that he is unfit. There will be a small percentage of doubtful cases. In nearly all these the parents are aware beforehand of the chance of failure, and have to decide for themselves whether the boy should take up his special studies or not. No official Medical Board or examiners could give any more decisive or binding opinion than that given by the private medical man, whose opinion is, in fact, almost invariably asked. The final decision must be made about the time of joining the service, otherwise officers might be admitted who were unfit, but for Government, in addition, to arrange for the medical and physical examination of a large proportion of the educating youths of the country, is not within the range of practicability, and yet there is the necessary corollary of the recommendation of Dr. Sykes, that a preliminary physical examination should be held before the youth begins his special studies. After all, it is the open competition that rejects some 90 per cent. of the boys that go up for the services, and this after they have gone through all the labour and expense of special preparation. Very few indeed are rejected on medical grounds.

I will briefly touch upon one or two of the points of my letter criticised by Dr. Sykes, as I am unable to admit his correctness. First as to the acceptance of certificates of civil practitioners in the case of officers of the militia, volunteers, and not in the case of the regulars. It is quite obvious that the officers of the two former services are on a totally different footing than those of the line. They are engaged for home service only and are on military duty for a few weeks only in the year and are civilians for the remainder. If under exceptional circumstances they go on foreign service they have to pass the same medical examination as officers of the line. The two classes of officers are entertained under totally different conditions, and it is not difficult to understand that different rules should be in force as to their medical examinations.

Dr. Sykes must have misread my letter when he says that I claimed for the medical departments and medical boards a monopoly of the special knowledge required for giving a sound opinion on such matters. I did nothing of the kind, but I expressed the opinion which I think can hardly be denied that these departments and the members of the medical boards, all of whom have had personal experience of all kinds of foreign service, who have had constant experience in examining recruits or candidates for commissions, who again see these same men when sick or when sent home as invalids, it can hardly be denied that these medical officers have the requisite data and have the special knowledge for forming a sound opinion on such subjects more than can generally be acquired by medical men in the ordinary practice of their profession. They are, in fact, specialists who have no claim to monopoly of knowledge, but for whom I may rightly claim special knowledge and experience.

I quite agree with Dr. Sykes in believing "that no large proportion of invaliding results between those ages—15 or 16 to 19 or 20—in those preparing for the army," or in those admitted as cadets into the navy, and I think that he is quite in error when, in a later paragraph of his letter, he makes the exactly contradictory statement to the effect that their constitutions are ruined and they are unfitted for their professions as a result of the mental over-pressure extending through this educational period.

With regard to the general health and physique of the officers of the army, and as a rule of the cadets of Woolwich and Sandhurst, I am sure that Dr. Sykes is mistaken in putting them down at a low standard; they are in every way equal to, if not better than, any set of men you can find anywhere, and they are presumably, because they were successful, the ones who went through the greatest amount of cram and bookwork in preparing for the competition. On one occasion only, I believe, the Commander-in-Chief found some deficiency in the cadets, an exception that only strengthens the rule showing how carefully their condition is observed. Those, again, who join the Indian Staff Corps are as a rule both in mental and physical qualities as fine a set of fellows as can be met with. They have all passed through the ordeal of competition, and of late years have nearly all taken high places. I am quite sure that Dr. Sykes is utterly mistaken in saying that young officers in India die off like rotten sheep from enteric fever because they are weakly or of poor physique. Such a statement is contrary to all experience in India, when it is well known that the strong healthy men, whether officers, soldiers, or any other class of Europeans, are just as liable to enteric, that present scourge of India, as are the weak and sickly; and, indeed, it often seems that the disease is more fatal among the strong and vigorous than among the delicate ones.

On this matter of the health of the candidate for the service I am confident that we may comfort ourselves with the assurance that whatever may be the defects of the present system of competition, no boy or youth of average health and stamina is ever likely to suffer any permanent injury to health, or even to be temporarily affected to any serious extent, by the hard work of preparing for these examinations. It may weed out some of those who are weak and sickly, and anyone whose health or whose system is so unstable that it will not stand this amount of work would be sure to break down under the intense strain, mental and bodily, often necessitated by active service, and such are not fitted for our naval and military services.—I am, etc.,

Weybridge, Oct. 28th. HENRY CAYLEY.

THE PREVENTION OF VENEREAL DISEASE.

SIR,—There were two able letters about the above subject in the BRITISH MEDICAL JOURNAL of September 23rd and 30th which I should like to discuss. The writer of the former letter, signing himself "Malgré Malthus," alleges what I think is quite clear, that the only radical way to prevent the dissemination of venereal diseases would be to promote almost universal early marriage. M. Lejeune, President of the Brussels Congress (September 4th to 8th) well summed up this idea when he remarked to me, "Hors du marriage d'amour, point de salut"; which I venture to paraphrase thus: "Outside unions of affection between the sexes, there is no safety against such contagions."

Our Indian Army experience teaches us that lesson powerfully; for, whilst our most unfortunate celibate troops are so severely attacked by these contagions, the native troops, whose religion enjoins early marriage on all men, escape almost entirely, thus showing that the true way to banish syphilis, gonorrhœa, and soft sore consists in unions between the sexes in early youth. So far, so good.

But then your second able correspondent points out that it is out of the question to suppose that we as a nation could afford to send abroad regiments of married soldiers, since they, with their wives and hosts of children, would require far too much barrack-room, conveyances, and—in short—expensive outfits of all kinds. Hygienists of a humane kind, however, may insist that, if we are to try to conquer and rule the vast territories of Europe, Asia, Africa, America, and Australia, which we possess, we have no right to do so at the expense of the health of our unfortunate soldiers. The end of hygiene and morality is human happiness, not the happiness of a few at the cost of the masses. And our forerunners, the ancient Romans, used to do better than we! for they sent forth colonies of soldiers with their wives and families to settle in healthy localities; whilst our poor young soldiers are a kind of "globe tramps," obliged to remain celibate for seven years, and then to return crippled by syphilis or stricture to their native land. Or they are offered the dangerous relief of licensed prostitution by some ignorant people, who do not know, what some of us know, how greatly the spread of syphilis, gonorrhœa, and soft sore has been increased in France by the use of these so called "regulations" of prostitution.

The only legal plan for attacking the spread of these diseases would be by punishing any individual who, knowing himself or herself to be infected with such diseases, communicates it to his or her neighbour. Such a law is about to be enacted in Norway, and in that country they have already made the notification of all cases of syphilis obligatory on all practitioners, the patient's name being left out. This is a most useful step towards a more perfect law.

I may assure my readers that Dr. Fournier, Dr. Mireure, and Dr. C. Mauriac of Paris, are unanimous in stating that

syphilis is on the increase in Paris; and, as I stated at the Congress, there is no doubt that London is not nearly so infested with venereal contagions as Paris. Mr. Jonathan Hutchinson stated that syphilis in adults, and especially in infants, had decreased greatly in this country during the last thirteen years.—I am, etc.,

CHARLES R. DRYSDALE, M.D.,
Formerly Physician to the Rescue Society of London.

London, October 11th.

NORTH INDIA SCHOOL OF MEDICINE FOR NATIVE AND EURASIAN CHRISTIAN WOMEN.

SIR,—Referring to Dr. Havelock Charles's article on the teaching of anatomy in India, will you allow me to give another instance of not only the loss of repugnance on the part of Hindus, but also of the increasing interest they take in all things medical, including the study of anatomy?

In 1894 a medical school for native and Eurasian women was opened in Ludhiana, a large native city in Punjab, with a population of 45,000. The scheme was originated by an English lady medical missionary, Dr. Edith Brown, who is now principal of the school. During the first year there were sixteen students; last year there were twenty-six. At the ceremony of laying the foundation stone of a new wing to the hospital, where the students receive their clinical instruction, a number of the most influential Hindus and Mohammedans of Ludhiana presented themselves, showing their interest and sympathy in the native women's medical school.

The dissecting room is an isolated building, and, though small, the abundance of material at command, and the proximity of the civil hospital *post-mortem* room, saved any inconvenience. During the winter session of 1896, when I acted as temporary lecturer on anatomy in Ludhiana, the method of teaching was as follows: The civil surgeon informed us when the police had brought an unclaimed dead body to the hospital. The students were then taken over to the *post-mortem* room where the body lay, and there they were taught surface-marking. The body, or such parts of it as we required, was then injected in the same way as we do at home, and removed to the dissecting room. The students were interested in their work, and manifested an average amount of ability. Their comparatively small number allowed of their receiving individual attention at practical work. Nor were they studying for the first time, for native students who take the full medical course in English have had a thorough preliminary English education, and have passed a recognised medical preliminary examination. At the commencement of its career the Ludhiana medical school had not Government recognition, but last year the Lieutenant-Governor, after receiving a report on the school and adjoining hospital from the Inspector-General of Civil Hospitals for Punjab, conferred upon it the right of sending up its students for a Government diploma, the examination being given by the Lahore Medical College for Hospital Assistants.

There are several courses of study given at the school. The medical course is a four years' curriculum, and classes are given both in English and Urdu. A course for compounders extends over two years; a course for nurses and another for *dais*, or native midwives, both extend over two years. The *dais* are admitted to the Government examination in midwifery held at Lahore. Dr. Edith Brown, amongst her other arduous duties, has written an Urdu textbook for midwives.—I am, etc.,

GRACE HAXTON GIFFEN.

Edinburgh, Oct. 9th.

THE EYESIGHT OF PILOTS.

SIR,—My attention has just been drawn to the correspondence (September 30th, October 7th and 14th) on this subject; and I write to endorse the correctness of the general statement made by Deputy-Surgeon-General Cayley—namely, that "for the English pilot service no test was enforced."

It has long been a crying shame that the Board of Trade or other Governmental authority have not scheduled the position of pilot as one in which the proper testing both for form and colour should be compulsory. The fact that isolated associations, such as the Trinity Corporation and the Clyde Navigation, insist for the well-being of their Services on an entrance examination no more disproves Dr. Cayley's position than would the statement that the Cunard Company examined the eyesight and colour-sight of their look-out men disprove the fact that there is no official test for colour-blind look-outs, colour-blind apprentices, or colour-blind seamen (A.B.s).

I have many cases in my notebooks of both colour-blind and nautically-blind pilots, and the rejoinders of Drs. Godding and Dunlop but strengthen the gallant officer's argument. If these gentlemen would but impress upon the Government the real necessity, which they know exists, for the compulsory examination of every candidate who aspires to the office of pilot they would indeed be doing a valuable service.—I am, etc.,

THOMAS H. BICKERTON.

Liverpool, Nov. 1st.

THE POWERS OF THE COUNCIL.

SIR,—I notice in the report of the last meeting of the Council[1] the official statement that it had never ruled to the effect alleged in the resolution adopted by the annual general meeting on August 2nd, 1899, namely, "that the members of the Association have no right to discuss in general meeting the expenditure of the Association upon its JOURNAL," and upon which the general meeting expressed its strong disapproval of the action of the Council.

I raised the point of order on which Mr. Horsley moved the above-cited resolution. It was based on the rejection, by the President of Council, of my notice of motion, which proposed a reduction in the Editor's salary to call attention to omission from the JOURNAL of matters relating to medical reform. To this notice I received the following reply signed by the General Secretary: "I am directed to inform you that your notice of motion is out of order for the general meeting, as the remuneration of the Editor is entirely in the hands of the Council." What, may I ask, is this but a ruling "that the members of the Association have no right to discuss in general meeting the question of the expenditure of the Association upon its JOURNAL?"

In the light of the fact that 75 per cent. of the resolutions passed at the annual meeting at Portsmouth have been treated by the Council with contempt at its meeting last week and allowed to "lie on the table," it is to be hoped that members will take advantage of attending a meeting of the Association and join in the discussion of some direct issues which have arisen in our relations, as an Association, with the Council, an opportunity for which I have reason to believe will be afforded at an early date.—I am, etc.,

F. LORIMER HART.

Sydenham, Oct. 24th.

*** We have submitted the above letter to the President of the Council, who writes as follows:

SIR,—In reference to Dr. Lorimer Hart's letter on the subject of his proposed motion at the annual meeting on the reduction of the Editor's salary, I desire to state that Dr. Lorimer Hart is mistaken in assuming that he was ruled out of order by the Council for the reason that the members of the Association have no right to discuss in general meeting the expenditure of the Association on the JOURNAL. This has never been ruled either by the Council or the President of Council. The motion of Dr. Lorimer Hart was ruled out of order as the question of payment of the salary of the Editor is entirely in the hands of the Council in accordance with By-law 12 as follows:

"The Editor shall be elected by *the Council, and be remunerated in such manner as the Council shall think fit.*"—I am, etc.,

JOHN ROBERTS THOMSON,
President of the Council.

Bournemouth, Oct. 31st.

THE MALARIAL MOSQUITO.—According to a telegram in the *Times* of October 27th Dr. Grabham (Kingston, Jamaica) has discovered in the neighbourhood of Kingston a specimen of the malarial mosquito corresponding to the species determined by Major Ronald Ross. The importance of this discovery to Jamaica may be judged from the fact that of the patients admitted to Kingston Hospital last year one-third were suffering from malaria. Dr. Grabham, who is a son of Dr. Michael C. Grabham, (Madeira), has, we are informed, been engaged in scientific research in Jamaica for some time. Dr. Grabham is a graduate of Cambridge, where he had a brilliant career, taking a First in the Natural Science Tripos, with special distinction in zoology and botany.

[1] BRITISH MEDICAL JOURNAL, October 21st, p. 1132.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MEDICAL ARRANGEMENTS FOR SOUTH AFRICA.

THE following officers of the R.A.M.C. have been detailed for duty on the lines of communications: Colonel J. A. Clery in charge of No. 4 General Hospital from Aldershot; Major R. E. Kelly also to No. 4; Major C. J. Addison, Registrar and Secretary No. 2 General Hospital from Netley; Major R. J. MacCormack, Officer in Charge No. 1 Base Depôt Medical Stores established in Natal; and Major C. W. Brazier-Creagh, who will have charge of No. 1 Hospital Train.

No. 3 Stationary Hospital mobilising at Woolwich will leave Woolwich in charge of Honorary Lieutenant G. H. Painton, who will embark at Southampton in the *Kildonan Castle* with five other officers and forty N.C.O's. and men for Cape Town. The Union liner *German*, which left for the Cape on October 28th, took No. 2 Company R.A.M.C. with other troops.

The St. John Ambulance Association gives notice that it has undertaken the organisation of working parties and the collecting and forwarding of suitable articles of clothing and other gifts calculated to alleviate the sufferings of the sick and wounded in the South African war. These articles are intended for use in the hospitals in South Africa, and to form part of the equipment of a hospital train and a hospital ship which are being prepared by the Central British Red Cross Committee. Particulars as to the articles desired, packing, dates, etc., can be obtained on application to St. John Ambulance Association, St. John's Gate, Clerkenwell, London, E.C., the envelopes being marked in the top left-hand corner "South African War." An addressed envelope should be enclosed for reply.

The Russian Red Cross Society has decided to offer help in South Africa to both belligerents. The surgeons and nurses of this Society gained a great reputation in Abyssinia at the time of the Italian campaign against the Negus, and in Greece during the Græco-Turkish war.

An expedition of the German Red Cross Society, consisting of 3 surgeons, 13 sisters of charity, and 6 assistant nurses, with hospital plant for the Transvaal, sailed on October 25th from Hamburg to Delagoa Bay.

The total British losses at Glencoe, Elandslaagte, and Rietfontein, up to early on October 26th, are estimated as 18 officers killed and 55 wounded; and of the rank and file, 76 killed, 435 wounded, and 13 missing—a total of 597 officers and non-com.'s and men. The tabular statement is as follows:

Regiments.	Officers.		Non-commissioned Officers and Men.		
	Killed.	Wounded.	Killed.	Wounded.	Missing.
King's Royal Rifles ..	5	6	9	78	—
2nd Gordons	4	9	20	77	8
Royal Dublin Fusiliers...	2	3	3	47	—
Royal Irish Fusiliers ..	2	3	14	41	—
1st Gloucesters	1	1	7	52	3
1st Manchesters	—	3	11	26	—
1st Devons	—	4	1	34	—
Royal Artillery	—	6	1	12	—
Leicester Regiment ..	2	1	—	1	—
19th Hussars	—	1	1	2	—
18th Hussars	—	—	—	11	—
5th Lancers	—	—	—	3	1
Staff	1	3	—	—	—
Imperial Light Horse ..	1	9	8	35	1
Border Mounted Rifles..	—	—	2	10	—
Natal Carabineers ..	—	—	1	10	—
Natal Mounted Rifles ..	—	—	—	2	—
Natal Police	—	—	—	3	—
Ammunition Column ..	—	—	—	2	—
	18	55	76	435	13
Total	597				

At a meeting of American ladies resident in London, it was proposed to despatch immediately a suitable hospital ship, fully equipped with medical stores and provisions, to accommodate 200 patients for three months, with a staff of 4 doctors, 5 nurses, and 40 non-commissioned officers and orderlies.

The large Anchor liner, *City of Rome*, which recently arrived at Greenock from New York, has been chartered by H.M. Government for a hospital ship in South African waters. The *City of Rome*, which is a steel screw vessel of 8,000 tons, left Greenock on October 27th for Glasgow, where she will be fitted up at once for her new work.

The ambulance corps which is being sent out to the Transvaal by the Dutch Red Cross Society under the direction of Professor Korteweg of the Amsterdam University, sailed on board the steamer *Koenig* for South Africa on October 28th.

The services of the past and present members of the bearer company of the Welsh Border Volunteer Brigade, whose headquarters are at Shrewsbury, have been accepted by the War Office for duty in the garrison hospitals in England. Departmental pay according to rank will be given to those employed.

The Society of American Women in London, which includes the Duchess of Marlborough, the Countess of Essex, Lady Harcourt, Lady Randolph Churchill, Mrs. Joseph Chamberlain, and Mrs. Ronalds (honorary secretary), have undertaken to fit out the *Maine*, the ship which has been lent by the Atlantic Transport Company to serve as a hospital ship for South Africa. The *Maine*, which is a ship of 2,700 gross tonnage, is the sister ship to the *Missouri*, which was fitted out as a hospital ship during the Spanish-American war. The chief medical officer and the nursing superintendent will be appointed by the War Office, but it is intended that all the other members of the medical and nursing staff shall be Americans. Offers of contributions in kind have been received by the Society from various sources, among other from Messrs. Burroughs, Wellcome and Co., who have offered to supply the medical equipment free of cost.

ROENTGEN RAY APPARATUS FOR SOUTH AFRICA.

THE Roentgen rays were used during the Tirah operations and in the Soudan by the officers of the Royal Army Medical Corps for the localisation of bullets and fragments of projectiles in the tissues. In the Tirah expedition they were found useful on many occasions, while in the Soudan the various improvements which had been made in the apparatus, and greater experience in the interpretation of skiagraphs, and the images seen on the fluorescent screen rendered the method a still more valuable means of diagnosis and aid to treatment by operation or otherwise.

The sets of apparatus supplied for *x*-ray work in the field in South Africa may be pronounced to be complete and thoroughly up to date. Each set contains six focus tubes; a 10-inch field service induction coil, with condenser and commutator; two pairs of conducting cords and four ebonite pillars packed in teak cases; two lithanode portable batteries, with six cells of 30-ampère hours; one fluorescent screen with cryptoscope; a voltmeter; a stand for *x*-ray tubes; spare wires; a portable cross frame localiser of Mr. Mackenzie Davidson's pattern with stand and accessories; a stretcher with tube holder and plate holder; nine dozen Edwards's cathodal *x x x* plates of various sizes, material and apparatus for developing, printing paper and printing frames, and black and ruby fabric.

The War Office has provided ten such sets for use by the forces in South Africa; two sets are already in use in Natal, their allocation having been determined by the Principal Medical Officer in Natal. Two sets are at Cape Town, and six more on the way, or are about to be despatched. One set will be assigned for use in each general hospital. The distribution of the remaining sets will be determined by the Principal Medical Officer of the Army Corps, but it seems probable that one will be assigned to each Stationary Hospital. It therefore appears that the supply of ten sets sent out, or about to be despatched, is by no means in excess of the demand which is likely to be made; on the contrary, if the Roentgen

rays are to be used in the field hospitals in any systematic way, it would appear necessary that further sets should be sent out, for it will be noticed that the sets cannot be divided since each possesses only one induction coil. On the other hand, those who are most experienced in the use of the Roentgen rays are of opinion that they are not likely to be generally employed with advantage except in hospitals established completely out of the range of fire.

We understand that the Central British Red Cross Committee are arranging to supplement the provision made by the War Office by sending out further sets of Roentgen ray apparatus in charge of an expert.

THE TELEPHONE PROBE.

DR. W. S. HEDLEY (in charge of the Electrotherapeutic and Radiographic Departments of the London Hospital) writes: In these days of "wars and rumours of wars," it is not perhaps inopportune to call attention to the telephone probe, an instrument that I have found chiefly useful (in my work) to verify the localisation of foreign metallic bodies whose presence has been shown by radiography. But, whether with radiography or without it, the telephone probe is an excellent bullet detector. Its action depends on the difference of potential between two metals, and upon the delicacy with which the telephone will disclose a current so engendered. A thin sheet of pure silver is placed upon an indifferent part of the body, and attached by means of a wire having a telephone in circuit, to a silver probe or heavily-plated exploring needle. If the probe is inserted into the tissues the telephone is silent, because there is no difference of potential that the telephone will register; but immediately a metallic body other than silver is touched there is a fall of potential, a current is produced, and the telephone indicates the fact.

THE INDIAN MEDICAL SERVICE.

THE following extracts are from a considerable mass of correspondence, partly hopeful, but mostly desponding, on the Indian Medical Service. The statements are based on the authority of correspondents, made, no doubt, in absolute good faith; but we do not thereby guarantee them, or necessarily coincide in the inferences drawn. For India is a vast and various country, and the experience of one man may be directly contrary to that of another, and yet both be true. It is only by free discussion that statements can be sifted and broad correct conclusions drawn.

One correspondent writes: The once famous and respected service (of which he is a member), which in early days contributed perhaps more than any other to the foundation and building up of our Indian Empire, has been sinking for many years past, and is now entirely submerged. Its emoluments and prestige are gone.....The more pressing wrongs may be classified under the heads of (1) Pay and Allowances, (2) Position and Honours, (3) Leave, (4) Appointments.

1. PAY AND ALLOWANCES.

It is impossible for a European officer to live in India on less than the following rupees monthly:

	Bachelor.	Married.	
Rent and furniture hire	35	70	
Servants	60	130	
Nursing (*sic*)? living	150	200	
Stables	50	50	
Club	40	50	
Sub. to Pension Fund	10	40	
Total monthly	345	540	
Extras.			
Life insurance	—	100	Bachelors not insured as a rule.
Monthly saving for passage home after 3 years	35	120	Return first class, Rs. 1,200. Married man has to pay for wife, children, and nurse.
School fees	—	100	For each child.
Clothes	25	60	
Total	405	900	

These are the lowest possible figures and do not permit of entertaining, amusements, and short spells of leave—up to ten days at a time. To meet this expenditure the incomes are as follows:

	Monthly.	
Lieutenants on arrival	286	
,, in acting charge	386	Generally obtained in a few months.
,, with regiment or civil charge	450	Obtained at about 5 years' service.
Captain (5 to 12 years' service)	600	
Majors (12 to 20 years' service)	800	
Lieutenant-Colonels (over 20 to 30 years)	1,000	

So that a bachelor for the first five years can just manage to get along in a very quiet way (afterwards he is fairly well off); but a married man (and practically all are married) simply cannot live on his pay at any period of his service, and until he has put in twenty years, or frequently for much longer, is in a state of indebtedness. The fall in the value of the rupee, and the loss of allowances which latter compensated for the meagre salary and enabled men to exist, have deprived some families of even the necessities of life. These allowances were derived from extra charges, such as gaols, asylums, railways, etc., and from private practice. Special officers are now appointed to these institutions, which have been centralised, and native practitioners fill up other appointments, and monopolise all the practice.

2. POSITION AND HONOURS.

It is not to be wondered at that, reduced to a condition of poverty, the service does not attract the smiles of the powers that be. Wherever our duty leads us we find we are, quite unnecessarily, subordinated to the local authority, civil or military, however junior he may be. The multiplicity of masters is most exasperating, and, coupled with our rigid exclusion from all honours, such as seats on the Legislative Council (on which, or in the Secretarial, every other department of the State—Legal, Forest, Public Works, Educational, etc.—has representatives), places us in such an invidious and subordinate position, that if it were not for our military rank we should rapidly become socially extinct.

3. LEAVE.

The one solace of exile in this dreary land is the hope of leave, and no more bitter disappointment can be experienced than the inability to obtain this privilege when due.

The country is never free from war, famine, or pestilence, but while the soldier and civilian are hampered in their leave by only one of these contingencies, we are affected by all three, so that our leave may be said to be permanently stopped. The result is that there are men of over ten years' service without furlough, as it is impossible to get away except on sick leave.

We are thus deprived of the inestimable boon of three months' privilege leave on full pay after thirty-three months' service, a concession of the greatest value to men financially prevented from taking furlough.

4. APPOINTMENTS.

There are in every Presidency a few, very few, desirable appointments generally in connection with hospitals and medical schools in the large towns. They are the plums of the service, and are the equivalent of judgeships or commissionerships of civilians, and general commands of military officers.

Now these latter appointments are invariably made by seniority tempered by selection. Not so with us; the junior is held to be as eligible as the senior, and is frequently appointed, to the perpetual exclusion from the post of all men of longer service. The pretext is that the junior is often the best qualified. The same argument would hold for military commands or high civil posts. Where there are eligible seniors available, and there always are for every post, it is iniquitous to select juniors for them. In no other service is such a system of promotion tolerated.

The writer concludes as follows:

If the Indian Medical Service is to be raised from its present slough of despond and continue to attract European candidates, the following reforms will require to be introduced without delay:

1. Increase of pay as follows:

Lieutenants on arrival	400	monthly
,, in charge	450	,,
Captains (5 to 10 years' service)	600	,,
,, (over 10 years' service)	800	,,
Majors (12 to 15 years' service)	1,000	,,
,, (over 15 years' service)	1,200	,,
Lieutenant-Colonels	1,500	,,
,, (over 25 years' service)	1,700	,,
Colonels	2,000	,,

2. The present Surgeon-Generals with the various Governments should be created "Secretaries to Government Medical Department," and a retired Surgeon-General should be appointed to the India Council in London on a suitable salary. The rank and file should serve directly under the Surgeon-General, and not through intermediate chiefs. Medical officers themselves and the head of their department should be trusted to carry on their own work in a satisfactory manner in every particular. It is unnecessary and humiliating that a very senior civil surgeon should have to ask a young collector for leave if he wishes to absent himself for a few days. Every officer has to arrange for the satisfactory performance of his duties during even the shortest absence, and it is the Surgeon-General, and not the collector, that should be satisfied on this point.

3. Leave should not be stopped in case of war. Famine and epidemics should be arranged for by the employment of temporary officials.

4. All appointments should be made by seniority tempered by selection, and should be gazetted at once. The present system of keeping men in suspense for indefinite periods is another of the grievances of the service.

A correspondent, who roundly taxes us with neglecting the Indian while favouring the Royal Army Medical Service, says in response to our invitation that definite reforms should be formulated: "The service is, I am quite certain, unanimous on the question of an increase of pay all round." The present pay "is not commensurate with what is due to educated professional men." The popularity of the service is waning; in the "spring examination of 1889 there were 68 candidates for 10 vacancies; in the spring of 1899, 27 candidates for 23 vacancies." The comparative isolation of Indian medical officers from one another makes collective action and discussion very difficult.

Another correspondent declares the civil surgeoncies in India are no sinecures and of doubtful value. Private practice is reduced to a minimum through the competition of native graduates turned out by the Indian universities. The civil surgeon is under no fewer than six masters, inspectors, commissioners, and magistrates, and his life is not a happy one. Sick leave is almost the only leave open to him. Constant reductions in administrative appointments and in pay have been steadily lessening the attractiveness of the service.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—JOSEPH A. MOON, Staff Surgeon, to the *Arethusa*, November 14th; JAMES C. F. WHICHER, Staff Surgeon, to the *Monarch*, for the *Penelope*, October 25th; GEORGE F. WALES, Staff-Surgeon, to the *Melampus*, October 25th; LANCE-

LOT KILROY, Surgeon, to the *Boscawen*, for the *Minotaur*, November 14th; WILLIAM J. CODRINGTON, M.B., Surgeon, to the *St. George*, October 31st; WILLIAM H. POPE, Surgeon, to the *Juno*, October 31st; JOHN W. BIRD, Surgeon, to the *Minerva*, October 31st; ARTHUR W. B. LIVESAY, M.B., Surgeon, to the *Thunderer*, October 31st; EDWIN R. GRAZEBROOK, Surgeon, to the *Impregnable*, October 31st; JOHN S. LAMBERT, Fleet Surgeon, to the *Excellent*, October 28th; HENRY C. WHITESIDE, Surgeon, to the *Magpie* when commissioned, November 2nd.

ARMY MEDICAL STAFF.

SURGEON-GENERAL T. F. O'DWYER, M.D., remains as Principal Medical Officer under Lieutenant-General Kelly-Kenny, C.B., who has been appointed to command the troops during the absence of Sir Redvers Buller.

ROYAL ARMY MEDICAL CORPS.

MAJOR A. E. J. CROLY, who has been serving in India since July, 1897, is appointed Medical Officer to Lord Sandhurst, Governor of Bombay, *vice* Major H. Martin, M.B., R.A.M.C.

Quartermaster and Hon. Captain JOSEPH HUNT is placed on retired list, October 28th. He was appointed Lieutenant of Orderlies, July 2nd, 1877, and Quartermaster, July 1st, 1881, and was granted the honorary rank of Captain, July 2nd, 1888.

Sergeant-Major GEORGE A. SELLEX is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Hon. Captain Hunt, October 28th.

It has been ordered that when an officer of the R.A.M.C. is relieved by a civilian practitioner who assumes charge of the station hospital and troops, the detachment R.A.M.C. shall be attached for discipline to the troops at the station.

INDIAN MEDICAL SERVICE.

ON the transfer of Colonel SINCLAIR to be Surgeon-General with the Government of Madras, the posts held by him have been divided, Colonel C. Little, M.B., of the Madras Establishment, being appointed head of the Civil Medical Administration, the Government Department being placed under the Inspector-General. No officer has yet been appointed to the latter post.

THE VOLUNTEERS.

THE Volunteer Officers' Decoration has been awarded to Surgeon-Lieutenant-Colonel C. W. MACGILLIVRAY, M.D., the Queen's Rifle Volunteer Brigade, the Royal Scots (Lothian Regiment), and Surgeon-Captain G. T. BEATSON, M.D., the Glasgow Companies Volunteer Medical Staff Corps.

SURGEON ON THE STAFF OF THE GOVERNOR OF BOMBAY.

MAJOR A. E. CROLY, of the Royal Army Medical Corps, has been appointed Surgeon to His Excellency Lord Sandhurst, *vice* Martin, who has resigned, and will, it is stated, be employed in the Transvaal. Major Croly will probably be seconded. Lord Sandhurst's term of Governorship expires in March next.

ARMY NURSING SERVICE.

A CORRESPONDENT draws our attention to an article on the Army Nursing Service in the *Daily Telegraph* of September 23rd, from which he points out any unsophisticated outsider might conclude there was no such body as an Army Medical Corps, at all events as far as officers are concerned, but that military hospital work was not only done but directed by female nurses. We confess there is something in the inference our correspondent draws, but he does not take into account the circumstances or conditions under which such articles are written. The Army Nursing Service consists of a large body of trained male orderlies, supplemented by a limited but highly efficient body of female nurses. The good work and the admirable qualities of the latter are, or ought to be, known to all; but, of course, their services would only constitute a fraction of the whole in a serious campaign. Although they have their own lady superintendents, they are as much under the orders and control of the medical officers as any other persons employed in hospital work—the only possible arrangement compatible with discipline. Of course, it has been suggested in days gone by, but we do not find it repeated in this article, that the "men" of the Medical Corps should be placed under the orders of the nursing sisters, an idea which any of the latter, having experience, would repudiate. Women can enormously lead or influence men but not command them. Anyone who would advocate the latter can have little knowledge of human nature. If war comes upon us, women nurses, whether belonging to the army or to aid societies, will no doubt nobly do their part, and we would be the last to cast a doubt or shadow on their admirable services.

THE R.A.M.C. INDIAN RELIEF.

DURING the ensuing trooping season the War Office has approved of the relief of the following Royal Army Medical Corps officers: Lieutenant-Colonels Williamson, Trevor, and Dempsey; Majors Molesworth, Donegan, Hamilton, Osburne, Geddes Whaite, Spence, Stuart, Kerin, Rowney, Philson, Le Quesne, Newlands, Davis, Donnet, Sparks, O'Brien, Macleod, Wilson, Barefoot, Coates, Nicolls, and Sexton; Captains Anderson, Longhurst, Read, Condon, Healy, O'Reilly, Marder, Thomson, Jones, Stalkartt, McDermott, Johnson, Hinge, Thurston, Hodgens, Erskine, Slayter, Farmer, McNaught, Austin, and Samman; thus making a total of 47 officers.

RECRUITING OFFICERS, R.A.M.C.

BRIGADE-SURGEON-LIEUTENANT-COLONEL JOHNSTONE, retired list, has been appointed to succeed Lieutenant-Colonel W. Temple, V.C., R.A.M.C., at the Recruiting Depôt, St. George's Barracks. Lieutenant-Colonel Temple vacates through compulsory age retirement next month. Lieutenant-Colonel Johnstone (who will drop his compound title on being nominated to the succession) was for a considerable time officer commanding the Depôt and Training School at Aldershot, where he kept matters well up to the mark.

HONOURS FOR THE GRAECO-TURKISH WAR.

THE *London Gazette* of October 17th announces that the Queen has sanctioned the acceptance by Francis C. Abbott, Esq., F.R.C.S., and Samuel Osborn, Esq., F.R.C.S., of the insignia of an Officer of the Royal Order of the Saviour, conferred upon them by the King of the Hellenes in recognition of their services to the wounded during the late war between Greece and Turkey.

The undermentioned gentlemen have also received permission to accept the insignia of Chevalier of the Royal Order of the Saviour for similar services: Henry J. Davis, Esq., M.R.C.S., Robert F. Symons, Esq., M.R.C.S., Henry A. Moffat, Esq., F.R.C.S., and Hamilton Gattliff, Esq.

SERVICE IN SOUTH AFRICA.

A CORRESPONDENT suggests that there are probably many retired medical officers who, if approached, would volunteer for service in South Africa to assist the R.A.M.C. They would bring to bear wide experience—many of the theatre of war. He also advocates trial of some recent water "sterilisers" as a precaution against enteric fever.

LIABLE TO RECALL TO SERVICE.

WE understand that a circular letter has been issued by the War Office to retired army medical officers liable to recall in national emergency, stating that while the Secretary of State for War did not wish to issue a recall order, he would be glad to have the names of those so liable who might volunteer to serve at home. We understand that there has already been an active response, and certain appointments have already been made.

THE ARMY MEDICAL RESERVE.

A. M. R. writes: Why do the military authorities advertise for civilian medical men to do duty with troops, and why are such men sent to the Cape to the exclusion of the Army Medical Reserve, formed of volunteer officers, who have given their services and money to the State, and are to reap no return?

*** We cannot say, unless it be that the officers of the reserve may yet be wanted with their corps should they be called up. In any case, the inadequacy of the so-called reserve is manifest.

PAY OF R.A.M.C. IN INDIA.

JUSTITIA writes: In the continued paucity of candidates for the Royal Army Medical Corps, the question of pay, especially in India, has not received sufficient attention. The following contrasts their pay with that of the Royal Engineers in the recent organised Military Works Department:

R. E.—Rs. per Mensem.		R.A.M.C.—Rs. per Mensem.	
Lieutenants	415 to 515	Lieutenants	350
Captains	733 to 783	Captains	350 to 500
Majors	1,109 to 1,209	Majors	789 to 825
Lieutenant-colonels	1,627	Lieutenant-colonels ...	1,056 to 1,150
Colonels	2,102	Colonels	1,800

It would require very strong reasons, both in the nature and importance of the relative duties performed, to justify this disparity. The Royal Engineer officer is trained largely at the public expense, the Royal Army Medical Corps at private cost.

PROFESSOR OGSTON'S ADDRESS.

I.M.S. thinks this address an able and earnest one, although it has aroused resentment. The condemnation is less of the man than the system; he might have dwelt more upon how the medical training at Netley could be improved, especially in tropical medicine. With the exception of excellent practical training in bacteriology the candidates of the Indian Medical Service learn little there. He refers to an observation of one of our correspondents as to the high-class surgery in military hospitals by juniors, "unrestricted" by seniors; that, with rare exceptions, he does not believe in. He cannot imagine the available opportunities as either many or great. Only by freely acknowledging defects can the sympathy and aid of the civilian profession be enlisted.

R.A.M.C., writing from India, says he is amazed and depressed by this address. He has always laboured to show his men that he is as competent to treat their ailments as any civilian, and has met with their complete confidence. In fact the cordiality between medical officers and regimental officers was never greater than at present, nor do the latter fail to show their appreciation of the medical officer's professional services. The impression on many medical officers is that Professor Ogston has undone the work of years in grievously injuring the professional reputation of medical officers, for his remarks have been largely published in the Indian papers. Is it fair to brand the best of the R.A.M.C. as inferior to the weakest of the Indian service? It is not true. I cannot imagine the Professor meant harm, but has done it all the same. If the best graduates have lately shown no disposition to enter the army, are they likely to do so now? Of course all agree as to his advocacy of "study leave," which I suggest should be for three months every five years.

NEW UNIFORM OF R.A.M.C.

INQUIRER avers there has been considerable friction in military circles over the new uniform for the R.A.M.C. Bearing on this question, he asks, How comes it that the Medical Corps is the only corps in the army with a badge and motto to which there is no reference in the *Army List*?

OBITUARY.

JOHN THOMAS ARLIDGE, B.A., M.D.Lond., F.R.C.P.,

Physician to the North Staffordshire Infirmary.

We record with deep regret the death of Dr. Arlidge, which took place at the age of 77, at his house at Newcastle-under-Lyme, on Friday, October 27th. His health had been failing for the last three years, and a year and a half ago peripheral neuritis developed after influenza, leaving him a permanent invalid.

Dr. Arlidge, who was the son of a member of the medical profession, was born at Chatham on July 17th, 1822. He became a student at King's College, where he gained numerous prizes. He was recognised by the Apothecaries' Society as a Lecturer on Botany at the Aldersgate School of Medicine. He became Prosector of Anatomy at King's College, and a Student of Anatomy at the Royal College of Surgeons. In 1847 he graduated as B.A. in the University of London, being placed first in the Examination for Honours both in Vegetable Physiology and Structural Botany, and in Animal Physiology. He also took the degree of M.B. in the same University, and became M.R.C.S. in 1847. He at first gave much attention to the subject of lunacy, and attended at Hanwell Asylum the lectures of Drs. Conolly and Hitchman, whose friendship he enjoyed throughout their lives. He became Resident Superintendent of St. Luke's Hospital for Lunatics, where he brought about the abolition of mechanical restraint. After resigning this appointment Dr. Arlidge travelled with a patient through Europe, Egypt, and Palestine; on his return he married and commenced practice as a physician at South Kensington. He became a Member of the Royal College of Physicians, and was elected a Fellow in 1869. Soon after settling in London he was appointed Physician to the Surrey, Chelsea, and Farringdon Dispensaries, Physician to the West London Hospital, and Demonstrator of Anatomy and Lecturer on Psychological Medicine at the Grosvenor Place School of Medicine. In 1859 he wrote a work on *The State of Lunacy and the Legal Provision for the Insane*, which was dedicated to the Earl of Shaftesbury, Chairman of the Commission on Lunacy. He was also at this time editor of the *British and Foreign Medical and Chirurgical Review*, to which he contributed numerous essays. In 1857-60 he wrote for the *Psychological Journal* a series of reports on the Lunatic Asylums of France, Italy, and Germany, and edited Part I of Pritchard's *Infusoria* for the revised edition of 1861.



In 1862 he was appointed to succeed the late Dr. Wilson Fox as Physician to the North Staffordshire Infirmary. His public spirit, medical attainments, and scientific knowledge here found scope, and his attention was directed into a new field—new to him, and, in a very large extent, new to medicine. He first urged upon the executive of the hospital the need of structural improvements. As a result the foundation stone of the fine institution at Hartshill was laid by the Prince of Wales, and the building was completed in 1869. Throughout his life he continued to take great interest both in the Infirmary and in the amelioration of the condition of the operatives in the district. He was one of the prime movers in the establishment of a fund in connection with the Infirmary for sending patients to the seaside, and had a large share in improving the nursing of the sick both in their own homes and in the hospital.

From the first Dr. Arlidge interested himself greatly in the health of the pottery operatives, whose condition he had exceptional facilities of studying after his appointment as Certifying Factory Surgeon to the Stoke-on-Trent district. The disease known as potter's phthisis—a fibroid consolidation of the lungs due to the inhalation and subsequent irritative effect of particles of flint and clay dust—was always a subject of deep interest to him. His observations thereon found expression in the Milroy lectures, delivered before the Royal College of Physicians in 1889. In these lectures, which were published in our columns at the time, he insisted, as indeed he had long maintained, that the disease in its early stage was of a simple inflammatory nature, while he recognised the later supervention of the true tuberculous process in the cirrhosed pulmonary tissue.

These lectures Dr. Arlidge subsequently expanded into the book on the *Hygiene, Diseases, and Mortality of Occupations*, which was published in 1892. It constitutes his chief contribution to medical literature and it is not too much to say that it is the most comprehensive and important work on the subject which has ever issued from the English press. Systematically arranged, temperate and accurate in statement, and illumined by wide knowledge of the hygienic conditions under which various industries are conducted, it produced a great effect on public opinion, and Dr. Arlidge had the satisfaction of knowing that it had no small share in bringing about the new legislation and improved regulation with regard to factories and workshops. He was a member of the Commission appointed in 1893 to inquire into the conditions of employment in the Potteries. Dr. Arlidge and Mr. Spanton made a special report on the medical aspects of the question, and the final report of the Commission contained many valuable recommendations which have since been embodied in the new rules.

His efforts, at first the personal efforts of a physician strongly impressed by the need for preventive measures, and later as a member of the Commission just mentioned, have resulted in a great improvement in the sanitary condition of the pottery factories, and to a great diminution in the number of sufferers from potter's phthisis. The special rules of 1898, which carried out many of the recommendations made by Dr. Arlidge, will be still more effective in abolishing this and allied troubles incidental to the potter's employment. Lead poisoning, which is unfortunately so intimately associated with the pottery district, was also carefully investigated by him. He often drew attention to the important differences in the clinical manifestations which obtain between cases

occurring in the Potteries and in London, gout being a very common accompaniment in the latter district, while such a connection is very rarely observed in Staffordshire. The thenar muscular flattening and the tendinous thickening on the dorsum of the metacarpus were elements which he emphasised in the diagnosis of plumbism, although he never attributed the development of these physical signs to local contact with the glaze.

Dr. Arlidge was a Justice of the Peace for Newcastle-under-Lyme and for the county of Staffordshire, and in 1878-79 was Mayor of the borough. He received from the North Staffordshire Field Club the Garner medal, and in February, 1898, he was the recipient of a remarkable testimonial consisting of his portrait subscribed for by the past and present members of the General and Medical Committee of the North Staffordshire Infirmary, and of an illuminated address and a presentation of plate made on behalf of the medical profession throughout the country.

FREDERICK H. LEWIS, M.B., B.C.Camb., M.R.C.S., L.R.C.P.

We regret to announce the death from heart failure during scarlet fever of Mr. Frederick Henry Lewis, of Weymouth Street, London, at the early age of 32. He was the son of the late Dr. Frederick Lewis, of Gloucester Place, W. He received his early education at Queen's College, Taunton. He entered St. Bartholomew's Hospital in 1885, from whence, having passed the Anatomy and Physiology Examination of the Conjoint Board, he went to Cambridge University, where he took the degree of B.A. in 1891 with honours in Natural Science. He then returned to St. Bartholomew's and passed the final Conjoint Board Examination in 1892, and took the degrees of M.B., B.C.Cantab. in 1893.

Mr. Lewis held several valuable posts, including a House-Physiciancy, Extern Midwifery Assistant, and Assistant Chloroformist (for two years) at St. Bartholomew's, and House-Surgeon to the Royal Alexandra Hospital for Children at Brighton. When he retired from his post of Assistant Chloroformist at St. Bartholomew's, he studied diseases of the ear and throat in Vienna, and, returning to England at the beginning of last year, he was appointed Non-resident House-Surgeon to the Throat Hospital in Great Portland Street, a post which he had filled with entire satisfaction to all with whom he worked, and who will lose in him one whose genial nature and great capabilities cannot be easily replaced.

Dr. Herbert Tilley, who had been an intimate friend of Mr. Lewis for fifteen years, writes: "On Saturday morning, October 21st, Lewis was to have given an anæsthetic for me, and wrote saying he was too ill, and asked me to come and see him. I found his throat acutely inflamed, and the well-marked scarlet rash on the body. He was soon after removed to the London Fever Hospital, Liverpool Road, and at first progressed favourably, but on October 17th and 18th his temperature remained between 103° and 106° F.; heart failure supervened, and he died on Wednesday, October 18th.

"His loss is one which many friends must now be mourning. As an anæsthetist, he was one of the most skilled I have known, and possessed that rare gift of making his patients feel quite at home before they took the anæsthetic; more especially was this the case with children. In private life he was 'hail fellow well met' with all, whilst his philosophic views upon things in general and his fund of quiet humour made him excellent company. To those of us who knew him well is brought home the personal loss of a kind-hearted, modest, and faithful friend, of whom it may be truly said that he was 'one of the best.'"

It is with much regret that we have to record the death (after an illness of about eighteen months' duration) of Dr. E. C. Palmer, of Lancaster House, Lincoln, which took place on October 21st. The deceased, who was only in his 35th year, was educated at Downing College, Cambridge (B.A., 1888; M.A., M.B., B.C., 1893), and at St. Bartholomew's Hospital, London. He took the diploma of M.R.C.S., L.R.C.P.Lond. in 1891, and was House-Physician at the Royal Free Hospital. Several years ago he joined the late Mr. Charles Dalton in practice in Lincoln, and very soon took the entire charge of it, with much success. He was one of the salaried medical officers of the General Dispensary, and Surgeon-Lieutenant in the 1st Volunteer Battalion of the Lincolnshire Regiment, besides holding other minor public appointments. He was a member of the Midland Branch of the British Medical Association, and an energetic supporter of the Lincoln Medical Society. A thorough type of a cultured and athletic English gentleman, he was deservedly popular with his own profession, his patients, and the public generally, and much sympathy is felt for his widow and his two-year-old son. His funeral, with military honours, took place at St. Peter-at-Gowts and the Canwick Cemetery, on Tuesday, October 24th, and was attended by almost all the medical profession in Lincoln, and by very many friends and acquaintances.

We regret to report the death, at the early age of 29, of Dr. William Menzies Hutton, which took place in his father's house, The Manse of Oldhamstocks. After a course marked by ability, he took the degrees of M.B., C.M. in 1891; the degree of M.D., with a gold medal for his thesis, in 1894; and the Fellowship of the Royal College of Surgeons of Edinburgh in 1895. In 1893 he was Syme Surgical Fellow in the University of Edinburgh. He was House-Surgeon in the Royal Infirmary of Edinburgh and in the Southport Infirmary. He had made several contributions to the British Medical Journal and other periodicals. Recently he had settled in practice in Edinburgh, and had been appointed Medical Registrar in the Royal Infirmary. At the last meeting of the Board of Managers reference was made to his death by the Rev. Dr. Scott and by the Rev. Rowland Ellis, both referring to his high scholarship and the great attention and skill he displayed in his work.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Eduard Juliewitsch Petri, Professor of Geography and Ethnology in the University of St. Petersburg; Dr. William Binaud, *agrégé* of the Bordeaux Medical Faculty, author of numerous contributions on surgical subjects, aged 37; Dr. Gonzalo Aróstegui, sometime Professor of Surgery in the University of Havana, aged 96 years; and Dr. C. Cron, Medical Director of the well-known Sanatorium at Grunewald.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Examination for the M.B.—The first and second examinations for the degree of Bachelor of Medicine will commence on Wednesday, December 6th, 1899. The names of the candidates must be received by the Secretary to the Boards of Faculties not later than 10.30 A.M. on Wednesday, November 22nd, 1899.

UNIVERSITY OF CAMBRIDGE.

Fellowships.—Mr. J. J. Lister, M.A., Demonstrator of Comparative Anatomy, and Mr. A. C. Seward, M.A., F.R.S., University Lecturer in Botany, have been elected to Fellowships at St. John's College. Professor Sims Woodhead has been elected to a Professorial Fellowship at Trinity Hall.

Demonstrator.—Mr. Ivor Lloyd Tuckett, Fellow of Trinity, has succeeded Mr. Eichholz as Additional Demonstrator of Physiology under Sir M. Foster.

ROYAL COLLEGE OF PHYSICIANS.

The Quarterly Comitia of the College was held on Thursday, October 26th, the President (Dr. W. S. Church) in the chair.

Admission of Members.—The following gentlemen, having passed the required examination, were admitted as Members: E. F. Buzzard M.A., M.B.Oxford; W. H. Davis, M.A., M.B.Oxford, L.R.C.P.; T. F. Gardner, L.R.C.P.; D. W. Samways, M.A., M.D.Camb., L.R.C.P.; R. Sevestre, M.A., M.D.Camb., L.R.C.P.; E. Stainer, M.A., M.B.Oxford.

Grant of Licences.—The licence of the College to practise physic was granted to 122 gentlemen. Of these 26 were granted under regulations dated October 1st, 1884; two under old regulations before October 1st, 1884.

Report on the Brussels Conference.—A report upon the International Conference on the Prevention of Venereal Diseases, held at Brussels in September last, was received from Dr. Radcliffe Crocker, and a cordial vote of thanks to him was passed.

Recognition of Technical School.—A report of the Committee of Management, recommending that the Rochdale Municipal Technical School, which has been visited on behalf of the Committee, be added to the list of institutions recognised by the Board as a place of instruction in Chemistry, Physics, and Practical Chemistry, was adopted.

Laboratories.—The Laboratories Committee reported that since June 9th last 700 doses of antitoxin, each containing 2,000 units, and 9,900 doses, each containing 4,000 units, for the treatment of diphtheria in the hos-

pitals of the Metropolitan Asylums Board, had been supplied, and all the demands fully met. During this period 41,000,000 units had been supplied. During the quarter Messrs. Parke Davis and Co. had had 500 c.cm. of diphtheria antitoxin tested in the laboratories. It was certified as containing 450 units per c.cm., as sterile, and as being free from excess of antiseptic. Under the grant from the Goldsmiths' Company 705 doses of antitoxin, containing 1,670,000 units, had been supplied to the general and children's hospitals in or near London. Six new applications for permission to work in the laboratories had been received, and of those who had been at work since the Committee made their last quarterly report all but four had applied for permission to continue their researches.

Election of Representatives.—Dr. W. S. Church, the President, was unanimously re elected as the representative of the College on the Council of University College, Bristol. Dr. Liveing and Dr. Halliburton were re-elected as members (respectively) of the Committee of Management and of the Laboratories Committee. A letter from Dr. J. F. Payne was read expressing his desire to be allowed to retire from the Laboratories Committee on being elected Harveian Librarian.

A Morgagni Medal.—A letter was received from Dr. J. F. Payne, offering for the acceptance of the College a medal struck in commemoration of the recent presentation of a bust of Morgagni to St. Thomas's Hospital by a committee of Italian physicians, and the best thanks of the College were accorded to the donor.

Alteration of By-law.—The following alteration of By-law clxiii was moved for the second time and adopted by the College: The fee to be paid for admission as a Member of the College shall be 40 guineas; except when the candidate for the Membership is a licentiate of the College, in which case the fee already paid for the licence shall be deducted from the 40 guineas.

Finance.—The quarterly reports of the Examiners for the Licence and of the Finance Committee were received and adopted.

Library.—A list of the books presented to the library during the past quarter was read and the thanks of the College accorded to the donors.

MEDICO-LEGAL.

A CORONER'S INQUIRY.

The *Westminster and Pimlico News* of October 20th reports an inquest recently held by Mr. Troutbeck at the Coroner's Court, Westminster, on the body of Minnie Mary Watts, aged 1 year 11 months. The deceased was the child of a police constable, and on October 4th slipped and struck her eye against the corner of the bed. Gangrenous inflammation of the eye supervened and death took place at St. George's Hospital shortly after. The child was a club patient, and it was suggested that on that account the patient did not receive proper attention. From the evidence, however, it appeared that the doctor had done all he possibly could under the circumstances, but it was stated in evidence that he had said sometimes he had eighty patients to attend in the day, and the coroner is reported to have said "that it was a very serious thing that these clubs should put such pressure upon their doctor, and it was a state of things that was very prejudicial to the public health." The jury returned a verdict of "accidental death," and expressed the opinion that there had been no neglect on the part of the medical man.

DOCTOR AND PATIENT.

At the Norwich County Court on October 24th Mr. Alfred Henry Miller, surgeon, sued Robert Kemp, a boot manufacturer, to recover £12 14s. 6d. for medical services, the defendant counterclaiming £50 for alleged negligence. According to the evidence, as reported in the *Eastern Daily Express*, the defendant met with an accident, resulting in a fracture of the tibia and fibula. It occurred about twenty miles from his residence, and he was attended at the time by a local practitioner. On the patient's return to his own home he sent for the plaintiff, who went on with the case. The only allegation of negligence was that the plaintiff, when first called, had not unlastened the bandages and examined the fracture, and that the half-inch shortening of the injured limb was due to this neglect. After hearing the evidence of several surgeons, in the course of which it appeared that the same leg had since been fractured in another accident, the jury found for the plaintiff: and his Honour, who stated that he fully agreed with the jury, gave judgment for the plaintiff and against the counterclaim.

MEDICAL PARTNERSHIPS.

A CORRESPONDENT, about to enter into partnership with another medical man, writes as follows: The rule, I believe, in general force as to patients' debts owing before the date of partnership is that these debts go to the doctor who is selling. Do old-standing debts or recent debts claim precedence?

*** In the absence of any agreement to the contrary, old-standing debts, provided they have not been rendered irrecoverable by the Statute of Limitations—that is, are not more than six years old, claim precedence of recent debts.

RIGHT TO COMMENCE PRACTICE.

OMEGA.—On the facts stated we do not think there can be any objection, legal or ethical, to our correspondent starting a practice at "B."

BLACKPOOL.—On the facts as gathered the patient certainly appears to be liable to pay the account. In case of refusal, however, we should recommend that the facts be laid fully before a solicitor.

The first meeting of the Royal Statistical Society will be held at the Society's Rooms on Tuesday, November 21st, at 5 P.M.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,545 births and 4,623 deaths were registered during the week ending Saturday last, October 28th. The annual rate of mortality in these towns, which had been 18.6 and 19.0 per 1,000 in the two preceding weeks, further rose to 21.1 last week. The rates in the several towns ranged from 10.1 in Cardiff, 12.7 in Croydon and in Derby, 13.4 in Norwich, and 14.0 in Plymouth to 24.8 in Salford, 27.3 in Sheffield, 27.7 in Liverpool, and 29.7 in Bristol. In the thirty-two provincial towns the mean death-rate was 21.1 per 1,000, and was identical with the rate recorded in London. The zymotic death-rate in the thirty-three towns averaged 2.2 per 1,000; in London the death-rate was equal to 2.0 per 1,000, while it averaged 2.4 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.6 in Portsmouth, in Birkenhead, and in Salford, 4.2 in Hull, 4.5 in Swansea, and 5.6 in Sheffield. Measles caused a death-rate of 1.1 in Nottingham, 1.2 in Salford, 1.4 in Sheffield, and 2.3 in Birkenhead; scarlet fever of 1.4 in Burnley; whooping-cough of 1.0 in Gateshead; "fever" of 1.1 in Nottingham and in Sunderland and 1.4 in Sheffield; and diarrhœa of 1.0 in Bristol, in Liverpool, in Salford, and in Gateshead, and 1.2 in Wolverhampton and in Manchester. The 130 deaths from diphtheria in the thirty-three towns included 58 in London, 13 in Sheffield, 7 in Leeds, and 6 in Portsmouth, in Swansea, and in Birmingham. Four fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday last, October 28th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,538 to 3,408 at the end of the eight preceding weeks, had further risen to 3,504 on Saturday last; 414 new cases were admitted during the week, against 461, 455, and 447 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, October 28th, 970 births and 546 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.1 and 17.3 per 1,000 in the two preceding weeks, rose again to 17.9 last week, but was 3.2 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 10.8 in Leith and 13.5 in Perth to 18.8 in Greenock and 20.3 in Glasgow. The zymotic death-rate in these towns averaged 1.9 per 1,000, the highest rates being recorded in Paisley and Greenock. The 287 deaths registered in Glasgow included 8 from measles, 3 from scarlet fever 2 from diphtheria, 4 from "fever," and 13 from diarrhœa. Three fatal cases of diphtheria were recorded in Edinburgh; 2 deaths from "fever" occurred in Dundee, and 2 from diphtheria in Greenock.

ZYMOTIC MORTALITY IN LONDON.

The accompanying diagram shows the prevalence of the principal zymotic diseases in London during the third or summer quarter of this year. The fluctuations of each disease and its fatal prevalence, as compared with that recorded in the corresponding periods of recent years, can thus be readily seen.

Small-pox.—One fatal case of small-pox was registered in London last quarter, the corrected average number in the corresponding periods of the ten preceding years being 13; one small-pox patient was admitted into the Metropolitan Asylums Hospitals during the quarter, but none remained under treatment at the end of September last.

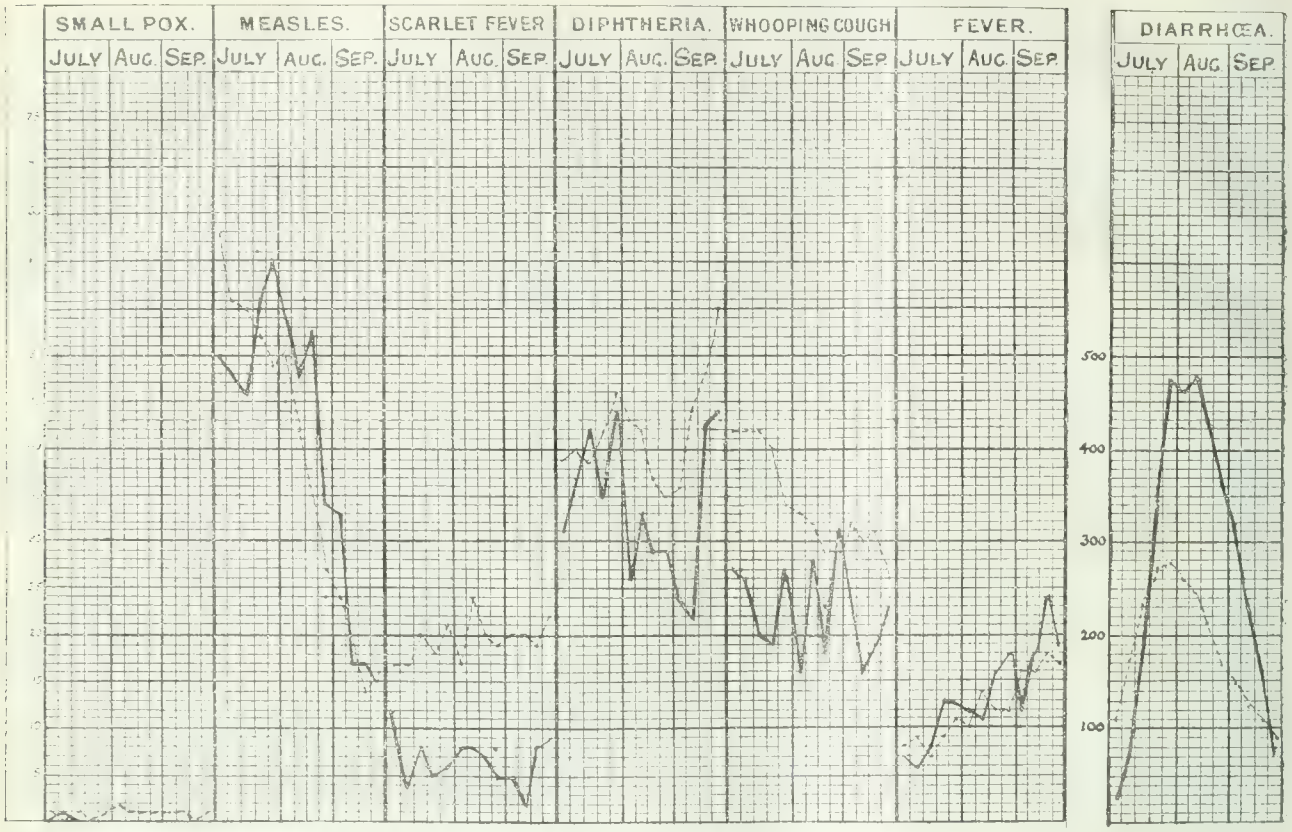
Measles.—The deaths referred to measles, which had increased from 238 to 696 in the four preceding quarters, declined again to 530 during the three months ending September last, but were 37 above the corrected average number. Among the various sanitary areas of the metropolis measles showed the highest proportional fatality in St. Saviour Southwark, St. George Southwark, Newington, St. Olave Southwark, Bermondsey, and Greenwich.

Scarlet Fever.—The fatal cases of this disease, which had declined from 139 to 84 in the three preceding quarters, rose again to 87 during the three months under notice, but were as many as 165 below the corrected average number in the corresponding periods of the ten preceding years. Among the various sanitary areas this disease was proportionately most fatal in Fulham, Clerkenwell, Bethnal Green, St. Saviour Southwark, St. Olave Southwark, and Rotherhithe. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 2,272 and 2,372 at the end of the two preceding quarters, had further risen to 2,836 at the end of September last. The number of new cases admitted into these hospitals, which had been 2,880 and 2,990 in the two preceding quarters, further increased to 3,760 during the quarter ending September last.

Diphtheria.—The deaths referred to diphtheria in London, which had declined from 511 to 357 in the three preceding quarters, rose again to 438 during the three months under notice but were 108 below the corrected average number. Among the various sanitary areas this disease showed the highest proportional fatality in Shoreditch, St. George Southwark, Newington, St. Olave Southwark, Bermondsey, and Rotherhithe. The number of diphtheria patients in the Metropolitan Asylums Hospitals at the end of September last was 1,479, against 1,159 and 1,273 at the end of the two preceding quarters; 2,651 new cases were admitted during last quarter, against numbers declining from 2,241 to 1,953 in the three preceding quarters.

Whooping-cough.—The fatal cases of this disease, which had been 681 and 528 in the two preceding quarters, further declined to 295 during the three months ending September last, and were 147 below the corrected average number; among the various sanitary areas whooping-cough was proportionately most fatal in St. James Westminster, St. George-in-the-

DEATHS FROM ZYMOTIC DISEASES IN LONDON DURING THE THIRD QUARTER OF 1899.



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the ten preceding years, 1888-97.

East, Limehouse, Mile End Old Town, Poplar, and St. Saviour Southwark.

Fever.—Under this heading are included deaths from typhus, enteric, and simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had declined from 296 to 88 in the three preceding quarters, rose again to 177 during the three months ending September last, and were 17 above the corrected average number. No death from simple continued fever was registered during the quarter under notice, and only one from typhus. Among the various sanitary areas the mortality from "fever" was highest in Fulham, Chelsea, Shoreditch, Bethnal Green, Whitechapel, and St. Olave Southwark. The Metropolitan Asylums Hospitals contained 252 enteric fever patients at the end of September last, against 255, 148, and 105 at the end of the three preceding quarters; 453 new cases were admitted during last quarter, against 531, 338, and 228 in the three preceding quarters.

Diarrhœa.—The 3,651 fatal cases of diarrhœa registered in London during the three months ending September last were more than 50 per cent. above the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Fulham, St. Luke, Shoreditch, Poplar, St. Saviour Southwark, and St. George Southwark.

In conclusion it may be stated that the 5,179 deaths referred to the principal zymotic diseases in London during the third or summer quarters of this year were 848, or nearly 20 per cent., above the corrected average numbers. The mortality from scarlet fever, diphtheria, and whooping-cough showed a decline, while from measles, "fever," and diarrhœa it exceeded the average. Among the various sanitary areas, the lowest zymotic death-rates were recorded in St. George Hanover Square, St. James Westminster, Hampstead, St. Giles, St. Martin-in-the-Fields, and London City; and the highest rates in St. Luke, Shoreditch, Poplar, St. Saviour Southwark, St. George Southwark, and Bermondsey.

WATER SUPPLY.

A WEST COUNTRY M.O.H. writes that his District Council is promoting a Water Bill. The greater part of the proposed gathering ground—nearly 2 square miles in extent—is grass land; a few fields, however, are under tillage. He asks if these fields must be converted into pasture land, or whether it would suffice if clauses were agreed upon restricting the nature of the manure stuffs to be used on such lands. He asks us to refer him to authorities.

*** Dr. Thresh, author of a book dealing chiefly with rural water supplies, read, we believe, a paper on the protection of surface water supplies at the recent Blackpool meeting of the Royal Institute of Public Health. The subject was also discussed at the Birmingham meeting of the Sanitary Institute in 1898, on a paper by Dr. Spottiswoode Cameron. The reader of the latter paper strongly advocated the purchase of the gathering ground by the authority, arguing that as owners of the land they could get rid of tenants who would not do as they were ordered. It is not usually safe to use without subsequent treatment water from tilled land. Even grass land must be carefully watched, the drainage of cattle sheds, the situation of manure heaps, etc., attended to.

SPRING WATER asks if a small country town of 2,000 inhabitants, supplied by springs yielding at the end of the late dry season 15 gallons per head, should, to get a larger supply, go in for storage, whether the water now certified pure by the analyst would suffer.

*** Not if the scheme were properly carried out. Spring water is certainly pleasanter to the palate than stored water. It would not be difficult to continue the principal supply still from the springs, storing the surplus, and keeping up a slight movement in the reservoir by drawing from it for street watering and other sanitary purposes. Our correspondent should not rely too absolutely on chemical analysis as a proof of purity of water. The whole circumstances of the springs should be carefully looked into and their surroundings protected.

ADMISSION OF PATIENTS TO INFECTIOUS HOSPITALS.

FEVER asks what is the usual mode of procedure in towns, that the friends of a patient suffering from an infectious disease may get him removed to the local fever hospital.

*** The commonest procedure is for the medical attendant to mention the matter to the medical officer of health when sending the notification form, giving such particulars as to rooms, inmates, and duration of disease as will enable him to grasp at once the urgency of the case. If the medical officer of health is not available, the sanitary inspector might act for him.

MEDICAL NEWS.

Female Medical Students in Baltimore.—The Johns Hopkins Medical School, Baltimore, has opened with thirty-five women in the school, six of whom are freshmen, with fourteen in the graduating class. In the first class that graduated there was one woman. Seven women in all have taken their degrees from this school, and nearly every one now holds the position of resident physician in some well-known hospital in some part of the country.

The Bristol Medical School.—It is proposed to hold the Bristol Medical School annual dinner at the Clifton Grand Spa on November 16th. Mr. Nelson C. Dobson, F.R.C.S., will preside, and his Honour Judge Austin will be the guest of the evening. Already 120 gentlemen have signified their intention to be present. Great interest attaches to this dinner, as it is the first official function held since the amalgamation for clinical purposes of the Royal Infirmary and General Hospital. We are asked to state that should any old student have been inadvertently omitted from the list of those to whom notice has been sent, it is hoped that he will communicate with the Hon. Secretary of the Dinner Committee, Royal Infirmary, Bristol.

Admission of Women to Learned Societies.—At the annual meeting of the Agricultural Association for Women a paper by Mrs. Farquharson, F.R.M.S., was read in which she discussed the exclusion of women from many learned societies, and pointed out that in the case of the Linnean and Royal Microscopical Societies ladies might be elected Fellows, but were not admitted to the meetings. In the discussion which followed, Mrs. Garrett Anderson pointed out that the British Medical Association admitted women to all the privileges of membership. The position of a society which elects women members to its membership, but forbids them to attend its meetings, is surely most illogical. There can be no reason why ladies should not be admitted to the meetings of the societies concerned with science in which they take an interest, and there is every reason why they should.

The West London Hospital.—The annual dinner of the staff of the West London Hospital took place at the Great Central Hotel on Wednesday, October 25th, 1899. Mr. Percy Dunn occupied the chair, and out of the twenty acceptances for the dinner, seventeen members of the staff were present. After the usual loyal toasts, the Chairman proposed the toast of "The West London Hospital," and referred to the great success which had attended the organisation of the Post-Graduate College in connection with the Hospital. He referred also to the many advantages likely to accrue from the enlargement and improvements now being effected in the out-patient department. The Dean of the Post-Graduate College, Mr. L. A. Bidwell, replied and gave some interesting facts relating to the growth and progress of the undertaking. Subsequently the *réunion* resolved itself into a committee in which many and various matters concerned in the well-being of the hospital were discussed, and resolutions thereupon passed. The toast of the health of the Chairman, proposed by Mr. Keetley, brought the proceedings to a close.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN UNIVERSITY.—(1) Examiner for Graduation in Surgery (including Clinical Surgery); (2) Examiner for the Dip oma in Public Health. Applications to the Secretary of the Court by November 6th.

BETHLEM HOSPITAL.—Two Resident House-Physicians. Appointment for six months. Apartments, board, and washing provided, and honorarium of £12 12s. per quarter. Applications, endorsed "House-Physicians," to the Treasurer, Bridewell Hospital, New Bridge Street, E.C., by November 6th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by November 11th.

BRISTOL GENERAL HOSPITAL.—Assistant Physician. Applications to the Secretary by November 22nd.

BRISTOL ROYAL INFIRMARY.—Dispenser, Non-resident. Salary, £150, with dinner and tea. Applications to the Secretary by November 13th.

BURY ST. EDMUNDS: SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £130 a year with board, lodging, and washing. Applications to the Secretary by November 20th.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board and washing. Applications, endorsed "Assistant House-Surgeon," to the Secretary.

CAMBERWELL: PARISH OF ST. GILES.—Assistant Medical Officers for the Work-house, Gordon Road Peckham between 24 and 35 years of age. Salary, £120 per annum, with furnished apartments, and £1 1s. weekly in lieu of board and washing. Applications, on forms provided, to be sent to the Clerk to the Guardians, 29, Peckham Road, S.E.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Board and residence provided. Candidates mus attend at the Hospital on Thursday, November 9th, at 4 P.M.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Post tenable for three months. Fee, 8 guineas. Applications to the Secretary.

DERBY BOROUGH ASYLUM.—Assistant Medical Officer. Salary, £120 per annum, with board and washing. Applications to Dr. Macphail, Rowditch, Derby, by November 7th.

EDINBURGH ROYAL INFIRMARY.—Superintendent. Salary, £500 per annum, with free house, coal, and light. Applications to Mr. W. Caw, Treasurer and Clerk, by November 15th.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. No salary, but board, lodging, and washing provided. Applications to the House-Surgeon.

FRENCH HOSPITAL AND DISPENSARY.—Resident Medical Officer; unmarried. Salary, £80 per annum, with full board. Applications to the Secretary, 172, Shaftesbury Avenue, W.C.

GLAMORGAN COUNTY COUNCIL AND CARDIFF CORPORATION.—Bacteriologist to the Joint Committee and Lecturer on Bacteriology in the University College, Cardiff. Salary, £300 per annum. Applications to W. E. R. Allen, Clerk to the Joint Committee, Glamorgan County Offices, Cardiff by November 6th.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to J. F. Winfrengham, Honorary Secretary, St. Mary's Chambers, Great Grimsby, by November 18th.

HOSPITAL FOR CHILDREN, Great Ormond Street, Bloomsbury.—Resident Medical Superintendent. Appointment for one year, subject to annual re-election. Salary, £105 a year, with board and residence. Applications to the Secretary by November 21st.

HULL ROYAL INFIRMARY.—Senior House-Surgeon; unmarried. Salary, 100 guineas per annum, with board and furnished apartments. Applications to the Chairman of the House Committee by November 7th.

LAGOS RAILWAY, West Africa.—Two Qualified Assistant Medical Officers, between 25 and 40 years of age. Salary, £30 to £35 per month. Applications, endorsed "Assistant Medical Officer," to Messrs. Shelford and Sons, 35A, Great George Street, Westminster, S.W.

LINCOLN: BRACEBRIDGE ASYLUM.—Junior Assistant Medical Officer; unmarried, and not over 30 years of age. Salary, £125 per annum, with furnished apartments, board attendance, etc. Applications to Mr. W. T. Page, jun., 5 and 6, Bank Street, Lincoln, by November 25th.

LIVERPOOL DISPENSARIES.—Senior Surgeon at the East Dispensary. Salary, £200 per annum, with board and apartments. Applications to the Secretary, 34, Moorfields, Liverpool, by November 14th.

LONDON LOCK HOSPITAL, Harrow Road, W.—House-Surgeon to the Female Hospital. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by November 18th.

LONDON TEMPERANCE HOSPITAL, N.W.—(1) Surgical Registrar and Anæsthetist. Honorarium, 50 guineas per annum. (2) Assistant Resident Medical Officer. Appointment for six months. Board, residence, and washing provided. Honorarium at the rate of 50 guineas per annum. Applications to the Secretary by November 9th.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Honorary Aural Surgeon. Applications to the Secretary, Dispensary, Goatside Street, Manchester, by November 8th.

MANCHESTER: ST. MARY'S HOSPITAL, Quay Street.—Resident Medical Officer. Appointment for six months, subject to re-election. Salary £65 per annum, with board and residence. Applications to Thomas Browning, Chartered Accountant, by November 16th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers at the Fever and Small-pox Hospitals. Unmarried, and must not exceed 35 years of age. Salary, £160 per annum for the first year, £180 the second, and £200 the third and subsequent years. Applications on forms provided to be sent to the Secretary of the Board, Norfolk House, Norfolk Street, Strand, by November 8th.

NATIONAL ORTHOPÆDIC HOSPITAL.—Honorary Anæsthetist. Applications to the Secretary, 234, Great Portland Street, by November 11th.

OXFORD EYE HOSPITAL.—House-Surgeon. Honorarium £50 on completion of a year's residence, with board and lodging. Applications to the Honorary Secretary, 29, Banbury Road, Oxford, by November 30th.

OXFORD: RADCLIFFE INFIRMARY.—Surgeon. Applications to the Secretary by November 25th.

PONTEFRACT GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Commencing salary, £130 per annum, with furnished rooms, etc. Applications to the Secretary by November 11th.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—First and Second Assistant House-Surgeons. Appointment for six months, but renewable. Salary at the rate of £65 per annum, with board and residence. Applications to the House Governor by November 15th.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, washing, etc. Applications to the Secretary by November 8th.

PUBLIC DISPENSARY, 52, Stanhope Street, Clare Market. Resident Medical Officer. Salary, £105 per annum, with furnished apartments, coal, and gas. Applications to the Secretary by November 11th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—(1) Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. (2) Ophthalmic Surgeon: (3) Dental Surgeon; (4) Physician; (5) Physician to Out-patients. Applications to the Secretary for the first post by November 7th, and for the remainder by November 18th.

ROYAL EAR HOSPITAL, Soho.—(1) Anæsthetist. (2) House-Surgeon, non-resident. A small honorarium is given. Applications to the Honorary Secretary before November 10th.

ST. LEONARD'S-ON-SEA: CHELSEA HOSPITAL FOR WOMEN CONVALESCENT HOME.—Honorary Medical Officer. Applications to the Secretary of the Hospital, Fulham Road, S.W., by November 13th.

SCARBOROUGH HOSPITAL.—Assistant Resident House-Surgeon. Appointment for six months, subject to re-election. Salary, at the rate of £50 per annum, with board and lodging. Applications to the Honorary Secretary by November 18th.

STOKE-UPON-TRENT UNION.—Resident Medical Officer for the Workhouse. Salary at the rate of £130 for the first year, with an increase of £15 per annum to a maximum of £175, with board, washing, and furnished apartments. Applications to the Clerk to the Guardians, Union Offices, Stoke-upon-Trent, by November 6th.

TOTTENHAM HOSPITAL.—Senior Resident Medical Officer. Commencing salary, £80 per annum, with board, residence, and laundry. Applications to the Chairman of the Joint Committee by November 6th.

UNIVERSITY COLLEGE HOSPITAL.—Second Anæsthetist. Applications to the Secretary by November 7th.

WOOLWICH UNION.—Assistant Medical Officer at the Infirmary, Plumstead; unmarried, and not more than 30 years of age. Salary, £60 per annum, rising £10 yearly to £130, with apartments, rations, and washing. Applications on forms provided, to be sent to the Clerk to the Board, Union Office, Woolwich, by November 15th.

MEDICAL APPOINTMENTS.

ARMER, A., M.B. Lond., appointed Assistant Medical Officer of the Workhouse for the Township of Toxteth Park, *vice* J. Prentice, resigned.

BOON, J. G., L.R.C.P., L.R.C.S. Irel., appointed Medical Officer for the Broseley District of the Madeley Union.

BROWN, A. P., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., appointed Medical Officer for the Elsdon District of the Rothbury Union, *vice* W. Dinwoodie, M.D., resigned.

BUTTERWORTH, J. J., M.B., B.Ch., appointed Junior House-Surgeon to the Manchester Royal Eye Hospital.

CHURCH, B. E., L.S.A., appointed Medical Officer of the 4th District of the Stroud Union, *vice* F. Fowler, M.R.C.S., L.R.C.P.Lond., resigned.

CLEGG, J. Grave, M.D., B.S., F.R.C.S., appointed Honorary Assistant Surgeon to the Manchester Royal Eye Hospital.

CRADDOCK, S., M.R.C.S.Eng., L.S.A., appointed Medical Officer to the Children's Homes of the Bath Union.

HUSKIE, J., M.B., C.M.Edin., appointed Medical Officer of the North Sefton District of the West Derby Union, *vice* W. Rowlands, L.R.C.P.I., M.R.C.S.Eng.

KEY, David T., M.R.C.S. and L.S.A.Lond., appointed Medical Officer and Public Vaccinator for the Wyke Regis District of the Weymouth Union, *vice* E. P. Simpson, resigned.

O'FARRELL, H., L.R.C.P., L.R.C.S.Irel., appointed Medical Officer to the No. 1 Portumna Dispensary District.

STOKES, H. Fraser, M.D., appointed District Medical Officer, London County Council.

TAYLOR, H. J., M.R.C.S., L.R.C.P.Lond., appointed Senior House-Surgeon to the Manchester Royal Eye Hospital.

WHITELAW, F., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Second District of the Holsworthy Union, *vice* J. H. White, resigned.

EAYTOUN, F. S., M.B., C.M.Edin., appointed Medical Officer for the Third District of the Bellingham Union, *vice* W. Limwoodie, M.D., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

Odontological Society of Great Britain, 40, Leicester Square, W.C., 8 P.M.—Inaugural Address by the President, Mr. Storer Bennett. Paper by Mr. J. F. Colyer and Casual Communications by Mr. F. J. Bennett, Mr. C. Robbins and Dr. F. Hewitt.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Mr. Lennox Browne: Gout in relation to the Throat and Larynx.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. McAdam Eccles: The Anatomy and the Dislocations of the Joints of the Upper Extremity. Lecture I.

TUESDAY.

Pathological Society of London, Jenner Institute, Grosvenor Road, W., 8.30 P.M.—Laboratory Meeting. Demonstrations by:—Drs. Macfadyean and Salter: "A Diphtheria-like Organism found in Pigeons. Dr. Klein, F.R.S.: "The Bacillus of Pseudo-tuberculosis. Professor Worsley, F.R.S.: Lantern Demonstration. Drs. Dean and Salter: Haemolytic Action of Toxins, Test Tube Demonstration. Drs. Eyre and Washbourn: The Method of Testing Antipneumococcic Serum. Mr. Shattock: "Chromocysts Clumping. Dr. Dean: "Diphtheria Immunity. Dr. Orr: "A New Method of Staining Medullated Nerve Fibres, and a Modification of Marchi's Method. Dr. Salter: "Notes on Immunity. Microscopes at 9: Dr. Macfadyean, Mr. Shattock, Dr. Dean. The latter will show a new streptothrix. The Lantern.

Jenner Institute is in Grosvenor Road, opposite Chelsea Bridge, two minutes' walk from Grosvenor Road Station, first station outside Victoria. Cab fare, 1s. 6d. from Cavendish Square. Bus from Sloane Square and Victoria to Chelsea Bridge every five minutes, fare, 1d.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 4 P.M.—Dr. Harry Campbell: Cases of Chorea and allied Affections.

London Throat Hospital, 204 Great Portland Street, W., 4.30 P.M.—Dr. Edward Law: Examination of the Throat.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. Ormerod: Muscular Atrophy.

WEDNESDAY.

Hunterian Society, 8.30 P.M.—Dr. Newton Pitt will open a Discussion on the Treatment of Typhoid Fever.

Hospital for Consumption, Brompton, 4 P.M.—Dr. P. Kidd: Laryngeal Tuberculosis.

THURSDAY.

British Gynæcological Society, 8 P.M.—Specimens will be shown by Dr. Purcell, Dr. Herbert Snow, and Mr. Bowreman Jessett. Papers:—Dr. R. H. Hodgson: A Case of Tuberculous Peritonitis simulating Abdominal Tumour; Operation; Recovery. Dr. James Oliver: On the Physiochemical Conditions concerned in the Production of Version of the Uterus.

Ophthalmological Society of the United Kingdom, Card Specimens at 8 P.M. Papers, 8.30 P.M.:—Mr. Arnold Lawson: Corneal Horns. Messrs. E. Treacher Collins and C. Devereux Marshall: Two Cases of Primary Tumour of the Optic Nerve. Mr. John Griffith: Iritis, a sequel of Gonorrhœa.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Dr. Green: Cases in the Wards.

Central London Throat, Nose, and Ear Hospital, 5 P.M.—Dr. Dundas Grant: Differential Diagnosis of Nasal Obstructions.

North London Medical and Chirurgical Society, Great Northern Central Hospital, 8.30 P.M.—Clinical Evening.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. McAdam Eccles: The Anatomy and the Dislocations of the Joints of the Lower Extremity. Lecture II.

FRIDAY.

London Throat Hospital, 204 Great Portland Street, W., 4.30 P.M.—Mr. Claud Wookes: Diseases of the Ethmoid Bone: Diagnosis and Treatment.

Clinical Society of London, 8.30 P.M.—Mr. H. Bertram Robinson: Acute Intestinal Obstruction due to an Intussusception of Meckel's Diverticulum. Mr. J. Bland Sutton: A Case in which Primary Nephrectomy was Performed for Complete Rupture of a Kidney. Dr. Norman Dalton: A Case of Enlarged Spleen due to Congenital Volvulus of the Stomach and Transverse Colon, and simulating Splenic Anæmia.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

JARDINE.—At 5, Clifton Place, Glasgow, W., on October 31st, the wife of Robert Jardine, M.D., F.F.P. and S.G., of a son.

WALKER.—At "Las Acacias," Durazno, Republic of Uruguay, South America, on August 22nd, the wife of Herbert J. Walker, M.B.Edin. Univ., of a son.

MARRIAGE.

CAMPBELL—THOMAS.—On October 21st, at Carmarthen, Henry Campbell, L.R.C.P.E., L.R.C.S.E., etc., of 310, Cowbridge Road, Cardiff, to Edith E. Thomas, third daughter of Thomas Thomas, Esq., J.P., Official Receiver for Swansea and Carmarthen Districts.

DEATH.

ARLIDGE.—On October 27th, at Onslow, Newcastle-under-Lyme, John Thomas Arlidge, M.D., F.R.C.P., J.P., aged 77 years. Late of the High Grove, Stoke-on-Trent. Friends please accept this the only intimation.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30; F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2, Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

Dr. T. B. O'Connor (Arlington Street, S.W.) asks to be informed whether Dr. Turck's apparatus for washing out the stomach can be obtained in London.

Mr. Arthur H. Burgess (Royal Infirmary, Manchester) asks if any reader knows of a home where a female patient suffering from hemiplegia, in poor circumstances, could be received. She could only afford to pay 10s. weekly.

G. P. would be glad to know the names of a few towns or districts suitable for residence in a case of rheumatoid arthritis. A professional man whose wife suffers from the disease has applied for information in order to guide him in selecting a suitable locality.

A. B. asks: Is it permissible for a doctor to take charge of a person of unsound mind without his being certified?

*** No. Petition, statement of particulars, two medical certificates, and order of a judicial authority, all five, must first be obtained, and all in compliance with the provisions of the Lunacy Act.

F. asks whether any medical man can recommend a home—South or South Coast preferred—where a lady, aged 30, erratic and troublesome to her relatives, but without any particular ailments, could be placed under a certain amount of control. She could only pay £1 a week?

*** We know of no "home" where such a case can be received at the rate mentioned.

Prevention and Treatment of Cracked Nipples.

Antilles writes: A patient of mine was obliged to wean her firstborn at the age of 14 days owing to small nipples which became badly fissured. In the event of her having another child, would it be wise to allow her to suckle it, and if so what is the best local treatment for the nipple previous to and after delivery?

Treatment of the Pruritus of Jaundice.

M.D. asks for suggestions for the relief of intolerable and constant itching of the skin in a case of intense jaundice due either to an impacted gall stone or to some very obscure malignant disease—not discernible—about the portal fissure.

*** In the British Medical Journal of January 19th, 1889, p. 120, Dr. Goodhart stated that a hypodermic injection of pilocarpin gr. $\frac{1}{3}$ relieved the itching of jaundice in 6 cases. He had to repeat it every third day.

Faradic Battery.

S. writes: Kindly inform me if it is necessary to wet the bisulphate of mercury in a small faradic battery made by Graeffe of Paris before putting on the plates?

*** The sulphate of mercury must be wetted with water to quite a thin paste, and must be in quantity sufficient to touch the whole under-surface of the zincs.

Intranasal and Intraoral Lupus.

A. K. C. (Lond.) writes: A young lady suffering from this complaint has been under my care for nearly two years. The disease has been kept in check by several applications of the curette. Internally she has more or less continuously taken cod-liver oil, syrup of the hypophosphites, and creosote. There is a small circular ulcer on the septum nasi, immediately above the left nostril. This scabs over, occasionally bleeds, and refuses to heal in spite of alkaline douches and applications of ichthyol with iodoform. It will probably lead to perforation of the septum and deformity. I shall be much obliged for any advice as to further treatment, either local or constitutional.

Victoria Legal Friendly Society.

Enquirer writes that he has agreed to act as surgeon to the above society on the following terms: 2s. 6d. for an ordinary visit and medicine, 3s. 6d. for a special visit, and double for a night visit; fractures at Poor-law rates, and, in consideration of the society paying monthly, and so obviating the necessity of keeping books, etc., to allow it a discount of 20 per cent. It is also specially agreed that there shall be no canvassing for patients. Our correspondent wishes to know if, under these circumstances, he might permit the society to write his name on the cards delivered to his members.

*** There does not seem to be any objection to the course proposed, if our correspondent's name is only written on the cards delivered to his own patients.

Operations for Talipes Varus.

B. S. asks for information regarding Phelps's latest operation for talipes varus.

*** Our correspondent will find the following references useful: 1. Phelps, *New York Record*, September, 1881. 2. Lane, *Lancet*, August, 1893. 3. Kellock, *ibid.*, March, 1893. 4. Tubby, on *Deformities* (with reference to Gardener's operation). 5. Jonas, *Annals of Surgery*, April, 1899. We are informed that Phelps's operation is being given up by surgeons generally for the following reasons: Club-foot comes under the surgeon's notice in two distinct classes: (*a*) Where bones are still cartilaginous; (*b*) where bones are ossified. It appears to be generally considered that in condition (*a*) other less severe methods produce a better result than Phelps's operation. In condition (*b*) the operation, dealing only with the soft parts, is inappropriate. The operation is described by Phelps thus; "An incision is made commencing between the int. malleolus and the tuberosity of the scaphoid downwards across the inner border of the foot. The abd. hallucis is divided, the internal plantar vessels and nerves drawn out of the way, and the tendons of tib. anticus and tib. posticus, the internal lateral and calcaneo-scaph. ligaments divided. The tendo Achillis is divided, and the foot wrenched into good position. The open wound is packed with gauze, and the foot fixed in plaster-of-paris."

Medical Appointments to Clubs.

Perplexed writes: A. and B. are medical men in the same place. A. was appointed, by a majority, medical officer of a club five years ago, and a majority might at any time put an end to his appointment. Recently 50 per cent. was added to his remuneration, and a substantial number (a minority) think this an opportune time for being allowed a choice as between A. and B., thus having two medical officers. Would it be a breach of medical etiquette for B. to accept the contributions of the minority, and attend them professionally?

*** It is difficult to see how B. could accept the contributions of the minority unless the club had decided to appoint two medical officers. If this had been done, it would not be a breach of etiquette for B. to accept the second appointment. It would be a breach of etiquette for B. to attempt to injure A. by endeavouring to get the club to make a second appointment.

Club Surgeons' Liabilities.

A correspondent writes that he has recently attended a club patient with a fracture of the lower jaw. He took him to a dentist, and had a plate made to keep the fragments in position. The dentist's fee for work was £2 2s. He wants to know who is to pay this, the patient or his club, and asks whether he is in any way liable for the fee.

*** It is unwise for a club surgeon when attending a club patient to employ the services of any other professional man without first making definite arrangements as to who is to pay the cost. Morally speaking, there can be no doubt that in such a case our correspondent ought not to be called upon to pay this fee, but seeing that he has contracted to furnish the members of the club with surgical attendance, if in carrying out his contract he calls in the services of others, it might be difficult to make the club, or even a county court judge, believe he was entitled to surcharge for the extra work.

Bicycle Puncture Protectors and Mud-guards.

Dr. T. Gordon Kelly (Leicester) writes: The great drawback to the use of the cycle by medical men is the risk of puncture, especially when on the way to an urgent call. Lately my attention was drawn to a new puncture-proof band manufactured by the Echo Company, of Birkdale, Southport. The band consists of hogskin $1\frac{1}{4}$ in. wide, $\frac{1}{8}$ in. thick in the centre and thinning off to the sides. The main principle of the shield is that it is nearly cut through transversely into a series of flaps overlapping one another, the result of this being that it is wonderfully flexible and the puncture-resisting power increased. The bands weigh $2\frac{1}{2}$ ozs. each, and can be obtained with solution for fixing, brush, chalk, etc., for 12s. 6d. The bands are marked with an arrow, and it is important that they should be placed in the tyre so that the arrow points in the direction the wheel is turning, as thereby the flaps fall on one another in the proper manner and the flexible nature of the band is unimpaired. I find that they cause no loss of resilience, and can detect no difference in the running.

I have lately tried a pair of mud-guards made for me by Messrs. Bluemel, the makers of celluloid accessories. The front guard is $3\frac{3}{4}$ in. wide, the back 3 in., well curved in at the sides, and the end of the back guard comes below the level of the hub. The front guard has the usual leather flap at the bottom. There is also another guard about 9 in long, which is fixed by clips to the top of the front forks, its position being in front of the brake, where mud often gets up. These guards are very light and wonderfully effective. I have tried them during a 10-mile run on very sloppy roads without getting a spot of mud on my clothes.

ANSWERS.

Justitia writes, in reply to "Oxonian," to recommend the United Kingdom Enquiry and Trade Protection Association, 19, Cheapside, London, E.C., as a good debt-collecting agency.

T., who asks for reference in the English language to books on superfœtation and superfecundation, might consult Lusk's *Midwifery*, 1886, p. 233; the *American Journal of Obstetrics*, 1886, p. 457, Ovulation during Pregnancy; the *Edinburgh Medical Journal*, 1864-65, paper by Bonnar; and Dr. Tyler Smith's *Manual of Obstetrics*, p. 112.

Anxious.—Our correspondent has invented a small surgical instrument, and asks us whether he might register it, and secure any profits that may be derived from its sale for himself. We should advise him not to do so, as such a course would be contrary to the best traditions and to the usual practice of the medical profession.

Uitlander.—The General Medical Council has no power to grant costs. We should recommend our correspondent to communicate with one of the medical protection societies; the Medical Defence Union, 4, Trafalgar Square, W.C.; or the London and Counties Medical Protection Association, 12, New Court, Lincoln's Inn, W.C.

Valencia.—The following are among the best modern textbooks in English and French on obstetrics and gynæcology: Dakin's *Handbook of Midwifery*, 1897; Herman's *Diseases of Women: a Clinical Guide to their Diagnosis and Treatment*; Tarnier and Budin's *Traité de l'Art des Accouchements*, 3 vols. (vol. iii appeared in 1898); Budin's *Femmes en Couches et Nouveau-Nés, Recherches Cliniques et Expérimentales*, 1897 (a valuable work); Labadie-Lagrave and Leguen's *Traité Medico-Chirurgical de Gynécologie*, 1898.

THE COURTESY CALL.

SOMERSET.—We think four months would be too long a time for our correspondent to wait before calling upon his medical neighbours. We do not think he should leave his wife's card, as when she arrives she can if she chooses, being a qualified medical practitioner intending to practise, make her own calls upon her medical colleagues.

"MEDICAL ADVERTISING."

WITH respect to the paragraph on medical advertising, published in the BRITISH MEDICAL JOURNAL of October 21st, p. 1157, Dr. ARTHUR J. CAREY asks whether the law does not compel medical practitioners to put their names and addresses upon medicines dispensed by them which contain poisons. There is no doubt that this is the case, but it may be very easily met by a special "poison label" to be affixed to such bottles, while as a general rule the label should be plain, containing merely the directions for the patient.

"COMMISSIONS TO THE MEDICAL PROFESSION."

A CORRESPONDENT sends us a card issued by a truss and surgical appliance manufacturer upon which are the following words, "A liberal discount allowed the medical profession for their recommendation," and our correspondent makes the comment that "it is this kind of thing which brought such disgrace on our profession in the report of the Royal Commission."

*** We fear that some confusion exists in the mind of our correspondent upon this subject, as, so far as we are aware, there has been no report of a Royal Commission, still less has any disgrace been brought upon our profession. But we agree with him that such a notice is an impertinence. We sincerely hope that no members of the profession accept discount or commissions for recommending their patients to particular shops.

NOTES, LETTERS, Etc.

THE MISUSE OF MEDICAL CHARITIES.

AT a meeting of the East Suburban Medical Protection and Medico-Ethical Society to be held at the Town Hall, Stratford, E., on Tuesday next, at 3.15 P.M., Mr. C. S. Loch, the Secretary of the Charity Organisation Society, will open a discussion on the Use of Medical Charities. Dr. Murtaugh Houghton, the Honorary Secretary of the Society, will move a resolution to the effect that as a means of preventing the misuse of medical charities—supported wholly or in part by voluntary contributions—medical men should be elected on the governing bodies of such charities in a proportion of not less than 25 per cent., such representatives to be periodically elected by the medical practitioners in the vicinity. The meeting will be presided over by Dr. F. J. Smith, Physician to the London Hospital.

"THE" ROYAL COLLEGE OF SURGEONS.

HIBERNIA writes: I beg to suggest to editors of newspapers and others that when writing of either of the three Royal Colleges of Surgeons it would be well to add whether of England, Ireland, or Scotland. The Royal College of Surgeons of England, although the younger of the three, is generally described as "The" Royal College of Surgeons. This may be understood when it appears in the London papers, but when it appears in papers circulating in Ireland and Scotland the description is misleading, and particularly so when the paragraph is copied into Irish and Scotch newspapers.

AN AFFECTION OF THE SKIN SUPPOSED TO BE CAUSED BY A SPIDER.

MR. A. NORRIS WILKINSON, M.R.C.S.Eng., L.R.C.P.Lond. (Twatutia, North Formosa), writes: Amongst the limited number of foreigners in North Formosa this year, I have met with several cases of a peculiar kind of skin irritation. It begins as an intense, strictly localised inflammation of the superficial layers of the skin, arranged in patches of a circular or ovoidal shape, slightly, if at all, raised above the surface. The colour ranges from scarlet to a dark red; when the inflammation is very acute, one finds what resembles a very fine sheath or covering, quite white, not like natural skin in colour, covering the central position; in the process of healing this is thrown off, and I take this to be the part actually in contact with the irritant. In milder cases the colour is of a milder red, and generally covered superficially with minute blisters containing serous matter; these take the place of the white sheath before mentioned.

In the acute cases there is dull burning pain; in the milder the part is extremely irritating and itchy. For the treatment in severe cases I use ung. zinci and pure carbolic acid mixed; in the milder cases only vaseline to exclude the air. The colour gradually fades away, sometimes leaving a brownish discoloration, which lasts some time. No scar is formed.

CASE I.—A lady had three patches on the neck, just where the neck band of a night or day garment might come in intimate contact with the skin. Last year she had a similar patch on the middle of right forearm, flexor surface; acute form. The patches varied in size from 1 inch to ¾ inches.

CASE II.—The husband of the former had four to five patches on the front of left shoulder and axillary portion of arm, where his singlet would fit tight; size varied from ½ to ¾ inches. The acute form.

CASE III.—A small patch, of the mild variety, on dorsal surface of foot over the heads of the second and third metatarsals; size ½ by ¼.

CASE IV.—The patient's face had a streak of red running down the side, the underlip and adjacent skin was swollen and red with small blisters. This patient earlier in the summer had three patches, one at back, another at the side, and the third over the sternal portion of sterno-mastoid. These were of the severe type, and would catch his shirt collar.

CASE V.—A Chinese had his back covered over with an intense inflammation; it looked like wheals.

CASE VI.—The writer had twice on the upper surface of prepuce a very small patch of light red, with from three to four small papules on the surface.

CASE VII.—A Japanese lady had a small patch on the cheek, of the mild form.

The only information that I have been able to gather of the foregoing cases has been very indefinite indeed. Cases I and II keep a washerman in their own compound, so that their clothes do not leave the premises. Cases III, IV, and VI employed a common washerman, who only washes foreigners' clothes; both the above have their soap, etc., found for them, so that they would not use the Chinese soap made of crushed tea seeds and twigs mixed, and even from the use of the latter I have had no complaints from Chinese, so that I am of opinion it can not be due to bad washing of clothes. Case IV, on another foreigner suggesting that he had been poisoned by the web of a spider, recalled that on coming out of his bath-room door a web had come in contact with his face, which he rubbed with his hand, and so communicated it to his chin and lip. Case V, on my questioning him, said that he remembered during the night being half awakened by something irritating him, swept his hand over and so brushed something away. The Chinese say themselves that this is due to a spider they call "là-gia." urinating on the towels, clothes, pillow-cases, etc. They are also very frightened if a cobweb crosses the face, being afraid of its hurting the eye; if it does this they apply some water mixed with Chinese or, as it is named at home, Indian ink. From the numbers of spiders that abound in a hot damp climate like this, taken in conjunction with Cases IV and V, and the common belief of the Chinese, who observe little things with minuteness, I, for the present, believe in the spider "là-gia" as a factor in causation. Foreigners in the East are cleanly in the extreme, always having one or two baths a day, besides changing their singlets or other underlinen at least once.

LETTERS, COMMUNICATIONS, ETC., have been received from **A** Antilles; A. K. C. (Lond.); Associate; Mr. R. B. Anderson, London; Mr. J. E. Allen, London; Dr. H. Austen, London. **B** Blackpool; B.A.; British Homes; Dr. L. D. Bulkeley, New York; Dr. A. Bronner, Bradford; Dr. T. Barlow, London; Mr. J. F. Briscoe, Alton; A. H. Burgess, M.B., Manchester; Mr J. P. Bush, Clifton. **C** Colonial; Civil Surgeon; Candide et Caute; Dr. W. Calwell, Belfast; Messrs. J. and A. Churchill, London; Mr. O. Campbell, Saddleworth; Deputy-Surgeon-General H. Cayley, Weybridge; Mr. W. R. E. Coles, London; Mr. H. C. Carter, London; Mr S. Cliffsyr, Ammanford; H. C. Colman, M.E., Broughty Ferry; Dr. W. T. Cocking, Sheffield; S. Crawshaw, M.B., Ashton-under-Lyne; Dr. J. M. Clarke, Clifton; Dr. F. J. H. Coutts, Manchester. **D** Dr. W. E. Dixon, Forest Hill; Dubicus; T. Divine, M.B., Dewsbury; Dr. A. Duke, Cheltenham. **E** Edina; E. L. C.; Dr. F. Edge, Wolverhampton. **F** Mr. W. T. Freeman, Reading; Mr. C. Fenwick, London; A. Fraser, M.B., Manchester; Mr. E. H. Freeland, London; A. G. Francis, M.B., Hull. **G** G. F. S.; G. P.; Dr. H. L. Gordon, London. **H** Hibernia; Dr. J. H. Hill, London; Mr. M. Houghton, Ilford; Dr. W. Hutchinson, London; Mr. A. Howatson, Neuilly-sur-Seine; Dr. T. A. Helme, Manchester. **I** I.M.S.; Messrs. Innes, Smith, and Co., London; Dr. W. W. Ireland, Polton. **J** Justitia. **K** Mr. R. Kershaw, London. **L** Dr. J. P. Lyon, Buffalo; Mr. S. M. Laurence, Trinidad; Dr. F. Livingstone, Rochdale; A. W. W. Lea, M.B., Manchester; J. T. Leon, M.B., London; Mr. S. T. Lord, Castleton. **M** M D; Mr. O. Mayhew, Portsmouth; W. Mitchell, M.B., Bradford; Mr. J. M. Menzies, London; Mr. T. E. Mansfield, Bristol; Miss L. A. Maule, London; Dr. R. L. Meade-King, Taunton; Mr. R. A. Milligan, Northampton. **N** Messrs. Nicolay and Co., London; Miss K. F. Nerie, Coventry. **P** P.V. for over 30 Years; Dr. J. Pringle, Manchester; Sir H. C. Perrot, Bart., London; Mr. W. G. Porter, London; Dr. J. E. Platt, Manchester; Mr. W. S. Prophet, Manchester; Dr. W. H. Paterson, Grantham; Mr. H. J. Prangley, London; H. S. Pope, M.B., Bridgwater. **Q** Q. S.; Q. **R** R. S.; Dr. J. G. Robertson, Ashwell; Mr. A. E. Russell, London; Mrs F. Rye, London; G. A. Reid, M.B., Southsea; J. S. Riddell, M.B., Aberdeen; Messrs. Rebman, Limited, London. **S** Dr. J. Symington, Belfast; Messrs. Street Bros., London; Dr. W. Sykes, Broughton; Dr. H. G. Smeeth, Stockport; Dr. T. Stevenson, London; Dr. P. A. Smith, Glasgow; Dr. H. F. Stokes, London; Sir J. B. Sanderson, Oxford; Mr. H. Saunders, Teddington; Dr. A. Sheen, Cardiff; Dr. F. M. Sympson, Lincoln; Dr. J. F. J. Sykes, London; W. W. Sinclair, M.R., Ipswich; Mr. W. M. Scott, Bridgwater. **T** Transparent; Dr. A. J. Turner, Brisbane. **U** Union Steamship Company, Manager of, London. **V** Valencia; Viator. **W** West County M.O.H.; Miss R. Wood, London; Dr A. S. Wohlmann, Bath; H. Wintle, M.B., Staines; Dr. F. Willcocks, London; G. Warnes, M.B., London; Mr. H. Wilson, London; Dr. H. Woods, London; G. B. M. White, M.B., London. **Y** Dr. M. Young, Crewe. **Z** Zephyr.

BOOKS, ETC., RECEIVED.

Pharmacopœia of the University College Hospital, 1899. Edited by H. Wilson. London: J. Truscott and Son.

Leitfaden für die Schwangeren-Untersuchung. Von Dr. E. Winternitz. Leipzig: A. Georgi. 1900. M.3

Die Mischgeschwülste. Von Dr. M. Wilms. Heft II. Leipzig: A. Georgi. 1900. M.4

Difficult Digestion due to Displacements. By A. S. Eccles, M.B. London: Baillière, Tindall, and Cox. 1899. 4s.

An Introduction to Diseases of the Nervous System. By H. C. Thomson, M.D., M.R.C.P. London: Baillière, Tindall, and Cox. 1899. 4s.

Transactions of the Epidemiological Society of London. Vol. xviii. 1898-99. London: Shaw and Sons. 1899.

Leçons de Pharmacodynamie et de Matière Médicale. Par G. Pouchet. Première Série. Paris: Octave Doin. 1900. Fr.18.

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AN ADDRESS
ON
THE RELATION OF SCIENCE TO EXPERIENCE IN MEDICINE.

Delivered at the Middlesex Hospital.

By Sir J. BURDON-SANDERSON, Bart., M.D.,
Regius Professor of Medicine, Oxford; formerly Assistant Physician to the Hospital.

If a comparison be made of the two great branches of medical practice—surgical and medical—with reference to their present position and past progress, one of the most striking points of difference is that in that progress the influence of scientific discovery has been much greater in surgery than in medicine, so that those surgeons who speak of their own as the scientific branch of the profession appear to have some justification for doing so. It is generally known, even outside of the profession, that the surgeon has during the last two or three decades acquired new powers for the preservation of life and relief of suffering. Nor does anyone doubt that knowledge which has been acquired by research as to the nature and causes of traumatic infection has not only made the ordinary operations of surgery more successful, but has enabled the surgeon to encounter without apprehension difficulties which before were rightly considered insuperable. Most medical men would also admit that scientific discoveries in another field—that relating to the localisation of function in the central nervous system—have enabled surgeons to relieve many sufferers whose cases were previously hopeless.

As regards medicine, the influence of scientific discovery in recent times has not been so obvious. Progress has been made, but in a different way and much more gradually. It has been rather in nosology than in pathology—rather in the study of the distinctive characteristics of diseases with a view to diagnosis and treatment than in the investigation or solution of the difficult pathological problems which underlie the manifestation of disease in internal organs. A chief reason for this may, I think, be found in the great extent and complicated nature of the ordinary clinical investigations which it is the life work of the physician to make, with an immediate view to diagnosis and treatment—investigations which are so engrossing that if he carries them out thoroughly and conscientiously he has no time left for any systematic inquiries excepting those that are directed to these ends.

In saying this I do not for a moment suggest that it could be or ought to be otherwise. It would be an exaggeration to say that to be an accomplished clinicist a man must be nothing else, for some of the greatest clinicists have been equally great pathologists; as a distinguished example of this we cannot fail to think of one whose name is revered by us all. On the other hand, it is undeniable that some of the greatest pathologists of the last half century have not been clinicists. To acquire clinical experience for oneself, to assimilate the experience of others, and to unite the items of the two kinds of experience so gained into a whole, so as to be able to bring them to bear at any moment on the elucidation of cases, is sufficient life-work for any man. It may be stated generally that the modern progress of knowledge in medicine has been due to the accumulation and systematisation of clinical experience; but this is only true so long as we assume that knowledge is of one kind only. I wish this evening to emphasise what you will all admit to be true—namely, that there is another way of regarding disease—as a subject of scientific investigation.

In other words, there are two kinds of knowledge, of which both are founded on observation, but the one is built up of data derived from the observation of cases during life and after death (for the clinicist does not change his method when he enters the *post-mortem* room), that is to say, on experience; the other is attained by the method which in modern times has been called scientific because in the exact physical sciences and in the sciences of observation—such as physiology and pathology—which are immediately based upon them, it is the only method used. Fully recognising the value of each, we correctly indicate their essential nature by designating the one empirical and the other etiological. But for our purposes the words "clinical" and "pathological" are more expressive, as denoting that the data which the one deals with are those of clinical experience, while the other seeks to discover the origin of diseases, that is, the antecedent conditions which produce them.

In emphasising this distinction, I feel as if I were labouring to enforce what everyone is prepared to accept. Few would be inclined to deny that the phenomena of disease may be legitimately brought within the scope of scientific investigation. I cannot, however, conceal from myself that there are very many persons whose opinions are well worthy of respect, to whose minds disease presents itself under one aspect only, namely, as a thing to be cured or prevented, and to whom any method of investigation which, disregarding for the moment the benefit of the sufferer, professed to have as its aim the discovery of the causal relations between certain morbid changes and the conditions which give rise to them, would seem unprofitable and even unjustifiable. Yet investigation of this kind is precisely what is meant by the scientific study of disease. We cannot apply this term with any regard for accuracy either to the observation of pathological changes after death for the verification of diagnosis, or to the use in the ward or laboratory of exact methods borrowed from other sciences for a similar purpose, but only to the direct investigation of pathological problems. The physician is constantly receiving aid in his special work from the more exact sciences, but this does not aid him in the investigation of the nature and causes of pathological phenomena. For the one thing needful is that the investigator should be conversant with the method by which alone a real understanding of the processes of Nature can be acquired—that method which makes all sciences one, uniting pathology with physiology and physiology with natural philosophy, at the same time that it draws a well-defined line of demarcation between science and what is not science.

If in what has preceded I have made it clear that medical knowledge taken as a whole presents itself to us under two aspects corresponding to the methods by which and the purposes for which it is acquired, I may now pass on to consider how important it is for the future of medicine that we should assign its true value to each of these two aspects of medical knowledge, the practical and the scientific, of which the first may be considered as the source of efficiency in the art of healing, the kind of knowledge which makes the physician supreme in the hospital and the sick room, the second as having in it the promise of the future. It is of the nature and certainty of this promise that I wish most to speak this evening. I hope you will not think it superfluous if before attempting to do so I say a word or two by way of retrospect.

I will not waste words in proving what is familiar to everyone who knows anything of the history of medicine during the nineteenth century, namely, that up to the present moment the advance of medical knowledge has consisted chiefly in the improvement of diagnosis—that is, in the discovery and employment in practice of exact modes of observing and recording cases. In the early days of medicine the criteria by which the physician was able to conjecture what ailed his patient were vague and his judgment thereon inconclusive. This is now no longer true. Just as in natural history the knowledge of plants and animals began with the recognition and discrimination of species, so the great achievement of modern medicine has been the accurate recognition of the various forms of disease. We should have no difficulty in obtaining striking evidence of this, if it were possible to compare our present clinical knowledge of any group of diseases of internal organs with that which existed before the middle of the century. I mention that time because it was the beginning of a period of rapid advance, the causes of which can be very easily traced. Of these the most important were the systematic study of descriptive pathological anatomy, the discovery by Laënnec of the methods of physical diagnosis, and the introduction by Louis of more exact methods of recording and observing cases. And here I would ask you to note that the experience on which the splendid edifice of exact knowledge which we now speak of as clinical medicine, is founded is as truly experience as that

which Hippocrates, in his first and most familiar aphorism, so justly pronounced to be fallacious; for then no less than now, whatever knowledge existed was derived from the observation of cases, the difference being that the observations themselves were vague and the description of symptoms vitiated by the preconceptions of the observer. So that although the two kinds of experience might be as different from one another as a Greek galley and a modern battleship, Hippocrates was just as much a clinicist as any physician of the present day; and we, on the other hand, are as truly empirics as he was. If we shirk the word it is not that we hesitate to admit that the knowledge we most value is that which is founded on experience, but because, like many other words, it has acquired a disagreeable meaning, which does not properly belong to it.

I have referred to the Father of Medicine as a clinical observer merely for the purpose of emphasising by contrast the statement that when we speak of the clinical method as that by which medicine has chiefly advanced to its present position, we use the expression in the most modern and comprehensive sense. The clinical method includes everything that we do for the elucidation of the case, whether in the ward, the *post-mortem* room, or the laboratory. However elaborate may be the instruments of precision which we may be able to borrow from the physiologist, the physicist, or the chemist for the examination of the patient during life or for the study after death of the changes which the affected tissues have undergone, our method is, and continues to be, clinical. Just as the art of destroying life does not become a science, notwithstanding that the complicated engines of destruction which are used in it have been constructed on scientific principles, so the art of saving life is not made into a science by the use of what are called scientific instruments. In a certain sense science is the handmaid of medicine, but this expression denotes only the technical relation between science and medicine. Thus, for example, when Helmholtz discovered the ophthalmoscope, new powers of exploration were thereby conferred on the ophthalmologist. In like manner we are grateful to the distinguished discoverer of *x* rays, not because we anticipate that they may serve to throw light on any pathological problem, but because the new mode of exploration constitutes so valuable an addition to the available means of exploration. But neither of these discoveries constitutes in itself an advance in the science of medicine.

I trust that you will not think that I have been needlessly wasting time in setting forth what in substance is sufficiently plain. I was desirous that we should have in our minds a just conception of the present position of medicine as affording the best standpoint from which to look forward to the future. I wished to make it clear that medicine has hitherto progressed chiefly by the perfecting of its clinical method, in order that I might express to you my own confidence that the future will not be merely a continuation of the past. The work of elaborating and co-ordinating case knowledge will, we may be sure, go on as it has done, and conduce as ever to an improvement of diagnosis and treatment; but, if I am not misled, we must look in another direction for the promise of the future.

I figure to myself the advance of medicine as taking place by two continuous processes or by two collateral channels, distinguished from each other by the tendencies which I have already indicated, but not severed from each other by any sharply-defined line of demarcation. Of the two the empirical or clinical has hitherto been the most important; but already the smaller stream—that which represents the scientific study of disease as a natural process—the object of which was marked perhaps more distinctly than in any other way by the publication of the first number of *Virchow's Archiv* just fifty years ago—is becoming year by year deeper and wider.

The systematic investigation of morbid processes is going on all over the world, and producing additions to knowledge which year by year increase in value and importance. Are we not right in anticipating that during the next century this progress will not only continue, but continue at an ever-increasing rate? I have not myself the slightest doubt that it will be so, and that in this progress even more than in the improvement of clinical methods the promise of the future is contained. The line, therefore, we ought to pursue is clear. We have to make every possible effort to further the fulfilment of that promise. And it is well that we should recognise from the first that in this effort we must not expect to receive much encouragement from outside, not even from all of our professional brethren, whose practical tendencies and occupations make it difficult to realise any form of truth that does not fall within the scope of their own experience. This is the true source of the scepticism which we meet with every day as to the value of scientific investigation in medicine. The only way in which we can hope to cope with it is by knowing ourselves what we have in view, and how serious is the task we have undertaken.

There can be no doubt that this task is beset with difficulties, but, on the other hand, I think that there are good reasons for the hopefulness which I have allowed myself to express. No one here need be told that the facilities which are afforded here in this and other London schools for pathological study contrast in the most striking way with the state of things which existed when I was a member of the staff of this hospital. But external conditions in the way of laboratories and their equipments are not the one thing needful for work. As in practical matters, so in research, the worker is much more essential than the workshop. Now the contrast between now and formerly in our London schools and elsewhere is even greater as regards the number and competency of workers than as regards the means for effectual work at their disposal. The two principal qualifications for our work are, in my judgment, training and faith.

To be of real value as an investigator a man must have learned, by becoming conversant with some field of exact scientific inquiry (the most important and best adapted for the purpose being chemistry and physiology), the nature and value of the scientific method, and have thereby acquired confidence in its power to unravel all questions which fall within its own categories. Such a man, when at last having bid adieu to examinations and (will you allow me to add?) resisted their deadening influence, he is again able to think freely, is prepared at once to come to the front and take his part in the investigation of pathological or etiological problems. So far as concerns British pathology, the fact that affords us the strongest ground for confidence as regards the future is that while thirty years ago you could with difficulty find anyone possessing the qualities for genuine scientific work, such men are now forthcoming in every hospital.

I trust that these considerations may serve as a basis for the discussion of certain suggestions of a practical nature which I desire to bring before you relating to the part which we may hope that the London school of medicine will take in the future advancement of medical science. We may, I think, rightly regard the metropolitan schools collectively as constituting in themselves a great medical university. We do so in the hope that at no distant period they may be united for university purposes. Now, the two great functions of a university are education and the extension of knowledge by research. As regards the first I shall have nothing to say this evening. We may confidently anticipate that the clinical instruction given and the opportunity for clinical study afforded to students will improve year after year, and that practitioners will twenty years hence be even better informed, and their practice more sound than it is at present. But it is the other function of a university to which I would call your attention. Admitting, as I think must be admitted, that the metropolitan schools have been hitherto, and will continue to be, admirable institutions for the training of men competent to exercise the healing art to the public advantage, it may still be asked whether our hospitals are, as they ought to be, observatories in which the scientific method is employed, not with a view to immediate utility, but for the eventual benefit of mankind by the advancement of knowledge. If we are right—as I am sure no one present doubts—in regarding a hospital school as an academical institution of which it is as much the function to make additions to knowledge as to educate, the organisation of every hospital school should comprise a special department for research in medicine—that is, that just as we have recognised for long the importance of pathological anatomy by the establishment in each school of a museum for the collection and display of morbid specimens, so we should provide what

is of much more importance to the progress of medicine—a working place for the investigation of morbid processes. And, inasmuch as in most instances such investigation could be carried out much more effectually by the co-operation of several hospitals, I should further desire to see established a Hospital Association or an Association of Hospitals for the advancement of medicine by research. The organisation of such an association would be simple. Each hospital would, as I have said, provide a research laboratory, under the direction of a working pathologist, the equipment of which would be the best that the resources obtainable for the purpose would admit of. The function of the Association would be the selection of subjects suitable for combined investigation.

Of the nature of these problems I need, I think, speak only very shortly. They would probably be of two kinds, namely, etiological and therapeutical, for it seems evident that for the investigation of the action of remedies, including under this term all the agencies which can be employed for the purpose of modifying pathological states, the same combination of clinical with physiological research is required as for the investigation of the processes of disease. But the greater part of the work of the Association would come under the other head. It would be advisable to restrict the scope of the investigation undertaken by well-defined limitations, and particularly to guard against the attractiveness of topics deriving their interest from their novelty or from the rarity of the diseases to which they relate rather than from their intrinsic importance. Preference would rather be given to the standing questions of clinical pathology, as, for example, to the investigation of the nature and causes of functional disorders or organic changes which, however frequently they may occur, are very imperfectly understood; and among these it might be well to select those in respect of which current medical opinion appears to be less in agreement than could be wished with the data of science. Let us take, for example, the case of gout. Here the difficulty which we find in harmonising what is ordinarily believed as to the etiological relation of gout with uric acid, with the relatively complete knowledge we now possess of the physiological significance of that substance, at once suggests that it is desirable that the two kinds of knowledge now apparently at variance should be, so to speak, confronted. Another field in which it is difficult to reconcile the clinical and physiological aspects of the same phenomena is that of the relation between chronic renal disease and the functional disorders of the vascular and lymphatic system to which it gives rise. Here, again, the light which has been thrown on these subjects by such experimental investigations as those of Dr. Starling (which I may mention in passing, have since their publication been confirmed by subsequent work in Germany) make us feel a certain degree of disappointment in finding ourselves still compelled to speak with the utmost reserve about such questions as the etiology of renal dropsy. Here, as in many other instances of a like nature, unsolved problems present themselves in connection with even the best-known diseases, from the moment that we turn our attention to the underlying processes of which the familiar clinical characteristics are but the outward and visible signs.

I trust that the suggestion I have made to you may not seem wholly unworthy of your attention, however imperfectly I may have been able to set it forth. I do not, myself, feel it to be premature. I should not, however, have the boldness to propose it even now, were it not that, as I have already told you, the reason which would have forbidden its being entertained no longer exists. We have now what we had not before—a sufficient number of men who, with youthful enthusiasm and with the best of their lives before them, have at the same time the scientific training necessary for pathological research.

If, as I trust may be the case, the new metropolitan University is successfully constituted, it may be hoped that the economy of resources consequent on a better organisation of scientific teaching may set free the hospital medical schools from obligations which at present seriously impair their efficiency as academical institutions. At present, as we all know, elementary chemistry, elementary natural philosophy, and natural history are taught in schools of medicine; and large sums have, no doubt unavoidably, been spent in providing accommodation for subjects which lie outside the legitimate scope of medical study. It is surely not too much to hope that when these preparatory disciplines are duly provided for elsewhere, the resources hitherto required for their maintenance may be devoted to purposes in which we as the representatives of medical science can take a deeper interest, and particularly to the establishment in all hospital schools of well-equipped working places for clinico-pathological researches.[1]

In all that I have said this evening my aim has been to advocate the claims of scientific research in medicine; I have made no reference to the teaching of science. It is, however, easy to see that if the organisation of pathological research were to become more distinctly recognised as a function of a hospital medical school, the tendency of the change would be to infuse into the teaching of the science of medicine a reality and life which it has not as yet possessed.

Under present conditions there is much too wide a gap between the scientific and the practical part of the course of study for medicine. Let me take, for example, the case with which I am most familiar—that of the Oxford or Cambridge student, who, after receiving his preliminary instruction in the exact sciences in biology, and then acquiring a more thorough knowledge of anatomy and physiology, repairs to a metropolitan medical school for the most essential part of his medical education. A considerable proportion of these comparatively well-trained students are able to grasp the connection between science and practice, so as to appreciate the bearing of the science they have learned with the practical work in which for the rest of their lives they are to be engaged. But as regards the rest, we know what happens as soon as they have got rid of their last examination in science. It would be of little consequence that the details of the knowledge which has been so painfully acquired should fade from the memory, if one could believe that some notion of the scientific way of looking at questions was retained.

Whatever plan of study is followed, it is inevitable that the competent should succeed and the incompetent fail; but in our medical course there are causes of failure which it seems possible to obviate. One of these is no doubt the overloading of our preparatory scientific curriculum with subjects which have no bearing on future work, an evil against which the General Medical Council has failed to protect us. The other is the unfortunate interruption of continuity which exists between the practical and the scientific stage in medical study.

It may, I think, be stated generally that every student when he enters on his hospital career feels that he is turning over a new leaf. It is quite natural that he should do so, and quite right, provided that he does not lose his interest in what he has previously learned. How is this to be prevented?

I have submitted to you this evening the proposition that research ought to be a recognised function of every medical school that lays claim to an academical position, on the ground that research is necessary for the advancement of medical science. The more this principle is acted upon the more effectually will the science of medicine be taught, for there is no qualification so essential to a teacher of science, and especially of pathology, as that he should himself be engaged in trying to master its difficulties.

Every advance in the direction I have indicated will have a direct effect on teaching. The breach will cease to exist. The physiologically-minded student will no longer feel that in approaching the bedside he must leave his scientific preconceptions behind. In turning over the new leaf he will not forget what was inscribed on the old, but will rather find that the old has acquired a new value from its intimate connection with the work of his life.

But, gentlemen, all depends on whether you accept the proposition I have submitted to you—namely, that the science of medicine, even more than the art, holds the promise of the future.

NOTE.

[1] At the Middlesex Hospital a systematic investigation of the pathology of cancer is now in contemplation. I learn that it is intended to appoint a highly-qualified young pathologist to conduct the proposed research, and that in the necessary clinical work he will have the co-operation of the registrar of the Cancer Department of the hospital. The whole will be under the direction of a Committee of the hospital staff. I refer to this as an example of the kind of work that can be done, and of the way of doing it.

PRIMARY TUMOURS OF THE SUPRARENAL GLAND AND THEIR REMOVAL BY OPERATION.

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In connection with the cases recently published in the *Johns Hopkins Hospital Bulletin* of January-March, 1899, and in the British Medical Journal of October 21st, 1899, I would call attention to two cases which I reported in the Journal of January 7th, 1893, of removal of tumours of the suprarenal capsule.[1]

One of these cases was operated upon in 1885, and is referred to and illustrated in my book on *Surgical Diseases of the Kidney* published in that year. The other case was operated upon in March, 1892. To these I can add a third case operated upon in March, 1894. As the two former were only briefly reported in a course of lectures on the Surgery of the Kidney, and, as the third case has not been published, I propose giving a short account of each of them under this their proper title, and adding a few remarks on the pathology, clinical features, and surgical treatment of adrenal tumours.

Case I.—Tumour of the Suprarenal Capsule removed through Langenbuch's Incision.

H. S., a pale, emaciated man, aged 51, was operated upon by Langenbuch's incision on April 13th, 1885, for a large tumour 6½ in. in diameter. Thirty years ago he had gravel, but none since. Two years ago slight hæmaturia in turbid urine, not since. During the last few months had rapidly lost flesh. The tumour, which had been noticed for six months and had caused pain, presented a well-defined prominence, the size of an apple, immediately below the left costal margin; this prominence looked like a tumour situated in and projecting from the parietes, with its central point in the linea semilunaris, and its inner border reaching the linea alba, and extending along it for a distance of an inch and a half; it was, however, only a part of a large tumour, completely filling the left iliocostal space. It moved freely on manipulation, and when the patient changed from the recumbent position on to his right side it fell bodily against the anterior abdominal parietes. It also moved freely with respiration. A notable symptom in this case, which had commenced eighteen months before the tumour was detected, and had been gradually increasing with the growth of the tumour, was a large varicocele of the left side. At the operation it was seen to be directly due to distortion and distension of the spermatic vein, which with the inferior mesenteric vein curved over the front and inner side of the tumour, and was enlarged to the size of the ring-finger.[2]

The following account is taken from the printed records of the Middlesex Hospital for the year 1885, p. 230, where it is classified under the heading of "Sarcoma of Suprarenal." On examination, after removal, the mass was circumscribed, firm, nodulated, and about the size of a child's head; it weighed 61½ ozs. The whole kidney had been removed; it was adherent



Fig. 1.—Tumour of adrenal, with kidney flattened out over part of its surface.

to the tumour, much wasted from pressure, and spread out like a hood over it, but not otherwise involved in the disease. The growth was situated at the upper extremity of the kidney, and had evidently originated in the suprarenal capsule. The appearance presented on section was that of a dense quasi-fibrous structure, with large areas of exceedingly soft tissue interspersed. On microscopical examination the tumour consisted for the most part of groups of cells in columns, on the type of those of the normal suprarenal coxtex embedded in an abundant fibrous stroma, infiltrated with small cells; in other parts this columnar grouping of the cells was lost, the type of the group resembling that of the medullary portion of the suprarenal capsule. Intermixed with these elements were extensive tracts of fibrous tissue, infiltrated with the spindle and small round cell. Death occurred from shock within twenty-four hours. At the *post-mortem* examination the intestines were distended, and coated in places with a little recently-effused lymph. The stomach was enormously distended, and measured 12 inches across. The lungs were deeply engorged; the bronchial tubes contained a large quantity of secretion; one infiltrated gland was found behind the peritoneum, but no secondary deposits in other organs. The right kidney, right suprarenal capsule, and the bladder and ureters were all normal. One-half of the tumour is preserved in the museum of the Middlesex Hospital, and the other half in the Hunterian Museum.

Case II.—Tumour of the Suprarenal Capsule, removed through Langenbuch's Incision.

Mr. C., aged 43, was sent to me by Dr. McNaught, of Walsham-le-Willows; he had had hæmaturia for two years, and following the influenza in the summer of 1891 he rapidly emaciated. In March, 1892, a tumour was detected in the right side of the abdomen, associated with great pain and suffering; and his liver began to enlarge, but without jaundice. There was a fixed hard nodule in the left temporal region, which he said followed a severe toothache in March of this year. Thus the abdominal and the temporal tumours were noticed at the same time.

The operation, after consultation with Dr. Cayley and Dr. McNaught, was undertaken to relieve the intense suffering. On opening the abdomen the liver was found to be studded with yellowish white nodules, resembling cancer; the renal tumour, which was exceedingly movable, easily shelled out of its connections. He recovered from the operation rapidly, was relieved of all his pain, and left the nursing home on June 13th, just a fortnight after the operation.

Eight months after the operation the patient was alive and still going about, but his liver had increased greatly in size, and had become very irregular. The skin over the entire body contained scattered nodules the size of peas. His chief trouble was from constipation and occasional sickness; he had emaciated greatly, and was a "wretched sight to behold." He died shortly afterwards, but no *post-mortem* examination was allowed, nor was I successful in my attempts to obtain one or more of the cutaneous tumours for examination. The large tumour (Fig. 2) removed



Fig. 2.—An adrenal tumour removed from patient in Case II. A, flattened area of kidney; B, lower portion of kidney unaltered; C, vessels at the hilum.

resembled in structure the medullary part of the suprarenal gland. It had encroached upon, compressed, and flattened out the upper half of the right kidney, which was atrophied and stretched over part of the tumour. A branch of the ureter passed into the flattened area of the kidney, so that it appears as if the kidney had been completely divided opposite the hilum. The surfaces in contact with one another are perfectly smooth and separate, and are all covered by a thin, fibrous envelope. The figure shows a strong fibrous band passing from the tumour to the flattened surface of the kidney, and serving to hold the two together.

Case III.—Cystic Sarcoma of the Suprarenal Gland removed by Lumbar Incision.

A lady, aged 57, had only a few weeks previously noticed a swelling in the left hypochondrium, when I was asked to see her by Dr. Andrews, of Hampstead, on March 22nd, 1894. The tumour had grown, and was growing rapidly. It moved with freedom backwards and forwards between the two hands; it was elastic, painless, and not tender. It was resonant in front, and there was an absence of bulging in the flank. The patient was not at all emaciated, but, on the contrary, moderately fleshy, though not

actually stout. Through an incision in the loin a large cyst was seen, springing from the upper part of the kidney (Fig. 3), and connected with this was a large elastic cystic tumour, which displaced the kidney very much downwards. The cyst was filled with grumous semi-fluid and brain-like material, and some brownish-grey gelatinous tissue, looking like decolorised blood. The tumour reached high up under the diaphragm and infringed upon the spleen, and pushed forward the colon. It was entirely retroperitoneal. The kidney, which presented numerous minute cysts on its surface, was removed with as much of the wall of the tumour as possible, and the contents of this cystic tumour were thoroughly scooped out with



Fig. 3.—Cystic kidney, with large cyst at the upper end, part of the wall of which was invaded by the adrenal growth.

the fingers. The portion of the tumour wall near the diaphragm and spleen could not be peeled away without force and so were left behind. There was not much bleeding. Some iodoform was rubbed over the surface of the cavity; two large drainage tubes were introduced and the parietal wound closed. The patient recovered from the operation. The kidney on section showed a number of small cysts of various sizes. The contents of these cysts were a light yellow or brown gelatinous fluid. The larger cyst, which sprang from the upper and back part of the kidney was of the same nature as the small cysts; its walls, where they were in relation to the kidney, consisted of compressed renal cortex. The anatomical and histological characters alike confirmed its nature and origin.

On May 28th the patient died of recurrence of the disease. The recurrent growth extended from the diaphragm to the pelvis, and from the side to the median line of the abdomen. The surface of the recurrent tumour was lobulated. Pleurisy had existed for three weeks before death.

The following is Dr. Voelcker's report of the parts removed:

"The left kidney is 5 ins. long and 2.5 ins. broad. At its upper and inner end is a sac, the wall of which is continuous with the capsule of the kidney. The outer surface of the sac wall contains some perinephritic fat. The wall of the sac is incomplete. The base of the sac is situated in the upper part of the kidney, and measures 2.25 ins., and is formed by kidney substance covered over with a membranous exudation. The base of the sac shows in its lower half an oval depression measuring 1 in. by 0.75 in. across, and varying in depth from 0.3 in. to 0.4 in. The floor of this portion is formed by smooth kidney tissue. Around the upper half of the circumference of this oval depression the wall is composed of a layer of membrane firmly adherent to the underlying kidney tissue."

The capsule of the kidney is not unduly adherent, but, on removing it, numerous depressions and some yellow, firm, projecting nodules are seen on the surface. On section the nodules are circular, sharply defined, yellow masses (cysts), of the colour and consistence of cream cheese. They have a greasy feel, can be removed from their capsule, which is quite smooth, and under the microscope show fatty *débris*. The largest cyst is 0.4 inch in diameter. The cysts are most numerous on the anterior and inferior portions of the kidney. (Fig. 4.)

There is some excess of fat in the pelvis of the kidney, but there is no evidence of any new growth. Portions of the cyst wall and underlying kidney were submitted, after hardening, to microscopic examination. In the kidney itself there is no evidence of any new growth. There is chronic interstitial fibrosis, with some scattered foci of inflammatory exudation, chiefly in the neighbourhood of the cyst. There are some small cysts with walls composed of fibrous tissue, but in which no epithelial lining remains. In the foci of small cells, no giant cells and no caseation can be made out. In the kidney tissue beneath the cyst wall there is considerable staining from extravasated blood. The cyst wall on its inner surface shows merely fibrous tissue and small inflammatory exudation. The outer surface of the cyst wall shows fatty tissue infiltrated with small, round, and oval cells, and also with small branched cells. The cells are most numerous towards the peripheral portion of the section, and appear on the free surface of the section, where they resemble the cells existing in the material removed at the time of operation. A portion of the material removed from the cyst at the time of operation was hardened, embedded, and cut. The microscopic examination shows it to be composed of round and oval cells, arranged in irregular tracts. There is no intercellular substance. Here and there are seen spindle cells, forming processes, around which smaller oval cells are grouped. No epithelial cells or giant cells are present, and there is no obvious necrosis of the cells. The character of the growth is that of an oval and round-celled

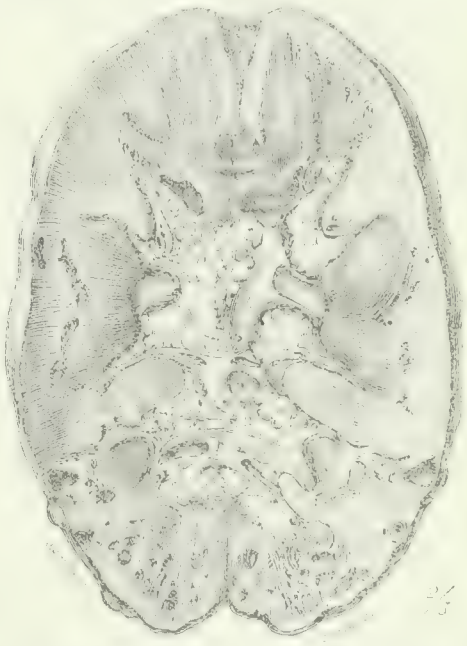


Fig. 4.—Left kidney laid open the same as shown in Fig. 3. Numerous minute cysts are seen on the cut surface of the parenchyma.

sarcoma. The growth appears identical with that noticed on the outer wall of the upper part of the cyst in the kidney.

From the above examination, it appears that there is no new growth in the kidney itself, but that a cyst similar to, but larger than, the other cysts in the kidney, has existed at the upper end of the organ. In addition to this, there was a sarcomatous new growth originating outside the kidney proper, possibly in an adrenal.

Pathology.

Much difficulty exists in distinguishing, pathologically as well as clinically, between primary tumours of the suprarenal gland and certain tumours of the kidney, a consequence of which is that tumours of the suprarenal capsule may unknowingly have been removed with the adjacent kidney, and have been grouped with renal tumours.

Primary new growths of the adrenals, especially those which attain to a size large enough to cause an abdominal tumour, are, however, very rare. Roger Williams found only one instance of primary adrenal growth in a collection of 8,378 consecutive cases of malignant disease.

For these reasons less attention has been paid to them by surgeons, and in surgical literature than by pathologists. The only account of the adrenals from a surgical point of view which has been attempted since Le Dentu added a few pages at the end of his work on the *Surgical Affections of the Kidney and Ureters*, published in 1889, is that recently given by Tuffier. Leconti and Robert have also made valuable contributions.

The nature of the primary enlargements of the suprarenal gland may be either (1) a purely glandular proliferation (like simple parenchymatous bronchocele) which some pathologists have, not very appropriately, called "adrenal goitre"; (2) large adenoma; (3) malignant growths which many have described as carcinoma, others, as positively, as sarcoma.

The origin of certain perinephritic tumours, other than primary adrenal new growths, is in adrenal "rests" sometimes found in the tissues around the kidney or in the renal hilum.

The nature of some primary tumours of the kidney is similar to the normal adrenal tissue, but in others, "while some portions simulate suprarenal tissue, other parts closely resemble an alveolar sarcoma, and some districts have an appearance which, I believe, many would be inclined to term carcinomatous" (Kelynack). Some are identical in structure with adrenal adenomata.

Grawitz's ingenious hypothesis, first published in 1883, that certain tumours of the kidney arise from small adrenal "rests" embedded within or beneath the capsule of the kidney (called by him "strumæ lipomatodes aberratæ renis") has been pretty generally accepted. Indeed, as Mr. Targett suggests, it is a question whether it has not been somewhat too frequently applied, with the result that some ordinary renal carcinomata have been referred to this extraordinary class. Such a mistake is quite compatible with the opposite one suggested above, that some primary tumours of the suprarenal gland have been regarded as primary tumours of the kidney.

It is not necessary to reject Grawitz's theory in order to accept somewhat similar, though morphologically different, theories as to the origin of some of these growths. Albarran's view is that many tumours arise from aberrant renal lobules embedded in the capsule of the kidney and capable of degenerating into epithelioma. Collections of embryonic tubes have been discovered in the renal capsules of a great number of fœtuses, and probably they represent aberrant formations derived from branchings of the convoluted tubules of the cortex not coming into relationship with the glomeruli of the renal parenchyma. Just as paradental epithelial *débris* in cancer of the jaw, and the tubular formations in the parovary in cancer of the ovary, so these pararenal tubules play an important *rôle* in the pathogenesis of cancer of the kidney.

Pilliet points out that in the process of development of the kidney in two parts, namely, the secretory portion and the collecting portion, certain areas of the secreting tissue, failing to join the calyces, become shut out, and are thus functionally isolated within the kidney. From these isolated tubules he thinks an epithelial evolution may take place at some period of the development or during the life of the individual.

In connection with these hypotheses, R. Marie's recent experiments are of interest as showing that pieces of the cortical substance of the kidney implanted beneath the renal capsule, in 2 cases out of 25, became adeno-epithelioma tous evolutions, and not grafts at all in the proper sense of the word.

It is now well known that bodies identical in structure with the suprarenal gland are found in the cortex of the kidney, in the perinephric tissue, in the mesentery, beneath the capsule of the liver (Schmorl) in the broad ligaments of a fœtal uterus (Marchand and Targett), and in the inguinal canal; but they are very rare, and are seldom observed by those constantly engaged in *post-mortem* examinations.

Pathologists and practised microscopists have in many instances given totally different interpretations of the microscopical characters of the same tumour.[3] What one regards as a typical renal tumour of accessory adrenal origin another speaks of as a spheroidal-celled carcinoma, another as an endothelioma, another as an epithelioma with clear cells, another as a renal adenoma, and again other observers have described them as primary angio-sarcoma, or alveolar sarcoma, or lymphadenoma.

Kelynack probably gives the true explanation of this when he says: "Although these growths may for convenience be placed in the large class of adenomatous forms of renal growth, it is clearly to be remembered that the cells of the suprarenal, although morphologically epithelial, are strictly of mesoblastic origin, and growths arising in adrenal 'rests' appear to be sarcomatous in general characters rather than carcinomatous."

Unless it can be shown that there is a distinct difference in the manner in which the kidney is encroached upon by a perirenal or a primary adrenal growth as distinct from a renal new growth originating from an adrenal "rest" or from the renal tubules themselves; or unless in any given case it is found that the suprarenal gland on the same side as the tumour is unaltered, it will not be possible in all cases to distinguish, even after their removal from the body, the one class of tumours from the other.

The same tumour is regarded by some as a pararenal tumour primarily of the suprarenal capsule, by others as a renal tumour contained entirely within the fibrous capsule of the kidney; and the confusion reaches its height when a tumour is described as a primary tumour of the suprarenal gland, and yet is stated to have "the capsule of the kidney continued over the surface of the tumour," as in the account of the specimen removed by Mr. Knowsley Thornton, and now in the Hunterian Collection, No. 3,597.[4] Thus we see that differences of opinion are entertained not only as to the pathogenesis of renal tumours, but also as to the manner in which a malignant tumour originating in the suprarenal gland can, as it grows, involve the kidney. Does it invade the kidney and cause its destruction, or does it merely flatten the adjacent part of the kidney as a simple mechanical effect of pressure whilst the two organs remain definitely separated by the fibrous capsule of the kidney? It is probable that it may do either.

The relations, or apparent relations, of the capsule to the various tumours in and around the kidney are not reliable as a guide to their morbid anatomy. The isolation from the renal parenchyma of a tumour situated immediately beneath the renal capsule is far from being decisive in favour of Grawitz's theory; neither is the argument that the capsule of the kidney seems to be continued over the tumour a decisive proof that the tumour originated in the kidney and not outside it.

A primary tumour of the suprarenal gland, like an encapsuled renal tumour, may stretch the kidney substance like a hood over part of its surface, and as the tumour increases in size the stretching of its own capsule, the thinning by compression of the capsule of the kidney, and the addition of a certain amount of connecting fibrous tissue may give it an appearance indistinguishable from that presented by a renal growth springing from an embedded accessory adrenal. Such newly-formed fibrous tissue is seen as a band in Fig. 2. In other cases it might develop into a more or less complete capsule. Again, as a tumour developing from an adrenal "rest" grows, little gaps may form in the capsule on its deep aspect, and little offshoots of the tissue may spread into the parenchyma of the kidney, whilst a few convoluted tubes may be seen on section in the tumour itself. There is equal reason to believe that as a primary adrenal grows downwards it may invade and cause the destruction of the kidney tissue, just as in Affleck's case a tumour, primarily of the right kidney, was found to have grown upwards and invaded and destroyed part of the liver.

It would also seem that incomplete development of the capsules of the kidney and suprarenal gland may allow of mutual interpenetration of part of each organ into the other. In one of these ways could be reconciled a description such as that given by Eve and Targett of Thornton's case, and which otherwise appears irreconcilable—namely, that the renal capsule was continued over what was considered to be a primary tumour of the suprarenal gland. Ricker has described a case in which the kidney and suprarenal gland were thus firmly united, the tissue of each extending into the other.

There is another condition which may account for the same appearance. In a case recorded by Eurich a nearly spherical tumour having adrenal structure was found in a space between the apparently normal suprarenal gland and a very small ill-developed kidney. This tumour had not encroached upon either suprarenal gland or kidney, either by invasion or compression, but had, so to speak, merely served to "fill a gap." The fibrous capsule of the suprarenal gland, however, "was prolonged at the lower pole of the tumour to form a short but broad pedicle, by which it was continuous with the capsule of the kidney."[5]

Symptoms.

No wonder when the anatomical and microscopical characters are insufficient to distinguish a perirenal from a renal new growth—a primary adrenal from a primary renal tumour of accessory renal origin—that little or nothing which is distinctive can be stated as to the symptomatology of adrenal tumours.

In fact the diagnosis in some cases is not only difficult, it is impossible; and this is not surprising, considering the proximity of the two organs, the similarity of their position behind the peritoneum, the not infrequent absence of hæmaturia in renal tumours (50 per cent.), and its occasional presence in primary adrenal tumours. Hence it has happened that the cases recorded in Otto Ramsay's paper of Excision of Primary Tumours of the Suprarenal Gland, Knowsley Thornton's case, Mr. Ward's case published in the British Medical Journal on October 21st by Mayo Robson; and the three cases reported above, were all diagnosed and operated upon as renal tumours.

The symptoms given by Ramsay from an analysis of 37 out of a total of 67 cases, in which the reports were full enough for the purpose, were the following:

1. The most frequent symptom, seen in 22 patients, was a marked and steadily increasing loss of strength, accompanied in many cases by extreme languor and debility.

2. Emaciation, varying greatly in degree, was noted in 20 cases; in few only of these was the loss of flesh extremely marked.

3. Gastro-intestinal symptoms were the next most frequent. Twelve out of 37 complained of nausea and vomiting, 9 of loss of appetite, 5 of constipation, and 4 of diarrhœa.

4. Pain in different parts of the body was complained of in 25 cases. The pain was referred variously in different cases to the renal region, to the whole length of the back, to the epigastrium, one or the other of the hypochondriac regions, or to the knee or ankle-joints. In several there was tenderness or pressure in the epigastrium or over the tumour. The pain was generally intermittent, but in some continuous.

5. The circulatory system in the case of adrenal tumour, as compared to that of Addison's disease, was rarely involved; palpitation or anæmia was a symptom in 11 cases, and œdema of the legs in 6. In most cases the œdema was due to renal changes, and not to the tumour; and it is a remarkable fact that in four or five cases in which there was extension of the growth into the vena cava and thrombosis the patients had no œdema.

6. The skin changes were not marked, only 3 out of the 37 showed distinct bronzing; but in 9 there was some change in the colour or texture of the skin, which was described as a "brownish discoloration," "muddy looking," or "of a yellowish colour." In 2 there was a peculiar profuse growth of hair. Both of these cases (Cayley's and Fox's) were in young children. Other writers, however, describe the same symptom in adults also. A marked cretinoid appearance, with abundant growth of hair over the whole or greater part of the body has been described by Fox and Ogle in children with adrenal sarcoma. Targett, in an adult female, the subject of primary sarcoma of the suprarenal body, met with hypertrichosis. In a female, aged 36, from whom Thornton removed a tumour, which Targett and Eve examined and considered a tumour of the suprarenal gland, the whole body, including the chin and upper lip, was thickly covered with long, dark, soft hair. This grew so rapidly that, though the abdomen was shaved for the operation, the hair quickly reappeared, and was a source of much trouble during the after-treatment of the wound.

7. Hæmaturia was noticed twice, and, as Ramsay remarks, this is important, because it makes the differential diagnosis between renal and suprarenal tumours still more difficult. In both these cases, however, it should be noticed that the hæmorrhage was really due to associated renal conditions (a cauliflower growth in the renal pelvis in one, and cystic changes in the kidney in the other).

8. An abdominal tumour was noted in a good many cases, but how often during life as distinct from *post-mortem* discoveries could not be deduced from the reports.

9. In 13 cases out of the 67 the new growth in the suprarenal capsule caused no symptoms whatever referable to that body. In 5 of these the symptoms were entirely confined to the respiratory tract—pneumonia, gangrene of the lung, extensive metastatic growths in the lung (2 cases), and intense bronchitis and weakness were the causes of death in these 5 cases.

As a rule in adrenal growths there is an absence of any marked urinary symptoms, but if the growth spreads through its capsule (like some of the aberrant adrenals spread through gaps in the deep aspect of their capsules) and invades the kidney, the urine may present the same changes as primary renal tumours are known to do.

The adrenal tumour may displace the kidney either downwards or outwards, and the kidney may give rise to a distinct prominence upon some part of the surface of the tumour, as it did in No. 1 of the above cases. In Case II the kidney, much altered and misshapen, was pushed below the tumour.

In a case recorded by Cohn a distinct transverse groove marked the junction between the tumour and the kidney. In one of Thornton's cases the kidney lay in a cleft of the tumour, and in the other it was pushed down almost into the iliac fossa, and was mistaken for a lobule of new growth. In one of Kelly's cases (reported by Ramsay) there was a kidney-shaped prominence on the surface of the tumour. Pawlik has noted this feature in the tumour as an aid to diagnosis, but even where it is present it is very difficult to be sure that the prominence is due to the kidney and not to a projecting lobule of the tumour.

Extreme mobility of the tumour will, I believe, be found to be in some instances a notable symptom; it was so in Cases I and II. When the patient sat up or turned to one side, it fell downwards, forwards, or inwards, by its own weight, moving more freely than a very movable kidney. This makes the enucleation of the tumour so easy in certain cases, and is doubtless due to the large quantity of loose areolar tissue which surrounds it, and to its early subjection to movements of the diaphragm. In other cases, if the growth becomes adherent to the diaphragm, liver, or spleen, it will not have this character, but, on the contrary, may become dangerously fixed.

The rapidity of growth and the greater frequency of metastases would seem to be in favour of adrenal as opposed to renal new growths. Rapidity of growth was a marked feature of Case III. The numerous metastases which occurred in Case II are of special interest as bringing adrenal tumours into strong resemblance with the remarkable cases such as that which I reported to the Pathological Society in 1880[6] of "general thyroidal malignancy" in which multiple tumours with the microscopic characters of thyroid gland tissue occur in the bones of the skull and of the extremities, and in the viscera, as secondary to enlargement of the thyroid gland.

Roger Williams found that of 36 collected cases of malignant tumours of the suprarenal gland, more than one-third occurred in infancy and childhood, some being even met with at birth. It has been thought that in children primary adrenal tumours are less frequently bilateral than primary renal new growths, but this point is not satisfactorily established as yet. There is a tendency for adrenal tumours to invade the diaphragm and spread into the chest. This, there is no doubt, occurred in Case III.

A symptom which was present in Case I is noteworthy, namely, varicocele on the side of the tumour. I drew attention to this in connection with left-sided renal tumours in my book in 1885, and at that time I did not know that Guyon had specially remarked upon it as an occasional symptom in renal tumours of either side. I have since met with it in a case of right renal sarcoma. The varicocele comes on after the commencement of the growth but possibly before the appearance of a tumour, increases with the tumour, and rapidly disappears after removal of the tumour. Its occurrence in Case I shows that it may occur in primary adrenal as well as in renal tumours.

Diagnosis.

Granted that in any given case there is the following group of symptoms, the diagnosis of a primary adrenal new growth should be made, and will most probably be correct.

1. A tumour in the suprarenal or renal region with a kidney-shaped prominence on the surface of the tumour.

2. An unusual degree of mobility of the tumour, so that it falls away from the loin on the patient rising or turning on to the opposite side.

3. Rapidity of growth of the tumour, and secondary growths in the skin, liver, or the temporal region.

4. Marked emaciation and rapid loss of strength.

5. Absence of any change in the urine, and of any alteration of the normal temperature.

6. The presence of some pigmentation of the skin, or of marked or rapid growth of hair over the body.

7. Some gastro-intestinal symptom, such as nausea, vomiting, diarrhœa, or constipation.

8. Pain, deep seated in some part of the abdomen; or an ill-defined, unexplained pain in some joint or distant part of the body.

It is, however, the exception to find the whole, or even the majority, of these symptoms present in any given case. If several of them are absent, and most especially if there is no tumour, a positive diagnosis is quite impossible.

Tumours of the suprarenal gland might have to be diagnosed from other conditions of that organ, such as tuberculosis and blood cysts. Tuberculosis rarely gives rise to a palpable tumour; besides, the general state of the health, the temperature, and the presence of tubercle in some other organ or part of the body would assist the diagnosis. A. F. Jonas published a case of a patient who had a palpable tumour due to tuberculous disease with symptoms pointing to a suprarenal new growth. He did an exploratory operation and successfully removed the suprarenal mass.

Blood cysts of the suprarenal gland are rare. Drouboix and Ramsay have studied them. They seem to be due to a necrosis and a subsequent hæmorrhage into the centre of a new growth, usually an adenoma. The cyst wall may be thickened, but otherwise is normal and composed of unchanged suprarenal tissue. The symptoms in some of the cases have been exactly like those of a malignant adrenal tumour, and a differential diagnosis has been quite impossible.

The difficulty of diagnosis is evident from the fact that in all the recorded cases of operation—except 2, which were mistaken for hepatic or gall bladder tumours—as well as in many cases not submitted to operation, the growths were taken to be renal tumours. It is more than doubtful if even a close attention to Piorry's description of the adrenal dulness or special experience in the use of the phonendoscope of Bianchi would enable us to distinguish the renal from the adrenal new growths. Early or profuse intermittent hæmaturia, with a tumour in the renal region and pain taking the course of the ureter, would point very strongly indeed to renal in distinction to suprarenal new growth. The absence of all symptoms referable to the urinary organs is the rule in primary adrenal tumours, but we must bear in mind the exceptions as regards hæmaturia. It is well to remember also that though hæmaturia occurs as the earliest symptom in 41 per cent. of malignant tumours in the adult, it is observed in only 5 per cent. of malignant renal tumours in children under 5 years of age (Heresco).

Tumours of the suprarenal gland have also been mistaken for enlargements or tumour of the liver. In some instances the liver has been actually enlarged, as in Case II. In Cohn's case[7] the liver was thought to be considerably enlarged, but at the necropsy it was found to be normal in size but displaced downwards by the adrenal tumour. The absence of jaundice, the characters of the enlargement, the presence of resonance in front of the tumour, and extreme mobility instead of a comparative fixation of the swelling would tend to exclude the liver. As Ramsay remarks, "careful consideration of the symptoms, and a painstaking physical examination would, in most cases at least, serve to distinguish the two."

Between tumours of the adrenal and enlargement of the gall bladder mistakes in diagnosis ought seldom to occur. If an adrenal growth is seen before it has attained too great a size to simulate the gall bladder in position or form it will be found presenting below the costal margin, more to the right and more posteriorly than the gall bladder does, and there will probably be resonance in front of it. Movable—and possibly excessively movable—it is not pivoted beneath the liver as an enlarged gall bladder is. An enlarged gall bladder being so pivoted moves mostly towards the median line, and in the arc of a circle, whose centre is beneath the notch of the liver.

With the fingers dipped below the free border of the liver the tumour will be felt behind it, and by pressure can be made to recede backwards and upwards from it. There will also be an entire absence of any history or symptom suggestive of biliary colic. Further, great depression, weakness, and emaciation, in the absence of jaundice, would also incline one to think of new growth of the adrenal. Lastly, should it be impossible to exclude hepatic or cystic disease, the diagnosis will be cleared up by an abdominal exploration through the linea semilunaris, an incision along which is the one best suited for the removal of adrenal growths.

A pancreatic cyst may closely simulate an adrenal tumour in general symptoms—emaciation, weakness, nausea, vomiting, and epigastric discomfort or pain—but the position in which the tumour first appears, and its mode of increase, are very different in the two cases.

Prognosis.

The prognosis of adrenal tumours is very unfavourable owing to the rapidity of growth, the tendency to metastases, and the frequency with which both glands are affected. The immediate risk of an operation when any portion of the tumour is left behind is very great, and if the patient recovers recurrence follows with terrible rapidity (Case III).

The prognosis is more serious even than in malignant renal tumours. Whereas the average duration of life in sarcoma of the kidney is five to six years, and of carcinoma three to four years, Otto Ramsay points out that the average duration from the onset of the first symptom to death was from 6.7 to 10.6 months, the shortest duration being six weeks and the longest thirty-six months. The mortality of operation for tumours of adrenal origin is a little higher, and the prognosis after a successful operation is about the same as after nephrectomy for malignant renal tumours.

Heresco amongst 165 cases of nephrectomy for malignant disease, performed between 1890-1898, found 17 cases of operations for tumours described as "struma-suprarenalis." How many of these 17 were primary adrenal tumours and how many renal tumours arising from embedded adrenal "rests" is not clear.

The following figures taken from this collection show the immediate and remote effects of nephrectomy for the different classes of cases as follows:

68 sarcoma of all forms, 14 died—that is, 20.0 per cent.
53 carcinoma of all kinds, 12 died—that is, 22.56 per cent.
14 adenoma, all successful.
17 struma suprarenalis, 5 died—that is, 29.4 per cent.

Of the patients alive two years after nephrectomy, and still free of recurrence, the percentages were: 25.9 for sarcoma, 25.0 for struma-suprarenalis, 9.7 for carcinoma.

Of the survivors after nephrectomy who had recurrence within one year there were 33 per cent. of the sarcoma, 25 per cent. of the struma-suprarenalis, and 9.7 per cent. of the carcinoma.

Treatment.

Operation gives the only hope of life. It should be done as early as possible, because the probability of metastases, and of adhesions forming which will make the operation difficult, increases as time goes on. It should be undertaken by way of an exploratory operation, and removal should not be attempted unless it can be completely effected. When the tumour is adherent to liver or spleen, the risk of hæmorrhage proving fatal is very formidable; when adherent to the diaphragm, the pleural cavity or pericardium might be opened. When metastases are found in the viscera, it is only with the view of relieving intense suffering that removal should be attempted, and then only when the tumour is very freely movable, so that its enucleation can be done without risk or difficulty, as in Case II.

The method of operation should in some cases be the transperitoneal by an incision through the linea semilunaris, in others the lumbar, and in others again the combined lumbar and transperitoneal method, which I have for many years adopted in cases of nephrectomy when the kidney is much enlarged.

1. If the tumour is large and very freely movable, as in Cases I and II, the transperitoneal route answers best. The incision in the linea semilunaris may be joined if requisite by a short one at right angles to it, carried either forwards or backwards, as best suits the individual case.

2. When the tumour is situated well back in the loin, and is cystic or not very large, the lumbar method is to be preferred. If the space between the last rib and the crest of the ilium is contracted, the last rib, or even the last two ribs, should be excised, and the lumbar incision carried freely forwards. When this space is roomy, the ordinary oblique incision

amply suffices for the enucleation and delivery of a tumour of moderate size, or one which is collapsible by tapping.

3. When the diagnosis is uncertain or the tumour is large and fixed, or but slightly movable, the exploration should be first made through the incision along the linea semilunaris. Before, however, any attempt at enucleation is begun in front, an oblique lumbar incision of moderate length should be made, and through this all the posterior outer, upper, and lower connections should be severed. This wound should then be plugged with a sponge or with gauze, and the enucleation completed and the vessels ligatured from the front. The delivery of the tumour through the anterior wound is very greatly facilitated by the fingers of one hand in the posterior wound.

There are many advantages in the combined method in cases of large and adherent tumours which I will not dwell upon here, but will merely strongly recommend it to surgeons who have not tried it.

Ramsay says if the tumour is removed it is wise to remove the corresponding kidney because of the frequency of metastases; but I cannot accept this judgment as decisive. On the contrary, if, after close inspection and careful palpation it is found unaffected, the kidney ought not in my opinion to be removed. In some cases partial nephrectomy should be performed, as in Robson's second case. Partial nephrectomy has been practised in some 5 or 6 cases of malignant tumour of the kidney itself, but the surgeons were all under the impression that the new growths were benign. In 3 of these cases, however, the patients were well several months after the operation, one died of hæmorrhage, and one subsequently underwent total nephrectomy for recurrence of the disease, and died five months later.

The friability of the tumour and the great hæmorrhage which occurs when its texture becomes broken into are the chief risks attached to the operation. Should the tumour have grown into the spleen or liver, as in Affleck's case, and an attempt is made to detach it, the loss of blood would probably be fatal.

NOTE AND REFERENCES.

[1] See also *Hunterian Lectures* on the Origin and Progress of Renal Surgery, Table IX, Nos. 7 and 11 [2] *Surgical Diseases of the Kidney*, 1885, p. 488, plate II, fig. 2, p. 273 [3] See an excellent account of Kidney Tumours derived from Suprarenal "Rests" by Dr. McWeeney of Dublin, BRITISH MEDICAL JOURNAL, February 8th, 1896, p. 323. [4] *Harveian Lectures*, 1889, pp. 75, 76. [5] Kelynack, p. 143, [6] *Trans. Path. Soc. Lond.*, vol. XXXI, p. 259. [7] *Berl. Klin. Woch.*, 1894, No. 11. [8] These figures as given by foreign writers are much more favourable than those quoted by Kelynack from various English authors.

MEDICAL MISMANAGEMENT IN MADAGASCAR.—Dr. Reynaud, Physician-in-Chief to the Colonies of the French Republic, has prepared an essay on sanitary considerations on the Madagascar expedition and on certain other French and English colonial campaigns. This treatise has been offered by its author for the Prix Larrey of the Académie de Médecine. According to the abstract in the *Bulletin* of that Academy, Reynaud is most enthusiastic about British military hygiene in the tropics, and very indignant about the carelessness of his countrymen in such matters. He declares that the expedition of Madagascar in 1894-5 will remain a historical example of the calamities to which an expedition is exposed in hot and malarious lands when there is neglect of rules which after long experience have afforded to the British such brilliant results. The climate was well known, the expedition of 1883-85 had been duly reported upon, and it was recognised that paludism was the only dangerous enemy that would have to be faced. Yet every error in the management of troops in malarious districts was deliberately committed. Regiments were camped on the shore, and then employed in digging up swampy ground for road making. In the engineers the mortality rose to 64.5 per cent. The European men were much too young and were all overworked. The 200th Foot, entirely made up from other line regiments, lost 39 per cent. of its men. The mortality of the colonial regiment—creoles from Réunion, the West Coast of Africa, and French ports in Madagascar—was but 15.4 per cent. The total mortality of the French army in this terrible expedition was sixteen times higher than that of the British force in Ashantee twenty-two years earlier. We have heard much ill already of the expedition, but each new report makes it out worse and worse.

SIXTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held at PORTSMOUTH, August 1st, 2nd, 3rd, and 4th, 1899.

PROCEEDINGS OF SECTIONS.

SECTION OF PATHOLOGY.

J. F. PAYNE, M.D., President.

THE PATHOLOGY OF MILK.

By G. LESLIE EASTES, M.B., B.Sc.
London.

I DESIRE to place on record the results of the examination of 186 samples of milk by microscopical and bacteriological methods. These samples of milk were obtained from all parts of the kingdom, from medical officers of health, public institutions, and from private sources. The primary object of the investigation was to establish the presence or absence of the B. tuberculosis by microscopical means.

The points in the microscopical preparations observed were: (1) The character of any cells present; (2) the presence or absence of pus; (3) tubercle bacilli; (4) other micro-organisms.

In normal milk there is always a slight leucocytosis. The leucocytes correspond to the polymorphonuclear neutrophiles of human blood. The leucocytes may be marked during the first week of lactation, especially after the first pregnancy; after that period they decrease in number till their number becomes so small that there may be no more than a dozen or so in the smear preparation from the deposit. During the first week of lactation the leucocytes are accompanied by colostrum corpuscles. In the fresh milk these may be known by their size, granulation, and contents, which consist either of separate and minute fat globules, or of one large fat globule resulting from the enlargement and coalescence of smaller ones.

In any milk, therefore, in which the leucocytosis is marked it is essential to examine it for colostrum corpuscles. These are present in largest number in the cream, as, containing fat, they rise to the surface during centrifugalising. If, however, they are absent, then some other cause for the leucocytosis must be sought, and in such cases the leucocytes are very frequently associated with so-called "mucous" threads which retain the methylene blue stain of the Ziehl-Neelsen method, and are easily recognised. In hardly any case are these mucous threads present unaccompanied by pus cells, and the presence of such threads may usually be taken as corroborative proof that the leucocytosis is due to some inflammatory lesion. That, however, the material is not true mucin is fairly certain, as true mucous cells are absent from the ducts and acini of the udder. The chemical composition of the material is doubtful, but it is probably of the nature of a nucleo-albumen. The presence of an excess of leucocytes and this mucin-like substance constitutes "muco"-pus, and is a sign of the existence of an inflammatory lesion of the ducts of the udder, for it is in such lesions that the "mucous" material is excreted, and not from abscess cavities in the substance of the gland. Of 124 samples in which an excess of leucocytes amounting to pus was found, however, 47 were unaccompanied by this mucin-like material. In such cases there is, however, another indication of the nature of the leucocytosis, and this is the presence of streptococci. Not that streptococci cannot be found in normal milk. By cultivation it is possible to prove that some samples of otherwise apparently normal milk do contain the streptococcus, but in normal milk its presence is the exception, and, when present, in but very small numbers. When pus is present, however, it is far otherwise so far as the streptococcus is concerned; there is no need to proceed to cultivation. Chains of cocci are found in the stained deposit, often in very large numbers, and frequently closely associated with the individual pus

cells. In only two of my cases in which pus was present was it definitely stated that no streptococci could be fouud, and in three other samples the question was left open to doubt. But in one case in which the streptococcus was not found the B. pyocyaneus was isolated, and in two other cases it was noted that closely and intimately associated with the pus cells were staphylococci, and though in neither case were cultures made, yet the inference was drawn, and it appears legitimate, that these staphylococci were probably pyogenic.

Turning now to cells other than leucocytes found in milk, I have already mentioned colostrum corpuscles; another important cell which is frequently found is the red blood disc. The presence of blood may frequently be recognised by the naked eye in the centrifugalised deposit, but in other cases it is necessary to examine iodine preparations of the deposit. The presence of blood usually indicates the existence of an active inflammatory lesion, but not always, as it may be present in very early lactation, due to physical causes.

The last and least important kind of cell that requires mention is the large squamous epithelial cell derived from the hands of the milker or else from the skin of the teat. Its size and other characteristics render it easy of recognition, and it is of course devoid of pathological significance.

The differences between the cream and deposit are differences of degree rather than of kind. The cream is relatively richer in colostrum corpuscles, the deposit richer in red blood discs when either is present—a fact due to the specific gravity of the two kinds of cell. The bacteriological flora of cream and deposit are usually alike. The deposit, however, contains nearly all the other foreign matter, even vegetable *débris*, etc. Of the B. tuberculosis in milk it is only necessary to say that in my experience it is usually shorter than that found in human sputum, but it is usually beaded, presenting the appearance of a brilliantly stained rod with darkish granules in its continuity. The presence of tubercle bacilli in milk is an absolute indication of the existence of a tuberculous lesion of the udder. The animal may be tuberculous, but till the udder contains breaking-down tubercles no bacilli are passed in the milk.

Of other micro-organisms that I have found in milk I will only mention the staphylococcus pyogenes aureus, B. of Klebs-Loeffler, B pyocyaneus, B. coli, and B. enteritidis sporogenes, besides various sarcinæ and moulds.

What is the significance of the streptococcus in milk? The facts are that in nearly every sample of milk containing pus streptococci were found. In milk not so contaminated this organism was only rarely identified. It is known that one cause of infectious disease of the udder is that streptococcus which has received the name of the streptococcus of bovine mastitis. It is not, however, the sole cause of inflammation of the udder. Whether it is identical with the streptococcus that infects man is not yet certain. That it may produce symptoms of poisoning in man I have proved, as it was the only pathogenic micro-organism found in a sample of milk which contained no irritant poison detectable by chemical methods, and which had caused vomiting and collapse in a family of five children and a nurse, all of whom except one suffered in these respects, the one that escaped (one of the children), being the only one that did not partake of the milk. And I have also not the slightest doubt that unboiled milk containing streptococci is also responsible for some of the cases of infantile diarrhœa and mortality.

General Statistics.—Of 186 milks examined, tubercle bacilli were present in 11, and doubtfully in 2 others. One was doubtful because only one bacillus, morphologically correct, was found, the other because though of the right colour, the beading was not apparent in any except one, and in that only imperfectly. In 47 there was pus, and muco-pus was present in another 77. Both of these objectionable features were absent in 51 cases, and the question was undecided in the other 11. Blood was noted in 24 samples, absent in 77, and probably absent in 85. Streptococci were found in 106 cases, absent in 53, and undetermined in 27. Colostrum corpuscles were detected in 16 specimens. The percentages in the mixed milks work out as follows:—5.3 per cent. contained tubercle bacilli, 30 per cent. contained pus, and 48 7 per cent. "muco" pus, these varieties being therefore present in 78 7 per cent. of all mixed milks examined. It was absent in only 15 per cent. and doubtful in the other 6.3 per cent. Streptococci were found in 75.2 per cent. of the samples, absent in 15 per cent., and doubtful in the remaining 9.8 per cent.

General Conclusions.—Milk which contains pus or muco-pus and streptococci is unfit for human consumption, but unfortunately, according to my figures, this would entail condemning 80 per cent. of the samples I have examined. No farmer, however, dreams of allowing a cow with an inflamed udder to suckle a calf. Why then should he be permitted to sell such contaminated milk for human consumption? Should such milks also contain tubercle bacilli, they should be unhesitatingly condemned as unfit for consumption in any form, for example, as butter, cheese, etc. It is my experience that milk derived from pasture-fed cows is less likely to be contaminated than that from cows which are stall-fed. Nor, of course, is this to be wondered at. In conclusion, I would say that the condition of mixed milk should be made more widely known, the conscience of the farmer aroused, so that he may of his own accord isolate those cows suffering from inflamed udders, and not permit their milk to be mixed with that of healthy cows—a practice which in the end would repay the farmer, as the risk of infecting other cows through the milker, and this is, of course, a very real risk, would thereby be minimised.

DISCUSSION.

Mr. PAKES thought that Dr. Eastes had made a most important addition to the subject, and from his own work he could thoroughly substantiate what had been said as to the general badness of the usual mixed dairy milk. He emphasised the fact that the bacteriological examination of milk should not be undertaken in the casual manner in which it was so frequently undertaken. One case had come under his notice where a certain public analyst had given a certificate to the effect that the milk from a certain dairy was free from tubercle bacilli. He maintained that this was an unjustifiable deduction from the fact that he had failed to find them, and one which was likely to do considerable harm in allaying the fears of the consumers.

Dr. TREVELYAN quite agreed with Mr. Pakes that the bacteriological examination of milk was not easy, and ought not, for the public safety, to be undertaken by men who had not had a thorough training and experience in bacteriological technique.

Dr. DRIVER called attention to the fact that, particularly in the hot weather, children often did much better upon condensed milk than upon cow's milk, and he thought that this was probably due to the fact that it was comparatively sterile. He felt certain, from his own experience, that diarrhœa, vomiting, and the concomitant symptoms in infants were frequently produced by ordinary dairy milk.

A CASE OF ANÆMIC INFARCT IN THE LIVER.

By W. S. LAZARUS-BARLOW, M.D.

THIS specimen was obtained from the body of a man, aged 25, who received fatal injuries by crushing between buffers while pursuing his occupation as a railway shunter. The following is a short description of the case and specimen:

When admitted to St. George's Hospital he was profoundly collapsed, but in spite of the probability, from the nature of the accident, that his condition was due to abdominal injury, there was no symptom which pointed to that region. The patient lived three days, but did not improve; the abdomen remained soft, though there was dulness on the right side below the liver and sharply limited towards the middle line. He vomited frequently, but the vomit was unmixed with blood, and hiccough became pronounced. As soon as abdominal symptoms appeared a consultation was held with a view to the performance of laparotomy, but it was agreed that the patient's condition forbade the operation.

At the necropsy, which was performed five hours after death, the only condition of importance found was that shown in the specimen and the results thereof. The abdomen was full of fluid blood, which, moreover, had a yellow tinge as if bile were also present. The intestines were covered with fibrin derived from the effused blood, but they were otherwise uninjured.

The specimen shows a portion of the right lobe of the liver, in which there is a large rupture of the organ extending from the free anterior margin close to the gall bladder, well over the convexity to the posterior aspect. The rupture is slightly irregular and bifurcated over the convexity of the liver, but in its greatest length measures 7 inches; its width is much less considerable, as in its widest part it does not exceed half an inch. The rupture itself is filled by blood clot, which is in part decolorised, and is covered by a thin bile-stained layer of fibrin. About the middle of the rupture is a pale yellow mass of tissue, ovoid in superficial form, and wedge-shaped on section. This mass is 2 inches in length, and

nearly an inch and a half in greatest width; its depth from surface to apex of the wedge is 1 inch. The appearance of this pale area is quite conclusive as to its nature, for it shows the appearance of normal liver save that it is quite free from the normal reddish-brown colour of liver substance, and that in the centre there are certain branches of the portal vein obstructed by thrombus. It is an indubitable anæmic infarct. At the apex of the infarction, and along its inferior margin, is a large bile duct, which is shown in section. Still deeper in the substance of the organ is much blood clot irregularly disposed, and reaching very nearly to the inferior surface of the liver. In certain regions (notably in the centre of the liver, and tracking into apparently normal liver substance, and superficially on either side of the rupture) the liver substance has a purplish hue, and the regions so affected project slightly from the mean level of the part. Except for the characteristics just mentioned, these portions of liver substance are identical with normal liver, and since they tend somewhat to have the shape of a wedge on section, it is probable that they, too, are infarctions, but contain blood instead of being anæmic, as is the case with the principal infarct. This is the more probable, in that there is in the museum of St. George's Hospital another specimen which presents similar appearances, and is certainly an hæmorrhagic infarct of the liver.

Infarction of the liver of any kind is so rare that until recently it was commonly accepted that this organ is free from a condition so often seen in the spleen and kidney. The reason of this assumed immunity from infarction was ascribed to the fact that the blood vessels of the liver are not terminal vessels, but, on the contrary, have a very free capillary anastomosis. Though there is no doubt that the hepatic circulation is extraordinarily free, the mere fact that infarction of the liver does occur makes it certain that the rarity of hepatic infarction is due to the comparative rarity of conditions which produce such infarction rather than to any inherent and fundamental difference between the vascular supply of the liver and such an organ as the kidney. That infarction of the kidney is common because the renal arteries are end-arteries, and infarction of the liver is rare because the hepatic vessels are not terminal, is undoubtedly true. But this is only because a vascular obstruction of the ordinary kind met with in ordinary diseases shuts off the blood supply from a certain portion of the kidney, while a similar obstruction cannot produce the same effect in the case of the liver. It by no means follows that a vascular obstruction of an extraordinary kind cannot produce in the liver the same effects as one of the ordinary kind readily produces in the kidney. And, in the case of hepatic infarctions, we have invariably to deal with vascular obstructions of an extraordinary kind. It is not in cases of heart disease with clot in the left auricle or vegetations on the aortic or mitral valve, cases in which splenic and renal infarction are common, that we meet with infarcts of the liver. Under such conditions they are scarcely ever found, and never found at all unless some special condition obtains which takes the case out of the ordinary category.

It follows, from what has been said in the preceding paragraph, that hepatic infarct very rarely depends upon embolism of the hepatic artery; nevertheless, it does sometimes depend upon that condition. Thus, Ogle[1] records a case in which there was complete obstruction of the hepatic artery at its bifurcation by an adherent brick-coloured clot, and in which were also numerous anæmic infarcts of the liver. The author expressly notes that there were infarctions also in the spleen and kidneys, and that "the origin of the embolism seemed to be a soft patch of fibrin attached to a calcareous aortic cusp." This result of obstruction of the hepatic artery is, however, very rare. More commonly such a condition leads to necrosis of the liver, as has experimentally been shown by Cohnheim and Litten[2] and Doyon and Dufourt[3] in the rabbit and dog, and has been observed clinically by Chiari.[4] The extraordinary factor in Ogle's case was a fractured spine; to this reference is made below.

But even in the case of thrombosis affecting veins in the intestinal area hepatic infarction is not very common; nevertheless in a certain number of cases in which infarcts of the liver have been formed some part of the intestinal area has been affected. Thus in cases recorded by Chiari[5] and Newton Pitt[6] (2 cases) there had been operation for strangulated hernia, and in one case at St. George's Hospital the primary condition was perforation of a gastric ulcer with suppurative peritonitis. Evidence, however, with regard to implication of the portal vein or its branches is more definite, for Chiari, who has seen 17 cases, found that 15 of them depended upon embolism and 2 upon thrombosis (in carcinoma) of large branches of the portal vein. Moreover in Osler's case[7] there was "soft brown thrombus in the portal vein, and especially old laminated clot in the part going to the infarct." And in each of Newton Pitt's 3 cases there was thrombosis of the portal vein or one of its large branches.



Anæmic and hæmorrhagic infarcts of the liver.

But in spite of the frequency of inflammatory and other conditions of the intestinal area, which must necessarily be accompanied by thrombosis of veins, infarction of the liver is very rare. More definitely still, thrombosis of large portal branches is met with without the coexistence of hepatic infarct. For both of these reasons we must conclude that some other factor besides obstruction of the portal vein is necessary; indeed obstruction of the portal vein may be absent as in Ogle's case, to which reference has already been made, but this case is exceptional in many respects. Rattone[8] believes that both hepatic artery and portal vein must be occluded before a hepatic infarct can arise, in this respect following von Recklinghausen; and Osler inclined towards this view when endeavouring to explain his own case, but apparently this combination, though a common one, is not necessary. Thus in Ogle's case the hepatic artery alone was

involved, and in many of the other recorded cases the hepatic artery has been free. Nor does stasis in the inferior vena cava afford a sufficient explanation, for in the large majority of cases this vessel is normal.

Chiari suggests that the effective adjuvant to portal obstruction in the causation of hepatic infarct is a very low blood pressure, especially in the hepatic artery. It is probable that this suggestion is somewhere near the truth. At least, in a large number of cases in which infarct of the liver has been found, the primary condition has been one in which it is very probable that the blood pressure was low. So far as I can find, 27 cases of hepatic infarction have been recorded and to these I add 3 in the present communication, making 30 in all. Little or no information is given about the 17 cases which Chiari has seen and the large number he mentioned compared with the rarity of the condition in the experience of other pathologists raises the question whether he has not recognised infarcts which would have been, and perhaps are every day being overlooked by others. But of the 13 cases in which the information is given 4 (Klebs 2, Lubarsch 1, Lazarus-Barlow 1) were found after severe injury to the liver as the result of accident; 3 (Newton Pitt 2, Chiari 1) after strangulated hernia; 1 (Ogle) after fracture of the spine; 1 (Lazarus-Barlow) after suppurative peritonitis; 1 (Newton Pitt) after cerebral hæmorrhage; 1 (Osler) after prolonged and severe illness with cirrhosis of the liver; and 2 (Chiari) in cases of carcinoma. In a large number of the above cases shock, in which lowering of blood pressure is one of the most prominent phenomena, must have been present, and in the remainder it is not improbable that such a condition co-existed.

[NOTE.—Since writing the above paragraph I have made necropsies at St. George's Hospital on two cases in which hepatic infarction was present. Both were cases of malignant disease involving the head of the pancreas. In one there was a single bile-stained anæmic infarct on the convex surface of the right lobe, about the size of a hazel nut; in the other multiple large hæmorrhagic infarcts were scattered irregularly through the organ. In the last case the lumina of certain branches of the hepatic veins situated at the apices of infarction areas were found to be obstructed by masses of intravenous new growth.]

With regard to the relative frequency of hæmorrhagic and anæmic infarction of the liver, it is impossible to speak with certainty, but apparently the hæmorrhagic form is by far the more common. Indeed of undoubted anæmic infarcts I can find only three (Newton Pitt, Ogle, Lazarus-Barlow). This accords well with Welch's[9] remark, "Pale wedge-shaped areas have been observed, but in most of the cases there were circumscribed dark-red or reddish-brown wedge-shaped, rectangular, or irregular areas."

Histologically, very little is to be said concerning the condition. In the hæmorrhagic variety the capillaries of the affected part are intensely engorged with blood. So much is this the case, that in the discussion following the reading of Chiari's paper the author was asked whether some of the infarcts were not in reality capillary angiomata. In the anæmic variety the exact opposite obtains, and it is difficult rather than easy to recognise the capillaries. In the red variety there is marked atrophy of liver cells, but this is apparently not the case in the anæmic variety; in the present specimen the cells are a little more granular than normal, but they can hardly be differentiated from normal liver cells.

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A CASE OF DISSECTING ANEURYSM OF THE RIGHT VENTRICLE.

By W. S. LAZARUS-BARLOW, M.D.,

THIS specimen is of interest from the double point of the side of the heart affected and the nature of the lesion.

The specimen was removed from the body of R. S., aged 68, a cabinet maker, who was a patient first of Dr. Ogle and afterwards of Dr. Owen at St. George's Hospital for a period of nine or ten weeks. The patient had been feeling ill for about four months before death with pain in the left iliac region, occasional vomiting, and loss of flesh. One morning about ten days before admission he noticed that his left arm was swollen when he woke, and it had remained swollen since. On examination he was found to be an emaciated sallow-complexioned man with well-marked arcus senilis. His abdomen was soft, the skin was very loose, and he complained of some tenderness on pressure in the left iliac region, but no definite tumour could be felt. The heart sounds were normal, but there was said to be increased tension in the radial pulse. The urine was normal and contained no albumen. The left cephalic and median cephalic veins were blocked by thrombus.

During his stay of three weeks in hospital he grew progressively weaker, worn out by vomiting and pain. He ultimately died in the early morning, but beyond this fact I have been unable to obtain details as to the actual mode of death: in particular whether death was gradual or sudden and whether preceded by an attack of acute pain.

At the necropsy it was found that there was malignant disease (columnar cell carcinoma) of the head of the pancreas with secondary nodules of growth in the liver, great omentum, and mesenteric glands. The kidneys were somewhat granular and there were two infarcts in the left kidney as well as one in the spleen.

The pericardium was greatly distended and contained a large quantity of fluid blood and some large clots. The heart forms the subject of the present communication. It may be described as follows: In the wall of the right ventricle close to the apex is a hæmatoma about 1½ inch long by 1 inch broad, the outer wall of which has in part been cut away to show the contained blood. At the lower part of the hæmatoma the outer wall has lacerated, and from this opening protrude two glass rods, A and B. The glass rod A shows the fact that the external opening on the wall of the heart communicates with the cavity of the hæmatoma; the glass rod B passes from the cavity of the right ventricle through an opening in the ventricular wall into the cavity of the hæmatoma and traversing the hæmatoma comes out at the same spot as the glass rod A, namely, the external opening of the hæmatoma. The position of the glass rod B shows conclusively that the internal and external openings of the hæmatoma are practically opposite to one another. The blood has escaped much further into the myocardium than is indicated by the limits of the hæmatoma, for extravasated blood is present also in the substance of the left ventricle about the apex and is continuous with that in the hæmatoma itself. The descending branch of the left coronary artery is also shown in the specimen, and is somewhat dissected out along the anterior portion of the septum. It is intensely calcareous, its lumen is very small, and is completely obstructed by thrombus. The myocardium is the seat of extensive fatty degeneration in all parts.

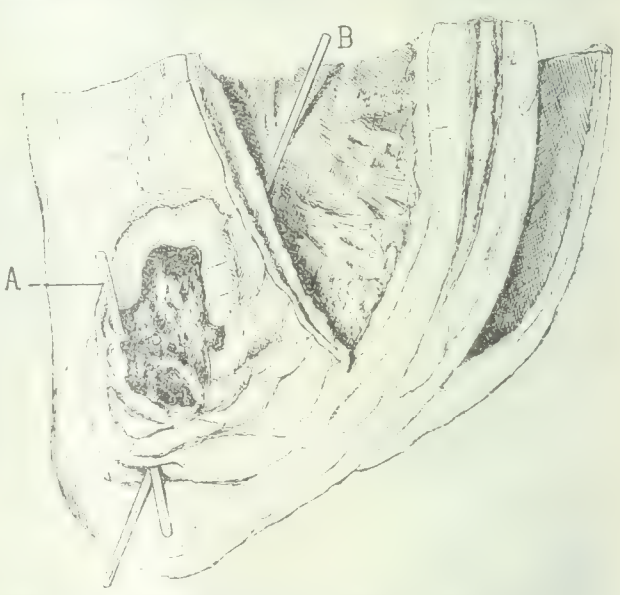


Fig. 1.—Dissecting aneurysm in wall of right ventricle. (Drawn from nature by Dr. G. H. Goldsmith.)

If for the moment the specimen be simply regarded from the point of view of a rupture of the heart it is interesting by reason of the infrequency with which rupture takes place on the right side. Quain[1] writes that in 76 cases out of 100 which he collected, the left ventricle was the seat of rupture, while the right ventricle was ruptured only 13 times, the remainder of the cases being divided between the auricles and the septum; Elléaume[2] in 55 cases found the rupture 43 times in the left ventricle, 7 times in the right ventricle, and the general conclusion to which examination of a variety of statistics leads is that rupture occurs in the left ventricle about five or six times as often as it does in the right.

Nevertheless in two papers read before the Pathological

Society of London, Beadles[3] drew attention to rupture of the heart in the insane, and brought forward in all 12 examples of the condition, in all of which the rupture was on the left side. Possibly, therefore, the ratio given above underestimates the rarity of spontaneous rupture of the right ventricle.

It is curious to note, however, that in St. George's Hospital Museum out of 7 specimens of spontaneous rupture of the heart, 3 involved the left ventricle, 3 the right ventricle, and 1 the left auricle. Further points of interest in the specimen in connection with the subject of spontaneous rupture are present in the well-marked fatty degeneration of the myocardium and the extreme calcification with thrombosis of the coronary artery. A valuable summary of the literature of spontaneous rupture of the heart has been made by Kelynack in the *Lancet*, ii, 1896, p. 165, where he describes a case of spontaneous rupture of the left ventricle. The coexistence of these two conditions when spontaneous rupture of the heart occurs is so well recognised that further reference to it need not be made here.

The nature of the lesion in the present specimen is of great interest. Aneurysm of the heart is a very uncommon condition. Nevertheless, many specimens are preserved in hospital museums. Thus, ten examples are to be found on the shelves of the museum at St. George's Hospital, the largest being the size of a large orange, and rising from the dome of the left ventricle, with which it communicates by an orifice the size of a sixpence. According to Wickham Legg,[4] during nine years that he was in the *post-mortem* room at St. Bartholomew's Hospital, 1,890 necropsies were made, but only three aneurysms of the left ventricle were found. Willigk[5] of Prague (9 cases in 1,600 necropsies) and Heschl[6] of Vienna (about 170 in 34,000 necropsies) would make the occurrence of cardiac aneurysm somewhat less rare. Amongst cardiac aneurysms themselves, aneurysms affecting the right ventricle are excessively rare. Pelvet,[7] out of 56 cases, found 52 in the left ventricle, 3 in the right, 1 in the right auricle. Wickham Legg collected 80 cases of cardiac aneurysm affecting the left ventricle, but dismisses aneurysm of the right ventricle with the remark: "Besides the one observation of traumatic aneurysm of the right ventricle, there are a few other cases known of aneurysm from disease." This was in 1883. Since then 16 cases of aneurysm affecting different parts of the heart have been recorded in the *Transactions of the Pathological Society of London*, but not a single case of aneurysm affecting the right ventricle.

The next point of interest concerns the nature of the aneurysm. Before the days of John Hunter and Matthew Baillie any dilatation of the cavities of the heart, even simple uniform dilatation, was often spoken of as aneurysm of the heart. But with these two authors the terms took on the special significance it has at the present day, though for a time what we now call an aneurysm was called a "partial aneurysm."

Two varieties of aneurysm of the heart have been described, the acute and the chronic. Acute aneurysms are the result of an acute, generally septic, myocarditis, but with this variety, as commonly described, we are not in the present instance concerned. Suffice it to say that it appears to be even more uncommon than the chronic variety. Chronic aneurysm of the heart is the variety usually seen, and the examples to which reference has been made in the last paragraph but one were of this kind. They differ from acute aneurysms in that they have a special relationship with fibroid degeneration of the heart. But to this point it will be necessary to make reference later. In the case of arteries, and especially in the case of the aorta, a variety of aneurysms is known which holds an anomalous position. I refer to dissecting aneurysm. This variety is of the acutest kind, though no doubt it is superposed upon the more or less chronic condition of atheromatous degeneration. And yet it is totally unlike in its pathology as well as clinically the acute variety of aneurysm as that term is commonly understood. Moreover, except for the fact that it is a sequel of a degenerative process, it has no relationship with chronic aneurysm. Now of the dissecting variety, in spite of careful search, I have not been able to find record of a single example as occurring in the heart. The specimen shown now is therefore to the best of my belief unique.

The example, which resembles the present specimen most nearly, is one recorded by Murray in the *Transactions of the Pathological Society of London* for 1869, under the name Dissecting Aneurysm of the Wall of the Right Side of the Heart. In this case, however, the title is misleading, as will appear from the following abridged account of the appearances at the necropsy. "The pericardium was universally and firmly adherent; it was much thickened, measuring at some places as much as five lines....At the commencement of the aorta, just above the valves and formed by the anterior wall of the artery, was an aneurysmal sac the size of a large walnut. It was firmly bound down by the adherent pericardium....and was partially filled with laminated fibrin. On the right side of the heart was a very large cavity between the visceral pericardium and the walls of the right cavities of the heart, which were much attenuated. It was very much distended, and contained about four ounces of black coagula....Between the apex of the aortic aneurysm and this sac there was a very small communication, marked by a slight effusion of blood into the meshes of the thickened pericardium. The right auricle and ventricle were compressed by the distended sac to such an extent that the finger could only with the greatest difficulty be pushed from the ventricle, through the tricuspid orifice, into the right superior vena cava." At the end of his communication Murray says, "The course of the case is, I think, evident. The aortic aneurysm was probably the original lesion; this set up pericarditis, and the aneurysm was consequently bound down by the resulting adhesions. A small rupture in the aneurysmal sac, with effusion of blood beneath the visceral pericardium, had afterwards taken place, and thus commenced the cavity on the right side of the heart."

The quotations I have made show conclusively a fundamental difference between my case and that of Murray, which indeed I think might better be described as one of "intrapericardial aortic aneurysm bursting into the wall of the right ventricle." It is obvious that the only reason why the blood in his case did not follow the usual course on rupture of an intrapericardial aneurysm, and fill the pericardial cavity, was because as the result of adhesions there was no cavity to fill. It burst into the ventricular wall because the myocardium was more easily ruptured than the pericardial adhesions. Moreover, there is no evidence whatever that the myocardium in his case was abnormal, whereas in my case the extensive fatty degeneration which existed no doubt played a fundamental part in the pathology of the condition. To the question of fatty degeneration of the heart in connection with cardiac aneurysm I shall return later.

Taking, then, the present case on its merits, it will be well shortly to discuss its right to the name of a "dissecting aneurysm." In this connection it is necessary to refer to dissecting aneurysm of the aorta, since, to the best of my belief, smaller arteries are not subject to the condition except so far as they are involved in a dissecting aneurysm of the aorta. The criteria of a dissecting aneurysm are that there should be a rupture through the internal coat of the aorta (usually about the junction of the ascending and transverse parts of the arch), a more or less extensive extravasation of blood into the substance of the middle coat, with ultimate rupture through the external coat at a point opposite or nearly opposite to the rupture through the internal coat. A dissecting aneurysm of the aorta therefore comes to be a specialised variety of hæmatoma with two openings opposite one another. Whether a dissecting aneurysm always ruptures is a little uncertain. E. Rindfleisch[8] relates a case in which healing of a dissecting aneurysm took place, and here the ordinary rupture of the external coat of course did not occur; but this termination of dissecting aneurysm must be excessively rare, if not unique. For all practical purposes, a rupture through the external coat may be regarded as constant.

Now the specimen which is the subject of the present communication conforms to the criteria of a dissecting aneurysm. There has been (1) rupture through the endocardium, (2) the formation of a hæmatoma in the wall of the right ventricle, and (3) subsequent rupture of the outer wall of the hæmatoma into the pericardium at a point opposite the internal rupture. That the hæmatoma must have preceded the external rupture is, I think, incontestable, and for the following reasons: First, because the pressure necessary to rupture the muscular bundles of the ventricular wall could not have been obtained if the pericardium had been full of blood, since under these conditions, as Cohnheim has shown, there is an enormous fall

of blood pressure in the right heart, and the pressure in the pericardium would manifestly be insufficient; and, secondly, because there is never a noteworthy extravasation of blood into the ventricular wall in cases of spontaneous rupture of the heart.

In the last place a word may be said concerning the condition of the myocardium which preceded the formation of the dissecting aneurysm. In spite of the fact that the patient was suffering from malignant disease, there is not the slightest reason to suspect that the myocardium was at any time the seat of a secondary nodule of growth. On the other hand, the existence of widespread fatty degeneration is indubitable, and its coexistence with, and probable dependence upon, extreme disease of the coronary arteries is well shown. In the case of ordinary chronic aneurysm of the heart fatty degeneration of the myocardium plays a far less important part than fibroid degeneration. With regard to the latter, indeed, Hilton Fagge[9] went so far as to say that it was the only cause of aneurysm. But Wickham Legg (from whose Bradshaw Lecture on the subject of Cardiac Aneurysms I have drawn much of my information) rightly drew attention to three cases in which fatty degeneration of the heart coexisted with aneurysm. In the present instance there can be no doubt upon the question, for while there is abundant evidence of fatty degeneration, there is a complete absence of fibroid degeneration.

I have thought it worth while to bring this specimen before the British Medical Association partly because as I have said, it is to the best of my belief unique, partly because it shows that dissecting aneurysm is not a prerogative of the aorta alone, and largely because I think it may give us an indication as to the direction in which we are to look for the pathology of that hitherto inexplicable condition, dissecting aneurysm. To anyone who has actually tried to tear through the middle coat of the aorta longitudinally the force that can be exerted by the aortic blood pressure seems ridiculously inadequate. And yet dissecting aneurysm does occur and the blood pressure is the only force available whereby it is brought about. The specimen I have shown at least suggests that it would be well to investigate whether the middle coat of the aorta is not at times the seat of extensive fatty change. Changes practically confined to the middle coat occur in the smaller arteries in arterio-sclerosis, and therefore there is nothing inherently improbable that the middle coat of the aorta should be at times affected to the practical exclusion of the adventitia and intima. If it were shown that such a change of the middle coat of the aorta actually occurs, a very important step would have been made in the elucidation of the pathology of dissecting aneurysm.

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INFECTIVE SARCOMATA IN DOGS.

By

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and

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OUR attention was prominently drawn to the question of infectivity of growths in 1896, when we had brought under our notice a series of contagious tumours occurring on the genital organs of dogs, which were conveyed from one to another in the act of coitus. Shortly, the history is as follows: Of 12 bitches served by 1 dog suffering from a growth on the penis, 11 became infected with similar growths in the vagina; 3 of these bitches were served by a second dog, which subsequently developed a growth on the penis. After becoming infected this second dog served two healthy bitches, and, of these, one developed a growth in the vagina.

The growths formed lobulated masses, which at an early stage affected the mucous membrane only. In some cases the lower part of the vagina was completely filled with large masses of softish growth. Later on the tendency was for the growth to extend deeply, so that the other structures of the vaginal wall became infiltrated.

The specimens we exhibit show this infiltrating character of the growth, and in two of them the vaginal wall is seen to be uniformly infiltrated and converted into a mass of firm white growth, one-half to three-quarters of an inch thick.

All the cases that we have been able to watch in the highly bred animals, in which a cure was not effected by excision or other means, terminated sooner or later in this way, death resulting from a cachexia which we can compare to that usually accompanying malignant disease. That this course is not invariable, at all events in dogs that are not well bred, we have evidence. We inoculated a terrier on the penis with a portion of growth. A tumour similar in all respects to the others resulted, but it never grew vigorously, and in twelve months it was only half an inch in diameter. Six months later it had disappeared without any treatment. This showed us that growths, which in one highly-bred class of dogs exhibited a malignant tendency, might in another more robust variety fail to show these characteristics.

In three *post-mortem* examinations made by us upon the dogs of the above series, we found the inguinal glands infiltrated with growth, as determined microscopically, in one case, but in none were there any deposits in the viscera. Microscopically the growths have the structure of round-celled sarcomata, with a stroma that is variable in amount but usually scanty.

Both the clinical characteristics and the microscopical appearances of the growths are such as we commonly associate with malignancy. And of this, as our experiments show, we have further evidence.

As these growths have been held to be dependent upon the continued irritation of some discharge, this was a point we carefully inquired into, and we were led to the conclusion that they were not preceded by any discharge. This was further corroborated by the experimental inoculations we made into the penis and vagina of a dog and bitch. In neither case was there any discharge observed preceding the appearance of the growths.

As these tumours were clearly possessed of infective properties so far as the genital organs were concerned, and as we found the structure and course to be that characterising sarcomata, we carried out a series of inoculations into the subcutaneous tissues of dogs. The details[1] of these experiments we have already published, but we wish here to draw attention to some of the results.

These experiments, if carried out with moderate care as regards asepsis, do not present any great difficulties. We have been successful not only in inoculating dogs from the primary growths, but also in passing the growths through a number of dogs by serial inoculation in the subcutaneous tissues.

In the majority of cases we obtained positive results. Occasionally a dog seemed naturally refractory, and to resist repeated attempts at inoculation. For example, one young terrier was inoculated on three separate occasions without result, whilst inoculations made on each occasion from the same source into other dogs proved successful. Altogether 14 out of 17 experiments were successful.

For the first few days after inoculation a swelling can be felt, due partly to the fragments of tumour introduced, partly to inflammatory reaction. In some cases the swelling subsides so that nothing definite can be felt until the appearance of a small nodule indicates that the inoculation has proved successful. In other cases the swelling persists, and it is difficult to decide whether the result is successful till a definite increase in the size of the swelling has taken place. As a rule we had evidence that the inoculation was successful in about three weeks' time, but this varied somewhat in different cases, and also depended to some extent upon the source of this growth.

When once a nodule of growth made its appearance in the subcutaneous tissues, it ran a fairly rapid course. A lobulated tumour resulted, which at first was freely movable, but at a later period usually became adherent to the skin, which became thinned out over it. We exhibit photographs of a dog with large subcutaneous tumours on each side of the abdomen. The size usually attained varied from 1½ to 3 inches, and it reached its maximum in about three months. From

this time retrograde changes took place; it became soft and flabby, and gradually disappeared in the course of another three months. In nearly half the cases the thinned-out skin gave way over the tumour, and there resulted a deep ulcer, from which a thin grumous discharge flowed, the whole presenting an exact picture of a breaking-down malignant growth. The course taken by the tumours presents a very marked regularity. In 6 out of 7 in our series the maximum growth was attained in three months, whilst in the seventh it was reached in two months and a-half.

The disease, then, may be regarded as running its course in about three months, at the end of which time the dog has acquired some power of resistance to its further extension. That the dogs actually are immune for a certain time, though how long this period lasts we are unable to say, we have shown by experiment. Four dogs that had been successfully inoculated were reinoculated with growth after the subsidence of the original tumours, two of them on two occasions each. The results were uniformly unsuccessful, though other dogs inoculated at the same time with material from the same source gave positive results.

These experiments seemed to us sufficient to prove that dogs that had once been successfully inoculated, and in which the tumours had run their course and finally disappeared, are immune, at all events for a time, to further inoculations; and in this immunity we get a point of resemblance between new growths and certain specific diseases.

For a long while we were disappointed in not obtaining secondary deposits. The tumours disappeared with regularity, and it was justly said that we could scarcely regard the growths as having a malignant tendency. At last in one of the dogs the growths ran a different course. Instead of commencing to subside in about 3 months' time, they continued growing until the death of the animal at the end of 6 months. The growths were then about 4 inches long on each side. At the *post-mortem* examination both the liver and spleen contained a number of small nodules of white growth, varying from the size of a millet seed to about half-an-inch in diameter. In structure the secondary deposits in the viscera were identical in all respects with the primary growths in the abdominal wall, having the structure of a round-celled sarcoma.

In this case the puppy was thin and weakly to commence with, and, owing most probably to some lack of resisting power, the growths, instead of subsiding, continued to grow and finally gave rise to secondary deposits in the viscera. Death was brought about by a cachexia that may be compared to that seen in man as resulting from malignant growths. We may add that a careful *post-mortem* examination showed no other cause for death.

The benign course run by some of these growths in dogs, and their total disappearance, in spite of their malignant structure, has its counterpart in man. Many of us have probably seen growths which, from their clinical course and their microscopical characteristics, we have been led to regard as sarcomata, and which, nevertheless, have undergone a spontaneous disappearance. Mr. Bennett has placed on record, in the *Lancet* of January, 1899, a most interesting series of cases of this kind. In is worth noting in connection with these cases that most of them were sarcomata. Only one was a carcinoma.

That these tumours in dogs, in spite of their structure, should run the course they so frequently do, when inoculated subcutaneously, is not to be wondered at. It would be reasonable to regard dogs of a hardy type as possessing some natural powers of resistance, and, in fact, as we mentioned, some of them could not be inoculated at all. It would appear that it is in the highly-bred dogs and in those that are weakly, both classes having less resisting power than normal to disease, that the tumours show unlimited powers of growth and extension both locally and to remote parts; on the other hand, the course run by the tumours in the more hardy and resistant animals appear to us to be of considerable interest and significance when we consider the occasional vagaries of growths having a malignant structure in man.

Our observations show definitely that some tumours, having a sarcomatous structure, are of an infective character; that whether they run a benign or malignant course is dependent, at all events partly, upon such questions as those of breeding and general bodily condition; and that immunity results for a certain period of time after the subsidence of the growths.

References.

1 *Journal of Pathology and Bacteriology*, January, 1898; *Path. Soc. Trans.*, 1898; British Medical Journal, December 17th, 1898.

A CASE OF PRIMARY CARCINOMATOUS CYST OF THE LIVER, WITH SECONDARY DEPOSITS IN THE LUNGS AND BONES.

By Charles Powell White, M.B., F.R.C.S.,

Demonstrator of Pathology at the Yorkshire College, Leeds.

This specimen was taken from the body of a man aged between 40 and 50.

He was admitted into the General Infirmary, Leeds, for a tumour of the sternum. At no time during his illness were there any symptoms pointing to disease of the liver.

At the *post-mortem* examination the following conditions were found:

Liver.—In the upper part of the right lobe was a large swelling containing fluid. The capsule over this swelling was quite smooth and there were no adhesions to the diaphragm or the surrounding viscera. On cutting into this swelling about 1 pint of straw-coloured turbid fluid escaped revealing a cavity which in the hardened condition measured 4 inches by 3 inches. The walls of the cavity were covered by an irregular layer of new growth which did not in any place exceed half an inch in thickness. The growth did not penetrate the surrounding liver substance and there were no other growths in any part of the organ.

Lung.—In the base of the right lung, which was adherent to the diaphragm, was a ragged cavity containing fluid. There were slight indications of new growth in the walls of this cavity, but no growths elsewhere in the lungs. The contents of the cavity were not offensive.

Sternum.—There was a large tumour of the manubrium sterni. A growth occupied the whole of the anterior and posterior surfaces and infiltrated the surrounding structures. On section the bone was seen to be involved but not expanded by the growth. The tumour was very firm to the touch, and did not show signs of cystic change.

Clavicles.—There were several growths attached to both clavicles. They were movable, and sprang from the periosteum, the bones not being involved; they were firm but somewhat elastic to the touch. The largest was about the size of a tangerine orange, and on section showed a small ragged cavity in its centre.

The other bones were not examined. There were no other growths in the viscera or cavities of the body.

The histological structure of these tumours is peculiar. It is the same in all.

Liver.—A section through the wall of the cyst shows in the neighbourhood of the growth the hepatic cells flattened out and separated by a considerable amount of fibrous tissue. The growth is extremely cellular, the cells being large and of very irregular shapes. The nuclei are large and vesicular. Some of these cells measure as much as 30 μ to 40 μ in diameter, and a large number of them show endogenous proliferation. The stroma is very scanty, being represented only by a few fibrous tissue trabeculæ. In these trabeculæ run the blood vessels, which are well formed. There are no embryonic vessels running among the cells. The most peculiar feature in the histological appearances is the great tendency to necrosis, which is evidently associated with the scanty blood supply. Only those cells stain well which are in the neighbourhood of the trabeculæ and therefore in close proximity to the blood supply.

Lung.—The microscopic characters of the wall of the cavity in the lung are much the same as described above for the liver.

Sternum.—Here again the main features of the growth are identical. Although the tumour is firm to the touch, yet under the microscope it is seen to be composed for the most part of cells which have undergone necrosis. Each trabecula is surrounded by a few layers of cells staining normally.

Clavicle.—The growth here has the same characters as the preceding. In some parts an alveolar arrangement of the stroma can be seen.

This case presents several features of interest.

First, the cystic character of the growth in the liver. Neither in the *Journal of Pathology and Bacteriology* nor in the *Transactions of the Pathological Society* (of which, with the exception of one or two, I have consulted the last thirty volumes) is there any record of a similar growth in the liver. The cyst in this case is evidently due to the extensive necrosis of the cells, which is due to the great lack of stroma and therefore of blood vessels.

Next as to the nature of the growth. At first sight it is difficult to recognise this growth as being a carcinoma, owing to the want of alveolation of the stroma. Moreover, there is an appearance of intercellular substance in places owing to the *débris* of necrosed cells. The cells, however, and especially the large cells above-mentioned, are of an epithelial character, and there are no vessels except those found in the trabeculæ.

Lastly, which is the primary growth? Having come to the conclusion that this is a carcinoma, the primary seat must be either in the liver or lung. From the large size of the growth in the liver, and from the character of the cells in the growth, I think there can be no doubt that this is a case of primary carcinoma of the liver.

HEREDITY IN RELATION TO DISEASE.

By G. Archdall Reid, M.B.,
Southsea.

[Abstract.]

[The author observed that the human races show great differences in colour, intellect, etc., and in their power of resisting certain diseases. Biologists have met with no indubitable instance of the transmission of an acquired characteristic, and the study of disease alone is sufficient to prove that racial differences cannot have arisen through the transmission of acquirements, but must be attributed wholly to the survival of the fittest—in other words, to disease selection. After these preliminary observations Dr. Reid continued as follows]:

For example, there are some diseases, and these the most death dealing, against which immunity cannot be acquired—malaria and tuberculosis for instance. One attack of such complaints weakens rather than strengthens against subsequent attacks. It should follow, if acquired characters were transmissible, that races that had longest been afflicted by malaria and tuberculosis should be the weakest against them. The direct contrary, however, is the fact—a result which could only have been attained in this instance by the survival of the fittest. On the other hand, some diseases of which one attack confers immunity or increased resisting power, though prevalent, are not deadly. Chicken-pox is an example. As regards them, disease selection cannot therefore act, but were the acquired effects of disease transmissible, races that had longest been afflicted should still be the most resistant. But such diseases as chicken-pox are just as severe in Europe as in the South Sea Islands, to which they have lately been introduced. Plainly, then, races have evolved in relation to disease solely by reason of the survival of the fittest, not in the least by the transmission of acquired powers of making resistance.

The micro-organisms of some diseases, of which malaria is a conspicuous example, find their principal habitat outside the human body. They, therefore, infest certain districts within which the conditions are favourable to their existence, and beyond the limits of which they do not usually spread. Within these limits the human population has undergone an evolution which is proportionate to the virulence of the diseases. As a result the inhabitants are able to dwell within areas which are practically closed to the rest of mankind. For instance, by means of our weapons and by enlisting the natives, we are able at present to conquer West Africa, but we cannot colonise it. Every Englishman who ventures therein takes his life in his hands. Even if here and there an Englishman survives prolonged residence, he cannot rear a family of pure British blood. The natives, therefore, defended by their diseases, will surely regain their freedom and expel their foreign masters, unless the march of sanitary science destroys their principal rock of defence.

On the other hand the microbes of an important class of diseases have their chief habitat within the human body, and therefore do not infect travellers in uninhabited or sparsely inhabited lands. Measles and tuberculosis are examples. Hence, since the microbes of these diseases depend for persistence on a continual supply of susceptible persons, they are essentially diseases of crowded populations; and, since they dwell in the human body, they are limited to no particular areas of the earth, but may travel wherever men go in sufficient numbers. For thousands, perhaps tens of thousands of years, they have afflicted the more crowded population of the Old World—the crowded populations most, the less crowded least, so that the former are now more resistent to them than the latter.

It follows as a corollary that the comparatively scanty populations of the far-off past were as a whole less afflicted by these diseases than the dense populations of modern times, whence it further follows that concurrently with the evolution of increased resisting power in man there has been an extension of conditions favourable to the prevalence of these diseases. The world has become more crowded. In fact, we have abundant evidence that the crowded conditions of modern civilised life are so favourable to the prevalence and virulence of zymotic disease that civilised man is only able to persist in consequence of the evolution his race has undergone. That his remote ancestors could not have maintained existence under similar conditions is proved by the recent history of what we call the New World.

In North and South America, in the islands of the Pacific, in Australasia, and even in the remote oceanic island of the Old World, as the Andamans, many zymotic diseases which have for ages afflicted Europe, Asia, and Africa, were unknown till introduced by the white man. The inhabitants of the New World, therefore, had not undergone that evolution which had been the lot of the Old World races. As a result, wherever under civilised conditions the white man has introduced his diseases, the native races have perished, or are perishing. The Caribs and the Tasmanians are gone. The Red Indians, the Australasians, and the Polynesians are going. Only those races seem destined to survive which, like the inhabitants of tropical America, are defended from civilised life and extensive contact with the white man by virulent malaria.

It will easily be seen that the Anglo-Saxon race owes its commanding position largely to the fact that it has been its fortune to invade vast tracts the natives of which were undefended by malaria or by evolution against diseases which have long been prevalent in England. We may conquer West Africa and India, but for the time being only. We must share South Africa with the natives. But the future of North America and Australasia is wholly our own.

BACTERIOLOGY OF RHEUMATIC AND ALLIED DISEASES.

By A. S. Wohlmann, M.D.,
Bath.

During the last ten years the belief has been gradually gaining ground that rheumatic diseases are of microbic origin. Clinical evidence and analogy point so strongly in this direction that, even without bacteriological confirmation, the presumption amounts almost to a certainty.

It must be admitted that bacteriological proofs have been somewhat unsatisfactory. This is partly due to unfortunate nomenclature and classification. There are four clinically distinct diseases called by as many interchangeable names.

The rheumatic and allied diseases may be divided into four main groups:

1. Rheumatism (acute rheumatism).
2. Gout.
3. Rheumatoid arthritis (pernicious arthritis).
4. Osteo-arthritis.

I shall limit my remarks to acute rheumatism (not gonorrhœal) and pernicious arthritis.

A.—Bacteriology of Acute Rheumatism.

In 1887 Dr. Mantle found cocci, diplococci, and a short bacillus in the joint fluid and in the blood of patients suffering from rheumatic fever. In 1888 Guttmann, Birch-Hirschfeld, Bouchard and Charrin, Triboulet, Sahli, and Sacaze found staph. albus, and sometimes streptococci in acute rheumatism. In 1891 Achalme first found his bacillus. In 1894 several observers in Germany, Italy, and France described organisms occurring in joint fluids and blood of patients suffering from acute and "chronic" rheumatism. In 1895 Newsholme demonstrated the epidemicity of the disease, and concluded that its cause was probably a saprophyte, spending part of its existence in the soil and part as a parasite in man. In the same year Leyden isolated a "delicate diplococcus." This is of interest in connection with the results obtained by Drs. Bannatyne, Blaxall, and myself in pernicious arthritis. In 1897 there were many workers at this subject, and it is noticeable that their results are more and more in agreement. Achalme confirmed his previous observation of a large bacillus resembling anthrax. Thiroloix confirmed this, and injecting a guinea-pig caused endocarditis. Triboulet and Coyon found Achalme's bacillus alone in two cases of severe acute rheumatism, but in milder cases it was generally associated with a diplococcus.

As of all the observations, that of Achalme seems to have met with most support, a short summary of his results may not be out of place. Examining the heart blood and the cerebro-spinal fluid of two cases of undoubted acute rheumatism as soon as possible after death, he obtained in each

instance in pure culture and in enormous numbers, a bacillus similar in appearance to that of anthrax (Fig. 1) and identical



Fig. 1.—Bacillus in the subcutaneous serum from the back of a frog twenty-four hours after inoculation with one drop of the culture. × 800.

with that which he had obtained six years before. In 6 living cases he examined the blood, and obtained in 4 cases pure culture of this same bacillus, and in 2 the bacillus associated with micrococci. The bacillus stained readily with aniline dyes, or by Weigert's or Gram's methods, but feebly alkaline methylated blue was the best and most selective stain. For cultures liquid media were better than solid, and horse bouillon with the addition of a little glycerine was the best of all. In regard to growth, while the breadth remained the same, the length varied exceedingly with the medium employed, being short in those very rich in hydrocarbons, such as milk, longer in simple bouillon, longer still in serum, and almost filamentous in human urine.

It was absolutely anaërobic, and flourished at temperature 30° to 38° C. Sporulation was best observed in the amniotic fluid

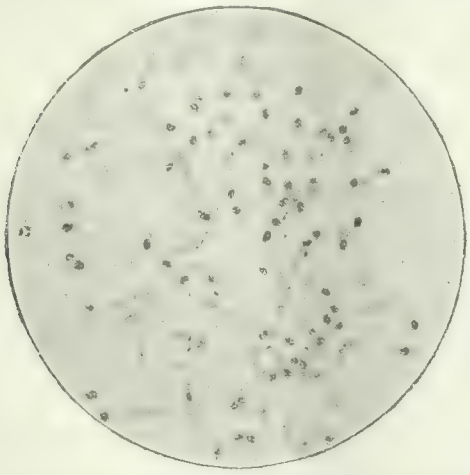


Fig. 2.—The bacillus in the sporulating stage from the serous fluid of a guinea-pig which had been kept forty-eight hours in an incubator coloured by Moeler's method. × 800.

of a rabbit killed by inoculation. On the third or fourth day a spore highly refractile and difficult to stain appeared at the end of the bacillus, which assumed a nail form, and then gradually disintegrating, set free the spore. Injection in guinea-pigs caused very great local œdema, formation of serous pouches, and death of the animal in from 20 to 36 hours. He made several observations, very interesting and suggestive from a clinical point of view. Growth in sterilised urine threw down a copious precipitate of urates, while growth took place more readily in the urine of "arthritics" than of other people. Again, sodium salicylate in doses of 2 minims of a 1 per cent. solution stopped all growth in a culture, a smaller dose than is required for most pathological microbes. He noticed, too, the marked sour smell given off by the cultures, and which was due to the formation of lactic, acetic, butyric, and propionic acids. In experimental inoculations he found that however pure the culture injected, one often found it in the serous fluids associated with cocci, especially streptococci, and he once found the latter in the blood of a rheumatic patient. In regard to this, he remarked: "It seems as if the microbe, in pure culture at first, opens the door to the microbes of secondary infections, which may persist alone at the decline of the disease, and this would explain the numerous cases in which they have appeared to be pathogenic agents of rheumatism." This statement is of especial interest in view of the fact that a large proportion of the cases of pernicious arthritis have previously suffered from acute rheumatism, and that gonorrheal rheumatism is especially prone to occur in rheumatic subjects.

B.—The Bacteriology of Pernicious Arthritis.

Schüller described in the synovial fluid a characteristic bacillus 2.6 μ by 0.75 μ to 0.995 μ, easily colouring by ordinary stains, especially fuchsin, but easily decolorising. On agar-agar it grew in greyish-white films, while in gelatine at 25° C. in from two to six days white grains appeared and grew with such luxuriance that the whole gelatine became liquified, eventually becoming opaque white. Some four years ago Dr. Bannatyne and myself, working in the Bath Mineral Water Hospital, where there was abundant material for research, discovered a minute diplococcoid organism in the synovial fluid of affected joints, and in the following year, in conjunction with Dr. Blaxall, we published our results so that I shall do no more than give a brief summary here. In almost every affected joint, examined during life, we found the same organism. Apparently a diplococcus, an occasional fortunate result with prolonged staining faintly showed an interconnecting band, so that we came eventually to the conclusion that it was in reality a bacillus exhibiting marked polar staining. It averages 2 μ by 0.75 μ, but is sometimes larger and often very much smaller. It will stain, though not satisfactorily, with ordinary aniline dyes, very weak methylene blue being the best, but not by Gram's method.

After very many failures with different media, Dr. Blaxall succeeded in getting cultures by using flasks of perfectly clear peptone beef-broth kept at blood-heat. On the fourth day minute floating colonies appear resembling gold dust when held up to the light, while nutrient agar-agar tubes inoculated from this show on the fourth day a delicate translucent superficial film, much as if one had breathed on a polished surface.

Although now a large number of cases have been examined we have never yet met with Schüller's bacillus or obtained the growths on gelatine described by him, while the diplococcoid bacillus has been constant, so that we cannot but conclude that he was dealing with a different disease.

Animal inoculation has not yet been fully worked out, so that there is still much to be done, but the constancy of our results make us convinced that the bacillus is the true cause of pernicious arthritis.

A few months later Chauffard and Ramon described in one case of "rheumatoid arthritis" a diplococcus not staining by Gram's method and impossible to cultivate which seemed to be identical with the organism just described.

In reviewing the work so far done it is evident that there is a good deal of discrepancy. In regard to acute rheumatism however, Achalme's results have been confirmed by Thiroloix and again by Triboulet and Coyon. Just as I started for this meeting I received from Dr. Achalme these very beautiful specimens that I am able to show you, accompanied by a letter in which he states that the new observations he has made since his last publication enable him to still more positively affirm the pathogenic nature of his bacillus; while his results have been further confirmed by Carrière (Lille), Soutchenko (Kazan), and de Béthencourt (Lisbon).

In regard to pernicious arthritis I am afraid matters have not progressed so far.

I fear I have been able to say little that has not already been better said before, but I thought it might not be unprofitable

to gather together into one paper the scattered records of many observers, and to enable members to see for themselves bacilli which so far as I know have never been shown in this country. I am sure we are all much indebted to Dr. Achalme for his courtesy in sending these sections.

SOME POINTS IN THE PATHOLOGY OF PLAGUE.

[ABSTRACT.]

FREDERICK PEARSE, F.R.C.S.,
Calcutta.

[THE author described first the nature of the disease, and the modes of infection were discussed in order to show that the swellings of the glands were not manifestations of the local nature of the infection. The disease was one which spread slowly, and this could be explained by the facts that rats, ants, and fleas were responsible for the infection both of the patients directly and also of the dwellings. He then proceeded:]

The glandular enlargements are really local expressions of system infection. Cases without glands are almost invariably fatal, and the inference seems to be that the peculiar swelling of the lymphatic glands is in some way an attempt by Nature to control the virus of the disease. In the early stages the glands are found crowded with bacilli. If the reaction in the glands is favourable the swelling subsides. If the reaction is excessive the glands and tissues around suppurate. If the process going on is still more virulent the whole mass sloughs.

The point to note is that when suppuration or sloughing occurs the bacilli are no longer to be detected. The occurrence of swollen glands in many parts is entirely against the local inoculation theory, but if it be considered as a selective action to destroy the virus of the disease the occurrence is explainable.

There are cases also which either without or with enlarged lymphatic glands present sometimes diffused, sometimes more or less circumscribed, swellings in the subcutaneous tissues. These carbuncular-like places often break down, and enormous sloughs may be separated. They have been observed at all parts of the body. Before sloughing or suppuration has taken place they may be found crowded with bacilli. Except in moribund cases the bacillus is not found in the blood. Wherever, therefore, the particular manufactory for the toxin of plague may be, it would seem tolerably clear that it is limited to a few places. It may be that in the worst instances many tissues supply the toxin which rapidly kills the host, while in average cases the development of the poison is confined to certain spots, and is dependent upon the reaction which the tissues are capable of making against it. My own inference is that the lymphatic glands enlarge because they have a peculiar selective and reactive power against the bacilli, and that the subcutaneous swellings are also expressions of local attempts to destroy what may be a local gathering of the bacilli. I think it may be said for the majority of cases of plague that if a patient survives a week he will not die from plague, but he has still to run the gauntlet of septicæmia of other kinds. I would say that if the toxin developed does not kill within a week then the reaction of the tissues seems to be such that the bacilli undergo little further development. Unfortunately the mortality from plague is at least 75 per cent. A considerable number of those who attain to convalescence ultimately succumb to intercurrent disease. It is the terrible mortality which creates fear of the disease, and not the number who are attacked. Cholera kills in India in one year more than double that which plague has destroyed during the whole of this epidemic.

THE INFLUENZA THROAT.

By W. FLEMING PHILLIPS, M.B.,
Kilchattan, Bute.

I DESIRE to call attention to a sign of influenza and its sequels, which, from its diagnostic importance, deserves to be called pathognomonic. The sign referred to, which I first observed in the autumn of 1892, is a congestion of the greater part, or the whole, of the faucial arch, including, as a rule, the uvula and often the posterior part of the soft palate, the whole area of congestion being indicated, of course, by increased redness. The dilatation or relaxation of the capillaries, and of the smaller vessels of the mucous membrane generally, is sometimes extreme, the redness being of a more or less dusky tint, and not infrequently arborescent venules are plainly visible, especially about the base of the uvula. But the feature of this affection, which distinguishes it from all other congested or "sore" throats with which I am acquainted, is a narrow patch of superficial ulceration on the edge of the anterior pillars of the fauces on both sides symmetrically, this ulceration being evidently due in the first place to desquamation of the epithelium during the acute attack. In the chronic stage of influenza throat, however, which is that now generally met with, the denuded surface is usually more or less granular in appearance, the granulations being in some cases even exuberant; and this affection, so far from being a rare or a fleeting feature of primary "grip," is all but universally present for months or years after. It will thus be seen that it is really most chronic and persistent in character.

Another remarkable fact connected with this lesion of the throat is that it is painless, the exceptions only arising when, from some microbic infection of the ulcers, the chronic congestion passes into inflammation—a very frequent occurrence—or when, from some exposure to a chill, the faucial hyperæmia becomes aggravated till a feeling of irritation or vague discomfort ensues. In consequence of this painlessness, I find that the ulceration commonly exists for years without its presence being suspected either by the patient or the doctor; and even when an infective inflammation compels attention to the throat, the characteristic appearances are then so obscured as almost to escape detection even by one who knows what to look for.

One more fact should be noted. I have recently been fortunate enough to discover also that in these inflammatory exacerbations of the throat affection the temperature of the mouth may be considerably elevated above the normal, while that in the axilla is not. In one case I have observed a temperature of 102.4° F. in the mouth, while that in the armpit was 97.5°.

In those cases where the diagnosis of an ailment is doubtful or obscure, the presence of this lesion in the throat will oftentimes clear up the mystery. During the past seven years I have examined no fewer than 500 cases; and in my experience the great majority of those who have had influenza even in its mild and ambulatory forms, were the subjects of this characteristic chronic lesion of the throat.

THE LOCAL DISTRIBUTION OF TUBERCLE IN VARIOUS SPECIES,

WITH REFERENCE TO THE CHANNEL OF INFECTION.

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THE purpose of this brief paper is to present an outline of our present knowledge as to the localisation of the lesions of tuberculosis, based partly upon veterinary records, but chiefly upon the experience of the writer in the *post-mortem* room of the London Zoological Gardens during the past nine months. As this only covers some 80 cases of tuberculosis in animals and birds, the outline is most incomplete, and the report merely a preliminary one to see what light can be thrown upon the question of the commonest channel of infection or port of entry of the bacillus.

Although the disease spares no family or order of mammals in confinement—and my brief series includes cases in kangaroos, antelopes, an armadillo, a jackal, a llama, rodents, lemurs, monkeys, and apes—yet it cannot be said that its localisation in any form presents any very striking differences from that in our own species. In all the lung is the point of severest attack, and its lesions the usual cause of death. Tubercle in all mammals kills by the lung. As to whether this organ is the earliest to be affected, my *post-mortem* findings are not adequate to prove, as most animals which die of tuberculosis are simply crammed with it, and it is impossible to say with any safety which are the oldest lesions.

In the small number of cases in which a few tuberculous

foci were found in animals dead by other causes, these were almost invariably in the abdomen, usually either the mesenteric lymph nodes, the spleen, or the liver. In fact, the most striking thing about the lesions of tubercle in animals is their much more general distribution throughout the organs. Though in nearly all my 40 cases in mammals the lung was most severely affected, yet in only 6 was it confined to this organ alone, foci being found in the spleen, liver, mesenteric nodes, and even kidney as well. In 7 it was confined entirely to the abdomen.

Veterinary writers are generally agreed that in the domestic animals—that is, in cattle, pigs, and rarely in horses and dogs—the lung suffers most frequently and most severely, and that here is probably the earliest site of serious invasion, but that in most cases foci are to be found in the abdominal organs also. The curious exception to this rule of more widely-spreed distribution in animals is the almost complete immunity of the bones and joints. I have only seen osseous tuberculosis four times in animals, once in the knee of a kangaroo, twice in the ribs of monkeys, where a tuberculous lung was adherent to them, and once in the jaw of a monkey. It does occur, but not with anything like the human frequency, and is regarded in veterinary literature as rather a rare form of the disease. Affections of the genito-urinary apparatus would also appear to be much less common in animals, although more frequent in the domesticated than in wild mammals.

A marked characteristic of the disease in the bovidæ, whether cattle, antelopes, sheep, or gazelles, is its preference for the serous membrane, especially the pericardium and pleura. Here it forms the well-known grape-like or shot-like masses of dense fibrous tissue, sometimes containing thick pus in their interior, which stud the whole surface of the membrane, and have given its popular English and German names to the disease, "the grapes" and "*perlsucht*." Both this special preference and form of lesion appear to be confined to this family, although the pericardium is certainly much more frequently affected in the other groups than in our own species. In two cases in monkeys I have found small nodules upon the surface of the heart itself, just under the pericardium.

Many of the lesions in other situations in bovines appear to have this tendency to surround themselves with a dense fibrous envelope. Suppurating foci in the liver and lung will be found enclosed by a wall of fibrous tissue nearly a quarter of an inch thick. In a sable antelope the whole external layer of the pericardium was changed into a firm dense wall of new growth three-quarters of an inch thick, which retained its shape after the heart had been removed from its cavity, as if it had been a plaster cast. Tuberculous peritonitis, on the contrary, appears to be no more common in animals than in man, as I have found only three cases, all in monkeys. Tuberculous ulceration of the intestine is not uncommon, especially in the cæcum and colon of monkeys.

It may be broadly stated that purulent degeneration of tuberculous masses is much more rare in animals than in man. With the exception of the thick-walled abscesses in bovines, most foci in mammals are firm, well defined, caseous, and even fibroid masses, which often closely resemble true tumours. Even in the tremendous infiltration occurring in the lungs of monkeys, in which two-thirds of the organ is turned into a caseous mass, a cavity or even fluid pus is a decided exception. The mesenteric nodes, which may reach the size of a greengage plum, are usually firm, cheesy, or fibroid masses, and I have never yet seen pus in either liver or spleen.

The distribution of tuberculous lesions in birds is strikingly different. Instead of the lungs being the commonest site of attack, they are one of the rarest among the great viscera, and, in place of their lesions being the cause of death, I have only seen one case in thirty-five where they seemed to be so. The chief seat of the disease is in the abdominal viscera; first and most severely in the liver, next in the spleen, and third in the wall of the intestine and mesenteric nodes.

In only 20 per cent. of my cases were the lungs affected at all, and usually all that is to be found in them is one or two small, round, very firm nodes, which shell out of the lung parenchyma in removing the organs from the chest. These are often of a brownish colour, and of about the consistency of very hard, old soap; indeed, some of them are so difficult to cut as to suggest a keratinous or horny change in their substance. All tuberculous nodes in birds are firm and usually well defined, and in many cases contain so much calcareous deposit as to render section of them with the microtome almost impossible.

Dr. Heinrat, avian pathologist in the Berlin Zoologischer Garten, informed me last summer that they also often contained deposits of urates; these, however, I have not been able to detect in any of my cases as yet. I am, however, strongly inclined to agree with him that these hard, chalky, tuberculous nodules in birds occurring in the neighbourhood of the joints have been mistaken for gout, which latter disease is much rarer in birds than usually supposed and reported.

My own brief experience, like Sibley's, does not agree exactly with Sutton's statement of some fifteen years ago that tuberculosis in birds invariably began in the intestines or their lymph nodes, as both of us have found a number of well-marked cases in which lesions in the intestines could not be found.

The cause of death in tuberculous birds appears to be most commonly diarrhœa; but I should be inclined to regard this as due more to the condition of the liver and its secretions than to ulcerations of the intestines, which, though occasionally present, are not common, and never in my experience extensive or severe enough to account for the diarrhœa and fatal result.

The chief attack of avian tuberculosis falls upon the liver. In only 2 cases in 35 have I found it unaffected, while in about 20 per cent. it was the only organ attacked, and usually a glance at its upper surface is sufficient to base a diagnosis upon. It becomes enormously enlarged, fatty, and crowded full of hard yellow nodules from the size of a pinhead to that of a hazel-nut. The spleen comes second both in frequency and severity of attack, although in some cases it is even more severely damaged, being swollen into such a huge, caseous mass as to be almost unrecognisable.

Tuberculosis of the bones and joints seems to be decidedly more common in birds than in mammals, as I have found it in about 10 per cent. of my cases, most strikingly out the knees of a peacock and a pheasant, the elbow of a stork, and the palate of secretary vulture.

Pus is practically unknown in birds, not merely in tuberculosis, but also, in both my experience and that of Dr. Heinrat, under any circumstances. This may possibly be connected with the dryness of their flesh, their solid urine, and the remarkable extent to which all their tissues are permeated by the air. I have also found the heart-surface twice attacked, once in a curassow and once in a buzzard.

As to the distribution of tuberculosis in reptiles, I am afraid we must wait until the interesting question has been decided whether the disease actually occurs among them. Sutton was of the opinion that it did rarely, and Sibley some years ago succeeded in producing apparently tuberculous lesions in snakes by injecting cultures into their tissues. I have found lesions closely resembling both their descriptions in two pythons, two smaller snakes, and one tortoise. In the snakes there were firm, cheesy, and calcareous nodes about the size of a small hazel-nut under the skin of the neck region and in the intestinal wall and mesentery; while the greater part of one lung in the tortoise was packed full of a flocculent, softish caseous material.

Mr. A. G. Foulerton and Dr. Geo. Newman, to both of whom I am greatly indebted for valuable advice and co-operation in my investigations, kindly examined several of these for me bacteriologically, but with negative results, except in the lung of the tortoise, which was crowded full of suspicious-looking bacilli, which, however, did not respond completely to Koch's tests.

Do the facts of distribution throw any light upon the problem of the channel of infection? Only, I fear, the questionable illumination of casting a shadow of doubt upon our existing theories.

If the tremendous susceptibility of the lungs in mammals is to be accounted for by their being the port of entry for aërial infection, how are we to explain the almost equally striking immunity of the bird's lung?—to say nothing of the well-known experimental fact that if a guinea-pig or rabbit be in-

oculated in the flank or abdomen he usually dies of pulmonary tuberculosis, and this, too, in spite of the fact that the guinea-pig is extremely hard to infect, even by coating his cage bottom or mixing his food with dried sputum, and fanciers assure me that under ordinary circumstances he is almost exempt from tuberculosis.

The air passages of the bird are certainly no better protected against dust contagion than those of the mammal, indeed if anything rather less so, as the turbinate filter is less complete and the throat and trachea much wider.

Then if it is simply a question of exposure to aërial infection, it seems hard to understand why the lodgment should occur at the highest and most inaccessible parts of the lungs, the apices in our own species, and the dorsal borders on each side of the vertebral colium in bovines, as Friedberger and Fröhner, Law and Stalker unite in stating that it does, only towards the posterior (caudal) border or base instead of the apex.

What seems to me a suggestive parallel is to be found in the localisation of glanders lesions in the horse. Most veterinarians regard the glanders infection as entering by the alimentary canal in the drinking water or food, and yet its severest and most fatal lesions are as a rule found in the lungs. Most suggestive is the fact that if a horse be tested by the subcutaneous injection of mallein, and killed forty-eight hours later, his lungs will be found clotted with small, firm, shot-like "tubercles," when no other trace of the results of the injection can be found. Even the toxin of glanders has a special affinity for the vertebral borders of the lungs. Schutz's interesting experiments have shown that when an excessive amount of infectious material is introduced into the stomach, although the lung becomes most seriously affected of all the organs, the abdominal viscera are also attacked.

And this appears to me the most probable relation of the mammalian lung to tuberculosis. By whatever channel the bacilli are introduced, they find their most favourable soil for growth in the lungs.

Nearly all the veterinarians I have consulted are inclined to the opinion that the commonest channel of infection is through the alimentary canal, and my own limited experience seems to point in the same direction. It is probable that the distinctly greater frequency of abdominal lesions in the lower mammals than in man may be due to the more voracious and less cleanly food habits of the former, the larger amounts of infectious material swallowed overcoming the resistance of the abdominal viscera as well as of the lungs.

That the organs of the body vary in the degree of their resistance to various infections, however introduced, can hardly be questioned. And this degree of relative resistance appears to vary in different species. Professor MacFadyean informs me that if a series of rabbits and a series of guinea-pigs be inoculated in the same part of the flank from the same culture, in the former the kidney will be affected and the spleen exempt; in the latter the spleen be attacked and the kidney escape.

The morbidity of the mammalian lung in tuberculosis is in keeping with its great susceptibility in other diseases. In any bills of human mortality the three highest causes of death are almost invariably diseases of the lung, tubercle, bronchitis, pneumonia, and it stands responsible for from 25 per cent. to 35 per cent. of all deaths. No other organ or system can show a third of this fatality, the entire alimentary canal and its appendages, for instance, being responsible for less than 10 per cent. And the same disproportionate fatality is found in the lower animals. Percival states that in the horses of a cavalry regiment under his charge during ten years nearly 60 per cent. of all deaths were due to diseases of the lungs, and all authorities agree that pneumonia is the most fatal of equine diseases, with glanders of the lung a close second. Among cattle, tuberculosis and pleuro-pneumonia or cattle plague head the list, the former causing as high as 40 and even 50 per cent. of the deaths in dairy cattle in some provinces. Nearly 40 per cent. of the monkeys and apes in the Zoological Gardens die of tuberculosis, and 30 per cent. more of bronchitis and pneumonia. Thirty per cent. of the carnivora die of pneumonia, and nearly 50 per cent. of the marsupials.

Whether this excessive vulnerability of the mammalian lung has any connection with the fact that it is far the most recent of all our great vital organs, first appearing two-thirds of the way up our family tree in the lung-fishes, *Ceratodus* and *Protopterus*, is an open question. Certain it is that recentness and instability usually go together, and that this part of our organism is less perfectly adjusted to its new environment, the air instead of water, than any other tissue. Indeed, the lung alveoli are the only air-living and air-breathing structures in our entire body, all the rest of our cells being still aquatic organisms and marine at that. They die unless kept flooded with salt water.

Professor MacFadyean accounts for the susceptibility of the lung to tuberculosis upon the purely mechanical ground that the infection entering through the alimentary canal is taken up by the lacteals carried into the receptaculum chyli, and through this to the superior vena cava and right auricle. Thence it is, of course pumped to the lungs, and their mesh being the first capillaries through which it passes, the bacilli naturally lodge there. But it seems hard to understand why at least as many of the bacilli do not get into the portal system instead of the lacteals, and lodge mechanically in the liver capillaries. And this explanation completely fails to account for the remarkable immunity of the bird's lung, when the abdominal viscera and lymphatics are simply packed with tuberculous material.

As to the curious immunity of the bird's lung in tuberculosis, it can only be said that it is in keeping with its low susceptibility to disease in general. Nearly all of the "plagues" and fatal diseases of birds attack only the abdominal viscera. I have found lesions of the lungs, of any sort, distinctly rare in any necropsies upon birds at the Zoological Gardens.

The respiratory system of birds differs markedly from that of mammals. The lung is scarcely more than half the relative size, is extremely solid and vascular, and expands but little. A large part of the respiration is carried on by means of the huge air sacs, expansions of the bronchial and alveolar mucous membrane which fill the entire body cavity from clavicle to pelvis, and even extend into the shafts of the long bones. It would seem as if through them many of the tissues took their oxygen at first hand instead of through the oxy-hæmoglobin of the blood. In this respect they resemble the "invertebrate birds," the insects.

Whether these differences are adequate to account for the lower susceptibility of the bird-lung would be impossible to say, but it would not seem improbable that this small, firm, vascular, inexpansile lung should have higher powers of resistance to bacterial invasion than the large, soft, comparatively anæmic lung of the mammal. Curiously enough, the bird-lung is in almost the same condition physiologically as the so-classed human lung after Murphy's thoracotomy operation for the cure of localised tuberculosis.

This anomalous distribution might at first sight be explained by the growth preferences of the avian type of bacilli, as Nocard's experiments have shown that if rabbits be inoculated in the usual way with avian tuberculosis material, the abdominal type of disease is produced, while with human material the pulmonary type results, and the same is true in the horse, in the rare instances in which he can be infected by the avian bacilli. But as Nocard has also succeeded in changing both human and bovine bacilli into the avian type so that they acquire virulence toward birds by cultivating them in collodion capsules in the peritoneal cavities of successive fowls, this preference for the abdominal viscera would appear to be little more than an acquired habit of a germ compelled to live in bird tissues.

It may, perhaps, be worth adding that although the lung proper of birds is comparatively seldom the site of disease, the other part of the respiratory system, the great air sacs, are much more so. They are extremely prone to be attacked by pathogenic moulds, which form a thick layer over their inner surfaces, often making a complete cast of half their cavity and in some cases filling it up solidly. A thick whitish exudate, not unlike tough cream-cheese, is poured out from the walls and upon this abundant crop of white, green, or black "mould-fur" grows, readily recognisable by the naked eye as well as under a lens. Among the water-fowl in the Gardens more die of this aspergillosis than of tuberculosis, and I have twice found the trachea completely blocked by "emboli" colonies which had adhered to its wall.

SOME SOURCES OF INFECTION IN CUTANEOUS TUBERCULOSIS.

By Robert B. Wild, M.D., M.Sc., M.R.C.P.,
Honorary Physician to the Manchester and Salford Hospital for Skin Diseases.

In the study of the effects produced by the tubercle bacillus upon the tissues, the various forms of cutaneous tuberculosis are of special interest and importance on account of their accessibility to observation and treatment. Notwithstanding this advantage, but little is known as to the etiology and mode of infection even of ordinary cases of lupus, and still less as to the factors which determine what particular form of lesion will result from a direct infection of the skin by tubercle bacilli.

For some years I have been much interested in this question, and have endeavoured to investigate as far as possible all cases of tuberculous skin disease which have come under my care. In hospital patients it is very difficult to obtain a satisfactory history and details of home environment, therefore it is not surprising that a large majority of cases fail to throw any light upon the source of infection. A careful inquiry, however, will in many cases elicit a history showing that the patient, at the time when the tuberculous disease of the skin first appeared, was exposed to possible infection from tuberculous—usually phthisical—relatives, servants, or persons with whom he or she was in intimate social relationship. It is, however, only right to state that in some cases all inquiry possible under the circumstances fails to reveal any such sources of infection.

During the last six years I have records of over 7,000 patients who have been under my care at the Manchester and Salford Hospital for Skin Diseases, and among them were 138 cases of tuberculous disease affecting the skin primarily or secondarily. In addition to these there were several cases of a doubtful tuberculous nature, and 38 cases of lupus erythematosus which I do not purpose to consider at all in my present communication.

Of the 138 cases of tuberculous disease, which form very nearly 2 per cent. of the total number, 80 (1.1 per cent.) were lupus vulgaris, 13 (0.18 per cent.) tuberculosis verrucosa cutis, 7 (0.1 per cent.) erythema induratum scrofulosorum (Bazin's disease), and 38 (0.5 per cent.) scrofuloderma in which the skin was involved secondarily to tuberculous lymphangitis, tuberculous adenitis, or tuberculous disease of bones and joints.

In going over these cases several small groups especially attracted attention; in these the infection could apparently be traced to sources which are not generally recognised, and in some an interesting relation was suggested between the mode of infection and the type of the cutaneous lesion. It is to these cases only that I desire to draw attention.

The first group to which I refer is one consisting of 4 cases of lupus affecting the lobule of the ear. The cases are as follows:

(*a*) A woman, aged 25. The left ear presents a thickening of the lower part of the lobule, the infiltrated skin of which was studded with lupus nodules. The disease had existed for ten years, and followed the piercing of the lobules for earrings at the age of 15.

(*b*) A woman, aged 23. Lupus vulgaris of the lobules of both ears. The left lobule was only slightly affected, and partially cicatrised. The right lobule was swollen, purplish-red in colour, and studded with lupus nodules. The disease had spread to the neck below the ear, and was advancing towards the right cheek. The duration of the disease was ten years, it commenced directly after the piercing of the ears for earrings, the punctures then made never became properly healed.

(*c*) Healthy-looking but anæmic girl, aged 17. Lupus of the lobule of the right ear, and a small patch on the outer part of the right cheek. There was a small scar on the left cheek, and a commencing spot on the left arm. The disease appeared first on the ear nearly six years age, after the lobules had been pierced for earrings.

(*d*) Pale and strumous-looking boy, aged 14. Lupus of the lobule of the left ear extending on to the neighbouring parts of the neck and cheek. The disease came on four years ago after the ears had been pierced as a remedy for "sore eyes." This is a common reason for piercing the ears among the working classes, and in this patient the eyelids show loss of eyelashes, and traces of previous disease of the margins of the lids.

In these 4 cases we have direct evidence of an unusual source of infection, though we cannot say whether the disease was inoculated by the instrument employed or afterwards into the raw surface. In each case the disease took the form of lupus vulgaris and the inoculation was through a wound penetrating the deeper parts of the skin.

The second group consists of 3 cases of tuberculosis verrucosa cutis. These are:

(*e*) A woman, aged 60, with a nearly circular patch of tuberculosis verrucosa cutis on the anterior and outer aspect of the left wrist and ball of the thumb. The upper part of the patch is cicatricial, the lower part of typical appearance and spreading towards the palm of the hand. The duration of the disease is between 1 and 2 years; it commenced while she was nursing a son suffering from pulmonary consumption who is now dead. She washed all the linen for him, including pocket-handkerchiefs.

(*f*) A widow, aged 34, presents a patch of tuberculosis verrucosa cutis on the front of the right wrist. The upper part is cicatricial, the lower edge bluish red, tender, warty, and spreading towards the palm. The disease commenced 2 to 3 years ago when she was nursing her late husband through a long illness, pulmonary phthisis. Like the previous case she washed all the linen.

(*g*) Woman, aged 43, presents a serpiginous patch of tuberculosis verrucosa cutis on the front of the left wrist and ball of the thumb. The centre is depressed and commencing to cicatrise, the edges raised, red, tender, and warty. The duration of the disease is between 6 and 12 months. She is a washerwoman and washes for a patient suffering from pulmonary consumption.

In these three very similar cases there is a curious correspondence between the position of the lesion and that part of the skin upon which the linen is rubbed while washing by hand. There is no history of mechanical injury or wound of the skin, and there are no lupus nodules. The infection has apparently been received through an unbroken surface, and the disease is typical of the warty type of tuberculosis of the skin.

The third group comprises 6 cases of tuberculosis verrucosa cutis and one of lupus occurring in children from 3 to 12 years of age on the the gluteal region or neighbouring parts. Most of the lesions were ulcerated and crusted, probably from the secondary infection by pyogenic organisms, since antiseptic treatment rapidly reduced them to the ordinary type of tuberculous lesions. Several of the cases were of some years' duration, and partially cicatrised.

The cases were as follows:

(*h*) Girl, aged 6. Left gluteal region.
(*i*) Boy, aged 8. Left gluteal region and also lupus in the face.
(*j*) Girl, aged 10. Large patch on inner side of right gluteal region. Mother suffering from pulmonary phthisis.
(*k*) Boy, aged 12. Large patch right gluteal region.
(*l*) Girl, aged 11. Inner side of the left gluteal region.
(*m*) Girl, aged 10. Inner side of right thigh, high up near posterior aspect and spreading to gluteal region.
(*n*) Girl, aged 10. Left gluteal region.

In all these patients the situation of the lesion varied within narrow limits, and on placing the child in the sitting position it could be seen in each case that the diseased patch was on some part of the circle of pressure when the child was seated upon a chamber utensil or the seat of the commode. In several instances there was direct evidence of some tuberculous patient in the house, and one cannot avoid the suspicion that utensils not properly cleansed, and perhaps used for expectoration or for the reception of tuberculous evacuations, had much to do with the infection of a part of the body so little exposed to other sources of direct inoculation.

In none of these cases could any history of wound or injury be obtained, and in 6 out of the 7 no lupus nodules were present.

From consideration of these cases I am led to think it is possible that the mode and depth of inoculation into the skin is at any rate one factor in determining the type of a cutaneous tuberculosis. The warty form may represent the reaction of the epidermis and papillary layer of the skin to a superficial infection, while lupus may be the result of the introduction of infective matter into the deeper layers of the derma. Much careful observation will be required to determine whether this view is correct. Since my attention has been directed to it I have been able to note two cases of lupus in which there is a distinct history of the disease commencing at the site of an injury to the skin of the face—in one case a scald, in the other a burn. On the other hand, I have a patient with long-standing lupus of the face, who presents a more recent patch of typical warty tuberculosis on the back of the left thumb which followed a cut with a knife.

It is sometimes overlooked that infection of the skin may occur from mucous membranes not only in the rare form of the acute tuberculous ulceration found near the mucous orifices in patients suffering from advanced visceral tuberculosis, but also in the more chronic forms. In cases of lupus of the face the nasal mucous membrane is occasionally also affected; out of my 80 cases of lupus 7 presented this combination, and in 4 of them it appeared probable from the rela-

tive extent and severity of the lesions that the nasal mucous membrane was the primary seat of the disease; in 2 of them the lower part of the nasal septum was perforated, though the face lesions were comparatively slight and recent.

Another point, and the last to which I wish to draw attention, is the danger of reinfection after treatment of lupus or other forms of cutaneous tuberculosis. From watching many of these cases after operative or caustic treatment, I am inclined to the opinion that some of the cases of relapse or recrudescence are really cases of reinfection. Everyone has experienced the disappointment of having patients who have been discharged, after apparently complete eradication, return with fresh foci in the scar. Is it not likely that a patient, who by his disease is shown to be susceptible to tubercle, on returning to the environment from which he was first infected, perhaps with a scarcely healed wound from operation, should in some cases, at any rate, be speedily reinfected? One case in particular impressed me with this possibility; a patient was discharged from hospital after operation on two occasions apparently free from disease; each time recurrence took place within three months; at home there was a sister suffering from pulmonary phthisis. Whilst the patient was in hospital a third time the phthisical sister died, and several weeks afterwards the patient was again discharged. So far there has been no further recurrence, though a much longer time has elapsed than after any of the previous operations.

I only bring forward this communication as a suggestion for further and fuller observation upon the etiology of cutaneous tuberculosis. I firmly believe that all cases of cutaneous tuberculosis are due to local inoculation and that a knowledge of the sources of infection would not only enable us to prevent some of the most disfiguring and distressing diseases we are called upon to treat, but also contribute much to our knowledge of tuberculosis and the conditions of its dissemination in the community.

At the present time when so much interest is taken in the prevention of tuberculosis it is most important that attention should not be too exclusively directed to pulmonary phthisis, but should also take into consideration other forms of tuberculosis less serious in themselves, but nevertheless capable of keeping alive foci of active disease which may cause infection of other persons or auto-infection of the patients themselves in more vital organs.

DEMONSTRATIONS

ON TUMOURS OF GIGANTIC SIZE.

By W. Roger Williams, F.R.C.S.

[Abstract.]

Mr. Williams pointed out that the largest tumours known almost invariably arose from those parts of the body where post-embryonic developmental changes were most active, such as the uterus, ovaries, and mammæ. They were always of the non-malignant variety. The weight of such monstrous formations was sometimes double that of the body of their unfortunate possessor. When the minuteness of the germs whence these big tumours originated was borne in mind, it seemed not unreasonable to regard the force that originated them as analogous to that which determined the development *ab ovo*. Those who bore these large tumours nearly always presented an emaciated, feeble, and cachectic aspect. Among malignant neoplasms the largest tumours were produced by the slow-growing sarcomata, especially those of the fibrifying and chondrifying kinds. Cancers seldom attained great bulk, owing to the poorness of their nutrition, which caused degenerative changes to supervene.

The largest tumour known was a cystic myoma of the uterus, which weighed 195 pounds, the abdominal girth of the patient being 6 feet. Instances of similar tumours, weighing 140 and 135 pounds, were cited. The largest solid myoma weighed 106 pounds.

Among ovarian tumours Dr. Elizabeth Reifsneider, of Shanghai, had described the largest extant. This colossal growth weighed 169 pounds. Instances of similar formations of 149, 146, 135, and 125 pounds weight were cited. Some very large ovarian cystomata had been met with in quite young girls. Dermoids were usually of small size, but instances weighing 100 pounds were known, and Mr. Williams had met with, and successfully removed, a very large tumour of this kind.

The largest mammary tumours were those that resulted from that mysterious disease called "diffuse hypertrophy." Among the instances cited was one in which the right breast attained to 64 pounds weight, and the left to 40. Next to these it was among the tumours denominated "adenosarcoma," "adeno-fibroma," etc., that the largest mammary tumours were found. Examples were cited weighing 44, 26, and 22 pounds. Mr. Williams had met with two instances of this kind, in one of which the tumour weighed over 20 pounds.

The paper was illustrated by the exhibition of drawings of the most remarkable tumours.

HYDATID DISEASE OF THE SPINAL CANAL.

Dr. Barrs and Dr. Trevelyan showed a vertebral column with cord *in situ* in which there were numerous hydatid cysts both in the bones and in the extradural space. The patient, a man, aged 52, was admitted into the Leeds General Infirmary under Dr. Barrs, and died with all the appearances of acute myelitis. The cancellous tissue of the vertebræ was found after death to be extensively occupied by minute cysts, and in one of these a scolex head had been demonstrated. Between the dura mater and the bones from the first dorsal to the second lumbar vertebræ there were many cysts of varying size and shape. Similar cysts also lay in some of the intervertebral foramina, but no evidence of hydatid disease was found in the tissues about the spine, nor yet in the other organs of the body. The cord, so far as it had been examined, showed marked disorganisation. Dr. Trevelyan then gave some account of the peculiarities of hydatid disease as it occurs in bone, and referred to the various specimens of hydatids of the spinal canal of which he had been able to find recorded details since Dr. Maguire's paper appeared in *Brain*, 1888.

SECTION OF PHARMACOLOGY AND THERAPEUTICS.

John Buckley Bradbury, M.D., President.

THE PHARMACOLOGY OF CANNABIS INDICA.

By Walter Ernest Dixon, M.D., B.S., B.Sc.Lond., D.P.H.Camb.,

Salters' Research Fellow in Pharmacology.

(From the Physiological Laboratory at St. Thomas's Hospital.)

At Professor Dunstan's suggestion I have examined the physiological activity of various samples of crude Indian hemp, and also of some derivatives of this substance. Most of these latter were prepared at the Scientific Laboratories of the Imperial Institute under Professor Dunstan's direction, to whom I would express my indebtedness.

The history of hemp has been so many times and so fully discussed that any considerable account would be out of place; much, however, of that which has been written is misleading or incorrect.

The plant, cannabis sativa, is at present very widely distributed over both temperate and tropical countries, but there is very strong evidence for supposing that this was not always so, and that it was originally confined to only a very small portion of the earth's surface somewhere in Southern Siberia. The plant was probably carried from here to India first as a "fibre plant," and from there subsequently westwards into Europe by some of the later waves of migration. The connections between the vital functions of the plant and its narcotic property are ill understood. When grown in Siberia it is not toxic, but in India, probably as a result of altered conditions of climate, etc., it develops a power of elaborating a resinous substance which is utilised in the growth of its seeds, and which is found to be toxic.

If the plant is transported to adjacent more temperate climates it loses its narcotic properties, although the resinous substance is still elaborated, but now, possibly being no longer functionally necessary, it is exuded. A similar exu'a-

tion is brought about in India by taking means to prevent the formation of seeds.

The plant is monœcious, and although both the male and the female inflorescences contain the specific principle in India, yet it is found necessary to extirpate the males in order to get a good crop of narcotic material, because (*a*) the proportion of toxic material in males is very small, and (*b*) the resinous matter which contains the active substance in the female is used up in the formation of the seeds.

The drug, as prepared in India, is known in three forms: *bhang*, consisting of the dried leaves of either sex; *charas*, the resinous exudation already mentioned; *ganja*, the dried flowering tops coated with resin.

Although without doubt an exceedingly useful drug, its employment at the present is rare, chiefly on account of the great variation of activity as exhibited by the various commercial samples. With the object of getting over this difficulty by the discovery of its supposed active principle, a very large number of original papers have been published.[1]

Smith in 1846 isolated a resin he called cannabin.[2] Ten years later Personne prepared an amber-coloured volatile oil[3] to which he attributed the therapeutical activity of the drug.

Preobraschensky stated he had found nicotine,[4] and various other chemists have placed on record numerous alkaloids and oily substances, each of which has been considered by its discoverer as the chief narcotic principle.

Wood, Spivey, and Easterfield[5] separated by distillation a toxic red oil which was examined by Dr. Marshall, and regarded as the active principle. More recently[6] the same experimenters found that this substance (cannabinol) regenerated from its crystalline acetyl derivative was no longer active.

The object of the present research was, if possible, to discover the cause of the irregularity in action of the drug, and to determine its exact physiological effects, and the therapeutic uses to which it might be put.

Method.—The animals used in these experiments were principally cats and dogs, but all the results were verified as far as practicable on man. The method of administration is of great importance, the substance being either given (*a*) by the mouth or subcutaneous injection; (*b*) by the inhalation of the fumes of burning *ganja*. Further details of method are described later.

Variability of Action.—One of the most striking facts to anyone working with Indian hemp is the extreme variability of results obtained. Equal quantities of the same preparation administered to two similar animals of the same weight and under, as far as possible, identical conditions, produced narcosis in one case, and a negative result in the other; and further, three times the original dose had to be administered to the latter animal before the toxic effect was shown. In its other effects upon the heart, etc., this idiosyncrasy is also pronounced even to the extent of causing death in some cases by cardiac inhibition, and in others by respiratory failure. But although perhaps idiosyncrasy is better marked in Indian hemp than in any other drug, yet there are other factors to be taken into consideration when explaining its irregularity of action. It is now recognised that patients used to a certain dose of hemp may suddenly develop "the intoxication" after taking the same dose, but from a different supply. This important fact is exemplified by the following experiments:

Two examples of crude *ganja* were obtained (1) of the ordinary commercial Bombay variety and (2) a special Calcutta sample (kindly provided me by Messrs. Wright, Layman and Co.). These two samples were treated in precisely the same way, and it was demonstrated that the Calcutta sample, besides containing considerably more resin than the Bombay, also produced a much more toxic resin. By a series of such experiments I am convinced that hemp of different seasons and places and prepared in different ways not only contains different amounts of resin but that this resin varies very widely in its activity.

It is asserted that hemp however grown or prepared loses its power when kept,[7] and Indian dealers regard it as unfit for use at the end of the second year. Some which I had an opportunity of examining had been kept for twenty years and appeared little if any less toxic than that obtained more recently. In a further experiment, however, where I purposely exposed fresh *ganja* to the action of air and sunlight during six months, the activity had markedly depreciated, whereas the control *ganja* kept sealed and in the dark was little if at all affected.

Nervous Effects.—The value of hemp as a drug depends largely on its effects on the central nervous system, and these may be divided into two stages, a primary stage of stimulation and excitement, followed when administered in sufficient quantity by one of intoxication associated with anæsthesia and paralysis. Animals after the administration of cannabis by the mouth show symptoms in from three-quarters of a hour to a hour and a-half. In the preliminary stage cats appear uneasy, they exhibit a liking for the dark, and occasionally utter high pitched cries. Dogs are less easily influenced and the preliminary condition here is one of excitement, the animal rushing wildly about and barking vigorously. This stage passes insidiously into the second, that of intoxication, in which the symptoms may be divided into two groups, the mental and the physical.

Mental.—In cats the disposition is generally changed showing itself by the animals no longer demonstrating their antipathy to dogs as in the normal condition, but by rubbing up against them whilst constantly purring; similarly a dog, which was inclined to be evil-tempered and savage in its normal condition, when under the influence of hemp became docile and affectionate. On man the effect of the inhalation of the fumes from powdered *ganja* produces an exhilaration and refreshed feeling which is particularly noticeable after fatigue, mental or physical; these effects are more pronounced than those produced by either tea or alcohol, and give rise to no noticeable subsequent reaction. Further, the feelings of the patient are sufficient to regulate the dose, and there is little danger of taking an excess. Should the inhalation be continued after the desired effect has been produced he loses some self-control, manifests a desire to laugh at everything, and becomes very talkative. In the space of some twenty minutes to half an hour the normal condition recurs, and all feelings of exhaustion, headache, etc., have disappeared.

Physical Effects.—These are well shown in animals. When standing they hold their legs widely apart and show a peculiar to and fro swaying movement quite characteristic of the condition. The gait is exceedingly awkward, the animal rolling from side to side, lifting its legs unnecessarily high in its attempts to walk, and occasionally falling. A loss of power later becomes apparent especially in the hind limbs which seem incapable of being extended. Sudden and almost convulsive starts may occur as a result of cutaneous stimulation, or loud noises. The sensory symptoms are not so well defined, but there is a general indifference to position. Dogs placed on their feet will stay thus till forced to move by their ataxia, whilst if placed on their side they continue to lie without attempting a movement. Partial anæsthesia is present over the whole body. There is sluggishness in response to all kinds of stimuli, and a general indifference to mild stimuli, such as pricking with pins. Anæsthesia is most clearly defined in the posterior half of the body and the animal evidently appreciates this condition as from time to time it turns and bites its hind limbs.

Animals generally become more and more listless and drowsy, losing the peculiar startings so characteristic in the earlier stage, and eventually sleep three or four hours, after which they may be quite in a normal condition. Knee-jerks and reflexes generally are increased in the earlier stages, but are absent or feeble during deep narcosis. The pupils always dilate, and during complete narcosis barely react to light.

Effect on Nerve and Muscle.—There is great difficulty in investigating these effects on account of the present impossibility of finding a harmless substance for dissolving the active resin. The fumes of ignited *ganja* were therefore tried on a simple frog's nerve muscle preparation suitably arranged in a moist chamber. A long clay pipe, the bowl of which was fitted with a cork and glass tube connected to bellows, was half filled with powdered *ganja*, so that on working the bellows air and hemp fumes were blown out of the stem. These fumes were twice passed through water, and then into the moist chamber.

Single induction shocks of fixed strength were passed through the nerve every five minutes, but for the first half-hour no effect was produced, then the height of contraction

gradually diminished, and in one hour and a-half's time no strength of current affected a contraction, although direct stimulation of the muscle still produced a normal result. Similarly a general paralysis of the vagus was also obtained, as was shown by the absence of inhibitory effects on the heart after fumigation.

If the fumes are directly passed into the moist chamber without previously being passed through water, paralysis is produced much more rapidly—that is, from ten to fifteen minutes. The action of some irritant substance removed by water is further shown in that these unwashed fumes when inhaled by man caused great irritation at the back of the pharynx, whilst those which had been washed, although somewhat less toxic, produced no such inconvenience.

Control experiments were performed with other dried herbs, and it was ascertained that in most similar results were produced, but in no case was the paralysis obtained so rapidly as with the untreated fumes of hemp, and, moreover, it was further shown that washing in water in each case served to remove the paralysing effect to a much greater degree than was the case with hemp.

All this points in favour of the assumption that the active principle of hemp has a paralysing effect on nerve terminals, a supposition which has been definitely proved with reference to the vagus nerve terminals in mammalia.

Gastro-Intestinal.—No effect has been noticed tending either towards constipation or diarrhœa. After moderate inhalation the general stimulating effect extends to the stomach, and an increased appetite is noticeable, so much so that it may even be regarded as a useful food accessory.

Effects on the Heart and Circulation.—After perfusion of the frog's heart with a diluted emulsion of Indian hemp made up with Ringer's fluid, for three hours, no alteration in the beat is observed, and the vagi produce normal inhibitory results on stimulation. On mammalia, and especially the carnivora, its effects are well marked and highly characteristic, but its action is somewhat different according as to whether the fumes of ignited hemp are inhaled or the drug administered by the mouth. When inhaled in moderation there is always a quickened beat. In man, for example, four or five inhalations from a *ganja* cigarette are sufficient to increase the pulse rate to 100 or more; this increased rate becomes normal again in about half an hour, but no slowing occurs. When administered to man by the mouth in medicinal doses, the quickening if any is insignificant, and after an intoxicating dose there is a stage during the intoxication of marked cardiac slowing.

The exact mode of action was studied by injecting various active substances, made up with gum acacia in the form of an emulsion, into the circulation of cats and dogs. A small dose will produce an almost immediate slight slowing of the heart, together with a corresponding passive fall of blood pressure, followed almost immediately by a permanent rise. This is probably due to a direct action on the cardiac centre, because no such slowing and fall of blood pressure occur when both vagi are severed, and it may be shown that the effect is not vasomotor because the volume of the intestines, kidney, and spleen accurately shrinks or swells with the fall or rise of blood pressure respectively, showing that the vessels are affected purely passively. The first effect on the heart is therefore a central one, the impulses passing down the vagi.

If now both vagi be severed, and a large injection of the emulsion given, for about one minute no alteration of the tracing will be noticed, then the heart begins to slow, beats are dropped, and the dropped beats become more and more frequent, until suddenly the heart stops beating entirely, and the blood pressure falls to zero. The heart may cease to beat for thirty seconds, or even more, and then suddenly commence again, the blood pressure simultaneously bounding up. This complete temporary stoppage of the heart may be repeated two or three times before recovery. The nerve terminals of the vagus are now found to be paralysed, no amount of stimulation serving to produce cardiac inhibition. If the heart is previously poisoned with atropine the same result is still obtained.

It is not always, however, that this sequence holds. Idiosyncrasy appears to be present here as in the other actions of hemp. The following are some effects which have been observed:

(*a*) The heart may get gradually slower, but still beat with such vigour that the blood pressure remains at its normal level, until suddenly it stops permanently, and the blood pressure simultaneously drops to zero.

(*b*) The blood pressure may after a small injection exhibit a series of small curves purely cardiac in origin, and not connected with respiration, the pressure undergoing a regular series of rises and falls.

Hence cannabis indica has a very powerful effect upon the heart; it first acts on the cardiac centre, and causes slowing with a consequential fall of blood pressure, followed by a permanent rise, the impulses passing down the vagi; secondly, it has a direct action upon the heart itself, producing marked slowing, the dropping of beats, and complete inhibition, which may or may not be permanent.

Respiration.—In small doses there is generally some tendency towards quickening of respiration; this quickening may also be seen during the "stimulation stages" after much larger doses. Animals deeply under the influence of hemp invariably show some slowing in respiration, which also tends to become deeper. Death from Indian hemp, as has already been shown, almost invariably occurs as the result of cardiac failure, and respiration continues in spasmodic gasps for some minutes after the heart has ceased to beat. In a few cases the heart and respiration appear to cease simultaneously, and very exceptionally respiratory failure may precede cardiac.

Renal Effects.—A healthy man was fed for five days on a diet, the solids and liquids being kept constant, both as regards quantity and kind. The following results were obtained as to the quantity of urine in the twenty-four hours and its specific gravity: First day, 45½ oz., specific gravity 1018; second day, 49½ oz., specific gravity 1017.5; third day, 49 oz., specific gravity 1017; fourth day, 55 oz., specific gravity 1018 (20 ℿ tinct. can. ind., *B.P.*); fifth day, 52 oz., specific gravity 1019.5 (20 ℿ tinct. can. ind., *B.P.*).

The effect on the renal blood vessels is entirely passive, that is, any constriction or dilatation of the vessels occurs as the result of cardiac innervation, and is in no case vasomotor. Hence small doses produce slight vascular dilatation. Dr. Russell in his evidence before the Royal Commission states that "diuresis occurred after drinking an infusion of fresh leaves and stems," this difference in action probably being due to the escape of a volatile principle, possibly a volatile oil, many of which are known to possess diuretic properties.

Effect on Reproductive Organs.—In no case was any aphrodisiac effect observed. Experiments were performed by observing on dogs the changes of volume undergone by the testes after an injection of the drug. It was found that in moderate doses slight vascular dilatation was obtained, and as an increased blood supply must be associated with an increased glandular activity, it is probable that in this sense hemp should be regarded as a true aphrodisiac.

Conclusion.—Hemp therefore exerts its effects differently according to the preparation used, fresh hemp, for example, being diuretic, whilst the dried possesses little such action. Its effects vary according to the manner in which it is taken into the system, when smoked exhilaration is most manifest, whilst when taken by the mouth in small quantities exhilaration is generally not observed.

In cases where an immediate effect is desired the drug should be smoked, the fumes being drawn through water. In fits of depression, mental fatigue, nervous headache, and exhaustion a few inhalations produce an almost immediate effect, the sense of depression, headache, feeling of fatigue disappear and the subject is enabled to continue his work, feeling refreshed and soothed. I am further convinced that its results are marvellous in giving staying power and altering the feelings of muscular fatigue which follow hard physical labour.

By the mouth one hour to two hours are necessary before absorption occurs, the effects produced being more lasting than when it is inhaled. Hemp taken as an inhalation may be placed in the same category as coffee, tea, and kola. It is not dangerous and its effects are never alarming, and I have come to regard it it this form as a useful and refreshing stimulant and food accessory, and one whose use does not lead to a habit which grows upon its votary.

By the mouth or the contrary hemp should rather be classi-

fied with the narcotics, and when given in this way the nervous effects produced may be such as to cause serious alarm, yet no danger is to be apprehended whilst the heart remains regular and strong. It is to be feared, however, that cannabis indica can never become popular until its active principle has been isolated, that is, the isolation of a compound of fixed strength. Like any other stimulant or sedative narcotic, hemp may be abused as when taken to produce an intoxicant or deliriant effect, but this abuse is rare and there is reason to believe has been grossly exaggerated.[5]

Finally, from a frequent observation of hemp, both subjective and objective, I can affirm that it is soothing and stimulating, being when inhaled a specially valuable cerebral stimulant. I believe it to be an exceedingly useful therapeutic agent, one not likely to lead to abuse, and producing in proper dosage no untoward after-effects.[9]

References.

[1] Abstracts of these papers may be seen in *Jour. of Imp. Inst.*, vol. ii, No. 15, 1896, and *Zur Kentniss des Cannabis Indica*, Jurjew, 1894. [2] *Pharmaceutical Journal*, 1847, p. 6, 675. [3] *Ibid.*, 1857, p. 31, 47. [4] *Pharmaceut. Zeitung für Russland*, 1876, p. 905. [5] *Journ. Chem. Soc.* 1896, p. 69, 539. [6] *Ibid.*, 1899, p. 20. [7] *Report on Cultivation and Use of Ganja*, Calcutta, 1893. [8] *Ibid.*, Chap. 6. [9] *Ibid.*, p. 75.

Dr. R. B. Wild remarked that cannabis indica in the ordinary preparations was clinically a most uncertain drug, used as a substitute for opium in advanced cases of cancer; it was of value in breaking the opium habit for a short time so that the dose of the latter drug need not be increased. It was also of value in certain cases of functional headache. The increased blood pressure demonstrated by Dr. Dixon was possibly of importance with regard to the aphrodisiac and mental effects, as the combination of increased cerebral circulation with partial paralysis of certain cerebral centres would allow of considerable variation in the mental condition, the exact effect produced being probably determined by the mental constitution of the individual.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

W. Watson Cheyne, F.R.S., President, in the Chair.

Tuesday, November 7th, 1899.

(Meeting held at the Jenner Institute.)

A Diphtheria-like Organism found in Pigeons.

Dr. A. Macfadyen and Mr. R. T. Hewlett who made this communication said: A swabbing was sent up in the usual way to the Jenner Institute by Dr. Sharman, of Rickmansworth, to be examined for the presence of the diphtheria bacillus. The report sent to him stated that the Klebs-Loeffler bacillus had been found. Dr. Sharman then informed us that the swabbing had been taken from the throat of a pigeon, suffering from a disease known as "pigeon canker." This interesting fact led us to follow the matter up. For this purpose we obtained a number of diseased birds. The disease appears in two forms, either attacking the scalp or the throat and fauces. It may attack the eye, the appearance being that of a warty growth about the size of a pea, which may increase in size and close the eye. There is no evidence of the eye itself being affected. The growth may drop off, leaving the subjacent tissues quite healthy. It is strictly localised. In the throat the disease usually attacks the maxilla, and may become as large as a small nut, presenting in appearance a yellowish, dryish, and caseous mass. On the palate a membrane may appear, and is very firmly adherent. In all these phases of the disease we found the diphtheria-like organism in numbers, and usually mixed with cocci. The bacilli presented the Klebs-Loeffler appearance as regards size, parallel arrangement, and polar staining. The bacilli were non-motile, and, stained by Gram's method, we have obtained apparently two strains: No. 1 giving a dry and adherent growth on serum like the xerosis bacillus, and also a pellicle on broth like the Parkes diphtheria bacillus, and No. 2 more closely resembling in growth, etc., the diphtheria bacillus as usually met with. The first strain was obtained from the scab and gave a feeble indol reaction, the second was obtained from the throat and gave a good indol reaction. Both strains produced acid like the diphtheria bacillus. We show cultures and microscopic specimens in illustration of the similarities between these organisms and the Klebs-Loeffler bacillus. The organisms further stain by Neisser's method. The disease can be inoculated directly from pigeon to pigeon, but we have hitherto failed in reproducing the disease in pigeons with pure cultures of the above bacillus. In guinea-pigs and mice solid and fluid cultures have given negative results as regards infection or intoxication. It occurred to us to examine the throats of healthy pigeons, and in every case examined we have found the "throat" strain of the organism just described—that is, the one most closely resembling the Klebs-Loeffler bacillus. We will reserve any discussion of the etiology and pathology of the disease for a future communication. The point we wish to bring before the Society this evening is the interesting fact that in the throats of pigeons, whether diseased or healthy, there is to be found an organism which might be, and has been, mistaken by us for the Klebs-Loeffler bacillus, and which resembles it in morphological, cultural, and staining peculiarities—in everything, in short, save its pathogenic and toxic properties.

The Bacillus of Pseudo-Tuberculosis.

Dr. Klein under this term referred to an organism isolated by A. Pfeiffer from rodents affected with a disease closely resembling tuberculosis. He had discovered the presence of the micro-organism in Thames and Lee water, by injecting the residue, after the filtration of large quantities, into the subcutaneous tissue of guinea-pigs. A local ulcer formed at the site of injection, and the neighbouring lymphatic glands became caseous. The micro-organism occurred, also, in sewage. It was easily cultivated, and morphologically was a short thick bacillus. Feeding experiments were also productive of positive results. The lesions in the liver, lung, and lymphatic glands, as well as in Peyer's patches, presented themselves as necrosing areas containing large numbers of the bacilli. The disease could be reproduced in the monkey from pure cultures; animals could again be infected from material derived from the human subject. The author had found that some samples of milk were similarly pathogenic. By the treatment of animals with dead cultures resistance could be brought about.

Hæmolytic Action of Toxins.

Drs. Dean and Salter gave an exhibition showing the solution of the red corpuscles which occurred when certain toxins were admixed with blood. Ehrlich had shown this phenomenon in the case of tetanus toxin; and had shown, moreover, that tetanus antitoxin inhibited the result if added first to the toxin. The authors showed that diphtheria antitoxin also acted as a neutralising agent. Goat's blood, for some unexplained reason, did not show the hæmolysis. Other observers had shown that emulsified brain mixed with tetanus toxin also destroyed the hæmolytic action of the latter.

Standardisation of Antipneumococcus Serum.

Drs. Eyre and Washbourn explained the method they adopted for this purpose, which they had already fully described elsewhere.

Chromocyte Clumping.

Mr. S. G. Shattock observed that the part played by rouleaux formation in hastening the subsidence of the red corpuscles and clearing of the upper part of shed blood had at present come to be almost completely ignored. He had, on delaying coagulation in cat's and horse's blood by icing, been surprised to find that not only did subsidence of the red mass in the former take place to a very small degree, but that the normal subsidence which was so marked in the horse no longer occurred. If retardation was inhibited with sodium citrate, the rate of subsidence, he found, in horse's blood greatly exceeded that in cat's; this must be ascribed to the fact that rouleaux formation was much more marked in the first-named animal—a very old observation. Lord Lister had noticed that in "whipped" blood the same difference occurred. The author was, therefore, led to try if normal horse serum increased rouleaux formation in normal human blood. This was notably the case, as studied by the hanging drop method; and the result

showed that rouleaux formation was due in part to some property of the serum, and it might be regarded as a phenomenon of "agglutination." As confirming this, he had found that normal horse serum produced marked clumping in typhoid cultures; the result, however, did not obtain with a dilution of 1 in 50. A further likeness in the two phenomena he had noticed in the fact that when a broth culture of typhoid was mixed with horse serum *in vitro* visible clumping rapidly ensued and this was followed by subsidence; but if the fluids were iced and the mixture kept iced this result was altogether inhibited; if the iced mixture was then raised to the ordinary temperature the clumping quickly took place. This result of cold might be provisionally explained by supposing that it inhibited or retarded a process that was, whether in chromocyte or bacterial clumping, essentially chemical. He had not detected any difference in rouleaux formation or typhoid clumping on studying it in red and violet rays; neither were the movements of amœboid leucocytes affected in such altered circumstances. The author restated the observation of Wharton Jones that in the blood of inflammatory diseases rouleaux formation was exaggerated, and then stated his own observations, showing that the blood serum from cases of acute pneumonia, acute rheumatism, erysipelas, etc., if added to normal human blood, produced the same exaggeration, whilst normal human serum added in the same proportion (1 to 1) to normal human blood led to no such result. The formation of a buffy coat in the shed blood in such diseases might be viewed as a Durham's reaction, arising from an abnormal clumping or agglutination of chromocytes and their consequent more rapid subsidence; or, seeing that it occurred during the period of infection, it was rather a Widal reaction. This interpretation neither increased nor lessened the difficulty of explaining the specificity of bacterial clumping. Agglutination of the red corpuscles was held by Lord Lister to constitute an important element in the production of stasis in the vessels of an inflamed part, and the author concluded by asking how far bacterial clumping arising during life might not be responsible for the determination of the lesions met with in the later stages of bacterial disease. Such bacterial embolism occurring during natural antitoxinisation might constitute latent sources of future local recrudescence. Possibly the difficulty of explaining the location of the secondary affections in pyæmia as due solely to vascular thrombosis and the transference of disintegrating clot from a primary focus might in this way be removed, could the circulating cocci clump in any parts of the circulatory system.

Diphtheria and Tetanus Immunity.

Dr. Dean gave a short account of his experience as to the time during which the serum of horses immunised against diphtheria would furnish antitoxin after the process of immunising injection had been discontinued.

Dr. Salter made similar remarks in regard to tetanus. The yield of antitoxin in this case was more lasting than in diphtheria. In one instance no injection had been made for twelve months; nevertheless, the antitoxin value of the serum remained the same.

Vote of Thanks.

At the conclusion of the meeting a vote of thanks to Lord Lister as President of the Jenner Institute, and to Dr. Allan MacFadyen the director, was proposed by Dr. Church, seconded by Mr. Bryant, and carried unanimously.

HARVEIAN SOCIETY OF LONDON.

H. E. Juler, F.R.C.S., President, in the Chair.

Thursday, November 2nd, 1899.

Treatment with Antistreptococcus Serum.

Dr. J. W. Washbourn read a paper on this subject. He first considered the question as to whether the various processes associated with the presence of streptococci were manifestations of a single disease or were distinct pathological entities. These processes were (1) all cases of cutaneous erysipelas, (2) most cases of puerperal fever, and (3) many cases of septic trouble, passing under the names of septicæmia, phlegmonous erysipelas, pyæmia, infective lymphangitis, infective endocarditis, etc. The clinical symptoms were not reliable in indications of the specificity of a disease. A simple poison such as lead might cause cerebral symptoms, paralysis, or colic according to its localisation. The character of the lesion was also an unreliable criterion, depending as it did upon the strength of the virus, and upon its localisation. Thus there was clinical evidence that cases of typical cutaneous erysipelas might gradually merge into septicæmia or pyæmia. Another important factor in determining the specificity of an infective disease was the source of the infection. As a rule, a case of erysipelas was derived from a case of erysipelas, and a case of puerperal fever from another case of puerperal fever, so that at first sight they might be regarded as two distinct diseases. Further investigation showed, however, that the diseases under consideration were naturally interchangeable, and that one of them might by infection give rise to another, as, for instance, erysipelas to puerperal fever. The evidence supported the view that the conditions above enumerated were manifestations of a single disease, and that to a certain extent the mode of conveyance of the virus might determine its localisation. The absolute proof of the relation between erysipelas and other allied conditions must depend upon the identity or non-identity of the associated streptococci, and much evidence was adduced to illustrate the many difficulties met with in determining this. After reviewing the evidence, Dr. Washbourn said he believed that there were distinct varieties of streptococcus, only distinguishable by their behaviour towards serum, and that these streptococci might produce either the same or different lesions in the human subject. The method of preparing the antistreptococcus serum was described as follows:—"The serum is now prepared either from the horse or from the donkey; the former is usually chosen as it is less affected by the necessary inoculations. For the inoculations virulent cultivations are used, these cultivations being obtained by repeated passages through rabbits. The inoculations are made into the subcutaneous tissue of the shoulder. At first a small dose of about 1 c.cm. is employed. The injections give rise to considerable swelling attended by pyrexia and *malaise*. Individual horses vary enormously in susceptibility, some being severely affected by a small dose and others hardly at all by a large one. After recovery from the first inoculation, a second inoculation with a larger dose is made, and the process is continued for several months, ultimately as much as 100 c.cm. being used for a single dose. The horse is then bled and the serum allowed to separate; it is subsequently filtered through a Berkefeld filter, and after the addition of a small quantity of an antiseptic it is transferred to small bottles, which are plugged with india rubber stoppers." The mode of standardising the serum was then described. Dr. Washbourn then quoted cases of pyæmia, septicæmia, puerperal fever, erysipelas, and infective endocarditis to show the value of the treatment. The serum should be administered in exactly the same way as the diphtheria serum, careful aseptic precautions being observed. The dose was 10 to 30 c.cm., which might be given two or three times a day in acute cases, and once a day in chronic cases. If possible it should be injected near the site of infection, for it had been shown experimentally to be efficacious when administered in this way. The treatment should be commenced as early as possible. The opinion was expressed that the serum was of extreme value in certain cases, but that it was valueless in other cases apparently identical. This was attributed to their causation by different varieties of streptococcus, and it was pointed out that it was desirable to use a second sample of serum from a different source if the first failed.

Dr. Dean had no doubt as to the protective power of the serum in rabbits, although its action had nothing like the constancy of diphtheria antitoxin, for in one animal many c.cm. might be required to obtain the effect produced in another animal by 1 c.cm. of the serum. The death of a rabbit inoculated with a dose of a virulent culture causing death in a control animal might be much delayed or altogether prevented. He thought that some cases of failure might be due to the injections being stopped too soon, for he had found swarms of living streptococci in rabbits as late as the ninth or even the thirteenth day. The varying virulence of apparently similar streptococci was insisted upon, and the remarkable fact had been noticed that two streptococci of the same initial virulence might show great differences in the case

with which the virulence could be increased by passage through rabbits. An attempt was now being made at the Jenner Institute to prepare a polyvirulent serum by using streptococci obtained from different sources. In using the serum it was advisable as far as possible to make the injections at the site of infection.

Dr. Goodall had tried the serum in a certain number of cases of severe malignant scarlet fever, but without observing any benefit. He pointed out that such cases occasionally recovered with ordinary treatment, so that too much importance must not be attached to an occasional recovery after the use of the serum. He mentioned one severe case of phlegmonous inflammation of the fauces in which he had employed the serum with apparently great benefit. There was great œdematous swelling, with high fever and delirium. The temperature fell to normal in two or three days, the swelling rapidly subsided, and the patient recovered. Such a condition following scarlet fever was rare, but it was very fatal. In this case the diphtheria antitoxin had been used without benefit. It was thought by some that streptococci played an important *rôle* in some severe cases of diphtheria, but Dr. Goodall did not think there was sufficient evidence of this to call for the use of the two serums together in such cases.

Dr. H. A. Caley alluded to cases of infective endocarditis in which antistreptococcus serum had been given with negative results, and to one case of endocarditis of a subacute type in which it appeared to be of service. The variable clinical course of erysipelas made it difficult to gauge the effect of any particular therapeutic measures. Occasionally, however, the serum apparently exercised a definite beneficial action, and he gave particulars of a severe case of facial erysipelas in which the administration of each dose of the serum was followed by marked improvement, the patient subsequently making a good recovery. It was noteworthy that some of the recorded instances in which the serum appeared to have been of conspicuous value were cases of recent septic infection associated with a definite local lesion, so that the administration of the serum was employed in conjunction with local measures at the site of the primary lesion.

Dr. Blacker was interested to hear Dr. Washbourn's opinion, opposed as it was to the conclusions arrived at by Dr. Spencer in his report to the British Medical Association this year, and to the report of the Subcommittee of the American Gynecological Society. The question was an exceedingly difficult one to decide, since it was difficult to say at the onset of a case of septic infection whether it was going to run a severe or a mild course, and the total mortality of cases of puerperal streptococcal infection was not higher than 5 to 8 per cent. Dr. Blacker's own experience of the serum had been entirely disappointing. Many of the cases recorded were worthless from the absence of any bacteriological examination, and many cases of puerperal infection were due to a mixed infection which the serum could not be expected to influence.

Dr. Ewart briefly referred to his experience with the serum. In a very severe case of infective fever in which the streptococcus was found in the blood marked improvement was observed after each injection, and the patient recovered. In cases of endocarditis and of erysipelas the serum had not proved successful, and in a case of fœtid bronchitis no improvement had taken place in the patient's condition nor in the expectoration.

In reply, Dr. Washbourn stated that he had noticed the same fact with regard to the pneumococcus as Dr. Dean had observed in the streptococcus—namely, that two organisms might differ widely in the readiness with which their virulence could be increased by passage through animals. The varying results obtained in the treatment of ulcerative endocarditis with antistreptococcus serum might partly be accounted for by the fact that not all cases were due to a streptococcal infection—some were caused by the pneumococcus, and others again by the staphylococcus. He had used a very powerful antipneumococcus serum, which could now be obtained, with success in a severe case of pneumonia following influenza. Dr. Washbourn did not agree with Dr. Blacker as to the mixed nature of the infection in puerperal fever. The discharges might certainly contain many organisms, but the lesions were, he believed, due only to the streptococcus.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, November 1st, 1899.

Alban Doran, F.R.C.S., President, in the Chair.

Tubercle of Uterus.

Dr. P. D. Turner (Ryde) read notes on tuberculosis of the Fallopian tubes and uterus based on the examination of the genital organs of 27 consecutive cases of phthisis in female subjects in the *post-mortem* room of the Brompton Hospital. In all cases the naked-eye appearances were noted and a complete microscopical examination was made. The results demonstrated the frequency of tuberculous lesions in these organs in cases of phthisis, and some of the lesions being in a very early stage afforded evidence as to the mode of infection and the development of the disease. Tuberculous lesions of an undoubted character, demonstrated by microscopical structure and the detection of the tubercle bacillus, were found in 5 cases (18·5 per cent.). In 1 of these the tubes alone were involved, in 2 the tubes and the body of the uterus; in 1 the tubes, body, and cervix of the uterus, and in 1 the tubes, body of uterus, and ovary were affected. All 5 cases presented some degree of intestinal ulceration. In 7 of the remaining cases there was evidence of interstitial or catarrhal salpingitis, and in several of these the condition was suggestive of a tuberculous origin, but no positive evidence to that effect was forthcoming. The author gave a detailed description of the lesions met with, and inferred that the usual form of tuberculous salpingitis appeared to be due to the entry of bacilli into the open ends of the tubes from the endometrium; infection through the blood supply probably also occurred, but much less frequently. The cervix was similarly affected. The ovary did not form the same nidus and was comparatively rarely diseased in these cases.

Dr. Peter Horrocks said it was unexpected to find such a large proportion of patients with undoubted pulmonary phthisis affected by tuberculous mischief of the uterus and other generative organs. He inquired whether these patients had complained in any way of symptoms associated with the generative organs. These cases did not bear out Louis's law that if tubercle was found in any part of the body after puberty it was sure to be found in the lungs. He related details of a case of tubercle of the cervix uteri which was mistaken for sarcoma.

The President suspected that in the cases where Dr. Turner detected hydrosalpinx the tube was first closed by local peritonitis and then infected with tubercle, whilst in many other cases where the tube was still unobstructed the tuberculous disease began in the tube as a true tuberculous salpingitis. He referred to Kleinhaus's statement that the tube was the part of the female genital tract most often affected. In acute tuberculous salpingitis it appeared that the bacillus was found in abundance whilst giant cells were scanty; in the chronic form the giant cells were abundant and the bacilli scanty. The balance seemed even in Dr. Turner's cases, possibly because subacute exacerbations were frequent.

Dr. Turner, in reply, said that, as far as he knew, none of the cases presented any symptoms referable to the lesions in the generative organs. The great relative frequency with which the lesions had been found he attributed to their having been minutely searched for.

Antistreptococcus Serum.

Dr. Herman read a paper on two cases in which life appears to have been saved by antistreptococcus serum. He said that judgment as to the therapeutic value of the antistreptococcus serum was difficult, because not enough was yet known about the effects of the streptococcus. If the serum failed it might be because it was used too late or because the patient had been poisoned by some microbe other than the streptococcus. In some cases published as examples of success from the serum, it had seemed to the author, from reading the reports, that some of the patients were never in danger, and that in some recovery was to be attributed to other therapeutic measures (such as removal of retained placenta) used at the same time as the serum. For these reasons it seemed to him impossible at present to draw conclusions as to the value of the serum from statistical tables. He submitted two cases in which, in his opinion, the symptoms were such as to

warrant a very unfavourable prognosis, but nevertheless the patients got quite well after antistreptococcus serum. The first was a case in which a severe operation was followed by great prostration from which the patient recovered, but the rally was followed by renewed prostration, such as in the author's former experience had ended in death. With the serum the symptoms quickly improved and the patient got well. The second was a puerperal case, in which the occurrence of three severe rigors on successive days led the author to think that the patient was suffering from pyæmia, and that secondary abscesses, etc., might be expected. With serum the symptoms improved, and the only development was a small patch of cellulitis which ended in resolution. The author was aware of the difficulty and uncertainty of prognosis in cases such as those now reported, but he submitted that, in the present state of our knowledge, it was only by the consideration of cases such as these that judgment could be formed.

Dr. CLAPHAM narrated the case of a woman, aged 28, who was delivered by a midwife on November 8th, 1898. On the third day the temperature rose to 103°. The uterus was explored and washed out with sublimate solution. The temperature next day was normal but on the fifth day it again rose. On the sixth day it reached 105°, pulse 130. The uterus was scraped and scrubbed with iodine. On the seventh day 15 c.cm. of serum were injected, and afterwards five more injections of 10 c.cm. were made at daily intervals. During this time the temperature rose daily to 105° falling to 102°. The patient recovered after a tedious convalescence.

Dr. PETER HORROCKS described a case successfully treated with serum which so impressed him that he felt very enthusiastic about the treatment. He had, however, since seen many cases treated by the serum, and on the whole was bound to admit that he had been disappointed. Some of the cases were described, and allusion was made to pain caused by the injections. In spite of the disappointing results so far he recommended the continuance of the serum injections. The solution should be clear and injected with all aseptic precautions, and then was quite safe and harmless, and even nutritive.

Dr. CULLINGWORTH spoke of the difficulties inherent in all inquiries into the effect of remedies. He felt it right if the symptoms persisted after exploration and treatment of the uterus to advise the administration of the serum. He mentioned a case in which after removal of pieces of adherent placenta the temperature rose within twenty-four hours to 104°. Within twelve hours after injection of the serum the temperature had fallen to normal. On the other hand in another case twelve or fourteen injections had been made without any appreciable effect. Until we had more precise knowledge there was sure to be failures, but the serum was, as yet, the only antidote to puerperal fever that we possessed.

Dr. AMAND ROUTH could recall only one successful case where he had ordered the serum and had done nothing else. This woman had had a rigor with very high temperature on the third day of the puerperium, and when seen by him on the eighth day was apparently dying. The uterus was fixed, and the pelvis full of cellulitic deposit. After injections of the serum the patient recovered after a protracted convalescence and the subsequent development of a pelvic abscess. He was not aware of evidence to prove that the injection of sterilised serum was in itself harmful.

Dr. DRUMMOND ROBINSON had found the results of bacterial investigation of puerperal septic cases to be very unsatisfactory. He therefore disagreed with those who thought that the serum should only be employed in cases in which it was possible to demonstrate the presence of streptococci. He had treated several cases with the serum, but in only one case did the slightest benefit result—a case of puerperal sepsis with membranous vaginitis first treated with serum at the eleventh day.

Dr. ROBERT WISE thought serum treatment would rarely be required if the conditions were recognised early and modern local and general treatment were applied.

Dr. RIVERS POLLOCK said the presence of several varieties of micro-organisms might account for the failure of the serum.

Dr. EWEN MACLEAN thought that one good result of the present discussion would be the checking of the indiscriminate use of the serum. It had been experimentally proved that the serum of an animal immunised to the effects of one bacterium might provoke increased virulence in the effect of another, and it was quite conceivable that the injection of the antistreptococcus serum in cases which were not caused by that micrococcus might be harmful rather than helpful.

Dr. HERBERT SPENCER had given at the August meeting of the British Medical Association[1] the results of an extensive inquiry into the subject of serumtherapy. The results of that inquiry were unfavourable to the treatment and were corroborated by the similar investigation by the American Gynecological Society. He agreed with Dr. Eden in regarding it as empirical and unscientific to give the serum in cases where no streptococcus was present. It was, moreover, not free from danger, several deaths having occurred from the injections.

The PRESIDENT agreed with Dr. Spencer as to the high importance of the report on antistreptococcus serum published in the September number of the *American Journal of Obstetrics*. It should be carefully studied, as it not only seemed to demonstrate that the employment of the serum would not materially improve the results in the treatment of streptococcal infection, but implied that the use of the curette greatly increased the mortality.

Dr. HERMAN replied.

SPECIMENS.

The following specimens were shown: Mr. TARGETT: Tuberculous Salpingitis.—Dr. P. D. TURNER: Tubercle of Uterus.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Sir JOHN BATTY TUKE, M.D., LL.D., F.R.C.P.E., President, in the Chair.

Wednesday, November 1st, 1899.

CASES.

Dr. ALEXANDER JAMES showed: (1) A case of slight Cretinism; and (2) a rare case of Skin Affection, mainly of the hands, which were horny and cracked.—Dr. F. D. BOYD (for Dr. GEORGE GIBSON) showed a little girl, aged 14, but only of sufficient intelligence to be in the "first standard," whose Thyroid began to enlarge shortly after birth.

SPECIMEN.

Dr. THOMAS SHENNAN (for Dr. ALEXANDER BRUCE) presented a specimen of the lower part of the Bowel, showing thickenings and ulcers, which were believed to be due to syphilis.

EXAMINATION OF THE BLOOD IN DISEASE.

Dr. E. LOVELL GULLAND read a paper on the Importance of the Examination of the Blood in Doubtful Cases of Disease. He said he did not intend to speak specially about the examination of the blood in pernicious anæmia or chlorosis, for in these and similar conditions everyone was agreed that the blood ought to be examined, and such examinations were not infrequently actually made, even though the results were not always scientifically accurate. But there was, in this country in particular, a general and widespread ignorance of the amount of information which could be gained from the thorough examination of the blood in general diseases—apart from the diseases of the blood-forming organs—and of the valuable indications for diagnosis, and treatment which could be obtained in this way. The blood was the only *tissue* of the body which we had the opportunity of examining microscopically and chemically during life. Further, while there were special diseases which affected mainly the blood, there was probably no disease which did not affect the blood mixture, as the Germans call it, in some way. Present methods were often too rough to enable them to seize the exact difference; in most cases they could only trace comparatively coarse morphological changes, but there was no reason to believe that the discovery of serum diagnosis in typhoid fever and other infectious diseases had exhausted the possibilities in that direction. In an ordinary blood examination one had to look to the number and condition of the red corpuscles, and their content of hæmoglobin, the number of white corpuscles and the percentage of the different varieties present, the number of blood plates, and

[1] BRITISH MEDICAL JOURNAL, October 14th, 1899

the rapidity of formation of the fibrin network. In special cases, of course, such things as the plasmodium malariæ or the presence of organisms might have to be looked for, but these need not now further be alluded to. First, as to the number and condition of the red corpuscles. These points were of importance in the diagnosis from primary blood diseases, but apart from that they were of comparatively little service in making the diagnosis of the disease which was present except in so far as they enabled one to discriminate between a grave illness and a slight one, for the reason that the conditions which produced anæmia were almost infinite in number, and any two causes of equal severity would produce just the same kind of anæmia, no matter how widely diverse they might be. For example, gastric cancer, bleeding piles, and septicæmia would produce anæmias which as far as the red cells went, were indistinguishable from one another. The condition of the red cells was invaluable on the other hand in helping to estimate the severity of the individual case, and its prognosis, the amount of recuperative power, and of course to trace progress. It was obvious that a patient suffering from, say, pneumonia or phthisis had a much better chance if he started with 5,000,000 corpuscles to the cubic millimetre than if he had only 2,500,000, and these small and misshaped. The percentage of hæmoglobin gave very much the same kind of information as the red cells; in many cases the amount of loss was proportional to the loss of red cells, and in many others—where the corpuscles were small and of light weight—the hæmoglobin was proportionately diminished. In one case only, that of pernicious anæmia, the hæmoglobin was relatively increased. The number of blood plates was difficult to estimate, and changes did not usually give any information that could be got in other ways. The same might be said with regard to the rapidity of fibrin formation; the one point in which special help might be got from it was in making a diagnosis between suppuration and malignant disease. In the former the fibrin was increased, in the latter it remained unaltered, though the blood in other respects might be very similar. But it was the white corpuscles which helped most. An increase of them (leucocytosis), a diminution (leucopenia), a normal number, and almost as much the proportion of the different varieties which was present, and in some cases the presence or absence of varieties which were not usually found in the blood, might all give us important information, not only for diagnosis, but also for prognosis. The use which was to be made of the information gained by blood examinations could best be illustrated by recounting briefly some of the many cases in which he had examined the blood for diagnostic purposes, and by pointing out the method of interpretation in each case, which, as in other methods of diagnosis, usually involved the weighing of *pros* and *cons*. A case which made a deep impression on Dr. Gulland's mind at the time was that of a young man on whom on the first of the month a cosmetic operation was performed. Everything went well until the evening of the fifth, when the temperature rose to 104°, and the patient developed a sore throat. The wound seemed to be all right; there was no pain. The man was obviously very ill, but there was nothing on which a definite diagnosis could be founded, and the surgeon was naturally unwilling to believe that it was a septicæmia. Was it influenza (which was epidemic at the time), tonsillitis, or septicæmia? On the 7th Dr. Gulland saw the case when the temperature was about 103°, and examined the blood. The red corpuscles numbered 2,000,000 in the c.mm., with about 30 per cent. of hæmoglobin, and the whites numbered 24,200, and were almost all polymorphonuclear. On the strength of this he assured the surgeon that it was septicæmia, and advised the opening up of the wound and the injection of antistreptococcus serum. Nothing was found in the wound, the temperature fell to 99.5 after the injection of the serum, but rose again and remained about 104°, in spite of a second injection, until death, which took place on the 9th. The interpretation of the blood examination was as follows: Influenza was at once excluded by the leucocytosis, for that disease did not cause an increase in the number of leucocytes in the blood. Tonsillitis might have caused a leucocytosis of that size, though it was generally smaller, but could not have caused the tremendous drop in the red corpuscles. The operation was a cosmetic one, and the patient had been in sound health before it was done, so that his red corpuscles were presumably about 5,000,000. The only things practically which could have caused a fall from 5,000,000 to 2,000,000 in a few days were hæmorrhage—which had not occurred—and septicæmia. The interpretation was amply justified by the progress of the case. Another case of a similar character was that of a lady, who had been confined about five weeks before Dr. Gulland saw her. The placenta had been adherent, and the doctor had had to introduce his hand into the uterus. It was found also later that the house was in a very insanitary state. She went on well at first; but about ten days after the confinement the temperature was found to be raised. She developed phlegmasia, first in one leg, then in the other; but a gynæcologist who saw her found no mischief in the uterus or pelvis, and the temperature began to fall. She got very pale, however, and exhibited the usual symptoms of anæmia. The family doctor thought she might be developing pernicious anæmia, and asked Dr. Gulland to examine the blood. He found the reds to number 2,640,000, with 15 per cent. of hæmoglobin and a certain amount of poikilocytosis; the leucocytes were 13,400 and mostly polymorphonuclear, the fibrin was increased. Pernicious anæmia was therefore out of the question; the reds were too numerous, the hæmoglobin too low, so that the colour index was only 0.3 instead of being at least 1.0, while the leucocytosis, though it was not very high, and the increase of fibrin pointed to an inflammatory condition. He therefore reported that the case was a septic one, though the apparent absence of local mischief was puzzling, and treatment was carried on on that line. The patient lived for three weeks, during which he saw her several times, and in a second blood examination found the reds lower, and the whites higher. *Post mortem* it was found that the uterus was not enlarged, but that on its posterior wall were two small ulcers, and starting from them a thrombosis, with purulent softening, of the right uterine vein. This passed into the iliac vein, down both femoral veins, up the vena cava, and into the pulmonary artery. The converse of these cases was found in a man who had a double pleurisy with effusion, with a febrile but irregular temperature, a slight pericarditis, and an enlarged spleen. There was a vague history of rheumatism, but nothing else to point to a cause for the condition. Repeated blood examinations showed red corpuscles varying between 2,500,000 and 3,500,000, while the leucocytes were always below 5,000. This last fact excluded rheumatism, where there was always a leucocytosis depending in amount on the severity of the case, and excluded any septic element, while it made tuberculosis very probable. The man lived for two months, and then numerous miliary tubercles were found throughout the lungs and spleen, and a few in other organs. There was another point of interest, namely, that the man had inflammation of three serous cavities—both pleuræ and the pericardium—and in spite of this there was no leucocytosis. Had the inflammations been rheumatic or septic, affection of a single cavity would have sufficed to produced a marked increase of the leucocytes. A companion to this case was one which also illustrated some of the difficulties of blood diagnosis. A little girl, aged 10, was taken ill rather suddenly about a fortnight before, and her temperature had remained high (about 103°) all that time. She had some abdominal tenderness, slight diarrhœa with dark motions, some bronchitis, and lay in a semi-comatose state. The spleen was not enlarged, and there were no rose spots. The blood was repeatedly tested for the typhoid reaction, but the result had been negative. When her blood was examined, the red cells were found to be little altered, and numbered 4,080,000, while the white cells were 9,400. This excluded any suppuration or septic mischief, or pneumonia, but left undecided the question whether the disease was typhoid or general tuberculosis. Dr. Gulland therefore made a differential count of the leucocytes in the stained fibres, and found that the polymorphonuclears numbered 80 per cent., and the lymphocytes 20 per cent. Now the number of leucocytes, 9,400, was not high for a child, and he did not think it could be called a leucocytosis. But the normal percentage of lymphocytes in a child of 10 should be about 50 instead of 20 as in this case, and in typhoid, apart from complications, the tendency was for the lympho-

cytes to increase in number. It might also do so in tuberculosis, but much less frequently. On the whole, therefore, as the Widal reaction was negative, and as enlargement of the spleen and rose spots were both absent, he inclined to think the case one of general tuberculosis and said so, but kept back in his mind the idea that there might be a commencing tuberculous meningitis, as that was the one pure tuberculous process in which a slight leucocytosis occurred. Two days after this examination the blood gave the Widal reaction strongly, and the case was now progressing favourably as a typhoid. The explanation of that relative leucocytosis—that is, the increased percentage of polymorphonuclears—probably was that the bronchitis was more severe than one realised, and was producing this effect on the blood. Another case illustrating the importance of leucocytosis was that of a woman aged 25, who was anæmic, slightly feverish, and had a markedly enlarged spleen and enlarged cervical glands. Her heart was enlarged, and there were slight systolic and diastolic murmurs. So far the condition might have been leucocythæmia with a coincident cardiac lesion, but the blood was found to contain 18,000 leucocytes per cubic millimetre, and the vast majority of these were polymorphonuclears. There were no myelocytes or nucleated red corpuscles, and no increase in the eosinophiles, as there would have been in a leucocythæmia, and Dr. Gulland hazarded the suggestion that the case was an endocarditis, which turned out to be correct. About six years ago he was attending a family of children among whom measles had broken out. Three of them were attacked, and on the following day the eldest boy, who had not before been seen so that he might have been feverish or not, was taken ill with shiverings, cough, and high fever. At first it was thought to be measles, as he had not had the disease, but the next day he was evidently very ill, the breathing had quickened, there was no rash, and no physical signs in the chest. Was it a severe aberrant form of measles or a lobar pneumonia? The uncertainty lasted till the morning of the fourth day, when the familiar pneumonic signs showed themselves on one side and the case went on satisfactorily. Had the leucocytes been counted on the first day one would probably have been able to make the diagnosis, for in measles there was no increase in their number, while in pneumonia in 99 cases out of 100 there was a well-marked leucocytosis from the very first. But leucocytosis was just as important to the surgeon as to the physican. If surgeons would examine the blood systematically they would find that, for instance, in appendicitis, a leucocytosis increasing day by day would give them warning of pus formation before the temperature or physical examination give any sign of it, while all other septic conditions could be diagnosed from the blood more certainly than in any other way. The amount of leucocytosis present in malignant disease would give them an idea of the rate of growth and nature of the tumour, and of the existence or non-existence of metastases, and after its removal the reappearance of leucocytosis would warn them that the disease was recurring. In very mild and in very severe cases of pneumonia or other leucocytosis-producing diseases the blood gave a prognosis also. In obviously mild cases, where the patient easily overcame the infection, the leucocytes were not increased, while in severe cases where the infection easily overcame the patient, there was no reaction and no leucocytosis. Such cases were doomed. In the great middle class, where there was leucocytosis the actual amount of it depended on so many causes that it was impossible in most cases to draw a prognostic indication from it. There were two diseases which were the very dust-bins of diagnosis, influenza in this country and malaria in America. It was worth remembering that neither of them caused leucocytosis, and that when a leucocytosis was found one could not be dealing with uncomplicated influenza. In America the almost equal prevalence of malaria and typhoid led to many mistakes, which might always be cleared up by a blood examination, the plasmodium on the one hand, and the serum reaction on the other being sufficiently definite. The varieties of leucocytes present in the blood might give useful information, and these must of course be sought in stained films. Men who had no time for complete blood examination could learn more from stained films than from any one other method, and if to that they added the enumeration of leucocytes, it would often be unnecessary to count red corpuscles, to estimate hæmoglobin, or even to examine a fresh film. With practice one could make a fair guess at the amount of hæmoglobin in the blood as it flowed, and if one found the red corpuscles normal in shape in the films they were not as a rule greatly diminished in number, whilst by spreading films always as nearly as possible of the same thickness one got to know how near to one another the corpuscles should lie, and any considerable alteration in the number of leucocytes could at once be detected. The percentage of the different varieties of leucocytes could only be ascertained in films, for it was thoroughly misleading to attempt to estimate them from the number counted in the leucocytometer, though it was often stated in textbooks that this was sufficient. One rarely counted more than a hundred leucocytes in that instrument, often not so many, and it was necessary to count at least thrice as many, and for real accuracy five hundred or a thousand. Further, in the leucocytometer one had not the staining reactions to guide one, so that a myelocyte looked just like a large lymphocyte, and an eosinophile like a "neutrophile." It was to be remembered, moreover, that the combination of eosin and hæmatoxylin was not a sufficient stain for diagnostic purposes; some combination of basic and acid aniline stains such as eosin and methylene blue, or the triacid stain must be used. Cases illustrating the information to be obtained from stained films were related. A very interesting series of observations was beginning to be made with regard to the eosinophiles. It had long been known that they were increased in the blood and sputum in asthma, and that one could by that means distinguish true asthma from cardiac and renal dyspnœa. They were also increased in some skin diseases, notably in pemphigus and in dermatitis herpetiformis. In one case of the latter disease he found them to form 16 per cent. of the leucocytes present (the normal percentage is under 5), and he had been able to show that two cases, supposed to be of that disease, were not so, by finding the percentage to be 4 and 5 respectively. But the disease which gave the highest percentage of eosinophiles was trichinosis—for some unexplained reason—and there they had been found in one case to make up 68 per cent. of all the leucocytes present. At first sight nothing seemed more unlikely than that it should be possible to diagnose such a disease by a peculiarity in the leucocytes, but the observation was quite recent, and it was evidence that there was still much to be found in the blood if it were carefully and systematically examined. In conclusion he pleaded for a systematic examination of the blood in all serious cases where there was any doubt about the diagnosis. The blood would often give positive information, and in many other cases would give negative information, which was often just as valuable.

Dr. ALEXANDER JAMES, Dr. D. C. WATSON, and Dr. JAMES FOULIS spoke; and Dr. GULLAND replied.

PRESIDENT'S VALEDICTORY ADDRESS.

The PRESIDENT (Sir John Batty Tuke) gave his valedictory address. After thanking the members of the Society for the honour done him in electing him to the chair, and for their kindness and courtesy to him during his tenure of office, he referred briefly to the thirteen deaths in the membership of the Society during the past two years. In particular he made sympathetic and touching reference to the deaths of John Duncan, William Rutherford, and John Struthers. He then briefly reviewed the work of the Society during his Presidentship.

VOTE OF THANKS.

On the motion of Dr. ARGYLL ROBERTSON, a vote of thanks was given to Sir John Batty Tuke for his address and for his conduct in the chair.

ELECTION OF OFFICERS.

The following gentlemen have been elected office-bearers for the ensuing session:—*President:* Mr. Alexander Gordon Miller, F.R.C.S. *Vice-Presidents:* Dr. James Andrew, Dr. P. A. Young, Dr. James Dunsmure, and Sir John Batty Tuke. *Councillors:* Dr. H. M. Dunlop, Dr. George Mackay, Mr. Alexis Thomson, Dr. G. Lovell Gulland, Dr. R. Mackenzie Johnston, Dr. Graham Brown, and Mr. D. Wallace. *Treasurer:* Dr. Harvey Littlejohn. *Secretaries:* Mr. J. M. Cotterill and Dr. H. M. Dunlop. *Editor of Transactions:* Dr. William Craig.

LIVERPOOL MEDICAL INSTITUTION.

A. Bernard, M.B., Vice-President, in the Chair.

Thursday, November 2nd, 1899.

Cholecystotomy.

Mr. Newbolt read notes of a case of cholecystotomy and exhibited the patient. The operation was performed five months previously, and 70 small calculi were removed.

Artificial Anus.

Mr. R. W. Murray showed a boy, aged 14 months, upon whom he had operated for imperforate anus. At the time of the operation the infant was one day old, and on making the incision in the normal position of the anus, meconium escaped *per urethram*. The attempt to find the lower end of the bowel was abandoned and left inguinal colotomy performed. The subsequent progress of the case was satisfactory. At the present time the infant was well-grown and in good health. The question Mr. Murray raised was, Can anything further be done for the child, or must he be compelled to go through life with an artificial anus in the groin? Considering the great disadvantages the boy would suffer, especially when he grew older, Mr. Murray suggested the advisability of opening the abdomen and endeavouring to bring down the present artificial anus or some other part of the large intestine, to the normal position of the anus. This he believed to be quite possible, considering that in intussusception the ileo-cæcal value occasionally projected beyond the anus.

Mr. F. T. Paul thought that drainage of the intestine in iliac colotomy was best effected by the use of a glass tube. It regard to the proposal to bring down the bowel to the region of the anus, he feared the attempt would fail, as the bowel below the artificial anus would be atrophied, while to bring the upper part of the sigmoid flexure down would involve so much division of its mesentery as to risk the vitality of the cut end. He would advise either that it be left alone or that the proximal end of the bowel be separated and passed between the muscles for a couple of inches, with the object of obtaining better control over the fæces.

Dr. Hubert Armstrong thought that an operation involving such grave dangers, and by no means absolutely necessary in order to prolong life, should not be performed until the patient was old enough to say for himself if he would take the risk.

Mr. Thelwall Thomas thought that it was a pity that the primary exploration for the rectum was abandoned; removal of the coccyx would have probably allowed the bowel to be reached. Now, however, before considering anything further, an exploration through the artificial anus should be made, to determine the condition of the lower bowel, and subsequent proceedings, if any, based on the knowledge then found.

Messrs. Larkin, Newbolt, and Rushton Parker spoke; and Mr. Murray replied.

A Piece of Steel in the Eye.

Mr. Richard Williams read notes of a case of foreign body (a small piece of steel) in the right eye of a boy, aged 15. The steel had entered the cornea at the upper and outer part, and penetrated the iris at the periphery without injury to the lens. At first it was plainly visible behind the lens, but in an attempt at removal under an anæsthetic it disappeared during a violent attack of vomiting, and had not been seen since. First attempts with the *x* rays failed to discover the body. Ultimately a good skiagraph by Dr. Thurstan Holland showed its presence. The eye recovered perfectly, and had normal vision; but later on some turbidity of the vitreous came on, with slight deterioration of vision, and it was a question whether the rays had anything to do with this result. At present the eye was quiescent, with vision = $\frac{6}{9}$.

Epidemic of Follicular Conjunctivitis.

Drs. Grossman and Loewenthal read a paper on an endemic of follicular conjunctivitis in a Liverpool school. A case of advanced follicular conjunctivitis without marked subjective symptoms was accidentally discovered, and led to an examination of all the children of the school. It was found that of 700 children 422 had follicular conjunctivitis (60 per cent.). They described the appearances and symptoms, the percentage of occurrence of the different stages, prognosis, treatment, and the differential diagnosis. Many patients were exhibited, and microscopic sections were shown.

Mr. Charles Shears said that in his experience follicular conjunctivitis was an extremely common affection in young people, and was often accompanied by other signs of glandular activity, such as post-nasal adenoids and granular pharyngitis. Dr. Sydney Stephenson, a recognised authority, had examined the lids of nearly 15,000 children, in all ranks of life, and found enlarged follicles in over 80 per cent. The majority of these children did not complain of their eyes in any way. While quite agreeing that there was no difficulty in distinguishing between the ordinary cases of follicular conjunctivitis and true granular lids, he thought that there were certain severe cases of follicular conjunctivitis which were very difficult, if not impossible, to differentiate from true granular lids, and that only time and careful observation could clear up the diagnosis.

Drs. Abram and Bickerton spoke.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

D. Burgess, M.B., M.R.C.P., President, in the Chair.

Thursday, October 26th, 1899.

Coxa Vara.

Mr. Pye-Smith showed a case of double coxa vara, with a skiagraph, in a boy, aged 3 years. He was the youngest of seven children; there was evidence of rickets in him and in two of his brothers. He did not begin to walk until he was over 2 years old; he had a waddling gait, and soon got tired. There was lordosis, slight eversion of the feet, great restriction of abduction, and some diminution of internal rotation. The great trochanters were an inch above Nélaton's line, the heads of the femora could not be felt, nor could the limbs be lengthened by traction. The diagnosis from morbus coxæ and from double displacement of the hips was pointed out.

Cases.

Mr. Dale James showed an example of Tattooing on the chest and forearms.—Dr. Arthur Hall showed (1) A case of Lichen Planus; (2) Serpiginous Syphilide.—The President showed (1) a case of Addison's Disease; (2) a case of Hemiatrophy resulting from injury to the skull in infancy, and the following morbid specimens; (3) Tumour of the Pons.

Aseptic Surgery.

Dr. Sinclair White read a paper on aseptic surgery. He stated that no one now doubted the germ origin of septic diseases, but it was open to question whether in surgical practice the application of Lister's memorable discovery was as wide as it should be. Teachers should insist that failure to resort to measures for securing aseptic healing of wounds was tantamount to gross professional negligence. Sterilisation should be the first, and, except in operations through septic tissues, the only line of defence against septic micro-organisms. With efficient sterilisation the subsequent use of antiseptics was illogical and unnecessary. Heat in the form of boiling water or steam should be used for disinfecting instruments, ligatures, dressings, and towels. The skin, after thorough cleansing with a nailbrush, soap, and hot water, should be disinfected by a five minutes' contact with a 1 in 500 solution of biniodide of mercury in methylated spirit. An aqueous solution of the same salt—1 in 1,000—should be used for disinfecting wounds. Ligatures should be of silkworm gut, which in various sizes was applicable to all kinds of work. Vessels should be twisted rather than tied. Drainage was unnecessary and a source of danger in operations through healthy tissues. We did not drain the non-dependent lacerated wound filled with blood and bone dust produced in performing osteotomy, yet, logically, if drainage were ever required in non-septic operations it should be resorted to here. Aseptic healing was a painless process and deviation from this condition should excite suspicion of something having gone wrong. After operations the pulse and temperature should be carefully watched. A slight degree of fever during the first forty-eight hours was common and need not cause anxiety, but, generally speaking, if all was going on well, the pulse and temperature should be normal on the evening of the third day and remain so afterwards.

MANCHESTER THERAPEUTICAL SOCIETY.

Julius Dreschfeld, M.D., President, in the Chair.

Wednesday, October 25th, 1899.

President's Address.

The President delivered an address on the dietetic treatment of disease. He pointed out that the proper nutrition of the patient was one of the most essential points in the treatment of disease. In gout and rheumatism dietetic measures might effect a cure, whilst in other cases, such as phthisis, dieting might do more good than change of climate or drugs. The same was true of some nervous diseases. In most chronic diseases the object was to prevent loss of body weight; in adiposity it was to reduce body weight, whilst overfeeding was desirable in some nervous diseases. In acute fevers, by appropriate feeding, one might increase the resistance of the system to micro-organisms and allow for increased metabolism. Diet might help to eliminate toxins from the body, and by strengthening the heart aid diuresis. Food sufficient to produce 2,500 to 2,700 calories was often necessary in fever. As regards the advisability of giving solid food in fevers, milk and hydrocarbons were usually sufficient, but occasionally raw scraped beef, somatose, or eucasin might be given with milk. Too much milk might increase the diarrhœa in typhoid fever, and in pneumonia the excess of fluid might lead to weakening of the heart. Alcohol prevented the burning up of the tissues, and might be given in small quantities. Sugar seemed to revive and strengthen the tired heart muscles, and might be a useful food in acute fevers. Chronic fevers, such as phthisis, required overfeeding. Fat should be given in some form in sufficient quantity. In regard to gout, the President referred to the different theories as to its causation and to the effect of these theories on the dietetic treatment of the disease, but concluded that in some cases, such as those of gout in stout people, with urine not rich in urea, an exclusive meat diet might sometimes be beneficial, whereas in others, such as those of gout in thin persons with a gouty family history and a urine rich in urea, meat diet should be restricted. Diabetes in its milder forms might be entirely cured by appropriate diet. In diabetes, 2,500 to 2,800 calories were required to prevent wasting from the loss of sugar. Fatty food had been recommended by Van Noorden, and alcohol might be given to help the digestion of the fat. The President stated that when diabetic coma threatened strict diet should be relaxed, fluids given, and also alcohol. In granular kidney a carefully regulated diet was required which should include a small amount of proteid food—for example, milk, eggs (not raw), white-fibred meats, chicken, rabbit. Van Noorden did not think the exclusion of red-fibred meats based on sound principles, for it had been found that they did not contain more extractives than the white fibred, the reverse being the case. In diseases of the stomach when hydrochloric acid was present in small quantity, proteid food was well borne. When the acid was absent, peptonised foods might be given, or acids administered with the proteids. When there was atony of the stomach walls and no secretion of hydrochloric acid, proteids should not be given. The President then referred to the numerous artificial foods at present in vogue, pointing out that those consisting chiefly of peptones were useless. The liquid preparations contained very little albumen, but some of the newer solid preparations contained a considerable amount. He referred to the malted foods and the emulsified fat preparations, stating that these were frequently of service.

Professor Leech thought that in fevers milk was often given in quantities that were injurious; it was advisable to give some nitrogenous food as soon as possible. In typhoid fever he had found that animal food given as soon as the patient expressed a desire for it apparently did no harm. In gout he believed the attacks often followed indigestion, which was frequently due to taking nitrogenous foods and farinaceous foods at the same meal. He thought these attacks might often be avoided by taking nitrogenous food principally at one meal and farinaceous food chiefly at another.

Professor Dixon Mann thought one should be careful in advising animal food in gout; the question of digestion was of great importance. In granular kidney he was not disposed to keep patients too closely to white meat. As regarded artificial foods, he did not believe in any of them; the liquid preparations were certainly useless.

Dr. Hopkinson emphasised the importance of non-dilution of foods with water at meal times. He thought rectal feeding was of much advantage in many cases.

Dr. Leslie Jones disagreed with Professor Mann as regarded artificial foods. He had seen lives saved by some of these preparations, patients being able to take them when no other food could be retained.

Dr. Goodfellow had seen a case of typhoid where the temperature during convalescence kept constantly high on milk diet; on giving ordinary diet the temperature fell.

Dr. Wild referred to the exclusive diet of maltose which had been recommended by some in typhoid fever; this was said to prevent tympanites and allow the patient very early to recommence with ordinary diet. He thought there was not much nourishment in the artificial foods, but that they might be useful as stimulants.

The President, in reply, acknowledged the great utility of nutrient enemata, both those containing albumen and those containing sugar, especially in cases of dilated stomach. Much sugar, however, was liable to lead to diarrhœa. In regard to diet in disease generally, he thought that the patient's inclinations might well be consulted to some extent, the food which the patient desired being given to him unless quite unsuitable.

Election of Officers.

The following are the officers for the session 1899-1900: *President:* Dr. Dreschfeld. *Vice-Presidents:* Dr. Dixon Mann, Dr. Wilkinson. *Honorary Treasurer:* Dr. Williamson. *Honorary Secretary:* Dr. Wild. *Committee:* Dr. A. Brown, Dr. F. J. H. Coutts, Dr. Kelynack, Dr. Vipont Brown, Dr. Goodfellow, Dr. J. E. Platt.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Annual General Meeting.

Friday, October 27th, 1899.

The annual general meeting took place in the Royal College of Physicians, Dublin, on October 27th. The report showed that the year's income was £570 9s. 1d., but a temporary overdraft of £33 1s. 1d. was required to meet an outlay of £100 17s. 2d. on microscopes. The capital invested amounted to £751 4s. 2d.

Election of Officers.

The following officers were elected:—*President:* E. H. Bennett. *General Secretary:* John B. Story. *Secretary for Foreign Correspondence:* Sir W. Stokes. Medical Section—*President:* J. W. Moore. *Council:* Wallace Beatty, J. B. Coleman, James Craig, Sir George F. Duffey, R. A. Hayes, A. N. Montgomery, Conolly Norman, R. Travers Smith, W. Langford Symes, H. C. Tweedy. Surgical Section—*President:* R. L. Swan. *Council:* A. Chance, H. G. Croly, E. Hamilton, F. T. Heuston, John Lentaigne, R. B. M'Causland, R. G. Patteson, H. R. Swanzy, E. H. Taylor, Sir William Thomson. Obstetrical Section—*President:* A. V. Macan. *Council:* G. Cole-Baker, R. H. Fleming, R. A. Flynn, J. H. Glenn, F. W. Kidd, J. L. Lane, R. D. Purefoy, A. J. Smith, E. Hastings Tweedy, T. H. Wilson. Pathological Section—*President:* A. C. O'Sullivan. *Council:* A. H. Benson, J. B. Coleman, James Craig, W. R. Dawson, H. C. Drury, H. C. Earl, E. J. M'Weeney, R. C. B. Maunsell, A. R. Parsons, J. A. Scott. Section of Anatomy and Physiology—*President:* W. H. Thompson. *Council:* A. Birmingham, D. J. Coffey, D. J. Cunningham, A. Fraser, T. E. Gordon, W. Taylor. Section of State Medicine—*President:* Sir C. Cameron. *Council:* J. Burgess, E. MacD. Cosgrave, W. R. Dawson, N. Falkiner, J. M. Redmond, H. C. Tweedy.

Honorary Fellows.

The following were elected Honorary Fellows of the Academy:—Sir J. Burdon-Sanderson, Bart., M.D., F.R.S., Oxford; Professor Howard Kelly, Baltimore; Professor Koch, Berlin; Professor Kocher, Bern; Professor Th. Leber, Heidelberg; Sir W. MacCormac, Bart., K.C.V.O., London; Professor Martin, Berlin; Professor Nothnagel, Vienna; Professor Osler, Baltimore; Sir W. Turner, M.B., F.R.S., Edinburgh.

REVIEWS.

RECENT WORKS ON PHARMACOLOGY AND THERAPEUTICS.

Many researches have been made to determine the exact action of the aconite alkaloids, but the results have differed so widely on important points that it is evident the various investigators have worked with more or less impure or different substances. In the recent investigation[1] by Professors Cash and Dunstan, the greatest care has been taken to ensure that the alkaloids used were chemically pure, and this precaution, combined with the painstaking and exact nature of the pharmacological portion of the work, invests the contribution with a very special value. It is found that aconitine kills mammalia by its action on the respiratory centre, diacetyl-aconitine has much the same action but is not so powerful, while benzaconine and aconine are much weaker. On the heart all have finally a depressing effect, but aconine compared with the others proved to be relatively harmless. It was found that atropine and digitalis exercised a certain amount of antagonistic effect to aconitine. The actions on the nervous system, temperature, and muscle are all described at great length and with much care. The addition of the two di-acetyl groups to aconitine slightly weakens its action but produces no radical change. The removal of an acetyl group from aconitine to form benzaconine greatly reduces its toxic power and greatly alters many of its minor effects, although in a general way its depressing action on the respiration and temperature resembles that of aconitine. It is no longer a strong heart poison. Aconine is very much less poisonous, has a curare-like action, and differs in other respects from the parent alkaloid. The introduction into its molecule of benzoyl, and still more of acetyl, to form the other alkaloids heightens its lethal effects and modifies its action to a very remarkable degree. The authors also found that there is a certain antagonism in action between aconine and benzaconine on the one hand and aconitine on the other hand. The research will prove of lasting value, and has greatly extended and made more accurate our knowledge of the pharmacological action of aconite.

In his monograph on the action of mercury on the kidneys[2] Dr. Karvonen deals with the subject from the experimental, literary, and clinical standpoints. After a short historical summary the author gives an account of his experiments on rabbits and dogs, various mercurial preparations having been administered subcutaneously, and the kidneys afterwards examined microscopically. In all cases changes were detected in these organs, varying from simple hyperæmia to marked nephritis with albuminuria and tube casts. The well-known deposits of lime salts in the kidney were often obtained as a result of the action of mercury. The pathological changes in the kidney are minutely described. From his own experience in practice, and from cases reported by others, the author describes similar symptoms occurring in man. He also discusses the value and dangers of mercury as a diuretic, and other matters of less importance, such as the occasional occurrence of glycosuria. A good bibliography is given.

Dr. Lewin's comprehensive volume[3] fulfils the function of a complement to the ordinary treatises on pharmacology and therapeutics, as it deals specially with the more or less unexpected and often highly disagreeable results which sometimes follow on the administration of strictly therapeutical doses of remedial agents. Fortunately such effects are, on the whole, rare in the case of any one remedy, but when they do occur they are none the less unpleasant both for doctor and patient. Certain of them depend on the subject having an "idiosyncrasy" and cannot be avoided except after experience, but others depend on the poisonous action of the drug itself and are not so difficult to avoid or to account for. Before the publication of this book the information obtainable on these points was widely scattered in short contributions—chiefly accounts of cases—to different journals, and was often very difficult to come at. It is the author's great merit that by the expenditure of a vast amount of literary research and labour he has collected a large number of these cases and has welded the information so obtained into a harmonious whole. The value of Dr. Lewin's work has obtained deservedly wide recognition. It is scarcely a book which anyone would care to read through, but for reference its usefulness can scarcely be overestimated. The first twenty-nine pages deal with certain general questions such as hereditary, constitutional, and temporary predisposition to an excessive reaction to drugs, the effects of habit, the importance of adulterations and impurities, the commoner symptoms of slight poisoning, and the medico-legal aspects of the question. The remainder of the book is devoted to individual drugs under comprehensive headings such as narcotics, alteratives, diuretics, etc. As far as possible the pharmacological actions and therapeutical uses are only discussed with reference to untoward actions or effects, as otherwise the bulk of the book could not have been kept within reasonable limits. It is hardly possible that such a work could be quite complete even in a third edition, and here and there omissions occur. Like many Continental authors also, Dr. Lewin has availed himself somewhat too exclusively of the literature of his own country, thereby lessening the value of a very valuable contribution to medical literature.

A year ago the sixth edition of Dr. Hare's work[4] was reviewed in our columns, and at that time certain very obvious minor errors and faults were pointed out, most of which have now been altered for the better by the author. The further criticism was made that "the work, good as it is on the whole, would be greatly improved by a careful and comprehensive revision of every part of it." The author, in view of the continued popularity of his work, may have thought such advice ill-timed, and he has acted accordingly. Although he describes the present edition as "largely rewritten," this is a description which careful perusal scarcely bears out, for the same criticism as before may be again justly passed to-day. Dr. Hare states in his preface that "the opportunity has been embraced to make the text conform to the *British Pharmacopœia* of June, 1898." This has been done to a certain extent, but in a slovenly way. Numerous errors are made in preparations and doses, and even in the names of the official preparations, while omissions are very frequent. Such work is purely mechanical, but the necessity for accuracy is very great, and this could have been attained by the expenditure of a comparatively small amount of labour. It is superfluous to enter into details regarding these inaccuracies, as a comparison of the text with the *Pharmacopœia, 1898* reveals them as occurring under almost every drug of any importance. Numerous improvements might be made in the text in many directions. The pharmacology is especially meagre, sometimes erroneous, and the therapeutical uses tend to degenerate into mere bald statements of the drug having been used in certain diseases. These drawbacks are the more to be regretted as the book has a certain character and originality which have justly made it popular; but success carries responsibility along with it, and there can be no doubt that the present edition stands in need of much more careful revision and editing than it has received at the hands of its author.

King's *Dispensatory*[5] is the standard authority of the Eclectic School of Medicine in the United States, the first edition having been compiled by Professor King and issued by him in 1854. The present editors in preparing the new edition have drawn from all available sources on matters relating to materia medica and pharmacy, the result being a mass of information on these subjects which is probably not at present attainable in any other single book. The information given

[1] *The Pharmacology of Aconitine, Diacetyl-Aconitine, Benzaconine, and Aconine considered in relation to their Chemical Constitution.* By J. Theodore Cash, M.D., F.R.S.; and Wyndham R. Dunstan, M.A., F.R.S. Reprint from the *Philosophical Transactions.* London: Published for the Royal Society by Dulau and Co. 1898 (Roy 8vo, pp. 154. 10s.)

[2] *Ueber den Einfluss des Quecksilbers auf die Nieren.* [The Influence of Mercury on the Kidneys.] Von J. Karvonen. Berlin: S. Karger. 1898. (Roy. 8vo, pp. 102. M.3.)

[3] *Die Nebenwirkungen der Arzneimittel.* [The Untoward Effects of Medicines.] Von Professor Dr. L. Lewin. Third Edition. Berlin: August Hirschwald. 1899. (Royal 8vo, pp. 699. M 16.)

[4] *A Textbook of Practical Therapeutics*; with especial reference to the application of Remedial Measures to Disease and their employment upon a Rational Basis. By H. A. Hare, M.D., B.Sc. Seventh Edition; enlarged, thoroughly revised, and largely rewritten. London: Henry Kimpton. 1899. (Royal 8vo, pp. 776. 21s.)

[5] *King's American Dispensatory.* By Harvey Wickes Felter, M.D., and John Uri Lloyd, Phr.M., Ph.D. Entirely rewritten and Enlarged. Eighteenth Edition. Third Revision. In Two Volumes. Vol. I. Cincinnati: The Ohio Valley Company; and London: Potter and Clarke. 1898. (Roy. 8vo, pp. 950. 18s. 9d.)

about each vegetable drug is arranged in a certain definite order which is adhered to throughout. In each case a beginning is made with a short definition, and this is followed by the natural order—common names, botanical description, chemical composition, action, and uses, and other points of interest. The information on many of these points has been directly derived from the *United States* and *British Pharmacopœias* and other standard authorities; it has been carefully selected and arranged, and hence is for the most part accurate and of recent date. The weakest part is comprised in the paragraphs on the action and uses of medicines, but as the work is not primarily intended as a system of therapeutics this may be excused. The arrangement is alphabetical, this first volume beginning with "Abies" and ending with "Fumaria." A good deal of space is wasted, or perhaps we should rather say occupied, by the detailed description of numerous extracts, elixirs, plasters, and other preparations, which the editors seem to have thought necessary. The drugs described form a curious and very comprehensive mixture, including Prussian blue, powdered deerhorn, and other substances of very doubtful efficacy.

Professor LIEBREICH'S valuable compend of all matters relating to therapeutics[6] has already been frequently noticed in the BRITISH MEDICAL JOURNAL, as the succeeding parts have been published. The present instalment extends from Mammary Neuralgia to Pharyngitis, and the various articles maintain the high standard which has been attained from the first.

The plan and contents of Dr. MITCHELL BRUCE'S well-known textbook[7] for students remain virtually unchanged, except in so far as alterations have been necessitated to bring it into harmony with the 1898 edition of the *British Pharmacopœia*. The necessary changes in the text have been made with extreme care and accuracy.

The lectures delivered by Professor GREENISH at the School of Pharmacy of the Pharmaceutical Society of Great Britain form a systematic treatise on Materia Medica.[8] At the present day the physical and chemical characters of crude drugs do not bulk large in the scheme of medical education, and it is generally recognised that such matters are best left to the pharmacist. The present volume can, however, be heartily recommended to anyone who wishes a thoroughly trustworthy work dealing with organic drugs. It is difficult to speak too highly of the accuracy of the information given and of the fidelity and finish of most of the illustrations.

Dr. MAISCH has succeeded in writing a book[9] dealing with the materia medica of animal and vegetable origin in a moderate compass. The different substances are classified under such headings as roots, leaves, barks, seeds, etc., and a short but sufficient description of each is given embracing the origin, habitat, physical and chemical characters, and dose of each drug. The therapeutical uses are dismissed almost in a single word, and no account is given of the official preparations. It is obviously, therefore, not a book calculated to be of much value to medical practitioners, but its accuracy and conciseness, which are now widely recognised, give it a high value to students of pharmacy and materia medica, and to dealers in crude drugs.

Dr. WOOD'S little volume[10] is eminently adapted to serve as a guide to medical students beginning the study of pharmacy and therapeutics. The author expressly states that it is not intended to take the place of the practical work of dispensing, but only to be read along with such work, and as an introduction to a systematic course of lectures on therapeutics. The information contained in it is elementary and quite non-controversial, but it is very practical and carefully arranged. There are sixteen very short chapters dealing with weights and measures, prescription-writing, incompatibilities, dosage, Latin phrases, and so on, each section being short and divested of superfluities. It is well calculated to assist junior students in the laborious process of becoming acquainted with the official materia medica.

The second edition of the *Student's Practical Materia Medica*[11] has been revised in accordance with the *British Pharmacopœia, 1898*, and the chief chemical tests for the various organic and inorganic medicinal substances added. The work contains lists of the official preparations and their doses, and the strength and composition of the more important. The chief characteristics of parts and products of plants are described, and also the chief features of chemical substances employed in medicine. The book is intended for a pocket manual. The arrangement and its conciseness will make it useful to refresh the memory before examination.

Mr. HUDSON-COX and Dr. STOKES have succeeded in bringing together[12] within a small compass practically everything that a medical man or student requires to know about the *British Pharmacopœia*. The information is arranged concisely and is readily available for reference. The therapeutical notes are of necessity very brief, the action of a drug in many cases being summed up in half a dozen words, but they answer their purpose. It is a work which can readily be carried in the pocket, and certainly supplies a want.

An account of many hundreds of new drugs is given by the author of the *Newer Remedies*.[13] The sources, methods of preparation, tests, solubilities, medicinal properties, and doses are stated, and there are sections on organo-therapeutic agents and indifferent compounds of iron. The true synthetic remedies have received many valuable additions since the publication of the second edition of this book in 1896. The paraphenetidin nucleus, which has already given the antipyretics phenacetin, phenocoll, lactophenin, etc., has again been drawn upon for such new combinations as kyrofin, phesin, oxyphenacetin, and vanillin-para-phenetidin. Cocaine has now some formidable competitors in eucaine "A," eucaine "B," holocain, pyrocain, orthoform, and guaiacyl. Eupthalmin and mydrol are amongst the newest mydriatics. New compounds and combinations intended for iodoform substitutes, and local and intestinal antiseptics have come in large numbers. The antiseptic treatment by organic silver combinations has much increased. The latest additions are hydrogal, protargol, largin, actol, itrol, and argentol. The author, in addition to giving a very complete list of modern synthetic remedies, has included also such proprietary combinations as are made up of mixtures containing one of more of these synthetic compounds.

The need of a thoroughly good, reliable, and trustworthy book on medical chemistry has long been felt, and Dr. BARTLEY'S[14] fairly realises expectations. It contains a great deal of information about alcohols, ethers, aldehydes, ketones, nitrils, etc., and also devotes a fair amount of space to the mode of examination of the various secretions and excretions of the body. It seems too advanced for the ordinary medical student, but to the candidate for honours it will be useful. As a work of reference it is all that can be desired.

Dr. CRAIG, Lecturer on Materia Medica in the Extra-Mural School at Edinburgh, has compiled a series of tables,[15] of the remedies of the *British Pharmacopœia* with their doses, actions, and forms of administration. It gives also an index of diseases, to which is added an appendix on poisons. The book is very small, and, as it can easily be carried in the pocket, it will probably be largely used by students.

[6] *Encyklopædie der Therapie.* [Encyclopædia of Therapeutics]. Herausgegeben von Oscar Liebreich. Band iii, Abtheilung 1. Berlin: August Hirschwald. 1899. (Roy. 8vo, pp. 320.)

[7] *Materia Medica and Therapeutics.* By J. Mitchell Bruce, M.A., M.D. Thirty-eighth Thousand. London: Cassell and Co. 1899. (Cr. 8vo, pp. 609. 7s. 6d.).

[8] *An Introduction to the Study of Materia Medica.* Designed for Students of Pharmacy and Medicine. By Henry G. Greenish, F.I.C., F.L.S. London: J. and A. Churchill. 1899. (Roy. 8vo, pp. 534, 213 illustrations. 15s.).

[9] *A Manual of Organic Materia Medica for the Use of Students, Druggists, Pharmacists, and Physicians.* By John M. Maisch, Ph.M., Phar.D. Seventh Edition. Revised by Henry C. C. Maisch, Ph.G., Ph.D. London: Henry Kimpton. 1899. (Cr. 8vo, pp. 523, 285 illustrations. 10s. 6d.)

[10] *Elements of Practical Materia Medica and Pharmacy for Medical Students.* By William Wood, M.B., C.M. Edinburgh: James Thin. 1899. (Crown 8vo, pp. 131. 2s. 6d.).

[11] *The Students' Practical Materia Medica.* By Grace Haxton Giffen, L.R.C.P. & S.E., Senior Demonstrator of Anatomy, Ladies' School of Medicine, Edinburgh. Second edition. Edinburgh: E. and S. Livingstone. 1899. (Crown 8vo, pp. 96. 2s.).

[12] *The Pocket Pharmacopœia: including the Therapeutical Action of the Drugs, with the Natural Orders and Active Principles of those of Vegetable Origin.* By Frederick Hudson-Cox, F.I.C., F.C.S., and John Stokes, M.D., B.S. London: Baillière, Tindall and Cox. 1899. (Fcap. 8vo, pp. 206. 3s. 6d.).

[13] *The Newer Remedies.* By Virgil Coblentz, A.M., Phar.M., Ph.D., F.C.P. Third Edition. Philadelphia: P. Blakiston's Son and Co. 1899. (Demy 8vo, pp. 147. 8s.

[14] *Text Book of Medical and Pharmaceutical Chemistry.* By Elias H. Bartley, M.D., B.S., Professor of Chemistry and Toxicology in Long Island College Hospital. Fifth edition. London: H. Kimpton. 1899. (Demy 8vo, pp. 738, 96 illustrations. 10s. 6d.)

[15] *Posological Tables.* By William Craig, M.D., F.R.S.E. New edition. Edinburgh: E. S. Livingstone. 1899. (32mo, pp. 128. 1s.)

REMUNERATION OF MEDICAL WITNESSES IN CRIMINAL CASES.

We published in the British Medical Journal of October 28th, 1899, page 1217, a copy of a letter on this subject from Mr. Andrew Clark, Treasurer of the British Medical Association, and Chairman of the Committee appointed jointly by the Council of the British Medical Association and by the Police Surgeons' Association, which was published in the *Times* of October 20th. We are glad to see that the subject is attracting the attention of other papers. The following excellent article appears in the *Morning Post* of November 6th:

It is not surprising that medical men who have to attend as witnesses in our criminal courts should regard the fee of one guinea a day paid them for such services as inadequate, and that they should agitate—as they are doing—for more liberal remuneration. Things are ordered differently and better in Scotland and in Ireland. The arrangement in Scotland is that a doctor summoned as a witness on behalf of the Crown receives two guineas a day, with one day added in, so that he gets four guineas for one day, six for two days, and so on. In Ireland the instructions given by the Attorney-General to the Crown solicitors are that when a medical witness is summoned to attend at sessions in the town in which he resides a fee of one guinea is to be paid. If he is detained in Court more than three hours, he earns an additional fee of the same amount. When he is summoned to attend from any other town, two guineas a day with travelling and hotel expenses are allowed. It is difficult to deny the force of the claim of medical men in England to a fee of two guineas a day, with railway fare when the witness has to travel from a distance, and other expenses when he is detained overnight in the town to which he has been summoned. At the best the duty of attending criminal courts of law is an unpleasant one. There is no reason why in many cases a quite unjustifiable pecuniary sacrifice should be attached to its performance.

NOTES ON CASES OF MEAT POISONING

(B. Enteritidis of Gaertner).

By William Neish Barker, M.B., Ch.B.,
Senior Assistant House-Surgeon, Sheffield Royal Infirmary.

An interesting series of cases of poisoning by unsound meat occurred in Sheffield on October 11th. The victims belonged to the poorer working class, and all resided in the same district. The meat consumed was "corned beef," put up in 6-lb. tins. On the morning of October 11th a fresh tin was opened and about 4 lbs. of the meat was sold, chiefly in quarter-pounds. Nothing was noticed about the meat except that it was less solid than usual and that the "jelly" was rather oily. It had no smell, and, although a few, it would seem, noticed some nasty flavour about it, the majority of the purchasers observed only an unusual saltness, and took the meat at their mid-day meal. As far as is known no one who ate the meat escaped. The number affected was 24, and of these 22 were treated at the Sheffield Royal Infirmary; the remaining 2 I was able to observe by the courtesy of their medical attendants. The ages of the patients varied from 2 to 89 years, about half of them being children under 12 years. While each case presented symptoms peculiar to itself, they agreed in the main details, and, as space forbids me to chronicle each case individually, I shall give an account of one of the most typical, and afterwards briefly indicate wherein the others differed:

About 12 30 P.M. the patient, a woman aged 35, ate about 2 ounces of the meat. She stated that at 2.30 she was seized with sudden faintness, giddiness, and drowsiness, She suffered from nausea and from great muscular weakness, especially in the legs. Persistent vomiting, with frequent retching, soon occurred, accompanied by intense frontal headache. Colic then set in, followed immediately by a profuse diarrhœa. The colic was not relieved by the vomiting or the diarrhœa. About 3.30 P.M. she was brought to the infirmary. When first seen she was lying on a couch with her knees drawn up, in a state of extreme collapse, The face was pale, with livid patches round the eyes, and covered with beads of perspiration. The skin was cold and clammy, the pulse small and rapid, the respirations shallow, and the pupils dilated. The temperature was subnormal. A hypodermic injection of liquor strychninæ hydrochloridi was administered, and the stomach washed out with the siphon tube till the washings came clear. The first washings were straw-coloured, neutral in reaction, and contained here and there shreds of fibrinous-looking material. Very soon the pulse became slower and fuller, the pain and retching ceased, the drowsiness became less marked, and only the headache and diarrhœa remained. The patient was put to bed, and hot bottles were applied. Within an hour, the state of collapse and other symptoms reappeared, though less markedly than before. The stomach was again washed out—this time with permanent good effect. The patient slept well, and next morning all that was complained of was slight frontal headache. In another twenty-four hours the patient expressed herself as perfectly well, and was discharged.

The following table will show more clearly the points of difference in the cases. The amount of meat each patient had eaten is of course only approximate, but I think in most cases it is fairly accurate.

Sex.	Age.	Approximate Amount Eaten.	Approximate Latent Period.	Initial Symptoms.	Frontal Headache.	Vomiting.	Pain.	Profuse Diarrhœa.	Marked Collapse.	Treatment.	Result.
F	30	Hazel nut	2 hrs.	Drowsiness and giddiness	+	+	—	+	+	Washed out	Recovery.
F	62	2 oz.	2½ ,,	,,	+	+	—	+	—	,,	,,
F	40	2 oz.	2½ ,,	Giddiness	+	+	—	+	—	Castor oil	,,
F	40	2 oz.	2½ ,,	Drowsiness and giddiness	+	+	—	+	—	,,	,,
M	2	Hazel nut	2 ,,	Drowsiness	—	+	—	+	+	Washed out	,,
F	28	2 oz.	2½ ,,	Drowsiness and giddiness	+	—	—	+	+	Castor oil	,,
F	3	1 oz.	2½ ,,	Drowsiness	—	—	+	—	+	Washed out	,,
M	■	½ oz.	2½ ,,	,,	—	+	—	—	+	,,	,,
M	5	1 oz.	2 ,,	,,	+	+	+	+	+	,,	,,
M	2	Hazel nut	2½ ,,	,,	—	+	—	+	+	,,	,,
F	7	2¼ oz.	2 ,,	Drowsiness and giddiness	+	+	—	—	+	,,	,,
F	15	1⅛ oz.	1½ ,,	Giddiness	+	+	+	—	—	,,	,,
F	12	2 oz.	2½ ,,	Drowsiness and giddiness	+	+	+	+	—	,,	,,
F	28	2 oz.	2½ ,,	,,	+	—	+	+	—	,,	,,
M	30	1 oz.	3½ ,,	,,	+	+	+	+	—	Castor oil	,,
M	7	2 oz.	1 ,,	,,	+	+	+	+	+	Washed out	Death.
F	35	1 oz.	1 ,,	Drowsiness	+	+	—	+	+	,,	Recovery.
M	15	1½ oz.	3 ,,	Drowsiness and giddiness	+	+	+	+	—	Castor oil	,,
F	7	1 oz.	2 ,,	,,	+	+	+	+	+	Washed out	,,
M	21	2½ oz.	1 ,,	,,	+	+	+	+	+	,,	,,
M	55	1 oz.	1 ,,	,,	+	+	—	+	—	,,	,,
M	89	4 oz.	2 ,,	,,	+	+	+	—	—	,,	,,

It will be observed from the above table that the period between the ingestion of the meat and the onset of symptoms was comparatively short, showing that the poison had already been produced in the meat. The amount of meat eaten appeared to bear no very direct relation to the severity of the attack; a piece the size of a hazel nut produced the most violent symptoms in a young woman, while a man, aged 89, ate 4 ounces and suffered only slightly. Drowsiness was an early, well marked, and persistent symptom in all the cases, although in a few it was not the first symptom observed. I may here remark that the adult patients all described their symptoms as having come on very suddenly. The vomiting was also an early symptom, and in the majority of cases was severe and prolonged. Abdominal pain was, as a rule, not severe; while in the larger number it came on early in the attack, it was a late symptom in a few. Profuse diarrhœa was the rule; in one case only was there constipation. The stools were offensive, liquid, and of a brownish-yellow colour, containing shreds of fibrinous-looking material. In 4 cases the presence of blood was detected. While all the patients were more or less collapsed, the children suffered most. In one case—that of a boy 7 years old—who had eaten about 2 ounces of the meat, the symptoms were especially severe. The collapse was very marked, and he had to be constantly plied with stimulants. About ten hours after the onset of the illness he had a series of clonic contractions of the flexor muscles of the neck, arms, and legs. The movements were violent, rapid, and almost rhythmical, commencing first in the neck and arms, but soon affecting the legs. The eyes were fixed and staring, and the pupils widely

dilated. After lasting an hour and a half the convulsions ceased. They reappeared in half an hour, affecting at first the right arm and right side of the face, but they soon became general. The collapse gradually deepened, and the boy died about fifteen hours after being taken ill. A *post-mortem* examination was made, but all that was found was a general hyperæmia of the stomach and intestines, with a few hæmorrhagic erosions in the mucous membrane of the stomach. A microscopic examination of the kidney showed cloudy swelling of the cortex, with a few scattered hæmorrhages. This was the only fatal case. All the others convalesced rapidly, and were discharged from the infirmary within forty-eight hours.

The treatment adopted in the majority of the cases was thorough washing out of the stomach immediately on admission. While the good effect of this was apparent, a few of the cases relapsed within a couple of hours. These were again washed out, and no further relapses occurred. Stimulants, chiefly in the form of strychnine and brandy, were freely administered, while an attempt was made to clear the bowel of its irritating contents by purgatives.

In addition to the clinical aspect of the outbreak, there are some points which appear worthy of mention. The brand of beef in question is said to be one of the best in the market. The manufacturers, recognising that it is impossible to guarantee that all the tins of beef shall remain sterile, have made arrangements with retailers to replace any bad tins. Most of the tins that go wrong are so obviously "blown," and their contents so putrid, that no retailer would attempt to sell them. A few, however, do not present any such evident signs of bacterial activity, and that such cases may not be overlooked instructions are printed on the tins to open them at the wider end, and turn the contents out *en masse*. It is supposed that in this way the vendor will be better able to see whether the appearances are those of good beef, especially in regard to the consistency of the beef, the condition of the jelly, and any alteration in colour or odour. In the case of the tin in question, it has been elicited that the vendor opened it by accident at the smaller end, and proceeded to shake out the contents. In this way only portions were got out at a time; so that he could not see the condition of the meat as a whole.

The question arises, how such tins become infected. In this instance the tin appeared fresh, and in good condition. It was not what is usually known as a "blown" tin. It is therefore surmised that a portion of one of the joints was open, and that organisms may have ingress in this way, or the gases produced by their action may have thus escaped, and prevented the bulging of the tin, which they would have otherwise caused.

Dr. Robertson, Medical Officer of Health for Sheffield, has examined a portion of the meat bacteriologically, and I append his report.

My best thanks are due to Dr. Dyson for his kindness in permitting me to publish the above cases, and to Dr. Robertson for much assistance and advice.

Note on the Bacteriological Examination.

By John Robertson, M.D.,

From the Bacteriological Laboratory, University College, Sheffield.

The meat submitted for examination consisted of a lump weighing about 2½ lbs. in a tin. From the facts already reported by Dr. Barker and others subsequently obtained it was quite evident the poisoning was due to some product of bacterial grown in the meat prior to its introduction into the stomach, and not due to a bacterial growth subsequent to its introduction into the stomach.

A very large number of cases of meat poisoning have been examined by bacteriologists in this country, in America, and on the Continent, and as a result two well-defined types of micro-organisms have been described, corresponding to two equally well-defined groups of cases. The anaërobic organism described by Van Ermengen may be taken as the type of one group, the conspicuous symptoms of which is the disturbance of nerve functions which they give rise to. The other group of cases are associated with organisms of the coli group in which gastro-enteric symptoms are the most prominent feature.

The examination of the meat was commenced about eleven hours after the tin was said to have been opened. The examination was greatly facilitated and the result rendered more definite by the fact that only one organism was found universally present in the various places examined. On the outside of the meat many varieties of organisms were found. Some of these were identified, such as staphylococcus cereus flavus and albus, and staphylococcus pyogenes albus, and several organisms of the bacillus subtilis group. No pure anaërobe was found, although special attention was devoted to the examination for such.

The only organism which was present in cultures from the centre of the meat as well as from those on the surface was the bacillus enteriditis of Gaertner. This has been identified by its staining reactions, motility, cultural characteristics, and pathogenicity.

This organism has given rise to most virulent poisoning in the human subject in several instances.

THE ITALIAN MEDICAL CONGRESS.

The Italian Society of Internal Medicine held its tenth meeting in Rome on October 25th and three following days, under the presidency of Professor Baccelli, the Minister of Public Instruction.

President's Address.

On the morning of the 25th the President opened the Congress with a short but eloquent address, in which he dwelt especially on the triumphs of the experimental school and its relation to clinical medicine, and on the great movement nowadays towards political medicine or hygiene.

The subjects selected for special discussion were: Chlorosis, introduced by Professors Castellino and Riva; and the Pathology of the Pancreas, introduced by Professor Devoto.

Chlorosis.

Professor Castellino, in opening the discussion on chlorosis, alluded to the various theories propounded to explain its pathogenesis, including that in which it was said to be due to alteration of the large blood vessels and of the sexual apparatus, and he referred to the three orders of lesions recognised by Virchow in chlorosis. Fraenkel and his school, however, maintained that the lesions of the blood vessels were secondary to the alterations of the sexual apparatus. Most authors were inclined to admit the influence exercised by the genital sphere on organic nutrition. The hæmatic lesion for some was due to the alteration in development of the hæmatopoietic organs. The researches of Quinquaud, Hayem, and Maragliano proved that the total density of the blood was frequently not much altered, that the red corpuscles were scanty in hæmoglobin, and that the dry residua of the coagulum were below the normal. After discussing the results of the investigations of Landois, Daremberg, Panum, and others, he came to the conclusion that chlorosis is a primary lesion *sui generis* characterised by a red corpuscle defective in development. The lesion continuing, trophic disturbances were set up in the organism, which, if reverberated still more in the blood, determined not chlorosis but chloranæmia, according to Hayem. But if these studies fixed the characters of the peculiar alteration of the blood in chlorosis, they did not explain the pathogenetic mechanism. This was the reason why the speaker and Maragliano in 1890 had thought that the nervous system must play an essential part in the pathogenesis of chlorosis. As to the determining factor which set the nervous system in action, that was a very difficult problem. De Giovanni was the first to call attention to the relation existing between the evolutionary modifications of the organism and its possible morbidities, especially at the period of puberty and on the neuroses of the different epochs of life. The speaker, having studied chlorotic individuals from this point of view, maintained that chlorosis is a disease characterised by disorders connected with the evolution of the organism. Having referred to the influence of the nervous system on all the organic functions, second childhood, and diseases of youth, Professor Castellino said that it was precisely in this period that the transformations happen which interfere with the uniform evolutionary metamorphosis. He then alluded to the very significant development of the limbs in the period

of youth, and to the fact that in the prepuberal period the specific weight of the blood in some females is diminished owing to the smaller amount of colouring matter. Thus also the activity of reduction of the hæmoglobin is diminished, and the temperature lowered. After this, one could not deny, remembering the great frequency of neurotic phenomena in women at this period, the relations between the neurotic state and the constitutional changes noted in the prepuberal evolutionary period. The development of the organs in this period explains the tendency to a neurotic predisposition. This, however, was not equal in every individual. These theories explain the fact why the disease presents itself more frequently in women than in men, in whom the variations of organic development are infinitely less; why it develops at the period of puberty; and why it is accompanied by alterations not only of the blood, but also of the whole organism. Professor Castellino concluded by stating that the facts adduced demonstrated that chlorosis was connected with an excitation of the sympathetic induced by very various stimuli, which that period of life (puberty in woman) in which sudden and imposing organic transformations only could furnish. This excitation, which may extend beyond the domain of this system and radiate into that of the life of relation, has in itself the key of the peripheral and central vasomotor disturbances of chlorosis.

Professor Riva, who spoke next, after analysing the various arguments for and against the genital theory, concluded that it must be rejected. He in his clinical investigations had not observed in chlorotic persons nervous conditions different from those noted in other neurotic but non-chlorotic individuals. He did not deny the great influence of the nervous system, but he did not believe that it represented the first chief link of the chain which led to chlorosis. Neither did he share the general opinion that the blood change in this disease was a hæmolytic anæmia in the recent and more distinct forms; because in the later forms the globules were in almost normal number. The urohæmatin which was said frequently to exist was not a definite substance. Finally, the alkalinity in chlorosis, at least in the distinct forms, was not diminished. The red corpuscle was certainly less resistant than normal; but when the chlorosis was pure, the number of corpuscles was almost normal; later hypoglobulia and alterations of the stroma appeared. The distinctly chlorotic corpuscle was smaller and less individualised, but what most distinguished it was its loss of colour. The speaker next discussed the theories in connection with the formation of the colouring matter in the spleen, liver, and bone marrow. He, in spite of the various studies cited, did not believe that there were one or more hæmoglobinogenetic organs. He believed that hæmoglobin was derived with the intervention of the corpuscular protoplasm by a combination of its globulin with iron. In what conditions the iron must be found for its combination with the globulin of the stroma he did not know, but he knew that the healthy but achromatic corpuscles took up iron under all forms; in chlorosis, instead, it had lost the property of taking up organic iron, while it was capable of taking up inorganic. If things were so, as he believed they were, the alteration of the chlorotic corpuscle would be represented by a bio-chemical modification, through which it was no longer in the position, at least in an ordinary measure, to charge itself with iron and generate hæmoglobin. He believed that this alteration of the corpuscle, and the consequent development of chlorosis, must be sought for in two elements, the morphological and the puberal. The osseous system in woman was less robust than in man; this inferior development corresponded to the inferior development of the bone marrow, which was the hæmopoietic organ. It appeared that the hæmopoietic system was more vulnerable in woman than in man. Gang had observed that up to 13 years males and females had an equal density of the blood; after this age it increased in man and diminished in woman. In the life of the red corpuscle of young women there was an innate tendency to modify its hæmoglobinic contents, so that an impulse or an occasion was sufficient for the disposition to be translated into a morbid condition. To bring the clinical facts and scientific investigations into harmony with each other it was, therefore, necessary to admit that the occasion was generally represented by the entrance into function of the genital organs. The suddenness of the development of the epoch in which the child became a woman exposed, according to Sée, the insufficiency of the hæmopoietic system, but this did not exclude the idea that a particular substance concurred, which came from the internal secretion of the ovaries in the period in which they began to function. The other elements (fatigue, chill, etc.) were only occasional, and eventually determining causes. In any case these causes introduced into the corpuscle a biochemical change, through which its power of manufacturing and, so to speak, of charging itself with hæmoglobin, was attenuated or destroyed.

In the discussion which followed Professor De Dominicis said that in his opinion chlorosis was an alteration of the nutrition—that is, it was under the dependence of the sympathetic.

Professor Tedeschi feared instead that the ready invocation of the nervous disturbances in the interpretation of the clinical phenomena was too convenient and dangerous.

Professor Gioffredi referred to two cases of chlorosis developed acutely in young women after fright. Iron had little effect, but they were rapidly cured by electricity.

Professor Petrone maintained that a particular organ containing iron and the generation of hæmoglobin existed in the red corpuscle; it must be diseased in chlorosis.

Professor Bernabei attached importance to the absorption of the intestinal gases in the etiology of chlorosis.

Professors Castellino and Riva replied.

Acute Infections of the Pancreas.

The second subject for discussion, acute infection of the pancreas, was introduced by Professor L. Devoto, who said that acute infections of the pancreas were not very rare, though statistics appeared to prove the contrary. When they were mild they gave rise to no symptoms, owing to the facility with which other organs assumed the digestive functions of the diseased organ. Pancreatitis was mostly of an infective nature, and might be caused by the bacterium coli, the diplococcus of Fraenkel, the streptococci, the tubercle bacillus, and sporozoa. Experimental pathology had carefully traced the alterations that infection of the pancreas gave rise to. Acute non-suppurative pancreatitis was the expression of a very violent infection causing death in 12 to 24 hours. Purulent pancreatitis had a slower course, was not always fatal, and it might become gangrenous. The data of experimental pathology were applicable to the pancreatitis of man, with the difference that the phlogistic process in human pathology had a less severe course. At present, however, it was as yet impossible to describe the clinical course of acute pancreatitis in man, inasmuch as only one case of cure was known, that of Halsted. The hæmorrhage accompanying acute pancreatitis was not *per se* ordinarily the cause of death. No suitable treatment was known. Perhaps there might be some hope in the future from opotherapy. Surgical treatment was indicated in suppurative pancreatitis.

In the discussion which followed, Professor De Dominicis dwelt on the importance of this gland, and the deficient diagnostic signs.

Professor Riva said that owing to the scarcity of the means of investigation much aid would be obtained from a complete and thorough analysis of the fæces.

Papers.

Besides these discussions several important papers were read, including the Action of the Thyroid in the Development of the Skeleton; Composition of the Blood on Material Exchange, by Professor Calabrese; Chylous and Chyliform Ascitis, by the same author; Organic and Inorganic Iron in the Treatment of Anæmia, by Drs. Ferranto and Silvio Ajuti; Albuminuria in Diabetes and Renal Diabetes, by Professor Schupfer.

Italy and the International Medical Congress.

On the last day of the Congress a discussion took place on the justice of the adoption of the Italian language among those officials at the International Congress in Paris. A motion was unanimously agreed to that Professor Baccelli should be requested to notify that the admission of the Italian language among those recognised as official at the Congress in Paris be put as a condition essential to the official participation of Italy in the Congress.

DIPHTHERIA IN ALDERSHOT.

IN view of the continued fatal prevalence of diphtheria in the Aldershot district, not only shown in successive quarterly returns of the Registrar-General, but noticed also in our columns and in those of the local press, it was several months ago announced that the Local Government Board had determined to make an inquiry by one of its medical officers into the circumstances in which the disease has prevailed. We are now in possession of Dr. R. J. Reece's report to the Board *On the General Sanitary Circumstances and Administration of the Urban District of Aldershot, with special reference to the prevalence of fatal diphtheria therein*.[1] The report is elaborately drawn out, and is divided into: A. Preliminary remarks dealing with geology, area, population, occupation of inhabitants, artificial division into town and camp, etc. B. The town and its generally sanitary circumstances (water supply, sewerage, etc.) C. Sanitary administration in the town. D. The camp in relation to the town; and, E. General considerations on the past and recent prevalence of diphtheria at Aldershot.

The inter-relation of the Aldershot town and camp being allowed, the Local Government Board duly notified the fact of Dr. Reece's inspection to the War Office, requesting assistance, which was cordially given and as cordially acknowledged. Dr. Reece recalls the fact that in 1885 Dr. Sweeting reported on the registration district of Farnham, including the urban district of Aldershot, and in 1887 Dr. George Turner undertook a similar duty. In respect of sewerage, Dr. Reece states that at the present time the District Council are fully alive to "the defects of the sewer system, and are endeavouring to make good the deficiencies." Remarking on the ventilation of sewers, Dr. Reece says, "Many of the ventilating shafts after they emerge from the ground are not carried up straight, but often have curves or bends in their course, thus vitiating to a great extent the object for which they were erected," and again, "as to flushing that the sewers are supposed to be self-cleansing, but, as a matter of fact, there are certain sewers which do not fulfil this requirement." The connections of the house drains with the sewers are also pronounced faulty in many cases. Dealing with house accommodation we are struck by the remarks that "there are several houses of the back-to-back type, that is without means of thorough ventilation; one or two of the older houses manifestly unfit for human habitation." In commenting on the sanitary administration of the town, it is stated that the medical officer of health was elected to the office in 1866, that no part of his salary is repaid out of the county funds, and that he is "not under the Board's orders of March 23rd, 1891, and consequently he does not forward copies of his annual and special reports to the Local Government Board."

Under Section D. we have the routine of reporting infectious diseases, inspections of quarters, disinfections, and general camp sanitary administration; and here it is gratifying to find that at the time of Dr. Reece's inspection the P.M.O. had the services, as an assistant sanitary officer, of Captain Louis Hughes, who has made a special study of bacteriology and is a D.P.H., the date of the appointment being December, 1897. A large garrison like Aldershot much needed such an expert. Finally, under Section E. we have some food for reflection as to school influence on diphtheria. Here Dr. Reece remarks:

> As to means at school for facilitating spread of diphtheria: During my inspection of Aldershot town each school was visited, and inquiry made into certain matters, including the method in vogue for cleansing the slates used by the pupils. The answer to this query was practically the same at all the schools, and was to this effect. The schoolmaster or mistress had a mop or sponge attached to the end of a stick, which he or she dipped into water and moistened the slate; the children, with a rag or wiper which they provided themselves, then cleaned the slate. This was the theory, but the practice would appear to be somewhat different, as on one occasion, when a statement similar to that set forth above had just been completed by a teacher, another teacher in the schoolroom ordered a class of infants to clean their slates. This they proceeded to do by expectorating on or licking the slates, and rubbing them with their rags. If a child had no rag it borrowed a neighbour's, and the rags themselves were moistened in a similar manner to the slates. Given a case of infectious sore throat, it is easy to see how it might be spread by such methods as above described. Added to this is also the fact that the slates are the property of the school, and no child exclusively uses one slate.

Further, the systematic inspection of the throats of children attending school with a view to eliminating all suspicious cases has never been attempted. Inquiries as to disinfection at schools tend to show want of thoroughness and perfunctoriness in the processes.

The general conclusions of the report are that the sewerage of the town is imperfect, the superficial soil polluted with organic filth, many houses damp, and many built before the days of concrete and cemented foundations—all conditions tending to lower bodily vitality, and to a corresponding extent resistance to disease. As to the extent to which the transmission of diphtheria from man to the lower animals or from them back to man occurs, inquiries made of veterinary practitioners showed that diphtheria had been recognised in dogs and cats.

In one locality where diphtheria had occurred in several houses certain cats were stated to have been "poisoned." A child, while it was in bed with a sore throat, "recognised as diphtheria by the parents but not so notified by the medical practitioner in attendance," had a neighbour's cat to play with:

> This cat was the first of the series said to have been poisoned. The symptoms were difficulty of breathing and swallowing, and diarrhœa. A second cat in the same house died a few days after the first, with similar symptoms. A third cat, belonging to the next house, sickened while the other cats were ill, and ultimately died. The death took place the night before my visit to the locality, and I obtained possession of the carcass. Captain Hughes, R.A.M.C., kindly made a *post-mortem* examination on this cat. A congested patch was found at the posterior part of the pharynx, which on pressure yielded a yellowish exudation. Plate cultures made from this showed the presence of the Klebs-Loeffler bacillus. Owing to there being no arrangements at the laboratory of the Cambridge Hospital for control experiments on animals, the pathogenicity of the micro-organisms on guinea-pigs could not be put to the test—a fact which is to be regretted.

As to milk supply in possible relation to diphtheria, although none of the cowsheds visited at inspection were "free from defect," no disease among the cows was ascertained to have existed.

Dr. Reece's report, studied with the various tables and charts appended to it, will be interesting and instructive to all medical officers of health. We have only briefly dealt with the mass of matter contained in it.

[1] To be obtained of Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C., and Westminster, S.W.; or John Menzies and Co., 12, Hanover Street, Edinburgh, and 90, West Nile Street, Glasgow; or Hodges, Figgis and Co., Limited, 104, Grafton Street, Dublin. Price, 1s.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held on October 27th at 429, Strand, London, W.C.

There were present Dr. DE HAVILLAND HALL (in the chair), Dr. J. B. Ball, Dr. J. W. Hunt, Mr. F. S. Edwards, Dr. W. Knowsley Sibley, Dr. M. Greenwood, Dr. Walter Smith, and Dr. Alfred S. Gubb.

The accounts presented showed that the sickness experience of the month of September was well under the amount expected. During the fifteen years of the working of the Society it has always been found that, as might be expected, the summer claims are both less numerous and of shorter average duration than those experienced during the winter months. The result of this was that for some years after the Society started in 1884 the amount of sickness benefit paid away between May 1st and November 1st was always very much less than that disbursed during the other six months of the year. But the number of members on the chronic list has steadily grown, and as these draw their sickness allowances all the year round, the summer and winter sick benefit pay of the Society has become more nearly equal.

A statement was produced showing that a little over £5,000 had been paid to the members during the months of August and September as cash bonus. A few cheques are still outstanding, and the account will be kept open until the end of November, after which date it will be closed and the balance transferred to the Sickness Benefit Fund.

Prospectuses and all particulars of Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

AT a meeting of the medical practitioners of Limerick on November 3rd Dr. O'Shaughnessy, D.L., in the chair, it was resolved unanimously to present a congratulatory address to Dr. Thomas Myles, a native of the city, upon his elevation to the presidential chair of the Royal College of Surgeons of Ireland.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 11TH, 1899.

MEDICAL ARRANGEMENTS FOR SOUTH AFRICA.

When commenting in March last on Lord Wolseley's statement that two Army Corps could be mobilised before ships to transport them from these shores were ready, we pointed out what were the medical requirements for such a force, and expressed grave doubts as to whether they could be met by existing establishments.

Now the matter is being put to the test. We have an Army Corps and a division already practically in the field; and in view of Lord Wolseley's statement at the Authors' Club on November 6th, that our "enemy is more powerful than we anticipated," it is almost certain that at least another division, if not a whole Army Corps, must be at once mobilised.

How are the medical requirements of this additional force to be met? That is the grave question which now confronts the War Office.

We may assume that the medical requirements for the force in or near South Africa have been adequately met. The arrangements for the Field Force are very complete, but it must be remembered that we have already a large number of wounded on our hands, while there is as yet little or no information as to the amount of sickness among the troops, which must already be considerable, and is unfortunately likely to increase in an accelerated ratio. The minimum requirements for two Army Corps are about 270 medical officers. As over 180 officers are now needed or employed in the field, and the home establishment is already practically denuded, how is a fresh medical mobilisation to be effected?

It may be assumed that all those liable to recall to service on the retired pay list will now be summoned, but they would probably muster less than 100, and not a few will certainly be found unfit, on the score of health, for foreign service. The fact that our army medical establishments are undermanned seems therefore likely to land us in very considerable difficulties.

It is true that the aid of civil surgeons at the base hospitals and of the Red Cross Society, both in men and equipment on the lines of communication will be very valuable, but they cannot take the place of medical officers in the fighting line with troops.

The Red Cross indeed seems to be taking matters in a somewhat leisurely fashion. The Central British Red Cross Committee has sent out Colonel J. S. Young as Red Cross Commissioner to South Africa, with funds and material to act in co-operation with the Principal Medical Officer of the Field Force with a view to aiding the sick and wounded of both sides; it has also sent an equipment to Durban for fitting up a hospital train. Provision has also been made through the Army Nursing Reserve to supply additional nursing sisters to the military hospitals, and forty have already taken over duties, but this seems to be all that has as yet actually been accomplished. Another equipment for a hospital train is about to be sent out, and as we have already stated, a hospital train of seven carriages is being built at Birmingham, and a hospital ship is being fitted out and equipped at the expense of the Princess of Wales's Branch of the National Aid Society. Further we learn that the St. John Ambulance Brigade "is prepared to meet any requirements that may arise in connection with the supply of ambulance officers and hospital orderlies, and several members of the Brigade are now under orders to hold themselves in readiness." The Committee have informed the public that "for the meantime ample provision has been made in the direction of supplementary aid to the Army Medical Service in the field."

But, even accepting this somewhat optimistic opinion, our medical difficulties are not confined to field mobilisation, but extend to the Militia, of which about 27,000 are to be embodied for garrison duty at home and abroad. With the exception of a few companies of the Militia Medical Staff Corps, trained for bearer duties, the Militia have no medical officers or establishments whatever, but rely on the Royal Army Medical Corps, which at present cannot help them.

There is lastly the so-called Army Medical Reserve, which is made up of Volunteer medical officers, almost all of whom are civilians in active practice; a certain number of these might be locally available for charge of troops, but it is certain they could not without serious consequence to themselves leave their homes for general duty.

Altogether we await the solution of these army medical problems with considerable uneasiness and misgiving some confusion and dislocation of our garrison and camp duties at home, if not in the Mediterranean, appear only too probable even if we are not called upon to make still greater war preparations and sacrifices.

If our military system as a whole is on trial, our army medical establishments are, in particular, being put to the test. Our American friends are finding out how difficult it is to improvise an army, and in no department more so than in the medical. A large number of civil surgeons are proceeding to the Philippines, and an immense increase is being made to the hospital establishments in that country, even to provision for 8,000 sick. We can only hope that this may be much beyond what we shall ever require in South Africa.

PHARMACEUTICAL CHEMISTS AND COMPANIES.

When the two clauses dealing with the carrying on by companies of medical, surgical, and dental practice, and of pharmacy respectively, which were introduced by the Lord Chancellor into the Companies Acts Amendment Bill in

the House of Lords last session were first published, much dissatisfaction was expressed by pharmaceutical chemists. This dissatisfaction even went the length of a suggested opposition to the medical clause unless they could be included in it. We ventured to predict that more temperate counsels would in the long run prevail, and this has proved to be the case. A perusal of the correspondence and the editorial comments which have appeared in the *Pharmaceutical Journal* shows a gradual and increasing recognition of the difficulties which surround the question, and it is evident that thus far, while there is unanimity upon certain points, there are others upon which no general consensus of opinion has been attained.

It will be remembered that, whilst in the clause dealing with the medical, surgical, and dental aspects of the question, practice by companies was categorically prohibited, in the Pharmacy clause no such absolute prohibition occurred, but that certain conditions as to the employment of qualified persons took its place; or, to put it in another form, the practice of pharmacy by companies was recognised, but an attempt was made to regulate it. At the last meeting of the Council of the Pharmaceutical Society a report from its Law and Parliamentary Committee was presented, in which the extreme position was recommended for adoption—namely, that companies should be wholly prohibited from carrying on the business. A draft clause embodying this principle was submitted, but an amendment was moved and carried, by 10 votes to 8, to refer the draft clause back to the Committee for reconsideration. The difficulty felt is shown by the narrowness of the majority, and by the fact that while the President and ex-President voted with the majority, the Vice-President and at least one former President voted with the minority.

Upon one point the discussion discloses a complete unanimity of opinion—namely, that anything which extends the use of titles which imply qualification beyond those persons who have actually received the qualification should be strenuously resisted, and in this we are in entire agreement with the views expressed. It is obvious that anything of the kind would be a most dangerous precedent, not for the pharmaceutical chemists alone, but for the medical profession. It is clear on all sides that the protection afforded to the public by preserving a proper significance to titles, inadequate though this protection may be, must not be weakened.

During the discussion in the Council of the Pharmaceutical Society, it was pointed out with ability and clearness that in asking for a complete prohibition of company practice more was sought than was likely to be obtained; and that, in fact, were this enacted, two members of the Council itself would have to close their businesses as at present conducted, whilst several local secretaries were in the same case. It was further admitted that although great abuses existed there were, nevertheless, examples of pharmaceutical businesses carried on as companies on excellent lines; indeed, we infer from what was said, that in some instances all the members of the company are duly qualified chemists.

Even in such a case as this it would appear more fitting that the titles should be appended to the names of the persons rather than attached to a body in its corporate capacity. It is the individual and not the corporate entity which is qualified. The "widow's clause" in the existing Pharmacy Act, by means of which an executor or a trustee, although not himself qualified, is enabled to act for a time as proprietor of the business (which must be conducted by a qualified servant), also gives rise to difficulties, inasmuch as it in some degree recognises unqualified proprietorship. At first there appears to have been a feeling that this privilege had better be abandoned in order to clear the way, but there is now manifested a considerable unwillingness to surrender it, and it is said that a majority are opposed to any alteration in that section.

Upon the whole some middle course appeared to commend itself to the majority of speakers, such as the prohibition of pharmacy practice by companies unless all of the directors be qualified chemists, and even in that case, with the limitation that the use of title be only in association with the names of the qualified individuals. No doubt the pharmaceutical chemists smart under the competition of companies, but the contention that they should not be parties to the regulation of company practice, and so indirectly to its recognition, loses much of its force when we find that there are already so many perfectly legitimate businesses conducted in this form that the thing must be acknowledged as existent and must therefore be grappled with. For, as was truly observed, what Parliament will look at first is what is best for the interest and protection of the public, and, secondly, what will interfere least with existing conditions.

In short, the representative body of the pharmacists seems to have come round to the adoption of the view which was all along taken by the Lord Chancellor's department; namely, that notwithstanding the similarity, and on some points indeed the identity, of the position of the medical profession and of the chemists in regard to infringements by companies, there were yet sufficient differences in that position to render it advisable to deal with the two in separate clauses of the Bill.

If after the reconsideration of the clause drafted by their Law and Parliamentary Committee the Pharmaceutical Society should produce one upon the lines which we have indicated, we think that the medical profession would be prepared to give every assistance in its power to enable the Society to get it adopted when the Bill comes before the House of Commons; and we are informed that the Companies Acts Amendment Bill is likely to be brought forward at an early period in the ensuing session.

PUBLIC VACCINATORS AND THE LOCAL GOVERNMENT BOARD.

WHEN, owing to neglect or other cause, Boards of Guardians failed to come to an agreement with their public vaccinators as to the terms of their contract before December 31st last, many of the latter felt happy in the knowledge that the Local Government Board had reserved to itself the right to fix the fees to be paid by Boards of Guardians. The language of the Vaccination Order, 1898, seemed clear enough to justify confidence. Article 5 provides that if before January 1st, 1899, the amount be not agreed upon, then it shall be "as may be determined by us," that is, the Local Government Boar

The word "determined" is a strong one, and means, if it means anything, a final unquestionable decision on the part of the Local Government Board, and as such binding on Boards of Guardians. As a matter of fact, the Local Government Board, though it may determine, exhibits very little determination. This may be illustrated by a case which has come to our knowledge. A Board of Guardians, without any communication, much less any "agreement" with its public vaccinator, decided to pay the minimum fees, and on the last day of the year communicated this decision to that officer. He appealed to the Local Government Board, which decided that this did not constitute an "agreement" under the Act, and that it would "determine" the fees to be paid. The Local Government Board did so, and fixed the fees, considerably above the minimum decided on by the guardians. But when the vaccination account was furnished to the guardians they refused to pay the fees "determined" by the Local Government Board, and again reduced some of the items to the minimum. The Local Government Board, when again appealed to, decided that it was "incumbent" on the guardians to pay the full fees, but has taken no steps to compel the recalcitrant guardians to carry out the obligation thus declared to be incumbent on them. Apparently it proposes to leave the public vaccinator to obtain the fees by the ordinary process of the law courts. This, as he works under a contract terminable at twenty-eight days' notice, would be very apt to lead to his dismissal.

It is most unfortunate that the Act of 1898 should have passed through Parliament without the introduction of a clause placing the public vaccinators, as regards tenure of office, on the same footing as the vaccination officers. Had this been done public vaccinators would have been free agents to carry out the law without fear or favour. As it is, they may be made the sport of Boards containing a majority of antivaccinists. A new instance of this is afforded by what happened at Bury. The guardians recently passed a resolution to reduce the fees paid to public vaccinators to the minimum scale. The clerk communicated this resolution to the Local Government Board, and the Board replied stating that the guardians would have to enter into fresh contracts with the public vaccinators, and that before these contracts were signed a copy must be sent to the Local Government Board. At the meeting of the guardians on October 25th a letter was read from Dr. Hunt, writing on behalf of the public vaccinators of the Union, asking the guardians to appoint a subcommittee to meet the public vaccinators before entering into new contracts. This very reasonable request was refused, one of the guardians observing that if the public vaccinators were dissatisfied they could resign, and adding that personally he would like the Board to pay no fees at all for vaccination.

The matter is one which demands the serious attention of the President of the Local Government Board. The guardians by refusing to pay the fees which the Board has "determined," and which it has declared it is incumbent on them to pay, are practically defying the Local Government Board and violating the law. It is public vaccinators who suffer in pocket but it is the Board which suffers in credit. As administrators of experience Mr. Chaplin and Mr. Russell must know perfectly well that to leave the public vaccinator to go to law with his Board of Guardians is, as we have pointed out, no remedy at all, so long as he has no security of tenure. Public officials, who by the nature of their office are liable to be brought into conflict with the individual interests or opinions of the persons who employ them, have a right to be protected in the exercise of duties which affect the well-being of the public. In this instance the public vaccinator should be placed in the same position as a medical officer of health under the Public Health (London) Act; that is to say, he should not be appointed for a limited period only, and should be removable only with the consent of the Local Government Board. We believe that the powers which the Board possesses under the Vaccination Acts would be found to be sufficient for the purpose indicated.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual meeting of the Fellows and Members of the Royal College of Surgeons of England will be held at the College on Thursday next, November 16th, at 3 P.M. The Council will present the usual annual report, which gives at some length the history of the proceedings of the Council during the past year, and particulars with regard to the library, museum, and laboratories. A notice of some of the more interesting parts of this report will be found elsewhere in this issue. We understand that Mr. Joseph Smith will move a resolution regretting that the Council has disregarded the principal resolution passed at the meeting of the Fellows and Members in July last, expressing the opinion that the introduction into the centenary charter of some provision for the representation of Members would have been most opportune, and the hope that the Council will even yet seize this unique occasion for terminating by an act of grace a long and wearisome controversy. We are informed that Mr. W. G. Dickinson, Honorary Secretary of the Society of Members, will move a resolution expressing the opinion that no Fellow or Member of the College ought to be allowed to act as medical officer to any association (whether a registered friendly society or not) which has for its objects the provision of medical attendance, and which in pursuance of that object advertises and canvasses for patients, and urging the Council to announce that the holding of such appointments is contrary to the declaration made by Fellows and Members on their admission. We understand that Mr. George Brown will move a resolution on the midwives question. As will be seen from the report of the last meeting of the Council of the College, published in another column, it was resolved to accede to the request of Members for a distinctive gown. The correspondence which has appeared from time to time in our columns proves that this will be a source of considerable satisfaction to many Members.

PROFESSIONAL CANVASSING AND ADVERTISING.

WE are glad to see that the Council of the Royal College of Surgeons, in its annual report, expresses its disapproval of direct canvassing for patients, and of the employment of professional advertisements addressed directly to the lay public, but we think the time has come for the qualifying bodies to take some stronger action than merely to express disapproval. What is wanted is a distinct warning that actions of the kind in question will be regarded by the qualifying bodies as incompatible with the retention of their diplomas. The English Royal Colleges might very well set an example in this respect, and we hope that they will be supported by the other authorities. If any member

of these bodies has any doubt as to the need for such action we would refer them to our correspondence columns, and we shall be pleased to give further information upon this subject to any members of the Councils of these Colleges, should they desire to see the original documents. It is a matter for regret that the particular case which was laid before the Council of the College of Surgeons was not stronger, and appears to have broken down upon inquiry, for there can be no doubt at all that there are plenty of instances of advertisement in the public newspapers, by handbills, by posters stuck upon the wall, and of canvassing by so-called collectors, besides many objectionable indirect practices, such as permitting biographical notices with portraits to appear in local newspapers and magazines, the advertisement of so-called health lectures on the "Diseases Peculiar to Women," the "Diseases Peculiar to Men," the "Management of Children," in which the lecturer's name appears in letters 6 inches long, and is posted all over the district. The extent to which advertising is now practised, and the demoralisation of the profession which must ensue unless this practice is checked, are exceedingly serious subjects, and are well deserving the attention of the General Medical Council and of the other medical authorities who have the power and upon whom the responsibility lies of maintaining the honourable traditions of the medical profession.

THE BIRMINGHAM CONSULTING INSTITUTE.

THE promoters of the Birmingham Consulting Institute are advertising in the lay press for a physician and a surgeon who are guaranteed a minimum income of £500 a year each. Our readers have been made aware of the circumstances which have attended the promotion of this scheme and of the opposition it is meeting with in Birmingham where at a largely-attended meeting of the medical profession it was generally condemned, and a resolution was passed expressing the hope that no member of the medical profession would accept office in an institution open to so many objections. We trust that the profession will be united upon this matter, and that no one will come forward to accept such an anomalous position as that of a stipendiary consulting physician or consulting surgeon to the Birmingham Hospital Saturday Fund.

THE PATHOLOGICAL SOCIETY OF LONDON.

AT the beginning of the second half-century of its existence the Pathological Society of London appears to be taking a fresh lease of life. The familiar card announcing the dates of its meetings which has been issued almost unaltered session by session has at length undergone a material change. It now gives notice that four meetings of the Society will be held in the Pathological Laboratories of London, and that one meeting will probably be devoted to papers on chemical pathology. Pathology thus vindicates itself as against morbid anatomy, which has too long usurped its place. Yet this putting of the part for the whole was unavoidable until recent years, for pathology is of such modern origin that experimental pathology was a lost art for many years after the death of John Hunter, its father; whilst pathological chemistry and bacteriology have only been rendered possible by the recent advances in chemistry and physics. The arrangements for the present session of the Pathological Society of London seem well adapted to facilitate the intercourse of pathologists, for which the Society was founded. Morbid anatomy must always form the foundation of pathology, and the Council of the Society has therefore done wisely in retaining the time-honoured evenings at which so many distinguished men have made their reputation as pathologists. Experimental pathology and bacteriology are advancing rapidly, but in both branches "the occasion is fleeting, experience is fallacious, and judgment difficult." Arrangements have been made that laboratory meetings shall be somewhat less formal than those held in Hanover Square, that the discussions which then take place shall not be published, and that abstracts of the papers read shall only be made public with the consent of the authors. It is hoped that a freer interchange of thought and criticism will thus be ensured, and the experience of the Physiological Society and of the Medical Research Club proves that much more valuable results can be obtained both by workers and their critics at such informal gatherings than at more ceremonious meetings. The first laboratory meeting of the Pathological Society of London was held at the Jenner Institute on Tuesday last, and was so largely attended as to show that the British pathologists, like the Athenians of old, rejoice either to tell or to hear some new thing. At this meeting of the Society many of its older and most distinguished members were present, amongst whom were Dr. Church (President of the Royal College of Physicians), Lord Lister, Dr. Pavy, Mr. Bryant, Dr. Klein, and, as a visitor, Sir Henry Roscoe. The contributions were worthy of the occasion, for although they dealt chiefly with bacteriological subjects each had a definite and very practical bearing either upon clinical medicine or the causation of disease. Such meetings redound greatly to the credit of the Society's executive; they should be beneficial to the study of pathology throughout England, and, by attracting members from all parts, should add greatly to prestige of the Society, which was in some danger of undergoing eclipse.

THE LONDON WATER QUESTION.

THE London County Council on Tuesday decided to promote a Bill next session for the purchase by the Council of the undertakings of the eight Metropolitan water companies upon similar lines to those presented to Parliament last session, and another Bill to enable the Council to obtain and to introduce into London an additional supply of water from Wales. An amendment to the effect that the question of proceeding with such Bills should again be brought under consideration when the Royal Commission shall have reported was rejected by 61 to 40. It will be remembered that the water policy of the Council has met with uniform opposition in Parliament since 1896. The Bills were then opposed by the Government on the ground that they were going to deal with the question themselves. The result was the Water Board Bill introduced by Lord James in the House of Lords. The Bill had the inherent defect of placing all the local authorities outside London, but inside what has been termed "Water London," in a permanent minority. The Bill failed to pass. In 1897 the Council's Bills for making the County Council the water authority for London, and for purchasing the water companies' undertakings were rejected at the instance of the Government, because the appointment of yet another Royal Commission was contemplated. Last year the Council's legislative attempts were again frustrated, owing chiefly to the fact that the said Royal Commission, under Lord Llandaff's chairmanship, had not then reported. The Council was accordingly scarcely in a mood to make the prosecution of its policy contingent upon the report of a Commission which they never asked for, and whose appointment was made the ground for the rejection of Bills which might otherwise have become law. It is undoubtedly contrary to well-accepted principles that the water supply of a large town community should be in the hands of profit-making companies. The central health authority and the water authority should be one and the same. The Plunkett Committee appeared to be satisfied that the purchase price of the Companies' undertaking should not be assessed under the Lands Clauses Consolidation Act, with its 10 per cent. for compulsory purchase. The question has been befogged by a mist of arguments and assertions on either side, but it is difficult to resist

the conviction that the Council is wise in looking for the supply of the future needs of London to sources which are not liable to the contamination inseparable from the watershed of rivers like the Thames and Lee. We trust that Lord Llandaff's Commission will report forthwith, and that its well-matured findings may have more permanent value than some of those which were recorded by the Commission of Lord Balfour of Burleigh.

THE METROPOLITAN MAIN SEWAGE QUESTION.

The flooding of basements by sewage-polluted water, apart from the inconvenience occasioned, is a matter fraught with considerable danger to the public health. Yet, whenever in the metropolis a heavy rainfall occurs within a short period, complaints are made in many districts both north and south of the Thames of such flooding. The cause is mainly the insufficiency of the main outfall sewers, which, strange to say, have a smaller sectional area than the main sewers emptying into them, and therefore do not admit of all the sewage getting away which may reach them under exceptional conditions of rainfall. Now, whereas the local sewers are under the charge of the local sanitary authority, the main branches of sewers are under the charge of the London County Council, and, since it is the main sewers which are responsible for the flooding, repeated representations have been made by local authorities to the Council to induce it to construct additional relieving or intercepting main sewers and to enlarge the existing main outfall sewers. As far back as 1890 Mr.—now Sir Alexander—Binnie and Sir Benjamin Baker reported to the Council upon the main sewerage system of the metropolis, and recommended that "the construction of additional relief sewers and the enlargement of main outfall sewers" was necessary. Nothing, however, has been done, and recently a conference of representatives of the leading parishes on the north side of the Thames was held, with the view of urging upon the London County Council the absolute necessity of at once taking steps for improving the main sewerage system. At this conference a resolution was carried expressing surprise that, after so strong an expression of opinion by a Committee of the London County Council and its responsible officers that the existing sewer accommodation of the metropolis was entirely inadequate to carry out the work required of it, no attempt has been made, notwithstanding the repeated representations made by vestries and district boards upon the subject, to remedy the intolerable evil referred to. The resolution concluded by urging upon the Council the absolute necessity of at once carrying out such works as may be necessary to remedy the nuisance complained of.

THE VOLUNTARY NOTIFICATION OF PHTHISIS.

The Health Committee of the Norwich City Council has agreed, at the suggestion of its medical officer of health, Dr. H. Cooper Pattin, to make a trial of the value of notification of phthisis. The experiment is to commence on January 1st next, and is to continue for six months. Though notification is to be voluntary, the Health Committee has decided to pay a small fee for each notification. It is believed that with the cordial co-operation of the medical men of the city much valuable information as to the amount and distribution of phthisis in Norwich may be obtained. Dr. Pattin, in a circular letter, has expressed the hope that there may be sufficient to justify him in advising the continuance of this voluntary notification, possibly until tuberculosis is included by general Act of Parliament among the diseases notified compulsorily. That valuable results may be obtained by notification of phthisis there can be little doubt, although the trial has hitherto rarely been made in this country. Dr. Newsholme has already shown the possibility of notification and its utility in Brighton. Dr. Niven has advised the adoption of a similar scheme of voluntary notification of phthsis in Manchester. Not only is notification useful in obtaining statistical information from the point of view of etiology, but it allows certain prophylactic measures to be employed. At Norwich, for example, the medical officer of health proposes, on the receipt of a notification of phthisis, to visit the dwelling indicated, to satisfy himself as to the possible existence of overcrowding or other remediable sanitary defect, and to leave at the house a small clearly-printed card as to the treatment of expectoration, provision of ventilation, etc. Such cards might with advantage be sent to the medical practitioner in charge of the case, so that he might give one to his patient instead of the medical officer of health himself giving them. With regard to the detection and remedy of sanitary defects, the experience of Brighton has shown that such defects are sometimes brought under the notice of the medical officer of health by the notification of cases of phthisis, and there is abundant evidence to prove that the prevalence of the disease may be diminished by the removal of insanitary conditions. With the absence of unanimity amongst medical officers of health, evidenced in the discussions on the subject at Portsmouth and elsewhere, it is clear that the time has not yet arrived for proposing the compulsory notification of phthisis. The institution of a voluntary notification by sanitary authorities is, however, a step in the right direction, and if the measures taken by the medical officer of health on the receipt of notification are conducted, as they are sure to be in Norwich, with tact and consideration, the results are certain to be beneficial to the community.

THE SILVER JUBILEE OF THE FRIEDRICHSHAIN HOSPITAL.

On October 8th, 1899, the Municipal hospital at Friedrichshain, Berlin, completed the twenty-fifth year of its existence. The building is of particular interest, because it is a classical example of the "pavilion" system. Mouat in his work on *Hospital Construction and Management* writes: "All the general hospitals of the future should be constructed strictly on the lines of the Friedrichshain at Berlin." It is the oldest Municipal hospital in Berlin. The opinion of the local authorities in Berlin some thirty years ago that a large hospital was necessary was strongly reinforced by the legacy of 50,000 thalers bequeathed, for this specific object, by a citizen of Berlin, Jean Jacques Fasquel. The building, entrusted to the distinguished architects Gropius and Schmieden, was begun in 1868, and completed in September, 1874, and opened for the admission of patients on October 8th, 1874. The number of patients treated at this hospital has increased progressively, at first rapidly, but in the last ten years, owing to the limitations of space, only very slowly. The daily average of patients was in 1876 424, in 1898 667. The surgical and medical directors at the opening were Dr. Trendelenburg and Docent Dr. Riess. In October, 1875, Dr. Trendelenburg received a call to the Chair of Surgery at Rostock. To fill his place Dr. Schede was called from Halle. In 1879 Schede accepted the Chair of Surgery at Hamburg, his successor being Dr. Hahn. In 1885 Professor Fürbringer, of Jena, succeeded Dr. Riess. Dr. Kronig now has charge of the medical side, Dr. Neumann of the surgical. A review of the work done has revealed in several departments results of extreme interest. Thus, in the treatment of diphtheria, there are two epochs marking an increase in the percentages of recovery. The first was in 1887, the second in 1895. In 1886 a new pavilion (No. 4) was reserved especially for patients suffering from this disease. Isolation and all sanitary precautions were then, for the first time, strictly enforced. The second epoch was in 1895, when serum treatment was first employed. The percentage mortality of typhoid in 1875 was 26; in 1884, 8; in 1891, 9; and in 1898, 11. The nursing arrangements at first were

inefficient, but a state of improvement was created in 1884 by the appointment of five sisters, under the personal supervision of Fräulein Fuhrmann. In 1897, on the death of Fräulein Fuhrmann, Victoria Gervinus, a daughter of Georg Gottfried Gervinus, the celebrated historian, was appointed sister in charge. In the twenty-five years, 123 assistants have acted on the staff, many of whom have in later years won fame for themselves. From these we may select the names of Professors Fleischer of Erlangen; G. Salmon, Renne, Gluck, Grunmach, C. Günther, and Rosenheim, of Berlin; Dr. Kümmill of Hamburg; Dr. Gutsch of Karlsruhe; Professor Bessel-Hagen of Charlottenberg; and Professor Hochhaus of Kiel.

POISONING BY HYDROFLUORIC ACID.

WE are indebted to Dr. Thomas Stevenson for the following interesting note on the case of poisoning by hydrofluoric acid which was recorded in the BRITISH MEDICAL JOURNAL of October 21st, p. 1145. It will be remembered that the poison was taken by a sign writer, apparently out of a spirit of bravado, that symptoms of collapse seem to have ensued in a few minutes, that death occurred in an hour or two, and that the *post-mortem* appearances were those of corrosive poisoning. Dr. Stevenson writes: "Poisoning by this acid is rare. So far as I can ascertain, there have hitherto been only three cases of death from its use. One of these is recorded[1] by Dr. King. Half a fluid ounce was swallowed, and death ensued in twenty-three minutes, apparently from the closing of the glottis by shreds of mucous membrane. Some years ago a suicidal death was registered as having occurred from the taking of the acid; but I have been unable to gain any particulars of the case. The third case is the one recorded in the BRITISH MEDICAL JOURNAL of October 21st. I have examined the acid used in this case, and find it to be a weak acid, containing 9.2 per cent. only of HF. The commercial acid as sent out to glass engravers is, I am informed, usually sent out of at least four times this strength. The highly corrosive effects of commercial hydrofluoric acid are familiar to all chemists, but it would seem that the toxic effects are not exclusively due to this property." The quantity of the acid taken in this case cannot be stated with any certainty; it may have been as much as two fluid ounces or as little as half an ounce of the solution (9.2 per cent.).

THE JAPANESE NAVY.

IF imitation be the sincerest form of flattery the Japanese Government have indeed flattered us in this little "Grey Book," which contains the Annual Report of Health of the Imperial (Japanese) Navy for the year 1896, for it is a very close reproduction, in form and substance, of our own Blue Books. This report for 1896 is dated May, 1897, and was thus produced with due despatch, not perhaps a very great feat in vital statistics, seeing that the navy was practically all in home waters. The book is well got up, and printed in good official English, and duly laid before and addressed to the Naval Minister by the naval medical Director-General, as ours are. Under the head of "Patients" it shows the strength (about 13,000) and sickness of officers and men combined; and in a subsequent table according to "Classes of the Force," which shows 218 cadets or officers, 2,019 petty officers, and 10,559 seamen. Among general diseases we find 161 cases of typhoid fever occurring in the ships, of which 27 cases were in the *Yamato*, saying little for the general sanitation of the vessels. Such other general diseases as mumps, dysentery, measles, influenza, and small-pox are also enumerated, but owing to efficient vaccination the return of the last-named is almost a blank. Venereal diseases, which are greatly on the increase, and cause much inefficiency, produced a sickness ratio of 157.50 per 1,000. The total cases of disease or injury during the year were in the ratio of 437.51 per 1,000, and the deaths, deducting 36 from drowning through an accident, 7.90 per 1,000. The total number admitted to hospital was 2,284, or 175.22 per 1,000; the daily average sick 301.40, or 23.12 per 1,000. Under "Food" it is stated that the daily amount is 384.9 momme (1 momme equal to 58 grains troy), nearly equal to 4 lbs. avoirdupois. The dietary consists of fresh or preserved meat, fish, bread, and vegetables, with hard biscuit, tea, sugar, pepper, salt, vinegar, fruits, and roasted barley. The amount had been lessened since the war, and in consequence the average body-weight of 12,000 persons had slightly decreased to 15,510 momme, or about 126 lbs. avoirdupois. In striking this average, however, newly-enlisted recruits were included. No fewer than twenty-five tables are given in an appendix, embodying interesting vital statistics of various kinds, the last being meteorological, showing the temperature of Tokio, and other parts of Japan, during each month of the year. Tokio, for instance, has a mean temperature of about 37° in January and 78° in August, or an annual mean of 58°; the extremes are a minimum of under 20° and a maximum of over 90°. Altogether, this is a very creditable annual report.

[1] *Lancet*, 1873, i, p. 203.

A CHILDREN'S COUNTRY HOSPITAL FOR LIVERPOOL.

ABOUT twelve months ago it was mentioned in our Liverpool correspondence that a suggestion had been made to found a country hospital for children suffering from chronic diseases. The suggestion was first mooted by Dr. Charles MacAlister, Physician to the Stanley Hospital, and Mr. Robert Jones, Surgeon to the Royal Southern Hospital, and it finally took shape in March of the present year, when a public meeting was held, and subscriptions invited. So warmly was the project taken up by the people of Liverpool and Birkenhead, that it has already been possible to commence work with twenty-one beds. In spite of the best intentions and generosity on the part of the subscribers, it would scarcely have been possible to accomplish this in so short a time were it not that the governors of the Children's Convalescent Home at West Kirby have been willing to let some of the wards in the latter institution for the purposes of the hospital. The managers of the new hospital have thus found a building ready to hand, and have not been obliged to wait until one could be erected. The aim of the promoters is to provide a hospital where children who are the subjects of chronic diseases will receive the prolonged treatment which is necessary for their recovery, and which the ordinary hospitals cannot afford to give them, and where they will enjoy the advantages of fresh air and sunlight which cannot be found in towns. The institution is not a cripples' home or a home for incurables, an essential condition for admission being a medical opinion that recovery is possible. Patients will not be admitted for a shorter period than six months, and they may remain as inmates as long as two years. Both medical and surgical cases will be treated. A small charge will be made in most cases, but there are a certain number of free beds, an annual subscription of £25 entitling the subscriber to nominate a free patient. The leading hospitals of Liverpool and Birkenhead have each the nomination of a free patient, and the West Derby Board of Guardians has two nominations. A considerable sum of money has already been subscribed, and it is expected that it will soon be possible to erect a building in some country locality within easy reach of Liverpool. In the meantime the work will be carried on in the temporary premises at West Kirby, which are admirably adapted for the purpose, all the wards being new, and one of them adjoining the sun-house. The rapidity with which the scheme has been brought to a successful issue is a sufficient indication of the energy of its promoters; but the medical staff are

anxious to acknowledge especially the help which it has received from Miss Sedgwick, formerly the Lady Superintendent of the Home for Incurables, who showed indomitable perseverance in raising funds and awaking interest in the movement. The idea of a country hospital for chronic diseases, as distinguished from a home for incurables, seems to be a new one in this country, and, should its practical application yield the results which may reasonably be anticipated, it will probably be adopted in other places.

A FIBROID IN A LAW COURT.

A remarkable lawsuit occurred last year in the capital of Hungary, and is reported in German in a recent number of the *Centralblatt für Gynäkologie*. A lady, aged 37, when in childbed for the twelfth time, suffered from hæmorrhage and fever. A Dr. Tuszkai removed a large mass, 5½ in. broad and 2¾ in. thick, and, together with another doctor, blamed the midwife in presence of the patient's family for leaving part of the placenta in the uterus to the hazard of her life. The case occurred in a small village near Buda-Pesth, and, although the midwife declared that she had removed the placenta entire, and had sent for a doctor directly the bleeding began, nevertheless the report did her great harm in her calling. She therefore proceeded against the patient for slander. Dr. Tuszkai and his colleague maintained their diagnosis and their statement about the defendant. Dr. Kovacz, who was skilled witness for the defendant, deposed that the plaintiff had kept the structure expelled from the uterus, and that it had been examined microscopically and found to be an ordinary fibro-myoma. The verdict was given for the defendant on the ground that she had spoken in good faith and on the testimony of her two medical attendants. The midwife had to pay the costs.

THE SUMMER OF 1899: THE HEAT AND DROUGHT, AND DEATHS FROM DIARRHŒA.

The relationship between a hot dry summer and an increased mortality from diarrhœal diseases has been exemplified this year. The summer was in the south-eastern portion of England peculiarly fine, bright, and warm; and Mr. J. Glaisher in the two most recent quarterly returns of the Registrar-General shows that after a wet April and cold May, June was fine and bright, with little rain, and the weather thenceforward until September 9th generally fine, bright, and warm. Three remarkably hot periods occurred, extending from July 6th to July 22nd, from July 29th to August 27th, and from September 3rd to September 8th respectively. At Greenwich the mean reading of the barometer was 0.076 of an inch above the average in June, 0.107 above the average in July, and 0.138 above the average in August. The mean temperature in the same three months was above the average, exceeding it by 2.3° in June, 4.0° in July, and 4.4° in August. The mean temperature of the air for August was 65.7°, and there have been only two instances of as high or higher mean temperature for the month of August back to the year 1771, namely, 1857, when it was 65.8°, and 1779, when it was 65.7°. The amount of rain measured during the same three months was 3.99 inches below the average, the deficiency being 1.18 inch in June, 0.80 of an inch in July, and 2.01 inches in August. The duration of bright sunshine was above the average in each of the three summer months, exceeding it by 39.1 per cent. in June, by 79.9 hours in July, and no fewer than 110.2 hours in August. The influence of this heat and drought on the death-rate from diarrhœa in England and Wales was very marked. In the second quarter of the year, ending June 30th, diarrhœa caused 1,418 deaths, corresponding to an annual rate of 0.18 per 1,000 persons living, or 0.07 below the average of the quarter in the previous 10 years. In the third quarter, ending September 30th, the deaths from diarrhœa were 25,952, corresponding to an annual rate of 3.24 per 1,000, or nearly 76 per cent. above the average of the quarter in the previous 10 years. The rate for the quarter was 4.2 in 33 great towns, 4.1 in 67 other towns, and 2.4 in the rest of England and Wales. The rate was as high as 6.02 in Portsmouth, 6.16 in Manchester, 6.42 in Salford, 6.47 in Liverpool, and 7.20 in Preston. The mortality among infants was especially high, chiefly in the 33 great towns, where it was equal to 303 per 1,000 births; it was 392 in Preston and 507 in Burnley. In the 67 other large towns the average mortality was 300 per 1,000 born, and the average rate was 443 in Stockport, 448 in Rhondda, 449 in Aberdare, and 429 in Merthyr Tydfil. In the rest of England and Wales the infant mortality was equal to 208 per 1,000 births. The death-rate at all ages from diarrhœa in the 33 large towns was only 0.4 in the week ending July 8th, and 0.9 in the following week. In the third week the diarrhœa mortality rose to 2.1, and in the fourth week to 3.7. In the first week of August it was 5.4, then successively 5.9, 6.6, and 7.2 in the week ending August 26th, when it touched its highest point. Week by week it fell to 6.6, then to 5.9, to 4.3, and to 3.1; and in the last week in September it came down to 1.9.

IS NAIL-CUTTING A SURGICAL OPERATION?

Some time ago a German court had to adjudicate on the question whether corns constitute a disease. A still more abstruse problem has recently engaged the attention of a Vienna tribunal. A medical practitioner of that city, having occasion to operate, very properly trimmed his nails as a preliminary. In doing so, however, he cut his finger, but was nevertheless able to perform several operations on the same day. The wound became infected, and the practitioner himself had to be operated on. He was thus disabled for twenty-one days, and therefore claimed 5 florins a day from an accident assurance company. The company repudiated liability, on the ground that, according to its by-laws, no claim can be entertained for an operation performed by a medical practitioner on himself. The question whether nail-cutting is a surgical operation appears to have proved too much for the judicial intellect, for, after hearing arguments on both sides and suffering much vexation of spirit, the court reserved its decision. We do not presume to offer any help towards the solution of so subtle a question. We venture, however, to submit that, if nail-cutting comes within the sphere of operative surgery, *a fortiori* shaving must do so, for that procedure was once among the duties of a surgeon. So well was this recognised in some countries that at the beginning of the present century some English surgeons were summarily dismissed the Danish Naval Service for refusing to act as barbers to the crews of their ships.

POISONING BY YEW LEAVES.

A rather interesting correspondence has been raised by a correspondent of the *Times*, who reported that a four-year-old cart horse had died after eating a few sprays of yew (12 to 20) 3 inches long. The leaves were found in the stomach undigested a few minutes after death. There was no food in the stomach at the time, and this is supposed to render the theory that death was due to poisoning by the yew leaves more probable. The extreme rapidity with which, on this theory, death must have been brought about raises some doubts, and these are strengthened by the results of Cornevin's experiments quoted by Dr. John Lowe, the author of an admirable work on *The Yew Trees of Great Britain and Ireland*. Cornevin found that for each kilogram (= 2.206 lb.) of weight of the live animal the dose necessary to cause death is, for the horse, 2 grams; for the ass and mule, 1.60 grams; for the sheep 10 grams; and for the goat 12 grams. Another correspondent of our contemporary has related a case in which a herd of cows strayed during the night into a field where there was a

large yew tree. In the morning five of the cows lay dead in the field. A *post-mortem* examination was made, and was considered to indicate that the cause of death was the eating of yew leaves. On another occasion eleven pheasants died suddenly, and undigested yew leaves were found in the crop of every bird. Professor Wiborg, of Copenhagen, found that although the leaves of the yew when taken alone were particularly fatal to horses, when mixed with twice or thrice their bulk of oats they could be eaten with impunity. In Hanover and Hesse the peasants appear to feed their cattle on dried yew during the winter, beginning with small quantities, and gradually increasing the amount. Dried leaves are said to be more poisonous than fresh, and Dr. Lowe thinks that this fact—if it be a fact—may be due to the animals eating a larger quantity of the dry leaves, as in the process of drying and fermentation they become less bitter and disagreeable. The seeds of the yew berries are extremely poisonous, but the pulp is believed not to be harmful. Cæsar, Livy, and Virgil refer to the poisonous effect, especially to cattle, of the berries and leaves of the yew tree. A decoction of yew leaves was, it is said, used among the North American Indians to procure abortion, and the practice is reported to have been resorted to in Europe.

THE TYPHOID OUTBREAK IN DUBLIN.

IT has already been stated in connection with the typhoid outbreak at Dublin that the origin of the greatest mischief, so far as it could be traced, was a dairy. The Local Government Board has held an inquiry into the circumstances through their Inspector, Dr. Edgar Flinn. It was shown that a dairyman (unregistered), living a few miles outside the city, became ill in August. He had pneumonia, but later on typhoid developed, and he was removed to hospital. His sister was also attacked. From this house milk was distributed over a large area. In September there were 32 cases in the Royal Irish Constabulary Barracks. The milk was stopped on September 12th, and only 7 cases occurred after that. The man was not the contractor, and only supplied some of the constables. Several of the patients died. In an adjacent school in the district three pupils and one of the maids died. The evidence showed that there had not been prompt notification. Dr. Cullen admitted that he became aware of the first case of typhoid on September 1st, but he did not report it until the 10th. He did not think it necessary to report every private case. The inquiry lasted two days. The decision will not be known until the Local Government Board has considered the evidence.

FINSEN'S PHOTOTHERAPY.

IN the *British Journal of Dermatology* for November Dr. Stephen Mackenzie gives an account of a visit which he recently paid to the "Light Institute" in Copenhagen, where Finsen's phototherapy, described by his chief assistant, Dr. Valdemar Bie, in the BRITISH MEDICAL JOURNAL of September 30th, is carried out. Dr. Mackenzie attended daily at the Institute for a week, and was afforded every facility for observing the details of the method and the results of the treatment. Up to the present nearly 400 cases have been treated, the greater number of them during the last two years. Dr. Mackenzie was greatly impressed with the equipment, organisation, and administration of Professor Finsen's Mediciniske Lysinstitut, and he formed a very favourable opinion of the value of the treatment in lupus vulgaris. It appeared to him that the mucous membranes were more frequently involved in the Scandinavian cases than in those seen in this country and a large proportion had perforations of the septum nasi. Dr. Mackenzie gathered from Dr. Forchammer, the physician in charge of the clinical department, that the mucous membranes are affected in about 75 per cent. of the cases. The general run of cases seen at Copenhagen was altogether more severe than in Dr. Mackenzie's experience in this country, but he adds that it is difficult to be sure that the type of disease is more severe, as the reputation of the Lysinstitut is so great that all the old and uncured cases find their way there. Dr. Mackenzie was led by what he saw to the conclusion that, as compared with treatment by erasion and the application of escharotics, the light treatment yields far better results, and for this reason, that it is selective in its action, killing the bacillary exciters of the granulation tissue, without destroying any tissue, diseased or healthy. The objections to the treatment are: (1) The length of time which it requires, extending to three or four, in some cases to six, eight, or even twelve months, during which an attendance of one hour a day is necessary; (2) the expense, the apparatus being costly, and a large staff of nurses with several medical officers and a practical electrician being necessary. All the patients pay according to their means, from 30 kroner (£1 13s. 3d.) to 70 kroner (£3 18s. 9d.) a month; foreigners pay 100 kroner a month. In spite of the expense there is an increasing afflux of patients not only from Denmark but from the whole of Scandinavia and other parts of Europe. Dr. Mackenzie is convinced that the light treatment is established as a successful method of treating lupus vulgaris, and he has advised the Committee of the London Hospital to adopt it. The necessary apparatus has already been given to the hospital by a generous benefactor.

CHOLERA IN ASIATIC TURKEY.

AN official communication to the *Administration Sanitaire* of the Ottoman Empire—for a copy of which we are indebted to Dr. E. Dickson, of Constantinople—states that Dr. Cavallaris, of Bussorah, reports cases of cholera as having occurred there. Bussorah (Bassorah or El Basrah) is a town situated on the banks of the Euphrates some fifty miles up the river from the head of the Persian Gulf. Not only in the city itself but also at Kourna, some fifty miles further up the river, at the junction of the Euphrates with the Tigris, a few cases have been reported. On October 23rd 15 cases of cholera appeared at Bussorah, but since that date the numbers have declined. The Turkish authorities are taking all available steps to check the disease, and cordons have been placed around the infected districts, and doctors officially told off to superintend the outbreak. The disease seems to have occurred amongst the immigrants, chiefly from India, who are housed in specially-constructed sheds. The prompt announcement of the occurrence of cholera in the Euphrates Valley by the Turkish authorities is a clear indication that the pressure brought to bear on the authorities at Constantinople is likely to result in a more systematic and more correct result of epidemics than has hitherto been the case.

THE NEURON AND CELL MEMORY.

PROFESSOR J. RENAUT, in a lecture published in a recent number of the *Revue Scientifique* (September 9th, 1899), refers to the conception of the nerve cell as an element which exercises the functions of a ruler in the animal economy. The nerve elements have grown and gradually developed into an oligarchy which rules the armies of motor cells, whereby the animal is able to react in response to varying conditions of the environment. The history of their development in the early metazoa shows that the nerve cells originated from the sensitive outer covering of the body (ectoderm), the cells showing an early differentiation into a sensitive pole or *terminus a quo* situated in the surface of the body, and a neuraxon or fibre which terminated by a bulb or an arborisation in the deep-lying contractile tissue (*terminus ad quem*) of the mesoblast. The

cell body and nucleus occupied an intermediate position, and a collection of such cell bodies formed a nerve ganglion. The researches of Golgi and of Ramón y Cajal have enabled us to have the clearest and most consistent picture of these elements and of their relations to one another. A close contact or conjunction between neuron and neuron enabled the impulses or nerve currents to pass from one to the other; and similarly by a separation or disjunction in the field of contact the nerve impulse could be prevented from passing. The capacity of change and of disjunction or conjunction in the field of contact is styled the plasticity of the neuron. The contacts are probably of an adhesive nature. The formation of pearls or moniliform enlargements is an instance of disjunction. A nerve cell once serving for the passage of nerve currents undergoes an alteration which allows of a more ready passage of a similar current on a future occasion, as Herbert Spencer was the first to conclude in his *Principles of Psychology*. This teaching has been adopted by Maudsley, Ribot, and other modern psychologists, and is generally accepted as essentially correct. It is also the doctrine of organic memory taught by Hering. Nerve cells and nerve centres may, as the result of disease, be subject to unusual disturbance and derangement comparable to conditions such as anarchy prevailing in civil communities.

LEPROSY CASES IN ENGLAND.

THE members of the London Medical College and Polyclinic have been fortunate in the matter of leprosy demonstrations. We are informed that during the last six months no fewer than seven opportunities have been afforded for the inspection of cases of this malady, which in England is very rare. One of these patients, an excellent example of the macular form with tendency to tuberculous developments, is expected to attend again on Thursday next. All the cases have been in Europeans who have lived in leprosy districts, and in only one was the patient of mixed blood. One patient had lived in India in the army, another in Australia, New Zealand, and South America, a third in British Guiana, and a fourth in the West Indies. In no single case were there any facts suggestive of direct contagion from any known source. All the patients were still living with their relatives without precautions, and Mr. Hutchinson pointed out that no suspicion of contagion had occurred. In one the disease had been for some years completely arrested, whilst all the others showed the macular type.

ÆSTHETIC COLOUR-SENSE IN CHILDREN.

DR. AARS has recently published[1] the results of some investigations he has made on the subject of the æsthetic appreciation of colours in children. Paper rings coloured red, green, blue, and yellow respectively, the colours being similar in brilliancy and depth, were laid two at a time on a dark grey ground, and the children were asked which of the two rings they preferred. Each colour was compared with each other colour twice every day. Eight children were examined, four boys and four girls, whose ages ranged from 4 to 7 years. Out of 191 decided answers blue was chosen 55 times, green 46 times, red and yellow each 45 times. With the girls green was the favourite colour with 30 votes, blue came next with 26, red had 23, and yellow 16. In the case of the boys blue and yellow were equal, each being chosen 29 times; red followed with 22, green with 16 votes. The rings were then placed in pairs, and choice was made of the different pairs of colours. The combinations in which blue occurred again headed the list. Combinations of blue 211, of yellow 187, of green 186, of red 184. It is curious to note how evenly matched the latter three colours were. This was probably due to the fact that the colours were prepared of equal depth. While brilliancy carried some weight, it was the depth of a colour, in the case of children, that formed its chief æsthetic attraction. "Diluted" and pure colours were submitted to two of the children. The former consisted of 160° colour with 200° grey.[2] The pure colour was chosen 13 times, the "diluted" 3 times. It was found, not unexpectedly, perhaps, that very contradictory answers were sometimes given. On one occasion blue was chosen fourteen times and green twice, on another blue once and green fifteen times. Aars explains this by the law that "variety is preferable to repetition." Another disturbing element is the fact that novelty in a colour weighs more with children than its absolute quality. The errors introduced by these factors were reduced to a minimum by having only two tests in a day, by repeating the questions a large number of times, and by having the examinations at intervals sufficiently long to ensure the children forgetting their previous answers. The result as a whole is not particularly striking, except in its negative aspect. Green was the colour the girls liked best, and the boys least, and the latter preferred the combinations of blue to those of any other colour; otherwise the children seem to have chosen indifferently.

[1] *Zeitschr. f. pädagog. Psychol.*, 1899, i. 4.

THE TOTAL NUMBER OF NERVE CELLS IN THE CEREBRAL CORTEX OF MAN.

MISS HELEN BRADFORD THOMPSON has reported in the *Journal of Comparative Neurology*, June, 1899, a research at the Neurological Laboratory of the University of Chicago to determine approximately the total number of nerve cells in the human cerebral cortex. Meynert's estimate that there were 612 millions of nerve cells in the tops of the convolutions of the cerebral cortex, and that there are 1,200 millions in the entire cerebral cortex, is not regarded as accurate. The present calculation is based upon data given in Hammarberg's work *Studien über Klinik und Pathologie der Idiotie, nebst Untersuchungen über die normale Anatomie der Hirnrinde*, Upsala, 1895. This observer made a large number of very careful observations to determine the number of nerve cells per cubic millimetre of cortex. Dividing the entire cortex according to variations of microscopical structure, sixteen regions are mentioned. A portion of each such region was separately examined, and the number of nerve cells per cubic millimetre estimated with great accuracy. Calculations were next made, mainly also from data supplied by Hammarberg, but partially verified or worked out by Miss Thompson, of the relative numbers in the sides and bottoms of sulci. The total cortical area was next calculated by various well-known methods. The present estimate gives the astounding result that there are over 9,200 millions of nerve cells in the cerebral cortex, an estimate about eight times as large as that published by Meynert in 1872 (see *Vierteljahrschrift für Psychiatrie*, 1872, p. 18).

MEDICAL ARRANGEMENTS FOR THE UNITED STATES TROOPS IN THE PHILIPPINES.

ACCORDING to the *New York Medical Journal* the new United States Secretary for War has already shown a disposition to give careful attention to the question of making provision for the medical needs of the American soldiers in the Philippines. Colonel Woodhull reports that the hospitals are now not overcrowded; there is accommodation for over 2,000 patients, and only 1,847 beds are occupied, including those of convalescents. But in view of the active operations contemplated after the subsidence of the floods, the accommodation is to be largely increased. Provision for the care of 8,000 sick and wounded is on the way to Manila. The hospital corps men now number nearly 2,000, and more than 1,000 others will be added before the opening of active hostilities. Besides the land hospitals, the hospital ships *Missouri* and *Relief*, now on their way to Manila, are to be used as floating hospitals.

[2] *Cf.* Graefe's *Arch. f. Opht.*, Bd. xxiv, 30, and xxvii, 1.

Together they will accommodate 600 patients. Thirty women nurses have sailed from New York. That was the number that Colonel Woodhull asked for, together with twenty medical officers, but he is reported to have added, "Can use twice as many." Thirteen commissioned medical officers and forty acting assistant surgeons are already either on their way to the Philippines or under orders to proceed thither, in addition to the medical officers of the volunteer regiments.

THE CONSULTING SURGEONS WITH THE FIELD FORCE.

MR. FREDERICK TREVES who sails from Southampton on Saturday, November 11th, to take up the duties of consulting surgeon to the Field Force in South Africa is taking with him two nurses, Miss Alice Tarr, formerly of the London Hospital, who has been Mr. Treves's instrument nurse for some years, and Miss Ethel McCaul, formerly of Addenbrooke's Hospital. Adeline Duchess of Bedford has placed at the disposal of Mr. Treves a sum of money to assist in defraying the cost of the nursing arrangements. Mr. Treves is taking with him his own surgical appliances, including special boxes of sterilised dressings for abdominal and other major operations. Each box measures about 7 inches by 5 inches by 1¼ inch, is hermetically sealed, and contains a dozen sterilised artificial sponges, sterilised ligatures, and a tube containing absolute phenol. The box is opened by detaching a tin strip soldered round the lid, and the lid when removed forms a tray for holding instruments. When this tray is half filled with water the quantity of phenol in the tube is sufficient to yield a carbolic solution of 1 in 20. This will be used for sterilising instruments. Before leaving London Mr. Treves received a summons to Marlborough House, when the Prince of Wales expressed to him the deep interest which he felt in the work. Sir William MacCormac and Mr. Makins left Southampton on Saturday last, November 4th, and may be expected to reach Capetown about November 22nd or 23rd. It is probable, however, that they will both go on to Durban.

AN AMBULANCE FOR THE BOERS.

SIR JAMES SIVEWRIGHT, K.C.M.G., who was Commissioner of Public Works in Cape Colony until last year, has been successful in organising an ambulance party to go to Pretoria to assist in treating the Boer wounded. He defrays the whole cost of the equipment, and we understand that a British line of steamers has arranged to take the whole party to South Africa free of charge. The ambulance party will be in charge of Dr. Gray, of Aberdeen, son of Brigade-Surgeon R. Gray. An Afrikander Home was established in connection with the Edinburgh University some years ago, and has been attended by some eighty students in the various faculties. One of these gentlemen, Dr. Neethling, who took his degree in the University this year, and has since been House-Surgeon to the Bradford Infirmary, has, we are informed, resigned that appointment, and will be one of the surgeons to the ambulance. Ten students from the Afrikander Home in Edinburgh will go out as dressers, and the ambulance staff will also include a nurse. In the selection of the equipment Sir James Sivewright has had the assistance of Mr. Cantlie. The statement that Mr. Cantlie will accompany the party is, however, incorrect.

THE WOUNDED AT WYNBERG.

WYNBERG, the suburb to which the wounded from Glencoe and Elandslaagte, who arrived at Capetown on November 1st, were taken, is a beautiful spot, about eight miles from Capetown, on the railway to Simonstown. It is situated in a splendid forest of pine and gum trees, and will be an excellent place to treat the wounded in. The Wynberg Hospital is a small one of about 50 beds, but the barracks close by are available, and will be used as a base hospital. About 500 beds altogether will thus be provided. The military hospital in Capetown itself contains about 100 beds, but is badly situated. It stands on the seashore near the point at which one of the main sewers of the town discharges, and when the wind is on shore the odours are stated to be extremely disagreeable. Further, about three hundred yards on one side is a cemetery, and on the other a piece of open ground frequented by persons of doubtful reputation, while behind the hospital at a distance of about one hundred yards runs the railway. The Capetown barracks are old, and not fitted for use as a hospital. Owing to the large number of refugees in Capetown it is not probable that there will be much room to spare in the principal civil hospital, the Somerset Hospital. If more beds are required than the hospital and barracks at Wynberg can provide, it is probable that the best arrangement will be found to be the erection of tents there.

WE regret to have to record the death on November 4th, after a few days' illness, of Dr. W. A. Arnison, Professor of Surgery in the University of Durham, and Consulting Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

THE dinner of the Harveian Society will be held at the Cafe Monico on Thursday, November 23rd, at 6.30 for 7 P.M. The chair will be taken by the President, Mr. Henry E. Juler, F.R.C.S.

AMONG those who will take part in the discussion on the Open-air Treatment of Tuberculosis, to be opened by Dr. Kingston Fowler at the meeting of the Royal Medical and Chirurgical Society on Tuesday next, will be Sir William Broadbent, Professor Clifford Allbutt, and Professor Boyce.

THE first meeting of the Incorporated Society of Medical Officers of Health is to be held this (Friday) evening, November 10th, at 197, High Holborn. The President (Dr. Newsholme) will give his presidential address, which is entitled a Contribution to the Study of Epidemic Diarrhœa, at 8 P.M.

THE first examination of the Sanitary Inspectors' Examination Board for certificates of qualification for the appointment of sanitary inspector will be held in London on Tuesday, December 5th, 1899, and the four following days. Further particulars can be obtained from the Honorary Secretary, William R. E. Coles, 1, Adelaide Buildings, London Bridge, London, E.C.

HIGH MARRIAGE RATE.—The prosperity of the country was reflected in the high marriage-rate which prevailed in England during the second quarter of this year, when the marriages of 144,490 persons were registered, being equal to an annual rate of 18.3 persons married per 1,000 of the estimated population. This rate is 2.1 per 1,000 above the average rate in the second quarters of the ten years 1889-98, and is a higher rate than has occurred in the corresponding quarter of any year since civil registration began.

A MEDICAL GUNNER.—Dr. Rossignon, a Belgian medical officer in the service of the Congo Free State, is said to have done excellent work as a volunteer artilleryman at the capture of Redgaf in 1897. Lieutenant Saroleá and Sergeant Cajot, who were in charge of the guns, were killed, and as they were the only European artillerymen in the expedition the commanding officer was in a serious difficulty. But Dr. Rossignon was equal to the emergency, and without hesitation proceeded to direct the service of the guns. This he did with such success that in recognition of his services the decorations of the Service Star and the Knighthood of the Royal Order of the Lion were conferred on him.

THE DIRECT REPRESENTATIVES' MEETING AT NEWCASTLE.

The North of England Branch of the British Medical Association, the Newcastle-on-Tyne Medical Ethical Society, the Gateshead Medical Association, the County of Durham Medical Union, and the South Shields and Jarrow and Sunderland Branches of that Union, have arranged to hold a conference of medical men interested in medical politics on November 22nd, 1899, at 6 P.M., at the University of Durham College of Medicine. It is anticipated that the Middlesbrough and District Medical Association will also co-operate. Circulars are being sent to every medical man in the two counties of Northumberland and Durham.

The chair will be taken by Dr. Jepson, President of the County of Durham Medical Union, and the meeting will be addressed by the three direct representatives. Mr. Victor Horsley will, we are informed, devote his address to the constitution of the General Medical Council, and its procedure, especially in relation to legal business and to the organisation of the profession by means of the British Medical Association. We are informed that Mr. George Brown will deal with the work of the General Medical Council as regards medical reform, from the institution of direct representation to the present time, and will discuss reforms still needed. He will also refer to the Conciliation Board and the use of medical titles, with particular reference to the Hunter case. Dr. Glover's address, we are informed, will deal with the general work of the General Medical Council, its virtues and defects, the Conciliation Board, contract medical work, the unity of the profession, and its effective organisation.

At the conclusion of these addresses a period of not less than an hour will be allowed for questions on the above and kindred topics. Subsequently a discussion will take place on the question of the granting by registered practitioners of certificates to unqualified persons as to their competence to undertake any department of medical practice. The following resolution will be proposed by Dr. Clark Newton, President of the Newcastle-on-Tyne Medical Ethical Society, and seconded by Dr. Blacklock, President of the Gateshead Medical Association:

That this meeting strongly urges the local organisations of the profession and our representatives on the General Medical Council to oppose strenuously the certification by registered practitioners of unqualified persons as competent to undertake any department of medical practice. That this meeting further regards such certification as contrary to the principles of the Medical Acts, and any measure to legalise the same as a repeal of those Acts.

Dr. Alfred Cox, Honorary Secretary of the Gateshead Medical Association, will move, and Dr. J. H. Hunter, of the South Shields and Jarrow Branch of the Durham Medical Union, will second a vote of thanks to the direct representatives for their attendance, and expressing the opinion of the meeting that the time has arrived when the number of direct representatives should be increased.

We are asked to state that refreshments will be on sale for the convenience of those attending the meeting from a distance. Any further particulars can be obtained from Dr. Alfred Cox, Honorary Secretary, Cotfield House, Gateshead.

THE USE OF MEDICAL CHARITIES.

Mr. C. S. Loch (Secretary of the Charity Organisation Society) delivered an address on the Use of Medical Charities before a meeting of the East Suburban Medical Protection and Medico-Ethical Society on November 7th at the Stratford Town Hall. The chair was taken by Dr. F. J. Smith, Physician to the London Hospital.

In the course of his remarks Mr. Loch reviewed the history of medical charities in London, and showed how it was possible for a hospital to create in a district a habit of dependence among the working classes where before, under normal circumstances, there was no such habit. In regard to outpatient departments, it was clear that in this matter they were still attempting to solve a problem the gravity of which had grown up in the last forty years and the solution of which was not yet achieved. To ensure reform four interests had to be considered: the hospital as an institution, the hospital as a medical school, the class of patient belonging to the labouring and necessitous poor, and the general medical practitioners. Some form of quadrilateral alliance between these various interests was necessary. Trifling ailments should not be treated at hospital, but the patients should be referred to those who ought to treat them. Such cases, together with most of those treated in the casualty departments demanded the attention which could be given by a general medical practitioner. For medical education any case which was considered necessary for teaching should be retained. There should be a proper inquiry system to prevent abuse of medical charities. It was absurd to expect any results from a system which consisted of setting one unfortunate inquiry officer to investigate the circumstances of those seeking relief at the outpatient department. The interest of the general practitioner should be recognised by representation on the Hospital Board. To extract from our hospitals the greatest vitality and the greatest usefulness Mr. Loch urged that they should be associated together by means of some representative system. The speaker concluded his address by pointing out that the just economy of the cause from a charitable point of view corresponded with the point of view of a well-ordered medical profession, and hoped that united efforts would be made to reconsider the whole question, on the ground that after the lapse of so many years out-patient administration needed thorough reorganisation.

After Colonel Montefiore had addressed the meeting, the following resolution, proposed by Dr. Murtaugh Houghton, and seconded by Dr. Tomlin, was carried unanimously:

That this meeting of the East Suburban Medical Protection Society and other medical practitioners is of opinion that as a means of preventing the misuse of medical charities—supported wholly or in part by voluntary contributions—medical men should be elected on the governing and executive bodies of such charities in a proportion of not less than 25 per cent., such representatives to be periodically elected by the medical practitioners in the vicinity; and hereby invite the medical profession as a whole to support this policy.

Dr. Rose said that salvation lay with the medical profession themselves, and remarked that consultants encouraged cases into the hospitals to get a bigger advertisement at the expense of the general practitioner.

Dr. Boyton denied that staffs of hospitals "cadged" for patients, and contended that any member of a hospital staff should be at full liberty to refuse medical aid to any patient he considered unfit for relief.

Dr. Napier Jones also addressed the meeting, and the proceedings terminated with a cordial vote of thanks to Mr. Loch.

HOLIDAY LEAVE OF IRISH POOR-LAW MEDICAL OFFICERS.

As the readers of the British Medical Journal are well aware the recent rule of the Irish Local Government Board with regard to holidays for dispensary medical officers has given rise to much friction between some of the Boards of Guardians and the Local Government Board. The wording of the rule is: "Each medical officer shall be allowed an annual vacation not exceeding four weeks, and the guardians shall pay to the medical practitioner employed temporarily to discharge the duties of the medical officer for that period such reasonable remuneration for his services as the Local Government Board shall approve or direct."

A few of the Boards of Guardians contended that as the words "not exceeding four weeks" occur in the rule they had power to grant a shorter period, and they only gave way on this point on strong pressure by the Local Government Board. At Belfast the Board of Guardians took up this position, and several of the less important Boards in the north followed their lead.

The Belfast Board adopted a memorial to the Local Government Board protesting against the action of that Board, and copies were forwarded to the other Boards in Ireland for adoption.

This memorial contained several inaccurate statements: For example, it stated that (1) "no medical gentleman engaged solely in private practice leaves his practice for a longer period than two weeks" (annually), and also that (2) "medical men as a rule take few holidays where they are obliged to pay their own *locum tenens*." Yet many of the medical

officers of the Belfast Union have for years past applied for and have been granted one month's leave (and even longer periods) annually, and paid their own substitutes. The inaccuracy of these statements must have been apparent to many members of the Board, especially to the medical members, of whom, it is stated, three were present at the meeting at which this memorial was unanimously adopted.

The memorial also objected that the rule was a "privileged class order," but the Board were aware that, under the old *régime*, the medical officers were the only Poor-law officials who were required to provide and pay substitutes when absent on holidays, and therefore the only class requiring this rule.

To this memorial the Local Government Board forwarded a full reply, in which it stated *inter alia* that it "had decided upon a uniform rule which would be binding on all Boards of Guardians;" that it "considered a period of one month the best reasonable vacation to be allowed;" that "it is essential that the medical officers should have secured to them as a matter of right a definite period annually for rest and recuperation." It also added that it "considered the regulation necessary, not merely for the sake of the officers concerned, but in the best interests of the ratepayers and of the sick poor."

The full text of this memorial appeared in the Belfast papers, but the reply of the Local Government Board had not, down to a few days ago, been published in the Belfast press. The Local Government Board deserves the gratitude of the medical profession for acknowledging the unfairness of the action of many of the Irish Boards of Guardians and firmly insisting on having that unfairness righted.

THE INTERNATIONAL CONGRESS OF MEDICAL ETHICS.

ARRANGEMENTS are now being made for the organisation of this Congress, which is to meet in Paris from July 23rd to 28th, 1900; and during November and December of this present year a circular letter, to which we are asked to draw attention, will be addressed to many practitioners in Great Britain and Ireland, asking them to send in their adhesion to the Congress.

As with our own Association meetings, the Congress will, after its opening meeting, divide into sections, of which four have been up to the present arranged, dealing with (1) the relations of medical men to the State or to large bodies other than the State, municipalities, etc.; (2) relations of medical men to individuals, as patients, chemists, nurses, midwives, etc., including the subject of the illegal practice of medicine; (3) relations of medical men with colleagues, consultations, clinics, medical societies, and unions; (4) mutual assurance and medical defence societies.

The opening meeting will be held in the Exhibition building, and the sections at the Faculty of Medicine. In addition to the papers to be read in the sections, there will be seven reports, printed and distributed in advance, which will be discussed by the Congress in general meetings. They are on the following subjects, and the names of the reporters are attached to each:

1. The Principles of Medical Ethics, M. Grasset (Montpelier).
2. Illegal Practice of Medicine, M. Desconts (Paris).
3. Medical Insurance and Assistance, M. Lande (Bordeaux).
4. Medical Defence, M. Porson (Nantes).
5. Relations of Medical Men with their Colleagues, M. Cuylits (Brussels).
6. Organisation of Medical Chambers or Unions and their Results, M. Pollak (Vienna).
7. Organisation of the Doctors' League of Hungary, M. Jendrássik (Buda Pesth).

These reports will be printed in French, and will be accompanied by summaries in English and in German. The President of the Congress is M. Lereboullet (Paris), the General Secretary M. Jules Glover, and the Treasurer (to whom the forms of adhesion, duly filled up and accompanied by a postal order for 12s. are to be sent) is M. P. Masson, 120, Boulevard St. Germain, Paris.

It will be seen that the subjects to be discussed in this Congress are very similar to those which frequently take up so much space in our columns, and which were dealt with for a couple of years in the Ethical Section of the annual meetings of the Association. We understand that already it has been practically decided by the Arrangement Committee, no doubt for good and sufficient reasons, that no such Section is to be held next year at Ipswich; and as the Paris Congress takes place the week before that fixed for the annual meeting of our Association there will be an opportunity for those who would otherwise help to constitute an Ethical Section, and desire to read papers on such burning questions as Medical Defence, Midwives, Poor-law Medical Service, Hospital Abuse, *et hoc genus omne*, to deliver their souls before an international congress under favourable circumstances. It must be understood, howeve, that there is not much time to lose, since papers, if they are to be read before the Congress or to appear in full in its *Transactions*, must be written in French and sent to the General Secretary before January 1st, 1900, otherwise communications may be crushed out and summaries only appear in the report.

The Committee for Great Britain and Ireland is constituted as below, and while we have no objection to urge against any one of the names in this list, we may say of it, as well as of some of the committees of other countries, that it cannot be regarded as fully representative of the profession. The following is the list as it at present stands:

Presidents: Messrs. Thomas Wakley, *père et fils (sic)*.
Secretary: Mr. A. Smith.
Committee: Messrs. W. A. S. Griffith and G. Bateman (London), Carline (Lincoln), Harper (Eastbourne), Waring (Brighton), Horder (Cardiff), Houghton (Ilford), Dockrell (London), W. R. Smith (London), Shingleton Smith (Bristol), Grainger Stewart (Edinburgh), Kinkead (Galway), Whitla (Belfast), Hobart (Cork), Ogston (Dunedin, New Zealand).

LITERARY NOTES.

A NEW volume of the "Masters of Medicine" series, *Hermann von Helmholtz*, by Professor J. G. McKendrick, F.R.S., of Glasgow, is ready for publication, and will appear immediately.

The *Century* for November contains the first part of a story by Dr. Weir Mitchell, entitled, "The Autobiography of a Quack." It promises to be of great interest as a study of a degraded type of medical practitioner which it is to be hoped will, in the higher evolution of the profession, become extinct.

Messrs. Bale Sons and Danielsson Limited will shortly publish a work by Mr. P. Y. Alexander, entitled, *Darwin and Darwinism*.

Index Medicus Novus is the title of a new fortnightly publication which professes to give the "contents of the periodical medical literature of all the lands." It "can be ordered by all post-offices." Apart from its slight linguistic eccentricities, the new *Index Medicus* is a meritorious effort to supply clues to the mighty maze of current medical literature. It is much less elaborate than the defunct *Index Medicus*, the place of which, indeed, it is by no means adequate to fill. But, on the other hand, it will probably be found more convenient by the ordinary run of medical workers, to whom the American *Index* was apt to be oppressive by the very plenteousness of its references.

It is a familiar fact of literary history that Molière used to read the manuscript of his comedies to his housekeeper, expunging or rewriting whatever she found incomprehensible. The name of this literary "foolometer" was Louise Lefebvre, and in view of the large place occupied by medicine and its professors in Molière's plays it is an interesting circumstance that she was the widow of a surgeon named Edme Jorand.

In the *Journal of Anatomy and Physiology* for July, Mr. Charles Ind, Musgrove Scholar in Anatomy and Physiology, St. Thomas's Hospital, describes a method of obtaining a radiograph of an injected full-term fœtus. After trying bismuth subnitrate suspended in water by means of tragacanth, Mr. Ind employed mercury on the suggestion of Mr. F. H. Glew, member of the Roentgen Society. The metal was introduced into the external circumflex branch of the femoral artery through a hypodermic needle. The radiograph taken by Mr. Glew shows that the vessels are very thoroughly injected, but Mr. Ind points out that the radiograph should be taken as soon as possible after the injection, as the mercury tends to gravitate towards the lower parts.

Dr. E. F. Cordell has reprinted from the *Johns Hopkins Hospital Bulletin* an interesting sketch of the life of Dr. John Crawford, a forgotten medical worthy of Baltimore. Crawford was born in the North of Ireland in 1746. After studying at

Trinity College, Dublin, he went to Leyden where he obtained the degree of Doctor of Medicine. He entered the East India Company's service, and afterwards held appointments in Barbados and Demerara. In 1796 he settled in Baltimore, where he took a prominent part in the professional and public life of the city. He was one of the pioneers of vaccination in the United States. He died in 1813. He was the author of a goodly body of writings on medical subjects, and he was on some important points so much in advance of the professional opinion of his day that he was, as is usual in the circumstances, looked upon by his brethren as a "crank." In a lecture on the Cause, Seat, and Cure of Disease he anticipated the germ theory. He seems to have begun to entertain the idea of a *contagium vivum* as the cause of disease in 1790 when he went to Guiana, where he saw numerous cases of malarial and yellow fever. At the close of the day, when the sunbeams fell aslant upon the earth, he saw myriads of tiny insects, at other times invisible, fluttering in the air, and he said to himself, "If in the air, why not in my air tubes? and why not thus the conveyors of disease?" All analogy, he argued, showed that disease and decay were coincident with the presence of minute organisms. If the fly lays its eggs to develop later into worms, why may not minute insects deposit their offspring in our bodies, there to develop and ravage the tissues? Giving practical application to these principles, Crawford insisted upon absolute cleanliness and perfect hygiene in the matter of water, air, food, clothing, sewerage, and mode of life. He also taught that persons sick of infectious diseases should be isolated, and he used remedies with the object of destroying pathogenic organisms. He was prepared for opposition from his colleagues, and his expectation was fully justified by the event. He was driven to appeal from the profession to the public by delivering his message in a lay journal, because his own received him not.

A patient suffering from dropsy recently (as we learn from our Belgian contemporary *Le Scalpel*) sent the following classical invocation to his physician, Professor Masius, of Liége:

Audi, doctor, me clamantem
Tristi voce lamentantem!
Aqua horrida interna
Ventris plena est caverna.
Diaphragma, in thoracem
Aquæ vi impressum, pacem
Rapit jam pulmoni; omnes
Fere noctes sunt insomnes.

Nunquam autem tulit ventor
Meus aquam—phy!—libenter!
Ergo, doctor, fac me salvum
Aqua liberando alvum:
Ne sis Fabius Cunctator,
Veni Masius Punctator.

THE JOHNS HOPKINS UNIVERSITY MEDICAL COMMISSION TO THE PHILIPPINE ISLANDS.

[From a Correspondent.]

Constitution of the Commission: Visits to Japan and Hong Kong.—Investigations in Manila.—Isolation of a Bacillus in Acute Dysentery.—Malarial Diseases.—The Climate of the Philippines.—Visit to Plague Districts in India.—Instruction in Tropical Medicine at Johns Hopkins University.

In March last the Johns Hopkins University, Baltimore, decided to send two of its staff—Dr. Simon Flexner and Dr. Lewellys F. Barker—to the Philippine Islands to investigate the diseases which prevail in those regions. In addition to the medical men mentioned, two advanced students from the Johns Hopkins Medical School—Messrs. Joseph M. Flint and Frederick P. Gay—went as volunteer assistants. The trip out was made by way of Vancouver, and some ten days were spent in Japan. In Tokio the laboratories of Kitasato, Aoyoma, and Miura were visited, and the studies of the Japanese upon beri-beri and dysentery formed a valuable introduction to the work which was undertaken later in Manila. The voyage from Japan to Manila was made by way of Hong Kong. In the latter city the Johns Hopkins party were most courteously received by the English authorities. Dr. James Lowson in particular gave the visitors every opportunity for the clinical and pathological study of bubonic plague which at the time was attacking many of the Chinese. The members of the Johns Hopkins party refer enthusiastically to the strenuous efforts made by this medical officer to stop the spread of plague in China.

The party arrived in Manila at the beginning of May, and remained there until about the middle of July. As May and June are the two hottest months of the year, and the rains are well on in the early part of July, the islands were visited at their most unfavourable season from the standpoint of comfort, but at the most desirable time for the study of tropical diseases. Through the courtesy of Colonel Woodhull and other authorities among the American forces every opportunity was afforded to the visiting physicians for the study of disease clinically and in the deadhouse. A complete clinical, bacteriological, and pathological outfit accompanied the party, and careful studies were undertaken in the wards, laboratories, and *post-mortem* room. The report of the Commission has not yet been published, as it will take some time to work out thoroughly the pathological material collected and brought home to America for microscopic examination.

The most prevalent and fatal diseases among the American troops were found to be typhoid fever and dysentery, and one of the most interesting of the findings of the Johns Hopkins Commission was the isolation of a bacillus which is believed to be the cause of the acute dysentery which exists in the Philippine archipelago. The bacillus was obtained from the stools of recent cases; a fresh bouillon culture was quickly agglutinated when exposed to the action of the blood serum of dysenteric patients even in high dilution.

Of the fevers which prevail besides the diseases above mentioned may be specified malarial fever, acute croupous pneumonia, and dengue. The malarial fevers are apparently not so prevalent in the city of Manila itself as in certain other parts of the archipelago. Tertian parasites and those of the æstivo-autumnal variety were isolated, however, from a number of cases studied. The Commissioners state that good opportunity for the investigation of what the natives call "*calentura perniciosa*" will be afforded in the islands of Mindoro and Mindanao as soon as they have been made accessible. Among the natives themselves, beri-beri, tuberculosis, and leprosy are frequently met with. A large outbreak of more than two hundred cases of beri-beri occurred among the Filipino prisoners at Cavite. These cases were studied clinically, and necropsies were made upon the dead. No clue, however, has as yet been discovered with regard to the etiology of this obscure disease.

It is believed that the climate in the Philippines is supportable by Americans who go to live there for a term of years, though permanent residence by Anglo-Saxons can scarcely be advised, as the conditions resemble closely those of British India. Americans are strongly urged to take precautions, especially on first going to the islands with regard to food, clothing, bathing, and avoidance of excesses of all sorts.

On the return voyage, which was made by way of Suez and London, two of the party crossed British India in order to continue the study of plague, especially at Poona and Bombay. In the former place Majors Reid and Windle, and in the latter city Colonel Weir and Captain Howell, received the visitors most courteously, and gave them every opportunity for the examination of the measures adopted by the plague authorities in India. The problem there is rendered extremely complex by the caste rules and religious prejudices of the natives.

Instruction in tropical diseases has been begun this autumn in the Johns Hopkins Medical School. It seems likely that the inauguration of a foreign policy by the Americans will do much to stimulate interest among American physicians in the study of the diseases which prevail in the hotter regions of the earth.

THE PLAGUE.

Prevalence of the Disease.

Portugal.

Oporto.—The only definite information received recently concerning plague in Oporto is that 1 fresh case occurred on November 2nd. Dr. Gomez Silva declares that the disease is endemic and not epidemic in Oporto. There would seem to be conclusive evidence that such is the case. Plague has prevailed in the city for some six months, and nothing in the character of an epidemic has occurred. The fact that the disease is endemic in character affords, however, no special hope that it will be speedily eradicated. In Calcutta nothing of the nature of an epidemic has existed, yet the disease remains in spite of precautionary measures. An eye-witness of the present condition of Oporto declares the sanitation to be primitive in the extreme, but not more so than in

other Portuguese towns. Sweeping the streets and collecting dust with an occasional flushing of the gutters seems to be the extent of the hygienic measures attempted. There seems no doubt that it is amongst the dirtiest classes chiefly that the disease prevails. The inhabitants of Oporto are not afraid of typhoid, and they declare small-pox to be non-contagious. To such an extent is this belief acted upon that persons with the dried scabs of small-pox still upon them may be seen travelling in public conveyances without any notice of the fact being taken. The lowest class in Oporto are really Spaniards, and it is amongst them that plague chiefly prevails.

INDIA.

The plague summary for the week ending October 14th showed that the deaths in all India fell from 6,707 in the previous week to 5,806. Whilst in the city of Bombay an increase was observed, throughout the Presidency the numbers decreased from 5,707 to 5,310.

Plague increased in the following districts: Poona, Belgaum, Dharwar, Bijapore, and in the Southern Mahratta States during the second week of October, but declined in the Satara, Nasik, and Ahmednagar districts, the Madras Presidency, and in the Central Provinces.

On October 18th 5 cases remained in the European Plague Hospital at Poona. Owing to the Kameteepura part of the Poona cantonment being invariably the first part to be attacked by diseases, whether cholera, fever, or plague, the Committee have decided to rebuild the whole area.

In the Punjab plague is again appearing.

The fresh engagements of nurses and doctors in England for plague duty in India is not regarded with approval either by the laity or the medical profession in India.

HONG KONG.

During the week ending November 6th 1 case of plague and 1 death from the disease occurred in Hong Kong. This is now the third week that a similar return has been made.

MAURITIUS.

For the week ending November 5th, 87 cases of plague and 75 deaths from the disease occurred in the island of Mauritius. Seeing that British troops are being transferred from Mauritius to the seat of war at the Cape, it behoves the authorities in Natal to keep a sharp look-out for the appearance of plague amongst the soldiers.

EGYPT.

Alexandria.—A telegram from Cairo dated November 6th states that an isolated case of plague had occurred at Alexandria. The medical authorities there are reported to hold the opinion that this indicates no fresh outbreak.

BRAZIL.

Plague cases are reported to continue to occur in Santos, but there is no official record of the actual numbers to hand. San Paulo is declared to be free of plague; the one case previously reported from there is denied.

THE NEW VACCINATION ACT IN OPERATION.

W. M. Y.—A public vaccinator can never, under any circumstances, claim a second fee under Clause 1 (*a*) of Article 3 of the Vaccination Order in respect of any one child.

THE LYMPH OF THE NATIONAL VACCINE ESTABLISHMENT.

OLIVER SNITCH writes: The results of my vaccine are as follows: National Vaccine Establishment 793 insertions, 421 successful; total failures, 3. Chaumier, 735 insertions, 714 successful; total failures, 2. The National Vaccine Establishment lymph was tolerably good up to May, after then I am sure the results would not satisfy the inspector.

A P. V. FOR 25 YEARS writes: I am quite in agreement with your last week's correspondent as to the unsatisfactory results obtained from the lymph of the National Vaccine Establishment, and have in consequence discontinued its use. The record in my register for the last hundred consecutive cases inspected is: Jenner's Institute, 396 insertions, 394 vesicles. Dr. Renner's, 4 insertions, 1 vesicle.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 27th, 1899, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this Branch will be held at the White Hart Hotel, Lewes, on November 30th. Dr. Fawssett will preside. Members are requested to send notice of papers or other communications to the Honorary District Secretary,—J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards.

SOUTH-WESTERN BRANCH.—The next meeting of this Branch will be held in the Board Room of the Royal Devon and Exeter Hospital, Exeter, on Tuesday, November 14th, at 4 P.M. Mr. J. Bland Sutton will deliver an address on Cancer Infection in relation to the Surgical Treatment of Cancer. Luncheon (2s. 6d.) will be provided at the Royal Clarence Hotel from 1.30 to 2.30 P.M., and tea and coffee will be served in the Board Room of the Hospital at 3.30 P.M.—H. W. WEBBER, M.S., 4, Woodland Terrace, Plymouth, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of this Branch will be held in the Medical Institution, Liverpool, at 2 P.M. on Wednesday, November 29th, 1899. Members who wish to bring forward any business, to read papers, or show cases or specimens, are requested to communicate with the Honorary Secretary not later than Saturday, November 18th.—T. ARTHUR HELME, M.D., 3, St. Peter's Square, Manchester, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The autumn meeting of this Branch will be held at the Joint Counties Asylum, Carmarthen, on Thursday, November 23rd.—ALFRED SHEEN (Cardiff), D. ARTHUR DAVIES (Swansea), Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting of this District will be held in the Court Room of St. Thomas's Hospital on Thursday, November 16th, at 3.30 P.M. Dr. H. P. Hawkins will read a paper on Albuminuria in the Apparently Healthy. Cases of clinical interest from the wards of the hospital will be shown by Dr. Payne, Dr. Sharkey, and Dr. Acland.—THEO. B. HYSLOP, Bethlem Royal Hospital, S.E., District Secretary.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting of this District will be held at Shadwell Hospital for Children on Thursday, November 16th, at 4 P.M. Dr. F. J. Smith, Vice-President of the District, will preside. A demonstration of cases will be given by members of the staff. Visitors are invited.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

YORKSHIRE BRANCH.

THE autumn meeting of this Branch was held at Harrogate on November 1st, Dr. KILNER CLARKE (Huddersfield) President, in the chair.

New Members.—The following gentlemen were elected members of the Association and Branch:—Drs. and Messrs. C. Blue, Frizinghall; M. Skeels, Brighouse; J. Wilson, Haworth; J. Longford, Halifax; J. Nixon, Menston; W. Parkinson, Bradford; E. Burnett, Saltburn; G. Pearce, Barnsley; of the Branch: Drs. and Messrs. E. Symes, Scarborough; J. Irving, Scarborough; C. B. White, Leeds.

Election of President.—Dr. Cuff was elected President for the ensuing year.

Illegal Certificates.—Dr. HIME proposed, Dr. RABAGLIATI seconded, and it was carried unanimously:

That the Yorkshire Branch of the British Medical Association expresses its strong disapproval of unauthorised societies or other organisations of registered medical practitioners arrogating to themselves the right to grant diplomas or certificates of proficiency in any branch of medicine, surgery, or midwifery, as being contrary to the Medical Acts, and opposed to the interests of the public and of the medical profession,

and that a copy of the resolution be sent to the Council of the Association, to the General Medical Council, the Privy Council, the Obstetrical Society, and the Queen Charlotte Hospital.

Communications.—Dr. CHURTON read a paper on the Limits of Cardiac Murmurs.—Dr. GODFREY CARTER: Four Cases of Cerebral Type of Pneumonia. Both papers were discussed by numerous members.

Visit to the Royal Baths.—At 5.15 the members visited the Royal Baths. The manager and the director were present, and kindly explained numerous new additions: the Greville and Dowse hot appliances, the sun bath, etc.

Dinner.—Twenty-seven members dined at the Queen's Hotel.

Vote of Thanks.—A vote of thanks was passed to the Local Secretary, Dr. Gibson, for the successful manner in which he had made arrangements for the meeting.

PERTHSHIRE BRANCH.

The winter meeting was held at Perth on November 3rd, Dr. Beatty in the chair.

Confirmation of Minutes.—The minutes of last meeting were read, approved, and signed.

New Members.—The following members were duly elected: Hugh De Maine Alexander, M.B., C.M., Perth District Asylum, Murthly; Lewis Campbell Bruce, M.D., M.R.C.P.E., Perth District Asylum, Murthly; John Hume, M.B., C.M., 14, King Street, Perth; John Lyell, 15, Marshall Place, Perth; T. R. Scott Sibbold, M.B., C.M., Stanley, Perthshire; C. Parker Stewart, 21, Marshall Place, Perth; William Haig, M.B., C.M., 15, High Street, Crieff.

Election of Officers.—The office bearers for the year ensuing were elected as follows: *President*, Dr. W. Robertson, of Paisley; *Vice-President*, Dr. Simpson, Glenalmond; *Secretary*, Dr. Urquhart, Perth; *Treasurer*, Dr. Macaulay, Perth; *Council*, Dr. Beatty, Pitlochry; Dr. Niven, Newburgh; Dr. R. Stirling, Perth; Dr. Norwell, Perth; Dr. Taylor, Perth.

Report of Treasurer.—Dr. Robertson reported that he had handed the balance of money to the Secretary pending the election of his successor. The sum was £6 2s.

Report of Branch Council.—The Secretary read the report of the Council, which showed an increase of seven members during the year, the total reached being fifty-one attached members, which is the highest on record for the Branch. The history of the local association for the past twenty years was briefly reviewed, and it was resolved to hold a special commemorative meeting in 1900, efforts being directed to induce all members of the British Medical Association within the county to join the Branch. It was further decided to arrange a meeting in regard to tuberculosis, that formerly summoned having been arranged for an inconvenient date. The representative member gave in his report, specially referring to subjects now engaging the attention of the Central Council.

Installation of New President.—Dr. Robertson, having taken the chair on his election as President, moved that the reports read be received, adopted, and entered in the minutes. This was carried by acclamation.

Scottish Poor-law Medical Officers' Association—Dr. Campbell (Glasgow) introduced the matter which had brought him and Dr. Muir to Perth in pursuance of their policy of informing Scottish Branches of the work in hand. He said that Mr. Cross, on their initiative, had promised again to introduce a Bill into Parliament to give security of tenure to these officers, while leaving superannuation to the larger Association of Poor-law Officials.—Dr. Muir gave a synopsis of the work done since 1894, and urged that no medical officer should be dismissed without the consent of the Local Government Board. As this affected 25 per cent. of medical men in practice in Scotland, he hoped that the Branch would support him.—After some discussion Dr. Beatty moved:

That the Branch do support the Scottish Poor-law Medical Officers' Association in their endeavours to obtain greater security of tenure for Poor-law medical officers, and empower the President and Secretary to sign the petition in favour of the Bill in name of the Branch; and to bring the matter under the notice of the members of Parliament for the county and city of Perth and for the Scottish Universities; and that Dr. Campbell and Dr. Muir be cordially thanked for their explanations and efforts in connection with this question.

This was seconded by Dr. Niven, and agreed to *nem. con.*

Next Clinical Meeting.—The next clinical meeting was ordered to be held early in 1900, on a date to be fixed by the staff of the infirmary.

President's Address.—The President (Dr. Robertson), now Burgh Medical Officer of Paisley, in his address dealt with the notifiable diseases from their different standpoints. He did not, however, deal with the curative aspect, which he explained was out of his province. The chief points of interest were those that dealt with the marked decrease of small-pox and typhus, the first on account of enforced vaccination, the latter because local authorities were rooting out dirty houses and overcrowded slums. Early removal to hospital had much to do, he thought, with the decreasing mortality from scarlet fever. He also laid special stress upon the early recognition of mild scarlatina which, when unobserved, did much to spread the disease in schools. Enteric bulked largely in Paisley. In fact the disease was endemic there. He blamed the water supply, and showed how the experiments of Dr. Robertson of Sheffield and Dr. Sydney Smith applied to Paisley. In this burgh the unpaved back courts were polluted with organic matter from foul privies and badly-constructed ashpits, thus favouring the production of bacilli in the earth. In a few words Dr. Robertson traced the bacteriology of each disease, as far as that was known.—On the motion of Dr. Beatty, seconded by Professor Stalker, Dr. Robertson was accorded a cordial vote of thanks for his Presidential Address.

Dinner.—The members thereafter dined together in the hotel, with Professor Stalker and Drs. Buist, Muir, and Campbell as guests.

NORTH OF IRELAND BRANCH.

The autumn meeting was held in Belfast on October 26th.

Introduction of New President.—The retiring President Dr. O'Neill, took the chair, and, after the minutes were read and confirmed, introduced the President for the year, Dr. J. C. Martin, Portrush. About 60 members were present.

The late Professor Cuming.—A resolution of condolence on the death of Dr. Cuming, formerly President of the Branch and of the Association meeting at Belfast during the year 1884, was proposed by the President, seconded by the Ex-President, and passed.

Fees for Assistance under New Dispensary Regulations.—On the motion of Dr. Loates, seconded by Dr. Kevin, the following resolution was unanimously passed:

That with a view to secure uniformity of fees for extra-professional assistance rendered under the new dispensary regulations in Ireland, and of fees for services as *locum tenens*, etc. (Arts. 23, 28, and others), and to prevent friction between the Boards of Guardians and their medical officers, the Local Government be requested to issue a scale of fees applicable to varying circumstances, taking into consideration not only the services rendered, but also the time occupied, and, where necessary, the distance travelled.

The Training of Infirmary Nurses.—Dr. Thompson (Omagh) raised the question of infirmary nurses, their training and certification, and it was agreed to summon the Special Committee.

President's Address.—The President gave an opening address, the subject of which was the Radical Cure of Piles. After mentioning a practical classification, and reviewing the operations usually considered most suitable for the different varieties, he gave reasons for considering the operation by a new hæmorrhoidal suture clamp (exhibited) as the best, laying stress on the speedy and painless recovery after operation by this method, and its applicability to each and every variety of pile.

Dermatitis Venenata.—Dr. Calwell read a short paper for Dr. Sidney B. Smyth and himself on a case of Dermatitis Venenata caused by the rhus toxicodendron. The nature of the plant was verified at Kew Gardens, and the history of introduction from America was clear: the chief signs were a severe erythemato-vesicular eruption on hands with much œdema, and some blotchiness of face; the irritation was not subdued for three weeks, and even afterwards some swelling remained.

Bothriocephalus Latus.—Dr. Monypeny showed a specimen of bothriocephalus latus from a young Jewess who had left Russia some years previously.

Expert Medical Evidence.—Dr. Thompson (Omagh) read a short paper entitled a Curious Example of Expert Medical Evidence. As in it reference was made to the action of a member of the profession not present, it was proposed not to print the paper in the *Transactions*, but on this being put to the meeting, it was decided to let it take the ordinary course.

Laparotomy for Intussusception.—Dr. R. W. Leslie (Strandtown) related the notes of a successful case of laparotomy for intussusception in a child aged 6 months; the bowel was pro-

truding nearly three inches from the anus; no attempts at reduction by the ordinary methods were made, but the gut was reduced with comparative ease through a two-inch incision in the middle line below the umbilicus.

Sympathetic Ophthalmia.—Dr. CECIL SHAW (Belfast) showed a patient suffering from sympathetic ophthalmia, which had supervened forty days after the removal of the injured eye; also slides of the injured portion. He remarked that this was a unique case as regards the length of time.

Removal of Renal Calculi.—Mr. KIRK (Belfast) showed for himself and Dr. STRAFFORD SMITH a patient from whose right kidney he had successfully removed one very large and one small calculus. The patient has enjoyed excellent health since.

Extirpation of Penis.—Dr. DARLING (Lurgan) read notes of a case of extirpation of penis by Treves's method, and showed the specimen.

Strangulated Inguinal Hernia.—Dr. DARLING also read notes of two cases of strangulated inguinal hernia, in which extensive subperitoneal hæmorrhage had taken place; both cases required abdominal section; one recovered and one died.

Stomatitis.—Dr. CALWELL read notes of two peculiar forms of stomatitis: one was marked by a peculiar thin smooth membrane spreading over the gums, cheek, palate, etc., and resembling in appearance the effects of the application of nitrate of silver solution; the other, of which he had only seen one case, was characterised by an exceedingly tough thick membrane which began on the right arch of the palate and spread over all the mouth, taking about ten days to spread and two to three weeks to disappear again. Diphtheria antitoxin was administered without effect, and culture examination did not reveal the typical bacillus. Both forms are marked by great depression of strength and their lengthy duration.

Gastric Diverticula.—Dr. CALWELL also read a short paper on stomach diverticula.

Votes of Thanks.—A vote of thanks was passed with acclamation to the ex-President, Dr. O'Neill, for his past services in the chair; and to the President, Dr. Martin, for his opening address.

New Members.—The following were elected members of the Association: Dr. C. K. Darnell (Bangor), Dr. H. J. Monypeny (Belfast), Dr. J. E. White (Belfast). Miss S. E. White, M.B. Lond. (Belfast), was elected a member of the Branch.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE first meeting of the forty-third session was held at the Gravesend Hospital on November 2nd; Mr. R. J. BRYDEN in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Chairman of Next Meeting.—On the proposition of Dr. J. V. BELL, seconded by Dr. FIRTH, it was resolved that the next meeting be held in March at Rochester, and that the President of the Branch (Dr. Eastes) be invited to preside.

Communications.—Mr. L. A. DUNN read a paper on the Dangers and Difficulties in the Treatment of Strangulated Hernia, which was followed by an animated discussion.—Dr. G. STEELE PERKINS delivered an address on Lateral Curvature of the Spine, which aroused much interest, as did also the series of exercises which he demonstrated on a patient he exhibited.

Vote of Thanks.—A vote of thanks to the Chairman for presiding terminated the meeting.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular monthly meeting of the Branch was held at the Royal Society's Room on August 25th, Dr. E. T. THRING, President, in the chair. There were thirty-six members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Communications.—Dr. R. STEER BOWKER read a paper on a Case of Cancer of the Colon removed by Paul's Method; the patient was exhibited. Drs. WORRALL and MAITLAND discussed the paper.—Dr. FRANK TIDSWELL exhibited some microphotographs of Sections of Leprosy Tissue.—Dr. MILLS exhibited a Pathological Specimen.

Notification of Ophthalmia Neonatorum.—Dr. POCKLEY read a paper on the Notification of Ophthalmia Neonatorum. Dr. Pockley moved the following resolution:

That considering the serious results in the community of neglected cases of ophthalmia neonatorum, both from commercial and humanitarian points of view, the New South Wales Branch of the British Medical Association recommend that ophthalmia neonatorum be included in the list of compulsorily notifiable diseases, or, if this be considered impracticable, that the Board of Health should take whatever steps they may consider desirable to deal effectively with the disease.

The paper and resolution were discussed by Drs. THRING, S. H. HUGHES, TIDSWELL, CORDON, MACLEOD, HANKINS, CRAGO, CHAS. MACLAURIN, QUAIFE, KIRKLAND. Mr. POCKLEY replied, and the resolution was carried.

A SPECIAL general meeting of the Branch was held at the Royal Society's Room, Sydney, on September 1st, Dr. E. T. THRING, President, in the chair. There were twenty-two members present.

Reform in Quarantine.—Dr. L'ESTRANGE EAMES read a paper on reform in quarantine, and moved the following resolution:

That a committee, consisting of the President, Vice-President, Treasurer, Secretary, and the mover, with power to add to their number, be appointed to act in conjunction with a committee of the Chamber of Commerce Newcastle, to suggest reforms in quarantine.

The paper and resolution were discussed by Drs. BEATTIE, TODD, CLARENCE READ, WEST, COUTIE, HANKINS, NORTON MANNING, J. A. DICK. Dr. EAMES replied, and the resolution upon being put to the meeting was negatived.

HALIFAX (NOVA SCOTIA) BRANCH.

THE annual meeting of this Branch was held on October 18th. Dr. CHISHOLM (the President) occupied the chair.

Confirmation of Minutes.—The minutes of last meeting were read and confirmed.

Report of Council.—The report of the Council was read and adopted. The Treasurer's report was deferred until next meeting.

Election of Officers.—The election of officers for the ensuing session was proceeded with, and the following were elected:—*President:* E. A. Kirkpatrick, M.D. *Vice-President:* G. Carlton Jones, M.D., M.R.C.S. *Treasurer:* M. A. B. Smith, M.D. *Secretary:* C. Dickie Murray, M.B., C.M.Edin. *Branch Council:* Colonel MacWalters, R.A.M.C., Drs. Ross, Jones, Chisholm, Trenaman, Walsh, and MacKay. Surgeon-General O'Dwyer was elected to represent the Branch on the Council and Parliamentary Bills Committee.

CORRESPONDENCE.

MEDICAL REFORM AND THE MIDWIVES BILL.

SIR,—From a report in the BRITISH MEDICAL JOURNAL of November 4th of a meeting held in Hull by a Branch of the British Medical Association and the Hull Medical Society, it is evident that the registration of midwives is becoming a burning question for our Association. From the resolutions passed in Hull, it is apparently intended to bring the British Medical Association into line with the Corporate and Medical Reform Association—that is, to commit it as a body to an uncompromising opposition to the Bill which the Association is now promoting on the subject of the registration of midwives. For Mr. Anderson, who is the life and soul of the Corporate and Medical Reform Association, I have the greatest respect; his capacity is great, his energy is unbounded, and his convictions and motives are genuine beyond suspicion. To everyone associated with him the same purity of motive may and ought to be credited. But is the position they have taken up tenable? Will the agitation redound to the credit, the status of our profession? These are the questions that demand the most earnest and dispassionate attention of every medical man, and more particularly of every member of our Association.

In the first resolution passed at Hull the grounds of the present movement are set out. The Midwives Bills, already drafted, including that of the British Medical Association, are there described as "attempts to create an inferior order of

practitioners." This statement begs the whole question at issue. Are midwives medical practitioners? Is midwifery a branch of medicine properly so-called? The fact that medical men practise midwifery does not by any means necessitate affirmative answers to these questions. On the contrary, the true answers are in the negative, and here we get to the bed rock of the whole dispute. Medicine is a science dealing with disease, the art of medicine arises in the application of the science. Parturition in something over 90 per cent. of all cases is a purely physiological act, and attendance on it has no place in medicine. That medical men must be familiar with the anatomy and physiology of normal labour, in order that they may deal with difficulties and abnormalities that bring some parturient women into the proper range of medicine is clear and fully recognised; but that the medical man is a necessary spectator of all normal labours is a false and utterly untenable proposition. An attempt to create an inferior order of practitioners is charged against those who wish to regulate the practice of midwives, but the very facts that these Bills are intended to regulate a practice which has been carried on for ages with the full knowledge and consent of the law and of the medical profession, disproves the accusation at once and entirely. That this flaw in their argument was at least suspected by those who passed the resolutions is probable from the occurrence lower down of the expression "so-called normal labour."

Difficulty—and there appears to be some—in defining normal labour does not and cannot alter the fact, known to everyone, that considerably over 90 per cent. of all labours are physiological events in spite of civilisation and Medical Acts. The further fact must be admitted that a vast number of labours have been, are, and will be attended by midwives. The public, the medical profession, and the law have all recognised this practice. That many of these midwives are culpably ignorant and notoriously dangerous is clear. What then is the alternative? Either the midwife must be abolished or she must be made by education, registration, and regulation as little dangerous as may be. This is the alternative before us individually and collectively as guardians of the public health. It behoves us to take up a position at once dignified and defensible. It is impossible, consistently, to oppose the registration of midwives without advocating their abolition. The existence of midwives is right or it is wrong; if they are to continue it must be as a trained and controlled body. Shall we join in their regulation or shall we demand their abolition?

For reasons of prudence it might be thought sufficient to reflect that the extermination of the midwife is impossible, but prudence of this sort is, or ought to be, a last resort. Hardly anything, to my mind, could be more derogatory to the status of the medical profession than this agitation, founded, as it is, on the assumption that the midwife is a practitioner of medicine.

It has been stated that in some countries, particularly Germany and Sweden, the midwife is recognised as the proper attendant on normal labours, and that the medical profession thereby gain leisure for their proper work and a better standing in the eyes of the public. Perhaps someone who knows would give us reliable information on the subject as a guide.

Some five or six years ago, when this subject was discussed by the Branches, I spoke and voted in my then Branch in the sense here written, and found myself but one out of some forty members present in favour of registration. Whether that proportion represents the general feeling of members is a question that clearly ought to be decided. It is not right that the Association should promote a Bill for the registration of midwives if the vast majority of members are opposed to the principle of registration. Let us think twice before committing ourselves to the programme adopted at the Hull meeting.

The adoption of that programme involves the statement that normal parturition—a purely physiological act—is within the field of medicine, and that those in attendance are engaging in the practice of medicine. This statement is contrary to fact, and represents an untenable position. An untenable position is an undignified one, because ultimately the moment of retirement must come. When the medical profession elevates the midwife into a rival practitioner, it will have taken up a sorry position. I cannot believe that the profession will ever do so. Our Association seems in danger of attempting it.—I am, etc.,

Redhill, Nov. 7th. S. W. MacIlwaine.

ILLEGAL CERTIFICATES.

Sir,—In Dr. Tomlin's resolution in the Wood Green and East Suburban Societies, all mention of Mr. Horsley's election pledges was omitted, as presumably unnecessary.

When Mr. Horsley came to the joint meeting at Stratford to explain, and possibly to maintain, his support of "a midwives Bill" (that of the British Medical Association), Dr. Tomlin, introducing the subject and repeating in effect the hope expressed in the resolutions, that Mr. Horsley would "reconsider his position," read the latter's letter to Mr. Jackson. If that was not a sufficient "hint" that Mr. Horsley's support of such a Bill was held inconsistent with that letter, it is difficult to imagine a broader hint, or for what purpose Mr. Horsley thought the letter was read; but Dr. Tomlin may apparently rejoice to have escaped rather serious consequences.

Mr. Horsley has failed to answer the questions or deal with the positions we have very patiently and respectfully submitted to him, and has replied by protests and personal attacks.

As the real issue of this discussion, we are entitled to, and again do, specifically ask Mr. Horsley to explain, in the perfectly open and fair arena of your columns, how he reconciles his support of a Bill to register midwives, to recognise licences and certification of midwives, and their right to practise midwifery in so-called natural labour, which is medical practice, with his letter of October 4th, 1897, to Mr. Jackson, pledging himself to oppose "the registration of midwives" (not any one Bill) and any concession of medical functions to nurses, including midwifery nurses, in any Bill for their registration?

If Mr. Horsley cannot himself, with the full opportunity you afford him, do this, no votes of public meetings can do it for him, and until he at least attempts it he is not entitled to ask us to exchange this temperate and fair field of discussion for another, too often characterised by partisanship, personality, and passion.

It has never been our wish to attack Mr. Horsley, or to lower his prestige, but to secure his powerful influence in opposing the mischievous and dangerous registration of midwives.

We feel confident that when he dispassionately faces the position he will find that he is quite definitely pledged to help his constituents in resisting any such Bill, including that of the British Medical Association.

We will certainly not involve the clear issue of the meaning of his letter to Mr. Jackson, and his obligations under it, with any far more wide-reaching question of a vote of censure upon him, which our own sense of his services in the cause of reform would forbid; but if he will accept that course we will do our best to bring forward at public meetings a motion such as that appended, which we believe accurately states the issue for the consideration of his constituents, and if he has no objection we will add a similar motion to the agenda arranged for the proposed extraordinary general meeting of the British Medical Association.—We are, etc.,

George Jackson.
Jas. A. Myrtle.
T. Granville Hockridge.
F. Lorimer Hart.
R. F. Tomlin.
J. Higham Hill.
Guilford Street, W.C, Nov. 8th. Tom R. Taylor.

Terms of Suggested Motion.

That, inasmuch as the Midwives Bill of the British Medical Association proposes to register midwives; to legalise the certification of such unqualified persons as competent in midwifery, a branch of medical practice; and to confer on such persons the right to attend cases of so-called natural labour, which attendance is medical practice; and such Bill, if enacted, would constitute a precedent for similar legislation in the case of opticians and others:

This meeting earnestly invites Mr. Victor Horsley (on his election pledges contained in his letter to Mr. George Jackson, dated October 4th, 1897, in reply to specific questions of constituents) to reconsider his support of that Bill, which concedes the principle of such legislation, and hampers resistance thereto; and to unite in inducing the Council of that Association to recall its adoption thereof, as contrary to repeated "determinations" of the Association in general meeting.

THE R.A.M.C. AND ITS EQUIPMENT.

SIR,—I have had experience of the army medical officers in one campaign and I have further had the opportunity of seeing them at work at Netley on many occasions. Although—as in civil practice—all may not be highly-skilled operators, still there are plenty of such and first-class surgeons amongst them. There are also many of them who have more experience of bullet wounds and military surgery than perhaps any civilian surgeon alive. Viewed in the light of experience I consider the field equipment of the R.A.M.C. is in some respects faulty, especially ambulance waggons and beds. I once travelled two hundred miles in an ambulance waggon such as was pictured in the BRITISH MEDICAL JOURNAL recently, and though a hard and healthy man, neither sick nor wounded, I never suffered so much in my life. The beds are not fit for sick and wounded men; they are too much of the barrack room type.

These things are not the fault of the department, but are due to the parsimony of the Government; for instance, out of £10,000,000 granted for the war £50,000 were allocated for the care of the sick and wounded!—I am, etc.,

GEORGE STOKER,
Chief of No. 1 Transport Ambulance, Turko-Russian War; Stafford House Surgeon, Turko-Russian War; Commissioner South African Aid Committee, Zulu War.

Mayfair, W.

*** Mr. Stoker is probably mistaken as to the pattern of the waggon. The equipment with the army corps and cavalry division is of the new 1898 pattern, and that in which he suffered must have been of the old pattern.

OCEAN VOYAGES IN PULMONARY PHTHITIS.

SIR,—I have often observed the remarkable benefit that many patients with tuberculous phthisis obtain from a sea voyage.

Only lately Dr. Rushbrooke of Stamford Hill and I were congratulating a patient on the well-marked evidence of arrest in his disease that followed a trip to the Mediterranean. This patient had a well-marked crepitant *râle* at his left apex when he left England. On his return this was replaced by a weak breath sound. His appetite was excellent, and, though the weather in the Bay of Biscay was so rough that he and a few more passed much of their time lashed on the upper deck, he returned home to all appearance cured of his disease.

The constant inhalation of the salt spray during a gale must certainly be very hostile to the development of tubercle bacilli in the lung. None of these could be found in the sputa of our patient on his return from his sea trip, though they were evident in small number when he set out.

Not long ago I had a call from a friend who, being decidedly phthisical, went to Melbourne and back in a sailing ship with most satisfactory results, though it seems a real cure cannot yet be claimed in this case. In my own experience I have never seen any climatic change work such really curative results in phthisis as the voyage to Australia and back in a sailing ship. Feeding on these ships is very much better than it was years ago, and in many other respects the comfort of the passengers is studied.

It would be very interesting to observe more extensively the effect of a long sea voyage in a well-found sailing ship on cases of tuberculosis. The ship ought to carry a doctor whose heart would be in the work and who would exercise authority over the patients in seeing that they did not drink too much whisky, and that they had supplied to them good food well cooked.

In selecting cases it would be well to reject all who were far advanced in disease of the lungs, and to take as far as possible those of a cheerful and hopeful temperament.—I am, etc.,

JOHN C. THOROWGOOD, M.D., F.R.C.P.

Welbeck Street, W., Nov. 4th.

THE POWERS OF THE COUNCIL.

SIR,—In reply to the letter of the President of the Council with reference to mine upon this subject, I have to say that I was quite aware of By-law 12. It does not apply to the notice of motion I gave which was ruled out of order. In sending in my motion I had before my mind Article 25, which is as follows:

"The business of the Association shall be managed by the Council, and the respective constitutions, duties, powers, and modes of procedure of the Council shall be determined on from time to time by the Association in general meeting."

Of course everyone knows that no by-law can override the Articles of Association, and my contention is that whilst By-law 12 gives the Council discretion to engage and pay the Editor, Article 25 secures to the general meeting (which is after all the highest authority of the Association) the absolute right to review and control the Council's exercise of that discretion.

The best form of motion to found a discussion upon what has been done is surely a motion requiring it to be altered. My motion required the Council, who alone could do so, to alter what it had done. As the Editor's salary is an item in the expenditure of the Association on its JOURNAL, to rule that the payment of this item "is entirely in the hands of the Council," and to rule on that ground that my motion was out of order is therefore to rule that the members have no right to discuss in general meeting the expenditure of the Association upon its JOURNAL. This would make By-law 12 override Article 25, and it was in effect for doing this that the general meeting adopted Mr. Horsley's motion with its strictures on the action of the Council.

I desire again to say that this is in no sense a personal attack upon the Editor, as the motion had for its primary object the raising of another issue regarding omissions from the JOURNAL of certain questions relating to medical reform, and for which omissions the Council have since assumed the responsibility.—I am, etc.,

Sydenham, Nov. 6th. F. LORIMER HART.

THE IRISH DISPENSARY DOCTOR'S POSITION UNDER THE NEW LOCAL GOVERNMENT ACT.

SIR,—With reference to a "North of Ireland Dispensary Doctor's" letter in the BRITISH MEDICAL JOURNAL of October 14th, I would like to know have the guardians paid his substitute yet, even though the Local Government Board sanctioned £3 3s. per week? and, if not, by what means will he get the £3 3s., provided the guardians will only pay £2 2s. per week?

I also am a dispensary doctor, and applied to my Board of Guardians for my annual holiday in the beginning of August last, nominating a doctor who had done duty for me on previous occasions, but he resided a short distance outside my district, his fee being £3 3s. per week. The guardians replied sanctioning my leave, but that the remuneration would be £2 2s. per week for my substitute; in a few days I had a letter from the Local Government Board sanctioning my leave provided the *locum tenens* resided in the district.

I then wrote to the guardians, stating that "I was unable to procure a substitute for £2 2s. per week, and I would feel obliged if they would procure a substitute for the dispensary." They advertised for a *locum tenens* at £2 2s., and sent notices to the medical papers. One paper inserted the announcement, but your JOURNAL refused to do so. I need hardly say that the guardians had no applicant for the position. I then procured the services of a medical man from Dublin, sending in his application to the guardians, his remuneration being £3 3s. per week. They replied that they would not sanction my leave. As I received this notice my *locum tenens* arrived, and I found I was in a fix, it being an expensive amusement bringing a man all the way from Dublin, so I wrote to the Local Government Board stating that the guardians would not sanction my leave owing to my *locum tenens* requiring £3 3s. per week as remuneration. To this letter they replied sanctioning my leave. In the meantime I had written to the guardians stating "that it would be most inconvenient to postpone my holiday any longer as the doctor had arrived, and that I was prepared to pay the extra guinea per week provided the guardians and the Local Government Board would not sanction the £3 3s. per week."

Now I would wish to know who will pay the £3 3s. per week, as the guardians are determined not to pay more than the £2 2s., and the Local Government Board have sanctioned the

£3 3s. For my own part it is most unpleasant to be opposed to the guardians, but, at the same time, when a rule is laid down that a dispensary doctor is entitled to a month's holiday and that the guardians shall pay his substitute, I do not see why I should pay anything out of my own pocket.—I am, etc.,

October 17th. A Dispensary Doctor.

Sir,—Under this head a lengthy letter appears in the British Medical Journal of October 14th appealing to the *esprit de corps* of the Irish dispensary doctors under their present unenviable position.

My own opinion, which is founded on some personal experience in endeavouring to cultivate the same spirit and organisation in the past, is that such a laudable effort is useless. All previous attempts in this direction have proved worthless. The dispensary doctors of Ireland are notoriously careless and indifferent to their own interests, and apparently prefer to continue in their present bondage rather than adopt forcing tactics, or offend these honourable guardians.

Here is an example of how I and my *locum tenens* have been treated by my present taskmasters under similar conditions as a "North of Ireland Dispensary Doctor" depicts, and let me add likewise by a brother dispensary man in the same union.

Being the first in the union to face the music, I made my application for four weeks' leave, and nominated a duly qualified man from a distance at three guineas a week. The guardians allowed two weeks at two guineas weekly; I protested, and appealed to the Local Government Board and proceeded on my leave. My neighbour dispensary man of the same union immediately afterwards made application for his leave. He applied for a fortnight and stated he would be satisfied to accept two guineas a week, which he understood was the rate of remuneration granted in my case, and this, notwithstanding that he knew I had protested and appealed to the Local Government Board and therefore fighting his battle as well as my own. The Local Government Board have in my case sanctioned the three-guinea fee and for the full period of four weeks; in the case of my neighbour they have allowed him to please himself. The fact that this other application and from the same union was simultaneously before the Local Government Board was, I know, and naturally, very likely to influence their decision against my terms. As the guardians persist in defying the central authority my *locum* will be compelled to process for his fees and costs. Anticipating the result, I should like to be informed how he will proceed to levy the amount from this corporate body. I should also like to be convinced that the opinion expressed by your correspondent is correct when he states that, provided sufficient notice be given, the onus of supplying the substitute rests with the guardians. Otherwise I fear great difficulty in inducing eligible men to again contend for their legitimate fees after their experience of the present year.—I am, etc.,

October 16th. Dispensary Doctor.

P.S.—I know it is the wish and the intention of the Local Government Board to insist on three guineas as "reasonable remuneration" if the dispensary men will only be true to themselves and the profession.

HOLIDAYS FOR SCOTTISH PARISH MEDICAL OFFICERS.

Sir,—The Local Government Board of Ireland having granted to their medical officers in outlying districts the privilege of a paid *locum tenens* during an annual holiday, I trust that the Scotch Local Government Board will see their way to grant a like advantage to their medical officers in the remote highlands and islands, many of whom, owing to their isolation and poor returns from practice, can ill afford the services of a qualified substitute. I trust this proposal may meet with the approval of many professional brothers more fortunately situated.—I am, etc.,

November 2nd. Isolated Practitioner.

MEDICAL EDUCATION.

Sir,—I am much surprised that no "ordinary practitioner" has as yet ventured to protest against some of the extraordinary remarks of Dr. Saundby in his address on Education, as reported in the British Medical Journal of October 7th.

The following incomplete sentences taken from the address will suffice for my present purpose: "General run of students who are not likely to become *more than practitioners*;" "the end in view being the training of men to fill the ranks of ordinary practitioners," and "a university standard for those who aspire to the best professional education."

What more, may I ask, can a man become than an ordinary practitioner; and does Dr. Saundby think that he, or any specialist in London, is necessarily superior professionally or socially to a general practitioner of tried experience and cultivated education?

This attempt to divide the profession into higher and lower strata is absurd. The majority of even university graduates must of necessity become general practitioners. Improve the preliminary education of the medical student as much as possible, but a truce to these disparaging remarks anent the ordinary practitioners.

A Baccalaureus in Artibus et Doctor in Medicinâ, I am an ordinary general practitioner in a somewhat remote country district, my *clientèle* the poor, my *voiture* a bicycle, yet I consider I am quite fit to associate with any London consultant or specialist on terms of absolute equality; and although, of course, willing to pay that respect which is always due to age and accepted ability, I should not submit to any patronisation on the part of Dr. Saundby or others, who no doubt think they belong to a much higher "social stratum" than I do. It is true were I blessed with private means I might vacate my present sphere, or at least get that assistance which every doctor with club patients sorely needs; but does poverty detract from one's right to be considered a gentleman, or from one's professional worth? In England I am afraid it does. Does the necessity to engage in general practice entitle Dr. Saundby to point the finger of scorn at us as only ordinary practitioners, because this is what he really does, if not in so many words at least by implication. Can it be wondered at when a man in Dr. Saundby's position tries to belittle the ordinary practitioner, that many of our better class patients are imbued with the idea that a country practitioner is only to be consulted in a case of dire necessity?

In my opinion there can be no nobler life than that of a general practitioner, and the better educated he is (if a gentleman in the truest sense of the word) the better for his patients however poor they be. Is there anything derogatory in trying to excel in not only one but all branches of the profession? The difficulties are enormous, generally insuperable; but where, as is occasionally the case, that *rara avis*, an all-round specialist, is met with, is he not superior to a mere physician or surgeon?—I am, etc.,

November 8th. An Ordinary Practitioner.

PULMONARY AFFECTIONS AFTER ANÆSTHETISATION BY ETHER.

Sir,—I have been greatly interested by your leading article in the British Medical Journal of October 21st entitled, A Recent Pronouncement on Ether, and containing some of the results of Mr. Pridgin Teale's long experience of ether. The statement quoted, that Mr. Teale "has never seen a case of ether bronchitis," is to me a surprising one, and so far as I know, contrary to the experience of many surgeons. By inference, I think perhaps I am justified in assuming that Mr. Teale has never seen a case of ether pneumonia. In strong contrast to Mr. Teale's experience stand forth papers by English, American, and German writers on the subject of the pulmonary after-effects of ether, and of pneumonia in particular.

Thus fresh and full discussion at some of the medical societies of such sequelæ of etherisation would seem to be invited by a conflict of opinions.

I have records of several cases of ether pneumonia, and of many cases of bronchitis and of cough or increased cough after the administration of ether. A little time ago I published some remarks on ether pneumonia,[1] and at the time looked through a series of my cases of anæsthetisation on which I had taken notes, and whose after-condition I had watched. In 310 cases of etherisation there were 2 cases of pneumonia, giving a percentage of 0.645, one being of the lobar type and the other a bronchopneumonia; and both of them I positively attributed to the administration of ether. In addition, there

[1] *Treatment*, January 26th, 1899.

were 9 cases of bronchitis (one being very acute), or cough, either afresh or increased. For the sake of comparison I reviewed, from the same standpoint, a series of 114 administrations of chloroform and 214 of mixtures of chloroform and ether, making together a total of 328, and found among them no case of pneumonia, and only 3 cases of *increased* bronchitis or cough.

Now the above-mentioned cases of etherisation had, with the exception of the case of bronchopneumonia, all been selected as suitable to take ether by reason of absence of respiratory lesions, whereas the other series included patients affected with various kinds of lung trouble, while the operations, taking them as a whole, were at least as long and severe as those conducted under ether, and the patients also were just as much exposed to the depressing influence of cold.

I shall, as soon as opportunity serves, read Mr. Pridgin Teale's article in the *Encyclopædia Medica* on Ether, and shall certainly derive great pleasure and profit in so doing.—I am, etc.,

W. J. McCardie, B.A., M.B., B.C.Cantab.,
Anæsthetist to the General and to the Dental Hospital,
Birmingham, Oct. 23rd. Birmingham.

FIRST AID TO THE INJURED.

Sir,—In Mr. Marshall's interesting suggestions on the above subject, the third raises a question which often occurs to a lecturer and an examiner—namely, whether the lungs do or do not contain an appreciable quantity of water in the case of the apparently drowned. If they do contain water to any extent and it were possible to squeeze this out as suggested, such an effort might assist resuscitation, but I doubt the presence of an amount of fluid which could be evacuated from the lungs in a few seconds by the force of gravitation. The *post-mortem* appearances found in the lungs after death by drowning are enlargement, sponginess, and a bloody froth when cut into; the latter probably the result of powerful attempts to breathe. The stomach contains water, and this would doubtless be evacuated by the action suggested. Death in drowning is due rather to the absence of air than to the presence of water in the lungs, and it is very questionable whether valuable time might not be lost in seeking to evacuate the smaller bronchial tubes.—I am, etc.,

Coventry, Oct. 31st. Milner Moore, M.D.

THE EASTBOURNE PROVIDENT MEDICAL ASSOCIATION.

Sir,—The Eastbourne Provident Medical Association has completed its fourth year of work. The membership is now 5,981, an increase of 643 on last year. The income of the Association is close upon £1,100, but we have not yet succeeded in reducing our working expenses below 17½ per cent. Two dental surgeons have been added to the staff, and a rule has been passed that "any registered dentist resident in Eastbourne may become a member of the staff subject only to his appointment being approved by the General Committee." A special rate of charges has been fixed for dental work.

The Medical Aid Society in this town now only charges a halfpenny a week a member, and there are other reasons for thinking that its business continues to decline. This is directly due to the action of our Association. These facts, coupled with certain indications that the General Medical Council is at last beginning to appreciate the evils wrought by these medical aid societies, seem to give some hope that before long it will not be possible for medical men to lend their support to a system the overthrow of which our Association so earnestly desires.—Yours, etc.,

Alex. Harper, M.D.,
October 31st. Hon. Sec. Eastbourne Provident Medical Association.

ATTENDANCE ON THE FAMILIES OF MEN ON ACTIVE SERVICE.

Sir,—I hope I may be allowed to suggest that we should all undertake to attend the wives and children of the men on active service without charging any fees.—I am, etc.,

Hamilton, Buckingham, Nov. 9th. George H. De'Ath.

The German Balneological Congress will meet at Frankfort-on-Main in March, 1900.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MEDICAL ARRANGEMENTS FOR SOUTH AFRICA.

We are indebted to the Director-General Army Medical Service for a copy of the paper showing the medical arrangements made for the field force in South Africa.

Staff.—Surgeon-General W. D. Wilson, M.B., who has been appointed Principal Medical Officer of the force, will also, under order of the general officer commanding, act as Principal Medical Officer of all troops (Natal included) assembled in South Africa.

Medical Equipment.—Owing to the very large amount required the medical equipment and supplies are of two kinds—the old and the new (1898) pattern. The Army Corps and Cavalry Division, however, are entirely equipped with the new pattern, as are also several units on the lines of communication. The contents of the various depôts and medical stores are so constituted as to be available to replenish, in most cases, both kinds of equipment.

Roentgen Ray Apparatus.—Of the ten sets of Roentgen ray apparatus provided, two are already in Natal, one is allotted to each general hospital, and the remainder will be located at such posts as the principal medical officer may select.

Transport.—Transport has been considerably modified to meet local requirements.

Infectious Diseases.—The most rigid precautions are directed to be taken at once to check the spread of any infectious disease. Two portable disinfectors (Thresh pattern) will be established at the base, one in Natal, and the other at Capetown, but they can be transported either by road or rail, and will be available at any place required.

Sanitation.—It is stated that no special sanitary officer is appointed to the forces, nor is any such appointment provided for in war establishments; but it is pointed out that every principal medical officer and every officer in medical charge of a unit is *ex officio* a sanitary officer, and should exercise ceaseless vigilance over his particular charge. Too much importance, it is added, cannot be attached to this subject, and this last sentence is italicised. Filters of the Berkefeld pattern will, if possible, be supplied to each company or similar unit of 100 men.

Hospital Trains.—Two hospital trains have been sanctioned. Of one Major G. W. Brazier-Creagh will be in charge, and Mr. W. T. Rowe will be attached as civil surgeon. There will be two nursing sisters of the Army Nursing Service. The other hospital train will be in charge of Captain C. C. Fleming, D.S.O., Mr. W. J. Waters will be the civil surgeon, and there will be two nursing sisters of the Army Nursing Service Reserve.

Sick Transports and Hospital Ships.—The sick transports *Spartan* and *Trojan* will be utilised in the first instance for conveying invalids from Durban to Capetown for transfer to the base hospital at Wynberg, but may be diverted for the transport of sick to England from South Africa. The accommodation available is: Invalids, five in officers wards, and sixty-two in three hospital wards and fracture wards; convalescents, ten in first-class cabins, four in second-class cabins, fifty on main deck. These ships carry special medical comforts, clothing, and necessaries, a special hospital equipment, refrigerators, mosquito and fly netting, one wheeled ambulance, and six stretcher ambulances. It is added that the hospital ship now being fitted out by the Central British Red Cross Committee will be capable of carrying about 200 patients. The *personnel* will be nominated by the Director-General Army Medical Service. The hospital ship will be utilised exclusively for the conveyance of invalids from South Africa to England.

At Durban the Legislative Assembly building has been fully equipped as a hospital. All persons will be treated alike, irrespective of class or nationality. The first batch of sick and wounded were expected on October 31st. During the first and second weeks in November general and field hospitals and bearer companies from the detachments of Nos. 5, 9, 10, 12, and 16 Companies R.A.M.C. embarked in the *Englishman*, the *Dictator*, *Ismore*, *Ranee*, *Bavarian*, and other transports. Captain R. Fawssett, R.A.M.C., is the medical officer

detailed for the composite regiment of Household Cavalry. At Chester the 2nd Hospital Corps of the R.A.M.C. was inspected on October 31st by General Swayne, who advised the men to be brave, considerate, determined, and kind. A public subscription supper, at which the Mayor presided and chief men of the city were present, was given to this corps before its departure for the front on November 2nd.

The Central News telegram from Ladysmith regarding the fighting on 30th states that a word of praise is due to the Indian Ambulance Corps, who have throughout these operations comported themselves with uniform coolness and gallantry. They performed splendid service by bringing in the wounded under fire.

At Chatham, on November 6th, Major-General T. Fraser, C.B., C.M.G., R.E., commanding Thames District, inspected No. 15 Field Hospital prior to its embarkation for service in South Africa. The officers present were Major G. H. Younge (in command), Major F. T. Wilkinson, Captain E. M. Pilcher, Lieutenant R. S. H. Fuhr, Lieutenant and Quartermaster J. Hirst. After the inspection Major-General Fraser addressed some words of advice and encouragement to the men.

Major W. J. Baker, R.A.M.C., has been ordered to proceed to South Africa in medical charge of the 1st Battalion Suffolk Regiment, which leaves Dover on November 11th, and embarks on the Union Co.'s ss. *Scot* on the same date at Southampton, for active service.

The ambulance and nursing delegation of the German Red Cross Societies has left Berlin for South Africa. Twenty-four large cases contain the surgical and ambulance apparatus, bandaging material, drugs, etc., packed in such a way that, if necessary, they can be divided and made use of in different places. The Roentgen ray apparatus, which has already done service in the war between Turkey and Greece, is included in the outfit.

THE ROENTGEN RAYS IN MILITARY SURGERY.

By John Hall-Edwards, L.R.C.P., F.R.P.S.,
Surgical Radiographer to the General Hospital, Birmingham.

From the report published in the British Medical Journal of November 4th of the arrangements made by the War Office for the transportation of Roentgen ray apparatus to the seat of war, it would appear that this adjunct to military surgery is not receiving the amount of attention which its importance warrants. Of the ten sets of apparatus provided, four only have reached South Africa, whilst two of these are located so far away from the field of operations that they must be of little service. The remaining six sets, we are told, are either on their way out, or are about to be despatched.

It is freely acknowledged that no medical equipment for active military service can be considered complete unless an *x*-ray apparatus is included; it must therefore follow that, in many instances, our wounded are not having the best possible done for them. Up to the present time some 750 men have been wounded, and as it is fair to assume that in at least 80 per cent. of the cases the *x* rays must have proved of service; the two apparatuses in Natal must have been kept exceedingly busy, or, as is much more probable, they cannot have been used in half the cases in which they were necessary.

It has been proved beyond the shadow of a doubt that the application of the *x* rays to military surgery constitutes one of the greatest advances of the century. Mr. Mansell Moullin, F.R.C.S., in his presidential address to the Roentgen Society, in July last, said:

> The benefit which surgery has derived from the improvements which have been effected in the use of the Roentgen rays during the past year is no less striking. Military surgery will have to be rewritten. Thanks to the ease with which suitably planned apparatus can be carried on campaign, all the wearisome and intensely painful probings after bullets and foreign bodies, to which the wounded look forward with such dread, have been swept away.

As one of the first in this country to apply the Roentgen rays to practical surgery, and as a constant worker both in hospital and private practice since, I have no hesitation in echoing the statement above quoted. It may be argued that inasmuch as in modern warfare few bullets find their billets in the bodies of the wounded, the *x* rays must prove of little practical use. This is, however, incorrect, for in every case in which a bone has been injured the amount of injury can be ascertained, and the subsequent treatment arranged accordingly.

The great drawback to successful surgery in the field is the difficulty of carrying out the principles of absolute cleanliness, upon which modern surgery is founded. That at certain times and in certain places absolute cleanliness is impossible I freely admit, and knowing this it becomes all the more necessary that every possible step in the direction of securing the desired end should be seized upon. With the *x* rays at command an injured limb can be examined and the injury diagnosed, the presence, shape, and exact location of a foreign body ascertained, and the amount of injury to a bone discovered, without giving the patient pain and without removing the dressings. The probe is rendered unnecessary, and dangerous manipulation can be dispensed with. In many cases all can be done with a small apparatus at a field hospital, or even at a dressing station, whilst in others the larger apparatus at the base can be brought into requisition.

After the recent Nile campaign much dissatisfaction was expressed both in Parliament and elsewhere, because the ambulance arrangements were imperfect, and the *x* rays had not been fully utilised. The Under-Secretary for War said "that there had been no case of a wounded man at the Atbara to whom the absence of the Roentgen apparatus had made any difference." That this statement was not an explanation must be patent, as the results of the application of the *x* rays could in no case be foreseen. The excuse offered by the War Office was that the transport difficulties had not been overcome. Since this time the necessary apparatus has been much simplified and improved, whilst Major Beevor, myself, and others, have demonstrated that the transport difficulties are more imaginary than real.

With an apparatus I have devised I have given two demonstrations in the field in conjunction with Surgeon-Major Freer and the ambulance section of the 1st Volunteer Battalion Royal Warwickshire Regiment. In each instance three negatives were produced, and developed under the conditions of actual war. The apparatus (including portable 8-in. spark coil, accumulators, developing tent and stand, and box for tubes, plates, and chemicals sufficient for 100 exposures) was carried to the field in the ambulance waggon, and although it was freely jolted for a distance of six miles it worked to perfection.

Such an apparatus can easily be carried (should necessity arise) for a long march by eight men, and although small it is quite sufficient for field work; more elaborate and larger apparatus can be supplied to the hospitals. The chief difficulty previously experienced in applying the *x* rays lies in the changing of the accumulators; this has, however, been successfully overcome, and in the present war, where the line of operations will in all probability follow the railway, there should be no difficulty in this respect.

The fluorescent screen is of very little use in the field, owing, on the one hand, to a darkened room being necessary, and on the other to the fact that the surgeon in command of the *x*-ray apparatus is rarely the one who is entrusted with the subsequent operation. A negative or series of negatives is much more useful, as they can be placed in the hands of the operating surgeon, who can refer to them at any stage of the operation.

Even when the apparatus is working to perfection, the surgeon in whose hands it is placed must have a knowledge of photographic procedure, or his results will be useless, and in the event of anything going wrong the operator must have had considerable previous experience, in addition to a fair knowledge of electricity. If military surgery is to be rewritten after the present campaign, no expense or trouble should be spared to render the Roentgen-ray arrangements as complete as possible.

MILITIA MEDICAL STAFF CORPS.

The Militia Medical Staff Corps, that is to say, the 2nd or Militia Battalion of the Royal Army Medical Corps, under the command of Surgeon-Lieutenant-Colonel Collingridge, will be embodied on Monday next, November 13th.

This is the first occasion on which the Royal Army Medical Corps have made use of their Militia.

The connection between the M.M.S.C. and the R.A.M.C. is precisely the same as that between a Line regiment and its Militia battalion.

Officers and men will do duty in the various hospitals, re-

placing the Royal Army Medical Corps, and thus relieving the strain thrown upon it by the heavy drafts in South Africa. The disposition of the corps will be as follows :—

THE HAMPSHIRE COMPANY

will be attached to the Royal Victoria Hospital, Netley.

Officers.—Surgeon-Captain O'Connor (in command), Surgeon-Captain Simpson, Surgeon-Lieutenant J. Clerke.

THE MIDDLESEX COMPANY

will be at the Herbert Hospital, Woolwich.

Officers.—Surgeon-Captain Morris (in command), Surgeon-Lieutenant K. Trubridge.

THE SURREY COMPANY

at the Cambridge Hospital, Aldershot.

Officers.—Surgeon-Major Lake (in command), Surgeon-Lieutenant Steele, Surgeon-Lieutenant Davies.

THE EASTERN COUNTIES COMPANY

at Aldershot.

Officers.—Surgeon-Captain Waring (in command), Surgeon-Lieutenant J. E. O'Connor.

THE KENTISH COMPANY

at Aldershot.

Officers.—Surgeon-Captain Kelly (in command), Surgeon-Lieutenant Madge.

Surgeon-Lieutenant-Colonel Collingridge will be stationed at Aldershot in command of the corps.

The corps will probably be embodied for six months.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: THOMAS T. JEANS, M.B., Surgeon, to the *Doris*, November 1st; GERALD B. BROWN, Surgeon, to the *Cambrian*, on commissioning, October 23rd; JOHN C. FERGUSON, B.A., M.D., Surgeon, to the *Bellona*, November 1st.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL H. H. STOKES, M.B., has been appointed Senior Medical Officer at the Curragh during the absence of Lieutenant-Colonel J. D. Edge, M.D., who has proceeded to South Africa.

INDIAN MEDICAL SERVICE.

THE undermentioned Captains, having completed twelve years' full-pay service, have been promoted to be Majors, from October 1st:—Bengal: A. E. ROBERTS, M.B., D. M. DAVIDSON, M.B., F. P. MAYNARD, M.B., J. C. LAMONT, M.B., A. H. NOTT, M.B., A. COLEMAN, M.B., W. W. WHITE, M.D., D. T. LANE, M.D., R. C. MACWATT, M.B., W. H. E. WOODWRIGHT, W. J. BUCHANAN, J. K. CLOSE, M.D. Madras: F. J. DEWES, J. O. PINTO, P. C. H. STRICKLAND, T. W. STEWART. Bombay: J. L. T. JONES, M.B., W. E. JENNINGS, M.B.

Lieutenant-Colonel J. ARMSTRONG, M.B., Bengal Establishment, civil surgeon, Cawnpore, is permitted to retire from the service, from October 17th. His commission as Assistant-Surgeon dates from March 31st, 1874; that of Surgeon-Lieutenant-Colonel from March 31st, 1894.

Captain C. DONOVAN, M.D., Madras Establishment, is appointed Personal Assistant to the Surgeon-General with the Government of Madras.

THE VOLUNTEERS.

SURGEON-CAPTAIN W. J. PICKUP, M.B., 2nd Volunteer Battalion the Royal Warwickshire Regiment, has resigned his commission, November 8th.

Surgeon-Major (Brigade-Surgeon-Lieutenant-Colonel) W. M. VORES, M.B., 2nd Volunteer Battalion the Royal Sussex Regiment, has resigned his commission, retaining his rank and uniform, November 8th; he at the same time vacates his appointment as Senior Medical Officer to the Sussex Volunteer Infantry Brigade.

VOLUNTEER MEDICAL ASSOCIATION.

THE lectures of the next class of instruction for the Proficiency Examination will commence on Tuesday, November 14th, at 5.15, at the headquarters Volunteer Medical Staff Corps, 51, Calthorpe Street, Gray's Inn Road, W.C. The Correspondence Class will commence in the same week. The classes are open to all members of the Volunteer Medical Association. All applications should be made to the Honorary Secretary, Surgeon-Captain J. Harper, 25, Rosary Gardens, South Kensington, S.W.

VOLUNTEER MEDICAL STAFF CORPS.

VOLUNTEER should apply to the Adjutant Volunteer Medical Staff Corps, 51, Calthorpe Street, Gray's Inn Road, W.C, who will give him all particulars as to the corps.

INVITATION TO SERVE.

COMMENTING on the invitation to retired medical officers liable to recall to volunteer for duty, a correspondent writes: It would be both good policy and just to give these officers while employed remuneration equal to the full pay and allowances of their rank on retirement.

*** They will apparently only receive £150 a year, in addition to their pension, which is quite insufficient to meet cost of travelling to take up an appointment, and of living away from their families. If recalled to duty by order, then they would clearly receive full pay and allowances.

MEDICAL OFFICERS IN THE GERMAN ARMY.

OFFICIAL statistics recently published show that the German army consists of 23,230 officers, 78,247 non-commissioned officers, and 479,000 privates, in all 580,577 men. The medical officers number 2,103, so that there is 1 surgeon to every 276 of the total force. Of the medical officers, 1,629 are in the Prussian, 246 in the Bavarian, 142 in the Saxon, and 86 in the Würtemberg service.

OBITUARY.

EDWARD WOLFENDEN GRAY, M.B.T.C.D., F.R.C.S.I.,

Major Royal Army Medical Corps.

THE first medical officer to fall in the Transvaal war has been Major Edward Wolfenden Gray, who is reported as killed near Ladysmith on or about October 30th, apparently in the disaster of Nicholson's Nek. Major Gray was educated in the Medical School of Trinity College, Dublin, and having taken the degrees of B.A. in the University proceeded to the M.B. and B.Ch. in 1885. He was also a Fellow of the Royal College of Surgeons in Ireland, a Licentiate of the Royal College of Physicians in Ireland, a Diplomate in State Medicine of the University of Dublin, and a Licentiate of the Apothecaries' Hall. His clinical studies were followed in Jervis Street Hospital, and he there obtained the Gold Medal for distinguished answering. He was successful at the competitive examination of candidates for admission to the Army Medical Staff in August, 1886, and was appointed Surgeon-Captain on February 5th, 1887. He was promoted to the rank of Major, Royal Army Medical Corps, on February 5th, 1899.



After serving at home for 2½ years he embarked for Egypt, in which country he served for nearly six years. He went out from England to Bengal in March, 1898, and only recently left India with the Indian contingent for active service in South Africa. He was shown in returns as having been attached to the 2nd Battalion King's Royal Rifles as their medical officer.

Major Gray, who was a member of the British Medical Association, was in his 37th year at the time of his death. He was considered by his superiors to be an exceptionally able medical officer, and his untimely death is a loss to the Royal Army Medical Corps. As yet no particulars as to the manner of his death have reached this country.

[We are indebted to the courtesy of the Editors of the *Daily Graphic* for the portrait of Major Gray here reproduced.]

THE LATE DR. ARLIDGE.

WE are informed that there is a slight error in the notice of the life of Dr. Arlidge published in the BRITISH MEDICAL JOURNAL of November 4th. We learn that the journey with a patient, to which reference was made, through Italy and France, terminated at Montpellier, from which place he made his way alone to Egypt and Palestine, staying some little

time at Jerusalem, where he visited every place of interest. The Duke of Brabant (the present King of Belgium) was at the same time visiting the Holy City by special firman, and by his courtesy Dr. Arlidge was permitted to join his party, so he had the pleasure of seeing the Mosque of Omar. Returning from the East he visited Malta, and with his wife travelled through Germany and France, visiting all hospitals and asylums on his way.

We regret to record the death of Mr. H. C. Hopkins, which occurred on November 6th, at his residence, 4, Belmont, Bath. After a successful course of study at St. Bartholomew's Hospital, Mr. Hopkins was admitted M.R.C.S.Eng. and L.R.C.P.Edin., and also L.M. of the Rotunda Hospital, Dublin. A house-surgeoncy at the Royal Free Hospital was followed by a similar appointment at the Royal United Hospital, Bath, which he held for four or five years. Without any other introduction, he began practice in Bath about the year 1873. His appointments brought him in contact with the poor, by whom he was much appreciated. For many years he was surgeon to several benefit societies, to the Police, to the Great Western Railway, and to the Western Dispensary. He was also for a time Assistant Surgeon to the Royal United Hospital, and to the day of his death Registrar to that institution, as well as Public Vaccinator for the City of Bath. In spite of his many appointments, he gave much time to Masonry, and held high rank amongst the fraternity. Mr. Hopkins's last illness was of short duration, for, although he had suffered from diabetes for some time, it was not until the last week in October that an attack of influenza confined him to the house. This was followed by capillary bronchitis, to which he succumbed at the age of 55. Genial, good-tempered, and good-hearted, he leaves many friends and no enemies. Mr. Hopkins was a widower, and his only son is now studying to follow in his father's profession.

A deservedly respected member of the profession, Robert Blane Erskine, M.D., L.R.C.S.Edin., died suddenly on October 19th, at his residence in the "auld toon of Ayr." He had been ailing and partly confined to his room for a fortnight, but feeling easier had been out for a short drive on the day preceding his death. He was being examined in bed by Dr. M'Kerrow, his usual medical attendant, and Dr. Finlayson of Glasgow, when he suddenly expired. Dr. Erskine was a native of Ayr, where his father was for years a magistrate and town treasurer. He studied medicine at Edinburgh, and became qualified in 1860. He immediately started in practice at Ayr, and about thirty years ago joined the 1st Ayrshire and Galloway Artillery Volunteers, in which corps he was eventually Surgeon-Lieutenant-Colonel. Dr. Erskine was ever the friend of the poor, to whom his services were frequently given gratuitously, and in this respect he worthily carried out the injunctions of his father, who constantly bade him "be good to the poor." He was a man of deep religious feeling, a member of the Church of Scotland, and in politics a staunch Conservative. He has left a widow, but had no family. The funeral was attended by a large company of mourners, and by the Artillery Volunteer Corps and a detachment of infantry. As the procession was on its way to the grave side the regimental band played the Dead March in *Saul*, and the customary three volleys were fired over the grave.

UNIVERSITIES AND COLLEGES.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Meeting of Council.

An ordinary meeting of the Council was held on November 2nd, Sir William Mac Cormac, Bart., K.C.V.O., President, in the chair.

South Africa.—The President reported his own departure and that of Mr. F. Treves, a member of the Council, owing to their appointment as Consulting Surgeons to the Forces in South Africa. The Council expressed their cordial approval of this acceptance of service under the Government, and their appreciation of the opportunity thus afforded to the College of being represented by the President and Mr. Treves in the performance of a national duty.

The Fellowship Examination.—The following resolution, moved by Mr. Morris and seconded by Mr. Willett, was carried: "That steps be taken for the alteration of Sections xiv and xx of the by-laws, with a view to admitting registered candidates to the Fellowship Examinations without requiring them to pass the examinations of the Conjoint Examining Board."

Medical Registration.—The Committee of Management have considered the letter from the Registrar of the General Medical Council dated June 19th last, which was referred to them for consideration and report, calling attention to the following regulation of the Council, which is to come into force on January 1st, 1900—namely, "No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council, and has produced evidence that he has commenced his medical studies at a university or school of medicine, or at a scientific institution recognised by one of the licensing bodies and approved by the Council." The Committee now recommend that the following resolution be adopted by the two Royal Colleges, and forwarded to the Registrar of the General Medical Council—namely, "The Royal College of Physicians of London and the Royal College of Surgeons of England fail to recognise any authority under the Medical Acts in virtue of which the General Medical Council may impose the conditions formulated in the regulation in regard to the registration of medical students, referred to in the letter from the Registrar." "They decline to recognise the requirement that scientific institutions where medical study is commenced should be approved by the General Medical Council." The recommendation was adopted.

Reports.—The report of the Committee of Management, recommending the recognition of the Rochdale Municipal Technical School, recognised by the Royal College of Physicians on October 26th (British Medical Journal, November 4th, p. 1327), was adopted, and the report of the Laboratories Committee, noted in the report of the meeting of the Royal College of Physicians on October 26th (*ibid.*) was received.

Committees.—Mr. T. P. Pick was re-elected on the Committee of Management; and Sir William Mac Cormac was re-elected a member of the Laboratories Committee.

University College, Bristol.—Mr. Thomas Bryant was renominated as a representative member of the Council of the above College.

College Centenary.—The President reported that the Benchers of Lincoln's Inn had kindly granted to the College the use of their Hall for the dinner to be given in connection with the Centenary of the College, and that the library of the Inn would also be available for receiving the guests before the dinner.

Examiners.—The President stated that the vacancies on the Court of Examiners occasioned by the expiration, on December 13th next, of the periods of office of Mr. Edmund Owen, Mr. William Anderson, and Mr. Herbert W. Page would be filled up at the ordinary meeting of the Council in December. Of these three gentlemen, Mr. Owen is not a candidate for re-election. Mr. Morton Smale was re-elected a member of the Board of Examiners in Dental Surgery.

Members' Gown.—Mr. Pick moved, and Sir Thomas Smith seconded, that a gown for Members should be instituted. This was adopted. The details were referred to the Committee for General Purposes.

Annual Report of the Council.

The report of the Council recording work done by the College in its various departments from July, 1898, to July, 1899, has been issued in anticipation of the meeting of Fellows and Members to be held on Thursday, November 16th. Most of the contents of the report have at various times been published in the columns of the British Medical Journal, but some of the subjects seem worthy of renewed attention.

Canvassing for Patients.—A complaint was made to the Council that a Member of the College employed a collector and canvasser for a private medical club; but upon inquiry it appeared that the advertisement and circular relating to the club had not been used for several years, and that the use of a collector and canvasser had also been discontinued. The Council thereupon expressed their disapproval of direct canvassing for patients and of the employment of professional advertisements addressed directly to the lay public. The member in question was also informed that the Council, while disapproving of the advertisement and circular and the use of a canvasser for his private club, did not propose to take any further steps in view of his statement that he had ceased to have recourse to these practices.

Centenary of the College.—On March 22nd, 1800, the College was incorporated by Royal Charter, and the Council have determined to celebrate the centenary of this event on July 25th, 26th, and 27th, 1900. They are desirous of conferring diplomas of honorary Fellowship upon persons of distinction at that time, but have found that a supplemental charter is necessary for the purpose. A meeting of Fellows and Members, to which the charter was submitted, was held on July 5th, 1899, and a resolution was adopted by 40 votes to 8, "That in the opinion of the meeting no charter should be granted which does not give to the Members some representation on the Council." A memorial to this effect from several members of the College was subsequently presented to the Council. To this the Council replied that they were introducing only one matter, the institution of an honorary Fellowship, into the proposed charter, and that in their opinion it would be inopportune to introduce any other matter on the present occasion. The Council further noted with satisfaction that the memorialists endorsed the proposal that powers should be obtained to confer the Fellowship of the College upon persons of distinction.

Petition and Draft Charter.—The petition to the Queen and draft charter, embodying the powers required, are given. The honorary Fellows whom it is thereby sought to create must be such persons as the Council of the College shall from time to time consider of sufficient distinction to be elected, and shall elect without examination, and the number of existing honorary Fellows shall never exceed fifty. No person so elected an honorary Fellow will thereby acquire any right to practise surgery or to be registered as a registered medical practitioner, nor shall he be eligible to any office in the College or have any share or voice in the election to any such office. No fee is to be charged on admission to the honorary Fellowship. The honorary Fellows may be subjects of Her Majesty or not. Except that they may not hold office or become examiners of the College, the honorary Fellows shall enjoy the other corporate rights and privileges attached to the Fellowship of the College and shall be subject to such rules and regulations as the Council may think fit and direct.

Taxation of the College.—The appeal of the College against the decision of Justices Wright and Channell respecting the assessment of the College to Corporation duty, was heard before Lord Justices A. L. Smith, Collins, and Romer, in March last, and judgment was delivered on April 15th, the

appeal being dismissed with costs. The shorthand notes of the judgment by Lord Justice Romer were appended to the report. The appeal was dismissed on the ground that the ground property of the College is legally appropriated and applied, not merely for the promotion of science, but also for the promotion and encouragement of the practice of surgery, including the promotion of the interest of those practising, or about to practise, surgery as a profession, and also including the examination of students and others to qualify for practice or honours in surgery or kindred subjects.

The Library.—Several valuable volumes and some engravings of medical celebrities have been added to the library and the College collections. During the year the number of readers was 9,990 on 244 days when the library was open, an average of 36 per diem.

THE SOCIETY OF MEMBERS.

The following is a copy of the statement presented to the Lord President of the Privy Council on behalf of the Society of Members of the Royal College of Surgeons in reference to the application by the College Council for a supplementary charter:

"The proposed charter is intended to enable the Council to confer honorary Fellowships on persons of distinction, as a means of celebrating the centenary of the granting of the original charter in 1800.

"The Lord President may be aware that unsatisfactory relations have existed for many years between the Council of the College and the Fellows and Members. It is submitted that the provisions of the proposed charter are very inadequate, inasmuch as they do not tend in the slightest degree to terminate the dissensions which have so long prevailed.

"At the time of the application for the last supplementary charter of 1888 the attention of the Privy Council was called to the grievances of the Members by a petition signed by 4,665 of their number, and by a statement presented by the Association of Fellows of the College. To these documents (presented to the Privy Council in May, 1887) the Lord President is referred.

"The supplementary charter was then granted; but only so far as it related to subjects on which there was no controversy with the Fellows and Members. Unfortunately, this method of dealing with the disputed matters was far from succesful. Within a short very time the College Council and the Members were engaged in litigation on the question of the right of the latter to meet in their own College, and there have subsequently been continuous disputes on numerous points, all arising out of the persistent refusal of the Council to grant the Members a limited representation on the Governing Body of the College.

"The Council some years ago passed a resolution agreeing to consult the Fellows and Members on all important matters affecting the external relations of the College. Accordingly a meeting was held on July 5th last for the consideration of the present draft petition and charter.

"After full discussion, the following resolution was then carried, with only eight dissentients:

> That this meeting of Fellows and Members, summoned by the Council to consider the terms of a proposed new charter, is of opinion that the powers asked for are inadequate, and that no charter should be granted which does not give to the Members some representation on the Council.

"The following was also carried unanimously:

> That this meeting requests the Council to postpone a final decision as to the the terms of the new charter until a memorial which is in course of signature has been received and considered.

"This memorial, a copy of which is enclosed, was signed by over 700 Members in less than a fortnight; but like every other attempt to propitiate the Council, it failed. The memorialists were informed that the Council was introducing only one matter into the supplementary charter, and that the inclusion of anything else would be 'inopportune.'

"The attention of the Lord President is particularly drawn to the fact that the Council having called a meeting to consider the draft charter entirely disregarded the resolution passed by that meeting declaring the provisions of the charter to be inadequate. This is in harmony with the habitual practice of the Council, owing to its non-responsibility to the Members.

"It is in the power of the Privy Council to put an end to the present anomalous state of affairs by refusing to sanction any charter which does not grant the Members a reasonable representation.

"By the charters the body corporate of the College is declared to consist of the Members; the entire property of the College is vested in them; and they provide by far the greater part of the annual income; yet they have no control whatever over the expenditure and no share in the government.

"Their difficulties are not understood by the Council, which is entirely composed of hospital surgeons, and their requests are persistently refused. They have to obey by-laws made by persons who have interests distinct from their own, and by a body in which they have no representation. They are governed by an irresponsible oligarchy, and in all collegiate matters they are as far as possible ignored.

"The present mode of government of the College is an anachronism, and is out of harmony with the representative institutions of our country. It is, therefore, respectfully urged that your lordship will, on grounds of public policy, either refer this supplementary charter back to the Council of the College in order that provision may be made for the representation of Members, or that, before granting any charter, you will hear the Society of Members of the Royal College of Surgeons by counsel."

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

Licences.—At the monthly business meeting of the President and Fellows held on Friday, November 3rd, Messrs. G. R. Barton, G. Canilla, H. H. A. Carter, G. W. T. Clarke, J. W. Clarke-Baylis, W. A. Cooke, C. H. Cormac, R. B Daly, M. Gavin, A. Gill, M. F. Hession, A. H. Jacob, J. L. Jones, T. F. Loughrey, G. L. N. Miles, W. Patterson, J. W. Shortt, and J. Whelan were admitted to the licences in Medicine and Midwifery under the conjoint scheme with the Royal College of Surgeons in Ireland.

UNIVERSITY OF CAMBRIDGE.

Election to a Fellowship.—Dr. Grafton Elliot-Smith, B.A., who held last year the Research Scholarship of the British Medical Association, and who is highly distinguished for his investigations on the anatomy of the brain, has been elected to a Fellowship at St. John's College. Dr. Elliot-Smith is a Doctor of Medicine of Sydney, and entered the university as an advanced student.

Medical School Buildings.—Mr. Timothy Holmes, M.A., has been appointed an additional member of the Medical School Buildings Syndicate.

UNIVERSITY OF GLASGOW.

GRADUATION CEREMONY.

THE usual autumn graduation in connection with the Glasgow University took place on November 2nd in the Bute Hall. Principal Story presided, and there was a large attendance of students and their friends. Professor Cleland, the Dean of the Faculty of Medicine, presented the following gentlemen for medical degrees:

Doctors of Medicine (M.D.).—With honours—J. S. M'Kendrick, M.B., C.M., W. Scobie, M.A., B.D., M.B., C.M.; with commendation—J. G. Gray, M.B., C.M., W. E. Macharg, M.B., C.M., J. S. Ormond, M.B., Ch.B.; ordinary degrees—A. S. Dick, M.B., C.M., W. M'Alister, M.B., C.M., J. MacDonald, M.B., Ch.B., A. A. Pratt, M.B., C.M., L. Williams, M.B., C.M., A. G. Young, M.B., C.M.

Bachelors of Medicine (M.B.) and Masters in Surgery (C.M.).—J. J. Edgar, R. Hastie, W. Shearer.

Bachelors of Medicine (M.B.) and Bachelors of Surgery (Ch.B.).—T. B. Calland, Jessie Sophia Beatrix Hunter, N. Jamieson, A. S. Lang, R. Lunan, P. M'Fadyen, J. M'Gilchrist, C. F. Maclean, Sara Maude Robertson, Maud Hamilton Spencer, P. A. Steven, J. D. C. Swan, A. Vost.

THE VICTORIA UNIVERSITY.

AMONG the external examiners appointed by the Council at its last meeting were the following:—*In Physiology:* J. G. McKendrick, M.D., F.R.S., Professor of Physiology, Glasgow University. *In Forensic Medicine:* A. P. Luff, M.D., Lecturer in St. Mary's Hospital, London. *In Public Health:* Arthur Ransome, M.D., F.R.S. *In Surgery:* A. Ernest Maylard, M.B. *In Medicine:* David Bridge Lees, B.Sc., M.D., Lecturer in St. Mary's Hospital, London.

ROYAL UNIVERSITY OF IRELAND.

Exhibitions.—At the recent examinations in the Faculty of Medicine, Miss Lily A. Baker and Mr. W. A. Crofton obtained exhibitions of £10 each in the First Examination; Messrs. W. Warnock and H. M. Johnston, one of £15 each in the Second Examination; Mr. J. Armstrong, one of £20 in the Third Examination; and Mr. W. Lapsley, one of £25 in the M.B. B.Ch., B.A.O. Examination.

CONJOINT BOARD IN IRELAND.

THIRD PROFESSIONAL EXAMINATION.—Candidates have passed his Examination as undernoted:

In All Subjects.—C. C. Meeke.

Completed the Examination.—G. R. Barton, G. Canilla, C. H. Cormac, M. Gavin, M. M. Goldfoot, J. Hutch, J. H. O'Connell, J. B. O'Halloran A. E. O'Reilly, T. D. Sullivan.

In Medicine.—V. F. Connor, W. H. Dodd, A. J. Fitzgerald, J. O'Leary E. M. Pennefather, A. B. Stephenson, F. R. Thorn.

In Surgery.—R. B. Elliott, P. A. Frazer, H. W. Spaight, A. B. Stephenson A. L. Tindall.

In Pathology.—A. J. Fitzgerald, P. A. Frazer, J. O'Leary.

In Therapeutics.—D. A. Faris, A. J. Fitzgerald, J. O'Leary, E. M. Pennefather, A. B. Stephenson, F. R. Thorn, A. L. Tyndall.

In Forensic Medicine and Hygiene.—S. Browne, A. J. Fitzgerald, P. A. Frazer, J. O'Leary, E. M. Pennefather, F. R. Thorn, E. R. Townsend, A. L. Lyndall.

LICENCES IN MEDICINE, SURGERY, AND MIDWIFERY.—The following candidates have passed this examination as undernoted:

In all Subjects.—G. R. Barton, G. Canilla, C. H. Cormac, M. Gavin.

Completed the Examination.—H. H. A. Carter, G. W. T. Clarke, J. W. Clarke-Baylis, W. A. Cooke, R. B. Daly, A. Gill, M. F. Hession, A. H. Jacob, J. L. Jones, T. F. Loughrey, G. L. N. Miles, W. Patterson, J. W. Shortt, J. Whelan.

In Medicine.—B. M'M. Coffey.

In Mental Diseases.—B. M'M. Coffey, T. D. Sullivan.

In Surgery.—W. S. D. Bird, F. C. Fowler, T. D. Sullivan.

In Midwifery.—R. J. Cane, B. M'M. Coffey, L. A. Hare, T. D. Sullivan.

In Ophthalmology.—W. S. D. Bird, B. M'M. Coffey, L. A. Hare, P. J. M'Ginn, T. D. Sullivan.

In Forensic Medicine.—R. G. Mostyn.

PRESENTATION.—Dr. W. H. Bowes, Medical Superintendent of the Plymouth Borough Asylum, has been presented by the staff of the asylum with an electro-plated tea kettle and table stand in view of his approaching marriage as a mark of respect and esteem.

A POST-GRADUATE HOSTEL IN ST. PETERSBURG.—A boarding house or rather hostel has recently been opened in St. Petersburg for the accommodation of provincial medical men who visit the capital for the purpose of post-graduate study. The establishment comprises a certain number of furnished rooms at very moderate rents, and a *table d'hôte* adapted to the resources of light purses. Provision for the social needs of the guests is not forgotten.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

NEW TUBERCULOSIS ORDER IN SCOTLAND.

Cowsheds and Dairies.

The Local Government Board of Scotland have issued a new Order—The Dairies, Cowsheds, and Milkshops Order, 1899—amending the Orders of 1885 and 1887, and have forwarded to all local authorities some explanatory notes concerning the character and scope of the alterations, the main object being to give effect to the recommendations of the Royal Commission on Tuberculosis. Article 15 of the 1885 Order stated that:

If at any time disease exists among the cattle in a dairy or cowshed or other building or place, the milk of a diseased cow therein (1) shall not be mixed with other milk; (2) shall not be sold or used for human food; and (3) shall not be sold or used for food of swine or other animals unless and until it has been boiled.

This is altered by the new Order so that the word "disease" shall include such disease of the udder of a cow as shall be certified by a veterinary surgeon to be tuberculous. This applies to all milch cows, whether their owners are registered under the Order or not. The Board, as entitled under Section XIII, invite the attention of local authorities in framing dairy regulations, to the recommendations of the Commission on Tuberculosis:

That the conditions of the attached cowsheds that shall warrant the registration of a dairy in a populous place, whether technically urban or rural, in the future shall include the following: (1) An impervious floor; (2) a sufficient water supply for flushing; (3) proper drainage; (4) a depôt for the manure at a sufficient distance from the byres; (5) a minimum cubic contents as regards such districts of from 600 to 800 feet for each adult beast, varying according to the average weight of the animals; (6) a minimum floor space of 50 feet to each adult beast; (7) sufficient light and ventilation.

The Board recommend a minimum floor space of 50 feet in all cases, whether in populous or in sparsely-populated places, and adds the following suggestions:

The walls of a byre or cowshed ought not to be masked by the erection against them of structures which interfere with lighting and ventilation. Old horse litter ought not to be used in bedding cows. The exclusion of dust from access to milk or milk vessels exposed during processes of cleansing or otherwise is of the utmost importance. The free use of water in all such processes, whether in byres or milkshops, so as to avoid the production of dust if necessary.

Meat Inspection.

The important question of meat inspection is gone into, and the recommendations of the Commissioners regarding the qualifications of meat inspectors, and the principle to be observed by meat inspectors in the inspection of tuberculous carcasses of cattle are given; and as the Board has no authority to issue instructions, they direct the attention of local authorities to the recommendations of the Royal Commission, and also state that the "principles" of inspection laid down by the Royal Commission can be applied in detail only through medical officers of health and veterinary surgeons.

The Board has revoked Article 14 of the Order of 1885, which dealt with the procedure necessary in adopting regulations, and substituted a provision assimilating the procedure under the Order to the procedure laid down in the Public Health Act of 1897 with respect to by-laws under that Act.

Hospitals.

The Public Health (Scotland) Act, 1897, makes it compulsory for local authorities to obtain the approval of the Local Government Board to the site and plans of any infectious diseases hospitals proposed to be erected. A most useful memorandum has been issued, giving particulars of the requirements of the Local Government Board which have to be attended to with reference to the site and plans of such hospitals. It states that the following particulars must be submitted to the Board:

A general description of the site, with information as to soil and subsoil, exposure, facilities for drainage and water supply, accessibility, distance from furthest points of district to be served, distance from nearest inhabited house, distance from nearest medical man (where there is to be no resident medical officer); also, in rural districts, the distance from the nearest railway station, and the distance from the chief centres of population in the district to be served.

The plans must be drawn to a specified scale, and in the memorandum minute details are given of what is to be delineated, and a statement must be appended from the medical officer of health of the district expressing his opinion on the site and the plans.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

[Specially Reported for the British Medical Journal.]

The Registrar-General has just issued his return relating to the births and deaths registered in England and Wales during the third or summer quarter of 1899, and to the marriages during the three months ending June last. The marriage-rate was equal to 18.3 per 1,000, and has not been exceeded in the corresponding quarter of any year since civil registration began.

The births registered in England and Wales during the quarter ending September last numbered 231,593, and were equal to an annual rate of 28.9 per 1,000 of the population, estimated by the Registrar-General to be nearly thirty-one and three-quarter millions in the middle of 1899. This rate was 1.2 per 1,000 below the mean rate in the corresponding quarters of the ten preceding years. The birth-rates in the several counties ranged from 23.1 in Sussex, and in Oxfordshire, and 23.6 in Somersetshire and Westmorland to 32.5 in Warwickshire, 33.5 in Northumberland, 34.5 in Staffordshire, and 35.6 in Durham. In thirty-three of the largest English towns, including London, the birth-rate last quarter averaged 29.8 per 1,000, and exceeded by 0.9 the general English rate. In London the birth-rate was equal to 28.6 per 1,000, while it averaged 30.5 in the thirty-two provincial towns, among which it ranged from 22.8 in Huddersfield, 24.1 in Croydon and in Oldham, and 24.2 in Halifax to 34.6 in Hull, 35.0 in Gateshead, 35.9 in Liverpool, and 36.1 in Sunderland.

The births registered in England and Wales during the three months ending September last exceeded the deaths by 77,972; this represents the natural increase of the population during that period. From returns issued by the Board of Trade, it appears that 85,579 emigrants embarked during last quarter, for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these 85,579 emigrants, 33,300 were English, 6,760 Scotch, and 13,227 Irish, while 32,292 others were of foreign nationality. Compared with the averages in the corresponding quarters of recent years, the proportion of English emigrants showed a decline, while that of Scotch and of Irish emigrants showed an increase.

During the third quarter of this year the deaths of 153,621 persons were registered in England and Wales, equal to an annual rate of 19.2 per 1,000 of the estimated population, the average rate in the corresponding quarters of the ten preceding years having been 16.9 per 1,000. The lowest county death-rates last quarter were 11.5 in Westmorland, 12.8 in Rutlandshire, 13.5 in Oxfordshire, 13.9 in Cambridgeshire, and 14.0 in Wiltshire; while the highest rates were 21.7 in Warwickshire, 21.8 in Durham, 22.2 in Northumberland, and 23.0 in Lancashire. In the urban population of England and Wales, estimated at twenty-one and three-quarter millions of persons, the rate of mortality during the quarter under notice was 20.9 per 1,000; while in the remaining and chiefly rural population of nearly ten millions the rate was 15.6 per 1,000. These urban and rural rates were 2.8 and 1.3 per 1,000 above their respective averages in the corresponding quarters of the ten preceding years. Among thirty-three of the largest English towns the mean death-rate was 21.9 per 1,000, or 2.7 per 1,000 in excess of the general English death-rate during the same period. In London the rate was 20.6 per 1,000, while it averaged 22.8 in the thirty-two large provincial towns, among which the rates ranged from 15.6 in Croydon, 16.4 in Huddersfield, 17.1 in Halifax, and 17.5 in Bristol to 26.3 in Burnley, 27.4 in Sheffield, 27.6 in Manchester, 29.1 in Salford, and 29.9 in Liverpool. In sixty-seven other large towns, with an estimated aggregate population of more than four millions, the mean death-rate was 20.1 per 1,000, or 1.8 below the rate in the thirty-three great towns.

The 153,621 deaths registered in England and Wales during the three months ending September last included 25,952 which were referred to diarrhœa, 2,252 to measles, 2,050 to whooping-cough, 2,055 to diphtheria, 1,673 to "fever" (including typhus, enteric, and ill-defined forms of continued fever), 818 to scarlet fever, and 29 to small-pox; in all, 34,869 deaths resulted from these principal zymotic diseases, equal to an annual rate of 4.35 per 1,000, which was 1.33 above the average rate in the corresponding quarters of the ten preceding years. The mortality from diphtheria, "fever," and diarrhœa showed an excess, while that from each of the other principal zymotic diseases was below the average. Of the 29 deaths from small-pox registered in England and Wales during the quarter under notice, 23 occurred in the Borough of Hull, 1 belonged to London, and 3 were registered in Grimsby, 1 in Gainsborough, and 1 in Doncaster registration districts.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under 1 year of age to registered births, was equal to 255 per 1,000, and was 76 per 1,000 below the average rate in the corresponding period of the ten preceding years. In London the rate of infant mortality was 279 per 1,000, while it averaged 318 in the thirty-two large provincial towns, among which it ranged from 200 in Halifax, 234 in Swansea, 239 in Bristol, and 241 in Huddersfield to 361 in Nottingham, 374 in Salford, 390 in West Ham, 392 in Preston, and 507 in Burnley. The mortality in England and Wales among persons aged between 1 and 60 years was equal to an annual rate of 8.5 per 1,000 of the estimated population at this group of ages, and was 0.2 above the mean rate in the ten preceding third quarters. In the thirty-three great towns the mortality at this age-group averaged 10.1 per 1,000, and ranged from 5.9 in Norwich, 6.2 in Croydon, and 7.5 in Derby and in Huddersfield to 12.9 in Sheffield, 13.3 in Manchester, 13.9 in Salford, and 14.8 in Liverpool. Among persons aged 60 years and upwards, the death-rate in England and Wales last quarter was equal to 50.7 per 1,000 of the estimated population at this age-group, against an average rate of 53.8 in the corresponding quarters of the ten preceding years. In the thirty-three great towns the rate was 61.1 per 1,000, ranging from 44.4 in Portsmouth, 45.8 in Croydon, and 49.5 in Norwich to 74.0 in Bolton and in Newcastle, 77.9 in Salford, and 80.4 in Manchester.

The mean temperature of the air at the Royal Observatory, Greenwich, was 63.0°, and was 3.3° above the average in the corresponding quarters of 128 years; it showed an excess of 4.0° in July, 4.8° in August, and 1.1° in September. The rainfall during the quarter amounted to 4.32 inches and was 2.90 inches below the average.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,749 births and 4,120 deaths were registered during the week ending Saturday last, November 4th. The annual rate of mortality in these towns, which had increased from 18.6 to 21.1 per 1,000 in the three preceding weeks, declined again to 18.8 last week. The rates in the several towns ranged from 11.3 in Derby, 11.8 in Brighton, 13.1 in Huddersfield, and 13.5 in Cardiff, to 22.9 in Salford, 23.6 in Bristol, 24.1 in Wolverhampton, and 25.7 in Bolton. In the thirty-two provincial towns the mean death-rate was 19.0 per 1,000, and exceeded by 0.4 the rate recorded in London, which was 18.6 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.0 per 1,000; in London the death-rate was equal to 1.6 per 1,000, while it averaged 2.2 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.1 in Blackburn and in Hull, 3.5 in Bolton, 4.5 in Birkenhead, and 5.1 in Leicester and in Sheffield. Measles caused a death-rate of 1.0 in Bolton, and 1.4 in Birkenhead; scarlet fever of 1.1 in Halifax, 1.3 in Bolton, and 1.4 in Burnley; whooping-cough of 1.0 in Salford; "fever" of 1.1 in Sunderland, 1.2 in Wolverhampton and in Leicester, 1.3 in Nottingham, 1.6 in Sheffield, and 1.8 in Birkenhead; and diarrhœa of 1.2 in Blackburn. The 97 deaths from diphtheria in the thirty-three towns included 39 in London, 15 in Sheffield, 10 in Leicester, 6 in West Ham, and 6 in Leeds. Six fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday last November 4th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,538 to 3,504 at the end of the nine preceding weeks, had further risen to 3,539 on Saturday last; 331 new cases were admitted during the week, against 455, 447, and 414 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, November 4th, 950 births and 573 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.3 and 17.9 per 1,000 in the two preceding weeks, further rose to 18.8 last week, and was identical with the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.2 in Paisley and 16.2 in Greenock to 19.4 in Dundee and 20.1 in Glasgow. The zymotic death-rate in these towns averaged 3.0 per 1,000, the highest rates being recorded in Dundee, Paisley, and Greenock. The 287 deaths registered in Glasgow included 15 from measles, 7 from scarlet fever, 3 from diphtheria, 4 from "fever," and 13 from diarrhœa. Three fatal cases of diphtheria and 3 of whooping-cough were recorded in Edinburgh; 3 deaths from "fever" and 2 from whooping cough were registered in Aberdeen, 4 from measles and 2 from diphtheria in Dundee, and 2 from "fever" in Paisley.

THE PARISH OF ST. GEORGE-THE-MARTYR SOUTHWARK.

THE parish of St. George-the-Martyr Southwark is just one of those districts in which the local authority must be kept constantly face to face with the fact that the duties and responsibilities which devolve upon them are more onerous than those which fall to the lot of the local authorities of districts more happily circumstanced. Dr. Waldo, the medical officer of health, does not lose sight of this fact. He repeatedly draws attention in his reports to the insanitary conditions which continue to call for redress. In doing so he does not mince matters, and by consequence his relationship with those of the local authority, who would prefer to regard the existing state of things with complacency, and to thank Heaven that they are no worse, has not always been as pleasant as he could easily have made it, had he elected to take a less conscientious view of his duties. Reading between the lines of Dr. Waldo's annual report for the year 1898, it appears that the antagonism which has existed between the medical officer and a section of his authority has, in a great measure, spent itself. Much good work was performed in 1898, but Dr. Waldo takes the opportunity, in his annual report, of again reminding his authority of duties which still remain unperformed in a district which, to quote his own words, "is one of the most heavily rated, one of the poorest, and one of the most densely populated in the metropolis.....while the death-rate has always been abnormally high." The last annual report furnishes evidence of the continuance of a considerable excess of mortality. The general death-rate was 24 3 (45.4 per cent. of the total deaths occurring under 5 years of age), as against 18 7 in London as a whole, and the zymotic death-rate was 4.0, as against 2.8 in London generally. As means of further reducing the preventable mortality in the parish, Dr. Waldo advocates the compulsory notification of measles, the systematic inspection of schools, the gratuitous bacteriological diagnosis of diphtheria and typhoid fever, the abolition of certain insanitary areas, and the rehousing of those displaced, and the bringing of "model dwellings" under the salutary provisions of the by-laws dealing with houses-let-in-lodgings.

EXTRA FEES AND DEDUCTIONS.

MEDICUS writes asking the following questions: (1) Can I charge the guardians in my quarterly account for a pauper lunatic whom I have seen once in order to certify his removal to asylum, and for which certificate I have received 10s. 6d.? (2) Is 10s. 6d. the proper fee for such certificate? (3) Is it my duty to visit and report on lunatics other than pauper, and, if so, am I entitled to fee for same? (4) Is it proper for guardians to make a deduction for superannuation on the extra medical fees?

*** (1) We are advised that our correspondent has no further claim on the guardians. (2) We believe that a guinea is the fee most frequently paid for certifying a pauper lunatic for an asylum. There is, however, no fixed sum for this duty; it is regulated by what the magistrate considers to be a proper fee. (3) No. (4) All extra medical fees paid by guardians to a district medical officer when acting strictly in that capacity become emoluments of his office, and are consequently liable to a deduction under the Superannuation Act of 1896; but when a district medical officer is called upon by a magistrate to certify to a case of pauper lunacy, he is then in the same position as any private medical practitioner the magistrate might call to his assistance, and consequently any fee received for this duty would not be liable to deduction. All fees paid to a district medical officer for quarterly visits to pauper lunatics (these visits being a part of his official duty) would of course be liable to deduction.

FEVER HOSPITALS IN POPULOUS DISTRICTS.

ASSOCIATE inquires if there is any written or other evidence of the effect of fever hospitals when in close proximity to houses; if there is danger from servants and attendants carrying the infection, and if the distance prescribed by the Local Government Board in regard to small-pox hospitals should be observed in regard to hospitals (say) for scarlet fever.

*** It is pretty generally conceded that a well-managed hospital for infectious diseases other than small-pox has no tendency to cause outbreaks of the interned diseases in its own neighbourhood. Such a hospital should of course be enclosed within a close, unclimbable ring fence; it should have only one entrance; attendants and visitors should not be allowed to pass out in garments exposed to infection. These conditions can be complied with as easily in a populous place as out in the country. The needful purity of the air being granted, there seems no need to banish such a hospital too far from the relatives of the patients. If cases of typhoid fever are admitted, attention must be given to the careful disinfection of the excreta before admitting them to the town sewers. This is of course even more easily done in hospital than at home.

QUALIFICATION FOR POOR-LAW APPOINTMENT.

G. W. asks whether a medical man who took the L.R.C.P.Lond. in 1887, and holds no other qualification, can hold a parish appointment, that is as medical officer to the outdoor relief paupers.

*** The Licence of the College is a qualification under the Medical Act, 1886, and is recognised by the Local Government Board. The possessor of such a diploma would thus, if registered, be entitled to hold a Poor-law appointment.

EXTRA FEES FOR DISTRICT MEDICAL OFFICERS.

T. L. H. wishes to know what extra fee he can claim for attendance on the following case; also what drugs he can charge the guardians for as extras: A man attended immediately after an accident at 7 P.M. for injury to the leg and severe hæmorrhage therefrom was found on examination to have compound fracture of the tibia and fibula into the knee-joint, with laceration of the femoral vessels. T. L. H. attended again on the following day, and was then assisted by two medical friends, who were summoned by telegraph. All agreed that the proper treatment of the case was to have the patient removed to the county infirmary, thirteen miles off, to which he was accompanied by T. L. H.

*** It is not very easy to say what fee a district medical officer can claim for this case. It is, however, evident that he attended and treated the case, and it may be assumed that the proper treatment was adopted; this, however, was not of long duration so far as T. L. H. was concerned, and it appears somewhat questionable whether it can be said that the patient received several subsequent attendances from him: if so, the proper fee would be £5, but if not so, half this amount would by Article 177 of the Consolidated Order of July, 1847, be the sum to claim. We think the full fee may fairly be charged. It is impossible for us to say what drugs T. L. H. can charge the guardians for as extras, as this depends on the contract he has himself entered upon with them.

ATTENDANCE ON URGENT CASES WITHOUT MEDICAL ORDERS.

H. S., who is a district medical officer, writes to say that the guardians of his union have declined to pay him the extra fee which he considers he is entitled to claim for the two following cases: (1) For attendance on a child 4 years old with a fractured fibula, the mother of this child being at the time of the accident a pauper patient; (2) for attendance on a case of placenta prævia at night without an order, the R.O. being four miles off and this patient having been attended as a pauper in a previous confinement. In both these cases the formal medical order was subsequently refused by the Board of Guardians.

*** As our correspondent attended these two cases without having previously obtained an order to do so, and as the guardians subsequently decided that the formal orders should not be given, we fear it would be useless for H. S. to appeal to the Local Government Board. Should the attendance of H. S. be applied for in similar cases in future he must decide for himself whether he will attend without an order or not. In both these cases we consider he had a right to expect that the formal orders would be granted as soon as applied for, and there is no doubt this would have been the case except for the fact that their issue would have compelled the guardians to pay a special extra fee for each case.

A MEMORIAL of Professor Heinrich van Bamberger in the quadrangle of the University of Vienna was unveiled on October 29th. An address was delivered by Professor Neusser on the occasion. Bamberger was Professor of Medicine at Würzburg from 1854 till 1872, and at Vienna from 1872 till 1888.

MEDICAL NEWS.

The number of students matriculated in the academic year just begun in the Faculty of Medicine of the University of Coimbra (Portugal) is 149, 2 of whom are women.

At the meeting of the Chelsea Clinical Society this (Friday) evening, it will be proposed that a scheme should be framed for rendering gratuitous medical aid to the wives and families of men now serving with the colours.

The Richard Middlemore Post-Graduate Lecture for this year will be delivered at the Birmingham and Midland Eye Hospital on December 6th by Mr. J. Jameson Evans, F.R.C.S. The subject will be Eye Affections in Connection with Blood and Vascular Diseases.

At the meeting of the St. Pancras Guardians on October 26th, the resignation (in consequence of ill-health) of Dr. C. C. Claremont, who has held the office of Public Vaccinator for the past 40 years, was received with regret; and at the same meeting Dr. L. B. Claremont, who has acted as deputy for his father for the past ten or twelve years, was unanimously appointed to the post.

Claybury Asylum.—On Sunday afternoon, November 5th, the Crown Prince of Siam, with the members of the Siamese Legation in London, were accompanied by Mr. Frederick Verney, L.C.C., and the asylum medical staff, on a visit to this asylum. His Royal Highness expressed himself as most pleased with the care and treatment given by the London County Council to the insane, as also with the scientific work carried on in the excellent laboratory of this asylum.

Examinations for the Certificate in Psychological Medicine of the Medico-Psychological Association of Great Britain and Ireland will be held in London, Edinburgh, Glasgow, Aberbeen, Cork, and Dublin on December 14th. Candidates intending to present themselves for examination should give fourteen days' notice to the Registrar, Dr. Benham, Bristol City Asylum, Fishponds, of whom full particulars can be obtained.

Anatomical Society of Great Britain and Ireland.—The general meeting of the Anatomical Society of Great Britain and Ireland will be held in the Physiological Theatre of the London School of Medicine for Women, Hunter Street, W.C., on Friday, November 17th, at 4 P.M. The officers for the ensuing year will be elected, and Professor A. H. Young of Owens College is proposed by the Council for the office of President. Papers will be read by Mr. Stanley Boyd, Miss Stoney, M.B., Professor A. M. Paterson, and by Professor B. C. Windle, F.R.S., and Mr. F. G. Parsons. Mr. C. B. Lockwood will give a lantern demonstration of Certain Points in the Lymphatic System of the Appendix.

Alvarenga Prize of the College of Physicians of Philadelphia.—The College of Phildelphia announces that the next award of the Alvarenga Prize, amounting to about 180 dollars (£36), will be made on July 14th, 1900. Essays intended for competition may be upon any subject in medicine, but must not have been published, and must be received by the Secretary of the College on or before May 1st, 1900. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper, within the name and address of the author. The Alvarenga Prize for 1899 has been awarded to Dr. Robert L. Randolph, Baltimore, for his essay entitled the Regeneration of the Crystalline Lens: An Experimental Study.

Presentation.—At Stanhope, county Durham, on October 24th, Dr. Thomas Livingstone and Mrs. Livingstone were presented on the occasion of their silver wedding with a massive solid silver bowl, handsomely chased and embossed, on an ebony stand, along with a large silver inkstand. The inscription on the bowl was as follows: "Presented to Dr. and Mrs. Livingstone by the members and teachers of the Stanhope School Board and other friends, as a memento of their silver wedding, and as a token of the doctor's long and faithful service to education." Dr. Livingstone is a magistrate for the county of Durham, as well as an alderman of the county council. He has for several years held the post of chairman of the health committee of the county, and has done excellent work in sanitation. Dr. Livingstone has also been a member of the Stanhope School Board since its formation twenty-six years ago, and for twelve years he has been its chairman. He was also chairman of the Weardale Board of Guardians for many years.

MEDICAL VACANCIES.

The following vacancies are announced:

BELFAST: FORSTER GREEN HOSPITAL FOR CONSUMPTION.—House Physician. Applications to Honorary Secretary, Staff, Forster Green Hospital, Forthoda, Belfast, before November 24th.

BIRMINGHAM: GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. Residence, board, and washing provided. Applications to the House Governor by November 25th.

BRISTOL GENERAL HOSPITAL.—Assistant Physician. Applications to the Secretary by November 22nd.

BRISTOL ROYAL INFIRMARY.—Dispenser. Non-resident. Salary, £150, with dinner and tea. Applications to the Secretary by November 13th.

BUENOS AIRES BRITISH HOSPITAL.—House-Surgeon. Salary, £200 first year, £250 second year, and £300 third year, with board, lodging, washing, and wine allowance. Applications to Dr. Louis Colbourne, Berkhamsted, Herts.

BURY ST. EDMUNDS: SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £130 a year, with board, lodging, and washing. Applications to the Secretary by November 20th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Board and residence provided. Applications to the Secretary by December 12th.

CITY OF LONDON UNION.—Assistant Medical-Superintendent for the Infirmary, Bow Road. Must not be more than 35 years of age. Salary, £150 per annum, with furnished apartments, rations, and washing. Applications, on forms provided, to be sent to the Clerk to the Guardians, 61, Bartholomew's Close, by November 20th.

EDINBURGH ROYAL INFIRMARY.—Superintendent. Salary, £500 per annum, with free house, coal, and light. Applications to Mr. W. Caw, Treasurer and Clerk, by November 15th.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to J. F. Wintringham, Honorary Secretary, St. Mary's Chambers, Great Grimsby, by November 18th.

GUY'S HOSPITAL.—Joint Lecturer and Senior Demonstrator of Physiology in the Medical School. Applications to the Treasurer, Superintendent's Office, Guy's Hospital, London Bridge, S.E.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon; unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary by November 15th.

HOSPITAL FOR CHILDREN, Great Ormond Street, Bloomsbury.—Resident Medical Superintendent. Appointment for one year, subject to annual re election. Salary, £105 a year, with board and residence. Applications to the Secretary by November 21st.

HOXTON HOUSE ASYLUM.—Clinical Assistant. Honorarium, £50 a year. Applications to the Medical Superintendent.

LEEDS GENERAL INFIRMARY.—Honorary Obstetric Physician. Applications, marked "Private," to be sent to the Treasurer by November 28th.

LINCOLN: BRACEBRIDGE ASYLUM.—Junior Assistant Medical Officer; unmarried, and not over 30 years of age. Salary, £125 per annum, with furnished apartments, board, attendance, etc. Applications to Mr. W. T. Page, jun., 5 and 6, Bank Street, Lincoln, by November 25th.

LIVERPOOL DISPENSARIES.—Senior Surgeon at the East Dispensary. Salary, £200 per annum, with board and apartments. Applications to the Secretary, 34, Moorfields, Liverpool, by November 14th.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL, Park Hill.—Resident Medical Officer. Unmarried and must not exceed 30 years of age. Salary £120 per annum, increasing to £140, with board, washing, and lodging. Applications, endorsed "Resident Medical Officer," to be addressed the Chairman of the Port Sanitary and Hospitals Committee, under cover to the Town Clerk, Municipal Offices, by November 20th.

LONDON LOCK HOSPITAL, Harrow Road, W.—House-Surgeon to the Female Hospital. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by November 18th.

MANCHESTER: ST. MARY'S HOSPITAL, Quay Street.—Resident Medical Officer. Appointment for six months, subject to re-election. Salary £65 per annum, with board and residence. Applications to Thomas Browning, Chartered Accountant, by November 16th.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer; unmarried. Salary, £125, with board, apartments, and washing. Applications to the Medical Superintendent by November 20th.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon; unmarried. Salary, £140 a year, with furnished apartments, coal, gas, etc. Applications to the Secretary.

OXFORD EYE HOSPITAL.—House-Surgeon. Honorarium £50 on completion of a year's residence, with board and lodging. Applications to the Honorary Secretary, 29, Banbury Road, Oxford, by November 30th.

OXFORD: RADCLIFFE INFIRMARY.—Surgeon. Applications to the Secretary by November 25th.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—First and Second Assistant House-Surgeons. Appointment for six months, but renewable. Salary, at the rate of £65 per annum with board and residence. Applications to the House Governor by November 15th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—(1) Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. (2) Ophthalmic Surgeon: (3) Dental Surgeon; (4) Physician; (5) Physician to Out-patients. Applications to the Secretary for the first post by November 7th, and for the remainder by November 18th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—Clinical assistants. Applications to the Secretary by November 25th.

ST. JOHN'S WOOD AND PORTLAND TOWN PROVIDENT DISPENSARY.—Third Medical Officer. Emolument, a third share of an honorarium of £120 and midwifery fees. Applications to the Secretary, 1, Hensbridge Villas, St. John's Wood, N.W., by November 17th.

ST. LEONARD'S-ON-SEA: CHELSEA HOSPITAL FOR WOMEN CONVALESCENT HOME.—Honorary Medical Officer. Applications to the Secretary of the Hospital, Fulham Road, S.W., by November 13th.

ST. NEOTS: THREE COUNTIES ASYLUM.—Second Assistant Medical Officer; unmarried and under 30 years of age. Salary, commencing at £125 per annum, with board etc. Applications to F. G. Butler, Clerk to the Visiting Committee, St. Neots, Hunts, by November 15th.

SCARBOROUGH HOSPITAL.—Assistant Resident House-Surgeon. Appointment for six months, subject to re election. Salary, at the rate of £50 per annum, with board and lodging. Applications to the Honorary Secretary by November 18th.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—(1) Honorary Ophthalmic Surgeon. (2) Honorary Dentist. Appointments for five years. Applications to the Secretary by November 18th.

WOOLWICH UNION.—Assistant Medical Officer at the Infirmary, Plumstead; unmarried, and not more than 30 years of age. Salary, £100 per annum, rising £10 yearly to £130, with apartments, rations, and washing. Applications, on forms provided, to be sent to the Clerk to the Board, Union Office, Woolwich, by November 15th.

WORCESTER GENERAL INFIRMARY.—House-Surgeon. Salary. £100 per annum, with board and residence. Applications to the Secretary, Worcester Chambers, Pierpoint Street, Worcester, by November 25th.

MEDICAL APPOINTMENTS.

BANKES-PRICE, Hugh, M.R.C.S., L.R.C.P., appointed Honorary Medical Officer to the Coventry and Warwickshire Hospital, *vice* F. M. Hare, M.D., resigned.

BARNARDO, F. Fleming, M.A., M.B., Ch.B., appointed House-Surgeon to Royal Maternity and Simpson Memorial Hospital, Edinburgh.

CLOSE, N., L.R.C.S.I., L.R.C.P., appointed Medical Officer for the No. 2 District of the Chard Union.

DAVIES, J. T., M.D.Mich., M.R.C.S., L.R.C.P., appointed as Clinical Assistant to the Chelsea Hospital for Women.

FORDYCE, A. Dingwall, M.B., B.Ch., appointed House-Surgeon to Royal Maternity and Simpson Memorial Hospital, Edinburgh.

GERVIS, F. Harcourt, M.D.Brux., M.R.C.S., L.R.C.P.Lond., appointed Clinical Assistant to Paddington Green Children's Hospital.

HALL, Walker, M.B., B.Ch., appointed Senior Demonstrator in Physiology at the Owens College, Manchester.

MCELLIGOTT, Maurice G., D.P.H., L.R.C.S.I., L.R.C.S.I., appointed Medical Superintendent of Belper Isolation Hospital, *vice* E. Gaylor, L.R.C.P.E., L.F.P.S.G., retired.

PHILLIPS, Hugh R., M.B., Ch.B.Edin., appointed House-Surgeon to the Children's Hospital, Paddington Green, W.

SANDY, T. Edmonston, L.R.C.P., L.R.C.S.Edin., L.P.P.S.G., appointed Medical Officer to the Parish of Uist, Shetland, N.B., *vice* John E. Kennedy, M.B.C.M.Aberd., resigned.

SERJEANT, Robert, M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Officer to the Camberwell House Asylum.

SMITH, W. Brownlow, B.A., M.D., B.Ch., B.A.O.Dub., appointed Deputy Medical Superintendent to the Belper Isolation Hospital, *vice* M. G. McElligott, D.P.H., L.R.C.P., L.R.C.S.Irel., promoted Superintendent.

WILLIS, Harry Legge, M.R.C.S.Eng., L.R.C.P.Lond., appointed Junior Assistant Medical Officer to the Govan District Asylum.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M.—Clinical Cases:—Dr. E. Cautley: (1) Aphasia; (2) Congenital Heart Disease, probably Aortic: Dr. W. Ewart: (1) Persistent Lockjaw in an Edentulous subject, relieved by incising a tender portion of the gum; (2) Addison's Disease, with Unusual Pigmentation of the Nails, etc. Mr. B. L. Barnard: (1) Hernia Cerebri due to Tumour; (2) Two cases of Serpiginous Ulceration affecting the Eyelids: (3) Caries of the Skull due to Congenital Syphilis. Mr. F. C. Wallis: (1) Simple Comminuted Fracture of Tibia treated by wiring; (2) Pott's Fracture treated by wiring.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Mr. Wyatt Wingrave: Polypi, their Nature and Diagnosis.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. St Clair Thomson: Consultation (Nose and Throat).

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. Cheatle: The Diagnosis of Surgical Cases.

TUESDAY.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Sir W. Gowers: Epilepsy.

London Throat Hospital, 204 Great Portland Street, W., 4.30 P.M.—Dr. Furniss Potter: Examination of the Ear.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. William Ord: Consultation (Medical).

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street W., 4 P.M.—Dr. T. D. Savill: Cases of Neuralgia and Peripheral Neuritis.

Royal Medical and Chirurgical Society, 8.30 P.M.—A Discussion on The Open-Air Treatment of Tuberculosis will be opened by Dr. J. Kingston Fowler. Among the speakers will be Sir William Broadbent, Professor Clifford Allbutt, and Prof. Boyce.

WEDNESDAY.

Royal Microscopical Society, 20, Hanover Square, W., 7.30 P.M.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Wethered: Asthma.

Royal Meteorological Society, 25, Great George Street, Westminster, S.W., 7.30 P.M.

THURSDAY.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Dr. Amand Routh: Demonstration of Gynæcological Cases.

Central London Throat, Nose, and Ear Hospital, 5 P.M.—Dr. Dundas Grant: Diagnosis of Nasal Diseases characterised by Pain, Disturbances of Smell, etc.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Voelcker: Rickets.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Dr. Abraham: Cases of Skin Disease illustrating Diagnosis and Treatment.

Royal College of Surgeons of England, 3 P.M.—Annual Meeting of Fellows and Members.

Harveian Society of London, 8.30 P.M.—Dr. A. H. N. Lewers: Some Interesting Cases of Fibroid Tumours of the Uterus.

FRIDAY.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Dr. Sicker: Impaired Movements of the Vocal Cords.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 6 P.M., Mr. Richard Lake: Consultation (Disease of Ear).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

EVANS.—On November 5th, at 21, Charles Street, Cardiff, the wife of Frederick William Evans, M.D., of a daughter.

GIBSON.—On November 3rd, at Philbeach, Cowes, Isle of Wight, the wife of L. Percival Gibson, M.R.C.S., L.R.C.P., of a daughter.

LOWSON.—On October 31st, at Bishop Ryder's Vicarage, Birmingham, the wife of Charles Stewart Lowson, M.B., C.M., I.M.S., of a daughter.

MARRIAGE.

STORRAR—BANKS.—On November 1st, at St. Philip's Church, Southport, by the Rev. C. H. Hatfield, M.A., Vicar, William Morrison Storrar, L.R.C.P., L.R.C.S.Ed., Senior Honorary Physician North of England Children's Sanatorium, Physician Southport Hydropathic Hospital, to Mary Alice, youngest daughter of the late Richard Banks, of Liverpool.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1 p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1: S. 9.30; Skin, M. Th., 1: Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Tu. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30: Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Tu., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Tu. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

G. F. S. writes: Can any of your readers tell me of any book or books on Biblical medicine—author's name, and by whom published?

STAMMERER asks to have recommended a school where a somewhat delicate boy could be sent for general education, and with a view to cure his defect.

THORAX wishes to hear of a home on the south coast where a working girl threatened with phthisis could be taken in and if possible given treatment at an early date. It is three months before she can be taken into Ventnor Hospital.

RULES FOR A MEDICAL CLUB.

P.-D. writes: Will some member kindly lend me or inform me as to rules suitable for the medical officers of clubs. I, in the country, am offered a club at 4s. per head—subject to provisional rules. What is a reasonable sum to be demanded for fractures, spinal cases, accidents, night-journeys, admissions, surgery, etc.? I shall be grateful for any information.

ARTIFICIAL ILLUMINANTS.

B. A. writes: (1) Is the use of gas as an illuminant injurious to patients suffering from tubercle? (2) Is it correct that the Welsbach solid mantle does not produce carbonic oxide? (3) Is lighting by electricity giving favourable results in the London hospitals?

*** (1) Yes, unless means are taken to prevent the products of the combustion vitiating the air of the room, as by using some form of ventilating gas-light, or by having a shaft over each burner to allow of the escape of these products.

(2) We are not aware of any independent experiments on this point.

(3) Few of the London hospitals are yet lighted by electricity. The Middlesex Hospital and St. Mary's Hospital have now an electric installation, which, so far as a short experience goes, are said to be very satisfactory.

A QUESTION IN PRESCRIBING.

DR. ROGER EDWARDS (Tanyffordd, Colwyn Bay) writes: I have read with great pleasure and interest the discussion which took place at the annual meeting on Headaches and their Treatment. Dr. Lauder Brunton, F.R.S., in the course of his remarks on treatment, says "that salicylate of soda is apt to produce a feeling of depression, etc.," and to counteract this he generally gives "with it half a drachm of aromatic spirit of ammonia." But in Squire's *Companion to the British Pharmacopœia 1899* it is said that the salicylate of soda is turned brown by the addition of ammonia; also in Martindale's *Extra-Pharmacopœia* it is said "Salicylate of soda is not compatible with free ammonia, carbonate of ammonia, or aromatic spirit of ammonia, etc." We all know what a high authority Dr. Lauder Brunton is on all matters of pharmacology and therapeutics, and I should like to know whether any important change takes place on the addition of aromatic spirit of ammonia to solution of sodium salicylate or if it is merely a question of making a nice mixture. If I might be allowed to say it, I think too little notice is taken in prescribing of what a patient can take.

ANSWERS.

HALLOWEEN.—There appears to be no objection to the course which our correspondent proposes to pursue.

L. E. X.—There could be no objection to our correspondent giving a course of lectures to pupils attending the art and technical schools. We are advised that a reasonable fee would be 5 guineas.

NEMO.—Very few medical men are registrars of births and deaths. As to the emoluments of the post, they are too detailed to enumerate, but if application were made to the Registrar-General, he might perhaps furnish a table of fees payable to registrars.

J. W. P.—The preparations in question have been advertised and sold for years. They are of the usual quack order. We are informed that the proprietor was never a qualified practitioner. There is no law, unfortunately, which can be used to suppress the sale of such "remedies." It is a case of *caveat emptor*.

TOTAL OR PARTIAL DISABLEMENT.

INSURANCE.—In a case of injury to the right arm everything depends on the nature of the insured's occupation as to whether he is justified in claiming total or partial disablement. If he be retired from business, we are advised that the medical officer to the company would be justified in recommending that partial disablement only should be paid for.

OUTFIT FOR SOUTH AFRICA.

CIVIL SURGEON.—We have communicated with Surgeon-General Hamilton, late P.M.O. for South Africa, who informs us that the advice which he gave in the BRITISH MEDICAL JOURNAL of September 30th, 1899, p. 879, to officers of the Royal Army Medical Corps will generally apply to civil surgeons. He thinks that as the civil surgeon will probably be employed at the base or in field hospitals on lines of communication, a few more comforts in the way of clothing, bedding, etc., might be taken, but he insists that the civil surgeon should go as lightly equipped as possible. He adds that a good waterproof coat, shooting boots, and leggings should be taken.

MEDICAL ANNOUNCEMENTS IN HOTELS.

DUBIOUS.—A correspondent draws our attention to another form of medical advertisement, in which a doctor's name and telephone number are placed over the telephone at one of the principal railway hotels in a large city. This is not an isolated instance, but is only an illustration of a practice which is unfortunately becoming common. We do not think that members of the medical profession should allow their names and addresses to be put up in conspicuous places at hotels, and we think that the attention of the qualifying bodies concerned should be drawn to the matter.

TREATMENT OF SORE NIPPLES.

DR. H. COOPER ROSE (Maida Hill, W.) writes: In reply to "Antilles" in the BRITISH MEDICAL JOURNAL of November 4th, I would call his attention to vol. iv of the *Transactions of the Obstetrical Society*, page 135, where he will find a description of a nipple shield which I and many others have found infallible. I have since improved it by rendering the mouthpiece flexible. It is equally useful in ordinary sore nipples as it is in cases of inverted nipples. I have found the application of equal parts of glycerine and tinct. benzoin co frequently applied to the nipples for two or three weeks before the labour most useful, and continued afterwards. The shields are to be procured from Coxeter, of Grafton Street; Maw, of Aldersgate Street; Weiss, and others.

*** The principles of these shields, as stated by Dr. Rose in his paper referred to above, are: (1) That the cylindrical portion should be long enough to ensure a space between the end of the nipple of the mother when fully drawn out and the end of the shield so that the lactiferous ducts are not closed by pressure against the side of the shield; (2) that the diameter should be large enough to render strangulation of the nipple impossible; (3) that the shield should be smooth and unyielding so as to avoid friction, and transparent so that the position of the nipple and the flow from it may be observed; (4) that the mouthpiece should resemble the natural nipple, and should be so arranged that it cannot collapse and allow the child to suck in air. The instrument as figured consists of a shield with a large reservoir for the nipple and a cone-shaped mouthpiece over which an india-rubber nipple is slipped or a piece of washleather tied.

DR. WANNAN (Airbroath) suggests that, in the event of the patient having another child, the nipples should be painted with port wine, using a camel-hair brush, twice a day one month previous to her confinement, and, if required, after.

NOTES, LETTERS, Etc.

A CORRECTION.

DR. WILLIAM W. IRELAND (Mavisbush, Pulton, Midlothian) writes: I regret that in my letter which appeared in your number of November 4th, p. 1314, in commenting on the suggestion that the medical examinations should be kept strict in consideration of the crowded nature of the profession, Dr. Saundby's name was put in place of Dr Sommerville's. I should be obliged if you would allow me to correct this mistake.

THE COST OF MEDICAL EDUCATION.

SCOT writes: Your correspondent "Nemo" seems, like many others, to be under an extraordinary delusion as to the cost of medical training and the general culture of medical students as compared with the cost and culture of other professions. Let me give the facts as regards Scotland. In Scotland, so far from the medical being the cheapest and easiest profession to enter, it is by a long way the most expensive and difficult. The ordinary member of the legal profession, the law agent, can live at home during his whole apprenticeship, has no college classes whatever to attend, and a payment of £10 on passing his legal examination is his only outlay. Who would for a moment compare this with the cost of a medical education? Then as to culture. It is only within the last year that the lawyer's general knowledge examination has been raised to the standard of the doctor's one. And besides, during the medical curriculum, the student gets some knowledge of several natural sciences in which the legal student gets no training whatever. The Scotch lawyer therefore, so far from having a costlier and a superior training to the doctor, has a much cheaper and inferior training.

The Scotch clergyman, again, though he generally has a better arts education than the doctor, has a much inferior scientific one, while the cost of becoming a clergyman is undoubtedly much less than of becoming a doctor. Any Scotch parent whose means are limited would soon tell "Nemo" that it would be much easier and cheaper to make his son a clergyman or a lawyer than a doctor.

As to England I speak from hearsay, but I believe that there too it costs a parent much more to make his son a doctor than either a lawyer or a clergyman. For while a solicitor, for example, has to pay down £200, or perhaps £300, for his indenture, yet he can always live at home during his apprenticeship, and can pass his qualifying examination without attending any classes or living in a large city. The whole cost, therefore, to a solicitor can certainly not exceed the £600 or £1,000 you mention as required for a medical education, and in the great majority of cases must be much less. Nor is the solicitor's general knowledge examination of a higher class than the doctor's, while, like the Scotch lawyer, he has no scientific training whatever. Barristers, on the other hand, like the Scotch advocates, have generally a better art course training than doctors, but they too have no scientific training; while their legal education, like that of the Scotch advocates again, is, as compared with that demanded of medical men, a mere farce. The cost of becoming a barrister is also, I believe, much less than that involved in becoming a doctor, since less of a college career is required.

No; the differences which the *Spectator* thinks it sees between the medical and some other professions do not arise from either the less cost or the greater ease of training, for the facts decidedly contradict this idea. Rather they arise, I think, after student days are past, and are due to the smaller amount of leisure that is available for the medical man; and this want of leisure comes, I imagine, partly from the long and irregular hours a doctor must work, and partly from the much smaller pay he gets for his work. Could a doctor reserve for himself as many hours of his day as the lawyer or clergyman can, or were these

within his reach the many appointments, each worth thousands of pounds a year, and yet allowing months of entire holiday every year that are open to the lawyer, the doctor might then well hope to take that lead in general affairs which the extent and thoroughness of his training undoubtedly at present give him in professional affairs.

CANCER IN THE LOWER ANIMALS.

DR. HERBERT SNOW (Gloucester Place, W.) writes: It is to be regretted that Mr. W. M. Scott's interesting case should have been made matter of controversy, and himself derided for a view which has every indication of being perfectly correct. He says: "My case was not a case of cancer—at least as we interpret the term." It has been shown that a heterogeneous assortment of diverse tissues is the most typical mark of the numerically small class of blastomata—congenital cancers—derived from some unobliterated embryonic vestige. These are exceptional developments, widely different in most features from ordinary cancer and it is scientifically most essential to discriminate between the two. The association of bone, cartilage, large cysts, and glandular epithelium in acini described by Mr. Scott, stamp his case as of the former class, certainly not of the latter. A like condition occasionally occurs in the breast of the human female.

This question of cancer in the lower animals is particularly important in respect of those which are used for food. Commonly among butchers actinomycosis is termed cancer. I believe the disease is very prevalent in certain districts. The carcasses are sent into the market, and, as I am informed, fetch as high a price as healthy ones. I heard recently of a whole flock of lambs affected by "cancer," and sold for food without question. Whether such meat is prejudicial to health we do not know. At any rate, I have reason to believe that it is passed by the health inspector, and extensively sold. Ignorance is bliss. We should none of us like to eat the flesh of actinomycotic beasts with our eyes open.

But it is further highly important to ascertain how far true cancer prevails, and whether the diseased animals are similarly utilised by the trade as "prime English meat." A Society with which I am connected is actively investigating the matter, together with the preceding. On both points we are now almost entirely in the dark. Any light your readers may be able to throw upon these very practical questions will be most useful.

DENTISTS' TELEPHONES.

MR. HENRY C. CARTER (Edgware Road, W.) writes: Some weeks ago I called the attention of the National Telephone Company to their apparent injustice towards the dental as compared with the medical profession in not letting the members of the former have the use of the telephone on the same terms as those of the latter. Since then the Board has had the matter under consideration, and I am now pleased to inform my *confrères* that I had a letter from the district manager, stating that the Company will be pleased to make the same concessions to the dental that they have made to the medical profession—that is, £10 per annum for the use of the telephone.

THE SUPPLY OF SPECTACLES.

M.R.T.—It appears that a Dr. William Radford (Sidmouth) exercises his philanthropy by supplying spectacles gratis to the poor. We learn from a letter from this gentleman that he sees most of his patients, but when they cannot attend they receive a copy of this post-card:

FROM DR. RADFORD (SIDMOUTH).

Please to send one line of the smallest print that can be read with perfect ease, a foot off without glasses.

It appears to be generally believed that a large legacy has been left to Dr. Radford and that he is bound by the terms of the bequest to give spectacles to all who apply for them.

For this belief there is no foundation whatever.

We have no doubt that Dr. Radford is animated by the best intentions, but we think he would show a truer philanthropy by confining his benevolent practice to patients whom he is able to see in person.

SECRET COMMISSIONS.

TWO correspondents send us copies of a circular received from the B.C. Century Thermal Bath Cabinet Company, dated from Regent House, Regent Street, London, W. The circular, we are sorry to see, offers a "royalty" to doctors on the sale of these cabinets, and asserts that "scores of doctors have accepted this offer." As it bears internal evidence of being of Transatlantic origin, we hope that this does not refer to our own countrymen.

TREATMENT OF OBSTINATE HICCOUGH.

DR. RICHARD NEALE (Hampstead, N.W.) writes: At page 1148 of the BRITISH MEDICAL JOURNAL of October 21st Mr. George Pernet mentions the value of snuff in obstinate hiccough, but fails to find notice of its use in recent works. A glance at Section 962-5 of the *Medical Digest*, 1890 edition, and also *Appendix* of 1895 will show that its value is not unknown.

CITO, TUTO, SED NON JUCUNDE.

DR. THEOBALD A. PALM (Wigton, Cumberland) writes: In connection with the discussion reported in the BRITISH MEDICAL JOURNAL of November 4th on the advisability or otherwise of giving sodium salicylate in gout, I should like to mention that I once lost a patient through it. The patient was an elderly lady who had passed through many an attack of gout. When she came into my hands I prescribed sodium salicylate, with the result that she was frightened by the rapidity of her relief from pain, and by the simultaneous ringing in her ears. By an unkind irony of fate I was informed that my medicine had suppressed the gout and sent it to her head, and so firmly was she convinced of this in spite of my disclaimers, that on her next attack of gout a more orthodox practitioner was called in.

REJECTIONS AT EXAMINATIONS.

M.D. writes: I should be glad to know if universities, which I understand are public institutions and not private ones, have the power to refuse a candidate an oral examination when fairly good written papers have been given in?

That there are numerous unfair rejections at these examinations there can be no doubt, anyone who has studied the subject must be aware that it is often the very superficial candidate who will pass, when one who has a deeper knowledge will fail to do so.

Like a chemist who has to analyse a simple chemical substance and a more complex proteid material, all that can be found out in the simple substance is done in a short time, but he may work long at the more complex proteid material, and unless he is an efficient chemist may fail to find out its different parts. So it is with the examiner. Thus an inexperienced or not very expert examiner will too often pass a more superficial candidate when he will fail to find out the truth about one who has studied the subject more deeply.

LETTERS, COMMUNICATIONS, ETC., have been received from

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AN ADDRESS
ON
MENINGITIS,

Delivered before the Birkenhead Medical Society.

By JAMES BARR, M.D.,

Physician, Liverpool Royal Infirmary; Lecturer on Clinical Medicine, University College, Liverpool.

Gentlemen,—When I selected the subject of Meningitis for this address I was well aware that I was coming before an audience of practical men who would appreciate any serious attempt to reduce the fearful mortality which has hitherto attended this disease. I may now speak of it as a protean malady, because there are not only many varieties of the disease, but many of the symptoms—more or less common to all the varieties—are very varied in their obtrusiveness, and very closely resemble those of other acute diseases, so that this affection is frequently not recognised at an early stage.

In the *Liverpool Medico-Chirurgical Journal* for January, 1891, I published an account of 13 cases, with only one death. This exceptionally good result was no doubt largely due to fortuitous circumstances, to the fact that the cases came early under my observation, and to the fact that I then excluded all tuberculous cases. However under any circumstances 12 recoveries from meningitis was a result with which anyone might feel pleased. Since then I have copious notes of 26 cases with 10 deaths; of these

3	died	within	24	hours	of admission.
1	,,	,,	48	,,	,,
2	,,	,,	72	,,	,,
1	,,	,,	96	,,	,,

Moreover three of the deaths were from tuberculous meningitis, and one from cerebro-spinal fever.

Of all the cases 20 were males and 6 females. The ages of the males ranged from 5 to 30, the average age being 16.6; of the females from 2 to 28, the average age being 15 years. I have seen many other cases in the practice of my colleagues and in consultation, but these 26 cases will suffice "to point a moral or adorn a tale."

I have taken the subject of meningitis in its widest sense to include all inflammatory processes of the meninges, however originated; but pachymeningitis, externa and interna, chiefly come under the care of the surgeon and alienist respectively, so that I need not do more than mention them here except to point out that in many cases of extension of inflammation from the middle ear to the pia the dura mater is also involved, and over the petrous bone all the membranes may be matted together. Here again the treatment is largely surgical.

We shall now come to the subject proper of the paper, leptomeningitis. The classification of the various types of disease which are grouped under this generic head is still very indefinite, and an anatomical basis is frequently adopted accordingly as the base, the vertex, or the ventricles of the brain are chiefly affected. This division is sometimes convenient, but not of much practical importance, except for explaining variations of clinical symptoms, as in very few cases is the affection limited to one particular area. Of much more value would be a classification founded on the etiology, and in this direction we may hope in the future to learn much from bacteriology. So far it has not taught much more, except in the case of cerebro-spinal fever, than that a great variety of micro-organisms have been found; consequently we have still to speak, as our fathers did before us, of simple, purulent, tuberculous, and syphilitic meningitis. All these varieties present many features in common, so our first object should be to determine whether the patient be suffering from meningitis, and then as far as possible settle its location, and from a careful study of the history and symptoms of the case determine its nature.

Etiology.—The disease, especially the tuberculous variety, is most common in childhood, but the incidence in adult life is greater than is generally supposed. In the *Liverpool Medico-Chirurgical Journal* for July, 1885, the late Dr. Oxley recorded 63 cases with 62 deaths, all under the age of 10 years. These occurred in a practice of 22 years' duration, which was almost exclusively amongst children. It is more prevalent among males than females. Among other predisposing causes may be mentioned heredity, bad sanitary surroundings, deficient nourishment, and mental over-work. However predisposed the individual, the lighting up of the inflammation must in every case be ascribed to an infective process. In fact it is doubtful whether such causes as insolation, traumatism, with even laceration and hæmorrhage can be looked upon as other than remote agents. The meninges, like other serous membranes, injured or uninjured, are liable to inflammatory processes which may be started by various pathogenic micro-organisms or their toxins. It has been often stated that the presence of tubercles in the meninges is capable of setting up irritation and inflammation, but it is more highly probable that the tubercles and meningitis are the results of a common cause, the tubercle bacili and their toxin. In fact in many cases the inflammation is out of all proportion to the number of tubercles, and the clinical symptoms are often more pronounced than would be readily accounted for by *post-mortem* appearances, so that in such cases there must be a general toxæmia, the brunt of which is borne by the nervous system. Every physician of experience when viewing a necropsy in many a case of tuberculous meningitis, must have asked himself, Why did this child die? a question which would be often difficult to answer if he had no knowledge of the previous nerve storm. The explosion has been kindled by a toxin which the grosser pathology does not reveal, but which should not be beyond our powers to render harmless. We must not cry *non possumus*, that tuberculous meningitis is necessarily a fatal disease; we must not apply such balm to our consciences as that the disease is incurable; "that blessed word Mesopotamia" must give way to healthy action. In future we will not have to ask the question in such cases why did the patient die, but why did we allow him to die? Many of the other micro-organisms, such as the streptococci, which attack the meninges are much more deadly in their effects. A meningitis which has reached a suppurative stage must be looked upon as almost necessarily fatal unless this result can be averted by surgical interference. Micro-organisms may reach the meninges through different paths, such as middle ear disease, necrosis of the petrous bone, disease of the sphenoid and ethmoid bones and upper nasal cavities. A tumour or abscess of the brain, or a septic thrombus may start a local or general inflammation. They may also be conveyed by the blood, or travel along the lymph channels. It is occasionally caused by many of the acute infectious diseases such as pneumonia, erysipelas, measles, scarlet fever, typhoid fever, septicæmia, ulcerative endocarditis, etc. It must often be doubtful as to whether the micro-organisms or their toxins are the exciting causes. In tetanus, for example, it is highly probable that the active congestion produced by the toxin would soon be worthy of the name of inflammation if the patient survived. The rheumatic poison, which is not generally ascribed to a micro-organism, may give rise to a basilar inflammation just as it lights up a pericarditis. I believe the pneumococcus is a not infrequent source of infection, but I cannot agree with those who assert that such cases are usually suppurative. This is a short-lived organism which is very susceptible to treatment. To an allied organism, the diplococcus intracellularis of Weichselbaum, cerebro-spinal fever is due. In a recent epidemic of this disease in Boston, Professor Osler found this organism in the cerebro-spinal fluid obtained by lumbar puncture. Councilman and others have also shown that the diplococcus intracellularis is the cause of this disease. To the influenza bacillus meningitis has been not infrequently ascribed, and we know that, independently of this affection, it has often caused optic neuritis and middle ear disease.

Syphilis as a rule gives rise to a local rather than a general inflammation.

Meningitis associated with external wounds is usually septic, and, notwithstanding the advances of surgery, is often fatal. In such cases the presence of micro-organisms is easily explained, but in most other instances they must find an entrance through the blood or lymph channels. It is highly probable that there are often organisms present in the blood and tissues which in normal conditions are destroyed, but which in states of depraved health find a suitable nidus in the vascular pia.

Leptomeningitis infantum, to which a very lengthy article has been devoted in *Ziemssen's Cyclopædia*, is probably a title which will disappear with advancing knowledge. It is chiefly used to cover those cases in early childhood which are not distinctly tuberculous, and especially such as recover. It is a simple inflammation probably of toxic origin, and may occur under very varied circumstances. We all know how many specific diseases in childhood are ushered in by convulsions and other cerebral disturbances. The delicate nervous system may be so damaged by these explosions that meningitis may be readily set up.

Pathology.—The inflammation is marked in the early stages by redness of the pia mater and slight lymph effusion into the perivascular and subarachnoid spaces. The chief incidence of the process may fall on the convexity, the base, or the ventricles. Tuberculous meningitis usually commences at the base and extends up the Sylvian fissures, and is attended by inflammation of the choroid plexus with effusion into the ventricles. When this latter is great the surface of the convolutions may be flattened and have a dry appearance. A few small opaque white miliary tubercles are found along the course of the vessels, and tubercle bacilli have been found in the subarachnoid and spinal fluid. Very often the macroscopic appearances are comparatively slight, and seem quite insufficient to account for death. When the disease is more protracted there is often a considerable amount of opaque gelatinous lymph between the optic chiasma and the pons, at the commencement of the Sylvian fissures and over the rest of the base, along the sides of the pons, on the under surface of the cerebellum and around the medulla. The lymph over the fourth ventricle may be so dense that the foramen of Majendie gets closed, and there is no escape for the ventricular fluid, which then accumulates and distends the ventricles, giving rise to the condition termed acute hydrocephalus. There is a considerable amount of subarachnoid fluid in the lacunæ of the base, and the sheaths of the optic nerves may be much distended. My own limited observation agrees with that of Gowers that "the inflammation is never actually purulent," but Huguénin in *Ziemssen's Cyclopædia* asserts that in protracted cases "general purulent inflammation of the pia is the second great lesion of this disease."

In a large proportion of cases of tuberculous meningitis in children the disease is primary, or at least in a considerable number of *post-mortem* examinations no other primary source of infection has been found. Possibly if the bowel were more systematically examined in these cases a source would be then occasionally discovered. I recollect being once asked to see a case of supposed typhoid fever, which I felt confident was one of meningitis. I was afterwards told that at the *post-mortem* examination two typhoid ulcers were found in the ileum, but I have never felt absolutely convinced that those ulcers were not tuberculous. In adults this disorder is invariably secondary to tuberculous deposits in other organs.

We occasionally get a simple basilar meningitis which runs a very protracted course, six to eight weeks. There is considerable effusion of lymph at the base; in two cases I have seen it almost half an inch thick in places. There is usually a large collection of fluid in the ventricles owing to obstruction to the exit, and to inflammation of the choroid plexus. There is considerable fever, and the disease starts with a very acute onset, and as the mental symptoms are not pronounced it is occasionally mistaken for typhoid fever. The pathology is still unsettled. In some cases the disease runs a more subacute and even chronic course, "with formation of indurated patches of connective tissue, strangulation and lesion of the nerves of the base, but without hydrocephalus."[1] I believe I have a case of this kind under my care in the Royal Infirmary at present. It is that of a bright, intelligent, healthy-looking, well-nourished servant girl, aged 21. She was at service in Manchester, and nine weeks before admission to the infirmary she began to suffer from violent headache especially about the temples and forehead, and vomiting after every article of food which she took. There was slight mental confusion, such as forgetting whether she had seasoned the food which she was cooking, but these failures of memory were readily corrected by taste. She continued at her work and had no medical advice for four weeks, when getting very weak she returned to her home in Cumberland. The vomiting and headache continued for two weeks more, when it ceased, and she then became suddenly blind. At the end of three more weeks she was sent by her medical attendant to the Liverpool Eye and Ear Infirmary on account of loss of sight. Mr. Shears found advanced optic atrophy in both eyes and almost absolute blindness. He sent her on to me. On admission there were also paresis of the left abducens oculi nerve, weakness in the grasp of the right hand, and absence of the knee-jerks. My colleagues and self at first diagnosed the case as one of cerebellar tumour, but I now look upon it as a case of chronic basal meningitis involving the optic nerves and extending up the left Sylvian fissure. The grasp of the right hand is now as strong as that of the left, and the paresis of the left external rectus muscle has disappeared, but the knee-jerks are still absent. In short she is mentally and physically quite well except for complete blindness.

[1] Huguénin, in *Ziemssen's Cyclopædia*.

About twelve years ago I had under my care a somewhat similar but more severe and more protracted case in a young man, in whom the eye symptoms were the first to attract attention. He consulted Mr. Bickerton to see if he could give him glasses to correct his failing sight as he was soon about to be married. Mr. Bickerton found advanced double optic neuritis, and sent him to me. The meningits extended down the cord as far as the cervical enlargement, and involved the brachial plexus on the left side. The illness lasted about six months, but with the exception of total blindness he got well, and I believe he is still alive.

Basal inflammation may arise from diseased bone, abscesses, and growths; and that associated with influenza usually starts here, but is not confined to this region.

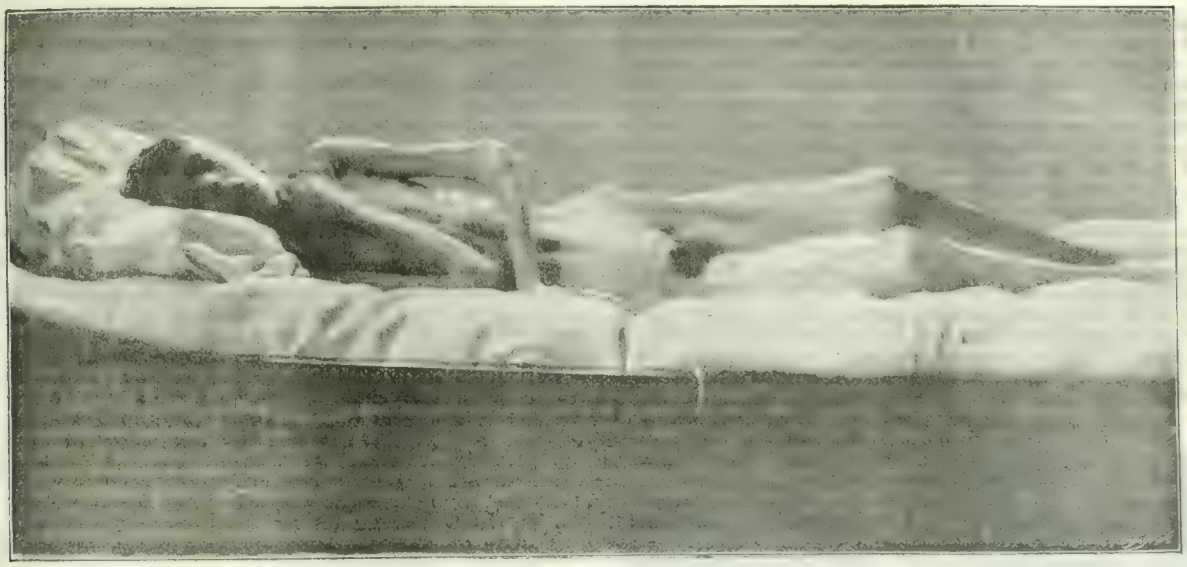
Meningitis arising in connection with insolation, pneumonia, erysipelas, septicæmia, ulcerative endocarditis, or any of the acute specific diseases usually begins in the convexity. In cerebro-spinal fever the convexity, base, ventricles, and spinal meninges are all affected, and in severe cases the disease rapidly progresses to the formation of pus which is situated in the subarachnoid spaces and does not float freely in the cerebro-spinal fluid. This has been an almost unknown, or I should rather say an unrecognised disease in this neighbourhood for many years. Those who are interested in the subject will find an excellent digest by Dr. Ormerod in Clifford Allbutt's *System of Medicine*. From a paper by Captain Buchanan, of the Indian Medical Service, published in the *Dublin Journal of Medical Science*, February, 1899, this disease would seem to have a wider geographical distribution than that ascribed to it by Hirsch. Last year I made a *post-mortem* examination for the coroner of this city in what I believe was a case of this disease. The whole surface of the brain under the arachnoid was covered with a thick layer of greenish yellow creamy pus which extended down the spinal canal; there was also a considerable amount of curdy pus in the ventricles. The history in this case was that the woman had been going about her household work and getting often drunk until three days before her death.

When the meningitis arises from middle ear disease, or necrosis of bone, the dura is also affected, is usually glued to the pia, and there may be a collection of pus between it and the bone. Pus is not often free in the arachnoid cavity except in cases of compound fracture of the skull or those in which an abscess in the brain has burst.

There is often slight softening of the cortical surface, especially in purulent meningitis; and when the choroid plexus and velum interpositum are involved the ventricular walls are softened.

Symptoms.—The symptoms vary considerably according to the site and nature of the inflammation. but there are many points common to all cases, so it will suffice for our purpose to give a general description, and at the same time note the variations which occur. A series of phases in the progress of the disease have been described under the terms prodromal, irritative, pressure, and paralytic stages. This arrangement is fairly convenient for descriptive purposes if it be clearly understood that the borderland between the different stages is generally ill-defined.

The prodromal stage is chiefly marked in the tuberculous variety, and therefore as the groundwork of our picture we will take a case of primary tuberculous meningitis in a child. For two or three weeks there are vague indefinite indications of general failure in physical and mental energy, with perhaps



slight loss of flesh. There is lassitude and general *malaise*, slight frontal headache aggravated by fatigue either mental or physical. The child may not complain of the headache because he desires to be left alone, apart from all noise and play. There is frequently slight giddiness, and occasionally vomiting after food, which may or may not have been of an indigestible nature. The appetite is poor. There is mental irritability, restlessness at night, grinding of teeth which may have been ascribed to worms, sleeps with eyelids not firmly closed, and often wakes up with nightmare or a scream. It is said that the disease is sometimes ushered in without any prodromal stage in the midst of perfect health, but this I do not believe. It is true the child may not have complained, but the symptoms were there plainly depicted to any observant eye. The parents excuse their faulty observation by denying the existence of signs which they failed to perceive. You may get them to admit that they thought the child rather lazy and inattentive. In this stage there is often a slight rise of the evening temperature to 99° or 99.6°. If there be primary tuberculosis in other organs the prodromal stage may be masked and shortened.

In the other forms of meningitis there is scarcely any prodromal stage, certainly not more than two or three days.

In the second or irritative stage, with which the commencement of the disease is usually dated, the symptoms are much more pronounced, the headache is severe and marked by exacerbations, there is general hyperalgesia so that the child cannot bear to be handled, there is intolerance of light and sound so that the patient lies huddled up in bed, and if left alone will probably make no complaint. His eyelids may be kept firmly closed but relax during sleep; pupils are rather contracted. There is somnolence rather than sound sleep, and muttering delirium at night. The patient may or may not complain of giddiness, but the vertigo will be generally noticed when he gets out of bed to urinate or for some other purpose by his using one hand to steady himself. There is frequent vomiting of an explosive character after food; the bowels are usually constipated and abdomen retracted. The temperature generally ranges from 99° to 102°, but may be much higher, and is very variable in its fluctuations. Pulse slow and moderately firm, as a rule under 100, bnt it is also liable to great fluctuations in frequency. The tongue is at first clean and moist, but afterwards becomes slightly furred. If there be any dry secretion in the nose or cracked lips the patient is frequently picking at them. The skin is dry, and *tache cérébrale* well marked.

There is now marked rigidity of the neck and retraction of the head, so that any attempt to straighten the neck or bring the chin down on the sternum causes great pain. In cases of cerebro-spinal fever there may be marked opisthotonos. There may be aphasia and muscular twitchings or local convulsions but these symptoms are usually deferred to a later period. This stage generally lasts about a week, but under judicious treatment it may be protracted, the further downward progress delayed, and I hope in many cases averted.

In other forms of meningitis the disease is ushered in much more abruptly and with greater violence than in the tuberculous variety. There is headache, restlessness, delirium, vomiting, hyperalgesia, vertigo, early rigidity, and weakness of the limbs. The deep and superficial reflexes are as a rule increased and remain so until the pressure stage, but here again there is a liability to great variation. I have often seen the knee jerks present one day and absent the next, and the same may be said of ankle clonus. Owing to the hyperalgesia and over-action of the flexors it is often difficult to elicit the deep reflexes. Tongue clean and moist, bowels constipated, and abdomen retracted. The temperature has a higher range than in the tuberculous form, generally from 101° to 103°, but may reach 104°, 105°, or 106°. Its chief characteristic is its great variability and sudden fluctuations. The pulse is slow, firm, and infrequent especially in the adult, it may be only 40 and is usually below 100 per minute. In purulent meningitis there is a high range of temperature without much fluctuation. In the septicæmic variety there may be very little headache, and the case passes rapidly into coma.

There is somnolence, confusion of ideas, and delirium, but when he is roused up he answers questions intelligently, and is perfectly conscious. Sometimes when an adult is roused out of active delirium and asked what is the matter, he looks confused, and answers "Oh! nothing, I have got a headache; why did you wake me"? Unlike typhoid fever the headache does not abate when the delirium sets in. There are often periods when the patient is perfectly conscious and appears much better.

In basilar meningitis there is marked rigidity of the neck and retraction of the head, but general hyperalgesia, sensitiveness of the special senses, increased reflexes, weakness, and rigidity of the limbs are more pronounced when the convexity is affected. In this latter case there may be general convulsions especially in children, the pupils are contracted, and at a later period become dilated and unequal. Optic neuritis and strabismus as well as paralysis of the other cranial nerves occur in basal mischief, but convulsions, rigidity of the muscles of mastication which I have once seen, aphasia, paralysis of one or more limbs arise from irritation or pressure on the cortex.

In tuberculous meningitis about the end of the second week when the case is passing into the pressure stage and the mischief extending up the Sylvian fissures there is slight optic neuritis, occasionally aphasia, muscular twitchings or

slight convulsions, delirium, hyperalgesia, muscular rigidity, still intolerance of light and sound, somnolence passing into coma. Pulse small and frequent, respiration irregular, perhaps occasional vomiting, abdomen boat-shaped, bowels constipated and great emaciation; temperature very variable. About the third week the child lies very quiet and still, eyes half open with the lower half of the cornea exposed and covered with mucus or muco-pus. The child may appear asleep, but is only in a state of semi-consciousness, and there is still marked hyperalgesia, so that if you lay hold of a limb or cause any movement, the child often gives a piercing shriek —the so-called hydrocephalic cry. There are frequently slight convulsions, but with the gradually increasing fluid in the ventricles the whole body becomes paralysed and lies extended on the back. The respirations assume the Cheyne-Stokes character, the pulse becomes quite small and often irregular in rhythm. The temperature is moderate and often high before death; in some cases it is subnormal and the head moist with perspiration. From the onset of the irritative stage to death is generally from one to three weeks.



I append two illustrations of an excellent case of primary tuberculous meningitis with recovery. Those who think that all tuberculous cases die may remove the word tuberculous without in any way detracting from the value of the case. I have no absolute proof that it was tuberculous, I did not perform lumbar puncture, and did not find the tubercle bacillus. Some of my other cases of recovery were as bad, and the case of cerebro-spinal fever with recovery was worse than this patient.

In the non-tuberculous cases the symptoms during the pressure and paralytic stages vary considerably according to the site and nature of the mischief. In purulent meningitis the temperature is high and sustained, pulse rather slow and infrequent, respirations sighing, delirium perhaps slight and rapidly passing into coma. It is often difficult to distinguish such cases from cerebellar abscess, especially as both usually arise from the same cause—middle ear disease. However, the differential diagnosis is not of much practical importance, as the same surgical treatment should be adopted in both cases. On the other hand, simple basilar meningitis often runs a very protracted course. There is often neuritis. The temperature is moderately febrile but frequently high and subject to great fluctuations. Pulse slow and irregular in rhythm until a late stage when it becomes short, quick, and frequent. *Tache cérébrale* distinct. Respirations irregular, shallow, and feeble, and near the end when effusion has taken place into the ventricles the breathing may suddenly cease, the patient become cyanosed, and asphyxia terminate the scene.

In meningitis of the convexity the delirium continues, and with the involvement of the motor centres there are local twitchings or general convulsions; and when there is thrombosis, paresis of the limbs occurs. In basal cases the delirium is also often marked, but in such there are lucid intervals. The most prolonged state of coma-vigil which I have seen occurred in a case of basal meningitis.

When the ventricles are affected the symptoms are somewhat similar to those of the other varieties, such as vomiting, headache, delirium, and convulsions, but towards the end there are general paretic symptoms with loss of the reflexes, but the cranial nerves are not involved.

In cerebro-spinal fever the symptoms do not differ in any essential particular from those already described. The onset of the disease is abrupt, and the very malignant cases rapidly proceed to suppuration and death, but at least half the cases run a milder course and terminate in recovery. There is early rigidity of the neck, spine, and muscles of the extremities. The head is retracted, and the spine in a more or less marked state of opisthotonos. There is contraction of the flexors and Kernig's symptom is soon developed. The hyperalgesia is pronounced; pain and swelling in the articular joints often occur and may be mistaken for rheumatism. Skin rashes such as erythema, purpuric spots, and herpes labialis are common. In this series there were two cases of cerebro-spinal meningitis, one died and the other after a severe and protracted illness recovered. This latter case was complicated with double otitis interna, which left the patient permanently and absolutely deaf. There was marked vertigo, but he did not complain of it until he was able to be propped up in bed. The erythema and joint affections were prominent features, and even at a late stage there was lymphangitis in one limb, but no suppuration occurred. Hyperalgesia, muscular contractions, and Kernig's sign were all present. There was no optic neuritis. The emaciation was extreme. For a long time there was troublesome incontinence of urine and fæces. It should be noted that in the early stages of meningitis there is often retention of urine.

[Since this address was delivered I have had three cases of cerebro-spinal fever under my care in the Royal Infirmary, and on July 5th I saw another case in consultation with Dr. Main, of Heswall. Dr. Nathan Raw has recently had three cases under his care at the Mill Road Infirmary, so the disease is not quite so rare in this neighbourhood as is generally supposed. Of my cases there have been one male and three females. The male, aged 24, made a good recovery, but the disease was complicated with double otitis interna, and, like the boy previously referred to, he remains absolutely deaf. The two females in the infirmary, aged 24 and 25, died. In both these cases lumbar puncture was performed; in one we found pus and the diplococcus intracellularis; and in the other nothing but clear cerebro-spinal fluid. In the latter case a great many of the joints suppurated, and we found the diplococcus intracellularis in the pus; the cerebro-spinal symptoms subsided, but she died from pyæmia and exhaustion. At the necropsy in this case several of the joints were disorganised and small collections of pus were found in the

subarachnoid spaces of the brain and spinal cord, but there was very little injection of the pia, and the inflammatory process seemed to be resolving. In the other necropsy there was pronounced cerebro-spinal inflammation with purulent deposits in the subarachnoid spaces. The case which I saw in consultation with Dr. Main is a remarkable sporadic case occurring in a healthy rural district where there has been no other case and no recent cases of pneumonia. Moreover the woman was not away from home for months.

Mrs. E., aged 41, took suddenly ill on the morning of July 1st, 1899, with severe headache, shivering, and vomiting. When seen by Dr. Main soon afterwards her temperature was 105°. She had not felt quite well for a few days previously, but she ascribed her feelings to menstruation which had occurred for the first time since the birth of her only child five months ago. Probably her surmises were correct, as Dr. Main met her on the road about 36 hours before the commencement of this illness, and she then made no complaint. On July 2nd her temperature dropped to normal, but on the 3rd it was 103°. She then complained of pain in her back and joints, and there was a purpuric rash over her body. Her temperature continued between 101° and 103°, and her pulse ranged between 90 and 130.

July 5th she was much worse, and I saw her with Dr. Main about 1 P.M. She was then complaining of severe pain and tenderness in her spine, right elbow, both knee and ankle joints, which were slightly swollen. Her head was retracted, and any attempt to straighten it or to bring the chin down towards the sternum caused great pain; there was marked opisthotonos and tenderness down the spine especially about the level of the cervical and lumbar enlargements. There was general hyperalgesia; there was much rigidity of the limbs with overaction of the flexors so that the forearms and legs were flexed, and any attempt to straighten them caused pain. Kernig's sign was present. [The knee-jerks were absent. There was paralysis of the left third nerve with ptosis, external squint, and diplopia: the left pupil was larger and more fixed than the right; vision good. The *tache cérébrale* was well marked. Temperature 101.6°; pulse 96 full, and tension moderate. Herpes on upper lip, tongue coated with a creamy fur, appetite poor, bowels constipated. Her abdomen flat; she had some difficulty in micturating. Her thoracic and abdominal organs were normal.

She was ordered an ice helmet to be kept constantly applied, cold compresses to the abdomen, a light but liberal nutritious diet, 5 grains of calomel at once, and ½ grain of morphine hypodermically every four hours—the morphine to be quickly increased. July 9th. I saw her again this afternoon and found her much better. Her temperature had been on the whole kept well down, but it reached 103.6° on the 7th, and 102.4° on the 8th, and was at my visit 100.4°. Dr. Main rapidly increased the morphine, and for the last two days she has been getting ½ grain every 3 hours. There is now very little pain or tenderness except in the right elbow; tongue clean and moist, appetite better, in fact craving for more food; bowels open. The head less retracted, spine not so rigid, and practically no tenderness; the contractures of the flexors less, and the legs can be almost extended on the flexed thighs; both knee jerks exaggerated and slight right ankle clonus. No swelling in any of the joints. The left ptosis less but still marked external strabismus and diplopia; pupils about equal and not very contracted. We directed the treatment to be continued as before with no diminution of the morphine below 4 grains daily, but if necessary to be increased. She was ordered a fairly liberal diet consisting of Mellin's and Benger's foods made with milk, bread and butter, mutton broth, and white fish, etc.

I went fully prepared to do a lumbar puncture, but I found her so much better that my judgment gained the ascendency over my curiosity, and I left her alone. I cannot say what coccus is the cause of the mischief, but at any rate it is a well-marked case of cerebro-spinal meningitis.

As I was away on my holidays I did not see this patient again till August 7th. She was then in a dying condition, and succumbed the following day. She was delirious, but her attention could be arrested when asked how she felt, or ordered to put out her tongue. There was, and I believe had been for some time, evidence of involvement of the cerebral ventricles by frequent general convulsive twitchings and abolition of the knee-jerks. The superficial reflexes were exaggerated. Dr. Main told me that he had great difficulty in controlling the temperature, and the morphine had not produced any soporific effect, although he had increased it to two-thirds of a grain hypodermically injected every hour and a-half. When I saw her she had been getting over ten grains a day for some time, and was not then under its influence.]

I am convinced that many other organisms besides the diplococcus intracellularis can give rise to cerebro-spinal meningitis. In a child very recently under my care in the Royal Infirmary with marked cerebro-spinal symptoms, retraction of the head, opisthotonos, hyperalgesia, Kernig's sign, general purpuric rash, and swelling of many joints, we did not discover any micro-organisms by a microscopic examination of the clear cerebro-spinal fluid obtained by lumbar puncture, but Dr. Warrington got a culture of staphylococci—probably an accidental contamination. At the *post-mortem* examination there was general injection of the whole cerebro-spinal pia mater, but no tubercles. There was a tuberculous cavity in the left lung about the size of a walnut. The inflammation was evidently due to a tuberculous toxæmia.

Diagnosis.—It might be supposed that a disease with such pronounced symptoms as meningitis would be always easily recognised, but such is not the case, as many of the most prominent cerebral symptoms are common to this and many other acute diseases. In meningitis the classical symptoms, headache and vomiting, have in my opinion led to more failures to recognise this disease than to success in its early diagnosis, because these symptoms are frequently not more marked here than in typhoid and several other specific fevers. The subjective phenomenon, headache, has been so placed in the forefront by textbook authors that the medical attendant almost expects to see it, and so I may say he could if he would only employ his own powers of observation rather than those of the patient, but because the patient is not shouting "Oh! my head," and writhing in agony the onlooker thinks the headache cannot be that of the textbooks. The patient is really too ill to complain, he knows that the noise of his own voice as well as that of his questioner aggravates his suffering. When a child placidly wants your sympathy for a bad headache you may feel confident that it is not due to meningitis. Vomiting is not always an obtrusive symptom; it is explosive, occurs after food and without any nausea. The patient has a poor appetite, takes little or no food, and so there may not be much vomiting. Among the other early signs may be mentioned moderate pyrexia, delirium, stupor, occasionally general convulsions, irregularity of pupils, retraction of the head, retention of urine, etc. One of the earliest and most persistent symptoms, especially in meningitis of the convexity, is general hyperalgesia; so that when you firmly grasp a limb the patient winces. There is intolerance of light and sound. It has been stated by Gowers that lesions of the cranial nerves are among the most definite and conclusive signs of the disease; but if you wait in most cases for the appearance of such signs before beginning a definite line of treatment, you will have a high mortality. This is a disease which no line of treatment will rapidly abort; and if you recognise the nature of the disease at an early stage, you will have plenty of opportunities of confirming your diagnosis. We have previously referred to the various symptoms according to the site of the disease. We can surmise the nature of the disease from the cause. Purulent meningitis is associated with middle ear disease, necrosis of bone, abscess, septicæmia, and frequently cerebro-spinal meningitis. Simple or plastic meningitis may be connected with pneumonia, rheumatism, or some of the specific diseases. Tuberculous meningitis is most common in children under 10 years, but may occur in adults, especially in association with tuberculous disease of the lungs, up to 40 years of age; after this period it is very rare.

Meningitis is frequently mistaken for typhoid fever, but in the early stages at least there should be no difficulty in differentiating the two diseases. In typhoid fever the patient is dull, apathetic, and listless; and although there may be violent headaches, and later on marked delirium, yet the patient is not specially sensitive to external impressions; there is no intolerance of light or sound, no hyperalgesia, he makes no attempt to remove the sordes from his teeth or

lips, and the dried secretion in his nose remains unheeded. In meningitis, and especially in meningitis of the convexity, among the early symptoms are marked general hyperalgesia and augmentation in all the reflexes. The patient is irritable and restless, picks at his nose and lips, throws his arms about in an aimless manner, perhaps gets out of bed without knowing exactly why, roams about, returns again to bed. There is hyperalgesia so that he cannot bear to be handled, and generally intolerance of light and sound. The hyperalgesia is often well marked even in an advanced stage of tuberculous meningitis. The little patient may be lying apparently asleep with eyes half open, but the slightest movement or handling makes him scream out with a piercing shriek. The knee, elbow, and wrist jerks are generally pronounced, and there may be well-marked ankle and knee clonus. At a later stage of the disease, if effusion has taken place into the ventricles and beneath the arachnoid, these signs may disappear. The chief characteristic of the deep reflexes is their great variability —absent or present one day and exaggerated the next. In typhoid fever on the other hand the deep reflexes are only exaggerated in severe cases and at a later stage of the disease.

In meningitis the temperature is very variable, frequently reaches a great height and this followed by a rapid fall, and as a rule it is more easily controlled than that of typhoid fever.

We can also examine the urine with Ehrlich's test, and the blood for Widal's reaction, but in the latter test we can rarely expect any positive evidence before the fifth day of typhoid, and the diagnosis should be made before then.

Pneumonia of the apex might be mistaken for meningitis of the convexity, but a careful examination of the lungs, the respiration, and pulse will differentiate the two affections.

Influenza occasionally assumes a cerebral type, but the head symptoms quickly pass off and the real nature of the disease becomes apparent. The same may be said for many of the other specific diseases, such as typhus fever, measles, and scarlet fever.

In bilateral otitis interna there may be headache, delirium, vomiting, convulsions, vertigo etc., but when the disease is not associated with meningitis the febrile process soon subsides, and there is no great emaciation, etc.

Meningitis has been mistaken for hysteria, but a careful observation of the temperature and other symptoms should readily serve to differentiate the two diseases.

Lumbar Puncture.—Since Quincke drew attention to the diagnostic importance of an examination of the cerebro-spinal fluid, lumbar puncture has been performed in a considerable number of cases, and not infrequently with a positive result. Among the organisms that may be found may be mentioned tubercle bacilli, the diplococcus intracellularis, streptococci, Fraenkel's pneumococcus, and staphylococci. With a positive result the diagnosis is established, but unfortunately in many cases of even purulent meningitis the fluid is perfectly limpid and free from pus and organisms. This is, however, what might be expected as the effusion is usually in the sub-arachnoid spaces, and therefore a negative result is of no value. Some have even claimed considerable therapeutic value for the operation, but the beneficial results seem to have been usually more imaginary than real. The inflammatory effusion for the greater part is in confined spaces, and not floating freely in the cerebro-spinal canal. Where there is an accumulation of inflammatory fluid in the ventricles of the brain, the foramen of Majendie is generally closed, and the fluid cannot escape into the general arachnoid cavity.

Treatment.—The patient should be submitted to as little reflex disturbance as possible. He should be kept in a dark, carpeted, noiseless room so that few nerve impressions should travel to the sensorium by either the eye or ear. The very injurious effect of noise was well exemplified in the fatal case which I published in 1891, when the relapse which ended in his death began on the night when a patient suffering from delirium tremens and carbolic acid poisoning was unfortunately admitted to the same ward. In these respects private practice has a great advantage over the hospital where we cannot always afford such accommodation. Due attention should also be paid to the cutaneous sensibility; when practicable the patient should lie on a water-bed, and be lightly clothed. His head and shoulders should be raised. Great care should be exercised at all times in the application of hot-water bottles to the extremities, as owing to the vasomotor disturbance blistering readily occurs. The room should be well ventilated, and kept at a uniform temperature of about 60°F.

When there is middle ear disease and we have reason to suspect suppurative meningitis, or an abscess in the cerebellum or temporo-sphenoidal lobe, the mastoid cells should be laid open and the disease followed up to the brain, a large trephine opening be made in the skull. If there be evidence of a local abscess anywhere else in the brain surgical treatment should be adopted. Syphilitic meningitis requires specific treatment, and if there be necrosis of bone the surgeon should be called in.

Many cases of meningitis have recovered under very varied treatment, and even in spite of treatment. Iodide of potassium and mercury seem to be the popular remedies even in cases of tuberculous meningitis, but on what grounds I cannot say, certainly they are not employed in tuberculosis in any other part of the body. When the brain is thus affected I fail to see why it should be considered a citadel to be stormed by random shots more likely to kill the patient than the enemy. These drugs should be reserved for syphilitic meningitis. In meningitis I have no faith in the new antipyretic and analgesic drugs; bromide of potassium I have long discarded, while chloral hydrate, sulphonal, paraldehyde, urethane, and all the newer soporifics are by me discredited.

The following methods of treatment are applicable to tuberculous and all the forms of simple meningitis, even including cerebro-spinal fever. There is no disease in which antipyretic treatment requires to be more promptly and efficiently carried out. Of all the means at our disposal for this purpose I prefer a large ice-cap, or a cap formed of Leiter's tubing with a constant stream of cold water flowing through it, applied to the shaven scalp. The application of cold to the head not only lowers the general temperature, but also moderates the circulation within the cranium. This latter statement is perhaps opposed to the researches of Dr. Leonard Hill who denies that there are any vasomotor nerves supplied to the cerebral vessels, and maintains that the cerebral circulation is regulated by the splanchnic area. This latter statement is no doubt in the main true, but it does not necessarily follow that there is no local regulative nervous mechanism of the cerebral circulation. We all know that a large dose of nitrite makes one feel as if the top of the head were coming off. I recollect once in a case of granular kidney an attack of hemiplegia which I ascribed to one-sided spasm of the vessels supplying the motor corex; the hemiplegia was removed by a few doses of nitro-glycerine. I highly appreciate the valuable work of Dr. Leonard Hill, but I am not bound to accept all his conclusions. However, supposing his views are ultimately established we can still explain the beneficial action of the ice-cap by its effects on the general circulation. In many cases this local application of cold is not sufficient to keep the general temperature down to a fairly normal level, and in that event I apply large cold compresses to the abdomen. The application of cold to the splanchnic area raises the general arterial pressure, but this has a beneficial effect on the cerebral circulation by heightening the velocity without necessarily augmenting the transudation from the vessels. The temperature is usually easily controlled in meningitis, but if there should be any hyperpyrexia it can be quickly reduced by swinging the patient in a hammock, and running a small stream of cold or tepid water over the body. The cold to the head should be continued until the general temperature has been for some time subnormal, and if any pyrexia should afterwards recur it should be immediately combated by resort to the ice-cap.

As before stated I have no faith in the new antipyretic drugs. For general use, especially if there be any chest symptoms, I much prefer the free administration of carbonate and acetate of ammonia. If there be any fear of the formation of thrombi in the cerebral sinuses, two to five minims of liquor ammoniæ fort., well diluted with iced barley water, may be given every hour or two. Such cases, however, are generally septic and require surgical treatment.

In the early stage of the disease I have still some faith in the old-fashioned remedy of a fly blister to the nape of the neck, but I very rarely employ it as it rather interferes with the ice-cap, and adds to the discomfort of the patient. In a late stage, when there is evidence of much cerebral effusion

with general paresis, and perhaps subnormal temperature it might be worth while to try the effect of liquor epispasticus painted over the whole scalp.

In simple and even in tuberculous meningitis I prescribe, almost as a routine treatment, internal antiseptics, and in such cases I prefer salicylic acid, salol, or benzo-naphthol. A favourite combination with me, especially when the temperature is above the normal, has been equal proportions of Dover's powder and salol; ten grains of each flavoured and suspended in almond mixture every three hours for an adult. The bowels should be kept open throughout the illness, and of all agents for this purpose I prefer calomel, and occasionally enemata. The vomiting is usually of cerebral origin, and any direct treatment to the stomach is generally of little avail; however a sinapism to the epigastrium, and the internal administration of bicarbonate of soda, sal volatile, and creosote frequently does good. The hiccough, which occurs at a late stage, is best relieved by hypodermic injections of morphine, or morphine and atropine. When there is much cardiac excitement with deficient vascular tone, a combination of opium, digitalis, and quinine will be found useful. When there are convulsions the inhalation of chloroform will prove efficacious. In basilar meningitis, when at a late stage there is a tendency to bulbar paralysis, atropine in small doses should be frequently given.

With the use of local or general blood-letting in this disease I have no experience, and in those cases where such a course might be deemed advisable I would rather try the effect of antimony. Depletion might be useful in the early stage if there were violent action of the heart and increased arterial pressure, but such conditions seldom or never occur.

As in other febrile affections, the nasal secretions become dry, inspissated, and irritating; this can be remedied by a spray of 1 or 2 per cent. of menthol in paroline. An antiseptic mouth wash should be used, or it answers equally well for this purpose to paint the teeth and gums with a mixture of equal parts of glycerine and tincture of iodine. If some be swallowed the antiseptic action will be further extended.

To relieve cerebral excitement, sleeplessness, delirium, and general restlessness, I have gradually arrived at the conclusion that there is no drug equal to opium very freely administered. It is not a specific for meningitis or anything else, but to it more than to anything else I ascribe my marked success in the treatment of this disease. It puts the patient in the most favourable position for getting well, and renders his brain less susceptible or more resistant to the storm which is passing over it.

My views on this question have gradually undergone a process of development. At first I used Dover's powder and salicylic acid, opium and calomel; now I almost exclusively use hypodermic injections of morphine, and prescribe the antiseptic remedy separately, or even discard it. It is most difficult to poison a patient suffering from meningitis with opium. I would not advise you to try to poison him for fear you might succeed, but I wish to emphasise the difficulty of doing so, and I am convinced that there is more danger to the patient in using it sparingly rather than freely. In one of my most successful cases the patient, an adult, received each day for over a fortnight 6 grains of morphine hypodermically injected. As the patient began to improve the quantity was gradually reduced; but, with a too rapid diminution at first, there was a relapse, which was cured by a return to a larger dose. In one little patient, who only weighed 28 lbs., and who eventually died from tuberculous meningitis with tuberculous ulceration of the bowels, the quantity of morphine was gradually increased up to 3 grains a day. On one occasion I asked my house-physician, "How is it that this patient is not under the influence of morphine?" To which he replied, "Is there to be no limit?" And I answered that the only limit should be the quantity necessary to keep the patient constantly under the influence of the drug. I prefer a solution of morphine, as being more reliable and more uniform in strength than the hypodermic tablets.

I have often had a little difficulty with house-physicians in indoctrinating them into my views; they have generally been educated by therapeutists who are well up in the coal-tar series, and taught to avoid opium in this disease. I generally commence in children over 7 years of age with ½ grain of morphine hypodermically every four hours, and increase the quantity, and perhaps the frequency, as quickly as may be necessary. For children usually about 2 grains a day suffice, but for adults it may be necessary to give 3, 4, 5, or 6 grains daily. For children under 6 or 7 it is perhaps better to administer opium or morphine by the mouth, and to arrive at the requisite dose is a very simple matter. When there is much vomiting it is often an advantage to combine small doses of atropine with the morphine, but if there be much temperature the atropine had better be avoided. At a late stage, when there is evidence of ventricular effusion with a risk of respiratory paralysis, atropine should be given rather freely.

Treatment should be commenced early; when patients are sent into hospital actually dying we should not be expected to perform miracles. I feel confident that if the nervous system were kept absolutely at rest under a free administration of morphine from an early stage of the disease, the mortality would not be so high as it is at present. These views may seem heterodox to many, as the textbooks do not recommend morphine in meningitis, and the few, such as Sir J. Burdon-Sanderson and Professor Osler, who have employed it in cerebro-spinal fever have merely prescribed it to relieve pain.

Diet.—In all these cases there is impaired nutrition, hence the patients should be well fed with light articles of diet, such as peptonised bread and milk, various kinds of children's food, and other articles of farinaceous diet, vegetable juices, grapes, maltine, bread and butter, etc. I always see that the patient gets as great a variety as possible, and as much nutritious food as can be retained in the stomach.

NOTES ON A CASE IN WHICH ANTITYPHOID INOCULATIONS WERE PRACTISED.

By Sir DYCE DUCKWORTH, M.D., LL.D.,
Physician and Lecturer on Medicine, St. Bartholomew's Hospital.

It is important to record at the present stage of this practice the results which are obtained from antityphoid inoculation, both to add to the stock of knowledge respecting it, and, if possible, to encourage its further adoption, in the hope of securing a sufficient degree of prophylaxis against the invasion of enteric fever.

Primary Inoculation.

A young man, aged 24, about to proceed on tropical service, submitted to a primary inoculation on October 23rd. Professor Wright, of Netley, very kindly supplied some doses of antityphoid vaccine in sealed glass capsules. The patient was confined to bed, and had a pad of lint soaked in mercuric perchloride solution applied overnight to the left flank. Dr. Garratt injected the first dose, about 1 c.cm., at 9.30 A.M., the temperature being below normal, 97.6°, and the pulse 80. The site of puncture was closed by sterilised plaster. Some pricking pain and throbbing ensued at the part, and some slight pain was also felt in the left thigh and round the left ilium. In two hours there was a copious flow of pale urine, and the temperature had risen to 99.4°. There was slight left temporal headache, the skin was generally injected and moist, and after short sleeps the patient awoke in profuse perspiration. At 4.30 P.M. the temperature was 100°, pulse 95. The pain continued in the left flank, was felt in the axilla, and down the left leg. At 6.30 P.M. a patch of vivid redness, 2 inches square, was apparent around the point of injection, with streaks proceeding from it in various directions, as of cellulitis, the sensibility of the patch being much heightened. Pulse 76. Appetite was impaired till the evening, and there was considerable thirst. At 9.45 P.M. the temperature was 99.8°, and the pulse 80. On scoring the red patch with the finger nail white streaks were readily produced.

October 24th. The patient had had a good night's rest. The redness of the patch was as before, and he had a bruised sensation in the flank. At 9 A.M. the temperature was normal. He had had one loose motion. Appetite was good. The urine was natural, though rather dark in appearance, and less in amount than usual, specific gravity 1026, alkaline reaction. About noon the temperature was 99.6°, but fell in the evening to 99.2° F.

On October 25th, he was feeling quite well. The temperature was 97.4°. The patient rose, had a bath, and went out in the forenoon. The bruised sensation in the side remained for four days subsequently.

SECOND INOCULATION.

This was carried out by Dr. Segundo as before, with the same amount of vaccine, also in the left flank, a little lower down, on November 2nd at 9 A.M. The temperature was 99°. There was less pain after the injection. In two hours' time a large amount of pale urine was discharged, and there was some sweating during the forenoon. At 12.15 P.M. the temperature was 100.8°, at 3 P.M. 99.2°, and at 7 P.M. 98.6°. The pulse during the day was 80, bounding, and of moderate tension. The patient felt very poorly for half an hour about 2 P.M. In the evening a fresh patch of redness appeared at the site of inoculation, less marked than on the first occasion. Appetite was diminished, but there was less thirst than after the first injection.

November 3rd. He had passed a good night. The redness persisted, and was spreading round towards the loin. An enlarged gland had appeared in the left groin, and was distinctly tender. A loose motion was passed. The urine was diminished in amount, and darker in colour than usual. Ehrlich's reaction was not obtained in it. The patient was feeling quite well, and went out in the afternoon.

On November 9th an examination of the finger blood was made for Widal's reaction by Dr. Andrewes in the pathological laboratory of St. Bartholomew's Hospital. The reaction was extremely vigorous and well marked even in a 200-fold dilution.

An inoculation was made in a second patient with another portion of the same vaccine. Very similar symptoms followed, and there was slight poorliness for three or four days; the pain in the flank, though not severe, giving rise to the most urgent of the slight inconveniences experienced.

A second inoculation, ten or twelve days after the first, is highly desirable to secure the full benefit of the vaccine.

The points requiring attention in this practice are to secure perfect asepsis and sterilisation of all instruments employed. The patient should remain in bed for two days, and resolve to keep quiet till all reaction has passed off. With these precautions in healthy subjects there appears to be no cause for anxiety as to a satisfactory result. The subject would do well to have his blood serum tested by Widal's process at intervals of three or six months, or, whenever possible, for some years to come.

Lastly, I will express my thanks to the Pathological Department of Netley Hospital for supplying me with the vaccine, and my high appreciation of Professor Wright's public services in promoting this practice of inoculation which appears to hold out promise of a boon not only to the military forces of this country, but to the whole community.

THE RELATION OF LARGE-CELLED INDURATIVE HYPERPLASIA OF THE LYMPHATIC GLANDS TO TUBERCULOSIS.

By HUGH WALSHAM, M.A., M.D.CANTAB., M.R.C.P.LOND.,
Assistant-Physician to the City of London Hospital for Diseases of the Chest; formerly Pathologist to the Hospital.

PATHOLOGISTS who have made many *post-mortem* examinations on patients who have died of chronic pulmonary tuberculosis, and who have examined microscopically the lymphatic glands, especially in the cervical and bronchial regions, must be perfectly familiar with this condition. Large-celled indurative hyperplasia of the lymphatic glands is distinguished by the transformation of the normal gland tissue into large-celled tissue, having none of the characteristics of the original structure. This large-celled tissue consists partly of rounded and polygonal cells, and partly of spindle cells. If the proper lymphadenoid tissue has not altogether disappeared, the remaining portions of it form reticulated bands pervading the large-celled tissue.

Fig. 1 shows clearly the microscopical structure of a cervical lymphatic gland that has undergone this change. The normal lymphoid tissue stains more deeply than the large-celled portion, thus coming out in sharp contrast under the microscope. The process of transformation begins probably with an accumulation of leucocytes in the gland tissue, followed by the development of epithelioid cells with large nuclei. Now what is the significance of this large-celled hyperplasia in a lymphatic gland? Is it a tuberculous change? Are we to look upon a lymphatic gland so changed as tuberculous, although there may be no definite evidence of tubercle, using that term in the usual histological sense? The actual frequency of tuberculosis of the lymphatic glands is not easily determined by mere anatomical inspection, and it is often difficult to say whether a given glandular affection is tuberculous or not.

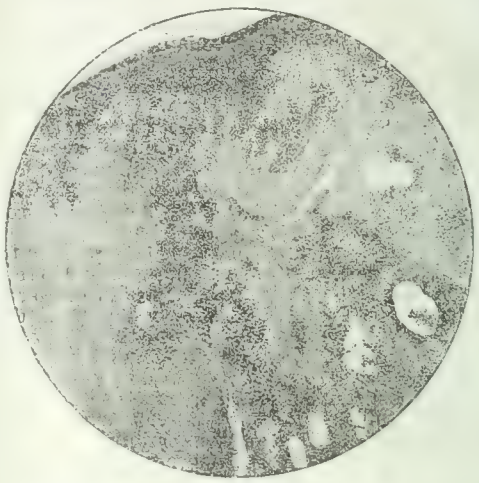


Fig. 1.

Professor Ziegler[1] in his textbook of pathology separates the large-celled hyperplasias from the tuberculous affections of the lymphatic glands, but he goes on to say that it is not unlikely that tuberculosis may assume this type, and that some of the so-called scrofulous inflammations of the lymphatic glands in which no typical tubercles can be found are really due to the invasion of the tuberculous virus.

The following case is, I think, worthy of record as bearing on this question:

E. T., female, aged 7, died in the City of London Hospital for Diseases of the Chest of morbus cordis, mitral and aortic. The *post-mortem* examination was made by myself twenty-seven hours after death.

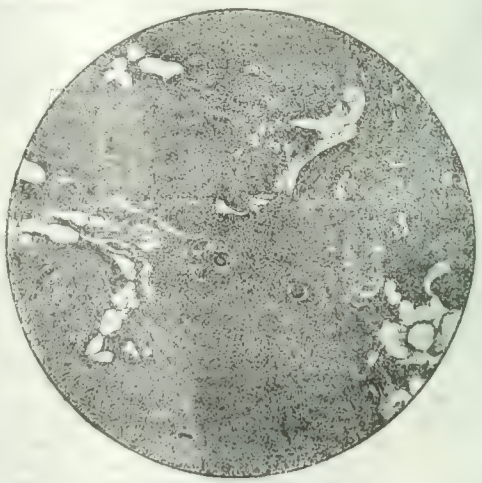


Fig. 2.

The body was well nourished, and *rigor mortis* present. The heart was hypertrophied and dilated, and gave evidence of old and recent endocarditis which was the cause of death.

The larynx, trachea, and bronchi were normal. The pleural cavities contained a small quantity of clear straw-coloured fluid, and showed no adhesions. The bronchial glands were enlarged and in parts caseous. At the anterior margin of the middle lobe of the right lung there was a small caseous tuberculous nodule about the size of a small pea, radiating from this immediately under the pleural surface were numerous grey granulations. With this exception there was no evidence of tubercle in the body. The left lung was perfectly free. The tuberculous patch in the right lung was quite limited to the space indicated above. On making microscopical sections the bronchial glands were found to be typically tuberculous, with large giant-cell systems. (See Fig. 2.) The microscopical picture of the lung was typically that of grey miliary tubercle. The whole chain of cervical glands was carefully dissected out on the right side, and the glands were found to be in a condition of large-celled hyperplasia, but with no typical giant-cell systems. The tonsils were very diligently searched for tubercle, but none was found.

I think the inference from the above is clear that this large-celled hyperplasia of the lymphatic glands is of a tuberculous nature. In this case we have the two conditions occurring together. The bronchial glands being typically tuberculous, with secondary lung infection, and the cervical glands being in the condition of large-celled hyperplasia which I look upon as being equally tuberculous. How the bronchial glands became affected is not clear. As already said, diligent search was made in the tonsil, but with a negative result. The case is in other respects an interesting one, because the tuberculous infection was, at any rate in the lung, quite recent, there being no suspicion of tuberculosis until it was discovered at the *post-mortem* examination. Tubercle bacilli could not be found in the cervical glands, but I think we may consider this large-celled hyperplasia as a kind of pretuberculous change in the gland.

REFERENCE.

[1] *Textbook of Pathological Anatomy*, translated by MacAlister, vol. ii, p. 112.

THE DIPHTHERIA MORTALITY OF THE THREE PRINCIPAL AUSTRALIAN COLONIES FOR THE PAST FIFTEEN YEARS,

WITH SPECIAL REFERENCE TO THE INFLUENCE OF ANTITOXIN ON THE DEATH-RATE.*

By A. JEFFERIS TURNER, M.D.Lond.,

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The antitoxin treatment of diphtheria was introduced into Australia at about the beginning of 1895, and almost immediately came into general use. In the city of Brisbane, for instance, there have been since then very few practitioners—the principal exceptions being those engaged in certain forms of club practice—who would omit to administer an injection of serum to a case of diphtheria. A few cases may have been so treated during the closing months of 1894, but I believe not sufficiently many to exert any appreciable influence on the mortality.

Judging from the great reduction in the case-mortality of the disease in the numerous hospital reports which have appeared since the introduction of the new treatment, it becomes interesting to inquire whether the total yearly mortality as recorded by the Registrars-General of the various colonies shows any signs of reduction. It is obvious that, although the more exact details of cases treated in hospital are best fitted to elucidate the problem as to the efficacy of the treatment, its actual value in saving life under present conditions of use can only be determined by such an inquiry.

The principal difficulty in this investigation is produced by the varying epidemic prevalence of diphtheria, or, to speak more accurately, of fatal cases of diphtheria in different years, quite apart from the question of the possible influence of treatment. If we had had notification of the number of cases of the disease occurring in each year, this difficulty would have been for the most part removed. In the absence of this, we can only deal with it by taking the average mortality of a sufficiently long series of years so as to eliminate annual variations. We commence our inquiry at the year 1884, and from this to 1894 inclusive we have what may be termed a pre-antitoxin period of eleven years, which again we have divided into two periods of six years and five years respectively. The antitoxin period consists of the four years 1895 to 1898 inclusive. It would be convenient to have a longer antitoxin period, but this is all that is available to us at present. For the colonies of Queensland and New South Wales this period appears fairly satisfactory, as the annual variations in the mortality per 100,000 of mean population are not excessive. Contrary to what might be expected the colony of Victoria, with a population nearly three times that of Queensland, shows much greater variations in mortality. Probably the explanation of this is a climatic one. Queensland and New South Wales, both on the eastern coast of the continent and facing the Pacific, enjoy a very similar climate; Victoria, lying on the south coast and facing the Southern Ocean, has a different and much more variable climate. Whether, however, this is a true explanation of the more variable diphtheria mortality of the last-named colony is immaterial to our present purpose.

Another difficulty lies in the considerable number of cases registered as deaths from "croup." The great majority of these may be taken as cases of membranous croup, for death from true catarrhal croup is rare. Without entering into pathological discussions it may, I think, be taken as universally admitted, that if not all, at least the great majority, of fatal cases of membranous croup, are really cases of diphtheria of the air passages. Accordingly I have included deaths from croup in my statistics, and would point out that if in so doing I have included some deaths not actually due to diphtheria, these would tend to obscure, certainly not to exaggerate, any fall in the mortality due to the use of antitoxin, for it is not contended that non-diphtherial cases are influenced by this remedy.

The increasing proportion of children in the population since the proportional decrease of adult immigration, has, perhaps, had some effect on the annual death-rate, diphtheria being with few exceptions a disease of childhood; but although some slight apparent increase in the mortality of the later years of the series might have been expected from this cause, such is not apparent in the statistics, and evidently the comparative influence of this factor has been inappreciable. The varying meteorological conditions of different years has no doubt a direct influence on the death-rate, but as there still remains considerable obscurity as to the exact weather conditions that are of importance, I have thought it wiser to eliminate this varying factor by the method of averaging, rather than to attempt to consider it in detail.

QUEENSLAND.

Treating the mortality records of the colony of Queensland on these lines, we obtain the following table:

Queensland: Deaths from Croup and Diphtheria.

Year.	No. of Deaths.	Mean Population.	Deaths per 100,000.
1884...	135	298,694	45.2
1885...	208	318,415	65.3
1886...	200	332,510	60.2
1887...	159	354,777	44.8
1888	156	377,201	41.4
1889...	165	397,061	41.6
1890	232	414,716	55.9
1891	205	404,772	50.7
1892...	176	415,813	42.3
1893...	156	426,798	36.6
1894	157	438,727	35.8
1895...	96	452,852	21.2
1896...	60	466,364	12.9
1897...	67	478,440	14.0
1898...	96	492,602	19.5

Mean annual death-rate per 100,000 living for six years 1884-89, 49.2.
Mean annual death-rate per 100,000 living for five years 1890-94, 44.1.
Mean annual death-rate per 100,000 living for four years 1895-98, 16.4.

* Read in the Section of Public Health of the Intercolonial Medical Congress held in Brisbane.

I must here express my obligations to Mr. Thornhill Weedon, Compiler of General Statistics to the Queensland Government, for his liberal assistance in furnishing me the material on which the following tables are based, and also for checking the calculations.

Comparing the two divisions of the pre-antitoxin period we observe a fall in the average mortality from 49.2 per 100,000 mean population in the first six years, to 44.1 in the next five. This fall will be seen to be due to the unusually high mortality in the years 1885 and 1886 in the one, and the low mortality in 1893 and 1894 in the other; eliminating these years the comparison would be reversed, and glancing at the whole of the pre-antitoxin period it may be said that there is no evidence of any steady fall. From the year 1890, however, when the death-rate was high, there is a gradual fall to 1893 and 1894, and these two last years have the lowest mortality of the whole period.

In the antitoxin period the mortality is 16.4 per 100,000 mean population, but little more than one-third of that in either of the two preceding periods. Furthermore, it will be noted that a sudden considerable fall occurred in 1895, a second fall in 1896, and that although there has been a slight rise since, the figures of 1895 have not been reached. It is noticeable that the highest mortality of any antitoxin year is considerably lower than the lowest mortality of any pre-antitoxin year.

NEW SOUTH WALES.

The returns from New South Wales are as follows:

New South Wales: Deaths from Croup and Diphtheria.

Year.	No. of Deaths.	Mean Population.	Deaths per 100,000
1884...	325	883,145	36.8
1885...	582	927,275	62.8
1886...	269	969,455	27.8
1887...	423	1,004,835	42.1
1888...	450	1,035,705	43.5
1889...	494	1,066,450	46.3
1890...	649	1,101,840	58.9
1891...	653	1,143,580	57.1
1892...	458	1,181,475	38.8
1893...	578	1,210,510	47.8
1894...	464	1,237,410	37.5
1895...	283	1,264,660	22.4
1896...	247	1,287,755	19.2
1897...	173	1,310,550	13.2
1898...	255	1,334,850	19.1

Mean annual death-rate per 100,000 living for six years, 1884-89, 43.2.
Mean annual death-rate per 100,000 living for five years, 1890-94, 47.7.
Mean annual death rate per 100,000 living for four years, 1895-98, 18.4.

Here, in contrast to Queensland, we find a higher mortality in the second of the two divisions of the pre antitoxin period, these being 43.2 and 47.7 per 100,000 respectively. The difference is attributable to the unusually low mortality in the year 1886, which is the lowest of the whole eleven years. From the year 1890, which was one of high mortality, there is a fall, which, however, is interrupted by a considerable rise in 1893. There is no evidence of any continuous fall during the whole pre-antitoxin period.

In 1895 there occurred a sudden large fall in mortality, succeeded by further slight falls in 1896 and 1897, and a slight rise in 1898. The average mortality of the four antitoxin years is 18 4 per 100,000, being, as in Queensland, considerably less than half that in either of the two divisions of the pre-antitoxin period.

Furthermore here, also, the highest mortality of any antitoxin year is lower than the lowest mortality of any pre-antitoxin year.

VICTORIA.

In Victoria the returns bear a somewhat different aspect:

Victoria: Deaths from Croup and Diphtheria.

Year.	No. of Deaths.	Mean Population.	Deaths per 100,000.
1884...	343	932,630	36.8
1885...	332	956,880	34.7
1886...	281	984,860	28.5
1887...	390	1,016,750	38.4
1888...	583	1,054,080	55.3
1889...	809	1,090,350	74.2
1890...	1,031	1,118,500	92.2
1891...	496	1,146,930	43.3
1892...	363	1,162,710	31.2
1893...	182	1,170,330	15.6
1894...	225	1,174,730	19.2
1895...	186	1,180,040	15.8
1896...	174	1,177,435	14.8
1897...	319	1,172,790	27.2
1898...	247	1,172,952	21.1

Mean annual death-rate per 100,000 living for six years 1884-89, 45.4.
Mean annual death-rate per 100,000 living for five years 1890-94, 39.8.
Mean annual death-rate per 100,000 living for four years 1895-98, 19.7.

If the average of the two divisions of the pre-antitoxin period and of the single antitoxin period be taken, we obtain results closely similar to those observed in the two former colonies. But on examining the returns of the separate years we are struck by the extreme variations of the annual mortality in the pre-antitoxin period. This rose to an excessive height in 1889, and reached a climax in 1890, when it far exceeded that attained in any year in the two colonies previously considered. Thence there occurred a rapid fall, reaching a remarkably low level in 1893, from which occurred but a slight rise in 1894. These variations point to great differences of epidemic prevalence in the years considered.

CITY AND SUBURBS OF MELBOURNE.

This is even more noticeable when we examine the records for the city of Melbourne, which contains more than one-third of the population of the Colony. In the year 1890 there occurred 470 deaths from diphtheria in this city; in the year 1893 only 35. The full records since 1890 are given here:

MELBOURNE AND SUBURBS.

Deaths from Diphtheria (including Diphtherial Croup).

1890 ...	470	1893 ...	35	1896 ...	93
1891 ...	172	1894 ...	51	1897 ...	151
1892 ...	100	1835 ...	57	1898 ...	128

The excessive fall shown in the Melbourne mortality from this disease may be partly due to improved sanitary conditions. That it is not wholly so due may be inferred from the rise that has occurred since 1893, which is considerable, though not reaching nearly the height attained in 1890. The variations must be in part at least due to meteorological conditions, assisted to a small extent by the fact that the excessive prevalence of the disease in the year 1890 must have eliminated many of the most susceptible by death, and left a still larger number comparatively immune by recovery from an attack.

Viewing the mortality returns for the whole Colony of Victoria in an impartial manner, we may fairly claim that they do not contradict the very positive and striking figures of the other two colonies, but that taking them by themselves a longer series of years in the antitoxin period are required to establish positive conclusions. There have been disturbing factors at work which obscure the results which in Queensland and New South Wales are sufficiently evident.

AUSTRALIA COMPARED WITH ENGLAND AND WALES.

The following table shows the annual mortality of the three colonies taken together, and also the mortality of England and Wales for the same years as compiled from the reports of the Registrar-General:

Number of Deaths from Croup and Diphtheria per 100,000 of Mean Population in each Year in the Three Principal Australian Colonies and in England and Wales.

PRE-ANTITOXIN PERIOD.

Deaths per 100,000 Living.

Year.	Three Australian Colonies.	England and Wales.
1884	38.0	36.3
1885	50.9	32.0
1886	32.8	28.3
1887	40.9	30.3
1888	48.2	30.0
1889	57.5	30.3
1890	72.6	28.8
1891	50.2	26.4
1892	36.1	29.9
1893	32.6	38.9
1894	29.7	35.0
	Mean for 11 years, 44.3	Mean for 11 years, 31.5.

ANTITOXIN PERIOD.

1895	19.5	31.4
1896	16.4	34.4
1897	18.9	28.2
1898	19.9	—
	Mean for 4 years, 18.7	Mean for 3 years, 31.3.

The average mortality during the eleven years of the pre-antitoxin period in these colonies is 44.3 per 100,000 mean population, during the four antitoxin years 18.7 per 100,000, being considerably less than one-half the preceding. On a population of nearly 3 millions this represents a saving during the four years of about 3,000 lives, which, even though liberal allowance be made for possible statistical fallacies, represents a very substantial debt owed by Australia to Professor Behring of Marburg University.

Contemplating the individual years, we observe a continuous fall in the mortality during the years 1890 to 1894, a fall chiefly due to the returns from the colony of Victoria. The lowest point reached is 29.7 per 100,000. It is observable that in 1886 the mortality fell to a point almost as low, and that this was followed by a continuous rise culminating in the excessive mortality of 1890. Whether, therefore, a further fall, instead of a rise, might have been expected in 1895 is very doubtful. In any case the fall which did actually occur was sharp and sudden, and brought the mortality to a much lower point than it had ever before reached, and, what is still more important, to a point which has not been appreciably exceeded since. The highest mortality of any antitoxin year is much below the lowest mortality of any pre-antitoxin year. That some new factor began to exert a considerable effect in lowering the mortality in the year 1895, and has continued to exert this effect since then, appears to be a fair, indeed a hardly resistible, conclusion. If this factor were not the introduction of the antitoxin treatment, no other explanation that I know of suggests itself as adequate to explaining the phenomena. If antitoxin be accepted as the true cause, we may hope by still further extending its use to obtaining a still lower mortality.

The returns from England and Wales are in striking contrast to those from Australia. There is here, as might be expected from the much larger population, a smaller extent of variation in the pre-antitoxin period. The average for the eleven years is 31.5 deaths per 100,000, a mortality considerably less than that of Australia. In the antitoxin period I have returns only for the three years 1895 to 1897, and these show an average mortality almost exactly the same as in the pre-antitoxin period, and much greater than that in the three colonies for the same period. The position as compared to Australia has become conspicuously reversed since the introduction of the serum treatment.

This fact is emphasised in the following table, in which I have compared the mortality for the four antitoxin years with that of the previous four years, selecting these because in Australia they were years of unusually low mortality, and therefore compare more favourably with the antitoxin years than do the longer period given in the last table.

Table showing Mean Annual Death-rate per 100,000 Living during the Four Years preceding and following the introduction of Anti-toxin, together with the Proportionate Reduction in Mortality.

	Mean Annual Death-rate per 100,000 for Four Years 1891 to 1894.	Mean Annual Death-rate per 100,000 for Four Years 1895 to 1898.	Reduction in Death-rate per 100,000 Living.	Proportional Reduction of Death-rate (Death-rate for 1891 to 1894 = 100).
				Per Cent.
Queensland	41.2	16.4	24.8	60.2
New South Wales ...	45.1	18.4	26.7	59.2
Victoria	27.2	19.7	7.5	27.9
The three Colonies taken together ...	37.0	18.7	18.4	49.5
		Three years only, 1895-97.		
England and Wales	31.3	31.3	1.6	4.9

We see that the mortality in Queensland and New South Wales has fallen almost 60 per cent., in Victoria not far from 30 per cent., in three colonies together about 50 per cent., in England and Wales not quite 5 per cent.

It is possible that the true reduction in the English mortality may have been greater than shown by the figures. The two years preceding 1895 were in this country years of unusually high mortality, that for 1893 being the highest on record during the period treated of. This rise may have had a tendency to continue, and so may have partly marked the decreased mortality caused by treatment. But after making allowance for this possibility the small extent of the fall in the mortality of the mother country, as compared to the greatly reduced mortality in the Colonies, remains conspicuous, and demands some explanation. This explanation seems to be afforded in a paper by Dr. Goodall,[1] as far, at least, as regards the diphtheria mortality of London. In the following table, based on a table given in his paper, we have the mortality in each year of cases notified as diphtheria. Being a case mortality the disturbing factor of epidemic prevalence is eliminated; and as the returns are based on a population of four or five millions, they may be regarded as free from minor influences.

Case Mortality of Diphtheria in London.

Year.	Mortality per Cent. of Notified Cases admitted to Asylums Board Hospitals.	Mortality per Cent. of Notified Cases not Admitted.	Mortality per Cent. of all Notified Cases.
1892	24.8	21.5	23.8
1893	27.1	23.7	24.5
1894	25.0	24.5	24.7
Mean for three years..	25.6	23.2	24.3
1895	18.3	23.3	21.2
1896	17.7	21.3	19.9
1897	14.9	20 1	17.4
Mean for three years..	17.0	21.6	19.5

The proportion of notified cases treated in the hospitals of the Metropolitan Asylums Board in each year varies from 25 to 50 per cent. of the whole number notified.

It will be observed that a very considerable fall in the case-mortality of diphtheria has occurred in the hospitals of the Metropolitan Asylums Board since 1895, but that among all cases not admitted into these hospitals the fall has been very small, hardly beyond the limits of accidental variation. This is so in spite of the fact that hospital cases always contain a large proportion admitted in an advanced stage of the disease.

Dr. Goodall remarks: "All the evidence I have brought forward has been designed to show, and I think does show, that outside the hospitals, general or special, the antitoxin treatment is little practised."

On referring to the table showing the diphtheria mortality for the three colonies, and for England and Wales for the last fifteen years there will be found, I think, evidence that this statement does not hold good of the metropolis alone. When we consider that a fall of 10 per 100,000 in the annual mortality of diphtheria—a much smaller fall than might be expected from the experience of the Australian colonies—would, in a population of 30 millions, mean the annual saving of 3,000 children from a cruel and painful death, I think we are justified in pressing the results obtained in these Colonies on the attention of our professional brethren in the mother country.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, 1889, i, p. 197.

CASE OF SNAKEBITE TREATED WITH CALMETTE'S "ANTIVENENE SERUM:" RECOVERY.

BY MAJOR S. J. RENNIE, R.A.M.C.,
Meerut, North-West Provinces, India.

History.

MORADI, a Hindu boy, aged 12, was brought to me about 6 P.M. on July 10th in a semicomatose condition, and with all the symptoms of bite from a colubrine snake fully developed; in fact, the case was in such an advanced stage that paralysis of the respiratory muscles was just commencing. The history given was "that the boy was sleeping on the ground in the early morning, when he felt something bite him on the little finger of the left hand. Being very drowsy, he simply shook off the offender, without even looking at it, and went off to sleep again. He was soon, however, wakened by pain and stiffness in his arm, and complained of vertigo. First the limb and then the body began to swell, which was followed by complete paralysis of the whole of the left side and blindness in both eyes, after which he slowly sank into a state of semiconsciousness"—which was his condition when brought to me.

On examination, two small punctured wounds were detected on the back of the third phalanx of the left little finger, which, judging from their appearance, had been inflicted by a reptile some 12 or 18 inches long—probably the well-known krait (*Bungarus cæruleus*). The arm, face, left side, thorax, and throat were œdematous, and there was complete paralysis of the left side of the body. The eyeballs were protruded and staring, with ptosis of both eyelids. Sanious froth was bubbling from his mouth, and the glottis was evidently obstructed, as the breathing was laboured and stertorous and deglutition impossible. The pulse was 110 and dicrotic; the respirations 25 and entirely abdominal in character; the surface of the body was cold and covered with clammy perspiration. He could be slightly roused with difficulty, but soon sank again into a state of lethargy and collapse. His condition was very grave and apparently hopeless.

Treatment.

I at once injected 12 c.cm. of Calmette's antivenene serum hypodermically, and also gave enemata of brandy and beef-tea. The case was so far advanced that it was useless attempting the local treatment of the wound with the chloride of gold solution, as recommended by Calmette. For the next fifteen minutes the patient's condition remained much the same, when the paralysis of the respiratory muscles, which had been slowly coming on, became fully developed, and he ceased to breathe altogether. The pulse beats were now only 4 a minute; each individual beat hard and "hammer-like" at first, but getting more and more faint as the heart's action slowly ceased. I immediately commenced artificial respiration, and kept it up for half an hour, by which time the serum had done its work and the boy had regained power over his respiratory muscles. I also at the same time injected ⅓ gr. strychnine hypodermically as a cardiac and nerve stimulant. As soon as the breathing was restored the brandy and beef-tea enemata were continued.

From this time he made a rapid and uninterrupted recovery, the symptoms disappearing in the inverse order to their onset. In forty-eight hours the œdema and paralysis of the limbs, and the blindness were completely gone, and he is now as well as ever he was in his life. A curious fact was that it left him with diplopia of his left eye for several days, but this has also quite disappeared. The after-treatment consisted in small doses of strychnine, with stimulants and bark; and plenty of nourishing diet, with port wine.

REMARKS.

That we have in Calmette's antivenene serum a most powerful remedy against the bites of venomous reptiles has been fully proved both in the laboratory, and also, in a few instances, in actual practice. In the year 1896 it fell to my lot to treat the first case in which this serum was used in India, which was detailed at the time in the columns of this JOURNAL, and since then other successful cases have been reported. The case under consideration is, however, of especial interest, in that it proves, first, that no matter how acute the symptoms, or how far advanced the effects of the poison, it is never too late to use the antidote; for, as will have been noted, the boy, in this instance, was, to all intents and purposes, dead at one time; and, secondly, that the "antivenene" will keep for an almost indefinite period, and exposed to all vicissitudes of climate, as I had the serum used in this case in my possession in the plains of India for nearly four years.

A CASE OF CEREBRO-SPINAL FEVER IN INDIA, WITH BACTERIOLOGICAL EXAMINATION.

BY MAJOR W. J. BUCHANAN, B.A., M.B., I.M.S.,
Superintendent, Central Prison, Bhagalpur, Bengal.

AT the Tropical Section of the British Medical Association meeting in 1898, there was read for me a paper on Cerebro-spinal Fever in India.[1] In this paper, besides sketching the history of the disease in India, I gave three cases, in one of which I described the finding of the diplococcus intracellularis. This, I believe, was the first time that this organism had been isolated in any case of this disease in India. Since then I have met with a few other cases, and in the case briefly described herewith I am able to announce the finding of the diplococcus again, the finding being confirmed by Major F. C. Drury, I.M.S., Professor of Pathology at the Calcutta Medical College. The case is briefly as follows:

Prisoner No. 654, aged 32, employed as a cook, over two months in gaol, was admitted to the hospital of the Bhagalpur Central Prison on August 21st, 1899, with fever (102° F.) and headache. He soon became unconscious, and passed thin stools involuntarily into the bed. The pupils were contracted. The pulse was only 90. At 5 P.M. he was still unconscious, and the conjunctivæ were much injected. On the next day the temperature was 100° F., the pulse 86, and the patient was conscious. He complained greatly of intense pain over the back of the neck and upper part of the spine as well as over the forehead. He was very restless. The urine had a specific gravity of 1030, and contained neither sugar nor albumen. There was strong flexor spasm of the leg muscles, and the head was drawn back markedly. There was no paralysis. On this day Kernig's symptom was demonstrated very clearly and distinctly, and contrasted with patients suffering from other diseases in another ward. In the cerebro-spinal case, when the patient sat up or when the thigh was flexed on the abdomen extension of the leg was impossible owing to the strong spasm of the flexors. The same day lumbar puncture was done, and about 1 drachm of turbid fluid was drawn off from the canal. This was examined and the diplococcus found within the pus cells, thus confirming the diagnosis. The case ran a rapid course, internal strabismus and left facial paralysis soon appeared, with retention of urine and herpes on the lips, and the patient died in an unconscious condition at the beginning of the fifth day of illness.

The necropsy was done four hours after death. The body organs generally were healthy. The brain was covered with fine leptomeningitis, and the base of the brain, the cerebellum, the medulla, and the first four inches of the spinal cord (all that was examined) were covered with thick flaky lymph, involving all the roots of the cranial nerves. I examined specimens of the lymph and cerebro-spinal fluid, and found the diplococci in large numbers within the cells. Specimens were at once sent to Major Drury, I.M.S., Professor of Pathology at the Medical College of Calcutta, who kindly examined them and made cultures. He reported that he found the diplococci in large numbers within the cells, both in the turbid fluid and in the purulent lymph, and cultivations on agar showed the diplococci in abundance in almost pure cultures. This case was the first in this gaol for the past sixteen months; about sixteen months previously there had been in three months 9 cases with 5 deaths. No possible source

of infection could be traced, nor between this case and the next, which occurred four weeks later. This, however, is the history of the disease everywhere. The general health of the gaol is very good; with 1,800 prisoners the death-rate *per mille* is only 11, a figure almost as good as any English prison and less than half the provincial (Bengal) death-rate for men from 15 to 45 years.

The case is interesting on account of three features not hitherto reported in any case in India (1) lumbar puncture; (2) the finding and culture of the diplococcus intracellularis of Weischelbaum and the demonstration of Kernig's symptoms; the latter a valuable aid in diagnosis which has not yet found its way into the textbooks.

REFERENCE.

1 BRITISH MEDICAL JOURNAL September 24th, 1898, p. 871; *vide* also *Journal of Tropical Medicine*, vol. i. No. 1, and *Dublin Journal of Medical Science*, February, 1899.

THE TREATMENT OF TETANUS BY THE INTRA-CEREBRAL INJECTION OF ANTITOXIN:

WITH NOTES OF A FATAL CASE TREATED BY THIS METHOD.

By CHARLES FIRMIN CUTHBERT, M.R.C.S.,
Gloucester.

THE success of this treatment so well described by Dr. Semple in the BRITISH MEDICAL JOURNAL of January 7th, 1899, also the case under the care of Dr. James Lawrence and Mr. John Hartley at the Darlington Hospital, reported in the same JOURNAL on June 3rd, 1899, cannot fail to have given great encouragement to surgeons in the treatment of these terrible cases by the method of MM. Roux and Borrel. Although the following case did not terminate in recovery, yet perhaps this is all the more reason why it should be reported.

On May 24th, 1899, T. G., aged 21, sent for me to see him on account of a fall from his horse, and in my absence from home my friend, Mr. T. Hampton, who helps me in my work, went to see him at once, and took charge of the case, and although I saw him at intervals I am much indebted to Mr. Hampton for the notes and many good suggestions. The last time I saw the case prior to the onset of tetanus was on June 1st, when the wound was rapidly healing, and there were no symptoms to indicate that tetanus was coming on.

The injury on May 24th consisted of a lacerated and jagged wound over the tubercle of the left tibia about two inches long and half an inch deep. At the time seen there was no bleeding, and the wound had been washed and cleansed of a considerable amount of dirt which the patient averred had got into it by being dragged some distance after the fall.

The wound was again washed thoroughly and all round with soap and water, and biniodide of mercury lotion (1 in 1,020) was kept thoroughly applied for half an hour. It was again washed with soap and water and thoroughly bathed with biniodide lotion; four sutures were put in, the wound dressed, and the leg put up in a back splint.

On May 25th the patient complained of some pain in the leg.

On May 26th the leg was still very painful, so the dressing was removed, and the wound found to be suppurating. It was well irrigated with biniodide lotion after removing the sutures, and boroglycerine fomentations were ordered every two hours, with biniodide lotion to wash out the wound each time the fomentation was changed.

On May 27th the patient was easier, and the wound was discharging freely.

On May 31st a dry dressing of iodoform and boracic acid was substituted. I saw him on June 1st, when he appeared to be going on well.

At 9 o'clock on the evening of June 3rd a message was sent saying he had some pain in the neck. Mr. Hampton went at once to see him and found him suffering from difficulty in swallowing, with some slight stiffness in the muscles of the neck and lower jaw.

On June 4th in the morning we went together to see him, and found the signs of tetanus much more pronounced, more stiffening of the jaw, and the difficulty in swallowing almost amounting to complete dysphagia. Spasm of the sterno-mastoid muscles was well marked, and a suspicious appearance of risus sardonicus.

The invariably fatal termination of these cases was clearly put before the friends and the operation of intracerebral injection with its prospects of recovery explained. Dr. Batten kindly saw the case with me at 12.30, and concurred in my opinion.

The head was shaved and the skin well cleansed, with every attempt to render the skin antiseptic, and a dressing applied. At 4.30 the patient was anæsthetised by chloroform, and the following lines of surface markings were taken: (1) A line across the top of the skull from the external auditory meatus of one side to that of the other side. (2) A line sagittally backwards from the root of the nose to the occiput, and bisecting line No. 1 at right angles. (3) A line drawn from the external angles of the orbits on either side to the point where the sagittal line met and bisected the line joining the two meati. A point was marked off midway along this third line as the point for drilling the skull. Two incisions were made, one on either side, about one inch in length, the centre corresponding to the centre of the line No. 3. The tissues were laid bare, and the pericranium having been separated, an Archimedean drill was used to bore the skull. The needle with a rounded point passed through the drill hole for about 2 inches and attached to an aseptic syringe containing the 5 c.cm. of dried serum dissolved in 5 c.cm. of sterile water, and representing 10 c.cm. of the ordinary antitetanic serum was then injected deeply into the frontal lobes, half the quantity on one side and half on the other, taking 10 minutes to inject each half. The skin was sutured, and the patient was returned to bed. When seen later in the evening he was comfortable, and had quite recovered from the effects of the operation.

On June 5th he had a fair night, sleeping at intervals. His temperature was 99.5°, and this had been the maximum rise in temperature since the morning of June 4th. He was given two injections of antitoxin, each 10 c.cm., into the flank, one in the forenoon and the other in the evening. The recti muscles were much less painful, and the jaw muscles were considerably relaxed. There was in the evening some slight spasm of the recti abdominis. The temperature had risen to 102°. With each injection of antitoxin in the flanks ½ grain of morphine was given hypodermically.

On June 6th he expressed himself as feeling better. His temperature was 101°, and his pulse rate 100. He had slept for three hours, and was much refreshed. Besides being given small quantities of peptonised milk with a spoon, which he had swallowed fairly well, he had been fed with four ounces of peptonised milk, four hourly *per rectum*, and these enemata he had retained. There was less spasm of the recti abdominis, also less pain in swallowing, and the tongue could be protruded further. At 12 o'clock in the day he had slight opisthotonos lasting a few minutes, and his temperature was 102°. He had another injection of 10 c.cm. antitoxin in the flank, with ½ grain morphine hypodermically. At 4 o'clock his temperature was 103.9°, and he appeared restless. About 7.30 he became suddenly delirious and attempted to get out of bed, and after some struggling with the nurse in trying to put him back to bed he died quite suddenly, presumably from heart failure.

I have reported this case fully because I feel the importance of all these cases, and although I was not successful in my attempt I trust that others may obtain the same good result as was obtained in the previous cases.

MAGNESIUM SULPHATE IN TROPICAL DYSENTERY.

By F. A. ROUGET, M.B., C.M.EDIN.,
Port Louis, Mauritius.

DYSENTERY is a common disease in the Port Louis Gaol, which has an average daily population of 375, consisting chiefly of Indian prisoners; and, as medical officer of the institution, I could not but be deeply interested in the remarks published in the BRITISH MEDICAL JOURNAL by Dr. Wyatt-Smith, Captain Johnston, and others on the treatment of this tropical disease by sulphate of magnesium.

I readily agree with the above writers that ipecacuanha does not deserve its time-honoured reputation of radix anti-dysenterica. For many years the classical treatment of dysentery was regularly followed in my hospital practice with but disappointing results. In my experience the majority of patients could not retain sufficiently active doses of the drug, however administered, and in spite of all precautions against emesis. After several days of unsuccessful trial I had in most cases to discontinue it, and to resort to other less nauseous remedies, such as salicylate of bismuth, salol, etc., combined with opium. Nevertheless, the death-rate from dysentery in the prison of Port Louis has never been high. Dysentery in this colony is not a very deadly affection when seen at the outset. On the contrary, it is perfectly amenable to treatment, provided proper attention be paid to the diet. A large proportion of the cases that have come under my notice ran their course in from six to fourteen days, and although as a rule they derived little or no benefit from the administration of ipecacuanha, the dysenteric stools remaining unchanged for days, still, they ultimately yielded to intestinal disinfectants, coupled with a milk diet. The mortality from this disease in the prison hospital, where nearly all the cases are treated from their very commencement, has never been higher than 8 per cent. At the Civil Hospital, which is intended for the general population, the death-rate from dysentery is much higher. It was 20 per cent. last year. This is due to the fact that the uneducated inhabitants of this island are in the habit of throwing themselves into the

hands of quacks when suffering from dysentery, and only repair to hospital *en dernier ressort*, often in a hopeless condition, after all quack remedies have failed to relieve them.

After reading Dr. Wyatt-Smith's article I resolved to give to sulphate of magnesium a fair trial, and the results obtained are as follows:

Date.	No. of Cases.		Died.	Recovered.	Prisoners Discharged from Hospital on Expiration of their Sentence, although not Cured.	Treatment.
From Jan. 1st, 1898, to May 15th, 1898 ...	41	Severe 6	3	2	1 Not improved	Ipecacuanha followed by bismuth salicylate, salol, and opium.
		Mild 35	0	28	7	
From May 15th, 1898, to March 31st, 1899	56	Severe 15	0	15	—	Magnesium sulphate, followed by bismuth salicylate and benzo-naphthol.
		Mild 41	0	39	2 (improved)	

The sulphate of magnesium was administered in doses of from ℥jss to ℥ij, with ♏x of aromatic sulphuric acid and some cinnamon water and syrup. The result of the treatment was in all cases without exception remarkable. In from eighteen to thirty-six hours the dysenteric stools entirely disappeared; soft yellowish fæces were passed instead, and in a few days the cure was complete. During convalescence I gave three times a day a powder composed of salicylate of bismuth, 15 grs., and benzo-naphthol, 10 grs., to which 3 or 4 grs. of Dover's powder were sometimes added.

In addition to this treatment, too much attention cannot be paid to the diet, which should essentially be a milk diet. Any deviation from it is likely to materially interfere with recovery, and in not a few instances relapses occurred among the cases under my care owing to my Indian patients eating rice and curry.

I entirely agree with Dr. Day that magnesium sulphate should be continued for some days after the stools have ceased to be dysenteric. In fact, I have every reason to attribute some of the relapses to my stopping the treatment too soon. In every case of relapse, however, on the sulphate of magnesium being resumed and on subjecting the patient to the strictest supervision, the character of the stools rapidly improved and recovery ensued. So far, then, the results of my own observations thoroughly corroborate the opinions advanced by Dr. Wyatt-Smith, Dr. Day, and other writers, to the effect that magnesium sulphate is really a specific for dysentery. Under its administration the death-rate from dysentery was brought down in the prison hospital under my charge from nearly 8 per cent. to *nil*.

In conclusion, I must say that the magnesium sulphate treatment does not appear to me to be of much value in chronic dysentery. At all events, no improvement was derived from its use in two cases.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

DISLOCATION OF THE RADIO-CARPAL JOINT.

As this dislocation appears to be very rare I may mention that I have had a similar one to that recorded by Dr. Given in the BRITISH MEDICAL JOURNAL of June 3rd (p. 1332). In my case—which happened a few weeks ago—a boy about 10 years of age fell out of a swing through one of the ropes slipping from its attachment, and he fell upon his outstretched left hand. On examination the lower ends of the radius and ulna were seen in their normal relative position, but protruding more than usual, while the carpus was lying on the posterior surface of these two bones, reaching upwards about an inch from their ends. I was unable to reduce the dislocation until the patient was anæsthetised, when it was easily reduced. I commenced passive movement of the wrist-joint and massage of the muscles ten days after the injury, and although at first there was considerable loss of power in the flexors this has passed off. With the exception of some impairment of the power of extension at the wrist-joint, the movements are excellent, and the stiffness which is stated as often to result from this accident has, I think, been prevented by the early movement.

Grahamstown, Cape Colony. JAMES T. BAYS, M.D.Lond.

ANOTHER CASE OF CARDIO-PULMONARY *RALE*.

THERE is at present under my charge a patient presenting a somewhat similar phenomenon to that recently described by Dr. James Carslaw. A domestic servant, aged 20, came to the Bridge-of-Weir Consumptive Hospital with a cavity in the left lung, in the immediate neighbourhood of the heart On February 17th, 1899, a series of coarse crackling *râles* was audible over the left lung, accompanying the cavernous respiratory sounds; and twelve days later, a rhythm given by the cardiac systole to the crepitations and grating sounds was audible all over the left lung, but most distinct in the neighbourhood of the heart. At the right base behind this phenomenon was also present. On May 3rd the crepitations had disappeared and were replaced by a creaking sound possessing the cardiac rhythm. On July 7th the adventitious sound had the character partly of creaking, partly of the cracked-pot sound, and was audible to anyone standing at the patient's bedside; it accompanied each cardiac systole. This phenomenon was quite distinct from the clicking sound referable to the throat (which Dr. Carslaw mentions as present in his case), which is found in a large number of sufferers from phthisis.

THOMPSON CAMPBELL, M.B., C.M.,
Medical Officer, Consumptive Sanatoria of Scotland, Bridge-of-Weir.

CEREBRO-SPINAL RHINORRHŒA.

THE article in the BRITISH MEDICAL JOURNAL of September 23rd on cerebro-spinal rhinorrhœa recalled to my mind a case seen some years ago in which I now regret I did not take a deeper interest.

A boy, aged 4 years, was admitted into the Hospital for Sick Children, Waterloo Bridge Road, for meningitis. There had been convulsions and vomiting, and marked optic neuritis was present at the time of admission. The acute symptoms subsided. He was conscious, but was quite blind and lay in bed almost helpless, though there was no complete paralysis of any limb. About two months after the onset, there was a free flow of fluid from the nose which lasted several days. My notes state the discharge to have been like "clear water, never stained with blood, and not offensive." From the time of the discharge the boy commenced to improve, and before he left the hospital four months later he could walk with a little help. The possibility of the fluid from the nose being cerebro-spinal fluid was thought of, but the idea rejected as highly improbable. Dr. StClair Thomson's observations, however, seem to show that the fluid was more likely than not to have been of that nature.

Clifton. THEODORE FISHER.

A HYDATID CYST IN THE FEMORAL CANAL.

ON May 22nd a patient was sent to me with a lump in the left groin. This was situated over the saphenous opening, was lobulated, firm, and presented no impulse on coughing. It had been increasing in size and was rather tender. The diagnosis was irreducible omental femoral hernia or lipoma coming from the femoral canal, and as the lump was growing and causing pain I determined to remove it.

A sac was met with and opened, when about a dozen daughter cysts escaped. The sac was dissected out and found not to enter the femoral canal, so that the hydatids were not deposited in herniated omentum, but in cellular or lymphatic tissue.

The interest in this case is pathological, and I wish to register it as a very rare source of confusion in the differential diagnosis of groin tumours.

Wolverhampton. FREDERICK EDGE, M.D.Lond., F.R.C.S.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

CHARING CROSS HOSPITAL.

A CASE OF MITRAL OBSTRUCTION: THROMBOSIS OF THE SPLENIC VEIN: ENLARGEMENT OF THE SPLEEN AND HÆMATEMESIS.

(Under the care of Dr. GREEN, Senior Physician to the Hospital.)

[Reported by DONALD NAESMYTH, M.R.C.S., L.R.C.P., late House-Physician and House-Surgeon to the Hospital.]

THE following case is published as an unusual one, and of considerable interest.

A boy messenger, aged 19, was admitted into the hospital on February 7th, 1899, for "vomiting blood." His past history showed that he had suffered from chorea at the age of 10, but had otherwise been healthy. His illness commenced at the beginning of December, 1898. He suddenly felt faint, and vomited "about a quart of dark clotted blood." A doctor was sent for, and the patient was put to bed. The following evening he got up, took his dinner, and almost immediately brought up "about half a pint of dark blood." He returned to bed, and was kept on fluid diet for the next five weeks, during which time he had no return of the hæmatemesis. He then resumed full diet, and got up and about, and felt "quite well" for another week. On January 7th, 1899, he again had hæmatemesis, bringing up "about half a pint of dark blood." He returned to bed and "slop" diet, and remained in bed until his removal to the hospital on February 7th. In all these attacks the patient had no epigastric pain, but noticed some tenderness in the left hypochondriac region, and swelling of the legs and abdomen. Nothing else complained of except great weakness.

On admission he was found to be well nourished, but markedly anæmic. There was slight œdema of both legs. Examination of the abdomen revealed an enlarged spleen, regular in outline, reaching 2½ inches below the costal margin, and slightly tender on palpation. The liver was not enlarged. Examination of the heart showed signs of well-marked mitral obstruction with right-sided enlargement. The urine was normal. The temperature on admission was 100°, but on the following day normal. The blood was watery in appearance, the red corpuscles being much diminished in number (2,400,000), and some were pear-shaped and irregular. There was no increase in the number of leucocytes. The patient was kept in bed, put on full diet, and given iron.

On February 16th he developed an evening temperature of 100.6° (previous to this it had never risen above 99.6°, except on admission, when it was 100°).

On February 27th the anæmia was greatly improved, he was eating and sleeping well, and had had no bleeding since admission. There had been no alteration in the size of the spleen. The temperature remained irregular, rising in the evening to 100 2° or 100.6°.

On March 14th the temperature had been normal for fourteen days, with the exception of an evening rise on two occasions to 99.6°. He felt much better, and was allowed to get up.

On March 18th, while walking across the ward, he suddenly turned faint. He complained of feeling sick, but did not vomit. He became very collapsed; his pulse was 160, soft, and irregular. Twenty-four hours later patient passed a stool, black from the presence of blood.

On March 22nd he was still being kept in bed. His temperature had varied between 99° and 101.4°. The heart was acting quickly and irregularly, but he felt better on the whole. About mid-day he complained of nausea and abdominal pain, and suddenly vomited 3 ounces of bright blood. He was put on nutrient enemata and given ice to suck. From this date the hæmatemesis continued daily and the patient got rapidly worse.

On March 23rd 4 ounces of blood were vomited; on the 24th 20 ounces; on the 25th 2 ounces; and on the 26th 8 ounces. He was now very weak and collapsed. For the last three days he had had diarrhœa, passing five or six stools daily, all containing blood. His temperature on the 25th rose to 103°.

At midnight he was sleeping quietly, but his pulse was rapid, feeble, and irregular.

About 2 A.M. on March 27th he became restless, and quite suddenly died.

Throughout the illness there was no blood in the urine. The case was diagnosed as one of mitral stenosis with embolism causing the enlarged spleen and the hæmatemesis.

Notes on the Post-mortem Examination.—The right pleural cavity was obliterated by old adhesions, the left was normal. The bases of the lungs were congested, and their anterior margins were emphysematous. Some of the bronchial glands were calcified. The heart weighed 12½ ozs.; it was not markedly enlarged. The pericardium was normal. The mitral orifice admitted the thumb only; there was slight opacity of the endocardium round the valve, and there were small recent vegetations around the orifice. The tricuspid orifice admitted three fingers, and similar vegetations were present round the cusps. The aortic valves were competent, slightly thickened, and a few vegetations were present on them. The substance of the heart was fatty. There was only a small quantity of blood in the body; the clots were of a pale but bright red colour. The aorta and pulmonary artery were very thin. The aorta was ⅝ inch in diameter. The mucous membrane of the stomach was healthy, and presented no signs of ulceration or congestion. The œsophagus and duodenum and intestines were also healthy. The spleen was much enlarged, weighing 13 ozs., and was adherent to the diaphragm. Its capsule was thick and opaque; its substance pale and very tough. There were no signs of embolism. The splenic vein was thrombosed throughout, up to its junction with the organ, but the thrombus did not extend beyond the junction with the superior mesenteric vein, which was normal. The liver and kidneys showed nothing remarkable.

REMARKS.—The points of interest about the case are: 1. The enlarged and tender spleen occurring in a case of mitral stenosis, and suggesting embolism; 2, the profuse hæmatemesis, which was considered *ante mortem* to be due to an infarct, or possibly a gastric ulcer, and the fact that the *post-mortem* examination revealed a healthy stomach and duodenum; 3, the rarity of thrombosis of the splenic vein.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. BRYANT, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, November 14th, 1899.

THE OPEN-AIR TREATMENT OF TUBERCULOSIS.

DR. J. KINGSTON FOWLER, in opening the discussion, said that the treatment in this country had not been so successful as to allow them to disregard any measure of treatment that had met with success on the Continent. He had for long taken exception to the use of the terms "phthisis" and "consumption" as describing what was truly a tuberculosis of the lung. Rational therapeutics, depending as it did on true ideas of pathology, could not be obtained while pulmonary tuberculosis was considered as a catarrhal process. The name "open-air" treatment referred to only one factor; "sanatorium" treatment was probably a better term. The origin and general features of the method were then described. Too many sanatoria on the Continent were little better than hotels, so numerous were the patients' friends, and they gave results much inferior to those obtained in smaller sanatoria containing 40 or 50 patients. In cases running a favourable course a period of activity was followed by one of quiescence, then fibrosis followed, and the lesions became obsolete. Such a result required, it might be, years of special care for its accomplishment. A much stricter supervision of the patient was needed than at present obtained in the average sanatorium. The patient was in the position of one who was learning how to regulate his life. The influence of fashion in maintaining the excess of candidates for treatment in the sanatoria over the vacancies was obvious. Mental excitement was to be deprecated for sanatorium patients. The site of the sanatorium was an important factor, as also was its altitude. Tuberculosis of the lung might be arrested under residence in a favourable climate merely, but it was less likely than under the sanatorium method with pure air and moderate elevation. So long as phthisis was believed to be due to a catarrhal process, all measures for excluding cold air were adopted: but now that its tuberculous nature was recognised, an open-air life was desired. By observations of the temperature one could gauge the character and activity of the disease, and they were the chief indications for regulating the precise measures of the sanatorium treatment, and hence frequent readings were necessary. The observations taken in the rectum were advocated. Cases of high fever should be at rest in bed, but when for a week the temperature had been below normal in the morning and below 100.4° F. in the evening the patient should begin to take graduated exercise. The "separate" plan of keeping the patients at rest was probably the better. The most suitable exercise was slow up-hill walking, strengthening as it did the heart and promoting complete expansion of the lungs; and the sanatorium should be halfway up a hill, not at its top. One distinction between the sanatorium treatment and other methods was the large amount of food the patients were induced to take, and this was best accomplished in company, and in a small sanatorium where the physician could himself apportion to each patient his suitable *quantum* of food in which fats and carbohydrates and green vegetables were important constituents. The digestive powers of the patient were sufficient to bring his body weight up to the average normal. A patient might gain in weight and yet the tuberculous process not be arrested, and the larger the quantity of food administered the less could a gain in weight be taken as a proof of the arrest of the disease. Clinical cases were referred to illustrating the re-

sults of the method. As much depended on the man as on the system. Probably the most suitable man to take charge of a sanatorium was one who had undergone the treatment himself, or one who had been trained in a sanatorium for at least six months. The earlier in the disease the patient came under the treatment the better, but even in the very advanced stages patients might derive great benefit. He thought this method had come to stay—aiming, as it did, at increasing in every possible way the resisting power of the body.

Sir WILLIAM BROADBENT accepted practically the whole of the statements that had been made. If the open-air treatment were to be applied to the poor the sanatorium method was indispensable, although the simple open-air treatment might suffice for others. Advantages of the sanatorium treatment were that the public was protected from the patient in regard to the tubercle bacilli, and that the patient was protected from the public in minimising the risk of secondary infections, as, for example, that of influenza. He would like all friends of patients to be received in the open air. Another advantage was that a closer study of the disease could be made, particularly the effect of exercise and excitement in phthisis. Sanatoria should be conducted on good principles of management, and there should be nothing of the nature of limited liability companies. He thought the oscillation of the temperature was the important point to observe, and not its absolute height. The diet should be adapted to the individual patient.

Professor BOYCE (Liverpool) alluded particularly to the construction of sanatoria, based on his visit to the sanatorium of Dr. Trudeau in the Adirondacks and on visits to the European sanatoria. In regard to their curative action, there should be means in the sanatorium for diagnosis and rooms properly furnished. There should be the maximum amount of air, light, food, and cheerfulness. Dust as predisposing to secondary infection, and the milk and the water supply were important. In regard to prevention, the patient should be drilled by the routine of the sanatorium in preventing the spread of his tubercle. A sanatorium should also contain facilities for education. A series of lantern slides were shown of the more important sanatoria. The advantages of the cottage system over the block system were slight when both were well conducted. The former was more homely and village-like and air was more plentiful, the patients needing to walk to the central block. The block system was cheaper. He advocated the "letter H system," in which the dining-room being placed on the north side was intermediate between the two blocks. The verandah ought not to interfere with the light and air of the living rooms. The single room system was probably better than that of wards containing numerous beds. The rules, especially for poor patients, should not be too Spartan. It was important for poor patients to have living rooms. The mixture of the sexes tended to cheerfulness and was to be recommended. Distance from a railway station was no particular drawback. The patients should cleanse their sputum receptacles themselves. An endeavour should be made in building sanatoria to make provision for the prosecution of research on tuberculosis.

Dr. BURTON-FANNING (Norwich) had followed this mode of treatment for four and a half years on the Norfolk coast, first with rest and fresh air with fairly good results, with better results when extra diet was added, and still better in a third group when medical supervision and regulated exercises were also employed. Many of the cases were old-standing ones which could not go abroad, and these did not give a large number of actual cures. Given a case of strictly limited disease, with good digestion and circulation, if the patient would persevere for a sufficiently long time such a case should be curable in England. First to be observed was an increase of weight in the cases that did well, then a reduction of temperature, then a diminution of tubercle bacilli, and then the disappearance of physical signs, the shortest time for this to occur in his experience being three months. He had found that after a short walk the rectal temperature was markedly affected, the oral very little. The taking of the rectal temperature necessitated that the patient should leave the open air for a time, which was undesirable. Some cases deteriorated as regards their psychical condition from being secluded.

Dr. THURNAM (Nordrach-on-Mendip) remarked that the system of having patients lying in company in the open air had an injurious influence on the nervous condition, and he thought that the fewer the number of the patients in any group the better. The balcony should not exceed 4 feet in width, so that the patients could not lie side to side. There was no necessity for *Liegehallen*, and all unnecessary conversation was to be deprecated. There was no inconvenience in taking the rectal temperature, and he thought it a more sensitive index of pulmonary changes than the oral.

Professor CLIFFORD ALLBUTT (Cambridge) emphasised the distinction between open air and draughts. On the H plan the windows of the dining-room were east and west and were practically open to these winds; this was not open air, and presented all the disadvantages of a railway station. He disliked small bedrooms facing east and west with removed windows. Cold winds and draughts brought about a great diminution of vital energy and often induced cyanotic states in patients. The keeping of patients in tents on the lawns had advantages over such arrangements of rooms. Verandahs were of great use, and if not more than four feet in width and eight or ten feet high were a boon, particularly in winter. He thought the isolation system had a very bad effect in diminishing the cheerfulness of the patient, although the large concourse of patients in the *Liegehallen* was not to be advocated. An increase of weight was not in itself evidence of arrest of the disease. When the disease was progressive the patient must not, of course, take exercise, and though his weight might be increased his condition did not become hard. As they began to amend, their appetite improved. The meals should not be too frequent. Many of the alleged cures relapsed, and even if the physical signs disappeared there might still be active disease. The test of a cure was ability of the patient to return to ordinary conditions of work and remain well for at least a year, and only such should be recorded as cures. There was great need for thorough scientific investigation of tuberculosis in relation with the sanatoria.

The discussion was adjourned.

CLINICAL SOCIETY OF LONDON.

Sir R. DOUGLAS POWELL, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, November 10th, 1899.

ACUTE INTESTINAL OBSTRUCTION DUE TO AN INTUSSUSCEPTION OF MECKEL'S DIVERTICULUM.

MR. H. BETHAM ROBINSON read notes of this case. A healthy boy, aged 5, quite well up to 40 hours before his seizure, and never making complaint, except of occasional pain in the belly, after breakfast on January 21st had nausea and felt unwell, his bowels being relieved naturally. During the day he complained of pain in the belly, but his temperature was normal, and there was nothing found on examination to point to any serious lesion. Through the night there were frequent attacks of bilious vomiting with cramping pains about the umbilicus, hiccough, and thirst. Next morning he seemed a little better, but vomited after swallowing anything; there was no distension; no lump could be felt in the belly or rectum. His temperature was 99°; pulse 130. In the afternoon the pain, hitherto intermittent, was continuous, the belly a little fuller. An enema was given, without result; the returned fluid showed a little blood staining. Mr. Robinson saw him in the evening in consultation, and found him with a distressed look and very restless, with pain across the belly at the level of the umbilicus. His temperature was 99°, pulse 160. He was vomiting clear watery, bile-stained fluid. No flatus had passed during the day. The belly was distended, coils of small gut being noticed in the upper part. On palpation there was no rigidity, no special tenderness; an ill-defined lump could be felt just above the outer part of Poupart's ligament on the right side, with comparative dulness over it; nothing else could be made out, and the rest of the belly was resonant. In the rectum there was no mucous discharge, no lump; but in the faecal smear on the finger was a little blood-stain. Immediate operation was advised, and proceeded with. Under the anæsthetic the resistance above Poupart's ligament disappeared, but *per rectum* a lump was found in Douglas's pouch, which could be pushed up by the finger, and then grasped with the other hand above the inner part of the ligament and to the right of the bladder. It seemed firm and

tubular, and about 3 inches long. Its low situation and free mobility were rather puzzling. A mid-line incision was made, and on opening the cavity clear fluid escaped, but no lymph coagula. Two fingers were passed down into Douglas's pouch, when they seized the lump and drew it out of the wound. It was intussuscepted small intestine, forming a tumour about 4 inches long. Without much difficulty the main part of the gut was reduced, when a hardness presented with a cup-shaped depression in the centre: this lump proved to be an inverted diverticulum. The reduction of this from its thickened contracted neck proved impossible, and there was no alternative but to excise it. The edges of the gap in the intestine were brought together by Lembert's sutures, but, owing to the doubtful state of the bowel at one point, it was thought better not to close it entirely, but to fix it in the abdominal wound. An additional reason for doing this was that the boy's condition forbade any lengthy resection. After the operation he revived for about two hours, and then somewhat suddenly collapsed and died.

Mr. Charters Symonds had had no personal experience of intussusception following Meckel's diverticulum, but had seen two cases of obstruction from that cause. The first was in a little boy who had repeated attacks of pain on the right side, like that of appendicitis. The lad was seen on the fourth day, and was extremely ill. He therefore operated and found an adherent diverticulum of the small intestine round which bowel was twisted and gangrenous. The second was that of a man aged 26, who came in on the fifth day of an attack of acute intestinal obstruction. On opening the abdomen he found a very wide diverticulum round which bowel was folded. In both cases the intervention was too late to save life. The sooner these cases were attacked the better for the patient. He had operated upon eight cases of intussusception; only two were successful. One of them was in a child of 12 months with an intussusception reaching from the cæcum almost to the rectum, and the incision extended from the ensiform cartilage nearly to the pubes. The other was that of a child only 8 months old in which he made an opening over the cæcum. The first case was seen within twenty-four hours and the second within forty-eight hours, and both made excellent recoveries.

Mr. Robinson, in reply to the President, said it was difficult to speak with certainty on the question whether or not there would be any contraction after the operation. That would probably depend upon the area of the base of the diverticulum. If large, there might be some contraction.

Primary Nephrectomy for Complete Rupture of a Kidney.

Mr. Bland Sutton related details of the case of a man, aged 35, who was run over by a cab. On admission he showed marked signs of internal bleeding, and a large ill-defined swelling formed in the right loin. The overlying skin was not scratched, contused, or torn. Three hours after admission the signs of bleeding became so marked, blood appearing also in the urine, that there could be no doubt that the kidney had been severely injured. Through an incision in the right linea semilunaris it was ascertained that the remaining abdominal viscera were uninjured; on detaching the peritoneum overlying the swelling in the loin the kidney was found completely torn across at the junction of the lower with the middle third; the laceration had involved the renal vein, and blood issued from it with some force. As it was hopeless to attempt to suture the two parts of the kidney together, the fragments were removed with the surrounding clot. The perirenal region was lightly stuffed with gauze, and the wound secured with interrupted sutures of silkworm gut. The patient left the hospital for the convalescent home in four weeks from the date of the operation. Mr. Bland Sutton suggested that the term "primary nephrectomy" should be reserved for cases in which the kidney was removed within twenty four hours of the accident, and that where it became necessary to remove a kidney some days or weeks after such an injury, it should be called secondary nephrectomy. British literature contained very few records of primary nephrectomy for rupture of the kidney, and a study of the *Centralblatt für Chirurgie* indicated that far too many cases were recorded from *post-mortem* observations, the patients often dying without surgical intervention. This, he held, was very regrettable, especially as the signs of this grave accident were in a large proportion of cases very clear and obvious.

Mr. G. R. Turner described a similar case in a man, aged 57, who fell from an omnibus to the pavement, striking his right side; he became collapsed, and passed blood from the bladder. Mr. Turner diagnosed rupture of the right kidney, and opened the abdomen in the same way as the author. He found the ascending colon and cæcum black from extravasated blood that had come from behind. He incised the peritoneum to the right of the ascending colon, when his hand passed into a blood clot in which lay the kidney torn completely across, with its lower end lacerated. As the two halves could not be united, he removed them and drained the cavity. The man recovered, in spite of an unfortunate *contretemps* on the eighth day, when, as he was coughing during an attack of acute bronchitis, he burst the wound, and a foot of intestine escaped into the dressing. Mr. Turner had been led to operate at once in that case from having seen a fortnight before a man, aged 24, who was too collapsed with rupture of liver and kidney to allow of immediate operation. He waited until the third day, and then found slight laceration of the under surface of the liver, with blood in the general peritoneal cavity. The hæmorrhage from the liver had ceased; there was also a huge retroperitoneal clot from rupture of the right kidney. He closed the abdomen, without attempting any further operation. Vomiting subsequently persisted, and the patient died on the seventh day. He had no peritonitis; the vomiting was probably due to the extravasated blood behind the peritoneum involving the sympathetic ganglia. He preferred operation in such cases through the linea semilunaris rather than through the posterior wall of the abdomen. He had known the removal of a kidney increase the amount of urea excreted in the urine.

Dr. Coode Adams mentioned a case in which rupture of the kidney was not followed by hæmaturia. The patient, a man, aged 45, after a "buffer" accident, had fracture of the femur and three ribs, and laceration of the left kidney, which was found *post mortem* with some blood in the capsule, though none had passed into the bladder. As a contrast, he had since had in private practice two cases of young men in whom injury was followed by considerable hæmorrhage from the bladder. Both were treated by rest, and both recovered; but both were slight cases, one having fallen in jumping, and the other having slipped in the street. He was consequently disposed to question the diagnostic value of bleeding from ruptured kidney.

Mr. Kellock asked why the author had removed the kidney transperitoneally rather than by the more convenient approach through the loin. The gauze had left a sinus, which would have been better if it had gone through the loin than through the anterior wall of the abdomen.

Mr. Howard Marsh said very few cases had been submitted to this treatment. The case was similar to the cases of ruptured spleen lately recorded in which the spleen was removed. But why did not the author, when he found the retroperitoneal hæmorrhage, close the first wound and attack the kidney from the back externally to the peritoneum? If he had sutured the kidney, urine might afterwards have escaped into the peritoneal cavity. In cases of great collapse he used saline injections with a little brandy or whisky, which in the course of a few hours brought a patient into a condition fit for operation. With reference to the absence of any external signs of injury, he instanced the case of a boy, aged 6 years, who had been run over, and soon died without any external evidence of injury, though after death the left lung was found torn away from its bronchus.

Mr. Sutton, in reply, said he had been brought up as a "loin" surgeon, but had come round to Mr. Knowsley Thornton's way of performing the operation from the front. He had treated 25 cases transperitoneally, and with a little care could close the peritoneum so as to shut off its cavity. By adopting the anterior method he shortened the operation, saved the patient much shock and a second wound. He selected his cases for either route, and thought he thus did better for them than if he universally adopted one way only. In cases of shock he used saline injections of about 3 ounces, with a very little brandy or whisky, into the rectum every hour, but after the operation, because when it was done beforehand there was apt to be an inconvenient oozing during the

operation. His experience with the injections had been principally in cases of ruptured gravid tubes, in which the hæmorrhage was often terrible. After operation he injected every hour. There was a paucity of records of cases of ruptured kidney, What was needed was early treatment and suture of the torn fragments, which, as Dr. Bradford had shown, readily united if the rupture was through kidney substance.

Mr. TURNER, in reply to the PRESIDENT, said there was a *post-mortem* examination in the case of the man, aged 24. No injury of intestine was found, and no peritonitis existed, but there was an enormous retroperitoneal extravasation of blood.

ENLARGED SPLEEN, WITH CONGENITAL VOLVULUS OF THE STOMACH AND TRANSVERSE COLON, SIMULATING SPLENIC ANÆMIA.

Dr. NORMAN DALTON described this case. The patient was a woman, aged 38. The spleen was painless, and had probably been enlarged since her first pregnancy. It now reached to the right iliac fossa. There was no history of malaria, syphilis, or alcohol, and the liver was not enlarged. All the symptoms of anæmia were present, and the blood showed 21 per cent. of red discs, 20 per cent. of hæmoglobin, no increase of leucocytes, and no abnormal corpuscles. No hæmorrhages had occurred. She had noticed the pallor and debility for one year, and while under observation remittent fever was present. Death occurred suddenly. The stomach was found to be strangulated and extremely distended by gas, and a perforation due to sloughing existed at the cardia. The enlargement of the spleen was such as would have resulted from obstruction of the splenic vein. Two other abnormalities were found: (1) The transverse colon lay above the stomach, in the anatomical position, and, before it reached the left lumbar region it was bent in such a way as to encircle the insertion of the œsophagus into the stomach. This abnormality was congenital, because the apron of omentum attached to the transverse colon had not united with that attached to the stomach, a state of affairs which existed in fœtal life. (2) The pylorus lay almost behind the cardia, so that whenever the stomach became distended the fundus, by rotating to the right and forwards, would half intertwist the cardia and pylorus, so as to narrow both orifices. The grip of the colon round the cardia was apparently not tight enough of itself to cause obstruction; but, when the spleen became large, the drag of its weight on the gastro-splenic ligament pressed the cardia tightly against the encircling colon. This could be demonstrated on the *post-mortem* table by traction on the lower part of the gastro-splenic ligament. Finally, some extra distension of the stomach produced such a twist of the cardia and pylorus that fatal strangulation of the involved tubes occurred. The position of the parts at the cardiac end of the stomach was such that the splenic vein might have been compressed from the first, but, from the history, it probably became loosened from its attachments at the first pregnancy, and then increased in size from traction and torsion of its vein. The anæmia and fever could be explained by the condition of the stomach. As regarded diagnosis, lymphadenoma, leucocythæmia, malaria, and other splenic affections were easily eliminated, and he came to the conclusion that the large spleen was due to obstruction of the splenic vein, although he was not able to discover any cause for such obstruction. The blood condition (oligocythæmia and chlorosis without leucocythæmia), the large spleen, and the fever established a close resemblance between this case and the disease called splenic anæmia or splenomegaly. There were some minor differences, such as the absence of hæmorrhages, and the apparent long duration of the case. He was not sure that Banti was correct in considering that splenomegaly was a "pathological entity"; because, while the total number of cases of this affection which had been recorded was still small, in several of those which were most carefully observed during life, no *post-mortem* examination was obtained; and, further, in a few of those in which a *post-mortem* examination was made, it had been shown that the symptoms could be explained without calling a new disease into existence.

Dr. PERCY KIDD could scarcely think the condition of the stomach was the cause of the anæmia. Also he thought they should scrutinise each case very carefully before admitting that it was one of splenic anæmia; in fact, the diagnosis should not be conceded without a *post-mortem* examination.

Dr. DALTON, in reply, said it was difficult to explain the anæmia, the connection of which with stomach disease had not been thoroughly worked out. In a case recorded in the BRITISH MEDICAL JOURNAL some time ago, a spleen was removed for "splenic anæmia." *Post mortem*, however, extensive lymphadenoma of the abdominal glands was met with. Yet the case was labelled "splenic anæmia," and would doubtless go down as such.

MEDICAL SOCIETY OF LONDON.

CLINICAL EVENING.

F. T. ROBERTS, M.D., President, in the Chair.

Monday, November 13th, 1899.

CASE OF APHASIA.

DR. E. CAUTLEY showed a man, aged 71, who had had a fit, followed by aphasia and agraphia, with loss of power on the right side, from which he had partially recovered. He suggested that the symptoms were probably due to a small hæmorrhage in the second and third left frontal convolutions pressing on the speech and writing centres.

CASE OF CONGENITAL HEART DISEASE.

Dr. CAUTLEY also showed a lad, aged 14, who exhibited a well-marked systolic thrill and murmur over the base of the heart, audible in the neck and in the back, associated with hypertrophy of the left ventricle, which he attributed to a congenital defect of the aortic valves.

The PRESIDENT concurred in the diagnosis, and asked if there was any history of syphilis.

Dr. CHAPMAN thought there was a mitral murmur, too, and commented on the slight effect of the lesion on the health of the patient.

Dr. CALVERT thought there was evidence of marked aortic stenosis, and suggested that a sphygmographic tracing would throw light on the nature of the lesion.

Dr. EWART thought it was conceivable that there was a permanent ductus arteriosus, though the double murmur which he regarded as diagnostic of that condition was absent.

Dr. CARR thought there was evidence of disturbance in both the pulmonary and aortic areas, but without any considerable amount of obstruction.

The PRESIDENT called attention to the absence of cyanosis.

Dr. CAUTLEY said syphilis was negatived, and he thought the absence of cyanosis was opposed to the idea of a permanent ductus arteriosus.

CASE SIMULATING ADDISON'S DISEASE.

Dr. EWART showed an Italian, aged 42, born in England, who exhibited pigmentation of the skin and nails, with loss of flesh and a low tension pulse suggestive of Addison's disease. He subsequently ascertained, however, that the liver and spleen were much enlarged, and that the pigmentation had existed for twenty years, he being an asphalte layer. There was a decrease in red corpuscles, with an increase of white cells and eosinophiles. He had been taking suprarenal extract with apparent benefit. There was no history of malaria.

Dr. GARSON did not think the pigmentation was at all well marked for a Southerner.

Dr. AULD did not think the condition could be produced by asphalte working, but if Addison's disease, the pigmentation would before then have been much more marked. He thought it was probably malarial.

Dr. SAVILL alluded to a well-marked case of malarial pigmentation.

LOCKJAW RELIEVED BY INCISION OF GUM.

Dr. EWART also showed a man, aged 47, who had developed lockjaw in connection with tenderness of the gum. A deep incision of the tender gum caused the condition to subside. These cases, he observed, were well known to specialists.

Dr. KINGSCOTE referred to two similar cases in which lockjaw was relieved by incision of inflamed gum.

Serpiginous Ulceration of Eyelids.

Mr. H. L. Barnard showed two women with serpiginous ulcerations of the eyelids, one probably syphilitic and the other possibly of the nature of rodent ulcer.

Dermoid Cyst of Nose.

Mr. Barnard also showed a boy, aged 4, from whom he had removed a dermoid cyst situated on the bridge of the nose and communicating with a dimple at the tip.

Case of Hernia Cerebri.

Mr. Barnard also showed a man, aged 20, who came with symptoms of cerebral tumour of four years' standing, optic neuritis, hemianopia, continuous vomiting, and persistent headache. To relieve the pressure a large piece of skull was removed, through which an enormous hernia cerebri projected, but the symptoms were greatly relieved, and sight returned to some extent. The skull was very thin, hardly thicker than parchment.

Mr. Cautley said they were disappointed in not finding the tumour, which was probably tuberculous, but the pressure symptoms had been greatly relieved by the operation.

Cases of Wired Fractures.

Mr. Wallis showed three patients, two of Pott's fracture and one of fractured tibia, which he had treated by wiring the fragments, with excellent results.

Sir Robert Craven (Hull) remarked on the satisfactory nature of the treatment.

Œdema of Arm following Axillary Abscess.

Mr. Morgan showed a young man in whom a large axillary abscess, presumably of lymphatic origin, was followed by periodical attacks of solid œdema of the arm and forearm, the hand, curiously enough, not being involved. He attributed the condition to blockage of the lymphatics of the limb.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

G. Anderson Critchett, M.A., F.R.C.S.Edin., President, in the Chair.

Thursday, November 9th, 1899.

Primary Neoplasm of Optic Nerve.

Mr. E. Treacher Collins and Mr. Devereux Marshall read a paper on two cases of primary neoplasm of the optic nerve. They exhibited also 4 other specimens of this variety of new growth which they had collected. Their first case was that of a boy, aged 5 years, who had come under the care of one of them at Moorfields. The right eye had become more prominent than its fellow, and, although treatment with iodide was tried, no improvement occurred, and it was therefore decided to explore the orbit. While under observation the proptosis had become more marked and the eye more flattened in its antero-posterior diameter, as was proved by the fact that the hypermetropia increased from 4 D when it was first seen to 9 D at the time of the operation. The movements of the eyeball were but very slightly limited. When removing the eye it was found that the nerve was very much enlarged; this was divided as far back as the optic foramen. On examination, the growth was seen to be chiefly composed of the very much thickened pial sheath; there was also a great increase in the fibrous tissue of the nerve, and the nerve fibres had almost entirely disappeared, leaving apparently empty spaces. The second case was that of a lady, aged 46, whose sight had been failing for nine months. Hæmorrhages covered the retina, and the eye was quite blind. Excision was performed in November, 1897, when the optic nerve was found to be much enlarged. As malignant disease was feared, the contents of the orbit were taken away and the nerve divided at the optic foramen. In this case, as in the first, there was found to be much thickening of the pial sheath and also of the connective tissue of the nerve. There was at present no recurrence in either of them. The authors fully discussed optic nerve tumours, and drew attention to the numerous and varied names under which reported cases were described. Owing to the rarity of this form of growth but few observers had been able to examine more than one or two cases, and thus much confusion existed as to their nature. In some of their cases the growth was more fibrous, while in others it was more cellular, but in none did they find any true myxomatous changes. They believed that all their 6 cases were of essentially the same nature, differing only in detail. They argued that as the tumours had really commenced in the supporting tissue of the nerve, that therefore the term "glioma" was applicable. They strongly disapproved of the compound terms so frequently applied, such as "fibro-sarcoma," and urged that as much of the confusion which had arisen with regard to the nature of optic nerve tumours was due to the nomenclature which had been adopted, they expressed a hope that this might be in a measure cleared up by pathologists recognising the essential principles observed in all these growths, and as the different appearances were really matters of detail only, they were really far less complicated than the description of published cases would lead one to believe.

Mr. Rockliffe, who had supplied one of the 6 cases examined by the authors, stated that the health of his patient was greatly impaired before the operation, but improved directly the eye was removed. Although this was six or seven years ago, the patient remained well with no recurrence. He thought that the sections of the different tumours shown were by no means similar in appearance, and he asked if this could be explained.

Mr. Devereux Marshall, in reply, said he had found no such impairment in health in any of the other cases, and he considered that the growths were not of a highly malignant type. He referred to a case he had brought before the Society a year ago with Mr. Bullar, in which it was certain that the growth extended further back than the part removed, and yet after several years there was no recurrence. With regard to the differences seen in the section he admitted that at first sight such was the case, but on further examination both he and Mr. Collins were quite convinced that the difference was far more apparent than real.

Iritis: a Sequel to Gonorrhœa.

Mr. John Griffith read a paper on this subject. He was of opinion that though iritis as a complication of gonorrhœa was universally recognised, it had not received attention as a sequel of that complaint. He gave a brief account of 12 cases that had come under his care. Of the 12, the greater number had developed iritis seven years or more after the urethritis. Syphilis was excluded in 9, and the 3 in which that disease had complicated the gonorrhœa, iritis had developed, which he regarded as gonorrhœal and not syphilitic. In the syphilitic subjects rheumatic troubles had occurred only subsequent to the urethritis. In 9 out of the 12 rheumatism had been present, in 8 of which no rheumatic attack had shown itself prior to the gonorrhœa. Mr. Griffith considered gonorrhœa on a parallel with syphilis in the liability to remote complications, and strongly upheld the constitutional nature of the affection. He was sceptical about rheumatic iritis, believing that the iritis and the rheumatism were in many instances dependent upon a previous attack of urethritis. He concluded by quoting a case of recurrent pleurisy, which he attributed to the evil effects of constitutional gonorrhœa.

The President thought that the sequelæ of gonorrhœa were very much underrated, and although he could not go so far as Mr. Griffith, yet he thought the Society was indebted to him for drawing attention to the subject.

Dr. Brailey did not agree with Mr. Griffith as to the gonorrhœal origin of iritis in many cases where it did not come on for many years after the urethritis.

Mr. Treacher Collins had once collected a series of cases of iritis, and in those which were due to gonorrhœa there was frequently a gouty history.

Mr. Lang said that iritis following gonorrhœa was by no means uncommon, and he thought that such cases frequently had the characteristic albuminous exudation in the anterior chamber at times looking like a dislocated lens.

Mr. Griffith briefly replied.

Card Specimens.

The following card specimens were shown:—Mr. R. D. Batten: Disseminated White Patches in the Choroid.—Mr. Work Dodd: (1) Case of Bifurcation of the Retinal Vein; (2) Intraocular New Growth; (3) Opaque Nerve Fibres.—Mr. Vernon Cargill: Tuberculosis of the Lachrymal Sac with

other manifestations of Tuberculosis.—Mr. Holmes Spicer: Case of Spring Catarrh.

BRITISH GYNÆCOLOGICAL SOCIETY.

H. Macnaughton-Jones, M.D., President, in the Chair.

Thursday, November 9th, 1899.

Specimens.

Dr. Herbert Snow read the notes and showed the specimen from an unsuccessful case of Hysterectomy for Myoma.—Dr. F. A. Purcell showed a Myomatous Uterus removed by supravaginal hysterectomy.—Mr. Charles Ryall showed a Myomatous Uterus removed by supravaginal hysterectomy, followed three weeks after operation by embolism of the posterior tibial artery and gangrene of the leg, leading to a fatal result.—Dr. Purcell, Dr. J. A. Mansell Moullin, Dr. Bedford Fenwick, Mr. Bowreman Jessett, Dr. Inglis Parsons, Mr. Ryall, and the President took part in the discussion on these specimens; and Drs. Snow and Purcell replied.

Exhibits.

Mr. Bowreman Jessett showed for Dr. A. Duke: (1) A new Curette; (2) a Prehensile Forceps.

Tuberculous Peritonitis.

Dr. R. H. Hodgson read a short communication on a case of tuberculous peritonitis simulating abdominal tumour; operation; recovery.

This was discussed by Mr. Ryall, Dr. C. H. F. Routh, Dr. Inglis Parsons, Mr. Bowreman Jessett, and the President; and Dr. Hodgson replied.

Physico-Chemical Changes concerned in the Production of Version of the Uterus.

Dr. Oliver, in a paper on this subject, stated at the outset that it was impossible to define in accurate terms the normal position of the uterus; that the body of the uterus should not rest as a passive weight upon any of the neighbouring organs, nor was it in turn expected to prop up the superimposed viscera. All the organs of the body were retained in position by adhesive affinity. So long as the integrity of those tissues on which the maintenance of the natural position of the uterus depended was preserved, then this position was not appreciably affected by any of the ordinary alterations in the posture of the body of the female. Attention was drawn to the part played by the broad ligaments—to the existence of a tissue tension between the neck of the uterus and the vaginal canal, to the part played by water in maintaining cell tension and in carrying on the nutritive and depurative processes, and to the importance of the mutual tissue tension displayed by the uterine tissue and its peritoneal envelope. During gestation the uterus was virtually a growing organ, and the tendency for a retroverted uterus under such circumstances to assume spontaneously an erect position was attributed to turgescence. After death the uterus commonly became retroverted. This was brought about by loss of water by evaporation, and other physico-chemical changes consequent upon the cessation of life. The mutual tension which existed between the uterine tissue and the serous membrane was likened to that displayed by many other organic structures such as the stalk of the dandelion flower and the leaf stalk of rhubarb. In the organic world it was difficult to find another structure circumstanced like the uterus, but the hump on the camel's back bore some analogy. Retroversion was frequently observed in association with more or less marked prolapsus when the beneficial influence exerted by the staying and resisting powers of the vaginal canal was practically withdrawn. The importance of osmosis in maintaining turgescence was referred to, and it was considered probable that some disturbance of this phenomenon, allowing of a too rapid filtration taking place, might account for the sudden production of version of the uterus from physical shock. It was pointed out that in the vegetable world cell tension might in this way be rapidly diminished. The motile cells in mimosa pudica might be readily disturbed by shocks. It was pointed out that the peritoneum was a highly elastic structure, and that that portion of it which enveloped the uterus and entered into the formation of the broad ligaments was in its natural connection passively extended, and that this passive extension played an important part in maintaining the natural inclination of the uterus. This elastic property might not only be impaired but lost, and he alleged that the spontaneous rupture of certain cysts of the ovary and of the uterus during pregnancy was sometimes due to this change in state. The artificial cells formed by the so-called precipitation membrane of Traube burst on account of the increasing internal hydrostatic pressure and the inelastic character of the cell wall. When the elasticity of the serous covering of the uterus was unduly diminished or lost, then the mutual tissue tension which played such an important part in preserving the rigidity of the organ was annihilated, and the organ under such circumstances was less capable of withstanding the influence of adverse forces, and would assume that position which the resultant of these might determine.

The discussion on this paper was adjourned.

SOCIETY OF ANÆSTHETISTS.

J. F. W. Silk, M.D., President, in the Chair.

Friday, November 3rd, 1899.

Anæsthetics and Insanity.

Dr. G. H. Savage read a paper on the relationship between the use of anæsthetics and insanity. He divided the subject, first, as to anæsthetics as causes of insanity; secondly, the forms of insanity which followed the use of anæsthetics, as well as the form of anæsthetic administered; and, next, the effects of anæsthetics on those already insane, and on the highly neurotic and those who had had previous attacks of insanity. He referred to the treatment of insanity by anæsthetics. He pointed out that any drug which produced temporary mental disorder might produce disorder of a more lasting nature. Anæsthetics producing delirium might give rise to mania, or, producing insensibility, might cause stupor and mental confusion. Anæsthetics rarely produced insanity, except in patients who had had previous attacks or who were predisposed by exhaustion or allied states. Anæsthetics might produce insanity alone, or the production might depend upon the operation and the anæsthetic. In some cases insanity had followed the administration of an anæsthetic and the application of some dressing, such as iodoform. Dr. Savage did not think that one anæsthetic was more likely to cause mental disorder than another, as he had seen acute mania following the administration of gas for slight dental operations. In a certain number of cases he had seen insanity following the administration of anæsthetics during childbirth. He had scarcely ever seen simple melancholia or delusional insanity following the use of anæsthetics, but stupor lasting for some weeks had occurred in several cases, and he was inclined to think greater risk of such disturbance followed the use of anæsthetics in operations about the rectum or bladder than in other operations. The administration of anæsthetics to patients who were subject to recurring attacks of insanity was associated with considerable danger, and he gave examples to prove this. Dr. Savage gave examples of redevelopment of mental symptoms that were passing off when an anæsthetic was given to the convalescing patient. In his experience little or no danger resulted from the administration of anæsthetics to those who were already insane, and he maintained that it was rather a question for the surgeon than for anyone else as to whether operations should be performed on the insane. Naturally in maniacal cases it would be risky to perform any operation. As far as the treatment of insanity by the administration of anæsthetics was concerned, he would only say that it had failed in all cases. Maniacal cases, though quiet at the time, returned to their maniacal excitement as soon as the anæsthetic was removed, and sleep produced by anæsthetics was temporary and of little service. In a few cases of extreme weakness following maniacal excitement it was of service. Therefore he could only, in summing up, say that anæsthetics, though they might cause insanity, might relieve for a very short time if given to the insane; that there was great danger to patients who had had previous attacks or who were very unstable; but that the administration of anæsthetics to the insane might be looked upon as harmless.

Mr. Walter Tyrrell related the case of a little girl who, after coming round from the effects of chloroform and being

reasonable for an appreciable time, gradually fell into a state of stupor, in which she remained three days. At the end of the time she suddenly awoke as if from a dream, and had remained herself since.

Mrs. Scharlieb, M.D., instanced the case of a lady who on two occasions became temporarily insane after the administration of an anæsthetic. Some of her delusions still persisted.

Mr. Turle Bakewell related a case in which insanity followed the use of an anæsthetic in an operation for oöphorectomy on a girl who had previously suffered from mental disturbances.

Mr. Henry Davis had met with a case of delirious excitement bordering on mania.

Mr. Crouch related a case in which after the administration of gas and ether for a dental operation the patient became violently delirious, and gradually passed into a state of dementia from which he never recovered but eventually died in an asylum. All his children had since developed neurotic taints.

The President thought there was some association between the delirium after ether anæsthesia and the absence of vomiting. He had noticed several cases of mania following excision of the rectum.

Dr. Savage, in reply, pointed out that when a patient's intellectual level had been reduced by an anæsthetic, any delusion which might be developed was apt to persist as a kind of mental scar. He thought cases of temporary delirium might be looked upon as the connecting links in the series—loss of consciousness, loss of higher control, delirious conception, mania. Melancholic exhibitions were unusual after anæsthesia, except, perhaps, in those who had previously suffered from melancholia.

BRITISH ORTHOPÆDIC SOCIETY.

H. A. Reeves, F.R.C.S.Edin., in the Chair.

Saturday, October 28th, 1899.

Instrument for Congenital Misplacement of Hip.

The Chairman showed an improvement of an instrument which he first showed to the Society in 1895 for the ambulatory treatment of congenital misplacement of the hip. This instrument kept up extension while the patient walked about. The improved instrument allowed flexion at the knee and abduction at the hip. The latter could be fixed at any desired degree of abduction and the former in full extension. He drew the attention of the Society to the fact that he first employed this method of treatment a year and a half before Lorenz published a similar method. The difference lay in the use of plaster-of-paris instead of a steel support. He was strongly opposed to the open operation for this deformity. The results he had seen were most discouraging, and, moreover, several deaths had occurred.

Mr. Noble Smith, Mr. W. Thomas, and Mr. Freer agreed with the Chairman's views.

Cases, etc.

Mr. Jackson Clarke showed a child suffering from Spastic Paralysis on whom he had performed tenotomy. She now walked in instruments. Since operation her mental condition has improved.—Mr. Muirhead Little showed a case of Congenital Displacement of the Hip, in which, although the affected limb was three-quarters of an inch shorter than its fellow, the great trochanter was slightly below Nélaton's line. On the sound side the trochanter was about 1 inch below the line. Skiagraphs clearly showed the dislocation and defect of the acetabulum, and also the increased angle between the shaft and neck of the femur on each side. Mr. Little also read notes and showed skiagraphs of another similar case. He suggested the name of "coxa valga" for this abnormality.—Mr. Robert Jones showed a cast and photographs of a most unusual Deformity, which had some points of resemblance with Myositis Ossificans. There was a cartilaginous mass containing a few nodules of bone extending from the spinous process of the fifth dorsal to that of the fourth lumbar vertebra, with transverse projections at either end, there were exostoses in various parts of the body, and an enlargement of the bones of the first tarso-metatarsal joints, of which a skiagraph was shown. The patient was a boy of 16. He proposed to remove the cartilaginous and bony outgrowths from the back, which prevented proper extension of the spine.—Mr. E. Luke Freer showed skiagraphs of Dislocation of the Hip and of other Deformities.—Mr. Henry Baker showed a case of Congenital Talipes Valgus. On a cursory examination it might appear to be a case of calcaneo-valgus, but really the tendo Achillis was short, and only allowed a false dorsal flexion in an everted position of the foot.—Mr. Noble Smith showed skiagraphs of a case of supposed Subluxation of the Fifth and Sixth Cervical Vertebræ, relieved by extension and rotation under an anæsthetic.

Surgical Treatment of Infantile Spastic Paralysis.

Mr. A. H. Tubby read a paper on this subject. After briefly summarising what was known of the pathology of the various forms of the affection, he said that in microcephalic idiotic children surgical operations were contraindicated. Craniectomy was disastrous. The occurrence of convulsions which indicated that sclerosing processes were still going on was another reason for not operating. Physicians and neurologists generally treated a contracted arm by advising that the sound one should be bound up so that the child would have to use the palsied one, and that the child should be taught to use its lower limbs and walk. This treatment was effectual only in slight cases. When there had been no convulsions for two or three years, when the mental condition was good and there was no athetosis, the case was favourable for operation. In his opinion no retentive apparatus was of any use, as it could not fight against the spastic muscles. It could only cause sores and increase of spasm. He would, however, make an exception in cases of talipes equinus where the foot could be flexed to a right angle with the leg. In such cases he anæsthetised the patient and forcibly dorsi-flexed the foot and fixed it in gypsum. If the tendon were divided talipes calcaneus might result. If there was distinct equinus to 10 or 15 degrees beyond a right angle, tenotomy should be performed. The neurologists, however, were opposed to tenotomy. Gowers had said it was without the least benefit and was not justified. Tenotomy reacted beneficially on the mental condition, probably by diminishing the afferent impulses which were constantly arising from the spastic muscle. In more severe conditions, when the adductors of the thighs and hamstrings were contracted, he preferred to divide the treatment into three stages, dealing first with the adductors, next the hamstrings, and lastly the tendo Achillis. By dividing these tendons in that order children could be made to walk easily and well. In the arm, division of the pronator teres and its conversion into a supinator, as described at the last meeting of the Society, gave good results combined with open section of the flexor tendons at the wrist without any attempt at lengthening and suture. He suggested that at the knee the gracilis, etc., might be detached from the tibia and used to strengthen the quadriceps by suturing them to its tendon.

Mr. Jackson Clarke referred to the occurrence of spastic paralysis in children after influenza, etc. He advocated tenotomy of all the affected tendons at one sitting, but section of the adductors was often followed by pain in the scar, and he therefore preferred to stretch instead of dividing them.

Mr. Robert Jones said that the great force of the spasm which in the adductors sometimes persisted under chloroform was most striking. Elongation of muscles by tenotomy allowed development of their opponents. He thought that most cases could be benefited by operation. A principle that should guide them was that a wide pedestal for walking was most necessary. It was no use to operate on the lower limbs unless the arms were or could be made useful, as much depended upon them in walking. After operation, slow imitative movements were to be practised. These were more important than massage. He did not think that complete division of the adductors was practicable subcutaneously. He divided them by the open method, excised part of the tendons and muscles, and kept the thighs abducted nearly to right angles for at least two months. He used a walking apparatus which held the limbs abducted. He found that phimosis had nothing to do with spasm, judging from the negative results of operation on severe phimosis in spastic cases.

Mr. Noble Smith remarked on the striking divergence of opinions between orthopædic surgeons throughout Europe and America and physicians. He emphasised the importance of treatment after operation.

Mr. Luke Freer agreed with Mr. Tubby and others as to the good effects of operations physically and mentally. He thought all massage and retentive apparatus useless without tenotomy.

Mr. Muirhead Little referred to the fact that in many of these cases labour was difficult or prolonged or premature. He thought that the intelligence was always subnormal. He did not think convulsions always indicated progressive disease. He had operated in children subject to "fits" with good results. He entirely disagreed with the views of several previous speakers as to retentive apparatus. He had often found splints effective without tenotomy, and had seen the spasm, instead of increasing, diminish or disappear while they were used. No doubt the immediate results of operations were gratifying, but many cases improved as much without operation. His rule had been only to operate on those cases in which there was actually shortening of muscle as shown by the fact that the deformity could not be overcome by moderate force even under an anæsthetic. Even then too long a tendon might be left when the spasm disappeared, and then talipes equinus might be succeeded by talipes calcaneus. He would like to see more of the results of freely operating by tenotomy or tenoplasty, which latter was in great favour in Germany.

Mr. Keetley said he thought some cases were of infectious origin; possibly the infection was the same as that of infantile atrophic paralysis. Some, he believed, were of spinal and not cerebral origin. He thought arthrodesis of one leg might prove useful. He believed exercises alone did sometimes do good, but tenotomy was generally needed.

Mr. Chisholm Williams said that he had operated on three idiotic cases. The parents preferred their children straight idiots rather than crooked idiots.

Mr. Tubby briefly replied.

EDINBURGH OBSTETRICAL SOCIETY.

J. Halliday Croom, M.D., F.R.C.P.E., President, in the Chair.

Wednesday, November 8th, 1899.

President's Valedictory Address.

Dr. Halliday Croom, the retiring President, delivered his valedictory address. After expressing his thanks for the honour the Society had done him in electing him President for the second time, he said that his term of office had not been marked by any special features, except, alas! by one, that, during the last two years the death roll had been heavier than during any similar period of the Society's history. No fewer than twenty-four members—honorary, corresponding, and ordinary—had been called away during the last two years. He felt that it would be wrong not to make at least a passing reference to the Honorary Fellows whom death had claimed. He referred to the death at the ripe age of 91 of Dr. John Moir, who had filled the Chair of Obstetrics before the late Sir James Simpson, and who had read an original paper on the Induction of Premature Labour during Dr. Croom's presidency. He paid a lengthy, full, and fitting tribute to the life-work of Mr. Lawson Tait. After referring in detail to the work of Theophilus Parvin of Philadelphia, and Tarnier of Paris, he entered into detail on the work of Slavinsky of St. Petersburg, and then gave a lengthy record of the work of Dr. Charles West. In the sequel of his address Dr. Croom discussed possible improvement in the work of the Obstetrical Society. While admitting that the backbone of every medical Society was its scientific work, yet, with the view of interesting the general practitioner in the work of the Society, he advocated clinical evenings, short clinical papers, extended discussions on specimens, and prearranged debates. He then entered on a review of the progress of obstetrics and gynæcology in the present century, and concluded his address by paying a tribute of regard to his successor in the chair, Dr. Milne Murray.

On the motion of Dr. D. Berry Hart, a vote of thanks was given to Dr. Croom for his address and his conduct in the chair.

Solid Intraligamentary Tumour.

Dr. N. T. Brewis read a short paper on this subject. Neoplasms growing between the layers of the broad ligament might develop from the Fallopian tube, the round ligament, the ovarian ligament, the connective tissue, and the uterus. They were either fibromyomata or sarcomata. Tuberculosis and cancer were always secondary. Sarcomata developed from the connective tissue normally present. Berry Hart and Bland Sutton each reported a case. Dr. Brewis had met with 2 cases growing in the cellular tissue of the recto-vaginal septum. Myomata had not been observed before the thirty-fifth year; sarcomata might occur earlier. Intraligamentary solid growths were rare. An unmarried woman, aged 49, was first seen three weeks ago complaining of an abdominal swelling, which she first noticed in June, 1897, in the right iliac region. At first it grew slowly, but for the last three months it had been growing rapidly. Occasionally there had been pain in the back; menstruation was regular, not painful, and scanty for the past few years. Occasionally there occurred a very marked diminution in the quantity of urine passed, but no discomfort. Severe bilious attacks, constipation, but no loss of flesh, had also to be noted. The abdomen was of the size of a seven-months' pregnancy; the tumour was of firm consistence and immovable; the uterus was pushed upwards and to the left, and was in the abdomen. On October 25th, the second day of menstruation, the operation was performed. The right Fallopian tube stretched over the summit of the tumour, the right ovary was compressed and lay behind the outer end of the tube, the greatly hypertrophied right round ligament lay on the anterior surface, the bladder and the uterus covered the lower part of the tumour. The tumour was deep down in the pelvis. The vessels on the left of the uterus were first tied and the broad ligament divided. The peritoneum was then incised, the broad ligament peeled off, the tumour shelled out after the right ovarian artery had been tied. The uterine arteries were secured and the body of the uterus removed. The cavity was packed with iodoform gauze carried out by an opening in the vaginal roof. The anterior and posterior layers of the broad ligament were stitched together over the gauze and stump of the cervix. The patient made an excellent recovery. The tumour weighed 15 lbs., was 13 in. by 10 in., and its circumference 27 in.; it had no pedicle. The origin of the tumour was doubtful; possibly it might have originated in the connective tissue and unstriped muscle of the broad ligament. Microscopically it was chiefly composed of fibrous tissue and unstriped muscular tissue, very vascular, and with in places a tendency to myxomatous degeneration.

Dr. Milne Murray (the new President), Dr. Halliday Croom, and Dr. Berry Hart spoke; and Dr. N. T. Brewis replied.

Election of Officers.

The following have been elected office-bearers for the ensuing session:—*President:* Dr. R. Milne Murray. *Vice-Presidents:* Senior, Dr. J. W. Ballantyne; Junior, Dr. McVie (Chirnside). *Members of Council:* Professor Kynoch (Dundee), Dr. Mackness (Broughty Ferry), Drs. Halliday Croom, Berry Hart, Barbour, Ritchie, Darling, and Armour. *Treasurer:* Dr. W. Craig. *Secretaries:* Dr. J. Haig Ferguson, Dr. W. Fordyce. *Librarian:* Dr. Haultain. *Editor of Transactions:* Dr. N. T. Brewis.

ULSTER MEDICAL SOCIETY.

Joseph Nelson, M.D., ex-President, in the Chair.

Thursday, November 2nd, 1899.

The opening meeting of the present session was held in the Museum, Belfast.

Introduction of New President.

The out-going President, Dr. Nelson, occupied the chair at the commencement of the proceedings, and was accorded the customary vote of thanks for his services during the past year. He introduced his successor, Dr. James Graham, who took the chair.

Inaugural Address.

The new President, in his inaugural address, said he would devote his remarks to the sanitary history of Belfast. It might be asked whether modern sanitary science was worth

the price paid for it in the loss of individual liberty and the violation of the rights of property. The best answer to such allegations would be found in the study of such cities as Belfast. In the year 1641 a great epidemic, probably typhus fever, devastated the districts of Belfast and Malone, then very small places. About 5,000 people died of the disease in the space of four months, and from these figures it might safely be conjectured that at least 25,000 were affected by the epidemic—probably nearly the entire population. Another great epidemic occurred in the year 1689, and 3,762 persons died in the course of six months. This epidemic was notable, as it was the first time that there was any mention of the existence of a hospital in Belfast. The first Belfast dispensary was founded in 1792. Its object is recorded to have been "To preserve the lives and health of the poor, the prevention of small-pox, and the reviving of persons supposed to be dead." In 1797 a fever hospital was opened. Typhus fever was very prevalent in the town at this time. In 1817 another great epidemic of typhus occurred, and 3,527 cases were admitted into the new hospital in Frederick Street even before the paint had time to dry on the walls. In the year 1822 a society for the relief of the destitute poor was founded, and in 1827 an auxiliary medical society came into existence, and in eleven years gave medicine and advice to 74,228 persons. From 1831 to 1840 there were many painful records of epidemic disease, whereby at least 40,000 people must have been stricken down by fever, small-pox, erysipelas, and influenza. In 1842 another great epidemic of typhus took place, and in 1847-48 small-pox prevailed widely. Shortly afterwards the Irish plague broke out, and about one person out of every four suffered from it. Cholera prevailed in the year 1849, but turned out to be a blessing in disguise, as it was indirectly the cause of the passing of the first of the great series of Public Health Acts. Small-pox was formerly a very common disease in Belfast, whereas in the year 1898 there were only 5 cases and no deaths. Typhus in 1898 caused only 1 death. Cholera had apparently been entirely banished. Consumption should be combated by putting an end to the trade in milk or meat affected by tuberculosis, by insisting on compulsory notification of consumptive cases, and by persuading the people to work and sleep as much as possible in pure air. He would urge the necessity for promoting greater cleanliness in the dwellings of the poor, and for encouraging in such houses the growth of flowers and plants. Infectious diseases should be treated in institutions to which the citizens could go without incurring the slightest suspicion of pauperism. Modern sanitation had rid them of small-pox, typhus fever, and cholera, and had at least in part fulfilled its mission.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Professor C. J. Wright, President, in the Chair.

Friday, November 3rd, 1899.

Diphtheria.

Dr. Gordon Sharp read notes on an epidemic of diphtheria. The cases recorded numbered 25, with 2 deaths (ages 7 and 19). A fair proportion of the cases were confirmed bacteriologically. Six suffered from after-paralysis. Two cases were ushered in by a convulsive seizure (ages 2 and 3). Four had severe bleeding from the nose. Two had severe laryngeal symptoms, and recovered without operation (ages 4 and 10). The nose suffered in many cases. Insanitary surroundings had nothing to do with the spread of the disease; it appeared to be spread by school children. New property might have had something to do with the rise of the disease, for perhaps a larger proportion of the cases arose therein than in the old property. The district of Leeds in which most of the cases occurred had more of the character of the country than the town. Geologically the soil was made up of 2 to 4 feet of sand, and below 3 to 12 feet of a permeable clay, and below that again sandy rock. The epidemic started in the end of January, 1899, with a lull till June, when it started afresh, and was most severe from July till the end of September. Simple sore throats were during the period particularly prevalent. Scarlet fever did not prevail. Diarrhœa was not observed in epidemic form in the period covered by the diphtheria epidemic. It was mentioned that diphtheria was not common in Leeds till 1896, when there were 136 cases with 50 deaths. In 1897 there were 210 cases, with 74 deaths; in 1898 there were 891 cases, with 229 deaths: while in the first three quarters of 1899 the cases were 1,234, with 230 deaths. These included membranous croup. The death-rates were progressively smaller as the years went on, being 36.7, 35 2, 25.7, and 18.6 respectively. The high recovery-rate in the present epidemic was accounted for on the grounds of favourable accidental circumstances.

Dr. Mouillot, Dr. Barrs, Dr. Spottiswoode Cameron, Dr. Trevelyan, and Dr. Campbell took part in the discussion; and Dr. Sharp replied.

Removal of the Lens for High Myopia.

Dr. Bronner (Bradford) read a paper on this subject. He considered that some eyes of 10 to 15 D of myopia should be operated on, many of 15 to 20, and all over 20. Both eyes should be operated on.

Mr. Secker Waller, Dr. Kerr, and Dr. Griffith took part in the discussion; and Dr. Bronner replied.

Fatal Case of Abscess of the Sphenoidal Sinus.

Dr. S. Lodge, jun., related the case of a man, aged 31, who had a thick discharge from the nose. The pus appeared to come from high up in the nostril. There was some swelling over the right cheek. The right antrum was explored but nothing found. After a temporary improvement the patient became worse, developed symptoms of meningitis, and died. There was thick pus at the base of the brain. The sella turcica was occupied by pus, and there was some necrosis to the right of it. The sphenoidal cells when opened were found full of pus. The opening from the sphenoidal cells into the nose was quite free. The frontal sinuses and ethmoidal cells were healthy. Dr. Lodge discussed the diagnosis and treatment.

Mr. Whitehead made some remarks; and Dr. Lodge replied.

Innominate Aneurysm.

Mr. Moynihan showed a case of innominate aneurysm in a woman, aged 52. The lower part of the common carotid was also involved. The subcutaneous injection of gelatine in solutions of from 1 to 5 per cent. had been tried for a period of two months. It had been shown by Dastre and Floresco that the subcutaneous injection of gelatine increased, very decidedly, the coagulability of the blood. Lancereaux suggested the treatment of inaccessible aneurysms by repeated injections, his idea being that, by increasing the power of coagulation of the blood, clots would form on the roughened inner surface of the aneurysmal sac. In Mr. Moynihan's case no perceptible good had been derived from the injections, and as severe and persistent pain demanded further treatment the common carotid and subclavian vessels were to be ligatured.

Cases, Specimens, etc.

The following were shown: Dr. Stewart: (1) A case of complete Removal of the Internal Semilunar Cartilage; (2) a case of Removal of a Loose Body, measuring ¾ in. by 1 in., from the Knee-joint of a man aged 26; as some of the symptoms appeared during an attack of gonorrhœa, there was some danger at one time of mistaking the disease for gonorrhœal arthritis.—Mr. W. H. Brown: Some cases of Deformities following burn cicatrices relieved by plastic operations; the flaps in all the cases had been left attached at the base for ten days after operation.—Mr. Cammidge: (1) A lung showing Broncho-pneumonia; (2) a specimen of Multiple Abscesses of the Lung secondary to ear disease.—Dr. Barrs: (1) A case of Spasm of the Muscles of the Neck (professional spasm); (2) a case of Intracranial Syphilis under treatment.—Mr. Ward: (1) Case of Abdominal Section for Volvulus of Sigmoid Flexure; (2) case of Short Circuiting for Growth of Cæcum; subsequent disappearance of tumour; (3) case of Partial Gastrectomy (shown before); (4) a child, aged 3 years, from whom a Spina Bifida was excised at the age of 3 weeks; (5) a case of Hip-Joint Disease with Large Abscesses, excised and dressed with Dr. Robinson's decalcified bone dressing.—Dr. Churton: (1) Perforating Duodenal Ulcer (with Dr. Griffith); (2) a case of Tracheal Tugging.—Mr. Littlewood: (1) Case of Removal of Lower Jaw, Chin, part of Tongue, and

Glands for Epithelioma; (2) Calculus (weighing 4 grs.) removed from the kidney; (3) Vesical Calculus, the nucleus of which was a large brass pin.—Dr. Wardrop Griffith: (1) A child suffering from Birth Palsy; the paralysis was hemiplegic in distribution, the face not being affected; though the pregnancy was an eighth one the confinement was very severe, the presentation being breech; there was no history of fits; (2) a case of Tetany showing Chovstek's symtom; (3) a well-marked case of Raynaud's Disease in a girl, aged 19.—Dr. Trevelyan: (1) Specimens of the Diphtheria Bacillus obtained at intervals during four weeks from the throat of a very mild case of diphtheria; (2) a specimen of Secondary Sarcoma of the Lung from a patient who died suddenly; (3) a case of Diphtheritic Paralysis in a child with Inco ordination.—Mr. Lawford Knaggs: Case of Metastatic Growth in Femur 9 months after removal of breast.—Mr. Secker Walker: A case of Epithelioma of the Pinna.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

W. Robinson, M.D., F.R.C.S., President, in the Chair.

Thursday, November 9th, 1899.

Operation for Cerebral Abscess.

Mr. Albert M. Martin brought forward a boy, aged 14, who had had a chronic ear discharge for some years. Three and a half months previously he had the mastoid antrum laid open for acute mastoiditis; there was temporary improvement, but latterly giddiness, increasing mental hebetude, headache, vomiting, and right sixth paresis, with double optic neuritis had supervened. The symptoms increased in severity, and evidences of cerebral irritation were added; the pulse was slow; temperature remained normal. For these reasons an anæsthetic was administered, the antrum and middle ear thoroughly explored, without sufficient cause being discovered; therefore Mr. Martin trephined above and in front of antral opening and an abscess located in the temporosphenoidal lobe and drained. Hernia cerebri resulted, with slight return of symptoms; on shaving this off, a further collection of pus was found. Since the drainage of this, improvement had steadily continued.

Coxa Vara.

Mr. Albert M. Martin also exhibited a boy, aged 9, with unilateral coxa vara, the result of rickets, evidences of which were apparent. The patient's complaint was an increasing limp of about three years' duration. On measurement, there was found to be ¾-inch shortening. Bryant's lines showed a corresponding result, and the trochanter was distinctly above Nélaton's line. Movements in all directions were free with the exception of inversion and abduction, which were limited. There was no downward movement of trochanter on traction. The differential diagnosis was reviewed and comment made upon the unilateral character of the conditions in this instance.

Removal of Gall Stone from Common Duct by Incision through Duodenum.

Dr. Clay showed, for Mr. Page, a woman, aged 48, who had shown the ordinary symptoms of impacted calculus. On laparotomy dense adhesions prevented proper exposure of the common duct, and it was thought a nearer and safer way to reach the stone through an incision in the duodenum rather than attempt separation of such dense adhesions. By such an incision the stone was successfully removed. Dr. Clay stated that McBurney had recorded six such operations with only one untoward result.

Dr. Gowans cited a case in which he had removed a calculus by this method.

Mr. Rutherford Morison, after having read McBurney's paper, had performed it with success on three occasions. He thought, however, duodenal incision ought to be reserved for those cases in which the stone was impacted near orifice of common duct.

Case of Hemiplegia demonstrating Babinsky's Toe Phenomenon.

Dr. G. R. Murray showed a patient, aged 57, 5½ weeks after cerebral hæmorrhage, with complete hemiplegia and descending degeneration exhibiting Babinsky's toe reflex which he demonstrated. The symptoms had been observed one week after the onset of hemiplegia.

Dr. Clay said he was observing a case of hemiplegia which exhibited this phenomenon when excited by a very slight stimulus; a stronger stimulus produced dorsiflexion at the ankle, while a still stronger resulted in flexion of the knee.

Dr. Beattie had examined all the patients in the male adult and children's wards and found this phenomenon present, as was to be expected, only in those cases where a lateral column lesion existed above the lumbar enlargement, cutting off cerebral inhibition. He thought the reflex of some value in the differential diagnosis between functional and organic lesions.

The President drew attention to the fact that it was present on the sound side, but stated that increased reflex irritability was usually met with even in the unaffected limb.

Repair of Divided Tendons.

Mr. Rutherford Morison showed a young man, aged 23, who had a transverse division of all his exterior tendons 2 inches above the wrist. These were carefully isolated, sutured with catgut, and the limb kept in a splint for six months. The patient had regained absolutely perfect mobility.

Excision of Epithelioma of Bladder.

Mr. Rutherford Morison also showed a woman, aged 48, whose only symptoms were hæmaturia and suprapubic pain of ten months' duration. On cystoscopic examination an ulcerated surface was seen, and on vaginal examination a hard nodule was felt through the anterior wall. By combined suprapubic cystotomy and laparotomy the malignant growth was completely excised. The bladder wound was sutured with no subsequent leakage. The patient made a good recovery.

Renal Calculus Localised by X Rays.

Mr. Rutherford Morison exhibited skiagraphs showing faint but constant shadow, and stated that this was even more apparent on the fluorescent screen. This evidence, added to the patient's symptoms, had resulted in his removing the calculus exhibited, which was the size of a large filbert, and consisted apparently of oxalate of lime. Dr. Angus, who had prepared the skiagraphs, laid stress upon the constancy of the shadow, though faint, upon repeated negatives.

Ascites Due to Cirrhotic Liver Treated Surgically.

Mr. Rutherford Morison brought forward two cases after laparotomy and epiplorrhaphy for chronic ascites due to hepatic cirrhosis. In both some fluid remained, but he still hoped that as collateral venous circulation became more fully established the fluid would permanently disappear. He mentioned a peculiar toxic condition, with sallowness and drowsiness, which sometimes followed the operation, and was relieved by purgation.

Dr. Beattie stated that such a toxic condition was known of in medicine, and cited three cases where drowsiness had gone on to complete coma, and was sometimes associated with hæmaturia. It commonly occurred in cases of liver without ascites, where collateral circulation had been well established by a large vein of Sappey.

Operation for General Septic Peritonitis.

Mr. H. B. Angus read notes of two patients with general septic peritonitis due to perforated appendix, treated within twelve hours of diffusion by laparotomy and lavage, with successful results.

Excision of Knee for Tuberculous Arthritis.

Mr. H. B. Angus showed a boy in whom excision had been primarily unsuccessful, and on account of suppuration the flaps had been reopened, the wound swabbed with pure carbolic acid and packed with iodoform gauze; no sutures. Although put up straight some flexion had occurred, which he ascribed to interference with the epiphysial cartilage.

Deformity of Ankle.

Dr. Modlin exhibited an amputated foot with cast showing marked inward displacement. There was thickening of the skin over the external malleolus, with ulcer and marked

swelling of the whole ankle-joint. He asked for an expression of opinion.

Mr. Albert M. Martin, Dr. Beattie, and Mr. Rutherford Morison expressed the opinion that it was a Charcot's joint.

Votes of Condolence.

The President moved and it was resolved that votes of condolence and expressions of sympathy on the deaths of their distinguished members, the late Professor Arnison and Dr. T. C. Nesham, be sent to the relatives.

British Laryngological, Rhinological, and Otological Association.—At the annual general meeting on October 27th, Dr. Barclay Baron (the President) in the chair, Dr. Dundas Grant read notes of a case of Sudden Nerve Deafness of the Right Ear in a woman, aged 40. Prior to the attack she had menorrhagia and diarrhœa, with passage of blood from the bowel, and, following the deafness, vertigo and nausea. The loss of hearing was chiefly for tones of the middle pitch. There was diminution of the pharyngeal reflex, exaggerated knee-jerk, and comparative hemianæsthesia. The condition might be due to Ménière's disease, to anæmia of the auditory nerve, or to hysteria. The hearing soon improved, and was now nearly normal. Comments were made by the President, Mr. Wingrave, Dr. Tresilian, Dr. Mackintosh, and Dr. Haslam; Dr. Grant replied.—Dr. Dundas Grant showed a microscopical section of an Epithelioma from the Temporal Bone of a man, aged 45. The symptoms simulated necrosis of the temporal bone. A mastoid operation was performed with considerable relief, though the disease was slowly extending. Mr. Bark (Liverpool) remarked that he had lately seen an almost similar case with rapidly-recurring aural polypi. Mr. Wingrave thought that the growth commenced in an epidermal region.—The President delibered an address upon the Correlation of General Medicine and Laryngology, Rhinology, and Otology. He also showed a case of Double Uvula in a child, associated with a Curious Defect of Speech. Mr. Wingrave considered the case to be one of cleft palate, and that the defective articulation was due to a different condition.—Dr. Vinrace, Messrs. Bark and St. George Reid and Dr. Tresilian also spoke.—Dr. Abercrombie again showed his case of Laryngeal Papilloma, exhibited at the meeting in April. Since then the tonsils and adenoids had been removed and the growth afterwards treated with astringents; it was now much diminished in size.—Dr. Whistler showed a useful Instrument for Gauging the Antero-posterior Length of Spurs.—Mr. Reid showed for Dr. Orwin a convenient Apparatus for Applying Continuous Heat to Different Regions of the Body.—Dr. Tresilian showed a case of New Growth in the Left Maxillary Antrum of a child, which produced a prominent hard swelling of the left cheek. A discussion ensued as to the seat and nature of the growth.—Dr. Tresilian read notes of (1) a case of Anosmia following head injury; (2) a case of Severe Bilateral Acute Otitis with Facial Erysipelas.—Mr. Nourse showed for Dr. Jakins a case of Malignant Growth of the Larynx in a phthisical patient.—Mr. Wyatt Wingrave showed a case of Suppuration of the Maxillary Antrum. Persistent pain and discharge from the left nostril had followed the extraction of an upper molar twelve months site before. On examination a small opening was found at that through which a fine probe could be passed into the left nostril. The opening in the alveolus was enlarged with a drill and fœtid pus evacuated.—Mr. Wingrave also showed a woman from whose left ear he had removed an Ivory Exostosis with a drill trephine. The deafness from which she previously suffered was relieved.

West London Medico-Chirurgical Society.—At a meeting held on November 3rd, Dr. J. B. Ball, President, in the chair, a Native Enema Apparatus, brought from the Upper Congo River, Central Africa, by Mr. W. D. Armstrong, was shown by Mr. McAdam Eccles. The instrument consisted of a medium-sized calabash, together with a small cane pipe some 3 inches in length and the size of an ordinary lead pencil fixed into the smaller end of the calabash, the fluid being allowed to run into the rectum by hydrostatic pressure.—Dr. Mansell Moullin exhibited the Ovaries removed from a patient, aged 40 years; both ovaries were enlarged and the capsules thickened, one containing a cyst the size of a walnut.—Mr. Pardoe read a paper entitled Some Modern Methods of Treatment in Chronic Urethritis. For successful treatment accurate localisation of the seat of the disease was essential. After explaining the methods in use which were best calculated to attain this object, he proceeded to describe various modes of treatment which were most likely to cure the diseased condition of the urethra causing the gleet. The paper was discussed by the President, Dr. Lloyd, and Messrs. Swinford Edwards and Bidwell; Mr. Pardoe replied.—Mr. Swinford Edwards read a paper on Urinary Obstruction, with cases illustrating some of its causes. He said that obstruction to the free flow of urine was due to changes either in the prepuce, the urethra, the prostate, or the bladder. The first case illustrating his remarks was one of stricture and impacted urethral calculus. The calculus was removed after urethrotomy with Otis's instrument with complete success, the patient being able to pass water naturally for the first time for many years. The next case was that of a patient operated on by the author for stricture and perineal fistula. The last case narrated was that of a patient who suffered from obstruction due to enlarged prostate; vasectomy was performed on one side with such an excellent result that it was proposed to at once perform the same operation on the opposite side. The paper was discussed by the President and Dr. Lloyd, and Messrs. Bidwell and Pardoe; Mr. Swinford Edwards replied.

Glasgow Medico-Chirurgical Society.—At a meeting on November 3rd, Mr. Henry E. Clark (President) in the chair, Dr. Walker Downie showed two patients on whom he had operated with success for primary sarcomata of the mouth: (1) A woman, aged 58, who had a Primary Sarcoma of the Right Tonsil, now, two and a half months since the operation, there was no sign of recurrence; (2) a man, aged 34, whose case was reported in the British Medical Journal of October 21st, p. 1065. The President made remarks.—Dr. J. Galbraith Connal narrated two cases of Primary Epithelioma of the Tonsil, one of the patients being shown. This patient was 61 years of age, and the epithelioma had spread from the tonsil to the palate, the tongue, and lymphatic gland. Dr. J. H. Nicoll who had ligatured the common carotid, explained that the operation had been performed with the idea that it might do good in itself, and in view of its being of considerable assistance if a radical operation were tried. The patient, however, had decided to have nothing further done, and probably wisely, considering his age and the extent of the mischief.—Dr. Rowan read notes of a case of Traumatic Aniridia, and demonstrated the condition with the new corneal microscope. The patient was a young man, and his affection was the result of a blow in the eye whilst at his work.—Dr. Munro Kerr described the following cases of abdominal section, and showed the specimens: (1) Suppurating Cyst of Broad Ligament, in which the pedicle had become twisted; (2) Cyst of Ovary, associated with infantile uterus; (3) large Myoma of Uterus, removed by enucleation.

Glasgow Southern Medical Society.—At a meeting held on November 2nd Dr. Hugh Kelly delivered his presidential address, the subject being Tuberculosis. Speaking of the causation of the disease, the President referred to the various modes of communication that had been discussed, namely, direct, as by the introduction of the tubercle bacillus into the body by means of food; and by the inhalation of the desiccated sputum of tuberculous persons; and, indirect, as hereditary predisposition, enfeebling diseases, overcrowding in houses and districts, insanitary dwellings, workshops, and occupations, and certain conditions of climate, soil, etc. Special reference was made to the incidence of tuberculosis in domestic animals. The susceptibility of the cows when housed in insanitary dwellings was dwelt upon, and from various authorities he showed that milk was a common vehicle for bacilli when the udders were diseased. After discussing the means of prevention, he referred to the Nordrach treatment, as to which he remarked that there were many places in this country where the same beneficent results could be obtained. In conclusion, the President read a copy of the Dairies, Cowsheds, and Milkshops Order of 1899, just issued by the Local Government Board. In this order

the important step was taken that Article 15 of the Dairies, Cowsheds, and Milkshops Order of 1885 was amended in the Order of 1899, so that the word "disease" in the Contagious Diseases (Animals) Act, 1878, was extended to and included "tubercle."—On the motion of Professor T. McCALL ANDERSON a hearty vote of thanks was awarded Dr. Kelly for his address.

IPSWICH CLINICAL SOCIETY.—At a meeting on October 12th, Mr. S. O. EADES (President) in the chair, the pathological specimens added to the Museum of the Society during the past year were exhibited. Dr. BROWN showed a child aged 8 years suffering with Spastic Paraplegia due to Spinal Caries. The condition had been present for twelve months, and had not improved during the past six months. Dr. Brown intended to perform laminectomy.—Mr. DAVIES showed a child aged 11 years with advanced Pseudo-hypertrophic Paralysis. A younger child of the family was similarly affected, and the family history pointed to syphilis.—Mr. HOSSACK showed a cheap and convenient form of Electric Lamp for use in operation work.—Mr. SINCLAIR showed a man who had carried a chip of Iron embedded in the Ciliary Region of his left eye for two and a half years. At the time of the accident, although no foreign body could be seen, the history and appearances suggested the use of the electro-magnet. A negative result was obtained, but the eye rapidly recovered, and regained good vision (V=⅔). The eye remained well for two years; then vision gradually failed without pain or congestion, the failure being due to chronic exudation over the posterior surface of the lens. An *x*-ray photograph, taken by Mr. S. A. Notcutt, demonstrated the presence of a foreign body in the eye. This was localised by Mr. Mackenzie Davidson. The greater part of the lens was then extracted, and the electro-magnet was again introduced into the eye (by Mr. Treacher Collins). The chip of iron was so firmly fixed in the ciliary region that it could not be dislodged. In spite of slight loss of vitreous, the eye recovered rapidly from the operation, and had remained quiet since, though vision was reduced to "hand movements." The most interesting feature of the case was the fact that a foreign body could remain fixed in the so-called "dangerous zone" of the eye for so long a time as two years, without affecting vision or setting up inflammatory symptoms. The setting in, after this period of immunity, of a slow process of exudation, doubtless from the affected ciliary region, illustrated the truth that an eye which contained a foreign body was never safe.—Dr. BROWN described a case, and showed the specimen, of Cancer of the Cæcum which had been removed by Mr. H. P. Dean with brilliant success. The patient was a middle-aged lady, and the chief symptoms were emaciation, constipation, some abdominal pain, and slight occasional vomiting. Careful observation of the peristaltic movements led Dr. Brown to diagnose obstruction at the cæcum at the first operation on June 14th, and incision in the middle line revealed a malignant growth of the cæcum. The distended bowel was incised, emptied, and sutured. A second incision was then made over the cæcum, which was united to the skin. The ileum was divided close to the cæcum, and a Paul's tube was inserted, through which the intestine was washed out, and its contents evacuated. The tube came away four days later, leaving an artificial anus. On July 19th a second operation was performed by Mr. Dean. An incision was made about an inch to the inner side of the cæcum; the ileum and ascending colon were united by means of a Murphy button; the new growth, with the skin, including the artificial anus, and about 2 inches of the ascending colon were then removed *en masse*, and the wound was closed. The cæcum was found completely blocked by new growth, which appeared to take its origin in the ileo-cæcal valve. The patient was now well, and had gained flesh rapidly. The bowels acted normally *per vias naturales*.

FORFARSHIRE MEDICAL ASSOCIATION.—AT a meeting on November 1st, Dr. TEMPLEMAN, Vice-president, in the chair, Dr. MACKIE WHYTE read notes of the case of a man, aged 39, who had had symptoms of Cardiac Failure with Angina for thirteen months. He had signs of marked aortic regurgitation with a slowly-progressing dilatation of the heart, and latterly severe pain over the liver. The necropsy showed fatty and dilated heart without hypertrophy to any degree; atheromatous and dilated aorta; small coronary orifices meeting liver; perihepatitis; perisplenitis; fatty kidneys. The specimens were shown to the meeting.—Dr. MCGILLIVRAY read a paper on the Treatment of Tear Duct Obstruction. He stated that he had almost entirely abandoned repeated probings, preferring the use of solid metal styles made of electric fuse wire. After dividing the lower canaliculus and the stenosed portion of the tear duct by means of a specially-constructed knife, a No. 6 Couper's bulbous probe was inserted and then the style. When the style was properly inserted the bent upper portion should lie in the divided canaliculus without causing inconvenience, and without being seen except on eversion of the eyelid. The style need not be removed for two or three months, by which time the cure was generally complete. The fuse wire was used on account of its toughness, cheapness, and pliability. The only further treatment necessary was the use of an alum and boracic lotion for bathing the eye and the emptying of the sac by pressure over it with the finger. He had tested the treatment in about 200 cases with such gratifying results that he was not likely to return to the method of probing, which caused considerable pain and convenience to the patient. Drs. DUNCAN and HALLEY spoke on the paper; and Dr. MCGILLIVRAY replied.—Dr. MACKIE WHYTE gave the results of treatment of Tapeworm in six cases by internal administration of chloroform. The dose was usually 1 drachm. In several cases a deep sleep of an hour's duration or more came on a few minutes after the dose. The results were on the whole disappointing, and usually the oil of male fern had ultimately to be given. His results were compared with those recently published by Leichtenstein in *Die Therapie des Gegenwart*, whose conclusions were entirely against the efficiency of chloroform. Professor MARSHALL expressed surprise that chloroform should ever have been used in the treatment of tapeworm. Drs. COLMAN and HALLEY also spoke; and Dr. WHYTE replied.—Professor STALKER read a paper on Delayed Recovery in Pneumonia, prefacing his remarks by reference to a case in which there was an apparent crisis about the eighth day, but the temperature again rose and continued with nightly rises to the twenty-second day without any apparent reason such as pleural effusion. He compared the temperature chart in such cases with that in specific fevers, and sought to explain the prolongation of the fever in some cases of pneumonia by some septic infection of the pneumonic exudation, maintaining that these cases of delayed recovery were not simply cases of prolonged pneumonia. Professor MARSHALL, Drs. J. M. WHYTE, MCVICAR, BRUCE, and the CHAIRMAN, spoke on the paper. Professor STALKER, in his reply on the discussion, said he thought the prevalence of pneumonia in Dundee was a striking fact, but the type was severer than formerly. He also stated that in none of his cases was there any tuberculous tendency to explain the delayed recovery.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.—At a meeting on November 2nd, Dr. T. BEATTIE in the chair, the following officers were elected for the session 1899-1900: *President:* H. Brunton Angus, M.B., M.R.C.S. *Vice-President:* Frank Hawthorn, M.D., M.R.C.S. *Treasurer:* O. Watson Ogden, M.D., M.R.C.S. *Secretary:* Wilfred E. Alderson, M.D., M.S. *Committee:* T. Beattie, M.D., M.R.C.P. (retiring President); John Clay, M.B., M.R.C.S.; A. M. Martin, M.B., B.S; T. G. Ouston, F.R.C.S.—The new PRESIDENT having taken the chair, Mr. MARTIN exhibited (1) a boy, aged 10, with left Coxa Vara. There was a history of an injury three years ago, since which time a gradually increasing limp, unaccompanied by pain, had developed. The diagnosis was made by excluding morbus coxæ and congenital dislocation of the hip, and by observing other evidences of rickets. The treatment consisted in the usual treatment of rickets. (2) A man with a typical Hunterian Chancre on the upper lip of six weeks' duration. No secondary manifestations were yet evident. Dr. BEATTIE, who had had considerable opportunities for observing extra-genital chancres, strongly urged the difficulty in diagnosis, and deprecated the administration of antisyphilitic treatment until secondary symptoms became manifest.—Mr. VICKERY showed a child, aged 5 years, upon whom he had successfully performed Suprapubic Cystotomy for Stone.

The calculus was formed of uric acid, and was the size of a small haricot bean.—Dr. Beattie exhibited several pathological specimens showing the appearance of the Lungs in different stages of Phthisis.—Dr. Alderson exhibited the Uterus and Kidneys of a primipara, aged 21, who died twelve days after being delivered of a stillborn child in an advanced state of decomposition. No medical advice was sought till forty-eight hours before death, by which time the patient was already moribund. The uterus was large, and the cavity was filled with foul-smelling pus, decomposing clot, and adherent placental tissue. No pelvic peritonitis or cellulitis was found. The kidneys were surrounded by much perinephritic inflammation. They were much enlarged and the capsule considerably thickened. Points of pus were evident on the convexity of the cortex and throughout the cortical tissue. Dr. Alderson considered that the woman had died septic, the primary focus being the endometrium, the kidneys being infected secondarily by means of the lymphatics.—The President showed a Spleen which he had removed for rupture caused by a fall on the abdomen. The man was apparently progressing favourably after the operation till the third day, when he developed pneumonia and died. Fatty changes in the liver and other organs were well marked.

Association of Registered Medical Women.—At a meeting on November 7th, Mrs. Scharlieb, M.D., M.S. (President) in the chair, Miss Long, M.D., read a paper describing an epidemic of 40 cases of Diphtheria treated with Antitoxin. No deaths occurred, in spite of a proportion of very severe cases, and of the fact that many of the patients were very young children. This was attributed to the early use of antitoxin, usually within twelve hours of the onset. She read notes of the case of a patient, aged 2½ years, who recovered in spite of the diphtheria being complicated by acute nephritis, with suppression of urine for 18 hours, and by bronchitis and whooping-cough.—Miss Agatha Porter, L.R.C.P. and S., read an account of some cases of Malignant Disease seen in workhouse hospital practice. She gave notes of three cases of malignant disease, and accounts of the *post-mortem* appearances, and dwelt on the possibility of very extensive involvement of important structures, to which pain or other symptoms during life had given no adequate clue.—The President gave an account of some Surgical Cases which had occurred under her care at the New Hospital for Women during the month.

Folkestone Medical Society.—At a meeting on November 6th it was decided to defer the consideration of a letter referring to a proposed scheme of medical organisation. A letter of congratulation was directed to be written to Dr. Latter on his election to the Municipal Council of the town.—Dr. Norton read a paper on the Morphine Habit and its Treatment. After detailing the various symptoms occurring in morphinomania, and the dangerous depression that occurred when patients were suddenly entirely deprived of it, he said he was little disposed to follow the method known as "immediate suppression." He endeavoured to restore the will power of the patient whilst gradually lessening the amount of morphine injected. It was not until the dose was reduced to about 2 grains a day that difficulty began; then for every sixth of a grain suppressed hypodermically twice the amount might be given by the mouth or rectum. Having given up the syringe, these doses were made less and less, and finally discontinued. Digitalis, sparteine, trinitrine, coca, kola, valerianate of ammonia, bromides and hydrate of amyl were useful adjuncts to treatment. An interesting discussion ensued.

Bristol Medico-Chirurgical Society.—The second meeting of the session was held on November 8th in the Medical Library of University College, Bristol, Mr. W. H. Harsant in the chair.—Dr. W. H. Newnham showed a specimen of Ruptured Tubal Pregnancy. Dr. Aust Lawrence, Mr. Paul Bush, Dr. W. C. Swayne, and the President discussed the specimen.—Dr. T. Fisher read a paper on Œdema of the Eyelids with Intermittent Albuminuria in Children. Dr. Waldo, Dr. B. Rogers, Dr. Edgeworth, Dr. Parker, Dr. Skerritt, Dr. Michell Clarke, Dr. C. Walker, and Dr. Shingleton Smith commented on the paper.—Dr. Michell Clarke read a paper on Two cases of Sporadic Cerebro-spinal Meningitis, and a case of Posterior Basic Meningitis. Dr. E. C. Williams, Dr. Waldo, Dr. T. Fisher, and the President spoke on the paper.—Dr. E. C. Williams read a paper on Some Points in the Artificial Feeding of Infants.

REVIEWS.

The Removal and Disposal of Town Refuse. By William H. Maxwell, Assistant Engineer and Surveyor, Leyton Urban District Council. London: Sanitary Publishing Co. 1898. (Demy 8vo, pp. 382. 15s.)

In this well printed, freely illustrated book, Mr. Maxwell deals with the big subject of town refuse. Though the *motif* of the work, to judge from the space allotted to them, would seem to be the production of an up-to-date account of dust destructors, the whole subject is treated, though often in a somewhat rapid manner. The first chaper is general, and contains a good deal on laws and by-laws. We are told that the word "scavenger" means not only the gentleman we are accustomed to see with the dust cart, but that it was once employed to designate a "petty magistrate whose province it is to keep the streets clean." The disadvantages of wood pavements, from a sanitary standpoint, are briefly glanced at, and the means for lessening them indicated. Channels and gullies are referred to. Machine sweepers, brooms, and cleansing by washing are mentioned, and the cost of water and labour for the last discussed. The second chapter deals chiefly with house refuse and its collection, the third with the removal of excreta. A diagram of Duckett's slop-closet ornaments the sixty-second page. Disposal of town refuse is the heading of the fourth chapter, leading easily to the main topic of the work—refuse destructors—in the fifth.

The real book thus begins at the eighty-sixth page. The various makes of destructor are described in the fifth chapter, and certain accessories to destructors in the sixth, their chimneys in the eighth, the seventh being devoted to some "general observations." The Babcock and Wilcox water tube boiler has a very short chapter to itself.

The tenth chapter, which runs to 169 pages, much of it in small type, describes the destructor installations in various towns, by no means all of them in this country. An important chapter is devoted to the explanatian of Mr. Druitt Halpin's method of thermal storage. The great cost of burning rubbish naturally leads authorities to seek for some method of utilising the enormous heat generated by the combustion of the town's refuse. One great difficulty in accomplishing this lies in the necessity of burning the rubbish regularly, while the requirements for motive power are often periodical, if not intermittent. Electricity for lighting is in demand, for instance, chiefly at night, while the destructor is working with equal energy during the day.

Mr. Halpin proposes to work his boilers at the rate required for the average amount of work demanded of them. When the steam generated is more than is needed, all the surplus is conducted to a reservoir, where it meets cold water, to which it gives up its latent heat. This is, of course, done under pressure. Steam, we may suppose, is produced in the boiler at a temperature of 406°—this means under a pressure of 265 lbs. absolute. What is wanted for the engine goes through a reducing valve at 130 lbs. (absolute); the energy of the remainder is employed in raising the temperature of the water in the storage reservoir to its own temperature of 406°. When, however, more work has to be got out of the engine and more steam is required, the lessened pressure, caused by the increased demand, allows the water heated under pressure to evaporate at its high temperature. As this is 406°, this hot water is capable of giving off a quantity of high pressure steam proportionate to its own amount, and more than capable of doing work at the lower pressure of 130 lbs. and its corresponding temperature of 347°. Making allowance for losses, it is calculated that 16 lbs. of storage water heated to 406° is good for producing a pound of steam at the working pressure of 130 lbs. This mode of storing energy is regarded

as less wasteful than, for instance, secondary electric batteries. It was in actual work at Shoreditch, where the method adopted was practically the conducting of the stored hot water from Halpin's cylinders to the boilers, thus enabling the latter when so fed to raise steam more rapidly. The book contains a large amount of valuable information on the structure of destructors. That it should be largely a compilation is inevitable. The author has naturally quoted lengthily, perhaps in a few cases too much so. Had some of the statements been more condensed, and the extra space employed to make certain of the diagrams a little larger, a good book would have been better.

THE ANNUAL AND ANALYTICAL CYCLOPÆDIA OF PRACTICAL MEDICINE. By CHARLES E. DE M. SAJOUS, M.D., and One Hundred Associate Editors, assisted by Corresponding Editors, Collaborators, and Correspondents. Vol. II.—Bromide of Ethyl to Diphtheria. Vol. III.—Dislocations to Infantile Myxœdema. Philadelphia, New York, Chicago: The F. A. Davis Publishers. 1899. (Roy.8vo, vol. ii, pp. 616, vol. iii, pp. 608. Cloth 5 dollars, half Russia 6 dollars each volume.)

IN noticing the appearance of the first volume of this *Cyclopædia* last year, we stated that it was designed to replace the *Annual of the Medical Sciences*, and mentioned the reasons which had induced Dr. SAJOUS to make the change. The general plan of the present venture is to present an article giving a general account of each subject, to illustrate this by quotations from the most important papers, with references, and finally to bring the whole up to date by giving abstracts of the most recent literature. The editor has been fortunate enough to obtain the assistance of leading authorities on various subjects. Thus, the article on Cirrhosis of the Liver is by Professor Adami, of Montreal; that on Cholelithiasis by Professor Graham, of Toronto; that on Diabetes by Professor Lépine, of Lyons; that on Diphtheria by Drs. Northrup and Bovaird, of New York; that on Dysentery by Dr. Flexner, of Baltimore; and that on Infantile Myxœdema by Professor Osler and Dr. Norton, of Baltimore. The volumes will be found extremely useful by the practitioner who wishes to make himself acquainted with the most recent views on any subject, and also by writers who desire to have an indication of the most recent literature.

MAN PAST AND PRESENT. By A. H. KEANE, F.R.G.S. Cambridge University Press. 1899. (Cr.8vo, pp. 596. 12s.)

IT is difficult to review Professor KEANE's book without doing an injustice either to him or to his readers. The volume is a monument to the author's industry and erudition. It gives such an account of its subject as has probably never before been attempted in the like space, and, owing to the great increase in the mass of recorded facts, never with such completeness. It is written in the scientific spirit, and the keynote is contained on page 75, where Professor Keane enunciates the obvious but too often neglected truth that "ethnical problems are like algebraic equations; they cannot be solved if some of the necessary factors be overlooked." Yet it is impossible to avoid feeling that the facts accumulated with so much industry and marshalled in such excellent order have been imperfectly digested. If the author is not himself overburdened by the weight of his own erudition, his readers run the risk of bewilderment.

Professor Keane is a monogenist, and hotly resents the attempt of Ehrenreich to claim him as a polygenist. But in fact the controversy tends to turn a good deal on the answer to the question, When in the process of evolution did man become man? Professor Keane seems inclined to accept *Pithecanthropus Erectus* (Dubois) as the long sought-for "First man," but many excellent authorities regard *P. Erectus* as representing not only a distinct species, but as a distinct genus. In another place Professor Keane speaks of the earth being "mainly peopled by the generalised pleistocene precursors, who moved about, like the other migratory faunas, unconsciously, everywhere following the lines of least resistance, advancing or receding, and acting generally on blind impulse rather than of any set purpose." If the "pleistocene precursor" was of a species, to say nothing of genus, distinct from *homo*, then the difference between Professor Keane's position and that of the polygenist is not very great.

The illustrations, which appear to be all from photographs, are printed on plate paper, and are carefully selected to elucidate the text. It is only a pity that there are not three times as many, for a good photograph is of great assistance in giving form to the descriptions in the text.

With regard to the general tone of the book, it would not perhaps be fair to say that it is dogmatic, for, as a rule, authorities whose opinions conflict with Professor Keane are fairly stated, but the reader is never left in any doubt as to the author's own opinion. This is as it should be, and the work may be confidently recommended as a sound and comprehensive treatise on the subject with which it deals.

INTRODUCTION À L'ETUDE DE LA MÉDECINE. [Introduction to the Study of Medicine.] Par G. H. ROGER. Paris: Georges Carré et C. Naud. 1899. (Crown 8vo, pp. 954. Fr. 7.)

THIS is a very compact and conveniently-arranged handbook, and is intended for the student on the threshold of clinical work. It begins with an account of the various factors that lead to morbid lesions, and successive chapters are devoted to the consideration of the mechanical, chemical, and living causes of disease. After this, the pathological problems of the infections are considered, and a full description given of the morbid processes entailed in disturbances of nutrition, auto-intoxication, inflammation, septicæmia, pyæmia, tumours, and degenerations.

In this part of the volume a great deal of general pathology is gone over in a clear and most attractive manner. The views put forward are well considered, but at the same time the whole trend of thought is decidedly modern, and is inspired with the spirit of recent pathological work and research. For this reason these pages will provide interesting reading, not only for the student whose work is before him, but for the practitioner who desires to familiarise himself in an easy manner with the theories and conceptions that have arisen and become prominent since the birth of bacteriology and chemical pathology.

The remaining part of the work deals more directly with the clinical aspects of disease. The methods of systematic examination of the patient are fully described in a chapter of 143 pages, while a chapter is devoted to the practical appplication of chemical, physical, and bacteriological methods to clinical medicine, and contains remarks on the analysis of urine, Roentgen rays, electrical testing, and so forth. Finally, sections on diagnosis and therapeutics, and a useful glossary, complete this admirable handbook.

VEGETATIONSTÖRUNGEN UND SYSTEMERKRANKUNGEN DER KNOCHEN. Von Dr. MAXIMILIAN STERNBERG, Privat Docent an der Universität in Wien. Specielle Pathologie und Therapie. Herausgegeben von Hofrath Professor Dr. Nothnagel, vii Band, II Theil, II Abtheilung.) Wien: Alfred Hölder. 1899. (Roy. 8vo, pp. 104, 10 illustrations. M. 3.)

THIS addition to the systematic work on special pathology and treatment issued in sections under NOTHNAGEL's editorship, deals with generalised forms of arrested and of exaggerated developments of bone, and also with some of the diseases of the skeleton. Among the latter class of diseases of the osseous system attention is directed chiefly to new growths, to osteitis deformans, and to the special form of hypertrophic osteo-hypertrophy which has been described by Bamberger and Marie as a secondary affection in certain cases of pulmonary and cardiac disease. The extent and complexity of the subject of general diseases of the skeleton are shown by the addition of a chapter on some imperfectly-known diseases of

the bones, indicating two new diseases with which are associated the names of Marie and Bruck.

Dr. Sternberg's contribution to the literature of general defects and diseases of bone is a good example of much German work on medical and surgical subjects. In one important respect it claims both praise and commendation. With regard to acquired knowledge, it is thorough and indeed complete, and certainly the author has spared no pains to obtain and impart all available information on his subjects. The information thus acquired is well arranged, and in spite of the almost endless complexity of detail and the wide divergence of opinion amongst different observers, this book cannot fail to impart much profitable and interesting matter to the reader. On the other hand, we find but slight indications of any direct research, or of any attempts made either by clinical observation or scientific reasoning to throw light on many of the obscure subjects with which the author deals. One result of Dr. Sternberg's industry is the addition of a complete and very useful bibliographical list.

NOTES ON BOOKS.

The first edition of *Syphilis*, by Dr. Isidor Neumann, was published in 1896, and was reviewed in the British Medical Journal of the same year. The book forms one of the volumes of a series of works on special pathology and therapeutics, edited by Professor Hermann Nothnagel, and the fact that a new edition (2nd Edition. Wien: Alfred Hölder. 1899. Roy. 8vo, pp. 867. 60 illustrations. M.20) should have been called for in less than three years is sufficient evidence of the value of Professor Neumann's large and elaborate work. It is worthy of note that the new edition appears in one volume instead of two, and that the author has found it possible to reduce the size of the work by about 140 pages. As in the first edition, Dr. Kahane is responsible for the section on diseases of the nervous system, and Dr. S. Klein for that on diseases of the eye. The book can be recommended with confidence, not only as a comprehensive and trustworthy treatise on syphilis generally, but as especially valuable in regard to all that relates to syphilitic affections of the viscera, and to the morbid anatomy and histology of syphilitic changes in the various tissues and organs of the body, many of which are illustrated in the well-executed drawings which accompany the text.

Glaucoma: its Symptoms, Varieties, Pathology, and Treatment. by Alex. W. Stirling, M.D., C.M.Edin., D.P.H.Lond. (St. Louis, Mo.: Jones H. Parker. 1898. Demy 8vo, pp. 186. 6s.) is to a great extent a reproduction of the author's lectures in the Post-graduate Medical School and Hospital of New York, which have already been published in the *Annals of Opthalmology*. The book is illustrated by photographic reproductions, and contains fifteen chapters; at the close of each is a very complete bibliography. We have thus a summary of the whole literature of glaucoma; but the quotations from different authors' papers make up a very large portion of the book. Dr. Stirling did the greater part of his pathological work in the laboratory at Moorfields, and this perhaps accounts for his apparent desire to give all credit to his teacher Treacher Collins; for certain it is that hardly a page can be opened without finding his name. This is also the case with some other authorities on glaucoma, notably Priestley Smith. The published papers of these and several other surgeons are dished up in every conceivable way, and the list of authors and their papers at the end of each chapter is appalling in its extent, though on more careful examination it is found that the same references occur over and over again. To anyone wishing to get up a summary of all that has recently been written on glaucoma we can recommend the book, though much the same information could be obtained by reference to the *Index Medicus*.

Mr. Simeon Snell has reprinted in a small volume the address *On the Prevention of Eye Accidents occurring in Trades* (London: Bale Sons and Danielsson, Ltd., price 1s) which he gave at the opening of the Section of Ophthalmology at the annual meeting of the British Medical Association at Portsmouth last August. The address in its present form makes, with the illustrations, an elegant little volume of some forty pages.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

A New Bed Rest.—Messrs. Carter, 6A, New Cavendish Street, Portland Place, W., have designed and patented a bed rest which seems to present certain distinct advantages. It consists of two wooden side frames, between which is stretched and suspended an elastic woven wire mesh. The pillow is attached to this, and can be kept in position by means of four tabs of web buttoned on studs fitted under the frame. The rest can be adjusted at any angle; but a special point about it is that it has no top or bottom bar. The side frames are kept apart by two light cranked iron bars, and in this way the head does not come in contact with a hard bar, as is the case with most other forms of bed rests. The makers have given the name "Raston" to this design, and have adapted the principle to circular back bed rests and other forms of support for invalids.



MEDICINAL AND DIETETIC PREPARATIONS.

Effervescent Carlsbad Water Lentiforms.—Messrs. F. Newberry and Sons, 1 and 3, King Edward Street, Newgate Street, E.C., have sent samples of effervescent Carlsbad water lentiforms, prepared by W. R. Warner and Co., Philadelphia, U.S.A. These lentiforms are intended for making artificial Carlsbad water, and contain in a compressed form the main ingredients—the sulphate, carbonate, and chloride of sodium—which analysis of the Carlsbad spring has shown to be present. The lentiforms dissolve readily with effervescence in water, and form a convenient method of preparing artificial Carlsbad water.

Pharmaceutical Preparations.—Messrs. Parke Davis and Co., 451, Oxford Street, W., have sent us specimens of globules of saw palmetto and santal oils, containing a preparation of the saw palmetto (Serenoa serrulata); the fruit of this palm, occurring in the south-eastern United States, is stated to have sedative, diuretic, expectorant properties, and is used in phthisis and chronic bronchitis. Concentrated saline solution sterilised is a convenient one for the ready preparation of saline solutions for intravenous injection. Fluid extract of pichi is a preparation of leaves and twigs (Fabiana imbricata). This drug is said to be useful in some urinary disorders, and good effects have been reported from its use in gonorrhœa and cystitis.

Esrach Water.—The claims made for this artificial aperient water are that it contains a large proportion of sodium and magnesium sulphates together with a considerable amount of sodium bicarbonate, that it is free from lime, and that it contains sufficient free carbonic acid to give a certain freshness to the water. The results of the analysis of the sample submitted to us show that these claims are justified by the facts. The water contains 10.25 grams per litre of sodium bicarbonate, it is not unpleasant to the taste, and it is conveniently put up in screw-stoppered bottles.

THE MEDICAL ASPECTS OF THE BOER WAR.

By a South African Campaigner.

I.

The Medical Work of the Campaign.

It is now abundantly clear that during the South African campaign the medical service, both in the army and civil branches, will have important duties to perform. Hospital ships and a hospital train will shortly be despatched in addition to the resources already available; and although we may still hope that the campaign will be a short one, and the deplorable losses of life on both sides be soon brought to an end, it is evident from the very imperfect medical resources at the disposal of the Boers that our medical and ambulance departments will have, while the war lasts, to devote a considerable portion of their attention to Boer wounded in addition to attendfng to our own soldiers.

The Mauser and Lee Metford-Bullets.

Judging from the result of the campaign up to the present, and from the nature of the wounds received by our soldiers, it is probable that the great bulk of surgical cases will consist of bullet wounds, and inasmuch as the Mauser bullet used by the Boers is a small hard conical one, which passes out with as little disturbance to surrounding tissues as is produced at the point of entrance, these cases should in the great majority of instances do well wherever the wound is merely one of a limb or limbs; and although thoracic and abdominal wounds will naturally be more serious, their gravity is certainly less than it would be with a Martini-Henry or old Snider bullet. The large proportion of wounded to killed, and the excellent accounts received of the progress of the wounded are both largely due to this peculiarity in the Mauser bullet.

In the same way we know from past experience, and also from recent Boer testimony, that the Lee-Metford—our own rifle—inflicts a similarly small and clean wound. The Lee-Metford bullet, it is true, is somewhat larger than the Mauser, but the difference is slight, and both bullets, when compared with the Martini-Henry, are diminutive. Of the wounds inflicted by the Martini-Henry I have myself had practical experience; there was with this bullet little difficulty in telling the wound of entrance and the wound of exit, the characteristic features of which are so fully described in the old textbooks. The track of the wound itself also was large and well defined, and the shock, wherever the wound might be, was severe. This was the rifle used by the Boers in the campaign of 1881, and the proportion of killed to wounded then was very much higher than it is to-day.

Shell Wounds: Melinite and Lyddite.

Fortunately for us and for our soldiers the Boer shell, from some peculiarity in its loading or structure, very frequently omits to burst, so that hitherto the losses from artillery fire on our side have not been very numerous, although it is equally clear that our own artillery have inflicted very serious losses upon the Boers. The wounds from bursting shells may be of any degree of severity, but obviously cannot be of so clean a character as those produced by Mauser bullets. In view of the protests recently made by the Boer General against our use of lyddite, I took the opportunity the other day to obtain the opinion of an artillery officer and a naval commander on the subject. I found they had been freely comparing notes and discussing the question. The following is a summary of the information derived from those authorities. Melinite and lyddite, although not absolutely identical, are so for all practical purposes, and the former is largely used in Continental armies. The shells now being used by the Boers in their field guns are, I was assured by the Royal Artillery officer, loaded with melinite. If accurately fired these shells would, if they exploded, inflict very severe losses upon our men, but by a fortunate coincidence these shells, although not infrequently directed with accuracy by the German artillerists now serving with the Boers, do not as a rule burst.

The shells used in our field artillery are loaded with black powder and shrapnel, and never fail to explode. The only lyddite shells used by us were fired from the naval guns for the first time at Farquhar's Farm on October 30th. They are of somewhat large size, and doubtless did great execution, as they called forth General Joubert's protest. In sending this protest, however, the Boer General did not, we understand, send any guarantee that the Boer melinite was *intentionally* kept damp or otherwise inefficient. The difference between a black-powder and a lyddite shell is that fragments of the former must strike a foe in order to inflict injury, whereas mere vicinity to the explosion of the latter is fatal from the terrific concussion which is produced. In this respect it seems to be similar to dynamite. Men or animals killed by the explosion of lyddite have been found in some cases to show no wound whatever.

The Summer Heats.

Another factor to be reckoned with by the medical service in the present campaign is that the summer is rapidly coming on in South Africa, and by December the heat on the plains of the Karoo and Orange Free State will be very great. A temperature of 90° or even higher in the shade may have to be encountered, and in the sun the heat at mid-day will produce many cases of solar fever and sunstroke unless provision is made against it. The hospital train should have more than the ordinary protection overhead, and the fittings might well be made to approach more to those in use in India than in South Africa.

The Transvaal and the Free State, at least those portions of them which Sir Redvers Buller's column will enter, are situated on the high veld of South Africa, and one peculiarity of these high inland plateaux is the great changes between the night and day temperatures, which have to be borne in mind by troops bivouacking on the veld. Sharp attacks of diarrhœa and dysentery are very liable to occur at this time of the year.

The Climate of the Inland Plateaux.

Johannesburg is 5,600 feet high, and at this altitude the temperature seldom goes above 85° F. in the shade. Pretoria lies under the Magaliesbergen at an altitude of 4,500 feet, and is considerably hotter than Johannesburg. The great interior plateaux on which both Bloemfontein and Pretoria stand are those plains lying inside the semicircle of mountains which run all round South Africa parallel to the coast, and amongst which in Natal itself our troops are now more or less entangled.

The Thunderstorms.

The thunderstorms in these plains are sometimes terrific, and, although grateful in their after-effects, are trying at the time, especially to men clad in khaki. Wet khaki is about as unpleasant, and while it remains wet as unhealthy, as anything I know. Chills and occasionally pneumonia will occur among men exposed to wet.

Froude's description of one of these thunderstorms on the high veld of the Transvaal during the summer is so graphic and true that I will quote it, as showing the dangers to health, as well also unfortunately to transport, which a series of these storms may produce. The extract is taken from his *South African Diary:*

"The lightning was rose colour, deepening at times to crimson. Each flash appeared like a cross; a vertical line seemed to strike the earth a second time, crossing it horizontally. The air was a blaze of fire; the rain fell in such a deluge that the plain in a few minutes was like a lake. Of course we could not move; the horses stood shivering up to their fetlocks in water. At one time there was no interval between the flash and the report, so that we were in the very centre of the storm. The sense of utter helplessness prevented me from being nervous; I sat still and looked at it in mere amazement. In two hours it was over, the sky cleared almost suddenly, and with the dripping landscape shining in the light of a summer sunset we trotted on to the river."

In such hours as these on the High Veld the sound of Heaven's artillery will drown even the roar of battle.

The first scientific meeting of the Zoological Society of London for the session 1899-1900 was held at the Society's House, 3, Hanover Square, on Tuesday last, November 14th, when Mr. F. Vaughan Kirby read Field Notes on the Bluebuck of Cape Colony. Papers were also read by Mr. R. I. Pocock and Mr. Stanley S. Flower.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 18TH, 1899.

THE METHODS OF MEDICINE.

A commentary on the methods and progress of medicine by the Regius Professor of Medicine at Oxford would have its weight even were it less wise, thoughtful, and earnest than that delivered by him recently at the Middlesex Hospital. It is the purpose of such occasional discourses to awaken thought as well as to instruct. While for the better appreciation of its instructive contents readers may be referred again to the discourse as printed last week, it will not be out of place to obey the thoughtful impulse which it generates, and dwell upon some points which may admit of various interpretation. In baldest outline Sir John Burdon-Sanderson's argument ran as follows: That the influence of scientific discovery has been greater in surgery than in medicine; that in medicine clinical description has advanced rather than solution of its underlying problems, the advance having been too exclusively in accumulation and systematisation of clinical experience as opposed to scientific investigation; that by clinical medicine the speaker meant not only ward work, but also necropsy, and even laboratory work (presumably laboratory work upon static and not upon dynamic phenomena), and these not as science but as the art of saving life; that even new clinical instruments, such as the ophthalmoscope, stethoscope, the *x* rays and the like, do not advance the science, but only enlarge the clinical sphere of medicine; that cure and prevention have been pursued too exclusively in their immediately utilitarian aspects, to the disadvantage of pure knowledge with its deferred but more permanent benefits; that, indeed, there is in high quarters much scepticism as to the value of scientific work, which disheartens and alienates the increasing band of young scientific workers who should be engaged in research; that hospitals should remember that collectively they are a medical university and should give opportunities to these young workers to pursue investigation into morbid processes, especially in two branches of medical science—the etiological and the therapeutical (pharmacological?); that thus students trained in purely scientific methods should find a bridge between theory and practice; finally, that the curriculum is overloaded in the earlier years of the student. Such a summary cannot be made without some injustice to the speaker, but it may serve.

Now without questioning the force of this line of argument, there are at least two grounds upon which a demurrer may be entered. The first is that the merely empirical nature of clinical observation is asserted a little too strongly; the second that, although the distinction between medicine as a science and medicine as an art is, of course, well known to the speaker, yet this fundamental distinction was not consistently and vigilantly carried through the argument. In respect of the first consideration we note that the speaker uses the word "empirical" more than once in respect of medical observatian. This is convenient, since it indicates exactly in what respect he considers that our observations which, on the face of them, cannot be called other than a method of science, are yet scientifically defective.

The term "empirical" is understood to mean that certain uniformities are recognised, but are not known as laws of causation; they may turn out to be causative in connection, or approximately so, but by our uses of observation the connection is not proved to be causative. Empirical generalisations then are observed uniformities which have to undergo experimental and other tests before they can be restated as natural laws. If, let us suppose, certain symptoms are found to recur together time after time, and an axiom is framed to express their coexistences and sequences, we are in possession of an empirical law; but so far we do not know that the series is a law of Nature; many of the associated phenomena are, or may be, derivative or incidental, and not sequences or coexistence esssentially invariable; they may not be due to a common cause. To form such axioms simple enumeration is sufficient; for instance, *a*, *b*, *c*, *d*, *e*, *f* are symptoms very often associated, do they spring from a common cause, or are some of them essentially independent of the others? The empirical law of the group is not to be looked upon as a law of Nature until, by methods of experiment, of difference, of concomitant variation, and so forth, we have sifted out the phenomena essentially connected in causation from those which, although often frequenting the group, as jackdaws frequent flocks of rooks, yet have an independent and contingent origin. Now, if our clinical observation be a method of simple enumeration only, without further inductive tests, we deserve the reproach; but is this so? In myxœdema and Graves's disease—to take ready examples—do we content ourselves with the method of observing collocation only? Are our observations of little more scientific value than, say, the entries in a ship's log? Have we not sought to ascertain also the underlying causes of the phenomena, to determine how much of the association is natural law, and to sift out the incidental? In medicine—in man at any rate—direct experiment is for the most part inadmissible; but observation is not thereby reduced to simple enumeration. Indirectly by experiment on animals, by observations in mankind of differences, of concomitant variations, of residue, and so forth, we believe we have done more than this; we believe we have attained to more than empirical laws, or axioms, and that in many cases we have attained if not to ultimate laws or to laws of very wide generality, at any rate to laws of no inconsiderable compass.

Again, we may briefly refer, as examples of scientific progress, to the action of many toxic causes of disease,

of the multiform tuberculous and syphilitic series, of pneumococcic meningitis, and to many other infections. Gout, on the other hand, may be set against us as an instance of an empirical law; we do not know the causal line of dissolution, and in our clinical description of the disease there are, no doubt, many incidental phenomena engaged, phenomena due to derivative causes or contingencies; still, can it be said that all or even the chief part of our symptom groups have in recent years remained thus unelucidated? More indulgence may fairly be claimed at the hands of our scientific critics, although it is true that very much has yet to be done in separating in our symptom groups those phenomena which are causally connected and those which are incidentally collocated.

In the next place, the Regius Professor seems, as we have hinted, to make too little of the distinction between the art and the science of medicine. Abstractedly speaking, it is not the business of the practitioner to advance the science of medicine. A contested case in the courts of law is not entrusted to a professor of laws as such; nor might it be wise to put the President of the Meteorological Society in command of a ship. While it is the business of the man of practice to ascertain from time to time what is doing in the field of research, and thereby to enlarge or to remodel his methods, research is the business of the scientific inquirer. Nay, the artist is to be forgiven if he be slow at times to modify his practice to any great extent on rumours of new results, before such results have been verified again and again; for too fluid a method of practice leads to inconstancy of judgment, to inconsistency in action, and so far to harm.

Every practical art must have its rules—not iron rules, but such as may steady the hand and fortify the practitioner in the exercise of it under (in our case) very heavy responsibilities. The artist, then, and the investigator are not the same person, save by accident: if combined perchance in the same person, the functions are different in kind, and need different faculties and mental processes. On the other hand, science is useless until it is applied as an art, and of this function the man of science is, as such, incapable.

That surgery has advanced whilst medicine has relatively stood still is a truth, so far as it may be true, of a very temporary value. The distinction between these two branches of our common profession is artificial, and consists in no more than this, that the surgeon is a physician who happens to be clever with his fingers. Even as matters stand it would not be difficult, perhaps, to show that the surgeon owes at least as much to the physician as the latter to him; but the distinction is, we repeat, not founded in the nature of things, and is, indeed, one which rests on a very unstable convention.

Concerning the overloading of the earlier stages of the curriculum, and the relation of the hospitals taken collectively to the rejuvenated University of London, we should be glad to learn the opinion of the Regius Professor in more detail. The problem of the formation and enlargement of the mind of the student without oppressing him, or wasting his precious time, is a very grave one; it is one upon which there seems to be much disagreement, and one on which fuller statements by persons in academic authority are much to be desired.

"THE LORDS OF THE SLUMS."

Lord Rosebery resumed his congenial task of inspiring and applauding municipal enterprise on the occasion of opening some artisans' dwellings at Moira Place, Shoreditch, on Monday last. As a former Chairman of the London County Council, Lord Rosebery has looked the housing problem in the face, and is not unnaturally intolerant of the "insolence of office" and the "law's delay" which have prevented more rapid progress in exterminating the rookeries of the metropolis. He handled, without however solving, the difficulty of dealing with the "residuum," that submerged tenth for whom sanitary dwellings have little attraction, and who seldom secure a "living wage" sufficient to pay rentals demanded for model dwellings. He was eloquent in reprobating alike "impure" vestrymen who have axes to grind and the owners of house property which is permitted to lapse into conditions unfit for human habitation.

It is pleasant to find, amid the wholesale and no doubt usually justifiable condemnation, instances of an exceptional and better state of things. On Tuesday the County Council had before it an interesting report from its Housing Committee, in regard to a notoriously insanitary area—namely, Nightingale Street, Marylebone, in which the ground landlord, Lord Portman, is showing a spirit of enterprise which we hope may arouse emulation. From the report we gather that in November, 1898, attention was called by the medical officer of St. Marylebone to an insanitary area in Nightingale Street and Samford Street in that parish. The area was the subject of a special report to the vestry by the medical officer, and subsequently, in December, 1898, the vestry approached the Council with a view to the area being dealt with by way of scheme under the Housing of the Working Classes Act, 1890. The Council's medical officer reported that the faults of the majority of the houses were (*a*) defective condition of repair and (*b*) insufficient yard space at the rear. Nightingale Street is only 25 feet wide, and the population of the area is 620. The death-rates, calculated over the last eight years, were for Nightingale Street at all ages, 35.3, and for children under 5 years of age, 109.9 per 1,000, while the corresponding death-rates for the parish of St. Marylebone were 18.3 and 59.6 respectively. The medical officer was of opinion that if the persons displaced could be satisfactorily rehoused there would be advantage in dealing with the area under a scheme. It was ascertained that the whole of the property was held on lease from the trustees of the Portman estate, of which it formed part. The Housing Committee therefore entered into communication with the agent to Lord Portman with a view to ascertaining whether he would be prepared to co-operate with the Council in carrying out a scheme as contemplated by Subsection 3 of Section VI of the Housing of the Working Classes Act, 1890. The Committee's proposals were met throughout in a most courteous and willing spirit, and the result of the negotiations was that Lord Portman undertook that if the Council would pass the necessary resolution to enable the area to be dealt with, and acquired all the leasehold interests in the property, he would repay the Council all its costs and expenses. The Committee proposed to close Nightingale Street, to utilise

a part of the area adjoining a Board school as a playground, while Lord Portman undertook to provide dwellings on the remainder of the area for as many persons as would be displaced.

The net cost to Lord Portman is estimated at £6,000, and the gross cost, which must in the first instance be paid by the Council, but which will be repaid by Lord Portman, is estimated at £10,800. The Committee accordingly prepared a scheme, but it was pointed out that should Lord Portman be unable from any cause to carry out his part of the scheme, the whole of the cost thereof would have to be borne by the Council. This reservation gave rise to some discussion in the Council, and a reference back to the Committee was moved in order to obtain some guarantee from Lord Portman's trustees to the effect that he was legally able to carry out his portion of the scheme. The Council, however, rejected the amendment, and on receiving assurance from Sir J. D. Poynder, the Chairman of the Housing Committee, that the scheme would not be proceeded with unless Lord Portman was able to perform his promise, the Council passed the necessary resolution.

Attention was called by Dr. Collins in the course of the debate to a proposal emanating from Mr. Blashill, the late architect of the Council, which, if sanctioned by law, would enable the Council to compel slum owners to put their insanitary property in order without resort to the expensive clearance schemes which, though valuable, are yet costly in the extreme, and press hardly upon ratepayers already overburdened with the cost of London improvements, past, present, and future.

THE ADMINISTRATION OF THE CHARITABLE FUNDS OF THE PROFESSION.

If we were to judge simply from the list of benevolent societies given in the *Medical Directory*, and the statements therein made as to the good work they are doing, we might well be disposed to doubt whether there is any form of real distress or poverty in which a qualified member of our profession, or those who have been near and dear to him, could find themselves without a brotherly hand being held out to help him or them effectively, as soon as the trouble which had come upon them had been made known in the proper quarter. There is first of all the British Medical Benevolent Fund, established in 1836 to afford immediate pecuniary relief to distressed qualified members of the profession, their widows or orphans; and to grant annuities to the aged or disabled among them. We find it stated that in addition to the relief afforded to the aged, blind, sick, and helpless, this fund has aided in the bringing up and placing in situations of orphans; has given timely help to struggling widows and daughters by which they have tided over temporary difficulties which would otherwise have overwhelmed them; and has in many instances enabled medical men, reduced to poverty by misfortune or illness, to resume practice and support their families. Then there is the Royal Medical Benevolent College, Epsom, established in 1855 to provide an asylum and pensions for duly qualified medical men, and the widows of such, in reduced circumstances; and a school for the sons of duly qualified medical men. Thirdly, there is the Society for the Relief of Widows and Orphans of Medical Men, which was formed in 1788, with the object of establishing a brotherhood for relieving, half-yearly, those widows and orphans of its deceased members who might need assistance, and which having expended on the objects to which it is restricted by its charter a sum of about £150,000, had still invested on May 1st, 1898, no less than £97,300 for the benefit of future claimants. Lastly, there is the excellent Relief Fund of our contemporary, the *Lancet*, instituted ten years ago by the proprietors, for the purpose of affording immediate pecuniary assistance to medical men, or their widows or orphans, in cases of emergency and distress, either by loans free of interest, or gifts, as may be required. When we come, however, to inquire how all these benevolent societies, with the large funds at their command, deal with a case of real and urgent distress which is brought to their notice and duly certified as deserving by medical and clerical witnesses, we shall see that there is another side to the shield, and, in order to exhibit it fully, we can hardly do better than quote the instance of Mrs. Beales, the widow of a medical man who died about fourteen years ago. This old lady, whose case has been inquired into by two of the funds we have named, supported herself after the death of her husband by giving lessons in French, music, and singing, until about six months ago, when a paralytic stroke rendered her helpless and speechless. She became an in-patient at the Royal Free Hospital, and while there some of her pupils paid the rent of her two rooms near Finsbury Park, so that when discharged she should not have to go to the workhouse, and in the hope that she might be able to resume her tuitions—a hope which can now now longer be entertained, as she remains quite helpless and speechless. Her case was stated to the authorities of the British Medical Benevolent Fund by a relative of the doctor at Highgate to whom Mrs. Beales's husband had been 30 years ago an assistant, and who had long known her, and they, after making inquiries, "most kindly," as our informant says, granted the old lady a sum of £18 for the year, paid in monthly instalments, sufficient to pay her rent, but which leaves nothing for food, clothing, or nursing. It was at first supposed that this £18 might be looked upon as an annuity, but this turns out not to be the case. The almoners of the *Lancet* Fund also, we are told, "most generously voted her a gift of £5, and on some occasions 10s. a week" (all of which is now exhausted), although her case did not properly come within the scope of their work. It will be seen that there is no complaint made, but quite the contrary, by those who are befriending the old lady, of the treatment she has received from the benevolent funds to which application has been made on her behalf, though in the end they see before her only a choice between starvation and the workhouse, and almost wish for death to release her from her troubles. But our readers will, we think, agree with us that the profession has a right, and, indeed, a duty, to form its own opinion on the matter, and to ask whether there is not a defect somewhere in the administration of our charitable funds when a genuine case of distress like that of this poor widow receives no more effective assistance than what we have mentioned. Especially is this the case in view of the fact that such very large invested funds exist for the benefit of those who come after. We cannot but think that, whilst preserving an invested capital to secure the charities in the future, a larger liberality might be extended to those who are now in grievous need.

THE SANATORIUM TREATMENT OF PULMONARY TUBERCULOSIS.

The discussion which was opened by Dr. Kingston Fowler at the meeting of the Royal Medical and Chirurgical Society promises to be extremely interesting, and the turn which it took on Tuesday makes it particularly valuable at the present time, when so many projects for the erection of sanatoria are under consideration. Dr. Fowler had to address an audience rendered critical, if not sceptical, by the past disappointments which make up the history of the therapeutics of phthisis. He was himself critical and

not enthusiastic, but he contended that the results which may be attained under sanatorium treatment properly applied probably surpass those which have been achieved under any other system. He recognised Brehmer as the founder of the system, and expressed the opinion that Brehmer's principles—pure air, regulated exercise, and careful feeding, the whole under medical control—remained fundamental elements of successful treatment. Dr. Fowler insisted that if discredit is not to be brought upon a good system, a discredit in which the medical profession will be involved, it is absolutely essential that the profession should take the direction, and keep a firm control over sanatoria. We believe that there is considerable need for this warning, in which both Sir William Broadbent and Professor Clifford Allbutt concurred. There is a danger that a sanatorium may be conducted as a hotel for the benefit of the shareholders of the company and a risk that medical principles, and, indeed every other consideration may be subordinated to the earning of dividends. Some of the sanatoria on the Continent have not escaped this danger, and there is at least one started with a great flourish of trumpets, the echoes of which have not yet died away, the proprietors of which have frankly admitted its failure as a sanatorium, and are now only anxious that it should be known as a rather luxurious hotel. On the other hand, there is the danger that benevolent persons who are now considering the erection of sanatoria for the poor may be deluded into the belief that all that is wanted is cheap cottages and a few lean-to sheds anywhere in a country place. If disappointment and disillusion are not to succeed the sanguine hopes now entertained, it is essential that the system upon which sanatoria are to be erected, and the details of administration should be controlled by the medical profession. The discussion was adjourned until November 28th, when it will be reopened by Sir R. Douglas Powell.

THE PLAGUE AT DELAGOA BAY.

Official information from Lourenço Marques, the port of Delagoa Bay, establishes beyond doubt the fact of the presence of plague at this important seaport. The source of infection may have been either Madagascar, Mauritius, or India. Most probably plague has been carried from Goa, in India, as between Lourenço Marques and Goa a traffic partly in goods and partly in coolies is kept up. At the present moment Delagoa Bay is frequented by ships of many nationalities and in much larger numbers than is wont to be the case. There all goods, passengers by train, and refugees from the Transvaal reach the coast. The passages from the southern and western borders are closed, and it is by the railway from Pretoria to Lourenço Marques that exit and entrance to the Transvaal is alone possible. From this port also proceed vessels to other towns on the South African littoral, not to mention further afield. The danger of plague being carried by land and sea from Lourenço Marques is very great. As an instance of the latter possibility it is sufficient to mention the fact that on November 8th the ss. *Tintagel Castle* arrived at Capetown with 1,000 refugees from Delagoa Bay. The journey occupies but four days, or less than the maximum period of plague incubation, so that it is possible medical inspection at Capetown may prove ineffectual, unless quarantine on board the steamship is insisted upon. The Government authorities in German East Africa have already taken steps to guard against plague from Portuguese territory, and have ordered that all the German subjects on the frontier of Portuguese East Africa shall be inoculated. It is one thing to give and another thing to execute such an order in the face of practical difficulties, among which must be included those due to racial considerations. The nearest British port to Portuguese territory in South-East Africa is Durban, which at the present moment is in frequent, almost daily, communication by sea with Delagoa Bay. British transports are landing troops in thousands, and refugees are crowding into Durban. The danger of the spread of plague is acute; it threatens to embrace all South Africa. War may be rendered more horrible still by an outbreak of plague amongst the soldiers of the contending armies, and a calamity as great or greater than the appearance of cholera amongst the troops before Sebastopol in 1855 would seem only too possible. This may seem an alarmist statement, but nevertheless it is a possible contingency. Plague is so uncertain in its behaviour, at times spreading with rapidity, at times slowly, that it is impossible to predict what will happen.

THE AMBULANCE PARTY SENT FROM GREAT BRITAIN TO THE TRANSVAAL.

The ambulance detachment sent to the Transvaal through the munificence of Sir James Sivewright, K.C.M.G., left the Royal Albert Docks for Capetown by the ss. *Moravian* on Wednesday, November 13th. It is stated that the Aberdeen line, to which this steamer belongs, gave every facility for the transit of the party with its stores, but that it is not, as we were informed on apparently good authority, taking the party free of charge. On arrival at Capetown the members of the party are to report themselves to the medical officer in command at Capetown, and the War Office has arranged that every facility shall be given for as rapid a transit as possible to the Boer lines. On arrival at their destination the party will be divided into two; one section to be under Dr. H. M. W. Gray, of Aberdeen, and the other under Dr. Neethling. Dr. Gray, who is a nephew of Brigade-Surgeon Gray, is accompanied by his wife, herself a trained nurse. Mr. Montague, of New Bond Street, has supplied the surgical and medical equipment, which is on a most liberal and complete scale. We are informed that Sir James Sivewright has placed the houses on his extensive estate at the disposal of the British authorities as a military convalescent home. The offer has been thankfully accepted by the War Office authorities. The home thus available is situated some thirty miles from Cape Town, in a most attractive locality, and one in every way calculated to benefit the sick and wounded. In fact, there are three large and commodious dwellings available, namely, at Oakwood, Lourensford, and Vergelegen, capable of accommodating some 200 soldiers, and as they are all on the same estate a most convenient and pleasant retreat is afforded the sufferers by war.

BIRMINGHAM CLERKS' PROVIDENT ASSOCIATION.

A correspondent sends us a copy of the prospectus of the Birmingham and District Clerks' Provident Association, and states that he and several of his neighbours have been asked to undertake to attend the members of this society for the sum of 4s. per annum. He asks whether we do not consider this sum too small for a society whose members are clerks, cashiers, and travellers, and who belong to a class from which a higher rate of payment to the medical profession is ordinarily expected? We quite agree with our correspondent, and we cannot help expressing our surprise that, as appears from the prospectus, the Association should have succeeded in obtaining some forty medical practitioners to accept these terms. On looking into the accounts we find that the total amount paid to the medical profession for the year was only £230, and that there was a balance carried forward of £2,989 3s. 8d., so that the medical officers of the Association must have received on an average about £6 apiece! We notice further that the total membership of the Association amounted at the end of last year to only 874, and as this is spread over Birmingham and a radius of twenty miles, we presume that the question has never presented itself as a very important one to any of the medical officers. But we can easily see that

if this society were to have the success it desires the medical profession would suffer very considerably, and we think our correspondent is quite right in refusing to entertain the offer of the Association. We think it right to call the attention of all those who at present are working for this Association to the injury inflicted upon the profession by the acceptance of such terms. We should be pleased to see this Association, which we have no doubt is animated by the most excellent intentions, adopt a system of payment by fees after the fashion of the National Deposit Friendly Society, though upon a higher scale, and we should like to see some proposal to this effect brought forward by its medical officers.

COAL SMOKE ABATEMENT.

THE campaign against smoke in London initiated last November by Sir W. B. Richmond, R.A., and which led to the formation of a society, of which Sir W. B. Richmond himself is President, and Mr. Owen B. Thomas (59, Chancery Lane, W.C.) the Honorary Secretary, is evidently progressing. The Society is confining its action to the metropolitan area, its object being (1) to aid the enforcement of the existing law dealing with the smoke nuisance, which is contained in the Public Health Act, 1891; (2) where the present law is inefficient to bring about an amendment; (3) to inquire into the present causes of the smoke nuisance, and the best means of removing or lessening them, and to promote the investigation of appliances designed with that object; (4) to obtain evidence of the methods of dealing with smoke at home and abroad; and (5) to promote the knowledge of methods by which the emission of smoke may be prevented, and for that purpose to encourage the organisation of exhibitions and to stimulate invention by the offer of prizes. This practical endeavour to grapple with and mitigate the smoke of London, its resultant fog, the dirt, darkness, and disease which they together cause, and the heavy burden of unnecessary expenditure in cleaning, painting and renovating injured books, pictures, furniture, and household decorations has enlisted a wide circle of sympathisers; and it is calculated that a yearly subscription of 5s. from each member will provide ample funds for a vigorous campaign, provided some of the wealthy supporters give more. Much activity has been lately exhibited in the endeavour to enforce the existing law, which is less stringent in London than elsewhere. The Society has during the present month proceeded against two manufacturing companies for, in each case, allowing dense volumes of black smoke to issue from a chimney-shaft on various occasions. In each instance fines were imposed by the magistrate at the West London Police-court. The principal witnesses called in both cases were two inspectors of the Smoke Abatement Society, who watched the premises on certain days, and forwarded reports of their observations to the Vestry. It is not encouraging to learn that since the duty of suppressing black smoke was transferred from the police to the vestries, the number of cases investigated in the courts has actually decreased. It would probably be an improvement if Government were to take it in hand, and appoint smoke inspectors just as they appoint factory inspectors. Such officials would act without fear or favour. in many towns smoke inspectors are already employed by the local authorities; in Manchester, for example, there are four such inspectors. Why does not London follow suit? The work effected in this direction by Mrs. Hopwood, of Middleton, near Manchester, is most encouraging. This public-spirited lady has prosecuted numbers of owners of large works in that murky district of Lancashire with the greatest success. She herself conducts the cases in the police-courts, and employs two inspectors who go together and take the time by minutes and seconds during which black smoke is issuing from the chimney that is the subject of complaint. The emissions need not be consecutive. For example, in a recent case the inspectors showed that in one hour for 17 minutes 20 seconds black smoke had been emitted, and for 9 minutes moderate smoke, there being seven emissions in the hour. The inspectors state on oath the results of their observations, whilst a photograph of the chimney and the smoke it emits is of service if counsel for the defence should ask what a witness considers black smoke. Mrs. Hopwood has prosecuted as an owner of property aggrieved. An order to abate the nuisance in a month's or two months' time, and to pay the expenses of the prosecutrix and her witnesses, has been the usual result of her procedures. It is no hardship for steam users to be compelled to abate the smoke issuing from their furnaces; the change in the method of using coal not only diminishes the smoke produced, but also lessens the amount of coal burned, bringing it down in one case from 29 tons to 22 tons per boiler, so that manufacturers actually gain by the change. One gentleman acknowledged that he had made several hundreds of pounds a year by the alteration. The production of smoke is, indeed, a positive loss to the manufacturer; a fact which is easily intelligible when it is recollected that "the soot (that is unconsumed carbon) which came out of a single sugar refinery was gathered for six days and found to weigh 4,800 pounds." Mechanical appliances for the consumption of smoke can be adapted to furnaces of all sorts, so as to ensure smokeless chimneys whilst they are in full work. Smoke producers have, in fact, no good cause to continue to pollute the air.

AN EARLY GLASGOW MEDICAL SOCIETY.

IN the *Glasgow Medical Journal* for November Dr. George S. Middleton gives an account of a forgotten medical society not included among those enumerated by Dr. Duncan in his *Memorials of the Faculty of Physicians and Surgeons of Glasgow*. Three practitioners of Glasgow—Mr. Marshall, Dr. Ferguson, and Mr. Wilson—"considering the great advantages which each of them might derive by forming themselves into a Society for the purpose of writing and discussing medical subjects," met on June 13th, 1820, and constituted themselves into the Glasgow Medico-Chirurgical Society. Whether the life of the Society was a merry one does not appear, but it was certainly short, for in 1832 occurred the last resignation of which there is record, and after that the Society, if it did not become defunct, ceased to have any annals. At no time had the Society more than a small membership, the total number who signed the laws being only 21. Among these the names of two of the founders are conspicuous by their absence, a circumstance which is explained by a later entry, which states that they had "absconded." The members do not seem to have been very eager to carry out their purpose of discussing medical subjects, for the minutes of the meeting of August 31st, 1821, states that only one member was present, and he "having waited untill his patience was nearly exhausted, it was resolved that all the absentees be fined double. One would suppose from this entry that his patience had been quite exhausted. It is to be hoped that the absentees duly paid their fines. Among the subjects discussed was the treatment of consumption. On February 17th, 1825, Mr. Campbell read a paper advocating the tonic plan of treatment, but the majority of his hearers supported the antiphlogistic treatment. The following extract from the minutes relating to this matter is interesting: "The Society, in discussing this subject, naturally adverted to the chief promulgator of this practice—a medico-clerical gentleman of consumptive notoriety—who, by means of nourishing diet of the most substantial kind, with occasional use of wine and ardent spirits, aided by cold and tepid sponging, with as much exercise as the patient can bear, has effected so many wonderful cures, and rendered his name famous over the three kingdoms. If

his practice has been so strikingly successful, he ought long ago to have sacrificed every feeling of personal aggrandisement to the public good, and, by publishing an account of his experience, illuminated the darkened intellect of his medical brethren, removed those prejudices which many of the best informed entertain against it." The "medico-clerical gentleman of consumptive notoriety" had the misfortune to be in advance of his age.

THE VICEROY OF INDIA AND PLAGUE INOCULATION.

THE *Times* correspondent has sent a very interesting report of a speech which Lord Curzon made at a meeting at Poona on November 11th. The Viceroy is reported to have said: "In my judgment inoculation is by far the wisest system of prophylactics that you can adopt..... If I find, as I do find, out of 100 plague seizures among uninoculated persons, the average number who die is somewhere about 70 or 80 per cent., while in a corresponding number of seizures among inoculated persons the proportions are entirely reversed, and 70 or 80 per cent., if not more, are saved, I altogether fail to see how, in the face of them, it is possible for anyone to argue that inoculation is not a wise and necessary precaution..... Inoculation has saved thousands and thousands of lives which would otherwise have been lost, and gives to the patient more than a reasonable chance of recovery. I do not say," he continued, "that you ought to force inoculation upon people. I am entirely of the opposite opinion. . . . but in the interests, not of science, but of humanity, and for the future welfare of thousands of human lives let no effort be spared to spread the facts, to inoculate reason and to win by persuasion that which you cannot extort by force." The Viceroy stated that before leaving Simla to visit Bombay and Poona his whole party had been inoculated with plague serum, and he cordially commended the treatment. The visit of the Viceroy to the plague-infected centres has caused the liveliest satisfaction, and the eloquent and practical manner in which he has advocated the claims of inoculation with prophylactic serum cannot fail to do good throughout the length and breadth of India, and beyond its borders.

CIVIL PLAGUE MEDICAL OFFICERS IN INDIA.

IF letters and paragraphs in the Indian papers represent the prevailing views, it would seem that the recent importation of English doctors into India has given rise to discontent in several quarters. First of all, to the Indian Medical Service, because it is felt that these appointments should be reserved for that service; secondly, to those English doctors who were sent out at an earlier period for similar duties, but on smaller pay; and, thirdly, to the large number of native medical men, who feel that they are quite competent to perform the ordinary duties assigned to those who have been brought from England. We hardly think that the Indian Medical Service have much to complain of in this matter. It is a well-known fact that without plague they are overworked by the many duties that they have to perform, and that on account of the strain placed upon them for the past few years a major portion of them have not enjoyed the leave and furlough which they have earned and are so much in need of. To place further duties on them would be risking the effect of the proverbial straw on the camel's back; and we think that the authorities both in India and at home acted wisely in deciding that in a calamity such as that which has overtaken India additional skilled assistance was required. Whether that assistance should be wholly derived from native sources or partly from native and partly from English is a matter on which various opinions may be entertained. We are of those who think that a hundred, or even two hundred, well-qualified English doctors are but a small proportion of the numbers required, and that they give strength to any native agency that may be employed. We believe in the native medical men, and, properly trained, we think there is a fine future for them in the sanitary service of their country, but they must be trained first, and that training unfortunately is not yet to be found in the curriculum of the Indian colleges. The Government of India we trust has not forgotten its resolution of 1895, in which it determined to give native medical men in 1900 the training we speak of, and to form the sanitary service so much required. Such a service strengthened by the European element as represented by the English importations who have, and are, doing such excellent plague work, would place the sanitary department of India on a basis commensurate with the needs of the country. As regards the complaints of the English doctors who first took service in India for plague duty, it is undoubtedly a hardship to see others come out on better pay, but in cases of emergency such as this it is not easy to foresee events, and while sympathising with the position, it is difficult to find a solution that would satisfy them and the Government. We think that both the Government and the English doctors made a mistake in coming to an agreement of 500 rupees a month for such exceptional services as plague duties involve, and it would only be fair on renewal of the services of these medical men in India for the Government to consider the matter from an equitable point of view, and to pay them all not less than 700 rupees a month.

HOMŒOPATHS ON THE WARPATH.

AMONG the wars and rumours of wars now agitating the minds of men there is one that may escape the notice of some of those directly concerned unless their attention be drawn to it. The homœopaths are on the warpath, and the current issue of the *Homœopathic World* contains what we suppose is to be regarded as an ultimatum. The editor calls on the followers of Hahnemann to close up their ranks, and demands that the homœopathic body be organised and vitalised into an effective fighting machine. He is terribly in earnest. Guerilla warfare, he says, is all very well in its way, but what is wanted is organised concentrated effort. This, he is confident, would speedily put a different complexion on affairs. We might hint that a different complexion would be more becoming, but the situation is too serious for jesting. "Allopaths" are threatened with a war to the knife—or perhaps we should say to the pilule. "All attempts," says our bellicose contemporary "to conciliate the allopaths by a more punctilious observance of points of etiquette (allopathically manufactured) than the allopaths themselves maintain, excite (as they deserve) only the derision of the party in power. Until the two divisions of the homœopathic body unite their forces and rise resolutely up and determine that a homœopathic college shall be established in spite of—and not at all by favour of—allopathy, we must be content with the unexciting rate of progress which at present obtains." What does all this fiery eloquence mean? Why these alarums and excursions? Why this unprovoked defiance of the "allopath"? Allopathy being a mere creature of the Hahnemanno-maniac fancy may safely be defied, and the writer of the brave words we have quoted is simply, as Cassio says, discoursing fustian with his own shadow. It appears, however, that even a "college" will not satisfy the aspirations of our homœopathic friends; we gather that an attempt is to be made to capture the hospitals. This, at any rate, appears to be the meaning of a letter which Lord Dysart has addressed to the secretary of the Grantham Hospital. The noble earl has been considering the question of his annual subscription, as "while wishing in every possible way to support surgery which everyone agrees with," he dislikes intensely supporting an institution which adopts "antiquated and unscientific methods of internal medi-

cine." It is interesting to know that Lord Dysart agrees with surgery, but it is sad to learn that internal medicine disagrees with him so much that he will have none of it, not even in infinitesimal doses. He invites the Committee "to exclude all internal treatment whatsoever from the hospital except in very exceptional cases when it might be a matter of life and death, and when even homœopathic medical men would allow drastic remedies." If the Committee will do this, why then Lord Dysart may think proper to double his subscription. He is tolerant enough not to wish to force homœopathy down the throats of those who do not believe in it, but he apparently sees nothing objectionable in a proposal to leave hospital patients without any internal treatment at all. Lord Dysart seems to write as a homœopath, and we hope his implied admission that homœopathic treatment is practically equivalent to none will be appreciated by those of his persuasion. The further implication, however, that when a case is serious the homœopaths throw aside their popguns and use the weapons of rational medicine, will probably make them willing to dispense with the support of so candid a friend as Lord Dysart.

THE PREVENTION OF TUBERCULOSIS IN CATTLE.

The head of the Government department must necessarily assure himself of the need for interference as well as of the practicability of regulations before advising legislation on any subject. Caution may, however, be carried too far, and delay a much required measure. There are certain facts with regard to tuberculosis in cattle which may be accepted as proved. The great prevalence of the disease, the danger to the rest of a herd of the presence in it of a tuberculous animal, and the danger to the public of the large amount of tuberculous milk supplied by dairies, are points which will hardly be questioned. The injection of tuberculin, if skilfully made, gives a sufficiently accurate means of detecting the disease to fulfil all the requirements of practice. The President of the Board of Agriculture does not, however, appear yet to be convinced that the time has come for the Government to take any action. In the meantime private enterprise is showing what might be done in stamping out tuberculosis in cattle if a scheme were elaborated and applied to the whole country. It is on the question of expense that the most potent argument against legislation is based, and the economic aspect of the subject is undoubtedly important. Professor Delépine, in the *Veterinarian* for July and August of this year, reports some investigations into the question of expense following the slaughtering of the affected animals. That the loss may be considerable when animals are slaughtered as soon as they are found to be tuberculous is shown by the figures adduced by Professor Delépine. The chief loss occurs in the case of cows which have recently calved, whose value for dairy purposes is considerable, though they are too lean to be profitably slaughtered. If, however, by periodical testing with tuberculin the presence of tuberculosis is detected early, there is no reason why such milch cows should not be kept and fattened before slaughtering. This would materially diminish the loss. On the question of the danger of milk from tuberculous cows, Mr. Lloyd, F.C.S., the analyst to the Dairy Farmers' Association, was unable to find tubercle bacilli in the various samples of milk sent to him by Professor Wortley Axe in connection with the investigations to which reference was made in the British Medical Journal of November 4th. A series of negative results, even by a skilled analyst, can, however, hardly affect the conclusions arrived at by so many competent observers from positive evidence.

AURAL EFFECTS OF MODERN ARTILLERY FIRE.

Attention has been directed by one of the war correspondents in Natal to the indescribable din of a modern battle. The crackle of the rifles, the thud of the Maxims, and the bang of the larger quick-firing guns combine to produce a confusing effect on the hearer. Some observations of R. Müller's[1] on the results of loud reports on the tympanum may therefore be of interest at this time. Müller examined 96 tympanums before and after firing, and in 44 changes could be detected. In 7 cases multiple hæmorrhage could be found, small and stippled for the most part, but in 1 the hæmorrhage was the size of a lentil. The other 37 were characterised by widespread reddening of the proximal end of the meatus and of the margin of the tympanum. These changes occurred as a rule in ears which had not previously been quite normal. In 40 cases the distance at which a tuning fork could be heard was diminished. Rinne's test always remained positive; therefore the result of repeated loud explosions, owing to overstimulation and subsequent fatigue, is to dull the perception for bone-conducted sounds. Only four men complained of subjective noises. Müller is of opinion that the amount of firing the ordinary soldier hears in his two years of service is insufficient to do him serious harm. On the other hand officers and non-commissioned officers who live near a firing ground, or who have to do with instruction in firing for long periods, very often become partially deaf, and suffer from subjective noises. In all such cases retraction and dulling of the tympanum could be found. The conclusion Müller arrives at is that no officer whose ears are not quite normal should be allowed to join the artillery, but that slight abnormalities need be no bar to a private doing so.

HOLIDAYS FOR IRISH DISPENSARY DOCTORS.

It may be hoped that we have now seen the last of the resistance of so many Boards of Guardians in Ireland to the new law which provides for holidays for the dispensary doctors. In the first place these Boards, led by the guardians in the enlightened city of Belfast, opposed a four-weeks holiday. The Local Government Board have met the revolt by declaring that period of rest a reasonable one, and accordingly that point is settled. Next came a refusal to pay £3 3s. a week for the *locum tenens*, and we warned the doctors against taking less. Some, we regret to say, did take less, and they have not earned the respect or gratitude of their colleagues. But a formal legal decision has now been obtained, which we hope will settle the question. The Coleraine guardians refused to pay Dr. Law, *locum tenens* for Dr. Creery, more than £2 10s. a week, and he brought an action against them. The Recorder of Derry has given a decree for the sum claimed, holding that the Local Government Board's order as to the amount to be paid (£3 3s.) was decisive.

ANTITOXIN FOR PAUPER PATIENTS.

It has recently come to our knowledge that a metropolitan Board of Guardians has refused to supply antitoxin at the request of one of the district medical officers, who had to defray the expense out of his own pocket in treating a pauper patient. The only reason for the refusal appears to have been that some of the guardians disapproved of the antitoxin treatment of diphtheria. If this refusal is persisted in, application should be made to the Local Government Board to remind these guardians of their public duties, and to point out that it is not their part to decide what medicines shall be used by their medical officers in their treatment of the sick poor. If a pauper patient should die in consequence of the refusal of the guardians to supply antitoxin after it had been ordered by one of their medical officers, a very serious responsibility would be incurred by the Board.

[1] *Zeitschr. f. Ohrenheilk.*, Bd xxxiv, p. 323.

THE CARMICHAEL PRIZE ESSAY.

THE President and Council of the Royal College of Surgeons in Ireland announce that on the first Thursday in November in 1900 they will proceed to adjudge a prize of £120 for the best essay under the Carmichael Bequest. The essays must deal with the state of the medical profession in Great Britain and Ireland, the state of the hospitals and schools of medicine, surgery, and pharmacy, and the examinations of the different licensing bodies. The authors are expected to make suggestions respecting the improvement of the profession, "with the view of rendering it more useful to the public and a more respectable body than it is at present." Each essay is to be distinguished by a device or motto, and accompanied by a sealed packet containing the name and address of the author, also distinguished by the same device or motto. The essays are to be lodged at the College on or before the first day of July, 1900. No essay must exceed 65,000 words in length. The President and Council will not consider themselves bound to award the prize should any of the essays not appear to them to possess sufficient merit.

THE CHAIR OF MEDICINE IN QUEEN'S COLLEGE, BELFAST.

DR. J. A. LINDSAY has been appointed Professor of the Theory and Practice of Medicine in Queen's College, Belfast, in succession to the late Dr. Cuming. We desire to congratulate Dr. Lindsay, and also the medical faculty of the College which, by this appointment, gains the services of a distinguished physician already well known as a successful clinical teacher. That the appointment will be most popular in Belfast is proved by the facts, first, that a memorial praying that he might be appointed was signed by over three hundred members of the medical profession in the North of Ireland; secondly, that a similar memorial was largely signed by the medical students of Queen's College who had attended his clinical lectures. Dr. Lindsay, who is Physician to the Belfast Royal Hospital, had a distinguished career as a student of Queen's College, and graduated M.D. in the Royal University of Ireland in 1882. He is a representative of the North of Ireland Branch on the Council of the British Medical Association. Professor Lindsay will deliver his inaugural address on Monday next, November 20th, at 1 P.M.

ANKYLOSTOMIASIS IN BELGIUM.

THE spread of ankylostoma duodenale on the Continent is becoming serious, while the history of its advance in Belgium is full of warning to ourselves. Professor Ermengem, of Ghent,[1] points out that the disease known previously in Egypt and Brazil found a congenial home for itself in Italy, whence it spread not only to the St. Gothard tunnel, but also to the brickfields of Austria, Hungary, and Germany, and to the coal mines of certain districts in France and Belgium. The Belgians consider themselves indebted to Cologne for the disease, transmitted, they say, by workers from the brickfields there. The Germans maintain precisely the opposite theory, asserting that Belgium was infected by workers from the St. Gothard tunnel, and then conveyed the parasite to Cologne. Be this as it may, the presence of the parasite was first demonstrated in Belgium in 1884, the patients coming from one or two coal mines at Liége. Since 1895 the spread of the disease among the miners of the Liége district has been rapid, so much so that an investigation carried out this year proved that of 411 workmen taken at random, no fewer than 201 were infected. Of 80 workers who complained of being ill, 70 had the disease. Of men looking for work 19 were examined, and 17 were found to harbour the parasite. In a mine the parasite finds the conditions most favourable to its development and propagation—humidity, a raised and fairly equable temperature and a want of cleanliness among the workers. It is less common above ground apparently. As no symptoms may be produced for some weeks, the stools of the apparently healthy must be examined as well as those of the sick. As regards prophylaxis, little alteration is needed in the recommendations of a Commission appointed in 1892 to combat the spread of cholera in Belgium. They comprise in the mines the provision of numerous portable latrines, the supply of pure drinking water, and the disinfection of woodwork, etc., in the galleries with some cheap disinfectant; above ground the provision of baths where the men can wash before going home, and the systematic examination of the stools of all the men who are out-of-sorts.

[1] *Revue d'Hygiène*, October 25th, 1899.

THE annual dinner of the Royal College of Physicians of Edinburgh will take place on Thursday, December 14th, at the College Hall.

OWING to the date for holding the International Medical Congress falling in 1903, it has been decided that the next International Otological Congress shall not take place in that year, but in 1902. The meeting will be held at Bordeaux, under the Presidency of Dr. Moure.

THE anniversary meeting of the Royal Society will take place on Thursday, November 30th, when Lord Lister will be proposed for re-election as President, and Sir Michael Foster, K.C.B., M.D., and Professor Rücker as Secretaries. Among the members of Council to be proposed are Sir Samuel Wilks, Bart., M.D., and Professor W. D. Halliburton, M.D.

IN Algiers, where a case of plague has been reported, and where certain other cases of a suspicious character have occurred, the authorities, it is reported, sealed all the sewers hermetically and then burned chemical products, the fumes of which destroyed all the rats. This is a step which might be followed with advantage by all municipalities which are threatened by plague.

THE autumn dinner of the Irish Medical Schools' and Graduates' Association will be held at the Hotel Cecil on Wednesday, November 29th, at 7.15 o'clock, the President, Sir William Thomson, of Dublin, in the chair. On the same evening at 9.30, and in the same hotel, an "At Home" will be given in celebration of the "Coming of Age" of the Association, to which a large number of distinguished guests have been invited. Application for tickets for the dinner and "At Home" should be made to Mr. P. J. Freyer, 46, Harley Street, W.

WE understand that the Fellows' dinner of the Royal Medical and Chirurgical Society, which is to be held at the Whitehall Rooms, Hotel Métropole, this (Saturday) evening, will be attended by a large number of the profession, and that among the guests will be the Bishop of London and representatives of other professions. We are informed that Fellows who at the last moment may desire to attend the dinner may do so by applying direct to the Manager, Whitehall Rooms, Hotel Métropole.

MR. TREVES received a most enthusiastic send off from a large number of students of the London Hospital at Waterloo station on Saturday last. A number of his colleagues and many personal friends were also present to say goodbye. Mr. Treves sailed for Capetown in the *Dunvegan Castle*, which touched at Madeira on November 15th. The *Briton*, in which Sir William MacCormac and Mr. G. H. Makins are passengers, touched at Madeira on November 8th, and is due at Capetown on November 21st. Miss McCaul, one of the nurses who accompanied Mr. Treves, was trained at the Radcliffe Infirmary, Oxford, and not at Addenbrooke's Hospital, as previously announced.

OPENING OF THE BRISTOL JUBILEE CONVALESCENT HOME BY THE QUEEN.

The ceremony of opening the Convalescent Home by the Queen on Wednesday, November 15th, passed off without a hitch. Her Majesty, having travelled from Windsor, was received at Temple Meads Station by the Lord Mayor, the Lord Lieutenant, the High Sheriff, the Lord High Steward, and other officials, who were duly presented by the Lord Chamberlain. The Lady Mayoress, having presented a bouquet to Her Majesty, the procession formed and proceeded to the Council House, where the Recorder read the dutiful address of the Lord Mayor, the Aldermen, and Burgesses of the City, which address Her Majesty graciously replied to and accepted in a gold casket.

The procession then reformed and proceeded through the city to Clifton; but before reaching the Home Her Majesty's carriage was stopped to listen to 27,000 children singing the National Anthem. The sight of so many young persons placed in one huge stand was wonderful, and the sound of the shrill little voices singing, and afterwards cheering the Queen, was most impressive.



The Jubilee Convalescent Home, Bristol.

The Home having been reached, the Queen's carriage was drawn to the south front. After a prayer by the Bishop of Bristol and the singing of the hymn "Oh King of kings," Mr. E. P. Wills, the President of the Home, read an address, and certain presentations were made. A move was then made to the north front, where the principal entrance is situated, and the Queen declared the Home open after connecting some electric arrangement. The fact that the Queen had performed the ceremony was announced by a flourish of trumpets by the 1st Life Guards.

All along the route thousands of spectators crowded the pavements and sides of the road, and the reception the Queen received was most hearty. In many places the crush was very bad, and much difficulty was experienced in getting the road clear; but everyone was in the best of humour, including the police and soldiers, though at times their authority seemed to be on the point of being ignored. As usual the Queen was favoured with beautiful weather; the sun shone brightly at times, and the absence of rain for the last day or two made the roads in excellent condition.

The house which has been converted into the Convalescent Home was originally built for a private school by the Rev. J. Wilkinson, and stands in about three acres of land at the corner of Durdham Down. At the time of Her Majesty's Jubilee in 1897 it was felt that some fitting memorial of her long reign should be instituted in Bristol, and Mr. Edward Robinson opened the fund with £2,000 towards providing a building if the Committees of the Royal Infirmary and General Hospital considered the movement desirable, and the city adopted it as the Jubilee scheme. The Committees affirmed their need of a convalescent home, and commended the adoption of the scheme at a private meeting of citizens called by the Mayor. The proposal to found a Convalescent Home was subsequently adopted at a public meeting, and the movement at once met with hearty support. Mr. E. P. Wills, who has been made a K.C.B. in recognition of his services, purchased Mr. Wilkinson's house for £20,000, and presented it to the governors of the Home. Originally it was intended that the Home should contain 50 patients, but subsequently this number was doubled, and at the same time £100,000 was asked for, half of which should be invested for maintenance. At the present time only a very small amount of this sum is required, and there is no doubt that the balance will be met.

In the building, the front of which is shown in the accompanying photograph, considerable alterations had to be made to render it suitable for the accommodation of convalescent patients. On the ground floor a new large dining hall has been found capable of accommodating all the inmates, while the rooms have been converted into smoking and day rooms for the men, with lavatories and cloak rooms. Here, too, are the servants' rooms, kitchens, and offices. Outside a verandah has been constructed running the whole length of the buildings between the end wings, and all the windows have been lowered to allow the inmates a view of the garden.

On the north aspect a new front door has been made with stone steps and balustrade. On this floor are the dormitories and nine day rooms, the men's being at the east end, the women's at the west, with the matron's room, nurses' dining hall and sitting-room, the medical officer's room and dispensary, and a large day room for the women. On the second floor are dormitories for the patients, certain private bed-rooms, and a chapel. Access to the various floors is obtained by three staircases, for the men, women, and servants respectively, and a passenger lift. Warming is done by open fires and by low pressure steam pipes. The laundry has been constructed out of the stables and workshops, and the building is fitted throughout with electric light. Various presents have

been made to the Home, the articles being clocks, one a handsome turret clock for the outside, bath thermometers, and a weather vane.

The ambulance arrangements were under the management of the Bristol Branch of the St. John Ambulance Association, detachments of four or five men being placed at short intervals along the route. Among the large number of children on the Downs there were a few cases of fainting, but no report of any serious accident was received.

AUSTRALASIAN MEDICAL CONGRESS.

The fifth session of the Australasian Medical Congress was opened at Brisbane on September 18th, under the presidency of Dr. John Thomson.

The President, in opening the proceedings, thanked the members for the very high honour they had conferred upon him. He welcomed the visitors to Brisbane, and hoped they would do something to dispel the notion that Brisbane had a bad climate. At the request of the Premier, the Governments of the other Colonies had appointed representatives to attend the Congress. New South Wales sent Dr. J. Ashburton Thompson; Victoria, Dr. Watkins; Tasmania, Dr. Sprott; New Zealand, Dr. Cahill; and South Australia, Dr. Brickle.

Executive Report.

The Secretary (Dr. Love) read the report of the Executive Committee, which stated that the work of the Congress had been divided into six sections, the subject of eye, ear, nose, and throat being promoted to the dignity of a full section. Promises of papers had been liberal in all save the anatomy section, where they had not succeeded in obtaining either papers or president, doubtless owing to the absence of a school of medicine in Brisbane. Three matters were referred by the Dunedin Congress to the Brisbane Session: (1) The question of a fully representative medical journal for Australasia; (2) the establishment of a dental section; (3) the question of the Contagious Diseases Act. With the first matter the Executive Committee had not interfered. As regards the establishment of a dental section, it was thought desirable to recommend to the Congress that so long as the registration of the dental profession in the various colonies was in its present imperfect condition the establishment of a dental section was hardly feasible. Regarding the Contagious Diseases Act, it was advised that this should be referred to the Public Health Section.

The Hon. Dr. Taylor (Treasurer) read the balance sheet of the previous Congress, showing total receipts amounting to £439 13s. 8d., and a credit balance after the payment of expenses of £54 3s. 11d.

Dental Section.

Some discussion took place upon the question of establishing a Dental Section in connection with the Congress. The matter had been referred from the last Congress.

Dr. Wilton Love stated that formal application had been made for the establishment of a Section.

After considerable discussion, in the course of which some members favoured the request and others strongly opposed it, the President held that under the constitution of the Congress they had no power to establish such a Section. The matter accordingly dropped.

The Contagious Diseases Act.

The Secretary read a memorial from the Women's Christian Temperance Union of Australasia asking for the co-operation of the Congress against the proposed extension of the Contagious Diseases Act in Queensland, and in favour of the repealing of similar Acts in Tasmania and New Zealand. This, also, the President said, was an heirloom from the previous Congress, at which, after being referred to the Public Health Section, it was referred to the present Congress. The manner in which some portions of the memorial were received indicated that some of the members had some difficulty in regarding them quite seriously.

Dr. Lindo Ferguson (Dunedin) moved that the matter should be referred to the Public Health Section. It was a matter which could be better licked into shape by experts in public health than by general discussion.

Dr. Crowther (Hobart), in seconding the motion, said he had taken an active part in Hobart in passing the Act though the Legislature, but if it had to come up again he would not help it at all. He was not at all satisfied with the working of the Act in his Colony.

The motion was agreed to.

Ceremonial Opening of the Congress.

On the evening of September 18th the ceremonial opening of the Congress took place in the Centennial Hall, when a distinguished company assembled to welcome the visitors. On the platform, among others, were his Excellency the Governor (Lord Lamington) and Lady Lamington, His Excellency Sir S. W. Griffith, C.J., and Lady Griffith, the Premier (the Hon. J. R. Dickson), the Right Hon. Sir Hugh Muir Nelson, the Bishop of Brisbane, the Mayor of Brisbane (Alderman W. Seal), Major-General Gunter, and the Hon. Dr. Taylor. The chair was occupied by Dr. John Thomson, President of the Congress. The Governor, in welcoming those who attended, and particularly those who had come from the other colonies of Australasia, trusted that they would find their sojourn here one of fruitful work. He trusted that they might induce people to take precautions against those conditions that favoured the outbreak of disease. He thought there might be improvement in the sanitary arrangements in Brisbane, and he believed the same observation might be made about various other towns in the colony. Only recently they had a meeting for giving instructions as to the causes and prevention of tuberculosis, and he trusted that the society which was then formed would do a good work in the future, and would show the people that by taking proper and decent care of themselves they might render infection less easy. Recently they had been exercised by the meeting of a great Peace Conference. He considered the medical profession an ever-existing, a continuously sitting peace conference, for it was impossible for such a body to be engaged throughout the world in seeking to relieve pain without creating a corresponding feeling of dislike to the horror and cruelties of war. He trusted that the week's proceedings, heralded by this meeting, would lead to a mitigation of human suffering and to the advancement of medical science and the promotion of public health.

The Premier, after extending to the visitors a most cordial welcome to Queensland, said he was very glad that Brisbane had been selected as the place of the meeting of this Congress, the triennial sittings of which had resulted so much to the advancement and development of medical science. He regretted, however, that Western Australia had been unable to send a representative, but he was sure that that did not arise from any lack of medical and surgical ability in that colony, but from circumstances which had rendered it inconvenient to send a representative. He welcomed the many medical experts and men of science who had come, perhaps at some personal inconvenience.

Presidential Address.

The President then delivered his inaugural address. He took for the subject of his address, Our Craft in the Queen's Reign. After some introductory remarks he passed on to review the advances made in the many departments of medicine in the last sixty years, dwelling especially on anæsthesia, antiseptics, and bacteriology. In speaking of the latter subject, he said that some five years ago Queensland had no bacteriological laboratory. The Government Stock Department, recognising the urgent necessity, then started work in a small way, and that small way had so proliferated, like the tiny organisms it was set to watch, that its paths now spread all over the colony. The work done had been thorough and largely original, such as the discovery in Australia of the bacteria of chicken cholera; fowl enteritis and swine fever; the preparation of pleuro-pneumonia virus guaranteed free from tuberculous taint; of immune blood serum for the preventive inoculation of tick fever; of locust fungus for the destruction of locusts, grasshoppers, etc.; of the bacillus typhi murium to destroy mice in grain fields and cornstacks, and of specially standardised tuberculin in commercial quantity. Brisbane was the only city of the south where that bacteriological product was manufactured, and its quality was pronounced to be equal to if not better than the best coming from Europe; enough had already been issued to test over 2,500 head of cattle,

All this had been freely accepted by both theorist and capitalist, and it was recognised throughout Australasia as eminently successful. If the Government had done so much for cattle, why not for the higher animal? The problems to be solved in a laboratory are innumerable, but two of the simplest, and yet perhaps the most frequent, would be the bacteriological recognition of diphtheria and the serum diagnosis of typhoid. These were denied to the general practitioner; it was impossible for him to conduct the investigations, so the Government, whose duty it was, had within the last fortnight signified its intention of establishing such an institution. It would be heartily welcomed by the profession. The President next passed to the subject of hygiene. He said that with the great council of war which recently assembled in London, under the presidency of the Prince of Wales, and with many similar gatherings, not the least of which was the one lately held there, when the Governor kindly took the chair—all to devise a campaign against, and, it was hoped, for the eventual destruction of tuberculosis—there was initiated a new scheme of medical combat in which professional and lay forces had agreed to co-operate, and happy results might be expected from the union. The issue was not likely to be known in our day, but who dared say that when another Congress met at the close of another century, phthisis might not be referred to as a forgotten because an extinct disease? The time had arrived when concerted action should reign in Queensland. With federation accomplished, the Premier would cease to be Minister of War, the Treasurer would be relieved of his Customs, while the Postmaster-General would find his occupation gone. There would be plenty of time and opportunity for a new Minister—a Minister of Health. Under him would be the administration of many Acts, and the management of many institutions—the Health Act, Dairy, Adulteration of Food, Leprosy, C. D., Insanity, Asylums, Hospitals, Benevolent Institutions, Government Medical and Health Officers, Medical and Pharmacy Boards, and others in existence and prospective, for legislation of the most advanced health kind might now be framed which would be more readily accepted and adopted in sparse communities, and in youthful towns, than when forced upon old country cities, with their teeming multitudes wrangling over vested interests, and squabbling over ancient rights. The Minister need not be a specialist, but of course would have expert advisers. The President went on to speak of new medicines and new methods of treatment, particularly serumtherapy; of specialism; of nurses; of medical education; of the position of medical men. In regard to the latter point, he said with reference to Australia that there the medical profession were highly esteemed, and its position could not be assailed; its members were absolutely unfettered, and the individual was eligible for any position, political or social, and he was exactly what he made himself, free to choose his place and free to occupy it. But he might discover his professional path beset with some obstacles, the more important of which were benefit societies, benevolent institutions, and official indifference, and these difficulties were to be encountered on all British courses. Various schemes had been suggested to counteract the evils of the clubs and of the institutions, but nothing successful had yet been achieved, nor would there be until the medical profession throughout the British Empire was as thoroughly organised as the workers were. The British societies at the end of 1896 had a membership of 8,078,000, and a capital of £25,408,000, or about 3 guineas a member; while the Australasian societies at the same date had 258,000 members, and a capital amounting to over £3,000,000, or nearly £12 a member. This was a big army to encounter, and it was well provided with the munitions of war. Would the fight be successful? The scheme which might solve the difficulty would be the complete management of the club medical service by the Government; this might appear to be socialistic, but it was eminently feasible. A civil medical service should be created on the lines of the naval and military medical departments. Men would enter it by examination, be trained to it, receive pay and promotion by seniority, be rewarded or decorated for distinguished service, and eventually retire on pensions. It would be a large medical army, organised, with its specialists travelling about doing their peculiar work. This service could easily be made attractive, and it would be an honourable one. The work might be very hard, but it could never become tyrannically oppressive. Those worked for would get the best attention and would quickly realise the fact; while the Government would terminate the evils and abuses which disgrace the present system. The President next spoke of the abuse of hospitals and of the suppression of quackery, and concluded with a prophetic vision of a time when the infectious and contagious diseases would be swept from the earth; when parasitic diseases would have disappeared; when cancer would be conquered; and gout and rheumatism subdued. It might be that other affections would replace them—disturbances of a neurotic kind; but if the sum total were perennial comfort, a surcease of sickness and suffering, improved physique, and increased longevity, the hygienic workers would not have worked in vain.

Votes of Thanks.

Sir S. W. Griffith, in moving a vote of thanks to Dr. Thomson for the extremely instructive and interesting address that he had delivered, said he would like to refer to one or two points which had been touched upon. It was within his own experience when he was a Minister of the Crown that the medical adviser of the Government did not know what to do with typhoid fever. Now, at any rate, medical science had a definite idea of the nature of the disease. He had been much interested in Dr. Thomson's remarks with respect to nurses and hospitals, and with respect to quack medicines he would suggest for the consideration of Mr. Dickson, his colleague, and the Parliament, the laws of some of the European countries, which did not allow the proprietors of quack medicines to prey upon the public.

The President briefly responded.

The Rev. T. Nisbet moved a vote of thanks to his Excellency the Governor, and in doing so expressed the hope that when he returned to the Colony he would be able to lay the foundation stone of the Queensland University.

His Excellency, in returning thanks, referred to the fact of the establishment of the Pathological Institute by the Government, and spoke eulogistically of Mr. Pound's work. Sir S. W. Griffith and Mr. Nisbet had made demands on the Prime Minister for future service, and he had a request to make himself. Speaking entirely from his own observation, and not from anything he had heard, he wished to say that he thought that the responsibilities of the Board of Health should be increased so as to give them more efficiency in their work. He trusted also that the two medical societies in Queensland—the Queensland Medical Society and the Queensland Branch of the British Medical Association—would soon be amalgamated and work together as one body.

Reception.

The delegates were formally received at the Exhibition on the afternoon of September 19th by the Mayor and Mayoress (Alderman and Mrs. Seal). There were upwards of 150 ladies and gentlemen present, and the function was a very pleasant one.

Medical Students in American Universities.—Of a total number of 4,067 students on the books of Harvard University for the session 1899-1900, there are 550 belonging to the Faculty of Medicine. Columbia University has 2,768 students, of whom 743 are students of medicine. The University of Michigan has 3,187 students, of whom 469 are medical. In addition to its ordinary Medical Faculty, this seat of learning rejoices in the luxury of a "homœopathic department" which is credited with 68 students.

Italian Red Cross Society.—From the report of the Italian Red Cross Society, which has recently been published, it appears that the membership of the Society is 23,428. The total amount of its property is valued at 6,262,187 lire (£250,487). The organisation of the Society comprises a Central Committee, 359 subcommittees, 98 ladies' sections, 559 communal delegates, and 49 delegates to foreign countries. The administrative *personnel* numbers 1,058, the Executive rather over 2,000. The Society has 49 field hospitals, 22 mountain ambulances, 15 hospital trains, 2 river ambulances, 2 outfits for hospital ships, and 40 railway aid stations. The medical and pharmaceutical *personnel* numbers in all 786.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE annual meeting of the Fellows and Members of the Royal College of Surgeons of England was held on Thursday, November 16th, at the College, Lincoln's Inn Fields. The chair was taked by Mr. HOWSE, the Senior Vice-President, in the absence of Sir William Mac Cormac, the President.

The CHAIRMAN placed before the meeting the Report of the Council, an account of which will be found in the BRITISH MEDICAL JOURNAL of November 11th, p. 1393.

The CHAIRMAN reported in reference to the fourth resolution carried at the annual meeting of Fellows and Members on November 17th, 1898, that the Council on November 2nd, 1899, had determined to institute a gown for Members of the College to be worn on ceremonial occasions, and it was left to the discretion of the Members themselves to define the term "ceremonial occasion."

The following resolution was moved by Mr. JOSEPH SMITH:

That this meeting regrets that the Council, having called a meeting of Fellows and Members in July last ostensibly to consider the terms of a Supplementary Charter, should have entirely disregarded the principal resolution then adopted; and this meeting further considers that the introduction into the Centenary Charter of some provision for the representation of Members would have been most opportune, and trusts that the Council will even yet seize this unique occasion of terminating by an act of grace a long and wearisome controversy.

He said that it did not seem to him to be too late for the Council to grant what the Members had been asking for years. If the Council saw fit to grant some representation it would add dignity to the College. The Members had heard from the Privy Council that it could not hear the Members by counsel on the application by the College for a supplementary charter. The Council of the College could not understand the responsibilities and trying circumstances of general practitioners. He would himself be ashamed to receive one of the honorary degrees the Council were about to confer, because they would be from the Council of the College and not from the College.

Dr. SNOW seconded the resolution.

Mr. ALDERSON said the surgeons in the country were united in feeling that they had not their rights.

Mr. HORDER (Cardiff) considered the present a good opportunity to give to the Members the rights they ought to have had.

Mr. COLLINGWOOD thought the Council should give some reason why the Members are excluded from representation.

Surgeon-Major INCE said a vote of censure on the Council was implied by the resolution.

Sir THOMAS SMITH stated that on two separate occasions the Fellows had been consulted as to the representation of Members on the Council, and each time there was a large majority against the franchise.

Sir ROBERT CRAVEN said that the next time the Fellows were consulted the suggestion should be made that the time had arrived for the Members to receive representation.

Mr. GEORGE BROWN hoped that next time the Fellows were written to they would be asked to say "Yes" or "No."

The CHAIRMAN repudiated the charge that the Council had in any way suggested the replies by the Fellows.

Mr. BELL suggested that alternative courses of representation should be sent to the Fellows.

Mr. BARKER recommended the formation of a Joint Committee of the Conjoint Colleges to consider the affairs of those qualified under the Conjoint Board.

Mr. PAGE said that he objected to the words "most opportune" in the resolution. He deprecated the introduction of contentious matter into the application to the Privy Council.

Mr. JOSEPH SMITH observed that the members had always been told that to obtain representation a new charter was necessary, and he thought the present opportunity should not be lost.

Mr. ANDERSON urged that the concession would be welcomed by all who understood medical politics.

Dr. SNOW said the resolution was an appeal to the Council to withdraw the scheme from the field of contentious matter.

The resolution was then put and carried by 42 votes against 6.

The following resolution was moved by Mr. W. G. DICKINSON:

That, in the opinion of this meeting, no Fellow or Member of the College ought to be allowed to act as medical officer to any association (whether a registered friendly society or not) which has for one of its objects the provision of medical attendance, and which in pursuance of that object advertises and canvasses for patients; and the Council is once more urged to announce that the holding of such appointments is contrary to the declaration made by Fellows and Members on their admission.

Mr. Dickinson, in the course of his remarks, contended that the National Medical Aid Society, Limited, was not a Friendly Society; its canvassers at Plymouth were now going about on behalf of the Member of the College who had been complained of. He (Mr. Dickinson) asked the Council if the Member had been given definite warning to cease his practices.

The CHAIRMAN said the Council had been told that the practices complained of were discontinued.

Mr. DICKINSON said his information was to the opposite effect.

Mr. BRINDLEY JAMES, in seconding the resolution, said that canvassing was commonly practised in London under the guidance of the clerical profession under the name of clerical medical aid societies.

Mr. BEVERLEY recounted what had been done by the medical profession at Norwich.

Mr. COLLINGWOOD said that medical aid societies were detrimental to the dignity of the medical profession.

Dr. MORTON narrated how medical aid societies were accepting bad lives, and placing them on the lists of patients of their medical officers.

Mr. HORDER referred to his experiences of the canvassing in Cardiff by medical aid societies.

Mr. JOSEPH SMITH urged that the Council should make a general pronouncement that medical men engaged by the medical aid societies were guilty of infamous conduct.

The CHAIRMAN explained the legal difficulties, and asserted that the Council were hampered by the state of the law, but were quite at one with the Members in agreeing that the law must be altered.

Mr. BROWN asked if the Council had invited Members to furnish the Council with facts in regard to those who did not carry out the by-laws of the College. Contumacious Members should be struck off by the Council.

The resolution was then put, and carried by 44 against 1.

The following resolution was moved by Mr. GEORGE BROWN:

That this meeting regrets that the report of the Council regarding the registration of midwives has not been laid before it. This meeting trusts that the Council will adopt the principle that no person, male or female, shall be recognised as qualified to practise midwifery who is not also qualified in medicine and surgery.

In speaking to this resolution, Mr. Brown said that the London Obstetrical Society examined women and granted diplomas called licences, but accepted by the public as diplomas. In one month over 180 of these diplomas had been issued.

Mr. ALDERSON said that the profession was now suffering from these evils, but it was the public that would ultimately suffer.

Mr. BARRETT related an instance of an unqualified midwife stating that she was always "followed" by a Fellow of the College of Surgeons.

Mr. JOSEPH SMITH urged that unless the Corporations protested against the Midwifery Bills, one or other of them would pass into law.

Mr. GEORGE BROWN said he did not vote for or approve the regulations of the General Medical Council in regard to the matter.

Sir ROBERT CRAVEN considered the London Obstetrical Society was among the greatest sinners.

The resolution was carried unanimously.

Mr. HENRY W. DAY moved a resolution in regard to notices to Members, which was seconded by Mr. JOSEPH SMITH.

Certain alterations having been discussed by Sir ROBERT CRAVEN, Dr. VINRACE, and Dr. SNOW, the following was carried unanimously:

That this meeting of Fellows and Members of the College would respectfully urge on the Council the desirability in the future of due notice of the annual meeting of Fellows and Members being given by the College to

each Fellow and Member by post or otherwise, together with a copy of the Report from the Council.

The proceedings terminated with a vote of thanks to the Chairman.

LITERARY NOTES.

MESSRS. J. AND A. CHURCHILL have in the press a new *Textbook of Medical Treatment (Diseases and Symptoms)*, by Dr. Tirard. The arrangement of the work is mainly based on anatomical and physiological lines, but sections have been inserted in which symptoms rather than diseases are dealt with. The forms of treatment which have received general approval are fully indicated, and incidentally newer methods are frequently mentioned, but no attempt has been made to say the last word in favour of the newest remedies. The same firm has also in preparation a new treatise on *Gastric Ulcer*, by Dr. Fenwick and Dr. Soltau Fenwick; the work will be illustrated with numerous photographs of morbid specimens.

Many members of the New Sydenham Society will be glad to know that amongst the works recently adopted by the Council for translation is the treatise on the pathology of the blood by Professor v. Limbeck (*Grundriss einer klinischer Pathologie des Blutes für Aerzte und Studirende*). The work is, we understand, to be epitomised in parts with the author's consent and co-operation. This, if judiciously carried out, will be an advantage. The work will supply a gap in English medical literature, and will be very welcome to many.

At the Congress of the Société pour la Diffusion des Sciences Physiques et Naturelles of Tours, Dr. Le Double, the President of the Society, read a paper in which he showed that Rabelais knew that scabies was caused by a parasite. The etiology of the disease was known to Avenzoar in the twelfth century, and several writers in the seventeenth and eighteenth centuries had spoken of the association of the itch with a special mite. But this doctrine had never been accepted by the profession. In 1834 Alibert was with difficulty convinced by a Corsican student named Renucci, who showed him the parasite; while as late as 1850 it was still taught that scabies was caused by a "morbid poison" contained in the fluid of the vesicles. Rabelais knew better. Sufferers from itch were classed with the "Fracastorians" (syphilitics) and other contagious persons who were to be excluded from the Abbey of Thelema. In another place Panurge says to Herr Trippa, "Whence comes this worm (*ciron*) here between those two fingers?" This he said pointing towards Herr Trippa the two first fingers opened in the fashion of horns, and closing the others fistwise." Enay, an ancestor of Panurge was, we are told, deft at taking worms out of the hands. Again, we hear of a physician of Montpellier who died suddenly as the result of an accident in extracting a worm from his hand with a penknife.

One of the penalties of greatness in these days is to be anatomised after death. Indeed, the scientific inquirer does not always think it necessary to wait till his "subject" is dead before using the scalpel. Is there not a substantial volume giving the results of a painstaking dissection of M. Zola? Tennyson objected to being "ripped up like a pig," but the author of *Fecondité* willingly sacrifices himself on the altar of science. Your dead hero, however, may be freely knocked about the sconce for the edification of the curious; Shakespeare's curse on him that moved his bones has no terrors for the student of the anatomy of greatness. We have had *post-mortem* studies of Richelieu, Beethoven, Goethe, Byron, and many others. Now it is the turn of Scott, whose "medical history" is written in the *New York Medical Journal* of November 4th by Professor Roberts Bartholow, of Philadelphia. "To vary a little the medical monotony of the dog days" he took up one day Lockhart's *Life* of his famous father-in-law. Scott's lameness is attributed to poliomyelitis anterior, commonly called infantile paralysis. This is not a new discovery, but there is distinct novelty in the suggestion that there was a "mutual lameness" between Scott and Byron; so remarkable a pathological condition should have been more fully described. In middle life Scott suffered from attacks of "cramp" in the stomach, which Dr. Bartholow confidently pronounces to have been due to the passage of gall stones; he even describes the calculi, which no one appears to have seen or suspected during the poet's lifetime. At a later period came rheumatism, then "fits" and changes in the brain. The report of the necropsy states that there were three small "hydatid cysts" in the left choroid plexus. Dr. Bartholow, however, holds that there is no reason to suppose that these cysts were true hydatids, for there was no evidence of the presence of either echinococci or cysterci. He further thinks it probable that the decline in Scott's intellectual powers was in part due to "defective renal action—to the complex of symptoms and structural alterations of uræmia."

To Professor Mantovani of Bergamo we owe the discovery of a work by Samuel Fuchsius, bearing date 1615, which is described as a scientific treatise on physiognomy. Fuchsius, who appears to have been a precursor of Lombroso, held strong views as to the symptomatological value of the forehead and eyes for the diagnosis of character, intellectual aptitude, and affective peculiarities of individuals. The work, which comprises 34 chapters, consists of two parts, dealing respectively with "metoscopy" and "ophthalmoscopy." The author says in his preface:

> If many mourn the fate of Cato and Cæsar as victims of adversity, how much more reasonable would it be to seek, with a prescience almost divine, how much of criminality and how much of integrity each one of us has in him?

At the beginning of the section on Metoscopy, he says:

> Entrench your voice, O mortals, behind the double rampart of the teeth and the lips; nevertheless, by the hidden way of your forehead, your thought will appear without the cloak of pretence.

Like Lombroso, Fuchsius finds confirmation of his theories in ancient statues and in literature. In more than one point he anticipates the "discoveries" of the modern criminal anthropologists. An exhaustive study of the human forehead leads him to the conclusion that the minimum frontal diameter is found in great criminals. He indicates profusion of hair-growth and premature wrinkles as signs of degeneracy, and points out the affinity between insanity and suicide. He notes the frequency of squint in criminals, and recognises the close connection between epilepsy and criminality.

Not long ago we showed cause why Adam should be looked upon as having been the first practitioner of the art of midwifery. Since then Dr. Paul Petit has come across a detailed discussion of this interesting point of medical history in a treatise entitled *L'Art d'Accoucher réduit à ses principes*. The work, which bears date 1766, was written by J. Astruc, "Professeur Royal de Médecine et Médecin Consultant du Roi." The author says that Eve in bringing forth her children must have needed help, and there was no one to give it but Adam. But how did Adam deal with the emergency? Astruc offers three solutions of the problem:

> *Primo.*—Adam must have been astonished at the birth of Cain to see that a formless mass known to-day by the name of afterbirth was attached to his navel by a long string. It is obvious that fearing it might be a part of the child's body he would not dare to touch it. Soon however the placenta became decomposed, and Adam and Eve cannot have been troubled long by it for by the fifth or sixth day the cord separated and the child was rid of the foreign body. Adam doubtless profited by this observation. He grasped the fact that the mass did not belong to the child's body, and that it could and should be detached therefrom. Thus, profiting by his reflections, in the case of Abel, his second son, he cut the cord, and seeing that a little blood from the cord he tied it. Here, then, we have ligature and severance of the cord known and practised by Adam from the birth of his second son, with the consequence that the human race is saved.
>
> *Secundo.*—Adam was aware that the females of animals, even of those who did not feed on flesh, after giving birth to their young devoured the placenta, divided the cord with their teeth, and thus set free their offspring. Adam may have taken example from that procedure when his wife, driven with him from the Earthly Paradise, began to bear him children. I do not contend that Adam ate the afterbirth, but he may well have divided the cord with his teeth, and in this way again the human race may have been saved.
>
> *Tertio.*—I assume that Adam, disliking the afterbirth and cord hanging from Cain's navel, tore them off. Now both these structures are constantly torn away from calves at the time of their birth without any hæmorrhage following. They have several times been torn away from human fœtuses without any fatal accident. Therefore, Adam may well have torn the cord away from Cain without risk of injury to him or of destruction to the human race.

It may be added that Astruc with charming frankness confesses in the preface of his book that he had never delivered a woman. He thought it necessary, however, to write a treatise on midwifery in order to make his work on the diseases of women complete; "childbearing being one of the most common of these diseases."

THE Worshipful Company of Leathersellers have presented £500 to the Tottenham Hospital.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 27th, 1899, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will take place at the White Hart Hotel, Lewes, on Thursday, November 30th, at 3.30 P.M. Dr. Fawssett will preside. Dinner at 5.30 P.M., charge 6s., without wine. The following communications have been promised:—Mr. W. G. Earle: On Some Fresh Details in the Disposition of the Deep Cervical Fascia. Dr. Helen Boyle: Early Insanity. Dr. Mackinder: Four Cases of Stone in the Bladder; Moral and Physical Difficulties encountered in Removal of the Stones. Dr. Watson Griffin: A Specimen of Leuco-sarcoma of Iris, showing Fibro-myxomatous Changes, with notes of case. Dr. Dow: Skiagraphs (Recent) of Fractures treated by Screwing two to three years ago.—J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards, Honorary District Secretary.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.—The next meeting of this District will be held at the Beach Hotel, Littlehampton, on Wednesday, November 22nd, at 5 P.M. Dr. Eustace, of Arundel, will preside. Members wishing to read papers or show cases or specimens at the meeting are requested to communicate with the Hon. Secretary, FRANK HINDS, 14, The Steyne, Worthing.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of this District will be held at the Kent and Canterbury Hospital, Canterbury, on Thursday, November 23rd, at 3 P.M., Dr. Pittock, of Margate, in the chair. Agenda: Dr. Halstead: The Desirability of Increased Opportunity for Medical Men of the Study of Pathology by *Post-mortem* Examination. Dr. Tyson: Some Clinical Studies. Dr. Hoggan Ewart: Healthy Metabolism and Some of its Indications. The Chairman kindly invites members to luncheon at the County Hotel at 1.30. Members intending to avail themselves of the Chairman's hospitality are requested to send acceptances to him by November 21st or they will not be expected. All members of the South-Eastern Branch are entitled to attend these meetings, and to introduce professional friends.—THOS. F. RAVEN, Barfield House, Broadstairs, Hon. District Secretary.

STAFFORDSHIRE BRANCH.—A meeting of this Branch will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 30th. The President, Dr. J. B. Spence, will take the chair at 4 P.M. Business: Minutes of last general meeting. Election of new members. Exhibition of Living Cases. Dr. Hind: A case of Fracture of Radius, Ulna, and Humerus, with Injury to the Median Nerve; Operation. Mr. T. Vincent Jackson: A Contribution to the Treatment of Enlarged Prostate by Vasectomy. Dr. G. Petgrave Johnson: Pyrexia in Chlorosis. Exhibition of Pathological Specimens, etc. Dinner at 6.30 P.M.—F. MILNES BLUMER (Stafford), General Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of this Branch will be held in the Medical Institution, Liverpool, at 2 P.M. on Wednesday, November 29th. Members who wish to bring forward any business, to read papers, or show cases or specimens, are requested to communicate with the Honorary Secretary not later than Saturday, November 18th.—T. ARTHUR HELME, M.D., 3, St. Peter's Square, Manchester, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The autumn meeting of this Branch will be held at the Joint Counties Asylum, Carmarthen, on Thursday, November 23rd.—ALFRED SHEEN (Cardiff), D. ARTHUR DAVIES (Swansea), Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

THE first meeting of the session was held at the Royal Free Hospital on November 8th, Dr. MORTON in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Cases.—Mr. BERRY showed: (1) Congenital Malformation of the Ear in a baby; (2) A girl who had had several Plastic Operations performed on account of the whole of the nose and part of the soft tissues over the forehead having been eaten away by a ferret during babyhood; (3) A woman upon whom Oöphorectomy had been performed for Inoperable Recurrent Cancer of mammary origin; (4) A woman from whom a large Thyroid Adenoma had been removed (specimen shown); (5) A young man after removal of a Cirsoid Aneurysm from the Forehead (specimen shown); (6) A baby with Double Harelip and Cleft Palate; (7) A child after successful operation for Cleft Palate.—Mr. ROUGHTON showed: (1) A girl, aged 11 years, presenting marked Cicatrisation after Tertiary Syphilitic (probably acquired) Ulceration of the Throat (soft palate, etc.); (2) A young woman after Mastoidectomy for old Otitis Media after scarlet fever at the age of 4; (3) A woman, aged 40, cured of Chronic Purulent Rhinitis with Polypi after scraping both Antra of Highmore and the Right Frontal Sinus; (4) A man, aged 26, after operation upon the Left Antrum and Frontal Sinus for Empyema; (5) A boy who had just escaped amputation of the leg after a severe injury to the lower end of the Right Femur separating the epiphysis and causing necrosis, etc.—Dr. CARR showed: (1) A girl, aged 12, with Uncomplicated Obstruction at the Pulmonary Orifice of the Heart; (2) A young girl with Contraction of the Right Lung and Bronchiectasis.—Mr. EVANS showed: (1) The scarring left upon a woman's two arms by Lupus Erythematosus: this was symmetrical and the face was unaffected; (2) Rodent Ulcer of the Upper Lip in an old woman aged 80; (3) A case of Circumscribed Traumatic Aneurysm of the Wrist in a young man.—Dr. CARR also showed (for Mr. BATTLE): (1) A woman after operation for Removal of a Large Growth from the Scalp and Skull (anterior part). The growth was either a spheroidal-celled carcinoma or rodent ulcer. Mr. BERRY referred in this connection to tumours found in this situation related to thyroid gland trouble. (2) A man, aged 44, who had had a most successful Kraske's Operation performed in August, 1897, for Malignant Disease of the Rectum (columnar-cell carcinoma).—Dr. FAWCETT showed: (1) A man with Left-sided Athetosis and with Rigidity following upon Hemiplegia, and accompanied by complete Hemianæsthesia. There had been an injury to the skull originally, and he was trephined in consequence, the hemiplegia following this. Hemianæsthesia was said to be not hysterical.

Vote of Thanks.—Dr. MORTON proposed, and Dr. CUBITT LUCY seconded, a hearty note of thanks to the authorities of the Royal Free Hospital, and especially to the staff for the interesting cases they had shown.

SHROPSHIRE AND MID-WALES BRANCH.

THE annual general meeting of this Branch was held at the Salop Infirmary on October 31st. Forty members were present.

Introduction of New President.—The retiring President, Mr. T. LAW WEBB, introduced his successor, Mr. ARTHUR JACKSON.

Confirmation of Minutes.—The minutes of the previous meeting were taken as read, and signed.

Council's Report.—The report and financial statement presented by the Branch Council was read and confirmed.

The late Dr. Jukes de Styrap.—A letter was read from Mr. H. de Styrap thanking the Branch for the vote of condolence passed with him on the loss of his brother, the late Dr. Jukes de Styrap.

Election of Officers.—The officers of the Branch for the ensuing year, whose names appeared upon the agenda, were then proposed *en bloc*, and unanimously elected.

New Members.—The following gentlemen were elected members of the Branch: Messrs. Bartholomew Langran Hopesay,

Craven Arms; H. C. O'Connor, Llanymynech, Oswestry; T. S. Sutton, Bishop's Castle, Salop; C. R. Leader, Wem, Salop.

Votes of Condolence.—A vote of condolence was passed with the relatives of the late Mr. H. J. Rope, all members upstanding. A vote of condolence was also passed with the relatives of the late Mr. Lawson Tait.

Dr. Charnley and the "British Medical Journal."—Dr. Charnley made a further communication to the Branch respecting the refusal of the Editor of the Journal to publish an abstract of his paper on the Salisbury Diet. A discussion ensued in which Dr. Cureton, Mr. Harries, Mr. Withers, Dr. McCarthy, and Mr. Tredinnick took part. It was proposed by Dr. Cureton, seconded by Mr. Tredinnick, and unanimously resolved:

That this Branch strongly resents the refusal of the Council to rescind its resolution of April 12th, 1899, regarding the non-publication in the Journal of an abstract of a paper on the Salisbury Diet read before the Branch by Dr. Charnley, which was suppressed by the Editorial Committee on grounds which the Council does not attempt to justify, and which the Editor declines to publish, and requests its Branch representative or other member of the Branch to bring the matter before the next annual general meeting of the Association.

President's Address.—The President delivered an address upon the Incidence of Cancer, which will be published. Mr. Eddowes, Mr. Law Webb, and Dr. Baddeley spoke upon the address.

Communications.—Mr. Eddowes read a short paper upon Oöphorectory for Mammary Cancer.—Dr. McCarthy exhibited and described the special Diphtheria and Tubercle Bacillus Outfits supplied to medical men by the Salop County Council.—Mr. T. Law Webb showed Microscopical Sections of (1) Carcinoma of the Orbit containing peculiar concretions; and (2) Spindle-celled Sarcoma of the Femoral Region.—Dr. Mackie showed a large Coccoon-shaped Calculus 1¾ inch long by ¾ inch in diameter taken from the male urethra.—Dr. Williams showed a Needle removed entire from the neighbourhood of the knee-joint.—Mr. Jackson showed a case of Popliteal Aneurysm, in which a spontaneous coagulation had taken place within the sac.—Mr. MacLeod showed a case of Sarcoma of the Maxillary Antrum in an infant 3 weeks old, the grandson of a patient recently shown to the Branch suffering from a large epithelioma of the soft palate.

Exhibit.—Messrs. Bayer exhibited some of their most recent products.

Dinner.—The members and their friends, to the number of 52, afterwards dined together at the Music Hall. A collection was made during dinner for the widows and orphans of our soldiers who fell in the South African campaign. Dr. Ayling announced, amid cheers, that the collection realised £8 8s.

STAFFORDSHIRE BRANCH.

The twenty-sixth annual general meeting of this Branch was held at Stafford on November 2nd. Twenty-one members were present.

Confirmation of Minutes.—The minutes of the last annual meeting were read, approved, and signed.

Death of Dr. Arlidge.—It was resolved, on the motion of Mr. Folker, seconded by Mr. Spanton, and supported by Dr. McAldowie:

That the Branch records its sense of the great loss it has sustained in the death of Dr. Arlidge, who was not only one of its original members, but also one of its most valued and highly esteemed ones; and that an expression of its sincere sympathy with her in her bereavement be conveyed by the Secretary to Mrs. Arlidge.

Introduction of New President.—Dr. McAldowie vacated the chair, and introduced his successor, Dr. J. B. Spence, who then presided over the meeting.

New Members.—The following were elected members of the Branch: J. T. H. Croft, M.R.C.S., L.R.C.P. (Stafford); Frank G. Layton, M.R.C.S., L.R.C.P. (Walsall); G. H. List, M.D. (Stoke-on-Trent).

Vote of Thanks to Retiring President.—A cordial vote of thanks was given to Dr. McAldowie for his services as President during the past year.

Presidential Address.—Dr. Spence delivered an address on The Insane and their Treatment, for which he was accorded a hearty vote of thanks on the motion of Mr. Spanton, seconded by Dr. Malet.

Reports and Financial Statement.—The report of the Council and Ethical Committee were adopted, as was also the financial statement, which showed a balance in hand of £30 16s. 8d.

Next Annual Meeting.—It was decided to hold the next annual meeting at Wolverhampton.

Election of Officers.—The following were elected officers for the ensuing year: *President-Elect:* Dr. A. H. Carter, Birmingham. *Vice-Presidents:* Mr. G. A. Phillips, Dr. McAldowie. *General Secretary:* Mr. F. M. Blumer, Stafford. *Financial Secretary:* Dr. C. Reid, Stafford. *Auditor:* Mr. W. H. Folker, Hanley. *Council:* Dr. S. K. Alcock, Burslem; Dr. T. Ridley Bailey, Bilston; Mr. Clare, Hanley; Dr. E. Deanesly, Wolverhampton; Mr. Hartley, Stone; Dr. Hatton, Newcastle; Dr. Hind, Stoke; Dr. W. G. Lowe, Burton; Dr. Malet, Wolverhampton; Dr. G. Reid, Stafford; Mr. J. M. Taylor, Burslem; Dr. Tylecote, Sandon. *Representative on the Council of Association:* Mr. T. Vincent Jackson, Wolverhampton. *Representative on the Parliamentary Bills Committee of the Association:* Mr. W. D. Spanton, Hanley. *Delegate to the International Medical Congress, Paris, 1900:* Mr. W. D. Spanton.

Exhibition.—An exhibition of the various Synthetical and Pharmaceutical Products manufactured by the Bayer Company was held by a representative of that company.

SPECIAL CORRESPONDENCE.

INDIA.

The Muktesar Laboratory destroyed by Fire.—The Plague.—The Recruiting of Plague Doctors.—The Famine.

In my last letter the proposed extension of the work of the Muktesar Bacteriological Laboratory so as to embrace medical as well as veterinary research work was mentioned, and now the main laboratory building, including the residence of the Imperial Bacteriologist, which formed part of it, has been completely gutted, the fire having apparently started in the private quarters. Owing to the large amount of pinewood which had been used in the construction of the building, including an enclosed wooden verandah on either side, the flames, which broke out at night, aided by a strong wind, spread with such rapidity that much of the laboratory apparatus, and nearly all private property, was lost. It is stated, however, that the whole of the records of the rinderpest experiments which have been carried out throughout the present year, together with efficient apparatus to allow of their being continued, and all the Government library, have been saved. Surgeon-General Harvey will visit Muktesar early in November, when it is expected that arrangements will be made for the reconstruction of the building, as the walls are reported to be sound. It is hoped that this may be completed in from six to nine months' time. The Government loss is estimated at about half a lakh of rupees, and coming, as it has, just when the work was to be extended, and in a famine year when money for such an emergency is hard to find, the occurrence is a most unfortunate one. Much sympathy will be felt for Dr. Lingard, who is still on sick leave in England.

With the early cessation of the rains and the advent of cold weather conditions the plague appears to be once more on the increase both in the Bombay Presidency and elsewhere, the total weekly reported death-rate for the whole of India having increased to over 6,000, or more than 1,000 over what it was a month ago. In Calcutta, although there has been no very great increase in the number of deaths reported from plague, which remain at about 50 a week, yet there has recently been a suspicious rise in the general death-rate of the city. The disease has also broken out in the Sarun district of Bengal, which borders on the North-West Province, and precautionary measures have been put into operation in the eastern portion of the latter Province, which it is to be hoped will be as successful as Sir Anthony Macdonald's previous measures have always been so far, a success which appears to depend on his having enlisted the sympathies of the native gentlemen on his side. The disease is also present in the Punjab, Karachi, Mysore, Hyderabad, and the Central Provinces, and the recently imported batch of doctors and nurses will find plenty to do, although it is much to be regretted that so few of the older hands can be induced to re-engage for a second period, when their past experience would double their value. Under

the present conditions, however, they can return to England at Government expense and subsequently re-engage for a second term on higher pay than if they stayed on for a second term without going back to England—a very anomalous state of affairs. It is stated that at least one officer has done this. The present system of recruiting medical men for short terms of six and nine months, with the necessity of paying their passages both ways, is as unsatisfactory as it is expensive, and has recently been protested against by the leading Bombay paper. It is quite evident by this time that plague has come to stay, for some years at least, while if it succeeds in getting a firm footing in Bengal during the present cold weather, as appears increasingly probable, the position of affairs will be more serious than ever. It is evident, then, that the time has come for the present hand-to-mouth policy in the supply of plague doctors to cease, and for recruits, who will be prepared to engage for a term of years, to be engaged, or, as the *Times of India* suggests, for a considerable number of extra men to be added to the Indian Medical Service to enable it to undertake all plague work. When the disease subsides, and ceases to call for extra medical men to deal with it, the entry for the service should be reduced until the surplus ceases to exist.

During the last month, although a deluge of rain has caused a terrible loss of life and property in Darjeeling and some parts of Bengal, yet no appreciable quantity of rain has fallen in any of the parts of the country which were suffering from drought. Well may India be called a country of extremes, and seldom do we see the happy mean in anything. To find anything like a parallel for such a failure of the south-west monsoon as this we have to go back to 1876, while the meteorological reporters write that quite such an early and complete withdrawal of the rain-bearing current has not occurred for more than a hundred years. As, moreover, it depended on far distant factors with regard to which no data existed—namely, the strength of the south-east trade winds off the south-east coast of Africa last cold weather and the still less determinable direction and strength of the winds in the vast area between this coast and the Malay Peninsula—it is no wonder the failure could not be predicted. It was accompanied by a very unusual amount and extent of rain in South Africa last Christmas and a failure of the rains in British Central Africa and Abyssinia more recently, the latter accounting for the abnormally low Nile, and by a deflection of the rains to the east, causing a very high rainfall in Eastern Bengal and Assam, over 600 inches having been already recorded this year at Cheerapungi in the Khasia Hills. A statement just issued estimates the cost of direct expenditure on famine relief alone at one and a half crore of rupees, or over one million pounds stirling. The population affected is less than in 1896, but a much larger area is involved, including many native States. A terrible loss of cattle in many places owing to lack of pasturage is a very serious matter, as the wealth and cultivating power of the people in many parts is represented very largely by their animals. Relief works are in full swing, and already 250,000 persons are supported by them. Coming when the ranks of the Royal Army Medical Corps are depleted by the war in South Africa, and when plague is at least as prevalent as ever, a considerable strain will once more be thrown on the medical services; but fortunately a good deal of the leave overdue to the officers of the Indian Medical Service has been worked off during the last year, and thus refreshed they will no doubt be equal to the occasion which a succession of heavy years has accustomed them to meeting cheerfully.

CORRESPONDENCE.

MEDICAL EDUCATION.

SIR,—I am very sorry to read the letter addressed to you by your correspondent who signs himself "An Ordinary Practitioner." Far be it from me to dispute his claims to nobility; but I would remind him that *noblesse oblige*, and that it is doubtfully noble to pick words from their context in order to attribute to them a forced meaning or to accuse anybody without good grounds of doing odious things. I will deal *seriatim* with the sentences to which your correspondent objects.

The first is that in which I speak of students who do not expect to become "more than practitioners," and your correspondent asks, What more can a man be than an ordinary practitioner? In passing, I would call attention to the interpolation of the word "ordinary," which does not occur in the sentence quoted, and is obviously put in to create prejudice. I was thinking of practitioners as distinct from those who are in addition laboratory workers, original investigators, scientific thinkers, and teachers, and this is my answer to the question, What more can a man be than a practitioner?

The second and third sentences are taken from a passage in which I put the question whether it is or is not desirable to have two recognised curricula, one for the general practitioner and one for the consultant class; but, so far from advocating this distinction, I wind up by saying that it is opposed to the spirit of the times, which tends to obliterate all such distinctions.

It is upon these words that your correspondent accuses me of seeking to "divide the medical profession into upper and lower strata," of "belittling the general practitioner," of "pointing the finger of scorn" at himself, of regarding him as socially inferior, etc., all of which are without other basis than his imagination, and were very far indeed from my meaning or purpose.—I am, etc.,

Birmingham, Nov. 13th. ROBERT SAUNDBY.

ILLEGAL CERTIFICATES.

SIR,—Until your last issue it was possible that Mr. Jackson and his friends misrepresented me in consequence of their want of knowledge of the midwifery question and of my public actions in relation to it. It is now clear that their persistent attacks are the outcome of something less innocent than ignorance, and that they dare not attempt to establish their imputations before a public meeting of my constituents which I challenged them to call.

For the third time without apology or excuse they ignore my refutation in your columns of their accusation that I have violated my election pledges, and now they go further and actually misrepresent the facts given in this very correspondence which has been published. They do this by alleging that I have "failed to answer their questions," and that I have only "replied by protests and personal attacks."

Now, Sir, this is a striking example of Mr. Jackson's lack of accuracy and of his intense desire to place me in a false light before the profession. If your readers will kindly refer to my previous letters and especially that of the date September 30th they will find that I have answered in full detail every question raised against me. Of course, the tactics of my accusers are grounded on the expectation that the majority of your readers have not seen or have naturally forgotten what I published six weeks ago. It is the notorious weakness of a newspaper correspondence in a weekly journal that a lie cannot be nailed to the counter for the reason that, as this very controversy shows, however completely a misrepresentation may be exposed one week, it is furbished up again in a later issue as though it had never been refuted at all. It was in order to put a stop to this method of my critics that I challenged them to call a public meeting where no point could be evaded by them, but would of necessity be settled on the spot.

As might be expected, however, Mr. Jackson and his friends characteristically shrink from this the only real trial of the issue they have seen fit to raise and the responsibility for which they cannot hope to avoid.

I have finally to point out, in regard to their last letter, that not only does the "suggested motion" which Mr. Jackson alleges "accurately states the issue," contain no less than four direct misstatements of fact on the Bill of the British Medical Association, and my election pledges, but also that it does not directly express the accusation Mr. Jackson made against me.

Mr. Jackson publicly charged me with violating my election pledges, and it is due to me that either he accept my challenge and submits his allegation to the simple test of moving a vote of censure upon me at a meeting of my constituents, or

that if, as now appears, he cannot face such a public exposure, he shall apologise in your columns for having made a false accusation against my public reputation.—I am, etc.,

Cavendish Square, Nov. 14th. VICTOR HORSLEY.

SIR,—Is there a little misprint in the letter of Mr. George Jackson and others under the above heading in the BRITISH MEDICAL JOURNAL of November 11th, p. 1387, para. 4, line 6, and for "which is medical practice" should we read "which is *not* medical practice"?

If we may trust to your uniformly excellent accuracy, then we must conclude that Messrs. Jackson, etc., do really maintain that attendance on labour is medical practice, but it seems hardly fair to suppose that they can think so. Labour is no doubt at times attended by circumstances which depart from the purely physiological process, and at times also by practitioners whose impatience leads them to misconceive the use of forceps. One argument is as good as the other for the proposition that all labours require medical assistance, because the one is not more absurd than the other. In his lucid letter in the same issue Dr. MacIlwaine estimates the abnormalities to make up 10 per cent. of the whole, which certainly seems to be a liberal estimate. Granting, however, that proportion to be fairly accurate, how will Messrs. Jackson, etc., support the fallacy that the 10 per cent. of abnormality renders the 90 per cent. extra-physiological? If there is no material difference between a particular and a universal affirmative, if it is no longer necessary to distribute the predicate, then Messrs. Jackson, etc., are clearly right. They may as well add that defæcation and micturition are no longer physiological processes, for these also have their percentage of abnormality; and even in deglutition a man may chance to choke himself, whence it is manifest that a waiter is a medical practitioner, and if he shall dare pat the victim on the back unquestionably he is guilty of the grossest usurpation of professional functions; but if the new logic leads us to such a position, perhaps we had better keep to the old rules.—I am, etc.,

Frant, Nov. 12th. HAMILTON HALL.

MEDICAL REFORM AND THE MIDWIVES BILL.

SIR,—The letter of Dr. MacIlwaine in the BRITISH MEDICAL JOURNAL of November 11th teems with inconsistencies and absurdities. To begin with, he states that parturition is a purely physiological act. So it is; but in the circumstances of town life at the present day it is an extraordinary physiological act, not in any sense to be compared with any other. He affirms that the fact that such an abuse as the existence of mere midwives has continued for ages is a reason why it should now be legally sanctioned; the same reasoning will apply to the case of wise women and herbalists, etc., who ought, therefore, if his argument holds, to be allowed to be on a register specially devised for them. He has the audacity in these days of scientific obstetrics to hint that the ceasing to be present at normal labours would add to the leisure and dignity of the profession, who are to be called in at the last moment to set wrong things right when the opportunity has perhaps already passed. This is returning with a vengeance to the early day of the century when obstetrics were thought unworthy of study by learned men. What do the professors of midwifery say to this proposition of his? The best definition of normal parturition I know is that given by Dr. Herman in his book on *Difficult Labour*.

> Labour is natural when the mother is in good health, and the pelvis is of not less than normal size; when the vertex presents, and the child's back is in front; when the membranes do not rupture till the os is at least three-quarters of its full size; when the placenta is implanted above the lower segment of the uterus, and is not detached until the child is born; when uterine contraction and retraction go on at such a rate that the child is born within twenty-four hours from the beginning of labour pains, and continue after the child is born.

If this is not "within the field of medicine," may I ask him how often its likelihood even can be determined without the assistance of a highly-skilled practitioner at the outset, and how any mere midwife can be in a position to decide this question, which severely taxes the brains and hands of the most skilled among us with all the knowledge we have gained by anatomical study and frequent examination of the pelvic organs? Is it not absurd that a person should be forbidden to practise medicine or surgery unless he have a knowledge of midwifery, though he may never enter a lying-in chamber, while the lives of countless women who may be suffering from mortal disease unknown to themselves, and in whose cases the most urgent symptoms may suddenly arise, should be legally entrusted to those who are utterly unable to cope with any emergency, and who are indeed absolutely forbidden to do so? Who among us has not discovered cases of heart disease, of Bright's disease, and other serious maladies while overhauling his patient at the time of engagement or of labour? The registration of mere midwives as such will strike the hardest blow at the science and art of obstetrics that they have ever known, and will drive them back to the slough from which they emerged so long ago. The subject will no longer repay careful study; men will, quite rightly too, decline to be merely called in to get a muddled midwife out of a mess, for which they would themselves probably incur the blame in the end; many general practitioners will hence altogether decline to attend midwifery cases, which will then become the heritage of comparatively few men, difficult of access in an emergency. Fifteen years of practice as a hospital resident, as a parish doctor in London and the provinces, as dispensary medical officer and private practition have convinced me that there is no reason whatever why nearly every woman should not receive the advantage of the attendance of a qualified medical practitioner in her trouble, physiological though it be.

Midwifery deserves far more careful and systematic teaching in the schools than it even yet obtains, and it should be the aim of obstetric reformers to train up qualified practitioners, male or female, to a keener interest in the higher branches of the science, and teach the public to recognise that while a purely physiological act, it is also an extraordinary one, involving great strain on the organism, which occurs moreover frequently in pathological subjects, and requires the greatest skill to determine its physiological nature in any given instance. Finally—and I speak from a considerable knowledge of the class of patients who would be most affected by the establishment of a legally-registered class of midwives—do the advocates of this measure suppose for one moment that the fee for the often necessary attendance of a qualified medical practitioner on an emergency would be usually forthcoming? My experience of "midwives' midwifery" is that a consultation is rarely paid for. Are those gentlemen whose practices are too large for them, or who are consulting specialists already, really desirous of taking from the general practitioners all the comparatively remunerative normal cases, and leave them only the anxious cases that have gone wrong before they appear on the scene, and for which they can never hope to be paid; and that, too, at an enormous risk to, if not sacrifice of, maternal and infantile life, the true way to lessen which is to provide fully and properly qualified assistance for each mother? Moreover, there could not fail to be an increase in that most undesirable form of cadging that consists in "following," as it is called, certain women by arrangement, covering up their errors, and using them as "touts" to get general practice—a form of enterprise all too common in and around London, at any rate, where a particular class of practitioners ally themselves with advertising homes and institutions, and even with uncertified midwives.—I am, etc.,

WM. J. TOWNSEND BARKER, M.R.C.S., L.R.C.P.Lond., L.S.A., D.P.H.Camb.,
Formerly Physician's Assistant, Bristol General Hospital.

Fulham, S.W., Oct. 11th.

MEDICAL ORGANISATION.

SIR,—It will perhaps be as well for the benefit of Dr. Crawshaw and others, whether members or not, who are apt to detract from the medico-political utility of the British Medical Association, to quote one instance of its existence, and that a local one. The Lancashire and Cheshire Branch, by a large Committee, not very long ago, did an enormous amount of work extending over a long period in opposing the registration of midwives and the institution of an inferior order of medical practitioners. Not only was this work done voluntarily by a large number of members—70—but the sinews of war to the extent of £250 were furnished by the Branch. He probably knows very little of the actual facts of this; and why? Partly because most of those with whom he is associated at the Medical Guild were not on that Committee until most of the work was done, and partly because, as he confessed at its

quarterly meeting recently, he is not a member of the British Medical Association, and does not see its JOURNAL regularly. In fact, he admitted that he had not seen the whole of the letters published in its columns in reference to his lengthy one which had recently appeared. One thing he must admit, that the columns of the BRITISH MEDICAL JOURNAL are dealt with in a generous and open-handed manner in bestowing so much of its space to one who is not a member of its Association. All this must be taken in consideration with respect to the work he is now specially engaged in, the views he has expressed and the composition of the Council of the Guild under whose auspices he comes forward.

As to the object he has in view—the Conference—no one, whether a member of the British Medical Association or not, need object. There can surely be no harm in calling representatives of the various medical societies throughout the country together, but I think it was very unfortunate that in his very lengthy letter he was led to make any suggestion of a new society, especially as he was speaking as the Honorary Secretary of a Committee of the Medical Guild. Whether this was entirely upon his own responsibility or not, or was endorsed by his co members of that Committee, I know not, but I cannot help thinking that suggestion or slip of his has somewhat retarded the work he has in view.

As to the composition of the Council of the Medical Guild perhaps I have said enough in my letter in the BRITISH MEDICAL JOURNAL of October 7th, p. 957, except that at the quarterly meeting of the Guild, held on October 27th, it was stated that three members had been elected as its representatives to the International Conference in Paris, one of the three being a prominent member of the medical staff of the Manchester and Salford Provident Dispensaries. Thus the dispensaries are safeguarded in case of attack. Any breaches in the walls can be at once repaired; awkward questions answered in the most plausible and suave manner. Thus the Guild by its representative acts as a shield to the dispensaries. Those of us who have carefully watched the growth of the Guild from its initiation, and been familiarly acquainted with its working, have seen this constantly going on. In fact, at its early stages an attempt was made not only to recognise the provident dispensary system, but to actually incorporate it in a certain form into its constitution. This was frustrated by the vigilance of active opponents, but still the provident dispensary men have remained with us, but many members are ignorant of these early struggles, and others may have forgotten them, so that this election of one of their staff to go to Paris is all of a piece with the policy running through the Guild from its very commencement. Dr. Crawshaw cannot know much of all this, for it is not many months since he began to take any active part in the proceedings of the Guild; hence the care he has taken to leave it alone in his replies to his critics.—I am, etc.,

Manchester, Nov. 12th. G. H. BROADBENT.

THE DIRECT REPRESENTATIVES' MEETING AT NEWCASTLE.

SIR,—I shall be glad of a further opportunity of bringing the above before the notice of your readers. A combined circular and agenda paper has been sent to every medical practitioner in Northumberland and Durham, and also in Middlesbrough; but one knows from experience that take what precautions one may, somebody is sure to be missed. Any practitioner who has not received a circular will please consider this an invitation for Wednesday, November 22nd, at the College of Medicine, Newcastle-on-Tyne.

This meeting will fulfil many useful purposes. It should bring together a large number of practitioners from all parts of the north. It will give many of us our first opportunity of meeting in the flesh Messrs. Horsley, Brown, and Glover, our direct representatives. We shall hear an account of their work and their opinions on the medico-political questions of the day, and they will hear our views on these questions. From the exceedingly kind way in which all three gentlemen accepted the invitation I am sure they are looking forward to an opportunity for exchange of views which occurs but seldom. It will be a misfortune—nay, more, a disgrace—to the northern practitioners if a very large attendance does not assemble to greet our representatives.

Mr. Victor Horsley will speak on the constitution of the General Medical Council and its procedure, and on the organisation of the profession by means of the British Medical Association. Mr. George Brown will address himself to the work of the Council in relation to medical reform, to reforms still needed in the constitution and functions of the Council; also he will touch on current topics, such as contract work, the Conciliation Board, the Hunter case, and effete Corporations. Dr. Glover's address will deal *inter alia* with the general work of the General Medical Council, its virtues and its defects, the Conciliation Board, the unity of the profession and its effective organisation.

These three speeches contain sufficient interesting material to occupy easily the whole of an evening, but the intention of the meeting being interchange of opinion, these addresses will only occupy about half an hour each. The meeting will then be thrown open for questions and discussion on these and similar topics. Later, the feeling of the meeting will be taken on the important question of illegal certification of midwives and others; and as opinion in the north is very strong on this point, and the representatives themselves are not all of the same mind, an interesting and useful discussion and division may be expected. Lastly, the question of the advisability of an increase in the number of direct representatives will be put to the meeting in the form of a resolution.

It will be absolutely necessary if we are to get through this programme that a start should be made at the hour fixed, namely, 6 P.M. This means the sacrifice of an evening on the part of those interested, which is not too much to ask when it is considered that Messrs. Horsley, Brown, and Glover, all very busy men, are not only willing to sacrifice an evening, but two days in order to be present. The Committee of Arrangement, on whose behalf I write, urges on the medical practitioners of the northern counties to look upon attendance at this Conference as a duty owing not only to themselves, but to the representatives who go in their name to the General Medical Council, and who need and welcome all the moral support they can get.

For the benefit of practitioners coming from a distance I may mention that refreshments will be on sale in the College at reasonable prices.—I am, etc.,

ALFRED COX,
Gateshead, Nov. 13th. Hon. Sec. Arrangements Committee.

[We are requested to state that Dr. Jepson will move the following resolutions at this meeting:

1. That it behoves all medical practitioners to become members of medical unions, or societies, or guilds, in towns and counties throughout the United Kingdom, in order to secure a proper representation of the profession on the General Medical Council.
2. That every medical man should use his influence to bring about a reform in the constitution of the General Medical Council, so that the status of the profession may be improved, and placed on a better footing with regard to (*a*) contract practice, (*b*) unqualified practitioners, (*c*) hospital abuse.
3. That copies of these resolutions be printed and forwarded to every ethical or kindred society in the United Kingdom.]

THE RELATION OF SCIENCE TO EXPERIENCE IN MEDICINE.

SIR,—If you have space, will you allow me to say a few words from a general practitioner's point of view concerning Sir J. Burdon-Sanderson's address in the BRITISH MEDICAL JOURNAL of November 11th? There are two large and distinct subjects which are constantly being brought before the medical man's notice, and both of which are still in the empirical stage, namely, the etiology of disease and the action of remedies.

Of course, I am quite aware that in both these fields most valuable scientific work has been done, but this only covers a very small extent, and, so far as it has gone, emphasises most strongly Sir J. Burdon-Sanderson's view. One is constantly being asked as to the course of the maladies which one is daily called upon to attend, and the thoughtful man must feel that very little of anything is positively known. That exact knowledge we have has been obtained by experiment. Such general terms as cold, personal idiosyncrasy, etc., serve merely to cloak our ignorance. Clinical experience alone cannot settle these matters because in dealing with any specific case the factors are so numerous and complex, that it is impossible to say which is causal. For this purpose an experiment must be so devised as to have but one answer, and must be accompanied by control experiments.

The same line of reasoning applies to remedies, and here one comes upon a mere shoal of preconceived ideas and mere individual opinion. In any medical society, if a discussion is started on the treatment of any disease, nearly every member will have a different treatment, and this will be supported in the majority of cases on the logical fallacy of *post hoc propter hoc*.

Here, again, nothing but exact experiment is of any real avail to enable us to possess any exact knowledge. The perception of this truth is the one reason for supporting the vivisection of animals. Those who oppose this must necessarily for ever shut us out from any science in either of these important branches and leave us a mere prey to all sorts of sensational crazes and fashions. Where science exists there is no room for anything but an exact statement of fact based on experiment.

Now the uncertainty existing in these branches leads to mysticism, and so on the one hand to an undue credulity, or an equally absurd scepticism, whereas what we want is to be sure of our ground, so as, on the one hand, to be able to prevent disease, and, on the other, if it already exists, to relieve.

The general practitioner has no objection to science; his bane is the fanaticism of science, as shown by crude theories, unproved hypotheses, mere fashions and fads. This pseudo-science is most trying, and unless one is in the swing of the various societies one never knows the latest fashion, which probably is the very reverse of the last. Unfortunately, some of our leaders are the worst sinners in this respect. Outsiders sneer at us because we are always at the mercy of these fashions. As the general practitioner is fully occupied with clinical work, he is compelled to take his science from others, and we really need a society to protect us from pseudo-science.

If Sir J. Burdon-Sanderson's scheme is carried out, a very good way to bring this about would be by post-graduate lectures from time to time, clearly pointing out what science has done and what one may accept as exact knowledge.

Another fallacy of the present day is the logical one. Men seem to think that logic will lead them to new knowledge, whereas logic only deals with propositions, and does not trouble itself about the truth of the premiss or premisses, but, given these, tells how we may without error make either valid inferences or deductions; consequently valid logical conclusions may be arrived at, and yet be wrong owing to the premiss or premisses being incorrect. Now in our work science and it alone can determine whether a given premiss is sound or not—when this is done, then, logical inference or deduction may do their proper work. Unless this latter be complied with, logic may lead one far away from the truth. Of course one may fairly construct hypotheses even on wrong premisses, supposing that they are held as such, and subject to verification of the original statement, and are only used as guides to seek further enlightenment. Riding a hobby to death, or being a man of one idea is equally inimical to science, and yet how much of our so-called medical knowledge falls under this head. Light, more light, is what we want, and level-headedness in using it, and these good things can only come through science.

I think it is most important to gain the general practitioner's attention to this matter, because the general public is largely influenced by him.—I am, etc.,

Northcote Road, S.W., Nov. 11th. M. G. Biggs.

LEPROUS DISEASES OF THE EYE.

Sir,—I allow myself to direct the attention of the English medical world to a treatise published recently by two Norwegian authors.[1] Dr. Borthen, oculist at Trondhjem, has for a couple of years studied the diseases of the eye in lepers in the leper asylum at Reitgjärdet, near Trondhjem, and partly in the asylums in Bergen. We find the results of these studies in this treatise, which is accompanied by excellent plates, fifteen reproductions of photos, six plates with exceedingly well executed watercolour drawings of leprous eye diseases (by an English artist, Miss Muir), and three coloured plates with drawings of microscopical preparations.

The clinical descriptions of Dr. Borthen are clear and exact, and very detailed; no symptom is omitted. All descriptions are illustrated in the paintings. There is nothing wanting to get an almost complete knowledge of the clinical aspect of the leprous diseases of the eye.

The clinical descriptions are excellently completed by the anatomical researches of Dr. Lie, and Dr. Lie has found something quite new; he has in an old maculo-anæsthetic patient whom I myself regarded as quite healed found lepra bacilli in sclera, cornea, iris, corpus ciliare, and choroidea. This tells us (1) that the maculo-anæsthetic patients are not, at least always, cured, when it may appear to be the case, and (2) that the affections in the deeper parts of the eyes in maculo-anæsthetic patients such as uveitis, cyclitis, described in the clinical part, most probably are due to the direct working of the lepra bacillus. This we did not know before, and I myself have not even suspected it.

After these remarks I can recommend the treatise as the best hitherto existing on the leprous diseases of the eye.—I am, etc.,

Bergen, Norway, Oct. 1st. G. Armauer Hansen.

[1] *Die Lepra des Auges*, Klinische Studien. Von Dr. Med. Lyder Borthen: it pathologisch-anatomischen Untersuchungen von Dr. H. P. Lie. ipzig: Wilhelm Engelmann. 1899.

PULMONARY AFFECTIONS AFTER ANÆSTHETISATION BY ETHER.

Sir,—In the British Medical Journal for November 11th, Dr. McCardie calls attention to a sentence in your article, A Recent Pronouncement on Ether, which does not quite express what I said in my paper in the *Encyclopædia Medica*. In the leading article the words are "he has never seen ether bronchitis." The sentence in my paper was, "that during my more than twenty years of almost exclusive use of ether in private surgical work, I can only recall one case of fatal broncho-pneumonia as a sequel to an operation under ether." In this sentence I was speaking of my private surgical work, and of fatal cases.

If it be the case, as I believe it is, that in the hands of some anæsthetists pulmonary complications as the result of administration of ether are rare, and in the hands of others are so far from infrequent as to lead them to question the superiority of ether to chloroform, there must be some reasons for the differing results, and it ought to be possible, by careful and conscientious discussion, to find out some of the factors bearing upon the question. The proposed discussion at a meeting of the Society of Anæsthetists early next year, will, I trust, throw valuable light on the question.—I am, etc.,

Leeds, Nov. 14th. T. Pridgin Teale.

OCEAN VOYAGES IN PULMONARY PHTHISIS.

Sir,—The remarks that Dr. Thorowgood has made in the British Medical Journal of November 11th on the advantages of a sea voyage in the treatment of phthisis deserve attention. First one place and then another comes into fashion, and it always appears as if there were some financial reason for the advertising of any place as peculiarly superior to others.

The great advantage of a change from this country to Australia or New Zealand is the escape from our winter, and the influence, properly pointed out by Dr. Thorowgood, of the inhalation of sea air in phthisis. The constant change of atmosphere on board ship has probably some effect. Madeira and the Canaries have gone out of fashion and the Mediterranean coast is more attractive to the pleasure-seeker than the invalid.

Having some experience of the neighbourhood of Cannes during the winter months, I am not surprised at its having lost much of its reputation during the past few years as a good place for phthisical cases. Dr. Thorowgood would agree, probably, in the view that a great deal of good might be done by arranging for the Australian trip for all classes of cases, and that far better results would be obtained than by choosing any place in England or Europe between November and May.—I am, etc.,

Gunterstone Road, W., Nov. 11th. Robert Lee.

THE PHARMACOLOGY OF CANNABIS INDICA.

Sir,—The paper on this subject in the British Medical Journal of November 11th, p. 1354, contains some statements which call for comment. In the first place, the author appears to be unaware of the recent work done on this subject in this country, and, in the second, no trustworthy deduc-

tions can be drawn from many of his experiments. Thus it is stated that "cannabis indica has a very powerful effect upon the heart"; but when we inquire into the method by which this was obtained, we find that it was by injection of "various active substances made up with gum acacia in the form of an emulsion into the circulation of cats and dogs." No details are given as to what the active substances were, where the injection was made, or what steps were taken to ensure the emulsion being in a sufficiently fine state of division for this mode of administration. In any case it is doubtful whether this method is justifiable, and in this case we may almost certainly say that the effects obtained were due to embolism and not to any peculiar action of the principles of Indian hemp.

Most of the remaining work of the author has been anticipated. Even "the cause of the irregularity in action of the drug," which was one of the objects of the research and of which nothing is said beyond that when fresh *ganja* was exposed "to the action of air and sunlight during six months, the activity had markedly depreciated, whereas the control *ganja* kept sealed and in the dark was little, if at all, affected," has, to a certain extent, been demonstrated.[1]

I must also dissent from other conclusions drawn by the author. But all that I wish to point out is the unfairness of drawing conclusions as to "the exact mode of action" of this drug from such experiments as he has given us.—I am, etc.,

University College, Dundee, Nov. 11th. C. R. MARSHALL.

ALCOHOLISM AND HEREDITY.

SIR,—Dr. Reid, and certain select illuminati who agree with him, have lately been very hard upon the medical profession in general on account of its alleged ignorance of the subject of heredity. The illuminati assume ignorance in others rather freely. Dr. Laing Gordon opined that I should have attributed greater weight to Dr. Reid's views if I had not been "unaware that they were founded on the neo-Darwinian doctrine that acquired traits are not transmissible;" which was odd, considering that I had twice over quoted Dr. Reid's statement of the doctrine in these very words.

What if the facts noted by medical men in their study of hereditary diseases tell against the "neo-Darwinian doctrine"? Roberts, in *Quain's Dictionary*, says: "When gout becomes developed *de novo* in an individual, children born previously are free from the complaint, while those born subsequently are liable to be affected." Dr. Fagge quotes Mr. Jonathan Hutchinson's observation of heredity in gout that "the younger children in a family are more likely than the elder to suffer, and to suffer severely." And in regard to insanity, Dr. Fagge tells us, "Children born subsequently to the occurrence of insanity in a parent are more likely to be attacked by the disease than those born previously."

Perhaps Dr. Reid and the illuminati may object that these statements were made in ignorance of Weismann's theory; but they purport to be the summing up of observed facts, and the majority of the medical profession have a prejudice in favour of adapting theories to suit facts, rather than facts to suit theories.

The above observations are not the only, nor indeed to my own mind the most convincing, evidence afforded by the phenomena of disease adverse to Dr. Reid's favourite dogma. Perhaps, after all, the medical authorities, who pass by "the Weismann logomachy" rather hastily, need not stand convicted of ignorance on that ground. Weismann might have had more to gain by study of their facts than they by study of his theories. Only Weismann was very great at explaining things away; witness his much too ingenious management of the difficulty about accounting for the origin of hereditary instincts. The word "logomachy" is too aptly chosen to let me believe that the medical authority who used it knew as little about Weismann as Dr. Reid appears to know about temperance reform and its results.

But really the truth or falsehood of the much-quoted dogma about acquired traits is a matter of academic interest. Its practical bearing upon the problem of the prevention of alcoholism is absolutely *nil*. If a house is built of cards, it matters little whether it is founded upon rock or upon sand.

[1] *Journ. Amer. Med. Assoc.*, October 15th, 1898; Professor Bradbury's Croonian Lectures, 1899.

Artificial selection does not call for serious discussion: and natural selection has had a freer hand to do its best in the past than it is ever likely to have in the future. The results have not been brilliant. And this is partly because hereditary tendency is not the determining factor in the making of drunkards in most cases. The idea of an "inborn capacity for delighting in alcohol," peculiar to certain individuals, is a mere fancy. Practically, all men are capable of delighting in alcohol, but their motives for indulgence in it are nearly as various as the other motives which restrain them from indulgence.

Do Chinamen frequently, and Englishmen rarely, fall victims to opium, because Chinamen have inherited "an inborn capacity for delighting in opium," and Englishmen have not? Englishmen who have unwisely meddled with opium have learned to their cost that the craving for it is only too easily acquired. The average Englishman is in small danger from opium simply because he never dreams of making experiments upon himself with it. There are thousands of English households where family custom excludes alcohol as completely as opium from ordinary use. None of the members of these households ever taste alcohol, or intend to do so. Many of them have never tasted it in their lives. The number of such households is continually increasing. That their disuse of alcohol is a financial gain to them needs no proof. In the working classes this gain represents a very large proportion of the total income. Statistical evidence is overwhelming that there is also a gain in health and longevity. To the moral side of the question I need not here refer.

Dr. Reid, of course, knows these facts, and yet he desires to be taken seriously when he speaks of the result of temperance work as disaster.—I am, etc.,

Newcastle-upon-Tyne, Nov. 13th. FREDERIC C. COLEY, M.D.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MEDICAL OFFICERS WITH THE NATAL FIELD FORCE.

NATAL.

THE following are the *personnel* and medical units at present in Natal, so far as their disposition is known to the Medical Division of the War Office here:

Unit.	Names.
Natal Field Force Staff	Lieut.-Colonel R. Exham.*
	Major J. F. Bateson.
Infantry Division Staff	Lieut.-Colonel R. W. Mapleton.
	Major S. Westcott.
No. 12 Field Hospital	Major B. W. C. Deeble.
	Major R. H. Love.
	Captain T. J. Lenehan.
	Lieutenant C. W. Jones.
No. 1 Stationary Hospital	Major A. Dodd.†
	Major.
	Lieutenant W. B. Winkfield.
	Lieutenant J. M. Sloan.
On general duty	Lieut.-Colonel P. H. Johnston.
	Major H. L. Battersby.
	Major F. A. B. Daly.
	Major H. O. Trevor.
	Major D. Bruce.
	Major S. Buttersworth.
	Major J. Kearney.
	Major C. G. Woods.
	Major C. P. Walker.
	Major R. J. C. Cottell.
	Major T. Browning.
	Major R. Holyoake.
	Major A. L. F. Bate.
	Major J. E. Anderson.
	Captain C. A. Stone.
	Captain R. J. W. Mawhinny.
	Captain W. E. Hardy.
	Lieutenant R. Selby.
	Lieutenant A. E. Weld.

* As Principal Medical Officer. † Also Senior Medical Officer, Durban.

Officers who have proceeded to South Africa with the Indian Contingent.

5th Dragoon Guards	Major J. Minnicce.
9th Lancers	Captain J. V. Forrest.
19th Hussars...	Captain W. A. Ward.
1st Battalion Devonshire Regiment...	Major E. A. Burnside.
1st Batt. Gloucestershire Regiment...	Major J. S. Green.
2nd Batt King's Royal Rifle Corps ...	Major E. W. Gray (killed Oct. 30th)
2nd Battalion Gordon Highlanders...	Captain G. S. Walker.
Brigade Division Field Artillery ...	Captain E. W. Slayter.

No. 11 British Field Hospital ...	Lieut.-Colonel S. H. Carter. Major W. W. Pope. Captain B. Forde. Captain R. M. Cameron.
No. 18 British Field Hospital ...	Major T. F. Donegan. Captain T. McDermott. Captain A. E. Milner. Captain W. D. Erskine.
No. 24 British Field Hospital ...	Major H. Martin. Major R. Porter. Major M. P. C. Holt. Lieutenant H. G. Martin.
No. 26 British Field Hospital (Sections A and B.)	Major M. W. Kerin. Captain H. Marder.

Lines of Communication.

The following are the *personnel* and medical units allotted to the lines of communication. This table also shows the distribution of the Civil Surgeons:

Staff of Headquarters, Lines of Communication.

Colonel W. F. Stevenson, M.B. (Principal Medical Officer and Consulting Surgeon to Field Force).
Major G. H. Sylvester (Registrar and Secretary).
Major W. B. Day (2nd Battalion Northumberland Fusiliers, from Portsmouth).
Captain R. H. E. Holt (2nd Battalion Somersetshire Light Infantry, from Portland).
Lieutenant H. S. Anderson (2nd Battalion Duke of Cornwall's Light Infantry, from Devonport).
Lieutenant L. Wood (1st Battalion Welsh Regiment from Aldershot).
Lieutenant E. L. Munn (2nd Battalion Northamptonshire Regiment, from Aldershot).
Lieutenant E. P. Connolly (2nd Battalion Shropshire Light Infantry, from Aldershot).
Captain P. J. Probyn (1st Battalion Gordon Highlanders, from Edinburgh).

No. 2 Stationary Hospital (from Chester).

Major H. D. James (officer in charge).
Major C. W. Allport. — Lieutenant W. A. Woodside.
Captain J. Hennessy.

No. 3 Stationary Hospital (from Woolwich).

Major T. A. P. Marsh (officer in charge).
Major M. W. Russell. — Lieutenant O. Challis.
Captain C. B. Lawson.

No. 4 Stationary Hospital (Edinburgh).

Major R. Kirkpatrick (officer in charge).
Major J. R. Mallins. — Lieutenant H. Simson.
Captain F. A. Symons.

No. 1 General Hospital (Portsmouth).

Lieutenant-Colonel A. H. Anthonisz (officer in charge).
Lieutenant-Colonel H. Grier (Registrar and Secretary).
Lieutenant-Colonel R. D. Hodson. — Major R. W. E. H. Nicholson.
Major R. W. Barnes. — Major F. D. Elderton.
Lieutenant W. Jagger (officer in charge of *x*-ray apparatus).
And the following eleven civil surgeons:

Mr. G Carre.	Mr. G. Thornton.
Mr. F. E. Fremantle.	Mr. W. F. Tyndale.
Mr. R. W. Jameson.	Mr. C. G. Watson.
Mr. C. Reissmann.	Mr. A. E. Wynter.
Mr. R. Fox-Symons.	Mr. A. W. Harding.
Mr. W. Thomas.	

The Army Nursing Service supplies a Nursing Superintendent and eight nursing sisters.

No. 2 General Hospital (from Netley).

Colonel A. W. Duke (officer in charge).
Major C. J. Addison (Registrar and Secretary).
Lieutenant-Colonel M. D. O'Connell.
Major S. F. Lougheed.
Major C. J. MacDonald.
Lieutenant H. H. Norman (officer in charge of *x*-ray apparatus).
And the following twelve civil surgeons:

Mr. E. D. Hancock.	Mr. E. S. Crispin.
Mr. C. Roberts.	Mr. J. J. Day.
Mr. J. B. Stanley.	Mr. J. J. S. Suffield.
Mr. E. A. Housemann.	Mr. E. Hill.
Mr. J. H. Pegg.	Mr. G. L. Hanwell.
Mr. S. H. Pooley.	Mr. J. B. Wood.

The Army Nursing Service supplies a Nursing Superintendent and eight nursing sisters (one from the Army Nursing Service Reserve).

No. 3 General Hospital (from Aldershot).

Lieutenant-Colonel O. G. Wood (officer in charge).
Major A. Keogh (Registrar and Secretary).
Major H. T. Knaggs.
Major W. C. Poole.
Captain F. J. Wade-Brown.
Lieutenant H. Ensor (officer in charge of *x*-ray apparatus).
And the following twelve civil surgeons:

Mr. A. Burton.	Mr. F. Pershouse.
Mr. O. B. Goldschmidt.	Mr. S. W. Richardson.
Mr. D. J. Conacher.	Mr. F. Isherwood.
Mr. H. R. Langmore.	Mr. T. E. Stuart.
Mr. T. B. Sherwen.	Mr. J. P. Brown.
Mr. H. A. Fairbank.	Mr. J. E. Ker.

The Army Nursing Service supplies a Nursing Superintendent and eight nursing sisters (one from the Army Nursing Service Reserve).

No. 4 General Hospital (from Aldershot).

Colonel J. A. Clery (officer in charge).
Major T. R. Lucas (Registrar and Secretary).
Major R. I. D. Hackett.
Major S. F. Freyer.
Major R. E. Kelly.
Lieutenant W. R. Blackwell (officer in charge of *x*-ray apparatus).
And the following twelve civil surgeons:

Mr. E. M. Rooke.	Mr. W. R. Kemp.
Mr. S. B. Hulke.	Mr. S. Copley.
Mr. F. B. Cayley.	Mr. S. Whicher.
Mr. F. R. Martin.	Mr. F. Pope.
Mr. A. W. Nuthall.	Mr. R. M. Cowie.
Mr. M. A. Corcoran.	Mr. A. E. Elliott.

The Army Nursing Service supplies a Nursing Superintendent and eight nursing sisters (one from the Army Nursing Service Reserve).

No. 1 Base Depôt, Medical Stores (Established in Natal).

Major R. J. McCormack (officer in charge).

No. 2 Base Depôt, Medical Stores.

Major R. C. Thacker (officer in charge).

No. 1 Advanced Depôt, Medical Stores.

Officer to be detailed by the Principal Medical Officer, Natal

No. 2 Advanced Depôt, Medical Stores.

Captain C. W. H. Whitestone.

No. 3 Advanced Depôt, Medical Stores.

Captain J. C. Connor.

No. 1 Hospital Train.

Major G. W. Brazier-Creagh (officer in charge).
Mr. W. T. Rowe, Civil Surgeon.
Two nursing sisters of the Army Nursing Service Reserve.

No. 2 Hospital Train.

Captain C. C. Fleming, D.S.O. (officer in charge).
Mr. W. J. Waters, Civil Surgeon.
Two nursing sisters of the Army Nursing Service Reserve.

No. 1 Sick Transport (ss. "Spartan," Admiralty Transport No. 11).

Major T. P. Woodhouse (officer in charge).
Mr. S. E. Dennyer, Civil Surgeon.
Mr. W. H. Brodie, Civil Surgeon.
Three nursing sisters of the Army Nursing Service Reserve.

No. 2 Sick Transport (ss. "Trojan," Admiralty Transport No. 10).

Major A. P. Hart (officer in charge).
Mr. W. L. Griffiths, Civil Surgeon.
Mr. P. Wood, Civil Surgeon.
Three nursing sisters of the Army Nursing Service Reserve.

THE NEW DIVISION FOR SOUTH AFRICA.

We understand that the Principal Medical Officer of the fifth (Sir Charles Warren's) division now being mobilised for service in South Africa is Lieutenant-Colonel W. B. Allin, recently officer commanding the Depôt and Training School at Aldershot. Lieutenant-Colonel Allin, who is a graduate of the Glasgow University (M.B., 1873) entered the service in 1877. He served in the Afghan War 1878-80, for which he received the medal; he served with the Nile Expedition 1884-85, and had charge of the Field Hospital at the Gakdul Wells. For his services on this occasion he was mentioned in despatches, received the medal, with clasp, and the Khedive's Star, and was promoted to the rank of Surgeon-Major in June, 1885. Major E. Davis, R.A.M.C., at present at Devonport will be Medical Staff Officer.

5th Infantry Division.

Medical Officers.

9th Brigade:	
2nd Battalion Royal Lancashire Regiment	Captain H. Tyacke, R.A.M.C.
2nd Battalion Lancaster Fusiliers ...	Major W. P. Squire, R.A.M.C.
1st Battalion South Lancaster Regiment	Major S. R. Wiles, R.A.M.C.
1st Battalion York and Lancashire Regiment	Lieutenant J. H. R. Bond, R.A.M.C.
10th Brigade:	
2nd Battalion Royal Warwickshire Regiment	Captain G. A. Moore.
1st Battalion Yorkshire Regiment ...	Major W. C. Ferguson.
2nd Battalion Dorsetshire Regiment..	Major J. H. Daly.
2nd Battalion Middlesex Regiment ...	(Not yet named.)
Divisional Troops:	
14th Hussars...	Major B. Skinner.
Brigade Divisional Staff Royal Field Artillery	Major J. G. Black.

Bearer Companies.

No. 6 Bearer Company (9th Brigade)	Major S. B. Winter. Captain J. F. Kelly. Lieutenant*
No. 18 Bearer Company (10th Brigade)	Major H. H. Johnston. Captain C. B. Martin. Lieutenant*

Field Hospitals.

No. 4 Field Hospital (9th Brigade)	Major J. D. Moir. Major A. O. Fitzgerald. Captain F. G. Faichnie. Lieutenant*
9th Divisional Field Hospital (10th Brigade)	Major E. R. Cree. Major W. C. Poole. Lieutenant* Lieutenant*
No. 8 Field Hospital (Divisional Troops)	Lieutenant-Colonel J. Armstrong. Major R. Caldwell. Lieutenant* Lieutenant* Quartermaster*

Special Service.

No. 11 Bearer Company (Special Service)	Major C. E. Nichol. Captain S. H. Withers. Lieutenant E. P. Hewitt.

* Not yet appointed.

MEDICAL ARRANGEMENTS FOR SOUTH AFRICA.

Arrival and Departure of Transports.

The transport *Gascon*, which arrived at Capetown on November 12th, and went on to Durban, had on board No. 18 Company, R.A.M.C. (Bearer Company), and No. 19 Company, R.A.M.C. (Field Hospital). The *Oriental*, which arrived at Capetown on November 13th, and was also sent on to Durban, had on board No. 11 Company, R.A.M.C. The *Orient*, which arrived at Capetown on November 13th, brought a detachment of No. 3 Company, R.A.M.C. (Field Hospital), and the *Harlech Castle*, which arrived at Capetown on November 14th, had on board a detachment of the Depôt Companies of the R.A.M.C. (Field Hospital). The *Goorkha*, with two officers of the R.A.M.C., arrived at Capetown on November 15th. The *Spartan* hospital transport ship arrived at Durban on November 12th, and the *Trojan* at Capetown on the same day. The *Sumatra* has left Capetown for Southampton with invalids, etc.

The transport *Idaho* left Chatham Dockyard on November 4th with a bearer company party consisting of 2 officers and 66 men of the R.A.M.C. from Woolwich. On the same date the *Ismore* took the 11th Company Bearers of the R.A.M.C. from Colchester comprising 51 men with many ambulance waggons and fittings. Majors A. B. Cottell and Thurston, R.A.M.C., embarked with officers of other corps.

The steamer *Rapidan*, which had to put back to Liverpool owing to damages in a gale, carried a number of men of the R.A.M.C. The *Servia* embarked 5 officers and 78 men of the Field Hospital R.A.M.C., on November 5th. This vessel also carried ambulance waggons.

The transports *Englishman* and *Dictator* took out Majors W. Douglas, V. M. Birkbeck, and R. P. Hetherington, R.A.M.C. The *Arawa* embarked, on November 7th, the 5th Field Hospital R.A.M.C. from Netley; but, owing to defect in machinery, did not leave till the 8th.

Another party of the R.A.M.C. was despatched from Fort Pitt Hospital, Chatham, on the evening of November 7th for South Africa. It comprised Major Young (in command), 4 officers, and 34 non-commissioned officers, including 11 reservists.

Captain P. J. Probyn, R.A.M.C., embarked with the Gordon Highlanders in the *Cheshire*, as also did 35 of the R.A.M.C., under Major Lilly. A detachment of No. 16 Bearer Company, R.A.M.C., embarked at Queenstown in the *Bavarian*. The Hampshire Company, Militia Medical Staff Corps, were embodied at the Royal Victoria Hospital, Netley, on the 13th inst. Three companies of the Militia Medical Staff Corps (the Kent, Surrey, and Eastern Counties) assembled at Aldershot on the same date, releasing sufficient men to form No. 5 General Hospital, should it be required.

A South African Red Cross Ambulance.

At a meeting held on November 14th at the residence of Adeline Duchess of Bedford it was resolved to provide a civil ambulance for the sick and wounded in South Africa, and it was announced that upwards of £8,000 had been received by Lord Henry Bentinck and Mr. J. L. Langman, the Treasurers. The scheme has been approved by the Central British Red Cross Committee. The ambulance will contain 120 beds and will have its own transport and ambulance waggons. There will be 5 surgeons, 1 physician, 6 dressers, 4 clinical clerks, a matron and assistant, and 12 nurses, as well as orderlies. The Director will be Mr. George Stoker, who was a Stafford House Surgeon in the Turko-Russian war, and a Commissioner of the South African Aid Committee in the Zulu war. It is hoped that all the London hospitals not at present represented at the seat of war may be represented in the staff of the ambulance. Mr. Stoker informs us that the equipment is ready with the exception of the waggons, which will be furnished in ten days' time, and it is proposed that the ambulance should start on December 2nd. Further particulars can be obtained from Mr. George Stoker, 14, Hertford Street, W., or Miss Gallaher, 26, Hertford Street, W.

Roentgen Ray Apparatus.

The Duke of Newcastle's offer to furnish completely the ship *Princess of Wales* with the Roentgen apparatus and photographic material, and that of a private donor to similarly equip the *Spartan*, have been accepted by the Red Cross Society. The apparatus will be arranged under the direction of Mr. John Leconteur. The outfit for the *Spartan* will go out in the ship *Princess of Wales* on the 16th instant.

Foreign Red Cross Ambulances.

The French Red Cross Society has, through its President, the Duc d'Auerstadt, generously offered to the Central British Red Cross Committee a complete equipment of medical appliances, surgical instruments, etc., sufficient for two field hospitals. The offer has been gratefully accepted, and the appliances will be placed on board the hospital ship *Princess of Wales*. It is semi-officially announced that a similar offer has been made to the Transvaal Government.

From Berlin, under date November 10th, it is announced that the conference of the chief officers of the Central Committee of the German Red Cross Society with the representatives of the Provincial Committee has ended in the decision to request all the German provincial committees to organise subscriptions for rendering aid under the Red Cross in the Transvaal war.

The Italian Red Cross Society, in consideration of the aid sent by the British Red Cross Society to the Italian soldiers in the Abyssinian war, has decided to send a quantity of supplies for the British wounded and sick in South Africa. The Society will also send to the Transvaal sanitary material for about 10,000 dressings.

The American Hospital Ship.

In connection with the American hospital ship, Mrs. Whitelaw Reid, who has given her personal attention to the selection of the nursing staff, is now, with Drs. Billings and McBirnie, naming the surgeons to work under the English chief medical officer. Mrs. Reid's own personal gift to the fund takes the form of one of the most perfect ambulances yet invented. Surgeon-Lieutenant-Colonel Hensman, A.M.D., late of the 2nd Life Guards, has been appointed chief medical officer in command. Lady Randolph Churchill, the President, Mrs. Blow, the Honorary Secretary, and Mrs. Ronalds, the Honorary Treasurer, wish to thank the many English nurses who have volunteered their services to the American hospital ship. Every post on board the vessel has now, it is announced, been filled. Miss Hibbard, Superintendent of the United States Government Hospitals, who has had great experience in the late war with Cuba, is to be Chief Superintendent of Nurses on board the *Maine*. She, with 4 other nurses and 10 male nurses, sailed from New York on November 11th. The 2 ambulance officers and the 10 male nurses are all graduates of Mill's School, Bellevue, New York.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: William H. Patterson, Fleet Surgeon, to the *Europa*, for medical charge on voyage out to the Mediterranean, to date November 23rd, and afterwards to the *Revenge*, on recommissioning; John D. Henwood, Fleet Surgeon, to the *Europa*, from medical charge on the voyage home; Edward Ferguson, Fleet Surgeon, to the *Europa*, for the voyage home; Daniel J. P. McNabb, Staff Surgeon, to the *Europa*, for the voyage to Malta, to date November 23rd, and afterwards to the *Vulcan*; Walter K. Hopkins, Surgeon, to the *Wildfire*, for the *Edinburgh*, November 1st; Harold P. Jones, Surgeon, to the *Wildfire*, November 18th; Charles J. E. Cock, Surgeon, to the *Revenge*, undated.

James G. Watt, Surgeon, to the *Sans Pareil*, November 11th; Fred. C. B. Gittings, M.B., Surgeon, to the *Australia*, November 11th; Arthur R. H. Skey, M.B., Surgeon, to the *Pembroke*, for disposal, November 13th.

OBITUARY.

W. C. ARNISON, M.D., D.C.L.,

Professor of Surgery in the University of Durham; Consulting Surgeon to the Royal Infirmary, Newcastle-upon-Tyne, etc.

We have to record, with great regret, the death of Dr. Arnison, which occurred at his house, Fenham Terrace, Newcastle-upon-Tyne, on Saturday, November 4th, after an illness of only a few days. On Monday, October 30th, he lectured in the evening as usual at the College of Medicine, but his colleague, Dr. Philipson, meeting him before he began, saw that he was not well, and advised him to give up the lecture and to go home. Dr. Arnison, however, with his high sense of duty, would not consent to do this, and the delivery of that lecture was the last event of his professional life. When he reached home he became seriously ill; pleuro-pneumonia developed, and after an acute illness, accompanied by severe pain, he died on the fifth day. He preserved his consciousness until the end, and mastering the pain from which he was suffering, he calmly received the Communion, took leave of his family, and faced death with the deliberation and perfect courage that were characteristic of him. He was attended by Dr. Armstrong-Atkinson, by his nephew, Dr. W. D. Arnison, and later, at his own request, he was seen also by his old friend and colleague, Mr. Page.



Dr. Arnison was born in 1837, in Allendale Town, Northumberland. He came of a good old medical stock; his father, two uncles, and a brother, all practised in the neighbourhood. He received his professional education at the College of Medicine, Newcastle-on-Tyne, and he resided for four years—from 1854 to 1858—in the Newcastle Infirmary, so that for forty years he was connected with the infirmary—as resident pupil, Surgeon, and then Consulting Surgeon. He took the diplomas of M.R.C.S. and L.S.A. in 1858, and the degree of M.D.Durh. in 1862.

After qualifying he assisted his uncle, Dr. George Arnison, of Stanhope, for five years, leaving him in 1863 to become Resident Medical Officer at the Newcastle Dispensary. After holding this appointment for four years, he commenced practice in Newcastle, and a few months later he was elected Honorary Surgeon to the dispensary. In the same year he became Surgeon to the Newcastle Infirmary on the resignation of Sir John Fife. In 1864 he was appointed Lecturer on Botany in the Medical School of Newcastle. Fifteen years ago, at the request of his old master, the late Dr. Heath, Dr. Arnison became a co-Lecturer with him on the Principles and Practice of Surgery, and during the remainder of Dr. Heath's life the teaching of surgery in the College was conducted by them jointly. On the retirement of Dr. Heath from the infirmary Dr. Arnison became Senior Surgeon, and in 1892 he was appointed Professor of Surgery in the University of Durham. Between two and three years ago, when having reached the age limit he was compelled to give up his position of Surgeon to the Royal Infirmary, his pupils entertained him at dinner, and presented him with a handsome silver bowl as a token of their esteem.

Dr. Arnison took great interest in the Northumberland and Durham Medical Society, of which he was one of the most prominent members, both from his position and from his readiness and clearness in discussion. For two years he was President of the Society, and distinguished himself by his knowledge, tact, and impartiality; by his kindly encouragement of the younger members, and by his hospitality. For many years he was the local Treasurer of the Epsom Medical Benevolent Fund, and his energy in gaining new subscribers and in getting in subscriptions greatly strengthened the position of the Fund in his district. At the meeting of the British Medical Association in Newcastle he was President of the Surgical Section, and he took an active part in the arrangements of the meeting. He was the representative of the College of Medicine on the Senate of the University of Durham, and for more than twenty-five years he was Surgeon to the post office in the Newcastle district. Amongst his contributions to the medical journals may be mentioned those on Successful Ligature of the Subclavian for Axillary Aneurysm, Anterior Colotomy, and Successful Trephining for Traumatic Epilepsy.

In 1893 he founded the North of England Surgical Aid Society, acting on the suggestion of Mrs. Arnison, who was struck by the difficulty experienced by the infirmary and other poor patients in obtaining surgical appliances. He was Chairman of the Society until the time of his death, and it is entirely owing to his own and to his wife's exertions that the Society is in its present useful and assured position. Dr. Arnison took great interest in church work; he was vicar's warden at St. Andrew's Church, where he was an indefatigable worker and a most regular attendant. His students and house surgeons of years ago will well remember his Sunday dinners, and how he invariably took his guests to church with him afterwards.

As a surgeon Dr. Arnison was cautious in diagnosis, but bold and skilful in operations. He excelled, and was specially interested in, the operative treatment of deformities such as hare-lip, cleft palate, and generally in cases requiring great care and accuracy. He was extremely conscientious, and his work cost him much anxiety and thought. He was much followed by the students, who appreciated his clear and accurate teaching. His lectures at the College of Medicine were most carefully thought out; he was a good speaker, and they were well delivered. He will be greatly missed: by his colleagues at the College of Medicine, who knew his integrity and straightforwardness; by the Committee of the Infirmary, who were glad to profit by his knowledge and experience of the institution; by the students, who knew him not only as a good lecturer but as a generous and kind friend; and by his patients and numerous friends, who feel that they have lost one whom it will indeed be difficult to replace.

The funeral took place on November 7th. St. Andrew's Church was crowded by a great congregation, which included

Dr. Arnison's colleagues at the College of Medicine and at the Royal Infirmary, about 150 students, representatives from Durham, from the College of Science, and from the various bodies with which he was connected, as well as by a large number of private friends. The coffin was covered with beautiful flowers, and was carried from the church and from the cemetery gates by eight of his students. Dr. Arnison leaves a widow and three young children.

REGINALD SOUTHEY, M.D., F.R.C.P.,

Late Commissioner in Lunacy, and one time Physician to St. Bartholomew's Hospital.

THE news of Dr. Southey's death has come as a shock to his former colleagues at St. Bartholomew's. His frail and worn aspect had long been noticed, but his mental faculties remained vigorous, and his manner bright and cheerful to the last. He dined with several of his old friends only nine days before his death, and, though looking very ill, was in excellent spirits.

Reginald Southey was born in 1835, and was the younger son of Dr. Henry Herbert Southey, D.C.L., F.R.S., and the nephew of Robert Southey the poet. He received his early education at Westminster School, whence he went to Christchurch, Oxford, and took the degree of B.A., with a first-class in Natural Science in 1855. He proceeded M.A. in 1857. He studied medicine at St. Bartholomew's Hospital. He took the degree of M.B. in 1858, and that of M.D. in 1861, both in the University of Oxford. He was elected a Radcliffe Travelling Fellow, and studied in the medical schools of Berlin and Vienna. He became a Fellow of the Royal College of Physicians in 1866, and in the following year delivered the Goulstonian Lectures on the Nature and Affinities of Tubercle. In 1881 he delivered the Lumleian Lectures, taking Bright's disease as his subject. Both these courses of lectures were published, and constitute Dr. Southey's most important contributions to medical literature. He also translated the articles on the Structural Diseases of the Kidney and the General Symptoms of Renal Diseases, and that on the Diffuse Diseases of the Kidney, which form part of the fifteenth volume of Ziemssen's *Cyclopædia of the Practice of Medicine*, and made numerous contributions to the *Transactions* of the Pathological Society, as well as to those of the Royal Medical and Chirurgical and Clinical Societies.

He was elected Assistant Physician to St. Bartholomew's Hospital in 1863, and became Physician in 1868, and in the same year was appointed Lecturer in Forensic Medicine and Hygiene.

In 1883 he resigned his offices at St. Bartholomew's Hospital on his appointment as Commissioner in Lunacy, and he continued to discharge the arduous duties of this office until 1898, when he was led by failing health to retire. His death took place on November 8th at his country residence, Belringham, Sutton Valence, Kent, after a few days' illness.

We are indebted to Sir Dyce Duckworth, who was Dr. Southey's colleague at St. Bartholomew's Hospital, for the following note: During his service at St. Bartholomew's he was always punctual and diligent, painstaking, and careful at the bedside. His manner was quiet and sympathetic. He was an original thinker, and had the courage of his opinions. The duties of the wards and lecture room appeared to tell heavily upon him in his later years of service, and he doubtless was led to seek another sphere of work in consequence, taking in 1883 a Commissionership in Lunacy. He well utilised his clinical opportunities, and communicated no fewer than seventeen important papers to the Clinical Society. His writing gave evidence of his culture, his style being neat and incisive. His manner was kindly and genial and his interests and sympathies were large. He was a trustworthy friend and a good colleague. It was remarkable how in later years his mental powers and geniality dominated the obvious frailty of his body. He was satisfied with his place in life, and no soaring ambitions ever diverted him from a straightforward and industrious career. In his person, his work, and his conduct he well exemplified the type of a cultivated, high-minded gentleman, one of the best products of Oxford training, influenced doubtless by his distinguished ancestry. The profession is the poorer for the loss of such a man; but his good qualities remain happily enshrined in the memory of all with whom he had to do, and we can now only say: *Requiescat in pace.*

WE regret to announce the death, at his residence, Portsmouth, of Mr. FREDERICK MORLEY on November 11th, after a long and painful illness. He was educated at St. George's Hospital, and became M.R.C.S.Eng. and L.S.A. in 1863. For upwards of thirty years Mr. Morley was in practice at Portsmouth, and for a long period held the appointment of District Medical Officer of the Portsea Island Union, and by his death the poor of the neighbourhood have lost a kind and sympathetic friend. He was an old member of the British Medical Association, and joined the Southern Branch at the time of its formation, twenty-seven years ago. During his long and successful career he enjoyed the confidence and esteem of all his professional friends. The funeral took place at the Highland Road Cemetery, Southsea, on November 14th, amid every manifestation of sympathy and regret, and his grave was surrounded by a large number of his old colleagues who will ever retain for him the kindliest recollections. Mr. Morley has left behind him two sons, members of the medical profession—Mr. George F. Morley and Mr. H. W. Morley—both of whom are engaged in practice at Portsmouth.

A MUCH-RESPECTED member of the profession in Salisbury, Mr. W. D. WILKES, died at his residence there on October 29th, in his 75th year, from pneumonia, after a few days' illness. He received his medical training at University College Hospital, London, where he was Physician's Assistant, and he became qualified at College and Hall in 1847. He was appointed House-Surgeon of the Salisbury Infirmary in 1849, and held the post until 1855, when he commenced private practice in the City, being partner of the late Mr. G. Tatum. He was an able, industrious, and thoughtful practitioner, and was highly esteemed by all classes of patients. In 1860 he was elected one of the Honorary Surgeons of the Salisbury Infirmary, retaining the post until 1890, when he resigned. He continued to practise in Salisbury until his retirement about two years ago. He was the author of many valuable papers in the *Transactions* of the Pathological Society, the *Medical Times and Gazette;* a case of Cervical Rib, in the *Journal of Anatomy and Physiology;* a case of Lithotomy, in the *Proceedings of the Royal Medical and Chirurgical Society;* also a paper in which he upheld "the claim of the late Mr. A. B. Middleton as first in England to notice the relation between wetness of soil and phthisis" (BRITISH MEDICAL JOURNAL, 1884). For many years Mr. Wilkes rendered valuable services to the Salisbury Diocesan Training College, resigning in 1888. He was much interested in antiquities, was a member of the Salisbury Field Club, and a regular exhibitor at the annual shows of the Wilts Horticultural Society. He married Anna, daughter of the late Mr. Thomas Grove, who survives him. The funeral took place at Bemerton Church, his family having been formerly connected with that place. It was attended by a large number of the residents of Salisbury and the neighbourhood, including the Mayor, and many members of the medical profession.

Dr. ROBINET, of Paris, whose death is announced, was well known as a medical practitioner, and still better as a philosopher and a politician. Born at Vic-sur-Seille, in Lorraine, in 1825, he studied medicine in Paris, where he came under the influence of Auguste Comte, whose intellectual disciple he remained through life. He fought at the barricades in the Revolution of 1848, but afterwards subsided into the practice of medicine, chiefly among the poor. He cared nothing for money-making, and died as he had lived—a poor man. He was Comte's medical adviser, and he was one of the Positivist prophet's executors. Dr. Robinet was Mayor of the Sixth Arrondissement during the war of 1870, and for some twenty-five years afterwards was the recognised leader of the Republican party in that electoral district. He was an ardent propagator of the ideas of Comte, and was the author of numerous writings explaining and defending the doctrines of his master. He had also made a special study of the Revolution, and the men who played a leading part in it. Some of the results of his researches into the history of that period were given to the world in various works on Danton, Condorcet, etc.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

Number of Students.

The following table gives the numbers of students of medicine, under their respective years, and for the past five *anni medici*, taken in each year on the twenty-fourth day of the session:

Session.	1st Year.	2nd Year.	3rd Year.	4th Year.	5th Year.	Total.
1895-96	223	194	241	208	312	1,178
1896-97	216	222	201	237	262	1,138
1897-98	205	208	227	193	306	1,139
1898-99	186	209	211	208	325	1,139
1899-1900 ...	220	175	210	203	311	1,119
	+34	−34	−1	−5	−14	−20

The last line indicates the increase or decrease in the number of students, on the day named, in session 1899-1900 as compared with session 1898-99. From this it will be noted that there is an increase of 34 in the number of first-year students. In the face of the growing vigour of so many medical schools throughout the country this figure had not been anticipated. Not only so, but the number of first-year entries is larger than in any of the past four sessions.

In addition to these figures, which refer entirely to male students, there are 74 women studying for the degrees in medicine of the University of Edinburgh, of whom 8 only are matriculated students in attendance at the Class of Physics. At the same period of last year there were 66 women, of whom 6 only were matriculated students, the remaining 60 being registered as preparing for degrees by attendance at various classes in the Extra-Academical School.

No figures relating to the number of students in attendance at the various sections of the Extra-Academical School are yet available, as no system of registration or matriculation exists, and the figures are handed in much later in the session by the various lecturers.

It ought to be added that the University figures may be increased up to at least the end of November, but the late increase as a rule only affects the number of fourth and fifth-year students, rarely those of the first year.

UNIVERSITY OF CAMBRIDGE.

Degrees.—At the Congregation on November 9th, Professor Somerville was admitted to the degree of M.A. *honoris causâ*, and Mr. F. G. Stacey, B.A., of St. John's College, to the degrees of M.B. and B.C. Mr. T. W. Letchworth, B.A., of Emmanuel College, has been approved for the degree of M.B., and Mr. Shelford Bidwell, M.A., F.R.S., of Gonville and Caius College for the degree of Sc.D.

UNIVERSITY OF ABERDEEN.

Election of Lord Rector.—On November 12th Lord Strathcona was chosen by the votes of the "nations" to be Lord Rector of Aberdeen University, in succession to the Marquis of Huntly, who had completed his third term of office. There was no opposition, as Sir Edward Grey, who had stood as a candidate for a brief period, retired before the election was held. A well-arranged torchlight procession took place in the evening, nearly 400 students appearing in fancy costumes. The excellent police arrangements prevented any but very mild interruptions by roughs.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

At a stated meeting of the College held on Friday, November 10th, Mr. J. J. O'Sullivan, L.R.C.S.I., was admitted as a Licentiate in Medicine.

CONJOINT BOARD IN IRELAND.

The following gentlemen have passed the examination for the Diploma in Public Health: Dr. E. J. McWeeney (Honours), Dr. R. H. Draper, Dr. J. J. Earls, Dr. T. W. Heywood, Dr. G. G. Lawson, Dr. J. C. McWalter (Part I).

MEDICO-LEGAL.

A NEW ZEALAND ACTION FOR MALPRAXIS.

In August last, in the Supreme Court at Christchurch, New Zealand, an action was brought against Dr. Arthur de Renzi, a practitioner of that city, by a patient, who claimed £2,000 damages for injury alleged to have been received in consequence of the defendant having needlessly extirpated the coccyx without her consent. From the evidence it appeared that the defendant had been her doctor for some years. That in December, 1897, he had removed the ovaries on account of disease, but after the operation, up to October, 1898, she had suffered from constant pain of a severe character, referred to the lower extremity of the spine. After trying various remedies the defendant decided that the best treatment would be to remove the coccyx, as he ascertained that the pain was altogether in this bone. The patient consented, and he performed this operation with great success, and several witnesses testified to the benefit the plaintiff had received from the operation. On the other hand, it was alleged on the part of the plaintiff that no good had followed the operation, and that she had taken the anæsthetic on the understanding that "there was to be no cutting." This was stated by several witnesses; among others, by the proprietress of the Nursing Home where the operation was performed, and by the anæsthetist. All the services of the defendant had been given gratuitously, and there was strong evidence that immediately after the operation the plaintiff had shown herself exceedingly grateful to her doctor. The Judge put three questions to the jury: (1) Did the defendant have the plaintiff's consent? (2) Was the operation necessary? (3) Was the operation scientifically performed? The jury answered the three questions in the affirmative—the first two unanimously, and the third by a majority of nine. Judgment was given for the defendant, and the result was received with applause by a large crowd that had gathered outside the court to learn the verdict.

A DISPENSARY DOCTOR'S FEE.

The Recorder of Derry has just decided a case in which Dr. Keys, who was acting as *locum tenens*, claimed two guineas from the Limavady guardians as a consultation fee. He had been summoned by Dr. Moore, who was also a *locum tenens*, to consult regarding a midwifery case, and on this duty he had to drive six miles and to spend eight hours at the case. The large-hearted guardians thought one guinea ample for this service. The Recorder gave a decree for £2 2s., with £5 expenses to the plaintiff, who had travelled from Manchester for the trial; £2 2s. to Dr. Moore as a witness, and 10s. 6d. to the clerk, who also appeared as a witness. He said the plaintiff had asked the scantiest remuneration, and the Local Government Board had refused to sanction the guardians' offer of £1 1s. We may point out that the obstinate "economy" of the guardians has added a charge of £7 12s. 6d. to the rates without including the cost of their defence. This has been done in spite of the remonstrance of the Local Government Board, and we sincerely hope that the public auditor will surcharge with this sum the gentlemen concerned. The only way to deal with such conduct is to make the offenders and not the ratepayers pay.

Q.—If a registered medical practitioner were to work such practice for a layman, whether as partner or agent, the medical man would undoubtedly render himself liable to a serious charge before the General Medical Council.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,738 births and 3,936 deaths were registered during the week ending Saturday last, November 11th. The annual rate of mortality in these towns, which had been 21.1 and 18.8 per 1,000 in the two preceding weeks, further declined to 18.0 last week. The rates in the several towns ranged from 10.2 in Croydon, 10.3 in Derby, 10.7 in Halifax, and 11.1 in Swansea to 20.2 in Leeds and in Leicester, 24.3 in Blackburn, 24.9 in Bristol, and 25.1 in Liverpool. In the thirty-two provincial towns the mean death-rate was 18.5 per 1,000, and exceeded by 1.2 the rate recorded in London, which was 17.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the death-rate was equal to 2.3 per 1,000, while it averaged 1.9 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.3 in Salford and in Sheffield, 3.6 in Birkenhead, 3.7 in Leicester, and 4.6 in Blackburn. Measles caused a death-rate of 1.1 in Bradford and in Hull, 1.2 in Salford, and 2.7 in Birkenhead; scarlet fever of 1.0 in Oldham; whooping-cough of 1.0 in Salford; and "fever" of 1.2 in Wolverhampton, in Blackburn, and in Sheffield, and 2.0 in Nottingham. The mortality from diarrhœa showed no marked excess in any of the large towns. The 135 deaths from diphtheria in the thirty-three towns included 68 in London, 10 in Sheffield, 7 in Leicester, 7 in Leeds, 6 in West Ham, and 6 in Liverpool. Two fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday last. November 11th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,538 to 3,539 at the end of the ten preceding weeks, had further risen to 3,564 on Saturday last; 328 new cases were admitted during the week, against 447, 414, and 331 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, November 11th, 877 births and 526 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17.3 to 18.8 per 1,000 in the three preceding weeks, declined again to 17.0 last week, and was 1.0 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 12.2 in Paisley and 14.9 in Aberdeen, to 20.3 in Perth and 20.5 in Greenock. The zymotic death-rate in these towns averaged 1.4 per 1,000, the highest rates being recorded in Glasgow, Paisley, and Greenock. The 252 deaths registered in Glasgow included 7 from measles, 2 from scarlet fever, 3 from diphtheria, 5 from "fever," and 7 from diarrhœa. Two fatal cases of "fever" were registered in Edinburgh, in Dundee, and in Paisley; and 2 deaths from diarrhœa occurred in Edinburgh and in Dundee.

PUBLIC VACCINATIONS IN SCOTLAND.

IN DOUBT asks whether he is entitled to pay for the use of a room, say in an inn, for the purpose of vaccinating.

*** As this is a doubtful point, and the parish auditor might refuse to pass the charge, the best course would be to ask the question of the Secretary of the Local Government Board, Edinburgh. It should be explained that the inn is the most convenient centre for vaccinating purposes.

DUTIES OF M.O.H. UNDER THE NOTIFICATION ACT.

M.O.H. asks: Is a medical officer of health justified in seeing a case notified so as to be able to advise his council to take proceedings under the Notification Act?

*** He should inform the practitioner, if there be one in attendance, of his proposed visit, and ask him to accompany him. "Proceedings" are not usually the best method of getting the Notification Act carried out most efficiently. Medical men are usually willing to explain any apparent neglect if applied to in a friendly spirit. They are not willingly law-breakers.

DIPHTHERIA: EXAMINATION OF SCHOOL CHILDREN.

BROOK STREET asks: What would be a proper fee to charge a Town Council for visiting a school and examining all the children's throats during an epidemic of diphtheria? Any child found suffering from sore throat would have to be excluded from school and notification made to the medical officer of health.

*** If the outbreak is really an "epidemic" the schools ought probably to be closed. The word "epidemic" is, however, often somewhat loosely used to signify a mere prevalence. We are not told if the certification of cases is to be paid for separately, or whether a bacteriological examination is to be made of the secretions of the throats. For a merely ocular (we were about to say "clinical") examination perhaps a fee of 1s. a head, with say 5s. added for each school visited, would suffice. There should be a minimum of say 10s. a school. We think whatever charge is made should include fees to be paid by the same body for certificates. There should be no possibility afterwards of an accusation that cases were certified for the sake of extra fee. The council should also be asked to protect and indemnify the practitioner against any prosecution for acting as they request. The examination of a child's throat without the previous consent of the parent might be held to be a technical "assault."

ALTERATION OF DISTRICT OF POOR-LAW MEDICAL OFFICERS.

R. H. writes: A. and B. are two district medical officers in a large town. About six years ago the districts were rearranged, and both A. and B. then signed forms accepting the districts allotted to them. B. now says that he has more than his share of work, and asks the guardians to again rearrange the districts. A. wishes to know whether the guardians can legally compel him again to alter his district against his wishes.

*** By Art. 5 of Medical Appointments Order of the Local Government Board, dated May, 1857, which is as follows, it is evident that further alteration of districts can be made:

"Where a change in the extent of the district of a medical officer shall be deemed necessary for the more convenient supply of medical relief to the poor, or otherwise for the general benefit of the union, and he shall decline to acquiesce therein, the guardians may, with the consent of the Local Government Board, but not otherwise, and after six months' notice in writing given to such medical officer, determine his office."

THE PLAGUE.

PREVALENCE OF THE DISEASE.

PORTUGAL.

Oporto.—The plague returns for the week ending November 11th show that 11 fresh cases of plague and 7 deaths from the disease occurred in the city of Oporto. The total cases and deaths from plague since the outset are 236 and 81 respectively. This is the first definite statistical announcement that has reached us for some weeks, and the number of cases recorded demonstrate the fact that plague is persisting, with a tendency to increase. It was hoped that the cooler weather would have brought about a remission of the disease at least, but this does not appear to be the case. It is satisfactory to note that Dr. Gomes da Silva, the colonial surgeon in Macao, a Portuguese island on the China coast some thirty miles from Hong Kong, is in Oporto. Dr. Gomes da Silva has had a very large experience of plague, and his advice at the present moment should prove invaluable. An interesting account of the plague in Oporto is published in this month's *Nineteenth Century*. The writer states that many of the facts were supplied by Dr. Ricard Jorge, medical officer of health to the municipality of Oporto, and he adds: "I am glad to have this opportunity of paying a sincere tribute of admiration to the ability, zeal, and courage with which Dr. Jorge has discharged the duties of a most difficult and thankless position."

Lisbon.—It is with great regret that we hear of the death of Dr. Camara estana, the distinguished director of the Lisbon Bacteriological Institute, from plague. Dr. Pestana is supposed to have contracted plague in Oporto whilst attending to his professional duties there. The attack was serious from the first. The King of Portugal visited Dr. Pestana in the Arroyas Hospital, which has been specially arranged for plague patients At Lisbon every precaution is being taken. Some 60 persons who inhabit the same house as Dr. Pestana were sent to the lazaretto on the other side of the Tagus for 12 days' quarantine, and the doctor who attended him will be subject to the nine days' sanitary observation.

Braga.—At Braga, a town some 35 miles north-east of Oporto, 2 cases of plague are reported. Whilst announcing this apparent extension of plague, there is as yet no cause for scare, as neither in Lisbon nor in Braga has plague got a firm hold; the cases being merely isolated instances of infection contracted in Oporto.

ALGERIA.

In various places in Algeria suspicious cases of illness have occurred, which in their symptoms resemble bubonic plague. An official statement by the French authorities, however, is to the effect that "of the suspicious cases all but one proved not to be cases of plague. As soon as the doubtful cases occurred, sanitary and quarantine measures were adopted."

INDIA.

For the week ending October 21st the mortality from plague in all India fell from 5,806 to 5,156. In Bombay city the deaths fell from 125 to 101, and in Karachi from 7 to 3, and in the Bombay Presidency the number of deaths from plague decreased from 5,303 to 4,427. In the Madras Presidency a few deaths from plague only are recorded. In Calcutta the plague records show an increase in the numbers as compared with the previous week, being 40 and 47 respectively. At Poona the number of plague cases is rapidly diminishing, and in the European Plague Hospital on October 23rd 4 cases only remained. At Rangoon a native attached to the West Riding Regiment was seized with plague; he had come with the regiment from Bangalore.

Restrictions on Pilgrims to Mecca.—The Government of India does not think it necessary to prohibit the pilgrimage from districts uninfected by plague during the approaching pilgrim season, but considers it essential that careful precautions should be observed. Certain districts are named from whence no person is to be allowed to embark. The authorities have issued orders that no person shall be allowed to embark from Mecca except from the port of Chittagong, and only after being kept under observation for a stipulated period. The Government also warns pilgrims that owing to the stringent regulations imposed by the Turkish Government at the port of Mecca, it would save possible disappointment were the pilgrimage deferred.

MAURITIUS.

For the week ending November 9th 87 fresh cases of plague occurred in Mauritius, and 72 deaths from the disease.

SOUTH AFRICA.

The official statement that Lourenço Marques, the port of Delagoa Bay[a] has been declared infected is noted elsewhere.

BRAZIL.

Santos.—Cases of plague continue to occur at Santos, and it is significant that on board the ss. *Berenice*, proceeding from Brazil to Trieste, 3 persons died of plague.

HOSPITAL AND DISPENSARY MANAGEMENT.

EDINBURGH ROYAL INFIRMARY.

THE managers have appointed Dr. J. Stewart Fowler clinical tutor to Dr. Affleck's wards during the present winter and the following summer sessions. They have also made the following appointments for six months as from October 1st:—George Lyon, M.B., Ch.B., resident physician to Professor Greenfield, and Joseph Hunter, M.B., Ch.B., resident physician to Dr. Andrew Smart; W. M. Paul, M.A., M.B., Ch.B., resident surgeon to Dr. C. W. MacGillivray; J. Mattheson Cullen, M.D., non-resident house surgeon to Mr. F. M. Caird; R. M. Rowe, M.B., Ch.B., was appointed clinical assistant to Professor Greenfield; R. J. Johnston, M.B., C.M., to Dr. J. Murdoch Brown; Charles Heron Watson, M.A., M.B., Ch.B., to Dr. C. W. MacGillivray; and Thomas Paul Gray, M.D., to Dr. P. M'Bride. In regard to the appointment of clinical tutors, Miss Stevenson asked whether a woman clinical tutor might not be appointed to the women's ward. The matter was remitted to the Medical Managers' Committee. Drs. Geo. Elder, J. G. Cattanach and J. M. Beattie have been appointed clinical tutors to the professors of medicine, and Dr. Fordyce clinical tutor in the University Gynæcological Ward for the year from October 1st. Charles H. J. Watson, M.B., Ch.B., has been appointed non-resident clinical assistant to the eye wards, under the care of Mr. George Berry.

ROYAL ALBERT ASYLUM, LANCASTER.

THE annual meeting of this charitable institution for idiots and imbeciles of the northern counties was held on October 24th at the Town Hall, Leeds. From the thirty-fifth annual report then presented, it appears that on June 30th, 1899, there were 588 patients in the asylum, namely, 390 boys and 198 girls, and that the average number resident during the previous twelve months had been 576. A fair number of the patients who had been discharged were capable of doing useful work; but much depended on their friends being able to obtain suitable employment for them The Principal (Mr. Diggens) urges the desirability of some public provision for the permanent care of such as cannot adequately be provided for by their relatives. Amongst other discharged patients earning their living, the case of one lad who joined a Hussar regiment now serving in South Africa was specially referred to. The Home for Feeble-minded Girls in connection with the asylum built by the late Sir Thomas Storey, had proved a most valuable auxiliary to the institution. An extension of the south wing of the main building was now in progress to provide separate accommodation for fifty epileptics and fifty crippled and feeble patients. The receipts from all sources during the year on maintenance account had been £20,857 12s.; and £1,041 10s. had been added to the sustentation fund.

The report of the medical superintendent, Dr. Telford-Smith, states that 81 patients had been admitted during the twelve months, 65 had been

discharged, and 10 had died. There had been no serious epidemic disease, and the death-rate had been low—namely, 1.73 per cent. on the average number resident. During the last three years the average death-rate had been no more than 1.6 per cent., less than that of the general population. Of the 10 deaths 5 seem to have been from tuberculous disease (2 from general tuberculosis, 1 from phthisis, and 2 from meningitis). The detached infirmary had been of great service not only as a hospital, but as a sanatorium where open-air treatment could be carried out; 59 patients had suffered from epilepsy, and 3,978 fits had been recorded during the year. In conclusion the medical superintendent refers with regret to his own impending retirement, a regret which will be shared by all who are familiar with the good work (scientific and otherwise) done by Dr. Telford Smith at the Royal Albert Asylum.

LOWESTOFT HOSPITAL.

At the recent annual meeting of the governors of the Lowestoft Hospital there was a large attendance. Sir Savile Crossley, Bart., who presided, stated that there had been some friction between Mr. H. Bournes Walker, the senior surgeon, and Miss Howes, the matron, and that the former had sent in his resignation after eighteen years of service. The House Committee had inquired into the question, and had come to the conclusion that the differences between Miss Howes and Mr. Walker were of a personal character, and they had earnestly desired Mr. Walker to abandon his intention to resign, Miss Howes in the meantime undertaking to give him greater satisfaction in the future. Mr. Walker, however, declined to abandon his intention to resign unless the matron was dismissed. The Committee, having failed to adjust matters, a special Committee of Investigation was appointed by the governors, and at an adjourned meeting of the governors this Committee, after going through each charge separately, concluded as follows:

"Your Committee having carefully investigated the evidence and arrived at the decisions already stated, are of opinion that there were grounds to justify the further inquiry, and consider that an apology is due to Dr. Walker from the matron for using disparaging remarks about him, and permitting others to make the same in her presence without reproof; and they further consider that an apology is due to Dr. Evans from the matron for not attending upon him when requested. The Committee, in the interests of the institution, strongly appeal to Dr. Walker to withdraw his resignation of the post of senior surgeon."

After the reading of the Committee's report the President stated that Mr. Walker had said to him that, yielding to great pressure, he would withdraw his resignation. After some discussion Mr. Walker said that in the interest of the hospital he did not wish for Miss Howes's apology, and one of the governors said that Miss Howes had desired him to say that she regretted having used the expressions. This seems to be the most satisfactory termination of the difficulty possible.

THE LEICESTER AND RUTLAND LUNATIC ASYLUM.

The Commissioners in Lunacy in their report as printed in the annual report of this asylum, comment upon the resolution of the County Councils to build a new asylum and relinquish the present building, and express the hope that a suitable site for the contemplated new asylum will soon be found. Additional room for the pauper insane of the two counties is much needed, as is shown by the fact that not only is the present asylum overcrowded, but that 38 female patients who should be accommodated in their home asylum are boarded out in others. A site at Nasborough has been inspected by the Commissioners and favourably reported on. During the year 1898 there were 40 patients admitted and the recovery-rate was 31.3 per cent. The death-rate was only 7.6 per cent., calculated upon the total number under treatment, which Mr. Rothsay Stewart, the medical superintendent, regards as a very low one, considering the crowded state of the asylum.

EMSWORTH VICTORIA COTTAGE HOSPITAL.

The new hospital, which stands in a prominent position, and was opened by Sir S. Wilks in the autumn of 1898, has proved a marked success. The number of admissions has increased to 53, the highest previous number for a year in the old cottage premises having been 32. The number of subscribers in the year ending September 30th, 1899, trebled itself; and the annual subscriptions in the same time were almost double those of the previous year. Twenty-two operations were performed in the thirteen and a-half months that succeeded the opening of the hospital. In two cases of fractures the *x*-ray apparatus was used by the honorary radiographer, whose services the hospital has been so fortunate as to secure.

WORCESTER CITY AND COUNTY LUNATIC ASYLUM.

At the end of 1898 31 more patients were in the Asylum than at the commencement, and the average number resident was 1,096. There were 206 patients admitted; of these 162 were either in indifferent health and reduced condition, or were in bad health and suffering from exhaustion, and 18 were suffering from general paralysis. Fifty-seven patients were discharged "recovered," giving a percentage of only 29.68 calculated upon the number admitted. This is the lowest recovery rate recorded for the last ten years. The death-rate was 9.67, calculated upon the average number resident. Of the 106 deaths 52 are recorded as resulting from "disease of the heart and lungs." It would be well to separate these causes in future, in order that the incidence of tuberculosis might be worked out. A married woman admitted pregnant was confined of twins. The admission of private patients continues. During the year 12 were admitted, 7 discharged, and 3 died. Fifty-one remained on the books at the end of the year. Dr. Braine-Hartnell calls attention to the fact that although the new wards have been occupied by female patients the female side of the Asylum is overcrowded to the extent of 12 patients, and he is of the opinion that a second asylum should be put in hand without any delay, as long before it would be ready for occupation accommodation for the surplus population would have to be found elsewhere.

MEDICAL NEWS.

We understand that Mr. J. W. Stephens and Dr. R. S. Christophers, members of the Royal Society expedition on malaria have returned home, but that they may possibly at a subsequent date proceed to the West Coast of Africa.

The Hamilton Association for Providing Trained Male Nurses will keep open the places of those of their nurses who have been transferred from the Reserve to the Colours for service with the R.A.M.C. in South Africa.

The annual meeting of Livingstone College will be held on Thursday, November 23rd, at the Memorial Hall, Farringdon Street, when the chair will be taken by the Bishop of Tugwell at 5.15 P.M. The executive of the College are arranging to hold at St. Martin's Town Hall during the first week of January an exhibition of articles which may help towards the promotion of the health and comfort of missionaries and travellers.

Home for Inebriate Women.—The Women's Union of the Church of England Temperance Society for the diocese of Worcester, which includes the counties of Worcester and Warwick, are about to open a voluntary inebriates' home for women at Halesowen near Birmingham. The home will provide accommodation for 30 patients in three grades—drawing-room patients at £1 1s. a week, workroom patients at 10s. 6d. a week, and kitchen patients at 7s. 6d. a week.

The Dental Hospital of London.—The annual dinner of the Staff and Past and Present Students will be held on Saturday, December 2nd, at the Hôtel Métropole (Whitehall Salon) under the presidency of Mr. Alfred Coleman. We are asked to say that gentlemen, either now or formerly connected with the hospital or medical school, who may, through inadvertence, not have received special notice, and who desire to be present, are requested to communicate with the Dean at the Dental Hospital, 40, Leicester Square.

The Wellcome Physiological Research Laboratories at Herne Hill, which are now approaching completion, are under the managment of Dr. Dowson, and he is to be congratulated on the site which has been acquired by the owners of the undertaking, Messrs. Burroughs, Wellcome and Co. The premises consist of a country mansion standing in its own grounds, called Brockley Hall, which has been suitably altered for the accommodation of the bacteriological, chemical, and other departments.

British Medical Temperance Association.—The annual breakfast given by the Council of the British Medical Temperance Association to the medical students of medical schools in London, was held at the Cannon Street Hotel on November 9th, and was attended by between 60 and 70 students, the London Hospital and the School of Medicine for Women being most numerously represented. Professor Sims Woodhead presided, and short speeches were made by Dr. Hingston Fox, Dr. Heywood Smith, Mr. McAdam Eccles, and the Honorary Secretary, Dr. Ridge. Several students present joined as student associates.

Election of Mayors.—In the list of mayors elected in the principal cities and towns on November 9th for the ensuing year occur the names of the following members of the medical profession: *Bishop's Castle:* Dr. Selwyn H. Buckle. *Blackpool:* Dr. George C. Kingsbury. *Bolton:* Alderman J. E. Scowcroft, M.D.St. And. *Carnarvon:* Alderman W. J. Williams, L.R.C.P.Edin., L.F.P.S.Glasg. *Cheltenham:* Alderman George Norman, M.B., B.S.Durh., re-elected. *Conway:* Dr. M. J. Morgan, re-elected. *Devizes:* Dr. Robert Beattie. *Harrogate:* Dr. J. A. Myrtle, J.P. *Newark:* Dr. F. H. Appleby. *Pwllheli:* Alderman Wynne Griffith, L.R.C.P., L.R.C.S.Edin. *Tamworth:* Mr. A. M. Sculthorpe, re-elected. *Worthing:* Mr. Frank Parish, J.P., re-elected. Mr. W. A. Churchman has been elected Mayor of Ipswich.

The Royal Orthopædic Hospital.—The occasion of the completion of the redrainage of this hospital and of the execution of extensive repairs afforded an opportunity for the Earl of Denbigh (the President) and the Countess of Denbigh, to hold an At Home on November 13th at the hospital. It will be remembered that the Hospital Committee recom-

mended the rebuilding of the hospital on another site, but this proposal was not accepted at a general meeting. The present Committee of Management, at the cost of £2,000, have now carried out various alterations and repairs. The old board floorings of the wards have been washed with perchloride of mercury (1 in 200), and an oak parquet of plain herringbone pattern has been placed upon them. All superfluous ornamentations on the walls and ceilings have been removed, and where possible structural changes have been carried out under the direction of Messrs. Young and Hall for the purpose of securing more light and air. To remedy the serious insanitary condition, the advice of Professor Corfield has been sought, with the result that the old drains have been removed, new drains have been laid down, and the sanitary arrangements generally have been remodelled. The difficulty in regard to lavatories and bath rooms has been met as far as possible, and the room appropriated for operations has been renovated.

MEDICAL VACANCIES.

The following vacancies are announced:

BELFAST: FORSTER GREEN HOSPITAL FOR CONSUMPTION.—House-Physician. Applications to Honorary Secretary, Staff, Forster Green Hospital, Fortboda, Belfast, before November 24th.

BIRMINGHAM CITY ASYLUM.—Junior Assistant Medical Officer; unmarried and under 30 years of age. Salary commencing £100 per annum, with board, apartments, washing, and attendance. Applications to the Medical Superintendent.

BIRMINGHAM: GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. Residence, board, and washing provided. Applications to the House Governor by November 25th.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary to commence at £60 per annum, with board, washing, lodging, etc. Applications to the Secretary, 15, Richmond Terrace, Blackburn, by November 27th.

BRISTOL GENERAL HOSPITAL.—Assistant Physician. Applications to the Secretary by November 22nd.

BURY ST. EDMUNDS: SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £130 a year, with board, lodging, and washing. Applications to the Secretary by November 20th.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer; unmarried. Appointment for twelve months. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Secretary, 13, Guildhall Square, Carmarthen, by December 1st.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Board and residence provided. Applications to the Secretary by December 12th.

CITY OF LONDON UNION.—Assistant Medical Superintendent for the Infirmary, Bow Road. Must not be more than 35 years of age. Salary, £150 per annum, with furnished apartments, rations, and washing. Applications, on forms provided, to be sent to the Clerk to the Guardians, 61, Bartholomew's Close, by November 20th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—House Physician. Board and residence, etc., provided. Honorarium of £25 on completion of six months' service. Applications to the Secretary by December 9th.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months, eligible for senior post on vacancy. No salary, but board, lodging and washing provided. Applications to the House-Surgeon.

FLINTSHIRE DISPENSARY.—Resident House-Surgeon. Salary, £120 a year, with furnished house, etc. Applications to the Secretary, Bagillt Street, Holywell, by November 28th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street.—Resident Medical Superintendent. Appointment for one year, subject to annual re-election. Salary, £105 a year, with board and residence. Applications to the Secretary by November 21st.

HOXTON HOUSE ASYLUM, N.—Clinical Assistant. Honorarium, £50 a year, with board, lodging, and washing. Applications to the Medical Superintendent.

LEEDS GENERAL INFIRMARY.—Honorary Obstetric Physician. Applications, marked "Private," to be sent to the Treasurer by November 28th.

LINCOLN: BRACEBRIDGE ASYLUM.—Junior Assistant Medical Officer; unmarried, and not over 30 years of age. Salary, £125 per annum, with furnished apartments, board, attendance, etc. Applications to Mr. W. T. Page, jun., 5 and 6, Bank Street, Lincoln, by November 25th.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL, Park Hill.—Resident Medical Officer. Unmarried and must not exceed 30 years of age. Salary £120 per annum, increasing to £140 with board, washing, and lodging. Applications, endorsed "Resident Medical Officer," to be addressed the Chairman of the Port Sanitary and Hospitals Committee, under cover to the Town Clerk, Municipal Offices, by November 20th.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer, not less than 25 years of age and unmarried. Salary, £150 per annum, with board and residence. Applications to the General Superintendent by December 2nd.

NORTHAMPTON GENERAL INFIRMARY.—Qualified Assistant to the House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium of £25. Applications to the Secretary by November 30th.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer; unmarried. Salary, £125, with board, apartments, and washing. Applications to the Medical Superintendent by November 20th.

OXFORD EYE HOSPITAL.—House-Surgeon. Honorarium £50 on completion of a year's residence, with board and lodging. Applications to the Honorary Secretary, 29, Banbury Road, Oxford, by November 30th.

OXFORD: RADCLIFFE INFIRMARY.—Surgeon. Applications to the Secretary by November 25th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Three members of the Court of Examiners. Must be Fellows of the College. Applications to the Secretary by December 6th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Assistant Physician, must be F. or M.R.C.P.Lond. Applications to the Secretary by December 16th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Assistant Physician; must be F. or M.R.C.P.Lond. Applications to the Secretary by December 5th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—Clinical Assistants. Applications to the Secretary by November 25th.

SALOP COUNTY COUNCIL.—County Medical Officer of Health. Salary, £750 per annum. Applications to the Clerk, Shirehall, Salop, by December 27th.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—House-Surgeon; unmarried. Salary, £50 per annum, with board, lodging, and washing. Applications to Dr. Martin, Claremont Place, Sheffield, by November 18th.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, washing, and lodging. Applications to the Hon. Sec., Bank Buildings, Taunton, by November 29th.

THROAT HOSPITAL, Golden Square, W.—Junior Resident Medical Officer. Appointment for six months, but renewable. Salary, £50 per annum. Applications to the Secretary by December 10th.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Medical Officer to the Provident Dispensary. Salary, £90 per annum, with board, lodging, and washing. Applications to the Hon. Secretary by November 28th.

WORCESTER GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications to the Secretary, Worcester Chambers, Pierpoint Street, Worcester, by November 25th.

MEDICAL APPOINTMENTS.

BAKER, John, M.B., C.M.Aberd., appointed Deputy Superintendent, State Criminal Lunatic Asylum, Broadmoor, *vice* John S. Isaac, M.D.R.U.I., resigned.

BROCKBANK, Edward Mansfield, M.D.Vict., M.R.C.P.Lond., appointed Honorary Physician to the Ancoats Hospital, Manchester.

EMERY, W. d'Este, M.D., B.Sc.Lond., M.R.C.S., L.R.C.P., appointed Assistant Surgeon to the Birmingham and Midland Skin and Urinary Hospital.

FORWARD, E. L., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Officer to the Coppice Asylum, Nottingham.

MONTGOMERY, W. P., M.A., B.S. & M.B.Lond., F.R.C.S., appointed Honorary Surgeon to the Ancoats Hospital, Manchester.

PARSONS, C. T., M.D.Lond., appointed Medical Superintendent to the Fulham Infirmary.

RICHARDSON, I. B., M.R.C.S., L.R.C.P.Lond., appointed Assistant House-Physician for the General Hospital, Birmingham.

SAVAGE, Smallwood, M.A., M.B., B.A.Oxon., F.R.C.S.Eng., appointed Honorary Surgeon to the Birmingham Lying-in Charity.

SCHOLEFIELD, G. E., M.D., D.P.H., reappointed Medical Officer of Health to the West Lancashire Council.

SQUIRE, M. F., M.B.Durh., and B.S., appointed Medical Superintendent of the Infirmary and Medical Officer of the Workhouse of the Parish of Paddington, *vice* T. E. Hillier, M.B.

WESTMACOTT, F. H., F.R.C.S., appointed Honorary Aural Surgeon to the Manchester Children's Hospital, Pendlebury.

WILDE, Leonard, M.D., reappointed Medical Officer of Health to the Bedfordshire County Council.

YOUNG, David J., M.B., Ch.B.Glasg., appointed Casualty Surgeon of the St. Rollox Division of Police, Glasgow.

DIARY FOR NEXT WEEK.

MONDAY.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Mr. Wyatt Wingrave: The Normal Anatomy of the Nasal Cavities.

TUESDAY.

Chelsea Clinical Society, Trinity Parish Hall, Pavilion Road, Sloane Square, S.W., 8.30 P.M.—Paper by Mr. E. Mitch Smith: The Use of Baths in Skin Diseases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Consultation (Medical), Sir William H. Broadbent.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. Buzzard: Selected cases.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 4 P.M.—Dr. Harry Campbell: Cases of Muscular Rigidity, Tonic and Clonic.

Pathological Society of London, 20, Hanover Square, W., 8.30 P.M.—Dr. F. W. Mott, F.R.S., will read a paper, illustrated by the lantern and by microscopical preparations, on the Pathology of Tabes and its Relation to General Paralysis. The following gentlemen and others are expected to take part in the discussion: Sir William Gowers, Dr. Alexander Bruce of Edinburgh, Dr. Hugh Anderson of Cambridge, and Drs. Buzzard, Payne Ferrier, Salaman, Ormerod, Hale White, Head, Batten, Risien Russell, and Purvis Stewart.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Dr. Woakes: Necrosing Ethmoiditis.

WEDNESDAY.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Habershon: Cases Illustrating the Causes of Cardiac Hypertrophy.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 3 P.M.—Clinical Bacteriology (King's College) Class, Demonstration I, Dr. J. C. Nash.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 P.M.—Informal exhibition of cases at 4.30 P.M.

THURSDAY.

Central London Throat, Nose, and Ear Hospital, 5 P.M.—Dr. Dundas Grant: Treatment of Inflammatory and Specific Affections of the Nose.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Mr. Collier: The Treatment of Club Foot.

Charing Cross Hospital. Post-Graduate Course, 4 P.M.—Dr. Willcocks: Medical cases.

FRIDAY.

Clinical Society of London, 8.30 P.M.—Mr. Howard Marsh: A Case of Senile Tuberculosis. Mr. Arthur E. Barker: A Case of Excision of the Cæcum for Carcinoma of the Ileo-Cæcal Valve and Obstruction. Dr. Charles W. Chapman: A Case of Obstruction of the Inferior Vena Cava, probably Syphilitic (with Patient).

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Consultation (Ear and Throat), Dr. Dundas Grant.

Central London Throat, Nose, and Ear Hospital, 4.30 P.M.—Mr. Waggett: Diseases of the Accessory Sinuses.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

DOWN.—On November 6th, at 14, Mount Edgcumbe Terrace, Stoke, Devonport, the wife of Edgar Down, M.R.C.S., of a daughter.

MARRIAGES.

MUSGROVE—ROGERS.—On November 11th, at the Parish Church, Pangbourne, Berks, by the Rev. G. S. Lee, Rector of Bennisworth, Lincoln (uncle of the bride), assisted by the Rev. Canon Miles, Vicar of the Parish, Charles D. Musgrove, M.D., Penarth, S. Wales, to Ethel Francis, eldest daughter of J. Price Rogers, Orgside, Pangbourne.

REVIE—MARSHALL.—On November 8th, at Wellesley Square Free Church, Calcutta, by the Rev. David Reid, B.D., assisted by the Rev. W. B. White, B.A., sylhet, the Rev. Dugald Revie, M.B., C.M., of the Free Church of Scotland Mission, Wardha, C.P., India, to Louisa, second surviving daughter of the late Thomas Torrance Marshall, Edinburgh. (By cable.)

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 3.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 3; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 3. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; 1.p., 1; o.p., 12; Obstetric, 1.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 3; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9. Electro-Therapeutics, M. Th., 3.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynecological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynecological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 3; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MR. W. G. NASH (Bedford) wishes to know the latest opinions as to what disease in the cow will produce scarlet fever in human beings.

L. asks for names of cottage hospitals charging maintenance and professional fees to patients of means admitted for accidents.

X. Y. Z. asks for advice in the treatment of a male child, aged 3 months, who suffers from obstinate constipation. His bowels have never acted naturally, and an enema is required daily. All the usual remedies have been tried.

MOUNTAIN SICKNESS.

N. O. asks: Is bleeding from the ears a symptom of mountain sickness?

*** Yes. See Paul Bert, *La Pression Barométrique*, p. 344.

LEAD POISONING.

VERITAS asks to be referred to information on lead poisoning as affecting enamel workers.

*** Our correspondent should consult the Report of the White Lead Commission, published by Messrs. Eyre and Spottiswoode.

CLUB RATES.

INQUIRER asks our advice as to the acceptance of a lodge. He is asked to quote terms for three classes of members: (1) Adult males, ages 16 to 30; (2) adult females, 18 to 45; (3) juvenile males and females, ages 5 to 18.

*** Our correspondent should only accept healthy male adults after proper medical examination, and at a rate not under 1s. a quarter. Female and juvenile members, if accepted at all, should be at a distinctly higher rate.

TEXTBOOK ON CHEMISTRY.

STUDENT writes: What is the best book on practical chemistry for a pass in Intermed. M.B. Univ. Lond.?

*** A little book by Dr. Samuel Rideal, published by H. K. Lewis, pro- contains all that is required for the analytical part of the Practical Chemistry Examination for the Intermediate M.B. Pass (London. The organic preparations must be made under the direction of a competent teacher, though several of the textbooks on organic chemistry (for example, Remsen) give brief directions for making a few preparations.

INSURANCE FEES.

H. W. I. writes: 1. What is one's proper course under the following circumstances? I was asked to examine two lives for insurance. The fees stated on the examination form are 10s. 6d. for all cases under £500, and £1 1s. above and including £500. One of these lives has been declined after my examination, and the company's agent has handed me a cheque paying the full fee for the accepted case, and one-half fee for the declined case. Am I justified in accepting the half fee, and thereby encouraging a system that seems to put a premium on careless or inadequate examination? Might I also ask: 2. If there are many companies that adopt this practice? ought they to be encouraged by the profession?

*** (1) Our correspondent is justified in refusing to accept the half fee. It is quite contrary to the principles of life assurance to allow the amount of the fee to depend upon whether the life is accepted or declined. (2) We doubt whether any good company would sanction such a practice. Our correspondent should write to the London manager and point out the drawbacks to the practice.

ANSWERS.

VASOGEN should communicate with the Dean of the Medical School of which he proposes to become a student.

COLONIAL.—The question has been again and again discussed in previous issues of the BRITISH MEDICAL JOURNAL, to which we would refer our correspondent.

ZEPHYR.—Hilton's *Rest and Pain*, 5th edition, 1892, is published by Messrs. Bell and Sons, York Street, London, W.C., price 9s.; and South's *Memorials of the Craft of Surgery*, 1886, by Messrs. Cassell and Co., price 21s.

DR. MCCONNELL.—We know of no monograph on gonorrhœa and its complications recently published in this country. Information relating to the affection and its complications will be found in recent works on general surgery, as, for instance, Rose and Carless, and Treves (*A System of Surgery*, vol. i). If a special treatise be needed we would recommend *Genito-Urinary Surgery*, by White and Martin (Lippincott Company). Bumstead's work on the *Pathology and Treatment of Diseases of the Urinary Organs*, though much older, will be found very useful.

REMOVAL OF LEAD FROM WATER BY FILTRATION.

D.M.—We have referred our correspondent's question to Professor Sims Woodhead, who writes: If the filter is required merely for the purpose of removing lead, probably the best form to use is one of Barstow's stone filters, or a filter to be obtained from Mr. S. Dawson, Westgate, Huddersfield, which is also said to act efficaciously in removing lead from water.

MEDICAL APPOINTMENTS TO CLUBS.

PERPLEXED wishes to modify the statement of facts recently submitted to us. He writes that "a contribution of so much a week is retained from each employee of a company at the company's office, and handed to a medical man who was appointed by a majority five years ago. Any employee can at any time refuse to allow his contribution to be de-

ducted from his wage. Since the remuneration was increased by 50 per cent., a substantial minority has signed a petition to be presented to the directors of the Company asking to be allowed to choose whether their subscriptions shall be handed to A. or B. Would it be a breach of etiquette for B. to accept the contributions?

*** Under the circumstances represented it would not be a breach of etiquette for B. to accept these contributions.

THE COURTESY CALL.

J. E.—The rule about which our correspondent questions us only obtains in comparatively small places, or applies only to the medical practitioners in a particular neighbourhood. Where it is the custom for the newcomer to call upon the already established practitioners, we can see no reason why, in the case of a lady doctor, this custom should be altered, but we would suggest that the married practitioners might very well ask their wives to call upon her should she hesitate to take the first step.

BIBLICAL MEDICINE.

P. M. writes: A small book on *The Diseases of the Bible* by Sir Risdon Bennett, M.D., LL.D., F.R.S., third edition (London: Religious Tract Society, 1895. 2s. 6d.) contains numerous references to other sources of information. The same society also published in 1894 a book on *The Sanitary Code of the Pentateuch*, by the Rev. C. G. K. Gillespie. (2s.)

DR. CORDES (Geneva) also writes to recommend Sir Risdon Bennett's book.

DR. J. BENSON COOKE (Rochester) writes to say that the following is fairly comprehensive in the department of hygiene: *Bible Hygiene, or Health Hints.* By a Physician. Hodder and Stoughton. 1878.

THE APOTHECARIES' ASSISTANTS' EXAMINATION.

INQUIRER.—The Apothecaries' Assistants' Examination includes the translation of prescriptions, the compounding and dispensing of medicines, and an oral examination in chemistry, materia medica, and pharmacy. Attfield's *Chemistry* (15s., Gurney and Jackson), Dr. Hale White's *Materia Medica* (7s. 6d., Churchill), Squire's *Companion to the British Pharmacopœia* (12s. 6d., Churchill), *The Art of Dispensing* (3s. 6d., *Chemist and Druggist* Office) and Ince's *Latin Grammar of Pharmacy* (5s., Baillière) will be found suitable books for the candidate. Instruction for this examination can be obtained at some of the schools of pharmacy advertised in the *Pharmaceutical Journal.*

A QUESTION IN PRESCRIBING.

DR. HUBERT T. SELLS (Northfleet) writes: I am very much surprised at the letter on the above subject in the BRITISH MEDICAL JOURNAL of November 11th. If Dr. Roger Edwards had dispensed pure sodium salicylate with carbonate of ammonia himself, or seen the result of such a mixture, he would have found that the salicylate is not turned brown, but the resulting mixture is quite clear. Having, unfortunately, had to take sodium salicylate myself, I quite appreciate the depressing effects of that drug, and also the benefit derived by the addition of some carbonate of ammonia. I may say that I have for years been giving carbonate of ammonium or aromatic spirits of ammonia in combination with sodium salicylate with most satisfactory results.

INTRANASAL AND INTRA-AURAL LUPUS.

DR. ARTHUR JOHN HUBBARD (Chiswick, W.) writes: I am surprised to see that in the BRITISH MEDICAL JOURNAL of November 11th there is no answer to "A.K.C.," who in the JOURNAL of November 4th, p. 1331, asks for advice as to further treatment of a case of intranasal lupus. It may interest him to know that I have twice attained thoroughly successful results in the treatment of lupus by the administration of antidiphtherial serum. I believe that this is an entirely new departure in serumtherapy, and I know it is effective. Once a week for eight weeks let "A.K.C." give 2,000 immunity units, hypodermically, and with all the usual antiseptic precautions. The only special precaution necessary in using serum in this way is to be sure that there is no albuminuria or other sign of renal insufficiency. If "A.K.C." should act on my suggestion I shall be extremely obliged if he will let me know the ultimate result. I have no fear about it, but one likes to know.

NOTES, LETTERS, Etc.

MR. FREDERICK JAMES GANT, F.R.C.S., begs to offer his most grateful thanks for the expressions of kind sympathy by letters and cards, far too numerous for personal acknowledgement, which he has received on the death of his devoted wife, in whom the light of his life has gone out.

MOSQUITOS AND MALARIA.

KURSEONG writes: In recent numbers of the BRITISH MEDICAL JOURNAL many of your correspondents have cast doubts on the mosquito theory of malarial fever. They seem to ignore the fact that it is only infected mosquitos that can transmit the plasmodium malariæ. Investigation has shown the species to be *Anopheles.* But even this species must be infected with the plasmodium malariæ to give rise to malarial fever by its bite. If not so infected the bite would not give rise to more than ordinary inconvenience. No one would suggest that rats are the cause of bubonic plague: few doubt they are carriers of plague infection, but a non-infected rat cannot give rise to plague.

"PLANTERS' DOCTORS."

A CORRESPONDENT in India writes, with regard to payment of medical officers to tea plantations in Assam, that he believes it is impossible to cover expenses on a salary of 150 rupees a month; his own experience of the expenses of living in Assam was that it amounted to 250 rupees a month.

QUININE AS AN OXYTOCIC.

MR. THOMAS DIVINE (Dewsbury) writes: I can endorse the remarks of Mr. T. S. Finch Hudson as regards the value of quinine as an oxytocic. In uterine inertia I give quinine in 5-gr. doses combined with hydrobromic acid every half-hour until pains become energetic, which they usually do after the second or third dose. By this treatment, too, after-pains are usually avoided. Where an oxytocic is indicated in inevitable abortion I have had the happiest results from a combination of quinine and ergot, and it is just in such cases that ergot alone so frequently proves disappointing. I have also found quinine, either alone or with opium, to be the best general treatment for severe after-pains.

SPREADING AORTITIS.

DR. T. FISHER (Clifton) writes: The report of my remarks in the discussion on the pathology of infective endocarditis is perhaps misleading. Cases in which the aorta has become infected from acute disease of the aortic segments are common enough, but in rare instances a nodular aortitis spreading to the aortic valve may lead apparently to yielding and rupture, causing a superficial resemblance to the ulcerative form of infective endocarditis. In the current number of the *Edinburgh Medical Journal* this point is briefly referred to in a paper by me.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Association of Registered Medical Women, Secretary of, London. **B** Mr. L. A. Bidwell, London; Dr. E. S. Bell, London; J. W. Batterham, M.B., St. Leonards-on-Sea; Beeston Motor Co., Coventry; Mr. L. Briant, London; Sir W. Broadbent, Bart., London; Messrs. Burroughs, Wellcome, and Co., London; Dr. A. Bronner, Bradford; Mr. A. H. Bird, London; Dr. M. G. Biggs, London; Mr. W. J. T. Barker, London; Mr. J. P. Bush, Clifton; E. C. Baber, M.B., Brighton; F. M. Blumer, M.B., Stafford. **C** Dr. F. C. Coley, Newcastle-on-Tyne; Hon. S. Coleridge, London; A. Cox, M.B., Gateshead; Messrs. J. and A. Churchill, London; Mr. W. R. E. Coles, London; Com. Pounded; Messrs. W. and R. Chambers, London; Dr. J. J. Cursetji, Bombay; Mr. S. Cole, Exeter; Dr. A. Cordes, Geneva; R. Cunliffe, M.B., Blackburn; F. H. Carlyon, M.B., Truro; Mr. E. Curwen, London; Dr. A. E. Cooper, London. **D** Mr. G. H. De'Ath, Buckingham; Sir D. Duckworth, M.D., London; Dr. C. Dukes, Rugby; Mr. A. A. Dighton, Cheltenham; A. F. Dixon, M.B., Cardiff; Dr. E. W. Diver, Shotley Bridge. **E** Eyemes; E. C. **F** Folkestone Medical Society, Secretary of, Folkestone; Dr. P. J. Freyer, London; Mr. W. T. Freeman, Reading. **G** Mr. P. Giles, London; Gray's Inn, M.A., M.B.; Mr. A. S. Greville, London; Mr. F. J. Gant, London. **H** Dr. W. Hutchinson, London; Mr. A. F. Harvey, London; G. Halley, M.B., Dundee; Dr. A. J. Hubbard, London; Mr. F. J. Hart, Much Wenlock; Mr. J. W. Hall, Manchester; Mr. G. H. Henlen, London; Mr. W. H. Hall, Frant; Mr. R. Hunt, Blackburn. **I** Inquirer; Dr. H. W. Irvine, Belfast. **J** Mr. J. B. James, London; J. E.; Dr. E. Jepson, Durham. **K** Kurseong. **L** L. M. C.; Mr. E. M. Little, London; Leeds and West Riding Medico-Chirurgical Society, Secretary of, Leeds; Dr. R. Lee, London; Dr. A. Lustig, Florence; Dr. R. Leigh, Liverpool; Mr. C. E. Lansdown, Cheltenham. **M** Mr. J. D. Macdonogh, Bettws-y-coed; Medicus; Dr. C. R. Marshall, Dundee; Dr. H. J. Macevoy, London; Dr. W. Milligan, Manchester; Dr. J. A. Menzies, Rochdale; Mr. H. G. Moore, London; A. M. Martin, M.B., Newcastle-on-Tyne; Mr. D. W. Mordie, Belfast; N. O. McConnell, M.B., Belfast; C. Martin, M.B., Birmingham; Mr. J. Y. W. MacAlister, London; Mr. W. T. Mills, Rhode. **N** N. O.; Mr. W. G. Nash, Bedford. **O** Obstetrical Society, Secretary of, London; Observer; Mr. F. Ormrod, Workington. **P** Puzzled; P. M., P. C.; R. G. Patteson, M.B., Dublin; J. Patterson, M.B., Ramelton; Mr. J. F. Pink, London; Dr. Posner, Berlin. **R** Royal Medical and Chirurgical Society, Secretary, London; Dr. D. Rennet, Aberdeen; Rosin; Mr. T. F. Raven, Broadstairs; Mr. H. Rainsford, London; Dr. J. J. Ridge, Enfield; Dr. W. R. Rice, Coventry; Dr. W. Rankin, Londonderry; Rural. **S** Subscriber; Dr. W. Sykes, Torquay; Messrs. Street Brothers, London; Mr. P. L. Sclater, London; Mr. K. Schube, London; Mr. N. Smith, London; W. W. Sinclair, M.B., Ipswich; Mr. M. A. Smale, London; Mr. H. T. Sells, Northfleet. **T** Dr. T. R. Taylor, London; Mr. R. F. Tomlin, London; Mr. G. Thorn, Longton; Alderman and Sheriff Treloar, London; Mr. J. Taylor, Chester; Dr. F. J. Tresilian, Enfield; T. P. Teale, M.B., Leeds; Mr. J. L. Thomas, Cardiff. **V** Vasogen; Veritas. **W** W. H. C; Dr. F. Willcocks, London; Dr. R. T. Williamson, Manchester; Mr. N. Wood, London; Dr. C. Watson, Edinburgh; Mr. W. M. Willis, Nottingham. **X** X. Y. Z.

BOOKS, ETC., RECEIVED.

Mental Affections. By J. Macpherson, M.D., F.R.C.P.E. London: Macmillan and Co. 1899. 12s. 6d.

Oysters and Disease. By W. A. Herdman, D.Sc., F.R.S., and R. Boyce, M.B. London: George Philip and Son. 1899. 7s. 6d.

Chirurgie du Foie et des Voies Biliaires. Par J. Pantaloni. Paris: Institut de Bibliographie Scientifique. 1899.

A Manual of Surgery. By C. Stonham, F.R.C.S. In Three Volumes. Vols. I and II. London: Macmillan and Co. 1899. 7s. 6d. each vol.

The X-Ray Case Book for Noting Apparatus, Methods, and Results. By D. Walsh, M.D. London: Baillière, Tindall, and Cox. 1899. 2s.

The Carlsbad Treatment for Tropical and Digestive Ailments and How to Carry it Out Anywhere. By L. T. Young, M.D., B.Ch., B.A. Second Edition. London: W. Thacker and Co. 1899. 6s.

North London or University College Hospital. Reports of the Surgical Registrar for 1891 and 1897. London: H. K. Lewis.

The Medical Digest or Busy Practitioner's Vade Mecum. Third Edition, with Appendix. London: John Bale Sons, and Danielsson. 1899. 25s.

The Diseases of Children, Medical and Surgical. By H. Ashby, M.D., F.R.C.P., and G. A. Wright, B.A., M.B., F.R.C.S. Third Edition. London: Longmans, Green, and Co. 1899. 25s.

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AN ADDRESS

ENTITLED

A MODERN VIEW OF CANCER.

Read at a Meeting of the West Somerset Branch of the British Medical Association.

By GILBERT BARLING, B.S., F.R.C.S.,
Professor of Surgery, Mason University College, Birmingham; Surgeon to the Birmingham General Hospital.

GENTLEMEN,—By the kind invitation of your President, my friend Dr. Macdonald, I have undertaken to give an address at this meeting of your Branch.

What I have to say falls mainly under three heads: (1) The supposed increase in cancer mortality; (2) cancer as a possible infective disease; and (3) its operative treatment.

Increase of Deaths attributed to Cancer.

At a time when the death-rate from almost every disease is diminishing, there is one singular and remarkable exception in the death-rate of cancer. From the records it appears at first sight that there has been during the past forty years or so, and especially during quite recent years, an enormous increase in the deaths from cancer in proportion to the population. This is asserted to be true, not only of our own country but of Continental ones and the United States. One eminent surgeon and pathologist, Dr. Roswell Park, makes the following statement[1]: "A careful study of all these tables permits one to make the following startling prophecy: if for the next ten years the relative death-rates are maintained, we shall find in ten years from now (in 1909) there will have been more deaths in New York State from cancer than from consumption, small-pox, and typhoid fever combined." Truly the picture, if not overdrawn, is an alarming one, enough to scare not only the public but the medical profession also.

I hope I shall make it clear in my paper how hopeful a view I take of the treatment of many forms of cancer by surgical measures. Yet as cancer is in such a large percentage of cases inaccessible to surgery, or in the stage at which it is discovered impossible to attack, we are, if the pessimistic view be correct, left face to face with a rapid increase of a mortal disease, one universally dreaded more than any other, for which we have in the majority of cases no remedy whatever—a truly appalling position. Those who believe in this rapid increase in cancer point to the figures of the Registrar-General. Foremost among them I may place Dr. J. F. Payne. In a recent very interesting paper on the Increase in Cancer,[2] the following table which he quotes gives the figures which appear to justify the belief in a very remarkable increase in cancer:

Mean Annual Death-Rate from Cancer per 1,000,000 Persons Living at Successive Age-Periods, 1851-60 to 1881-90 (England).

	All Ages.	0.	5.	10.	15.	20.	25.	35.	45.	55.	65.	75.
1851-60 ...	317	22	9	9	17	28	103	389	0	1410	1960	2083
1861-70 ...	387	13	7	7	17	29	113	445	1048	1768	2360	2556
1871-80 ...	473	12	7	7	15	27	124	525	1255	2200	3092	3283
1881-90 ...	589	20	10	11	20	35	128	584	1545	2868	4169	4295
Increase per cent.	86	—	11	18	18	25	24	55	80	103	112	106

The total increase in the death-rate since 1851-60 is 86 per cent. for all ages, and over 100 per cent. for ages above 55 years.

Dr. Payne's conclusions are as follows: (1) Cancer is becoming increasingly frequent as a cause of death; (2) in this increase there is a marked increase of cancer of the digestive organs; (3) cancer of the generative organs increases less rapidly but does not stand still. As possible explanations of this apparent increase, Dr. Payne suggests:

1. Increased prosperity on the part of the masses, who are better fed than formerly, for there is a general impression that cancer more frequently attacks the well-nourished and prosperous than those who are poorly provided for.

2. Increased consumption of alcohol, for the classes who are credited with consuming unusual quantities of alcohol are on the whole the most subject to cancer.

As one would expect from Dr. Payne, he presents his case most temperately and in a philosophic spirit. He would, I am sure, be the last to resent criticisms of his conclusions, and these had already been supplied by Dr. Newsholme[3] before Dr. Payne's lecture appeared in print.

Let me point out that the two opponents are in agreement up to a certain point. First, they agree as to the figures showing a registered increase in the proportion of deaths from cancer; this, of course, greatly clears the ground. They also agree that this registered increased is largely due to what I may call abdominal cancer; and, lastly, that increased longevity from lessened mortality due to phthisis and the zymotic diseases, etc., is totally insufficient to account for the registered increase in cancer. Here, however, agreement practically ceases. Dr. Newsholme does not accept the registered increase in cancer death-rate as proving that cancer is becoming increasingly common in proportion to the population, but regards it as the result of a steadily-increasing accuracy in death certification.

I quote now what I regard as the essence of his paper. He says:

The Registrar-General's figures represent certified causes of death and not necessarily actuarial facts. The registration of deaths in England and Wales only commenced in 1839, and an examination of the annual returns shows that a large though diminishing proportion of deaths are still uncertified or returned under indefinite headings. Each year the returns are becoming more accurate; but a serious error is committed when the attempt is made to institute an exact numerical contrast of the present incidence of a disease like cancer with its incidence in the days of less complete registration of causes of death. It would on similar lines be very easy to prove—what is contrary to the facts—that the number of persons who annually die of old age has enormously declined, because deaths formerly returned as simply "old age" now appear under various nervous, circulatory, digestive, and other diseases, including cancer. The table which follows shows the extent of the diminution under the head of "ill-defined diseases" in the periods 1866-68 and 1894-96:

Deaths in England and Wales.

	1866-68.	1894-96.
Deaths from indefinite causes	143,472	68,650
Deaths from cancer	25,567	67,888
Annual death-rate per million living from indefinite causes	2,206	766
Annual death-rate per million living from cancer	393	744

Commenting on this table Dr. Newsholme says:

If we were to distribute the deaths from indefinite causes in the above table equally among the deaths from all causes, a simple arithmetical calculation will show that the increase in the death-rate from cancer would have been between half and one-third less than it appears in the above table.

He, however, goes on to point out how probable it is that cancer would share in a higher proportion than the average for all diseases in any transference from deaths ascribed to indefinite causes in view of the large number of deaths returned as abdominal disease, hæmatemesis, and so on, which are probably in a high proportion of cases cancerous in character. Another reason for the increased record of deaths from cancer is the practice of the Registrar-General of sending letters of inquiry to elucidate imperfect death certificates. In the year 1896, 597 deaths from vague headings were eventually transferred to cancer after inquiry. Bearing on the same point, it is shown that out of 111 cases returned as stricture of the œsophagus, 74 were found to be due to malignant disease. I may add that, from personal investigation of œsophageal stricture, I should regard many of the remainder as almost certainly due to cancer. In the year 1889, as the result of 3,175 letters of inquiry, 421 deaths were transferred to cancer.

The records of cancer mortality show a greater increase amongst males than amongst females, and this again reinforces Dr. Newsholme's great argument that the apparent increase is due to more careful certification of death associated with the more accurate diagnoses which accompany more

frequent necropsies, for it is generally recognised that in the male cancer is more often internal and difficult of diagnosis than in the female. I will only mention one other argument used by Dr. Newsholme, who, with the co-operation of a statistician, Mr. George King, has compared the cancer death-rates from a standard population in Great Britain and Ireland with the experience of the Scottish Widows Insurance Office. The result of the comparison shows a much smaller increase of cancer mortality among the deaths of those insured with the above-mentioned office than do the national statistics. It is reasonable to suppose that the policy holders in the insurance office mentioned, insured as they are on the average for substantial sums, are in a position to secure a greater share of medical attendance than the mass of the people. "Hence the death certification throughout has probably been good, though not so good as to exclude some amount of improvement in accuracy, though not so great as that what has occurred among the general population."

I have briefly placed before you the two views on this question of the increase of cancer. From the nature of things it is impossible to express a positive opinion as to which is the correct one. My own inclination is, however, decidedly to accept Dr. Newsholme's explanation of the figures—that the increase in the main is apparent and not real, and is due to more accurate death certification, a very large number of cases having been transferred during later years from deaths due to indefinite causes to death from cancer. In this large group of deaths from indefinite causes there is possibly ample room to explain the large increase in deaths recorded as due to cancer without there being any actual increase of the disease.

The Causation of Cancer.

The public when afflicted with the disease are generally anxious to know why the misfortune has fallen upon them and commonly seek some explanation in their past history, especially in local injury. Whilst one cannot exclude a few cases of traumatic malignancy, it must be confessed that injury plays a very small part in the majority of cancer cases. The man in the street still fancies the tomato theory more commonly than any other I believe, and only quite recently a member of Parliament enlightened his constituents by attributing the supposed increase of cancer to the large number of cancerous animals consumed as food. Unfortunately for the learned gentleman, cancer in animals is an uncommon and, comparing it with tuberculosis, one might almost say a rare disease.

The part played by hereditary tendency is still as unknown a quantity as ever. Certain geological features and conditions of soil appear to be associated in particular districts with a cancer mortality considerably above the average, whilst in other districts higher and better drained cancer mortality is low. Again, several observers, especially men practising in country districts, have recorded examples of "cancer houses"—that is, houses in which quite a series of cancer cases has arisen, often in people without any blood relationship. Whether these are more than the mere accidents of chance it is impossible to say without further investigations; but inquiries are being pursued in more than one direction, and notably, I am glad to say, by a Committee of the Birmingham and Midland Counties Branch.

Valuable as all investigation of this kind is, it occupies only a corner of the field. The pathologist and the clinician must each contribute his quota, and it is only when the work of all is collected and adjusted, each in the light of what is revealed by the other, that we shall break through the bonds of ignorance we now have to acknowledge concerning cancer. It seemed a few years ago as if the pathologist were to have the honour of clearing up our difficulties. The demonstration of certain bacilli as the absolute cause of certain diseases such as tubercle, leprosy, and glanders, raised the highest expectation of the speedy demonstration of similar causes for malignant disease. Several bacilli were discovered in cancer, and vaunted as its specific cause, but the claim of each in turn has been rejected. The demonstration of a protozoon, the coccidium oviforme, in certain tumours in the rabbit proved the starting point for numerous enthusiastic but not always well-balanced investigators. There was some reason for this. The coccidium oviforme is found in its most interesting form in the rabbit's liver, where it excites the formation of nodules of considerable size. The parasite enters the bile duct from the intestine, and penetrating the cells sets up an overgrowth of the epithelium, producing papillary developments which ultimately present the appearance of an adenomatous formation. The remarkable point of interest about the whole thing to my mind is that we have as a result of a parasitic growth the formation not merely of an inflammatory nodule, as in tubercle or actinomycosis, but of something which resembles the "tissue system" found, for instance, in cancer of the breast or intestine.

It was not to be wondered that the recognition of the part played by this protozoon in the rabbit should stimulate inquiry as to the possibility of similar parasites existing in and exciting the production of cancer in the human subject. During the last ten years or so several observers have described parasitic bodies as existing in cancer. About the earliest demonstration of their presence was made in the disease known as Paget's disease of the nipple, which is in a limited number of cases the forerunner of cancer of the breast. More recently they have been recognised in many forms of cancer, both carcinomatous and sarcomatous. A hot dispute has raged around these bodies, as to the interpretation to be put upon them. Some observers regard them merely as degenerative changes in epithelial cells, others as the result of the reagents used to harden and stain the tissues for microscopic examination, whilst yet others are content merely to accept the observations as to the presence of these bodies without at present drawing conclusions as to their meaning. The most ardent believers in the parasitic origin of cancer consider these bodies to be the cause of the disease, but before it is possible to accept such a conclusion it is of course necessary to cultivate the supposed parasites outside the human body, to set up cancerous disease by injecting the cultivations into living tissues and in the lesions thus produced to recognise and to again cultivate the parasite first started with. Nothing conclusive has yet been done in these directions, but the subject is being busily pursued. Amongst the most successful investigators is Professor Sanfelice of Cagliari,[4] to whom, and to several Italian colleagues, much credit is due. Whilst investigating certain organisms known as blastomycetes, he found that one of them was pathogenic, and when injected as a pure culture gave rise in guinea-pigs and other animals to a growth of bodies resembling those which have been described by others as cancer parasites. Various animals were experimented on, with the result in general of the death of the animal and great multiplication of the parasites in the tissues, with the production of new formations of tissue, but not of characteristic cancer. Later on the same observer passed the blastomyces which he had cultivated through a number of dogs, that is, from dog to dog. From the cultures thus, if I may so put it, standardised, inoculations were made into the nipples of the dog. The immediate result was slight inflammation at the seat of inoculation; in about a month signs of a new formation were detected. Ten months later the animal died with marked cachexia, tumours in both teats, and secondary growths in the associated lymphatic glands, microscopic sections of which exhibited the typical structure of adeno-carcinoma. This opinion as to the nature of the new growth was confirmed by Biondi and Carboni. As in Plimmer's work, to be presently mentioned, the parasites were only to be found in the peripheral parts of the primary and secondary growths, and only in small numbers. Attempts at cultivating the parasites from the cancer thus produced did not succeed, but I have no details of the nature of the media used for cultivation. Other successful results were obtained from inoculation either with the cultivated organism or from portions of new growth produced by it, but in none of these, as far as I can gather, could a cultivation of the parasite be made from the tumour. One thing is clear, that the Italian observers generally are convinced that the organisms concerned are not protozoa.

The recent investigations published by Plimmer[5] also deserve careful attention. He has examined a large number of cancers microscopically—over 1,200—and has satisfied himself in eleven-twelfths of these that a parasitic body exists. The parasite is described by him as existing in the epithelial cells of the growth and in the small cell infiltration around,

but almost exclusively in the active or growing edge, hence Plimmer explains his failure to detect the parasite in a certain proportion of cases where fibrosis on the one hand, or marked degeneration on the other, exists.

Another point worthy of mention is the very large number of parasites present in the growing edge of very acute cases of cancer, whereas in the more ordinary forms of malignant growth the number is comparatively few. Examination of various other tissues, tuberculous, actinomycotic, normal tissues, etc., have failed to discover the parasitic bodies described by Plimmer. He has, however, carried the matter much further than this, for he has succeeded in isolating and cultivating the organisms on special media. He made an infusion from cancer tissue in the same way that ordinary stock for cultivation is made with beef, and to this he added 2 per cent. of glucose and 1 per cent. of tartaric acid. Very tiny portions of the growth were placed in the medium, and the cultivation was carried out in an atmosphere of hydrogen, but whether in an incubator or at ordinary temperature does not appear. Cultivations were also made on the same medium solidified with agar or gelatine, and potato was also successfully used. The organism grown in these ways is quite similar to the supposed parasite in the original cancer, but Plimmer hesitates to pronounce whether he is dealing with a protozoon or one of the yeasts, but he inclines to the latter opinion. Experimental inoculations with these cultivated organisms gave various results. In some rabbits inoculated intravenously, intraperitoneally, and subcutaneously, and also in some guinea-pigs inoculated subcutaneously, there was no result.

In a second group of rabbits inoculated subdurally the organisms were subsequently found in the brain, liver, kidney, and blood, and pure cultivations were obtained from these organs, but no true new growth was formed. A third division includes animals in which death was caused and actual new growths were produced. The most successful results were obtained with guinea-pigs inoculated peritoneally. Death resulted in from thirteen to twenty days and the peritoneum, the liver, spleen, omentum, intestines, and lungs were studded with transparent nodules of new growth. Microscopically the growths appear to be of endothelial origin, the cells containing the organisms, and in the neighbourhood of the growth there is a great deal of small-celled infiltration. Comparing the results obtained by Sanfelice and Plimmer, they appear to recognise a very similar body as the cancer parasite and to have cultivated it, and with the cultivated organism to have set up a fatal condition in animals with multiplication of the parasite, and with formation of new tissue in various parts of the body. Plimmer claims to have cultivated the organism from cancer, but he does not appear to have produced with his cultivations a structure which could be recognised as cancerous. Sanfelice has succeeded in producing a typical cancerous growth with his cultivations, but he was unable to recultivate the organism from the cancer thus artificially produced. Deeply interesting as the results are, they at present only justify us in hoping that a real advance has been made in clearing up the causation of cancer.

For some years my own tendency has been to regard cancer as due to infection—that is, to look upon the cancerous tumour as the local expression of an irritation induced by a parasitic body invading the tissues from without. Of course, one is always met with the objection that no parasite has yet been constantly demonstrated.

Putting on one side the recent work which I have already cited as bearing upon this question, let us grant that this objection is not at present overcome, this does not alter the fact that the method of extension of the disease once it has started exhibits a much greater likeness to other diseases in which a positive infection is recognised than to disease of any other class or kind. The same difficulty of recognising the absolute nature of the infective material exists in syphilis, and yet no one hesitates to regard this as a typical disease due to an external infection. Experimental inoculation on animals has not thrown the light upon cancer which it was reasonable to hope might have resulted from that method of inquiry. Before the demonstration of the tubercle bacillus as the cause of tuberculosis, experimental inoculation of tuberculous tissues in living animals gave plenty of evidence that the disease was an infective one capable of being conveyed from one animal to another.

The question may therefore be asked why similar evidence is not forthcoming with regard to cancer. The explanation may be in the insusceptibility of animals to cancer. The question of susceptibility or otherwise must play an enormous part in inquiries of this kind, and cancer in animals being so much less common than tuberculosis, failure of experimental inoculation of the former may be explained by a slight susceptibility to it as compared with greater susceptibility to tuberculosis.

Turning one moment again to syphilis, we are met with the same difficulty when inoculations are performed on animals, some doubtful positive results have been obtained, but on the whole it is generally recognised that animals are insusceptible to this disease.

Of course absolute insusceptibility to cancer does not exist in animals who occasionally become the subjects of the disease, and moreover there is at the present time some evidence of successful inoculation of animals with cancerous tissue, although the successful results have been few and far between. Whatever may be the truth about the questions I have so far discussed, and in which I have not, I hope, spoken dogmatically, I want to emphasise very positively the belief that cancer is in the first instance a local disease capable in its early stages of being completely eradicated, and that it is not the expression of a constitutional tendency which makes its removal by operation a mere palliative, and not a possible cure. There may be in people who are the subjects of cancer a susceptibility of tissue which renders the absolute cause of cancer active in them, when it would die out or remain ineffective in others who have not that susceptibility or tendency.

Twenty years ago tuberculosis was regarded as a disease due to constitutional tendency. Now we know that its absolute cause is a bacillus, but we recognise a varying susceptibility to receive and grow the poison. The more susceptible have widespread lesions which kill them; in the less susceptible, the infection, unless in overwhelming quantities, dies out or produces a local manifestation only. The same may be true of cancer, but whilst waiting for this to be elucidated, we may accept the accumulating evidence of the curability of cancer by excision as showing its local origin and the absence of a constitutional cause which mere local excision could not affect.

The Local Origin of Cancer in its Bearing on Treatment.

It may be asked, Why lay stress upon this purely theoretical matter, whether cancer is due to a diathesis or not? The answer is easy. Upon this turns the question of sufficient or insufficient operation, and consequently of cure or no cure. So long as surgeons regarded cancer as set up by some constitutional cause, so long were their operative measures quite inadequate, and their cures practically non-existent. Recurrence was regarded as a certainty, and as unavoidable. The growth was therefore removed in such a manner as to inflict as small a wound as possible, thereby keeping the mortality within moderate limits, whilst the lymphatics were left severely alone. Then it became known how frequently the lymphatic glands marked the limits for a time of the progress of the disease. As a result of this excision of the affected lymphatic glands was urged and often adopted. From this time onward the operative treatment has steadily improved, but unfortunately the pessimism of the profession in the past with regard to the incurability of cancer by operation has not yet been entirely removed. The public, advancing of course still more slowly than the profession, yet remains under the same unfortunate belief. I say unfortunate because there can be no doubt that, believing the tumour that he suffers from to be incurable, and, dreading to have this opinion confirmed, many a patient delays seeking medical advice until the time for cure has passed by, and a palliative operation is performed, followed by a recurrence, which confirms the patient and his friends in their former estimate of the incurability of cancer. It is not difficult, then, to show how theory influences practice, but practice is sure to be the better if based not upon theoretical considerations only but upon careful investigation of matters of fact.

With a thorough study of the different varieties of cancer it is recognised to what a considerable degree the life-history of cancer in different parts of the body varies, and how incorrect it may be to argue from one to the other. In cancer of the tongue lymphatic infection takes about as many weeks to arise as it does months in the breast. In the breast the lymphatic glands in the axilla are involved in the first instance alone almost constantly; unfortunately in the tongue no particular group can be constantly predicted. In the urinary bladder and in the uterus secondary infection of glands and other structures occurs comparatively late in the course of the disease. Instances such as these might be multiplied, and they must have considerable influence in determining the possibility and the scope of successful operation.

The Need for Extensive Primary Operations.

The tendency at present is to extend the operation for removal of the cancer itself, not only to the group of lymphatic glands most likely to be affected, whether they are or not, but to include all the lymphatic vessels, small or large, between the primary cancer and its lymphatic catch glands, if I may so term them. This is only possible at present in a few situations, as the tongue, lip, and breast. Taking the last mentioned as one of the best examples of successful surgery in cancer, and as typical of the lines on which further advance may be hoped for, it is worth while considering the foundation upon which modern operations on the breast are based. They are to be found chiefly in the works of Stiles, Langhan, and Heidenhain on the lymphatics of the breast and adjacent parts. The result of their observations shows that cancer emboli may extend from the tumour widely into the fibrous septa, the fat around the lobules, and to the most distant and ill-defined parts of the breast where to the naked eye there is not the slightest evidence of disease. The same is true of the pectoralis major and the fascia over it. There may be infections of these when to the naked eye there appears a considerable thickness of healthy tissue between them and the breast tumour. Further, whilst it is common to find the axillary lymphatic glands under the edge of the pectoralis major the earliest group to be affected, these may be missed, and a higher group under the pectoralis minor at the apex of the axilla may be involved instead of or in addition to the ordinary one. To meet the requirements indicated by this extension of our knowledge several operations have been planned, varying somewhat in detail, but all aiming at thorough removal of the entire breast and its lymphatic area. Personally I favour Halsted's method, and if you will bear with me, although I may be repeating what is already familiar to you, I will briefly point out the main outlines of his plan, because of the importance of its being thoroughly grasped. The whole of the breast, including its peripheral lobules, with the area of skin over it, and the costal portion of the pectoralis major, are removed. The clavicular portion of the pectoralis major, with the skin over it, is divided vertically up to the clavicle, exposing the pectoralis minor and the space above it. The minor is in its turn divided, and thus the apex of the axilla is exposed. This may be termed the method of access, and, as this is carried out step by step, the fascia and fat containing lymphatics are dissected away in one sheet (continuous with the breast and pectoral muscle) from the remainder of the pectoralis major, from both surfaces of the pectoralis minor, from the apex of the axilla and from its lateral and posterior walls. There is no pulling out the infected lymph glands, leaving behind the tissues in which they are embedded; everything in the shape of fat and fascia must be cleanly dissected away. This is an extensive operation, taking up considerable time in the doing; and although it is sometimes described as almost bloodless, this does not, I think, convey the truth about it. There can be no doubt whatever that it is a much more severe operation than the procedures generally adopted until quite recently, and this implies an increased mortality. The death-rate of the ordinary operation of excision of the breast and axillary glands has been in my own cases 4 per cent., but my experience of Halsted's operation leads me to believe that the death-rate will be distinctly higher than this. Deaths from sepsis after operation for cancer of the breast are almost abolished. I find that in the last fifteen years in hospital and in private work I have lost five patients, three after what I shall call the old operation, and two after Halsted's. Of the three, one died of cerebral embolism four weeks after operation, one of delirium tremens on the fifth day after—a quiet drinker—and one probably of pulmonary embolism at the end of three and a-half weeks when the wound was healed. Of the two, one, a very fat woman, died of shock two days after operation with a heart the subject of fatty infiltration and degeneration, while the second died of pulmonary embolism in the third week after operation, the wound being healed. It is evident, therefore, that sepsis plays very little part in the death-rate, which is due mainly to what we may call accidental causes. Shock is the one particular cause we have to guard against after Halsted's operation. Shock appears to me to be induced by two factors—loss of blood and exposure to chill of a large denuded area on the thoracic wall.

Every effort must be made to prevent hæmorrhage by picking up each vessel as soon as it is divided or before, and the patient must be protected from chill by a suitably warm atmosphere, and the application of warm sterilised towels to the part of the wound not immediately occupied by the surgeon. With these precautions, and the use of strychnine injected hypodermically and normal salt solution administered subcutaneously or otherwise, we have weapons which will rarely fail to carry the patient through. Another point to be considered in adopting Halsted's operation is the length of time occupied in healing the wound. Owing to the wide area of skin removed, it often happens that the edges of the wound cannot be approximated by sutures, and the area is left to granulate up and skin over from the edge. To the surgeon this is not much, the wounded surface is entirely superficial and causes no anxiety, but to the patient and her friends it is otherwise. In their minds there is anxiety until healing is absolutely complete, and although there may be at the end of three weeks only an area of two inches square waiting for the epithelium to grow over it, yet as this may be another three weeks before it is skinned over, the time generally allotted by the surgeon for recovery has been doubled to the patient. Now this need not be if the operator, when unable to approximate the wound edges, will take the trouble to graft skin at once on the bare area. Personally I generally employ the deltoid area on the same side as the wound, and take from this part strips of epithelium with a sharp razor, the pieces being nearly an inch wide, and from an inch up to two or three inches in length, and with these the bare part is covered. When doing this the razor blade, the skin over the deltoid, and the wound to which the grafts are to be tranferred are kept thoroughly wetted with normal salt solution, which greatly facilitates the small operation, and the grafts are covered with oiled silk wet with the same solution. Most if not all of these grafts will live, and at the end of three weeks, when the deeper parts of the wound have become consolidated, the surface will also be healed and the patient will regard herself as well. The only drawback to grafting is the time it takes, about a quarter of an hour, and whether it is to be carried out or not, must be decided in each individual case by the ability of the patient to bear any further stay on the operating table.

So far I have dwelt rather on the disadvantages of Halsted's operation. What justification is there for so strongly commending it to your notice? The justification is in the admirable results it has given in the way of cure. I do not propose to trouble you with my own statistics on this point, as I do not think they are at present ripe for the purpose, though I have sufficient experience to induce me to continue to practise this operation and to urge its advantage on you. I prefer to point to the results obtained by others, especially by Halsted himself, by Butlin, and by Cheyne. The last mentioned does not operate quite on Halsted's lines, but on a similar plan which is adequate to the requirements of the disease. Taking the results of the three together, we find that more than 50 per cent. of the patients are regarded as cured of cancer. Experience has shown how rare it is to get recurrence of the disease if the patient remains well for a period of three years after operation. Of course the three years' limit is not absolute, but for practical purposes it suffices, and, accepting this limit, the above-mentioned figure of 50 per cent. rather understates than overstates the proportion of cures. In a question of this kind much

importance necessarily attaches to those whose work is under review. The names of those whose results I have cited are a guarantee of the accuracy of their statements, and their published results may be accepted without cavil as fair descriptions of the success attained.

My remarks to-night will indicate to you that I take a hopeful view of the operative treatment of cancer in accessible situations. Unfortunately this does not apply to the majority of cancerous growths which are not easily accessible. Further experience and careful clinical investigation will, I think, yet enlarge the sphere of surgical success, notably in cancer of the alimentary tract. In the stomach and intestines the discontinuity of the parts attacked with the tissues around offers a remarkable opportunity for successful operation if only early diagnosis can be made. To the question of early diagnosis to be made by exploratory incision into the abdomen if necessary we must turn our attention. What is true of cancer in the alimentary tract is true of it in all parts. Early diagnosis is one of the essentials of success, the other is thorough and complete removal of the disease. The difficulties in the way of the former are very great, the disease often runs a large part of its course before it attracts attention. These difficulties we must struggle to overcome, and above all let us avoid that pessimistic attitude towards cancer which I have endeavoured to show has been one of the greatest obstacles to its successful treatment in the past.

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AN ADDRESS
ON
THE INCIDENCE OF CANCER.

Delivered at the Annual Meeting of the Shropshire and Mid-Wales Branch of the British Medical Association.

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AMONG the many great advances in medical and surgical science which have been achieved during the last few years, few perhaps hold out promise of greater future usefulness than those discoveries of the various organisms which we look upon as the proximate causes of many diseases. For these discoveries we are indebted to the unwearied labours of many workers at microscopic and bacteriological work.

The theory that many diseases had a parasitic origin is a very old one, but it was not until the discovery of the microscope that it was capable of proof. This theory seems to offer the best—indeed to most people the only—explanation of the origin of cancer. I would recommend any who have not done so to read the Cancer Number of the *Practitioner* published in April last. It is shown conclusively there, I think, that there are not only districts, but also houses, in which cancer is peculiarly prevalent. None of the observations as to cancer houses are more careful and conclusive than those of our late President, Mr. Law Webb, and I feel considerable diffidence in his presence in offering any remarks on this subject; my excuse for doing so must be that this disease has always possessed a deep interest for me, and the necessity that devolves upon each of us to study, as well as to treat, disease.

These cancer districts seem more especially to lie about the beds of rivers which are liable to overflow their banks, and the nature of the soil into which the overflow takes place appears to have a very marked influence in the production of cancer; it is the stiffer clay soils which hold the water for a considerable time, which seem to be particularly noxious. It is generally thought that this disease is not waterborne, and it may be that the causal relationship that seems to exist between residence in such damp unhealthy situations and the occurrence of cancer is simply due to diminished tissue resistance to the inroad of the parasite induced by the unhealthy surroundings, just as seems to be the case in tuberculous affections. At any rate, I think there can be no doubt that diseases lowering the general health of a patient have a marked influence on the growth of cancer. We have probably all of us seen, for instance, cases in which an attack of influenza has been followed by an enormously rapid growth of a previously slow-growing cancer; and I remember a case of epithelioma of the tongue which had been apparently cured by operation some years before in which, after an attack of influenza, rapid recurrence and a speedy death took place. I would suggest the possibility that the prolonged epidemic of influenza through which we are passing may be, at any rate, one possible explanation of the apparent increase of cancer in late years.

With regard to the question of heredity in cancer we must suppose that, as in the case of tubercle, so here the tissues of persons in whom there is a hereditary tendency to cancer are more liable to be attacked by the cancer parasite than are those of others in whom there is no such tendency. Many of the cases which have been recorded as showing a very remarkable degree of heredity in some families are cases of what is called homotopic cancer—that is to say, the cancer always, or almost always, occurs in the same organ of the body. Quite recently I was attending one of three sisters who were all dying of cancer of the uterus at the same time, and many other more remarkable instances than this have been recorded in which five or six descendants in one family have suffered from cancer occurring in the same region of the body. We must suppose, I think, in such cases as these, that there is some peculiarity of structure, amounting almost to a malformation (and we know how markedly hereditary malformations are in their more gross forms), which renders the tissues of the organ more liable to be affected by the inroad of the cancer parasite. Cases such as these seem to me to constitute a strong argument in favour of the theory of the parasitic origin of cancer, for if cancer be due to simple irritation it is difficult to see why the irritation should always occur in the same spot, but if it be due to parasitic infection, one can more readily understand that an abnormality of structure would render the tissues of a part less able to withstand such an infection.

Let us assume, then, that cancer is due to parasitic infection. By what channel do these parasites enter the system? If it were by the lungs, we should expect primary carcinoma of those organs to be much more common than it is. There is no doubt that cancer is inoculable, for one sees occasionally epitheliomatous ulcers which have produced others in contiguous parts of the body by simple contact; and I regret to say it has been experimentally proved to be possible by deliberate experiment in the human subject. It is by way of the stomach that the parasite gains an entrance, and various articles of food, such as tomatoes and fishbones, have been credited with introducing it. It must be absorbed into the blood, for it is only by the blood that it can be conveyed to some organs of the body in which it is ultimately found. Now during its sojourn in the blood we find no traces of any morbid action; it does not, primarily at least, attack the lining of the vessels, and only when it has escaped from the blood stream and reached epithelial structures does it begin its active growth. I think we must believe that these cancer organisms are of fairly general prevalence, for there is no obvious reason why their ingestion at the age at which carcinoma most frequently appears should be more common than at any other period of life, so that we must admit that some one or other of the tissues of the body exerts an inhibitive influence upon their growth and development. I think we see different degrees of resistance on the part of the tissues even in cancerous subjects themselves. We must all have seen cases of recurrence of cancer—or, rather, I should say incomplete removal of cancer, in which the growth begins again in the line of one or more of the sutures. Now we must suppose that the cancer cells are equally present in the surrounding skin; why, then, should they grow again in the line of the stitches more readily than in the intervening spaces? Those who uphold the irritation theory would, I suppose, say that it was due to the irritation caused by the suture; but in these days of aseptic operation wounds there is little if any irritation in such cases, and moreover the fresh growth involves the whole depth of the tissues which have been included within the stitch. A more probable explanation seems to me to be that the tightness of the stitch has been sufficient to cause such a local deprivation of blood in

the tissues included within the suture as to allow the cancer cells to begin to grow while the suture remained *in situ*. If this be the true explanation of this process, it would seem that the blood itself exercised a restraining influence over the growth of these parasites, and that an efficient blood supply might be an important factor in determining the first laying down of cancer.

Now, do we see anything in the distribution of cancer in different parts of the body that would encourage this view? I think we do, for, just as in phthisis we find that the tubercle bacilli infect most readily the less vascular portions of the lungs—namely, their apices—so, too, here we see that cancer chooses as its favourite haunts organs such as the female breast and the uterus, which are from their functions liable to periods of excessive hyperæmia followed by a time of atrophy and diminished blood supply. This is equally true, though to a far less extent, in unmarried and nulliparous women, for all women get fulness and tenderness of the breasts at their menstrual periods, so that in them, too, we see, though to a lesser degree, varying conditions of congestion and anæmia of the uterus and breasts. It is not during the period of excessive vascularity of a part—as in lactation, for instance—but when the part has ceased to be functionally active and the stage of atrophy and lessened vascularity is reached that carcinoma most frequently begins. Since, as I said before, there is no apparent reason why the number of these infecting organisms present in the blood should be greater at one time than another, we must conclude that during the period of more active tissue changes these parasites are destroyed either by the blood or the tissues themselves.

Again, how frequently we see cancer recurring in the poorly-nourished non-vascular tissue of a scar, and occurring too as a primary growth in the scar of a burn. Cancer, then, in these cases would seem to be a disease of decay rather than of active growth, of malnutrition rather than of excessive vascularity. These considerations should teach us, I think, to avoid anything like undue tension in bringing the skin margins together after removal of carcinoma, and to avoid any bruising of the tissues either by rough handling, or by the use of the *écraseur*, in any operation for the relief of cancer, for there is no doubt that such damaged tissues form a very suitable nidus in which cancer may recur. In the same way we see why a blow or injury may prove to be the exciting cause of cancer; for, given the presence of cancer parasites in the blood at the time, any injury sufficient to cause stasis or extravasation of blood might give an opportunity for the neighbouring epithelium to become infected.

We come now to cases of cancer which seem to me to belong to an entirely different class, and to have a different mode of origin. I mean cancers in such highly vascular parts as the lips, the tongue, and other parts of the intestinal tract. If it is by way of the alimentary canal that cancer organisms are introduced into the body, there is a possibility at any rate that in this region cancer may originate as a consequence of the direct implantation of the parasite—inoculation in fact—and that this is the true explanation of the incidence of cancer in this region would appear probable when we consider the precise localities in which, in practice, we most commonly meet with it. Upon which lip, for instance, should we expect to find it? Naturally the lower lip would be more liable to become infected from noxious substances resting upon it, and we should naturally expect it to be affected towards the angle of the mouth rather than in the middle and more mobile portion. So too in the tongue epithelioma more commonly occurs towards its margins where it lies in contact with portions of food lodged between the teeth than upon the dorsum; and so, too, throughout the whole alimentary canal cancerous growths occur more frequently in its narrowed or more fixed portions, such as the œsophagus, œsophageal end of the stomach, the pylorus, the cæcum, sigmoid flexure, and the rectum, which are all positions in which substances taken in by the mouth remain for a greater length of time in contact with the adjacent epithelium, and with greater opportunities therefore of infecting it than they have in the more mobile portions of the stomach and intestines.

We see the bacilli of tubercle and of typhoid each causing its own particular manifestation upon the intestinal mucous membrane when introduced into the alimentary canal, and why should not the cancer parasites do the same? This view seems at least as probable, and quite as scientific, as that dying, if not defunct, irritation theory which has been dinned into our ears so long and so persistently that it has delayed our recognition of the true cause of cancer. In such situations as the vulva, penis, eyelids, and so on we have again situations eminently favourable for inoculation, for the dried mucous secretions from these surfaces would be admirably adapted for glueing on, as it were, any infective parasite that happened to come in contact with it. The corrugated, and often dirty, surface of a wart might thus become, as it often does, the starting point of epithelioma.

These cases of cancer affecting the alimentary canal, the skin and muco-cutaneous surfaces, all occur in highly vascular parts, but if we admit, as I think we may, that they are caused by infection of the epithelium from without, they fall into a different category from cases of cancer affecting the breast and the uterus, and notwithstanding the fact that they occur in these vascular situations, they do not militate against the view I am endeavouring to establish—that in those cases in which the infection is carried through the medium of the blood, an efficient blood supply seems to exercise an inhibitive influence upon the deposition of cancer.

Dr. Coley says, in the Cancer Number of the *Practitioner*, "that whatever diminishes the flow of blood to the part will, in nearly all cases, be followed by at least temporary diminution in the size of the tumour, and general amelioration of symptoms." But however necessary a copious blood supply may be for the continued growth of a cancer when once formed, it does not appear to be necessary, nor indeed favourable, to the primary deposition of cancer, for if it were so should we do not expect to find it originating in an organ so prone to carcinoma as the human breast, in the years during which it is most highly vascular, rather than at the time it begins to atrophy? Or, to take the case of the cow, whose udder is in a more or less constant state of hyperæmia, yet cancer of the udder in cows is practically unknown; so, too, the uterus in cows, which never reaches the time when its functional activity is lost, is never affected by cancer.

If, then, there be, as I have ventured to suggest, any property in the blood which is destructive to the cancer parasite, it is obvious that this property is not shared by the lymph, for it is by means mainly of the lymphatic system that cancer when once formed is disseminated, and the far greater readiness with which carcinoma is transmitted by the lymph stream seems to me to be another point showing that the blood has an effective control over the growth and propagation of cancer.

Oöphorectomy, either combined with removal of carcinoma of the mamma or performed subsequently in consequence of recurrence, or undertaken as a last resort in inoperable cases, has sometimes produced remarkable amelioration of symptoms, and even total disappearance of undoubted cancerous tumours of the breast. The good effect of this operation has been attributed either to atrophy of the breast consequent upon removal of the ovaries, or to suspension of some occult influence supposed to be exercised by them upon the breast. A very serious drawback to both of these theories is that they do not explain the undoubted benefit, marvellous indeed in some cases, which follows oöphorectomy when it is performed for recurrent scirrhus in the pectoral region, many months after all breast tissue has been removed in a former operation. A strong argument against them is the fact that if either or both of these theories were correct, we should expect that the cancerous tissue in the breast itself would be chiefly benefited by the oöphorectomy, but it is not so; it is expressly stated in several reports of such cases that it is the nodules in the skin and subcutaneous tissues which show the first signs of any decrease in size. Can it be that the sudden flushings which occur after the artificially produced, as after the natural, menopause have anything to do with it? May it be that in this capillary dilatation occurring, mark, in precisely those situations in which the first signs of improvement appear, we see an indication that the blood may have not only a retarding influence upon the primary deposition of cancer, but that it may also be actually destructive of it when fully formed? I cannot say. But I may point out that this view would at least possess the

merit of offering some sort of explanation of the beneficial effect of oöphorectomy in those cases which are totally unexplained by either of the other two theories put forward. I may point out, too, that these two "flushings" may possess a very considerable physiological importance, for, according to Bland-Sutton, they occur as frequently as fifteen times an hour in an artificially-produced menopause.

Oöphorectomy as a mode of treatment of cancer is so frequently combined with the administration of thyroid extract that it is difficult to apportion their respective shares in any improvement that takes place. There is no doubt in the minds of many—certainly there is none in mine—that thyroid extract has an undoubted effect in some cases of cancer in retarding the progress of the disease, and even in causing actual diminution of existing tumours. The good effect produced we must attribute, I suppose, to some destructive or solvent action restored to, or conferred upon, the blood by the extract; why it should do good in some cases and not in others is not easy to see, but I would point out that here we have to deal not only with what, for want of a better term, we call the idiosyncrasy of the patient, but we have also to take into consideration the idiosyncrasy of the animal from which the thyroid gland was taken, and I would suggest that as the pig seems to be particularly immune from cancerous affections, the gland from that animal should be used in making the extract when required for administration in cases of cancer.

That some day or other something in the nature of a specific for cancer will be discovered is, I think, highly probable, and the beneficial effect of thyroid extract in some cases, and the mixed toxins of erysipelas and bacillus prodigiosus in others seems to point to the direction in which we should look for it. No vegetable or mineral substance in our *Pharmacopœia*, with the possible exception of chelidonium, though it too seems about to share the fate of chian turpentine, has hitherto been found, which after extended trial has had any real effect in controlling the growth of carcinoma. It is, I believe, to some one or other of the toxins, or to the extract or serum of some animal substance, that we must look for the cure of this truly malignant disease.

Until that day comes, as I believe it will come, the best, and indeed the only, treatment is early and complete removal not only of the growth itself, but also, where practicable, of the neighbouring lymphatic glands as well. It seems to me that as general practitioners a very grave duty devolves upon us in this matter, for in spite of the readiness with which our patients seek the advice of consultants, it is after all the ordinary medical attendant who has the greatest power and opportunity to mould the opinion of the public on any medical question. If we ourselves would but look upon cancer as the purely local and curable disease that it undoubtedly is in its first onset, we should gradually, no doubt, teach the public so to regard it, and we should see fewer of those distressing cases in which a woman has hidden from her friends, and even from her husband, for months and even years, the existence of a tumour of the breast until it has become too late for us to promise her any prospect of permanent cure by any means which we at present possess.

We know nothing concerning the host or vehicle which conveys the cancer parasite. I would only say that since it seems to penetrate no further into the lungs than the larynx, it would appear to be possessed of a certain degree of ponderosity. In the alimentary canal, on the other hand, it seems, if my view is correct, to be able to withstand the action of the gastric and intestinal fluids to its remotest end. Further, it is a very interesting and suggestive fact that although we seldom see nowadays the old chimney-sweep's cancer, yet men following this occupation seem still to be much more liable to cancer than other men. The occurrence of chimney-sweep's cancer is precisely the kind of ground upon which we can conceive the irritation theory to have been started. Everyone must admit that irritation may be a cause of cancer when the irritant conveys the infection. Was this the case in chimney-sweep's cancer? From the fact that these men are still more than twice as liable to cancer as any other class it would seem as if it might have been so.

Reading or listening to the theories of others on any subject in which we are interested is somewhat like watching a hand of whist; we see apparently well-established suits fall to pieces against a strong hand of trumps; lookers-on proverbially see most of the game, and doubtless many of you have detected instances in which I have miscounted my adversary's trumps; but even if I have led from weak suits, and if, too, I have been guilty, as I fear I have, of the grave offence of playing entirely for my own hand, I shall still be amply satisfied if anything that I have said should induce you to think more deeply on this subject, which must have an absorbing interest for all of us.

Busy practitioners have unfortunately too little leisure for reading, and less still for work at the microscope or bacteriology; but we all may have, if we choose to cultivate it, the power of keen observation and the faculty of reasoning out for ourselves the various symptoms and processes of disease—things unimportant and trivial perhaps in themselves, but full of meaning, it may be, if we could but divine the principle that governs them. Even if we fail to find the whole solution of a problem ourselves, we may light upon some fact which will enable some other seeker after knowledge to grasp the truth that we ourselves have missed. In this way, then, it seems to me, we might make our life work more useful here; and, indeed, perchance it might be, when

> Departing leave behind us
> Footprints on the sands of time.

THE PROGNOSIS AND MODERN TREATMENT OF APPENDICITIS.*

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An inflammation of the vermiform appendix does not differ pathologically from an inflammation elsewhere. It begins acutely in consequence of a local injury or irritation, and under normal conditions it often proceeds to resolution. But the appendix is an atrophied portion of the alimentary canal, and the degenerative changes it has undergone do not always leave it in a normal condition even in a person who is otherwise in perfect health. The position of the appendix, the distribution of its blood vessels and lymphatics, or the arrangement of the peritoneal folds in its neighbourhood may render resolution of the inflammation impossible. The inflammation may then become chronic, leading either to sclerosis of the appendicular wall, to the formation of adhesions with surrounding tissues, the adhesions in turn keeping up a continuous irritation of the inflamed appendix; the appendix may become kinked and twisted so that its secretion is retained; or its channel may become more or less completely obliterated. The appendix, too, is a part of the alimentary canal where complex putrefactive changes are occurring continuously, and it is no wonder therefore if an appendicular inflammation often becomes infective, ending in ulceration, suppuration, or gangrene, such sequelæ being associated necessarily with an extension of the inflammatory process to the surrounding peritoneum, whence it may spread to the whole abdominal cavity.

The classification of appendicitis is thus established upon a firm basis of pathology, which is always the best guide both to prognosis and treatment, and the inflammation is either simple or infective. The simple inflammation ends in resolution or becomes chronic, forming adhesions or leading to sclerosis of the appendix, terminations which are in themselves sources of danger because they may lead to fresh attacks of acute inflammation as a result of very trifling causes. The infective inflammation runs a peculiarly deadly course owing to the position occupied by the appendix; and although an abscess may be formed behind the peritoneum, it is much oftener found within it.

Simple Appendicitis.

But if the pathology of appendicitis is clear to us, it is far otherwise with the clinical aspect of the cases, and we have still much to learn about the prognosis and treatment of the affection. Some surgeons, especially in France and America, maintain that there is no medical treatment for appendicitis, forgetting that every inflammation is not infective, and that

* Read at a meeting of the West Surrey District of the South-Eastern Branch of the British Medical Association.

every inflammation does not necessarily become chronic. I maintain, however, that a surgeon is not required in a case of simple appendicitis running a natural course, and occurring for the first time in a patient who is otherwise healthy. Yet even in these cases it is the duty of the medical man to be as ready to operate upon the first unfavourable sign as he is to perform a tracheotomy when he is treating a patient with diphtheria, or to trephine when he is attending a case of middle-ear disease. The first forty-eight hours in the history of a case of appendicitis is always an extremely anxious time, because it is impossible to foretell the course which the inflammation will follow, and it may even happen that only the most trivial signs and symptoms give any adequate information about the state of the appendix.

It is not necessary here to dwell upon the story of such a simple case. It is well known to all of you, and Addison[1]—when his contemporaries were unanimous in considering the affection as due to an inflammation of the cæcum—not only recognised it as an appendicitis, but described it most exactly when he wrote in 1839: "The patient has complained, more or less, for some time past of pain and uneasiness in the right iliac region, increased on exertion, or after neglect of the bowels, or excess in eating or drinking; he has, however, retained such a share of health that he has not been interrupted in his daily avocations till, after some unusual exposure to cold or some long walk or other overexertion, he has been suddenly seized with more severe pain, attended with rigors, chills, and sometimes with sickness and violent vomiting." The pain is felt at first all over the abdomen, or it may be sharper across the umbilicus than elsewhere, and as a rule it does not settle in the right iliac region for twenty-four to thirty-six hours after the onset. The pain is tolerably severe, yet the appearance of the patient does not alter materially, and this is one of the points upon which an observant practitioner lays some stress, but not too much, in making his prognosis. There is usually a decided want of appetite, and the constipation may be as absolute as in a case of strangulated hernia, for when the large intestine has been emptied neither flatus nor fæces are passed. The vomiting is not urgent as a rule, nor does it last beyond the second or third day. The pulse is more rapid than in health, but it is strong and regular; the respiration is full and painless; and, although the patient is feverish, the rise of temperature is rarely excessive, and generally falls gradually in six or ten days. Sometimes the fever leaves the patient suddenly, and sometimes there are irregular rises of temperature without any apparent cause.

Method of Examination.

It is of the utmost importance for the medical man to have an accurate knowledge of the condition of the abdomen in a patient who is suffering from appendicitis, because it gives him a clue to the diagnosis, prognosis, and treatment of the case. He should therefore examine the abdomen, carefully but gently, as soon as he sees the patient, repeating the examination at each visit. As in every physical examination, he should act on the aphorism which was so constantly on the lips of Sir George Humphry, "Eyes first and much, hands next and least, tongue not at all." The abdomen should be exposed in as good a light as possible, and the medical man should look to see whether or not it is distended, whether it moves freely with respiration, and whether the outlines of the muscles are better marked on the right than on the left side. A hand is then laid upon its surface and a methodical examination is made from the painless left iliac region until the place of maximum pain and resistance is reached at McBurney's point in the right iliac fossa. Even from the beginning of the illness, and before the patient complains of abdominal pain, the right iliac fossa is tender, and there is often a radiating cutaneous hyperæsthesia extending over the whole flank. The abdomen soon becomes a little distended, and the right lower quadrant feels harder, owing to muscular rigidity, than the opposite side. This muscular rigidity is important because it may prevent any information being obtained by palpation about the state of the intra-abdominal inflammation. It usually passes off in a few days, but it may continue so long as to allow a large abscess to be formed unrecognised.

When the rigidity passes off, or when it is relaxed by the use of an anæsthetic, a thickening can often be felt in the right iliac fossa either as an oval swelling lying parallel and just above Poupart's ligament, extending inwards towards the umbilicus or upwards in the flank, according to the position of the vermiform appendix. The percussion note which it yields is either clear or muffled, and is rarely quite dull because a part of the intestine generally lies over it, paralysed and full of gas. The swelling is at first purely inflammatory, and is not necessarily, or even usually, an abscess. It subsides gradually in a case of simple inflammation, and as it subsides the rigidity, pain, tenderness, and fulness diminish and the temperature falls. The recognition of this swelling is in some sense satisfactory to the medical man, because it confirms his diagnosis and at the same time indicates that he is treating a case of simple appendicitis which may or may not end in suppuration. It may happen, on the other hand, that the rigidity passes off, and gives place to an acutely tender distension of the abdomen without any dulness on percussion and without any local tumour. This condition is serious in a case of undoubted appendicitis, for it often indicates an acute infective inflammation of the vermiform appendix, but it is more usually associated with an error in diagnosis and is due to colic, or to that form of peritoneal irritation which follows abdominal operations and yields to enemata, to sulphate of soda or Epsom salts in small doses, to calomel, or, if the doctor is certain of the cause, to a dose of castor oil.

Treatment of Simple Appendicitis.

It may be accepted as an axiom that a case of appendicitis which has been properly diagnosed and well treated should recover, for medical treatment will be adopted in the simple cases, and the surgeon will be summoned as soon as the inflammation ceases to run a straightforward course. Medical treatment may be adopted so long as the patient seems fairly well, if his pulse is regular, firm, and not too rapid; if his respiration is full and painless, his belly is but little distended, and if the stools are normal or there is only slight constipation. It is better not to use opium in any form, because it hides the tenderness and masks the facial changes, which are the only safe indications of the course which the disease is running. This is often a counsel of perfection, especially in treating private patients; but when opium has to be given the medical man should himself administer it in the form of a hypodermic injection, and he should so arrange his next visit as to see the patient when its effect has passed off. As a routine treatment of straightforward and simple cases of appendicitis, I have seen the best results follow the method to which Mr. Maylard[2] has recently drawn renewed attention. It consists in the immediate administration of a copious enema of warm soap and water, followed by teaspoonful doses of sulphate of magnesia dissolved in a couple of wineglassfuls of warm water given hourly, the dose being repeated six or eight times until the bowels begin to act. A hot boracic fomentation or an icebag is applied to the right iliac region, the choice being determined by the relief which the patient obtains, though the surgeon prefers an icebag. The patient must be kept in bed until the swelling and all tenderness has left the right iliac region, and he must be fed upon food which is so easily and early digested that it neither constipates nor forms massive stools. Benger's food, peptonised milk, raw eggs beaten up, whey, chicken broth, and beef essence will be sufficient to tide the patient over the few days during which the acute attack lasts.

The Prognosis of Appendicitis.

The majority of cases of appendicitis recover, and in a first attack it is said to be three to one against a recurrence, but the affection is very treacherous, and during the acute stage the medical man must be constantly on his guard lest he be taken by surprise and summon the surgeon too late. The condition changes at first from hour to hour, and except in the simplest cases the patient should be visited at least three or four times a day, and if the distance is great it may often be wise to bring the patient nearer to his doctor as soon as his condition is recognised.

A change in the appearance of the patient is one of the first symptoms to cause anxiety; he looks anxious and pinched without being able to assign any cause; his pulse becomes more rapid, smaller, and softer; the temperature rises to 102° F., or higher; the respiration becomes embarrassed; the

abdomen is more distended, is more acutely tender, and there is increased thickening in the right iliac region. The appearance of the patient, the alteration in the pulse, and the increased abdominal tenderness, especially if it exist without any definite tumour, are the most important of these indications that a case of appendicitis is not running its normal course to recovery, and although the symptoms are of no great moment individually, yet when they occur together they lead me to operate with as little delay as possible. I operate, too, during the acute attack when the patient has been severely purged by the injudicious administration of cathartics, and when rigors, stercoraceous vomiting, and the classical signs of the facies hippocratica warn me that the inflammation is no longer confined to the neighbourhood of the appendix, but that it is infective and has involved the general peritoneal cavity, though I confess that in these cases it is with a heavy heart, and that I am easily dissuaded, for there is but a faint hope of success.

On the other hand, although the alteration in the pulse, the rise of temperature, and the increase in all the symptoms are usually evidence of progressive inflammation, the surgeon must remember that the worst cases are sometimes the most deceptive. It is possible for a physician by his remedies to allay the pain, stop the vomiting, and keep the bowels open whilst the inflammatory process in the appendix proceeds unchecked. A gangrenous appendix, as in gangrene elsewhere, may be associated with diminished rather than with increased pain, whilst the temperature falls concurrently, and if the intellect remains unclouded the patient may wholly belie his desperate condition. Experience has taught us also that a flat abdomen with the passage of flatus, or even with diarrhœa, does not necessarily negative a diagnosis of appendicitis, even in its worst forms. Such anomalous cases are fortunately of rare occurrence, but the absence or perversion of the symptoms leads to very disastrous results, since they cause the patient and his friends to disregard the fatal prognosis which the wise practitioner bases upon the continued acceleration of the pulse and the increasing tenderness of the abdomen over the site of the appendix. There is also another point in the course of appendicitis which is likely to mislead the surgeon, and that is the remission of many symptoms with a temporary but fallacious improvement. The remission of symptoms can be distinguished from genuine improvement by the condition of the pulse and the continuance of abdominal tenderness. It demands immediate operation before the recurrence of the unfavourable symptoms, which often return with exaggerated intensity.

Differential Diagnosis.

The surgeon must be quite certain of the diagnosis before he performs any operation upon a patient who is said to be suffering from appendicitis. It is by no means difficult to mistake a case of typhoid fever, inflamed tuberculous mesenteric glands, tuberculous peritonitis, hysteria, inflammation of the ovaries or uterine appendages in the female, or of a retained testicle in the male, for a case of appendicitis, whilst the pain of intestinal, renal, and biliary colic, influenza, and even pleurisy and pneumonia, have been considered appendicular. To be forewarned of these mistakes is to be forearmed: ordinary care, and the delay of a few hours, will usually clear up the diagnosis. The abdominal symptoms grow steadily worse in the intestinal cases, whilst other signs became manifest when the case is not one of appendicitis.

Operative Treatment of Appendicitis.

(*a*) *Primary Laparotomy.*

When a patient who is known to have an acute attack of appendicitis shows that his progress is unfavourable, the abdomen should be opened at once by a surgeon who has already had experience of these cases. And at the risk of being tedious, I would repeat that in the order of their importance these unfavourable signs are: A change in the aspect of the patient, an alteration in the pulse, which becomes quicker, the respiration being less and less abdominal in type; increasing intestinal obstruction and the continuance or recurrence of vomiting when the patient is kept at rest and is carefully fed, especially if the vomit is brown and foul. I do not wish to magnify my office unduly, but the operation of laparotomy in these cases is often a serious one, and should not be lightly undertaken. There is little or nothing to inform the surgeon of the state of the appendix until the abdomen is opened, and he has then to decide on the spur of the moment as to the course which it is best to pursue. The incision chosen is that to which the surgeon is most accustomed, provided that it leads him at once to the appendix. For my own part, I generally employ that which passes through McBurney's point and runs parallel to Poupart's ligament, and I prefer to cut the internal oblique and transversalis muscles rather than to separate their fibres. The peritoneum is opened to the full extent of the skin incision, and two pair of pressure forceps are placed upon its cut edges, because it is sometimes difficult to find them at the end of the operation. I think it is better not to make any attempt to isolate the affected area by packing with gauze, for it is not very satisfactory, and it takes time which is better spent in other ways. Pus may escape at once when the peritoneum is divided, even though the duration of the symptoms has been very short. The quantity may only amount to a few drops, or it may be considerable, but in either case it is very foul, and it is often present when there has been no recognisable tumour. More often only some unhealthy peritoneal fluid escapes, and the surgeon must then find the outer border of the colon and trace it downwards, but without extracting it from the abdominal cavity until he reaches the appendix. There will usually be very little doubt as to the seat of the inflammation, the surrounding tissues may be matted round it, there may be definite evidence of commencing perforation, or to the pleased disappointment of the surgeon it may be healthy.

When pus escapes in an acute case it is better not to make any examination of the abdominal cavity, for the limiting adhesions must necessarily be extremely delicate, and even gentle irrigation may destroy them. A drainage tube should be placed in the wound, which is afterwards dressed with gauze and cotton wool in the usual manner. A concretion, or even a piece of gangrenous appendix, may be discharged at a subsequent dressing, and the patient usually makes a slow but uneventful recovery. His convalescence may be prolonged by the existence of a sinus running deeply into the iliac fossa, and sometimes, but not often, a ventral hernia forms at the site of the wound if the patient returns to heavy manual labour too soon and without wearing a properly fitting belt.

The appendix may be removed at once when it is found quickly and without undue disturbance of the parts if the condition of the patient allows the operation to be continued. The mesoappendix being ligatured, the appendix itself is separated carefully without tearing its wall, until two small flaps of serous and muscular tissue can be cut near the cæcal end. The flaps are retracted gently until the mucous and submucous coats are isolated, a task of no great difficulty, because the submucous tissue is œdematous from inflammation. A fine silk ligature is tied round the submucous tissue in two places, and the appendix is divided between them, taking care that none of its contents escape into the abdominal cavity. The distal end of the appendix is removed, and the remaining stump of mucous membrane is destroyed and disinfected by touching it with a drop of pure carbolic acid. The flaps are brought together over the end, and are united by two or three Lembert's sutures of silk. The surrounding tissues are then irrigated with a solution of biniodide of mercury of the strength of 1 in 5,000; the iliac fossa is sponged dry, and the abdomen is closed without employing any drainage, even when small abscesses have been opened during the operation. I still employ three tiers of sutures to close the abdominal incision. A continuous suture of fine silk for the peritoneum, interrupted sutures of kangaroo-tail tendon passing through the aponeurosis of the external oblique and the abdominal muscles, whilst the skin is united by a continuous suture of silkworm gut. The wound is dressed antiseptically. It generally heals by first intention, and I feel no anxiety about the subsequent formation of a ventral hernia.

This is the immediate operation which is urgently demanded in many cases of acute appendicitis, and is not yet done sufficiently often in this country, if one may judge by the large number of huge abscesses which come yearly under our hands in a large general hospital. It is still necessary to convince physicians and general practitioners alike that an

early operation is advisable in many cases of appendicitis, and that a period of remission is capable of being distinguished from the improvement in the symptoms which are caused by true progress to recovery. The operation is not attended with any undue risk, the acute symptoms are relieved, and the period of convalescence is materially shortened.

(b) Secondary Laparotomy.

There is a second group of cases in which the abdomen must be opened for the more remote effects of appendicitis, and in this class the operations are usually performed under far more favourable conditions than those just described. It includes the cases of appendicitis in which a large abscess has been allowed to form; when repeated crises show that there is some permanent disease of the appendix; when a patient who has apparently recovered is still conscious of some trouble in his right iliac region, even though it is only so slight as a little pain or discomfort when he is tired or overstretches himself, or if any thickening remains in the right iliac region, which is tender on pressure, especially if this important sign coexists with habitual constipation, and when repeated attacks show that the appendix needs removal or at any rate exploration. Lastly, there are cases in which it is best to remove the appendix, and thus place the patient in the best possible position to prevent recurrence, as in a planter living up country, a sailor employed on an ocean tramp, or an explorer whose duties or pleasure take him far from the haunts of men. It is true that we do not yet know whether removal of the appendix will cure a patient, and we have it on authority that a man subject to attacks of colic which rendered him speechless with pain who lived where surgeons were numerous and eager, had his abdomen indelibly impressed with the legend, "Please don't open my belly again; the appendix has been removed three times."

The secondary operations are all done under more favourable conditions than a primary laparotomy, because the patient is in a better state of health, the surgeon can select his time, the parts can be rendered more securely aseptic, and the operation is less hurried. The method of operation differs necessarily with the object to be attained, and, in my experience, this object is most often the evacuation of a large abscess which has been allowed to form as the result of undue caution or of a mistaken diagnosis. At first every abscess arising from an inflammation of the appendix lies within the peritoneal cavity, but in many cases the peritoneum gives way, and a perityphlitic abscess tracks up the loose connective tissue so that it is virtually retroperitoneal. The surgeon must first decide therefore whether the abscess is outside or within the peritoneal cavity, and it is so much easier to recognise an intraperitoneal abscess that when I am summoned to a doubtful case in which there is evidence of suppuration though no collection of pus can be felt, I prefer to act as though it were retroperitoneal, and make an incision in the right flank sufficiently high above the crest of the ilium to prevent any chance of the bone becoming necrosed if a sinus be afterwards formed. The incision is carried through all the tissues in the loin until pus escapes on cutting through the deep layer of the lumbar aponeurosis, and the abscess is then gently irrigated and drained.

There is usually no difficulty in recognising an abscess which is situated within the peritoneal cavity, since it forms a well-localised swelling, the outline of which is not masked by a dense fascia like that obscuring a retroperitoneal abscess. But it is often hard to understand how so large a collection of pus can have remained so long undetected. The direction of the long axis of an intraperitoneal abscess varies greatly, probably because the position of the appendix is inconstant. It may be directed vertically upwards, giving rise to a suspicion of renal trouble; it may lie obliquely across the abdomen; the bulk of the tumour may be situated within the pelvis, where it may be discovered by rectal examination, or it may be concealed beneath the cæcum, and run up as a long narrow track, though in most cases a retrocæcal abscess is small and limited.

In whatever direction an intraperitoneal abscess may lie, it must be opened by an incision carried over the most prominent part without any slavish regard for this or that surgical line. But inasmuch as an intraperitoneal appendicular abscess shows a tendency to point on the outer side of the cæcum, the line of incision should be carried in ordinary cases rather nearer to the anterior superior spine of the ilium than is usual; whilst if pus does not at once escape, a gentle examination of the outer border of the cæcum will generally find an abscess. I hold very strongly that when this form of abscess has emptied itself, no attempt should be made to explore the cavity either with the finger or by an instrument, nor should a search be made for the appendix or for any concretion which may have escaped from it. It is quite sufficient to allow the pus to flow out and then to cleanse the edges of the wound by irrigating them with a solution of a 1 in 5,000 biniodide of mercury at a temperature of 105° F., the solution being poured over the wound from a jug. A drainage tube is then passed into the depths of the abscess cavity, which is not to be packed with gauze, and the ordinary dressings of gauze and wool are afterwards applied.

I believe that opium is of the greatest value after an abscess has been opened, though the use of the drug is contra-indicated in cases of appendicitis before operation, and I feel sure that two or three of my patients owe their lives to its administration. It is best to give it in the form of morphine hypodermically, the injections being repeated when the patient becomes restless. The bowels, too, should be opened by an enema on the second or third day after the operation. It happens sometimes that a portion of the appendix or a concretion which it may have contained will come away when the dressings are changed, but these cases are often most troublesome, for they heal very slowly, and a sinus is left which may take months to close. So far as my own experience extends, it is not very likely that a ventral hernia will be formed, and even when the scar shows a tendency to bulge it is usually restrained easily by the application of a well-fitting belt. I should like to elicit the experience of those amongst you whose opportunities are much greater than my own of watching these cases after an operation as to whether ventral herniæ are common or not, and if they are common under what conditions they are most frequently formed? At the present time I call to mind two cases in which after prolonged suppuration a perfectly sound and supple scar was formed, the one in a bricklayer's labourer, the other in a boy who has since achieved the swimming championship of his native town.

Laparotomy is also done for a widely different group of cases, when it is desired to remove the appendix for the relief of symptoms originally caused by the acute inflammation. But I do not wish to dwell upon this group to-day, because the conditions under which the operation is performed are well understood and pretty generally acted upon. It is sufficient to point out that the surgeon may have the greatest difficulties to contend with during the operation. The appendix may only be found after the most diligent search; it may lie embedded in scar tissue, it may be so adherent to the cæcum or ileum that its removal is impossible, or it may form the roof of an abscess cavity running to a considerable depth in the abdomen. Two lines of incision are in common use, the one carried across McBurney's point and parallel to Poupart's ligament, the other running downwards along the outer border of the rectus abdominis muscle. The incision in the lower part of the linea semilunaris has the important advantage in doubtful cases of allowing the uterine appendages to be more easily and thoroughly explored.

In conclusion, I have to thank Mr. Percival Wood and Mr. E. S. E. Hewer, my house-surgeons at St. Bartholomew's Hospital, and Mr. Sydney Duke Turner, formerly my house-surgeon at the Victoria Hospital for Children, for collecting the notes of the various cases of appendicitis upon whose details I have built up this paper.

REFERENCES.

[1] *Elements of the Practice of Medicine*, by Richard Bright and Thomas Addison, vol. ii, p. 498. [2] *Glasgow Medical Journal*, March, 1899, p. 161.

MUNIFICENT BEQUEST TO DUBLIN HOSPITALS.—By the will of the late Major Leslie, of Tannagh, co. Monaghan, the following Dublin hospitals divide between them property valued at between £50,000 and £60,000:—Sir Patrick Dun's Hospital, Jervis Street Hospital, Adelaide Hospital, Cork Street Fever Hospital, Hospice for the Dying, Mercer's Hospital.

ON THE PREVENTION OR ANTICIPATION OF SHOCK IN SURGICAL OPERATIONS.

By B. G. A. MOYNIHAN, M.S.Lond., F.R.C.S.Eng.,
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Shock is one, if not the chief, of the difficulties encountered by the surgeon. It is to a large extent impossible to foresee to what degree it will develop in any projected operation, but when once its manifestations are exhibited the case becomes from that moment a serious one.

The exhaustive research of Dr. Crile, published in his essay on *Surgical Shock* has not suggested to us any new remedies or any new method of utilising the old ones. For some twelve or eighteen months I have in all cases which even remotely threatened to exhibit indications of shock undertaken a plan of treatment which, so far as I am aware, is not generally adopted. I look upon shock as a condition to be prevented. For its prevention I use the same remedies as are usually applied for overcoming it when once it has definitely asserted itself. I may best explain my meaning by describing in brief the measures I should adopt in part or wholly according to individual differences in, say, a case of gastro-jejunostomy for malignant disease of the pylorus.

The operation theatre, if in a hospital, would have usually a temperature of 60° to 65°. I should increase this by some 5 or 10 degrees. The patient would be placed on a table warmed by a current of fairly hot water. As an additional though not invariable adjunct to these means for retaining heat, I have several times had the upper and lower limbs of a patient bound in hot cotton-wool and flannel bandages. Strychnine is administered hypodermically before the anæsthetic or the operation commences. The dose is modified according to circumstances. As a general rule, the doses advised in textbooks—for example, Watson Cheyne's *Manual of Surgical Treatment*—are so small as to be ineffective. I usually begin with a dose of 10 minims of the liq. strychninæ. During the operation 5 minims may be given when required. I have altogether given as much as 30 minims, frequently 20 or 25, and I have never in one single instance seen any evil result, or even any physiological manifestation, as a sequel to such liberal administration. I also give 10, 15, or 20 ounces of hot saline solution by the rectum, with or without a small quantity of brandy. As soon as the patient is under the anæsthetic, the transfusion, or rather infusion, of saline solution to the extent of 1 to 4 pints may be begun. If after the operation the patient is at all collapsed I think it is important to postpone the removal to the wards. In some cases, such as severe abdominal cases, operated upon during the night, this can readily be arranged; in others it would be impracticable.

It will be seen from this that there is nothing novel in the means that I adopt; the principle lies in the method of their adoption. Briefly stated my points are:

1. The early use of various agents, so as to prevent, to *anticipate* shock.
2. The use of larger doses of strychnine than are generally recommended.

I do not necessarily carry out, even in a severe operation, all these suggestions that I have enumerated. Such only would be practised as seemed desirable in each separate instance. The amount of benefit derived from this plan cannot of course be stated in terms of precision, but of its existence I, with others who have practised it, am abundantly assured.

THE TREATMENT OF SURGICAL SHOCK BY LARGE DOSES OF STRYCHNINE.*

By J. BASIL HALL, M.C.Cantab., F.R.C.S.E.,
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Should anyone be inclined to exult over the resources and triumphs of modern surgery, he will do well to refer to the surgical textbooks of the present day and study the chapters devoted to the treatment of shock. They are depressing, not to say humiliating. There is usually the time honoured anecdote of the behaviour of the frog under the influence of atropine and a few lines devoted to stimulants, opium, and the application of warmth. As a student one grows to look upon the condition as a fatal but unpreventable interference on the part of the patient in what would otherwise have been a very successful case. In other words, we seem to have arrived at that hopeless state when we regard shock as a reasonable excuse for failure. Certain it is that many deaths are improperly attributed to it, especially those due to acute sepsis, as was pointed out by Treves[1] in his lectures on peritonitis.

The observations I am about to make may be regarded by some as a confession of therapeutic atrocities. I can only say that after a fairly extensive trial of a bold use of strychnine in cases of severe shock, I have yet to see the case that displays any symptom of overdosage. On the other hand, I am confident that the drug has proved of great service in many of the cases in which it has been freely given.

Eight years ago, whilst house-surgeon to Mr. Mayo Robson at the Leeds Infirmary, I gave a patient two hypodermic injections amounting to 15 minims of liquor strychninæ during a period of profound shock after a surgical operation. I was somewhat surprised to find that he suffered no inconvenience from what I at that time considered a rather heroic dose, but, on the contrary, seemed to rally remarkably well under its influence. Since that time I have gradually increased my dosage for use in such conditions and have been much astonished at the large quantity the human body will tolerate without exhibiting symptoms. Seeing what a potent drug strychnine undoubtedly is, I can only suggest that during shock the tissues, or the processes of absorption, are so modified that the drug loses much of its potency. Whatever may be the exact cause, there remains the fact that in conditions of profound shock the body is capable of receiving doses of strychnine which, under normal circumstances, would be poisonous.

Up to the present time I have given injections of strychnine in doses varying from 15 to 25 minims on fourteen occasions, and I have never regretted the largeness of the dose. Most of the cases have been those with which I came in contact whilst a resident in hospital. The following occurred in my private practice, and are the only two in which I have given so much as ½ gr. of the drug.

Case I.—*Air Embolism during Operation: Collapse and Impending Death: Injection of ½ gr. of Strychnine: Recovery.*—On September 5th, 1897, I removed an extensive recurrent scirrhus of the right breast in a patient of Dr. Yeoman's, of Thornton. The method adopted was that of Halsted. Everything proceeded satisfactorily until air entered a small vein cut across at the apex of the axilla. There were three inspirations of air before the vein was closed. The patient suddenly became pale, gave several inspiratory gasps; the features became distorted and rigid, and the teeth clenched; the pupils dilated widely and the face became covered with sweat. Breathing ceased, but the heart continued beating, at first rapid and tumultuous, then fluttering and feeble, finally imperceptible. A well-marked thrill over the precordium was present for the first few seconds. Artificial respiration was at once begun, and 20 minims of strychnine were injected subcutaneously. After five or six minutes a few inspiratory efforts took place, followed a little later by irregular and spasmodic breathing. At the end of fifteen minutes another 5 minims were injected, as the pulse, which had become perceptible, showed signs of failing again. Regular breathing gradually became established, the pulse improved and remained steady at 120. She slowly rallied and made a good recovery.

I have no doubt whatever that the artificial respiration was largely responsible for the successful issue of this case, but the fact remains that ½ gr. of strychnine was injected into this patient without producing the slightest symptom of poisoning.

Case II.—*Laparotomy for Ovarian Tumour: Profound Shock: Injection of ½ gr. of Strychnine: Immediate Recovery: Death Subsequently.*—On April 21st, 1898, I operated upon a patient of Dr. J. J. Bell, of Bradford, for a pelvic tumour which proved to be an ovarian carcinoma. The removal was exceedingly difficult, but it was not until the operation was almost completed that the patient showed signs of collapse. She then rapidly went from bad to worse, and became pulseless; respiration almost ceased, only consisting of an occasional jerky inspiration; the face was covered with sweat, the pupils were widely dilated, and death on the table seemed inevitable. Fifteen minims of strychnine were injected and artificial respiration begun; the foot of the table was raised and the limbs were bandaged. In 10 minutes there was a decided improvement; the pulse was perceptible, and respiration was more regular. At the end of 20 minutes another 10 minims of strychnine were injected. Within an hour she was able to be moved off the table into bed, and during the day she rallied well. In the afternoon she was conscious, and her pulse, 118 to the minute, was of fair volume. The same evening she became worse quite suddenly, and died nine hours after the operation. There was no *post-mortem* examination.

These two cases are the nearest approaches to death on the

* Read before the Leeds and West Riding Medico-Chirurgical Society.

operation table followed by recovery that I ever remember to have seen. In both, the patient received ¼ of a grain of strychnine by subcutaneous injection, yet neither of them ever exhibited the slightest indication of poisoning. In the second case, recovery from shock had taken place some hours previous to the fatal termination, and the cause of the somewhat sudden collapse must remain uncertain. I was inclined at the time to attribute it to a reactionary hæmorrhage.

I have quoted these cases in full as examples of the conditions under which I would advocate the administration of very large doses. They are the only two instances in which I have given so much as a quarter of a grain of the drug. Whilst resident at the Leeds Infirmary I gave hypodermic injections of twenty minims on four occasions after amputations for railway smash; twice I gave 15 minims after hip-joint amputation, and the same dose in five cases of shock combined with severe hæmorrhage. One railway case, a double amputation, died in eight hours; one hip amputation died in sixteen hours; the rest recovered. The cases associated with hæmorrhage showed very little response to the drug, and only one recovered. Two of these, however, were suffering from visceral injuries. None of the cases ever showed the slightest symptoms of poisoning. In some of the cases the drug was given in two separate doses, but in none was there a longer interval than half-an-hour between the two injections. The cases of pure shock rallied remarkably under the influence of the drug. Of these, the following case is a good instance:—

Railway Smash: Double Amputation of the Legs: Shock: Injection of ¼ gr. of Strychnine: Recovery.—In October, 1896, a goods guard was admitted into the Leeds Infirmary under the care of Mr. Moynihan, to whom I am indebted for permission to publish the case. A railway truck had passed over both legs. He was in a state of shock, having travelled some distance by train. Whilst Mr. Moynihan amputated the right leg above the condyles, the left was simultaneously removed by myself immediately below the knee. Ten minims of strychnine were injected whilst the patient was on the table, and a second 10 minims on his arriving in the ward. In two hours it was difficult to believe that he had so recently undergone a double amputation.

It is not, however, the proportion of recoveries that I wish to emphasise, although, looking back on the cases, I feel confident that without strychnine it would have been a smaller one. Judging, however, from the small number of cases I have treated in this manner, it seems certain that the human body, when suffering from profound shock, will endure very large doses of strychnine not only without ill-effect, but actually with benefit, and I feel convinced that when given boldly it is a most powerful remedy.

I do not for one moment wish to advocate that ⅛ or ¼ gr. of strychnine should be given in every case of shock, but I hold that the drug should be given boldly and fearlessly, and repeated without hesitation where rallying does not quickly take place. It is in those cases where shock is present in its severest form that I would give the larger doses; where we find cold extremities, extreme pallor, widely dilated pupils, a failing respiration and imperceptible pulse; where, in short, a speedy death appears inevitable. On the other hand, where strychnine is indicated at all, I believe it is futile to give less than $\frac{1}{10}$ gr.

It is especially in those cases where respiration fails that one would expect the effects of the drug to be most marked. In most of the cases, however, I have noted a remarkable improvement in the pulse, apart from the respiratory movements. So much has this been the case, that I have come to regard the beneficial effect as chiefly due to the drug's action upon the vasomotor mechanism. This view seems to be strengthened by the fact that where large loss of blood has previously occurred, response to the drug has not been marked.

The tolerance, under certain conditions of the body, for large doses of strychnine has been demonstrated by Mueller,[2] who put forward the drug as an antidote for snake poison. He advocated injections of 15 to 25 minims in adults, and Dr. Banerjee published eight successful cases in support of its value. The matter was subsequently investigated by Elliot,[3] who by a series of experiments on animals showed that in many cases it actually seemed to hasten death rather than retard it. The fatal result seems to be largely due to the fact that the drug, "by increasing the force and frequency of the circulation aids in the diffusion of the virus." In these cases it seems, on the whole, that strychnine, whilst being in no sense an antidote, nevertheless combats the state of collapse, and that when this is marked, large doses are easily borne.

The vascular theory of shock put forward by Fischer and Schneider has recently been strengthened by the experiments of Dr. Crile,[4] who has demonstrated that failure of the vasomotor mechanism is the principal factor in the production of shock. He has shown that in severe and fatal cases there is an almost complete paralysis of the vessel walls. He advocates the use of small doses of strychnine, frequently repeated, together with saline infusions. Such a line of treatment in any given case may probably achieve the same result as the administration of one full dose. But in cases of sudden and severe shock the time for successful action is often too short to allow of the frequent repetition he advises. Moreover, it is difficult to see what especial advantage there is in two small doses over one large one. Patients suffering from severe shock will tolerate 10 to 15 minims without exhibiting any symptoms. I quite recognise that the administration of larger doses than this incurs a serious responsibility, but whilst bearing this in mind I should not hesitate to go further where rallying did not quickly take place.

In conclusion, therefore, I would urge a bolder and more systematic use of the drug, and feel confident that such a course will be followed by improved results. The mortality from shock must always remain considerable so long as we are unable to increase what has been called "man's vital capacity for surgical interference." The most we can hope to do, therefore, is to reduce the mortality to its smallest proportions, and this we are likely to accomplish by adopting a more hopeful attitude and a more energetic treatment than heretofore.

REFERENCES.

[1] *Lettsomian Lectures*, 1894. [2] Mueller, *On Snake Poison and its Antidote*, 1893. [3] *Trans.* South Indian Branch of British Medical Association, 1894. [4] Crile, An Experimental Research into Surgical Shock, *Cartwright Prize Essay*, 1897.

THE RELATION OF BACILLUS COLI COMMUNIS TO OTHER ORGANISMS IN THE URINE.

BY J. L. MAXWELL, M.B., B.S.LOND.,

WITH REMARKS BY

W. BRUCE CLARKE, M.B., F.R.C.S.,

Assistant Surgeon, St. Bartholomew's Hospital.

THERE are many points in the mode of invasion of the urinary tract by microbes which still require elucidation. In the discussion on this subject which took place in Edinburgh last year[1] a marked difference of opinion existed as to the kind of micro-organisms which were most commonly found in the urinary tract. The French school, headed by Guyon, has always maintained that the bacillus coli communis was almost invariably present, whilst Melchior, Rovsing, Moullin, and others have stated that other infective organisms were often found. When taking part in that discussion I pointed out that it was extremely probable that these different statements depended on the stage of the cystitis at which the observations were made, and that in cases which at first teemed with staphylococci or streptococci, these organisms might entirely disappear and be replaced by the colon bacillus.

Some doubt was expressed as to whether this was possible, and accordingly Mr. Maxwell has at my suggestion undertaken the following series of experiments with a view to confirming or disproving my statements. I do not of course for one moment wish to contend that bacillus coli is never a primary cause of infection. In women especially I am sure that this often occurs; but there is good reason for believing that any part of the urinary tract which is infected by cocci soon attracts the more vigorous colon bacillus, and the cocci are speedily ousted.

In order to indicate the kind of case which has been selected with a view to testing points just referred to, a short clinical history of each case has been appended. The actual pathological work has been carried out by Mr. Maxwell in the St. Bartholomew's Hospital pathological laboratory. Though not very numerous so far as the cases themselves are concerned, the number of experiments was very considerable.

It is only possible here to describe the general conclusions to be drawn, and the mode by which they have been arrived at. So far as they go, they completely support the view brought forward by me in Edinburgh last year. Both Mr. Maxwell and myself are desirous of expressing our indebtedness to Dr. Andrewes for his kind help and many excellent suggestions, without which it would have been impossible to bring the work to a satisfactory conclusion.

The methods which were employed in this investigation were as follows:

In all the cases described in this paper the urine was drawn off with a boiled soft rubber catheter, or else a boiled silver catheter; the meatus urinarius was washed with soap and water, and an antiseptic lotion. The catheter, until required for immediate use, was put in sterilised water, and the manipulator's hands prepared as for a surgical operation. The urine was caught in a sterilised test tube, the first portion escaping from the catheter being rejected. Cultures were made directly from the urine, no centrifugalising process being used. Cultures were made directly into nutrient broth and milk tubes, and surface cultures on sloped agar-agar and gelatine tubes. From the latter subcultures on agar or gelatine tubes and gelatine shake cultures were made. Agar or gelatine plates were used when the organisms appeared to be multiple. The cultures were examined fresh, and their reaction with Gram's stain tested. With regard to the reliability of this simple method of drawing off the urine for examination without the use of Melchior's or other complicated catheters, all I can say is that, having tried it frequently on patients whose urine was expected to be sterile, I have never succeeded in growing organisms from their urine, with one exception, in which, what was apparently an air infection of sarcina lutea occurred at the upper end of the culture tube.

Case I.—R. L., 63. Urinary trouble for two years or more; when admitted had to pass water about every hour or oftener. Urine foul, 1030, alkaline; albumen and pus; prostate enlarged. July 8th, 1898. Urine contained streptococcus pyogenes albus and bacillus coli communis in small quantity. August 5th. Bacillus coli alone. August 17th. Bacillus coli chiefly, also bacillus pyocyaneus, probably from accidental contamination.

Case II.—J. G., 52. Pain and difficulty in micturition for about six hours. Had had catheters passed. Prostate hard and nodular, probably carcinoma; had passed blood on several occasions. Urine acid, 1024. Enormous quantity of bacilli. Bacillus coli communis formed the great mass of the bacilli present. There was also present in very small quantity a large diplococcus that retained the stain on staining by Gram's method, and may possibly have been a urethral organism contaminating the urine.

Case III.—J. P., 67, admitted August 3rd, died August 13th, 1898. History of three years' painful and difficult micturition. Self-catheterisation past two years. Three months ago acute attack of cystitis, which improved under benzoate of ammonia; a second attack four days before admission. Prostate a good deal enlarged. Urine very foul, 1015, albumen, much pus. Got steadily worse, refused operation, and died ten days after admission. The bladder was small and contracted; a saccule containing several calculi communicated with it. Ureters and kidney calyces were dilated and contained pus. *Bacteriological Examination.*—August 3rd: Bacillus coli communis and bacillus proteus vulgaris. August 13th. Same forms present. At the *post-mortem* examination fluid taken from the calyces of the kidneys contained the same bacilli.

Case IV.—J. A., 71, admitted October 8th, died October 24th, 1898. *History.*—A year of urinary trouble; frequent catheterisation; acute cystitis last fortnight, accompanied by a good deal of pain and bleeding. Prostate enlarged. Urine 1010, ammoniacal pus and blood. Suprapubic cystotomy. Carcinomatous growth in bladder, in addition to enlarged prostate. *Bacteriological Examination.*—Pure culture of bacillus coli communis.

Case V.—J. P., 52. Stricture 6 years previously; much neglected. Wheelhouse's operation performed. Urine 1016, ammoniacal; trace of albumen, pus, and triple phosphates. *Bacteriological Examination.*—January 17th, 1899. Urine drawn by suprapubic aspiration, contained bacillus coli communis and bacillus proteus vulgaris. January 31st: Urine drawn by silver catheter; contained same bacilli, but the B. proteus was much diminished in quantity.

Case VI.—H. L., 28, admitted with prolapsed semigangrenous piles, which were reduced under an anæsthetic, and operated on later. Suffered from retention immediately after admission. Had never had a catheter passed, or suffered from venereal disease. Urine alkaline, 1024, contained blood and pus. Rapidly recovered from the cystitis as the rectal trouble cleared up. *Bacteriological Examination.*—Pure culture of bacillus coli communis.

Case VII.—J. M., 20. Admitted with a fracture dislocation at level of the 11th or 12th dorsal vertebra. During his stay in hospital of nearly three months had two attacks of cystitis, which cleared up under treatment. Urine 1028, ammoniacal; contained pus, blood, and abundant ropy mucus. *Bacteriological Examination.*—January 20th, staphylococcus albus (first attack); February 18th, staphylococcus albus (second attack).

Case VIII.—A. T., 35. Extrauterine pregnancy. Operation. Large abscess cavity closely bound down by great omentum; contained about 2 pints of pus and a decomposing fœtus. Admitted July 2nd; discharged December 28th, 1898. *Bacteriological Examination of Pus.*—July 9th, 1898: Pus teemed with streptococci and staphylococci of various sizes, and also contained bacillus coli, but in small amount. August 15th: Streptococci and staphylococci present in small proportion. The principal organism is now bacillus coli, with a slight secondary infection of bacillus pyocyaneus. September 26th: No cocci present. Bacillus coli the predominant organism. Bacillus pyocyaneus present in very small quantity.

General Conclusions.—In only one case of cystitis has the bacillus coli communis been actually noticed to supplant the cocci which were present in an earlier stage of the disease (namely, in Case I), but in this instance the supplanting of the one organism by the other was a regular and gradual process. The same gradual disappearance of cocci was, however, equally well marked, namely, in Case VIII (extrauterine pregnancy). Cocci were present in great quantity at the time of operation, but were soon supplanted by B. coli. In Case V, where bacillus coli and B. proteus vulgaris were present when the case first came under observation, B. coli soon became the predominant partner, and would in all probability, had the case been under observation a little longer, have soon become the sole occupant of the urine, and eventually have disappeared altogether.

Case VII had two attacks of staphylococcus infection, but they yielded to treatment so soon that B. coli did not presumably have time to make its appearance.

Another case (VI), which suffered from gangrenous piles, exhibited B. coli before any catheter had been passed, and it is most probable that infection took place directly from one viscus to another, owing to the passage of the bacilli through the intervening tissues.

The remaining cases only came under observation at a comparatively late stage in the course of the disease, and they all contained B. coli. It is exceedingly probable that some of them at any rate would have yielded cocci in their earlier stages, and this is borne out by their histories, which state that ropy mucus was present at the onset in nearly all of them, and this condition is nearly always associated with infection by cocci.

Reference.
1 British Medical Journal, 1898, vol. ii, p. 1302, *et seq.*

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A METHOD FOR THE REMOVAL OF FOREIGN BODIES FROM THE NOSE AND EAR.

Having experienced some difficulty on more than one occasion when attempting to remove foreign bodies from the nose and ear, it occurred to me that another and more simple method must be devised, for the recognised methods—at all events in my hands—left much to be desired, and did not always prove satisfactory.

It seemed to me that the principle of suction would obviate the difficulties of grasping with forceps or a snare a smooth and slippery body, and of getting behind with the blunt hook or a stream of lotion those bodies which completely, or almost completely, filled the lumen of the auditory and nasal passages.

After making trials of several kinds of apparatus, I found that the simplest is the best. It consists of a piece of india-rubber tubing, rather less in diameter than an ordinary lead pencil, and varying in length from 1 to 3 inches, according to the distance of the foreign body from the surface, attached to the nozzle of a brass syringe. The presence and approximate situation of the body having been ascertained, the tubing attached to the syringe is passed into the nostril or meatus, as the case may be, and brought into contact with the foreign body. The piston of the syringe is then pulled out for a sufficient distance to create a vacuum in the tubing, and thus to draw the foreign body into or against its free end. The syringe is then withdrawn, and with it the foreign body attached to the tubing. In some cases I have found it advantageous to dip the tubing into glycerine before inserting it; this diminishes the chance of air entering the tubing between it and the foreign body.

In this way I have, experimentally and in the course of practice, removed a large variety of foreign bodies, such as

beans, peas, shells, seeds, cotton-wool, etc. As a matter of fact, the substances most readily removed by this method are just those substances which baffle attempts to remove them by means of forceps, snare, blunt hook and the syringe, and I have frequently proved the accuracy of this statement.

CHARLES A. STURROCK, M.A., M.B., F.R.C.S.E.

Dunfermline.

THE TREATMENT OF ACUTE TROPICAL DYSENTERY.

IN the BRITISH MEDICAL JOURNAL of January 29th, February 12th, February 26th, April 9th, and April 16th, are memoranda and letters, detailing the efficacy of magnesium sulphate, and decrying ipecacuanha as "useless," in the treatment of acute tropical dysentery.

My experience entirely confirms this opinion. During the year 1898 I treated 11 cases of acute dysentery in the 7th Bombay Infantry Hospital at Jubbulpore, all with magnesium sulphate, and was struck with the superiority of this drug over ipecacuanha. All the cases were typical acute or subacute dysentery, with scanty frequent motions, containing blood and mucus; and all were cured in an average of five to eight days with magnesium sulphate.

I resumed medical charge of the regiment on February 22nd, 1898, previous to which date my *locum tenens* had treated 3 cases of dysentery (which, I was informed by the hospital assistant, differed in no way from those treated by me during the rest of the year), with ipecacuanha, in the old-fashioned way, and these were an average of 27 days under treatment. This, I think, clearly demonstrates the superiority of magnesium sulphate over ipecacuanha as a remedy in acute tropical dysentery.

H. J. JERVIS,
Lieutenant-Colonel, I.M.S.

Bushey Heath.

HYPODERMIC INJECTIONS OF QUININE IN INTENSE MALARIAL FEVERS.

IN St. Lucia I have found the hypodermic injection of gr.x doses of quinine sulphate (when necessary) dissolved in half its bulk of tartaric acid and ♏x of distilled water, most useful in the comatose and cerebral forms of remittent fever, especially when constant vomiting precludes all medication by the mouth, and when I expect anal or rectal enemata are not absorbed. The syringe is of course carefully sterilised before use, and I have had no local inflammation or abscesses and no general septicæmic troubles of any kind, much less tetanus. The typical remittent fever of St. Lucia is characterised by the autumno-æstival plasmodium malariæ, two or three in each red cell attacked; pigmented spheres, flagellated and moribund, are found in fair quantity. I have seen the flagellated bodies shoot out a flagellum, and from the extremity of the flagellum shoot out a free spore, as if the flagellum was channelled. In some chronic cases received from the West Coast of Africa intensely pigmented spheres were found. In one case paralysis had been caused by malaria: the brain capillaries must have been choked by these pigmented bodies, but the patient eventually recovered. In short, I advocate an extensive trial of quinine hypodermically in all malarial fevers where mouth medication is impossible.

E. J. ERSKINE RISK,
Major, R.A.M.C.

Barbadoes, W.I.

A CASE OF TETANY DUE TO EXPOSURE TO THE SUN.

A BOY, aged 13, was brought to me by his mother and a friend, complaining of pains in his arms and legs, and inability to move his hands and feet. He was one of a large and healthy family, and had never suffered from any illness until the day before I saw him. He had been sitting in the sun all the preceding afternoon, and on reaching home complained of headache and vomited. He was sent to bed, and woke up about 5 A.M., complaining of pains in his arms and legs, and that he could not move. He was brought to the surgery at 9 A.M., when it was seen that the hands and feet were rigidly contracted in the position met with in tetany, and he was quite unable to move them. His knee-jerks were markedly exaggerated. He was very nervous and frightened, but apart from the conditions of his hands and feet appeared in good health. There was not, nor had there been, any gastric or intestinal trouble. He was treated with a calomel purgative and 10 gr. doses of ammonium bromide every four hours. The spasm gradually relaxed, but it was five days before he could walk or use his hands properly.

The case appeared interesting owing both to the age of the patient and to the total absence of any cause for the attack that I could discover other than exposure to the sun, a somewhat unusual, or at least undescribed, cause of tetany.

HERBERT FOX, M.B.Lond.

Catford, S.E.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROCHDALE INFIRMARY.

A CASE OF COMPOUND COMMINUTED DEPRESSED FRACTURE OF THE CALVARIUM, WITH FRACTURE OF THE BASE OF THE SKULL.

(Reported by T. HILLHOUSE LIVINGSTONE, M.B., Ch.B.Edin., House-Surgeon to the Infirmary.)

A GIRL, aged 10, was struck by one of the shafts of a cart in which was a runaway horse, so that she was pushed against the side of a house with her head pinned to the wall. When I saw her she was quite unconscious, and her breathing was stertorous; her pulse was small in volume and rapid, and the respirations were jerky and irregular. There was a depressed, compound, comminuted fracture of the calvaria just about the junction of the parietal, temporal, sphenoidal, and frontal bones behind and above the external angular process on the left side. The scalp was very much torn and lacerated, and was extremely dirty; a small portion of brain matter protruded, and fragments of bones were driven into the brain substance. A serous fluid tinged with blood trickled away from the right auditory meatus, and there was considerable livid effusion into both eyelids, which were considerably swollen. There was no bleeding from the nose nor any conjunctival ecchymosis; she vomited blood, and this I considered had trickled down the Eustachian tube into the pharynx from a fracture of the base in the middle fossa which had involved the petrous portion of the temporal bone.

I thoroughly washed the lacerated scalp with antiseptics after shaving off the hair, and with considerable difficulty succeeded in raising the depressed portion of fractured bone. A small piece of very dirty bone was removed along with a small portion of brain matter. The scalp wounds were stitched with silkworm gut, except over the fractured region, where a little packing of iodoform gauze was gently inserted; the other wounds were dressed with double cyanide gauze. The right ear was syringed out with boric lotion and packed with sublimate wool, and the patient was put to bed with an icebag over her head. As she seemed very collapsed I injected brandy *per rectum*. The coma lasted for a day and a-half, and then the patient attempted to speak; the speech, however, was unintelligible, and was "lalling" in character. There was no paralysis of any of her limbs, but the right side of her face was paralysed. At this time she was very emotional and hysterical, and in a day or two recognised her mother.

In about a fortnight after the accident she was quite conscious, although the mother said she seemed more childish than usual. About three weeks afterwards, when I tested the various cranial nerves, all the face muscles of the right side were found to be equally paralysed, and there was loss of taste in the anterior two-thirds of the tongue on the right side, showing that the lesion in the seventh nerve was in the aqueduct of Fallopius.

Hearing was very defective on the same side. On testing it with a watch I found that bone conduction was absent on the affected side, showing that the deafness was not due to previous middle-ear disease but to a lesion of the auditory nerve itself. The impact of the shaft of the cart on the left side of the skull, acting by *contrecoup*, probably caused fracture of the

petrous portion of the right temporal bone, involving the seventh and eighth nerves. Other signs were present which were not easy to explain—namely, paralysis of the orbicularis palpebrarum on the left side, along with dilatation of both pupils, neither of which reacted to light or on accommodation, without ptosis, squint, or diplopia.

The girl, seven weeks after the accident, was able to walk and run quite well, and her speech was quite normal. The scalp wounds were quite healed, and with the exception of the paralysis of the right half of the face and the deafness she is practically cured. The case is interesting as showing the amount of damage the nervous system can recover from in a young and healthy subject.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

W. Watson Cheyne, F.R.S., President, in the Chair.

Tuesday, November 21st, 1899.

The Pathology of Tabes in relation to General Paralysis of the Insane.

Dr. Mott, in opening a debate upon this subject, remarked that the tabetic form of general paralysis was recognised clinically by Baillarger in 1862; and later, in 1867, Westphal demonstrated the anatomical lesion in the posterior columns of the spinal cord. Since then a discussion had occurred, in which a number of neurologists and alienists had taken part, as to whether tabes could be looked upon as the same morbid process affecting different parts of the nervous system. It was well known (1) that a certain number of cases of tabes might begin with mental symptoms, or that mental symptoms in the form of crises might occur in the course of tabes; many such cases had come under Dr. Mott's notice in the London county asylums. (2) A certain number of cases of general paralysis presented tabetic symptoms during life, and *post mortem* showed atrophy and sclerosis of the posterior columns of the cord and the posterior roots. (3) A few cases had been met with which later developed well-marked symptoms of general paralysis. Dr. Mott stated that he, in conjunction with Dr. Hamilton Wright, had investigated the microscopical changes in 8 cases of tabes dying in the asylums; all these cases, with the exception of one, showed more or less clinical symptoms and pathological changes indicative of general paralysis. Dr. Mott expressed the opinion that it was proved that syphilis was the most important factor in the production of these two diseases, although the evidence was insufficient to show that if there were no syphilis there would be no general paralysis or tabes; yet inference might lead one to suppose so, and to allow the claim that these diseases might be regarded as parasyphilitic. The close relationship of these two diseases was strikingly shown in the etiology, and he referred to the fact that in the 22 cases of juvenile general paralysis (one of which was of the tabetic type) which he had had the opportunity of seeing, definite signs of a history of syphilis were obtained in 80 per cent., and could not be excluded in the remainder. Similarly the relationship to juvenile tabes had been proved in the recorded cases. He had seen one such and that with well-marked signs of congenital syphilis; the father had since died of general paralysis. Various clinical phenomena which were considered characteristic of tabes, such as grey atrophy, ocular paralyses, perforating ulcers, and Charcot joints, he had seen in general paralysis. Some of the delusions were doubtless due to irritation of roots, and possibly visceral crises might form the basis of many other delusions. The most important physical sign in general paralysis, as in tabes, was reflex iridoplegia, and this was only met with otherwise in syphilitic brain disease. He referred to several cases which had come under his notice, that for considerable time had presented symptoms of tabes, and subsequently had developed general paralysis. He considered that the pathological process in the two diseases was identical, namely, a primary progressive degeneration of the neuron with secondary sclerosis and inflammatory or subinflammatory conditions in the vessels or adjacent membranes due to irritation, caused by the products of degeneration and a formative proliferation of the glia elements. In the case of tabes the degenerative process affected almost exclusively the first afferent system of neurons and the degeneration in the posterior column corresponded when complete with that which would be obtained by cutting the posterior root, exogenous tracts being affected, endogenous spared. The exogenous tracts consisted of short, medium and long fibres, occupying definite positions and entering into the formation of three nervous circles and cerebral respectively controlling the action of the muscles. He had found in conjunction with Professor Sherrington that one of the most marked effects of section of posterior roots was loss of muscular tonus, and he regarded the lower and unequable tonus as an important factor in the production of the ataxy. It might be argued that if the disease was a primary degeneration of the neuron, why had not obvious changes been more frequently noted in the posterior spinal ganglion cells? He had found no chromolytic changes in the cells of the posterior spinal ganglia after section of the posterior roots in monkeys. It had, however, been shown by Van Gehuchten that section of the peripheral nerve produced chromolytic changes in the cells, also atrophy. He had examined the spinal ganglia in 6 of the cases, and in only 2 were there definite chromolytic changes. In both of these the peripheral nerves were affected. In all the cases, however, the cells showed excess of pigmentation and some shrinking and irregularity. Dr. Mott remarked that a number of authorities had examined the spinal cords in the tabetic form of general paralysis. One set of observers claimed that the lesion was of the same nature as tabes, while others held the opposite opinion. In the cases examined by Dr. Mott, of which he showed specimens, the lesions were certainly typical of tabes, and these also showed changes in the brain to a more or less marked degree typical of general paralysis. In the cases where these were slight some authorities might regard them as being tabes with mental symptoms. But Dr. Mott considered that these borderland cases between tabes and general paralysis formed an important link in proving the unity of the two diseases.

Dr. Alexander Bruce would not speak upon the clinical but the histological aspect of the question. It was universally allowed at the present time that the lesions in ataxia were not due to a primary sclerosis affecting the neuroglia; the disease commenced in the continuations of the posterior nerve roots within the spinal cord; the exogenous fibres were its seats, the endogenous escaped. What was the explanation of the degeneration? He had at one time been fascinated with Marie's hypothesis—that the degeneration was due to nutritive changes in the cells of the posterior root ganglion. If this view were true, however, it had to be shown why the degeneration was limited to the intraspinal fibres; it was true that at times the peripheral nerves suffered, but not regularly so, and not in a degree proportionate to the others. The hypothesis that he adopted was that of Obensteiner and others, namely, that the action of the nutritive centre in the ganglion of the posterior root was cut off by pressure upon the fibres at their site of entrance into the spinal cord. Normally the posterior roots at this spot underwent a sharp constriction, and this might be increased from extrinsic causes, such as meningeal thickening involving the spot, the result being that the posterior root between the ganglion and the cord remained intact, as it actually did, whilst the degeneration involved the strictly intraspinal fibres. Such meningeal thickening might be syphilitic or due to other causes. Were the other view of a primary nerve-fibre degeneration true, and the meningeal thickening secondary, he asked why similar thickenings were not regularly found over areas of sclerosis. Possibly there was too great a readiness to assume that in general paralysis the meningeal changes, increased vascularity, etc., were secondary; they were at least concomitant, and perhaps primary.

Dr. Buzzard said he felt so little qualified to discuss from intimate and personal knowledge the microscopical revelations dependent on the most recent staining processes that he should almost have shrunk from rising on the present occasion but for the opportunity which it gave him to express his estimation of the value of the paper and demonstration which they had had brought forward. Clinical observation must largely be concerned in this question of the pathology of tabes and its relation to general paralysis, and it was from that side that he would venture to make a very few remarks.

His experience was that mental symptoms might and did, though not very frequently, occur in tabes, but he could not call to mind an instance in which tabes had begun with mental symptoms. He had seen a considerable number of cases of general paralysis which presented symptoms of tabes during life, and indeed had not infrequently experienced great difficulty in determining to which category the case should be allotted, but opportunities had been wanting to him to observe the pathological condition after death in cases of general paralysis, as these usually passed into the hands of the alienist. He would say at once that from a clinical point of view he quite agreed with Dr. Mott in regarding the evidence that syphilis was the most important factor in the production of both tabes and general paralysis as unquestionable. Dr. Mott's unique experience as regarded juvenile general paralysis appeared to him to present overwhelming evidence as to the dependence of general paralysis on syphilis. And he was also disposed to think that there was sufficient evidence to show that general paralysis and tabes were one and the same disease affecting different parts of the nervous system. An instance which had occurred in his own practice pointed with remarkable force in the direction of showing the identity of the two diseases. In 1890 a husband and wife consulted him, both suffering from typical tabes. The man had had syphilis in 1880, and had married within two months. His wife had bubo two months after marriage, and lightning pains six years later. Under specific treatment the husband greatly improved; the wife developed grandiose conceptions of a kind completely characteristic of general paralysis of the insane. She then passed into a stage of maniacal violence, and died in an asylum in the middle of 1891 after a succession of epileptiform and paralytic seizures. As regarded another point proposed for discussion, he was disposed to agree with the view that both diseases could be pathologically considered as a primary decay of the neuron with secondary inflammatory and subinflammatory changes in the meninges and formative proliferation of the glia cells. But he did not think that this was always the case, and it was very likely that (as he felt pretty sure occurred frequently in insular sclerosis) the two processes might go on side by side. Was the toxic influence of syphilis essential for the production of this degenerative process, seeing that in a certain number of cases there was only a history of what was called a soft sore? The infection of syphilis was in his opinion unquestionably the most frequent cause of these diseases, but it had not yet been proved to be the only one. It often, indeed, happened that in a case of tabes one could only obtain a history—though a circumstantial one—of a soft sore. Until other possibilities had been exhausted to argue that in such a case there must necessarily have been true syphilis mingled with the chancroid did not appear to him to be quite logical, as it assumed the necessity for the presence of that which had not been proved to be absolutely essential. It was true that the exact nature of the soft sore was still *sub judice*, and the question in what way, if at all, it was related to syphilis was undetermined. In view, however, of the fact that a specific micro-organism had been described by Ducrey, Unna, and Buschke as being present in the soft sore (though not in the syphilitic), it appeared to him premature to put the soft sore out of court as a possible source of a toxin capable of causing the degenerative changes in question. It would be remembered that in multiple peripheral neuritis, a disease characterised by degenerative changes, which was always of toxic origin, the lesions observed microscopically were essentially the same whatever might have been the particular toxin by which they had been brought about.

The discussion was adjourned.

HARVEIAN SOCIETY OF LONDON.

W. J. Gow, M.D., Vice-President, in the Chair.

Thursday, November 16th, 1899.

FIBROID TUMOURS OF THE UTERUS.

DR. A. H. N. LEWERS read a paper on this subject. The cases illustrated some of the principal varieties of uterine fibroids, and showed some of the chief methods of treating them in use at the present time. In Case I the chief point of interest was the remarkable diminution in size of the fibroid tumour following removal of the uterine appendages; on one side the ovary formed a suppurating ovarian cyst the size of a cocoanut. Cases II, III, and IX were typical examples of large uterine fibroids successfully removed by abdominal hysterectomy, with intraperitoneal treatment of the stump. In Case III a point of interest was that in one place the fibroid had undergone cystic change, and the cavity so formed contained pus. Case IV was an example of pregnancy complicated with a large subperitoneal fibroid, in which expectant treatment was adopted with a satisfactory result, the patient being delivered naturally at term, without any complication, either during the labour or afterwards. The patient was seen some two or three months later, when the subperitoneal fibroid could easily be felt by abdominal palpation alone. Cases V and VI were examples of removal of fibroids, partly submucous and partly interstitial, from the cavity of the body of the uterus after dilatation of the cervix by enucleation and *morcellement*. Case VIII was one of a large subperitoneal fibroid removed by myomectomy with intraperitoneal treatment of the pedicle, and in this case the body of the uterus was not removed. Case VII was on account of its rarity perhaps the most interesting of the whole series. It was a case where an interstitial fibroid of the posterior wall of the uterus sloughed *en masse*, and was discharged through an opening formed in the posterior lip of the cervix. When first seen (May 30th, 1899) the case appeared an ordinary one of uterine fibroid, the tumour reaching nearly to the umbilicus. The vaginal cervix at that time was not encroached upon by the fibroids, yet on July 20th, 1899, the upper part of the vagina was found occupied by a large, fœtid, friable mass. Careful examination under anæsthesia showed that the os externum lay in front of the mass, which was coming through an opening formed in the posterior lip of the cervix. The patient was feverish and extremely ill. All that was done was to remove the fœtid mass with the fingers as completely as possible, much in the same way as a decomposing retained placenta would be removed, except that in the present case the decomposing mass (the fragments of which weighed 2 pounds 8 ounces) was situated in the substance of the posterior uterine wall, and not in the cavity of the uterus. The patient continued to suffer from septic fever even after the sloughing fibroid had been removed as completely as possible, and finally died from it some three months later. The specimens corresponding to several of the cases were exhibited.

The CHAIRMAN referred to the importance of the subject under discussion, because since the mortality of hysterectomy had so greatly diminished, the indications for operative treatment had considerably altered. He criticised the employment of drainage after abdominal hysterectomy, and considered that it was seldom necessary.

Mr. ALBAN DORAN dwelt on the different surgical methods for the treatment of uterine fibroids which he had seen introduced and practised, supported by plausible arguments, and yet often discarded. There was still great room for improvement; the removal of small fibroids which caused no symptoms was bad surgery though it might be brilliant operating. Altogether retroperitoneal hysterectomy was preferable to the more conservative myomectomy, and to the more radical panhysterectomy. Too great stress was now laid upon the supposed advantages of leaving the ovaries, just as too much importance was attached twenty years ago to their complete removal. The surgeon must remember that leaving the ovary might mean shutting up in the abdomen a portion of a diseased tube with its mucous membrane exposed. Abel and Zweifel had shown on clinical evidence that when the ovaries were left behind they nearly always atrophied, so that the menopause occurred within three years of the hysterectomy. Zweifel believed that when their atrophy did not occur it signified that a portion of the body of the uterus was left in the stump, hence he now made large flaps consisting of more than the tissue of the cervix. There was yet much to learn, but in the meantime it might be remembered that an artificial menopause was seldom very formidable.

Dr. W. H. TATE agreed with the Chairman as to drainage in cases of abdominal hysterectomy for fibroids. He considered that drainage was rarely necessary where the broad ligaments and uterine arteries had been securely ligatured and the stump carefully sutured. Referring to Case VII in

the paper, he wished to ask Dr. Lewers whether he did not think removal of the whole uterus might have given the patient a chance of life, seeing that partial removal of the sloughing tumour *per vaginam* had failed to relieve her. Dr. Tate had assisted Dr. Cullingworth in a case in which a large sloughing tumour occupied the vagina, and an attempt had been made to remove it. It was found impossible to remove the whole tumour; the portion left behind sloughed and the condition of the patient became extremely grave. Three days after the first operation Dr. Cullingworth decided to perform abdominal hysterectomy, and the patient made an excellent recovery. Mr. Doran had referred to the greater mortality of abdominal hysterectomy in cases of large tumours compared with small. He (Dr. Tate) did not agree that this was the case, as it frequently happened that a large fibroid was removed much more easily and safely than a small. Bearing on the question of oöphorectomy for fibroids, he thought it important to consider the symptoms before deciding on this means of treatment. Even where the size of the tumour did not contraindicate the operation, the presence of severe pain in the tumour suggested some degenerative or necrotic change, and it was doubtful whether under these circumstances removal of the ovaries would be followed by the desired result.

Dr. Boxall drew attention to the difference in fibroids, to variation in their position and mode of growth, and of the symptoms to which they gave rise, differences which affected materially the question of operative interference and the choice of the most suitable operation in individual cases. He instanced several cases which presented unusual features, and in particular directed attention to the necessity of taking measures to prevent large abdominal fibroids from sinking into and becoming impacted in the pelvis during the shrinkage which usually takes place after the menopause.

Dr. Lewers replied.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Friday, November 10th, 1899.

Arthur Newsholme, M.D., F.R.C.P., President, in the Chair.

President's Address.

The President delivered an address on The Study of Epidemic Diarrhœa. In the choice of a subject he had been prompted by the conviction that a disease responsible, as in 1897, for 4.8 per cent. of deaths from all causes in England and Wales, against 7.6 per cent. from the six more important zymotics, merited more careful study than it had as yet received. It was true that diarrhœa was but a symptom, and that of late years a large proportion of the deaths of infants under 1 year of age, practically those with which he was now concerned, had been returned as enteritis or gastro-enteritis, to an extent varying in different years. But he did not think that this seriously vitiated comparisons between different towns in the same periods, and the Registrar-General having ordered the inclusion of most of these deaths under the common head of diarrhœa, he believed that any errors of inclusion or exclusion on the part of registrars or practitioners alike were mutually corrective. Since the epidemic or specific diarrhœa was, as a cause of death, almost restricted to the first year of life it would be most accurate to take the ratio of deaths of infants only to the total births, but this not being everywhere available he had calculated the total diarrhœal mortality in terms of the births, that is, approximately of the infant, instead of the total population, as giving a nearer approach to the truth, and he had for the most part exhibited his results diagrammatically or graphically for facility of comparison, giving only a few statistical tables. One of these showed that the seasonal incidence of epidemic diarrhœa presented several peculiarities; the highest mortality was everywhere in the third quarter, but the proportion that the deaths in these three months bore to those in the whole year ranged from 50 per cent. in Edinburgh and 54 in Glasgow and Blackburn to 82 per cent. in Sheffield and Portsmouth and 84 in Leicester. In some towns, as Blackburn, Preston, Edinburgh, Glasgow, and Dublin, diarrhœa prevailed endemically throughout the year, while in Leicester, Norwich, Brighton, and Portsmouth it recurred as an epidemic every autumn, there being little at other times. In these, too, the severity of the annual epidemics differed greatly, being high in Bolton and Preston, and comparatively low in Edinburgh, Glasgow, and Dublin, Blackburn being alone in the high mortality of the first quarter, though approached in this respect by Edinburgh and Glasgow. In investigating the causation of epidemic or summer diarrhœa we must regret that the report of Dr. Ballard in 1888 was left incomplete through his death. They could not be said to have advanced beyond Dr. Longstaff's conclusion in 1880 that it was "caused by the pollution of air, water, and food with some product or products of the decomposition of organic matter during very hot weather." In some towns, as Halifax and Huddersfield, the low mortality was owing in a slight degree to the paucity of the infant population; but while "the causes of infant diarrhœal mortality were multifarious" (Ballard), and "every effect had an ancestry of causes and every cause a posterity of effects," the essential cause, the "unconditional invariable antecedent" of epidemic diarrhœa was certainly a micro-organism, possibly the bacillus enteritidis sporogenes of Klein, though requiring for its activity certain conditions of temperature, rainfall, and soil, which must be considered in order. First, epidemic diarrhœa was chiefly a disease of urban life. It was more prevalent now than formerly, simply because a larger proportion of the population was now urban, for there was actually less diarrhœa in the towns than in the past, when, as Creighton showed, the mortality in the two worst weeks of the year in London was relatively higher than that of the entire season at the present day. (*a*) Density of population did not bear any direct proportion to diarrhœal mortality; for while Brighton stood third among the thirty-one great towns as regards density, it was eighteenth in diarrhœal mortality; indeed the crude inference from a comparison of the overcrowding, judged by the number of persons to a room in many towns, and the diarrhœal mortality would be that they were in inverse proportion, which would be a *reductio ad absurdum*. (*b*) As a fatal disease it was almost confined to the artisan class, and fell heaviest on the lowest ranks of the labouring population, as was well seen in its relative incidence on different quarters of the large towns. (*c*) That the employment of married women was a factor was certain; but further investigation was required before trustworthy conclusions could be drawn as to the relative importance of the various factors which might be at work. (*d*) There was as a rule less fatal diarrhœa in towns where the water-carriage system of excrement disposal had been adopted. Leicester and Liverpool had, however, shown little or no improvement since the introduction of waterclosets, probably on account of the previous pollution of the soil. On the other hand, Derby with its numerous middens, and Halifax, Oldham, and Huddersfield, where the pail system was in force, showed low death-rates, owing no doubt to other circumstances, and would be better still if they adopted water carriage. (*e*) The diarrhœal mortality was as a rule lower where the removal of house refuse was more efficient; but the scavenging of streets was no less important, though its influence could not be so well determined. (*f*) Dr. Ballard had stated that on loose soils diarrhœal mortality was apt to be high, and that it was low on rocky sites notwithstanding many unfavourable conditions. But geological characters influenced the mortality only through the permeability and dampness of the soil, its gradients and other conditions facilitating the retention or removal of impurities and of moisture, whether by natural or artificial means, and unfavourable conditions might generally be counteracted by good drainage, paving, and scavenging. Thus, while Preston, Bolton, and Salford were on impervious soils, the mortality from diarrhœa was high, whereas Halifax, with a pervious soil, had a low mortality. (*g*) Dr. Newsholme was convinced that there was a direct relation—not that of a *causa causans* but of a necessary condition—between the temperature and rainfall and the prevalence of diarrhœa, especially in the third quarter of the year. A high temperature and scanty rainfall during the summer and autumn was invariably followed by an outbreak of diarrhœa, the intensity of which was determined by the sanitary conditions of the town. An analysis of these meteorological phenomena for four-

teen towns showed that, whether one took the means of the whole years or of the third quarters only, all those with excessive rainfall (except Liverpool) and all with low temperatures (except Liverpool, Wolverhampton, and Hull) had low diarrhœal mortalities, and all with low rainfall (except London and Brighton) and with high temperatures (except Wolverhampton and Hull) had low diarrhœal mortalities; Liverpool had a higher mortality under favourable meteorological conditions, and London and Brighton a lower under unfavourable than one would expect. It was not possible to trace a quantitative relation between these meteorological factors and the amount of diarrhœa, but the influence of rainfall seemed to be general and inverse and that of temperature direct. Pettenkofer and Pfeiffer had called attention to the relation between the earth temperature and enteric fever, but it must be borne in mind that the microbe of diarrhœa resided in the surface soil, and though the influence of heat must be cumulative it mattered little whether we said that the annual recurrence of diarrhœa occurred when the mean air temperature had stood at 65° for a fortnight or as soon as that of the earth at 4 feet deep had reached 56°. The influence of heavy rains and of "swilling down" of streets and courts in decreasing the mortality from diarrhœa was evidence of its connection with superficial pollution, and was very clearly shown by the reduction of the death-rate in the poorest part of Leeds in 1892 that followed the "swilling" process, while it rose in the rest of the town where it was not carried out. Diarrhœa was thus seen to be essentially a filth disease, the micro-organisms flourishing under high temperatures in a polluted surface soil, and therefore prevailing in any town in wholly different degrees from those of enteric fever, which resided at greater depths, and was dependent on the pollution of the subsoil by defective privy pits and drains. But, like enteric fever, it was communicable, multiple cases being frequently observed in the same family, and there was no doubt that it was often caused by the infection of food by means of street dust entering the houses, and the part played by milk in the production of infantile diarrhœa was rather that of a vehicle than of a primary cause. Infants brought up at the breast were rarely attacked, but the filthy state of cowsheds and dairies was a fertile source of milk infection. These observations were illustrated by graphic representations of the diarrhœal mortality in each of the thirty-one great towns, which were accompanied by short notes on the physiography, the conservancy, and the course followed by the annual epidemics in each.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

E. H. BENNETT, M.D., President of the Academy, in the Chair.

Friday, November 3rd, 1899.

PATHOLOGICAL EYES.

DR. ARTHUR H. BENSON and Dr. H. C. EARL exhibited a series of pathological eyes, half globes (mounted in formalin), and microscopic sections: (*a*) Glioma was the only tumour originating in the retina. It was, perhaps, the most malignant growth occurring in the human body, and the prognosis was favourable only when removal was carried out early. It was essentially a disease of infancy and early life, and might even be congenital. It was usually monocular, and never pigmented. The specimen was from a child aged 4 months. It was now seven months since the operation, and so far no recurrence had taken place. (*b*) The second case (sarcoma of choroid) was that of a boy, aged 3 years. On admission a fungating mass, the size of a duck's egg, was protruding from the right orbit. This contained the remains of the globe, and filled the orbit. Removal of the whole contents of the orbit was performed, but it was found that the orbit back to the posterior foramen was completely filled with the growth, and the optic nerve was so disintegrated that no trace of it was visible to the naked eye. As the growth could not be entirely removed the prognosis was bad, and recurrence did actually take place a month after the child's return home. (*c*) The third specimen (epithelioma of cornea and conjunctiva) was taken from a man aged 69. The whole cornea and part of the ocular conjunctiva were covered by the growth, which was so extensive and seemed to penetrate so deeply into the subjacent tissue that Dr. Benson felt sure it could not with safety be excised, and that enucleation gave the man the only chance. The tumour was unpigmented, flat, and sessile, with a very broad base, and had ulcerated. (*d*) Bony degeneration of choroid in a woman, aged 50. She had had a diabetic cataract removed from one eye in 1898. The other eye was collapsed and blind since childhood, the result of an accident. It was irritable and painful to the touch, and, as it was believed to be the source of irritation in consequence of possessing a bony choroid, it was removed. The choroid was found converted in its whole extent into a layer of true bone. The lens was calcified, not ossified. (*e*) Intraocular hæmorrhage. The patient, aged 45, gave a history of cataract of the right eye of four years' duration. During the last three months the pain in the eye had been very severe, and one month ago a large hæmorrhage occurred, which filled the anterior chamber, and the pain became constant and intolerable. The tension was about −1, and the globe had the appearance of a shrinking one. Enucleation was performed. No cause for the hæmorrhage (which probably came from the iris) was found. (*f*) Collapsed globe, after cataract removal, in a woman on whose left eye a combined extraction of an opaque lens was performed. An asthenic suppurative cyclitis resulted, the globe shrank, and vision lost in the eye. Seven and a half months after the globe was collapsed, and the right eye had a condition very suggestive of sympathetic ophthalmitis—serous iritis, keratitis punctata, pupil fixed, tension normal, and slight circumcorneal vascularity. The lens was opaque, and no illumination of the fundus could be obtained. There was no pain. As the shrunken left globe was believed to be the cause of the trouble in the right eye enucleation was performed. Four days later the patient became delirious. She continued in a low state, and thirteen days after operation refused food altogether, and the bowels acted involuntarily. No organic lesion could be found, and she died sixteen days after operation.

The PRESIDENT and Mr. H. G. CROLY made remarks, and Dr. BENSON replied.

SPECIMENS.

Mr. H. G. CROLY exhibited (1) Fracture of the Base of the Skull; (2) Sarcoma of Testis. The fracture of the base of the skull was the most perfect he had ever seen. It extended through the petrous bone, body of sphenoid, and ethmoid. The man was found on the road in a pool of blood, and was carried to hospital in a collapsed state. There was great hæmorrhage from both ears. He recovered consciousness sufficiently to say that he felt himself better. He lived for three days. There was no lesion of the brain, and no hæmorrhage into the brain. There was no fracture of the vault of the skull.—Dr. KNOTT showed some specimens of Fractured Humeri. In connection with one showing fracture of the lower end of the bone, he drew attention to the fact that the epiphysial line of the lower articular surface of the humerus did not involve the condyles. The PRESIDENT concurred in the diagnosis of one of the specimens as a fracture passing obliquely through the elbow-joint, as it had none of the features of an epiphysary displacement. Mr. CROLY, referring to one of the specimens, pointed out a fact which he thought a great many did not know, and to which Robert Smith had drawn particular attention, namely, that epiphysary fracture of the upper end of the humerus included the tuberosities. He (Mr. Croly) in teaching fractures of the upper end of the humerus impressed on his pupils that there were two fractures of the surgical neck, one being epiphysary below the tuberosities, one lower down in the surgical neck. The line of fracture through the anatomical neck was above the tuberosities. Speaking of the specimen Dr. Bennett had drawn attention to, he should certainly say it was not an epiphysary fracture, since the condyles here were carried forwards instead of backwards, which they knew was distinctive of epiphysary disjunction. Dr. KNOTT, in reply, said that the epiphysary line at the upper end of the humerus was always exactly horizontal. In addition to the observation Mr. Croly had made that from the action of the triceps it would be almost necessary that there should be a backward displacement in epiphysary disjunction of the lower end of the humerus, there was also the point that

his specimen involved the external condyle, which it would not do if it were an epiphysary disjunction, as the external condyle did not belong to the epiphyses, but to the shaft.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Bennett May, F.R.C.S., President, in the Chair.

Thursday, November 9th, 1899.

Pedunculated Adenoma removed from Sigmoid Flexure.

Mr. Barling showed this specimen, nearly as large as the fist, removed from a man aged 54, who had probably suffered from it for twenty years. From time to time there had been loss of blood, with passage of mucus and too frequent action of the bowels up to five or six times a day. Occasionally the distal portions of the growth came down to the anus, and fragments of it were broken off. As it was found impossible to reach the base of the growth through the anus, the posterior wall of the rectum was divided back to the coccyx. Space was thus obtained through which the hand and forearm could be introduced, when the growth was found attached by a broad pedicle to the posterior wall of the bowel, about the position of the lower part of the sigmoid flexure. Even with this access, it was found impossible to secure the pedicle by ligature. A powerful pair of clamp forceps was therefore guided by the left hand around the pedicle, and the growth cut away with scissors. Uninterrupted recovery followed, with complete anal control.

Large Synovial Fringe Removed from the Knee-joint.

Mr. Barling showed this specimen from a woman, aged 39, the subject of rheumatoid arthritis in the knees and elbows. The body removed had been growing in the left knee-joint for about two years, and had been associated with pain in the joint and frequent synovitis. It had steadily increased in size until it had reached the size of a small hen's egg at the time of the operation. The body was freely movable except at a small part of its surface, and doubt was felt whether it was an overgrown synovial fringe or some form of new growth. On incising the joint, a large quantity of fluid escaped, the synovial membrane was found very vascular with much velvety thickening, whilst the movable body was found attached by a broad pedicle at the inner and upper side of the joint. The pedicle was divided, some small vessels in it ligatured, and the knee-joint was closed in the usual way. Microscopic examination of the removed body showed it to be a fibrinous mass undergoing organisation, and in the centre there was a small carious focus, but neither bone nor cartilage was detected. The vessels in parts showed marked endarteritis obliterans. There was no evidence of tubercle.

Excision of Cæcum.

Mr. George Heaton showed a patient whose cæcum he had excised for carcinoma some two months ago, and the portion of intestine removed. The cæcum, vermiform appendix, 3 inches of the ascending colon, and 3 inches of the ileum were resected. The lower end of the ascending colon was closed by interrupted sutures, and the cut end of the small intestine was united laterally to the ascending colon by means of a Murphy's button. The patient made a rapid recovery, and had since the operation gained more than 2 stone in weight. The specimen showed a large cylindrical-celled carcinoma, which almost completely filled the cavity of the cæcum and was invading the ascending colon.

Pulmonary Hypertrophic Osteo-arthropathy.

Mr. Blakeney showed a baker, aged 73, exhibiting the following well-marked symptoms: Hypertrophy of the lower ends of the radius and ulna; no enlargement of the metacarpal bones; great hypertrophy of the fingers, with marked hyper-extension of the last phalanx of the fingers. The balls of the fingers resembled the clapper of a bell, quite different from the grape-shaped fingers of phthisis or the club-shaped finger end of heart disease. The nails were longer, larger, and watch-glass shaped, tending to cap the tops of the fingers; they were striated in their length and very brittle. There was extreme weakness in the hands and some slight loss of sensation. There was some œdema of the limbs from the centre of the forearm to the tips of the fingers, which somewhat concealed the deformity of the bones. The enlargements in the lower limbs were similar, the great toe being more markedly affected. The tarso-metatarsal region was relatively free. The malleolar lesions were very marked, the maximum increase being in the bimalleolar diameter. The clavicles were thickened, particularly the acromial end. The acromion process of the scapula was also thickened. The iliac crests were thickened, and there was enlargement of the ends of the ribs, also hypertrophy of the sternum. There was a very pronounced curvature of the spine situated in the inferior dorsal and upper lumbar region. There was tumefaction of the elbow and knee-joints, but the reflexes were present, though slight. There was thickening of the alveolar border of the superior maxillary bone, but a complete absence of disease in the lower jaw and the bones of the head. There was a trace of albumen and phosphates in the urine from time to time. The sputum contained a large amount of mucus, but there was no pus, tubercle bacilli, or cancer cells.

Carcinoma of Sigmoid.

Mr. Haslam showed a specimen from a woman, aged 84, who was admitted with acute intestinal obstruction. The growth was small and, though blocking the lumen of the gut, was not evident from without. It was impossible to ascertain the exact cause of the obstruction at the time of operation, owing to the great distension of the intestines.

Papers.

Dr. Carter read a note upon a Red Pigmentation of the Fæces simulating the presence of blood.—Dr. Thomas Wilson read a paper on Backward Displacements of the Uterus, based on notes of 276 cases.—Dr. McDonald read a note on the Diagnostic Value of Simple Estimation of the Hæmic Leucocytes in Obscure Suppuration.

LIVERPOOL MEDICAL INSTITUTION.

Pathological and Microscopical Section.

F. T. Paul, F.R.C.S., in the Chair.

Thursday, November 9th, 1899.

Demonstrations.

Professor Paterson gave a lantern demonstration of a beautiful series of micro-photographs made by Dr. Bryce of Glasgow, and illustrating the various stages of fertilisation and segmentation of the ovum of Echinus Esculentus.—Dr. John Hay demonstrated very completely, by means of pathological and microscopical specimens, and by drawings and lantern slides, a case in which there was a large Pedunculated Thrombus—$1\frac{3}{4}$ inch long—hanging from the septum ovale into the left auricle. There was also extreme mitral stenosis, and during life marked presystolic pulsation $4\frac{1}{2}$ inches to the right of the middle line.

Specimens.

Dr. Abram showed a Dysenteric Abscess of the Liver ruptured into the pericardium.—Dr. Grimsdale some Uterine Fibroids, one of which was found free in the peritoneal cavity.—Mr. Newbolt a well-marked specimen of Multilocular Cystic Epithelial Tumour of the Lower Jaw removed from a woman aged 66. It had been growing for twenty years. The cysts varied in size from the size of a pea to that of a small orange.—Mr. F. W. Bailey showed an Ascaris Lumbricoides which had been vomited by a healthy woman of 25. The specimen had been prepared so as to show the internal anatomy of the worm.—Mr. Keith Monsarrat showed (1) the organs of a bitch affected with Carcinoma Mammæ. They had been preserved by Jore's method and retained their natural colour excellently; (2) Microscopic Specimens of the same.—Dr. J. E. Gemmel showed a Hydatid Cyst which he had removed from the omentum of a woman. He demonstrated its microscopical structure.—Dr. Buchanan showed some very fine specimens of large Plasma Granule Cells from the wall of the rectum.—The Secretary (Mr. Larkin) showed for Dr. Nathan Raw (1) the Calvaria of a woman of 60 showing very extensive Syphilitic Necrosis externally and internally,

the whole of the necrosed area was covered by a thick gummatous mass, there were no symptoms during life indicating this; (2) an Aneurysm of the Renal Artery.—Mr. PAUL showed microscopic sections of an Eight Weeks' Human Embryo. A discussion took place on the specimens, in which the following members took part: Drs. and Messrs. ABRAM, BOYCE, BUCHANAN, HAY, MONSARRAT, NEWBOLT, and the CHAIRMAN (Mr. Paul), who strongly advocated the view that cystic tumours of the jaw were developed from embryonic tooth remains.

Thursday, November 16th, 1899.

W. MACFIE CAMPBELL, M.D., President, in the Chair.

COLECTOMY.

MR. FRANK T. PAUL read notes of two cases of colectomy.

Mr. RUSHTON PARKER spoke.

PERFORATING GASTRIC ULCER.

Mr. RUSHTON PARKER read notes of a case of gastric ulcer, in which perforation occurred and an operation was performed.

Mr. PAUL mentioned a case of perforating gastric ulcer in which the extravasation became localised and the patient recovered without operation. For three weeks not a drop of anything was swallowed, and the deprivation was borne without discomfort owing to plenty of water being injected *per rectum*. He thought that as in appendicitis the different degrees of peritoneal infection called for different treatment.

Mr. THELWALL THOMAS agreed as to the value of injections by water or saline solution into the rectum for shock, or after operation for perforated gastric ulcer. He alluded to two cases (one fatal) in which he had operated; in one case the perforation occurred when the stomach was empty of food, yet the whole peritoneal cavity was soiled, the ulcer being near the pylorus. In the other case, which was followed by recovery, the perforation was near the cardiac extremity of the organ, and occurred when the stomach was full, yet the extravasation was limited by the anterior surface of the great omentum. In the first case abdominal lavage was practised, in the second merely wiping out the extravasated food and lymph.

Dr. CARTER remarked on the apparent frequency with which, after immediately successful operations for perforating gastric ulcer, death took place from changes in secondary exudations between the liver or the diaphragm and the stomach. As to the possibility of recovery even without operation after perforation, he had no doubt whatever: first, because he had seen patients recover where the symptoms left no doubt that such perforation had occurred; and, secondly, because in one instance a *post-mortem* examination, years after such an occurrence, proved it to have taken place.

Drs. J. H. ABRAM and GRÜNBAUM spoke.

TREATMENT OF UTERINE FIBROIDS.

Dr. BRIGGS read a paper on vaginal enucleation and vaginal hysterectomy in the treatment of uterine fibroids. The paper was based mainly on his own experience in 39 cases, 25 by hysterectomy, and 14 by enucleation. The fibroids enucleated varied in weight from 2 ozs. to 2 lbs.; the uterus and fibroids removed by hysterectomy varied in weight from 7 ozs. to 2 lbs. 2¾ ozs. The main object of the paper was to show the advantage of an anterior mesial section of the dilated cervix, after separating the bladder, as in vaginal hysterectomy, in affording room for piecemeal extraction and enucleation. Enucleation of submucous and interstitial growths was, in his opinion, now rendered as safe as hysterectomy by the vaginal route. All the patients recovered, and only one operation (enucleation) was followed by a complication—cellulitis—during recovery. In only one case was enucleation abandoned and hysterectomy rendered necessary. Opponents of enucleation on account of fibroids being multiple seem to have overlooked the complete exploration possible at the close of enucleation. One patient had eight growths thus removed in March, 1893, and was now still free from symptoms or physical signs of fibroids. The work was in all respects less formidable than the work of Péan, but it demonstrated that such operative treatment had wider limits than had been generally recognised.

Dr. T. B. GRIMSDALE thought that there was much to be done by vaginal enucleation, but considered that the great difficulty in the general application of the operation lay in the fact that, fibroid tumours being usually multiple, the exact relations of all the tumours were often impossible to make out, so that the operation must often be completed by means of a vaginal hysterectomy. He related a case where he had removed fifteen fibroids by vaginal enucleation with the best results, but it was still possible that other tumours had been left behind, and that a second operation might be required at some future date. For large tumours he preferred to perform abdominal hysterectomy.

The PRESIDENT and Dr. BURTON made remarks.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

H. MICHIE, M.B., C.M., President, in the Chair.

Wednesday, November 1st, 1899.

PRESIDENTIAL ADDRESS.

DR. MICHIE delivered his presidential address, taking as his subject Puerperal Sepsis, under which term he included all those diseases of the puerperium having for their essential cause the various pathogenic micro-organisms, the staphylococci and the streptococci, including all but a few rare exceptions. Though much importance had lately been attached to the bacillus coli communis in its relation to septic peritonitis, he still believed that streptococci were the prime agents in the production of puerperal peritonitis. After drawing attention to the anatomy of the endometrium, the lymphatics, and the blood vessels of the uterus and the parturient canal, and their importance in reference to the beginning and spread of septic disease in the lying-in woman, he went on to discuss the conditions that favoured septic infection, the sources of infection, and the means to be adopted for its prevention. The conditions that favoured septic infection were everything that provided suitable soil for the growth and development of bacteria—necrotic tissue, blood clot, retained placenta, or membranes being the most suitable and frequently provided soil, and mechanical injury the most potent in its production. This question of soil and its production Dr. Michie considered worthy of far more attention than was generally given to it. The most obvious sources of infection, and those which it might reasonably be hoped to a large extent to have under control were the patient's own body, the obstetrician's hands and appliances, bedding and other articles of clothing, and barring the avoidance of rough and frequent use of instruments and constant vaginal examinations, he would place attention to these as being the most important step in the whole art of midwifery. To his mind therefore the indications for the prevention of puerperal sepsis were perfectly plain, namely, avoid rough and frequent handling and keep the patient's body and your own hands and appliances clean. Just as every good surgeon attended to the cleansing of the field of his operation so should the obstetrician pay attention to the cleanliness of the patient about to be confined, special pains being taken to cleanse the external genitals, and for this purpose nothing answered better than scrubbing with soap, soda, and hot water; though he himself did not consider that a final washing with an antiseptic solution added much or anything to the patient's safety, he saw no objection to its employment externally. He considered, however, that none of the disinfectant solutions in common use were altogether free from objection when used for douching, etc., inasmuch as all of them produced more or less necrosis of tissue, and therefore in that respect favoured the growth of organisms. The obstetrician's hands were to be cleaned in the same way, and his instruments sterilised by boiling in strong soda solution. The bed linen both under and over the patient should be fresh from the laundry, and all napkins or other dressings sterilised. Beyond as near an approach as possible to absolute cleanliness of the external genitals, convalescence was left as much as possible to Nature, believing as he did that any elaborate system of douching and swabbing before, during, or after delivery was likely enough to give rise to the very diseases they were intended to prevent. In referring to the treatment of the various forms and degrees of puerperal sepsis, Dr. Michie confessed that in its worst forms—when there was septic metritis with

the lymphatic spaces and vessels and the uterine sinuses crammed with streptococci, the disease quickly spreading to the peritoneum, he knew of no treatment that was of any avail, any operative interference being certainly worse than useless. Often, however, cases of septic infection were limited chiefly or entirely to pieces of retained placenta or membrane or decidua, when the removal of these septic tissues would, nineteen times out of twenty, cure the patient at once. Digital exploration of the uterus should always precede any employment of a curette or similar instrument.

The address was discussed by nine members.

Vote of Thanks.

Subsequently a hearty and unanimous vote of thanks was accorded to the President for his able address.

MANCHESTER MEDICAL SOCIETY.

Wednesday, November 1st, 1899.

Professor Sinclair, M.D., President, in the Chair.

Colotomy.

Mr. Montgomery gave an account of 6 cases of colotomy performed by a new method. The principle of this consisted in: (1) The twisting of the loop of gut so as to make, after completion of the second stage, the lower opening the acting one; (2) The passage of a mesenteric suture, so that when tied it should constrict tightly the opening leading to the rectum.

Obscure Cases of Syphilis.

Dr. Mules narrated the histories of the following obscure cases of syphilis: (1) Arrests of Development due to Syphilis: (*a*) A case of Microphthalmos in the right eye, with, in the left, congenital cataract and posterior synechia. There was a clear history of inherited disease. (*b*) A case of Double Zonular Cataract, with other evidence of syphilis, and complete absence of the right external ear and persistence of branchial clefts. (2) A girl aged 22 years, with Paresis of Left External Rectus, followed by double severe retinitis; no other evidence of syphilis, but father had mild tabes. The patient up to that date was exceptionally healthy, free from any scars, teeth marks, or keratitis. The case was given as an illustration of the value of the "hypothesis of Strümpell," by which alone could an adequate explanation be offered. (3) A man aged 43, with Paresis of the Left External Rectus, and thickening of the left testis; paraplegia supervened, and death from progressive tabes after seven years. In this case the history was extremely obscure and the diagnosis of various medical experts singularly at variance. The atrophy of the testis which supervened, and was certainly due to gumma, was held to invalidate the statistics of Rivière, who attributed testis atrophy in tabes solely to peripheral neuritis, with preliminary anæsthesia of the organ.

Hypertrophic Alcoholic Cirrhosis.

Dr. Dreschfeld made some remarks upon a peculiar form of hypertrophic alcoholic cirrhosis. After giving a classification of cirrhosis of the liver, he described a form of alcoholic cirrhosis which differed from the common types in several respects. There was a preascitic stage which often lasted a considerable time, and during which the liver was found very much enlarged, as also was the spleen. This stage was succeeded by one in which jaundice came on gradually, and preceded or soon followed by ascites; the jaundice was not due to obstruction of the large bile ducts, and had more the character of a toxic jaundice, the stools containing some bile and the urine (in one case) showed the presence of leucin and tyrosin; with the onset of the jaundice the patient's condition became rapidly worse, the liver still farther enlarged, the ascites increased, and toxæmic symptoms appeared. There was obstinate and persistent diarrhœa or the patient suffered from a number of nervous symptoms. Hæmorrhages often appeared and the patient died from collapse or coma. In several of the cases observed the heart was the seat of mitral or aortic disease. The necropsy in 2 cases showed a monolobular rather than a multilobular cirrhosis. From idiopathic hypertrophic cirrhosis these cases were distinguished by the history, the short duration of the disease after jaundice had set in, and the ascites.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

D. Burgess, M.A., M.B., President, in the Chair.

Thursday, November 9th, 1899.

Cases.

Mr. Simeon Snell showed the following cases: (1) A young woman who had been the subject of Tuberculosis of the Ocular Conjunctiva, illustrating the value of treatment by application of lactic acid; (2) a similar case in a young woman in which the left upper eyelid (inner surface) had been chiefly affected, treated also by lactic acid; (3) a young girl with Double Papillitis associated with Incomplete Palsy of Both External Recti; vision was hardly affected; (4) a man with Bilateral Palsy of External Recti (no optic neuritis) with symptoms of ataxic paraplegia coming on after influenza: (5) a man with a Fragment of Steel embedded in the Left Lens.

Eye Accidents and Trades.

Mr. Simeon Snell exhibited a number of lantern slides from photographs taken at several large works bearing on the causation and prevention of eye accidents in trades, and made brief remarks. This subject Mr. Snell dealt with in his address as President of the Section of Ophthalmology at the recent meeting at Portsmouth of the British Medical Association and the same lantern slides were then exhibited.

Asthenic Bulbar Paralysis.

Dr. Hall read notes of a case of asthenic bulbar paralysis. The patient, a married woman, began with symptoms of general weakness, was easily tired on slight exertion, could hardly hold a teacup to drink out of. This was in November, 1896. One day she fell down in the house, her legs giving way altogether. About two months after this slight ptosis, especially in the left eye, was noticed; there was also some ocular paresis, variable in amount and difficult to estimate. She was apparently free from this in the mornings, but as the day went on her symptoms got worse. Except for this muscular weakness there was no evidence of organic nervous disease. Weir-Mitchell treatment was tried, and the patient improved greatly during a few weeks, but after a somewhat profuse menstrual period she relapsed and new symptoms were added, notably a nasal twang in the voice, occasional attacks of dyspnœa, and some difficulty in swallowing. One day, some six months from the commencement of her illness, she suddenly felt ill whilst drinking some soup, gradually lost consciousness, and died from failure of respiratory centre a few hours later. At the necropsy nothing abnormal could be found in the brain, pons, or medulla oblongata. Portions of these were carefully preserved and examined with great care, but no evidence of disease in the nerve cells, fibres, or interstitial tissue was discovered.

Tinned-Meat Poisoning.

Dr. W. N. Parker read a paper on 22 cases of poisoning from tinned corned beef, a report of which was published in the British Medical Journal of November 11th, p. 1367.

Glasgow Medico-Chirurgical Society.—At a meeting on November 17th, Mr. Henry E. Clark, President, in the chair, Professor McCall Anderson showed a man, aged 27, who appeared to be the subject of hereditary syphilis, and had developed symptoms of disease of the spinal cord. There had been difficulty in walking, with considerable ataxia, exaggerated reflexes, giddiness, and a scalding sensation of the tip of the left side of the tongue. All his symptoms had steadily improved under treatment consisting of iodide of potassium in increasing doses; for some time the patient had been taking 120 grains three times a day. Dr. Alex. Robertson, Dr. W. G. Dun, and Dr. Robert Kennedy took part in the discussion. — Professor McCall Anderson also showed a case of Leucocythæmia of the spleno-medullary form. The patient, aged 30, had had five healthy children, and since the birth of the youngest two years ago she had not menstruated, and had had pain in the left side. There was marked pallor, loss of flesh, some retinal hæmorrhages, great enlargement of the spleen, with characteristic alterations of the blood, which were demonstrated. She was being treated with raw bone marrow and tabloids of splenic extract. Some remarks were made on this case by Dr. Alex. Robertson, Dr. W. G. Dun,

Dr. HUNTER, and the PRESIDENT.—Dr. HINSHELWOOD showed a patient suffering from Tabes in the pre-ataxic stage, with characteristic eye symptoms. The patient was not ataxic, but had no knee-jerks, though when first seen his knee-jerks were both present. However, he had some diplopia, with ptosis and some strabismus from paralysis of the left third cranial nerve. There was Argyll-Robertson pupil, and an absence of Westphal's pupil phenomenon. There was also some optic atrophy and characteristic contraction of the visual fields.—Dr. J. SOUTAR MCKENDRICK read a paper on a case of Epithelioma of the Œsophagus involving the pneumogastric nerve with its recurrent branch on the right side, in which the symptoms resembled those of aneurysm.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—At a meeting on November 13th, Dr. BARR (President), who was in the chair, showed: (1) A deaf mute, aged about 9, on whom he had performed Stacke's operation for chronic Middle-ear Suppuration; he had also relieved an extradural abscess in the neighbourhood of the sigmoid sinus; (2) a man on whom Stacke's operation had been performed, and, secondarily (by Dr. J. H. Nicoll) the whole of the lateral sinus, cleared out after ligating the internal jugular vein in the neck; septic pneumonia, pulmonary abscess, and gangrene had complicated the case. Drs. FINLAYSON, ROBERTSON, ADAMS, and NICOLL took part in the discussion on these cases. —Dr. ALFRED YOUNG showed a patient, aged 5, in whom a Nævoid Growth occupied the left temporal region and left upper eyelid so that the eye could not be opened; the skin was not implicated.—Dr. FRASER (Paisley) showed specimens from a case of Thrombosis of Superior Mesenteric Vein, characterised by fatal hæmorrhage from the bowel. The patient had had rheumatic fever three years before, and had suffered from endocarditis. The spleen showed evidence of old infarctions. Mr. MAYLARD and Dr. MCCALL ANDERSON commented on the absence of a symptom usual in such cases—namely, severe pain about the umbilical region.—Professor MUIR showed: (1) Specimen of Calcifying Spindle-celled Sarcoma of the Humerus, involving the upper two-thirds of the bone, and of only six weeks' known duration; (2) three specimens of Tuberculous Pericarditis; (3) microscopic specimens showing Weigert's Method of Staining Yellow Elastic Tissue.

MIDLAND MEDICAL SOCIETY.—The annual meeting was held in Birmingham on October 11th, Dr. W. G. LOWE, President, in the chair. The following officers were elected for the ensuing session: *President:* Dr. Rickards; *Treasurer:* Mr. John Garner; *Secretaries:* Dr. O. J. Kauffmann and Mr. Christopher Martin; and *Members of Council:* Mr. T. F. Chavasse, Mr. Jordan Lloyd, Mr. J. W. Taylor, and Mr. Bennett May. On the motion of the PRESIDENT, a resolution expressing sympathy with Mrs. Lawson Tait in her bereavement was passed unanimously.—The first ordinary meeting was held on Wednesday, October 11th, at the conclusion of the annual meeting, Dr. RICKARDS, the President, being in the chair.—Dr. KAUFFMANN showed a case of Scleroderma. The patient was a man, aged 33, but looking younger. He was a painter by occupation, but had never suffered from symptoms of plumbism. Both gums presented well-marked lead lines. The scleroderma appeared about six months before, without any assignable cause, as a solitary raised patch on the inside of the left thigh, neither red nor tender, according to the patient's recollection. This patch had now extended, so that the scleroderma occupied the whole of the front of the left thigh and leg, running down along the dorsum of the foot in a narrow band from the ankle to the cleft between the great and second toes. The posterior surface of the limb was quite free, and an oval patch of healthy skin extended broadly over the front of the knee-joint. Two small patches were present on the abdomen, unnoticed by the patient, both on the left side. The state of the skin was that usual in scleroderma. There was neither anæsthesia nor pain; the sebaceous secretion seemed to be absent, and hairs were very scarce in the sclerosed areas, though plentiful on the opposite limb. The general health had not suffered in any way, and there was no mental depression. Dr. Kauffmann drew attention to the fact of this man's occupation. The only other case of extensive scleroderma which he had seen in Birmingham likewise occurred in a painter.—Mr. HALL EDWARDS read a paper on Some Advances in the Application of the *X* Rays to Medicine and Surgery, with some notes on their Therapeutic Value. The paper was illustrated by an exhibition of apparatus, including range-finders, Wehnelt interrupters, etc., and a patient was shown in whom, after long exposure to the rays, a large patch of lupus had sloughed.—The inaugural meeting was held at the Great Western Hotel on the evening of Thursday, October 19th. The PRESIDENT (Dr. Rickards) held a reception at which over 130 members were present. Sir RICHARD DOUGLAS POWELL, M.D., F.R.C.P., delivered an address entitled Some Remarks on the Treatment of Consumption.

CHELSEA CLINICAL SOCIETY.—At a meeting on November 10th, Dr. J. FOSTER PALMER, President, who was in the chair, delivered an address on Deviation in Nature and its Clinical Bearing. The necessity for careful individual discrimination as distinct from reckless drug-giving was dwelt upon, and in relation to this the fallacy of regarding all the actions, or so-called "laws," of Nature as unvarying and eternal. On the contrary, deviations abounded. The absence of finality in our knowledge of Nature's workings was exemplified by observations on certain supposed "laws" of Nature, all of which were subject to remarkable exceptions that we could not explain. The laws referred to were: (1) The expansion of solid bodies on assuming a liquid state; (2) bisexual generation; (3) the sterility of hybrids (*inter se*); (4) evolution; (5) the non-transmission by heredity of acquired characteristics; (6) acquired immunity to attacks of zymotic disease; (7) normal resistance to disease; (8) the incidence of disease and death; (9) the bacterial origin of zymotic disease; (10) resistance to hypnotic suggestion; (11) the action of drugs; (12) the incidence of pleuritic adhesions in relation to operations on the lung. Dr. R. L. BOWLES, in thanking the President for the far-reaching and philosophic spirit of the address, remarked upon the real value to the practitioners of medicine of what the President had so clearly and ably demonstrated—namely, that what are called the laws of Nature were by no means without exceptions. In the present day there was so much that was new, and so much that was plausible in every department of medicine, as for example, in bacteriology, toxins, and synthetic remedies; that fashions were started by them, and the bewildered practitioner was apt to be led to trust to the dogmatism of the experts and the wonder-stirring advertisements of the manufacturing chemists; the individuality of the patient got overlooked, and the doctor was tempted to try many remedies for the many symptoms, and to forget the guidance of old principles and common sense. Dr. C. A. MORRIS seconded the vote of thanks; and the PRESIDENT replied.

ROCHDALE AND DISTRICT MEDICAL SOCIETY.—At a meeting on November 9th Mr. CHADWICK gave the Presidential Address on the Prevention of Tuberculosis. After referring to the diminished death-rate from phthisis, he alluded to recent researches on tuberculosis in cattle, which proved (1) the reliability of the tuberculin test, (2) the value of separating tuberculous animals from those which did not react to tuberculin, and (3) the inadvisability of breeding from unsound animals. He pointed out the prevalence of tuberculosis in wild rabbits, ascribing it to their living in burrows, necessarily containing little fresh air. Farmers now were ventilating cowhouses because they found it to their advantage, and one farmer had almost abolished losses from tuberculosis by attention to ventilation. In a series of experiments with tuberculin it was found that 90 per cent. of cows kept continually indoors reacted, whereas in a herd kept out of doors from May to December and as much as possible out during the winter months, 3.6 per cent. reacted, and in two herds kept out of doors all the year round none reacted. Milk was infected only where the udder was tuberculous, and although diseased udders were common, tuberculous udders only existed to the number of about 4 per cent. He proposed as a cheaper measure than the condemnation of all tuberculous cows, and a measure equally effective, that there should be compulsory notification of udder disease, that all such cows should undergo the tuberculin test, and those which reacted be stopped supplying milk for sale. Cows with general tuberculosis soon ceased to give milk. Contracts for

the supply of milk to institutions should only be accepted from dairies where the cows were periodically subjected to the tuberculin test.—Mr. Stanwell strongly protested against the custom of using the sweepings of factory floors for bedding in cowhouses, on the ground that such sweepings must frequently contain dried tuberculous sputum.

REVIEWS.

Archives of Neurology: from the Pathological Laboratory of the London County Asylums, Claybury, Essex. Edited by F. W. Mott, M.D., F.R.C.P., F.R.S., Director of the Laboratory and Pathologist to the London County Asylums. Printed for the London County Council: P. S. King and Son, Great Smith Street, Victoria Street, S.W. (Roy. 8vo, pp. 552. 15s. net).

The Pathological Laboratory of the London County Asylums was established at Claybury in the summer of 1895, and Dr. F. W. Mott has at length been able to issue its long-promised *Archives*, which contain a record of the work done during the past four years. A preface by Dr. W. J. Collins, formerly Chairman of the London County Council, explains the scope and purpose of the institution. The larger and more valuable part of the work contained in the volume before us is from the pen of Dr. Mott himself, and other contributions appear from workers who have availed themselves of the facilities of the laboratory at Claybury. The major portion of the work deals with such important matters as cerebral syphilis, the etiology of general paralysis, and cognate questions.

Part I contains a masterly paper by Dr. Mott dealing with brain syphilis as met with in hospital experience, careful and instructive notes concerning 40 cases being appended. Amongst other points we note that cerebral syphilis may declare itself within the first three years of syphilitic infection, four patients having shown it in the first year, seven in the second, and six in the third year. Many recent observations from the clinics of Fournier, Neisser, and others have established this beyond a doubt in Continental schools of medicine. In nearly all cases of basal syphilitic meningitis, as Dr. Mott points out, *post-mortem* evidence shows the presence of spinal meningitis, the brain symptoms having during life overshadowed the spinal symptoms. The section on the arteritis of syphilis is admirably written, and is illustrated by microphotographs. Dr. Mott points out that the lesions of syphilis may result in advanced and irreparable destructive changes in the so-called "silent" areas of the brain (psychological areas) before diagnosis can be made, and in this respect no restoration of function can be hoped for. The prevention of syphilis is insisted on as an urgent necessity, and this is especially the case as regards the army. The incidence of this malady upon the civil population is, however, not to be ignored, for "of all the causes of insanity," says Dr. Mott, "none writes with such a broad and indelible hand as syphilis."

Part II deals with the etiology of general paralysis. Dr. Mott strongly inclines to the view of Fournier that both tabes and general paralysis are parasyphilitic affections, and maintains that the evidence of asylum casebooks (to the contrary) regarding the etiology of general paralysis is of very little value. This is a statement of great and far-reaching importance. The strongest evidence of syphilis as the factor *par excellence* of meningo-encephalitis is shown in the ancestry of juvenile general paralysis, the records of Mickle, Alzheimer, and Thiry, showing that over 90 per cent. are due to syphilitic parentage. Dr. Mott's valuable collection of 22 cases of juvenile general paralysis is one of the strongest arguments in support of the truth of this statement. Concerning the degenerations in the vagus nerve in general paralysis, Drs. Mott and Barratt bring conclusive evidence of their absence, not one out of 10 cases showing degeneration, they also state that no pathological changes can be established in the neuro-muscular terminations. Indeed, it is "very difficult to show these structures in normal human muscle."

There are other papers dealing with subjects of less importance, and based upon more restricted material, but all of them show evidence of careful and painstaking study. Mr. Salaman reports a case of tabes in which microscopic studies were made on the posterior root ganglia. Mr. Durham contributes a suggestive article on colitis, and finds that out of eight cases bacteriologically examined seven showed the presence of a micrococcus of exceedingly minute size, growing with difficulty on nutrient media. Drs. Hamilton Wright and Margaret Orange have made a study of the nerve changes in a woman suffering from alcoholic dementia and symmetrical polyneuritis. Dr. Mott contributes an important paper on the changes in the brain, spinal cords, etc., of persons dying from prolonged convulsions (status epilepticus), illustrated with coloured drawings and ten microphotographs, but this being a "preliminary communication," critical notice of it may be deferred until the complete paper is published. We note, however, *en passant*, that in the four cases of status epilepticus which were investigated, fatty changes were observed in the heart-muscle, liver, kidney, and nerve-cells. Mr. Eric France contributes a brief article entitled "The Prevention of Phthisis in the Insane," which touches the fringe of a wide and grave subject that has for some time seriously occupied the minds of hygienists and legislators.

In an estimate of the work before us as a whole the following highly-important facts should be borne in mind: In the closing years of the century we are standing on the threshold of a new epoch, in which the insanities are beginning to be studied and investigated as other diseases are investigated, and progress is steadily being made in the growth of knowledge regarding the etiology, hereditary conditions, classification, pathology, and therapeutics of the insanities. Statistical and sociological studies are contributing their quota towards the elucidation of the problem, and pathological results like those embodied in the volume before us tell the tale of the morbid brain changes underlying such diseases as general paralysis, brain syphilis, etc. The attention of administrative bodies and of legislators is forcibly, and even irresistibly, drawn to the necessity of facing and grappling with the lunacy problem. Legislation proposed to facilitate the early recognition and treatment of "incipient" cases of insanity, the current and widespread realisation of the necessity of classification and of separate provision for the reception and treatment of "acute and curable cases," all combine to show in what direction lie our hopes for the future. Pathological study has also its distinct and scientific value, and as such it must receive due recognition and encouragement. Practical results should be looked for in the directions indicated above. One of the best fruits of these most valuable *Archives* will be to promote the diffusion of medical and scientific knowledge, and the growth of an enlightened public opinion, and thus to prepare the way for further social and legislative measures dealing with what is the crux of the problem, namely, the gradual prevention of the preventable insanities, better classification on a medico-economic basis of the chronic insanities and allied infirmities, and suitable provision for the "hospital" treatment and cure of curable insanities.

In conclusion, we warmly congratulate Dr. Mott and his assistants and contributors on the excellent work which they have done, and also on the manner in which it is presented to the scientific world. The *Archives of Neurology* will form a most valuable addition to the literature of pathology, and one in the highest degree creditable to those to whose labours it is due. It is matter for special satisfaction that such a work should be produced under the auspices of the London County Council, and such enlightened liberality on the part of a public body of such authority is of good augury for the future of pathological research in this country.

An Introduction to Dermatology. By Norman Walker, M.D., F.R.C.P.Edin. Bristol: John Wright and Co. 1899. (Demy 8vo, pp. 247; 30 plates and 34 illustrations. 8s. 6d.)

In the words of the author's preface, this work is practically a reproduction of lectures delivered to students, and does not profess to be a complete system. This fact somewhat disarms criticism. The title of the book is perhaps a little misleading,

It is not a survey of the general principles underlying the subject, but is really a rapid review of the more common diseases of the skin, which are more or less fully described much in the same way that obtains in already existing manuals.

No scheme of classification of diseases of the skin is perfect, but it is not easy to see why pediculosis corporis is placed under anomalies of circulation. The section of infectious inflammation includes a variety of diseases, such as scabies, eczema, seborrhœa, ichthyosis, alopecia areata, favus, ringworm, and so forth. Tinea versicolor and erythrasma, on the other hand, are placed at the end under saprophytes. Had the diseases due to animal and vegetable parasites (fungi) been brought together in a special chapter it would have been more convenient.

The author lays much stress, and frequently, on Unna's particular opinions with regard to the seborrhœic process and seborrhœic dermatitis; the latter is made to cover a multitude of things, including psoriasis. It is significant that Dr. Norman Walker himself is not always quite sure what Unna at times really does mean (p. 112).

A little space in the introductory portion of the book devoted to a definition of the terms used in dermatology for primary and secondary lesions would have added to its usefulness. Among minor points, the use of nodule as a synonym of papule (p. 56), the retention of the unfortunate designation "syphilitic lupus," the omission of a reference to the pioneer work of Tilbury Fox in connection with dermatitis herpetiformis, may be alluded to in passing.

In the matter of illustrations the work is ambitious. The plates are unequal in quality, especially those in colours.

On the whole, apart from its arrangement and what the author himself calls its "new-fangled" ideas, the book contains useful and practical hints on treatment and diagnosis, and will no doubt find favour with many.

The Medical Digest, or Busy Practitioner's Vade Mecum. By Richard Neale, M.D.Lond. Third edition, with appendix, including the years 1891 to March, 1899. London: John Bale, Sons, and Danielsson. 1899. (Demy 8vo, pp. 1530. 25s. complete. Appendix 15s. 6d.)

An edition of this valuable work, with a new appendix brought down to March of the present year, has just been published. The volume contains the third (1890) edition, which remains in its original form, and with its index of 132 pages occupies the first three-fourths of this volume. The appendix of the last four years has been incorporated with the appendix published in 1895, and each section corresponds with the same numbered section in the 1890 edition. The new appendix-index numbers over 30 pages, although new subjects alone are noted in it. The appendix further contains a list of corrigenda of the edition of 1890 and its index. Thus owners of the 1890 edition require merely to purchase the appendix to bring their volume quite up to date.

It seems almost unnecessary to refer now to the many and great excellences of the *Digest*, for its earlier editions have been well known and highly appreciated by the profession. But we may revert to a few points. The book is a marvellous result of painstaking industry. The author wrote in 1890 that the work had occupied on the average four hours a day for over forty years, and the time expended on the present appendix has probably exceeded that estimate, as the medical periodicals of to-day contain far more than the corresponding journals of thirty or even ten years ago. This well-directed industry has laid the whole profession under a deep obligation to the author.

The *Digest* contains references to the principal contributions to medical science which have appeared since 1840 in a few widely-diffused periodical publications, but it does not profess to be a complete index to all medical literature. The first index has nearly 17,000 references, and the body of the 1890 book contains about 200,000 distinct entries. This new appendix has probably 50,000 more entries, and its index nearly 4,000 references. It is therefore as true now as it was in 1882 that "the great richness of the index and the various designations of subjects contained in it form an important feature in the usefulness of the book." At the same time it was noted that "Dr. Neale has, however, not overloaded his sections with references, ample as is their number. We have observed instances where, out of several communications on the subject occurring together in a journal, he has chosen but a few, and those the most important." This commendation applies equally to the present volume.

The usefulness of the *Digest* is in every respect so manifest, especially to the "busy practitioner," for whom it was originally compiled, that no man in practice who has once learnt to use it would willingly be without it. It is also of great use to those who wish to record a case or compose a paper, for if the duty of consulting it be neglected the writer will run great risk of omitting some point or points of importance.

The price of the appendix (15s. 6d.) may possibly seem high, but the cost of publishing such a volume is necessarily great. The price, however, of the whole work, dating nearly sixty years back (25s. 6d.), appears to be moderate.

REPORTS AND ANALYSES

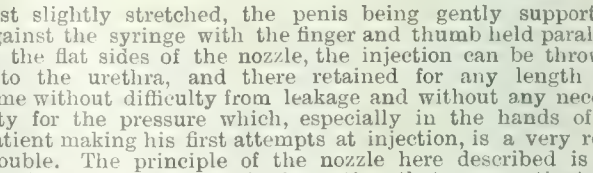
AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

A Urethral Syringe.—Mr. James B. Byles, M.B., M.R.C.S. (London), writes: The accompanying illustration represents a urethral syringe made by Messrs. Krohne and Sesemann according to my design. The nozzle is the only part of it to which attention need be called; its shape is that of a spear head with a broad flat blade. The object aimed at was to do away with the pinching and consequent irritation of the parts which is unavoidable with the ordinary forms in holding in the injection. The meatus of the urethra being a slit, it will be found that on introducing the nozzle till the opening is



just slightly stretched, the penis being gently supported against the syringe with the finger and thumb held parallel to the flat sides of the nozzle, the injection can be thrown into the urethra, and there retained for any length of time without difficulty from leakage and without any necessity for the pressure which, especially in the hands of a patient making his first attempts at injection, is a very real trouble. The principle of the nozzle here described is so simple and so effective in its action that any patient of ordinary intelligence quickly grasps the idea, and can safely be trusted to use his injection in a satisfactory manner.

MEDICINAL AND DIETETIC PREPARATIONS.

Ol. Morrhuæ Comp.—The presence of alkaloids in cod-liver oil was first demonstrated by two French chemists, Gautier and Morgues, 1888-1890. Further researches, extending over a period of several years, enabled them to separate a number of distinct alkaloids. They also made a long series of physiological experiments with each one of the principles separated, and concluded that cod-liver oil acts mainly by the alkaloids which it contains. M. J. Bouillot by microchemical methods proved the presence of these same alkaloids in the fresh liver of the cod. Ol. morrhuæ comp. is a very palatable preparation made by Henry K. Wampole and Co., manufacturing pharmacists, Philadelphia, U.S.A., which is stated to be a solution of the combined alkaloidal and other principles of cod-liver oil combined with extract of malt, fluid extract of wild cherry bark, and the compound syrup of the hypophosphites. Samples are supplied by Mr. E. A. Martin, 4, Duke Street, Adelphi, W.C.

THE MEDICAL ASPECTS OF THE BOER WAR.

By a South African Campaigner.

II.

The Line of Advance.

The transports are still arriving. Thousands of troops and horses, guns and ammunition, field hospitals, and all the other equipment of a great army corps have already been landed on the shores of South Africa. Of the reinforcements, a portion have gone to Durban, and a larger portion are being retained to make up the invading column from the South, which will enter the Free State and subsequently the Transvaal. From Capetown to De Aar the railway is still open, and should be well defended, as it passes entirely through the Cape Colony. De Aar is the junction on the main line for Kimberley, and is one of the advanced depôts for Sir R. Buller's column. The distance from Capetown is nearly 500 miles; further eastwards on the main lines some 70 miles is Naauwpoort, the junction for the Free State. This also is securely held and used as an advanced depôt.

Kimberley.

Information is now to hand that a forward movement having for its object the relief of the garrison at Kimberley has already commenced. This is welcome intelligence, and may be regarded as the first step in that forward advance which lies before us. Kimberley is situated in the midst of rolling grass plains on the borders of the Free State; these plains extend in all directions, to the east as far as Bloemfontein, and beyond that again to the Basutoland border; to the north into Bechuanaland to Vryburg, Mafeking and beyond; to the south to the Orange River; and to the west to the sandy wastes of Nemaqualand. Here and there on the surface of these elevated plains, isolated ironstone kopjes (hills) and rocky ridges are dotted, but these may always be avoided, and for the most part this country is admirably suited for the operations of cavalry and for that manipulation of a disciplined army which is so invaluable in warfare.

Kimberley itself is peculiarly situated. On the one side are the Kimberley and De Beers mines and their works, which, with the floors on which the blue ground from the mines is deposited, occupy several square miles, the whole of which is lit up with electric light and overlooked by watch towers. At a distance of some two miles from Kimberley and its two mines is situated the suburb of Beaconsfield, with the Dutoitspan and Bultfontein mines. Between these two townships is situated the sanatorium, which is the headquarters of the garrison. Over the sanatorium and also over the De Beers rock shaft are two commanding watch towers from which men continually survey the whole surrounding grass country through telescopes. The advance of the enemy is thus observed at a distance of many miles, and with the addition of search lights at night Kimberley is kept constantly advised of the movements of the enemy.

The two principal incentives to the Boers to seize Kimberley are doubtless the capture of Mr. Rhodes and the stock of diamonds which they would hope to obtain. Mr. Rhodes, as we are informed, feels perfectly secure with his "troop of horse" and the rest of the garrison against the attacks of his enemies, and the Boers are probably not aware that the stock of diamonds has been removed to Capetown, and that should they desire to possess themselves of the precious gems they will have, in addition to capturing Kimberley, to undertake the necessary mining operations to do so. Nevertheless, it is certain that the relief of Kimberley at an early date is eminently desirable in the interests of the health of the town. Although the attacks of the Boers have been absurdly ineffectual, they have succeeded in cutting off the main water supply and keeping the place closely invested. The effect of this is that the inhabitants of Kimberley will probably have been compelled in some measure to resort to wells for drinking water, and although supplies are said to be forthcoming in abundance, it is doubtful whether fresh meat can be as freely obtainable as might be desired. The population shut up in Kimberley is a large one, over 20,000, and includes, with the De Beers employees, several thousand natives. The sanitary system of Kimberley is the pail system, and involves the removal nightly by a sanitary service of the night soil this is carted some distance out of the town, and there deposited on the veld. It is questionable whether the town is so invested as to interfere with this service, though if it be so some temporary discomfort and even menace to health might arise from this source. Kimberley once relieved, and the lines of communications freely opened up it would be an extremely valuable base for marching on Bloemfontein, the capital of the Free State. From Kimberley to Bloemfontein the distance is under 100 miles, and the country, which is entirely open, would afford an admirable route for the advance of a column.

Kimberley has a hospital with 300 beds, and many other buildings capable of conversion into temporary hospitals. Should the column proceed from here, there is no doubt it will form a most suitable spot for a military hospital on the line of communications.

Railway Transport.

The most momentous question for the Army Medical Service as well as to all other branches of the Army Corps is at what point, if any, short of Bloemfontein, and later Pretoria, the railway will finally have to be abandoned. Will the advancing column be able to repair and use the railway as they go along, carrying their rolling stock and repairing material with them; or will a point be reached beyond which repair in any reasonable period of time will become impracticable? So long as the rail is directly in touch with the army, and communication by rail with the advanced depôts of De Aar or Naauwpoort remains open, the wounded and sick can be moved without discomfort in a few easy stages to Capetown or Port Elizabeth. Once there, they can either be accommodated in temporary hospitals on land or in one of the hospital ships. But once the rail head is left, the disposal of sick and wounded will become a more difficult matter. Travelling in a hospital train, if not luxury, is far from being positive discomfort; but travelling by waggon over the roads of the Free State or Transvaal in the rainy season entails suffering on wounded men. Under these circumstances, we must hope that even if the railway lines be broken in some places beyond immediate repair, means will be found to convey at least a light train over the break to the intact railway beyond. The railway system of the Free State and Transvaal are continuous, and their permanent way so far unimpaired. Their gauge is the same as that of Cape Colony and Natal. All Boer rolling stock will of course be withdrawn by the Boers as the army advances, but if we are once able to get some of our own trains on to this system of railways, it will be available for the advance, as well as for the retirement of sick or wounded.

Disposition of the Wounded beyond Railhead.

Nevertheless, all contingencies must be provided for, and it is quite possible that the advance of the army may have to be made for hundreds of miles without the assistance of the railway. Putting it at its worst, the distance from the southern border of the Free State to Pretoria is nearly 400 miles. Fortunately the country is magnificently open and level, so that strategically the difficulties should not be great, but the march will be a long and arduous one under the most favourable circumstances. If fighting occurs on the march, as we must assume that it will, there will be three alternatives for the wounded—they will either have to advance with the army, to be sent back to the railhead, or to some hospital on the line of communications between the army and the railhead. In either of the latter contingencies it is devoutly to be hoped there will be no such disaster as occurred at Dundee, where our wounded were left in the hands of the enemy. I do not suggest that the enemy did not take care of them and treat them well; we are assured that they do both. I will not venture to criticise the tactics which rendered such a step necessary, but it cannot be ignored that it is a bitter experience for a wounded soldier to find himself in such a position, nor can it be doubted that if such a fate came to be regarded as at all a probable contingency it could have any but a discouraging effect upon our men. The line of communications will be the greatest difficulty Sir R. Buller has to contend with, and its special bearing upon the disposal of the wounded will no doubt receive his careful consideration. Among other things recently added to the army equipment to be sent out to South Africa are a

number of traction engines and trucks. It is highly probable that these would be found most serviceable on the plains of the high veld.

Food Supply.

With reference to the food supply it is certain that a large quantity of tinned meat and vegetables will have to be taken. At the same time there is no reason why fresh meat should not be made available for at least an occasional ration. During a campaign in which the writer served in South Africa a troop of cattle was taken with the column wherever it moved. Over an open country there is not much difficulty about this, and both meat and milk are thus supplied.

Types of Sickness likely to Occur.

To estimate the probable number of the wounded on an expedition of this sort is of course beyond our power. We may reasonably hope, looking to the great strength of the army now preparing, that they will not be great; but with regard to the sick the case is somewhat different. It is certain that a large body of men cannot travel over the open veld for weeks together without a certain amount of sickness arising. The climate, taken all round, is a healthy and pleasant one, and about as well suited for an open-air life as any well could be. The country to be crossed is high; Bloemfontein is 4,000 feet, Johannesburg nearly 6,000 feet, and Pretoria over 4,000 feet above sea level. On these high plateaux true malaria scarcely ever occurs. The two elements which may give some trouble at midsummer—and Christmas is midsummer in South Africa—are the sun and the summer rains.

Transient attacks of fever will occur; in some instances true solar fever, in others one or other of those fevers which even Dr. Patrick Manson still describes as the "unclassed fevers" of the tropics. These attacks are usually of quite short duration, and not severe. Sharp attacks of diarrhœa, and also of dysentery, will arise, though much depends on the water supply. If water is good and plentiful they will not be numerous. If drought occurs—though this is unlikely on the high veld in the summer—the water supply would be indifferent, and the health of the army would be in a measure affected. Take it all round, however, for my part I would rather campaign on the high veld of South Africa than in any northern European country, including England. At these high altitudes pneumonia is the most fatal disease, the mortality being higher from this disease in South Africa than in England.

Hot Days and Cold Nights.

The paper recently issued by the War Office showing the medical arrangements for the field force on service abroad in South Africa, and dealing with medical equipment and supplies, transport, sanitation, equipment for nursing sisters, rations, and other important matters contains an Appendix (V) headed "Sanitary Notes (Natal and Transvaal), Climate." This document, in referring to the temperature, states that at Maritzburg and Ladysmith the temperature in the summer is intense. "In Pretoria the variations are not so great, the maximum in January, the hottest month, reaching 90° F., while in the coldest months (July and August) the temperature falls to a minimum of only 30° to 42° F." This information is not quite accurate. During the writer's comparatively short visits to Pretoria he has known the temperature to be 98° in the house, while the temperature in the shade sometimes exceeds that recorded for Maritzburg, namely, 105°. Pretoria is notoriously one of the hottest large towns in South Africa, and during the coming months it is highly probable that in the vicinity of Pretoria a very high degree of heat may be anticipated. The warning given as to the great variations between the day and night temperatures is certainly based on accurate observations, and is very valuable. All troops who may have to bivouac in the open, as many of our men will be called upon to do, should be provided with woollen night caps. The Tam O'Shanter is an excellent cap in its way for this purpose. It is certain that one of the essential precautions necessary for sleeping in the open is the provision of adequate covering for the head at night. A long woollen cap, such as is used by sailors on yachts, formed a part of the kit of the men in a campaign through which I served in South Africa. Among the precautions required on account of climate, waterproof sheets and cloaks as protection against the heavy rains are recommended. There is nothing more trying to troops on the march than having to bivouac or camp at night upon damp ground. This is a contingency which frequently arises during the heavy summer rains, and one of the most practical and simple precautions which can be adopted against this evil is the provision of a waterproof sheet, say 6 feet by 3, which the soldier can place on the ground beneath him. A small sheet of this sort can be, if necessary, carried by mounted infantry and cavalry when away from the main column on distant patrols, as it goes readily with the blanket on the saddle.

Headgear: Helmet or Wideawake?

Suitable headdress as a protection against the sun is another precaution recommended; and in reference to that I should like to say that, while the helmet is a universally approved mode of headdress for tropical climates, it nevertheless has undoubted objections as a headdress for the soldier during a campaign. It is an impossible thing to lie down in it, and it very soon loses its smart appearance; further, in really great heat I question whether the helmet gives such protection from the sun as is obtained, say, from a wideawake hat with a puggarree. The advantages of the wideawake, which is used by all Colonial troops, are many; the men can sleep in it at night, or during the midday halt can lie down on the ground in it. For the rough and tumble of camp life it is an infinitely more comfortable and more suitable headdress than the helmet.

Clothing.

A fourth precaution recommended in Appendix V is "warm clothing, even in summer, in the Drakensberg country." I would point out that the period spent by troops in the Drakensberg country is not likely to be at all prolonged, nor is there any appreciable degree of cold in the summer. The Drakensberg consists of the somewhat mountainous country between Ladysmith and the Transvaal frontier. For the main column proceeding from the south there will be no mountains to be encountered; and although I believe serge to be a better material than khaki, there is no reason to suppose that during the summer anything in the shape of really thick clothing will be required by the great majority of our troops.

Enteric Fever, Dysentery, and Diarrhœa.

Reference to the extreme liability of the occurrence of enteric fever is made. This is one of the scourges of South Africa. It is common in Johannesburg and along the line of mines, and will doubtless be liable to arise in any camp remaining in the same spot for any length of time. It could have been wished that the instructions with regard to the sanitary precautions necessary against the occurrence of enteric fever had been a little more detailed and explicit. The one remedy urged appears to be the use of disinfectants, for which purpose quicklime is strongly recommended; but it must be pointed out that it may not be possible for armies on the march to carry any great quantity of material of this sort, and that after all there are very few disinfectants which are more efficacious than mother earth, which will always be ready to hand; its proper use at the latrines is, to my mind, more important than artificial disinfectants. On proper attention being given to this one particular detail more will depend probably than upon anything else. The abdominal belt is no doubt an admirable precaution against those sudden chills which are associated with the onset of dysentery and diarrhœa.

Malaria, Hæmaturia, and Pneumonia.

Malarial fevers, the Appendix states, occur around Delagoa Bay and the Limpopo River, and disappear in the higher plateaux of Northern Natal and Zululand, but they are carried up some of the valleys. "High grounds should therefore be selected for camps, and valleys avoided." As has already been pointed out, the vast tracts of country which are likely to be the scene of our military operations during this war—that is the plains of the Free State and the Transvaal, and their borders to the west and east, as well as the whole of the south eastern portion of the Transvaal—are practically entirely free from malaria, so that I do not anticipate that this disease will occur to any appreciable extent among any of our troops. The gentle valley or "laagte" on these high plains is as healthy

and safe as the crests of the rolling undulations. Hæmaturia ("red water") is referred to among parasitic diseases as common in the low-lying coast country; it is also common, I may add, in the low-lying portions of the Transvaal; but these, as already stated, are not likely to be occupied to any extent by our soldiers. The tributaries of the Crocodile River to the immediate north of Johannesburg are infested with the bilharzia parasite. The reference to pneumonia is brief, but states that it often occurs in the form of epidemics in the Transvaal during the winter months. As already pointed out the mortality from this disease on the highlands of South Africa is high, and although it is more prevalent in winter than summer it is liable to occur all the year round.

Disinfection.

A final note in this Appendix commends certain reports for the perusal of the medical officers joining the field force. It also adds that any medical officer considering that, in order to carry out effectively the measures indicated above for the prevention of disease in connection with standing camps, additional materials, such as disinfectants, are required, he should make an immediate demand for them. If, as I have already suggested, the medical officer will only bear in mind that mother earth is by far the most economical and admirable material for his purpose, he will be able to avoid unnecessary demands for other disinfectants which may not be readily obtainable at some odd hundred miles from our bases.

THE WAR IN SOUTH AFRICA.

[From our Special Correspondent in Capetown.]

November 1st.

The Censorship.

It is impossible at the present time to send much news with reference to the military medical arrangements for the campaign. In the first place, the dispositions which have so far been made are merely of a temporary nature, and will be altogether remodelled as soon as General Buller has matured his plans; and secondly, the censorship is so strict that scarcely any information is obtainable as to what has actually been done. When I tell you that the Berkshire Regiment were at Stormberg Junction at least a week before any newspaper in Capetown published the information, and that only by very slow degrees has the news leaked out that a force in full of some 2,500 men is at another point—De Aar—the readers of the British Medical Journal will understand this. And as even Royal Army Medical Corps information may give a rough indication as to troops either being at a particular place, or being likely to be sent there, it is, except in the simplest details, invariably refused. For this reticence, the ever present Boer spy must be held responsible. Such details as are obtainable I will, however, give.

Excellence of the Arrangements made by the Royal Army Medical Corps.

The arrangements for the war as carried on thus far appear to be very complete. The Natal force, I am assured from several trustworthy and independent sources, is admirably provided from the medical side. Colonel Supple, the Principal Medical Officer, took a journey there shortly before war broke out, and saw to every detail so completely that there was practically nothing to do when Sir George White and his staff arrived. And the arrangements he then made have stood the test of practice, for the Royal Army Medical Corps has proved thoroughly equal to its work at the fairly severe engagements that have already occurred. Contrary to what has sometimes happened, nothing has been wanting, and *mirabile dictu*, *matériel* and *personnel* have so far always been at the right place. The bearer company work was heavy at Elandslaagte owing to the extent of ground covered and the intervention of darkness immediately after the action, but it was extremely well done. Men who were there write me that the Indian bearers are preferred to their white comrades, having, as one phrases it, "the hands of a woman," and they exhibit an absolute indifference to the risks of being under fire. It is not contemplated to have a base hospital in Natal, the present arrangement being that base hospital patients will be brought down here by ship and taken to Wynberg, a fashionable suburb about nine miles from this city. The barracks there have been entirely vacated, and converted into a hospital capable of holding from 550 to 600 patients. It is with very good reason considered that the hot climate of Durban in the summer precludes that place from being used as a hospital base. At present no base hospital except Wynberg has been arranged for, but it is quite possible that others may be established at Port Elizabeth and East London. This, however, depends entirely on the lines of advance which Sir Redvers Buller may adopt. Neither place is an ideal situation for a hospital, owing to depressing weather in summer, whilst the climate of Wynberg, in fact, the whole of the Cape Peninsula, is all that could be desired.

Transport of Sick and Wounded.

There is nothing special to note about the Wynberg Hospital. It is fitted up in the ordinary way, and is well found in every respect. Should any considerable column advance along the eastern frontier a base hospital in that direction might be necessary; as the long railway journey would be trying, and as neither Port Elizabeth nor East London has a good harbour, sending men down by sea would involve a good deal of trouble and risk.

Durban is only open to this latter objection in a very slight degree. A consignment of sick is already on its way from Natal. The ailments are varied, but, I am told, include a good many cases of dysentery or dysenteric diarrhœa. I should mention that the accommodation at Wynberg could be easily supplemented by huts, if necessary, and that there is excellent railway communication right from the Capetown Docks to the Wynberg Station, which is very near the hospital.

The Ambulance Trains.

The idea is to make use of the railway line to the utmost extent possible, and two trains have been already constructed at the local works of the Cape Government Railways, under the supervision of the Principal Medical Officer. I had the opportunity of inspecting these yesterday, and found them very complete and well designed. Seven vehicles have been built, with two combined pharmacy and kitchen coaches. It is intended to run them as two trains usually, but although there is through communication from car to car each is detachable, and a train or trains can be made up as desired. Three of the ambulance vehicles are fitted for 4 officers and 20 men and four for 4 officers and 12 men. Being on a narrow gauge line they are, of course, somewhat deficient in width, but they are roomy enough for all practical purposes. The bunks are arranged lengthwise in two tiers, the upper furnished with weather boards. The mattresses are stuffed with horsehair and covered with Berkmeyer's prepared waterproof canvas, an excellently cool and "cleanable" material. Each bunk has a handy locker for books, glasses, and the like. The four officers' bunks are at one end screened off by curtains. Between these bunks and the rest are the side entrances to the vehicles, and at this point the uprights supporting the corner bunks can be turned aside on a hinge, thus allowing of turning a stretcher without difficulty. There are, of course, entrances at each end of the coaches. Each coach contains a couple of seats for attendants, a set of pigeon-holes for dressings or bottles, and a watercloset. The latter discharges direct on to the line, without any flush of water, a somewhat objectionable arrangement, certain to lead to fouling of the sides of the funnel. Ventilation is excellent, being on the double ridge plan, the opening being closed by adjustable screw flaps. The pharmacy waggons contain a very well equipped dispensary, with store room, a kitchen, pantry with refrigerating cupboards, room for patients' clothing, with arm racks, and bunks for six attendants. There is also a very handy shower-bath with dressing room. The cars are lighted with oil lamps. The officers of the Royal Army Medical Corps and some others of the *personnel* will be provided with an ordinary saloon carriage. The vehicles themselves are calculated to accommodate 12 or 15 *personnel*. They are intended to run up and down the main line of communication.

The Work of the Capetown Centre of the St. John Ambulance.

As at present arranged, the Royal Army Medical Corps will

convey the wounded or sick as far as De Aar, the principal junction of the Colony, and there the trains will be taken in hand by parties of trained attendants provided by the Capetown centre of the St. John Ambulance Association, who will convey them to Wynberg. A medical officer will, of course, accompany each train throughout. The conveyance of sick brought from Natal by sea from the ships to Wynberg will also be in the hands of the St. John people. For this purpose three vehicles have been constructed to hold stretchers racked on the American plan. This employment of the St. John Association seems a wise arrangement, as it will set free a certain number of the Royal Army Medical Corps for more responsible work.

THE ROYAL ARMY MEDICAL CORPS.

Surgeon-General Wilson arrived yesterday, with his Secretary, Major Bedford, R.A.M.C. Major Anderson, R.A M.C., is in medical charge at beleaguered Mafeking, and Lieut. O'Gorman, R.A.M.C., at Kimberley, each with small detachments of their corps. At both places a large amount of civilian ambulance help has been organised, Dr. Hayes being at the head at the former place, and Dr. Smith, I believe, at the latter.

A number of civil surgeons have already arrived from England, and are for the present at Wynberg and Capetown. It is intended, as far as possible, to keep them at the hospitals. This engaging of English civilians appears somewhat superfluous, as there are numbers of Colonial men eager to take duty for the pay that would be given to their home brethren. Apart from the fact that South Africa is normally overstocked in the medical line, most of our brethren from Johannesburg are at present without occupation.

There are various detachments of the Royal Army Medical Corps dotted about at Orange River, De Aar, Nauwpoort, Stormberg, and intermediate points. At De Aar a station hospital is being formed which will be used largely as intermediate between the front and Wynberg.

THE CAPE VOLUNTEER MEDICAL STAFF CORPS.

About 40 of the Cape Volunteer Medical Staff Corps, a very well-trained body of men, have gone to the various points mentioned above. Their commanding officer, Surgeon-Major Cox, is at De Aar. A field dressing has been served out to each man in all the four. Several army nurses who arrived last week are at Wynberg, where they will probably remain.

THE DIRECTOR-GENERAL ON THE MEDICAL ARRANGEMENTS FOR SOUTH AFRICA.

SURGEON-GENERAL J. JAMESON, M.D., C.B., Director-General of the Army Medical Service, in responding to the toast of "The Guests" at the annual dinner of the British Gynæcological Society, said:

We have lately completely transformed the surgical equipment of the army and brought it up to date so that every army surgeon in South Africa has now an opportunity of carrying out in a thorough manner modern and scientific surgery. Mr. Makins, before leaving for the war, was shown the nature of the equipment, and the only suggestion he could make was the addition to it of a few extra nailbrushes.

At my suggestion three of the most eminent surgeons in England—Sir William Mac Cormac, Mr. Treves, and Mr. Makins—have been appointed by the Secretary of State to act as consulting surgeons at the seat of war. This is no reflection upon the skill of the medical officers of the army. Such appointments are in accordance with Continental customs and in harmony with our scheme of mobilisation for home defence. The presence of such men will be advantageous by reason of their wide experience and dexterity, and I am sure that my brother officers in South Africa will welcome them with open arms.

The War Office, recognising the usefulness in war of hospital transports, have sent out two capable of accommodating in each about 170 officers and men. They are light draught vessels able to cross the bar at Durban and be brought alongside the wharves so as to facilitate embarkation of sick and wounded. In fitting them up we had the benefit of the advice of an able naval officer and of one of our own officers conversant with details, and together they made an excellent job of it. They are intended to run between Durban and the Cape.

The Central Committee of the British Red Cross Society are determined to go one better, and it is likely they will succeed. They have chartered the *Midnight Sun*, a vessel probably known to many of you, and her equipment is nearly complete. She will be renamed the *Princess of Wales*, in compliment to Her Royal Highness, who not only takes a deep interest in all that concerns the happiness, comfort, and welfare of soldiers, but has handed over to the Central Committee a fund of over £10,000 which was at Her Royal Highness's disposal. The *personnel* will be supplied by the Royal Army Medical Corps, supplemented by civil surgeons and nurses from the Army Nursing Reserve.

The American ladies of London, headed by Lady Randolph Churchill, are fitting out a fourth ship, and American ingenuity, thoroughness, and liberality are certain to make it a success. The *personnel* will be entirely American, with the exception of one retired army surgeon, whose presence on board is considered advantageous for disciplinary purposes, and the preparation of invaliding documents, the correctness of which may influence rewards and rates of pension. The last two ships are intended to ply between the Cape and England.

A hospital train is also being prepared under the direction of Sir John Furley. Sir John is perhaps the greatest living authority on ambulance work. He has devoted his whole life to mitigate the sufferings of war. This train will be named the "Princess Christian," in grateful acknowledgment of the business-like ability which Her Royal Highness has shown as a member of the Central Committee and in the creation of the Army Nursing Reserve.

Roentgen *x*-ray apparatus has been supplied liberally. There are now ten in South Africa; one, I am happy to state, is at Ladysmith at the present time. Through the generosity of private individuals three more will be sent out. We have engaged an expert able to repair the instruments if necessary, or indeed to make them. A large number of our officers are experienced in this form of photography.

In this war there are two powerful enemies to contend with—the Boers and enteric fever. In this connection I may be permitted to state that the Director-General of the United States Army Medical Service, in a letter just received, mentions that in their late war in Cuba enteric fever was much more deadly to their troops than gunshot wounds. In Natal last year the admission-rate for enteric fever was 5½ per cent. Extraordinary precautions are, therefore, urgently required. After numerous experiments at Netley we came to the conclusion that of the numerous filters in the market only two possessed sterilising powers, the Pasteur-Chamberland and the Berkefeld. We tried the first during the late war in Ashanti, but it would not stand the roughness of transport, and soon became unserviceable. The Berkefeld is more portable and less fragile. The field pattern adopted has a power of sterilising 40 gallons of water in an hour; that filter has been issued to each company of each regiment in South Africa, and to all units of corresponding strength. As probably you are aware, Professor Wright of Netley has been for some years experimenting by inoculation against enteric fever. The results are encouraging. Thus out of 2,000 men inoculated, whose ages were under 24, the admission-rate in eight months has been 0.7 per cent., while in 6,000 men not inoculated, whose ages were greater and susceptibility therefore less, the admission-rate for the same period was exactly double—namely, 1.4 per cent. Of late every officer and man under orders for India or South Africa has been given the opportunity of being inoculated, and about 70 per cent. have taken advantage of it.

Gentlemen, the results of all these elaborate preparations remain to be told; and when Sir Redvers Buller's despatches are published at the end of the war, I shall be content if he expresses himself, in regard to my Service, in language similar to that used by Lord Kitchener when referring to the war in the Soudan: that it was characterised by a maximum of comfort and a minimum of suffering.

MEDICAL ARRANGEMENTS FOR SOUTH AFRICA.

THE HOSPITAL SHIP "PRINCESS OF WALES."

THE hospital ship *Princess of Wales*, formerly known to many tourists as the *Midnight Sun*, was brought round to Tilbury Dock this week, and will sail immediately. The ship has

been chartered by the Central British Red Cross Committee, and has been planned and fitted up entirely by Major W. G. Macpherson, R.A.M.C. The Princess of Wales has borne the entire cost of fitting the ship, and has devoted to this purpose £9,000 balance of Her Royal Highness's Fund raised at the time of the Soudan campaign. Her Royal Highness has taken the greatest personal interest in every detail of the fittings, and has added another £1,000 to be spent in luxuries and comforts for the wounded soldiers. Her Royal Highness's Committee for carrying this out have worked as a branch of the Red Cross Society, and consisted of the Marchioness of Lansdowne, the Viscountess Wolseley, the Lady Wantage, Mrs. Wilton Phipps, Hon. Sydney Holland (Chairman), Sir Donald Currie, M.P., K.C.M.G., Sir John Furley, and Major Macpherson. The Princess of Wales, who was accompanied by the Prince of Wales, Princess Victoria, and the Duchess of York, paid a private visit to the ship on Wednesday afternoon.

The Wards.

The interior fittings of the ship have been removed. The following wards have been provided:

1. Surgical: 70 ft. by 32 ft., by 7 ft. 6 in., to contain 40 cots, giving a cubic space of 420 cubic ft. to each patient.
2. General: 75 ft. by 34 ft. by 7 ft. 6 in.; to contain 52 cots, giving a cubic space of 368 cubic ft. to each patient.
3. Medical: 39 ft. by 34 ft. by 7 ft. 6 in.; to contain 30 cots, giving a cubic space of 330 ft. to each patient.
4. Convalescent: 44 ft. by 34 ft. by 7 ft. 6 in.; to contain 56 cots, giving a cubic space of 200 ft. to each patient.
5. Officers: 16 ft. by 15 ft. by 7 ft. by 7 ft. 6 in.; to contain 4 cots, giving a cubic space of 462 cubic feet to each patient.
6. Isolation: 21 ft. by 8 ft. by 7 ft. 6 in.; to contain 2 cots, giving a cubic space of 630 ft. to each patient.

A special bed table is fixed to the lee rail of all the cots, except in the Convalescent Ward. This table can be placed alongside or aport the lee rail as the occupant may desire. Fifty bed headrests specially constructed to fit the cots are supplied, and the cots are specially constructed to permit of being readily lifted from the stanchions without moving the patients. Each cot can thus be carried on deck and placed on the deck trestles as desired. The Convalescent Ward has messing tables for all the patients, and in the other wards there are seats for about 25 per cent.

The Operating Room.

The operating room, which adjoins the surgical ward, is fitted with an operating table, an operation-room sink, a Schimmelbusch steriliser, a fresh water tap with Berkefeld sterilising bougie, an electric grid for boiling water, and a table and cupboard for instruments and surgical material. The room is lighted by fixed electric lights, and there is also a portable electric light. The operating room is on the lower deck, amidships.

A Roentgen ray outfit, the cost of which has been defrayed by the Duke of Newcastle, has been supplied by Messrs. Harry W. Cox, Limited. It consists of the following apparatus:

One Cox special record portable 10" coil in polished mahogany case complete.
One specially made polished oak table for coil, consisting of platform for coil and tube stand; the latter can be screwed down if necessary, with drawer underneath lined with baize and wool to hold 8 tubes, the bottom space to take the accumulators; wheels fitted with rubber tyres.
One collapsible fluoroscope and screen 9 by 12.
One adjustable mahogany tube holder.
Six tubes (3 record).
Four 6-volt 60 ampère accumulators.
One resistance for charging accumulators from dynamo.
One voltmeter of the very best quality with bevelled glass front.
One ammeter the same.
Two spare platinum contacts.
One mahogany dark slide.
One thoracoscope.
One Hicks's patent hydrometer bead.
One Hicks's patent hydrometer flat.
One 2-volt cell tester.

It will be observed that no localising apparatus has been ordered, an omission which we think is to be regretted, as calculated to diminish the practical value of the apparatus. An isolation ward and dispensary have been provided, and the ship has also three refrigerating rooms for fresh meat.

Convalescents.

The ship is fitted throughout with the electric light, and electric call bells between the wards and the quarters of the medical officers and nursing sisters have been provided. The whole of the promenade deck will be available for the patients and hospital orderlies, and the bridge deck for the officers and nursing sisters. All these decks have been provided with double awnings throughout, and in addition to fixed garden seats on the decks, 40 deck chairs, and 60 camp stools, there are 50 cane chairs given by Princess Christian. The Princess of Wales has presented a number of games, and sets of games have also been given by others. The Princess of Wales has also presented a large quantity of tobacco, pipes, and cigarettes, which will be distributed to patients as may be expedient.

Embarkation.

Careful consideration has been given to the means for placing the sick and wounded on board. Abaft of the starboard alley-way there are large side ports, by which patients can be placed direct on the main ward deck, and access is obtained to the other wards by the starboard alley-way and the main companion. Two naval hammocks for wounded, six naval cots with slinging poles, and two naval cot under-carriages, have been placed on board for use in case of necessity.

Warming and Water Supply.

The ship can we warmed throughout by steampipes, and cooled in the tropics by electric fans and scuttle ventilators. The ship has ample cold chambers for preserving meat. Provision has been made for the production of 10 cwts. of ice daily, and a special water-cooling apparatus has been fitted.

The water supply is from condensers capable of condensing 2,000 to 3,000 gallons daily, and from reserve fresh-water tanks of the capacity of 30,000 gallons. Fresh water is laid on to all the wards and lavatories, to the operating room, dispensary, troop deck, and laundry, sea water to the baths, latrines, and sinks. All the drinking water taps are supplied with Berkefeld tap bougies capable of sterilising 25 gallons of water an hour, for use if necessary. In the operating room, dispensary, and ward pantries there are electric or other boilers. Disinfectant solution bottles are supplied in connection with the water supply of the ward washhand basins and the disinfecting-room sinks.

A laundry, completely equipped, has been provided, and adjoining it is a foul-linen store containing a Lyons steam disinfecting apparatus.

Medical and Nursing Staff.

The Senior Medical Officer and Military Commanding Officer is Major A. Hickman-Morgan, D.S.O., R.A.M.C. (retired pay), and the medical officers are Captain A. Pearse, R.A.M.C., and the three following civil surgeons: Mr. W. H. Farmer, Mr. W. S. Crosthwaite, Mr. L. E. Hardy.

There are 4 nursing sisters, 1 from the Army Nursing Service, and 3 from the Army Nursing Reserve.

The Royal Army Medical Corps provides 1 staff sergeant (as warrant officer), 2 sergeants, 4 corporals, and 10 privates.

St. John Ambulance Brigade provides 3 ambulance supernumerary officers, 20 ward orderlies, 10 of the first, and 10 of the second grade.

THE LADIES' COMMITTEE AT ALDERSHOT.

A subject connected with the help given by ladies at Aldershot to Government in the matter of regiments proceeding to South Africa, and the outbreak of infectious disease there, is well worthy of mention. During the time an outbreak of scarlet fever occurred which it was thought might have delayed some of the regiments going out to the seat of war, Lady Audrey Buller and the Ladies' Committee (with the entire sanction of Sir Redvers Buller) took measures for improving the means for the isolation of those who had come in contact with the infected cases. A qualified nurse was engaged for the isolation block, and under her direction and supervision the most complete precautions were taken to prevent any risk of the spread of infection; clothes were provided for those isolated, so that all clothing and bedding might be thoroughly disinfected. As a result of these precautions the outbreak was confined to narrow limits, and the despatch of the troops was not interfered with. It is gratifying to learn from a local source that the same machinery will be again set in motion whenever required, not only because of its benefit to the nation, but also to secure the well-being of soldiers' families.

Arrival and Departure of Transports.

The *British Princess*, which sailed on November 14th, carried a detachment of the Royal Army Medical Corps (No. 4 General Hospital).

Colonel Clery and Majors Lucas and Freyer, of the R.A.M.C., sailed in the *Goth* on November 15th. Headquarters No. 4 General Hospital went out in this ship.

The hospital ship *Trojan* left Capetown for East London on November 17th.

The men of the St. John Ambulance Brigade detailed for ambulance duty on the Red Cross ship *Princess of Wales* left on November 20th. The following further embarkations of Royal Army Medical Corps are issued from the War Office: No. 10 Company (Bearers) in the *Gaul* on November 24th; the Headquarters in ss. *Simla*; No. 11 Company, R.A.M.C. (Bearer), in the *Dorme Castle* on November 24th; in the *Simla* Headquarters No. 10 Company, R.A.M.C.; in the *Maplemore* on December 1st, detachment No. 6 Company, R.A.M.C. (Bearer); in the *Avondale Castle* on the same date No. 11 Company, R.A M.C. (Field Hospital); in the *Norman* December 2nd detachment No. 6 Company, R.A.M.C. (Bearer); and in the *Pinemore* December 3rd another detachment of the same company.

Nursing Sister Knox, Cambridge Hospital, Aldershot, and Sisters Mark and Young, of the Connaught Hospital, left Aldershot on November 18th for duty in South Africa; while Captain Pearce, R.A.M.C., a staff-sergeant, and 16 non-commissioned officers and men from the same station sailed on November 20th.

The *Mohawk*, which arrived at Capetown on November 16th, had on board a detachment of No. 9 Company, R.A.M.C. (Field Hospital). The *Mongolian*, which arrived at Capetown on November 18th, had on board No. 8 Company, R.A.M.C. (Field Hospital). The *Cephalonia*, which also arrived at Capetown on November 18th, carried No. 6 Company, R.A.M.C., and Reservists of R.A.M.C. The *Briton*, which arrived at Capetown on November 20th, having on board Sir William MacCormac, Bart., Mr. G. H. Makins, F.R.C.S., Captain Holt, R.A.M.C., and Surgeon T. Jeans, R.N., accomplished the voyage in 14 days 19 hours. The *German*, with one officer of the R.A.M.C., arrived at Capetown on November 20th, and the *Glengyle*, with Detachment No. 3 General Hospital, arrived at Capetown on the same date. The transport *Narrung* left the Albert Docks on November 16th, with detachments of the R.A.M.C.

South African Red Cross Ambulance.

At the meeting of the governors of the Richmond Hospital, Dublin, on November 17th, permission was unanimously given to Miss Mac Donnell and ten nurses to volunteer their services in aid of the wounded in South Africa. It was announced that two of the students had already volunteered, and that their services had been accepted. They will form the South African Red Cross Ambulance, leaving London in the first week in December, headed by Dr. George Stoker, who was Assistant Commissioner under the Stafford House Committee in the last South African campaign.

More Field Hospitals.

Orders have been issued for the Aldershot depôt of the Royal Army Medical Corps to be prepared to form another field hospital for service in South Africa. No. 4 Field Hospital for duty with the 9th Brigade is to be formed at Aldershot. It will be in charge of Major Moir, the other officers being Major Fitzgerald, Captain Faichine, and Lieutenant Braike. It will take 35 non-commissioned officers and men. The 5th Divisional Medical Staff will also be drawn from Aldershot.

Volunteer Ambulance Corps.

The War Office has accepted the services volunteered by the men of the Ambulance Corps attached to the Westmoreland and Cumberland Yeomanry Hussars for service in South Africa.

THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

The undermanned condition, as regards officers, of the Army Medical Service, long continued and notorious, has resulted, under the pressure of war, in a condition of things, which it is impossible to blink, and is causing no little anxiety to those who choose to look beneath the surface. This is apparent from the following analysis of the distribution of the officers, according to the monthly Army List for November.

In the table they are enumerated in three groups—namely, home, South Africa and other foreign stations, together with those seconded, largely for service with the Egyptian army, and those with no stations after their names, presumably the sick, and such as at the moment are unposted on return from foreign relief.

Distribution of Officers of the Army Medical Staff on November 1st.

Ranks.	Stations. Home.	South Africa.	Other Foreign Stations.	Seconded.	No Station.	Total.	Remarks.
Surgeon-Generals.	5	1	4	—	—	10	1 Staff appointmnt.
Colonels	7	6	13	—	1	27	1 " "
Lieut.-Colonels ...	22	11	41	1	1	76	1 " "
Majors	71	120	217	7	9	424	3 " "
Captains	24	41	95	7	6	173	9 " "
Lieutenants ...	11	66	38	7	1	123	1 " "
Total	140	245	408	22	18	833	

The table first discloses that the Army Medical Service is still 60 below the total of 890 which a late Director-General described as a "perilously low" establishment. Next, that 83 per cent. of its effective strength are at present serving abroad; and only about 16 per cent. of its executive strength were available for contingencies on November 1st. This latter, by the mobilisation of a fifth division, must now be reduced to a nominal 11 per cent. In other words, barely 100 medical officers are available to complete the mobilisation of a second army corps, should that prove necessary; and not a man will be left at home to fill vacancies. Of course it may be argued that, with the bulk of the army abroad, home duties are lessened; which, if broadly true, is by no means so in a proportionate sense. Unless the military hospitals are to be closed, we presume they must be administered under the command and control of commissioned medical officers; no others have the requisite authority. But they will all be needed to receive the sick of 27,000 militia about to be embodied, who have no medical officers of their own.

A certain number of retired medical officers are employed especially in the all-important and now pressing recruiting duties, and others "liable to recall" will doubtless also be employed. But, even if every one of these available were at work, they would afford no solution to the problem how medical casualties in the field and abroad are to be met. We will take for granted that all time and tour reliefs must be suspended during the war; these may wait, but death and invaliding cannot be postponed. Every casualty in South Africa and our foreign garrisons among commissioned medical officers must therefore remain unfilled.

Is this a safe or creditable position for a great and humane country, which boasts a large part of the empire of the world, to be in? We have over and over again called attention to the grievously undermanned condition of our medical services both at home and in India. Now the din of war may open hitherto deaf ears.

We challenge contradiction that our army medical establishment should at least consist of 1,000 officers. Now is the time, when the Army Estimates are being framed, to provide for this number. No House of Commons would deny such an obviously reasonable vote. If the establishment is voted the officers will be found.

PROMOTIONS IN THE ROYAL ARMY MEDICAL CORPS.

The death of Colonel Hughes, R.A.M.C., Principal Medical Officer at Quetta, is announced. This creates a vacancy in the ranks, which will be filled by the promotion of Lieutenant-Colonel Anthonisz, now on active service in South Africa, By the retirement of Surgeon-General Nash, Colonel Evatt, R.A.M.C., becomes Surgeon-General, and Lieutenant-Colonel Exham, R.A.M.C., now Principal Medical Officer of Sir George White's force, becomes full Colonel.

Captain C. A. Stone, M.D., R.A.M.C., is with Colonel Plumer at Tuli.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A major recently arrived home is willing to exchange to India. Apply to "Z.," care of Holt and Co.

CHANGES OF STATION.

The majority of the recent changes of station to South Africa have been published in the official posting of medical officers or are published this week:

		From		To
Lieut.-Col.	J. D. Edge, M.D.	Curragh	...	South Africa.
,,	W. Donovan	Colchester	...	,,
,,	H. H. Stokes, M.B.	Straits Smnts.		Curragh.
,,	J. F. Williamson, M.B.	Bengal	...	Gosport.
,,	R. C. Gunning	Gibraltar	...	Chester.
Major	A. E. J. Croby, B.A.	Madras	...	Bombay.
,,	S. J. Flood	—		Belfast.
,,	D. Wardrop, M.B.	Okehampton	...	Punjab.
,,	G. E. Twiss	Shorncliffe	...	South Africa.
,,	W. G. A. Bedford, M.B.	Home District		,,
,,	R. W. Ford	Bermuda	...	Gosport
,,	J. Osburne	Bengal	...	South Africa.
,,	J. C. Culling	Dover	...	,,
,,	R. I. D. Hackett, M.D.	Aldershot	...	,,
,,	E. M. Wilson, C.M.G., D.S.O.	Home District		War Office.
,,	J. M Laughlin, M.D.	Barbadoes	...	—
,,	R. H. S. Sawyer, M.B.	Egypt	...	Dublin.
,,	C. E. Faunce	Malta	...	Woolwich.
,,	G. Wilson, M.B.	—		Chatham.
,,	R. Crofts	—		Aldershot.
,,	C. C. Reilly	Malta	...	Devonport.
,,	F. W. C. Jones, M.B.	—		Natal.
,,	N. C. Ferguson, M.B.	Fort George	...	Edinburgh.
,,	M. O'Halloran, M.D.	Bengal	...	Colchester.
,,	W. H. Pinches	Egypt	...	Curragh.
,,	H. G. Hathaway	Woolwich	...	South Africa.
,,	A. A. Sutton	—		Devonport.
,,	T. G. Lavie	Egypt	...	Dublin.
,,	H. T. Baylor	Egypt	...	Cork.
,,	C. H. Burtchaell, M.B.	Woolwich	...	South Africa.
,,	O. R. A. Julian	—		Natal.
,,	G. Raymond, B.A., M.B.	—		Cahir.
,,	J. Ritchie, M.B.	—		Edinburgh.
,,	E. M. Hassard	—		Gosport.
Captain	M. L. Hughes	Aldershot	...	Natal.
,,	W. T. Mould	—		Netley.
,,	W. Ap S. J. Graham	Bury	...	Egypt.
,,	C. Dalton	—		Netley.
,,	C. E. G. Stalkartt, M.D.	Barbadoes	...	Woolwich.
,,	J. Hennessy, M.B.	Curragh	...	South Africa.
,,	G. A. Moore, M.B.	Madras	...	Colchester.
,,	H. W. K. Read	Bombay	...	South Africa.
,,	B. W. Longhurst	Punjab	...	,,
,,	J. V. Forrest, M.B.	Bengal	...	,,
Lieutenant	G. E. F. Stammers	—		Aldershot.
,,	M. McG. Rattray, M.B.	Crete	...	Colchester.
,,	P. M'Kessack, M.B.	Portsmouth	...	Punjab.
,,	J. G. Berne	—		Cork.
,,	M. M. Lowsley	Alnwick	...	Bombay.
,,	R. S. H. Fuhr	Portsmouth	...	South Africa.
,,	H. P. W. Barrow	Dublin	...	,,
,,	H. S. Taylor	Lancaster	...	West Africa.
,,	R. H. Lloyd	Netley	...	South Africa.
,,	H. E. Haymes	Aldershot	...	Egyptn. Army.
,,	F. J. Brakenridge	,,		,,

Lieutenant-Colonel C. S. Wills, C.B. (retired pay) has relinquished the medical charge of the troops at Lancaster.

Lieutenant-Colonel A. Anderson (retired pay) has assumed medical charge of the troops at Galway.

ROYAL NAVY MEDICAL SERVICE.

Fleet-Surgeon Henry W. D. Walsh has been placed on the retired list, October 14th. He was appointed Surgeon, September 30th, 1876; Staff-Surgeon, September 30th, 1888; and Fleet-Surgeon, August 2nd, 1897. He was Surgeon of the *Cygnet* at the bombardment of the Alexandria forts in July, 1882, and during the subsequent war received a medal with clasp and the Egyptian bronze star.

Deputy-Inspector-General Henry Loney died at Torquay on November 7th, aged 76. His commissions were thus dated: Surgeon, June 4th, 1846; Staff-Surgeon, January 23rd, 1856; Fleet-Surgeon, October 21st, 1869; and Deputy-Inspector-General, April 1st, 1881, when he retired from the service.

ARMY MEDICAL STAFF.

Surgeon-General W. Nash, M.D., is placed on retired pay, November 20th. He entered the service as Assistant-Surgeon, April 14th, 1863; became Surgeon, March 1st, 1873; Surgeon-Major April 2nd, 1876; Brigade-Surgeon, May 2nd, 1888; Surgeon-Colonel, April 1st, 1893; and Surgeon-Major-General, July 6th, 1896. He was engaged in the Afghan war of 1878-80, was mentioned in despatches and received the medal; he was also in the Egyptian war of 1882, for which he has the medal and the Khedive's bronze star.

ROYAL ARMY MEDICAL CORPS.

It is officially announced that a fifth division is to be mobilised for service in South Africa. Among the officers nominated to the division by the War Office are: Lieutenant-Colonel W. B. Allin, M.B., as Principal Medical Officer, and Major E. Davis as Medical Officer.

Colonel G. J. H. Evatt, M.D., R.A.M.C., is promoted to be Surgeon-General, *vice* W. Nash, M.D., November 20th. General Evatt's previous commissions are as follows:—Assistant-Surgeon, March 31st, 1865; Surgeon, March 1st, 1873; Surgeon-Major, March 31st, 1877; Brigade-Surgeon, November 30th, 1891; and Surgeon-Colonel, March 30th, 1896. General Evatt served in the Perak Expedition in 1876 (medal with clasp); in the Afghan war of 1878-80, being present at the capture of Ali Musjid; he was Senior Medical Officer with Tytler's column in the expedition to the Bazar Valley (mentioned in Lieutenant-General Maude's despatch); was in charge of a Section Field Hospital on the return march to India in June, 1879 (thanked by the Governor-General and by the Commander in Chief in India in General Orders); afterwards served in charge of a field hospital with Sir Charles Gough's brigade during the advance to Gundamuck and Cabul (medal with two clasps); he was also with the expedition to the Soudan in 1885 in command of the 2nd Bearer Company of the Medical Staff Corps, and was present in the engagement at Hasheen and at the destruction of Temai (mentioned in despatches, medal with clasp, and Khedive's star); also with the Zhob Valley Expedition in 1890 in command of the British Field Hospital (mentioned in despatches).

INDIAN MEDICAL SERVICE.

The attention of the Government of India having been called to the depleted condition of the Indian Medical Service in military employment, the question is being considered whether some of the twenty-seven officers at present employed with the mobilised field hospitals cannot be released in view of the urgent need of officers elsewhere.

Colonel David Sinclair, M.D., C.S.I., Madras Establishment, is promoted to be Surgeon-General from October 11th. He joined the department as Assistant Surgeon, October 1st, 1869, becoming Surgeon-Colonel February 22nd, 1808. He was appointed a Companion of the Order of the Star of India in December of last year, but has no war record in the *Army Lists*.

THE VOLUNTEERS.

Mr. Gardiner W. Trouton, M.D., is appointed Surgeon-Lieutenant in the West Kent (Queen's Own) Yeomanry, November 15th.

Surgeon-Lieutenant A. Duke, M.B., the Tynemouth Artillery (Western Division Royal Garrison Artillery), is promoted to be Surgeon-Captain, November 15th.

Mr. George C. Cathcart, M.B., is appointed Surgeon-Lieutenant in the 7th Middlesex (London Scottish) Rifles, November 15th.

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The following officers who have been under instruction from the staff of the school have recently passed the Proficiency Examination held by army medical officers at the head-quarters of regimental districts thereby earning the higher capitation grant for their corps, namely:

Surgeon-Lieutenant-Colonel F. J. Pearse, V.D.

Surgeon-Majors: J. E. Davies, C. H. Hough.

Surgeon-Captains: F. Bindloss, A. Cosgrave, J. E. H. Davies, L. T. Bryett, M.D., D.P.H., B. L. Stivens, M.D., W. Howatson, M.D.

Surgeon-Lieutenants: P. Wood, J. Cromle, R. G. Nesbitt, D. J. Penney, M.B., W. McClelland, M.B., T. Harper, M.D., E. T. Cox, A. Y. Pringle, A. E. Watson, M.D., J. Wilson, M.B., T. Carwardine, M.S., H. Waite, W. Lawton, M.B., H. MacNaughton Jones, M.D., W. N. Evans, G. Cohen, C. A. Morris, M.B., J. Godding, P. Edmunds, M.B., F. Norman, M.D., A. M. Hickley, R. J. Swan, M. J. Foster, M.A., M.D., E. Ayton Marrett, W. T. Brooks, M.A., M.D., C. J. Martin, M.B., W. Stedman, M.D., E. Evans, M.B., E. R. Williams, D. L. Davies, M.D., A. P. Swanson, J. N. Patterson, W. G. Brett, J. B. Masson, A. Morison, G. Stephen, J. W. Nicholson, J. H. Ferry, C. C. Bullmore, J. C. Mackay, M.D., J. B. Yeoman, M.D., J. E. Wells, F. Ward, M.D. A. Clark, J. P. Graham, A. S. Tindal, J. C. Taylor, E. D. Paton, M.D., J. H. Murray, M.D., J. P. Brown, T. J. Burton, M.D., C. F. Spinks, J. Wayte, M.B.

Applications to join the next class should be addressed to the Senior Medical Officer, 8, Portman Street, W.

The annual entertainment of the school (ladies' night) will take place at St Martin's Town Hall on Thursday, December 7th, at 8.30 P.M. During the evening Surgeon-General Hamilton, M.D., late Principal Medical Officer, Cape Town, will distribute the prizes. The proceeds of the entertainment will be handed over to the British Red Cross Society for aid to the sick and wounded in the South African war. Past and present members of the school can obtain tickets by making early application for the same to the Mess President, 8, Portman Street, W.

Erratum.—In the list of officers of field hospitals in the British Medical Journal of November 18th, p. 1452, line 6, for Major W. C. Poole read Major W. C. T. Poole.

THE SURRENDER OF LEICESTER.

SWEARING they would ne'er consent, the Leicester Guardians have consented. On Tuesday evening, by a majority of 25 to 19, they agreed to appoint a vaccination officer. The triumph of Mr. Chaplin and the defeat of Mr. J. T. Biggs and his followers is a notable event in the history of the antivaccination crusade. The great majority of the Leicester Guardians are opposed to the Vaccination Acts, and Mr. Biggs's policy of refusing to appoint a vaccination officer received at first a very large amount of support. We have all along held that in this matter, be the consequences what they might, Mr. Chaplin had no course open to him but to stand firm. In Leicester, however, it was apparently hoped that he might be bullied into yielding. As the contest went on it became increasingly manifest that he intended to maintain a firm front, and as imprisonment came nearer and nearer to the recalcitrant guardians their courage began more and more to ooze out of their fingers' ends. Vote after vote showed a growing transference from the one side to the other, and the end was well in sight when one of five lady members who had originally thrown in their lot with the majority successfully moved at a recent meeting the suspension of the standing orders to enable her to bring forward at the following meeting a motion to rescind the resolution resisting the *mandamus*.

To an outsider it appears a curious fact that this resolution, which no doubt required a large majority, obtained 33 votes to 10, while the final resolution adopted at the meeting of last Tuesday, was supported by only 25 to 19. Does this mean that some of the 19 have, after all, been masquerading as stalwarts, and that when the standing orders required a large majority they helped to form it: but that when they knew a bare majority would be sufficient, they thought to save themselves and their reputation by returning to the fold? We have not sufficient local knowledge to speak with certainty here.

The victory is all the more notable on account of the desperate efforts which were made, and the abundant prophecies which were poured forth by the Antivaccination League in its anxiety to support Mr. Vice-President Biggs and his party in their attitude of defiance to the Local Government Board. Last month a great conference of the League took place at Leicester. A huge tent was erected in the Market Place, overflow meetings were held, and all the usual "business" of a big demonstration was carried through with much apparent spirit. Here and there in the speeches the skeleton in the cupboard is occasionally hinted at, but the general note is that of triumph and congratulation. Mr. Bull, of Walsall, was glad that the Leicester Guardians had refused to appoint a vaccination officer, and he himself, if he had been in Leicester, would have gone to prison rather than yield. That sanguine warrior Major-General Phelps said that the electors had only to back up that "gallant band," the majority of the guardians, "and as sure as the sun should rise to-morrow, their freedom would come." Alack a-day, the majority was melting into a minority even as he spoke! Mr. Hazell, M.P., explained clearly enough his share in the business. "He went to Mr. Chaplin and he said: 'You cannot coerce the guardians. If you make them go to prison, to prison they will go;'" and he added that "those ladies and gentlemen who made up their Board of Guardians had an immense amount of pluck." But they didn't go to prison, and they had only pluck enough to stand fast so long as they hoped they wouldn't need to yield. Then Dr. Hadwen went on to talk about "the glorious 26," that being the understood dimensions of the diminishing majority not long before he spoke. He explained that these 26 "were not going to argue with the Local Government Board; they were not going to try to persuade them, but they were going to resist." This statement, which was received with "loud applause," was singularly, or rather dually, incorrect. The guardians did argue with the Central Board, and would have gladly gone on arguing till Doomsday, but they were not going to resist. The 26 were reduced to 19, and when necessity arose they numbered only 10. But the last shot — a regular Long Tom it was intended to be — was fired at Mr. Chaplin by the great mass meeting in the Market Place. It sent the following message, not by letter post, but by telegraph: "To the Right Hon. Henry Chaplin, House of Commons.—A mass meeting of many thousands of citizens, being held in the Market Place, Leicester, to support the majority of the guardians in refusing to appoint a vaccination officer, sends intimation of its unwavering determination to support its representatives, notwithstanding Mr. Chaplin and the Local Government Board." Even this failed to bring down Mr. Chaplin, and now the position has been reversed, and the guardians have explained that, if he does not shoot, they will come down.

And now let us add just a word of advice to Mr. Chaplin. The guardians have failed to defeat him, but let him take care that he is not defeated by himself. The present arrangements with regard to prosecutions by vaccination officers are objectionable, and ought to be amended. The direction in which amendment should be sought has already been indicated in the BRITISH MEDICAL JOURNAL; and having fairly and squarely beaten the League, he is now in a much better position than he would have been after a Majuba to take the steps that are necesaary to remove existing causes of complaint.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

PORTUGAL.

No detailed statement of the number of plague cases in Oporto is to hand this week. On November 16th 2 fresh cases of plague occurred and 3 deaths from the disease, and on November 19th 1 fresh case occurred, and again on the 20th 5 cases were reported. With these exceptions no further information is obtainable.

A case of plague has been discovered at Alpedreno, a Portuguese village near the frontier of Spain, on the line of railway leading to Salamanca; both the Spanish and Portuguese authorities are taking rigorous sanitary measures in consequence.

PLAGUE ON BOARD TURKISH STEAMERS IN THE MEDITERRANEAN.

From Trieste and Fiume we have reports of cases of plague occurring on board steamers arriving from Constantinople. The case which was landed at Trieste from the steamer *Polis-Mytilini* died in hospital at Trieste. Whilst at Constantinople the vessel was sent to the Lavak Lazaret, in the Upper Bosphorus, and there submitted to disinfection, in spite of the remonstrance of Dr. Dickson that the vessel should be allowed to proceed to Trieste on her return voyage.

The report from Fiume is that a steamer from Constantinople arrived at Fiume with a case suspected to be plague. These continued reports of plague cases on steamers starting from Constantinople excite considerable apprehension as to the state of public health in Turkey in regard to plague.

INDIA.

The total number of cases of plague in India, according to a Dalziel telegram, has considerably diminished during the past three weeks. For the week ending November 21st the total number of plague deaths for India amounted to but 2,968, a decrease of some 2,000 in the course of about fourteen days.

In the Bombay Presidency the numbers had decreased to 2,055, and in Bombay city to 100. In Calcutta 44 deaths occurred from plague during the week ending November 21st. The city of Poona is pronounced again to be free of plague.

The report for the week ending October 28th prepared us for the telegraphic information, for during that period the plague death-rate for all India had decreased in one week from 5,765 to 3,672, and only in the southern Mahratta States and the Sholapore District was there any evidence of an increase. Up to the beginning of this month the Imperial Bacteriological Laboratory at Parel had sent 25,000 doses of Haffkine's prophylactic to London for the Local Government Board.

HONG KONG.

No case of plague has been reported from Hong Kong during the past fourteen days.

MAURITIUS.

For the week ending November 16th 65 fresh cases of plague and 48 deaths from the disease recurred in Mauritius. These numbers indicate a decided abatement in the cases of plague. During the preceding two months a steady increase has been recorded. It is to be hoped that now the height of the epidemic is past.

BRAZIL.

Only two or three cases of plague are reported from Santos during the past week. That this is the true state of affairs, however, is not by any means certain.

A death from plague occurred on the steamer *Taylor* on the voyage between Brazil and New York. The victim was Mr. Hope, an Englishman, and the captain of the vessel, Captain Cook, who nursed Mr. Hope, has himself developed symptoms of plague. Several of the crew are also said to be ill, and the whole of the sick have been landed at the quarantine station at Swinbourne Island. The rest of the crew remain on board the vessel, which floats the yellow flag in quarantine. Every vessel arriving from South America will be subjected to rigid examination, and vessels coming from Brazil will be compelled to remain in quarantine for several days before landing their passengers. The United States authorities have taken vigorous measures in consequence of this case of plague, and the news has been telegraphed all along the Atlantic seaboard with instructions as to the steps to be taken in the event of suspicious cases of illness arriving in any of the ports.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 25TH, 1899.

THE LONDON UNIVERSITY AND MEDICAL SCHOOLS.

In some comments last week on the address of the Regius Professor of Medicine of Oxford the claim was made for modern clinical medicine that it had achieved something more than empirical success. While it was admitted that much of modern medical progress had no doubt consisted in the formulation of empirical rules or axioms, it was urged nevertheless that not a few axioms have been restated if not as general laws of Nature at any rate as laws of no inconsiderable compass. Thus, while admitting that the recent progress of medicine in its scientific aspects has left and leaves much to be desired, we believe that the profession will welcome gladly all appeals to it to take such order that clinical observations shall partake more and more of scientific method, thoroughness, and accuracy.

It is an open secret that in view of the establishment of the University of London the teachers of metropolitan medical schools are discussing anxiously the way in which their own several labours may at once give and take benefits in this new system of education and research. Nor is it a secret that the teachers, even those who have most sympathy with the forward movement, find this reciprocation of service very difficult to provide for, even on paper. Such ominous phrases as "The schools must be conciliated" are flying about; but we have full confidence that wheresoever any school of medicine may find itself in conflict with the general good it will sink its selfish interests and look for a later recompense in this higher object; probably however no such heroism will be called for.

If advances in medical science are to improve the practice of the art, we must not only establish laboratories and encourage skilful workers, but the results of this machinery must reach the mind of the practitioner himself, and promote in him a gradual adaptation to the new knowledge. Whatever his grade, whatever his department of practice, he must be touched more or less with the fresh enthusiasm of learning—learning which his maturer mind shall never become too fixed to assimilate. But, if this is to come about, there must be, as was said last week, many bridges between the academic student and the practitioner. If the student works in a balloon, and his researches remain in a purely abstract form, the practitioner will continue to rely still on personal gifts of resource and initiative unregenerated by scientific inspirations. It has been England's misfortune that, while we have had, and have still, investigators of Nature second to none elsewhere, and practical men second to none, in no country has so deep a gap existed between the academic worker and the man of affairs; thus the man of affairs has not been bred in sympathy with the academy, nor the professor with the craftsman. In our new schemes let us see to it that we provide the needful bridges between abstract and applied science, and between these two sets of men, whose interests are every day becoming more and more identified, and whose hearty and intelligent co-operation is essential to orderly and efficient progress.

It follows, then, that we shall have to provide means both for academical research and for immediate uses; for the discovery of abstract truth, and for the perception and appreciation of those innumerable contingencies and secondary and tertiary causes which in practice modify the effects of more general laws so infinitely as to make these alone inapplicable in the world of action.

It would be presumptuous to rush in where the most experienced teachers of medicine and of the medical sciences are treading fearfully; still the foregoing considerations seem to indicate with some clearness the outlines of the steps which should be taken. There is a fundamental need for academic research, without which highly-organised teaching and the most sagacious and dexterous craft must sooner or later decay. For such research full provision can be made only in a university where the pursuit of knowledge must be disinterested and free, where no utilitarian bias and no exigencies of convenience will prevail to deflect the investigator from the search after naked truth. Such laboratories and such professors, wheresoever they may find accommodation, must be wholly under academic control. Thus the chairs and laboratories of physics and of chemistry may be actually or virtually at South Kensington; and in this academic air the first-year's students will spend their time. No one probably will desire to create or to perpetuate in the several hospitals a number of subordinate and disunited centres for these studies. But, when we pass from them to a somewhat different kind of study, namely, to anatomy, another set of considerations comes in. Anatomy—descriptive anatomy—is not an abstract science; it is not a science in the strict sense at all; it does not deal with causes, and does not seek after origins. Descriptive anatomy is a technical instruction; and, although it derives much of its vitality from scientific biology, it may without detriment be taught with a definitely utilitarian purpose. Descriptive anatomy, therefore, though under the influence of the university professor or professors of scientific anatomy—of morphology, embryology, and so forth—should still be taught as heretofore at the several hospitals, the hospital classes for dissection being conducted by readers or senior demonstrators. Thus the technical study will be kept in touch with pure science, and one of the needed bridges between science and the arts will be built.

With physiology the case is not so easy. Histology may be taught at the hospitals, but physiology proper needs as as free and disinterested a devotion as chemistry. Yet, to

send all second year's students to a single central establishment for physiology alone would be very inconvenient.

Again, while there may be no objection to the student in anatomy receiving his instruction from a reader or senior demonstrator who, although on the one hand in touch with academic anatomy, may, on the other, intend to use the post as a stepping stone to practice, yet in physiology such temporary tenures are to be deprecated. Although every professor or responsible teacher of physiology should for his own sake have had a medical education, yet thenceforward physiology must be not his mistress but his wife; he shall not teach his subject with one eye on his science and the other on professional success. The provision for the teaching of physiology, then, by single-minded and academic teachers in establishments within easy reach of the hospitals has to be thought out.

With pathology the way is clearer; this subject, the descriptive side of it at any rate, must be taught at the hospitals, and there can be no objection to assigning to young physicians a part of this duty also. General pathology, however, is an academic subject; it is an aspect of physiology, and must be taught by professors of a university.

It is obviously impossible, however, that one professor of pathology and one laboratory can cope with the large numbers of medical students who will need personal instruction. Moreover, at the risk of tediousness, it must be reiterated that it is essential that academic science should be at the door of the practising physician, and infuse itself into his life. Thus with pathology as well as with physiology, some of the existing buildings of the great hospitals may be utilised for university departments, and university teachers supplied, without breaking up community of method or lowering standards. The university must bring itself within sight and touch; and the engagement of young practitioners in the department of pathological anatomy will help to build one more of the bridges between science and practice.

Finally, the connection between science and practice will be strengthened if arrangements are made by the university under which as many students as possible may pursue research under professorial regulation for a few months or a year before entering into practice. These short apprenticeships may do little directly for the advance of science; but by creating the scientific habit of mind in young practitioners they will form another invaluable bond between the academic and the practical man.

DESTRUCTION OF HUMAN AND ANIMAL LIFE IN INDIA BY WILD ANIMALS AND POISONOUS SNAKES.

IN the BRITISH MEDICAL JOURNAL of November 10th, 1894, we commented upon the mortality caused by wild animals and poisonous snakes in India, and showed by the official returns of the Indian Government that in 1893 24,017 human beings were destroyed, 21,213 by snakes, 2,804 by wild animals. It appears that this was an increase upon the previous year, and although the returns are of a fluctuating character, they showed that there had been no diminution since 1887.

The most recent returns furnished show that this mortality continues unabated, for in 1898 25,166 deaths were due to wild animals and snakes, 3,265 to wild animals, 21,921 to snakes, showing a slight increase in both.

It is remarkable how closely the numbers correspond yearly, notwithstanding the difficulty of obtaining in India correct returns from the different provinces, though there can be little doubt that all possible trouble is taken to ensure accurate registration.

The Government of India has always evinced an anxious desire to do all that is possible to diminish this mortality, and it is much to be regretted that its efforts have been attended with so little success. It is not suggested that this cause of death can be altogether removed so long as wild beasts and poisonous snakes continue to exist, but there can be no doubt that it is to a great extent preventable, and it may fairly be concluded that with some change or modification of the measures now in force, the great mortality might be considerably diminished. Various measures have been enforced, consisting mainly of giving rewards for the destruction of the noxious animals, the issue of free gun licences, the clearing away of jungle in the vicinity of villages, and, perhaps, the attempt to diffuse knowledge of the characters and appearance, especially of the poisonous snakes, but all seems to have but little if any effect.

Unfortunately, unanimity of opinion does not seem to exist amongst the executive authorities by whom these measures should be enforced. Some advocate, some are indifferent to, some repudiate them altogether. As to the rewards, in many cases, for certain of the noxious animals, they are too low, men not caring to risk their lives for so small a sum in the search after and destruction of cobras, vipers, tigers, leopards, wolves, etc. It is impossible under the circumstances not to be impressed with the belief that a more systematised method of dealing with the evil might be insisted upon, and that a scheme having been determined on and thoroughly organised, it should be carried out without reference to the discretion or the opinions of different individuals.

The annual death roll of 24,000 human beings and 80,000 cattle (and these numbers are well below the mark) should surely be considered a matter of sufficient importance to warrant a special scheme for its reduction. Difficulties no doubt stand in the way, and there is naturally a disinclination to impose further duties upon officials who are already overtaxed with work. It appears to us that the matter is urgent enough to be placed under the management of a selected officer, as was the case in dealing with the evil of Thuggee, which was completely suppressed by the exertions of officers specially selected for the purpose.

Such a measure we venture to recommend to the consideration of the Indian Government. This loss of human and animal life not only justifies but demands it. Were such an officer appointed (and there are many no doubt in India well qualified for the post), and were he given a free hand in the selection of his assistants and his modes of procedure, there would ultimately be such a decrease in the mortality caused by wild beasts and snakes as to justify a step that has been more than once suggested, unless, indeed, the Indian Government can devise something more effective.

MEDICAL ATTENDANCE FOR THE FAMILIES OF SOLDIERS ON ACTIVE SERVICE.

The medical profession has certainly not been behind any class of Her Majesty's subjects in patriotic offers of service at this time of national anxiety. We cannot, however, all go to the front, and many of us can spare but little in the way of contributions to the funds that have been started to supply help of one kind or another to the men now fighting for their country in South Africa or to those dependent on them. But every member of the medical profession can give something that will often be more valuable than money to the wives and children of our soldiers and sailors, and that is his professional knowledge and skill. Some practitioners, to their honour be it said, have not waited for an appeal to be made to them, but have placed their services freely at the disposal of families of men on active service. In the British Medical Journal of November 11th Mr. G. H. De'Ath, of Buckingham, proposed that medical men should undertake to attend such families without fee, and a resolution to the same effect was passed by the Chelsea Clinical Society. This excellent form of medical charity must however be organised if it is to be thoroughly effective. We therefore call attention to the plan proposed by Surgeon-General J. B. Hamilton in the *Times* of November 16th. He points out that although in the case of women "on the strength" residing in or near barracks professional aid would at once be given by the military medical officers, there must on the other hand be many cases of women living at a distance from military centres to whom such aid, obtainable without delay, would be an immense boon. He proposes, therefore, that in each district a list of medical practitioners willing to give their services should be obtained, and that cases of illness reported to the Relief Committees should be distributed according to proximity among those willing to help. Any expenditure for costly medicines or appliances could be paid by the Relief Committee, as it would hardly be fair to throw that burden on the doctors. We may add that this suggestion has the warm approval of Colonel Gildea, C.B., Chairman of the Soldiers' and Sailors' Families Association. By applying to the Secretary of that Association, Captain Wickham Legg, at 23, Queen Anne's Gate, Westminster, S.W., a list of the names and addresses of honorary secretaries of counties and naval and military stations can be obtained, and to them practitioners in the corresponding districts should give their names. Surgeon-General Hamilton has offered to help in organising such a system in South Kensington in connection with the Relief Committee, and we hope the idea will be acted upon by medical practitioners throughout the country. There may be differences of opinion as to certain forms of medical charity, but there surely can be none as to the provision of help in their hour of need for the women and children whom the "absent-minded beggar" has left behind him. When he hears their voices "through rolling drums that beat to battle where he stands," let it not be the cry of helpless and unregarded suffering that sobs in his mind's ear, and chills his heart in the glow of the victory which his valour has helped to win.

INOCULATION OF TROOPS AGAINST TYPHOID FEVER.

Among the manifold risks to which our troops will be exposed in South Africa not the least is typhoid fever. The medical officers of the army are thoroughly trained in sanitary science, and the public may have the fullest confidence that no precaution against the attack of so formidable an enemy will be neglected by them. The method of protective inoculation against this disease, which we owe to Professor Wright, of Netley, though its value has not yet been definitively determined, has given sufficiently encouraging results in India and elsewhere to justify a trial on an extended scale. Large numbers of men ordered on active service have accordingly been inoculated before embarkation or after their arrival in South Africa. Precise statistics are naturally difficult to obtain at present, but we have it on the highest authority that about 70 per cent. of the troops sent to the seat of war have been inoculated. As the treatment is in every case voluntary, this result speaks well for the intelligence of the men and the persuasive power of the medical officers. A special correspondent of the *Westminster Gazette* gives an interesting account of what took place on the *Dunottar Castle* in which Sir Redvers Buller and his staff sailed to the Cape. Captain M. L. Hughes, R.A.M.C., delivered a lecture in the saloon on the prevention of typhoid fever, and recommended inoculation with such convincing eloquence that he persuaded many officers and civilians to submit to the process. "The result," adds the writer, "was patent at the next meal hour. There were many vacant places at the tables, and those who erstwhile occupied them were to be seen on deck lounging about in listless attitudes and complaining of fever and pain. Some, indeed, sought the seclusion of their cabins, and were seen no more for a day or two. Captain Hughes practised what he preached; and those who suffered for their compliance with his exhortations took a wicked delight in the fact that he became not the least pain-afflicted of their number." Of the passengers on board the *Dunottar Castle*, fully 150 were inoculated. The correspondent had a conversation with Captain Hughes, who said that when he left Aldershot the medical officers were busy inoculating men destined for the front, and he was hopeful that no fewer than 10,000 of the Army Corps would have availed themselves of the means of protection thus offered them. We may add that, in view of what has been done in the British Army, Surgeon-General Sternberg has recently had his attention called to the advisability of adopting the method in the United States Army. No definite steps have yet been taken, but the question is being carefully considered.

SIR CHARLES BELL AND THE WOUNDED AT WATERLOO.

At a moment when the President of the Royal College of Surgeons of England and a distinguished member of its Council have gone to the seat of war to place their skill at the service of our wounded soldiers, the fact may not inappropriately be recalled that Sir Charles Bell acted as a volunteer consultant to the forces after Waterloo. In his *Letters*, published by his widow,[1] it is stated that when on June 22nd, 1815, the news of the great battle reached London, Bell exclaimed to his brother-in-law, Mr. John Shaw, afterwards Surgeon to the Middlesex Hospital, "Johnnie! How can we let this pass? Here is such an occasion of seeing gunshot wounds come to our very door. Let us go." They set off at once, the only passports they thought of being surgical instruments; these Shaw shook in the faces of the officials, who thereupon let them pass without making any difficulty. On their arrival at Brussels they found things in some confusion. Bell writes on July 1st: "It was thought we were prepared for a great battle, yet there we are, eleven days after it, only making arrangements for the reception of the wounded. The expression is continually heard, 'We were not prepared for it.'" One might ask, "When are we prepared for it?" Tommy Atkins may be an "absent-minded beggar," but are his chiefs always wide-awake? On July 3rd, Bell writes: "I could not sleep for thinking of the state of the wounded French. *Pansez! pansez, majeur docteur!* (*sic*); or *Coupez, Coupez*, sounded in my ears. I rose at four o'clock, and wrote to the surgeon-in-chief, and have taken on me to perform all the capital operations on the wounded French—no small effort." But it was not only the French that had the benefit of his skill. He writes to his wife:

I had a note from General Adam, and examined his wound; the ball has penetrated between the bones of his leg; it remains lodged, and will

[1] John Murray. London. 1870.

come out some day without the aid of surgery. The next whom I saw were Major-General Sir Edward Barnes, Captain Elphinstone, Lieutenant Reynolds, and lastly, whom I like the most, was a perfect little gentleman, Sir Henry Hardinge, who has lost his forearm.

* * *

In general the wounded are doing well. I believe I shall be taken to any who are not.

But the fullest and most interesting account of Bell's experiences is found in a letter to Francis Horner written somewhat later. The following are the most striking passages:

An absolute revolution took place in my economy, body and soul, so that I, who am known to require eight hours' sleep, found just three hours, then one hour and a half, sufficient, after days of the most painful excitement and bodily exertion.

After I had been five days engaged in the prosecution of my object, I found that the best cases—that is, the most horrid wounds, left totally without assistance, were to be found in the hospital of the French wounded; this hospital was only forming. They were even then bringing in these poor creatures from the woods. It is impossible to convey to you the picture of human misery continually before my eyes. What was heartrending in the day was intolerable at night; and I rose and wrote, at 4 o'clock in the morning, to the chief surgeon, offering to perform the necessary operations upon the French. At 6 o'clock I took the knife in my hand, and continued incessantly at work till 7 in the evening; and so the second and third day.

All the decencies of performing surgical operations were soon neglected. While I amputated one man's thigh, there lay at one time thirteen, all beseeching to be taken next; one full of entreaty, one calling upon me to remember my promise to take him, another execrating. It was a strange thing to feel my clothes stiff with blood, and my arms powerless with the exertion of using the knife, and more extraordinary still to find my mind calm amidst such variety of suffering; but to give one of these objects access to your feelings was to allow yourself to be unmanned for the performance of a duty. It was less painful to look upon the whole than to contemplate one object.....But there must ever be associated with the honours of Waterloo, to my eyes the most shocking sights of woe, to my ear accents of entreaty, outcry from the manly breast, interrupted forcible expressions of the dying, and noisome smells.

Bell, who was as skilful with the pencil as with the knife, made many sketches of what he saw in the Brussels hospitals. These sketches were afterwards reproduced in watercolours. Some were given to the Edinburgh College of Surgeons, others to University College, London, while seventeen of them were presented, with Bell's notes, by Lady Bell to the Royal Hospital, Netley, in 1867.

THE PREVENTION OF PLAGUE IN THE STRAITS SETTLEMENTS.

A VERY remarkable feature of the plague in the East is the immunity which Singapore has enjoyed, notwithstanding its constant communication with infected ports. In this connection it is a source of much satisfaction to learn that the Governor of the Straits Settlements, Sir Charles Mitchell, attributes Singapore's freedom to the measures of prevention in force there, and to the excellent manner in which these measures were carried out by the principal civil medical officer and staff. Sir Charles Mitchell gives unstinted praise to the officers concerned, and especially mentions, thanks, and rewards, Mr. Reardon, the Deputy Health Officer, for his services during a period when an enormous amount of work devolved upon him. Recognition of this kind must be particularly gratifying to the medical department, and contrasts with the treatment of the medical officers engaged in plague work in India. During the last five years quarantine measures have had, for some period more or less prolonged, to be established against Hong Kong, Macao, Swatow, Hainau, Siam, Amoy, south coast of China, Karachi, Calcutta, Mauritius, Egypt, and Penang. The system adopted for dealing with ships from an infected port was to anchor them at the quarantine station, where the passengers and crew were inspected by the Singapore Deputy Health Officer, after which the passengers were landed at St. John's Island, and there detained until nine days had elapsed from the time they left the infected port. The ship was disinfected if necessary, and allowed pratique. That this inspection duty was of a very onerous nature may be gathered from the fact that vessels from China at times brought from 3,000 to 4,000 coolies, each of whom had to be personally examined before being permitted to land, and that attempts at concealment of illness were frequent. The numbers inspected were—in 1895, 196,633 passengers and 11,438 crew; in 1896, 145,814 passengers and 43,457 crew; in 1897, 115,542 passengers and 12,573 crew; and in 1898, 144,686 passengers and 12,571 crew. In each year a number of plague cases were detected and isolated, and in the first seven months of 1899 ten such cases were dealt with in addition to five that were doubtful, which suffered from symptoms of fever and buboes without obvious cause; some of the cases also exhibited symptoms of pneumonia. One noticeable fact ascertained by these inspections was that the precautions taken at the ports of departure were evaded by a large percentage of coolies, vessels on their arrival having many men in excess of their passenger lists. The experience of the five years moreover showed that the risk of plague infection from certain cargoes coming under the category of susceptible is practically *nil*, for, owing to the vast amount of commercial business done at the large ports of Hong Kong and Singapore, no disinfection of cargo was attempted; yet no case of plague occurred in Singapore from the admission of susceptible cargo, or from its being unpacked, packed, or handled. Plague appeared in Penang on May 11th, 1899, and from that date to July 16th there were 49 cases, of which 37 were fatal. They occurred in the most part in houses of ill-fame, and, with the exception of a few Malays, all the victims were Chinese, no European or Eurasian being affected. The outbreak caused considerable loss to Penang, as its trade was very seriously affected by quarantine regulations imposed by foreign Powers, and the measures taken to suppress the disease cost the municipality 30,000 dollars, and the Government a smaller sum. The campaign against disease and dirt appears to have been particularly vigorous, and Sir Charles Mitchell commends in high terms the services of Dr. Kerr, Health Officer to the Government, and Mr. Kennedy, the President of the Municipal Commissioners.

LORD CURZON'S APPEAL TO THE EDUCATED NATIVES OF INDIA.

IN replying to an address from the Nagpur Municipality on November 18th, the Viceroy, according to a telegram in the *Times*, referred to the calamities of plague and famine which had befallen the Central Provinces. In the course of his speech he said: "I suppose no educated human being in India doubts that if the plague attacks a house the elementary measures that should be adopted are to remove the patient to a place where he can be properly tended, and if possible cured; to disinfect the house; and temporarily to shift the remainder of the inmates to a spot where they shall, if practicable, be at no great distance from the patient, and where they shall live in comfortable and healthy conditions until permitted to go back. But many are so ignorant that they decline to move or be moved, and prefer to sit still and wait for death. Furthermore, there is the preliminary safeguard or precaution of inoculation. It is one which also falls into the category of measures prudent in themselves, but not to be associated prudently with force. I venture, therefore, to impress upon members of the municipal committee, and upon the prominent citizens of Nagpur, that in all respects they may do a good deal to save the poor sufferers from the consequences of ignorance and induce them voluntarily to consult their own safety. After all, the Government cannot conceivably have any object in the plague policy except the good of the population, and if the latter can be

convinced of this fact by those who are their natural guides, any reluctance arising from prejudice or apprehension should before long disappear."

THE PORT SANITARY WORK OF LONDON.

The report just issued by Dr. Collingridge, the Medical Officer of Health of the Port of London, for the half year ending June 30th, 1899, furnishes evidence of good work in every direction; but the one fact which will probably impress the average reader more than any other is the large amount of work performed by the port sanitary officers in the direction of maintaining the wholesomeness of the food supply of London. The return of unwholesome food condemned shows a large increase on any previous half year, a total of 19,519 original packages and 27,216 loose articles, comprising almost every description of the commoner food stuffs, were seized. Sixty-four cases of infectious disease were dealt with, comprising 4 of small-pox, 4 of scarlet fever, 2 of diphtheria, and 24 of enteric fever, and of these 26 cases were isolated in the Port Sanitary Authority's hospital. Although several rumours of plague had to be investigated, only one case actually arrived on shipboard at Gravesend, and this was removed to the hospital. The vessel was disinfected, arrangements were made for the daily medical inspection of the crews, and all the rats which could be caught on the ship were destroyed. The details given of the various nuisances abated, and of the proceedings taken in the matter of offensive cargoes are further interesting and important items of a report which, inclusive of appendices, comprises 56 pages of printed matter.

IRISH DISPENSARY ELECTIONS.

Some time ago an election of dispensary medical officers took place at Westport, co. Mayo. There were several candidates, and Dr. Bermingham was elected by 57 votes as against Dr. Moran, who got 9. There were other candidates. All the local forces were in operation: the clergy, Parnellites, "Poleites," the Labour League, and other bodies worked for their particular selection. Dr. Maguire, of Ballinrobe, had written to all the electors in favour of his son, and from two he had replies which suggested that money would have a considerable influence on the result. One wrote: "Several of us will take the money if you can see your way to a majority. I will be on your side for £2." Another replied: "It is believed that it is money that will do it all, and I know five or six that would sell their votes for very little. There is one doctor that will sport £100 on on the job—it's a fact—and it is no use for him: he will not be returned, as no man stands a better chance than a Leaguer." At an inquiry held by the Local Government Board Inspector, Sir Acheson McCullagh, the writers admitted the authorship of the letters, but they denied that they had received any money. Dr. Bermingham and Dr. Moran also declared that they had not offered or paid any money for votes, or authorised anyone on their behalf to do so. Whatever the decision in this case may be, it seems clear that some elections of dispensary doctors in Ireland are conducted by methods that are somewhat peculiar. The topics discussed in such circumstances are not the professional qualifications of the candidates, but their belief in some particular political or religious creed, or their willingness to spend money on votes. All this goes to support the view which we have so often urged, that these appointments ought to be filled by competitive examination. It is not otherwise easy nowadays to secure honesty in elections of this kind.

IRISH DISPENSARY DOCTORS' HOLIDAYS.

The Cahirciveen (Kerry) guardians have resolved that in future their medical officers shall only have a fortnight's holidays. At Letterkenny, Dr. Browne, the medical officer, nominated Dr. Thompson as his *locum tenens* and went on a fortnight's holiday. The Local Government Board approved, and directed his substitute to be paid £3 3s. a week. The guardians sanctioned only one week's leave, appointed another *locum tenens* (Dr. Patterson), and refused to be responsible for Dr. Thompson's salary. They further censured Dr. Browne, and one guardian gave notice of a motion to have him dismissed from his office. It is fortunate that the Local Government Board can control these ridiculous actions; but they are fresh indications of the petty tyrannies of the guardians of the poor.

PROFESSOR VIRCHOW'S JUBILEE.

Our Berlin correspondent writes: It was to be expected that Rudolf Virchow's Jubilee—the 50th anniversary of his tenure of office as Professor Ordinarius—would not be passed over in silence by the University of which he is, perhaps, the most illustrious member. No banquet or similar social function took place, it is true; nor was there any array of State delegates or representatives of foreign universities. In the hall of the Pathological Museum (Virchow's own creation) the Senate of the University, its Rector, Professor Fuchs, at their head, assembled to greet their revered and honoured colleague, and to present an illuminated and illustrated address, the text of which had been written by Professor Waldeyer. In it Virchow's wonderful many-sidedness, and his achievements as scientist, archæologist, and politician were recounted in glowing terms. "We all know, however," the address went on to say, "that the roots of your strength lie in your work as a German professor, and ever the 'Professor' has been foremost with you. We know that, even in your 78th year, when the day's work is done, the night hours are devoted by you to scientific research. . . . . Thus we see you to-day in our midst, the Professor Ordinarius of five decades, active amongst the most active, beloved, honoured and admired by thousands of pupils, colleagues, and men of all orders in every part of the world. In honouring you, who in your long, laborious life have ever had at heart the honour and weal of the German universities, and above all of the Alma Mater Friederica Guilelma Berolinensis, we honour ourselves. May your strength be long preserved to us!" Virchow, who was surrounded by his family and many personal friends, in his reply gave expression to his thanks for the support which he had always met with on the part of the university, and said it was true that his chief feeling had ever been that of "the Professor." In cases of conflicting interests he had always chosen the course of "Professor." He said that, like others of his age, he was sometimes conscious of a certain isolation, many friends and fellow-workers having gradually fallen out of the ranks. But the best results of his work had always been due to the independent efforts of his pupils, and he had the firm hope that the pathological school of Berlin would retain its distinguished position. In the evening the Berlin Medical Society did homage to its President (Virchow) by a graceful little spontaneous ceremony. The Presidential chair was wreathed and decorated with flowers and garlands, and the Vice-President, Professor v. Bergmann, greeted Virchow with a speech full of hearty good feeling, respect and admiration. Virchow seemed sincerely touched, and expressed his thanks in a short speech. Subsequently, he took a prominent part in the evening's debate on Organo-therapeutics, thus proving unimpaired mental activity even at the end of a day of ovations and congratulatory speeches, than which nothing more fatiguing surely can be imagined.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Fellows' dinner of the Royal Medical and Chirurgical Society of London, on Saturday, November 18th, was well attended, and a very pleasant evening was passed. The toast list was mercifully short, and the speeches not long. The chair was taken by Mr. Thomas Bryant, President of

the Society, who gave the toast of "Our Patron the Queen," which of course met with an enthusiastically loyal reception. The toast of "The Society" was given by Dr. James E. Pollock, and acknowledged by the chairman, who referred to the fact that the Society would be able shortly to celebrate its centenary, and discussed briefly the proposal which had been put forward for the amalgamation of societies in London. He mentioned some of the advantages which might follow such an amalgamation without committing himself to any strong advocacy of the proposal. The toast of "The Guests," which was coupled with the names of the President of the Royal College of Physicians and the Bishop of London, was given by Dr. Pye-Smith. Dr. Church, in reply, observed that he shared with the presidents of many of the medical societies who were present as guests the difficulty that he was also a Fellow of the Society, and expressed his good wishes for the prosperity of the Society. Earlier in the evening Dr. George Ogilvie had told in an inimitable manner a series of Scotch stories, and the Bishop of London followed suit in reply by relating a story in which a Scotch minister appears to have resorted to a form of incantation to procure the recovery of a sick cow. At a later date the minister himself recovered from an illness by the use of the same incantation uttered by the owner of the cow, the ludicrousness of the situation having caused him to burst a quinsy by which he was nearly suffocated. The toast of "The Chairman," proposed by Mr. Timothy Holmes, and duly acknowledged by Mr. Bryant, brought the evening to a conclusion. The number present exceeded 120.

ABERDEEN MEDICAL WORTHIES.

AT the annual election dinner of the Convener Court of the Seven Incorporated Trades of Aberdeen, held on November 18th, Professor Ogston, in responding to the toast of "The Medical Profession," took occasion to praise some of the famous medical men who had gone out from the good city of Bon Accord and its historic University. He said that last year he was at St. Petersburg on the occasion of the centenary of the Imperial Military Academy of Medicine. The ceremony was witnessed by the whole of the citizens of St. Petersburg with enthusiasm, and the Czar himself took part in the proceedings. Professor Ogston learned that one of the first presidents of that institution was an Aberdeen graduate, who was for thirty years at its head. That was James Wylie, a native of Dundee, who had learned medicine at the University of Aberdeen. He was one of the Scotsmen who had followed Patrick Gordon Menzies of Pitfodels, and Barclay of Towie, whose names were known in connection with the Napoleonic campaigns. No sooner had Wylie arrived at St. Petersburg than he began to make his reputation. One of the generals—Michaelovsky Palin—had a swelling in his neck, and no one had the nerve to open it. Young Wylie promptly did so, and saved the general's life, and to this day the Russians said that he made his fortune by cutting a general's throat. He was then 31 years of age. He was one of the "whispering, trembling company" assembled in the Winter Palace in St. Petersburg, when the Emperor was strangled by his relations and nobles, but this did not seem to have affected his career, for he was appointed surgeon to the Czar's successor, and took part in the wars in which the Emperor engaged. Afterwards he was known as Klinik Vyllie, as the Russians pronounced his name. When he came to be an elderly man, and his days of cutting throats were at an end, he was made Body Physician to the Emperor. That was before the outbreak of the Crimean war. At his death Wylie had saved 2,000,000 roubles, almost a quarter of a million of money, and with this he founded what is now the largest hospital in St. Petersburg—a village of five large hospitals, occupying a space equal in size to one of the wards of Aberdeen. When this old gentleman died there was found, treasured with great care, amongst his papers a diploma of the University of Aberdeen of the year 1719. Dr. Ogston went on to say that not many weeks before, when taking a visitor round the sights of Aberdeen, they came upon an old chair, on the back of which was "H. G., chirurgian." On applying to Mr. A. M. Munro, whose antiquarian eye could pierce through the mists of three centuries or more, he learned that this was the chair of one Hercules Guthrie, a man of distinguished family and coat-of-arms. Referring to Mr. Bain's volume, he found certain interesting particulars regarding this Dr. Hercules Guthrie, who had supplied a number of guns to the Catholic troops which were being raised at that time. The Chirurgians had at one time been one of the trades instituted in the year 1530 or thereabouts, and he believed they had existed until about thirty years ago, the last member having died twelve years since. Although Aberdeen might forget her medical sons, they did not forget her.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THE annual dinner took place on November 16th, at the Café Monico; the President, Dr. Macnaughton-Jones, being in the chair. Sir J. N. Dick, K.C.B.; Surgeon-General J. Jameson, M.D., C.B., Director-General A.M.S.; Dr. F. T. Roberts; Sir J. Crichton-Browne, M.D.; Mr. Watson Cheyne, Dr. Sansom, Mr. Andrew Clark, Mr. Juler, Dr. Silk, Dr. W. J. Smyly, Dr. G. Keith, and about eighty other members and guests were also present. The toast of "The Queen," eloquently proposed by the Chairman, having been duly honoured, he proposed "Our Guests," and calling upon Dr. F. T. Roberts, Sir J. N. Dick, and Surgeon-General Jameson to reply, said that civilians might well be proud of their military *confrères;* and he predicted that, when the war was over, no department would come out with greater *éclat* than the medical members of the sister services. Sir J. N. Dick, K.C.B., late Director-General R.N., said that sailors were not just now so much *en évidence* as the army, this being a soldier's war. But the navy was behind the army, ready to cry "Hands off" if any meddlesome Power seemed inclined to intervene. The transport to South Africa of these thousands of troops with their stores had been carried out without a hitch. Surgeon-General J. Jameson, C.B., Director-General of the Army Medical Service, also responded, and gave an interesting account of the preparations made by the Army Medical Service to prevent disease and to treat the sick and wounded in the South African campaign. His speech is printed in full at page 1488 of the BRITISH MEDICAL JOURNAL. Dr. Frederick Roberts, who responded on behalf of the Presidents of the various Societies present as guests, said that if enteric fever was so prevalent in South Africa, why had not physicians been sent out rather than surgeons? Many physicians would doubtless serve, and even have a great gathering of students at Waterloo Station to see them off. Sir J. Crichton-Browne proposed "The British Gynæcological Society," which was founded in 1884, and had now, therefore, reached the interesting age of puberty. Might it be fruitful and beneficent! If our sisters went on growing and competing with men, they would desire to take arms and appear in the "tented field," so that in future wars a gynæcological ambulance might be required. Dr. Macnaughton Jones had made an excellent President, and he thought the Society must be very sorry to part with him. The President said that he was most grateful to the Society, which, when he was a comparative stranger in London, had elected him to that high office. The Society numbered in its ranks the foremost gynæcologists of the Continents of Europe and America. It was in touch, too, with all the provincial centres of Great Britain, and numbered the best gynæcologists of England, Scotland, and Ireland in its ranks. The process of decentralisation was now the path of progress in medicine

and surgery. He was to be followed as President by the distinguished Master of the Rotunda Hospital of Dublin. It was uncertain if the next Gynæcological Congress would be held in London. The Society had forwarded an invitation, and had asked the Obstetrical Society to co-operate, and was willing to do its full share if the invitation should be accepted.

SMALL-POX AT HULL.

The outbreak of small-pox at Hull, which commenced in March last, has been dragging its slow length along with a pertinacity which has defied all the efforts of the Sanitary Committee to overcome it. Up to the middle of last month there had been a dropping fire of a dozen or so cases weekly, but on October 20th no fewer than 36 new cases were admitted into the small-pox hospital, the total number admitted since the beginning of the outbreak having then reached 300; but since that date there has been a rapid extension of the infection, and it is stated that the total number of cases admitted into the hospital down to November 18th was 475. The outbreak, therefore, is steadily assuming the character of an epidemic. This result appears to be due to two causes: one being diffusion of infection from the hospital, a wooden building, which is being superseded by a more permanent structure as rapidly as is practicable. This new building, when completed, will accommodate between 250 and 300 patients, and there appears every probability of its soon being taxed to its utmost capacity as things are going on at present. The second cause of the spread of the infection is the large, shifting, and imperfectly protected population of dockers, canal boatmen, and others which the trade of Hull is constantly bringing into contact with it. Revaccination is being pushed with a good deal of activity, between 30,000 and 40,000 persons having undergone the operation within the last few months; but the authorities will probably find that they will sooner or later have to follow the example of Gloucester, and make a house-to-house visitation with the aid of a special staff of vaccinators. Meanwhile Hull, as might be supposed, is acting as an effective centre for the diffusion of small-pox into the neighbouring towns, as was the case at Gloucester, so the inhabitants of our northern counties are likely to have a more intimate experience of what a visitation of small-pox means than they have had since so many of them have taken to discourage vaccination.

FEVER HOSPITAL MANAGEMENT.

Our criticism has been invited by correspondents on one or two matters of medical interest in connection with the administration of fever hospitals. One correspondent tells us that after a week's attendance on a patient with sore throat he concluded that the case was one of scarlet fever, and reported accordingly. The patient was removed to the fever hospital, and five weeks later called at our correspondent's surgery, telling him she had been in hospital a month, had been told she had not had scarlet fever; had, however, been placed in a ward with scarlet fever cases—some of them severe; that, though other patients had cards marked "doubtful," hers was headed "scarlet fever with complications." Our correspondent asks: (1) Whether, if there were any doubt, this patient should not have been separated from others until a definite opinion could be formed; (2) why, if not convalescent from scarlet fever she did not develop it in the ward; (3) whether the hospital staff did right in telling the patient that she had not had scarlet fever, and, inferentially, that her medical attendant had mistaken the nature of the case? If our correspondent treated the patient for a week before he reported the case, we presume there must have been some doubt at first in his own mind. Under these circumstances it would perhaps have been well if, when notifying the case, he had informed the health officer of his difficulty, and told the patient at the same time that there was an element of uncertainty. Had he done so, and had the patient been placed, notwithstanding, in an infected ward, the responsibility would not have been his. He appears, however, to have certified scarlet fever without "if or but," and the case would, as the accommodation in the house was admittedly insufficient, be sent at once into the scarlet fever ward. In answer to his second query, we need only remind him of the vagaries of infectivity, while on the third point we entirely sympathise with him. It is not however always very easy for the medical staff to prevent nurses and others from chattering. Every hospital ought to have ample isolation accommodation, and every medical man certifying a case about which he is in doubt would do well to communicate his doubt to the medical officer of health. Lastly, the discussion of a diagnosis should not be *coram populo*. Is it necessary to add a word of caution on the danger of accepting the statements of a patient as necessarily in every respect accurate? Even educated people are occasionally wanting in accuracy. Another correspondent objects that, having been called in to see two children, having reported their illness as scarlet fever, and having pressed for their removal, as the mother, who had to nurse them, was approaching her confinement, they have not been taken to hospital. An inspector is said to have objected to their removal on account of the cost to the authority. The cost is an obviously absurd objection. It is the duty of the authority to take such cases. They may of course recover the cost, though that is not a course to be recommended. There may, however, be other reasons not communicated to our correspondent. Again we say authorities should provide sufficient accommodation for their infectious cases and abundance of room for isolating doubtful ones. We fear however that, great as has been the progress in this matter of late years, some authorities still lag behind.

THE ROYAL SOCIETY'S MALARIA COMMISSION.

Of the three members of the Malaria Commission which proceeded to British Central Africa in the early part of the year, two, Messrs. Christophers and Stephens, have returned. Dr. Daniels remains for a further term in Central Africa. We understand that Messrs. Christophers and Stephens will almost at once proceed to the West Coast of Africa, in the first instance to Sierra Leone, where there should be no lack of material for studies both in malaria and in blackwater fever. Hitherto the work of the Commission has been hampered by lack of clinical material. It is easy to understand how, in the scanty and scattered European population of British Central Africa although blackwater fever is the most frequent cause of death, such a concentration of cases as would best suit the purposes of the Commission might be difficult to effect. In the larger and more concentrated European populations to be found in West Africa it is to be hoped that in this respect the conditions will be more favourable to the work of the Commissioners.

PHARMACY AND THE *BRITISH PHARMACOPŒIA*.

Dr. Tirard, Professor of Materia Medica and Therapeutics in King's College, London, commenced a course of lectures on Pharmacy and the *British Pharmacopœia* at the hall of the Apothecaries' Society of London on Tuesday last. The first lecture deal with the relation of the *British Pharmacopœia* to medical students, and discussed its history, evolution, and educational influence, and its omissions. The second lecture, which will be given on Tuesday next, November 28th, at 4 P.M., will deal with the *Pharmacopœia* in its relation to medical men, and its scope, limitations, and influence on practice as well as with the additions to it will be considered. In the third lecture on Tuesday, December 5th, the *Pharmacopœia* in its relation to pharmacists, its influence on prescribing and dispensing, its con-

struction and the alterations in it will be discussed. Members of the medical profession and students will be admitted on presentation of their cards.

SYPHILIS AND GENERAL PARALYSIS IN EGYPT.

In the *Archives of Neurology*, reviewed in another column, Dr. Mott brings forward very weighty evidence in support of his contention that syphilis is a most important factor in the causation of general paralysis. An argument which has been freely used against this thesis is that in Mohammedan countries, for example, Egypt, where syphilis is very common, general paralysis is almost unknown. A new light has, however, been thrown on the question by Dr. Warnock, medical superintendent of the lunatic asylum of Abbasiyeh, near Cairo. The report of the Egyptian Government Hospital for the Insane gives the following percentage: The admissions of general paralytic were, in 1895, 19, being 3.6 per cent. of total admissions; 1896, 29, being 6.8 per cent. of total admissions; 1897, 27, being 5 per cent. of the total admissions; 1898, 34, being 5 7 of total admissions. An interesting fact is that nearly all these cases came from the large towns, and Dr. Warnock remarks that general paralysis is proved to exist in Egypt to a much larger extent than was formerly believed owing to the more careful diagnosis and observation. In a letter to Dr. Mott, Dr. Warnock says:

> The number of patients suffering here from syphilis is proportionately greater than among the poorer classes in England. When I wrote my 1895 report, I believed that syphilis was not an important (the all-important) factor in the causation of general paralysis. In later reports I have changed that opinion, and from experience here I am coming round to the idea that general paralysis is caused by syphilis and probably only by syphilis. I doubt if alcohol, sexual excess, worry, fast life, have anything to do with general paralysis.

He was able to get a history of syphilis in all cases which he personally examined, but those he was unable to investigate, owing to the rapid discharge and admission-rate, are classed as "doubtful" in the report. In many other ways these reports are extremely interesting as showing the influence of "hashish" in the production of toxic insanity; also the prevalence of pellagra among the rural population—the fellaheen of Egypt.

THE PASTEUR INSTITUTE OF ATHENS.

The report of Dr. P. Pampoukis, Director of the Hellenic Pasteur Institute, Athens, states that from the establishment of the Institute in August, 1894, to the end of 1897 the number of persons who underwent antirabic treatment was 797. The animal inflicting the bite was in 732 cases a dog, in 34 a cat, in 1 a wolf, in 13 other animals, while in 17 the infection was conveyed by the saliva of a human being suffering from the disease. Among the 797 treated 2 deaths occurred, being 0.25 per cent. In 5 other cases the disease developed within fifteen days of the completion of the course of treatment. In another case not included in the number above given, that of an individual who had been bitten by a wolf, the treatment also failed.

THE BOMBAY BACTERIOLOGICAL LABORATORY.

Dr. E. L. Marsh reports to Mr. Haffkine the results of certain experiments on the efficiency of mercury perchloride in disinfectant solution as an application to cowdung floors, and on the utility of saturating cowdung or simple mud floors with sea water before spraying them with mercury perchloride. For disinfection in Bombay a solution containing mercury perchloride, ammonium chloride, and hydrochloric acid is commonly employed in the strength of 1 in 725. It was found that the acid solution of this strength reduced the microbes 65 per cent. below the average of occupied plague-infected rooms; the perchloride solution *plus* lime washing and unroofing reduces the microbes 85 per cent.; while perchloride solution *plus* electrolysed sea water reduces the microbes 93 per cent. It appears that the application of electrolysed sea water makes the surface of the mud or cowdung floor friable, and therefore more easily acted upon by the perchloride; that it oxidises and neutralises the organic and mineral matters that interfere with the efficient action of the perchoride of mercury, and that it enables spore-bearing micro-organisms to vegetate (important in disinfection against anthrax and glanders), and thereby become more easily killed by the action of mercury perchloride. The value of electrolysed sea water as an adjunct to mercury perchloride in the disinfection of the native floors is therefore not so much due to any germicidal action it may exert as to its utility in oxidising and neutralising the chemical ingredients of the mud and cowdung which interfere with the efficiency of the perchloride.

AN INTERNATIONAL CONGRESS OF TUBERCULOSIS.

We understand that it is proposed to hold an International Congress on Tuberculosis in London in May, 1901. The Congress is to be held under the auspices of the National Association for the Prevention of Consumption and other Forms of Tuberculosis, and H.R.H. the Prince of Wales has graciously consented to be the President, and to open the Congress in person.

We are informed that the Diploma in State Medicine heretofore issued by the Royal College of Physicians and the Royal College of Surgeons in Ireland conjointly will in future be styled the Diploma in Public Health.

The City Council of Nottingham has unanimously elected Mr. James Black Roberts, M.B., C.M.Edin., to be Sheriff of the county of the city of Nottingham. The records of this office date back unbroken to Saxon times.

The Royal Mail steamer *Briton*, by which Sir William Mac Cormac and Mr. G. H. Makins travelled, arrived at Capetown on November 20th. A telegram to the *Daily Mail* states that Sir William visited the military hospital at Wynberg on the following day, and expressed himself as most delighted with the arrangements, everything being practically perfect.

The Chairman of the Technical Education Board of the London County Council stated at the last meeting of that body, in reply to questions, that the Board had made representations to the London University Commission urging that students attending evening classes in polytechnics and other institutions should be admissible to all the privileges attaching to internal students of the new Teaching University for London.

The Berlin municipal hospital, Friedrichshain, is building a small *annexe*, which is to contain a full set of modern massage, orthopædic, and gymnastic apparatus. The cost is estimated at about £1,200.

Workmen have lately been digging a trench for an underground passage at Guy's Hospital; and underneath the "Park," at a distance of 6 feet below the surface, came across a layer of human bones, which as the depth increased became more numerous. Some thirty sets of bones were unearthed. Mixed with them was a number of clay pipes, most of which were very short in the stem. It is generally supposed that this is one of the common burial grounds into which were cast the bodies of those who died from the Plague in 1665. The ground on which the hospital stands was a very little way outside the City boundary, so that the men having charge of the burials would have only a short distance to carry their burdens.

THE DIRECT REPRESENTATIVES' MEETING AT NEWCASTLE.

A CONFERENCE of medical men interested in medical politics arranged by the North of England Branch of the British Medical Association, the Newcastle-on-Tyne Medical Ethical Society, the Gateshead Medical Association, the County of Durham Medical Union, and the South Shields and Jarrow and Sunderland Branches of that Union, was held in the Examination Hall of the University of Durham College of Medicine on Wednesday, November 22nd. The chair was taken by Dr. JEPSON, President of the County of Durham Medical Union, and over 160 medical men from the districts around Newcastle were present. Intense interest was shown in the proceedings which lasted from 6 to nearly 11 P.M.

[For the text of the following addresses we are indebted to Mr. Horsley, Mr. George Brown, and Dr. Glover respectively, who were good enough to supply us with the manuscripts, which they had prepared beforehand. It is therefore possible that the following print may not precisely correspond with the wording of the addresses as delivered.]

MR. VICTOR HORSLEY'S ADDRESS.

I.—CONSTITUTION OF THE COUNCIL.

THERE are many questions of importance and interest which affect the medical profession very keenly at the present time, some of which will have to be dealt with by legislation shortly. I believe we are all agreed here, at any rate, as to the essential points for reform in the constitution and procedure of the General Medical Council, the protection of the interests of the profession collectively or individually, and reform of various conditions which govern the requirements of the profession. Although these subjects may be prosaic, and not of such immediate apparent value for discussion at the present moment as some others, they are nevertheless perfectly fundamental in character, and until they are decided in our favour the practitioner will have to wait an indefinite time for the redress of the evils from which he is now suffering.

My first topic, the constitution of the General Medical Council, embraces a far wider field in reality than that which it appears to do. The General Medical Council is not the only body which is accorded legislative and judicial powers over the members of the medical profession, and it is not usually realised in what an extraordinary series of little oligarchies that power really resides. The medical corporations, that is, the colleges and universities, are also bodies which control the fate of the general practitioner, and they do so not only through their own powers, but also by means of their excessive representation on the General Medical Council. The medical corporations therefore have a double power, as a matter of fact, given to them by the Medical Act of 1858, although each corporate body or guild was originally never intended by the State to do more than regulate the conduct of the few individuals who composed that guild or corporation. But a further point comes in here, namely, that when we talk of the great medical corporations doing this, that, or the other, it is a mere figure of speech, because the councils of these bodies, having usurped the rights of the members, now refuse the individuals who hold the membership of the corporation or guild any share in the conduct of the business of the corporations. In other words, therefore, when we say that the college has taken such and such action in the name of the profession, it conveys a wholly false idea of the situation, because it is not the college that moves in the matter at all—it is only a body of twenty or more estimable gentlemen who have arrogated to themselves the use of the name of the college or corporation. With the College of Physicians the case is slightly different, because the body which takes upon itself to reply to questions from the Government, etc., in the name of the corporation is somewhat larger, but there still remains the fact that it is only a small oligarchy within the college and not the college itself. So much, then, for the conduct of the matters within our corporations.

We now come to the fact that these corporations are excessively represented on the General Medical Council, since each has legally the power of sending a representative to the Council. That each corporate body, as a whole, should elect a representative was intended by the Medical Act of 1858, which constructed the General Medical Council, but a coach and horses has been driven completely through that Act by the little collections of men who compose the councils of the corporations. These gentlemen elect a representative who nominally represents the whole college or university, etc., but of course, as a matter of reality, he does nothing of the kind. At the utmost he represents only the little *coterie* who elected him, and in the case of Mr. Brudenell Carter, who represents the Apothecaries' Society, we have the unedifying spectacle of a seat on the General Medical Council being occupied by a man who is sent there by a handful of City grocers who have not a particle of medical education about them, and whose nominee takes upon himself to speak as though he were the representative of the large body of medical practitioners throughout the United Kingdom who are licentiates of the Apothecaries' Society. This system, of course, leads to the utmost indifference on the part of the so-called representatives of the corporations to the interests of those whom they nominally represent, and the recent case of the late Mr. Hunter, L.S.A., is a striking instance in point, for his so-called representative, Mr. Carter, allowed him to be prosecuted and ruined on the false plea of his being an American quack, while as a matter of fact he was a registered medical practitioner, and a licentiate of the Apothecaries' Society. Further, inasmuch as the gentlemen who hold these positions as so-called representatives of the medical corporations are in a greatly preponderating proportion among the members of the General Medical Council, it follows that our unfortunate profession is doubly governed by a series of small oligarchies who regard themselves as entirely irresponsible to the great body of practitioners, their colleagues in the profession they have the honour to belong to.

It should be the business of meetings like this to see that this glaring instance of unconstitutional government is put an end to, and the quickest method of setting things right would be to obtain an amendment of the Medical Acts so that each university or corporation would elect its representative by the votes of all the Fellows and members of the corporation in question. This is clearly what was intended by the Medical Acts, but, as I have pointed out, the power has been gradually usurped by the council of each corporation. This plan is one which appears to me to be the simplest for adoption by the British Medical Association for inclusion in the forthcoming Medical Act Amendment Bill, but it is not of course the ideal plan. An ideal constitution for the General Medical Council would be the returning of a member by the profession in various districts throughout the country so that each representative could fully present to the Council directly the wishes of a certain given portion of the profession. It is, I believe, however, useless to put forward such a sweeping reform at the present time since the corporations have for so long had the examining powers in their hands that they have attained a fictitious importance in the eyes of the Government, and I do not believe that any Government would consent to take away the influence of the corporations as laid down in the Medical Act of 1858, although it would, I am sure, cheerfully deprive the councils of those corporations of their ill-gotten powers, and hand the same over to the practitioners who compose the membership of each corporation as it originally intended to do in 1858. In whichever of these two ways the constitution of the Council is amended, there can be no doubt that the abolition of the close borough system and the introduction of the ordinary principle of representation would lead to an immense change in its efficiency. For at the present time it is notorious that when an important subject—especially if it involve the details of medical practice—is brought before the General Medical Council for the first time, few seem to grasp it, and it is as a rule promptly rejected, the favourite device, especially employed in the last session, being for one of the well-known reactionaries to move the previous question. It thus takes usually the period of two sessions before the Council will listen to a statement of the question at issue, and it is usually a third before it is carried. I do not believe that with a thoroughly representative council such delays could possibly occur.

Now with regard to this great and fundamental question of amendment of the Medical Acts. As a matter of fact the

amendment of the Medical Acts is needed for very many things, but especially has it lately become urgently necessary for the Council itself, for even the constitution of the Council and the subdivision of its working as established by the Act of 1858 are at the present moment endangered. As I pointed out in my last report to the profession, the Irish Branch of the Council is bankrupt and the funds of the Scottish Branch of the Council are steadily failing. It is clear, therefore, that for the welfare of the Council a complete revision must be at once made of its organisation and of the powers under which a Branch Council can carry on its work or even exist. A Committee of the Council is sitting on the question, and must report to the next session, but it is doubtful how far the rottenness of the present system or the necessity of fundamental change in the organisation of the Council and its work is fully realised. Further, of the other important questions which are pressing for immediate solution, and which can only be answered by means of an amended Medical Act, there are especially the establishment of a one-portal system of examination for entry to the profession, the further suppression of illicit medical practice, and the rearrangement and improvement of the procedures of the Council, which I shall refer to directly.

Supposing, then, it is granted that such a Medical Act Amendment Bill must be formulated and pressed forward by the profession, it is worth looking to see what has been done already in this matter. The British Medical Association a few years advocated a one-clause Bill which dealt only with the question of illicit practice; but though this very small fraction of necessary reform has been long given up by the Parliamentary Bills Committee of the British Medical Association as utterly inadequate, it has nevertheless been revised and pressed forward by Dr. Saundby, the late President of the Council of the Association, as being the only measure worth the attention of the Association. To emphasise this mistaken view, the Council of the Association with Dr. Saundby in the chair, actually struck out of the Bill recently proposed by the Parliamentary Bills Committee all the other reforms it contained. Dr. Saundby, of course, as I showed at the meeting at Portsmouth, was quite unaware of the fact that the Government had already, about two years ago, expressed itself very definitely to the effect that it would not look at a Bill which only dealt with one subject. Nevertheless the Council of the British Medical Association was so misdirected as to put back the hands of the clock and delay the work of the Parliamentary Bills Committee. The debate which I opened at the annual meeting this year at Portsmouth also brought out this fact very prominently, especially through the speech of Dr. Crocker, that there are many members of the Council of the British Medical Association who are so enamoured with the way in which the medical corporations behave, that though they are supposed to represent on the Council of our Association the interests of the medical profession—that is, the members of those corporations—they prefer to advocate the reactionary opinions of the small majority of those who constitute the councils of the colleges.

The result of this extraordinary action on the part of the Council of the British Medical Association with regard to the amendment of the Medical Acts has simply been to bring the Council of the Association into conflict with its Parliamentary Bills Committee, and to waste time. To restore the matter to its proper and former position, I moved at the annual general meeting at Portsmouth:

> That any draft Bill for the amendment of the Medical Acts shall contain, *inter alia*, provision for further direct representation of the profession on the General Medical Council, and for the establishment of a one-portal system of qualifying examination.

In other words, instructing the Council to return to the former position laid down by the Parliamentary Bills Committee. If factious opposition were not a matter of regret, it is really comic to notice that according to the last published minutes of the Council of the Association, that Council took this motion of mine which was carried unanimously at the Portsmouth general meeting, and actually sent it to the Parliamentary Bills Committee as an instruction reference, thus positively assuming the position of ordering the Parliamentary Bills Committee to do what the latter had already done, but what the Council had mutilated and rejected. Such proceedings reflect very little credit on those who are responsible for the conduct of the business of the Association, and who are placed on the Council to watch the interests of the practitioner. I will now remind this meeting again of what I reported to the profession in the early part of the year respecting the views prevailing in the General Medical Council itself on this matter of the amendment of the Medical Acts, namely, that many members of the General Medical Council consider that this fundamental movement of reform ought to come from the outside, though, as I have already pointed out, it is really necessary for the interests of the General Medical Council itself to obtain an Amendment Bill. We must therefore in the Association press forward the matter of this Bill; and let me here point out that a meeting of the profession like this ought to instruct by a special resolution the representative of the Branch on the Council of the Association to do all he can to push forward the amendment of the Medical Acts; and further, it ought to approach Dr. Philipson, who is the representative of Durham University on the General Medical Council, and invite him similarly to use his best endeavours to advance this very important matter. If these questions were not simply talked about but supported by personal application to the members of the Council of the British Medical Association and of the General Medical Council they would be advanced much more quickly.

II.—Legal Business.

I have taken as my second topic the legal procedure of the Council, because that involves a great deal which is of direct interest to the profession. The Council is entrusted by the State with the preservation of the *Register*. Now, registration by itself is of no value to the individual who is registered unless it secures to him certain privileges; and, on the other hand, there is no use in a body like the General Medical Council having the maintenance of the correctness of the *Register* entrusted to it, unless it is also given judicial powers of investigation and decision respecting the persons whose names it admits to the *Register*. There are two different sides, therefore, to this subject of registration: one which secures to the profession certain advantages and another which provides for the benefit of the public at large that the registered members of the profession shall possess certain virtues. Both of these aspects of the question involve legal procedure. It is, therefore, of immediate interest to us to see what the legal procedure of the Council has been or is likely to be in regard to these matters.

The Medical Acts are very clear in their wording as regards the advantages and privileges which registration confers upon the practitioner who registers his name. The advantages which the State offers to give a man who was of honourable character, who had passed through a certain duration of arduous and expensive education far exceeding what is demanded of any other profession or calling, are first, that he alone should be entitled to practise medicine, surgery, and midwifery; secondly, that he alone should be able to legally recover the fees for such practice; and, thirdly, that he alone should be able to occupy any medical post under the Government or under any institution or society towards which the State admits any responsibility.

As regards the first of these privileges I hasten on at once to state that although, as I have frequently explained before, the Medical Act is clear enough in wording on the subject, nevertheless certain reactionary spirits in our profession, together with some lawyers, delight themselves in constantly asserting that the Acts do not mean what they say and in fact deny to us any real birthright at all. It is indeed singular that the legal profession, which has taken good care to protect its own professional work up to the hilt, should endeavour in every possible way to obstruct us from interpreting our Act in the way in which it is printed; but we have to accept the position until we can get the much-desired Medical Act Amendment Bill, which must restate the position in such a manner as to prevent, if that be humanly possible, legal quibbling upon the subject. As to what is said by members of our own profession—notably by Mr. Carter—against the privileges of the practitioner, the profession has its own remedy in its hands to deal with that form of betrayal of its interests. In the Bill of the Parliamentary Bills Committee of the Association the law is put upon the plain footing that indeed already exists in most of our colonies. Our difficulties with lawyers have been greatly enhanced by

the fact that the Medical Act is legally administered in the hazy atmosphere of a magistrate's court, but the magistrates are by no means only to blame for the failure of the law to preserve to us the protection of our work which the Medical Act gives us. I have collected and published recently in the British Medical Journal by way of correcting certain anonymous statements made in that Journal by a so-called legal correspondent over twenty cases in which quacks were successfully prosecuted in magistrates' courts for infringing this the first of our privileges. The difficulty has also occurred in the High Court and in no small measure. For in the now notorious case of Bridgwater and Frickhart the High Court of Appeal emitted the remarkable decision that because a scoundrel of a quack said he possessed a degree which itself has no existence—namely, the M.D.U.S.A., that therefore he did possess it; and the Judge of the High Court said more than this: he said he really did not see why a person who had been struck off the *Register* for infamous conduct should not be allowed to practise. When a judge of the High Court says such things as these there is some excuse of course for the humbler legal minds of magistrates who, as in the recent Norwich case, positively decided that, although a quack might not under the Act call himself a "surgeon," he had a perfect right to call himself a "doctor," although, as many of you doubtless know, both titles are specifically named as being secured to our profession by the Medical Acts.

The General Medical Council has during the past two or three years been testing the Act by a certain number of selected cases, that is to say, it has been finding out how far the hostility of the legal profession will go in the way of opposing a sister profession in obtaining its legal rights, and if only the legal steps taken by the Council's lawyers were less cumbersome and less expensive one would not have so much fault to find. But the legal procedures of the Council on the general question of the use of medical titles have quite recently, in the case of the late Mr. Hunter, L.S.A., been, as I pointed out at the last session of the Council, most seriously malversated. The lawyers of the Council, without any justification whatever in the way of instruction from the Council, took upon themselves to prosecute the late Mr. Hunter, L.S.A., for calling himself a physician, and by intimidating the local magistrates succeeded in obtaining a conviction. Mr. Hunter was ruined, and his death, which followed soon after, was the direct outcome of this legal action. Not content with this, the lawyers of the Council, with the illegal connivance of the then Penal Cases Committee, and again without any authority whatever, prepared to resist the appeal which the late Mr. Hunter had lodged, and which was carried on for him by the Apothecaries' Society. By the absurd edict of the President I was prevented for some months, as you may remember, from seeing any documents of the Council; I could not discover what was going on or, of course, would have secured the staying of these abominable proceedings. Thus it was that the case came before the Appeal Court, and it was positively argued before the Appeal Court by the legal advisers of the Council that no one had any right to call himself a physician unless he belonged to some antiquated college of physicians.

This delirious view of the medical title of physician was invented by the law officers of the General Medical Council, and was positively accepted by the High Court, the justices composing which were so devoid of knowledge concerning medical education or medical affairs that while one judge laid down the decision that a physician was a person who was trained in surgery, the other judge was convinced that the medical colleges granted university degrees, and both were fully satisfied that no M.D. of any university had any right whatsoever to call himself a physician. It is impossible to think calmly of such a hotchpotch of nonsensical untruths such as these passing for a grave decision in the High Court of Appeal. Yet this is what we have been brought to by the present legal procedures of the Council against which I have so repeatedly protested.

We will now leave the question of legal procedure, as it affects the question of quackery and medical titles, and turn to the matter of legal procedure in regard to that class of professional misdoing which is known as infamous conduct. The General Medical Council has had imposed upon it by the Medical Act the duty of keeping the *Medical Register* clean, and in this matter the profession has always supported the decisions of the Council, which have erred, if at all, on the side of mercy. But it is a remarkable thing that the Council has never safeguarded its legal procedure in this particular by obtaining from the Legislature the necessary powers, as other public bodies have. I will only take one example of very necessary reform in procedure which, among others, was referred by a direct resolution of mine to the late Penal Cases Committee, by whom it was of course disregarded. I refer to the fact that in conducting its inquiries the General Medical Council has no power to administer the oath to the witnesses which it hears. It is not surprising, therefore, to find that justice has been frustrated, and the decisions of the Council vitiated by perjury. I am bringing forward the matter again this session, and since this will require an addition to the Medical Amendment Act, it is a further reason for the pushing forward of that necessary reform.

III.—Organisation of the Profession.

My last topic is the organisation of the profession by means of the British Medical Association. The existing medical organisation of this country may be roughly divided into Branches of the British Medical Association and medical societies with various titles. Quite recently it has been proposed by Dr. Crawshaw to form a medical association which shall have for its sole objects the furtherance of medico-political reforms. Personally, I think that the proper organisation of the profession in this matter is the British Medical Association, because there is, first, the existing machinery to hand; secondly, the efforts of the Association in medical legislation have been very fairly successful; and, thirdly, the Association is recognised now by the Government as being very representative of the voice of the profession. If only the Memorandum of Association were carried out in its existing words, the Association would provide everything that the practitioner requires—namely, scientific medical information, legal protection in the practice of his profession, and the social political furtherance of the best and highest interests of the profession.

Holding these views it is naturally a great pleasure to me to take part in a meeting composed like this of members of the Northumberland Branch of the British Medical Association and of the medical societies of the district. While thus advocating the British Medical Association to be the proper basis of organisation for our profession, I am by no means blind to the fact that a great deal of preliminary work remains to be done within the Association itself. In the first place the Council of the Association undoubtedly needs an infusion of new blood. It has been thought wise in the past to provide for a large number of vice-presidents who shall be for the remainder of their lifetime members of the Council. This, I think, is a constitutional mistake, because it necessarily follows that there is an always increasing body of men on the Council who take part in the proceedings when they themselves are practically removed from active life in the profession, and so from opportunities of becoming acquainted with the ever-changing needs of the profession. Another point is that the representative members of the Branch are accorded the position as a dignified honour rather than an appointment for active work. This I venture to think is a mistake. A representative on the Council of the Association should be a man to whom the interests and difficulties of professional work should be very pressing, and he should be paid for the loss of time which his attendance on his duties involves. With a Council so recruited there can be but little doubt that the Association would become a most powerful agency of good service both to the profession and to the public. One more preliminary consideration I must draw attention to. Chiefly through the extraordinary activity of Dr. Welsford a resolution of the Association was obtained empowering the Council to remove by applying to the High Court certain verbal disabilities which prevent the Memorandum and Articles of the Association being as useful to its members as they should be, and especially in the direction of protecting the livelihood and of furthering the professional welfare of the members of the Association. I hope that this and other similar meetings will cause the members of the Council of the Association to carry out the instructions they

received from the general meeting of the Association and help to put an end to the reactionary spirit which affects the judgment of many of its older members and which has led to its recent singular action in regard to the Medical Acts Amendment Bill.

In conclusion, let me point out to you that although there are doubtless certain members of our profession who, like Sir William Gairdner, consider that resolutions in favour of medical reforms are only the "production of a small insignificant *coterie* of discontented men 'again the Government,' who were always disposed to get up a row for the sake of a little notoriety." It should be our duty to convince such persons that their constant obstructiveness is due to a combination of a want of knowledge and of sympathy and that their true aspiration should be to carry out the words of the Memorandum of the British Medical Association, namely, "the objects for which the Association is established are the promotion of medical and the allied sciences and the maintenance of the honour and the interests of the medical profession." Nothing will, I think, more successfully overcome the hostility of our elder brethren than this meeting, the outcome of the active development of the work so happily inaugurated in this district by Dr. Jepson.

MR. GEORGE BROWN'S ADDRESS.

Mr. President and Fellow Practitioners,—It affords me great pleasure to have an opportunity of meeting such an important section of my constituents as is represented at this Conference. Such gatherings tend to silence the slanderous imputation that the bulk of the profession are perfectly indifferent as to the work of the General Medical Council or the individual action of its several representatives on that body. I congratulate you, Mr. President, and the Societies represented here to-day, on the novel step you have taken in convening this Conference, in order to obtain orally the opinions of your direct representatives on medical reform and other important questions now before the medical profession and to exchange views with them. Such a meeting as this cannot but strengthen our position in the Council Chamber. But I would remind you that your interests in the *personnel* of the General Medical Council does not begin and end with your direct representatives. Each member of that body, although he may sit at the Council only as the representative of a minor medical corporation, has, in addition to his responsibility to the corporation he represents, responsibilities of a far higher order to the profession as a whole, to say nothing of his responsibilities to the public. I would therefore suggest that medical men in every part of the kingdom should lose no opportunity of bringing their influence to bear, personally or by letter, on the representatives sent to the Council by local universities and corporations. It would be an immense advantage to your direct representatives if the representatives of the Durham, Victoria, and other extra-metropolitan universities and corporations were less frequently found voting in opposition to them.

The Work of the General Medical Council before 1886.

In the few minutes allotted to me for this address it will be impossible to do justice to the various topics I had intended to discuss. I observe that in the agenda the first place in the synopsis of my address is given to "The Work of the General Medical Council as regards Medical Reform from the Institution of the Direct Representatives to the Present Time." That of itself would afford sufficient matter to occupy the half-hour I am allowed. I must therefore ask your indulgence if I only give a hurried and imperfect glance at this portion of my address.

As you are all aware, the General Medical Council came into existence under the Medical Act of 1858. The members of that body did not seriously trouble themselves about questions of medical reform. They considered that their duties began and ended with medical education and registration and the preparation of a *Pharmacopœia*. Under the Act of 1858 they were empowered to require that all the bodies connected with the legal authorisation of practitioners in medicine throughout Great Britain should place their education on adequate and uniform grounds. How the members of that Council fulfilled their trust and discharged their duty to the profession and the public in this regard was thus summed up by Sir Henry Acland in his presidential address delivered at the opening of the forty-first session of the Council on February 15th, 1887. He said, referring to adequate and uniform medical education: "Twenty-nine years have passed, and now only last year has this been effected. Over the melancholy history of this delay a veil had best be drawn." The veil which Sir Henry Acland drew over this unfortunate history should however, be lifted for one moment. The individuals responsible for this melancholy history have long ceased to be members of the Council, but it is to be feared that in many cases their mantles have fallen on other shoulders, and that the influences at work in the Council Chamber remain very much what they were in the 28 years which elapsed between the Medical Acts of 1858 and 1886. This, perhaps, was to be expected; indeed, Sir Henry Acland, in referring to the addition to Council in 1886, said the constitution of the Council would remain the same under the new Act with the addition only of such fresh blood as the practitioners of the three divisions of the kingdom may in their discretion see fit to elect. It would not be fair to the Council of those days to say no efforts were made in the direction of medical reform. As Sir Henry Acland in the address above referred to pointed out, in the sixteen years following 1870 much fruitless labour was expended in the endeavour to bring about reform which involved, to quote his actual words, "loss of time to the Council and to Parliament, and some loss of character to our profession. It is," he continued, "a sad chapter in the history of parliamentary government and of free institutions." This, be it remembered, is not the verdict of a dissatisfied reforming agitator, but the well-thought-out judgment of one of the most honoured of the past presidents of the Council, who held that important office nearly twice as long as any other president. The result of this neglect of duty was that at the time of the introduction of the Medical Reform Bill of 1886 there was not a medical corporation in the kingdom which held a qualifying examination which could be regarded by an impartial critic as adequate.

"The Battle of the Shops."

The failure to carry out the obvious intention of Parliament as laid down in the Medical Act of 1858 was generally ascribed to the "battle of the shops." This was the reason put forward by Sir Henry Acland, and I will not waste your time or my own in looking for another. The "battle of the shops" has continued ever since the Act of 1886 was passed, and is still being waged with disastrous results to the profession as a whole, as well as to individuals. So bitter has been the contest that it has been impossible for medical reform to make much headway. The hopes of those who were most active in bringing about the passage of the Medical Act of 1886 have not been realised, and it has become only too evident that little can be done unless parliamentary pressure is again brought to bear, but with more force, upon our medical corporations. It was clearly intended and fully expected that the Act of 1886 would bring about the "one-portal system." Indeed, this was the primary object of the Act. Section III Clause (*c*) of the Act provided that for the purpose of instituting a qualifying examination in medicine, surgery, and midwifery, all the medical corporations in the same division might combine, and further that the universities and corporations in each division of the kingdom might combine for the same purpose, so that for all practical purposes for gaining admission to the *Medical Register* there should be only one Examination Board in each division of the kingdom.

As far as I am aware no serious attempt has been made to effect combinations of the universities and corporations, and the attempts to unite the corporations in at least two of the divisions of the kingdom have ended in lamentable failure. The result is the continued existence of competing corporations and of too low a standard of professional education and examination.

The London Colleges and the Apothecaries' Society.

It will be in the recollection of some of the older members of the profession present that, soon after the Act of 1886 was passed, the Apothecaries' Society of London approached the Royal Colleges of Physicians and Surgeons with a view

to instituting a combined examination of the three corporations. The Colleges, however, absolutely declined to take any steps in this direction. The Apothecaries' Society then applied to the various English universities to combine, but with a similar result. The Society then applied to the General Medical Council to appoint examiners in surgery, so as to empower the Society to grant a registrable qualification in medicine, surgery, and midwifery. Instead of immediately granting the request the Council on February 19th, 1887, passed a resolution by 20 votes to 4, expressing the opinion that it would be contrary to the interests of the public to have two competing examining Boards sitting in London, and strongly recommending the two Colleges and the Society of Apothecaries to arrange to hold a qualifying examination conjointly. In forwarding the resolution to the two Colleges, Sir Henry Acland, the President of the Council, said; "I am unwilling to add much. But it is my duty to say that the General Medical Council has come to the conclusion, after very careful deliberation, that I should thus address you..... It is the unquestionable duty of the Council to leave no means untried by which the examining corporations may be induced to combine for examination purposes. They have already combined in Scotland. In England and Ireland they have partially combined, or are combining. Should you (that is, the two Colleges) be induced to co-operate with the Society of Apothecaries of London, it is evident that one strong licensing body, to which no exception can be taken, would be constituted in London; that the system of inspection would be simplified, and long discussion and suspense would be happily terminated. I could indeed, were I at liberty, write much in support of the wish of the Council, representing as it does, every medical interest in the kingdom. I will, however, now only add that by desire of the Council I shall hold myself in readiness to confer with you on this matter at some convenient time, should that course appear to be desirable."

The good offices of the President were declined and the strong recommendations of the Council treated by the two Colleges with contempt; indeed it was held by some of those connected with the Colleges that the Council had gravely outstepped its duties by addressing the Colleges on the subject. It is not to be wondered at that, finding his efforts to carry out the intentions of the new Medical Act frustrated at the outset by those to whom he had a right to look for help, Sir Henry Acland, who at the time was not in good health, promptly retired from the Council.

I have, Mr. President, dwelt on this subject at considerable length, but it is necessary to do so in order to show the spirit in which the provisions of the Medical Act of 1886 were approached by those who were responsible for carrying them out. The same spirit, sad to say, prevails to this day.

Friction between the Council and the London Colleges.

Thirteen years have elapsed since the two London Colleges defied the Council in the matter of combining with the Society of Apothecaries. They were successful then. They—the two Colleges—have now quite recently set themselves in opposition to the Council in regard to another most important matter, showing that these corporations still continue to oppose progress. At the last session of the General Medical Council, a resolution was passed to the effect that on and after January 1st, 1900, "No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council, and has produced evidence that he has commenced his medical studies at a university or school of medicine, or at a scientific institution recognised by one of the licensing bodies and approved by the Council."

The Colleges have replied to this much-to-be-desired educational reform by passing resolutions denying the authority of the Council to make such regulations, and declining to recognise the requirement that scientific institutions where medical study is commenced should be approved by the General Medical Council. Is it a matter for surprise that medical education and medical reforms lag behind? I take it that this matter will be the subject of very serious discussion at the Council when we meet next week.

The Council and Penal Cases.

Although so little was accomplished in the way of medical reform in the first ten years of direct representation (1887 to 1897), it is only fair to record that a great advance was made as regards the enforcement of the penal clauses of the Medical Acts, especially in checking the practice of so-called "covering" of unqualified practitioners. This, no doubt, was due in a great measure to the presence on the Council of the three direct representatives, and the frequent reports of cases of unprofessional conduct sent to the Council by the Medical Defence Union and other similar organisations.

Recent Reforms.

Although since my election in December, 1896, to a seat on the Council as one of your representatives I cannot point to a long list of reforms accomplished, it is pleasing to be able to report that some progress has taken place. Regulations have been passed raising the standard of preliminary education for medical students. These come into operation in January next, and a further resolution has since been passed requesting the Education Committee to report during the next session as to the earliest date at which it will be practicable to raise the standard to the senior and higher grade examinations at present recognised.

The Council has also issued more stringent regulations with a view to suppress the employment of unqualified assistants in visiting and treating patients, except under the immediate personal supervision of the employer. In taking this action the Council has responded to the appeals which have been made for many years past by medical men and the organs of professional opinion. Although, apparently, some cases of individual hardship may have been occasioned by the new regulations I feel sure that the profession as a whole will approve the action of the Council in endeavouring to suppress an evil which is fraught with danger to the public as well as being highly injurious to the best interests of the profession.

One of the most important steps taken by the Council since it was first constituted was taken at the last session. I refer to it with particular satisfaction, as it goes a long way to redeem one of my election pledges. In my address I pledged myself, if successful, "to endeavour to make it impossible for cheap clubs and medical aid associations which make a profit out of their medical officers and canvass from door to door for members to obtain the services of registered practitioners." I had given notice previous to the meeting of the Council in May last of my intention to propose the following motion: "That this Council regards it as unprofessional to hold the appointment of medical officer to any society established for the purpose of providing medical aid to its members whose agents systematically canvass for members from door to door."

A Special Committee, of which my colleague, Dr. Glover, was chairman, had been appointed previously to report on the question, but of course I did not know what their report would be. I was agreeably surprised to find during the session that the Committee had reported in favour of an almost identical motion. When the question came on for discussion the Council unanimously adopted the following modified resolution: "That the Council strongly disapproves of medical practitioners associating themselves with medical aid associations which systematically practise canvassing and advertising for the purpose of procuring patients." This is an entirely new departure, and if acted upon, as I trust it will be, it will effectually solve the most difficult problem which has engaged the attention of general practitioners in recent years.

The Demand for Increased Direct Representation.

On the question of increasing the number of direct representatives on the Council I regret to report that no progress has been made. On May 31st last I brought forward a proposition "That the time has come when it is expedient to confer on the registered medical practitioners resident in England and Wales the power of returning an additional member to the General Medical Council, as provided for in the Medical Act of 1886." The motion was lost, 21 voting against it, and only 7 in its favour. The minority consisted of the five direct representatives and Dr. McVail and Mr. Tomes, Crown representatives. All the corporate representatives who were present, the President excepted, voted against

the recognition of the just claims of the medical practitioners in England and Wales. The chief reason put forward by our opponents for refusing to sanction the proposed increase is that the majority of the profession are quite indifferent about the question, as evidenced by their failure to fill in and return their voting papers when an election takes place. It is deeply to be regretted that medical men are so apathetic, as the position of your direct representatives on the Council is thereby rendered more difficult than it otherwise would be. This conference leads me to hope that greater interest will be taken by medical men generally in the work of the General Medical Council. In an address which I delivered to the members of the Incorporated Medical Practitioners' Association some eighteen months ago, I ventured to hope that the infusion of new blood in the *personnel* of the Council in recent years would result in a more liberal policy. The chilling reception given last session to my proposition to increase the number of direct representatives has completely dispelled this hope.

Reforms Needed in the Council.

This brings me to the question of reforms needed in the constitution and functions of the Council. The constitution needs remodelling by reducing the corporate members and increasing the number of direct representatives. The Legislature evidently foresaw that the time would come when the corporate representatives should be reduced, and powers are given to the Council in the 10th Section of the Act of 1886 to make representations to the Privy Council when any constituent body has so diminished in importance as not to be entitled to return a representative. The time is approaching when it will be necessary to exercise these powers. The University of Wales and the proposed Birmingham university will, no doubt, seek to be represented on the Council, and the best method of meeting their claims will be by re-reducing the representatives of the "diminished" corporations.

Reforms in the Methods of the Council.

The methods of the General Medical Council sadly need reforming. Too much of the work of the Council is done by Committees. The Executive Committee and the Penal Cases Committee are entrusted with powers and discharge functions which ought to be, and formerly were, performed by the Councils or Branch Councils. The results of this delegation of duties are disastrous. This was exemplified by the unfortunate prosecution of the late Mr. H. K. Hunter, a registered practitioner, for using a title descriptive of his professional calling. Through the failure of the Penal Cases Committee to make themselves fully acquainted with the facts, the members of the Council were misled, and authorised a prosecution which would never been sanctioned by myself and other members of the Council had the actual facts been laid before us Through this prosecution and conviction it is to be feared Mr. Hunter died prematurely, and the diploma of the Apothecaries' Society has been publicly discredited. The decision of the magistrates in this case will not, it is to be hoped, be allowed to stand, for it appears to me to be absolutely opposed to the law.

The One-Portal System.

Among general medical reforms I would give the first place to the institution of the "One Portal System" by means of a State examination. It is high time that effete corporations should give place to State Examining Boards associated with the universities. In the future, medical men who wish to occupy a proper position in public estimation, should hold a qualification from a university. It is not sufficient to hold a surgeon's or an apothecary's diploma. It is most damaging to the holder of the College of Surgeons or the "Hall" diploma for his patients to be told that he is not a proper "Doctor," as too frequently happens. The rising generation of medical men recognise this, and in consequence the demand for university degrees relatively increases, whilst the applicants for the diplomas of the Corporations are diminishing. In 1885—the year before the passing of the Medical Reform Act, and the Conjoint Board did not exist—the candidates for the licence and membership diplomas of the London Colleges aggregated 1,398; in 1893, six years after the Conjoint Board was formed, the aggregate was 951, whilst in 1898 it had diminished to 822. A large decrease is also shown in the number of candidates for the Licence of the Apothecaries' Society of London.

In 1879, Dr. Glover, in his evidence before a Committee of the House of Commons on Medical Reform, said: "I should say that the Irish Apothecaries' Society could be dispensed with. I think that the English Apothecaries' Society, too, although it has done very good work, is certainly no longer wanted." On the same subject, to the Royal Commission on the Medical Acts in 1881, the present President of the Medical Council, Sir William Turner, stated: "As regards the two Societies of Apothecaries, I am of opinion that their existence as licensing bodies is an anachronism, and that they should in future cease to take part in conducting examinations for a licence to practise." There are many who to-day are prepared to say the same of the remaining corporations. If, however, we cannot end effete corporations, the next best thing we can do is to mend them, and this should be accomplished by affiliating them with the universities, as I have already shown is fully provided for in the Act of 1886. I have given formal notice of my intention during the session which commences next Tuesday to take the opinion of the Council as to the propriety of calling upon the corporations and the universities to combine for the purpose of instituting a qualifying examination.

Club and Contract Work.

On this subject, which includes the proposed Conciliation Board, I must say but little, as Dr. Glover, who has given much attention to it, will probably discuss it very fully. I supported the suggestion when it was before the Council because such a Board could not possibly do any harm, and in certain cases might do good, but it appears to me that too much has been made of the difficulties arising from club and contract work. I venture to think that we, as general practitioners, can if we choose settle the matter to our own satisfaction without any outside help. In my own case I settled the question once for all soon after commencing practice by declining to accept club appointments, and I have never regretted taking this course. The usual conditions of club practice appear to me to be unsatisfactory both for doctors and patients. If we were to unite we might obtain more satisfactory terms than are now offered. It appears to me that the most satisfactory arrangement for club patients would be a graduated scale of fees to be paid, through the club officials, for actual attendance and medicine supplied, and that none but those who cannot afford to pay ordinary fees should be permitted to take advantage of the club rates.

But nothing can be done to improve the position of general practitioners in regard to contract work or any other desirable reform unless we present a united front, and I trust that one of the results of this conference will be to promote unanimity in our ranks, so that by mutual confidence and by helping each other we may speedily succeed in doing something to raise medicine to the position it should occupy as an honourable and noble profession.

DR. GLOVER'S ADDRESS.

Dr. Glover, after a few preliminary remarks on the pleasure it gave him to address a meeting of his old north country friends, proceeded to speak on medical contract work and the Conciliation Board. He said:

I am one of those who do not think that we shall be able at present to do away with contract medical work. Not that I like it. My ideal of medical attendance, as I have told the friendly societies' leaders, is private practice—the personal and continuous attention of a selected practitioner extending over years till he gets a knowledge of and a human interest in individuals and families. And it is my experience that a good, honest, industrious, sober working man makes one of the best patients, and one whom it is a pleasure to attend. Medical attendance in huge societies is attendance more or less in a crowd and in a rush; but we must take facts as we find them, and for the time being contract work is the fashion. The working classes are great at organisation, and willing to sink their individuality in their organisations. There is nothing essentially wrong or illegal in medical contract work if it is based on fair and sound principles.

I shall try to give you in a few sentences my views on this

great question. 1. I think that the present rates and terms of the system, as regards both the profession and the patients, are most unsatisfactory. 2. I feel that the discussion on this system, and on what changes it needs to make it fair and good for all, is only beginning. 3. That conciliation should be tried and exhausted before controversial methods are resorted to. 4. I must say a few words as to the way in which the General Medical Council is brought into the question, and in which it can help. 5. I would emphasise the importance of local efforts and organisation, subject to some general principles to be agreed on by a good conciliation board representing all parties concerned—friendly societies, their medical officers, the outside practitioners of any place who have a right to be considered.

Existing Terms of Medical Contracts are very Unsatisfactory.

First, the existing terms and relations in medical appointments of clubs and friendly societies (I take the latter as large typical clubs) are very unsatisfactory. (*a*) One obvious and chief grievance is the dependent position of the medical officer. He is excluded from the committee, and is overpowered with a huge organisation and its executive. (*b*) Then the pecuniary terms, ranging from 2s. 6d. to 4s. 4d. a year, are low and altogether inadequate. Think of the cost and care of a medical man's education now, extending up to his twenty-second or twenty-third year or more, and his equipment for practice, and then taking clubs on such terms. No self-respecting working man can think such terms adequate. I know the leaders of the friendly societies do not think so, and are willing and even anxious to discuss them with duly authorised members of the profession. Only one thing could make such terms tolerable any longer, the inability of the working classes to pay more—their poverty. But this is not pretended. They are not poor—they are well off, proud, properly proud of their independence and strong in their self-respect, and would be more so if they were not hampered and pauperised by bad forms of medical attendance in hospitals and clubs. They are able to pay more adequately. Let me prove this by facts. I shall not take extreme facts—perhaps stories—that of late years the sturdy miners of Durham, in order to get rid of their superfluous cash in their prosperous times, have been known to take to a degenerate diet of chicken and champagne. I shall deal with admitted facts. The unemployed now are at a minimum—2 to 3 per cent. of the working classes. The deposits in savings banks, largely those of the working classes, amount to more than one-fourth of the National Debt. A friend told me the other day that in his little town in the centre of England with 3,000 inhabitants there were Post Office savings of £40,000; that in a neighbouring town with a population of 4,500 there were savings to the amount of £60,000. To estimate what a working man can give for his medicine let us consider what he can give for his beer. A medical man practising in a poorish part of London told me the other day that working men in his district spend in beer probably 8s. a week. Let us say 5s. a week, and I think that a moderate estimate. Strange beyond all understanding, the Chancellor of the Exchequer has lately been encouraging the working classes to spend more money on beer. Surely, at any rate, if a working man and his wife can spend 5s. a week on beer they can afford more than 4s. a year per head on medicine. Another proof that the working classes are able to pay their medical men more adequately is that they save money on their contracts and invest it in property.

My second point is that the discussion of what is fair and just remuneration to the medical profession is just beginning. We have never had the machinery for such a discussion. And, mark you, the questions involved are very "ticklish" and delicate ones, such as the individual liberty of the medical man, the right of contract of the clubs, modes of practice, and modes of payment for medical service. Some of these questions are such as neither we nor the General Medical Council nor any local association will be allowed to settle by force, for they are legal questions. But let us realise the good that may accrue from their being discussed by competent and authorised persons on both sides, and let us welcome every suggestion for such a discussion. This brings me to the Conciliation Board.

The Question of the Conciliation Board.

I know there is some backwardness in the acceptance of this proposal; and I am sure you will let me advocate it, which I do strongly. I have no personal or paternal interest in the suggestion, which we owe to Dr. Bruce, the direct representative for Scotland, than whom I make bold to say there is not a wiser or more respected member of the Council. There are objections. There always are to everything. Let us meet the objections as best we can, but give the thing a fair trial. They resolve themselves into two: The question of the wage limit and the difficulty of choosing the representatives on the Board. It is true that the great friendly societies of England do not see their way to deal directly with the question of wage limit. Experienced men here who know the constitution of these societies will understand the difficulty. But the friendly societies do not absolutely defend their rich members who are shabby enough to take medical attendance on club terms. They say public opinion is the cure for that, and public opinion will come out very strongly in a Board such as is proposed. But we are dealing here with millions of people, and I maintain that, if you could raise the whole conception of medical service and the whole standard of remuneration, you would be doing a great service to the medical profession and to the people who are attended under the contract. I speak with some authority when I say that, though the wage limit is not directly included in the purview of the Board, it does not follow that it will not come in indirectly, or that some concession will not be made to neutralise its exclusion. Such a Conciliation Board would be an immense power for good. The friendly societies are powerful bodies and are much favoured by the State and by the public. We should do ourselves no harm, but great good, by meeting them half-way. If we could effect an improvement in our relations with them, other clubs would follow suit. The experiment should be tried heartily and carefully.

The Constitution of the Board.

Another difficulty is, how is the Board to be constituted? My answer is—obviously by a body representative of the profession and not hindered by law from giving help in the nomination of suitable members. The British Medical Association is considering the question, and is very naturally taking plenty of time to do so. I am not without hope that we may get help from one or other of the medical authorities. I put it to you, gentlemen, would it not be a misfortune if when we are all trying to organise and unify the profession this proposal for a Conciliation Board should fall through, and we should give a glaring illustration of our want of organisation, of our power of agreeing, in the face of highly-organised bodies willing and anxious to meet us on fair terms? Remember the proposal is made by a direct representative. The President of the Council has taken a great amount of personal interest in it, and there was not one vo e recorded on the Council against it. Whatever the action of the profession in this matter I feel convinced that the General Medical Council has acted with a real desire to uphold the interest and reputation of the profession. It has done so in two ways, first, in its support and furtherance of a Conciliation Board, and secondly in a warning resolution:

> That the Council strongly disapproves of medical practitioners associating themselves with medical aid associations, which systematically practise canvassing and advertising for the purpose of procuring patients.

I cannot do so now, but I hope at the approaching meeting of the General Medical Council to show that this resolution is having a good effect. Let me say a few words about the interest of the Council in these matters. It is only indirect, but it is real. They are appealed to by the profession about them. The Council were asked to excommunicate men on the ground of connection with these medical aid corporations or to sanction their excommunication. This would be a very strong measure. I, personally, am not prepared to say that in certain circumstances, within certain limits, it may not be justifiable, but it is certainly impracticable and out of the question till conciliatory means have been exhausted.

The Council is interested in the question indirectly in its bearing on the efficiency of medical service. If the conditions and terms of it are such as to imply injustice to medical men and injustice to patients—the profession would not like the Council

to assume a position of entire indifference. At any rate, as direct representatives, and as supporters of direct representation, we cannot take such a position. I hope, therefore, you will see that the General Medical Council, though it could not itself be or create a Board of Conciliation, is actually well within its duties in supporting the formation of such a Board for the improvement of medical attendance on the industrial classes and the remuneration of such attendances. The question isa big one, involving the opportunity of a better understanding with societies that represent nearly 3,000,000 of actual persons and a capital of £23,699,709; and it cannot be doubted that a good settlement with these societies would be likely to carry with it an improvement in all other forms of club practice. On its own merits the Conciliation Board deserves a thorough trial; and at this moment, as a concrete illustration of the power of the profession to organise and concentrate itself, it deserves support.

The General Medical Council.

The Council is one of the best-abused bodies in the kingdom. I am to speak of its virtues and its defects. Many would deny that it has any virtues. That is not my view. It is interesting in its composition. Most of our medical bodies are close; it is open. Most of them are local and one-sided in their composition; it is catholic. It contains a representative of every medical and surgical examining Board in the country; also of every university. All divisions of the United Kingdom are represented in it. This is a great virtue, and does much to vary and improve methods of education and examination. Then the General Medical Council contains direct representatives of registered practitioners in England and Wales, Scotland and Ireland. You cannot claim such an interesting and important constitution for any other medical body in the country.

The absence of direct representation in the medical and surgical corporations is obviously unjustifiable and unreasonable. Nothing surprises me more than the refusal of the Council and Fellows of the great College of Surgeons of England to meet the modest demand for a few direct representatives of its Members, unless it is the innocent reason given that they are only seeking one thing in their new Charter. The gift to these Members of the right to wear gowns instead of the right of direct representation would be humorous if it were not also very like offering stones when bread is demanded. I am not an extreme man. I have no sympathy with my colleague, Mr. Brown, in speaking of these corporations as "antediluvian and effete." I do not think we advance direct representation by that kind of inaccuracy. But it is simply amazing that a great College with 17,000 members, trained on its own lines, and largely representing the profession of the United Kingdom, should deny them a representative at its Council Board, and should set such a line of demarcation between the Fellows and Members, as if the former were something entirely different from the latter. I venture to hope that the College—both the Fellows and the Council—will not lose the chance of conceding at this gracious moment the satisfaction which the Privy Council or the House of Commons will not be likely long to refuse, and so ending one of the causes of division in the profession. Such a good example to other corporations would soon be followed.

But to return to the virtues of the General Medical Council. I think it is generally admitted that of late years, at any rate, it has been doing good work—work that is appreciated both by the public and the profession. It has raised and is likely to raise higher the standard of preliminary education. It has lengthened the curriculum of medical education and improved its character. It is trying hard to improve the discipline of the profession and to bring the authorities into line with its own disciplinary action. At present there is a serious confusion, and in many of the authorities entire helplessness.

Another urgent question to which the President is devoting much attention is the loose state of the law in reference to death certification. Before leaving the virtues of the General Medical Council I would say that there has been manifest of late years a much greater sympathy with the general practitioners of the country and a disposition to help them where possible. This is largely due to the action of the direct representatives, but I should be unjust if I did not say that many other members of the Council have taken a very prominent part in questions affecting the general body of practitioners.

Coming to the faults of the Council I shall notice two—the first of which is the overpowering predominance in it of the representatives of corporations and of universities. This is more objectionable, as there is in these bodies no or no adequate representation of their members in their own domestic constitution. It follows that there is in the General Medical Council a very defective closed representation of the registered practitioners. The next fault of the Council is in respect of its powers of discipline, which are very cramped and imperfect. It can do nothing in the way of punishment but take a man off the *Register*, and when it has taken him off—possibly for a comparatively light offence—it cannot always put him on again. The consequence is that either it hesitates to remove men, or inflicts a terrible injustice by not replacing them.

What is the chance of getting any amendment of the Medical Acts to remove these faults? I think some of these defects in the medical authorities or in the General Medical Council are so glaring that if we could get any approach to agreement in the Council and in the profession some sound legislation could be got. Without such agreement I believe it to be absolutely unattainable. Only those who have seen the process of getting anything like medical legislation can realise its difficulty and its slowness, and unless we can close some of the divisions of the profession it would be useless in times like these to expect the Government to undertake legislation.

The Organisation and Unification of the Profession.

I am more and more convinced that if we are to do our best as a profession and take the high place that the course of things marks out for us, we must perfect our organisation and cement the different opinions and the different sections of the profession into one. I shall never willingly be a party to breaking up the profession into bits and into separate interests. There is no fine line of distinction between general practitioners and consultants, and there should be none. What needs most to be guarded against is an infinite number of opinions and schemes without much reference to what can be accomplished. All the conferences and associations in the world will not advance our interests unless we can agree upon some organisation that will bring difficult questions to a practical form that shall command the whole strength and assent of the profession. What are the necessary elements of such an effective organisation?

First, local societies like your own. Every locality has its own peculiar traditions of practice, and must have full discretion to apply general principles to its own case. There seems to be a full recognition of the importance of this element in organisation, thanks very much to the medical press, and if I may be excused for saying so, to the *Lancet*, which, through its special articles by a special commissioner, has done so much to supply the materials for judgment.

But we come now to the second element in our organisation. A central body of some kind, not to control but to co-ordinate the local bodies, to agree on general principles, and to represent not the divergence of the profession, but its unity, its agreement, its assent, without such a harmonising, moderating, unifying central body, the indefinite multiplication of local organisations will not avail us. What body is sufficient for this function to represent the concentrated wisdom and the assent of the local associations? What body shall it be? What body can it be? What but the British Medical Association? I am a very young member of that body, and have no prejudices in its favour. There is a certain element of timorousness in it which disappoints me and ill befits its size and wealth, and right to be bold. But what other body can you set against it? For numbers, for age, for what it has done. It laboured for years, and obtained, with the help of the *Lancet*, the concession of the principle of direct representation. It has worked hard for Poor-law medical officers, and for the recognition of the just claims of our brethren in the services. I see

no alternative. Do what you think best to improve its action and its constitution; but stick to this one central body. The multiplication of local bodies is good. The multiplication of central bodies shows weakness. One heart, one brain, one uterus is the lesson of our anatomy, and must be the moral of our medical politics. The very multiplication of local associations makes the necessity for a strong central body the greater, and without it we shall be weaker and more divided.

The One Central Body.

And let me say one word more about this one central body. When you have got it—and I think you have got it—respect its decisions. Let them for the time being be your guide. If they seem to you doubtful meantime still respect them. You will gain more in the long run by this than you will lose, and unless the decisions of a central body are to be respected you may as well be without it. I myself speak feelingly. I am interested—not personally in any way—in the British Medical Association deciding in favour of a Conciliation Board. I think if it does not it will lose a great opportunity of doing the profession good and of showing its own usefulness and power; but if it acts so I should submit, and be sorry only for the British Medical Association.

The Value of Local Action.

By way of illustrating the value of local action, I should like to refer to what I have heard since I came into this hall concerning the inadequate way in which certain practitioners perform the operation of vaccination in this neighbourhood in order to please parents and so attract patients. I think this is a very serious matter, and should come in the first instance before the local organisation for consideration. I myself think the circumstances worthy of consideration by the General Medical Council.

Finally, a Word for Your Direct Representatives.

Gentlemen, I have done. Let me in conclusion say one word for your direct representatives. If they do not always take exactly the line you think they ought, give them credit for having the same objects as yourself while seeing reasons for exercising a little discretion as to the best way of attaining them. Treat them not as machines to record votes, but as brother practitioners having the same interests, the same prejudices, if you please, as yourself. Try to put yourselves into their place, with imperfect laws to administer, with a public opinion jealous for the freedom of quacks, bonesetters, and midwives. I believe that we still have statesmen and judges who will perceive that it is in the interest of the public to maintain the high traditions of the profession; and if we act with moderation and with unity, avoiding the haggling vulgarity of common politics, we shall secure for the profession still better laws, including an extension of direct representation and for the public better medical practice and better medical attendance.

Discussion.

Dr. Alfred Cox (Gateshead) asked Mr. Horsley what prospect there was of the General Medical Council doing something in the way of reforming death certification.

Mr. Horsley replied that the matter was in the hands of the President of the Council, who was to approach the Government on the subject. The President was assisted by Sir Richard Thorne Thorne and a report on the matter was hoped for in the next session.

Mr. Mark Wardle referred to the opinion expressed by the General Medical Council on medical men taking service with medical aid associations, and asked if there was any near hope of such men being effectually dealt with by the Council. He then detailed a case in which a medical man in the service of a medical aid society was preparing to undersell the local practitioners, and to canvass for patients.

Dr. Armstrong (South Shields) said that there should be power of appeal to the General Medical Council to stop medical men underselling old practitioners by taking colliery clubs at the old rate of 6d.

Dr. Stewart narrated an instance of a medical man accepting a colliery club at a sixpenny rate, and behaving in a disgraceful and incompetent manner. He thought that men who so acted ought to be brought to book and punished.

Dr. E. H. Gibbon asked what action, if any, were the direct representatives going to take to prevent such an abuse of the Council's rights as occurred in Mr. Hunter's illegal prosecution, apparently at the unauthorised instigation of the legal advisers.

Dr. Glover said Dr. Wardle justly complained of the action of men who, under the cover of medical aid associations, canvassed from door to door. He (Dr. Glover) had omitted to remind the meeting that the General Medical Council had last session passed a resolution on this subject, that they would be prepared to take a severe view of persons who committed this offence, or of any medical man connected with a medical aid association who became implicated in this system. He reminded Dr. Armstrong that the General Medical Council had not the power which the Incorporated Law Society had. The General Medical Council might be empowered to act if the arrangements were such that the crowd of patients were so great as to be inconsistent with anything like decent practice.

In reply to Dr. Gibbon, Mr. Horsley said that in order to approach the matter of the Hunter case, and prevent such an occurrence again, he had moved at a previous session that the Penal Cases Committee should revise the legal procedures of the Council, and report to the Council thereon; they reported that the procedures were so perfect that nothing was needed. He differed *in toto* from that view, and moved his former resolution in a little different form. That was carried, and the matter referred back to the Penal Cases Committee; he had become a member of that Committee, and hoped they would report this session and offer such safeguards that a terrible occurrence like the Hunter case could not possibly happen again.

Replying to Dr. Penfold, Mr. Horsley said he had been asked to explain the exact position of affairs with regard to unqualified assistants, and especially

1. Could a medical man keep a student in his house to attend midwifery cases alone?
2. Could a medical man keep an unqualified assistant living at a distance from him and managing a branch surgery?

Speaking as a member of the General Medical Council, all Mr. Horsley could answer was to refer to the edict of the Council in regard to the first portion of his query. With reference to the latter part Mr. Horsley's reply was in the negative.

Dr. Taylor asked if the General Medical Council was likely to take any proceedings against a medical man who persistently made one insertion in vaccination.

Mr. Horsley said he was unable to foresee what course the Council would take.

In reply to Dr. Taylor, Mr. Horsley said his own view as a private individual was that, if a man certified that he had performed a vaccination and had done it in the insignificant manner described, it was unprofessional conduct.

Mr. George Brown said in regard to the case of a man holding a medical aid appointment the question had been asked, Is anything likely to be done, or will the General Medical Council do anything with a man who holds such an appointment? The resolution of the Council on the subject strongly disapproved, but held out no threat in any way; it really went no further than to express a pious opinion of the Council, and therefore a man might fairly say the Council simply disapproved and no more. Mr. Brown's motion which was not accepted by the Council was that the Council should consider it unprofessional conduct to hold medical aid appointments, and until the Council held this view those who held these appointments could defy the Council. With regard to underselling, he did not see that the Council had any power to deal with it as long as there was no unprofessional practice. It was unprofessional for a man to vaccinate in one place only for the purpose of cutting out other medical men, and such a man should be complained of to his College, to be dealt with in a disciplinary manner. In regard to the Hunter case, he took it that such a case would never occur again; the prosecution was sanctioned through a mistake, and it was not stated to the Council that Mr. Hunter was on the *Register*.

Dr. Hedley asked for a more definite reply to Mr. Wardle's question.

Dr. Glover said the General Medical Council was definite upon the offence of canvassing. Though Mr. Brown thought the resolution was not strong enough, it was intended to be

strong. They would be glad to know that the resol had already had a valuable effect against canvassing.

Referring to Dr. Stewart's case of underselling, combined with malpraxis, Mr. BROWN said that the corporation that sent that practitioner out to get his practice at the expense of the public ought to be approached. The Council could consider whether that corporation should be entrusted with the licensing of practitioners.

Mr. HORSLEY said that in Dr. Wardle's case they came back to the resolution of the General Medical Council, which was a kind of straw to show the profession which way the mind of the Council was trending. To really decide the issue, Dr. Wardle or some aggrieved practitioner should bring a specific case before the Council, and force the Council to do one thing or the other, because it was necessary to have decisive opinions and finding. In regard to Dr. Stewart's case of underselling combined with malpraxis, the civil law could be appealed to on behalf of the injured person, and the qualifying body granting the diploma should be approached, and, if that body failed in its duty, then a complaint of that body should be made to the General Medical Council. In regard to underselling, the Council could not point out to an offender that he was sailing too near the wind; it could not censure a man; it could only let him off altogether or strike him off the *Register*, and the consequence was that some men were whitewashed who really had done wrong. The remedy was to agitate for a Medical Act Amendment Bill.

Dr. CRAWSHAW referred to a case of a medical man who in consequence of the resolution of the General Medical Council in regard to medical aid associations had resigned his connection with a club of that description. That club had now got a fresh medical officer, who was one chosen out of thirteen applicants for the post.

CERTIFICATES GIVEN TO UNQUALIFIED PERSONS.

Dr. CLARK NEWTON moved the following resolution:

That this meeting strongly urges the local organisations of the profession and the representatives on the General Medical Council to oppose strenuously the certification, by registered practitioners, of unqualified persons as competent to undertake *any* department of medical practice. That this meeting further regards such certification as contrary to the principles of the Medical Acts, and any measure to legalise the same as a repeal of those Acts.

He said that the word *any* was in italics to indicate that the Midwives Bill and the licensing of opticians was included. He considered that the Midwives Bill was one of the most retrograde medical movements that had taken place during the last forty years. The Duke of Devonshire had received a deputation favourable to the registration of midwives, and he was told that the idea had received the sanction of the General Medical Council and the College of Physicians. The Bill would create an inferior order of practitioners. It must be opposed strenuously, because it was incompatible with the dignity of the profession. The creation of the so-called educated midwife was one of the silliest mistakes that could possibly be made. The Bill provided no penalty for a midwife practising without being registered. Women were more easily tempted by money and other things than men, and when once a woman had departed from the correct path she sank through depths unknown to men.

Dr. BLACKLOCK seconded the resolution, and said that there should be no half or quarter knowledge, and no half or quarter qualifications. When the dentist secured for themselves a *Register* a large number of unqualified persons got on the *Register*. Now the midwives and opticians sought to filch from the medical profession other portions of work. The female midwife had been a curse ever since she had been in existence.

Mr. HORSLEY said he would like to know exactly what the resolution was they were going to vote for. He had spent many hours, weeks, and months in trying to stop unqualified practice and he thought he was qualified to speak to a resolution of this kind. He understood from Dr. Newton that the word *any* included *inter alia* reference to the Midwives Bill; but for the life of him he did not know what Midwives Bill Dr. Newton was referring to, because there was not a single Bill before the public which answered to Dr. Newton's description. They were there to discuss a serious question, and if they did not have the facts correctly, their discussion was not worth a snap of a finger. If they were to discuss a Midwives Bill he asked again, What Bill? There had been more than two Midwives Bills, but as far as they were concerned there were two Midwives Bills of some importance. One was the Bill before the House of Commons, Mr. Balfour's Bill, and which must be considered still before the House, and it must not be forgotten that that Bill had powerful backers in the Government. That Bill was a constant danger to the profession, and if Dr. Newton referred to that Bill, then he (Mr. Horsley) was in favour of the resolution. That Bill with its recent amendments was a horribly bad Bill, and one to be resisted, but it must be treated fairly. Dr. Newton said that that Bill contained no penalty for a person practising without being registered, but that was not treating the Bill fairly, because the promoters of the Bill had adopted the penal clauses out of the British Medical Association Bill, in order to make the Duke of Devonshire think that he was being instructed by the profession, when he really was not. It was not fair to say now that they were seeking to protect title only. To be strictly fair, the prospects of the Bill passing through the House had to be considered. Though the Bill now contained the safeguards from the British Medical Association Bill, he did not trust the promoters, for when difficulties arose these safeguards would be thrown overboard. It was necessary to be quite fair, otherwise these people would at once go to the Duke of Devonshire, and say, "We are being maligned." If, however, that meeting was going to discuss the broad question of the advisability of registering midwives, he (Mr. Horsley) could not vote for the resolution. They had elected him for a specific purpose. His election pledges had been called in question in the pages of the BRITISH MEDICAL JOURNAL by some gentlemen who did not find it convenient to come to a public meeting and discuss the question. At the time of his election he had pointed out that there were calamities caused through ignorant midwives, and he had talked to numberless members of Parliament on this subject; they all knew of these calamities, but they knew nothing about the privileges of the profession. Members of Parliament would not learn, but they would vote, and they intended to vote, so that these calamities should be stopped, and they quite saw that it could only be done by putting these women on a *Register*. Supposing a complication occurred in a midwifery case, then if the midwife went on with the case, she at once clashed with the Medical Act of 1886. On that ground he had always maintained that if there was to be any registration at all it should be narrowed down to the so-called normal case. This point had been accepted by the Duke of Devonshire only since last May, and in terms which could not be improved upon. The Duke suggested terms for dealing with this point which were far better than he had ever seen anywhere else, and the advocates of Mr. Balfour's Bill had accepted them, and this was another step taken by the promoter of this still obnoxious Bill to further it through the House of Commons. It was untrue to say that Mr. Balfour's Bill created a new order of practitioners; it only put people who were already practising midwifery on a list, so that if they did what they ought not to do they should be punished. As to their recognition by the State, it was only recognition for the sake of penal disability. The House of Commons when it had constructed an Act to restrict a certain interest to a certain class, had never interfered with persons carrying on their work. They must all start together; the improper people would die out, and a proper class would gradually be constituted. The British Medical Association had dealt with the matter of the midwife, and had introduced the first Midwives Bill.

Dr. COX: "Shame."

Mr. HORSLEY said it was no good calling out "Shame." Facts had to be dealt with as they were now. It was to be remembered that a few years ago every Branch in the Association received draft proposals for legislation on the subject, and the Branches wrote back, and returned those proposals corrected and amended, having approved of the principle. The British Medical Association at that moment was committed to the principle of putting those women on a list for the purpose of correcting them if they did wrong. If that Branch wished to pass a resolution to rescind their previous one, that was another matter, only it was better to word it so that all knew

what they were voting for. He (Mr. Horsley) declined to vote because the resolution did not put the matter fairly and squarely before them. It was the duty of the profession to see that these midwifery catastrophes were stopped. The extirpation of every midwife in the country was an impossible and an absurd suggestion, and the only other remedy was the Bill of the Parliamentary Bills Committee of the British Medical Association. Mr. Horsley then quoted from his election pledges, and showed that his position had been known for years.

Dr. CROSBIE and Dr. PENFOLD having spoken,

Dr. COX addressed the meeting. He said they objected to any Bill, and they objected to every Bill. He pointed out that in the BRITISH MEDICAL JOURNAL of June 15th of this year Mr. Horsley said that he would prefer no legislation. Mr. Horsley had adopted a policy of despair rather than have a bad Bill passed, and had advocated what he considered to be the best out of some bad Bills. He (Dr. Cox) contended that the Bill created a new order of practitioners. Dr. Cox referred to Mr. Horsley's speech at Manchester, and did not think the British Medical Association Bill safeguarded the interests of the practitioner. He admitted that it was a losing cause, and he had cried shame on the British Medical Association bringing forward the first Midwives Bill, because it was in direct opposition to the opinion of every general meeting of the British Medical Association. The members had been betrayed by the Council of the Association. The only straightforward position to take was to say to the General Medical Council, to Parliament, and the Privy Council that they might go on with their Midwives Bill, but they, the practitioners, protested that it was not a good thing for the public nor for the profession, and they would do their best to defeat it, and would wash their hands of it and would have none of it.

Mr. GEORGE BROWN said that the public called for a Bill supposed to increase the safety of parturient women. His experience was that fatalities were due to bad nursing. A better class of nurses was wanted. It was said that the Bill would not create a new order of medical practitioners, but the trained midwifery nurses he had seen were a very good guide in the matter, for these nurses called themselves as good as doctors, and this Bill would only consolidate them in their position. They had certificates now, and directly they were put on a *Register* they would be made into practitioners. They must go to members of Parliament and explain the evil of the Bill, and how it would be a public injury to vote for this Bill.

The resolution was carried with one dissentient.

VOTES OF THANKS.

Dr. COX proposed and Dr. HUNTER seconded the following resolutions, which were carried:

That the hearty thanks of this meeting be given to our direct representatives for their presence to-night, and for their work on behalf of the profession both in and out of the Council.

That this meeting is of opinion that the time has arrived when the number of direct representatives should be increased.

The proceedings terminated with a vote of thanks to the Chairman proposed by Dr. MURPHY.

LITERARY NOTES.

FROM Williams and Norgate's *Book Circular* it appears that among works on tropical diseases recently issued are the following: Brault, *Hygiène et Prophylaxie des Maladies dans les Pays Chauds: L'Afrique Française*; Gaffky, Pfeiffer, Sticker, Dieudonné, *Bericht über die Thätigkeit der Erforschung der Pest in 1897 nach Indien entsendeten Kommission*, with an appendix on leprosy by Sticker; and Grall, *Pathologie Exotique, Études Statistiques et Cliniques, Indo-Chine*.

From the same source we learn that Professor E. Behring, who is editing the *Beiträge zur experimentellen Therapie*, will publish shortly, as a second volume of the *Beiträge*, a supplement to *Aetiologie und Therapie der Streptokokken-Infektionskrankheiten*, by Dr. W. von Lingelsheim, which formed the first volume of the series. Professor Celli, of Palermo, will contribute a treatise on Malaria, which will probably form the third volume of the *Beiträge*.

The *Erinnerungen aus meinem Leben*, by Professor A. Koelliker, which has just appeared, is of great interest to all anatomists and to medical men in general. Professor Koelliker has occupied the chair of Anatomy at Würzburg for 52 years, and it is 58 years since he began to take part in researches in anatomy and kindred subjects. The work is illustrated.

According to the *Boston Medical and Surgical Journal* a beautiful memorial window in honour of Samuel Warren was unveiled in St. James's Protestant Episcopal Church, New York, on November 1st. The author of *Passages from the Diary of a late Physician* and *Ten Thousand a Year* was never formally pronounced *Dignus intrare in nostro docto corpore*, but he was, we believe, for some time a student of medicine at Edinburgh. The window is probably an expression of filial devotion, for the rector of the parish, the Rev. Dr. E. Walpole Warren, is a son of Samuel Warren.

It is expected that the *Atlas der Anatomie*, which Professors Toldt and Dalla Rosa are publishing, will be completed before the end of this year.

Volumes xxii and xxiii of the *Realencyclopädie der gesammten Heilkunde*, edited by Professor Eulenburg, will appear in the course of this autumn. It is expected that the work will be complete, in 26 volumes, by October, 1900.

A new work by Dr. Féré, entitled *L'Instinct Sexuel: Evolution, Dissolution*, will be published during November.

A new edition of Dr. A. Plumbert's work on *Naval Hygiene* is in the press.

Les Blessures par Armes Blanches is the title of a work by Dr. Nimier which will appear shortly. The author has recently published two works on the wounds caused by projectiles and explosives.

Professor Scheidemuhl, of Kiel, is preparing a work on Animal Foodstuffs, which will probably appear at the end of the present or early in the coming year.

Dr. J. Broesike, author of *Lehrbuch der normalen Anatomie* and of *Der menschliche Körper, sein Bau*, etc., is preparing an anatomical atlas, of which the first part will shortly be published. Vol. i of *Knochen Bänder und Muskeln* will be complete in two parts.

In the *Bulletin of the Johns Hopkins Hospital* for August-September there is a biographical sketch of John Archer, M.B., a famous practitioner of Harford County, Maryland, in the latter half of the last century and the first decade of this, written "by one of his descendants." Archer was descended from an English family that had settled in the north of Ireland, and emigrated to America before the middle of last century; he was born in Maryland in 1741. He was educated at Princeton College, where among his classmates was Benjamin Rush. Archer first tried, or wished to try, schoolmastering; from this he turned to Presbyterian theology, and got so far as to preach his trial sermon, but was recommended by the Presbytery not "to prosecute his tryals for the Gospel ministry any further." In 1765 he became a pupil of Dr. Morgan, one of the founders of the department of Medicine in the University of Pennsylvania. He attended daily at Dr. Morgan's "shop" and on three days a week at his lectures. In 1768 the degree of Bachelor of Medicine was conferred upon him and nine other students. This was the first time a medical degree was conferred in America, and Archer, by right of alphabetical precedence, was actually the first American graduate. He returned to his native district, where he practised his profession for nearly forty years. He took an active part in the Revolution, and the sword which he wore as a Captain of Militia is preserved by a branch of his family. After the Revolution he had so many applications from young men wishing to be his pupils that he built for them a house called "Medical Hall." His pupils formed the first Medical Society of Harford County. In 1800 he was elected a member of Congress. He died in 1810. His descendant claims for him the discovery of the fact that whooping-cough may be favourably modified by vaccination. He is also said to have been the first to introduce senega snake root (*polygala senega*) as a remedy in croup. He was a man of strong character, and a fighter not with words only but, when the occasion called for it, with blows. By his will he directed debts from patients not in affluent circumstances, to the amount of several thousands of dollars, to be written off, and set free his male slaves at 30 and his female slaves at 25 years of age.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 27th, 1899, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—A meeting of this Branch will be held at the Grand Pump Room Hotel, Bath, on Wednesday, November 29th, at 7.30 P.M., A. J. Harrison, M.B., President. The following communications are expected: Dr. J. Pearse: Case of Rupture of Uterus; Recovery. Dr. J. Michell Clarke: The Early Stages of Degenerations of the Spinal Cord in Anæmia (lantern slides). Dr. A. E. Norburn: Case of Wound of the Thoracic Duct. Mr. C. E. S. Flemming: Dislocation of the Humerus with Fracture of the Anatomical Neck. Dr. A. S. Wohlmann: Morton's Disease. W. M. BEAUMONT (Bath), and J. MICHELL CLARKE (Clifton), Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of this Branch will be held in the Medical Institution, Liverpool, on Wednesday, November 29th, at 2.30 P.M. Agenda: (1) Presentation of testimonial from the Lancashire and Cheshire Branch to Dr. James Barr, Liverpool; (2) Resolutions: (1) Dr. Ritchie will draw attention to the fact that the Branches have at present no opportunity of expressing an opinion on questions of general policy or affecting the profession at large when such are about to be dealt with by the Central Council, and will propose the following resolutions: (*a*) "That this Branch is of opinion that when matters of general policy or affecting the profession at large are about to be discussed by the Central Council, the Branches should have an opportunity of expressing an opinion on such, and that, as a means to that end, the agenda of a Central Council meeting should be received by the members thereof at least fourteen days before such meeting, and that such matters should not be considered private and confidential to members of Council." (*b*) "That the meetings of the Branch be held, as far as possible, within fourteen days of the meetings of the Central Council." (2) Mr. Colin Campbell will call attention to some important resolutions adopted by the British Medical Association at its recent annual general meeting at Portsmouth and to the action of the Council of the Association thereon, and will move: "That the Lancashire and Cheshire Branch of the British Medical Association condemns the action of the Council of the Association in refusing to carry into effect important resolutions adopted by the Association in general meeting assembled; and regards such refusal as a neglect of the interests of the medical profession, and as a contravention of the 'Articles of Association.'" (3) Dr. Brassey Brierley will propose the following resolutions: (*a*) "That inasmuch as the representatives of the Branches are sent to the Council to take a share in the conduct of the Association's work, their expenses should be paid out of the funds of the Association, and equally so the representatives on the Parliamentary Bills Committee." (*b*) "That this meeting protests against the action of the Council in refusing to carry into effect the resolutions of the annual meeting, which action is a violation of the Articles of the Association, and in order to remove any doubt of this statement the President of the Branch be requested to take legal opinion as to whether or not such resolutions are obligatory. If these resolutions are binding, this meeting shall take steps to summon a special general meeting of the Association to consider the matter." (*c*) "That in the opinion of this meeting the reports issued by the Council of the Association of its proceedings in general meeting and in meetings of the Council are utterly worthless, and this meeting begs to suggest the advisability of engaging the services of expert shorthand writers and other competent officials to remove this defect." (*d*) "That copies of these resolutions be forthwith forwarded to the Secretaries of all the Branches with a request that they will take the matters into consideration, and also copies be sent to the President of Council, the President of the Association, and any other persons interested in the work." (3) Communications: Mr. Walter Whitehead: A Short Road to Medical Reform. Dr. Eugene S. Yonge: (1) A case of Papilloma of Larynx: (2) a case of Papilloma of the Tongue. Mr. W. Thelwall Thomas: The Surgical Treatment of Chronic Suppuration of the Frontal Sinuses. Dr. Karl A. Grossmann: Evisceration of Orbit for recurring Orbital Tumour. The patient and specimen will be shown. Mr. F. T. Paul: A case of Gall Stones and Right Hydronephrosis in the same subject. Mr. G. Gibson Hamilton: Compound Dislocation of Elbow Joint. Dr. T. Arthur Helme: The operative treatment of Fibroma Uteri, with notes of six cases of Abdominal Hysteromyomectomy. Sir William Banks, Dr. Barr, Mr. Damer Harrisson, Mr. Robert Jones and Mr. Rushton Parker will exhibit patients. Dinner: Dinner will be arranged at 6 P.M. if thirty members give notice of their intention to be present to the Honorary Secretary before Saturday, November 25th. A Council meeting will be held at 1.30 o'clock on the day of the above meeting.—T. ARTHUR HELME, M.D., 3, St. Peter's Square, Manchester, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will take place at the White Hart Hotel, Lewes, on Thursday, November 30th, at 3.30 P.M. Dr. Fawssett will preside. Dinner at 5.30 P.M., charge 6s., without wine. The following communications have been promised:—Mr. W. G. Earle: On Some Fresh Details in the Disposition of the Deep Cervical Fascia. Dr. Helen Boyle: Early Insanity. Dr. Mackinder: Four Cases of Stone in the Bladder; Moral and Physical Difficulties encountered in Removal of the Stones. Dr. Watson Griffin: A Specimen of Leuco-sarcoma of Iris, showing Fibro-myxomatous Changes, with notes of case. Dr. Dow: Skiagraphs (Recent) of Fractures treated by Screwing two to three years ago. Dr. Mackey: A case of Tetanus Successfully treated with Antitoxin.—J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards, Honorary District Secretary.

STAFFORDSHIRE BRANCH.—A meeting of this Branch will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 30th. The President, Dr. J. B. Spence, will take the chair at 4 P.M. Business: Minutes of last general meeting. Election of new members. Exhibition of Living Cases. Dr. Hind: A case of Fracture of Radius, Ulna, and Humerus, with Injury to the Median Nerve; Operation. Mr. T. Vincent Jackson: A Contribution to the Treatment of Enlarged Prostate by Vasectomy. Dr. G. Petgrave Johnson: Pyrexia in Chlorosis. Exhibition of Pathological Specimens, etc. Dinner at 6.30 P.M.—F. MILNES BLUMER (Stafford), General Secretary.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.—A meeting of this District will be held at the West-End Hospital for the Diseases of the Nervous System, 73, Welbeck Street, W. (by kind permission of the Medical Board), on Tuesday, November 28th, at 4.30 P.M. J. Pickett, M.D., V.-P., in the chair. A discussion upon the Cause and Treatment of Neurasthenia will be briefly opened by Dr. Savill. It is requested that members will take part in the discussion. The Medical Staff will afterwards show some Clinical Cases. Tea and coffee at 4.15 P.M. —THOMAS DUTTON, 13, Holland Park Avenue, W., Honorary Secretary.

DUNDEE AND DISTRICT BRANCH.—A meeting of this Branch will be held in University College, Dundee, on Thursday, December 7th, at 4 P.M. Mr. Peddie, F.R.C.V.S., will introduce a discussion on Milk, from the Standpoint of Public Health.—R. C. BUIST, Annfield House, Dundee, Honorary Secretary.

SOUTHERN BRANCH: SOUTH WILTS DISTRICT.

THE last meeting of the District was held at Salisbury on November 8th, Mr. J. H. J. MANNING (President) in the chair.

The late Mr. W. D. Wilkes.—The PRESIDENT referred to the death of Mr. W. D. Wilkes, a former member of the Association, and the oldest practitioner in Salisbury, and moved:

That this meeting desires to offer to Mrs. Wilkes and to the other members of the family of the late Mr. W. D. Wilkes an expression of sincere sympathy and condolence.

Accounts and Balance Sheet.—Mr. J. E. GORDON (the Honorary Treasurer and Secretary) presented a statement of accounts and balance sheet, showing a balance in hand of £5 12s. 9d. The accounts were passed.—The Honorary Treasurer also presented the accounts of the British Medical Association excursion to Salisbury from the Annual General Meeting at Portsmouth on August 5th. The accounts were passed, and a balance over of 12s. was added to the District funds.—The PRESIDENT proposed, and Mr. C. R. STRATON seconded:

That the thanks of the members of this District be accorded to Messrs. P. J. Barcroft, of Amesbury, and J. E. Gordon, Honorary Secretary of the District, for the care taken by them in the arrangements of the excursion for members of the Association from Portsmouth on August 5th.

Carried unanimously.

Election of Officers.—The following were elected officers for the ensuing year:—*President:* Mr. H. J. Manning. *Vice-President:* Mr. P. J. Barcroft. *Honorary Secretary and Treasurer:* J. E. Gordon. *Committee:* Mr. L. S. Luckham, Dr. H. C. Blackmore, and Dr. Gilbert Kempe.

Rhinoplasty for Lupus.—Dr. KEMPE read notes, and showed a case, on which he had performed the operation of rhinoplasty for lupus with a successful result.

Bone Grafting.—Dr. WILLIAMS-FREEMAN read notes and showed a case in which severe injuries to the skull on the left frontal and parietal bones, with loss of bone and brain

matter, had been grafted with small pieces of bone taken from the skull of a lamb. The patient was a boy, aged 13. The pieces of bone grafted seemed at first to grow well, but at the present time, several weeks after the accident, do not seem to be making satisfactory progress. Dr. Williams-Freeman thought the grafted bone would probably be exfoliated from the wound.

Functional Hemiplegia.—Dr. E. T. Fison read notes of a case of functional hemiplegia of forty-three years' duration. The patient was a woman aged 59 years, who had suffered from hemiplegia for forty-three years without, apparently, remissions when admitted into the infirmary under Dr. Fison. She could now walk without assistance, and had made a good recovery.—Mr. Luckham was doubtful about the absence of remissions, and recalled occasions on which remissions had occurred in this case.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A meeting of this Branch was held in Aberdeen on November 15th, Professor Ogston in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were confirmed.

New Members.—The following gentlemen were, after ballot, elected members of the Branch: Professor Hamilton, Aberdeen; Dr. James A. Stephen, Aberdeen; Dr. A. H. Mackie, Aberdeen; Dr. Clifford T. Bell, Aberdeen; Dr. A. B. Cruickshank, Aberdeen; Dr. Alex. Thompson, Huntly; Dr. A. W. M. Sutherland, Aberdeen; Dr. Ernest Bisset, Aberdeen; Dr. Albert Westland, Aberdeen; Dr. Cecil V. le Fanu, Aberdeen; Dr. J. A. Tolmie, Aberdeen; Dr. Thomas Fraser, Aberdeen; Dr. James D. Noble, Aberdeen; Dr. W. Christie, Woodside; Dr. John A. Watt, Aberdeen.

Hepatic Disease.—Professor Finlay read notes of two cases of hepatic disease. After a summary of the history and symptoms of the cases, and the grounds on which the diagnosis was based, Professor Finlay stated that both cases were transferred to the surgical wards, where Dr. Riddell performed cholecystotomy in the first case, removing 186 gall stones; while in the second an exploratory laparotomy showed the patient, a man aged 28, to be suffering from malignant disease.

Cases.—Dr. Mackenzie Booth described a case in which he had performed double osteotomy for distortion resulting from Coxitis, and showed the patient.—Dr. Riddell showed a patient after Rhinoplasty for rodent ulcer of the nose, and a woman on whom he had operated for a large Cystic Goitre. His paper on a Series of Abdominal Sections was deferred to a future meeting.

SOUTH WESTERN BRANCH.

The autumn intermediate meeting of this Branch was held on November 14th, in the Royal Devon and Exeter Hospital, the President (Dr. Mark Jackson, of Barnstaple) in the chair. Tea and coffee were served before the meeting. Invitations had been sent to the members of the West Somerset Branch. There were 56 members present.

Confirmation of Minutes.—The Honorary Secretary read the minutes of the last intermediate meeting, and these were confirmed.

Cancer Infection in Relation to Operation.—Mr. J. Bland-Sutton, of Middlesex Hospital, read a paper on Cancer Infection in Relation to the Operative Treatment of Cancer. At its close a brief discussion was opened by the President, and continued by Messrs. Bell and Roper.

Vote of Thanks.—The President then proposed a very cordial vote of thanks to Mr. Bland-Sutton for his able address. This was seconded by Dr. D. Thompson (Launceston) and carried by acclammation.

NATAL BRANCH.

A meeting of this Branch was held at Pietermaritzburg on July 29th.

Election of Officers.—The following office-bearers were elected:—*President:* Rev. Canon Booth, M.D. *Vice-President:* Dr. Daumas. *Honorary Secretary:* Dr. G. L. Bonner. *Honorary Treasurer:* Dr. S. N. Harrison. *Council:* Dr. S. G. Campbell, Dr. W. H. Addison, jun., Dr. D. Birtwell, Dr. H. A. Dumat.

SPECIAL CORRESPONDENCE.

BRISTOL.

The Queen's Visit.—Medical School Dinner.—Sewage Disposal Scheme.

On the return of Her Majesty to Windsor after the visit to Bristol Sir Arthur Bigge telegraphed to the Lord Mayor her appreciation of her reception and her admiration of the well-arranged ceremony, at the same time expressing a hope that the great gathering of children was accompanied with no mishap. Her Majesty's Private Secretary also mentioned that the Queen was not unduly fatigued by her journey. The collection and dispersal of the children was a credit to those who made the arrangements, and in spite of the evil forebodings of many before the event, not a single child or one of the numerous teachers who marshalled them came to any accident. To collect and disperse over 27,000 children without a mishap is a wonderful feat. There were four cases of fainting and nothing more. The number of cases treated by the St. John Ambulance Association men, the Brigade, and other persons doing ambulance work along the route did not amount to fifty, and, as far as can be discovered, only two cases of accident directly due to the crowd were treated at the infirmary or hospital. That no medical men connected with the hospital or infirmary, or the medical officer of the institution, was presented to Her Majesty has caused a good deal of comment, especially as every other official of the home was given that honour.

It is six years since the last medical school dinner was held, and the success that attended the one held at the Clifton Spa on November 16th argues well for its yearly continuance. It was not really a medical school dinner, as a large number of laymen, mostly connected with Bristol University College, and medical men of the city, were present, but for want of a better name the old one was retained. The guest of the evening was his honour Judge Austin, who was seated on the right of the chairman, Mr. Nelson C. Dobson, F.R.C.S., and about 150 was the total of those present. There were many speeches and toasts; these referred particularly to the medical school; all touched on the recent amalgamation scheme by which students can attend the clinical work at both the infirmary and hospital. The wonder was that such a scheme had never been found practicable before, but now that it is accomplished great things are expected, and if it is allowable to draw conclusions from the increased number of entries this October, its good effect is already being felt.

It is reported that a poll of the citizens of Bristol is to be held on the question of the drainage scheme. Whether this is a satisfactory method of accurately measuring public opinion on the matter is certainly open to doubt. Ordinary citizens—the man in the street—knows little about the disposal of sewage, and would probably oppose any measure which would lay an additional burden on the ratepayers. The drainage question, however, goes hand in hand with any scheme for the improvement of the city docks, and the latter will certainly be in the direction of putting gates at the mouth of the river Avon, into which at present all the sewage of Bristol goes. In addition to this refuse from several works on the river or tributaries is allowed to escape into the tidal waters, and powers will have to be obtained to prevent this. The various schemes suggested for the disposal of the sewage have already been noticed, and though any conclusion as to which should be adopted is at present premature, there is little doubt that the discharge will be near Avonmouth, where the action of the receding tide has been shown to be most powerful.

An Institute of Experimental Therapeutics at Frankfort.—A new Institute of Experimental Therapeutics was opened at Frankfort-on-Main on November 8th, in the presence of the municipal authorities and many scientific and official notabilities. Dr. Moritz Schmidt delivered an address. The University of Marburg conferred an honorary degree of M.D. on Herr Adickes, the Oberburgomaster of Frankfort, in honour of the event. The new institute is to be under the direction of Professor Ehrlich.

CORRESPONDENCE.

THE CHARITABLE FUNDS AND THE PROFESSION.

SIR,—My attention has been called to the article in your columns entitled "The Administration of the Charitable Funds of the Profession," and it seems to me only right to offer some explanation of the facts there stated and to point out that the inadequacy of the relief given by our medical charities is due only to the overwhelming number of those who apply for help and to the utter insufficiency of the money placed by the profession at our disposal.

The Society for the Relief of the Widows and Orphans of Medical Men, the only one able to deal adequately with the appeals to it, is restricted by its laws to helping the widows and orphans of medical men who have been subscribers to it during their lifetime, and since those who require help are comparatively few, the society has ample funds at its disposal and is able to give liberally. I may take the opportunity of suggesting that no better insurance exists than a subscription to this fund, and of expressing my regret that so few medical men avail themselves of it.

The Royal Medical Benevolent College, Epsom, provides the pensions and the educational opportunities which it promises, and there are always more applicants for both than can be elected.

The British Medical Benevolent Fund, which has no voting system and no restrictions as to previous subscriptions, is the only one open to all. It has two departments of work, the annuity and the grant, to the latter of which go all subscriptions and donations, while all legacies and a few sums specially given for the purpose are invested to provide annuities. Since those who leave money to the Fund are well aware of this we have no right to dispose of it in any other way. Unfortunately there are numbers of widows and daughters of medical men and many aged or disabled medical men themselves whose sole protection from the workhouse or starvation is an annuity, and if annuities are to be assured there must be investments to provide for them. During my connection with the British Medical Benevolent Fund, the number of annuitants has been increased from about 12 to 108. The amount of the annuities is only small—£20, or in eight cases £26, and in one £36. But, small as the annuity is, it usually makes it possible for relatives to give a home to the poor recipient. The plan on which annuitants are appointed is that the name of every applicant for assistance above the age of 60, whose circumstances seem to demand it, is at once placed on the list of candidates. A small subcommittee goes carefully through the list twice a year, and selects the most needy and deserving cases, and as soon as a vacancy occurs the general committee proceeds at once, after consideration of their respective claims, to the appointment of one of those selected.

Grants are made at the monthly meetings of the Committee from the ordinary subscription and donations, and I may mention that the total amount of subscriptions and donations received from January to November this year is £1,242 19s. 6d., while the grants voted by the Committee during the same period, including this month, amount to £1,436 10s. At the last meeting there were 15 suitable and mostly urgent cases, and the balance in the bank was £29 0s. 11d. We could only imperfectly relieve 12 of them to the amount of £128 by borrowing from the annuity fund. Last year our receipts were £1,684, and during the year 157 applicants received grants amounting to £1,617.

Mrs. Beale, whose case has been referred to, was the recipient of a grant of £18, which is almost the maximum that we can ever afford. Obviously we could not give her an annuity at once, but as she is over 60 her name is already on the list, and I may add, high up, while in the meantime her friends are at liberty when a year is expired to apply again for a grant. Every year we have at least a hundred cases quite as urgent, but what are we to do?

It is stated in the leading article that Mrs. Beale had also received £5 from the *Lancet* Fund. This Fund is a considerable sum of money generously placed every year by the proprietors of the *Lancet* at the disposal of almoners, two of whom are the Presidents of the two Colleges, for the relief of distressed members of the profession, especially where the need is sudden and urgent. Enormous profits are made by the BRITISH MEDICAL JOURNAL as the organ of the Association. I am tempted to ask how it is that the example of the *Lancet* is not followed?

But to return to the British Medical Benevolent Fund, I may point out that its working expenses are extremely small—under 5 per cent. There is no office for which rent has to be paid, no salaried secretary, very little expenditure in advertising. The principal expense is in postage and in clerical work, which no honorary secretary could possibly undertake. It has been found by experience that the money granted is of far greater benefit if paid in monthly instalments, and this involves the sending out of about 200 small cheques every month on a given day. The other work falling on the honorary secretaries in the investigation of the cases, and in receiving and acknowledging the subscriptions and keeping the accounts, is heavy enough without this.

It seems to me that the heading of the article which has drawn forth this letter is singularly inappropriate. Instead of "the administration of the charitable funds of the profession," it ought to have been "the inadequacy of these funds." But the intention was no doubt benevolent, and the effects will be good, since it compels attention to the needs which exist.

I venture, finally, to appeal to medical men everywhere for means to help our distressed brethren, and it may stimulate their generosity to be reminded that the President of the British Medical Benevolent Fund is Sir James Paget, whose name is held in affectionate veneration throughout the profession.

Donations or subscriptions, which it will be seen are urgently needed, may be sent to Dr. Samuel West, 15, Wimpole Street, Honorary Financial Secretary, or to myself.—I am, etc.,

W. H. BROADBENT,
Treasurer British Medical Benevolent Fund.

84, Brook Street, W., Nov. 21st.

SIR,—Your article in the BRITISH MEDICAL JOURNAL of November 18th on the Administration of the Charitable Funds of the Profession will do good by directing the attention of the members of the profession residing within twenty miles of Charing Cross to the advantages of joining the Society for the Relief of Widows and Orphans of Medical Men. Allow me to supplement your article by pointing out that this Society unites the advantages of a provident with those of a benevolent society. It is provident, as by the small yearly subscription of 2 guineas the members do, through it, protect their own families from destitution should they be left with an income of less than £80 per annum for the widow and £15 for each child under 16; and it is benevolent, as its benefits are conferred only on the families of deceased members who are left in indigent circumstances.

Under the charter of the Society its officers have no power to deal with the claims of any widows and orphans except those of members of the Society of three years' standing, but it is very desirable that it should be more widely known that practitioners become eligible for election as soon as they are registered under the Medical Act, and while residing in the metropolis, although not permanently so. Again, as regards subscription, the annual payment of 2 guineas ceases when 50 guineas have been paid; or life membership can be obtained by the single payment of 20 guineas under 30 years of age, and 30 guineas under 40 years.—I am, etc.,

J. B. BLACKETT,
Secretary.

Chandos Street, W., Nov. 19th.

A PIONEER IN THE TREATMENT OF CONSUMPTION.

SIR,—In reading the account given by my friend, Dr. Middleton, of an early, and mostly forgotten, medical society in the BRITISH MEDICAL JOURNAL of November 18th, p. 1435, I was at once reminded of a discussion in Edinburgh many years ago in which the late Professor Christison produced from his early notes of lectures a detailed reference to the system of treating consumption introduced a whole generation previously by the Rev. Dr. Stewart, of Erskine, a parish not far from Glasgow, and which Dr. Christison referred to as evidence that even when depletion and other like remedies were the order of the day, there were some who advocated methods

more in accordance with modern ideas. The Dr. Stewart in question was, I think, the father of the late Dr. A. P. Stewart, so well known to many of us as a very constant friend of the British Medical Association, and the founder of a prize to be given in connection with sanitary objects. His methods of treatment, though apparently obnoxious to the members of the defunct society as being those of "a medico-clerical gentleman of consumptive notoriety" were by no means lightly esteemed by Dr. Christison, who frankly admitted having learned much from them, and adopted them to a considerable extent. The Rev. Dr. Stewart afterwards became a Presbyterian chaplain at Leghorn, and, I believe, ended his days there with the respect and appreciation of all men; but probably there are not very many living now among us who have even the tradition of his early doings in medicine, and, therefore, I venture to trouble you with this annotation to your leaderette of Saturday last.

Dr. Middleton, who has been lucky enough to unearth this bit of medical history, had evidently no clue to the person so scornfully referred to in the Glasgow minute of long ago (1825).—I am, etc.,

The University, Glasgow, Nov. 20th. W. T. GAIRDNER.

ILLEGAL CERTIFICATES.

SIR,—Every letter of Mr. Horsley's must bring more forcibly home to your readers the truth that we are, and have been, defending ourselves from his attacks; not attacking him, except in necessary self-defence. His last letter places this beyond a doubt. In writing such a letter he too greatly underrates the intelligence of his constituents, who will not fail to observe his otherwise politic ruse of imputing to us, and vehemently denouncing, tactics he has himself adopted throughout this controversy.

He began the attack by placing our memorials, to borrow his expression, "in a false light before the profession"; he carried it on by the addition of terms insulting to the judgment of the large body of his constituents who signed the memorials, using such terms under cover of the misstatement that he was a "co-signatory"; in place of giving the explanation we very temperately and respectfully asked for, which he has never given; and now he has recourse to gross expressions, and imputations of motives for which our letters afford no ground: a course in which we absolutely decline to follow him.

This is not the first time in our experience that Mr. Horsley has made personal attacks on the same individual he was at first attacking, and failed to explain his meaning, when invited to do so.

He now assumes to complain bitterly that we "ignore his refutation in your columns of the accusation that he has violated his election pledges"; that we "misrepresent the facts given in this very correspondence" by alleging that he has failed to answer our "questions," and "replied by protests and personal attacks"; that we suppose your "readers have not seen or have naturally forgotten" what he "published six weeks ago;" and that it is the "weakness of a newspaper correspondence in a weekly journal that a lie cannot be nailed to the counter." We think, on the contrary, that it is the strength of such a correspondence that misstatements can, by comparison and comment, be brought home to their authors; and that our success in doing this is possibly the reason Mr. Horsley is eager for a new arena, a wider issue, and the clamour of his more enthusiastic followers.

We will endeavour to further apply the method he suggests, whilst carefully avoiding his unnecessarily strong language, and will take an instance from his latest letter:

MR. HORSLEY'S STATEMENT.

(BRITISH MEDICAL JOURNAL, November 18th, p. 1446).

"If your readers will kindly refer to my previous letters, and especially that of the date September 30th, they will find that I have answered *in full detail every question raised against me.*"

(Italics and capitals ours.)

OUR COMPARISON AND COMMENT

(Questions raised to which replies will NOT be found in Mr. Horsley's letters.)

Our letter in the BRITISH MEDICAL JOURNAL, August 26th, page 569: "His (Mr. Horsley's) opinion as to this most important question of legality (that is, of legality of his Council's sanction of the certification of midwives) as well as *some useful illustrations* of our faults in the memorials will still oblige us; having, indeed, been our objects in this correspondence."

In our letter in the BRITISH MEDICAL JOURNAL of October 14th, 1899, we invite "some better reasons than our memorials afford (to which it now appears his censures did not apply) why he has not taken action to rescind his Council's sanction of the licence of the London Obstetrical Society;" and "Some more definite pronouncement of Mr. Horsley's views on these points....." These points were, briefly, whether he shares the views we hold:

1. That attendance of medical men on normal labour is medical practice (that is, not in theory, but in fact).

2. That certification of persons not medically registered is a covering of such unqualified practitioners.

3. That any Bill to legalise such certification will be a partial repeal of the Medical Acts.

Also as to whether the Bill of the British Medical Association will:

1. Legalise attendance on normal labour by persons without medical curriculum.

2. Legalise the certificates which have been sanctioned by the General Medical Council.

3. Confer a right to practise even on the unlicensed midwives now practising.

COMMENT.

These questions have perhaps escaped Mr. Horsley's memory, but he should not say he has replied to them. We should still be glad of specific, not necessarily very "*detailed*" replies to the same questions—namely:

(1) Whether he regards the sanction of such certificates by his Council as illegal;

(2) Whether it ought not, in his opinion, to be rescinded;

(3) Whether his constituents are entitled to demand that recission; and

(4) As to the meaning of the British Medical Association Midwives Bill.

We proceed in the same way to examine Mr. Horsley's statements:

(1) That he has refuted the charge of violating his election pledges; and

(2) That we have "ignored" his "refutation:"

OUR CHARGE

(which was not precisely as Mr. Horsley expresses it), BRITISH MEDICAL JOURNAL, August 26th, 1899, page 569.

"Such a policy....." (support of the Bill of the British Medical Association) is *inconsistent* with Mr. Horsley's election pledges," and we hope to have his valuable support, etc."—BRITISH MEDICAL JOURNAL, September 16th, 1899, page 748.

"The document he sent to members of the profession before his election of 1897 was dated September 18th, 1897, and no doubt expressed the view he then desired to commend to his constituency, including '3, THE REGISTRATION OF OBSTETRIC NURSES,' but the following direct question was, on September 29th, 1897, put to him by certain constituents: 'Whilst opposing the registration of midwives will you support the insertion of a provision in any Act of Parliament for the training or registration of nurses, that whereas such nurses have no medical training, their presence in no way relieves those who may be concerned of any responsibility to provide medical attendance.....'

In answer to this question, amongst others, Mr. Horsley, on October 4th, 1897, wrote to Mr. George Jackson:

"Dear Mr. Jackson,—I agree with all the reforms mentioned in the circular you kindly sent me, and though some are plainly impossible of attainment for a long period, I would use every effort to press them forward. May I add that I cannot see that our views as to what is urgently required to further the interest of the profession are in any degree divergent, and remain, yours sincerely. VICTOR HORSLEY."

"This had the ring of a frank and

MR. HORSLEY'S "REFUTATION" AND OUR COMPARISONS AND COMMENTS.

Mr. Horsley (BRITISH MEDICAL JOURNAL, September 30th, 1899, page 879) after quoting the questions.

"To this I replied that I was quite willing to support the introduction in ANY Bill ..... of provision to secure the predominance of medical practitioners over nurses."

OUR COMMENT.

1. Is there a word in Mr. Jackson's questions or Mr. Horsley's reply about the "pre-eminence of medical practitioners over nurses?"

2. Does Mr. Horsley attempt to show that he did not assent to Mr. Jackson's propositions of

(1) A general and unreserved opposition to "registration of midwives";

(2) That nurses (including obstetric nurses) have no medical training, and are not to be authorised to be employed instead of medical attendance?

(3) Does he not admit (*vide supra*) that the question applied to 'ANY' Bill?—Mr. HORSLEY, BRITISH MEDICAL JOURNAL, September 30th.

"It (Mr. Jackson's question, "whilst opposing the registration of midwives") means to indirectly assume that I oppose the Bill then before the House of Commons for the registration of midwives."

OUR COMMENTS.

(1) Is there in Mr. Jackson's question one word as to, or the least ground to imagine an allusion to, "a Bill then before the House of Commons," or any particular Bill or anything else, but what it specifies to be opposed, namely, "the registration of midwives," broadly and inclusively?

sincere pledge but it is not consistent with its sincerity for Mr. Horsley to fall back upon and misinterpret a prior document (his formal address to his constituents in which he recommended registration of OBSTETRIC NURSES) to second and advocate the Bill of the British Medical Association.....or to persuade his constituents to abandon the direct opposition to such certification, to which opposition he stands pledged by his letter to Mr. Jackson."

MR. HORSLEY (*Ibid.*).
"But what means the reference to an Act of Parliament for nurses." This refers to a Bill which was actually put forward by Dr. Rentoul and the Association of Incorporated Medical Practitioners for the registration of all nurses, midwifery or otherwise."

OUR COMMENTS.
It refers, as Mr. Horsley has admitted (*vide supra*) to *any* Bill to register any nurses; but it applied especially to the measure recommended by Mr. Horsley in his formal address to his electors—namely, "3. THE REGISTRATION OF OBSTETRIC NURSES." (BRITISH MEDICAL JOURNAL, 25th, 1897).

Such statements are not a "refutation" of our moderate and civil proposition that Mr. Horsley's advocacy of the Midwives Registration Bill of the British Medical Association is inconsistent with his pledges to Mr. Jackson; they are puerile and disingenuous and totally unworthy of his reputation and position.

By his own showing he pledged himself, as to the Bills he refers to, to the broad principles (1) that a nurse is not to be recognised as having medical training, and (2) that attendance of registered midwifery nurses is not to be recognised in place of medical attendance.

How does he keep those pledges by supporting the Bill of the British Medical Association?

STATEMENT.
Mr. Horsley in his last letter states that we "ignored" his "refutation."

COMPARISON AND COMMENT.
Our letter, BRITISH MEDICAL JOURNAL, October 28th.
"Mr. Jackson's question was 'whilst opposing registration of midwives'—not a particular Bill, but 'registration of midwives' generally and inclusively."
That surely does not "ignore" the supposed refutation.

Already in this correspondence we have, we think, fairly brought home to their author as misstatements Mr. Horsley's statements, (1) That he was a co-signatory of the memorials; (2) that Mr. Brown concurred in supporting him at Stratford; and (3) that he (Mr. Horsley) proved at the Stratford meeting (or that the meeting adopted his view) that a "policy of blank negatives was quite impotent"; since the meeting, with two dissentients, declared its "alarm" at the measure he advocated; and added that that measure was a dangerous and unnecessary concession to a mischievous agitation; and (4) his statement that Mr. Tomlin's reading Mr. Horsley's reply to Mr. Jackson at that meeting was not a "hint" that support of such a Bill was regarded as inconsistent with that reply.

More suo, without the least substantiation, Mr. Horsley tells your readers that our suggested motion, which he appears nevertheless to "shrink" from meeting, contains "no less than four direct misstatements of fact on the Bill of the British Medical Association and my election pledges."

How very easy it would be for Mr. Horsley to bring such misstatements home to their authors, in this correspondence or in a public meeting; and how impressive it is that he does not avail himself of the former opportunity, or of our invitation to the latter.

Unless Mr. Horsley replies to the very direct questions we have raised, and accepts the opportunity our offered motion affords him, we shall waive, as against a too obviously worsted disputant, our right of reply; and we beg you to excuse the length of this letter because Mr. Horsley's imputations necessitated a somewhat lengthened reference to, and extracts from, those to which you have already kindly afforded space.—We are, etc.,

GEORGE JACKSON.
T. GRANVILLE HOCKRIDGE.
F. LORIMER HART.
R. F. TOMLIN.
TOM R. TAYLOR.
J. HIGHAM HILL.

Bedford Square, W.C., Nov. 22nd.

MEDICAL ORGANISATION.

SIR,—In his letter to the BRITISH MEDICAL JOURNAL of November 18th, Dr. G. H. Broadbent has hit the right nail on the head in connecting together the lack of support which the Manchester Medical Guild receives with the fact that prominent members of its Council are on the staff of the Manchester and Salford Provident Dispensaries. This unfortunate state of affairs prevents many medical practitioners from joining the Guild, as they recognise the injury which the provident dispensaries have done to medical practice in Manchester and Salford.

I would venture to suggest as a remedy that Dr. Broadbent propose an addition to the rules of the Guild as follows:

That no medical man be eligible for membership if connected with the Manchester and Salford Provident Dispensaries.

Were this rule carried, any suspicion of complicity on the part of the Medical Guild "in whitewashing" provident dispensaries would be removed, and a large accession to the membership of the Guild would result.—I am, etc.,

Pendleton, Nov. 20th. J. HAROLD BAILEY, M.B.

FIBROIDS OF THE UTERUS AND FIBROIDS OF THE BROAD LIGAMENT IN YOUTH.

SIR,—I have read with great interest Dr. N. T. Brewis's case of successful removal of a fibromyoma of the broad ligament weighing 15 lbs., read before the Edinburgh Obstetrical Society.[1] I find, however, that he makes the following statement: "Myomata have not been observed before the thirty-fifth year," an observation apparently copied from Mr. Bland-Sutton's well-known textbook, *Tumours, Innocent and Malignant*, p. 141. In a recent contribution to the Obstetrical Society of London, based on a case where I removed a tumour of this kind over 44 lbs. in weight, with successful results, I was able to state that "no fewer than 6 out of the 34 patients [out of 39 cases of fibroid of the broad ligament which I tabulated, no age was given in 5 cases] were under 30, or 17.6 per cent., a proportion far larger than in the case of uterine fibroids.....In my own case the heaviest broad ligament tumour on record, the patient was not 23 when it was first detected." The rarity of true uterine "fibroid" in young women is shown in Dr. Herbert Spencer's instructive monograph on the subject in the fortieth volume of the *Transactions* of the Obstetrical Society of London, where he demonstrated, however, that this affection is rather more frequent in youth than was suspected. Fibroid of the broad ligament is clearly far more common, and it is very possible that in more than one of the cases collected by Dr. Spencer, the "fibroid" was of intraligamentary and not of uterine origin. Even in Dr. Boxall's case, where the patient was 23, there was some doubt about this essential point.

The knowledge that intraligamentary fibroid is relatively frequent in youth is an important factor in diagnosis, as a growth of this kind should be removed when recognised, whilst most uterine fibroids allow at the worst of a little watching. I know from some experience that the most careful palpation and the use of the sound cannot always enable us to distinguish accurately between the two diseases in question.—I am, etc.,

Granville Place, W., Nov. 18th. ALBAN DORAN.

PRIMARY NEPHRECTOMY FOR COMPLETE RUPTURE OF KIDNEY.

SIR,—In your report of the recent meeting of the Clinical Society, Mr. Bland-Sutton, in relating details of the above case, says "that British literature contains very few records of primary nephrectomy for ruptured kidney."

This being so, may I call attention to a case of mine published in the *Transactions* of the West London Medico-Chirurgical Society, vol. vii, and which is shortly as follows:

A man, aged 55, on February 23rd, 1895, fell from a third storey window on to some spiked railings, causing a punctured wound in the left lumbar region, just below the twelfth rib. There was free haemorrhage from the wound on his admission into the West London Hospital, and temporary plugging was resorted to. Operation two or three hours after the accident. Loin incised. Eleventh and twelfth ribs found fractured. Portions of the patient's vest and shirt found deeply embedded in the wound. The kidney was found to be nearly severed in half transversely, and in a vertical direction a deep laceration extended along the whole of the outer or convex border. The kidney was removed. No wound of the peritoneum was seen. Ligature of the renal vessels at once stopped all haemorrhage.

[1] BRITISH MEDICAL JOURNAL, November 18th, p. 1422.

After the operation the patient soon rallied. February 24th 22 ounces of urine passed; February 25th 32 ounces of urine passed; February 26th 43 ounces of urine passed; February 27th 45 ounces of urine passed. Urea gr. xi to 3j.

This case differs from Mr. Bland-Sutton's, inasmuch as there was an external wound. By following this wound through a free lumbar incision it was an easy matter to locate the source of the bleeding. Where there is no external wound I agree with Mr. Bland-Sutton that it is best to open the abdomen in the semilunar line corresponding to the kidney supposed to be injured.

Within the past year, that is, four years after the operation, I have come across my patient, apparently none the worse for accident or operation. He is a cabdriver, and from the top of his hansom he greeted me one day, reminding me of his identity by saying, "Why, sir, I'se the chap what's only got one kidney."—I am etc.,

Harley Street, W., Nov. 22nd. F. Swinford Edwards.

THE PHARMACOLOGY OF CANNABIS INDICA.

Sir,—In a criticism appearing in the British Medical Journal of November 18th upon my report on the above subject, Professor Marshall in the first place accuses me of being ignorant of recent work which has been done in this country; and secondly states that no trustworthy deductions can be drawn from many of my experiments. In support of the first of these statements Professor Marshall refers to a paper by himself published in America. I was perfectly well acquainted with this paper, but in the short report of my work published in the Journal it called for no comment.

In support of his second assertion he points out that the effects I obtained on animals by the injection of hemp emulsion were "almost certainly" due to embolism. The results I obtained were in no case due to embolism. Every experiment was carefully controlled by the previous injection of emulsions, and in many cases these were of even a coarser nature than those of the hemp used. It was not to be expected that I should enter into detailed accounts of my experiments in the brief and preliminary record of my work published by the Journal as a summary of a paper read before the Section of Pharmacology at the annual meeting. It would, however, be interesting to know if Professor Marshall has based his very positive criticism upon any experiments in which he has recorded effects produced by embolism similar to the cardiac effects of Indian hemp, and if so whether they produced paralysis of the cardiac nerve terminals of the vagus.—I am, etc.,

W. E. Dixon.

Research Laboratories of the Royal Colleges of Physicians and Surgeons, London, Nov. 21st.

MEDICAL REFORM AND THE MIDWIVES BILL.

Sir,—Dr. Barker has done me the honour of quoting my definition of "natural labour."

Will you allow me to point out that he has omitted one important clause: "When the child is living and is of not more than normal size."—I am, etc.,

Harley Street, W., Nov. 21st. G. E. Herman.

Sir,—Whilst I welcome the justice Dr. MacIlwaine does to the motives of the Corporate and Medical Reform Association and Mr. Anderson, and would desire to do equal justice to his own motives, I cannot enter into his views nor understand how far he goes.

He appears by his reference to Germany and Sweden to desire that midwifery in normal cases (to avoid begging the question by saying "practised" let me say) should cease to be "undertaken" by medical men. Yet in the earlier part of his letter he admits that abnormal labour is "disease," and therefore within the domain of medicine. He also admits "medical men must be familiar with the anatomy and physiology of normal labour, in order that they may deal with difficulties and abnormalities that may bring some parturient women into the proper range of medicine."

How is that "familiarity" to be attained and maintained without attendance on normal labour? The *tactus eruditus* does not come by instinct, by reading, or by lectures. The *tactus eruditus* for dealing with abnormalities and difficulties in labour cannot be either attained or maintained by the profession at large from the small proportion in numbers Dr. MacIlwaine allots to such cases, and such attendance would fall into the hands of specialists more or less difficult of access in emergency.

When the present generation of general practitioners, who have that training and competency to deal with most difficulties and abnormalities, has died out or been divested of its acquired and maintained competency, who is to deal with such difficulties and abnormalities? What medical man, without such "familiarity," will be competent to dilate the os, turn, and deliver in placenta prævia, or to remove an adherent placenta, or to overcome hour-glass contraction by manipulation?

Whilst this generation of doctors is dying out, or being divested of its faculties by want of training and "familiarity" with normal labour, the midwife will not, without full medical education, be able to develop those faculties and be what we are now, and there will be none to take our place for the public safety.

It is part of the platform of the Corporate and Medical Reform Association that all midwifery is required for medical tuition and practice, and that it is imperatively necessary to return to a modified system of apprenticeship in order to utilise fully this and all other available means of practical training.

To imply that medical men are properly "spectators" in cases of normal labour is to seriously misrepresent our duties and position, since medicine and midwifery alike include the discernment of health from disease or abnormality, which is called "diagnosis," and is surely part of "medicine properly so called."

We know that contempt for midwifery was always a heresy of the London College of Physicians; but we hoped the condescension of that College to include the real "practitioner," the Licentiate, would have cured it of that heresy, which, but for respect for Dr. MacIlwaine, I would define by a less complimentary term. Alas, it seems the heresy has survived, and is extending, but the profession will not, on any such grounds, give up the victory it gained for science and for public safety, when a knowledge of midwifery was included by the State as a condition precedent for the recognition by law of his eminency the physician.—I am, etc.,

T. Granville Hockridge, M.D.

Tysoe Street, W.C., Nov. 21st.

THE CONTROL OF EPIDEMIC DISEASE IN EGYPT.

Sir,—Permit me to correct a slight error in the leading article in the British Medical Journal of November 4th on the subject of plague in Egypt. The International Quarantine Board has nothing to say to the control of plague or any other disease in the country. Its task is limited to the prevention of the introduction of disease into Egypt, and its propagation to other countries. Once a disease such as plague or cholera be introduced, it devolves on the sanitary department of the Ministry of the Interior alone to prescribe and carry out the measures to stamp it out. As a matter of fact Dr. Ruffer, the President of the Quarantine Board, has been engaged on other duties in England from the middle of July to November.—I am, etc.,

J. G. Rogers,

Cairo, Nov. 9th. Late Director-General, Sanitary Department, Egypt

PHARMACEUTICAL CHEMISTS AND COMPANIES.

Sir,—As one who has for some time taken a great interest in the difficulties that chemists have to contend with, I was pleased to read the article in the British Medical Journal of November 11th on pharmaceutical chemists and companies. Since the discussion on pharmacy and company law started great changes of opinion have occurred, not the least important of which has been the clearing away of the impression that chemists held—namely, that it was no good looking to the medical profession for any active assistance. Your article must banish that idea for ever, for, as you so ably put it, "It is clear on all sides that the protection afforded to the public by preserving a proper significance to titles must not be weakened." The fight for protection of title is as much medical as pharmaceutical. If gained at the expense of chemists it is but a lever with which to attack, first, veterinary surgeons and dentists; then our own titles would become the object of capitalistic combinations.

The only ground of dispute is, how should such titles be

protected best? I have no hesitation in saying my opinion is with the minority of the Pharmaceutical Council. The Lord Chancellor says distinctly that individual qualification and company pharmacy will not cohere. Why, if this be true, should anyone attempt that which is impossible?

If chemists cannot maintain their titles, rights, and privileges without giving up rights under the Limited Liability Acts, there is only one position they can logically occupy. That is—alongside of others who depend on qualification—to decline to avail themselves of the right to form limited liability companies. Hard as this position may seem to some, it is the only one which will adequately protect their title. Attempts in any other direction are foredoomed to failure. Questions of qualified directorate, or even of qualified shareholders if admitted, are unworkable, and if attempted could only work for a few years; then by death the interests would be transferred to the unqualified, and the whole question would again crop up to be dealt with at a greater disadvantage than even now.

The great risk at the present time is that the Pharmaceutical Council should be inclined to barter away the rights of qualification. Should they do so a compromise might be forced upon them; but if chemists could be unanimous in declining to deal at all with company pharmacy, I cannot believe that Parliament would force it on them in face of their opposition, backed up by strong expressions of opinion from the medical world.—I am, etc.,

Blackburn, Nov. 11th. RILEY CUNLIFFE, M.B., C.M.

THE RELATIVE IMMUNITY OF DOGS TO PYOGENIC INFECTION.

SIR,—May I be allowed to refer to a paper by Dr. Archibald Reid published in the BRITISH MEDICAL JOURNAL of October 28th? The writer of that paper, in elaborating a principle of treatment of wounds, has been influenced by his assumption that open sores of dogs and of the lower animals heal so well without surgical aid because their wounds are constantly licked and kept clean, open, and free from irritating dressings. It is a fact that the wounds of dogs and certain lower animals heal better without surgical aid than do those of human beings. From recent experiments of my own I am convinced that the great reason for this fact is really to be found in the comparatively diminished susceptibility of the animal kingdom to those micro-organisms that commonly infect the carelessly-treated wounds of suffering humanity.—I am, etc.,

Harley Street, W., Nov. 1st. G. LENTHAL CHEATLE.

OBITUARY.

MR. E. P. VINES, M.R.C.S., who had been practising for about twenty years in various parts of Australia and Tasmania having held Government appointments in charge of certain hospitals in outlying districts, was murdered under circumstances described in the London *Morning Post* of October 23rd, 1899, and in Australian journals. Just before daybreak on September 9th, Mr. Hodgson, the owner of Braeside Station, on the Oakoris river, Western Australia, who was sleeping outside the house, was awakened by the dogs barking. He sat up, and was immediately speared in the shoulder. He called to Mrs. Hodgson and Mr. Vines that natives were attacking them; at the same time he received several other spear wounds. Mr. Vines rushed out of the house and was speared twice, both weapons entering his chest; he turned back into the house and expired immediately. All hands would certainly have been killed had not Mrs. Hodgson, with great bravery and presence of mind, fired two revolver shots from the verandah at the savages, who then bolted. Mr. and Mrs. Hodgson were removed to a neighbouring settlement thirty miles off on the next day, and during the journey the lady gave birth to a son. A local magistrate, constable, and trackers started off as soon as possible to the scene of the outrage. Mr. Vines held a Government appointment, and was in charge of a hospital at Marble Bar. He had made a journey of 110 miles to attend upon Mrs. Hodgson, and had arrived at Braeside a few days before the house was attacked by natives. Mr. Vines, who thus met his death in a noble attempt to help his friend, was the son of the late Mr. Charles Vines, F.R.C.S., who for many years practised as a surgeon in Reading, Berkshire.

MR. ROBERT JOHN BURNS, M.R.C.S., L.R.C.P., died at Sunderland on October 31st, where he had been in practice for about ten years. Mr. Burns was educated for the professional Preliminary Examination at Durham University, and subsequently entered the Medical College there, where he distinguished himself by taking a gold medal. He then went to London, and completed his medical education at University College, qualifying in 1888 as M.R.C.S. and L.R.C.P. Returning to Sunderland he became associated in practice with the late Dr. Wood, and was afterwards appointed Police Surgeon. He appears to have soon gained a reputation, acknowledged by Bench and Bar, for the satisfactory way in which he gave his professional evidence in court whenever he had occasion to do so. In 1890 he was appointed by the Sunderland guardians Medical Officer to the Bishopswearmouth District of that union, but resigned his appointment shortly before his death, which was very unexpected, and probably not unconnected with unfortunate circumstances which led to his resignation. Mr. Burns had been twice married; he leaves a widow, and one child by his first wife. He was the eldest son of Alderman Burns of Sunderland, with whom the deepest sympathy is now felt, and has in fact been very freely expressed by all classes. The funeral, which took place at Sunderland on November 3rd, was of such a character as had never before been seen in that town. All the public bodies of the borough attended or were represented; these together with large numbers of the general public formed a procession almost a mile long. The scene was an impressive one, and clearly indicated the respect which Mr. Burns had gained for himself during the few years he was engaged in the practice of his profession at Sunderland.

WE regret to record the death, at the early age of 33, of MONTFORT MICKLIN, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., which occurred on November 12th at his residence, Darlington Street, Wolverhampton. After studying at Queen's College, Birmingham, he became qualified in 1889, and graduated M.B. in 1891. He was at different times House-Surgeon to the Birmingham General Hospital, Resident Medical Officer to the Victoria Hospital, Burnley; and, succeeding the late Dr. Charles Smith in his practice at Wolverhampton, followed him also in the appointment of Assistant Gynæcological Surgeon to the out-patients of the Wolverhampton and District Hospital for Women. He died somewhat suddenly from a cardiac affection, much regretted by his patients and his colleagues.

WE regret to notice the death of Dr. W. T. NICHOLSON, the Medical Superintendent of the Victoria Infirmary, Glasgow, which took place on November 11th. Dr. Nicholson studied at Glasgow University, where he graduated in medicine in 1886. For about eight years he was Assistant Medical Officer at Barnhill Hospital. Five years ago he was appointed Superintendent of the Victoria Infirmary, which position he filled with much acceptance, not only to the medical and nursing staffs, but also to the large number of patients who passed through the wards of the hospital. Some weeks ago he had an attack of pneumonia, and appeared to be recovering satisfactorily, when complications developed which have caused his untimely death. He is survived by a widow and one child, for whom much sympathy is felt.

WITH regret we record the death at Margate, on November 12th, of FREDERICK HANSON WALKER, M.R.C.S.Eng., L.R.C.P. Lond., of Blagdon, Putney, at the age of 31. He was the eldest son of Mr. J. Hanson Walker, of Montagu Street, Portman Square, and received his medical education at St. George's Hospital.

SURGEON-MAJOR ANDREW KNOX RICKARDS, M.R.C.S., formerly of the Army Medical Department, died at Southsea on November 7th, aged 65 years. He took the diploma of M.R.C.S.Eng. in 1855, and entered the army the same year. He served with the 16th Lancers in the Crimea, and latterly

with the 7th Dragoon Guards. After his retirement from the army he took an active interest in the Volunteers, and became Surgeon-Major of the 3rd Volunteer Battalion Hampshire Regiment.

Major Arthur Harding, R.A.M.C., died at Paignton on November 13th in his 51st year. He became M.R.C.S.Eng. in 1877 and L.R.C.P.Edin. in 1878, and entered the Army Medical Department in the latter year, retiring on half-pay, through ill health, in June, 1898. His war service included the Zulu war, 1879-80 (medal and clasp); the Transvaal war, and defence of Marabastad, 1881; the Egyptian campaign, 1882, at Kassassin and Tel-el-Kebir (medal, clasp, and bronze star); the Nile campaign in 1884-5, including the battles of Abu Klea and Metemmeh (two clasps and mentioned in despatches).

MEDICO-LEGAL.

CHEMIST v. DOCTOR.

In its issue of November 11th the *Western Mail* reports an action brought by Dr. William Lloyd at the Cardiff County Court to recover £12 12s. for professional attendance on Mr. Fargher, a chemist. The defence was a counter claim for the same amount, on the ground of alleged negligence. According to the plaintiff's evidence he had been called in to attend the defendant for a fracture of his tibia, and had paid in all eighty-one professional visits, and he considered his charges fair and reasonable. The defendant on the other side sought to show that a mistake had been made, and he had not been properly treated. Dr. Corrigan, who gave evidence for the defence, said that in his opinion the tibia had not been broken, but the tendons were ruptured; the treatment in either case would be the same—absolute rest. He did not think the plaintiff had treated defendant altogether properly, but he did not accuse him of neglect; in fact, he seemed over-anxious. Dr. Wallace also, another witness, said he did not think there had been any neglect. Defendant's counsel, after hearing this evidence, said that he should witddraw the case, and the judge said it was a very cruel and serious thing to make such a charge against a medical man without the slightest evidence to support it. He thought the defendant ought to withdraw the charges, and make an apology to Dr. Lloyd. He gave judgment for the latter with costs, and also dismissed the counter claim with a separate set of costs.

A TERRIBLE BLUNDER.

Under this head the *South Wales Daily News* reports the circumstances under which an application was made at the Glamorgan Assizes by Mr. Arthur Lewis, who appeared for the Treasury, for the discharge of the recognisances of Mrs. Minnie Jane Hayter. In answer to the application, the judge said that Mrs. Hayter was committed to take her trial for the wilful murder of her husband, and the committal by the magistrates arose in this way: she and her husband lived in a cottage in a lonely part of the country, and her husband died. The medical man owing to whose carelessness, to use a mild expression, this poor woman had been in peril of her life, had induced the magistrates to believe that the deceased man had died of a broken neck. In his depositions before the magistrates the medical man said he found at once that the neck was dislocated, and that death must have been instantaneous. He also said that on the left side of the head he found a contusion and a small clot of blood—formed, he thought, a few hours before. He said the neck was dislocated high up, and that the dislocation must have caused instant death. He also said that a billhook was produced to him, the blunt edge of which corresponded with the bruise, and he said that it might have been used, although he could see no blood on it. On that evidence, and other evidence not nearly so material, this poor woman, who is now admitted to be perfectly innocent of the death of her husband, was committed to take her trial here on a charge of wilful murder. However, she found some kind friend—for she was very poor—to take up her case, and he obtained an order that the body might be exhumed, and in the presence of the medical man in question, Dr. W. E. Thomas, Dr. Randall, and Dr Griffiths made another *post-mortem* examination, the medical man in question agreeing to their report, which said there was no fracture present, and that there had been no broken neck at all. The cause of death was described in these words: "I entertain no doubt whatever that the deceased died from syncope, following acute inflammation of the left lung," the gentleman in charge of the examination adding, "I may add that all the medical gentlemen present completely endorse my opinion, and in my recollection they also said they found no such wound as could be produced by a billhook." Hence on the statement by the medical man in question, this poor unfortunate woman, who is as innocent of the death of her husband as I am, has been put in peril of her life, and but for the kind friend who took up her case, assisted by the Home Office, which allowed the body to be exhumed, she would now probably be standing there to take her trial for wilful murder. The medical man is in duty bound, if he can, to make some compensation to that unfortunate person; and I hope this will go far over the face of the country that he is under the deepest obligation to her for the terrible blunder he has made We all must sympathise very much for her, especially as she is a woman of considerable poverty. Her recognisances will be discharged, and I express my sincere regret and deepest feeling of horror that she should by such a blunder have ever been placed in such a position. I should like to add that those who sat at the Petty Sessions had nothing to blame themselves for. They acted upon the evidence before them at the time, and they were in no way to blame.

The judge does not appear to have made any comment upon the proceedings before the coroner. From the reports which have been published, it does not appear whether the medical man who gave the evidence at the inquest and before the magistrates had received orders from the coroner to perform a complete *post-mortem* examination. If such instructions were given, it is difficult to find any excuse for the blunder committed by the medical man in question.

SINGLE DIPLOMAS.

A contemporary in a recent issue characterises a statement which recently appeared in the columns of the British Medical Journal as "entirely misleading." The statement to which exception is taken is to be found in the Medico-Legal column of the Journal of November 11th, and is to the following effect—namely, that the L.R.C.P.Lond. is by itself a qualification under the Medical Act, 1886, and is recognised by the Local Government Board, and its possessor would thus, if registered, be entitled to hold a Poor-law appointment.

The grounds stated by our contemporary as a justification for its somewhat sweeping criticism are that under Section III of the Medical Act, 1886, no single qualification entitles a person to registration, but that it must be combined with a qualification in the correlative subjects derived from another body. In fact the registered diplomas must represent separate qualifications in medicine, surgery, and midwifery, and no single qualification fulfils this requirement, nor can anyone go on the *Register* in respect of such single qualification. There appears to be some confusion between the words "qualification" and "diploma." It is perfectly true that no one can be registered subsequently to the coming into force of the Medical Act, 1886, unless he is duly qualified in medicine, surgery, and midwifery. But it is equally true that a medical body which fulfils the statutory requirements is able of itself to grant a single diploma which confers a triple qualification upon its holder which entitles him to practise medicine, surgery, and midwifery. Such is the Royal College of Physicians, and its power to grant a registrable diploma under the Act of 1886 was decided in the well-known case of the Royal College of Physicians *v.* the General Medical Council, in which it was held that the College always had been and was then (and therefore is now) entitled independently and without acting in combination with any other medical body to hold such qualifying examinations in medicine, surgery, and midwifery as are mentioned in the Act of 1886, and to confer by its single diploma on its members and licentiates who had passed such examination the right of registration under the Medical Acts then (and now) in force. Such again are the powers, and such the diploma of the Society of Apothecaries of London. This body obtained under the powers of Section v of the Medical Act, 1886, Assistant Examiners in Surgery, and has ever since granted and continues to grant a single statutory and registrable diploma in medicine, surgery, and midwifery. The right of the Society no less than that of the Royal College to do this has been consistently recognised by the Local Government Board. If any further proof were needed of the incorrectness of our contemporary's contention, it is to be sought in the pages of the *Medical Register* itself, where numbers of names will be found registered subsequently to the Medical Act, 1886, with one diploma only. Under the circumstances to which we have adverted, we therefore repeat, confirm, and amplify our original statement—namely, that the Licence of the College of Physicians of London or of the Society of Apothecaries is by itself a registrable qualification under the Medical Act, 1886, and is recognised by the Local Government Board.

NON-REGISTRABLE DEGREES.

Rosin has this year obtained the M.D., C.M. of Queen's University, Kingston, Ontario. When signing his name, is M.D., C.M.Ont. sufficient, the degree being unregistrable?

*** When the degree is unregistrable, the proper course is, we consider, to affix the name of the university granting it. In the present case it would, perhaps, be better to add the word "Kingston" to the signature.

ASSISTANTS' HOLIDAY.

Veritas sends the following; A. is a medical practitioner, and B. acts as his assistant. B., wishing to take a holiday, informed A. of his intention, mentioning at the same time the length of his intended absence, to which A. did not object by word or deed. On B.'s return A. offered him half the amount of salary which had fallen due during his (B.'s) absence. Has A. any right to do this?

*** We are advised that on general grounds, as B. appears to have taken his holiday with A.'s previous consent, nothing being said on the question of salary, it does not seem that the latter is justified in subsequently making any deduction. Possibly the question is governed by the terms of B.'s engagement, and if these are contained in a written agreement reference should be made thereto.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Sanitary Science.—The State Medicine Syndicate report that during the present year they have examined 58 candidates for the Diploma in Public Health. Of these 34 were successful in passing both parts of the examination.

Entrance Scholarships.—The examinations at 10 of the colleges for entrance scholarships and exhibitions have just taken place. Of over 110 awards it appears that 28 have been made for Natural Science and 23 for mathematics.

Medical Examinations.—The First and Second M.B. Examinations will begin on December 11th; the Third Examination for Degrees of M.B. and B.C. on December 12th. The names of the candidates are to be sent to the Registrary for the first two by November 28th and for the last by November 20th.

UNIVERSITY OF LONDON.

M.B. EXAMINATION.—The following candidates have satisfied the examiners:

First Division.—A. S. Barnes, B.Sc., Mason College and Queen's and General Hospitals, Birmingham; J. Beatty, Trinity College, Dublin; W. Billington, Mason University College and Queen's Hospital, Birmingham; W. S. Danks, St. Bartholomew's Hospital; H. L. Eason, Guy's Hospital; C. T. Hilton, Guy's Hospital; R. J. Howard, London Hospital; C. G. Pugh, B.Sc., Middlesex Hospital; S. R. Scott, St. Bartholomew's Hospital; Mabel Geraldine Stevenson, Royal Free Hospital and London School of Medicine; F. G. Thomson, University Cambridge and Middlesex Hospital.

Second Division.—Susila Anita Bonnerjee, London School of Medicine for Women; H. S. Capper, University College; H. Clifford, University College; E. H. Collens, Mason University College; H. Collinson, Yorkshire College; E. C. Davenport, London Hospital; T. Evans, University College; H. D. Everington, St. Bartholomew's Hospital; W. Ferris, St. Mary's Hospital; E. F. Fookes, Owens College and Manchester Royal Infirmary; J. Gaff, St. Thomas's Hospital; T. H. Gardner, King's College; Annie Chapman Gowdey, London School of Medicine and Royal Free Hospital; E. S. Hall, Guy's Hospital; J. C. Harcourt, St. Thomas's Hospital; H. Hartley, Owens College and Manchester Royal Infirmary; P. M. Heath, University College; W. C. Hirst, St. Bartholomew's Hospital; T. Oban, St. Thomas's Hospital; G. H. J. Hooper, Charing Cross Hospital; A. E. Horne, B.Sc., St. Mary's Hospital; Mary Muriel Griffin Iles, Royal Free Hospital; C. L. Lander, B.Sc., London Hospital; T. N. Leah, St. Mary's Hospital; Beatrice Frederica Lovibond, London School of Medicine and Royal Free Hospital; Louisa Martindale, Royal Free Hospital; G. N. Meachen, Guy's Hospital; H. H. Mills, Westminster Hospital; Christine Mary Murrell, Royal Free Hospital; J. A. O'Dowd, Birmingham Medical School; A. G. Osborn, Guy's Hospital; A. R. G. Pocock, University College; J. F. Porter, London Hospital; B. E. Potter, Charing Cross Hospital; H. M. Reeve, Guy's Hospital; B. E. Reynolds, University College; J. H. Rhodes, St. Bartholomew's Hospital; J. Robertson, Guy's Hospital; Mary Ariel Stewart, London School of Medicine and Royal Free Hospital; W. G. Stewart, Guy's Hospital; R. G. Strange, St. Thomas's Hospital; E. W. D. Swift, University College; I. Taylor, Yorkshire College; G. B. Thwaites, St. Thomas's Hospital; Jane Holland Turnbull, Royal Free Hospital; P. Turner, B.Sc., Guy's Hospital; W. H. Unwin, Charing Cross Hospital; H. J. Van Praagh, St. Mary's Hospital; Ethel Miller Vernon, London School of Medicine and Royal Free Hospital; J. G. Wallis, London Hospital; W. B. Watson, St. Mary's Hospital and Durham University; H. E. White, Mason University College; C. W. Wirgman, University College.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following have passed the primary part of the examination for the licence in Dental Surgery of the College: E. T. Pasley and H. Schlegel.

ANDERSON'S COLLEGE MEDICAL SCHOOL, GLASGOW.

TWO additions have just been made to the teaching staff of this College. Dr. Carstairs Douglas, M.D., B.Sc., has been appointed Professor of Medical Jurisprudence in room of Professor R. M. Buchanan, resigned; and Dr. James Galbraith Connal, M.B., C.M., has been appointed Lecturer on Aural Surgery in room of Dr. James Erskine, resigned.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, NOVEMBER, 1889.—The following candidates passed in:

Surgery.—F. G. Aldrich (Section I), Charing Cross Hospital; R. Brookes (Section II), Westminster Hospital; J. M. Edwards (Section I), Charing Cross Hospital; D. Hamilton, Royal Free Hospital; F. Marriott, Edinburgh; G. G. Membery (Section I), Toronto; T. C. Mitchell (Sections I and II), Leeds; H. J. Pickering (Sections I and II), St. Bartholomew's Hospital; E. D. Wortley (Sections I and II), St. Bartholomew's Hospital.

Medicine.—C. B. S. Amos (Section I), Royal Free Hospital; G. H. Bedford (Section I), Guy's Hospital; R. F. Ellery (Section II), St. Bartholomew's Hospital; R. T. Foster (Section I), Leeds; J. B. Hall (Section II), Leeds; W. K. S. Hay-Coghlan, St. Mary's Hospital; G. G. Membery (Section I), Toronto; T. C. Mitchell (Sections I and II), Leeds.

Forensic Medicine.—C. B. S. Amos, Royal Free Hospital; G. H. Bedford, Guy's Hospital; T. Burdekin, University College Hospital; E. E. Evans, Royal Free Hospital; R. T. Foster, Leeds; M. P. Gabb, Middlesex Hospital; W. K. S. Hay-Coghlan, St. Mary's Hospital; G. G. Membery, Toronto; T. C. Mitchell, Leeds.

Midwifery.—J. R. Clemens, St. Thomas's and London Hospitals; F. R. Featherstone, Guy's Hospital; R. T. Foster, Leeds; W. K. S. Hay-Coghlan, St. Mary's Hospital; H. Jessop, Birmingham; G. L. Parsons, Westminster Hospital; J. R. Pooler, Birmingham; C. H. Williams, St. Bartholomew's Hospital.

The diploma of the Society was granted to Messrs. M. P. Gabe, D. Hamilton, F. Marriott, T. C. Mitchell, H. J. Pickering, and E. D. Wortley.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,822 births and 3,785 deaths were registered during the week ending Saturday last, November 18th. The annual rate of mortality in these towns, which had decreased from 21.1 to 18.0 per 1,000 in the three preceding weeks, further declined to 17.3 last week. The rates in the several towns ranged from 11.5 in Burnley, 11.7 in Halifax, 12.3 in West Ham, and 12.6 in Cardiff, to 21.2 in Liverpool, 21.4 in Sheffield, 22.4 in Blackburn, and 25.3 in Preston. In the thirty-two provincial towns the mean death-rate was 17.2 per 1,000, and was 0.3 below the rate recorded in London, which was 17.5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the death-rate was equal to 2.0 per 1,000, while it averaged 1.9 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Blackburn, 3.7 in Leicester, 3.8 in Hull, and 4.3 in Sheffield. Measles caused a death-rate of 1.0 in Sheffield, 1.1 in Bradford, 1.2 in Blackburn, 1.3 in Preston, 1.4 in Birkenhead, and 1.6 in Hull; "fever" of 1.1 in Nottingham, 1.2 in West Ham and in Croydon, and 1.3 in Preston: and diarrhœa of 1.0 in Bolton. The mortality from scarlet fever and from whooping-cough showed no marked excess in any of the thirty-three large towns. The 117 deaths from diphtheria included 56 in London, 14 in Sheffield, 8 in Leicester, 8 in Liverpool, and 7 in Leeds. Six fatal cases of small-pox were registered last week in Hull, but not one in any other of the large towns; and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday last, November 18th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,538 to 3,564 at the end of the eleven preceding weeks, had further risen to 3,578 on Saturday last; 334 new cases were admitted during the week, against 414, 331, and 328 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, November 18th, 884 births and 580 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.8 and 17.0 per 1,000 in the two preceding weeks, rose again to 19.0 last week, and exceeded by 1.7 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.5 in Perth and 16.6 in Dundee, to 21.3 in Greenock and 21.5 in Aberdeen. The zymotic death-rate in these towns averaged 2.3 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 270 deaths registered in Glasgow included 12 from measles, 7 from scarlet fever, 5 from diphtheria, 3 from whooping-cough, 6 from "fever," and 7 from diarrhœa. Four fatal cases of diarrhœa were recorded in Edinburgh, 5 in Dundee, and 4 in Aberdeen; and 5 deaths from measles were registered in Greenock.

BURNLEY DISTRICT SANATORIUM.

THE new sanatorium of the Burnley Joint Hospital Board, erected at Kibble Park, Burnley, which was opened on November 11th by Alderman Caleb Thornber, J.P., Chairman of the Board, will provide for the proper isolation and treatment of infectious diseases, other than small-pox, occurring in Burnley Borough Rural District, Padiham, and Brierfield. The total population of this district in 1891 was 118,711, and the rateable value in 1899 is £558,007. The land on which the sanatorium is built is entirely enclosed with a substantial wall; it contains 6¾ acres, and forms part of a breezy height overlooking Burnley, and varying from 600 to 750 feet above sea level. The water supply is from the Burnley corporation mains.

The buildings already completed, which allow of extensions, have been most substantially built, and equipped in the most approved fashion; they include an administration block for the medical officer, matron, dispensary, etc., and a fever pavilion for 22 adult patients in 2 wards of 10 beds each, and 2 single bed wards. The wards, bathroom, and lavatories are heated by low-pressure hot-water circulating pipes, and by Shorland's ward stoves and Manchester grates. The ventilating arrangements of the wards consist of Shorland's inlets and extractors fitted with control flaps, also glazed hopper fanlights to the windows. The ward windows are all constructed to allow of fresh air being admitted into the wards without causing draughts. The beds are of the Lawson Tait pattern, and the mattresses are stuffed with wood fibre.

The isolation pavilion contains 4 wards of 2 beds each, and 2 ward kitchens; there is also a laundry, stable, and mortuary block. The disinfection by Defries, Limited, London, is of the "Equifex" pattern, employing saturated steam at a pressure of 60 lbs. to the square inch. The mortuary is so arranged that a body may be placed under a special inspection window, whereby friends of the deceased may, with a minimum risk of infection, see the body from the exterior of the building. The drainage has been carried out on the separate system, all surface and roof water being conveyed direct to the surface water drainage of the Corporation of Burnley, and the sewage to the Corporation sewer in Marsden Road. A duplicate set of tanks for sewage disinfection has been constructed on the site, through which all sewage from the hospital buildings must pass before being turned into the sewer. Self-acting flushing tippers of various capacities are placed at the heads of all drains. Disinfection chambers and inspection manholes have been constructed along the lines of the drains.

The total cost of land, buildings, drainage, furnishing, etc., will be about £20,000. Mr. F. S. Button, M.I.C.E., architect to the Board, prepared the plans of the sanatorium.

There is ample space on the appropriated site for 4 additional pavilions, which when completed will give further ward accommodation for 74 adult patients, making a total of 104 with those already provided for. The Committee intend as soon as possible to proceed with the erection of 2 more pavilions similar to the isolation pavilion now in use for scarlet-fever patients.

BATHS AND BATHERS IN LONDON.

A RETURN presented by the Local Government Committee to the London County County Council at its meeting on November 21st showed that in thirty-five parishes of London the Baths and Washhouses Acts had been adopted. Some 2,532 public baths are in existence, of which 887 are first class and 1,659 second class, in addition to 85 swimming baths. The total bathers in 1897-8 are reported to number 4,463,109. The receipts and expenditure for 1897-8 show a deficit which falls on the rates amounting to £83,360.

FEVER IN LONDON.

At the meeting of the managers of the Metropolitan Asylums Board held on November 18th, it was reported that there were 5,676 persons suffering from fever under treatment (3,504 from scarlet fever, 1,730 from diphtheria, and 441 from enteric fever). In addition, 25 enteric fever patients had been admitted to general hospitals on the Board's application during the previous fortnight. It was reported that the Admiralty had applied to the Board to receive for treatment at the hospital ships any cases of small-pox that might occur on board Her Majesty's ships at Sheerness or Chatham; that the Board had agreed to admit them at a charge of four guineas a case, with a reservation to suspend the arrangement in the event of an outbreak of small-pox in London; and that the Admiralty had accepted these terms. The Hospitals Committee reported upon the present unusual prevalence of enteric fever in London. During ten weeks there were 1,526 notifications, against 937 in the corresponding weeks of last year; and the disease seemed to be still increasing in the E., N.E., and S.E. districts. All the managers' available accommodation for enteric cases was consequently exhausted, and 86 cases were still awaiting removal, many from most insanitary surroundings. A communication had been addressed to the general hospitals asking for further accommodation, but the replies had not been encouraging. The authorities of the Metropolitan Hospital, Kingsland Road, had, however, offered two empty unfurnished wards for 24 and 12 adults respectively, that Board to supply bedsteads, bedding, furniture, all the washing of linen, etc., and to pay £54 a week for 36 beds. The Committee had, in view of the urgency of the situation, accepted the offer, and given instructions for the two wards to be equipped as speedily as possible. The managers approved of the steps taken by their Committee. In face of the serious condition of things herein disclosed, the authorities at the general hospitals should undoubtedly do their utmost to aid the Asylums Board in coping with the difficulty which has arisen. The action of the managers of the Metropolitan Hospital might doubtless be repeated by other managers who have wards closed for lack of funds, especially as the Asylums Board seems willing to pay a fair amount per bed for the accommodation which may be provided.

TENEMENT DWELLINGS.

E. C. asks as to the cost of building tenement dwellings of the cheapest sort.

*** Prices vary in London and the provinces. It may be taken that the cost of providing dwellings of this class runs, however, from £45 to £60 for each person housed. The Metropolitan Association for Improving the Dwellings of the Working Classes was founded in 1841, and owns 14 estates, containing 1,405 tenements and 21 offices and shops, and houses about 6,241 persons. The Farringdon Road buildings of this Association contain 56 two-roomed, 126 three-roomed, and 71 four-roomed dwellings, with 10 shops. The cost was £42,376 11s. 11d., the profit in the year ended March, 1898, £2,484 7s. 1d. The 784 rooms (counting the 10 shops as rooms) cost therefore a little over £54 each. As the tenements are practically back-to-back, the planning might be improved upon. The East End Dwellings Company houses about 4,800 persons. On their Cromer Street Estate alone are 11 blocks. Some, but not all, are open to the objection just stated. In this group are 922 rooms (including 8 shops and 8 cellars), divided into 370 tenements. There is a ground-rent of £422, while the cost ran up to £59,301. They pay about 7 per cent, and the cost per room works out at a little over £64. The cost of the Boundary Street Buildings of the London County Council is probably nearer £90 per room. The Orchard Street tenements of the Peabody Trustees, which yield a net profit of over 3½ per cent., cost from £91 to £92 a room for building alone, but these are scarcely cheap buildings.

The City of Manchester, in their Pott Street area, have erected, at a cost of £15,471—£78 per room—accommodation for 321 persons: for 108 in 36 two-roomed, for 195 in 39 three-roomed, and for 18 in 3 four-roomed tenements. These buildings are excellently-planned and only three storeys high. The Oldham Street tenements of this corporation house an average of 800 persons; the block cost £60,577. The shops, caretaker's office and house complicate the calculation, which works out, however, at about £100 a room. The Juvenal Buildings, in Liverpool, and the Victoria Square tenements in the same city cost about £83 and £94 a room respectively. High buildings may be necessary in certain centres of population. Their erection is to be deprecated where land can be had at a reasonable price. The Arley Street and Charters Street tenements in Liverpool, which are only two storeys high, and the Pott Street buildings in Manchester, are well worth studying by those interested in the problem of cheap dwellings, each with a through draught.

Alderman Thompson, of Richmond, in Surrey, has issued a report on housing, which may, we believe, be obtained from the Town Clerk for 2s. 6d. Other information may be obtained from the secretaries of some of the societies we have named and from officials of the towns mentioned.

INSTRUCTION FOR STATE MEDICAL OFFICERS.—In all the State and hygienic institutes in the German Empire a course has been given for the benefit of State medical officers. The subjects were etiology of the plague and measures for dealing with it, as well as other infectious diseases such as cholera, typhoid fever, and dysentery.

HOSPITAL AND DISPENSARY MANAGEMENT.

SUNDERLAND BOROUGH ASYLUM.

IN the fourth annual report of this new asylum, Dr. Middlemass draws attention to the fact that during the five years 1890-94 an average of 66 patients were sent to the County Asylum at Sedgefield every year, while during the last three years the average at the new asylum has been 99, and he attributes this large increase to the greater proximity of the new asylum to the borough, which has made the transference to the institution a more expeditious process, and has also overcome one of the objection of patients' relatives to their removal from home. We note, however, the admission of 20 female patients as boarders from the Middlesex County Asylum, thus removing these unfortunate creatures not 20 but 260 miles from their relatives. During 1898 the admissions numbered 115 and the discharges 49, the recovery-rate being 36.5 per cent. The death-rate was high, being 12.6 per cent., the cause being attributed to deaths from general paralysis, which was 36 per cent. of the total deaths. The average daily number resident was 309, and already the question of extension has forced itself upon the attention of the Committee. In a special report drawn up at the request of the Committee, Dr. Middlemass advocates extension, to take the form of a hospital, a most desirable adjunct to every properly equipped institution for the insane. Another excellent suggestion he makes is to provide suitable accommodation for private patients. In the district this is a distinct want, which is inflicting real hardship upon the community, as he truly says, "for this at present there is no adequate provision in the whole north of England." The provision of such accommodation would not only meet this want, but the Committee would find it a source of considerable profit.

THE EARLSWOOD ASYLUM FOR IDIOTS.

FROM the annual report for 1898 recently published, we learn that this useful institution contained on December 31st, 1898, 554 inmates, of whom 366 were males and 188 females. Forty-five cases had been discharged relieved during the year and 20 had died, while 51 cases had been admitted for the first time, and 6 cases readmitted. The medical superintendent, Dr. Caldecott, points out that the term of five years for which patients are usually elected is too short a period for education and training, and recommends that improving cases should, at the discretion of the Board, be kept for seven years. This seems a very reasonable recommendation, especially in view of the fact that recent legislation enables school authorities to provide for the special education of defective children for a period of nine years—that is, from the age of 7 to 16. Dr. Caldecott further pleads for a separate building for unimprovable and epileptic cases, so that training might be carried on unhampered by the mere custodial element. It would be interesting to know what percentage of the discharged patients are able, as a result of training, partially or wholly to earn their living. It is too much the custom in reports of charitable committees merely to parade one or two prominent (and possibly exceptional) successes. The general question of custodial care, in many instances permanently required, has to be faced, and is beginning to be freely discussed by an intelligent public. The death-rate is stated to be 3.23 per cent. upon the total number of patients under treatment during the year (619). As, however, the average number resident was 554, and the total number of deaths was 20, 3.6 would seem a fairer way of setting forth the percentage mortality. No fewer than 50 per cent. of the deaths are attributed to phthisis.

DORSET COUNTY ASYLUM.

THE report of Dr. MacDonald, the medical superintendent, shows that although the number of patients on the asylum register for 1898 shows a decrease of 2, yet the county patients have increased by 8, and the private patients by 14, the reduction in the numbers having been effected by the discharge of what are called out-county patients—that is, patients who are taken in from other counties and boarded at a profit. This fact shows that the requirements of the county are gradually taking up the extra accommodation provided by the foresight of the Committee; 142 patients were admitted and 144 discharged, the recovery-rate for the year being 32.23 per cent. The death-rate was 6.22. Beyond an outbreak of dysentery, from which 3 patients died, and for which the cause could not be traced, the health of the asylum was satisfactory.

STINGS OF INSECTS AND DIABETES.—Dr. Navarre, of Lyons, has recently published a case of wasp-sting in a diabetic patient, a lady of 67, under treatment for over five years. Before receiving the sting the amount of sugar was never great, and a season at Vichy had just reduced it to 4 g. to the litre. One day in autumn, when gathering fruit in an orchard, she was stung by a large wasp. The injured part became swollen as usual, but prostration with occasional rigors ensued, and lasted for about twenty-four hours. The patient on recovering from the attack looked very haggard, her usual thirst was greatly increased, and her breath became distinctly fœtid. Her urine was analysed a few days later. Then it was found that the proportion of glucose had increased over tenfold—from 4 g. to 40.5 g. to the litre, with but a trifling increase in the polyuria. The odour of the urine was characteristic; on careful analysis acetone was detected. The general symptoms of diabetes were aggravated. Dr. Navarre thinks there can be little doubt that the virus from the wasp's sting caused an aggravation of the diabetes, so severe as to induce acetonæmia.

MEDICAL NEWS.

MEDICAL MAGISTRATE.—Dr. R. M. Simon, F.R.C.P., Physician to the Birmingham General Hospital, has been appointed on the Commission of the Peace for the county of Warwick.

THE course of lectures on Dental Surgery by Mr. Storer Bennett, announced to be given at the Middlesex Hospital during November and December, is unavoidably postponed until after Christmas.

HOSPITAL TREATMENT FOR CONSUMPTIVES IN BERLIN.—Arrangements have been made for a daily consulting hour for phthisical patients in Professor Senator's University Policlinic, Berlin, and a ward in the Charité Hospital is to be set apart for consumptives.

SIR SQUIRE BANCROFT has promised to tell the story as arranged by himself of Dickens's *Christmas Carol*, to which some passages from *The Chimes* have been added, on behalf of the Shadwell Children's Hospital, at St. Martin's Town Hall, Charing Cross, on Monday, January 15th, at 3 P.M. The amount which Sir Squire Bancroft has been able to give to various hospitals as a result of the readings which he has given exceeds £10,000.

THE SAN REMO HOME FOR INVALID LADIES.—This home, which was established twenty-two years ago to provide a temporary residence with board, medical care, and medicine for ladies of limited means, has, we are informed, several vacancies at the present time. Only cases in which there is a prospect of restoration to health are received, and hopeless or chronic cases are not admitted. The payment made by patients is 25 francs a week, which covers board, lodging, medical attendance, medicine, and all the comfort of a villa residence. The deficit on the working of the home, which is managed by a committee of ladies and gentlemen, is made up by subscription. The Empress Frederick is the patroness, and the medical officers are Dr. A. J. Freeman and Mr. L. E. Kay Shuttleworth. Applications for admission, which must be accompanied by certificates of social position and state of health, should be sent to Mrs. Daniel, Villa Emily, San Remo, or to Miss Kay Shuttleworth, 55, Aughton Street, Southport, England.

MEDICAL DEFENCE UNION.—The usual monthly meeting of the Council of the Union was held on Thursday, November 16th, at the registered offices, 4, Trafalgar Square. Dr. Griffith was in the chair; 20 other members of the Council were present. The Treasurer reported the satisfactory state of the funds, the bank balance being £1,061. The Secretary stated that 53 applications for advice and legal assistance had been received from members since the last meeting of the Council, and 25 of these were dealt with. A writ for libel on the professional character of a member was directed to be served and all legal steps necessary ordered to be taken by the Solicitor to the Union in defence of the member's reputation. Several other cases were placed in the hands of the legal adviser. Communications were received from the General Medical Council relating to the proposed restoration to the *Medical Register* of certain names previously erased; the Secretary was directed to take certain action to oppose restoration in two cases. The number of candidates elected at the meeting was 15, making a total for the year to date of 438 new members. The members number altogether 4,449, and the guarantee fund amounts to £6,552 15s.

MEDICAL VACANCIES.

The following vacancies are announced:

BETHNAL GREEN BOARD OF GUARDIANS.—Second Assistant Medical Officer to the Workhouse and Infirmary, Waterloo Road. Salary at the rate of £80 per annum (payable monthly) with rations, furnished apartments, and washing. Applications on forms provided to be sent to the Medical Officer to the Workhouse.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum with apartments and board. Applications to the Chairman of the Medical Board by December 16th.

BIRMINGHAM GENERAL DISPENSARY.—A Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), with furnished rooms, etc. Applications to the Secretary by December 18th.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary to commence at £60 per annum, with board, washing, lodging, etc. Applications to the Secretary, 15, Richmond Terrace, Blackburn, by November 27th.

BRADFORD POOR-LAW UNION.—Two Resident Assistant Medical Officers (male or female) for the Hospital and Workhouse of the Union. Unmarried. Appointments for one year. Salary for senior £150, and £100 for junior, with prescribed rations, etc. Applications to the Clerk to the Guardians, 32, Manor Row, Bradford, by December 4th.

BRECON INFIRMARY.—Resident House-Surgeon; unmarried. Salary, £70 per annum, with furnished apartments, etc. Applications to W. Powell Price, No. 6, Bulwork, Brecon, by December 20th.

BUENOS AYRES, BRITISH HOSPITAL.—House-Surgeon. Salary, £200 for the first year, £250 second, and £300 third year, with board, lodging, washing, and wine allowance. Applications to Dr. Louis Colbourne, Berkhamsted, Herts.

BUXTON, DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications endorsed "Assistant House-Surgeon," to the Secretary.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. No salary, but board, lodging, and washing provided. Applications to the Secretary by December 9th.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer: unmarried. Appointment for twelve months. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Secretary, 13, Guildhall Square, Carmarthen, by December 1st.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Board and residence provided. Applications to the Secretary by December 12th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant, tenable for three months. Fee eight guineas. Applications to the Secretary.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—House-Physician. Board and residence, etc., provided. Honorarium of £25 on completion of six months' service. Applications to the Secretary by December 9th.

EDINBURGH, UNIVERSITY OF.—(1) Examiner in Materia Medica; (2) Two Examiners in Clinical Surgery. Appointments for four years. Salary of the former £75 per annum and the latter £50 each per annum. Applications to the Secretary, University Court, by December 30th.

FLINTSHIRE DISPENSARY.—Resident House-Surgeon. Salary, £120 a year, with furnished house, etc. Applications to the Secretary, Bagillt Street, Holywell, by November 28th.

GLASGOW VICTORIA INFIRMARY.—Superintendent and Resident Medical Officer. Salary, £300 per annum, with board in the Infirmary and a free house. Applications to the Secretary, 22, Carlton Place, Glasgow, by December 9th.

GUY'S HOSPITAL.—Joint Lecturer and Senior Demonstrator of Physiology in the Medical School. Applications to the Treasurer, Superintendent's Office, Guy's Hospital).

LEEDS GENERAL INFIRMARY.—Honorary Obstetric Physician. Applications, marked "Private," to be sent to the Treasurer by November 28th.

LIVERPOOL EYE AND EAR INFIRMARY.—House-Surgeon. Salary, £80, with residence and maintenance. Applications to the Honorary Secretary, Berey's Buildings, Liverpool, by December 2nd.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer, not less than 25 years of age and unmarried. Salary, £150 per annum, with board and residence. Applications to the General Superintendent by December 2nd.

MIDDLESBROUGH-ON-TEES, NORTH RIDING INFIRMARY.—House Surgeon. Salary £100 a year, with lodging, board, and washing. Applications marked "Application for post of House Surgeon" to the Secretary by December 6th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, Bloomsbury.—Registrar. Annual honorarium, fifty guineas. Applications to B. Burford Rawlings, Secretary and Director by December 8th.

NORTHAMPTON GENERAL INFIRMARY.—Qualified Assistant to the House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium of £25. Applications to the Secretary by November 30th.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke-on-Trent.—House Governor and Secretary (non resident), age from 30 to 45 years. Salary £300 per annum. Applications to the Chairman of the General Committee by December 6th.

NOTTINGHAM GENERAL DISPENSARY.—Clinical Assistant; unmarried. Salary, £60 for six months, with coals, gas, furnished apartments, etc., renewable. Applications to the Secretary.

OXFORD EYE HOSPITAL.—House-Surgeon. Honorarium £50 on completing of a year's residence. Applications to the Honorary Secretary, 29, Banbury Road, Oxford, by November 30th.

PARISH OF ST. PANCRAS WORKHOUSE.—(1) Senior Assistant Medical Officer. Appointment for two years. Salary, £125 for the first year, £135 for the second, and residential allowances. (2) Junior Assistant Medical Officer. Appointment for one year. Honorarium, £60, with residential allowances. Applications on forms provided to the Clerk to the Guardians, Vestry Hall, Pancras Road.

PONTEFRACT GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary commencing at £150 per annum, with furnished rooms, etc. Applications to the Secretary by December 11th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Three Members of the Court of Examiners. Must be Fellows of the College. Applications to the Secretary by December 6th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Assistant Physician, must be F. or M.R.C.P.Lond. Applications to the Secretary by December 16th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Assistant Physician; must be F. or M.R.C.P.Lond. Applications to the Secretary by December 5th.

SALOP COUNTY COUNCIL.—County Medical Officer of Health. Salary, £750 per annum. Applications to the Clerk, Shirehall, Salop, by December 27th.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the House-Surgeon by December 5th.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, washing, and lodging. Applications to the Hon. Sec., Bank Buildings, Taunton, by November 29th.

THROAT HOSPITAL, Golden Square, W.—Junior Resident Medical Officer. Appointment for six months, but renewable. Salary, £50 per annum. Applications to the Secretary by December 16th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Physician; (2) House-Physician; (3) House-Surgeon. Two latter appointments tenable for six months, with board and lodging provided. Election for the former on December 11th. Applications for the two latter to the Secretary Superintendent by December 13th.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Medical Officer to the Provident Dispensary. Salary, £90 per annum, with board, lodging, and washing. Applications to the Hon. Secretary by November 28th.

WREXHAM INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications on forms provided to the Secretary, 1, Church Street, Wrexham, by December 16th.

MEDICAL APPOINTMENTS.

BARKER, F. Marriott, M.A., M.B. & B.C.Cantab., L.R.C.P., M.R.C.S., appointed Honorary Medical Officer to the Convalescent Home of the Chelsea Hospital for Women at St. Leonard's-on-Sea.

BEEVOR, Sir Hugh, Bart., M.D., appointed a full Physician at King's College Hospital.

CARTE, W. A., M.D., M.Ch., Univ. Dub., appointed Senior Assistant Medical Officer to the Lagos Railway, West Africa.

DOUGLAS, Carstairs O., M.B., B.Sc.Edin., appointed Professor of Medical Jurisprudence in Anderson's College Medical School, Glasgow, *vice* R. M. Buchanan, M.B., F.F.P.S.G., resigned.

FISCHER, F. C., M.D., F.R.C.S.Edin., appointed Professor of Ophthalmology to the School of Medicine, Cairo.

GAIRDNER, J. F. R., M.B., C.M.Glas., appointed Extra Dispensary Surgeon Royal Hospital for Sick Children, Glasgow.

GIBSON, R., M.B., Ch.B.Edin., appointed House-Physician to the Hospital for Women, Soho Square, W.

GRAY, John G., M.B., C.M.Glas., appointed Extra Dispensary Physician, Royal Hospital for Sick Children, Glasgow.

GROSVENOR, Randolph L., B.A.Cantab., M.R.C.S., L.R.C.P., appointed Clinical Assistant, Chelsea Hospital for Women.

HILYAR, G. H. S., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Much Wenlock District of the Madeley Union, *vice* A. G. Mackenzie, M.R.C.P., F.R.C.S. Edin., resigned.

KNOWLES, Miss Beatrice, M.B., B.S.Lond., appointed Assistant Medical Officer to the Waterloo Road Workhouse of the Bethnal Green Union.

LITTLEJOHN, E. Sydney, B.A.Syd., M.D., C.M.Edin., appointed Honorary Medical Officer to Outpatients' Department, Sydney Hospital for Sick Children.

MACKAY, Hugh J. D., L.R.C.P.E., L.R.C.S.E., L.F.P. & S., appointed Medical Superintendent of Aston Hall, Warwickshire.

MCLEAN, J. F., M.R.C.S., L.R.C.P.Lond., appointed Superintending Surgeon to the British Seamen's Hospital, Constantinople.

MACMAHON, John Ross, M.B., C.M., appointed Clinical Assistant to the Chelsea Hospital for Women.

MEACHEN, G. N., M.B.Lond., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Tottenham Hospital, N.

MOLINEUX, J., M.D.St.And., M.R.C.S.Eng., appointed Medical of Health to the Hessle Urban District.

NORMAN, G., M.B., appointed Medical Officer for the Buckhurst Hill District of the Epping Union, *vice* M. Hutchinson, L.R.C.P., L.R.C.S.Irel., resigned.

STUART, Hackworth, M.R.C.S., L.R.C.P., appointed Assistant Resident Medical Officer to the London Temperance Hospital.

WARDMAN, W., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Third District of the Manchester Union, *vice* J. M. S. Preston, M.B., C.M.Edin., resigned.

YOUNG, Alfred A., M.A., M.B., C.M.Glasg., appointed Extra Dispensary Surgeon, Royal Hospital for Sick Children, Glasgow.

KING'S COLLEGE HOSPITAL: The following appointments have been made:
House-Physicians—(Senior) G. A. Roberts, M.R.C.S., L.R.C.P.; (Junior) W. H. Mc Mullen, M.R.C.S., L.R.C.P.; (Assistant) F. A. Hadley, M.R.C.S., L.R.C.P.
House-Surgeons—S. M. Mayon, M.R.C.S., L.R.C.P.; H. B. Stratford, M.R.C.S., L.R.C.P.; P. Vosser, M.R.C.S., L.R.C.P.
House Accoucheurs—C. E. Fenn, M.R.C.S., L.R.C.P.; J. M. Twentyman, M.R.C.S., L.R.C.P. (Assistant.)

DIARY FOR NEXT WEEK.

MONDAY.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Mr Wyatt Wingrave: The Pathology of Nasal Obstruction.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Dr. Robinson: The Causes and Treatment of Pelvic Pain.

Medical Society of London, 8.30 P.M.—Mr. Wansell Moullin: Excision of the Vesiculæ Seminalis. Dr H. A. Caley: Prognosis in Appendicitis, with notes of 200 cases.

TUESDAY.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Mr. Gunn: Optic Neuritis.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street W., 4 P.M.—Dr. Fletcher Beach: Cases of Epilepsy and Other Convulsive Disorders.

Royal Medical and Chirurgical Society, 8.30 P.M.—Adjourned Discussion on The Open-air Treatment of Tuberculosis, to be opened by Sir R. Douglas Powell, Bart., M.D.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Dr. Cathcart: Syphilitic Affections of the Pharynx and Larynx.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Consultation (Medical), Dr. W. Miller Ord.

WEDNESDAY.

Medical Graduates' College and Polyclinic 22, Chenies Street, W.C., 2 P.M.—Clinical Bacteriology (King's College) Class, Dr. J. C. Nash.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Maguire: The Progression of Phthisical Lesions.

THURSDAY.

Medical Graduates' College and Polyclinic 22, Chenies Street, W.C., 3 P.M.—Rontgen Ray Class (Demonstration II), F. Harrison Low, M.B.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Garrod: Some Urinary Disorders of Childhood.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. Percy Dunn: External Diseases of the Eye.

Central London Throat, Nose, and Ear Hospital, 5 P.M.—Dr. Dundas Grant: Treatment of Diseases of the Nasal Sinuses.

Charing Cross Hospital, Post Graduate Course, 4 P.M.—Mr. Wallis: Demonstration of Surgical Cases.

FRIDAY.

West London Medico-Chirurgical Society, West London Hospital, W., 8.30 P.M.—Clinical Meeting. Cases will be shown by Mr Meadam Eccles, Mr. Bidwell, Mr Keetley, Dr. George Johnston, the President, and others.

Laryngological Society of London, 20, Hanover Square, 5 P.M.—Cases and specimens will be shown by Sir Felix Semon, Drs. Powell, Bronner, Pegler, Waggett, Messrs Butlin, Boughton, Wingrave, and others.

Society of Anæsthetists, 20, Hanover Square, W., 8.30 P.M.—Dr. Walter Coneslake: A Combined Inhaler for Ether, Chloroform, and A.C.E. Mixture. Clinical Cases by Mr. McCardie, Mr. R. W. Lloyd, and Mr. Turle Bakewell, etc.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Dr. Stoker: Chronic Glandular Diseases of the Nose and Nasopharynx.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGE.

MORRISON—BETTY.—On November 18th, at St. Etheldreda's, Hatfield, Herts, by the Rev. E. A. Smith, Alexander Morrison, M.R.C.S., L.R.C.P., South Croydon, to Louisa, youngest daughter of Richard Betty.

DEATHS.

JOHNSON.—At his residence, Cliff Bank House, Stoke-upon-Trent, on November 15th, Samuel Johnson, M.D., Ch.M., Medical Officer of Health for the Borough, aged 53 years.

LAKEMAN.—On November 14th, at 30, Church Street, Modbury, Thomas Lakeman, M.R.C.S., L.R.C.P., aged 84. Funeral at Modbury Friday, November 17th, at 2 P.M. Friends please accept this (the only) intimation.

SKRIMSHIRE.—On November 17th, suddenly, at Morpeth, Northumberland, Frederic William Skrimshire, M.R.C.S., L.S.A., in his 52nd year.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1 p., Tu., 2.30; 5 p., F., 2

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 3; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 8.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Th., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.D. asks for advice as to the treatment of frequent muscular twitching round the eye—"life in the eye," as it is called.

E. M. W. writes: A patient about to travel in the Soudan has asked me to recommend a light portable commode for tent use. I have seen one advertised for use of children travelling by railway that would be suitable. Can any reader inform me where such are procurable, and are they satisfactory?

A. E. asks for information as to a home where a woman, aged about 70, could be received for some small payment, £1 1s. to £1 10s. per week. She is suffering from tuberculosis in several joints, with lupus of the face, but as yet is not absolutely helpless. Nursing at home has become impossible owing to serious illness in other members of the family.

SCHLEICH'S METHOD OF INFILTRATION ANÆSTHESIA.

E. L. C asks where he could obtain full details of Schleich's method of infiltration anæsthesia, with all particulars necessary for performing the same.

*** The fullest accounts of the infiltration method appears in the BRITISH MEDICAL JOURNAL, July 4th, 1896, p. 30; *Encyclopædia Medica*, edited by Chalmers Watson, M.D., vol. i, p. 211; *Schmerzlose Operationen* von Dr. C. L. Schleich (Springer, Berlin, 1899). Important articles may be consulted in *Verhandlungen der Deutschen Gesellschaft f. Chirurgie*, Berlin, 1898 (published by Hirschwald of Berlin); *Archiv f. Pathologische Anatomie und Physiologie* (R. Virchow), Band 153, Heft 3 (Reimer, Berlin), p. 466. English readers will find brief accounts also in *Yearbook of Treatment*, 1899, p. 172; *Lancet*, February, 1899; *Journal of American Medical Association*, December 29th, 1894.

ANSWERS.

X.—Our correspondent might give his patient the Duke o Wellington's advice, "When you wake up get up."

CANDIDE ET CAUTE.—There can be no objection to our correspondent notifying his own patients if he thinks it necessary.

BIBLICAL MEDICINE.

F. S. T. writes: In reply to "G. F. S.," *re* books on Biblical medicine, I have a book called the *Medical Language of St. Luke*, by Rev. Wm. Kirk Hobart, LL.D., which I should be happy to lend to "G. F. S." if it would be of any use to him.

INFANTILE CONSTIPATION.

DR. W. R. COSSHAM (Cirencester) writes: "X. Y. Z." will probably find his baby patient much benefited by the use of tincture of strophanthus given in half-minim doses four times a day in a little sweetened water. I have repeatedly proved its value in such cases.

TEXTBOOK ON CHEMISTRY.

DEMONSTRATOR writes: There is an excellent detailed small book on *Organic Chemistry* by Cohen, giving clear directions for all the organic preparations needed for Inter. M.B. Lond. An intelligent student could perform many of the operations without further instruction.

MOUNTAIN SICKNESS.

DR. MALCOLM L. HEPBURN (South Lowestoft) writes: I observe the following question in the Queries column for November 18th: "Is bleeding from the ears a symptom of mountain sickness?" which is answered by you in the affirmative, at the same time referring to M. Paul Bert. Personally, I should hesitate to answer so positively without qualifying the statement. It is true that M. Paul Bert describes it as one of the symptoms, and some of the earlier mountaineers, for example, Humboldt, support this opinion; but the general tendency of experiments at the present time seems to point to the fact that there are two separate sets of symptoms experienced by mountain explorers on the one hand, and by aeronauts and laboratory experimenters on the other; and Angelo Mosso's recent work, *Life of Man on the High Alps*, gives some strong evidence in support of this view. M. Paul Bert's observations were made mostly on aeronauts and in the laboratory. I should be inclined to answer the question by saying that bleeding from the ears and nose is a common symptom amongst aeronauts and those subjected to laboratory experiments, but is very rarely (I might say never) present as one of the symptoms complained of by mountain explorers.

NOTES, LETTERS, Etc.

A QUESTION OF ETHICS.

MRS. B. was taken ill and sent for Dr. L., the partner of her old medical attendant, but not finding him at home the messenger fetched Dr. D., who saw and prescribed for the case. Dr. L. on getting the message visited Mrs. B., and arranged to telephone and explain the position of things to Dr. D. On returning home he attempted to do this, but Dr. D. had gone out. Dr. D. paid a second visit to Mrs. B., and then heard of Dr. L.'s visit, and that the lady considered herself Dr. L.'s patient. Dr. D. considers that he is ethically entitled to regard Mrs. B. as his patient, and complains that Dr. L. should have visited the patient and looked at his prescription without previously communicating with him. There is one fact in dispute. Dr. D. alleges that the messenger left word at Dr. L.'s house that unless he returned immediately he was not to go to Mrs. B., but Dr. L. denies having received this portion of the message.

*** It is to be regretted that there should have been any misunderstanding, but such things are always liable to occur in sickness. The messenger appears to have been a young boy who would hardly be likely to think of the questions of professional ethics which might arise from his actions. As Mrs. B. evidently desires to be under the care of Dr. L., we think there can be no doubt that, whatever her messenger may have said, she wished Dr. L. sent for, and Dr. D. can only have been called in as a substitute. It is therefore impossible to admit his claim to regard Mrs. B. as his patient; nor can we see that he has any ground for complaint against Dr. L., who acted with perfect propriety.

ARE UTERINE MYOMATA USUALLY SINGLE OR MULTIPLE?

MR. W. ROGER WILLIAMS (Clifton) writes: Uterine myomata are generally said to be seldom solitary, but of 100 laparotomies for this disease by Engeström—in all of which the uterus was carefully examined—in 63 cases only a single tumour was detected, multiple tumours being present in the other 37 cases. Pollock long ago reported that of 39 myomatous uteri examined by him, 21 contained only a solitary tumour; and Fordyce Barker has stated that single and multiple tumours are of about equal frequency. If solitary tumours really are as frequent as this, it would be a reason, among others—in the event of surgical interference being necessary—for preferring myomectomy to more radical operative procedures.

LETTERS, COMMUNICATIONS, ETC., have been received from **A** A.; A. E.; Aqua Pura. **B** Miss B. M. Broadwood, London; F. M. Blumer, M.B., Stafford; J. W. Batterham, M.B., St. Leonards-on-Sea; G. J. Branson, M.B., Birmingham; Mrs. E. V. Brown, Manchester; Mr. L. A. Bidwell, London; Mr. J. B. Blackett, London; J. H. Bailey, M.B., Manchester; Bahadur; Mr. W. J. T. Barker, London; Messrs. C. Barker and Sons, London; Sir W. H. Broadbent, Bart., London; Mr. F. Broadbent, Newark; Mr. T. Bell, Uppingham; Miss F. H. Brown, London. **C** Mr. J. E. Cooke, Rochester; Dr. H. Campbell, London; Dr. J. M. Clarke, Clifton; Dr. W. E. Cossham, Cirencester; Church Agency, Manager of, London; Mr. G. Cleaver, London; J. M. Cotterill, M.B., Edinburgh. **D** Demonstrator; Dr. C. C. Douglas, Glasgow; W. E. Dixon, M.B. London. **E** Mr. G. Elkington, Birmingham; Dr. G. H. Edington, Glasgow; Dr. F. Edge, Wolverhampton; E. M. W. **F** Mr. J. M. Ferguson, Burnley; Mr. J. Fitzgerald, London; A. H. Frere, M.B., Stradbroke; Colonel F. O. B. Foote, Woolwich F. S. T.; Mr. D. Fletcher, Tarbert. **G** Mr. J. Griffith, Bethesda; Mr. J. E. Gordon, Salisbury; Mr. J. M. Giles, Plymouth; Mr. G. L. Green, Southsea; Dr. H. L. Gordon, London; Mr. C. G. Grant, London; Sir W. T. Gairdner, K.C.B., Glasgow; Mr. P. J. Galloway, Tramore. **H** Mr. W. F. Haslam, Birmingham; Miss M. Harris, London Mr. J. C. Hepton, Liverpool; Harveian Society, Secretary of, London; Hydrastis; G. E. Herman, M.B., London; Dr. T. A. Helme, Manchester; Dr. M. L. Hepburn, South Lowestoft; H. A. D.; Mr. H. M. Holt, Mansfield Woodhouse; Dr. T. G. Hockridge, London. **I** Indian Medical Service; Il Medico. **J** Mr. H. H. Jennings, London; Dr. H. J. Jones, Wallington; Dr. P. Janet, Paris. **L** Dr. E. S. Littlejohn, Sydney, N.S.W.; Mr. W. G. Lockett, Davos Platz; L. B.; Mr. R. E. Leeper, Dublin; Licentiate. **M** Dr. W. Milligan, Manchester; Dr. J. A. Merzies, Rochdale; W. A. Milligan, M.B., Bristol; Motor; Dr. T. H. Moorhead, Cootehill; E. H. G. Morris, M.B., London; M.D.; C. Martin, M.B., Birmingham. **N** "Nursing Record," Editor of, London; Nemo. **O** Professor A. Ogston, Aberdeen. **P** Dr. F. Parsons, Frome; S. C. Paul, M.B., Colombo; Dr. T. D. Poole, Wolverhampton; Dr. F. Pollard, London; Mr. J. F. Palmer, London; Mr. G. Pim, Dublin. **Q** Quercus. **R** Mr. R. H. Rains, London; Mr. F. M. Robinson, London Dr. G. D. Robinson, London; Mr. F. Renshaw, Huddersfield; G. A. Reid, M.B., Southsea; Ray; J. B. Roberts, M.B., Nottingham; Mr. I. D. Rea, London. **S** Messrs. Street Brothers, London; Sheffield Medico-Chirurgical Society, Secretary of, Sheffield; Dr. D. W. Samways, Mentone; Mr. R. R. Sleman, London; Mr. P. L. Sclater, London S.W.; Dr. R. M. Simon, Birmingham; S. S. Sprigge, M.B., London; Dr. T. S. Short, Birmingham. **T** Mr. W. T. Thomas, Liverpool. **V** Mr. C. S. Vines, Newport. **W** Mr. F. E. Williams, Buckden; Mr. C. H. Wakeham, London; Dr. F. J. Waldo, London; Mr. F. A. Warner, London; J. R. Whitwell M.B., Melton; Dr. L. A. Weatherly, Bath. Dr. F. Willcocks, London; Mr. C. H. Whiteford, Plymouth. **X** X.; X. Y. **Z** Dr. J. Zabludowski, Berlin.

BOOKS, ETC., RECEIVED.

Medicine Old and New. By W. Howship Dickinson, M.D., F.R.C.P. London: Longmans, Green, and Co. 1899. 2s. 6d.

The Transactions of the Society of Anæsthetists. Vol. II. London: The Medical Publishing Co. 1899.

Manuel Pratique d'Hygiène a l'Usage des Médecins et des Étudiants. Par Dr. Guirand. Deuxième Edition. Paris: G. Steinheil. 1899. F. 8.

Geburtshilfliches Taschenphantom. Von Dr. A. Mueller. Munich: J. F. Lehmann. M. 6.

Atlas und Grundriss der speziellen pathologischen Histologie. Von Dr. H. Dürck. Band I. Munich: J. F. Lehmann. 1900. M. 11.

Chirurgie du Rectum. Par E. Quénu et H. Hartmann. Tome II. Paris: G. Steinheil. 1899. F. 16.

A Manual of Surgical Treatment. By W. Watson Cheyne, M.B., F.R.C.S., F.R.S., and F. F. Burghard, M.D., M.S., F.R.C.S. In Six Parts. Part II. London: Longmans, Green, and Co. 1899. 14s.

The Healing of the Nations. A Treatise on Medical Missions. Statement and Appeal. By J. R. Williamson, M.B. London: Student Volunteer Missionary Union. 1899. 2s.

System der Bakterien. Von Dr. W. Migula. Zweiter Band. Jena: Gustav Fischer. 1900.

*** In forwarding books the publishers are requested to state the selling price.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

A DEMONSTRATION
OF A
CASE OF ANEURYSM OF THE ASCENDING AORTA,
WITH COMMENTS.

(Given at the London Medical Graduates' College and Polyclinic.)

By Sir WILLIAM BROADBENT, Bart., M.D., LL.D., F.R.S.,
Consulting Physician to St. Mary's Hospital.

The case was brought before the College as illustrating the class of "aneurysm of physical signs."

The ascending aorta and the first part of the arch move freely up and down with each beat of the heart, and this mobility is provided for. As a consequence of such provision an aneurysm of this part of the great vessel may attain considerable size and betray its presence by conspicuous signs without pressing upon any important structure. Aneurysm of the transverse or descending division of the arch, on the other hand, very soon implicates nerves or veins or the trachea or the root of the left lung, thus giving rise to symptoms while the physical signs are still obscure and difficult of recognition, whence the name "aneurysm of symptoms."

The patient was a literary man of sedentary habits aged 52. Two months previously he had had pain, supposed to be rheumatic, in the front of the right chest. It had soon subsided, but had led him to notice a pulsation which was easily felt about an inch and a half from the right border of the sternum in the third intercostal space.

The first point to which attention was called was a marked difference between the right and left radial pulses. The right pulse was larger than the left, more sudden, and much more perceptible, and it was worthy of notice, although the difference was not due to the aneurysm, but especially because the aneurysm could not have given rise to it. Had the aneurysm been in the transverse part of the arch the smaller left pulse would probably have been set down as one of the points in the diagnosis. Erroneously, however, for it was not the characteristic aneurysmal modification of the pulse. The distinction was, not that the pulse was apparently weaker or smaller, but that the left pulse seemed to be later in time than the right in consequence of a difference in the form of the pulse wave, which made it less sudden in its incidence. Here the two radial pulses were absolutely simultaneous and essentially similar, the only difference being that the left was smaller. This was mainly due to the fact that the artery was smaller, but Dr. Walter Broadbent has pointed out that in aortic obstruction and regurgitation the pulse is often bisferiens in the left radial and not in the right, which shows that there is some modification of the blood pressure in the arch of the aorta.

Coming now to the examination of the chest. A slight general heave of the right chest was visible, and a distinct gentle pulsation in the third space about an inch and a half from the margin of the sternum. The cardiac impulse could not be seen; there was no enlargement of the veins of the neck and therefore no pressure on the vena cava or right innominate vein.

On palpation, heaving pulsation was very distinct at the point already named; it was felt to be forcible when the fingers were pressed into the space and rather more extensive during expiration than inspiration. Attention was specially directed to the diastolic shock, which though not well marked in this case was easily recognised when the palm of the hand was closely applied to the chest over the pulsating area.

This diastolic shock is one of the most conclusive signs of aneurysm; it is a sharp vibration felt as the heaving pulsation subsides and it coincides with the accentuated second sound heard at the same spot. It is not present over a pulsating malignant tumour.

The cardiac impulse was feeble, and the apex beat displaced upwards and to the left, no doubt from the base being carried downwards by the elongation of the aorta.

The beat of the right carotid was much more distinct than that of the left, corresponding in this respect with the radial pulse.

Nothing of importance was brought out by percussion, except the fact that while there was modified resonance all round the pulsating area which itself was dull on percussion, the resonance in the right second space near the sternum was good. This seemed to indicate that the neck of the aneurysmal sac was probably narrow.

The evidence already obtained was quite sufficient, without the aid of auscultation, to establish the diagnosis of aneurysm of about the size of a small orange springing from the outer side of the ascending aorta, just above its emergence from the pericardium.

Auscultation, however, confirmed the diagnosis and revealed the existence of aortic regurgitation. A smooth diastolic murmur, beginning with an accent, was audible over the lower end of the sternum in the middle line, and less distinctly to the left of this spot. It was more distinct in the recumbent than in the sitting position, and was not heard either at the right second space or over the aneurysm or in the left third space, where a diastolic aortic murmur is usually audible. The absence of the murmur from the usual points may be taken as due to the displacement downwards of the base of the heart, which had led to the tilting upwards of the apex already noticed. The regurgitation could only be slight since it had not given rise to the characteristic collapsing pulse, or called for any compensatory change in the heart, or impaired the aortic second sound.

Over the aneurysm itself, and especially over the part of the pulsating area most remote from the sternum, the second sound was loud, lower in pitch, and more ringing than elsewhere. Had there been any doubt or uncertainty as to the existence of an aneurysm, this modification of the aortic second sound would have been important evidence. In aneurysm of the descending part of the arch, reinforcement of the second sound beyond the left edge of the manubrium, and the change in its character just described, are often extremely valuable as physical signs corroborating an inference from symptoms.

A smooth low-pitched systolic murmur was also heard over the pulsating area, but murmurs scarcely enter into the diagnosis of aneurysm. Murmurs along the course of the aorta are very common from other causes, and may be produced at the valves, or by roughness of the walls of the vessel or by pressure of a tumour upon it, while they are often absent in aneurysm. The one condition in which a murmur may afford important aid in the diagnosis of aneurysm is when, there being no murmur in the right second space or over the right carotid, a murmur is developed in the course of the aorta, and is heard to the left of the manubrium and in the left carotid.

The most important question remaining for discussion is the prognosis, and this, for aneurysm, may be looked upon as favourable. An aneurysm in this situation may reach a very large size without pressing on any important organ, and therefore without giving rise to secondary effects which produce suffering and shorten life, and as a matter of personal experience the cases which have survived longest have been very similar in all respects to that now under observation.

An interesting subordinate question bearing on the prognosis is the probable influence of the aortic regurgitation. It might, as a matter of argument, be urged either that the violent alternations of pressure in the arterial system would tend to distend the sac and prevent the deposit of laminated fibrin, or that the average general diminution of intra-arterial pressure would have an opposite effect. The only safe answer is experience, and it has seemed to me that those cases do best in which aortic regurgitation is present. One patient with a very large aneurysm and aortic regurgitation was under observation for twelve or thirteen years.

In addition to these general reasons for anticipating a favourable course in the present case, percussion seems to show that while the sac is of some size the neck is comparatively narrow; there is good resonance in the second space close to the sternum. Now, paradoxical as it may appear at first sight, there is a better chance of cure of a large aneurysm

than of a small one. This will be understood by a glance at the accompanying diagrams. In the first, where the sac is



small, the communication with the artery is relatively large, and the blood current will sweep through the aneurysm and effectually prevent the deposit of fibrin. In the other the blood contained in the aneurysm is withdrawn from that which is rushing along the aorta and is comparatively stagnant, which affords the desired opportunity for the formation of laminated clot. The treatment is rest in bed for six weeks, dry diet, and the administration of iodide of potassium in considerable doses.

AN INAUGURAL ADDRESS

ON

OUR POSITION AND OUTLOOK.

Delivered at Queen's College, Belfast, November 20th, 1899.

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Upon an occasion like the present, we must not forget the dead. We meet to-day under a sense of a loss which has cast its shadow not only over this College and Medical School, but also over this city and province, and indeed, over a much wider area. The late Dr. Cuming was a man of rare natural gifts, of still rarer attainments, esteemed for his sagacity and honoured for his integrity, trusted as a physician, and beloved as a man. My acquaintance with him extended over a period of 20 years, first as pupil, then as colleague in hospital work, and for the last eight or nine years as companion and friend. I learned to appreciate his singular force and vigour of mind, which delighted to range over the whole field of knowledge, and to which no department of culture was foreign or uncongenial. It was difficult to decide whether his aptitude for science or his love for literature was more pronounced, or whether his strength was more manifest in philosophical discussion or in dealing with the practical affairs of life. It might be said of him as it was said of Linacre, the first President of the Royal College of Physicians of London, and the founder of British Medicine: "It has been questioned whether he was a better Latinist or Grecian, a better grammarian or physician, a better scholar or man." Dr. Cuming carried on with singular success the traditional association of letters and medicine, and belonged to the same intellectual family as Harvey and Sydenham, Paget and Stokes. His mind was essentially Socratic and critical rather than positive or dogmatic. He delighted to let the searchlight of his powerful intellect play round the mysteries of Nature, life, and disease, sometimes with the effect of real illumination but sometimes also (as he would himself have been the first to confess) only to render darkness visible. Regarding many great questions, his last word was suspense of judgment. He always distinguished sharply between what was certain and what was only hypothetical or conjectural, and could never be induced to go a single step beyond the evidence. Like Goethe, when confronted by any positive statement, he would say, "But is it so? is it so to me?" He was remarkably free from bias or prejudice, and eminently wise in counsel, and probably it is by this last characteristic that he will be longest remembered. There were other phases of his many-sided character which can only be briefly touched upon here—his admirable serenity of temper, his complete freedom from the foibles and jealousies which professional life sometimes induces, his playfulness and *bonhomie*, his steadiness in friendship, his loyalty as a colleague. He is truly mourned both within the ranks of the medical profession and by the larger world outside, and he has left a name which I venture to think will not be soon forgotten.

Scientific addresses have of late been largely reminiscent in character. As the nineteenth century draws to its close it is natural that we should mark time, count our gains and our losses, seek to determine our present position, and cast a glance at the road already traversed and at the path which opens in front. Has medicine—one of the oldest of the art and one of the youngest of the sciences—made solid progress during the century, progress commensurate with the notable advances in physical science, in industrial development, and in imperial expansion which have rendered this epoch illustrious? Has our profession grown in scientific precision, in practical utility, in efficiency, and in repute? Has it developed new organs to discharge new functions and sloughed off the organs which were decayed or outworn? To all these questions an answer can be given—perhaps not wholly satisfactory, but still full of encouragement. To appreciate the progress of medical science during the century we have only to place ourselves in the position of a practitioner a hundred years ago. We will conceive a professor of medicine addressing his class in the month of November of the year 1799. He would probably congratulate his hearers on the great progress of his art since the days of Harvey and Sydenham. He would refer sympathetically to the life and work of John Hunter, not many years deceased, and to the light thrown upon surgery and pathology by his powerful and penetrating intellect. He would recount the rise and progress of the great Edinburgh School of Medicine, then in its nascent glory, and tell of Cullen, of the Monros and the Gregorys. He would probably refer with becoming reserve and caution to the startling assertion of a country practitioner down in Gloucestershire, one Edward Jenner by name, that he had discovered a cure for the greatest scourge of the age—small-pox. But if we consider for a moment the many things which our professor could not know, our feeling will be one of commiseration for him, for his students, and for his patients. He knew nothing of chloroform or ether. He had never heard of antiseptic surgery. He was ignorant of the distinction between typhus and typhoid fever, or between scarlatina and diphtheria. He could not recognise the most ordinary diseases of the kidneys. He had no stethoscope, had never heard of auscultation, and his knowledge of diseases of the chest was less than that which the student now acquires in his first month at hospital. He had no ophthalmoscope or laryngoscope, or clinical thermometer. He knew of the virtues of opium and quinine, of iron and mercury, but he had never heard of digitalis, or of salicin, or of cocaine. He knew almost nothing of the physiology of the nervous system, and had never heard of reflex action or of cortical centres. He had never counted the corpuscles in his own blood, or seen a radiograph of his own vertebral column. He probably regarded ovariotomy as criminal. He had never seen a lithotrite. If we reflect upon the various points here enumerated—and the list might be easily expanded—we shall realise how largely modern medicine is a creation of the present century, and how our professor would have been either confounded with surprise or consumed with envy if he could have beheld our own enlarged resources and ampler day. That increased knowledge has led to increased power to cope with disease might easily be shown in detail by pointing to the practical extinction of small-pox and typhus fever, to our success in keeping cholera at bay, to the great reduction in the mortality following major operations, in puerperal conditions, and in phthisis; and finally to the fact that during the present reign alone the average duration of human life in the United Kingdom has increased by three and a half years. It has sometimes been said that these great advances are due not to the soldiers, but to the camp followers of the great army of medicine, less to the physicians and pathologists than to the man who repairs our cisterns or looks after our drains. Let us give all such indispensable workers their due, but let us assert once for all

that sanitation owes everything to scientific medicine, and that in order to prevent disease you must know the laws of disease, its modes of origin and methods of propagation, and that such knowledge can come only from those who make disease their life study.

We conclude, then, that during the now waning nineteenth century our art has shared to a notable degree in the intellectual activity and practical progress of the time. Let us now see if we can define its present position, its relation to the age, its predominant tendencies, and its prevailing doctrines. Has medicine any peculiar advantages to gain or difficulties to surmount in adapting itself to the needs of a democratic epoch? We may rely upon it that a democratic age will take care that the benefits of medical science—so far as they commend themselves to the intelligence of the democracy—shall be widely diffused, and embrace all classes. We may, therefore, look confidently for developments of the Poor-law system, for a higher level of municipal hygiene, for many developments in the field of preventive medicine. But there is another and less agreeable side to the picture. Medical science can be helped very little by legislation, but it can be hampered and hindered much by legislators, and legislators cannot be wholly deaf to the voice of the man in the street, who is perchance a voter, and the man in the street finds that medical science often speaks to him in an unknown tongue, and he misunderstands, and therefore dislikes her teaching and her methods. Goethe says: *Wir sind gewohnt dass die Menschen verhöhnen was sie nicht verstehen.* A good instance of the difficulties which beset medical science in a democratic age is afforded by the proceedings of the late Royal Commission on Vaccination. Both in its inception and in the legislation which arose from its report there was a thinly-disguised concession to popular clamour. The spectacle of a Royal Commission, comprising some of the most illustrious men of the day—with a due admixture of less admirable material—sitting for several years solemnly to retry Edward Jenner's discovery is one calculated to give us pause. If we could count confidently upon the years of the patriarchs, it might be interesting to have Royal Commissions to inquire whether the rotundity of the earth is in very truth a secure doctrine, or whether Newton's views on gravitation are really standing the test of time. But life is short. We cannot be for ever retesting first principles. Progress is possible only by entering into the enjoyment of the labours of those who have preceded us, and making the successful hypotheses of one generation the accepted axioms of the next. During the recent agitation much emphasis was laid upon the terrible consequences alleged sometimes to follow vaccination. Herein did history once again repeat itself. Those familiar with the early controversies about vaccination could find parallels for the most harrowing of these modern tales of horror. We read that in Edward Jenner's time some controversialists with lively imaginations detected resemblances to ox faces produced in children (such was the theory) by vaccination. "A lady complained that since her daughter was vaccinated she coughed like a cow, and had grown hairy all over her body; and in one country district it was stated that vaccination had been discontinued there because those who had been inoculated in that manner bellowed like bulls." The remedy for these difficulties of medical science in a democratic age is to spread the light, to trust to the slow but sure advance of wider knowledge and more enlightened views.

Science advances mainly by bringing isolated facts within the sweep of some wide generalisation—in other words, by enunciating principles and formulating laws. Medical science seeks to discover whether any common cause, or set of causes, can be assigned to the manifold phenomena of disease. It must be confessed that the premature generalisations, based upon insufficient knowledge, of unscientific ages in the past have not advanced, but rather retarded progress; witness the old humoral pathology derived from Galen and dominant for many centuries. It seems not unreasonable to hope, however, that a better fate may be in store for those leading ideas which are now permeating the theory and practice of our art. Of these ideas I may particularise two—(1) that disease is to a large extent due to some toxic substance present in the body, either derived from without or generated in the body itself; and (2) that this toxic substance is in many cases the product of micro-organisms. Those who think that these doctrines do not rest upon any secure basis and will be merely one of the passing fashions of medicine have not sufficiently grasped the significance of the lifework of Pasteur. His researches upon fermentation in the early Sixties, followed by his work in connection with anthrax, septicæmia, and hydrophobia, constitute a memorable epoch in human history, and have literally transformed the face of medical science. I need not stay to remind you how the work of Pasteur has been supplemented by that of Koch and a host of other workers, or with what brilliant results the Pasteurian doctrines have been applied by Lister to the practical problems of hygiene and surgery. We may take it as demonstrated that micro-organisms are the cause, or at least an essential part of the cause, of anthrax, malaria, tubercle, Asiatic cholera, relapsing fever, glanders, septicæmia, erysipelas, and probably of diphtheria and pneumonia. We may further take it as certain that micro-organisms cause disease almost entirely by virtue of certain toxic substances which they produce. These substances are of complex composition. "Some," says Fraser, "are alkaloids, and others modified proteids, and others, again, have altogether unknown chemical composition. Many of them are of extreme and almost indefinitely great activity; one milligramme, for instance, of the dry poisonous constituents of tetanus toxin is sufficient to kill a horse, or six hundred million times its weight of living tissue." But a still greater discovery, and one opening up a new field for therapeutics, was soon to follow. It gradually became evident that micro-organisms generated not only a lethal but a protective substance, not only a toxin but an antitoxin, not only a poison but actually an antidote to that poison. It was shown that the poison produced by certain micro-organisms could, by process of attenuation or cultivation, be deprived of its lethal while preserving its protective properties, and to the successful application of this principle we owe the modern treatment of hydrophobia and diphtheria and the prospect of a rational therapy for cholera and plague. How far this principle will be found capable of general application in infective diseases, and whether pathologists will be successful in discovering the necessary modes of attenuation and cultivation, the future will show. The outlook is certainly most hopeful, medical science has secured a new *organon*, a new method, and one of apparently vast and far-reaching potentialities.

So much may be allowed, but the whole doctrine of the microbian origin of disease is still involved in great obscurity. We seem to have been admitted for a moment into the arcana of Nature, to have got a glimpse of her mysterious methods of destruction and repair, of morbid action and healthy reaction, only to realise how much still remains inscrutable. How is it that one individual falls a prey to the micro-organism of malaria or tubercle while another individual escapes? Why does the bacillus of diphtheria rest harmlessly upon the fauces of one person and produce a fatal disease in the case of another? Why is the same micro-organism in one case entirely inert, in another moderately active, in a third positively lethal? Is it a question of hereditary constitution, or acquired immunity, or of the nature of the media in which the organism grows? May not the soil be as important as the seed, individual proclivity as influential as the presence of the morbid germ? I by no means assert that these questions are insoluble—indeed, an answer to some of them seems already within sight—but such considerations serve to show the extreme complexity of the phenomena with which we are confronted. We may recall that Pasteur himself denied that micro-organisms were morbid entities, and held that their activity was dependent upon the media in which they live and multiply.

The germ theory of disease has not been a mere brilliant and barren hypothesis. On the contrary, it has been the most fruitful speculation ever cast into the field of medical science. It has already revolutionised surgery. It has given us a remedy for diphtheria and hydrophobia, and has opened up a prospect—distant, probably, but hardly doubtful—of the ultimate extinction of all forms of infective disease. It is desirable, however, that we should hold it in a broad and philosophical, not in a narrow and technical, sense; that we should realise how much still remains to be explained and

how important it is that all the elements in the problem should receive adequate recognition.

Another leading doctrine of present-day medicine which has proved to be capable of important practical applications is the doctrine of internal secretion. It has been shown that the thyroid gland, the suprarenal capsules, and the pancreas possess internal secretions, the suppression or morbid alteration of which is the cause of certain well-known and important diseases, such as myxœdema, Addison's disease, and possibly diabetes. It has also been shown that in certain cases the deficiency in the natural secretion can be artificially supplied with the happiest results to the sufferer. There are few more encouraging chapters in the history of medical science than that relating to the recognition of the clinical features and pathology of myxœdema, and the discovery of a rational and abundantly successful treatment. The disease was first described in outline, as a clinical picture, by Gull, who was, however, ignorant of the pathology. A little later Ord completed the description of the symptoms of the disease, on which he conferred the name "myxœdema," and suggested that it was due to disease of the thyroid gland, an organ which had hitherto been regard as of no importance in the human economy, some authorities even suggesting that it was intended simply as a pad to protect the trachea and fill up the contour of the neck. Physiological experiment was then brought into operation, and it was proved that the artificial removal of the thyroid gland in animals produced a condition similar to the disease myxœdema in man. Finally, the therapeutic test was supplied. Portions of the thyroid gland of animals were introduced into the tissues or cavities of the human body, and it was found that some temporary benefit was the result. Then hypodermic injections of a glycerine extract of the thyroid gland of the sheep were tried with much better results. Later, the internal administration of the thyroid gland of the sheep, either in the natural state or in the form of various extracts and dry preparations, was tried with brilliant and enduring success. The whole history of the recognition and cure of myxœdema is one of the glories of medical science in the nineteenth century, but it is something more than a lucky guess or a happy intuition. It is an admirable example of true scientific method, happily devised and patiently pursued to a triumphant conclusion. Further, it supplies medical science with a new principle, and one which may be capable of the most far-reaching applications. It seems reasonable to hope that a cure may be found for Addison's disease in the artificial administration of suprarenal capsules, and that if further investigation should confirm the suspicion that diabetes is connected with disease of the pancreas, we may be on the verge of discovering a remedy for a common and distressing disease. It is not to be supposed that internal secretions are the characteristic exclusively of the thyroid gland, the suprarenal capsules, and the pancreas. It is probable that they are much more widely distributed in the organism, and a field is here opened to physiological research and therapeutic endeavour which can hardly fail to be fruitful hereafter.

Another leading note in the medical science of this epoch has been the application of surgical procedure to diseases of the nervous system. The results have been in a few cases of almost startling brilliancy. Tumours have been successfully removed from the brain, and cases of apparently hopeless spinal disease have been cured by operation. It does not seem, however, that the sphere of surgery in connection with nervous diseases is likely to be an extensive one, and we may, I imagine, anticipate rather an occasional happy hit than any constant or trustworthy reinforcement of our resources in dealing with these peculiarly intractable maladies. Nor does surgery seem likely to have any considerable career in relation to diseases of the thorax. I recently read a book upon the surgery of the chest, and I laid it down with a reassured mind, feeling that in this department at least there is still a field for the physician. If I may use a form of speech which has become familiar, surgery during the last few decades has pegged out more claims than she is likely to be able successfully to work. We physicians, however, gladly recognise the brilliant position which modern surgery has won for herself, we rejoice in her achievements, her prospects, her imperishable services to humanity.

Such, then, are some of the advances, presented in brief and imperfect outline, which have characterised medical science in the nineteenth century, and such are some of the dominant notes of our art towards the close of that epoch. Let us now cast a glance forwards and consider some of the problems which await solution and some of the lines which future progress is likely to follow. While recognising the great progress which has marked recent years and the hopefulness of the outlook, we must avoid a tone of overconfidence. Science has done much, and will yet do more, but Nature remains infinitely mysterious. "My chief care," said Sydenham, "in the midst of so much darkness and ignorance, is to wait a little and proceed very slowly, especially in the use of powerful remedies, in the meantime observing their nature and procedure, and by what means the patient was relieved or injured." Medical science has made large advances since the days of Sydenham, but this philosophic caution is by no means out of date. We shall receive a lesson in humility if we reflect how far at the present day practice lags behind knowledge, how imperfect a use we make of our present weapons while eagerly seeking to multiply their number. Typhoid fever still flourishes in our midst, although it is certain that if we could ensure to the masses of the people pure water, wholesome food, and healthy homes—and this task should not be one of supreme difficulty—the disease would disappear. Consumption still claims 60,000 or 70,000 victims annually in these islands, although we feel well assured that, if overcrowding could be prevented, the principles of sanitation strictly enforced, and the segregation of patients secured, the disease would soon become infrequent. We still lack the courage to apply resolutely and impartially the methods which scientific medicine indicates as necessary to prevent the fever-stricken patient from being a source of danger to his own household and to the community. Preventive medicine and the unrestricted liberty of the individual to spread disease are incompatible ideals. We have long followed the latter ideal, but there are indications that the former is growing in popular favour. The passing of the Compulsory Notification of Infectious Diseases Act and its adoption by all the great urban communities are satisfactory signs of a healthier public opinion, and constitute one of the greatest steps hitherto achieved by civilised communities in the direction of freeing themselves from the incubus of infectious disease. That Act has certainly not been applied hitherto in any severe or oppressive manner. If there has been any failure it has been rather in the direction of slackness and timidity. But at least a beginning has been made, and it is well to bear in mind that sanitary reform can never go far in advance of public opinion. "To know and counteract the causes of disease before they become effective," says Gull, "is evidently the triumph of our art"; but, he very truly adds, "It will be long before mankind will be wise enough to accept the aid we could give them in this direction."

We must all rejoice that the civilised world is at length making a somewhat belated, but still most welcome, effort to stay the ravages of tuberculosis. Much has been recently spoken and written on this subject which did not always proceed from fulness of knowledge or ripeness of wisdom, but we may well forgive something to the zealots of a new crusade, a crusade necessary and salutary, and one which has already borne important fruit. The recognition of tubercle as an infective disease due to a specific virus, and transmissible in ways which are becoming gradually understood, is one of the most substantial advances of the time. If the new pathology suggests lessons of precaution, it affords no justification for panic. Tubercle is infectious, but its infectiousness is of limited range and easily preventable. We may teach with confidence that, granting care and diligence in the disposal of the expectorated matter, the consumptive patient need not be a source of danger to those around him. We may also contemplate hopefully, if with some reserves, the prospects of the hygienic treatment of consumption which is becoming increasingly popular. While entirely approving of the general theory which underlies that treatment, I cannot acquiesce in the proposition recently propounded in the pages of one of our leading reviews, that abundance of fresh air and forced feeding constitute a sovereign remedy for tubercle in all its forms and at every stage. We may content ourselves with more modest antici-

pations, we may claim for the new treatment that it is a substantial advance upon older methods, and that its results, though not seldom disappointing, are sometimes brilliant beyond expectation. Those results will be far more solid and enduring when the disease is more often detected in its earlier stages, and when treatment is entered upon while the local damage is still slight and constitutional involvement absent or trivial. In this disease time is a factor of the first magnitude. The earlier manifestations of tubercle are comparatively amenable to treatment, the later are too often irremediable.

One of the most hopeful features of present day medical science is the ever-increasing closeness of association between clinical medicine and pathology. Never before did the hospital and the laboratory work so fully hand in hand, never before were observation and experiment so fruitfully combined. Clinical physicians are grateful for the large amount of assistance which pathology gives them in the *post-mortem* room in interpreting the problems of disease, nor are they insensible of the somewhat more limited assistance which pathology gives them at the bedside. The physician, without the aid of the pathologist, may practise—perhaps successfully practise—an art; he can never expound a science. The pathologist, without the aid of the physician, often finds the facts of the *post-mortem* room a meaningless tangle, or at best a riddle of which the solution can only be guessed. Pathology is an invaluable aid to clinical medicine, but its function is in the main critical, explanatory, and corrective, rather than dominant or regulative. "The art of medicine," said Sydenham, "is to be properly learnt only from its practice and its exercise." In our profession experience is the supreme test, the bedside is the most important training ground; the course of disease and how it can be modified by treatment are in many cases ultimate facts, which no theory can shake and no argumentation can alter.

To seek to anticipate the progress which awaits our art in the coming years, to endeavour to cast the medical horoscope of the twentieth century would be a tempting task, but I can only lightly touch it to day. That the outlook is hopeful may be safely inferred from the fact that medical science is to-day in possession of new and fruitful ideas and of methods which are still unexhausted. The serum treatment of disease and the doctrine of internal secretion are still only in their infancy. The prevention of tuberculosis, which is really only a phase in the application to medicine of aseptic principles already dominant in surgery, is within sight, although the goal is still distant. The brilliant illumination which Golgi and his school have shed upon the structure and functions of the nervous system may point the way to some therapeutic progress in this most difficult and baffling field. We may well contemplate the future with confidence, feeling assured that whatever disappointments the twentieth century may have in store for us, it can hardly fail to witness the growth and development of our art, and a corresponding gain to the race in comfort, happiness, and longevity.

While I would urge you to spare no labour in the endeavour to master every branch of your art, I think I might invoke the authority of my predecessor in this chair in cautioning you against a narrow professionalism, and in recommending as wide an outlook as possible upon the ever-broadening field of knowledge. The late Dr. Cuming owed no small part of his unique influence to his general attainments and breadth of culture. I know that the medical student of to day is a much-lectured and much-examined individual. It may seem a refinement of cruelty to suggest that he should extend his studies beyond the somewhat capacious limits of the medical curriculum. But onerous as without doubt are his tasks, I think he has still a small margin of leisure. Let me plead with you to give some portion of your limited leisure to the study of good literature. When football and cricket, the bicycle and the cue have had proper and adequate attention paid to them, reserve some margin of time for the poets, the essayists, the historians, and the biographers. If you can enjoy Homer and Horace, Molière and Heine, so much the happier are you, but if not, the field of English literature is wide, it abounds in every variety of literary product, and is practically inexhaustible. Make a daily companion of Shakespeare or Wordsworth, or Tennyson, or, if you prefer, of Scott or Emerson or Carlyle—it matters little which you choose, so long as you choose among the best. While learning the attachments of the latissimus dorsi or the characteristics of electrotonus, do not forget the tale of Troy divine, or the immortal knight of La Mancha or the Prince of Denmark. The great masters of literature will help you to that knowledge of life which is hardly less important to you than a knowledge of your profession. "Most men," says Lowell, "make the voyage of life as if they carried sealed orders which they were not to open until they were fairly in mid ocean." Literature is the record of the accumulated experience of mankind rendered immortal by the salt of genius. Its study can hardly fail to make you more flexible in mind, more tolerant in opinion, more sympathetic in heart. It will also help you to a juster estimate of your profession and of your own place in human society. Your business will be first and chiefly to prevent disease, to cure disease, and to relieve suffering, but you may also each in your sphere do something to hold up the standard of liberal culture and to pass on the torch of knowledge to those who will come after us.

SOME REMARKS ON RINGWORM.

WITH ESPECIAL REFERENCE TO THE EARLY STAGE OF ATTACK OF THE HAIR AND THE PRODUCTION OF PUSTULAR INFLAMMATION.*

BY

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The following remarks fall under two heads. In the first place we desire to demonstrate some drawings which portray the various stages of the attack of the hair by the different fungi; and, secondly, we offer some new observations on the association of endothrix fungi with kerion.

Preparation of Specimens.—By way of preface we may add a word on the preparation of specimens. Stained specimens are striking as microscopical objects, and are invaluable for preservation, but their preparation often demands close attention and time. The fungus located in the interior of the hair sometimes stains with difficulty, and in removing the excess of stain such fungus is very apt to be decolorised. The examination of infected hairs in liquor potassæ (*B.P.*) is easy and convenient, especially, for instance, when it is desirable to study a great number of hairs from a given case. It is also extremely satisfactory as a temporary means of displaying the fungus and its location. The fungus resists the disintegrating action of the potash, and the epithelial structures may be completely dissolved away by prolonged soaking, leaving the fungus intact, and the latter may then be stained.

Exhibition of Drawings.—These drawings are more or less diagrammatic, but they have been carefully made from stained specimens. They show very clearly the fundamental similarity in the attack of the fungi in all cases, whilst illustrating the minor variations characteristic of each group.

Microsporon Audouini.

If from a very early macule on the scalp the apparently healthy hairs are carefully epilated, a proportion of them will afford material for the study of the earliest stages of the attack. Similar features will be met with time after time. Fig. 1 is drawn from a very happy specimen, and shows a quantity of plain branching mycelium ramifying in the epithelium at the mouth of the follicle and encircling the hair throughout its intrafollicular portion. The hair itself is not yet attacked. Fig. 2 illustrates specimens which can be obtained in profusion. The early follicular mycelium has disappeared for the most part, just as it disappears from the surface epithelium, but the intrafollicular portion of the hair is being attacked. The precise site and method of attack have been the subjects of much dispute. We are not disposed to dogmatise beyond pointing out that in many hundreds of specimens we have only observed in microsporon

* Read at the meeting of the British Medical Association at Edinburgh (Section of Dermatology), 1899.

he method here portrayed. The fungus first enters beneath the cuticle in the lower third of the follicle above the bulb, and similarly enters and strips off the cuticle from below upwards towards the mouth of the follicle. It is a remarkable act that when the invading mycelium comes into this



Fig. 1. Fig. 2. Fig. 3.

intimate contact with the hair it assumes peculiar characters. It enters beneath the cuticle, which it strips off, and divides up into short segments, sometimes arranged in linear series, but for the most part forming facetted groups. These segments are at first of large size with thin walls, and constitute the "giant" or "ghost-like" elements described by Adamson and ourselves. Gradually the segments, as they subdivide, become smaller and smaller, and the groups form, coalesce, and gradually constitute the characteristic mosaic closely ensheathing the hair. At the same time some threads enter and grow between the hair fibres, but this never occurs to the same extent as in endothrix and ectothrix.

The correctness of our description of the method of infection is in dispute and awaits confirmation. You will remember that Sabouraud gives an entirely different account of the matter. He described the mycelia as entering the hair, throwing off lateral branches, which in turn give rise to more delicate processes piercing the cuticle, and then terminating on the outside of the hair in an ectospore, as distinguished from a mycelial endospore. He, therefore, maintains that the microsporon is the only one of the ringworm parasites which is capable of passing through a complete developmental cycle (with the production of ectospores) whilst parasitic on the human subject. If such were the case the microsporon would be clearly and widely separated from the other ringworm fungi.

Fig. 3 portrays the completely infected hair. It will be noticed that the mycelium within the hair terminates in a fringe above the bulb, though the amount of this mycelium varies a great deal in different hairs. In decolorising stained specimens this fringe is apt to be lost. It is characteristic of these hairs to see columns of "spores" arranged on the surface of the root, and occasionally the mycelium within grows right down into the bulb. Our explanation is that the mycelium only grows down in this manner when the hair is dead—that is, separated from the papilla.

The Mycelium.—In microsporon, whether in the macules of glabrous skin, or the scalp, or in the hair follicle, the mycelium is as a rule segmented only at long intervals, or appears quite plain, though it often branches irregularly in a characteristic way. But in, or on, the hair there are numerous exceptions to this rule, and the mycelium is often seen to be segmented at short intervals, forming chains of right-angled or rounded or oval segments. These can generally be distinguished by the expert from the chains of the other kinds of ringworm fungi, but sometimes the resemblance is very close. We exhibited a photograph of a remarkable specimen at the International Congress of Dermatology, 1896.[1] Sabourand very naturally hesitated to accept this specimen as an example of microsporon, and he refers to the point in the fourth paragraph on page 513 of the *Transactions of the Third Congress of Dermatology, 1896*. We were, however, able to place the matter beyond dispute by the demonstration of the cultures.

The Fructification.—We have insisted on the desirability of studying the fructifications in the cultures by means of Klatsch specimens, and not by the hanging drop method. By this means we demonstrated that the fructifications of microsporon, of endothrix, and of ectothrixes, were essentially on the same plan, and that the microsporon fructification was not radically different, as maintained by Sabouraud. It was a satisfaction to find our observations in respect to microsporon confirmed by Bodin.

Endothrix.

Fig. 4 is drawn from a hair, apparently healthy to the naked eye, extracted from a very early macule on the scalp. It will be seen that the picture corresponds closely with that in Fig. 1. The hair in its intrafollicular part is encircled by mycelium somewhat larger than that of microsporon, and with a marked tendency to chain formation. The latter feature is frequently seen in the lesions of tinea circinata due to these endothrix fungi, and, when met with, is very suggestive. Fig. 6, for instance, is the drawing of fungus taken from the roof of a vesico-pustule of a tinea circinata of the back of the hand of a woman (Mrs. N.). The culture proved it to be an endothrix. In Fig. 1 you will also notice the fungus entering beneath the cuticle a little way above the bulb, exactly as in microsporon. Sometimes indications are met with at this early stage of the formation of giant segments, but it is in no way comparable to that so frequently seen in microsporon, and here there is no division into groups with subsequent confluence to form a mosaic sheath around the hair. The fungus, on the other hand, always assumes the chain formation, and on entering the hair branches dichotomously both towards the bulb and also towards the free end.

We do not assert that this site of attack of the hair is the invariable one, but we have seen it in many specimens, and it is obviously on all fours with that of microsporon. The fungus eventually packs the hair from end to end (Fig. 5), and

consequently the hair readily breaks, and characteristic very short stumps are the rule; indeed, they are often broken off short in the mouth of the follicle.



Fig. 4.



Fig. 5.

All trace of mycelium exterior to the hair tends to disappear, or is only found exceptionally in the fully infected hairs. Hence the justification of the term "endothrix." In specimens in which some of this extrapilar mycelium persists the microscopical differentiation of the fungus from some forms of ectothrix is undoubtedly difficult, unless many specimens are examined, as has been our invariable custom.

It is a notable fact that the cuticle is not, as in microsporon, stripped off, and this makes the staining and preparation of good specimens the more difficult.

The endothrix fungi, as microsporon, meet with resistance to entrance into the succulent live bulb, and in Fig. 5 the mycelium is seen terminating in a fringe above the bulb exactly as in microsporon. We have constantly met with this appearance. These terminal threads or feelers are often quite plain and smaller than the rest, and bulbous at the ends as in microsporon. The bulb of the hair may, however, be invaded, but probably only in dead hairs.

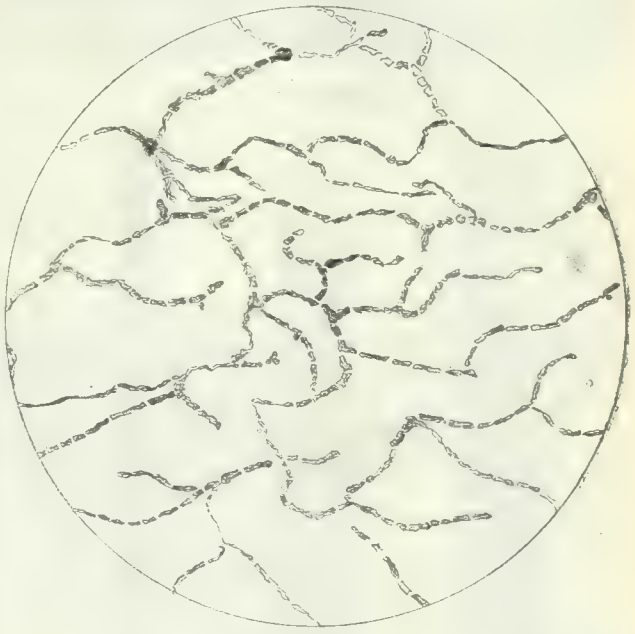


Fig. 6.

We have brought to the meeting a collection of about twenty endothrix cultures, which display in a striking manner the prevailing crateriform type, and illustrate the minor differences of configuration met with. To emphasise the distinct nature of these endothrix fungi it is well to state that all these cases without exception were correctly diagnosed clinically or microscopically before the cultures confirmed the diagnosis.

Ectothrix.

In examining hairs from any given case, or from different cases, of microsporon one sees the same picture over and over again, and so with the endothrix tricophytons. On the other hand there is a great difficulty in presenting any one drawing of ectothrix which will convey a complete picture of the latter fungi. This arises from the fact that much diversity of size and appearance is met with owing to many different fungi being comprised in this group. Moreover, the ectothrix fungi are not common in London, and some are very rare. Specimens from ringworm of the beard, mostly of horse origin, are most frequently seen, and several authors have published illustrations. Fig. 7 is taken from an early stage of kerion of a child's scalp. The dense feltwork of mycelium encircling the intrafollicular portion of the hair is represented in the upper portion of the figure (*a*), as brought away by epilation. In the lower portion (*b*) the fungus is seen entering beneath the cuticle exactly as in microsporon and endothrix. The fungus is somewhat larger than in microsporon, but otherwise the picture is very similar. All the specimens obtained from this case were in this comparatively early stage of attack, but in a photograph from another case published in the *British Journal of Dermatology*, vol. 8 (plate v, fig. 1) the fungus is seen to have formed a very dense circumpilar sheath in which the chain formation which existed was masked by the aggregation of the segments. The chain formation, however, was evident within the hair. Figure 8 portrays such appearances. Here the chain formation so prominent in ectothrix and endothrix is clearly seen, but the persistence of the circumpilar sheath of fungus warrants the application of the term ectothrix in distinction to endothrix. The degree to which the interior of the hair is implicated varies in different cases. Figure 9 displays a hair taken from a case of ringworm of the horse, and demonstrates the large-sized chain formation on and in the hair.

A point has been made concerning the differences in the mode and point of attack in microsporon on the one hand and endothrix and ectothrix on the other. Whilst repeating that we do not wish to dogmatise on this somewhat difficult matter, we have ample evidence that in all the mode and site of attack may be similar, that is, entering beneath the cuticle of the hair in the lower third of the intrafollicular portion just above the bulb.

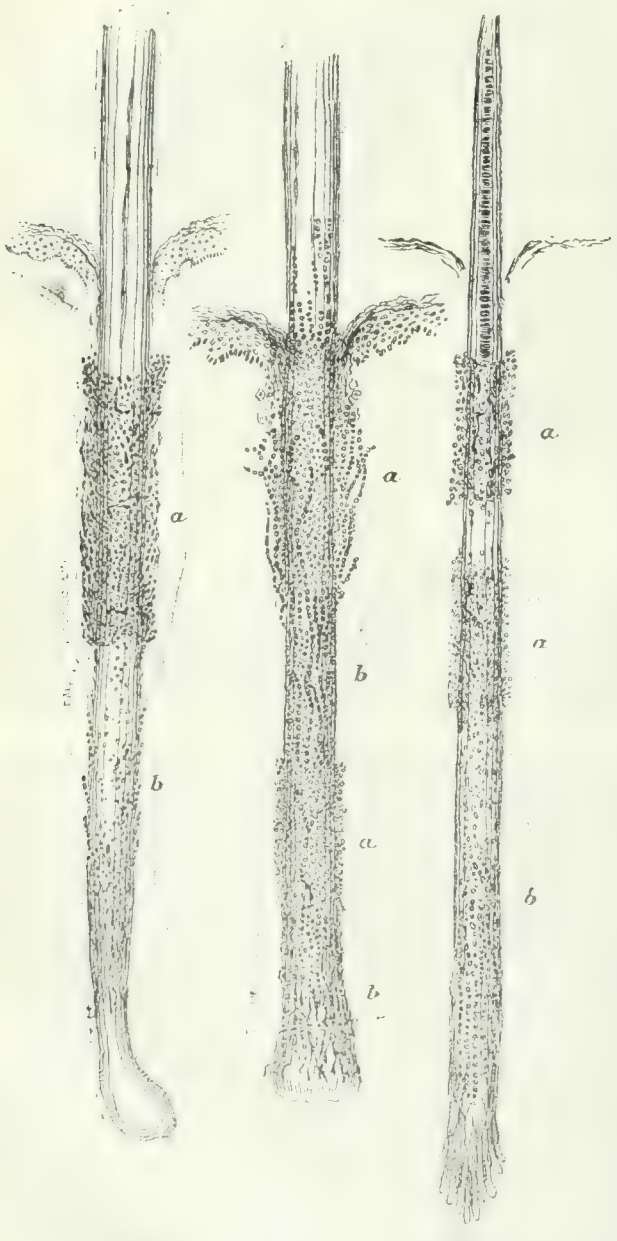


Fig. 7. Fig. 8. Fig. 9.

With regard to the presence of a mycelial fringe within the hair above the bulb in the ectothrix infected hair, it is uncommon in our experience, but we have seen it several times. The explanation of this rarity appears to be that these fungi cause so much inflammation as a rule that the bulb is rapidly detached and the fungus rapidly grows down. It is quite possible that the detachment occurs so early that the fungus may sometimes enter the hair by the root.

NEW OBSERVATIONS ON THE ASSOCIATION OF THE ENDOTHRIX FUNGI WITH KERION.

We will conclude our remarks with the record of some new observations on the association of the endothrix fungi with kerion. We have met with five cases of spontaneous typical kerion in association with endothrix fungi, and one of us demonstrated a case at the Dermatological Society of London,[2] so that there should be no doubt as to the clinical facts. After the examination of many hairs in each case we found the fungus in appearance and mode of attack microscopically indistinguishable from endothrix, and the cultivations have confirmed this view and given us well-marked crateriform cultures. Clinically in four of the cases we could only say that we had to do with kerion, as there was nothing distinctive about the configuration of the parent and satellite patches. In one case, however, long under observation and not quite so highly inflamed as the others, we observed in addition to the main patches pustules perforated by diseased hairs dotted about the scalp singly and in little groups in a manner very suggestive of endothrix.

The causes of this excessive inflammation and pus formation in ringworm remain to be worked out. Sabouraud insisted on the pyogenic properties of certain ectothrix fungi of animal origin, but he combated the idea of kerion being produced by other kinds of fungi. We have certainly cultivated the microsporon from highly inflamed pustular patches of ringworm, which seemed to be rightly designated as kerion. In studying this subject we must recognise that it is not very uncommon to find microsporon patches considerably inflamed secondarily by rubbing and scratching and the application of remedies in susceptible children, and that the presence of pediculi may lead to a secondary pus inoculation, and thus true kerion may be simulated. By kerion, however, we understand the apparently spontaneous production of areas of deep-seated conglomerate folliculitis, often studded with pustules and bathed in pus, or covered with crusts. This condition may be due, presumably, to the direct influence of the ringworm fungus, or to the presence of accompanying pyogenic organisms, and it is not always an easy problem to determine, especially in the presence of pediculi, what is the precise agency at work. In the endothrix cases now under consideration the causation by pediculi was eliminated, and the kerion must have been due either to the fungus or other pyogenic organisms.

In confirmation of the high degree of inflammation which may be associated with the presence of the endothrix fungi we may mention two cases of vesico-pustular tinea circinata due to these fungi. Dr. Fremlin kindly sent us a woman and child with marked vesico-pustular tinea circinata, from which we cultivated an endothrix fungus.[3] We have lately met with a similar case on a woman's hand (Mrs. N.), and again cultivated the endothrix fungus.

NOTE.—Since this paper was written we have seen a baby, aged 6 weeks, with a huge patch of tinea circinata with a vesicular margin covering the greater part of the vertex of the scalp due to an endothrix fungus. It is interesting to note that the child was an only one, and had never been out of the house or mixed with other children. No clue whatever to its origin from animals, or otherwise, could be made out.

NOTES AND REFERENCES.

[1] Depicted Plate II, figure 4, of our paper in the *British Journal of Dermatology*, Nos. 93, 96, vol. viii. [2] *British Journal of Dermatology*, July, 1898, p. 252. [3] See notes on two cases of tinea circinata (*British Journal of Dermatology*, February, 1898, Case 2).

A VACCINATION VICTORY.—Our contemporary, the *Philadelphia Medical Journal*, publishes the following letter to its editor from the Secretary to the Superior Board of Health of Porto Rico: "San Juan, P.R., October 23rd, 1899.—Sir, I have the honour to inform you that the existence of a single case of small-pox is at this moment unknown on this island. Nine months ago a serious epidemic was threatened and the disease prevailed over the whole island. Since then 800,000 vaccinations have been performed. It is possible to stamp out small-pox in Spanish-American countries. There has been no case of yellow fever all summer. No serious diseases have followed the hurricane of August 8th.—Very respectfully, Geo. G. Groff, Secretary." Our contemporary speaks of this triumph over small-pox as "a great victory in Porto Rico, and one of which we may be as proud as of winning any battle."

A CASE OF ADIPOSIS DOLOROSA.

(With Illustrations.)

By W. HALE WHITE, M.D., F.R.C.P.,

Physician to and Lecturer on Medicine at Guy's Hospital.

Adiposis dolorosa is the name first applied by Dercum[1] in 1892 to an assemblage of clinical symptoms which apparently occur in association sufficiently constantly to be considered as a separate disease. Dercum himself has seen two fatal cases; unfortunately the assistant, by mistake, threw away all the organs reserved for histological examination, but as in one the thyroid was small, indurated, and infiltrated, with calcareous matter in each lobe; and in the other the thyroid, although larger than normal, was much calcified, especially in the right lobe, it may be that adiposis dolorosa should be called a disease of the thyroid gland, but our knowledge does not at present allow of a more definite opinion.

The best general accounts of the disease are those by by Collins[2] and Dercum,[3] and the last author when he named the disease gave an excellent description of 3 cases. Spiller[4] also has recorded 3 cases which are particularly interesting; because the first was in a young adult. Other American authors have described cases, one of the latest is that recorded by Eshner.[5] Putting together the symptoms of all the cases I have been able to read and my own case, the following appears to be a fair description of them.

So far all the observed cases have been in women. The onset is usually noticed between the ages of 40 and 60. Some of the patients have been drunkards, and some have had syphilis. The first thing noticed is that fatty masses appear on the trunk or limbs; these are sometimes symmetrical. Fresh masses appear, and at the same time the patient becomes generally obese, so that in a fully developed case she is enormously fat—in one fatal case the fat of the abdominal wall was 7 inches thick—but even then here and there there are large lumps. The hands, feet, and face have escaped in all the recorded cases. These points are admirably shown in the photograph of my patient, and the symmetrical lumps hanging from each arm should be noticed. Dercum's first patient, of whom a photograph may be found in his and Collins's articles, also had symmetrical masses in this position, but a friend tells me that in Uganda, where the native men fatten their wives because they consider fat beautiful, huge masses form in this position. In Spiller's first case the patient was seen early, so that the excess of fat was only evident on one lower extremity and part of the trunk. On taking hold of one of these masses of fat they feel not unlike a varicocele. It has been suggested to me that some of the fat women in travelling shows are examples of adiposis dolorosa.

Pain is a striking symptom. It is usually noticed as soon as and it may be before the fatty masses: it may be felt in parts that do not become fat. It may be very severe, is often sharp, burning, or scalding, and is frequently paroxysmal, but then there is usually slight pain between the paroxysms. The patient often complains early in the course of the disease of a sense of coldness, and if examined when the disease is fully developed is usually found to have greatly diminished powers all over, or almost all over, her body of appreciating pain, touch, heat, and cold. This diminution of sensation varies in different parts of the body in the same patient; in some places it amounts to absolute loss of one or more of the varieties of sensation. Often the masses of fat are intensely tender when grasped. My patient shrieks when she is gripped.

The muscular power is very feeble; my patient can hardly walk, and with either hand can only move the dynamometer through 5 degrees.

In some cases there has been great mental dulness, and one of Dercum's patients died demented. My patient goes out of her mind temporarily. Headache is a common symptom. Herpes, hæmatemesis, epistaxis, early menopause, slight pigmentation of the skin, atrophy of the muscles of the hand, and reaction of degeneration of them have all been described as occasional symptoms.



Fig. 3.—During one of her mental attacks in which she imagines she is a child.

Dercum extracted a piece of the fat during life, and found it to resemble the embryonic type, and one nerve fibre examined showed dense connective tissue with a multiplication of nuclei. He suggests that the disease is a trophic neurosis.

In some cases the disease has been complicated by bronchitis. The mucous membranes, the appetite, the pulse, the temperature, the urine, the speech, the hair, and the optic discs, all appear healthy. In one case the tongue was a little large, but not strikingly so. The skin is usually normally moist. The special senses may be slightly blunted. There is no œdema.

In most cases the disease is progressive. One fatal case died from pulmonary œdema, bronchitis, hypostatic congestion, and all the effects of backward pressure; the other died demented. One case appeared to improve on thyroid, but in my case administration of thyroids did no good.

I append an account of my patient. For help in preparing it I am indebted to Mr. L. E. Stamm, who was her clinical clerk, and also to him and Mr. E. J. Claxton for the photographs. The clothes in Fig. 1 are pinned up above the knees; the masses of fat end so sharply at the ankles, that she looks as though she had on baggy trousers. It will be noticed that she is unlike the other cases in that the disease began early in life. She is only now 22 years old and she has had congenital syphilis. Dr. P. A. Colmer, of Yeovil, under whose care she has often been, writes to me: "I have tried every form of treatment, including thyroid, without any benefit. She has been in the asylum once or twice. There is no doubt her parents had syphilis, and her grandparents on the mother's side are rather peculiar people. She has been in several hospitals but all with no benefit.

A. F., aged 22, was admitted into Guy's Hospital, July 29th, 18 under Dr. Hale White.

All the members of her family are healthy. There is no one related to the patient who has suffered in the same way

Personal History.—Between 11 and 12 years of age the patient began to get stout. The legs first began to enlarge just above the ankle. She had pain in the epigastric region; this was quite independent of meals, and is said to have been "a constant, gnawing, aching pain." There was similar pain with tenderness in the lower lumbar region. By the end of twelve months she had increased in bulk in all parts of her body, and at the age of 13 she weighed 20 stone. At this age a soft swelling appeared on the left side of the neck, anteriorly and about half way down. It burst, and for some weeks discharged a dark brown fluid. It then healed.

At the age of 15 the patient's mind began to be affected. She lost conscious control of herself and her actions, and was very violent. She remained in this condition for several weeks and then recovered, but had no recollection of what happened during the time. Since then she has had repeated attacks of a similar nature, except that she is not violent. In them her mental condition is that of a child, and she plays with toys, etc. This condition may last a week or so. She has had intervals of four or five months between the attacks, but during the last year they have become more frequent, the interval between them being about a fortnight. She knows when an attack is approaching. She "feels something rising from the body into the head." These attacks often commence with an epileptiform fit. She loses consciousness and falls, often hurting herself. She then apparently has convulsions, the fit lasting a few minutes. After this she is quiet, but does not return to her proper senses for some days. She has no recollection of what she has said or done during this time.

At the age of 16 she went to a doctor, who treated her with thyroids. About this time her eyes were affected. She had sharp shooting pains in them, and soon became almost blind. She could only distinguish light from darkness. She was again treated with thyroids, and recovered the sight of one eye in about four months, but the left eye remained blind for some time longer. During this time, when more or less blind, she had no mental attacks; but the latter returned as soon as the sight had recovered.

At the age of 20 she still weighed 20 stone. Ever since the beginning of the illness she had had pain in the abdomen, pelvic region, lumbar region, head, eyes, and limbs. She always describes it as an "aching pain," and it is often bad enough to keep her awake at night. It is always of the same nature, and is not generally in more than one place at a time. It often lasts for several hours, and then disappears for a day or two. The mental attacks are generally preceded by pain in the head and eyes, and followed by pain in the abdomen. Her menstrual periods began at the age of 12, and occur at intervals of five or six weeks. She perspires a good deal, and is not at all susceptible to cold. She complains of thirst.

Condition on Admission.—She is excessively stout on all parts of the body except the hands, feet, face, neck, and head. She weighs 19½ stone. Large masses of subcutaneous fat hang from the posterior part of the limbs, especially the arms and thighs, but the limb is, in addition to this, fat all round. There is no pitting anywhere on pressure, the face is large and a little fat, but the fat here is quite inconsiderable compared to that on the body and limbs. The hair is well grown, and is not coarse; the eyebrows and eyelashes are also quite normal. The nails are healthy, the skin is pale but not abnormally pigmented; it shows several atrophic lines, and is on the abdomen thrown into folds from the rolls of fat; it is moist. The eyes are rather large, and have a dull expression. There is a small white opaque patch at the lower margin of the cornea in each eye. The iris of both eyes is a little irregular as though from old iritis. The optic discs are healthy, except that perhaps the vessels are a little small. The hands and feet are small. There are some scars on the upper lip near the nose, and at the angle of the mouth, which the patient says are due to sores, and her mother says she had a rash not long after birth. It is quite obvious that she has had congenital syphilis. The circulatory and respiratory systems appear normal. There is a slight mucous secretion from the mouth which collects on the lips, especially in the morning when waking. The tongue is perhaps a little large, but very little. The teeth are rather decayed. She has lost three or four, which she says have dropped out. The mouth and fauces appear absolutely healthy. She has a poor appetite, but has no alimentary disturbance. There is nothing abnormal to be made out on feeling the abdomen. She says that occasionally there is a discharge of whitish, thick, foul-smelling fluid from the umbilicus. The urine is healthy, except that it contains some phosphates, mucus, and epithelial cells. The voice is perfectly normal, but she speaks a little slowly, not more so than many healthy people. All over the body, face, and limbs sensation to touch, pain, and temperature is impaired—in some parts so much so that she cannot feel the prick of a pin nor tell the difference between iced and hot water. The masses of fat are very tender, so that the patient cannot bear them to be grasped. She is extremely weak in her muscles, with her hands she can only move the dynamometer through 5 degrees, and she walks with difficulty; the knee-jerks and plantar reflexes are absent, but this may well be from sheer weakness.

The following measurements were taken while she was in the hospital: Just above the umbilicus the circumference was 50 inches; at the axillæ it was 40⅜. The left arm was 20, the right 20⅜, the middle of the right thigh 32 and of the right leg 20⅜. After she had been in a few days she had one of her mental attacks. For a few hours she was violent, made a noise, and could not be kept in bed; then for twenty-four hours she became like a child, said she was 5 years old, played with a doll and a number of toys, and gave her wrong name. After a sleep this passed off, and she was herself again.

She remained under observation in the hospital for six weeks. There was no change in her condition. During this time she had two mental attacks, in which she became quite childlike. An exclusively proteid diet was tried, but it did not diminish her weight. Treatment by thyroid gland preparations was begun, but after receiving Dr. P. A. Colmer's letter it was discontinued. In order to make sure that the description of her history was correct we communicated with her parents and grandparents.

REFERENCES.

[1] *International Journal of Medical Sciences*, 1892, p. 521. [2] *Textbook of Nervous Diseases*, by American authors. [3] *Twentieth Century Practice of Medicine*, vol. xi. [4] *Medical News*, February 26th, 1898. [5] *Philadelphia Medical Journal*, October 8th, 1898.

THREE CASES OF SHARK BITE.

BY WILLIAM BRYCE ORME, M.R.C.S.ENG.,
P.M.O., Port Said.

(With Illustrations.)

THE following account of three cases of shark bite which occurred here on August 8th, 1899, may be of interest:

CASE I.—Arab boy, aged 13, admitted 8.30 A.M. The outer aspect of the left leg presented an enormous wound 10½ inches in length, with its convexity backwards. The inner aspect showed three much smaller and more superficial wounds. Suffice it to say that the knee-joint was completely laid open on its external aspect, so that by slightly bending the limb inwards one could obtain a perfect view of the interior of the joint with its semilunar cartilages. The peroneus longus tendon was divided in two places, and the tendo Achillis partially torn through. After suturing the tendons I inserted three large drainage tubes in various parts, and then united the skin wounds. The joint was left open, all antiseptic precautions taken, and the limb fixed on a McIntyre's splint. Unfortunately the lower wound suppurated freely, a large portion of the skin, 6 inches long, sloughing. The joint, which was at first doing well, and had healed up, soon became distended with pus, so that it had at a subsequent operation to be freely opened on both sides and a large drainage tube inserted. The boy is still alive, but his further history I do not know, as his friends insisted on removing him to his own home.

CASE II.—Arab boy, aged 19. Admitted 9.30 A.M. About one dozen lacerated wounds on the dorsal aspect of right forearm, wrist, and hand, varying from ½ to 3½ inches in length, and not involving deep structures. He was discharged quite cured at the end of the month.

CASE III.—Arab boy (of darker skin than the preceding cases), aged 9, admitted 11.30 A.M. It is not necessary for me to describe this case, as the illustrations do this for me. However, large masses of the erector spinæ were torn and lacerated, so that they had to be cut away. A long drainage tube was placed under the large flap, and a total of 86 stitches inserted. A few days later a small portion of skin 3½ inches in length sloughed; the resulting scar is well shown in the photograph. The boy was at the time of the accident floating on his back, and the large back wound corresponds to the lower jaw of the animal. The great wonder, considering the huge superficial extent of the injury, is that no ribs were broken and the pleural cavity not opened. The boy was discharged perfectly cured on September 2nd.

REMARKS.

There are several points of interest in these cases: (1) That during 10 years only two other cases have occurred at Port Said (one two years ago and one six years ago). Of course I cannot be certain that no other case had been treated in private, but I think it unlikely, as all serious cases of the kind are naturally brought to hospital.

(2) All three boys (as in the two preceding cases) were bathing off the Mediterranean shore, although none were bathing at the same place or at the same time. Many people have expressed the opinion that it must have been one shark which bit all three boys, and I think this very likely.

(3) Not one of the boys was out of his depth at the time of the accident, although the little boy who is figured in the photograph had been swimming out a few minutes before he was bitten.

(4) That bathing off the Mediterranean shore is not very dangerous is seen from the fact that during the hot weather hundreds of boys can be seen bathing daily from the very place at which these unfortunate boys were bitten.

I am told that the most common kind of shark off this coast is the smooth-hound, and I have myself seen two specimens which I believe to be of this variety. From the scanty information I can gain from the boys I fancy it must have been a smooth-hound that bit them. Hammer-headed sharks are also occasionally seen here.

It is said by many old residents in Port Said that there is no danger in bathing in the harbour or canal, as sharks never come where the common porpoise (*phocæna communis*) abounds, as it certainly does in both. I am now told, however, that in a small village about eight miles from here numbers of sharks are caught in a small creek connecting the sea with Lake Menzaleh, which also abounds in porpoises. From the subjoined extract from a newspaper it appears that sharks have come through the canal, and I see no reason why they should not still continue to do so.

Sharks were almost unknown in the Adriatic until the Suez Canal was opened. Now the harbours of Fiume and Pola are so infested with them that residents dare no longer bathe in the open sea.

BY Royal decree, dated October 28th, a State Institute of Serumtherapy, Vaccination, and Bacteriology, to bear the name of Alfonso XIII, has been created in Madrid. The new institute is organised on the lines of the Institut Pasteur.



Fig. 1.—A. F., aged 22. Front view.



Fig. 2.—A. F., aged 22. Side view.

TO ILLUSTRATE DR. HALE WHITE'S PAPER (page 1533).



Fig. 1.—Scar of shark bite.



Fig. 2.—Scar of shark bite.

TO ILLUSTRATE MR. W. B. ORME'S PAPER (page 1534).

substance. The tissue of the tumour appeared to separate these by occupying the spaces between them. The connective tissue supporting this cellular tumour tissue was very scanty in amount, nuclei characteristic of fibrous connective tissue being met with, practically, only in the external (peritoneal) confines of the tumour. There was a certain

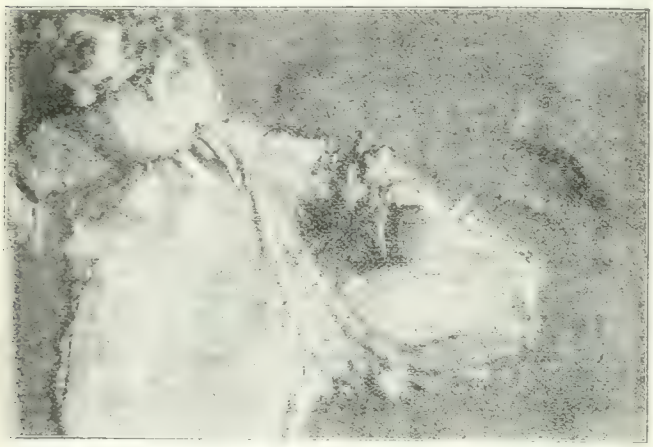


Fig. 1.—Sarcoma of stomach, peritoneal surface. (From a photograph.)

amount of inter-cellular ground substance of very finely granular, almost homogeneous character throughout the tumour. The tumour was tolerably vascular, the thin-walled vessels being of small size.



Fig. 2.—Sarcoma of stomach, mucous surface. (From a photograph.)

Of the other organs it need only be stated that the pericardium contained 2 ounces of fluid, the muscle of the heart being pale. The spleen was of normal size. The lungs were œdematous. Liver, kidneys, and intestines were normal, or only presenting a pallid appearance.

The most important paper on this subject is one by Tilger in *Virchow's Archiv*, Bd. cxxxiii, 1893, on Primary Sarcoma of the Stomach. The plate there given presents considerable resemblance, in the naked-eye appearances, to my case. Both show a great projecting mass on the peritoneal as well as on the mucous surface. Tilger's case presents more of a pedunculated appearance on the serous surface than mine. His case was that of an old woman. In Perry and Shaw's Examination of 50 Cases of Malignant Disease of the Stomach, in 1892, 4 proved to be sarcomatous; 2 of these were in young patients, 15 and 18 years. In a case reported by Dr. Wickham Legg, in 1874, the patient was a girl of 17 years; and it was considered that this was the youngest case of sarcoma of the stomach published up till that time. The case of sarcoma of the stomach reported by Greenhow and Cayley is interesting, as the tumour felt during life was regarded as the spleen, and the detection of a considerable excess of white blood corpuscles no doubt favoured this erroneous view. I have been unable to find records of any definite case of sarcoma of the stomach in a young child.

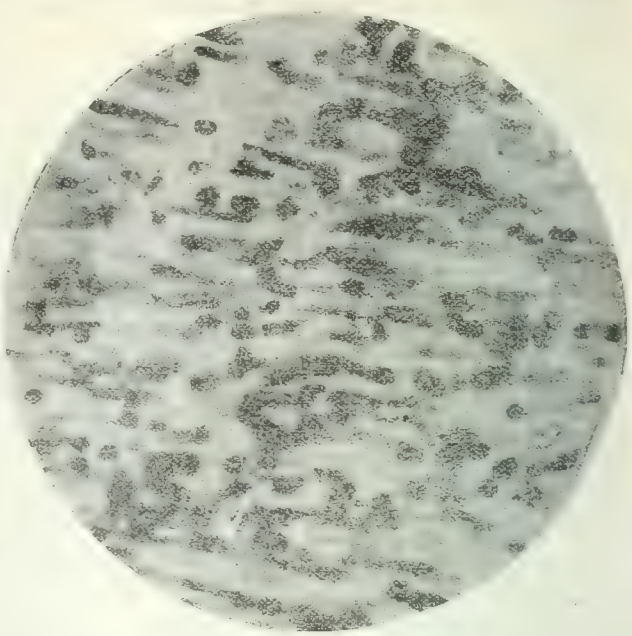


Fig. 3.—Sarcoma of stomach. Micro-photograph of section. High power. Zeiss 4 mm.

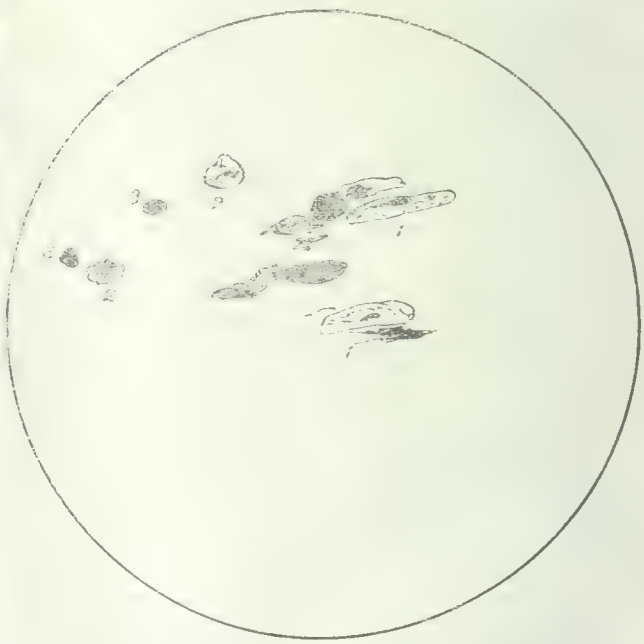


Fig. 4.—Note.—1. Elongated nuclei, with rounded extremities, and faintly staining nucleo-plasm. 2. Same in transverse section. 3. Lymphocytes throughout tumour.

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Cremation in the United States.—According to the *Boston Medical and Surgical Journal*, the total of persons whose bodies have been cremated in the United States up to the present time is about 8,800.

THE GEOGRAPHY AND CLIMATE OF SOUTH AFRICA.

(With a Special Map.)

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Some time ago I wrote an article on the climate of South Africa dealing with the country as a health resort for patients suffering from pulmonary tuberculosis.[1] In compiling the present article with a view to its bearing on the war in South Africa I have drawn somewhat largely on the previous article, but have omitted any reference to aspects of the question which have especial reference to phthisis.

The accompanying map showing the different altitudes in South Africa cannot claim to be absolutely accurate; it however may be regarded as being so for all practical purposes. For the contours I am indebted to Mr. Dickinson of Rugby and Mr. Andrews. It shows at a glance the peculiar character and the physical formation of the country. The tables are compiled from the meteorological returns of the Cape Colony, the first by the late Dr. Guybon Atherstone of Grahamstown, the second by myself. Some traveller has observed that "South Africa is a climate," and although the remark may not be flattering to the general resources of the country, it should be satisfactory testimony to the quality of the climate. The climate of any country being dependent mainly on two great factors—altitude and physical configuration—it will serve our purpose best if we begin with some estimate of these in relation to South Africa. The greater portion of the country is situated in that quarter of the temperate zone which adjoins the Tropic of Capricorn running through the north of the Transvaal and British Bechuanaland.

It will thus be seen that almost the only British territory actually within the tropics in South Africa is the great country of Rhodesia, comprising the whole of the territories under the administration of the British South Africa Company. The whole of that portion of the Transvaal likely to be the theatre of future operations is just south of the tropics; the climate of the country is largely modified and subdued by physical features, for the proper understanding of which a consideration of the geography of South Africa is necessary.

Approaching Table Bay on a typical southern day, a blue and cloudless sky overhead, "the many-twinkling smile of ocean" spreading broad to the westward and Capetown, of which, says Mr. Froude in his *Oceana:* "In all the world there is no place so beautifully situated," lying clear and white beneath the dark stern face of Table Mountain; the traveller will see, if he turns his eyes eastward, perhaps the grandest part of all this vast panorama, a rugged, serried line of noble mountains running in broken masses far inland, and nigh 100 miles from the deck of the vessel on which he stands. And in these mountains may be found an index to the whole of South African geography, and an explanation of the superb qualities of the South African climate.

These mountains are a portion of a huge series of ranges which, in one broad chain following the curve of the coast and running parallel to it at a distance of from one to two hundred and fifty miles, form the watershed of the country and divide the temperate comparatively fertile terraces of the coast belt from the far-stretching and more barren level plateaux of the vast interior. Within the semicircle of these mountains there exists a large interior tableland, consisting of immense plains, now level almost as a lake, with hills like islands planted here and there upon its surface, as in the great Karoo, now rolling in slight undulations over the grass plains of Griqualand West and the Free State. The plains are of the highest altitude in the east, where they approach that portion of the mountain chain running through Basutoland. Basutoland, with its lofty Mont Aux Sources and other peaks nearly 10,000 feet high, has been described as the Switzerland of South Africa, and at the foot of the mountains the plains are some 5,000 feet above sea level. To the westward the altitude of these plains is lower; at Kimberley, for instance, they are 4,000 feet, and still lower to the south and westward. The fall from east to west is very gradual, and scarcely perceptible. On the seaward side of the great mountain chain encircling the plains of the interior, a series of plateaux are again found, which rise from the sea one above the other in great broken steps or terraces. These terraces often present bold fronts towards the sea, and, viewed from the coast, have the appearance of separate mountain ranges. These plateaux have not the regular even character of those of the interior, and are broken by spurs of mountains, the beds of streams and rivers, forest-clad kloofs and gorges, which, with their frowning krantzes (cliffs) and silent unfrequented solitudes present some of the most impressive and beautiful scenery the traveller can ever hope to behold. It is among these coast terraces, which are more broken in Natal than in the Cape Colony, that both Ladysmith and Estcourt are situated, although Estcourt is surrounded by a more level country than Ladysmith.

The foregoing brief sketch of the natural features of the country will sufficiently serve to show that with such diversity of physical conditions a corresponding diversity of climate must necessarily obtain. For the purpose of more clearly understanding these diversities, the natural divisions of the country into, first, the coast terraces, secondly, the mountains, and thirdly, the plains of the interior, must now be considered. On the coast line itself some of the finest and most interesting towns are naturally situated, and Capetown, Port Elizabeth, and East London in the Cape Colony, and Durban in Natal, are names familiar to the majority of English readers, Durban being considerably further north than the other seaports on the Indian Ocean, the climate both summer and winter is much warmer. These coast towns have, from their immediate proximity to the sea, all the climatic characteristics which this situation gives them. Their climate is more agreeable throughout the year, it is less liable to sudden changes, and has less diversity between summer and winter, as well as between day and night temperatures, than that of the inland or, as the South Africans say, up-country towns. The moisture in the air is by far the most trying part of the coast climate during the summer, rendering oppressive and enervating a temperature which, in the dry rare air of the plains, would hardly be felt unpleasantly.

The mean annual temperature of Capetown is 61.9°, or practically that of Nice and the Riviera, which is given as 63°, while that of London is only 49.6°. The mean for the hottest month in Capetown, February, is 69.2°, while that of the coldest month, July, is 54.4°, the difference between summer and winter being considerably less than on the interior plateaux or the mountains. The climates of Port Elizabeth and East London approximate to that of Capetown, while all three are subject to gales from the south-east, which are rendered intensely disagreeable by the duststorms they arouse, and undoubtedly form an unpleasant element in the climate of these towns. But to do the terrible south-easter—so familiar to all South Africans—justice, it is only fair to say that in Capetown, at all events before sanitary arrangements had reached their present stage, it was known as the "Cape Doctor," its searching gusts and eddies effectually clearing even the lowest slums of pestilent odours for many days afterwards.

The rainfall of Capetown is 23.308 inches, or within an inch and a half of that of London, and occurs principally during the winter months from May to September; in this respect being at variance with what prevails in the coast towns to the eastward and in the interior, where the rains fall chiefly during the summer months. There are suburbs of Capetown immediately under the mountain, such as Wynberg, where the rainfall is much greater than in Capetown.

The prevailing winds, both on the coast and in the interior, are south-east in summer and north-west in the winter. Rarely a north wind blows off the deserts of South Central Africa in a hot and stifling blast, but this is never of long duration. Proceeding inland from the coast the land soon rises in abrupt ascents from one vast terrace or plateau to another, and as the distance from the sea increases, there is a marked rise in the summer maximum and a distinct fall in the winter minimum temperatures, while the air becomes appreciably drier. The mean temperatures—very misleading guides as to the real nature of any climate—do not so vary, owing to the greater differences between the night and day temperatures, which produce about the same average or mean as on the coast.

From Capetown the nearest inland towns are those quaint

TABLE I.

	1876-79.	—	Temperature. Mean Temp.	Absol. Max.	Absol. Min.	Mean of Max.	Mean of Min.	Mean Range.	Humidity. Complete Saturation = 100.	Annual Rainfall. Amount in Inches.	No. of Days on which Rain fell Yearly.	Wind.
1	Coast plateau (E.) Port Eliz. Alt. 180 ft.	Summer	66.8	94.5	48.5	75.0	60.4	14.6	75	19.99	49	S.E. N.E. N.W.
		Winter	59.5	97.5	43.0	67.4	53.3	14.1	80			
2	*Midland (Grahamstown) Alt. 1,800 ft.	Summer	63.1	99.0	44.0	74.3	56.6	17.7	74	29.59	77	S.W. W.S.W.
		Winter	53.1	82.0	35.0	63.7	50.9	12.8	77			
3	Mountain Colesberg. Alt. 3,600 ft.	Summer	69.7	101.0	33.0	85.3	54.9	30.4	44	18.35	69	S.E. S.E.
		Winter	49.3	84.5	23.0	66.8	39.2	27.6	73			
1	Coast (W.) Wynberg. Alt. 250 ft.	Summer	63 8	96.0	42.0	76.2	65.2	11.0	75	34.62	92	S.E. N.W.
		Winter	55.3	92 0	41.5	66.4	49.2	17.2	83			

* Midland—Grahamstown—represents fairly the district in the "Coast terraces" about midway between the coast and the higher ranges of mountains where they border the plains.

TABLE II.

	1895-6.		Thermo. in Stevenson's Screen. Absol. Max.	Absol. Min.	Mean of Max.	Mean of Min.	Humidity Saturation = 100.	Inches of rain annually.	No. of Days in which Rain fell in the Year.	Remarks.
Karroo Districts. Alt. 2,000 to 3,000 ft.	Beaufort West. Alt. 2,850 ft.	Feb.	—	—	—	—	—	9.7	27	Temperatures not given.
		July								
	Cradock. Alt. 2,855 ft.	Feb.	99.0	46.0	85.5	57.9	71	14.6	58	1895 only given. Rainfall and rain days above average.
		July	83.0	23.0	68.0	36.0	68			
Grass plains. A.t. 3,000 to 4,500 ft.	Bloemfontein, Orange Free State. Alt. 4,540 ft.	Feb.	95.0	51.0	85.5	59.0	72	26.0	47	Rainfall largely in thunderstorms.
		July	77.0	19.0	67.0	29.0	48			
	Aliwal North. Alt. 4,830 ft.	Feb.	90.5	48.0	80.5	56.2	77	29.0	74	
		July	75.0	20.0	64.0	29.5	60			
	Kimberley. Alt. 4,012 ft.	Feb.	102.6	54.0	92.5	62.0	55	17.9	60	Humidity in September, 1895, as low as 29.
		July	78.0	30.7	70.2	38.8	46			
Mountain Districts. 4,500 to 6,000 ft.	Hogsback Homestead, Cape Colony. Alt. 5,170 ft.	—	—	—	—	—	—	43.6	91	
	Johannesburg. Alt. 5,735 ft.	Feb.	95.0	53.0	80.9	56.7	71	23.2	78	For year 1896 only.
		July	73.0	25.0	65.5	34.6	42			
Rhodesia, Matabeleland.	Hope Fountain. 4,700 ft.	—	—	—	—	—	—	34.6	62	Year 1895 only. Of total rainfall 10 inches fell in December.
Northern Border. N.W. of Cape Colony, adjoining German territory.	Pella, 1,800 ft.	—	—	—	—	—	—	1.20	2	Sandy deserts almost uninhabited.
	Kenhardt. Alt. 2,700 ft.	—	—	—	—	—	—	6.7	14	

old Dutch centres, The Paarl, Stellenbosch, and Worcester. At no great altitude above the sea, they nestle among trees, with water running through the streets in streams before the doors of the houses. Here fruit is of the best, cheap, and plentiful, a perfect godsend in the hot summer weather. Still further inland, 1,700 feet above sea level and picturesquely placed among the mountains, which form a sort of amphitheatre, is situated the little summer health resort of Ceres. The air is cool and bracing, and the town has a few hotels and lodging-houses where the residents of Capetown in search of health and a more invigorating climate frequently spend a few weeks.

Dr. Guybon Atherstone, of Grahamstown, a scientific observer and writer, has, in his contribution to the *Official Handbook of the Cape of Good Hope*, divided the coast terraces of the eastern portion of the Cape Colony into three, as follows:

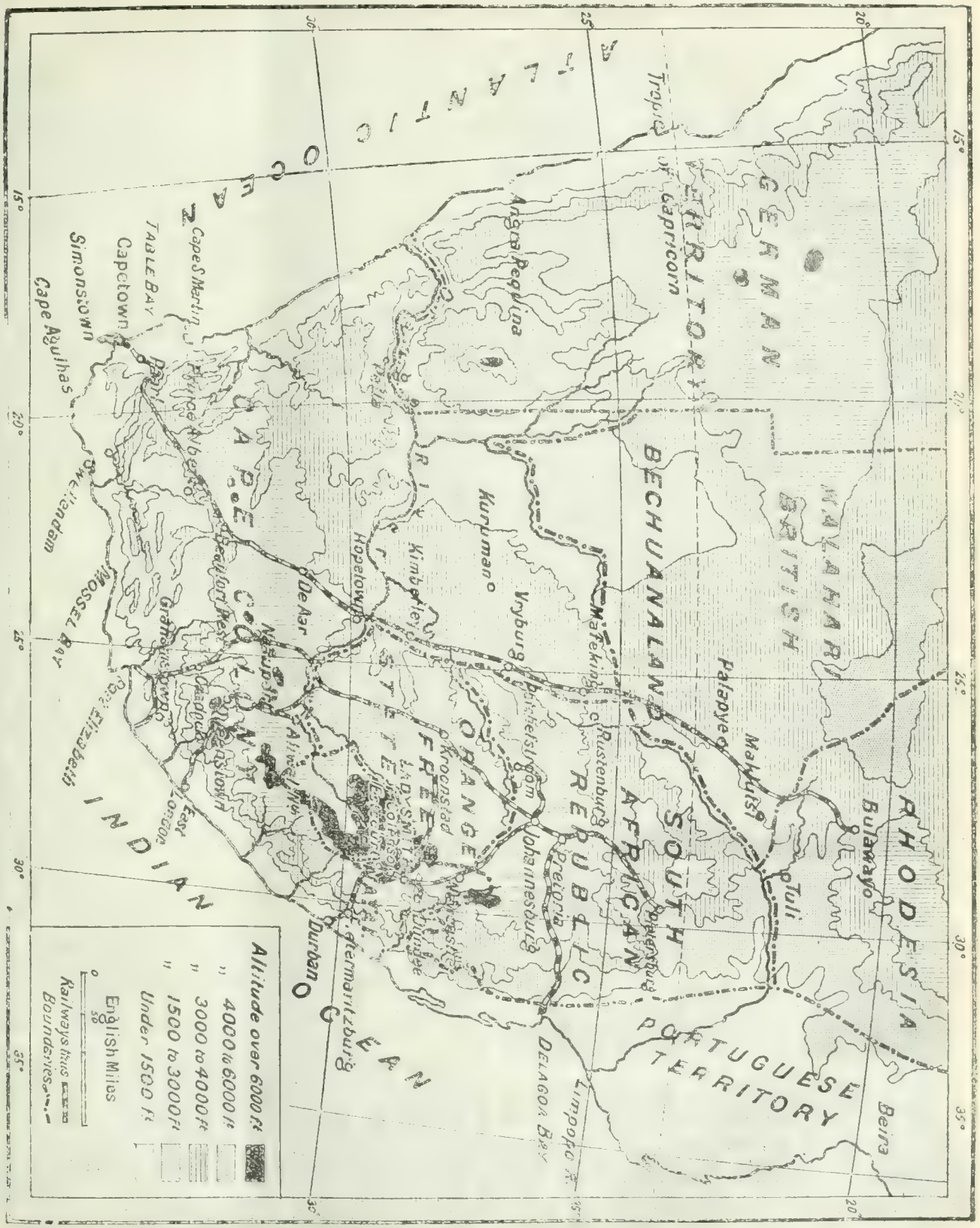
(1) A coast plateau, extending to the base of the first mountain range about 1,000 feet high, embracing the districts of Alexandria, Bathurst, Peddie, East London, and Komgha.

(2) The midland terrace, between the altitudes of 1,000 and 2,500 feet, comprising Albany, Somerset, Bedford, Fort Beaufort, Victoria East Stockenstrom, and King Williams Town.

(3) The upper plateau, from 2,500 to 5,000 feet above the sea, in which are situated the districts of Cradock, Tarkastad, Queenstown, Stutterheim Cathcart, Wodehouse, and Aliwal North.

The third division trenches somewhat upon what I have described as the mountain and interior plateaux regions, and will be considered later on.

These divisions of Dr. Atherstone's are, of course, accurate for that portion of the coast in the Eastern Province of Cape Colony with which they directly deal; they are also of considerable interest as indicating the sort of division which may be applied even to the coast terraces of Natal, although, as already pointed out, these are more broken than in the Cape Colony. Both Ladysmith and Estcourt would have to be placed under the third of these divisions. The oldest and, as a place of residence, one of the most agreeable towns in the Eastern Province of the Cape Colony is Grahamstown. It is situated at an altitude of 1,800 feet, and has a tolerably equable climate with a drier air than the coast towns. It is the old capital of the British settlers who first landed in the Eastern Province in 1820, and, in addition to pleasant



Map of South Africa showing altitudes. (Contours by Messrs. Dickinson and Andrews).

TO ILLUSTRATE DR. A. HILLIER'S PAPER (page 1537).

society, it has some historical interest, and an excellent library and museum.

The following three diagrams are after Theal. They show in a striking manner the peculiar configuration of the country. The Boers of the Transvaal and Free State, as a glance at these diagrams will show, are on the plateau. Their object has always been to force the fighting in the mountain and on the coast terraces, keeping it off the plateau. They succeeded entirely in 1881. They are now fighting under the Drakensberg, in Natal, and will endeavour to meet us in the Stormberg. To the West there are no mountains, and our columns will have to be met on the plateau. The whole country, as these drawings readily show, is a huge tableland.

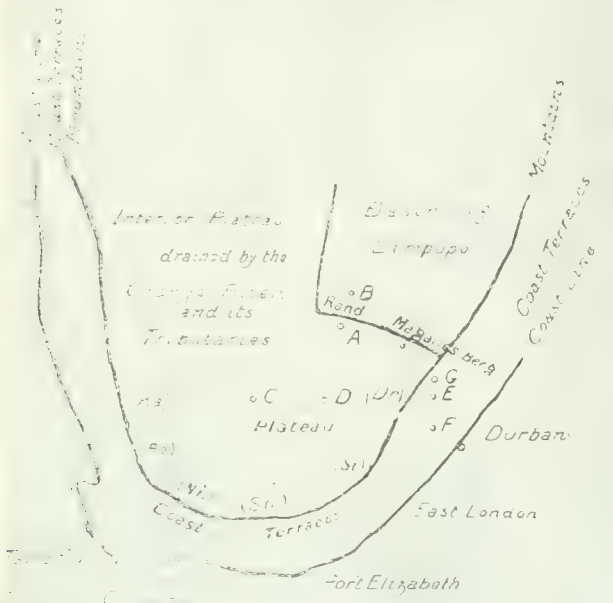


DIAGRAM 1: SOUTH AFRICA.—A. Johannesburg; B. Pretoria; C. Kimberley; D. Bloemfontein; E. Estcourt; F. Maritzburg; G Ladysmith. The mountains are continuous though different parts of the range have different names. Thus from W. to E. are the (Ka) Kamiesberg; (Ro) Roggeveld; (Ni) Nieuweld; (Sn) Sneenberg; (St) Stormberg; (Dr) Drakensberg.



DIAGRAM 2.—Section through South Africa at the thirtieth parallel of latitude, showing the configuration of the land. The heights are, of course, shown greatly increased—the section being diagrammatic and not drawn to scale. A drawing to scale would render the mountains almost invisible.

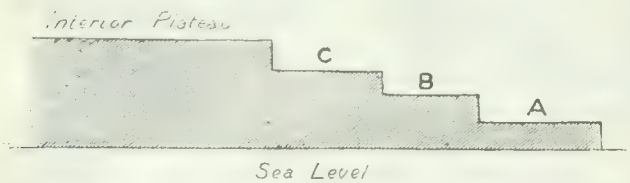


DIAGRAM 3.—Section of typical South African coast, showing sea level, successive coast terraces, A, B, and C, and interior plateau. This diagram more truly represents the relative proportion of flat surface to steep faces in those terraces than Diagram 2.

The region between the Drakensberg Mountains and the sea in Natal is a beautiful one, more broken and wooded than the corresponding region in the greater part of Cape Colony, but hotter in the summer, more enervating, and with a greater rainfall. In the Portuguese territory north of Natal, whether round Delagoa Bay or Beira, the low coast regions and river valleys are hotbeds of malaria, and, although not so dangerous in the winter months, are deadly in the summer. On the coast in Natal itself, although the summer heats are great, and the moisture renders the climate enervating, the amount of malaria which occurs is small and by no means severe, the fevers which arise there would many of them come under what Dr. Manson calls "unclassified fevers of the tropics." Travelling inland from any of the coast ports in South Africa the mountainous fronts of the coast terraces are successively ascended until the main chain of the mountains is reached. Following the curve of the coast these mountains attain their greatest altitude in Basutoland; from there to the north through Natal the altitude is considerably less, and the passes over the Drakensberg from Natal are by no means precipitous, and may be crossed by waggons without much difficulty. In the southern Transvaal a range occurs westwards, and at right angles to the main ranges. This is known as the Magalies Bergen, of which the Witwatersrand is a section. This range of mountains, or perhaps in view of their insignificant size, placed as they are on a lofty plateau, we should more correctly speak of them as hills, forms the great watershed of the country. The Limpopo takes its rise to the north, and flows on its course to the Indian Ocean; the streams from the south are all tributaries of the Vaal and Orange rivers, which, when joined form the great river of the interior plateau, draining an area of between 300,000 and 400,000 square miles, the greater portion of which to the westward is a desert and almost rainless country. The Magalies Bergen are, moreover, a sort of natural division placed between the healthy and the unhealthy portions of Eastern South Africa. To the north, following the valleys of the Limpopo and its tributaries, malaria is very prevalent and severe; the bilharzia parasite also infests the Limpopo. To the south malaria is scarcely found, and curiously enough, in none of the streams running south of the Witwatersrand does the bilharzia parasite occur, although it is again prevalent on the Natal and Eastern Province coasts. The most important point about these mountains is that the Witwatersrand is the site of the Johannesburg gold fields.

Johannesburg is placed at an altitude of 5,600 feet; the barometer ranges at about 24.5 inches, the temperature in summer is never high, and the nights are delightfully cool; the air is rare without being too dry to feel pleasant, and the atmosphere has an exhilarating and bracing effect, which entirely prevents the feeling of langour so frequently experienced during summer on the coast. The two great drawbacks are the terrific thunderstorms and hailstorms in the summer and the duststorms in the winter. Pretoria, considerably lower than Johannesburg, lies under the Magalies Bergen at an altitude of 4,450 feet. It has a hotter and less invigorating climate than Johannesburg, and although at about the same altitude as Bloemfontein and Kimberley the air is not so dry. The interior plateaux already referred to are the great plains lying inside the semicircle of mountains which run parallel to the coast, and are bounded by the Magalies Bergen to the north-east. They are drained by the Orange River and its tributaries, and comprise the Southern Transvaal, the Free State, Griqualand West, of which Kimberley is the chief town, British Bechuanaland, and the northern part of the Cape Colony known as the Karroo. To the north-west they are continuous with the Kalahari Desert, and to the westward with Namaqualand, though for practical purposes we need not consider the last two regions. These plains lie at an altitude of from 2,500 to 4,500 feet. They have an extremely dry atmosphere, and, especially towards the west, a very limited rainfall.

Spring and autumn can scarcely be said to exist on these plateaux, the season changing rapidly from summer to winter and *vice versâ*. The rain falls almost entirely in the summer, generally ushered in by thunderstorms. The winter is undoubtedly the pleasantest and most healthy season of the year; then the skies are clear, both day and night. The air is dry, exhilarating, and not too warm. The nights are cold and a fire is generally necessary or at least desirable in the sitting-room, and warm clothing at this time of year is as necessary as in England. For although the temperature at midday is occasionally as high as 75°, the mornings and evenings are cold, and not infrequently throughout the day a cold wind blows.

The principal objection to the summer, of which it must be borne in mind January and February are the hottest months, is the heat by day, 105° in the shade being sometimes reached; but from this relief is not infrequently found by a thunderstorm in the afternoon, and always by a big drop in the temperature at night. The cool nights are the most delightful feature of these high plateaux, and they distinguish the climate from that of so many other subtropical countries. The soil throughout the plains is shallow, with a hard rocky subsoil. Water, even after the heavy tropical downpour, quickly runs off, and while gratefully cooling both the air and the land soon leaves the latter dry without its dust, and the former balmy and delightful.

The dewpoint is seldom reached, the degree of saturation of the atmosphere, even with a big drop in the night temperature, not being sufficient to cause dew to be deposited; so that by night and day, except after the occasional summer downpour, both earth and air are dry. As practical proof of the peculiar dryness of the air on these plains, guns and surgical instruments carried in a waggon on the open veld never rust, and anyone with a delicate skin requires vaseline or some other ointment as an occasional application to the small cracks and blisters produced. The thunderstorms at these high altitudes—more terrific on the mountains and at Johannesburg even than on the plains, although grateful to every living thing in their after-effects—are anything but agreeable at the time of their occurrence, especially to the traveller caught in one. To the majority of people they are, however, not more than disagreeable, and these grand displays of heaven's artillery inflict upon them neither fear nor suffering. But in some few people, in whom a peculiar susceptibility to a highly electrical condition of the atmosphere appears to exist, this influence, combined with the continuous flash and roar of the storm, produces a condition of nervousness and even alarm. Froude, who at the time was travelling by waggon in the south of the Transvaal, has described one of these storms in his diary, and the following is that distinguished writer's graphic account:

> The lightning was rose colour, deepening at times to crimson. Each flash appeared like a cross, a vertical line seemed to strike the earth, a second line crossed it horizontally. The air was a blaze of fire; the rain fell in such a deluge that the plain in a few minutes was like a lake. Of course we could not move; the horses stood shivering up to their fetlocks in water. At one time there was no interval between the flash and the report, so that we were in the very centre of the storm. The sense of utter helplessness prevented me from being nervous; I sat still and looked at it in mere amazement. In two hours it was over, the sky cleared almost suddenly, and, with the dripping landscape shining in the light of a summer sunset, we splashed on to the river.

From this description it will be readily seen that a large proportion of a limited annual rainfall may come down in two or three storms.

The great plains naturally arrange themselves in two broad divisions; the one, the plains of the Great Karroo, are covered with the Karroo bush which leaves patches of bare earth visible all over the surface; the northern or second division consists of the rolling grass plains which cover the Free State and Griqualand West, and extend to the Magalies Bergen in the Transvaal.

Kimberley and Bloemfontein are situated in the midst of the grass plains. Some of the Little Karroo towns deserve a reference here. In the western portion of the Cape Colony, on the main trunk line of railway from Capetown to the north, is situated, well out in the heart of the great lone levels of the Karroo, the little town of Beaufort West. It has an altitude of 2,850 feet, a very limited rainfall, and contains some shaded streets and gardens. Seen from the railway as the train approaches, it looks like an oasis in the midst of the brown, parched country around. The heat in the summer is the most trying feature, and an occasional trip to the mountains at this time of year will be found refreshing. Further east, at about the same altitude, are the towns of Graaf Reinet, Middelburg, and Cradock, the last named being an especial favourite resort with invalids, on account of the mountains in the neighbourhood, which render the scenery less monotonous than it becomes further out on the plains.

Cradock has also another point of interest; it is the centre of a great farming district, principally occupied by the well-to-do English colonists of the Australian squatter class. Here South African country life may be seen at its best. Stock breeding of all sorts, especially horses, sheep, and ostriches, is extensively carried on, and good sport, both with rifle and gun, is obtainable. Many of the wealthier farmers here—and for that matter elsewhere in South Africa—live very much the life of English country squires, and the English lady or gentleman, with some knowledge of, and love for, the country life of England will find many congenial spirits in this interesting and in many respects charming neighbourhood. Dr. Arthur Fuller, of Kimberley, in his excellent little work *South Africa as a Health Resort*, gives the annual rainfall of Cradock as 9 inches, or rather lower than the returns for 1895 and 1896, and writes of this town as follows: "I should therefore advise no invalid to leave South Africa uncured without, if it is in his power, first trying this, one of the best health resorts." The Karroo is covered by a short scrub or bush growing in scanty patches and tufts, from a few inches to a foot in height. These plains take their name from this shrub.

Further north, in the second or northern division of the plains are Griqualand West, the Free State, and the Southern Transvaal. The Karroo bush gradually disappears, and the country becomes an undulating prairie covered with grass. In Griqualand West is situated Kimberley, the site of the famous South African diamond mines, at an altitude of about 4,360 feet. Kimberley is, after Capetown and Port Elizabeth, the most populous and important town in the Colony. It has over 20,000 inhabitants, black and white; it contains a general hospital, and has recently had established a sanatorium for the use of invalids. This sanatorium, standing as it does on the highest ground in the neighbourhood of the township, is at present used as headquarters for the garrison. Kimberley has many excellent public institutions, including public gardens and large library, theatre, and municipal buildings. Owing to its summer heat, which is often great, and its dust-storms, it does not form an ideal health resort.

In the Free State, Bloemfontein, the capital, at an altitude of 4,500 feet, is a pleasant little town, though the sanitary arrangements are said to be very deficient, and during the summer typhoid is unusually rife there.

In Bechuanaland, the Northern Transvaal, and Rhodesia, as the tropics are actually entered, the heat becomes greater, although in all these territories the land above 4,000 feet is healthy, and has approximately the same climatic characteristics as the plateaux further south. In the valleys and on the coast, as lower altitudes are reached, however, the heat becomes very intense, and malaria is prevalent and severe during the summer and early winter months; and although burning off the rank vegetation and the introduction of stock and agriculture will all tend to diminish the virulence of this disease, it is doubtful whether in these tropical latitudes the low country will ever be quite healthy for Europeans. Buluwayo, the capital of Southern Rhodesia, at an altitude of about 4,000 feet, is the centre of a healthy district with an excellent climate.

From the Tables I and II and the accompanying map, it will be seen that on the interior plateaux both altitude and rainfall are higher in the east as the mountains are approached, while temperature and dryness of the atmosphere increase towards the west as the distance from the mountains increases, even Kimberley being sufficiently west of Bloemfontein to illustrate this climatic difference. What discrepancies there are in localities not far apart from one another in the incidence of rainfall occur principally in or near mountains, and of this the Cape peninsula is the best illustration.

The map, in which as much as space would allow has been sketched, will be found a ready guide to the approximate altitude of the different parts of the country. Reference to the rainfall has been made so frequently that it is as well to say that away from the coast and mountains, even on the higher plains themselves, rain is so rare as to be little considered in everyday life except for the short summer deluges falling in a dozen or so thunderstorms during the season. Sunshine is the normal condition. In the vicinity of Capetown, where cloud is of much more common occurrence than on the plains, and at the Royal Observatory, which for a portion of the day is in the shade of Table Mountain, the daily average of bright sunshine recorded during the months of November, December, January, and February, 1896, was

ten hours. It is of course less in the winter, which is Capetown's rainy season, and when more cloud occurs, but ten hours is not more than the summer average on the plains, while on the plains in the winter clouds are rarely seen. In fact, on the plains over which our army will march through the Free State and Transvaal the sun reigns supreme. In the morning his coming is ushered in with a fringe of crimson light over half the wide horizon, which rapidly spreads upwards into the clear blue of the heavens. Thus comes the dawn, the *rooi dag* of South Africa, an hour familiar to all her children. It is then in times of peace the day's labour begins in earnest. It is then in times of war that the native and the Boer alike commence their attacks upon the enemy. By the sun throughout the day the native both marks the hour and steers his course. When evening approaches the sky is again resplendent, bathed in orange and green and crimson, and throwing dark purple into the shadows of the hills. Abundant sunshine, a dry, rarefied, and exhilarating air, and a temperature which is only at midday excessively hot, are the leading features of the climate on the plains. The habit of the Dutchman in travelling over this high veld is to remain quiet and in shelter from the sun during the middle hours of the day. This plan is undoubtedly a wise one, and if practicable should, when the heat is severe be followed by our army. The early morning, the evening, and often the hours of the magnificent moonlight nights are the times for movement. One hour of work or marching at midday is more exhausting than three in the early morning or at night.

REFERENCE.

1 *Practitioner*, June, 1898.

THE RESTLESSNESS OF OLD AGE AND ITS TREATMENT.

BY CLEMENT DUKES, M.D.LOND., J.P.,
Physician to Rugby School and Senior Physician to Rugby Hospital.

IT has fallen to my lot to have had under my care from time to time a considerable number of old people, whose ages ranged from 75 to 96, free from disease.

The lives of some of these old people are frequently a burden to them, and they occasion considerable distress to friends who look after them by their incessant restlessness by day and by night. During the day they are never quiet. If they sit down they want to get up and walk about. Then they sit down, and in a few minutes are on the move again. This want of peace is very wearing to themselves and those who live with them. During the night they are merely restless, and toss and turn about in bed; or sleepless; or they have to sit up in bed or in a chair, with dyspnœa. Consequently they arise in the morning unrefreshed and unrested to resume the day performance.

It arises, in my opinion, from the gradual age-failing of the scavenger organs. Their incompetence fails to depurate the blood sufficiently. And this lack of perfect removal of the products of wear and tear occasions increased arterial tension. Hence the restlessness.

While the heart beats with the natural feebleness one expects, I have been frequently told what a very good pulse the patient has, which is really the pulse of rigid arteries.

The administration of carminatives, sedatives, or digitalis merely aggravates the condition. Where the cause is recognised, and mercurials given, many of these cases are considerably relieved; but I have seen a grain or two of blue pill produce a cold clammy sweat and considerable depression in the aged; while 3 grains of grey powder once entailed salivation in a very old lady. The remedies, however, which bring calm and peace, and remove all the discomforts, are those which relieve the arterial tension, such as nitro-glycerine gr. $\frac{1}{100}$, and even better still, because it requires to be taken less often, erythrol tetranitrate gr. $\frac{1}{2}$ to gr. 1.

I have now under my care one lady, aged 85, who, instead of having such terrible nights that she had to sit in a chair most of the night, and she and her friends longed for her departure, is now able to sleep nearly all night, comfortably lying down, under the influence of erythrol. I have another lady nearly 80 whose day restlessness is so completely relieved by nitro-glycerine that she is able to pass her days in peace,

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A BRASS SCREW SWALLOWED BY AN INFANT AGED FIFTEEN MONTHS.

AMONG the variety of foreign bodies which have been swallowed by children and safely expelled *per rectum* many have been of such extraordinary size and shape as to cause wonder how the difficulties of transit through the alimentary tract could be so easily overcome. A good illustration of such a case has recently come under my notice.

A child, aged 15 months, was brought to me on April 24th with a history of having swallowed a brass screw. (The exact size and shape are shown in the figure.) The mother stated



that whilst the child was playing her attention was attracted to it by a sudden, severe, and prolonged attack of coughing and choking. Suspecting some obstruction she placed her finger in the child's mouth, and felt the screw at the back of the throat, and in her endeavours to remove it; it was swallowed. The child was at once relieved, and when brought to me half an hour later showed no indications of discomfort. The mother stated positively that the child must have swallowed the brass screw. Vomiting failed to expel the foreign body.

Considering the large size of the screw, and the fact that one had to deal with infantile structures, an element of doubt arose as to the probability, even possibility, of expulsion by natural means. It seemed as though the narrow lumen and orifices of the alimentary tract would prove insuperable obstacles.

Assuming, then, the presence of this foreign body in the stomach, was an immediate operation for its removal justifiable? Or, on the other hand, was it advisable rather to trust to natural means of expulsion under careful supervision and dieting?

My decision in favour of the latter course rested mainly on the acceptance of a principle which I had been led to conclude from previous experience of similar though less extreme cases, namely, that in children, if a foreign body of whatever size or shape can pass through the œsophagus into the stomach, it is possible for the same to pass through any other orifice of the alimentary tract. The child was accordingly carefully watched and dieted; instructions were given for the examination of every evacuation, and on the fifth day the screw was passed without any difficulty. There was no abnormal deviation from the child's usual health and spirits throughout.

Although the possibility and risk of such foreign bodies being impeded in their progress must ever be a source of anxiety, yet this and similar successful results demonstrate the facility with which foreign bodies can pass safely through the alimentary tract and its orifices. We may therefore expect, even in such extreme cases, a successful issue without having recourse to surgical interference.

Nottingham, A. WARING, M.B.Lond.

RUPTURE OF THE HEART.

A WOMAN, aged 73, suffering from left hemiplegia of four years' standing, was seized, while taking food, with a sudden attack of asphyxia. Violent respiratory efforts set in, and before assistance could be rendered, death ensued within a minute of the onset of the symptoms.

Post-mortem Examination.—An old, and partially absorbed, blood clot was present in the right cerebral hemisphere. All the cerebral vessels were atheromatous. No food was present in mouth or pharynx, but impacted in the larynx between the vocal cords, and completely blocking the orifice, was a small piece of cooked meat. The lungs were deeply congested, and some patches of hæmorrhage between the air cells were observed. The pericardium was fully distended with dark-coloured clotted blood, completely enveloping the heart, which was firmly contracted. On the anterior surface of the left ventricle was a small rent, a quarter of an inch in length, near the septum. The cardiac chambers were empty. The valves were competent. The coronary vessels and aorta, in common with the entire arterial system, presented marked atheromatous changes. Extensive fatty degeneration and infiltration were present in the cardiac muscle, which was very soft and friable.

Remarks.—Death seemed too sudden to be due alone to asphyxia, and a recurrent attack of apoplexy, induced by the violent efforts to remove the obstruction in the larynx, was suspected. The *post-mortem* examination showed that, while the vessels remained intact, the diseased cardiac muscle had given way before the strain.

E. S. BELL, M.D.Brux., L.R.C.P.Lond., M.R.C.S.Eng.
Rotherhithe, S.E.

VESICAL CALCULUS: RUPTURE OF BLADDER: SUPRAPUBIC LITHOTOMY: RECOVERY.

L. R., aged 50, had had symptoms of stone for six years. On sounding the bladder, the stone appeared fairly small. The patient was directed to empty his bladder. I then injected four syringefuls of boracic lotion without a catheter. The resistance, which was considerable, diminished rather suddenly, while the third syringe was being emptied—that is, when rather less than 9 ounces of fluid had been injected. As, however, the patient came just at that time under the full influence of the anæsthetic, I hoped that the lessened resistance was due to cessation of voluntary expulsive effort. I proceeded to crush the stone. This presented no difficulty. After ten minutes, withdrawing the lithotrite, I passed the evacuating catheter. Although not blocked, only 2 or 3 ounces of fluid passed from the bladder. The diagnosis seemed indisputable. Rapidly cleaning the abdomen and boiling the necessary instruments, etc., I made an incision from 1 inch below the umbilicus to the pubes, prepared to find extravasation of lotion and fragments of stone into the peritoneal cavity. As, however, I reached the extraperitoneal cellular tissue, I found colourless fluid rapidly welling up into the wound, so, drawing up the pouch of peritoneum, I opened the bladder, extracted the stone and its fragments (300 grs.), and inserted a drainage tube. The rupture was behind the fundus. I could not discover any special reason for it. The patient made a good recovery.

The interest and importance of this case is that a bladder should rupture under a pressure of 9 ounces of fluid, for there was no residual urine. An accident of this kind is unusual, and, as it might happen in the hands of any surgeon, the case seems worth placing on record.

Kashmir. ERNEST F. NEVE, M.D., F.R.C.S.Edin.

A CASE OF POISONING BY THE PRIMULA OBCONICA.

I AM informed that owing to the liability of the workers among the primula obconica to poisoning by it, the flower not being in great demand, less and less will be grown. Consequently cases of such poisoning will become much less frequent than is the case even at present. The following is a case which has come under my observation:

A man, aged 20, employed in the Horticultural Gardens here, consulted me for a rash on both his arms and on the right side of his face. Twenty-four hours previously, for the first time, he had been engaged in cutting the primula obconica, and four hours after, whenever his arms had come into contact with the juicy stems, intolerable itching and redness (preceding the itching) had resulted. He rubbed his right eye with the back of his hand, and a few hours later the lids and adjacent skin became inflamed, irritable, and swollen. On examination I found no constitutional disturbance. The skin of both forearms and the backs of both hands were covered with a closely-set eruption of papules and vesicles on a raised red base, the rash having an abrupt termination at the healthy skin. The rash was very symmetrical, the skin of the right upper and lower eyelids was very red, with a sharply-defined raised edge, and there was considerable œdema of the lids. The erythema was very vivid, and, unlike that of the forearms, showed neither papules nor vesicles.

The treatment consisted of the repeated application to the arms of a paste of calamine, chalk, lime water, and olive oil, and a boracic lotion to the eyelids. In the course of a few days the inflammation subsided.

The case, I think, is worthy of record, since there was an entire absence of general poisoning, the polymorphism of the eruption on the arms, the symmetrical behaviour of this latter rash, the erysipelatous character of the affection attacking the eyelids, and, lastly, the very short incubation period.

Chiswick, W. BERTRAM COOPER, M.R.C.S., L.R.C.P.

BILHARZIA IN MESOPOTAMIA.

IN *Tropical Diseases*, by Patrick Manson, M.D., F.R.C.P., published by Cassell and Co. in 1898, the geographical distribution of bilharzia hæmatobia is stated to be limited to Africa and its island dependencies. I regret to say the disease is widely spread throughout Mesopotamia, occurring in those living in towns and villages situated on the banks of the rivers Tigris and Euphrates. I have been able to trace it up to about 900 miles from the mouth of the united rivers, but so far no patients have applied for treatment who dwell upon the river where the influence of the tide of the Persian Gulf is felt. Vesical calculus is more prevalent above Bagdad, where apparently there are more cases of bilharzia hæmatobia.

P. S. STURROCK, M.B., B.C.,
Church Missionary Society, Bagdad, Turkish Arabia.

PRECOCIOUS DENTITION.

IN connection with the case of precocious dentition mentioned in the EPITOME of July 8th, I may mention that I had a similar case in the autumn of 1896. The infant, a girl (sixth labour) was delivered at 7½ months. Labour was induced on account of justo-minor pelvis. The baby was perfectly normal and healthy in every way, but had the two lower central incisors appearing under the gum. These cut through in a few days after birth, the right on the fourth and the left on the fifth day, as well as I recollect. As in Joukovsky's case, in a few days an abscess began to form and the teeth to loosen. I then extracted them, and, as in the other case, it required a distinct effort to remove them. They were typical milk teeth of a whitish colour. For some time after the lateral incisors appeared there was a gap, but at the present time this has closed, and no one, unless they were in the secret, would remark anything amiss. This case is, I think, of special interest, owing to the fact that the teeth were cut at a period of 7½ months' gestation.

Monkstown, co. Dublin. R. LYNN HEARD, M.B.

ANKYLOSTOMA IN SIERRA LEONE.

HAVING recently found the ankylostoma duodenale in a case of obstinate and otherwise apparently causeless anæmia in the person of a negro soldier of the West African Regiment (a native of this country), I think it sufficiently interesting to make a note of, inasmuch as, though it has been surmised that the parasite exists in most tropical countries, it has not, so far as I know, been actually demonstrated in Sierra Leone until now.

I doubt, however, if the ankylostoma is responsible for much sickness, in this part of the Protectorate at any rate, as anæmia does not seem common among Mendi people.

FRED SMITH,
Bandajuma, Sierra Leone Protectorate. Captain R.A.M.C.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LIVERPOOL ROYAL INFIRMARY.

CARCINOMA OF GALL BLADDER, WITH ABSCESS.

[Under the care of Dr. Glynn and Dr. Bradshaw; Operation by Mr. Rushton Parker.)

History.—A man, aged 54, previously healthy, had influenza in February, 1896, and, a month or two later, peritonitis. In November, 1896, pain commenced in the right lumbar region, of a stabbing character, persisting, and gradually becoming more severe, often shooting up to right shoulder, and sometimes down to right hip. The pain had no relation to ingestion of food, and came on irregularly, at night as well as day. During the next five months he suffered from constipation, and at times noticed his skin deeply jaundiced, "a regular saffron colour." He continued at work till March, 1897, when he had to give up, and came into hospital on the 23rd of that month.

Condition on Admission.—His teeth were deficient; his tongue large, dry, furred, œdematous, and tremulous; appetite was very poor, and was gradually getting worse. In the abdomen there was a bulging in right lumbar region; there was no evidence of fluid. The liver area was very tender, and the liver felt hard about 2 inches below ribs. The pulse was 84, regular, very small, but of fair tension.

Course.—No elevation of temperature occurred until April 16th, when it rose to 100°, and afterwards went up almost every day to 100° or 101°, falling to about normal in the morning. Meanwhile the pain was becoming more severe, By April 28th there was a rounded lump under the umbilicus. thought to be a malignant growth which had spread along the round ligament of the liver. This day also the man had a severe rigor in the morning, and the temperature went up to 104° F. As pus was now thought to have formed, aspiration was performed, with issue of pus and blood.

Operation.—The same afternoon Mr. Rushton Parker was asked to explore and deal with it. This was done and an abscess found, evidently due to a broken-down nodule of malignant substance, which apparently studded the liver around. A piece was removed for examination, and the parts exposed were packed with cyanide gauze. Microscopical examination of the fragment showed it to be a cylindrical-celled carcinoma.

After-History.—Next day the man was more comfortable, and the temperature fell again to 101° F. each day for three days, then to normal for three days, then went up to 103° and 102° for three more days. For six days he went on fairly well and had not much pain; but vomiting and diarrhœa set in, and he died on May 8th, 1897.

Post-mortem Examination.—A carcinomatous mass was found replacing the gall bladder, with malignant nodules on the diaphragm and round ligament of the liver to the umbilicus. There was general peritonitis and half a pint of pus in the peritoneal cavity. The liver was free from new growth, and fatty. The kidneys were pale, the heart flabby, dilated, and its muscle thin and friable; lungs œdematous.

Remarks by Mr. Rushton Parker.

On removing the piece of malignant disease, I was distinctly under the impression that I had found it in the liver, and that the surrounding nodules were also in that organ, whereas the *post-mortem* examination showed that the liver itself was absolutely free from the disease, which was only now discovered to be in the gall bladder. No sign of any gall stone was found.

CHRISTCHURCH HOSPITAL, NEW ZEALAND.

A CASE OF GONORRHŒA ENDING FATALLY.

(Recorded by P. Clennell Fenwick, M.B.Lond., Surgeon to the Hospital; and Leslie Crooke, L.R.C.P., Resident Medical Officer.)

A lad, aged 20, was admitted complaining of severe pain in the right foot. He stated that a month previously he had contracted gonorrhœa. At the time of admission there was a urethral discharge. The foot was swollen and extremely tender, and the temperature was 101° F. Sodium salicylate was prescribed, but the temperature remained of the hectic type, varying from 99° to 102°. On the eleventh day, it suddenly rose to 104.8°, and he had a severe rigor. On the next day an incision was made in the foot down to the bone. There was considerable relief from pain, but the temperature remained hectic, rising to 103° and 104°, and falling to 98° and 99°, with daily rigors. The chart assumed the appearance of that of a malarial case. Quinine, arsenic, opium, and antipyrin were all tried in turn without any effect on the temperature or on the continued rigors. Six weeks after admission the temperature rose to 105.8°. There had been no pain in the foot since the incision was made. There was no organic disease of the lungs or abdomen, and the only theory that could be formed was that the case was one of ascending pyelitis with absorption of pus. At this date the patient for the first time passed albuminous urine, and later showed facial œdema, the limbs becoming rapidly swollen. The next symptom was a slight dry pleurisy which cleared up in two days, and then returned on both sides. Sixty-one days after admission the patient died.

On *post-mortem* examination the kidneys were found to be inflamed and enlarged. There was a small amount of fluid in the right pleural cavity, but no other abnormality could be detected.

We thought this case might prove interesting, as the correct diagnosis seemed almost impossible, and the temperature variations were somewhat unusual.

The patient came from a healthy district, none of his neighbours had ever suffered from malaria, and urethroscopic examination showed the presence of a simple gonorrhœa.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. Bryant, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, November 28th, 1899.

The Open-air Treatment of Tuberculosis.

Sir R. Douglas Powell, in resuming the discussion, expressed the opinion that if not premature it was at least of a preliminary kind, though none the less useful on that account. He thought the name "open-air treatment" was unfortunate from ignoring the other factors in the so-called sanatoria method. This, too, was not satisfactory, indicating, as it did, that a special building was necessary. He thought sanitary or hygienic treatment was preferable as a descriptive term, but that any such catch name was undesirable. He held that the thing itself was a distinct advance in therapeutics. A great point in the method was the supervision of the patient by a medical man. Sanatoria were not the only places where consumption could be successfully treated, but for a vast number of people who had no home where they could be adequately treated they were a great boon; not only for them but also for those who had the medical care of them. Our whole consumptive population could not be received into sanatoria. The method combined the hospital and asylum modes of treatment. The object of the treatment on sanatorium lines was to check the spread of the disease, to remove the patient from the conditions in which he was taken ill, and to starve out the septic organisms that produce destructive changes in the lung. The great evidence of the progress of the disease was the temperature of the patient; too little notice was taken of the too low temperatures. The important point was the excursions of the curve, and the object was to approximate it to a fair level. He did not advocate the rectal method of taking the temperature. Other objects were to promote repair and to help the compensatory activity of the unaffected part of the lung. It was of the first importance to have good cooking for the patients, and the physician should superintend the distribution of the food to their individual needs and capacities. The effect of superfeeding in consumption was the maintenance or increase of the weight of the patient, it was only a doubtful advantage to increase the weight of a patient above

his average normal. Weight might be gained beyond the capacity of a patient's lungs and heart, so that he became still more distressingly breathless. During the hectic and apyretic periods of consumption, carefully-graduated exercise was certainly indicated. Exercise might be commenced by walking ten minutes and resting fifty minutes in the hour, increasing the relative proportion of exercise time by degrees. The treatment of the patient was not completed when he left the sanatorium, but afterwards the careful selection of work and climate was needed; a return to city life, for example, might mean a final relapse.

Sir Hermann Weber observed with regard to the name given to this method—inasmuch as open-air treatment might be used in many diseases, for example, anæmia, neurasthenia, and glycosuria—that some qualifying epithet should be added. The system was very important, but the doctor was at least as important, if not more so. It was necessary in treating every disease to take into account the constitution of the patients; in many cases, for example, any mental excitement produced a rise in their temperature, and this was important in regulating the degree of the isolation any individual patient should be subjected to; it was necessary to individualise in this matter as in that of exercise. As long as there was fever exercise should be forbidden, and, later, the amount of exercise that was beneficial should be determined by experiment in each patient. Too much open air he thought might cause fever in a patient, and even too much light might be deleterious. For the majority of patients sanatoria were desirable, but for the poor they were essential.

Dr. Arthur Ransome (Bournemouth) agreed with nearly everything that the opener had said, and particularly in the honour he gave Dr. Brehmer as its originator. English physicians were among the first to point out the advantages of fresh air in the treatment of consumption, but the method in its entirety was introduced by Dr. Brehmer. The results obtained in the sanatoria might be accounted for by the rest to the body generally and to the injured organ, to the judicious feeding, apart from mere fattening, resulting in the strengthening of the different systems. He protested against any attempt to apply a procrustean method to all sorts of patients, and the tendency for the method to degenerate into a mere cure. Oxygenation of the blood and increase in its hæmoglobin were important, and pure air was even more important than open air; it was, indeed, a question of aseptic air. There was no danger of reinfection of tuberculosis in the presence of the pure air and sunlight of the sanatoria. The worst cases were those of mixed infection, and this source of danger was disposed of by the pure air. He inquired whether the natural food of the tubercle bacillus might not be the organic impurities in the air. He thought it possible that the ozone of the air might have an antidotal influence on the toxins of tuberculosis. It was possible that the hygienic method might increase the activity of the phagocytes. If as much care were taken by the medical attendant and nurses in a patient's house as in a sanatorium, and if it were free from ordinary contaminations, cases of tuberculosis might be treated at home. The chill of draughts had a harmful influence in lowering the vitality of the patient, permitting the activity of latent organisms.

Dr. Heron noticed that all speakers had spoken well of this method of treatment, and the general consensus of Continental opinion for two years had been in its favour, and this, he thought, was a "record" for a method of treatment of tuberculosis. He was sure the method could be carried out in a patient's house if he were intelligent himself and had a suitable medical supervisor. The most hopeful cases were the cases in the earliest stages, hence the importance of early diagnosis. A slight infection of one or both lungs, a temperature not rising about 99° or 99.5° were characteristics of such; if the temperature rose above 100° they were probably cases of mixed infection. Many of the early cases had a natural tendency to self-cure, and these vitiated statistics to some extent. Some of the rules of the sanatoria were needless and irritating for cases of early tuberculosis; he thought a daily visit from the medical attendant unnecessary in some, even once a fortnight might be frequent enough. The daily frequent taking of the temperature was irksome. The amount of exercise prescribed was in some cases too little, active games were often indicated in this type of case. For those poor patients who could not relinquish some sort of work open-air employment might be suggested, such as farming, fruit-growing, road-making, and so on. A warning was needed against the conduct of sanatoria by those medical men who would treat them as a commercial speculation.

Dr. J. E. Squire had had twelve years' experience of the fresh-air treatment of consumption as distinguished from the sanatorium treatment. The system was a part of preventive medicine. The hygienic treatment assisted the tendency towards cure. It was important that when the organ by which oxygen was introduced into the body was damaged the purest air possible should be afforded. Not every case could tolerate the open-air treatment in every climate; a selection of climate for the individual cases should be made. The effect of the treatment was to diminish the temperature, and increase the appetite and weight at the very beginning. The diminution of temperature in cases with a wide daily range needed careful watching lest collapse should supervene. Overfeeding was not good for all cases; and certain "bronchitic" cases could not bear much exposure to cold air. Cough was often increased at first, but soon diminished. Hæmoptysis was no contraindication, and the method seemed to reduce the frequency of hæmoptysis. Tents were not suitable means of housing patients unless kept constantly open on one side. Many cases of alleged cure relapsed after, it might be, return to work for a year. He advocated the formulation of the contraindications to the adoption of the open-air treatment. The more complete the open-air treatment the better the results; it should be continuous night and day.

Dr. Pruen (Cheltenham), referring to the financial side of the question, said that the building of a sanatorium was a very expensive affair. A plot of land was taken far away from everywhere, a house was built on it which was adapted for letting in the air, so that it was not of much value as an asset. Capital should be spent on the sanatorium and not in increasing dividends. Verandahs, although objectionable theoretically, were a necessity; they should never be greater in width than they were in height. Their right use was occasional, and limited to a few patients each. About five-sixths of the patients could tolerate overfeeding; the other sixth did not do well as a rule, and in these particularly medicinal treatment was indicated. It was essential that the sanitary arrangements should be perfect, and he advocated the discarding of traps; he used open drains and filtration gutters, so that no sewer gas should find entry.

Dr. Poore alluded to the effect of the open-air treatment on bronchitis. An arctic climate he believed prevented the onset of lung disease, but made existent chronic bronchitis neither better nor worse. He referred to the tables in the fifty-fifth report of the Registrar-General in regard to the incidence of tuberculosis in children as affected by city life and overcrowding, and in cities whether they lived near the outskirts or near their centre; also its incidence in different occupations, the death-rate being higher in those occupied in the country as compared with the town—taking as examples hotel servants and general labourers, the law clerk, the barrister, doctor and parson being lowest in the latter and highest in the hotel servant in London. The chief factor in the case of hotel servants was the living in a fœtid unwholesome atmosphere. Sanatoria should be one storey high, in this way preventing overcrowding. The living and dining-rooms should face south-east and the attractions of prospect should give way to advantages of aspect. One angle of rectangular blocks should point due north, not one side of the block, giving a maximum of incident sunlight all round. The offices should be well removed from the living rooms. All baths and sinks should be separated by a well-ventilated lobby from the main building. There should be aseptic drainage, not a waterborne sewage system, the gases of putrefaction predisposing to the attack of the bacillus of tuberculosis and its allies.

Dr. Hillier referred to a previous discussion on similar lines before this Society introduced by Dr. Mac Cormac many years ago which was by no means well received. The relationship between the bacteriology of tuberculosis and this treatment had not been sufficiently considered. Open air meant pure air, and pure air meant the absence of the respiratory impurity of indoor confined air. What was the nature of this

respiratory impurity? The impurity meant the presence of certain effete animal products exhaled in the breath vapour as toxic as the effete products of the kidneys or sweat glands if reabsorbed into the system. But these products, toxic to the host, were nutritious to the parasite. The tubercle bacillus was a vegetable parasite, and for the nutrition of all vegetables in agriculture there was nothing so nourishing as manure, another form of effete animal product. This analogy to the growth of vegetables in soil was too close to be overlooked. With abundant foul air and reabsorption of respiratory impurity, the tubercle bacillus flourished within the host. The tissues of the host were the soil in which the tubercle bacillus grew. Cut off the supply of this effete animal product, the respiratory impurity, and the starved tubercle bacillus withered and died. Tuberculosis was checked or cured. This might not be the beginning and the end of the *rationale* of the open-air treatment, but it went far to explain it.

The discussion was adjourned.

CLINICAL SOCIETY OF LONDON.

Sir R. Douglas Powell, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, November 24th, 1899.

Senile Tuberculosis.

Mr. Howard Marsh read notes of a case of tuberculosis in an old lady, the "senile scrofula" of Sir James Paget. In June, 1894, a lady, aged 71, complained of swelling and pain in left ankle, with dusky red œdematous skin over it. In the following October it suppurated, when the joint was opened and drained. The pus, however, burrowed up the leg in the sheaths of the flexor tendons, with muscular wasting and general loss of strength. Amputation through the lower third of the leg was performed in March, 1895. The wound slowly healed, and the patient recovered her general health. Twelve months later the patient developed periostitis of the left ulna, which ultimately suppurated, and was opened and cleared, a small sinus remaining for three months. Nine months later, the patient being then 73, similar changes occurred in the right ankle, and a further amputation became necessary in March, 1897, which healed in five weeks. In June, 1897, an abscess formed over the ulna in the site of the 1896 periostitis, which was opened and slowly healed. She remained well for eighteen months, when, at 75 years of age, her right knee began to give trouble. The disease progressed rapidly, and she lost flesh. Amputation through the lower third of the thigh was done four months later, and healed without suppuration in six weeks. The patient had since had no further trouble. The condition of all three joints was the same, the disease having evidently begun in the synovial membrane, leading to complete destruction of the ligaments and articular cartilages, the bones being ulcerated in some spots. The cavity was occupied by tawny-coloured and friable granular tissue and cheesy pus, while the neighbouring soft structures were infiltrated with pus. He observed that the older the patient the greater was the tendency towards progressive and usually rapid destruction of the joint, the resistance of the tissues to the tuberculous process being greatly diminished by age. Diagnosis was often difficult at first, the symptoms closely resembling those of osteo-arthritis. Within two or three months, if not earlier, however, the infiltration of the soft structures, etc., would assist the diagnosis. Suppuration was a marked feature of senile tuberculosis leading to extensive and rapid destruction of the joint structures.

The President said that in his experience tuberculosis in the aged chiefly affected the lungs, and he thought the tendency of the disease in these patients was to remain local, so that the prognosis was more favourable than in younger subjects.

Dr. Percy Kidd thought tuberculosis of the joints in old people must be rarer than tuberculosis of the lungs.

Mr. Raymond Johnson was interested to hear that Mr. Marsh's experience agreed with what he believed to be the general experience that tuberculous joint disease in the aged often pursued a rapidly destructive course, and necessitated, when practicable, treatment by amputation. He asked whether Mr. Marsh had any favourable experience of milder methods of treatment in such cases. It was interesting to notice the very different behaviour of carcinoma and tuberculous disease in the young and in the aged. The former usually ran a very rapid course when occurring in the young and vigorous, and often a slow course in the aged. With tuberculous disease, at any rate in the forms met with surgically, the reverse was the case, a difference not easy to explain if both affections were microbic in origin.

Dr. J. S. Richards said that as medical superintendent of a Poor-law infirmary (St. Saviour's Union, East Dulwich) he had seen many of these cases. He had abstracted 500 *post-mortem* examinations made in the institution during the last two years; there were 17 patients over 70 who had died of acute tuberculosis, 1 of them having miliary tuberculosis; while between 60 and 70 there were 16—3 of them having miliary tuberculosis. About 6.6 of the whole number of deaths examined *post mortem* (about half of the whole number) were thus tuberculous. He did not take such a despairing view of tuberculous disease of the joints and bones as the author, for they often did well, the effect of rest and improved diet being immense. He described many cases which had been scraped and had quite recovered.

Mr. Marsh, in reply, said there was no early history of tuberculosis in the patient or her family. No bacilli had been isolated, but the anatomical evidence was quite clear. His experience at the Hip Hospital was that children with tuberculous joint-disease seldom had the lungs diseased. The incidence of the disease appeared to be different at different periods of life. He pointed out that such an operation as excision was hardly applicable to patients over 70; when their joints suppurated the neighbouring parts were so much involved. He thought that the disease affected old people much more frequently than was generally believed. He had seen 9 or 10 cases of Pott's disease taking place in people over 70. Carcinoma increased rapidly in organs well supplied with blood, as the breast of a pregnant woman. Tuberculosis in old people seemed to be rather a question of want of resistance than of increased vascularity, as in the young.

Excision of the Cæcum.

Mr. Barker related this case, and described the treatment. The case was one of a disease rare in the pathological condition found on operating, and also in the operative treatment to which it was submitted. Carcinoma of the ileocæcal valve was shown to be a rare disease by reference to the *Transactions* of the Pathological Society and of the Clinical Society. That it should have given rise to intestinal obstruction was shown to be also rare. The case was that of a man, aged 29, who was admitted into University College Hospital under the care of Dr. Risien Russell, by whom it was placed in the hands of Mr. Barker for operation, all other measures for relief having failed. The man had had attacks of chronic obstruction for a considerable period, culminating in an acute attack. On opening the abdomen in the middle line the small intestine was found much distended and hypertrophied. This was opened, and five pints of liquid fæces of an intensely fœtid character were evacuated. It was then possible to introduce the hand, when a hard mass was discovered in the ileocæcal valve plainly obstructing the bowel. As it appeared dangerous to remove it at once owing to the presence of much liquid fæces, the ileum was anastomosed to the hepatic flexure of the colon by suture, and the wound was closed. The patient made a steady recovery, only checked by some stitch abscesses. At the end of six weeks and three days after the first operation a long oblique incision was made over the cæcum, and the latter was excised with some of the ascending colon and about 6 inches of the ileum above the valve. Both viscera were divided a few inches below the ileocæcal union. The wound was packed with antiseptic gauze and left partially open. Convalescence was good, but a small fæcal fistula remained open for some weeks, and then closed. The growth was found to be a carcinoma of the ileocæcal valve, with many polypoid excrescences projecting into the cæcum. The specimen was shown, as well as microscopic sections. The patient was also present for examination. He was in excellent health, and had returned to work as a plumber. His bowels acted well, and he had no sign of recurrence so far.

Dr. Voelcker agreed that the disease was probably one of adeno-carcinoma, with some points of colloid degeneration. He recalled three cases of similar disease of the ileocæcal valve found *post mortem*.

Mr. Howard Marsh did not think carcinoma of the cæcum a very rare disease, and referred to a specimen in the museum of St. Bartholomew's Hospital. He approved of doing the operation in two stages, especially when the patient was very feeble. He had twice removed the cæcum, with good results. He usually used simple suture for the intestine, but in some cases Murphy's button could be employed when suture was not possible.

Dr. Norman Dalton described a case he had seen at King's College Hospital six years ago, in which a movable lump seemed to him to be a cancer of the cæcum. He advised operation, and Mr. Burghard removed the cæcum successfully. For two years subsequently that patient remained quite well; since then he had not been seen. He thought this position for cancer was not extremely rare.

Mr. Charters Symonds exhibited a drawing of a case of carcinoma starting at the ileocæcal valve in a woman, aged 50, whose cæcum he removed successfully. He had also operated on two other patients who were still living, but he had just lost a case in which there was obstruction with much prostration. He thought that when there was obstruction the operation should be done in two stages; without obstruction it might all be effected in one stage. Where there was no distension he made the incision in the middle line, divided the ileum and cæcum, and joined the ileum to the colon by lateral anastomosis, removing the excluded part at a second operation. He had had to remove the mesentery nearly to the spine on account of the enlarged glands it contained, but that patient had done well. He had often used Murphy's button, but considered the direct suture superior, as it gave a freer passage. The free mobility of the cæcum allowed the disease to be brought up beneath the skin as a small hard moveable nodule. He related a case supposed to be one of appendicitis which he had opened. It then healed, but afterwards the disease returned, and the patient died. At the *post-mortem* examination epithelioma of the cæcum was found, which had grown into the iliac fossa, and given rise to a huge growth in that position.

Mr. J. Hutchinson, jun., had been working at the statistics of resection of intestine for gangrenous hernia, and had found that when Murphy's button was used there were 7 per cent. of recoveries against 40 per cent. after direct suture. Carcinoma of the cæcum was difficult to diagnose. In one case in an old woman, at the operation a hard mass was found, matted to the surrounding parts, so that only the exploratory operation was performed. Since then the patient had progressed well, and had improved marvellously during the last six weeks. It was sometimes impossible to determine at the operation whether the case was one of cancer or inflammation, but such cases had greatly improved after the operation.

Mr Barker, in reply, still thought that disease starting exactly at the ileocæcal valve was very rare. He referred to two cases of gangrenous hernia treated by suture that recovered; while two others treated with the button had died.

Obstruction of the Inferior Vena Cava: Probably Syphilitic.

Dr. C. W. Chapman read a paper on a case of this kind. The patient, who was present, had been shown at a clinical meeting of the Society last session; he was a hair-dresser, aged 48, who was admitted into the National Hospital for Diseases of the Heart on October 4th, 1897. He then complained of palpitation, shortness of breath on exertion, a shooting pain in the head, and a sense of suffocation when he leant forward. There was a history of syphilis twenty years previously, for which he had had only a two months' treatment. There were no secondary symptoms. His next illness was influenza in 1892, which was followed by palpitation. About nine months later he had a sudden but transient severe pain in the head, followed by swelling of the face, which, however, soon disappeared; he also was subject to syncopal attacks. The superficial abdominal veins gradually became enlarged and varicose, and subsequently the veins of the right leg were similarly affected. The action of the heart was feeble, and the pulse was 54. A systolic murmur of a harsh character was heard at the sternal margin of the fourth left space, also a soft systolic murmur at the apex, which was heard to the left axillary line. The second pulmonic sound was a little accentuated. The liver was but little enlarged; urine normal. No tumour could be discovered in the abdomen. There was a hard swelling at the back of the neck the size of half a walnut. The case was diagnosed as obstruction of the inferior vena cava from syphilitic disease either from pressure of a gumma or from thrombosis. Under specific treatment the swelling diminished, the symptoms were relieved, and the health improved, though the condition of the external veins was unaltered. After referring to the more usual causes of obstruction of the inferior vena cava, Dr. Chapman quoted from Mr. Hutchinson's contribution on Visceral Syphilis, where the author expressed his belief in the existence of a syphilitic phlebitis. He also drew attention to the article on syphilitic phlebitis in the *Archives Générales de Médecine* for 1894, where the author referred to two cases of phlebitis associated with gummatous tumours. Mr. Battle's paper, vol. xviii of *St. Thomas's Hospital Reports*, was also quoted as bearing on the subject.

Mr. J. Hutchinson, jun., asked how it was that there was no marked enlargement of the veins of the lower limbs and no varicocele, inasmuch as the vena cava was undoubtedly obstructed; possibly, however, the obstruction was below the renal veins. He mentioned the case of a lad, aged 16, with double varicocele, the veins of the legs being extremely dilated and tortuous, in whom there was obvious obstruction of the lower vena cava. There was no ascites, but the liver and spleen were decidedly enlarged, with other evidences of congenital syphilis. This patient improved under iodide of potassium and mercury, though the veins in the legs did not regain their normal size. The obstruction was undoubtedly due to a gumma at the posterior surface of the liver, but he pointed out that with syphilitic disease of the liver and spleen there might be tertiary disease of the lymphatic glands lying behind the inferior vena cava. It was well known that gummatous disease of the lymphatic glands had a greater tendency to infiltrate neighbouring vessels than tuberculous disease. He referred to a case of gumma in the cervical lymphatic glands pressing upon the carotid, infiltrating the hypoglossal nerve, and paralysing that side of the tongue; also a case, in Guy's Hospital Museum, of obstruction of the superior vena cava, which was obliterated by a large gummatous mass which had apparently started in the mediastinal glands. There was also a specimen in the College of Surgeons Museum of obstruction of the superior vena cava by a gumma. In this case, as the subject had angular curvature of the spine, it was, of course, open to the suspicion of tubercle, but Mr. Targett, who had carefully examined the specimen, decided that it was syphilitic. Dr. Barlow had given him notes of a case in which the veins of the right arm and chest were enormously distended in which recovery had followed vigorous antisyphilitic treatment.

Dr. Chapman, in reply, remarked that the veins of the right leg were swollen in his patient.

MEDICAL SOCIETY OF LONDON.

Frederick T. Roberts, M.D., F.R.C.P., President, in the Chair.

Monday, November 27th, 1899.

Prognosis in Appendicitis, with Notes of 200 Cases.

Dr. H. A. Caley read a paper with this title. He said prognosis must be considered in two sections: (1) As to recovery; (2) as to recurrence. As to recovery, general statistics, giving mortality of appendicitis in the aggregate, were misleading unless based on a large series of cases, including all types of the disease, and unless case mortality was clearly distinguished from attack mortality. Of more importance than the mortality of appendicitis in the aggregate was the relative danger to life in the several forms of the disease. This was especially so in relation to the principles of prognosis in individual cases, the point under consideration in this paper. In regard to the pathological basis of prognosis, there were two essential factors: (1) Nature and course of the appendix lesion regarded from the point of view of relative infectivity; (2) extent and nature of any resulting peritoneal infection, which depended for the most part upon the actual lesion of the appendix, in part also on its position and on certain special

modifying conditions. Of these two the most important direct prognostic factor was the peritoneal. Two hundred consecutive cases treated in the medical and surgical wards of St. Mary's Hospital were adduced to illustrate this: 99 were cases of simple appendicitis and perityphlitis—that is, cases in which the peritonitis was localised and non-suppurative, all these recovered; 31 were cases with localised suppuration, 29 recovered, with 2 deaths; 23 were complicated by general peritonitis, 3 recovered and 20 died (many of these patients being in a practically hopeless state when admitted); 42 were examples of chronic and relapsing appendicitis, in 37 the appendix was removed, and all the 42 recovered; in the remaining 5 cases there were special complications such as intestinal obstruction, hepatic abscess, pulmonary œdema; of these, 2 recovered and 3 died. These figures illustrated the great fatality of appendicitis with general peritonitis, the small mortality of appendicitis with localised abscess if efficiently treated, and the almost uniformly favourable course of mild cases which constituted the large majority of all cases of the disease. Such differences in the extent and characters of the peritoneal infection were found to correspond with different types of appendix lesions, which for prognostic purposes might be divided into severe and mild, the division being based on relative infectivity. Severe lesions of the appendix were perforation, gangrene, ulceration, and, to a less extent, concretion (without perforation), and suppuration within the appendix itself. The large majority of fatal cases were associated with perforation or gangrene, and most of the cases of local abscess with one or other of the severe lesions. Mild lesions of the appendix were simple inflammation, acute or chronic ("parietal appendicitis"), stenosis or obliteration of the lumen, with or without cystic dilatation of the distal portion, some forms of concretion, superficial ulceration, kinking, volvulus, or extensive adhesions. This group, while it consisted of lesions relatively mild as regards acute peritoneal infection comprised most of those responsible for chronic and relapsing cases. In regard to the clinical basis of prognosis too much stress had been laid on the impossibility of ascertaining early in an attack of appendicitis whether resolution or suppuration would be the outcome. On pathological grounds it was clear that for purposes of prognosis this was not the most important point. The important question, in the first instance, was, Will the peritoneal infection be localised or diffuse? Is it a mild attack, or is it one of the grave forms of appendicitis with which we have to do? To determine prognostic indications one must proceed on the same lines as one did in order to ascertain diagnostic indications, and in their characters and relative significance taken as a whole there was the clinical basis of prognosis. These might, for convenience of description, be arranged in four groups: (1) Local symptoms, with especial reference to pain and vomiting: (2) general symptoms with especial reference to temperature, pulse, respiration, and general condition; (3) local signs on physical examination; and (4) progress of the case. Local symptoms: The distribution, severity, and duration of pain varied greatly; as a rule, however, in mild cases the pain tended to become localised, whereas in perforative cases it was usually sudden, severe, and more generalised. Persistent severe pain was suggestive of a severe lesion and a sudden increase of pain of an unfavourable turn. Vomiting as a single symptom was more significant than pain. Severe and persistent vomiting suggested a severe case; so also did vomiting which recurred after an interval of comparative quiet. Gangrenous appendicitis, however, might pursue a fatal course with remarkably little pain or vomiting. General symptoms: The temperature chart by itself was apt to be a fallacious guide, for there might be a subnormal temperature with the initial collapse of perforation, or with general suppurative peritonitis. If, however, the type as well as the height of the fever were considered in conjunction with the pulse and respiration it was of prognostic import. The pulse was of the greatest possible importance. A high pulse-rate suggested a severe lesion, though the converse of this was not necessarily true. In the large majority of the less severe cases included in the author's series the pulse-rate was between 80 and 100; in every one in which it was persistently above 120 the attack was severe, and in most cases ended in local suppuration or general peritonitis. The importance of a pinched and anxious aspect, of restlessness, obvious distress, or collapse were well known. Severe initial collapse generally meant a formidable case, and its significance was none the less because shortly afterwards the condition for the time being appeared favourable. Local signs: The degree of impaired mobility, the presence of any abdominal distension, the distribution of local tenderness and muscular rigidity were of value in estimating the extent of peritoneal implication. An ill-defined local swelling, or the absence of any marked signs in the appendix region, might be of unfavourable import. The progress of the case was especially important during the first forty-eight hours in acute cases. In the course of a few hours developments might occur which had a determining influence on prognosis and treatment. In regard to prognosis as to recurrence this might be expected in at least one-third of the cases; the second attack usually occurred within two years, and most commonly within one year of the first. The liability to recurrence in a particular case amounted to a practical certainty if there were persistent pain, tenderness, or local thickening indicative of chronic appendicitis.

Mr. EDMUND OWEN insisted that no amount of statistics would assist them much in a given case, this being an essential difference between acute inflammation of the appendix and acute inflammation elsewhere. He could only wonder why a case of acute appendicitis was ever sent into a medical ward, and he urged that their proper place was in the surgical wards. He protested against the much abused term of McBurney's point, which was most misleading. He agreed with the author that suddenness of onset was a grave prognostic sign, of which he gave two illustrative examples. On the whole, he thought the sooner such cases came under the surgeon the better.

Dr. F. SMITH mentioned that they had recently had a consultation of the staff at the London Hospital to consider a resolution to send all cases of appendicitis into the surgical wards direct. The great point was to find out at once whether or not there was suppuration; if so, an immediate operation was imperative; if not, then with salicylate of soda and an icebag they might temporise until the question of impending suppuration could be settled.

Mr. CARLESS urged that they ought to anticipate suppuration, and not wait for it to be established. By so doing they would cut out several of the groups altogether. By operating early, they not only obviated peritonitis, but they could completely remove the appendix, which could often not be done if there were abscess formation. He thought early operation on American lines would be the treatment of the future.

Mr. MANSELL MOULLIN thought that if within thirty-six hours no improvement occurred in a case of appendicitis the surgeon ought to be called in. If no improvement took place, that meant either that there was suppuration or that adhesions were forming, which would render relapse inevitable. Gangrene of the appendix might occur independently of peritonitis, even in less than thirty-six hours, but if they operated peritonitis would be forestalled.

Mr. BERRY said that though at first greatly in favour of early operation, his experience as registrar had converted him into an ardent advocate of more expectant treatment. He had observed many clinically parallel cases treated in the different ways, and was sure that many of them might have survived if they had been treated on less drastic lines. He mentioned that in one series of figures of 24 cases treated by free incision only 5 recovered, while of 21 belonging to the second group only 2 died. In another series of 42 cases of chronic recurrent appendicitis operated all recovered, and of 14 of chronic disease with abscess only 1 died. There were 74 cases of acute appendicitis treated as follows:—33 by free incision with 26 deaths, while 41 dealt with by limited incision through adhesions gave only 2 deaths. He protested very strongly against the fatal practice of washing out the abdomen, and he expressed surprise that surgeons should continue to have recourse thereto. He showed that an incision through the linea semilunaris in most instances would fail to open up an appendicular abscess, and he urged an incision perpendicular to and just above Poupart's ligament.

The PRESIDENT declined to concur in the view that such cases ought always to be handed over to the surgeons, for he had seen a great number which had recovered under common-

sense treatment, but he always and at once got in touch with a surgeon in these cases.

Dr. Caley agreed that early removal had much to recommend it if they could get the cases early enough, and could make sure of operating at an opportune moment, but he asked whether it would not sometimes occur that an operation performed at an injudicious moment might convert a local infection into a more generalised one. He agreed that most physicians would at once call a surgeon in consultation in such cases and he denied that any physician would leave a case of appendicitis in his wards twenty-four or forty-eight hours under the house-physician. He believed that by careful examination and close watching it was possible in most instances to differentiate the grave cases from the others.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Pathological Meeting.

A. G. Barrs, M.D., F.R.C.P., Vice-President, in the Chair.

Friday, November 17th, 1899.

Fallacies Connected with Tests for Albumen.

Mr. P. J. Cammidge read a paper on some fallacies connected with the tests for albumen in urine. After some preliminary remarks on the collection and preservation of urine, he discussed the relative delicacy of the more common tests, and pointed out how fallacious results might be given by an incorrect performance of several of them. He then considered the question of the occurrence of nucleo-proteids (mucus) in urine, and after mentioning the principal properties of these bodies he enumerated the various albumen tests with which they gave reaction. He pointed out how in Heller's test the position of the nucleo-proteid ring gave a clue as to its cause, and showed that by dilution or the performing of a separate test with distilled water and acetic acid, the presence of nucleo-proteids might be demonstrated. He briefly referred to albumoses and their reactions; after which he considered the mistakes which might arise especially in inexperienced hands from urates and uric acid, phosphates, carbonates, bile, creatin, drugs, etc., with certain of the tests. Finally, Mr. Cammidge stated that no one test was by itself satisfactory, and that it was necessary to employ at least two to make a reliable diagnosis, always selecting as far as possible tests that were mutually supplementary. For this purpose he suggested the use of salicyl-sulphonic acid as a routine test, checked by Heller's cold nitric test in all cases where the reaction was not either negative or very well marked. Dr. Churton, Dr. Griffith, Mr. Teale, Dr. Mouillot, and Dr. Barrs took part in the discussion.

Dilated Cerebral Ventricles.

Dr. Wakelin Barratt (Wakefield) showed a cast of dilated ventricles of the cerebrum. The cast was obtained from a case of internal hydrocephalus apparently congenital in origin, and undergoing a considerable increase in later life as the brain became senile. The third ventricle had fused with the bodies of the lateral ventricles to form a common cavity. Anteriorly the anterior cornua had fused together in part, the septum lucidum having completely disappeared. Below two projections were seen in the cast, corresponding to the infundibulum and the upper opening of the aqueduct of Sylvius. Numerous grooves were seen on the surface of the cast. On the bases of the inferior cornua these corresponded to the sulci seen on the surface of the temporal lobes. On the mesial aspect of the posterior cornua a broad groove was seen to correspond to the internal parieto occipital fissure, and below it a narrower groove corresponding to the calcarine fissure. The cast was asymmetrical, being inclined to the left above and to the right below; a similar asymmetry was seen in the skullcap.

Malformations.

Dr. Sanderson Long (York) showed: (1) The Viscera of a woman aged 35 in whom there was complete right-to-left transposition of the entire contents of the thoracic abdomen, and whose stomach was so contracted that its total capacity was only about 6 fluid drachms. The organ consisted of a tough thick-walled tube, considerably smaller in external circumference than the small intestine. The glands in the neighbourhood of the portal fissure were greatly enlarged, and there were numerous nodules of secondary growth in the lungs; (2) a Large Double Malformed Kidney which was contained in a tumour of embryonic tissue at the root of the umbilical cord of a full-term fœtus.

Specimens.

Dr. Wardrop Griffith showed the following specimens from the *post-mortem* room:—(1) (Dr. Barrs's patient): Aneurysm, size of chestnut, on a branch of the superior mesenteric artery in the mesentery. This contained firm laminated clot. There was extensive vegetative endocarditis of the mitral and aortic valves, and the aneurysm might have had an embolic origin. There was embolic infarction of the spleen. (2) (Dr. Chadwick's patient): a Villous Growth involving the orifice of the appendix vermiformis. There were no symptoms during life, and the patient died of cerebral hæmorrhage due to the rupture of an aneurysm on a branch of the anterior cerebral artery, which was associated with mitral disease, and probably embolic.[1] (3) (Dr. Barrs's patient): Intrathoracic Growth, originating in mediastinum, and involving root of right lung. The growth fungated into the superior cava and both innominate veins. It also appeared in the pericardium and involved the right bronchus, part of the trachea, and the right pulmonary vein. It extended upwards, and expanded laterally after passing through the superior aperture of the thorax.—The following specimens were also shown:—Mr. T. Pridgin Teale: Tuberculous Testicle.—Dr. Eurich (Bradford): (1) Melanotic Sarcoma of Spine and Dura Mater; (2) Angio-Sarcoma of Kidney; (3) Specimens prepared by Kaiserling's method.—Dr. Allan: (1) Typhoid Ulcers in the large Intestine, nearly healed, death being due to perforation of an ulcer in the ileum; (2) Syphilitic Aortitis (the left lung from this case was small and deformed); (3) Malignant Disease of the Uterus, causing dilatation of the ureter; (4) some eight or nine Gall Stones, passed *per rectum* by a woman aged 52.—Mr. E. Ward: (1) Three specimens of Malignant Disease of the Stomach, removed by operation; (2) Skiagraphs of Disease and Injury.—Mr. Basil Hall (Bradford) showed: (1) Hand and Foot, showing Clubbing of the Digits from a case of spinal caries; (2) Bones of Leg seven years after a fracture into the knee joint (a popliteal aneurysm developed seven years after the injury); (3) Carcinoma of Pharynx; (4) Skiagraphs and Photographs from a case of Congenital Syphilis.—Dr. Powell White: A demonstration of Inflammation in the Mesentery of the Frog.—Mr. W. H. Brown: (1) Surgical Kidneys with Dilatation of Ureters and Hypertrophy of Bladder following Stricture; (2) Uterine Myoma removed by Abdominal Hysterectomy.—Dr. Bronner: Aspergillus from the External Auditory Meatus.—Dr. Milroy: Microscopic specimens illustrating the Weigert Pal's method as modified by Bolton for staining nervous tissue.—Dr. Hellier: (1) Uterus removed by Vaginal Hysterectomy for Carcinoma complicated by Pyometra; (2) Large Utero-vaginal Polypus removed from a virgin.—Dr. Barrs: (1) Tuberculous Liver; (2) a Heart from aortic disease, weighing 36 ozs.—Mr. R. Lawford Knaggs: (1) Sarcoma of Breast; (2) Tuberculous Tumour of Cæcum and Appendix; (3) Kidney removed for hæmorrhage occurring during nephrolithotomy; two unsuspected stones found after removal.—Dr. Trevelyan: (1) Pure cultures of the Streptococcus and Staphylococcus obtained from throat exudations; (2) a specimen of Hæmorrhoids; (3) a Heart with Mitral Disease and an old Infarct in the Spleen (from Dr. Chadwick's case).—Recent additions to the Pathological Museum were also shown, mostly prepared by Kaiserling's method.

MIDLAND MEDICAL SOCIETY.

Edwin Rickards, M.A., M.B., F.R.C.P., in the Chair.

Wednesday, November 1st, 1899.

Cancrum Oris.

Mr. Gamgee showed a boy, aged 6, who three years ago had suffered from severe cancrum oris of the right side of the face, resulting in complete fixation of the right temporal maxillary

[1] British Medical Journal, vol. ii, 1899, p. 1292.

joint by firm cicatricial tissue. To remedy the condition a portion of the lower jaw in front of the cicatricial mass was excised, and a false joint made. The result had been quite satisfactory, the boy being now able to separate the front teeth to the extent of 1¼ inch.

OSTEO-CHONDRO-SARCOMA.

Mr. JORDAN LLOYD showed a large osteo-chondro-sarcoma of the pubes, removed from a man, aged nearly 40 years, whose father underwent amputation at the hip joint some thirty years ago for a similar tumour in connection with the femur. The growth completely filled the pelvic cavity, compressing the urethra to such an extent as to interfere with micturition, a chronic cystitis resulting. The part of the tumour outside the pelvis was larger than an adult head, and extended nearly halfway down the thigh. The operation was resorted to for the sake of relieving the cystitis, and the man's general condition at the time was very unsatisfactory from pyæmia and urotoxæmia. The whole tumour was removed by *morcellement* without injury to the pelvic viscera, and with the loss of only a few ounces of blood. The patient rallied easily from shock, and died somewhat unexpectedly the following morning from asthenia.

JOINT DISEASE IN TABES.

Dr. DOUGLAS STANLEY showed the tibia and fibula from a case of joint disease due to tabes. There was marked new formation of bone at the lower end, and also an increased porosity. A cast was also shown taken from the right knee of a man, aged 59, who was the subject of tabes. When about 12 years of age he had sustained a severe injury to the knee, as the result of which it became ankylosed. When he came under observation in February, 1899, the injured knee showed "Charcotic" changes in process.

APPENDICITIS.

Mr. BARLING read a paper, entitled, Appendicitis; a Review of 117 cases of Operation.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—At a meeting held on November 22nd, Dr. H. RADCLIFFE CROCKER in the chair, the PRESIDENT showed a case of Kerion in boy, together with a slide exhibiting the spores causing the disease (megalosporon ectothrix). In the discussion both Drs. J. GALLOWAY and P. S. ABRAHAM stated their opinions that kerion might appear spontaneously apart from treatment. It was remarked also that animal ringworm (cases in man contracted from the animal) appeared most often in the spring of the year. Dr. RADCLIFFE CROCKER expressed his satisfaction with the method of simply soaking the hairs in liq. potassæ for exhibition as contrasted with the method of staining.—Dr. GRAHAM LITTLE showed a little girl with universal Psoriasis Punctata. The President said that he believed that the spots in many of these cases commenced around the sweat ducts. Dr. Little also read notes of a case of Erythema Iris, exhibiting a drawing of it.—Dr. DAVID WALSH showed a man suffering from Acne Varioliformis. Dr. RADCLIFFE CROCKER thought that the pathology of the disease was by no means cleared up. Dr. JAMES GALLOWAY mentioned Sabouraud's paper in which he tried to prove its invariable association with seborrhœa oleosa.—Dr. T. D SAVILL showed a man with a peculiar Ulcerating Scarred Condition on the right cheek as a case for diagnosis. Mr. T. J. HITCHINS suggested Milton's lupoid sycosis. Dr. GALLOWAY suggested a form of epithelioma. The majority of the members regarded it as a case of rodent ulcer.—Mr. G. PERNET showed for Dr. P. B. ABRAHAM two children with Ringworm of the Scalp.—Dr. RUFENACHT WALTERS brought forward: A girl about 20 years old with a small Tumour about the size of a hazel nut on the inside of the right knee. He did not know what name to give it, but suggested morphœa. Mr. HITCHINS did not agree as to its being morphœa. Dr. PHILLIPS-CONN suggested Addison's keloid. Dr. RADCLIFFE CROCKER would not give it a name.—Dr. WALTERS also showed: (1) A woman with (?) Addison's Disease; and (2) a Generalised Eruption in a man for diagnosis; the latter was considered by some to be a case of guttate psoriasis; but the PRESIDENT thought the case was of seborrhœic origin.—Dr. RUSSELL RYAN showed a most interesting case of Scabies.—Mr. G. PERNET showed for Dr. J. H. STOWERS a man with a Secondary Rash, including a lenticular syphilide rash.—Mr. T. J. HITCHINS showed a case of a man for diagnosis. Nearly the whole of the front right chest was covered with a raised fawn-coloured, rather firm, dry, non-scaly eruption. He had also a general eruption of a seborrhœic character. The general eruption was not diagnosed, but that on the right chest, which had existed for eighteen years, was considered by Dr. CROCKER to be a form of scarring following the application of some strong or continuous irritant application.

CHELSEA CLINICAL SOCIETY.—At a meeting on November 21st, Dr. J. FOSTER PALMER, President, in the chair, Dr. NITCH-SMITH read a paper on the Use of Baths in Skin Diseases, with the object of making their use more popular and practical. After years of clinical study and observation Dr. Nitch-Smith had arrived at the conclusion that all universal or medicated baths could be obtained at home, which important fact obviated the necessity of a journey abroad. The treatment of some of the common and easily recognised skin diseases was fully entered upon and illustrated by portraits. A discussion followed, in which the PRESIDENT, Dr. C. A. MORRIS, and Dr. VINRACE took part; Dr. NITCH-SMITH replied.

IPSWICH CLINICAL SOCIETY.—At a meeting on November 9th, Mr. W. F. FRYER, Vice-President, in the chair, Mr. C. K. MOSELEY read notes of a case of Extrauterine Fœtation. The patient was aged 32 and had been married six years without family. Menstruation was regular till two months before present illness. During August and up to September 19th she had complained of dull pain chiefly on the left side of the abdomen, and there was some discharge of blood from the vagina. On September 19th she was suddenly seized with severe abdominal pain and had retention of urine. The use of a catheter gave much relief. *Per vaginam* the uterus was felt enlarged, but in its normal position; the os admitted a finger, and some placenta-like tissue was scraped away. Next day the uterus was tender and was displaced to the right; the sanious discharge continued, as did the difficulty in passing urine. On September 23rd the uterus was felt pushed up against the pubis and a large swelling was felt above Douglas's pouch, the patient was pale, had considerable abdominal pain, and vomited frequently. On the following day the abdomen was distended and tender, and the swelling in Douglas's pouch was tenser; the temperature was 99°, and the woman was very pale as if from severe hæmorrhage. Mr. J. F. C. Hossack opened the abdomen and found the peritoneal cavity filled with blood. Neither the fœtus nor the bleeding point were found, and the abdominal cavity was freely washed out with hot water. A considerable quantity of this was left within the abdomen, which was stitched up. Recovery was uninterrupted, and on November 8th it was noted that the uterus was normal in size and position; there was no swelling in Douglas's pouch and the woman felt quite well and was at work as usual. Mr. HOSSACK made some remarks referring to the rarity and the high mortality of such cases, and he emphasised the importance of the free use of hot water, and of leaving some of it in the abdominal cavity to counteract shock and arrest hæmorrhage.—Mr R. W. BROGDEN read notes of a case of Intussusception in an infant 6 months old, successfully treated by inflation of the intestine. The child was quite well till the day of admission to hospital. The bowels had acted normally that morning. At 4 P.M. she was fretful and blood and slime was passed *per rectum*. On admission, a well-defined elongated tumour could be felt extending from the right iliac fossa up towards the thorax. Two hours later the tumour had increased in size. Nothing abnormal was to be felt *per rectum*. Under chloroform the intestine was inflated by means of a No 12 Jacques catheter attached to a Higginson syringe by a long rubber tube. After a few minutes the tumour could be no longer felt and the child was put to bed. Recovery was immediate and complete. Dr. H. H. BROWN made some remarks.—Mr. BROGDEN also showed a man on whom he had performed gastrostomy for Stricture of the Œsophagus.—Mr. WALTER SINCLAIR made remarks on the Localisation of Foreign Bodies in the Eye by means of the X-Rays. He referred to the accurate results obtained by Mr. MacKenzie

Davidson's method of localisation, but pointed out that a source of error arose in cases where the normal relation of parts was extensively altered by pathological processes. Where such conditions were present any method of localising based on measurements which were referred to a schematic eye, was open to error. In certain cases this "pathological factor" should be taken into account. Mr. Sinclair also showed a specimen of a "Mottled" sarcoma of the Choroid. The only symptom noticed by the patient—a middle-aged woman, was a limitation of the field of the right eye towards the temporal side. Central vision was normal, and there was no increase in the intraocular tension. The presence of a growth was diagnosed by the ophthalmoscope, and after the diagnosis had been confirmed by Mr. Holmes Spicer the eye was enucleated. Mr. Sinclair referred to the intense "malignancy" of these intraocular tumours, and mentioned that a similar case which he showed to the Society about two years ago died eighteen months after enucleation with an enormous secondary growth in the liver, this being one of the commonest sites for metastatic growths.

REVIEWS.

Christmas Gift Books.

In spite of the fact that the population of Great Britain tends to accumulate more and more in the big towns, which grow ever larger at the expense of the country, the love of country and the appreciation of the charm of country life have never probably been stronger than at the present day. Indeed, there is evidence that this longing for a freer air is increasing among the dwellers in big towns, and is extending rather rapidly among classes who a generation or so ago were almost untouched by it. One evidence of this is the extraordinary popularity of some recent books in which various aspects of country life have been treated with the insight and sympathy which only long and intimate experience can give. A striking example of this was Mrs. C. W. Earle's first volume, and a not less measure of success appears likely to be the part of *More Pot-Pourri from a Surrey Garden*,[1] for the volume has already been reprinted. It is a kind of gossiping diary. Mrs. Earle is a little troubled about her title, and it is pretty certain that if her grandmother had written such a book she would have called it "The Country Gentlewoman's Companion," or by some such name. At any rate, this title describes its scope fairly well. She begins her diary on September 1st, 1898, and ends it on August 29th, 1899; in the interval she has given a great deal of advice about the plants to grow to keep up a succession of flowers, and how to grow them; a large number of receipts, many of them for dishes which are not generally known, and has discussed a good many of the ethical problems which present themselves to women in the present day.

Mr. Rider Haggard has written a book, *The Farmers' Year*,[2] not unlike Mrs. Earle's in plan, but dealing with his experiences as a farmer during the year 1898. The book has all the charm which comes from an intimate acquaintance with, and a genuine love for, the first great industry of man, and it is illustrated by some excellent reproductions of drawings by Mr. G. Leon Little of the events on a farm—ploughing, harrowing, reaping, threshing, draining, and so forth. But it must be admitted that it is on the whole rather melancholy reading. There is indeed a certain gentle, and not altogether distasteful, melancholy which is proper to the countryman, but there are circumstances which in the present day tend to deepen this melancholy. Mr. Haggard discusses incidentally the causes of the depression of agriculture, and of the depopulation of country districts. Indeed, he is never far away from these subjects, which cannot but have a great interest not only for those interested in vital statistics, but also for country doctors, than whom few perhaps, except the farmers themselves, have as a class suffered more from the operation of these causes. What is to be the outcome of the farmer's struggle in this country it is not easy to foresee, but the author of this diary, though he relates some of his own hard experiences as a colonist, evidently thinks that that way lies the best hope for the young man of energy and small or no capital. Possibly the love of country life which is growing among town dwellers may in time contribute to bring about some amelioration at least within the sphere of influence of the big cities. Perhaps if the British farmer will clear his herds of tuberculosis, and his wife will learn to make butter which will keep sweet for a reasonable time, the townsman may yet learn to prefer butter to margarine, though it be never so artistically coloured. Mr. Haggard has some sensible observations on the almost incredible want of cleanliness and of attention to the most elementary sanitary precautions exhibited by many farmers in the management of their stock; and in discussing the subject he says, writing at first with reference to the tuberculin test for tuberculosis:

> If these scientific operations are to be carried out, there ought to be in every county Government laboratories to which farmers could apply for instruction and assistance. Moreover, there ought to be Government inspectors to see that they did apply, and to assess damages when it became necessary to destroy affected animals. It is useless to leave it to the farmers themselves to take the initiative, as not one in twenty would ever bother his head about the matter—indeed I doubt whether some would stir if a scientific friend were to prove to them that their cattle were a walking mass of tuberculosis. I believe that there exist inspectors of dairies, though I never saw or heard of one of them inspecting my dairy, and I doubt whether the duty is half so efficiently or strictly performed as it ought to be. I know that when I took over this farm I found that into the pond from which the cows drank was led the entire sewage of a yard. I daresay that any inspector who took an interest in his work could make even worse discoveries in the Eastern counties.

We are not altogether sorry to learn from a later note that retribution overtook Mr. Haggard, for the squire ought to set a good example. An inspector descended upon him, and requested him to be good enough to alter a certain surface drain in one of his own cowhouses. He complied he tells us, "with much pleasure, delighted to reflect, indeed, that the sanitary authorities have developed such activity. They will, I think, find many worse things than my drain to occupy them." Scattered up and down the volume are some curious extracts from parish registers, and the following will interest medical readers. It is from the register of the parish of Bedingham:—

> John Francis, the Vicar of this parish underwent, October 25th, 1780, an operation for the stone, when two, weighing an ounce and a-half, were extracted by that very eminent surgeon, Mr. William Donne, of Norwich, for which Mr. Francis paid him seventy pounds. Mr. Francis is now perfectly recovered, for which great mercy he daily returns his most sincere and unfeigned thanks to the Divine Author of his Being, the Father, the Son, and the Holy Ghost.
>
> His affliction under this severe trial was greatly lessened through the affectionate tenderness and care of Elizabeth, his well-beloved wife, the generous kindness which was shown him by his dear relations [here follows a long list of the names of relations and friends] to each of whom he esteems himself most highly indebted, and begs them to accept his very sincere acknowledgments.—August 7th, 1781.

In a footnote Mr. Haggard suggests that it is possible that the word "seventy" should be read "twenty," but expresses the opinion that "even in the former event the sum is large for the time."[3] Mr. Rider Haggard is distressed, like many another magistrate, by the thought of the responsibility thrown upon him by the so called conscience clause of the last Vaccination Act. It appears, he says, that

> magistrates are to decide whether the objection in each case is one of conscience or of mere prejudice and idleness; that is to say, that we are to sift a man's mind, and, without any evidence beyond his own statement, to decide whether he is speaking the truth. I maintain that the task is impossible, and one which should not be laid upon the shoulders of any judge. In practice, what will probably happen is that the chairman or clerk will ask the objecting parent if he or she is prepared to take an oath that his or her objection to the vaccination of the child is founded on conscientious scruples. The parent or guardian will reply that he is, and there will be an end of the matter. If the same test, he continues, could be applied to the case of sending children to school in six months, the classrooms would be half emptied by "conscientious objections." A falsehood is easily spoken, and such an Act seems to put a premium on the speaking of it.

Those who remember Mr. Rider Haggard's admirable story, *Dr. Theme*, will not be surprised to read that he looks upon vaccination as "one of the greatest boons that the century has brought to mankind."

Never before in these enlightened days, he continues, has such sanction been given to the wretched theory that "freedom" consists in giving

[1] London: Smith, Elder and Co., 1899, cr. 8vo, pp. 464, 7s. 6d.
[2] London, New York, and Bombay: Longmans, Green, and Co. 1899. Cr. 8vo, pp. 510. 7s. 6d.
[3] Some account of William Donne was given by Dr. Michael Beverley in his address on Norwich Medical Worthies which was published in the British Medical Journal of July 19th, 1890. He was one of the first surgeons to the Norwich Hospital and there performed 172 operations for stone between the years 1772 and 1780 effecting 147 cures. Dr. Beverley states that Mr. Donne was one of the largest contributors to the unrivalled collection of calculi in the museum of the Norwich Hospital, and he adds that Sir Astley Cooper stated in his biography that "seeing Mr. Donne, of Norwich, operate when I was a boy gave me the first desire to be a surgeon."

a man the right to gratify his own whim, however mischievous, at the cost of society at large, and never before has the doctrine of the power of the parent over his offspring been pushed so far. In future an indolent, or a prejudiced, or a "conscience-stricken" father or guardian is to be licensed at will to expose children to the ravages of a fearful sickness and the risk of death; and, helpless though they are, it is by Act of Parliament decreed that no hand shall be held up to save them.

Mr. Haggard adds that if the leaders of the antivaccination party could see, as he has seen, what happens when a small-pox epidemic is raging in foreign parts where vaccination is unknown or little practised their minds might be enlightened. At present they think little of the disease because they have scarcely seen its dreadful work. "What they lack," he says, "is imagination."

If Mr. Haggard's advice is emigrate, Mr. Harold Bindloss, though in *A Wide Dominion*,[4] the volume which he has contributed to "The Oversea's Library," he has not hesitated to show the seamy side, will not deter the adventurous spirit from seeking fortune in the West. The story appears to be a piece of autobiography. He speaks in just terms of praise of the invigorating climate of the great central plain which extends from Winnipeg to the Rocky Mountains, but, like many another before him, he staked his all on the success of a single harvest, was ruined by a hailstorm, and had to seek a precarious living in the forests of British Columbia with their damp and trying climate. The book is one which any reader who has a son thinking of trying his fortunes in the Dominion should read, for it will show the dangers to be avoided.

A very commendable disposition is being shown by the publishers of popular histories, historical romances and reminiscences to illustrate their volumes by reproductions of authentic contemporary portraits, engravings, and caricatures. Sir William Fraser's volume of reminiscences, to which he gave the title *Words on Wellington*,[5] was well worthy to be republished, and the illustrations which Mr. Joseph Grego has selected add materially to its value and interest. They include (in addition to thirty illustrations in the text) five photogravure portraits of the Duke after Lawrence, Knight, Phillips, and Lucas (2), and one of Napoleon after Vernet. Sir William Fraser expresses the opinion that no portrait of the Duke was like him, and attributes this to the fact that all represent him with "lantern" cheeks, "whereas his head was formed on the most beautiful lines, particularly the straight line from the temple to the corner of the jaw." His son, the second Duke, agreed that the portraits were not good, and gave Sir William the following explanation: "You may have observed that my father, when not speaking, had a movement of his lips as if he were chewing. That arose from his artificial teeth not fitting him properly. He lost all his back teeth early in life, this was the reason of the sunken condition of his cheeks. It was only when he was compelled to wear a set of artificial teeth that the natural configuration of his head returned." Sir William Fraser's notes were thrown together without much order or system, but he knew the Duke and had a sincere admiration for him, not only as a soldier but as a statesman and a man. The result is a volume at once entertaining and instructive, for even those who cannot altogether sympathise with the hero-worship of the author must recognise that the Iron Duke was a man of commanding intellect, great shrewdness, and wide knowledge of the world, qualities which find expression in many of the sayings here preserved by Sir William Fraser.

Mr. Joseph Grego has rendered the same service to the *Reminiscences and Recollections of Captain Gronow*,[6] as to Sir William Fraser's book. The author, who came of a good Welsh family, after seeing service in the Peninsula and at Waterloo became one of the Prince Regent's set, and a great man about town. Later in life he lived much in Paris, and married a French lady. He thus had the opportunity to know a great many interesting and some notorious people, and his collection of "anecdotes of the camp, court, clubs, and society, 1810-1860," to use his own words, make very good mixed reading. Captain Gronow was a *connoisseur* in dandies; he found those of the later Georgian epoch in England "odious.....a motley crew, with nothing remarkable about them but their insolence"; and those of the Second Empire in France poor creatures who took "their pleasures sadly, soberly, and stupidly." His reminiscences, however, are by no means limited to the gossip of the court and the clubs, but contain many notes on the war and its varied fortunes. The writer has followed no sort of order, and we find wedged between a description of the pack of hounds which the British officers took with them in the Peninsular War, and the story of a daring ruse of one O'Keefe, who volunteered to take a hill held by a French force, a brief account of the frightful ravages caused by dysentery in the Peninsula. In 1812, five hundred men of a single battalion of Captain Gronow's regiment died within a few weeks of their landing at Cadiz. The book is a good companion for leisure moments, and the contemporary prints, which are well reproduced, really illustrate the text.

A great deal of pioneer work in Africa has been done by missionaries, and much is still being done. The latest contribution to the literature of the subject is by Mr. A. B. Lloyd, who in 1894 went out as one of a party of four whose field of work was Uganda. His book, entitled *In Dwarf Land and Cannibal Country*,[7] falls naturally into three parts. The first relates the really serious sufferings which the party endured on the way from Zanzibar to Uganda, and one cannot help feeling that many might have been avoided had the party been in charge of some more experienced traveller. It is to be feared that this is not a solitary example of want of foresight on the part of great missionary societies. The second part deals with the history of the Soudanese rebellion in Uganda, and the narrative is a valuable contribution to the history of that unfortunate occurrence. The third part relates the author's return journey to Stanley Pool; on the road he saw something of the Pigmies, of whose habits and temperament he gives an interesting, and, on the whole, very favourable account. Though of a low order of humanity, they appear to possess a sense of humour, and to be the most wonderful forest trackers in existence. This part of the book is that to which most readers will probably first turn, but the whole volume is well worth reading, and will be especially interesting to the friends of medical missions, for Mr. Lloyd shows very plainly their value as agencies for helping the people and establishing friendly relations with them. Mr. Lloyd is much indebted to his publisher, who has shown great liberality in the matter of illustrations, of which there are 146, mainly from photographs. There are also three maps, showing the country traversed by the author.

One of the best boy's books of the season is *The Log of a Sea Waif*,[8] in which Mr. Frank Bullen, who woke up one morning last year to find that his story of the whale fishery had made him famous, gives his recollections of the first four years of his sea life. It is a stirring story and well told, but it contains many gloomy pages. Whether any real improvement has taken place since Mr. Bullen commenced his seafaring life as a cabin boy, less than thirty years ago, we do not know, but the brutality he suffered on more than one ship must, it is to be hoped, only prove that he was exceptionally unfortunate. It is to be feared that not even so much can be said as to his dietary experiences. "The Board of Trade scale of provisions for the mercantile marine," he writes, "must strike every landsman as being a most absurd compilation." The diet may be theoretically sufficient, but salt beef, salt pork, split peas, and biscuit do not allow of much variety or skill in cookery, even if the cook were skilled. But Mr. Bullen brings a much more serious charge against the Board of Trade than mere incompetence to move with the times. "The very best ships' beef and pork," he writes, "is not nice; the second best is nasty, and what will pass an inspector is often utterly unfit for men to live upon entirely for any length of time, while it would be considered loathsome ashore." We sincerely trust that the wide circulation which this admirable book is sure to command will draw serious public attention to this question, and that light may at last be thrown on the methods of the Board of Trade, and some common sense introduced into its hidebound regulations.

That matters were once as bad or worse in the Royal Navy we are reminded by the description of the mutiny at the Nore in the first volume of Dr. Fitchett's *How England Saved Europe: the Story of the Great War* (1793-1815).[9] The petition

[4] London: T. Fisher Unwin. 1898. Small 8vo, pp. 240. 1s. 6d.
[5] London: John C. Nimmo. 1900. Large 8vo, pp. 328. 7s. 6d.
[6] London: John C. Nimmo; New York: Charles Scribner Sons. 1900. Two volumes, extra cr. 8vo, pp. 722, 31 illustrations. 12s. net.
[7] London: Fisher Unwin. 1899. Large 8vo, pp. 410. 21s.
[8] London: Smith Elder and Co. 1899. 8s. 6d.
[9] London: Smith, Elder and Co. 1899. In four volumes. Vol. i, From the Low Countries to Egypt. (Cr 8vo, pp. 374, 16 portraits and 8 plans. 6s.)

of the seamen at Spithead is truly described as "almost touching by its simplicity and reasonableness" The first clause asked that there should be 16 ounces in the seaman's pound (the pursers deducted 2 ounces from each pound as a perquisite); the second that when in port he should get bread instead of biscuits, and "a sufficient quantity of vegetables of such kind as may be most plentiful in the ports to which we go"; the third, that there should be "better care of the sick, and that the necessaries for the sick be not on any account embezzled." We venture very strongly to recommend this work to all who desire to have in a brief space a trustworthy account of the early days of the great war. If the standard of the first volume, which takes us from the Low Countries to Egypt, be maintained in the three which are to follow—and there is no reason to doubt that it will—the whole will form a very readable history of a stirring time, and a useful work of reference. The worst part about it is the title, which is perhaps trivial and savours a little of boasting, though Napoleon's exclamation, "I have made war upon you for twenty years," goes far to justify the boast. It is, at any rate, cheering reading in these times, when the horizon, if not so dark as it was in the closing years of last century, is not too bright. The publishers have taken the wise course of illustrating the volume by reproductions of contemporary portraits of Nelson (2), Napoleon (2), Hood, Howe, Jervis, Duncan, Saumarez, Troubridge, and Sidney Smith. The book is one which will delight a boy, but will be read with hardly less zest by his father.

That the hand of Mr. G. A. Henty has by no means lost its cunning is proved by his new volumes One of these, *No Surrender*,[10] is a tale of the rising in La Vendée. Probably nobody at the present day knows better how to write a historical romance, and the history of the defence of La Vendée against the republican forces is so full of romance that it lends itself readily to his method. The story is well contrived, full of incident, and will be read with avidity by young people, whose interest in a page of history little known to many at the present day will thus be aroused. The volume is illustrated by eight plates by Mr. Stanley L. Wood. Mr. Henty's other volume is *Won by the Sword*.[11] This though an independent story, is in a sense a continuation of the author's *Lion of the North* and carries forward his account of the Thirty Years' War. The hero is a young Scotchman and his adventurous career brings him into contact with Turenne, Mazarin, and Condé This volume contains twelve illustrations by Mr. C. M. Sheldon, and the seriousness of the author's method is shown by the fact that he gives plans of four battles. Nevertheless, experience proves that the solid basis of fact on which his stories rest does not in the least diminish the pleasure with which they are read by young people.

No more opportune time than the present could have been found for the publication of Captain F. S. Brereton's book, *With Shield and Assegai*[12] The author, who is an officer of the Royal Army Medical Corps, makes his hero a witness of the disastrous day of Isandhlwana, and takes him through the fight at Rorke's Drift and the battle of Ulundi. Excellent descriptions, to which the author's professional experience enables him to add some graphic details are given of all these actions, and much is said of Buller's Horse, which was commanded by the present Commander-in-Chief in South Africa The volume, to which Mr. Stanley Wood has contributed some spirited illustrations, is certain to be highly appreciated by boys.

The plot of the *Boys of the Priory School*[13] turns upon a dilemma in which a young boy is placed by strict adherence to the code of honour which forbids a boy to clear himself by getting another into trouble. The story is well told, and the authoress is able to write good dialogue, so that the book, which is illustrated by Mr. Harold Copping, is sure to be welcomed by boys. Whether quite so much can be said for Dr Gordon Stables's *Kidnapped by Cannibals*[14] we do not know. It has many exciting episodes, but is a somewhat gruesome story.

[10] London: Blackie and Co. 1900. 5s.
[11] London: Blackie and Co. 1900. 6s.
[12] London, Glasgow, and Dublin: Blackie and Son. 1900. 3s. 6d.
[13] By Florence Coombe. London, Glasgow, and Dublin: Blackie and Son. 1900. Pp 240. 2s. 6d.
[14] Same publishers, 3s. 6d.

In *The Drummer's Coat*[15] the Hon. J. W. Fortescue tells a story of the West Country which takes us back to the early years of the century, when the memories of the Peninsular War were fresh in the mind of countryfolk who had lost, one a son, and another a husband or a brother, killed, and when of others the official report was "missing," perhaps even worse than "killed," by reason of the suspense—a suspense which many are suffering at this day. The story itself in this volume is not much, but the way in which it is told is a great deal; it will appeal to young and old, boy and girl, but most to those who love Devonshire and the racy dialect of its shrewd but simple people. The illustrations, by Mr. H. M. Brock, are agreeable, and add to the merits of the volume as a gift book.

Mr. John C. Nimmo is publishing in "The Mary Powell Series" reprints of the late Miss Manning's very engaging historical tales. Some of them are well known, especially the *Household of Sir Thomas More* and *Mary Powell*, but others have been less widely read, and among these is to be reckoned *The Colloquies of Edward Osborne*,[16] the last published volume of the series. It is a short tale dealing mainly with Wyatt's insurrection, what led up to it and followed it, written in a pleasant old-fashioned style. This edition is well printed, and Mr. John Jellicoe's illustrations contribute not a little to render the volume an elegant gift book.

John Strange Winter has published in the volume entitled *A Mother's Holiday*[17] a collection of stories of which the best is certainly that which stands first and gives its title to the volume. It is sadly true that the summer holiday is often no holiday to the mother of the family, and if the British hotelkeeper understood the position he might quickly grow rich by giving materfamilias what she wants for what she can afford to spend. As a character study very delicately worked out his story deserves to be read.

The author of *Lady Barbarity*[18] calls it a "romantic comedy," and the description is just. The heroine, a delightful hoyden, has set her heart upon rescuing a young rebel of the '45 from Tyburn Tree, and the tussle of wits between her and a certain captain who guards the rebel supplies the comedy of the book. It is good comedy and the story is both amusing and absorbing.

Mr. S. Dodgson Collingwood has followed up his biography of the author of *Alice in Wonderland* by *The Lewis Carroll Picture Book*,[19] which consists of a selection from the unpublished writings and drawings of Lewis Carroll, together with reprints from scarce and unacknowledged works. The Rev. C. L. Dodgson was an Oxford Don, and some of the jokes and allusions in these fragments will not easily be appreciated except by those who knew Oxford in his day. But there are some specimens which will appeal to all lovers of his humour. There is, for instance, the delightful letter in which he urged the University to erect a mathematical institute containing "a room for reducing fractions to their lowest terms ..... provided with a cellar for keeping the lowest terms when found," and "a large room, which might be darkened and fitted up with a magic lantern for the purpose of exhibiting circulating decimals in the act of circulation." The institute, he urged, should possess "a piece of open ground for keeping roots, and practising their extraction (it would be advisable to keep square roots by themselves, as their corners are apt to damage others)," and also "a narrow strip of ground railed off and carefully levelled for testing practically whether parallel lines meet or not." The process of "continually producing the lines," he added, "may require centuries or more, but such a period, though long in the life of an individual, is as nothing in the life of the University." The last touch is delicious, and the whole is a not unkindly skit on demands made on behalf of experimental science which must have seemed extravagant to Dodgson, who had little or no knowledge or sympathy with those sciences.

The authoress of *Mignonne*[20] founds her plot on an instance of complete loss of memory after a shock followed by an acute illness Such cases are, to say the least, very uncommon,

[15] London: Macmillan and Co. New York: The Macmillan Co. 1899. 4s. 6d
[16] London: John C. Nimmo. New York: Charles Scribner's Sons, 1900. 6s.
[17] London, New York, and Melbourne: Ward Lock and Co.
[18] London, New York, and Melbourne: Ward Lock and Co.
[19] London: T. Fisher Unwin, 1899, cr. 8vo, pp. 392, 6s.
[20] *Mignonne or Miss Patricia's Pet.* By Jeannie Chappell. London, Glasgow, and Dublin: Blackie and Son, Limited. 1900. 2s.

especially in children; but good judgment is shown in selecting the sense of smell as the channel through which the dormant memory is aroused. The story, as a story, is well told; and the volume, which contains some neat sketches by Mr. Paul Hardy, will be read with pleasure by the young girls to whom it is addressed. Another story for girls which may be recommended is *The Four Miss Whittingtons*.[21] It is an account of the means taken by four young sisters possessed of a very limited capital to earn their own living. The difficulties encountered and the measure of success attained make a story which has a useful moral, though this is not intruded. The next story on our list, *A Queen Among Girls*,[22] is another example of the modern girl. Here the sister is the strong ambitious character, the brother diffident and self-conscious. It is a good story, though its plot may have a chastening effect on the young persons to whom it is addressed. Miss Sarah Tylter again presents us with a charming, if very juvenile, heroine, but she is more of the old-fashioned type which showed courage and steadfastness in the face of physical difficulties. She has called it *A Loyal Little Maid*,[23] and it is concerned with a romantic episode of Mar's rebellion. It is illustrated by Mr. Paul Hardy, and is sure to be highly approved of by other little maids.

In a volume which has for title *The Scarlet Herring and Other Stories*,[24] Judge Edward Abbott Parry, who is no novice in such matters, has produced a bundle of fairy stories which are well illustrated in black and white by Mr. A. D. Rusden. The story which gives its name to the volume is founded on a Welsh myth, but the author draws his inspiration for some of the stories in the volume from other sources, from the *Arabian Nights*, for example, and the book altogether will form a most acceptable gift.

Of books for young children there is none better this year than *The Little Browns*.[25] The writer really understands children and knows how they talk and think. Her method is one result of that more honest and respectful study of the child's mind which is one of the notes of the present day. The attention of children is easily drawn away; they pass rapidly and easily from one subject or one mood to another; but, when they reason they are usually surprisingly logical, and some of the oddest and apparently most perverse things which they say and do are really correctly reasoned out from their premisses. This book is well worth reading by the elders, not that it is at all addressed to them, or that the writer deliberately endeavours to teach either age or youth, for the book is a bright, straightforward story such as appeals to children. It is written pleasantly, simply, and without affectation, and is admirably illustrated.

Mrs. Molesworth is so well known as a writer of stories for and about children that every one will take up her new book, *This and That*,[26] with pleasurable anticipation. It is a study of two very engaging children, written with insight and sympathy, and will appeal alike to children and to those who love them. The authoress succeeds perhaps better than any one before in transliterating child's talk, a department of linguistics to which very little attention has been given; and Mr. Hugh Thomson has added some agreeable sketches.

The amount of skill and pains now given to the production of Christmas books for quite young children appears remarkable to those who remember what such books were before the age of Caldecott and Walter Crane. The influence of the Japanese and to some extent of the modern impressionist school has been apparent for some years past, and this year Mr. Carton Moorepark has given us in *A Book of Birds*[27] twenty-six studies of birds in black and white. The drawings are on large paper (13 by 10) and the artist by his broad method of treatment gets some striking effects. All the plates are not of equal merit, but none are commonplace. Those of the goose, the duck, the cassowary, the magpie, the parrot, and the seagull strike us as the best. The letter-press is brief and adapted to the comprehension of young children, for whom the volume will form a very handsome gift book.

Somewhat more on the old-fashioned lines is *The Book o. Penny Toys*.[28] It consists of a series of pleasant rhymes by Miss Mabel Dearmer, illustrated by very spirited coloured drawings by the authoress. It is to be supposed that the small people of to day are somehow learning the old nursery rhymes, but these new ones which are original, will probably appeal to them. The pictures will certainly please them, for the artist has not hesitated to use bright colours; she is of the mind of William Morris who one day told a customer dissatisfied with the brilliant colouring of the wall papers and fabrics in the famous shop, "If you want dirt you can find it outside."

The periodical publications of the Religious Tract Society (56, Paternoster Row, E.C.) are too well known to need any description, and too firmly established in public favour to require commendation from us. The annual volumes of the *Leisure Hour* (price 7s. 6d.), *Sunday at Home* (price 7s. 6d.), *Girl's Own Paper* (price 8s.), and *Boy's Own Paper* (price 8s.) are as usual full of matter interesting and instructive to the different classes of readers for whom they are intended. The *Leisure Hour* holds its ground as one of the most popular of the cheaper magazines. It may be mentioned that with the November number it entered on an entirely new series. The size has been altered, and other changes in form have been introduced which will, it is hoped, make the periodical more attractive. An interesting story by Sir Walter Besant is appearing in the new series. *Sunday at Home* is more directly religious in purpose, and correspondingly more "goody" in tone. Its contents are varied, and though intended for edification are far from dull. We note here and there, however, slight but unpleasant marks of bigotry. Doubtless the editor would plead that these are the "Persian attire," which a religious paper must wear to keep up its character, but we would answer with Lear, "Let them be changed." Of the *Girl's Own Paper* we need only say that the present volume well maintains its reputation; for the modern girl with her bicycle, her golf, her hockey, and her other athletic tastes, what may be called the "prunes and prisms" element is perhaps a little too pronounced, but this is a useful corrective of boydenish instincts when tending to be too rampant. The *B. O. P.* is, as it should be, more breezy and more racy. It remains the first favourite among schoolboys, and alike in the quality of its stories and in the number and excellence of its illustrations, is unrivalled in its class. Other periodical publications of the Religious Tract Society are *Our Little Dots* and *The Child's Companion*. These have always been highly esteemed in well regulated nurseries. The annual volumes (price 1s. 6d. each) will be welcomed as Christmas presents by small children, who will find in them much to interest and amuse them, the *dulce* being tempered with just enough of the *utile* to make a compound well adapted to further the healthy development of the mind and character of the rising generation. The Religious Tract Society also publishes a number of stories, all directly or indirectly religious in character. We must ourselves plead guilty to being bored by the religious only a little less than by the "problem" novel. The height or depth or breadth of the particular doctrine inculcated makes no difference; we hold that a novel should be warm with the living blood of human passion, not sicklied o'er with the pale cast of theological thought. But we do not in the least find fault with the Religious Tract Society for trying to fulfil its mission in its own way. Anyone buying their publications knows what he may expect, and has no right to complain when he finds that he has got a tract in the disguise of a tale. And we freely admit that the publications of the Religious Tract Society, as a whole, have the great merit that there is nothing morbid about the religious instruction which they convey. Moreover, bigotry is generally conspicuous by its absence, though bias is often enough plainly visible. If in some of them the taste of the medicinal powder which they contain is imperfectly concealed by the jelly of the story, that defect is doubtless held by the authors to be more than compensated for by merits of a higher order than that of literary art. Passing from the general to

[21] By Geraldine Mockler, with eight illustrations by Charles M. Sheldon. Same publishers. 5s.

[22] By Ellinor Davenport Adams, with six illustrations by Harold Copping; same publishers 3s. 6d.

[23] Same publishers. 2s. 6d.

[24] London: Smith Elder and Co. 1899. Cr. 8vo, pp. 266; 30 illustrations. 6s.

[25] By Mabel E. Wotton. Illustrated by H. M. Brock. London: Blackie and Son, Limited; 1900; 70 illustrations. 6s.

[26] London: Macmillan and Co. New York: The Macmillan Company. 4s. 6d.

[27] London, Glasgow, and Dublin: Blackie and Son, Limited. 5s.

[28] London: Macmillan and Co. New York: The Macmillan Company. 1899. 6s.

the particular, we may say that the individual books submitted to our judgment are for the most part more readable than we expected to find them. *An Incorrigible Girl*, by M. H. Cornwall Legh (Cr. 8vo, price 2s. 6d.) is a story of a self-willed girl who went to Sunday school and afterwards into service, was "district-visited" and otherwise chastened till she submitted to discipline. The story is well told, and its moral purpose is redeemed by a sense of humour, which is not as common as it might profitably be in novels with religious tendency. *The Bond of Love*, by Margaret Thorn (Cr. 8vo, price 1s. 6d.) is a story of the West country, strongly tinctured with the Methodist spirit, which will make it acceptable to those of kindred religious affinities. *Driftwood*, by Mary E. Palgrave (crown 8vo, price 5s.), points the moral that the battle of life is won by character, and the enemy to be most stoutly fought against is selfishness. *Her Own Way*, by Eglanton Thorne (crown 8vo, price 2s. 6d.), shows that one's own way is often the road to ruin. In *Clipped Wings*, by Harriet E. Colvile (crown 8vo, price 2s), the plot turns on the fact that the heroine's mother had been condemned for a crime of which she was not guilty. In *How Gladys Won Her Great Victory*, by Hester Grey (crown 8vo, price 1s. 6d.), the scene is partly laid in Australia and the story itself has an active ingredient of incident. *Over against Her House*, by Margaret S. Comrie (crown 8vo, price 3s. 6d.), has more variety and human interest than most of those hitherto mentioned. It is written in a very wholesome spirit, and has this special interest for the medical profession that two of the female characters in it are doctors. The book may be commended to girls who feel within themselves the stirrings of a medical vocation. *I Will be a Sailor*, by H. Louise Bedford (cr. 8vo, 2s.) is a story of a boy called Nelson Trevelyan, who had an ambition to rival his great namesake. The story is improving and fairly interesting, though hardly sufficiently exciting for the average young Briton. *Legend Led*, by Amy Le Feuvre (cr. 8vo, price 2s.), is a sweet and wholesome story of child life, in which the legend of the Holy Grail is skilfully adapted to modern use as an incentive to higher aims in life. *Parkhurst Sketches and Other Stories*, by Talbot Raines Reed, edited by G. Andrew Hutchison, editor of the *Boy's Own Paper*, *etc.* (cr. 8vo, price 2s. 6d.), takes us into the breezier atmosphere of boy life—football, paper chase, cricket, etc. The types of boys described under the head "Boys we have Known"—the sneak, the sulky boy, the boy who is never wrong, etc.—are at once humorous and true to life. The second part, entitled "Boys of English History," contains stories about John Plantagenet, the boy who broke his father's heart; Edward the Black Prince, the boy who went to battle; Lambert Simnel, the baker's boy, who pretended to be a king; Edward and Richard Plantagenet, the boys who were murdered in the Tower; Henry Stuart, the boy whom the nation loved; and other tales of boys famous in our rough island story. The book will be greatly appreciated by intelligent boys. *Little Tapers*, by Frederick Langridge (price 1s.) consists of a number of moral sentiments and reflections conveyed in facile but somewhat feeble verse.

The *New Century Library* (Thomas Nelson and Sons, Edinburgh, London, and New York, 1899) comprises dainty little reprints of *Pickwick*, *Nicholas Nickleby*, and *Vanity Fair*. Though so small that they can be conveniently carried in the pocket, each tale is complete in one volume and is printed in extremely clear and legible type. The little volumes are neatly got up, and it will be a boon to lovers of Dickens and Thackeray to have their masterpieces in a form at once so attractive and so handy.

The Courteous Knight and Other Tales from Spenser and Malory, by E. Edwardson, illustrated by Robert Hope (T. Nelson and Sons, Edinburgh, London, and New York. Price 3s 6d.), attempts to do for Spenser what Charles Lamb did for Shakespeare. The attempt itself is most praiseworthy and the author has to a large extent succeeded in his object. Spenser, though the most musical of poets, is also, it must be admitted, one of the most wearisome to the average sensual man. We agree with Macaulay that "very few and very weary are those who are in at the death of the blatant beast," a statement, by the way, which reveals the painful fact that Macaulay himself had probably not read *The Faerie Queene* to the bitter end. We may take it, therefore, that Spenser would be too much even for Macaulay's terrible schoolboy. But many children will read Malory with pleasure and understanding. His sweet quaint English is in itself a lesson in style and a means of cultivating literary taste. But in these days of "tit-bits" and "snippets" it is useless to expect that many people will plod through the *Morte d'Arthur*, and in default of the original Mr. Edwardson's selections may be heartily commended.

Indoors and Out, a book of pictures and stories for little folk (Blackie and Sons), will certainly be a favourite with young children. The stories are simply but effectively told, and the illustrations, which are very numerous, are executed in superior style. In looking through those books for the rising generation, one whose childhood lies a considerable way behind him cannot help a feeling of envy when he thinks of the kind of literature that was available for him at a corresponding stage in life's journey; and in nothing is the superiority of modern child literature more conspicuous than in the illustrations.

Messrs. Dean and Son, Limited, publish an extensive and varied series of illustrated alphabets. The *Gimcrack Alphabet*, "pictured by Ingles Rhode," besides the illustrations, gives what may be called literary examples of the individual letters in nursery rhymes. This will serve, no doubt, to facilitate the process of learning the letters, which is probably the most painful experience in educational development. Then there is an *Animal A B C*, in which the letters are illustrated by pictures of beasts; the *A B C Nursery*, objects, toys and so forth; and the *Fairy Alphabet*, in which the illustrations are drawn from fairy life. Other publications of this firm which will be welcomed by the little ones are *A Romp in the Country*, and *A Ride Through Nurseryland*. In a more serious vein are scriptural stories such as the *Story of Samson* and the *Story of David*, retold by the Rev. Theodore Johnson. Both these are profusely illustrated in a somewhat flamboyant style of art.

An untearable picture book especially appropriate to the present time is *On and Off Duty*, pictured by R. Simkin A. Hanslip (Dean and Co.). This contains excellent pictures, many of them coloured, of the different branches of Her Majesty's Army. The young Briton will therein see the Gordons and other regiments now at the front in their habit as they live at home and in their khaki as they fight for Queen and country "across the faem."

The British Empire A.B.C., one of Dean's gold medal series, is a geography of the empire in pictures which will serve to foster the imperial idea into hardy growth in the youthful breasts of the future citizens of this country. Thus A stands for Australia, and as a concrete presentment of the letter there is a little map of Australia, with a youthful digger in the foreground, somewhat regardless of perspective, but an imposing little figure well calculated to arouse the British boy to thoughts of colonial enterprise. B stands for Bombay, and is illustrated by a picture of a chubby little black girl with a necklace, and so on. The idea is excellent, and is well carried out. The book is untearable.

Diaries.

Messrs. John Walker and Co. (Warwick Lane, E.C.), issue their familiar diary in various sizes. Among the most useful sizes are No. 1, which contains a week on the open page, and will go conveniently into the waistcoat pocket; No. 2, which is similar in make but slightly larger; Nos. 3, 7, and 24. All these contain special pages for memoranda, engagements, addresses, bills payable, cash account, and notes. In Walker's Graphic Diary, No. 17, the dates are printed in very large letters, under each one being indicated the number of days passed and the number of days to come in the year. Messrs. John Walker's Diary Notebook contains an almanac and a number of blank pages for memoranda. All these diaries are excellently got up in flexible covers. A feature worth special mention, as it is too rare in diaries, is that in the larger sizes the pencils appear to be made for use and not merely to give an appearance of completeness to the book. A full list of Messrs. Walker's diaries, which are at once the handiest and daintiest known to us, may be obtained on application to the firm.

The *Scripture Pocket-book*, published by the Religious Tract Society, is a convenient diary, containing the usual information, with the addition of a scriptural text for each day of the year.

The *Nurses' Pocket Diary and Note Book*, issued by the Scientific Press (Southampton Street, Strand), contains useful memoranda on the emergency treatment of poisoning by various toxic substances, notes on utero-gestation, concealment of birth, infanticide, criminal abortion, sudden death and unnatural death, and signs of death. The diary is of a very handy size, and is likely to be useful to nurses.

The *Royal Navy List Diary and Naval Handbook* gives a page to each day, and is furnished with a separate index, monthly cash account, letter register, etc. In the letterpress accompanying the diary is a complete calendar of notable naval events, lists of the benevolent funds and institutions in connection with the Navy, besides original articles on the naval progress of the year, tides, terrestrial magnetism, etc. The diary, which is indispensable for naval men, will be useful also to the general public.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS

MEDICINAL AND DIETETIC PREPARATIONS.

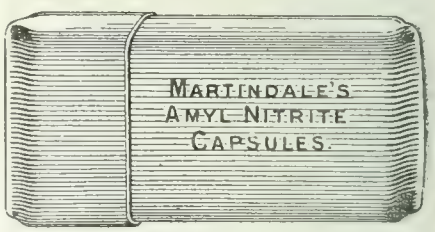
Sapolette Powder.—We have examined a sample of this preparation, which is made by Messrs. Wyleys, of Coventry. It is described as a "non-alkaline antiseptic soap powder," which lathers very freely in cold and hard water, the active antiseptic substance being thymol, and it is suggested that it is specially adapted for the use of medical men, nurses, and the travelling public. The results of our analysis show that the preparation is a well-manufactured dry soap powder devoid of free caustic alkali and containing thymol. A small percentage of insoluble silicious matter is present, and this has no doubt been added for the purpose of enhancing the detergent properties of the powder. It is suggested by the makers that the preparation is a convenient one for medical men to carry in their instrument cases. The powder is used by placing it on the hands, previously wetted; and when this is properly done an abundant lather is produced. The use of thymol instead of carbolic acid may be regarded as a distinct advantage in many respects, as it is a powerful antiseptic, and does not affect the skin in the same way as phenol. We think that the preparation deserves the attention of the profession.

Allenburys' Toilet Soap.—It is claimed that this soap, which is manufactured by Messrs. Allen and Hanburys, is a superfatted soap made from pure fats, and that it is specially suited for tender and sensitive skins. The results of our analysis of a sample of the soap show that it is a well-manufactured toilet soap of very good quality. It is devoid of free caustic alkali, and of any mineral or other substances which could be regarded as adulterants. The soap is "superfatted," and is a pure and high class preparation.

MEDICAL AND SURGICAL APPLIANCES.

Portable Urine Test Case.—Mr. Martindale (10, New Cavendish Street, W.) has sent us a urine test case designed by Mr. W. Harrison Martindale, Ph.D., which is intended to meet the requirements of the busy practitioner who desires to make a fairly exhaustive examination of the urine at the patient's bedside. The apparatus and reagents, which are sufficient for the purpose of a qualitative and quantitative examination for albumin, glucose, and urea, are contained in a mahogany cabinet measuring 6 inches by 2½ inches by 4 inches. The case contains an albuminometer (Esbach's), a graduated tube for glucose determination, a ureometer for urea determination, a urinometer for reading off the specific gravity, a metal spirit lamp with brass screw top, three test tubes, a test tube stand, a test tube brush, four stoppered bottles of reagents fitted with patent stopper bands, a funnel, a graduated pipette, litmus papers, filter papers, cloth, calculation papers, and a book of directions and charts. The processes are described clearly and in sufficient detail to enable any medical practitioner to make a satisfactory analysis for clinical purposes. The case, which is a miracle of neatness and compactness, can be carried about with as little inconvenience as a pocket dressing case. The only difficulty in actual use will be in repacking it.





Pocket Drug Cases — Mr. Martindale has also introduced a pocket case to carry one dozen nitroglycerine tablets, and a similar portable case to contain three amyl nitrite capsules. The prices of these, filled, are respectively 1s. and 2s. each. The size is shown in the illustrations.

THE MEDICAL ASPECTS OF THE BOER WAR.

By a South African Campaigner.

III.

It is cheering news, when all news is so scarce from South Africa, to learn that our forward movement has at length begun, and has been celebrated by victories under Lord Methuen north of the Orange River and well on the way to Kimberley. The main feature of the engagements at Belmont and Enslin was the steady advance of our infantry under a heavy fire until they were actually within bayonet thrust of the enemy. This method of charging at close quarters completely demoralised the Boers, and when adopted has invariably led, if not to their actual rout, at least to their retreat. At the same time, the price paid for this mode of attack is necessarily dear, although, looking to the number of men engaged on both sides at Belmont, the number of killed and wounded on our side cannot be regarded as excessive.

Killed and Wounded at Belmont.

Lord Methuen's returns to date are 4 officers killed and 19 wounded, and 55 rank and file killed, and 128 wounded. In a previous letter, when discussing the proportion of killed to wounded, I commented on the fact that the latter bore an unusually large proportion to the former; unfortunately the same cannot be said of the casualties sustained in the Belmont engagement. We must infer that the large number of proportion of killed in this engagement was due to the close character of the fighting and the short range of the rifle shooting. At long ranges it is evident that the wound of the Mauser rifle may frequently be a comparatively trifling affair. It is probable that even at short ranges the wound inflicted by this bullet in the limb is not a severe one, but the chances of shooting men in a vital part are of course increased as the range diminishes, and we must infer that the short range of this engagement probably enabled the Boers to take more accurate aim, and that the increased mortality was not due to any change in the character of the missile, but to the fact that the shooting was of a much more accurate character. It will, however, be of interest to learn whether the Free State Boers,

and especially those fighting in this engagement, were all so universally armed with the Mauser rifle as the Boers of the Transvaal. I have known the Free State for many years, and during my acquaintance down to quite a recent time the majority of the Boers were in the habit of using the Martini-Henry. It is possible that they used this arm to some extent at Belmont. As already stated, the Martini-Henry bullet is much more deadly than the Mauser, and at close quarters the shooting may easily be quite as accurate. The *Times* correspondent states that the Boers used some Dum-dum bullets. From this we are led to suppose that some of the Boers must have been armed with the Lee Metford rifle, as it was for that arm that the Dum-dum bullet was originally prepared, although it is possible that the reference may be to a Mauser bullet prepared on the Dum-dum pattern.

Disposition of the Wounded.

The railway is open to Belmont, and the wounded at Belmont, both Boer and British, have been sent to Orange River, and from there to Beaufort West and Capetown. Beaufort West is a picturesque town in the heart of the Karroo with a good, though small, hospital of its own. Should a further engagement, as is anticipated, occur at Modder river, and be followed by the same successful result, it is probable that any wounded there may be at that point will be carried forward to Kimberley itself, where the accommodation for treating both sick and wounded will be ample and complete. Kimberley has an excellent hospital with 300 beds, and is a town containing many buildings which might be used for the reception of wounded if necessary.

Health of Troops in Natal.

From Natal the information to hand is somewhat confusing, but there is no indication of any considerable outbreak of either typhoid or dysentery among our troops. While food supplies and water are available for the different garrisons, as there is every reason to suppose they will continue to be there is no reason to anticipate any great degree of sickness. The climate is a healthy one, and unless exceptionally unfavourable conditions arise the health of the troops should remain good, and their vigour unimpaired.

Mafeking.

Reports from Mafeking state that the continued shelter which the garrison are compelled to take in the underground holes, together with a short and indifferent water supply, are producing a certain amount of dysentery among the garrison. This will probably only be of a sporadic character, but at the same time it is devoutly to be hoped that this plucky little garrison will be relieved before many days have gone by. It is quite possible that the bold policy of striking directly at the heart of the Free State, Bloemfontein, would more effectually relieve the various besieged garrisons by necessitating the withdrawal of the enemy surrounding them than would separate expeditions to each garrison in turn. Typhoid has not been referred to in any of the despatches made public, and there is every reason to hope that it will not prevail to any extent.

Antityphoid Inoculation.

Whatever risk there may be in store from typhoid fever, it is to be hoped that it has been minimised by the extensive use of antityphoid inoculation among our troops previous to embarkation, or after their arrival in South Africa. It is stated that as many as 70 per cent. of the troops sent to the seat of war have been inoculated voluntarily. This speaks well for the intelligence of the men and the persuasive power of the medical officers; it further shows the confidence which the men feel in the Army Medical Corps, and the good relationship that exists between that branch of the service and the fighting arm.

The statistics with regard to the efficiency of this preventive treatment of typhoid are not entirely conclusive; at the same time they are sufficiently encouraging to warrant the further application of the remedy, and in any case no evil results appear to follow its application, although some days of *malaise* are usually suffered by the person inoculated. There are two features about typhoid fever which render it specially desirable that this remedy should be found efficient for the protection of our soldiers. In the first place the average British soldier leaving our shores is of the age most susceptible to the disease; in the second place, having lived under more or less perfect sanitary conditions at home, he has not been subjected to those immunising influences which an insanitary environment appear to induce. It is notorious, for instance, that the native can tolerate conditions of insanitation with impunity which inevitably produces a high typhoid mortality among Europeans newly introduced to such conditions.

Hospital Ships.

According to the statement of the Director-General at the dinner of the British Gynæcological Society, the hospital ship *Princess of Wales* is intended to ply between the Cape and England, and that the ship now being fitted by the Committee of American Ladies will also be employed in this way, and not as floating hospitals to be moored either in Simon's Bay or Table Bay.

They are a most interesting element in the preparations for the campaign, and serve to illustrate perhaps as fully as anything could the close touch which is being maintained between the mother country and her sons fighting her battles in the southern hemisphere. It is no exaggeration to say that the wounded in the present campaign will be more directly under control from home and infinitely better provided with both surgical and medical aid than were our forces at Waterloo. The world has never yet had a more striking object lesson in the significance of modern ocean transport facilities than is offered by the whole of the present campaign.

Horse Sickness.

One of the worst enemies to be dreaded during the approaching summer after the Boers, and possibly typhoid, is what locally goes by the name of "dik kop," "black tongue," or horse sickness. It is said to be allied to anthrax, and resembles Loodiana fever which attacks horses in India. The micro-organism responsible for it is said to be derived from the soil, and the disease is most rife from about November to March. Fortunately, it is less prevalent on the plains than in the low country or on the coast. This sickness occurs at times among horses in the form of an epidemic, and kills them wholesale. Colonial farmers believe the poison comes down with the dew at night and in the early morning. It at any rate seems certain that the attacks are associated with the exposure to the night and early morning mists, and horses kept in the stable, or even in a "kraal" (cattle yard) from sundown until the sun is well up and has dried the grass, do not contract it. Many devices have been used to protect horses while campaigning or travelling in the open. During the Zulu war nosebags of flannel were issued to protect horses from the night air to some of the cavalry. These were kept on all night, and only taken off when the dew had evaporated. Very few horses protected in this way were lost during that campaign, and it is to be hoped that similar precautions will be adopted with the cavalry in Natal at the present time.

Boer Commissariat and Medical Arrangements.

The Germans who left the Boer force in Natal and gave themselves up to the British stated that many of the Boers are starving, and although we may venture to doubt that statement, it is quite probable that the Boer commissariat is very much disorganised. The system of supplies is of the most free and easy description, many of the Boers bringing their own waggons and others having little or no provision for food. Each burgher is a law and, as far as may be, a larder unto himself. There is no systematic distribution of rations which ensures every man getting his share, so that it is quite probable that some men have to go very short when the commando has been absent some weeks in the field. What cattle are to the kaffir waggons are to the Boer. The loss of 64 of these huge land transports, each one drawn by 16 bullocks, must have been felt very keenly by the Free State Boers at Belmont. The Boer medical department is undoubtedly of a very primitive character. Both at Ladysmith and at Belmont they appealed for assistance from our commanders, in addition to leaving a number of their wounded in our hands. At Elandslaagte many of the Boer wounded begged to be taken over by our medical men in preference to being left to their own. At Pretoria they are better provided with surgeons, but in the field the number of Boer surgeons must be very small.

THE WAR IN SOUTH AFRICA.

[From our Special Correspondent in Capetown.]

November 8th.

The Wynberg Hospital.

No. 1 General Hospital at Wynberg is now practically in working order, and I have to-day paid a visit to it. Lieutenant-Colonel Anthonisz is in charge, and Lieutenant-Colonel Grier is Registrar and Secretary. I must express my thanks to these officers for their courtesy in personally conducting me over the hospital and in affording me every information. A better site for a large hospital it would be difficulty to find. Situated at a height of 160 feet above sea level on a sandy soil, on the slopes of Table Mountain, sheltered from the Cape south-easter, it is dry and cool, even at this season of the year. As I mentioned before, the hospital is the old military camp converted. It is situated about a mile from the Wynberg station, which is about 9 miles from the city. It contains official accommodation for 500 men and 20 officers, but this could easily be increased to 750, or even more. The buildings are wooden huts, well built, with broad verandahs back and front; 12 patients only are located in each small barrack room, and 24 in the large rooms which are intended for 50 healthy soldiers. The ventilation is excellent; there are ridge ventilators in addition to exit openings in the walls and entrance apertures under each bed. Every ordinary hospital convenience is provided, including a small kitchen adjoining each ward. The electric light is being installed all over, and the operating room is in every respect up to date. Roentgen ray apparatus is in use, and everything required in the way of aseptic surgery. Mosquito nets are in store, but there is very little use for these in the Cape Peninsula. In general the administration of the hospital certainly does not bear out the prevalent idea that military hospitals are behind similar institutions in civil life. I was struck by the advances made since the Zulu war; 86 marquees are in hand, and available for use in the event of more accommodation being required. Such tent accommodation would be in excess of the limit of 750 which I have already mentioned. The *personnel* consists of 6 R.A.M.C. officers, a quartermaster, 160 non commissioned officers and men R.A.M.C., 9 army nurses, and 14 civil surgeons. The latter are not yet all joined. I may mention that it is not contemplated, except in unforeseen emergencies, to detail the civil surgeons for anything but general hospital work, or possibly to take charge of trains. The nursing sisters occupy the former officers' quarters, and are very comfortable. Two servants have been brought out to attend upon them. The hospital is, of course, divided into a medical and a surgical division, and 2 R.A.M.C. officers are allotted to each. The surgical division has 350 beds.

The Patients.

At present there are about 200 patients, some transferred from the original station hospital at Wynberg, and some ordinary invalids. One consignment of sick and wounded from Natal arrived by the *Jelunga*, consisting of 99 non-commissioned officers and men, 85 of whom are wounded from Talana and Elandslaagte; most of the remainder are suffering from dysentery. The *Sumatra* is expected this evening with 199 men and 15 officers. I may mention that the original officers' mess has been converted into an officers' hospital. One is struck with the rapid way in which the wounded have convalesced. All except about half a dozen are up and about, with wounds completely healed, and in only very few cases have the wounds become septic. This, whilst partly due to the style of weapon used, at the same time speaks volumes for the excellence of the arrangements on the field.

Mauser Bullet Wounds.

All are Mauser bullet wounds except two. One of these is a superficial wound of the hand inflicted by a shell splinter, and the other a Martini wound, the bullet having passed between the radius and ulna without apparently having damaged either bone. It had healed well. All the men agree as to the very small amount of shock produced by the Mauser bullets, many stating that they went on some distance after feeling they were hit, one man telling me that he did not notice being hit at all until he began to feel dizzy and found that he had lost a lot of blood. One notable circumstance is that the vast majority of the wounds are in the extremities. This the men attribute to the wild firing of the Boers, and to the fact that they were generally hit just at the moment of leaving or taking cover. One wound had its aperture of entrance just on the inner side of the lower third of the right thigh, and its aperture of exit in the right buttock. Probably this was due to the man having been climbing a steep bit of rock at the time. Apparently the bone was not injured, but it is notable that the injuries involving bone are just as aseptic as the rest. I saw one case of a perforating Mauser wound of the chest. The entrance was about the second interspace, and the exit just to the inner side of the angle of the scapula. It had completely healed without hæmoptysis or any other bad symptom. One peculiar wound deserves mention: The bullet had entered the upper part of the malar prominence, and passed out at exactly the same point on the opposite side. For a time sense and taste were impaired, but now the patient suffers from nothing except some deafness on one side. The bullet must have passed just under the orbital plates. Both wounds were completely healed.

The Hospital Transports.

All men not likely to return to duty in two months will be sent to England.

The *Spartan* has passed through here on her way to Natal. I inspected her, but, as she was fitted up in England, a description would not be new to your readers. She and her sister ship, the *Trojan*, will principally be used for transit purposes between here and the eastern ports, but, if necessary, they may be anchored in Table Bay as actual hospitals.

The Hospital Trains.

Batches of the St. John men are being drilled daily in train work, with a view to their employment between De Aar and here. It is intended to put a non-commissioned officer of the R.A.M.C. in charge of each train, in addition, of course, to a medical officer.

Other Hospitals.

No definite arrangements are as yet made about the other hospitals, but it is probable that No. 2 General Hospital will be in Capetown itself, and 3 and 4 at Port Elizabeth and East London respectively. The situations of the station hospitals depend entirely on the General's plans, which are not yet disclosed.

Camp.

Full provision has been made for a camp of 1,500 men on Green Point Common, just out of the city, and a complete system of sewerage has been laid out.

Nothing has been heard of Dr. Hoffman's party in the Free State.

THE PLAGUE.

Prevalence of the Disease.

Portugal.

During the week ending November 25th, 16 fresh cases of plague occurred in Oporto, and 5 deaths from the disease.

There is no evidence of the spread of plague in Lisbon, and in the case of Dr. Pestana seems to have been an isolated case contracted in Oporto.

Egypt.

No fresh cases are reported from Alexandria or any part of Egypt.

India.

The summary for India for the week ending November 4th shows an increase on the previous week amounting to 3,971, instead of 3,672. Since then a marked decrease in the death-rate from plague has been telegraphed. During the week reported upon an increase was recorded in Bombay City, but a decrease in the Bombay Presidency generally. In Southern India plague has generally decreased.

The report of the sanitary officer for Calcutta, Dr. Nield Cook, is interesting reading. Dr Cook states that "history repeats itself," and that a number of the people even now believe that the statement that plague exists or has existed in Calcutta during the past eighteen months is pure fiction. When it first appeared in Calcutta not only the laity but a number of medical men in responsible positions attempted to disprove the fact of plague being present. It was the same tale when plague appeared in Hong Kong, Bombay, and almost every other place or city which it has visited, and the medical man who first called attention to the presence of the disease has in every instance been looked at askance, and often held up to ridicule.

Mauritius.

For the week ending November 23rd 37 fresh cases of plague occurred in Mauritius, and 39 fatal cases.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 2ND, 1899.

THE BRITISH MEDICAL ASSOCIATION.

The Sixty-eighth Annual Meeting of the British Medical Association will, at the invitation of the East Anglian Branch, be held at Ipswich. The meeting will commence on July 31st and terminate on August 3rd; and, from the particulars published at p. 1580, it will be at once apparent that, so far as forethought can ensure success, the meeting is certain to be of a most interesting character.

Dr. W. A. Elliston, who is one of the surgeons to the East Suffolk and Ipswich Hospital, and has been for some years one of the elected representatives of the East Anglian Branch on the Council of the Association, will be the President, and Dr. E. A. Barnes, of Eye, upon whom as Local Secretary of the meeting much of the work of organisation falls, is finding his task rendered comparatively easy by the cordial manner in which the members of the Association resident within the area of the Branch—which includes Norfolk, Suffolk, and the northern part of Essex—are seconding his efforts.

The Address in Medicine will be delivered by Dr. Pye-Smith; that in Surgery by Mr. Frederick Treves, who is at present one of the consulting surgeons with the military forces in South Africa; and that in Obstetric Medicine by Dr. W. J. Smyly, formerly Master of the Rotunda Hospital, Dublin. It would be difficult to find names more representative of the best clinical work in medicine, surgery, and obstetrics. There will be thirteen Sections, and the arrangements for these will be found in the centre of the Journal. For the first time a Section of Navy, Army, and Ambulance will be formed.

Medicine, both its practice and the study of the sciences upon which it rests, grows yearly more complex, and there is a real danger that those who are engaged in scientific investigation may drift away and lose touch with the great body of the profession which is engaged in practice. To this danger attention was drawn, not for the first time, by Dr. Saundby in his address at Nottingham.[1] His object, which appears to have been strangely misunderstood by some, was, we take it, to show that it was essential that all should receive the same training in the institutes of medicine, though it was inevitable and even desirable that there should be divergence afterwards. The Regius Professor of Medicine at Oxford also discussed this question, from a slightly different point of view, in his suggestive address to the students of the Middlesex Hospital, to which reference has already been made at some length in these columns. He insisted upon the necessity of building "bridges" to maintain easy communication between those engaged in practice and those giving their time to scientific investigation. The debt which practical medicine owes to science was long ago recognised by the British Medical Association, which through its Scientific Grants Committee has given a large sum of money for the advancement of medicine by research, the amount voted during last year to the three research scholars and in grants to various workers was £1,000, and this year the first appointment was made to the research scholarship in public health, founded by the Association as a memorial to the late Mr. Ernest Hart.

The voluminous correspondence on medical organisation which has been published lately in our columns will have been read, by those who have had the pains and patience, with mingled feelings. It has made it clear that many of those who express dissatisfaction with the organisation of the British Medical Association, and depreciate the value of the great work which it has done for the betterment of the profession, not only in the United Kingdom, but throughout the Empire, are very imperfectly acquainted with the one or the other. They may fairly be asked to devote a little time to historical study. As a first step, we may recommend them to peruse the interesting presidential address of Mr. Jones Morris to the North Wales Branch.[2] He there quoted from a minute book half a century old the following as a list of the principles which should be embodied in any satisfactory measure of medical reform: (1) A liberal preliminary education; (2) uniform and sufficient qualification in every branch of medical and surgical science; (3) equal rights for all so qualified to practise throughout the whole extent of Her Majesty's dominions; (4) the adoption of the representative principle in the formation of the Council of Governing Bodies. The fifth principle included the proposition that any system of examination which might be adopted should include a special one in midwifery; while the seventh proposition was that there should be but one common portal by which all men should enter the profession, so that the fundamental laws of medicine should be known by surgeons and the leading principles of surgery understood by physicians, and that any enactment which would debar the general practitioner from any status in the profession to which talent and character would otherwise entitle him was to be reprobated. Anyone who will reflect upon the principles thus enunciated will be able to see how much has been accomplished, although it is true that the principles embodied in the fourth and seventh proposition have not yet been completely attained.

Any scheme to knit together more closely the scattered units of our profession must command the sympathy of those who feel that the true remedy for the many ills and injustices under which we labour is to be found in a greater feeling of unity. We believe that the profession at large has no sympathy with those who would attempt to divide it into classes, and pit the interests of one against

[1] British Medical Journal, October 7th, 1899, p. 937.

[2] British Medical Journal, September 2nd, 1899, p 615.

the other. The Association at its foundation was a provincial organisation, but its founders early perceived the inherent weakness of any partial schemes, and it became both in name and in scope the British Medical Association. Under that name and with that scope it has grown and flourished until it is at the present time the largest and most embracing medical organisation in existence. As Mr. Jones Morris pointed out in his address, there was at about the time when the British Medical Association was first founded a proposition, the sixth in the list above quoted, to found a separate incorporation of general practitioners. This proposal was so completely abandoned by the founders of the Association that it is now difficult to ascertain the exact nature or the supposed advantages of the scheme.

Of one other point we may remind our readers: the Council of the British Medical Association consists of 72 representatives of the Branches and of the President, the President-elect, the Vice-Presidents, and the Treasurer of the Association. Each Branch elects one representative and in addition a representative for every 200 members belonging to the Branch. The Vice-Presidents are members, who either as President, President of Council, or Treasurer of the Association, have rendered exceptional services to it. We may remark incidentally that by far the greater part of the work of the Council of the Association is done by the elected members. There were nine meetings of the Council in 1898-99; all were attended by the President of Council and Treasurer of the Association, and six by the President-elect. The elected representatives, 72 in number, each attended on the average 5.3 meetings, and the 20 Vice-Presidents 1.4 meetings.

Every one who joins the Association should therefore become a member of the Branch in the district in which he resides, and the General Secretary of the Association, on application, will give full information on this head. It is unfortunate that so many do not do this. They are no doubt the people to whom a recent correspondent referred as joining the Association to get a cheap journal, but by failing to carry their adherence to its logical conclusion, they not only lose much themselves, but fail to give to the Association all the support which it is in their power to render.

IS GENIUS A MORBID CONDITION?

To say that men of genius are eccentric is but to repeat ourselves, since whatever we mean by genius we at least imply that it is unusual. The word is used of many powers of the mind; a man is said to have a genius for music, for science, for scholarship, for mathematics, for finance, for engineering, for war. These uses all imply the faculty of imagination, while only in some instances is there combined with this the power of fitting means to ends. The use of the term for a linguist like Mezzofanti, or a calculating boy, is plainly less exact; the astonishing memory of the one, the marvellous cerebral machinery of the other, miss that power to see relations unobserved by other men which we find necessary for genius.

Attempts which have been made in recent years to class genius among the degenerations or neuroses have obtained a certain vogue among those sciolists who accept the new because they have no good knowledge of the old, and among those moral dyspeptics to whom all is acceptable that makes for dreariness. Yet it must be confessed that even the most serious of these endeavours leaves much to be desired. In drawing such a conclusion the inquirer should first examine as complete a list as possible of persons of genius, and should exclude from it all who are not of this class. It is surprising, therefore, to find in a serious work such as that of Professor Lombroso the names of Wilberforce, Gibbon, John Howard, Marcus Clarke, and many others less known, whose great qualities are not of the order to which genius is restricted. Lombroso's collection is indeed a list of eminent men, but here again it is at fault, because it obviously leaves out of consideration a vast number of persons equally qualified to be considered. A further difficulty in such research is that many persons have the qualities of genius to whom circumstances deny their exercise. How many mute, inglorious Miltons go to one *Paradise Lost*; how few soldiers have the chance to become Napoleons; how many discoveries are never brought to public notice, or if published at first neglected? Given, therefore, that it were possible to make a satisfactory list of recognised genius, a very much larger series who have never been acknowledged would remain to vitiate the statistics.

Secondly, in computing the eccentricities of genius, it should be clearly shown that these do not occur to the same extent in the surrounding population. Twenty-three men of genius, including Agesilaus, Crates, and Galba—names which would stultify any list—are said to have been rachitic, but it does not seem to occur to Lombroso that rickets is not unknown among those who are free from the taint of genius. Several were thin, some had big, some little heads, many were unwed, and so forth. Dante, Alfieri, Scarron (did his genius consist in espousing Madame?), Rousseau, and Byron, we are told, fell in love before they were twelve; but how many who have no claims to be reckoned men of genius have done the same? Such methods rob the inquiry of any serious value.

A third necessity is that allowance should be made on the one hand for the peculiarities likely to develop genius, and on the other for those which the circumstances of genius are likely in their turn to develop without necessary immediate relation between the two. For instance the physical defects noted in some cases of genius are likely to have a fostering effect upon intellect. Such men, when boys, are debarred from games, and not only have more time for study, but are spurred to excel in that since the other road to fame is closed. Again many men of genius have led dissipated lives, but what temptations have not tried them? Men have sought them with wine, women with love, the great have courted, their inferiors have flattered them. How many would have stood where Raphael fell? In neither case is there any necessary connection between genius and the physical defect or moral peculiarity. If there be a higher percentage among men of genius, which from present statistics it is quite impossible to say, it is no more than was to be expected. And similarly of madness, what class would furnish more insanity than one, every detail of whose life, even to the precarious nature of their earnings, tends to irregularity.

Drink and women are the great causes of lunacy, and they are both pressed upon men of genius much more than upon the less attractive among us.

In Lombroso's book a large section is devoted to describing work done by insane persons which has the quality of genius. But even granting this major premiss, the minor—that these efforts are the result of morbid cerebral action—is very doubtful, and the conclusion that, therefore, all genius is morbid is plainly a fallacy.

It is often said that genius is involuntary, and some have even called it unconscious. It is said that its ideas arise of themselves, or that they possess the man rather than are possessed by him. But though the immediate moment and method of the conceptions of genius, as of all other conceptions, baffle analysis, they are both preceded and followed by mental action which is not only voluntary but involves great effort. An artistic or scientific discovery is made only by one who has devoted much study to the subject; and when the idea has occurred to the mind, it requires much effort to seize it, to understand it, and to carry it out. Without adopting the extreme view that genius consists in an infinite capacity for taking pains, we must at least allow that severe labour is necessary for its exercise. Great imagination implies, indeed, unusual sensibility, and genius, it is true, is apt to disregard the conventional rules of society, but there is little reason for calling a high perfection of sense neurotic because some hysterics possess it, and conventionality is more truly a degeneration than is independence.

On the whole, it must be confessed that the theory has not yet been supported by good statistics or by good logic, and that at present we may safely leave it to those who prefer epigram and paradox to truth.

THE GENERAL MEDICAL COUNCIL.

The autumn session of the General Medical Council was opened on Tuesday last, when the President delivered an address which, in accordance with a convenient custom, was devoted to an enumeration of the various matters which were likely to engage the attention of the Council during its session. Though he did not enter at any length into a discussion of these matters, yet enough was said to afford subject for thought; and, whilst full comment must be reserved until the business is in a more advanced condition, we may note that progress has been made in several directions since the conclusion of the last session.

The Education Committee, which was requested to report upon the feasibility of further raising the standard of preliminary education, has engaged the services of three experts, selected from the three kingdoms, to make an independent examination of the papers set and the answers deemed sufficient, so as to afford help to the Committee in arriving at a conclusion. It is expected that the Committee will be able to report during the session.

Further inquiries have been made as to the acceptance by registrars of death certificates from unqualified persons. In response to a request that he would move in the direction of obtaining fresh legislation, the Registrar-General has replied that, while he admits the evil, he is himself unable to take any such step. The subject was reached in the business subsequently transacted, and it appeared from statements made by the President and by Dr. Glover that, at all events in some parts of the United Kingdom, as many as 3 per cent. of the deaths were not properly certified.

It will be remembered that the General Medical Council is inclined to seek fresh powers in order to enable it to grapple more effectually with certain penal cases, but that sundry of the licensing corporations expressed themselves as unwilling to surrender to any other body powers which they at present hold in their own hands. Others appeared to be quite satisfied with the *status quo*, though under it they have little or no power to cancel or rescind qualifications bestowed by them. The President informed the Council that replies had been received from almost all, and he spoke hopefully as to the possibility of meeting their various views without abandoning the endeavour to strengthen the hands of the Council, especially as some bodies explicitly recognised that reform in this direction is needed.

The very vexed question of reciprocity of practice between this and other countries will again come up for discussion. The German Embassy has addressed inquiries to the Privy Council upon the subject, and it is known that Italian medical men are again moving to obtain legislation involving the exclusion of all foreigners from practice in their country. The nature of the answer to be returned is thus far hardly indicated, but it has been suggested that the position to be adopted by the Council shall be that set forth in a memorandum furnished by its standing counsel, which as yet has not been made public.

One of the penal cases will, the Council was informed, raise the question of the employment of a medical pupil as an assistant, and it seems probable that the Council may be asked to define more precisely than it has hitherto done the range within which the services of such a person may be legitimately employed.

Another matter of wide interest arises out of an application by the Society of Apothecaries, to which we have already alluded, that the question of the use of the titles "physician" and "surgeon" may be more satisfactorily settled. The proposition is that a kind of friendly suit should be instituted between two medical men, the one complaining of the assumption of titles by the other, and that the General Medical Council on the one side and the Society of Apothecaries on the other shall defray the costs, each paying its own, whatever the decision may be. The Society of Apothecaries is fortified by high legal opinion that the assumption of the titles "physician" and "surgeon" by their licentiates is right and proper and that the recent decision of the High Court, raised in the form of an appeal from Mr. Hunter's conviction by magistrates, will not be regarded as a binding precedent in the decision of a case presented in the form now proposed. It remains to be seen what attitude the General Medical Council will assume in the matter; it may be taken for granted that there will be some members who will object to the question being again raised, on the ground that the previous action was taken with a view to its settlement, and that they are perfectly satisfied with the decision as it stands. We hope, however, that those who take this view will not constitute a majority of the Council, for the present state of the question is unsatisfactory.

Of the discussions which have taken place up to the time we go to press, perhaps the most important from a public point of view was that which took place on a motion by Mr. Brown recommending that the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Apothecaries Society of London should combine for the purpose of holding qualifying examinations conjointly. Many speakers expressed their strong approval of the one-portal system to which this would be an approach, but of these a considerable proportion did not vote on the ground that they were inclined neither to endorse the terms of Mr. Brown's motion, nor by voting against it to appear to entertain views adverse to a one-portal system. It was mentioned that more than one of the Universities were not indisposed to surrender the right of conferring a qualification for admission to the *Medical Register*, feeling that were they to limit their final examinations to those who were already on the *Register*, their degrees would take a position higher than they did at present. Moreover, the representatives of the Royal Colleges of Physicians and Surgeons of England both seemed disposed to think that such a conjunction as was proposed might be attended with advantages, and that it was possible that the scheme for the reconstruction of the University of London might afford an opportunity for carrying it out. They, however, as well as the representative of the Society of Apothecaries of London, recorded their votes against the motion as it stood. The motion was nevertheless carried by a considerable majority, though an unusually large number of members refrained from voting. Perhaps the opinions expressed came somewhat as a surprise to many, for few were prepared to learn that this approach to a one-portal system would find so many supporters in the Council. The discussion appears to show that this consummation, so ardently desired by the bulk of the profession, may be nearer realisation than it has been since the passing of the last Medical Act.

MEDICAL ATTENDANCE FOR THE FAMILIES OF SOLDIERS AND SAILORS ON ACTIVE SERVICE.

IN the last issue of the BRITISH MEDICAL JOURNAL it was stated that suggestions had been made in various quarters that medical men should give attendance gratuitously to the wives and children of our soldiers and sailors now in South Africa, and an appeal was made to the profession to help in organising such a system of relief throughout the country. The burden of charitable service already borne by medical men is heavy beyond that which is laid on any other profession, but we are sure that they will cheerfully take up this additional load in so good a cause. As will be seen from a letter published in another column, a scheme of the kind outlined by Surgeon-General Hamilton had been proposed by the Chelsea Clinical Society before his letter appeared in the *Times*, and is now in working order. The scheme seems to be well drawn up, and the necessary safeguards against abuse are provided. It might well, we think, be taken as a model of the lines on which the system of medical relief proposed might be organised elsewhere, of course with such modification in points of detail as local circumstances may require. In such a movement it is felt that the British Medical Association may most fittingly co-operate, and, as its Branches extend over the whole country, the machinery for working the scheme is already provided. As the Council will not meet till the middle of January, its President, Dr. Roberts Thomson, proposes to issue a circular letter to all Secretaries of Branches, inviting them to place themselves in communication with the local representatives of the Soldiers' and Sailors' Families Association. In this way arrangements suited to the needs of each locality may be made, and the scheme may be carried into effect with the least possible loss of time. In such a cause there can be no ground for doubt or suspicion or jealousy; it is one in which every member of the profession, in which the instinct of charity is pre-eminently powerful, may be trusted to do his best cheerfully and ungrudgingly. We therefore ask with confidence for the active help of every member of the British Medical Association in this national service.

THE UNIVERSITY OF LONDON.

WE understand that the Chairman of the Statutory Commission now engaged in formulating the statutes which, when approved by Parliament, will regulate the new university, hopes that he and his colleagues will complete their labours before separating for the Christmas recess. If Parliament assembles early in February, it is possible that the proposed statutes may be laid on the table of the House on an early day. They will lie on the table for forty days, and unless unforeseen opposition arises they may not improbably become law by Easter. The composition of the new Senate will then be undertaken, and the reconstituted University for London should be established at the Imperial Institute before the summer holidays. A discussion has, we understand, arisen at the last moment in reference to Clause 82 of the Draft Statute No 1, which reads as follows:

> Subject to any order of the Senate there shall be a Board to advise the Senate on all questions relating to the matriculation of both internal and external students. The said Board shall consist of the Vice-chancellor and the Chairman of Convocation for the time being and of such teachers of the University and such other persons as the Senate may annually appoint, provided always that the number of such other persons shall not exceed one-fourth of the total number of members of the Board.

From this it would appear that the interests of the intending matriculants, whether "internal" or "external," will be looked after by a body (subject to the Senate deciding otherwise) composed largely of those whose position will have familiarised them more especially with the needs of the internal side of the university. This has occasioned opposition in some quarters, but it is possible the matter will not be pressed any further.

THE SPECTACLE MAKERS' COMPANY.

THE Master of the Spectacle Makers Company, Alderman Sir Reginald Hanson, M.P., in addressing candidates for the diploma granted by that body, recently said that it was essential that the optician should be proficient in the mechanical work of his calling, and competent to distinguish between those cases in which glasses could be supplied by him and those which required the skill of an oculist. He deprecated strongly the idea that an optician should attempt to take the place of the ophthalmic surgeon, and pointed out that the duty of the former was to deal with the eye as an optical instrument, so that as soon as it was found that the eye was incapable of attaining perfect vision with the aid of the appliances of the trade, it was the bounden duty of the optician to refer the individual for the advice of the ophthalmic surgeon. The action of the Spectacle Makers Company in granting certificates of proficiency to opticians has been strongly disapproved by the majority of ophthalmic surgeons; and it is certainly a matter for congratulation that the present Master of the Company has so plainly told the opticians that their chief essential is mechanical proficiency. He might have gone a step farther, and told them that the real practice of the optician is accurately to carry out the directions of the ophthalmic surgeon. When the former

attempts to occupy the position of the latter, the public must inevitably suffer. To quote only two instances, though they might be multiplied *ad infinitum*, the most experienced optician would not be competent to judge whether a case of asthenopia could be treated by glasses or needed operative measures, nor would he be able to recognise the cupping of the disc and the contraction of the visual field in chronic glaucoma, and would almost certainly be led to believe that no disease was present if, as so often occurs in these cases, the central field came up to the normal standard of vision.

MR CHAPLIN ON THE VACCINATION ACT.

The Association of Public Vaccinators was honoured by having Mr. Chaplin, M.P., as the guest of the evening at their first annual dinner on Saturday last. His speech was naturally looked forward to with very considerable interest, but we doubt if it will be looked back on with much satisfaction by his hearers. On the question of security of tenure, "he assured them that he should regard it as his duty, whenever it was made clear to him that the position of a public vaccinator was prejudiced in any way because he honestly tried to do his duty, to come forward in his support." That, however, is a very long way from what their circumstances demand. At present a public vaccinator may be dismissed on twenty-eight days' notice if he takes legal means to cause to be paid to him the fees determined by the Board of which Mr. Chaplin is President. But would Mr. Chaplin hold such dismissal to be due to the official's honestly trying to do his duty? Some vaccinator who has a grievance of this sort might write to the President to ascertain definitely whether, if he takes his Board of Guardians to the law courts to make them pay their debt to him, the central authority will prevent his dismissal or compel his reinstalment. If there is any doubt as to the Local Government Board's power to deal with the matter by order, legislation should be undertaken to remove a very obvious grievance. Mr. Chaplin attributed the improvement in the vaccination returns to three causes—domiciliary vaccination, glycerinated calf lymph, and the independent position of the vaccination officer. Surely this last reason is in itself a good ground for extending official independence, so as to make it embrace the professional as well as the lay officer. At the same time, we are glad to acknowledge that Mr. Chaplin's presence at the dinner was in itself a very significant indication of good will, His own desire to pass a good Vaccination Bill has never been doubted, and it is only fair to remember that a Cabinet consists of many members, and that not every one of them can get all of his own way, even in his own special department.

A WORD OF CAUTION.

A person who states that he is acting in connection with the formation of a large new (London) insurance company, on the lines of the Prudential, with a capital of £1,000,000, has written and called upon members of the profession with a view of securing their appointment as consulting medical officer for their respective city or district. The conditions of the appointment are that the company when and if ever formed, will guarantee £100 for the first year's services provided the medical man will invest £100 in the shares of the prospective company. The receipt given for the money runs as follows:

> Received of ..... the sum of one hundred pounds in payment of five deferred shares of £20 each, at the price of £20 per share, in the Anglo-American Insurance Company, Limited (or any other name which may subsequently be adopted before registration) towards the flotation expenses of the same, the said shares to be only transferable upon the successful flotation of the company.
>
> £100. Signed.....

It will be observed that the receipt is most ingeniously worded, and gives the person in question full power to expend the money in the flotation of the company. A well-known member of the medical profession who has already been induced to give a cheque, and whose name is being used for the purpose of impressing others, has asked us to make known the above facts in order that medical men may be put upon their guard. The person in question has given an address in the City of London, but we understand that the result of inquiry is that nothing there is known either of the man or his company.

MEDICAL MEN IN MUNICIPAL LIFE.

It will have been noted with satisfaction that, among the new mayors elected this month, our profession is well represented. At Blackpool, Bishop's Castle, Conway, Carnarvon, Pwllheli, Devizes, Tamworth, Dewsbury, Bolton, Newark, Harrogate, Cheltenham, and Worthing medical men have been promoted to the chief magistracy. It is a sign of the times alike beneficial to the civic life of the nation and honourable to an honourable profession. The end of the nineteenth century finds public concern for the "health of nations" as keen and as widespread as was the concern for the "wealth of nations" at the end of last century. County councils and borough councils, in so far as they are charged with the care of lunatics, the appointment of coroners, hospital provision, and sanitary organisation demand and cannot fail to attract public-spirited medical men. But we are of opinion that the training and the social influence of the sagacious practitioner afford invaluable assistance even in extra-professional affairs. The prompt apprehension of minute differences which constitutes the art of accurate diagnosis, the resourcefulness in emergency which is the essence of treatment, are qualities calculated to assist in no small degree successful ministration to the ills of the body politic. We therefore welcome the entrance of medical men who have the time and the ability for the task into the ranks of municipal activity.

GUARDIANS AND THE PREVENTION OF TUBERCULOSIS.

The report of the twenty-fifth Annual Poor-law Conference held at Manchester last month has a special interest for the medical profession in connection with the efforts now being made to bring about the diminution in the prevalence of tuberculosis in this country. A discussion on the treatment of tuberculosis by Poor-law guardians indicates an important stage in the education of the public, which it is the aim of the profession to promote. Organised and systematic preventive measures cannot be successfully attempted until the public has been taught to appreciate the necessity for them, and it has been for some time past the object of the profession to disseminate a knowledge of the causation of tuberculous diseases which shall enable the public to appreciate the measures advocated for their prevention. Poor-law guardians as a body are credited with being slow to learn, or perhaps only slow to adopt, innovations. The official burnt ledom of the past was a by-word for ignorant prejudice and stagnation. That this spirit is not quite dead appears from the remarks of one speaker at the Manchester conference. This official thought the suggestion that the guardians might provide sanatoria for the consumptive poor "looked to him like an ingenious endeavour to divert the cost of an important medical experiment from the shoulders of some strong scientific medical association like the British Medical on to the poor rates through the guardians." The general tenour of the discussion, however, showed a most satisfactory knowledge of the requirements and an enlightened interest in the means by which these requirements might be carried out. The Chairman of the West Derby Union, who introduced the discussion, formulated a recommendation that Poor-law unions might combine together in dis-

tricts, and establish a joint sanatorium for the treatment of consumption in its early stages. The three large unions of Liverpool have already combined together for this purpose, and have purchased an estate overlooking the river Dee, on which to erect a sanatorium. This is the first attempt made in this country by Poor-law guardians to cure consumption, and the scheme has the approval of the Local Government Board. Dr. Nathan Raw, medical superintendent of the Mill Road Infirmary, Liverpool, spoke in favour of the recommendations, and the majority of the speakers seemed also to view the suggestion in a favourable light. Dr. Rhodes (Chorlton), in the course of an admirable summary of the present position of our knowledge of the causes of consumption, drew attention to the importance of overcrowding as a factor. He appealed to the authorities to proceed more quickly in sweeping away the slums, which he said are not houses for people to live in, but hovels for them to die in. Although the main subject of the discussion was the treatment of curable cases, the sanatorium treatment of the consumptive poor has a most important bearing upon the prophylaxis of tuberculosis, we may expect to find that the action of the Liverpool vestries has a marked influence in diminishing the prevalence of consumption in that city. We may also look forward to similar action of Boards of Guardians in other parts of the country.

THE OBLIGATION TO REPORT CASES OF LEAD POISONING.

A CORONER'S inquiry has recently been held in the neighbourhood of Manchester relative to the supposed death from lead poisoning of a workman at a chloride electrical storage factory. Although death was immediately due to septicæmia, it was stated on the authority of two medical men that it was indirectly caused by lead poisoning. An inspector of factories who attended the inquest complained that the case had not been reported to the Home Office in accordance with requirements issued to the medical profession by circular some time ago. One of the medical witnesses stated that he had not received any such official information. In the pages of the BRITISH MEDICAL JOURNAL attention has on several occasions been drawn to this important subject, and for the sake of those who have not seen our previous remarks it may be well to reproduce the paragraph concerning notification of industrial poisoning: "Every medical practitioner attending, or called in to visit a patient whom he believes to be suffering from lead, phosphorus, or arsenical poisoning, or anthrax contracted in any factory or workshop shall (unless the notice required by this section of the Act has been previously sent) send to the Chief Inspector of Factories at the Home Office, London, a notice stating the name and full postal address of the patient, and the disease from which, in the opinion of the medical practitioner, the patient is suffering, and shall be entitled, in respect of every notice sent in pursuance of this section, to a fee of 2s. 6d., to be paid as part of the expenses incurred by the Secretary of State in the execution of the principal Act." It is incumbent on medical practitioners, therefore, to report to the Home Office all cases of lead, arsenic, and phosphorus poisoning, and of anthrax due to occupation.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION

ABOUT 180 members and their wives, and guests of the President and Council, were present at the autumn dinner of the Association, which took place at the Hotel Cecil on November 29th. The President, Sir William Thomson, was in the chair; there were also present Sir Dyce Duckworth, Dr. James Little, Sir C. Nixon, Dr. Sansom, Mr. Smith Turner, Dr. R. Heath, Dr. Phillips-Conn, Dr. Macnaughton-Jones, Sir Walter Armstrong, Inspector-General Lloyd, R.N. (President-elect), Surgeon-Major-General Rice, C.S.I., Dr. Lauder Brunton, F.R.S., Sir P. C. Smyly, Dr. Mapother, Dr. R. Barnes, Mrs Bryant, D.Sc., Dr. Gilbart Smith (Chairman of Council), Dr. R. Jocelyn Swan (Honorary Treasurer), Dr. James Stewart, and Mr. P. J. Freyer (Honorary Secretaries). The toast of "The Queen and the Royal Family," proposed by the President, met with a most loyal reception. The second toast, "Our Defenders," was also proposed by the President, who remarked that three of the five chief medical officers on duty in South Africa were Irish. At the last meeting of the Association the guest of the evening was Sir George White, who was now gallantly upholding this country's flag at Ladysmith. Another general, Sir Francis Clery, was also in command of another part of the British forces. The Governor of Natal (Sir Hely Hutchinson), and the Premier of that Colony (Colonel Fryer), were also Irishmen, as was Sir William Mac Cormac, who had gone to take a share in the surgical work to be done there. From nearly all the colonies, too, forces had hurried to show that they were determined to take their share in the defence of the Empire. Foremost amongst these were the Volunteers of the Cape and of Natal, who had loyally supported this country throughout the war. Surgeon-Major-General Rice, C.S.I., and Staff-Surgeon Barrington, R.N., suitably responded. Inspector-General Lloyd, R.N., proposed the toast of "Our Guests," to which Sir Dyce Duckworth responded. The toast of "Ourselves" was proposed in an amusing speech by Dr. Lauder Brunton, F.R.S., who said that the Association was endeavouring to teach the lesson of consolidation—the binding together of Englishmen, Scotchmen, and Irishmen in unity. The President replied. Subsequently a very pleasant "At Home" was held under the same roof, at which 200 other guests were received by the President and Lady Thomson. A programme of vocal and instrumental music was also performed by Mr. W. Nicholl, Miss L. Moreton, Miss F. Woolf, and Mr. F. Clive, whilst recitations were given by Mr. P. Kirwan.

EDINBURGH ROYAL INFIRMARY.

THE managers of the Edinburgh Royal Infirmary on November 27th elected Colonel W. P. Warburton to the office of superintendent of the infirmary in succession to Major General Lithgow. It is understood that he will enter on his new duties in the beginning of 1900. The new superintendent, who is just over 56 years of age, is an M.D. of Edinburgh. For the last thirty years his work has been largely administrative, and for the past five entirely so. As a civil surgeon in the Punjab, he was a superintendent of dispensaries, and of a district gaol. For nearly two years he was superintendent of the Central and District Gaols, Thuggee School of Industry, and Female Penitentiary at Lahore, one of the largest charges of the kind in India, with upwards of 2,500 prisoners. For more than seventeen years as medical officer to the important native State of Kapurthla, he organised the medical and vaccination departments, and introduced registration of births and deaths. For four years he was Inspector-General of Civil Hospitals of the North-West Provinces and Oudh, and he officiated as Director-General of the Indian Medical Service for nearly three months at the time of the Plague Conference at Venice in 1897, to which the Director-General was deputed to represent the Government of India. An idea of the magnitude of the medical work in the North West Provinces and Oudh may be formed from the fact that there are more than 300 hospitals and dispensaries, as well as a large medical school at Agra and four lunatic asylums, and the indoor and outdoor patients treated in a single year exceeded four millions. Colonel Warburton controlled the financial as well as the medical arrangements of all these institutions. During

his incumbency the most severe famine that has ever visited India broke out in the North-West Provinces and Oudh, and he had to make the necessary arrangements for the medical care at one time of 1,600,000 persons on relief works and in temporary poor-houses. Before this had passed away plague preventive measures had to be taken against the entrance of that disease from Bombay and Sind. Colonel Warburton received the decoration of Companion of the Star of India from the hands of Her Majesty some two months ago; and as a mark of distinction was appointed honorary surgeon to the Viceroy. He retired from the Indian Medical Service in January, 1899.

THE ABATEMENT OF COAL SMOKE FROM DWELLING-HOUSES.

In a recent issue some particulars were given of the proceedings which may be taken against manufacturers in the metropolitan area who allow dense volumes of black smoke to issue from their works, thereby polluting the atmosphere and creating a nuisance. But although factories are still in certain districts in London and other cities considerable producers of smoke, the fireplaces of ordinary dwelling-houses are chiefly responsible for the murky atmosphere of the West End of London and of towns where manufactories do not abound, especially in cold weather, when domestic fires are numerous and frequently replenished. The increase in the density of the atmosphere of West London that occurs daily at this time of year, between 6 or 7 A.M. and 9 A.M., when the household fires are lighted, is usually quite notable. When, therefore, in consequence of the energetic action of the Smoke Abatement Society or other repressive agency, smoke shall no longer issue from manufactories, that coming from domestic hearths will have to be suppressed before the air of towns where coal is burnt becomes clean. How is this to be accomplished? The problem is one of complete *versus* partial combustion. If coal be entirely burned there is no smoke. Unfortunately Englishmen prefer open fireplaces and the blaze of smoky coal in their homes, and so favour the present unscientific and wasteful method of burning coal which is almost universal. They even make this much worse than need be by piling on a large amount of fresh fuel when the fire is low. Coal thus treated remains black for a long time, gives out very little warmth, and becomes largely converted into dense smoke, which escapes up the chimney. The economical method of using fuel is to keep the fire bright, and frequently sprinkle on its surface a thin layer of fresh coal. The problem of the suppression of the smoke from domestic fireplaces is happily not beyond solution; and there will probably come a day when, although occasional fogs and mists may remain, they will be deprived of most of their blackness and much of their injurious effects in towns. Amongst the methods suggested for the abatement of smoke from domestic fireplaces are the following: (1) The replacement of ordinary coal by gas (especially for cooking), coke, oil, wood, or anthracite coal; (2) the use of ordinary coal burnt in grates that consume their own smoke; (3) the replacement of fireplaces by systems which introduce warmed air into rooms, or heat rooms by warm air, hot water, or steam, conveyed in closed pipes. Although there has of late been a perceptible diminution of the smoke issuing from factories, there has practically been no decrease of that emitted from domestic grates since the Smoke Abatement Exhibition of 1881. Possibly a few more kitcheners are now used, which are good cooking apparatus, and give very little smoke. Gas stoves also are less rarely seen, but are still far from being commonly used. A few other grates and stoves, burning ordinary coal, are efficient in the way of consuming smoke or of reducing it to a minimum, some of them without even sacrificing the cheerful appearance of the open fire; but they are nowhere in general use. Anthracite coal is seldom seen in domestic grates. There is unfortunately no law prohibiting the emission of smoke from dwelling-house fires. Possibly its introduction would be a hardship on the poor, as it would entail expense for the altering of grates. But failing such legislation, each householder might and should do his best to limit as much as possible the amount of smoke issuing from the fireplaces under his control. In this country many results are achieved by combined though private effort, which abroad are accomplished by the action of the executive. Here is a direction in which the Smoke Abatement Society might seek to cultivate a healthy public opinion; and Londoners might effect a reform that would free them from much suffering. But will they ever, as a community, truly appreciate the misery inflicted by the smoke nuisance? If only they do this, they will soon put forth their best endeavours to abate it, and will not rest satisfied until the metropolis becomes a clean and wholesome city.

THE ANALYSIS OF LONDON WATER.

Dr. T. E. Thorpe, who has been appointed to succeed the late Sir Edward Frankland in the work of analysing the water supplied by the London water companies, is Principal of the Laboratory Department in connection with the Inland Revenue Offices, Somerset House. Dr. Thorpe, who is Ph.D Heidelberg, B.Sc.Vict., D.Sc.Dubl., LL.D. Glasg., and a Fellow of the Royal Society, is also President of the Chemical Society of London, having formerly been one of the most successful Treasurers that that Society ever had. During the last thirty years Dr. Thorpe has been a most active worker in the domain both of pure and applied science, and mention may be made of his researches on specific volumes published more than twenty years ago as an example of scientific work carried out with extraordinary accuracy and attention to details. Dr. Thorpe was for many years Professor of Chemistry at the Yorkshire College, Leeds, and subsequently for some years Professor of Chemistry at the Royal College of Science, South Kensington.

THE PURITY OF OUR FOOD SUPPLY.

On January 1st next the Sale of Food and Drugs Act, 1899, comes into operation, and the Board of Agriculture is meanwhile issuing a number of circulars calling attention to the scope of the Act, in order that its provisions shall be known and enforced directly the Act becomes operative. Among these circulars is one which has been sent to the manufacturers of margarine. In it the Board points out, among other matters, that the provisions of the Margarine Act, 1887, are extended to "margarine cheese," which term includes "any substance, whether compound or otherwise, which is prepared in imitation of cheese, and which contains fat not derived from milk." No such substance may be lawfully dealt in, exposed for sale or sold except under the name of "margarine cheese." The new Act will also make it an offence to deal in margarine the fat of which contains more than 10 per cent. of butter fat. This important provision is designed to check the fraudulent sale as butter of a mixture which can be made almost indistinguishable from the pure article. It is to be hoped that the Act will effectually put a stop to the sale of the "starvation brands" of condensed milk, although some doubt may reasonably be entertained as to whether it will succeed. The Act provides that receptacles containing condensed separated or condensed skimmed milk must bear a label clearly visible to the purchaser on which the words "machine skimmed milk," or "skimmed milk," as the case may be, are printed in large and legible type, under a penalty not exceeding £10. The Departmental Committee appointed to inquire into the use of preservatives and colouring matter in food is doing good work by collecting evidence from witnesses connected with the production, distribu-

tion, inspection, and analysis of food stuffs. This evidence will be most valuable as a practical and scientific basis upon which useful legislation can be founded. At the most recent meeting of the committee a considerable amount of very conflicting evidence was taken. Some witnesses insisted that the use of antiseptics in certain food stuffs was essential, and one witness deposed to having taken as an experiment half a teaspoonful of boracic acid in a glass of water every morning for three months and had experienced no ill effects from it; while, on the other hand, witnesses of great experience gave it as their opinion that if milk, butter, preserves, etc., were treated on scientific principles, there was not the slightest necessity for any preservatives whatever. From the evidence of these last-mentioned witnesses it appears that without preservatives great care and cleanliness must be practised in order to preserve food, whereas with the use of preservatives such cleanliness and care are rendered unnecessary. No doubt this aspect of the question will meet, at the hands of the Committee, with the consideration which is its due; and it is reassuring to those who would prefer at all times pure food, free from the admixture of any non-alimentary matter, to hear from practical men that even such perishable articles as milk and butter can be preserved in a fresh state without such addition.

SMALL-POX AT HULL.

The information we have received since the publication of our last issue as to the progress of the Hull outbreak confirms our anticipations of its gravity. Owing to the ill-advised attempt which has been made by the local authorities, as is too common in such cases, to conceal the real extent of the mischief, it has been difficult to obtain satisfactory information of the progress of the epidemic. But we are glad to say that the Health Committee have realised the mischievous effects of their policy of concealment, and are now willing to give authoritative information. Since the outbreak some nine months ago 588 patients have been admitted into the hospitals, the greatest number, 127, was admitted last week, whilst the highest number in one day was 29, which occurred in the same week. All cases known to the authorities have been isolated in hospital, excepting in a very few and exceptional instances. The outbreak originally was possibly due to imported cases which had been mild and unrecognised, whilst latterly the old hospital appears to have been a means of diffusing the disease. No fresh cases, however, are now being admitted into this hospital. The Evan Fraser Hospital has been erected on a site recently acquired at Sutton, some 23 acres in extent and situated 4½ miles from the Town Hall and without the City boundary. Three pavilions have been erected and are now occupied, in addition to the administrative department, laundry, and disinfecting station. Special accommodation is also being provided for convalescents. A resident medical officer has been appointed, together with an efficient nursing staff. A steriliser of the Newcastle type for the sterilisation of all bath and slop wastes is being provided, likewise an incinerator. In order that the disinfection of infected houses may be complete, a temporary station and shelter are being provided, to which latter place families may be removed for the purpose of bathing whilst their homes are being fumigated. A special sanitary staff has been appointed to carry out house-to-house inspection and the cleansing of courts and areas. Disinfectants are distributed free, and printed precautions against the spread of small-pox have been circulated extensively amongst the community. There are at present 217 cases under treatment. Of the total number of cases admitted 504 were vaccinated, whilst 84 showed no evidence of vaccination. In all there have been 90 deaths, being equal to a death-rate of 15.3 per cent. of the total admissions. The deaths of vaccinated cases yield a death rate of 9 5 per cent., whilst that of those showing no evidence of vaccination is 50 per cent. The inhabitants have most readily resorted to revaccination, and it is computed that some 60,000 persons have availed themselves of the protection. The police force and the officials associated with public institutions have also submitted to revaccination, whilst the employers of labour have adopted a similar precaution for their employees. A Special Committee sits daily to receive the Medical Officer of Health's latest reports. Some complaint, apparently well founded, as to the nuisance caused by the scavenging carts has been taken advantage of by the Secretary of the Antivaccination League, *more suo*, to improve the occasion. In a letter to the leading local paper he seeks to persuade the good people of Hull, as was also attempted in the case of the epidemics at Gloucester and Middlesbrough, that the outbreak is due to the insanitary condition of their town, and that instead of being misled by the doctors into being vaccinated and revaccinated, they had better turn their attention to their sewers and water supply.

THE LEAGUE OF MERCY.

This league, which was initiated by H.R.H. the Prince of Wales last spring under a Royal Charter, has for its object the promotion of the hospital fund with which the Prince sought to commemorate the Diamond Jubilee. We understand that some eighty branches have now been organised in London and the home districts under influential presidents and lady-presidents. A meeting of the presidents will, we understand, be shortly summoned, when the Prince of Wales as Grand President will receive accounts from the various branches of the progress of the League. It is the especial object of this organisation to bring home to those who have hitherto, from lack of knowledge, opportunity, or application, not contributed to the support of the metropolitan hospitals. Directly or indirectly everybody is interested in the welfare of these vast charities, and so long as aid from state or rate is unforthcoming, the importance of organising and promoting voluntary effort is obvious. The offices of the League are at 29, Southampton Street, Strand, where information is available for those who wish to offer their services.

MEDICAL COMPETITION IN GERMANY.

It is too often assumed by those who are not satisfied with the state of the medical profession in this kingdom that everything is much better managed in France and Germany; but those who know the facts are aware that the struggle to live is quite as severe in the medical profession in those countries, and that the average income is very much lower than with us. In Germany there has lately been much complaint of the great increase in the number of medical practitioners, and an official inquiry into this question has shown that in 1898 the doctors had increased during the previous eleven years 56 per cent., while the population had increased only 14 per cent. The statistics coming down to April 1st, 1898, show that from April 1st, 1887, the total number of legally qualified medical practitioners in the German Empire had increased from 15,824 to 24,735, that is by 56 25 per cent. The population of the Empire during the same period increased only by 14 per cent. (47,630,000 to 54,324,000). In other words, whilst the proportion of medical practitioners to inhabitants was for the whole Empire about 1 in 3,000 in 1887, it was in 1898, 1 in 2,197. The number of doctors practising exclusively in "institutes" rose in the eleven years aforesaid from 581 to 1 927 (332 per cent.), while that of civil practitioners in private practice rose in the same period from 13 908 to 21,178, an increase of 52 3 per cent. On the other hand, lower grade practitioners ("wound surgeons," local surgeons, etc.) decreased from 669 to 271, that is by about two-

fifths. The number of doctors, especially those in private practice, increased in proportion to the population least in communes of medium size (5,000 to 20,000 inhabitants), but in communes with less than 5,000 inhabitants it increased by about 30 per cent., while the number of inhabitants increased only by 0.3 per cent. The increase in the proportion of doctors was greatest in communes with 20,000 inhabitants and upwards; but the increase in these cases more nearly corresponded with the increase of population than in the small communes. Of the cities of 20,000 and upwards, Charlottenburg showed the greatest increase in the number of medical men, which in the eleven years rose from 25 to 277, while the population increased only threefold in the ten years since the last census (42,371 to 132,377). The most interesting point is that the increase in the number of doctors is greatest amongst those employed by *Anstalten* or institutes of the private hospital order, such as abound in Germany for the treatment of diseases of all kinds. The extent to which such institutions are growing in Germany may be judged by the fact that upon a single advertisement page of a number of the *Münchener medizinische Wochenschrift* we have counted twelve advertisements of homes for the treatment of nervous diseases, alcoholism, morphinism, anæmia, malnutrition (*Stoffwechselkranke* which includes diabetes, gout, etc.), digestive disorders, chronic diseases, "all diseases," and chest diseases.

THE INTERNATIONAL CONGRESS ON TUBERCULOSIS.

At a meeting of the Council of the National Association for the prevention of Consumption and other Forms of Tuberculosis, held on November 16th, it was resolved to issue invitations to some 600 representative persons and institutions in the United Kingdom to attend a preliminary meeting for the purpose of making arrangements for the International Congress on Tuberculosis, which is to be held in London in the spring of 1901, under the Presidency of H.R.H. the Prince of Wales. The meeting will be held in the Hall of Gray's Inn, on Monday, December 18th. The Earl of Derby will take the chair at 3.30 P.M.

OPERATION ON SPLEENLESS PATIENT.

Max Madleuer[1] operated a year ago on a woman, aged 57, who slipped and fell, striking her left side against the edge of a pail. She was admitted into hospital considerably collapsed, and contusion of some of the abdominal viscera was diagnosed. There was anæmia, but it was not marked. Tenderness was marked on the left side. Seven hours after the injury an incision was made in the left mammary line from the ribs almost to Poupart's ligament. Great quantities of blood, clotted and fluid, at once escaped, and it proved that nearly two pints had entered the peritoneal cavity. On the concave aspect of the spleen was a transverse laceration extending to the hilum. On detaching some clots a big artery in the hilum was seen spouting. Suture of the laceration after ligature of the vessel was out of the question. The gastro-splenic omentum was transfixed and tied in two parts near the hilum and divided, the spleen was then removed, and the vessels ligatured separately. The abdominal wound was closed with deep sutures, as separate suture of each layer would have taken too long, considering the patient's exhausted condition. Five months later an attack of obstruction set in, and a wide hernia had developed in the wound. Max Madleuer operated once more. Some small intestine closely adherent to the integument forming the sac of the hernia was damaged and had to be repaired; much omentum was also adherent, and it was resected. Then the sac was excised and the layers sutured separately. The spleenless patient bore well this second operation, which lasted for an hour and a-half; it was done in spring, and the patient is now quite strong. The author tabulates 11 cases of excision of the spleen ruptured without any external wound—8 recovered (including Ballance and Pitt's 3 cases), and 3 died. Max Madleuer may claim, it appears, the first operation on a spleenless patient.

[1] *Münch. med. Woch.*, October 24th, 1899.

MUNICIPAL LODGING HOUSES.

Last Tuesday an interesting discussion took place at the London County Council on a report of the Housing Committee recommending the erection of a lodging house on the Rowton House type on the Council's land at Mill Lane, Deptford. The charge was to be 6d. a night, and on this an amendment was moved to substitute 5d. It appears that Lord Rowton and Sir Richard Farrant have been in conference with the Housing Committee, and have strongly advised the erection of a Rowton House for 800 men at 6d. a night. The additional penny is held to afford all the little extra amenities which have rendered Rowton Houses so attractive to the single working man. Of course there is always the poorest class for whom housing schemes and Rowton Houses are in vain, and it may be that in Deptford a 5d. house is as much as the local labourer's wages could permit. The Council, however, has decided not to pay rent out of rates, and it seems probable that a 6d. house used by men working in various parts of London will prove a sounder financial undertaking than a 5d. house which might cater for the poor of Deptford only. The Council rejected the amendment, but the discussion of the original proposal was adjourned to next week.

ANTITOXIN FOR PAUPER PATIENTS.

The *Shoreditch Observer* of November 25th reports a protest made by the district medical officers of St. Leonard Shoreditch against a recent refusal of the guardians to supply antitoxin for the treatment of paupers suffering from diphtheria. The clerk properly pointed out that the guardians were bound to provide the requirements of the district medical officers, and that it would be a serious responsibility for the Board to set itself up against the doctors in this respect. In spite of this sensible advice, it is to be regretted that the guardians decided to allow the antitoxin to be ordered only by the casting vote of the chairman, and one of the guardians—a lady—gave notice of her intention to move the rescission of this decision. It is to be hoped that the good sense of the guardians will prevent them from being led by some of their members to make themselves guilty of what would be little short of a public scandal, which could have no other result than to bring on the guardians a reprimand from the Local Government Board, and an order to carry out the duties for which they were elected.

We are informed that the returns for the current session show that the students entered for dissections in Dublin are as follows. Trinity College, 170; Royal College of Surgeons, 130; Cecilia Street School, 123; making a total of 423, as against 435 for the previous corresponding session, being a decrease of 12.

The Purvis Oration before the West Kent Medico-Chirurgical Society will be delivered by Mr. Victor Horsley, F.R.C.S., F.R.S., on December 8th, at 9 P.M., at the Royal Kent Dispensary, Greenwich Road. The subject of the oration is The Treatment of Trigeminal Neuralgia, and after its delivery a *conversazione* will be held.

Mr. Watson Cheyne, F.R.S., will give the first of his course of Harveian Lectures before the Society of that name on Thursday, December 7th, at 8.30 P.M. Subsequent lectures will be given on December 14th and 21st, at the same hour. The subject of the course is Surgical Tuberculous Diseases.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION, 1899.

NOTES.

The Winter Session of the General Medical Council commenced on Tuesday last, when all the members, with the exception of Sir W. T. Gairdner, K.C.B., and Dr H. C. Cameron were present to hear the address in which the President outlined the business of the session.

The Reports on the Army and Indian Medical Service examinations, showing the number of the successful and unsuccessful candidates in these examinations, classified under the headings of the licensing bodies whence they have obtained their qualifications, afforded an occasion for Mr. Brown to call attention to the fact that, of the unsuccessful candidates, almost all had qualified in Ireland, and to suggest that the tables be referred to the Examination Committee for examination and report. On the other hand, it was urged that the particular tables did not show any *primâ facie* ground for special inquiry, inasmuch as in some instances the candidates had qualified, and were unsuccessful only because there were not enough vacancies for them; and further, that in fact although three had been really rejected, even these had failed only upon aggregate marks, having passed in each of the subjects separately. Several of the Irish representatives stated that the services were not now very popular in Ireland. It is obvious that if it is worth while to compile and to print these tables it is worth while also to scrutinise them and see what lesson may be learnt from them. They are a means—practically the only means—of reviewing and comparing the work done by the various licensing bodies. On the other hand, it is equally obvious that nothing can be established by the chances of a single year, and it would have been well if the mover of the motion had examined the returns for a number of years, and had been in a position to show to the Council that the facts to which he drew attention were not the accident of a year, but constantly recurred—if, indeed, such be the fact.

A Personal Explanation was made by Mr. Brudenell Carter, contravening certain statements made by Mr. Victor Horsley as to the constitution of the electorate of the Society of Apothecaries which returned him as their representative, and as to Mr. Carter's position with regard to the Hunter case. It must be conceded that there were good grounds for allowing this statement to be made, as Mr. Carter was able to show conclusively that his electorate was not, as had been alleged, largely non medical, whereupon Mr. Horsley withdrew and apologised for this statement. But the opportunity was abused by the introduction of personal recrimination, and by the use of some expressions which it is rather surprising were allowed to pass without protest. We can only attribute this to an unwillingness to interrupt or in any way hamper a speaker who was—we say it in no offensive sense—on his defence. Mr. Horsley's reply was temperate and well judged, and contrasted very favourably in tone with the utterances of the previous speaker, though he pointed out that the explanations offered did not substantially alter Mr. Carter's position with regard to the Hunter case.

Mr. Carter's apologia contained a charge against "the medical journals" of entirely suppressing his defence while giving space to Mr. Horsley's attacks. Mr. Carter, in response to an inquiry, has informed us that the speech to which he referred was that delivered by him during the debate on the Hunter case in the Council on June 8th, 1899. This debate was reported in the British Medical Journal of June 17th, 1899, pp. 1475 76, and on the latter page is a report of a speech made by Mr. Carter in the course of that debate. It would be impossible, even if it were desirable, to report all that is said during the prolonged sessions of the General Medical Council, but the instructions to the reporters employed by this Journal are to give, fairly and impartially, as full a report as the necessary limitations of space permit. We have every confidence that these instructions are strictly observed. In this particular instance it would appear that Mr. Carter's speech in defence was reported, so that he must have made his sweeping charge without taking the trouble to refer to our pages.

The British Medical Journal was made the subject of further animadversions by Mr. Carter in the course of his personal explanation. He complained that he had not been fairly dealt with, because in what he described as "a sort of descriptive article" on a speech of his in the Council during its last session it had been stated "that he had said certain things with great bitterness." He alleged that in the report in the same number "he did not find that a single word appeared such as was suggested to have been said." It may be convenient to place side by side the two references to Mr. Carter's speech which are contained in the number of the British Medical Journal to which he referred (June 3rd, 1899):

Report.

Mr. Carter stated that before this resolution appeared on the minutes as coming from the British Medical Association, it had been sent to him from some provincial medical society precisely in the same terms, and it was therefore evident it had been manufactured and sent out by the society to be boundantly passed, but, as far as he knew, it had been only adopted by the society he referred to. If the Council adopted this resolution, it could not go on with the business of the present session, as the constitution of the Council would be incomplete. It would have to adjourn and get a new election as soon as the Privy Council sanctioned it.

"Notes."

Mr. Brudenell Carter, in a short but bitter speech, delivered with great deliberation, described the resolution as cut and dried, manufactured in some central workshop, and sent out to various book clubs and chess clubs to be obediently passed. Not satisfied with this flight of imagination, Mr. Carter ventured on the still more daring assertion that the people who passed it did not care one farthing about it, and had obviously never given it five minutes' thought.

Upon this, in "the descriptive article," the following comment was made:

Mr. Carter's knowledge of the British Medical Association is not so profound as Sam Weller's knowledge of London—it is peculiar but not extensive.

It will be obvious that the same speech and the same passage are referred to in both places, but in the one Mr. Carter's eloquence has been subjected to a process of Bowdlerisation. The meaning of the two accounts is the same, though the descriptive article has preserved the reference to the Branches of the British Medical Association as book or chess clubs. We do not understand Mr. Carter to dispute the substantial accuracy of either report of his speech.

The Certificate of the Obstetrical Society led to a discussion which by some members of the Council was apparently felt to be inopportune. The matter was raised by a motion brought forward by Mr. Brown to the effect that the Council should signify to the Society that it could no longer assent to the holding of examinations and the granting to midwives of certificates by any body destitute of legal status. A sort of rider followed, which laid down that any persons doing so would be held liable to be adjudged guilty of infamous conduct in a professional sense. It was urged that these certificates were calculated to mislead the public, and that the term "midwifery" had been adopted in Acts of Parliament as connoting an essential element in all qualifying examinations for medical men. Mr. Horsley supported the motion mainly on the ground that the sanction of the Council to this certificate was embodied in a resolution which was somewhat indirect, and that the terms of the certificate were open to exception. Dr. Lombe Atthill, Sir Richard Thorne, and other speakers opposed the motion, because the form of the certificate now used by the Obstetrical Society had been suggested by the Council. Finally the motion was disposed of by the previous question, and amidst some difficulties as to the interpretation of the effect of such a vote when not only a motion but an amendment were before the Council, a more moderate amendment suggested by Sir Christopher Nixon, which approved the holding of examinations, but suggested an alteration in the terms of the certificate, never came to a vote, although it seemed probable that had it done so it would have met with considerable support.

REPORT OF PROCEEDINGS.

Tuesday, November 28th.

Sir William Turner, President, in the Chair.

The sixty-eighth session of the General Medical Council was commenced on Tuesday, November 28th.

President's Address.

The President delivered the following address:

Since the close of the meeting of the Council early in the month of June progress has been made in some of the pieces of business which were then under consideration.

Preliminary Examinations.

It will be in the recollection of the Council that a sum of money was placed at the disposal of the Education Committee to enable them to obtain expert assistance in examining the questions put, and the answers of candidates thereto, at the examinations by the Boards which conduct the preliminary examinations of intending students of medicine. Acting on the authority granted by the Council, the Committee have engaged three gentlemen—the Rev. T. W. Sharpe, C.B.; Professor W. S. McCormick, M.A.; and Dr. Joseph McGrath, a representative from each division of the United Kingdom—to read and report on the papers which the majority of the Examining Boards have very courteously placed at the disposal of the Council. The Committee will therefore doubtless be in a position to present a further report on the important question of raising the standard of the entrance examination to the medical profession. I am requested by the Chairman of the Education Committee to express to the Council the thanks of the Committee for the valuable assistance which they have received from their expert advisers.

Death Certification.

On May 29th the Executive Committee authorised me to forward to the Registrar-General the correspondence which had reached the Council on the subject of death certification, and to make further representations as to the importance and urgency of the question. On June 7th I addressed a letter to the Registrar-General on the subject, which, together with the reply, is printed in the Minutes of the Executive Committee, November 27th. Whilst the Registrar-General cordially reciprocates the wish of the Council for further legislation, with a view to the due certification of the causes of those deaths which have now to be registered without certification, he intimates that he has no power to initiate such legislation, and that we must look to the Local Government Board to act in this matter. In my judgment the Council should not relax in its efforts to obtain this much-needed reform, and should pass a formal resolution on the subject.

Proposed Legislation.

In an interim report, which I read to the Council on June 3rd, I related the steps I had taken to obtain the opinion of the medical authorities on clauses which had been drafted by Mr. Muir Mackenzie with the object of strengthening the penal and disciplinary powers exercised by the Council under Section XXIX of the Medical Act, 1858. As objections were taken by some of the authorities to certain of the clauses, the Executive Committee requested me to remit the whole matter to Mr. Muir Mackenzie in order that he might consider the objections taken, and advise if they could be removed. This was accordingly done, and amended clauses were subsequently submitted to the medical authorities for their consideration. Replies have now been received from all the authorities with one exception. A few verbal changes have been suggested by a few of the bodies, and to the majority of these suggestions, as will be seen from the report which I shall present to the Council, effect has been given in the clauses as now drafted. The advisability of obtaining further powers from Parliament in order to strengthen Section XXIX of the Act of 1858 has been recognised by the authorities, and the method by which it can be effected has been agreed to. It lies therefore with the Council, if they approve of the clauses, to request the Privy Council either to introduce, or, if introduced by a private member, to support, a Bill to carry out this much-needed reform. A motion to this effect will be submitted to you.

Identification.

During the last session a Committee was appointed to report on the best means of securing the identification of persons applying to be admitted to the *Medical Register* or *Dental Register*, and also on the whole subject of granting certificates of registration. The Committee presented a draft report on the last day of the session, the consideration of which was adjourned to the present session. As important changes in the methods of registration are proposed in the draft report, I requested the registrars of the three Branch Councils to consider them in the light of their knowledge and experience of the work of their respective offices. I have received from the registrars memoranda on the subject, copies of which have been forwarded to members of the Personation Committee.

Reciprocity with Foreign Countries.

I may remind the Council that in January, 1898, an application was made by the German Ambassador for information on several points specified in the Ambassador's letter regarding the admission of foreigners to the practice of medicine in this country. It was stated that the information was required in connection with the work of the revision of the regulations for the examination of medical men in Germany and the establishment of uniform bases for the admission of foreigners to medical examinations in the German Empire. An answer was prepared by the Executive Committee, which is printed in the minutes, vol. xxxv, p 237 In the month of October we received from the Privy Council a letter from the German Ambassador, in which he asks for information as to the conditions under which foreigners can be admitted to examination by the medical authorities in this country. As the office did not possess sufficiently detailed information to enable us to state the conditions of study and examination imposed by the various licensing bodies on foreign students and graduates, I directed the Registrar to communicate with the licensing authorities and ask for the necessary information. With one exception, replies have been received from the bodies, and I have asked the Registrar to prepare a *précis* and place it in the hands of the Education Committee for their consideration. The report of the Committee on this matter can then be transmitted through the Council and Privy Council to the Foreign Secretary for the information of the German Ambassador.

From a letter which I received a few days ago from a leading British practitioner in Rome, I understand that the recent agitation amongst native Italian practitioners to obtain an Act to prohibit foreigners from practising in Italy, unless they possess an Italian qualification, has been revived, and I am requested to ask the Council to move the Government to consult the law officers of the Crown, and to obtain an official statement of the rights to practise in this country enjoyed by Italian practitioners. This question as it affects Italy, was, in consequence of communications from the Privy Council, brought before the Executive Committee in February of this year. The Committee expressed the opinion that they would welcome such a recognition of a right by English practitioners to practise in Italy as would enable Her Majesty in Council to extend similar privileges to Italian practitioners in this country. They referred the communications from the Privy Council to the meeting of Council in May, when Mr. Muir Mackenzie was requested to advise the Council whether, under Section XVII of the Medical Act, 1886, the privileges of foreign practitioners can be restricted to the recognition of practice by them amongst their fellow countrymen only, who may be resident in this country. In his reply to the question put to him, Mr. Muir Mackenzie expressed the opinion that the privileges to foreign practitioners could not be restricted in the manner indicated in the question.

The Council also referred to the Executive Committee a report which that Committee had made some time ago on reciprocity of medical practice in relation to foreign countries, in order to obtain an opinion on the whole question. A statement has accordingly been prepared by Mr. Muir Mackenzie on the law which prevails in the United Kingdom with respect to the rights of foreign practitioners in medicine and surgery to practise in the United Kingdom, copies of which will be be sent to members of Council. A report on the question of reciprocity has been considered by the Executive Committee,

and motions on the subject will be brought before you for consideration.

The Hunter Case.

I have received a letter from the Society of Apothecaries regarding the decision of the Court of Queen's Bench on the Hunter case. The Society have been advised by counsel that the decision is "erroneous," and they have also been advised that an L.S.A. (1886) is entitled to describe himself as "physician" or "surgeon," or both, and that the Society of Apothecaries are justified in so advising their licentiates, notwithstanding the decision in the case of Hunter *v.* Clare. It is suggested in the letter that a test case should be arranged in order to obtain, with the co-operation of the General Medical Council, an authoritative exposition by a Court of Appeal of the 40th Section of the Medical Act, 1858. The Society also suggest that they and the General Medical Council should guarantee the expenses of the plaintiff and defendant respectively, and that whatever the result may be each party should pay its own costs. The letter will appear in the programme of business, and a motion on the subject will doubtless be submitted to the Council.

Penal Cases.

As regards the penal and disciplinary duties of the Council, two cases adjourned from last session will be brought up for disposal; the case of a dentist convicted of misdemeanour and now undergoing imprisonment, will be reported to you, as well as those of certain medical practitioners who have been convicted, and whose conviction should be considered, under Section XXIX of the Medical Act. Only one new case will have to be inquired into. From the character of the defence which has been made by the practitioner whose conduct has been called in question, the Council will have to consider the latitude allowed in the Council's resolution in regard to unqualified assistants, as to the employment of medical students and surgery attendants in private practice.

Reports.

The Examination Committee will report on the examination conducted in July last by the Apothecaries' Hall, Dublin. Reports may also be expected from several other Committees to which matters appertaining to their respective provinces have been referred by the Council.

On the proposition of Mr. Bryant, seconded by Sir Dyce Duckworth, the thanks of the Council were given to the President for his address, and he was requested to allow it to be printed on the minutes.

Results of Competitions.

On the motion of Dr. Heron Watson, seconded by Sir R. T. Thorne, the following yearly tables for 1899 were received and entered on the minutes:

(*a*) Table showing results of competitions held in July, 1899, for commissions in the Royal Army Medical Corps.

(*b*) Table showing results of competition held in July and August, 1899, for commissions in the Indian Medical Service.

Dr. Heron Watson moved that the thanks of the Council be conveyed to the Director-General of the Army Medical Service, and to the Under Secretary for India, for these returns, which they have respectively furnished to the Council, with the request that these returns may in the future continue to be furnished to the General Medical Council. He said he would have included the name of the Director-General of the Royal Navy in this resolution, but their return had not come to hand.

Sir Richard Thorne seconded.

Mr. Geo. Brown wished to call attention to the fact that in the lists there were several candidates who had been declared not qualified to enter the services. He was not aware of the reason for this, but the fact was evident that they came in most cases from Ireland. The Conjoint Board of Ireland sent in four candidates to the examination for the army, and 50 per cent. of them failed. The University of Dublin sent in two candidates and only one passed, so that out of six candidates in Ireland three failed. He asked, did that point to defective education? He then dealt with other instances, and said that he thought the test examinations should not be passed over, as they had been year after year, as a matter of course. He thought that when they found candidates coming up from corporations who did not show a sufficient state of education to be able to pass into the public service, there must be something wrong, and he would therefore move that these reports be referred to the Education Committee or the Examination Committee.

The President thought that as Mr. G. Brown was not moving an amendment to the resolution of Dr. Heron Watson, the resolution should first of all be passed.

Mr G. Brown said he certainly did not intend his motion to be an amendment. He only wished to direct attention to the matter.

The resolution was then put and carried.

The President asked Mr. Brown if he now wished to move his motion, and

Mr. G. Brown moved that the matter be referred to the Examination Committee, and that they be asked to report during the present session.

Dr. Glover seconded.

Sir Dyce Duckworth, as Chairman of the Examination Committee, remarked that if such a request came before him he should not know what to do with it.

Dr. Macalister pointed out that Mr. Brown was wrong in speaking of the candidates as he had done, because it appeared in the table that with regard to three of the candidates although they appear under the column headed "Qualified, but Unsuccessful," yet none of them were rejected. That only meant that they were below the compulsory aggregate of marks which were necessary for that examination. The word "unsuccessful" had nothing to do with their qualifications; the result was that all the candidates were qualified in all the subjects.

Sir Christopher Nixon thought it was useless to refer this matter to the Examination Committee or the Education Committee because it could not lead to any possible good. In his opinion it was entirely a misconception on the part of Mr. Brown. The duty of the Council was to see that no man was put on the *Register* who was not sufficiently qualified and not sufficiently well educated to be a fairly good medical man. To his mind Mr. Brown had discovered what he might call a "mare's nest."

Dr. Atthill said the motion was a misconception. It was the duty of the Council to see that no one was put upon the *Register* who was not sufficiently well educated to be a fairly good medical man. That was the standard which this Council had adopted, but the Army Medical Board expected something higher. The Irish candidates were all taught by Irish surgeons and physicians, and they were examined by English and Scotch surgeons and physicians; and, without imputing the most trivial unfairness to either Scotch and English examiners, they must remember that each class of examiners had their own particular way of examining, and also that the teaching in Ireland might differ in some respects to that in England. In his opinion Mr. Brown had discovered what he might call a "mare's nest."

Dr. McVail entirely agreed with the general principle of Mr. Brown's motion. He had always regarded the army and navy and Indian examinations as a means of getting information which would not otherwise be got, namely, as to how the various bodies conducted their work. When the Medical Act of 1886 was before Parliament, the public opinion of the country paid great attention to the results of the army and navy examinations for the nineteen or twenty years preceding, and they were very frequently quoted both by the British Medical Journal and the *Lancet*, and it was in fact held that this was one of the most certain and admirable means of testing the work done by these bodies. What was proposed, it seemed to him, was a compliment to rather than a slight on, the Army and Navy and Indian Departments.

Dr. Bruce thought the discussion had amply shown that this was a question that should be looked into.

Sir Richard Thorne differed from Dr. Bruce. It seemed to him that the Council had plenty of work already without seeking other things. He thought that if anyone wanted anything to be referred to a committee it was for them to show why it should be referred, and not for the Council to seek out a reason.

Dr. Little thought Dr. Atthill had probably given the correct explanation, namely, that the services are not popular in Ireland. He would accept Mr. Brown's motion if he would add to it that it be an instruction to the Examination Committee to ascertain what were the circumstances

which had led to the unusual success which had attended the efforts of the Irish graduates in the more wealthy and appreciative English communities.

Mr. Tichborne believed that the candidates from Ireland for the Army Medical Board made as good army medical men as they did soldiers, which was saying a great deal.

Mr. Brown said he could not accept Dr. Little's proposed amendment.

Sir Dyce Duckworth asked if the motion were passed, and the Examination Committee asked to inquire into the matter, what were they to inquire into. They could not go behind the Examination Board, and it was not the business of the Council to do it, and the Council was not set up for that purpose.

Sir John Tuke said it appeared to him that it was not for Sir Dyce Duckworth to give reasons for refusing this, but for Mr. Brown to give reasons why this motion should be adopted.

Mr. Brown, in reply, said the discussion that had taken place fully proved the necessity of the motion. Although he only called attention to the tables set out in the agenda that day, he could have referred to those tables which had been presented in years gone by, and if the whole of those tables were studied it would be seen that there was something to be inquired into. It was a duty which the Council owed to the public, and he hoped the matter would receive more attention than it had done.

The President pointed out that the motion before the Council was confined to Tables A and B, which he took to mean Tables A and B on the Council's programme of business, and, if the motion was carried in that form, there was no instruction to the Committee to go beyond those Tables.

The motion was then put and declared lost, 7 voting for and 18 against.

The Representative of the Society of Apothecaries of London.

The following recommendation of the Executive Committee was then read:

The Executive Committee having had its attention directed to certain statements recently made respecting the constitution of the Society of Apothecaries of London, one of the bodies represented on this Council, and the action of the representative of that body on the General Medical Council, recommend to the Council that Mr. Brudenell Carter should be afforded an opportunity to reply to these statements in his place at the Council.

The President said, the Council having heard the recommendation of the Executive Committee, he had to ask the Council to afford Mr. Brudenell Carter an opportunity to reply to the statements referred to in his place at the Council.

This having been agreed to,

Mr. Brudenell Carter said he was very much indebted both to the Executive Committee for placing this resolution before the Council and to the Council itself for graciously according the permission to make a statement. He was very desirous to trespass as little as possible on the time of the Council; but he would begin by saying that for the last two or three years or more his conduct as a member of the Council, and his opinions in relation to subjects that it was the business of the Council to discuss, had been made the subjects of a good deal of adverse criticism, chiefly by a member of the Council, Mr. Victor Horsley, and of criticism which had not always been founded on facts. For example, Mr. Victor Horsley had stated publicly that he, Mr. Brudenell Carter, had given a vote which the minutes of the Council showed he had not given, and he had spoken in various ways depreciatingly of his conduct in relation to medical questions. Mr. Victor Horsley had, of course, a perfect right to his opinions, and as long as his denunciations, if he might use such a word, chiefly resembled what Mrs. Malaprop called "derangement of epitaphs," he (Mr. Carter) was not curious to discuss them, or to endeavour to refute them. He had had the honour of being a member of the Council for more than ten years, and he had been a member of the profession for fifty years. He had held important hospital appointments in London, and he ventured to think that his life, his acts, and his writings, were sufficient to defend him against these criticisms. He, therefore, had submitted to them in absolute silence for a long period. But in August last, after the last session of the General Medical Council, these criticisms went to the point of imputing to him a very definite departure from his duty as the representative of the Apothecaries' Society, and endeavoured to fix upon him a special measure of responsibility for the prosecution of the late Mr. Hunter. When this statement appeared he naturally consulted the Society with regard to it at the earliest moment, and obtained from them an opinion that in their view it was his (Mr. Carter's) bounden duty to endeavour, in his place in the Council, to clear himself from the imputations of misconduct which Mr. Victor Horsley had thrown upon him. Scarcely had that opinion reached him from the Society of Apothecaries, when he received on October 1st last a publication called the *Medical Guild Quarterly*, and in that publication he found a long article by Mr. Victor Horsley, one passage of which he would venture to read:

Mr. Carter, for example, though he represents the Apothecaries' Society, is not elected by medical men at all as their representative on the General Medical Council, but by a few druggists and other persons who style themselves "The Master and Wardens of the Society of Apothecaries," and who know no more about medicine than about bootmaking. It is Mr. Carter's gift to prevent the actual facts from appearing; and in speaking of himself as a representative of a licensing body, he avoids telling your readers that he does not really represent a licensing body at all, but that he represents a handful of tradesmen who, though not having any medical education, notoriously prescribe over the counter in the druggists' shop on the ground floor of the Apothecaries' Hall in Blackfriars.

Soon after the passage came into his hands, he found in the British Medical Journal a report of a meeting held at Newcastle, which contained a somewhat similar statement that he, Mr. Carter,

only represents a little *coterie* who represent the Apothecaries' Society. We have the undignified spectacle of a seat on the General Medical Council being occupied by a man who is sent there by a handful of city grocers who have not a particle of medical education about them, and whose nominee takes upon himself to speak as though he were the representative of a large body of medical men throughout the United Kingdom instead of the members of the Apothecaries' Society.

It appeared to him that whatever might be the case with regard to any attack upon himself, the attack upon the Society which he had the honour to represent was of such a nature that, if it were well founded, the Society would be unfit to send a representative to the Council. It appeared that there was no option left to him (Mr. Carter) but by calling attention to these statements, and by contrasting them with the facts of the case, to establish that the Society of Apothecaries was not the kind of body which Mr. Victor Horsley had described, and in doing so he would chiefly confine his remarks to the *Medical Guild Quarterly*, in which Mr. Victor Horsley had had an opportunity of correcting errors, and must, therefore, be held responsible for the statements. In Mr. Victor Horsley's statements about medical matters and the Medical Council generally there was something which he (Mr. Carter) might describe as an economy of truth, and he was, therefore, the more glad to be able to say that in the statement which he had read from the *Medical Guild Quarterly* there was one assertion which was absolutely and entirely true. Mr. Victor Horsley wrote that he (Mr. Carter) had not told the readers that he did not represent a licensing body at all. He did not tell them so. Everything else in the paragraph that was either asserted or implied, the whole and every separate detail of which it was composed, was false from beginning to end; there was not one single word of truth in it. To take the sentences *seriatim*, first, "He is elected by a few druggists and other persons who style themselves the Master and Wardens of the Society of Apothecaries." He (Mr. Carter) was not elected by the Master and Wardens of the Society of Apothecaries; he was elected by the Court of the Society of Apothecaries, a body of twenty-four gentlemen, of whom the Master and Wardens were three. The Society of Apothecaries was formed on the ordinary lines of city companies; it was governed by a body of gentlemen selected from its Livery, and three of these gentlemen were by rotation the Master and two Wardens, practically the president and vice-presidents of the court. It was false that the Master and Wardens styled themselves by this appellation; they were so styled by the charter given to the Society by James I. He ventured to call the attention of the Council to what appeared to him the studied insolence of Mr. Horsley's phraseology. Gibbon somewhere pointed out that every animal is accustomed to utter the howl or cry peculiar to its species, and he thought that the use of definitely insolent phraseology towards gentlemen who had given no offence,

gentlemen of mature age, gentlemen who had spent long lives of usefulness, honour, and repute, might fairly be described as the howl or cry of that variety of the human race known to modern sociologists as "the bounder." It was false that the Master and Wardens and Court of Assistants of the Society of Apothecaries knew no more about medicine than about bootmaking. They were elected from the livery of the Society, and there were a few liverymen who were not members of the medical profession—he thought about ten—but no one who was not a medical man had since 1815 been eligible for the Court. Every member of the Court was a Member of the Royal College of Surgeons of England and a Licentiate of the Society; and, as additional qualifications, the Members had among them three Doctors and one Bachelor of Medicine of the University of London, four Doctors of Medicine of the University of St. Andrews, one Fellow and two Members of the Royal College of Physicians of London, one Fellow and one Licentiate of the Royal College of Physicians of Edinburgh, and five Fellows of the Royal College of Surgeons of England. This was the body which Mr. Horsley described as a handful of tradesmen having no medical education, and he (Mr. Carter) had sufficiently shown the falsehood of his statement. It might not be uninteresting to inquire whether the falsehood was of his own invention, or whether he was merely a conduit pipe for the discharge of falsehoods invented by others. On this point it was perhaps worth while to consider whether he could by any possibility have believed what he said. It amounted to a statement that the Society of Apothecaries was a non-medical body; that was to say, that the Legislature of this country, in the year 1815, committed to a non-medical body the entire supervision, control, and direction of the medical education and the medical examination of the whole body of general practitioners of England and Wales; that this non-medical body discharged this function for forty-three years not only without reproach, but to the entire satisfaction of the public and the profession; that in 1858, when the field of English practice was thrown open to the Scotch and Irish licentiates, this non-medical body, again without protest of the profession, was preserved by the Legislature in the full possession of its powers, and that in 1886 the same thing happened. He inquired whether it was possible to believe such a statement as that; surely ordinary credulity would be incapable of such an achievement. He apprehended that anyone who believed Mr. Horsley's own statements about his (Mr. Horsley's) influence in the Council and the things he had done in it, or who believed his account of the duties of the Council, or who accepted his assertions about the meaning of the Medical Acts, might fairly be taken as representing something approaching very nearly to the zero of human intelligence; but even such a person could not believe the statement. But there was more than that. A few years ago, before Mr. Horsley was a member of the Council, Mr. Carter had some controversy with him in the *Lancet*, and in the number for August 29th, 1896, Mr. Horsley wrote over his signature with regard to this body that was not medical, and "knows no more about medicine than about bootmaking":

> "In conclusion, Mr. Carter congratulates himself upon being the 'representative of the Society of Apothecaries.' As a matter of fact he is not. Of the whole body of licentiates and members he is elected by twenty-four individuals only, and therefore, in truth, he only represents those twenty-four members, most of whom are on the *Medical Register*, although some are not."

It follows that, when Mr. Horsley said that Mr. Carter was elected by the Master and Wardens, he all the time knew that he was elected by the twenty-four members of the Court; and, when he said that Mr. Carter was elected by a handful of tradesmen without medical education, he knew all the time that "most" of the electors were on the *Medical Register*. The reason why some were not on the *Medical Register* was that the Court of Assistants of the Society of Apothecaries contained a few gentlemen, some of whom had had a long and distinguished career in the public medical service of the country, and who had only returned to this country in order to settle down in retirement in the evening of their lives, and who had never placed their names upon the *Register*. He thought he had sufficiently shown the amount of confidence which could be placed, either by the Council or by the public, in Mr. Victor Horsley's general assertions, and he would not detain the Council long in order to consider Mr. Horsley's statements as to his (Mr. Carter's) own action on the Hunter case. Mr. Victor Horsley had said a great deal in the journals of his (Mr. Carter) having been, as he said, Chairman of the Committee by which the prosecution of the Hunter case was recommended to the Council. The Council had all the documents before it, and it well knew that the Chairman of a Committee was naturally expected to exercise a certain amount of mastery over the business. He had been called Chairman of the Committee by Mr. Horsley in order to fix upon him this responsibility. Mr Horsley knew quite well that he had never been Chairman of the Committee. He went to the meeting of the Committee, and he found two other gentlemen there, and they asked him to take the chair. He chanced to occupy the chair at that particular juncture, and that fact precluded him altogether from exercising any influence whatever on the decision at which the Committee arrived. The decision at which the Committee arrived was moved by one of his colleagues, and seconded by the other, and he could have no influence on the result. Then it was said that on the second occasion when he was in the chair of the Committee the proceedings were reported and that he ought to have stopped them. What was reported? It was a verbal report by the solicitor that steps had been taken to carry out the instructions of the Council. He believed the facts were simply these, that the Committee, and, he believed, afterwards the Council, had nothing before it except the charge made againt Mr. Hunter by Mr. Syme, that was to say, the charge that he had improperly described himself as M.D. That was everything that was contained in the charge and they recommended the prosecution because it was stated to them that Mr. Hunter asserted his right to use M.D., and because Mr. Muir Mackenzie told them that the case was a convenient one for testing the legal point at issue, namely, whether a registered practitioner holding a degree in medicine which was not registrable in this country was still entitled to describe himself in the way he did. That was the sole question on which the Committee recommended the prosecution of Mr. Hunter and that was the sole question on which the Council *in camerâ* passed their resolution. The Council would remember, he thought, at whose instigation it was that the prosecution was mainly urged. The Council unfortunately on that occasion fell into this error: they passed an omnibus resolution recommending the prosecution of A B C D and E under Clause XL of the Act, and the learned advisers of the Council either forgot, or did not perhaps consider, the precise charge against Mr. Hunter which had been made, and with which alone it was the intention to proceed; and, it being their duty to prosecute five other people under Clause XL, they also thought it their duty, if possible to get a conviction of the whole of them. So far as he was concerned he knew absolutely nothing about the Hunter case; and he had no more responsibility for it, and no more influence in inducing it, than any other member of the Council. In Mr. Victor Horsley's last report but one, he had stated that he had carried a resolution for the inspection of certain papers after the strenuous opposition of the President and three or four other members of the Council; and at the next meeting of Council, when Mr. Horsley himself raised a debate on the Hunter case, and he expressed his willingness to whitewash the Council, he (Mr. Carter), said he hoped that Mr. Victor Horsley would also whitewash it of the charge he had preferred against it in his report, and which he showed him to be absolutely unfounded. He showed that none of the gentlemen whom he mentioned had ever opposed his desire for the papers, and that he himself had voted in favour of the proposition. What he had done was to oppose in the previous year the ransacking of their papers by Mr. Horsley, and he thought it was his duty to oppose. But it was a very remarkable thing that although he made that speech, and though Mr. Victor Horsley, referring to in his last report, said that he occupied himself in abuse of him (Mr. Victor Horsley), he ventured to appeal to the Council whether his speech was not made in perfect temper, and whether it contained a single abusive epithet or expression, and whether it was not confined in the strictest way to answering the statements which had been made. For some reason unknown to him the medical journals suppressed that speech. He thought it was of importance to the public that they

should know how little confidence could be placed in the statements proceeding from Mr. Victor Horsley, and he therefore deliberately made that speech in the full Council and before the reporters in the hope that it would be read and weighed by the medical profession. But in the report it did not appear that he had spoken at all; and the medical journals which had for four or five years given Mr. Victor Horsley every facility for filling their columns with personal vituperation and abuse of him—with charges which were absolutely devoid of foundation—entirely suppressed what he had intended as a defence. He trusted that the medical journals would reconsider their decision. He thought their action in throwing open their columns to the assertions of which he complained, and in closing them to his denial of those assertions, was a course which might hereafter place them, in possible eventualities, in a difficult position; and he would venture, through the reporters, to call the attention of editors to what he said, and to ask them whether it was, not only a fairer course, but also a safer course, that they should allow both sides to be heard in the columns of print which they put before the public. His attention had been called that day to the British Medical Journal of June 3rd, in which there was a sort of descriptive article of a speech of his in the Council, stating that he had said certain things with great bitterness. Upon referring to their own report in the same number, he did not find that a single word appeared such as was suggested to have been said. It was a first principle of respectable journalism never to comment upon any part of a speech that was not contained in the report published by the same journal. When that was done, the readers of the journal would turn from the comment to the report, and see how far the one was justified by the other; but when the report contained no reference to the description of what was alleged to have taken place, then obviously many readers were apt to be deceived. He was greatly indebted to the Council for allowing him that opportunity of explaining his position.

Mr. Victor Horsley (having obtained through the President the leave of the Council to make a few remarks) said that Mr. Carter had done perfectly right in carrying out the instructions of his Society, namely, to enter a public protest against the description which had been published of the governing body of that Society as being the electing body of that Society. He (Mr. Carter) had established, he supposed, to the satisfaction of all of them, that his (Mr. Horsley's) description of that elective body, as at present constituted, was not justified, and he, therefore, begged to apologise in his place, to that Society for having inadvertently misrepresented them. He said "inadvertently" for a very good reason. He was informed at the office of the Society that practically the representative was elected by the Master and Wardens. He was quite aware that the Master and Wardens numbered three in a body of twenty-four. He was also informed at that time that the then Master and Wardens were not on the *Medical Register*. It was also true that although in the *Lancet* on the previous occasion he pointed out that a large proportion of the members were unregistered persons, he certainly did not know, as they had now heard, that although these gentlemen were not on the *Register*, they were nevertheless qualified medical men. He therefore apologised to that body of men for what he had said. All that, however, was not germane to his point. His point, which had not been met by Mr. Carter, was this: that Mr. Carter had no right, in his (Mr. Horsley's) opinion, to speak of himself, or to be spoken of at that Council, as the representative of that Society of Apothecaries; because he contended he was not. He would insist that he was not. If he were elected by the Licentiates and all the other Liverymen of the Corporation in question, then he certainly would admit him to be the representative. But he insisted that he had no right to describe himself as representing that large body of practitioners. Mr. Carter had proceeded further, and had told them that the work of the Society had been carried on without reproach. He had also his opinions on that subject, and could not agree with that statement. He could not agree that the examination of that body had been carried on in a way in which he believed that Council would now, at any rate, approve. He said that advisedly as a teacher of students. He knew perfectly well what the reputation of the Apothecaries' Society was among students, and that reputation bore him out in the colour that he had given from time to time to his views of the Apothecaries' Society as a whole. Mr. Carter's second point was that he (Mr. Victor Horsley) was wrong in saying that he (Mr. Carter) was Chairman of the Penal Cases Committee on the occasion when the Hunter case was before them. They had heard that he was in the chair, and he (Mr. Victor Horsley) could not see that he was wrong in saying that he was the Chairman of the meeting.

Mr. Carter said Mr. Horsley did not say that he was chairman of the meeting, but that he was chairman of the Committee.

Mr. Victor Horsley replied he would not dispute a little point like that; the profession would fully understand the point. Then Mr. Carter proceeded to say that he (Mr. Horsley) was wrong in accusing him, as it were, of not observing that Mr. Hunter was an L.S.A. He had never brought it before this Council before, but still if it was brought before them he said distinctly that he was wrong. He said that if he (Mr. Carter) had had before him, as he undoubtedly had at the meeting, the fact that Mr. Hunter was an L.S.A. and a registered medical practitioner he was primarily responsible for the Council being misled into thinking that he was nothing but an American quack and ordering his prosecution upon that ground. If any of the gentlemen present had been the members of the Committee at that time, and had had before them in print, as Mr. Carter had, that this man was an L.S.A. and a registered medical practitioner, was it to be supposed that they would have voted for his prosecution among a body of quacks? He still maintained everything that he had stated respecting Mr. Carter on that point, and with regard to that he had nothing to withdraw or to apologise for. He had undoubtedly been misinformed as to the nature of the present Court of Assistants of the Apothecaries' Society, and he therefore apologised to them as he ought to do as a gentleman for what he had said respecting that body.

The President stated that, the Council having heard the statement of Mr. Carter and Mr. Victor Horsley's reply, the incident was closed.

Death Certification.

Mr. Carter moved:

That with reference to the correspondence between the President of the Council and the Registrar-General on the subject of death certification, the Executive Committee recommend that the President should request the President of the Local Government Board to receive a deputation from the General Medical Council to urge the advisability of early legislation on this subject on the lines of the recommendations of the Committee on Death Certification approved in September, 1893.

He said he was of opinion that there should be no registration without a proper death certificate, and the effect of that would be, not to increase certificates, but to render it imperative that proper medical attendance should be obtained in times of sickness.

Dr. Glover seconded the resolution.

The President stated that he had had the opportunity of reading one of the latest, though not the last, report by the Registrar-General for Scotland, and he found that in 1896 70,677 deaths occurred in Scotland, and of these 68,168 were certified, and 2,509 were uncertified. He thought it was perhaps not unlikely that the proportion in England was even greater. Those figures showed that 3.6 per cent. were uncertified.

Mr. G. Brown said it had been found in many cases that registrars of deaths were the persons who had been in attendance on the patients whose deaths they had to certify, and also that chemists, who did a large practice, sometimes certified that they had attended the patient, and then registered the death. He thought it should be laid down by the authorities that no chemist should hold an appointment as registrar of deaths, especially if it was shown that he prescribed for the patients.

The resolution was carried.

It was agreed to leave the selection of the deputation in the hands of the President, who said it was very important that the deputation should consist of persons who had paid attention to the subject.

RESTORATION OF NAMES.

The REGISTRAR stated that the next business was to receive a report from the Executive Committee in regard to certain applications for the restoration of names to the *Medical Register*.

Dr. MCVAIL thought that as the report had not been received by the members of the Council it was better to postpone the consideration of this matter. He had no objection to the Council receiving the report and putting it on the minutes.

On the motion of Dr. MACALISTER, and seconded by Mr. BRYANT, the report of the Executive Committee was received and entered on the minutes.

ILLEGAL CERTIFICATES.

Mr. G. BROWN proposed, and Dr. GLOVER seconded, and it was resolved, that the following communication in regard to the issue of alleged illegal certificates of proficiency, remitted to the General Medical Council by the Executive Committee, be received and entered on the minutes:

British Medical Association,
Yorkshire Branch,
33, Manor Road, Bradford,
November 11th, 1899.

Dear Sir,—I beg to enclose a copy of resolution adopted unanimously at the November meeting of the Yorkshire Branch of the British Medical Association, and which I am sending to you at the request of that meeting.—Yours truly,

ADOLPH BRONNER, M.D.,
Honorary Secretary of the Yorkshire Branch
of the British Medical Association.

To the Secretary of the General Medical Council.

"That the Yorkshire Branch of the British Medical Association expresses its strong disapproval of unauthorised societies or other organisations of registered medical practitioners arrogating to themselves the right to grant diplomas or certificates of proficiency in any branch of medicine, surgery, or midwifery, as being contrary to the Medical Acts, and opposed to the interests of the public and of the medical profession."

The Registrar laid on the table a communication from the East York and North Lincoln Branch of the British Medical Association, enclosing a report of a special meeting held on October 20th, 1899.

The PRESIDENT remarked that if the communication was to be regarded as a memorial they would then remit it to the Business Committee, who would report on it in accordance with the Standing Orders; but inasmuch as it included a variety of subjects he had no doubt that they would rule it out, because the Standing Order was to the effect that no memorial could be received which comprised more than one subject.

Mr. BROWN had a notice of motion on the paper:

That the resolution No. 9 on the minutes of the meeting of the Council held on May 29th, 1895 (Vol. XXXII, page 42), relating to the certificate issued to persons who have passed the Midwifery Examination held by the Obstetrical Society of London, be and is hereby rescinded.

Dr. MACALISTER pointed out that if this resolution was carried it would have the effect of removing something which appeared already on their minutes.

Mr. G. BROWN felt a great difficulty in framing his resolution so that it should not be ruled out of order.

The PRESIDENT suggested that Mr. Brown should see Dr. MacAlister, as Chairman of the Business Committee, on the point, and they no doubt would be able to draft a motion in such a manner that it could come properly before them.

Mr. G. BROWN agreed to this course being adopted.

The Council then adjourned for the purpose of going into Committees.

Wednesday, November 29th.

Sir WILLIAM TURNER, President, in the Chair.

THE MINUTES.

THE minutes of the previous day's proceedings were read and confirmed.

Dr. MCVAIL raised an objection to the recommendations of the Executive Committee contained in their report appearing on the minutes.

Dr. ATTHILL thought the names had better not be printed.

Dr. MACALISTER said that the minutes containing all these details had been published already.

Dr. MCVAIL then said he would move a special resolution with reference to the matter.

MIDWIVES' CERTIFICATES.

Mr. GEORGE BROWN moved the following:

(1) That notwithstanding the resolution of the Executive Committee passed on May 27th, 1895, the Registrar be instructed to inform the President of the Obstetrical Society of London that the Council can no longer assent to the holding of examinations in midwifery, or to the granting of certificates of proficiency in the practice of that art, by any body of persons unless invested with legal authority to hold examinations and grant certificates in this branch of medicine.

(2) That the Registrar be instructed to insert notices in the leading medical journals to the effect that on and after the 1st day of January next any registered practitioner who takes part in any examination in the art and practice of midwifery, or any other branch of medicine or surgery held by or on behalf of any society or person, or body of persons, unless legally authorised to hold such examinations, and grant certificates of proficiency to successful candidates, will be liable to be adjudged guilty of infamous conduct in a professional respect, and to have his or her name removed from the *Medical Register*.

Mr. Brown said that the numerous petitions and memorials which had come before them session after session showed that great interest was taken in this matter. Last session a memorial signed by 550 of the leading practitioners in the provinces dealing with the subject had been received, and he thought they could just as easily have got 5,000 signatures. These quasi-diplomas were issued by hundreds, and probably thousands, during the year, and professed to show that the persons holding them were qualified to practise the art of obstetrics. Other certificates were issued by other parties, which professed to qualify persons in treating all kinds of disease by massage. There were other certificates issued by bodies having no medical standing, to deal with abnormalities of vision, and those examinations were conducted partially by registered medical practitioners. Under the Act of 1886 they were expressly given power to prevent persons from holding any qualifying examination to practise any branch of medicine, surgery, or obstetrics, unless they were recognised corporations under the Act. The Act of 1886 enacted that—

A qualifying examination shall be an examination in medicine, surgery, and midwifery, held, for the purpose of granting a diploma or diplomas conferring the right of registration under the Medical Acts, by any of the following bodies—

and the different bodies were enumerated. But they found that certain societies held examinations and issued diplomas quite outside the Act. He had before him a diploma which had been actually issued.

The PRESIDENT inquired the date of it.

Mr. BROWN replied that it was an old one; the one issued at present was somewhat less pretentious, and was differently worded. His point was that when such a document was framed and put in a window, as was done throughout the country, it led the public to believe that a person holding such a certificate was qualified and was recognised by law to practise the art stated on it, which was the art of midwifery. He regarded midwifery as one of the most serious duties that a medical man could be called upon to perform. Under the Medical Act five years' training in medicine, surgery, and obstetrics was required, but the Obstetrical Society and other kindred societies examined women after some thirteen weeks' training which they got in lying-in hospitals; and then they were sent out with these quasi-diplomas to practise. He had read the result of the last examination of the Obstetrical Society of London, and he had had a copy of the examination paper, and he found that the questions put to these persons were very little different in character to the usual questions put by the examining boards of the various licensing bodies. He contended that the body he had referred to was going outside its function in issuing the certificate he had produced.

The PRESIDENT thought Mr. Brown was not in order in referring to that certificate at all, because that was not the certificate which the Obstetrical Society now issued or had issued for many years, and he asked Mr. Brown not to refer to it, as he held that that certificate ought not to be before them.

Mr. BROWN did not wish to be unfair, but said it would come into his argument later. He had a list before him of 190 midwives who passed that examination. The kind of person they wanted was one who had been in a lying-in hospital and had been thoroughly trained. He objected to the woman with the red lamp and the brass plate who said that medical men were unnecessary and were dangerous. He had before him an advertisement which appeared in a weekly paper.

The PRESIDENT pointed out that Mr. Brown was wandering

from his notice of motion. He suggested that Mr. Brown should read the certificate to which he took objection by his notice of motion, and see how far that certificate supported his argument that the Obstetrical Society of London stated that these women were qualified to practise the art of obstetrics. That was the initial step.

Mr. Brown said the certificate was as follows:

Obstetrical Society, London.

We hereby certify that ——— has passed to our satisfaction the Examination in Midwifery instituted by the Obstetrical Society of London.

The Chairman and the Examiners (Signed by).

The President asked Mr. Brown to read the note at the bottom.

Mr. Brown read as follows:

This certificate confers no legal qualification to practise under the Medical Acts.

He contended that midwifery was a branch under the Medical Acts, and that the person who saw the certificate exhibited in a window would not see the footnote, but would think it was a *bonâ-fide* authorised document instead of a spurious one. It had no legal status. Neither the Obstetrical Society "nor any other similar Society" had any legal status. It was purely a voluntary body, and was self-constituted. He should like to ask, What would be his own position before this Council if to-morrow, after he had been told that was the kind of thing they should encourage, he were to start an Obstetrical Society in Islington and form himself into an Examination Board for the issuing of diplomas such as he had exhibited? It was a curious thing that when the report approving the certificate came before the Council the then President of the Obstetrical Society sent a communication, saying that the Society would accept the form of certificate approved by the Executive Committee, and it was moved by Dr. McVail and seconded by Dr. Bruce that it be remitted back to the Committee, but the amendment was negatived by 20 to 7. The motion committed the Council as a body to nothing. The Council simply received the motion and entered it on the minutes. He thought the Council should then have said, "We do not revise or approve the certificates of every society; we ask you to obey the law, and you must not come to us." It was a mistake for the Council to have anything to do with revising or sanctioning in any form a certificate with regard to the practice of obstetrics.

The President said the certificate was merely a certificate that A. B. had passed to the satisfaction of the Obstetrical Society the examination in midwifery which they had instituted; that was all. The certificate expressly stated that it conferred no legal qualification to practise under the Medical Acts; and it was not a licence.

Mr. Brown said that was so. He would not object to the Obstetrical Society or any other body issuing a certificate that this person or that was qualified to act as a midwife or obstetrical nurse, and what else could they want? They need not come to the General Medical Council to sanction that. Their object in coming was to get something by which they could say to the public "You need not have a doctor; I am qualified. I have the Obstetrical Society's certificate, which has the sanction of the General Medical Council, which is as good as any examination in London." That was what had been said and what was heard on every side. He thought he had proved his case, and he asked the Council to assent to his resolution.

Mr. Victor Horsley seconded the motion from a very simple point of view, and he desired to refer to two points which had been already brought home to the Council. The first was that the Council, as a whole, had never had the opportunity of finally expressing its opinion on the subject. It had received the terms of the report of the Executive Committee, but until a definite resolution on the subject had been placed on the notice paper it ought not to have gone forth to to the world, as it did in 1894, that this Committee was satisfied with the so-called certificate of the Obstetrical Society. The minutes of the Committee showed there was a difference of opinion, but it was settled in favour of the certificate. The Committee had now an opportunity of reconsidering its attitude towards this certificate, and he hoped the motion would be allowed to pass, in order that they as a Council might acquit themselves of appearing in any way, directly or indirectly, to sanction this certificate. His second point was with regard to the terms of the certificate, which included the statement that the Obstetrical Society in London certified that a person had passed the examination in midwifery instituted by the Obstetrical Society in London, and went on to say that the certificate conferred no legal qualification to practise under the Medical Acts. They must have the utmost sympathy with the Obstetrical Society in instituting these examinations, which were originally instituted because of the evil effects of the midwifery system in those days to which they sought to put an end; but, as he said, with all sympathy with the objects of these gentlemen, it could not but be felt that they were from the first mistaken in issuing a certificate of any kind which the Council's resolution in 1889 stated was a colourable imitation of a diploma. The Obstetrical Society, in answer to an invitation from the Council, threw aside that certificate, and brought out another; but he still felt that the original resolution of the Council was effective as to the action of the Obstetrical Society in issuing this certificate which was before the Council now. From the legal aspect, he also thought Mr. Brown was perfectly right, because in Section 111 of the Act of 1886 it was stated that a qualifying examination shall be an examination in surgery, medicine, and midwifery. He ventured to think that this certificate was not a justifiable certificate, and ought never to have been issued by the Obstetrical Society.

Replying to Dr. Glover, Mr. Brown said if his first resolution was passed he would leave the second resolution on the agenda in reference to this subject in the hands of the Council.

Dr. Glover entirely sympathised with the mover and seconder of the motion in feeling that this was a very important question. He thought the moderation shown both by Mr. Brown and Mr. Horsley would facilitate, to the satisfaction of all parties, the settlement of the question. If Mr. Brown were to persist in his second resolution and call before them for infamous conduct men like Sir John Williams and others it would be to take up a position bad for the Council and bad for the profession. On that ground he declined to follow Mr. Brown. The position of the Council was that they had never sanctioned this certificate, and they were all agreed it was objectionable; and he thought, also, it was objectionable that the Council should appear to give its sanction to an examination which had no legal standing, and he thought they would be doing no harm in withdrawing the apparent sanction which it was said had been given by the Council.

Sir Richard Thorne said that, in the first place, his objection attached very largely to the word "midwifery," and he reminded the Council that it was they or their Executive Committee who were responsible. The original certificate, which he would only refer to in the one sense, distinctly said that they gave their opinion that So-and-So was a skilled midwife, competent to attend "natural labour"; and if anyone was to blame for having knocked out those words "natural labour," which he deeply deplored, and having changed the word "midwife" into "midwifery," it was this Council and not the Obstetrical Society. Then, as to the second question of nursing as opposed to midwifery, Mr. Brown had properly reminded the Council that on May 29th, 1895, by a majority of 20 to 7, it had absolutely rejected the motion that they were to use the term "midwifery nurse" instead of "midwife," and any change to-day in that sense would be undoing the work of the Council for a long period of years. He had gone over the resolutions of the Council in regard to this matter, and he found that they had distinctly urged that midwives should be certified, and he referred the Council to one of the later ones in 1889, which date was significant. He had heard it said over and over again until he had almost come to believe that it was true that midwives were never sanctioned by this Council in any way; after the passing of the Medical Act of 1886 the Council were just as firm after as it was before. For the past twenty years they had been pressing upon the Government and the public the absolute necessity in order to save the lives of poor women to have midwives certified, and now they were asked to tell the only body which ever made the slightest attempt to achieve what had been aimed at that they would withdraw their assent to the little that had been done. To do so would be unworthy of the Council. The Council deliberately rejected the word "nursing." It was

not a question of nursing at all, it was a question of midwives. They might as well tell the tide to stop at the Nore instead of coming up to London as try to do away with the midwife and call her a nurse. He very much regretted the elimination of the word "labour" in the old certificate. He felt very strongly that nothing could be more unworthy of the medical profession than to say—and it amounted to that—that no woman should go through the perfectly healthy, perfectly normal and physiological process of natural labour without paying a doctor a fee, because to say that no person without full medical training should be allowed to attend those cases amounted to that. If the Council withdrew the assent which had been given the Obstetrical Society could go on just the same, and he hoped it would.

Dr. ATTHILL was of opinion that a midwife was absolutely essential. For the greater part of his life he was engaged in teaching them and sending them out to the public. He did so under a charter which was given under an Act of Parliament. He had always endeavoured to advocate the education of these women as midwives and as midwifery nurses, and on that point he differed from Sir Richard Thorne.

Dr. MACALISTER wished to call attention to the fact that even if Mr. Brown withdrew the second resolution the effect would be just the same. If they withdrew their consent to the present form of the certificate of the Obstetrical Society it was because, as had been urged, it was regarded in the light of a colourable imitation of a diploma, and that was the point which Mr. Victor Horsley had emphasised; therefore if they passed this resolution its effect could only be to assert that the present certificate was a colourable imitation of a licence, and those who granted it would be brought under the ban of infamous conduct. He hoped the Council would carefully consider its action in the matter.

Dr. LITTLE thought this was a very complicated question, and that it would be very injudicious for the Council to adopt Mr. Brown's resolution. Those nurses who were not qualified had no legal status, and therefore it was absurd to remonstrate with a body for doing a thing which they did not do, because this Society did not give a legal status.

Sir CHRISTOPHER NIXON thought the Council ought by every means in its power to secure an efficient training for midwifery nurses, and that they ought to consider the holding of an examination which would test the efficiency of those women who practised. He thought the Council would be, as Sir Richard Thorne had pointed out, taking a false position with regard to the Obstetrical Society in asking it not to hold those examinations, but he felt very strongly that, whilst the Council took steps to secure the training of nurses and favoured the holding of examinations to test their efficiency, still it ought to be opposed to the granting of a certificate which was practically used as a diploma.

Dr. LEECH would have been glad to have supported any resolution which would prevent certificates in regard to efficiency and practice being granted, but to say that there should be no longer any examination in regard to midwifery was further than he cared to go.

The PRESIDENT said the following amendment had been handed to him, to be moved by Dr. Bruce and seconded by Dr. Little:

That in view of the time spent and the consideration given by the Council to the subject of the Midwives Bill, and considering also the chances of early legislation in Parliament, it is inexpedient to disturb the present system of examination and granting of certificates to midwives.

He was advised that the amendment was in order.

Dr. BRUCE did not, in moving the amendment, desire to say much, as so much time had been spent on it, and it was unfortunate to open the question again.

Dr. MCVAIL felt that, although he did not at all like the wording of the resolution, still as between that and the amendment, he certainly should vote for the resolution. The fact that the Council had gone on for twenty years doing a thing would not influence him to say that it was right, for he did not think it was. It was not long since midwifery was held to be much lower in the scale than medicine and surgery. In 1886, when the three branches of surgery, medicine, and midwifery were all placed on one level, it was thought that they were never going to hear again of the general practitioner regarding midwifery as something alien to his ordinary work.

After some observations from Dr. LITTLE,

Sir RICHARD THORNE moved the previous question, which was seconded by Dr. MCVAIL.

The previous question was then put, and declared to be carried by 15 votes to 8.

The PRESIDENT then put it to the Council that instead of proceeding to vote on the question originally proposed, they should pass to the next order of the day. (Fifteen voted in favour of the previous question, and 9 against.)

Sir CHRISTOPHER NIXON then moved that No. 1 of Mr. Brown's propositions should read as follows:

That, notwithstanding the resolution of the Executive Committee passed on May 27th, 1895, the Registrar be instructed to inform the President of the Obstetrical Society of London that the Council, whilst approving of the holding of examinations in midwifery nursing by the Society, was adverse to the granting of certificates of proficiency in the practice of the art of midwifery by any body of persons, unless invested with legal authority to grant certificates in this branch of medicine.

Sir WILLIAM THOMSON seconded.

Mr. BROWN said that he would accept the amendment in lieu of his original motion.

Mr. VICTOR HORSLEY said that he would second it in that form.

On the motion of Dr. BRUCE, seconded by Dr. REID, the previous question was then put and carried by 19 votes.

The PRESIDENT pointed out that both Mr. Brown and Mr. Victor Horsley had accepted Sir Christopher Nixon's amendment as a substitute for their motion, and that therefore the amendment and the motion had both fallen; and if No. 1 had fallen, he supposed that No. 2 had also fallen.

Mr. BROWN said that No. 1 was introductory, while No. 2 dealt with a different matter, and he felt that he must persevere.

Mr. VICTOR HORSLEY seconded.

Mr. BROWN stated that this matter had not been before the Council for five years; the last time that such a resolution was passed in very much the same words was when it was proposed by the present President himself on May 22nd, 1894. As more than half of the members were new to the Council since that resolution was passed, he thought this was an opportune moment for bringing forward the recognition or otherwise of certificates purporting to be a licence to practise.

The PRESIDENT remarked that he took a very active part in what took place in the Council in 1894 and 1895 on the question of what the Obstetrical Society in London might be allowed to do. He took a very active part in opposing the action of that Society in issuing any such certificate as that which they had seen. The Obstetrical Society of London withdrew that certificate. It was felt on the Council that the Obstetrical Society of London had exercised such a beneficial influence in improving the status of midwives as regarded their education, that it should be permitted to grant not a diploma, not a licence, but a certificate, as long as that certificate did not infringe the Medical Acts. The condition laid down by the Executive Committee, which was embodied in the certificate now granted by the Obstetrical Society was that it should be a certificate and should not be a diploma; it should not be a licence, and that it should bear on its face that it was not to be regarded as conferring any privileges under the Medical Acts. That was a literal statement of the case, and he, having taken a personal interest in it at the time, spoke from his own personal knowledge.

Mr. BROWN was perfectly willing to accept what the President had said, but still thought the document might mislead the public. His resolution simply protested against the granting of licences by persons who had no legal authority to do so, but if the Council did not feel inclined to deal with that matter now, he would withdraw the proposition and ask for the appointment of a committee to consider the question and report later on.

The PRESIDENT said he must remind Mr. Brown that this question was before the Council on May 31st, 1899, when there was a Report received from the Executive Committee. Then on June 9th, 1899, it was proposed by Mr. Brown, and seconded by Mr. Victor Horsley, that the memorial referred to in the Report of the Executive Committee, and the memorial dated March 30th, 1899, be referred to a Special Committee to report on at the November session, and that was lost. Therefore the matter had been considered by the

Council and dealt with at that time. He, of course, did not say that it could not be reopened.

Mr. Brown said the reason it was dealt with in that way on that occasion was because the Council took cognisance of the fact that the Midwives Bill was then before Parliament.

The President then called on Mr. Victor Horsley.

Mr. Victor Horsley said he rose specially to second this second part of Mr. Brown's motion, because he considered the first part had not received perfectly fair treatment at the hands of the Council. Sir Richard Thorne, quite inadvertently, had drawn a red herring over the track. Within the last few years they had been face to face with a new development distinctly affecting the Medical Acts and the welfare of practitioners, and he hoped the Council would see its way to accede to Mr. Brown's proposal.

Dr. MacAlister pointed out that the effect of passing the resolution would be to create on January 1st, on one month's notice, an absolutely new offence for which a man might have his name removed from the *Register*.

Sir Wm. Thomson proposed as an amendment that the measure be referred to a Committee. It was a matter of considerable interest to the medical profession. There was a practice growing up in some cases of getting the stamp of certain medical and surgical authorities to a practice which was entirely opposed to the purposes of the Medical Acts. He would like to call attention to a portion of a resolution passed in May last by the Council, to the effect that, as regards the certificates granted to spectacle-makers, the Council exercised no jurisdiction over such opticians, but would be prepared to consider any properly-substantiated charge of improper conduct brought against a registered medical practitioner with reference to this subject. Therefore, in the face of that resolution it was admitted that there was a ground for the charges which were originally made. If the matter were referred to a Committee, then evidence could be taken, and that would certainly shorten matters.

Sir Christopher Nixon seconded.

Dr. MacAlister asked the Council to be very careful what they did in this matter. The Council was a judicial body, and had intimated that if any evidence was brought before it of improper conduct, and that evidence was sufficient, they would deal with it. That was a perfectly clear position, but if they had a Committee before whom the evidence was to be brought, then it would be impossible for the Council itself to overhaul that afterwards. He did not think it would be wise to appoint what might be a fishing Committee.

Mr. Bryant thought it would be premature to appoint any Committee. He had gone into the matter very carefully, and had certain information in his possession which might be valuable by-and-by, but he thought the measure was not yet ripe to be considered.

Dr. Heron Watson thought it had always been understood that the Council would not act as judges and prosecutors too.

Sir Wm. Thomson pointed out that the Penal Cases Committee had evidence brought before it, and reported to the Council, by whom it was subsequently discussed. Therefore, he thought the objection to sending it to a Special Committee was worthless. He did not wish that Committee to fish for evidence, but let them consider the question in its broadest aspects, and recommend the Council what steps it ought to take. There was no getting rid of this matter by an adverse vote, because there was a feeling outside that there existed an evil the nature of which he had mentioned, and simply to vote them down on the question would not get rid of it. Therefore he asked the Council to refer the matter to a Committee and for that Committee to report.

The President then put the amendment of Sir William Thomson, seconded by Sir Christopher Nixon, that Mr. Brown's motion No. 2 be referred to a committee for consideration and report to the Council, when 6 voted in favour of the amendment, and 14 against.

On request of Sir William Thomson the names were taken down.

The President then put the original motion (which appears above) when 5 voted in favour of the motion and 21 against. The motion was declared lost.

Combination of Medical Corporations with Universities.

Mr. Brown asked leave to postpone the next notice of motion which stood in his name, on the ground that he had not been able to refer to certain papers which were necessary for the purpose.

After some discussion, the President put it to the Council whether they would give leave to Mr. Brown to postpone his motion, and after taking the vote he called upon Mr. Brown to go on with his motion.

Mr. Brown accordingly moved:

That, in view of the necessity of establishing a higher standard of medical education and examination, the Council strongly recommends the medical corporations in each division of the kingdom to take steps, in accordance with Section III, Clause c of the Medical Act, 1886, to combine with one or other of the universities to form a Conjoint Board for the Qualifying Examination in Medicine, Surgery, and Midwifery.

The President inquired if Mr. Brown had a seconder.

Mr. Brown replied that he had not.

The President then asked if any member of the Council was prepared to second the motion.

Dr. Bruce said that he felt that Mr. Brown was in an awkward position, so he would second it.

Mr. Brown said that he felt that it was somewhat premature to expect universities to combine with the medical corporations to form a "one-portal" qualifying examination in medicine, surgery, and midwifery; but he would refer to the Act of 1886, part I, sec. III. The motion was based on subsection "*c*," which recognised:

Any combination of any such university as aforesaid with any other such university or universities, or of any such university or universities with a medical corporation or corporations, the bodies forming such combination being in the same part of the United Kingdom.

That would not have been in the Act unless the Legislature thought it a desirable thing for such a combination to be carried out. As a matter of fact it was felt that anything short of a University degree did not give a medical man the status in the profession or with the public which he should occupy. Many medical men advocated State examination. Whether that was desirable or not it seemed to him it would cut the ground from under the feet of those medical reformers who advocated that view if it should be said that there was really and practical a one-portal system existing in the United Kingdom.

Dr. Bruce formally seconded the motion.

The President inquired if any members wished to speak on the motion, and getting no reply put the resolution to the Council, when 2 voted in favour of it and 19 against. The motion was declared lost.

The Apothecaries' Society and the Conjoint Board in England.

Sir John Tuke then raised the question as to whether the next resolution which Mr. Brown was about to move was in order, and after a little discussion,

The President ruled it in order.

Mr. Brown proposed:

That the Council, having regard to the fact that it is contrary to the interest of the public to have two competing Examining Boards sitting in London, strongly recommend the Royal College of Surgeons of England, the Royal College of Physicians of London, and the Apothecaries' Society of London to combine for the purpose of holding qualifying examinations conjointly.

He said that it was only a reassertion, after something like thirteen years, of a resolution which was carried by 20 votes to 4 as long ago as February 19th, 1887. At that time there was a question of the combination of corporations in London, that was to say, the Royal College of Physicians and the Royal College of Surgeons in London, and the Society of Apothecaries. He need not go into the controversy which took place then, suffice it to say that the two Royal Colleges declined to combine with the Apothecaries' Society, and a resolution was passed which was sent to the Royal College of Physicians and the Royal College of Surgeons by Sir Henry Acland (then President of the Council) as to the position which the Council took up with regard to the matter. He used his personal influence and he did everything a man possibly could to induce these Colleges to combine with the Apothecaries' Society for examination purposes. Sir H. Acland put it in the strongest possible way that it was the duty of those three corporations to combine in the interest of the public, but the Colleges rejected his advances, and simply passed a resolution that they would not entertain any suggestion for amalgamation. After the lapse of all this time

the intention of the Legislature was still frustrated, and the Act non-effective as far as the combination of the three corporations in England was concerned, and he thought the time had arrived when these three corporations should be asked to arrange to hold a single qualifying examination.

Mr. VICTOR HORSLEY seconded the motion for the sole reason that, being an ardent advocate of the one-portal system, and seeing no hope of such a system being introduced at present, he was inclined to vote for half a loaf as better than none. The Council having already expressed its opinion in favour of this motion, he could only conclude with his earnest belief that it would again vote as it had done in the past.

Dr. MACALISTER observed that an Act of Parliament, the University of London Commission Act, had been passed since 1886. That gave statutory power to the Commissioners under the Act to incorporate for the purposes of examination the College of Surgeons and the College of Physicians and such other bodies as the Apothecaries Hall. That Statutory Commission was now sitting to consider the question of the establishment of one system for the whole of London, to unite the University of London on the one hand, and the three Corporations on the other, so that instead of the half loaf which he asked for a whole loaf might be coming.

Mr. TEALE said that Mr. Brown was anxious that he should second his motion because he knew what a warm advocate he (Mr. Teale) had been of this combination of these various colleges, but he felt he was not able to do so unless there were either a desire on the part of the bodies in London to combine, or else some evidence that medical education was suffering by the present state of those bodies. He did not think that either of those things had happened. It would perhaps be remembered that there had been a magnificent scheme under which the University and Colleges were to combine, and that the carrying out of this by voluntary arrangement under the Act of 1886, though it fell through, had seemed not to be very far off.

Dr. PYE-SMITH could not vote for the resolution because it would not achieve the end in view; and, on the other hand, he could not vote against it, because he had always been in favour of a one-portal system. He did not think it desirable that Scotchmen or Irishmen should be brought up to London. In each kingdom there should be a single Board to examine for the qualification.

Sir RICHARD THORNE said that this was the first occasion since he had a member of the Council upon which he had had an opportunity of giving a vote for the one-portal system. For that reason he intended to vote for the motion, but he very much doubted whether its proposal was the best.

Sir JOHN BATTY TUKE felt that although he was strongly in favour of the one-portal system, it would be useless to vote for the resolution.

Sir DYCE DUCKWORTH was quite sure that if the Council only thought fit to send down any communication to the body which he represented it would receive the most careful consideration. What he had intended to say had been anticipated mostly by Dr. MacAlister. He did not think there was anything in the motion; they must wait until something was decided by the University Commission which was now sitting. He thought it very likely that the fusion contemplated by the motion might come about.

Dr. GLOVER thought the contemplated combination of these bodies gave the proposition a certain opportuneness, and therefore on its own merit and on account of its opportuneness he should vote for it.

Mr. BRYANT regretted that such combination did not take place at the time the Conjoint Board was made.

Mr. TOMES thought that the wording of the resolution was very objectionable, and he could not vote for the motion.

Mr. CARTER had only to say that with regard to this, the Council ever since 1869 had been thoroughly in favour of a one-portal system, and the Apothecaries' Society had as long ago, under the direction of the Council, endeavoured to carry out their wishes. They appointed delegates, who met seventy or eighty times, but unfortunately the scheme fell through. Other attempts were made by the Society at the time of the passing of the Act in 1886; difficulties arose, which were accentuated by the fact that many members of the Council did not realise that it would be regarded by the Privy Council as the duty of this Council to appoint the examiners. There was a feeling that it was optional, and therefore many thought that the Society of Apothecaries would fall out as an examining body altogether. He believed that all the members of the Council would feel that a combination would be far better than the existing state of things. He hoped when the time was ripe a combination would be effected, but, although he sympathised with the motion, he did not think he could vote for it.

Mr. BROWN, in reply, said the Council did up to 1887 do all it could to bring about combination. Possibly some might have objected to the association with the Apothecaries' Society because it was a trading corporation and sold drugs, but that had now passed; or it might have been that they would not combine because it was hoped that the Council would not appoint the examiners and the Apothecaries' Society would be snuffed out. The Apothecaries' Society had not been snuffed out and would not be. If the combination was desirable in 1887, how much more so was it desirable in 1899? He felt if this one-portal system was not established by the corporations, legislation would be passed in order to bring it about compulsorily.

The PRESIDENT said that having been a member of the Council, and having supported by his vote the recommendation referred to by Mr. Brown that there should be a combination of these three corporations, namely, the College of Surgeons, the College of Physicians, and the Apothecaries' Society, and Mr. Brown having been told in the course of the discussion that there were various members in sympathy with his motion who yet felt that they could not vote for it, he would ask him as a matter of policy whether he would push it to a vote. Having regard to that wide expression of opinion in its favour, although there was a difference as to its appropriateness, would Mr. Brown be content to allow the matter to stand?

Mr. BROWN regretted that he could not accede to the President's wish, on public grounds.

The motion was then put and declared carried.

Mr. BROWN asked that the names be taken down, when it appeared that 11 voted for, 8 against, 8 did not vote, and 3 were absent.

THE APOTHECARIES' HALL, DUBLIN.

Mr. BROWN then moved:

That it be referred to the Irish Branch Council to consider and report as to the possibility of making arrangements for the institution of a Conjoint Qualifying Examining Board for Ireland, to include the Royal Colleges of Physicians and Surgeons in Ireland and the Apothecaries Hall of Ireland.

He thought it might be better, if the Council were desirous that these bodies should combine, that it should be referred to a committee. The reason he had put this motion on the paper was that he received a report of the Examiners of the Apothecaries' Hall, Dublin, and he blushed when he saw so much force was expended for so little result. The whole staff of examiners were brought to Dublin in many instances to examine only one candidate. It was nothing less than a scandal that in Dublin an examining body existed when so few candidates presented themselves. If this went on they would have to put the powers in force given them under the Act of 1886, and make representations to the Privy Council that a certain body had ceased to be of importance.

Sir CHRISTOPHER NIXON, in seconding the motion, said he was afraid he did so in opposition to the view of the representative of the College of Physicians, who, as far as he could gather, thought this an impracticable suggestion. At the time of the passing of the Act of 1886, he (Sir Christopher Nixon) opposed any combination with the Apothecaries' Hall because he believed that if it was unable to effect a combination it would cease to exist. But it did not cease, and now there was the miserable spectacle of a competition to which he thought they ought, as practical men, to put a stop. It was quite possible if the matter was referred to the Irish Branch Council some *modus vivendi* might be found.

Sir PHILIP SMYLY, having called attention to the endeavours that had been made to bring about combination, stated that the College of Physicians and the College of Surgeons in Ireland had been in perfect unity for many years, and they had continued their examination to the satisfaction of the Council. He did not see how any recommendation could be

considered with regard to a recombination with the Apothecaries' Hall.

Dr. MacAlister having called attention to the fact that it was 6 o'clock, it was agreed, on the motion of Dr. Glover, seconded by Mr. Teale:

That the Standing Order be suspended for the consideration of this matter.

Dr. Little objected to the matter being referred to the Branch Council unless some good could come of it, because the Branch had no money and could hold no meetings; moreover, it would be quite impossible to persuade the body to which he belonged to go into such an amalgamation.

Dr. Atthill said he had been an advocate of the one-portal system ever since he first began to take part in medical politics, now some forty years ago. Sir Christopher Nixon's speech had surprised him; there never was any competition between these bodies.

Mr. Tichborne could not support the motion, although he had always been in favour of the one-portal system.

Mr. Brown thought, after the observations of the Irish members that they had no money, it would be useless to refer it to the Irish Branch Council, and he desired, with the assent—which was given—of his seconder, to withdraw the resolution.

The President asked if the Council agreed to its being withdrawn, and, receiving a negative reply, put the motion, which he declared lost.

Medical Reform.

The subjoined letter has been sent to us for publication:

2, Southampton Street,
Strand, London, W.C.
November 28th, 1899.

To George Brown, Esq., Dr. J. Grey Glover, Victor Horsley, Esq., F.R.C.S., Dr. William Bruce, and Sir William Thomson, Direct Representatives on the General Medical Council for England, Scotland, and Ireland respectively.

Gentlemen,—We have the honour to enclose copies of resolutions adopted by certain of our societies,[1] and which are being submitted to others on the subjects of (1) your Council's illegal sanction of certificates to midwives; (2) amendments of the Medical Acts; and (3) reconstitution of your Council. (For substance of resolutions *vide* report of Hull meeting, *Lancet* and British Medical Journal, November 4th, 1899.)

We invite your concerted action in pressing these subjects on the attention of your Council by means of a motion, Mr. Brown has expressed his intention to move to rescind its sanction of medical certificates or diplomas of competency in medical practice which are not medically registrable, and also by a motion that your Council promote a Bill containing the provisions so long demanded by the profession, set out in the resolutions.

We have, unfortunately, no ground to expect that your Council will adopt either motion, but its rejection of reasonable proposals and your united action in making them strengthen the claim for its reconstitution.

Our hope is to obtain your united support of these demands, both in and outside the Council, and your friendly co-operation with our affiliated societies, which represent a considerable body of English constituents who are consistent and earnest in these demands, and also represent, on this main principle of the Medical Acts, some Scottish and Irish constituents, besides considerable numbers of Scottish and Irish diplomates and graduates resident in England.

Methods in which your support is invited are:

1. By attending a conference with a deputation of our societies.

2. By taking part, as Mr. Brown has kindly consented to do, in introducing to the Prime Minister, Lord President of the Privy Council or other Minister, if received, deputations (*a*) to oppose the adoption of a Midwives Registration Bill as a Government measure, (*b*) to explain why the registration of midwives is a retrogressive policy and would perpetuate the mischiefs against which the law, if enforced, at present humanely, though not adequately, provides; and (*c*) why your Council does not represent the profession.

3. By taking part, as Mr. Brown has kindly consented to do, in meetings of your constituents organised for the purpose of promoting these views, and bringing them effectively before the profession and members of Parliament.

As the first objects of our societies is to secure your combined action in support of our policy, we hope you may be able (extending the course so admirably commenced by Mr. Horsley) to unite in joint reports to your constituents; severing only when any of the electorates have distinct interests; for nothing can be successfully attempted till our direct representatives are unanimous.

We have the honour to be, Gentlemen,
Your obedient servants.

George Jackson	President	Corporate and Medical Reform Association, Limited.
James A. Myrtle, J.P. ...	President-Elect ...	
T. Granville Hockridge ...	Pres. of Council ...	
J. Higham Hill	Vice-Presidents ...	
Tom R. Taylor...	Honorary Secretaries	
R. B. Anderson		

[1] By the Hull Medical Society, in joint meeting with the East York and North Lincoln Branch, British Medical Association, and with some modifications by the Hartlepool Medical Society and the Wood Green and District Medical Society.

F. S. Barnett	Hon. Secretary ...	Lewisham Local Com.
Thomas Fort	Hon. Secretary ...	Oldham Local Com.
P. L. G. Skipworth	Hon. Secretary ...	Gravesend Local Com.
Ludford Cooper	Hon. Secretary ...	Rochester District Soc.
A. S. Myrtle, J.P.		For the Harrogate Local Committee.
Neville Williams, M.A., J.P.		
E. Boase Thomson		For the Plymouth Local Committee.
C. P. Handson	President	
S. R. Russell Matthews ...	Hon. Secretary ...	New Cross Medical Society.
E. J. H. Midwinter	President	Beckenham and Penge Medical Society.
A. P. Wells, M.A.	Rep. on C. and M.R.A.	
A. W. Blacklock	President	The Gateshead Medical Association.
Alfred Cox	Hon. Secretary ...	
W. H. Best	President	The Ilford Medical Society.
H. E. Watts	Hon. Secretary ...	
M. Houghton	Rep. on C. and M.R.A.Ld. ...	
Thomas Wilson	President	Mid-Tyne Medical Association.
Alfred Wilson	Hon. Secretary ...	
S. Biggart	President	The Hartlepools Medical Society.
H. M. MacGill	Hon Secretary ...	
E. H. Davies, J.P.	V.P. and Rep. on C.and M.R.A.Ld	
C. H. Conolly	President	Wood Green and Dis. Medical Society.
W. B. Winston	Hon. Secretary ...	
Edwd. Harrison	President	Hull Medical Society.
James L. Waters	Hon. Secretary ...	
Robt. Grieve	Hon. Sec. for C. and M.R.A.Ld....	
R. Clark Newton	President	Newcastle-on-Tyne Medical Ethical Society.
Law. S. Mackenzie	Vice-President ...	Bradford and West Riding Medical Union.
John Dunlop	Hon. Secretaries...	
W. Mitchell		

LITERARY NOTES.

Professor Henschen, of Upsala, will issue very shortly the second volume of a series of observations made in the clinic of that University.

An *Index Companion to the New Sydenham Society's Library* is now being prepared by Dr. Dines Parker. The work is intended to supply means of easy reference to the works issued by the Society. It can be obtained by persons who are not members of the Society from Mr. H. K. Lewis, Gower Street; the price is 2s. 6d.

The *Lyon Médical* quotes a passage from the Memoirs of Casanova in which reference is made to a certain pupil of Boerhaave in the last century, "whose method of treatment was such that it could have been prescribed only by a philosopher." As an illustration of this philosophic system of therapeutics, he cites the fact that the doctor had cured a consumptive person who had contracted syphilis by means of the milk of an ass which he had subjected to thirty vigorous frictions with mercury carried out by four powerful porters. Casanova, who was a "leear himsel'," evidently thought that his informant was practising "economy of truth" at his expense.

Jean Jacques Rousseau, as readers of his *Confessions* know, was a man of many infirmities, mental and bodily. His morbid psychology has been dealt with by more than one expert in mental diseases. An exhaustive monograph on his urinary troubles was published not long ago in France. In the *Cabinet Secret de l'Histoire* Dr. Cabanès has discussed him from the pathological point of view with what might appear to be unnecessary fulness. But he seems to have missed one point, and the omission is supplied by Dr. A. Courtade in the *Chronique Médicale* of November 15th. Rousseau relates how one fine morning in 1736, when he was in his 25th year, he suddenly felt "queer;" as he himself expresses it, a kind of tempest arose in his blood, and at once spread over all his limbs. His arteries began to beat with such violence that not only did he feel their throbbing, but he heard it, especially in the carotids. At the same time there was a tumult of noise in his ears, in which he could distinguish, in addition to the throbbing, three distinct sounds—namely, a deep dull buzzing, a murmur clearer than a running stream, and a very sharp whistling. This noise, says Rousseau, was so great that it made him from that time forth, though not quite deaf, hard of hearing. Later he became subject to attacks of giddiness on stooping. The noise and throbbing never left him for a minute up to the time of his writing his *Confessions*, thirty years later. Dr. Courtade, after careful analysis of the symptoms and of the medical history of the patient, concludes that Rousseau was the subject of Ménière's disease.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, IPSWICH, 1900.

The British Medical Association has not met within the borders of the East Anglian Branch, one of the oldest and most important of the constituent Branches of the Association, since 1874, when the annual meeting was held in Norwich under the presidency of Dr. Edward Copeman. At the annual meeting at Portsmouth this year a cordial invitation was given by the East Anglian Branch, which embraces the counties of Norfolk and Suffolk and part of Essex, to hold the sixty-eighth annual meeting of the Association in Ipswich, the county town of Suffolk. There are probably few parts of England which are so little known to the majority of English people as this easterly corner, and to many such the beauty of the country, the many objects of antiquarian interest which it contains, and the enterprise which the inhabitants are displaying both in the promotion of education and in commerce will come as something of a revelation.

Ipswich.

The ancient borough of Ipswich, which has a population of 65,000, is one of the most important educational and commercial centres of East Anglia. It lies in a valley at the point where the river Gipping, from which the town takes its name, meets the tidal waters of the Orwell, an estuary of the sea which forms the port of Ipswich, and about twelve miles from the town, widens out into Harwich Harbour. The more modern parts of the town lie on the northern and southern slopes of the hills which enclose the Orwell valley. The surrounding country is well wooded and picturesque, while the neighbouring villages and hamlets, with their beautiful old churches, quaint country houses, and extensive parks afford ample opportunity for interesting excursions. Suffolk is essentially an agricultural county, and within a few miles of Ipswich some of the most charming spots in rural England are to be found.



Fig. 1.—The Town Hall, Ipswich.

The centre of the municipal and commercial life of Ipswich is the Cornhill, which is situated in the middle of the borough. Here are to be found the Town Hall, which, as will be seen from the illustration (Fig. 1) is a handsome modern building in the Renaissance style, surmounted by a conspicuous clock tower, the fine Post Office buildings upon the opposite side of the street, and the principal banks. Close by is the Corn Exchange, a comparatively new building, with a fine and well-lighted hall of considerable size. Adjoining the Cornhill are the Public Hall, available for large public meetings, and the Lecture Hall, suited for somewhat smaller gatherings. The fine church of St. Mary-le-Tower, which has been carefully restored, is likewise situated in the middle of the town, and its lofty spire forms a prominent object from the surrounding country. Within a minutes' walk lies the Masonic Hall, with two excellent meeting rooms, and in the opposite direction is the magnificent Museum, with its unrivalled collection of Suffolk fossils; the Free Library and the Science and Art Schools, containing rooms suitable for the deliberations of learned societies.

Owing to rapid educational developments during the last few years, the town of Ipswich is amply equipped for housing a great Association and all its attendant Sections within a comparatively small radius, so that the meeting place of no Section need be more than at the most five minutes' walk from another, while there is abundant accommodation for central reception rooms for members of the Association and ladies accompanying them. On the occasion of the visit of the the British Association to Ipswich in 1895, no difficulty was experienced in providing convenient meeting places for the various Sections, but since then a large and imposing block of buildings has sprung up within two minutes' walk of the Cornhill, a monument to the energy and enterprise of the School Board. These higher grade school buildings, only just erected with every modern appliance, are shown in the illustration (Fig. 2). They contain a large central hall, capable of seating over 600 persons, on the ground floor, with further accommodation in the surrounding gallery, and also about 20 lecture and class rooms of different sizes, which will be available for some of the sectional gatherings. It may be added that there are numerous other educational institutions in Ipswich, and that by scholarships and exhibitions the path from the Board schools to the Universities is made possible, and as easy as can well be. Queen Elizabeth's School, popularly known as the Grammar School, dates as an endowed foundation as far back as 1447. Later, its revenues were grasped at by the greedy hand of Cardinal Wolsey for the foundation of his projected Ipswich College, but under Edward VI and Elizabeth were restored to their old use. During the present reign handsome buildings in the Tudor style were erected in Henley Road. The first stone was laid by the Prince Consort, and a new scheme of education was at the same time promulgated by the Privy Council. Under the late Dr. H. A. Holden the school established its name for University successes, while its numbers were brought up to their highest mark by the succeeding headmaster, the late Rev. F. H. Browne, M.A. Under the same foundation there exist middle schools for both boys and girls, providing a capital commercial education, the school buildings adjoining Christ Church Park. The High School for Girls, opened about 20 years ago in the Old Assembly Rooms by the Girls' Public Day School Company, Limited, provides higher education for girls; while the Charity Schools, known as the Greycoat Boys and Bluecoat Girls, though the distinctive dress has been abolished, may also be mentioned. In addition to this are the Board and Voluntary and Evening Continuation Schools, various technical classes, while such institutions as the Working Men's College and the Young Men's Christian Association all help in the work of education.

Recreation Grounds.

Ipswich is well provided with open spaces, of which the chief glory is Christ Church Park, extending right into the

heart of the town, with its fifty acres of old timbered land and picturesque ponds. At the town end of the park is Christ Church Mansion, a fine old Tudor house, which has suffered nothing at the hand of time and the restorer. The house and garden were purchased and presented to the town by Mr. Felix Cobbold, and the former is in constant use as a picture gallery and a lecture centre for technical classes and the like. There are also public gardens known as the Upper and Lower Arboretum, tastefully laid out with flowers, trees, and grass lawns, and a Recreation Ground of fifteen acres in extent near the railway station and close to the River Gipping. A walk shaded by double rows of trees and known as the Promenade affords a fine view down the River Orwell of the shipping bound for the docks.

Ancient Houses and other Buildings.

Of objects of antiquarian interest the town is full; in the older streets quaint gables and richly-carved corner posts meet the eye at every turn. The "Ancient House," dating from 1567, is by tradition said to have afforded shelter to Charles II, and is a capital specimen of domestic architecture. Other old houses are the Neptune Inn, and in its neighbourhood is shown the house which Cavendish is said to have occupied; in fact the whole of the lower part of the town is full of examples of sixteenth century domestic architecture. Close by St. Peter's Church Wolsey's Gate still stands, the sole remains of the College the Ipswich Cardinal had planned; it is apparently a side entrance, and has been copied in the porch of Ipswich School. The old town gates have all disappeared and left only a name, but the line of the old town walls can still be traced in the street known as the Tower Ramparts and elsewhere. In monastic institutions and churches old Ipswich was rich; of the former all traces have disappeared; of the latter, fourteen still exist, while recent years have added new churches to their number.



Fig. 2.—Higher Grade School Buildings.

Hospitals.

At other public institutions it is sufficient merely to glance. The Ipswich and East Suffolk Hospital occupies an imposing position at the top of a hill looking down into the town. During the last twenty years it has been continuously added to and improved, and extensive additions have only recently been completed, so that the hospital may take rank with any institution of its kind. The Infectious Hospital and the Borough Asylum are situated in ample grounds to the east of the town, upon a light sandy soil in the neighbourhood of Foxhall Heath. In the same quarter is to be found the new Workhouse with its modern-equipped Infirmary, designed by Mr. Percy Adams, a well-known hospital architect.

The manufacturing industries of Ipswich are numerous and varied, the three great foundries alone employing thousands of men, while new industries are constantly being attracted by the deepening of the river channel and improvements at the extensive docks and riverside wharves. Only recently a firm employing 1,100 workmen has shifted its works from the Thames to the Orwell on account of the facilities afforded.

Access.

Ipswich lies within about an hour and a half of Liverpool Street, on the Great Eastern main line; and may also be reached from London Bridge by steamboat, which affords a very pleasurable combined sea and river trip. From the North of England Ipswich may be reached by way of the joint line from York, Doncaster, and Lincoln, the journey from York taking about six hours. By the Harwich and Hook of Holland route the town is placed in quick and easy communication with all parts of the Continent.

Excursions.

The opportunities for excursion by river and road in the environs of Ipswich are exceptional. Felixstowe, a rising seaside place, is within 12 miles by rail, and may almost be said to be a suburb of Ipswich, with frequent fast trains. The River Orwell surrounded by its five parks, is more like an inland lake than a tidal estuary, and has many objects of interest on its banks. Harwich and Dovercourt may be reached by rail or boat, forming a pleasant half-day excursion. To mention only a few of the places within easy distance of the town there are Gainsborough Lane, which the painter loved; Shrubland, with its splendid gardens; Helmingham Hall, with its moated Tudor house, where good Queen Bess visited: East Bergholt and the Constable country, with the Vale of Dedham; and Hadleigh, the cradle of the Oxford movement, with its quaint old street, its church, and recollections of its martyrs. To go further afield, there are the Norfolk Broads, and within the same radius excursions may be multiplied *ad infinitum*.

Dentists in Germany.—Official statistics for the eleven years ending April 1st, 1898, show that the number of dentists in the German Empire increased from 548 to 1,299. Taking collectively communes with less than 5,000 inhabitants, the proportion of dentists to population was 1 per million; in communes of 40,000 to 100,000 it was 77, and in those of 100,000 and upwards 87. These figures do not include dental mechanics, among whom are counted dentists with foreign qualifications. The number of these increased threefold from 1887 to 1898.

THE VACCINATION ACT.

SPEECH BY MR. CHAPLIN.

THE first annual meeting and the dinner of the Association of Public Vaccinators were held on November 25th. The meeting took place in St. Martin's Town Hall, the PRESIDENT (Mr. E. Climson Greenwood), in the chair. The annual report of the Council was adopted, the balance sheet showed a substantial balance, and the officers for the coming year were elected.

In the evening the first annual dinner of the Association was held at the Trocadero Restaurant, Mr. Greenwood again presiding. The Right Hon. Henry Chaplin, M.P., President of the Local Government Board, was the guest of the evening, and spoke at length on the subject of the Act of 1898. About 100 members and guests were present, amongst whom were Mr. Sidney Gedge, M.P., Dr. Sweeting, Dr. Griffiths (President of the Medical Defence Union), Mr. Pitts Fenton (President of the Poor-law Officers' Association), Dr. Isambard Owen, Dr. F. T. Bond of Gloucester, Dr. Lovell Drage, Dr. Masters (Treasurer of the Medical Defence Union), Dr. Blaxall, Mr. H. S. Fremlin, Dr. G. A. Miskin (Honorary Treasurer), and Mr. V. A. Jaynes and Dr. Albert E. Cope (Honorary Secretaries of the Association of Public Vaccinators), and representatives from Liverpool, Manchester, Bournemouth, Cinderford, Brighton, Cardiff, Mansfield, Uttoxeter, Reading, Folkestone, Tunbridge Wells, Tonbridge, Sittingbourne, Southend, Liphook, Great Missenden, Chesham, and Dovercourt, and from every part of the metropolis.

After the toast of "The Queen" had been duly honoured, the CHAIRMAN gave that of "The Association of Public Vaccinators," which had been formed after the passing of the Act of 1898. He said there were from 3,000 to 4,000 public vaccinators in England and Wales, of whom 400 or 500 had already joined the Association. He hoped the great majority of the whole body would soon belong to the organisation, that their influence might be increased. As to the future, the chief question was as to the permanency of their office. They held office now on a twenty-eight days' tenure, and as many of the guardians were not in sympathy with their work, the more conscientiously the vaccinators did it the more liable were they to attack. Even the vaccination officer could defy his guardians so long as he did his clerical work well. An enlightened Government should remove such a cruel anomaly. The 1898 Act provided no real remedy for this state of things. A public vaccinator of thirty years' service who had aske for the arbitration of the Local Government Board between him and his guardians, as provided for in the Act, had promptly received twenty-eight days' notice, and his place was now filled by another. In another case the guardians refused to vote any salary at all to their public vaccinator. When the guardians were seized with a fit of economy it generally took shape in the reduction of the fees of the public vaccinator. Lastly, many points in connection with vaccination their society would be able by discussion and experience to settle, to the immense benefit of the community.

Dr. R. MACARTNEY (Cinderford), who responded, complained of the medical men who vaccinated in one point only, pandering to the prejudices of their patients, and thus bringing vaccination into disrepute. He thought the emoluments of public vaccinators should be put on a more satisfactory basis. He bore testimony to the increase of vaccination which had occurred under the Act, but complained that the lymph of the Local Government Board had much deteriorated during the hot weather of last summer, and produced no vesicles. This had caused much complaint against vaccination, and he trusted that experience would not be repeated.

The CHAIRMAN then gave the toast of "The Local Government Board," which was charged with the duty of preserving the nation's health. They were honoured by the presence of the President of that Board and of Drs. R. D. R. Sweeting and W. F. E. Fletcher, Medical Inspectors of the Board. They might congratulate Mr. Chaplin on the success of the Act, though its success would doubtless have been still greater if it had been passed as originally introduced by him, without the clause of the "conscientious objector." The insertion of that clause in a Bill designed to protect the community against the ravages of small-pox must have stretched the consciences of legislators almost to a breaking point. However, the Bill was passed on the distinct understanding that a supplemental Bill should be introduced for securing better revaccination, and he hoped that the Government in dealing with this question, having put their hands to the plough, would not turn back.

MR. CHAPLIN'S SPEECH.

The Right Hon. H. CHAPLIN, M.P., who was received with much applause in responding to the toast, said he was very pleased to have an opportunity of meeting such a large body of public servants, and of hearing what they had to say. He noticed that the complaints urged had not been made against all Boards of Guardians, but against individual Boards only. He should attend to all the Chairman and others had said, and where a public vaccinator had done his duty he (the speaker) would not be slow to come forward and assist him in any difficulties that for that reason he might have with his Board. He was bound to admit that during the hot weather the lymph became inefficient when removed from cold storage and brought into the warmth. Abroad, the same difficulty had occurred, so that foreign vaccinators had suspended vaccination during the summer. At first the lymph supplied by the Local Government Board was found to be very good, and experiments were now being conducted to discover means of always keeping it efficient. He would now pass to the general question, and proposed to review the circumstances attending the passing of the Act of 1898, and the general results by which it had been followed. Before the Act one-third of the local authorities whose duty it was to see that vaccination was duly performed within their districts had declined to carry out that duty. Thus, of 900,000 children annually born, about 300,000 were being left unvaccinated, and in some places the practice of vaccination had practically ceased. Then came the report of Lord Herschell's Commission of 1896. That report was responsible for inventing the "conscientious objector." The Commission recommended that any Bill should contain provisions relieving objectors from any penalties for refusing to allow their children to be vaccinated, provided they made a declaration to that effect. Mr. Chaplin himself disagreed with that recommendation, and the Bill was introduced without it. It seemed to him to be a hazardous experiment. But, in Committee after a division in which the Government was defeated, the conscientious objector was imposed upon them and took his place in the Bill. They had either to accept this addition or drop the Bill, and the latter alternative would have been fatal and would have led to a deadlock altogether. The Government had to choose, and events had proved that their choice was right. But the decision was received with a howl of condemnation by the press generally and by many others. An attempt was made to throw out the Bill in the House of Lords, but was unsuccessful. The passing of the Bill had had results which everyone who favoured vaccination must regard as very satisfactory. Up to the end of June last 77,000 more vaccinations had been done in the preceding six months than in the last six months before the passing of the Act, which was at the rate of more than 150,000 for the whole year. As 300,000 was the number calculated to go unvaccinated before the Act was passed, half that falling off had been recovered in the first year of the Act, before even it was in full play. Since June there were no complete returns, but inspectors reported no falling off, with one single exception. In an East End metropolitan union the vaccinations by public vaccinators in the twelve months to September, 1898, were 335; in the twelve months ending September, 1899, they were 1,130, that is, more than three times as numerous. In three other unions of the metropolis there were 1,181 public vaccinations in the first nine months of 1898, and 2,441 in the first nine months of 1899. In seven unions of the East Riding of Yorkshire there were, at a rough calculation, in the three months ending at September, 1899, 60 per cent. more public vaccinations than in the like period of 1898—that is, 316 in 1898 and 524 in 1899. That had nothing to do with the Hull Union, where there was now an unfortunate outbreak of small-pox, which had doubtless led to greatly increased vaccination and revaccination. In Lancashire, in two unions the public vaccinations in the September quarter of 1898 were 380, and 943 in the corresponding quarter of 1899. These figures—although they

did not include the returns by private vaccinators, but those by the public vaccinators only—might be regarded as typical of what was going on in other parts of the country, and were very satisfactory. He attributed the improvement mainly to three things: First, to the efficiency and tact and judgment with which the public vaccinators had performed their duties. Domiciliary vaccination had given them the opportunity of talking to people who might entertain objections to vaccination, and of explaining to them the real and the great advantages of the practice. One of the public vaccinators of Lincolnshire had this week informed him that he had been successful of late with several people, even among those who were armed with certificates of conscientious objection in inducing them to submit to vaccination. Secondly, he attributed the improvement partly to the character of the new lymph that was now supplied, and which had to a great extent disarmed the apprehensions and removed the objections of many who were before opposed to vaccination. Thirdly, he put it chiefly to the fact—and this was, perhaps, the most important point of all—that it was the duty of the vaccination officer, when the guardians were opposed to vaccination, to act without their authority. The vaccination officer, in this respect, stood in the same position as clerks to the guardians, medical officers, relieving officers, and others, whose duties were prescribed for them entirely irrespective of the guardians. The inspectors under the Contagious Diseases (Animals) Acts had duties of a similar kind imposed upon them, and could be removed if they neglected these duties. There had been difficulties in the administration of the Act, as at Leicester. He, however, congratulated the guardians there on the course they had now adopted, and hoped they would appoint an inspector who would act with efficiency and tact. He himself disliked much to be brought into conflict with an important representative local authority such as the Leicester Board of Guardians. But it must be remembered that he too had his duties to perform. The Local Government Board was charged with the care of the public health. Had no vaccination officer been appointed in Leicester, and an outbreak of small-pox come about, such as that at Gloucester or the one at Hull, the responsibility and the blame would have fallen heavily on him. He believed the Act of 1898 was proving a very distinct and a very considerable success: and that, happily, even the admission of the conscientious objector had been powerless to spoil it. But, of course, he could not expect his critics to own that they had been wrong. He did not think the position had ever been fully explained until that evening. The discussion in the House of Commons was all in favour of the conscientious objector. Of 28 speakers in Committee, all except Mr. T. P. O'Connor, who had spoken at Mr. Chaplin's request, had been against the original Government proposal. Not even the doctors said a word in his support. And it would have been perfectly hopeless to expect further powers from the House when the members had just refused to give him support against the conscientious objector. He hoped, however, that the anticipations he had drawn might be fulfilled. The Antivaccination League was a strong body, and there was nothing like it on the other side. If the people of England were in earnest in favour of vaccination, why did they not start a body to explode the fallacies of that small body of opponents, who disseminated all manner of stuff in town and village, without there being anything to counteract it, so that it had a very bad effect on the poorer and less-informed of the inhabitants. He trusted his suggestion might meet with support in many quarters. He also hoped that, with the help of the public vaccinators, the anticipations he had drawn might be more than fulfilled in the future.

Dr. Macartney (Cinderford) said that there had been 10 vaccinations in his district in the year before the Act, as against more than 300 in the first nine months after the Act passed.

Mr. Alfred G. Wells proposed the toast of "The Visitors," for whom Mr. S. Gedge, M.P., responded. He thought the public vaccinators must all be disciples of Mark Tapley, because, notwithstanding the difficulties under which they seemed to be working, all those at that festive board were in excellent spirits.

Dr. W. S. A. Griffith (President of the Medical Defence Union) also returned thanks, and wondered where the vaccinators would be if there were no obstetricians to look after the births of the 900,000 babies that were every year added to the population.

Dr. J. Bark (Liverpool) proposed "The President," whom he hoped to find presiding next year. The toast was received with musical honours.

Mr. E. C. Greenwood briefly replied; and proposed the health of "The Two Honorary Secretaries and the Treasurer."

Dr. Cope and Mr. Jaynes acknowledged the toast.

THE SALE OF ABORTIFACIENTS.

The case of R. *v.* William Brown and others, who were indicted for conspiring, together and with other persons unknown, to incite women, who should read and become cognisant of pamphlets and circulars published in the name of Madame Frain, to attempt to administer to themselves noxious things with intent to procure a miscarriage, has resulted in a verdict of guilty against all the defendants. One was sentenced to twelve months' imprisonment in the second division, two (Abrahams and Fox, who as soon as the police took the matter in hand allowed the business to come to an end) to nine months in the second division, and two other prisoners (described as merely servants of the other defendants) were recommended to mercy by the jury, and were bound over in their own recognisances to come up for judgment if called upon.

The nature and extent of the evil which the prosecution of these persons was intended to suppress, the highly lucrative character of their business, and the curious point of law involved, have drawn considerable attention to the case. The beneficial effect which it will probably have in suppressing obnoxious advertisements is an ample justification for the presence of the Attorney-General to conduct the prosecution in person on behalf of the Crown.

The history of the case is somewhat remarkable. Early in July of last year proceedings were commenced at the Clerkenwell Police-court against the defendants for inciting divers persons to attempt to commit the crime of abortion. After the lapse of six weeks, during which many sittings were held, the charge was dismissed by the magistrate, upon the ground that there was no evidence that the medicines were "noxious." Upon this the inspector was bound over to prosecute under the Vexatious Indictments Act, and the papers were laid before the Attorney-General, at whose instance an indictment was preferred at the last Old Bailey Sessions against the defendants, who appeared to take their trial on Monday, November 13th. Ably seconded by his junior counsel, the Solicitor to the Treasury, and Inspector Hare, the Attorney-General has at length succeeded in procuring the conviction of five persons whose fate may be a warning to other advertisers of "female medicines."

The extent of the evils to which such advertisements give rise is well known to our readers, and many correspondents have directed attention to the devices of this particular firm, which traded under the name of "Madame Frain." The advertisements, speciously worded, appeared to hold out to women an easy means of escape from the consequences of an act of indiscretion. "What else," said the Attorney-General, "could have induced women in the humbler classes of life to spend 16s., 20s., and in one case as much as £2, upon medicine, when for the paltry sum of half a crown immediate relief could have been obtained, had there been nothing to conceal, from the nearest medical practitioner?" No one can doubt that the prosperity of such a business, the proprietors of which could afford to lay out as much as £2,800 a year in advertisements, was due to the underlying belief that it provided a safe, secret, and effectual method of procuring abortion; and the various subterfuges adopted in order to show the *bona fides* of Madame Frain's establishment only prove that the defendants were endeavouring to evade the law. As an instance of this we might mention that bottles of "magic mixture" were labelled, "This mixture on no account to be taken by persons desirous of becoming mothers."

The legal interest of the case centres upon a discussion of a highly technical point which was raised by the able counsel for the defendants. The prosecution was based upon Sections lviii and lix of 24 and 25 Vict., c. 100, to the familiar words

of which it is hardly necessary to refer. Mr. Charles Gill, Q.C., argued: (1) That to take medicine incapable of producing abortion, even with intent to commit the crime, was not in itself a crime; (2) that no one could be found guilty of inciting, counselling, or procuring the commission of a crime unless the means suggested were capable of bringing about the desired result. He also said that there was no evidence before the Court that any of the medicines used in Brown's time were of that character. Lord Coleridge, Q.C., who appeared for the other defendants, suggested the following proposition: "Suppose a pregnant woman consults her medical adviser, and asks him to prescribe a medicine capable of causing a miscarriage. In answer to his indignant remonstrances she threatens to consult A. B., a well-known abortionist. Fearing the results of such a consultation, her own physician prescribes a harmless medicine, which she takes in the belief that it is capable of producing the desired effect. Could he under such circumstances be found guilty of any crime known to the law?"

In the course of his judgment upon the points thus raised Mr. Justice Darling said:

I have no desire to define the words "attempt" and "incite," nor is it necessary for me to do so. The conclusion at which I have arrived is that if a woman takes a medicine believing it to be noxious with intent to procure abortion she is guilty of an attempt to commit that crime, although the medicine is absolutely harmless. I have also come to the conclusion, although it is not necessary for the purposes of this case to decide the point, that a person supplying a woman with something which he knows to be innocuous, but which she believes to be capable of procuring an abortion, is not guilty of inciting her to commit that crime. I am of opinion, however, that there is evidence that some of the medicines supplied by the defendants, for example, the pills, were to the defendants' knowledge harmful to pregnant women. The case must therefore go to the jury.

His Lordship concluded his remarks by saying that where innocuous drugs are supplied with intent that those who use them shall do so for the purpose of procuring abortion an indictment for obtaining money by false pretences might be preferred against the vendors.

In deciding that a woman who takes a harmless medicine with intent to procure abortion, is guilty of an attempt to commit that crime, Mr. Justice Darling has applied the principle of law which was laid down in the case of R. *v.* Brown (24 Q.B.D., 357). While it was formerly held that as the prisoner could only be convicted of an attempt to commit a crime where, if no interruption had taken place, the attempt could have been carried out successfully, the cases which embody that principle have now been overruled. This interpretation of the statute was anticipated by Dr. Abercrombie in his little work on *Medical Jurisprudence* (1885 ed., p. 285), where, after alluding to the statute, he says: "It follows as a matter of course that it is not necessary to the crime that abortion should have been procured, or even that the means adopted should have been able to procure abortion. So long as the person using those means believed that they would have such an effect, it matters not what their real effect would have been."

In deciding that the defendants could not be found guilty had the medicines been in fact and to their knowledge absolutely harmless, Mr. Justice Darling was doubtless influenced by the argument put forward by Lord Coleridge. At the same time it is interesting to notice that according to Clause 12 of the Draft Penal Code, which was drawn up by four eminent judges in the year 1879 the vendors of medicines might be regarded as parties to the offence committed by the person taking them in the belief that they were capable of bringing about an abortion. That clause reads as follows:

Everyone who counsels or procures another to be a party to an offence is a party to every offence which that other commits in consequence of such counselling or procuring, and which the person counselling or procuring knew or ought to have known to be likely to be committed in consequence of such counselling or procuring.

Therefore, assuming the woman to have been guilty, the vendors of the patent medicines were clearly parties to an offence within the meaning of this clause, which, of course, has never become law. Although he was of opinion that the defendants could not have been found guilty of any offence connected with procuring abortion (which opinion, be it observed, is merely *obiter*), Mr. Justice Darling also expressed the belief that they might have been convicted of obtaining money by false pretences.

Mr. Justice Darling, in concluding his judgment, said, according to the report in the *Times*:

This crime was rendered possible because newspapers accepted advertisements of this illegal business. It was desirable that it should be known that any one who incited, by whatever means, a person to commit crime himself committed a crime. The jury had found by their verdict that these advertisements were incitements which were used by the men on whom he had passed sentence to the crime of abortion. If any advertisements which incited to this or any other crime appeared again the proprietors, editors, and printers of the newspapers which made them public would deserve to find themselves—and if any words of his had any influence with the Treasury they would find themselves—in that dock; and although they pointed out no particular means for the commission of the crime, if the jury found that they did incite to crime, they would probably receive a more severe sentence than that passed in this case.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 27th, 1899, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The half-yearly meeting of this District will be held at the Medical Library, 5, Pembroke Road, Portsmouth, on Thursday, December 14th, at 4 P.M. Members willing to show patients or specimens, or to read communications, are requested to communicate with C. C. CLAREMONT, M.D., 57, Elm Grove, Southsea, Honorary Secretary.

DUNDEE AND DISTRICT BRANCH.—A meeting of this Branch will be held in Universities College, Dundee, on Thursday, December 7th, at 4 P.M. Mr. Peddie, F.R.C.V.S., will introduce a discussion on Milk from the Standpoint of Public Health.—R. C. BUIST, Annfield House, Dundee, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE autumn meeting of this Branch was held at the Joint Counties Asylum, Carmarthen, on November 23rd, Mr. W. W. LEIGH (President) in the chair.

Luncheon.—Through the kindness of the Committee the members were most hospitably entertained at luncheon on their arrival.

New Members. — The following members were elected: Messrs. J. H. Turner, Cardiff; Rhys David Morgan, Ynys-y-bwl; George Gillon Irving, Barry; R. Fisher Ballantyne, Aberdare Cottage Hospital; Arthur R. Jones, Merthyr. *Branch only:* John Beamish Hamilton, Tenby; Herbert Jones, Pentre; Alfred Hanson, Swansea.

Confirmation of Minutes.—The minutes of the three previous meetings—the annual at Swansea, the clinical at Cardiff, and the medico-ethical at Neath — were read and confirmed.

Cases.—Dr. E. GOODALL showed a number of patients illustrating various forms of Mental Disorder.

Anthropological Work in Asylums.—Dr. Goodall also gave a short address upon anthropological work in asylums. The chief objects of a systematic study of the insane with a view to recording the stigmata of degeneration were pointed out. Dr. Goodall showed the principal apparatus employed by him in this work, and gave an outline of the scheme which he used (embracing measurements and descriptions in the examination of patients).

Votes of Thanks.—A cordial vote of thanks was awarded Dr. Goodall for his interesting communications. For want of time several papers were postponed. A vote of thanks to the Asylum Committee for their hospitable reception of the Branch concluded a pleasant and instructive meeting.

SPECIAL CORRESPONDENCE.

GLASGOW.

The Tercentenary of the Faculty of Physicians and Surgeons.—The Consumptive Sanatorium, Bridge of Weir.

The Faculty of Physicians and Surgeons at Glasgow was founded by Royal Charter granted by King James VI in "the penult days of November," 1599. The annual dinner of the Faculty on November 29th coincided with and celebrated the completion of the three hundredth year of the history of the Corporation. It is contemplated later on, as a further memorial of the occasion, to invite to a *conversazione* the members of the medical profession in Glasgow and the West of Scotland.

The annual meeting in connection with the Orphan Homes of Scotland, Bridge of Weir, was held in Glasgow last week, the Lord Provost being in the chair. It is well known that in connection with this work there has been started a sanatorium for the treatment of consumption, and the results of the past year's work appears in the report. At present there is only one sanatorium open, and that is restricted to female cases. Separate bedroom accommodation is given to each patient, the "cure" being carried out under medical supervision. It is expected that this branch of the work will extend, and additional buildings be erected with this special treatment in view. In the Consumption Sanatorium last year 81 patients were treated, and 22 per cent. of the cases admitted were reported as cured, while 44 per cent. had been so greatly improved that they might be classified as relative cures. Dr. Ebenezer Duncan, who spoke in regard to this work, pointed out the great prevalence of tuberculous disease. He said that in Scotland alone 7,000 lives were lost annually from pulmonary consumption, and that in the United Kingdom the deaths from tuberculosis numbered 60,000; so that if the whole British Army in the Transvaal were destroyed to-morrow, there would be no more British subjects destroyed than were lost every year from this form of disease. Glasgow, with its dense population and smoky atmosphere, was probably one of the worst cities for consumption of the lungs, and there was great need of such work as had been begun with such success at Bridge of Weir.

LIVERPOOL.

Medical Expedition to West Africa.—The Address by Major Ronald Ross: The Future of the Tropics: The Climate of Sierra Leone: The Stamping out of Malaria.

Major Ronald Ross, I.M.S., Lecturer on Tropical Diseases in the Liverpool School, who has lately returned from Sierra Leone, where he has been directing the expedition sent out to investigate the conditions under which malaria prevails in that part of Africa, has given an account of the expedition at a meeting convened by the African Trades Section of the Liverpool Chamber of Commerce. The meeting was a large one, and was attended by influential representatives of the commerce and the professions in the city. Mr. A. L. Jones, who has done so much to encourage the study of tropical diseases in Liverpool, was in the chair, and expressed his gratification at the manner in which the public had come forward to support the School of Tropical Diseases.

Major Ross introduced the subject of his address by stating his belief that in the next century the success of imperialism would be found to depend very largely upon success with the microscope; that the conquest of the world would be found to depend on the conquest of invisible particles. He considered the backwardness of tropical countries as regards civilisation to be greatly or chiefly due to the prevalence of malaria. During the last two years one mode at least by which the infection of this disease was conveyed had been definitely ascertained. The microscopic and experimental evidence was quite conclusive, and he thought he might add that the leading experts on the subject were agreed on the point. Of course there were sceptics, but the sceptics were not the experts. It was known for certain that malarial fever was often, perhaps always, caused by the bite of the special kind of mosquito called *Anopheles*.

The express object of the expedition was to find out whether or no there was any chance of our being able to exterminate the *Anopheles* from a given malarious area.

The climate of Freetown, Major Ross pointed out, is scarcely tropical, being much cooler and pleasant than the climate of parts of India, and the place is so beautiful that if it were not for malaria it would probably be a haunt for tourists—possibly for invalids—from Europe. However, the malaria was an ever-present plague, not a plague which swoops down occasionally, such as cholera and yellow fever, but a perennial plague which slays its victims one by one, and selects by preference the Europeans, the very men on whom the welfare of the place so largely depends. There was an excellent water supply which had been provided by the Government, and consequently the city was comparatively free from dysentery and typhoid. After a few days' work the expedition found numbers of the *Anopheles*, and in a few of them the germs of malaria were discovered. The puddles in which these insects breed did not appear to be very numerous, and the expedition came unanimously to the conclusion that it would probably be an easy and inexpensive matter to rid the town almost entirely of *Anopheles*, either by destroying the larvæ in the puddles, or by draining away the puddles altogether. The Acting-Governor of the Colony, Major Nathan, R.E., C.M.G., was much interested in the investigation, and appointed a medical officer to superintend the destruction of the insects.

Major Ross further discussed the possibility of stamping out malaria in certain districts, and expressed his belief that the general health of Europeans in West Africa might be much improved by the adoption of measures, such as the use of the punkah and the mosquito net, which are in common use in other tropical regions. In the course of his remarks he paid a high tribute to the courage and spirit of Dr. Fielding-Ould, a former student of the Liverpool School, who has gone out to continue the investigations begun last summer by Major Ross.

BIRMINGHAM.

Prevalence of Typhoid Fever.—Limitation of Cases Admitted to the General Hospital.—Need for Public Hospital Provision for Typhoid Fever and Diphtheria.

There is at present in Birmingham an unusually large amount of typhoid fever, which is beginning to cause the health authorities some alarm. The disease is usually prevalent during the autumn quarter, but the number of cases notified during this autumn up to the present time exceeds those of previous years. The total number of new cases notified during last week was 48. The disease is not confined to any particular quarter of the city—15 out of the 18 wards showing cases; but the chief stress of the disease seems to be on the northern side. In St. Stephen's and St. Mary's wards the outbreak is showing some signs of abatement, but in all the other wards the number of cases remains about the same, or is increasing.

The treatment of these increasing numbers at the hospitals is causing considerable inconvenience at those institutions. It has been found necessary in at least one large institution to take measures to prevent the medical wards containing too great a percentage of such cases.

The Health Committee of the City Council will in the near future have to seriously consider the question of providing accommodation for both typhoid fever and diphtheria. At present the only accommodation for cases either of typhoid fever or diphtheria is at the General, the Queen's, and the Children's Hospitals, and in case of a severe epidemic such accommodation would be quite inadequate.

SHEFFIELD.

An Antivivisectionist Fiasco.—The Musical Festival.

The antivivisectionists have been making a very active crusade in the city. They have for several weeks past posted placards on the walls depicting animals being tortured in the name of science, with the figure of the torturer at his work. The crusade is directed against the licence held for physiology in the medical department of the University College. Petitions have been signed for the withdrawal of the licence. A place in close proximity to the Medical School was secured, where petitions lay for signature, and information was given and literature distributed. The culminating point of the crusade was to have been a public meeting presided over by a live knight and ex-mayor of the city. The meeting appears, however, to have been a fiasco to judge from the report in a daily paper:

Judging by the attendance at the meeting, the question of vivisection is not one that excites much interest in Sheffield. For some time past an effort has been made by the British Union for the Abolition of Vivisection to create a feeling in this city on the question, but last night's meeting, which was a sort of wind up to the campaign, was far from encouraging. The attendance was a very poor one, and the only comfort afforded to the promoters of the gathering was that a resolution against vivisection was carried unanimously.

The medical profession, wisely it would seem, left the atrocity-mongers severely alone, and allowed them "to stew in their own juice," to use a political expression.

The recent Triennial Musical Festival was not merely a musical success, but resulted in a nett profit of about £1,000. Whether any part of this sum is to be devoted to the medical charities or placed to the guarantee fund has not yet been decided.

CORRESPONDENCE.

THE CHARITABLE FUNDS AND THE PROFESSION.

Sir,—The very admirable letter of Sir William Broadbent in the British Medical Journal of November 25th will, I trust, direct more attention to the British Medical Benevolent Fund, and the good work it carries on among the distressed members of the profession or their relatives.

We can only wish that larger sums were at the disposal of those who administer this Fund, and that their efforts were more generously supported by the profession at large. That a larger subscription list does not exist is in some cases, I believe, due to the want of energy or of time on the part of local honorary secretaries. A study of the list leads one to the conclusion that many districts, if efficiently worked, would show much better results. The honorary local secretaries are often, I daresay, very busy men, and cannot give that time which is necessary for the extension of a knowledge of the Society and its aims, and for an increase of the members and supporters of the Fund.

But my immediate object in writing now is to direct attention to one sentence in Sir William Broadbent's letter. After speaking of what is done by the *Lancet*, he says: "Enormous profits are made by the British Medical Journal as the organ of the Association. I am tempted to ask how it is that the example of the *Lancet* is not followed." I think Sir William is scarcely fair to the Council of the Association.

In the first place, it would be illegal to devote any part of our funds to any such purpose, however desirable it might be in itself.

In the second place, the profits which are the result of the careful working of the business part of the Journal, though they have of late been considerable, cannot accurately be described as "enormous."

It is necessary to have a reserve fund, and there are expenses looming in the near future in connection with the premises of the Association which will absorb any balance which has been built up by the carefulness of the office administration.

In spite of this, large sums are spent annually in scientific research, and for such purposes as come within the scope of the Association's powers. Charitable donations are not included among these.

But, in referring to the Association, I do not think Sir William Broadbent should have omitted to recognise what is done both by Branches in their collective capacity and by members of the Association and of the Fund working within the Branches. Page after page of the published subscription list of the British Medical Benevolent Fund speaks of the generosity displayed in this way, much as we might wish that larger amounts were collected.

We all heartily wish increased success to the British Medical Benevolent Fund, but is it wise in advocating its claims to cast envious eyes on funds which have been raised for other purposes?—I am, etc.,

J. Roberts Thomson.
President of the Council.

429, Strand, Nov. 29th.

MEDICINE AND PATHOLOGY.

Sir,—In your article in the British Medical Journal of November 25th upon the London University and the Medical School's, after saying that descriptive pathology should be taught at the hospitals, you add:

General pathology, however, is an academic subject; it is an aspect of physiology, and must be taught by professors of a university.

There is one English book, and so far as I know one alone, which professes to concern itself with general and not with special pathology. It is the *Manual of General Pathology*, written by Dr. Lazarus Barlow. He has in his introduction a paragraph on the scope of general pathology. It begins with the following sentence:

It is the duty of general pathology to correlate symptoms with structural changes and trace the connection between them.

He then instances the case of a patient with a dilated heart, and shows how general pathology explains the symptoms. He then continues: "Nor is general pathology of theoretical interest only"—and so on.

I suppose that no physician ever goes over a case of this sort without giving to his students exactly the kind of explanation which is claimed by Dr. Barlow as the peculiar property of general pathology; and I suppose that all would allow that to correlate symptoms with structural changes is exactly what clinical medicine is doing all day long. What in the world Dr. Barlow means by calling this a matter of theoretical interest only, I entirely fail to understand. Nor do I find any help in your own reason for drawing a line between medicine and pathology—namely, that the latter is a branch of physiology. Disease is, of course, morbid physiology; and I do not know what medicine is but the study of the variation which agents called morbid produce upon the natural functions and structures.

Yet I in common with most other physicians think that pathology should be under a special lecturer who is not practising medicine. Why?

The reason is entirely a question of time, and not at all one of purpose. A clinical physician is always a pathologist, and would be, if he could, as perfect in the subject as his colleague the professor of pathology. The professor, on the other hand, is a physician who has given up practice so that he can give all his time to his special bit of medicine. The advance of pathology has produced an immense number of difficult processes which it takes long training to perform reliably, and if a man wishes to speak with authority upon such matters he can do nothing else but practise them.

But in histology, bacteriology, chemical and physical pathology, the method is the method, and the aim is the aim of medicine. The patient is the first factor; from him, living or dead, is obtained material which starts a long series of investigations all aiming at the diagnosis and cure of his complaint. The histologist sees after death what the physician could only conjecture. The bacteriologist, by processes involving immense time and labour, makes out the bacillus which is peculiar to this patient and his like; then, to clinch the proof, reverses his processes and resorts to experiment. No physician could do this, because he has not time.

Moreover, the professor of pathology has not time even to become a complete pathologist. If he is a histologist and bacteriologist he will know very little of chemical or physical methods. He will require help in his own department just as he is required to help the physician with his special knowledge.

Again, the skill which was at one time peculiar to the pathologist gradually becomes the property of the physician. Some day we shall all do Widal's test just as now we all have

learnt to stain tuberculous sputum. But by that time there will be many newer processes in which physicians will be unskilled.

Neither, then, in the general ideas of pathology nor in its special processes lies any ground for its separation as an "academic subject" from general medicine. The method of the two and the purpose of the two are the same, and to separate them would be disastrous to both. If you take away from me my friend, the pathologist, not only do I lose the stimulus which his newer knowledge brings me, and the help in clinical work which his special skill affords, but he, too, loses still more by the separation. He is no longer in touch with the abounding material which my cases afford, and, still more important, he loses that sense of direction which the questions that he daily hears me ask, the difficulties that he daily shares with me, instil into his work.—I am, etc.,

Upper Wimpole St., W., Nov. 27th. W. P. Herringham.

THE SOCIETY OF APOTHECARIES OF LONDON.

Sir,—Mr. Victor Horsley at Newcastle is reported to have made the following statement: "And in the case of Mr. Brudenell Carter, who represents the Apothecaries' Society, we have the unedifying spectacle of a seat on the General Medical Council being occupied by a man who is sent there by a handful of City grocers who have not a particle of medical education about them."

Although I cannot believe that anyone who knows the fact can give credit to such a statement, I think it due to the Society to give an official contradiction to it.

The representative of the Society on the General Medical Council is elected by the Court of Assistants. This Court is, and always has since the Apothecaries Act of 1815, been composed exclusively of medical men, and no one but a medical man is eligible as a member of that Court.

I may mention that while all the members of the Court hold full medical qualifications, there are no less than seven who possess the degree of M.D.

In the immediate past I would mention among deceased members the late Sir George Buchanan and among retired members Dr. Lionel Beale as typical instances of the men with whom the election of the representative of the Society on the General Medical Council rests.—I am, etc.,

November 29th. J. Sherwood Stocker, M.D.Lond.,
Master of the Society of Apothecaries of London.

THE CONCILIATION BOARD AND MEDICAL AID ASSOCIATIONS.

Sir,—Dr. Glover must be much more convincing and (may I say without offence) logical in his arguments before he will convert the profession generally to his views that the question of medical aid associations can be solved by the too-agreeable method of a Conciliation Board, and the solution will not be rendered easier by obscuring the matter by including details of scale of payment, wage limits, mode of practice, etc. The question to be considered, apart from such accretions, is simply this;

Is it allowable for a registered medical man to contract to run a practice which belongs to an unqualified person or persons?

or paraphrased,

May an unqualified person after renting a house, buying necessary drugs, instruments, etc., for the purpose of running a medical practice and enjoying the benefits and emoluments of so doing, at the same time directing how such practice shall be conducted, employ a registered medical man at a salary to do the medical work?

The sense of the profession says, No; it is against the public interest that such should be allowed, and against the intention of the Legislature that it should be done.

The "individual liberty of medical men" to make such contracts is emphasised, and the excuse for not dealing with the question is that it is a legal one. Now there are legal and illegal contracts, and the Legislature has deputed to the General Medical Council sovereign power to define what conduct of a medical man involves what is legal and what is illegal in his professional relations. Formerly it was legal for a medical man to contract with an unqualified assistant, but the General Medical Council, in virtue of its power bestowed by statute, made this illegal, and its power to do so would be (and I think has been) upheld by the Court.

Stripped to the core, there is no question of the competence of the General Medical Council to solve this question; but to approach the matter with suggestions for a Conciliation Board to settle all sorts of details without regard to the sublying principle is to court disaster and disrespect alike from the profession and the public. Define this principle first, and then a Conciliation Board may possibly find a use in dealing with the relations of the profession to the clubs.—I am, etc.,

Leamington, Nov. 28th. Leslie Phillips.

ILLEGAL CERTIFICATES.

Sir,—Under the above heading there appears in the British Medical Journal of November 25th a letter to which my name appears as a signatory. The signature was inserted without my knowledge, and in opposition to my refusal to allow it to appear.—I am, etc.,

Wood Green, Nov. 24th. R. F. Tomlin.

Sir,—We are requested to explain and to express regret that, by clerical oversight, Mr. R. F. Tomlin's name appeared amongst the signatures to the letter in reply to Mr. Horsley in the British Medical Journal of November 25th. Mr. Tomlin did not sign that letter, which besides ourselves was signed by Mr. George Jackson, and Drs. Hockridge and Lorimer Hart.—We are, etc.,

J. Higham Hill.
Guilford Street, W.C., Nov. 28th. Tom R. Taylor.

*** Mr. Horsley having inquired of us whether the appearance of Dr. Tomlin's name was due to a printer's error, a proof of the above letter from Drs. Higham Hill and Taylor was forwarded to him. We have received the following letter for publication:

Sir,—I have hitherto replied to the charges of some members of the Corporate and Medical Reform Association, Limited, because I thought it a duty I owed to my constituents to clear up any misconception which the letters so far published might be calculated to cause; since, however, I have been informed that in addition to renewing their misstatements of fact they in their last letter appended by clerical error (!) a signature the use of which was expressly refused them, it is quite unnecessary for me to take further notice of their attacks.—I am, etc.,

Cavendish Square, W., Nov. 28th. Victor Horsley.

THE *MEDICAL DIGEST*.

Sir,—In your notice of the last Appendix of the *Medical Digest* you remark at p. 1484: "We have observed instances where, out of several communications in a journal, he (Ed.) has chosen but a few, and those the most important." This, I think, scarcely explains the plan of the *Digest*. The preface to Appendix shows that in such cases *et seq.* follows the first reference, and indicates that the index of the journal quoted must be consulted. Were each reference to be inserted, the *Digest* would soon become so bulky that it could no longer be a carriage companion and accompany the "busy practitioner" on his daily round as in many cases it does at present, where its true value has been learnt. For example, were all references to the "open-air treatment" noted, much space would be occupied and for no purpose.—I am, etc.,

Hampstead, N.W., Nov. 27th. Richard Neale, M.D.Lond.

A PIONEER IN THE TREATMENT OF CONSUMPTION.

Sir,—Since my communication to you of last Saturday, I have come to know from various well-informed quarters that the Rev. Dr. Robert Walter Stewart, who officiated as the Scotch chaplain at Leghorn, was not the Rev. Dr. Stewart, of Erskine, to whom I referred as the clerico medical curer of consumption. I had, in fact, confused two generations, which I need not have done considering the dates.

Dr. Stewart, of Erskine, at the time of the Glasgow Society's minute, was the father both of Dr. R. W. Stewart, of Leghorn, and Dr. A. P. Stewart, the latter being the younger brother. The first Dr. Stewart, of Erskine (for he was succeeded there by his son), brought the reputation for curing consumption from East Lothian, where he had his first settlement as a clergyman; but I am informed that he was also a duly-qualified member of the medical profession before he became a minister of the gospel. He married a daughter of the then Lord Blantyre (an aunt, I think, of the present lord) who was

reported to be one of his "cures"; and he was transferred to Erskine parish, where he died, and was succeeded by his son, who, however, left the Church of Scotland at the "Disruption" in 1843, and was sent to Leghorn shortly afterwards.

It is not improbable that some further traces of this little episode in medical treatment may yet be discovered—indeed, I have already got hold of one or two clues—but while awaiting further information no harm will be done by correcting the error into which I was led, and which shows once more the danger of writing history without being able to "verify your references."—I am, etc.,

London, Nov. 29th. W. T. GAIRDNER.

WILD ANIMALS AND POISONOUS SNAKES.

SIR,—With reference to your article on this subject in the BRITISH MEDICAL JOURNAL of November 24th, one reason may be given partly accounting for the failure of the measures adopted by the Indian Government to prevent loss of life from these causes.

It was found in many district that the wily Hindu was breeding venomous snakes, and killing them when they arrived at maturity for the sake of obtaining the reward offered by a too confiding Government for each dead reptile.—I am, etc.,

November 26th. R.A.M.C.

THE CAT AS A CARRIER OF PLAGUE.

SIR,—I read in the BRITISH MEDICAL JOURNAL of September 16th, received by last mail, among your notes on the prevalence of plague in Portugal, that "the cat, however, is one of the animals least liable to contract plague." Our experience in this island has been quite the reverse. Since July, when plague became epidemic in Port Louis, a number of instances of cats affected with and dying from plague have been brought to the notice of the Health Department, and in several cases we have been able to trace infection in the human subject to plague-stricken cats, with open cervical buboes in which plague bacilli have moreover been discovered. I have thought it desirable to bring this fact to your knowledge, as the statement referred to might lead to the neglect of sanitary precautions in certain directions, a mistake which might be avoided by a word of warning from the BRITISH MEDICAL JOURNAL.—I am, etc.,

H. LORANS, M.D., D.P.H.Ed.

Port Louis, Mauritius, Nov. 26th.

MEDICAL ATTENDANCE FOR THE FAMILIES OF SOLDIERS ON ACTIVE SERVICE.

SIR,—In the BRITISH MEDICAL JOURNAL of November 25th, you mention that the Chelsea Clinical Society had passed a resolution that the families of men on active service should receive gratuitous medical attendance in their own homes, and it may be of interest to you to hear what has been done. Early in November some of our members consulted together as to the formation of a scheme on the following lines:

1. To get together a body of medical men willing to attend gratuitously the families of men on service in their own homes on the recommendation of the representatives of the Soldiers' and Sailors' Families Association.

2. To invite chemists to supply medicines at a nominal charge.

3. To interfere as little as possible with existing medical clubs, and when families had previously been members of such clubs, to recommend that their subscriptions should be kept up.

4. To start work in a limited area, and, if our scheme proved practicable, to invite other medical societies to join us, and, if possible, to get the British Medical Association to extend the work throughout the country.

Our representative called on Colonel Gildea, Chairman of the Soldiers' and Sailors' Families Association, on November 7th, and discussed the matter with him. He cordially approved of the scheme, and told us that the Soldiers' and Sailors' Families Association would be willing to pay for the medicines.

On November 10th these proposals were brought before a meeting of this Society, and carried unanimously. A subcommittee was formed, and it was decided to start the work in an area bounded on the north by Hyde Park, Green Park, and St. James's Park; on the south by the Thames; on the east by the Thames up to Westminster Bridge; and on the west by the Kensington and Chelsea Railway.

On November 14th circulars were sent out to members of this Society asking them to volunteer, and also to invite other medical men to co-operate with us, and to send us the names of chemists who would dispense the medicines at a nominal charge.

On November 19th the names and addresses of the medical men who had volunteered, arranged according to their districts, together with printed letters of recommendation, were distributed to the divisional secretaries of the Soldiers' and Sailors' Families Association.

We have now a complete organisation of consultants, general practitioners, dentists, and chemists, and it promises to work most successfully.

We think that the work might be rapidly extended on similar lines throughout the country if the British Medical Association would join hands with the Soldiers' and Sailors' Families Assoociation. Both Associations have their local representatives throughout the kingdom, and it is only necessary for them to confer and start the work according to the local requirements.

In a letter appearing in the *Standard* and other papers on November 28th, Colonel Gildea suggests that all offers of help and any inquiries should for the present be addressed to us.—We are, etc.,

THE SECRETARIES,
41, Sloane Square, S.W., Nov. 29th. Chelsea Clinical Society.

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

SIR,—Will you allow me, through the medium of the BRITISH MEDICAL JOURNAL, to appeal to the medical profession for subscriptions to a fund now being raised by the London Companies Volunteer Medical Staff Corps for the benefit of the wives and families of non-commissioned officers and men of the Royal Army Medical Corps on active service in South Africa? The fund is being raised with the approval of the Director-General of the Army Medical Department, and with the active support of Surgeon-Lieutenant-Colonel J. E. Squire commanding the London companies. A committee, of which he is the chairman, has been formed among the officers of the corps. All moneys collected will be handed over to the Depôt Mobilisation Relief Fund of the Royal Army Medical Corps at Aldershot, which is working in connection with the Soldiers' and Sailors' Families Association, and relieves the wives and families, either "on or off the strength," of any case belonging to the Royal Army Medical Corps, whether the husbands were mobilised at Aldershot or not.

It is needless to remind members of the profession that the men of the Royal Army Medical Corps, although non-combatants, are frequently exposed to fire, share all the fatigue and hardships of combatant corps, in addition to the risk of infection incurred in nursing the sick, and that by subscribing to this fund they will show in a practical way their appreciation of the work done by this branch of the service and their sympathy with the men's families.

In addition to volunteer medical officers, present and past, former members of the Volunteer Medical Staff Corps, and retired medical officers of the services, may I appeal especially to civilian practitioners to help the homes of those men who are "doing the country's work" in a department which has the first claim on the medical profession?

Subscriptions sent to me, as Honorary Secretary of the V.M.S.C. Relief Fund, addressed as below, will be gratefully acknowledged.—I am, etc.,

VALENTINE MATTHEWS,
Surgeon-Major V.M.S.C.

Headquarters London Cos. V.M.S.C., 51, Calthorpe St., W.C., Nov. 25th.

MEDICAL ORGANISATION.

WE have received letters in continuance of the controversy on this subject from Dr. Stewart (Honorary Secretary of the Medical Guild), Mr. Horbury Preston, Mr. Broadbent, and Dr. Crawshaw. These gentlemen indulge in mutual recriminations that may possibly amuse a cynical reader, but must make the judicious grieve. The BRITISH MEDICAL JOURNAL is an arena for the free discussion of medical matters; we cannot, however, allow controversies to degenerate into personal squabbles which can have only a local interest.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MEDICAL ARRANGEMENTS FOR SOUTH AFRICA.

Army Medical Strength in South Africa.

A statement communicated by the War Office to the press gives in detail the medical arrangements and the strength of the medical establishments in South Africa, as under:

Medical officers, R.A.M.C.	282
Civilian surgeons	68
Nursing sisters, including 4 superintendents	56
Quartermasters R.A.M.C.	28
All other ranks	2,050
Army Service Corps for transport	800
Total	3,284

This return, which is no doubt up to date, agrees closely in the number of medical officers with a table published last week in the British Medical Journal, p. 1490. The table showed, according to the November *Army List*, 245 medical officers in South Africa, since which the mobilisation of a Fifth Division has apparently added 37 officers, or 282 in all. This leaves 103 medical officers at home as all we have to draw upon for any future mobilisation which may be necessary and for the filling of casualties.

The details of the medical arrangements for the war, which closely correspond to those given during past weeks in our columns, leave in themselves little to be desired, and we have no doubt will prove thoroughly efficient. The weak spot lies in the fact that the *personnel* of the medical service is already so nearly exhausted; and we have no proper margin whatever for inevitable contingencies. The term "undermanned" covers all.

Civil Surgeons.

Mr. Charles Leedham-Green has been selected by the Director-General of the Army Medical Department as Civil Surgeon to the 4th Divisional Hospital in South Africa. Mr. Leedham-Green is one of the casualty surgeons at the Queen's Hospital, Birmingham, and expects to leave early in December. It is stated that about 1,000 highly-qualified medical men, many of whom were willing to give their services gratuitously and pay their own expenses, offered their services.

The American Hospital Ship.

The party of American surgeons and nurses for the American hospital ship *Maine* have arrived in London. The three medical men are Drs. G. E. Dodge, H. H. Hodman (New York), and Dr. C. H. Weber (Philadelphia). Of the nurses, the head nurse is Miss M. E. Hibbard, who has served as head of the United States General Hospital at Savannah, and later still has been on duty in the Surgeon-General's office in Washington. The ambulance which has been brought over by the American surgeons has been the subject of much interesting comment since its arrival in London. It is the personal gift of Mrs. Whitelaw Reid, and was constructed after designs by Major E. T. T. March. It will carry four wounded, and is filled for immediate service. Messrs. Chappell and Co. have presented an organ to the ship, and Messrs. Maw, Son, and Thompson will lend an operating table. The second instalment of American officers and nurses for the *Maine* will arrive in London shortly.

Preparations at the Home Hospitals.

Lieutenant-Colonel Charlton has been transferred to Netley as Principal Medical Officer. Staffs at the hospital at Netley are to be ready to receive the invalids, and should there be insufficient accommodation at the home hospitals, or other circumstances necessitate it, certain wards in the hospitals at Gibraltar and Malta will be appropriated for the reception of patients. The depletion of the nursing staff at the home hospitals by the embarkation of the ordinary members of the R.A.M.C. has necessitated other provisions being made for the nursing of the sick at these establishments, and the War Office has authorised the appointment for nursing duties of army pensioners and soldiers of the infantry and other battalions not required for foreign service. Five strong drafts of the R.A.M.C. were despatched from Aldershot on November 20th to Dover, Netley, Portsmouth, and Cork for duty at the various hospitals in those stations. These consisted largely of reservists who are sent to take up duties vacated by men drawn for active service, and to increase the establishments of hospitals where it is expected large numbers of sick and wounded from South Africa will shortly arrive.

Arrival and Departure of Transports.

The following further despatches of the R.A.M.C. are announced: No. 16 Co. in the *Canada* at Liverpool on November 30th; No. 6 Co. in the *Dilwara* on December 3rd; Depôt Co. in the *Majestic* on December 9th. Colonel W. B. Allin, R.A.M.C., P.M.O., 5th Division, embarked in the *Norham Castle* on November 23th, with Lieutenant-General Sir Charles Warren and other officers. No. 11 Co. R.A.M.C. at Dover, which was under orders to leave for South Africa on December 4th, received fresh orders on November 23rd to leave Southampton in the *Doune Castle* the following day. The *Kildonan Castle*, having on board No. 2 General Hospital, arrived at Capetown on November 22nd, and East London on November 26th. The *Servia*, with hospitals, arrived at Capetown on November 24th. The Natal Direct Liner *Congella* with field hospital arrived at Durban on November 22nd. The *Goorkha*, with a detachment of the R.A.M.C., arrived at Durban on November 23rd. The *Cephalonia*, with No. 6 Co. of the R.A.M.C., and Reservists of the R.A.M.C., arrived at Durban on November 23rd. The *Mohawk*, with No. 9 Co. of the R.A.M.C. (Field Hospital) arrived at Durban on November 25th. The 4th Field Hospital formed at Aldershot will leave about December 3rd or 4th. Of the officers serving there, Major Halliaran has been ordered to hold himself in readiness for South Africa. Major Ferguson will go out in medical charge of the 1st Yorkshire Regiment. Dr. Harrison has been posted to the 4th Field Hospital as Surgeon on probation.

OBITUARY.

WM. IRELAND DE COURCY WHEELER, M.D., F.R.C.S.I.,

Surgeon, City of Dublin Hospital.

We learn with deep regret that Mr. William Ireland Wheeler died at his residence, 33, Merrion Square, Dublin, on Saturday last, November 25th, from an attack of typhoid fever. Unfortunately he did not himself realise the gravity of the malady from which he was suffering, and he continued to do his work for about ten days after the apparent onset of the disease. When he was seen by Sir George Duffey and Sir Francis Cruise he was very ill, but for several days he went on satisfactorily. Then he became delirious, and finally his heart began to fail, with the result which we regretfully announce to-day.

Mr. Wheeler was born in 1844, and in 1866 he entered the profession, having been educated at Trinity College Medical School. In succession he became M.B., M.D., M.Ch. of the University of Dublin, a Member of the College of Physicians, a Licentiate of the Royal College of Surgeons, and in 1870 a Fellow. Soon after he became qualified he entered the Army Medical Service, and served with his regiment in the Abyssinian war as Assistant-Surgeon. But he retired after that campaign and started in practice in Dublin. He was appointed Demonstrator of Anatomy in the School of the College of Surgeons and Surgeon to the City of Dublin Hospital. Then he joined the late Mr. Stoney as a private teacher and attained great success in that line. In 1882 he was elected Vice-President of the Royal College of Surgeons, and in 1883 he filled the Presidential chair. In 1892 he was High Sheriff of Kildare, his native county.

Mr. Wheeler was son of the late Mr. G. N. Wheeler, of Pendishe Road, Dublin, and was connected with Sir Charles Wheeler-Cuffe, Bart. Mr. Wheeler occupied for many years a very prominent place in the profession, and at the time of his illness he was in the full swing of practice. He was a very excellent surgeon, courageous, resourceful, and dexterous. When he was younger the late Mr. Butcher was his patron, and he succeeded to a good deal of that distinguished surgeon's practice. His own qualities, however, helped to spread his reputation, and he early acquired a very extensive practice. He wrote many papers on surgical topics. His personality was very strong, and while he was very human in his hostilities there was no truer or more energetic friend. He was exceedingly popular, and there is to-day deep and general regret for the loss of one who inspired so much admiration. Mr. Wheeler's wife died a few years ago, and he leaves a family of nine children.

WILLIAM LEWIS MORGAN, M.A.Oxon., L.R.C.P., M.R.C.S.,

Formerly Surgeon to the Radcliffe Infirmary, Oxford.

To the many friends of Mr. Morgan the news of his death at sea on November 15th has come as a painful surprise. Mr. Morgan, who had spent nearly a year at the Cape, was travelling on board the *Avondale Castle* to the Canary Islands in order to winter there when his death occurred.

Mr. Morgan, who received his medical education at the London Hospital, held the posts of House-Surgeon and Junior Resident Medical Officer to that hospital, and on leaving London was elected Resident Medical Officer to the Radcliffe Infirmary, Oxford. Whilst holding this post he matriculated

as a member of the University. In 1878 he took the arts degree, obtaining a first class in the school of natural science. Two years later he was appointed Surgeon to the Radcliffe Infirmary, which post he held until the end of 1898.

Mr. Morgan in a short time gained an extensive practice as a surgeon in Oxford and the neighbouring district. For some time he gave special attention to ophthalmic surgery, and was the first occupant of the newly-created office of Ophthalmic Surgeon to the Radcliffe Infirmary. For many years he was Surgeon to the University Volunteers, and he was at the time of his death the Surgeon-Captain of the corps. On the resignation of Dr. Darbishire he was elected without opposition University coroner. He was also a member of the Board of Faculty of Medicine, and served several periods as Litchfield Clinical Lecturer in Surgery in the University.

In addition to his strictly professional work, Mr. Morgan was for some years one of the Lecturers in Science in the University, acting in this capacity at Exeter and Wadham Colleges. He lectured also in science at St. Peter's College, Radley.

Mr. Morgan was a clever and skilful surgeon, and was renowned for the neatness and manipulative skill he showed as an operator. Kindly in manner, and with an excellent gift of humour, he had many friends in Oxford. He was a prominent Freemason for many years and held many offices in the craft. Mr. Morgan was the first Secretary to the Oxford Branch of the British Medical Association, and on the resignation of this office early in 1898 he was appointed representative of the Branch on the Council of the Association. In the summer of 1898 his health became so much impaired that it was thought wise for him to give up his work in Oxford and leave England for the winter. At that time, though he had previously been obliged to winter in Cornwall, no immediate danger was anticipated, and it was hoped that after a winter at the Cape he might be able to return to England.

The esteem and regard with which Mr. Morgan was held in Oxford was well shown on his retirement from practice by the testimonials which were presented to him by his friends in the University, his brethren in the Craft, and by his fellow-practitioners in the city.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Basil Wolan, Professor of Forensic Medicine at Czernowitz, aged 68; Dr. Friedrich Nötel, Director of the Rhine Provinces Asylum, Andernach, aged 60; Dr. A. Brujeff, some time Professor of Dermatology and Syphiligraphy in the University of Charkow; Dr. Albert Györy von Nadudvar, one of the best known practitioners of Vienna; Dr. Luther Dana Woodbridge, Professor of Anatomy and Physiology in Williams College, Massachusetts, aged 48; and Dr. F. V. Birch-Hirschfeld, Professor of Pathological Anatomy in the University of Leipzig, aged 57.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Examiners.—The examiners for the diploma in Public Health for the ensuing year are Dr. B Anningson, Dr. W. Collingridge, Dr. Lane Notter, Dr. T. Stevenson, and Professor G. S. Woodhead.

Walsingham Medals.—The medals given annually by the High Steward have been awarded to H. H. W. Pearson, Caius, for research in Botany, and to J. Barcroft, Fellow of King's, for research in Physiology.

Degrees.—At the Congregation on November 23rd, Mr. Timothy Holmes, F.R.C.S., was admitted to the degree of Master of Surgery. The following degrees were also conferred: *M.D.*: M. R. P. Dorman, M.A., Clare, and R. W. Michell, M.A., Caius. *M.B.*: E. C. Taylor, B.A., St. John's. *M.B. and B.C.*: T. W. Letchworth, B.A., Emmanuel.

UNIVERSITY OF EDINBURGH.

Prizes in Tropical Medicine.—A number of medical practitioners in the Straits Settlements having presented to the University of Edinburgh a prize of the value of twenty-five guineas for research in tropical diseases, the Faculty of Medicine has determined that the prize shall be open for competition to students of medicine, or graduates in medicine of not more than two years' standing; that competing essays shall be given in on or before April 30th, 1900, and that any essay containing original scientific or literary research on tropical disease shall be eligible for competition. The following are suggested as appropriate subjects of research, in order to aid candidates in their selection of a subject; (*a*) Investigation on the conditions producing attenuation and exaltation in the activity of plague virus, and the relation of such changes to the symptoms of plague in man; (*b*) the bearing of meteorological conditions on the incidents of tropical disease.

MEDICO-LEGAL.

PROSECUTION BY THE LUNACY COMMISSIONERS.

RECENTLY, Mr. Philip Henry Harmer was summoned for receiving a lunatic on May 2nd, 1899, and also for unlawfully receiving payment for a lunatic in an unlicensed house. The proceedings were instituted by the Commissioners in Lunacy. We summarise from a report in the *Sussex Daily News*:

There was a conflict of evidence. The evidence for the prosecution indicated lunacy both before and after the time of the patient's reception by the defendant. On the other hand, the evidence for the defence was to the general effect that the patient suffered from locomotor ataxy, and was not thought to be in a state for certification under the Lunacy Acts during the earlier portion of his residence under care of the defendant; and that, becoming worse in July or August, he was certified on August 27th, and on September 2nd was removed to an asylum.

In the event, the Bench dismissed the case.

ATTEMPTED BLACKMAILING.

THE *Western Mail* of November 17th reported a trial at the recent Glamorganshire Assizes of great interest to club doctors. A workman at the Dowlais Iron Works, of the name of Francis, who was also a member of the Workmen's Provident Society, was charged with blackmailing Dr. Corrigan, the surgeon to the works, by sending to him a letter feloniously demanding money, with menaces.

It would appear that in August last Francis was attended by Dr. Corrigan's *locum tenens*, the doctor being away for his holiday. The latter, however, visited the prisoner on his return, and found that there was not much the matter with him, but the prisoner affected to be very dissatisfied with his treatment by Dr. Corrigan, and informed him that many of his fellow-workmen considered that the doctor had been negligent, and that it was proposed to agitate for another doctor. He said that it was in his power to smooth the matter over, and that he would do so for a consideration. Later on he wrote a letter to Dr. Corrigan, in which he reiterated his charge of neglect, and stated that it was in his power to do the doctor "a good turn or a bad turn," and he expressed a hope "he would keep the letter to himself."

The jury found the prisoner guilty, but recommended him to mercy.

The Judge said he could not understand how the jury could find any other verdict, but he did not agree with the recommendation to mercy. He would, however, give effect to it by sentencing the prisoner to three months, instead of six months, imprisonment with hard labour.

DOCTOR AND PATIENTS.

UNDER this head the *Hampshire Telegraph* of November 18th reports an action at the Portsmouth County Court, in which Dr. A. J. Dalton sued a Mrs. Lucy Moore for the sum of £85 11s. 6d., being fees due for medical attendance and medicine supplied between February 13th and May 3rd last. The plaintiff said that his charges were for professional attendance both on the defendant and her husband for alcoholism, the latter being on the verge of delirium tremens. The attendance had been particularly onerous, necessitating 180 visits in eighty days, and owing to the servants leaving the defendant he had on more than one occasion to prepare food for the patients in their own kitchen, or to send it from his own house. He had charged 7s. 6d. for an ordinary visit, and 21s. when called at night or in the early morning. He considered these fees not exorbitant, especially considering that his patients could afford four bottles of brandy a day at 5s. 6d. a bottle, in addition to paying heavy millinery bills.

Dr. Ward Cousins gave evidence that in his opinion the charges were fair and reasonable, and that he thought all patients should be charged according to their means. For the defence it was sought to show that defendant's total income did not amount to more than £420 per annum.

The jury, after a short deliberation, returned a verdict for the plaintiff for £75, and judgment for this amount was given with costs.

COMPLAINT AGAINST AN IRISH DISPENSARY DOCTOR.

AT the Tralee Board of Guardians recently a complaint was made against Dr. Denny that he had not come promptly to see a woman who was dying; that after the woman's death he was asked by the priest to remove the living child; that he did not do so; that four hours afterwards he sent for Dr. Brick and Dr. Harrington, who extracted the child; that "it gave two little screeches and died immediately after birth"; and that the woman had not been properly treated, or she would have lived. To this Dr. Denny replied that he was in bed when he was summoned, and that he left his house in fifteen minutes. He found the woman dropsical and pulseless, and he understood she died in a few seconds after he left the room. In an hour afterwards the priest asked him to remove the child, but he refused, as on another occasion he had been turned out of a house for making the suggestion. He asked for a sworn inquiry. It was resolved to ask the opinion of the Local Government Board.

THE DUTIES OF MEDICAL OFFICERS IN THE HEBRIDES.

A MEDICAL OFFICER in one of the Western Islands of Scotland asks whose duty it is to coffin and see to the burial of patients dying from fever, and states that in the Western Islands the medical officer is the only person courageous enough to perform such duty, and that the custom has been so common that medical men are now looked upon as regular undertakers, and are frequently commanded to turn out and do the coffining.

*** It is the duty of the sanitary inspector and not of the medical officer to attend to such matters. The Public Health (Scotland) Act, 1897, Section XV, states that local authorities shall, subject to the approval of the Local Government Board, regulate the duties of medical officers and sanitary inspectors. If the district committee have not drawn up regulations defining the duties of their officials, the Local Government Board may be communicated with on the subject. It would be well for medical men in the Western Islands to combine and put a stop to such unreasonable demands.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

FEE FOR ATTENDANCE ON SERIOUS ILLNESS AFTER CONFINEMENT.

M. O. writes asking whether he, as district medical officer, can claim an extra fee for the following case. Called by relieving officer's order (given two days after delivery) which described the case as "illness after confinement:" found the patient in a very critical condition, with signs and symptoms of retention of part of placenta; adopted necessary treatment, with satisfactory results.

*** The M. O. should claim the extra fee of £2 for this case, it being one which would necessitate long attendance in respect of a puerperal affection. The regulation which relates to this case is Article 183 of Consolidated Order July, 1847: "Provided that in any special case in which great difficulty may have occurred in delivery, or long subsequent attendance in respect of some puerperal affection may have been requisite, any district medical officer shall receive £2."

THE HEALTH OF ALDERSHOT.

At the meeting of the Council in the second week of November, Dr. Shoolbraid was able to report that October had been a very healthy month, only 3 infectious cases having been notified since his last report. The mortality of the town, and also of the camp, had been very considerably lower than for the corresponding period covered by a previous report. For the town 17 deaths were recorded, and for the camp 8, giving a death-rate of 12.2 per 1,000 per annum. As against these figures, 39 births for the town and 36 for the camp had been recorded. The Council proposes to appoint a medical officer of health, with Dr. Shoolbraid as assistant medical officer, the latter having agreed conditionally to resign his appointment. Respecting the analysis of well water, it appears that the medical officer had been instructed to take samples from eight sources. These had been subjected to analysis by an expert, who had pronounced six out of the eight "bad," and the other two "fairly good."

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,539 births and 4,216 deaths were registered during the week ending Saturday last, November 25th. The annual rate of mortality in these towns, which had decreased from 21.1 to 17.3 per 1,000 in the four preceding weeks, rose again to 19.3 last week. The rates in the several towns ranged from 12.1 in Huddersfield, 13.2 in Derby, 13.5 in Croydon, and 14.4 in Halifax, to 24.6 in Salford, 24.8 in Liverpool, 28.0 in Hull, and 29.7 in Preston. In the thirty-two provincial towns the mean death-rate was 20.5 per 1,000, and exceeded by 3.0 the rate recorded in London, which was 17.5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.0 per 1,000; in London the death-rate was equal to 1.8 per 1,000, while it averaged 2.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.6 in Birkenhead, 4.0 in Sheffield, 4.3 in Salford, and 6.9 in Hull. Measles caused a death-rate of 1.3 in Sheffield and in Hull, 1.4 in Burnley, 1.8 in Birkenhead, and 2.4 in Salford; whooping-cough of 1.2 in Croydon and 1.4 in Norwich; and "fever" of 1.2 in Wolverhampton and 2.0 in Nottingham. The mortality from scarlet fever and from diarrhœa showed no marked excess in any of the large towns. The 97 deaths from diphtheria included 43 in London, 11 in Sheffield, 7 in Leeds, 7 in Liverpool, 5 in Birmingham, 4 in Leicester, and 3 in Cardiff. Twenty-two fatal cases of small-pox were registered last week in Hull, but not one in any other of the large towns; and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday last November 25th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 2,538 to 3,578 at the end of the twelve preceding weeks, had declined again to 3,503 on Saturday last; 293 new cases were admitted during the week, against 331, 328, and 334 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, November 25th, 903 births and 581 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.0 and 19.0 per 1,000 in the two preceding weeks, was again 19.0 last week, and was 0.3 per per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.1 in Aberdeen and 15.1 in Edinburgh, to 21.6 in Paisley and 37.6 in Greenock. The zymotic death-rate in these towns averaged 3.2 per 1,000, the highest rates being recorded in Perth and Greenock. The 290 deaths registered in Glasgow included 12 from measles, 6 from scarlet fever, 6 from diphtheria, 4 from whooping-cough, 3 from "fever," and 8 from diarrhœa. Two fatal cases of diphtheria were recorded in Edinburgh; 10 deaths from measles and 3 from diarrhœa occurred in Dundee; 3 from whooping-cough in Aberdeen; 17 from measles and 2 from diphtheria in Greenock; and 3 from whooping-cough in Perth.

MEDICAL NEWS.

Dr. J. Roberts Thomson, the President of Council of the British Medical Association, has been gazetted Lieutenant-Colonel 4th Volunteer Battalion Hampshire Regiment.

Mr. W. Howard Bell, one of the largest beneficiaries under the will of the late Mr. John Nixon, one of the pioneers of the South Wales coal trade, has sent a cheque for £1,000 to the Mountain Ash Cottage Hospital and £1,500 to the Cardiff Infirmary.

British Gynæcological Society.—The President and Council desire to announce that at the meeting of the Society on Thursday, December 14th, M. Doyen of Paris has arranged to give a cinematographic demonstration to illustrate his operative procedures on the abdominal and pelvic organs. The meeting begins at 8 o'clock. All medical men are invited to be present, whether Fellows of the Society or not.

Experimental Psychology.—During the Lent Term, 1900, a course of demonstrations in the methods of experimental psychology will be given in University College, London, under the direction of Professor Sully. The course will be conducted by Mr. W. McDougall, M.B., Fellow of St. John's College, Cambridge, who will be glad to receive beforehand the names of any who propose to attend.

Presentation.—On the occasion of his marriage, Dr. W. F. Farquharson, Medical Superintendent of the Cumberland and Westmorland Asylum, has been presented by the Lunacy Committee of these counties with a silver-plated table lamp; by the officers, female staff, and workmen at the asylum with a pair of bronzes and a silver-mounted paper-knife; and by the male attendants and workmen at the asylum with a black marble clock.

Edinburgh Royal Maternity and Simpson Memorial Hospital.—F. W. N. Haultain, M.D., F.R.C.P.E., has been appointed one of the Assistant Physicians to the Hospital, *vice* Dr. A. H. F. Barbour, who has been promoted to be a full Physician in place of Dr. Halliday Croom, whose term of office has expired. We understand that the Directors of this institution intend shortly to proceed to the appointment of two further assistant physicians, making four in all.

Harveian Society of London.—The annual dinner of the Harveian Society was held at the Café Monico, on Thursday, November 23rd. Mr. H. E. Juler, the President, was in the chair, and more than a hundred members and guests were present, amongst whom were the President of the Royal College of Physicians, Dr. Church, Sir R. Douglas Powell, Bart., M.D., Dr. J. B. Ball, Dr. F. T. Roberts, Mr. Alban Doran, Dr. Sansom, Mr. H. Power, Mr. Watson Cheyne, Dr. Buzzard, Mr. Alfred Cooper, Mr. E. Owen, Dr. T. Morton, Mr. Eastes, Mr. Roughton, Dr. Guthrie, and Mr. Raymond Johnson. The menu card gave the following quotation from Pepys's *Diary*, "His discourse being ended, we walked into the hall, and there being great store of company, we had a fine dinner, and good learned company, many doctors of physique, and we used with extraordinary great respect." In proposing "Success to the Harveian Society," Sir R. Douglas Powell dwelt upon the fact that its members represented every branch of the healing art, and that although the Society had attained middle age it was still very robust. The President, in returning thanks, said that the Society was founded in 1831 to foster observation and induction, and he believed the mantle of Harvey had fallen upon it. Mr. Alban Doran proposed "The Sister Societies and Guests." Dr. F. T. Roberts, who responded, said the societies were full of vitality, all doing excellent work and trying to do their duty for the advantage of the community in general. Mr. H. Power proposed the last toast, "The President," which was received with applause and "musical honours," and elicited a warm acknowledgment from Mr. Juler, who spoke of the great assistance he had received from the Secretaries, especially the Senior Secretary, Dr. Guthrie, whose health was also drunk. In the course of the evening Dr. George Ogilvie related some humorous anecdotes, Dr. Roberts sang in his inimitable fashion, "Sally in Our Alley," and gave as an encore, "Poor Tom Bowling." Mr. Frederick Upton recited "A Sensational Novel," "My Vegetable Garden," and a few tales. Mr. John Josey and Mr. Frank Tebbutt sang some excellent songs, and Mr. Fountain Meen presided at the pianoforte.

MEDICAL VACANCIES.

The following vacancies are announced:

Birmingham General Dispensary.—A Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), with furnished rooms, etc. Applications to the Secretary by December 18th.

Birmingham and Midland Eye Hospital.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by December 16th.

BRADFORD POOR-LAW UNION.—Two Resident Assistant Medical Officers (male or female) for the Hospital and Workhouse of the Union. Unmarried. Appointments for one year. Salary for senior £150, and £110 for junior, with prescribed rations, etc. Applications to the Clerk to the Guardians, 22, Manor Row, Bradford, by December 4th.

BRECON INFIRMARY.—Resident House-Surgeon; unmarried. Salary £70 per annum, with furnished apartments, etc. Applications to W. Powell Price, No. 6, Bulwork, Brecon, by December 20th.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. No salary, but board, lodging, and washing provided. Applications to the Secretary, 23, St. Andrew's Street, Cambridge, by December 9th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Board and residence provided. Applications to the Secretary by December 12th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—House-Physician. Board and residence, etc., provided. Honorarium of £25 on completion of six months' service. Applications to the Secretary by December 9th.

EDINBURGH: UNIVERSITY OF.—(1) Examiner in Materia Medica; (2) Two Examiners in Clinical Surgery. Appointments for four years. Salary of the former £75 per annum and the latter £50 each per annum. Applications to the Secretary, University Court, by December 30th.

GLASGOW VICTORIA INFIRMARY.—Superintendent and Resident Medical Officer. Salary, £80 per annum, with board in the Infirmary and a free house. Applications to the Secretary, 22 Carlton Place, Glasgow, by December 9th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—(1) House-Physician; (2) House-Surgeon. Appointments for six months. Salaries, £20 each, with board and residence. (3) Resident Medical Superintendent. Appointment for one year, subject to annual re-election. Salary, 100 guineas per annum, with board and residence. Applications on forms provided to be sent to the Secretary by December 12th.

LONDON LOCK HOSPITAL. (1) House-Surgeon to the Female Hospital, Harrow Road, W.; (2) House-Surgeon to the Male Hospital, 91, Dean Street, W. Salary of the former £80 per annum, and of the latter £50 per annum, with board, lodging, and washing in each case. Applications to the Secretary at the Hospital, Harrow Road, by December 14th.

MIDDLESBROUGH-ON-TEES: NORTH RIDING INFIRMARY.—House-Surgeon. Salary £100 a year, with lodging, board, and washing. Applications marked "Application for post of House Surgeon" to the Secretary by December 6th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, Bloomsbury.—Registrar. Annual honorarium, fifty guineas. Applications to B. Burford Rawlings, Secretary and Director by December 8th.

NORTH EASTERN HOSPITAL FOR CHILDREN.—House-Physician. Appointment for six months. Salary at the rate of £50 per annum. Applications to the Secretary, at the City Office, 27, Clement's Lane, Lombard Street, E.C., by December 15th.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke-on-Trent.—House Governor and Secretary (non-resident), age from 30 to 45 years. Salary £300 per annum. Applications to the Chairman of the General Committee by December 6th.

NOTTINGHAM GENERAL DISPENSARY.—Clinical Assistant; unmarried. Salary, £60 for six months (renewable), with furnished apartments, etc. Applications to the Secretary.

PERTH: JAMES MURRAY'S ROYAL ASYLUM.—Assistant Medical Officer. Applications to Dr. Urquhart, Physician-Superintendent.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Surgeon. Salary £100, with board and residence. Applications to the Honorary Secretary by December 18th.

PONTEFRACT GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary commencing at £150 per annum, with furnished rooms, etc. Applications to the Secretary by December 11th.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House-Surgeon and Dispenser. Unmarried. Salary, £70 for the first year, with board and lodging. Applications to the Honorary Secretary.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer for 1901. Applications to the Registrar by January 5th, 1900.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Three Members of the Court of Examiners. Must be Fellows of the College. Applications to the Secretary by December 6th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Assistant Physician, must be F. or M.R.C.P.Lond. Applications to the Secretary by December 16th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Assistant Physician; must be F. or M.R.C.P.Lond. Applications to the Secretary by December 5th.

ST. NEOTS: THREE COUNTIES ASYLUM.—Second Assistant Medical Officer, under 35 years of age. Salary commencing at £150 per annum, with board, apartments, etc. Applications to F. G. Butler, Clerk to the Visiting Committee, St. Neots, Hunts, by December 7th.

ST. SAVIOUR'S UNION.—Dispenser at the Infirmary, East Dulwich Grove, S.E. Salary, £120 per annum, and dinner and tea daily. Applications on forms provided to be sent to the Clerk, Union Office, John Street, W., Blackfriars Road, S.E., by December 11th.

SALISBURY: FISHERTON HOUSE ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, with board, lodging, and washing. Applications to Dr. Finch, the Asylum, Salisbury.

SALOP COUNTY COUNCIL.—County Medical Officer of Health. Salary, £750 per annum. Applications to the Clerk, Shirehall, Salop, by December 27th.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the House-Surgeon by December 5th.

THROAT HOSPITAL, Golden Square, W.—Junior Resident Medical Officer. Appointment for six months but renewable. Salary, £50 per annum. Applications to the Secretary by December 10th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Physician; (2) House-Physician; (3) House-Surgeon. Two latter appointments tenable for six months, with board and lodging provided. Election for the former on December 11th. Applications for the two latter to the Secretary Superintendent by December 13th.

WREXHAM INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications on forms provided to the Secretary, 1, Church Street, Wrexham, by December 16th.

MEDICAL APPOINTMENTS.

ALDRED, J. White, M.B., Ch.B.Vict., appointed House-Surgeon to the North Lonsdale Hospital, Barrow-in-Furness.

BOASE, E. D., L.R.C.P., M.R.C.S.Eng., appointed Medical Officer of Health to the Madron Urban District, *vice* J. Q. Couch, M.R.C.S.Eng.

BRADFORD, P. P., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Bracknell District and Workhouse of the Easthampstead Union, *vice* N. Davis, M.D.Durh., resigned.

CHAPPEL, George P., M.D., B.C.Cantab., appointed Honorary Physician to Out-patients at the Tottenham Hospital.

HILLYAR, G. H. S., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Third District of the Church Stretton Union, *vice* A. G. Mackenzie, M.R.C.P., F.R.C.S. Edin., resigned.

PHELPS, J. H. O., B.A.Oxon., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Buenos Ayres British Hospital.

PHILLIPS, Leslie, M.D.Brux., M.R.C.S.Eng., appointed Consulting Surgeon to the Birmingham Hospital for Skin and Urinary Diseases on retirement from the acting staff.

TAYLOR, Frank E., M.A., M.Sc., M.B., B.Ch., M.R.C.S., L.R.C.P., appointed Senior Resident Medical Officer to Queen Charlotte's Lying-in Hospital, London.

WAGGETT, Ernest, M.B., B.C., appointed Surgeon to the London Throat Hospital.

WETHERED, F. J., M.D., F.R.C.P.Lond., appointed Assistant Physician to the Middlesex Hospital.

WILLIAMSON, R. T., M.D.Lond., M.R.C.P., appointed Assistant Lecturer in Medicine at Owens College, Manchester.

WILLIS, E. E., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Littleport District of the Ely Union, *vice* A. H. Copeman, B.A.Camb., M.B.C.S., L.R.C.P.Lond., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

Odontological Society of Great Britain, 40, Leicester Square, W.C., 8 P.M.—Paper by Mr W. B. Dolamore, and casual communications by Mr. C. Robbins and Mr. M. Hopson.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. S. Paget: Aural Cases. Lecture I.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Mr Wyatt Wingrave: The Pathology of Acute and Chronic Inflammation of the Tonsils.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Malcolm Morris: Consultation (Skin).

TUESDAY.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. Risien Russell: Peripheral Neuritis.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 4 P.M.—Dr. Dundas Grant: Cases of Nervous Disorder of the Pharynx, Larynx, and Œsophagus.

London Throat Hospital, 204 Great Portland Street, W., 4.30 P.M.—Mr. Waggett: Dangerous Complications of Suppurative Otitis.

Pathological Society of London, 20, Hanover Square, W., 8.30 P.M.—Sir William Gowers, F.R.S., and Dr. Savage will reopen the discussion on Dr. Mott's paper on the "Pathology of Tabes and its Relation to General Paralysis." Drs. Ferrier, Payne, Hale White, Newton Pitt, Batten, Head, Ormerod, Salaman, Risien Russell, Purves Stewart, and others are expected to take part in the discussion. Drs. Mott and Batten will show Microscopical Preparations and some of the speakers will illustrate their remarks with the lantern.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Sir W. H. Broadbent, Bart.: Consultation (Medical).

WEDNESDAY.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by the President, Drs. Blacker, Tate Spencer, Robinson, Corrie Keep, and John Phillips. Paper: John Phillips: On a case of Acute (?) Idiopathic Peritonitis complicating Pregnancy and Labour.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Acland: Cases illustrating some of the difficulties in recognising those intrathoracic conditions which are amenable to surgical treatment.

Central London Throat, Nose, and Ear Hospital, 8 P.M.—Clinical Evening. Dr. Percy Jakins: Demonstration of cases of Operation on the Mastoid Process, Cerebrum, and Cerebellum for Post-Otitic Suppuration.

THURSDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. S. Paget: Aural Cases. Lecture II.

Central London Throat, Nose, and Ear Hospital, 5 P.M.—Dr. Dundas Grant: Treatment of New Growths in the Nose and Naso-Pharynx.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 3 P.M.—Dr. Woods Hutchinson. Lecture IV. Comparative Pathology.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Colman: Pathological Demonstration.

Harveian Society of London, 8.30 P.M.—Mr. Watson Cheyne. Surgical Tuberculous Diseases. Harveian Lecture No. I.

Neurological Society of London, 11, Chandos Street, W., 8.30 P.M.—Dr. F. E. Batten and Dr. J. S. Collier: Spina Cord Changes in cases of Cerebral Tumour. Dr. W. J. Harris: An experimental investigation on the Causation of Optic Nerve in various animals, and on the path of the reflex for the contraction of the pupil to light (Meynert's fibres). Dr. Mott and Mr. A. F. Tredgold: Hæmiatrophy of the Brain and its effects upon the Spinal Cord.

Charing Cross Hospital. Post-Graduate Course, 4 P.M.—Dr. Murray: Demonstration of Medical Cases.

FRIDAY.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Dr. Cathcart: Chronic Otitis Media.

West Kent Medico-Chirurgical Society, Royal Kent Dispensary, Greenwich Road, 8.45 P.M.—Mr Victor Horsley: The Pituitrin Operation on the Treatment of Trigeminal Neuralgia. (Illustrated by lantern views.) After the oration a conversazione will be held at which there will be a demonstration of "x" ray photographs and an exhibition of surgical instruments.

Clinical Society of London, 8.30 P.M.—Mr. A. E. Barker: Remarks on twelve cases of Perforating Gastric Ulcer treated by Operation. Mr. Jonathan Hutchinson, jun.: Two cases of successful Primary Resection of Gangrenous Small Intestines. Dr. A. F. Voelcker: A case of Arrested Development of the Speech Centre.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Treacher Collins: Consultation (Eye).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

GRANT.—On November 27th, at 523, Commercial Road, E., the wife of Charles Graham Grant, of a daughter.

LOWSLEY.—On November 24th, at Kirton Lindsay, the wife of Montagu M. Lowsley, R.A.M.C., of a daughter.

SHEPLAND.—On November 22nd, at Alma House, Beacon Hill, Exmouth, the wife of John Dee Shepland, M.A., M.D., of a son.

MARRIAGE.

FARQUHARSON—FLETCHER.—On November 21st, at the Parish Church, Broughton-in-Furness, by the Rev. James Cropper Vicar, William Frederick Farquharson, M.D., Medical Superintendent of the Cumberland and Westmorland Asylum, Carlisle, to Lucy Allason, daughter of the late Henry Allason Fletcher, of Croft Hill, Whitehaven, and of Mrs. Gillings, Broughton-in-Furness.

DEATHS.

HUMBLE.—On November 22nd, at Corfe Castle, Dorset, Eliza Letitia, the dearly-loved daughter of William Edward Humble, M.D., aged 53.

LEWIS.—On November 25th, after a few hours illness, Frederick Williams Lewis, Surgeon, Violet Cottage, Llandovery, aged 48.

SWALES.—On November 24th, at his residence, 8, Trinity Road, Sheerness-on-Sea, Edward Swales, surgeon, aged 70 years. Friends will kindly accept this (the only) intimation.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

P. A. W. asks where "Narissa Food" can be obtained.

G. F. S. asks to be recommended a work on "medical superstitions."

R. wishes to hear of an establishment where an invalid lady suffering from chronic rheumatism could be received on payment of about a guinea a week.

S.P.Q.R. would be grateful for hints or references as to diet, regimen, exercises, etc., in the case of a candidate for public service, aged 17, whose weight is below the standard. He is otherwise in perfect health and vigour.

Sanatoria for Consumptives.

W. O. asks whether any hospital or sanatorium is in course of construction in England for the treatment of the consumptive poor on modern lines, and whether subscriptions or donations entailing the customary privileges of "life governor" are invited.

Monthly Nurses and Medical Practitioners.

1900.—Our correspondent "B." complains that he was engaged to attend Mrs. H., but that the monthly nurse insisted upon R. being sent for, who came and attended the case. B., when he heard of the matter, was indignant, and accused the monthly nurse of being in the pay of R. She denied this, saying that he "only gave her a shilling out of the guinea." B. wrote to R. complaining of his interference with his case, and R. in his reply has denied that he knew that B. had been engaged to attend, and especially denied the statement that he made any payment to the monthly nurse.

*** B. should accept R.'s disclaimer, but R. should be in future exceedingly careful in his relations with this nurse. We have no doubt that to pay or bribe a monthly nurse is dishonourable conduct, and that means can be found to stop such practices wherever they can be proved to exist.

Acute Œdema of the Conjunctivæ.

W. E. M. (Constantinople) asks for light on the following case: A. B., a healthy young man of 25, of temperate habits, first officer of a steamship trading between England and the Mediterranean Sea, whilst suffering from an acute feverish catarrh, was suddenly seized one evening with violent pain in both eyes almost without any warning. I found some injection of the conjunctivæ, together with puffiness of both eyelids. These symptoms, together with the pain, increased rapidly until he was quite unable to open the eyes owing to the swelling of the lids and the œdema of the conjunctivæ. On account of the severe pain I injected hypodermically ¼ gr. of morphine in the forearm, and applied frequent hot fomentations over both eyes. This relieved the symptoms considerably, and he was able to obtain some sleep during the night. The following morning both lids were enormously swollen and glued together by a secretion from the conjunctiva, which was so œdematous that it bulged between the lids when an attempt was made to open them. There was, however, but little pain by this time. By bathing the lids with a hot solution of sodium bicarbonate and washing out the conjunctiva with lotio acidi boracici, these symptoms were much relieved, and by continuing this treatment at intervals they gradually subsided, so much so that by the next day they had quite disappeared, and by applying the usual remedies for catarrh the patient was soon restored to health. He stated that he had suffered in this way on three previous occasions, once during an attack of acute tonsillitis, but he was unable to assign any cause for the other two attacks, being in perfect health at the time. There was no history of gout or renal trouble.

"A Free Dispensary."

X Ray."—Our correspondent says he is thinking of establishing a "free dispensary for diseases of women" in a densely populated neighbourhood of a large town. His own name would not appear, but publicity would be given to the movement by the title as above being placed "in the window of a small house," which we presume would be the house in which the work of the dispensary would be done. Our correspondent further explains that he intends to take no fees at this dispensary, but that if consulted there by persons able to pay he shall ask them to call upon him at his own house.

*** We enter into these details in order to show our correspondent that we have duly considered what he probably regards as the extenuating circumstances of his proposal. He asks whether the scheme is perfectly ethical and professional. In our opinion it is neither ethical nor professional for a medical man to establish a free dispensary which is to be under no sort of public control, as such institutions are liable to be gravely abused.

Lead as an Abortifacient.

Dr. Guy J. Branson (Edgbaston) writes: During July, 1898, I had under my observation a multipara, who, under pressure to account for the well-marked symptoms of lead poisoning from which she was suffering, admitted having taken a pennyworth of "diachylon" some three or four weeks previously. She stated that she had made up some sixty pills from this, its size in bulk being about that of one's thumb. These she took within the space of forty-eight hours. The result answered to her expectations, and when I was called in to see her she certainly presented every appearance of having had a very severe and protracted dose of lead. The colic and blue line were both typical and well marked. The uterus was completely empty. She had been about three months pregnant. I could obtain no history of acute symptoms at the time of taking the pills—a fact which somewhat surprised me considering the dose. The immediate effect of the poison seems to have expended itself on the uterus. A few days after I had first seen this case, an inquest on a young woman was reported in the Birmingham papers; the death being attributed to lead poisoning, self-administered, with the same intent. Some inquiries I made of local chemists pointed to the use of diachylon as a criminal abortifacient being extremely common, but none of my friends to whom I mentioned the case had met with anything similar. Of course the effect of lead on the pregnant uterus is well known to all, but I have thought that many obscure cases of poisoning, in which the source of the lead cannot be discovered, may be due in women to this form of abortion-mongering.

*** We may refer our correspondent to a paper on Two Cases of Poisoning by the Self-administration of Diachylon—Lead Plaster—for the Purpose of Procuring Abortion, by Dr. F. M. Pope, published in the British Medical Journal of July 1st, 1893, page 9.

Mortuary Accommodation.

F.R.C.S. writes to inquire as to what is to be done with a body in the event of a death occurring in the cottage hospital, which has no mortuary attached to it. There is at present no public mortuary in the town to which a corpse can be removed.

*** Until the body of a deceased person is taken away from the hospital either by the friends or the undertaker, the authorities must keep it for the time being, and set apart some place for the purpose. No churchwarden or other person is bound to provide mortuary accommodation, and the hospital authorities, like proprietors of hotels and lodging houses, are expected to retain the body of a person who dies on the premises for a reasonable time until arrangements can be made for the interment. The local sanitary authority has power to provide a public mortuary to which all bodies can be removed on order of the medical officer of health should they in his opinion become a nuisance or injurious to health. The coroner can also order the removal of a body to a public mortury for *post-mortem* examination and to await inquest. We should hardly think that a site in the street in the centre of a town would be the most suitable for a public mortuary. As a rule the residents usually prefer such a place in the neighbourhood of a churchyard or cemetery, and not quite so near their own dwellings. A public mortuary, if properly constructed, should contain three or four chambers, of which one should be arranged for *post-mortem* examinations, one for those dying of infectious diseases, and the others suitably arranged as resting places for the dead pending interment or cremation. Doubtless if such a mortuary were established the Hospital Committee would have no difficulty in making arrangements with the local authority for the accommodation required.

ANSWERS.

A.S.R.S.—We hope shortly to be in a position to publish some reliable data upon the subject raised by our correspondent's question.

Examination of Blood in Disease.

W. S.—We have referred the questions which our correspondent asks as to Dr. Gulland's paper to that gentleman, and he replies as follows: (1) A "cosmetic operation" is one intended for the removal of some defect which interferes with the patient's appearance or usefulness without causing symptoms—for example, the removal of an accessory finger or large wen. (2) In a paper of mine in the *Scottish Medical and Surgical Journal* for April, 1899, a full description of the different methods of fixing and staining films is given. This answers (3) also. (4) Accounts of the methods of enumerating red and white corpuscles, etc., are given in most handbooks of clinical methods. The best account of blood changes in disease in English is to be found in Cabot's *Clinical Examination of the Blood*, 3rd edition; a shorter but good account in Coles's *Diseases of the Blood*. The textbook of general medicine in which most attention is given to these matters is Osler's (last edition).

"Is Advertising Unprofessional?"

Under this heading a correspondent writes to us enclosing a circular which he has received from a Swiss hotel in which it is proposed to carry out treatment for lung diseases under the personal supervision of a resident physician, whose name is given, and to whom intending visitors are referred for further information. We think the wording of the circular does not justify the criticisms of our correspondent, as we do not think there is any evidence that the doctor in question is to be manager of the hotel, that he intends to dispense medicines, that he states that his treatment is the best, or that he does or does not confine his medical practice to the treatment of lung diseases; and we cannot help thinking that our correspondent by these rash statements creates the impression that he is hardly able to look at the matter judicially. The fact evidently is that the doctor in question is attempting to establish at this hotel treatment similar to that carried out by Dr. Walther at Nordrach. There are resident physicians at hydropathic establishments in this country who occupy analogous positions, and whose names regularly appear upon advertisements of these institutions, and have done so for many years past without any action having been taken by any of the

medical authorities. It is also the practice of many lunatic asylums to advertise, giving the name of the resident physician or medical superintendent. These cases are sufficiently parallel to show that the present case is not without precedent. Our correspondent states that among our foreign brethren there is a higher appreciation of the dignity of the medical profession than with us, but we think that he must have a very small acquaintance with the real state of things. If he will take up any German medical newspaper, he will find it filled with leaflet advertisements of institutions for the treatment of various special diseases, such as diseases of the lungs, of the stomach, of the nervous system, etc., under eminent medical direction, very often with a university professor at the head. These are private establishments maintained for the profit of the doctors concerned. We have expressed ourselves sufficiently strongly about advertising for there to be no doubt at all as to our views upon this subject; but it seems that unless English doctors are to stand aside altogether and refuse to take part in the direction of sanatoria for consumption, some such circulars as that to which our correspondent objects must be permitted.

NOTES, LETTERS, Etc.

KENT has omitted to verify his communication with his name.

HOSPITAL REFORM ASSOCIATION.

DR. T. GARRETT HORDER (Cardiff), Honorary Secretary Hospital Reform Association, writes: Perhaps you will allow me to announce that in answer to an appeal in aid of the expenses of the Conference held last month, I have received the following sums:

	£	s.	d.
Mr. William Allingham, F.R.C.S....	5	5	0
Dr. Francis J. A. Waring	1	1	0

I may mention that we shall be prepared to issue a full report of the proceedings in a few days. The papers read are well worthy of study by all those who desire to bring about a satisfactory solution of this difficult question.

MOSQUITOS AND MALARIA.

MR. J. CUSSONS HEPTON (Waterloo) writes: In a book called *Mehalah*, written by Rev. Baring Gould some thirty years ago, there occurs the following striking passage:

"In the plaster and oak cottages, away from the sea, by stagnant pools, the hatching places of clouds of mosquitos, whence rises with the night the haunting spirit of tertian ague, the hag that rides on, and takes the life out of the sturdiest men and women, and shakes and wastes the vital nerves of the children."

It is interesting to note that the two associated causes of malaria are mentioned together—"the stagnant pools" and "clouds of mosquitos."

HÆMORRHAGE FROM THE EARS.

DR. CLEMENTS HAILES, F.R.C.S.Edin. (Surgeon Ear Dispensary, Bristol; late Clinical Assistant Royal Ear Hospital), writes: Anent the discussion in your correspondence columns on bleeding from the ears as a symptom of mountain sickness, I may mention the case of a patient of mine, who, when living in the Rocky Mountains 6,000 feet above the sea level, used to find that if he ascended another 1,000 feet, he was seized with giddiness, deafness, and hæmorrhage from the ears; if he then lay down he was able to hear sheep bells, and the symptoms passed off, the hearing power gradually returning. Also *re* Dr C. A. Sturrock's letter on a Method for the Removal of Foreign Bodies from the Nose and Ear, I have practised this method on the ear in a considerable number of cases, but it is necessary to be sure that the Eustachian passage is free, or the powerful action of the brass syringe and rubber tubing attached has the effect of cupping on the contents of the tympanic cavity, congestion of the tympanic membrane becomes visible, and I have seen free hæmorrhage into the external meatus from its use; this might be expected to occur also into the tympanum with unpleasant results.

EMETICS IN ORCHITIS.

DR. ARMSTRONG TODD (Monkstown) writes: In the EPITOME of this week, November 25th (417), A. Pigot remarks, "No other treatment (than administration of sodium salicylate) is so useful in orchitis." This statement leads me to wonder if the elder Colles's experience was ever recorded concerning the use of emetics. It is interesting, as thereby hangs a tale. A patient, suffering from gonorrhœal orchitis contracted in Liverpool, was travelling over to Dublin in order to consult Dr. Colles about his complaint. The weather was very rough, and on his arrival in Dublin, after severe sea-sickness had prostrated him, the orchitis was gone and not a trace remained. I personally have seen cases where emetics have cured the complaint practically in twenty-four hours, or at least so alleviate it that the sufferers were perfectly comfortable and able to pursue their ordinary avocations.

THE RELATIVE IMMUNITY OF DOGS TO PYOGENIC INFECTION.

DR. JOSIAH OLDFIELD (Harley Street, W.) writes: May I carry Mr. Lenthal Cheatle's arguments on this subject a little further? I think that he will find, if he continues his investigations, that the difference of relative immunity is twofold: (1) That animals of lower organisation are generally less susceptible to infection by certain micro-organisms than animals of a higher organisation; and (2) that the relative immunity of animals of a similarly-developed organisation depends largely upon variability in their present habits in respect to natural habits. Thus the pet poodle is far more liable to infection than the hill sheep dog, and the cockney human more liable than the Soudan Arab. It gives a wrong impression if all dogs are treated as equally immune, and all humans as equally susceptible.

THE COUP DE GRÂCE IN BULL FIGHTS.

DR. LÉON JOUBERT (*Philadelphia Medical Record*, October 7th, 1899) has made several necropsies on the bodies of bulls killed in the ring, and finds that in the majority of cases death has been the result of a sword thrust delivered into the left side of the chest between the shoulder blade and the spinal column. The sword enters the thorax close to the heart and cuts completely across the large vessels—aorta and vena cava or their principal trunks—close to the base of the heart. Death is therefore extremely rapid. The very acme of the matador's art, however, is said to be the introduction of the sword point into the occipito-atlantal space, severing that ligament and dividing the spinal cord at its junction with the medulla oblongata. When this is done *secundem artem* the animal is instantly killed, and falls dead on the ground like a thunderbolt.

SUPERNUMERARY THUMB

DR. J. W. MARTIN (Dumfries, N.B.) writes: On September 27th, 1899, I attended at the birth of a female child who had the peculiarity of possessing an accessory thumb on the right hand. The second thumb is altogether thinner than the other, but has two phalanges like the first. An interesting point about the case is that the father of the child has the same peculiarity of the right hand, while the one older child shows nothing unusual.

LETTERS, COMMUNICATIONS, ETC., have been received from

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CLINICAL REMARKS
ON
HYPERTROPHIC CIRRHOSIS OF THE LIVER WITH BRONZING OF THE SKIN: HÆMOCHROMATOSIS.*

By WILLIAM OSLER, M.D., F.R.S.,
Professor of Medicine, Johns Hopkins University, Baltimore, Md.

RATHER more than two years ago a man presented himself at the hospital complaining of a gradual darkening of the skin and an eruption on the legs. I do not remember to have seen him, and the diagnosis on his card was Addison's disease with an interrogation mark after it. He returned in May of this year with the bronzing of about the same intensity, but we found in addition that he had a greatly enlarged liver and an enlarged spleen, but no diabetes. Meantime, Dr. Opie, jun., had presented to our Medical Society a paper on Hæmochromatosis, and had considered fully the relation of this remarkable condition to hypertrophic cirrhosis and the *diabète bronzé*. I had become familiar in French literature with the latter condition, though I had never met with a case, and until hearing Dr. Opie's paper I was not aware of the significance of the general hæmochromatosis in connection with the disease. It called to mind also a remarkable instance of hypertrophic cirrhosis with bronzed skin which not long before had been under my care. As the literature of the subject is almost exclusively in French and German—Dr. Opie's paper will appear in the next number of the *Journal of Experimental Medicine*, vol. iv—I shall refer to a few of the landmarks in the progress of our knowledge. Hanot, whose name will always be associated with one form of cirrhotic liver, had noticed that in some cases the skin became bronzed, and he noticed further that diabetes was an occasional complication.[1] It is true that a bronzed cachexia in diabetes had been previously noted (Troisier, 1871), but Hanot's work began a long series of observations by the Paris physicians, through whose writings we have all become familiar with the subject. This author believed that the liver was the seat of origin of the pigment, but Letulle maintained that the liver cells stored but did not form the pigment, and he regards the cirrhosis as a secondary event. More recently Marie has suggested that the *diabète bronzé* is neither a pigmentary cirrhosis of the liver in diabetes nor a special bronzed cachexia, but a separate clinical and pathological entity—in fact, a new disease.

While the French observers had been studying the problem almost exclusively in connection with diabetes, in Germany it was approached from a different standpoint. In the Haller *Festschrift* (1877) Quincke had described a case of widespread pigmentation in anæmia. In 1889 von Recklinghausen described under the name hæmochromatosis a condition of pathological pigmentation, either local or general. To the local condition, which is met with in the heart and sometimes in the intestine, I need not here refer. The generalised pigmentation described by von Recklinghausen involved the skin, the liver, the spleen, the pancreas, and most of the glands of the body. In some of his cases of generalised hæmochromatosis there was cirrhosis of the liver, which von Recklinghausen suggested was the result of "eine hæmorrhagische Hepatitis." The German observers separated two forms of the pigment, one containing iron, hæmosiderin, and, a second, hæmofuscin, which does not give the iron reaction. In the general hæmochromatosis associated with cirrhosis of the liver, the pigment is the hæmosiderin and has an ochre yellow colour, which gives to the organs, affected a most remarkable and characteristic appearance.

In this country very little attention has been paid to the question. Saundby, in Allbutt's *System of Medicine*, vol. iii, in speaking of the liver, states that in diabetes it may be distinctly cirrhotic, and this form is sometimes associated with bronzing. Williamson, in his monograph on diabetes, gives Hanot's clinical description, but, so far as I can gather, the condition has not received special study either in England or in the United States.

Two cases of this remarkable hæmochromatosis have been under my care within the past few years. Both are of special interest, from the fact that there was no associated diabetes, only the general hæmochromatosis with enlargement of the liver, and in one of them the condition was diagnosed during life.

CASE I. *Clinical Summary.—Good General Health: Alcohol in Moderation: Progressive Bronzing of the Skin: For three years Numerous Attacks of Purpura and Urticaria on the Skin of the Legs: Enlargement of the Liver and Spleen: No Diabetes.*—J. A. M., aged 48, a pilot, was admitted May 1st, 1899, complaining of a stitch in the right side over the liver.

Family History.—The father died at the age of 73 of paralysis; mother died at 25 in childbed. His brothers and sisters are living and well.

Personal History.—When 7 years of age he had a severe illness, the nature of which he does not know. He had measles at 12, malarial fever at 14, with dumb chills and night sweats. With these exceptions he has been a very healthy man. He has been a pilot on the Chesapeake Bay. He has used alcohol ever since he can remember, but only takes a glass of whisky once or twice a week. He has never been a daily drinker, and never gets on sprees. I asked his wife particularly about his alcoholic habits, and she says he rarely touches whisky. He has smoked and chewed tobacco for many years. He had gonorrhœa ten or twelve years ago; he has not had syphilis. He has been a moderate eater. He has not lost in strength or in weight, and has not had to give up work.

Present Illness.—Three years ago he had the first attack of red blotches on the feet, and before this he had noticed that he had slight swelling of the ankles and feet, so that he had often to loosen his shoes and sit down. The spots turned purple and remained about three days. During the past three years he says he has had scores of these outbreaks of red blotches on the feet and ankles, sometimes on the legs. In February, 1897, he had a severe attack of pain on the right side, between the costal margin and the crest of the ileum, which lasted for about a week. On the day following the beginning of the illness his feet became swollen. He forgets whether he had the blotches.

In October, 1897, he had a second attack of pain in the right side, with high fever, and his right eye became inflamed and swollen. During this attack he had red welts on the legs as far as the groin. They turned purple and left areas of discoloration. During the past year and a-half these outbreaks of purpura and urticaria on the legs have been very much more frequent. His friends have noticed that his face has become darker in colour, and his hands, too, he thinks are very much darker.

Present Condition.—The patient was a sparely-built, healthy-looking man, weight 146 lbs. The skin of the face was slightly bronzed, not very intense, but his wife insists that his complexion has become very much darker during the past two years. There was no pigmentation of the mucous membranes of the lips or mouth. The general surface of the skin was slightly pigmented, that about the areolæ of the nipples and about the genitalia very much pigmented. The skin of the hands and wrists and of the legs as high as the knees was very deeply bronzed. The heart sounds were everywhere clear and strong. The pulse was regular in force and rhythm. The radial arteries were a little stiff, easily rolled under the finger. The abdomen looked natural, with the exception of a little fulness in the upper zone. On palpation the liver could be easily felt extending in the median line 8 cm. below the ensiform cartilage, between 6 and 7 cm. below the costal margin in the nipple line. The surface was everywhere smooth; the edge could be very distinctly felt. It was hard and firm and rounded. The absolute hepatic flatness in the nipple line began on the fifth rib, on the sixth rib in the mid-axillary line. On auscultation over the liver there was heard a distinct friction on deep inspiration. The gall bladder could not be felt. There was a fulness visible in the left hypochondrium, which altered on deep inspiration. On palpation this was found to correspond to a greatly-enlarged spleen, the border of which could be readily felt nearly 6 cm. from the costal margin. The axillary glands were enlarged. The patient had no fever. The urine was dark in colour, specific gravity 1014, reaction acid; no albumen, no casts, no sugar. There was no bile. Indican was present. There was a distinct reaction for iron. As the pigmentation, the enlarged liver and spleen, with recurring attacks of purpura, suggested the bronzed form of hypertrophic cirrhosis of the liver with which diabetes has been so often associated, the patient on May 5th, at 4 P.M., was given 75 grams of glucose, and the separate specimens of urine saved as voided until 8 A.M. on the 6th, and carefully tested for sugar. Each one of the four specimens was negative.

Blood.—The red blood corpuscles were above the normal number. There were no pigment granules seen either in the blood or in the leucocytes. The blood platelets were apparently diminished. The differential count of the leucocytes was as follows:

Polynuclears	131	...	63.9	per cent.
Small mononuclears	35	...	17.7	,,
Large mononuclears	17	...	8.2	,,
Transitionals	6	...	2.9	,,
Eosinophiles	16	...	7.9	,,

A portion of the skin of the leg was excised, and in it Dr. Opie determined the presence of the characteristic ochre-coloured pigment granules in the cells of the sweat glands.

CASE II. *Clinical Summary.—History of Malaria and of Attacks of Continued Fever in the Tropics: No Alcoholic History: Enlargement of Upper Part of the Abdomen due to Hypertrophic Cirrhosis of the Liver: Progressive Pigmentation of Face and Hands: Enlargement of the Spleen: Suspected Tumour of Liver: Laparotomy: Large Red-brown Liver: Erythema Nodosum: Hæmorrhage from Stomach: No Diabetes: Death: Duration of Illness about Five Years.*—G. M., aged 34, referred to me on January 18th, 1895, by Dr. MacMeans, of Monterrey, Mexico. The patient complained of an enlarged liver and a gradual alteration in the colour of his face.

Family History.—His mother died in childbed; his father died suddenly.

* Read in the Section of Medicine at the annual meeting of the British Medical Association, Portsmouth, 1899.

from what cause he did not know. He has had four brothers; one died of dropsy at the age of fifteen, the others are healthy and well.

Personal History.—Patient was born in the United States; was very healthy as a young man, with the exception of "chills and fever" at 10 and of small-pox at the age of 12. He has lived in Mexico for the past twelve years. He has travelled in the country a great deal but has enjoyed good health. He has never had yellow fever. Dr. MacMeans writes: "He has suffered from attacks of mild continued fever, very common in this locality, running a course of about fourteen days, and when uncomplicated by medication it is usually a very mild disease. I also might add it is commonly called malaria, but I am convinced that there is nothing malarious about it." Dr. MacMeans did not think that these attacks had any special connection with his present trouble. He has not had syphilis; of this he is quite certain. He has been a temperate man, taking wine and spirits only occasionally; he has used tobacco in moderation.

Present Illness.—For at least three years and a half the patient has noticed that he has been growing larger in the upper part of the abdomen. His general health has been very good, and he has been able to be at work. During this time he has had one or two febrile attacks such as described by Dr. MacMeans. A year and a half ago he was slightly jaundiced; has not had an attack since. There was no itching of the skin. He does not know when he began to change in colour but he thinks it was several years ago. The enlargement of the abdomen has been progressive, and lately he has had to have the waist band of his trousers let out. As stated he has been at work and has had a fairly good appetite and good digestion. Within the past year the enlargement has been very much more noticeable in the epigastric region, and Dr. MacMeans and others have regarded the condition as one of tumour of the liver.

Present Condition.—The patient was a medium-sized man, well nourished, lips and mucous membranes of a good colour. Tongue clean and red. The most noticeable feature about him was the peculiar bronzing of the skin, a somewhat leaden hue suggestive of argyria. On the face it was very deep, and at once attracted attention. It was uniform, but along the roots of the hair there was a line of about half an inch on which the skin was normal. The skin of the hands and wrists was also very pigmented. That of the general surface of the body was only a little increased. There was no pigmentation of the mucous membranes. The chest was well formed; there were no changes noticed in the heart and lungs.

Abdomen.—The whole upper zone looked enlarged, and a prominent mass filled the entire space between the costal borders. On palpation, this was found to be a firm solid mass which below reached to within exactly 2 inches of the navel. Here a rounded edge could be felt very readily, and it could be traced to the right, where it passed beneath the costal margin in the mid-axillary line. It could also be readily traced to the left. The edge was rounded and very hard and resistant. The general surface of the enlarged mass was smooth, but in places in the position of the right lobe it felt a little rough and irregular. The upper limit of hepatic flatness began in the mid-sternal line at the level of the fifth rib and extended to within 6 cm. of the navel. In the nipple line on the upper border of the sixth rib it extended a little below the costal margin. The edge of the spleen could be distinctly felt, and on deep inspiration came down 2 inches below the costal border. There were no changes in the blood; the urine was high-coloured, but contained neither bile pigments nor sugar. I was by no means certain as to the condition, but suspected a syphilitic liver, and ordered large doses of iodide of potassium.

I heard from the doctor again on November 21st. Mr. M. had been doing very well and keeping at work, though the mass was increasing in size.

The patient returned to see me on March 11th, 1896. The bronzing of the skin was more marked and more diffuse. He had been taking 30 gr. of iodide of potassium three times a day. The abdomen showed a very positive increase in the size of the mass in the epigastrium, which had tilted the tip of the ensiform cartilage, from which it extended exactly 11½ cm. The fingers could be placed under the edge of the liver readily from one costal border to the other. The surface was uniform, and there was a distinct prominence for the first few inches below the ensiform cartilage. It was very firm, but painless. There was no friction over it. The spleen had increased somewhat in size. When he stood up the mass made a prominent bulging in the epigastrium. The superficial veins were not enlarged. The conjunctivæ were not jaundiced. There was neither bile, albumen, nor sugar in the urine.

I was still very uncertain as to the nature of his trouble, and suggested an exploratory operation, to which he consented. This was performed by Dr. Halsted. The liver was enlarged, particularly the left lobe, which was very prominent. The capsule was not thickened. The surface was a little irregular, and the colour was of a deep brownish red. I was present at the operation, and noted the peculiar colour, but did not at the time realise its significance. The gall bladder was enlarged, and contained a light-coloured bile. There was no fluid in the peritoneum. The patient recovered rapidly from the effects of the operation, but two months later there was no change in his condition.

On December 22nd, 1896, Dr. Crouse, of Rockport, Texas, wrote as follows: "In his present condition the liver is five fingers' breadth from the navel. There is commencing dropsy of the feet and abdomen. He has had a very bad attack of erythema nodosum, involving both legs. Ten days ago, after a very wearisome boat trip, he had a hæmorrhage from the stomach, after which he pased tarry stools for three days. He died in May, 1897. His brother states that the abdomen increased in size, and that he lost flesh and strength.

The clinical features of the 24 cases of the so-called bronzed diabetes have been carefully analysed by Anschutz.[2] No case has occurred in a female, and in a discussion at the Société Médicale des Hôpitaux (1897) Letulle stated that of the 30 known cases all were in men. Pigmentation was present in 14 of the 24 cases. The melanoderma may be the first symptom noted, and may precede the diabetes for several years. It is sometimes of a peculiar leaden tint, and in Hanot's original description he speaks of "une teinte plombée." The diabetes, the symptom which has attracted special attention, is of the ordinary form; the amount of sugar is often considerable. In 6 cases the diabetes ceased under observation. Only a few instances have been reported—5 of the 30—(Letulle) without diabetes. The general opinion is that the diabetes is secondary to a disease of the pancreas, which in 18 cases has been found deeply pigmented and cirrhotic.

The pathology of the process is still very obscure. The present state of our knowledge is perhaps best expressed by the conclusion in Opie's paper already referred to:

"1. There exists a distinct morbid entity, hæmochromatosis, characterised by the widespread deposition of an iron-containing pigment in certain cells, and an associated formation of iron-free pigments in a variety of localities in which pigment is found in moderate amount under physiological conditions.

"2. With the pigment accumulation there is degeneration and death of the containing cells and consequent interstitial inflammation, notably of the liver and pancreas, which become the seat of inflammatory changes accompanied by hypertrophy of the organ.

"3. When chronic interstitial pancreatitis has reached a certain grade of intensity diabetes ensues and is the terminal event in the disease."

To one additional point I may refer. In Case 1 the hæmorrhages into the skin of the legs, which occurred so frequently, might be regarded as the cause of the general hæmochromatosis. Though experimentally Hunter and others have caused accumulation of large quantities of iron-containing pigment, particularly in the spleen, I believe no widespread hæmochromatosis has ever been produced.

I happen to have had under observation within the past two years a case of hypertrophic cirrhosis in a hard-working farmer who had been a very temperate man, and whose trouble began in 1895 with jaundice associated with urticaria and extensive subcutaneous ecchymoses and purpura. Dr. Tompkins, of Charleston, W. V., noted at that time a large, hard tumour-like mass in the epigastrium. I saw him first on December 23rd, 1897. He then had jaundice, a large, smooth liver, and an enlarged spleen. He had had during the two years innumerable attacks of purpura, and when I saw him there was a fresh crop, with large irregular wheals. In 1898 I saw him again and heard of him repeatedly. The special feature was the recurring attacks of purpura, very much of the same character as those noted in Case 1. Towards the end of the year he became more jaundiced and dropsical. He died in coma early in January of the present year. The point of special interest is that the liver, which was much enlarged and very cirrhotic, presented a totally different appearance from that of the liver in hæmochromatosis. There was none of the ochre-yellow pigment, and it could be seen at a glance that the condition was entirely different from that presented by the remarkable sections which I here demonstrate, and which were kindly loaned to me by Dr. Opie.

REFERENCES.

[1] Hanot and Chauffard, *Revue de Médecine*, 1882. [2] *Deut. Arch. f. klin. Med.*, Bd. lxii.

ROYAL SOCIETY OF EDINBURGH.—At the annual general statutory meeting held on Monday, November 27th, the following office-bearers were elected for the ensuing session: *President:* The Right Hon. Lord Kelvin, G.C.V.O., F.R.S. *Vice-Presidents:* Professor J. G. M'Kendrick, M.D., LL.D., F.R.S.; Professor Chrystal, LL.D.; Sir Arthur Mitchell, K.C.B., LL.D.; Sir William Turner, M.B., F.R.S.; Professor Copeland, Astronomer-Royal for Scotland; the Rev. Professor Duns, D.D. *General Secretary:* Professor P. G. Tait. *Secretaries to Ordinary Meetings:* Professor Crum Brown, F.R.S., and Sir John Murray, K.C.B., LL.D., F.R.S. *Treasurer:* Philip R. D. Maclagan, F.F.A. *Curator of Library and Museum:* Alex. Buchan, M.A., LL.D., F.R.S. *Councillors:* Sir J. Batty Tuke, M.D., D.Sc.; A. Beatson Bell, Advocate; Professor Shield Nicholson, M.A., D.Sc.; Dr. John Gibson; the Hon. Lord M'Laren, LL.D.; C. G. Knott, D.Sc.; Dr. Alex. Bruce, M.A., F.R.C.P.E.; James A. Wenley; the Rev. Professor Flint, D.D.; James Burgess, C.I.E., LL.D.; R. M. Ferguson, Ph.D., LL.D.; Robert Irvine. *Honorary Representative on George Heriot's Trust:* Sir John Murray, K.C.B., LL.D., F.R.S.

REMARKS
ON
THE PATHOLOGY OF TABES IN RELATION TO GENERAL PARALYSIS OF THE INSANE.

Made at the Opening of the Adjourned Discussion at the Pathological Society of London.

By Sir WILLIAM GOWERS, M.D., F.R.S.,
Physician to the National Hospital for the Paralysed and Epileptic.

Mr. President and Gentlemen,—I must first add my tribute to the recognition of the interest of the demonstration and the ability of the exposition we received from Dr. Mott at the last meeting, and of the proof it affords of the wisdom of the step taken by the London County Council, and of the appointment by which they completed it. I have little to criticise in the statements made by Dr. Mott, and much to endorse in the remarks of Dr. Buzzard. The question of the preponderant relation of tabes to syphilis has, I think, long passed into the region of admitted fact. I have published more extensive statistics on the point, but, for the sake of the discussion this evening, I have been through my notes of the last 100 consecutive cases of tabes seen in private, which constitute an unselected series, with this result: In 68 cases there was unquestionable evidence of past syphilis. In 12 per cent. the disease was probable; there was evidence of a chancre of uncertain nature, making 80 per cent. of certain or probable syphilis. In the remaining 20 per cent. the disease was possible, that is, there had been exposure to the ordinary risks of infection, emphasised in most cases by the occurrence of gonorrhœa, often several times. In not one of the 100 cases could the disease be excluded by the absence of any exposure to risk of its contraction in the ordinary way. We all know by experience that it is only by this means we can actually exclude it, for all have met with such cases as those quoted by Dr. Mott from Dr. Radcliffe Crocker, in which the constitutional disease has occurred without any history of a primary sore. Two of the cases in this series would have gone into the "possible" class but for the facts that the wife of one suffered from syphilitic choroiditis, and a child of the other from the interstitial keratitis. All these cases were males. In the case of women the facts are obviously more difficult to obtain, but evidence of syphilis is, I think, clear in at least half the cases, and the remainder are for the most part married women in whom the disease notoriously often eludes recognition. It is unjustifiable to inflict on the husbands the distress of direct questions.

In juvenile tabes we seldom have doubt. The evidence of inherited syphilis is usually clear. It was so in about 6 cases I have seen, and I have met with one instance in which both father and son suffered from tabes, the former from acquired, the latter from inherited syphilis. Optic nerve atrophy is also sometimes seen in these cases of juvenile tabes. So also is reflex iridoplegia—the Argyll-Robertson symptom. With regard to this, Dr. Mott remarks that apart from tabes, it is only met with in cases of syphilitic brain disease, but I would remind him that, ten years ago, in some lectures on Syphilis and the Nervous System, I pointed out that this isolated loss of the light reflex is not rare in cases of constitutional syphilis apart from any other characteristic nervous symptoms. It is so in men, women, and children, and I would emphasise it, because my observations since have confirmed me in the opinion that it is a diagnostic symptom of great weight and often very opportune.

Few of us are in a position to criticise the facts which Dr. Mott has given us regarding general paralysis and its relation to tabes. My own experience emphatically confirms the statement by Dr. Buzzard that when the symptoms of the two diseases are associated, those of tabes precede those of general paralysis. I have seen a large number of cases in which the latter supervened on the former; I do not recall any case in which the paralytic symptoms led the way and the knee-jerks afterwards became lost. The common rule in cases of this class is for the legs to remain normal, or more commonly for an excessive knee-jerk and foot-clonus to accompany progressive loss of power. In the tabetic cases a history of syphilis is, I think, as common, and its presumption as constant, as in the pure cases of tabes; but I do not think that this statement can be made of the paralytic class, although the facts are not easy to ascertain. Of the juvenile cases of general paralysis described by Dr. Mott I have had no experience. The only cases of the kind I remember have been cases of arrest and irregular impairment of cerebral function, not progressive, associated with the inherited disease, but most readily explained by actual specific disease of the brain.

The pathological questions I must, with Dr. Buzzard, leave to those with whom remains the opportunity for elaborate investigation. Dr. Alexander Bruce does not, perhaps, remember how strenuous, 25 years ago, was the advocacy of the dependence of the changes in the posterior columns on the meningitis over them, and on the interstitial and perivascular alterations, although not precisely in the minute form which he suggests. The theory disappeared for a reason which I think still holds good. These extra-neural alterations are inconstant, especially in degree, and they can be equally explained by the secondary neuroglial and vascular alterations which occur whenever there is a primary degeneration of the nerve elements; for example, in that which is secondary to a traumatic process or focal myelitis. On the other hand, the theory failed entirely to account for the most remarkable fact of tabes, the restriction of the symptoms to function, the manner in which, in the slighter cases, without cutaneous sensory disturbance, there was only degeneration of the fibres of the posterior median columns, which we have learned to regard as the upward path from the afferent muscle nerves, and the frequent, almost usual, loss of sensation to pain, it may be almost complete throughout the legs, with no impairment to sensibility to touch. There may be, though this is indeed a rare condition, loss of sensation to touch only, limited to the soles of the feet. We cannot explain such a functional limitation by a process essentially random in incidence. All the teaching of our pathological knowledge since has been that such restricted impairment is the result of the action of a toxic blood state on the nerve elements themselves. The difference in their function involves variations in their susceptibility, by which slight differences in the nature of the toxic agent, perhaps inconceivably minute, involve quite different effects in the symptoms produced.

We must remember, moreover, that in the case of other toxic agents the chief effects are produced on the extremities of the nerves, lessening in degree as we approach the centres. I think, therefore, that we need not be surprised at the slightness of the changes that can be perceived in the cells of the posterior ganglia. If the fibres which conduct from the ganglia are degenerated more completely—may not this be in accordance with a law which we cannot yet understand? We must expect to meet with facts we cannot yet explain.

The question of the identity of tabes and general paralysis as one disease, due to the same cause, acting on cerebral and spinal neurons, seems to me very much a question of words. Does even common causation create identity of diseases which differ so widely in symptoms as the cerebral form of general paralysis and the pure form of tabes? Does the fact of blending forms, and cases with common symptoms, create identity when there is a complete contrast between the extreme forms? If so, we ought to regard a scrofulous tumour of the brain and pulmonary phthisis as one disease, or even erythema nodosum and the acute articular rheumatism which may coincide with it. But would this correspond with our common use of the term "disease," which is connected with a definite aggregation of symptoms rather than with their discerned causation? This statement may, however, be regarded by Dr. Mott as handing to him the point at issue. It does, I think, so far as concerns the cases of tabetic general paralysis, but the cases of the paralytic form seem open to more question, which I must leave to Dr. Savage to solve. I would point out how imperfect is our present nomenclature by which we have to speak of tabetic and paralytic general paralysis. The German term, "paralytic dementia," has never obtained a foothold here, the word "dementia" having different associations. I do not know that any other word, such as "paramentia," would be appreciably better.

The final question put by Dr. Mott raises a problem of great importance on which I have long held a decided opinion.

Dr. Mott asks whether the toxic agent "does not lower the durability of the nerve elements, so that some other factor" induces a premature decay. I have long maintained that this is an essential secret of the mysterious incidence of these degenerative diseases. An average man inherits an equal vitality in all his structures. He goes to pieces at last like the famous "one-hoss shay," all at once, in mature, equable, senile decay. At the other extreme are those individuals who possess structural elements (it may be in some part of the nervous or the muscular system) so deficient in vital endurance that they decay as soon as, or soon after, complete development is achieved.

Such are some cases of idiopathic muscular atrophy, of congenital atrophy of the optic nerves, in which sight fails in a whole family soon after puberty, or of "hereditary ataxy,"—"Friedreich's disease"—in which certain structures of the nervous system decay soon after adult age is reached. In other cases the defect in vital endurance is only sufficient to render some structures less resistant than others, to cause, for instance, the motor nerve structures to decay before the others under the influence of grief, or the nutrition of the cerebral structures to give way under the strain of work or anxiety. This disposition to decay, sometimes inherent, strongly or slightly, seems to be induced artificially by toxic and perhaps other influences. Their effect is specific in many cases, probably in more than we can discern. They lead to failure of nutrition, decay, degeneration. It may seem spontaneous, or be evidently excited. It may occur soon, a few years after its cause has seemed active, or the effect may be only manifest so long afterwards that the connection may be only perceptible by these considerations. Thus tabes may be a post-syphilitic disorder in middle life, or only, yet with the same relation, when the general failure of approaching age obscures the significance of the cause. We shall understand many things more clearly if we perceive that acquired influences may have the effects of congenital dispositions, that either may cause effects unaided, and may predispose to the results of influences that would otherwise seem to act alone. These considerations are, I fear, somewhat beyond the question before us, but they are not, I think, beyond their indications.

ON "ALBUMINURIA IN THE APPARENTLY HEALTHY."

By HERBERT P. HAWKINS, M.D., F.R.C.P.,
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It has been known for some twenty-five years that albumen may be found in the urine of persons who are apparently in good health. During the last twenty years a large number of facts relating to this albuminuria have been accumulated. Theories as to its causation and meaning have been put forward. But very little advance has been made towards answering the important questions which must occur to anyone who has a case of this kind before him. We want to know: What is the subsequent history of the individual in whom this albuminuria is found? What is its effect on the duration of life? Does the albuminuria disappear? Does the patient develop true renal disease at a later period? Or is he a weakly individual who succumbs to some other ailment before his expectation of life has been realised? These are old questions, but a definite answer based on actual experience is still wanting.

Definition.

Before discussing the matter it is necessary to have a clear idea as to the meaning of this term "albuminuria in the apparently healthy." There are two points to be noted. In the first place, in using this term we must of course rigidly exclude all cases of albuminuria in which there is the possibility of suspicion that any true organic change in the kidneys may be present. And in this respect care must be taken to eliminate more particularly the early stage of granular kidney, in which albuminuria is often slight and inconstant. We must also exclude the albuminuria which is associated with morbid states of the blood, such as anæmia, and with the puerperal condition. We have nothing to do with the albuminuria which may be attributed to congestion of the kidney, such as results from cardiac disease or cardiac failure from any cause. And we have nothing to do with the toxic albuminuria which occurs in the specific or bacterial diseases. We are left to consider albuminuria in individuals who either are in perfect health, or at any rate present no sign of disease to which that albuminuria may reasonably be attributed. In the second place, it is necessary to understand in what sense the word "albuminuria" is used. It is used in a clinical sense, and not in a laboratory sense. There are some delicate tests for proteids, which give a reaction in nearly all specimens of urine, so that from the laboratory point of view albuminuria is the rule rather than the exception. Even the picric acid test, which reveals a percentage of albumen of 0.00015, may be said to err on the side of delicacy, and it is said to show a trace of proteid matter in some 30 per cent. of urines examined. For practical clinical purposes it is sufficient to employ the two common tests—namely, the boiling of acid urine, which shows a proteid percentage of 0.0003, and the addition of nitric acid, which shows 0.003 per cent. By albuminuria, then we mean the presence in the urine of such an amount of albumen as is revealed by these two tests.

Classification of Cases.

The next step is to consider under what conditions this "albuminuria in the apparently healthy" is met with. Without necessarily covering the whole ground, there are some four or five such conditions, and a provisional classification may be based on them. But it is unlikely that such a classification will prove a true and permanent one, because it is by no means certain that all these conditions stand to the albuminuria as cause and effect, and it is not improbable that some one primary defect underlies them all.

"Exertion Albuminuria."

The first class, in which the albuminuria is clearly dependent on "muscular exertion," is easily studied, as it is of very common occurrence. This exertion albuminuria is found in the healthiest and strongest individuals. One of the earliest observations was that of Leube, who found albumen in 19 out of 119 soldiers after a long march, that is, in 16 per cent. He found no casts. The same phenomenon has been shown to occur in boys at school. Numerous other observations of the same kind might be quoted, especially those of Grainger Stewart. This exertion albuminuria is very common, and it may be that after sufficiently severe and prolonged exertion it is universal. I may mention an instance which confirms this. Dr. Jenner, Superintendent of the Clinical Laboratory of St. Thomas's Hospital, examined the urine of some of the members of the Hospital Rugby Football Team, namely, nine forwards and one half-back, immediately after the Final Cup Tie three years ago. Albumen was present in every one of them, and, what is an important fact, hyaline casts were abundant in the urine of all except one. All these men were apparently in perfect health and training. In another case he found albumen and numerous hyaline casts in the urine of a student after a long cross-country run. Under this heading it may be noted that the urine sometimes becomes albuminous after a long series of epileptic fits. It is also worth while noting that in one recorded case, where albuminuria always occurred after slight exercise, massage was followed by no such effect; and it may be shown that the chief factor in the production of this form of albuminuria is the prolonged muscular contraction and consequent rise of blood pressure.

Neurotic Albuminuria.

Of the next class our knowledge is less precise. It has been termed "nervous" or "neurotic" albuminuria. There is some evidence to show that transient and slight albuminuria may follow prolonged overwork and mental strain or anxiety. It is possible that the transient albuminuria which has been noted in exophthalmic goître may come under this head. A third class is formed by individuals who present transient albuminuria after a cold bath, but this class is small and unimportant.

"Dietetic Albuminuria."

A fourth class comprises cases in which a slight transient albuminuria is apparently induced either (1) by the ingestion of large quantities of proteid material, such as cheese and

eggs: or (2) by the taking of food of any kind. The first of these classes undoubtedly exists, but, as regards the second class, where the mere taking of a meal apparently produces albuminuria, more doubt exists, because the meal at which observations have been chiefly made is breakfast, and here the influence of position of body and rising from bed has not always been eliminated. The conjunction of albuminuria with chronic dyspepsia (and often oxaluria) hardly comes under our definition of albuminuria in the apparently healthy. These four classes of albuminuria are easily recognised with a little care. In each of them there is some one definite cause, which is clearly removable, and I doubt if they need be looked upon as more than trivial departures from a healthy condition.

"Postural Albuminuria."

Finally we come to the class to which I believe most instances of albuminuria in the apparently healthy belong. It is sometimes spoken of as "postural" on the ground that it is largely influenced by the position of the body. It is also called "cyclic" from the fact that the daily appearance of albumen shows a certain definite rhythm or periodicity. This class probably also includes the majority of cases which have been termed "albuminuria of adolescents." I think it is the most common form. I have watched 6 such cases over varying periods up to seven years, and during the same period I have come across no case that I could reasonably classify under any of the other heads, excepting, of course, exertion albuminuria. It is of this class that the greatest doubt as to prognosis exists.

We have a certain number of facts concerning this form of albuminuria. It is most commonly met with in young people, but it may certainly be found up to the age of 50, though at such an age great care must be exercised in distinguishing it from an early stage of granular kidney. But the age at which it commences and the absolute frequency of its occurrence are unknown, because the condition is nearly always discovered accidentally, either as a result of examination for insurance, or by examination of the urine as a matter of routine in some illness. For the same reason our information as regards sex is imperfect. It is apparently far more common in males, but females seldom present themselves for insurance, and there is generally more difficulty in obtaining a specimen of their urine for examination. The time of day at which the albumen appears in the urine is constant. It is not present in the urine passed immediately on rising from bed in the morning. It is present in the after-breakfast specimen. It may not be found again in the course of the day, but in many cases it is present after the midday meal. It is nearly always absent in the evening, when the day's work is done. The albumen in these cases is always small in amount, being seldom a measurable quantity, sometimes, however, being one-tenth or one-eighth, according to the usual rough clinical method of estimation. In all other respects the urine is healthy, as regards quantity, colour, specific gravity, and amount of urea. In some cases hyaline casts are found, especially after centrifugalising. The general health is commonly perfect, and there is no evidence of any affection of heart or arteries, and there is no increase in the arterial tension as estimated in the radial artery. As regards the family history of these cases no constant factor can be discovered, though, by some, gout is supposed to play a part. A very important matter is the fact that this condition may be found to exist in more than one member of a family. In one recorded case three out of five children in one family always showed albuminuria for three hours after breakfast, and these children were carefully watched for seven years without the appearance of any renal or other disease, and without any sign of ill-health.

Before discussing the prognosis of such cases it is necessary to agree upon some explanation of this albuminuria. The central fact on which an explanation is based is the constancy in the time of day at which the albumen appears. It is a morning albuminuria. This constancy might conceivably be explained either by the rising from bed and assumption of the erect position, or by the cessation of sleep, or by the taking of breakfast after some hours of fasting, or by the taking of the matutinal cold bath. Of these possible factors the evidence points to the first, and I think it can be shown that this morning albuminuria is dependent on the rising up, the standing and moving about during the early part of the day, and that it is not influenced by the taking of food or of a cold bath. In confirmation of this, I may mention a well-marked case of this kind of albuminuria, where the condition had been present for two years. It was discovered as usual quite accidentally; as a matter of fact, the patient examined his own urine. I induced him to stay in bed for eighteen days, thinking that perhaps the long rest would lead to the total disappearance of the albuminuria. It had no such effect, and the albuminuria has now continued for another three years since then, making five years in all, without any impairment of health. But though the rest produced no permanent effect, it had considerable temporary influence. During the eighteen days which he spent in bed, at the very time at which the albuminuria is most constant, namely, about an hour after breakfast, on eight days no albumen appeared, and on ten days there was only a minute trace. It must be noted here that although the patient was kept in bed, yet a certain amount of movement of the body was entailed by the making of a toilet and the sitting up to take breakfast in bed, so that a condition of absolute rest was not strictly maintained. It was further found that the character of the breakfast and the taking of a cold bath had no obvious effect. The urine was examined also one hour after the midday meal, and although under the usual habits albumen was known to be commonly present at this hour, during these eighteen days spent in bed it was present on one occasion only, and then only as a minute trace. The effect of the rest in a recumbent position may be seen in this, but it is still more manifest in the evening record. Late in the evening the urine is almost always free from albumen, and on twelve of these eighteen days of rest no albumen was found. But on six evenings not taken consecutively, but at random, he was allowed up and about for two hours, and on every one of these occasions the urine passed at the expiration of this period of movement was found to contain albumen, and the amount of albumen was, moreover, greater than on any other occasion during this period. No doubt similar observations have been recorded. I think there is good evidence for believing that the one great factor which influences the albuminuria in the majority of these cases is the position and movement of the body.

It is possible to carry the explanation a step further. Our knowledge of the physiology of the secretion of urine, and the facts that we have at our disposal relative to the morbid conditions under which albumen appears in the urine, indicate that the escape of albumen occurs in the glomeruli. Further, we may believe that the process of secretion of urine in the glomeruli is not merely a matter of filtration, which would vary directly with the blood pressure in the glomerular capillaries, but that it is a process of filtration checked and controlled by the activity of the flat epithelium which covers the capillary loops. In other words, in order to understand the mechanism of albuminuria two elements must be considered—the pressure in the glomerular capillaries and the state of their epithelial covering. One of these two elements must be primarily at fault in this form of albuminuria. Now there is evidence to show that the activity and integrity of the epithelium is dependent on the maintenance of a certain normal blood pressure in the capillaries, and that if this pressure is disturbed, either raised or lowered, for even a very short period of time, the epithelium quickly responds by a failure to perform its selective function with efficiency and albumen appears in the urine. For example it can be shown experimentally that if the arterial supply to the glomeruli is cut off or diminished for a few hours, on restoring the blood current and blood pressure to the normal, the first urine secreted is albuminous. On the other hand, we know that a rise of blood pressure in the glomeruli, such as is produced by venous stagnation, is also attended by the escape of albumen, and that this is not a mere matter of altered filtration under a higher pressure, but that damage inflicted upon the epithelium also plays a part is shown by the fact that the amount of urine under this condition is diminished and not increased.

Now, in this condition of albuminuria in the apparently healthy, in exertion albuminuria, in so-called neurotic albuminuria, in albuminuria dependent on cold bathing, all our evidence tends to indicate: (1) That the immediate cause of the escape of albumen is temporary impairment in the efficiency of the epithelium of the glomeruli; but (2) that this

impairment in epithelial efficiency is itself the result of temporary alterations in the blood pressure in the glomerular capillaries. In other words, the actual seat of the trouble appears to be in the vasomotor mechanism which regulates the blood flow into and out of the glomeruli, and not in the kidney structure itself. This is the view which seems to be pretty generally held at the present time. It is supported by the periodicity and transience of the albuminuria, by its continuance over many years without increase and without impairment of health, by its close connection with movement and exertion, and by its disappearance on resting. All these facts would be difficult to explain on any theory involving a primary defect in the epithelium.

If, then, it is accepted that this albuminuria is due to a defect—either a sluggishness or an undue excitability (perhaps congenital) in the vasomotor regulation of the glomerular blood pressure, we are in a somewhat better position to discuss the question of prognosis. But most diverse opinions are still met with. Some are sanguine enough to dismiss it by attaching to the condition such terms as "physiological" or "functional." Others, with some reason, have suspected that it tends to end in true organic change in the kidneys.

At present we have no certain knowledge of the subsequent history of these individuals, and consequently a patient, if he makes a round of doctors, as he frequently does, becomes the possessor of a number of different opinions. The answer can, I think, only come from those who are so placed in practice as to be able to watch such cases through a lifetime; it cannot come from hospital practice. We know that the condition continues for many years without increase and without impairment of health; on the other hand, it is doubtful if in any clear case of the kind it has been known to disappear. Though the vasomotor defect which probably lies at the bottom of it is a small matter in itself, one may be justified in feeling dubious as to its total result after a lapse of twenty years. And I believe that it is one's duty, while reassuring the patient, to warn him that he must lead in all respects the healthiest life he can compass, and he should have his urine examined three or four times a year. In insurance work I am inclined to accept such an individual only with a heavy addition, acting so rather for the protection of other policyholders than as expressing any conviction that he will not live out his natural term of years.

Treatment.

As regards the treatment of apparently healthy people whose urine is albuminous, there is little to be said. On coming across one of these cases in whom the albuminuria is unexpectedly and accidentally found, the first duty is to make certain that there is no actual disease of the kidney or elsewhere. In the next place, by observation under varying circumstances, it will be possible to determine to which of the conditions mentioned above the appearance of albumen in the urine may be attributed. In the cases of exertion albuminuria, of neurotic and dietetic albuminuria, and of the form which is dependent on cold bathing, the apparent cause can be removed. In the far more common case of morning albuminuria dependent on position of the body, there is no indication for special treatment beyond the removal of anxiety from the mind of the patient and the enjoining of a perfectly healthy life. There is no reason for believing that medicinal treatment is either necessary or useful.

ON LOSS OF THE STEREOGNOSTIC SENSE.

By R. T. WILLIAMSON, M.D.Lond., M.R.C.P.,
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Cases of cerebral disease are occasionally met with in which there is no loss of sensation to tactile impressions and yet the patient is unable to tell the nature of objects placed in the hand when the eyes are closed. A coin or other familiar object placed in the affected hand is felt, but (the eyes being closed) the patient fails to recognise what it is. This condition has been described as "touch paralysis" or loss of the stereognostic sense. Under the former description I recorded 2 cases in the British Medical Journal in 1897;[1] 2 other cases I have recorded since,[2] and the following are the notes on a fifth case.

Left-sided Facial Paresis: Loss of the Stereognostic Sense and of the Sense of Pressure and Position in the Left Hand: Other Forms of Sensation Normal.—A. M., aged 44, came under my care at the Ancoats Hospital, October 24th, 1899, on account of inability to recognise objects (especially coins in his pocket) with the left hand.

History.

Three months previously he had suffered from severe pain in the head, chiefly on the right side, just behind and below the parietal eminence. It was worse at night, and kept the patient awake. At the end of two weeks the pain disappeared, but he began to be troubled with attacks of temporary failure of vision. The vision became dim or lost for five or ten minutes, but there was no loss of consciousness, no pain, no faintness, and no convulsions. He had about a dozen such attacks in four weeks' time. The attacks then ceased, and he first noticed inability to recognise the nature of objects with the left hand. He also experienced difficulty in buttoning his clothes, and in handling small objects with his left hand. Then he noticed slight clumsiness in the movements of the left leg, and afterwards, about a week before admission to the hospital, he experienced difficulty in spitting, and observed a difference in the appearances of the two sides of the face. History of gonorrhœa twelve years ago. No history of chancre or secondary syphilis. Vision greatly impaired in left eye owing to opacity of the lens and choroiditis, the result of injury in childhood.

Condition on Admission.

There was paresis of left side of the face. The nasolabial fold was less distinct on the left side than the right. This difference was increased when the patient was asked to show his teeth; it was then observed that the angle of the mouth was not retracted so much, and the upper lip was not elevated so much on the left side as on the right. The patient could not close the left eye so tightly as the right. The tongue was protruded straight; there was no paralysis of the ocular muscles (there was an old internal strabismus of the left eye dating from childhood). The right pupil was a little larger than the left; both reacted to light and accommodation. The optic disc and retina were normal on the right side; the right field of vision was also normal. The fifth and eighth cranial nerves were not affected. There was no motor aphasia, no word blindness, no word deafness. The patient could perform all the movements of the arms and legs, and was able to walk quite well. The left knee-jerk was more active than the right; there was no ankle clonus; the plantar reflexes were present. He complained only of clumsiness in the movements of the fingers of the left hand and of difficulty in recognising objects with the left hand without the aid of vision. There was no wasting of the muscles of the left hand or arm; all the movements of the fingers and arm could be performed. The grasp was unimpaired, and he could lift a heavy bucket of coals with the left hand when once he had obtained a good grasp of the bucket handle, but he had great difficulty in buttoning his clothes with his left hand. Also he showed a little unsteadiness in the movements of his left hand when he attempted to touch the tip of his nose with the index finger, or when he grasped any small object.

Sensation to tactile impressions, pain, and temperature, and the power of localising tactile impressions were normal on the left hand (as well as on other parts of the body). Though objects placed in the left hand (when the eyes were closed) were felt, their nature was not recognised; whilst they were readily recognised in the right hand. The following objects were employed in testing the sensation: Coins, keys, a watch, wood cube, ball, domino, small box, etc. Usually he had no notion of the shape or hardness of these objects when placed in the left hand (the eyes being closed) even after careful handling. Occasionally he had some knowledge of the shape and hardness, but was unable to say what the object was. Many objects, however, were recognised readily when simply placed in contact with the outstretched fingers of the right hand.

He was unable to tell the nature of passive movements and the position of the fingers and of the hand on the left side, the eye being closed; but he could tell the nature of passive movements at the left elbow and shoulder quite well, and also the nature of passive movements of the fingers, hand, and arm on the right side, and of the legs on both sides.

The sense of pressure, as tested by a pill box containing varying quantities of lead pellets, was completely lost in the left hand and arm, but it was normal on the right arm and on both legs, and both sides of the chest and face.

The apex of the heart was just outside the nipple line in the fifth space; the second sound was accentuated, the first sound was abrupt. The pulse tension was a little increased. The urine had a specific gravity of 1017; albumen and sugar were absent.

On November 6th the patient became suddenly blind in the right eye, and ophthalmoscopic examination revealed the appearances which are seen in sudden obstruction or embolism of the central artery of the retina.

The following is a brief summary of the symptoms in four cases which I have previously recorded:

Case II.—A. B., female, aged 26; syphilitic history, headache, double optic neuritis. Convulsions commencing with numbness and twitching of the left thumb. No paralysis of arms or legs; slight temporary left-sided paresis. Gradual recovery, but the patient became blind, owing to secondary optic atrophy, and the stereognostic sense was lost in the left hand. She was able to feel and localise tactile impression on the left hand correctly; she could feel painful impressions and distinguish between warm and cold objects quite well; she was able to tell the direction of passive movements of the fingers, hand, and arm on the left side, and was able to touch tip of the nose with the left index finger without inco-ordination when the eyes were closed. Sense of pressure not affected. Tenderness on deep percussion of the skull at one spot near the parietal eminence on the right side.

Case III.—Male, aged 25; sudden onset of paresis and "stiff sensation" in the right arm and leg. Gradual improvement. Two years and a-half later all the coarse movements of arms and legs could be performed quite well. Grasp of right hand equal to that of left, but difficulty in writing and in buttoning his clothes with the right hand. Slight inco-ordination

of the right hand on voluntary movement. The touch with the head of a pin recognised on both hands, but not quite so distinctly on the fingers of the right hand as on those of the left. The sense of pain and temperature and the power of localising tactile sensation not affected. Objects placed in the right hand (when the eyes were closed) were felt, but their nature was not recognised. The sense of pressure (tested by weights) and the sense of passive movements and of position were lost in the right hand. Left hand not affected. Heart normal.

Case iv.—M. H., female. Dilated heart, mitral systolic murmur. History of left-sided hemiplegia of sudden onset, complete recovery from the paralysis. Tactile and painful sensations recognised in the left hand quite well, but inability to tell the nature of objects placed in the hand, the eyes being closed.

Case v.—E. R., female, aged 37. Cardiac dilatation, mitral systolic murmur, right-sided hemiplegia of sudden onset; recovery almost complete, only the slightest impairment of the grasp of the right hand remained; tactile and painful impressions recognised in the right hand quite well, but loss of the stereognostic sense.

Nature of the Symptom.

Whenever there is marked tactile anæsthesia in the hand the patient is unable, of course, to tell the nature of the objects placed in the hand. But the cases now under consideration are those in which the patient is able to feel tactile sensations on the hand quite well, and yet is unable to tell the nature of the object (the eyes being closed). Not only is he unable to give the name of the object, but he does not recognise its nature. A patient once described the condition to me as follows: "I can feel it (a coin placed in the hand, the eyes being closed) quite well; I know there is something in the hand, but I cannot 'picture' it."

Complete motor paralysis of the hand may be present and yet the patient may be able to recognise the nature of many objects placed in contact with the affected hand when the eyes are closed. Also when there is a considerable diminution, but not total loss, of tactile sensation in the hand, the stereognostic sense may be but little affected, and when there is marked inco-ordination of the movements of the fingers, as in Friedreich's disease, this sense may be unaffected.

In the normal condition the nature of many objects may be recognised by tactile impressions alone. Thus if various flat objects be placed on the table, such as coins, flat boxes, books, etc., they may often be recognised (when the eyes are closed) by simply bringing the fingers or hand in contact with them. Some objects—such as a cube or ball—can only be recognised when the fingers are moved so as to grasp or handle them; in the recognition of other objects the weight or sense of pressure gives much assistance. The power of recognising objects placed in the hand, when the eyes are closed, is probably an associative process dependent on tactile sensation, on the power of localising tactile impressions, and on muscular sense, and sometimes, in addition, on the sense of pressure; but this power (stereognostic sense) may be lost, and yet the separate forms of sensation just mentioned, as well as the sensation to pain and temperature, may all be normal (as in Case ii). I have previously pointed out that in reference to general sensibility, the loss of the stereognostic sense appears to be analogous to the condition of word-deafness in reference to auditory impressions.[1]

Symptoms Associated with the Loss of the Stereognostic Sense.

In the 5 cases which have come under my observation the results were as follows:

Motor Symptoms.—Slight paresis of the affected hand was noted in 1 case, but in the other 4 paresis was absent at the time of examination. In two of the cases there had been hemiplegia, and in 1 case slight hemiparesis, which had disappeared. In 1 case there was distinct facial paresis, and in 1 very slight temporary facial paresis, on the side on which the stereognostic sense was lost. In 2 of the cases there was inco-ordination in the movements of the fingers of the affected hand.

Sensory Symptoms.—In all of the cases tactile and painful impressions on the affected hand could be recognised readily; in one case not quite so distinctly as on the hand which was unaffected. In 3 of the cases, tested more carefully, the sense of temperature was normal, and the patient could localise tactile sensations readily. In 1 of these 3 cases the patient could tell the nature of passive movements and the position of the fingers of the affected hand when the eyes were closed, but in 2 cases this sensation was lost. The sense of pressure (tested by weights) was lost in 2 of the cases and present in a third case.

In the cases of loss of the stereognostic sense recorded by Sailer[3] and Burr[4] tactile sensations were felt readily but could not be localised; in Sailer's case the sense of position and passive movements of the fingers on the affected side was also lost. In a case recorded by Olmsted[5] the sense of pressure was lost, but the patient was able to tell the nature of passive movements.

In the case reported by Sailer there was left-sided hemianopsia. Case ii recorded above is of much interest, because, apart from the blindness left by the optic neuritis, there were finally no symptoms, motor or sensory, except loss of the stereognostic sense—sensation to tactile impressions, pain, temperature, the power of localising sensations, the sense of pressure and position being normal.

Nature of the Lesion.

In 2 of the cases which have come under my own observation the patient had recovered from hemiplegia due to cerebral embolism; in a third case the lesion in all probability was syphilitic (? gumma); in the 2 other cases the cause was indefinite, but probably thrombosis or embolism. In cases recorded by Dubbers,[6] Burr, and v. Monakow[7] the loss of the stereognostic sense had followed an injury causing fracture of the parietal bone. Oppenheim[8] states that loss of the stereognostic sense is often met with in the hemiplegia of children which dates from birth or early infancy, and he thinks that in such cases the sense has never been acquired in the paralysed hand.

Seat of the Lesion.

Though the exact seat of the lesion causing loss of the stereognostic sense has not been demonstrated pathologically, it is extremely probable that it is situated in the cortex of the parietal lobe. In Case ii recorded above there was tenderness on percussion of the skull close to the parietal eminence, just behind the position of the ascending parietal convolution, and there was a history of convulsions commencing in the thumb of the affected (opposite) hand. In Case i there had been pain just behind and below the parietal eminence on the side opposite to the affected hand. In the case recorded by Dubbers a gunshot injury had caused fracture of the right parietal bone; a fragment of the bone had been removed and a depression was left at the lower margin of the parietal bone, at a spot situated between the position of the middle and lower third of the ascending parietal convolution. In the case recorded by Burr the symptom had followed an injury to the head which had caused fracture of the right parietal bone. In the case recorded by v. Monakow the symptom was caused by a blow on left parietal region. An operation was performed and a splinter of bone was found compressing the ascending parietal convolution. In this case there was paralysis of the affected arm as well as loss of the stereognostic sense. In most cases there has been no paralysis of the hand at the time of examination, and it appears probable that the lesion causing loss of the stereognostic sense is situated in the parietal region just behind the arm centre of the ascending parietal convolution.

References.

[1] Williamson, R. T., British Medical Journal, September 25th, 1897. [2] Williamson, R. T., *Medical Chronicle*, February, 1899. [3] Sailer, J., *Journal of Nervous and Mental Diseases*, No. 3, 1899. [4] Burr, C. W., *Ibid.*, p. 37, 1898. [5] Olmsted, *Ibid.*, p. 807, 1898. [6] Dubbers, *Neurologisches Centralblatt*, No. 2, 1897. [7] V. Monakow, *Gehirnpathologie*, Wien, 1897, quoted by Sailer, *loc. cit.* [8] Oppenheim, *Lehrbuch der Nervenkrankheiten*, Berlin, 1898, p. 505.

ON THE DEVELOPMENT OF DISTURBANCES OF SENSATION IN DISEASES OF THE SPINAL CORD.

By L. J. J. MUSKENS, M.D.Utrecht.

The development of disturbances of sensation of the skin in locomotor ataxy is subject to the following rules:

I. As to the quality, the following changes succeed each other: (1) Retardation of sense for pain;[1] (2) loss of sense for pain; (3) loss of sense for touch. These different stages are studied best on the chest of early cases. The importance of the examination of the region of the thorax was, so far as I

am aware, first pointed out by Sir W. Gowers and Hitzig. Stages 1 and 2 follow each other rapidly: stage 3 supervenes usually after a long interval or not at all. This happens in such a way that in the midst of an area with retardation of pain stimuli a smaller area becomes analgesic. In accordance with this, an area of stage 2 is, at least in early cases, surrounded by a zone of retardation of pain sense;[2] and an area of the third stage is found as a rule surrounded by an analgesic zone. Frequent changes in involved areas within a short time also are characteristic of the first and second stages. In the first two stages no marked lack of co-ordination is observed in the affected limbs. Wherever this was the case diminished sensation for touch was found. In no incipient case with lost Achilles jerk[3] in one or both legs was a normal condition of sensation found in that limb. In all cases with deficient sexual power some disturbance in the sensation of the skin of the genital organs was found.

II. As to the quantity, the disturbance of sensation develops also systematically; that is to say, it follows the distribution of the posterior spinal roots. This has already been suggested by Hitzig[4], M. Laehr,[5] Marinesco[6], and H. Patrick[7].

Owing to the very extensive overlapping of these roots (quite in accordance with the observations of C. S. Sherrington[8] in *Macacus*) absolute loss of pain sense in a certain area can be observed only if two or more adjacent roots are involved. In the zones, where healthy overlap diseased roots only relative analgesia and retardation of pain sense is found.

The first roots involved in locomotor ataxy are, with great constancy, the third, second, and fourth dorsal, the fifth lumbar, first sacral, and fourth lumbar; from these localities the pathological process extends upward and downward.[9]

The comparative study of the development of disturbances in sensation in locomotor ataxia and allied diseases is most helpful in locating with greater accuracy the root distribution in certain parts of the human body. We find in many cases in the cervico-dorsal region the same peaks and notches in the border lines as were observed by Head and Sherrington. It appears, however, that the extent of the root areas, mapped out after this method, correspond more closely to the areas of Sherrington than to those of Head; and that, as Head himself and Thorburn have suggested, Head's zones do not correspond to posterior root zones, but to sensory segments of the cord. The cutaneous overlapping is certainly more extensive for touch than for pain; this is in accordance with Head, who worked on entirely different lines.

With regard to this method, the following facts are important:

1. As a rule, the extent of the disturbance of sensation in early cases is not quite symmetrical; usually on one side one or two more roots are involved than on the other.

2. In early cases of tabes the involvement of another root accompanying an attack of pain or numbness is a rather frequent occurrence. Areas with numb feeling are nearly always found analgesic, at least for quickly applied pin pricks.

3. In cases of advanced tabes persistent healthy root zones are very often observed within large areas of analgesia.

Finally, it is remarkable that the trigeminus area, at least the two upper branches, is very rarely involved; and also, that the nipple in very many cases, though surrounded by analgesic areas, long preserves its sensibility for pain and touch.

The development of disturbances of sensation of the skin described above was observed to occur with very great constancy[10] in nearly 100 cases examined during the last eighteen months in New York and London. Of many of these cases diagrams and photographs were repeatedly taken. No border lines were drawn, but the answer obtained after each individual inquiry was noted down on the skin. These results held good also for many cases of allied diseases (ataxic paraplegia, syphilitic affections of the cord, combined sclerosis). The different qualities of disturbance of sensation were also met with in several cases of other spinal maladies—for example, different forms of myelitis, surgical cross lesions, and even disseminated sclerosis—often extending in the same order as in tabes.

If my observations can be accepted as numerous enough to permit me to draw conclusions, I would say that:

1. Cases of recognisable tabes dorsalis without any change in the perception of the skin do not occur.

2. The first and most constant objective symptoms of the disease are disturbances in the sensation of the above description, and absent or slowly-produced diminished Achilles jerk.[11]

From the practical point of view we arrived at the conclusion that in suspected cases of tabes incipiens it is hardly of any use to test the sensation for touch, whereas it is of the greatest importance to test with great care the sensations of pain (pin prick), and to inquire also after the existence of retardation of pain perception, especially in the customary chest zone (third dorsal root zone). In three cases, in which the differential diagnosis between tabes and pseudo-tabes had to be suspended, adequate examination according to the above rules proved to be of decisive value.

It is rather strange that thus far in clinical examination, as well as by previous workers in this particular line, the sense for touch was by preference examined, whereas the sense for pain gives far more information; and also that the dissociation of the sense for touch and pain was regarded so long as characteristic of syringomyelia, whereas this dissociation, as I have shown, is a most common phenomenon in nearly all organic diseases of the cord.

As far as the work was done in London, I am greatly indebted to the visiting physicians of the National Hospital for the Paralysed and Epileptics, especially to Sir William Gowers for permitting me to examine the cases fully, and also to the house-physicians for facilitating the work.

NOTES AND REFERENCES.

[1] Examined after the method, described by me in the *Journal for Nervous and Mental Diseases*, July, 1899, p. 424. [2] *Loc. cit.* [3] Compare previous communications in *Belge Médicale*, January, 1899; and *Neurologisches Centralblatt*, No. 23, 1899. [4] Hitzig, *Ueber traumatische Tabes, etc.*, Berlin, 1894. [5] M. Laehr, *Archiv für Psychiatrie*, Bd. xvii, H. 3, 1895, p. 609. [6] G. Marinesco, *Semaine Médicale*, October 13th, 1897. [7] H. Patrick, *New York Med. Journal*, 1897, p. 173. [8] C. S. Sherrington, *Phil. Trans.* R. S. of London, 1898, v. 190, p. 46. [9] It is most probable that further anatomical research will throw some light on this peculiar distribution. [10] Except in one case of so-called high tabes. [11] Examined after the method described by me in the *Neurologisches Centralblatt*, 1899, No. 24.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THREE VARIETIES OF SKIN TUMOUR EXISTING SIMULTANEOUSLY IN ONE INDIVIDUAL.

I HAVE recently had under my care two cases of epithelioma of the right hand occurring in men employed in gasworks. One of them, aged about 60, presented a somewhat unusual combination of tumours. The three following were present:

1. On the outer aspect of the left hand over the fifth metacarpal bone was a warty-looking growth, which had existed for about five years. When removed it showed microscopically the typical structure of a warty papilloma.

2. Near the inner canthus of the right eye there was a small ulcer with slightly raised edges and smooth base, which had made its appearance ten years previously. Clinically it had all the appearance of a rodent ulcer, and after removal this was confirmed by microscopic examination.

3. Lastly, on the right hand there was an ulcer of some size on the stump of the index finger, which finger had been amputated some months previously for epithelioma. The original ulcer that necessitated the amputation of the index finger appeared about five years before. I amputated the hand above the wrist, and microscopic examination of the ulcer proved it to be a typical squamous-celled epithelioma.

The simultaneous occurrence in one individual of three varieties of skin tumour exhibiting different modes of growth and with different clinical characters seems to me of sufficient interest to justify the case being put on record.

Glasgow. GEORGE THOS. BEATSON.

FRACTURE OF BOTH CLAVICLES.

FRACTURE of both clavicles is an accident of such rarity that it is worth recording. A gentleman was galloping over one of his harvest fields, and put his horse at a stook; instead of rising to clear the stook it rushed through it, its forelegs got

entangled in some of the sheaves, it came down on its head, and, according to some of the labourers on the field who saw the accident, turned heels-over-head. The rider fortunately was thrown clear of the horse, and put out both his hands to save himself. Both clavicles were broken in the middle third very obliquely. The position and obliquity of the fracture in both bones was almost exactly similar. Although stunned and badly shaken by his fall he had no other injuries.

Kircaldy, N.B. HENRY W. LAING, M.D.

VESICAL CACULUS RESEMBLING CANCER.

A WOMAN, aged 50, for twelve months had been suffering from severe pain in the region of the bladder. There was no symptom of cystitis, and the presence of a stone could not be made out by sounding, but on vaginal examination a very hard lump could be felt. As the case was thought to be one of cancer, she was sent to the Manchester Infirmary for operation. She was sent home and told to come back in a month. However, a few days ago, she was in severe pain again, and I was sent for, and on arriving at the house she passed a calculus about the size of a hen's egg, or rather larger. She is now free from pain, but has frequency in micturition.

Colne. A. A. G. DICKEY, M.D.

INFLUENZA WITH URTICARIAL RASH AND DESQUAMATION SIMULATING SCARLET FEVER.

CASES of influenza accompanied by a red rash are sufficiently common not to attract much attention, and several such are referred to in Dr. Parsons's report on the epidemic of 1889-90 to the Local Government Board, and also in his further report the occurrence of desquamation in a proportion of cases either with or without previous rash is mentioned. In the following case an unusual combination of circumstances might easily have led, on the *post hoc ergo propter hoc* principle, to the conclusion that a wrong diagnosis had been made, and it therefore seems worth recording.

Inspector R—— of the Metropolitan Police, was first seen by me on September 4th, 1899. His face then had the appearance of a boiled lobster, and his arms and hands had what appeared to be an urticarial rash. He was put on the sick list, and in a few days the rash gradually disappeared, while pains in the back and limbs, similar to what he had had in a previous attack of influenza, developed, and left no doubt as to the nature of the present attack.

On September 13th he was granted a fortnight's leave of absence and went to the seaside, but reappeared on September 22nd in a state of alarm because his hands were desquamating freely, and he had been telegraphed for the day before, one of his children having shown symptoms of scarlet fever. It was found, however, that other cases of scarlet fever had occurred among the boy's playmates in the same street, two of whom had been removed to hospital, and in any case it was clear that what the inspector had suffered from was influenza, and not scarlet fever.

H. NELSON HARDY, F.R.C.S.Ed.,
Divisional Surgeon, Metropolitan Police.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

HOSPITAL FOR WOMEN, LIVERPOOL.

CASE OF HYDATID CYST IN THE OMENTUM OBSTRUCTING LABOUR: SUBSEQUENT ABDOMINAL SECTION AND REMOVAL.

(Under the care of JOHN E. GEMMELL, M.B., Honorary Surgeon to the Hospital.)

MRS. M. C., aged 29, 1-para, was seen by me with Dr. Harcourt Davies, of Walton, on the night of July 5th, 1899. The history was that the patient had been in labour for twenty-seven hours, being attended by a widwife, who had called in Dr. Davies on account of the delay; the latter found that the labour was obstructed by a tumour.

On examination, a cystic tumour was felt low down in the pelvis; the first stage of labour was completed, and the head unable to descend into the pelvis. The tumour was the size of a cocoanut, and was between the pains felt to be movable. The diagnosis was that of ovarian tumour, and with a cystic tumour of such a size the question of immediate operative interference was never considered, but on the patient being placed under an anæsthetic it was found that between the pains we could push the tumour out of the pelvis into the abdomen; after this, forceps were applied, and delivery easily effected.

On examination of the abdomen after delivery, we found the tumour occupying the right iliac fossa, and very movable. The puerperium was normal.

On August 14th the patient was admitted into the Hospital for Women under my care, and on examination we could feel a cystic tumour to the right of the uterus, which, being very mobile, could be pushed high up into the abdominal cavity or down into the pelvis; it was about the size of a small cocoanut, and of a soft solid consistence. The uterus was in normal position. The diagnosis was now made of a dermoid ovarian cyst with a long pedicle.

On August 18th I opened the abdomen, and passing the fingers into the peritoneal cavity the omentum was felt spread over the cyst and adherent to it and to the abdominal wall; and on exploring the pelvis, the uterus was in normal position, both ovaries and Fallopian tubes healthy and free, and the cyst in no way connected with them. The omentum being separated from the front of the tumour, a trocar and cannula were pushed into the cyst, the wall of which was very thick and irregular, and on squeezing the cyst a jelly-like matter came out, which was observed to consist of daughter cysts, the tumour being thus proved to be a hydatid.

As is usual in cases of hydatid cysts in the abdominal cavity there was no pedicle, but adhesions to the omentum on its upper and lower surfaces formed a pedicle for it, and allowed of the free movement remarked upon. On the right side, at its lowest part, it was adherent to the bladder, from which it was with difficulty separated. The adherent omentum was now ligatured in several pieces and separated, and the cyst removed. One small cyst, about the size of a barcelona nut, which contained several daughter cysts, was found fixed to the posterior wall of the uterus, and removed. The abdominal cavity, omentum, intestines, liver, and pelvis were thoroughly explored, but no more cysts were discovered. The abdomen was washed out and closed with silkworm gut; no drainage was used.

The first dressing was on the eighth day (August 25th), when the wound was healed and the stitches removed. The recovery was uninterrupted.

REMARKS.—This case is interesting mainly from the rarity of the condition; and although there are many recorded cases of hydatid disease of the abdominal cavity, yet looking over the literature of the subject I find no record of such a cyst being a cause of obstructed labour, although Galabin in his textbook of midwifery states that such cysts may be found in the pelvis and obstruct labour, but are rare, and cannot be diagnosed from ovarian tumours unless there is also a tumour of the liver. It is further to be noted that this cyst was solitary, whereas, in most instances recorded, cysts have been found to be multiple. The treatment of the case during labour is not different from the treatment of any case of tumour obstructing labour, namely, whenever possible push the tumour beyond the presenting part, and therefore there is no necessity to discuss the reasons, for and against, immediate operation by vaginal or abdominal section. Such operations are easy enough to do at the time, but must be even easier, and certainly safer, when undertaken after the puerperium. The pathological condition is that of the echinococcal mother cyst, containing numerous daughter cysts, and these cysts under the microscope show the typical characters of the laminated outer layer of the cyst wall proper, hooklets, and granular matter. It is impossible to say how the patient came to be infected. She stated that she had never resided in the country, had never lived anywhere where dogs were kept, and had never cared for dogs.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

W. WATSON CHEYNE, F.R.S., President, in the Chair.

Tuesday, December 5th, 1899.

THE RELATION OF TABES TO GENERAL PARALYSIS OF THE INSANE.

THE debate upon the above subject was resumed by Sir WILLIAM GOWERS, whose full remarks will be found on page 1597.

Dr. SAVAGE observed that the two diseases bore close resemblances, as studied from the clinical side, and he held that syphilis was the most important factor concerned in each. It was to be remembered that other toxins than that of syphilis might lead to results of a like kind—as, for example, alcohol and lead—or the virus causing influenza. The poisons produced their effects upon the least stable parts of the nervous system. But whether such results could be classed as one disease was a debatable subject. The speaker had seen (in support of the essential similarity of the two affections): (1) Ataxic patients who later on developed general paralysis; (2) patients in whom the symptoms of the two ran together; (3) alternations of the two conditions. His statistics showed that the larger number of general paralytics were not ataxic; not more, perhaps, than one-third were so. He suggested the possibility of a cerebral form of ataxia occurring, as well as one arising in the spinal cord. Amongst cases exhibiting alternations, it might happen that a lull would arise in the mental condition, and corresponding with this, there appeared bodily enfeeblement; then a maniacal outbreak would occur, and the full power of the limbs be temporarily regained. A patient might be typically ataxic and insane, but did not necessarily become paralytic. He could confirm the observation of others that the ataxic patient often had a neurotic history, whilst in the general paralytic that was not the case.

Dr. FERRIER had arrived at the conclusion that tabes and general paralysis were essentially identical, from clinical observation. Such a view was definitely proved by the experiments of Krafft Ebing, who showed that such patients were insusceptible of syphilitic infection. It must be borne in mind that dermatologists knew that in a certain percentage of typically syphilitic lesions of the skin no history of syphilis could be obtained, and he thought that the same held in the small percentage of cases of tabes in which no syphilitic history was forthcoming. For him syphilis was an essential factor; stress alone could not produce tabes. The same was true of general paralysis. The percentage of cases in which the two groups of clinical signs concurred was not in his experience high. His own notes showed him that tabes was three times as common as general paralysis. He directed particular attention to fact that, although meningeal thickening accompanied tabes and general paralysis, there was clinically no pain in either, and no pain in the second on compressing the head. On the contrary, pressure caused pain in true syphilitic cerebral disease. He had long been accustomed to adopt this as a means of differential diagnosis.

Dr. PAYNE said he thought Dr. Mott's evidence in favour of the unity of tabes and general paralysis was an important contribution to pathology. This question had, of course, been raised by others, but the histological evidence had been extremely conflicting, so much so that Fournier in discussing the subject was obliged to admit that there was a gap in the demonstration, where anatomical evidence ought to come in, from the contradictory statements made by different observers. He was not sufficiently familiar with the recently-introduced methods of histological examination and staining to criticise Dr. Mott's histological results; he would only venture to say a few words on the general pathology of the question. He quite agreed with the conclusion now widely adopted that those diseases were, in most cases at least, due to syphilis. On this point he could not, of course, produce those large statistics, which could only be provided by those who had experience in special practice and institutions, as neurologists or alienists. But he would insist upon this fact, that in those cases which one knew most intimately by personal as well as professional acquaintance with the patient's history, a history of syphilis could almost always, he might say from his own experience always, be obtained. It might be that gross syphilitic lesions were only occasionally, perhaps even rarely, present in such cases, but the mode of action of the syphilitic virus appeared to be different: it was that of a diffuse toxin, presumably the product of the living syphilitic virus—that is, the yet unknown microbe of the disease. The disorders which were thus very probably referred to the remoter action of syphilis, he had been in the habit of calling, when explaining these matters to students, post-tertiary disorders; but the term used in the classical lectures of Fournier—parasyphilitic—had obtained general acceptance, and would probably be preferred. Merely as an illustration, he would refer for one moment to the parallel case of cirrhosis of the liver. At one time he remembered syphilitic changes in the liver were supposed to be confined to the well known focal or gummatous disease syphiloma, and diffuse cirrhosis was referred to other causes, especially to alcohol. But then came the demonstration that hereditary syphilis produced a diffuse cirrhosis of the liver, though differing anatomically from the alcoholic cirrhosis of adults. In the light of this discovery, one had to reconsider the cases of adult cirrhosis in which there was a history of syphilis, with or without concomitant alcoholism, and one was ultimately led to the conclusion, which he for one had adopted with some reluctance, that syphilis was an undoubted factor, sometimes even the exclusive factor, in diffuse cirrhosis of the liver. If this was granted it would remove much of the difficulty which some pathologists felt in admitting the possibility of diffuse organic changes, as well as focal changes, in organs being attributed to syphilis. Another class of cases pointing in the same direction was that of cirrhotic granular kidney occurring in children or young persons. These rare cases had always been thought to be difficult of explanation, since the change in question was generally found at an age and under conditions when the vascular and renal systems had been exposed to considerable wear and strain. But he thought he had clear evidence in some such cases of hereditary syphilis, which, if it really were the efficient morbid agent, could only act as in the other diseases spoken of, in the manner of a diffuse toxin, producing diffuse organic changes. These parasyphilitic diseases of other organs than the nervous system were, he thought, worth referring to, as strengthening the evidence that syphilis might produce diffuse organic changes such as those met with in tabes and general paralysis. And the proof of syphilitic origin of both diseases was a large part of the demonstration that they were really one. With submission to the neurologists, he would suggest that another so called systemic disease of the spinal cord—namely, primary lateral sclerosis or primary spastic paraplegia—was more often due to syphilis than was generally supposed. He had seen well-marked cases, though more in which no history of syphilis could be obtained, and which were even influenced by antisyphilitic treatment. It was well known that the anatomical evidence for a primary or uncomplicated lateral sclerosis was even now very defective, a cerebral spastic paraplegia being recognised as well as the supposed spinal form, the former being assumed to be the rule in children (even apart from birth palsies), the latter in adults. He thought it was by no means proved that the adult cases were not sometimes of cerebral origin, that is, due to a degeneration limited to the Rolandic area. This would make the disease more analogous to general paralysis, though with obvious differences which need not be insisted upon. If systemic spinal disease of the sensory tracts could be produced by syphilis, it seemed *a priori* probable that systemic disease of motor tracts might result from the same cause. The reason why in different individuals different parts of the nervous system were affected had still to be found, but this subject was too large to enter upon.

Dr. HALE WHITE said that he had heard with very great pleasure the address which Dr. Mott had given, for he had been accustomed for some years to teach the same views as Dr. Mott had expressed. It appeared to him that the most reasonable opinion to hold was that a person once having had syphilis was therefore more liable than others to become the victim of a chronic morbid process such as Dr. Mott had described, and that it might attack any part of his nervous system, but that it particularly first attacked one of two parts—namely, either the grey matter of the cerebral cortex

or the posterior nerve roots of the lumbar and lower dorsal cord central to the ganglia. In the first instance the disease was comparatively rapidly fatal because of the large amount of nervous tissue involved, this probably acting, as Dr. Mott had suggested, partly through absorption of toxic products of disintegration of nervous tissue. In the second case the disease lasted longer, and was naturally followed by a degeneration in the posterior columns, as in the first case it was succeeded by a degeneration of the lateral. It followed from this view that, as Dr. Mott had said, often the two types were combined in the same patient at some period of his illness, and it also followed that if a patient came before them with what appeared to be ordinary tabes, but as the disease went on the observer was struck by the rapidity with which it developed, then he could almost certainly predict that it would ultimately turn out to be of the general paralytic type. Dr. Hale White had often found this true, and of great value in prognosis. But he regarded it as essential to remember that while there were two great clinical groups in which the result of the syphilis was manifested either in the cortex of the brain or in the lumbar and dorsal posterior nerve roots central to the ganglia, so there were cases in which the first effect was seen in the peripheral nerves, such, for instance, as those in which the first symptom of tabes was either an ocular paralysis, laryngeal paralysis, or even paralysis of some other muscles. In these cases it seemed reasonable to assume that the peculiar syphilitic result now under discussion was shown first in certain of the peripheral nerves. Also in those cases in which optic atrophy was the first symptom of the disease it was shown in the optic nerve. Dr. Hale White said it was no answer to this view to say that it was unlikely that the same cause would damage sometimes one part of the nervous system and sometimes another, for other poisons, such as lead, did the same. Perhaps the reason for this selective power of poisons and the toxins of specific fevers was to be sought in slight chemical differences in the composition of the tissues. He quite agreed with Dr. Mott that general paralysis and tabes were most often seen in those in whom the earliest symptoms of syphilis had been slight.

Dr. F. E. Batten said there were two points to which he would like to allude, the first was the condition of the peripheral nerves and their terminations, and the second was the origin of the degeneration of the posterior columns. With regard to the first point, after referring to the anatomy of the muscle spindle and the fact that Professor Sherrington had definitely proved its sensory nature, he said that he had examined several such spindles from patients with tabes. In his first cases he had endeavoured to examine this organ by serial sections of the muscle, this method was unsatisfactory on account of the bulk of the material, but so far as it went it seemed to show that the nerve supply to the spindle was normal. The more satisfactory method which he had adopted in his later cases was to tease out the muscle-spindle by Sihler's method and then to undertake its examination by serial sections in longitudinal and transverse diameter, staining the muscle spindle by the Marchi and Weigert-Pal methods. By these methods some of the spindles appeared perfectly normal, others however showed degenerative changes near the nerve termination, that is to say, when stained by Marchi's method fat granules were present in the intrafusal muscle fibre near its equatorial region. The nerve passing to this region of the spindle appeared in some cases normal. Such an observation would seem to support the view that degeneration might take place at a point remote from the cell, the intermediate portion of the nerve remaining unaffected. He had endeavoured to reproduce the condition experimentally by section of the nerves passing to a muscle and then examining the nerve terminations at periods from one to fourteen days after such section, but he had failed to produce any condition similar to that found in tabes. The nerve degenerated in its whole course distal to the section at one time. He believed that the degeneration in the muscle spindle was secondary to the change in the posterior root ganglion and were not primarily due to the toxic action of the virus on the nerve terminations, for, as Dr. Mott had pointed out, there was some evidence to show that the condition of the cells of the posterior ganglion depended on peripheral stimuli, and, had the condition been primarily a terminal one, then one might have expected early degeneration of the posterior root ganglion and the peripheral nerves, whereas it was well recognised that degeneration of these parts was a late manifestation of the disease. With regard to the second point—namely, the origin of the degeneration of the posterior columns, he believed that there was considerable evidence in support of the view suggested by Dr. Bruce at the former meeting—namely, that the degeneration started from the point where the posterior nerve roots entered the spinal cord. He said that it had been shown that degeneration of the posterior columns occurred in cases of cerebral tumour, and, further, that in some such cases the degeneration limited itself to the posterior columns, the posterior roots being unaffected. He could not at this time deal fully with this condition, but he hoped to have the opportunity in a few days' time of bringing forward definite evidence on this point.

EPIDEMIOLOGICAL SOCIETY.

H. F. Parsons, M.D., President, in the Chair.

Friday, November 17th, 1899.

Presidential Address.

The President delivered an address on the Comparative Mortality of English Districts. He said that at the opening of the previous session he had called attention to the great reduction in the death-rate of the country effected by social and administrative improvement during the past half-century—namely, from 23.1 per 1,000 in the five years 1847-51 to 18.1 in the five years 1892-96, a difference of 5 persons per 1,000 living. But in the ten years 1888-97 the local death-rates ranged from 14.4 in Croydon to 25.5 in Liverpool, a difference of 10.1 per 1,000, or twice as great as between that of England fifty years ago and now; the causes of this he proposed to discuss. The death-rates of towns were as a rule higher than those of the rural districts, but the difference was diminishing, for in the ten years 1851-60 there were 124, and in 1891-97 only 115 deaths in the towns to 100 in the country, the rates per 1,000 in 1888-97 being 18.4 for England and Wales, 19.3 in the towns, and 16.8 in the rural districts; and in the three years 1896-98 they were 17.4 for the whole country, 19.0 in the thirty-three large towns, 17.2 in sixty-seven others, and 16.3 in the rest of the small urban and rural districts. The higher rates in towns were partly due to the larger proportion of children, more than half the excess being caused by zymotic diseases, the mortality from each of which was from 50 to 100 per cent. higher in the towns, with the exception of "fever," mostly enteric, in which the difference was less, or 0.19 per 1,000, in the great towns and 0.15 elsewhere; while diphtheria, which was formerly a rural disease, was now far more fatal in towns. The mortality of infants averaged 174 in the great towns and 138 in rural districts to every 1,000 births. It had been maintained that a high birth-rate involved a high death-rate; but since it involved also a large proportion of persons of reproductive age, and if the social and sanitary conditions were good, so that a normal proportion of the children survived to the ages of lowest mortality, the accumulation of these would soon more than compensate for the unavoidable mortality in the earlier years of life and the mean death-rate be low; but under unfavourable conditions, the children dying in infancy before being enumerated in the population, the death-rate and birth-rate would alike be high. But the differences between the aggregate death-rates of different counties were greater than between those of the larger towns and of the rural districts, the extreme terms being Surrey with 14.8 and Lancashire with 21.8, or, if corrected for age and sex, Rutland 13.2, Huntingdon, Cambridge, and Dorset under 14.0, eight others under 15.0; and, on the other hand, London, Durham, and the West Riding over 20.0 and Lancashire 23.6. The more purely rural and agricultural the population the lower the death-rate, even after correction, whereas in manufacturing, mining, or wholly urban and densely-peopled counties it was high. All counties with crude death-rates under 16, except Westmorland, lay to the south, and all with rates over 18, except London and Cornwall, to the north of a line drawn from the mouth of the Severn to the Wash. The country was thus divided into a north-west and a south-east half, in the former of which for the most part the death-rates, the birth-rates, and the infant mortality were higher than in the latter.

It did seem as if the highest death-rates prevailed where, as in Wales and to a lesser degree in Cornwall, the population was Celtic, or where, as in Lancashire, especially in Liverpool and in Glamorgan, there was a large Irish element. Again, the water supplies of the northern towns were mostly derived from upland sources, and those in the south from the chalk and oolite, and therefore were harder, though there were exceptions on both sides, as Sunderland with its hard magnesian water and a high death-rate, and Huddersfield and Cardiff in the north-west and Plymouth in the south with soft moorland waters, and low death-rates. In nineteen of the twenty-two counties south of the line the birth-rates in 1888 97 were under 30 per 1,000, and in three only, namely, London, Essex, and Northampton were they over 30 per 1,000; whereas in fifteen of the twenty-three on the northern side they was over 30 and in eight under 30 per 1,000. The deaths of infants to 100 births were under 14 in all the southern and eastern counties, except in London, where they were 15.5, but in the northern and western counties they were under 14 in eight only and over 14 in fifteen, reaching 17.3 in Lancashire, a difference that went far to account for the higher general death-rate. The higher birth-rate in these partly explained the greater mortality from diarrhœa and the infectious diseases of childhood, but he could not overlook the popular fatalism and recklessness of the parents and the employment of mothers in factories. The mortality from measles, scarlatina, and whooping-cough, and in a far greater degree from diarrhœa, was higher in the manufacturing and mining districts, and lower in the agricultural, as was that from enteric fever, but here another factor was evident, for it was more prevalent and fatal where the midden system was in vogue, and less so where waterclosets were in general use. Diphtheria, though frequently associated with scarlet fever, was altogether irregular in its distribution, both as regards time and space, being generally less fatal in the populous manufacturing and mining than in the agricultural districts, though showing a tendency towards equalisation. It appeared from time to time in certain localities as an epidemic for several consecutive years, after which it died out for a time. At present London and the adjoining counties presented one such focus and South Wales another. Influenza had for some years shown a lower mortality in the manufacturing districts of the north and Midlands, and a higher in the agricultural counties of the Midlands, the south, and the hilly counties of the west coast. Phthisis was more equally distributed, but higher, in London, Wales, Lancashire, and the West Riding, and lower in Westmorland and Buckinghamshire, the extremes being 1.08 in Worcestershire and Rutland, and 1.89 per 1,000 in Northumberland. Other respiratory diseases were chiefly made up of bronchitis and pneumonia, and a fourth part of the mortality took place in the first year of life, but the proportion of infants to the population would not account for the differences between one county and another. The highest rates were 4.9 in Lancashire, 4.2 in Monmouth, 4.1 in the West Riding and Stafford, and 4.0 in London, and the lowest 2 3 in Rutland and Westmoreland, 2.6 in Norfolk, Cambridge, Oxford, and Herts, and 2.7 in Bucks, Lincoln, Suffolk, and Dorset. Generally it was highest where the population were engaged in smoky and dusty occupations, thus in Staffordshire with its ironworks and potteries it was 4.1, but in Leicestershire with the cleaner industries of bootmaking and stocking weaving it was only 3.0, and a like difference was seen between the West Riding with 4.1 and the East with 3 3. Cancer and heart disease were naturally more prevalent where there was the largest proportion of elderly persons, and heart disease more in hilly districts than in others. Comparing the two counties that stood at the opposite ends of the scale of mortality, Surrey with a crude death-rate of 14.8 and Lancashire with one of 21.8 per 1,000, or when corrected for sex and age of 15.0 and 23.6 respectively it was found that the majority of the population in Surrey lived on porous soils and of those in Lancashire on clays, the density of the population in Surrey being 1.4 persons to the acre, in Lancashire 3.3. In Surrey 60 per cent. and in Lancashire 92 per cent. lived in urban districts, and these were more densely peopled. Overcrowding, that is, more than two persons per room, was more prevalent by far in Lancashire. Domestic servants constituted 15.8 per cent. of the female population in Surrey, but only 6.3 in Lancashire, where 13.7 per cent. were engaged in cotton mills. Early marriages were more numerous, illiteracy far more general, especially among the women, and the infant mortality higher in Lancashire, 173 infants per 1,000 born dying in the first year against 113 in Surrey, and the death-rate from almost every cause was higher in Lancashire, where the greater mortality from alcoholic, venereal, puerperal, and congenital disease indicated a lower moral and social standard, while the sanitary conditions of the dwellings of the working classes were generally bad. The like contrasts might be shown between the population of Durham and Dorset, the former densely crowded, and engaged in coal, iron, and lead mines and works, and the latter sparse and agricultural. As to the thirty-three great towns, among which the corrected death-rates varied from 15 in Croydon to 28 and over in Manchester, Salford, and Liverpool, the questions were more complicated. The officially stated densities were frequently delusive, for the 18 persons per acre at Sheffield was explained by the inclusion within the municipal boundaries of many miles of open moor, and the density of North Sheffield was not less than 224. West Ham was amongst the most populous and densely peopled, but had one of the lowest death-rates; the density, however, was uniform, and not the mean of overcrowded and semirural districts. Many differences between towns apparently similarly circumstanced were inexplicable, but we might say that, as a rule, the healthiest towns were those of recent growth, where the soil had never been polluted by middens and cesspits, but where well-planned sewers had been laid down from the first, where sound by-laws regulated the construction of houses and streets and the amount of open space; and the unhealthiest were those with the greatest proportion of courts and alleys, with privies, middens, or other filthy systems of the disposal of excrement, and regulated by antiquated by-laws, while the social and moral habits of the people had probably as great an influence on the mortality as that exerted by the character of the industries in which they were engaged, though there was a closer connection between these than was commonly supposed.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

John W. Moore, M.D., P.R.C.P.I., President, in the Chair.

Friday, November 17th, 1899.

The President opened the Section by some remarks regarding the excellent attendance during the last session, and hoped for its continuance.

Cerebro-spinal Disseminated Sclerosis.

Dr. J. Craig exhibited a man, aged 34, suffering from insular sclerosis, and demonstrated as far as possible the classical symptoms of that disease as first described by Charcot: (1) There was defective vision, o.d. $\frac{6}{12}$, o.s. $\frac{6}{6}$; the field of vision was not contracted; the optic papillæ had a dirty white complexion; there was nystagmus and defective power of consensual, lateral, and upward motion of the eyeballs. (2) Intention tremors were very evident. (3) Scanning speech was fairly characteristic. (4) A spastic condition of the lower extremities existed, with increased knee-jerks, rectus and ankle clonus, weakness and rigidity of the muscles, and the "toe phenomenon" of Babinsky. (5) Considerable delay precedes the act of micturition. The next case referred to was a boy who, at the age of 9, was found to be blind of the right eye, with atrophy of the disc, which seemed to Dr. C. E. Fitzgerald to be congenital. The right eye was normal. Three years after the lower extremities became spastic, tenotomy was performed in London to correct the talipes equino-varus, and shortly afterwards sight was lost in the right eye. Nystagmus, intention tremors, and slow monotonous speech had all developed. A probably specific origin, the youth of the patient, the completeness of the optic atrophy, and the surgical interference were the points of interest. The third case mentioned was that of a young lady who, at the age of 17, developed symptoms of an apparently hysterical character. In 1882 there was transient blurring, defective vision, with hazy disc in the right eye, and recovery in a month. In 1884 left optic neuritis, with right hemiparesis, occurred, followed by recovery within a few weeks. In 1885 there was again transient dimness of the right eye. In 1888 there was transient blurring in both eyes, but the discs were normal. In 1889

there was transitory blurring in the left eye, with vision and discs normal. In 1890 there was numbness in the right leg, weakness in both, giddiness, diplopia, blurred vision, defective lateral movement, and for the first time nystagmus in the left eye. Delay preceding micturition, with excessive secretion of urine, was noted. In 1891 there was apparently complete recovery from all the symptoms, save very slight nystagmus. The patient felt quite strong and well. In 1896 he became unsteady in walking and was easily fatigued; knee-jerks were increased, but no ankle clonus and no tremors existed. Diplopia, blurred vision, and nystagmus were present. Physical disturbances and slight blunting of mental faculties were observed. In 1898 intention tremors first appeared; the legs became quite rigid; ankle and rectus clonus and toe phenomenon were present; loss of muscular sense in both upper and lower extremities was very manifest; control of bladder was weak; vision o.d. $\frac{6}{9}$, o.s. $\frac{6}{6}$; hazy discs and nystagmus but no distinctive syllabic speech. If only the classical symptoms were to be relied upon in forming a diagnosis the facility for making mistakes became very evident. In this case (1) nystagmus did not manifest itself for six years after the initial symptoms; (2) a spastic condition of the extremities was fourteen years in making an appearance; (3) intention tremors appeared after the lapse of sixteen years; (4) syllabic speech could not be said to exist at all. The difficulty in arriving at a diagnosis was, therefore, chiefly limited to the earlier years where the transient, ocular, and paretic symptoms might have been considered to be of a functional nature. Dr. Craig then contrasted in detail the differential diagnosis between organic disease and functional disturbance of the central nervous system.

The President, Dr. J. B. Coleman, Dr. Finny, Sir George Duffey, Dr. Knott, and Dr. R. Travers Smith made remarks.

Dr. Craig, in reply, said, with reference to Dr. Finny's remarks, he agreed that in severe illness, and indeed in many chronic diseases, structural changes might take place in the cord and ankle clonus and other symptoms be evinced. In answer to Sir George Duffey, Dr. Craig said the third case he had referred to often got perfectly well for two years, and it was sixteen years before they knew she was not suffering from hysteria.

Senile Dementia.

Dr. Conolly Norman read a paper on senile dementia. He dwelt on certain points of clinical interest, emphasising the fact too often forgotten that this form of mental trouble might appear with apparent rapidity, and often seemed to develop after an attack of acute physical illness, influenza or the like. The most typical mental condition in senile dementia was characterised not only by a forgetfulness of recent events, but also by an abnormal acuteness of recollection of events long past. He therefore thought that mere amnesia did not cover the field. He gave a somewhat detailed description of the conditions of aphasia, paraphasia, and alexia, which were sometimes met with in cases of senile dementia.

Dr. Ninian Falkiner inquired if there was generally albuminuria in cases of senile dementia, and asked if it was a fact that there was a train of mental symptoms in chronic Bright's disease closely resembling those of senile dementia.

Dr. Law said he had a little experience of asylum work in England and afterwards in British Guiana, and a point that struck him when in the latter place was the large number of cases of senile dementia in comparatively young subjects, where in this country they would expect an attack of more active mental disease. He also noticed that cases of that kind were commonest in the lowest races in the colony.

Dr. Norman, in reply, said that albuminuria and bad kidney disease associated with senile dementia was only what they might expect. He could not however subscribe to the theory of some nervous pathologists that senile dementia depended upon arterio-sclerotic conditions in the brain, although it was undoubtedly true that gouty kidney and extensive arterio-sclerosis was common in persons dying of senile dementia. Consequently the two conditions, mental disturbance and albuminuria, coexisting would not surprise him. He had heard of various conditions of mental disturbance being described as the insanity of Bright's disease. With regard to the racial question, Dr. Law's remarks bore out his statement that the more the brain was used the less the probability of the occurrence of senile dementia.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Archibald Donald, M.A., M.D., President, in the Chair.

Friday, November 17th, 1899.

Specimens.

Dr. J. W. Martin showed a Pedunculated Subperitoneal Fibroid removed by abdominal section.—Dr. W. Walter also showed Microscopic Specimens.—Dr. W. J. Sinclair related a case of Abdominal Pregnancy, and showed the specimen along with drawings. The specimen consisted of a fully developed macerated fœtus, together with the placenta. The mass was removed by abdominal section. The fœtus lay free in the abdominal cavity. There was no evidence of amniotic covering. The patient made a good recovery. Remarks were made by Dr. Keeling and the President; and Dr. Sinclair replied.

Extirpation of Uterus.

Dr. T. Arthur Helme related two cases of extirpation of the uterus for extreme hypertrophy and prolapse. The patients (multiparæ aged respectively 47 and 52 years) had suffered for many years from prolapse of the uterus along with the anterior vaginal wall and bladder. The posterior vaginal wall was not everted. The cervix was extremely hypertrophied. The fundus uteri was felt in its normal position behind the pubes in each instance. The length of the uterine cavity measured $5\frac{1}{2}$ and $6\frac{1}{2}$ inches respectively. The operation performed was as follows: The uterus was removed in the usual way by ligaturing the broad ligaments in section. The peritoneal cavity was completely closed by careful suturing. By means of buried sutures the large raw connective tissue area covering the bladder was diminished and the bladder folded upon itself. The cut edges of the vaginal walls were then sutured, a broad surface being united. At a second operation the perineum was repaired, and the vaginal outlet narrowed. The results were quite satisfactory; the patients walked well, had no bladder trouble, and did not require a pessary. Extirpation of the uterus by itself would not cure complete prolapse of the vaginal walls, which formed a true hernia of the pelvic floor. In these cases a plastic operation combined with the ventrifixation of the uterus gave good results.

Dr. Lea remarked that in these cases it was always advisable to remove the ovaries and tubes, inasmuch as they often became prolapsed and painful. This might necessitate their subsequent removal.

Remarks were made by Dr. Sinclair and the President; and Dr. Helme replied.

Dr. W. K. Walls related a case of double ovarian abscess with purulent salpingitis in which the uterus and appendages were removed by the vaginal radical operation. The patient, a multipara, had pyrexia and pelvic inflammation. Whilst under observation rapid enlargement of each ovary was detected; ovarian abscess was diagnosed, and the operation at once carried out. Each ovary was a thick-walled sac of pus. Both Fallopian tubes were swollen and infiltrated. They contained purulent secretion, but the fimbriated extremity was not occluded. The patient made an excellent recovery. The specimen of the uterus and appendages was shown.

Tumour of Suprarenal Capsule.

The President related a case of tumour of the suprarenal capsule. The patient, aged 37, married, had an abdominal swelling which was the size of a fœtal head at term. It was very mobile and fluctuant, and could not be pushed down into the pelvis. A diagnosis of cyst of the kidney or ovarian cyst with a long pedicle was made. On opening the abdomen the tumour was found to be retroperitoneal and crossed by the descending colon. The peritoneum was divided and the cyst enucleated. There was no pedicle. The cyst lay immediately in front of the left kidney, which was normal. The patient made a rapid recovery. On section the tumour contained blood and clots. The cyst wall showed fibrous septa enclosing polyhedral granular nucleated cells closely resembling the "zona glomerulosa" of the normal suprarenal capsule.

CYSTO-SARCOMA OF THE PELVIC CONNECTIVE TISSUE.

The PRESIDENT also related the case of a single woman, 26, who had a symmetrical cystic tumour springing from the pelvis and reaching the level of the umbilicus. The uterus was small and separate from the tumour. An ovarian cyst was diagnosed. On opening the abdomen the cyst was found to be retroperitoneal. The peritoneum was divided and the cyst punctured. Three pints of blood-stained fluid were evacuated. The cyst was not connected with the uterus or appendages, but was found to grow from the connective tissue near the left sacro-iliac joint. The tumour was shelled out with difficulty, and the patient made a good recovery. Microscopically it was a round-celled sarcoma with cystic degeneration. These cases were striking examples of the difficulty of accurate diagnosis of abdominal tumours.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

WM. HORROCKS, F.R.C.S., President, in the Chair.

Tuesday, November 21st, 1899.

PATHOLOGICAL SPECIMENS.

DR. EURICH gave an exhibition of pathological specimens. Amongst them were: (1) Angio-sarcoma of the Kidney; (2) Primary Melanotic Sarcoma of the Spinal Column, which invaded the dura mater and destroyed the spinal cord by pressure. There was no metastasis except in the lungs. The specimen was spoken of as one of extreme rarity.

SUPPURATIVE PELVIC CELLULITIS.

Dr. RABAGLIATI read notes on a case of suppurative pelvic cellulitis. The *post-mortem* specimen had been shown at a previous meeting. The patient was a woman aged 27, married two and a-half years, but had no family. The catamenia were regular, but accompanied by pain. Never pregnant. On admission, December 7th, 1897, she complained of general abdominal pain, especially in the right iliac region; also of febrile symptoms. The abdomen was somewhat distended, the resistance being much increased in the right iliac region. The percussion note was clear over the greater part of the abdomen, but was dull above Poupart's ligament for about an inch. Pulse 112; temperature 101.5°; urine clear, no albumen or sugar. On December 10th the dulness had increased upwards. The patient being under ether and the presence of pus having been confirmed by the exploring needle, an opening was made a little to the outside of the pubic spine, and a large quantity of fœtid pus evacuated. The cavity was washed out with boric lotion, and a drain passed into it. On December 13th there was discharge of fæces and flatus from the wound; the general condition had improved greatly. On January 20th the wound had almost closed, but the patient now complained of pain in the right thigh, extending down to the knee. On vaginal examination, an elastic swelling was felt in the situation of the right broad ligament, which was supposed to be the abscess already opened. The temperature was normal or subnormal about this time. The patient continued to improve, and was discharged to the convalescent home on March 5th, 1898. There was still a sinus present, but very little discharge. She was readmitted in March, 1899. A sinus was still open, and she desired to have this cured if possible. On March 17th a probe was passed for 5 inches and the track opened up. It was scraped with a sharp spoon and then packed with gauze. The patient went on satisfactorily till April 2nd, when she complained of headache; temperature 97°. On April 4th the temperature rose to 102°; she vomited, and developed symptoms of influenza. She died on April 11th. *Post-mortem* examination showed no general peritonitis. The vermiform appendix was normal. The ileum was adherent to the abdominal wall, and there was an opening into the bowel, communicating with the sinus, which extended from the skin to the back of the pubic ramus. There was a dilatation of the right Fallopian tube containing fœtid pus. Dr. Rabagliati remarked on the fact that a large proportion of the recorded temperatures were subnormal, in spite of the fact that suppuration in the Fallopian tube was present during a great part of the case. He also made some observations on the sequence of high and low temperatures in inflammatory diseases.

ADDISON'S DISEASE.

Dr. H. JOHNSTONE CAMPBELL related a case of Addison's disease and showed the suprarenal bodies obtained *post mortem*. The patient was a man, aged 48, a shoemaker. Nine months prior to admission the illness had commenced with nausea and vomiting in the morning. His appetite failed, and bronzing of the skin soon began to show itself. The fingers and toes became blue in the cold weather. On examination the patient showed well-marked "bronzing" of the skin, especially in the folds and over points of pressure—for example, at the place where a truss was applied. The skin over the terminal phalanges of the fingers and toes was blue and cold, although the weather was warm. Urine normal; heart normal; no sign of tubercle in the lungs. Examination of abdomen negative. The appetite was very bad, and there was occasional vomiting. The pulse was small and feeble and the patient very weak. He rapidly got weaker, refused to take his food, and, passing into a semi-unconscious state, died on June 19th, 1899, seventeen days after admission. *Post mortem* examination showed extensive tuberculous disease of the suprarenal bodies. Dr. Campbell remarked that the patient showed the typical symptoms of the disease. The asthenia without marked wasting, the pigmentation, the persistent nausea, and low blood pressure rendered the diagnosis easy, and it was confirmed by the *post-mortem* appearances. After discussing the history of the disease and the experimental work in connection with the suprarenal bodies, Dr. Campbell expressed the opinion that there was a hope of good result in the future from the treatment by suprarenal extract. He remarked that intravenous injection was the ideal method of administration, but was not available for prolonged treatment. He suggested the employment of suppositories made up with a neutral fat.

EMBOLISM OF CENTRAL RETINAL ARTERY.

Dr. J. KERR showed a man in whom thirty hours previously sudden blindness in the left eye had come on. There was a blood-red spot at the macula surrounded by a white collar of œdematous swelling, except at the line joining the sharply defined disc and the hazy macula; there a rosy congestion ran up to the red spot. The arteries were white and scarcely noticeable; in two vessels broken columns of blood were seen moving slowly forward in pulsating jerks, in one possibly a vein as the white artery was seen alongside, towards the disc, in the other also a vein from the disc. A small patch of the field, extending about 30° from the fixation point down and out was preserved. The urine was highly albuminous, specific gravity 1006. The patient had always enjoyed good health.

TRAUMATIC HYSTERICAL MONOCULAR DEVIATION.

Dr. KERR also showed a spare, single woman, aged 39, who was first seen with her right eyeball rotated about 30° up and about 27° out, one-third of the cornea showing below the lid; this dated from an injury with a gas pendant ten years before, which had left a small scar on the cheek about the margin of the nasal bone, and half an inch below the bony orbital edge. The left eye being covered, the right fixed naturally and moved freely in all directions. A cosmetic operation was suggested, and advancement of the internal rectus done; a month later tenotomy of the external rectus and of the inferior oblique, and in another month tenotomy of the superior and advancement of the inferior rectus. Care was taken to maintain the integrity of the orbital fascia, lest enophthalmos might result. The patient had now had the position of insertion of all the muscles except the superior oblique altered and had gained in sightliness, the scarcely noticeable deviation of the eye being, as measured by the rod test, 2° out and 6° up; a result thoroughly satisfactory to herself, although binocular vision was wanted to make it perfect. Orbital traumatisms caused squint from pressure of exudations, the displacement from pressure being down, out, and forwards, disappearing on absorption of the exudation, or deviation from paresis of injured muscles or nerves, as in several illustrative cases brought forward. In this woman's case the rotation was up and out, and there was no paresis or injury that could be determined. The clue was probably found in that the deviated eye was a little myopic, +0.5 D. or −0.5 D. equally reversed the retinoscopic shadow, but required +2 0 D. sph to read diamond type with ease. The amount of help required was too great and her age too

young for presbyopia. She had had no failure of health, and with distant vision got $\frac{6}{9}$ improved with any weak glass, and even with two that neutralised each other. There was then accommodative weakness for both near and far points. There had never been diplopia, which was often a cause of trouble in traumatic cases with good acuity and nearly parallel axes, yet she had not binocular vision. The field was definitely contracted; there was also pharangeal anæsthesia noted. These points suggested a neurotic element. Almost any amount of functional trouble might follow a traumatism even so slight as to be scarcely noticed as in other cases with contracted fields mentioned. As a rule, traumatic hysterical conditions developed slowly, but they might be instantaneous. The patient stated that her eye was displaced at once. Hysterical troubles, except of associated movements of the external eye muscles were very rare, pareses unknown. This case represented an idea, a complex movement of the globe from the point of injury instead of a simple anatomical movement, and this was in favour of a neurotic origin. The diagnosis had been come at for want of a satisfactory anatomical explanation. Definite hysterical symptoms were present, and traumatic hysterical contracture afforded a complete, although not certain, explanation.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

D. Burgess, M.A., M.B., President, in the Chair.

Thursday, November 23rd, 1899.

Cases, etc.

Mr. Edward Skinner showed an instrument for examining the throats of patients suffering from Diphtheria, consisting of spoon handle having a glass disc between the observer and patient.—Dr. Arthur Hall showed the following cases: (1) A young woman with very loud rough Aortic Systolic Murmur of some years' duration, in whom a diastolic murmur had developed during the last month or two, there was no history of rheumatism, strain, or syphilis, and up to the present time the obstruction had not caused any ventricular dilatation or hypertrophy; (2) a girl with Keratosis Palmaris et Plantaris; (3) a man with Multiple Soft Fibromata varying in size from a pin's head up to a marble; not pedunculated; (4) a case of Favus of the Cheek in a child.

Pseudo hypertrophic Paralysis.

Dr. C. N. Gwynne showed a case of Pseudo-hypertrophic Paralysis. The patient, a boy aged $6\frac{1}{2}$, began to develop the disease about $2\frac{1}{2}$ years ago. Two of his maternal uncles suffered from paralysis in early life. There was no mental deficiency. He was unable to walk, and could not rise from the stooping posture without the aid of his hands. The muscles of the calves were enlarged and hard, as were also the erector spinæ muscles and the infraspinati. Most of the muscles of the upper extremity were atrophied, also the muscles of the chest and ribs. The faradic current produced no reaction except slightly in the flexor longus pollicis and the adductor pollicis brevis. The galvanic current (16 cells) produced no reaction in the lower limbs except in the tendo Achillis. Most of the muscles of the upper limbs were unaffected by the current, including the supraspinatus and infraspinatus. The adductor pollicis brevis and the flexor communis digitorum on the right side showed the R. D. reaction. Dr. Gwynne favoured the view that the disease was a primary idiopathic atrophy of the muscles.

Etiology of Diphtheria.

Dr. J. Robertson gave a demonstration of organisms isolated from the throats of children attending public elementary schools during the prevalence of diphtheria, and contrasted them with typical diphtheria bacilli. He afterwards read a paper on some points in the etiology of diphtheria, in which he dwelt at length on the number of children attending school, apparently in good health, who had in their throats either typical diphtheria bacilli or organisms which could not by microscopical methods be distinguished from them. Examination had shown that in schools not attacked with diphtheria the children did not in any instance show the diphtheria bacillus in the throat. During the past twelve months 59 selected children from five schools had been examined bacteriologically. Of these 17 showed typical diphtheria bacilli, 13 showed an organism very like the bacillus diphtheriæ, while the remaining 19 gave no suspicious organism. All of these children were at school when examined, and none of them had any typical diphtheria lesions. Dr. Robertson thought the occurrence of such unrecognised cases was one of the most important difficulties in dealing with epidemic diphtheria, and unless they were recognised other preventive measures were likely to be abortive.

Serum Treatment of Diphtheria.

Dr. A. Anderson read a paper on the serum treatment of diphtheria. After a brief summary of the results obtained by the use of antitoxin in different parts of the world, he said that in a series of 258 consecutive cases treated by antitoxin at the City Hospital, Sheffield, where 45 per cent. of the cases were admitted on the fifth day and after, the case-mortality was 15.8 per cent. In Chicago the mortality in 4,071 cases only 11 per cent. of which were treated on the fifth day and after, was only 6.77 per cent. Early administration was the most important point. It was not advisable to waste too much time in disinfecting the skin and it was bad practice to wait for the results of a bacteriological examination before using antitoxin. The enormous reduction in the mortality of post-scarlatinal diphtheria was due to the fact that all such cases were injected on the first or second day. In laryngeal diphtheria, if antitoxin treatment was begun early enough, operative interference was often unnecessary. Intubation ought to be given a trial as the primary operation in most cases. He had never observed any really serious constitutional disturbances following the injections, though in a few cases the occurrence of pains in the joints in patients suffering from cardio-gastric symptoms seemed to accentuate the tendency to collapse. Antitoxin albuminuria was of no real importance. The dose in a mild case should be 4,000 units. In several cases the best plan was to give 4,000 units every three hours for three or four doses and to repeat similarly next day if necessary. In his experience this was better than giving one or two large doses of 8,000 or 12 000 units. Septic complications were very infrequent in diphtheria. The associated micrococci seemed harmless enough, though they had all the advantage of the situation. When cervical cellulitis was present he had tried simultaneous injections of antitoxin and antistreptococcus serum, but with no better results than with antitoxin alone. A perfected serum would no doubt yet be obtained with a greater affinity for the toxins and a diminished liability to the production of rashes and pains, which were often a source of considerable annoyance and discomfort.

PATHOLOGICAL SOCIETY OF MANCHESTER.

William Thorburn, F.R.C.S., in the Chair.

Wednesday, November 8th, 1899.

Acute Disseminated Myelitis.

Dr. Dreschfeld related a case in a woman, aged 40. Two months after confinement she was suddenly paralysed. The paralysis of the lower extremities was complete, there was complete anæsthesia from a line stretching across the abdomen above the umbilicus to the dorsum of the feet—the soles of the feet and heels were not anæsthetic, the superficial and deep reflexes in the lower extremities were absent; the bladder and rectum were incontinent, the upper extremities were not affected. The optic discs were normal. The patient died three weeks after the onset. The symptoms remained stationary, but two days before death the patient was seized with persistent and uncontrollable vomiting. There was no history nor were there any symptoms of syphilis. Sections of the cord showed disseminated myelitis affecting the anterior, lateral, and posterior columns up to the middle of the dorsal region. The upper part of the dorsal and the cervical region showed patches of myelitis chiefly in the posterior columns affecting Goll's and Burdach's tracts. The vessels were markedly congested, and showed some thickening of the walls and perivascular infiltration, the nerve fibres in the affected parts were almost completely destroyed, and small and large-branched cells were seen throughout the affected parts. The affection of the blood vessels was most marked in the centre of each patch. The affection appeared to have spread from the blood vessels, pointing to the toxic nature of the disease. Dr. Dreschfeld expressed the opinion that probably many cases of transverse myelitis, unless due to syphilis or trauma,

were cases of disseminated myelitis, and discussed the etiology and the various types of disseminated myelitis and their relation to disseminated sclerosis and combined sclerosis

GANGLIONIC NEUROMATA OF FACE.

Drs. J. GRAY CLEGG and F. C. MOORE showed specimens from a case of bilateral ganglionic neuromata of the face in a child aged 8 months. The two tumours were situated one on each side of the nose, in the position of the lachrymal sacs, and each was about the size of the child's nose. The left tumour was present at birth, and the right appeared a few weeks afterwards, and both continued to grow until removal. From the minute structure of the growths it appears not improbable that they were in some way derived from the olfactory lobes.

CASES AND SPECIMENS.

Dr. DIXON MANN showed specimens from a case of Hodgkin's Disease, which he described.—Dr. HOPKINSON made some remarks on an unusual case of Cirrhosis of the Liver in young adult, and showed specimens and microscopic preparations.—Mr. E. STANMORE BISHOP showed (1) a Fibroid Uterus removed *per vaginam*, to whose left side a pyosalpinx was attached. The patient, who was 43 years of age, had a uterine polypus removed two years ago. A right pyosalpinx was removed on April 11th, 1899, and on August 29th a second operation was done, when the specimen shown was removed. On the right side near the fundus was an encapsuled fibroma about the size of an orange, smaller nodules being scattered in the uterine wall. The left ovary and tube were transformed into a tubo-ovarian abscess, attached by numerous adhesions; (2) two specimens of Papilloma springing from opposite broad ligaments in a woman aged 40, the one removed in November, 1898, the other in November, 1899; (3) a mass consisting of a Small Cystic Ovary, over which the altered tube was stretched. The symptoms caused by this growth exactly simulated those of ectopic pregnancy.—Several card specimens were also exhibited.

CLINICAL SOCIETY OF MANCHESTER.

JUDSON S. BURY, M.D., President, in the Chair.

Tuesday, November 21st, 1899.

TORSION OF PEDICLE OF OVARIAN CYST.

MR. F. A. SOUTHAM mentioned a case where torsion of the pedicle of an ovarian cyst gave rise to attacks resembling those of recurrent appendicitis. The patient, aged 63, in two years had suffered from eight attacks, each lasting about four days, of severe pain with tenderness on pressure in the right iliac region, accompanied by vomiting. Persistent rigidity of the overlying abdominal muscles prevented the tumour from being felt. On opening the abdomen, an ovarian cyst the size of a cocoa-nut, with a long slender pedicle twisted several times on itself, was found. The tumour was extremely mobile and free from any adhesions, and the attacks were believed to be due to the pedicle from time to time becoming temporarily still further twisted upon itself. The appendix was healthy, and removal of the tumour was followed by a subsidence of the attacks.

Dr. T. ARTHUR HELME said the case showed the value of examination under anæsthesia in cases of obscure abdominal swellings. He himself had not met with a case of ovarian tumour with torsion of the pedicle giving rise to recurrent attacks simulating peritonitis without any alteration in the substance of the cyst, though he had had to operate in several where torsion of the pedicle had caused strangulation and necrosis of the cyst wall with adhesive peritonitis and in which severe symptoms had arisen.

CASES.

Dr. HILL GRIFFITH showed the following cases: (1) Lead Opacity of Cornea; (2) large Scleral Equatorial Staphyloma in an Eyelash from Interstitial Keratitis; (3) Traumatic Cataract undergoing absorption; (4) large flap Wound of Cornea with Prolapse of Iris treated by Excision of Iris.

ABDOMINAL HYSTERO-MYOMECTOMY.

Dr. T. ARTHUR HELME read notes of two cases where he had performed abdominal hystero-myomectomy in patients under 30 years of age for fibroma uteri. He urged the importance of operating early in these cases if the condition warranted operation, and emphasised the dangers of delay. The mere existence of a fibroid in and of itself did not, in his opinion, justify immediate operation, but a woman with a fibroid should be looked upon as being on the edge of a precipice, and accordingly watched with care. Should the health be threatened by hæmorrhage or pain or mental worry or pressure symptoms, or should there be continuous increase in the size of the tumour, operation was not only justifiable, but necessary, and if done early was a safe and comparatively simple matter. The danger lay in delay. In the present instances the whole uterus and tumours, with the cervix, were removed suprapubically, the peritoneum being closed above and below completely, no drainage being employed, and the patients made recovery as after a simple ovariotomy.

MIDLAND MEDICAL SOCIETY.

Wednesday, November 15th, 1899.

HENRY EALES, M.R.C.S., in the Chair.

VAGINAL HYSTERECTOMY.

DR. E. MALINS showed two cases of vaginal hysterectomy: (1) In this case the pregnant uterus was removed for carcinoma. The patient was aged 40, and had seven children but no miscarriages. Her labours had been difficult, the last being in August, 1897. Her illness dated from that time. She complained of pains in the back and lower abdomen, irregular menstrual discharge with occasional flooding. On admission on October 13th, a mass was found on the anterior lip of the cervix, 2½ inches broad, bleeding on touch and rapidly breaking down. The uterus was enlarged, being also the seat of a ten-weeks' pregnancy. The operation of vaginal hysterectomy was performed on October 14th. The broad ligaments were clamped with forceps, ten pairs being used. To facilitate removal the uterus was split posteriorly to within a short distance of the fundus. The forceps were removed in forty-eight hours. The patient made an uneventful recovery. The growth presented all the characteristics of carcinoma of the cervix. (2) In the second case, the uterus was removed for persistent metrorrhagia. The patient was aged 44, had had fourteen children and three miscarriages. For two years she had suffered from irregular hæmorrhages with pain in the pelvis, worse on the left side, and at times very severe. She was curetted on March 18th. She was admitted again on August 19th, and on September 9th vaginal hysterectomy was performed. The broad ligaments were tied on each side with silk. The appendages were left. There was subsequently a little suppuration at the apex of the vagina, but the patient did well, and left the hospital on October 25th. The uterus was large, very thick, its walls measuring fully 1 inch across. It was examined microscopically by Dr. Macdonald, who reported that the glands were enlarged and increased in number, the connective tissue increased in quantity. The condition was therefore one of hypertrophic glandular endometritis.

BRONCHOCELE.

Mr. GEORGE HEATON showed three specimens of bronchocele removed during the last two months. The first specimen was the right lobe and isthmus of an enlarged thyroid removed from a woman, aged 25. The specimen was a true parenchymatous bronchocele. Mr. Heaton had some years ago removed a bronchocele from her mother's neck. The second specimen was the right lobe and isthmus of the thyroid removed from a patient, aged 34. For some time past the tumour had completely prevented her from lying down when asleep, and occasionally brought on attacks of suffocative dyspnœa. The specimen was a colloid goitre, the cells lining some of the spaces showing rapid proliferation. The third specimen was a well-marked cystic bronchocele. It consisted of the right lobe and isthmus of an enlarged thyroid removed from a woman, aged 21, who had noticed an enlargement in her neck for three years, which had latterly increased rapidly in size. The largest cyst in the tumour measured 2½ inches by 1½ inch. All the patients made good and rapid recoveries. It is noteworthy that they all came from the neighbourhood.

EARLY TREATMENT IN STRABISMUS.

Mr. PRIESTLEY SMITH read a paper on the importance of early treatment in strabismus.

West London Medico-Chirurgical Society.—At a meeting held on December 1st, Dr. J. B. Ball (President) made the following proposal:

That it is desirable that this Society should join in the scheme in connection with the Soldiers' and Sailors' Families Association to afford gratuitous medical attendance in their own homes for the necessitous wives and families of soldiers and sailors now serving with the colours. And that a subcommittee be formed to carry out this resolution.

The proposal was carried unanimously. Mr. C. B. Keetley proposed that the following should be nominated members of the subcommittee to carry into effect the resolution which had just been passed by the Society: The President (Dr. J. B. Ball), the Secretaries (Drs. G. D. Robinson and G. P. Shuter), the Treasurer (Mr. T. Gunton Alderton), Mr. F. Lawrance, Mr. W. H. C. Staveley, Dr. S. D. Clippingdale, Dr. A. H. W. Clemow, and Dr. H. Campbell Pope, with power to add to their number. Dr. W. H. Walter seconded the motion, which was carried unanimously.—Mr. McAdam Eccles then showed a case of Excision of Carcinoma of the Ascending Colon in a woman, aged 45, who was operated on for cystic right ovary, which was removed. On further examination the whole circumference of the ascending colon was found to be involved by a large growth. The diseased portion of the gut was brought to the surface and stitched to the skin. Eight days afterwards the tumour was removed with complete success, the woman making a good recovery. No secondary deposits were found at the time and there had been no recurrence since. Remarks were made by the President, Messrs. L. A. Bidwell, C. B. Keetley, and E. P. Paton.—Dr. George Johnson showed a case of Intracranial Growth Affecting the First Eight Cranial Nerves in a sister of the last patient. After minutely describing and demonstrating the patient's symptoms, Dr. Johnson said that the lesion was improving under treatment and that it was probably syphilitic.—Dr. Seymour Taylor showed a patient suffering from Injuries to Nerves due to fall of a few feet. On one side the seventh and eight were affected, and on the opposite side the eighth nerve alone. The cases were discussed by the President and Messrs. McAdam Eccles and E. P. Paton.—Mr. L. A. Bidwell showed: (1) Two sisters from whom Thyroid Cysts had been removed; (2) a case of Congenital Syphilitic Synovitis of both Knees. The three cases were discussed by Messrs. W. H. C. Staveley and W. McAdam Eccles.—Mr. McAdam Eccles showed a case of Wiring in an Ununited Fracture of the Tibia, with Skiagraphs by Dr. F. H. Low.—Mr. C. B. Keetley showed a patient on whom he had operated for extensive Suppuration of the Abdominal Wall, and who had attended the West London Hospital for an offensive purulent discharge from the vagina. An incision was made in the middle line, a large quantity of pus and air being evacuated. Another incision was made to the right of the umbilicus; on passing the finger through this opening into the pelvis the cervix could easily be felt, but the body of the uterus had disappeared. He diagnosed the case as one of pelvic suppuration, the pus having tracked up into the abdominal wall. Remarks were made by Dr. G. D. Robinson.—Dr. G. D. Robinson showed two skin cases for Dr. P. Abraham: (1) Case of Condylomata about the Anus in an infant, aged 1 year; there was no history of syphilis, maternal or otherwise, and the child was rapidly cured by the external application of zinc oxide and calomel; (2) case of Pityriasis Rosea of Gibert, showing points of resemblance to tinea circinata as well as to eczema seborrhœicum.

Kidderminster Medical Society.—At a meeting on November 17th, Mr. J. Lionel Stretton (President), who was in the chair, read notes of the case of a man, aged 44, upon whom he had operated for Malignant Disease of the Ascending Colon. He was first seen on May last, when he was in bed recovering from what appeared to be a second attack of appendicitis, the first having occurred about a month previously. On May 31st an exploratory incision was made; there were some dense adhesions enclosing a fæcal abscess communicating with the cæcum. Thr appendix was not seen. The cavity was not packed with gauze. His recovery was uninterrupted and he was left with an artificial anus through which nearly all the fæces escaped, only an occasional natural motion being passed. On July 31st, two months after the first operation, it was decided to attempt to close the artificial anus. On opening the abdomen the cæcum and ascending colon appeared thickened and vascular, and there was a tight stricture in the ascending colon, which with difficulty admitted the little finger, but there was no appreciable growth. As he had not consented to a radical operation nothing further could be done; he soon recovered from the operation, gained weight, and was able to get about, but nearly all the fæces were passed through the artificial opening, and he refused to wear any apparatus or have anything further done. Towards the end of September the contraction of the opening caused difficulty of defæcation, and he then consented to a further operation, which was performed on October 11th. On opening the abdomen, a considerable mass of growth was found in the ascending colon. It was quite impossible to remove it; a lateral approximation was therefore effected between the ileum and transverse colon by means of simple incision and suture. The patient suffered from considerable shock, necessitating transfusion with saline solution, and for this reason it was impossible to divide the small intestine between the site of the approximation and the cæcum. He had now quite recovered; his bowels acted normally and regularly, and there was very little discharge from the artificial anus, which was daily contracting.—Dr. Evans read notes of 3 cases: (1) A married woman, aged 36, had had several attacks of gall-stone colic within the last two years. An incision was made over the gall bladder, which was found to be large and flaccid; five stones were extracted. The bladder was stitched to the abdominal wall, and a strip of gauze introduced. The patient took the ether rather badly, and vomited once or twice during the operation. After the operation the vomiting continued, the patient became gradually more exhausted and died in twenty-eight hours. (2) A man, aged 48, had had abdominal pains and constipation for a fortnight, together with vomiting; these symptoms became more marked on July 14th, 1899. Ether was given and an incision made in the middle line from the umbilicus to the pubes. The intestines were found to be distended, congested, and rather dark coloured. A portion of the ileum, probably from 12 inches to 18 inches long, was found twisted and doubled upon itself in all directions, the adjacent parts being firmly adherent; there were also small white patches upon the gut, about the size of sixpenny-pieces, of what appeared to be cicatricial tissue; these were scattered about irregularly. An attempt was made to break down the adhesions, but they were too firm to be separated without injury to the gut, so the mass of adherent small intestine was removed, and the divided ends of the bowel reunited by Murphy's button, the abdomen flushed out with boracic lotion (1 to 40), and the wound closed. Towards the end of the operation the patient was much exhausted, and suffered a good deal from shock afterwards. He steadily improved for a fortnight when acute peritonitis supervened, and on August 30th the abdomen was again opened, and the peritoneal cavity found to contain serous fluid but no pus. The button had apparently separated and moved further down the gut; the patient died a few hours later. Dr. Evans attributed the peritonitis to the escape of some of the intestinal contents into the peritoneal cavity on the separation of the button. The President concurred in this view, and said he preferred the simple suture of intestines to the use of any appliance. (3) A man, aged 32, had had several attacks of abdominal pain and constipation, for which he had been in the habit of taking aperients, for the last five years. He was admitted to the Kidderminster Infirmary on June 22nd. The bowels had not been moved for four days, aperients having no effect; he had vomited once, on the day before admission, a brownish-green bitter fluid, the constipation continuing. On June 24th the abdomen was opened in the middle line below the umbilicus. The appendix was found to be very thickened and adherent to the omentum, and was removed after division of the adhesions. The patient made a good and uninterrupted recovery, and was discharged quite well twenty-one days after the operation. The President recommended operation in cases of appendicitis after the first attack. Mr. W. H. Moore said many of these cases recovered completely without operation even after more than one attack, and knew of cases that had remained in good health for ten years after an attack.—Mr. J. P. Race showed a woman who had suffered a Severe Injury to the Hand the result of a cog-wheel crush. The end of the

third finger, which was almost crushed off, sloughed off in a few days: the other wounds healed well, leaving a very useful hand.—Dr. B. Addenbrooke read a paper on an Infective Theory of Chorea, which was followed by a discussion.

Glasgow Medico-Chirurgical Society.—At a meeting on December 1st, Dr. Middleton showed a well marked case of Myoclonus Multiplex. The patient was a man, and somewhat melancholic. The movements were chiefly in the quadriceps extensors when he was lying on his back, and in the legs when he was sitting. The abdominal muscles, and those of the back and face, were also involved, but not nearly so distinctly. The movements, which were sometimes as frequent as 60 or 80 to the minute, were more marked under observation, and ceased on voluntary movement.—Dr. Freeland Fergus narrated an unusual case of ocular paralysis in a young man, who had complete paralysis of the one eyeball without disturbance of the optic nerve or retina. The condition was possibly congenital.—Dr. R. H. Parry showed two specimens of Malignant Stricture of the Large Intestine, both of which had been removed by resection of the bowel.—Dr. Rutherfurd showed a card specimens three examples of Goitre successfully removed under local anæsthesia, the specimens weighing 10 oz., 13 oz., and 19 oz. respectively.

REVIEWS.

Surgery: A Treatise for Students and Practitioners. By Thomas Pickering Pick, Consulting Surgeon to St. George's Hospital; Senior Surgeon to the Victoria Hospital for Children; Her Majesty's Inspector of Anatomy in England and Wales. London; Longmans, Green, and Co. 1899. (Roy. 8vo, pp. 1,176; 440 illustrations. 25s.)

This treatise will, we anticipate, be found a very useful addition to the recent supply of entirely new books on surgery. For such works as this there is now a decided demand. The late revolutionary changes both in the scientific principles and in the practice of surgery have rendered it more and more difficult to adapt, even by the ablest and most careful revision, the excellent textbooks of the past to the needs of the present generation. In order to retain any former textbook of surgery in the shape of a handy and useful volume much that is practically obsolete must be rejected to make room for the results of bacteriological work and the latest extensions of surgical treatment.

For the preparation of a work of this kind Mr. Pickering Pick is certainly well fitted, as he has had much experience as a hospital surgeon, and has gained well-deserved reputation as a teacher. His treatise is intended for the practitioner as well as for the student, and the association in its pages of a ripe experience of clinical work with a full knowledge of recent advances in the scientific and practical branches of his subject, will, we believe, render it acceptable to both. As might be expected from his long service both as teacher of surgery and as an acting member of the surgical staff of a large hospital, Mr. Pick has his own views on the nature and treatment of injuries and diseases, but such views cannot be fairly regarded as dogmatic, and are, for the most part, in strict accordance with contemporary advance in the science and art of surgery.

The chapters on injuries and diseases of the head, chest, and abdomen, though not of disproportionate length, present a broad statement of the present condition of these branches of surgical work. Reference is made to recent methods of treatment, but in some instances of a special character, as for instance the surgical treatment of cerebral tumour and of epilepsy, and also of pulmonary abscess and gangrene, the author's remarks, though probably sufficient for the student's needs, fail to afford such full and definite information as might be needed by the practitioner.

The section on abdominal surgery will be found very useful and instructive, as in a chapter of little more than sixty pages the reader will find a clear and concise review of all that he can desire for purposes either of study or of reference. With regard to the treatment of mild and incipient attacks of appendicitis, on which surgical opinion is now so much divided, Mr. Pick may be classed as an opportunist, and as one in favour of not deciding too hurriedly upon performing an operation. This view, however, is qualified by the important statement that operative interference is indicated by a high pulse rate.

This treatise differs from many other books of a similar scope in the presence of a long chapter on injuries and diseases of the female generative organs, and in the omission of any reference to the subject of anæsthesia. The illustrations, most of which are original, though not possessing any artistic attractions, have been well selected, and add much to the claims of this work as an excellent and very useful manual of modern surgery.

Organic Chemistry. By W. H. Perkin, jun., Ph.D., F.R.S., and F. S. Kipping, Ph.D., D.Sc., F.R.S. London and Edinburgh: W. and R. Chambers. 1900. (Cr. 8vo, pp. 73. 1s.)

This is an appendix to the well-known *Organic Chemistry* by the same authors. A notice of the original book will be found in the British Medical Journal of September 28th, 1895, p. 781. The present appendix is published in a limp cover, and is paged so that it may be bound up with the original work. It deals with certain subjects of interest in medical study that were omitted from the two parts of the book already published. Twenty pages are devoted to the terpenes and camphor compounds, and we find an excellent account of the constitution and synthesis of uric acid There are also notes on amido-acids, ptomaines, and proteids. The last nineteen pages constitute an index to the entire work.

NOTES ON BOOKS.

Christmas Cards.

The size of the catalogue which Messrs. Raphael Tuck and Son issue gives an impression of the great number and variety of their productions which is confirmed and extended by an inspection of specimens of their cards and booklets. The black and white series of cards, consisting for the most part of excellent reproductions of well-known pictures to which we called attention last year, has received many additions, but it is run hard by the "Wedgwood Series," in which the effect of a Wedgwood plaque is obtained by white embossing on a paper of the true blue tint. The firm also published a large number of coloured cards, and many diaries and calendars of elegant or fantastic form. It also publishes some toy books, among which *Our Soldier Laddies* will, perhaps, find most favour if the echoes of Glencoe, Elandslaagte, and the Modder River have, indeed, penetrated to the nursery. *Father Tuck's Annual*, a volume of stories with very numerous illustrations, deserves a more extended notice than we can give it here: it has the great merit of being written for children alone, without any thought of their elders. Some other similar publications are not quite free from blame in this respect. It should be added that the firm have recently erected new premises in Moorfields, E.C., to which they have given the name Raphael House.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS.

AN IMPROVED OVUM FORCEPS.

Dr. John D. Williams (Honorary Gynæcologist to the Cardiff Infirmary) writes: In the British Medical Journal of November 4th, 1899, page 1298, Dr. Rabagliati depicts and describes an improved ovum forceps. May I be allowed to state that the improvement referred to is not new. I have seen in the possession of Dr. Herbert Vachell, Cardiff, an identically improved instrument, and on communicating with Dr. Vachell he tells me that he has used his improved forceps for many years, and, like Dr. Rabagliati, has found them more serviceable and efficient than the old pattern. The instrument was made for Dr. Vachell many years ago by Messrs. Down Brothers, who at the same time constructed to his design an improved placental forceps, which, while resembling the ovum forceps in shape, differs from them in having the blades flattened, untenes rated, and more toothed. The modification alluded to constitutes, I think, a real improvement in the construction of these forceps, enabling the operator to tackle the uterine contents in a more efficient and workmanlike manner, and it is well that attention has been directed thereto. Until I saw Dr. Vachell's instruments I was in the habit of using Nélaton's cyst forceps, or Doyen's toothed *morcellement* forceps according to the size of the canal of the cervix.

ANNIVERSARY OF THE ROYAL SOCIETY.

Address by Lord Lister.

The anniversary meeting of the Royal Society was held on St. Andrew's Day.

Lord Lister, in the course of his presidential address, referred to some of the more distinguished Fellows who had died since the last anniversary. In mentioning Sir William Flower, whom he described as a man of noble and generous nature, ever ready to give his aid and counsel to those who sought it, he said that the arrangements of museum collections was a matter which engaged Flower's earliest attention. One well qualified to speak on the subject had said "the arrangement and exhibition of specimens carried out by Flower in both instances" (the Hunterian Museum and the Natural History Museum) "was so definite an improvement on previous methods that he deserves to be considered as an originator and inventor in museum work His methods have not only met with general approval, and their application with admiration, but they have been largely adopted by other curators and directors of museums, both at home and abroad." How beautifully he carried his ideas into practice had been, Lord Lister said, a matter of familiar admiration to all who have followed the development of the South Kensington Museum under his hands.

Preventive Inoculation.

Lord Lister then observed that one of the most interesting scientific gatherings which the Society had held was the meeting for discussion at which M. Haffkine brought before it his experience and views with regard to preventive inoculation. Lord Lister continued: The first subject with which he dealt was the application of that system of treatment to cholera He went out to India six years and a half ago with the object of testing there a method which he had recently elaborated. Applying Pasteur's principles of the "atténuation et renforcement des virus," he had succeeded in obtaining the microbe of cholera in two very different degrees of intensity – one so virulent as to produce, when introduced in small quantity beneath the human skin, the most violent inflammatory disturbance, and even mortification at the seat of inoculation, the other so mild as to cause extremely little reaction or inconvenience. And he had ascertained by experiments upon himself and some scientific friends that if a little of the milder form of the organism was injected hypodermically, and followed a few days later by a similar dose of the more potent variety, introduced, it might be, at a place remote from the site of the first operation, the whole system of the human body had in the interval undergone such a change, that the second potent injection was unable to produce more effect than the original mild one.

This was a perfectly definite and a truly astounding fact: but there were many who doubted whether it would prove applicable for the prevention of cholera. To understand these doubts, it is necessary to bear in mind some very important distinctions that have been established regarding artificial immunity to infective diseases. Pathogenic microbes produce by their growth in organic media poisons or toxins, varying according to the nature of the microbe concerned, but often of astonishing potency; and it is commonly by means of these poisons that the infective diseases produce their fatal effects. The toxins, which are purely chemical products, can be separated by filtration from the microbes that produced them, and animals naturally highly susceptible to their action can be completely protected against them by the administration of successively larger and larger doses. When thus rendered proof against the poisons produced by the microbes, they are secured against the chief causes of their fatality.

But besides this antitoxic immunity, a strikingly different kind of protection against infective diseases may be produced If, instead of the toxins, the bodies of the microbes themselves are administered to an animal, it acquires a wonderful power of repelling the assaults of that particular kind of micro-organism, which is thus rendered incapable of obtaining a footing among the tissues of the creature. This kind of protection has been termed by Metchnikoff anti-infective immunity. The antitoxic and anti-infective forms of immunity appear to be quite independent of each other. An animal may be brought to a very high degree of protection against the attacks of a microbe, and yet remain perfectly susceptible to the poisonous action of its toxin.

Now cholera is essentially a toxic disease. It is by the poison which the cholera bacillus produces that the fatal symptoms are occasioned Hence it might appear at first sight as if an antitoxic treatment could alone give promise of success in dealing with it. Haffkine's injections, on the other hand, prepared with the bodies of the microbe, were essentially anti-infective, not antitoxic.

Haffkine, however, felt confidence in his method, and resolved to give it a trial in India, where the dreadful disease is in some districts awfully prevalent; and he pursued his object in spite of wellnigh insurmountable difficulties with an enthusiastic perseverance and an heroic self-devotion which could never be forgotten. How fully his efforts were crowned with success was evident from the striking statistics which he brought before us, confirmed as they were by Professor Simpson, now of King's College, who had shared his labours in India, and was present at the meeting.

Now that we know the success of these preventive inoculations for cholera, we are perhaps able to explain them. It appears to be established that the cholera bacillus invariably attacks the mucous membrane of the intestinal canal. And if it be admitted that this is always the primary site of its invasion, we can well understand that the anti-infective inoculation, by securely protecting the mucous membrane against the invasion of the microbe, may prevent it from ever developing in the body and from ever producing its deadly toxin.

These considerations enable us to understand Haffkine's position with reference to plague. The plague bacillus, like that of cholera, can be cultivated apart from the animal body in artificial media. Living plague bacilli could of course not be injected; but it is a happy circumstance that their life is not essential to their efficacy for producing anti-infective immunity. Cultures of the microbe could thus be used after being subjected to a temperature high enough to ensure their death and prevent the possibility of communicating the disease with them.

But another important point claimed his attention. He had noticed in his cholera statistics that among the comparatively few persons who were attacked in spite of inoculation, the disease was as fatal as in the uninoculated. Or, to speak technically, while the absolute mortality was immensely reduced by the inoculations, the case-mortality was unaffected by them This he attributed to the purely anti-infectious character of his cholera inoculation; and it occurred to him that if he could combine, in the case of plague, the antitoxic with the anti-infective element, he might not only diminish the number of attacks of the disease, but also render them less deadly when they did occur, by robbing the plague toxin of its power for mischief With this object in view he resolved to cultivate the plague bacilli for so long a time as to allow of an accumulation of their toxin in a concentrated form in the liquid in which they grew; and having devised an ingenious and effective method of culture, he continued it for five or six weeks. He expressly disclaimed any wish to regard the theory that led him to this practice as more than a guess. But whether well founded or not, his guessing has been followed by striking success. It is difficult, when inoculations are practised on a large scale, to obtain accurate statistics as to the relative aggregate mortality among the inoculated and uninoculated; but with the case-mortality it is otherwise. Many patients with plague were admitted into the plague hospitals; and it was easy to learn which of them had received inoculation and compare their cases as regards the proportion of recoveries with those which had not been so treated. The result has been to show incontestably that the case-mortality in the inoculated is less by 50 per cent. than that in the uninoculated. Thus Haffkine's anticipation in that respect seems to have been fully justified.

At the same time the number of attacks appears to have been greatly reduced by inoculation. He brought before us certain comparisons that had been instituted in gaols and elsewhere that had, as he said, the precision of laboratory experiments; where the inoculated and uninoculated were in all other respects under identically similar conditions, and all were under strict supervision, the observations being controlled by independent witnesses. And although the numbers

here were not very large, the facts were extremely convincing. Taken altogether, the evidence brought before us tended to the conclusion that this system of preventive inoculation is, under proper management, capable of reducing the mortality in a plague-stricken district by between 80 and 90 per cent.

At the close of his discourse Haffkine referred with confident hope to typhoid fever. Considering the close analogy that exists between that disease and cholera, he early predicted that the protective method which had proved successful with the one would answer with the other. Indeed, he was only prevented from dealing with typhoid himself on the same lines by the persuasion of friends, who urged that he was already overtaxed by the cholera work. His suggestion has been more recently acted on by Professor Wright of Netley, who has developed with great zeal and ability a method of procedure which appears full of promise. As a member of the Plague Commission he had large opportunities for applying it in India; and although sufficient time has not yet elapsed for testing fully its protective efficacy, he clearly established its freedom from any immediate injurious consequences. Meanwhile, some earlier trials, though on a limited scale, have proved so satisfactory that our army authorities have seen their way to recommending the system to our soldiers going out to South Africa, where the disease is grievously prevalent, and we may fairly anticipate that many a gallant life will thus be preserved.

How long the protection caused by these protective inoculations will last is at present somewhat uncertain. It will no doubt differ in its duration in different diseases. In the case of cholera it appears from Haffkine's results that it continues for upwards of a year. In plague so far as can be judged hitherto, it would also seem to last for at least a twelvemonth. With typhoid there are not yet materials for forming an estimate.

I have thought it nor unfitting to dwell upon this subject of preventive inoculation on the present occasion, because, while it is of supreme practical importance, it is in many directions of high scientific interest.

CLINICAL RESEARCH IN LONDON.

THE MIDDLESEX HOSPITAL.

Cancer Investigation Scheme.

LAST week the quarterly court of Governors of the Middlesex Hospital sanctioned a scheme already considered by the Managing and Medical Committees for the systematic investigation of cancer.

The new Cancer Research Laboratories will be in full working order by the end of the year. The accommodation provided for the purpose of the scheme includes pathological and chemical laboratories, and a director's office. The laboratories, which are situated in the recently-built Cancer Wing of the hospital, are fitted up very completely; and the work which it is proposed to do will be carried on under the most favourable conditions. The permanent staff of the laboratories will consist of a director, an assistant to the director, and a registrar. It is also proposed to afford facilities to others who may be specially interested in this part of pathology, and are qualified to carry on original work in connection with it. Mr. Alexander Foulerton, F.R.C.S., has been appointed Director of the Laboratories, and an advertisement inviting applications for the other posts appeared in the BRITISH MEDICAL JOURNAL of December 2nd. The Governors of the Middlesex Hospital are to be congratulated on the public spirit which has prompted them thus seriously to make an effort to deal with what is in many ways the most terrible disease which afflicts mankind, and we are glad to be able to add that a generous donation of £1,000 from Mr. Arthur W. Davis has already been placed at their disposal for the furtherance of the objects of the scheme.

According to this scheme a Cancer Investigation Committee is to be formed, consisting of the surgeons to the hospital and the lecturers on medicine, surgery, and pathology, the director of the Cancer Research Laboratories being the scientific secretary. This Committee would superintend the issue of reports, the business of the laboratories, and the election of members of its staff. The responsible director will be aided by an assistant and also by a medical officer and registrar, who would have access to the wards for the purpose of obtaining information needed for the department. Three rooms already existing in the Cancer Block are suggested for laboratory accommodation: one as the director's office, the second as the chemical, and the third as the bacteriological and microscopic laboratory, but yet larger premises are held as desirable.

The necessary expenditure for preliminary alterations and fittings in the three rooms considered suitable for research purposes is estimated at £465, the annual expenses at £650. The latter include a salary of £250 to the director, £100 to his assistant, at least for the first year, £100 to the medical officer and registrar, with £100 for board and residence. £30 is apportioned to the laboratory assistant, whilst the estimate of the maintenance of the laboratories is £70.

The framers of the scheme also suggest the scope of the investigations.

(*a*) Every case of cancer and sarcoma in the hospital is to undergo a systematic bacteriological and histological examination. The results of this systematic examination would be applied to an attempt to formulate a classification of sarcomata, hitherto very unsatisfactory, and to the investigation of the causes of both forms of malignant disease.

(*b*) As respecting causation, the framers of the scheme note that in the case of carcinoma recent theories not universally accepted as to a blastomycetic causation require investigation. The arguments in favour of them have been very ably urged by Italian pathologists, and careful bacteriological examinations are required, if only for the purpose of obtaining negative evidence. The theory of a protozoal causation has now been practically abandoned by pathologists, and probably would not require any further investigation. The older theory as to the direct origin of carcinoma from normal epithelial cells as the result of a perverted or irregular overgrowth, and independently of the influence of any parasites from without, would seem to offer the line of research from which definite results might most probably be expected.

(*c*) As to the causation of sarcoma, a knowledge of the pathology of that form of malignant disease is even less definite than in the case of carcinoma. We have reasonable grounds for assuming that all varieties of carcinoma are, at any rate, manifestations of one and the same kind of morbid action. But with regard to sarcoma, there is reason to believe that the term, as ordinarily used, includes the results of more than one morbid process. Recent investigators (Curtis, Busse, and Nello Biargi) have shown that some of the cases, which clinically would be classed as sarcomata, are definite instances of yeast infection. And there is also presumptive evidence that some of the cases which are clinically recognised as "lympho sarcoma" may similarly be caused by a parasitic infection of some sort. On the other hand, there is no reason for supposing that all cases of sarcoma are due to a parasitic infection. The relation of some cases of sarcoma to chronic inflammation, arising independently of the action of micro-organisms, would require investigation.

The scheme urges the value of a precise and scientific tabulation of cases of malignant disease in connection with public health statistics. It is urged that it is not advisable that the term "cancer" should any longer be made to include sarcoma in the Registrar-General's returns, which are still of very small value in assisting to the formation of a correct judgment as to the age and sex incidence of both diseases. Systematic examination of the blood and quantitative examination of the urine in malignant cases are also indicated as specially suited for laboratory investigation.

The Medical Committee have accepted in a general sense the above suggestions for the pursuit of investigations on malignant disease.

THE WESTMINSTER HOSPITAL.

Clinical Laboratory.

A new departure has been recently taken at Westminster Hospital with regard to the Pathological Department, and the Governors are taking steps to place the whole of that department on a footing conformable with the modern advances of that branch of scientific medicine. A clinical laboratory is being constructed which will be in working order early in the New Year, and the Governors are sparing no expense to render it thoroughly efficient. At the same time it is recognised that

the superintendent of the laboratory should be a professed pathologist, and not a physician or surgeon in practice; and that, therefore, the remuneration to be paid him should be on a higher scale than is usual with hospital appointments. As pathologist and curator of the museum the holder of the office will receive £250 a year, and since he will also be lecturer in pathology to the medical school, a certain sum will further accrue to him from the fees.

In requiring that the holder of the office should be a professed pathologist, the Governors have taken a step as yet taken by few of the London hospitals; but it is held to be advisable from the point of view of the patients, the hospital staff, and the reputation of the hospital and school, and one which has been shown to work admirably in the case of the Johns Hopkins Hospital at Baltimore, to cite the most notable example.

Dr. Lazarus-Barlow has been elected to fill the office thus created, and since he has already had over seven years' experience in pathology as Demonstrator of Pathology at Cambridge University, and Curator of the Museum and Demonstrator of Morbid Anatomy at St. George's Hospital, his appointment will doubtless justify the expectations of the Governors with regard to the new departure that they have taken.

THE WAR IN SOUTH AFRICA.

[From our Special Correspondent in Capetown.]

November 15th.

The Boer Wounded.

The transport *Patiala* arrived from Natal yesterday, with 87 Boer prisoners, of whom about twenty were wounded, and were sent on to No 1 General Hospital at Wynberg. The rest went in the usual course to the prison ship *Penelope* at Simons Town. The wounded men were landed at the Capetown Docks, and thence conveyed by train direct to Wynberg Station. I have not as yet had an opportunity of examining the injured men, but from what I saw of them as they were being landed, I should say that none of the injuries are very severe; only 5 were stretcher cases, the rest being quite able to walk As in the case of the British wounded, to whom I referred last week, most of them appeared to be hit in the extremities. Two Boer surgeons, Drs. Sharpe and Marais, accompanied them.

Arrangements for Removal of Wounded to Wynberg Hospital.

The local centre of the St. John Ambulance has got into working order a scheme for affording assistance *en route* to the sick conveyed from the Docks to the General Hospital. At the Docks, where the men are entrained, it has a trained nurse, with three lady assistants, and at Wynberg Station, where they are detrained for conveyance by ambulance waggon to the hospital, a trained nurse with 5 lady assistants. A waiting room is provided at each place, with a paraffin stove and light refreshments, such as bovril, milk, tea, coffee, cocoa, and aërated waters, with stimulants. Lounges and chairs are fixed up in each depôt, and they furnish not only a place where the men can be kept in privacy, but the opportunity of a little refreshment before the journey is undertaken. At Wynberg, the advantage of this provision is obvious, as the hospital is fully a mile distant, and the ambulance waggons can only convey about twenty-four each journey, so that a number must always have to remain in waiting for a time. The bearer detachment of the Association has not yet been made use of, but is ready whenever required. Very much more voluntary aid is available, but the authorities have, for the present, declined it.

The Good Hope Society.

The Good Hope Society, which has been formed for the purpose of providing sick and wounded with extra-regulation comforts, is meeting with enthusiastic support. Mrs. Hanbury Williams, the chatelaine of Government House, being the moving spirit. It is supplying such things as flowers, literature, fruit, tobacco and cigarettes, easy chairs, lounges, etc.

The Sympathy of the "Brown People."

In connection with this, a very touching instance of the quiet sympathy of the coloured people ought to be mentioned. A largely-attended meeting of coloured men was held at Stellenbosch, a very hot Boer centre, but where the Brown people are enthusiastically loyal, to consider the best way of helping the Imperial authorities, and it was decided to forward regularly supplies of strawberries and other fruit to the hospital. Stellenbosch is a large fruit-producing centre, and most of the coloured folk have their little gardens. No white man was present at the meeting, and the action was absolutely spontaneous.

Offer of a Hospital at Stellenbosch.

The loyal whites held a meeting at the same place, and decided to offer the General a hall fully equipped as a hospital with 12 beds and provided with nursing staff, Dr. Versfeld agreeing to give his services as surgeon. All was to be done at the expense of the community. Whether this kind offer will be accepted I do not know. The village has an evil sanitary reputation, so perhaps the Surgeon-General will hesitate.

Medical Attendance on the Johannesburg Refugees.

The problem of medical attendance on the Johannesburg refugees has had the attention of the local relief committees. As we have now about 20,000 of these people in our midst, most of them practically penniless, there is naturally a good deal of sickness amongst them, mostly gastro-intestinal diseases, and broncho pneumonia amongst the children. Dr. Jane Waterston, Miss Edith Pellatt, L S A., and Drs. Kitching, Fuller, Hazell, Von Landsberg, and Darley-Hartley have volunteered their services, and are dividing the duty of gratuitously attending the scattered refugees at the six homes and at their lodgings in the city. Several chemists have kindly undertaken to do the dispensing at half ordinary rates.

Vaccination.

The Relief Committee is very wisely insisting on every claimant for relief, without distinction, being vaccinated—a very necessary measure, as Johannesburg has never been free from small-pox for years, and several cases have already been brought down.

THE PHYSICAL STANDARD FOR ADMISSION TO THE ARMY.

At the annual meeting of the British Medical Association held at Portsmouth, the following resolutions were passed in the Section of Medicine:

That the Council be requested to communicate to the War Office that it is the opinion of this Section that the physical examination of candidates for the army should precede the educational.

That the Council be requested to communicate to the War Office that it is the opinion of this Section that soldiers ought not to serve in the tropics before the age of twenty-two (22).

That the physical standard for admission to the public services requires reconsideration, and that the Council be also requested to communicate this resolution to the War Office, the Admiralty, and the other Governmental bodies interested.

Copies of these resolutions were in due course forwarded to Her Majesty's Secretary of State for War. The following reply has been received by the General Secretary:

[Copy.]

War Office,
London, S.W.,
December 2nd, 1899.

Sir,—I am directed by the Secretary of State for War to acknowledge the receipt of your letter of 8th ultimo forwarding copies of resolutions passed at the annual meeting of the British Medical Association at Portsmouth in August last.

In reply I am to acquaint you that Lord Lansdowne will take note of the views expressed by the Association in regard to the important subjects dealt with in the resolutions, and I am to state also that it may be of interest to the Council to know that he has appointed a Committee to report upon the question of the physical standards for admission to service.

I am, Sir,
Your obedient servant,
R. H. Knox.

The General Secretary,
British Medical Association,
429, Strand, W.C.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 27th, 1899, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SHROPSHIRE AND MID-WALES BRANCH.—A meeting of the Clinical and Pathological Section of this Branch will be held at 5 P.M. on Tuesday, December 12th, at the Salop Infirmary. Members who wish to read communications, or show cases or specimens are requested to communicate with the Honorary Secretaries. It is hoped that every member will endeavour to attend this meeting.—HAROLD H. B. MACLEOD, LEONARD J. GODSON, College Hill, Shrewsbury, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH.—A special general meeting of this Branch will be held on Tuesday, December 19th, at 5 P.M., in the Museum of Practical Geology, Jermyn Street, S.W. (by kind permission of the Director), to consider the report of the Council upon a letter received from the East York and North Lincoln Branch with reference to the certification of midwives and opticians.—H. BETHAM ROBINSON, M.S., 1, Upper Wimpole Street, W., J. W. WASHBOURN, M.D., 6, Cavendish Place, W., Honorary Secretaries.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The half-yearly meeting of this District will be held at the Medical Library, 5, Pembroke Road, Portsmouth, on Thursday, December 14th, at 4 P.M. Members willing to show patients or specimens, or to read communications, are requested to communicate with C. C. CLAREMONT, M.D., 57, Elm Grove, Southsea, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.

A MEETING of this Branch was held in the Medical Institution, Liverpool, on Wednesday, November 29th, at 2.30 P.M. Dr. CHARLES MACFIE, President, occupied the chair and there were over seventy members present.

Opinion of Branches on General Policy.—Dr. RITCHIE drew attention to the fact that the Branches have at present no opportunity of expressing an opinion on questions of general policy or affecting the profession at large when such are about to be dealt with by the Central Council, and proposed the following resolutions, which were seconded by Dr. MASSIAH:

1. That this Branch is of opinion that when matters of general policy or affecting the profession at large are about to be discussed by the Central Council, the Branches should have an opportunity of expressing an opinion on such, and that as a means to that end the agenda of a Central Council meeting should be received by the members thereof at least fourteen days before such meeting, and that such matters should not be considered private and confidential to members of Council.

2. That the meetings of the Branch be held as far as possible within fourteen days of the meetings of the Central Council.

A discussion took place in which Dr. JAMES BARR and Dr. WILLIAM CARTER opposed and Drs. RAYNER and BRASSEY BRIERLEY supported the resolutions. On their being put to the meeting 18 votes were recorded in favour of and 5 against the resolutions, which were therefore carried; a large number of members abstained from voting.

Resolutions Adopted at the Annual Meeting of the Association.—Mr COLIN CAMPBELL had given notice that he would call attention to some important resolutions adopted by the British Medical Association at its recent annual general meeting at Portsmouth, and to the action of the Council of the Association thereon, and would move:

That the Lancashire and Cheshire Branch of the British Medical Association condemns the action of the Council of the Association in refusing to carry into effect important resolutions adopted by the Association in general meeting assembled, and regards such refusal as a neglect of the interests of the medical profession, and as a contravention of the Articles of Association.

In order to save the time of the meeting Mr. Campbell asked, and was given, permission to move the resolution standing in his name as an amendment to one of Dr. Brierley's resolutions.—Dr. BRASSEY BRIERLEY then moved, and Dr. O'SULLIVAN seconded *pro formâ* the following resolution:

That this meeting protests against the action of the Council in refusing to carry into effect the resolutions of the annual meeting, which action is a violation of the Articles of Association. If these resolutions are binding this meeting shall take steps to summon a special general meeting of the Association to consider the matter.

Dr. WILLIAM CARTER asked if it were not the fact that the Central Council was at the present time taking legal opinion on this question.—The PRESIDENT replied that the Honorary Secretary informed him that such was the case.—Dr. MACFIE CAMPBELL moved the following amendment, which was seconded by Dr. RITCHIE:

That this matter be postponed until the Central Council has taken legal opinion.

A discussion followed, in which Drs. WOODCOCK and JAMES BARR supported the amendment; and, after Dr. BRIERLEY'S reply, the amendment was put to the meeting, when 25 voted in its favour and 9 against. It was therefore declared to be carried. On Dr. Macfie Campbell's amendment being placed before the meeting as the substantive resolution, Mr. COLIN CAMPBELL moved his original resolution as an amendment, by permission of the Chair, explaining that it had been drawn up in collaboration with Mr. Victor Horsley as follows:

That the Lancashire and Cheshire Branch of the British Medical Association condemns the action of the Council of the Association in refusing to carry into effect important resolutions adopted by the Association in general meeting assembled; and regards such refusal as a neglect of the interests of the medical profession, and as a contravention of the Articles of Association.

This was seconded by Dr. FRANCIS VACHER. On a vote being taken the PRESIDENT declared the amendment lost. This decision was challenged, and a recount was made, when 17 voted in favour of and 26 against the amendment, which was therefore lost. Several members abstained from voting. Dr. Macfie Campbell's amendment was then put as the substantive resolution, and agreed to *nem. con.*

Railway Expenses of Representatives.—Dr. BRIERLEY proposed, Dr. T. R. BRADSHAW seconded and it was resolved *nem. con.*:

That inasmuch as the representatives of the Branches on the Parliamentary Bills Committee and on the Committees of the General Council are sent to take a share in the conduct of the Association's work, their railway expenses should be paid out of the funds of the Association.

Dr. BRIERLEY proposed and Mr. COLIN CAMPBELL seconded the resolution:

That in the opinion of this meeting the reports issued by the Council of the Association of its proceedings in general meeting and in meetings of the Council are utterly worthless, and this meeting begs to suggest the advisability of engaging the services of expert shorthand writers and other competent officials to remove this defect.

Dr. T. R. BRADSHAW proposed and Dr. RITCHIE seconded an amendment:

That in the opinion of this meeting the reports issued by the Council of the Association of its proceedings in general meeting and in meetings of the Council are inadequate.

Drs BRIERLEY and COLIN CAMPBELL accepted the amendment, which was carried *nem. con.* It was also agreed:

That copies of these resolutions be forthwith forwarded to the Secretaries of all the Branches, with a request that they will take the matters

into consideration, and also copies be sent to the President of Council, the President of the Association, and any other persons interested in the work.

Presentation to Dr. James Barr from the Lancashire and Cheshire Branch.—Dr. Charles Macfie (President) of Bolton said: Gentlemen,—I am now called upon to undertake a pleasant and not onerous duty, a duty that many of the older members of the Branch, with a fuller knowledge of the work that Dr Barr has done, and with a greater eloquence than I can command, could do fuller justice to. It is now seven years since Dr. Barr accepted the post of secretary to this Branch, and from the moment of his accepting office a full tide of activity began to flow and, increasing in volume with each year, had not reached its full when he resigned last year. The wave of work was largely of a medico-political character, and being of a kind comparatively new to the Branch Dr. Barr entered into it, as in all his other work, with enthusiasm, an enthusiasm which in time permeated the whole Branch and made it the power it is to-day. Commencing with a membership of about 800 seven years ago, Dr. Barr handed over the reins of office with a membership of over 1,100. I would here sound a note of warning. Do not dissociate scientific work by attention to medical politics. By scientific work we maintain our position before the enlightened public, and advance as a profession; by medico-political work we obtain our rights and protect a blind public from itself and from the overweening attentions of the omnipresent and ever-blatant charlatan. Dr. Barr's work has always been well done. His services were willingly and freely given to the work of the Branch; he was always alert and ready at the call of duty. By his urbanity, tact, and thoroughness, he has won the respect and admiration of the profession in Lancashire and Cheshire. In the Central Council of the British Medical Association in London Dr. Barr was listened to with attention and respect as a man with a mind of his own, and with a power of giving pointed expression to his thoughts. Dr. Barr was always quick in thought, sound in judgment, and certain in action; his speech tempered with the quaint humour of the western Celt, and his actions with the determination of purpose of the dogged Teuton. Though Dr. Barr is out of official harness, he is still in sympathy with the Branch, as his regular presence and well-considered remarks at our several meetings give ample testimony. I may say, though we have got another man at the *helm*, we feel assured our late Secretary will offer no *bar* to measures that will be for the good of the Branch. His successor, Dr. Helme, will have much work to occupy his time, and many difficulties to surmount, but we pray that the mantle of Dr. Barr may fall on him. Dr. Barr's resignation, after several refusals by the Council of this Branch, was ultimately accepted last year. The mind of the Branch, as one man, felt that the grand services of Dr. Barr should be recognised in some tangible form, and the convincing eloquence of Dr Bradshaw in bringing the subject before the Council set flame to our feelings; 150 guineas was voted to Dr. Barr out of the funds of the Branch, part of which has been expended in the purchase of the beautiful flower vase and elegant tea service, all in silver, that now stand before you. I now ask you, Dr Barr, to accept this gift, not as a remuneration for services rendered, but as a small token of our gratitude for your devotion to the work of this Branch, and as a mark of the profound esteem and affection the members of the Lancashire and Cheshire Branch have for you. May you and Mrs. Barr have health and long life to enjoy the use of it.—Dr. Bradshaw, the local secretary for Liverpool, supplemented the remarks of the President, and expressed his conviction, derived from his own personal knowledge, that the present prosperity of the Branch was in a great measure due to the energy and ability of Dr. Barr.—In accepting the presentation, Dr. Barr said that his work in connection with the Association had been a labour of love, and that he was grateful for the assistance which he had received from many of the members during his term of office. The handsome and valuable present which he had received from this great Branch would always remind him of his very pleasant associations during the time he acted as its secretary. He had been ably assisted by his wife in carrying on his secretarial work, and on her behalf as well as his own he thanked them most cordially for their handsome gift and their kind expressions of goodwill.

Cases.—Cases were shown by Sir William Banks, Dr. Barr, Mr. Damer Harrisson, Mr. Robert Jones, and Mr. Rushton Parker.

Communications.—The following communications were read: Mr. Walter Whitehead: A Short Road to Medical Reform.—Dr. Eugene S. Yonge: (1) A case of Papilloma of Larynx; (2) a case of Papilloma of the Tongue.—Mr. W. Thelwall Thomas: The Surgical Treatment of Chronic Suppuration of the Frontal Sinuses.—Dr. Karl A. Grossmann: Evisceration of Orbit for recurring Orbital Tumour. The patient and specimen were shown.—Mr. F. T. Paul: A case of Gall Stones and right Hydronephrosis in the same subject.—Mr. G. Gibson Hamilton: Compound Dislocation of Elbow-joint.—Dr. T. Arthur Helme: The operative treatment of Fibroma Uteri, with notes of 6 cases of Abdominal Hystero-myomectomy.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

A meeting of this District was held in the Court Room of St. Thomas's Hospital, on November 16th, 1899, Mr. Charles Sangster, Vice-President of the District, in the Chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Albuminuria in Apparent Health.—Dr. H. P. Hawkins read a paper on Albuminuria in the Apparently Healthy, which is published at page 1598.—Dr. Leetwich said that something might be attempted for the treatment of these cases. The dietetic form by vegetarian or sparingly albuminous diet, and all forms, even the postural, by reduction of blood pressure, if not by drugs, at least by the restriction of liquids. An appeal had been made to members in general practice to study this abnormality. Such cases, however, were rarely detected in ordinary practice; they occurred chiefly in connection with examination for life assurance, and medical etiquette stood in the way of studying the patient of another practitioner. Country doctors were more favourably placed.—Drs. Nestor Tirard, Hector Mackenzie, and Hyslop also discussed the paper.—Dr. Hawkins said, in answer to questions, that it appeared from the example given of exertion albuminuria, that the presence of hyaline casts need not add to the gravity of the prognosis. The distinction of these cases from true renal disease lay in the facts (1) that albuminuria was present only during part of the day; (2) that the urine was in all other respects healthy; (3) that there was no sign of affection of heart or arteries; (4) that a definite and removable cause of the albuminuria could be found in nearly all cases.

Idiopathic Muscular Atrophy.—Dr. Sharkey showed a case in a man, aged 40, a clerk. There was no family history of any similar disease. The condition began in infancy. The patient remembered as a boy having to raise himself by pushing with his hands on his thighs. He had not altered much since he could remember. All the muscles except those of the head and neck and eyes were affected. Most of the affected muscles were distinctly wasted. The calves were, however, very large. They were stronger than the other muscles, but not so strong as their size seemed to indicate. The condition was symmetrical on the two sides. There was no affection of sensation or of the reflexes, and no visceral disease. The mental condition perfect. The electrical reaction of the muscles showed some diminution of excitability to both the constant and interrupted currents. There was no reaction of degeneration. He had to climb up from the floor by the help of furniture, and his method closely resembled that of a case of pseudo-hypertrophic paralysis.

Aphasia.—Dr. Hawkins showed a case in a healthy-looking man, aged 50, who had been free from illness till the present attack. He had always been a moderate drinker, but, though he worked in a brewery, he seemed never to have indulged in excess of alcohol. On November 1st he was found unconscious in his room in the early morning, and since then he had been unable to speak properly. A doctor who saw him soon after he was found diagnosed "apoplexy," but no details were forthcoming of his condition at this time. On admission, except that the grasp of both hands was weak, no evidence of any paralysis was obtained. He did not seem to understand questions put to him, nor did he understand written orders. He could not speak intelligibly. At first the words were quite

clear, but not appropriate, and soon he wandered into gibberish. A question often evoked the answer, "I wrote I can as well as I can." Written matter conveyed nothing to him. Often he could name letters correctly, but with a tendency to call them *x* and *y*. In many cases he named the letters correctly without power to pronounce the word. No notice was taken of corrections offered to him, but he stuck to his own pronunciation. He seemed perfectly intelligent, and took a pocketbook out of his locker to show that previously he was able to write well. He was totally unable to write or pronounce his own name, though he could form letters and articulate quite normally. He was able to feed himself, and knew the use of knife and fork, though he had to be shown the use of a towel and brush and comb His eyes showed no optic neuritis, nor was there any sign of elsewhere.

Cases.—Dr. HAWKINS showed a patient, aged 52, a millwright, who until the present illness had always been a healthy man. Two years before admission to St. Thomas's Hospital he first noticed weakness in the left shoulder and arm; this increased, and was followed by loss of strength in the right arm and later in the legs. On admission there was much wasting of the muscles round the shoulder, the muscles involved being those affected in Erb's paralysis. The wasting was also well marked in the interossei, especially those of the right hand, and also in the muscles of the thenar and hypothenar eminences. The legs did not show marked wasting, but there was great loss of power in the extensors of the ankle, and his gait was weak and uncertain, and he can only walk a short distance. Throughout there had been no sensory affection. He was unable to raise himself in bed, and could not maintain the sitting position. So far he had been able to feed himself; he did this by lying on the left side. He could not raise the arms from the bed, but could raise the forearms fairly well. There were no signs of disease in the internal organs.—Dr. HECTOR MACKENZIE showed a child of $5\frac{1}{2}$ years. There was a family history of chronic rheumatism on the father's side, and a brother was said to have died from rheumatism. The patient had muscular rheumatism in November, 1897, during which both hands and wrists were swollen and painful. Recovery from this was complete. The present illness dated from January of the present year, when the wrist-joints and knee-joints were enlarged and painful. This condition came on gradually On admission in July, 1899, the boy was anæmic and feeble, the least movement causing pain in the joints. The head was held stiffly, and could not be turned from side to side, and there was much limitation of all the movements of the vertebræ. There was also some kyphosis. The wrists and carpal joints were swollen, and there was much hypertrophy of the periarticular tissues. The blood counted showed nothing abnormal. The other joints similarly affected were the knees, elbows, right shoulder, and right hip. The lymphatic glands in the right axilla were enlarged and tender. The *x* rays showed the bone to be unchanged. The spleen also was enlarged, and could be felt. The heart and lungs were normal. No albuminuria. There was no fever. There had been marked improvement since admission in the elbows, hips, shoulders, and the left knee. Treatment had consisted in the administration of cod-liver oil and the local application of guaiacol and iodine.

Cubitus Varus.—Mr. F. C. ABBOTT showed a case of cubitus varus in a boy, aged 7. The condition was the result of an injury to the lower epiphysis of the left humerus nineteen months previously. The deformity was that of the typical "gun-stock" fracture, but the cause was not the usual one. The external condyle and capitellum were displaced downwards, and the ulna had swung inwards over the apparently unbroken internal condyle, thus producing the usual obliquity, but in an unusual way. The deformity was only apparent on extension of the forearm, and the importance of putting up these injuries in the extended position was emphasised. A skiagraph of the injury was shown. Also a case of anterior curvature of the shafts of both tibiæ due to congenital syphilis, in a boy of 19. He was just recovering from an attack of acute synovitis of the left knee under mercury, and had developed a marked degree of genu valgum in the last nine months. Careful examination showed no other signs of congenital syphilis, nor of rickets.

Congenital Dislocation of both Hips.—Mr. WALLACE showed a case of double dorsal congenital dislocation of the hip. There was extreme tilting forward of the pelvis with consequent lordosis. The gait was typical, the body being swung over to the side of the supporting leg. When the child walked the great trochanter seemed to rise up considerably in the pelvis; but this was really only apparent, and caused by the sinking of the pelvis from the supporting limb, as when the child was laid on its back little or no movement could be detected between the femur and the ileum. It was not proposed to operate.

Specimens.—Mr. SHATTOCK showed the following pathological specimens:—Congenital Rickets; Sarcoma of Uterus, Gangrenous Myoma of Uterus, Vesical Calculus formed upon a Hair pin, Tuberculosis of Cow's Udder; Experimental Glanders in Guinea-pig, showing the Affection of the Testicles after Intraperitoneal Injection; Experimental Abscess in Rabbit produced by Injection of Staphylococcus Aureus; Hair Ball from Stomach of a Cow.

Votes of Thanks.—Votes of thanks were passed to Dr. Hawkins and the other gentlemen who had contributed to the success of the meeting, and to the Treasurer of the hospital for the use of the Governors' Hall.

EAST YORK AND NORTH LINCOLN BRANCH.

A SPECIAL meeting of this Branch and the Hull Medical Society was held on November 23rd at the Hull Royal Infirmary. The object of the meeting was to hear an address by Mr. G. Brown on Medical Reform, with special reference to the proposed legislation for midwives The chair was taken by Dr. T. S. MORLEY, President of the East York and North Lincoln Branch, who concluded an introductory speech by moving the following resolution:

That we, the members of the medical profession residing in East Yorkshire and North Lincolnshire, offer a hearty welcome to Mr. George Brown on the occasion of his visit to Hull and take this opportunity of cordially thanking him for the efforts he has already made in the direction of medical reform, in which he has our vigorous support.

—The resolution was seconded by Dr. E. HARRISON, President of the Hull Medical Society, and carried unanimously.

Mr. BROWN, in his address, said it had now become evident that the Midwives Bill was not intended to improve the obstetric nurse; it was intended by those who were responsible for introducing the Bill that it should produce or make a new order of midwives, who should be able to take the place of the doctor entirely. Since the obstetric nurse had been in possession of the certificates issued by the Obstetrical Society she brought her bag with her, filled with various instruments and medicines, and she directed and conducted the case as if she were a qualified practitioner. That was the sort of thing, he thought, that the medical men ought to put a stop to. Mr. Brown then read extracts from *Nursing Notes*, the organ of the Midwives' Institute and Trained Nurses' Club, to show how the Society for Promoting the Compulsory Registration of Midwives was pushing forward the Bill. These people had got their agents at work for them—ladies from the Primrose League and other political organisations, and from the Liberal Associations all over the country—for they said, "This is a Woman's Rights question." They had got the political associations throughout the country behind their back; and in this way they were putting force upon members of Parliament all over the country to get this Bill through the House of Commons when Parliament met in February next. It was likely that if the Bill got a good place on the list at the first ballot, it would be run through the House before they knew what was being done. Mr. Brown urged his hearers, if they had any influence whatever with any member of Parliament, to exercise that influence. Let them tell that member that if he assisted in passing this Bill, he would be helping to pass into law something very injurious to the public. In his interviews with members of Parliament—and he often talked to members in the Lobby of the House of Commons—they asked, "How is it that none of the medical men in my constituency write to me about it? I have communications from all parts telling me that this measure is for the good of the public, but no medical man in my constituency has told me about this." They must instruct their members of Parliament; they must tell them the truth about

this Bill, if they wished to prevent legislation of this kind. Referring to the certificates granted to midwives, Mr. Brown said they were undoubtedly issued in such a form that people might think they were diplomas to practise, and he had already given notice that at the forthcoming meeting of the General Medical Council he should move a resolution to the effect that the General Medical Council should not sanction the issue of any certificates by the London Obstetrical Society or any other similar body, stating that the owner thereof was competent in the practice of midwifery. He regarded it as a serious infringement of the Medical Acts that any person should practise in midwifery if not properly qualified. If his resolution were carried he would propose a motion that the President of the Obstetrical Society be informed that any person signing these certificates should be judged by the Council to be guilty of unprofessional conduct. They had been told the previous night at Newcastle that the principle of the Midwives Bill had been approved by the British Medical Association. It had not been approved, nor had any other Midwives Registration Bill been approved by the British Medical Association. And because it had not, it was not fair for this statement to go forth to the public and to be used to their detriment as it was used by the deputation that went before the President of the Privy Council in July last. In every general meeting held by the British Medical Association where this question had been brought forward the members had voted against it by overwhelming majorities, and he trusted they would continue to do so. Mr. Brown then referred to other questions of medical reform, and after a discussion the meeting concluded.

SOUTHERN BRANCH: WINCHESTER DISTRICT.

The half-yearly meeting of this District was held at Winchester on November 22nd, Dr. Bevan, President, in the chair.

The Prevention of Tuberculosis.—On the motion of Dr. Harman, it was agreed to take steps to promote the formation of a local Branch of the National Association for the Prevention of Consumption.

Communications.—Dr. Livingstone read further notes on a case of Diabetes, and exhibited the patient, aged 19, who appeared to be making unusual progress under restricted diet and morphine.—Dr. Harman read notes on a severe case of General Exfoliative Dermatitis, which made a rapid recovery with oleaginous remedies internally and externally applied.—Dr. Brown read a paper on Gouty Congestion and Cellulitis, pointing out the difference between gouty and other forms of cellulitis, and the importance of accurate diagnosis. He considered that the value of mercury was not sufficiently recognised in the treatment of gout. An animated discussion on gout followed.

Medical Reform.—A communication on medical reform and the Midwives Bill from the East York and North Lincoln Branch and the Hull Medical Society was submitted to the meeting; and it was decided to discuss it at a special meeting to be held in January, 1900, to which all medical practitioners in the neighbourhood should be invited.

Refreshments.—Tea and refreshments were kindly provided during the meeting by the President.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

The 153rd meeting of this District was held at the Kent and Canterbury Hospital on November 23rd, Dr. Pittock (Margate) in the chair. There were only nine members present

Confirmation of Minutes.—The minutes of the last meeting, held at Ramsgate, were read and confirmed.

Chairman of Sittingbourne Meeting.—Dr. Tyson proposed and Dr. S. Wacher seconded a resolution that Dr. Gosse should take the chair at the meeting to be held at Sittingbourne in March, 1900. This was carried.

Medical Men and the Study of Pathology.—Dr. Halstead (Ramsgate) read a paper on the Desirability of Increased Opportunity for Medical Men of the Study of Pathology by *Post-mortem* Examination. He advocated the great importance of *post-mortem* examinations in general practice. Instances were given of the loss of valuable information to the profession by reason of the dislike of the public to this procedure. The hope was expressed that in the early future we should have cremation, preceded by the routine *post-mortem* examination, of every corpse under official methods at a mortuary.—A discussion ensued, and Dr. Halstead replied.

Clinical Studies.—Dr. Tyson (Folkestone) contributed a paper entitled Some Clinical Studies. He read short notes on the following subjects: Renal asthma, the danger of keeping old people in bed, sensitive skins in children, sudden deaths in old people, the use of chloride of calcium in hæmorrhage, cases of high temperature with no discoverable cause, simple retention of urine, and respiratory exercises for the promotion of absorption of pleuritic effusion. He also showed specimens of the ankylostoma duodenale.

BATH AND BRISTOL BRANCH.

The second ordinary meeting of the session was held at Bath on November 28th; Dr. A. J. Harkin, President, in the chair. There were twenty-five members and visitors present.

New Members.—The following gentlemen were elected members: Newman Neild, M.B Viet., W. A. Milligan, M.A., M.B., J. C. MacWatters, H. L. Brownlow, J. Tubb Thomas.

Medical Reform.—A letter was read from the Secretaries of the East York and North Lincoln Branch and the Hull Medical Society with reference to medical reform and the Midwives Bills. It was proposed by Dr. Aust Lawrence, seconded by Dr. Pearse, and resolved, to refer the letter to the Branch Council for future consideration.

Communications.—Dr. J. Pearse read notes of a case of Rupture of the Uterus followed by recovery; and Dr. Aust Lawrence and the President commented upon them.—Mr. Michell Clarke described the early stages of Degeneration of the Spinal Cord in Anæmia, and illustrated them by lantern slides. Dr. Goodridge, Mr. Flemming, and Dr. Cave joined in the discussion which ensued.—Dr. Norburn read notes of a case of Wound of the Thoracic Duct, and suggestions as to the treatment of such cases were made by Drs. Harrison and Michell Clarke.—Mr. C. E. S. Flemming read a paper on Dislocation of the Humerus with Fracture of the Anatomical Neck; and Mr. Paul Bush commented upon it.—Dr. Wohlmann described some cases of Morton's Disease, and other cases were referred to by Mr. Harsant, Dr. Wilson Smith, and Mr. Paul Bush.

BRITISH GUIANA BRANCH.

A special meeting of this Branch was held in the Public Hospital, Georgetown, on October 5th; Dr. Edmonds, President, in the chair. Twelve members attended.

The Segregation of Lepers.—The meeting was called to consider and give an opinion on a letter received from the Government *in re* segregation of lepers, in a plan to join with the other West Indian Islands, and have a common asylum on one of the smaller islands, in one of the Virgin or Grenadine Islands; and it was considered that the difficulty of transport could be got over, by owning in common a suitable schooner. The President explained the nature of the business for which the meeting was called. The proposal was evidently the result of the late Berlin Congress, and he thought it was unnecessary to discuss any topic already decided on by the same Congress, but that they should discuss the proposed scheme from the following points—namely, 1. Is it expedient to form a common leper community? 2. Whether such community be established in the Virgin or Grenadine Islands? 3. Whether the means of conveyance would be sufficient?—Dr. Barnes said he thought the only question to be decided was that of common segregation, and that details should be left to the Government.—Dr. Anderson said he did not see the necessity of entering upon such a scheme with their present and recently-extended accommodation. Most of the members present discussed the scheme and it was then proposed by Dr. Matthey, seconded by Dr. Kennedy:

That in spite of the initial expense, this meeting recommends the adoption of a leper community as suggested.

Dr. Ferguson moved as an amendment, seconded by Dr. Wells:

That it was not necessary to join in such scheme; that we had sufficient lepers in the colony (over a thousand) to form a community of our own, and be governed on the spot.

Dr. WILLS, in supporting the amendment, considered that if they knew they were to be sent away from the colony their friends and relations would conceal the lepers. Most of the members spoke on the motion, and the amendment was lost by a large majority. The Grenadine Islands, all things being equal, were considered the most suitable, being more central and nearer British Guiana and Trinidad, which would supply most of the lepers. A suitable schooner was considered sufficient means of transport.

HALIFAX (NOVA SCOTIA) BRANCH.

A MEETING of this Branch was held on November 1st, 1899, at Halifax Hotel, Dr. KIRKPATRICK, the President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Programme for Coming Session.—The programme of work for the coming session was read, amended and approved.

Communications.—Drs. FARRELL and KIRKPATRICK exhibited cases, which were commented upon by members.—Dr. MURPHY described a method of sterilising medium catgut.—Dr. FARRELL showed a Crochet Probe for removing stitches from sinuses.

A MEETING was held on November 15th at Halifax Hotel, the PRESIDENT, Dr. Kirkpatrick, in the chair, and seventeen members being present.

Confirmation of Minutes.—The minutes of the previous meeting were approved.

Communications.—Dr. JONES exhibited an Apparatus for modifying milk for infant feeding, and explained its use. After some criticism by Drs D. A. CAMPBELL, CHISHOLM, DOYLE, FARRELL, and GOODWIN there was a general opinion that the subject of infant feeding should be dealt with at a special meeting.—Dr. FARRELL exhibited specimens removed at operations during the week.

Discussion on Tuberculosis.—The PRESIDENT called upon Dr. Farrell to open a discussion on tuberculosis.—Dr FARRELL presented the meeting with copies of the report which he had made to the Government of Canada on his return from the Congress at Berlin, where he was their representative. He spoke at some length on the conclusions arrived at at that Congress.—Dr. HATTIE followed on the etiology of tuberculosis.—Dr. MURRAY spoke on the institutional treatment of phthisis, and urged the importance of holding a public meeting and founding a society for the prevention of tuberculosis.—Dr. CAMPBELL spoke on the etiology, and urged the importance of institutional treatment.—Drs. BLACK, JONES, ROSS, MURPHY, and GOODWIN spoke on various aspects of tuberculosis.—The PRESIDENT supported the idea of a public meeting being held, and appointed the following a committee to report to the next meeting: Drs. D. A. Campbell (convener), Murray, and Jones.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular monthly meeting of this Branch was held in the Royal Society's Room, Sydney, on September 29th, Dr. E. T. THRING, President, in the chair. There were thirty-eight members present, and three visitors.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The PRESIDENT announced the election of the following new members: Drs. Halliday, Neale, Lawes.

Communications.—Dr. BARRINGTON read a paper on A Year's Hospital Abdominal Surgery. A discussion ensued in which Drs. CHARLES MACLAURIN, HINDER, TAYLOR YOUNG, FIASCHI, FAIRFAX ROSS, and THRING took part. Dr. BARRINGTON replied.—Dr. HINDER read a paper on Aseptic Surgery. Drs. NEILL and BARRINGTON discussed the paper, and Dr. HINDER replied.

PHARMACOGNOSY IN THE UNIVERSITY OF MICHIGAN.—According to *Science*, the department of pharmacognosy of the University of Michigan will henceforward grow the plants required by it for use in research work. The object of this is to ensure abundance and genuineness of the drugs. Several acres of ground will be acquired, and the plants which are to be the subjects of investigation will be cultivated in large quantities. The plan is an outgrowth of the botanical gardens which were established three years ago.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

PORTUGAL.

DURING the week ending December 2nd, 14 cases of plague and 6 deaths occurred in Oporto. Since the plague first was recognised in Oporto, 280 cases and 98 deaths from the disease have been recorded. There is no account of plague extending to other parts of the kingdom of Portugal. Sporadic cases have been met with at various places, at Lisbon, and even as far as the Spanish frontier, but at no place has the disease obtained a hold. At Oporto, however, there is no sign of abatement of the disease.

INDIA.

So markedly has the epidemic of plague subsided in the city of Bombay that we have no telegraphic information sent during the week for publication. The deaths from plague during the week ending November 17th numbered 88, as compared with 71 for the previous week; but as the mortality is below 100 a week, plague is regarded as sporadic. The 88 deaths were distributed as follows: Hindus, 72; Mohammedans, 13; Parsees, 1: native Christians, 1; and Eurasians, 1.

On November 16th plague was declared to be gradually dying out in Poona. For a few days previous to that date only 3 or 4 cases occurred in the city, but in the Poona district between 20 and 30 cases occurred daily. The inhabitants are returning in numbers to the city, and many deserted streets are assuming a busy appearance. The speech of the Viceroy in Poona has done much to encourage voluntary inoculation with Haffkine's serum.

On November 8th, 9th, 10th, 11th, 12th, and 13th, the fresh plague cases in Calcutta were respectively 3, 6, 2, *nil*, 4, 4.

MAURITIUS.

During the week ending November 30th, 29 fresh cases of plague were reported in the island, and 36 deaths from the disease. This is a marked improvement upon the previous week, and it is to be hoped that a complete abatement of the disease may be at hand.

MADAGASCAR.

A letter from Madagascar received in Paris on November 27th communicates the fact that plague had virtually disappeared from Tamatave. This is satisfactory news, more especially as the proximity of the island to the eastern shores of South Africa threatened to spread the disease on that littoral. So far as is known, plague has not extended beyond Delagoa Bay.

NORTHERN CHINA.

The presence of plague in the port of Newchwang has been mentioned on several occasons in our weekly summary of the disease. Mr. Eliot Curwen has drawn our attention to the fact that Port Arthur is also infected, and that in the local journals of September 16th, 73 deaths were recorded as having taken place from plague. We have conclusive evidence from Russian official sources that plague exists in Eastern Siberia and Manchuria, and its appearance at the ports on the Gulf of Pechili is really an extension from the northern hinterland. A great deal of trouble has been caused by the methods adopted by the Chinese in their disposal of the dead. The Cantonese in Newchwang, who are the chief sufferers from plague, wish their friends to be buried near Canton, some 2,500 miles away by sea. The body in its coffin is kept waiting above ground, or only with a thin layer of earth over it until a favourable opportunity for shipping the coffin occurs. As this is often a question of months it can be conceived that an accumulation of coffins containing corpses is calculated to foster disease of all kinds, and to aid directly in the spread of plague.

SOUTH AMERICA.

During the ten days ending November 22nd, 2 fresh cases of plague were reported from Santos. At the hospital on November 22nd there were 7 cases of plague of whom 6 were convalescent. Santos is situated 24 degrees south of the equator; therefore the heat of spring and summer is approaching, and it is possible that the increasing heat is inimical to the prevalence of plague in the district. It is to be hoped that this is the case, and further that the municipal authorities of Santos will embrace the period of subsidence in the epidemic to improve the sanitary condition of this most filthy city.

THE INEBRIATES ACT IN LONDON.—At a recent meeting of the London County Council it was decided to appoint a new Standing Committee to be called the Inebriates Act Committee, to deal with all matters arising out of the Inebriates Act, 1898, the management of certified reformatories, the contracting with certified reformatories for the reception of cases, the licensing of retreats, etc.

THE Earl of Leicester, President of the Norfolk and Norwich Hospital, has promised a further sum of £10,000 to that institution in addition to the £5,000 which he gave recently. It is his wish that a separate house for the nursing staff shall be provided and fully furnished out of his gift. This, it is estimated, will cost £10,000 or £11,000; the balance will be added to the Leicester Endowment Fund.

FEVER IN LONDON.—The latest returns to the Metropolitan Asylums Board showed a decrease of 82 in the number of patients remaining under treatment compared with those at the end of the previous fortnightly return. In the fourteen days included in the last return the notifications of infectious diseases showed a decrease of 361 when compared with the notifications of the previous fortnight.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 9TH, 1899.

THE GENERAL MEDICAL COUNCIL.

The session of the General Medical Council has come to an end somewhat more speedily than is usual, or than was, perhaps, on the whole desirable. Not that prolonged sittings of the Council are of unmixed advantage, but because the immense amount of business which was taken on the last day was got through by a process which in many instances can only be described as "shelving." In the early part of the session a great deal of time was spent upon various questions which, though not without importance, were yet not in a sufficiently forward state to permit any satisfactory solution to be reached. Towards the end of the session reports of committees were practically crowded out from discussion, so that matters which had been for long periods under consideration and were ripe for debate and decision were dismissed without discussion or after debates of a somewhat perfunctory nature. Thus the report of the Public Health Committee, which dealt with the interpretation given at different places to the Council's regulations as regards the course of study for the Diploma in Public Health, a report which was in a measure final, was not discussed at all, in spite of the fact that the Chairman, Sir Richard Thorne, expressed the readiness of the Committee to see the report adjourned rather than that it should not be discussed. A similar fate befell the report of the Committee appointed to revise the machinery of registration with the object of preventing personation and other similar forms of fraud, although the necessity for revision is demonstrated by the fact that two applications have been made to the Treasury to undertake prosecutions in cases of alleged personation. We believe that the report is a very good one, but it would have been more satisfactory had the Chairman of the Committee, Mr. Horsley, had a fuller opportunity of pointing out the nature of its provisions and the necessity for them. Again, a further report by the Medical Aid Associations Committee was presented, but its Chairman, Dr. Glover, had only a few minutes in which to explain its terms and indicate the course which the Committee, which has been reappointed, intends to pursue in the future. The question is one which interests the profession at large most acutely, and it is one upon which more light is greatly needed. In particular we should all have been grateful for some clearer statement as to the mode in which the Committee consider that the Conciliation Board, the appointment of which they recommend, should be chosen. We are glad to have Dr. Glover's assurance that the representatives of the friendly societies are showing an anxiety to arrive at some working arrangement satisfactory to the profession; but we should like to have some definite statement on this head, and some tangible evidence of the conciliatory spirit said to be growing. We can only hope that the information gained by this Committee since the last session of the Council may be made available in some other form, and without too much delay.

Though it has seemed necessary to make these criticisms on the work of the Council during the session, it would be unjust not to recognise that a good deal has been done, and that one or two questions have been brought to a stage which, so far as the Council at least is concerned, is final. Thus the statement of the President as to the steps he had taken to bring about an agreement among the licensing bodies as to the need for fresh legislation to confirm or confer powers to remove and restore names to their lists, appears to show that something like unanimity has now been attained. Again, the *Memorandum* on reciprocity of practice with foreign countries, which contained erroneous statements, has been revised, and in its old form has now disappeared. Again the Council has now brought the matter of the amendment of the Companies Acts into as forward a state as possible. It has, in fact, now practically passed out of its hands into those of the Government. It was, however, thought advisable to press for the insertion of the words "medical practitioner" in the clause forbidding medical practice by companies. The legal doubts which have attached to the user of the words "physician" and "surgeon" have not been completely cleared from the legal mind, so that it seemed wise to insert some term of the widest possible connotation.

Other matters though not brought so near completion have been materially advanced. Thus the unfortunate conflict which has arisen between the Council and the Conjoint Board in England, or rather between the Council and the two Colleges severally, may it is to be hoped quickly be terminated. The principle involved was fully and clearly brought out in the debate, and it is impossible to believe that the Colleges are in any way opposed to it. The important question as to the expediency of at once proceeding still further to raise the standard of the preliminary examinations in general knowledge recognised by the Council has also been advanced a stage, even if it be only so far as to put before the Council and the profession the grounds for the very pessimistic views of the educational experts consulted.

LONDON'S MAIN DRAINAGE.

The London County Council on Tuesday decided, on the recommendation of the Main Drainage Committee, to construct (1) two additional outfall sewers 9 feet in diameter between Abbey Mills and Barking; (2) an additional outfall sewer, 11½ feet in diameter, from Deptford to Crossness; and (3) a new sewer from Catford to Crossness. The total expenditure will involve a capital charge of £1,250,000, to be carried over the eight years which it is calculated will be the period of construction.

The additions now recommended by the engineer, Sir A.

Binnie, are in compliance with and in completion of the scheme propounded by the late Sir J. Bazalgette forty years ago for the main drainage of the metropolis. It is idle at the present time to wish that the whole scheme of disposal of London's sewage had been such as to return refuse to the land and storm water to the river. That counsel of perfection, if it were ever attainable, is now out of the question except by fundamental reconstruction at incalculable cost.

The history of main drainage in London is briefly this. Up to the year 1815 it was penal to discharge sewage or other offensive matters into the streams or the old natural watercourses. Cesspools were regarded as the proper receptacles for house drainage, and the streams as the legitimate channels for carrying off the surface waters only. As population increased the old system had to be superseded, and in the year 1847 the first Act was obtained making it compulsory to drain houses into the streams which discharged directly into the Thames. These open streams gradually become polluted, and covered brick channels were necessarily substituted for them. The drainage of London was thus effected by means of sewers running in a general direction at right angles to the river, which as time went on became more and more polluted. This state of affairs gave rise to such serious complaints that after several Commissions had failed to come to any practical result in effecting a solution of the difficulty, the Metropolitan Board of Works was formed with the object of preventing the sewage from entering the Thames in its passage through London as one of its main duties.

The County Council continued the policy of the late Board, and constructed many relief sewers at a cost of more than a million; it also greatly improved the condition of the Thames at the outfalls by careful chemical treatment of the sewage; but the time has now arrived when the great interception mains, five in number, which cross London from west to east, require to be augmented. The main drainage system was constructed to serve 3,450,000 persons, with an average water supply of 31¼ gallons per head; whereas it now serves 4,700,000, or 36 per cent. more persons, with a water supply of from 35 to 40 gallons per head. The population is increasing at the rate of about 400,000 persons in every ten years. The system was designed for a dry-weather flow of sewage of 108 million gallons daily, whereas the quantity now passing may be taken at about 195 million gallons daily, or an increase of about 80 per cent. The northern low-level sewer was not designed to take any of the sewage west of Chelsea, as it was intended to discharge it after treatment into the Thames at Fulham. The whole of the drainage of the area south of the river Thames amounts in dry weather to about 80 million gallons daily, and all this quantity has to pass through the only existing sewer between Deptford and Crossness.

THE MEDICAL ARRANGEMENTS FOR SOUTH AFRICA.

The very interesting letters from our correspondent in Capetown which have been published during the last few weeks will have been read with interest we believe by all, and with particular satisfaction by those members of the Association who took a share in the long controversy to obtain for the medical officers of the army due recognition of their true military status. Our correspondent, who is a practitioner of large experience in the Colony, has told us that the medical arrangements appear to him to be as nearly perfect as human foresight can make them, and has expressed his sense of the great advances made since the Zulu war. The letters and telegrams of the correspondents of our daily contemporaries bear not less satisfactory testimony to the gallantry and devotion shown by the officers of the Royal Army Medical Corps in the field, and to the foresight displayed by administrative officers. Thus in Natal, Colonel Exham, the Principal Medical Officer of Sir George White's force, had organised hospitals at Ladysmith before hostilities commenced, and rapidly increased his accommodation for the wounded by requisitioning chapels and schools so soon as the first shot was fired. No doubt in this campaign the task of the Royal Army Medical Corps has been very much facilitated by two circumstances. First of all, the railway arrangements have been so good that it has been possible—in Natal during the early days of the campaign before the investment of Ladysmith, and again in the east during the advance to Kimberley—to move most of the wounded from the field hospitals to the hospitals on the lines of communication, or at the base, within a day or two of the action in which they were wounded. This has left the field hospitals comparatively free to deal with fresh casualties, while the advantage to the wounded of being transported in specially fitted ambulance trains to such well-appointed hospitals as the Royal Army Medical Corps has been able to fit up in the barracks at Wynberg, and so saved the hardships necessarily attending the lot of wounded men carried with an army ore treated near the front, are too obvious to need discussion. The second point is more unexpected, and will undoubtedly lead to much discussion in the future. It is that, in spite of quick-firing guns and the reputation of the Boers as marksmen with the rifle, the number of killed and wounded is very distinctly lower than in earlier campaigns. Lord Methuen has said that the battle of the Modder River was one of the hardest fought in the annals of the British army. Even allowing for a little natural exaggeration on the part of a General who had himself been wounded in the action, and discounting very largely the picturesque adjectives of some of the correspondents, there can yet be no doubt that the Boer fire, both the rifle fire and that from quick-firing guns, was very severe, yet it is surprising to find that the total number of casualties was only 475 out of a total force of 6,500. This is 7¼ per cent. At Inkerman in 1854, another "soldiers' battle," where the force was only a little larger—7,474—the casualties numbered 2,357, or 31 per cent. At Waterloo, where the British force was, in round numbers, 23,000, the killed and wounded numbered 6,932, or 29 per cent., while at Albuera in 1811, probably the bloodiest battle ever fought by the British army the force of 8,200 men lost 3 990 killed and wounded, or 48 per cent. On the other hand the ratio of killed to wounded in this campaign has so far been less than in many previous campaigns, though nearly identical with the German experience in the Franco-German war. We are unfortunately compelled to hold over this week some very interesting remarks on this subject which we have received from our correspondent, a South African campaigner, but it appears that in the Russo-Turkish war, during which the Russians had frequently to attack entrenched positions, the ratio of killed to wounded was as high as 1 to 2.1, while Longmore, from the consideration of a great mass of statistics, arrived at a general average of 1 to 4. So far the ratio in Lord Methuen's force in the three actions at Belmont, Graspan, and Modder, in all of which entrenched positions were attacked in front, the ratio has been approximately 1 to 5 3. Altogether the Royal Army Medical Corps has had to deal

with about 800 wounded from the three actions. The wounded from Belmont numbered 238, and most were sent south by train before the later actions took place under the direction of Surgeon-General Wilson, P.M.O of the army corps, who met them at Orange River. Before long we hope to be able to commence the publication of letters from a distinguished surgeon who has proceeded to South Africa as our special war correspondent, and we have every reason to anticipate that he will be able to report that the arrangements for the relief of the wounded are continuing to work well. At any rate we know that no effort is being or will be spared, and that the arrangements are under the direction of officers of tried ability and long experience as administrators. Unfortunately, the splendid effort that has been made to render the medical arrangements in South Africa equal to the greatness of the needs has almost denuded home stations. Some of the vacant billets have been filled by officers from the reserve, and others by officers who had retired but volunteered for service again in this emergency. This is not a satisfactory state of things, and shows convincingly the truth of the contention, which we have again and again advanced in these pages, that the Army Medical Corps is undermanned. No doubt we shall learn many lessons from this unhappy war. Military critics tell us that we shall have to increase the artillery and cavalry; and we venture to think that, though no weakness has been disclosed in the field of operations, but rather the contrary, another lesson will be that we must increase the establishment of the Royal Army Medical Corps, which at the outbreak of hostilities was dangerously low even for a peace footing.

CLINICAL RESEARCH IN LONDON.

At this time, when to a superficial observer it might appear that the chief end of civilised man is the destruction of his fellows, it is encouraging to those who still have faith in human progress to turn to the peaceful field of scientific research. Reference has already been made to the enlightened liberality of the London County Council in promoting investigations into the pathology of insanity; now we have to congratulate the Governors of the Middlesex and the Westminster Hospitals on the steps which they have recently taken for the furtherance of clinical research. Details of the schemes are given elsewhere. They appear to be well devised for the special end in view, and their practical execution has been placed in competent hands, so that good results may confidently be looked for. It is to be hoped that other schools in London and elsewhere will follow the example thus set. At the present time certain millionaires are said to be exercised in their minds as to how they may best apply their wealth for the good of mankind. One of these said some time ago that the millionaire who dies rich is disgraced. As he is credited with the possession of some forty millions, his position is, on his own showing, a very serious one. Naturally there is no lack of advisers to suggest means by which he may practise the salutary depletion which he considers necessary. To us there appears to be no difficulty in the matter. The promotion of original research, especially in the province of medical science, offers a practically limitless field for the useful expenditure of money, and there is certainly no other department of human enterprise in which so much absolute good may be accomplished. To any millionaires in doubt what to do with their money we commend the example of M. Osiris, a well-known philanthropist, who has just given to the Institute of France a capital sum representing an annual income of some 32,000 francs for a triennial prize of 100,000 francs, to be awarded for the most remarkable work or discovery from the point of view of the general interest. M. Osiris makes special reference to the fields of surgery and medicine. In exhibition years the prize is to be open to all countries. We think, however, that the foundation and endowment of research laboratories is better than prizes as an investment for "the general interest."

THE USE OF PRESERVATIVES IN FOOD.

The Departmental Committee appointed to inquire into the use of preservatives in foods has recently taken the evidence of some of the medical officers of health who have more particularly interested themselves in the subject. These gentlemen were unanimous in condemning the practice of the use of antiseptics in food, and agreed that it was as unnecessary as it was undesirable. Dr. Williams, the Medical Officer of the Glamorgan County Council, who gave evidence on behalf of the Incorporated Society of the Medical Officers of Health, gave it as his opinion that the practice of drugging the public promiscuously and without their knowledge by incompetent persons was very dangerous. He found that the amount of boric acid added to milk varied from 13½ grains to 210 grains per gallon, while in butter the amount of boric acid was from 1 to 112 grains per pound. He considered that 17 grains per pound was sufficient to preserve butter. He was unable to offer evidence of any direct injury to health which had resulted from the use of preservatives, but, like the next witness, Dr. Handford, Medical Officer of Health to the Notts County Council, he believed that injurious effects must follow from the use of boric acid in such a large variety of foods. Dr. Alfred Hill, the medical officer of health of Birmingham, had found that 9 per cent. of the milk samples submitted to him for analysis during three years and a half contained either boric acid or formaldehyde. He gave evidence of the injurious effect of milk containing the usual quantity of boric acid upon a kitten, which died in about five weeks. He considered that formaldehyde was more injurious to health than boric acid, for it hardened albuminous materials and made them more difficult of digestion. Of 871 samples of butter examined 243 contained boric acid, and of 21 samples of bacon, ham, sausages, polonies, and pork pies 64 per cent. contained from 10 to 45 grains per pound of boric acid. Dr. Cameron, Medical Officer of Health for Leeds, gave similar evidence, and expressed it as his belief that such preservatives interfered with the natural process of digestion; he thought, with others, that the use of these preservatives should be declared, just as chicory in coffee had to be, so that the purchaser might know what he was buying.

MR. D. L. MOODY ON MEDICINE.

There is not always that sympathy between healers of souls and healers of bodies that should exist between members of mutually complementary professions. The mass of the educated clergy of all denominations, indeed, obey the scriptural precept and honour the physician for the need they have of him. There is, however, what may be called a natural affinity between religious teachers of a certain type and quackery. We are all the more pleased, therefore, to cite a passage from a sermon recently preached in Chicago by Mr. D. L. Moody, in which that noted evangelist rebuked a brother preacher who had openly supported a notorious American quack and allowed one of his children to die of diphtheria without calling in a medical practitioner. Mr. Moody, after pointing out that the saving of souls and the healing of the body are two entirely different functions, went on to say: "I do not believe that doctors are devils. The noblest profession outside of the ministry is that of medicine. Never yet in all my years of work have I called upon an able doctor, telling him of the sickness and need of some poor friendless person, that he did not at once go to the rescue, without money and without price. Some of the noblest men I ever knew have gone out as medical missionaries, devoting their lives to doing good with the

skill and healing medicines the Lord has conferred upon them. And those men are called devils! God have mercy upon the man who says so; God forgive the man who holds such beliefs! God heals, and God heals through doctors and through medicines. Do not be carried away through ravings of fanaticism. We have a new 'ism' in America about every year—beware of the 'isms'! What would I do if I fell sick? Get the best doctor in Chicago, trust to him, and trust to the Lord to work through him! The doctors have done wonders as their knowledge has grown; they have reduced the dangers of death from diseases that once slew all they touched; and the doctors, if God helps them, will yet find a way to stop the ravages of other terrors." We can only wish that all ministers of the Gospel had as clear a perception of the proper relations between religious teaching and the practice of medicine, and as enlightened a conception of the value of medical science as Mr. Moody.

ULSTER MEDICAL SOCIETY.

The annual dinner of the Ulster Medical Society took place in Prince's Restaurant, Belfast, on November 23rd, and proved, as usual, a most successful function. The President (Dr. James Graham) presided, and 65 gentlemen sat down to dinner. Amongst the guests were the Lord Mayor of Belfast (Mr. Otto Jaffe, J.P.), Sir James Henderson, President Hamilton, etc. After dinner the President gave the usual loyal toasts, which were heartily honoured. "The Lord Lieutenant and Prosperity to Ireland" was proposed by Lieutenant-Colonel Moorhead, R.A.M.C., and responded to by Dr. O'Neill; "The City and Trade of Belfast," proposed by Dr. McKeown, was responded to by the Lord Mayor, who declared himself in favour of various far-reaching schemes of municipal sanitary reform, including the establishment of a crematorium. Dr. King Kerr gave "The Queen's College and Belfast Medical School" in felicitous terms, and the toast was duly acknowledged by President Hamilton, Professor Thompson, and Professor Lindsay. The toast of "The Navy, the Army, and the Reserve Forces," to which the state of public affairs lent exceptional interest, was proposed in an eloquent speech by Professor Byers, and responded to by Lieutenant-Colonel McFarland, R.A.M.C. "The British Medical Association" was proposed by Dr. Dempsey, and responded to by Dr. Calwell. The last toast, "The President of the Ulster Medical Society," was given by Dr. Kevin, and acknowledged by Dr. Graham.

WHOLESALE PRESCRIPTIONS.

There can be no doubt that of late years a very undesirable practice has sprung up of prescribing active drugs in the form of proprietary articles. That many of them are well and carefully prepared, and that there is no secret as to their composition, hardly affects the question. A drug habit is soon established, and patients who have once taken such drugs as antipyrin, sulphonal, trional, and thyroid gland in the form of compressed tablets continue to do so, in season and out of season, and with a complete disregard of the consequences. No prescription is required; their portability, their cheapness, and the facility with which they can be obtained, even in small country villages, present irresistible attractions, and they are recommended to friends and acquaintances without the slightest thought of the harm they may do, or of the untoward symptoms which may result. There is no check on their use, and they are handled as carelessly and distributed as freely as so many packets of sweets. The art of writing a thoughtful and appropriate prescription is lost, and the medical man falls a victim to the wiles of the wholesale medicine vendor. That such a custom is prejudicial to the interests both of the physician and the patient is obvious. We by Act of Parliament insist on the pharmacist passing certain stringent examinations, and yet when he has passed his ordeal and is duly qualified we send him prescriptions for packets of drugs which require no skill in compounding, and could be, and are, distributed by the local grocer. His technical knowledge is of no avail and he is quickly reduced to the level of the agent of wholesale manufacturers. That the physician should cease to control the treatment of his patients and should leave it in the hands of others is a very serious consideration. Each case requires individual care and attention, and the attempt to prescribe for people simply by the name of the complaint from which they are supposed to be suffering must be prejudicial to the individual. Medicine is both a science and an art, and the custom of reducing patients to a uniform level and of regarding them simply as units of a group is not to be commended.

GOETHE: A PSYCHO-PATHOLOGICAL STUDY.

Dr. P. J. Möbius, who has for several years been a diligent investigator in neurological and psychiatric medicine, contributes an interesting study on Goethe and his writings from the psychiatric and pathological standpoint.[1] Möbius has not followed in the footsteps of Max Nordau and decried the works of the brilliant German author, but has made an acute and scientific study and analysis of the facts in Goethe's life and work, and has been able to point out interesting parellelisms between genius and marked mental manifestations. Möbius truly points out that in the portrayal of the passions, the impulses and the emotions of men, the poet is naturally drawn towards the pathological. The more a poet is a fine mirror of reality the more truly will the abnormal and the pathological, like the normal, be presented in his writings. The materials of the pictures which Goethe gives in his writings of diseased mental states must be regarded as having been drawn from observation as well as from conversation with others, and in this connection we may note that Goethe was well acquainted with Heinroth, the celebrated alienist. A young man afflicted with dementia lived as ward in Goethe's father's family. Rechtecandidat Clauer appears to have been the original of the young lunatic in the *Sorrows of Werther*. Both Lenz and Zimmermann (the latter the author of the well-known mystical religious work on *Solitude*) were also personally well known to Goethe, and both became at one time the subjects of mental alienation. Goethe makes use of the expression "*Seelenleiden*" (ills of the soul); he speaks of the "*Tollheit*" (phrenzy) and "*Raserei*" (fury) of the mad, and applies the word hyponchondria as it is used now to the irritable, gloomy, and melancholic temperament which is so prone to develop sad and depressing delusions. Goethe also seems to have had a peculiarly intimate knowledge of transitional pathological and mental states. He evidently had abundant opportunities of observing these amongst the numerous pathological men and women whom it was his fate to know. Goethe regarded the passions as the cause of mental disturbance. By their excitation a level may be reached where transition to insanity takes place. He also makes Werther say: "My passions were never far removed from insanity." A most interesting chapter deals with Goethe's parents. His father possessed stability and a strong love of order, which at times degenerated into pedantry, and in contrast to his son he was unimaginative, morose, and narrow-minded. In old age he broke down mentally, and died a senile dement. The qualities of the mother seemed to have been prepotent in Goethe. In his features, particularly his eyes and mouth, he strongly resembled his mother. From her, also, he inherited his "joyous nature and a turn for poetising," his warm imagination and his love of the sensuous. His brothers and sisters all died young except one—his sister Cornelie—whom Goethe describes as "a most strange mix-

[1] *Uber das Pathologische bei Goethe*, Leipzig, 1898.

ture of strength and weakness, of self-will and pliability." She was reserved even to her husband, had a disgust for married life, became hypochondriacal, and after a short unhappy married life, died in her second confinement. Goethe when a youth in Leipzig suffered from hypochondriasis. His temperament, as he himself relates, wavered at this time between the extremes of unrestrained merriment and melancholic depression. A long period of invalidism followed, and when he next visited his father at Frankfort Goethe appeared like a patient whose illness was "more of the soul than of the body." He suffered from neurasthenia afterwards. Goethe was subject to periods of exaltation, sometimes of acute excitement. His adolescence was marked by periods of irritation and of powerful erotic impulses. With manhood these gradually subsided, but the emotional hyperexcitability never entirely disappeared. In periods of excitement he wrote poetry and fell into love affairs. But his keen analytical and powerful intellect always triumphed in the end; hence his literary productive capacity remained to old age.

PROHIBITION OF STAYS IN ROUMANIAN SCHOOLS.

THE Roumanian Minister of Public Instruction has sent a circular to the head mistresses of all girls' schools in Roumania to the following effect: "Experiments based on science and practice having shown that stays are hurtful to health and interfere with the action of the organs of respiration, I decree that you strictly forbid the use of stays to the pupils of your establishment." A similar edict was not long ago issued by the Russian Government, with what result we do not know. It is certain that if the girls are bent on tight lacing, they will do so in spite of ministers and even monarchs. To make the ukase effective, a definition of "corset" within the meaning of the Act would be required, and that might be almost as troublesome as the definition of "normal labour." It is on record that Paul I, having issued a decree forbidding the use of hats, was for a long time defied by a young Englishman who rang the changes with manifold varieties of headgear so successfully, that at last the Czar was fain to issue a decree expressly prohibiting his lieges to wear a covering for their heads like that worn by Mr. So-and-So. It is to be hoped that neither the Roumanian nor the Russian Minister will be driven to such extremities of definition.

INFLUENCE OF LIME ON MALARIOUS SOIL.

M. GRELLET recently communicated to the French Academy of Medicine[1] some interesting observations on the influence exercised by lime on a malarious soil. Up to the year 1840 malaria was rife among the inhabitants of Châtillon-sur-Loing; after that date it disappeared completely. Except in one particular no difference had been made in the agricultural methods employed, no drainage or sanitary works had been carried out, no change had been made in the mode of living. Between 1824 and 1840 lime was applied to the soil for purely agricultural purposes and by the time the whole plateau had been thus treated malaria had disappeared. As an indication of the extent to which the soil was affected, it was noticed that a sorrel which requires a certain amount of acidity in the soil, and which formerly abounded in the fallow field, died out completely. Among the observations adduced by the author in support of his theory are the following: Lime is found at Châtillon a considerable depth below the surface in a stratum of marl. Near the edge of the plateau this marl forms the sides of a swampy valley, just the place which would be expected to be very malarious. Now the valley was healthy, while the plateau above it, separated from the marl by an impervious stratum of flint and oxide of iron, was fever stricken. Similar disappearances of malaria elsewhere (Puy-de-Dôme, Allier, Cher, etc.) have followed, and would seem to have been due to the application of lime. The author maintains that the geographical distribution of malaria supports his contention that malaria is not found where the soil contains a sufficient quantity of lime. Lower Egypt, for instance, which with its marshes, high temperature, etc., might be expected to prove a hotbed of malaria, owes its general exemption to the relatively large amount of lime in the Nile water and mud (118 grams per cubic metre in flood time, according to Müntz). Still more striking are the differences observed in adjacent district in France. La Beauce on the right bank of the Loire is free from malaria. Across the river, la Sologne, on clay and gravel, suffers severely. The north (calcareous) coast of France is free from fever; the west coast, south of the Loire, is malarious, its soil is clay. No accurate observations have been made as yet on the quantity of lime necessary to kill the malaria parasite. At Châtillon-sur-Loing 27,000 kilos per hectare (roughly about 10 tons per acre) were employed. At Lapeyrouse the amount used on granite soils and on clay were respectively 6,400 and 8,800 kilos per hectare (about $2\frac{1}{2}$ and $3\frac{1}{2}$ tons per acre). M. Grellet makes no mention of the mosquitos at Châtillon. The value of a process which at once checks malaria and improves the soil is obvious, and it is to be hoped that further observations may be made on the lines indicated by M. Grellet.

[1] *Revue Scientifique*, October 21st, 1899, p. 530.

SOME HIDING PLACES OF THE TUBERCLE BACILLUS.

WE now know pretty well how to fight the tubercle bacillus in the open, but we are only gradually learning the infinite variety of ambush in which it may lie in wait for us. For instance, although the cigarette has an indifferent reputation among sanitarians, the cigar has hitherto been looked upon rather as a safeguard than a source of infection. There appears, however, to be some reason to suspect that this good character is undeserved. The United States Sanitary Commissioner at Constantinople, in a recent report to Surgeon-General Wyman, of the United States Marine Hospital Service, says that the sanitary officer at Cavalla has been much impressed by the spread of tuberculosis among the workmen in the tobacco factories there. In order that the special qualities for which it is so highly prized may not be lost, Turkish tobacco should be exposed to the air as little as possible; consequently, in the course of its manufacture into cigars, no circulation of air is allowed in the workrooms. These rooms, besides being ill ventilated, are damp; the workmen are crowded in them and inhale all the dust caused by the manipulation of the herb. They sleep in the rooms, and are poorly clad and insufficiently fed. Bronchitis is universal, tuberculosis very common among them, and they spit all about the rooms. The bacillus may also lurk among the leaves of books. The New York State Board of Health recently received a communication from the Board of Health of Michigan stating that twenty clerks in that State, who were working over several volumes of records, were taken ill with consumption and died. The books were examined by a bacteriologist, who found them full of tubercle bacilli. It is thought that they became infected from a clerk who had consumption, and who had the habit of moistening his thumb with saliva when he turned a page. A similar occurrence originating in a like cause has lately been reported as taking place in a German labour bureau. Here, too, investigation proved that the books had probably been infected by a consumptive clerk who had the habit of moistening his finger in his mouth whenever he turned the pages of a book. These facts have a moral for all of us in these days of free libraries. Another possible source of infection to which attention has recently been called is what is called in

America the "Chatanqua salute," which appears to consist in the waving of handkerchiefs by way of greeting or applause. It was estimated that in a crowd of 20,000 persons who welcomed President McKinley in this fashion lately there were 4,000 suffering from pulmonary tuberculosis. How many myriads of bacilli were shaken out of their handkerchiefs is past all computation. Even the British cheer will, it is to be feared, come under the ban of the National Association for the Prevention of Consumption, for Flügge has lately shown that in ordinary speech a considerable number of micro-organisms are discharged from the mouth. A much larger number must be expelled in cheering. It would be an interesting problem to calculate the number of tubercle bacilli that came from the throats of Her Majesty's lieges during the Diamond Jubilee procession.

VALVULAR DISEASE AND LIFE ASSURANCE.

DR. A. A. MACFARLANE, of Sydney, N.S.W., in a paper published in the August number of the *Medical Examiner*, states that "Valvular disease of the heart has up to the present time been considered as absolutely incompatible with the acceptance of an applicant as a satisfactory risk to life insurance, as far as I am aware, by any life insurance company in the world." Whatever may have been the custom formerly, this statement is no longer true in Great Britain, as for some years many of the offices have been willing to accept lives suffering from valvular disease of the heart, and statistics have shown that these lives have turned out very well. Dr. Macfarlane is of opinion that certain cases of valvular disease should be accepted subject to the following rule: "1. The applicant must not be over 35 years of age. 2. There must be an entire absence in the *personal* and *family history* of (*a*) gout, (*b*) alcohol, (*c*) and syphilis. 3. Compensation must be good. 4 The pulse full, regular, and compressible. 5. The amount of alcohol restricted to 1 ounce in the 24 hours. 6. The applicant must not be engaged in any hard manual labour." It will probably be found, however, that these rules will need to be supplemented. To begin with, they contain no reference to the particular valve defect. Aortic regurgitation is justly deemed a bar to life assurance on account of the liability to sudden death. Again mitral stenosis is a much more serious lesion from a life assurance point of view than mitral regurgitation. The frequency of the pulse and the length of time which should have elapsed since the apparent commencement of the murmur should also be taken into consideration. It certainly would not be wise to accept an individual with mitral regurgitation, however good the compensation was, if the attack of endocarditis, from which it originated, dated back only two or three years.

CÆSAREAN SECTION FOR ECLAMPSIA.

IT is a curious and interesting fact that the teaching of obstetrics has passed almost entirely into the hands of men who by training and instinct are surgeons. This development must be heartily welcomed, for every obstetric emergency is essentially a surgical problem, and the conduct of a normal case of labour demands that rigid adherence to antiseptic routine which only a surgical training can ensure. An illustration of this tendency is supplied by the fact that among Continental obstetricians there is a marked and growing inclination to widen the indications for Cæsarean section. This is the result mainly of the great reduction in the mortality of the operation which has followed recent improvements in the technique of abdominal surgery. In the hands of experienced operators like Olshausen and Leopold, the mortality of the Cæsarean operation (when performed for pelvic obstruction) hardly exceeds that for ovariotomy or the removal of diseased appendages. And further experience has shown that the anticipation of trouble arising from the uterine and abdominal cicatrices in the course of a subsequent pregnancy or labour is groundless; this probably follows upon improvements in the methods of suturing. One of the more recent applications of the operation is in unfavourable cases of eclampsia. The operation was first performed upon an eclamptic patient by Halbertsma of Utrecht, in 1889, and in a recent paper by Hillmann[1] the records of 40 cases are analysed and tabulated. There are, therefore, materials for the formation of a *primâ facie* judgment upon the matter. The indications for interference in cases of eclampsia are thus laid down by Hillmann: If the cervix is fully dilated delivery can be rapidly and safely effected by section or forceps; if the cervix is partly dilated and dilatable, dilatation may be completed by rubber bags or by deep incision of the cervix, as recommended by Dührssen; if the uterus is inactive, the cervix undilated, and the mother's condition so urgent that time cannot be lost, then the Cæsarean section offers a fair chance of saving the life both of the mother and the child. When sedatives or other measures fail to control the seizures, no other method remains than to empty the uterus, and the quickest way of doing this is Cæsarean section. Of the 40 cases tabulated by Hillmann, in one the operation was performed *post mortem*, the child being saved; of the others 20 women died and 19 recovered, a maternal mortality of 51·3 per cent.; of the 41 children, 23 recovered, and 18 died, a fœtal mortality of 43·9 per cent. In every case repeated seizures had occurred before the operation, labour either had not begun or was hindered by the presence of some complication such as pelvic contraction or fibroid tumours, and in 14 out of the 39 cases the mother was *in extremis* from coma or pulmonary œdema. Considering the serious nature of the conditions under which the operation was performed the results must be regarded as encouraging, for we know that severe cases of eclampsia in which delivery cannot be rapidly completed nearly always terminate fatally. The mortality of all cases of eclampsia is generally estimated at 30 per cent., and many are, of course, slight in comparison with those referred to here. It is curious to note that in 6 cases the fits recurred after the operation; of these, 4 recovered, including 1 who had thirty post-operation seizures.

PATHOLOGICAL TEACHING AT CAMBRIDGE.

PRELIMINARY arrangements for the long vacation course given in the pathological department at Cambridge have already been made. It has been settled that the course shall commence on Friday, July 6th and terminate on August 17th, 1900. The classes will be the same as those held last year, but further arrangements will be made for advanced classes and the laboratories will be open for original research.

OWING to the great pressure on our space produced by the reports of the General Medical Council we are unable this week to publish a number of communications.

WE regret to have to announce the death, on December 5th, of Dr. Edward Hamilton, F.R.C.S., Surgeon in Ordinary to the Lord-Lieutenant, and formerly Professor of Surgery at the Royal College of Surgeons of Ireland.

THE Bradshaw Lecture before the Royal College of Surgeons of England will be delivered by Mr. H. G. Howse on Wednesday next at 5 P.M., in the theatre of the College. The subject of the lecture is A Centennial Review of Surgery.

[1] *Zeitschrift für Geburtshilfe und Gynäkologie.*

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION, 1899.

NOTES.

The New Legislation desired by the Council to increase the efficacy of its penal procedures now appears to be within measurable distance of being carried through, for the objections offered by the Universities and Corporations have been almost entirely met. It is sought to remedy two anomalies, the one that a person struck off the *Register* might still retain and use his diploma, in those cases in which the original licensing body had no power to revoke the diploma or did not see fit to do so, and the other that there was some doubt whether the Council had full legal power to restore a name to the *Register*. It has frequently restored a name, but it seems to be certain that it cannot do so if the registrable diploma has been cancelled, so that the applicant has no registrable qualification to replace. Some of the bodies appear to have no power to restore a diploma which has been cancelled except by re-examination; in this way a deadlock might and indeed has occurred, and thus the punishment inflicted by erasure of a name from the *Register*, though only intended to be temporary, might become perpetual. Many of the qualifying bodies objected to the proposal that erasure from the *Register* should automatically have the effect of removing, as is the case under the Dentists Act, the qualification from their lists. This proposal has been abandoned, but in its place provision is made to confer upon the licensing bodies the power to cancel a diploma after the holder has been condemned by the Council. It is left to the University or Corporation to decide whether it shall do this without further inquiry, or whether it shall hold an independent inquiry. The power to restore without re-examination a diploma cancelled or suspended is specifically given. The only doubt remaining is whether the Privy Council will undertake or will further any partial legislative measure—a course to which some objection has been expressed.

The Resistance of the Royal Colleges of Physicians and Surgeons to the decision of the Council, at its last session, that for the purposes of students' registration courses of chemistry and physics could only be accepted when taken at institutions recognised by the Council, led to a warm debate. The two Colleges had sent letters to the Council asserting that it had no legal authority to impose any such conditions as to a matter said to be wholly within the province of the licensing bodies. The old question whether the plan adopted by these Colleges of recognising courses given at schools did not practically reduce the five years curriculum to four years was raised. It was maintained during the debate that the effect was merely to make the student spend another year at school, and that this was not loyally to carry out the intention of the Council in prescribing the five years curriculum. The present position appears to be that a student applying for registration upon unrecognised certificates might be refused. Though this might make no difference to him so far as admission to the examinations of the Conjoint Board in England was concerned, yet it might have an injurious influence upon his career were he to seek the qualification of other bodies which accepted the Council's pronouncement. The legal position as to students' registration is peculiar. There is no mention of it in any Act of Parliament, and the power to enforce it at all, otherwise than by the various licensing bodies individually prescribing it, rests upon the interpretation placed upon certain not very precise phrases empowering the Council to take measures for the efficient carrying out of the Acts. The regulation is, however, so obviously necessary that it is hardly likely to be seriously disputed by the Colleges when the full significance of the question is understood. The original motion was to the effect that the Council adheres to its resolution; but for this was substituted another by which the Colleges were requested to take the matter into fresh consideration, and it was understood that representatives of the Council and of the Colleges would meet and discuss the matter. It was pointed out that had this course been adopted in the first instance it was very possible that the Colleges would have replied in different terms. It seems a pity that dissensions of this kind should arise, for the General Medical Council is the only common ground upon which the several bodies meet, and a loyal adoption of the measures passed by a "General Council of Medical Education and Registration," even though they be slightly distasteful to the individual body, tends to that professional unity, the absence of which oftentimes places the medical profession in a less favourable position than other professions in seeking measures of reform.

The Memorandum on Reciprocity of practice was the subject of an interesting discussion. From a conversation which took place when the report was first brought on, it appeared that the old *Memorandum*, which contained a statement recognised by the Council to be erroneous, had still been advertised and remained upon sale. The President seemed to be unaware of this, but in the result it was made quite clear that the statement prepared by Mr. Muir Mackenzie is to be introduced into an amended edition of the *Memorandum;* and Mr. Horsley, by whom the point was raised, expressed himself satisfied that the old "statement" should in this way receive decent burial. The statement, which is printed in full elsewhere, sets out that a foreign medical practitioner who comes to the United Kingdom is bound by the laws in force in the United Kingdom, and becomes subject to the penalties and disabilities imposed by those laws. A foreign practitioner is thus in the position of a practitioner who is not recognised by law, the only exception being that under the Medical Act Amendment Act, 1859, a foreigner who has obtained from a foreign university a degree or diploma of Doctor of Medicine, and who has passed the regular examinations entitling him to practise medicine in his own country, may act as the resident physician or medical officer of any hospital established exclusively for the relief of foreigners in sickness. The only action which can be taken is under Section xvii of the Act of 1886, by which that part of the Act which relates to foreign practitioners may be applied by an Order in Council to any foreign country which offers to the registered medical practitioners of the United Kingdom such privileges of practising in the foreign country as may seem just. When such an Order has been made the General Medical Council may recognise such of the medical diplomas of that country as may, in its opinion, furnish a sufficient guarantee that the holder possesses the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery. After this recognition the holder of a foreign diploma who shows that he is of good character, and that he is entitled by law to practise in the foreign country can claim registration on a "foreign list," provided that he can show that he is not a British subject, or that being a British subject the foreign diploma was granted to him at a time when he was not domiciled in the United Kingdom, or in the course of a period of five years, during the whole of which he resided out of the United Kingdom.

Reciprocity of Practice with Italy was recommended by the Executive Committee, and Sir Dyce Duckworth moved a resolution declaring that it was now opportune that Clause xvii, Part II, of the Act of 1886 should be made applicable to Italy. At the present time foreign practitioners are allowed to practise in Italy without any special permit so long as they confine their practice to the foreign community. If they want to do more than this they must obtain from one of the Royal Italian Universities an authorisation which appears to be merely of a temporary nature. It was known upon trustworthy private information that these privileges, whilst probably secured to those already in practice, were likely to be curtailed in the case of British practitioners who may in future wish to settle in Italy. It was urged that a move in the direction of recognising Italian diplomas, which were stated to be of high excellence, would have the effect of stopping the agitation among Italian practitioners. After some discussion, in which it appeared that some members of the Council felt that the recognition under any circumstances of foreign diplomas over which the Council had no jurisdic-

tion, and could only have secondhand and imperfect knowledge, was a dangerous step; whilst Mr. Muir Mackenzie told the Council that no partial recognition as to practice amongst their fellow countrymen was possible under the Acts, an amendment proposed by Mr. Tomes, and seconded by Sir Christopher Nixon, was adopted by a large majority. The principles on which this amendment was based were that it was improper for the Council in a matter of first-rate importance to act upon private information, however trustworthy, and that were it to do so there was no security whatever that the object mentioned above would be attained. It was therefore proposed that the British Ambassador in Rome should be put in motion to procure from the Italian Ministry an official statement as to the present state of the Italian law, as the only official documents relating to it in the possession of the Council are now seven years old. And further, that the Ambassador should be asked to inquire whether any change was now in contemplation, in order that the Council might judge as to the advisability of reciprocity. This was felt to be a far safer course, for it would secure by an official pledge, which would be upon record, that any concessions were really reciprocal. It was pointed out, also, that this would be as speedy, or rather a more speedy, method than that of putting in motion the machinery of the Act of 1886, so that the plea of urgency was met. It was urged also that if reciprocity, and not the exclusion of foreign practitioners, was what the Italian medical profession were really seeking, it was not to be supposed that the Italian Government would take any active step pending negotiations of this character. As it was felt to be illogical to ask for information and at the same moment to prejudge the question, the acceptance of this view necessarily had the effect of postponing any definite pronouncement upon the broader question of the policy of putting these clauses into operation.

The Vexed Question of the Title of Physician and Surgeon was raised by an application from the Society of Apothecaries, expressing a wish that the Council would co-operate in seeking to settle the matter by means of a friendly suit. It was suggested that this might take the form of an action brought by one medical man against another, the expenses being guaranteed by the two bodies respectively. Though it was admitted that the outcome of the case Hunter *v* Clare was unsatisfactory, the view was taken that the Council had no statutory power to spend money in this way, and it was finally decided that the matter should be referred to a Special Committee to report upon the general desirability of taking the matter up. It was originally proposed that this Committee should have the power to take legal advice and even to take steps to initiate an action if it thought fit, but both of these propositions were negatived and its functions restricted to a general report upon the attitude of the Council. Mr. Carter read a letter from Dr. Murray, the Editor of the great English *Dictionary* now in course of publication, giving some interesting information as to the use of the term *physicus* in late classical and mediæval Latin, with the view of showing that it was the most general term to designate a medical practitioner, and that its use could not, therefore, be restricted. Mr. Horsley strongly opposed the proposition that the Council should delegate to any committee the power of initiating proceedings upon the ground that the Council would be pledging itself to uphold, even though only *pro formâ*, a position upon which it had never at any time made, or had the opportunity of making, any pronouncement; this aspect of the case commended itself to the Council, and his amendment was carried by a large majority. Thus the decision of the Council is not final; it awaits the report of its Committee, and very possibly may ultimately take the line that it never intended to raise the question, and that it will not consent to assume the position of apparently upholding a decision with which it is not in accord. Should this happen, although the settlement of the issue may not be so definitive as that which would be attained by an appeal, yet the decision of the Council would carry very great weight, even in a court of law, inasmuch as the question is one upon which the Council is eminently fitted to pronounce judgment. The result will, we believe, be considered satisfactory by the Society of Apothecaries. It will be observed with much surprise that the name of Mr. Horsley does not appear on the Special Committee to consider this question. The resolution to appoint the Committee was carried by Mr Horsley, and we believe that it is an almost universal custom to put the member of any body who moves for and obtains a Committee upon that Committee. The omission is the more extraordinary because, as will be seen from our report, Mr. Horsley, as soon as his resolution was carried, was asked to nominate his committee, but suggested that Mr. Carter should do so, and when Mr. Carter also declined the duty it was undertaken by the President. If we may judge from the general tenour of their utterances upon this and similar questions, we cannot but feel that the gentlemen nominated to form this Committee do not adequately represent the various shades of opinion held by different members of Council on this matter.

The Report of the Education Committee upon the feasibility of increasing at an early date the standard of the examinations in preliminary education was received but was not adopted. Much exception was taken to endorsing the opinion of the educational experts who had been consulted to the effect that no further raising of the standard was feasible. The matter was referred back to the Committee with instructions to obtain from the experts a fuller exposition of their reasons for taking this view. The statement to which the strongest objection was felt was that a standard high enough for one division of the kingdom would be too high for another. This view is at variance with the whole policy of the Council, which for years has been endeavouring to render qualifying standards as nearly as possible the same for all examinations. Another point which was felt to be open to question was whether the experts' inference that to raise the standard would have the effect of leading to a proportionate increase in the number of rejections, and so to starving the medical schools, was justifiable. This view is opposed to the experience of the Scottish Universities, in which the sudden elevation of the entrance standard had only a temporary effect. It was thought that students prepare themselves, or are prepared by their instructors, with strict reference to the requirements of the examining bodies, and that they would very soon come up to any reasonable standard. Hence the settlement of the question is postponed until further data are presented, the Council being very reluctant to abandon for an indefinite time the cherished scheme of securing for medical students a higher standard of general education.

The Inequalities in the Treatment of Foreign and British students disclosed by a report of the Education Committee led to the adoption of a resolution of Mr. Horsley instructing the Education Committee to consider the circumstances under which at the present time foreigners who desire a British diploma obtain exemption from some of the conditions of education and study required under the regulations of the Council from British students. The Education Committee in consequence of an inquiry received from the German Government had through the Registrar addressed a letter of inquiry to all the licensing authorities and a number of replies had been received, but though these were abstracted the Committee had made no report upon them, nor had it attempted to tabulate or analyse the results. Not only are exemptions, the exact effect of which requires further consideration, granted to foreign subjects who have obtained part of their medical education abroad, but it would appear that these exemptions are more extensive than those which are granted to British subjects who desire to obtain part of their education abroad. The effect of Mr. Horsley's resolution will be that a report will be presented to the next session of the Council, and it is very possible that the Council may then see reason to take action upon the matter with the view of ensuring uniformity and proper precautions to prevent the whittling down of its regulations in favour of foreign students.

The Financial Position of the Branch Councils is to be investigated by a large Committee. The contrast between the financial position of the English and the Irish Branch Councils is striking, for while the latter is impecunious the Council has mortgaged its buildings to the former as part security for a

loan of £25 000. To pay off this a Sinking Fund has recently been started.

REPORT OF PROCEEDINGS.

Thursday, November 28th.

Sir William Turner, President, in the Chair.

The minutes of the previous day's meeting were read and signed by the President as correct.

The Case of Wm. Stewart, M.D.

The Council then proceeded to consider the charge proved against Wm. Stewart, of Denton, near Manchester, registered in Ireland May 19th, 1887, as M.D., Mast. Surg., 1887, R.U.I., adjourned from June 2nd, 1899. Dr. Wm. Stewart appeared in person.

The charge originally preferred against Dr. Stewart, as formulated by the Council's solicitor, was as follows:

Complaint had been lodged with the Council by the Ashton-under-Lyne District Medical Society in relation to the Denton and District Provident Dispensary, by whom he (Stewart) was engaged as medical officer, and by whom an unqualified person named Burgess was engaged or employed as his assistant. The complaint was that he (Stewart) associated with the said unqualified person in the practice by him (Burgess) of medicine and surgery, and permitted him to carry on medical practice, and was party to his administering medical aid and treatment to patients as if he were a duly qualified medical man.

At the conclusion of the deliberations of the Council on the case in June last on question put from the chair, it was resolved:

(*a*) That the Council do proceed at once to pronounce its judgment on the case.

(*b*) That the charge made against Dr. William Stewart has been proved to the satisfaction of the Council.

(*c*) That the further consideration of the charge proved against Dr. William Stewart be adjourned until the next session.

Since then the Council had received a communication dated October 13th, 1899, from Mr. Harold Hyde, solicitor, who wrote, on behalf of the Ashton Medical Society, representing that the Society did not wish to press the case further, and requesting the Council to allow them to withdraw from further proceedings. Having been told that the Society should formally communicate their wish in writing, Mr. Hyde subsequently supplied the following resolution, passed at a committee meeting held on October 24th, 1899:

That the Ashton-under-Lyne and District Medical Association, being satisfied that the grounds upon which their complaint to the General Medical Council was laid against Dr. William Stewart, of Denton, near Manchester, having now been removed, by reason of the said Dr. Stewart having discharged the unqualified assistant referred to in the complaint, and also having resigned his appointment in the Denton Provident Dispensary, and taken proper steps to effectually terminate his connection therewith, are of opinion that the objects of the Association in laying such complaint have been fully gained; that the complaint be not further prosecuted on the adjourned hearing to be held on the 30th day of November next; that the members of this Association hereby record their appreciation of the careful and patient hearing given to the above complaint by the General Medical Council; that the General Medical Council be and they are hereby prayed to take the above circumstances into their favourable consideration on the adjourned hearing; and that a copy of this resolution be forwarded to the Registrar of the General Medical Council.

F. J. Roberts-Dudley, President.
John William Talent, Secretary.

A letter had also been received from Dr. Stewart's solicitor, stating that Dr. Stewart, in accordance with the advice of the Council in May last, had considered his position, and immediately on his return from London, on his request, the Denton Provident Dispensary dispensed with the services of Mr. Burgess. Since that time Dr. Stewart had become a member of the Ashton-under-Lyne Medical Association, and had given notice terminating his position of medical officer to the Denton Provident Dispensary, and would in future continue in private practice only.

No member of the Council desiring to question Dr. Stewart, strangers were requested to withdraw. On readmission,

The President, addressing Dr. Stewart, said that the Council had had under consideration the resolution passed by the Ashton-under-Lyne and District Medical Association on October 24th, and also the letter written by Dr. Stewart's solicitor. The Council were glad to find that he had reconsidered his position in the matter, and the Council had now come to the following resolution:

That the Council having further considered the charge proved against Dr. William Stewart, does not adjudge him guilty of infamous conduct in a professional respect.

The President concluded by informing Dr. Stewart that the case against him was at an end.

Restoration of Names.

The Council then went into *camera* to consider the report of the Executive Committee with regard to the restoration of certain names to the *Medical Register*, and strangers were requested to withdraw. On readmission, the President announced that the Council had resolved to direct the Registrar to restore the name of Robert Masters Theobald and the name of George Hamilton Wise to the *Medical Register*.

Dental Cases.

The Council then proceeded to consider the charge found to be proved against Mr. Clement Maguire Kershaw, adjourned from June 3rd, 1899. The Dental Committee reported that facts admitted or proved were that Mr. Kershaw was registered in the *Dentists Register* on July 22nd, 1891, under Section xxxii of the Act, without a diploma, and the charge against him was that he employed an unqualified person, named Victor Neighbour, who had performed a dental operation, and had been permitted by Mr. Kershaw to see patients and to do work beyond the province of mechanical assistance.

Mr. Germaine, who appeared as counsel for Mr. Kershaw, said that immediately the facts above stated had been found of the last occasion, Mr. Kershaw at once took steps to obtain a qualified assistant, and he informed Mr. Neighbour that he could no longer employ him. He had entered into a contract with Samuel Dunn, who had made a statutory declaration that he was fully qualified, and on August 1st last Mr. Dunn entered into the service of Mr. Kershaw as assistant. He handed in Mr. Dunn's diploma for the information of the Council.

The President pointed out that although Mr. Dunn had a diploma which was granted in July, he could not find his name on the *Dentists Register*, unless he had registered since it was published; and a person who was not on the *Register* could not practise, although he might hold a diploma which would entitle him to be registered.

Mr. Germaine was instructed that Mr. Dunn was not registered. Mr. Kershaw thought that he was acceding to the desire of the Council by employing a man who had a diploma which entitled him to be registered; but if the Council went further and said that the employee as well as the employer must be registered, he had no doubt Mr. Dunn would obtain registration without delay. Mr. Kershaw had recognised the necessity of carrying out loyally the desire of the Council, and was under the impression he had done so.

The President said the non-registration of Mr. Samuel Dunn, although he had obtained a diploma in dental surgery of the Faculty of Physicians and Surgeons of Glasgow was a question of importance, not so much with regard to Mr. Kershaw as with regard to Mr. Dunn, who was not before the Council. He ought to point out that Mr Dunn ought to register because he appended to his name the letters "L D S.," implying that he was a licentiate in dental surgery, and the appending of such letters to his name when he was not on the *Register* did not seem to be in conformity with the Dentists Acts, Section III. It was a matter which he (the President) thought should be brought to the attention of Mr. Dunn.

Mr. Germaine, on behalf of Mr. Kershaw, undertook that the matter should be mentioned to Mr. Dunn. He added that Mr. Neighbour had left the locality and gone to Scotland. Mr. Kershaw had gone through many months of anxiety. The profession of dentistry was his livelihood, and he recognised that his livelihood depended upon his doing it in a proper manner and in accordance with the dignity of the profession. A letter from Mr. A. Maurice, who had preferred the charge in the first instance, was then read, in the course of which he stated that he did not intend to offer any statement at the adjourned hearing of the Kershaw case, but deemed it proper to add that he had heard, and had no reason to doubt, a rumour to the effect that Kershaw had parted

with his unregistered assistant. Since the beginning of these proceedings he had learnt that the practice with which Kershaw was charged was a very prevalent one; and, therefore, while rejoicing that it had been put a stop to in one case at least, he hoped Kershaw would not suffer any punishment for doing what was also done with impunity by many men more highly placed in the profession than he.

Strangers were directed to withdraw. On being re-admitted,

The PRESIDENT, addressing Mr. Kershaw, said, the Council had deliberated on his case. He had heard read the report of the Dental Committee on the facts of the case, and those facts obviously were omitted by his counsel. The facts were undoubtedly grave. They showed a condition of things of which the Council eminently disapproved; but in view of this being one of the first cases in which such a matter had been referred to the Council, the Council had taken a merciful view, and had come to the following resolution:

That the Council having further considered the charge proved against Mr. Clement Maguire Kershaw, does not adjudge him guilty of infamous conduct in a professional respect.

The PRESIDENT informed Mr. Kershaw that the case against him was now at an end.

The Council then proceeded to consider the case of Henry Louis Goodman as to which the Dental Committee presented a report.

The PRESIDENT moved:

That Henry Louis Goodman having been proved to have been convicted of misdemeanour, the Registrar be directed to erase his name from the *Dentists Register*.

Mr. TOMES called the attention of the Council to the minutes of 1891, from which it appeared that this same person was brought before the Council and convicted of using titles such as Surgeon Dentist to "Her Majesty's Household" to which he was in no way entitled, and that he was then admonished.

The motion was then put and carried.

RESTORATION OF NAMES.

The Council again went into *camera* to further consider the report of the Executive Committee, and strangers were directed to withdraw. On being readmitted the Council proceeded with the next item of business.

ALLEGED EMPLOYMENT OF UNQUALIFIED ASSISTANT.

The Council then proceeded to consider the case of Richard Thomas Williams, of Cwmavon, Port Talbot, Glamorganshire, registered as Lic. R. Coll. Phys. Edin. 1889, Lic. R. Coll. Surg. Edin. 1889, Lic. Fac. Phys. Surg. Glasg. 1889, who had been summoned to appear before the Council to answer the following charge as formulated by the Council's solicitor:

That, being a registered medical practitioner, he permitted and enabled an unqualified person named J. C. Davies, under cover and with the aid of his name, qualifications, and presence to administer treatment to patients, and do acts which ought properly to be done only by duly-qualified and registered practitioners, and to carry on medical practice as though he were duly qualified

The complainant is James Herbert Powell, of Cwmavon, in the parish of Michaelstone-super Avon, in the county of Glamorgan, registered with the triple qualifications of Scotland, 1896.

Mr. Arthur Powell appeared as counsel for Dr. Powell; and Mr. Eldon Banks as counsel for Dr. R. T. Williams.

Mr. ELDON BANKS informed the Council that Dr. Williams, who had come up to London to meet the charge, had been taken seriously ill, and was unable to be present. He called Dr. MUMFORD, who said that he had seen Dr. Williams; that he was suffering from tonsillitis, and was unfit to leave his bed.

Mr. ARTHUR POWELL, in opening the case, disclaimed any feeling of vindictiveness on the part of Dr. Powell. The result which he desired had already been obtained, because Dr. Williams had notified that Mr. Davies was no longer employed by him, and that he left his employment on October 13th last, after the proceedings had been commenced and the declarations had been sent up. Mr. Powell had seen Mr. Davies going about the neighbourhood visiting from house to house seeing patients, with a visiting list in his hand. It was disputed by Dr. Williams and Mr. Davies that the latter saw the patients as a medical man; that all he did was to see the patients and to report to Dr. Williams their condition, so that he (Dr. Williams) could visit, or refrain from visiting, them as he thought fit. Dr. Williams was the medical officer of a number of friendly societies in the neighbourhood. He was very popular, and many of the inhabitants of the district were unwilling to assist the complainant as against Dr. Williams. Therefore a detective was employed, who had seen Mr. Davies go from house to house, and he had followed him in, and had had conversations with the persons whom Mr. Davies had visited, and had taken certain statements from them, which he was prepared to relate to the Council. That was as far as he (counsel) could go. He had not any evidence to produce before the Council such as would be received in a court of law, and would certainly be required in a court of criminal jurisdiction, which would show that any offence had been committed. He produced a number of certificates signed "Pro R. T. Williams, Surg., J. C. Davies," and there was also another certificate, of which he had only a copy, signed "J. C. Davies, Surg." The original was in the possession of the secretary of the society, and he had been asked to send it to the Council, but had declined. It was a case of the very gravest suspicion. It was very odd that these certificates should be given, signed, as he had stated, not once or twice but in numbers, by Mr. Davies, and the explanation given—that it was mere clerical work—seemed to be of the lamest possible description.

Dr. JAMES HERBERT POWELL, examined by Mr. ARTHUR POWELL, said he adhered to his original declaration.

Cross-examined by Mr. BANKS: He went into partnership with Dr. Roberts in June, 1899; he did not know then that Dr. Roberts was not on speaking terms with Dr. Williams, but he knew it now. The substance of his declaration was what was told him by the detective he employed.

WILLIAM OXLEY, ex-detective sergeant of the Cardiff Police examined by Mr. ARTHUR POWELL, said he knew Mr. Davi of Cwmavon, and had seen him visiting at that place. H saw him visit a Mrs. Jones, and followed him into her house, and asked if Dr. Davies was attending her, and she said he was and also her baby.

Cross-examined by Mr. BANKS: He made no note of the conversations he had. He got most of his information from the village barber.

By Mr. BROWN: He found out that Mr. Davies was called "Dr. Davies" by making inquiries of persons in the street. As Mr. Davies passed by he would ask a person "Who is that gentleman?" and they would reply "Dr. Davies"

By the PRESIDENT: Neither Dr. Roberts or Dr. Powell suggested the form in which he should put his questions. On July 29th he went to Cwmavon and saw them and they said there were rumours about the village that there was an unqualified person practising there, would he go and take observations, follow him about and report.

The case on behalf of the complainant having been concluded,

Mr. ELDON BANKS read the declaration of Mr. Davies, in which he said he was a medical student, and had gone through four years' study at Glasgow University, and had passed the Second and Third Examinations, and intended to go in for the Final in April next. He denied attending any case requiring professional skill; he saw a few simple cases in which he took the temperature and so forth for Dr. Williams, but never prescribed in any case. He signed the certificates as Dr. Williams's clerk and nothing else. The declaration of Dr. Williams was then read, in which he explained that he engaged Mr. Davies as assistant on the distinct understanding that he was not to attend patients professionally or prescribe for them.

The case had not concluded when the Council adjourned.

Friday, December 1st.

SIR WILLIAM TURNER, President, in the Chair.

The minutes of the last meeting were read and confirmed.

RESTORATION OF NAMES.

The Council resumed *in camerâ* the adjourned consideration of the report of the Executive Committee with regard to the restoration of names to the *Medical Register*.

The Council having ceased to sit *in camerâ*, the President announced that:

The Council, having carefully considered the application of Robert Alexander Douglas Lithgow, resolved that his application for the restoration of his name and qualifications to the *Medical Register* be refused.

Alleged Employment of Unqualified Assistant.

The Council then resumed the consideration of the case of Richard Thomas Williams (Cwmavon) and immediately went into *camera* to consider an important matter appertaining to this case. When strangers were readmitted no announcement was made as to what had transpired *in camerâ*.

Mr. Eldon Banks proceeded to read a number of declarations of persons cited by the complainant denying that Mr. J. C. Davies had attended them as a qualified practitioner. He also informed the Council that Dr. Williams was still unable to be present through illness.

The President intimated that the Council did not desire to hear Dr. Williams.

Mr. J. C. Davies was then called, and in reply to Mr. Eldon Banks stated it was untrue that he ever signed in his own name with the word "surgeon" at the end of it.

Cross-examined by Mr. Arthur Powell: He had signed a number of certificates, but in the presence of Dr. Williams and under his direction. He had seen cases of a trivial nature which Dr. Williams had previously seen and prescribed for, but in those simple cases that he saw he did no more than take the temperature and report to Dr. Williams; he did not prescribe in any case.

By Sir Christopher Nixon: He was aware of the regulation of the General Medical Council with regard to the fifth year of medical students; a medical student could be a clinical assistant for his fifth year. He entered the service of Dr. Williams for the purpose of preparing himself for his final examination.

By Sir Dyce Duckworth: He had passed four winter sessions at Glasgow University; this was the first employment he ever held.

By the President: He was registered as having commenced his medical studies with James Bowen James of Aberavon, Glamorgan, in 1883; that was his uncle, to whom he was apprenticed. He never acted as his assistant.

Mr. Eldon Banks, addressing the Council on behalf of Dr. Williams, asked them to deal with the facts only as they were proved before them. As to the allegation of visiting, the detective only vouched for three out of ten cases deposed to, and as to those he asked leading questions and was satisfied with an affirmative answer to each. As to the charge of attending patients it was mere idle suggestion, unsupported by any evidence, and was absolutely unfounded and untrue. The whole case against Dr. Williams was most flimsy to begin with, and had been answered fully, frankly, and fairly. Dr. Williams had desired from first to last to do only what was perfectly legitimate and right as a member of his profession, and he hoped that the Council would exonerate him from the charge that had been made against him.

Mr. Arthur Powell, having reviewed the evidence adduced on behalf of Dr. Williams, said that that which seemed contrary to the rules of the profession had now passed away, and he left the matter entirely in the hands of the Council.

Strangers were directed to withdraw. On readmission,

The President said he had to intimate that the charge against Richard Thomas Williams was not proved to the satisfaction of the Council.

The Case of William Matthews Joyce.

The Council then proceeded to consider the case of William Matthews Joyce, probably of 25, Cattell Road, Small Heath, Birmingham, registered with the triple qualification of Scotland 1889, who had been summoned to appear before the Council on the following charges:

(*a*) That he was, on July 10th, 1899, at the Warwick Borough Sessions, convicted of being drunk and disorderly.

(*b*) That he was, on November 13th, 1899, at the Warwick Court House, convicted of misdemeanour, namely, of assaulting and beating Ellen Simpson.

Mr. Muir Mackenzie (legal assessor) said the only evidence necessary to be put in was the certified copies of the two convictions, which he read.

Replying to the President as to what explanation, if any, he had to give with regard to the two convictions,

Mr. Joyce stated the first was the result of a family quarrel from beginning to end. He denied *in toto* the charge of drunkenness, but he admitted that he had used language which was unbecoming. As to the charge of assault, the woman came to his house with her mother drunk, and he merely pushed them away from his door, for which he was fined £2 14s. or one month's hard labour in default.

Strangers were directed to withdraw. On readmission:

The President, addressing Mr. Joyce, said: I have to tell you that the Council consider your conduct to be most improper, and entirely unworthy a professional man. They, however, are disposed this time to take a merciful view of your case, and not to inflict on you that severe penalty which it is in their right and power to do. But they call upon you to appear here in the month of May next—they adjourn your case for further consideration until the month of May—and they will then require that you should produce evidence that between this date and May your conduct has been that which a professional man ought to show.

The Case of Frederick Wm. Kirkham.

The Council then dealt with the case of Frederick William Kirkham, of London Street, Chertsey, registered Lic. R. Coll. Surg. Edin. 1882, and Lic. R. Coll. Phys. Edin. 1889, who had been summoned to appear before the Council on December 1st, 1899 at 3.45 P.M. on the following charge:

That he was on October 26th, 1899, at the Central Criminal Court, convicted on several indictments charging him with fraud.

The President said they had a certified copy of the conviction, and on motion put from the Chair it was resolved:

That Frederick William Kirkham having been proved to have been guilty of fraud, the Registrar be directed to erase his name from the *Register*.

The Council then adjourned.

Saturday, December 2nd, 1899.

Sir Wm. Turner, President, in the Chair.

The minutes of the last meeting were read, and, with certain emendations, confirmed.

The Title of "Physician."

The Council proceeded to consider the following letter (which was directed to be entered on the minutes) from the Society of Apothecaries in regard to the recent judgment bearing on the description that may be legally assumed by their licentiates, remitted to the General Medical Council by the Executive Committee:

London, E.C.,
October 10th, 1899.

My dear Sir,—I am directed by the Society of Apothecaries to make the following communication to you, and to ask that you will be so good as to place it before the Council for its consideration in November.

The Council will readily understand that what is known as the Hunter case has during the past year occupied much of the attention of the governing body of the Society in its three aspects, namely, the original institution of the proceedings against Mr. Hunter, the attitude of the Council during those proceedings, and the decision of the judges of the Queen's Bench Division.

It is with the last only of these three aspects that the present communication deals.

The Society contends, and is advised by eminent counsel, that the decision is "erroneous," and even if this be not admitted, it will at least be allowed to be unsatisfactory.

A perusal of the delivered judgment will show that the reasons assigned by one of the judges for his decision were based on most imperfect knowledge of the subject, while the other judge, whose observations during the arguments had apparently been favourable to the contention of the Society, eventually decided against it with doubt and hesitation.

The decision was rendered still more unsatisfactory by the fact that the Medical Council, having issued separate summonses against Mr. Hunter—(1) for calling himself a physician, and (2) for calling himself a surgeon—only proceeded in respect of the first of them: so that the case did not come before the Court in its entirety, and the right of the L.S.A. (1886) to call himself surgeon remains undecided.

The Society has not considered it sufficient to take the opinion of Mr. Haldane, Q.C., M.P., to whom reference has already been made as advising that the decision of the judges is "erroneous" but has also taken the opinion of Sir Edward Clarke, Q.C., M.P., who advises the Society "that the L.S.A. (1886) is entitled to describe himself as 'physician' or 'surgeon' or both, and that the Society of Apothecaries is justified in so advising their licentiates, notwithstanding the decision in the case of Hunter *v.* Clare."

He is further of opinion "that should the question again be raised in the courts the case of Hunter *v.* Clare would not of necessity be held to be a binding authority on this point, inasmuch as the conviction of the appellant was quashed on other grounds, and the opinions expressed by the Court as to the rights of the L.S.A. were under the circumstances immaterial to the issue."

In advising the Society as to the best means of getting the question properly settled, Sir Edward Clarke says:

"I advise the following course if practicable. An action should be brought by a medical practitioner (M.R.C.S. and L.R.C.P.) claiming an injunction to restrain a L.S.A. (practising in the same neighbourhood) from describing himself as 'physician and surgeon,' to the injury of the plaintiff's practice. The pleadings could be framed so as to make the defendant's right so to describe himself the only issue in the action, and the question might then be determined (if necessary) by the Court of Appeal or the House of Lords."

The Medical Council will agree that no medical practitioners would be willing to adopt the suggestion made by Sir Edward Clarke unless guaranteed against all expenses.

It would seem only reasonable under all the circumstances of the case that the General Medical Council and the Society should guarantee the expenses of the plaintiff and defendant respectively in the proceedings which are suggested, and that whatever the result may be each party should pay their own costs.

If such an arrangement were made, a suitable case would soon be found and a friendly action instituted.

A case was in fact suggested some time ago by the solicitor to the Council, but until the principles on which any case should be tried had been settled between the Medical Council and the Society, the Society decided that it was inexpedient to take proceedings.

In conclusion, I am directed to state that the Society emphatically disclaims the idea of wishing to assist its licentiates to appropriate any title belonging exclusively to any other licensing body.

What it desires is, with the co-operation of the Medical Council, to get an authoritative exposition by Court of Appeal of the 40th Section of the Medical Act, 1858, and to permanently set at rest the vexed subject of medical titles.

Your very faithful servant,
JAMES R. UPTON,
Clerk to the Society.

Sir William Turner,
President of the Medical Council, etc.

Mr. CARTER then moved:

That the letter of Mr. Upton, on the part of the Society of Apothecaries, on the subject of the use of the titles of Physician and Surgeon, be referred to a Special Committee, with power to take legal advice and to instruct the solicitor to take such steps as may be necessary for the purpose of obtaining a decision on the question raised in that letter.

He desired at the very commencement to put it entirely beyond the range and scope of questions affecting individual corporations, and to put it on the wide basis of questions which very closely concern a large number of medical practitioners. A vast number of Licentiates, of whom he was one, had no other qualification than that title conferred, and they felt they must call themselves something. They found in the English language the word "physician," which for time immemorial had been used as signifying one who practised the art of healing. He had a letter, a portion of which the Council would perhaps allow him to read. It was a letter from Dr. Murray, the most eminent authority in England on a question of this kind. He wrote:

The word was taken by us from Norman French in the thirteenth century in the form fisicien, and in its present sense of practiser of the healing art *medicus*; the only sense which it had in contemporary French. It has never had any other sense in English, though one or two writers have expressed a desire to abolish this, and to convert the word back to the sense of Latin *physicus*, Greek *phusikos*, student of Nature, naturalist, natural philosopher. Hume did this, but only as an etymological fancy. In French it has been different, *médecin* has successfully ousted *physicien*, and the latter in modern French since the sixteenth century has meant physicist. If you will turn to Du Cange's *Lexicon of Mediæval Latin* you will find that the regular mediæval Latin sense of *physica* is medicine, and *physicus* equals *medicus*. But in classical Latin, and as late as the Latin Lexicons come down, that is, to the fifth century or so, *physica* in Latin literature meant natural science, and *physicus* a physicist. What you have to do, then, is to show how Latin *physicus* and *physica* passed between the fourth or fifth, and say the eighth or ninth, century, during the very midnight of the Middle Ages, from the ancient to the mediæval and modern sense. This is an inquiry that lies far away behind the scope of an English, or even a French dictionary; it is part of the general history of the Latin language during the period of the break up of the Roman Empire and civilisation, for which, perhaps, no materials exist, and all that can be said is that the change took place, and was a very natural and intelligible one. I have little doubt that even in the third century the common peasant of Italy or Gaul thought a *physicus* must know something about the influence of stars and planets, and mysterious *influentias* or *influenzas* generally, and about the position of bones and virtues of the herbs, the only practical use of *physica* to him, and so, thinking the *physicus* a *medicus*, called the *medicus* a *physicus*. Does not the ignorant nineteenth century Englishman call a drug-seller a chemist for the same reason, and does not the drug-seller find it profitable to call himself a chemist, which he is much less than a baker or a whisky maker is? Well, when the Roman civilisation perished all the literary class (as a class) perished and the peasant survived, and his Latin became the language of the modern world. He did not call in a *medicus* to use his *medicina* to cure his bad *crura* or his aching *caput*, but got a *physicus* with his *physica* (*fisicus* and *fisica*, he wrote them when he could write to attend to his *gampas* (pins or hockey sticks) or his *testa* (shell or cocoanut). The substitution of *physicus* for *medicus* is then only part of the great revolution; but it lies a long way anterior to English and to the Englishmen of the thirteenth century who accepted physicien or fisicien as quite the fashionable courtly learned title for their own leche or leech. Of course, modern etymologists going back to the original Latin and Greek sense are apt to think the words ought to have the original sense—which is to undo history and pull down the Tower, St. Paul's, and Westminster, to say nothing of Cannon Street Station, in order to restore Roman London. (They do so at Athens and Rome.)

There was no other word equivalent to "physician," and if a qualified practitioner was not entitled to call himself that he did not know what he could call himself. It seemed to him the uncertainty which existed inflicted a certain amount of grievance on large numbers of practitioners, and, strongly as he disapproved of this Council being a prosecuting body under Clause XL, he did think that an exception should be made in order to clear up a doubt in regard to a profession which it was more or less their business and duty to assist as far as they could do so. He was not entirely satisfied with Mr. Upton's letter, and accordingly he had submitted it to Mr. Muir Mackenzie, and had received from him a reply, from which it appeared Mr. Muir Mackenzie thought there was considerable doubt as to the legal power of the Council to use or pledge its revenues in the way suggested by Mr Upton, but that there was no difficulty at all in the way of this Council undertaking such a proceeding as this: that a formal prosecution be instituted before a magistrate, who should be asked to state a case for the opinion of the High Court under Section XIII of the Summary Jurisdiction Act, 1879, which case could go straight to the Court of Appeal or even to the House of Lords. He believed this would be the least expensive procedure to adopt; and he therefore asked the Council to pass the resolution and to empower the Special Committee—which, if it was adopted, he was prepared to name—to take action for the purpose of obtaining a solution of the difficulty.

The PRESIDENT inquired how far it was contemplated the instruction to the Committee should extend.

Mr. CARTER thought the instructions should be that the Committee should have power to instruct the legal adviser of the Council to institute before the magistrate the case which was required.

The PRESIDENT observed that the onus of carrying the case to the Court of Appeal or the House of Lords would rest upon the Committee.

Mr. CARTER said if "Mr. Jones" was brought before a magistrate and fined 1s., and a case was stated for the opinion of the High Court, the Committee might instruct Mr. Muir Mackenzie or other counsel to present their view of the case, and the Society of Apothecaries no doubt would instruct counsel to support their view.

Sir JOHN BATTY TUKE seconded the motion from an entirely different view to Mr. Carter. He did so simply because the question had to be settled somehow or another; and he thought it was the duty of the Council to assist as far as it could in settling it, inasmuch as it arose out of a somewhat serious mistake on their part. He took the opportunity of saying that whatever blame attached to the Council for the mistake must be shared equally by each individual member of the Council.

The PRESIDENT stated that Mr. Victor Horsley had handed him an amendment, seconded by Dr. Bruce, which was as follows:

That all words after the word "Committee" be left out of the motion.

Mr. Victor Horsley's amendment would therefore read as follows:

That the letter of Mr Upton, on the part of the Society of Apothecaries, on the subject of the use of the titles "Physician" and "Surgeon" be referred to a Special Committee.

Mr. VICTOR HORSLEY, in proposing his amendment said that in the first place it was assumed that a licentiate of the Society of Apothecaries was not entitled to call himself a physician after the recent decision in the High Court; that, he ventured to say, was not a correct way of putting the case. Sir Edward Clarke's opinion amounted to this, that the decision in Hunter *v.* Clare was worthless. He (Mr. Horsley) was sure that any layman reading a detailed report of the decision would come to the same opinion, and he hoped members of the Council had read it. If that was so, were not they where they were before? To parody some recent celebrated words, had not the licentiate of the Society of Apothecaries a clean slate on which he might write any title he liked? He thought that under no circumstances was the Council justified in spending the money of the profession in

going to law on this matter, for the reason that he could not see that they were justified in such an expenditure unless they had had an opportunity of formulating their own opinions as to what they thought, because, after all, their responsibility for the money of the Council depended on what they thought.

The PRESIDENT observed that it was subject to the provisions of the Act.

Mr. VICTOR HORSLEY agreed, but the expenditure was entirely in their hands, and they had to report to Parliament what they had done with it. The members of the Court of Assistants of the Society of Apothecaries had sent this letter to them; but the licentiates of the Society of Apothecaries had not met in general meeting to say that their rights were imperilled by the decision in Hunter *v.* Clare. They did not ask to do this; it was a small body of men who asked them to do it. He said it with all courtesy, but he could quite see it was the opinion of that small body of men that this was an unsatisfactory state of things, and might decrease the number of application for membership to the Society of Apothecaries if this went on; but the welfare of the Society of Apothecaries was not their business. Until they had had an opportunity of thoroughly inquiring into this subject, which was an important one, and settling it among themselves, they ought not to spend a halfpenny of the money of the profession upon it. He quite agreed with Sir John Tuke that the Council in Hunter *v.* Clare made a serious mistake; but that was because it had not made up its mind beforehand. It never had an opportunity of discussing this question, and therefore had never come to a conclusion upon it. On all those grounds he ventured to think that the second part of the resolution should be omitted, and the matter referred to a Special Committee.

The PRESIDENT suggested to Mr. Victor Horsley that he should add to his amendment the words

to report to the Council.

Mr. VICTOR HORSLEY agreed.

Dr. BRUCE seconded the amendment, with the addition of the words suggested. He thought what they were asked to do was too large an order. It was a very important subject, and he agreed with much of what Mr. Carter had said. If they were to thoroughly consider it and get a report from this Committee, they could then consider the question of expense.

Dr. MACALISTER agreed with the amendment. He pointed out that the course proposed by Mr. Muir Mackenzie, as detailed by Mr. Carter, was open to serious objection. If they prosecuted a practitioner for calling himself a physician, with only the diploma of L.S.A., the magistrate might consider the decision of the High Court had no binding force, as Mr. Victor Horsley had pointed out, and dismiss the charge, and they would be no further on. He thought they should refer it to a committee to thresh out the whole possibilities, because Mr. Carter and Mr. Muir Mackenzie had had only one possibility in mind. He suggested the addition of the words "with power to take legal advice," as, in his opinion, legal advice would be wanted.

Sir DYCE DUCKWORTH did not regard the question as at all pressing. He reminded the Council of the debate as to the probability or desirability from some points of view of the Society of Apothecaries and other corporations forming a one-portal system in London. The view was then expressed that that might be achieved before long under the arrangement for a new university for London. If that was so, the diploma of the Society of Apothecaries would cease. He, therefore, did not think the matter of any importance at all.

Dr. ATTHILL did not contest the argument of Mr. Carter as to the utility of the word "physician"; but for a long time the title of "doctor" had been used by medical practitioners throughout Great Britain and Ireland; he supposed that nine out of ten persons one met would talk of members of the profession as "Dr. So-and So." It would be a great hardship upon them if they were to be saddled with £200 or £300 costs in respect of this matter.

Mr. BROWN thought there was no authority in the Medical Act of 1858 which entitled them to prosecute a registered medical practitioner. The object of that Act was to enable the public to differentiate between qualified and unqualified practitioners. He then proceeded to discuss the application of the Act in relation to the suggested prosecution, when

It was moved by Dr. MACALISTER, seconded by Dr. BRUCE, and resolved:

That the amendment be now put.

The amendment was then put and declared carried. On the names being taken down, it appeared there were 21 for, 5 against, 2 did not vote, and 2 were absent.

The amendment was then put as a substantive motion, whereupon

Dr. MACALISTER then moved, and Mr. CARTER seconded the insertion of the words, after "Special Committee,"

With power to consult if necessary the legal adviser of the Council.

Dr. MCVAIL thought the Committee should first of all report to the Council as to whether it was desirable that any action should be taken. He did not see why they should want to consult their legal adviser unless they had decided to take action, and, in his opinion, it emphatically was not desirable.

The amendment being put was declared lost, and, the names being taken down, it appeared that 7 voted for, 19 against, 1 did not vote, and 3 were absent.

The PRESIDENT then put Mr. Horsley's amendment as a substantive motion, which was carried by 15 to 4.

Being invited by the PRESIDENT to name his committee,

Mr. VICTOR HORSLEY, said, if he might be allowed to do so, he would leave that to Mr. Carter, but the latter declined. Mr. Victor Horsley then asked if he might leave it to the President, which was agreed to.

DEATH CERTIFICATION.

The PRESIDENT announced that he had arranged a deputation to the President of the Local Government Board, which the Council left in his hands, and Sir Dyce Duckworth, Dr. Glover, and Mr. Carter had consented to act along with him.

PENAL AND DISCIPLINARY POWERS.

Proposed Amendment of the Medical Acts.

A further report by the President on the steps taken by him to have Section XXIX of the Medical Act, 1858, amended so as to secure increased powers for penal and disciplinary purposes was read.

The report referred to the report made by the President to the Council on June 3rd, 1899, and to the draft Bill then presented. The report and the proposed Bill, together with a report by Mr. Muir Mackenzie on the Bill, were printed in the BRITISH MEDICAL JOURNAL of June 10th, 1899, page 1407. The report now presented by the President stated that unqualified approval of the clauses of this Bill had been expressed by the Universities of Oxford, Cambridge, Durham, and Glasgow, by the Society of Apothecaries of London, by the Royal College of Surgeons of Edinburgh, by the Faculty of Physicians and Surgeons of Glasgow, by the Royal College of Physicians and the Royal College of Surgeons in Ireland, and the Apothecaries' Hall, Dublin. Eight others of the medical authorities, the Royal College of Physicians of London, the Royal College of Surgeons of England, the Universities of Edinburgh, St. Andrews, Aberdeen, and Dublin, the Royal University of Ireland, and the Royal College of Physicians of Edinburgh had also expressed their general approval of the clauses, but had suggested slight alterations or verbal amendments. The University of London had replied in regard to Clause 2 (*a*) that as the point raised was part of a much larger question the Senate, as at present advised, was unable to take action, but the report pointed out that in their comment on this clause as originally drafted the Senate had expressed their willingness to co-operate with the Council in obtaining for the University the power to withhold from graduates who had been guilty of professional misconduct the use of their degrees as a qualification to practise during the time that their names are taken off the *Register*. The Victoria University had not been able to express its opinion, but when the clauses as originally drafted were before it its Council resolved: "That no graduate of the University should be deprived, or deemed to be deprived, of his degree or any right conferred thereby, except by the act of the University."

The report further stated that the President had submitted the criticisms on the clauses to Mr. Muir Mackenzie, and the draft clauses as amended were now presented as follows:

1. Where a person registered under the Medical Acts has been convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or has, after due inquiry, been judged by the General Council to have been guilty of infamous conduct in a profes-

sional respect, the General Council may, if it think fit, by order direct that the name of the practitioner shall be and remain erased from the *Medical Register* for a limited period, and may from time to time, by order, vary such period, and at the expiration of the period limited by such order or subsequent order, the Registrar shall, if the practitioner shall then possess a medical diploma, and unless otherwise ordered by the General Council, restore the name of the practitioner and his then existing medical diplomas to the *Medical Register*.

2 (*a*) It shall be lawful for each of the medical authorities, if and when such authority thinks fit, to revoke, suspend the use of, or cancel the medical diplomas or diploma of such medical authority held by any person whose name has been erased from the *Medical Register* by order of the General Council for any of the causes mentioned in Section XXIX of the Medical Act, 1858, and subsequently to restore such medical diplomas or diploma to such person without requiring him to pass a qualifying examination.

(*b* Nothing in this Act shall prejudice or affect the powers already possessed by any medical authority of depriving a member of his medical diploma or diplomas, or of striking off members from the lists or rolls.

3. Notwithstanding anything contained in any Act now in force or hereafter to be passed, all fines and penalties recovered under the Medical Acts or the Dentists Act, 1878, or this Act, whether recovered in the courts of summary jurisdiction in the Metropolitan Police District or elsewhere, shall be paid to the treasurers of the General Council.

4. In this Act, "General Council" means the General Council of Medical Education and Registration of the United Kingdom.

"Medical authorities" means the universities and bodies entitled to grant medical diplomas conferring on the holders the right to registration under the Medical Acts.

"Medical diploma" means a medical diploma as defined in the Medical Act, 1886, and entitling the holder to be registered in the *Medical Register*.

The report stated that the clauses as now amended and printed above met in all essential points the criticisms made by those medical authorities who had taken exception to some of the expressions in the clauses as previously drafted, and it might be considered that the authorities were now practically unanimous in their desire to have the Medical Act of 1858 amended in the direction stated in the report.

It was moved by Dr. MACALISTER, seconded by Mr. BRYANT, and resolved:

That this report be received and entered on the minutes.

The PRESIDENT thought that having had the responsibility of the report, he ought to say a few words with regard to it. The subject included in the report was not a new matter at all; it had been before the Council many years, although sometimes no action had been taken with regard to it. It was before the Council when the late Mr. Marshall was President, and there was a draft Bill prepared by the Council's lawyers bearing upon this very question, which Bill was never approved by the Council. Mr. Bryant also for several years took a strong interest in the question, and had laid before them a series of reports which were of great value, because they informed the Council what the powers of the individual medical authorities were under Section XXIX of the Medical Act with regard to this question of the removal from their respective lists of persons who had been convicted either by criminal courts or by the Council. Things were very much in that state when he was appointed President and asked to continue the matter. That which led the Council to desire to bring it to a point was the notorious case of a Doctor of Medicine who, having been removed from the *Medical Register* under Section XXIX of the Medical Act, continued to practise in London on his title, although he was no longer on the *Register*; and the offence of which he was convicted in a criminal court was of so serious a nature that it was felt the time had come when the Council should approach the different medical authorities, and especially those which did not possess the power to remove from their lists those holding their qualifications, and propose that they should agree to such power being conferred upon them. He had consulted the Privy Council, which was of opinion that they should first obtain the consent of the different medical authorities. Their legal adviser was then asked to draft clauses to be submitted to those authorities in order to elicit their views upon them. Three clauses were drafted from the point of view that where a person was struck off the *Register* by the Council his name should, by virtue of that erasure, disappear automatically from the list of the body or bodies to which he belonged, and that he should also be deprived of the power to use his diploma for professional purposes. That principle was considered by some of the authorities as too stringent because, as they very properly said, "We have in our own charters already the power to do this, and there is no reason why the General Medical Council should interfere with us." This was expressed so forcibly by some of the most important universities that it was felt useless to proceed with the clauses as originally drafted, and the matter was referred to Mr. Muir Mackenzie to see how far he could meet the objections that had been raised. He redrafted the clauses in regard to those bodies that did not at the time possess the power of removing from their list offending licentiates and graduates, so as to give them the power. Another important point included in the clauses now submitted to the Council was that the medical authorities who could remove or suspend from their list the names of licentiates or graduates should also have the power of restoring them; there was also the provision that the General Medical Council should have the power by statute to restore to its *Register* the names and qualifications of those persons who had been removed from the *Register* by the Council. The Council did not possess statutory powers to restore; the Council assumed it by virtue, he understood, of the common law. He ventured to summarise the clauses thus: if they became law, all the medical authorities in the United Kingdom would have the power of removing from their respective lists the names of persons removed from the *Medical Register* by the Council under Section XXIX of the Medical Act; and they would also have the power of suspending the use of their degrees or diplomas. Those were the principal points. There was a subordinate clause which would definitely give to the Council fees which had been recovered in the metropolitan district and elsewhere; this, if it were adopted, would put an end to what the Council had considered an abuse in that direction.

Mr. BRYANT then moved:

That the Council adopt the report of the President on the steps taken by him to have Section XXIX of the Medical Act (1858) amended so as to secure increased powers for penal and disciplinary purposes, and requests him to forward to the Privy Council the draft clauses as amended, with the expression of the hope that the Privy Council would support a short Bill in Parliament to have them made law.

He thought the Council should know the different stages which had brought the question to its present position. Mr. Marshall was no doubt the beginning of it, then it went to sleep; but on November 26th, 1895, the Executive Committee was instructed to revert to the consideration of the subject. The President had steered the ship well and brought it into the right haven, and he hoped they would see their hopes realised.

Sir DYCE DUCKWORTH, in seconding the motion, said the Council must feel great satisfaction at the point which had now been reached.

The PRESIDENT observed that as there was a special reference to the action of the University of London and the Victoria University he thought their representatives should be called upon.

Dr. LEECH stated that his committee had now considered the clauses and had expressed their unanimous approval of them and were going to report in favour of them. Unfortunately his council did not meet until next week, but he had no doubt they would ratify this approval.

Dr. PYE-SMITH said there was no change in the attitude of the London University with regard to the question; the majority was in favour of meeting the views of the Council.

Mr. CARTER asked what would be the position of a Licentiate of the Society of Apothecaries having another qualification whose name had been erased by the Council and his diploma withdrawn, and then the Council wished to restore him, but his Society refused him his diploma?

Dr LITTLE asked which body was to move first? If they withdrew or suspended a diploma they must give it back; that was a question for the body who registered the individual and not the Council. It was only with his diploma in his hands that he could come to the Council.

The PRESIDENT said there were two bodies concerned in the matter; first, the General Medical Council, which removed a man's name from the *Medical Register*; and, secondly, the medical authority which took a man's name off its own list. If a medical authority, following the action of the Council, removed a man's name from its list, or suspended the use of its diploma, that body must first restore to him his diploma, and then he, having got his diploma back, would come to the General Medical Council and say, "Put me again on the

Register." The Council would supply the authorities concerned with the papers and evidence that had been before them.

Dr. McVAIL thought the question raised by Dr. Little was one of great difficulty—namely, which body was to act first? How was the man to get back his diploma? Was the body that did not try him to go over the whole ground again? No doubt the difficulty could be got over by a standing order to the effect that on application for restoration to the *Register*, if the Council thought they should do so, they should send the body which had suspended the diploma their opinion that it should be restored.

Sir RICHARD THORNE remarked that, supposing it was a University degree, and that the man had got it back and came to the Council, which refused to restore his name, he would go away with the diploma in his pocket. Then the position remained unaltered.

The PRESIDENT then read the resolution in a modified form, which had been handed to him in substitution of the original motion:

That the Council approve the amended draft clauses embodied in the President's report, and request him to forward the same to the Lord President of the Privy Council, expressing the Council's desire that the Government should frame or support a Bill for passing them into law.

The motion, as modified, was then put and carried unanimously.

RECIPROCITY OF MEDICAL PRACTICE.

The next business was to receive the report of the Executive Committee on the revision of the Memorandum on Reciprocity of Medical Practice in relation to Foreign Countries, arising out of the following reference made by the General Medical Council on June 3rd, 1899:

That the report of the Executive Committee on Reciprocity of Medical Practice in relation to Foreign Countries be referred back to the Committee for further consideration, and in order to obtain an opinion on the whole question.

Before this report was taken, Mr. VICTOR HORSLEY desired to know what had become of the former Memorandum with regard to the practice of foreign practitioners which had been issued by the Council for a long time as an official document.

The REGISTRAR replied that copies were in the office; and in reply to a further question said that the order of the Council was that the document was not to be reprinted, but that copies already in hand could be issued.

Mr. VICTOR HORSLEY pointed out that the old Memorandum was revised by the Committee, and brought before the Council two sessions ago for approval, and was then postponed to the next session; the result was that they had never sanctioned that revision.

The PRESIDENT said that was so; it had never been adopted.

Mr. VICTOR HORSLEY upon that asked whether the Memorandum on Reciprocity which contained the original statement unamended, was being issued again.

The REGISTRAR said it might be; he did not say it was.

Mr. VICTOR HORSLEY replied that if this report was to give the burial to the old document, he was quite ready to assist in digging its grave.

Dr. MACALISTER moved, Dr. BRUCE seconded, and it was resolved:

That the report be received as a whole, and entered on the minutes.

REPORT.

The report gave a short history of the action of the Council in this matter, and stated that the following statement had been obtained from Mr. Muir Mackenzie, who suggested that it might be adopted as a basis for the statement to the Governments of foreign countries with whom it might be desired to establish reciprocity of treatment.

STATEMENT.

The law which prevails in the United Kingdom with respect to the rights of foreign practitioners in medicine and surgery to practise in the United Kingdom may, I think, be conveniently stated as follows:

Before the passing of the Medical Act, 1858, there was no general law in force in Great Britain and Ireland regulating the conditions under which persons might practise medicine and surgery.

Certain Acts of Parliament were in force in England alone, such as the 32nd Henry VIII. c. 40, which regulated the privileges of physicians, and the Apothecaries Act of 1815, which applied to England and Wales only. There were also some Acts in force in Ireland, such as the 40th George III. c. 84, which related to the College of Physicians in Ireland.

Of the Acts relating to separate parts of Great Britain and Ireland the most important is the Apothecaries Act, 1815, which applies only to England and Wales, by which a penalty is imposed on any person who practises as an apothecary without having obtained the certificate of the Society of Apothecaries. This Act is still in force. In England, before the date when the first of the Medical Acts was passed, it was undoubtedly considered illegal for a person who was not an Englishman to practise medicine in England, unless he was possessed of a qualification to do so granted by one of the English qualifying bodies. Collins *v.* Carnegie, decided in 1834, 1 A. and E. 695.

In the year 1858, by the Medical Act of that year, the *Medical Register* was established for the purpose of enabling persons requiring medical aid to distinguish qualified from unqualified practitioners, and that Act was amended by the Medical Act, 1886.

The Medical Acts provide in effect that a registered medical practitioner is entitled to practise medicine, surgery, and midwifery in the United Kingdom, and to recover his charges in respect of his practice; and the Medical Acts impose disabilities of a very stringent kind on medical practitioners who, even if possessing qualifying diplomas, are not registered. The Medical Acts do not in terms impose any penalty on a person who is not registered for practising medicine or surgery, but a stringent penalty is imposed on any person who wilfully and falsely assumes a medical title which he does not possess, or pretends to be a duly qualified or a duly registered practitioner. The general effect of the legislation is that a person is not a legally qualified medical practitioner unless he possesses a diploma granted after passing the prescribed qualifying examinations and is also registered in the *Medical Register*.

It is specially provided by one of the Medical Acts—namely, the Medical Act Amendment Act, 1859, that a foreigner who has obtained from a foreign university a degree or diploma of Doctor of Medicine, and who has passed the regular examinations entitling him to practise medicine in his own country, may act as the resident physician or medical officer of any hospital established exclusively for the relief of foreigners in sickness.

A foreign medical practitioner who comes to the United Kingdom is bound by the laws in force in the United Kingdom, and becomes subject to the penalties and disabilities imposed by those laws. See the judgment *in re* Clark (1896) 22 B. 476 on p. 479. Consequently a foreign practitioner who has not obtained registration in the *Medical Register*, and is not within the exception provided for by the legislation above referred to, is in the position of a practitioner who is not recognised by law.

With a view to establish reciprocity between the United Kingdom and foreign countries with regard to medical practice, enactments were introduced into the Medical Act of 1886 which provide for the establishment of a list in the *Medical Register* for foreign practitioners with recognised foreign diplomas. The Act in Section XVII. provides that the Queen in Council may by Order in Council apply the part of the Act which relates to foreign practitioners to any foreign country which, in the opinion of Her Majesty, affords to the registered medical practitioners of the United Kingdom such privileges of practising in the foreign country as to Her Majesty may seem just. When an order has been made applying the Act to such a foreign country as is above described, the General Medical Council has power to grant recognition to such medical diplomas of the foreign country as in the opinion of the General Medical Council furnish a sufficient guarantee that the holder of the diploma possesses the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery. The holder of a recognised medical diploma granted in a foreign country to which the Act applies may then obtain registration in the Foreign List of the *Medical Register*.

A foreigner who has obtained registration of his name in the Foreign List of the *Medical Register* is entitled to practise medicine, surgery, and midwifery in the United Kingdom, with all the privileges which are possessed by a British registered medical practitioner.

As regards dental surgery, the Dentists Act provides for the registration of foreign dentists in the *Dentists Register* on the production of the diploma or certificate of a foreign body whose diploma or certificate is recognised by the General Medical Council or the Privy Council as furnishing a sufficient guarantee that the holder possesses the requisite knowledge and skill for the efficient practice of dentistry and dental surgery. A foreign dentist who is not registered cannot legally practise as a dental surgeon or dentist in the United Kingdom.

The general effect of the legislation is that there is power in the Executive Government of this country and the General Medical Council to confer upon a medical practitioner of any foreign country which affords to the registered medical practitioners of the United Kingdom just and reasonable privileges of practising in that country, the right and privilege of lawfully practising medicine, surgery, and midwifery in this country without obtaining the diploma of one of the British qualifying bodies.

August 10th, 1899. M. MUIR MACKENZIE.

The report then referred to the resolution of the Council of June 9th, 1899, published in the BRITISH MEDICAL JOURNAL of June 17th, pages 1477-78, giving expression to the difficulty that the Council exercises no supervision over the curricula of study and the professional examinations of the medical graduates of foreign countries, such as is conferred on the Council in regard to the examinations conducted by the medical authorities of the United Kingdom. The Executive Committee left it to the Council to determine in what other way it might satisfy itself that the diplomas conferred had been obtained after such study and examination as furnished a sufficient guarantee of the possession of a requisite amount of professional knowledge and skill. The Committee reminded the Council that they had already admitted seventy colonial practitioners to the Colonial List, and that in no case had the Council had the opportunity of visiting and inspecting the examinations through which these practitioners obtained their diplomas. The Council had formed its opinion that the

diplomas obtained were satisfactory from an inspection of the regulations of the examining authorities in the Colonies, and from the public reputation of the examining bodies themselves. The recognition of diplomas granted by medical authorities in the United States of America was subject to the same conditions as were applicable to any other foreign country. The Committee called attention to Section XIII, 2, of the Act of 1886, which provided that should the General Medical Council refuse to recognise a Colonial or foreign diploma, the Privy Council might, if it thought fit, after communication with the General Medical Council, order the General Medical Council to recognise the said diploma, and such order shall be obeyed. The Executive Committee recommended the Council to authorise the issue of Mr. Muir Mackenzie's statement, printed above, as an expression of the Council's views in regard to its legal position in connection with the question of reciprocity of practice. The Executive Committee further recommended that the General Medical Council should represent to the Privy Council that the time had arrived when Her Majesty in Council should apply Part II of the Act of 1886 in respect of foreign practitioners to the kingdom of Italy

On the suggestion of Dr. MCVAIL, the statement of Mr. Muir Mackenzie was read to the Council.

Dr. MACALISTER then moved, and Mr. BRYANT seconded:

That the Council adopt the statement of Mr. Muir Mackenzie expressing the present state of the law with regard to reciprocity of practice, and that this statement be inserted in future editions of the memorandum instead of the present one.

The PRESIDENT said the Memorandum consisted of two parts. First, there was an expression of opinion; and, secondly, there was a publication of the law of a number of foreign countries. He had always felt that it was a very important thing that the Council should have before it what was the state of the law in foreign countries, because British practitioners frequently asked, "Can I go to France; or can I go to Switzerland or Italy; what is the state of the law there?" It was most important to put into the hands of such inquirers an authoritative statement as to the law not only here but in foreign countries. He would be very sorry, therefore, if the Council did not sanction the circulation of that part of the document. They were authoritative statements obtained from the respective Governments by the Privy Council.

Dr. MCVAIL thought that Mr. Muir Mackenzie's statement, which seemed to him both admirable and truthful, should be issued quite independently.

The PRESIDENT said the motion of Dr. MacAlister which had been handed to him was as follows:

That the Council adopt the statement prepared by Mr. Muir Mackenzie as expressing the present state of the law of this country in regard to reciprocity of medical practice, and direct that it be introduced into an amended edition of the memorandum, Reciprocity of Medical Practice in relation to Foreign Countries, to be hereafter issued in place of the Introduction (I) and Statement (II) on pages 5, 6, and 7 of the present edition.

This was carried, and Dr. MACALISTER then suggested that a French translation of the document be obtained.

The PRESIDENT thought it advisable to adopt that suggestion. The Council would understand that a translation would be obtained.

PROPOSED RECIPROCITY WITH ITALY.

Sir DYCE DUCKWORTH moved:

That the Executive Committee recommend that the General Medical Council represent to the Privy Council that it be intimated to the Italian Government that the time has arrived when it should approach Her Majesty in Council with a view to having Part II of the Medical Act of of 1886 in respect of foreign practitioners applied to the kingdom of Italy.

He said it had become important to take action with respect to reciprocity of Italian practitioners, as they had learnt that the Italian Parliament was moving in the matter, and it was feared that unless something was done by this country English practitioners would be probably shut out in future from practice in the kingdom of Italy. Hitherto in Italy medical practice on the part of Englishmen and foreigners had been permitted on a very liberal scale, and they had been able to do so to the advantage of their countrymen and countrywomen, and no doubt to the advantage of the Italians themselves. The question concerned a considerable number of medical men resident in Italy, and during the winter months also the Riviera, in Rome, and other large cities their countrymen travelled very largely and they naturally sought to be attended by their own countrymen. If the Italian Parliament altered the present law a difficulty would arise, and he thought they should intimate to the Government that the time had arrived when Part II of the Act should be applied. It was quite certain that for one doctor benefited by the law in England at least ten Englishmen would be benefited. There were no inferior diplomas in Italy; the requirements of medicine there set up a curriculum of six years, one year longer than their own. He believed there were no unworthy Italian degrees to be obtained, and that created confidence in receiving applications for Italian doctors who sought to come here.

Dr. HERON WATSON, in seconding the motion, endorsed what Sir Dyce Duckworth had said.

Dr. LITTLE asked why, if they were anxious to prevent the Italian Parliament doing what was unjust, they did not take steps to get France and Switzerland to undo what they had done. They were just as bad as the Italian Parliament proposed to be in preventing British medical practitioners from practising there.

Dr. MACALISTER observed that English practitioners could practise in Italy, and it was proposed to change the law which enabled them to do so. In France they could not practise without a French diploma.

Dr. MCVAIL objected to the recommendation. According to this arrangement, a large number of English practitioners were to be allowed to practise amongst wealthy Englishmen and Americans in Italy in order that a single Italian doctor might be in a position to attend a few organ grinders and ice cream vendors. If they granted reciprocity to Italy, they could not refuse it to Germany or to France or America. If the motion had been made applicable to America, there was not one man on the Council who would vote for it. In regard to the Colonial Universities, this Council could exercise some control through the Privy Council, although they could not exercise the same supervision as on home Universities. The Council had done good work for many years past, and now they were going to upset the whole thing, and let a number of foreigners come to this country without an adequate equivalent.

Mr. VICTOR HORSLEY hoped the Council would not accept the resolution. He submitted that it was not a question of hardship on travellers of British nationality the Council had been put in motion in the interest of some of their fellow practitioners resident in Italy, and it was felt it would be a hardship upon them. The estimate that for ten Englishmen going to Italy only one Italian would come to Great Britain was a very grave mistake in computation; the English as a people were in wealthy circumstances, while the financial position of Italy was well known. If they once established the open door, contrary to all the principles in time past, surely the logical conclusion would be that numbers of poor Italian practitioners would at once come to England to compete against their English brethren. He also submitted that however free trade might apply to commerce, it did not apply to medical practice; and every country in the world except Italy had recognised that. With regard to the argument as to the Colonial practitioners, that was not a parallel. If they were to adopt in the future all these free trade proposals it would be going against the feelings in this country towards Imperial Federation. They ought to welcome colonial men to the *Register*, but he did not think it was fair to regard the entry of foreigners in the same way.

Dr. MACALISTER said the number of colonials coming to England with the advantage of speaking our own language and knowing our ways was very small, and if the number of colonials in this country was small, the number of Italians would be infinitesimal. He thought it would be a very grave mistake to reject the motion; it would be protection in the narrowest and most trade-union sense.

The PRESIDENT said the motion had been varied, and was as follows:

That the President be requested to inform the Lord President of the Privy Council that it would be highly opportune were Her Majesty in Council pleased to take into consideration the propriety of issuing an order declaring that Part II of Section XVII (1) of the Medical Act, 1886, should apply to the kingdom of Italy.

Dr. Bruce was glad it was put in that form, which he thought it highly desirable to follow. If his friends would consider their argument they would see that it applied to the Act of Parliament. Their logic was good, but their logic carried them to the point of opposing words contained in the Act. The time to have opposed it would have been when the Act was being passed. The Act had given such a power, and he thought it their duty in this case to exercise that power.

Sir Richard Thorne said that not very long ago he met a young Englishman who told him that he had only got a certificate by which he was limited for one single year to treat English and American people in Italy, and its renewal would depend upon his taking some degree or diploma. They had better not take a leap in the dark.

Dr. Payne thought there was a preliminary consideration which ought to be entertained. They had to consider the Italian qualifications for medical practice, as to whether they were good enough for their purpose. It seemed to him it would be better in the first place to inquire into the qualifications of Italian practitioners in order to form an opinion, otherwise they might be placed in a difficult position.

Mr. Tomes was of opinion that what Sir Richard Thorne had told them stopped the proposal absolutely.

Sir John Batty Tuke moved, and Sir Dyce Duckworth seconded, and it was resolved:

That the debate be adjourned till Monday.

Finances of Irish Branch Council.

On the motion of Dr. MacAlister, seconded by Mr. Bryant, it was resolved:

That the report of the Finance Committee in regard to the financial condition of the Irish Branch Council be received and entered on the minutes; and that the opinion therein referred to be circulated as a strictly confidential document amongst members of the Council.

The Council then adjourned.

Monday, December 4th, 1899.

Sir Wm. Turner, President, in the Chair.

The minutes of Saturday's proceedings were read and confirmed.

The Title of Physician.

The President informed the Council that the following gentlemen had consented to act along with himself as the Special Committee on Mr. Upton's letter, namely: Mr. Bryant, Dr. Pye-Smith, and Dr. MacAlister.

Resumed Debate on Reciprocity.

Sir John Tuke (who on Saturday moved the adjournment) in answer to the President, said he had intended to speak on this matter, but he understood that Mr. Tomes was prepared with an amendment to the motion, and therefore he would waive his right to speak.

Mr. Tomes then moved as an amendment to the motion of Sir Dyce Duckworth:

That the Privy Council be requested to obtain through Her Majesty's Minister at Rome information upon the following points:

1. Whether any change in the regulations affecting foreign practitioners in Italy had been made since the communication received in 1898;

2. Whether any such change is at present in contemplation by the Italian Government?

in order that the General Medical Council may be enabled to decide whether it is or is not expedient that they should advise the Privy Council that the provisions of Part II, Section xvii, of the Medical Act, 1886, should be made applicable to the kingdom of Italy.

He did not wish to enter into the whole question, but the reason why he thought the amendment preferable to the original resolution was because he did not think that an official body such as the General Medical Council, in dealing with a point of such great importance, should proceed on private information when official information was procurable. He thought the basis of their action should be a species of pledge on the part of the Italian Government that they were not going to depart from the present order of things. Without this there was no certainty that the object would be attained. He considered the plea of urgency was fully met by the amendment, because it was hardly possible to conceive that the Italian Government would act precipitately in the matter whilst in official communication with our representative at the Court of Rome on the subject.

Sir Christopher Nixon, in seconding the amendment, said he did so with a view of there being more time to consider the matter, and in the hope that it would not come before them again. He thought it was a bad principle to alter their existing requirements for the convenience of foreigners.

Sir Dyce Duckworth expressed his willingness to add Mr. Tomes's amendment as a rider to the resolution; but

Mr. Tomes would not agree to this.

Dr. Atthill inquired whether it was not the fact that action such as that suggested by the second amendment was being pushed forward at that moment.

Sir Dyce Duckworth said a letter had been received from a gentleman whose information was reliable, dated December 2nd, as follows:

I write to tell you that I heard from Rome to-day that Professor Durante had mentioned to an English medical man practising in Rome "that the English Government as well as the others had declined to change their laws in reference to practice." Durante, besides being Professor of Surgery and a great leader, is President of the Association of medical men who have pressed their Government into bringing in a Bill to exclude foreign practitioners in Italy. Laying aside the question that we require no change in our laws, but only an Order by the Queen in Council to grant reciprocity, I gather from the above that somehow or other our Government has very recently led the Italian Government to understand that they decline reciprocity. If this is the case I regret it exceedingly, as the time has now come for English medical men in Italy not to continue to fight the battle to secure for their successors coming from England the privileges that they have all along enjoyed. I have vigorously rejected suggestions that my colleagues should simply content themselves with attempting to secure the privileges only for themselves and arrange that the alteration in the law shall not be retrospective. It is difficult for me to realise that our Government has refused to grant reciprocity to the Italians, but if it is the case the ground has been completely cut away from under my feet and I am therefore unable any longer to oppose those who wish to fight for their own hand alone. Before the meeting of your Council could you find out from the Government whether the refusal of reciprocity is already a *fait accompli*?

He did not think that members of the Council quite realised that Italy now was the only country to which this section of the Act could apply. Nobody from any country could under any circumstances be admitted to the Foreign List without the most careful inquiries being made by the Council with regard to his antecedents, character, and degrees. The Council was not under an obligation to put anyone on the list unless the requirements of the Council, which were most stringent, were complied with. On the whole, he though Mr. Tomes's amendment was very satisfactory, and he would be willing, with the consent of Dr. Heron Watson, to withdraw his motion.

Dr Heron Watson consented, and the motion was withdrawn.

The President pointed out that the only motion then before them was that of Mr. Tomes, which had been seconded by Sir Christopher Nixon.

Dr Atthill suggested that they should add a request that the British Government would communicate with the Italian Government, informing them that this question was under consideration, and requesting them to postpone any legislative action at the present time.

Dr. McVail hoped the Council would not adopt this suggestion.

Dr. MacAlister remarked that they could not make representations to a foreign Government and ask them to stay their hand.

The President thought the second part of Mr. Tomes's resolution covered the point put by Dr. Atthill.

Dr. McVail said he did not object to the amendment because it gave the Council time to think about the matter. He thought it was unfortunate that the clause in the Medical Act of 1886 which permitted foreigners to be registered did not give them power to limit the practice of foreigners to their own countrymen. It was only reasonable that a foreigner should be allowed to be attended by a fellow foreigner. They had asked the Privy Council to amend the Act in certain particulars, and probably he would put a motion on the paper asking that the Privy Council should seek to have the Act amended in this direction.

Mr Tomes made a few remarks in reply, and the President then put Mr. Tomes's resolution, which he declared carried.

Education Committee.

The President reminded the Council that the German Government had applied for information as to the admission

of foreigners to examinations for British registrable qualifications, and that a communication had been sent to all the medical authorities asking them to furnish the Council with a short statement of their practice. A *précis* of the replies made by the Registrar had been sent to the Education Committee, and he understood that the Education Committee had checked it by asking the representatives of the various medical authorities to state if the *précis* was correct. He believed, with one or two trifling exceptions, it had been regarded as correct. The *précis* was merely a statement of fact, and no question as to the expediency of this or that arose. He felt it ought to be before the Council, and he intimated his intention to send this in as the answer to the German Ambassador's request.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, the following resolution was carried:

That the print entitled "The Admission of Foreigners to Examination for Registrable British Qualifications" be received and entered on the minutes, and that the *précis* contained therein be transmitted by the President, with his communication to the Privy Council, as an answer to the questions in the despatch of the German Ambassador.

Mr. VICTOR HORSLEY inquired if he should be in order in making some observations on this document.

The PRESIDENT replied that it was merely a statement of fact.

Mr. VICTOR HORSLEY agreed, but he said that it did reveal a very serious state of things. His motion would be of a simple kind—namely, that the Council thanks the Education Committee for preparing this report, but refer it back to them for reconsideration of the circumstances under which they found that foreigners are admitted to the final examinations by certain qualified bodies.

The PRESIDENT suggested to Mr. Victor Horsley that he had better give notice of his motion.

Mr. VICTOR HORSLEY replied that he would put a motion on the paper. It was not intended in any way as a criticism of the document they had before them.

FINANCES OF THE IRISH BRANCH COUNCIL.

Sir CHRISTOPHER NIXON inquired of the President why the opinion of Mr. Muir Mackenzie with regard to the financial position of the Irish Branch Council did not appear on the programme of the business that day?

The PRESIDENT remarked that the document was a strictly confidential opinion

Sir CHRISTOPHER NIXON asked if they would have an opportunity of discussing it.

Dr. MACALISTER replied that Sir Christopher Nixon would be in order, as the document was a strictly confidential one, if he moved that the Council went into *camera* and discussed it.

THE ENGLISH COLLEGES AND THE COUNCIL.

Mr. BRYANT moved, and Dr. BRUCE seconded, that the two following communications be received and entered on the minutes:

(*a*) From the Royal College of Physicians of London.

Royal College of Physicians,
London, S.W.
November 3rd, 1899.

Sir,—I beg leave to refer to your letter of June 19th last, in which you drew the attention of this College, by direction of the Medical Council, to the following regulation of the Council in regard to the registration of medical students, intended to take effect from January 1st, 1900, viz.:

"No medical student shall be registered until he has passed a Preliminary Examination as required by the General Medical Council, and has produced evidence that he has commenced his medical studies at a university or school of medicine or at a scientific institution recognised by one of the licensing bodies and approved by the Council."

With reference to this communication, I have now to acquaint you that it came for a second time under the consideration of this College at a general meeting of the President and Fellows held on October 26th last, when the following resolution was adopted without a dissentient voice:

"The Royal College of Physicians of London fails to recognise any authority under the Medical Acts in virtue of which the General Medical Council may impose the conditions formulated in the regulation in regard to the registration of medical students referred to in the letter from the Registrar.

"The College declines to recognise the requirement that scientific institutions where medical study is commenced should be approved by the General Medical Council."

I was instructed to forward to you a copy of this resolution, and to request that you would direct the attention of the Council to the same.

I am, Sir,
Faithfully yours,
EDWD LIVEING,
Registrar.

H. E. Allen, Esq.,
Registrar.

(*b*) From the Royal College of Surgeons of England.

Royal College of Surgeons of England,
Lincoln's Inn Fields,
London, W.C.,
November 17th, 1899.

Sir,—In reference to your letter of the 19th June, 1899, I am directed to acquaint you, for the information of the General Medical Council, that the Royal College of Surgeons of England fails to recognise any authority under the Medical Acts, in virtue of which the General Medical Council may impose the conditions formulated in the Regulations in regard to the registration of medical students referred to in your letter.

The College declines to recognise the requirement that scientific institutions where medical study is commenced should be approved by the General Medical Council.

I am, Sir,
Your obedient servant,
EDWARD TRIMMER,
Secretary.

H. E. Allen, Esq.,
Registrar of the General Medical Council.

Sir WILLIAM THOMSON said that he must express his exceeding sorrow that this matter came once more before the Council. Originally he referred to the whole subject in a letter sent forward by the Royal College of Surgeons in Ireland, calling attention to the departure of the two Colleges in London from the resolutions and requirements of the Council. The Council would remember the matter was then referred to the Education Committee, which went to considerable trouble in investigating the whole question, and submitted a report to the Council. At the very last meeting it was carried by a substantial majority. The Council would observe that the two bodies, having deliberately considered the communication from the Council, had come to the conclusion that their position was justified, and challenged the authority of the Council That they challenged the authority of the Council on this particular matter was perhaps of small moment, but he maintained that if they succeeded in their declaration as stated in those letters, this Council had no authority in any matter over them. The very title of the Council declared that it has to do with education, and if at the very threshold of education their power to lay down certain conditions and requirements was challenged by two leading corporations, they would not have to wait very long before all the other colleges and corporations and universities defied the Council to carry out any single recommendation or requirement. Therefore he thought the letters raised a very important question as to the powers and functions of the Council which should reassert its powers. Section XX of the Act of 1858 was as follows:

In case it appear to the General Council that the course of study and examinations to be gone through in order to obtain any such qualification from any such college or body are not such as to secure the possession by persons obtaining such qualification of the requisite knowledge and skill for the efficient practice of their profession, it shall be lawful for such General Council to represent the same to Her Majesty's Most Honourable Privy Council.

The beginning of that section distinctly laid down that the Council had to look after the course of study, and the examinations to be gone through for any qualification, but when the Council began to lay down the very first condition that the first year students who were to be admitted should have been at medical schools and not schools of general education, they were challenged by these two Colleges. The Council on the last occasion laid down or adopted a very important clause in the report of the Education Committee. They then said:

One chief object of the Council's action has been to secure that ordinary school work should be completed and tested by a preliminary examination before the course of medical study was begun. It has been felt that to be truly profitable to the medical student, his work at the ancillary sciences should be conducted under higher conditions and under better safeguards as to efficiency than can be looked for in secondary schools, the majority of whose pupils are still boys and girls. The wholesale recognition of ordinary day schools, as "teaching institutions" in which the first year of medical study may be pursued, must practically frustrate this object, and bring about the result foreseen by the Committee in their report of May 24th, 1894.

Then the Committee went on to report that:

In the first place, contrary to the Council's intention, a considerable number of secondary and even of Board schools have been admitted to recognition; in the second place, the duty of inspection delegated to the licensing bodies had not been carried out in all cases.

He held, therefore, that these two Colleges not only had departed from the original arrangement as to the five years' course, but that in their own new arrangement in which they undertook to inspect these first year scholars—if he might call them so—they had failed in their duty. He was not going into the history of the matter, because the Council understood it thoroughly, but he would recall the fact that

when this matter came up before the College of Physicians in London last year, a discussion took place among the Fellows as to the force of this proposal by the conjoint body, and he was glad to know that in that report two of the members of the Council, who were Fellows of the College of Physicians, took precisely the same view which he was submitting to the Council now, namely, that they were to all intents and purposes changing the five years' curriculum required by the Council into a four years' curriculum. Though the Council would regard with the greatest pain any position taken up by those two great Colleges which would compel the Council to take action, yet he maintained that it was the duty of the Council, if it wished to hold in its hands the regulation of medical education in this country, to assert its authority. At whatever cost that had to be done, even if they were bound to carry out Section XX of the Act of 1858, the Council, having regard to its own position and dignity, must take that course. He was glad to think that, so far as the present moment was concerned, it was not necessary to make that proposal and go a step further and summon the opposing bodies before the higher authority; but he would call attention to the fact that the recommendation of the Council which was adopted at the last meeting would come into operation on January 1st, 1900, and all he should like to submit to the Council for approval was a proposition in these terms:

That in reply to the letters addressed to the Council by the Royal College of Physicians of London and the Royal College of Surgeons of England in reference to the Regulations of the Council on the subject of registration of medical students (vol. xxxvi, p. 75), the Registrar be directed to inform these bodies that the General Medical Council adheres to its resolution.

Dr. Bruce seconded.

Dr. MacAlister thought before they passed that resolution they ought to consider what the effect of it would be, and in his opinion he thought the effect would be very small indeed There was no provision in the Medical Act requiring the registration of a medical student; the only result would be a hardship on the few students who would have been perhaps misguided enough to seek registration without having fulfilled the proper conditions, and they would have to go back to the Colleges or put themselves in some recognised science class, and then they might be registered. No harm would be done to them in the end, and the Colleges would make nothing of their refusal to observe the regulations of the Council.

Dr. McVail inquired whether they were to understand that the resolution as to the registration of medical students was a farce. It seemed to him, according to Dr. MacAlister's view, that all the corporations could set the Council at defiance. He himself did not take that pessimistic view. Either the Council was in error in asking the different bodies to submit a list of schools where the science subjects were taught, or the Council must vindicate its position by asking the Royal Colleges to reconsider their position. He did not think these Colleges had the least desire to set the Council at defiance or do anything that the Council did not think right. He thought it would be quite sufficient to ask them to reconsider their position, but if they persisted in their position, the Council must take the course of saying under Section XX of the Act of 1858 that they did not think the course of study required by the Royal Colleges was sufficient. The gist of the whole thing was that these bodies did not for a moment enter into the merits of the question, but they met in a most defiant attitude the deliberate opinion of the Council arrived at after long consideration.

Mr. Brown pointed out that the motion would be more in order if the words "page 75, vol. xxxvi of the minutes of the general proceedings of the Council" were inserted.

Sir Wm. Thomson accepted the correction.

Sir Philip Smyly remarked that he had brought this subject before the attention of the Council before, but it was practically shelved by being referred to the Education Committee for report.

Sir Richard Thorne felt the greatest regret that a College to which he belonged and which he so highly respected, should have taken the course which had been adopted. The fifth year's course was first established in order that one year might be given over to practical scientific work. He thought the action of the Colleges of Physicians and Surgeons deplorable.

Dr. Atthill recognised that it was a very serious question, on the one hand, the total abolition of registration of students if these two Colleges carried out their resolution; and, on the other hand, it would cut off one year from the five years' course. If the Colleges would not reconsider the question, the Council would have either to put the subjects of chemistry and physics after biology in the Preliminary Examination, or return to the four years' course, or appeal to the Privy Council.

Sir John Batty Tuke said the principle on which the Council had always acted with regard to medical education was that registration of students was a machinery devised by this Council as absolutely necessary in order to carry out Section XVIII of the Act of 1858. His own feeling was that that contention would be maintained by the Privy Council. The moment it was found that these corporations were the very first to break down the system which had been gradually built up during 35 to 40 years by the Council, its influence would be very much impaired.

Mr. Bryant assured the Council that his colleagues did not wish to put themselves in opposition to the views of the Council; they had accepted the Council's suggestions in a good spirit, and acted upon them when they thought them right. But his College and the sister College felt that they had their own responsibilities, and they did not, when this Council was created, resign all those responsibilities and duties to the Council. They valued the power and the privilege of recognising the schools and places of scientific instruction where they should ask their students to obtain the necessary information to pass their examination. They felt strongly that, although contempt had been poured upon their list, it did not deserve it. They maintained that they had done a great deal of good by encouraging the teaching of scientific subjects in the big schools of the country. If the Council asked them to wipe out all these institutions, how was the Council going to select them, because they knew nothing about them? Many members of the Council did not know what these hybrid schools were, and thought them unworthy of consideration, but he (Mr. Bryant) had visited many of them, and had been surprised at their equipment for biology, chemistry, and physics. There was not the slightest wish to throw difficulties in the way of the Council doing its work if the Council did not throw difficulties in the way of the Colleges.

Mr. Tichborne asked how far practical chemistry was taught in the schools referred to by Mr. Bryant.

Mr. Bryant could not say.

Dr. Payne was of opinion that this new step on the part of the Conjoint Board was not politic. The letters of the two Colleges did not maintain the merits or advantages of their new regulations, but merely declined to recognise the power of the Council to sanction or not to sanction institutions where medical studies were commenced. But it might very well be held that the new regulations were impolitic, and at the same time that the powers of the Council were limited in the manner which the Colleges maintained. It appeared to him not arguable at all. If the Council had not the powers, it seemed to him very undesirable to argue as if it had them. He moved as an amendment:

That the question whether the Council has power to sanction or to refuse to sanction institutions where medical study is commenced be referred to the legal adviser of the Council to give an opinion thereon.

Dr. MacAlister pointed out that the opinion of the legal adviser had been obtained some time ago, and it was to the effect that in so far as it was a piece of machinery created by the Council for the purpose of carrying out its duties under the Act it might be held that the Council had a right to enforce conditions of registration; but it was quite clear that there was no specific clause in the Act which referred to it.

Dr. Payne did not press his amendment.

Sir Dyce Duckworth said the two Colleges did not recognise a power in the Council to impose conditions. They were entitled to be the judge of their own curricula. That was the line both he and Mr. Bryant took up last June, and they were well advised in taking the line they did. If that view was challenged he reminded them that the Council were sitting

under an Act of Parliament, and they must keep within the four corners of that Act. Appeal to the Privy Council was only justified when the General Medical Council was of opinion that the curricula of the bodies and the teaching secured by the curricula were not such as would secure that the candidates who came up for the diplomas of those bodies were perfectly taught. The Council had not shown that in this case. The Colleges did not recognise the assumption by the Council of powers to which they had no right, and the Colleges resented interference with the arrangement of their own curricula. He was certain any other college in the same position would do the same.

Mr. Carter confessed that he had never looked upon the Council as a body whose proceedings were to be altogether confined within the four corners of its statutory powers; he had always looked upon it as a means by which the representatives of the various licensing bodies were able to meet and discuss matters and principles of education. The Society of Apothecaries had not adopted the plan of the Royal Colleges; it had always carried out the wishes of the Education Committee in their entirety. He hoped the Royal Colleges would try to bring themselves into line with other educational bodies, and endeavour to carry out what he had no doubt were the strong wishes of the great majority of the members of the Council.

Dr. Pettigrew was of opinion that if the views of the Royal Colleges were adopted it would introduce a third order of teaching, and the Council would have to recognise these Board schools and other schools. That would introduce an element which would be disastrous, because he could not believe that a sufficiency of physics, of botany, of zoology, and especially of chemistry, could be taught at those places. He hoped the Royal Colleges of London would reconsider the matter, because it would lower the tone of medical teaching and be ruinous to the medical profession to make qualifications too cheap.

Dr. Leech was of opinion the question depended on whether they thought the teaching school was satisfactory or not. There were two ways of teaching chemistry; there was the school chemistry and the chemistry which ought to be taught to medical students. They wanted the real chemistry taught and not school chemistry.

Sir Christopher Nixon did not think the question before the Council was the sufficiency or insufficiency of certain schools, or the way in which chemistry was taught; the question was whether the Council would take notice of the contemptuous way in which it had been treated by the Royal Colleges. Any one who had followed the uncompromising attitude of Sir Dyce Duckworth in reference to this subject must see that the real test was whether the authority of the Council should be recognised by the Colleges or not. If the Council made a regulation which was thrown back with the statement that it had no authority to make such a regulation, every authority in the country would reserve to itself the right of repudiating those regulations. It was simply a test, and he hoped the Council would not give way.

Dr. Heron Watson said that the object of the regulations made some years ago was to secure that a student should be well educated to begin with and effectively tested by examination. The foundation was that the period of medical education should be extended from four years to five years. They were now told that the Council had no right to impose this regulation, though it was imposed without objection.

Dr. MacAlister asked if Sir William Thomson would accept a motion in a slightly altered form:

That the President be requested to communicate to the Royal Colleges the decision of the Council to adhere to its regulations of June 7th respecting the registration of medical and dental students, and to invite these Colleges to take the matter into fresh consideration in view of its important bearing on the maintenance of the standard of study and examination in the country at large.

After some discussion, Sir William Thomson, with the assent of Dr. Bruce, accepted the foregoing resolution in place of the one originally proposed.

Sir Dyce Duckworth said there was a complete change of front in the tone of the Council since their last meeting.

Sir William Thomson, in reply, observed that he had not a shadow of personal feeling in this matter, which was a public question affecting the whole arrangement for preliminary education in medicine. The question was not the quality of the school, but that a certain regulation was formulated which the Council believed was binding upon all the bodies under their control. The belief of Sir Dyce Duckworth was that it was not; that was the difference between them. The majority of the Council were under the impression that they had the power, and they asked the Colleges to obey and they said they would not. The only thing after that would be the Privy Council.

The resolution was then put and carried. The names being taken down, 22 voted for, 1 against, 3 did not vote, and 4 were absent.

Finances of the Branch Councils.

On motion put from the chair, it was resolved:

That Mr Muir Mackenzie's opinion on the financial position of the Irish Branch Council be, in the first instance, considered *in camerâ*.

The Council having ceased to sit *in camerâ*, the President announced that the following resolution had been agreed to:

That the whole question of the funds of the General Medical Council, and of the Branch Councils be referred to the Finance Committee, together with the trustees of the respective Branch Councils who are members of the General Medical Council, with instructions, if necessary, to take legal advice and to consult with the trustees who are not members of the Council, and to report to the next session of the Council.

Moved by Dr. McVail, seconded by Dr. Atthill, and agreed to:

That such recommendations as the Executive Committee shall think fit to make to the Council under Clause 5 of Chapter xvii of the Standing Orders be made to the Council *in camerâ*.

Report by the Personation Committee.

Mr. Victor Horsley moved, Dr. Atthill seconded, and it was resolved:

That the report from the Personation Committee be received and entered on the minutes.

Mr. Victor Horsley then moved the adoption of the report.

Dr. MacAlister moved, and Dr. Pettigrew seconded:

That the Council go into Committee of the whole Council for the consideration of the report of the Personation Committee.

Mr. Carter inquired if there was sufficient time for the discussion of the report this session.

Dr. MacAlister said it was an extremely important report, and would take probably a day and a half to discuss; he would have a number of amendments to move.

Dr. McVail moved:

That the consideration of the report be adjourned until next session

Mr. Victor Horsley protested that they were very much where they were at the end of last session, because the report in all essential particulars was precisely the same as that placed in the hands of the Council then.

Dr. Bruce thought they all appreciated the great trouble Mr. Horsley had taken in the matter, but he always held that anything in connection with the standing orders could not be too carefully considered. It would not do any harm if it was adjourned to another session before they put it into a crystallised form of a standing order.

The amendment by Dr. McVail was then put and declared carried; and, being put as a substantive resolution, was agreed to.

[Owing to the pressure on our space this week, we are compelled to defer analysis of this report.]

The Preliminary Examinations.

Sir J. Batty Tuke moved, Mr. Carter seconded, and it was resolved:

That the report of the Education Committee on the question of raising the minimum requirements of the Council as regards preliminary examinations should be received and entered on the minutes.

Sir J. Batty Tuke then moved the adoption of the report:

Report.

The report was made in answer to a resolution which was sent to the Committee last year:

"That the Education Committee be requested to consider and report to the Council during the next session as to the earliest date at which, in their opinion, it will be practicable to raise the minimum requirements of the Council as regards preliminary examinations to the standard of the senior and higher grade examinations at present recognised."

The Committee presented in June, 1899, an interim report, giving the opinions of a large number of educational authorities on the question

referred to them; and asking (1) that the period within which the Committee had to report might be extended, and (2) that a sum of £100 should be placed at their disposal for the purpose of enabling them to obtain expert assistance. Both of these requests were granted by the Council on June 5th, 1899.

The Committee accordingly secured the assistance of the Rev. T. W. Sharpe, C.B., formerly H.M. Senior Inspector of schools; Professor W. S. M'Cormick, LL.D., of the University of St. Andrews; and Joseph McGrath LL.D, one of the Secretaries of the Royal University of Ireland, as experts conversant with the condition of secondary edueation in their respective divisions of the kingdom. To these gentlemen were communicated the regulations and papers of questions of the several examinations recognised by the Council, and the examining bodies were requested to permit them to inspect specimens of the answers sent up by candidates. A large proportion of the bodies were able to comply with this request, and in addition they furnished, for the use of the experts, a number of details of a confidential character as to their methods of marking, classification, etc.

Each of the expert advisers dealt first with the examinations of his division of the kingdom, and then entered into communication and conferred with his colleagues, the various documents placed at their disposal being interchanged between them. Ultimately all three met in London for the purpose of comparing their results, and of drawing up a joint report. This latter was presented at a meeting of the Committee on the first day of the present session, when the members of the Committee had an opportunity of discussing it, and the individual reports on which it was based, with the experts in person. The Committee desire to record their great obligations to these gentlemen for the detailed and thorough investigations which they have made, and for the highly instructive comments which they have submitted on the examinations generally and individually.

As regards the point on which the Committee was requested to form and to give a definite opinion, the unanimous report of the experts was as follows:

"We have considered the question whether the Senior and Higher Grade Examinations shall be substituted for Junior. Taking into account the present state of secondary education in the country, we see no possibility of enforcing such a requirement in the near future. A demand of this kind would certainly result in defeating the ends which the General Medical Council have in view. Either it would diminsh to an indefinitely large extent the number of candidates entering the profession, or it would compel the examiners to a laxity of marking and a depreciation of the standard of questioning which would merely have the effect of lowering the senior papers to the level of the junior papers. The standard of the Medical Preliminary Examination must depend upon the general standard of the secondary education of each country in which the examination is held, and a standard too high for one might be found too low for another. We think, however, that the immediate object of the General Medical Council would be gained by the gradual raising of the standard of the lower "Junior" Examinations to the level of those "Junior" Examinations which, in our opinion, rank highest."

This joint conclusion was strongly enforced by arguments adduced by the experts severally.

The Committee felt assured that the Council will attach great weight to the mature opinions thus laid before them by men of wide experience in matters relating to secondary education and examination. These opinions are in consonance with those which the Committee have already expressed in their report to the Council, and in particular in the report of November 1898.

The Committee were therefore constrained to maintain their view, that a number of the Junior Examinations must still, for a considerable time, continue to be recognised for the purpose of medical and dental registration of students.

They proposed, however, to give effect to the specific recommendations of the experts in regard to certain of these examinations, of which it was desirable that the scope and standard should be still further improved, by entering into communication with the bodies which conducted them.

Applications had been received for the recognition of certain new examinations for the purposes of students' registration. The Committee desired, before making recommendations as to these applications, to have the opportunity of conferring with their advisers on the character and standard of the proposed examinations.

For these purposes, and in order that their investigations might be rendered more complete, the Committee desired to be authorised to retain the services of the gentlemen who had already given them such important assistance, and they therefore asked that a further sum of £100 be placed at their disposal for the year 1900.

Sir J. Batty Tuke pointed out that the opinion of the three experts named in the report coincided entirely with that expressed by the Education Committee in June last; and, although it must be a disappointment to a number of members of the Council, he would press upon them to accept this decision as final for the present.

Dr. MacAlister observed that the three gentlemen were selected by the English members choosing the English representative, the Scotch members the Scotch representative, and the Irish members the Irish representative. Those gentlemen had attended the Committee, and he thought that it would be agreed that their opinions were based on a very wide experience, and deserved the Council's gravest consideration.

Sir Richard Thorne said that if necessary he intended to move an amendment, but he hoped the mover and seconder of the motion would accept his proposal as a sort of addendum to their motion. It was:

That in the meantime the report of the three experts and the individual reports referred to be circulated amongst the members of the Council.

They were told that the report contained the most highly instructive comments, and on the basis of this these three experts had practically settled not only the whole thing, but they had gone a great deal further, and they were asked to adopt their report without seeing on what it was based. The Committee asked to be authorised to retain the services of these three gentlemen in order that they might go about and advise bodies all over the kingdom as to how they should raise their examinations; but the report referred to the Committee was whether they could demand a senior instead of a junior examination; he did not think that they ought to go beyond that. It was the most staggering conclusion he had ever heard. The experts laid down that the standard of medical preliminary examinations must depend upon the general standard of the secondary education in each country in which the examination was held; if on the north side of the Tweed there was one standard and on the south side another, one standard on this side of the Irish Channel and another standard on that side, they were to have varying degrees of efficiency. He thought the Council ought to have the whole of the report and not take a tremendous leap in the dark.

Dr. Reid seconded the amendment.

Dr. MacAlister thought the Council should be careful, as the report contained a number of confidential documents in respect of outside bodies which ought not to be circulated broadcast.

Dr. Reid said the report could remain in the office and not be circulated.

Dr. Leech said there were many points which he found it difficult to understand. It was said that an examination of this kind would diminish the number of candidates. The Council should know a little more than that, and should know a little more about the experts' opinions on the general education of the country. Was there such a separation between junior and senior examination as would prevent their taking the senior examination as the minimum for the preliminary? There were many questions on which information was required before the report was passed.

Dr. Pye-Smith knew from experience that the standard was lamentably and disgracefully low, and he hoped that in some way the Council would be able to refuse to accept the report as a final report.

Mr. Victor Horsley said that if there was one question on which he and his fellow representatives had a clear and absolute mandate, it was that they were by all means in their power to raise the standard of preliminary examinations. Sir Richard Thorne had said it was simply staggering that any expert in education should make such a statement as that referred to. Mr. Horsley could only say that it baffled him. Therefore, until the Council was furnished with a direct explanation of those sentences in particular it should not accept the report. It would not only be a disappointment to the profession to read the opinions of these experts, but he was quite sure they would consider it a very expensive disappointment.

On the motion of Dr. McVail, seconded by Dr. Pettigrew, it was resolved that the debate be adjourned.

The Council then adjourned.

Tuesday, December 5th.

Sir William Turner, President, in the Chair.

The minutes of the previous day's meeting were read and confirmed.

The Preliminary Examinations.

On the resumption of the debate on the report of the Education Committee, Dr. McVail desired to give way to Sir Richard Thorne, who, he believed, had some modification of his amendment to propose, which, he thought, would expedite business.

Sir Richard Thorne said his desire to do so was brought about by the fact that he had been informed that the Education Committee would, he might say, feel hurt, by its wording. Nothing was further from his mind. He recognised,

as they all must, that the labours of this Committee had not been exceeded by any committee that had ever been appointed. But for the moment he thought they ought to have the reasons on which these experts had come to the conclusions stated in the report, which practically put an end to their aspirations; aspirations which he personally believed if they had only been fulfilled would have done more than anything else to raise the status of their profession from the deplorable condition which obtained in many towns where men were practising for a sixpenny fee, or competing with each other for a few club members. He had read the report with the keenest disappointment, and he did not think the Council would be able to deal with the matter on the materials now before them. The amendment which he now proposed was:

That the Education Committee be requested to obtain from the experts a report setting out in full their reasons for the conclusions they had arrived at with regard to the adoption by the Council of the senior and higher grade standard of preliminary examination, and that the sum of £100 be placed at the disposal of the Committee for that purpose.

Dr. REID seconded the amendment.

Sir J. BATTY TUKE, on behalf of the Education Committee, accepted the amendment. They would undertake in the shortest time possible to obtain all the facts bearing upon the subject, and submit them to the Council before next session.

Dr. MACALISTER thought Sir Richard Thorne had forgotten what had taken place in 1898. A long report on this very subject had been presented, in which a clear line of work was indicated for the future, and an expression of the hope that the Council would approve of the procedure, and nothing had been known to the Education Committee to suggest that the Council had withdrawn its support for the policy which was therein indicated.

Dr. MCVAIL had not the slightest doubt that if the Council were rigidly to set the minimum of examination and adhered to it the schools of the country would respond loyally. They would probably find that for two or three years the number of medical students would decline, but then they would get a superior class of medical men afterwards. He hoped the Committee would give the Council something definite on the subject and tell them whether they were to sit still or whether they should take a step in advance.

On the suggestion of the PRESIDENT, leave was given to the mover and seconder of the original motion to withdraw it and substitute Sir Richard Thorne's amendment.

Dr. GLOVER understood that the Education Committee hoped to get for the £100 not only further information, but further help from the experts; the use of this money must not be restricted to a mere justification of the past report, but for further services. That was the intention of the Committee, and he was sure it was a reasonable one. This was one of the wisest things ever done by the Council; it was impossible to deny that by getting the opinion of the experts they had put themselves in a more impartial and stronger position than they could possibly have held without it, and he shared in the disappointment that was felt on reading the report they were not proceeding more rapidly.

Sir CHRISTOPHER NIXON informed the Council that one thing came out most distinctly in conversation with the experts, and that was the utter impracticability of raising the standard to the senior grade examinations, for the reason that there was the greatest possible difference in the scope of the examinations. The senior examination was altogether different. It really represented a university examination, and it corresponded to, and was recognised as corresponding to, the first examination in Arts at the Royal University; therefore it was considered impossible in the present state of medical examination to raise the standard to the senior grade. The reports of the experts were of the greatest value, and he thought if the Council would leave the matter in the hands of those persons to advise the Committee, and for the Committee to report, it would be acting wisely and prudently.

After a discussion in which Mr. HORSLEY, Dr. MACALISTER, Mr. CARTER, and Sir R. THORNE took part,

Sir WILLIAM THOMSON proposed the omission of the last three words, "for that purpose."

Mr. TEALE seconded.

The PRESIDENT put this to the meeting, when 17 voted for the omission of the words, and 5 against.

At the request of Sir R. THORNE the names were taken down, 18 voting for, 6 against, 2 did not vote, and 2 were absent.

The PRESIDENT then put it as the original motion, and declared it carried.

THE APOTHECARIES' HALL OF IRELAND.

Sir DYCE DUCKWORTH read the report of the Examination Committee on the inspection of the Examinations of the Apothecaries' Hall of Ireland, held in July, 1899, and moved:

That the report should be received and entered as an appendix to the minutes.

Dr. PETTIGREW seconded.

Report.

During July the entire series of examinations should have been conducted. Only one candidate appeared for the First Professional Examination, solely in the subject of biology. This candidate had been twice previously rejected in biology, but passed on this occasion with 52 per cent. of marks. No candidate appeared for the Second Examination.

The Third Examination was in pathology, materia medica, medical jurisprudence, and hygiene. Five questions were set in each paper, and three of these had to be answered. Seven candidates came up—one for pathology, two for medical jurisprudence, one for materia medica, medical jurisprudence, and hygiene, and three for pathology, medical jurisprudence, and hygiene. One candidate had spent twenty years in efforts to obtain his diploma. Three of the four candidates passed in pathology. The rejected one was very bad in his paper, and his spelling and grammar were also very bad. The solitary candidate in materia medica was rejected, his spelling being also defective. Of six candidates in medical jurisprudence, two were rejected, and three passed very well. Of four candidates in hygiene, two were rejected, and two passed very well.

The examiners direct the attention of the General Medical Council to the lack of general education evinced by one of the candidates, but they do not indicate what preliminary examination he had undergone, it being merely stated that he had passed his earlier subjects at this Board.

For the Final Examination, six candidates presented themselves. The nature and extent of the papers set (five questions in each, four only to be answered), were thorough and representative.

The Inspector was in substantial agreement with the marking of the examiners. The subjects were medicine, midwifery, ophthalmology, and surgery; and clinical examinations were held in medicine, surgery, and ophthalmology, as well as oral examination in medicine, surgery, and midwifery. Three of the six candidates in medicine were rejected, and one passed very well. Two out of six candidates were rejected in surgery and midwifery, and all the four who entered for ophthalmology passed. One candidate was rejected in every subject.

The Inspector notes that the Examining Board has fallen in with his suggestion made in April last respecting the number of questions required to be answered, and the meeting of examiners after each examination for which they are responsible, to confer as to marking, and has shown the greatest willingness to render the examinations more thorough than they formerly were.

The Inspector also notes that there was a full equipment of specimens, apparatus, and instruments in the entire series of examinations, and that the opportunities for ascertaining the clinical attainments of the candidates were excellent. He is of opinion that the Final Examination will bear favourable comparison, as a test of fitness, with any of the ordinary pass examinations within the United Kingdom.

The Surgical Examiners appointed by the General Medical Council declare that they were satisfied with the methods in which the examination was conducted, and with the standard of knowledge required.

In reply, the Examining Board expresses satisfaction with the Inspector's report, and refers to the imperfect general education of several of the candidates as a matter for the attention of the General Medical Council. The Board promises to consider the Inspector's comment on the suitability of one of the questions in pathology which appeared to relate rather to clinical medicine.

The Examination Committee is pleased to lay before the General Medical Council so satisfactory a report of these examinations, and to find that as a result of its previous reports and the regular inspection of this Board, a standard has been reached which cannot fail to be beneficial both to the public and the profession. They recommend the General Medical Council to suggest to the Board the necessity of furnishing the Council with the means of tracing the particular arts examinations which their imperfectly educated candidates have passed.

The Examination Committee, taking into consideration the last paragraph of the communication received from the Privy Council of date December 10th, 1895, beg leave to suggest that a copy of this report be furnished to the Privy Council Office, and that the inspection of these examinations, in accordance with their lordships' recommendation and the late President's promise, should be continued.

Mr. TICHBORNE said there were one or two alterations he would suggest to the Examination Committee should be made in the wording of their report. He thought that the body he represented had proved its willingness to do its best in connection with these examinations. It had obtained the unstinted praise of the visitors and inspectors. He, however, thought the report should not contain the reference to "one candidate had spent twenty years in efforts to obtain his diploma." He did not think it fair to discuss individual candidates in that way. He thought he knew the candidate referred to, and it was a case in which the candidate entered for medicine, never pursued it, and went in for the qualification of a pharmaceutical chemist. After working for many years

as a pharmaceutical chemist he went in for medicine again, but that person could not be spoken of as having spent twenty years in efforts to obtain his diploma. Then, again, the report stated that "The proposition was in substantial agreement with the marking of the examiners." He thought the word "substantial" should not be used, and pointed out that the inspector in his report had stated:

Every portion of the entire series of examinations inspected during July was fully equipped with specimens, apparatus, and instruments, and the opportunities for testing the clinical attainments of the candidates were excellent.

This has been the first occasion on which the entire Final Examination under the New Regulations has been carried out, and it has accordingly been for the first time inspected throughout. There cannot be any doubt as to the thoroughness of the examination in all its branches, and more especially in their practical departments—the examination, in short, will bear favourable comparison, as a test of fitness, with any of the ordinary pass examinations within the United Kingdom.

Conclusions.—The examinations of the Apothecaries' Hall of Ireland are in every respect sufficient. The tests imposed on the candidates are perfectly adequate for the purpose of ascertaining their fitness to pass. The decisions of the examiners in every instance were, in my opinion, eminently just, and I found myself in absolute agreement with them as to the results of the examinations.

He hoped the Chairman of the Examination Committee would see his way to make these alterations. He concluded by moving an amendment that the report should be altered, so that these two things were omitted.

Mr. G. Brown, in seconding the amendment, hoped that the matter would not be pressed to a division, and that the Chairman of the Examination Committee would see his way to accede to the suggestion of Mr. Tichborne.

Sir Dyce Duckworth pointed out that the word "substantial" was simply a quotation from one of the documents of the Inspector, but said he had no objection to acceding to the proposal. In preparing their report all the Examination Committee desired to do was to reflect exactly the state of matters to the Council.

The resolution was then put to the meeting and carried.

Dental Business.

The President said the next business was to receive a report from the Executive Committee in regard to the amendment of Section xi of the proposed Standing Order for regulating procedure in dental penal cases.

Mr. Tomes stated that the matter was very simple. On the last occasion they adopted some new Standing Order to enable them to deal with more precision with dental penal cases. The old Clause 11 did not give the Council the opportunity of using that sort of discretion that was very frequently exercised in medical penal cases. The old clause left no option but to vote at once on the question of striking off or not striking off the name. The proposed clause separated the finding of guilty or not guilty of the charge which was put in the resolution from the other resolution which involved or did not involve the penalty of striking the name off the *Dentists Register*. The separation of those clauses had been found of great value in medical penal cases. He concluded by moving that the report from the Executive Committee in regard to the amendment of Section xi of the Standing Orders be adopted; that the report be received and entered on the minutes; and the amended Clause 11 therein contained be adopted by the Council as the Standing Order.

Mr. Bryant seconded.

The motion was put to the meeting and carried.

Report of the Pharmacopœia Committee.

The Pharmacopœia Committee presented a report to the following effect:

Twenty-eight thousand five hundred copies of the *British Pharmacopœia of 1898* had been printed, and 27,613 copies had been disposed of; it was therefore evident that a further issue of 3,000 copies should be authorised. The Committee noted with satisfaction that the expenses incurred in the preparations of the *Pharmacopœia* had been more than met.

A meeting had been held of the Conference between the members of the Subcommittee and the representatives of the Pharmaceutical Societies, and on its recommendation a number of debatable points had been referred to experts for further investigation and report.

With the view to the more speedy production of the Indian and Colonial *Addendum*, the Committee had deemed it advisable to discontinue for the present the preparation of the annual reports on the progress of pharmacy.

A detailed report on the Indian and Colonial *Addendum* had been presented by the editor. Fifty-three of the seventy British Administrations of India and the Colonies had already communicated their views. The Committee desired to express their cordial thanks to those who have thus contributed much valuable assistance, and to note with gratification that in many colonies the *British Pharmacopœia* in its present form had completely satisfied all requirements.

Dr. Leech moved, Dr. MacAlister seconded, and it was agreed:

That the report of the Pharmacopœia Committee be received and entered on the minutes.

Dr. Leech, in moving the adoption of the report, stated that the sales of the *Pharmacopœia* were proceeding satisfactorily, and they had now £1,193 in hand. They were constantly receiving answers to the communications which had been sent out, and before long they hoped to submit a draft *Addendum* for the Council's consideration. The Canadian pharmacists were taking a great interest in the matter, and were employed in drawing up a report of what was required in Canada.

Dr. MacAlister, in seconding the motion, called attention to the statement in the report that "Fifty-three of the seventy British Administrations of India and the Colonies have already communicated their views." That number could be increased, although, he pointed out, the absence of replies should be taken rather as a compliment than otherwise, at least they had been told in some instances that the *British Pharmacopœia* as it existed was so complete there was nothing to add to it.

The motion was carried.

Penal Laws.

The next business was to receive *in camerâ* a report from the Penal Cases Committee.

Strangers were directed to withdraw. On readmission no announcement was made as to what occurred *in camerâ*.

Report of the Public Health Committee.

Sir Richard Thorne said that owing to something which had occurred since the report was printed it was found necessary to make an addition to it; and that as the Committee thought that the report should be fully discussed, it would be better to defer its consideration.

The President suggested that it be put in the form of a draft report.

Dr. McVail expressed the opinion that the report should be received and entered on the minutes.

Sir Richard Thorne said in regard to what he had already stated he would read a few words to the Council, which were as follows:

With the consent of the President, Mr. Muir Mackenzie's opinion was asked as to whether certain Colonial and Indian medical qualifications were included in the phrase "a registrable qualification" in Rule 1 (1) of the rules of the Council, and his answer was as follows: "Every degree or diploma which qualified for admission to the *Medical Register*, whether in the Home, the Colonial, or the Foreign List, is a registrable qualification for the purposes of the Medical Act." Having regard to this opinion, your Committee have not deemed it necessary to propose any modification of Rule 1 (1) referred to.

If there was no comment upon that, it should be added to the report, and he moved:

That the report be received, entered on the minutes, and circulated among the members of the Council and the bodies conferring diplomas in Public Health for any observations they may wish to make in regard to the Committee's recommendations.

Dr. McVail seconded the motion, which was agreed to.

Students' Registration Committee.

On the motion of Sir Dyce Duckworth the report of the Students' Registration Committee on exceptional cases was received, entered on the minutes, and adopted.

Unqualified Dispensers.

On the motion of Mr. Teale, seconded by Mr. Brown, the following report of the Unqualified Dispensers Committee was received, entered on the minutes, and approved.

Report.

The question of the employment of unqualified dispensers is a somewhat complicated one. In the first place there is the legal aspect. Two bodies possess a certain amount of authority in the examination and certification of dispensers, the Society of Apothecaries and the Pharmaceutical Society.

By their Act (1815), the Apothecaries have authority to examine and certify "assistants to apothecaries," and to prosecute "any person who, in England or Wales, shall act as assistant to any apothecary to compound and dispense medicines without having obtained such certificates." This power of prosecution would seem to be limited to persons employed by "apothecaries," and is practically unused, no complaint having been made to the Society on the question.

The Pharmaceutical Society gives a qualification without which it is unlawful for any person to sell, or keep open shop for retailing, dispensing,

or compounding poisons, or assume the title of chemist and druggist; but it appears to be legal for an unqualified assistant to dispense medicines containing poisons provided the chemist is on the premises.

In the second place there is the practical aspect of the question.

Setting aside the minor dispensing, which medical men carry out themselves without outside help, there is the dispensing on a larger scale (and on old-fashioned lines), which exists chiefly in the practice of the older members of the profession, and in outlying districts. This is carried on sometimes by unqualified dispensers who have been trained in the work for years, and have become from long experience expert and safe; sometimes by dispensers who have obtained certificates either from the Society of Apothecaries or the Pharmaceutical Society. On this point may be quoted the statement by Mr. Upton, solicitor to the Society of Apothecaries, that "during the last two years there have been 320 candidates, 171 of whom succeeded in obtaining the certificates (64 males and 107 females)."

The Committee, having carefully considered the whole matter, believe that the transition from the small amount of dispensing which a medical man can without difficulty perform himself, to the larger amount requiring the services of a special dispenser, is so gradual that it would be impossible to draw a line and say at what point a qualified person becomes indispensable.

Under these circumstances the Committee do not see their way to recommend any course to be taken by the Council at the present time in reference to this question, but they endorse the reply sent by the Executive Committee to the Privy Council:

"That whilst they fear that occasional accidents may arise from the employment by qualified medical practitioners of careless or incompetent dispensers, the cases, in their opinion, are very rare, and it appears to the Committee that probably the best protection is afforded to the public by the responsibility of the practitioner for the acts or defaults of the servants whom he employs."

Mr. BROWN then suggested that as the complaint came to the General Medical Council from the Privy Council, a copy of the report should be sent to that body.

The PRESIDENT thought a copy should be sent, and this was agreed to.

COMPANIES ACT AMENDMENT BILL COMMITTEE.

On the motion of Mr. TOMES, seconded by Mr. VICTOR HORSLEY, it was resolved the following interim report from the Companies Act Amendment Bill Committee should be received, entered on the minutes, and adopted:

Interim Report.

Your Committee is glad to be able to report that the Lord Chancellor's clause prohibiting the practice by companies of the business or profession of physician, surgeon, dentist, or midwife, which has now been placed in a Government measure (the Companies Acts Amendment Bill), was passed without amendment by the House of Lords towards the end of the last session. It was too near to the close of the session for the Bill to be then introduced in the House of Commons, but it is understood that the Government intend to actively proceed with the measure, and it is hoped that it will be introduced in the House of Commons early in the ensuing session.

In view of the doubt which still attaches to the application of the words "physician" and "surgeon," your Committee feel that the addition of the words "medical practitioner" is more than ever necessary, and they are using their best endeavours to procure its insertion, which will probably present no difficulty.

Since its last report, your Committee has received further information which enables it to state that both medical and dental companies are still actively pursuing highly objectionable forms of practice.

The following is the clause referred to:

"It shall be unlawful for a company, under the Companies' Acts 1862 to 1898, to carry on the profession or business of a physician, surgeon, dentist, or midwife, and if any company contravenes the enactment it shall be liable, on summary conviction, to a fine not exceeding £5 for every day during which the contravention happens."

MEDICAL AID ASSOCIATIONS.

The Medical Aid Associations Committee reported as follows:

Report.

They continue to receive communications from various persons interested in this subject, and to give help to the consideration by them of the suggestion of the Council at its May meeting in favour of the formation of a Conciliation Board. The Committee may remind the Council of the terms of the two resolutions on the subject of medical aids which the Council passed in May last:

Resolution 1.—That the Council approve of the recommendation of the Committee in favour of a Board of Conciliation to consist of representatives of the friendly societies and of the medical profession, provided it is understood that, having regard to the statutory responsibilities of the Council, it is inexpedient that it should take part officially in the formation of a Board.

Resolution 2.—That the Council strongly disapprove of medical practitioners associating themselves with medical aid associations which systematically practise canvassing and advertising for the purpose of procuring patients.

In reference to the latter resolution of the Council your Committee have reason to believe that it is having its intended effect in diminishing the system of canvassing and advertising for the purpose of procuring patients. The following letter bearing on this resolution has been received by the Chairman:

London and Manchester Industrial Assurance Company, Limited,
Chief Office,
Southwark Exchange,
London, September 7th, 1899.

J. G. Glover, Esq., M.D.,
Chairman of the Medical Aid Committee,
General Medical Council,
299, Oxford Street, W.

Dear Sir,—For the information of your Committee we desire to make you acquainted with the fact that we have ceased to take new members into our Medical Aid Department. Therefore, what is objected to by the General Medical Council's resolution of May last cannot now possibly occur so far as this Company is concerned. At the same time, we would point out that we never permitted objectionable methods in the enrolment of members for the securing to them of medical attendance, and that our Medical Aid Department has not been carried on as a source of profit to the Company.

Yours truly,
(Signed) W. DAWES,
Managing Director.

The Chairman of the Committee is informed by Mr. Dawes, Managing Director, that about 1,000 medical practitioners are under agreements with this Company.

The question of a formation of a Board of Conciliation is receiving the consideration of a Committee of the British Medical Association and other bodies, pending the results of which this Committee can only report that the information received by them continues to be on the whole favourable to such a scheme, though differences of opinion in the profession exist. In a Conference on November 30th, 1899, between your Committee and that representing the friendly societies, the questions on which most difference of opinion exists were freely and candidly discussed, and your Committee received important information on such questions, which confirms them strongly in the belief that such a Board would tend powerfully towards the advantage of the profession and the improvement of medical attendance on the members of such societies.

Dr. GLOVER, in moving the adoption of the report, said the resolutions passed by the Council were having good effect. The friendly societies had taken a long time to make up their minds in the matter, but he thought they had made them up well, and the British Medical Association had also considered the subject. The further conference with the representatives of the friendly societies showed that their position towards this subject was more cordial and more reasonable if possible than ever. The Committee thought it most desirable that the friction between the societies and the profession should cease, and that there should be a better understanding altogether. With regard to the question of advertising, he referred the Council to the letter contained in the report.

Mr. TEALE seconded the motion, which was adopted, and the Committee was continued.

THE EFFECT OF ERASURE FROM THE REGISTER.

Sir CHRISTOPHER NIXON moved and Mr. VICTOR HORSLEY seconded the following resolution:

That in all cases where a practitioner's name has been removed from the *Medical Register* for conduct infamous in a professional respect, such practitioner should be informed that the legal right to practise medicine, surgery, and midwifery is forfeited for such period as the practitioner's name does not appear on the *Register*.

The PRESIDENT, after a short discussion, said that Mr. Muir Mackenzie was present when Sir Christopher Nixon gave notice of this motion, and had remarked at the time that he thought it unwise of the Council to lay down abstract motions. He (the President) supposed that what Mr. Muir Mackenzie meant was that each case should be considered on its merits as it came up. He asked, in view of that opinion, would Sir Christopher Nixon, with the consent of Mr. Victor Horsley and the Council, withdraw his resolution?

Sir CHRISTOPHER NIXON accordingly did so.

FOREIGN CANDIDATES FOR BRITISH DIPLOMAS.

Mr. VICTOR HORSLEY moved:

That the Education Committee be requested to consider the circumstances under which at present foreigners obtain exemption from some of the conditions of education and study required by certain of the qualifying medical corporations under the curriculum determined by the General Medical Council.

He said the report which the Education Committee had presented to the Council this session concerning the exemptions which were offered to foreigners by the various qualifying bodies was a report of the greatest value, but it contained

evidence of a condition of inequality into which he was anxious that the Committee should inquire, because it was evident from the report that foreign students had an advantage as compared with English students with regard to the curriculum of five years. He thought they should exact from a foreigner one of two conditions: that either he should produce evidence of being qualified to practise in his own country, or that he had followed out the five years curriculum of this country. He called the attention of the Council to the fact that in foreign countries the diplomas of various universities, recognised by a large number of qualifying bodies here, were not of any value in relation to practice—they did not constitute a right to practise. It was assumed by many qualifying bodies that the course of instruction which the foreign candidate had gone through was parallel to that given in this country: but Mr. Horsley said that he had an extensive knowledge of foreign medical schools, and knew as a matter of fact that the course of instruction in those foreign medical schools was not strictly parallel with those in England. It was to determine those points precisely that he asked the Education Committee to undertake the inquiry.

Mr. Tomes, in seconding the motion, said that in looking over the report it appeared that there were considerable inequalities. It would be more reasonable if the Committee could see its way to "boil down" the answers received.

Dr. MacAlister had no further information to give to the Council on the subject; the matter had been referred by the Privy Council for a statement of the facts. He hoped the Council would not endorse Mr. Horsley's view, because it was based on an imperfect knowledge of the subject.

Sir J. Batty Tuke did not understand how they were to obtain the information from the universities; that was the difficulty.

Mr. Victor Horsley said he had been misrepresented when it was stated that he had an imperfect knowledge of the subject. Some of the Scottish Universities, the University of Aberdeen, for instance, allowed a man to spend three years of his curriculum elsewhere.

The President observed that that was a serious thing.

Mr. Victor Horsley remarked that that was why he had brought it forward. The Council was responsible for the medical education of the persons who were put on the *Register*. He hoped the resolution would be looked upon without any heat or feeling and that they would have a report from the Education Committee on the subject.

The motion was carried by 10 to 8.

The Rhodesian Medical Ordinance.

The next business was the consideration of a communication in regard to a medical ordinance for the practice and sale of medicine and practice of dentistry in Southern Rhodesia.

Mr. Carter moved, and Dr. Glover seconded the following resolution:

That in the opinion of the Council the objections urged in the memorial drawn up by the medical practitioners in Southern Rhodesia against the medical ordinance under which they act are invalid and indicate a serious grievance of which they are justified in complaining, and that this resolution be forwarded to the Secretary of State for the Colonies with the request that he will give it his consideration.

Mr. Victor Horsley informed the Council that the British Medical Association had already approached Mr. Chamberlain on this subject some months ago and that Mr. Chamberlain had informed the Association[1] that Sir Alfred Milner had withheld his approval of this ordinance, which decision Mr. Chamberlain had approved of; so that everything was in train.

Sir Dyce Duckworth was instructed on behalf of the College of Physicians to support any motion made in respect of this matter.

The resolution was adopted.

The University of Adelaide.

Sir J. Batty Tuke reported that the University of Adelaide had applied to have its First Year's Examination in Arts placed on the list of examinations qualifying for registration, and the Education Committee recommended that this should be acceded to. He therefore moved, Dr. MacAlister seconded, and it was resolved:

That on the recommendation of the Education Committee the following be added to the list of examinations held out of the United Kingdom which are recognised for the purposes of medical and dental students' registration, namely, the University of Adelaide's First Year's Examination in Arts.

Vote of Thanks to President.

On the motion of Dr. Bruce a hearty vote of thanks was accorded to the President for the able manner in which he had presided.

The President expressed his acknowledgments, and the proceedings of the session then terminated.

[1] Particulars as to this ordinance will be found in the British Medical Journal for July 15th, 1899, p. 160; in the Journal of August 12th, 1899, p. 417, will be found the reply of the Colonial Secretary to the representations addressed to him by the then President of Council (Dr. Saundby) on behalf of the British Medical Association.

LITERARY NOTES.

Mr. George Brown writes:

In order to prevent misunderstanding, I will thank you to permit me to state through your columns that I have resigned all connection with the editorial department of the *Medical Times and Hospital Gazette*, which journal I founded in 1872 under the title, *The Students' Journal and Hospital Gazette*.

A new edition of the writings of the old Greek physicians is, we understand, in preparation in Greece. The edition is to be in 60 volumes, and Dr. Fonstanos, the editor, has a large staff of collaborators, including medical scholars of several European countries and of America.

Not long ago a correspondent of the British Medical Journal asked to be referred to some works on Biblical Medicine. Several have been mentioned by other correspondents. We may add to the list an interesting paper by the Chief Rabbi, the Very Rev. Dr. H. Adler, entitled the Sanitation of the Mosaic Law, which was read at the Congress of the Institute of Public Health held at Blackpool last September, and is printed in full in the current number of the *Journal of State Medicine*. A list of "authorities" is appended which supplies a number of references that may be useful to those interested in the subject. We note with some surprise that the late Mr. Ernest Hart's paper on the Mosaic Code of Sanitation is not included. Neither by the way is Mead's *Medica Sacra* (published in 1749), but for that omission there is more excuse: the Chief Rabbi may conceivably never have heard of Mead.

Dr. N. P. Benaky, of Smyrna, is the author of a work (in French) on the sense of colour in antiquity which has recently been published by Maloine, of Paris. He gives a large number of passages from classical authors which, in his opinion, prove that changes of meaning in the terms descriptive of colours that have taken place in the course of centuries depend on linguistic, not on functional, evolution. The author's researches have extended not only to all the written records of antiquity, but to the painted monuments and decorations which still survive, especially in Egypt, Chaldæa, Syria, and Greece. All the colours mentioned in the Homeric poems are classified and compared in accordance with the strictest rules of criticism. The opinions of ancient philosophers on colours and on the structure of the rainbow are also discussed.

At a recent meeting of the Société Impériale de Médecine of Constantinople, Dr. S. Stainaliades presented an analysis of a work by Dr. Nicolas Lambadarios of the University of Athens. The book, which is written in Greek, deals with serumtherapy, organotherapy, antirabic and antileprous treatment as practised by the old Greek physicians. It is shown that in treating leprosy Galen used, not indeed antivenomous serum as some recent workers have employed Calmette's antivenene, but the flesh of the viper's body, which he thought contained the virus in an attenuated form. Mithridates, as every schoolboy knows, made himself poison-proof not only by taking antidotes of proportionate strength, but at last by combining in one all the antidotes known in his day. All his life he made experiments on himself and on condemned criminals; among the poisons against which he succeeded in making himself immune was that of snakes. For this purpose he added to his antidote the blood of animals which fed on venomous snakes, particularly Black Sea geese. Similar antidotes were used later by Attalus King of Pergamos, by Andromachos, Nero's archiatrus, and by Galen. As regards rabies, the author finds an anticipation of the essence of the Pasteur treatment in Dioscorides who advised persons bitten by mad dogs to drink the blood and eat the liver of the animal which had bitten them.

SPECIAL CORRESPONDENCE.

HONG KONG.

Bubonic Plague.

THE Governor, at a meeting of the Legislative Council, in referring to the epidemic of plague this year, remarked that the total number of cases was 1,471, of which 1,413 proved fatal, the highest percentage on record. The Government, he said, intended passing an Insanitary Dwellings Bill, which he hoped would help to prevent such a serious epidemic in future. His Excellency took a great personal interest in the measures adopted to stay the plague.

At a meeting of the Sanitary Board on October 12th Dr. Clark announced that ten days had elapsed since cases of plague had occurred in Hong Kong, and thought that for the present the colony was free from bubonic plague, and recommended that the Government should issue clean bills of health for the port.

LIVERPOOL.

The New Principal of University College.—Government Recognition of the School of Tropical Diseases.

MR. ALFRED WILLIAM WINTERSTON DALE, M.A., Fellow of Trinity Hall, Cambridge, has been appointed Principal of University College in place of Mr. Glazebrook, who has retired on his appointment to the office of Director of the National Physics Laboratory. Mr. Dale took the B.A. degree in 1879, being eighth in the classical tripos of that year, and he was then appointed classical lecturer of his College, and was elected a Fellow in 1882. He has held the office of Bursar, and has been examiner for the classical tripos at Cambridge, for various other University examinations, and for the Indian Civil Service examinations. He has recently written the life of his father, the Rev. R. W. Dale, of Birmingham. Mr. Dale, in common with his distinguished predecessor, Principal Rendall, has gained his laurels in connection with the classics and literature rather than with science. He is well versed in university administration and finance—a qualification which is doubtless especially called for in one who has to guide the fortunes of a growing institution such as that over which he is coming to preside.

The value of the School of Tropical Medicine is now universally acknowledged, and the welcome news has been received that the Government has at last consented to give official recognition to it.

CORRESPONDENCE.

THE REPRESENTATIVE OF THE SOCIETY OF APOTHECARIES.

SIR,—With reference to certain "Notes" on page 1568 of the BRITISH MEDICAL JOURNAL of December 2nd, I beg leave to express my sincere regret that, not having at the time seen the JOURNAL of June 17th, I may be held to have included the JOURNAL in my general statement to the General Medical Council on November 28th, that the speech which I made to that body on June 8th, in the debate raised by Mr. Horsley on the Hunter case, had been "suppressed." I have now seen the JOURNAL for the date in question; and I find not only that my speech, in so far as it related to the topic under discussion, was "suppressed," but also that your reporter, in lieu of the suppressed portion, did me the honour of writing, or you did me the honour of publishing, matter which I not only never uttered, but which had never in any form so much as presented itself to my imagination. I refer to the following passage in your so called "report," which occurs on page 1476:

> He then referred to a meeting of registered practitioners of England, at which it had been stated that the Council had improperly resisted access to the documents which were necessary to form an opinion on the subject. He quoted from the minutes of the Council to show that that was an entire mistake, and he thought it quite time that this fact was made clear.

It so happens, Sir, that I kept a careful note of the portion of my speech which the above quotation is supposed or intended to represent, and what I said was as follows:

> On November 22nd, 1898, the Council assembled for its winter session, and on December 10th next following there appeared in the *Lancet* a paper which purported to be A Fifth Report to the Registered Practitioners of England and Wales, by Victor Horsley. I have not heard that the paper in question has been repudiated by Mr. Horsley as a hoax perpetrated upon the proprietors of the *Lancet*. It contained, among other matter, the following statement: "On November 22nd Mr. Brown and I moved for the documents in the case of Mr. Hunter to be produced; and, as just stated, we carried that motion in the face of a strenuous opposition offered by the President, the Chairman of the Penal Cases Committee, by Dr. MacAlister, by Dr. Heron Watson, and by Mr. Carter." Speaking generally, Sir, the passage which I have quoted is a string of falsehoods, and I hope that Mr Horsley, now that he tells us he is endeavouring to relieve the Council of a reproach, will relieve it from that which he has thus unjustly and unduly cast upon it. It is true that the motion described was made by Mr. Brown, was seconded by Mr. Horsley, and carried by a considerable majority. According to the report in the BRITISH MEDICAL JOURNAL, it was carried "after brief discussion," no details of which were given, so that there can hardly have been "strenuous opposition" to its adoption. You, Sir, according to the very full and accurate report of the *Lancet*, did not oppose the motion, either strenuously or in any other manner, for you did not utter a word. The Chairman of the Penal Cases Committee did not oppose it, perhaps for the reason that, except yourself, there is no such official in existence, and that you, Sir, did not follow the example of the prince bishops of mediæval times, and did not oppose as a chairman the motion which you had accepted as a president. Neither Dr. Heron Watson nor I opened our lips. Dr. MacAlister cannot truly be said to have opposed the resolution, although, as Chairman of the Business Committee, he pointed out the difficulty in the way of the production of the documents arising from the fact that, in consequence of the pending appeal, some of them had been removed from the house, and were in the custody of the legal advisers. Mr. Horsley then spoke a second time. Sir Richard Thorne advised the withdrawal of the motion, on the ground that many of the documents were in other hands. Mr. Brown spoke a second time. Mr. Horsley spoke a third time. Dr. Althill said that in view of the pendency of an appeal he thought it would not be wise to produce the documents. Dr. Glover, Sir John Batty Tuke, and Mr. Tomes, briefly supported the motion, which was then put to the vote and carried by a large majority, I myself voting in its favour. I had not the smallest objection to the production of the papers to the Council, although, in a previous session, I had concurred with the majority in objecting to our papers being privately ransacked by Mr. Horsley without any regulations to secure their safe custody, and as part of a fishing investigation conducted in the hope of finding something which would do to talk about. The brief debate occupied only a few minutes, and gave occasion for eleven speeches, five of which were made by Mr. Brown and Mr. Horsley, three by members of Council who supported them, and three by members who thought the motion should be postponed.

The above speech, Sir, was that which Mr. Horsley, in his next or sixth "Report," declared to have consisted of "abuse" of him; and both you and the *Lancet* published that assertion. I need hardly point out that your version of it at least contains no "abuse"; nor, I think, does the genuine one. I had to say and to prove, in the plainest possible words, that Mr. Horsley's published statements were not true. I said this, and I proved it up to the hilt. I could not then, of course, anticipate the more recent and more splendid examples of mendacity which have since been furnished by Mr. Horsley's description of the Society of Apothecaries; but I was none the less anxious to impress upon the profession the high degree of caution with which it is necessary that any statements proceeding from him should be received. While I did not in any way "abuse" Mr. Horsley, neither did I say or suggest anything about a "mistake." I knew of no evidence upon which the hypothesis of a "mistake" could be founded; and I may add that Mr. Horsley, who heard my speech and could not reply to it, has since not only repeated his false assertion that I resisted his motion for papers, but has "gone one better" by describing my resistance as "unscrupulous." I should like also to call the attention of the profession to the attitude which Mr. Horsley assumed when I had exposed his falsehoods about the Society of Apothecaries. I showed that when Mr. Horsley wrote that I was elected by the Master and wardens, and that they had received no medical education, he all the time knew that I was elected by the Court, and that "most" of the members of the Court were on the *Medical Register*, although "some" (who had retired from practice) were not. He said, in reply, that he had been informed "at the office of the Society" that "practically" (whatever that may mean) I was elected by the Master and wardens, and that at that time (at what time?) the Master and wardens were not on the *Medical Register*. Is it even conceivable that Mr. Horsley ever received any such information? If he will give the date of his inquiry "at the office of the Society" and will mention the official with whom he was in communication, we shall be in a position to follow this matter to its source. I had said that, for forty-three

years from 1815, the Society had carried on its work without reproach from either the public or the profession, and I specified the period of time because it came down to the passage of the Act of 1858, under which the work of the Society, like that of other examining bodies, has been subject to a more definite control than that of either public or professional opinion, the control of the General Medical Council itself. Mr. Horsley endeavoured to whittle away the effect of his reluctant but enforced apologies to the Society by saying that its examinations are not now carried on in a way which the Council would approve, and by quoting in support of this assertion the views of some unnamed medical students who had been under his tuition. Mr. Horsley's students must belong to one of three categories. They must be students who had never gone up for the Society's examination, in which case they would know nothing about it; or they must have gone up and passed, in which case they would not be likely to belittle it; or they must have gone up and failed, in which case their opinions would hardly be confirmed by their experience. The merits of the examination do not rest upon the views of students, but upon the report officially made to the Council by its inspector and visitors that it is, in the language of the Medical Acts, "sufficient" to satisfy their requirements. I did not wish to occupy the time of the Council with merely personal matters, and it therefore was not worth my while to notice Mr. Horsley's contention, which he said I had not "met," that I am not the representative of the whole body of the Licentiates of the Society. If I were I should have no claim to a seat in the Council, and the contention is utterly absurd. The Legislature has not provided for any such representative. It has provided for the representation not of the licentiates, but of the licensing body. The licensing body is the Society of Apothecaries, and the Society of Apothecaries can only take corporate action through its authorities appointed by Royal Charter. I am, and have always claimed to be, the representative of the "Society of Apothecaries."

If I may refer for an instant to the British Medical Journal of June 3rd (which I did not see until my attention was called to it last week by a correspondent), and to your reference to it on December 2nd, it would be to repeat my opinion that it is not legitimate journalism to comment editorially upon any part of a reported speech which is not included in the report, and also altogether to disclaim the "bitterness" which you have been pleased to attribute to me. I believe I did say that the term "medical society" was somewhat indefinite, and might be used to include not only large societies, primarily ethical or political in their character, but also small ones, primarily social, such as chess clubs and book clubs; and I believe I also expressed the scepticism naturally produced by the receipt of resolutions couched in identical terms, and professedly coming from different sources. I make no secret of my entire disapproval of any proposal to increase the direct representation in the Council, but this disapproval rests upon such humble efforts at reasoning as fall within my capacity; and, if it is to be removed, the removal will have to be effected by reasoning and not by "resolutions," no matter what may be the source from which they proceed.

Finally, Sir, I should like to express my deep and sincere gratitude for the absolutely overpowering compliment paid to me in the British Medical Journal of December 2nd. It is so overpowering that, although none the less highly gratified, I cannot venture in any way to accept or appropriate it; and, at the same time, I am almost shocked by the exaggerated modesty by which it has been dictated. You say that my "eloquence has been subjected to a process of Bowdlerisation." The word was invented by the late General Perronet Thompson, in order to express what was done, to the works of Shakspeare and Gibbon, by a well-meaning but not very wise physician, who thereby (*absit omen*) rendered himself a laughing stock for all future generations of men. I am more than content with the company in which you have placed me, and sincerely trust that you may not share the fate of the model with whom you have elected to compare yourself.—I am, etc.,

Harley Street, W., Dec. 4th. R. Brudenell Carter.

*** We have requested the stenographer to consult his original shorthand notes, and it appears that in making his abridgment for publication in the Journal he fell into two unimportant errors, in referring to a *meeting* of registered practitioners, and in giving as the source of Mr. Carter's quotations the minutes of the Council instead of the *Lancet*. The stenographer's notes in no way support Mr. Carter's new charge "of publishing matter which [he] not only never uttered, but which had never in any form so much as presented itself to [his] imagination." With reference to the concluding paragraph of Mr. Carter's letter, we can only say that from his own account he would seem to be overpowered with as much facility as the friends of Mr. Peter Magnus were amused. With the help of those recondite authorities, the *National Dictionary of Biography* and Dr. John Murray, he appears to have discovered the meaning of the word "Bowdlerisation," and we are duly grateful to him for communicating the result of his philological exercitations. May we hint, however, that in the conveyance of his information Mr. Carter falls somewhat short even of the standard of accuracy required, say of a *Times* leader writer in the dull season? "The late General Perronet Thompson" is scarcely entitled to the credit of having invented the word "Bowdlerisation"; what is claimed for him is that he was apparently the first to use in print the verb "Bowdler-ize." As for the greatness which Mr. Carter professes to think we have thrust upon him, we venture to remind him of a story about another "immortal" with whom he will doubtless also pride himself on being compared. Alexandre Dumas, on being asked in a Rouen law court what he was, said *Si je n'étais pas dans la patrie du grand Corneille, je m'appellerais auteur dramatique.* Whereupon the judge gently replied, *Mais, monsieur, il y a des degrés!* The moral of which remark, as Jack Bunsby would say, lies in the application of it. A writer may be scurrilous without being a genius, and if Shakespeare may be "Bowdlerised," so may— —Mr. Carter.

THE SOCIETY OF APOTHECARIES OF LONDON.

Sir,—Your correspondent, Dr. Stocker, has rightly called attention to the error in Mr. Horsley's speech, but he has failed to explain some points. I should like to know by whom the Court of Assistants is elected? Certainly not by the Associates of the Society, as I have been an Associate of the Society for twelve years, but have never been favoured by any communication from the corporation. The Society publishes no annual accounts of its income or expenditure; it maintains a sphinx-like silence with regard to the delinquencies or good deeds performed by its Associates. Its only signs of life are the periodic additions to its progeny and a fierce determination to continue its torpid existence. Dr. Stocker has mentioned one deceased doctor of distinction and another venerable ex-member of the Assistants' Court. It would be much more to the point to enumerate the members, that the profession may know to whom they are indebted for the present state of things. As regards Mr. Carter, who considers himself as the representative of the Apothecaries' Society, I can only express the opinion that his obliquity of vision regarding the wants of his profession would be speedily remedied if the true electorate had voting power. Mr. Carter's continuous opposition to every measure intended to benefit his profession at least deserves this acknowledgment from one whom he has misrepresented for twelve years.—I am, etc.,

Bradford, Dec. 3rd. William Horrocks, L.S.A., F.R.C.S.

THE DIRECT REPRESENTATIVE MEETING IN NEWCASTLE.

Sir,—I think we all owe our best thanks to Dr. A. Cox and his friends for bringing about the above meeting. Personally I am pleased to see that the two subjects which I initiated—namely, increased direct representation and opposition to the so-called registration of midwives—claimed the major attention.

My chief aim in writing now is to show that there is an even greater question for our immediate consideration than increased representation. I refer to the very limited income of the General Medical Council. How can this be increased?

In 1896 I proposed we should follow the example of practitioners in Canada, where each pays an annual tax of 8s. to one or other of their medical councils. For all business purposes our General Medical Council is absolutely destitute of a working income. The three Branch Councils have also no working income. Had they, these three Councils could do good work in England, Ireland, and Scotland. In 1896 the total receipts of the General Medical Council amounted to £8 746. Of this sum £7,250 was for registration fees. Now what practical man can look for a proper administration of the Medical and Dental Acts with this paltry sum?

I would therefore propose that each practitioner be called upon to pay an annual registration fee of £1. What income would this give? In 1897 there were about 34,280 registered practitioners; so that such a system would give the General Medical Council an annual income of £34,280, instead of £7,250. If it were apportioned to each of the Branch Councils it would—taking it that there are 22,135 practitioners resident in England and Wales, 3,369 in Scotland, and 2,598 in Ireland—give these numbers in pounds sterling to each Branch Council—that is, £22,135, £2,598, and £3,369. When I state that in 1896 the incomes of the English, Scottish, and Irish Branch Council were respectively, from fees, £4,078, £2,470, and £673, it will show how we can readily supply ample funds. My proposed plan of practitioners resident in a division paying to their Branch Council would meet the present discontent connected with the system by which the three Branch Councils contribute to the General Medical Council.

Now, Sir, I have frequently heard practitioners complain of having to pay £5 for registration for a lifetime. But we pay nothing when compared with those of other callings. Thus the annual fee paid by a solicitor is £6, house agent £2, auctioneer £10, and banker £50.

I would just add that I believe a Draft Medical Bill should be immediately prepared providing for only two things: first, an annual registration fee; and, secondly, increased direct representation. This draft should be laid before the universities, corporations, our Association Branches, and other medical societies, and be thoroughly discussed. This would require £1,000.

In making the above estimate I do not include practitioners resident outside the United Kingdom. These would pay to the General Medical Council, not to one of the three Branches.—I am, etc.,

Liverpool, Dec. 2nd. ROBERT R. RENTOUL.

THE INSANITARY CONDITION OF THE LONDON STREETS.

SIR,—During the past fortnight of dry weather the unsavoury condition of the London streets has been worse even than during the height of summer. This is to be accounted for by the fact that although the temperature has been much lower the streets have not been watered, and the deposited organic refuse from horse droppings has only been removed by sweeping. Anyone can see how impossible it is to remove more than the upper layers of dirt by hand or machine sweeping, even from the best of the wood-paved streets. The filth that is not removed soaks into the absorbent wood, and forms a nidus for the growth of putrefactive microbes which infect all recently-deposited droppings, and cause their rapid fermentation. No doubt the absence of air movement and the humidity of the air during the past fortnight have contributed to enhance the result primarily due to the absence of any proper system of periodical flushing and watering. The effluvia from the busier wood-paved streets of the West End have been very much complained of, and the condition of these streets is not at all creditable to the wealthiest and most enlightened metropolis in the world, contrasting in this particular very unfavourably with the well-sluiced streets of Paris and other Continental cities.

The omnibus routes are generally the most offensive, not only because they are the busiest lines of traffic, but because the droppings from the maize-fed omnibus horses are particularly rich in sulphur compounds, which give rise to especially penetrating and disgusting emanations. It is remarkable that in the streets recently laid with tarred wood blocks such effluvia are not at all noticeable, the reason no doubt being that the tar exerts its antiseptic effect, inhibiting the growth of the putrefactive microbes on its surface, and tending to prevent fermentative changes. In the course of a year or so, however, most of the tar has been washed off or carried off by attrition, and as soon as the pores of the wood are exposed the offensiveness becomes quickly apparent.

The nuisance from this condition of the streets is obvious and unmistakable. The question of injury to health is not so easy to answer. The dust from horse droppings is enormously rich in the organisms known as bacillus coli communis and bacillus enteritidis sporogenes, but although both these organisms are undoubtedly pathogenic to some animals, their effect upon man when inspired into the mouth, throat, and lungs, or swallowed with the saliva has not yet been determined. On general grounds, however, we are entitled to say that all offensive organic effluvia are prejudicial to health. There can be no ozone in the air where such emanations exist; the air has lost its vitalising principle, and there is a possible danger in the inhalation of dust containing bacilli whose normal habitat is the bowels of animals.

It is quite certain that wood-paved streets should not be left unflushed and unwatered for weeks at a time simply because the summer is over and the temperature of the air is comparatively low. No amount of brushing and sweeping will properly cleanse a wood surface. In the case of worn wood pavements, even thorough flushing does not properly cleanse the surface; but badly worn wood should not be tolerated, it is absolutely unfit for its purpose. The proper method of cleansing is undoubtedly to have the streets swilled from the hose every morning, or at any rate three or four times a week, as is done in Paris and by some few of our more progressive authorities in London. Where the hose cannot be adopted the wood-paved streets should be watered early in the morning, before the traffic has commenced, from watering carts containing a weak antiseptic and deodorant solution, which will inhibit the growth of the putrefactive microbes on the wood surface. Probably the best for this purpose would be a weak chlorine solution, say 1 part of available chlorine in from 10,000 to 20,000 parts of water. The advantage of chlorine is that whilst without any perceptible odour in this dilution, it is antiseptic and deodorant, and, being volatile, leaves no residue on the road. It does not coagulate albumen, and consequently does not cake together the horsedung on the surface. As soon as the street has been well watered it should be swept clear, and the slop quickly removed. If our vestry surveyors would only adopt such a system on our busy wood thoroughfares, we should hear less complaint of the abominable offensiveness of our streets.—I am, etc.,

LOUIS C. PARKES, M.D., D.P.H.Lond.,
Cadogan Square, W., Nov. 27th. M.O.H., Chelsea.

MOSQUITOS AND MALARIA.

SIR,—I have read with much interest the account of the localisation of malarious foci by a member of the Sierra Leone expedition. One cannot help thinking, however, that the extermination of the *Anopheles* genus of mosquito from many malarious places in the plains of India is not so simple a matter as many would have us believe.

In Quilon and other parts of Travancore where I have searched for *Anopheles* larvæ, I find their distribution to be far more widespread than, from the article referred to, would appear to be the case in Freetown.

On first coming to Quilon, where malaria is prevalent, I searched for *Anopheles* larvæ in small stagnant pools and rain-water puddles of the kind that were suggested by Major Ross as being their most frequent breeding places, but failed to find them. On looking, however, in the large collections of water which, at that time, covered the rice fields round my bungalow, I was surprised to find *Anopheles* larvæ in great numbers. Searching all such large collections of water on rice fields and the large pools which are numerous in this country, I found that in this part of Travancore the distribution of these larvæ is commonly as follows:

1. They are commonly found in the water of rice fields.
2. They are very frequently found in the pools of water which lie between the rows of earth on fields where native vegetables are planted in rows.
3. They are not uncommon in the large permanent surface pools from which many natives get their water for drinking and other purposes.

4. They are frequently to be found in the small pools which form on fields which have been newly dug up.

This distribution applies to the whole of the neighbourhood of Quilon, and from the time that I first began to search for *Anopheles* larvæ in January last up to the present time, I have never failed to find them in the water on rice fields or in other similar large collections of water. The water on these rice fields in many cases contains minnows, but unless they are present in great numbers it is generally possible to find many *Anopheles* and other larvæ in spite of them. Now it is obvious that one cannot pour kerosene oil on rice fields, and the draining of many miles of cultivated fields in India is an impossible task. It is therefore, I think, not out of place to point out that the extermination of malaria mosquitos may prove difficult or impossible in many parts of India.—I am, etc.,

S. P. James, M.B.,
Captain I.M.S.

Quilon, Travancore, India, Oct. 23rd.

Sir,—In the British Medical Journal of September 30th Dr. P. O'Connell quotes the tea-garden coolies returning to the hills for the night as an argument against the mosquito being the decimator of malaria. As a resident for the last fifteen years at the foot of the Himalayas on the borders of the Terai, and as having had the pleasure of being instructed by Ross when he was making his investigations last year, I must beg to differ *in toto* from your correspondent's deductions. The coolies do undoubtedly return to the hills at night, and so to a great extent escape malaria, and they also at the same time escape being bitten by the malaria-bearing mosquito, the *Anopheles*. An almost constant observation during the last eighteen months has shown me that the *Anopheles*, although pretty prevalent in the Terai, is seldom found to any height in the hills, and, even when taken to an elevation or bred there, it is difficult to get it to feed.

The recent observations at Freetown on its breeding places tend to throw great light on this immunity of the lower hills, as pools suitable for it are seldom found, and even when present, if not inhabited by minnows, are plentifully supplied with the great carnivorous water beetles. The *Anopheles* larvæ seem to be distinctly algæ feeders, in contradistinction to the larvæ of *Culex*, which, according to the observations of Hankin in India, feed largely on bacteria, and tend to the purification of wells, etc., from cholera and other germs, and this is the only good point I know of in the mosquito.

With regard to your other correspondents who speak of the enormous number of people bitten by mosquitos who do not get fever, they leave out of consideration the fact that at present only one species, and that a small one, out of the vast number of mosquitos, has been observed to decimate malaria, and that even to do this it must first itself become infected, so that the mere fact of being bitten by any number of mosquitos does nothing to disprove Ross's theory. I know many places in South Africa that abound in mosquitos, and yet malaria is unknown. Judging from numerous specimens that I have, and, if my memory serves me rightly, *Anopheles* is not found in these places.—I am, etc.,

C. R. Newton, F.R.M.S.

Kurseong, Nov. 12th.

POST-MORTEM EXAMINATIONS IN MEDICO-LEGAL CASES IN SCOTLAND.

Sir,—I have read with considerable interest the article and subsequent letter which appeared in the British Medical Journal in connection with this matter. Dealing with the question entirely in its legal aspect, I wish to confirm the statement made in the article—that it is impossible effectually to cross-examine the medical witnesses upon their report unless that report contains some palpable blunder or omission. What is wanted to put the defence in precisely the same position as the Crown is another report or statement of facts by another set of witnesses. This might or might not coincide with the report furnished by the "Crown experts," but it is perfectly obvious that counsel for the defence would then be in a much better position to criticise that report and cross-examine its authors. He would have other information on which to proceed than that contained in the Crown report, and would be able to bring forward medical evidence to rebut that of the prosecution. It is only just and fair that a prisoner, especially when charged with the very grave crime of murder, should be allowed every reasonable facility for preparing his defence, and to exclude medical representatives on his behalf from the *post-mortem* examination is depriving him of an advantage—nay, of a right—to which he is entitled, and which is granted to prisoners under similar circumstances in England and many other countries. It must also be kept in view that the evidence of such representatives would always be subject to cross-examination by the Crown, so that in any case the prosecution and the defence would only start on equal terms, and would be put exactly on the same footing.

In my own experience the medical witnesses for the Crown have not always been unbiassed, as the following case will show: In June, 1895, what appeared to be a very brutal murder was committed in Glasgow. The body of a woman was found with several severe injuries on her head, presumably caused by some sharp instrument. A shoemaker with whom she lived was arrested on suspicion, and I was engaged to look after the interests of the prisoner and prepare his defence. My first step was to apply to the Crown authorities for permission to have the accused represented at the *post-mortem* examination. I knew how very important the result of such examination might turn out to be, as it was anticipated that most of the other evidence would be entirely circumstantial. My application was refused.

On the person of the accused when arrested there had been found a shoemaker's punch, and this fact was communicated beforehand to the examiners who were appointed by the Crown to conduct the *post-mortem* examination. One of them in his oral evidence stated that "he had placed the punch in the wounds, and it fitted exactly," indicating thereby that this instrument was presumably the cause of death. This statement was not made in the written report, and although it had to be modified afterwards on cross-examination, the fact that it was made shows how easily a medical examiner may be influenced by information previously given him by the Crown, and how inaccurate is the statement of Professor Glaister:

> That the examiners are independent medical men, not appointed by or in any way acting under the control of the Procurator-Fiscal, who conducts all criminal investigations, whose sole object is to arrive at the truth irrespective of the Crown or the accused.

I may mention that the refusal by the Crown to accede to the prisoner's application in this case caused a good deal of adverse criticism on the part of the press, and amongst medical men and lawyers generally a great amount of dissatisfaction was expressed at the present method of procedure.

The somewhat technical nature of this subject will, I think, prevent it engaging much public attention. Were it otherwise, I have no doubt that the present unjust state of matters would not long exist, and that persons arrested on suspicion of having committed murder would at least have the same facilities granted to them for preparing their defence as the Crown possesses for conducting the prosecution. Under present conditions the Lord Advocate and the Procurator-Fiscal—who goes through the form of obtaining a warrant from the sheriff—are the sole judges as to who may or may not be present at *post-mortem* examinations. As they are also the officials who prosecute in criminal trials in Scotland, it is perfectly obvious that they will regard with ill favour any attempt to bring about a change in this respect, whereby it might be made more difficult for them to obtain convictions in cases of murder and manslaughter. It is beside the point to argue that the examiners appointed by the Crown are perfectly unbiassed; one might as well suggest that there is no reason why two medical men selected by the accused should not make an equally impartial examination and report. Where it is possible let both sides be represented at all such examinations, and until this system is adopted there will always be a blot on the Crown's otherwise fair and impartial method of investigating murder cases in Scotland.—I am, etc.,

Henry Sommerville,
Solicitor.

Glasgow, Nov. 27th.

The annual meeting of the Metropolitan Hospital Sunday Fund will be held at the Mansion House on Wednesday next at 3 P.M., when the report of the Council for 1899 will be presented and the Council for 1900 elected.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MEDICAL ARRANGEMENTS FOR SOUTH AFRICA.

THE SIXTH DIVISION FOR SOUTH AFRICA.

LIEUTENANT-COLONEL W. L. GUBBINS, R.A.M.C., will be the Principal Medical Officer of the Sixth Division, which will be under the command of Major-General T. Kelly-Kenny, C.B. Lieutenant-Colonel Gubbins, who is a graduate in Medicine and Surgery of Trinity College, Dublin, served in the Afghan war of 1878-80, and took part with the Bazar Valley Expedition, under Lieutenant-General Maude, in medical charge of the 5th Fusiliers, and subsequently of the Headquarters Staff. In 1879-80 he served with the Khyber Line Force, under Lieutenant-General Bright, in medical charge of the Headquarters Staff. He was also Divisional Sanitary Officer to the Principal Medical Officer, and was present with the expeditions against the Mahmunds and into the Hissarik Valley (medal). He served with the expedition to Burmah in 1886 (medal with clasp). He has recently held the appointment of Assistant Director A.M.S. Major B. M. Skinner, R.A.M.C., will be the Medical Staff Officer.

THE PORTLAND HOSPITAL.

A movement started by the Duke and Duchess of Portland, the Duchess of Bedford, Lord Derby, Earl Grey, Mr. Werner, Lord Henry Bentinck, M.P., and Captain Bagot, M.P., has for its object the furnishing of an ambulance hospital for the sick and wounded at the seat of war. The Committee, of which Sir Thomas Smith is the surgical adviser, has progressed quickly with its plans, and already the "Portland Hospital," which will be under the Red Cross, has so nearly completed its organisation that all the staff and equipment will be despatched to the Cape on Tuesday next, December 12th, by the *Majestic*. The War Office, which retains the whole administration in its own hands, has appointed 4 female nurses of the Army Nursing Reserve, and 28 hospital orderlies for service with the Hospital. Lord H. Bentinck, M.P. (the Treasurer), and Captain Bagot, M.P. (the Honorary Secretary) will, at their own expense, accompany the expedition.

Its medical staff will consist of a Senior Surgeon, Mr. A. Bowlby, F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital; two Surgeons, Mr. Cuthbert Wallace, M.B., B.S., F.R.C.S., Assistant Surgeon to St. Thomas's Hospital, and Mr. E. J. Calverley, M.B., B.S., M.R.C.S.; and a Physician, Dr. Howard Tooth, M.D., F.R.C.P., Assistant Physician to St. Bartholomew's Hospital.

Surgeon-Major C. R. Kilkelly, of the Grenadier Guards, has been appointed to the military command of the hospital and of the non-commissioned officers and men of the R.A.M.C. He will also superintend the commissariat and transport.

Major-General the Hon. H. F. Eaton has been appointed by the War Office to supervise and control the arrangements for the equipment and despatch of the hospital, which will be fitted for the treatment of 4 officers and 100 non-commissioned officers and privates. With the exception that the medical and surgical staff are civilians, the hospital will be equipped in all respects as a military hospital, and will be at the disposal of the Commanding Officer in South Africa, to be used either as part of a "base hospital" of 520 beds, or else as a separate "station hospital" on the line of communication. It will be provided with its own tents and ambulance waggons.

TRANSFERS AND APPOINTMENTS.

Sir William MacCormac left Durban for Pietermaritzburg early last week.

The *Avondale Castle*, *Norman*, *Dilwara*, and *Pinemore* carry four-wheeled vehicles connected with the R.A.M.C. The first-named vessel had the 21th Company R.A.M.C. from Dover. Lieutenants Henry and Storr, R.A.M.C. left in this transport. Major Winter, Captains Kelly and Tyacke, and Lieutenant Knox, R.A.M.C., left in the *Dilwara*. The *Norman* embarked Major Squire, R.A.M.C., a small detail of No. 6 Company R.A.M.C., and Dr. Pope, Civil Surgeon, attached to No. 4 General Hospital.

Details of the R.A.M.C. left Queenstown for South Africa in the *Simla* on November 26th.

In the *Canada*, which left Liverpool on November 30th, was No. 6 Com[illegible] R.A.M.C., and in the *Dilwara* (December 3rd), No. 6 Company R.A.M.C. The *Majestic*, leaving Liverpool on December 9th, embarks a Depôt Company R.A.M.C., and in the *Atlantian*, also Depôt Companies Field Hospital. The *Avondale Castle* and *Tantallon Castle* take out, on December 2nd and 9th, companies for Field Hospitals.

The generous gift of the French Red Cross Society to the Central British Red Cross Committee of two complete field hospital equipments was placed on board the hospital ship *Princess of Wales*, which was detained by an accident to the boiler.

The *Cheshire*, having on board No. 7 Field Hospital Company, arrived at Capetown on November 29th. The *Catalonia*, with No. 11 Company R.A.M.C., arrived at Capetown on November 30th, and at Durban on De[illegible] 5th. The *Servia*, with hospitals, arrived at Durban on November 28th.

PREPARATIONS AT THE HOME HOSPITALS.

A conference took place recently at Netley Hospital regarding the con[illegible] of a loop line between Netley Hospital and Netley Station for the conveyance of sick and wounded soldiers right into the hospital. When the Queen visited the hospital some time ago she observed that it must be very painful for wounded soldiers to be conveyed in ambulances over rough roads, hence the decision of the War Office to construct a railway. Work will be commenced at once, and completed before the wounded arrived from South Africa.

Lieutenant-Colonel Lyle has temporarily taken over charge of the Connaught Hospital, Aldershot, *vice* Halloran. Lieutenant-Colonel Hayes, from half-pay, is to take charge of the Connaught Hospital at an early date.

The Committee of the Leicestershire Convalescent Home has decided to place the home at the disposal of the War Office for four months, for wounded soldiers returning from the war. The home will accommodate 30 patients, and is situated in the Charnwood forest district, near Loughborough. The Committee propose to defray the expenses of maintenance.

The Committee of the Morley House Convalescent Home for Working Men, at St. Margaret's Bay, Dover, have placed at the service of the War Office twelve beds free of cost for the reception of soldiers or sailors who are wounded in the war.

The P. and O. steamer *Sumatra* arrived at the Albert Docks from Capetown on December 6th, having on board two officers wounded at Elands Laagte, and 126 invalid soldiers and sailors. Most of the soldiers, who number 93 and belong to different regiments, have suffered from dysentery or malaria. They have been sent home to make room at the Wynberg Hospital. The Herbert Hospital at Woolwich has received 85 cases, 34 surgical and 51 medical. All are doing well. The naval invalids are from the China station. The vessel also brought upwards of 100 women and children.

6TH INFANTRY DIVISION.

Medical Officers.

12th Brigade:	
2nd Battalion Bedfordshire Regiment	Major J. D. Day, R.A.M.C.
1st Battalion Royal Irish Regiment	Major G. H. Thomas, R.A.M.C.
2nd Battalion Worcestershire Regiment	Lieutenant G. Stammers, R.A.M.C.
2nd Battalion Wiltshire Regiment	Major T. B. A. Tuckey, R.A.M.C.
13th Brigade:	
2nd Battalion East Kent Regiment	Major R. J. Geddes, R.A.M.C.
2nd Battalion Gloucestershire Regiment	Captain J. D. Ferguson, R.A.M.C.
1st Battalion West Riding Regiment	Captain G. S. McLoughlin, R.A.M.C.
1st Battalion Oxfordshire Light Infantry	Major W. W. Pike, R.A.M.C.
Divisional Troops:	
Brigade Division Staff, Royal Field Artillery (76th, 81st, and 82nd Batteries)	Lieutenant J. G. Berne.
Regimental Staff, Divisional Engineers 38th Field Company, R.E.	Captain C. O'C. Hodges.

Bearer Companies.

No. 10 Bearer Company (12th Brigade)	Major J. Fallon. Captain B. W. Longhurst. Lieutenant F. Ashe.
No. 16 Bearer Company (13th Brigade)	Major R. J. Fayle. Captain A. J. Chambers. Lieutenant M. M. Rattray.

Field Hospitals.

8th Divisional Field Hospital (12th Brigade)	Major T. Daly. Major D. R. Hamilton. Lieutenant J. Matthews. Lieutenant W. M. McLoughlin. Quartermaster Hon. Lieutenant.
IInd Corps Troops Field Hospital (13th Brigade)	Major F. R. Barker. Major R. E. Molesworth. Captain E. C. Anderson. Lieutenant P. S. O'Reilly. Quartermaster Hon. Lieutenant.
3rd Divisional Field Hospital (Divisional Troops, 6th Division)	Major R. W. Ford. Major T. Du B. Whaite. Lieutenant E. W. Siberry. Lieutenant B. F. Wingate. Quartermaster Hon. Lieutenant.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—JOHN JENKINS, Staff Surgeon, to the *Indefatigable*, on recommissioning, undated; EDWARD B. TOWNSEND, Staff Surgeon, to the *Canopus*, on commissioning, December 8th; EDWARD T. MEAGHER, Surgeon, to the *Scout*, when commissioned, December 5th; GEORGE M'GREGOR, Surgeon, to the *Caledonia*, December 5th; HENRY HUNT, Surgeon, to the *Dryad*, when commissioned, December 7th; ARTHUR H. H. VIZARD, Surgeon, to the *Northampton*, December 7th; ALFRED H. L. COX, Surgeon to Jamaica Hospital, November 28th; ROBERT D. JAMESON, Surgeon to the *Doris*, for disposal, November 29th; RICHARD F. BATE, Surgeon to Chatham Hospital, November 29th; WILLIAM A. COWAN, M.B., Surgeon to the *Monarch*, for the *Thrush*, on recommissioning, December 1st; STRATFORD D. T. HALLIDAY, Surgeon to the *Hearty*, December 1st; EDWARD HAINES, Surgeon to the *Latona*, when commissioned, December 12th; GEORGE T. BISHOP, Surgeon to the *Polyphemus*, on recommissioning, November 30th; WALTER H. O. GARDE, Surgeon to the *Imogene*, on recommissioning, November 30th; CHRISTOPHER L. W. BUNTON, M.B., Surgeon to the *Raven*, November 30th; JOHN J. DINNIS, M.D., Staff Surgeon to the *Highflyer*, December 7th; HAMILTON MEIKLE, Staff-Surgeon to the *St. Vincent*, December 7th; EDWARD H. MCSHERRY, M.D., Staff Surgeon to the *Severn*, December 7th; ROBERT H. MORNEMENT and EDWIN FOLLIOTT, Staff-Surgeons to the *Highflyer*, undated; ARTHUR S. G. BELL, Staff Surgeon to the *Duke of Wellington*, December 23rd; FRANCIS F. LOBB, Staff-Surgeon to the *Monarch*, December 1st, and afterwards to the *Thrush*, on recommissioning.

ARMY MEDICAL SERVICE.

DEPUTY-INSPECTOR-GENERAL JOSEPH SAMUEL PRENDERGAST, M.D., died at Bath on November 20th, aged 89 years. He entered the service at Assistant Surgeon, February 10th, 1836; became Surgeon, May 22nd,

1846; Surgeon-Major, March 28th, 1854; Deputy-Inspector-General, January 26th, 1862; and Honorary Inspector-General, on retirement, May 1st, 1863. He accompanied the Eastern expedition in 1854 as Surgeon of the 77th Regiment; while in Bulgaria he was appointed to the personal staff of Lord Raglan, and attended him in the field at the battle of Alma, and in all the other actions till his lordship's death, when he accompanied his remains to England (medal with four clasps, 5th class of the Order of the Medjidie, and Turkish medal).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel A. H. Anthonisz, M.B., is promoted to be Colonel, *vice* J. Hughes, deceased, November 15th. Colonel Anthonisz entered the service as Assistant-Surgeon, April 1st, 1871; became Surgeon, March 1st, 1879; Surgeon-Major, April 1st, 1883; was granted the rank of Lieutenant-Colonel, April 1st, 1891; and made Brigade-Surgeon-Lieutenant-Colonel, May 15th, 1895. He was in the Egyptian war of 1882, receiving a medal and the Khedive's bronze star, and in the Soudan campaign in 1885, for which he has a clasp.

Lieutenant-Colonel R. Exham is promoted to be Colonel, *vice* G. J. H. Evatt, promoted, November 20th. Colonel Exham's previous commissions are thus dated: Assistant-Surgeon, April 1st, 1871; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1883; rank of Lieutenant-Colonel, April 1st, 1891; and Brigade-Surgeon-Lieutenant-Colonel, July 8th, 1895. He has no war record in the Army Lists, but is at present Principal Medical Officer to the Natal Field Force, to which he was appointed October 9th last.

The undermentioned Surgeons on probation are appointed Lieutenants, November 17th: Lawrence W. Harrison, M.B., Francis S. Irvine, M.B., Hugh M. Morton, M.B., Marcus H. Babington, Francis G. Richards, Ernest B. Knox, Horace S. Roch, Frederic Harvey, Charles E. Trimble, John Matthews, Wilfred M. McLoughlin, Edward W. Siberry, Basil F. Wingate, Patrick S. O'Reilly.

Colonel J. H. Moore, who has but recently arrived in India, has been placed on the administrative medical staff of the army from October 10th

Lieutenant-Colonel O. E. P. Lloyd, V.C., in medical charge of the station hospital at Rangoon, is appointed to officiate on the administrative medical staff of the Indian Army, with the temporary rank of Colonel, from October 2nd.

The relief of officers of the Royal Army Medical Corps serving in India, detailed to proceed home in transports of the current trooping service will, it is stated, not take place at present.

Major R. N. Buist, M.B., from half pay, to be Major, with precedence next below Major R. Holyoake, *vice* E. W. Gray, deceased, November 11th. Major Buist, who entered the service as Surgeon-Captain, July 28th, 1886, and became Major twelve years later, was placed on half pay on account of ill-health on September 26th last.

Sergeant-Majors Bertram E. Essex, John McClay, and George F. Short are appointed Quartermasters, with the honorary rank of Lieutenant, on augmentation, December 6th.

Colonel John Henry Hughes, M.D., Principal Medical Officer at Quetta, died near Fort Sandeman on November 12th, aged 58 years, from inflammation of the liver. He was appointed Assistant-Surgeon September 30th, 1864; Surgeon, March 1st, 1873; Surgeon-Major, September 30th, 1876; Brigade-Surgeon, June 6th, 1890; and Surgeon-Colonel, July 9th, 1895. He went to India in December, 1897. He was in the Ashanti war of 1873-4 with the 2nd Field Hospital and had received the medal with clasp.

THE MILITIA.

Surgeon and Honorary Surgeon-Major G. P. Bate, M.D., 5th Battalion the Rifle Brigade, resigns his commission, December 6th; he retains his rank and uniform.

ARMY MEDICAL RESERVE.

Surgeon-Major E. J. Lloyd, M.B., resigns his commission, November 29th.

INDIAN MEDICAL SERVICE.

The undermentioned Majors, having completed twenty years' full-pay service, are promoted to be Lieutenant-Colonels: *Bengal:* G. W. P. Dennys, J. W. U. Macnamara, M.D., J. Sykes, J. F. Tuohy, M.D. *Madras:* J. C. Marsden, F. C. Reeves, J. L. Poynder. *Bombay:* C. F. Willis, M.D.

Lieutenant-Colonel W. H. Cadge, Bengal Establishment, has retired from the service, November 15th. He joined the department as Surgeon, March 31st, 1876, and became Surgeon-Lieutenant-Colonel twenty years thereafter.

Lieutenant-Colonel Sir George S. Robertson, K.C.S.I., Bengal Establishment, has also retired from the service, October 22nd. His first commission dates from March 30th, 1878; that of Surgeon-Lieutenant-Colonel from March 30th, 1898. Sir George served in the Afghan war in 1879-80, including the operations around Cabul in December, 1879 (medal with clasp); and during the expedition against the Hunza-Nagars in 1891-92 as Chief Political officer (mentioned in despatches, medal with clasp). He was British Agent at Gilgit during the siege of Chitral Fort from March 3rd to April 18th, 1895—wounded (received the thanks of the Government of India, K.C.S.I., and medal with clasp). Referring to his distinguished conduct on this occasion, the Duke of Cambridge spoke of him as "that brave civilian."

THE VOLUNTEERS.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated November 29th:—Thomas Kay, M.B., 1st Lanarkshire Artillery; John A. Wolverson, 3rd Volunteer Battalion the South Staffordshire Regiment; Edmond E. Dyer, M.B., and Samuel Fergusson, M.B., 7th (Clackmannan and Kinross) Volunteer Battalion Princess Louise's Argyll and Sutherland Highlanders.

Surgeon-Lieutenant H. L. de Legh, 1st Volunteer Battalion the Princess of Wales's Own Yorkshire Regiment, is promoted to be Surgeon-Captain, November 29th.

Surgeon-Lieutenant J. W. Cook, M.B., 1st Volunteer Battalion the Lancashire Fusiliers, is also promoted to be Surgeon-Captain, November 29th.

Lieutenant Frederick Edge, M.D., 3rd Volunteer Battalion the South Staffordshire Regiment, resigns his commission, and is appointed Surgeon-Lieutenant, November 29th.

Surgeon-Lieutenant-Colonel H. R. Myers, 19th Middlesex Rifles, resigns his commission, retaining his rank and uniform, November 29th.

Surgeon-Captain J. T. Jacques, Leicestershire Yeomanry ("Prince Albert's Own"), is promoted to be Surgeon-Major, November 22nd.

Mr. Frederick Treves is appointed extra Surgeon-Lieutenant in the Suffolk Yeomanry (the Duke of York's Own Loyal Suffolk Hussars), November 13th.

Surgeon-Major H. P. Symonds, Oxfordshire Yeomanry (Queen's Own Oxfordshire Hussars), is promoted to be Surgeon-Lieutenant-Colonel, November 22nd.

Mr. John J. Wallace, M.B., is appointed Surgeon-Lieutenant in the 1st Herefordshire Volunteer Rifles, November 22nd.

The following is substituted for the announcement in the *London Gazette* of June 2nd last:—Surgeon and Honorary Surgeon-Major Alfred Cooper, retired, late 14th Middlesex (Inns of Court) Volunteer Rifles, to be Surgeon-Major, May 17th, 1899. [The announcement referred to stated that Alfred Cooper, Esq., late Surgeon and Honorary Surgeon-Major, 14th Middlesex Volunteer Rifles, was appointed Surgeon-Lieutenant).

Surgeon-Major E. B. Reckitt, M.D., 1st Lincolnshire Artillery, is promoted to be Surgeon-Lieutenant-Colonel, December 6th.

Surgeon-Captain C. Godson, M.D., 18th Middlesex Rifles, is promoted to be Surgeon-Major, and Surgeon Lieutenant C. J. Beattie, M.B., of the same corps, to be Surgeon-Captain, both dated December 6th.

The undermentioned officers have also resigned their commissions from the dates specified:—Surgeon-Lieutenant A. F. Trail, M.B., 3rd (the Borders) Volunteer Battalion the Gordon Highlanders, November 22nd; Surgeon-Captain W. F. Lovell, 2nd Cinque Ports Artillery (Eastern Division Royal Garrison Artillery), November 29th; Surgeon-Lieutenant C. F. Goode, 1st Sussex Artillery (Eastern Division Royal Garrison Artillery), December 6th; Surgeon-Lieutenant F. Mercer, 2nd Tower Hamlets Rifles, December 6th.

Mr. Samuel P. Johnson, M.B., is appointed Surgeon-Lieutenant in the 1st Worcestershire and Warwickshire Artillery, December 6th.

THE "OLIVER" COLLECTING STRETCHER.

Deputy-Surgeon-General (Colonel) W. S. Oliver, the inventor of the "Oliver Accoutrements," now adopted by the militia forces of Canada, has just invented a light stretcher, known as the Oliver Collecting Stretcher, for the purpose of removing wounded quickly from the firing line to a place of shelter or the collecting station. The stretcher can also be utilised in mountain warfare. It is understood that specimen stretchers have been sent to this country for trial from Halifax, Nova Scotia, where the inventor of the stretcher, who is a retired officer of the Army Medical Service, is employed.

The stretcher is composed of strong duck 5 feet long and 22 inches wide, and two bamboo one-inch poles 5 feet 8 inches long, with two hand spaces at the sides for carriage transversely, as well as usual by pole ends, by two bearers. The stretcher can carry a patient of any height effectually in various positions, while it is only 53 ozs. in weight, the cost to the inventor being only 6s. for each. The present field stretcher is 34 lbs. in weight, and costs about £1 9s., while it is also heavy and somewhat cumbersome. One of the great advantages of the new invention, if adopted in supersession of the present field stretcher, will be that the small storage space required and the cheap cost will enable more stretchers to be placed at the disposal of bearer companies for transport of wounded to dressing stations. Cleansing and disinfection of the stretcher can be easily effected. The lightness of the newly-invented stretcher enables one bearer to carry and distribute at least six of them along the fighting line.

Deputy-Surgeon-General W. S. Oliver lays down certain precautions as to its use in wounds of the leg and foot, when the patient could be carried in a sitting position, head and body resting against the bearer's body. When ascending or descending mountains patients can be carried transversely.

A NEW AMERICAN ARMY AMBULANCE.

We learn from the *Boston Medical and Surgical Journal* that a Board of medical officers of the United States Army, consisting of Colonel Dallas Bache and Captains G. D. Deshon and E. L. Munson, have approved of a new type of ambulance. The ambulance, it is stated, is very roomy, the waggon body being much broader than in previous models. Hanging straps, a fixed support in front and a hinged removable pole in the rear, provide means by which two ordinary service litters, in addition to those placed on the floor of the waggon body, may be utilised for recumbent patients, this feature being of great practical value for use in the field, since movement of a patient from the litter on which he was transported to the ambulance is unnecessary. To facilitate the handling of the litters in placing them in position, the back of the driver's seat is hinged. The ambulance is capable of comfortably transporting, in addition to the driver, four recumbent and one sitting patient, or two recumbent and six sitting patients, or eleven sitting patients. The top and movable seats are covered with "pantasote," a new preparation found far superior to canvas or leather for these purposes. Small hammocks, capable of being suspended from several points, are provided for the better carriage of the effects of patients. A large box under the driver's seat affords ample space for the carriage of food, dressings, and supplies. The wheels are furnished with unusually broad tyres, while the front set "cut under," to facilitate turning. The ambulance is very easy when in motion, and is provided with auxiliary springs, which come into action under a load greater than 500 pounds. The tail gate is fastened with an improved snap lock, which is opened by a single motion. The water is carried in two large galvanised iron tanks behind the rear axle, each weighing 50 pounds when filled. They may be filled *in situ*, or may be readily removed when desired. They are so placed as to be protected from injury, especially when the tail gate is lowered, as when loaded. The vehicle is strong and solidly built, yet when complete weighs only 1,600 pounds.

RELIEFS R.A.M.C. IN INDIA.

THE relief of R.A.M.C officers detailed to proceed home in transports of the current trooping season will not take place at present.

THE ARMY MEDICAL SERVICE.

A. M. R. writes: If, as you say, "the so-called reserve is manifestly inadequate," how much more so must civilian surgeons be, who have had no experience at home or in camp with volunteers? The arrangements about "leading surgeons" for the Cape does not read well for the Royal Army Medical Corps; it is rather a direct insult to them, or they are deemed incompetent, as Professor Ogston insinuates.

*** We do not agree with the latter part of this criticism. The Director-General has expressly said that the services of the consulting surgeons were asked for by him, and that in doing this he was, as we have pointed out, merely following Continental example, and in no way reflecting on the skill of his own officers, which we are certain is the last thing he would do. Nor do we think the great bulk of the R.A.M.C. will in any way resent the presence among them at the Cape of consulting surgeons. It is certain that expert civilians will in future be present with all modern armies; and if expert civil engineers or electricians, why not surgeons? Such men are employed for consultative and not executive or administrative work.

OBSERVER writes thanking us for keeping the real state of the Army Medical Service before the public. If it gets abroad that the regular service has fully met the necessities of two army corps, nothing will be done to increase its numbers or efficiency. The efficiency at the Cape is at the price of great inefficiency at home; where nursing sisters are not at hand, the sick are handed over to untrained men from regiments. The civil profession may supply doctors, but these are not medical officers, as the Americans found to their cost in the Spanish war. Medical officers can no more be extemporised than can those of any branch of the service.

*** The outcome of this war will undoubtedly be an overhaul of our army establishments; and it will not be our fault if the Army Medical is not one of them.

MEDICO-LEGAL.

"PRIVILEGE" AS TO MEDICAL CERTIFICATES.

ARTHUR sends the following: A well-known railway company has issued a new form of certificate to its medical officers for the examination of candidates as to fitness for employment in its service. In case of rejection a blank is left to be filled up by the medical man, in which he is directed to insert the cause of rejection. Our correspondent asks whether a certificate given in this form would be considered a privileged communication if the reason for rejection were divulged by any official into whose hands the certificate happened to come.

*** Where a certificate of this kind is given as part of the medical man's duty, and the information is, as it is in this case, properly required by his employers, the communication of the certificate to them would, we are advised, be held to be privileged, provided, of course, that the cause of rejection is set down in good faith and without malice. But if any official of the company were to improperly publish the certificate no privilege would attach to him.

MEDICAL EVIDENCE AT INQUESTS.

D. P. writes to inquire whether the coroner is justified in holding an inquest without medical evidence, and whether such an inquest is legal?

*** When the coroner has decided to hold an inquest, which it is his legal duty to do in all cases arising from injuries or violence, he issues his warrant to the summoning officer directing him to summon a jury and such witnesses as he (the coroner) may think necessary to ascertain the cause of death, and the circumstances attending the same. In the case alluded to by our correspondent, which was a very bad case of burns, attended by him twice before death, the coroner did not summon the medical witness, and in the absence of his evidence the jury doubtless heard the evidence of what had occurred, and having viewed the body arrived at probably a correct and unanimous verdict: That the deceased died from shock following severe burns on the body, caused by so-and-so, and that the death was from an accidental cause. Then the coroner would be justified in issuing an "order for burial," and afterwards he would register the death with all the particulars required by law, including a copy of the verdict. Had the coroner or the jury not been satisfied with the evidence given, they could have adjourned for medical or further evidence, but in the case in question the cause of death was probably so apparent that we presume the coroner did not think it necessary to summon any medical witness. This is the only explanation we can give, but there can be no doubt that in the absence of medical evidence incorrect verdicts, some of a ludicrous character, are occasionally arrived at, more especially when the coroner himself has had no medical education, and when the evidence of the local policeman as to the cause of death is considered sufficient. Although such inquests are legal, they are not as a rule satisfactory, as clearly shown in evidence taken before the recent Parliamentary Committee on the Certification of Deaths, when it was recorded that the following verdict had been returned to the Registrar-General: "That the deceased died from a stone in the kidney which he had probably swallowed when he fell drunk upon a gravel heap."

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.—Mr. F. C. Kempson, M.B., of Gonville and Caius College, and Dr. G. Elliot-Smith, Fellow of St. John's College, have been appointed Demonstrators of Anatomy. Dr. Hill (Master of Downing), Professor Allbutt, Professor Woodhead, and Dr. Sladen have been appointed to represent the university at the preliminary meeting for promoting a Congress on Tuberculosis to be held in London in the spring of 1901. Professor Woodhead has been appointed a member of the Museums Syndicate and of the State Medicine Syndicate; Dr. Donald MacAlister a member of the latter syndicate; and Mr. F. Deighton, M.B., a member of the Medical Board.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen passed the First Examination of the Board at the October quarterly meeting of Examiners in the subjects indicated:

Chemistry and Physics.—E. F. R. Alford, University College, London; E. G. Anthonisz, St. Mary's Hospital; J. Aylen, St. George's Hospital; T. G. Campbell, St. Mungo's College, Glasgow; R. C. Bright, University College, Bristol; J. M. Carroll, Royal College of Surgeons, Edinburgh; J. Clarke Hall, St. George's Hospital; C. A. F. Cresswell and A. H. Curtis, University College, London; V. A Crinks, Clifton Laboratory; L. Doudney, Guy's Hospital; K. Edgar, St. Olave's Grammar School; F. G. Goble, Guy's Hospital; C. A. Godson, St. George's Hospital; M. Grundy, University College, London; F. F. Hatton, University College, Bristol; W. F. H. Ives, Hartley Institute, Southampton; A. H. Jacob, London Hospital; R. Jones, L.S.A Lond., Royal College of Surgeons, Edinburgh; E. L. King, University College, London; C. H. Morris and J. F Murphy, London Hospital; R. E. Palmer and W. H. Powell, St. Mary's Hospital; C. H. Reinhold, Guy's Hospital; T. W. Sexton, Middlesex Hospital; C. Speers, St. Mary's Hospital; and R. M. Wingent, Guy's Hospital.

Practical Pharmacy.—C. F. M. Abbott-Brown, King's College, London; L. D. Bailey, St. George's Hospital; J. E. L. Bates, Guy's Hospital; H. E. Batten and S. L. Brimblecombe, St. Mary's Hospital; I. W. Bent, private study; H. S. Burnell-Jones, London Hospital and King's College, London; G. A. Carter, Royal College of Surgeons, Edinburgh; A. F. Cole, St. Mary's Hospital; F. P. Cole, Calcutta Medical College; R. H. Cooper, Charing Cross Hospital; G. C. Cross and M. B. Dawson, Middlesex Hospital; S. J. Evans, Guy's Hospital; H. S. Faber, St. George's Hospital; H. A. Fenton, St. Mary's Hospital; S. C. Foster, Westminster Hospital; J. V. Foster, Mason (University) College, Birmingham; H. Gardner, Firth College, Sheffield; A. W. H. Grant, Charing Cross Hospital; C. S. Hawes, St. Bartholomew's Hospital; H. W. J. Hawthorn, Mason University College, Birmingham; A. S. Hosford, University College, London, T. H. J. E. Hughes, St. Mary's Hospital; T. Hutchinson, Mason University College, Birmingham; M. R. Johnson, London Hospital; F. J. F. Jones, Guy's Hospital; V. R. F. Kroenig, King's College, London; J. C. G. Kunhardt, St. Mary's Hospital; F. W. Longhurst, St. George's Hospital; E. H. McMahon, Charing Cross Hospital; R. M. McQueen and W. Martin, St. George's Hospital; J. J. Papanicoly, London Hospital; H. F. Powell, University College, London; T. R. Roberts, St. George's Hospital; G. M. Seagrove, H. H. Serpell, and H. E. Stanger-Leathes, St. Bartholomew's Hospital; Percy N. Smith and W. G. Speers, St. Mary's Hospital; A. M. Stevens, University College, London; F. Talbot, Charing Cross Hospital; J. L. Tayler, St. Thomas's Hospital; W. B. B. Taylor, London Hospital; E. M. Thomson, St. George's Hospital; R. H. Tribe and J. E. Turle, University College, London; A. P. Van Dyk, Royal College of Surgeons, Edinburgh; T. H. Vickers, St. Mary's Hospital; E. C Williams, St. Bartholomew's Hospital; J. A. Williams, University College London; Mr. R. O Wilson, University College, Bristol; C. W. T. Woods, St. George's Hospital; and J. H. Wroughton, St. Bartholomew's Hospital.

Elementary Biology.—F. C. J. Baker, King's College, London; H. S. Burnell-Jones, London Hospital and King's College, London; T. G. Campbell, St. Mungo's College, Glasgow; L. Doudney, Guy's Hospital; H. J. Duské, St. Mary's Hospital; W. H. Hamilton, Tonbridge School; F. F. Hatton, University College, Bristol; A. G. Payne, Charing Cross Hospital.

Materia Medica.—C. H. Gask, Guy's Hospital; F. A. Hort, Middlesex Hospital; R. Jones, L.S.A.Lond., Royal College of Surgeons of Edinburgh; and T. Morgan, Guy's Hospital

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen having passed the First Professional Examination for the Diploma of "Fellow" in Anatomy and Physiology:

J. Armour, M.B., B.A.Toronto, M.R.C.S.Eng., L.R.C.P.Lond., Toronto University and University College, London; L. Bousfield, B.A. Cantab., Cambridge University and London Hospital; E. W. Brewerton, M.R.C.S.Eng., L.R.C.P.Lond., St. Bartholomew's Hospital and King's College, London; E. R. Carling, Westminster Hospital; E. G. Carpenter, M.R.C.S.Eng., L.R.C.P.Lond., St. Bartholomew's Hospital; J. Cunning, M.B., B.S.Melb., Melbourne University and St. Bartholomew's Hospital and King's College, London; J. S. Fairbairn, M.R.C.S.Eng., L.R.C.P.Lond., M.B., Ch.B.Oxon., Oxford University and St Thomas's Hospital; A. J. Fairlie-Clarke, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; W. J. H. Hislop, M.R.C.S.Eng., L.R.C.P.Lond., M.B., C.M.Edin.,

Edinburgh University, King's College, and London Hospital; A. R. F. Hubbard, Charing Cross Hospital; H. R. Jeremy, London Hospital; F. J. McCann, M.D., C.M Edin., M.R.C.P.Lond., Edinburgh University and King's College, London; J. C. Matthews, B.A.Cantab., Cambridge University and University College, Liverpool; T. R. Mulroney, M.R.C.S.Eng., M.D. and M.C.Malta, L.R.C.S.&P.Edin., Bombay, Edinburgh, and King's College, London; L. G. Nash, Guy's Hospital; V. B. Nesfield, St. Mary's Hospital; P. N. B. Odgers, B.A.Oxon., Oxford University and Guy's Hospital; A. P. Parker, M.B., B.Ch.Oxon., Oxford University and Middlesex Hospital; E. S. Parker, University College, London; F. H. Parker, B.A. Cantab, Cambridge University and Guy's Hospital; A. E. Pinniger, Middlesex Hospital; L. B. Rawling, M.R.C.S Eng., L.R.C.P Lond., M.B., B.C.Cantab., Cambridge University and St. Bartholomew's Hospital; C. N. Sears, St. Thomas's Hospital; J. C. Shaw, M.R.C.S. Eng., L.R.C.P.Lond., St. Bartholomew's Hospital; J. E. Simpson, M.R.C.S.Eng., L.R.C.P.Lond., University College, London; J. L. Stephenson, St. Mungo's College, Glasgow; E. S. Steward, M.R.C.S. Eng., L.R.C.P.Lond, Yorkshire College, Leeds, St. Bartholomew's Hospital, and King's College, London; G. O. Taylor, London Hospital; F. L. Thomas, Guy's Hospital; G. W Thompson, M.B., C.M. Edin., Edinburgh University and King's College, London; B. J. Ward, Queen's Faculty of Medicine, Mason College, Birmingham; J. Wharton, B.A.Cantab., Cambridge University and Owens College, Manchester.

Seventy-four gentlemen presented themselves for this examination, 32 of whom passed, and 42 were referred back to their professional studies for six months.

The following gentlemen have passed the Preliminary Science Examination in Chemistry, Physics, and Practical Chemistry for the licence in Dental Surgery:

F. G. Day, Guy's Hospital; W. James, Middlesex Hospital; and F. W. Targett, East London Technical College, People's Palace.

Six gentlemen were referred back to their professional studies for three months.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Messrs. T. J. Abbott, L.R.C.S.I.; R. J. Coulter, B.Ch., Univ. Dub.; T. Gilcriest, L.R.C.S.I.; R. D. Joyce, M.R.C.S.; D. A. McCurdy, L.R.C.S.I., and H. W. Oulton, L.R.C.S.I., having passed the necessary examination, have been admitted Fellows of the College

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OBITUARY.

HUGH RHODES, M.D., C.M.Glasg., M.R.C.S.Eng., Sheffield.

The death of Dr. Hugh Rhodes, a young man of considerable promise, on November 16th, has occasioned great regret. Circumstances made it almost a tragedy. Not that it was sudden or at all unexpected, but for the courageous struggle he persistently and to the very last made, to carry on his professional duties, when for at least two years he and his more intimate friends were well aware that he was the subject of disease which, ere long, must prove fatal. This was not long after his marriage. The indomitable pluck he displayed could only be admired by those who knew the circumstances, and in spite of the difficulties mentioned he acquired such a success that, had his health and life been spared, it was clear he was marked out for a more than usually successful career. As it is, he passed away at the early age of 34, leaving a name for honourable dealing in professional and private life, and one which must for long be held in the highest esteem by his seniors no less than by his more immediate contemporaries.

He was the eldest son of Mr. H. G. Rhodes, Manager of the Dronfield Branch of the Sheffield and Rotherham Banking Company, and was born at Fulwood. He was educated at Dronfield and at Sheffield Grammar Schools, and passed on to Glasgow University to study medicine. He gained the Walton Bursary and the first prize in Anatomy in his year; and became M.B., C.M. (with honours) in 1887, M.R.C.S.Eng. in 1890, and M.D. in 1891. His first appointment was that of Assistant House-Surgeon to the Cumberland Infirmary, Carlisle; subsequently he was Assistant House-Surgeon and House-Surgeon to the General Infirmary, Sheffield. In 1892 Dr. Rhodes resigned the latter post, receiving many substantial tokens of regard, and joined Mr. W. Dale James in partnership in Sheffield. He was for a time Demonstrator of Anatomy, and lately Lecturer on Medical Jurisprudence in University College, Sheffield. He also lectured on Ambulance class work for the Sheffield School Board and the Midland Railway. About three years since he married the youngest daughter of the late Mr. E. Lucas, of Dronfield, and has left one little girl. He was Local Secretary of the Medical Defence Union and of the North of England Gynæcological Society, and was a member of the Sheffield Medico-Chirurgical Society. He was the author of a thesis entitled *Koch's Treatment in Phthisis and Lupus*. Dr. Rhodes was much respected by his fellow practitioners.

The funeral took place at Dronfield Cemetery in the presence of his father, brother, and a large number of other relatives and friends.

Several correspondents have announced that Dr. Stark was killed on November 18th in Ladysmith by a shell. Dr. Arthur C. Stark graduated M.B., C.M.Edin in 1883, and was engaged in making investigations for a book on birds in South Africa, which was to be the first of a series of reports on the fauna of the region south of the Zambesi, to be issued under the direction of Mr. Sclater, of the Capetown Museum. We are indebted to Mr. Jonathan Hutchinson for the following extract from a letter which he has just received from his brother, long resident in Natal: "The Dr. Stark whose tragic death at Ladysmith you will have noticed, was an intimate and esteemed friend of mine. He was a naturalist of repute. He introduced himself to us at Boshfontein some five years ago, having heard of G.'s reputation as a local collector. He expressed a strong wish to explore the Drakensberg Range, and asked our advice as to ways and means. Eventually we agreed to take him for a consideration, we finding waggon, oxen, servants, horses, tent, and food. We then went and had a most enjoyable time; they ornithologised and I sketched. I found him a congenial man. I believe he leaves two grown-up daughters in London, who were educated at Girton. It appears that he had attached himself (being in Natal) to the Ladysmith medical staff. Coming out of his hotel he had both his legs taken off by a shell. 'Take care of my cat,' he said, and died almost immediately. I have felt his death very much, as that of an intimate friend."

Sudden death has removed a cultivated, laborious, and highly esteemed member of the profession, Frederic William Skrimshire, M.R.C.S., L.R.C.P., who died at his house, in Morpeth, Northumberland, of angina pectoris, on November 17th. Until about five years ago he had enjoyed excellent health; but at that time a severe attack of influenza made a radical change in his constitution. In spite of his active life he became far too stout, and frequently suffered from attacks which he attributed to indigestion. However, he did all his professional work, being apparently in fair health, until the night before his death. On the day of his death he was quietly reading after breakfast, when he put his hand to the region of his heart, uttered an exclamation of pain, and fell from his chair. Dr. A. Brumell and Dr. Dickie both attended to him at once, but in half an hour he died. Mr. F. W. Skrimshire was born at Holt, Norfolk, where his father was a medical man. He studied for the profession at King's College, London, and passed the College and Hall examinations in 1870. He was Assistant Demonstrator of Anatomy at King's College Medical School for a time, and was then appointed House-Surgeon to the Dispensary at Morpeth. At the end of three years, during which his services received marked approbation from the governors, and patients, he resigned his post, and entered into partnership with the late Dr. M. Brumell. Mr. Skrimshire held several public appointments. He was (since 1888) Medical Officer of Health to the Morpeth Union District; Medical Officer and Public Vaccinator to one of the Districts of the same Union; Medical Officer to the Staff of the Post Office; and Surgeon-Lieutenant to the 1st Volunteer Brigade of the Northumberland Fusiliers. He was a member of the British Medical Association and of the Northumberland and Durham Medical Society, and was a Certifying Factory Surgeon. During his term of office as medical officer of health the Grand Stand on Morpeth Common was at his urgent solicitation converted by the Town Council into an isolation hospital. He was the senior practitioner in Morpeth, and his opinion, which was always carefully formed, was much sought after by his colleagues. His principal tastes, outside the work of his profession, were Freemasonry (he was a past master), volunteering, the services of the church (he had for years been a member of the choir and for the last two years rector's churchwarden), and music. He was a singer of taste, a pianist of skill, and composer of no mean ability. In every respect he was held in great esteem by all classes, and his death created profound regret throughout the town. He has

left a widow and five young children, for whom great sympathy has been evinced. The funeral was attended by deputations from the public bodies with which he had been officially connected, and also by the officers and band of the 1st V.B.N.F. and the men of the Morpeth company of the same battalion.

JOSEPH SAMUEL PRENDERGAST, M.D., Inspector-General of Hospitals, died at Bath on November 20th, in his 90th year. He was in point of age the father of the Army Medical Department, but entering the service pretty late in life, there is still a senior surviving officer, Inspector-General Dane. He entered the service in February, 1836, as Assistant Surgeon, and retired as Deputy-Inspector-General, with the honorary rank of Inspector-General, in May, 1863. He served in the Crimea on the personal staff of the Field-Marshal Commanding-in-Chief, was with Lord Raglan in his last moments, and accompanied his body to England. He was in the battles of Alma, Inkerman, and Balaklava, and at the siege of Sebastopol, for which he held the medal with four clasps, the fifth class of the Medjidieh, and the Turkish medal. Those medical officers who entered the service during the Mutiny will remember Inspector-General Prendergast as head of the medical division at Fort Pitt, Chatham—a smart little man, strict in discipline, but with a kindly keen wit and humour. He was among the last of the medical officers of the old school.

DR. HENRY HICKS, F.R.S., F.G.S., of Hendon Grove, Hendon, died on November 18th from heart disease. He was the son of the late Thomas Hicks, surgeon, of St. David's, was born in 1837, and received his medical education at Guy's Hospital. He became M.R.C.S., L.S.A., in 1862, and M.D. St. Andrews in 1878. He resided at St. David's from 1862 to 1871, and then at Hendon, where he had a very large practice. After a few years in Hendon he retired from general practice and became a specialist in mental diseases. His first geological paper was communicated to the Liverpool Geological Society. He communicated numerous papers to the Geological Society, British Association, London Geologists' Association, and to the *Geological Magazine*. Of late, his investigations were mainly confined to the oldest (pre-Cambrian) rocks of Great Britain, and he has shown that they are exposed in many areas in which their presence had hitherto been unsuspected. Dr. Hicks has also described many new fossils discovered by him in the Cambrian, Ordovician, and Silurian rocks, and has written several papers on the classification of these rocks. He also published results of explorations carried on by him in ossiferous caverns in North and South Wales, in which evidence is given to show that man occupied some of the caverns during a part of the glacial period. In 1891 he described the glacial deposits at Hendon and Finchley, and in 1892 he published an account of the discovery of mammoth and other remains in Endsleigh Street, London, with sections of the deposits in which they were found. Dr. Hicks was awarded the Bigsby Gold Medal of the Geological Society in 1883; he was President of the Society in 1896-98, had been Honorary Secretary, and was for many years on the Council. He was President of the London Geologists' Association in 1883-5, and was elected a Fellow of the Royal Society in 1885. He married, in 1864, Mary, only daughter of the Rev. P. D. Richardson, Vicar of St. Dogwell's, Pembrokeshire. He received the Diamond Jubilee Commemoration medal in 1897.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. G. A. Hendricks, Professor of Anatomy in the University of Minnesota, aged 49; Dr. Remi Lavisé, Surgeon to the Hôpital Saint-Jean, and Professor in the University of Brussels, aged 52; and Dr. Amilcare Nascimbene, of Milan, for some years editor of the *Gazzetta Medica Lombarda*, aged 37.

PRESENTATION.—Dr. Whitfield Perkins, Admiralty Surgeon, Port Isaac, has been presented with a revolving reading desk and table, in oak and brass, by the chaplain, officers, and members of the Christchurch Hawkeston Institute, in token of appreciation of his services as Honorary Medical Officer to their Holiday Camps at Port Gaveme in 1898 and 1899.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,340 births and 4,135 deaths were registered during the week ending Saturday last, December 2nd. The annual rate of mortality in these towns, which had been 17.3 and 19.3 per 1,000 in the two preceding weeks, declined again to 18.9 last week. The rates in the several towns ranged from 11.4 in Croydon, 13.6 in Huddersfield, 14.1 in Wolverhampton, and 14.3 in Blackburn, to 22.9 in Brighton, 23.8 in Liverpool, 24.9 in Plymouth, and 25.2 in Hull. In the thirty-two provincial towns the mean death-rate was 18.6 per 1,000, and was 0.8 below the rate recorded in London, which was 19.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the death-rate was equal to 1.7 per 1,000, while it averaged 2.3 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.6 in Salford, 4.0 in Preston, 5.5 in Sheffield, and 7.6 in Hull. Measles caused a death-rate of 1.3 in Preston, 1.4 in Birkenhead and in Sheffield, and 3.1 in Hull; "fever" of 1.1 in Birmingham and in Sunderland, and 1.5 in Nottingham; and diarrhœa of 1.0 in Plymouth. The mortality from scarlet fever and from whooping-cough showed no marked excess in any of the large towns. The 121 deaths from diphtheria included 52 in London, 17 in Sheffield, 8 in Leeds, 7 in Liverpool, 6 in West Ham, 5 in Manchester, and 4 in Salford. Fourteen fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-two provincial towns or in London; and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday last, December 2nd. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3,564, 3,578, and 3,503 at the end of the three preceding weeks, had further declined to 3,445 on Saturday last; 294 cases were admitted during the week, against 328, 334, and 293 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, December 2nd, 922 births and 625 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.0 per 1,000 in each of the two preceding weeks, rose to 20.5 last week, and was 1.6 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.5 in Leith and 18.6 in Perth, to 21.6 in Paisley and 29.0 in Greenock. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Greenock and Perth. The 296 deaths in Glasgow included 14 from measles, 3 from scarlet fever, 5 from "fever," and 8 from diarrhœa. Three fatal cases of diarrhœa occurred in Edinburgh; 4 of measles and 4 of diarrhœa in Dundee; and 12 of measles in Greenock.

UNSOUND CONDENSED MILK.

THE occasions on which the public attention is drawn to the sale or use of unwholesome food appear to grow more frequent year by year. Rarely does a week go by but some flagrant offence is disclosed. This circumstance is doubtless the result of the increased energy displayed by local authorities in detecting and dealing with such cases; and while it is unquestionably true that even at the present day the offences that are discovered probably form only a small proportion of those which actually occur, the lesson presented by the disclosures and heavy penalties inflicted must inevitably serve as a wholesome check upon such disgusting and harmful practices.

The latest offender is a woman, who, according to the report before us, trades under the superlative title of the Tip-Top Cake Company. She was found by an official of the Poplar Board of Works to have in her possession 216 tins of bad condensed milk. Although witnesses for the defence sought to prove that the milk was not used in the manufacture of pastry, etc., the magistrate, Mr. Dickinson, had no difficulty in deciding that the milk was intended for such uses, and a penalty of 10 guineas and 5 guineas costs, or, in default of distress, six weeks' imprisonment, was inflicted.

Another case was tried before the magistrate at the Thames Police-court on November 30th. The defendant, a confectioner of Poplar, was charged with having on his premises 71 tins of milk in an unsound condition, and intended for the food of man. It was stated that condensed milk was used for making caramel toffee. Dr. Alexander, Medical Officer to the Poplar Board of Works, gave evidence that the tins were blown. The defendant, who said that he remembered nothing as to the purchase of the milk, was convicted by the magistrate, who stated that the making of toffee for children with this milk aggravated the offence. The penalty was £20 and £10 10s. costs.

RIGHT OF M.O.H. TO NOTIFICATION FEE.

ALPHA SIGMA asks whether the medical officer of health of a small burgh in Scotland, who is also engaged in private practice in the burgh, is entitled to make any charge for the notification of cases of infectious diseases.

*** Certainly he is entitled to charge the statutory fee of 2s. 6d. Section XI of the Notification Act states that where a medical practitioner attending on a patient is himself the medical officer of the district he shall be entitled to the fee to which he would be entitled if he were not such medical officer.

THE date of the reception of the Presidents and Lady Presidents of the League of Mercy by the Prince and Princess of Wales at Marlborough House, has been fixed for Monday, the 18th inst., at 12 noon.

MEDICAL NEWS.

Dr. Yersin, whose name is well known for his researches on the plague, has been charged by the Government of Cochin China with a special mission to Java.

Presentation.—A dinner was held at the Café Royal on November 30th, at which Dr. Morgan Dockrell was the guest of the evening. Professor Windle, M.D., F.R.S., who presided, proposed the toast of "Our Guest," and concluded by presenting Dr. Dockrell with an illuminated address and a service of silver plate, subscribed for by a large number of medical brethren and friends as a mark of esteem, and in recognition of Dr. Dockrell's recent action in the law courts to check the unauthorised use of his name in trade advertisements. Dr. Dockrell in responding expressed his gratitude to the subscribers.

Moseley Hall Convalescent Hospital.—In the report in the British Medical Journal of November 11th, on the recent opening at West Kirby, near Liverpool, of a country hospital for children suffering from chronic diseases, appears the statement that "the idea of a country hospital for chronic diseases, as distinguished from a home for incurables, seems to be a new one in this country." We are informed, however, that the Moseley Hall Convalescent Hospital, near Birmingham, was opened in April, 1892, and the last annual report records the excellent work accomplished during 1898, when the number of children admitted was 725, as compared with 614 in the preceding year. The daily average of children in the hospital was 61, and the detention rate 30.64 days. It is gratifying to observe that no case of infectious disease had occurred in the hospital for more than eighteen months. In the case of the West Kirby Hospital, patients are not to be admitted for a shorter period than six months, and they may remain as inmates as long as two years. But at Moseley Hall detention is evidently much shorter. The admissions for each of the following diseases were twenty-five or over during the year: enteric fever, caries of spine, tuberculous hip, bronchitis, pneumonia, chorea, abscesses, debility, burns or scalds.

Death under Chloroform.—A quarryman, aged 49, of Egerton, Lancashire, had for years suffered from internal piles, especially during the past five or six months, and was about to undergo an operation for their removal on Saturday, November 11th, when death ensued. At the inquest it was stated that the deceased had "taken a drop of drink occasionally," but had not been drunk for a month. Dr. Robinson said the piles were ulcerated and bleeding, and he intended to excise them at the patient's own home. He had examined deceased carefully, and believed he would stand the anæsthetic. Dr. Boulton also examined deceased's heart, and administered the chloroform with a mask. The deceased struggled very violently; insensibility was, therefore, delayed. Two drachms of chloroform were used before unconsciousness ensued, when the breathing became deeply stertorous, the face and lips blue, and the pulse and respiration ceased. The veins were distended, one in the arm was opened, and black blood flowed freely. Artificial respiration was performed; a few ineffective respirations followed, but the heart ceasing to act, some ether was injected. Dr. Robinson considered death to be due to "paralysis of the right side of the heart from excessive strain caused by congestion of the lungs and asphyxia from violent struggling." There was no congestion of the lungs prior to the administration of chloroform. The verdict was "Death from misadventure." This would seem to have been a case of alcoholism, with the usual difficulty of producing anæsthesia common in such cases. The order of events was probably—struggling, fixation of chest wall, asphyxia, distension of the right side of the heart, and cessation of both pulse and respiration.

Dental Hospital of London.—The annual dinner of the staff and past and present students of the hospital was held in the Whitehall Rooms of the Hôtel Métropole on December 2nd. Mr. Alfred Coleman, F.R.C.S., was in the chair. There were also present about 200 gentlemen. The toast of "The Queen" having been duly honoured, the Chairman gave that of "The Past and Present Students," and recalled the names of the six men—Messrs. Cartwright, John Tomes, Harrison, R. Hepburn, Underwood, and Ibbetson—who were the first six officers of the hospital at its opening in 1859, and to whose exertions and sacrifices much of the success of the school and of the present high position of dental surgery was due. He hoped the new hospital would be ready for occupation in October next. Mr. W. B. Bacon (Tunbridge Wells) and Mr. J. T. Carter (Saunders Scholar of the past session) returned thanks for the past and present students respectively. Mr. F. A. Bevan, one of the Trustees, who proposed "The Hospital and School," observed that the cases treated during the past year numbered 63,298, or about 800 more than in the previous year; but, whilst there were 3,800 more extractions, the stoppings were 2,600 fewer than in the previous year. The Chairman had told them that teeth were becoming worse every year; the above figures seemed to prove it. In the army great importance was attached to good teeth; if soldiers in a long campaign had to eat "bildong" day after day and could not well masticate it, indigestion should ensue. Dr. Walker had just shown his interest in the school by giving an entrance scholarship of £20. Dr. Walker, in responding, said the new building was now at its third floor, and Mr. Woodruff traced the history of the school, and said that several foreign students were now at work there. Mr. C. S. Tomes proposed "The Visitors," for whom Dr. Montague Murray, Dean of Charing Cross Hospital, responded. He hoped that in the new London University there would be a Board of Dental Studies. Lastly, Mr. J. Smith Turner proposed "The Chairman," whom he described as "one of the boys of the old brigade." He spoke of the deep debt of gratitude which the dental profession owed to the College of Surgeons for founding the diploma of L.D.S., at an expense of £800, as the College had had to go to Parliament for a new charter. He warned students that if they went in for a university degree they should not be satisfied with one that was whittled down to the greatest possible extent. The Chairman replied. Mr. Chambers recited "The Absent-minded Beggar," and a collection was made for the Lord Mayor's War Fund, which realised £14 8s. 3d.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL DISPENSARY.—A Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), with furnished rooms, etc. Applications to the Secretary by December 18th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by December 16th.

BOOTLE: BOROUGH OF.—Resident Medical Superintendent to the Hospital for Infectious Diseases. Unmarried. Salary, £120 per annum, with board, washing and apartments. Applications, endorsed "Resident Medical Superintendent," to the Chairman of the Hospital Subcommittee, Town Hall, Bootle, by December 14th.

BRECON INFIRMARY.—Resident House Surgeon; unmarried. Salary £70 per annum, with furnished apartments, etc. Applications to W. Powell Price, No. 6, Bulwork, Brecon, by December 20th.

BRIGHTON: SUSSEX COUNTY ASYLUM.—Assistant House-Surgeon: unmarried, and under 30 years of age. Salary, not exceeding £30 per annum, with board and residence. Applications to the Secretary by December 20th.

BRISTOL: ROYAL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House-Surgeon. Salary, £100 per annum with rooms and attendance. Applications, endorsed "House Surgeon," to the Secretary by December 18th.

CANTERBURY: KENT AND CANTERBURY HOSPITAL. (1) House-Surgeon. (2) Assistant House-Surgeon. Unmarried in each case. Salary for the former, £90 per annum, rising to £100, and the latter £50. Board, etc., provided. Applications to the Secretary by December 29th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Board and residence provided. Applications to the Secretary by December 12th.

DROITWICH UNION.—Medical Officer for the Ombersley Medical District. Salary, £62 10s. per annum and fees. Applications to the Clerk, Board Room, by December 12th.

DUDLEY: GUEST HOSPITAL.—Senior Resident Medical Officer. Salary, £100 per annum, increasing to £120, with board, residence, etc. Applications to the Secretary by December 21st.

EDINBURGH: UNIVERSITY OF.—(1) Examiner in Materia Medica; (2) Two Examiners in Clinical Surgery. Appointments for four years. Salary of the former £75 per annum and the latter £50 each per annum. Applications to the Secretary, University Court, by December 30th.

GREAT NORTHERN CENTRAL HOSPITAL.—Junior House-Physician. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging, and washing. Applications to the Secretary by December 12th.

GREENOCK INFIRMARY.—(1) House Surgeon. (2) Assistant House-Surgeon. Salary, £60 and £40 respectively, with board and residence. Applications to the Secretary, 2, Hamilton Street, Greenock.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—(1) House-Physician; (2) House-Surgeon. Appointments for six months. Salaries, £20 each, with board and residence. (3) Resident Medical Superintendent. Appointment for one year, subject to annual re-election. Salary, 100 guineas per annum, with board and residence. Applications on forms provided to be sent to the Secretary by December 12th.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary, £40, with board and lodging. Applications to the Chairman, House Committee, by December 12th.

LEEDS: GENERAL INFIRMARY.—Honorary Assistant Ophthalmic and Aural Surgeon. Applications, endorsed "Appointment of Honorary Assistant Ophthalmic and Aural Surgeon," to the Treasurer by December 18th.

LEEDS: HOSPITAL FOR WOMEN AND CHILDREN. Honorary Surgeon. Applications to the Election Committee at the Hospital by December 19th.

LEEDS.—Medical Officer to the Beckett Street Fever Hospital. Salary, £150 a year, with board, lodging, and washing. Applications to the Medical Superintendent, Manston Hospital, Seacroft, near Leeds by December 12th.

LEWES DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary, £160 per annum, with furnished apartments, board, etc. Applications to the Honorary Secretary, 211, High Street Lewes, December 30th.

LINCOLN LUNATIC ASYLUM.—Assistant Medical Officer. Salary, £100, with board and washing. Applications to the Medical Superintendent.

LONDON LOCK HOSPITAL. (1) House-Surgeon to the Female Hospital, Harrow Road, W.; (2) House-Surgeon to the Male Hospital, 91, Dean Street, W. Salary of the former £63 per annum, and of the latter £50 per annum, with board, lodging, and washing in each case. Applications to the Secretary at the Hospital, Harrow Road, by December 14th.

MANCHESTER EAR HOSPITAL.—Clinical Clerkship. Appointment for six months. Honorarium of 10 guineas. Applications to the Secretary, 23, Byrom Street, Manchester.

MIDDLESEX HOSPITAL, W.—(1) Medical Officer and Registrar to the Cancer Department. (2) Assistant to the Director of the Cancer Research Laboratories. Appointments are annual, eligible for re-election. Salary of the former, £400 per annum, with board and residence in the College. Salary of the latter, £100 per annum, and an honorarium of £50 after his second year if re-elected. Applications to the Secretary-Superintendent by December 13th.

NORTH EASTERN HOSPITAL FOR CHILDREN.—House-Physician. Appointment for six months. Salary at the rate of £50 per annum. Applications to the Secretary, at the City Office, 27, Clement's Lane, Lombard Street, E.C., by December 15th.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—House-Physician; unmarried, and not more than 30 years of age. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by December 13th.

NOTTINGHAM GENERAL DISPENSARY.—Clinical Assistant. Salary, £60 for six months (renewable). Applications to the Secretary.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Surgeon. Salary £100, with board and residence. Applications to the Honorary Secretary by December 18th.

PONTEFRACT GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary commencing at £150 per annum, with furnished rooms, etc. Applications to the Secretary by December 11th.

QUEEN ADELAIDE'S DISPENSARY, Bethnal Green, E.—Resident Medical Officer; unmarried, and under 35 years of age. Salary, £100 per annum, with furnished apartments, etc. Applications to the Secretary by December 14th.

RICHMOND UNION.—Medical Officer and Public Vaccinator for the Mortlake District. Salary, £90 per annum and fees. Applications to the Clerk to the Guardians, 17, The Green, Richmond, Surrey, by December 12th.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer for 1901. Applications to the Registrar by January 5th, 1900.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Assistant Physician; must be F. or M.R.C.P. Lond. Applications to the Secretary by December 16th.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—(1) Senior House-Surgeon. Salary, £75, with board and residence. (2) Curator and Librarian. Salary, £120. (3) Junior House-surgeon. Salary, £50, with board and residence. (4) Junior Out-patient Surgical Officer. Salary, £50. Applications to the Secretary by December 14th.

ST. MARY, ISLINGTON.—Medical Officer for the No. 2 Upper Holloway Central District. Salary, £100 per annum and fees. Applications to the Clerk, Guardians' Offices, St. John's Road, Upper Holloway, by December 11th.

ST. SAVIOUR'S UNION.—Dispenser at the Infirmary, East Dulwich Grove, S.E. Salary, £120 per annum, and dinner and tea daily. Applications on forms provided to be sent to the Clerk, Union Office, John Street, W., Blackfriars Road, S.E., by December 11th.

SALOP COUNTY COUNCIL.—County Medical Officer of Health. Salary, £750 per annum. Applications to the Clerk, Shirehall, Salop, by December 27th.

SOUTHAMPTON: ROYAL SOUTH HANTS INFIRMARY.—Assistant House Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with rooms, board, and washing. Applications to the Secretary before December 23rd.

THROAT HOSPITAL, Golden Square, W.—Junior Resident Medical Officer. Appointment for six months, but renewable. Salary, £50 per annum. Applications to the Secretary by December 16th.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, S.W.—House-Surgeon. Appointment for six months. Honorarium £25 and board and lodging. Applications to the Secretary by December 23rd.

WEST AFRICAN RAILWAYS.—Two Assistant Medical Officers. Salary, £30 to £35 per month, with free quarters, first class passage out and home, and four months' leave after eight months' residential service. Applications, endorsed "Assistant Medical Officer," to Messrs. Shelford and Son, 35a, Great George Street, S.W.

WEST HAM UNION.—Medical Officer for No. 15 District. Salary, £130 per annum, rising to £150 and fees. Applications, on forms provided, to the Clerk, Guardians' Offices, Union Road, Leytonstone, by December 13th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Physician; (2) House-Physician; (3) House-Surgeon. Two latter appointments tenable for six months, with board and lodging provided. Election for the former on December 11th. Applications for the two latter to the Secretary-Superintendent by December 13th.

WREXHAM INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications on forms provided to the Secretary, 1, Church Street, Wrexham, by December 16th.

YORK.—Medical Officer of Health of the City. Salary, £400 per annum. Must devote his whole time to the duties. Applications, endorsed "Medical Officer of Health," to the Town Clerk, Guildhall, York, by January 4th, 1900.

MEDICAL APPOINTMENTS.

BLOXAM, G. E., M.R.C.S., L.R.C.P., appointed Medical Officer to the Western Dispensary, Bath, *vice* H. Culliford Hopkins, deceased.

BUTTERFIELD, Frank, M.B. Lond., appointed Junior House-Surgeon of the Blackburn and East Lancashire Infirmary.

EVANS, Arthur H., M.D., B.S. Lond., F.R.C.S. Eng., appointed Senior Surgeon to the East Dispensary, Liverpool.

GUNN, Albert A., M.B., Ch.B. Edin., appointed Senior House Surgeon of the Blackburn and East Lancashire Infirmary.

HELLIER, J. B., M.D. Lond., appointed Honorary Obstetric Physician to the Leeds Infirmary, *vice* James Braithwaite, M.D. Lond.

HOPKINS, J. J., L.R.C.M.S., L.R.C.P.I., L.R.C.S.I., J.P., appointed Medical Officer and Medical Officer of Health to the Castlebar No. 1 District.

JONES, T. O., L.R.C.P., L.R.C.S. Edin., reappointed Medical Officer of Health to the Rothlin District Council.

KELYNACK, T. N., M.D. Vict., M.R.C.P. Lond., appointed Assistant to the Professor of Medicine, the Owens College, Manchester.

NICHOLSON, H. Gilbert, M.R.C.S., L.S.A., appointed Honorary Medical Officer to the Queen Adelaide Dispensary, Bethnal Green.

PATERSON, James N., M.B., C.M., F.R.C.S.E., appointed Assistant Ophthalmic Surgeon to the Edinburgh Royal Infirmary.

PUGH, R., M.B., Ch.B., appointed Senior Assistant Medical Officer at the Birmingham City Asylum.

RYALL, E. Canry, M.R.C.S. Eng., etc., appointed Surgical Registrar to the Westminster Hospital, and Demonstrator of Physiology in the Westminster Hospital Medical School.

SMITH, Charles Edward, M.B., Ch.B. Edin., appointed Junior Assistant House-Surgeon to the Royal Devon and Exeter Hospital, Exeter.

STANWELL, St. John, M.B. Edin., M.C., M.R.C.S., appointed Surgeon to the Stamford Rutland General Infirmary, Stamford, *vice* R. Farrar, M.D. Oxon., M.R.C.S., resigned, and Surgeon to the Post Office at Stamford.

WHITEHEAD, A. L., M.B. Lond., B.S., M.R.C.S. Eng., appointed Honorary Ophthalmic and Aural Surgeon to the Leeds General Infirmary, *vice* J. A. Nunneley, M.B. Lond., M.R.C.S. Eng., appointed Consulting Surgeon.

WIGG, James, L.R.C.P. Lond., appointed District Medical Officer for Ward 2 of the St. Pancras Parish *vice* Mr. Louis B. Clarement, resigned.

ST. THOMAS'S HOSPITAL.—The following gentlemen have been appointed as House Officers from Tuesday, December 5th:

House Physicians—F. H. Ellis, B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S.; B. F. Howlett, L.R.C.P., M.R.C.S.

Assistant House-Physicians—H. R. Beale, L.R.C.P., M.R.C.S.; L. S. Dudgeon, L.R.C.P., M.R.C.S.

Obstetric House-Physicians—(Senior) G. B. Thwaites, M.B. Lond., L.R.C.P., M.R.C.S.; (Junior) H. H. E. Clarke, L.R.C.P., M.R.C.S.

Clinical Assistants in the Special Department for Diseases of the Throat—A. J. B. Adams, L.R.C.P., M.R.C.S.; S. R. Belfrage, M.B. Lond. Skin—Y. Takaki, L.R.C.P., M.R.C.S. Ear—Y. Takaki, L.R.C.P., M.R.C.S.

Clinical Assistant in the Electrical Department—E. F. Buzzard, M.A., M.B., B.Ch. Oxon., M.R.C.P. Lond.

Several other gentlemen who held offices before have received an extension of their appointments.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Malcolm Morris: Consultation (Skin).

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Dr. Moullin: The Diagnosis and Treatment of Pelvic Hæmorrhage.

Medical Society of London, 8.30 P.M.—Dr. Rodleston and Mr. Turner: Operative Treatment in Cases of Ascites. Mr. J. D. Malcolm: Fifty Successful Consecutive Cases of Ovariotomy, reported three years after the operations.

TUESDAY.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Dr. Furniss Potter: The Use of Instruments.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 4 P.M.—Dr. Harry Campbell: Cases of Syphilitic Affections of the Brain.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. W. Miller Ord: Consultation (Medical).

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. Buzzard: Demonstration of Two Cases of Myasthenia Gravis Pseudo-Paralytica.

Royal Medical and Chirurgical Society, 8.30 P.M.—Adjourned Discussion on the Open-Air Treatment of Tuberculosis. Speakers: Dr. Sidney Martin, Dr. J. E. Pollock, Dr. Washbourn, the President, and others. The Opener, Dr. Kingston Fowler, will reply.

WEDNESDAY.

Royal College of Surgeons of England, 5 P.M.—Mr. Henry G. Howse: Bradshaw Lecture on A Centennial Review of Surgery.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Hector Mackenzie: Bronchiectasis.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. E. W. Roughton: Consultation (Surgical).

Sanitary Institute, Parkes Museum, Margaret Street, W., 8 P.M.—Dr. Arthur Newsholme will open a discussion on The Health of Scholars, with special reference to the Education Code and the Board of Education Act, 1899.

Hunterian Society, 8.30 P.M.—Pathological Meeting. Specimens will be shown by Dr. Kingston Fox, Dr. F. J. Smith, Mr. Taggett, and other Fellows.

THURSDAY.

Ophthalmological Society of the United Kingdom—Patients and Card Specimens at 8 P.M. Chair at 8.30 P.M.—Clinical Evening.—Mr. George Keeling: Congenital Subluxation of Lens. Mr. Cecil Shaw: Sympathetic Ophthalmitis after Enucleation. Mr. John Griffith: Sarcoma of the Upper Conjunctival Cul-de-Sac. Mr. A. H. Thompson: Embolism of the Central Artery of the Retina. Mr. G. D. Maynard: Nasal Duct Dilator. Mr. G. Brookbank James: Changes in the Macula Area consequent upon Injury.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Mr. Gibbs: Demonstration of Surgical Cases.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Still: Some Gastro-intestinal Disorders of Infancy.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 3 P.M.—Dr. F. Harrison Low: Class. Roentgen Rays Demonstration, 4 P.M.—Mr. J. Hutchinson: Consultation (Surgical).

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. Bidwell: The Methods of Performing Intestinal Anastomosis.

FRIDAY.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Mr. Waggett: Prognosis in Chronic Deafness.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. StClair Thomson: Consultation (Nose and Throat).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

BODGER.—On December 5th, at Studley R.S.O., Warwickshire, the wife of F. Bodger, M.D., of a son.

MARRIAGES.

NICHOLSON-NAIRN.—At Dysart House, Fife, on the 5th inst., by the Rev. W. J. Macdonald, M.A., St. Bryedale Free Church, Kirkcaldy, assisted by the Rev. John Campbell, B.D., Kirkcaldy Parish Church, and the Rev. W. D. Beattie, Monimail Free Church, Henry Oliphant Nicholson, M.B., M.S., second son of the late Professor Allerne Nicholson, M.D., D.Sc., F.R.S., of Aberdeen University, to Ellie, fourth daughter of Michael B. Nairn, Esq. of Rankilour and Dysart House. At Home, 20 Manor Place, Edinburgh, third week in January.

ROWAN-HUME.—On the 7th inst., at the Church of St. Mary Magdalene, Bradford, by the Rev. G. E. Redhead, Vicar, assisted by the Rev. D. Linklater, O.D., Vicar of Strond Green, cousin of the bride, Major Henry Davis Rowan, R.A.M.C., son of the late Lieutenant-Colonel Terence O'Brien Rowan, 34th Regiment, to Rosalind, daughter of Thomas Whitesmith Hume, Esq., B.A., M.D., Bradford.

DEATHS.

GOODWORTH.—On November 30th, after twelve months' painful illness, Emily Mary, wife of R. P. Goodworth, Beech House, Winterton, Doncaster, aged 58 years.

JACKSON.—On the 4th inst., at 6, Scotch Street, Whitehaven, Thomas Jackson, M.D., aged 65.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu.F., 5. *Operations.*—I.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Tu. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophth almic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 8.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.D. wishes to know what is a fair charge per head per term for attending twenty boarders at a grammar school.

*** A usual charge is from 7s. to 10s. per head per term for ordinary medical and surgical attendance.

L.M.C. asks for advice in the treatment of the following case: A young man, aged 33, who resides in a tropical colony, suffers from intense itching of the lower extremities after bathing, which he does three times a day. He occasionally gets an attack of urticaria from nervousness—as, for instance, before speaking in public.

TYRES FOR AMBULANCES.

DR. W. ALLEN (Midhurst, Sussex) asks for opinions on pneumatic tyres for fever hospital ambulance vans running on country roads. He finds them liable to burst, and questions whether pneumatic tyres are any better than solid rubber for fever vans.

TEMPERAMENT AND DISEASE.

X. Y. Z. would like to know if there is any literature relating to the influence of temperament upon disease, and especially if there is any, and where it is to be found, having reference to the bearing of temperament upon tropical acclimatisation.

HERNIA IN CLUB CANDIDATES.

CLUB SURGEON asks if candidates for admission into any club or friendly society should be rejected if suffering from hernia.

*** Certain friendly societies, notably the Ancient Order of Foresters, forbid the admission into their order of any candidate who is ruptured. If the matter, however, is left to the discretion of the surgeon he might in many cases admit such candidates if the hernia were capable of being thoroughly relieved by a suitable truss.

CHOICE OF A BICYCLE.

COUNTRY SURGEON, aged 46, height 5 ft. 9½ ins., weight about 11 st., has just learnt to cycle on a borrowed Bantam of 22 in., geared to 60 in. He is barely of average robustness, but has found cycling far less exhausting than walking, and has ridden over 30 miles in one day. He finds, however, some difficulty in mounting an ordinary safety, and thinks of getting a 24 or 26 in. Bantam of 60-in. gear, but first wishes to know from more experienced men whether this will be best, or should he persevere with a safety?

ONE FEE FOR TWO CLUBS.

A CLUB SURGEON asks advice under the following circumstances: A vacancy for a surgeon having arisen in his district, he has been asked to become a candidate for the appointment, and has been promised the support of a certain number of the members if he will consent to forego his fees from such members as pay towards another club to which he has been surgeon for some time past. Some of his professional brethren in the neighbourhood think he will be taking an unfair advantage in the competition by so doing.

*** We would counsel our correspondent not to assent to such a proposition.

THE OFFICE OF HIGH SHERIFF.

ALPHA writes: I shall be glad if you will reply to the following query: I have been nominated High Sheriff for the county, and am trying to claim exemption on the ground that the luxury it affords is rather an expensive one. Can I claim exemption on the following grounds: (*a*) by virtue of my medical profession, being in active daily practice; (*b*) I have no freehold property in the said county. I shall also be glad if you can inform me how to go about claiming exemption, and to whom write.

P.S.—Perhaps I ought to mention that I am a justice of the peace for the county, though my freehold property is in an adjoining county.

*** We assume that our correspondent has been nominated for election to the office of High Sheriff for next year, and that his nomination was made on November 12th. With regard to his claim for exemption upon the ground of his being a member of the medical profession, we are not aware of the existence of any statutory exception in favour of registered medical practitioners. Nevertheless, in making the appointment, we have no doubt that the fact of his being in active practice would entitle him to the privilege which is extended to barristers and solicitors. Apart from this, however, we think that our correspondent's second ground of exemption is quite sufficient, as it is provided by Section IV of the Sheriffs Act, 1887, that "a person shall not be appointed sheriff nor bailiff of a franchise except he have sufficient land within his county or bailiwick to answer the Queen and her people." Exemption should have been claimed on November 12th at the Royal Courts of Justice, but probably a letter addressed to the Chancellor of the Exchequer, setting out our correspondent's claim for exemption, may have the desired effect, if received by the authorities before the sheriffs' names are "pricked" by the Queen.

With reference to the postscript, we should observe that the case of a justice of the peace has no bearing upon the present point, as it is governed by Section I of the Justices Qualification Act, 1744.

ANSWERS.

F. J. A. writes in reply to "R.'s" query: If Worthing would be suitable for "R.'s" patient, accommodation such as he requires could be obtained at Richmond House Home, Liverpool Gardens, Worthing.

ENQUIRER.—An application might be addressed to the Director-General, Army Medical Department, 18, Victoria Street, S.W., but it is stated that the number of such applications is already in excess of any probable demand.

DR. A. CORDES (Geneva) writes: I believe that "G. F. S." will find what he wants in *Superstitions, Erreurs, Doctrines Medicales*, by Perret (Paris, 1879). Some information of the same kind may be found also in *Memoirs of Extraordinary Popular Delusions*, by Charles MacKay, LL.D., office of the National Illustrated Library, 227, Strand. My copy is the Second Edition, 1852.

BAHADUR.—Our correspondent is recommended to read *Surgical Applied Anatomy*, by Frederick Treves, F.R.C.S., fourth edition (London: Cassell and Co., 1893, 7s. 6d.); *Applied Anatomy: Surgical, Medical, and Operative*, by J. M'Lachlan, M.D., B.Sc., M.R.C.S., in two volumes (Edinburgh: E. and S. Livingstone, 1889, 18s.); or a French work on the subject by Tillaux. No recent edition of the first two has appeared, but the subject is practically stationary.

MEDICAL ADVERTISING.

A CORRESPONDENT sends us the following cutting from a local paper:—

"Dr. ———, ———, has returned from Scotland to his residence, ——— Place, ———." 281.

*** The figures which follow appear to show that this is an advertisement that has been paid for, and it is followed by other trade advertisements. We hope means will be taken to draw the attention of the General Medical Council to these practices with a view to stopping them.

ALCOHOL IN DIABETES.

"GLYCO."—We know of no physiological ground for our correspondent's suggestion that alcohol is normally formed in the body from the breaking up of sugar, while there is good evidence that alcohol when ingested is excreted without having undergone any change, and it is doubtful whether alcohol serves any direct nutritive purpose. At the same time some authorities favour the use of a certain amount of alcohol in diabetes in the belief that it diminishes tissue waste.

SANATORIA FOR CONSUMPTIVES.

DR. H. SCURFIELD (Sunderland) writes, in reply to "W. O." in the BRITISH MEDICAL JOURNAL of December 2nd: The Sunderland Branch of the Society for the Prevention and Cure of Consumption in the county of Durham are endeavouring to establish a sanatorium. They hope to start a temporary place at Stanhope in a few weeks, and any subscriber of one guinea annually becomes a "governor," and donors of £20 and upwards become "life governors." Governors are eligible to act on the committee.

NAMES AND DESCRIPTION.

ORIELENSIS.—The law does not at present require a registered practitioner to put his name on the outside of the premises where he practises. The draft Bill now under the consideration of the Parliamentary Bills Committee of the British Medical Association contains a provision rendering this compulsory. Although the custom is almost universal in the medical profession, we do not think that failure to conform to it could be considered unprofessional conduct under existing circumstances. The use of such titles as "Medical Hall" or "Surgery" does not entail any consequence upon registered practitioners. We are unable to say what view might be taken by the courts of a case in which an unregistered person used such titles to describe his premises.

The correspondent who asks the questions to which the above answers are returned expresses the opinion that if any one inclusive title could be enforced for all medical men and could be required to be exhibited by all alike while on the *Register*, and denied to all others, much illegal practice would disappear—such words as the French "Médecin" or the Italian "Medico."

NOTES, LETTERS, Etc.

WE find it necessary to remind correspondents that no notice can be taken of communications unverified by the writer's name.

OUR attention has been drawn to the fact that in some copies of the BRITISH MEDICAL JOURNAL of December 2nd the decimal point in the figures 9.5 given as the death-rate of vaccinated cases in the paragraph on "Small-pox at Hull" has fallen out, so that it may have appeared to have read as 95.

ILLEGAL CERTIFICATES.

MR. R. B. ANDERSON (Montague Place, W.C.) writes: May I ask the favour of space to explain that, as the clerical supervision was in my charge, I alone am to blame for the appearance of Mr. R. F. Tomlin's name amongst the signatures of the letter, in reply to Mr. Horsley, in the BRITISH MEDICAL JOURNAL of November 25th, so that the oversight could not, as Mr. Horsley assumed, attach to the signatories or invalidate their letter. I desire to express my regret to Mr. Tomlin and the signatories for the accidental inclusion of his name, to you and to your readers for causing such an error to appear in your columns, and to Mr. Horsley if my previous silence led him to suppose a reply to that letter to be unnecessary.

[Mr. Anderson then proceeds to reopen the discussion which we must regard as closed.]

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

SURGEON-MAJOR VALENTINE MATTHEWS, V.M.S.C., Honorary Secretary, Headquarters, London Company V.M.S.C., 51, Calthorpe Street, W., writes: This fund is established to assist the families, on or off the strength, of non-commissioned officers and men of the Royal Army Medical Corps on active service in South Africa. All moneys received will be handed over to the Royal Army Medical Corps Depôt Mobilisation Relief Fund, Aldershot, the Honorary Secretary of which will be glad to hear of any cases of distress needing immediate assistance, whether the husbands were mobilised at Aldershot or elsewhere:

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Subscriptions will be gratefully acknowledged.

MEDICAL AID ASSOCIATIONS.

DR. J. NIELD COOPER writes that some time ago, being misled by an advertisement, he applied for the post of medical officer to the Accrington Medical Dispensary. After his appointment he found that it was simply a medical aid association, which depended for its support on canvassing. He therefore resigned his post, and for a time his office remained vacant. Since, however, the post had been advertised, and another medical officer selected out of numerous applicants. Our correspondent then says: "I find that the Royal College of Surgeons of England has resolved that any member acting for a friendly society, whether registered or not, is liable to have his name erased," and states his intention to bring the systematic canvassing of the above institution under the notice of the General Medical Council, and asks how this could best be done.

*** Our correspondent is to be congratulated on having severed his connection with this institution; but his reading of a recent resolution of the Royal College of Surgeons is somewhat vague, if not inaccurate. The suggested communication should be forwarded to the Chairman of the Medical Aid Associations Committee of the General Medical Council.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Mr. J. E. Arnold, London; Mr. F. Alcan, Paris; W. Allen, M.B., Midhurst; A. E. H. W.; Mr. E. Adams, Sheffield. B Messrs. Burroughs Wellcome, and Co., London; N. T. Brewis, M.B., Edinburgh; E. V. Brown, M.B., Manchester; Mr. W. M. Beaumont, Bath; F. Beach, M.B., Kingston Hill; Mr. J. Benjamin, Ahmedabad; Beginner; Mr. N. A. Butterfield, Walton-on-Naze; Mr. G. H. Broadbent, Manchester. C Mr. G. L. Collins, Providence, U.S.A.; Dr. H. J. Curtis, London; Dr. F. G. Clemow, London; T. M. Callender, M.B., Sidcup; Dr. J. M. Clarke, Clifton; Club Surgeon; Country Surgeon; Mr. R. B. Carter, London; Dr. A. Cordes, Geneva; Dr. C. J. Cullingworth, London; Mr. J. N. Cooper, Accrington; Dr. T. D. Crothers, Hartford, Conn.; C. A. D Dr. L. C. T. Dobson, London; Dr. Alex. Duke, Cheltenham; Dr Dunstable's Food Co., Manager of, London; Dr. W. R. Dawson, Finglas; Dr. H. Drinkwater, Wrexham; Dr. M. Dockrell, London. E Enquirer; W. M. C. A. Eccles, M.B., London; Dr. F. W. Edridge Green, Hendon; Ethicus. F A. G. Francis, M.B., Hull; Dr. T. Fenton, Bakewell; Mr. F. W. G Foat, London; F. J. A. G Dr. A. E. Giles, London; G. F. S.; Mr. A. Gale, Kingston Hill; Mr. J. S. Giordet, Mentone; Dr. J. C. Graham, Sumatra; Mr. J. T. Gradon, Oxford; Mr. J. L. Green, Salisbury; Mr. J. Grimshaw, Garstang. H Mr. C. G. Higginson, Manchester; Mr. C. Heath, London; H. E.; W. H. Horrocks, M.B., Hull; Dr. T. A. Helme, Manchester; Dr. F. Hinds, Worthing; Mr. J. Hutchinson, jun., London; H. J. H. J.; J. E. Jones, M.B., Chorley. K Mr. G. King, London. L Mr. T. C. Langdon, Winchester; Dr. J. P. Lyon, Buffalo, N.Y.; Dr. A. Lea, Manchester; Dr. W. S. Lazarus-Barlow, London. M J. S. McCracken, M.B., Newcastle-on-Tyne; Mr. V. Matthews, London; Mr. J. F. Mannix, Cahirciveen; M.D.; Mr. G. H. Makin, Romford; Mr. F. C. Melhado, London; W. J. McCardie, M.B., Birmingham; Dr. W. G. Mitchiel, Ballater; Dr. C. F. Marshall, London; Dr. H. Macnaughton-Jones, London; Member; Messrs. Mertens and Co., London; Dr. A. A. Macfarlane, Sydney, N.S.W.; Dr. F. C. Moore, Manchester. N Dr. C. V. H. Nesbitt, Aughton; Mr. N. H. Nixon, London; Mr. C. R. Newton, Kurseong; Mr. J. B. Nash, Wallsend. O Orielensis, M.B.; Mr. A. Orchard, Ashby-de-la Zouch. P Dr. E. P. Paton, London; Mr. E. D. Pedley, London; Parochial; Mr. T. H. Pounds, Derby; Dr. J. Pearse, Trowbridge; Public Vaccinator. R Dr. J. J. Ridge, Enfield; Dr. W. Robinson, Sunderland; Dr. H. B. Robinson, London; H. I. Rogers, M.B., Sandycove. S Dr. S. Sunderland, London; Sanitas; Dr. W. Sykes, Torquay; Mr. F. T. Simson, London; G. P. Shuter, M.B., London; Mr. E. G. Salt, Edinburgh; Dr. D. Sommerville, London; Dr. A. Stewart, Manchester; Dr. H. Scurfield, Sunderland; Mr. J. Startin, London; Dr. A. Sheen, Cardiff; Dr. Sonsino, London. W Mr. S. Wilson, London; Mr. S. N. Whitaker, London; Mr. C. H. Whiteford, Plymouth; Mr. H. Waite, Leeds; Mr. E. W. Wallis, London; Dr. J. Wyllie, Hull; Mr. T. C. White, London; Mr. W. A. Wheeldon, Stockport; X. X. Y. Z.; X Ray; etc.

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THE HARVEIAN LECTURES

ON THE

SURGICAL TREATMENT OF TUBERCULOUS DISEASES.

By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S.,
Professor of Surgery in King's College, etc.

Lecture I.

Tuberculosis of Lymphatic Glands.

In choosing the treatment of tuberculous diseases as the subject of these lectures, I propose to deal with a group of affections which interest both the surgeon and the physician, and which forms one of the most common of the more serious diseases which come under the notice of the practitioner. As a surgeon, I of course limit myself to those lesions which are accessible to surgery, and as the various surgical tuberculous lesions are too numerous for consideration in the three lectures which are at my disposal, and as I have already fully discussed on several occasions the subject of tuberculous diseases of bones and joints, I propose to confine my attention to tuberculous gland disease, tuberculous peritonitis, and genito-urinary tuberculosis.

[The lecturer, in the first place, discussed several points as regards the etiology of these tuberculous diseases which have considerable bearing on treatment; more especially the questions regarding the local character of the disease and its mode of production, and the questions regarding the possible primary or secondary nature of the tuberculous deposits, the latter question being of great importance with regard to surgical treatment. It was pointed out that it was of importance to know in operating on a tuberculous lesion whether the surgeon was operating on the only one present in the body (in which case there was a chance of ridding the patient of his disease altogether), or whether he was only operating on a local manifestation of disease existing elsewhere. In the former case he might aim at a completeness in the operative procedure perhaps somewhat in excess of the actual necessities of the case, in the hope of eradicating the disease entirely; while in the latter case only procedures which were necessary to get rid of the local affection itself would be adopted. It was pointed out that in many cases the disease undoubtedly is primary, but in the case of the deeper-seated tuberculoses this is not always clear; nevertheless, in a considerable number of cases which have been examined *post mortem* no other deposit could be found in the body than the one local condition, and the lecturer said that it was his impression that where we have a lesion which remains for a long time single, it is very probable that we have to do with a primary deposit, or one which has arisen by fresh infection from without; while lesions which arose from an already existing deposit were more often multiple, the various lesions appearing at the same time or in rapid succession. The result of these considerations was summed up as follows:]

Tuberculous disease is, in the first place, a local affection, and it may be local even though it is situated at a considerable distance from the possible point of entrance of the bacilli into the body. From this primary deposit tubercle bacilli may be disseminated; either in large quantities along with cheesy particles giving rise to an acute general tuberculosis, or to acute tuberculosis of an individual organ; or in small numbers which may or may not settle in other parts. These apparently secondary deposits may, however, not arise from the former one, but may be new lesions originating from them in the same way as the original one did. It is also probable that tubercle bacilli may live in the blood for some time, and unless they meet with circumstances under which they can grow may remain quiescent or die out.

[Further, in the production of tuberculous disease the number of bacilli which gain access to the part in the first instance plays an important *rôle* in the subsequent severity of the disease in cases where the tissues are not particularly susceptible, and it is possible also that there are variations in the virulence of the organisms. Apart from these conditions affecting the bacilli, the chief determining cause of the severity of the disease lies in the tissues themselves, and in their power to resist the attacks of the tubercle bacilli; and on this also depends the effect of treatment, more especially of those forms which may be grouped under expectant treatment, where nothing is done specifically against the bacilli themselves.

As regards the operative measures to be adopted in these cases, when it has been found after full trial of medicinal treatment that operation is necessary, it was pointed out that naturally the ideal procedure was complete removal of the tuberculous tissue, but that in cases where this was not possible or desirable much could still be done by partial operations. These, however, should not be employed in the very acute forms of tuberculous disease, but in the chronic forms the removal especially of the caseating foci, even although tubercles are left behind in the tissues around, may have great influence in arresting the trouble.]

Tuberculosis of the Lymphatic Glands.

[Attention was specially directed to tuberculosis affecting the cervical lymphatic glands, which is the most frequent seat of tuberculous gland disease accessible to surgical interference. This occurs most often in the anterior triangle, especially towards the upper part; then in the posterior triangle, and then in the sub-maxillary triangles. The mode in which these glands become infected is a matter of great importance. It has been pointed out that the onset of tuberculosis in the cervical glands is often associated with some acute inflammatory condition, such as tonsillitis, pharyngitis, carious teeth, adenoids, otorrhœa, eczema about the scalp, etc. In the ordinarily accepted view the tubercle bacilli enter at these points, are carried to the glands, and set up disease there. It is, however, very seldom that one meets with typical tuberculous ulceration in these regions, and hence it must be assumed that the bacilli pass through the mucous membrane or through open wounds without causing a local tuberculosis at the point of entrance. This possibility is founded on Klebs's experiments, which, however, have been somewhat weakened by experiments conducted by Baumgarten and Tangel. Tubercle bacilli have, however, been found in the sockets in connection with carious teeth, and tuberculosis of the tonsils is not uncommon in cases of phthisis. In almost all the cases where tonsils have been examined for tuberculosis the patients have also been suffering from phthisis, and the investigations made were rather on the state of the tonsils in phthisical patients that on the state of the tonsils in the cases of tuberculous glands in the neck. Krückmann found that in 20 cases of phthisis there were tubercles in the tonsils in 12. Schlenker in 22 *post-mortem* examinations of cases of phthisis found tuberculosis of the tonsil 14 times. Schlesinger says that there is almost always tonsillar tuberculosis in phthisis. If this be the case, when we bear in mind how rare enlarged glands of the neck are in cases of phthisis, it is rather an argument against the entrance of bacilli from the tonsils as a common cause of tuberculous glands in the neck. Dr. Craven Moore in fact refers in his paper in the *Journal of Pathology* to an unpublished research by Delépine and Yonge, in which the tonsils were examined in 17 cases of tuberculous glands without phthisis, and in no instance could tuberculosis be demonstrated. When tuberculous glands are secondary to ear disease, in all probability the bacilli have come direct from the ear. In cases of eczema capitis also it has been stated that tubercle bacilli are present in the eczematous patch, but many investigators have failed to confirm this.]

In all these cases of enlarged glands in the neck it is very common to get a history of an acute inflammatory enlargement of the glands in connection with some acute process at the origin of the lymphatic vessels, such as boils, carious teeth, quinsy, eczema capitis, etc., at the commencement of the trouble, and that as this passed off the glands began to subside, but instead of disappearing, as would be the case in a healthy subject, they subsequently enlarged and assumed the characters of tuberculous glands. No doubt it might be that tubercle bacilli entered the glands from the mouth or other source of irritation at the same time as the acute inflammation occurred, and that they afterwards grew and led to the tuberculosis of the glands; but in view of the researches mentioned previously and the remarkable absence of tuberculous sores at the point of entrance, even although wounds or abrasions were present; and in view, further, of the very frequent occurrence of tuberculous glands in different

members of the same family, I cannot think that this represents the whole truth. When we remember that in the case of joints and other deep-seated lesions the infection must practically always come from the blood, and that in children the bronchial glands are so frequently tuberculous, I cannot but think that in the case of the cervical glands infection often occurs from the blood also, and, in the absence of a primary tuberculous focus, I am inclined to think that in many cases we have to do with a non-specific inflammation of the glands in the first instance, and a subsequent infection of these inflamed glands with tubercle bacilli from the blood stream.

[After referring to the supposed less virulent nature of tuberculosis of the glands, which the lecturer doubted, and the possible explanations of this view, he went on as follows:]

As regards the clinical characters of tuberculous glands, we find great variations in different cases as regards the number and size of the glands affected, the rapidity in the progress of the disease, and the tendency to softening and abscess formation. From the point of view of treatment, we may consider the cases under the following five heads:

1. In some cases the glands remain hard and small, not large enough to produce deformity, and with no marked tendency to softening. Here one usually finds a number of glands of varying size, but for the most part small, hard, movable, and without any matting together. Fresh glands tend to become involved, though slowly, and if there is no intercurrent trouble, either local, such as sore throat, etc., or general, such as measles, chicken pox, influenza, etc., they tend to disappear gradually as the patient grows older. Where, however, intercurrent troubles, such as those mentioned, appear, suppuration may occur in one or more glands, or the whole trouble may take on a more acute course.

2. In a second set of cases the glands enlarge steadily, or it may be by fits and starts, attain a large size, and become very numerous, so that by-and-by the whole side of the neck becomes a mass of enlarged glands and great deformity is produced. This condition is usually bilateral, although it may be more marked on one side than the other, and it may go on for a long time without the occurrence of suppuration, the glands also remaining more or less mobile and discrete. The glandular disease tends to spread to the axilla. The patient frequently has a pasty complexion, feels weak, and the general health is not good. On removing these glands one frequently finds that they have been converted into large masses of cheesy material; in other cases, while some show only a few caseous or calcareous nodules, others appear fleshy on section to the naked eye without any sign of degeneration; under the microscope, however, one finds that the latter are infiltrated with tubercles and tuberculous tissue.

3. A third variety is where the glandular trouble is more acute and more likely to end in suppuration. Here, in the first instance, the disease may be apparently limited to a few glands, which, however, enlarge pretty rapidly. Further, periadenitis occurs, the glands tending to become more or less matted together and adherent to the tissues around, while fresh glands enlarge. Where we have this state of matters we find that the glands are breaking down, and suppuration will in all probability occur. If left to itself abscess after abscess may form till numerous ulcers are present, often extending round the neck in the submaxillary regions and downwards along the triangles.

4. We may have to deal with tuberculous glands with unopened abscesses. Suppuration in connection with tuberculous glands may be met with under various conditions. most commonly the state of matters is that described in No. 3, but in some cases the disease may be much more limited, and only one gland or one or two small glands may break down. Again, we may divide these cases into those where the abscess is still beneath the deep fascia, and those where it has burst through and formed a subcutaneous swelling, often with thin skin over it. Again, in some cases, the gland may be only partially broken down, and a large quantity of cheesy material and diseased glandular tissue is found at the bottom of the cavity when the abscess is opened. On the other hand, the gland may have completely broken down, and we practically have only a bag of pus. The latter condition is seldom found except where the abscess has gone on increasing underneath the fascia, usually beneath the sterno-mastoid muscle. Where the abscess comes quickly through the fascia it generally bursts before the gland has been completely destroyed.

5. Lastly, we have to do with cases where abscesses have burst or been opened and where sinuses remain. In some instances these sinuses may be numerous while in others there may be only one or two. In any case the sinus leads down through a hole in the fascia to the remains of the gland, and generally there is a quantity of cheesy and calcareous material and broken-down gland tissue at the bottom. In addition the skin at the orifice of the sinus becomes the seat of a tuberculous ulcer, so that we may have a large sore in that situation with undermined edges.

In discussing the treatment of tuberculous glands I do not propose to enter into detail on the medicinal treatment, but to indicate the cases which require surgical interference and to describe the nature of such interference. Medically there is very little to be done actively against this disease. The patient should, of course, be placed under the best hygienic conditions—country or seaside air, cod-liver oil, sunshine, and a nourishing diet. Some surgeons place great reliance on arsenic in the treatment of this and other tuberculous diseases. Buchner was one of the first to advocate the use of arsenic in tuberculosis on the supposition that it led to the development of fibrous tissue around the tuberculous lesions, and so encapsuled them or even brought about their disappearance. However that may be, increasing doses of arsenic not uncommonly lead to diminution in the glands, and should be tried except in cases where immediate operation is imperative. Where the glands are showing any tendency to enlarge or become matted together it is well to fix the head, and this can be readily done by means of a back splint, which takes a purchase around the thorax, with wings coming forward at the upper part and grasping opposite sides of the head above the ears—practically the splint introduced a good many years ago by Mr. Treves. Attention should also be paid to all possible sources of irritation; carious teeth should be removed, enlarged or diseased tonsils should be excised, adenoids should be operated on, eczema of the skin should be seen to, etc.

As regards local applications over the glands—such as mercurial or iodide of potassium ointments, iodine, etc.—they are, in my experience, of little use. Indeed, where the gland is large and superficial and on the point of breaking down, the irritation of the skin over it with iodine may actually precipitate the suppuration instead of preventing it. Attempts have also been made—and I have made a good many myself, by injecting antiseptic materials into the substance of the glands—to arrest the disease, the materials employed being arsenic, undiluted carbolic acid, iodoform, etc., but none of these have led to any good result, and I cannot recommend them.

With regard to these expectant methods of treatment, it is of great importance to remember that they must not be carried too far, and it is of especial importance not to send the patient so far away that he cannot be kept under observation. One is very apt to allow the patients to go off to the country for an indefinite time, and then find when they come back that suppuration has taken place and that operation is imperative; the operation then required will probably be more extensive, certainly it will be more difficult and less certain as regards its results, than if it had been done earlier. Where there is any doubt about the case, and especially where one sees the patient for the first time, it is better to watch the case for a time rather than to send the patient away at once.

The operative procedures adopted in these cases are twofold, namely, either excision or scraping. If excision is adopted its aim is not only to get rid of the actually enlarged glands, but to remove the disease, if possible, completely so as to avoid recurrence. To do this it is clear that not only should the large glands be taken away, but also the smaller ones in the vicinity which are likewise infected, and the operation to be effectual must be pretty extensive even in comparatively limited cases. The sort of operation which I recommend and am in the habit of practising will be presently described. Scraping, on the other hand, only affects an individual gland or glands which are breaking down, and leaves any others which may be infected behind. These may subside and not give any more trouble, or, on the other hand, especially in the third form above mentioned, they may rapidly enlarge,

and fresh scraping may be necessary. This method has its uses in certain cases, as will be presently pointed out, but it must rank second in importance and in choice to complete excision.

As a matter of curiosity I have looked out the last 100 cases of tuberculous glands in the neck on which I have operated, with the view of seeing the sort of treatment adopted and the results. Of these 100 cases 30 had unopened abscesses and 18 had sinuses. In some cases scraping and excision were performed in different situations at the same time. The following are the results:

In 84 cases excision was employed in the manner to be presently described. (In 4 of these sinuses in the neighbourhood were scraped.) In some both sides were operated either on the same day or after a week's interval; 19 of these had abscesses, and 10 had sinuses.

In 12 of these cases other glands in the neighbourhood subsequently enlarged and required further operation. For example, where the anterior triangle had been cleared out glands subsequently enlarged in the submaxillary region or on the other side or in the posterior triangle. In none did recurrence take place in the area operated on.

In 20 cases scraping was done either because sinuses were present or because there was a single large abscess. In 11 of these unopened abscesses were present, and in 8 sinuses. In 9 recurrence took place *in situ* and further operation was necessary.

Let us next consider the treatment to be adopted in each of the five classes of cases above referred to.

1. These cases may well be watched for a time, treated with arsenic, country air, good hygienic conditions and so forth, and unless the disease becomes active, most usually as the result of some intercurrent affection, there is as a rule no need for any surgical interference. There is no marked deformity in these cases; there is not as a rule much tendency to suppurate, and probably no great danger of dissemination of the disease. As long, therefore, as the glands remain quiescent these cases may be left alone in so far as active intervention is concerned.

2. The second class of cases, where there is marked enlargement of glands amounting to deformity, and where the glands are numerous and spreading, generally requires operation. A trial of the arsenic treatment may be given, but if it fails operation had better be resorted to. It is not advisable to wait too long in these cases, for the tendency is to progressive infection of the glands, and country air and other expectant means have but little influence on them. As has already been said, in many cases these swellings are simply composed of a mass of caseous material, and while they may not break down the disease has a great tendency to spread down the neck into the thorax and axilla, and to prove a distinct source of danger to the body generally. The only operative procedure possible here is excision; scraping is quite out of the question. The excision, to be of use, must be especially free, and if it is found that any glands beyond the area of operation have escaped they should be subsequently removed.

3. In this group the matting together of the glands as the result of peri-adenitis shows that active inflammatory processes are going on in them; and while they sometimes subside after careful treatment, their progress must be especially closely watched, and, if no improvement follows, operative interference should be carried out before a definite abscess has formed. In these cases some surgeons adopt scraping, others free excision, and I have no hesitation in expressing my very decided preference for the latter course, and that for the following reasons. In the first place, we seldom have only one gland enlarged, while the scraping only affects the individual gland penetrated by the instrument. It is, of course, possible to push the instrument on into other glands, but the result is not very satisfactory, and the smaller glands, which are also infected, are left untouched. Besides, even as regards the glands which are scraped out, it is often difficult, unless they are very much broken down, to clear them out completely, and thus tuberculous material is apt to be left behind, which rapidly grows and infects the wound, and thus recurrence very often takes place. It often happens also that the smaller glands enlarge, and a mass quickly forms as large or larger than the original one, and it is probable that the irritation of the scraping increases the inflammation and leads to this enlargement. Further, in a certain number of cases acute general tuberculosis has followed such scraping.

The results of excision in these cases are, as a rule, highly satisfactory, provided that the operation is so extensive as to include the fat and smaller glands in the neighbourhood, and that none of the operation is done by scraping. Some surgeons, when the glands are adherent to the internal jugular vein, as they often are, remove as much as they can with the knife and scrape the part adherent to the vein; but, as I shall state presently, there is no objection to removing the vein along with the adherent gland, no harm whatever resulting from this procedure. I have seldom seen recurrence after these operations, and this is the experience of others, and I have no doubt that in many instances the patients have been saved from a great risk. It is also very important in all cases to look for and remove a possible primary focus, such as enlarged tonsils, carious teeth, mastoid disease, etc., at the time that excision of the glands is carried out.

4. Suppurating glands. The conditions under which one meets with suppuration in the glands are various, and we may arbitrarily divide them into three groups.

(*a*) The abscess in the gland has burst through the fascia, but only forms a comparatively limited swelling under the skin. In these cases I advocate complete excision of glands, abscess, etc., in the manner to be presently described, an oval piece of skin being taken away over the abscess. In these cases it is usually necessary also to remove the jugular vein. Care should be taken as far as possible to avoid puncturing the abscess, although in many cases, if large, it is very apt to burst, and pus escapes over the wound; even when this takes place it is very remarkable that I have never noticed tuberculous infection of the wound. I have of course always washed the pus away immediately, but even doing that, if we judge from the result when a cancerous gland bursts, it is surprising that, in some cases at any rate, the wound does not become tuberculous.

(*b*) The abscess in the gland has burst through the fascia, and formed a large swelling under the skin with marked thinning of the skin over it. Under these circumstances the removal of the whole of the thin skin, which would be necessary in complete excision, would leave a gap which it is difficult to close, and the scar of which would be apt to stretch afterwards; hence, I prefer in these cases to open the abscess in the first instance, and then later on (in three or four weeks), when the skin has recovered and only a sinus is left, to carry out complete excision. In some cases it is well to scrape out the gland and abscess in the first instance instead of merely opening it, and it may be that this will suffice for a cure, but if fresh swelling appears excision should be performed as soon as the skin has recovered.

c. An abscess is present which has not yet burst through the fascia. Here one may in many cases wait and allow the abscess to increase till it is probable that the gland has become completely broken down, and then open and scrape out the abscess, inject iodoform and glycerine, and stitch up the wound again. A very small incision behind the sterno-mastoid frequently suffices in these cases, and the resulting scar is practically invisible. Cases, however, in which this result can be obtained are not very common and sometimes a sinus remains, and if it does will not heal, and if fresh glandular enlargement occurs excision should be performed.

5. Enlarged glands with sinuses. Here also excision is the best treatment, unless the sinuses are so numerous that the operation is not practicable. The operation is no doubt somewhat more difficult, but if it be carried out in the systematic manner to be presently described, I have never failed to complete it. Where the sinuses are too numerous for excision, thorough scraping and the subsequent application of undiluted carbolic acid is the best treatment.

Excision of tuberculous glands is an extremely satisfactory operation if carried out sufficiently widely. If the enlarged glands alone are removed, recurrence is very apt to take place, and this is more likely to happen if suppuration occurs in the wound. Under the latter circumstances the glands which are infected but not excised tend to enlarge and undergo suppuration.

I have already said—and I cannot emphasise the point too strongly—that in operations on tuberculous glands one must not be content with shelling out the infected glands, but must remove the whole of the glandular area, whether the glands are visibly affected or not. To shell out the enlarged glands is only to remove the most affected of the glands, leaving behind numerous others which are also affected but not markedly enlarged. It does not, of course, necessarily follow that these glands left behind will enlarge; but they

are more especially likely to do so if the operation has been an extensive one accompanied by much tearing of the tissues, and therefore with increased lymphatic flow, or accompanied by suppuration or even a less degree of inflammation. Under those circumstances the glands swell up and the tuberculous disease makes progress in them and generally forms fresh masses. And it must be borne in mind that a second operation in the same region is very much more difficult than the first on account of the cicatricial tissue distorting the relations of the parts. Hence, where glands are removed for tuberculous disease, one must map out and remove all the fat-containing small glands in that particular lymphatic area in addition to the enlarged ones.

The situation where one most commonly has to operate on tuberculous glands is in the anterior triangle of the neck, especially towards the upper part, and there one must remove not only the whole of the fat and fascia present in the anterior triangle of the neck, leaving the vessels, nerves, and other structures thoroughly clean, but if one is to avoid recurrence one must also thoroughly clean out all the tissues underneath the sterno-mastoid, so that the muscles on which the sterno-mastoid rests are completely bared. This cleaning-out process must extend backwards into the posterior triangle, and if glands are enlarged there one can very often by working from the front clear out even the greater part of the posterior triangle. In any case it is essential in removing glands from the anterior triangle, whether they be tuberculous or whether they be malignant, to remove all the material around the vessels, whether infected or not, and all the fat and glands underneath the sterno mastoid. Especially with regard to the latter, the removal must extend quite up to the mastoid process, because very often glands enlarge about the region of the transverse process of the atlas, and the material there must also be taken away.

The following is the operation which I perform in all cases where the glands of the anterior triangle of the neck are enlarged and require operation:

The incision varies according to the extent of the disease and other circumstances. The one which I use most commonly is an incision commencing on the edge of the sterno-mastoid, from half an inch to an inch below the ear, and running downwards in the line of the anterior edge of the muscle to a point opposite the cricoid cartilage. In some cases, especially in females, or where the disease is not extensive, the incision need not run so low. Another incision where the disease is not very extensive, or, in the case of women, where the scar should be as little noticeable as possible, is a shorter and more curved one, so as to fall more in the line of the natural folds of the neck. The incision begins a little lower and also further back than the first, and curves downwards and forwards till it ends close to the larynx at or above the level of the middle of the thyroid cartilage. The elasticity of the skin allows of retraction to a sufficient extent to get good access to the part. In both these cases, if an abscess is present, the incision should be so planned as to include the abscess in an oval incision.

A third incision suitable for the extensive enlargements causing deformity, described under No. 2, and involving not only the anterior but the posterior triangle, in fact, the whole side of the neck, is that introduced by Dr. Beatson of Glasgow, which gives very complete access to the parts, and although extensive, is very little noticeable. This is a curved or horse-shoe shaped incision, beginning over the upper part of the anterior triangle, just in front of the sterno-mastoid muscle at a point opposite the angle of the jaw, running backwards to the posterior triangle, curving down the centre of that triangle to the lower part, and then forwards again to the anterior edge of the sterno-mastoid at the lower part. This large flap of skin being turned forwards, free access is obtained both to the anterior and posterior triangles. The resulting scar is scarcely noticeable from the front, and the greater part of it is readily concealed by the hair and collar of the dress.

Whichever incision be made in the skin, the dissection is then carried down through the fat to the deep fascia, and the skin and superficial fascia are separated and cleared off the deep fascia over the anterior triangle. One should begin by exposing the edge of the sterno-mastoid muscle along the whole length of the incision, and then when one has exposed the sterno-mastoid muscle one can at its anterior border rapidly define the deep fascia, and then separate the tissues over the whole of the anterior triangle. Where a curved incision, such as has been described, is employed, it is also well to detach the skin and fat at the lower part of the wound for some distance, and then pull it down as far as possible by means of a retractor.

At the very lowest part of the wound an incision is then made through the deep fascia close to the edge of the sterno-mastoid muscle, and the jugular vein is defined. This is the key of the operation; the glands always lie close to the jugular vein, and are often adherent to the sheath of the vessel, and if one attempts to cut them out without previously seeing the vein, one may get into a great deal of trouble. But, by beginning at the lower part, below the area of enlargement of the glands, and exposing the vein and stripping up the common sheath, one can avoid any subsequent injury to the vein.

Having exposed the vein and divided the sheath, one can insinuate a separator, and in many cases also the finger between the sheath and the mass of glands. Where the vein is very adherent, and especially where the glands are very much matted together and suppurating, one is very apt to fail in getting the mass properly away by trying to peel it off from the jugular vein, and under these circumstances, the best plan is, having exposed the vein at the lower part, to ligature it in two places and divide it between the ligatures. Then, picking up the lower end of the upper part of the vein, insinuate the finger behind it so as to separate the vein along with the mass of glands forwards from the artery and vagus nerve. The loss of the jugular vein apparently does not make the slightest difference to the patient, and it makes all the difference as regards the ease of the operation, and also as regards the subsequent freedom from recurrence. Hence, probably, in the majority of cases—in all cases where there are sinuses, and practically all cases where suppuration is present—I make a point of dividing the vein between two ligatures and taking it away along with the mass of glands.

Having insinuated the finger either behind the vein or, if it is to be left, between it and the mass, one proceeds next to define the inner border of the anterior triangle. This can usually be readily done as the matting is generally more or less limited to the outer part, and by peeling the fat and glands from the carotid artery one can usually begin to divide the tissues upwards at the level of the side of the larynx. One or two large veins—namely, the superior thyroid, the lingual and facial veins, will be met with and, if the vein is being taken away, must be clamped before they are divided, These are freed and clamped in two places and then divided. the parts of the veins which run into the jugular vein being turned back with the mass. When the mass is turned outwards the vein can be seen running on its inner surface in cases where it has been divided below, and it should then be defined at the upper part, a ligature passed around it and tied as high as possible. The vein is then divided below that point, and the intermediate portion comes away with the mass. The descendens noni nerve can be preserved quite easily.

The next step in the operation is to ascertain the position of the spinal accessory nerve. This is usually readily done by turning back the edge of the sterno-mastoid and peeling off the fascia from its deeper surface; one very soon finds the point of entrance of the nerve towards the upper part, and can then usually pass the probe end of the separator upwards along the nerve, which often runs through the glandular mass, and thus define its course exactly In most cases it will be found that the mass of glands is divided into two parts by the spinal accessory nerve; the largest mass is usually below it, but there is generally also a considerable mass above the nerve. Having defined the nerve, one tears asunder the glands over it so as to expose it throughout its whole extent. And then, keeping the nerve in mind, one proceeds to separate the glands at the upper part. In this region it will usually be found that the mass is fairly firmly attached to the fascia over the transverse process of the atlas. This should be next divided, and then the glands and fat can be pulled down. In some cases where this forms the chief part of the tumour this is not so easily done; and Mr. Stiles suggests that the sterno-mastoid muscle should be divided at the upper part so as to expose the region

thoroughly. This certainly gives excellent access to all the tissues underneath that muscle, and is of especial value in the removal of malignant glands. Having separated the hands in this situation, one continues with the finger and dissector to bring down all the fat and glands beneath the muscle as far back as the upper part of the posterior triangle. Usually, having separated the glands from over the transverse process of the atlas, the glands further back, along with the fat, can be readily peeled down. This peeling down of the fat and glands beneath the sterno-mastoid muscle is continued until one can pull them right down below the spinal accessory nerve. Having once drawn down the mass underneath the spinal accessory nerve, one pulls the sterno-mastoid outwards and the nerve upwards, and then proceeds to clean the under surface of the sterno-mastoid muscle and the muscles beneath it so as to remove the whole mass of fat and glands in one piece. It is well, after having cleaned the tissues for some distance, to ascertain the point of exit of the branch of the spinal accessory nerve which runs across the posterior triangle to the trapezius muscle, and to take care to preserve this from injury. In this way one can also pull out a quantity of glands and fat from the posterior triangle, and this should always be done, whether they are affected or not. When the mass is removed a clean dissection of the anterior triangle and the parts underneath the sterno-mastoid muscle should be seen. In some cases glands are also present beneath the vessels, and in peeling off the vein it is well to try and take these along with it; if not they should be removed subsequently, and one should always investigate whether there are or are not glands in this situation.

If one proceeds in this methodical manner the chances of recurrence in the anterior triangle are extremely slight as all the glands are removed. Recurrence may take place in the posterior triangle lower down or anteriorly in the sub-maxillary triangle, but recurrence rarely if ever takes place in the anterior triangle itself, more especially in the cases where the vein is removed along with the other tissues.

It is well to bear in mind one other point—namely, towards the upper part of the incision one is very apt to catch a little twig of nerve which runs down under the jaw to the lower lip. The result is that there is paralysis of a little bit of the lower lip close to the angle, so that when the patient speaks or laughs the lower lip goes rather to the other side. This trouble can hardly be avoided in bad cases, but the patient may make his mind quite easy about it, because I have never seen recovery fail to take place. In two or three months the whole thing has disappeared again, and I believe the trouble is more often due to the division of the platysma than to division of the nerve, and when the platysma has firmly united again, and the scar is getting loose, recovery is, as I have said, complete. So that, although it is a thing which it is well worth trying to avoid, if it does happen it is not an occurrence which need give one the slightest anxiety.

In cases where the gland has undergone suppuration and the skin is quite thin, if the abscess is not large it is well to include the thin skin in the incision, and to avoid as far as possible rupturing the abscess cavity while dissecting out the gland.

In other cases where the abscess is large, and where therefore a large amount of skin will have to be taken away, I believe it is best to divide the operation into two stages, and in the first place to open the abscess and put in a small drainage tube, and then, in the course of three or four weeks, when the skin has recovered, and we have only a sinus running to the glands, to operate with the view of removing them. In this way less skin is taken away.

Where sinuses are present, which are usually septic, it is well before beginning the operation to scrape out the orifice of the sinuses, but not to go far in, and then to sponge the surface with pure carbolic; in fact, I usually take a tiny piece of sponge which has been soaked in undiluted carbolic acid, and push it well into the sinus. The incisions are then so planned that the sinuses are included between oval incisions, and care is taken not to open them in the course of the operation. The result is that I have hardly ever seen infection of the wound occur even in operations with septic sinuses. At the same time where one has operated in cases with septic sinuses, it is well to put in a drainage tube for a few days in case infection should have occurred, because one cannot under those circumstances feel anything like certain that infection will not take place. Where a drainage tube is employed it is well to perforate the skin behind the sterno-mastoid, and bring out the end of the drainage tube there; that allows the anterior incision to heal, and at the same time gives the most dependent point for drainage.

In cases where we have enlarged glands, both in the anterior and posterior triangles, which is often the case where the glands are causing a considerable amount of deformity, we may either remove these glands by two incisions, one such as I have described in front of the sterno-mastoid, and another running along the posterior border of the sterno-mastoid at the lower part, or employ the incision introduced by Dr. Beatson of Glasgow, which I have already described. When the flap has been turned forwards we can then proceed to the removal of the glands in the systematic manner just mentioned.

Where the posterior triangle alone is the seat of enlarged glands the main mass is usually just above the clavicle, and it can be removed either by a vertical incision running upwards and slightly backwards in the middle of the space, or by a triangular incision running backwards from the edge of the sterno mastoid along the upper border of the clavicle to the trapezius, and then upwards along the edge of the trapezius. In any case the essential point in this operation is to take care of the branch of the spinal accessory nerve running to the lower part of the trapezius; and this is very often difficult to do, because the glands run especially along this nerve, and are very apt to completely surround it. So that the first part of the operation would consist in detaching the fascia from the posterior part of the sterno-mastoid and finding the point where this nerve comes out. Then, having defined the nerve at the anterior part, a probe is insinuated along it, and the tissues divided over the probe, so that in most cases, with a little care, one can lay bare the nerve in its whole extent, and, having done so, free it and avoid injury to it afterwards.

At the lower part one will generally find that the glands run beneath the sterno-mastoid, and are attached to the jugular vein. In fact, when one pulls on the mass one can generally bring the jugular vein out behind the sterno-mastoid. Here the vein should be defined at the upper part, and then the sheath divided and the mass of glands detached from it. On the right side there is very little trouble about doing this quite satisfactorily; on the left side, at the lower part, one must bear in mind the presence of the thoracic duct, and avoid injury to it, for the glands are very apt to be pretty adherent in this region. One may also, in pulling the glands away too violently, pull out large lymphatic branches entering the duct, and so leave holes which may leak. Under the latter circumstances one need not be anxious, for though chyle may escape, still in the course of a short time the hole closes, and there will be no further trouble.

In cases where the glands affect the submaxillary region a curved incision from the centre of the lower jaw, carried downwards to the hyoid bone and then backwards and upwards to the angle of the jaw, will usually expose the whole area. In many cases the glands are very closely adherent to the submaxillary gland; and while one should always try to leave this gland if possible, in some bad cases it may be necessary to take it away. There is no particular point about this operation. It is a perfectly simple one. One may injure the facial vein and even the artery, but they are quite easily secured if necessary.

I need not discuss the extirpation of tuberculous glands in other regions. In the axilla one would make a curved incision, and turn down a flap from over the floor of the axilla and clear out the space. In the groin one must sometimes make T-shaped flaps; in other cases a curved flap with the convexity downwards below Poupart's ligament will expose both femoral and inguinal glands.

Leprosy in Crete.—Prince George of Greece, Commissioner-General of Crete, has invited Dr. E. Ehlers, a Danish physician who some years ago investigated leprosy in Iceland, to undertake a similar mission in Crete. It is estimated that there are from 2,000 to 3,000 lepers on the island. Dr. Ehlers will accordingly visit Crete this winter, and his inquiry will probably be extended over three or four months.

LECTURES
ON
PHARMACY AND THE BRITISH PHARMACOPŒIA.

Delivered before the Society of Apothecaries of London, November 21st, 1899.

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LECTURE I.

THE "PHARMACOPŒIA" IN ITS RELATION TO MEDICAL STUDENTS.

History.

MASTER, WARDENS, AND GENTLEMEN,—It is with some diffidence that I venture to address you on the subject of the *British Pharmacopœia*, because in this Hall we are surrounded by many influences which bear directly and largely upon the growth of pharmacy and the formation of the *Pharmacopœia*. We have above us the banners which remind us of the glories of the Society of Apothecaries in the past. We have in an adjoining room portraits connected with the early history of this Society, and of the King who granted the Charter; and I have to remember that, in speaking of the *Pharmacopœia* here, I am speaking to those who probably know more than myself of pharmacopœial processes and of the practice of pharmacy. This is one of the few societies in the City which remains as originally constituted—concerned with compounding drugs, concerned with the preparation of drugs, and concerned also with the education and examination of those who are engaged in these works. I may remind you, in this connection, that a Charter was granted to the Society in 1617 to undertake the examination of those who had been apprenticed as apothecaries, and following this Charter, a year later, the first *Pharmacopœia* was prepared by the London College of Physicians as the standard and guide in the compounding of medicines. The origin of the *London Pharmacopœia*, the forerunner of the *British Pharmacopœia*, is therefore closely linked with the Charter by which this Society examines candidates at the present time.

Although I hope to speak with becoming modesty, yet I feel that perhaps I know more than most people of the principles which actuated those who were concerned in the latest revision of the *British Pharmacopœia*. In the original form of the *Pharmacopœia* of the London College of Physicians it was stated in so many words that the *Pharmacopœia* was intended to be a "standard and guide" for those who conducted examinations in pharmacy, and these words, which occurred in the first *Pharmacopœia* of 1618, you will find are still retained in the present issue of the *British Pharmacopœia*; it is still a "standard and a guide," although it is not solely of value to those engaged in examining students; it presents "a uniform standard and guide, whereby the nature and composition of the substances to be used in medicine may be ascertained and determined."

Three classes of people are concerned in the preparation of this standard and guide: (1) the medical man, (2) the chemist, (3) the medical student.

The Students' Difficulties.

My sympathies are most on the side of the student, and in connection with my own work in the revision of the *Pharmacopœia* I was largely influenced by what I believed would meet the student's wishes. Considering that materia medica was not, perhaps a very attractive subject, I was actuated by the desire to make it less repulsive, more easy to understand and to remember. I therefore prefer speaking in this first lecture of the *Pharmacopœia* as it influences the medical student. In my student days the *Pharmacopœia* used to be rather a bugbear, that we heard of from time to time in our lectures; some of us might even have doubted its existence; we never saw it, never consulted it; or, on the other hand, a finger of scorn was occasionally pointed to it, as a book which contained many errors, and might lead to dangers in the examination room. It was a tradition that many doses were excessive and dangerous, and accordingly we were told not to answer too closely by the *Pharmcopœia*, not to be too implicit in our obedience to the authority originally intended as a standard and guide.

Another reason for speaking first of the relation of the *Pharmacopœia* to the student is that the medical student is somewhat in the position of a minor; he may have well defined opinions, but he has no voice in the compilation of the *Pharmacopœia*: he has no way of directly representing his difficulties with the subject; no means of getting his special requirements attended to. He really has to submit to the *Pharmacopœia* as he has to submit to other conditions of the existence to which he is born, such as measles, or whooping cough, and so he takes the *Pharmacopœia* on trust as one of the necessary evils of life, although there are many things with which he disagrees and cannot understand. This being so, one wishes from the student's point of view to represent a little more fully how it influences education, how it influences examinations, and how it influences textbooks. In all these connections the *Pharmacopœia* is the ultimate standard of authority; for instance, to take examinations, whatever may be the personal views of an examiner as to a pharmacopœial dose, he has to accept the answer given on the authority of the *Pharmacopœia*. That means, of course, that considerable care and considerable attention has to be paid to the dosage of drugs and to their arrangement with regard to the composition of the pharmacopœial preparations. The official doses should be those which would commend themselves to all practitioners and examiners. The *Pharmacopœia* is the ultimate appeal in any question of doubt. I do not know whether in these walls division of opinion ever arises between examiners who are not quite agreed as to the appropriate dose of any particular drug, but I have known the *Pharmacopœia* referred to under such circumstances. Hence from the student's point of view, whether it is right or wrong, the authority of the *Pharmacopœia* is final.

Further it influences the textbooks, and it also influences the whole future life of the practitioner, since in arranging these doses we hope to have put forward something definite for the student to learn; something that shall not require revision so soon as he passes into active practice. It is necessarily by this standard that those who compile textbooks of materia medica are guided.

The Descriptions of Drugs.

Of the needs of the student the most important is accuracy. First in regard to the description of drugs. The numerous specimens before me serve to illustrate the principles upon which the descriptions of the drugs in the *Pharmacopœia* have been based. A leading idea is that the drugs and the descriptions should tally; that when the *Pharmacopœia* describes a drug as a blue powder, it should require no effort of imagination for the student to realise what kind of colour the word blue means in the *Pharmacopœia*. I can remember perfectly well how, as students, we used to look at specimens and carefully consider the different points by which we should be able to recognise them again in the examination room, and when we once had made up our minds, we used afterwards to read the description in the *Pharmacopœia* as something that had to be applied, not to the specimen before us, but to something that existed only in the private collections, or perhaps only in the minds of those who compiled the *Pharmacopœia*. Now the difference between the descriptions and the actual drugs in our medical museums and in the examination room was one which shook the confidence of students very greatly. In the revision of the *Pharmacopœia* it was rather difficult sometimes to realise how this non-applicability of description came about, how anyone in all seriousness ever sat down and wrote a description which was so very unlike the actual thing. Colour blindness and idiosyncrasies have always to be allowed for, but still the portrait of the same person, painted by two different artists while showing each painter's particular method, should have some resemblance to the original; I mean that in spite of differences of method you should be able to recognise the individual. We were not always able to do this with the descriptions of former *Pharmacopœias*. I am not for a moment wishing to criticise or to find fault with those who compiled former *Pharmacopœias*, but merely to indicate my belief that their point of view was perhaps a little different from ours For instance, it is perfectly possible, in describing red iodide of mercury, to describe either what you

are able to obtain at every chemist's shop where you ask for red iodide and are supplied with a drug which, in its purity answers all requirements, or it is possible to describe such a specimen as I have here, which is really almost a chemical freak. It is a specimen of extraordinary beauty, in large crystalline plates, one that has been obtained with labour by a chemist, partly for his own amusement, partly as a museum specimen, but it is of no value for facilitating the recognition of mercuric iodide as an article of commerce.

Now the first idea in our descriptions at the present time is to describe good specimens, as pure as they can be obtained for medicinal use; for this purpose we must be able to obtain sufficient quantities of a drug, and these must be of sufficient purity to be safe from error. Mr. Martindale has kindly lent me numerous crystals of official drugs which are absolutely unlike anything described in the *Pharmacopœia*, or, indeed to be obtained, except in small quantity, at the cost of infinite labour; no good purpose would be gained by a painstaking description of these crystals; the official descriptions can only apply to articles of a reasonable degree of purity, such as can be used without risk to the patient, and without establishing an impracticable standard.

In its descriptions the text of the *Pharmacopœia* indicates any alteration that a crystal might undergo with age, with exposure to light, or to moisture; the words are so chosen that they shall exclude any such deterioration that crystals or vegetable preparations would undergo. They would exclude, as being below the standard, vegetable drugs, collected at times of the year when the particular part of the plant is deficient in active principles.

The Chemistry of the Pharmacopœia.

This is another point upon which the student requires accuracy, and it has given a great deal of trouble. It is inevitable in the course of the work to use numerous chemical terms, both with regard to the tests and the nomenclature. For instance, with the official names of crystalline salts, whether we should speak of ferrous sulphate or sulphate of iron, of mercuric chloride or perchloride of mercury, and so on. Numerous chemical changes of nomenclature have to be borne in mind. It was a question whether we were to speak of the subnitrate of bismuth or of the oxynitrate. In all these directions those responsible for the compilation of the present *Pharmacopœia* have been very careful to adapt it to modern needs. Chemical referees have carefully revised the proof sheets, and have thus kept every statement fully abreast of every modern advance of chemistry, for it is absolutely essential that the *Pharmacopœia* should not fall behind the times in that respect, and that students should not find a lack of harmony between the statements in the *Pharmacopœia* and those in their lectures and textbooks.

The synthetical work that has been undertaken with regard to substances like antipyrin or acetanilide has to be carefully considered, and we have to take the latest advances that have been made in representing the latest formula of each substance, and these, perhaps, are the points of the chemistry of the *Pharmacopœia* requiring the greatest consideration. The formulæ of organic compounds have been carefully revised, and are now believed to be in accordance with the most modern teaching.

Then, as influencing the education of the student, those who have compiled the *Pharmacopœia* have also been very careful in indicating the value of the tests to be employed in determining the purity of drugs, and a very great change has been made in stating not only what are the tests which will give reactions and will not give reactions, but in indicating what are the substances which we are looking for, and the presence or absence of which should be ascertained. In former *Pharmacopœias* the reactions were described but not explained.

The Botany of the Pharmacopœia.

The next point on which the student requires greater accuracy—and this affects chemists more than medical students—is with regard to the botanical terms employed. On this subject I do not propose saying much, because botany at the present time occupies such a very small proportion of the education of the medical student. I have examined in materia medica for some years, and it is very rare to meet with a colleague who has insisted upon having the full botanical name of a drug; for example, the name "aconite" is generally deemed sufficient. The student is rarely required to add a distinctive title to show which kind of aconite the specimen might be, though to be correct from the pharmacopœial point of view, and for descriptive purposes of the *Pharmacopœia*, we must indicate which variety of aconite is official. But, although a great deal of trouble has been taken with the botanical terms and descriptions, and a great deal of valuable assistance has been received from Dr. Thiselton Dyer and Professor Holmes, the Botanical Referees. I prefer to say very little about that side of the *Pharmacopœia*, as it is not at present of much interest or importance to the medical student. Long lists of the seeds, leaves, and barks of the *Pharmacopœia* are not now required at examinations. These lists do not indicate any knowledge of the value of the drugs, and they group together artificially and uselessly a large number of drugs which have no connection of action. There was nothing whatever in questions involving these lists to indicate the relative importance, say, of strophanthus seeds and of stavesacre or cardamom seeds.

Simplification.

The next requirement of the student is in regard to simplification. The medical student does not like to trouble himself to learn too much. He likes to understand the reasons of all detailed processes; when he is confronted with a long list of tinctures, infusions, or other official preparations, in which the method varies with the drugs, he is extremely apt to ask why different processes are employed. Thus, with the infusion of quassia and the infusion of calumba, he wishes to know why, in preparing the former, he is directed to use a covered vessel, while no such reservation is mentioned in connection with the latter.

The student requires simplification where simplification is possible. Where a large number of official preparations can be prepared on some definite plan, and where there are no cogent reasons why they should not be prepared on that particular plan, efforts should be made to meet this desire for simplification.

With regard to dosage, methods of preparation, and standardisation efforts have been made to simplify work. First, with regard to dosage, you will find that with one or two exceptions the tinctures have had their strength so modified that they can now be divided into two classes, so that the dose shall be either half a fluid drachm to 1 fluid drachm, or else 5 to 15 minims. This alteration, which simplifies the work of the medical student very much, was really undertaken by the Pharmaceutical Society with the utmost cordiality as soon as it was indicated from the Pharmacopœia Committee that it was desirable to obtain greater uniformity. At one time it was considered advisable to prepare the tinctures with the minimum expenditure of alcohol, to use alcohol of the minimum strength or quantity, to produce a fluid which should possess a definite medicinal action, and the consequence was that, as the solubility and the activity of different drugs vary greatly, the doses of tinctures extended over a wide range. Now the point to be determined was whether it would be possible, either by using a stronger form of alcohol, or a weaker, to bring the weak tinctures up and the strong ones down, so that the dose would be practically the same for at least two groups of tinctures. An easy way for the student to remember to which group any particular drug belongs is to ask himself, "Is this a drug possessed of strong, of active, of possibly violent physiological properties? Is this a drug, for instance, I need feel any anxiety about?" If so, its dose will be small. If it is not possessed of such active properties its dose will be large.

Many of the modes of preparation have been similarly simplified. With regard to standardisation this is a question which concerns chemists and medical men perhaps far more than students, so that I will reserve my remarks on it for the present.

Omissions.

The third direction in which the student is greatly concerned in any revision of the *Pharmacopœia* is with regard to the elimination or the removal from the book of any substance that is unnecessary. With the examinations of the University of London, where there is no syllabus for materia medica, it is in the power of the examiner to ask any question

concerning any pharmacopœial drug; and hence it is of extreme importance that a student should know why many substances that are not used, or that are rarely used, should not be removed from the list of articles contained in the *Pharmacopœia*.

From a student's point of view the list of omissions is the most important and most satisfactory feature in the new *Pharmacopœia*. There is a long list containing, I think, 188 articles of one sort and another that were included in the *Pharmacopœia* of 1885, and are deleted from the *Pharmacopœia of 1898*. With regard to this list of omissions a great deal of trouble was entailed, and in some of the initial steps which led to these deletions I had a large share. I feel satisfied in having got these out, but I should have been better pleased if we had whittled down the *Pharmacopœia* still further, and in looking over the list of omissions I do not for a moment regret the exclusion of any single drug or preparation.

The following question presented an initial difficulty: "On what principle is it to be decided that a drug is of no further value, or that its inclusion in the *Pharmacopœia* is no longer desirable?" While the first principle of the *Pharmacopœia* is to indicate the standard of purity of the substances used in medicine, there is no justification for retaining any drug that is not used with reasonable frequency by the general practitioner. Now with regard to the inquiries which were made by the Pharmacopœia Committee, much assistance was given by a large number of authorities, including the Royal College of Physicians of London, and the Society of Apothecaries of London, as recorded in the Preface. It was possible, however, that the opinions expressed were mainly those of teachers and consultants, and that they might scarcely represent the views of general practitioners. Information of great interest and of a more wide-spreading character resulted from private enterprise; I mean from such inquiries as were undertaken by Mr. Martindale, for instance, who had investigations made in several large centres of the last 2,000 copies of prescriptions of pharmacopœial substances. These indicated the number of times that a drug was used in these centres, and in that way a list was prepared which showed the degree of popularity attaching to each drug. This list is of value, but it fails just where the list of recommendations obtained from the different examining bodies had failed before; it does not indicate what the general practitioner uses. It is of very little use to consult the prescription books of chemists, which only show how often certain drugs are prescribed. We do not in that way find out the drugs used by the general practitioner; this analysis cannot represent what the doctor uses who dispenses his own drugs. Now, to meet that objection yet another investigation was undertaken by the Therapeutic Committee of the British Medical Association, and some of you may remember that a mysterious letter was sent round in which you were asked to indicate the relative frequency of your employment of certain drugs. It consisted of a table that was drawn up into three columns, marked:

Often.	Rarely.	Never.

Although from the first it was obvious that these lists contained numerous errors and must be used with discretion, they were of much service as an indication of the extent to which certain drugs had dropped out of use, and could therefore be omitted from the *Pharmacopœia*. To this inquiry, however, I shall have to refer more fully in my next lecture.

The French Medical School of Beyrout.—The Medical School of Beyrout, Asiatic Turkey, which is under the direction of Jesuit Fathers, has recently obtained a charter enabling it to grant licences to practise. The number of students has been steadily increasing for some years, and is now about 150. An extensive piece of land has recently been acquired, and on this site a new school is to be erected at an estimated cost of two millions of francs (£80,000). The French Government has promised a substantial subvention. A jury of examiners has recently been appointed, with Professor Cornil of Paris as President, the other members being Professor Mayet of Lyons, Dr. Walther, *agrégé* of the Paris Faculty, three professors of the Medical School of Constantinople, and the Professors of the Faculty of Beyrout.

THE CHANGES IN THE CENTRAL NERVOUS SYSTEM OF TWO CASES OF NEGRO LETHARGY: SEQUEL TO DR. MANSON'S CLINICAL REPORT.

[With Special Plate.]

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Two cases of Congo sickness, brought to England by Dr. Grattan Guinness, were admitted into Dr. Abercrombie's wards at Charing Cross Hospital last year, and for a short time were under my care; and a lecture with an account of these two cases was delivered by Dr. Manson, and reported in the British Medical Journal. These patients subsequently died, and the central nervous systems were handed to me for investigation. Before proceeding to describe the changes which were found and which are illustrated in the accompanying micro-photographs, it will be well to remind my readers of the principal clinical phenomena presented by the patients during their illnesses. I am enabled to do this by making a summary from the case-book notes carefully abstracted by the house-physician Mr. Clogg, to whom I wish to express my obligations.

Case I.—Eli Mboko, aged 20, was a Congolese school teacher of exceptional talent, speaking English perfectly, and having translated a book from English into his native language. His illness commenced twelve months before admission to the hospital on September 24th, 1898. Previously cheerful, interested in his avocation, he became vacant-minded and miserable, with little interest in his daily work, and as the disease progressed he would frequently fall asleep while at his work. These symptoms became more pronounced as time went on, but during his voyage to England he appears to have improved a little. Upon admission to the hospital, he was found to be fairly well nourished. The skin had to some extent lost its natural glossy condition, and there were a few papules over the abdomen. There was a general enlargment of the lymphatic glands, but they were discrete, and not anywhere massed together.

Nothing abnormal was found in the thorax or abdomen. Parchment scars on the fronts of both legs were evident. Examination of the eyes by Mr. Treacher Collins revealed nothing abnormal.

Examination of the fæces showed presence of the ova of the following parasites: Ankylostoma duodenale, trichocephalus dispar, ascaris lumbricoides (these parasites were treated successfully by anthelmintics). Examination of the blood by Dr. Manson on numerous occasions showed nothing markedly abnormal except the presence of the embryo filaria perstans, although there was some slight degree of anæmia.

The striking features to be associated with the nervous lesions, and which continued and progressed till the fatal termination, were:

1. Lethargy and a tendency to sleep the greater part of the day. From this drowsy condition the patient could always be aroused.

2. Slowness of speech without any tremor and without any noticeable change, except that there was an unwillingness to respond to questions owing to a sense of fatigue and drowsiness. The reaction time, as denoted by the time taken to frame an answer in response to a question, was much prolonged. When the patient spoke he usually made a curious grimace—elevation of the upper lip and nostrils.

3. Progressive motor enfeeblement, paresis like a man who had suffered a long illness. His gait also was that of weakness rather than paralysis or ataxy. He shuffled along, hardly lifting his legs from the ground, and with a wide base. Occasionally he would reel; there was nothing noteworthy about the reflexes, but the muscles, as indeed the whole body, were wasted, although the appetite was fairly good. There was no loss of sensation, and he complained of no definite pain except a pain in the back of the head, which he had had early in the illness. He suffered for some weeks with gingivitis.

4. The temperature until just towards the end of life, when hyperpyrexia occurred, was either normal, subnormal, or

very slightly raised, and the pulse denoted low arterial pressure.

The condition of the patient did not show any very marked change until about three weeks before he died, when he was noticed to breathe very deeply, and the alæ nasi could be seen working. Examination of the chest revealed nothing, but his breath was very fœtid. He had no cough; respirations were never more than 28. Two days before death a marked dyspnœa occurred. Respirations now became 48 to 56, and were very irregular. Only a little bronchitis and hypostatic congestion could be ascertained by physical examination, and his temperature rapidly rose on February 11th and continued until the night of February 13th, when in the axilla the thermometer recorded 108·6°, and he died. His weight on admission was 7 st 3 lbs., at death 5 st 7 lbs. The fœtid breath which occurred some weeks before his death could be accounted for by a fœtid expectoration which he coughed up. It was turbid, blood-stained, and very foul; it no doubt came from an abscess which was found *post mortem* in the lung. Whether it was the cause of the hyperpyrexia or not it is difficult to say. Muscular tremors were observed only during the last hours of life, and there were never any fits or twitchings or periods of maniacal excitement during the course of this patient's illness.

Necropsy.—The following is an abstract of the notes of the necropsy made by Dr. Hunter. Body very emaciated; no rigor mortis. All the organs, with the exception of those mentioned especially may be considered as having presented normal appearances although wasted. In the upper lobe of the left lung there was a small nodule half an inch in diameter, which on section proved to be a small abscess cavity containing thick pus, which on microscopical examination was found to contain an immature disorganised parent worm. Close to this were two smaller abscesses. The pus-containing cavities were close to a branch of the pulmonary artery, but there was no connection, nor did there appear to be any connection between these abscess cavities and the bronchi. The lungs otherwise appeared healthy. No ankylostomata found in the duodenum. An adult filaria was found by Mr. O'Neil in the retroperitoneal tissue near the aorta, and also several others at the root of the mesentery. These were subsequently identified by Dr. Manson as identical with those described by Dr. Daniels as occurring in the Buck Indians of British Guiana. The heart was very small, weighed only 5½ ozs., and the muscle had a pale hyaline appearance. Central nervous system: Removal of the skull-cap; the calvarium dense and hard, rather thin, symmetrical. Dura mater not adherent, longitudinal sinus empty. No marked excess of cerebro spinal fluid, ventricles neither dilated or granular. Slight pia-arachnoid thickening; right hemisphere, weight 1 lb. 6 ozs.; left, 1 lb. 6 ozs.; cerebellum, 6 ozs. Convolutions not wasted complex, and to all appearances a very well-formed brain. The spinal cord and spinal ganglia showed nothing abnormal to the naked eye. They were preserved in 5 per cent formalin, and subsequently the portions were hardened in various fluids for microscopical examination.

The change which I believe essential to this disease was found in both cases, and will be described with the next case.

Case II.—Tenda Mkaloo, aged 11, admitted September 24th, 1898. This patient was unable to speak English, and his fellow sufferer conversed with him and for him. Supposed date of illness three or four months prior to admission. He was carried into the hospital partly on account of his weakness, partly on account of his drowsy condition. Weight 3 st. 11 lbs. Very emaciated, and there was a certain amount of proptosis, for the eyelids did not meet during sleep, the sclerotics being visible. Skin dry and lustreless, covered on the thorax and abdomen with numerous papules. Marked pruritus, slight conjunctivitis and excessive lachrymal secretion. Marked dribbling of saliva, fœtid breath, tongue furred but moist: lips dry and covered with dry epithelium. Hair was not tinged red; he was evidently full of fear, and whether this was the cause of his disinclination to palpation or whether it was actual pain could not be discovered. There was general glandular enlargement, as in the other case, only more marked. He constantly put his hand to his neck, which appeared to pain him; the cervical glands were much enlarged. Thorax, heart, and lungs normal: abdomen uniformly enlarged and flaccid; spleen, extended to the level of the umbilicus, was hard and smooth, and the edge sharp, not tender. Edge of liver could be felt three fingers' breadths below the costal margin, sharp; surface of the liver smooth, not tender. Fæces contain the same parasite as Case I. Eyes, examined by Mr. Treacher Collins, found to be normal.

The patient presented the same characteristic features as regards mental and motor enfeeblement (but more marked), combined with lethargy, and a mournful expression, as Case I, except that the knee jerks were slightly exaggerated and plantar reflexes brisk; moreover, towards the end of life epileptiform convulsions, contracture of the limbs, retraction of the head and neck, unconsciousness, and Cheyne-Stokes breathing developed, but no hyperpyrexia.

Examination of the blood by Dr. Manson showed the presence of the embryo filaria perstans, but nothing else noteworthy is recorded. The intestinal parasites were cleared out with thymol, and his general condition and weight improved. Decrease in size of the liver, spleen, and lymphatic glands took place. Six weeks after admission some cervical glands were removed by Mr. Boyd, and 5 c.cm. of blood was withdrawn from the median basilic vein in the arm by means of an aseptic syringe. No benefit resulted from operation.

Dr. Bulloch placed 2½ c.cm. into each of two tubes of bouillon. He also attempted to make cultures from the gland on glycerine agar. None of the cultures had grown at the end of three weeks, he therefore came to the conclusion that no ordinary micro organisms were contained in the blood or glands. Neither could I by staining sections show tubercle bacilli in the glands. I regret, however, that lumbar puncture was not performed and cultures taken from the cerebro-spinal fluid.

On February 4th a fine tremor of the right hand developed, and a few days later a tremor of left arm and hand. The gums became spongy, and there was a foul smelling discharge from the mouth. A little later retraction of the head and neck occurred, and he began to pass his urine under him. Then on February 14th contracture of thighs on abdomen and legs on thighs noted, and he was frequently found crying and moaning as if in great pain. The knee-jerks were active, and there was no ankle clonus. His appetite failed, and he could only take fluid nourishment.

On February 21st the first fit occurred, and was succeeded in twelve hours by seventy-five others. They started with conjugate deviation of head and eyes to the right, the right side of the face was drawn, the jaws were at first clenched; the eyelids opened and closed very quickly, and the eyeballs were jerked from side to side. The arm was next flexed at the elbow and wrist, and the fingers flexed into the palm. The right leg then became rigid.

After the clonic spasm there was relaxation of the right side, and the left side passed through a tonic and clonic stage. At first the convulsions lasted for from 2½ to 3 minutes, and they followed one another in rapid succession. Later there was a greater interval between the fits, and they were of shorter duration, and did not extend to the left side of the body. The breathing in the interval between the fits (when there was any interval) was at first quite regular and shallow, about 24 per minute. During the two following days the patient had 23 more fits, making altogether 98 in three days. The temperature during the fits was 103° on an average. The breathing became irregular, and was at one time typical Cheyne-Stokes. The patient was completely unconscious during the fits, also during the intervals which were short, but when, later, a longer interval took place, he became semiconscious. Occasional irregular spasms followed, twitching of the face muscles, especially of the left side and risus sardonicus, with a peculiar catching breathing as if there were spasm of the diaphragm. Bedsores began to appear on the trochanters and sacrum. On March 12th patient appeared to be in great pain, crying out frequently, so that he had to be placed in a special ward. He had to be fed by the nasal tube. On March 19th patient had 94 more fits, similar to those previously described. He continued to have epileptiform fits, and later there appeared to be paresis of the right facial muscle and arm, as he was never seen to move the latter, although he did his left arm. On March 19th the temperature became subnormal, never rising above 96° until his death on April 2nd.

During the last few days of his life he had several fits a day, and the rigidity seemed to pass off in a measure. He was quite unconscious at the end, and appeared to have paralysis of the muscles of deglutition.

Necropsy.—The following is the report of a *post-mortem* examination made by Dr. Hunter: Body extremely emaciated, weight 3 stone. Bedsores on all prominences. Relations of organs in the thorax and abdomen natural. Mesenteric glands enlarged. No pleural or peritoneal effusions. Bronchial glands enlarged. Right lung, lower lobe exhibits a consolidated patch with recent lymph on pleural surface. On section this appears like a tuberculous mass with circumscribed pneumonia. Discrete nodules, shot like to feel, exist throughout the lungs. No cysts or abscesses. Heart small, muscle shows brown pigmentation. Kidneys small, each 2½ ounces, natural appearance. Thyroid, spleen, stomach normal, also intestines, with exception of duodenum, which shows a few patches of congestion here and there. Liver apparently normal in appearance. Bladder normal.

The brain was taken out soon after death. The dura mater was adherent to the calvarium. The cerebro-spinal fluid was slightly turbid, but colourless and in excess. The pia arachnoid over the convexities was thickened and opaque, but could be stripped without erosions, no marked flattening of convolutions nor wasting. The ventricles were not dilated and the ependyma was not granular. The spinal cord and ganglia were removed and appeared healthy except at the lower part where there was inflammation of the meninges due to extension from the large and very deep sacral bedsore. No doubt the gelatinous yellow deposit around the roots of the cauda equina was due to extension of septic inflammation from the bedsore The cerebro-spinal fluid was examined for micro-organisms by cultures, etc., and various organisms including diplococci, streptococci pyogenes, and bacilli were found, but, of course, under the circumstances no importance could be attached to these observations. Embryo filar a were found alive in this fluid (which, however, contained a little blood) thirty-six hours after removal from the body. Both in this case as well as Case I the pituitary body was in all respects normal. In both cases after hardening in 5 per cent. formalin the central nervous system and especially the medulla showed marked puncta cruenta. The vessels of the brain in neither showed any naked-eye abnormality. Portions of the brain, basal ganglia, pons, medulla, spinal cord, cerebellum, and spinal ganglia were hardened respectively in alcohol, Muller's fluid, Marchi's fluid, and 5 per cent. formol, and after fixation were embedded in celloidin or paraffin; thin sections were cut and stained by Nissl, Marchi, and Marchi-Pal methods. The microscopical appearances in both cases exhibited essentially similar but not identical conditions. There were in both instances lepto-meningitis and encephalo-myelitis. Throughout the whole central nervous system, but especially in the medulla and at the base of the brain, sections showed the pia arachnoid infiltrated with mononuclear leucocytes, the inflammation could be traced along the blood vessels and septa into the substance of the nervous system (*vide* Figs. 1, 2, 10).

The perivascular lymphatics around both large and small vessels were crowded with these lymphocytes. The left cerebral hemisphere of Case II showed a more intense inflammation than the right, and the infiltration of the membranes was more marked, which very probably may be associated with the right-sided fits, especially as one found in the motor region of this side more disorganisation of cells (*vide* Fig. 8)

Sections were stained by Gram, Pfeiffer, and many other methods for micro-organisms, but with negative results. Considering the universal evidence of intense chronic inflammation, the wonder is that the ganglion cells did not present more marked evidence of disorganisation. By Nissl method the cells of the cerebral cortex in the motor region of Case I showed a normal outline, but scattered through the substance, especially in the pericellular spaces, are the small round nucleated cells (*vide* Fig 9). In all other parts of the nervous system of Case I the outline of the cells is fairly normal, but owing to the hyperpyrexia characteristic bio-chemical change had taken place in all the nerve cells. The Nissl bodies were neither visible in the cells nor upon the processes, the whole neuron being uniformly stained by the dye instead of the normal differentiation into achromatic and chromatic substances (*vide* Figs. 6, 7, 9). The columns of Meynert were preserved, and if there had been no hyperpyrexia I doubt if much change would have been visible in the neurons.

In Case II the cortex cerebri, especially of the left side, showed more marked cellular, but not very much more marked perivascular, changes. The columns of Meynert were disorganised, the outline of a great many of the pyramidal cells, large as well as small, altered and irregular, indicating disorganisation and destruction (*vide* Fig. 8, and compare with Fig. 9 from Case I). In the spinal cord and various other parts of the central nervous system numbers of cells of fairly normal appearance existed, and in these the Nissl bodies appeared natural (*vide* Fig. 3). The medulla showed to the naked eye marked congestion of the vessels; and, microscopically examined, the evidence of chronic inflammatory reaction around the vessels and in the membranes was profound. Very many of the nerve cells were shrunken and atrophied, others showed chromatolysis, and not many normal cells were discoverable (*vide* Fig. 11).

Fibres.—Sections of the brain and spinal cord were stained by Marchi and Marchi-Pal methods. Nothing abnormal was found in Case I, with perhaps the exception that the tangential and supraradial fibres were not quite so numerous as normal. In Case II there was obvious atrophy of both these sets of fibres, and also to a less degree of the interradial fibres in the motor regions of both hemispheres, but especially the left (*vide* Figs. 12 and 13).

Examination of the spinal cord showed no degeneration or sclerosis in Case I, whereas in Case II there was a slight diffuse sclerosis (*vide* Fig. 5) in the pyramidal tracts, especially of the right side, with recent degenerated fibres. There was no degeneration in the anterior or posterior roots. The arteries showed no endarteritis in either case, but in the choroid plexus there were numerous psammomata, caused, I believed, by degenerated and occluded vessels. The epithelium appeared quite normal. The spinal ganglia showed the same evidence of a chronic inflammatory process; but with the exception of the hyperpyrexial change of Case I, the cells appeared otherwise fairly normal. The central canal of the spinal cord was filled up with proliferated glia tissue in both cases.

REMARKS.

The condition common to both cases was a meningo-encephalo myelitis. MM. Regis and Gaide[2] have attributed the symptoms to a diffuse meningo-encephalitis of infective origin. They described, however, the clinical symptoms only of a case observed in the region of Timbuctoo; but, so far as I know, this is the first detailed microscopical examination which has been made.

With the exception of the lymphatic glands and duodenum, the examination of the other viscera revealed nothing noteworthy. Sections of the lymphatic glands showed a proliferation of lymphocytes, and section of the duodenum showed also a large number of lymphocytes, and increase of size of the lymphoid nodules.

Both the clinical history and the morbid appearances point to a chronic process. It only affects negroes in West Africa, and it is here, though not exclusively, that the filaria perstans occurs. We might therefore attribute it to this parasite, but to my mind the evidence is insufficient. Some authorities have thought that it might be due to bad food, thus resembling in its etiology pellagra and lathyrism. This is not altogether unlikely, for there are certain clinical features resembling pellagra. Possibly it is due to some infectious organism for which a suitable stain has not yet been found.

I will, however, not speculate further upon the pathogeny of the disease, although I cannot refrain from pointing out that in my opinion the poison acts especially upon the lymphatic system, and particularly that of the central nervous system. The lethargy, together with progressive motor and mental enfeeblement could be explained either by the action of a toxic agent, circulating in the cerebro-spinal fluid, upon the vital activities of the neurons, or simply by the accumulation of lymphocytes around all the blood vessels interfering with the metabolic exchanges between the blood and the nervous elements. Although the existence in such abundance of mononuclear leucocytes would rather indicate the existence and prolonged action of a noxious agent

which would be capable of damaging the nervous elements. The mechanical theory, however, has some support, seeing that a somewhat similar condition of drowsy stupor, progressive paresis, and dementia, with epileptiform convulsions, may be brought about by internal hydrocephalus occasioned by tumour of the third ventricle. Whether the hyperpyrexia in Case I can be attributed solely to the encephalomyelitis I cannot say, seeing that there was a fœtid abscess in the lung, but I think it is quite possible. The right-sided fits, the muscular tremors, and the contracture in Case II were undoubtedly due to the inflammatory changes, with irritation, and destruction of the nervous elements in the cerebral cortex, especially of the left hemisphere.

Another question might be asked: Is this a nervous manifestation of constitutional syphilis, akin to general paralysis, which also by some authorities is considered to be a primary meningo-encephalitis. The geographical and epidemiological character of the disease, together with the absence of granular ventricles and the universal inflammatory condition, is against this hypothesis, although sections of the motor cortex of Case II might upon microscopical examination pass for general paralysis; but I have never, in the most acute forms of general paralysis, seen so much and so general an inflammatory condition of the vessels; yet the nerve-cell changes of this disease, which may last years, are slight in comparison with that other almost invariably fatal disease, general paralysis. This offers to my mind a strong argument in favour of the theory that general paralysis is a primary degeneration of the neuron with secondary inflammatory changes.

Neither Dr. Bulloch's observations nor my own support the observations and experiments of MM. Gagigal and Lepierre, published in the *Comptes Rendus de la Société de Biologie*, January, 1898, in which they claim to have isolated a bacillus from the blood which grows upon serum, upon gelatine, and in bouillon. These authors claim to have produced the disease in animals, but MM. Brault and Lapin obtained some of the cultures, and were unable to confirm the results (sur l'Etiologie et la Pathogénie de la Maladie du Sommeil, *Archives de Parasitologie*, etc., July, 1898. Again. M. Marchand (Rôle du Pneumocoque dans la Pathologie de la Maladie du Sommeil, *Annales de l'Institut Pasteur*, March, 1899) attributes the disease to the pneumococcus, rather by inference than proof. Still, I regret that Quincke's lumbar puncture was not performed and the cerebro-spinal fluid tested as I suggested.

The negative evidence obtained by Dr. Bulloch and myself as regards micro-organisms does not preclude the possibility that the disease is due to a living organism, for no organism has been discovered in rabies, nor has a specific organism been found for syphilis.

Valuable confirmation of these observations has been afforded me by the courtesy and kindness of Dr. Stephen Mackenzie. Having read the very interesting clinical report of a case under his care in 1890, published in vol. xxiv of the Clinical Society's *Transactions*, I wrote asking him if any microscopical examination of the central nervous system had been made. He kindly sent me a box of specimens in admirable preservation. The collection contained sections of most of the organs and included sections of the occipital and temporo-sphenoidal lobes, also of the corpus striatum. The specimens were stained with carmine and logwood and eosin; they showed the same evidence of chronic meningo-encephalitis that I have detailed in the above cases. All the perivascular spaces were crowded with mononuclear leucocytes; but the method of hardening and staining employed did not lend itself to a study of the condition of the nerve cells. It is therefore highly probable that meningo-encephalitis is the constant lesion of this disease.

In conclusion, I wish to express my indebtedness to Dr. Manson and Dr. Grattan Guinness for giving me the opportunity of making the above investigation.

DESCRIPTION OF PHOTO-MICROGRAPHS.

Fig. 1.—Anterior median fissure of lumbar enlargement, Case I. Congested vessel and membranes infiltrated with mononuclear leucocytes. Magnification 150 diameters.

Fig. 2.—Section of medulla, Case I. Stained by Nissl method, showing perivascular lymphatics, greatly distended and filled with mononuclear leucocytes. The blood in the small vessel in the centre shows five leucocytes. Magnification 250 diameters.

Fig. 3.—Anterior horn cell from the first sacral segment, Case II. Stained by Nissl method. Magnification 600 diameters. This shows a fairly normal cell; the Nissl bodies are seen upon the dendrons and in the body of the cell. The surrounding tissue shows a large number of leucocytes, and the chronic inflammatory changes in the vessels and membranes were very intense, yet there were many cells in the section as normal in appearance as this one, although there were some which showed some change in the chromophilous substance.

Fig. 4.—Central canal of the spinal cord, cervical region. Stained by Nissl method. Magnification 100 diameters. The canal is filled up with proliferated glia tissue, and there is a proliferation of the ependymal cells; exactly the same condition was found in Case II.

Fig. 5.—Cross pyramidal tract showing slight sclerosis and recent (black) degenerated fibres. Mid-dorsal region of spinal cord, Case II; right side. Magnification 200 diameters.

Fig. 6.—Anterior horn cell first sacral segment, Case I. Stained by Nissl method; magnification 600. There is no abnormality in the form of the cell, but the Nissl bodies are absent on the processes and in the body of the cell, the whole "neuron" being stained a uniform dull diffuse purple. The nucleus is especially distinct and unstained; the nucleolus deeply stained. This change was undoubtedly due to the hyperpyrexia, and is in no way connected with the disease. The cells throughout the central nervous system showed this acute change brought about by the high fever. If the patient had died suddenly from some other cause it is my opinion that the Nissl reaction of the cells would have been normal. Contrast Figs. 3 and 6. There are far more leucocytes in the surrounding tissue in Fig. 3.

Fig. 7.—Medium sized pyramidal cell from the third layer of the motor cortex, Case I. Nissl staining, magnification 750 diameters. There is chromatolysis, and the whole cell is stained a diffuse purple, consequently no Nissl bodies are evident on the processes. Two mononuclear leucocytes can be seen close to the body of the cell, and many others were observable on altering the focus. A dark strand can be seen passing from the apical dendron through the body of the cell and out by the axon, doubtless continuous fibrillæ, which are made evident by the pathological change.

Fig. 8.—Section of sensori-motor cortex, Case II. Stained by Nissl method. Magnification 200. The columns of Meynert are not seen; the cells are irregular in shape. Their processes are broken off; the small vessels are congested; and the appearances are not unlike those of acute general paralysis; but no spider cells were seen in the superficial layers. Contrast this with Fig. 9.

Fig. 9.—Section of sensori-motor cortex, Case I. Stained by Nissl method. Magnification 200. The cells are of good shape, although imperfectly and diffusely stained. The apical processes are of normal outline, and the columns of Meynert are not destroyed. There are numerous capillaries surrounded by deeply-stained leucocytes, and the same are seen in the perivascular lymph spaces.

Fig. 10.—Occipital region of cortex cerebri, Case II. Magnification 150 diameters. Perivascular lymphatic is seen in the subcortical white matter filled and and distended with mononuclear leucocytes; also a large number in the surrounding tissue. It may be here remarked that every vessel in the whole nervous system showed appearances more or less as marked as this.

Fig. 11.—Section of medulla, Case II. Stained by Nissl method. Magnification 250 diameters. Two small veins cut obliquely are seen side by side, with the perivascular sheath distended and filled with mononuclear leucocytes; in the neighbourhood are some nerve cells shrunken, and with their processes gone, apparently in a degenerating condition.

Fig. 12.—Section of sensori-motor cortex, Case I, stained by Marchi-Pal method. Magnification 200 diameters. The horizontal tangential fibres which lie on the surface of the convolutions, and which correspond to the axons of the molecular layer of Cajal, are seen in fair abundance. Contrast with Fig. 13.

Fig. 13.—Section of sensori-motor cortex, Case II. Stained by Marchi-Pal method. Magnification 200 diameters. The tangential fibres are here almost entirely destroyed. It is probable that the decay and death of these cortical structures was associated with the epileptiform fits which occurred in the later period of the illness.

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[1] December 3rd, 1898, p. 1672. [2] *Presse Médicale*, October 1st, 1898.

REPORT ON AN OUTBREAK OF TYPHOID FEVER AT SHOEBURYNESS ATTRIBUTED TO EATING COCKLES.

BY

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and

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SHOEBURYNESS is an urban district at the extreme south-east of the county of Essex, bounded on the south by the Thames, on the east by the German Ocean, and on the north and west by the Rochford Rural District, of which until recently it formed a part. Nearly the whole of this area has a high death-rate from typhoid fever, and every autumn outbreaks of greater or less intensity occur.

The population of Shoebury at the last census was 2,990, but

it is now believed to be over 4,000. This does not include the garrison or school for gunnery which is within the district. It is on the London clay, but this is covered, save along the coast, by beds of post-glacial gravel and sand and by brick earth. The abundance of the latter causes brickmaking to flourish, and a considerable portion of the population is employed in the brickfields. The whole area is fairly flat, but it is well above the sea level.

Until about two years ago the town devived its supply of water from shallow wells, most of which were liable to serious pollution. The present supply is from a deep well piercing the London clay, and yielding a supply of great organic purity. The waterworks were designed by Mr. Mansergh, and the works carried out under the supervision of his firm. They appear to me to be very satisfactory, and except in the outlying portions of the district, the population is now supplied from the works. Many wells have recently been closed.

The town is sewered, but certain of the sewers have little fall, and have no automatic flushing arrangement. There are three outfalls on the beach for the crude sewage. The most important one, the eastern outfall, has just been extended seaward 300 yards, but there can be no doubt that with the incoming tide the sewage, highly diluted, is carried over the beach (clay and sand). On this beach cockles (and other shell fish, mussels and winkles) are found in some abundance. Cockles are collected when the tide is down, by children and others, and it is not unusual for such people to force open the shells and eat the fish in an uncooked condition. They are, however, chiefly taken home and cooked by steaming in a saucepan until the shells are all open. The cockles are placed in a covered saucepan with a little water and then put over the fire. As soon as the water boils, or even before, the shells open, and this is the sign of their being cooked. It is tolerably certain that this method of cooking does not effect sterilisation.

There are 497 waterclosets connected with the sewers. The scavenging is fairly satisfactory, the few remaining pail closets being emptied three times a week and the ashbins weekly. There is a certain amount of overcrowding. This is decreasing on account of recent building operations, but house rental is high, and many recently-erected houses contain two families. There is no isolation hospital. An arrangement has been made to send patients to the Rochford Rural District Hospital when that is completed.

In the brickfields a great deal of house refuse (soft core) from London is used. This is brought by barges and chiefly used in brick burning. The burning causes an effluvium nuisance the prevention of which has occupied much of the attention of the District Council, but it has not as yet been found possible to take any steps to prevent the nuisance without injuriously affecting the industry upon which so much of the prosperity of the town depends.

Order of Infection.	No. of House.	Date of Notification of First Case.	Date of Notification of Subsequent Cases.
1 ...	No. 8	F., 15, July 10th	M., 2, August 16th. M., 3 August 18th. F., 6, August 20th.
2 ...	No. 9	F., 13, August 13th	M., 19, August 29th. M., 38, September 6th. M., 8, September 6th. M., 15, September 11th. F., 10, September 22nd. M., 4, September 22nd.
...	No. 6	M., 7, August 29th	M., 32, September 20th.
...	No. 4	M., 9, September 5th	M., 2½, September 9th. F., 30, September 9th. F., 7, September 11th. M., 36, September 17th.
3 ...	No. 5	F., 27, September 15th M., 10, September 15th	
4 ...	No. 7	M., 25, September 16th M., 20, September 16th	
7 ...	No. 10	F., 3, October 24th	

Out of the 10 houses, 7 have been infected, and there have been 23 persons attacked.

In the early part of the present year there had been few cases of typhoid fever; 1 in April, 2 in May, and 1 in June. There was a five weeks' interval between the last case in May and the one in June. This latter case the medical officer of health suspected to be due to eating cockles picked up from the beach. On July 10th a case was notified from a terrace of ten houses, only completed about two years ago, and in which the inspector could find no sanitary defects. The cases which occurred in this terrace are tabulated in col. 1.

In the remainder of Shoebury there have only been 11 cases since July 1st. When the unusual incidence of fever in this group of houses was obvious, a sample of water from the main supplying the terrace, and samples of milk from each of the four dealers supplying the families residing there, were taken and examined chemically and bacteriologically in the County Public Health Laboratory.

The water was found in all respects satisfactory. Neither the bacillus coli nor bacillus enteriditis was discovered. Three of the samples of milk were of good average quality, and contained neither of the above organisms. The fourth was evidently mixed with water, and contained both organisms. This milk was being supplied to two houses only. It was being used in other parts of the town, but in no other house so supplied was there any case of fever. Although "fouled" there was no reason to suspect it as being the cause of the outbreak. In fact, neither milk nor water can be reasonably suspected as the cause of the outbreak. Not a single fact has come to light appearing to implicate either.

The houses are of very recent erection, and stand upon an estate which has been divided up into building plots. It was previously a meadow, so that the subsoil cannot be polluted. In construction they conform to all the model building by-laws, and they appear to be in a very good sanitary condition. Each house drains separately into a sewer which runs behind, and is cut off from the sewer by a Weaver trap. This sewer, or combined drain, is also trapped off from the main sewer, which runs in front of the houses. Each house has a water-closet upstairs and one in the yard, and the soil pipe is carried up in each house full bore and straight, to a few feet above the eaves. No smell has ever been observed from any of the soil pipes. The drains and soil pipes have been tested with smoke, and no defects were discovered. The sink pipes are properly disconnected and the yard paved. The closets have flushing cisterns, and appear in good order.

Two of the earlier cases of typhoid fever which occurred prior to the outbreak in the terrace were in houses connected with this sewer at points above the terrace, and the sewer has little fall. It would doubtless therefore become infected, and infected material could lodge in it, but it is difficult to see how this could affect the terrace. There is no reason to suspect any defects in the sewer or water main whereby one could affect the other.

Just above the terrace on the opposite side of the road is a kind of farmyard in which manure is stored, and some time ago some very offensive material was stored here. It was not deposited there until after fever had appeared, and as soon as complaints were made it was covered over and the nuisance abated. This, therefore, can be excluded as the cause.

Most of the cottages were tenanted by persons working in the brickfields, and it was possible that they might have handled and been infected by the soft core used. Against this is the fact that only two of the persons attacked handled this material, and that no other case occurred amongst the very many who were constantly in contact with it. Could the effluvium from the brickfields carry contagion? Such an occurrence has not been recorded, and there are many houses nearer the brickfields than this terrace, and these houses have not suffered to nearly the same extent.

The two end houses of the terrace are occupied by persons in a much better position than those in the other houses. All the inhabitants of No. 1 have so far escaped. At the opposite end, No. 10, a girl, aged 3, has just been attacked. Here, however, there is a possible cause. After fever had begun to spread it was decided to improve the ventilation of the main sewer by running a tall shaft up the side of this house. When this was being done the tenant says there was a vile smell, which penetrated into the house. The date could not be fixed, but it was apparently between fourteen and twenty-one days prior to the child first appearing to be ill.

With the exception of the case last notified, all the usual causes of typhoid fever would appear to have had no part in producing the outbreak. There remains only for consideration the question of infected food. There is but one article

likely to carry infection which has been eaten so largely or by so many of the sufferers as to merit serious attention. It has already been stated that the large expanse of foreshore is liable to sewage pollution, and that on this foreshore, lying upon and in the superficial layer of mud, cockles are comparatively abundant, and that these cockles are gathered by children and others, and are sometimes eaten uncooked. Samples of these cockles were collected by the sanitary inspector and submitted to examination. There were two lots, one gathered on the beach near the town, and the others further out nearer the sewer outfall. Three examinations were made of each batch (*a*) of the mud adhering to the shells, (*b*) of the fluid inside the shells, and (*c*) of the pulped body of the cockle. The results showed in every instance the presence of the bacillus coli communis, and of the spores of bacillus enteritidis sporogenes. There can be no doubt that all were sewage contaminated.

That the sewage of the town had been specifically infected for some time prior to the outbreak is undoubted, and it does not seem improbable, therefore, that shellfish bathed in such sewage, though diluted with sea water, may become specifically infected, and cause typhoid fever in susceptible people consuming them in an uncooked or imperfectly-cooked condition.

Dr. Walter, in cases which occurred in previous years and in two cases which occurred in the district this year prior to the cases in the terrace, had suspected cockles as the probable cause. One of these cases was notified on June 30th, a child, aged 4, living in Wakering Road. No other cause could be assigned, and it was known that the child was in the habit of picking and eating cockles from the beach. The next case which occurred was in the terrace, and this was followed by one in West Road. In both these the eating of cockles appeared the most probable cause. Such being the case, careful inquiries were made at all the houses in the terrace, with the following results taken in order of invasion:

House No. 8. Four cases occurred here; the dates of notification show that some of the later ones were probably secondary, but they may have been due to the same cause as the first. Children often on the beach gathering cockles. Those brought home were cooked before being eaten. The family has since removed and we could not get further details.

House No. 9. Seven cases occurred in this house. The first notified was a girl, aged 13. The parents at first asserted that they rarely ate cockles, and that none had entered the house since May, and the child did not remember having had any. Afterwards the family acknowledged that all except the father often had cockles, and that the children were constantly on the beach during the summer months gathering them. They certainly had cockles on more than one occasion early in August, the last occasion being on or about August 9th, two days after Bank Holiday. This would account for the earlier cases, and the others were either secondary or caused by the children eating cockles as they picked them from the beach. The father denies ever touching shellfish.

House No. 6. Two cases occurred here, the later one probably being secondary. The patient was a child, aged 7 years. The six people in this house ate lots of cockles. They occasionally buy them, but more often pick them from the beach, and wash and boil them before eating. They know that they had some about a week before the child was taken ill.

House No. 4. Of the eight people in this house, five contracted typhoid fever. Dr. Walter thinks that four of the five were primary cases, the fifth only being secondary. The family admit nearly living upon cockles picked from the beach, boiling them before use. In this house every person was attacked, save a baby aged 4 months, and a lodger and her child. The lodger and child never touched shellfish, and the baby was obviously too young to eat cockles.

House No. 5. Of the three occupants of this house two had typhoid fever, and both were attacked at the same time and notified September 15th. They only rarely partook of shellfish, but early in August (Bank Holiday) they had some oysters, and near the end of the month they had some cockles collected from the beach. These they cooked. This would be about the time when they become infected.

House No. 7. Of the six persons in this house two contracted fever. One, a lodger, as soon as he felt ill went off home. The other was an adult notified on September 16th, at which time the lodger was found to be ailing. This family rarely took shellfish, but about three weeks before the attack the people next door gave them a plate of boiled cockles. The people who gave them the cockles have since left. They only occupied the adjoining house for a few weeks and then removed.

House No. 10. The last case notified in the terrace. One of the end houses occupied by a man in fairly good position. Patient a child aged 3. The mother says that none of the children have ever tasted cockles, and she would not have such things in the house. The nuisance caused by erecting the ventilating shaft at the side of this house has already been referred to. Of the remaining three houses unattacked No. 1 (end house) the family had partaken of cockles several times during the summer. They did not pick them, but purchased them at the door. The other two houses are now unoccupied, and appear only to have been occupied occasionally, and for a few weeks at a time, since their completion.

The subjoined table shows that in the terrace referred to a larger proportion of males than females were attacked, that children suffered more, proportionally, than adults, and that about one-third of the occupants have had typhoid fever. Only three cases proved fatal. As the result of an inquiry we are strongly inclined to the opinion that this outbreak was due to the eating of cockles, and our reasons may be briefly summarised as under:

1, There is no evidence tending to implicate the water supply.

2. There is no evidence tending to implicate the milk supply. It is true that one supply was impure, but it was only used in two out of the seven houses infected. The houses were supplied with milk from four different sources, and nothing occurred in any other part of the town to implicate any of the sources from which milk was obtained.

3. The drainage arrangements were unusually good.

4. The subsoil was free from polluting matter.

5. Cockles were eaten by nearly all the persons attacked, and these cockles were obtained from a source known to be polluted by sewage. Moreover, cockles gathered from this source showed when examined bacteriologically unmistakable signs of sewage pollution.

6. Cockles from the beach are consumed chiefly by newcomers to the district. The men in the garrison are expressly forbidden to eat any shellfish from the beach, and the older residents regard them with suspicion, it being well known that typhoid fever has been attributed to eating them. The residents in the infected houses were all recent arrivals in the town.

Age and Sex of Occupants of Nine Occupied Houses in the Terrace.

	Under 5.	Under 10.	Under 15.	Under 20.	Under 25.	Under 35.	Under 45.	Under 55.	Total.
Males.									
Attacked with typhoid fever ...	4	2	2	1	1	2	1	0	13
Not attacked	4	3	3	1	4	2	2	1	19
Females.									
Attacked with typhoid fever ...	2	3	1	2	0	2	0	0	10
Not attacked	3	3	3	2	4	3	5	0	23
Males and Females.									
Attacked with typhoid fever ..	6	5	3	3	1	4	1	0	23
Not attacked	7	5	6	3	8	5	7	1	42

A COMPLICATED CONVALESCENCE FROM OVARIOTOMY:

WITH REMARKS ON THE ORIGIN OF PAROTITIS AFTER ABDOMINAL SECTION.

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Shortly after Christmas, 1898, Mr. Kingston Barton was asked to see a patient, 64 years of age, on account of a slight "cold," and because her health appeared to have been failing for some months.

He found a lung condition which at first suggested the presence of an extensive pneumonia, but it was obvious that the patient was not ill to a degree corresponding with the physical signs, and the crepitations which were heard around the diseased part were not detected after a few days. The patient stated that she had had a delicate chest as a child; she said, however, that she had never had any lung disease, nor any special liability to bronchial catarrh. She had suffered from spinal disease also when very young, and two of the dorsal spines now stand out prominently. The patient's relations could not remember that she had ever been kept in bed by illness except for a few days nine years ago, when she had a violent bleeding from the nose which necessitated plugging of the nares. Besides the cold, which the patient considered a very trifling trouble, she complained that recently she had been unable to push her garden roller, because this caused discomfort and pain in the abdomen. Mr. Barton diagnosed a large cavity in the right lung, and an ovarian tumour which extended from the pelvis nearly to the ribs.

On January 12th, 1899, Sir William Broadbent and myself met Mr. Barton in consultation and agreed with his diagnosis. It was clear that under ordinary circumstances the abdominal condition found in this case should be treated by operation, and it was decided that the state of the lung did not constitute a sufficient reason for altering the method of dealing

with the ovarian tumour, the pulmonary cavity being evidently of very old standing.

On January 12th a laxative, consisting of 1 gr. pil. hydrarg. and 6 gr. pil. rhei co., followed by Æsculap water, was given, and the bowels acted the next day. They were moved by enema on the evening of the 14th, and again early in the morning before the operation, which was performed on January 15th, at 10 A.M. I removed a cystoma of the left ovary, the pedicle of which was twisted, the tumour having made one full turn. The circulation was not completely obstructed by the twist, but the tumour was congested, and the intestines also were of a darker colour and rather more distended than usual. There were no adhesions, and there was nothing further worthy of remark in connection with the operation.

At 3.15 P.M. the vaginal temperature was 100°, the pulse was beating 72 to the minute, and the patient's condition was in every way satisfactory. She had slept for an hour, and she slept again later without any opiate. Between 7 o'clock and half-past 8 in the evening the bowels acted repeatedly, the patient vomited freely, and she rapidly became very feeble. I was not sent for immediately, and when I saw the patient at 9 o'clock her face and extremities were very cold, she was hardly able to speak, the pulse was felt with difficulty, and I thought she was dying. Although the bowels had ceased to act I at once ordered 20 minims of tincture of opium to be administered by the rectum, and fortunately there was no further evacuation for a time. I gave brandy and milk freely, but it was an hour or more before I could see any sign of recovery. The condition very gradually improved and the skin became warm. At 3 30 A.M. she was somewhat restless and complained of pain in the back. Ten minims of tincture of opium were therefore administered by the rectum, and this induced quiet sleep.

At 5.45 P.M on the day of operation the patient passed 4 ounces of urine, and after twelve hours she passed 2½ ounces more. Six hours later another ounce was passed. All this urine was free from albumen, and had a specific gravity of 1026, or higher. At noon on the day following the operation the temperature was 101° F. in the vagina, and the patient was perspiring freely. She had to a very great extent recovered from the state of collapse in which she had been the previous evening, but the pulse was still very feeble. It was beating 100 to the minute. The secretion from the kidneys continued to diminish. At 2 P.M. a little urine was passed, and by catheter the quantity was made up to fully an ounce. The patient was inclined to be drowsy. At 10 P.M , as there had been no desire to micturate, I again passed a catheter, and found the bladder empty. Thus the secretion of urine was entirely suppressed for eight hours. During the day there had been practically no change in the temperature, pulse, or condition of the bowel. There had been much rumbling in the abdomen, but flatus had not come down to the rectum. Poultices were applied to the loins, and at Mr. Barton's suggestion 2 gr. of citrate of caffeine were given in the early morning. At 4 A.M. on the second day after the operation a few drops of urine were passed, and at 9.45 A.M. nearly an ounce was voided, containing a trace of albumen. The amount rapidly increased to as much as 4½ ounces in an hour, and during the third day after the operation 77 ounces were excreted. The urine gradually became normal in quantity and character.

On the third day the temperature fell to 99.4° F. in the vagina, and the pulse was beating 80 to the minute, but flatulence caused a good deal of pain. It was not till the fourth day that flatus was freely propelled into the rectum, and the bowels were moved by enema on the fifth morning.

A week after the operation the wound looked quite healthy. The abdomen was soft and almost flat, but peristaltic movements were visible through the abdominal wall. The lungs had given no trouble. The temperature was, however, about 100° in the vagina, and during the second week it did not fall below 99.8°. In every other respect the condition had improved. On the fifteenth day the patient was allowed to lie on her side. Next morning the left side of the neck was swollen and painful. The temperature rose, and early on the seventeenth day it was 103.2° F., the pulse beating 120 to the minute. The ostium of the left Stenson's duct was in contact with a decayed tooth, and was obviously inflamed and very dry. Under soothing treatment by glycerine, belladonna, and warmth externally, and by mild antiseptic washes inside the mouth, the pain gradually subsided, and after about thirty hours there was a free discharge from Stenson's duct, which could be increased by pressure outside the parotid gland. This discharge was of a pure white colour, and seemed to be very irritating. The patient complained of a constant tickling in the throat, the fauces became decidedly red and angry-looking, and a slight bronchial catarrh was induced, with fairly free expectoration. The discharge from the parotid was constantly wiped away by means of pledgets of wool steeped in boracic lotion. Three weeks after the operation the discharge from Stenson's duct was still free, but the fluid was then like ordinary clear mucus and not white. The temperature was 99.2° in the vagina, the pulse was 86, the wound was healed, and the abdomen was normal in every way.

The neck was carefully kept warm but the swelling did not quite subside. Four weeks after the operation there was an increase of the œdema and tenderness behind the angle of the left jawbone, and the patient complained of occasional sharp shooting pains in that situation. The highest temperature about this time was 100.2° F., and the patient did not seem so well. On the twenty-ninth day I incised the capsule of the parotid, and opened an abscess by means of sinus forceps. About 2 drachms of pus escaped from the deep parts of the gland. The patient went home a week after this, and the drainage tube which had been inserted was removed from the neck on the forty-first day. After her return home she got a little bronchitis which retarded her recovery, and it was not till nearly three months after the operation that she was able to go out; she then had a normal temperature and a pulse beating 64 to the minute.

Mr. Barton saw the patient on June 13th, and he found the lung condition exactly as before the operation. The patient was able to go out driving and for short walks. She ate and slept well and had put on flesh. The bowels and kidneys acted normally, and the patient's condition was in every way satisfactory. During the foggy weather in October she had a sharp bronchial attack affecting chiefly the area round the cavity in the right lung. She has nearly recovered. There has been no trouble in the abdomen.

REMARKS.

It is desirable that the patient's bowels should be opened well before an abdominal section is performed. In the case under consideration a purgative was prescribed two days before the operation, and I understood that this had acted well; but when the abdomen was opened the small intestine was full and congested, and I have no doubt that the effects of the purgative had not passed off. This was due partly to pressure on the lower bowel, partly to the congested condition of the tumour and of the rest of the peritoneum caused by the twist of the pedicle. Mr. Barton and I agreed that in all probability the frequent evacuations of the bowels in the evening after the operation were due to a delayed action of the purgative given three days earlier. In a younger woman the effect would probably have been beneficial, but in the circumstances of this case a most alarming collapse was induced. The patient's arteries were all very tortuous and atheromatous, and the blood tension became so low that for eight hours there was no secretion of urine. As is usual in such cases, there was a compensating excessive secretion later on. It is to be noted that the urine did not absolutely cease to be excreted until eighteen hours after the onset of the collapse caused by the action of the bowels, although during that time the condition of the patient was improving in many respects. It is, of course, open to question whether the opium and stimulants which were administered may have acted adversely on the secretory action of the kidneys.

This is the second case in which I have seen parotitis following laparotomy and associated with a carious tooth opposite the ostium of Stenson's duct. In the other case, also, the opening of the duct was obviously inflamed, and after a few hours there was a free discharge of fluid from it, but the condition was recovered from without the necessity of incising the gland.

The parotitis which every now and then follows an abdominal section has been considered somewhat mysterious in

origin. It has been said that the inflammation is always due to some septic condition in the abdomen. It has also been attributed to a sympathetic nervous influence.

It seems to me probable that a direct septic infection from the mouth may account for the parotitis in some cases, and perhaps in all. There is no doubt that the conditions under which the patient is usually placed contribute very materially to the occurrence of such an infection. The patient is made to retain the dorsal position for a time, and thus the force of gravity tends to prevent the emptying of the parotid ducts. The diet is at first liquid, hence the jaws are not used in chewing, and thus another powerful aid to the emptying of the ducts of the gland—namely, the intermittent pressure of the muscles—is in abeyance. The feverish condition following the operation, by reducing the quantity of the secretion, leads to a still further stagnation. The dryness of the mouth in fever is well known. Under such circumstances septic organisms in the mouth must be far more likely to affect the parotid gland than under normal conditions. Moreover, it is often extremely difficult to give the desirable attention to cleaning the teeth for some days after an operation without inducing nausea.

In the two cases I have observed the opening of Stenson's duct was certainly inflamed as soon as attention was directed to the gland. I have not had an opportunity of examining other cases since the above explanation occurred to me, but in a case temporarily under my care after both glands had been incised for parotitis a small abscess formed in the right cheek close to the opening of Stenson's duct, and I succeeded in arresting the formation of an external fistula only by a free incision inside the mouth. At that time, many years ago, I thought the infection in the cheek was secondary to that in the gland, but it now seems to me much more reasonable to suppose that the abscess in connection with the duct was due to an infection from the mouth. I have shown that many arguments may be brought forward in favour of the suggestion that parotitis may be thus induced, and this view has at least the merit of attributing the inflammation to a series of conditions which may be logically associated together. It has always seemed to me that the suggestion that the parotitis is due to a septic condition connected with the operation is, to say the least, a hypothetical one, for a parotitis comes on at a very varying period after a laparotomy, and it may occur after a simple operation in connection with which from first to last there is no other complication. The idea that there is a nervous association between the parotid gland and the rest of the intestinal tract might account for a proneness to parotitis after an abdominal section, but a direct infection seems to explain the condition more fully.

A CASE OF MYOMECTOMY FOR SUBPERITONEAL MYOMA COMPLICATING PREGNANCY.

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Assistant Surgeon, Lowestoft Hospital.

The following case appears worthy of record:

Mrs. L., a young married woman, aged 26, consulted me on August 26th, 1899, complaining of pain in the left groin, which was gradually becoming more severe. She had reached the end of the fourth month of her first pregnancy. She complained of obstinate constipation, but the sickness of the earlier months had passed off.

On examination, I found a hard movable lump in the left iliac region, which appeared to spring out of the pelvis and not to be attached to the uterus. The uterus itself was of a normal size for a four months' pregnancy. On vaginal examination the same lump could be felt as a mass about the size of an orange, lying at the pelvic inlet to the left of the enlarged uterus. The ovary was not discoverable apart from the tumour. It appeared to be probably a tense cyst of the ovary, or a solid tumour of that organ. The possibility of its being a myoma did not occur to me, as it did not feel as if it were attached to the uterus, although a thorough examination was made under chloroform in consultation with Mr. H. A. Ballance of Norwich.

As the growth of the tumour and its position rendered the possibility of hindrance to labour a very likely one, I performed laparotomy on August 30th, thinking it highly probable that the removal of the tumour in the fourth month would not interrupt the natural course of pregnancy.

On opening the abdomen by the usual median incision, the tumour was found to spring from the left side of the uterus low down, and the hand in the abdomen readily made out the appendages to be healthy immediately below it. With a little difficulty the tumour was delivered through the wound, when it appeared as a mottled whitish yellow solid body, rather more than 3 inches in diameter, hard and nodular on its surface; a pedicle could be defined, not containing much fibrous tissue, about an inch in diameter, attaching it to the uterus. It was decided to remove it, and the pedicle was accordingly ligatured in two portions, and the tumour snipped away with strong scissors. The stump was hollowed out somewhat by snipping away the central portion so as to allow the peritoneum to be drawn across it, which was then stitched carefully together with chromic catgut. There was no bleeding and no adhesions had to be dealt with. The wound was then stitched up by deep and superficial silk sutures, a separate series of catgut sutures being applied to support the rectal sheath. Cyanide dressing was used, carefully supported with a many tailed flannel bandage.

During the first twenty-four hours after the operation some painful uterine contractions occurred which were controlled by morphine suppositories. The temperature was 100.5 the first evening, but fell the next day and remained under 99° throughout. The bowels were opened by an enema on the third day. With the exception of some slight rapidity of the pulse, 88 to 100, which lasted for the first ten days, there were no unfavourable symptoms. Three weeks after the operation the patient quickened. The wound healed throughout by first intention, and she was up at the end of a month, and is now able to follow her usual course of life without inconvenience, the body being supported with a well-fitting abdominal belt. On examination of the tumour its structure was found to be typical of a fibromyoma of the uterus and does not call for any further remark.

Several questions arise for consideration in this case. What is the proper treatment of a pedunculated fibroid of the pregnant uterus of such size as to produce a well-marked tumour at the inlet of the pelvis? Kelly in his *Handbook of Operative Gynæcology* gives several rules for the treatment of myomata complicating pregnancy. He says that we should remember that there are two lives to consider and that operation as prophylaxis against possible complications is unjustifiable, in fact, that we should reject all radical measures unless the symptoms are urgent. He does not countenance operations for small fundal tumours, nor except in exceptional circumstances for interstitial fibroids.

The rapid growth of a tumour and excessive pain may necessitate operation. Kelly's rule for intraligamentary and subperitoneal cervical fibroids is that operation should not be undertaken unless the fibroid is of such size as to encroach upon the pelvic room and the superior strait in such a way as to prevent labour.

Now, the above case seems to me to belong practically to this last division; the tumour was of such a size and in such a position that when labour began, it would, in my opinion, have been forced into the pelvis, though it is open to argument whether the increasing size of the uterus and tumour would not have removed it from its dangerous proximity to the pelvic cavity.

The fact that in my case the pedicle could be easily ligatured decided me in favour of extirpation; if the tumour had been sessile the operation would have been fraught with more danger to the mother, and would have been more likely to produce abortion, while there would have been more likelihood of the tumour being gradually lifted out of the pelvis as the pregnancy advanced.

Fortunately the result justified the procedure in the case described, but there is always the other aspect to consider, what would have been one's reflections if the case had not done well. Was the risk of complications at the time of labour equal to the risk of removing the tumour? In connection with this, one should recall the published statistics of this operation. The mortality of myomectomy for pediculated fibroids of the pregnant uterus is stated by Kirschheimer[1] to be 18.87 per cent. This probably does not represent the mortality of the operation when carried out with modern aseptic methods, but it is sufficiently high to make one hesitate to operate unless the indications are clearly among those enumerated above.

Reference.
[1] *Inaug. Diss.*, Halle, 1895, quoted by Kelly.

Dangers of "Headache Powders."—Dr. J. Sobel, of New York, has published in the *Medical Record* the case of a woman, aged 25, who was a sufferer from headaches and had been in the habit of taking powders called "antiheadache or half-hour headache healer," a quack remedy which is "guaranteed" not to contain any dangerous drug. The patient foolishly relying on the advertisement took three powders for a violent headache, with the result that shortly after taking them the most distressing symptoms supervened. She became very cyanosed, her pulse and respiration grew feeble, and she fell into a state of collapse, her condition being decidedly serious. Under suitable medical treatment she however recovered. A specimen of the "antiheadache" powder was submitted to analysis and found to contain a large proportion of acetanilide.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

THE USE OF COCAINE IN LABOUR.

Inasmuch as the use of cocaine during labour has been the subject of several communications which have lately appeared in your columns, it may be of interest that I should chronicle the following case, in which I was led, for the first time, to try the effects of that drug by having read your correspondents' letters eulogising its efficacy: Mrs. J. called me in to attend her during her sixth confinement, shortly after midnight on June 28th. The os uteri was then about the size of a shilling, and the pains were fairly frequent and strong. Twelve hours later the size of the os was rather less than a florin. At 2 p.m. (as this state of rigidity persisted in spite of rapid and strong pains, unbroken membranes, and a vertex presentation) I decided on using cocaine. I applied a 10 per cent. solution on two pledgets of cotton wool, placing these between the membranes and the wall of the cervical canal, where they were easily retained in position. With the next pain the os dilated so rapidly that I can only liken it to the quick opening of a door, and in a few minutes it was fully dilated. The membranes were ruptured, the head came down, and labour was completed normally and speedily.

There were no unpleasant after-effects whatever. I may mention, however as showing that a new form of treatment is not always appreciated by the patient, that in this case there had been an accidental hæmorrhage on the placental site immediately before labour (a mass of semi organised blood-clot as large as the placenta was expressed immediately after the latter). The child was, of course, stillborn.

The mother having felt the movements of the child as late as the preceding day, persists in believing, in spite of my assurances to the contrary, that its death was due to the application of the cocaine.

Spitalfields, E. Percy T. Goodman, L.S.A.

HÆMORRHAGE THROUGH THE LACHRYMAL DUCT AFTER PLUGGING THE NARES.

Sergeant C., who is much debilitated, and suffering from cachexia (his blood reacts strongly to Malta fever), has had troublesome hæmorrhage from trivial causes, and frequent attacks of epistaxis, which have so far yielded to ordinary treatment. One evening severe nasal hæmorrhage set in, and all milder remedies failing I securely plugged his nares. Blood then appeared in each lower eyelid, and trickled down his cheeks, so great was the pressure and so little was the property of coagulability present. I find Sir William Ferguson reported a similar effect seen many years ago, but I am not able to trace what constitutional disease his patient suffered from. Sergeant C. had been taking chloride of calcium for some time.

Station Hospital, Colchester. A. B. Cottell, Major R.A.M.C.

A CASE OF COMPOUND DISLOCATION OF ELBOW-JOINT.

On May 25th, 1899, H. N., a little boy 7 years of age, while playing on some palings, fell a distance of about 2 feet on his left elbow. His parents living close by, on finding "the bone sticking out," brought him to me. I found there was a compound dislocation of the left elbow. The radius and ulna were displaced backwards, while the condyles of the humerus and about one inch of the shaft—entirely denuded of any ligamentous attachments and as if cleaned with a scalpel—protruded through a semi-circular wound in front of the joint and internal to the biceps tendon. The brachial artery was uninjured, but there was considerable venous hæmorrhage.

The protruding bone was carefully cleansed and washed with a warm solution of mercuric iodide 1 in 2,000. With a little difficulty the dislocation was reduced without enlargement of the wound. The joint was washed out with a warm solution of carbolic acid 1 in 30, and then thoroughly dried. The wound was closed with six wire sutures, the arm semi-flexed, and enclosed in two splints.

No rise of temperature or pain was complained of during the next seven days, when the sutures were removed. Passive movements were commenced a week later, and in ten weeks from the date of the accident all movements of the joint were perfectly normal.

I venture to report the case—first, on account of its rarity; and, secondly, as showing the ease with which healthy children recover from severe joint lesions.

Ledbury. J. McKean Harrison, M.B., B.Ch.

SCARLET FEVER WITHOUT ERUPTION.

The difficulty of correctly diagnosing scarlet fever is well exemplified by the following group of cases, which occurred in the course of a small epidemic in September, 1899.

Out of a total of 9 cases which occurred within a week, 3 had no sign of a rash. They had sore throat and fever, and desquamated. Two of them happened in houses where another person developed well-marked scarlet fever.

All the patients drank milk supplied by the same dairy, and as there was no other connecting link, I think we may infer that milk was the cause. If these cases without rash had occurred independently of well-marked scarlet fever, and when the milk supply was not suspected, it would have been almost impossible to make a correct diagnosis.

Case I.—Well marked sore throat and rash on September 14th.

Case II.—Arrived in Bedford on September 14th, drank unboiled milk in her tea the same evening. On September 16th had bad sore throat, and on 17th well-marked rash.

Case III.—Had severe sore throat with deposit of membrane on the tonsils on September 19th; did not have any sign of a rash, but desquamated freely on the soles of her feet.

A child in the same house had a sore throat on September 17th, had no rash, and did not peel.

Case IV.—Usually drank boiled milk, but on September 17th at teatime drank it unboiled; on 19th had sore throat, and on 20th well-marked rash.

Case V.—Well-marked rash and sore throat on September 20th.

Cases VI and VII (in the same house) were seen by my partner, Dr. Savory. Case VI had sore throat and rash, followed by peeling. Case VII had sore throat and fever, but no rash. She had slight general desquamation.

Cases VIII and IX were in the same house. Case VIII had rash and sore throat on September 21st. Case IX had severe sore throat on September 21st, but no rash. Desquamation occurred on ears, hands, and feet.

Bedford. W. Gifford Nash, F.R.C.S.

STRYCHNINE IN OPIUM POISONING.

A note with the above heading in the British Medical Journal of June 24th, 1899, suggests my reporting the following case. The patient, at least half an hour before being found, took 3 ounces of laudanum. The friends immediately gave an emetic of mustard and water, and sent for me. On arrival three-quarters of an hour later, I found the patient nearly comatose, and with all the usual symptoms of profound opium poisoning. I gave a subcutaneous injection of apomorphine, which produced free vomiting, the vomited matter smelling strongly of laudanum. I then washed out the stomach with Condy's fluid (℥vj ad Oj). This only occupied 5 minutes, but at the end of that time coma was profound. I then commenced to give subcutaneous injections of sulphate of atropine and sulphate of strychnine alternately; these were pushed until each produced characteristic symptoms. At the end of 70 minutes after my arrival at the house, the pupils, instead of being "pinhole," were well dilated, while the legs and arms were twitching. The total amount of sulphate of atropine injected was gr. $\frac{1}{8}$ (in five doses of gr. $\frac{1}{60}$), and that of the sulphate of strychnine was gr. $\frac{1}{10}$ (in six doses of gr. $\frac{1}{60}$). In the intervals between the injections I siphoned strong coffee into the stomach, and during the whole time when treatment was being carried on, the friends administered very energetic friction to the whole body, and warmth in the way of blankets and hot water bottles was well provided. At the end of the seventy minutes the patient was still unconscious and collapsed, so I gave digitalin gr. $\frac{1}{100}$ subcutaneously. During the following 4 hours there was steady improvement, but during the next half-hour the pupils suddenly became nearly "pinhole" again, and the breathing was slightly stertorous. I then gave two further injections of atropine sulphate at intervals of 15 minutes (each in a dose of gr. $\frac{1}{60}$), and at the end of a further 3 hours the patient was in a safe enough condition for me to be able to leave.

Streatham, S.W. Harry E. Smith, M.A., M.B.Camb.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

NEWBURY AND DISTRICT HOSPITAL.

CASE OF SUPRAHEPATIC ABSCESS: INCISION: RESECTION OF RIB: RECOVERY.

(Under the care of John Watson, M.D., F.R.C.S.E., Honorary Surgeon to the Hospital.)

The paper read by Mr. Cantlie at the Portsmouth meeting of the British Medical Association, and reported in the British Medical Journal for September 9th, as well as the case recorded by Mr. F. L. Nicholls in the Journal of September 16th, induce me to bring to the notice of those members interested in these comparatively rare cases, one which was under my care last year in the wards of the Newbury and District Hospital.

The case is of interest from: (1) The insidious nature of its onset: (2) the youth of the patient; (3) the obscurity of the symptoms; and (4) the treatment adopted, as compared with that advocated by the two above mentioned gentlemen.

Case.—H. P., aged 10 years, male, was admitted into the Newbury and District Hospital in November, 1898, for supposed general tuberculosis.

History.—The boy had been losing flesh and appetite for the past month or six weeks, and been getting gradually weaker without any very obvious cause. A fortnight before admission he had contracted a chill after exposure to wet and remaining in his damp clothes for some hours. From this he had recovered, but had not regained his usual ruddy complexion, and his condition was one of great listlessness and disinclination for the usual sports and amusements in which he had formerly been interested; he was, moreover, troubled with loss of appetite and occasional sickness and constipation, alternating with diarrhœa.

Family History.—Father died from phthisis. Mother healthy. One brother suffering from morbus coxæ at the time of this patient's admission to hospital.

Condition on Admission.—Child is very weak and muscles flabby and wasted; he complains of pains over the right side of the chest and in the right shoulder joint. Takes no interest in his surroundings, and has a constant cough, with occasional "chuly" feelings, great disinclination for food, together with a thickly-coated tongue and occasional attacks of vomiting of a bilious character. Temperature 99.8° at night, becoming normal each morning.

Physical Examination.—The patient lies on his back, and complains, when turned on the left side, of pain over the hepatic area and shortness of breath. He is very emaciated and the skin has a decidedly icteric tinge; the conjunctivæ also have a yellowish hue, and his general aspect is one of great distress, which is accentuated by his shallow breathing

Lungs—Healthy, except that over the base of the right lung behind the breath sounds are muffled, and some sibilant *râles* are audible over this area, together with some dulness of the percussion note.

Heart.—Sounds normal, apex beat slightly displaced in an upward and outward direction.

Abdomen—The area of liver dulness is increased in an upward direction, whilst the edge of the liver can be distinctly felt reach a finger's breadth below the costal margin. Bowels very irregular, constipation alternating with diarrhœa, the latter being very offensive.

Urine—Specific gravity 1020, acid, no albumen, no sugar, no casts.

Progress.—He was kept in bed on a milk diet, with occasional doses of hydrarg. cum cretâ, which checked the vomiting and regulated the bowels. He remained in much the same condition for a week after admission, the temperature never rising at night above 99.6° and regaining the normal in the morning. The physical signs in the chest during this period increased in degree over the base of the right lung, the *râles* becoming more numerous and the dull percussion note accentuated, the hue of the skin and conjunctivæ had also become more decidedly yellow. The respirations varied from 24 to 28 and the pulse from 76 to 84. But he now began to complain markedly of pain over the liver in front and also over a corresponding area in the back. On the twelfth day after admission he had a severe rigor in the evening, during which the temperature reached 103.4° and he was very sick; the next morning the temperature was 99°, but during this day he had two more rigors and his general condition became very grave, with quickened feeble pulse and rapid shallow breathing, and he complained much of the pain over the hepatic region and kept his right hand constantly pressed to his side.

Operation.—Seeing the dangerous condition of the lad, it was necessary to do something for his immediate relief and to do it speedily; the difficulty was to decide as to the definite nature of his malady, although his symptoms strongly pointed to abscess in or near the liver. With a view to clearing up the point, he was anæsthetised to the extent necessary to deaden the pain but not to that of producing complete insensibility, and with an exploring needle I punctured the fifth and also the sixth intercostal spaces from behind but with negative results. I then tried in the fifth interspace in the mid-axillary line but again failed to withdraw pus. However, on introducing the needle into the fourth interspace a little anterior to the mid-axillary line, I withdrew the syringe full of most offensive, thick, yellow pus, and I then diagnosed what I had suspected, namely, a suprahepatic abscess.

From the nature of the fluid withdrawn I felt that nothing but very free drainage would give good results, and with this in view I decided to act as though dealing with an empyema. I therefore resected three-fourths of an inch of the fifth rib, raising the periosteum from the bone by means of a raspatory, and cut away the portion of rib with bone forceps. On then introducing a pair of dressing forceps and separating the blades, three-fourths or more of a pint of most offensive bile-stained pus escaped. A large-sized indiarubber tube, with a safety pin through the lower extremity, was then inserted deeply into the wound, and a dressing of iodoform and sal alembroth wool applied externally, being kept in place with a broad flannel bandage. The subsequent progress was very rapid and uneventful, the temperature fell to normal on the following day, and the other bodily functions rapidly regained a healthy condition. The drainage tube was removed on the eighth day, by which time all discharge had ceased, except from the edges of the wound, and a fortnight later the lad went to the seaside.

I have recently seen him, and he is as fat and ruddy a specimen of a country lad as anybody could wish to see. The portion of rib removed has been quite replaced, and nothing but the cicatrix in the skin is left to remind him of the narrow escape from death he once had.

Remarks.—The interesting point in this case appears to me to be the rapid convalescence and increase in weight, and this I attribute to the very free drainage plan adopted, the size of tube used being the largest I could find, and measuring close on half an inch across. The plan with the trocar and cannula mentioned by Mr. Cantlie and Mr. Nicholls I have never tried, and not having seen the particular cannula employed, I can form no idea as to the size of the drainage tube it is possible to introduce through it; but whatever plan be adopted in these cases, judging from my own experience I should imagine that, other things being equal, the method which allows the freest possible drainage, and which sets the patient on his feet again in the shortest time, is the one which is naturally to be preferred.

Syphilis in Asia Minor.—Three years ago Dr. von Düring, of Constantinople, at the request of the Sultan, made a tour of inspection extending over several months in the north-western districts of Asia Minor, especially in the Castamuni vilayet with the object of devising measures for the repression of syphilis, which was making serious ravages there. Dr. von Düring drew up a code of regulations, which was submitted to the Ottoman Government and received the sanction of the Sultan. He has now been commissioned to place the system recommended by him on a working basis, and he has recently gone to Anatolia for that purpose.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. BRYANT, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, December 12th, 1899.

THE OPEN-AIR TREATMENT OF TUBERCULOSIS.

DR. SIDNEY MARTIN in resuming the discussion on this subject said that tuberculosis was an infective disease, the arrest of which depended on three factors: The amount of the virus, the virulence of the bacillus, and the resistive power of the infected individual. This might be said of all infective diseases; but the slow growth of the tuberculous lesions, the prolonged vitality of the tubercle bacillus in animal tissues, and the very problematical formation of antitoxin substances in the patient infected by tuberculosis, were in strong contrast to some of the acute infective diseases. The tuberculous lesion lost its power of infecting other parts of the body, partly by becoming shut off by an investing fibrous capsule, and partly by the degenerative changes which occurred in the lesion itself. The real treatment of all infective diseases was a part of the question of immunity, its object being to increase the resisting power of the individual. The immunity to tuberculosis in different classes of animals was very remarkable; for whereas rodents, cattle, and pigs were very susceptible to the disease, horses, sheep, and carnivora were relatively immune. The range of immunity extended from the very susceptible rodent to the highly immune Algerian rat (Meriones), in which, as the observations of Metchnikoff showed, the tubercle bacillus hardly produced a disease but a number of small foci which became non-infective by the remarkable changes that occurred, not only in the bacillus itself, but in the tissues around. The immunity in man varied very greatly, to some extent, perhaps, in the race, but more particularly in the individual. The peculiar resistance of some individuals against the disease, even after infection, could not be expressed in any scientific terms. It did not depend solely on the proper development of the body, shape of the chest, size of the lungs, etc., nor solely on the normal condition of the organs, as far as their normal condition could be discovered by physical signs. Although tuberculosis was very prevalent in the human race, mankind must be considered as relatively immune to the disease, since in the majority of cases there was evidence of a healing, more or less partial it might be, of the tuberculous lesions. The phases of the disease as observed during life, and verified frequently *post mortem*, were of great importance in discussing any mode of treatment. With regard to the lungs, a reinfection from without was common, as well as an extension of the primary focus of disease; but with the glands, the peritoneum, and the bones a reinfection was by no means common, and the disease advanced by the extension of the original focus. A primary attack of tuberculosis might either get well or lead, especially in children, to death from general dissemination or rapid extension of the disease. Tuberculous individuals were subject to a recurrence of the attacks, especially when the disease affected the lungs. The primary attack might be recovered from, the symptoms completely disappearing and the body regaining its usual weight in the course of a few months or longer. With an interval which varied from a few months to many years, a second attack of the disease occurred, which might be very varying in its seat; it might be a pleurisy on the same side or on the opposite side; or a lung infection just below the old lesion, or in the lower lobe on the same side; or a similar lesion at the apex or base of the other lung. This second attack might be recovered from, or might end fatally. The completeness of the recovery depended on the extent and nature of the damage done to the lungs in their air-breathing capacity. A third attack might occur at a longer or shorter interval, and was less likely to be recovered from, although the recovery depended on the extent of the previous damage to the lung, and on the virulence of the third infection. These facts must be borne in mind in discussing any mode of treatment. An important factor was the question of secondary infections. The infections of the streptococcus and of influenza were the chief ones to be considered in adults, and in children those of bronchitis, whooping-cough, and measles. A great deal of stress had been laid on the streptococcus infection in chronic tuberculosis of the lungs by observers in France and Germany; but although it did occur, it was chiefly in the later stages of the disease and not at the stage in which treatment was of much avail. The prevention of secondary infections in tuberculosis was of great importance in the treatment of the disease. In regard to the streptococcus infection, ordinary hygienic cleanliness of the surroundings and purity of the respired air were the chief agents in prevention. The treatment of tuberculosis had been from time to time a varied one. The treatment by drugs to relieve symptoms referable to the lungs or to the digestive system could not be discarded in any mode of treatment at present known. The treatment by "antiseptic" remedies, which, by subcutaneous injection or by mouth administration, were supposed to act on the tubercle bacillus itself, could only be described as futile. Such "specific" treatment by no means tended to increase the resistance of the patient to disease. To increase this resistance Koch recommended the use of minimal doses of his tuberculin R.; but this had not been found in man to have the desired effect. The "open-air" treatment had as its object the increasing of the resistance of the patient, the heightening of the immunity to the slowly-progressing disease. The increase and dissemination of our knowledge of tuberculosis had done good by leading to measures being taken for the destruction of the sputum, for the careful disposal of linen and clothes soiled by the expectoration. It had led to the prevention of reinfection by the destruction of the tubercle as by the boiling of the milk which might be dangerous. Two other facts were becoming more generally recognised, namely, that the tuberculous patient, when febrile, must be kept at rest like any other patient with fever, and that the tuberculous patient must during treatment be kept under supervision, and not be sent long voyages or to strange countries in the haphazard way formerly practised. A pure air and life in the open air were essential in the treatment of the disease, with the objects of increasing the resistance of the patient and of preventing secondary infections. An excess of food was of advantage in many cases, in order to repair the wasted tissues; but a mere increase of the fat of the body did not increase the immunity, and the excessive feeding now practised in some places was not only physiologically but practically wrong. To make a patient eat till vomiting occurred was of no advantage whatever in treatment; to continue excessive feeding while there was functional derangement of digestion was also of disadvantage. Judicious feeding, but not necessarily overfeeding, was the line to work upon. A third important element in the treatment was a change of life, with a change of locality. This not infrequently acted as the turning point towards recovery in a case of tuberculosis. For the treatment of the tuberculous poor country hospitals were a great desideratum, but for the well-to-do sanatoria had many disadvantages.

Dr. J. E. POLLOCK, in reviewing the position of the country in regard to tuberculosis, gave statistics to show that there had been a great decline in the mortality of phthisis, owing in great measure to improved hygiene. The results obtained at the Brompton Hospital were compared with results obtained respectively by Sir Hermann Weber, Dr. Dettweiler, and Dr. Theodore Williams at high altitudes, giving a very striking similarity between the results obtained at that hospital and in the sanatoria. The details of the treatment as carried out in the Brompton Hospital were described; they were very much those of the general treatment of a chronic disease. There was no specific cure for tuberculosis; there were means only of improving the nutrition of the patient. Treatment by open air was not a new thing; he referred to his own recommendation of this means as long ago as 1865. Fresh air was better obtained in the open and its temperature should be adapted to the individual case, which factor was involved with that of the amount of exposure to sunshine. Objections to the sanatoria were the aggregation of diseased patients together, allowing of too much mental concentration on their own and their neighbours' cases. For the poorer classes sanatoria were admirable, while rich people were often better sent to the mountains or on a sea voyage.

Dr. Drewitt thought the difference between the open-air treatment and living in a draught had not been sufficiently emphasised. Suitable ventilation must receive more attention in the future. The question of character of diet had also been neglected; diminution in the amount of carbohydrates and increase in the amount of nitrogenous elements were advocated. He alluded to investigations by Mr. Bland-Sutton and Dr. Woods Hutchinson on birds at the Zoological Gardens showing that the carnivorous birds had a remarkable freedom from tuberculosis, and these facts he applied to human tuberculous patients. He pointed out that the Scotch oatmeal eaters were scourged by tuberculosis.

Dr. Washbourn urged the need for caution in accepting statistics of improvement of cases. Fresh air was only one of the factors in the treatment. Careful medical supervision was essential so that the means might be adapted to difference in the cases. Many of the patients were really overfed, and an increase of weight might coincide with advance of the disease. As to the mode of action of this treatment, at first phthisis was a purely tuberculous process, and as long as it remained so the natural defences of the body could prevent the spread of the disease. Impure air contained other bacteria and allowed of secondary invasions—chiefly of the pneumococcus and streptococcus—which were the great risk. A secondary invasion of the throat in scarlet fever was a great source of risk in that disease, and overcrowding tended to produce it—this was analogous to what occurred in phthisis. The precautions of sanatoria in the way of destroying the sputum were important in preventing the spread of the disease to other parts of the lung.

Dr. Walters referred to the difference of opinion that existed as to the amount of medical supervision required; careful judgment was necessary in regard to detail at every step. The personality of the physician counted for much. Treatment should not be according to rigid rule, but should be adaptable to special needs. Patients with catarrhal complications needed a higher temperature than others. Draughts were always injurious, but could often be prevented by the wider opening of windows and doors. Chest hospitals were unsuitable for the open-air treatment, country homes were needed, and cottage sanatoria could often be easily adapted. For the successful treatment of phthisis a greatly prolonged course was necessary, particularly for the poor.

Dr. Parkes Weber said that the kind of diet most suitable for this method of treatment had not been determined. He had noticed that gouty people were remarkably free from tubercle, and these were largely meat eaters. Among the poor, who could not afford to eat much meat, there was an excess of phthisis. Other factors of hygiene might have importance as well. Richet's experiments on dogs showed the marvellous importance of a flesh diet in tubercle.

Dr. Spencer Watson said that the climate and geographical position of sanatoria were important. Ocean voyages were sometimes of great value, and marine sanatoria had been advocated.

Mr. Pearce Gould pointed out that this method was of great value for the treatment of tuberculosis in parts of the body other than the lungs. Fresh air, sunlight, physiological rest, and a liberal diet had for long been used by surgeons in the treatment of tuberculosis of the bones and glands. Surgical tubercle could be treated at the patients' homes even in London if sufficient care were used. Treatment should be prolonged long after all signs of tuberculosis had disappeared, even for a period of years. The social position of the patient was nearly the most important factor in the prognosis of surgical tubercle. Hence many operations needed for tuberculosis in the poor were unnecessary in the rich. Many of the methods of this means of treatment should be combined in the every-day life of all, particularly those in regard to free ventilation.

The President considered that the value of fresh air in tuberculosis had been more recognised previous to the present movement by surgeons than by physicians. The use of what he had long ago termed the constant fresh-air bath was illustrated by reference to several cases, particularly its effect in lowering the temperature of patients, in tuberculous arthritis of the knee, in tuberculous spinal caries, in tuberculous disease of the tarsus—cases in which either recovery occurred without operation or with a slighter operation than would have otherwise been, as he believed, necessary. Clean fresh air was absolutely essential for recovery from the tuberculous process, whether in its surgical or medical forms.

Dr. Fowler, in reply, adhered to his original statement that, given the right method, there would be no lack of men who were capable of putting it into practice successfully, provided they had been properly trained. He did not in the least underestimate the importance of the personality of the resident physician. To have fought his system through in the teeth of prejudice was the work of almost a genius, but to follow in his footsteps was a task not beyond the powers of many. The man must live the life of the patient. As to the mode of action of the method, he thought that an open-air life, abundance of food, and regulated exercise acted upon a patient with pulmonary tuberculosis in the same manner as upon a healthy individual, namely, by improving the quality of the blood, increasing the functional activity of all the organs, and so increasing vital energy and resisting power, and to this rather than to any aseptic action he was disposed to attribute the favourable results observed. He considered that the belief in the importance of secondary infections by septic organisms rested upon no solid pathological basis. The action of septic organisms was to produce septicæmia, and of this he could see no evidence in the vast majority of cases of pulmonary tuberculosis. In supporting his advocacy of the rectal temperature he showed a temperature chart from a case under sanatorium treatment in which, up to a certain date, it had not been thought necessary to obtain the rectal temperature, and the patient, in the belief that it was an apyrexial case, had been allowed to take active exercise, the result being that he made little or no progress. Immediately the rectal temperature was observed it became obvious that the patient ought to have been in bed. Although not in favour of draughts, yet where the open-air part of the method was thoroughly carried out, such a degree of "air-hunger" was induced in the patients that it was difficult to get them to avoid draughts. The open-air life must be continuous throughout the whole twenty-four hours, and not intermittent. One of the objects of treatment being to increase the patients' weight, he would prefer carbohydrate and fatty foods, and not nitrogenous foods. He preferred the single-storeyed building with a detached dining hall to any of the "palaces" in Germany. A great difficulty was in getting medical men and patients to realise the length of time required to obtain an obsolete condition of the lesions. This would be still greater in applying the sanatorium methods to the treatment of the poor. Only the unmarried of both sexes, who had no relatives dependent upon them for support, would be able or willing to devote a sufficient time to the recovery of health. He had no fear as to the result in this country, provided that the system was honestly carried out for the benefit of the patient, and not primarily for commercial purposes.

The discussion was then concluded.

CLINICAL SOCIETY OF LONDON.

Sir R. Douglas Powell, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, December 8th, 1899.

Perforating Gastric Ulcer Treated by Operation.

Mr. Arthur Barker gave a review of twelve consecutive cases of perforating gastric ulcer on which he had operated during the last few years. They were all treated as nearly as possible under the same conditions. The immediate results were that five out of twelve were saved. Two of the fatal cases lived for fifteen and fourteen days respectively, the first dying of subphrenic abscess and consequent pleuro-pneumonia, the second of bleeding into the stomach from the ulcer, the conditions following the operation being otherwise singularly favourable. The first suggested an improvement in technique which favourably affected the subsequent cases. The second suggested the propriety of excision of the ulcer in certain cases as the only means of preventing subsequent hæmorrhage from it. But in none of the other cases was the ulcer excised, and in none was there any secondary bleeding. In all the twelve cases mopping out of the abdomen was preferred to flushing, the author's previous experience having

satisfied him that the latter practice was undesirable in these cases. Drainage was employed only in one case, and was then shown to have been unnecessary. In none of the other cases would it have improved the patient's chances. The bearings of the following factors in similar cases were briefly reviewed: "Early recognition of perforation," "sex," "symptoms," "previous symptoms," "duration of symptoms of perforation," "liver dulness," "last meal," "conditions found at the operation," "dry mopping *versus* flushing," and their influence on the series in question. A note as to the remote result in the five successful cases was added. From this it appeared that all were well for a considerable period (amounting to years in some cases) after the operation. Only one case had a threatening of a second perforation, which was happily met by rest in bed and careful dieting, the patient being now quite well three years after operation.

Mr. WARRINGTON HAWARD commented upon the statement that many of these cases occurred in apparently healthy people with few, if, any, symptoms, a class which had not come under his observation. He regarded the extreme anæmia as very typical. He did not think the character of the extravasated material had as much bearing on the future of the case as the time that elapsed before operation. Subphrenic abscess was especially apt to occur when the ulcer had leaked a little, though not to such an extent as to cause urgent symptoms. A more frequent danger, with ulcer of the front of the stomach, was basal pleurisy. He was pleased that the author preferred sponging to flushing the abdomen, for he himself held that though flushing might be necessary in cases of some standing with extensive contamination, sponging was generally sufficient.

Mr. F. C. WALLIS referred to a case which in some points resembled the last one of the two which Mr. Barker had detailed. The patient was operated on some hours after perforation was supposed to have occurred, but although careful search was made no sign of a perforation could be seen, although some induration was felt in examining the stomach at the posterior cardiac end. Marked peritonitis, with free fluid and gas, were all present, and Mr. Wallis felt convinced that a small hole must exist; he therefore opened the stomach near the greater curvature, and on examining from within discovered a well-marked small ulcer with a tiny perforation. This was sewn up, as was the incision. The patient died thirty six hours after the operation, but *post mortem* the stomach was found to be quite watertight in both places where the suture had been applied.

Mr. BOWLBY had lately seen 2 cases in 1 of which the pain was at the pubes in the other in the lumbar region. In many of the cases the pain was in the lower part of the abdomen. He had also found an absence of liver dulness in a case of intestinal obstruction with much distension. The acuteness of the symptoms depended upon the size of the perforation and the amount of the extravasation.

Mr. L. A. DUNN had operated upon 6 cases of perforated gastric ulcer, of which 4 were men and 2 were women, and upon 1 case of duodenal ulcer in a male. Two of the men and 1 woman recovered. In 1 case of abscess of liver dulness he found the peritoneum full of gas, but containing no fluid, and the most careful examination of the stomach failed to reveal a perforation.

Mr. C. S WALLACE considered the flushing of the abdomen much more satisfactory than mopping; but to be efficacious the injection must be large and should float the intestines out of the body. He also considered absence of liver dulness an unreliable sign.

Mr. F. EVE thought the surgeon should not wait for particular symptoms. As to pain he referred to the case of a young woman who had had symptoms of ulcer of the stomach and was seized with symptoms of perforation. Some hours afterwards she had no pain nor tenderness in the epigastrium, but only slight rigidity of the recti and a rise of temperature. On the posterior surface of the stomach he found a pinhole perforation. Another young woman with gastric ulcer was suddenly seized with collapse, pain, retching, and tenderness at the epigastrium, but the stomach was found to be healthy. Pneumonia supervened on the following day and proved fatal. Liver dulness was very unreliable. He alluded to the case of a young man who after a blow on the abdomen had absence of liver dulness and was operated upon, when nothing abnormal was found. He preferred flushing to mopping in these cases and advocated the making of an aperture between the umbilicus and pubes for the escape of the fluid.

Mr. BIDWELL had collected notes of 55 cases of perforation, in 33 of which the time before operation was stated. All the cases in which operation was done within twelve hours were successful, as were half of those operated on between twelve and twenty-four hours. M. Comte had collected notes of 65 cases, with 19 recoveries, 11 of which had been operated upon within the first ten hours. Flushing and mopping must depend upon the case. If the pelvis was full of stomach contents, he thought it would be impossible to remove such an escape by sponging only.

Mr. BRUCE CLARKE considered that liver dulness *per se* was a symptom of doubtful value, but in no disease would one rely on any one sign or symptom. He referred to a case where liver dulness was almost absent from extreme distension. The pain might be almost anywhere, or indeed absent, of which he mentioned an instance. He pointed out that, as a general rule, the further down the intestinal tract the perforation was the less fatal it was, or at any rate the less acute were the symptoms. Something also must be allowed for the kind of fluid that was extravasated. He agreed with washing out the abdomen, turning out the intestines, and washing out the pelvis, but this was not necessary in all cases.

Mr. BERRY had seen about 12 cases of perforated gastric ulcer, and he had not seen a case recover after washing out, while, on the other hand, the majority of cases treated by mopping recovered.

Mr. BARKER, in reply, said it was certainly very important to get these cases early, but it was the character and the amount of the fluid quite as much as the time that determined the result. In three of his cases there was evidence of irritation of the pleura, in one decided subphrenic abscess, and in two symptoms of subphrenic abscess; in one of these there was serum and in the other not, but there was pleurisy. He himself had been greatly addicted to washing out in years gone by, but had been gradually weaned from it. Even when the extravasation had reached the pelvis it could be removed by mopping. In conclusion, he spoke highly of the value of saline infusion made into the areolar tissue.

ARRESTED DEVELOPMENT OF THE SPEECH CENTRE.

Dr. A. VOELCKER showed a girl, aged 7½ years, who was unable to speak.

The child was the elder of two children, her brother being healthy The father's sister had a child, aged 11 years, who was said to be similarly affected. There was no family history of insanity, epilepsy, alcoholism, syphilis, or rheumatism. The child had been quite well till six months of age, when she had a series of general convulsions ascribed to dentition. These fits recurred occasionally up to the age of 3 years, when they disappeared. She walked at twelve months, but had never spoken. At 1 year of age she had a severe fall on her forehead, followed by suppuration, but no discharge of bone. At 4 years she had measles. She had never been violent, passionate, or emotional and had been clean in her habits, though she occasionally soiled her clothes. Though unable to speak she appeared quite bright and intelligent, and heard well. On admission she was rather small, but well formed; maximum head circumference, 19.75 inches; forehead scarred in the centre, but no depressed bone felt; palate high and narrow; motion and sensation were natural, and there was no muscular wasting; the superficial and deep reflexes were natural; co-ordination good; no tremor of limbs. The child was rather left-handed. She was intelligent, understood what was said to her, and did readily what she was told. Hearing normal. Spontaneous speech was limited to a few monosyllabic utterances. She could sing, but no recognisable tune, nor did she sing scales in unison with the piano. The sight was natural. She could not recognise printed or written words, numerals, or letters, but readily recognised pictures of objects and objects themselves. She was unable to write letters, words, or numerals, or to copy them. She could, however, copy straight lines and circles with either hand, preferably with the left. When writing with the left hand she frequently made her marks from right to left.

The case, he observed, differed from cases of deaf-mutism and from cases of aphasia occurring in mentally deficient children, and from those in whom aphasia developed after the power of speech had been acquired. Dr. Bastian had pointed out in the development of the power of speech, the first stage consisted in learning to associate particular sounds with particular mental impressions, and this stage had evidently been reached by the child, but the second stage, in which the power of articulating the sounds which had been used as mental symbols was acquired had not yet been reached. Accepting the existence of a visual and an auditory perceptive centre and a glosso-kinæsthetic and cheiro-kinæsthetic centre

as maintained by Bastian, it appeared that the two former centres were intact, but that the two latter, or their commissural connections with the first two centres were involved. The observation that the child often wrote from right to left was explicable if it was remembered that movements of supination in the right hand resulted in a clockwise movement of the thumb, while in the left hand supination resulted in a counter clockwise movement, and that in movements simultaneously performed in the two upper limbs it was easier to excite corresponding muscles than to make the movements of one side maintain a parallelism with those of the other. This would tend to show that in mirror writing we had in the left hand represented the movements of the right, and that such movements were the result of kinæsthetic and not visual impressions, and also that it was probable that the centre for writing was, as Elder maintained, in the left hemisphere. The absence of any training in writing made it impossible to determine the extent to which the cheiro-kinæsthetic centre itself was involved, and the same held good with regard to speech and the glosso-kinæsthetic centre. The disease must affect the region of the posterior parts of the second and third left frontal convolutions, and was probably not a gross lesion but due to arrested or inhibited development of function of the glosso-kinæsthetic and cheiro-kinæsthetic centres or their connections with the auditory and visual perceptive centres. The prognosis was favourable and the treatment recommended was instruction in writing and in lip language. In reply to the President, Dr. Voelcker said he thought the convulsions had in some way damaged the region referred to, and produced arrested development.

MEDICAL SOCIETY OF LONDON.

Frederick T. Roberts, M.D., F.R.C.P., President, in the Chair.

Monday, December 11th, 1899.

Surgical Treatment of Ascites by the Artificial Production of Peritoneal Adhesions.

Dr. H. D. Rolleston and Mr. G. R. Turner read the notes of two cases on whom the operation, introduced by Dr. Drummond and Mr. Morison of Newcastle for the relief of ascites due to hepatic cirrhosis, had been carried out.

Case I.—In a man, aged 52, the ascites had existed for two months and a half; he had been tapped twice before the abdomen was opened in the right semilunar line, and the opposing surfaces of the cirrhotic liver and the diaphragm rubbed with a sponge and scratched with a director. The liver was then fixed by a kangaroo tendon suture to the abdominal wall. The patient recovered well from the operation, but the ascites recurred again and again, and when last heard of (November, 1899) he was very ill.

Case II.—A man, aged 45, was admitted for profuse hæmatemesis, and for the next six weeks had remained in bed with a raised temperature; during this time ascites and œdema of the legs developed. At the operation, which was undertaken without any paracentesis, except a pulmonary one on the morning of the day, the cirrhotic liver was exposed by an incision 5 inches long, parallel to and 1 inch below the right costal margin. The surface was scraped, and the omentum was brought up between the diaphragm and the convexity of the liver; a kangaroo tendon was passed through the edge of the liver, the omentum, and the parietal peritoneum. The patient steadily improved, had had no further ascites, but there was still some splenic enlargement.

Early operative interference seemed to have had a very satisfactory result in the second case, and was advisable in other cases, for two reasons: (1) inasmuch as patients with cirrhosis were not good subjects for operation, and (2) because if long postponed the liver might become too degenerated to undergo compensatory hyperplasia as the result of the improved blood supply provided by the adhesions. The method of stitching the omentum, liver, and the abdominal parietes together was recommended as an improvement, and the oblique incision, inasmuch as it gave better access to the liver, was preferable to that in the linea semilunaris. The manner in which the operation benefited the patient's condition was discussed at some length, and it was submitted that it was not due merely to reducing the portal blood pressure by opening up a collateral circulation, for this, if carried to its logical extreme in Eck's fistula in dogs, lead to a uræmic state, but that the improved blood supply to the liver resulting from the adhesions, enabled the liver to undergo compensatory hyperplasia, and so to counteract the destructive effects of cirrhosis.

Dr. Weber raised the question whether there were any cases which ought not to be treated by this method, evidently not the very advanced cases. In others, less advanced, a high specific gravity of the fluid might justify the suspicion of more inflammation than was usual in ascites, and, if so, one or two tappings might in some cases bring about a cure. He advocated the use of a very delicate trocar and cannula.

Dr. F. J. Smith advocated a proper laparotomy instead of tapping. He had had 2 cases operated on for the relief of extreme ascites, both being cases of cirrhosis, with hob-nailed liver, and the fluid was blood-stained, a fact of which he asked the significance.

Mr. Bidwell related 2 unsuccessful cases of operation for cirrhosis in one of which he had sutured the liver to the abdominal wall. He approved of the incision recommended by Mr. Turner, but thought suturing the omentum between the liver and the abdominal wall might interfere with the formation of direct adhesions.

Mr. Wallis referred to the case of a woman, said to be alcoholic, with enormous ascites, for which she was tapped on several occasions, with the result that for the last three years she had remained in comparatively good health.

Dr. Ewart referred to two cases which had been under his own observation. In one of these the patient was tapped upwards of 50 times. It turned out *post mortem* that the liver was sound, but the upper abdominal organs were all matted together so that the fluid below could not escape. It proved to be a case of ascites due to heart disease, namely, enclosure of the heart in a calcified pericardium. In Morison's case of long survival with many tappings after the operation the cause of death was not ascertained. Cases such as these indicated the need for some sure test identifying the presence of cirrhosis. This test might perhaps be supplied by an examination of the ascitic fluid withdrawn as suggested by Dr. Parkes Weber. In the other case, one of the earliest performed in imitation of the original operation, the details of the latter were not all carried out. The liver was cirrhosed, but it failed to be adherent in spite of peritonitis. The patient recovered from the operation, but ascites recurred and he died after a tapping followed by irrigation. In both cases Mr. Warrington Haward operated through a median incision, and in the case first narrated, but not in this one, the liver was sutured to the abdominal wall and a counter opening made for suprapubic drainage. In spite of this want of success Dr. Ewart was in favour of resorting to the operation in cases of well ascertained cirrhosis. The practical question would be, How early in the course of the case its employment might be recommended?

Mr. Turner remarked that when there was abundance of fluid it was well to withdraw this beforehand because this could be done without anæsthesia, and it shortened the subsequent operation.

The President commented on the distaste shown for tapping which he himself had resorted to many times with success. Before adopting an operation of this sort they ought to take every aspect of the question into careful consideration.

Dr. Rolleston, in reply, observed that cases of cirrhosis in which recovery followed tapping for ascites were quite exceptional, and one was apt to be too much impressed thereby. He thought that in the majority of cases of multiple tappings the ascites was probably not due to cirrhosis.

Fifty Successful Consecutive Cases of Ovariotomy recorded Three Years after the Operation.

Mr. John D. Malcolm read a paper on this subject. He gave an account of the patients three years after the last operation of the series. He could not trace 7; 29 were in very nearly perfect health, 7 others had very little to complain of, in 4 the condition was unsatisfactory, and 3 were dead. Special attention was directed to the difficulties, accidents, and mistakes which had occurred, and to those cases in which the later results were unsatisfactory. In conclusion, it was urged that early operations should be performed in cases of ovarian tumours whenever this was possible, and, above all, that the reason for delay should never be that the patient was quite well. This was especially put forward in the interests of those patients who might recover well from the operation. The author added a short account of his unpublished fatal cases of ovariotomy, and showed that in most of them the fatal issue could be directly attributed to the delay in operating.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, December 6th, 1899.

Alban Doran, F.R.C.S., President, in the Chair.

Tubal Molar Pregnancy.

Dr. John Phillips read notes of a case of tubal molar pregnancy complicated by a suppurating ovarian cyst on the opposite side.

The patient was 40 years of age, and had ten children after natural labours. On August 5th, 1898, she had pain in the left iliac fossa; menstruation had been absent since May. A lump was found in the left and posterior quarter of the pelvis. On August 26th, she had a sudden attack of pain and collapse with vaginal hæmorrhage which continued. On September 26th the patient was anæmic, and had a temperature of 100° and pulse of 108. A fixed bilobed swelling occupied the whole of the lower abdomen. At the operation on October 17th, 1898, the left part of the tumour was found to be an extrauterine sac with putrid contents and with a fœtus 3 inches long projecting through the wall; the right part was a suppurating ovarian cyst. After removal of the sac and the cyst, the peritoneum was washed out with 3 quarts of sterilised water. The patient was quite well a year later.

The points of interest were the constant hæmorrhage (a sign insisted upon by Dr. Cullingworth), the position of the fœtus partly within and partly outside the sac, and the cause of the suppuration.

Dr. Herman said that Dr. Phillips's specimen was important as throwing light on the possible results of tubal mole and abortion. It showed that a tubal mole was not always harmless.

Dr. Galabin had met with a considerable number of cases diagnosed with reasonable certainty as extrauterine fœtation in which a lump of notable size had gradually disappeared without any operation. If the ovum had not reached two months of development, there was a reasonable prospect that the lump would become absorbed; but if there was an embryo as large as that shown, suppuration or septic change would most likely occur.

Dr. Peter Horrocks did not think all cases of tubal moles or hæmatoceles due to tubal pregnancy should be operated upon, and gave details of cases under his care which were recovering satisfactorily under expectant treatment.

The President held that bleeding from an unruptured tube bearing a hæmorrhagic mole must be considered as a third form of pelvic hæmorrhage. Pelvic hæmatocele, intraperitoneal, was occasionally due to other causes than tubal gestation, and was not invariably fatal. Taylor was probably correct in insisting that broad ligament hæmatoma was due to tubal gestation only in the minority of cases. The President thought that a large tubal mole was a source of danger, and should be removed.

Peritonitis Complicating Pregnancy and Labour.

Dr. John Phillips read a paper on a case of acute (?) idiopathic peritonitis complicating pregnancy and labour.

The case was that of a woman nearly seven months pregnant and in good health, who fell on her left side over a chairback. Much pain and persistent vomiting followed. She was found in a very serious condition, her abdomen distended, pulse 120, temperature 103° F., and respirations 48. Labour came on, but no true pains could be distinguished, and terminated very quickly. Her condition became rapidly worse and she was admitted into King's College Hospital. After consultation Mr. Peyton Beale opened the abdomen and found general peritonitis, but no apparent cause. The patient died in a few hours. Full details of the *post-mortem* examination were given.

Short histories of 5 other cases were related: Matthews Duncan (2), Simpson, Romiti, and Gow. The author thought that three important points for discussion arose out of the case, namely: (1) The cause of the infection; (2) the question of operative interference; (3) the share the blow took in producing the illness.

Dr. Galabin had lately met with a case of general peritonitis not associated with pregnancy where the causation could not certainly be determined. The patient, who was 17 years of age, was exceedingly ill, the abdomen greatly distended. A large quantity of sero-purulent fluid was evacuated by abdominal section. The intestines were bound down posteriorly, but the effusion extended from the diaphragm to the pouch of Douglas; the uterus and broad ligaments being bathed in it anteriorly and posteriorly. There was no sign of tubercle nor history of gonorrhœa. The tubes were not distended, but a few drops of pus could be squeezed from the right tube. He thought it most likely that in this case and Dr. Phillips's the tube was the primary source of inflammation. The patient improved, but died from an anæsthetic three weeks later and no *post-mortem* examination was made.

Dr. Peter Horrocks thought the word "idiopathic" had practically dropped out of medical literature for years. He mentioned a case in a girl of 15 where every known cause of peritonitis having been eliminated by the physician idiopathic peritonitis might have been diagnosed: on abdominal section, however, he had found tuberculous peritonitis. The fact that no bacteriological examination had been made in in Dr. Phillips's case left the real pathology in doubt; still in all probability the cause of the disease was some form of microbe.

Dr. Inglis Parsons suggested that the fall might have caused bruising of the intestine which, thus damaged, allowed bacteria to pass through into the peritoneum. There was also the question of cold and chill; the general physicians allowed that pleurisy might be caused in this way; then why not peritonitis?

Dr. Amand Routh referred to Mr. Treves's statements in his Lettsomian lectures where he had shown that the bacterium coli commune was capable of becoming extremely virulent after the occurrence of inflammation or bruising of the intestine.

Dr. Robert Wise inquired about the condition of the spleen.

The President believed that direct infection of the peritoneum through the ostium of the Fallopian tube without any previous infective phenomena in the vagina, uterus, or tube was almost, if not entirely, unknown. Puerperal infection it appeared did not reach the peritoneum through the tube.

Dr. John Phillips replied.

Specimens.

The following specimens were shown: The President: Double Hydrosalpinx without Salpingitis.—Dr. Walter Tate: (1) Sarcoma of Ovary showing necrosis and suppuration in centre; (2) Calcareous Fibroid of the Cervix.—Dr. Blacker: Fibro-adenoma of Cervix.—Dr. Herbert Spencer: Peculiar Mucous Polypus of Cervix.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, December 6th, 1899.

A. S. Miller, M.D., F.R.C.S.E., President, in the Chair.

Radical Cure of Hernia.

Dr. C. W. Macgillivray read a paper entitled the Radical Cure of Hernia, with the statistics of seven years' experience in the Royal Infirmary. He said the tendency of late had been to have recourse to rash and unnecessary frequency in operating where milder measures would have led to safer and often more permanent results. Experience alone could teach the immediate dangers and ultimate prospects. He first considered the subject in its general aspects. First, there was the class of cases and conditions of hernia in which an operation for a radical cure was advisable. Here the general condition of the patient was to be considered, and the presence or absence of organic disease. Youth was no barrier to operation. Patients past middle life who had pendulous bellies, weak muscles, large canals, long standing ruptures, should rarely be exposed to operation. Sex was of little importance, save as to form of hernia. There were really only three forms of hernia in which the question of a radical cure had to be considered. Cases suitable for operation were imperative, necessary, advisable, or convenient. Those were imperative where strangulation or other complication pointed to a fatal issue without operation. Here the radical cure was secondary, and very frequently not advisable. Those were necessary where a truss was ineffective. Those were advisable where, mainly in the poorer classes, the patient had to work hard, and the hernia could not be controlled by a truss, or where the constant care of a truss could not be given. Where the patient did not care to put up with the inconvenience of a truss, an operation of convenience might be performed. So, also, where a hernia was a bar to the public services. As to the danger to life of operation, there were two groups: First, cases where, as in strangulation, some operation was imperative, and where when performed radical cure was secondary, and secondly, when the patient was in perfect health. As to age, the danger increased after middle life and was considerable in old age. The ultimate result and its permanency required consideration apart from the immediate

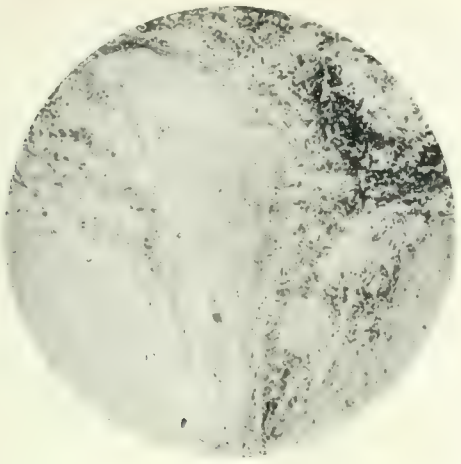


Fig. 1.



Fig. 2.

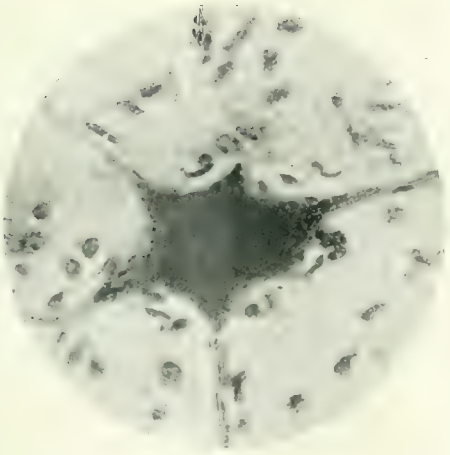


Fig. 3.

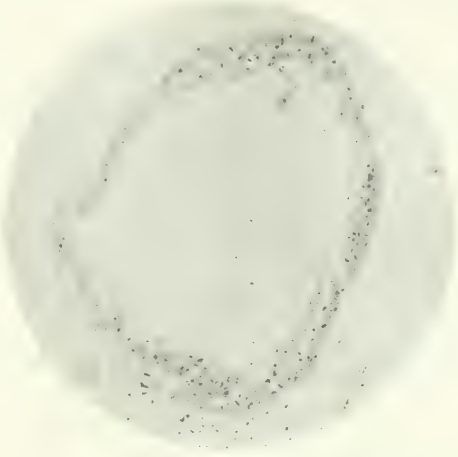


Fig. 4.

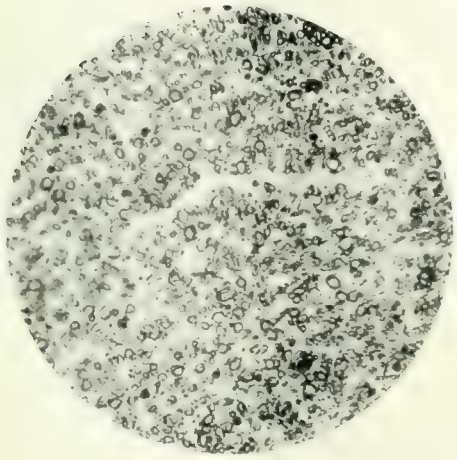


Fig. 5



Fig. 6.

TO ILLUSTRATE DR. F. W. MOTT'S PAPER.

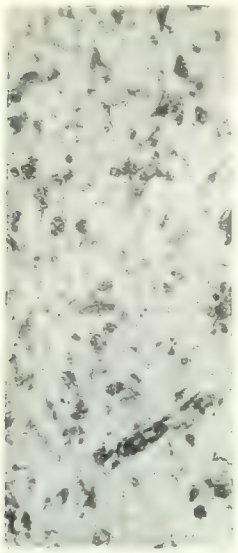


Fig. 8.

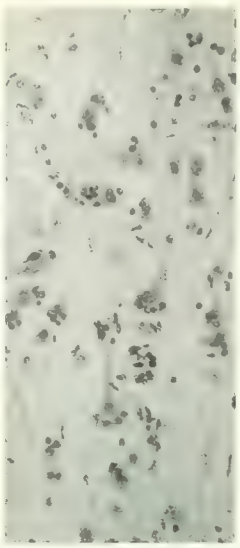


Fig. 9.



Fig. 10.



Fig. 12.

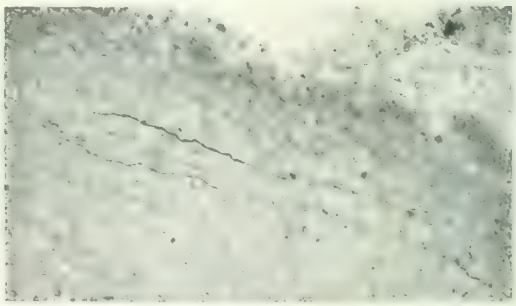


Fig. 13.



Fig. 7.

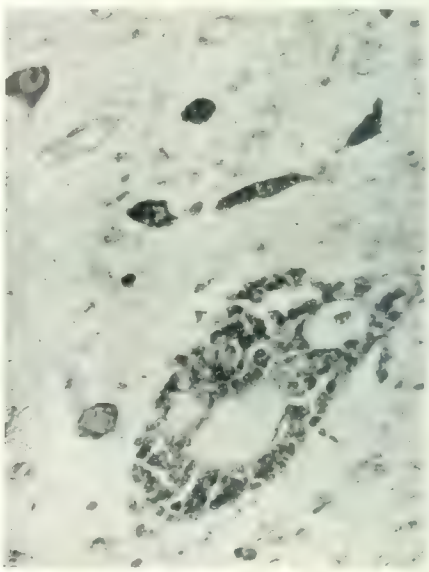


Fig. 11.

TO ILLUSTRATE DR. F. W. MOTT'S PAPER.

danger. There was the method, the nature of the rupture, the mode of healing, the after-treatment, and the age all had to be weighed. In children and in imperative cases the simpler the operation the better. Dr. MacGillivray cleared the constituents of the cord as far up as the internal ring, transfixing and tying it with chromic catgut. The long ends of the catgut were passed, the one through the lower edges of the transversalis and internal oblique, and the aponeurosis of the external oblique external to the internal ring, the other through Poupart's ligament at the same level. As to closure of the canal in infants and in strangulation, this should be as simple as possible. Details were given as to the treatment in infants, young adults, and in femoral hernia, and in umbilical hernia. As to the mode of healing by granulation preferred by McBurney, he disagreed. In after treatment keeping the patient in bed or long in the horizontal position, six weeks at least, was essential. A light truss might in some cases be worn during exertion. The question of permanency of results was most difficult. Patients did not come back to report themselves unless they got into trouble again.

Dr. MacGillivray then gave statistics of his own operations in the Edinburgh Royal Infirmary during the last seven years. In all there had been 91 operations with 10 deaths. Of these deaths 8 occurred among cases he had operated on for strangulated hernia in which the symptoms were severe and the prognosis bad before operation, and in which the question of the radical cure had nothing to do with the unfortunate result. Two deaths occurred after the operation for radical cure, uncomplicated by strangulation, the first due to persistent vomiting, the other in an infant of 3 years with double large congenital inguinal hernia where the wound healed by "first intention" and death was due to double pneumonia. Of these 91 cases 70 had inguinal hernia, 17 had femoral hernia, and 4 had umbilical or ventral hernia.

Inguinal Hernia: 70 cases, 6 deaths, four of the later from strangulation, all being males; 50 were simply operated on for radical cure; 14 cases were complicated by strangulation, 5 by irreducible hernia, 1 by incarceration, 20 were congenital, 7 were double; 3 cases were in females. As to age, 19 were under 20 years, 28 between 20 and 40 years, 9 between 40 and 60, 8 between 60 and 80, and in 6 the age was not given.

Femoral Hernia: 17 cases with 3 deaths, all females, aged 34, 64, and 66, and all cases of strangulation; 8 were simply operated on for radical cure, 8 were complicated by strangulation, and 1 by incarceration; 6 were males, in two of whom the hernia was strangulated; 11 were in females, with 6 cases of strangulation, and 1 of incarceration. As to age, 3 females and 1 male were between 20 and 40, 6 females and 5 males between 40 and 60, 2 females between 60 and 80. There were no cases of double femoral hernia.

Umbilical and Ventral Hernia: 4 cases, all in fat, middle-aged married women who had borne children; 3 recovered and 1 died, 2 were irreducible, 1 irreducible and strangulated, 1 incarcerated and inflamed.

These results showed a death-rate of little over 3 per cent. in all the cases, favourable and unfavourable, which were operated on for radical cure simply, the exact numbers being 2 deaths in 60 cases. In the 31 cases complicated by strangulation, etc., the total number of deaths was 8, or about 25 per cent., and in no case could the radical cure *per se* be held accountable for the fatal result. The absence of information as to the ultimate results was highly unsatisfactory, but that seemed inseparable from hospital practice. In suitable cases the danger of the operation was slight, while the immediate results, so far as regarded the comfort and well-being of the patient, were excellent.

The paper was discussed by Mr. C. W. Cathcart, Mr. Alexis Thomson, Mr. H. J. Stiles, Mr. Cotterill, and the President; and Mr. MacGillivray replied.

Cases and Demonstrations.

Cases and specimens were shown by Mr. David Wallace, Mr. Stiles, Dr. A. Scot Skirving, Mr. Miles, and Dr. Harvey Littlejohn.—Dr. A. P. Webster showed a simple mode of applying hot water, charged with remedial agents or not, to mucous surfaces; a beaker, a blower, an indiarubber perforated stopper, and glass tube being all that was necessary.—Dr. G. Lovell Gulland gave a demonstration of Cohn's method of showing fat in urinary deposits and other fluids.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Surgery.

R. L. Swan, P.R.C.S.I., President, in the Chair.

Friday, November 10th, 1899.

President's Address.

The President delivered an address on Venereal Diseases and their Therapeutics.

Treatment of Fractured Patella.

Mr. Glasgow Patteson read a paper on suture of fractured patella by an improved method.

Mr. H. G. Croly was opposed to the risk of opening the knee-joint. He thought ligamentous union just as good. When last in London he had inquired if there had been any deaths from the opening of the joint in fracture of the patella, and found there had been.

Dr. Ormsby had seen many cases treated by the Dublin method with a short ligamentous band, and frequently, when the patient was afterwards walking about, people could not say which patella was broken. The advantage of bony union did not appear to him so great as those of a short ligamentous band.

Mr. Patteson, in reply, said he had never seen death follow the modern method of treatment, which, of course, should be used only in suitable cases. By the open method bony union and absolute mobility were made certain within a short time. He felt more and more convinced that, with proper precautions, the opening of the joint was the best method.

Urinary Infiltration.

Mr. H. G. Croly read a paper, illustrated by a series of of cases which came under his care in his hospital and private practice, and exhibited six beautiful coloured drawings taken from the patients by Dr. Paul Carton. Some were made in the theatre before operation, others at a later period during the healing process, and some when the wounds were healed. Reference was made to the surgical anatomy of the region involved in cases of infiltration of urine, including a description of the attachments of Colles's middle femoral fascia. All the cases described were very severe. Only one fatal case occurred in the list; in that case the patient delayed in seeking admission to hospital until the local and constitutional symptoms were far advanced. He had never seen in any surgical work a drawing of urinary infiltration.

Remarks were made by Dr. E. H. Bennett, Mr. Doyle, and Dr. Knott, and Mr. Croly, in reply to Mr. McCausland, said he did not think incision would be dangerous if it did not go through the tunica albuginea. The diagnosis should present no difficulty, except where infiltration occurred behind the triangular ligament, but he had already mentioned a case of urinary extravasation in which the man's serotum was tapped with a trocar and cannula. The most deceptive cases were those in which abscess of the perineum existed.

MANCHESTER THERAPEUTICAL SOCIETY.

Professor J. Dreschfeld, M.D., President, in the Chair.

Wednesday, November 22nd, 1899.

Glycerophosphate of Sodium.

Dr. T. Harris made a communication on the use of glycerophosphate of sodium, which he had employed very largely during the last three or four years, and although unable to bear out all that had been said by others in its favour, he believed it had considerable value in certain conditions. From their chemical constitution and their relation to lecithin, there seemed a probability on *a priori* grounds of the glycerophosphates acting as foods to the nervous system. In 1894 Professor Robin published his observations on the physiological action and therapeutic uses of the glycerophosphates. He considered that they favoured assimilation and metabolism, especially acting on the sulphur metabolism, and exerting a sparing influence on the combined phosphates. It was impossible to believe that the glycerophosphates could be useful in all the large number of diseases in which beneficial result had been claimed, but such diseases as neurasthenia, Addison's disease, etc., seemed likely to be favourably influenced by them. Dr. Harris had used only the glycerophosphate of sodium, and not the other compounds. This could be obtained either as 75 per cent. solution, which was jelly-like, or a 50 per cent. solution, which was liquid. The dose was 15 to 40 minims three times daily of the weaker solution. Given in a mixture with tincture of orange and chloroform water it was quite palatable. He had used the drug chiefly in nervous affections, neurasthenia, and hysteria and functional affections, but had also tried it in diabetes, etc. In most cases of neurasthenia it had failed, but some cases had been benefited by it. Very few case of true hysteria had been favourably influenced, especially in long-standing cases. The best results had been obtained in the treatment of nervous exhaustion from overwork in which it has often had really good effects.

Dr. LEECH had not tried the glycerophosphate to any great extent His experience had not led him to think highly of the usefulness of these compounds.

Dr. WILD had used glycerophosphate of sodium on himself and others for weakness following influenza, and for nervous exhaustion from overwork, with apparently distinct advantage. It seemed to him that the calcium salt might be even more beneficial than the sodium salt.

The PRESIDENT had used glycerophosphate sodium for nine months. It failed in some cases of neurasthenia, and it failed to relieve the pains of locomotor ataxy. It seemed to do good in some functional diseases.

GALENICAL PREPARATIONS AND ISOLATED ACTIVE PRINCIPLES.

Professor D. J. LEECH opened a discussion on the comparative value of Galenical preparations and isolated active principles. Experiments on the physiological action of drugs had mostly been made with isolated active principles. It had been said that as drugs contained several active principles the action of the preparations of the drug must differ from the action of the chief active principle. He believed that in the case of some of the more important drugs there was no real evidence to show that the action of the drug was materially different from that of its chief active principle. Now that several of the principal drugs of the *Pharmacopœia* had been standardised, the question was a very important one, and that with more uniform strength of the drug preparations under the new *Pharmacopœia* it would be quite feasible and very desirable for members of the Manchester Therapeutical Society to undertake an investigation of the question, as if there were no real difference between the action of the Galenical preparations and the preparations of the isolated active principles the *Pharmacopœia* might be much simplified, and the use of active principles extended. He showed how by a consensus of action among medical men quinine had already practically taken the place of cinchona bark, whilst few people now used jaborandi, everyone relying upon pilocarpin instead.

Opium and Morphine. — Very little accurate knowledge existed about the action of many of the alkaloids present in opium; mostly they occurred in very small quantity. Dr. Leech believed that for practical purposes morphine and opium had the same action. Many authors gave a list of differences in the action of morphine and opium, but the same list appeared modified more or less in nearly all the text-books, and it could be traced back to some of the earlier works, such as Charvet and Pereira. Trousseau and Pidoux denied that there was any difference. Binz advised the use of morphine only, and Cushny thought the other alkaloids had very little effect. Most authors stated that morphine acted less as a diaphoretic than opium, but Dr. Leech was inclined to doubt this action of opium altogether, though in combination with other drugs the action of opium might be different from its action alone. Most said that morphine caused more irritation of the skin than opium, but it was a question whether there was any difference when the drugs were administered in the same manner. Nearly all authors agreed that morphine had a less astringent effect on the bowel than opium and this might be because the latter was more slowly absorbed. In diabetes opium was preferred by some to morphine, but Fraser found morphine quite as effective. As regarded diarrhœa Dr. Leech was not positive, but thought that perhaps opium might be rather more useful than morphine.

Atropine and Belladonna.—Belladonna contained atropine and hyoscyamine, young belladonna roots containing chiefly hyoscyamine, but this could readily be transformed into atropine. Pharmacologically there was very little difference between atropine and hyoscyamine, and none between atropine and belladonna; yet therapeutically they were used differently. The preference for belladonna preparations might be due partly to the fact that they were more convenient to take, and partly because physiological effects were more readily obtained from the use of the alkaloid. This might have been due to the fact that under the old *Pharmacopœia* belladonna preparations often fell much below their proper strength in atropine. Dr. Leech was not convinced of any real difference which should make belladonna preferable to atropine.

Strychnine and Nux Vomica.—The minute quantity of brucine in nux vomica probably had no appreciable influence. In practice nux vomica was given in dyspepsia, strychnine as a nerve tonic. Was this difference in therapeutic use founded on any sound basis? Dr. Leech thought not, though if nux vomica were more slowly absorbed, extract of nux vomica might be more suitable than strychnine for intestinal conditions.

Cantharides and Cantharidin.—If cantharidin could replace cantharides it would be a great boon, especially in India, where an insect abounded which contained much cantharidin, and the use of this would save the necessity of importing the Spanish fly. Greenish had suggested formulæ using cantharadin instead of cantharides for the blistering preparations of the *Pharmacopœia*. Dr. Leech had tried these preparations and found them efficacious, though some seemed to produce rather less marked effect than the corresponding cantharides preparations.

Dr. HARRIS, Dr. COUTTS, Dr. WILD, and Dr. DRESCHFELD took part in the discussion, the speakers generally agreeing with Dr. Leech that there appeared to be practically no difference between the action of the drug and its active principle in the cases of atropine and belladonna, strychnine and nux vomica, quinine and cinchona, pilocarpin and jaborandi, but some made a reservation in the case of opium and morphine, believing that there were some differences leading to a preference for one or the other in certain conditions.

Dr. LEECH, in reply, thought that many of their therapeutic views were founded on imperfect observations, and these views were passed on from one book to another, and generally accepted. It was time many of these beliefs were put to the test of experiment, and he thought the Therapeutical Society could perform a useful function in this respect.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

D. BURGESS, M.A., M.B., President, in the Chair.

Thursday, December 7th, 1899.

EXCISION OF GANGRENOUS UMBILICAL HERNIA.

Dr. GEORGE WILKINSON read notes of a case of excision of a gangrenous umbilical hernia with secondary enterorrhaphy:

The patient was a stout woman, aged 49, the subject of umbilical hernia for twenty-six years. When admitted to the Royal Hospital, symptoms of strangulation had been present for about forty hours. The hernial sac was about 5 in. in diameter. Sac and contents were gangrenous. The whole was excised. The contents of the sac were 12 in. of transverse colon and a large mass of omentum. Paul's tubes were fitted to the divided ends of the colon, which were fixed to the wound. Secondary enterorrhaphy was performed six weeks later by means of Murphy's button. The patient made a good recovery.

FACTITIOUS ERYTHEMA (?).

Mr. DALE JAMES showed a painting of a case of erythema:

The lesions existed on the chest and right arm, the patient being left-handed. Each spot began as an indefinite rose-coloured patch; this developed into a circle, the centre clearing up. In the circumference minute vesicles appeared and dried up; then exfoliation of the cuticle took place.

The patient was a highly neurotic single lady, aged 30. She had had the eruption for seven years. It was probably factitious, although this was denied, and control experiments had failed to solve the doubt.

EVULSION OF LOWER JAW.

Mr. H LOCKWOOD read the notes of a case.

A woman aged 35 was admitted an out-patient at the Royal Hospital on November 5th, 1898. She had been suffering from pain and swelling in the lower jaw for three months. On examination a swelling was found below the anterior surface of the lower jaw. Fomentations were ordered, but as she did not improve she was made an in-patient on November 25th. An incision was made, and pus let out. Subsequently the bone was scraped, and found to be extensively necrosed. As the disease progressed it was thought advisable, in April, 1899, to attempt removal of the jaw as far as the angle on each side, that being apparently the extent of the disease. A skin incision was not feasible, owing to the septic condition of the tissues. The symphysis was divided and the bone sawn through at the angle, but on seizing it with lion forceps, after a little manipulation, the entire half came out. The other half was removed in a similar manner. There was no hæmorrhage, and the patient made a good recovery.

Owing to the periosteum being left behind, a new jaw was being formed, but of course without the articulation. The patient could talk well and chew anything.

INTRACRANIAL TUMOUR.

Dr. GODFREY CARTER showed a girl, aged 14, who was totally

blind, and who was suffering from the effects of an intracranial tumour, probably tuberculous, and situated in the cerebellum.

Her mother and sister died of phthisis, but up to three years and a-half ago the patient had been apparently healthy, though the large size of her head had been commented upon from infancy. Illness set in with severe frontal headache; when this had lasted for a week she fell down unconscious. There were no convulsions. Consciousness returned in two hours, but she was blind, and paralysed in the face and all the limbs. There was also complete anæsthesia of limbs and left side of face. Sensation returned on the second day, but power only after two or three months; she was able to walk in six months. Vertigo was a prominent symptom; no nystagmus. At this time there occurred a second attack something like the first. Coma lasted, the sensation not affected. There was incontinence of urine for three weeks afterwards. She was in bed paralysed as before for six months, and was only able to walk in a year.

From that time improvement had been gradual. She was intelligent and active, but in addition to blindness there was paralysis of the left sixth and seventh cranial nerves, and the left side of the body was weaker than the right. Knee-jerks were abolished, and her gait was stumbling and uncertain. The head was large, as from hydrocephalus, and presented a marked rectangular prominence of occiput. There was also some retraction.

Cases.

Dr. Hall showed the following cases: (1) Ulcerative Syphilide; (2) Eczema of Face and Neck, Arms and Trunk, and Popliteal Spaces, due to Paraffin.

Forfarshire Medical Association.—At a meeting held at Dundee on December 1st, Dr. Templeman, Vice-President, in the chair, Professor Macewen read notes of a case of Tracheal Stenosis following Cut Throat.

The patient was a man, aged about 40, who cut his throat in October, 1896. A little time after the wound healed it was found necessary to perform tracheotomy. He improved, and the tube was removed; but some time afterwards it was found necessary to open up the tracheotomy wound and reintroduce a tube. An attempt was made to treat the tracheal stenosis by the passage of bougies upwards through the tracheotomy wound. After the tube was withdrawn the stricture tended to contract, and an intubation tube much longer and broader than O'Dwyer's was daily passed, and the patient was able to do without the tracheotomy tube. By frequently paring the edges and suturing, the tracheotomy wound ultimately closed. It was then found possible to discontinue the use of the intubation tube, and the patient had had no difficulty of breathing for four months.

Professor Macewen then made remarks on the value of intubation in laryngeal diphtheria. He quoted statistics of his own from which he considered that in many cases intubation was preferable to tracheotomy. In his experience pushing down of the membrane had been a rare occurrence, and blockage and ejection of the tube were difficulties which could be got over by an intelligent nurse. He advised the use of larger tubes than those recommended by O'Dwyer. His results had been quite as good as those of tracheotomy in laryngeal diphtheria.—Dr. Buist read a paper on the means which should be adopted to prevent occurrence of Ophthalmia Neonatorum. If there was a vaginal discharge frequent douching should be carried out, careful washing of the vulva, and bathing the eyes of the child with boracic lotion. If the discharge was gonorrhœal the eyes of the child should at once be swabbed, using fresh swabs for each application, and then a solution of silver nitrate 10 gr. to the ounce should be applied to the palpebral conjunctivæ.—Dr. McGillivray followed with a paper on the treatment of the disease when once established. This consisted in the daily application of a 2 per cent solution of silver nitrate to the palpebral conjunctivæ, together with the frequent removal of secretion, even every half hour, by means of tepid physiological salt solution and the bathing of the eyes with formalin solution (1 in 2 000) every two or four hours, according to the quantity of the discharge. In the case of corneal complication, besides the treatment already suggested, atropine drops should be applied thrice daily. Great care should be taken to prevent any abrasion of the cornea. Under prompt, careful, and energetic treatment on the lines indicated, complete recovery could invariably be obtained. Attempts had been made in this country to adopt compulsory notification, as in most European countries, and to a large extent in the American States, but without success. Much, however, could be done by impressing upon people, especially the so-called midwife, the dangerous nature of the disease. Drs. A J. Duncan, J. Mackie Whyte, C. McVicar, and the Chairman spoke on the subject. Dr. McGillivray replied.—Professor Macewen read notes of a case of Subphrenic Abscess on which he had operated, and showed the specimen.

The patient was a man, aged 40, who had five weeks before admission to the infirmary complained of abdominal pains after meals. A few weeks later the abdomen became suddenly swollen, and remained so till admission. On admission he was very breathless and in great distress. The liver dulness was replaced by tympanicity entirely, and the hypodermic syringe withdrew nothing but air with fæcal odour. Two incisions were made in the right hypochondrium and the abscess cavity evacuated and drained. The patient did not recover from the operation.

The necropsy showed a perforated ulcer of the first part of the duodenum which had become adherent to the under surface of the liver, whence infection had spread to the upper surface of the right lobe of the liver, forming a large subphrenic abscess.

Association of Registered Medical Women.—At a meeting on December 5th, Miss Cock M.D. (Vice-President), in the chair, Miss Dobbie, M.B., B.Ch., showed a case of Mutism without Deafness, in a child aged 10 years.—Mr. James Berry gave an account of 84 cases of Removal of Goitre by operation, together with remarks on the treatment of exophthalmic and malignant goitre, illustrated by photographs, casts, and pathological preparations.

REVIEWS.

Twentieth Century Practice: An International Encyclopædia of Modern Medical Science. Edited by Thomas L. Stedman, M.D. Vol. xvi, Infectious Diseases; Vol. xvii, Infectious Diseases and Malignant New Growths. London: Sampson Low, Marston, and Co. 1899. (Demy 8vo. Vol. xvi, pp. 785. 30s. Vol. xvii, pp. 724. 21s.

The sixteenth volume of this useful system of medicine embraces only a comparatively small number—about a third—of those maladies that are commonly known as the infectious diseases. One of its chapters, however, consists of a masterly dissertation on inflammation from the pen of Professor Ziegler, of Freiburg, which adds much to the value of the book, though exception might be taken to its inclusion in a volume with this general heading. We are glad, on the other hand, to find that acute lobar pneumonia is frankly classed with erysipelas and typhoid fever. There are discussed in the volume, in addition to the diseases named, cerebro-spinal meningitis, dysentery, yaws, simple continued fever, and lastly, by Professor Popoff, of St. Petersburg, relapsing fever. Five of the ten chapters are by foreign authors.

The least satisfactory contribution is that on simple continued fever; its quality, indeed, may be well gauged from the following list of synonyms which appears as a subtitle: Ephemeral fever, febricula, irritative fever, ptomaine fever, gastric fever, catarrhal fever, mucoid fever, abortive fever, sun fever, nervous fever, mountain fever, synocha, accidental fever, idiopathic fever, and non-specific fever. A classification so comprehensive, although having undoubted conveniences, can scarcely tend to exactitude in diagnosis. The article on Yaws, by Dr. H. A. A. Nicholls, formerly Her Majesty's Special Yaws Commissioner in the West Indies, is a valuable addition to the literature of tropical medicine. The first of the two chapters on Typhoid Fever is devoted to a discussion of its etiology and general pathology, and includes a succinct but sufficiently complete account of the means of identification of the typhoid bacillus, while the second deals with the symptomatology and treatment of the disease. The value of the volume is enhanced by numerous illustrations, by useful bibliographies following the different articles, and by a good index.

The seventeenth volume comprises articles upon diphtheria, tetanus, cancer, and short notices of malignant growths of the skin, and of the female organs of generation. All these are of high excellence, and adequately present what is known upon the subjects named at the close of the nineteenth century.

To Dr. W. H. Park is entrusted the general pathology and bacteriology of diphtheria. The bacteriology would have been more complete had it included a notice of the atypical forms of diphtheria bacilli as distinguished from Hofmann's or the xerosis bacillus. The author is evidently no satisfied that the neutralisation of toxin with antitoxin is chemical rather than physiological; the filtration experiments of Brodie, which

appear to settle the truth of the first view, are probably too recent to have been made use of. The article contains a concise summary of Ehrlich's researches and his hypothesis upon the nature of toxins and antitoxins and the problem of standardisation.

The symptomatology and treatment of diphtheria are very fully dealt with by Dr. A. Jacobi, whose large experience makes the article of great value, and one that will well repay perusal, though its polemical passages are regrettable; the injection of antitoxin, it is rightly insisted, constitutes part only and not the entire treatment of diphtheria.

Tetanus is fully discussed in all its aspects by Professor Babes. As regards the so-called idiopathic forms attributed to exposure to cold, Babes concludes that the theory of a dual causation is inapplicable; the symptoms of tetanus are so typical as to make it impossible to hold that the bacilli producing other diseases may become so modified as to cause tetanus. He prefers to view all cases as arising from the specific bacillus, which, however may have concealed portals of entrance, such as the tonsil, decayed teeth, or the intestine. The great number of spores around and in the body (even at times in the fæces in health) points to such a probability. Given the infecting agent however, weakened conditions of the organism render the latter more susceptible to the action of the toxin. Under treatment the subject of intracerebral injections of antitoxin is noticed. As the utility of antitoxin is often called in question, the author's views may be given; he thinks that the treatment constitutes a marked advance, though it should not displace the use of other well-tried remedies; in very grave cases the antitoxin, given subcutaneously at least, is ineffective.

The subject of carcinoma in general is ably dealt with by Mr. Roger Williams. The different views that may be advanced upon the pathogenesis of the disease are amply discussed; but the subject has reached a stage when nothing will avail but new data, and these can be furnished only by further research and experiment. The article considers such subjects as the relation of trauma and chronic inflammation to cancer; grafting; auto-inoculation; geographical distribution; multiple primary tumours; the influence of age, sex, and heredity. Where there is so much room for difference of opinion the author's own views can, of course, only commend themselves to a certain number of readers, and this the more so as the writer's statements on some points are curiously inconsistent. After spending much labour, for instance, in endeavouring to overthrow the view of Broussais as to the important part played by irritation and chronic inflammation in the production of carcinoma—a view held also by Virchow—he further on has to reach the inevitable statement that in many parts of the body, such as the buccal cavity, the outbreak of cancer is commonly preceded by obvious hyperplastic changes (ichthyosis), after which the author himself asks "whether all parts of the body in which cancers arise are not similarly circumstanced;" and, in support, he cites the well-known researches of Heidenhain on the breast in carcinoma, and the frequency with which endometritis is associated with carcinoma of the uterus. Upon the increase of cancer he is satisfied; and this, he suggests, may arise from the deleterious effect upon the health of modern conditions of life; one fact that appears important to him is the widespread excessive consumption of meat. The dissemination of the disease, cachexia, recurrence, and retrogression, are other topics that receive a full treatment.

The symptomatology and treatment of carcinoma are discussed by Dr. W. B. Coley. After adverting to the ligature of arteries, the parenchymatous injection of alcohol, and the use of caustics, he states that excision is the only method which can at present be considered. To Moore the credit is given of having first pointed out the incompleteness of the methods of excision in vogue in 1867; Gross developed the operative treatment still further; and then, following Heidenhain's observations, came the extensive procedures of Halsted and others. The statistical results of the operations of Watson Cheyne, Halsted, and Sir Thomas Smith are well presented, the writer apparently thinking, with Marmaduke Sheild, that the early error of under-operating is giving place to an opposite fault. The treatment of rectal and other carcinomata concludes the article.

Sarcoma is dealt with in its general pathology by Mr. Roger Williams; from its clinical, by Dr. Coley; and those who desire to know the latest views of the latter author upon the treatment of inoperable sarcoma by means of the mixed toxins of streptococcus erysipelatis and bacillus prodigiosus will find them concisely stated.

The volume concludes with a short, though adequate, notice of malignant new growths of the skin, by Dr. J. T. Bowen, and of malignant diseases of the female organs of generation, by Dr. E. McGuire.

APPENDIX XII TO THE SECOND EDITION OF THE DESCRIPTIVE CATALOGUE OF THE PATHOLOGICAL SPECIMENS CONTAINED IN THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND. By SAMUEL G. SHATTOCK, Pathological Curator of the Museum. London: Taylor and Francis. 1898. (Demy 8vo, pp. 46. 2s.)

THIS *Appendix* includes the description of the fine series of specimens prepared by Mr. Percy Furnivall for the Jacksonian Prize last year. This series contains some beautiful preparations, mounted on the newest principles, illustrating tumours of the stomach and intestine, and also the operations devised for their extirpation. Mr. Bourchier Nicholson's six groups of renal calculi successfully removed by operation in different cases are instructive. As signs of the times we may note Mrs. Scharlieb's specimens of calculous hydronephrosis, and Dr. Mary Marshall's specimen of the mucous membrane of a bladder cast entire. Two samples of calculi contributed by Mr. Betham Robinson, both successfully excised from the ureter, are interesting. One specimen illustrates that surgeon's article on A successful case of Retroperitoneal Uretero-lithotomy published in the BRITISH MEDICAL JOURNAL (vol. ii, 1897, p. 648); the second was removed, a few months later, from a young girl, also with success. As in the case reported in our pages, the ureter was stitched with fine silk. More than one writer of reputation as a surgeon considers the employment of sutures after retroperitoneal uretero-lithotomy to be unnecessary, but mostly on theoretical grounds; in fact, none of the authors of three textbooks in which the practice is condemned appear to have ever performed the operation. On the other hand, Mr Twynam, then of Sydney, who had already reported a case[1] when Mr. Robinson's paper appeared in our columns, sutured the ureter after retroperitoneal ureterotomy. The patient, a lad aged 8, made a perfect recovery. The clinical notes appended to Mr. Robinson's specimens are, as is usual in these days, very carefully prepared. Hence, as in the case of Mr. Furnivall's series, they illustrate the high value of a museum to the practical surgeon as well as to the scientific pathologist, provided that, as in the present instance, the true value of the collection is developed by means of an intelligent and intelligible catalogue.

A DIGEST OF METABOLISM EXPERIMENTS. By W. O. ATWATER, Ph.D., and C. F. LANGWORTHY, Ph.D. 1898. Washington: Government Printing Office. (Roy. 8vo, pp. 434.)

THIS valuable compendium is issued by the United States Department of Agriculture from the Office of Experiments Stations, and consists essentially of a digest of, and commentary on 3,661 published experiments, which have been made at different times in different countries and by many different observers, on the metabolism of man and the domestic animals. It presents shortly and in outline, but with complete bibliographical references, a tabulated and critical account of all the work which has ever been done on the subject of nitrogenous metabolism in the mammalian animals.

In its present form it is essentially a reference book for experts, and of little value to the general reader, but the thanks of all interested in physiological dietetics are due to the authors for the immense amount of work expended in recording the results of such a large number of researches. Its usefulness as a time-saving work of reference to all future workers on these subjects will be very great.

The critical and explanatory text adds greatly to the value of the tables, which taken alone would form a somewhat con-

[1] BRITISH MEDICAL JOURNAL, vol. i, 1890, p. 240.

densed and dry form of mental pabulum. There is a general introduction, in which the broad issues regarding nutrition, growth, heat, and energy are clearly stated, and attention is drawn to the numerous gaps in our knowledge and the shortcomings of experimental methods as hitherto used. The historical part, although all too short, is very interesting. It goes back to the early work of Mayow (1668), Sanctorius (1614), and Haller (1762), traces the influence of the discovery of oxygen on our ideas of bodily heat, and rapidly brings us down to the time of Liebig. Since 1850 the subject of animal metabolism has been continuously and industriously studied, and short reference is made to the valuable work of Pettenkofer, Voit, Pflüger, von Noorden, Paton, Seegen, Chittenden, and many others too numerous to mention here. The authors then give a critical exposition of the points to be considered in drawing deductions from the various experiments, and this is followed by the epitomised account of these, which forms the main bulk of the volume. Experiments on man constitute about two-thirds of the total number recorded, and these are subdivided for purposes of easy reference. There are tables giving all the observations which have been made with a vegetarian diet, with milk diet, or with other exclusive diets. The influence of alcohol, of fasting, of drugs, of muscular exertion, of water, of massage, of pregnancy, and of numerous diseases on metabolism have been extensively investigated, and these researches have all been duly collected and tabulated. The much less numerous data regarding the carbon metabolism of the body are also given. It is quite impossible to discuss all the subject matter in detail, but enough has probably been done by drawing attention to the existence of such a volume as the present.

Diseases of the Stomach. By William W. van Valzah, A.M., M.D., and J. Douglas Nisbet, A.B., M.D. London: The Rebman Publishing Co. 1899. (Demy 8vo, pp. 674, 24 illustrations. 20s.)

The subject of stomach diseases has attracted much attention of recent years, and many new books upon it have in consequence made their appearance. The book before us differs, however, in many particulars from its predecessors. The first of its six sections deals with classification, and here some apt remarks are made upon the error of mistaking conditions such as dyspepsia, hyperchlorhydria, etc., for the diseases upon which they depend. In the second section diagnosis and diagnostic methods are described. Here the authors first discuss at some length the clinical history, and then the physical signs are dealt with under "inspection," "electric illumination," "palpation," "percussion," "inflation," and "auscultation." In the chapter on functional signs, the gastric secretion and motor functions, as well as absorption and digestive work are discussed, and the methods of investigating them are given in full detail.

Under the somewhat attractive title of bacteriological signs the various forms of fermentation occurring in the stomach, together with putrefaction and gas formation, are described. The anatomical signs include the presence of blood, epithelium, pieces of the mucous membrane, and fragments of new growth in the stomach contents.

Section III deals with the subject of general medication, and more than 100 pages are given to it. Digestive hygiene, diet, physical remedies, and physiological, bacteriological, and chemical treatment are the headings under which it is described. In discussing diet, the authors begin by traversing Trousseau's dictum that the only suitable diet is the one which the patient knows by experience to agree with him best. It is boldly stated that the healthy man does not know how to feed himself, and that the diseased individual is still less likely to know. Lavage, electricity, and massage are dealt with under physical treatment.

The second part of the work includes the remaining Sections IV to VI. The so-called dynamic affections of the stomach are first dealt with, and here the various sensory affections of the stomach and the anomalies in the secretory and motor functions are described. The anatomical diseases which find a place in Section V include inflammation, ulcer, neoplasms, displacements, as well as obstructions of the orifices. Acute gastritis is divided into simple, mycotic, and toxic, and mycotic gastritis is further divided into the fermentative and infectious forms. Purulent or phlegmonous gastritis and gastric fever—a disease not universally recognised—fall under the heading of infectious gastritis. In the last section the effects of diseases of the stomach upon other organs and the secondary affections of the stomach are described.

This book is full of useful information sometimes viewed in a new light, and is well worthy of the careful attention of those interested in stomach diseases.

A Guide to Urine Testing for Nurses and Others. By Mark Robinson, L.R.C.P., L.R.C.S.Edin. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1899. (Fcap. 8vo, pp. 48. 1s.)

The author of this Lilliputian guide to urine testing informs us in the preface that the Nursing Superintendent of "a large provincial Poor-law Infirmary had suggested that such a book for the use of nurses would be acceptable," and that he has compiled it for their use, but on the title page it is said to be "for nurses and others."

It is questionable whether urine testing is within the province of a nurse, but if we are to entrust such work to persons wholly untrained in the knowledge which gives meaning to these operations it would appear desirable to select for their use only the best methods, those, namely, which are most in use and least liable to error.

But the book before us, although so limited in its scope that it deals with the quantitative chemical determination only of albumen, sugar, bile, blood, and pus, yet unnecessarily multiplies reagents, such as the bismuth test for sugar, citric acid and ferrocyanide of potassium for albumen, Oliver's test-papers, Gans' quantitative saccharometer, etc. As to this last, it is named in a list of apparatus on p. 21, but not figured or otherwise referred to elsewhere. Experiments with it some years ago showed that under ordinary conditions it is not to be depended upon. Fermentation is not mentioned either as a quantitative or qualitative test for sugar and Roberts's extremely practical method of estimating sugar by fermentation is ignored, although it is one of the few operations of urine testing which could be easily understood by a nurse.

Even in the very few statements which the author makes he is not always accurate, as, for example, "the urates are those of soda, ammonia, or more rarely lime;" "urine that is thick when first passed is unhealthy, and this condition is generally due to the presence of pus." Under the head of causes of low specific gravity diabetes insipidus is omitted, although several other conditions are enumerated. The scientific name for grape sugar is glucose, not dextrose, as the latter term includes cane sugar, and therefore is not a distinctive name.

We do not know who are "the others" to whom the book is addressed. It is not to be recommended to the public, as no one wishes to encourage patients to make urinary examinations for themselves, and it is not a book for either medical students or medical practitioners.

Anthropological Investigations of One Thousand White and Coloured Children of Both Sexes, the Inmates of the New York Juvenile Asylum. By Dr. Ales Hrdlicka. New York and Albany: Wynkoop, Hallenbeck, Crawford Co. (Demy 8vo, pp. 86.)

This is the record of an elaborate anthropological examination of 1,000 children in the New York Juvenile Asylum. Of the 1,000 children, 700 were boys and 300 were girls, and of these 908 were white, and 92 coloured. The ages ranged from 5 to 18 for the whites, 6 to 16 for the coloured children. The children appear to be largely of the merely necessitous class, but there is also an admixture of criminal, truant, and ungovernable children. Among the 634 white males examined, 58, or a little over 9 per cent., showed no abnormality whatever on any part of the body. Among the 274 white girls examined, there were 35, or almost 13 per cent., on whose body there was nothing atypical. Of the 66 negro boys, 5, or 7.6 per cent., were entirely normal; and of the 26 coloured girls, 7, almost 27 per cent., showed no irregularities. The disparity of defect in the two sexes is in harmony with the observations of Dr. Warner, who has noted the more frequent occurrence of defect

in the male sex than in the female. Atypical forms of the palate appear, however, to be more common in the latter than in the former.

Hrdlicka's observations lead him to believe that there is no one or any set of the abnormalities which run through such a number of subjects as to justify its being considered typical of the asylum children. White children of both sexes were found to possess, on an average, a decidedly larger proportion of inborn abnormalities than the negroes; but the latter acquire in early life a larger percentage of irregularities than do the white children. In the negroes both the pressure and traction force were found to exceed at all ages similar forces in the white children, though the average weight of the latter exceeds that of the former. On the whole, Dr. Hrdlicka does not appear to attach the significance which has been attributed by some to physical abnormalities, for he italicises the following statement: "As a matter of fact, there are very few abnormalities which we can observe in man that may be positively said to render the individual generally either decidedly inferior, or markedly superior, to his fellow-beings. No single physical abnormality (and but a rare combination of abnormalities) suffices of itself to stamp any individual as a human degenerate."

NOTES ON BOOKS.

Captain A. E. Grant, I.M.S., has printed in book form his recent address as President of the Madras Medical Society on *Post-Graduate Instruction and Research* (G. A. Nateson and Co.), in connection with the Tata scheme for a research institute in India. Captain Grant's only fear is that the project may be unduly delayed, or even temporarily stranded, on the shores of neglect, by the sluggish tide of "official reports," "memoranda," "suggestion," "reference," *et hoc genus*. But he trusts that with the present energetic Viceroy at the helm, and a picked crew of skilled and devoted men under his guidance, the scheme may be carried through.

We have received the Calendar of the Punjab University, Lahore (Calcutta: Baptist Mission Press. 1899. Demy 8vo, pp. 820. Rs.2.), which contains full particulars with regard to the regulations, faculties, degrees, and diplomas of the University, together with a college directory, and the examination papers set during the year 1898-99.

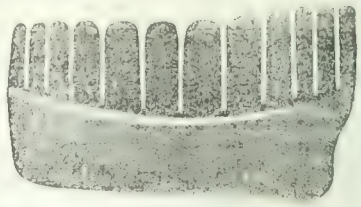
The Plague Inspector, by Lieutenant-Colonel W. G. King, I.M.S., is a book of over 160 pages, defining and explaining the duties of a plague inspector in India. It was written because something of the kind was asked for over and over again by plague supervisors to guide them in their work. Dr. King has accomplished the task he has set himself in a most satisfactory manner. The book is free from technical medical phraseology, and is written in a style that can be readily followed by laymen. It is divided into two parts. Part I begins with a short account of plague, a description of the plague microbe, with the favourable and unfavourable conditions for its vitality, the animals that suffer from plague, the incubation period of plague, the products of the plague microbe, mode of entry of the microbe into the system, and the mode of exit of the microbe from the body. Then follow the symptomatology of the disease, its mode of transmission, and the organisation for prevention of spread, the regulation of passenger traffic by sea, and the regulation of importation of articles from infected areas or country. The duties of the sanitary inspector with reference to plague are carefully and minutely gone into, and includes arrangements for home segregation, removal to hospital, house to house inspection, formation of health camps, and disinfection. Part II. refers more to the general duties of a sanitary inspector, and deals more especially with conservancy and sewage disposal. We hope the labour which Lieutenant-Colonel King has expended on this manual will bear fruit, and that full advantage will be taken of the knowledge he has placed within the reach of those engaged in sanitary work in India.

A Manual of Pharmaceutical Testing, by Barnard S. Proctor, F.I.C., gives such directions for testing as will show the quality of pharmaceutical chemicals with such reagents and appliances as are to be found at the dispensing counter. The object of the author has been to enable the pharmacist in the simplest, speediest, and most inexpensive way to be able to decide whether an article is fit for use. In many instances the *British Pharmacopœia* tests are sufficiently simple and satisfactory for the purpose, but in a considerable number of cases other and simpler methods of attaining the required object are given. The second edition, (crown 8vo, pp. 200, 2s. 6d.; London: *Chemist and Druggist* Office, 1899) has been brought into line with the *British Pharmacopœia, 1898*, and up to the requirements of the day by additions and emendations made by the editorial staff of the *Chemist and Druggist*.

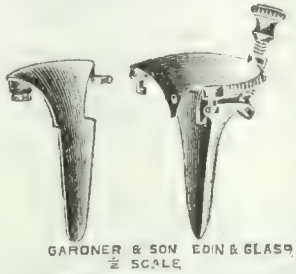
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Arch Support for Flat Foot.—Mr. F. H. Davies, M.B., has submitted to us an arch support for flat feet. It consists, as seen in the illustration, of a thin plate of steel in two planes, one of which is deeply dentated, and forms a lateral support for the arch of the foot; it fits in between the os calcis and the ends of the metatarsal bones. The plate is covered with leather when in use. It is claimed that the springs individually yield to pressure, and thus accommodate themselves to the under-surface of the arch, but collectively offer sufficient resistance to prevent the stretching of the ligaments. The flat part of the steel plate, being under the outer part of the foot, is fixed, and acts as a fulcrum from which the springs play. This spring plate is an endeavour to combine the advantages of the elastic rubber pad with the firm support given by a Whitman's brace, and as such it will probably be of service in cases of early flat foot with slight bony displacement.



A Modified Duplay's Nasal Speculum.—Dr. G. Sandison Brock (Rome) writes: In the removal of nasal polypi from the deeper parts with the aid of the ordinary Duplay speculum, I have experienced difficulty in manipulating the snare from not being able to remove the speculum from the handle of the instrument. To obviate this, Messrs. J. Gardner and Son, Edinburgh, following my suggestion, have made for me a modification of the Duplay by dividing its wide anterior ring in a vertical direction, so as to render the two blades readily separable when desired, the parts of the ring when the speculum is in use being secured in position by a gate at one side and by a bayonet joint at the other (see figure).

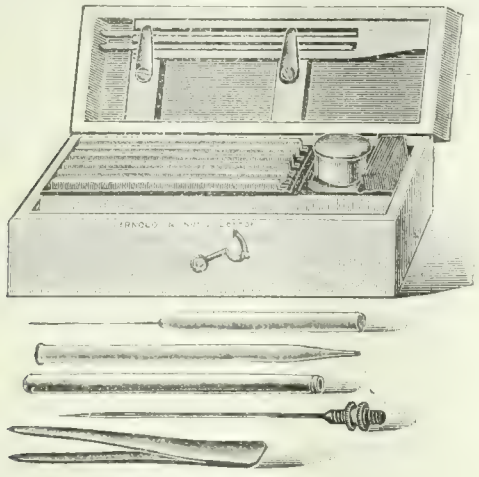




Professor Ferreri, of Rome, to whom I gave one of these modified Duplay speculums a year ago, tells me he has found it very useful, and describes it in his recently-published book on operative treatment in diseases of the nose, ear, and throat. I therefore venture to bring it to the notice of your readers.

A Modified Nasal Speculum.—Dr. G. Hunter Mackenzie (Edinburgh) writes: The Duplay nasal speculum has two disadvantages—it is difficult to clean thoroughly, and when in use is apt to be in the way during an operation. Thus, in the removal of certain varieties of polypi after the speculum has been used to facilitate the fixing of the snare, it would be an undoubted advantage if, during the actual operation, it could be removed from the nose. To overcome these disadvantages I have had the instrument modified by the addition of a couple of screws, so that it can be readily separated into halves, and when operating freed from the snare at the will of the user. After a fair experience I am certain that the modification is an improvement on the ordinary instrument. It has been made for me by Messrs. Young and Son, Forrest Road, Edinburgh.

The Microscopist's Companion.—Mr. Frederick Pearse, F.R.C.S.Eng., writes: The accompanying illustration depicts a small case which Messrs. Arnold and Sons, of West Smithfield, have made at my suggestion, and which contains in very compact compass, the immediate requirements of bacteriological and other microscopists. A few slides and cover glasses, a spirit lamp, grooved needle and platinum needle, capillary tubes, pipette and pair of forceps furnish a ready armamentarium for taking specimens, and any further preparation required can be subsequently completed at leisure.



MEDICINAL AND DIETETIC PREPARATIONS.

Soloids for Preparation of Saline Solution.—Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, E.C., have sent specimens of compressed salts for the preparation of saline solutions for intravenous injections. Soloids of sodium chloride contain 30 grains, and those of sodium chloride and sodium sulphate 15 grains each of the two salts. Soloids sodium chloride compound are composed of sodium chloride, sulphate, carbonate phosphate with potassium chloride. These soloids are very convenient for the ready preparation of solutions which are generally required in a hurry. Two of the soloids dissolved in a pint of sterilised water at a temperature of 100° F. form a solution of proper strength for injection. By means of soloid lead subacetate a solution approximating in the quantity of lead subacetate to the official liquor plumbi subacetatis dil. can be immediately prepared. Soloids lead and opium lotion contain 20 grains lead acetate, and the dry constituents of 20 minims of tincture opium in each. These soloids, on account of their portability and the ease with which the solutions can be prepared, will be found especially convenient to travellers.

"Gutenberg" Temperature and Pulse and Respiration Chart.—This sheet, printed and published by James F. Wilkinson, Pendleton, Manchester, contains an ordinary temperature chart and a chart for pulse and respiration rates, the normal line of the pulse being drawn at 75, that of the respirations at 17 per minute. There are also spaces for notes as to the condition of the bowels, urine, and body weight. The sheet is sold either singly or made up in pads.

THE MEDICAL ASPECTS OF THE SPANISH-AMERICAN WAR.

The *Philadelphia Medical Journal* of November 25th published Surgeon-General G. M. Sternberg's Medical Report of the United States Army for the Financial Year 1898-9. It deals with the fiscal year ending June 30th, 1899 and consists of two parts; the first financial, the second dealing with the health of the troops.

As it embraces the active period of the Spanish war, it is of special interest to us in its bearing on our South African campaign.

Financial Statement.

This statement at once shows how widely the constitution of the medical service of the United States army differs from our own in possessing a complete financial autonomy, embracing the procuring and distribution of hospital supplies, and even including what is properly looked upon as largely a medical duty—recruiting and mustering out of invalids. It is, therefore, only in certain directions that the two services can be fairly compared.

Appropriation and Expenditure.

The money voted for the medical service during the year in review was $3,750 000 (about £765,000), of which there was expended $2,750,000 (about £564,000).

The large item in these accounts is "medical supplies." This we take to embrace hospital dietary, which in a country like the United States is sure to be on a very liberal scale. Other considerable items are for "medical attendance and medicines," pay of "nurses" and other "employees," "hospital washing," etc.

Medical Officers.

The number of medical officers in the regular army was 192, which "was barely sufficient for the needs of the service in time of peace," with a strength of 25,000 men, and of course utterly insufficient for the war, or to meet an increase in the establishment of regulars, independent of volunteer establishments.

It was therefore necessary to employ about 940 "contract surgeons" during the year, of whom 385 were still serving on July 1st, 1899. Something of the same kind is now going on in our own undermanned medical establishments.

Female Nurses.

The female contract nurses reached a maximum of 1,200 in September, 1898, and 202 were still employed on July 1st, 1899.

Hospital Ships.

The *Relief* and the *Missouri*, which were Government ships, did excellent service between Cuba and the Philippines and the home country; but the *Aid*, formerly the *Bay State*, and the *Terry*, proved unsuited for hospital purposes for reasons which are not given.

Recruiting.

During the calendar year 1898, 66,237 white, and 5,013 coloured recruits were examined for the regular army; of that, a little over 20 per cent. only were rejected. This is much below the primary rejections among our own recruits, and apparently admits of a double explanation. First, men in America are enlisted up to a later age, and are therefore more developed; secondly, the medical examination is evidently less exacting. Nevertheless, the chief cause of rejection there, as here, is defective physique, while defective vision seems more common than with us; and diseases of the "circulatory system," which we presume can only mean varix and varicocele and cardiac affections among recruits, are also more common.

Irish and Germans formerly constituted a fifth of the United States regular army, or 200 in every 1,000; but they have recently steadily decreased, until in 1895 they were but 90 per 1,000; the native born have risen correspondingly.

Notwithstanding the smallness of the army and the largeness of the recruiting field, and the consequent opportunity for strict selection, a considerable "delinquent" and "undesirable" element has constantly to be weeded out of the United States forces, of which some figures are given.

Health of the Army.

It is noted with regret that even in the regulars, and still more among the volunteers, failure to keep and furnish accurate and complete records—especially in Cuba during July and August—makes the returns incomplete, and the ratios less than they undoubtedly actually were; this, however, with the scratch medical establishment employed, is scarcely to be wondered at.

Regular Army.

With a mean strength for the war year of 46,635, the admissions were at the rate of 2,136 per 1,000, or over two entries per man, and double the entries during peace. The excess was due to various "camp" diseases, of which the chief were malarial affections and typhoid fever.

The death-rate was 27 55 per 1,000 against a decennial average of 6.99, or nearly four times the normal amount. The number of days sick for each man was likewise double the average.

Of the different corps the infantry suffered most; but the death-rate was very high among hospital attendants, chiefly from typhoid fever, contracted in their ministrations on the sick.

The admissions were especially swollen by malarial diseases, but there were no fewer than 4,130 admissions from typhoid, and 604 from yellow fever; there were only 1,547 from gunshot wounds.

The death-rate of 27.55 per 1,000 was made up thus: Typhoid fever 9.74, gunshot wounds 3.94, malarial fevers 3.24, diarrhœa and dysentery 2.14, yellow fever 1.50, injuries other than gunshot 1.61, all other causes 5.38. Although the troops were exposed to dangerous infection in the islands from small-pox, there were only 19 cases and 7 deaths—such was the efficiency of revaccination. The highest admission-rate was in Porto Rico and Cuba; that in the Philippines was the same as in the United States itself.

The total deaths between May 1st, 1898, and June 30th, 1899, among regulars and volunteers, was 6,619, or an annual rate of 33 03 per 1,000 of strength, allocated as follows: Cuba 45.14, Porto Rico 38.15, Manila 17.20; United States: Regulars 17 43, volunteers 26 67.

Typhoid fever accounted for more than half the deaths from disease, and was worst in Porto Rico; yellow fever was worst in Cuba.

Sanitary Condition.

The sanitary condition of the permanent camps before the war was excellent, but the new camps formed on the outbreak of the war, and filled with undisciplined volunteers, speedily became hotbeds of disease, especially of typhoid fever, from which they suffered severely in July and August. Much good sanitary work has been done in Cuba since its occupation in December last, so that the amount of sickness in the camps and garrison has been much less than was expected; scattered cases of yellow fever have occurred, but its absence in epidemic form has afforded great satisfaction. The sanitary measures brought to bear on Santiago, hitherto one of the most unhealthy spots in Cuba, have proved remarkably successful. In Porto Rico, also, effective sanitation has been equally successful in controlling disease, and especially has an important attempt been made to suppress its worst disease—small-pox - by wholesale vaccination of the population. For that purpose a vaccine farm was formed at Coamo Springs.

Sanitary measures at Manila and elsewhere in the Philippines have been carried out with great labour, but with much success; so that the sickness and mortality have been not only relatively but absolutely low.

Water Supplies.

Much attention has been bestowed on this point, so that the supply to the various camps has uniformly been excellent. In no case was the rapid spread of typhoid conceded to be due to water pollution.

Various methods of sterilising drinking water have been tried, but simple boiling was found at once the readiest and most effectual, although it makes the water insipid and unpopular. The best filtering agents were found to be an asbestos strainer, with a cylinder of compact infusorial earth. The whole question of sterilising and aërating water was referred to a Board, who recommended the use of the apparatus known as the Waterhouse-Forbes water steriliser.

Conservancy.

The disposal of excreta in pits in camps of any long standing was found to be fraught with danger, unless most vigilantly looked after and constantly disinfected. After various experiments the most promising method was that known as the "trough system," with removal of the contents by pneumatic pressure. This has been successfully established in several camps.

Food Supplies.

The subsistence, or, as we call it, the supply departments, worked exceedingly well, and were constantly efficient. Many reports were received that the ordinary home ration was unsuited for the tropics in containing too much of the fatty and too little of the starchy elements.

The "60 per cent. allowance for subsistence" in hospitals proved more than ample, and enabled the medical officers to provide freely every delicacy for the sick; indeed a 40 per cent. allowance is declared to be sufficient.

Clothing.

The blue uniform used in the States was found too heavy for Cuba and the Philippines, and the woollen undershirts caused much irritation from prickly heat. Canvas suits until washed soft, were found to be too stiff and heavy, and caused chafing; and a similar complaint was made of one of the khaki issues. The British Indian helmet was found the best headgear; although after the rains set in the "campaign hat" was found to have certain advantages over the helmet.

The clothing finally recommended in the tropics is a light-weight woollen under-shirt, cotton drawers, white duck for garrison, and khaki for field service.

Conclusions.

From all of the foregoing it will be seen the experiences of our American friends in tropical warfare have been singularly like our own; and confirm what has long been well known to our army medical officers. We look less for new facts than for the application of new methods which their great inventive skill is likely to evolve.

Surgeon-General Sternberg concludes his report with certain recommendations concerning his army medical service which are equally applicable to our own; and which we have long and often urged on our War Office.

He points out the entire inadequacy of the regular army medical service, and urges its increase as soon as practicable. He says, "Physicians and surgeons from civil life, however well qualified professionally, as a rule are not prepared to assume the responsibilities of medical officers charged with administrative duties and sanitary supervision of camps. The proper performance of such duties cannot be expected from a physician without military training or experience, no matter how distinguished a position he may have held in civil life."

He urges the organisation of "a corps of trained medical officers larger than is absolutely necessary for the army on a peace basis."

He has thus found the danger and difficulty of a scratch medical organisation in time of war, a lesson which indeed may yet be brought home to ourselves. As the war with Spain evolved the weak points of the American army system, so our own deficiencies are certain to be found out in the Boer war.

It must be the immediate business of the nation to remedy them.

Idiocy in the Balearic Islands.—E. Pajarnes y Tur, in a recent number of the *Revista Balear de Scienc. Med.*, compares the number of idiots in the Balearic Islands with that in Spain. He finds that both in the islands and in the town of Palma de Mallorca, just as in Spain and France, idiocy more commonly affected the male than the female sex, and that the number of cases of acquired idiocy was greater than that of congenital idiocy. The proportion of idiots in Spain was 0.54 per 1,000, in the Balearic Islands it was 0.43 per 1,000, and in the town of Palma it was 0.63 per 1,000. The high percentage in Palma is ascribed specially to sociological conditions.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 16TH, 1899.

MEDICAL REGISTRATION AND PERSONATION.

The *Medical Register* is not exempt from the fraudulent attempts of persons who conceive that the material advantages to be derived from inscription thereon are worth the risks of detection. Once the fraud has been successfully perpetrated its subsequent detection depends largely upon accident. Now and again some other offence is committed by the wrongdoer in the investigation of which his former offence comes to light, and in this way two curious cases of personation have been discovered. In one a man obtained from the office of the Council a certificate of registration relating to another person, armed with which he obtained situations as assistant to various practitioners. At the first convenient opportunity he robbed them and then decamped, which operation he repeated a good many times, but finally attempting it once too often was detected. In the other an out-at-elbows practitioner left the country for one of the Colonies, leaving behind him his diplomas, for which he received a pecuniary consideration. It chanced that his name became removed from the *Register* under Section XIV of the Act of 1858, whereupon the individual personating him got a registered practitioner to furnish him with a false certificate of identity and presented himself with the other man's diplomas for re-entry upon the *Register*. In this he was successful, but the adverse verdict of a coroner's jury threw an undesired amount of light upon this individual, and the fraud was made plain.

As to the *Dentists Register* it is known that a few, and it is on good grounds suspected that a large number, obtained registration during a period of laxity shortly after the passing of the Dentists Act by fraudulent representations, whilst a very large number did so by representations which were not far short of being fraudulent. These registrations were effected under the provision permitting registration of persons in practice prior to the passing of the Act and under the apprentice clause. It is also believed that the diplomas and the registration certificates of medical and dental practitioners who have died are being fraudulently used by unqualified assistants and others.

In view of these facts and suspicions a Committee of the General Medical Council was appointed to draw up a scheme by which fraud should be rendered more difficult both in the first instance at the original registration and also at subsequent periods. The report came on so late in the session that it was shelved for consideration at the next meeting in May, although considerable pains had been spent upon its preparation, notably by the chairman, Mr. Horsley.

It has been the practice of the office to issue, upon payment of a small fee, certificates of the registration of any individual at any time and to any person who might apply without requiring any credentials; thus the detective engaged in one case obtained without any difficulty a certificate impressed with the seal of the Council, and looking more or less like a diploma.

In the report the subject is considered under the following heads: (1) the original entry of the name of the practitioner on the *Medical* or *Dentists Registers*; (2) the restoration of the name of a practitioner to the *Registers*; (3) certificates of registration; (4) preservation of the accuracy of the *Register*.

As to the first it recommended that the identification of the applicant should be tested by continuous record of his career from the commencement of professional education, as has in part been effected by the establishment of the *Students Register*. Handwriting, though it is acknowledged that this may change in the course of years, is to be used as one of the means of identification, the actual experience of the University of London having proved that in at least one case of personation at its examinations this was efficacious.

The wording of the Act by which a registered person is entitled, at least prior to the publication of the next *Register*, to a certificate of registration renders it impossible to do away with the issue of certificates altogether, but it is proposed so to alter the form of the certificate that it shall no longer have the semblance of a diploma, and that its purely temporary character should be made prominent.

Under the second head, that of restoration to the *Register*, as it is suspected that not a few persons have got upon the *Register* by personating dead practitioners or others who by various means had lapsed from the *Register*, additional safeguards are proposed. The application form is to be in the handwriting of the applicant; he is to furnish a statutory declaration (this is already done), and he is to obtain a certificate of identity from two registered practioners. We have seen that a personator can get one, but it is to be hoped that he would find it difficult to get two, and the substitution of "two registered medical practitioners" for "a clergyman or magistrate, or a registered practitioner," will bring any offender who gives such a certificate with undue laxity under the jurisdiction of the Council. The recommendations as to the restoration of names which have been struck off by the Council for infamous professional conduct we may pass over, as these must always be few in number, and are not very likely to be selected by aspirants to fraudulent registration.

With regard to erasures on death there has always been a difficulty, for although it is the duty as defined by statute of every registrar of deaths to transmit by post to the registrars notification of the death of any medical practitioner, this is very imperfectly carried out, and it may be remembered that last May the result of the examination of a list of 234 names of practitioners known to have died during 1898 was published in the British Medical Journal. The names of no fewer than 17 of these

deceased practitioners were found in the *Register* for 1899. The Committee urge that pressure be again put upon the Registrar-General to ensure that this provision may be more efficiently carried out.

When a name has been taken off under Section XIV (from change of address) the Branch Registrars are empowered by a Standing Order of the Council to restore a name on application when the "prescribed conditions" have been fulfilled. It appears that the "prescribed conditions" are nowhere to be found, so that it has become "an unavoidable formality." The Act provides that the Council shall give orders for the restoration, and as a matter of fact, the worst case of personation yet proved was the direct outcome of this Standing Order. As it is the Registrar has only to report the fact of restoration to the Executive Committee. It is proposed that in future the lines prescribed by the Act shall be followed, even if it causes a temporary inconvenience to a practitioner who might, though only as the result of his own carelessness, have to wait at most six months for the next meeting of the Council or three for a meeting of the Executive Committee.

The issue at any subsequent period of additional certificates of registration affords another and perhaps the easiest mode of personation. It is a curious point that the issues of these certificates—both of that on original registration and of that on subsequent application—are usages which have gradually grown up. Little is to be found about them in the minutes, though as early as 1863 the Irish Branch Council had discovered that there was a danger of misuse, for at that time it ordered that certificates should be issued only to persons whose names have not already been published in the printed *Register*. Under the Act a person whose name has not yet so appeared is entitled to ask for a certificate, which is at present given as a matter of course by way of receipt for his registration fee, and this is often needed by applicants for appointments, so that certificates cannot be wholly abolished, but can only be so altered as to limit their applicability by careful wording and by the omission of the seal, so as to render them insignificant in appearance. The report of the Committee winds up with a series of recommendations, the general scope of which has already been indicated. There are certain difficulties which are, however, inseparable from the wording of the registration clauses of the Act. Thus, it specifies that applications may be made by post, and also that, in lieu of production of actual diplomas, lists certified by the licensing bodies may be taken as evidence of qualification.

Hence, in the event of a person who is recently qualified having delayed to register, another aware of the circumstances might anticipate him and procure a certificate of registration. Here the provision of comparing handwriting, if preserved from the date of the student's registration, seems to afford a check, though at present by some bodies the students' registration is effected by the deans of the institution *en bloc*, and so there is no written application from the individual. It would not be difficult to make a different arrangement. The alterations proposed, which include insistence upon a statutory declaration in all cases save that of original registration, if they do not make personation absolutely impossible, will interpose considerable obstacles in the way of the dishonest, while they will add but little to the labours of the registrars. It is certainly time that the rules of procedure as to registration, in great part at present unwritten, should be codified.

MODERN CREMATION AND DEATH CERTIFICATION.

Sir Henry Thompson's little work on *Modern Cremation*,[1] of which a third edition has recently appeared, may be said without exaggeration to be one of the most important English contributions to the discussion of this method of disposing of dead bodies, since Sir Thomas Browne, in his classic treatise on *Urn Burial*, gave a description of the forty or fifty urns and their osseous contents which had been dug up in a field near Walsingham, in Norfolk. These still had the marks of combustion distinct upon them after having "quietly rested under the drums and tramplings of three conquests." Browne signed himself in his dedicatory epistle to his worthy and honoured friend, "even to urn and ashes, your ever faithful friend and servant, Thomas Browne."

As Sir H. Thompson in his slight historical sketch confines himself to the revival of the practice of cremation in England some twenty-five years ago, we naturally find no reference to Sir Thomas Browne, not even where the different forms of cinerary urns are discussed, a subject into which Browne entered at considerable length. This may be accounted for by the fact that the author had a far more important object in view than antiquarian research or even the advocacy of cremation.

At p. 45 he tells us that the defective system of death registration in this country, which the steps necessary to be taken before cremation could be carried out had brought to view, early led to a strong conviction on the part of the Council of the Cremation Society, of which he is President, that their primary duty was to agitate for the reform of this system, and that about the year 1891 it was agreed that to this object they should henceforth devote their time and energies. He gives in detail the steps taken for this purpose, which included a deputation to the Home Secretary in 1893 and resulted in the appointment of a Select Committee of the House of Commons with Sir Walter Foster as chairman in the same year.

How important the evidence given by Sir H. Thompson before that Committee was considered may be gathered from the fact (though for a knowledge of this we have to turn to the Blue Book itself) that his description of the system of *médecins vérificateurs*, as carried out in Paris and other large towns of France, is quoted in the body of the Select Committee's report, and that one of their principal recommendations is, that what is practically this system should be adopted here, whenever a medical certificate of death is not forthcoming. The Committee add that "what is of importance to note in this system is that the State takes upon itself the duty of ascertaining the cause of death, and in no case is burial permitted to take place until medical evidence of the cause of death, including, if necessary, that of a skilled pathologist, has been obtained." From the evidence placed before it, the Committee came to the conclusion that vastly more deaths occur annually from foul

[1] *Modern Cremation*, by Sir H. Thompson, Bart., F.R.C.S., etc., 3rd edition. London: Smith, Elder, and Co. 1899.

play and criminal neglect than the law recognises, that the existing procedure plays into the hands of the criminal classes, and that in order to remedy this state of things a medical man should be appointed in each district to investigate all cases of deaths not medically certified.

In 1894, seeing that no practical result had followed the publication of the Select Committee's report, Sir H. Thompson read a paper in the Public Health Section of the British Medical Association at the annual meeting at Bristol, when a resolution was passed by the Section urging the Council of our Association to press upon the Government the importance of carrying out the recommendations of the Select Committee. This was referred by the Council to the Parliamentary Bills Committee, and another deputation waited upon the Home Secretary. Sir Walter Foster, at that time Parliamentary Secretary to the Local Government Board, who was asked by the Home Secretary to reply on behalf of the Board, declared that the Local Government Board was as anxious as the deputation that the certification of death should be made as accurate as it could be, and also that the means by which crime now escaped detection should be as far as possible closed. He acknowledged that in this matter we were behind other nations, and that it was our duty to get on a level, at all events, with them; but the great obstacle, he said, was the expense. It would cost £64,000, perhaps even £100,000 (though he thought the latter estimate too high), to carry out the suggestions of the Committee, and thus the matter became one for the consideration of the Treasury, who, it is fair to conclude, from no official action having been taken from that day to this, thought the game not worth the candle.

The proved defects of the system of registering deaths have therefore been allowed to continue to play into the hands of the criminal classes, and the Government, though fully aware of this, refuses or neglects to take such means to prevent it as have long since been adopted by other civilised countries.

It is now nearly seven years since Sir H. Thompson, both in his letters to the *Times* and in his speech at the Home Office, brought the evils of the system prominently before the public, and was assured of the full sympathy of the then Home Secretary; but the "iniquity of oblivion," as Sir Thomas Browne quaintly says, "blindly scattereth her poppy," and in no place do the seeds appear to flourish better than in Government offices, where as soon as a subject has ceased to excite public discussion it is quietly sent to sleep in its appropriate pigeon-hole Sir Henry Thompson's book is a reminder that this ought not to be permitted in regard to death certification, and the resolution of the General Medical Council to seek an interview with the Local Government Board with the object of asking that the recommendations of the Select Committee be carried out should operate powerfully in the same direction; while our Parliamentary Bills Committee, we may be quite sure, will not let the matter drop until the principal points of the Committee's report become embodied in an Act of Parliament.

TUBERCULOUS MILK.

A REPORT from the Public Health Committee on the action taken under the Dairies and Milkshops Order of 1899 was discussed at the meeting of the London County Council on Tuesday, December 12th. From this it appears that a complete inspection has been made of all the cows in London—some 5,144 in number. Of these, it is satisfactory to learn, 4,464 were found free from disease or abnormality of the udder; 7 were "clinically affected with tuberculous disease of the udder" and 5 were suspected of such infection; 82 had acute mastitis, 165 were affected with chronic induration of the udder, and 214 had atrophy of the gland. It was, of course, recognised that the examination of cows in London cowsheds would be absolutely futile to prevent the sale of tuberculous milk, so long as milk from cows outside the county, which have been subjected to no inspection, is allowed to be sold in London and to be mixed with milk produced in London.

London also receives large supplies of milk from abroad, not to mention the various forms of condensed and frozen milk which arrives in a "preserved" state. It is clear that the adequate prevention of tuberculous infection from this source involves national and even international consideration. Contamination must be prevented at its source unless and until every householder will secure himself by the simple process of boiling.

The Committee expressed the opinion that further legislation is required, but that much good would at once result if every urban and rural authority were to exercise the power it now possesses under the Order of 1899, of examining cows for tuberculous disease of the udder, and preventing the sale of milk from cows found to be suffering from such disease. The Royal Commission recommended that the local authority of a district from which milk was sent to another district should be bound to supply to the local authority of the latter district full information and veterinary reports regarding the cows, byres, etc., whence the milk is brought. The Committee further recommended compulsory slaughter, with compensation in any case where an error of diagnosis occurred.

In the interesting debate which took place in the Council Mr. Verney moved, and Dr. Forman seconded, an amendment which, while approving the continuance of the inspection of cows in London, would cause a communication to be sent to the sanitary authorities of those districts which supply London with milk, asking what steps they would be willing to take with a view of supplying to the Council the information recommended in paragraph 14 of the report of the Royal Commission on Tuberculosis.

A further resolution was carried directing a bacteriological examination of 100 samples of milk as sold in various parts of London. Dr. Collins recommended that the Council should appoint a bacteriologist of its own with a suitable laboratory. This, he urged, would be more satisfactory and more economical, having regard to the variety of bacteriological researches in which several of the Committees of the Council were at present engaging.

THE BRADSHAW LECTURE.

THE Bradshaw Lecture, delivered before the Royal College of Surgeons of England on December 13th by Mr. H. G. Howse, Surgeon to Guy's Hospital, resolved itself into a discourse on the text that the great advances which have taken place in surgery since the beginning of this century

have been due to a more precise knowledge of the causes of disease, and to a consequent greater precision in diagnosis. Mr. Howse, who entitled his address "A Centennial Review of Surgery," had, in order to obtain a view of the state of surgery one hundred years ago, founded himself upon the surgical works of Baron Larrey and Percival Pott, leaving aside the teachings of Hunter on the ground that they were the subject of a biennial discourse before the College. Though Pott died before the century commenced, yet his teaching survived, and influenced the practice of surgery long after his death. Mr. Howse observed that the main advances of the century had been the introduction of anæsthesia, local and general, and of the antiseptic system of surgery, the application of the microscope, ophthalmoscope, and other instruments of precision to diagnosis, and the more recent application of bacteriological investigations to the same purpose. He devoted a large part of his address to the consideration of the different manner in which amputation of a limb is regarded by surgeons of the present day as compared with the view held by their predecessors at the beginning or even at the middle of the century. He recalled the fact that it had even been proposed to abandon such operations and that Pott had written a treatise to combat a view which, at the present day, it is difficult to comprehend. The proposal to abandon amputation was of course founded upon the terrible mortality which occurred after primary amputations, a mortality which was traceable to septic infections. Larrey had indeed argued strongly against the abandonment of the operation, and had advanced a claim that French surgery was in advance of that of other countries on the ground that he had been able to obtain in a large series of cases as high a proportion of recoveries after primary amputations as 75 per cent. But Mr. Howse proceeded to point out that Larrey, though undoubtedly not only a most accomplished operating surgeon but a man who possessed an independent judgment and great powers of observation, was yet hampered at every turn by the want of exactly that kind of knowlege which bacteriology had placed at the disposal of the modern surgeon. He instanced the fact that Larrey had as it were stumbled upon the observation that early excision of the primary lesion of anthrax was commonly followed by rapid recovery. Later on, however, owing to the difficulty of making an accurate and certain diagnosis, Larrey had been led to question his original conclusions, and had in fact, there can be little doubt, confounded anthrax with Oriental plague and possibly with other diseases. The practice had been forgotten and had only recently come again into use. It was now possible to make a definite diagnosis of anthrax by means of bacteriological examination, so that the method of excision was not again likely to fall into discredit owing to its being employed in cases which were not anthrax. As another illustration of the difficulties of a surgeon in the first decade of the century, Mr. Howse drew attention to a memoir of Larrey's, in which he described an epidemic of yellow fever among the wounded in Egypt. Mr. Howse showed good reason to believe that this epidemic was in reality a severe form of septicæmia, which spread with rapidity among the wounded men. He then referred to the precise means of diagnosis in diphtheria and typhoid fever which had been provided by bacteriology, and expressed the hope that in the future the same science might provide a definite means of recognising typhus fever. He quoted from Larrey his account of an epidemic which had occurred in a military hospital. It had been supposed to be typhus fever, but Mr. Howse showed that the cases occurred mainly in certain wards, that all the patients had been wounded, and further that, though introduced into another military hospital in the same town where the hygienic arrangements were better, it did not spread. From this and other considerations Mr. Howse concluded that Larrey had really had to deal with a severe form of septicæmia, spread from one wounded man to another and not with typhus fever. An accurate means of diagnosing typhus fever might therefore, he observed, be a matter of importance even to surgeons. The whole lecture bore testimony to the value of the services rendered by bacteriology to surgery; but in conclusion Mr. Howse uttered a warning against hasty drawing of conclusions from a limited number of facts, and urged upon bacteriologists the importance of carefully verifying their results before asking them to be applied in surgical practice.

UNIVERSITY REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

Dr. E. D. Kirby, writing on behalf of the Executive of the Birmingham and District General Medical Practitioners' Union, has addressed a letter to the Council of Mason University College with reference to the power proposed to be taken by the University of Birmingham, in a Bill to be promoted in Parliament as soon as the charter is sealed, to send a representative to the General Medical Council. The letter points out that the profession at large over which the General Medical Council administers, and from which it draws its funds, yet elects only 5 out of 30 members of the Council. The desire is then expressed "that the Birmingham University should have a broader and more purely medical electorate than the University Council," and "that the representative might be chosen by the medical professoriate and the medical graduates of the University." The reply from Mr. G. J. Johnson, one of the Vice-Presidents of Mason University College, dated December 7th, is to the effect that, as the draft Bill has been settled with the advice of counsel, the Council of Mason University College considers that it should be deposited as it now stands, but that, as the Bill cannot be proceeded with until after the sealing of the charter, it will probably not come on before Easter, so that there is "plenty of time further to consider the question." The reply, however, goes on to state "that there is not the smallest chance of your getting any different electorate than the University, because, by Section vii of the Medical Act, 1886, the like power of electing one representative is given to the Universities of Oxford, Cambridge, London, Durham, Edinburgh, Glasgow, St. Andrews (Dublin) (*sic*), and the Legislature is not likely in the case of Birmingham to depart from that precedent, and give the right of election to a new electorate. I think you will find that the powers given to these universities are really exercised by a small executive corresponding to the proposed Council of the Birmingham University." The action taken in Birmingham raises in a concrete form a subject which has been before the profession for some time. It is raised, moreover, in a form upon which it will be essential to obtain the opinion of Parliament, since nothing can be done to meet the wishes of the promoters of the Birmingham University or of its critics without legislation. The draft Medical Acts Amendment Bill of the Parliamentary Bills Committee of the British Medical Association contained a provision that the representatives of the universities and corporations should be elected by the registered practitioners holding a diploma or degree of the body in question. The provision of the Medical Act, 1858, with regard to the qualification of members of the General Medical Council is extremely unsatisfactory, as it merely requires that representatives of the medical corporations must be qualified and registered under the Act. Any existing university would therefore, as Dr. McVail pointed out last May, technically have the right to elect a layman as its representative. This is an anomalous state of things when it is remembered that the General Medical Council is the governing body of the profession and the last court of appeal on all questions of medical education and registra-

tion. The matter has not arisen since the passing of the Act of 1886, because the only university founded since that date, the University of Wales, put forward no claim to representation, which, indeed, it could hardly have done seeing that it has no medical faculty. The objection will, of course, be urged to the proposal now made that the Birmingham University can have no graduates when it first comes into existence nor for some years afterwards. This difficulty might be met by providing that the election should be made by the medical teachers in the university until such time as the number of medical graduates reach, say, one hundred.

MEDICAL ATTENDANCE ON THE FAMILIES OF SOLDIERS AND SAILORS ON ACTIVE SERVICE.

It was stated in the British Medical Journal of December 2nd that the President of the Council had authorised the issue of a circular to the Secretaries of all Branches of the British Medical Association in the United Kingdom inviting them to organise within the area of their respective Branches a scheme of gratuitous medical attendance on the families of soldiers and sailors now on active service in South Africa. So far replies have been received from twenty-eight of the thirty-eight Branches in Great Britain and Ireland, and we are pleased to say that of these twenty-one are heartily in favour of the movement. Of the others only three absolutely decline (through their Honorary Secretaries) to co-operate. In one case the Honorary Secretary has thought it necessary to call a meeting of the Branch Council to consider the subject. In the case of three others the Honorary Secretaries think it unnecessary that the Branch should take action, as the movement has been taken up independently by the local practitioners. As several correspondents have asked for suggestions as to the mode of organisation, we think it well to repeat that the best plan is for the Secretary of each Branch to put himself in communication with the local representatives of the Soldiers' and Sailors' Families Association, a list of whom can be obtained from the Secretary, Captain Wickham Legg, 23, Queen Anne's Gate, Westminster, S.W. Details can thus be arranged in accordance with local conditions. An essential part of the scheme is to secure the co-operation of chemists, who will supply the medicines prescribed at a nominal price. The Soldiers' and Sailors' Families Association will, we understand, defray the cost of medicines and will also in the case of club patients keep up the payments. A question is raised by one correspondent as to the limits of the medical attendance to be given, and in particular whether it is to include midwifery. We imagine that this form of medical relief is just that which is likely to be most needed. Undoubtedly a burden will be added to the already heavy load of charitable work that the profession has to bear. But the circumstances are such that we believe few will refuse to give their services to the families of the men who are fighting their country's battles in a war which has already cost us some of our best blood and is only too likely to cost much more. It is gratifying to note that the movement has been initiated in several quarters independently. Mention has already been made of the good work done by the Chelsea Clinical Society. At a meeting of the West London Medico-Chirurgical Society, on December 2nd, it was unanimously resolved that the members should undertake to give gratuitous medical attendance to the families of men on active service. A similar resolution has been passed by the Folkestone Medical Society. At Birmingham, Leicester, and Dundee schemes for the same object have been organised. It is difficult to say where or by whom the movement was first started, as it appears to have sprung into being in different places independently in obedience to a patriotic sentiment that does credit to our profession But we think it right to mention that at a meeting of the citizens of Perth held on November 3rd, Dr. R. de B. Trotter not only subscribed to a fund for providing help for soldiers' families, but offered his professional services to the families of reservists in Perth free of charge. This is the earliest instance of this particular form of patriotic devotion that has come to our knowledge, and it is right to give honour where honour is due.

TEETOTALLERS AND INEBRIATE HOMES.

We continue to receive many letters making inquiries as to homes into which inebriate men and women of the poorer classes can be admitted, but the fact is that at the present time the accommodation is absurdly disproportionate to the demand. One of our most recent correspondents is interested in the case of a workman of intemperate habits, whose family are not in a position to pay for his maintenance and treatment. We asked the advice of a well-known member of the profession who has given much attention to the question, and in the course of his reply he wrote: "Now that powers have been granted by Parliament in connection with inebriate homes, I hope that some effort will be made by people interested in the total abstinence question to undo some of the damage that they are now trying to prevent. Of course all this twaddle about the efforts of teetotallers has been utterly beside the mark up to the present, simply for the reason that they had absolutely no power to act, but with the new law they are in a position to be able to do something, and I hope that something will be done." We believe that this quotation gives expression to an opinion which is very widely held. While there is no desire to belittle the work done by total abstinence organisations, there has been a feeling that they are not doing all that they might be expected to do to provide means for the cure of inebriety among working men and women. We are therefore glad to see, from a letter signed by the wives of the Archbishops of Canterbury and York, and of the Bishop of London, that the Women's Branch of the Church of England Temperance Society has determined to provide a suitable reformatory for those unhappy women who appear again and again in police-courts charged with drunkenness. The reformatory is intended to be for the use of the whole of England, and is to be placed somewhere within convenient reach of London. An appeal is made for subscriptions to a fund of at least £10,000, to build and fit up a reformatory, while the hope is expressed that some landowner may be willing to help by presenting a suitable site. Subscriptions will be received by the Secretary of the Church of England Temperance Society, the Sanctuary, Westminster, S.W.

"ROWTON HOUSES."

The fourth of a series of the "Rowton Houses," or "Poor Man's Hotels" has been opened In 1893 the first of these establishments was opened at Vauxhall with 475 beds; a second in 1895 at King's Cross with 677 beds, a third in 1897 at Newington Butts with 805. The new building at Hammersmith contains 800 beds. Plans have been prepared for a fifth at Whitechapel with accommodation for over 800. These houses are the property of "Rowton Houses, Limited," and are intended exclusively for the use of males, who obtain all the advantages offered by the company for the sum of 6d. a night. A lodger can stop for one night or longer, payment being required in advance. Lord Rowton's object is to provide working men without a home with clean, comfortable houses, where good food and accommodation could be obtained at the smallest possible cost. These "hotels," however, have become so popular, that they are now used by a class of people who earn more money than was the case when originally instituted. There are many who have to keep up a semblance of re-

spectability with next to nothing to do it on—artisans, clerks, shop assistants, men who are looking for work, and those who have been in better positions in life. All these find a comfortable lodging, where cleanliness, order, and decency are strictly observed. The house at Hammersmith has a superficial area of 44,000 square feet, is built of red brick, and has been erected on a site within 250 yards of Hammersmith station. There is a handsome entrance hall; opening off a corridor running from this is the smoking room, with tables and seats of teak for the accommodation of 164 lodgers. Next door to the smoking room is the reading room, which provides for 176 lodgers; here there are two bookcases, and books are lent on application to the superintendent. In addition to the number of seats provided a number of easy chairs are arranged round the large fireplaces. The walls of these rooms are decorated with pictures. On the opposite side of the corridor are the two dining rooms, in which seats are provided for 464 men, besides numbers of easy chairs. There are four large cooking ranges, with ovens, hot plates, and grills placed well out of the line of traffic, where the lodgers can cook their own food should they desire to do so. Between the dining rooms is a large scullery, with access from both; it is fitted up with fire clay sinks, hot and cold water, and sanitary pails for potato peelings and tea leaves. All the crockery, cooking utensils, teapots, etc., are free, and after use are collected by the company's officials, and returned on a turn-table to the catering scullery. Bath rooms, feet-washing rooms, dressing rooms, washhouses where the lodgers can wash their own garments, barbers', shoemakers', and tailors' shops, a space for clothes and boot cleaning, and lavatories are also provided. There is also a spacious kitchen, larders, store rooms, etc., besides a sitting room and five bedrooms for the kitchen servants. On the floors above are the dormitories, lined on each side with a row of cubicles, and approached by three fireproof staircases. The disposition of the staircases renders it an impossibility for the lodgers to be trapped by fire in the event of an outbreak, as the cubicle corridors run from staircase to staircase, thereby leaving open a way for retreat should access to one staircase be blocked. At every twelfth cubicle there is a transverse partition carried right across the room from floor to ceiling, with a door in the centre, so that in the case of any infectious disease occurring the doors can be closed at both ends, and the intermediate space sealed and disinfected. The sanitary work has been well planned and carried out. Access is immediately obtainable to any portion underground, inspection manholes having been placed at every change in the direction of pipes and at all junctions. The waterclosets and urinals are cut off from the main building by a cross-ventilated lobby. The seats of these waterclosets are of solid teak, and cannot be raised; this is a mistake, as all seats should be freely movable, especially when in constant use by 800 people of all kinds, sorts, and conditions. This is the only fault to be found in the whole establishment, which is a model of care and forethought. Sixpence covers everything—bed, bath, books, fire, light, and the use of cooking utensils. It may be added that not only have the philanthropic aims of those connected with "Rowton House Limited" been amply justified, but that the company is a sound commercial success.

MUNICIPALISING THE FAMILY.

Attempts have been made from time to time to provide a family home under public management in which the families of those who are at work all day and can leave no one in charge at home might be cared for. In the case of widowers of the artisan class and widows who have to work for the support of young children such a project must appeal strongly to the philanthropic. Whether such a family home" run by the municipality can be made self-supporting is an interesting problem in local government. Glasgow has made a valiant attempt to answer the question. The corporation opened such a home in 1896, and some 200 children have been cared for within its walls. The experience of the last three years has, however, shown that apart from any interest or sinking fund on capital there has been a loss on the working of some £400 or £500 a year. It is true that this loss has been swollen by unforeseen expenditure in the shape of the appointment of a medical officer, whose presence was required for due attention to the many ailments occurring in the municipal family. The experiment must arrest our interested attention, but it would be more likely to command imitation if it could prove itself to be self-supporting.

RELIEF OF THE AGED POOR.

There are many interesting points in the paper read by Messrs. C. N. Nicholson and W. Chance before the South-Eastern and Metropolitan Poor Law Conference on the Poor Law in Relation to the Aged Poor. The Cottage Homes Bill was intended to supply "the necessitous deserving aged poor" of 65 years of age and over with suitable accommodation and maintenance by means of cottage homes, and thus spare them from the stigma of pauperism. It authorised the Council of any borough, of any urban district, or of any parish, with the consent of the County Council, to provide and maintain these cottage homes. The aged poor can be relieved either inside the workhouse or outside, the indoor relief including cottage homes. The powers possessed by the Boards of Guardians seem to be quite unlimited as to the classification of the aged poor inside workhouses, excepting in regard to the separation of the sexes; no married couples over 60 shall be forced to live apart from each other. The Sheffield Union is instanced as classifying largely by the character which persons held before their admission to the workhouse; a classification of outdoor paupers is also made, the amount of relief granted depending upon character. The authors think a much better plan is the classification by separate buildings and workhouses first adopted by the West Derby Board of Guardians. A suggestion has been made that the London Boards shall combine to provide a separate building or group of buildings, like cottage homes, outside London, for the reception of respectable poor who are not able-bodied, and who prefer to go there. There is practically no restriction upon the accommodation and relief that guardians can supply if they choose to do it, and the authors of the paper conclude that the powers now in the hands of the guardians are amply sufficient, if properly exercised, for the relief of the aged poor who become dependent for support on the community at large. The country might, they think, well hesitate before allowing a new Poor Law, in the shape of old-age pensions, to be instituted, without any of the deterrent influences of the present law. The question of old-age pensions is one not easily settled. There are undoubted difficulties in the way of any scheme for providing such pensions. Much can be said in favour of existing institutions, and much can be objected to the expense which the carrying out of any pension scheme must necessitate. We believe, however, that in the long run the most satisfactory plan would be the adoption of some general system of assurance by which the deserving working classes would be supported in case of sickness, infirmity, and old age.

THE "VACCINATION INQUIRER" IN DESPAIR.

It would be improper to make any comment on the behaviour of the Leicester Guardians in their treatment of the *mandamus* of the High Court pending the decision of the Court on the subject. But there can be no harm in giving publicity to the view taken of the general policy of the Leicester Board by those whose cause they have been

supposed to be advocating. The *Vaccination Inquirer*, which is the official organ of the Antivaccination League, contains a bitter jeremiad on the way in which, in its opinion, the majority of the Leicester Board have thrown up the sponge, by consenting to elect a vaccination officer. "There would be neither profit nor honesty," it remarks, "in endeavouring to conceal from ourselves or from others the magnitude of the blow that has fallen upon us in this defeat. During the sixteen years of active participation in the antivaccination movement to which we can look back, no heavier news has been brought to us." And the *Inquirer* then proceeds to belabour the *Leicester Post* for the "windy words" it has so abundantly talked about the "better plan of campaign" which the present majority of the Board have inaugurated under its advice, with results which, judging from Mr Justice Darling's remarks, do not promise much success. Regarding the present struggle between the guardians on one side and the Local Government Board on the other, the *Inquirer* admits that "the contest has closed in the complete triumph of Mr. Chaplin." More in sorrow than in anger, the distressed editor reproaches the Leicester recalcitrants, not because they have failed to show the courage of their opinions, but because they "commenced a resistance which they had no heart to put through." "When prosecutions are again in full swing in Leicester, and when the remonstrances of Mr. Kemp and his supporters are heeded by the Local Government Board as much as they would heed the crying of a Leicester kitten lost in a Leicester street, what," it pathetically asks, "will it avail the middle class in Leicester who are being sold up, and the Leicester poor who are going to prison in defence of their children, that Stoke Pogis or Old Sarum passes a resolution of support?" There is, we must confess, a good deal to be said for this view of the question. But we can only re-echo the hope expressed by Mr. Chaplin at the recent dinner of the public vaccinators, that the vaccination officer who might be appointed at Leicester would perform his duties with "judgment and tact," as well as with efficiency. In that case we may reasonably expect that neither the middle classes nor the poor in Leicester will be so foolish as either to allow themselves to be sold up or to be compelled to go to prison, but that if they really are determined to object to the vaccination of their children, they will avail themselves of the exemption which the Act of 1898 has given them, and thus baulk the wishes of those who have been inciting them to a defiance of the law which, as they must now see, will only land them in ignominious defeat.

THE COAL-SMOKE NUISANCE.

One of the miseries caused by coal smoke in the atmosphere of London and other cities where coal is improperly burnt, is the delay in transit which ensues during fogs such as those experienced on one or two days recently in the metropolis. That this is a very serious evil to the enormous number of clerks and others employed in London who live in the suburbs can be appreciated, when it is realised that on one of the railway lines to the south of the Thames some trains were two hours in doing a "half-hour" journey in the last fog. As we have stated before, we can never hope to do away altogether with fogs in London, owing partly to the proximity of the Thames, even if all smoke were banished from its atmosphere; but, under such an improved condition as that supposed, the fogs would be far less dense than they are at present, and they would be white, not loaded with black smoke. The delay in the train service would be correspondingly improved. The great loss of precious time inflicted on the travelling public during the black fogs of winter is probably not sufficiently considered in the enumeration of the evils of the smoke nuisance. This particular evil, however, is evidently to be fought in more ways than one, and the Great Eastern Railway has notified that it will make special train arrangements during foggy weather. Mr. Gooday, the general manager, has issued posters which state that "in order to minimise as far as possible the inconvenience caused to the travelling public by certain trains not being run in foggy weather," certain up and down trains on the various branches of the line ending in London are liable to be cancelled when fogs prevail. The trains affected are numerous and are selected from different periods of the day. This is certainly a praiseworthy endeavour on the part of the company to lessen the unpunctuality which smoke and fogs produce on their line, in London as elsewhere, and suburban passengers will doubtless be grateful for the proposed alterations if only the trains that are not cancelled can thereby be made to keep good time. But that the company should find this the best plan to mitigate one of the many great evils incidentally occasioned by the smoke fiend is surely matter for serious reflection, and we would commend the fact to the attention of the London County Council, which has shown an enlightened interest in matters affecting the daily journey of thousands of workers from the outskirts to the centre.

IRISH DISPENSARY DOCTORS.

Some weeks ago, in writing on the subject of the payment of substitutes for Irish dispensary doctors, we recommended that no one should take the temporary office for a smaller remuneration than three guineas a week. We are glad to learn that the Council of the Irish Medical Association has arrived at a similar conclusion. The Local Government Board has behaved with great firmness upon this question in insisting not only upon the four weeks' holiday, but also upon the payment of three guineas a week.

THE LONDON SCHOOL OF TROPICAL MEDICINE.

We are informed that the first session of the London School of Tropical Medicine has been very successful. The number of students who entered was 28. Of these 14 are medical officers of the Colonial Service, the remaining 14 being medical officers of the army or navy, or surgeons to railways, mines, etc., in the tropics. One student was sent from Germany and another from Belgium. One research student has just commenced special work in the laboratory of the school. There seems therefore to be every assurance that this school which, as we have already pointed out, is an institution of national importance, has before it a future of the greatest public usefulness. The next session opens on January 15th. Intending students who wish to reside in the school buildings should make early application for rooms, as during the present session several men who wished to reside could not be received owing to lack of accommodation.

THE CHILDREN'S HOSPITAL, TEMPLE STREET, DUBLIN.

We are informed that some changes have lately occurred in the medical staff of this hospital. It seems that the Sisters of Charity who administer the hospital recently determined to recast the terms under which the medical officers held their appointments, and with this view the Superioress wrote to the Secretary of the Medical Staff informing him that the members of the staff "hold their posts at the will of the Sisters of Charity," and that any of them who wished to continue in office should sign the following undertaking:

I hereby accept the office of ..... in the Children's Hospital for a period of five years from ..... and I undertake to fulfil the duties of that office, and *to hold it only as long as I comply with the rules and regulations made from time to time by the Sisters of Charity who are the Governing Body of this hospital.*

(Signed),

The Medical Board unanimously voted that the proposed

changes in their tenure of office would hamper the efficiency of their work and would be injurious to the hospital. At a later date the medical staff discovered that without any notice to them a Consulting Physician and a Consulting Surgeon had been appointed on the conditions of the foregoing undertaking. A date was then fixed by which those members of the staff who wished to continue in office should signify their acceptance of the new conditions. Certain members of the staff decided at the last moment to accept the conditions to which objection had been taken, while the two Visiting Physicians preferred to abide by the original resolution of the staff and accordingly resigned their appointments.

CITY OF DUBLIN HOSPITAL.

THE vacancy caused in the staff of the City of Dublin Hospital by the death of Mr. Wheeler will shortly be filled. Already several candidates are in the field, amongst them being Mr. Duffey (son of Sir George Duffey, one of the physicians); Mr. Harry Croly (son of Mr. H. G. Croly, the Senior Surgeon), and Mr. Lane Joynt, Assistant Surgeon to the Meath Hospital.

THE DEATH OF MISS HART.

WE notice with great regret the death, on December 12th, of Miss Charlotte Hart, the sister of the late Mr. Ernest Hart. In the early days of his editorship of the BRITISH MEDICAL JOURNAL, Miss Hart was her brother's most devoted assistant and amanuensis. The services which she thus indirectly rendered to the Association deserve to be held in grateful remembrance. She had herself considerable knowledge of medical literature and affairs. Her well-balanced judgment caused her to be respected by all with whom she was brought into contact, while her genuine character earned for her the affectionate regard of those who knew her well. Miss Hart had been for some years in failing health, and her death at the age of 70, though it leaves a sense of loss to her friends, cannot be a source of surprise to them.

THE PURITY OF THE WATER SUPPLIED BY THE THAMES WATER COMPANIES.

PROFESSOR CORFIELD, in his report as the medical officer of health for the parish of St. George Hanover Square for the year 1898, which has been issued recently, publishes a correspondence which took place during the early part of the current year between himself and the analysts of the London water companies deriving their supplies from the Thames. The correspondence is very significant, as indicating the considerable divergence of opinion which exists amongst recognised experts on the subject of what constitutes a safe water supply. In a report to his authority in February Professor Corfield reminded them that for many years he has pointed out that enteric fever was often unusually prevalent and fatal in London during November, December, and January, notwithstanding the fact that these are not the months for the "seasonal prevalence of the disease;" and he expressed the opinion that it may be something more than a coincidence that in those very months London is supplied with water which, according to the late Sir Edward Frankland's report, contains "an excess of organic matter." In answer to this, Sir William Crookes and Professor Dewar replied that all river-derived supplies have a period of maximum and minimum amount of organic matter during the course of the year, and that the water was "bacteriologically purified to the extent of over 99 per cent. from its natural condition, thus removing the suspicion of the possibility of its conveying any waterborne disease." This roseate view of the situation is not shared by Professor Corfield, who replied to the effect that if there is nothing exceptional in the occurrence of an excess of organic matter in the water in winter, then the water in winter is generally polluted. He further demonstrates from the results of the late Sir Edward Frankland's examinations, that the filters are not always effectual barriers against the passage of bacteria, and quotes the experiments of Drs. Parkes and Rideal, which showed that the methods of sand filtration pursued by the companies are ineffectual in eliminating from the filtered water microbes of which the common resting place is sewage and animal excrement. Doubtless, the standpoint which Professor Corfield adopts is the safer and the more scientific; for there must be an element of danger attaching to the supply of a water taken from sources inevitably exposed to contamination, and subsequently submitted to a system of purification which does not invariably eliminate all bacterial evidence of sewage and animal pollutions. This conclusion was also arrived at by the Public Health and Water Committees of the London County Council.

WE understand that Professor Ogston, of Aberdeen, who intends to sail for Capetown on Saturday, will travel in South Africa in his private capacity.

THE Council of King's College has appointed Professor N. I. C. Tirard, M.D., to the Chair of Medicine vacant by the resignation of Professor I. Burney Yeo, M.D., and Dr. W. A. Turner to be an Assistant Physician at King's College Hospital.

THE *Times* correspondent reports that Sir William MacCormac and Mr. Treves, with a large ambulance staff, arrived on December 11th at Frere Camp, between Estcourt and Colenso.

OUR special correspondent in Capetown informs us that owing to the utter disorganisation of things medical consequent upon the war, the South Africa Medical Association is contemplating suspending the publication of its *Journal* for six months.

AT the meeting of the Royal Meteorological Society on Wednesday next, at 7.30 P.M., Mr. Baldwin Latham, M.Inst.C.E., will read a paper on the Climatic Conditions Necessary for the Propagation and Spread of Plague. The meeting will take place at the house of the Institution of Civil Engineers, 25, George Street, Westminster.

LIEUTENANT H. E. M. DOUGLAS who was among the wounded at the last battle at the Modder River entered the Royal Army Medical Corps only last July. Major C. H. Burtchaell, R.A.M.C., who was taken prisoner on the same occasion entered the service in July, 1891, and served in the campaign on the North-West Frontier of India in 1897, and with the Tirah Expeditionary Force. For his services he was mentioned in despatches and promoted to be Surgeon-Major.

WE owe the distinguished Editor of the *New English Dictionary on Historical Principles* a humble apology for having tampered with his name in a manner that might suggest that we had been attempting a conjectural emendation of the kind which textual critics of the old school were wont to characterise by such adverbs as *perperam* and *inepte*. We have to confess that when we referred to him as "Dr. John Murray" we spoke in our haste. The error is of no consequence to anyone but ourselves—least of all to Dr. James A. H. Murray, whose name is a household word throughout the whole literary world.

THE WAR IN SOUTH AFRICA.

From Our Special Correspondent in Capetown.

November 22nd, 1899.

The Red Cross.

Colonel Young, the Red Cross Commissioner, who arrived last week, is rapidly getting voluntary efforts into something like working order. His arrival was opportune, as there was a danger of the well-meant enthusiasm of the people leading to much wasteful overlapping. His organising ability, coupled as it is with a suave and conciliatory manner, is likely to effect much. Several suburban organisations for the provision of comforts for the wounded have already amalgamated with the Good Hope Society which was formed not only for the provision of such comforts, but to assist the wives and families of reservists and local volunteers. Colonel Young addressed a full meeting of that Society, and it was gratifying to find that the Committee agreed to work entirely under his direction. Similarly, on Monday last, he met the Committee of the Capetown Centre of the St. John Ambulance Association, and that body passed unanimously a resolution placing itself unreservedly under his orders. The Colonial Secretary has placed at Colonel Young's disposal an office in the Parliament Buildings. So far, he tells me, he is doing practically nothing but collect information and get into touch with the various organisations, as no need has arisen for any special efforts. He expresses himself as particularly pleased with the rest stations organised by the St. John Centre at Wynberg Station and the Docks, to which I alluded last week.

The St. John Ambulance Train.

The St. John detachment for train work has left for De Aar with one of the trains. It consists of seven men, who have had several weeks' training, first at railway stretcher work, and recently as orderlies at the Station Hospital, Capetown. Two officers, one non-commissioned officer, and three men of the R.A.M.C. also form part of the train crew. Plenty of other St. John men are available for similar work if required. Colonel Young has provided the train with an ice chest.

The Military Hospitals.

The Good Hope Society has already supplied a large amount of fruit, literature, and the like to the Wynberg General Hospital, and contributions are coming in freely.

It has been decided to establish No. 2 General Hospital at Wynberg on a site adjoining No. 1. No. 2 will be entirely under canvas. Colonel Duke is in command.

The location of General Hospitals 3 and 4 have not yet been decided upon, but neither will be at Durban.

The Principal Medical Officer has declined the offer of the Stellenbosch people of a supplementary hospital at that place, owing to sufficient accommodation being already available.

Sir William MacCormac arrived by the last mail, and is at present staying in Capetown, as the guest of a local medical friend. He has visited No. 1 General Hospital, and expressed himself as highly satisfied with everything there.

Medical Refugees.

Drs. Rogers and Keenan, lately of Johannesburg, have been appointed to the South African Light Horse, an irregular corps raised here by the Uitlander Committee. Dr. Milne, another refugee, not being able to get a medical appointment, has joined the same corps as a combatant. The refugee medical men are complaining bitterly about the action of the authorities in engaging civilian aid at home, considering that, being out of employment, and unable to obtain any temporary work in a colony so medically overstocked as the Cape, they should have had a chance. One Johannesburg medical refugee, Dr. Harding, has been placed on the civilian staff at Wynberg, but he obtained his appointment from home.

The Boer Prisoners at Capetown.

The more severe cases amongst the Boer prisoners who arrived by the *Patiala* are at No. 1 General Hospital. The slighter ones are in an annexe to the Capetown Convict Station, with their unwounded fellows. It was decided at the last moment to send these there instead of to the *Penelope*. The cases at the Convict Station are under the care of Dr. C. C. Elliot, surgeon to that institution.

Boer Ambulance Arrangements.

I have just had an opportunity of speaking with a bearer of the Transvaal Ambulance Corps who has come down with Boer wounded. From his account the arrangements made were of the most primitive character. He left Johannesburg with an ambulance organised by the St. John Centre. It consisted of 3 medical men and 10 dressers, 4 of whom were left behind at what may call the "Stationary Hospital" at Newcastle. Their only equipment was 1 waggon, fitted to hold 3 men, 2 bell tents, and a stock of drugs. The drugs, however, were not supplied at Johannesburg, but were commandeered on the way. They were simply packed anyway in boxes carried on an ordinary South African waggon. Each medical man had a fairly good case of instruments, and each dresser one of the St. John bearer cases. There were 12 stretchers, but no bearers were provided. It would appear that any convenient building (at Elandslaagte a coolie store) was selected as what one might call a field hospital. One doctor, with some of the dressers went on the field, the other 2 remained at the field hospital. The dressers attended to the wounded on the field, and then got Kaffir men to carry them on the stretchers to the building. There temporary measures were taken, and all serious cases were sent on to Newcastle by train so far as that served, and by ordinary waggon otherwise.

At Newcastle a large house had been commandeered as a hospital, and had two doctors and five nurses. Not much however was done even there, the practice being to send everybody capable of travelling to Johannesburg. Each commando had an ambulance party equipped much after the style above described. Iodoform and carbolic oil on lint and gauze were used for first dressings. In supreme charge of all medical arrangements is Captain Bleksley, who was Sanitary Inspector at Johannesburg and head of the St. John Centre there. To him the surgeons were responsible. They appear to have possessed no authority whatever. By far the larger proportion of injuries were inflicted by shells. Some were very severe. At Elandslaagte absolutely every wounded Boer was left to be treated by the British; indeed, my informant, who is a burgher of the State, tells me that with the really bad cases this was done as far as possible everywhere. There was a great deal of dysentery amongst the Boers, but very little other trouble. Food supplies were scarce, and of what might be called medical comforts hardly anything was to be obtained. All through for supplies reliance was placed upon things commandeered *en route*.

THE MEDICAL ASPECTS OF THE BOER WAR.

By a South African Campaigner.

IV.

Proportion of Killed to Wounded.

In the battle at Graspan, or, as it is to be called, Enslin, the losses, which fell principally upon the Naval Brigade, were 24 killed, 166 wounded, and 7 missing. Here we have again to note the happily small proportion of those actually killed among the number hit. The Boer force encountered at Graspan probably consisted of the remnants of the Belmont force together with other fresh commandoes, and the rifle employed in all probability was principally the Mauser. At the first engagement at the Modder River, where Lord Methuen's force found 8,000 Boers posted in exceptionally strong positions, the casualties, although severe (73 killed and 365 wounded), were lighter than had at first been anticipated. This brings the total casualties for the three actions up to 966 killed, wounded, and missing.

	Killed.	Wounded.	Missing.
Belmont	54 ...	238 ...	2
Graspan	24 ...	166 ...	7
Modder River	72 ...	396 ...	7
	150	800	16

This gives a proportion of killed to wounded approximately as 1 to 5.3. The proportion of killed to wounded varies in

different campaigns, and of course depends to a considerable extent on the conditions under which actions are fought, the tactics employed by the commanders, and the distance usually maintained between the opposing forces, and finally whether or not the engagements in a campaign consist for the most part in attacking entrenched positions where one side is exposed at short ranges.

Colonel Stevenson, R.A.M.C., Principal Medical Officer on the Line of Communication, in his work entitled *Wounds in War*, gives some interesting statistics on this point. Thus in the Russo-Turkish war 1877-78, where entrenched positions were continually attacked at short ranges, the proportion of killed to wounded among the Russians was as high as 1 to 2.1; at Blenheim in 1704 it was 1 to 1.3. The late Sir Thomas Longmore, summing up the available statistics on this point, showed that the proportion of killed to wounded has been, on an average, 1 to 4. These figures refer to the number of dead found on the field; while of those who reach the hospital alive, a large proportion died during the first two or three days, but these were not included in the figures given above. During the Russo-Turkish war 1877 78,[1] 11.8 per cent. of the wounded died in the army of the Danube, and 30 per cent. in the army of the Caucasus. We may, therefore, conclude that we shall not be giving a too sanguine estimate when we predict that at least 87 per cent. of our wounded in South Africa will eventually recover. Fischer, whose statistics are probably the most accurate on this subject, gives the proportion of killed to wounded as follows:

At the battle of Kunnersdorf, 1759	1 to 1.9
At the battle of Leipzig, 1813	1 ,, 2.0
English in the Crimea	1 ,, 4.4
French in the Crimea	1 ,, 4.8
Prussians in Schleswig-Holstein, 1864	1 ,, 1.8
Prussians at Königgratz	1 ,, 3.6
Austrians at Königgratz	1 ,, 3.0
Germans in 1870-71	1 ,, 5.4
Russians in 1877-78	1 ,, 2.1

This gives an average of 1 to 3.2 It will thus be recognised at once that the proportion of 1 to 5.3, which is that for the battles on Lord Methuen's march, is considerably below the average of past campaigns, and is curiously enough almost identical with the loss sustained by the Germans in the campaign of 1870-71. It must further be borne in mind that these battles have all been fought under exceptionally arduous conditions for our men, inasmuch as they have in every instance been storming strongly held and partially entrenched positions.

Nature of Wounds.

Your special correspondent in Capetown is able in a recent letter to give some account of the wounds sustained by our men. Speaking of the cases which he had seen in the Wynberg Hospital, he says that all are Mauser bullet wounds except two; he also says that all the men agree as to the very small amount of shock produced by the Mauser bullets, and the slight amount of actual pain at the time of being hit; he also says that one notable circumstance is that the majority of the wounds are in the extremities, and from another source we hear that they are principally in the legs and abdomen. This the men themselves attribute to the wild firing of the Boers. As a matter of fact, it is an old tradition with the rifle to fire at a man's feet, as the bullet fired a little low will ricochet and do great damage, while if it be fired too high it passes harmlessly into space. There was a tendency with the Martini-Henry, and still more with the old Snider, for bullets to rise above the point fired at; hence the additional incentive to fire at the enemy's feet. The Lee-Metford and Mauser rifles are more accurate than the Martini-Henry, and this probably accounts for the fact of so many wounds being inflicted in the lower extremities. The bullets actually struck the object on the point aimed at. It is gratifying to think that not only are Mauser bullet wounds frequently almost painless at the time of infliction, but that a large number of them heal rapidly by first intention, a course which was rarely followed by the wounds from bullets of larger calibre.

LEE-METFORD *v.* MAUSER.

The bullet which our troops are using in the Lee-Metford rifles is known as the Mark II. It is a far less formidable bullet than either the Mark IV or the Dum-dum, but, nevertheless, has a slightly greater smashing power than the Mauser bullet. What the proportion of killed to wounded among the Boers may be we are, from the figures supplied, unable to estimate. I commented in my last letter on the extreme importance in the campaign of keeping the railway open, and it is extremely gratifying to note that Lord Methuen in his rapid march has done this most effectually with the Kimberley line. When the Modder River bridge is once negotiated there will be little difficulty in completing the restoration of the line up to Kimberley. The value of the railway for transport purposes as well as for dealing with the sick and wounded is incalculable. It is pretty evident that the repairs to the permanent way on the ordinary veld are very readily effected. I have had some experience of what may be done in a few hours in this way in South Africa. On one occasion the train in which I was travelling, having run into a cow, was disrailed, the engine was thrown on its side and the metals torn up. In the course of five hours a new track had been laid passing round the scene of the catastrophe, a fresh engine had arrived on the scene, and the whole train, with the exception of the capsized engine, proceeded on its way. Navvies, with spare rails and sleepers, may be readily conveyed to the scene of damage, and repairs in this way be very rapidly effected.

MEDICAL ARRANGEMENTS FOR THE ARMY IN SOUTH AFRICA.

In view of the large number of men now with the army in South Africa, the Army Medical Department have considerately published for the information of the public details of their medical arrangements. The whole or part of this document has already been published in many daily papers. It informs us that every regiment, battalion, artillery division, and engineer company, has a medical officer attached to it, and he accompanies it into action with his orderly in order to administer first aid to any man who is wounded, while the regimental stretcher bearers are ready to carry the same to the dressing station or field hospital. There will be 45 surgeons in immediate charge of the men composing the Army Corps. They are also responsible for the sanitation of their respective camps. There is a bearer company for each brigade of cavalry and infantry; this is composed of 3 officers, the officer in charge being a major, a sergeant-major, 12 sergeants and corporals, 44 privates, and a bugler, all of the R.A.M.C., in addition to which there are for transport 38 men of the Army Service Corps, under a warrant officer. The mode of working is described as follows:

Two stretcher sections under an officer, each section consisting of four stretcher squads under a sergeant, collect the wounded and carry them to the collecting station, a spot chosen as near the fighting line as possible, but sheltered from the enemy's fire. The collecting station is in charge of a sergeant, who has a supply of dressings, etc., to replenish the haversacks of the stretcher bearers. Here also are placed the ambulance of the first line ready to receive them, under the sergeant's direction, and bear them back to the dressing station. The dressing station is on a site selected as being, if possible, out of fire, near a water supply, and also near a road. When available buildings are chosen, and if not the operating tent is here pitched, and instruments, medicines, and medical comforts are arranged ready for use, and a fire lighted for heating water. It may be considered the most important position in the journey of a wounded man from the field towards the camp, as it is here the first opportunity occurs for a careful examination of his condition. The major of the company and another medical officer are here placed, with a separate sergeant-major, three non-commissioned officers, and four privates, including a cook. The wounded, being carefully attended to and dressed, are now placed in the second line of ambulance and taken to one of the field hospitals, which are encampments attached to each brigade or each body of troops large enough to render it desirable. The equipment of a field hospital is for 100 beds, but it is so arranged and packed that sections of 25 beds can be utilised separately if required. As it must accompany its brigade on the march it is movable, being supplied with means of transport; but it is equipped with a view to make it as comfortable and complete as its mobility will permit of. From the railway line the sick and wounded are conveyed to the base, which is at or near one of the ports of embarkation.

HORSE SICKNESS.

Since my last letter an interesting description of the South African horse sickness has been published by Professor Wallace in the *Times*. He has been at some pains to collect the latest bacteriological evidence with reference to this disease, and says that:

Numerous experiments by the Director of the Bacteriological Institute at Grahamstown have showed that no material can be obtained from the bodies of animals which have died of the malady which could be used in producing immunity in healthy animals. The use of serum from animals which have recovered from the disease has already proved abortive. A

[1] *Comple-rendu du Service de Santé Militaire pendant la Guerre de Turquie de 1877-78.* Par N. Kosloff, 1887.

measure of success has, however, attended the inoculation of horses with infected donkey's blood and with an attenuated virus got by transmission of a virulent virus from partially immune animals. By this means a mild form of the disease is produced; a period of at least fifty days is allowed to elapse, during which secondary attacks of fever and moderately high temperatures occur at frequent intervals. By repeated mild attacks the system is fortified against subsequent inoculation more effectively than by an attack accompanied by high temperature. The secondary fever, which occurs to a horse after recovery from a natural attack is termed by the Dutch "Anmanning," and until the first of these returns have passed off the animal is not fully protected or "salted." Inoculation in any form is consequently out of the question in connection with the preservation of the animals engaged in the present campaign,

Under these circumstances we may still conclude that the best practical remedy available for our troops is that recommended by me in my last letter, namely, the provision of nosebags to act as air filters through which the animals breathe, and they should be worn from sunset until the dew is well off the grass on the following morning. Horse sickness (œdema mycosis), according to Professor Wallace, is a fever produced by a micro-organism one of the filamentous fungi which under suitable conditions of heat and moisture grows in the veld, but whether in the water, on the soil, or as a parasite, is not yet known.

THE GENEVA CONVENTION.

The Geneva Convention of 1864.

One of the redeeming features of modern warfare is the protection which is afforded to ambulances and military hospitals and their *personnel*. The Geneva Convention of 1864, which was signed by most of the Powers of Europe, and has since been recognised by nearly every civilised State, has done much to alleviate the horrors of a campaign and the sufferings of the wounded on either side. The strict neutrality of the ambulance, and the protection which it affords both to friend and foe, are the most important results of the Geneva Convention of 1864, while in 1868 certain additional Articles, also signed by the representatives of many European nations, provided *inter alia* for the care and protection of hospital ships.

The Geneva Convention was signed on behalf of Switzerland, Baden, Belgium, Denmark, Spain, France, Hesse Darmstadt, Italy, Netherlands, Portugal, Prussia, Würtemburg, on August 22nd, 1864. It contained the following, amongst other provisions:

Art. I.—Ambulances and military hospitals shall be acknowledged to be neuter, and as such shall be protected and respected by belligerents so long as any sick or wounded may be therein. Such neutrality shall cease if the ambulances or hospitals should be held by a military force.

Art. II.—Persons employed in hospitals and ambulances, comprising the staff for superintendence, medical service, administration, transport of wounded, as well as chaplains, shall participate in the benefit of neutrality whilst so employed, and so long as there remain any wounded to bring in or to succour.

Art. III.—The persons designated in the preceding Article may, even after the occupation by the enemy, continue to fulfil their duties in the hospital or ambulance which they serve, or may withdraw in order to rejoin the corps to which they belong. Under such circumstances, when these persons shall cease from their functions, they shall be delivered by the occupying army to the outposts of the enemy.

Art. IV.—As the equipment of military hospitals remains subject to the laws of war, persons attached to such hospitals cannot, in withdrawing, carry away any articles but such as are their private property. Under the same circumstances an ambulance shall, on the contrary, retain their equipment.

Art. V.—This article provides for the protection of inhabitants who bring in or otherwise render assistance of wounded belligerents.

Art. VI.—Wounded or sick soldiers shall be entertained and taken care of, to whatever nation they shall belong. Commanders-in-chief shall have the power to deliver immediately to the outposts of the enemy soldiers who have been wounded in an engagement, when circumstances permit this to be done, and with the consent of both parties.

Art. VII.—This Article provides that the flag and the arm-badge shall bear a red cross on a white ground. Such badge is to be adopted for hospitals, ambulances, and evacuations.

The Supplementary Convention of 1868.

The following are taken from the additional Articles of 1868, which were signed on October 20th in that year on behalf of Great Britain, Austria, Baden, Bavaria, Belgium, Denmark, France, Italy, Netherlands, North Germany, Sweden and Norway, Switzerland, Turkey, and Würtemberg.

Art. I.—The persons designated in Art. II of the Convention (*vide supra*) shall, after the occupation by the enemy, continue to fulfil their duties, according to their wants, to the sick and wounded in the ambulance or the hospital which they serve. When they request to withdraw, the commander of the occupying troops shall fix the time of departure, which he shall only be allowed to delay for a short time in case of military necessity.

Art. II.—Arrangements will have to be made by the belligerent Powers to ensure to the neutralised person, fallen into the hands of the army of the enemy, the entire enjoyment of his salary.

Art. III.—Under the conditions provided for in Articles I and IV of the Convention of 1864 the name ambulance applies to field hospitals and other temporary establishments, which follow the troops on the field of battle to receive the sick and wounded.

By Art. VII, the religious, medical, and hospital staff of any captured vessel are declared neutral, and, on leaving the ship, may remove the articles and surgical instruments which are their private property.

Hospital Ships.

The provisions which relate to hospital ships are also of interest.

Art. XIII.—Hospital ships which are equipped at the expense of the aid societies, recognised by the Governments signing this convention, and which are furnished with a commission emanating from the Sovereign, who shall have given express authority for their being fitted out, and with a certificate from the proper naval authority that they have been placed under his control during their fitting out and on their final departure, and that they were then appropriated solely to the purpose of their mission, shall be considered neutral, as well as the whole of their staff. They shall be recognised and protected by the belligerents. They shall make themselves known by hoisting, together with their national flag, the white flag with a red cross. The distinctive mark of their staff, while performing their duties, shall be an armlet of the same colours. The outer painting of these hospital ships shall be white with red streak. These ships shall bear aid and assistance to the wounded and wrecked belligerents without distinction of nationality. They must take care not to interfere in any way with the movements of the combatants. During and after the battle they must do their duty at their own risk and peril. The belligerents shall have the right of controlling and visiting them; they will be at liberty to refuse their assistance, to order them to depart, and to detain them if the exigencies of the case require such a step. The wounded and wrecked picked up by these ships cannot be reclaimed by either of the combatants, and they will be required not to serve during the continuance of the war.

Soldiers' Wills.

There is one branch of our own law, that, namely, which relates to the making of the wills of soldiers on active service, to which it may be useful to make brief reference. By Section XI of the Wills Act, 1837, it was provided:

That any soldier being in actual military service, or any mariner or seaman, being at sea, may dispose of his personal estate as he might have done before the making of that Act.

Before the passing of that Act a soldier's will was regulated by the common law, that is, it might have been made by an unattested document or by word of mouth. By reason of the above Section the same rule holds good at the present day.

It has been decided that the term "soldier" in Section XI of the Wills Act includes an officer and a surgeon (Drummond *v.* Parish, 3 Curt. 522). The words "on actual military service" are equivalent to "on an expedition," but an officer (or surgeon), while quartered at home or abroad in barracks, is not on actual military service (Drummond *v.* Parish, 3 Curt. 522).

Although there need be no attestation clause it is necessary that some formality should be gone through in order to obtain probate. Thus, when a will made by an officer on actual military service is signed by him, but not attested, the Court will require an affidavit by two disinterested persons that the signature is in his handwriting (*re* Neville, 4 S. and T., 218). And where the will is signed by the mark of the deceased, an affidavit must be filed to show that when he made the mark the testator had knowledge of the contents of the will (*re* Hackett, 28 L. J., P. 42).

TRANSFERS AND APPOINTMENTS.

The 4th Field Hospital at Aldershot was inspected by General Kelly Kenny on December 5th, the Principal Medical Officer accompanying him. The hospital embarked in the *Majestic* on December 9th.

Gibraltar has been requisitioned for army medical officers for South Africa.

Surgeon-Captain Waring, of the Militia Medical Staff Corps, takes over medical charge of the 3rd Brigade at Aldershot, while the duties of House-Surgeon of the Louise Margaret Hospital will be discharged by Dr. Penny, *vice* Major Pike, R.A.M.C., going out to South Africa in medical charge of the 1st Oxfordshire Light Infantry.

From Durban it is stated by the Central News that on General Sir Redvers Buller making it known that 2,700 men were wanted to proceed to the front for ambulance work in the field, mostly as stretcher-bearers, 1,000 men had at once notified their willingness to enlist in the new corps. The volunteers were unemployed British refugees from the Transvaal. A recruiting office for the "Natal Ambulance Corps," as the new force is to be officially called, was opened in the Drill Hall, and by December 9th sufficient names had been registered to form two complete corps. On the same date 700 of the ambulance recruits had been examined by the army surgeons and passed fit for service in the field, and were sent to Maritzburg by special trains.

The hospital ship, *Princess of Wales*, the departure of which has been seriously delayed by defects in its engines, sailed from the Nore on December 12th.

The *Antillan*, having on board No. 4 General Hospital, arrived at Capetown on December 9th.

PREPARATIONS AT THE HOME HOSPITALS.

The military hospital, Devonport, will prepare 160 beds for the reception of wounded officers and men about to be sent home from the Cape. A ward at Haslar Hospital has been set apart for wounded men of the Royal Navy. At the Royal Victoria Hospital, Netley, extensive preparations have been made under the direction of Colonel Charlton, R.A.M.C., who is the officer officiating in charge. It is stated that Surgeon-General Wilson, at present Principal Medical Officer with the forces in South Africa, will on returning to England on the close of hostilities be appointed in medical charge of this hospital.

FOREIGN AMBULANCES.

From Lourenco Marques, under date December 6th, we learn that the German steamer *Königin* has arrived with the German and Dutch Red Cross Brigade. The Germans consist of 3 doctors, 4 nurses, and 4 bearers: and the Dutch of 8 doctors, 10 nurses, and 4 bearers. There is also one ambulance wagon with appliances. The party were met by the Transvaal and German Consuls at Lourenço Marques, and were to leave for the Transvaal on December 7th, by an ambulance train awaiting them.

The Russian Red Cross Society, with the consent of its Imperial Patroness the Dowager Empress, recently asked the Minister for Foreign Affairs to convey to the proper authorities its offer of medical and sanitary assistance to the belligerents in South Africa. The British Government has declined the offer with thanks: but Dr. Levds has telegraphed that a Russian Red Cross detachment will be gladly welcomed in the Transvaal. This detachment is now organised, consisting of 5 doctors, 8 sisters, 4 assistants, and 12 other attendants, who were to start for Pretoria on December 10th, taking with them a fully-equipped field lazarette for 25 beds. The Society has assigned 100,000 roubles for expenses.

ST. JOHN AMBULANCE BRIGADE AND THE WAR.

The St. John Ambulance Brigade was established by the Order of the Hospital of St. John of Jerusalem in England about twelve years ago, being an offshoot of the St. John Ambulance Association. Its main object was to provide organised first aid on public occasions, but it was also intended that its members should be invited to volunteer to supplement the medical *personnel* of the army if required in case of national emergency. Until the outbreak of the present war the Brigade has had no opportunity of proving its value and preparedness to act as an auxiliary to the Army Medical Service. The St. John Ambulance Association is chiefly concerned with the manufacture and distribution of ambulance material, such as ambulance waggons, stretchers, surgical haversacks, splints and bandages, and provides for the instruction and examination of classes in first aid, nursing, and hygiene, and the granting of certificates of proficiency. Persons who have obtained the Association certificate are alone allowed to enter the Brigade under certain conditions, the principal being that they shall attend at least twelve drills and practices yearly, shall pass an annual re-examination in first aid under the medical officers of the Brigade, and shall be ready to turn out for public duty whenever called upon by their officers. The total number of members of the Brigade in England, Ireland, Wales, and the colonies is now about 11,000, including nearly 2,000 nursing sisters.

The first call on the Brigade for volunteers during the present war was received from the War Office on November 3rd, and within ten days twenty-three picked men were assembled at headquarters in London fully equipped, and embarked on the *Princess of Wales* hospital ship, of which they form two-thirds of the hospital staff. The next call for fifty-five men was received on November 20th, and on November 22nd the volunteers selected from all parts of the kingdom were assembled at headquarters ready for embarkation. This detachment sailed in the *Simla* on November 25th, being intended for work in the base hospitals in South Africa. On November 29th twenty-eight men were requisitioned to man the Duke of Portland's hospital, and on December 4th the selected men were at headquarters fully equipped, and they sailed on December 13th in the *Majestic*.

While on service these men will be under the orders of officers of the Royal Army Medical Corps, and will receive pay at the same rates as the *personnel* of that corps. Each man provides his own outfit of underclothing and brigade uniform, the khaki suits and field or sea kit being paid for by the St. John Ambulance Association, or in the case of the twenty-eight men, by the Portland Hospital Committee.

When it is known that the members of the Brigade are, almost without exception, men who are earning good salaries or wages, and that they voluntarily accept service under the War Office at rates which in many cases represent only about half of the amount they temporarily forego, it will be seen that the Brigade has good cause to be proud of the patriotic spirit evinced by its members. The number of men so far selected represents but a small proportion of the members of the Brigade who have volunteered for the service. Many of the nursing sisters have volunteered, but as the Army Nursing Reserve is more than equal to the requirements it has not been necessary to accept their offer.

THE PORTLAND HOSPITAL.

The staff of the Portland Field Hospital sailed on December 13th in the *Majestic* from Liverpool for South Africa. It is only fair to remember that the formation of this hospital is due to the initiative of Mr. George Stoker, who was a Commissioner of the South African Aid Committee in the Zulu war. The original proposal was to provide a purely civil hospital, to be under the direction of Mr. Stoker. A considerable sum was collected for that purpose, and Mr Stoker and other surgeons, together with a number of dressers, students from various hospitals, were prepared to proceed with it to South Africa. It appears, however, that the War Office consented to accept the proffered assistance only on condition that the hospital was placed on a military footing and under military control. Under these circumstances, Surgeon-Major C. R. Kilkelly, of the Grenadier Guards, was appointed to the charge of the hospital, and Mr. Anthony Bowlby was nominated senior surgeon. The other members of the surgical staff were chosen by Sir Thomas Smith and Mr. Bowlby. The change in the constitution of the hospital has been a source of great disappointment to those originally selected to take part in its work, many of whom had made all their arrangements and provided kit. The hospital has 4 nurses, 30 orderlies of the R.A.M.C., and 28 men provided by the St. John Ambulance Association.

LEGISLATION FOR MIDWIVES.

AT a general meeting of the North-East London Medico-Ethical Society on November 30th, at the Hackney Town Hall, Dr. MAJOR GREENWOOD opened a discussion on the above subject. He drew attention to the cause that had led to the agitation for midwife reform—namely, the incompetence of many of the present class of midwives, and the mischief they caused to the lying-in, especially among the poorer classes. He contended that there was really no division of opinion in the profession as to the necessity of some reform, and that all the controversy was as to the shape this reform should take. He thought it very unfortunate that all the Midwives Bills hitherto drafted had been exactly copied from the Medical Acts, and would therefore appear as supplementary to them, and he thought that an unscrupulous midwife would be assisted by them to engage in illicit general practice; that this would be made plainer if men-midwives were admitted by the Bills in question. It was true they were not, but in all equity they ought to be. If they were he conceived that no one could be blind to the evil likely to be caused. He drew attention to the compromise argument, or argument of expediency, which he said he frequently heard in the mouths of eminent members of the profession: that they objected to these Bills, and had always done so, but, seeing that they were bound to come, they thought it would be advisable to take the wind out of their opponents' sails by adopting their Bills with improvements of their own. He disagreed with this principle. If the Bills were bad, the profession ought not to support them, and he denied that the Bills were bound to become law in the future. He pointed out the advantage of a constructive policy over a destructive, and that the opponents of these Bills would be relatively much stronger in their position if they had a policy of their own to put in the place of what they condemned. Legislation bristled with difficulties, but although the education of midwives was improving and would continue to improve without any Registration Bills, some kind of registration might be desirable. He would suggest a county register being kept of all midwives practising in the county; that each county council should appoint a Board chosen out the local practitioners, the medical officer of health being the person to examine all applicants for registration, unless they brought evidence of having passed an examination before another county Board. A registration of this kind would distinguish it altogether from medical registration, and the position of a midwife under such an arrangement would not be likely to be confounded with that of a medical practitioner.

Some discussion took place in which all the speakers agreed substantially with the opener of the discussion. Dr. Sequeira, the chairman, testified to the incompetency of many midwives in East London from the experience of thirty years in Whitechapel, but he thought they were better now than they used to be. All present strongly disapproved of the Midwives Registration Bills that had been brought forward up to the present time.

VISITATION OF THE QUEEN'S COLLEGE, CORK.

[FROM A CORRESPONDENT.]

IN the charter granted to the Queen's Colleges in Ireland provision was made for the holding of visitations by a Board of Visitors, whose chief office is to inquire into the working of the Colleges, as well as to consider and decide regarding grievances which may be preferred before them by students or officers of the Colleges against the ordinances made by the College authorities.

On November 25th the Queen's College, Cork, received its visitation by this Board, on which, amongst others, the Presidents of the Royal Colleges of Physicians and Surgeons of Ireland sat.

The students took advantage of this occasion to make

petition for the establishment of a chair of pathology, but the Board of Visitors declined to take action in the furtherance of their request. To be devoid of adequate teaching arrangements for such an important subject as pathology is rather an anomalous condition for a medical school to find itself in at the present day, and yet this condition has apparently to be left for reform at the request of the undergraduates by those responsible for the standard of medical education in the Queen's College, Cork.

Hitherto the Queen's Colleges have taken more than their full share in the training of medical men for the public services, and have one and all discharged their duties creditably and well so far as their funds permitted them to do, and we do not suppose that the Council of the Cork College is in anything but perfect sympathy with the very natural request of its students. Where, then, does the fault lie?

In the founding of these colleges, the noble idea of the great and good Prince Consort, "to afford to all classes and denominations of her Majesty's faithful subjects, without any distinction of religious creed whatsoever, an opportunity for pursuing a regular and liberal course of education," the British Government took the responsibility of making provision for advancing requirements in the domain of knowledge.

Yet we are told that the endowments of the colleges, at no period too liberal, are the same to-day as they were fifty years ago. To understand what this means, let us take the example of the Queen's College, Belfast, whose purely medical departments have precisely doubled within the last ten years, if we include the new lectureship on Tropical Diseases. This increase of new departments means an enormously increased outlay if due provision be made to meet their necessities. But, under existing conditions, two results follow: the older departments are pinched to furnish working expenses for the new ones, which, in turn, are far from being fully provided for.

The condition which the authorities of the Queen's College, Cork, are called to face at the hands of its students is the natural outcome of such a policy. Within the past year, the enlightened head of the Colonial Department of our present Government brought to the notice of the Queen's Colleges the desirability of instituting departments to be specially devoted to imparting instruction in the weighty subject of tropical diseases. Surely it is therefore at least desirable that the Government should place these useful institutions in a position to meet not only this request but adequately to remedy the much more fundamental defect brought to light by the action of the Cork students.

This is all the more imperative when it is borne in mind that the class fees in these colleges are fixed by Act of Parliament at so low a figure as to prevent the departments from being worked on ordinary self-supporting lines.

THE DUTIES OF THE MEDICAL PROFESSION WHEN CALLED IN SUDDEN EMERGENCIES.

We have received a letter, signed by Dr. Biggart, the President of the Hartlepool Medical Society, and by Dr. MacGill, the Honorary Secretary of the same Society, enclosing a cutting giving an account of an inquest from the *Northern Daily Mail*, together with short extracts of editorials from that paper and from the *Northern Guardian* and a statement by Dr. Neil Robson. In the coroner's summing up complaint is made of the opinion which was expressed by Dr. M'Kean, the witness who was called before the coroner, respecting the position of medical men who have been summoned to cases of emergency.

According to the evidence of a witness named James Cameron, Dr. Neil Robson, when called in "refused to take the case in hand unless he got paid; the daughter of the injured woman said he would be paid, but the doctor said he must have security before he examined her." It was in reference to this evidence that the coroner asked Dr. M'Kean whether it was recognised in the profession that security for payment might be stipulated for where there was sudden injury of a dangerous character:

Witness: You need not attend on the case unless you like.

The Coroner: But you don't go the length of saying that you have a right to stipulate for security of payment before you perform any work, however urgent?

Witness: Certainly, you are quite justified to stipulate.

The Coroner: Do the profession recognise it as right to so stipulate?

Witness: It is in medical ethics that you can do so.

The Coroner: I am afraid medical ethics and popular judgment are rather at variance on that point.

In summing up, the coroner again referred to this matter, and stated that he had no hesitation in saying—and he had no doubt that the jury would be quite agreed—that this rule of medical ethics should invariably be suspended where there was a case of human suffering that ought to be attended on humane grounds alone, independent of professional rules.

The Editor of the *Northern Daily Mail*, commenting upon this, says:

While recognising to the full the justice of the precept that "the labourer is worthy of his hire," I cannot but say that the code of medical ethics formulated in this case is one with which I have no sympathy.

The Editor of the *Northern Guardian* says:

Dr. M'Kean of course is quite right in avowing that any medical gentleman is entitled to see that he will secure remuneration for his services, but we hold strongly with Mr. Hyslop Bell that in cases of great and grave necessity the claims of human suffering should stand before medical rules. Happily there is nothing, so far as we can gather, to show that the former were not observed in the case which the coroner's court had under review.

In the statement by Dr. Neil Robson which has been supplied to us he appears to have asked, "who was to pay for the attendance?" and to have received "some indistinct assurance" that he would be paid. But having examined the patient, and found her to be suffering from a fracture of the neck of the femur, and having further ascertained that she was a pauper, he recommended her removal to the workhouse hospital, and telephoned to the police, who made the necessary arrangements, and removed the patient to the hospital, where she died of pneumonia some days afterwards. Our correspondents say: "Will you kindly give us your opinion as to the remarks of the coroner as bearing on the ethics of the case?"

We think that as an abstract statement there is no fault to be found with what the coroner said. The real misfortune was that the action of Dr. Robson was so represented to the coroner that he was under the impression that Dr. Robson had refused to do what was necessary for the patient, whereas Dr. Robson appears to have done all that the claims of suffering humanity demanded. We think it was unfortunate that Dr. M'Kean should have conveyed to the court the impression that the medical profession regards its members as justified in refusing assistance in emergencies unless they are guaranteed payment for doing so. This is a view which it is impossible for the medical profession to endorse. At the same time, we have an undoubted grievance in the fact that when summoned by the police to attend an urgent case the doctor who is thus called in is left to recover his fees from the patient, who may be, as in this case, a pauper. In France there is a fund out of which doctors are paid for such police calls, and we think that a similar arrangement should in common fairness exist in this country.

LITERARY NOTES.

Dr. W. H. Welch has now been a professor in the Johns Hopkins University, Baltimore, for a quarter of a century, and a "Festschrift" is accordingly being prepared by his pupils in honour of their distinguished teacher. During the past twenty-five years some seventy-five persons have made scientific researches under the direction of Professor Welch, and nearly half of these will contribute to the work. The volume will be royal octavo in size, will contain at least 500 pages of printed matter, and will be illustrated with numerous lithographic plates, besides figures in the text. The Committee of Publication includes, among others, the names of Drs. A. C. Abbott of Pennsylvania, W. T. Councilman of Harvard, Simon Flexner of Pennsylvania, W. S. Halsted of Baltimore, A. C. Hester of New York, Wyatt Johnston of Montreal, and G. M. Sternberg, Surgeon-General of the United States army.

Die Lepra des Auges is the title of a volume of clinical studies by Dr. Lyder Borthen, of Trondhjem, which will shortly be published, accompanied by pathological-anatomical notes by Dr. H. P. Lie, of Bergen. The work will be illustrated with 24 plates and 17 figures.

The Report of the eighth meeting of the German Otological Society will shortly be issued under the editorship of Professor F. Siebenmann. It will be illustrated with two plates.

In reply to inquiries that have been addressed to us, we may state that the essay on the Mosaic Code of Sanitation, by the late Mr. Ernest Hart, to which reference was made in the

last issue of the BRITISH MEDICAL JOURNAL, was originally delivered as a lecture before the Jewish Working Men's Club and Institute, and was published in the *Sanitary Record* of March 23rd, 1877. A reprint of the lecture was published as a pamphlet by Messrs. Smith, Elder, and Co., in the same year.

The *Canadian Journal of Medicine and Surgery* for December is a "special illustrated Christmas number." Professor Adami discusses the significance of bovine tuberculosis and its eradication and prevention in Canada; Dr. A. G. Nicholls contributes an inquiry into the etiology of chronic Bright's disease; Dr. W. J. Wilson records a case of craniectomy for microcephalic idiocy; Dr. E. Herbert Adams writes in praise of the Great Lakes as a health resort; and Professor Primrose relates some incidents in the life of John Hunter, anatomist and surgeon. There are full-page reproductions of famous pictures such as "The Doctor," by Fildes; "A Charity Patient"; "Duty" (a country practitioner crossing a bleak moor), by Heywood Hardy; "Nicolaus Tulpius demonstrating the Muscles of the Arm," by Rembrandt; "The First Public Demonstration of Surgical Anæsthesia at the Massachusetts General Hospital, Boston, on October 16th, 1846"; "Serumtherapy for Croup at the Trousseau Hospital, Paris," by André Brouillet; and several others. We congratulate our Canadian contemporary on an exceptionally interesting and valuable number.

Among the contents of Part XIII of *Contributions towards a Dictionary of English Book Collectors* (published by Bernard Quaritch) is an account of Richard Mead, the famous physician of last century, than whom, according to Johnson, no man of his time enjoyed more of the broad sunshine of life. Of all the numerous scholars, men of letters, collectors, antiquaries and intellectual benefactors whom (says the writer of the article in question) we owe to a profession which has fostered the learned Linacre (described by his friend Erasmus as *Vir non exacti tantum sed severi judicii*); the gentle Caius, that zealot of universities; the genial, the ingenious Arbuthnot; the bibliophilic Askew; Freind, the medical annalist; the Ovidian Garth; Radcliffe, the founder of mighty libraries; and Watson, the last of the race of *grands seigneurs de la médecine*—Mead stands pre-eminent as patron, collector, the friend of arts and letters, of artists and *littérateurs*, the stimulant and stimulator of men's bodies and minds alike. Dibdin, the most famous of bibliomaniacs, bursts into the following rhapsody at the thought of him:

> Yes, ever-renowned Richard Mead! Thy *pharmacopœial* reputation is lost in the blaze of thy bibliomaniacal glory! Æsculapius may plant his herbal crown round thy brow, and Hygeia may scatter her cornucopia of roses at thy feet; but what are these things compared with the homage offered thee by the Gesners, Baillets, and Le Longs of old? What avail even the roseate blushes of thousands whom thy medical skill may have snatched from a premature grave compared with the life, vigour, animation, and competition which thy example infused into the Book-World!

The experienced practitioner, it has been said, blushes only when the expected fee is not forthcoming, otherwise the roseate blushes referred to by this enthusiastic panegyrist might well have transferred themselves to the countenance of the physician, who, if the words are to be taken in their literal meaning, is here credited with having restored the vital spark to thousands in whom it had been prematurely extinguished! Mead's library was stored in his house in Great Ormond Street, now the site of the Children's Hospital. It consisted of 100,000 volumes, and realised by auction £5,499 4s. 5d. His pictures sold for £3,417 11s.; his prints and drawings for £1,920; his coins and medals for £1,975 17s. 6d.; his antiquities and other curios for £3,245, making a grand total of £16,057 12s. 11d.

With the New Year the *Settimana Medica* of Florence will be transformed into the *Rivista Critica di Clinica Medica*. The new journal, which is to be larger and more attractive in appearance than its predecessor, will be under the editorial direction of Professors Bozzolo, Cardarelli, Murri, and Grocco. The leading principle of the *Rivista Critica di Clinica Medica* is embodied in the words "Scegliere, condensare, purificare" (To select, to condense, to purify). Its programme is "dar notizia del meglio e tacere del cattivo" (to make known the best and to be silent as to the bad). Nothing could be better—in theory. But in practice certain difficulties may arise. Even editors are human, and *salvâ reverentiâ* of the average contributor, it may be hinted that he too has his share of original sin—in a literary and scientific sense—and if he submits to have his productions "condensed," will he be equally tolerant of "purification"? Then the gentle reader is not always a model of sweet reasonableness. Altogether, Professor Bozzolo and his colleagues have undertaken a serious task, but they are attempting it in a serious spirit, and we wish them all success.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

PORTUGAL.

DURING the week ending December 9th, 1 fresh case of plague only occurred in Oporto. There were 3 deaths from the disease during the week. The total number of plague cases reported since the commencement of the outbreak amounts to 281, of which number 101 proved fatal. The subsidence of the disease may be owing to the advance of cold weather, or to the general hygienic measures which are being assiduously carried out. The former theory is at variance with the experience in Bombay, where the winter is regarded as the season of the active spread of the disease. The cold season, however, in Oporto and Bombay are very different in their intensity, a winter temperature in Bombay favouring plague development, whilst in Oporto it may have the opposite effect.

INDIA.

Although there is a dimunition in the number of deaths from plague in the Bombay Presidency during the week ending November 18th, the numbers in the city rose from 74 to 100. It is an unwritten law in Bombay that when the deaths from plague number 100 a week the disease is to be regarded as epidemic, and it would appear that Bombay now finds itself in that unenviable position. The recrudescence in Bombay appears to be in the previously stricken districts and in the very houses where plague prevailed in the three previous outbreaks, showing that now for the fourth time these quarters are the permanently affected districts. Mandvi, the first attacked area of Bombay, still stands out prominently as the worst as regards plague epidemics.

The reported deaths from plague in Calcutta during the week ending November 18th, as compared with the previous week, rose from 33 to 44. During the same period plague increased in the Mysore State, but diminished somewhat in the Nagpur District. From the Jullundur District in the Punjab 4 deaths from plague are reported.

MAURITIUS.

During the week ending December 7th 37 fresh cases of plague occurred in the island and 29 persons died of the disease. The crisis in the epidemic in Mauritius occurred some three or four weeks ago, and it is disappointing to find the number of cases and deaths continuing so high.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at 429, Strand (corner of Agar Street), London, on Wednesday, the 17th day of January next, at 2 o'clock in the afternoon.

December, 1899. FRANCIS FOWKE, *General Secretary*.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 27th, 1899, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—A special general meeting of this Branch will be held on Tuesday, December 19th, at 5 P.M., in the Museum of Practical Geology, Jermyn Street, S.W. (by kind permission of the Director), to consider the report of the Council upon a letter received

from the East York and North Lincoln Branch with reference to the certification of midwives and opticians. At the annual meeting of the Metropolitan Counties Branch, held on June 20th, 1899, a letter, which was sent by the East York and North Lincoln Branch, was referred to the Council for report. The Council of the Metropolitan Counties Branch, having carefully considered this letter, passed the following resolutions, which will be submitted to the general meeting: (1) "That, whilst this Council is ready to oppose the illegal certification of midwives, it is ready to consider any Bill sanctioned by the British Medical Association and the General Medical Council, by which, while protecting all existing rights of medical practitioners, licences to practise can be granted to midwives, after examination, who have been declared to be competent to attend cases of natural labour, and are bound under penalties to send for qualified medical assistance in cases of a different kind." (2) "With respect to the illegal certification of opticians, this Branch has no jurisdiction, but would strongly urge the General Medical Council to consider any well-substantiated charge which might be brought against a registered medical practitioner for furthering any such object." Notice of motion to be moved, by way of rider or amendment, to the report of the Council on the East York and North Lincoln Branch letter in reference to the certification of midwives and opticians: (1) To be moved by R. F. Tomlin and seconded by Dr. Staniland or other mover or seconder: "That this meeting concurs with the East York and North Lincoln Branch of this Association in regarding the certification of midwives and opticians by registered practitioners as contrary to, and tending to defeat the objects of, the Medical Acts; the sanction of such certification by the General Medical Council in the case of midwives as illegal; and any Bill to legalise such certification and register midwives as a repeal of the Medical Acts in that particular, contrary to the public interest." (2) To be moved by R. B. Anderson, and seconded by J. H. Staniland, or other mover or seconder: "That the representatives of this Branch on the Council of the Association be requested to move to rescind the resolution of the Council adopting a draft Midwives Bill; such motion being contrary to repeated votes of this Association; and to bring such votes of the Association before the Government and Members of both Houses of Parliament." (3) To be moved by R. B. Anderson, and seconded by R. F. Tomlin, or other mover or seconder: "That this Branch do co-operate with other Branches and Societies in resisting any Bill to legalise such, at present illegal, certificates of midwives or others; that £ be voted from the funds of the Branch; and that a special committee be elected for the purpose of such co-operation." Notice of amendment by Mr. R. B. Anderson, to report of Council: "That this Branch regrets that the Council's report suggests that attendance on 'cases of natural labour' is not one of 'the existing rights of medical practitioners,' and contains proposals to approve of persons without medical education being recognised and licensed as 'competent to attend' such cases."—H. BETHAM ROBINSON, M.S., F.R.C.S., 1, Upper Wimpole Street, W., J. W. WASHBOURN, M.D., 6, Cavendish Place, W., Honorary Secretaries.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of this District was held at Lewes on November 30th, Dr. FAWSSETT (Lewes) in the chair.

Communications.—Dr. MACKINDER showed: (1) Three Vesical Calculi removed by himself, and read notes of the cases; (2) a part of the Stem of a Clay Tobacco Pipe removed from a Woman's Bladder.—Mr. W. G. EARLE read some notes on the Disposition of the Deep Cervical Fascia.—Dr. WATSON GRIFFIN showed a beautifully-mounted section of an Eyeball removed by him for Leucosarcoma of the Iris occurring in a young woman. He also exhibited microscopic slides of the growth, demonstrating very clearly the hyaline changes.—Dr. DOW showed Skiagrams of Fractured Patella and Fractured Olecranon healed some two or three years ago by screwing the fragments together. Bony union was perfect, scarcely any callus was visible.

Early Insanity in Women.—Miss HELEN BOYLE, M.D., read a paper on this subject. She said the extreme insidiousness of the onset of insanity was perhaps not always as clearly before the practitioner's mind as it ought to be. One was rather apt to overhaul the patient physically, to be relieved that there was no gross organic lesion, and to say that the symptoms were "merely a little hysteria" or "nervousness." That this was often only a method of treatment, and a most useful one, she was well aware, but she urged very strongly the danger of allowing one's own mind to take this attitude as regards the trouble. Nine out of every ten mental cases were first called "only a little hysteria." The risk of danger to whole families from hesitating to recognise the gravity of nervous cases, or rather from hesitating to admit their mental derangements, and in some their irresponsibility was not a chimerical one. Another danger in under rating the gravity of early cases was the occurrence of suicide. She believed that it was very uncommon for a case to occur without the patient having previously warned someone of the inclination. It was generally considered in asylums that patients continually talking of suicide rarely did it, and this might perhaps be partly true, but at the same time she never knew a patient removed from special supervision while still threatening it, so it was clear that people were chary of acting upon the theory. No one who saw anything of mental work could help being struck by the comparative rarity with which cases were seen during the first month or so of the onset of mental symptoms. Of the last 20 consecutive cases showing obvious mental symptoms which she had had, in only 1 did she see the patient within a few weeks of the beginning of the attack, in 1 within three months, in 2 within a year. The other 16 varied in duration up to fifteen years, and this last had not previously consulted any one for her mental condition, though frequently seeing the family doctor; she had nursed her delusions all that time, living with relations who, although they recognised her eccentricity, never thought it in any way particularly important until she became almost stuporose with melancholia, and groaned aloud at intervals. Of the 20 cases only 3 had seen a specialist, though all had been under treatment. Dr. Tuke gave as his advice: Attack the first symptoms of mental ill health by appropriate means with at least as much determination as the first threatening of phthisis, gout, or bronchitis; and perhaps before that he might have put: Be prompt to recognise them. A certain proportion showed marked signs of instability in childhood particularly, say, from eleven and twelve onwards. A case was quoted in illustration of this. In estimating the gravity of an early case one had to remember that the patient could not be expected willingly to give herself away. She would probably do her best to hide her delusions. At that stage she had a vague feeling that her ideas would not be understood by one of the common herd such as oneself, and in this a mental patient differed very markedly from a hysteric. It was often only with an expenditure of much time and patience that the idea could be got at, and then sometimes it required some care to recognise them as delusions. For instance, it was not a very uncommon idea in nervous states at the menopause for the patient to believe that she was suffering from worms. Two cases were cited in which the patient had been treated for months for thread worms. In connection with these cases mention was made of another group closely allied, that is, those which began as gynæcological patients. She had seen dozens of them at the asylum, and many since she left. Some went on from one operation to another until there was nothing left to be done, and still they were not well. Then they sank into chronic delusional insanity, delusions of the most horrible and depraved kind, which made them a terror to all inside and outside asylums, and a misery to themselves. The opinion was expressed that the nervous symptoms were often dependent upon gross organic pelvic mischief. When she went as medical officer to Claybury she started with a precisely opposite view. There she had about 400 patients constantly changing in her particular wards. She saw and did a large number of necropsies, and ultimately relinquished this idea. Miss Boyle concluded by referring to the cheering view taken by Dr. Rayner, who believed that the curve showing the amount of insanity in proportion to the population in England was now beginning to go down, and she felt that with improved methods of prevention and cure they would be embarking on a probably successful expedition.

Antitoxin Injections in Tetanus.—Dr. MACKEY related a successful case. A gardener, aged 15, was admitted to the Sussex County Hospital on October 28th, 1899. His left little finger had been crushed between a wall and a barrow full of manure three weeks before. He noticed difficulty in opening his mouth and backache one week before; the symptoms got worse in the last three days. The lad was well nourished. There was some "risus," flushed sweating face. His mouth was closed, but he could open it enough to speak and to admit the edge of a spoon. The back was rigid and the head retracted. The left little finger nail was loose and was removed. Its bed was found dirty and suppurating; this was cleansed and carbolised, and by 8 P.M. of the day of admission antitoxin was obtained from the British Institute of Preventive Medicine and 10 c.cm. injected (by Mr. Jordan, M.B., Resident Officer) with a Roux's syringe into the abdominal wall, which was tense. The symptoms of spasm, cramp, tongue biting, pain, etc., were moderately severe during the next few days and the patient received a daily injection of 10 to 12 and once 13 c.cm. up to November 6th (making ten injections in all), after which he was convalescent. There was no other medical treatment beyond an occasional dose of chloral bromide, not more than six doses in all, and mist. sennæ co. p.r.n., but

there was very careful and constant nursing in a quiet airy room and frequent feeding with as much beeftea and milk, with two eggs daily and about 3 oz. brandy. Thanks to careful antisepsis there were no complications from the large injections, but on November 7th an urticarial rash appeared over the joints and later spread over the body. He has been well now for more than a week.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.

A MEETING of this Branch was held at Littlehampton on November 22nd, Dr. EUSTACE (Arundel) in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Next Meeting.—It was decided that the next meeting be held at Worthing, and that Mr. G. B. Collet be asked to preside thereat.

Primary Actinomycosis of Testicle.—Dr. EUSTACE read a paper on actinomycosis, in which, after a short summary of the present state of knowledge as to actinomycosis, he gave the following details of a case which occurred in the practice of his partner, Dr. D'Olier:

The patient was a gentleman of independent means, aged 35, always lived in the country, but never farmed or was in any way connected with stabling or farmyard; married, and the father of two healthy children, youngest aged 8; he always enjoyed good health; no specific history. On July 21st, 1899, he consulted Dr. D'Olier for a swelling on the left cord, which he had first noticed three months previously. Examination showed (1) a hard cylindrical swelling, painless, and not tender, on the left cord about the size of a hazel nut, and situated about 1 inch from the external abdominal ring; (2) a small hydrocele of the cord; (3) general enlargement of the testicle, but chiefly of the globus minor; no enlarged glands; rectal examination and base of bladder normal; heart, lungs, kidneys, etc., healthy. Diagnosis: some chronic inflammatory process, probably tuberculous. Treatment: Excision of testicle and swelling on cord advised.

July 26th. Consulted Mr. Victor Horsley, who supported diagnosis and treatment. August 3rd. Under ether Dr. D'Olier excised testicle, cutting cord half an inch above swelling; wound healed by first intention. KI 5grs. *ter die* to be continued for three months. The excised testicle and cord were sent to Mr. Horsley, who himself kindly examined them microscopically. The patient was seen on October 31st, when the scar was found to be quite healthy. Heart and lungs and other organs healthy. Patient feels and looks very well, and has increased 1 stone in weight. Two sections of the growth were shown, which exhibited the typical appearances of the actinomyces bovis and the result of its presence on the tissues.

In the opinion of the author, this was the first recorded case of primary actinomycosis of the testicle.

Death in Diabetes.—Dr GOSTLING read a paper on the way in which death occurred in 18 cases of diabetes which had been under his care or of which he had notes. The modes of death were tabulated as follows:

	Under 20 yrs.	20-30	30-40	40-50	50-60	60-70	70-80	Over 80
Asthenia	—	—	—	—	1 F.	1 M.	—	1 M.
Sudden (syncope)	—	—	—	—	—	—	—	1 M.
Coma	1 M.	1 M.	—	1 M.	1 M.	1 F.	2 F.	—
Gangrene	—	—	—	—	—	1 M., 1 F.	—	—
Tubercle	—	—	—	1 M.	—	—	—	—
Influenza	—	—	—	—	—	—	1 M.	—
Mitral disease (bronchitis) ...	—	—	—	—	—	1 F.	—	—
Anginal symptoms	—	—	—	—	1 M.	1 F.	—	—

He pointed out that the proportional numbers of the various modes of death were not those usually given in textbooks, and accounted for this by the high average age of his patients, most of his cases of chronic diabetes being in elderly people. With regard to the deaths from coma, much stress was laid on the fact that in each of the four cases under 60 years of age death from typical Kussmaul's coma ensued in a very few days (less than seven) after the patient had been suddenly put on a strict non-saccharine diet and the suggestion was made that it would be better to make the change in diet gradually rather than suddenly, watching its effects. Microscopic slides of sections of arteries from cases of diabetic gangrene were shown, in which there was very greatly narrowed lumen of the vessel from proliferation of the inner coat. The two cases of gangrene were narrated in detail. In one of them amputation was performed first through the tarsus, and a few days later in the upper part of the leg without success. The other case was interesting from the fact that twenty years before death a toe had been amputated for gangrene, the patient recovering and finally dying of gangrene of the whole foot to well above the ankle. Amputation not being attempted owing (1) to the general condition of the patient; and (2) the want of success in the previous case.

Medical Reform.—Communications from the East York and North Lincoln Branch of the British Medical Association and from the Hull Medical Society were read by the SECRETARY. The meeting was invited to support these societies in (1) resisting any measure for the registration of midwives becoming law; (2) in their efforts to obtain other medical reforms. After discussion it was resolved that the papers do lie upon the table.

DUNDEE AND DISTRICT BRANCH.

A MEETING of this Branch was held in University College, Dundee, on December 7th, Dr. WEMYSS presiding.

Milk and Public Health.—Mr. PEDDIE, F.R.C.V.S., read a paper on Milk: Its Production and Distribution from the Standpoint of Public Health. After stating that, normally, milk from a healthy cow was sterile, he referred to the various sources of direct contamination, the changes immediate on calving and during œstrum, and the effect of medicine or poisonous ingest, and, what was still more important, the results of general disease and of mastitis. Statistics of the frequency of tuberculosis, and the results of testing with tuberculin were given, and it was shown that tuberculous mastitis was more frequent than had been supposed, the results of various observers showing its presence in 7 to 16 per cent. of tuberculous cows examined. Illustrations were given of the presence of tuberculous udder in cows actually supplying dairy milk and of the way in which the milk of a single diseased cow was widely distributed. The danger was a very real one. Among indirect sources of contamination were enumerated the condition of the cowhouses, their insufficient cleansing, impure water supply, non-cleansing of the udders and teats, and often the hands and clothes of the milkers, improper cleansing of the vessels, employment of unhealthy persons or those coming from infected houses, improper filtration and failure to keep the milk at a sufficiently low temperature. Several of these were discussed in detail, the variability of the regulations for cubic space, the insufficiency of the ventilation, want of arrangements for flushing out the byres, and the use of mill dust being specially referred to. The faults were not present in all, but in most. The sediment in milk in a vessel showed this. The artificial heating of byres would not be expensive. The rapid deterioration of milk in keeping, especially when the temperature was high, was pointed out, and the risk of contamination by persons from houses with infectious disease was emphasised, scarlet fever and diphtheria being most important. The inadequacy of the regulations for cowsheds and milkshops was pointed out, and Mr. Peddie advocated giving power to the local authority to deal with milk supplied from outside their area, the systematic inspection of dairy cows with the application of the tuberculin test, and the exclusion of reacting animals, and also more stringent regulations for the housing of cows, and the general cleanliness of handling of our milk supply. Compulsory notification of cases of tuberculous udder would not be sufficient.—Dr. TEMPLEMAN (M.O.H. Dundee) said the inspection must be by qualified veterinary surgeons and not by sanitary inspectors; and the inspection, to be satisfactorily made, must be a function of the Government, and taken out of the hands of the local authority. The regulations of the Dundee local authority required a cubic space of 800 feet, which, if the ventilation were efficient, was enough. In Dundee the authority could notify a dairyman that he had a tuberculous cow, and compel its removal.—Dr. J. W. MILLER referred to Dr. Still's paper, showing that the majority of tuberculous cases in young children were primarily pulmonary.—Dr. DICKSON (M.O.H. Carnoustie) said that there the veterinary surgeon made a quarterly report on all cows in the area, but that the tuberculin test was necessary, and could not be enforced without fresh legislation. Meantime all milk should be sterilised. He advocated open air for cows.—Dr. COLMAN read the terms of contract for milk for Northampton Infirmary. These did not include the universal application of the tuber-

culin test, but no tubercle bacilli had been found on the examinations made of the milk during the first year.—Mr. Greig wished to know the extra cost of milk from a tuberculin tested supply, and how often inspection was needed.—Dr. Kynoch mentioned the arrangements in Amsterdam for supplying sterilised milk to the *clientèle* of the maternity department.—Dr. Havelock said that, on having the dairy herd at Montrose Asylum tested, 30 cows out of 36 reacted, and he emphasised the financial magnitude of the question.—Mr. Peddie, in reply, stated that a careful estimate he had made showed that milk under the most perfect regulations could be supplied for about 1s. 4d. a gallon.

SPECIAL CORRESPONDENCE.

BIRMINGHAM.

Mason University College: Opening of New Laboratories of Bacteriology and Pathology—Class Rooms: Research Rooms.—Gift by Dr. Rickards.—Medical Attendance for Soldiers' and Sailors' Wives and Families.

The new laboratories for bacteriology and pathological research at Mason University College were opened on Wednesday, December 6th, by Alderman Clayton, Chairman of the Council of the College. Among those who were present at the informal opening ceremony were the Right Hon. Joseph Chamberlain, President of the College; the Lord Mayor of the City, Dr. Gibbs Blake, and Mr. G. J. Johnson, Vice-Presidents; several members of the Council of the College, including Sir John Holder, Sir James Smith, Dr. Heath, Principal of the College; Professor Windle, Dean of the Medical Faculty, and a large number of the professors and other medical men interested in the Birmingham Medical School.

The new department consists of a class room, lofty and well lighted, which has a present accommodation for 36 students. A separate basin, water supply, and electric lamp, and a microscope with high and low power, are provided for each student. Round the sides of the room are ranged the various sterilisers, incubators, and other apparatus for bacteriological work. Most efficient arrangements have been made in the class room for demonstrations, a large microscopic lantern standing in the centre of the room for use during lectures. In a large room adjoining the class room and in the Professor of Pathology's private room are a number of research tables with apparatus for the use of graduates and medical men who wish to prosecute individual research. It is hoped that when the new University is established the new laboratory will become the headquarters of bacterological research and investigation for the whole Midlands. Already Birmingham, West Bromwich, and the County Councils of Staffordshire and Shropshire have made arrangements with the College authorities for the investigation of doubtful cases of infectious disease such as diphtheria and typhoid.

The fitting-up and equipment of these laboratories have been rendered possible by the generous gift of £1,000 for that purpose by Dr. E. Rickards, Senior Physician to the General Hospital.

A large meeting of general practitioners was held on Wednesday, December 6th, at the Council House, the Lord Mayor (Alderman Beale) presiding, at which the question of attending the wives and families of Birmingham men called out on active service was discussed. In response to a circular issued replies had been received from some 210 medical men who were in favour of the aims of the meeting. It was unanimously agreed to attend deserving cases among the families of soldiers and sailors on active service.

BRISTOL.

The University College Colston Society.—Sir Humphry Davy's Discovery of Nitrous Oxide Anæsthesia.

The University College Colston Society held its first annual dinner at the Clifton Spa on December 7th, when about 100 persons were present. The president was Dr. Percival, the Bishop of Hereford (who was for many years headmaster of Clifton College), and the guest of the evening was the Right Honourable James Bryce, M.P. The success of this meeting, which was indisputable, promises well for future years, for not only were the speeches excellent, but the dinner was well served, and the subsequent collection on behalf of the college good. It has been argued that a new Colston Society was unneeded, if not out of place, for the three existing ones represent the Liberal, Tory, and neutral parties in imperial politics. The funds, however, of these three societies are all devoted to only one object of the several which benefited by Colston's munificence, namely, the relief of aged persons by annuities, or pensions and donations to lying-in women. A reference to the list of Colston's benefactions shows at once that he gave more money to educational purposes than for the relief of sickness and old age, and though it has been said that at the present time the need of supporting or endowing educational establishments is not so pressing as it was 150 years ago, it must be admitted that Bristol University College is badly in need of funds and that the particular scope of the teaching undertaken there is hampered by the shallowness of the purse. The addition made to the funds on December 7th, that is, £365, or as the Bishop of Hereford said "a pound a day," is not great, it is true, but the presence of so many indicated that a lively interest is taken in the College by many who have not before confessed it. The originator of the idea was Mr. Walter Reid, the proprietor of the *Western Daily Press*.

An attempt is being made to ascertain in which house in the Hotwell it was that Humphry Davy discovered the anæsthetic powers of nitrous oxide. It is a well-known fact that Davy was assistant to Dr. Beddoes, who had in 1798 opened a house called the Pneumatic Institute for the treatment of disease and more particularly phthisis by the inhalation of some of the then newly discovered gases, the Hotwell at Bristol being then a very popular watering place. Davy, it appears, was in the habit of administering the nitrous oxide to all comers at 2d. a dose, and from all accounts it was a popular amusement to go to the Institute and have the gas; the usual modern accompaniment of tooth drawing was omitted. The Institute appears from Stock's memoir of Dr. Beddoes to have been in Hope Square, but the common report puts it in Dowry Square. The Clifton Antiquarian Society, who are pursuing the investigation, hope to put a tablet on the house commemorating the fact that nitrous oxide was there found to have anæsthetic powers.

SHEFFIELD.

Notification of Tuberculosis.—University College.—News.

The Corporation of Sheffield, which has before now shown its anxiety to adopt means for the prevention of the spread of tuberculosis, acting on a suggestion of their energetic medical officer of health, Dr. Robertson, has adopted a voluntary notification of cases of tuberculosis. In a circular recently issued by the medical officer of health it is mentioned that only such cases as are in an infectious condition are required to be notified, and that for this purpose the Corporation has arranged that if a medical practitioner sends a sample of the sputum or other infectious matter from a patient to the Bacteriological Laboratory in connection with the University College, such material will be examined (free of charge) for tubercle bacilli, and their presence will be reported to the notifier. The ordinary notification fees will be paid 2s. 6d. for private cases and 1s. for cases in connection with public institutions. A special sanitary inspector will be detailed to visit the houses and, if necessary, the workplaces, of persons suffering from tuberculosis, and the greatest care will be taken that patients who are adopting reasonable means of preventing the spread of the disease shall not be interfered with. Each individual case should only be notified once. In the case of patients whom it is thought not desirable to notify the medical officer of health suggests that practitioners should co-operate by giving instructions to the patients as to preventive measures.

The need for increased accommodation for all departments of University College has for some time been recognised. Some were sanguine enough to think that their hopes in this direction were before long to be realised. Circumstances have, however, arisen which would appear likely to defer, at least for the present, the erection of the new buildings. The Town Trustees, an ancient body, holding in trust large

sums of money, on the representation of some of the College authorities, were willing to make a grant of land for the erection of the required buildings. Unfortunately, the convenience of this site for the purposes in view had not been sufficiently considered before the Town Trustees were approached. It was too distant from the centre of the city, from the railway stations (2½ miles), and of still more importance, both from the Royal Infirmary and the Royal Hospital, interfering thus seriously with the attendance of students at these institutions. On these grounds objections were raised to the suggested site when the matter came before the medical department. The great distance from both the Royal Infirmary and the Royal Hospital, and the consequent interference with clinical teaching, was an objection mainly, of course, affecting the medical department; but the other reasons named affected the College in each of its departments, and therefore the line taken by the medical was as much in the interests of the College as a whole as of its own particular department. The selection of this site not unnaturally called forth opposition on the part of those who had recently given up their vested interests in the Botanical Gardens—in which was the suggested site—and handed them over to the Town Trustees, so that the people could enjoy the garden as a public park. It is to be hoped that the difficulties in obtaining a suitable site will be overcome, and that the money necessary for the building and equipment of a University College will be forthcoming before long.

The Town Trustees have recently made a grant of £2,000 towards the building schemes of the Royal Infirmary and of the Royal Hospital, but have attached conditions as to the raising of other moneys during the next year.

At the annual dinner of past and present students, Professor Addison, President of the Students' Club, occupied the chair, and as usual, the dinner was well attended.

CORRESPONDENCE.

THE SOCIETY OF APOTHECARIES OF LONDON.

SIR,—In a previous issue of the BRITISH MEDICAL JOURNAL, Dr. Stocker comments upon some remarks of Mr. Horsley at Newcastle, in reference to the representation of the Apothecaries' Society upon the General Medical Council. Mr Horsley has already explained to the General Medical Council how he came to make the mistake in saying that the election of the representative was by those "who had not a particle of medical education about them," and therefore that part of his address need no longer be a matter of dispute.

Dr. Stocker objects apparently, however, to the further remark of Mr. Horsley, in that he described the electorate as a "handful of City grocers." Now, surely a grocer is one who sells groceries, and I would venture to ask Dr. Stocker whether groceries such as mixed spices and other common kitchen goods such as curry powder, cayenne pepper, etc., are not sold across the counter at the Apothecaries' Hall to any customer requiring them? If this be the case, the term "grocers" is surely not inapplicable.

Dr. Stocker is a Member of the Royal College of Physicians, and I was under the impression that those holding that valuable distinction were precluded by the by laws of the College from selling drugs, dispensing medicines, or trading. It seems rather an anomaly that individual Members of the College should be debarred from doing these things, and at the same time the Master of the Apothecaries' Society should be exempt from the regulations. These by-laws press very hardly sometimes upon professional men practising in the Colonies who are compelled to dispense medicines, and have therefore to return their diplomas of Membership. As a student of ethics I am interested to find that whereas dispensing by an individual Member for his own patients is not permitted, yet if that individual Member becomes the Master of the Apothecaries' Society in London, he may dispense wholesale for any customers, and sell them packets of mixed spices at the same time, and whilst doing these things retain his Membership of the Royal College of Physicians. Verily it is an amusing world.—I am, etc,

Devonshire Street, W., Dec. 11th. A. G. BATEMAN.

THE INCOME OF THE GENERAL MEDICAL COUNCIL.

SIR,—As an old member of the British Medical Association, I would emphatically protest against the suggestion made in Dr. Rentoul's letter on the above subject: that the income of the General Medical Council should be augmented some £26,000 a year by the imposition of an annual tax on the hard-earned incomes of medical practitioners.

The case of solicitors, auctioneers, bankers, brewers, etc., appears to me to rest upon an entirely different foundation, inasmuch as these are licensed to follow their respective vocations, and any unlicensed person conducting such business or profession would be liable to summary prosecution. Medical practitioners have, as the law is now administered, no such privilege or protection.

Expediency may suggest that as medical practice is supposed to exist not merely for the profit of the practitioner, but also for the public good, it should be exempt from direct taxation, but justice demands that where there is no privilege or protection there should be no special taxation.—I am, etc.,

West Worthing, Nov. 13th. FRANCIS H. PARSONS, M.D.

SIR,—Dr. Rentoul has broken a discreet silence by reproducing his impractical hobby in your columns. I am surprised at Dr. Rentoul's proposition to raise the General Medical Council's spending powers under present circumstances, and with a Council hostile to the principle of direct representation. It will be time enough to think of a poll tax when the direct representatives are in a majority, and if they all behave as Dr. Rentoul did soon after his recent election, that time will be relegated to the Greek Kalends. I think good taste would prompt a prolonged period of reticence to your correspondent.—I am, etc.,

East Sheen, Dec. 9th. ALEX. MCCOOK WEIR.

MEDICAL ORGANISATION.

SIR,—Dr. J. Harold Bailey's letter in the BRITISH MEDICAL JOURNAL of November 25th illustrates the difficulty of creating efficient medical organisation. Some men will not join a society because of other men connected with it, and there are men who will leave a society because of something done or left undone with which they do not agree in every particular. I once heard a practitioner tell the reason he was not a member of the British Medical Association: He would not belong to a Society of which a certain eminent practitioner was a member! This is individualism run riot. Those who have the the real welfare of the profession at heart will not allow personal considerations to debar them from joining associations which exist for the common good.

Dr. Bailey's "remedy" for the imaginary shortcomings he attributes to the Medical Guild could not have the effect he predicts, because instead of the needful union there would be further dissension, and the charge of "whitewashing" the provident dispensaries can only be made through ignorance, or from a wish to be offensive because it is contrary to the truth, as any one can learn who wishes to know the facts. The chief object of forming the Guild was to remedy the evils of the provident dispensaries, and that object has been kept in view throughout and acted up to on every possible occasion, not without results. The "lack of support" which the Guild receives, as Dr. Bailey alleges, is a matter of opinion—there are already over 200 members and new ones are continually joining, and the most vivid imagination cannot picture better society outside the Guild than exists inside it.

The Medical Guild exists not to sow dissension or to advantage one class of practitioner to the detriment of another class; far from it. The Guild aims at promoting union, loyalty, and the co-operation of all for the common good—the carrying out of the golden rule in the relationship of practitioners to one another. This cannot be done by wrapping oneself up in one's mantle of self-righteousness and thanking God how much better one is than other men: but by goodwill, by sinking personal differences for the attainment of high ideals, and by a little self-sacrifice much may be done.

The Guild would invite Dr. Bailey and all who think with him and are anxious for the common weal to become members, when they would find a willingness (of which they seem at present to be honestly in doubt) to remedy the evils of the

provident dispensaries equally with every other evil that plagues the profession.—I am, etc.,

Pendleton, November 27th. ALEXANDER STEWART, M.D.

SIR,—Dr. Harold Bailey's letter in the BRITISH MEDICAL JOURNAL, November 25th, p. 1516, may be summarised and dealt with under the three following headings:—

1. The injury which the provident dispensaries have done medical practice in Manchester and Salford.

This, I think, is admitted by all, even the provident dispensaries' staff themselves. They know very well that they are constantly attending members who ought to be the private patients either of their neighbouring practitioners or of themselves. The amount of injury done in Manchester and Salford during the last twenty years by the ten branches—chiefly conducted by working men committees (the medical staff being a small minority), without wage or rent limit, until recently in one branch, but still the old members retained—may be somewhat roughly estimated from the fact that between £2,000 and £3,000 per year is paid to the medical officers, having upwards of 20,000 members, and that a profit has been made and is held by the lay members as a reserve fund of nearly £2,000.

It is just possible that the medical officers retain their connection with the dispensaries because "it pays" from their point of view, although members only contribute a penny per week, half of which goes to the doctor, and a penny per bottle of medicine, that it is "the quantity" (to say nothing of the quality) of those on their list, because they are not always ill and that it is those who continuously pay who are well, who really pay or make up the payment for the attendance upon those who are ill. So far so good, but here comes the rub: Are they not damaging their neighbours' practices by doing it, depriving them of their legitimate patients in those cases where they are well able to pay ordinary fees? Then comes the test of principle, "Does he care, or does he not, what harm he does his neighbours so long as it 'pays' for himself?"

2. Any suspicion of complicity on the part of the Medical Guild "in whitewashing" provident dispensaries.

The use of this term is not novel. We often heard it at the earlier meetings of the Guild, and it has certainly seemed to trend in that direction, for their medical officers hold prominent positions therein, to which they have been elected by the votes of the members at its annual meetings, even when those positions have been made a test point by the issuing of circulars bearing upon it to members prior to an annual meeting, and so fine did the test run that a casting vote from the chair was given in one case in favour of a member of the dispensary staff for a seat on the Council.

3. The resolution he suggests I should propose: "That no medical man be eligible for membership of the Guild if connected with the Manchester and Salford Provident Dispensaries."

Acting upon this suggestion I have already sent a notice to the effect to the honorary secretary that I should propose such a rule as well as one "That no provident dispensary medical officer shall hold any office or position in the Guild or act on its Council" By means of these two resolutions we shall be able to test the present composition of the Guild as to the views of its members. If they prefer a mild policy they will vote for the second, if a drastic one the first. If they are lukewarm, or do not attend, and leave the election to the dispensary staff and their friends, neither will be passed.

I quite agree with Dr. Bailey that if his suggestion were carried out that "a large accession to the membership of the Guild would result." On the other hand, if, upon testing it, it be not carried, I quite expect a large number of members would withdraw, and leave the Guild to the provident dispensary officers and their friends and supporters.—I am, etc.,

Manchester, Dec. 11th. G. H. BROADBENT.

WHOLESALE PRESCRIPTIONS.

SIR,—We, the undersigned dispensing chemists, desire to express our concurrence in the view taken by the Editor of the BRITISH MEDICAL JOURNAL in his note on Wholesale Prescriptions in the JOURNAL of December 9th, and we trust the medical profession will raise its voice against a system of medication detrimental to the interests of the public and faculty at large.—We are, etc.,

DINNEFORD AND CO., Bond Street, W.
HOOPER AND CO., Davies Street, W.
W. E. LOWE AND CO., 8, Stafford Street, W.
V. L. FELLOWS, 49, Hertford Street, W.
G. JOLLEY AND CO., 13, Curzon Street, Mayfair.
A. RALPH MELHUISH, 78, Duke Street, Grosvenor Square (Burden and Co.)
R. L. WIGHAM, 22, Brook Street, W.
GODFREY AND COOKE, Conduit Street, W.
POPE, ROACH AND SON, 8, St. James's Street, W.
FRANK A. ROGERS, 327, Oxford Street, W.
R. A. POTTS, 62, South Audley Street, W.

Berkeley Street, W., Dec. 12th.

SIR,—At a Council meeting of the Chemists' Assistants' Union held on December 11th the following resolution was passed:

That the Council of the Chemists' Assistants' Union fully endorses the opinion of the Editor of the BRITISH MEDICAL JOURNAL in denouncing the continued spread of prescribing private specialities instead of standard *B.P.* preparations, recently expressed in an article on Wholesale Prescriptions in the above JOURNAL.

I am, etc.,

Stafford Street, W., Dec. 12th. R. E. WRIGHT, Secretary.

MEDICAL REFORM AND THE MIDWIVES BILL.

SIR,—Your correspondent, Dr. MacIlwaine, does not appear to grasp the practical difficulties attaching to the proposed registration of midwives.

I have lately had some bother with a district nursing association, the Committee of which allowed the nurse to attend confinements without the doctor With the approval of the coroner I warned the Committee that they were undertaking a very grave responsibility, and running the risk of public censure should a death occur. I further pointed out that such action placed the medical man in a false position, and that I could have nothing to do with such a scheme. The Committee took no notice of my warning. After a time, however, the people found that the medical men in the district would either refuse to come if sent for when anything went wrong under the nurse, or would only attend on receipt of double fee. The result was the people gave up subscribing to the nurse and the scheme was in danger of falling through. I advised the Committee to engage a new nurse and not to allow her to attend any case not under the charge of a qualified medical practitioner. Our present scheme is very popular and works admirably.

I think the case of the wrongly managed nursing scheme shows pretty well what we might expect should the Midwives Bill become law, and a strong fight should be made against a Bill which, without much influence for good, may prove very powerful for evil. I am the more convinced of this from the attitude taken up by the Coroners' Society in their report for 1898, where they agreed to support the Midwives Bill if further provisions were made to ensure:

1. That all stillbirths shall be registered in the same way as all other births and deaths.
2. That no stillbirth shall be registered except on the production of a certificate of a registered medical practitioner or a certificate from a coroner.
3. That no midwife shall be allowed to give a certificate of any sort.

—I am, etc.,

Stradbroke, November 20th. A. HANBURY FREER, M.B., C.M.

SIR,—It is not possible in the space of a letter to go into all the details of such a large subject as the practice of midwifery; but perhaps you will allow me to explain a little more fully a point on which there seems to be some obscurity in my last letter. Midwives will probably always be expected to call in the nearest medical man in minor emergencies such as Dr. Hockridge mentions, and if constantly called in, medical men will, I take it, remain sufficiently familiar with these conditions.

To give a parallel: We are obliged occasionally to undertake surgical emergencies—such as dislocations, compound fractures, strangulated hernia, the performance of tracheotomy, etc.—without constant practice or prolonged experience to ensure familiarity any more, to say the least, than we

should have in midwifery emergencies when normal labours were the property of mere midwives.

Dr. Hockridge does not mention the graver—one might almost say the real—emergencies of midwifery, such, for instance, as contracted pelvis, ruptured uterus, obstruction by fibroids and other growths, extrauterine pregnancies, pelvic suppurations, etc. Dr. Hockridge fears midwifery emergencies may fall into the hands of specialists when midwives are registered. Have we not already a band of specialists for the real emergencies, and is there a better qualified or more essential body of specialists in existence? These gentlemen seem to me to stand in relation to the general practitioner in a position very much like that of the operating surgeons—shall I say of other operating surgeons? It is well for us and for our patients when their services are available; when they are not we must do the best we can.

May I now point out to Dr. Hockridge that while discussing at some length a possible difficulty in the working of a proposed Act of Parliament, he has rather lost sight of the main issue? The question is not whether midwifery shall still be taught in the medical schools under the new order of things, neither is it a question whether things will be exactly as we should wish them to be. The point in debate is whether as a profession, as guardians of the public health, we are to help in the regulation of the practice of midwifery by midwives, or whether we are to start an agitation for their abolition. This is the alternative to be faced whether we like it or no, and to this the attention of the profession should be directed. My opinion is that the agitation being founded on a misconception of the interests alike of the profession and of the public—not to mention the midwife—is foredoomed to failure, and that it will inevitably lead to unprofitable and unpleasant results. Mere opposition to the registration of midwives represents a half-hearted and utterly illogical position—for medical men it is even ridiculous.

The members of our Association ought to understand clearly to what they are committing themselves before embarking on this enterprise.—I am, etc.,

Nov. 27th. S. W. MACILWAINE.

DISCUSSIONS IN THE SECTIONS OF THE ANNUAL MEETING.

SIR,—Now that the sectional officers have been appointed for next year's annual meeting I should like to be allowed to enter a protest against a practice that has lately grown up in regard to the arrangements for discussions. Discussions are popular, and I have not a word to say against them provided they are conducted properly. But that has not always been the case, and the fault lies not with the chairman of the section for the time being, but with those who have the arranging of the sectional programme. When it has been decided what subjects shall be discussed and who shall be invited to introduce them, I take it that the responsibility of choosing what aspects of the subject shall be selected for debate—what shall be considered within its scope and what shall not—should rest with those who are entrusted with the opening of the discussion, subject of course to the ruling of the President of the Section for the time being. Members and visitors who take part in the discussion should follow the lines laid down by the first speaker. It has instead become the practice to group together all the papers promised to the Section that have any bearing upon the subject under discussion, and to call upon the authors to read these during and as part of the discussion. As these papers have been written without any knowledge of the line to be taken by the member who is to open the debate, the result is, as might have been expected, that there has often been no real discussion at all. The member who has been honoured by an invitation to introduce the discussion finds that instead of a discussion on the points he has raised, a series of previously prepared papers on more or less analogous topics is read. This he naturally feels to be extremely unfair. He has probably taken considerable pains in preparation, and he feels that he might just as well have saved himself the trouble. I could give instances, but it is scarcely necessary.

The remedy is for the Sectional Secretaries to accept no formal papers as contributions to a discussion, and to let it be understood that of those who take part in a discussion only the member invited to introduce it shall *read* his contribution, the rest speaking extemporarily or merely from notes. We might then hope to escape the anomalous position in which the Sections have of late years not infrequently found themselves of having come to the end of a debate without any of the points singled out for discussion in the opening paper having been mentioned, much less threshed out, by the speakers that followed.—I am, etc.,

Manchester Square, W., Dec. 4th. C. J. CULLINGWORTH.

THE PHARMACOLOGY OF CANNABIS INDICA.

SIR,—In reply to Dr. Dixon's question,[1] I confess that I have not stimulated the vagus after the intravenous injection of an emulsion. Such a procedure cannot lead to any result of practical value. The method of application is an offence against the first principle of pharmacology that a substance can only produce a general action when in a state of solution. When substances of an irritant nature are injected as emulsions into the veins, owing to the difficulty of obtaining the emulsion in a sufficiently fine state of division, embolism of certain vascular areas occurs, and the substance exerts a local irritant action. The heart and nervous centres are the first to suffer, and the effects are inconstant. The active principle of Indian hemp is practically insoluble in water, and almost insoluble in dilute alkalies; considering its insolubility, it is a substance of an irritant nature; and I therefore maintain that the effects obtained by Dr. Dixon are in no sense peculiar to it. They are merely the result of embolism *plus* a local irritant action on certain vascular areas. The kind and inconstancy of his results are sufficient proof of this; and this view is further supported by the fact that with the excised frog's heart, that is, when the outflow was free, no effect was obtained.

In the only other statement in the letter Dr. Dixon misstates the facts. I did not refer to my last paper to support the statement that he was unaware of the recent work done on this subject in this country. The reference is appended to a particular experiment made by him, of which nothing is said in his letter, and it was merely given because it contains the only views, as far as I am aware, on this particular point based on experimental data.—I am, etc.,

University College, Dundee, Nov. 25th. C. R. MARSHALL.

THE CLEANSING OF THE SURGEON'S HANDS.

SIR,—It is gratifying to find that old friends, and good ones too, are not to be abused or discarded without protest, and I read Dr. Edge's remarks[2] against my condemnation of the use of hand basins in operating theatres with interest, but I must confess without detecting one single strong reason in favour of his contention against the quotation from my paper.

I do not know whether Dr. Edge has given a fair trial to the method I advocated for hand-washing, but I should like to state that at different times I have tried all the well-known methods of hand-washing, including Mikulicz's soap and spirit method, and personally I should adopt the latter method only in military surgery where there is a dearth of water and of other things needful for cleansing purposes.

I do not adopt Professor Watson Cheyne's definition of asepsis when he states that "aseptic treatment on the Listerian principle, which aims.....to destroy all organisms which may obtain access to a wound," etc. I limit my interpretation to "the prevention of detachable or removable organisms (*a*) from the hands of those engaged in the operation, and (*b*) of the patient's skin, from gaining access to the wound," and for this particular purpose I find that cleansing the hands with soap and water, and then rinsing them in methylated spirit before wearing a pair of sterilised thread gloves are sufficient precautions to enable me to state that the healing of the wound will almost to a certainty be by primary union without suture abscesses.

I think it is a waste of time to try to render innocuous the resident microbes of the skin, for in practice we find that over preparation of the skin is the one method by which one worries the staphylococci of Welch into a condition to become agressive.

I fully agree with those surgeons who believe that the use of

[1] BRITISH MEDICAL JOURNAL, November 25th, p. 1517.
[2] BRITISH MEDICAL JOURNAL, November 4th, p. 1318.

a nailbrush at the preliminary stage of washing hands is worse than useless, because it can only drive the organisms we wish to remove deeper into the skin, whilst at the same time the brush itself has become infected and it would take at least twenty minutes for the brush to become fit for use after soaking in 1-20 carbolic lotion. Perhaps a simple and a scientific method for washing the hands of a surgeon has yet to be invented.

Cardiff, November 11th. J. Lynn Thomas.

STRYCHNINE INJECTION IN SHOCK.

Sir,—In the British Medical Journal of November 25th, at page 1471-72, there are two important and interesting papers on cases of surgical shock and its treatment by the injection of one or more tenth-grains of strychnine. It is to be regretted that the effect of the anæsthetic is not taken into account in the argument of the papers. Whether anæsthesia was used or not is incidentally referred to in only one of the cases. What is needed is to know precisely whether an anæsthetic was administered, the nature of that anæsthetic, the amount used from the graduated bottle in each case, the method of its administration, and the time over which the anæsthetic used was spread.

It is obvious that many of the symptoms in some of the cases may have been due to the paralytic effect of overcharging the tissues with an anæsthetic; and, unless this question is clearly stated and fully considered, it is not possible to say how far collapse was due to the action of the anæsthetic, how far to the effects of the injury, how far to the operation, and how far to loss of blood. It is obvious also that there is a physiological antagonism between an anæsthetic and the action of strychnine, and that in cases of excessive saturation with an anæsthetic, the injection of strychnine *plus* artificial respiration gives about the very best chance of resuscitation. Snow's book (pages 240 245) deals helpfully with surgical shock under anæsthesia. He writes: "I have never observed it." I am convinced that as yet we do not sufficiently appreciate the poisonous effects of chloroform and other anæsthetics when given in too concentrated a vapour or over too prolonged a period. During the first eleven months of 1899 some 80 inquests have been reported in the newspapers upon persons killed by anæsthetics in England alone. It may therefore be reasonably estimated that some 200 persons a year are killed by anæsthetics in England. These questions as to anæsthetics are of pressing importance.—I am, etc.,

Manchester Square, W., Nov. 27th. James Edmunds.

THE PLAGUE IN RUSSIA.

Sir,—Some weeks ago you were good enough to insert a letter from me on the subject of the outbreak of epidemic disease at Kolobovka at the mouths of the Volga.[1] It will be recalled that there was a marked difference of opinion among the leading members of the profession in St. Petersburg as to the character of that epidemic; a minority regarding it as an outbreak of the pneumonic variety of plague, while a majority suspended their judgment until further information could be obtained. The task of collecting that information was entrusted to Professor Vinogradof and Dr. Raptchevski, who visited Kolobovka with that object. These gentlemen recently returned, and on November 2nd (14th) a second general meeting of the heads of the profession in St. Petersburg was held, at which the further information they had obtained was discussed. In the end a minority of six expressed their opinion that the disease was "of a character closely resembling plague in its pneumonic form." The majority, on the other hand, seventeen in number, were of opinion that the disease was "undoubtedly plague."

In view of this result there can no longer be any hesitation in placing the outbreak in Southern Russia among the numerous other foci in the western extension of plague which has characterised the present year.—I am, etc.,

London, Dec. 1st. Frank G. Clemow.

A PIONEER IN THE TREATMENT OF CONSUMPTION.

Sir,—In reference to Sir W. T. Gairdner's letter concerning the Rev. Dr Stewart and his advanced treatment of consumption in 1825, I would point out that Andrew Stewart was presented to the parish church of Bolton in 1804; he had two years previously (1802) taken his M.D. degree at Edinburgh. In 1809 he married the Hon. Margaret, daughter of Lord Blantyre, and in 1815 was translated to Erskine parish, then in the patronage of his father-in-law. He was the father of the late A. P. Stewart of London.—I am, etc.,

Haddington, Nov. 26th. J. G. Wallace-James, M.B.

THE BRITISH MEDICAL BENEVOLENT FUND.

Sir,—The letter of Sir Wm. Broadbent in the British Medical Journal of November 25th tempts me to again call the attention of the profession, and more particularly presidents and secretaries of our Branches, to a very simple method of increasing the income of this Fund to such an extent as to render occasional heartrending appeals to the profession unnecessary.

In 1881 the Council of the South Wales and Monmouthshire Branch, at my suggestion, recommended that each member of the Branch should be invited to subscribe 5s. a year to the Medical Benevolent Fund. This was done. Our general and Branch subscriptions previously amounted to 24s.; the 5s. increased it to 29s. The first year we got nearly £20; but as each year I applied for this extra 5s., members soon got accustomed to think of their subscriptions to be paid to me as 29s. During all those years I have had now and then the query sent to me, "What is this 5s. for?" and after my explanation the money has always been sent. The amount subscribed by our Branch, numbering about 250 members, has gradually increased to nearly £40 sent last year. From 1881 to 1898 we have sent to this fund a grand total of over £610 by means of a paltry 5s. a year given by each member, an amount which he does not feel the loss of, but which in the aggregate comes to so much. Some of our members send me only 24s. instead of 29s.; but as the subscription is a voluntary one, I do not ask them again for the 5s. My point is this. Without any trouble we as a Branch get nearly £40 a year for the Medical Benevolent Fund. If all other Branches would do the same (and they could try, anyhow), happy Medical Benevolent Fund!—I am, etc.,

A. Sheen,
Treasurer South Wales and Monmouthshire Branch;
Cardiff, Dec. 5th. Member of Council Medical Benevolent Fund.

THE LOCAL DISTRIBUTION OF TUBERCLE.

Sir,—I observe in the British Medical Journal of November 11th an article entitled the Local Distribution of Tubercle in Various Species, by Dr. Woods Hutchinson, in which the author devotes a paragraph to refuting what he is pleased to represent as my explanation of the susceptibility of the lung to tuberculosis. I shall be glad if you will allow me to state that I have never held or expressed the views therein attributed to me.—I am, etc.,

Royal Veterinary College, Nov. 28th. J. McFadyean.

THE PASTEUR TREATMENT OF HYDROPHOBIA IN ENGLAND.

Sir,—In 1891, on account of the many cases that were taken to France, I suggested that a Pasteur Institute should be opened in England. I was, however, referred to articles conveying the impression that the establishment of such an institute was under consideration. As yet I have not been able to gather that anything further has been done. That the need still exists I was assured yesterday by a friendly doctor, who was obliged to entertain the idea of accompanying to France for treatment a patient who had been badly bitten by a savage dog. I ask you again to kindly publish my letter that the home treatment of bites inflicted by dogs suffering from or suspected of rabies may be no longer ignored.—I am, etc.,

Stockport, Nov. 27th. J. Good, M.R.C.S.Eng.

ABSORBENT WOOL SPONGES.

Sir,—May I suggest, through the columns of the British Medical Journal, that very excellent sponges may be made from several layers of absorbent wool wrapped up in two layers of sal alembroth gauze, and stitched through in several places? They are capable of being wrung out, and half a dozen are quite sufficient for a major operation. They are of course

[1] British Medical Journal, October 7th, 1899.

thrown away at the end of the operation. While waiting for orders to advance, I have had eight dozen made, and wrapped up in packages of six.—I am, etc.,

F. J. W. PORTER, Captain R.A.M.C.

Camp Maitland, Capetown, Nov. 20th.

THE VACCINATION CONTROVERSY.

SIR,—I observe that public debates on the vaccination question, in which numbers of the medical profession are taking part, are again becoming common as the winter season advances. May I, therefore, also again ask the favour of being allowed to remind any persons who propose to take a share in this important educational work, that the Jenner Society can give useful assistance in it, and that it will be glad to do so if applied to?—I am, etc.,

FRANCIS T. BOND, M.D.,

Gloucester, Dec. 12th. Honorary Secretary of the Jenner Society.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

ON November 25th we published an analysis of the distribution of army medical officers, as shown in the Army List for that month. We now do the same for December:

Distribution in December Army List.

Ranks.	Home.	South Africa.	Other Foreign Stations.	Not Posted.	Total.	Remarks: Seconded.
Surgeon-General ...	4	1	4	1	10	—
Colonels	7	8	12	—	27	3
Lieutenant-Colonels...	20	11	42	1	74	1
Majors	59	134	223	7	423	6
Captains	22	46	102	4	174	7
Lieutenants	11	68	44	14	137	7
Total...	123	268	427	27	845	24

The total number of officers has increased by 12; accounted for by the gazetting of 14 lieutenants (who are not yet posted to stations), and deducting two deaths, of which one occurred in action. From the present total of 845 must be deducted 24 seconded officers, who are thus non-effective so far as general service is concerned; leaving an effective full pay strength of 821.

The number at home has decreased during the month from 140 to 123; while the number in South Africa had increased from 245 to 268. The numbers at other foreign stations are practically the same.

But from the 123 at home must be deducted 30 officers appointed to the Sixth Division, still returned as at home, but about to sail for the Cape. This will leave, in a few days, 93 officers all told at home; but as this includes administrative officers and those holding seconded and staff appointments, the real executive strength remaining cannot be much over 70. By stripping the home garrisons of every man, it may thus be possible to provide medical officers for two more divisions, the mobilisation of which, in view of recent events, is indeed probable.

It is of course announced that foreign reliefs are for the time necessarily stopped; but that leaves no solution of the problem how inevitable casualties are to be met.

We suppose the command of the home hospital establishments will be handed over to such retired medical officers as may already have been serving, or to those who have responded to the invitation to volunteer for service.

We have had several letters regarding the conditions under which the latter are serving. We understand they are receiving full pay and allowances of their rank; and can only presume, therefore, that their service will count towards future pension, if not promotion. That, at any rate, would seem the simple equity of the case.

We notice that 15 captains and quartermasters on the retired list are now employed, and posted to the headquarters of the Royal Army Medical Corps companies at home; this is an excellent arrangement.

We are not made aware how many retired officers have been practically recalled to service, or how many of the Reserve or civilian practitioners are now employed.

ASSISTANT DIRECTOR ARMY MEDICAL SERVICE.

ALTHOUGH not officially announced, we understand that Lieutenant-Colonel W. Johnston (retired pay), now employed on the London Recruiting Staff, has been temporarily appointed Assistant Director to the Director-General, Army Medical Service, War Office, *vice* Lieutenant Colonel Gubbins proceeding to South Africa as Principal Medical Officer of the Sixth Division.

We congratulate the medical service, as no more suitable appointment could have been made in the present crisis.

Colonel Johnston, from his previous connection with the War Office, and from having in past years commanded the Medical Staff Corps at Aldershot, will bring to bear great administrative ability and wide experience of all branches and departments of the service.

This is the first occasion on which a retired officer has been called to fill such an appointment, the exigencies of the present situation having apparently overcome all want of precedent.

We understand he will draw the full consolidated allowances of the appointment, to which, of course, he is in every way entitled.

"KILLED IN ACTION."

OUR attention has been called to the fact that in the *Gazette* of December 5th Major E. W. Gray, R.A.M.C., is referred to in the nomination of his successor as "deceased," whereas the names of other officers who have lost their lives under similar circumstances are referred to as "killed in action." Our correspondent seems to think that some slight is thereby intended upon the Royal Army Medical Corps. We hope and believe that this could not have been intended and we are confirmed in that opinion by noticing that in the *Monthly Army List* for December in the list of deaths under "Majors," "Gray, E. W., M.B., R.A.M.C., killed in action. Farquhar's Farm, near Ladysmith, Natal, October 30th, 1899."

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

THE annual entertainment and distribution of prizes took place at St. Martin's Town Hall on Thursday, December 7th.

Surgeon-General J. B. Hamilton, M.D., late P.M.O., Cape Colony, distributed the prizes, and subsequently said that he was well aware of the useful work carried out by the school under Major Andrew Maclure's presidency. Referring to the medical aspects of the war in South Africa, he stated that Sir G. White was accompanied to South Africa by his P.M.O., Colonel Exham, R.A.M.C., who, as the speaker could confidently assert, was the right man in the right place. He was of fine physique, an excellent surgeon, and a first-rate organiser. He had turned churches, the town hall, school rooms, and other buildings into carefully fitted-up hospitals, and had erected tents and marquees hard by for an overflow. The large hospital had been fitted with electric light, the operating room with every known scientific appliance, and a Roentgen ray apparatus provided, as had been everything, in fact, that was possible, for the care of the sick and wounded. At the battle of Elandslaagte the medical officers had been exposed to the deadly fire of the Boer marksmen, and one of their number, Major Gray, R.A.M.C., had been killed a few days later in action. After Elandslaagte, in torrents of rain and seas of mud, they attended to the wounded, and brought them in the ambulance train to Ladysmith. They had still to toil on, though overcome by fatigue and want of rest, for there were 400 wounded men saturated with rain and mud. Sir George White, when presenting the prizes at the termination of the last Netley course, had spoken most kindly and sympathetically of the labours of medical officers in the last frontier war in India, and said "he had seen reason to recommend more of the medical officers for the V.C. than any other branch of the service, and he did not think he would be wrong if he said 'than all the other branches of the service put together.'" Surgeon-General Hamilton said that he must regretfully add that the gallant officer's recommendations had been set aside by those in power in the War Office, and that many acts of valour performed by medical officers in that campaign had gone unrewarded. He considered the Medical Service of the army to be in a very unsatisfactory condition. Some forty years ago the medical officers numbered over 1,100; at present the executive ranks were barely 800, much below the recognised establishment. During that period, too, the European army of England had been increased by some 70,000 men; but with this large increase in strength there were 300 fewer officers to do the work. Of the 800 medical officers, 408 were on foreign service and 240 in South Africa; and when the two further divisions now being mobilised were provided for, the R.A.M.C. would have closely approached its vanishing point in the United Kingdom. The medical staff in South Africa had been supplemented by seventy civil surgeons, and nearly all the available retired-pay officers had been called back to duty. Civil surgeons were being largely employed in every camp and garrison in the United Kingdom, and if the war continued for long, with its inevitable drain, there would not be a full-pay medical officer in reserve. It had been argued by some that as most of our troops had gone on service, the necessity for a large medical staff at home no longer existed; but it was apparently forgotten that the sick who had been left behind required attention, and that larger bodies of wounded were

returning. In addition, some 40,000 militia had been embodied, and as these regiments had no medical officers of their own, their care devolved on the attenuated ranks of the R.A.M.C. Quite recently the Secretary of State for War had granted military titles and the position of a Royal Corps to medical officers, yet these valuable concessions had so far failed to attract eligible candidates, so that the ranks of the R.A.M.C. remained unfilled. There was no lack of military ardour amongst the members of the profession, as was proved by the fact that 70 civil surgeons were now serving with the troops, but it was equally evident that the R.A.M.C. was not popular in the medical schools. Everyone must allow that a skilled, contented, and numerically strong medical service, with a well-trained and adequate reserve, was indispensable to the efficiency of the army, and it was the duty of the authorities to ascertain without delay the causes of its present unpopularity, and provide an efficient remedy.

During the evening an excellent programme, consisting of recitations, instrumental and vocal music, combats of Bayonet *v.* Sabre, and of foils took place, and the recitation of "The Absent-minded Beggar" by Miss Eugenie Fox produced a collection that amounted to over £17 for the families of the Reservists. The proceeds of the entertainment itself were handed over to the British Red Cross Society.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From	To
Colonel W. J. Charlton	Aldershot ...	Netley.
Lieut.-Col. M. R. Ryan, M.D.	—	Gosport.
,, J. Armstrong	Fermoy ...	South Africa.
Major E. R. Cree	Gosport ...	,
,, T. Archer, M.D	Manchester ...	Bermuda.
,, W. C. T. Poole, B.A., M.B.	Pembroke Dck.	South Africa.
,, H. H. Johnston, M.B.	Cork	,,
,, F. J. Lambkin	Hilsea	,,
,, C. E. Nichol, M.B.	Dover	,,
,, T. B Winter	Portland ...	,,
,, L. R. Colledge	Hilsea	Gosport.
,, J. D. Moir, M.B.	Woking ...	South Africa.
,, C. C. Reilly	Devonport ...	Pembroke Dck.
,, A. O. Fitzgerald	Waterford ...	South Africa.
,, R. E. Molesworth	Bengal	Aldershot.
,, R. G. Thompson, M.D.	—	Sierra Leone.
,, N. C. Ferguson, M.B.	Edinburgh ...	South Africa.
,, J. H. Daly...	Templemore ...	,,
,, J. G. Black, M.D.	Holywood ...	,,
,, W. P. Squire	Chatham ...	,,
,, H. T. Baylor	Cork	Tipperary.
,, T. du B. Whaite, M.B.	Bengal	Dublin.
,, R. Caldwell	Cork	South Africa.
,, E. M. Hassard	Gosport ...	Portland.
,, W. Hallaran, M.B.	Aldershot ...	South Africa.
Captain A. E. Smithson, B.A., M.B. ...	Gosport ...	Portsmouth.
,, C. Dalton	Netley	South Africa.
,, S. H. Withers, M.B...	Lydd	,,
,, N. Tyacke	Chester	,,
,, C. B. Martin, M.B.	Dover	,,
,, G. J. Buchanan, M.B.	Cork	Queenstown.
,, J. F. M. Kelly, M.B.	Dublin ...	South Africa.
,, C. O'C. Hodgens	Bombay ...	Dublin.
,, F. G. Faichnie	Aldershot ...	South Africa.
,, A. J. Chambers	Half Pay ...	Aldershot.
Lieutenant H. B. G. Walton...	West Africa ...	,,
,, E. P. Hewitt	Portsmouth ...	South Africa.
,, J. H. R. Bond	Chester ...	,,
Quartermaster H Spackman	—	,,
,, G. A. Sellex	—	,,
,, A. J. Chalk	—	,,
,, W. M. Clarke	—	Netley.
,, J Green	—	South Africa.
,, W. J. C. Talbot	—	,,

Lieutenant-Colonel W. T. Johnston, M.D., and A. W. Browne have been granted increased pay under Article 362 of the Royal Warrant.

ROYAL NAVY MEDICAL SERVICE.

STAFF-SURGEON WILLIAM G. JACK is promoted to be Fleet Surgeon, December 1st. He was appointed Surgeon March 31st, 1879, and Staff-Surgeon twelve years thereafter.

The following appointments have been made at the Admiralty: HERBERT M. ELLIS, Deputy Inspector General to Bermuda Hospital, December 4th; ARTHUR S. NANCE, Staff Surgeon, to the *Black Prince*, December 5th; GEORGE R. MACMAHON, B.A., M.B., Surgeon, to the *Galatea*, temporary, December 5th; BENJAMIN G. HEATHER, Surgeon, to the Royal Marines, Plymouth, December 9th; HAROLD J. CHATER, Surgeon, to the *Magnificent*, December 9th.

ARMY MEDICAL SERVICE.

SURGEON-GENERAL WILLIAM TAYLOR, C.B., has been appointed (from an Honorary Associate) to be a Knight of Grace of the Order of the Hospital of St. John of Jerusalem in England.

ROYAL ARMY MEDICAL CORPS.

A SIXTH DIVISION is announced for service in South Africa, Lieutenant-Colonel W. L. GUBBINS, M.B., is gazetted Principal Medical Officer, and Major B. M. SKINNER, Medical Officer to the Division, dated December 4th.

Surgeon-Lieutenant FREDERIC HARVEY, who was appointed November 17th, should have been described as from the Volunteer Medical Staff Corps.

Sergeant-Majors FRANK ILLINGWORTH, HENRY WOOLLEY, SIDNEY DUFFIELD, and JOHN GLENNON are appointed Quartermasters, with the honorary rank of Lieutenant, on augmentation, December 13th.

Lieutenant-Colonel W. CAMPBELL, M.B., retired pay, has been recalled for duty at the Guards' Depôt, at Canterbury.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAINS JOHN W. MOIR, M.D., 1st Fifeshire Volunteer Artillery, and JAMES DRUMMOND, M.D., to be Surgeon-Majors, December 13th.

Surgeon-Lieutenant BONNER H. MUMBY, M.D., 3rd Volunteer Battalion the Hampshire Regiment, to be Surgeon-Captain, December 13th.

MILITIA MEDICAL STAFF CORPS.

SURGEON-LIEUTENANTS W. K. STEELE and L. W. A. KRIEFFENHEIM-TRUBRIDGE, M.D., are promoted to be Surgeon-Captains, November 13th.

THE VOLUNTEERS.

SURGEON-LIEUTENANTS A. HENDERSON, 1st Aberdeenshire Engineers, and J. A. BOYD, M.B., 1st Dumbartonshire Rifles, are promoted to be Surgeon-Captains, December 13th.

Surgeon-Major E. D. BERTON, M.B., 2nd Volunteer Battalion the Royal Fusiliers (City of London Regiment) has resigned his commission, retaining his rank and uniform, December 13th.

Surgeon-Captain T. E. LLOYD, 4th Volunteer Battalion the South Wales Borderers, also resigns his commission, December 13th.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Degrees.—At the congregation on December 7th, the following medical degrees were conferred:

M.D.—C. H. Cayley, M.B., B.C., Pembroke.

M.B. and B.C.—E. K. Le Fleming, B.A., Clare; S. E. Dore, B.A., St. John's; P. F. Barton, B.A., St. John's; H. F. Bassano, M.A., Trinity.

Honorary Fellowship.—Mr. Timothy Holmes, M.A., M.C., F.R.C.S., has been elected an Honorary Fellow of Pembroke College.

Shuttleworth Scholarship.—A scholarship worth £55 a year for three years will be awarded at Caius College in March, 1900. It is open to medical students of not less than eight terms' standing, and is given for Botany and Comparative Anatomy. Application is to be made to the Senior Tutor.

UNIVERSITY OF LONDON.

M.B. EXAMINATION (HONOURS).—The following candidates have passed this examination:

Medicine.—First class: R. J. Howard (gold medal), London Hospital. Second class: J. Beatty, Trinity College, Dublin; C. T. Hilton, Guy's Hospital; C. G. Pugh, B.Sc., Middlesex Hospital; S. R. Scott, St. Bartholomew's Hospital; F. G. Thomson, University of Cambridge and Middlesex Hospital; H. J. Van Praagh, St. Mary's Hospital. Third class: W. C. Hirst, St. Bartholomew's Hospital; Mabel Geraldine Stevenson, Royal Free Hospital and London School of Medicine.

Obstetric Medicine.—First class: W. Billington (gold medal) Mason University College and Queen's Hospital, Birmingham; Mary Muriel Griffin Iles, Royal Free Hospital; F. G. Thomson, University of Cambridge and Middlesex Hospital; W. H. Unwin (scholarship and gold medal), Charing Cross Hospital. Second class: A. S. Barnes, B.Sc., Mason College and Queen's and General Hospitals, Birmingham; J. A. O'Dowd, Birmingham Medical School; S. R. Scott, St. Bartholomew's Hospital; Mabel Geraldine Stevenson, Royal Free Hospital and London School of Medicine.

Forensic Medicine.—First class: R. J. Howard (gold medal), London Hospital. Second class: A. S. Barnes Mason College and Queen's and General Hospitals, Birmingham; H. Hartley, Owens College and Manchester Royal Infirmary; S. R. Scott, St. Bartholomew's Hospital; R. G. Strange, St. Thomas's Hospital. Third class: C. T. Hilton, Guy's Hospital; G. N. Meachen, Guy's Hospital; Mabel Geraldine Stevenson, Royal Free Hospital and London School of Medicine; P. Turner, B.Sc., Guy's Hospital; Ethel Miller Vernon, London School of Medicine and Royal Free Hospital.

THE APOTHECARIES' HALL OF IRELAND.

AT a special meeting of the Apothecaries' Hall of Ireland, held on December 8th, a resolution was unanimously adopted on the proposition of Dr. Adye Curran, seconded by Dr. Evans, strongly condemning the observations with reference to this body made by Dr. Atthill at the General Medical Council in London.

CONJOINT BOARD IN IRELAND

SUPPLEMENTAL AND FINAL PRELIMINARY EXAMINATION.—Candidates have passed this Examination as undernoted:

Honours in Order of Merit.—J. W. Harvey, M. Campbell, M. J. C. Kennedy.

Pass, alphabetically.—J. L. A. Allen, E. A. Bernard, F. L. Bradish, H. L. Cohen, W. J. Connolly, J. Ff. Crean, M. B. Fisher, P. E. Harrison, B. Jackson, T. R. N. Miles, J. Murray, J. O'Kelly, E. H. Patman, W. D. Sammon, S. W. Talbot.

DIPLOMA IN PUBLIC HEALTH.—The undermentioned candidates have passed this examination:

E. J. McWeeney, M.D., M.A., R.U.I. (honours), R. H. Dreaper, L.R.C.P.I., L.R.C.S.I., J. H. Earls, M.D., M.Ch. R.U.I., G. G. Lawson, M.B., B.S.Vict. Univ., T. W. Heywood, L.R.C.P.I., M.R.C.S.Eng.

A CONGRESS of railway surgeons was held at Warsaw in November.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD FOR ENGLAND.

DECREASE OF PAUPERISM.

THE Annual Report of the English Local Government Board for 1898-99, published recently, contains an immense amount of statistical information. Not the least interesting and important are the statistics relating to pauperism, and it is pleasant to read that there was a decrease amounting to 1.9 per cent. in the total number of paupers relieved on January 1st, 1899, as compared with January 1st, 1898. The figures show that the pauperism of the country is very unequally distributed among the several divisions. In the South-western Division the proportion which the paupers bore to the population was nearly twice as large as that in the North-western Division, and, as might have been expected, there are even greater differences in the counties than in the divisions. The county which contained the largest proportion of paupers to population on January 1st, 1898, was Dorset, where no less than 4.46 per cent. of the population were in receipt of relief; and Middlesex (with 1.61 per cent.) and the West Riding of Yorkshire (with 1.80 per cent.) contained the smallest proportion.

The numbers of the insane paupers continue to show the increase which is a noteworthy item of many previous reports; and it is a melancholy fact that the increase on January 1st, 1898, exceeded the figure for the corresponding period of last year by more than 3 per cent.

POOR RELIEF.

The gross cost of the relief of the poor during the year ending at Lady Day, 1898, was £10,828,276, which is greater than that recorded in any previous year; it represented an average charge of 6s. 11¾d. per head on the estimated population, being 2¼d. per head more than in the preceding year. Comparing the metropolis and the rest of England and Wales, the rate per head, calculated on the estimated population, was 14s. 6½d. in the metropolis, and 5s. 8½d. in the rest of the country. This result is, to a considerable extent, to be attributed to the fact that in the metropolis the paupers relieved in the workhouses and infirmaries, etc., bear a much larger proportion to the total number of paupers of all classes relieved than they do in other parts of the country. It is no doubt also partly due to the improved accommodation provided for the poor in the metropolis, and partly to the contributions to the managers of the Metropolitan Asylums District.

INFECTIOUS DISEASE IN LONDON.

With reference to infectious disease, the percentage of admissions to the Metropolitan Asylums Board's Hospitals to the notifications of admissible diseases during the year 1898 shows a marked increase on that of the preceding year. The following comparison of the figures for 1890 and 1898 serves to make very manifest the growing inclination on the part of the public to avail themselves of the advantages of hospital isolation:

Diseases.	1890.	1898.
Scarlet fever	42.82	74.07
Diphtheria	17.87	62.48
Enteric fever	22.49	36.97
Typhus fever	42.86	87.50

The total admissions to the hospitals in 1898 reached the large figure of 21,063, of which scarlet fever and diphtheria contributed as many as 18,691.

SANITARY BY-LAWS.

The Report affords pleasing evidence of increased activity on the part of local authorities in making by-laws on the more important sanitary matters, such as scavenging, the prevention of nuisances, the regulation of common lodging-houses, the construction of buildings, and the regulation of offensive trades. Moreover, the regulations empowered to be made under the Order of 1885, with respect to dairies, cowsheds, and milkshops, and which if made and enforced by every sanitary authority would do so much to reduce bovine tuberculosis, were drawn up and submitted to the Local Government Board for approval by no fewer than 40 local authorities.

THE FOOD AND DRUGS ACT.

The statistics of the working of the Food and Drugs Acts, 1875 and 1879, are always interesting and suggestive. In London, samples were obtained in the proportion of 1 to every 353 persons, and in the provinces 1 to every 659. The degree, however, to which the Acts were utilised was by no means uniform in different districts. Within the jurisdiction of ten county councils only 1 sample a year to every 5,056 persons was taken, and in 16 boroughs 1 for every 5,959; such action can have afforded little or no check upon adulteration, and it is to be hoped that the new Food and Drugs Act will deal effectually with such failure of duty on the part of local authorities.

Although of 49,555 samples taken 4,319 were reported as adulterated, proceedings were instituted in respect of only 2,685. This circumstance is in some measure due to the difficulty of ensuring a successful prosecution in view of the different standards and methods of analysis adopted by different authorities, and it points to the necessity of a board of experts being appointed to authoritatively determine methods and standards as recommended by the Royal Commission.

The proportion of adulterated samples was 8.7 per cent. of those examined. This is the lowest percentage of adulteration ever recorded, and less than one-half of the rate for the years 1877 and 1878. It must be conceded that it is somewhat surprising that the 1875 Act should have done the community such good service, seeing that for the year 1898 more than a third of the fines inflicted for offences were of only 10s. or under.

For the first time the percentage of milk adulteration for the whole of England and Wales fell below 10 per cent., while in London it remains at the considerably higher figure of 12.9 per cent.

It may be of interest to indicate the extent to which the various articles taken for analysis were found to be adulterated. First on the list come spirit and drugs, with a percentage adulteration of some 12 per cent. each. Sweet spirits of nitre, Gregory's powder, lime water, sulphur, rhubarb, magnesia, wax, cream of tartar, and seidlitz powders figured among the adulterated drugs, and it is somewhat disconcerting to read in the Report that eight out of the twenty-five prescriptions dispensed and sold under the Act were improperly or carelessly compounded. Sago and olive oil were adulterated to the extent of some 11 per cent.; then come coffee with 10 per cent. of adulterated samples; milk, 8.7 per cent.; vinegar, 5.8 per cent.; mustard, 4 per cent.; sugar, confectionery, and jam, 3 per cent.; ginger, 2.6 per cent.; wine, 2.4 per cent.; flour, 2 per cent.; and pepper, cheese, beer, and lard, with less than 1 per cent. of adulteration.

Of the samples submitted to the analysts by private persons 46 5 per cent. were reported against, whilst of those obtained by the officers of local authorities only 8.3 per cent. were condemned. This circumstance is mainly due to the fact that in the case of those samples submitted by private individuals some good ground for suspecting the genuineness of the article existed in each case, but the discrepancy in the figures is due in a minor degree to the fact that the officers of a local authority are generally known and recognised by the local tradesman, who not infrequently succeeds in circumventing them.

VACCINATION.

Of the entire number of children whose births were registered during 1896, 22.9 per cent. were not finally accounted for as regards vaccination at the time the returns were made. This percentage is higher than any previously recorded since the Vaccination Act, 1871, came into operation. As regards the Metropolitan District, the returns for 1896 show that the

number of cases not finally accounted for amounted to 26.4 per cent., whereas in the previous year the percentage of default was 24.9. In several of the unions the percentage of cases not finally accounted for was exceedingly high. For instance, in Bethnal Green it was 76 8; in Hackney, 63.6; in Mile End, 62.6; and in Shoreditch, 55.5. In the provinces the percentage of children unaccounted for was 22.3, as compared with 19.8 for the previous year (1895), and with regard to the counties, the greater proportion of default appears in Leicestershire, Bedfordshire, and Northamptonshire, with figures of 79.0, 78.9, and 65.7 respectively.

Extension of the Notification Act.

It is, in conclusion, both interesting and significant to note that, up to the date of the Report, the Infectious Diseases Notification Act has been extended to measles in 110 cases, to rötheln in 7, to whooping-cough in 26, to chicken-pox in 8, and to mumps, hydrophobia, yellow fever, and plague in 1. But in 38 of these cases the sanitary authorities have subsequently revoked the addition of measles, in 1 that of rötheln, in 7 that of whooping-cough, in 4 that of chicken-pox, and in 1 that of hydrophobia; while in 1 case the Act was extended to measles only for a limited period, which has now expired.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,065 births and 4,551 deaths were registered during the week ending December 9th. The annual rate of mortality in these towns, which had been 19.3 and 18.9 per 1,000 in the preceding two weeks, rose again to 20 8 last week. The rates in the several towns ranged from 13.1 in Croydon, 13.4 in Norwich, 13.5 in Oldham, and 14.3 in Cardiff, to 23.4 in Hull, 25.3 in Preston, 25.9 in Liverpool, and 26.4 in Plymouth. In the thirty-two provincial towns the mean death-rate was 19.7 per 1,000, and was 2.7 below the rate recorded in London, which was 22.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.2 per 1,000; in London the death-rate was equal to 2.1 per 1,000, while it averaged 2.3 in the thirty-two provincial towns, among which the highest zymotic death rates were 4.3 in Salford, 5.0 in Blackburn, 5.2 in Sheffield, and 6.0 in Hull. Measles caused a death-rate of 1.0 in Sheffield, 1.2 in Salford, 1.3 in Preston, 1.8 in Birkenhead, and 2.0 in Hull; whooping-cough of 1.0 in Leicester, in Liverpool, and in Salford, and 1.5 in Blackburn; and "fever" of 1.0 in Bolton, 1.3 in Nottingham, 1.5 in Derby, and 2.9 in Wolverhampton. The mortality from scarlet fever and from diarrhœa showed no marked excess in any of the thirty-three large towns. The 113 deaths from diphtheria in the thirty-three large towns included 43 in London, 16 in Sheffield, 11 in Leeds, 6 in Liverpool, 4 in Manchester, 4 in Blackburn, 4 in Preston, and 4 in Norwich. Eleven fatal cases of small-pox were registered last week in Hull, but not one either in any other of the thirty-two provincial towns or in London; and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday last December 9th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3,578, 3,503, and 3,445 at the end of the three preceding weeks, had further declined to 3,290 on Saturday last; 278 new cases were admitted during the week, against 334, 293, and 294 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, December 9th, 843 births and 611 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17.0 to 20.5 per 1,000 in the four preceding weeks, declined again to 20.0 last week, and was 0.8 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14 1 in Leith and 17.6 in Edinburgh, to 21.9 in Dundee and 37 6 in Greenock. The zymotic death-rate in these towns averaged 2.3 per 1,000, the highest rates being recorded in Dundee and Greenock. The 278 deaths registered in Glasgow included 6 from measles, 3 from diphtheria, 3 from whooping-cough, 4 from "fever," and 8 from diarrhœa. Seven fatal cases of measles and 7 of diarrhœa occurred in Dundee; 3 of "fever" in Paisley; and 13 of measles in Greenock.

OBITUARY.

EDWARD HAMILTON, M.D., F.R.C.S.I.,

Surgeon to Steevens's Hospital, Dublin.

We regret to have to announce the death of Dr. Edward Hamilton, of Dublin, a surgeon of great distinction in that city.

Dr. Hamilton was born in Dublin in 1824, and graduated M.B. in the University of Dublin in 1846. In the same year he became a Licentiate of the Royal College of Surgeons of Ireland, and in 1852 a Fellow. When the school attached to Steevens's Hospital was established, he became a Lecturer on Anatomy there, and soon after he was appointed to the visiting staff, his colleagues being the late William Colles and Robert McDonnell. He became President of his College in in 1875, and he again served in that capacity from 1892 to 1894. In 1884 he became one of the Professors of Surgery in the College School. At various times he was the President of the Dublin Branch of the British Medical Association, of the Pathological Society, and of the Irish Medical Association. He was one of the Surgeons-in-Ordinary to H.E. the Lord Lieutenant.

Dr. Hamilton was one of the most popular members of the profession in Ireland, and he enjoyed the confidence of his brethren in an eminent degree. He was a highly informed surgeon, an excellent teacher, and a skilled operator. His many pupils carried with them into life a knowledge of his wisdom, and he gradually succeeded in establishing a large practice, which he retained until a short time ago, when owing to illness he retired from active work. Dr. Hamilton contributed many papers to the medical journals, and he published a series of lectures on diseases of the rectum. He gave the Address in Surgery at the annual meeting of the British Medical Association in Dublin, 1887, when he took for his subject Tissue Resistance and Antisepticism, and discussed questions which since that time have received much attention from all surgeons. He was an excellent speaker, and although he seldom took part in the debates at the Surgical Section of the Royal Academy of Medicine, he was always interesting and informing, and was listened to with the greatest satisfaction. The profession in Ireland deeply regrets the death of one who held so high a place in their esteem and the general public, by an immense attendance at his funeral, testified to their respect and affection for him.

Professor THEODORE PUSCHMANN, M.D.,

University of Vienna.

Dr. Theodore Puschmann, Professor of the History of Medicine in the University of Vienna, who died lately in his 56th year, was born at Löwenberg in Prussian Silesia, in 1844. He studied at Berlin, Munich, Vienna, and Marburg, taking his Doctor's degree in the last named of these universities in 1869. After graduation he travelled extensively in the East, and practised for a short time in Cairo. But he did not care for the routine of professional work, and he again became a wanderer, travelling for a considerable time in Italy, France, and England. Wherever he went he worked in the libraries, and studied whatever records of medical history were available. In 1878 he qualified as Docent of the History of Medicine in the University of Leipzig, whence he was called in 1880 to Vienna as Extraordinary Professor, becoming Ordinary Professor in 1888. Dr. Puschmann was the author of numerous publications on subjects relating to the history of medicine, and was a frequent contributor to *Virchow's Archiv*. One of his earliest publications was an essay on circumcision, which was translated into several languages, including Turkish. The most important of his works was his German translation of the works of the Greek physician, Alexander Tralles, in which he proved himself not only a historian but a philologist. Among his other writings was a *History of Medical Education*, which has been translated into English by Mr. Evan H. Hare. One of his last works was a history of the Vienna Faculty of Medicine.

Puschmann was an indefatigable worker, and went to the original records for his material. Only a few years ago he ransacked the libraries of Spain and the archives in the old Spanish monasteries. He was a many-sided man, and as a teacher had the power of exciting interest in his subject, and of making dry bones of erudition live.

Professor Puschmann died of old-standing kidney disease. He was Dean of the Faculty during the last year, but the progress of his disease compelled him to resign his office some months ago.

Professor CAMARA PESTANA,

Lisbon.

Professor Camara Pestana, whose tragic death from plague recently excited such general sympathy, was born in 1863, entered the medical school of Lisbon in 1885, and after finishing his studies in 1889 devoted his attention to bacteriology. In 1891 he went abroad, commissioned by the Portuguese Government to study bacteriology, and in 1892 he was appointed Director of the Lisbon Bacteriological Institute. He

was a member of various sanitary commissions, and was the recognised leader in bacteriological research in Portugal.

Among his publications are an inaugural thesis on the Microbe of Cancer, a report on the Antirabic Service of the Lisbon Institute in 1893, a report on the Epidemic of Lisbon in 1884, and reports on certain outbreaks of typhoid fever, the serumtherapy of diphtheria, bubonic plague, etc.

When the outbreak of plague was reported in Oporto, Camara Pestana was sent by the Government to make an inquiry. He conducted the investigation with characteristic energy and devotion, and in the discharge of this duty he met his death. In examining the body of a patient who had died of the disease he accidentally inoculated himself under the fingernail. During his illness he noted his own symptoms, and even when delirious his ravings showed how full of the subject his mind had been. He refused to see his brother for fear of transmitting the disease, and in every way, even in making arrangements for his own funeral, he showed his anxiety to prevent the spread of the infection. He left a letter addressed to the Queen of Portugal, who is known to take a keen interest in medical science, bespeaking her influence in favour of his colleagues at the Lisbon Bacteriological Institute. His end was truly heroic.

In his investigations in Oporto, Pestana had as collaborators Drs. Gomes de Rezende and Carlos França, who in conjunction with Drs. Bello Moraes, Salembini, Annibal Bettencourt, and Moraes Sarmento have undertaken to complete his work.

The medical profession of Portugal in a generous impulse was about to raise a subscription for Pestana's mother and daughter; but the king, of his own motion, wrote to the President of Council asking him to place before the Cortes a proposal to grant them a pension.

It is the truest glories of the medical profession that it tends to foster such sublime self-sacrifice as that of Camara Pestana.

The death of Dr. Samuel Johnson, at the age of 53, which occurred on November 15th at his residence Cliff Bank House, Stoke on-Trent, has caused general regret throughout the district of North Staffordshire. After studying in Galway and Dublin he took the degree of M.D., Ch.M.R.U.I. in 1870, subsequently practising very successfully in England. He held for many years the appointments of Medical Officer of Health for the borough of Stoke-on-Trent, and Medical Officer and Public Vaccinator for the Stoke district of the Poor-law Union. The funeral took place on November 18th, and was of a public character, being attended by the mayor and corporation, and representatives of all the public bodies of the town. His place will not easily be filled. His never-failing sympathy with those in trouble and ever-ready help to the needy have endeared his memory to all classes, especially to the poor, for whom he laboured without thought of reward.

A great loss has fallen upon Whitehaven, Cumberland, where Dr. Thomas Jackson died, at the age of 65, at his residence on December 4th. He had been ill for a fortnight suffering from pneumonia, with complications of a septic character, probably contracted by his being nearly all night with a severe case of pneumonia not long before his initial rigor. He was born at Whitehaven in 1834, received his medical education at Guy's Hospital, became qualified in 1863, and in that year started in practice in his native town. He married Miss Dover of Sedbergh, and two years later being out of health he took a voyage to North America. He remained there five years, but never practised in America. Returning in 1871 he resumed practice in Whitehaven. In 1873 he was left a widower with two daughters and a son (Dr. T. L. Jackson), who survive. Six years later he married Miss Whitehead of Stockport, who also survives. He was a staunch advocate of temperance, a Congregationalist, and in politics a Liberal. He was noted through life for consistency and thoroughness, and his pursuit of a high ideal in daily life and conduct. He was a frequent speaker at public meetings, and four or five years ago he received a handsome testimonial from friends and admirers in recognition of his services in the cause of temperance and philanthropic movements. He was at the time of his death President of the West Cumberland Medical Society, and Senior Surgeon to the Whitehaven and West Cumberland Infirmary, where he will be greatly missed, and he held several important positions of trust in the town.

MEDICO-LEGAL.

WHAT IS A "PREPARATION"?

A case in which the Pharmaceutical Society summoned a firm of wholesale seed merchants, under Section xvii of the Pharmacy Act, for selling a poisonous vegetable alkaloid "called nicotine" without the precautions prescribed by the Act, raised a rather curious point which will be argued on appeal. The stuff was sold for the fumigation of greenhouses. Dr. Thomas Stevenson stated in evidence that it contained 37·3 per cent. of nicotine. Part I, Schedule A, of the Act includes "strychnine and all vegetable alkaloids and their salts." The point was taken that the fumigating fluid was not a poisonous vegetable alkaloid nor the salt of such, but a preparation containing a poisonous vegetable alkaloid, and nicotine was not one of the poisons the preparations of which were included in the schedule. The Lord Mayor, before whom the case was heard, said that he was quite satisfied that the thing sold was a poison within the meaning of the schedule, but consented to state a case.

AN ETHICAL QUESTION.

M.D. asks the following questions: A. sells his practice, and there is a clause in the bond of transfer prohibiting him from practising within a radius of four miles from his late residence. An old patient of A. requests A. to visit him at a distance of sixty miles from the locality of his late practice as a consultant. Is A. justified in reserving for his own use the fee for his services? A. resides just within the aforesaid four miles radius; supposing old patients residing beyond the four miles elect to send for him or to seek his advice, is he justified in prescribing for them in his capacity as consultant or otherwise? In other words, is A. prohibited only from seeing patients within the four-mile radius, or is he precluded from practice altogether while residing within the prescribed circle?

*** In the first mentioned case there would not appear to be any objection to the fee being retained, but, in the second case, the course suggested is certainly against the spirit of the bond, though whether from the legal point of view it would be a breach of the bond it is impossible to say without a fuller knowledge of the circumstances of the case, such as might be given to our correspondent's solicitor.

INDIA AND THE COLONIES.

NEW SOUTH WALES.

Insanity.—The annual report for 1898 by Dr. Eric Sinclair, Inspector-General of the Insane, on the state and condition of the hospitals and other institutions for the insane, gives a series of valuable tables respecting insane persons. Those under official cognisance were 4,073, of whom 2,479 were males, 1,594 females. The proportion of insane to population was 1 in 330·5, against 1 in 308 in England. Nearly 48 per cent. of all the patients under treatment were between 30 and 50 years of age. Delusional mania and melancholia were the most prevalent forms of mental disorder. The admissions during the year were 730, giving a ratio of "occurring insanity," in proportion to the general population, of 1 in 1,844. The deaths were 246 in number, a perceutage of 6.29, the rate for men being 6.58, and for women 5 81. Extra accommodation for 305 patients is now being built; and Dr. Sinclair advocates the establishment of a pathological department, similar to that in operation at Claybury, England. The average weekly cost per patient in the hospitals was 11s 03d.

JAMAICA.

The Medical Service.—The annual report of the Superintending Medical Officer for the year ended March 31st 1899, contains the reports on the Public and Lying-in Hospitals the Lunatic Asylum, and the Lepers' Home of the island. At the end of March last there were 44 medical officers in the public service. During the year 8 cases were tried at the instance of the constabulary for violations of the Drugs and Poisons Law (of 1894); and most of the defendants were fined or imprisoned. The value of the drugs, surgical appliances, and stimulants issued during the year to the hospitals, Lepers' Home, and the medical districts amounted to £2,348. At the Public Hospital Dispensary School 8 pupils passed in the twelve months. The successful vaccinations, which were 16,465 in the previous year, fell to 13,566. For this decline several causes are assigned, but the report states that "it is to be regretted that the peasantry apparently attach little value to this highly protective measure." The general health of the island in almost all districts compared favourably with that of the previous year, and this improvement was apparently due to the greater attention bestowed by the local authorities on all sanitary questions. Disease of an infectious nature was rarely met with; and in the opinion of some medical officers leprosy seems to be gradually dying out. The report on the Lepers' Home is interesting, and shows the benefit resulting from different treatments. Yaws proved troublesome, and it is remarked that many parents still expose their children to infection under the impression that their offspring must pass through the disease. Syphilis seems very prevalent, and the death-rate therefrom has rapidly increased since 1899, two years after the repeal of the Contagious Diseases Act. It is noted that the varieties of climate obtainable at different altitudes constitute the island a most favourable and enjoyable resort for Europeans in search of health, whilst the comparative ease with which visitors can proceed from one health centre to another is an extra inducement for tourists to visit the island. The Santa Cruz Mountains, an elevated plateau some 2,000 feet above sea level, are noted for their dry climate and equable temperature, the climate being an ideal one for tuberculous subjects in the early stages of the disease.

Dr. Quincke, Professor Ordinarius of Internal Medicine of the University of Kiel, has been elected Rector of that seat of learning.

MEDICAL NEWS.

Viscount Portman has presented a further donation of £1,000 in aid of the building fund of Queen Charlotte's Lying-in Hospital.

The London Hospital.—It is announced that an isolation block is to be built at the back of the hospital at a cost of £22,000. A site for a convalescent home near Whitstable has been procured for £12,000, and the cost of this will be defrayed out of the £60,000 recently bequeathed by the late Baroness de Stern.

Edinburgh Royal Infirmary.—At their meeting on Monday, December 4th, the managers elected James V. Paterson, M.A., M.B., C.M., F.R.C.S.E., assistant ophthalmic surgeon to the infirmary. At the same meeting it was intimated that the new superintendent, Colonel Warburton, was prepared to enter on his duties on December 15th.

Beri-beri Epidemic in Hong Kong.—Our correspondent in Hong Kong writes: During the months from April to October beri-beri has been very prevalent in the colony; the number of cases has been so great as to warrant it being called an epidemic. The epidemic is practically confined to the Chinese of the coolie class. The cases presenting themselves at the Tung Wa and Alice Hospitals are usually subacute or chronic.

Duel Between Medical Students.—At Bordeaux recently a fatal duel took place between MM. Auguste Vergely and René Constantin, both *internes* of the Pelegrin Hospital. There had been bad blood between the young men for some time, and their disagreement culminated in a challenge. They fought with pistols, and M. Constantin was hit in the groin, dying two hours later. His antagonist was put upon his trial, but was acquitted.

Pan-American Medical Congress.—Three years ago, when the Pan-American Congress met at Mexico, it was decided that the next meeting should be held at Caracas in December, 1899. Some time ago, owing to the disturbed state of the political atmosphere in Venezuela, it was decided that the Congress should be postponed for a twelvemonth. It is now suggested, however, that as there appears to be little prospect of better weather in the Venezuelan political world, some other place, such as Montreal or one of the larger cities of South America, should be chosen for the meeting of the Congress.

Diphtheria Mortality in Paris.—It is disappointing to realise that after all that has been hoped from the serum treatment of diphtheria the disease maintains its ground as a cause of death even in those places where the new methods of cure might be expected to be most generally and successfully practised. This is the case in Paris, where during the whole of present year the weekly mortality from this cause has almost constantly exceeded that of the year before. Not only has the number of cases been greater, but the deaths have risen from 10 per cent. during the first forty-three weeks in 1898 to 11.5 per cent. in the corresponding period of 1899.

A Giant Magnet.—According to the *New York Medical Times* a magnet so powerful that it will hold 250 lbs. of steel clinging to it has recently been introduced into the Manhattan Eye and Ear Hospital. The first test of its powers was entirely successful, and saved an eye which otherwise would have been utterly lost, as it would have had to be removed. A sliver of steel from a rapidly revolving wheel had cut through into the posterior part of the vitreous chamber. The magnet drew the steel through the opening it had made on going in, and is so powerful that it could have drawn a piece of steel through a human eye if no opening had been made. The magnet is 22 inches long and 14 inches in diameter. Between the poles, made of polished steel, the core of the magnet is wound with steel wire. It takes 15 ampères and 110 volts to saturate these coils.

French Anti-alcohol League.—On November 26th, a general meeting of the French league against alcoholism was held in Paris under the presidency of M. Cheysson. The General Secretary, Dr. Philbert, read a report setting forth the propaganda work done by the society during the year. He alluded to the large place which the alcohol question now occupied in all congresses of hygiene, tuberculosis, social science, etc. He advocated partial against total abstinence, the latter in his opinion being, at least in France, a hindrance to the success of the movement. He spoke of the efforts made in hospitals and in the great companies to check the spread of the drink scourge, and concluded with an appeal to women to make the home as bright and comfortable as possible, so that there might be no temptation for men to go to cafés.

Petroleum Lamp Accidents.—The London County Council has issued a paper of "suggestions for securing safety in the use of lamps." It is pointed out that the flashing point of ordinary petroleum oil is a little above 73° F., that the oil in the reservoirs of lamps is rarely heated above 100° F., and that the best safeguard against accident is therefore never to burn oil which has a flashing point of less than 100° F., which oil should be sold as cheaply as low-flash oil. Lamps, too, should be strongly made, and kept thoroughly clean; especially should the reservoir and burner be strong; the latter should screw into the collar, and its base should be broad and heavy. The wick should be soft, and just fill the wick tube; it should be frequently renewed, and before being put into a lamp it should be dried at a fire, and immediately soaked with oil. The reservoir should be filled with oil before the lamp is lit, the burner made clean before lighting; the wick when lit should be partially turned down, and then gradually raised; the wick should not, however, be left turned down; lamps that have no extinguishing apparatus should be put out by turning down the wick until there is only a small flickering flame, and a flat piece of metal should then be placed on the top of the chimney, so as to close it entirely; finally, cans or bottles used for oil should be free from water and dirt, and kept closed.

Mentone House of Rest.—The St. John's House of Rest at Mentone, which has been established for twenty years, is a very comfortable house containing good drawing and dining rooms, smoking room, and eleven bed rooms, nine facing south and two west, besides offices and servants' rooms. It is beautifully situated about five minutes' walk from the town on a slight elevation among pine trees. A large outdoor shelter has just been erected in the garden to enable the inmates to pass as much time as possible in the open air. St. John's House is not intended for those who are seriously ill, but for those who need rest or are suffering from the earlier stages or threatenings of illness, or are recovering from illness. Since its opening twenty years ago 207 inmates have been admitted, of whom 167 were clergymen and 40 were laymen. There are at the present time vacancies for clergymen and other professional men. Those who are admitted pay their own journey to and from Mentone, and £1 a week for board and lodging during the time they are in St. John's House. The honorary physician in Mentone is Dr. Siordet. Full particulars may be obtained from Canon Sidebotham, St. John's Parsonage, Mentone; or from the Rev. C. Wyatt Smith, Middleton House, Upper Tooting, S.W.

Murderous Assault on a Doctor.—The child of a public official in Italy fell ill and the local doctor was called in. The child gradually getting worse, as a last resource the doctor proceeded to administer a subcutaneous injection of caffeine. This proceeding was violently opposed by the father, who said it ought to have been done a week earlier. His violence increased and he ultimately drew a revolver from his pocket and discharged it point blank at the doctor. The result was a severe wound in the iliac region from which he suffered for seven months. On the part of the defence a sort of partial insanity was set up. In support of this it was stated that some days before the shooting the prisoner had been distracted by grief and anxiety on account of the state of his child. On one occasion he had exclaimed that if the child died he would kill all the rest of the family and himself. Professor Mugnani of Rome deposed that in his opinion the accused was the subject of epilepsia larvata, which had impaired the inhibitory powers of the higher centres. The victim disputed these contentions and alleged that the attack was inspired by long-standing ill-will and jealousy, and not by grief. The Court however accepted the views of Professor Mugnani as extenuating the crime and passed a sentence of two years' imprisonment.

THE TAXING OF THE MEDICAL PROFESSION IN PORTUGAL.—Everything is taxed in Portugal—except dirt and disease germs. The medical profession rejoices in a tax all to itself. The method of assessment is charmingly simple. The Government merely sends an intimation to the medical inhabitants of every town that they are expected to supply so many millions of reis, leaving them to settle the delicate matter of apportionment among themselves. The doctors then assemble and elect a *gremio*, or committee, whose duty it is to distribute the burden among the brethren in proportion to their supposed professional income. Those who consider themselves overcharged have the right of appeal to a special court appointed to deal with such cases.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL DISPENSARY.—A Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), with furnished rooms, etc. Applications to the Secretary by December 18th.

BRECON INFIRMARY.—Resident House-Surgeon; unmarried. Salary £70 per annum, with furnished apartments, etc. Applications to W. Powell Price, No. 6, Bulwork, Brecon by December 20th.

BRIGHTON: SUSSEX COUNTY ASYLUM.—Assistant House-Surgeon: unmarried, and under 30 years of age. Salary, not exceeding £30 per annum, with board and residence. Applications to the Secretary by December 20th.

BRISTOL: ROYAL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House-Surgeon. Salary, £100 per annum, with rooms and attendance. Applications, endorsed "House-Surgeon," to the Secretary by December 18th.

CANTERBURY: KENT AND CANTERBURY HOSPITAL. (1) House-Surgeon. (2) Assistant House-Surgeon. Unmarried in each case. Salary for the former, £70 per annum, rising to £100 and the latter £50. Board, etc., provided. Applications to the Secretary by December 23rd.

DERBY: ROYAL INFIRMARY.—Resident House-Physician. Appointment for twelve months, with possibility of extension. Salary, £80 per annum, with apartments and board. Applications to the Secretary by January 5th 1900.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications to the Chairman of the Committee by December 28th.

DUDLEY: GUEST HOSPITAL.—Senior Resident Medical Officer. Salary, £100 per annum, increasing to £120, with board, residence, etc. Applications to the Secretary by December 21st.

EDINBURGH: UNIVERSITY OF.—(1) Examiner in Materia Medica; (2) Two Examiners in Clinical Surgery. Appointments for four years. Salary of the former £75 per annum and the latter £50 each per annum. Applications to the Secretary, University Court, by December 30th.

GLOUCESTER GENERAL INFIRMARY AND EYE INSTITUTION.—Assistant House-Surgeon. Appointment for six months, subject to re-election. Remuneration at the rate of £30 per annum with board, residence, and washing. Applications to the Secretary by December 26th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Assistant Anæsthetist. Appointment for six months, but eligible for re-election. Honorarium at the rate of 10 guineas per annum. Applications to the Secretary by January 15th, 1900.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident House Physicians. Appointment for six months. Honorarium, £25. Applications to the Secretary by December 22nd.

HOSPITAL FOR WOMEN, Soho-square, W. Assistant-Surgeon, must be F.R.C.S.Eng. Applications to the Secretary by January 3rd, 1900.

KENSINGTON UNION.—Second Assistant Medical Officer to the Workhouse and Infirmary, must not exceed 28 years of age. Salary, £80 per annum, with apartments, board, and washing. Application forms provided to the Clerk to the Guardians, Marloes Road, Kensington, W., by December 29th.

LEEDS: GENERAL INFIRMARY.—Resident Medical Officer. Salary, £100, with board and residence and washing. Applications to the Secretary to the Faculty by December 20th.

LEEDS: HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Surgeon. Applications to the Election Committee at the Hospital by December 19th.

LEWES DISPENSARY AND INFIRMARY. Resident Medical Officer. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Honorary Secretary, 211, High Street Lewes, by December 30th.

LIVERPOOL EYE AND EAR INFIRMARY.—House-Surgeon. Salary, £80 per annum, with residence and maintenance. Applications to the Hon. Secretary, 8, Knowsley Buildings, Liverpool, by December 20th.

LONDON HOSPITAL, Whitechapel, E.—Dental Surgeon. Applications to the House Governor by January 6th, 1900.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Senior House-Physician. Junior House-Physician is applicant, and if appointed there will be a vacancy as Junior. Salary, as Senior £60 per annum as Junior £50, with board and apartments. Applications to the Secretary by January 3rd, 1900.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon; unmarried. Salary, £120 per annum, with furnished apartments, etc. Applications to the Secretary.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Surgeon. Salary £100, with board and residence. Applications to the Honorary Secretary by December 18th.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House-Surgeon and Dispenser, unmarried. Salary, £70 for the first year, with board and lodging. Applications to the Hon. Secretary.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer for 1901. Applications to the Registrar by January 5th, 1900.

SALOP COUNTY COUNCIL.—County Medical Officer of Health. Salary, £750 per annum. Applications to the Clerk, Shirehall, Salop, by December 27th.

SOUTHAMPTON: ROYAL SOUTH HANTS INFIRMARY.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with rooms, board, and washing. Applications to the Secretary before December 23rd.

TOXTETH PARK.—Resident Medical Officer to the Workhouse and Infirmary. Salary, £100 per annum, with board, washing, and apartments. Applications to the Clerk to the Guardians, 15, High Park street, Liverpool, by December 20th.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, S.W.—House-Surgeon. Appointment for six months. Honorarium £25 and board and lodging. Applications to the Secretary by December 23rd.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard Street, Soho, W.—Resident Medical Officer. Applications to the Secretary by December 22nd.

WESTMINSTER HOSPITAL, S.W. Casualty Medical Officer. Honorarium £50 per annum. Applications to the Secretary by December 23rd.

WOLVERHAMPTON AND DISTRICT HOSPITAL FOR WOMEN.—Surgeon to Outpatients. Applications to the Chairman at the Hospital, Chapel Ash, Wolverhampton by December 19th.

YORK.—Medical Officer of Health of the City. Salary, £400 per annum. Must devote his whole time to the duties. Applications, endorsed "Medical Officer of Health," to the Town Clerk, Guildhall, York, by January 4th, 1900.

MEDICAL APPOINTMENTS.

BROCKWAY, Archibald Birt, M.R.C.S., L.R.C.P., appointed Honorary Physician to Out-patients, Brisbane General Hospital, Queensland.

CARVOSSA, A.B., M.B., Ch.M., appointed Honorary Physician to Out-patients, Brisbane General Hospital, Queensland.

CRAIK, W., M.B., C.M.Glas., appointed Medical Officer for the Bolton-upon-Dearne and Thurnscoe District of the Doncaster Union, *vice* T. D. Nicholson, M.B., C.M.Edin., resigned.

DENNING, J. V. C., L.R.C.P., L.R.C.S.Irel., appointed Medical Officer of the Christchurch Workhouse of the St. Saviours Union, *vice* J. Herron, M.D., M.U.I.

FAIRWEATHER, W. E., L.R.C.P.Lond., M.R.C.S., appointed House-Surgeon to the Jessop Hospital for Women, Sheffield.

HALL, B., M.B., appointed Medical Officer for the Third District of the Lexden and Winstree Union, *vice* R. G. Naylor, F.R.C.S., L.R.C.P.Edin., resigned.

HANSON, R. J. E., M.B., B.C.Camb., appointed Assistant Medical Officer of the Infirmary and Workhouse of the Parish of Paddington, *vice* M. F. Squire, M.B., B.S.Durh.

HARE, F. W. E., M.D., M.R.C.S., appointed Honorary Physician to Out-patients, Brisbane General Hospital, Queensland.

HIRST, G. S. S., M.B., C.M.Edin., appointed Medical Officer for the Withern District of the Louth Union, *vice* A. Hanson, L.R.C.P.Edin., M.R.C.S.Eng., resigned.

JAFFERY, Francis, F.R.C.S., appointed Lecturer of Anatomy at St. George's Hospital.

NEWBERRY, W. J., M.R.C.S.Eng., appointed Medical Officer for the Overton District of the Whitchurch Union, *vice* I. Willcocks, M.R.C.S., resigned.

PALMER, J. A., M.R.C.S., L.R.C.P., appointed House-Surgeon at Hull Royal Infirmary.

PATCH, H. H. Lloyd, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Second and Third Districts of the Hertford Union, *vice* W. T. Davies, M.R.C.S., L.R.C.P.Lond., resigned.

PATERSON, J. V., L.R.C.S.Edin., appointed Assistant Ophthalmic Surgeon to the Royal Infirmary, Edinburgh.

POMFRET, Henry Waytes, M.D., F.R.C.S., appointed Pathologist and Assistant Honorary Surgeon to the Ancoats Hospital, Manchester.

SHAW, A. H. P., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the Workhouse of the Frittenden and Cranbrook Districts of the Cranbrook Union, *vice* J. W. Harris, M.R.C.S., L.R.C.P.Lond.

SYMES, J. O., M.D., D.P.H., etc., appointed Assistant Physician to the Bristol General Hospital.

STABB, Arthur F., M.R., B.C.Cantab., M.R.C.P.Lond., appointed Physician to Out-patients, Queen Charlotte Lying-in Hospital.

TAYLOR, Seymour, M.D., M.R.C.P., appointed Physician to the West London Hospital.

TIBARD, N. I. O., M.D., F.R.C.P.Lond., appointed Professor of the Principles and Practice of Medicine, King's College, *vice* I. Burney Yeo, M.D., F.R.C.P.Lond., resigned.

TURNER, W. A., M.D.Edin., appointed Assistant-Physician to King's College Hospital.

WHITELOCKE, R. H. Anelin, M.B., M.Ch.Edin., F.R.C.S.Eng., appointed Surgeon to the Radcliffe Infirmary, Oxford.

WYSE, T. F., L.R.C.P., L.R.C.S.Irel., appointed Medical Officer for the Ilkley District of the Wantage Union, *vice* L. H. Bennett, M.B., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

Royal Microscopical Society, 20, Hanover Square, W., 8 P.M.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. A. Whitfield: Consultation (Skin).

TUESDAY.

Chelsea Clinical Society, Trinity Parish Hall, Pavilion Road, Sloane Square, S.W., 8.30 P.M.—Dr. S. B. K. Mullick: A Practical Demonstration in the use of Electricity in Diagnosis and Prognosis in some forms of Paralysis. Dr. A. Symons Eccles: Some recent cases of Enteroptosis.

Pathological Society of London, 20, Hanover Square, W., 8.30 P.M.—Adjourned Discussion on D. Watt's Paper on the Pathology of Tabes and its Relation to General Paralysis. Drs. Beevor and Head will reopen the debate, and the following gentlemen and others will speak: Drs. Newton Pitt Crumpton, Salaman, Risien Russell, Purves Stewart, Robert Jones, Bertram Abrams, Fletcher Beach. Dr. Mott will reply.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Sir W. H. Broadbent, Bart.: Consultation (Medical).

Saturday Hospital for the Paralysed and Epileptic, Queen Square, W.C. 8.30 P.M.—Mr. Horsley: Surgery of the Nervous System.

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. James Berry: Consultation (Surgical).

Royal Meteorological Society, 25, Great George Street, Westminster, S.W., 7.30 P.M.

THURSDAY.

Harveian Society of London, 8.30 P.M.—Mr. Watson Cheyne on Genito-urinary Tuberculosis. Harveian Lecture No. III.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation (Surgical).

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. A. Cheatle: Consultation (Ear). 2.30 P.M.—Dr. James Taylor Class. Diseases of the Nervous System: Demonstration VI.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

MEREDITH.—On December 10th, 1899, at Ibstock, Leicester, the wife of George Low Meredith, L.S.A., of a son.

MARRIAGES.

COPEMAN—WILKIN.—On December 6th, at Christ Church, Lancaster Gate, by Rev. A. Garry Copeman, M.A., brother of the bridegroom, Vicar of St. Andrew's, Norwich, assisted by Rev. W. Burleigh, M.A., uncle of the bride, Vicar of St. Matthew's, Littleport, and the Rev. Prebendary C. I. Ridgeway, M.A., Rural Dean, Heathcote Copeman, B.A.Cantab., M.R.C.S., L.R.C.P., of Cowes, I.W., and Eva Florence, only daughter of Sir Walter Wilkin, K.C.M.G., of 43, Gloucester Square, Hyde Park, W.

CROLL—LAST.—On the 12th December, at the Cathedral, Wakefield, Yorkshire, by the Rev. W. H. Noble, M.A., Andrew Croll, M.D., to Agnes, daughter of the late W. A. Last, Bury St. Edmunds. No cards. At Home (Marshfield, Handsworth, Staffs) January 15th and 16th.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.
CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.
CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu.F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2
CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45, Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.
CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.
CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.
EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.
GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.
GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.
HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.
KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Tu., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.
LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.
LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.
LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.
METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.
MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.
NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.
NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.
NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.
ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.
ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.
ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.
ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.
ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.
ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2
ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.
ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.
ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.
ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 3; Th., 2.30; S., 10; (Ophthalmic), F., 10.
ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.
ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p. Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.
SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.
THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.
UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.
WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.
WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

P. G. will be grateful for information about post-graduate classes in Berlin.

DR. W. G. MITCHELL (Ballater, N.B.) would be glad to hear the experience of any member who has used a Beeston motor tricycle with electric ignition.

M.B.CANTAB. asks what strength of thymol ointment is an efficient parasiticide for use on dogs; also what is the maximum strength that may safely be used?

A MEMBER would be glad to hear of a home for epileptics where he could send a young man aged 20 who has rather severe fits; the parents at the outside could not contribute more than 2s 6d. a week.

M.D. asks for advice in the treatment of the following case: A patient, of gouty diathesis, suffered at the beginning of the year from acute eczema of body and limbs, pruritus, and afterwards pemphigus of arms. The itching and irritation was all along intolerable. He is now free from any skin disease, but suffers from great itching of the arms, scrotum, and anus, as he describes it, "as if something was creeping and biting under the skin." The skin is soft and free from any external or visible cause of irritation. There is no sugar nor albumen in the urine.

FEES FOR A MEDICAL PROVIDENT SOCIETY.

HONORARY SECRETARY writes: At a meeting of the local Medical Society a suggestion was made that a scheme should be started for the formation of a comprehensive medical provident society, the idea being that many men with families, earning a small wage, are unable to pay the ordinary professional fees, and are from this cause driven to seek attendance for themselves and families at the dispensary connected with the hospital. We should be glad to know if any of your readers have any experience of such a scheme elsewhere, and would give hints as to how we should proceed as to fees charged, wage limit of eligible members, and any other hints which might be useful.

THE BRITISH HOMES' INSURANCE CORPORATION.

"BRITISH HOMES" states that about eighteen months ago he was induced by an agent of the British Homes' Insurance Corporation to insure his life with that company, being at the same time appointed medical referee for a large district. He has not yet been called upon to act in any way for the company, except to pay his premiums, and in consequence of opinions expressed by friends he is in doubt whether it is advisable to continue the insurance.

*** An examination of the life assurance account in the balance-sheet of the company for the year ending December 31st, 1898, shows that commissions and management expenses amount to upwards of 60 per cent. of the net receipts. Under these circumstances we do not consider that the company can be recommended.

INCOME TAX.

C. A. asks for information as to the manner of making the return of his income for income tax assessment for next year under the following circumstances: My professional income has averaged about, say, £1,000 per annum; I am retiring from practice at the new year, and my income will be £500. Am I to take the average of the last three years or give the £500 as my income liable to income tax?

*** We have submitted the question to the Income Tax Repayment Agency (6, Chichester Road, Paddington). They inform us that as our correspondent ceases to practise he is certainly not liable to assessment on the average profits of the three past years. Whether he is liable to be assessed even upon the reduced income mentioned is a question which, in the absence of particulars of the sources of such income, they have not sufficient data to answer, but in all probability he is not called upon to make a return at all. They add that they are of opinion that he is entitled to a refund of one quarter of the tax paid last year, but that they are without sufficient data to give a decided answer.

BAD DEBTS.

A CORRESPONDENT asks the following question: A. and B. are partners about to dissolve partnership. By the partnership deed it was settled that the outgoing partner should leave the district altogether, and should be paid by the remaining partner one year's purchase of the whole practice less £350. Both A. and B. are quite agreed as to this, but A., the remaining partner, contends that he is entitled to deduct from his payment to B., the outgoing partner, 10 per cent. for bad debts. In the absence of any clause to this effect in the deed of partnership, is A. entitled to do so?

*** Unless such a power were reserved to the remaining partner in the deed, he would not, in our opinion, be entitled to deduct this percentage. A year's purchase of a medical practice is usually based on the actual receipts, with which bad debts have nothing to do.

The above will also answer another correspondent who has asked a similar question.

EXAMINATION FOR THE D.P.H.CAMBRIDGE.

SANITAS writes to point out that the syllabus for Part II of the examination for the D.P.H.Cambridge has been modified, and will come into operation in April, 1900. He refers particularly to: (2) The model by-laws of the Local Government Board; (3) sanitation of dwellings, schools, factories, and workshops, and of villages and towns; (4) inspection of cowsheds, slaughterhouses, etc.; (5) inspection of meat and other articles of food; (7) the methods applicable to the medical in-

vestigation of epidemics, and asks what works in addition to those usually recommended it would be advisable to consult.

*** It would be well to add to the list: (1) *Knight's Annotated Model By-laws of the Local Government Board*, 5th edition (London: Knight and Co. 1897. 12s. 6d.); (2) *The Food Inspector's Handbook*, by Francis Vacher, F.R.C.S. (London: Record Press. 1893. 2s.). Dr. Thresh's book *Water and Water Supplies* (London: Rebman Publishing Company. 1896. 8s.) would probably be suitable for his requirements as to water supply. As to a criticism on public health laws, Mr. Wynter Blyth's *Lectures on Sanitary Law* (London: Macmillan and Co. 1893 8s. 6d.) would probably answer his purpose.

ANSWERS.

LIEUTENANT R.N.—Arrangements ought, of course, to have been made by the persons concerned as soon as it became known that the doctor originally engaged had gone away.

KENT.—The question has been again and again discussed in previous issues of the BRITISH MEDICAL JOURNAL, to which we would refer our correspondent.

LUPUS.—If the case be one of lupus vulgaris, it can be treated just as well in this country (on the spot) as abroad. There is nothing in the Continental treatment which is not known here by those who deal with such cases.

H. M. W. writes: In reply to "L.M.C." I may say that I was troubled for years in the same way as his patient, by intolerable itching in the legs after a cold bath, till I reluctantly exchanged my cold morning bath for a tepid one (80° to 90° F.). I have never suffered since, except when unable to get warm water. Now I venture to finish up the bath by a momentary cold douche, and so get some of the refreshing effect of the cold water without the itching.

CHOICE OF A BICYCLE.

A MEMBER writes: "Country Surgeon" will find on inquiry that several makers supply a low-framed safety bicycle that can be mounted from the standing mount like a "Bantam, and called a "Polo." The pedals are necessarily near the ground, and care has to be exercised in turning corners. I have ridden one both by night and day 5,000 miles without accident. I did not commence riding until I was 64 years of age.

NOTES, LETTERS, Etc.

CÆSAREAN SECTION FOR ECLAMPSIA.

THERE is a printer's error in the paragraph on this subject which appeared in the BRITISH MEDICAL JOURNAL of December 9th, page 1626. In the thirteenth line, column 2, "section or forceps" should read "version or forceps." The error is, we believe, fairly obvious, since it would be absurd to suppose that anyone would recommend a Cæsarean section to be done for eclampsia when the cervix was fully dilated.

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

SURGEON-MAJOR VALENTINE MATTHEWS, V.M.S.C., Honorary Secretary, Headquarters, London Company, V.M.S.C., 51, Calthorpe Street, W.C., writes: This fund is established to assist the families on or off the strength of non-commissioned officers and men of Royal Army Medical Corps on active service in South Africa. All moneys received will be handed over to the Royal Army Medical Corps Depôt Mobilisation Relief Fund, Aldershot, the Honorary Secretary of which will be glad to hear of any cases of distress needing immediate assistance, whether the husbands were mobilised at Aldershot or not:

	£	s.	d.
Amount already acknowledged	50	16	0
Officers V.M.S.C. London Companies, additional subscription	2	2	0
Messrs. Vail and Co., Printing 600 circulars and 600 cards	1	12	8
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James Chambers, M.D.	3	3	0
Messrs. Pipe and McGill	2	2	0
Mr. W. Watson Cheyne	1	1	0
Mr. F. Manser	1	1	0
Professor Burdon Sanderson	1	1	0
G. Danford Thomas, M.D.	1	1	0
Surgeon-General W. Stewart	1	0	0
Mr. James Cantlie	0	10	0

Donations will be gratefully acknowledged by Surgeon-Major V. Matthews, Honorary Secretary, Headquarters, London Companies, Volunteer Medical Staff Corps, 51, Calthorpe Street, W.C.

WHOLESALE PRESCRIBING.

DR. HENRY DUTCH, M.D., M.R.C.S. (Berkeley Street, W.), writes: Your remarks on "wholesale prescribing" in the current issue of the BRITISH MEDICAL JOURNAL deserve the serious consideration of the medical profession. There are few among us who could not relate cases of the evil results of dangerous drugs being placed in the hands of the ignorant without any form of medical or legal restriction. If the system finds favour with the medical man of to-day there is no reason why it should not be introduced into our *Pharmacopœia*, when tablets would in all probability be as little sought after as the numerous trochisci which it contains. Under existing conditions the "consulting chemist" supplants the consulting physician.

DR. ALEXANDER DUKE (Cheltenham) writes with reference to this subject that the habitual prescription of proprietary preparations by medical men tends to encourage the practice of counter prescribing, since it is easy for chemists to recommend the purchase of such articles.

AMBULANCE LECTURES.

AT a recent meeting of the East Suburban Medical Protection and Medico-Ethical Society, Limited, the following resolution was passed: "That where ambulance lectures are advertised to be given by a medical man, it is both inadvisable and unprofessional for the name, address, or qualification of the lecturer to appear in the advertisement."

EARLY CEREBRAL SYPHILIS.

DR. C. F. MARSHALL (Finsbury Square, E.C.) writes: In the *Archives of Neurology* from the Pathological Laboratory of the London County Asylums, Dr. Mott gives the results of his valuable observations on cerebral syphilis. He comes to the conclusion that cerebral syphilis may occur during the first, second, or third year after infection. I wish to point out a possible fallacy in these conclusions, and that is the occurrence of second infection. We know that primary sores may be absent and secondary symptoms so mild as to be overlooked. Therefore, in these cases, is it not possible that the cerebral syphilis is due to a former infection which has been ignored, and the more recent infection a second infection?

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Mr. E. B. Anderson, London; Mr. J. E. Allen, London; Mr. A. Atkinson, London; Dr. G. Apostoli, Paris; Mr. E. J. Adams, Sheffield; Association of Registered Medical Women, Secretary of, London; Mr. C. H. Allen, Sheffield; Alcohol; A. D. B. **B** Mr. F. Bennett, Wellingborough; Mr. F. Boehm, London; J. W. Batterham, M.B., St. Leonards-on-Sea; Dr. H. T. Bulstrode, London; Mr. E. J. Baxter, Edinburgh; Mr. C. Bowdler, London; Dr. H. Barnes, Carlisle; Mr. G. H. Broadbent, Manchester; Dr. A. G. Bateman, London; Dr. F. T. Bond, Gloucester; Dr. J. Brown, Bacup. **C** Dr. F. J. H. Coutts, Manchester; Dr. F. Collie, London; Country Practitioner; Dr. A. E. Cooper, London; Mr. L. Cooper, Rochester. **D** Dr. W. R. Dawson, Finchley; Dr. H. A. Davis, Tottenham; Dr. H. Dutch, London; Delta; Dr. A. Duke, Cheltenham; W. Duigan, M.B., Oxford; Disgusted. **E** Enquirer; Mr. A. P. Elliot, Kingsbridge; Dr. F. W. Edridge-Green, Hendon; Dr. W. Ewart, London; Dr. J. W. Edgar, Settle. **F** Fair Play; Dr. E. L. Fox, Plymouth; F. S. T. F.R.C.S. **G** Mr. T. S. Gick, Dublin. **H** Mr. F. W. Howell, London; H. Hodgson, M.B., Bisworth; Mr. H. H. Heffernan, Wolston; H. M. W. I. and I.M.S. Man; Inquirer. **J** J. F. T.; R. Johnson, M.B., London; Junior W. D. Johns, M.B., Bournemouth; J. W. S. **K** Dr. G. C. Kinsbury, Blackpool; Dr. E. D. Kirby, Birmingham; Mr. C. W. Krohne, London. **L** Dr. A. E. Larking, Folkestone; L.R.C.P.I. **M** Dr. W. O. Moor, Rome; Mr. N. O. McDonnell, Belfast; Mr. P. J. Macleod, Grenada; Miss Mackey, London; Mr. J. C. McWalter, Dublin; Mr. V. Matthews, London; Mr. F. W. McClure, Kilmarnock; Dr. S. G. Mealum, Wooler; Dr. T. Myles, Dublin; C. Macvicar, M.B., Dundee; Dr. C. B. Marshall, Dundee; Dr. H. M. MacGill, Hartlepool; Dr. A. Mitchell, London; Moses; J. MacPherson, M.B., Glen Innes: Member; Mr. R. Montgomery, Dublin; M.B. Cantab; C. Martin, M.B., Birmingham; M.O.H. **N** Dr. C. V. H. Nesbitt, Aughton. **O** Messrs. Oliver and Boyd, Edinburgh; Obstetrical Society of London, Secretary of, London. **P** Persecuted; Dr. W. H. Peake, Marden; Mr. W. P. Pain, London; Mr. G. Pim, Dublin; Dr. R. Purdon, Belfast; Dr. F. L. Phillips, Leamington; Paterfamilias; Mr. G. H. Pearce, Parsley. **Q** Querous. **R** Dr. Ransome, Tottenham; Mr. D. C. Rees, London; Mr. J. A. Raye, Weston-super-Mare. **S** Mr. W. Soper, London; Dr. J. P. Simpson, London; Sir W. Stokes, Dublin; Dr. E. Schiff, Vienna; Sixty-four Years of Age; Sheffield Medico-Chirurgical Society, Secretary of, Sheffield; Mr. J. Sutcliffe, Cheadle; Dr. A. Stewart, Manchester; Messrs. Street Brothers, London. **T** Dr. G. Thin, London; Dr. T. R. Taylor, London; Dr. J. S. Torrop, Heywood. **V** Vanilla Panter. **W** Dr. F. J. Waldo, London; Mr. R. C. Worsley, Ramsgate; Mr. S. Wertimer, London; Mr. A. N. Wilkinson, North Formosa; Dr. E. C. A. Windle, Birmingham; Mr. G. A. Wilson, London; Dr. A. McC. Weir, East Sheen: Messrs. White and Wright, Liverpool; Mr. F. H. Walter, Vancouver; Mr. R. E. Wright, London. **Y** Mr. W. Yeates, Morpeth; etc.

BOOKS, ETC., RECEIVED.

Science Sketches. Chemistry, its Evolution and Advancements. By F. G. Weichmann, Ph.D. New York: W. R. Jenkins. 1899.

Medicinisches Taschenwörterbuch der deutschen, englischen u. französischen Sprache. Von Dr. E. Lehfeldt. Zweite Auflage. Berlin: S. Karger. 19.0 M.6.

Annual and Analytical Cyclopædia of Practical Medicine. By C. E. de M. Sajous, M.D., and One Hundred Associate Editors. Vol. iv. Philadelphia: The F. A. Davis Co. 1899.

Operations-Vademecum für den praktischen Arzt. Von Dr. E. Leser. Berlin: S. Karger. 1899. M 5.

The Western Rajputana States. A Medico-Topographical and General Account of Marwar, Sirohi, Jaisalmir. By Lieutenant Colonel A. Adams, I.M.S., M.D., M.Ch., F.R.I.P.H., F.R.C.S.I. London: Junior Army and Navy Stores. 1899.

The Health Resorts of Europe. By T. Linn, M.D. Seventh Year. London: Henry Kimpton. 1899.

First Aid to the Injured. By Dr. O. Bernhard. Translated from the German by Michael G. Foster, M.A., M.D. Samarden: Simon Tanner. 1896.

Formulaire des Médicaments Nouveaux pour 1900. Par H. Beaquillon-Limousin. Paris: J. B. Baillière et Fils. 1900. Fr. 3.

La Diphtérie depuis Arétée le Cappadocien jusqu'en 1894. Par Dr. E. Bayeux. Paris: G. Carré et C. Naud. 1899.

Clinical Studies in Vice and in Insanity. By G. R. Wilson, M.D. Edinburgh: W. F. Clay. 1899. 7s. 6d.

Practical Textbook of Midwifery for Nurses and Students. By E. Jardine, M.D., M.R.C.P., F.F.P.S. Edinburgh: W. F. Clay. 1899. 6s.

*** In forwarding books the publishers are requested to state the selling price

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A CLINICAL LECTURE
ON
A CASE OF SCURVY-RICKETS IN A BOY OF TWELVE YEARS.

Delivered at St. Mary's Hospital, November 2nd, 1899,

By EDMUND OWEN, F.R.C.S.,
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GENTLEMEN,—Many of you have already seen this interesting case, for I brought the boy before you on October 23rd, immediately on his admission to the hospital, but as I had not time on that occasion to go fully into his history, I had to content myself with calling your attention to the most salient features of his disease, for I was anxious that you should see them whilst they were in their most marked form. Briefly, as you will remember, his condition was this: He looked extremely ill; he was anæmic to the last degree, feeble, and listless; his ankles were swollen, his legs were motionless, and his gums were spongy and bleeding. His mother, who had just then brought him up to the hospital for urgent admission, admitted, in answer to my questions, that he had been allowed to live on a diet which was entirely destitute of fresh fruit and vegetables. And you will remember that I told you in her presence that he was as surely suffering from scurvy as a sailor might be upon an Arctic expedition or in a prolonged sea voyage, in which fresh food was absolutely unobtainable.



I then called your attention to the fact that the boy was markedly rachitic; his ribs were swollen at the junction with the costal cartilages, as were also the carpal ends of his radial diaphyses. Of the lower end of his tibiæ we could say nothing definite, as they were hidden in the midst of a large amount of soft effusion.

Whether the boy was rachitic during cradle life or not I was unable to say positively, though I thought it highly probable. At any rate he is extremely rachitic now. If, however, he was not rachitic in cradle life the interest of his case is increased, for then it would be that his diet in later childhood has produced rickets, and, as you know, rickets is peculiarly a disease of infancy, though the effects upon the skeleton may persist throughout life.

As I told you when we first saw the boy together, the diet of rickets is the diet of scurvy, and if a fairly healthy boy of, say, six or seven years is kept continuously upon a typical scorbutic diet, I do not see why the ends of his ribs and his radii should not begin to swell and keep on swelling just as in similar circumstances they would do in cradle life. But rickets is not confined to cradle life. It is specially a disease of infancy, merely, I suppose, because the dyspeptic child who has struggled through the perils of his cradle life is directly afterwards put upon a mixed diet, and it is this mixed diet that is the saving of him. If he were still kept on the scorbutic diet of his cradle life after he had reached the age of 3 or 4 years, he would either die of exhaustion or would be more than ever rachitic, or, perhaps like this boy, he would become the subject of unmistakable scurvy.

Thus, you see, I deem rickets to be the prescorbutic stage of scurvy; and when I am told that an infant or a child is the subject of scurvy, I do not need to be told that he is also rachitic. There is no boundary line between the rickets and scurvy of childhood; rickets gradually and imperceptibly passes into scurvy, and I cannot imagine any child to be the subject of scurvy who has not beaded ribs and swollen ends of radii. Though Dr. Cheadle has given the name of scurvy-rickets to the disease, I should not be averse from entirely dropping that part of the word after the hyphen, and calling the disease simply scurvy, feeling well assured that the scurvy has been developed from pre-existing rickets.

Some physicians are apparently in favour of calling the disease simply hæmorrhagic rickets. But, surely, when hæmorrhage has occurred beneath the periosteum or into the planes of other connective tissues, the disease has become developed into something more than rickets. Hæmorrhage is not a symptom of rickets but is a most characteristic sign of scurvy. Thus, the disease is now scurvy, not rickets. But the word scurvy is so thickly surrounded with unpleasant associations, that he would be a rash practitioner who told a lady that her child was the subject of that disease. Indeed, the word rickets has in such circumstances to be mentioned with care, lest the mother and the nurse be grievously offended by it, though since these patent foods (so-called) have found an easy entrance into the nursery, parents have become somewhat more accustomed to the sound of the word, and are, in consequence, less shocked by its personal application.

The report of the case is by the dresser, Mr. Reginald Hughes, whose brother, Mr. Thomas Hughes, kindly took the photograph printed herewith.

The patient is a schoolboy, 12½ years of age, and he comes from the middle of Essex. He was apparently always healthy, though last February he was in hospital for division of each tendon of Achilles. From the time of that operation the child has been peevish and fretful, and the parents have given way to him on all points. He is very anæmic and sickly, and has a wrinkled face, like that of an old man. The knee-joints are swollen, and there is some fluid present. The ankles and feet are swollen, and œdematous. There is wasting everywhere. He is 3 feet 11 inches high, and his weight is 39⅝ lbs. The teeth are slightly loosened, the gums are spongy, and occasionally bleed, especially when he eats hard food. The abdomen is swollen; the liver and spleen are slightly enlarged. The urine was alkaline (specific gravity 1030), and it contained a considerable amount of blood. The heart and lungs were healthy.

As regards diet, his mother said that he persistently refused to eat vegetables and fruit, and that he took very little milk. She admitted that she let him have just what he wanted, and forced him with nothing. At breakfast he had egg or bacon or some such thing, with bread and cocoa. At dinner he had meat or fish, with occasionally a little potato and more cocoa. Later in the day he had tea and bread and butter, with occasionally potted meat, and at supper he had bovril or cocoa.

This was certainly a highly improper diet for a boy, for it was conspicuously deficient in fresh, "living" food. I grant that in the daily *menu* there was a certain amount of the "living" food in the shape of milk, fresh meat, and occasional potatoes, but we gathered from the mother that he did not have much potato, and he would have had to eat a very large amount of fresh meat in order to take in the needful supply of fresh material—whatever that material may actually be—to make up the deficiency which was lacking by the absence of ripe fruit and green vegetables. Unfortunately, moreover, the boy seemed to prefer cream to milk. He took extremely small quantities of the latter.

What I would again ask you particularly to notice is the swelling about the lower end of each tibia and fibula. It is manifest in the photograph which I hand round. This swelling is due to extravasation of blood into or beneath the periosteum at the lower end of each tibial diaphysis. You will notice a similar condition about the lower end of the femur and also over each tarsus. Of course I cannot say for certain that the swelling is due to the presence of blood; but

n a somewhat similar case in an infant my colleague, Mr. Page, cut down upon a diaphysis and found a large collection of blood, and in several other instances a late colleague of mine at the Great Ormond Hospital, Dr. Barlow, found similar extravasations *post mortem*. These accounts, as some of you may be aware, are now classical. In this boy the legs were very tender; he never moved them, and he could not bear their being handled.

In his well-known lectures delivered at the Hospital for Sick Children in 1864 Sir William Jenner gave as the third characteristic symptoms of rickets a "general tenderness" of the child, so that it "cannot be moved without its uttering a cry." This certainly is not my experience. I have handled many rickety children, and in the course of a surgical examination, not always with absolute gentleness, but I confess that I have not noticed such "general tenderness." I make bold to think that when that illustrious physician was impressed with the importance of the symptom of general tenderness in rickety children he must have been examining cases in which the rickets from which they were suffering was extreme, and was gradually passing or had actually passed into a condition of scurvy, in which hæmorrhages were taking place into or beneath the vascular periosteum, and the bones in consequence were extremely tender. Strange to say, that acute observer and great clinical teacher told Dr. Barlow that he had never met with a case of rickets which was so advanced upon the road to scurvy as to be associated with subperiosteal extravasations of blood.[1]

Our little patient has now been in the hospital ten days; and, though his condition has in that time greatly improved, he still presents some of the most characteristic signs of scurvy. Thus you will notice that he is excessively anæmic, and, on turning down his lower eyelid, I show you that the normal, bright-red capillaries are conspicuous by their absence. On removing his blanket you notice that his skin is not exactly pale; it is destitute of the natural hue, and is muddy-looking. This is probably due to a disintegration of some of his red corpuscles, and to certain constituents of their colouring matter leaking out of his ill-nourished capillaries, and becoming deposited in the surface. His gums, which at the time of his admission were greatly swollen, blotchy, and unwholesome, are now almost normal in appearance, and they no longer bleed.

There is no possibility of your getting away from the diagnosis which some of you have already made of this case, namely, rickets and scurvy. Last Monday (October 30th) we had under discussion, as you will remember, a girl with septic osteomyelitis. But I think that none of you would suggest that this is a case of that nature, with the septic inflammation attacking the lower end of each tibial and fibular diaphysis. Osteomyelitis is a common disease with children, but it is a terribly acute and lethal affection. A boy who was the subject of it would not be sitting contentedly as you see this boy. He would be looking desperately ill; his temperature would be high, the bone-ends would be exquisitely tender, and the neighbouring skin would be red, hot, and œdematous. I admit that these ankles are somewhat tender, but the skin over them is pale and cool. Moreover, as the House-Surgeon, Mr. Priddle, and the dressers will tell you, the boy has greatly improved since he has been under antiscorbutic treatment. No internal medicamentation, outward applications, or carefully-ordered diet would have had any influence whatever on the osteomyelitis of childhood; and if in such a case the surgeon refrained from active treatment the whole diaphyses would be quickly ruined, and perhaps the limb or the life lost. Lastly, I have never seen such a symmetrical distribution of the acute disease. This symmetry itself suggests some general constitutional affection. Certainly the case is not one of osteomyelitis.

Is anyone of you inclined to regard the case as one of a "rheumatic" nature? "Rheumatism" is a comprehensive term, and useful as a refuge when the practitioner is face to face with obscure affections. But the absence of constitutional excitement, the quiet condition of the ankles, and the absence of the redness and heat about the joint are all against that theory. Moreover, the disease is, as I have said, rapidly clearing up under an antiscorbutic diet, and his temperature is normal.

Having regard to the absolute uselessness of the boy's legs, and to the fact that he never moves them when in bed or on a chair, it is likely that the thoughts of some of you have wandered, if only for a moment, to infantile paralysis. But in that condition, although there might be local tenderness in the limbs, there would not be marked, symmetrical swellings, as you see here. Still, when scurvy attacks an infant, it is quite easy to fall into the error of attributing the motionlessness of the leg and thigh to an attack of poliomyelitis. Indeed, only on Monday last I went a considerable distance into the country to see an infant of seven months, who, it was thought, might be the subject of infantile paralysis, though the actual explanation of the pseudo-paralysis was periosteal hæmorrhage, the result of acute rickets. This infant had been brought up on a well known patent food administered in one of those terrible tube bottles which are in too general use.

Since this boy has been in the hospital, he has been fed upon fresh fruit and vegetables, beef jelly, sweetened lemon juice, milk, meat and bread and butter, and he has, as you see, greatly improved upon the diet. He looks happier because healthier; his ankles are much less swollen, and he moves his legs a little; his gums have lost their sponginess, and blood has entirely disappeared from the urine.

Altogether, the case is one of great interest and rarity. I certainly never saw scurvy in a child older than three years, though I know that it has been met with in children up to ten years by others. Still, I am sure that I might look for a long while before discovering many such records. A country boy of ten years is almost invariably a great lover of fresh fruit. Is it not somewhere about this age that he is apt to creep through a hole in the hedge to possess himself of a few of his neighbour's apples? But, strange to say, this boy has been subject to no such temptations.

Possibly you may imagine that scurvy-rickets is more apt to be found amongst the children of the poor than of the rich, but, as a matter of fact, the reverse is the case. If the poor woman sees upon the the hoardings or in the railway carriages the speciously illustrated advertisements of those patent foods (so-called), she pays no heed to them; their price has fortunately placed them beyond her reach. But the well-to-do mother takes a delight in buying them. I have seen many infants with scurvy-rickets, and my general impression is that the worst cases were those which had been fed upon the most extensively advertised patent foods. One of the last cases that I saw, however, was an infant in a large house in Kensington, who had developed the disease by being fed upon fresh cow's milk diluted with large quantities of barley water. This feeding had been going on for a long while. Some infants become scorbutic by being continuously fed upon pancreatised milk, and I very much fear that the widespread habit of scalding the nursery milk with the view of freeing it of certain germs of disease materially detracts from its value as a food for hand-reared infants. At any rate, I would urge you, as Dr. Cheadle has done in his valuable Lectures[2] upon the artificial feeding of infants not to keep on continuously with any kind of artificial food. But both doctor and mother are apt to be so pleased when they have at last discovered a food which apparently suits the baby, that they are afraid to give it up when the dietetic crisis has entirely passed away. And so it is that the intercurrence of rickets and of scurvy is invited.

There is another reason, as pointed out by Dr. Cheadle, why the child of the poor person is not so likely to develop scurvy as the child of the rich, and that is because the former is likely to have a much more liberal and varied diet. In the out-patient department of the hospital you ask a mother how her dyspeptic or rachitic child is fed, and her reply is generally of this sort, "We gives him something of what we have ourselves." Of course, physiologically, this may be very wrong, and something worse than wrong, when the infant is allowed to sip beer out of his father's mug, or even gin and water out of its mother's glass. But, on the whole, the system is not without its recommendation. For the potato and gravy, the chicken bone, or bit of crust which is given to be sucked, and the piece of banana or pulp of apple with which some of these small, rachitic infants are indulged, have probably the effect of preventing the rickets advancing a stage further, and becoming scurvy. For there is no hard and fast line between rickets and scurvy; the diet which begets rickets if only continued long enough will produce typical scurvy.

I ask my friend, Dr. Mahon, of Ballinrobe, who is sitting

beside me, if he ever saw a case of scurvy in a child in the West of Ireland, and he replies that he is glad to say that the people there are not yet sufficiently "civilised" for their children to be even rachitic. Yes, civilisation is certainly not an unmixed blessing. Not very many years ago rickets was unknown in America; now there is plenty of it in certain parts of New York and other large cities. So also with Victoria and New South Wales; with the introduction of civilisation rickets has made its unwelcome appearance in Melbourne and Sydney, and the fear is that it means to stay. Rickets must, therefore, no longer be considered "the English disease."

References.

[1] The Bradshaw Lecture, British Medical Journal, November 10th, 1894, p. 1031. [2] Smith, Elder, and Co., 1894.

THE HARVEIAN LECTURES
ON THE
SURGICAL TREATMENT OF TUBERCULOUS DISEASES.

By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S.,
Professor of Surgery in King's College, etc.

Lecture II.
Tuberculous Peritonitis.

[After some remarks on acute tuberculosis of the peritoneum, the lecturer went on to describe the following chief types of lesions which may be found in cases of tuberculous peritonitis:]

Varieties.

1. The peritoneum may be studded with tubercles of varying size, some small, greyish and transparent (the ordinary miliary tubercles) others larger and tending to become cheesy. These tubercles are scattered over both the visceral and parietal peritoneum, and there are frequently patches of fibrinous exudation over them which readily peels off, and in the early stage there is not necessarily any matting together of the intestines or shrinking or adhesions of the omentum or mesentery. The peritoneum is usually markedly hyperæmic. In these cases there is almost always more or less fluid present in the abdominal cavity, usually of a lightish straw colour, but in more acute cases somewhat opalescent or stained with blood. The sensation on putting one's finger into such an abdomen is the same as if it were passed into a bag of sago.

The tubercles are not usually distributed over the whole cavity, but are most numerous in patches, and this is more especially the case where the origin of the tuberculous peritonitis is some tuberculous lesion inside the abdominal cavity. For example, in peritonitis originating from the tubes, the tubercles are most numerous in the pelvis, and become less numerous as one passes from it; or, again, in tuberculous peritonitis originating in connection with tuberculous ulcer of the intestines, the tubercles are in the first instance most numerous over the intestines in the neighbourhood and less numerous elsewhere.

Although, as has been said, in these cases the intestines are not usually matted together, still in some instances the fibrinous exudation produces sufficient adhesion to prevent the free spread of the fluid over the whole abdominal cavity, and thus we may have one or more collections of fluid simulating cystic tumours.

2. In a second set of cases the formation of adhesions and fibroid induration of the omentum and mesentery are the marked features. The intestines become bound together in masses by new fibrous tissue in which miliary tubercles may be present. These adhesions are often very firm, and may in parts constrict the intestines, or in other parts, from their shrinking, lead to kinking of the intestine, and in both ways they may cause partial or even complete obstruction. Further, the intestines are not only adherent to one another, but they are also very apt to contract adhesions to the abdominal wall, and this forms a great difficulty in performing laparotomy in these cases, and it is also the great objection to aspirating the abdomen where fluid is present. Where the whole abdomen is involved these adhesions are especially marked between the liver and diaphragm. The omentum is also early involved in these fibroid changes, the two layers of the omentum become matted together, and the whole structure becomes much thickened and shrunken, and in an advanced stage forms a thick rolled-up mass like a sausage lying about or above the level of the umbilicus, and usually running more or less transversely across the abdominal cavity; it is generally adherent to the abdominal wall at this part. This thickened omentum contains numerous tubercles in its substance and scattered over its surface. The mesentery is also markedly affected with similar changes, and becomes thickened and shrunken and drags the small intestine up towards its root, and thus it comes about that when fluid is present it is most apt to collect towards the left side and lower part of the abdomen. The mesenteric glands are also enlarged, but not as a rule cheesy.

In these cases a certain amount of cirrhosis of the liver may be met with, or there may even be tubercles in the substance of the liver. The spleen also is not uncommonly enlarged, either as the result of passive congestion or hyperplasia, or in some cases from the presence of tubercles. This adhesive form of tuberculous peritonitis may or may not be accompanied by the presence of fluid, and where fluid is present it is most often encapsuled, and there may be more than one collection.

3. A third condition which may be present, and one which is extremely grave, is that the tubercles run together and form large masses which undergo caseation; the mesenteric glands are enlarged and caseous; the omentum is often converted into a caseous mass, and caseating masses form in the adhesions which bind the intestines together. The contractions and distortions of the intestine and the shrinking of the mesentery and the other changes mentioned under the second form are usually much exaggerated. This condition is especially associated with intestinal ulceration, and the intestine is usually thinned, and may even be perforated. Collections of fluid are frequently present, most usually encapsuled and multiple, and not uncommonly purulent. The pus may present all the characters of ordinary tuberculous pus, but in other cases it may be foul smelling, either as the result of infection through the intestinal walls, or as the result of actual perforation of the intestine. In this form, in infants especially, the condition may be most marked in the neighbourhood of the umbilicus, and the pus may make its way through the abdominal wall at this point. Where this occurs we find a sinus passing into the abdomen, and not uncommonly a fæcal fistula is present as well. As this fæcal fistula is usually in the small intestine, and often pretty high up, the child rapidly emaciates and goes down hill.

In both the second and the third forms the upper part of the abdominal cavity may be healthy, the disease being shut off above by the adhesion of the omentum to the abdominal wall at the level of the umbilicus. In other cases it may be still more circumscribed, and form a limited patch with fluid in the interior, this condition being most commonly met with in the form of an irregular fluctuating swelling in the left iliac fossa. Another local form is where it is limited to the pelvic region, which occurs especially in connection with infection from the Fallopian tubes; or, again, we may meet with a tuberculous perityphlitis forming a mass in the right iliac fossa, which has been mistaken for a malignant tumour. These masses are usually secondary to tubercle of the appendix or cæcum.

There are many intermediate forms and varieties of these pathological changes which it is impossible to enumerate here, but these are the three chief types, and they are of especial importance from the point of view of treatment.

Etiology.

[As regards the etiology of tuberculous peritonitis, the lecturer pointed out that it usually occurred in the course of tuberculous disease elsewhere, such as phthisis, tuberculous diseases of bones and joints, genito-urinary tuberculosis, etc., but in some few cases it has been the only tuberculous lesion discovered, and may therefore be looked upon as of primary origin. Judging from a number of published statistics, the frequency of the primary forms as compared with the secondary is something like 2 to 10 per cent. In these primary cases it has been supposed that the bacilli enter through the wall of

the intestine and thus reach the peritoneum, but it is most probable that they are deposited from the blood in some part where the resisting power has been diminished as the result of injury or other cause.

As a secondary disease tuberculous peritonitis may follow either some intra-abdominal condition or some tuberculosis elsewhere. Of the intra-abdominal conditions the most common are tuberculous ulcers of the intestine, tuberculous disease of the genito-urinary system, especially of the tubes in females, tuberculous mesenteric glands, tuberculous appendix and cæcum, etc. Many look on intestinal ulcer as one of the commonest causes of tuberculous peritonitis. A fair estimate of the frequency is about 20 per cent. The form associated with intestinal ulcers is usually the caseating form, and the most serious one both as regards the condition of the patient and the chances of recovery. Another common source of infection is the Fallopian tubes, a considerable proportion of the cases in women having their origin from that source. The tubes become enlarged, hard, and tortuous, and form thick sausage-like tumours containing cheesy material, with their walls dotted with tubercles; they usually fall back into Douglas's pouch, and become adherent to the structures there. Some have supposed that the tubal disease is secondary to the tuberculous peritonitis, but the reverse seems to be the most common cause.

Of the extra-abdominal sources, tuberculosis of the lungs occurs in something like from 25 to 30 per cent. of all the cases, while tuberculosis of the pleura is not uncommonly associated with the disease. It is most common in children and young adults.]

Sex.

As regards sex, a very curious result is obtained according as we take the statistics of cases operated on or of cases examined *post mortem*. If the statistics of surgeons are taken, the great majority of the cases occur in women. For example, taking at random three sets of statistics, Lindner publishes 186 cases, of which only 21 were males. Lindfors published 109 cases, of which only 9 were males; and König publishes 130 cases, of which 10 were males. This difference, though still maintained, is not so marked in children. Thus, in Aldibert's tables, I find 106 adult female cases and 11 males, while in children there are 30 females and 17 males.

On the other hand, if we take the statistics of the *post-mortem* room, we find a larger number of cases in males than in females. Thus Vierordt in 24 cases had 19 males and 5 females. König in 108 cases had 89 males and 19 females, and Schmalmack in 54 cases had 33 males and 21 females.

How these results are to be explained is very difficult to understand. We must, I think, assume that a much larger proportion of female cases come to operation than males; and if this be true we must also, I think, conclude either that the disease is much more readily recovered from in females than in males, of which there is no evidence, or else that operation has a remarkably beneficial effect upon it. That the latter is true will be evident when I come to consider the results of operation, and it must also be true that a much larger proportion of females are submitted to operation than are males. Many of these operations have been and are done from mistaken diagnoses or for exploratory purposes. The mistaken diagnosis is most usually an ovarian cyst, and hence it occurs only in females, and, besides, in women the abdomen is more often opened, and the proposal to do so is more often acceded to, than in men. Then also women with enlargement of the abdomen are more likely to come under the care of the gynæcologist and of the surgeon than men, and the surgeon thus chiefly sees cases of localised tuberculosis simulating tumours, while the physician sees cases of diffuse ascites and others which do not so often come under the care of the surgeon. To some extent also the difference between the two sets of statistics may be taken to represent the relative value of medical and surgical treatment, the patients not operated on appearing much more often on the *post-mortem* table than those who are.

SYMPTOMS.

The commencement of the disease is usually insidious and slow, although in some cases it may be rapid, and may then be mistaken for typhoid fever, tuberculous peritonitis, etc. In most cases the early symptoms are quite indefinite. The patient has a feeling of *malaise* and weakness, he is subject to headache, may suffer from thirst, does not sleep well, and frequently has night sweats. He soon begins to lose his appetite, feels out of sorts, and not uncommonly has occasional vomiting. The bowels are irregular, he frequently suffers from obstinate constipation or from diarrhœa, or again from alternate constipation and diarrhœa. By-and-bye he begins to have occasional abdominal pain, especially of a shooting character, or, it may be, only a feeling of weight or pressure. In other cases there is no pain at all; indeed, it is very seldom that pain is severe at the commencement of the trouble. The pain if present is increased by exertion. The temperature is very variable; there is generally an evening rise but it may not be marked; in a good many cases there is no rise at all, the temperature being normal, while in others again, after it has been normal for some time, it may suddenly commence to rise in the evening and assume a marked hectic type. In the early stage, except in the acute cases, the patients are able to go about, or even follow their employments, but from time to time they may have to lie up on account of feeling out of sorts, or of general weakness, or of increasing pain, and then, after a few days' rest, they are able to go about again. After some weeks or months, however, the patient has to give up work either on account of increasing weakness, or more commonly on account of gradual swelling of the abdomen, a feeling of weight, or more rarely severe pain, shortness of breath, etc. As the disease goes on the general symptoms increase, there is rapid advance in the malnutrition and emaciation, the skin becomes pale and sallow and dry, the cheeks sink in, and the patient acquires the suffering aspect of those with abdominal trouble. In others, again, the symptoms are much more acute, and in a considerable number of cases they have been mistaken for those of typhoid fever.

On examining the abdomen the condition of matters present depends on the pathological changes already described, and to a great extent also on whether there is or is not fluid, and on whether the fluid is free or in loculi. Where there is much free fluid present, the abdomen is distended, somewhat flattened at the sides, and the ribs everted. The abdominal wall is stretched and shining, with big veins running over it, and it is usually so tense that nothing can be felt through it. The pain is not generally marked in these cases. Where the fluid is less, the thickened omentum is readily felt in the form of a tumour-like mass of a sausage shape, generally running more or less transversely across the abdomen about or just above the level of the umbilicus, the omentum being thickened and rolled up by the fluid and the distended intestines, and pressed against and becoming adherent to the abdominal wall. The percussion note is uncertain and atypical, fluctuation is not distinct, and the fluid as a rule only changes its position slowly, owing to having to make its way among the adherent intestines. Under other circumstances, again, the fluid may be more or less completely encapsuled and form definite fluctuating tumours, which may be mistaken for ovarian or other cysts. On the other hand, there may be little or no fluid present; the coils of intestine become adherent, the mesentery contracts, the omentum is thickened and shrunken, and hard bands and thickenings are found in the abdomen. Thus one may not only feel the thickened omentum, but also definite patches of hardness elsewhere, due to these bands and thickened adhesions, or one may find more definite hard tumours which are generally composed of masses of glands or of thickened adhesions studded with tubercles, or of small collections of encapsuled fluid. The abdomen is uneven, owing to irregular distension of the intestinal coils with gas. There may be marked meteorismus, and, when the intestine is kinked or in any other way obstructed, the coils of contracted intestine may be seen through the abdominal wall. In the latter case, of course there would probably be other signs of obstruction. The splenic dulness, if it can be made out, may be increased. The liver dulness is not commonly diminished, but, on the other hand, the liver may be enlarged as the result of early cirrhosis or fatty infiltration. There is often decrease in the quantity of the urine, and not infrequently albuminuria. The stools are frequently light in colour, due to imperfect digestion of the fat.

It is not uncommon for the disease to be associated with various complications, more especially with intestinal obstruc-

tion due to kinking, bands, or narrowing of the lumen in connection with ulceration; or, on the other hand, perforation may occur, either through the ulcer or above an obstruction; or, again, we may have inflammation and thickening around the umbilicus, especially in children, which has been already referred to, and which is pathognomonic of tuberculous peritonitis. In bad cases belonging to Type III, where suppuration is present and emaciation usually rapid, there is generally considerable fever, and the patient quickly goes down hill. It is not uncommon for the disease to be combined with phthisis, or with pleurisy. Schreiber gives 26 cases, of which 12 had already tuberculous pleurisy; and Heintze in 25 cases had 20 with pleurisy. Although not as a rule so frequently present, pleurisy is nevertheless not at all an uncommon accompaniment; it may precede the peritonitis, or the two may begin simultaneously, or more commonly the pleurisy comes on after it. It often sets in insidiously, and in any case it is grave and increases the dyspnœa.

Prognosis.

[After some remarks with regard to the diagnosis of the disease, the lecturer went on to consider the prognosis where no surgical intervention has taken place. On this point authors are not quite in unison, the older authors looking on the disease as almost certainly fatal, and considering that the cases which recovered were not tuberculous, whereas of late views have become more favourable, Herringham, indeed, looking on the disease as one in which the prognosis is not at all bad unless complications are present. According to statistics put together by Pick some years ago with regard to children treated medically, the diffuse form (Form I) was always fatal; the caseating form (Form III) was fatal in 70 per. cent. of the cases (where suppuration was present the mortality was 82 per cent.; where it was absent it was 52 per cent.); the fibrous form (Form II) was fatal in 17 per cent. (of these the dry form was fatal in 14 per cent., and the ascitic form fatal in 19 per cent.). Pick's actual figures were 67 cases in all; of these, 27 died, 5 steadily got worse, 11 remained *in statu quo*, 21 improved, and 5 were apparently cured. The lecturer thought that these statistics probably gave very fairly the prognosis in cases treated without operation. Some remarks were then made about the medical treatment in these cases, after which the lecturer went on as follows:]

Surgical Treatment.

The value of surgical measures was found out quite accidentally. In 1862 the late Sir Spencer Wells, in operating on what he supposed to be an ovarian cyst, found on opening the abdomen that he had before him a case of tuberculous peritonitis. He therefore at once closed the wound again, but to his surprise the patient soon began to improve, and ultimately got well, and was alive and well twenty-five years later. As abdominal surgery became more and more developed, similar mistakes were frequently made, and further, as exploratory operations were introduced, tuberculous peritonitis was not uncommonly discovered. It was found that in a considerable number of cases after such mistakes or explorations, the patients rapidly got well, and by-and-bye it became clear that this could not be regarded as a mere coincidence but that laparotomy had a distinctly beneficial effect in a considerable proportion of cases of tuberculous peritonitis. Hence surgeons began to perform laparotomy as a curative measure in cases which were diagnosed as tuberculous peritonitis, with results which have established it as a highly successful means of treatment.

Statistics.

König was among the first to bring this plan of treatment definitely forward; in 1884 he wrote a paper on the subject, and in 1890 he collected from various sources 131 cases, with the following results: 8 died from the operation, mostly as the result of shock; 16 died some days or weeks later, chiefly as the result of extension of the disease, giving a mortality, immediate or remote, of 24, or about 19 per cent.; 23 improved, and 84 were apparently cured. In 48 of these latter cases a year had elapsed since the operation; in 30 over two years; and in 3 more than six years. Maurange gives statistics of 71 operations, with 6 deaths from the operation, 7 deaths from generalisation of the disease, and the remaining cases were successful, the improvement being confirmed in nearly half the cases one year or more after the operation. In 87 cases by Pick and Maurange in which sufficient details are given there were 7 deaths from the operation, 10 deaths from generalisation of the disease—17 in all, or nearly 20 per cent.—and 28 of the remainder were well a year or more after the operation. Roersch (quoted from Voigt) in 1893 put together 358 cases, of which 20 died, apparently from shock; 1 of acute bacillary peritonitis; 1 of intestinal fistula; 10 of septic peritonitis; and 51 within eighteen months, of extension of the disease, such as general tuberculosis, tuberculous meningitis, marasmus with stercoral fistula, etc., some of these having shown temporary improvement; in the remainder improvement followed, and in a large number there was apparent cure. For example, in 53 cases two years and upwards had elapsed since the operation, and the patients were apparently well.

Many other statistics might be given, but these fairly represent the results obtained, and show that of published cases of tuberculous peritonitis something like 75 per cent. are improved or cured by laparotomy. Whether this represents the real state of matters is, however, very doubtful, because statistics made up of isolated published cases are certain to be one sided, for the publication of a successful case does not imply necessarily that no other cases were operated on, and, if they were, the results were probably not so good. My own experience and the study of numerous complete statistics of small numbers giving all the cases operated on would lead me to reduce the above favourable figures considerably, and I should say if all cases of tuberculous peritonitis were operated on (not merely selecting those that are most favourable), 50 per cent. would probably be the outside limit of improvement or cure as the result of the procedure. On the other hand, if the more favourable cases only were treated by laparotomy the percentage of successes would be much higher. It is well to add also that although laparotomy may fail on the first occasion, a repetition of it, especially if the fluid has reaccumulated, may be followed by success. Thus D'Urso repeated the operation four times in the course of seven months, and after the fourth time success was obtained. Richelot likewise repeated it four times in the course of two years with ultimate success, and others have repeated it successfully on two or three occasions; hence a failure where the fluid tends to reaccumulate should not discourage one from making a second attempt.

Cases Suitable for Operation.

While, taking all cases together, the above is the average result, there is no doubt that some forms of the disease are more amenable to surgical treatment than others. Opinions differ very much on this matter, some saying that it may do good in all forms, and others that it is only in the fibro-adhesive form with ascites (No. II), especially where the collection of fluid is localised, that it is of any use. Some also point out that it is useless where there is ulceration of the intestine, or where the disease is secondary to tubal disease, whether the tubes are removed or not. The most complete attempts to work out this point have been made by Aldibert and Roersch, and though the results have been often quoted, I may introduce them here. I have arranged Aldibert's first three groups in tabular form, and have worked out the length of time during which these cases were under observation. (See Table.) The *post-mortem* appearances described in my first group correspond to Aldibert's Groups I 1, 2 and 3 and II 1. The changes described under the second heading correspond to Aldibert's Groups I 3*b* and II 2; and the changes described under my third heading correspond in part to Aldibert's Group III.

Aldibert also refers to 4 cases in which the abdomen was opened and enlarged mesenteric glands were found. In 3 of these recovery took place, but in 2 of them the length of time during which the cases were under observation is not given (in both of these some of the disease was removed). In one, where the abdomen was simply shut up again, the case was well eleven months later. One case died of septic peritonitis. He also gives 14 cases of intestinal obstruction in connection with tuberculous peritonitis, of which 5 died from the operation, and 4 subsequently of the disease; 5 recovered, but in only one instance was the patient under observation for

Aldibert's Cases Treated by Laparotomy.

Table A.—*Children up to 16 Years of Age.*

	Total.	Died.		Recovered.				Not Improved.
		Of Operation.	Later.	Traced for One Year and Upwards.	Traced for Six Months to One Year.	Traced for less than Six Months.	Length of Time not stated.	
I. With ascites: 1. Acute miliary tuberculosis	1	1	—	—	—	—	—	—
I. With ascites: 2. Subacute	6	—	1	1	3	—	1	—
I. With ascites: 3. Chronic (a) Generalised	16	—	1	3	4	4*	4	—
I. With ascites: 3. Chronic (b) Encysted fluid	9	—	—	1	2	2	4	—
Total	32	1	2	5	9	6	9	—
II. Fibrous form without ascites: 1. Without adhesions (that is, tubercles over peritoneum undergoing fibroid changes).	0	—	—	—	—	—	—	—
II. Fibrous form without ascites: 2. Generalised adhesions	5	—	—	3	—	2	—	—
Total	5	—	—	3	—	2	—	—
III. Caseating form: 1. Dry	1	—	—	1	—	—	—	—
III. Caseating form: 2. Suppurating (a) Generalised	1	—	—	—	—	1	—	—
III. Caseating form: 2. Suppurating (b) Localised Multiple	0	—	—	—	—	—	—	—
III. Caseating form: 2. Suppurating (b) Localised Single	5	1	—	1	—	—	1	—
Total	7	1	—	1	2	1	1	—
Grand Total	44	2	2	10	11	9	10	—
		4		40				

* One of these had recurrence, and was operated on a second time.

Table B.—*Adults.*

	Total.	Died.		Recovered.				Not Improved.
		Of Operation.	Later.	Traced for One Year and Upwards.	Traced for Six Months to One Year.	Traced for less than Six Months.	Length of Time not stated.	
I. With ascites: 1. Acute miliary tuberculosis	1	—	1	—	—	—	—	—
I. With ascites: 2. Subacute	12	1	5	1	3	1	1	—
I. With ascites: 3. Chronic (a) Generalised	48	1	13	12*	9	6	5	2
I. With ascites: 3. Chronic (b) Encysted fluid	56	—	7	19	7	9	10	4†
Total	117	2	26	32	19	16	16	6
II. Fibrous form without ascites: 1. Without adhesions (that is, tubercles over peritoneum undergoing fibroid changes).	1	—	—	1	—	—	—	—
II. Fibrous form without ascites: 2. Generalised adhesions	19	—	5	4	1	4	4	1‡
Total	20	—	5	5	1	4	4	1
III. Caseating form: 1. Dry	3	—	3	—	—	—	—	—
III. Caseating form: 2. Suppurating (a) Generalised	5	—	2	3	—	—	—	—
III. Caseating form: 2. Suppurating (b) Localised Multiple	1	—	1	—	—	—	—	—
III. Caseating form: 2. Suppurating (b) Localised Single	5	1	1	1	—	1	1	—
Total	14	1	7	4	—	1	1	—
Grand Total	151	3	38	41	20	21	21	7
		41		103				

* Three after operation for recurrences. † All recurred. ‡ Recurred after one year.

a sufficiently long time. Further, he gives 17 cases of tuberculous salpingitis with tuberculosis limited to the pelvis; of these 4 died and 13 recovered, 3 being well for over a year. There were about 24 cases of tuberculous salpingitis with generalised tuberculosis; of these 10 died, 3 improved, 1 recurred, and 10 recovered, 3 of these being observed for over a year. Lastly, there were were 70 cases which, on account of absence of details, could not be classified, and of these 15 died, 6 improved, and 49 recovered; 16 of the latter have been traced from one to fifteen years.

I may also refer to Roersch's statistics, which are larger, and which have been worked out in the same way as Aldibert's (quoted from Voigt). In the ascitic form in children there were 40 cases with 5 deaths, 35 recoveries, 7 of these being spoken of as definite—that is to say, observed for a considerable time (whether long enough I cannot say). In adults there were 146 cases, with 32 deaths and 99 recoveries (18 of these being definite). In the fibro-adhesive form in children there were 6 cases, with 1 death and 5 recoveries (3 definite): in adults there were 24 cases, with 6 deaths 17 recoveries (3 definite). In the caseating form there were 22 cases, with 9 deaths and 13 recoveries, 3 of these being definite.

If we study these figures the results come out very much as one would expect from one's own experience. In the first place I do not think that we can draw any definite contra-indication to operation from them. All, even the gravest forms, show some good result and there is no form in which we can say that laparotomy is absolutely useless. Most certainly we cannot go the length to which some go in saying that unless in cases with ascites there is no use in performing laparotomy. On the contrary, as is evident from Aldibert's statistics, the percentage of recovery in ascitic cases (76 per cent.) is not

very much greater than in the dry forms (70 per cent.), and even in the caseating cases a percentage of recovery of 46 per cent is shown. In my own experience I have had success in the dry form as well as in the ascitic, though, of course, one meets with many more cases of the latter. The statistics rather help us to give a prognosis as to the probability of recovery than enable us to state that laparotomy must not be performed in a given case. The immediate mortality of the disease, which in some of these statistics seems pretty high, will no doubt be less as time goes on. Septic peritonitis, for example, ought not to occur nowadays unless the intestine is ruptured and deaths from shock ought not to be frequent. In the first place cases should not be left until they are practically moribund before the surgeon is called in, nor in any case ought the operation to be so extensive as to lead to any material shock, more especially no attempts should be made in bad cases to remove any portion of the diseased tissue. Most of the deaths after operation are from intercurrent disease, or phthisis, and very frequently there is a temporary improvement before death takes place. These deaths would likewise have resulted without operation, and we can only say with regard to them that the patient has had the chance, but without success.

Prognosis of Laparotomy.

The prognosis of laparotomy naturally varies in different cases. The most favourable are certainly those belonging to the first group, with localised ascites, and the next most favourable are those where the fluid is diffused over the abdomen. I must confess that I have been surprised at the recovery in some of these cases. On opening the abdomen one finds tubercles everywhere, the intestines protrude from the wound, and are seen to be red, inflamed, and covered with tubercles, some of them sometimes of considerable size, the abdominal cavity feels like a bag of rice, and yet in these cases recovery may follow. In two instances in which I gave a very bad prognosis after the operation, on account of the size and number of the tubercles scattered all over the intestine and abdominal cavity, recovery took place rapidly and apparently completely. The next most favourable are the cases where there is no ascites and where we have the fibro-adhesive form to a moderate extent as described under heading No. II. Indeed favourable results have been obtained in this form even where the adhesions were so great that the operator never penetrated into the abdominal cavity. By some this fibro-adhesive form is looked on as a healing process, and it is held that the operation probably merely gives it a fillip in a good many cases. Where the abdomen contains large caseating masses the prognosis is much more grave, and as is evident from the results mentioned above the successes are not nearly so great. At the same time they do occur, and I have myself had a successful result even where there were large masses of caseating material. In this group however it is rather the case of giving the patient a chance than of any great probability of curing him. It must also be borne in mind that it is in these cases more especially that harm may be done by the operation, for unless great care be taken the intestine may be very readily torn and a fæcal fistula be established. Indeed in some instances, even where there is no apparent injury to the intestines, a fæcal fistula may result after the operation. In these cases also it is not uncommon to find that the scar breaks down subsequently, having become infected with tubercle, but even in spite of this healing may ultimately occur in time where a fæcal fistula has also formed, provided always that it is not large nor situated high up in the small intestine.

Cases with slight phthisis also frequently improve both locally and also as regards the lung after operation, but where the phthisis is extensive the result is not good. Opinions differ as regards the effect of pleuritic effusion on the results of operation, but as a whole it is not looked on as a contra-indication. Cases with intestinal ulceration are particularly unfavourable, and it is a question there whether laparotomy does any good at all. Spaeth also asserts that cases secondary to tubal disease are not benefited by laparotomy, even although the tubes are removed, but this is contrary to the experience of Aldibert and of a number of other observers who have obtained good results even where the tubes were not touched. The great risk of tuberculous peritonitis in these cases of tuberculous salpingitis, however, makes it essential that where a diagnosis of tuberculous salpingitis is made the tubes should be removed at once.

Time for Operation.

From the evidence, I should say that in practically all cases where improvement does not follow under medicinal treatment after a reasonable time, say in from four to six weeks in acute cases, to four to six months in chronic cases, the abdomen should be opened whether there be ascitic fluid or not. The operation may do good in cases where it is least expected to do so, and it is but seldom that it does any harm. Do not in any case allow the patient to go down hill too much, otherwise one cannot expect good results to follow, and it is fair neither to the patient nor to the surgeon. It seems to me a very questionable thing whether it is good for the patient that the ascitic fluid should be absorbed seeing that it contains toxins and bacilli, and therefore, as I have said, where improvement does not follow soon I believe that early laparotomy is best, and the medical treatment can follow the operation just as well, or better, than if it precede it.

On the other hand, it apparently does not do to operate too soon. Where one operates quite in the early stage, recurrence curiously enough is very apt to take place, and the explanation of this I believe to be that which I shall give presently in connection with the *modus operandi* of the operation. However it may be explained, it certainly is the fact that most of the cases where repeated operations for recurrence have taken place have been those in which the first operation was performed quite at the commencement of the disease. On the other hand, it is most important not to wait till the patient has gone too far downhill. If the patient suffers pain from bands, or from kinking of the intestine, or from obstruction, operation is necessary, even although much good may not result.

The Operation.

In operating, as has been before stated, it is well not to carry the procedure to the extent of attempting to remove any of the diseased tissues, such as excision of an ulcer of the intestine, the removal of tubes, etc.; unless, indeed, one finds only quite a commencing peritonitis at that part. The removal of the tubes, for example, in cases of advanced peritonitis would mean a prolonged and very different operation, owing to the adhesions, in a peritoneal cavity already very much inflamed, and one which would almost certainly precipitate the patient's death from shock. On the other hand, if on opening the abdomen one finds only slight commencing peritonitis around the tubes, then I believe they ought to be removed so as to prevent further infection. Similarly, in the case of the appendix or cæcum, while a few cases have improved as the result simply of opening the abdomen, the best results have been obtained in cases where the disease has been localised to that region, and where the appendix or the cæcum itself has been resected. On the other hand, in cases with intestinal fistula, operation is out of the question. The patient cannot stand a proper operation for resection of the fistulous portion, and the intestine in the neighbourhood of the fistula is usually so thinned and diseased that any attempt to stitch up the whole without resection practically always fails, and such attempts leave matters worse than they were before. Lastly, it may be said that if one is in doubt it is better to operate than to leave things alone.

Some, thinking that the beneficial effects of laparotomy were simply due to the evacuation of the fluid, have concluded that the same result could be obtained by aspirating the abdomen; this, however, does not seem to be the case; good results have certainly in a few cases followed puncture with evacuation of the fluid and injection of air, but simply tapping the abdomen seems to be quite inefficacious. Further, puncture of the abdomen is a procedure by no means free from danger in these cases. It is not at all uncommon for the intestine to become adherent to the abdomen in the middle line, and cases have occurred where it has been punctured by the trocar, and the death of the patient has resulted. Hence, partly on account of its inefficiency and partly on account of its danger, puncturing the abdomen should be given up as a means of treatment.

The operative procedure is very simple in most cases. Where effusion is present without adhesions, it simply consists in opening the abdomen in the middle line, below the

umbilicus, allowing the fluid to run out, aided by turning the patient on his side and perhaps removing some of it by means of sponges, and then stitching up the wound again. In former days the abdomen was washed out with various antiseptic solutions, such as carbolic acid, sublimate, etc., some leaving the solution in, others flushing out the abdomen afterwards with salt solution. Others again very carefully dried the cavity as far as possible with sponges and so forth. All this seems, however, to be unnecessary, and in reality inadvisable, for as good results are obtained by simple laparotomy without the introduction of any chemical substance at all, or even without flushing out the abdomen or complete removal of the fluid, as where these measures are adopted.

Where adhesions are present, care must be taken in opening the abdomen not to injure the intestine, and if the adhesions are firm it is better to leave them alone and close the wound than to try to force one's way in, unless fluid be present.

In the dry fibrous form, unless the intestine is becoming kinked or bound down by adhesions, it is seldom advisable to try to separate the coils on account of the risk of weakening the wall of the bowel, and consequently leading to a fæcal fistula. If, however, obstruction is present it must be relieved or an anastomosis must be made between the coils above and below. Should a rent occur in the peritoneal coat in the course of such an operation it should be very carefully stitched up.

When pus is found it should be washed out by salt solution, and it is then well to introduce a little iodoform and glycerine emulsion into the cavity before closing it.

The question of drainage has been raised in these cases, but there does not appear to be any advantage in drainage where the fluid is serous, and there is the disadvantage that in some cases it has happened that a tuberculous sinus has been left at the seat of the drainage tube. Even where pus is present, unless it be foul-smelling, it seems best to treat it like a chronic abscess elsewhere by washing it out thoroughly, injecting a little iodoform and glycerine, and closing the wound again.

An important point arises—namely, whether a primary focus such as a tube or appendix etc., if found, should be removed. This, as I have already said, depends very much on the extent of the disease. If the whole peritoneum is infected, then no attempt should be made to remove the primary focus, such attempts having generally ended disastrously. On the other hand, if the tuberculous peritonitis be limited to the immediate vicinity of the tube or appendix and cæcum, the removal of the primary source is very important, and much better results are obtained by so doing than by simple laparotomy.

As regards the course followed after laparotomy, in some cases immediate improvement begins, while in others ten days or longer may elapse before any noticeable effect is produced. In any case medicinal measures should be superadded to the surgical as soon as possible. In some cases the fluid reaccumulates, and there is then no objection to a subsequent laparotomy; indeed, as has been already said, there are some instances where several laparotomies were performed and where cure was ultimately obtained.

The Rationale of Laparotomy.

[The lecturer then made some remarks with regard to the *rationale* of the treatment. The results had been attributed to the use of antiseptics, to the introduction of air, to the introduction of light, to the contact with oxygen, to the entrance of non-pathogenic bacteria from the air, to alterations in the circulation as the result of the removal of the exudation, to the removal of toxins, to the setting up of adhesions, etc., but none of these suggestions gave any real explanation. The author made the following suggestion:]

The matter seems to me very much on the same footing as the problem, Why it is that when we open an acute abscess antiseptically we do not have any more suppuration? and it seems to be on the same footing also in this respect, namely, that if we cut down on a commencing suppuration too soon before an abscess has formed we do not necessarily check the suppuration. As I have already said, if we operate too early in tuberculous peritonitis, we apparently do not get the same good result as if we wait until the disease has become more established. The question in the case of the abscess is as great a mystery as the other. The theory which I have suggested in the case of acute suppuration is that during the course of the disease an antitoxin is being formed in the blood, and that, as the result of opening the abscess, large quantities of serum are poured out and brought thus in contact with the bacteria in the wall of the abscess, and exert an antibacteric effect. On the other hand, if the operation is performed too early, the serum has not had time to acquire a sufficient antibacteric property and further the same amount of serum is not poured out It is possible that the conditions are somewhat similar in tuberculous peritonitis; where a large quantity of fluid is rapidly removed serum is certain to be poured out to a considerable extent, and this serum may, as I say, be more or less bactericidal. Even in dry peritonitis the irritation of opening the abdomen and separating a number of adhesions leads also to effusion of serum, and it may be that the reason why in dry peritonitis the result is not quite so good as in peritonitis with effusion is that this serum does not act over the whole of the affected area, as it would do if adhesions were absent, or if the whole area were exposed to rapid increase in circulation where a large diffuse collection of fluid has been removed. Further, following on the weakening of the bacilli as the result of this antibacteric serum which is poured out, we have exudation of cells and increased fibrous formation and fibroid changes in and around the tubercles which complete their destruction.

However the matter be explained the truth is that laparotomy in tuberculous peritonitis often leads to a real cure of the disease. This has been definitely proved quite apart from the fact that the symptoms completely disappear, and the patient apparently entirely recovers. In some cases the abdomen has been subsequently opened for some other reason, and it has been found that not only has the tuberculous effusion disappeared, but that even the adhesions and results of the tuberculous peritonitis have also gone. In some cases the abdomen opened a year or two after the operation for tuberculous peritonitis has been found with its peritoneal lining quite smooth and normal. In cases where the abdomen has been opened for a second time during the course of the disease, and where portions have been removed for microscopical examination, it has been found that the mode in which the disappearance is effect is similar to that already known with regard to disappearance of tubercles elsewhere, namely, spindle cells form in the tubercles, possibly to some extent from the epithelioid cells themselves, and the tubercles are gradually converted into fibrous tissues. I had the opportunity in one case of examining the state of matters in a healing tuberculosis of the peritoneum—namely, in a case where I operated for radical cure of hernia, and where, to my surprise, I found that the omentum and the whole of the peritoneum, as far as I could reach, were studded with tubercles. In that case there was no previous history of pain or any other trouble about the abdomen, so that I could not ascertain when this tuberculosis of the peritoneum had set in. I removed portions of the omentum which were present in the hernial sac, and on examining them microscopically found that the tuberculous nodules were for the most part completely converted into fibrous tissue. In some of the nodules, however, I could still detect sufficient remains of the original structure to satisfy me that it had really been a case of tuberculous peritonitis.

[In conclusion the lecturer mentioned that similar results, both as regards arrest of the disease by laparotomy and as regards the changes in the tubercles, had been obtained by experiments on animals, especially on dogs.]

MEDICAL INSPECTORS IN CHICAGO SCHOOLS.—The School Board of Chicago has decided to appoint fifty medical inspectors with special reference to preventing the spread of contagious diseases among children. The inspectors will examine pupils who have been absent from school four days or more, and all those who show symptoms of fever or sore throat. The plan, which is modelled on that already adopted in New York and Boston, will be tried for two months as an experiment.

LECTURES
ON
PHARMACY AND THE BRITISH PHARMACOPŒIA.

Delivered before the Society of Apothecaries of London, November 28th, 1899.

By Professor NESTOR TIRARD, M.D.Lond., F.R.C.P.,
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Lecture II.

The "Pharmacopœia" in its Relation to Medical Men.

Unemployed Drugs.

Master, Wardens, and Gentlemen,—On the last occasion I spoke of the *Pharmacopœia* mainly as it concerned the medical student. I then briefly mentioned the lengthy list of omissions, to which I drew your attention with considerable satisfaction.

The needs of the medical student are not far removed from those of the medical man, who, like the student, desires accuracy, simplification, and the elimination of useless material. He is also interested in the additions and alterations that may be made. These changes are determined by the scope and limitations of the *British Pharmacopœia*, and it is convenient to consider these together.

Although lately one member of the Pharmacopœia Committee in a friendly way criticised the suggestion in the syllabus that there could possibly be any limitations in connection with the *Pharmacopœia*, nevertheless the limitations and scope are accurately defined in the preface. The Therapeutic Committee of the British Medical Association endeavoured to ascertain the views of medical men with regard to many drugs that might possibly be omitted, or at all events with regard to a list that was drawn up, and in which medical men were asked to indicate the relative frequency of their employment of certain drugs. The information thus obtained was published in the British Medical Journal and presented to the Pharmacopœia Committee of the General Medical Council. This summary appeared to afford a measure of the requirements of medical men, but it was not quite satisfactory, since of the number that had been sent out, nearly 12,500, only about half were returned. Some surprise was felt when it was found that although we had drawn up a list of about 120 drugs or preparations, thinking that many were never used at all, yet every single drug in that list appeared to be used often by some medical men. For instance, copper nitrate was often used by 22, matico leaves by 67, cetraria was often used by 44, decoction of cetraria was often used by 52. Such results were not anticipated.

Following up this investigation still further, several separate inquiries were instituted, and letters were addressed, for instance, to the 94 medical men who had stated that they *often* used the extract of aconite, and to the 354 who *often* used extract of conium. They were asked kindly to say in what cases, in what doses, and with what objects, they used these different preparations. And then, in the words of Oliver Goldsmith, "Soon a wonder came to sight..." I am not going to give the full quotation. It was found that from many an apologetic letter came back saying that tincture of aconite, not extract, was meant; or that the extract of conium in the list had been mistaken for one of the other preparations. Hence allowance had to be made for errors due to haste and errors due to misunderstanding of the limitations of the original inquiry. To avoid hasty generalisation, one or two pitfalls had been introduced; thus the liquor ammonii acetatis had been inserted, as well as the liquor ammonii acetatis fortior. But this precaution was not quite successful; 1,287 never used the former, 2,381 never used the strong solution; in fact, a good many of these papers were returned with something like this written across them, "A most useless set of drugs; I never employ them." Still, although not accurate, the list indicated broadly the relative employment of these articles. A margin had to be allowed for carelessness, and the papers could only be used with discretion.

Certain broad principles, however, govern the construction of the *Pharmacopœia*. Thus it should contain certain drugs, and it should rigidly exclude certain others; it should include, for instance, drugs of known composition, it should exclude those of doubtful composition. Another principle is that, if possible, the drugs mentioned in the *Pharmacopœia* should be those with definite physiological actions, for instance, no drug should be included for whose presence there is any difficulty in accounting satisfactorily, that is, those responsible for the construction of the *Pharmacopœia* should be able to say why any particular drug is included, and the chief justification for inclusion should be the possession of well-marked physiological and therapeutic actions which have been ascertained and are capable of being proved by experiment.

Then again the *Pharmacopœia* should contain the drugs that were desired by the many who prescribe, and should exclude drugs asked for by a few individuals whose objects may be open to doubt; it should not include any drug whose admission is solely to be accounted for by the desire of the maker.

Then with regard to the limitations of the *Pharmacopœia*, these should increase the utility of the work. A book of very large size that would be put on a shelf and never referred to would be of little value. To economise space all that should be admitted is the account of the tests of purity, of the characters by which the drug can be recognised, and of its composition.

Influence on Practice.

In the course of the investigations on behalf of the British Medical Association we were by no means free from numerous scornful remarks about the *Pharmacopœia*, and they were not confined to the special list of drugs concerned in our inquiry. Many practitioners considered the book antiquated, and said they either used one of the manufacturer's lists of drugs, or one of the "companions" or books which comprised lists of newer remedies. Now, the influence of the *British Pharmacopœia* on practice is shown by the way in which it answers the question, "Does the *Pharmacopœia* contain the substances —not all, but the majority — that are needed in our daily medical work?" Of course we may come across an exceptional case of disease for which a relatively rare drug must be prescribed. As a rule, however, for the ordinary work of life the *Pharmacopœia* should contain all that is needed. It is, however, perfectly possible for it to do this and yet not to satisfy the next requirement, which is still more important—"Does it contain substances, or preparations of these substances, in such a form as to favour their employment?" This I believe to be the key to the position of the *Pharmacopœia* in the present and in the future—the extent to which it facilitates prescribing.

Simplification of the doses appeared likely to foster the increased employment of the pharmacopœial preparations. Permit me for a moment to contrast the extremely irregular doses of the drugs of the *Pharmacopœia* of 1885 with those of the present issue, and contrast the former with the system adopted by the makers of most of the proprietary preparations. The *Pharmacopœia* of 1885 imposed a heavy burden on the memory, which has frequently been evaded by prescribing proprietary preparations, which present no such difficulty. When a disease has been correctly diagnosed, we may be very much hampered by momentary forgetfulness of the official dose of the appropriate remedy. To remove this difficulty it became a question whether groups could not be made in the *Pharmacopœia*, groups in which the doses should correspond. There are different ways of producing greater harmony. One which recommends itself to most pharmacists is to arrange that all preparations of the same nature should be made with the same proportion of active ingredients and solvents; for instance, that the liquors of the *Pharmacopœia* should be 1 per cent. solutions, the spirits 1 in 10, the tinctures 1 in 20, or whatever it may be. Starting from the point of view of getting uniformity of composition, it is perfectly obvious that the greatest divergences of doses must result; and although it is easy for students to remember these proportions for examination purposes, the practical work later in life must suffer.

Another way of grouping preparations is by modifications of the dose, by making the preparations stronger or weaker, forcing them up or down to the same degree of relative activity. This has long been considered desirable but the difficulties involved seemed very great. One difficulty was to measure or compare the relative action of drugs like mor

phine and strychnine, a drug which is a sedative, and one that is a stimulant to the nervous system. How was it possible to obtain equivalent doses for preparations of drugs of dissimilar actions? I admit this was difficult, but still, it had to be done.

The chemist has the *Pharmacopœia* at hand for reference when compounding, and can refer when in doubt, but the prescriber cannot refer. It shakes confidence to see a prescriber take down the *Pharmacopœia* and look up the dose. For this reason, if for no other, it seems that the convenience of the prescriber should be consulted rather than that of the chemist.

There are various ways of determining the average dose of any particular drug. Chemists, who keep copies of the prescriptions dispensed, may be asked to draw up lists indicating the range of dose of any particular drug. Another way is to write to individual members of the profession, teachers, or practitioners in large practice to ask their opinions about the doses of certain drugs. Both of these methods may lead to very wrong conclusions. It might be found later, for instance, that, like sheep, we were following a leader who had originally fixed the dose in a haphazard manner on insufficient data, and that the body of the profession had gone on prescribing this dose. It is perfectly possible for a drug to be largely advocated by someone highly placed in the profession, and for this drug accordingly to speedily pass into general use. We all know the sort of wave of enthusiasm that so often greets the introduction of a new remedy; and yet it is often found later that all this enthusiasm was based on a mistake, merely upon an error of observation, and that for the particular disease for which it has been prescribed the drug has no special value; the improvement resulting from the natural tendency to revert to the normal, independently of any remedy in any dose.

Another totally different method of proceeding is to test the drug by its effects on healthy individuals, and while we do not necessarily prove the probable effect on diseased processes, we find out whether there is a limit of range for a particular drug. Thus, with the alkaloids, morphine and strychnine, of course it is perfectly easy to find what is a poisonous dose, but we desire to ascertain the dose which will produce symptoms or effects which would call for a reduction of the dose, or for its less frequent administration. Many of us have gone through this experience with various drugs at various times. We make experiments upon ourselves to find out what are the first symptoms produced by any particular drug, and what is the dose which is sufficient to produce unpleasant symptoms. Then we have something definite to go upon; we must stop short of this limit of the range. I have been speaking perhaps in rather general terms, but, to be more precise, we know that in practice with arsenious acid we should look for certain indications for reducing the dose, and the upward limit of dose should not produce these mild toxic symptoms. The doses in the *Pharmacopœia* aim at being average doses; formerly the official doses have been freely criticised, and thought to be unequal, some being much too large, others too small, while the doses of some galenical preparations did not harmonise with the doses of their constituents.

In considering changes which have been made, it is well to remember that "the doses mentioned in the *Pharmacopœia* are intended to represent the average range, in ordinary cases, for adults. They are meant for general use, but are not authoritatively enjoined by the Council."[1]

There we have in a nutshell the principle which influenced the recent changes in the doses. They were brought down to facilitate the use of the *Pharmacopœia*, to increase the range of our therapeutic resources, and to lead the profession, as a whole, to prescribe pharmacopœial preparations more frequently, and thus tend to reduce the baneful practice of prescribing proprietary preparations.

Having determined the principles on which the doses were to be given, and having found the equivalent mild toxic dose of various alkaloids, the strengths of the different official preparations had to be adjusted. For instance, with the preparations of nux vomica, it was desirable to argue from the proportion of strychnine present, taking strychnine as the active alkaloid instead of considering, as in the last *Pharmacopœia*, the total alkaloids present.

The Additions.

A list of the additions is to be found in the prefatory pages. At first sight this list appears rather lengthy, but on consideration it will by found that it can be divided into two groups, one consisting of new drugs or new chemicals, the other of new galenical preparations. Of these two, the first is of greatest interest to us professionally. It includes only seven or eight absolutely new drugs, that is to say, new to the *Pharmacopœia;* I do not mean that the *Pharmacopœia* has invented them, but that it has officially recognised them as generally used. The chief additions are the following: Bismuth salicylate, the two preparations derived from hyoscyamus, hyoscine hydrobromide, hyoscyamine sulphate, naphthol, salol, terebene, and the dried thyroid, with the official liquor thyroidei. It is perfectly easy to justify the inclusion of all of these except the last two. I do not want to dispute their value in medicine, but I feel rather grieved that a substance of animal origin has been introduced into the *Pharmacopœia;* one of uncertain composition, and still more uncertain tests—one that is so difficult to prepare, that I doubt whether it will be made except by those who manufacture on a large scale. It is to be regretted that official recognition has been extended to a substance which has already given rise to many disputes and many adverse criticisms. The other additions, however, can be cordially welcomed; bismuth salicylate is largely used, and compounds of hyoscyamine and hyoscine are given in lunatic asylums as sedatives, and some practitioners employ them for the sleeplessness of Bright's disease where morphine is undesirable, or in sleeplessness associated with weakness of the circulation, where chloral, sulphonal, and trional are not advisable. They are considerable additions to our therapeutic resources, and most of us are thankful for them.

With regard to the others, half a dozen new chemical substances are introduced, mainly on account of their greater solubility. Thus, codeine phosphate is soluble in 4 parts of water, while codeine is soluble in 80. Acid quinine hydrochloride is also more soluble than the neutral hydrochloride. There are a few new effervescent preparations, but these are only modifications of drugs previously in the *Pharmacopœia*.

It is not necessary to discuss here the advantages or disadvantages of using sulphate, hydrochlorate, or tartrate of morphine. It is for the chemist to decide which acid will best facilitate his processes. There are also two drugs—Virginian prune and quillaia—which are introduced, one as a flavouring agent, the other to aid dispensing purposes.

Turning next to the long list of new galenical preparations, these are of considerable interest both to medical men and to pharmacists. Some facilitate the standardisation of various preparations such as the liquid extracts of belladonna, ipecacuanha, and nux vomica. Some, on the other hand, like the concentrated liquors, are inserted tentatively, with the view of endeavouring to show that the *Pharmacopœia* should and does contain drugs in the form in which it is most convenient to employ them.

We all know that concentrated tinctures and concentrated infusions have for a length of time been before the profession, and that in the country, where there is a limited space in the dispensary, it has been the practice to employ such concentrated preparations which merely require to be diluted at the time they are dispensed.

It was thought desirable to introduce a new series of preparations which should be employed instead of the unofficial concentrated solutions, or perhaps in lieu of many of the decoctions or infusions which were omitted. I do not think that much need be said of the other new preparations, except that they were intended to meet the requirements of medical men, as, for instance, lozenges and ointments.

I must leave for my next lecture the alterations and changes which concern the chemist mainly, though they are also of interest to medical men.

REFERENCE.

[1] Preface to the *British Pharmacopœia*, p. xv.

VENEREAL DISEASES IN THE RUSSIAN ARMY.—Official statistics of the Russian Army Medical Department for 1897 show that during that year 34,228 men, being 35.4 per mille of the total force, suffered from venereal diseases. During the same period, 17,703, or 18.3 per mille of the Russian army, suffered from eye diseases.

ON PRIMARY RESECTION OF GANGRENOUS INTESTINE.

By ARTHUR E. BARKER, F.R.C.S.,

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The question as to the line of action to be adopted in cases of gangrenous strangulated hernia is still, I believe, a matter of anxious doubt to most surgeons. Three courses are open to us in such cases:

1. We may simply incise the gangrenous loop and establish a permanent artificial anus, thereby obviating the risks of obstruction otherwise certain to terminate in death.

2. We may perform the same operation, and when the dangers of the primary condition are past, proceed to rid the patient of the unpleasant and often dangerous intestinal fistula by subsequently resecting the part of the bowel involved and restoring its continuity.

3. Lastly, in a given case of gangrenous hernia we may at once proceed to do a primary enterectomy, removing the dead loop and restoring the track of the tube once more.

Which of these courses we shall adopt depends in the first place upon the view we take as to the relative risks of each. On this point it is difficult to speak with certainty. But my own observation in many cases is leading me more and more to the conclusion that with our improved methods of intestinal anastomosis the latter course is the best, where the patient is not too exhausted. For the dangers of the first course are admittedly considerable both immediately and remotely. And although in the past they compared favourably with those of primary and secondary resections, it is a question whether at present they should be regarded as slighter in the main. Probably a good deal depends upon the selection of cases in regard to this point. Aged people exhausted by prolonged vomiting and restricted food will most likely be better treated if an artificial anus be made at once, to be followed, if possible, by secondary resection of the bowel and junction of the two ends, while in younger and stronger cases a primary resection will be more suitable. But, above all, this question will be influenced by the surroundings of the patient who is to be operated on. If these be bad, no doubt the simpler operation ought to be selected. But if the surgeon have at his command all the necessary conditions for treating such a case according to the most approved methods, both before, during, and after operation, the results of primary resection may prove as perfect as those of any other surgical procedure, the after-history being simple, and the functions of the bowel perfectly unimpaired.

The last two cases in which I have been called upon to operate for gangrenous hernia illustrate this very well, and appear to me to deserve record.

Case I.—Primary Resection of Gangrenous Hernia: Recovery.

Mrs. H., aged 46, was admitted into University College Hospital, on June 2nd, 1899.

History.—The patient was a healthy woman with a good family history. On May 31rst she was seized with violent pain in the abdomen at about 8 P.M., and had sickness and diarrhœa all night, the vomit becoming foul next morning, while the diarrhœa ceased. The pain was felt most in the left groin. On admission a tight left femoral hernia was found.

Operation.—June 2nd, 1899, 9 P.M. On exposing the sac it was found gangrenous as well as the intestine, and great care had to be exercised lest the peritoneum should be infected. Both structures were well drawn forwards, and the sac was cut away in healthy tissue. After thorough drying out of the area of operation, and washing with mercury perchloride (1 in 1,000), and again drying, the intestine was drawn out, and 9 to 12 inches were clamped with a Doyen's forceps, the afferent and efferent portions of the loop lying side by side. The loop was now cut away close to the mesenteric attachment. The orifices of the intestine were then cleansed with 1 in 1,000 bichloride solution and dried, and their approximated edges stitched together with fine silk passing through all the coats. The same continuous suture was then passed through the opposite edges until the lumen was closed, and the two ends of silk were tied where they met. A second continuous silk suture was now carried round outside and close to the first, but this time only including the muscular and serous coats. The edges of the divided mesentery were now sutured by continuous silk suture, and after final cleansing and washing with normal salt solution were allowed to drop into the abdomen. As the sac had been found to be gangrenous a wisp of iodoform gauze was inserted into the abdomen through its neck, and the wound was stuffed with the same, only the upper and lower angles being sutured.

After-History.—The patient bore the operation well, and had no bad symptoms. The packing of the wound was removed on the fourth day, and the wound was found clean. There is nothing further to record except uninterrupted recovery, the wound healing by granulation. Feeding was began at once by the mouth, and soon increased to solid and abundant diet. She left the hospital on July 20th, looking and feeling quite well. The portion removed was about a foot in length.

Case II.—Primary Resection: Recovery.

History.—E. K., aged 20, was seized on Monday, June 12th, 1899, with severe pain in the abdomen while carting. He went home, and was seen by a doctor, who gave him some medicine, but he vomited it up at once. Next day he was advised to keep his bed. On June 14th he was told he had a rupture, but the doctor was unable to reduce it. He was again seen by the doctor on June 15th, but no attempt was made to reduce the hernia. On June 16th the latter was larger, and the patient was sent to hospital. He had been vomiting ever since Monday.

Condition on Admission.—June 16th, 1899. The patient was a fine, healthy young man. The abdomen was found to be distended but not tender. There was a large hernia in the right inguino-scrotal region, very hard, and showing no impulse on coughing. The temperature was 100.6°.

Operation.—He was operated on at once through the usual incision. The sac contained blood-stained fluid. The knuckle of intestine 2½ inches long was bluish black, and almost gangrenous. The wound in the abdominal wall was enlarged, the gut was pulled out, and the upper part where it was quite sound was laid side by side with the efferent part, where it was normal though greatly reduced in size. In this position both were clasped together accurately with Doyen's forceps, the blades of which ran along the mesenteric border of the loop to be removed. When the latter had been surrounded with aseptic gauze the loop was cut away with scissors from the mesentery. The edges of the latter were then sewn together with fine silk by the continuous method. The approximated edges of the two ends were then stitched together with a continuous silk suture which passed through all the coats of the bowel, special care being directed to the mesenteric angle. The same suture was then carried through the opposite sides of the intestinal edges in the same way, and the silk was tied to the first end, purposely left long. Then the forceps were removed, and a continuous silk suture was carried round the intestine over the first, but only including the serous and muscular coats. After washing the line of suture first with 1 in 1,000 bichloride solution, and then with sterile normal saline lotion, and when carefully dried with sterile gauze the loop was replaced. The sac was then drawn down, tied at its neck, and cut away. A radical cure was now done by Bassini's method, and a sterile dressing applied.

After-History.—The patient bore the operation well, and had 300 c.cm. of normal saline solution injected hypodermically immediately after. He was very restless subsequently, requiring morphine. Rectal feeding was at once begun, and continued daily. On the fifth day he was fed by the mouth every two hours, and on the sixth each hour. From the ninth day on he had light solid food. On this day the wound was dressed for the first time. The upper two stitches had suppurated: the rest of the wound was healed by first intention. On the thirteenth day the patient had a copious motion, and was soon quite well except from a small granulating spot at the seat of the suppurating stitches. He went home on July 14th, and came to show himself on July 26th. He was in robust health, and unconscious of any abnormality in his abdomen. The bowels acted well. The loop of intestine removed measured 30 to 36 inches.

As to the factors which appear to me to contribute most to a successful result, they may be divided into: (*a*) The preliminary treatment of the patient before the operation; (*b*) the details of the operation itself; and (*c*) the after-treatment.

(*a*) *Preliminary Treatment.*—In all cases where there has been stercoraceous vomiting the stomach should be washed out with a tube and funnel with warm brandy and water until quite clean. The patient should then be wrapped from head to foot in warm flannel or wool and lie between two hot bottles, with another between his legs. The area of operation having been cleansed and shaved in the usual way, should be covered with aseptic gauze, so that the intestine drawn out shall not come in contact with the skin, and so that any septic fluid from the latter shall not run back into the wound or abdomen. With feeble individuals, if not in all, it is desirable that hypodermic transfusion of warm normal saline solution should be provided for throughout the operation to make up for the fluid lost by vomiting, sweating, and lung exhalation. This is easily carried out by an assistant with an aspirator needle thrust into the areolar tissue of the arm, and connected by a tube with an elevated glass vessel holding the solution. Besides this it is well to give a copious enema of hot water and brandy. By these means the shock of the longest operation may be minimised. Local analgesia with eucaine beta should be used with all but the most excitable individuals. With such I prefer chloroform.

(*b*) *The Operation.*—Here everything which saves time is of the utmost importance. When the bowel is reached it must be drawn well out until a part is reached where the coats are perfectly healthy. In Case II I had to resect about a yard or so. This loop must be packed round with aseptic gauze most carefully. It is then emptied by pressure and clamped. Nothing is better for this purpose than Doyen's forceps, the long blades of which should run close to the mesenteric attachment, and across the two lumina of the afferent and efferent tubes first placed accurately side by side, the smaller efferent tube being spread out as much as possible to corre-

spond with the larger afferent. The loop is then well wrapped in sterile gauze, and removed by scissors cutting along the mesenteric border and obliquely across the two tubes, so that the free margin of what is left is shorter than the attached. The two adjacent open lumina are then wiped dry with sterile gauze, and mopped with 1 in 1,000 sol. hyd. bichlor. and later with saline solution. The ends are then united without removing the forceps, as described in Case II. Murphy's button, of course, may be employed, but after a considerable experience of it I must say I have more faith in silk suture. Before dropping the sutured bowel back into the abdomen, the exposed portion should be gently washed with saline solution, and carefully dried. In all these manipulations every kind of irritation of the gut or peritoneum with strong germicides must be studiously avoided. If they are used at all it should only be to the cut edges of the bowel. As to whether the abdominal wound should be closed or drained, it is quite impossible to lay down rules. In Case I it was stuffed with iodoform gauze for a few days, and then allowed to granulate up; in Case II I did a radical cure by Bassini's method at once. But in the last case the sac was not in a state of gangrene as in Case I.

(c) *The After-treatment.*—I venture to think that hypodermic transfusion of saline solution twice a day to the extent of a pint or so each time is an important factor in after-treatment, and it has proved of great use in many of my other abdominal cases. Nutritive enemata every four hours, and hot water enemata every four hours, alternating with the last, have for many years been a routine treatment in all my case of abdominal operation. But in these special lesions I believe that cautious feeding by the mouth may be begun at once.

All these factors require to be carefully taken into account and provided for before the operation is begun to obtain the best results. Where many of us have made the most serious mistakes in the past has been in the too free use of strong germicides on the peritoneal surfaces, and in removing too little of the intestine.

FRACTURE OF THE SPINE IN THE LOWER DORSAL REGION:

OPERATION FOUR YEARS AND A-HALF LATER: PARTIAL RESTORATION OF WALKING POWERS.

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E. W., aged 22 at the time of the accident, was training in the West Cumberland Hussars on June 1st, 1893, when his horse reared, fell back, and crushed the rider, who was also dragged for some distance, one of his legs being retained in the stirrup. He remained paralysed from his waist downwards. I first saw him in August, 1896, three years and two months after his accident. He was then at the Home for Incurables at Carlisle, and was in a very weak state of health. There was an acutely angular projection of the tenth dorsal vertebra. He had very slight power of flexing the left thigh upwards as he lay in bed, but the lower limbs were absolutely useless to him. There were several bedsores, which had commenced a few months after the accident and had continued more or less since, and other symptoms of paralysis which I will describe later. It was obvious, from the fact of his having lived so long, and of their being some movement in the left leg, that the cord was more pressed upon than crushed, and I suggested that laminectomy, to relieve that pressure, was desirable.

The patient was very anxious to have everything done that could be for him, but for various reasons he was unable to come to London until January, 1898, when he was admitted a patient under my care in the City Orthopædic Hospital, Hatton Garden. His condition was then found to be as follows:

There were several old scars from bedsores, as well as the open sores. Complete anæsthesia and analgesia of the whole of the right inferior extremity, with the exception of the upper third of the front of the thigh, where the patient detected both touches and pricks. Sensibility was not so much affected on the left side, the patient being able to detect touches and pricks above the level of the knee, both in front and behind, and over a limited area below the knee, in front and on the inner side of the leg. Below this level there was complete anæsthesia and analgesia. There was no blunting of sensibility of the trunk, the muscles of both limbs were greatly wasted, and there was considerable contracture of the calf muscles, both feet being extended and the heels drawn up. There was also some amount of "varus," especially on the left side, and the toes were bent towards the soles of the feet. This contracture of the toes in the flexed position had been more marked on the right side than the left, and most marked in the great toe, but diminished in degree towards the little toe. There was complete inability to move the toes of either foot or the feet at the ankle-joints. The right leg could be slightly drawn up in bed, flexion at the hip and knee-joints thus resulting, but there was no power of extending the limb at the knee-joint, so that the heel could not be raised from the bed. The power of movement, which was preserved in this limb, was only very slight in degree. There was somewhat greater range of power of movement on the left side, shown by ability to draw up that limb in bed, flexion of the hip and knee resulting. There was slight power of extension at the knee-joint, so that the foot and heel could be raised off the bed to some extent.

Reflexes.—The plantars were both absent as well as the knee-jerks, and there was no ankle clonus. There was complete loss of control over both sphincters. The patient was in a very emaciated condition; for some months he had been failing as regards his general health, and was able to take but little nourishment. He was suffering from cystitis.

Operation.—On February 5th, 1898, I operated, with the assistance of my colleagues, Mr. Jackson Clarke and Mr. Chisholm Williams, Mr. John Poland also being present. I cut down to the spine, exposed the laminæ of the tenth, eleventh, and twelfth dorsal vertebræ. The arches of the eleventh and twelfth were united together by callus, and were pressing slightly upon the spinal cord. One pointed fragment penetrated the membranes, and upon this being removed a small opening was left, which permitted the escape of cerebro-spinal fluid. The cord seemed to be then quite released upon pressure, and I closed the wound. The extremely weak condition of the patient was doubtless the cause of his suffering seriously from collapse, but he recovered in this respect during the night. The wound healed up rapidly, and a few days after the operation I applied a splint similar to that which I have used successfully in spinal caries. The general condition of the patient began to improve within a fortnight after the operation. The bedsores gradually healed up, and the functions of the bladder and bowels began to improve, so that on March 30th I was able to report that during the last fortnight he had regained control over the bladder, to the extent that instead of the urine dribbling away constantly he was able to retain it half an hour at a time, and was perfectly conscious when he wished to pass it, a condition which had not previously existed since the day of the accident, four years and a half previously. As regards the bowels, he was now perfectly conscious as to their action, but the paralysis of the sphincter ani remained. From this time forward the patient improved in every way, until, ten months later, massage was commenced. After about two months of this treatment the patient had gained so much control over the limbs that I contemplated getting him on to his feet. Both feet were in a position of extreme equinus, and it became necessary to divide the tendo Achillis on each side, and place the feet in a position of right angles with the leg. Although the parts felt inanimate and lifeless, yet the healing process took place perfectly, and upon January 18th, 1899, light steel instruments were made to support the right foot and knee and the left ankle, and with the help of these he commenced his attempts to walk. The process was of course a slow one, but on January 22nd he was able to walk across the ward with the assistance of the nurses. By February 1st he was able to work a few steps by himself with the assistance of two chairs, and on February 15th he managed to extend his walk without assistance from one ward to another. He was located for the time at Dr. George Stoker's Oxygen Home, where he had been kindly taken in during the rebuilding of the City Orthopædic Hospital. On March 8th he informed me that he had been able to walk into the next ward and back again three times

during the day, still helping himself with two chairs. Ordinary sticks did not afford sufficiently firm basis to support him, so I had two straight sticks constructed, with a basis to each like a small plate.

On May 5th, 1899, he was walking about the ward by the help of one of his sticks and a chair.

CONDITION OF PATIENT MAY 20TH, 1899.

Left Side.

Hip-joint.—There is fair power of flexion of hip-joint and possibly a very slight power of extension, but the latter doubtful.

Knee-joint.—There is fair power of extension of left knee-joint, so that the leg can be held straight out in the air. There is no power whatever to flex the left knee-joint. An appearance of this movement is produced by flexing the hip-joint when the leg at the knee-joint naturally bends owing to gravity, but if the femur be fixed no flexion at knee-joint can be produced.

Ankle.—No movement whatever at ankle-joint, foot in position of moderate "varus."

Right Side.

Hip-joint.—There is slight power of flexion of hip-joint present, but less than on left side. There seems to be very slight power of extension, but this is doubtful.

Knee-joint.—No movement.

Ankle.—No movement.

Anæsthesia.—Total anæsthesia on right side up to groin, on left side up to level of about 3 inches above knee-joint.

Reflexes.—Knee-jerks and plantar reflexes absent.

Nutrition.—Wasting of both limbs below knee-joint.

By comparing the report of this patient's condition before the operation with that taken on May 20th last, it will be seen that as far as the muscular system is concerned the improvement depends chiefly or entirely upon greater power of muscles which were not at first absolutely paralysed. The only movement that the patient performed voluntarily before the operation was lifting the left leg slightly, so that the increase of power in the muscles as above described has been very great. The chief improvement in nerve power has been the partial restoration of the functions of the bladder and the better nutrition, shown by the healing up of the bedsores. The improvement in general health is also very considerable, for whereas the patient appeared to be rapidly sinking at the time of his admission to the City Orthopædic Hospital, he is now in fairly good health, is cheerful, and enjoys life.

Subsequent History.—In August, 1899, this patient went to the seaside for a change. The rules of the institution where he was received did not permit him to take as much rest as he had been accustomed to. The bath chair which he was permitted to use was furnished with a hard seat, and bedsores, which had healed long previously, returned in the old places. He begged to be allowed to remain in bed so that these sores might heal, but this request was not acceded to. He returned to London in an emaciated condition, the bedsores suppurating freely. His temperature varied from 100° to 103°. There was constant irritation in the bladder, although it was washed out frequently. With perfect rest and careful attention he began to recover again, but uræmic poisoning supervened, and while semiconscious he wounded himself seriously with his razor, cutting deeply in the hypogastric region, but without wounding the bladder, bowels, or large vessels. He succumbed the next day to uræmic poisoning and exhaustion.

Early operation, before his kidneys had become affected, would probably have led to a much more satisfactory result.

CASE OF SYPHILITIC DISEASE OF THE HEART AND LIVER: SUDDEN DEATH.

By Surgeon PERCIVAL M. MAY, R.N.

The following case is of some interest, as cases in which the heart is implicated in acquired syphilis are comparatively rare:

J. A., aged 30, A.B., was admitted into the sick bay at the Royal Naval Barracks at 8 A.M. on June 22nd. He complained of intense pain in the front of the chest and constant vomiting. He stated that he felt quite well the previous evening, but that the symptoms came on in the night. His extremities were cold, his complexion pallid, and his expression anxious. The pulse was very slow and full, the respirations were shallow. He was constantly coughing and expectorating frothy sputum, and he vomited three or four times. On auscultation moist *râles* were to be heard on both sides of his chest in front, but the heart sounds could not be distinguished at all. He was ordered turpentine stupes to the chest, with hot bottles to the extremities, and was given ether and strychnine, but without any improvement in his condition. He sank rapidly, and died a little over an hour after his admission.

A *post-mortem* examination was made some twenty-four hours after death. The body was that of a well-nourished man, and there were no marks of any scars anywhere. Rigor mortis was well developed. The thoracic cavity was first examined, and the pleura was found to contain a considerable quantity of blood-stained serous fluid. There were no pleuritic adhesions. The lungs were bulky, heavy, deeply congested, and when cut into a large quantity of blood-stained serous fluid exuded. The pericardium contained a slight excess of pericardial fluid, and near the apex of the heart were some patches of recent lymph. The heart was found to be dilated and hypertrophied; it weighed 21 ounces. The right ventricle was much dilated, and the right auriculo-ventricular valve was incompetent. In the left wall of the right ventricle, at its upper part, and between the two ventricles was a hard, yellowish-white, irregular, nodular mass, about the size of a pigeon's egg, situated in the muscular fibre of the heart, and infiltrating its substance. The growth was firm; when cut into the surfaces gaped, and could not be scraped away with a knife. There was also a small nodule about the size of a pea occupying one of the pulmonary semilunar valves. This growth, together with the small nodule, must have caused considerable obstruction to the flow of blood through the pulmonary artery. The right auricle was also hypertrophied and dilated, but the hypertrophy was not very marked. The left ventricle was dilated and somewhat hypertrophied, and the left auricle slightly dilated.

The arch of the aorta was the subject of an acute aortitis, the inner coat being much inflamed. At the cardiac origin and extending upwards for 2 inches the aorta was much dilated and its coats much thickened. The inner surface was covered with numerous broad greyish white patches, which were slightly raised, hard and somewhat gelatinous looking. Here it seemed that the endarteritis was of a more chronic nature.

The liver was hard and large, weighing 65 ozs. There were many scar-like depressions and puckered cicatrices to be seen on the surfaces, and these on being cut into showed yellow, tough circular masses, some of these being of large size.

The spleen weighed 8 ozs. and was healthy, and the remaining organs were found to be perfectly healthy.

Examination of a microscopical section of the tumour in the heart proved it to be a typical gumma, showing small round cells with an intercellular substance infiltrating the muscular tissue of the heart. There was also some slight caseous degeneration.

There was a well-marked previous history of syphilis in this case, the patient having become infected in June, 1889, with secondary manifestations in July and October in the same year, so that it was exactly ten years from the initial infection to the period of occurrence in the heart. This corresponds with the mean time of occurrence in 18 cases, recorded by Grenouiller. As regards the situation in the septum ventriculorum, only 2 cases have been previously recorded, 1 by Jullien and 1 by Wilks; these were from a collection of 19 cases; of the remainder, 8 were in the right ventricle, 3 in the right auricle, and the rest in the left ventricle. No symptoms were noted in this case before the sudden death revealed the condition of the heart, and this appears to be the usual thing in syphilitic diseases of the heart.

A CASE OF POISONING WITH LIQUOR MORPHINÆ HYDROCHLORIDI: RECOVERY.

By HORACE C. COLMAN, M.B., C.M.Edin.
Broughty Ferry, N.B.

The following case is an instance of poisoning with morphine hydrochloride, due to the taking medicinally of a little over a grain in rather less than twenty-four hours:

A phthisical patient, on account of hæmoptysis, was directed, on the morning of August 4th, 1899, to take 20 minims of the liquor morphinæ hydrochloridi every four hours. At 4 A.M. on August 5th I was sent for, and found him in the following condition: He was quite unconscious, the pupils were moderately contracted, but not pin point. His skin was warm, and of an earthy colour, and he was sweating profusely: his lips were extremely pale. The conjunctival reflex was lost. Respiration had almost ceased; at intervals there were one or two gasping respirations, and then a long period of quiescence. The pulse was 90 to 100, and full but not very soft. I found from his wife that he had taken four doses of the medicine I ordered, and had insisted on taking a dose of a mixture containing morphine that had been previously prescribed, the last dose being taken at 11 P.M. At that time his wife said he seemed to be drowsy, but was quite sensible. The noise of his breathing woke her up and alarmed her about 3.45 A.M. There seemed to be no doubt that he was suffering from opium poisoning, and, seeing that five hours had passed since the last dose had been taken, it seemed useless to wash the stomach out. At 4.10 A.M. I started artificial respiration, and gave him gr. $\frac{1}{100}$ each of strychnine and atropine hypodermically. There was slight improvement in the pulse after this, the sweating ceased, and the pupils dilated a little. Artificial respiration had to be continued, as if stopped the cyanosis, which was not present at first, became worse, and the pulse-rate quickened. From 5.30 A.M., with the assistance of Dr. Bruce, artificial respiration was continued until 7.45 A.M. In spite of whisky, m xxx hypodermically twice, and continued artificial respiration, there was no improvement, but rather the reverse. The failure of respiration seemed to be the most urgent, and I determined to try the inhalation of strong ammonia. A bottle of 0·880 ammonia was held to his nose for two artificial respirations. The patient became almost black in the face, and his body gave a convulsive heave. The cyanosis passed off in a few minutes after gr. $\frac{1}{68}$ of digitalin followed shortly by gr. $\frac{1}{70}$ of strychnine and gr. $\frac{1}{100}$ of atropine. From this time on there was some improvement—namely, when artificial respiration was stopped; he took a few good breaths, though they soon ceased. I repeated the administration of ammonia, holding the bottle further from his nose, with much the same effect as before, though milder. At 7.45 A.M. he began to breathe naturally, and there was an occasional flicker about his eyelids. We were now able to obtain some coffee, and I poured 10 ozs. of very black coffee with ½ oz.

whisky down the stomach tube, which was followed by very rapid improvement. At 8.30 he was a natural colour and breathing steadily; although very dazed, swallowed some beef-tea from a spoon about 9 A.M. At 10.30 A.M. he was practically recovered, except that his accommodation seemed paralysed, and his tongue and throat very dry, doubtless from the atropine.

I was able practically to exclude the possibility of an attempt at suicide or error in dispensing, and I estimated the total amount of the morphine salt he could have had in the day was just over 1 gr. (M 110 = 1 gr.). In the three days before he had been given 3 drachms of liq. morphinæ for a previous hæmoptysis. It seems hardly likely that a slight increased dose would be sufficient to poison him, but it is difficult to explain the occurrence. Possibly the employment of an active aperient the night before may have suddenly increased the absorbing power of the alimentary canal, and that thus some of the previously-administered morphine may have been rapidly absorbed in addition to the larger doses he was taking during the succeeding twelve hours.

The points of interest in the treatment were, first, the marked beneficial effect of inhalations of strong ammonia, a means I have not seen recommended before, but which I shall certainly try again if occasion offer. Secondly, the well known stimulant and antidotal effect of strong coffee, which in this case was not used till very late owing to our inability to obtain it. Thirdly, that $\frac{1}{60}$ gr. of atropine in two doses gave very marked symptoms of belladonna poisoning.

The patient had no return of the hæmoptysis, and was very soon at work again.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

ANOTHER UNUSUAL CASE OF BLOOD-POISONING.

I BEG to forward you, for publication, the following short report of a case which may be of some interest to the readers of Some Unusual Cases of Blood Poisoning, as contributed to the JOURNAL of July 8th by Dr. T. Harris.

The patient, aged 30, was confined of her third child on the morning of July 28th. The baby was born half an hour after I entered the house, the nurse not having arrived. Two vaginal examinations were made, as by the time I reached her the head was pressing on the perineum. The placenta was expressed twenty minutes later, and came away, with the membranes, apparently intact. There was the merest tear in the perineum.

Everything went on well for a week, save for some little trouble with one breast in which there had been an abscess. The bowels moved naturally on the third day, and daily thereafter. Once an enema was given. The lochial discharge was quite moderate, as it always was after her confinements, I was informed. No douches were used. Once the thermometer registered 99°.

On the eighth day I was surprised to find the patient enveloped in all the blankets in the house and a pillow on her feet. The nurse told me that she had "caught a chill" by not covering herself up at night. There was some nausea, her face was flushed, and urination "scalded" her. Temperature 104, pulse 130. No abdominal tenderness, even on deepest pressure, and no tympanites.

Quinine in an alkaline mixture was given. The lochial discharge was, as usual, quite inoffensive and light in colour.

The same evening the temperature had fallen, 100.4, pulse 100. Next day, August 5th, the thermometer registered 104.6, pulse 140. A vaginal examination was made, the uterus was freely movable, no tenderness on bimanual pressure, os patulous, perineal tear completely healed. A good douche was given, vaginal and uterine. At 5 P.M. the temperature was 105.6, pulse 140. Bowels had been opened two or three times. Breasts somewhat tender. She was stripped, and I gave her a tepid sponge, which lowered the temperature 1° and the pulse 20 beats, and she fell asleep.

At 9 o'clock the same evening, in conjunction with my colleague, Dr. Weld, she was anæsthetised, placed in the dorsal position, the vagina properly cleansed, and the os uteri dilated. On passing the finger into the uterus, which was some 3½ inches long, the anterior wall and fundus were felt smooth and hard. On the posterior wall was the placental site elevated and boggy. This was carefully curetted with the flushing spoon, and some small shreds of placental tissue removed, which to all appearances were perfectly sweet and sound. The uterus was washed out with plain sterilised water, and the patient put back to bed. Three or four hours after the operation the temperature ran up to 106°.

At 9 o'clock next morning it was 100, pulse 100.2. She was resting easily, and taking nourishment well. The same evening the temperature was 100.2, the next day normal, and in a week the patient was out of bed.

The points to which I wish to draw attention are:

(1) The entire absence of any symptoms indicative of a uterine source of trouble, in which particular it resembles Case III reported by Dr. Harris.

(2) The advisability of regarding all serious or prolonged rises in temperature in the puerperal state, which cannot be accounted for by some definite evidence, as uterine in origin, and of acting swiftly on that decision. Try the douche first, and if that fails of speedy betterment use the curette.

And if we fail to do good we cannot do harm if careful and aseptic, but I maintain that in 99 per cent. of such cases nothing but good will result.

Vancouver, B.C. J. M. PEARSON, M.D.

A CASE OF SNAKE BITE TREATED BY DR. CALMETTE'S ANTIVENENE.

THE patient, a strong Canarese coolie, aged 26 years, was bitten by a cobra on the right ankle, behind and just above the internal malleolus.

He rapidly became unconscious, and was brought to the surgery about one hour after being bitten. When seen he was in a state of collapse, but could be roused, when he complained of pain at the seat of injury, the marks of which were quite distinct. The pulse was thready and rapid, and surface of the body cold.

The wound was rapidly incised, until blood flowed freely, and pure nitric acid applied. He was then given an injection of 10 c. cm. of Calmette's antevenene deeply into the right flank.

Stimulants were given, and he was kept under observation for some hours, during which gradual improvement set in, though the man still remained very drowsy, and the pulse was weak and fast. When he attempted to walk the paresis was very marked, and he was removed to his lines. On visiting him some hours afterwards I found he could walk without assistance, but staggered, and complained of weakness and pains in both legs and slight diarrhœa.

He was then ordered a mixture of ammonia and nux vomica every four hours, with strong soup and brandy every two hours.

As his surface temperature remained very low he was wrapped in blankets, and hot stones placed round him during the night.

Next morning he was much improved, and this was maintained; the paresis gradually wore off, the pulse steadily gained strength, and he returned to work four days after quite recovered.

The cobra was full grown, measuring 51 inches. The time which elapsed before the patient was seen is, perhaps, against his having received a very large dose of venom, but being a strong healthy coolie his resistance was probably great.

A few days ago a coolie was reported to me as having died a few minutes after being bitten by a snake which was not identified, and occurrences like these point to the necessity that every government or private dispensary should be supplied with antivenene, which is certainly the best remedy for snake bite available.

ARTHUR BEVERIDGE, M.B., C.M.,
Surgeon S. Coorg Medical Fund.

AN ADULT INFESTED BY OXYURIDES FOR OVER TWELVE YEARS.

THE medical man who is consulted by an adult patient suffering from the presence of the parasite, oxyuris vermicularis (thread, or seat worm) often finds himself confronted with one of those problems which, whilst seemingly most easy of solution, are really most trying and worrying.

The patient, who has been under careful observation during the entire period, first complained of intense irritation at the anus in 1884, when he was over 20 years of age. Knowing little or nothing of intestinal parasites he consulted a physi-

cian who diagnosed the condition after inspection, and prescribed the usual santonin and castor oil, with iron and quassia, and enemata of fresh infusion of quassia chips. This treatment was continued with temporary relief as regards the worms, but with much discomfort owing to the effects of the santonin on the nervous system and bladder. Cessation of the treatment was always followed by reappearance of the parasite, and the patient, who had registered as a medical student in 1887, consulted three or four of the leading men amongst his teachers. He was put on santonica and jalap, with iron and quassia, and copious enemata of quassia, and of salt and water. But again, although relief followed for a time, if the treatment was stopped, even with the utmost care to prevent auto-infection, the trouble always returned in about a month. This went on from year to year, and it was suggested that the breeding ground was in the caput cæcum coli, whilst the treatment only removed those worms who happened at the time to be in the large intestine. Careful consideration and study added two facts: first, that the life of the parasite from birth to sexual maturity is about three weeks (Cobbold); and, second, that apart from the reputed specific vermicides, the treatment seemed to be the administration of bitters with a suitable purge. Acting on these data the patient—whose bowels were always extremely regular—was given a 4-grain pill of cascara sagrada (as a mild but very bitter purgative) every seventh night, and this was always followed by three or four very liquid motions the following day. This treatment was continued for eight or nine months, and now eighteen months have elapsed without any reappearance of the parasite.

The accompanying pruritus ani was best relieved by an ointment composed of equal parts of ung. hydrarg. oxid. rubr. and ung. zinci oxid.

The intractability of such cases suggested to the patient's teacher the desirability of publishing this line of treatment, which has proved so successful in a case of such long standing, which resisted the measures usually employed.

It is, perhaps, of interest that in 1894 the patient suffered from a bad attack of mitigated small-pox, with diarrhœa for 36 hours. The oxyurides disappeared, and gave no trouble for six months, when they began to be felt again.

Dudley. E. Hawkins, M.A., M.D., D.P.H.

A CASE OF RUPTURE OF THE HEART.

[Communicated by the Principal Civil Medical Officer, Colombo.]

M., an estate labourer, aged about 45 years and married, was, on May 2nd, 1899, one of a gang of coolies paid off from one estate and going on to another, deceased carrying a box on her head weighing thirty pounds. The road was uphill. She was observed to strike her foot against a projecting stone, to try to regain her lost balance, but failing, to fall forward and to the right side. Her breathing was embarrassed, and she was restless and speechless for a few minutes, and died almost immediately.

Very little of her past history could be ascertained; she had been in good health, and worked regularly as a tea plucker.

Post-mortem Examination 24 hours after death.—She was well nourished—rigor mortis was present; the pericardium was found distended and contained about six ounces of dark fluid blood and a large clot. There was a rupture of the left ventricle half an inch from the auriculo-ventricular septum and along the left border, longitudinal in direction and one inch in length, the corresponding tear on the inner surface slightly less. The heart was fatty, and the muscular wall pale and friable; the cavities were contracted and empty, and the valves and orifices normal; there was no marked atheroma of the large blood vessels.

In this case it seems probable that as exciting causes there were the exertion of walking uphill with a box on the head, the stumbling and effort to regain her balance, with perhaps the fear of injury to herself and damage to the contents of the box, which caused violent action and consequent rupture, in a heart already predisposed to it by fatty degeneration.

Allan Kalenberg, L.R.C.S. & P.Edin.

Bogawantalawa, Colombo.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GOVERNMENT HOSPITAL AT KUALA LIPIS, PAHANG, MALAY PENINSULA.

A CASE OF COMPOUND DEPRESSED FRACTURE OF THE SKULL.

(By John D. Gimlette, M.R.C.S., L.R.C.P.Lond., Residency Surgeon.)

The following case is worth recording on account of the length of time—ten days—which elapsed before proper surgical relief could be afforded.

History.—The patient was a Chinese mining coolie, named Ng Hin, aged 43. On September, 27th, 1898, at 4.30 A.M., he was standing up at the bottom of a wet shaft. Owing to carelessness in overloading or handling the shaft bucket, a piece of quartz fell down from above. The stone struck him on the top of the head, after a fall of approximately 45 feet. The injured man did not lose consciousness, and remembers being brought to the surface in a bucket. He says that directly after the accident he was unable to use his left arm and leg. He was attended to by a native dresser, who found an irregular, triradiate scalp wound about 1 inch in size and 1½ inch deep. There was also a smaller scalp wound. Both wounds exposed the bone; they were washed and sewn up on the spot with silk sutures. The unfortunate man remained under the dresser's care for ten days, and was admitted to hospital at noon on October 6th, 1898.

Condition on Admission.—A complete motor monoplegia of the left upper and lower limb was apparent. Voluntary movement was entirely lost, but sensation was unimpaired. Paralysis of the facial muscles was also present in a lesser degree. A little to the right of the middle line, and 7½ inches from the root of the nose, was a dirty wound covered by a tangled mass of hair. Temperature (axillary) was 101° F.; pulse regular and soft. The patient, who was a strong, muscular man, spoke cheerfully, but was much fatigued by his journey. The bowels had been confined for three days. Urine clear, acid; specific gravity 1034, no sugar, no albumen. He complained very sensibly of periodic attacks of fever, as well as of headache, giddiness, and sleeplessness. Respiration appeared to be normal. The pupils were equally contracted, I think from the effects of either opium or chandu taken previously. Each contracted to light.

Treatment.—The scalp was at once shaved, with the exception of the queue, and the wound thoroughly cleaned; a loose silk suture was removed and an antiseptic dressing applied; 5 gr. of calomel were given, followed by 5 gr. of quinine, which was repeated in four hours' time, with an ounce and a half of mistura alba. The bowels acted satisfactorily before morning, but vomiting occurred during the night. At daybreak his temperature was normal.

Operation.—Chloroform was administered, and the scalp again very carefully washed and rendered aseptic. By digital examination through the wound, a depressed ragged fracture of the right parietal bone could be felt near the superior border (its centre). I enlarged the original wound freely, turning two semilunar flaps of scalp upwards and downwards. A depressed fracture with comminution of fragments and almost bare of periosteum was now evident. Two small insulated pieces of bone with a tuft of hair were removed without difficulty. Other pieces could be felt jammed under the vault towards the middle line, firmly compressing the brain. I applied the trephine to the right, removing an irregular circle of bone ½ inch in diameter, and was then able to elevate and remove in all six fragments of various sizes. Roughly these measured, when pieced together, 2 inches by 1, and weigh 1¼ drachm. Some blood clot was adherent to the lower surface. The dura mater had the appearance of having been bruised by the fracture. At one point posteriorly it had been slightly punctured; a sanious discharge was escaping. The wound was douched with perchloride of mercury lotion (1 in 1,000), and the operation

finished by replacing the remnants of periosteum and accurately uniting the scalp wound. Strict antiseptic precautions were taken throughout as far as possible.

After-Treatment.—Shortly afterwards the patient was found sitting up talking and asking for rice. He expressed himself much relieved as to his head, but was very depressed at being unable to move his limbs. The slight facial paralysis had disappeared. For the next three days the temperature was normal, and the wound healing by first intention, except at one spot. On the next day he had an attack of shivering and slight fever (101° F.). Ten grains of quinine were given morning and evening. There was no recurrence; it was evidently malarial fever. The stitches were removed on the fifth day (October 12th), the wound having now healed except at one small spot, which corresponded to the apex of the original scalp wound. This hole was gently plugged with a strip of cyanide gauze; pulsation of the brain beneath was now very evident. A small bedsore had formed on the left ankle. Full doses of syrup. ferri phosphatis cum quiniâ et strychniâ were prescribed. On October 17th, ten days after the operation, faradic electricity was applied to the paralysed limbs. Up till now there had been no return of power in them. On October 18th he was able to partly flex and extend the left ankle; on October 19th to move the fingers. By October 24th he was strolling about the verandah, and one month afterwards he left the hospital to return to his employment.

REMARKS.—It is not often, nowadays, that an uncomplicated case of traumatic hemiplegia is allowed to remain so long without surgical intervention. The only parallel case that I have reference to is one of Guthrie, quoted in Erichsen's *Science and Art of Surgery*, when a soldier was successfully trephined ten days after a bullet wound of the head. In the present case the effect of direct violence applied to the vertex in the parietal region was well exemplified by the driving inwards of the upper border of the bone. It was fortunate that the superior longitudinal sinus remained uninjured. From the position of the injury there could be no doubt that the "motor area of cerebral localisation" was severely pressed upon, and that the superior frontal and ascending parietal convolutions had been involved at the upper part of the sulcus of Rolando. From the sudden and continued symptoms of compression without loss of consciousness, the clinical inference was that the cause was local and outside the dura mater, and that it was probably due to pressure by bone alone. The bluish appearance of the dura mater, however, within the area of fracture was suggestive of subarachnoid hæmorrhage. Yet it seemed that the dura mater alone was torn. Leading symptoms of general compression, such as slowness of pulse and respiration, were not marked. There was no evident escape of cerebro-spinal fluid. Presumably the subdural space only was open, and the subarachnoid space intact. Bearing in mind the great natural barrier which the dura mater offers to septic infection, and that the preliminary conditions of cleanliness had not been good, I decided not to explore the subdural space at the time. Although there was no fear of the occurrence of hernia cerebri, antiseptic precautions having been taken, it was not improbable that failure of union by first intention might occur in a part of the scalp wound. This, indeed, happened at one spot, and a small hole was the result, which took many days to fill up by granulation. With regard to replacing the bone which was removed, this old scalp wound, the sanious discharge, and the age of the patient were, I think, against it, as well as the loss of periosteum. It would have been difficult, if not impossible, to wedge the pieces back to their exact relative positions so as to ensure accurate apposition. If a second operation had been necessary then grafting would have been futile. I believe the failure to relieve the symptoms at once must have been due chiefly to want of expansion of the brain from cardiac weakness. On the relief of the pressure there was, no doubt, an effusion of blood in the deeper layers of the grey matter from the over-distended blood vessels, as well as a certain amount of œdema, with, perhaps, a little secondary degeneration consequent on destruction of brain substance. This may have been at the arm centre, for muscular power returned in the upper limbs much more slowly than in the lower, and only after continuous application of the battery, massage, and gymnastic exercises. The complete recovery of this case bears out the truth of the observation that injuries to the area of the brain of this nature generally do well after operation.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

W. WATSON CHEYNE, F.R.S., President, in the Chair.

Tuesday, December 19th, 1899.

THE RELATION OF TABES AND GENERAL PARALYSIS.

DR. BEEVOR, in continuing the debate upon this subject, said, with regard to the first question, he thought that if the two diseases were one and the same, it meant that a common cause acted pathologically on different parts of the nervous system and produced symptoms which alternated with each other, and that therefore the majority of cases of tabes should tend to show symptoms of general paralysis, and *vice versâ*. He did not think that in the earliest stage general paralytics showed symptoms of tabes other than the Argyll-Robertson pupil, and that as a rule the knee-jerks were increased and they had no lightning pains. He thought that it was the exception rather than the rule for cases of tabes to end as general paralytics, and more cases of tabes died without showing any symptoms of general paralysis. He called attention to the slowness of the symptoms in tabes compared with general paralysis, and instanced 3 cases which had not increased during the last eight or ten years. With regard to the second question, he could not understand why in general paralysis the cells of the Rolandic motor area were affected, while in the spinal cord in tabes it was almost confined to the sensory side, and he instanced that in amyotrophic lateral sclerosis where the cells of the motor cortex were affected it was the motor cells of the cord which suffered, and not the sensory. With regard to syphilis he had found in 39 cases of tabes, syphilis in 11, a chancre without secondaries in 7, gonorrhœa without a chancre in 10, doubtful gonorrhœa without a sore in 5, and no history of venereal in 6. In the majority of the cases of general paralysis he had seen there was a history of syphilis. The cases of syphilis in tabes had been of a mild character, and contracted ten or twenty years before the first symptom of tabes. He considered that general paralysis and tabes were dependent very largely, if not entirely, on the action of syphilis on the nervous system, but as it seemed to be the exception rather than the rule for tabes to be followed by general paralysis, he thought that until in the majority of cases of tabes changes in the cerebral cortex were found, he would not like to consider them as one and the same disease, but he would rather look upon them as two diseases occurring in the same person at the same time, and he thought that the prognosis of tabes would have to be considered more unfavourably if the majority of cases of tabes were liable to become general paralytics.

Dr. HEAD said: My remarks will be based on three separate lines of research, the results of which are as yet unpublished. (1) For the last eight years I have investigated the sensory disturbances in tabes, and have paid especial attention to the relation of such sensory disturbances to the visceral crises and joint affections of this disease. Although the work is far from complete, I hope you will pardon me if I allude to some of the conclusions to which I have arrived up to the present. (2) For the last five years Dr. Campbell, of Rainhill, and I have been working at the supply of the fibres that enter the posterior root ganglia and the distribution of the afferent fibres in the spinal cord by means of the lesions produced by herpes zoster. (3) I have been engaged in examining the characters of the cells which are found in the posterior root ganglia at different levels of the cord. If we examine the course of an acutely degenerated posterior nerve root produced in man by the ganglionic destruction of zoster, in the monkey by the operator's knife, we find that the degeneration behaves somewhat differently in different regions of the spinal cord. In all cases at the point of entry into the cord the bundle at the head of the posterior horn and the root zone that lies close to the posterior horn on its posterior aspect show degenerated fibres; but higher up in the spinal cord the appearance varies according to the level

of the affected root or ganglion. If the degenerated root be one of the lower lumbar or upper sacral that supply sensation to the leg and sole of the foot, the degenerated fibres in their passage up the cord come closer to the median line of the posterior columns, and in the cervical region will be found to lie in Goll's column, as has been shown by Dr. Mott. If the degenerated root or injured ganglion be the first dorsal or one of the lower cervical group that supplies the arm and hand with sensation it rapidly reaches the postero-external column, and can be traced into the posterior column nuclei of the medulla. On the other hand, if the injured ganglion lie between the level of the roots that enter the lumbar and those that enter the cervical enlargements, the degeneration is rapidly lost in its upward course and can be distinctly followed for about five segments only. Now, as Dr. Mott pointed out in his opening address, every posterior root that enters the cord may be said to consist of three sets of fibres: (1) a short spinal set; (2) a set of medium length fibres that reach Clark's column and so pass to the cerebellum; and (3) of a longer set that pass up to the posterior column nuclei in the medulla, and thus transmit sensation to the cerebrum. Now, the facts I have just brought forward point to a difference in the relative number of these groups of fibres in different regions of the cord. In those roots which supply sensation to the limbs, the longest fibres are relatively in the majority; whilst in those which subserve the sensation of the trunk, the number of long fibres is relatively less, and the short spinal group preponderate. If we now examine the constitution of a posterior root ganglion, we find that it contains, as Dogiel and others have pointed out, of at least two different types of cells: the one large, spherical in shape, with coarse granules, and with a most remarkable spiral process ending at a considerable distance from the cell in a T-shaped junction; another type, smaller, more pear-shaped, and containing much finer granules, which ends in a straight process that branches dichotomously. These are the two preponderating types of cell, but there are several other forms which occur in less number. So far my results simply confirm those of Dogiel and others, but my attention has been less attracted to the finer details of these cells than to their original distribution in the central nervous axis, which seems to have escaped other observers as far as I can discover at present. On examining the distribution of these two types of posterior ganglion cells at different levels by Dogiel's modification of the intravital method and Nissl's method, I think it may be said that up to the present the following conclusions are correct. And in speaking of large cells, let me be understood to mean cells with large deeply-staining granules, a spiral process, and a T-shaped branch; by small cells, cells more nearly pear-shaped, with smaller granules staining more diffusely, and a straight branching process. In the region of the cervical and lumbar enlargements, that is to say, in the fifth, sixth, seventh, and eighth cervical and first dorsal ganglia, and in the third, fourth, and fifth lumbar and first and second sacral ganglia large and small cells are found, but the large cells are in great excess. On the other hand, in the dorsal region the small cells are in much greater number, then the large cells and such a ganglion as the seventh or eighth dorsal will show them in their purest form. Not that at any part of the axis is one form of cell absent, but at the level of the limbs the large cells much increase in number, whereas over the great visceral sensory area of the trunk the posterior root ganglia contain mainly small cells. Thus the conclusion lies near at hand that the smaller cells are associated with the shorter spinal group of fibres, whereas the long fibres of the postero-median and postero-external columns are associated with the large cells of the ganglia in the region of the cervical and lumbar enlargements. Now, Münzer and Wiener in the first November number of the *Neurologisches Centralblatt* of this year have shown by most ingenious experiments that the long paths of the posterior columns do not conduct painful impressions, and that the painful sensations are conducted by shorter fibres that enter the cord by the posterior roots. Let us now turn to the condition of sensation in cases of tabes dorsalis. I can confirm in the most complete manner the statement of Fraenkel and others that if ataxy is present the only essential loss of sensation is a loss of the sense of passive position. But I wish to warn those who would repeat these results that the sense of passive position must be tested with certain precautions that I have not found in general use. The toe or finger to be tested must not be grasped by the dorsum and plantar or palmar surface, but must be grasped laterally. For by this means a patient whose sense of touch is good can no longer discover the movement that is being produced with the aid of his intact sense of touch. Secondly, we must be very careful to prevent his contracting the long muscles of the toe or finger, and thus discovering into what position it has been moved should he still retain some muscular sense. If these precautions are taken it will be found that whenever a tabetic falls with his eyes shut or shows definite ataxy there is some loss of the sense of passive position in the terminal joints of the affected limb. I will now throw upon the screen the cord of a patient who suffered from abductor paralysis of the larynx. His knee-jerks were absent, but absolutely no form of sensation was affected except the sense of passive position in the fingers and toes, especially in the thumb and great toe. He later developed a Charcot's knee on the left side, and died suddenly from rupture of a small aneurysm of the posterior part of the arch of the aorta. Yet you will see how profound a degeneration affects the long tracts of the cord, although the man's condition was such that many observers refused to believe he was suffering from tabes. If on the other hand we turn to those cases where some form of sensation other than the sense of passive position is lost we find a marked difference in the symptoms of disease according to the form of sensation mainly affected. On the one hand the sense of light touch (cotton wool) may be profoundly lost over a wide area of the limbs and trunk, and provided that this is the only loss of sensation the patient will be extremely ataxic, but will not suffer from visceral crises (gastric, intestinal, vesical, or rectal). If the sense of painful stimuli only is lost, and such cases though uncommon have particularly attracted my attention, visceral crises are certain to be present and ataxy will be a prominent feature solely according to the extent to which the analgesia is accompanied by loss of sense of passive position in the joints. A commoner form of this type is one where the analgesia is accompanied by more or less loss of the sense of cold and perhaps of the sense of heat. Such cases, however, still belong to the second or visceral type because the concomitant loss of the sense of heat and cold seems to make no difference to the gross phenomena of the disease. Thus to sum up the effect produced by the various disturbances of sensation which may accompany tabes I think I may say: (1) The ataxy in so far as it is due to loss of sensation and not to loss of muscular tone is primarily due to a loss of the sense of passive position in the terminal portions of the limbs. Until this loss of the sense of passive position makes its appearance the case remains in the pre-ataxic stage however much alteration in the sense of pain, heat, or cold may be present; (2) loss of touch only produces an increase in the ataxy; (3) loss of pain in no way affects the ataxy, but is associated with the visceral disturbances that we know as crises; (4) loss of heat or cold, or of both heat and cold, produces no gross change in the form assumed by the disease. Thus it is obvious that the disease process at the bottom of tabes dorsalis is one that picks out different elements in the afferent system, and cannot be due to so gross an anatomical lesion as meningitis around the point where the roots enter the cord. It probably affects the whole nerve element, and whether or no gross changes are present in the ganglion cells depends upon whether the peripheral end-organs are profoundly affected or not, and in no way on the extent of the affection of the fibres in the posterior columns. In the process of destruction of the nerve elements paroxysmal outbursts will occur which will assume the character of the element that is undergoing destruction. Thus destruction of the elements that subserve the sense of position will be accompanied by those paroxysmal outbursts of acute ataxy that are not uncommon in the course of tabes. Destruction of the elements that subserve pain impressions will tend to be accompanied by hyperalgesia of the superficial structures of the body and a disturbance in the functions of the viscera which are supplied from the same segments, according to the laws that have been laid down in my work on referred pain in visceral disease. Such disturbances constitute the well-known visceral crises, and I believe it is

possible, by watching the areas on the skin that show evidence of advancing destruction in their sensation to pain, to predict what form the visceral crisis will assume. On the other hand, in general paralysis of the insane, destruction of the nerve elements of the motor cortex is accompanied by a paroxysmal disturbance known as a convulsive seizure. The crises of tabes and the seizures of general paralysis are due essentially to the same process affecting different nerve elements in the central nervous system. Both are parasyphilitic diseases, and the more one watches the two diseases, the more certain one becomes that they are due to an identical process affecting different portions of the nervous system.

Dr. PURVES STEWART would propose the question, Why do some of those who have contracted syphilis become the subject of tabes whilst others escape; why do others develop general paralysis; and why does pernicious anæmia lead to tabes? The gravity of the syphilitic infection did not determine the result. And he directed attention to the other factor, namely, the strain or stress thrown upon certain parts of the nervous system by over-exercise. The experimental basis for this view had been furnished by the experiments of Edinger, who had shown that if rats were kept on a treadmill for a certain time, the Marchi method of staining demonstrated degeneration of the posterior nerve roots and of the posterior columns. If rats were rendered anæmic, the changes were more pronounced. In applying this to the human disease, the speaker cited many examples in which excessive walking in persons unaccustomed to it, etc., was followed by tabes. In the case of general paralysis the strain was mental, and might be intellectual overwork, or emotional. Such facts furnished the indication that in those who had had syphilis these causes of strain should be carefully avoided.

Dr. ROBERT JONES was not inclined to accept the view that syphilis was a necessary factor in the production of tabes and general paralysis. He criticised the negative results of Krafft-Ebing's experimental inoculation with syphilis by observing that general paralytics were remarkably irresponsive to any kinds of irritation—as, for instance, when they were the subjects of pulmonary gangrene. General paralysis he thought due to a peri-encephalitis. The inefficacy of anti-syphilitic treatment in these diseases pointed also to the conclusion that they were not syphilitic, though he did not attach very much importance to the argument. An American writer had found that, of 20,000 syphilitic persons, only 1 per cent. became insane. He held that general paralysis was very difficult in many cases to diagnose, and was very insidious. Besides syphilis, alcoholism, overstrain, sexual excess were, he believed, other causes of these diseases.

Dr. BERTRAM ABRAHAMS concurred with the general testimony to the great importance of Dr. Mott's researches and the value of the results detailed in the introductory paper. He submitted, however, that to apply the metasyphilitic or parasyphilitic theory to every case of tabes and general paralysis, as was done, for instance, by Hirschl, was carrying it too far, at any rate in the light of our present knowledge. The authentication of one single non-syphilitic case of either of these diseases must direct our attention to the elucidation of other causes. Dr. Mott had conclusively shown the necessity of the syphilitic factor in the etiology of infantile general paralysis, but was this equally certain in the adult form of the disease or even in tabes? Looking at the question from the most general point of view, it appeared to be one mainly of vitality. Every cell in the body started in life with a certain measure of vitality, and the syphilitic poison possessed the power of diminishing that vitality in the case of certain organs, particularly the central nervous system. Such shortening of cell life as resulted might also arise from congenital or sporadic causes, as in pseudo-hypertrophic muscular atrophy, Friedreich's disease, etc. The syphilitic factor was thus a most important one in the production of neuronic degeneration, but it was not the sole one. Strain was also to be reckoned with, and they had only to consider the pathology of arterial degeneration to see how great a part it might play in the local determination of syphilitic sequelæ. With regard to general paralysis there was evidence in the same direction. This disease was known to particularly attack persons of considerable mental activity, and the strain upon the association neurons no doubt rendered them especially liable to selection by the syphilitic virus. An almost experimental example was afforded by the American negroes, among whom general paralysis was practically unknown before their emancipation, since when it had become very common. Syphilis had not increased among them, and the irresistible conclusion was that the appearance of general paralysis was a result of the increased nervous strain consequent upon entering actively into the struggle for existence. But strain alone might cause arterial degeneration, and so there seemed no reason why it should not lead to a loss of neuronic vitality. It might be that in cases of general paralysis in which a syphilitic history was absent, excessive mental strain, often added to toxic agents such as alcohol, might be sufficient to account for the disease. What etiological factor determined the tabetic lesion to the posterior columns was at present unknown, and indeed our cognisance of causes other than syphilitic for this disease was almost *nil*. One argument which appeared to tell in favour of the syphilitic origin of both diseases was their relative uniformity of pathological type. Typical cases of both were known to arise after syphilis, and it was certainly unusual, though not unknown, for various toxic agents to produce identical results upon the nervous system. If one case was syphilitic, the probability would be in favour of all being so; but there was no essential reason why different pathological agents should not lead to the same effects. With regard to the relation of tabes and general paralysis little could be added to what Sir W. Gowers had said. An etiological identity could hardly be used to connote "the same disease," and hence the question came back to the former one, namely, as to whether all cases of tabes and general paralysis were syphilitic or not. But what was abundantly shown by Dr. Mott's work was the pathological similarity of the two diseases, in that each of them was primarily a neuronic degeneration and not an interstitial overgrowth. This was confirmed in the syphilitic cases by the length of time which elapsed between the specific and nervous manifestations. In the twenty years which might pass before a syphilitic subject developed tabes, every trace of toxin must long since have been eliminated. What happened was that the neurons were affected at the time of the syphilis in a manner not to be detected by present microscopical skill, but revealing itself inevitably in their diminished vitality and premature death.

Dr. FLETCHER BEACH said that it appeared to him that in the discussion which was going on with reference to Dr. Mott's paper little attention had been paid to juvenile general paralysis. He referred to 2 cases that had been under his care and said that on consulting the literature of the subject he found several cases had been recorded. The first case was reported as far back as 1877 by Dr. Clouston. In 1881 a case was recorded by Dr. Turnbull, and in 1883 a case by Dr. Wiglesworth. Since then several cases had been reported. On analysing these 3 first cases it was noticed that there were no grandiose symptoms, but a steady progress towards dementia. The motor symptoms were well marked, and in 2 of the cases the course of the disease was prolonged. In 1891 Dr. Clouston described 2 cases of developmental general paralysis, one commencing at 15 and the other at 14 years of age. Altogether 38 cases had been recorded by different authors, and the ages at which the disease was first noticed were mentioned. As regarded the question of syphilis in the parents being the cause of infantile general paralysis, he found that in 20 out of 25 cases in which the histories were given there was a history of syphilis. He referred to the question of congenital general paralysis, which had recently been brought forward by Drs. Macdonald and Davidson, and said that it was a matter which required further attention being paid to it.

Dr MOTT, in his reply (which was curtailed owing to the lateness of the hour), observed that whilst most of the speakers had agreed as to the importance of syphilis in causing tabes and general paralysis, he did not allege that syphilis was the essential factor, though this might be assumed from the evidence until it was disproved. He had seen marked atheroma of the aorta even in juvenile cases of general paralysis; this bore out the syphilitic view. He had in his writings drawn attention to the relationship between the crises of tabes and the epileptiform seizures of general paralysis as conditions depending upon essentially similar

causes. He knew of a few cases in which mental symptoms preceded tabetic. He cited a case, also, like that of Dr. Buzzard, in which a woman was infected from her husband with syphilis and developed general paralysis, the husband suffering from the tabetic form of general paralysis. In regard to Krafft-Ebing's experiments, he could not think that all would have been negative were Dr. Jones's view the right one. He had recorded 22 cases of juvenile general paralysis, but many more had been collected. After congenital syphilis, hereditary neurosis had been alleged to be a potent factor. He was not convinced of this; but he believed drunkenness in one or both parents to be of importance, that was, if associated with syphilis. Of his 22 cases 11 were males, 11 females. As to the alleged absence of general paralysis amongst negroes before their emancipation, he thought this was probably a fallacy arising from defective diagnosis; in Egypt, where syphilis as a cause of general paralysis had been stated to be absent, more careful inquiry had shown this not to be the case. Nevertheless, Dr. Mott did not ignore the importance of stress. Dr. Payne had referred to syphilitic fibrosis of the liver and kidneys, and he had seen such lesions in some of his cases. It at times happened that a juvenile general paralytic would die without marks of syphilis, although sisters and brothers might present the typical characters, and in some of these general paralysis might ensue under stress. He viewed the syphilitic toxin as inducing an inherited or acquired diminution in durability of the nervous elements; the action was selective, as proved by the localisation of the changes; so the toxin of tetanus selected the motor nucleus of the fifth nerve. The reason why general paralysis developed in juvenile cases soon after puberty was because of the increased cerebral activity, both intellectual, and due to the development of sexual instinct; this involved stress. Edinger's experiments here came in. As to whether the two diseases were the same this was a matter of terms; the morbid process was the same, and its prevention and method of treatment would be alike. Dr. Hale White had remarked upon the way in which lead might affect the peripheral nerves or brain. So alcohol might lead to polyneuritis or dementia. In contrast to Dr. Savage, he did not think that more than 5 per cent. of general paralytics were ataxic. He did not hold the inflammatory view of the pathogenesis of the two diseases. Marked thickening of the meninges was met with only in the late stages. In negro lethargy, again, where such a meningeal change did occur, there was not the atrophy of nerve structures seen in either of these two diseases.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

A. Quarry Silcock, F.R.C.S., in the Chair.

Thursday, December 14th, 1899.

Clinical Evening.

Congenital Subluxation of Lens.

Mr. George Keeling showed a case of congenital subluxation of the lens with secondary luxation forwards.

When first seen six years ago both lenses were dislocated. In July last the patient was again seen, and then the left lens was found to be in the anterior chamber. Mr. Keeling attempted to pass a needle into it, but, owing to the toughness of the capsule, this failed. He subsequently extracted it, and with correction of + 12 and + 16 she now had vision of $\frac{6}{9}$ and J1 in spite of the fact that before the extraction she was highly myopic, as she still is in the other eye.

Remarks were made by Mr. Holmes Spicer and the Chairman.

Sympathetic Ophthalmitis.

Dr. Cecil Shaw brought forward a case of sympathetic ophthalmitis commencing forty days after enucleation of the injured eye.

The patient was a healthy girl, aged 10, who was wounded in the left eye by a pair of scissors which were thrown at her on May 24th, 1899. She was not seen by Dr. Shaw until June 20th. There was a wound at the upper corneal margin with iris entangled. The eye was injected, painful and blind with minus tension. On June 28th the eye was removed entire. This specimen with the sections was shown. The patient did perfectly well until August 14th, when the eye became suddenly painful and injected. She was seen a week later suffering from severe irido-cyclitis and considerable failure of vision. In spite of all treatment the eye went from bad to worse, the pupil filled with lymph, and the vision was now P. L. only.

Dr. Shaw proposed to try discission at a later period as recommended by the late Mr. Critchett.

Mr. Treacher Collins suggested that perhaps the second eye became affected independently of the first. He had under his care a man whose eye was removed for an injury in April last and who came back eight months later with the other eye inflamed and which under other conditions would certainly have been termed sympathetic.

Mr. Devereux Marshall thought that one of the most unusual features of the case was the severity of the disease, and he mentioned a case which had come under his observation in which sympathetic mischief had commenced about two weeks after the removal of an eye for injury. The disease was very mild and the eye quite recovered, and he thought that this was the common experience in such cases.

Dr. Shaw, in reply to a question by Mr. Doyne, said that the choroid had not been examined microscopically.

Sarcoma of Conjunctival Sac.

Mr. John Griffith showed a case of sarcoma of the upper conjunctival *cul-de-sac*.

The patient was a woman, aged 45. The tumour was first noticed in December, 1898, though there had been brown pigmentation of the ocular conjunctiva for eighteen months previously. The growth was freely excised, but a recurrence had recently appeared. Microscopically the growth was seen to be a mixed-cell sarcoma.

Mr. Griffith wished to know the opinion of members as to treatment—whether it would be sufficient to remove the recurrence or whether it would be better to remove the whole contents of the orbit.

Mr. Devereux Marshall looked upon the pigmentation of the conjunctiva as indicating disease, and from his experience of one case he had seen he strongly advised the more radical operation, as he thought that anything short of this would not ensure the removal of the whole of the disease.

Sarcoma of Choroid.

Mr. John Griffith also showed the macroscopic and microscopic specimens of Mr. Work Dodd's case of retinal detachment, which was shown as a clinical case at the last meeting of the Society. It turned out to be a sarcoma.

Embolism of Central Artery of Retina.

Mr. A. H. Thompson exhibited a case of embolism of the central artery of the retina in an anæmic girl, aged 16. She had acute rheumatism two years ago, which followed scarlet fever. The points of interest lay in the fact that the papillo-macular triangle had escaped, and also that there was some pulsation of the central artery.

Nasal Duct Dilator.

Mr. G. D. Maynard showed a nasal duct dilator, which differed from the ordinary probe in the fact that it could be passed and then dilated when in the duct.

Effect of Injury on Macular Area.

Mr. G. Brooksbank James exhibited a case showing changes in the macular area consequent upon injury.

The patient received a blow on the eye three years ago with a tennis ball. Since the accident the vision had been defective. Several white spots were seen about the macula and an area of pigmentation below the disc.

Mr. Adams Frost and Mr. Hartridge had both seen similar cases, and these were caused by injury such as in the present case.

Injury to Eyes from Explosion of Glass Bottle.

The Chairman and Mr. G. D. Maynard showed a patient who had both eyes wounded by the explosion of a glass bottle. The right had an extensive wound of the sclerotic on the inner side from which vitreous was escaping. The left eye had a wound through the corneo-scleral junction with iris and ciliary body prolapsed. Mr. Silcock sutured the sclera with fine silk, endeavouring not to penetrate the entire thickness of the sclera. The patient recovered vision of $\frac{6}{12}$ in the right eye and $\frac{6}{9}$ in the left.

Diphtheritic Ophthalmia.

Mr. Silcock and Mr. Maynard also read notes of a case of long persistence of membrane on the conjunctiva after diphtheritic ophthalmia.

The patient, a child, had been under the care of Dr. Mence, of St. Ives, Hunts. The eye was destroyed, and had subsequently been removed, and

in spite of this, the membrane still persisted after several months of treatment, and contained an attenuated form of diphtheria bacillus.

Mr. W. T. LISTER asked if antitoxin had been used, and in reply the CHAIRMAN stated that it had not been.

GROWTH ON EYELID.

Mr. VERNON CARGILL showed a patient with a growth on the right upper lid occurring in the site of an old scar, where a Meibomian tumour had been removed six years previously.

About three months ago the eye became irritable, and on the inner surface of the upper lid a cauliflower-like growth with a broad base made its appearance. There were no enlarged glands. A portion was removed for microscopic examination.

Clinically, it was thought to be an epithelioma, and Mr. GRIFFITH, who had seen the sections, was also of that opinion.

OTHER CASES.

Dr. BRAILEY and Mr. ORMOND showed a case of Vascularity of the Lens Capsule, probably Congenital. There was also a congenital cataract and a persistent pupillary membrane. Mr. STANFORD MORTON had a case showing Changes in the Macular Region, which in his absence was shown by Mr. G. W. THOMPSON.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Professor A. C. O'SULLIVAN, M.D., President, in the Chair.

Friday, December 1st, 1899.

PRESIDENT'S ADDRESS.

THE PRESIDENT gave an address on the Mode of Action and Production of Antitoxin.

MALFORMATION OF KIDNEY.

Dr. EARL demonstrated a specimen and read a report of a case:

The right kidney and both suprarenal capsules were normal as to position and vascular supply. The left kidney lay on the brim of the pelvis; it was tightly held down by the peritoneum, and partly covered by the sigmoid flexure of the colon. The left ureter was 5½ inches long, that on the right side being 10½ inches. The hilum was on the anterior surface. It consisted of a deep impression near the lower end of the kidney, continued upwards into two shallow depressions about ½ inch apart, lying parallel to each other and to the long axis of the organ. Each of these was about 2 inches long. The ureter, divided near the kidney into two branches, one of which entered at the lower part of the hilum, while the other again divided into branches for its longitudinal parts. The artery came off half an inch above the bifurcation of the aorta, and divided into three branches, two of which entered the kidney at its inner margin near the upper end, while the third ran behind the kidney, giving a branch to its posterior surface. It finally turned round the outer border, and, grooving the anterior surface, terminated in the lower part of the hilum. The vein entered the vena cava in the normal position. A little above the kidney it divided into two branches, which lay in grooves on the anterior surface, and having given branches to the longitudinal parts of the hilum, terminated in its lower part.

BACTERIOLOGY OF BERI-BERI.

A paper by Dr. PERCY GERRARD on this subject was communicated by Dr. A. R. PARSONS.

The PRESIDENT did not see why, if an attack of erysipelas would cure sarcoma, the streptococcus would not cure beri-beri without a specific action.

Dr. J. A. SCOTT said that during the epidemic of 1894 in the Richmond Asylum, Dublin, he made (with Dr. Rambaut) some investigations into the condition of the blood in this disease. A number of attempted cultures remained absolutely sterile. In other cases, however, colonies grew, and these were subsequently separated. In the memorandum he had made then he found notes of the bacillus subtilis, bacillus roseus, penicillium glaucum, and the like, which obviously indicated air contamination; but there were also colonies of cocci formed which had a yellow colour when grown on any medium. Some of these suggested to him the sarcina lutea, but other cultures he believed were not those of ordinary air cocci. In his notes he had the words "diplococcus" and (?) "tetrad," so that the general arrangement of these cocci occasionally suggested to him some form of tetracoccus. Some of the patients he observed were always sure finds as regards cultures, whereas other cases, equally as bad, were always sterile.

Dr. E. J. MCWEENEY said the amount of material Dr. Gerrard had operated on, a loopful of blood, was so small that, if the cocci had really been in the blood, it seemed to him that there ought to have been no great difficulty in demonstrating them microscopically. There was a paucity of detail regarding the cultural characteristics of the micro organisms found. For instance, there were no details about the temperature at which they would grow, whether they liquefied gelatine, about their growth on media containing glucose, their fermentative power, their coagulation of milk—particulars which were of importance in determining the species of a micro-organism. With regard to the improvement of the patients under anti-streptococcus serum being co-ordinated with a growth of a yellow colour obtained from the blood, he thought there could be no connection, because the streptococcus did not produce a yellow colour. The injection of the serum, however, might have produced, as the President had hinted, a general phagocytosis of a non-specific character, but that state of affairs could not denote any connection between streptococci and beri-beri. There was such an extreme difficulty in sterilising the skin that in his own work he would pay no attention to a result got from a drop of blood that had been in contact with the skin. The method he employed successfully was to extract several centimetres of blood from one of the veins in the arm with a sterilised hypodermic or antitoxin syringe. So few were the micro-organisms in even violent septicæmia that unless they extracted a good deal of blood they would not find any micro-organisms at all. It was with these precautions that he had succeeded in getting the diplococcus pneumoniæ in a case of ulcerative endocarditis coming on after acute pneumonia.

Dr. CONOLLY NORMAN, referring to the micro-organisms described by Pekelharing and Winckler, said that they found them in every patient's blood; but they also found them in the blood of persons in Atjeh who had not beri-beri, and similar cocci were also found in the air of that place.

Dr. Norman showed illustrations of cocci found by other observers which were very dissimilar to those of Pekelharing, but he (Dr. Norman) pointed out that these cocci were obtained from the dead body, and he therefore considered them of little value. Pekelharing's and Winckler's results were disputed by other investigators, amongst whom was Scheube, who said that their observations were made on dirt, and that most of the animals which they had injected experimentally had died of septic poisoning. Glogner found parasites in the spleen resembling those of malaria, and on that fact had founded his theory, which had got a few adherents, that beri-beri was identical with malaria. At Tuscaloosa, in the State of Alabama, cocci were found in the blood of beri-beri patients, but they were not described in detail.

One of the peculiarities of the disease which Dr. Gerrard had remarked, and which he also had noticed, was that patients frequently got relapses, and often died rather suddenly after apparently getting quite well. In a recent monograph on the subject Grimm laid it down that beri-beri always commenced with slight initial fever.

Dr. KNOTT made some remarks, and Dr. PARSONS, in reply, said that most of the points which had been raised had been already touched upon by Dr. Gerrard in his paper, which, however, he had not had time to read in full. Bearing in mind Dr. Scott's notes, it was interesting to observe that several of Dr. Gerrard's cover-glass preparations had shown distinctly diplococci, and in many cases tetracocci. Most of Dr. Gerrard's patients were miners, and this seemed to point to the poison being in the earth. In a few cases the ankylostoma duodenale was found.

PRIMARY SARCOMA OF THE LIP.

Dr. R. CHARLES B. MAUNSELL read notes of a case of a married lady, aged 32, from whose lower lip he had removed a small prominent tumour. She was suffering at the same time from well-marked chloasma uterinum. On examination the tumour was found to be a spindle-celled sarcoma. Attention was drawn to the rarity of sarcoma of the lip, and sections prepared by Dr. H. C. Earl were shown.

Dr. E. J. MCWEENEY said that about a week previously a specimen was given to him from the lower lip of a child, aged 10 years. He reported it as being a lymphangio-sarcoma.

Dr. MAUNSELL, in reply to the PRESIDENT, said that the tumour was not pigmented.

CASES.

Mr. H. G. CROLY furnished notes of a case of Suicidal Wound of Throat, which severed the right common carotid artery and pneumogastric nerve, causing immediate death.—Dr. R. CHARLES B. MAUNSELL showed a Varicose Aneurysm which he had excised from the right forearm of a man, aged 42, who had received a punctured wound from a broken bottle over the line of the radial artery, about 2 inches above the wrist-joint. Pulsation and a sharp thrill and buzzing sound were well marked before removal. The aneurysm had grown to the size of a walnut in a fortnight.—Mr. M'ARDLE demonstrated (1) the case of a boy with a Peculiar Form of Ectopia Vesicæ (artificial marsupialisation); (2) Bones of Forearm from a case of Compound Fracture; and (3) a Collection of Vesical Calculi.

Section of Obstetrics.

A. V. Macan, M.D., President, in the Chair.

Friday, November 24th, 1899.

Excision of Coccyx.

Dr. Glenn showed a specimen of excision of the coccyx for dislocation, causing severe coccygodynia of many years' standing.

Dr. Kidd had had three such cases. He was led to believe by the textbooks that granulation would occur after the operation, and that he could not expect primary union to take place. In one of his cases union was so complete that the cicatrix could not be seen. In two of the cases the pain was completely relieved.

Dr. Glenn, in reply to Drs. Knott and Purefoy, said he now thought the crepitus was a true crepitus, due to the rubbing together of the ends of the bone. It was only three weeks since the operation, and the pain had diminished, but had not completely disappeared.

Cæsarean Section.

Dr. G. Cole-Baker read a paper on a case of Cæsarean section, in which he performed this operation successfully in August, 1899, on a woman parturient for the eleventh time. He believed that in this fact his case was unique, though Murdoch Cameron (Glasgow) had performed it on a 9-para, whose eight previous pregnancies had been terminated by craniotomy.

The history of the ten previous labours was somewhat remarkable. The first, fourth, and fifth were terminated by forceps. Result to child: first stillborn, fifth died in four hours, fourth alive and now 11 years old. At the second and tenth labours, forceps having failed, version was performed, but in both cases the after-coming head was only extracted by perforation and craniotomy. The third, sixth, seventh, eighth, and ninth labours terminated naturally, resulting as follows: In the third and eighth the children were alive and still living, the sixth was stillborn, while the seventh and ninth both died a few minutes after birth. Aware that the woman had had living children, Dr. Cole-Baker allowed his patient to remain in labour for forty hours before he interfered, in the hope that the head might mould and the child be extracted. At the end of this time, however, as the mother's pulse and temperature were rising, the lower uterine segment thinning out, and the contraction ring becoming marked, the fœtal heart sounds increasing in frequency, with a "caput" commencing to form without any symptoms of moulding, he asked Dr. W. J. Smyly to see the case with him, and they agreed that the choice lay between Cæsarean section and craniotomy. Dr. Cole-Baker chose the former. He incised the uterus (longitudinally, and commencing as near the fundus as possible) while still in the abdominal cavity, and extracted the child by the feet. The incision was through the placental site, and hæmorrhage was very free for a few seconds, but was completely controlled by Dr. Smyly, who slipped both his hands down on to the cervix the moment the emptying of the uterus permitted of its being lifted out through the abdominal incision. The uterine wound, which was six inches long, was begun with a scalpel and completed with scissors, and from the time of its commencement till the child was extracted was not more than ninety seconds. The wound in the uterus was closed with interrupted silkworm gut sutures passed down to but not including the decidua. The patient made a good recovery, was up on the twenty-eighth day after the operation, having nursed her infant from the second day after her delivery. Later, Dr. Cole-Baker measured the patient's true conjugate with Skutsch's pelvimeter, and found it to be only six centimetres. It was difficult to understand how a woman with such a limited conjugate could have brought forth living children *per vias naturales*, except on the assumption that she did not go to "term" on these occasions and that the children were small. The child extracted was a female weighing nine pounds.

Dr. Cole-Baker did not approve of craniotomy if the child were ascertained to be alive, and believed it to be no whit less dangerous for the mother than Cæsarean section in either immediate or ultimate consequences, while the child was sacrificed. Jardine (Glasgow) agreed with him. Dr. Cole-Baker did not think the child could have been delivered alive in his case by the performance of symphysiotomy, and, even so, preferred Cæsarean section to that operation. In favour of his opinion he quoted Charles, Washburn (Boston), and Everke. The latter called the suture of the uterine wound the "essential" feature of the operation. Dr. Cole-Baker agreed with him, and advocated three sets of sutures—fine silk (interrupted) for the decidua and submucosa taken together, strong silk (interrupted) for the muscular coat taken alone, and a continuous fine catgut suture for the peritoneum, inserted so as to cover in completely all the silk sutures in the muscular coat. This minimised friction due to respiration between the anterior uterine and parietal or visceral peritoneum, thereby lessening possibilities of adhesion. He also advocated Marcy's manœuvre of drawing down the omentum over the incision as a good one—for adhesion of the uterus to the omentum would not be so undesirable, in the light of a subsequent pregnancy, as one of the uterus either to the abdominal wall or to intestine. He thought Schultze's method of artificial respiration the best for newborn infants, and had never had any bad results, even after employing the method for upwards of two hours.

Dr. Kidd said his operation was performed in a condition where labour was obstructed by a tumour which filled the lower part of the pelvis, while Dr. Cole-Baker had operated for deformity of the conjugate diameter. It was a common misfortune to come down on the placenta, and of course, if the operator, in his hurry to gain entrance, incised the placenta, it added to the danger of losing the mother and child. The question of putting ligatures through the mucous membrane of the uterus was important. Where a local discharge which had become septic afterwards occurred, he thought the passage of these sutures into the cavity of the uterus would be an indirect means to allow this discharge to get between the walls.

The President said that where there had been a long labour the danger of Cæsarean section was very great; in fact, the operation was at times almost contraindicated. Symphysiotomy was still permissible long after the period for Cæsarean section had gone by. He looked on the elastic ligature as the great cause of asphyxia. With regard to suturing the uterus he would use ordinary boiled silk, and rather than lose two seconds over the operation would include the mucous membrane.

Dr. Cole-Baker, in reply, said he failed to see that the suture tracks passing through the decidua could in any way conduce more to absorption from the uterus than in the case of any other mucous membrane. The asphyxia of the child was not due to pressure, as none was applied either with the elastic ligature or by the assistant, until the child had been removed.

President's Address.

The President read an address on The Significance of Pain in Gynæcology.

Exhibits.

Dr. Purefoy exhibited five Myomatous Uteri removed by abdominal section recently in the Rotunda Hospital.—Dr. Kidd exhibited a Myomatous Uterus removed by abdominal section.—Dr. Alfred Smith exhibited seven Fibro-myomatous Uteri removed by retro-peritoneal hysterectomy.

MANCHESTER MEDICAL SOCIETY.

Professor W. J. Sinclair, M.D., President, in the Chair.

Wednesday, December 6th, 1899.

Cerebellar Abscess.

Dr. Milligan described a case of cerebellar abscess secondary to acute suppurative middle-ear disease.

The patient, a man aged 42, contracted a severe head cold, which was followed very shortly afterwards by pain in the right ear and by a discharge which lasted for a few days. Ten days later pain in the head, mainly occipital, came on accompanied by attacks of vertigo. Examination of the ear at this time revealed a swollen and congested membrane, but without any perforation, complete deafness upon the affected side, a normal temperature, and a pulse-rate of 72. A few days later severe head symptoms supervened. Severe pain in the head—a pain mainly occipital—was constant, and was accompanied by marked insomnia. On two or three occasions the patient had been sick. The pulse was 62, and the temperature 97.8°. There was no optic neuritis, and no paralysis of any ocular muscles. The following day the patient was admitted into hospital. The membrana tympani was found congested and swollen in its posterior segment, but not perforated. Deafness upon the affected — the right — side was practically complete. Deep-seated pain could be elicited by pressure over the mastoid process. Temperature 97.8°, pulse 60, respirations 15 per minute. The tongue was thickly coated with fur, the breath was extremely foul, the bowels were markedly constipated, and the anterior abdominal wall was retracted. No optic neuritis, no hemianopsia, and no paralysis of any of his ocular muscles was present. Vertigo was complained of, and when walking a marked tendency existed to fall forwards and to the right side. Pain of an intense character was complained of when pressure was made over the right cerebellar region. Cerebration was somewhat sluggish, but during the night the patient was excited and incoherent. Arrangements were accordingly made for operation. The mastoid process was first of all opened up very freely, nearly the whole of its cellular structure being gouged away. The merest trace of pus was found in one of the more posterior cells, but the mucosa lining the cells was deeply congested. At this stage of the operation the patient suddenly ceased breathing, the pulse continuing, however, good and regular. The opening of the cerebellum had consequently to be performed while artificial respiration was being kept up. As quickly as possible a disc of bone was removed, and a grooved director introduced into the cerebellum downwards and forwards. Pus (1 to 2 ounces) was at once found, and was rapidly evacuated. A drainage tube was slipped into the abscess cavity, which was washed out with 1 in 40 warm carbolic lotion. The patient made a good but somewhat slow recovery.

Dr. REYNOLDS related the symptoms of a case of cerebellar tumour affecting the middle lobe (with staggering gait, dysarthria, and occasional vomiting) which was operated upon by Mr. Thorburn. It was afterwards found to be a soft myxoglioma.

Mr. WM. THORBURN showed that all conditions except cysts and tumours could be excluded, but that either a cyst or a tumour would cause the symptoms. Operation was carried out in two stages, but the second operation revealed no growths within an operable area. Symptoms were slightly but only temporarily relieved. On the general question of operation for cerebellar tumour, Mr. Thorburn maintained that, in spite of the small success hitherto attained, the hopelessness of the disease rendered exploration imperative, and that such exploration would be likely to relieve rather than to aggravate symptoms by reducing tension.

DIAGNOSIS IN ABDOMINAL SURGERY.

Mr. G. WRIGHT mentioned two cases illustrating the difficulties of diagnosis in abdominal surgery.

PATHOLOGICAL SOCIETY OF MANCHESTER.

WILLIAM THORBURN, F.R.C.S., President, in the Chair.

Wednesday, December 13th, 1899.

SARCOMATOUS DISEASE OF MIDDLE EAR.

DR. MILLIGAN showed a specimen of sarcomatous disease of the middle ear.

The patient was a child, aged 2½ years. The first symptom noticed in the case was the occurrence of slight facial paralysis. This was followed two days afterwards by a sero-sanguineous discharge from the middle ear, which rapidly became purulent and very fœtid. A fortnight after the first appearance of the discharge the external meatus was found to be filled with a fleshy-looking growth. When brought to the hospital six weeks after the onset of symptoms the child was found to be emaciated and feverish. A large peri-auricular abscess was present, and the external meatus was entirely blocked by a greyish-looking and vascular growth. The history, the emaciation, the appearance of the growth and its vascularity suggested sarcoma. A portion was removed for microscopic examination, and was found to present the characters of a myxosarcoma. The case was not considered suitable for any active interference; two months afterwards the child died. A *post-mortem* examination showed a large sarcomatous growth springing from the periosteum of the middle ear and perforating the tegmen tympani, growing inwards within the cranial cavity, and pushing the dura before it.

Reference was made to the rarity of sarcomatous disease of the middle ear, and to two other cases which the writer had had the opportunity of observing in his practice.

ADENO-CYSTOMA OF NECK.

Dr. EUGENE S. YONGE showed an adeno-cystoma of the neck, probably originating in an accessory thyroid gland.

The growth, which was congenital, was removed from a young man, aged 19. It occurred as a small encapsuled tumour, about the size of a walnut, situated in the middle line of the neck, immediately below the hyoid bone; a fibrous cord led from the upper extremity of the tumour to that structure. Microscopically, the specimen prescribed a strong resemblance to thyroid tissue.

Dr. Yonge referred to the possibility of remnants of the gland being left anywhere along the track of the thyroglossal duct, and undergoing adenomatous or cystic change. The specimen shown appeared to be an example of a median accessory thyroid which had undergone some such metamorphosis.

TUBERCULOSIS OF HERNIAL SACS IN CHILDREN.

Mr. WRIGHT and Mr. WYLIE reported and showed preparations of three cases of Tuberculosis of Hernial Sacs occurring in Children.

In two of the cases radical cure had been done with good result; the third case unfortunately died in hospital from tuberculous meningitis. In the two cases operated upon the lesion was apparently limited to the hernial sac, there being no signs present of abdominal or other tuberculosis.

DEFORMITY OF MOUTH.

Mr. DAVID HEADRIDGE showed models of the mouth of a young man, aged 21.

On the right side there was a space between the teeth of half an inch, extending from the canine to the distal edge of the second molar. The patient had enjoyed exceptionally good health, except for the occurrence of some inflammatory polypi in the middle ear on the same side, for which there had been an operation. Both the upper second temporary molars were *in situ*, the roots alone remaining of that on the right side. On the left side the teeth had their normal occlusion. The bones of the face were otherwise fully developed.

SPECIMENS.

Dr. LEA exhibited specimens from an unusual Tumour of the Face in a young child.—Dr. ROTHWELL showed and described a number of specimens of Experimental Aspergillosis.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Professor C. J. WRIGHT, President, in the Chair.

Friday, December 8th, 1899.

SUPRARENAL EXTRACT IN NASAL SURGERY.

MR. A. L. WHITEHEAD read a paper on the use of suprarenal extract in nasal surgery. The experimental investigations of Oliver and Schäfer on the effects of intravenous injections of the extract were mentioned, and papers by Newcomb, Bates, and Swain referred to. A watery extract of the driest gland in the strength of 10 gr. to the drachm, with the addition of 12 gr. of hydrochlorate of cocaine after filtration was recommended. The value of this extract for diagnostic purposes was pointed out, the extreme shrinkage in the vascular erectile tissue of the nose resulting after the local application facilitating examination. In operative work the advantages were stated to be threefold; first, the greater room afforded by reason of the ischæmia; secondly, the diminished loss of blood; and, thirdly, the freedom of the field of operation from hæmorrhage. Cases of partial and complete resection of the turbinate bones, removal of polypi and septal spurs were mentioned, and it was noted that there was no severe reaction, no excessive post-operative hæmorrhage, and no delay in the process of repair.

Dr. BRAITHWAITE, Dr. S. LONG, Mr. MOYNIHAN, Dr. BARRS, and the PRESIDENT discussed the paper, and Mr. WHITEHEAD replied.

HERNIA OF THE BLADDER.

Mr. MOYNIHAN read a paper on Three Cases of Hernia of the Bladder.

The first case occurred in a man, aged 77, who had suffered for eight years from a partially-reducible right inguinal hernia, and for twelve months from marked symptoms of prostatic enlargement. On the morning of the day of operation the hernia became quite irreducible, and symptoms of strangulation developed. On opening the sac, 7 inches of large intestine were exposed, and readily reduced. Behind and to the inner side of the sac lay the bladder thickly covered with fat, and containing about 10 ounces of urine. The sac was removed up to the bladder, and stitched up with a continuous suture. The bladder was freed and reduced, and the canal stitched up.

Two later cases were recognised by the examination of an adipose deposit on the inner side of the neck of the sac. On gently tearing through this fat the bladder was exposed. The paper was illustrated by lantern slides.

Mr. LAWFORD KNAGGS referred to a similar case which he had seen.

OTHER COMMUNICATIONS.

Dr. A. G. BARRS read notes of a case of Rheumatic Dermatomyositis occurring in a child, and referred to similar cases which had been reported.—Mr. BASIL HALL (Bradford) read notes of a case of Syphilitic Fibro-spongioid Ostitis, and illustrated his remarks by photographs and skiagraphs. Cases, specimens, etc., were shown by Mr. MAYO ROBSON.

LIVERPOOL MEDICAL INSTITUTION.

PATHOLOGICAL AND MICROSCOPICAL SECTION.

F. T. PAUL, F.R.C.S., in the Chair.

Thursday, December 14th, 1899.

THE ASSOCIATION OF ALBUMOSURIA WITH BONE DISEASE.

DR. BRADSHAW read for himself and Dr. WARRINGTON a paper on this subject. They pointed out that the peculiar body known as "Bence Jones albumose" had been recognised in all in 11 undoubted cases, and that all recent cases tended to confirm the view that albumosuria was always an indication of multiple myeloma. They considered it still undecided whether multiple myeloma ever occurred without albumosuria. Dr. Bradshaw demonstrated the distinctive characters of the urine in his case. Numerous microscopical and other specimens were shown.

The paper was discussed by the CHAIRMAN, Mr. THELWALL THOMAS, and Dr. LOGAN.

ETIOLOGY OF CANCER.

Dr. R. J. M. BUCHANAN read a second communication on the etiology of cancer, with special reference to the parasitic theory. He described the results of his personal investigations extending over a period of more than six years. The examination of several hundred tumours of various kinds (purposely omitting sarcomata), also normal tissues, revealed the parasite in carcinomata only these were examined from the breast, skin, parotid gland, urinary bladder, gall bladder,

tongue, palate, submaxillary gland, vocal cord, colon, stomach, rectum, antrum, with several secondary glands, and metastases. In 4 cases of mastitis of the breast showing early carcinoma, the parasite was present, while in simple mastitis it was not seen. He described the methods of investigation, and the characters of the parasite generally. The best place to find them was the growing edge of the tumour, although in cancer of the breast large numbers were present in the nipple. He laid stress upon the constant recurrence of definite structure, the beauty and regularity of design, also the evidences he had found pointing to a true developmental process as against degeneration. Many parasites were intracellular and many extracellular, having not been in cells at all, or after development escaped. He entertained two preconceived ideas: (*a*) that either parasite or cell, or both, must be capable of movement to account for the intracellular condition; (*b*) that as a cancer was progressive in growth, and assuming the parasite to be an exciting cause, the parasite must develop *in situ*. With no desire to go beyond his evidence, his observations had led him to believe that the parasite in its young state penetrated a cell, there developed and formed spores, swelling up the capsule and forming a sporocyst, the spores eventually finding an exit by means of an aperture in the capsule, whence they reinfected fresh cells. For this continued reproduction, another process was necessary—namely, fertilisation; this probably took place in the adult parasites by means of conjugation, or between spore and spore, for there was a certain amount of evidence tending to the distinction of two separate forms of spore. The bearing which the parasite had upon new growth, secondary deposits and infiltrations; and the complex nature of the phagocytic process in relation to it, were discussed. Dr. Buchanan held the view that secondary deposits were imitative rather than absolute reproductions of the primary growth. He discussed the oscillation taking place between the protozoal and the blastomycetic theories, and considered that in the light of present knowledge the truly scientific mind would be willing to leave the question of classification open for the present. In the likeness between cancerous and other infective process he considered the reactions as differences in method and degree rather than in kind. Referring to his previous communication to the Society in April, 1897, when many objections were offered to the idea that the cancer bodies were parasites, and after considering these objections separately he produced evidence to show that they were other than nuclear degenerations, endogenous division of cells; that they could be easily distinguished from ordinary cell invaginations; that a definite local leucocytosis and phagocytosis accompanied the invasion; that endotheliomata were not antagonistic to the parasitic theory, and that there was a certain amount of evidence that the parasites followed Koch's law, this even in the tumour from cell to cell as host. He held that in cancer were to be found bodies foreign to normal tissues, that there was reason to believe them to be living entities introduced from without, that to them the cancer cell occupied the position of a host, and that these bodies lived, probably moved, grew and reproduced their kind with a definite life-history of their own, and that the parasites might be considered a cause if not the sole cause of cancer. He demonstrated by a series of microscopic specimens the various stages of the life-history of the parasite in the tumour and illustrated his paper profusely by means of photo-micrographs and coloured lantern slides.

A discussion took place in which Sir William Banks and Drs. and Messrs. Paul, MacAlister, Imlach, Larkin, and George Hamilton took part.

Dr. Buchanan replied.

Specimens.

Specimens were shown by Dr. Nathan Raw, Mr. R. C. Dun, and Dr. G. S. Stansfield.

Bristol Medico-Chirurgical Society.—At a meeting on December 13th, Mr. W. H Harsant, President, in the chair, Mr. Munro Smith showed a patient with Marked Deformity of the Legs, and one with Syphilitic Disease of the Elbow.—Mr. Paul Bush showed a patient with Phosphorus Necrosis, and a patient with Actinomycosis. The President, Dr. J. O. Symes, and Mr. W. R. Williams spoke on the conditions.—Mr. G. Munro Smith read a paper on a case of Anthrax, which was discussed by Mr. C. A. Morton, Dr. T. Fisher, Mr. Paul Bush, Dr. L. Firth, and Mr. W. R. Williams.—Mr. T. Carwardine showed: (1) A Cyst of the Vermiform Appendix; (2) Extrauterine Gestation. Dr. A. E. Aust Lawrence, Mr. W. R. Williams, and Mr. C. A. Morton commented on the specimens.—Dr. J. O. Symes read a paper on Non-bacillary Croup. Dr. T. Fisher and the President spoke on the question.—The following lantern slides were shown by the aid of the oxyhydrogen light—Mr. Munro Smith: Syphilitic Disease of the Elbow; Syphilitic Ulcer of the Leg; slides illustrating his paper on Anthrax. Mr. Paul Bush: Syphilitic Disease of Humerus and Tibia, and several slides illustrating his Actinomycosis case. Dr. J. O. Symes: Slides in connection with his paper on Croup.—Mr. C. A. Morton read a paper on a Successful Cœliotomy for Intestinal Obstruction, due to Persistent Meckel's Diverticulum. Dr. J. Swain, Mr. Paul Bush, Mr. W. R. Williams, and the President spoke on the subject.—Dr. B. M. H. Rogers read notes on a case of Sarcoma of the Heart and showed the specimen. Mr. W. R. Williams, Dr. T. Fisher, and Dr. P. W. Williams discussed the paper.

Glasgow Pathological and Clinical Society.—At a meeting on December 11th, Dr. Thomas Barr, President, in the chair, Dr. T. Spence Meighan showed (*a*) a girl who had suffered from Extreme Divergence of both Eyes, due to congenital absence of the internal recti. At a distance of five feet there had been a blind space measuring three feet transversely. He had operated on the patient with the result that the visual fields now were in contact, but did not overlap. There was neither binocular vision nor diplopia; (*b*) a child, the subject of a very large Coloboma of left upper eyelid, associated with dermoid cyst of the cornea, and with supernumerary auricles on the same side.—Dr. David Newman gave an account of two cases in which small Renal Calculi were removed from the ureter by operation through the bladder. The calculi had become impacted in the vesical extremity of the duct and had projected into the bladder, covered by mucous membrane. He also showed Casper's instrument for catheterisation of the ureters.—Dr. G. Burnside Buchanan showed (*a*) a large Sarcoma of the Internal Popliteal Nerve from a patient who had motion and sensation below the knee, with the exception of some anæsthesia on the outer side of the sole of the foot. Microscopic specimens by Dr. A. R. Ferguson showed the tumour to be of the round-celled variety; (*b*) a large Urinary Calculus which had been impacted in the prostatic urethra and had been removed by perineal section.

Newcastle-on-Tyne Clinical Society.—At a meeting on December 7th, Mr. H. Brunton Angus, who was in the chair, showed a pit lad, aged 15, who had his right foot crushed by an overturned waggon on January 10th, 1899.

On admission to the Royal Infirmary it was found that there was a large lacerated wound, begrimed with coal dust, over the inner side of the ankle, through which protruded the lower end of the tibia, the tip of the internal malleolus was detached, all the ligaments of the joint severed, and the foot dislocated outwards. The vessels and nerves were intact. The dislocation was reduced, and the parts thoroughly cleaned, under anæsthesia, the wound being left open and a drain employed. The wound healed without suppuration in the joint. Thirteen weeks after the accident the patient walked out of the infirmary with the aid of stick, which he was able to discard in two weeks' time. He was now back to work, the movements in the joint being perfect.

—Drs. Coley and Beattie discussed the frequent occurrence of Tetanus after Pit Accidents.—Dr. Coley read notes of a case of Purpura Hæmorrhagica in a girl, aged 7, which he illustrated by means of excellent photographs. Treatment was by means of turpentine given by the mouth in 5-minim doses every four hours, and by subcutaneous infusion of saline solution in the axilla. The patient made an uninterrupted recovery.—Mr. Ouston showed a female infant, aged 7 weeks, with well-marked Double Inguinal Enterocele.—Mr. Ouston showed a man, aged 75, with Malignant Glands in the right side of the neck in the region of the thyroid cartilage. No primary growth could be found, and he suggested its origin in the epithelium of one of the branchial clefts.—On the invitation of the Society Mr. T. Maltby Clague read a paper, entitled, Prescribing from a Pharmacist's Standpoint. He discussed many incompatibilities prescribed in every-day practice, and showed several specimens in illustration of his subject. His concluding remarks were as follows:

I have ever regarded it as the duty of the pharmacist in cases of doubt to consult the prescriber, and in doing so to make any suggestion which

will help to carry out the purpose of the prescriber. This should be done without arousing any doubt in the mind of the patient or his friends. In carrying out this I have always had the most courteous reception, and a ready acquiescence in usable suggestions. My presence here this evening is a proof that in your profession you are ready to acknowledge and to utilise for the public good the knowledge which the pharmacist gains in his calling which, though partly trade, has yet in it much that is of a professional nature.

—The PRESIDENT showed a specimen of Ruptured Ectopic Gestation, which he had successfully removed by operation three weeks previously.

Menstruation ceased in August, 1899, and one month later the patient was seized with abdominal pain, metrorrhagia, and vomiting. This continued on and off till November 14th, when an exacerbation of the symptoms led to an examination by Dr. Jennings, of Jarrow, who sent her to the Royal Infirmary, Newcastle, for immediate operation. A large mass was found in the region of the left broad ligament, and from it the placenta and fœtus shown were removed. The patient made a good recovery, and was now well. Hæmorrhage from the placental site was very troublesome after the operation.

Dr. BEATTIE suggested that the placenta might with advantage have been left *in situ*.

REVIEWS.

A SYSTEM OF MEDICINE. By Many Writers. Edited by T. CLIFFORD ALLBUTT, M.D., F.R.S., Regius Professor of Physic in the University of Cambridge. Vol. VIII. London: Macmillan and Co. 1899. (Roy. 8vo, pp. 998. Illustrations, 16; plates, 3. 25s.)

THE last volume of Professor CLIFFORD ALLBUTT'S successful *System of Medicine* comes into the world just as the year is going out. As originally planned there were to have been five volumes in all, but the editor and the publishers have done well to allow of its expansion into the eight volumes which are now complete, and which present the reader with a valuable expression of medical authority at the present time. The first volume saw the light in 1896, so that this great undertaking had been carried through in excellent time. This last instalment contains some of the remaining diseases of the nervous system, and then deals fully with mental diseases and those of the skin. Thus in the course of these eight volumes three specialities have been exhaustively dealt with, for in addition to the two just referred to, the reader will remember the valuable monograph on diseases of the throat in Volume IV.

The volume opens with an interesting and instructive essay on craft palsies by Dr. G. V. Poore. The proper method of examining a patient is fully detailed, and the numerous conditions for which craft palsies may be mistaken are pointed out. The loss of irritability in the affected muscles is regarded as due to chronic fatigue, the result of long-sustained contraction. Among the descriptions of the various kinds of craft palsies stammering finds a place, although admittedly it has no right to be regarded as an occupation neurosis in the proper sense. The section on treatment is full of practical suggestions—the outcome of the experience derived from 400 cases of professional ailments. Professor Chiene gives a description of spasmodic torticollis, and in the section on treatment speaks well of the effects of neurectomy of the spinal accessory nerve. The article on tetany is a very valuable and elaborate contribution by Dr. Risien Russell, who, after a detailed discussion of the facts, decides in favour of its toxic origin, the toxic body not being the same in all cases. The same writer, who supplied the excellent accounts of convulsive tics in the previous volume, has wisely been chosen to describe the features of facial spasm.

Sir William Gowers, in the course of his authoritative essay on paralysis agitans, brings presumptive evidence in support of the view that the essential lesion is a chronic senile change in the nutrition of the terminations of the branching processes of the motor cells of the cortex. The interesting subject of migraine has been entrusted to Dr. James Mackenzie. Dr. Osmerod discusses the nature of hysteria, and is rightly emphatic on the point that it is not an assumed disease. The whole tone of his article is one of healthy common sense, and the remarks on treatment are both wise and practical. After an interesting account of latah, the curious disease of the Malay Peninsula and Java, by Dr. Manson, there is a short article on catalepsy from the pen of the late Dr. Hack Tuke.

The last article in the section of diseases of the nervous system is the important one on neurasthenia, contributed conjointly by the editor and by Mr. Victor Horsley. The medical side of neurasthenia is fully dealt with by the editor in a most interesting and gracefully-written article. He traces the history of this disease, and gives the results of his early experience at Leeds, where in former days railway accidents being frequent, a large experience of neurasthenic cases fell to the lot of the local practitioners. The various types of neurasthenia are graphically sketched and illustrated by clinical cases. Mr. Victor Horsley gives a well-considered account of traumatic neurasthenia, and emphasises a point made by the editor, namely, that before a trial the medical witnesses should meet in consultation over the case.

The succeeding section is devoted to mental diseases, and forms in itself a complete handbook to the subject. In his introduction Dr. Savage, to whose guidance the editor refers, adopts the classification suggested by Drs. Clouston and Mercier for the Educational Committee of the Medico-Psychological Association. The various causes are detailed, and their frequency and mode of action, as shown by the author's experience, estimated.

Dr. Francis Warner's valuable article on dull, delicate, and nervous children is based on an examination of 100,000 children, and contains details as to the associated defects found in these cases, and gives directions for their clinical examination and treatment. A very thoughtful and ably composed article is that written by Dr. Guthrie on night terrors, a subject that has evidently not only closely engaged his attention, but also interested him personally. In the article on idiocy and imbecility by Drs. Shuttleworth and Fletcher Beach the various types of idiots are classified chiefly from their method of causation, their chief features and characteristics are well told, and a practical account of the outlines of their appropriate treatment is given.

In an extremely well-written and interesting article on vice, crime, and insanity by Dr. Mercier, the gradual transition from a moral and normal to the immoral and abnormal condition in vice and insanity is insisted on and illustrated by well-chosen examples, graphic descriptions of sane and of insane vice being given. Dr. Clouston gives an account of the epochal insanities and of the insanity of phthisis, while Dr. Savage, in his article on the toxic insanities, deals concisely with the large number of the different factors that are concerned. The insanity following surgical operations is the subject of a well-considered though brief essay by Mr. Clinton Dent, who considers it independent of sepsis or toxic poisoning. After a concise sketch of alcoholic insanity by Dr. Hyslop, there is a brilliant and attractive article by Dr. R. Jones, of Claybury, on epilepsy and insanity, illustrated by a plate of a reflex cerebral circuit after Ramon y Cajal. This and Dr. Mercier's essay are certainly the most interesting contribution to this section on mental diseases.

Acute mania is described by Dr. Savage, while the allied condition, acute delirium, has been entrusted to Dr. Percy Smith; the possibility of the latter disease being septic and due to micro-organisms is discussed, but the evidence is as yet imperfect. It is interesting in this connection to note that sunstroke, which has recently been thought to be infectious, is one of the causes set down for acute delirium. A full description of the varieties of melancholia is given by Dr. H. Rayner, and a systematic account of the methods of treatment adds to the value of an article essentially practical. Dr. Conolly Norman gives an account of systematised delusional insanity; while Dr. Urquhart writes on states of mental weakness (dementia).

In the authoritative article on criminal insanity, Dr. Nicolson protests against the so-called science of criminal anthropology. He shows by statistics, most of which are derived from Broadmoor, that the criminal tendency among the insane is towards violence, while in the sane it is towards plunder. A very interesting article on the treatment of insanity and allied disorders by hypnotism has been contributed by Dr. Milne Bramwell, whose name is intimately connected with this form of treatment. The moderate tone taken and the entire freedom of any partisan's claim make this article attractive and convincing. Dr. Batty Tuke discusses the physical treatment of the insanities, prefacing his

remarks by speaking of the causation, the great need for rest, and the bad results following indiscriminate change. He cautiously speaks of mechanical restraint as preferable, under certain conditions, to narcotics, which tend to retard recovery, and appends some interesting remarks on the thyroid treatment.

The diseases of the skin practically occupy the remainder of the volume, and form a most valuable and successful addition to the system, inasmuch as nearly all the most distinguished English dermatologists have contributed their quota to it. The editor has had the assistance of Dr. Payne in this special department, and they must both be congratulated on the result.

The article on erythema commences with a discussion on the nomenclature and on the lesions which have been and should be included under this title; erythema nodosum is described under this heading, but after stating the views as to its association with rheumatism Dr. Colcott Fox leaves this interesting question open and does not express a decided personal view one way or the other. He also contributes careful accounts of urticaria, lichen urticatus, and urticaria pigmentosa, and points out the essential difference that exists between the latter morbid entity and those cases of ordinary urticaria where hæmorrhage and subsequent pigmentation happen to occur. In his account of eczema Dr. Payne emphasises the undesirability of freely coining Latin adjectives to describe trivial varieties of eczema; as an example of the extent to which this has been carried he refers to Dr. Bulkley's collection of 125 Latin names employed in the nomenclature of eczema. The subject of seborrhœic eczema is fully discussed and full justice is given to the other forms of this common disease, and especially to that most important point, their rational treatment. Dr. Stephen Mackenzie gives an authoritative account of exfoliative dermatitis, and discusses its relation to epidemic skin disease and to relapsing scarlatiniform erythema, which as well as roseola and pityriasis rosea, he also describes.

The complete description of psoriasis by Dr. Brook of Manchester is especially interesting from the very full account of the rival theories of its nervous and parasitic origin. He suggests as a compromise the view that it is due to both, the neuro-vascular factor being primary and the parasitic secondary but essential to the full manifestations of the lesions. The important subject of lichen is treated by the same writer in an equally admirable manner. Under prurigo Dr. Colcott Fox shows very clearly the difference between the views as to what was regarded as prurigo by Hebra and by Mr. Hutchinson. He lays great stress on the importance of adequate treatment being adopted in the earliest stage of the disease.

One of the most valuable and original articles in the volume is that on herpes zoster by Dr. Head. It is based on a clinical examination of a large number of cases—412—and represents the outcome of many years' research. A parallel is drawn between it and anterior poliomyelitis, and an extremely valuable addition is made to our knowledge of the pathology of herpes by an examination of the ganglia on the posterior roots in 12 cases after death; this research was undertaken in conjunction with Dr. A. W. Campbell of Rainhill Asylum. Hydroa or dermatitis herpetiformis is admirably described by Dr. Payne, who pays great attention to the diagnosis of this disease, and devotes a special section to hydroa gestationis.

Dr. Phineas Abraham's descriptions of general sclerodermia and of morphœa are well conceived, and show an extensive acquaintance with and research into the literature of the subject; he also gives an excellent account of keloid, and provides a useful historical note on the various uses of this term. He further provides satisfactory accounts of tylosis, corns, horns, and idiopathic atrophy of the skin. Dr. Pringle gives a full and systematic account of the affections of the sweat glands, beginning with functional disturbances such as anidrosis, hyperidrosis, and chromidrosis, and then going on to structural diseases, including inflammation, hydrocystoma, and pompholyx. The same authority describes two rare diseases, angiokeratoma and Darier's disease. In the latter article he describes fully the psorosperms, and touches on their occurrence elsewhere in the human body, but considers that at at present it would be rash to assume that Darier's disease is due to the active influence of psorosperms. Dr. Pringle gives a valuable description of ichthyosis and of the pigmentary affections, ephilis, chloasma, leucoderma and albinism, and of adenoma sebaceum. The diseases of the hairs and allied conditions, such as folliculitis and sycosis, are scientifically described by Dr. Radcliffe Crocker, who also writes on Kaposi's disease. The new growths of the skin generally are treated of in a concise and independent manner by Mr. Marmaduke Sheild. The various forms of lupus and tuberculous affections of the skin are dealt with by Mr. W. Anderson, who advocates excision of lupus vulgaris, a practice which he has carried out since 1881; while the eruptions of syphilis receive ample attention from Mr. Jonathan Hutchinson, jun.

Mr. Malcolm Morris, in the article on the parasitic diseases of the skin, suggests that special schools should be instituted for children affected with ringworm—a plan that has been adopted with success in Paris. In the concluding section on diseases of uncertain classification, Mr. Malcolm Morris contributes interesting accounts of acanthosis nigricans and the various forms of xanthoma. Dr. Payne gives scholarly and complete descriptions of mycosis fungoides and of rhinoscleroma. In his account of molluscum contagiosum Dr. Galloway clearly shows the appearances that erroneously give rise to the view that it was a disease of the sebaceous glands, and gives a good account of the minute anatomy of the so-called molluscum bodies. In some interesting remarks he clearly proves that they are not protozoa. The same writer gives accounts of the feigned diseases of the skin, and of the various forms of eruption produced by trades and occupations.

In an appendix Dr. Manson gives a lucid and well-illustrated description of the two cycles, intracorporeal and extracorporeal, of the malarial parasite, and thus brings the article in an earlier volume of the *System* up to date.

This brings not only the volume but this *System of Medicine* to a close; and since the medical public have already shown their opinion as regards the value of the work as a whole, it is quite unnecessary to insist further here on the success that it has both deserved and obtained; it only remains to congratulate the editor on this the concluding volume, which well maintains the high standard of its predecessors.

The Treatment of Lateral Curvature of the Spine, with Appendix, giving an Analysis of 1,000 Consecutive Cases Treated by "Posture and Exercises" exclusively (without Mechanical Supports). By Bernard Roth, F.R.C.S., Orthopædic Surgeon to the Royal Alexandra Hospital for Sick Children. Second Edition. London: H. K. Lewis. 1899. (Roy. 8vo, pp. 141; 46 Figures and 2 Plates. 10s. 6d.)

The second edition of this well-known book embodies further experience gained in the ten years since the first. The author freely acknowledges that, if osseous deformity of the ribs and vertebræ be present even to a slight extent, complete cure of the lateral curvature is impossible. But it would be interesting to know more precisely what the author means by osseous deformity of the vertebræ, and exactly how he is able to detect a slight degree of it. He naturally insists upon the importance of ascertaining "the best possible position," and describes it as the keynote of treatment.

As is well known, he is strongly opposed to any spinal support whatever except, he adds, in those rare cases of lateral curvature due to paralysis of the erector spinæ muscles, and even in those cases mechanical supports often fail to be of the slightest use. There can be no doubt that good work has been done by the author by his strong advocacy of the more rational method of treating scoliosis by exercises and he may perhaps be pardoned a little egotism such as creeps out in sentences like the following: "I have also, by means of these tracings, demonstrated further increase of the osseous deformity where my advice has not been followed, and the patient has returned to me after an interval of months or years." In another place he writes: "Some surgeons have tried to explain the success I claim by maintaining that I only undertake slight cases of lateral curvature with any prospect of permanent benefit." This Mr. Roth considers to be refuted by reference to his tables, in one of which is given the treatment of 202 cases "which were undoubted failures while under the treatment of other surgeons, or they would not have come under my care."

In this edition there is not much that is new nor much that adds to our knowledge of the subject. We could have wished that the author had given us some insight into the exact pathogeny of scoliosis.

The Exploration of the Urethra and Bladder. By M. Tuchmann, M.R.C.S.Eng., M.D. Würzburg, formerly Surgeon to Out-patients German Hospital, Dalston. London: H. K. Lewis. 1899. (Demy 8vo, pp. 62, 26 illustrations. 5s.)

This small monograph is "a sort of second edition" in English of a pamphlet published in German twelve years ago. The volume is chiefly devoted to expounding the author's views as to the anatomy of the bladder and urethra, and in advocating the use of the "ureter forceps" first suggested by Dr. Tuchmann and used by him "more than 1,000 times." It is asserted that the anatomy of the bladder and urethra is "not well known," but if that be so the fault surely lies with the ignorant. Dr. Tuchmann gives a minute description of what he considers to be the normal anatomy of both urethra and bladder. We think, however, that in discussing instrumentation Dr. Tuchmann does not realise—certainly the reader is not made to realise—the difference between the healthy bladder in the dead subject and the diseased bladder in the living. Many of the author's statements are at direct variance with the teaching of authority. For example, he says: "I can emphatically state that after sufficient practice the ureteric ridge in the empty normal bladder can be distinctly felt in every case without exception in men, women, and children (living or dead), with the *coudé* catheter." Of the "ureters forceps" we are, without trial, incompetent to speak. There is, however, one very clear objection. The urine collected from one kidney must have remained some little time in the bladder, and may therefore be so altered that its examination, as tending to elucidate the question of kidney disease, is necessarily fruitless.

Rhinologie, Laryngologie, und Otologie in ihrer Bedeutung für die allgemeine Medicin. [Rhinology, Laryngology, and Otology in their Relation to General Medicine.] Von Dr. Med. E. P. Friedrich. Leipzig: F. C. W. Vogel. 1899. (Roy.8vo, pp. 341. M. 8.)

The author has here collated and woven together a vast amount of material of interest and value which the practitioner could only find for himself distributed over a large number of works, both of special and general medicine. So far as we know, the happy idea of doing this has not hitherto occurred to any author, and it may be said in general terms that Dr. Friedrich deserves well of his brethren, both general and special, for the work now placed before them.

His twelve chapters refer respectively to the organs of respiration, of circulation, of digestion, to the blood, to chronic constitutional disease, acute and chronic infections, diseases of the kidney, the skin and sexual organs, as also syphilis, diseases of the eye, intoxications, and diseases of the nervous system. The influence of these various diseases upon the throat, nose, and ear are very obvious, and reciprocally diseases of these latter are frequently instrumental in inducing or maintaining disturbed conditions in other organs. The investigation of the nose, throat, or ear frequently leads to the detection of the nature or localisation of disease in other organs, and, on the other hand, disturbances in the function of these special organs can often only be explained by the results of a study of other parts of the body. Weak points are apt to exist in both special and general treatises, which in the work before us the author is endeavouring to remove. He has done this with a measure of success which is deserving of all praise.

It need hardly be said that the functions of the nose come in for a considerable amount of discussion; but among the most valuable portions of the book we might cite the discussion (pp. 178, etc.) on the nature of the disturbances of hearing associated with Bright's disease and the interrelations of the upper air passages and the organs of generation, including Fliess's somewhat startling observations on the treatment of painful menstruation by cauterisation or cocainisation of what he designates the genital spots on the nasal mucous membrane. The 84 pages of the chapter on nervous diseases are full of interest, including as they do the questions relating to paralysis of the recurrent laryngeal nerve, which are treated with a lucidity and terseness which will be highly appreciated by those who have studied the current literature on this subject. The study of the intracranial lesions giving rise to deafness is well up to date. The observations of Weinland and Siebenmann to show that the central auditory tract does not pass through the corpora quadrigemina (in entire agreement with the recent researches of Ferrier and Turner) are among the later additions. The aural and laryngeal disturbances associated with tabes receive full notice.

The work has not merely an excellent logical table of contents at the commencement, but at the end it has a very full index, a combination of advantages which is not so common in foreign as it is in English works. The language is extremely clear, and there is a singular freedom from the complexity of lengthy sentences which English readers find difficulty in unravelling. The book deserves to be widely read both by specialists and general practitioners.

Traité de Diagnostic Médical et de Séméiologie. [Treatise on Medical Diagnosis and Symptomatology.] Par le Dr. F. O. Mayet. Part III. Paris: J. B. Baillière et Fils. 1899. (Roy. 8vo, pp. 161-817, 54 Illustrations. Fr. 8.)

This well-written and carefully-planned work is now complete. When properly bound up, however, it will assume the form of two volumes although it has been issued in three parts. This method of publication is confusing, and has considerable drawbacks from the reader's point of view. This final present instalment continues the methodical examination of the heart, and in addition contains accounts of the lungs, abdominal organs, and kidneys.

After the physical signs and methods of examining the heart have been clearly described, the pathological aspects receive ample attention. Thus tachycardia is classified under three heads—(1) That due to general cardio-vascular disturbance, to poisoning, for example, by tobacco, and to neuroses such as hysteria; (2) that due to disease of the medulla or vagi; and (3) those forms the pathology of which is either unknown or at present not satisfactorily known, such as paroxysmal tachycardia. Included in the account of murmurs there is an interesting summary of Potain's views on cardio-pulmonary or hæmic murmurs. In the section on the pulse a number of sphygmographs are given, and the subject of arterial tension is well described. After the respiratory organs have been dealt with on the same lines, the abdomen and the kidneys are systematically treated.

The volume ends with a short appendix on the Roentgen rays and Widal's reaction, and contains a good index, a welcome but by no means a common feature in French scientific works.

Traité de Médecine et de Thérapeutique. [Treatise on Medicine and Therapeutics.] Publié sous la direction de MM. P. Brouardel et A. Gilbert. Tome sixième. Maladies du Cœur, des Artères, de l'Aorte, des Veines, du Système Lymphatique et du Sang. Paris: J. B. Baillière et Fils. 1899. (Royal 8vo, pp. 996. Fr. 12.)

Nearly one-half of the sixth volume of MM. Brouardel and Gilbert's System of Medicine, treating of the diseases of the circulatory organs and blood, is given to the diseases of the heart itself, and nearly a fourth to those of the blood. To our mind the more interesting, and in many respects the more valuable, of the six chapters are the shorter ones, of which we may particularly instance that on diseases of the veins by Dr. F. Widal and Dr. F. Bezançon, and that, consisting of only 17 pages, on the diseases of the lymphatic system by Dr. Bezançon.

The chapter on the diseases of the heart, which is contributed by Dr. Pierre Merklin, is quite abreast of modern research, and admirably lucid and graphic. The symptoms and physical signs of cardiac disease are well described and

explained in 82 of the 447 pages of which the chapter consists. The author gives an interesting reference to a vegetative valvulitis due to the gonococcus which he connects in its causal relations with blenorrhagic arthritis. The diseases of the arteries are discussed by Dr. H. Roger and Dr. Gouget, except those of the aorta, which have been entrusted to Dr. Boinet.

Dr. Bezançon, in his chapter on the diseases of the lymphatic system, discusses the part played by this system in the acute infectious diseases, quoting experiments by himself and M. Labbé on the attenuating influence of the lymph glands on streptococcic and pneumococcic infection, and argues in favour of the view that the glands are centres for the destruction of the toxins themselves. Regarding the part played by the lymphatic system in syphilis, tubercle, and cancer, valuable working hypotheses are advanced, if no conclusive proof.

The last chapter, on the diseases of the blood, by Dr. Parmentier, somewhat closely follows the lines of Dr. Hayem's classical monograph, *Du Sang*. After giving an excellent short account of the methods of its microscopical and spectroscopical examination, he deals in a clear and comprehensive way with the general pathology of the blood, making pointed allusion to serum diagnosis and the phenomena of agglutination. He discusses, lastly, the special pathology of chlorosis, pernicious anæmia, lymphadenoma, and leukæmia.

The volume affords encouraging evidence of advance in the direction of bringing the affections of the blood and of the organs that circulate it more and more into the domain of experimental pathology.

Les Rayons de Röntgen et le Diagnostic de la Tuberculose. [The Roentgen Rays and the Diagnosis of Tuberculosis.] Par A. Béclère. Paris: J. B. Baillière et Fils. 1899. (Cr.8vo, pp. 96. Fr. 1.50.)

In surgery the Roentgen rays have proved of immense value. In medicine the results in regard to treatment and diagnosis have been disappointing. This little book of 95 pages, however, will go to prove that the *x* rays may render service to the physician in the diagnosis of tuberculous lesions in the thorax.

The method of examination recommended is shown in an illustration. In this the patient is seen standing with the Crookes's tube placed in front and the fluorescent screen on the back of the thorax. The screen is preferred because the movements of the diaphragm and other parts during respiration can be watched and studied, whereas this movement is a disadvantage when taking a photograph. Dr. M. Guilleminot endeavoured to overcome the blurring effect of the respiratory motion by an arrangement which allowed the Crookes's tube to act only when the patient was in one and the same phase of breathing—for example, either at the end of inspiration or expiration.

Upon the fluorescent screen various abnormal appearances can be detected, and although in some cases the changes are slight, they are none the less definite. MM. Kelsch and Bonion examined 124 patients; 73 gave negative results. In the remaining 51 abnormal appearances were noted, which are classified as follows: (1) Decrease in the transparency to a variable extent in the apices of one or both lungs; (2) enlargement of the bronchial glands, unilateral and bilateral; (3) decrease in the transparency of the pleura; (4) decrease in the range of movement of the diaphragm, unilateral and bilateral.

The author quotes authorities who believe that latent or early pulmonary tubercle can be diagnosed where there is entire absence of the usual physical signs. Cases are referred to in illustration of this.

It is obvious that those who wish to use the screen in these cases must arrange their apparatus so that the Crookes's tube shall yield the rays of a degree of penetration best suited to the patient under examination: and, further, he must make himself thoroughly familiar with the appearances on the screen of the normal chest, and the range of motion of the diaphragm in the old and in the young.

Seven skiagraphs of the thorax are reproduced showing various lesions.

NOTES ON BOOKS.

The edition of *Who's Who* for 1900 (London: A. and C. Black. 3s. 6d. net) does not differ in any material respect from its immediate predecessor—that is to say, it maintains its place as one of the most comprehensive and accurate annuals. Its main feature is the list of brief biographies of most persons of either sex who can be considered to be public characters. There are also some useful tables which have been carefully compiled, though we think that headed "Societies, Royal, National, and Learned" might be revised. The casual reader who finds in this list "Physicians, Royal College of," might be led to suppose that there was only one College of Physicians, and since it is immediately followed by the Society for Psychical Research, might not understand that it is a body with important public duties prescribed by statute. It might be worth while to give half a page to a list of the medical corporations, showing the diplomas which they grant. This may perhaps seem hypercriticism to a layman, but in a book which has attained so high a standard it appears worth while to point out a minor matter in which it might be improved.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICINAL AND DIETETIC PREPARATIONS.

Tabloids.—Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, E.C., have sent specimens of a number of new forms of compressed drugs. Tabloid guaiacol camphorate contains 5 grains of guaiacol camphorate, a new drug the result of original work in the Wellcome Chemical Research Laboratories. Guaiacol and camphoric acid have been used separately for some time in the treatment of consumption. The chief advantage which this combination appears to possess is that it is better borne than other preparations of guaiacol. The tabloids quickly disintegrate when placed in water. Guaiacol camphorate is also supplied in powder. Tabloids of extract of cascara sagrada can now be obtained containing 1, 2, or 3 grains of extract; they are prepared both plain and sugar-coated. Holocaine hydrochloride has recently been introduced into ophthalmic surgery. A 1 per cent. solution is equal to 2 per cent. cocaine solution. The anæsthesia produced by holocaine is prompt and lasting, and is not accompanied by mydriasis or disturbance of the accommodation. Tabloid holocaine hydrochloride contains one-fiftieth of a grain; they quickly dissolve, so that solutions are easily prepared.

Soloid Microscopic Stains.—Aniline dyes in solution are apt to decompose, and in microscopic work are a source of trouble. Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, E.C., have introduced, under the name of soloids, compressed fuchsine methylene blue, gentian violet, eosin, and bismarck brown. These compressed stains solutions can easily be prepared as required according to the directions given.

Chocolate with Milk.—A few years ago—June 29th, 1895—samples of cocoa essence and soluble cocoa made by Ph. Suchard, of Neuchatel, were examined for us, and the report was of a favourable character. We have received from the same firm samples of milk chocolate, which it is stated are made with the chocolate of the firm by the addition of sugar and sterilised unskimmed Swiss milk. This preparation is made in cakes and discs, and appears to keep well, at any rate in a dry place. A palatable beverage is easily made from it, though it will be found too sweet by many. There is no doubt, however, that the combination is likely to be convenient especially for travellers.

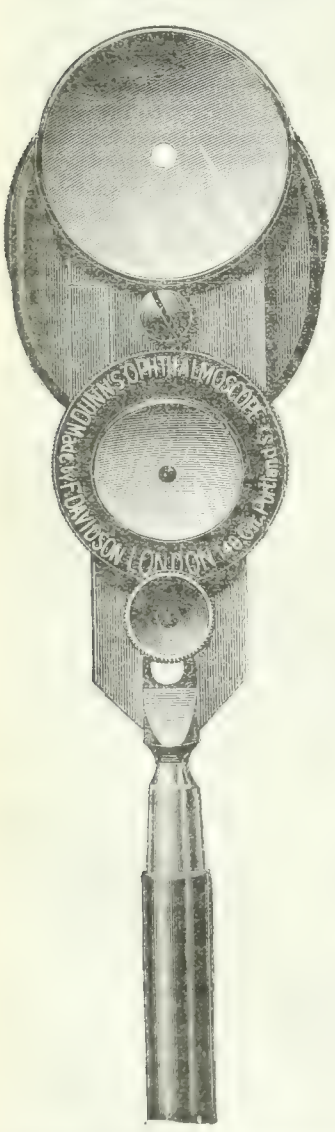
Vasogen Preparations.—Vasogen is a vehicle stated to possess the property of penetrating quickly the pores of the skin. It is capable also of holding in solution iodine, iodoform, creosote, guaiacol, etc. Vasogen is manufactured by the Vasogenfabrik Pearson and Co., Hamburg. The agent in this

country (Mr. E. J. Reid, 11, Dunedin House, Basinghall Street, E.C.) has sent samples of vasogen preparations of creosote, ichthyol, guaiacol, beta-napthol, menthol, sulphur, tar, and camphor-chloroform, also a vasogen ointment base, mercury vasogen ointment, and vasogen capsules of iodine and of creosote. Mercury vasogen, 50 and 33⅓ per cent., is put into soft capsules.

Phenalgin.—Phenalgin is made by the Etna Chemical Company, New York. It is described by them as phospho-ammonio phenyl-acetamide. The dose is stated to be from 5 to 20 gr., and it is said to act as a stimulant, hypnotic, and analgesic. It appears to combine the properties of antipyrin and phenacetin.

MEDICAL AND SURGICAL APPLIANCES.

A New Ophthalmoscope.—Mr. PERCY DUNN, F.R.C.S., Ophthalmic Surgeon to the West London Hospital, writes with reference to a new ophthalmoscope which he has devised: I claim for my appliance that it is simple in construction, strongly made, and that it has no working parts likely to get out of order. These are points of some moment when it is borne in mind that the most largely used ophthalmoscopes of the day are fitted with the delicate chain mechanism for the manipulation of the lenses; the lenses, however, in this instrument are arranged around a metal disc in two circles, the convex being on the outer circle the concave on the inner, and by means of a simple spring and slot adjustment either can be brought behind the sight-hole at will by a gentle pressure of the thumb. The convex and concave lenses are in strength as follows: 1, 2, 3, 4, 5, 6, 7, 8, 10, making eighteen in all, a number which may be regarded as fulfilling all ordinary requirements. There are two concave mirrors, one being oblique. The instrument is enclosed in a case with a 3-inch object lens of 2½ inch diameter. The design has been faithfully carried out for me by Mr. Davidson, optician, 140, Great Portland Street, W., from whom it can be obtained, price £2 2s.



Clinical Chart for Consumptive Cases.—Dr. L. A. WEATHERLY has published (Bristol: Ferris and Co. Price, 8s. per 100) a temperature chart specially adapted for consumptive cases, modified from that used in the Hohenhonnef Sanatorium. It is ruled horizontally for the markings on the Fahrenheit scale, each degree being divided into fifths. The vertical lines represent the twenty-four hours of the day, from 6 P.M. to 6 A.M. being ruled over a ground tint of grey, and from 6 A.M. to 6 P.M. on pink, allowing the night and day temperatures to be distinguished at a glance. The hourly ruling is continued into the sections for pulse and bowels. The degrees on the Centigrade scale are placed at the right hand side of the chart, opposite the corresponding reading of the Fahrenheit scale. The ruling is clear and distinct, but there is an unnecessary amount of explanatory letterpress at the head of the chart. These charts may be found useful in private sanatoria for consumptives.

NOVA ET VETERA.

A SURGICAL EPISODE OF THE PENINSULAR WAR.

THE bulk of mankind are sadly wanting in imagination; hence a bicycle accident which happens under their eyes excites them more than the report of a cyclone in the tropics. In the same way when in time of war we read of so many hundreds or thousands killed and wounded, the mind is overwhelmed by the mass of suffering, and only a vague horror is felt.

To understand something of the grim realities of war we must place it, as it were, under the microscope by studying records of individual cases. Such a case may be found in the memoirs of Captain Boothby,[1] who was wounded in the Peninsular war, and left in the hands of the enemy. The story of his sufferings will further serve to give an idea of military surgery in the early days of the present century.

WOUNDED IN ACTION.

Captain Charles Boothby was an officer of the Royal Engineers, who was present at the battle of Corunna, and in July, 1809, was wounded at Talavera, his leg being shattered by a musket ball. After the battle he was carried by four men on a bier to the town of Talavera.

The men were hampered by their arms and accoutrements, and the irregular motion caused the wounded man excruciating agony. The road lay through a thick wood; alarms of ambuscades were frequent, and the bearers often laid their burden on the ground while they reconnoitred. It was three hours after the receipt of the wound that the hospital was reached. From the hospital he was carried to a lodging in the town. There a surgeon (Mr. Bell) cut off his boot, and, having examined the wound, said there was no chance of saving the leg, and the amputation must be above the knee. He passed a night of agony, and at dawn Mr. Bell went to the hospital to seek another surgeon, Mr. Higgins. It was several hours before the latter came, and when he at last made his appearance it was only to tell Boothby that there was but one case of instruments, which it was impossible for him to bring from the hospital, while crowds of wounded, both officers and men, were begging for assistance.

CONSULTATION.

Higgins came again in the afternoon, bringing with him Bell and another surgeon named Gunning with instruments. Boothby resigned himself into their hands. The surgeons, having examined the wound, went to another part of the room to consult, after which they withdrew "to bring the apparatus," as Boothby thought. Hours, however, passed without their return, and Gunning, having at last been found, said he was too much occupied. Boothby then said to his servant to go again into the street, and bring the first medical officer he happened to fall in with. He soon returned, bringing with him Mr. Grasset, of the 48th Regiment. He on examining the wound declared that he was by no means convinced of the necessity of the amputation, and would on no account undertake the responsibility of so serious a measure without consultation.

The conversation that followed gives such a picture of the surgery of that day that it may be quoted:

"But," said I, "I suppose an attempt to save the leg will be attended with great danger?"

"So will the amputation," answered Mr. Grasset; "but we must hope for the best, and I see nothing to make your cure impossible. The bones, to be sure, are much shattered, and the leg is much mangled and swollen; but that may all suppurate and come right, so that I cannot think of amputating without more advice. But have you been bled, sir?" he asked.

"No," said I.

Mr. Grasset thought bleeding absolutely necessary, and at Boothby's request he bled him in the arm.

It appeared afterwards that Gunning's departure was due to

[1] *A Prisoner of France.* The Memoirs, Diary, and Correspondence o Charles Boothby, Captain Royal Engineers, during his last campaign. London: Adam and Charles Black. 1898.

his conviction that gangrene had already set in, and that it would be cruel to disturb Boothby's dying moments by a useless operation. As the wounded man had taken nothing but vinegar and water since his misfortune, the bleeding was succeeded by an interval of "painful unconsciousness."

In the evening another surgeon, named Fitzpatrick, came at his request to see him. The surgeon said, as soon as he looked at the wounded limb, that if he had him in London he might attempt to save it, but in the circumstances it would be hopeless. Asked if he had come too late, the surgeon said "No." But in this, according to Boothby, he dissembled, as there were already strong symptoms of lockjaw, which did not disappear till many hours after amputation.

The Operation.

It was arranged that the operation should take place in the morning, and on Boothby asking if something could not be given him to ease his sufferings, which were scarcely endurable, the surgeon took a towel, and, soaking it in vinegar and water, laid it on the wound, which gave considerable relief.

Fitzpatrick stayed with him till morning, changing the lotion at intervals. The account of the operation may be given in the patient's own words:

Fitzpatrick and Miller of the Artillery, Higgins and Bell, staff surgeons, were the gentlemen who at 9 o'clock prepared to perform this serious operation upon me. Having laid out the necessary instruments they put a table in the middle of the room and placed on it a mattress. Then one of the surgeons came to me and exhorted me to summon my fortitude. I told him that he need not be afraid, and Fitzpatrick stopped him, saying he could answer for me. They then took me to the table and laid me on the mattress. Mr. Miller wished to place a handkerchief over my eyes, but I assured him that it was unnecessary—I would look another way. The tourniquet being adjusted, I saw that the knife was in Fitzpatrick's hand, which, being as I wished, I averted my head.

As I do not choose to gratify the curious (at the expense of the feeling) reader, I shall not describe an operation the details of which are perhaps more shocking to reflect upon than to experience. But, as it is a common idea that the most painful part of an amputation lies in sundering the bone, I may rectify an error by declaring that the only part of the process in which the pain comes up to the natural anticipation is the first incision round the limb by which the skin is divided—the sensation of which is as if a prodigious weight were impelling the severing edge. The sawing of the bone gives no uneasy sensations, or if any, it is overpowered by others more violent.

"Is it off?" said I, as I felt it separate.

"Yes," said Fitzpatrick; "your sufferings are over."

"Ah, no; you have yet to take up the arteries."

"It will give you no pain," he said, kindly; and that was true—at least, after what I had undergone the pain seemed nothing

I was carried back to my bed free from pain, but much exhausted. The surgeons complimented me upon my firmness, and I felt gratified that I had gone through what lay before me without flinching or admitting a thought of cowardly despair. I desired that the amputated limb might be brought to me that I might examine the wound. The request was opposed with some force by the surgeons; but I persisted, and found a certain satisfaction in observing that the limb wore an appearance to the last degree mangled and hopeless. This moderated my tender sorrow at beholding for the last time that active and invaluable servant.

For some time after the operation the dangerous symptoms increased, his stomach refused sustenance, and a constant hiccough was recognised by the surgeons as a fatal prognostic.

In the night of the 30th he managed to retain some mulled wine strongly spiced, and in the morning he took two eggs. This was the turn; his unfavourable symptoms subsided, "and the flowing stream of life began to replenish by degrees its almost deserted channels." So he continued to improve until August 3rd, when in the movement of the troops his friends had to leave him. Fitzpatrick stayed till the 4th. In the morning he promised to engage for Boothby the attendance of Higgins, who was left senior surgeon, but a rumour that the French were approaching spread a panic through the town, and Fitzpatrick appears to have left in a hurry.

Left in the Hands of the Enemy.

The battle of Talavera resembled that of Glencoe, as the victors were afterwards obliged to retire and leave their wounded to a vanquished enemy. An order was given that the wounded in the hospitals who were able to move should set off instantly for Oropesa, as the French were at hand. The sensation this notice produced is beyond all description. I lay perfectly still. I had made up my mind that it would be better to fall into the enemy's hands than to attempt to go away. Other men in situations like my own had placed themselves across horses and mules, and fruitlessly attempted to escape. The road to Oropesa was covered with our poor, wounded, limping, bloodless soldiers. On crutches or sticks, with blankets thrown over them, they hobbled woefully along. For the moment panic terror lent them a force inconsistent with their debility, their fresh wounds, and their recent amputations. Some lay down on the road to take their last sleep. The rest, unable to get further than Oropesa, fell afterwards into the hands of the French when their troops entered that town.

Boothby admits that he was ill at ease, especially from the fear that the panic terror that had been communicated to the hospitals might extend to the surgeons, whose assistance, he says, was of more to him than any other consideration. The evening of the 4th, however, closed in quietness uninterrupted by the French, and Boothby had a visit from the senior medical officer, Mr. Higgins, which gave him great comfort, as the conversation of the surgeon taught him "to confide in his conduct."

The English Surgeon and the French General.

Like a prudent man Boothby employed the interval of tranquillity, short as it was, in laying in a stock of provisions. Mr. Stanniland, assistant surgeon of the artillery, said the French were coming, and Mr. Higgins had gone out to meet them. In about an hour Mr. Higgins came in and made the following announcement:

I have been out of town above two leagues, and can see nothing of them. If, however, they do come, they will have every reason to treat us with attention; for they will find their own wounded lying amongst ours, provided with the same comforts, treated with the same care. I have been completely round myself to see that the treatment of their officers and men was in every respect upon the same footing as our own, so that they will have no possible pretext for complaint; and I can boldly claim their protection and respect. Whenever they come, I shall meet them and solicit the General to visit the hospital with me.

When the French did come on August 6th, Higgins rode out to the General who commanded the cavalry, and on making the representation he had preconcerted, found the General full of the most noble sentiments. He said the fortune of war had thrown some Englishmen into the power of the French, who would be incapable of abusing it. He added:

And as for you medical gentlemen who have been humane and manly enough not to desert your duty to your patients (many of whom are Frenchmen) in the hour of difficulty and distress, and have done us the honour to trust yourselves in our hands, not the smallest constraint will be put upon your motions. Stay amongst us as long as you please; go when you will. You are as free as the air you breathe. And whenever you think proper, our safe conduct and unfeigned thanks shall attend you to your countrymen.

A Devoted Surgeon.

Boothby adds the following glowing eulogium of the conduct of the devoted medical officer:

We had afterwards reason to know how much we were indebted to this good beginning arranged by Mr. Higgins. Only their wish to support some appearance of consistency checked their natural disposition to ill-treat us. Throughout Mr. Higgins displayed the character of no common man. To be loaded with the charge of such groaning multitudes—almost wholly unprovided with medicines, medical stores, or provisions—would have been regarded by most medical men as a task of no common arduousness; and to perform it at the expense of personal liberty and all prospects of advancement was a case of peculiar hardship. But to prepare for the approaching crisis—determined to ride forth and parley with the enemy, and persuade him that he owes you respect, gratitude—this is the province of an officer of the first class: and Mr. Higgins in so acting—in adopting the duties of every station that happened to be vacant, in letting no office stop for want of an officer, but supplying the place of the absent and encouraging the present—discovered a manly superiority, a dauntless indifference to events that communicated confidence through every inferior branch, and secured to his suffering countrymen the blessings of a perfect medical attendance, and the protection and respect of their enemies.

Again:

The artillery surgeon was unremitting in his attendance, meeting Mr. Higgins at my quarters invariably at 10 o'clock every morning, and their visit was usually repeated in the course of the day. As Mr. Higgins had of necessity intercourse with the French commanders, from him I heard all the news. His mind was of such a cheerful cast, that it kept its tone amid all difficulties and all extremities. Never did I receive from his presence other than consolation. Since the battle he had never taken off his clothes—seldom, indeed, had rested; was ever in want of what could never be procured; and yet no whining—no complaining—no giving up!

Progress to Recovery.

On August 14th Boothby is able to announce that his stump is going on very well, and he hopes to be in Madrid in the course of two or three weeks. On August 25th he writes that his limb, after a good deal of struggling owing to a propensity in the muscles to retract, is now almost healed. The propensity here referred to required a tightness of bandage which made him suffer extremely, and broke his rest till he became accustomed to it. On October 1st he went out on crutches, attracting the notice of the French soldiers and of the Spaniards. The former invariably expressed surprise at seeing the success of an amputation which, in the hands of their field surgeons, they knew to be almost always fatal.

The Surgeon and the Wounded Prisoners.

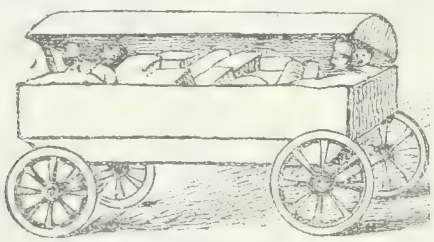
He mentions that after a time many of the British wounded

who had recovered found it no difficult matter to escape. Here, again, Boothby is loud in his praise of Higgins:

I heard Mr. Higgins pressed upon this subject. He was perfectly master of his time and motions, not from having given any parole, but because those duties he so manfully undertook, which were hardly more beneficial to us than to the French, required that he should be unconfined. He was offered disguise and safe conduct, and his success appeared to us both to be certain. The proposal was the more tempting because all the British surgeons, whose liberty one of the French commanders had guaranteed, were now declared prisoners as well as those for whose welfare they had suffered themselves to be taken. Neither was Mr. Higgins ignorant that, all exchange of prisoners being impracticable, the liberty and prosperity of the best years of his life would probably be sacrificed. He felt, also, that every important part of his duty had been well performed. Almost all the soldiers had been removed to Madrid; his energy, his management, his mediation, were no longer wanted, and no one would now have suffered by his absence. But he rigidly considered that while one man remained sick at Talavera of those who had been committed to his charge, duty prescribed his stay, and all temptations to go were unavailing.

To Madrid in a Truck.

Boothby travelled to Madrid with several other wounded officers in a waggon which had no springs, and was rather a large box or trunk placed upon wheels than a carriage for the transport even of living animals. The lid of the trunk they



(For the loan of this block we are indebted to the courtesy of Messrs. A. and C. Black.)

were enabled to raise or close by means of a perforated bar, which could not, however, be changed in its position without much trouble and external aid. The baggage was all piled in the middle of the waggon, a little cell, capable of seating two persons, being reserved at each end. Several English officers who had recovered from their wounds, and with them Mr. Stanniland, the artillery surgeon, accompanied the convoy on foot.

A Spanish Physician.

In Madrid they found themselves close prisoners; they were put into three close rooms, which, Boothby says, smelt like a French hospital recently evacuated; it turned out that it had not long before been tenanted by Spanish prisoners, who, not being allowed to pass the door, had left the attics in a most filthy state. After a time some of the officers were removed to the hospital, which had formerly been a Franciscan convent, and was completely full. Here we get a glimpse of a Spanish physician, "whose youthful age was almost concealed by a large cocked hat and his cloak so worn as to conceal all but his eyes and nose." He was followed from bed to bed by a troop of dirty Spanish menials carrying dressings, etc. Boothby had nothing to complain of but a continuance of pain, which broke his rest, and did not, as at first, yield to opium. After some consideration the Spanish *medico* said that he might hope much from camphor and time, an amalgam which he had hardly ever known to fail!

A Barber Surgeon.

He left Madrid for France with two or three brother officers on January 10th, 1810, and after an adventurous journey, full of tribulations from accidents due to rough roads, dangers from brigands, and manifold discomforts from unpleasant quarters, they reached France in March, 1810. On the way he comes across some curious specimens of the medical fraternity. At a place called Herrera he meets at the house in which he was billeted "a charming pretty woman," who describes herself as "the surgeoness," which turns out to mean the surgeon's wife. His host tells him of a great battle in Valentia, and when asked for his authority replies, "Our surgeon went to shave the commandant." "Shave the commandant!" says Boothby in surprise, to which the reply is, "Si senor es barbero tambien" (yes, sir, he is also a barber). The surgeon-barber soon comes upon the scene in person, and being asked to prescribe for the wife of one of the English officers' servants who was with the party, diagnoses a severe cold, for which he prescribes a dish of chocolate and a decoction of sauce flowers, "both of which being soon administered the patient betters."

English Surgeons as Amputators.

At Burgos they dined with General Solinac, whose left hand, which was useless, was covered with a glove. He had had a shot through it at Vimiera. The General vouchsafed the opinion that if he had been taken prisoner the English surgeons would have cut it off, as "they were addicted to excessive amputation." The General had an idea they were specially paid for this.

Peace with Honour.

In July, 1810, Boothby was allowed to return to his native country. He left the Service, and entered the Church. He married well, and in due course had his quiver full, and was blessed—with several benefices. He died, a prosperous pluralist, in 1846.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on November 24th.

There were present Dr. DE HAVILLAND HALL (in the chair), Dr. J. B. Ball, Dr. J. Brindley James, Mr. William Thomas, Dr. M. Greenwood, Mr. William J. Stephens, Mr. F. S. Edwards, Dr. F. J. Allan, Dr. J. W. Hunt, Dr. J. Pickett, Dr. Alfred S. Gubb, Mr. Edward Bartlett, and Dr. Walter Smith.

The accounts presented showed that the sickness experience of the Society during the autumn months had been well under the amount expected, and that the margin thus provided would more than cover the extra sickness which the Society experiences in the winter and spring. This extra is for the most part produced by chest and throat ailments, and as considerably more than half the members of the Society are in general practice in the provinces, and therefore very much exposed to the risks of travelling in bad weather, a large number of claims is expected from this source.

The claim lists for the last few weeks seem also to point to some recrudescence of influenza. For some years the claim account of the Medical Sickness and Accident Society was swollen by a large number of its members being incapacitated by this troublesome malady, and there seemed to be some truth in the idea that medical men were peculiarly liable to its attacks. Of late, however, the claims from influenza have been few, and of short duration, and there seems reason to hope that the malignity of its effects has been much mitigated. Many thousands of pounds were paid away for influenza claims, but it was a source of great gratification to the Committee to find that even during the worst of the epidemic the annual claim account of the Medical Sickness and Accident Society never exceeded the total expected and provided for, and at the close of every twelve months a solid addition was made to the financial reserves of the Society. Although the amount paid for sickness claims during the current year will exceed that paid in any previous twelve months of the Society's operations, it will be found that a considerable addition has been made to the reserves, which now amount to over £130 000.

Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

UNIVERSITY OF KASAN.—The University of Kasan, which entered on its ninety-sixth year of existence in November, had according to official statistics a student population of 859 on January 1, 1899. Of these 463 belonged to the medical faculty. The teaching staff comprised 117 persons. The expenditure of the university amounted in 1898 to 403,163 roubles. Of this sum 258,485 roubles were applied to the payment of the staff and 23,041 in bursaries and prizes for students, while 119,136 roubles were expended in books and apparatus. A sum of 2,500 roubles was granted as a subsidy for the research society of the university.

PROFESSOR BAGINSKY, of Berlin, has been elected a corresponding member of the Société de Pédiatrie of Paris.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 23rd, 1899.

CENTRALISATION OR CONCENTRATION.

There is good ground for hope that with the new century the new University of London will see the light; the impending report of the Statutory Commission will lay down the lines upon which it is to develop and, it is to be hoped, prosper. It is not rash to predict that its welfare will in large measure depend upon the good health of its medical faculty. There is in London no lack of excellent material from which a medical faculty may be expected to shape itself under an organisation that shall be so contrived as to strike the happy mean between the academic rigour of the cloister and the hand-to-mouth exigencies of the market place. If the good features of the present imperfect system can be maintained, if the weaknesses of that system can be made good by a better economy and a more harmonious co-ordination of their great but greatly-wasted energies, we may hope for the best.

If the vice of under-centralisation from which the medical schools now suffer is not to be replaced by the even greater vice of over-centralisation which is the chief defect of foreign establishments serving far smaller areas than must be served by the University of London, that University must not be a copy of any foreign model. The vice of under-centralisation felt to exist in London has aroused in the scattered units a unanimous desire for centralisation—it may be for over-centralisation. But if the desire is unanimous, the meanings and methods covered by the word are manifold. To some, centralisation implies the gathering together under one head of the twelve teaching institutions that now provide for the medical instruction of students, while preserving a necessary and valuable subdivision of the whole mass of pupils in manageable groups permitting personal contact between teacher and taught, and at the same time diffusing a university spirit through the whole body of teachers. To others, centralisation means concentration—a transfer of pupils from many institutions to fewer institutions.

It is clear that centralisation—whether in the form of a head centre innervating and co-ordinating local centres, or in the form of concentration from twelve to three or four centres—has widely different degrees of applicability in London to the three stages of the medical curriculum. Concentration is applicable to the first or preliminary scientific stage, consisting of biology, chemistry, and physics. It is not applicable to the third or clinical stage. If it be asked whether it is desirable or practicable for the second stage, consisting of anatomy, physiology, and pharmacology, the answer must be that centralisation or concentration is not in equal measure applicable to these three subjects now commonly spoken of collectively as the "early medical studies."

Concentration in the sense of a surrender of their functions by two-thirds of the medical schools to a remaining third does not appear to be desirable in the interests of the medical schools or of the future University of London. The surgery of a medical school rests upon its anatomy, the medicine of a medical school upon its physiology; an abandonment by a medical school of anatomy and of physiology would strike at its essential foundations. In the medical curriculum it is possible that there ought to be a line of cleavage between the preliminary scientific and the early medical studies; it is not advisable to make a line of cleavage in a teaching institution between the early medical and the later medical subjects nor to separate them from each other in locality.

Two schemes have recently been considered by the teachers of the "early medical subjects," and will soon be considered by the medical schools. The essential differences between the two schemes have thus been defined. The centralisation scheme proposes that there should be a central institute or establishment for teaching and research in anatomy, physiology, and pharmacology belonging to the university and under its direct control, such institute not to displace but to supplement existing teaching in schools recognised by the university as adequately equipped for the purpose. This scheme proposes further the establishment of a graded *personnel* of university professors, extraordinary professors, readers, and demonstrators to administer the central institute and local laboratories, and to keep them in touch with each other. The advocates of the proposal would preserve intact, or nearly so, the existing machinery, but would wish to see the University supplement it by founding a central institute with fully-equipped laboratories and an adequate professional staff, unconnected with any existing medical school, but available for the undergraduate students of all the schools. The central institute and the local schools working in conjunction would thus constitute the mechanism for university teaching in these early medical subjects. It has been objected to this scheme that such central institute would enter into rivalry with existing medical schools; but its advocates reply that a freshman would, as at present, join whichever hospital he chose to select, and that though, if a member of the University, he would *ipso facto* be entitled to attend courses of lectures or laboratory work at the central institute, yet the proportion of work to be done at the central institute and at the local schools respectively would be determined by the University in conjunction with the authorities of the schools.

The concentration scheme proposes that teaching in the early medical subjects should be concentrated in three or four institutes, and sketches a mode of distributing among three or four centres the present annual inflow of students and of funds now spread over eleven or twelve schools. It is proposed that the three or four university institutes should be quite independent of the hospital schools, which should teach the final subjects of the curriculum. The

scheme is open to the serious objection—an objection which we suspect will prove fatal—that however independent of the corresponding hospital school the university institutes might be in financial or administrative matters, nothing could alter the fact that in three or possibly four of the London medical schools there would be a local connection between the hospital schools and the University of London which the other schools would not possess.

Both schemes ask that the institute or institutes shall be under the control of the University and not of the hospitals, but whereas centralisers have in view a new central institute really and locally distinct from any existing medical school, the concentrators wish their three or four institutes to remain as they stand in juxtaposition with the schools of which they at present form part, but separated from them mainly by the possession of a separate bank account. This account is to be considerably augmented, partly from the University chest, partly from fees of students to be transferred to the three or four official institutes from the eight or nine remaining schools.

Certain advantages and disadvantages inherent to these two schemes are obvious enough. Both require money, the first to establish the new institute, the second to provide fully for equipment and teachers in the placesof concentration, to safeguard the interests of existing teachers, and to take over school buildings.

But whereas the first scheme might be expected to draw to a focus and utilise the entire groups of teaching places now active, and should therefore command their cordial co-operation towards the common welfare, the second scheme proposes to concentrate in three or four centres the work and the resources now distributed over eleven or twelve, and is liable to very serious miscarriage if any of the eight or nine remaining places should choose to maintain their efficiency and as extra-mural schools continue to absorb their share of work and of resources.

It is very desirable that some working compromise may be arrived at, some practicable scheme which will combine co-ordination under University direction with the gradual evolution of centralisation, while retaining those parts of the existing machinery of metropolitan medical schools which has stood the test of prolonged trial.

THE "DUTY" (?) TO SEND INFORMATION TO A CORONER.

CORONERS' inquests are among the ancient institutions of this country. Opinions differ as to their utility, and, naturally, the coroners are not disposed to underrate the importance of the office they hold. Formerly, when they were paid by fees, complaints were not infrequent of coroners insisting on holding inquests unnecessarily. This inducement has now been removed, but the public mind is still not satisfied that inquests are always held in proper cases, and in proper cases only. The Coroners Act—which was passed in 1887, not to alter but to codify the previously-existing law on the subject—prescribes that "where a coroner is 'informed' that the dead body of a person is lying within his jurisdiction, and that there is reasonable cause to suspect that such person has died either a violent or an unnatural death or has died a sudden death of which the cause is unknown" . . . .an inquest shall be held.

It will be noticed that the statute does not state how the coroner is to become possessed of the information which will justify him in holding an inquiry. The statute, in all probability, was thus generally worded on purpose, so as not to shut out the possibility of information reaching a coroner in an informal way. Be that as it may, he is left free to act on information derived from any credible source, and no one has any general duty cast on him of forwarding it. In practice many coroners employ officials of their own to inquire about suspicious cases of death, and the police give information of cases in which they think death has been caused by unlawful violence. Other cases also come under the notice of the coroner in which the certificate of the cause of death, required by our law as a preliminary to burial, is not forthcoming, either because no medical practitioner has been in attendance so as to be qualified to give a certificate, or because the attendant practitioner declines to certify that the death was due to natural causes.

In certain cases statutes have imposed on persons having special duties towards the deceased the further duty of giving information of death to the coroner. Thus the person having care of a lunatic must procure a medical certificate from the persons who attended the patient during his last illness, and transmit it to the coroner, who thereupon decides whether to hold an inquest. So, if an infant under the age of 12 months dies in a house registered under the Infant Life Protection Act, 1872, the registered keeper of the house is bound to send information to the coroner. If a person dies in gaol—whether by sentence of the law or from natural causes—the gaoler must send notice. And if a person dies in a licensed home for inebriates, the licensee must send a medical certificate. The above cases, it will be seen at once, are cases of persons under confinement who might presumably come by their deaths unfairly if there was not provision for ensuring full inquiry into any circumstances that might be thought suspicious. In these cases, and in these only, Parliament has specifically imposed on a responsible person the duty of giving information of death to the coroner. In other cases it has not imposed such a duty specifically on anyone; but has left the coroner to act when he is "informed," and without specifying the source from which he shall obtain the information.

The coroners, or some of them, are apparently dissatisfied with their position in this respect, and are desirous of imposing on medical practitioners who have been in attendance on persons who have died under circumstances which they may consider suspicious the duty of reporting the fact to the coroner of the district. Cases have occurred where individual coroners have censured medical practitioners for not having reported deaths to them, though such practitioners had certified the death as due to natural causes. And the Coroners' Society for England and Wales—which presumably is entitled to speak for coroners generally—has recently passed a resolution that "in cases of death from violence or from any unnatural cause, it is a common law duty imposed upon the medical practitioner in attendance, among others, to report to the coroner." Whether such a duty is imposed upon anyone by the common law is, to say the least, doubtful, though it has been asserted before

now that it is the duty of persons about the deceased (among whom the medical practitioner in attendance might or might not properly be reckoned) to give such information. Certainly there has been no case reported in modern times in which anyone has been made in any way responsible for not discharging this alleged common law duty. The means provided by the common law for enforcing the duties it imposes, in cases where no statutory remedy is provided, is by indictment of the alleged offender. No coroner has yet been found rash enough to try the experiment of indicting anyone for not giving him information of a suspicious death. Medical practitioners are, as everyone knows, liable to certain statutory penalties if they fail to give proper certificates of the cause of the death of a person whom they have attended. These certificates, however, are not intended—in the first instance, at any rate—to be submitted to the coroner. They have to be filed with the registrar of deaths. The registrar may inform the coroner of anything which makes him think that further inquiry into the cause of a death is desirable; and he frequently does so. There seems to be no reason why the information in any case, other than those in which it is now required by statute, should be given in the first instance to the coroner. The supposed common law duty may be left unnoticed, as it has been in past ages. No medical practitioner need feel seriously disturbed by the announcement of this new addition to his multifarious responsibilities.

LEICESTER'S REPENTANCE.

If the Leicester guardians imagined that they could play fast and loose with the Queen's Bench Division of the High Court, they have been rudely undeceived. They have, indeed, been in a curiously befogged condition as to the identity of the authority with which they were dealing, evidently supposing that they were still engaged in a warfare with Mr. Chaplin, whose position in the matter lays him more or less open to parliamentary and other badgering. Having promised the High Court to appoint a vaccination officer and so purge themselves of their contempt, they went on to try to evade their promise by electing to the office a well-known journalistic antivaccinationist, who had himself been prosecuted and fined, and who had not complied with the order made against him to vaccinate his own child. Neither the Local Government Board nor the Court were, however, to be eluded in this fashion. The Board refused to sanction a manifestly illusive appointment, and, when the matter again came before the Queen's Bench Division, Mr. Justice Darling, in giving judgment, spoke in such a manner as must have clearly shown even to the Leicester guardians that further evasion is impossible. He certainly did not regard them as either heroes or martyrs.

"They had no intention," he said, "of obeying the order of the Court if they could possibly avoid doing so, but always with a regard for their own personal convenience, keeping one eye on the Queen's Bench." After the writ of attachment was applied for, they advertised for a vaccination officer, and from nineteen applicants they selected the gentleman whose record has been above referred to. Being "absolutely unfitted for the appointment he was ready to accept," the central authority would have none of him, and "under these circumstances, being in the last ditch, the Leicester guardians threw over his appointment, and said they would appoint someone who would be approved." Even this, however, has not been enough to satisfy the Court, rendered suspicious by the guardians' previous evasion of their promise. The order of the Court, therefore, is that the rule be made absolute, but that as guardians in person cannot appoint an officer, delay will be allowed before issue of the writ of attachment, and before the fifth day of next term the guardians will be at liberty to apply to the Court to discharge the writ. Obviously this discharge will not be granted unless the law has been obeyed, not merely in name, but in reality.

The guardians, however, have done more than promise to make an appointment *bonâ fide*. It will be recollected that at the stage of the proceedings at which the Court first intervened the antivaccination majority numbered twenty-six. This was the "glorious twenty-six" of Dr. Walter R. Hadwen's speech at the great Leicester demonstration. "Ichabod" can be their only motto now. Regarding several of them an affidavit was produced that they had been ill, and through illness unable to attend recent meetings, and prove their repentance by their votes. One of these had, very unfortunately, suffered from apoplexy, another had broken a leg, and another (a lady) was so seriously ill that the excitement and anxiety of the proceedings had led to grave apprehensions as to her condition. The affidavit referred to members who had already changed their side in the guardians' meetings, and who also added an apology. This left nineteen of the twenty-six, and every one of these has formally apologised. According to their counsel, Mr. Walton, Q.C., "they desired to express their humble apologies" regarding any alleged contempt, and "their attitude was that of complete submission," coupled with an explanation as to their difficult position. The contemptuous way in which the Court treated this humble apology, must have been particularly galling to the self-importance of those who had signed it. Mr. Justice Darling passed it over as "a thing of no value whatever," and as being "neither here nor there." So far as we can make out, Mr. J. T. Biggs himself, leader of the stalwarts in the Board of Guardians and a Vice-President of the Antivaccination League, is among the apologists who are thus scornfully dealt with, and who have so ineffectually humbled themselves. The cup of his well-deserved humiliation is surely full, and the humiliation applies not only to himself but to those who in London or elsewhere have supported him in his futile efforts to paralyse and bring into contempt the administration of English law.

Already, we are glad to note, the Leicester proceedings are having their effect on other recalcitrant Boards of Guardians. At Lynn, where resistance had been begun, it has collapsed and a vaccination officer is to be appointed. Not for many years has the mischievous crusade against the Jennerian prophylaxis met with such disasters as are now befalling it, and the position is one on which all who have regard for the health and comeliness of English children have a right to congratulate themselves.

MEDICAL ATTENDANCE ON THE FAMILIES OF SOLDIERS AND SAILORS ON ACTIVE SERVICE.

We have received replies from eight more Branches of the British Medical Association to the circular issued by authority of the President of the Council to all Honorary Secretaries, inviting their co-operation in the scheme for providing gratuitous medical attendance for the wives and children of the men now on active service in South Africa. Of these eight Branches, all are in favour of the scheme; one reports that 100 members of the Branch have sent in their names, another that 150 have done so. Of the thirty-eight Branches of the Association within the United Kingdom, therefore, twenty-nine have now expressed their approval of the scheme and promised to help in carrying it into effect. We think we may most heartily congratulate the Association and the medical profession on this patriotic readiness to make personal sacrifices—which in many cases will, it is to be feared, not be light—at a time of national need. We have, as was inevitable, received a few letters protesting against this additional burden being laid upon medical practitioners, but we do not think the publication of them would serve any useful purpose. What is suggested is a purely voluntary offering of service, and only willing workers are wanted. The Lord loveth a cheerful giver, and those who are not disposed to give their service are not called upon to come forward; but at least they may be asked not to denounce others for helping in a cause as to the goodness of which there can be no possible doubt.

THE MEDICAL SERVICES IN INDIA.

We continue to receive private communications, together with press comments, on the condition of the medical services in India, which, when compared with each other, are often so contradictory as to make it difficult to arrive at definite conclusions. There can be no doubt that there are parties in the Indian Medical Service pulling different ways; and the statements and schemes set forth seem largely the outcome of individual experiences, which in a great country like India are, of course, many and varied. But making allowance for inevitable divergence in experience and opinion, there are certain cardinal points in the general question which seem clear enough. There would appear to be a certain division of interest between the sections of the Indian Service in military and civil employ; while both are sometimes not too friendly to the Royal Army Medical Corps. Such divisions are greatly to be regretted, and every endeavour should be made to harmonise them. The *Indian Medical Record* of September 6th quotes an article of ours in which, discussing the undermanned condition of both the home and Indian medical establishments, we advocated an increase of the former up to 1,000, and of the latter to 750 officers. Events in South Africa show that our estimate was not too large. But the writer, with a curiously limited purview, evidently concludes we meant 1,000 in India itself, which, with 750 of the local service, he says "reads ruin to the already overburdened and depleted exchequer of India." This we hold to be absurd; India can well afford to keep up efficient medical establishments, without drawing upon the home establishment in an emergency, which, indeed, at present would be an impossibility. Of course, we meant that the total home establishment for service all over the world should be 1,000; and had no intention of suggesting the 300 odd serving in India should be increased materially. But instead of discussing the reasonableness, or otherwise, of our proposals, the writer goes on to discuss the proposal ascribed to a "Surgeon-Colonel A.M.S.," of withdrawing the Royal Army Medical Corps altogether from India. The proposal is so clearly inadmissible on grounds of policy that we suspect the journal in question has been hoaxed. It is perfectly obvious that, while 70,000 British troops are quartered in India, there can be no divorce whatever between them and their own medical staff. But the writer, instead of increasing the Indian Medical Service, would reduce it by 300, or the number at present in civil employment. How is it to be done, and what is the bait held out? It is to be effected by substituting "locally-trained material," in other words graduates of Indian colleges; and the result would be financial saving, which, we are told, should dominate all other questions of efficiency or policy. We would first remark that the European members of the civil service and their families are just as much entitled to medical attendance by men of their own race as are British troops. We have always advocated the fullest employment of educated native gentlemen in the civil service, medical or other, in India, subject to their supplementing and not supplanting members of the ruling race. But here we have the proposal that the entire medical civil service shall be handed over to these graduates, a thing which can never be under British rule. There is surely a wide enough field for civil practice by Indian graduates among the teeming millions of India, of which they are fully availing themselves, without trying to grasp Government appointments, so ably and necessarily filled by European medical officers. We freely admit that Indian graduates might be employed with the best advantage in many civil departments, in which the presence of a European is not essential. The letters and comments we have recently received in no way alter our opinion that the European-Indian medical establishment should be made up to at least 750 officers. Such an increase would in no way prevent or jeopardise the employment of Indian graduates who aspire to Government employment; there is room enough for all, and the loudly-proclaimed poverty and bankruptcy of the Indian exchequer is but a convenient party cry.

THE INTERNATIONAL MEDICAL CONGRESS, PARIS, 1900.

Dr. Chauffard, the Secretary-General of the Congress, has issued a notice stating that the Paris Executive has been considering the important question of housing foreign members who attend the Congress. It has been arranged that the Rector of the Academy of Paris shall place at the disposal of the General Committee 800 beds in the various *lycées* at Paris during the Congress week, and it is hoped that an additional 200 may be obtained, making a total of 1,000. The price of each bed is fixed at 5 francs 50 centimes a day, to comprise bed, attendance, and the eight o'clock "petit déjeûner." The beds, of course, are in dormitories, and not in separate rooms; but the Committee think they may be of service to those who come as bachelors and with only scantily-lined purses. Nothing is yet decided about the distribution of these beds, nor is the Committee prepared to receive the names of those who wish to take advantage of them, but due notice will doubtless be given. The chief Parisian excursion agents are ready to receive applications for rooms from intending visitors who do not patronise Messrs. Cook and Son, the agents recommended by the English Committee. The names of the French agencies are (1) "Voyages Duchemin," 20, Rue de Grammont, Paris; (2) "Voyages Modernes," 1, Rue de l'Echelle Paris; (3) "Voyages Pratiques," 9, Rue de Rome, Paris; (4) "Agence Desroches," 21, Rue de Faubourg Montmartre, Paris; (5) "Agence Lubin," 36, Boulevard Haussmann, Paris.

THE HOME OFFICE AND THE MANUFACTURE OF POTTERY.

Acting upon the recommendations embodied in the report on lead poisoning in the Potteries by Professor Thorpe and Dr. Thomas Oliver, the Home Secretary has recently circularised the manufacturers as to the measures he proposes to take in regard to the prevention of plumbism in this industry. The experts indicated how the manufacture

of earthenware and china could be rendered innocuous, comparatively speaking, to the workers. Shortly after receiving this report, Sir Matthew White Ridley caused a copy of it to be distributed to each manufacturer in the country, inviting at the same time an expression of opinion in regard to the practicability of the recommendations of the experts. The manufacturers' views were embodied in a pamphlet ably written by Mr. Burton, and as a consequence a joint meeting of manufacturers and Government officials was held at the Home Office. At this stage of the proceedings it is only right to add that the manufacturers had expressed their willingness to abolish the use of raw lead, as recommended by Drs. Thorpe and Oliver. The abolition of raw lead and the employment of fritted lead compounds were briefly the recommendation of the experts. The Home Secretary now informs the manufacturers that he believes leadless glazes can be adopted in many of the processes of pottery manufacture without detriment to the product or to the industry. Leadless glazed ware has behaved well under all the tests to which it has been exposed. This circumstance marks an important event in the production of pottery. In order therefore to encourage the use of leadless glazes, the Home Secretary states that he is prepared to relax the stringency of the rules in factories where such glazes are used. It is gratifying to learn that as a result of the special rules enforced a little over a year there has been a considerable reduction in the number of cases of plumbism in the potteries. The number of women affected in 1898 was 55 per cent. of the whole, while for the corresponding period of this year it is 48 per cent. It is therefore proposed to extend the medical examination to all workers in lead processes. For the future, practically speaking, "fritted" lead alone is to be employed, but as there are frits and frits, some being much more soluble than others, a certain standard of insolubility is insisted upon. Two years are to be allowed to manufacturers to perfect their fritted lead glazes, and in order to help the manufacturers in their efforts the Home Secretary has arranged with Dr. Thorpe for specimens to be tested at the Government Laboratory for a nominal fee.

CLIMATE AND THE PLAGUE.

At the meeting of the Royal Meteorological Society held on December 20th, Mr. Baldwin Latham read an important paper on the Climatic Conditions necessary for the Propagation and Spread of Plague. After some preliminary observations, he remarked that the rise and fall of the plague in any country in which it had established itself showed a periodicity so marked that it could not be accounted for on any supposition connected with infection or contagion alone. Though plague was due to a specific microbe, it could not spread except under certain meteorological changes associated with the conditions of the ground favourable to the exhalation of what was necessary for the propagation and spread of the disease. A high degree of pollution combined with certain hygrometric conditions appeared to be necessary. Plague might be disseminated in various ways—by air, water, food, or direct inoculation — but these would have little effect in producing an epidemic unless there were present also certain climatic conditions. In every country plague usually rose to its height in a particular period of the year, and always at the same period in the same place. It was, moreover, affected by temperature. One of the most remarkable circumstances was that plague suddenly died out when the temperature rose above a certain point. A sudden fall of temperature had also favoured outbreaks of plague. To reconcile these and other phenomena, it was necessary thoroughly to understand the hygrometric conditions of the ground. The conditions which ordinarily produce evaporation from water or land surfaces were identical with those conditions which produce exhalations from the ground. Mr. Baldwin Latham showed from experiments with earth hygrometers that, when the air was warmer than the earth, condensation took place, but when the earth was warmer than the air evaporation took place. Diagrams were shown in which there appeared to be a marked relationship between the rise and fall of the differences in vapour tension and the rise and fall of plague. This held good for the plague in Bombay as well as for the great plague of London. From these observations it appeared that if the temperature of the air increased beyond the temperature of the ground, so that its dew point was above the temperature of the ground, instead of evaporation taking place, condensation took place, and to this might be entirely due the sudden stoppage of plague after the temperature had risen to a certain point, which by raising the temperature of the dew point stopped all exhalation from the ground, and might cause condensation to take place instead of evaporation. So also, where it had been observed that a sudden fall of temperature caused plague to arise. A fall of temperature meant that the temperature of the dew point must fall, and the tensional difference between a low dew point and a high ground temperature would at once lead to exhalations escaping in large quantity from the ground. The facts brought forward by Mr. Baldwin Latham are so striking that we hope further investigation will be carried out on the same lines. Mr. Latham has endeavoured more than once to get percolation observations made by the local authorities in India, but without any success. We trust, now the important bearing that such observations are likely to possess has been made known, that the meteorological department of India will have such observations regularly recorded.

THE INVESTIGATION OF TROPICAL DISEASES.

In a paragraph which appeared in a recent issue of the *Times*, it was stated that Dr. Christopher (*sic*) Dr. Stephens, and Mr. A. Pickels had been selected by the Royal Society to proceed, at the expense of the Colonial Office, to the West Coast of Africa, to continue the work of Major Ross and his colleagues. It was further stated that the work of the three gentlemen sent out to Africa "will be carried on under the auspices of the Liverpool School for Tropical Diseases." This statement is calculated to convey an erroneous impression. Dr. Christophers and Dr. Stephens were, we understand, sent for a week or so to Liverpool by the Royal Society Committee for the purpose of obtaining the latest information on the subject of malaria researches, but we learn on the best authority that there is no warrant whatever for saying that their work will be carried on under the auspices of the Liverpool School.

THE USE OF OPIUM IN CHINA.

We have received a volume[1] edited by Dr. W. H. Park, containing expressions of "opinions" on various questions connected with the eating and smoking of opium in China, from a hundred experts. The medical men from whom these opinions are collected are mostly American medical missionaries, but there is a fair number of British medical missionaries amongst them, and a few British private practitioners. It need scarcely be said that one and all condemn the opium habit, and rightly so. The evils of smoking and eating opium, their effects upon the individual, the family, and the State, are set forth with considerable force and with an evident intention to be fair. The Indian Government, and through it the British Government, is pronounced to be the virtual cause of the consumption of opium in China, owing to the large importation of opium from India and the cheapness of the drug. In other words, the opinion expressed is that the

[1] Printed at the American Presbyterian Mission Press, Shanghai, 1899.

British are morally responsible for the opium habit amongst the Chinese and that the trade is at once degrading and reprehensible. This may be all true, but it is not in accordance with the evidence laid before the recent inquiry on the opium habit conducted by a specially appointed Royal Commission. The men who sent in their reports to the Commission were presumably as fair-minded and as anxious for the welfare of the Chinese as any among the hundred experts who now submit their opinions. Practically the two are at variance. The evidence before the Commission showed but a minimum of evil; the present report indicates a maximum of ills from the consumption of opium. Were a dozen inquiries on the same subject to be made, we expect that the result would be similar, one half holding the opium habit to be of minor, the other half considering it of major importance to the national health of China. No single individual can be in a position to come to a positive conclusion in this matter. Medical men gain their experience for the most part amongst the sick. It is therefore to be expected that they would be pessimistic in their views, as to them it would appear that a large part of the Chinese population are slaves to the habit. If, on the other hand, some other class of the community, say merchants, were to be asked to give their opinion, in all probability they would deny they had ever seen an opium eater or smoker in China; or, if they had, that the person who so indulged seemed but little or none the worse. No doubt medical men, by their training, are probably the most trustworthy of all observers, but it is difficult for them not to be impressed by the number coming to them for treatment. Opium has only been used extensively in China for about 60 years, and, according to Dr. W. H. Park, one-third of the population smoke it. Seeing that children and women with a few exceptions do not smoke opium, it would have been more satisfactory had Dr. Park told us if this statement referred to the adult male population only. Adult males cannot be said to constitute the third of the population of China, so that the statement unless defined, is apt to mislead. But if Dr. Park refers to the adult male population only, the estimate, if true, constitutes a serious evil. Dr. Alex. Rennie, of Hong Kong, and formerly of Formosa and Canton, possesses an intimate knowledge of the life and customs of the Chinese. His evidence against opium is sufficiently strong. Amongst his answers he states: "I would not employ an opium-smoking servant." "Indolence and untrustworthiness" characterise the consumers of opium; "Many, about 80 per cent., wish to stop the habit, but only about 2 per cent. can stop of themselves." Opium smoking is no doubt a serious evil in China, and Dr. R. H. Graves, one of the contributors to the pamphlet, puts it pithily: "As whisky excites a man to anger, so opium excites him to lying. He is never straightforward and open. He often feels he is in a vice, and cannot escape. He is apt to give up all hope and sink into imbecility and stupor. It steadily and gradually fastens its chain around a man until there is no hope of release." With regard to the benefit to China of stopping the importation of the drug from India it is to be feared that little good would accrue to the Chinese, for they are growing opium extensively themselves. Dr. J. R. Watson states that when he first came to Shantung, practically no opium was cultivated in the part of the province of Shantung where he was quartered, but now it is to be seen growing on every hand. We are quite satisfied as to the risk each individual runs of becoming a confirmed slave to opium who takes to the drug, either to "cure" disease or for pleasure, but it has not been proved that the great ability and well-known commercial integrity of the Chinese as a people is being sapped to so fatal an extent as many would have us believe. In all inquiries of the kind, bias is always a dangerous element; remarks calculated to throw doubt upon the integrity of those who differ in opinion are not likely to bear good fruit. We quote a paragraph from an article headed "The Opium Habit, the Opinions of a Hundred Experts." The paragraph refers to the work done by the Royal Commission on Opium in India, and runs as follows: "The day will come when the bulky report of the Commission will be looked upon as a costly and stupendous monument of sordid bias, special pleading, and outrageous discrepancy." If the "hundred experts" wish the scientific world to take their "opinions" seriously into consideration, the less they indulge in such language the better. We regret that the value of the mass of evidence before us should be lessened by this and similar unjustifiable indictments.

THE BRANCH SEAMEN'S HOSPITAL, ALBERT DOCKS.

MR. CHAMBERLAIN has sent to the Branch Hospital of the Seamen's Hospital Society, Albert Docks, a cheque for £204 12s. 9d., which he has received from the Home Committee of the Sir William Maxwell Fund. This has been raised by officers who served under Sir W. Maxwell on the West Coast of Africa, the members of the African Section of the Liverpool Chamber of Commerce, and personal friends. The Committee has requested that the sum may be devoted to the endowment of a bed in the Tropical Diseases Ward, to be called the Sir William Maxwell Cot. Mr. Chamberlain has, we understand, expressed the opinion that the subscribers could not have done better than in selecting this form of memorial to their late chief and friend, who served the empire so well at the cost of his life in the deadly climate of West Africa. Sir William Maxwell was Governor of the Gold Coast from 1895 down to his death in December, 1897. Many native chiefs in the Gold Coast and Ashanti subscribed to the fund, and a memorial brass is to be placed in the church at Accra.

A FRENCH MEDICAL APOSTLE TO THE SCANDINAVIANS.

In the *Journal des Praticiens* of December 2nd M. Huchard gives an account of a "scientific and patriotic mission" which he recently took upon himself for the propagation of the French medical gospel in Scandinavia. He was led to undertake the journey by letters from Scandinavian correspondents, who pointed out that French influence in the medical sphere had waned almost to vanishing point in Scandinavia. With the object of reviving it, M. Huchard, whose patriotism had already induced him to come forward as an ardent advocate of the claims of the mineral waters and health resorts of France, accordingly set out with a medical companion for Copenhagen. There they were most courteously received by the leaders of the profession. M. Huchard delivered addresses to the Danish Medical Society, and to the local Society for the Propagation of the French tongue. They next went to Stockholm under the escort of Dr. Ehlers, the well-known leprologist. There they were entertained at a great banquet by the professors and the Society of Medicine, and had an audience with the king. At Christiania, which was next visited, the profession also killed the fatted calf in honour of the French guests. Huchard witched his Norwegian audiences with oratory in praise of the famous men of France—Laënnec, Claude Bernard, Pasteur, etc. He urged his hearers to love France and love it always, "for in spite of its undeserved misfortunes, or because of them, in spite of certain transient eclipses of reason and justice, France remains always a land of hospitality for justice and reason." M. Huchard's visit to Denmark, Sweden, and Norway was only of some ten days' duration, but in that brief space he seems to have seen nearly everything of medical interest in Scandinavia. He was greatly struck by the "excessive cleanness" of the hospitals, and by the liberality of the State in encouraging workers like Finsen and others pursuing new paths in

therapeutics. He deplores the absence of French books in the libraries, and the preponderance of "other"—which, being interpreted, means German—influences in Scandinavian science. One reason for this, according to M. Huchard, is that French publishers seldom send books to foreign parts except when they are asked, and, it may be added, paid for, whilst the Germans scatter their works broadcast with a wise liberality. Of twenty-three books advertised in a Danish medical journal which M. Huchard examined, twenty-two were German and only one French; this was a work by M. Huchard himself, of which he had asked the publishers to send copies to the three Scandinavian countries. He points out further that while Germany sends her teachers into all countries of the world, the Deans of French Faculties do not see beyond the four walls of their schools. It would be well, in M. Huchard's opinion, if five *agrégés*, with a salary of £400 a year each, were sent to spread abroad the light of French science. The practical outcome of M. Huchard's mission is that the principal Scandinavian physicians have agreed with him to organise trips for medical study in Northern Europe. An organising committee for the purpose will be formed in Paris and reception committees in Copenhagen, Stockholm, and Christiania. It is intended that these trips shall begin in May, 1901, and become an annual institution. In this way French doctors will be able to visit the Northern countries not as simple tourists, but as medical men who will be welcomed by professional brethren and shown everything in the way of scientific edification that the countries visited have to show. The scheme, if it can be carried out, can hardly fail to be useful to France itself, not less than to the countries to which she wishes to send missionaries. There is no civilised nation so wrapped up in its own virtue, in a scientific sense, as France, and valuable as is the work done by her sons it will still be of advantage to them to learn something of what is being done elsewhere. An Athenian—or Parisian—blockhead is, as Dr. Johnson well said, the worst of blockheads.

THE UNIVERSITY EXTENSION SCHEME AT ABERDEEN.

At the meeting of the University Court on December 12th, under the presidency of Lord Strathcona, the new Lord Rector, the question of the University extension scheme was again considered, and there seems to be good reason to hope that the important additions to the buildings at Marischal College may be carried to completion in the near future. That the Church of the Grey Friars is the historical reminder of the origin of the College, since it was its inheritance, with the conventual buildings, by the Earl Marischal that determined the foundation of the College on its present site by him is well recognised. Sir William Geddes, in alluding to this fact, echoed the feeling of regret of all lovers of antiquity that this interesting relic should be lost. But at the same time the great advantages of the scheme which has now been adopted by the University Court—a scheme which, though it entails this loss, will allow of the future growth of the buildings on convenient lines, as well as permitting of a really fine frontage to the College—are certainly sufficient to counterbalance such a regret. The adoption of the scheme was moved by Lord Strathcona and seconded by Lord Provost Fleming; and the hopeful way in which the possibility of providing sufficient funds—some £70,000 to £80,000, it is reckoned—to carry the scheme into effect was alluded to suffices to raise the expectation that the deadlock in the protracted schemes for completing the buildings may shortly be removed.

THE TYPHOID OUTBREAK IN DUBLIN.

The Local Government Board of Ireland has just sent to the North Dublin Rural District Council its decision regarding the inquiry held into the circumstances of the recent outbreak of typhoid fever in Dublin. It points out that the first case at Castleknock was not recognised; that on August 17th a second case occurred in the person of a dairykeeper named Duffy, and that Dr. Cullen did not recognise the disease until September 2nd. During September 100 persons appear to have been attacked in the district and twelve or thirteen died. The dairy supplied the sergeants' mess at the Royal Irish Constabulary Depôt, the canteen, the Besborough Police Barracks, the Morgan schools, and a convent, in all of which places cases of enteric fever occurred. The milk was found to contain the bacillus coli communis. The Commissioners deal with the evidence affecting the various officials concerned. They come to the conclusion that the epidemic might have been checked if Dr. Cullen had fulfilled his obligations under the Notification and the Public Health Acts, and they require him to tender his resignation as medical officer of the district. They also request the District Council to require the sub-sanitary officer to resign. As to the inspector of dairies, who is also inspector of dairies to the Dublin Corporation, the Board expresses the opinion that he should be required to resign the district appointment.

JUDGE FRENCH AND DOCTORS' FEES.

His Honour Daniel O'Connell French, Q.C., is a judge (of county courts), and we doubt not, like his learned brother in *Trial by Jury*, "a good judge too." But even judges have what in less legally sacrosanct personages would be called their prejudices, and we fear that Judge French is no exception. At any rate, we may say with all respect that he has peculiar views on certain subjects. In a case tried before him the other day at Bow County Court he is reported (in the *Sun* and *Evening News*) to have declared that a bill for £3 13s. 6d. rendered by a practitioner for attendance on a domestic who had been injured at a railway station was "preposterous." The visits were charged at the rate of two shillings each. His Honour ruled that "a shilling a visit is quite enough for attending a servant girl." A judge who allows himself to use such language can hardly complain if we characterise this deliverance as improper. Judge French has no sort of right to lay down a scale of fees for the medical profession in regard to attendance either on servants or county court judges. In the case in question the patient had brought an action for damages against the Great Eastern Railway Company, and it is simply preposterous—we thank Judge French for teaching us that word—that a scale of fees which might be applicable to the case of a poor girl should be held to be equitable when payment is claimed from a rich company. We shall be interested to learn of any other cases in which Judge French has denied to medical men the courtesy and fair treatment which they have, equally with the rest of the world, the right to expect and receive in a court of justice.

AN ARMENIAN PHYSICIAN OF THE TWELFTH CENTURY.

In a communication read not long ago before the Académie de Médecine of Paris Vharam H. Torkomian gave an account of Mekhitar of Her, in Persian Armenia, an Armenian physician of the twelfth century. He was born in the second quarter of the century, studied first among the Persians, then among the Greeks, but mostly among the Arabians, and acquired an extensive knowledge not only of medicine, but of philosophy, and astronomy. He was private physician to Nerses the Great, called Chenorhali, or "Full of Grace," an Armenian archbishop who was one of the most illustrious poets and writers of his time. The physician lived in the greatest intimacy with the prelate, who dedicated several poems to him. The works of Mekhitar are lost, with the exception of one which found its way to France in the early years of the eighteenth century, when, on the initiative of Cardinal Fleury, a number

of Armenian manuscripts were bought in Constantinople for the Royal Library of Paris. Among them was a copy made in the seventeenth century of a work written by Mekhitar in 1184 at the request of Archbishop Krikor who at that time occupied the episcopal throne of Cilicia as Catholicos of the Armenians. The work bears the curious title *Consolation of Fevers*, which it is explained by the author is intended to convey the idea that the book consoles the doctor by instructing him and the patient by curing him. It is divided into 46 chapters. Fevers are classed in three groups: (1) fevers with and fevers without mould formation, (2) acute fevers and synochal fevers, (3) fevers with recurrence and fevers without recurrence. Fever is describes as having its starting point in the heart and extending by way of the arteries over the whole body. The body is composed of three parts. The first of these comprises the three souls, that is to say, the natural soul which has its seat in the liver; the soul of life, the seat of which is the heart; and the soul of the emotions, situated in the front cavity of the head. The second comprises the four humours, to wit the blood, the bile, the *atrabilis* (black bile), and the sputum. The third comprises the hard parts, such as bones, ligaments, muscles, etc. Hence there are three kinds of fever. That which affects the three souls is called "ephemeral," as it lasts only a day. That affecting the humours is called "mouldy fever," for mould entering the humours burns them and thus produces heat. The fever which attacks the hard parts of the body is called consumptive as it produces wasting wherever it finds an entrance. The causes of fever are external and internal. The former includes hot air, cold, sulphurous waters and astringent waters. Among internal causes are emotions, fatigue, care, hot drinks, and indigestible food. Mekhitar also describes fevers with cough, fevers arising from inflammation of the chest, small-pox, wounds, etc. The treatment of all these varieties of fever is given, but M. Torkomian reserves this for a further communication. The work, which is written in old Armenian, was printed from the copy in the Paris National Library—which is the only one known to exist—in 1832, by the Fathers of the Mekhitarist Congregation of Venice. Mekhitar probably died at the end of the twelfth century or the beginning of the thirteenth. His works, which were highly esteemed by his contemporaries, were looked upon as authorities by the Armenian medical writers who lived in the following centuries. Among these are Amir, Dolvat, Assar, and Bouniat, whose writings are included in the collection of Armenian manuscripts in the Bibliothèque Nationale of Paris. Mekhitar's book contains ideas which seem to foreshadow certain doctrines of the present day, and his teaching contributed greatly to the evolution of medical thought in Armenia in his time, which was one of progress and prosperity for his country. M. Torkomian promises a further work on the subject.

THE LATE PROFESSOR CUMING, M.D.

A MEETING of friends of the late Professor Cuming was held at Queen's College, Belfast, on December 5th. It was unanimously resolved that some means should be taken to secure a permanent memorial of him in the College, and it was decided that this should take the form of a portrait to add to the historic series in the examination hall. An Executive Committee was formed, with President Hamilton (Chairman), Professor Lindsay and Dr. James Graham (Secretaries), and Professor Purser (Treasurer). Subscriptions—not to exceed two guineas—may be paid to the Treasurer at Queen's College.

ANCIENT SURGICAL INSTRUMENTS IN ATHENS.

A REMARKABLE collection of surgical instruments used in antiquity has just been restored to Greece through the intervention of the Greek Embassy in Berlin, and will shortly be placed in a separate department of the Central Museum of Athens. The collection comprises several hundred instruments, the uses of which are for the most part doubtful or unknown. They are made of bone, glass, bronze, and iron, and belong to various periods, and were evidently mostly intended for operative purposes. Some are similar to instruments in use at the present day; for instance, there is a uterine speculum, not essentially differing from those of modern manufacture. Besides surgical instruments there are various vessels and utensils for the preparation and administration of remedies, and many feeding cups made of glass and bronze. The collection enables the student to form a pretty clear idea of medical practice in ancient Greece.

HOLIDAYS OF SCOTTISH PAROCHIAL MEDICAL OFFICERS.

THE difficulty experienced by parochial medical officers in Scotland to obtain leave of absence has long been felt, especially in remote Highland districts where they have no medical neighbours able to help, and where the expense of providing a substitute is out of all proportion to the emoluments attached to their office. In Ireland, as our readers are well aware, the Local Government Board has firmly insisted, in face of much opposition by individual Boards of Guardians, that officers are entitled to a holiday, and that the guardians must pay a reasonable fee to a substitute. There is every reason that a similar privilege should be given to the medical officers in the Highlands and Islands of Scotland who carry out their duties under many difficulties and disadvantages. We are glad to learn that it is proposed to bring the question before the Scottish Local Government Board with a view to the redress of a distinct grievance.

A FRENCH TUBERCULOSIS COMMISSION.

M. WALDECK-ROUSSEAU, the French Minister of the Interior, has just appointed a National Commission composed of forty-eight members, which is to investigate the practical means that should be adopted for the prevention of tuberculosis. M. Jules Siegfried, Member of the Senate, is Chairman, and among the Commissioners are Drs. Cornil, Pozzi, Theophile Roussel, Paul Strauss, Brouardel, Armaingaud, Bergerar, Bouchard, Chantemesse, Gallippe, Grancher, Landouzy, Lannelongue, Petit, Proust, Roux, Duclaux, Nocard, A. J. Martin, and Napias. The appointment of the Commission has not been hailed with enthusiasm by the French press, whether medical or general. The reason is, we gather, that nothing has so far come of the former Commission on the same subject which reported in 1896. The report which was drawn up by Professor Grancher was exhaustive in its range and definite in its recommendations. But they have not been acted upon, apparently for want of money.

THE Morison Lectures of the Royal College of Physicians of Edinburgh for the present year were given by Dr. Byrom Bramwell, on the subject of Aphasia, on Monday, Wednesday, and Friday last, December 18th, 20th, and 22nd in the College Hall.

ON Thursday, December 14th, Professor Ogston bade farewell to the students in the surgery class in Aberdeen. He left on Friday for South Africa, and sailed from Southampton on Saturday. The lectures on Surgery at Aberdeen will be continued by Dr. Irvine Fortescue, the Assistant Professor. The duration of Professor Ogston's absence is uncertain, and he has consequently resigned the office of President of the Section of Navy, Army, and Ambulance at the annual meeting of the British Medical Association at Ipswich next year.

THE WAR IN SOUTH AFRICA.

Captain M. L. HUGHES, R.A.M.C.

Killed in Action.

The appearance of the name of Captain M. Louis Hughes in the list of officers killed in the action at the Tugela River on December 15th produced a profound feeling of sorrow among those who knew either the man or his work. He was acting as Assistant Sanitary Officer to the troops at Aldershot when he was chosen by Sir Redvers Buller (who had learnt to know his merits at Aldershot) to serve on his personal staff, and to act as sanitary adviser.

Captain Louis Hughes received his medical education at King's College, London, where he was Assistant Demonstrator of Anatomy. He obtained the diploma of L.R.C.P.Lond., M.R.C.S.Eng., and L.S.A.Lond., in 1889, and entered the Army Medical School at Netley by the competitive examination of August, 1889. He passed out of Netley in February, 1890, taking first place and being awarded the Parkes Memorial Bronze Medal. He received his commission as Surgeon-Captain at that date.



Captain Hughes was known to military men as an enthusiast in his profession, and as one having the care and well-being of the soldier thoroughly at heart. Not only has he brought credit by his scientific researches to the great department to which he belonged, but in matters of practical detail, whether of sanitary or physical moment, he showed the spirit of true genius. For the soldiers' benefit he systematised and placed on a scientific basis so empiric a subject as chiropody, a subject of the first importance to the fighting capacity of the soldier. For the soldiers' benefit he taught the meaning of sanitation to soldiers, and thereby spread the teaching of his great predecessor Parkes amongst all classes of the army. As Assistant Sanitary Officer at Aldershot he successfully carried through several hygienic improvements and reforms which were urgently needed. The history of science will always have a place for his name. His able, original, and scientific work on Undulant Fever fully entitles him to a high place. The unclassified, ill-understood, and practically unnamed fever, which found its most virulent expression at Malta, and was hence named Malta or Mediterranean fever, had long puzzled medical men in both the navy and army. Captain Hughes's first station abroad was happily Malta. He landed there in 1890, and immediately took up the study of the prevalent fever. The time and energy with which he worked on scientific methods for six years at this subject served to introduce true scientific precision into our conceptions of Malta fever. The result of his researches was published in a volume entitled *Mediterranean, Malta, or Undulant Fever* (Macmillan, 1897). On returning to England he was selected as one of the secretaries to the first meeting of the Section of Tropical Diseases at the Edinburgh meeting of the British Medical Association in 1898; and it was largely owing to his excellent organisation and keen enthusiasm that the experiment of holding this section was so successful as to warrant its becoming a regular part of the programme at the annual meetings.

At Aldershot, although in official charge of the bacteriological as well as the chemical laboratory, Captain Hughes's concern in this department was no mere official supervision. From time to time carefully-conducted investigations were carried out by him there, and we only hope that his unpublished work may not be altogether lost by his untimely death.

We have in our ranks but few men, whether in military or civil life, who have done so much work of real scientific value as Hughes accomplished in the short time allotted to him. It is only ten years since Captain Hughes received his diploma, and his name is known and honoured by all grades of his profession. The news of the battle of Colenso just received tells how Sir Redvers Buller fearlessly exposed himself to the rifle and shell fire of the enemy; how the members of his staff, of which Captain Hughes was one, were hit and their horses killed, and it was in this storm of missiles that Captain Hughes was killed. We mourn his loss as a scientific worker, we sympathise sincerely with his wife and child, and the British soldier has cause to remember with affection one who worked so well in their behalf during times of peace, and in time of war laid down his life in the service of his country.

Dr. Patrick Manson who is so well qualified to appraise the value of Hughes's work, and who was President of the Section of Tropical Diseases when Hughes was secretary, has sent in the following tribute to his memory:

Captain Hughes called on me a day or two before he left for the seat of war. The object of his visit, so he explained, was to thank me for a trifling favour, to ask for suggestions on such special lines for pathological investigation as the opportunity of his service in Natal might afford and to say good-bye. The visit and its object were characteristic of the man; his punctilious acknowledgment of even a small favour, his keen interest in the science of his profession, and his courtesy. I saw a good deal of Captain Hughes in connection with his Secretaryship of the Tropical Section at the Edinburgh meeting of the Association, as well as on other occasions, and I learned to regard him as an ideal army surgeon—soldierly in his bearing, gentle as the physician ever should be, and a devoted and successful but very modest student of his profession. His untimely death is a loss, not only to the Royal Army Medical Corps, but also to the profession at large and to medical science. His work on Mediterranean Fever shows what he was capable of doing, both as an original investigator and as a writer. It is by far the best work on the subject of which it treats. In its completeness, thoroughness, conscientious accuracy, and lucidity it is a model. Since Bruce discovered the micrococcus melitensis no individual worker has done so much as Hughes towards relegating Mediterranean fever to its proper pathological niche. Doubtless had the Boer bullets spared him, he would

have given us more and even better work than this, for, as I understood from him, he was eager to get on, relying for advancement, not on patronage, on seniority, or on chance, but on professional merit, hard work, and his deserts. Surgeons in the services sometimes complain of lack of opportunity for original work, of the discouraging interruptions arising from the frequent changes of station and other exigencies of their respective services as being inimical and even fatal to successful endeavour, and even of official discouragement. Hughes has not lived in vain, if his bright example in struggling against and in overcoming such difficulties be taken to heart. His book is permanent evidence of the vast amount of research, literary and scientific, that can be got through, even by the hardest worked among them, if they make the most of their opportunities.

A military correspondent, who had good opportunities of judging Captain Hughes's work, writes: For the last three years he acted as assistant sanitary officer to the troops at Aldershot, an office created by the present enlightened head of the Army Medical Service. During this period he had charge of the bacteriological and chemical laboratories at that important military centre, and extended and improved their organisation immensely. He was a capable bacteriologist, and held the diploma in Public Health. He arranged the medical portion of the combined medical and engineering course of lectures, delivered to all quartermasters at Aldershot, to initiate them into the rudiments of sanitation connected with their important duties. In this course, which was first ordered by H.R.H. the Duke of Connaught, when in command at Aldershot, and which was cordially supported by Sir Redvers Buller, who succeeded him, Captain Hughes took a prominent part and became the medical instructor, and so effectively did he perform his duty that many of those who attended his classes were able to obtain by examination the certificate of the National Health Society, given for knowledge of the rudiments of sanitation. Again, when chiropody was started in the army at Aldershot, Captain Hughes took it up with his usual energy, delivered lectures, and framed a syllabus of instruction, which it is understood the War Office will utilise when the question reaches a more advanced stage, as it doubtless would have done before this had it not been for the war in South Africa. Captain Hughes's death is regarded as a serious loss by the medical service, where his scientific acquirements were to the advantage of the army generally, and tended to enhance the position of the army medical service in public estimation. When Captain Hughes was killed he was serving on the staff of Sir Redvers Buller as his personal medical attendant, for which office he was selected by that officer, who had a good knowledge of his merits from his experience of him at Aldershot. Captain Hughes leaves a wife and child to mourn his death.

From Our Special Correspondent in Capetown.

November 30th, 1899.

THE WOUNDED AT CAPE TOWN.

Arrival of the Wounded from Belmont.

Military medical matters here are beginning to assume a busy aspect. The wounded from Belmont arrived on November 26th in the ambulance trains which I have described previously and which have proved admirably fitted for their purpose. Several of the wounded men told me that they were most comfortable on the way down. A few Boer wounded were included in the consignment. All were conveyed to No. 1 General Hospital, Wynberg, with commendable despatch. In order to supplement the ambulance waggons, and to prevent the delay in conveyance from Wynberg Station to the hospital, several large vans belonging to furniture firms here were brought into requisition and answered the purpose exceedingly well.

Wounds of the Abdomen and Groin.

Many of the injuries are of a severe character, there being as before a large proportion of wounds of the extremities, and of these again many were somewhere in the neighbourhood of the hip joints. Why this should be it is difficult to say. One hypothesis is that the enemy aims at the sporrans of the Highlanders, but as the proportion is just as evident with the other corps this will hardly hold water. Curiously enough, however, a man belonging to the Transvaal Ambulance told me quite spontaneously that some of the commandants had directed the Boers to aim by preference at the abdomens of our men, on the ground that Mauser bullet wounds would be more effective in that region than anywhere else. I paid little attention to the remark at the time, but it has since struck me that this may in a measure account, allowing for indifferent marksmanship, for the large number of wounds of the hip, groin, and thigh. One curious case of a penetrating abdominal wound, unfortunately ending in death, was described to me by Major Simpson, R.A.M.C. The man had been hit at Belmont; when he arrived here he had manifest peritonitis, and death resulted soon after arrival. There was a Mauser wound, apparently an entrance aperture, 3 inches below, and 2 to the left of the umbilicus. Just over the crest of the left ilium was an apparent exit wound, naturally ascribed to the same bullet. Near this latter wound a movable body could be felt, which was thought to be a detached fragment of the ilium. *Post mortem*, two bullets were found, one just above the crest of the ilium; this was the supposed fragment of bone. This bullet had evidently entered at the wound near the umbilicus, and, without damaging the small intestine, had perforated the descending colon just above the sigmoid flexure, and impinged against the ilium. The wound near the ilium was the entrance wound of another bullet, which was found loose in the lesser sac, just below the great curvature.

Penetrating Wounds of the Chest.

The few penetrating wounds of the chest are all doing remarkably well. In some cases there have been absolutely no symptoms; in others nothing more than a little early hæmoptysis, and in a few some pleural effusion. One chest wound was rather curious. The bullet had entered close to the right nipple, had traversed the chest laterally, apparently just grazing the posterior aspect of the sternum, then emerging at almost identically the same spot on the opposite side, it finally entered the left ulna an inch or so below the elbow, smashing that bone severely. The chest wound has healed without the least trouble. The arm wound has unfortunately become septic, and was looking rather bad. A man wounded at Belmont, the bullet having entered just below the spine of the left scapula, and emerged in the right mid-axillary line, at the level of the seventh rib, had yesterday a little effusion in both pleuræ, but no other untoward sign, and only a very slight rise of temperature. I saw one Martini wound, and two undoubtedly inflicted by some kind of soft-nosed bullet, both amongst our men.

Wounds of the Head.

I saw one bullet wound in which the frontal bone was slightly "ploughed" for about 2 inches, without any apparent fracture, but with some diplopia resulting. In another case the projectile had glanced along the cranium, but without causing any fracture of the outer table; but, as the patient was hemiplegic, he was trephined over the seat of injury, and extensive fracture of the inner table discovered. He is now doing well.

Wounded Prisoners.

The Boer prisoners are not, as a rule, severely hurt. The two worst cases are those of Field-Cornet Pretorius and a man named Impey. The former has sustained a Lee-Metford wound of the knee-joint, with a fracture of the patella, which has got more or less septic, but does not appear likely to lead to anything worse than a stiff knee. The latter was hit rather curiously. A bullet entered just below the outer canthus on one side and emerged in the temporal region on the other. He is quite blind on the side of emergence. The Boer wounded are kept in separate wards, but are, of course, in every way on the same footing as the others, and one of them, whom I knew slightly some years ago, was loud in his praise of the attention he and his comrades are receiving.

The Wynberg Hospital.

The General Hospital is proving quite equal to the tolerably heavy demands made upon it, and not even the most critical civilian could find anything to find fault with. In appointments no civil hospital could possibly surpass it. The

operating theatre is perfect in its way, and the whole place reflects very great credit on Colonel Supple and Major Simpson, who superintended its conversion from an ordinary hut camp to its present purpose.

Lieutenant-Colonel Hodson is in charge of the surgical, and Major Barnes of the medical division. Major Simpson is doing duty under the former. Colonel Stevenson, the officer in charge of the lines of communication, is evidently not disposed to rest altogether on his Netley laurels, but is taking an active interest in the executive work of the hospital. He, for one, may be commended to the notice of the next post-prandial speaker who feels inclined to reproach the R.A.M.C. seniors with falling into an administrative groove.

One of the civil surgeons, Mr. Freemantle, has been detailed as pathologist to the hospital, a very commendable step.

The wounded from Graspan arrived here this afternoon.

Field and Station Hospitals in Cape Colony.

Full details of the field and station hospitals have not yet been completed, or at least are not for publication, but one station hospital—No. 3—has been established at De Aar, and several field hospitals are at Orange River or thereabouts. There are about nine hospitals for the reception of the various troops guarding the lines of communication between here and De Aar, but these are not used for any but the local detachments, of whom there are a goodly number, owing to the suspicion entertained about possible attempts on the line by colonial sympathisers with the enemy. Two of these small hospitals—those at Victoria West and Richmond Road—are under departmental civil surgeons, detached from the General Hospital staff, the rest under local civil practitioners.

Lord Methuen has with him a field hospital for each brigade, and one for his divisional troops.

A general hospital is to be established at Rondebosch, a suburb of Capetown between here and Wynberg. The position chosen by Colonel Supple, who is making arrangements for it rapidly, is on a gentle slope, in an admirable situation. Another general hospital still on the water may, I am told, possibly be fixed at Queenstown.

The station hospital at Capetown itself has been extended to take 300 patients. It is fairly occupied now, principally with cases of pneumonia and the like, contracted by men on the transports. When the troops have ceased to arrive, it may be used as an additional general hospital.

Abuse of the Geneva Flag.

There can, unfortunately, be but little doubt that the Boers have been abusing the Geneva flag. I am told, on the authority of an eye-witness, that at Belmont they actually fired from cover of an ambulance waggon, and at the same battle several Boers professing to be St. John men, and wearing the badge on their arms, were found fully armed—a very suspicious circumstance. One can only hope that these breaches of usage are the result of defective discipline and not of deliberate malice.

Offers of Local Associations and Hospitals.

Several local associations for the supply of comforts to the wounded have been established at different centres. They are all gradually being got into touch with Colonel Young. A good many offers of hospital accommodation have been made from various parts. These offers are admirably well-meant, but there is not the least necessity for the military authorities to accept them. Splitting the sick up into small batches would lead to a great amount of administrative trouble, and the general hospitals can be indefinitely expanded by tent accommodation. In the suburbs of Capetown—such as Rondebosch and Wynberg—wounded or sick would at this time of the year probably be far better under canvas than in permanent buildings. There will be no rain to speak of in this part for months; the heat, especially in the southern suburbs, will never be excessive; and the high winds prevalent in Capetown itself scarcely reach these places.

The Excellence of the Medical Arrangements.

Now that the medical arrangements are being so fairly tested that one can judge of their efficiency, I am struck with the admirable way in which everything is being managed. From the collecting station to the base not a hitch appears to have occurred anywhere. As it is the fashion in some quarters to decry the army medical arrangements, I think it right to put this on record. The brunt of the whole business has thus far fallen upon Colonel Supple, who as principal medical officer of the command before the arrival of the army corps staff, and as principal medical officer of the base since, has been responsible for most of the arrangements. He has certainly shown indefatigable activity and unerring judgment in all he has done—at least, so far as I can judge as an impartial outsider—and the work at a place like this, which is at present the only medical base both for arrivals and wounded from the front, complicated as it is by the fact of the general hospital being some miles away from the city, is no light task.

The Future.

One remark in conclusion, and that I make from an intimate knowledge of the field of operations, and of the people concerned. I believe there will be an enormous pressure on the resources of the department during the next few weeks. This will not be so much in the shape of medical cases, for the uplands are very healthy at this time of the year, and the camp sanitary arrangements are reported to me to be very good. But there will be a very large number of wounded. The Boers will contest every inch of the advance to the bitter end. Wherever a natural fortification exists they will hold it, and although we shall in all cases doubtless drive them out, the loss we shall suffer will be great. So far as I can gather, the leaders have tolerably made up their minds to eventual defeat, but they are bent on its coming about at a cost which, to quote President Kruger, will "stagger humanity." It is as well to recognise this beforehand, and see that the medical *personnel* is sufficient for the future heavy demand.

THE MEDICAL ASPECTS OF THE BOER WAR.

By a South African Campaigner.

V.

Our Reverses.

Week by week the war appears to assume larger dimensions and more serious aspects. Fortunately however the reverses experienced have only had the effect which such experiences have invariably had upon the English. They make them redouble their efforts and become more determined than ever to win in the end. After all, what is the position to-day in South Africa compared with the position in India during the Mutiny? The men who suppressed that are not likely to be dismayed, and now we have one of the heroes of that very time, Lord Roberts, going out in supreme command to South Africa with Lord Kitchener as Chief of Staff.

General Gatacre.

One of the reverses sustained during the past unfortunate week was that of General Gatacre in Stormberg. Knowing the country as I do, I confess to some astonishment at the endeavour made to march a long distance for the purpose of attacking the Boers in these fastnesses. The country in the Stormberg district is of the most wild and mountainous description, and inasmuch as there was no garrison to relieve, nor any other special condition calling for the hazardous advance, I confess the movement seems difficult to understand. However, we are all accused of regarding ourselves as field marshals nowadays, and I do not propose to discuss the strategy further; but there is one peculiarity of General Gatacre's military policy which is distinctly open to comment from a medical point of view. General Gatacre, we are continually told, is known by the soldiers as "General Back Acher" on account of the extremely long and arduous marches which he is in the habit of giving his men as a form of exercise. The men, we are told, continually return from these marches extremely exhausted, and we submit that these severe bouts of exercise are not the way to develop "condition." A moderate and rational amount of exercise, with proper intervals of rest, produces fitness, but exhausting marches frequently have the very opposite effect. Some measure of this severity would appear to have been carried into the tactics exercised by General Gatacre in his last

march, which entailed upon his men a long train journey in the sun, followed by an exhausting night march immediately preceding an attack upon the enemy.

Magersfontein.

The list of casualties at Magersfontein appeared in detail on Saturday. The total loss in killed and wounded in these engagements was 957; this consisted of 125 killed, 642 wounded, and 190 missing. From this it will be seen that again the proportion of killed to wounded is by no means high, and that in face of the fact that our troops were gallantly storming a strongly entrenched position. Reuter's correspondent states that the ambulance service was magnificently organised. This is a gratifying tribute to the medical department, and we have the further testimony of Cronje himself in his despatch to Kruger, in which he commented on the completeness of the ambulance arrangements among the British forces. With regard to this battle I would add one word. It is true that Lord Methuen did not succeed in taking the position, but nevertheless it is certain that the loss inflicted upon the enemy was at least as great, if not greater, than our own, and it is therefore unfair to speak of this engagement as if it had been a defeat. Lord Methuen's column has marched with signal success from the Orange River, driving the Boers before him. The seizure of the Modder River was a most important one, and the holding of it is of the greatest strategic importance. That Lord Methuen should have accomplished it alone entitles him to our admiration; to be astonished that he did not then forthwith succeed in driving the reinforced Boers from their position in the Magersfontein is unreasonable.

The Tugela.

From the Tugela River we have the sad news that 82 officers and men have been killed, 667 wounded, and 348 missing, presumably prisoners, making a total of 1,097. Here again, the proportion of killed to wounded is small, and is pretty conclusive evidence that the wounds were inflicted almost entirely by the Mauser rifle, and probably many of them at long ranges. The individual shooting of the Boers is undoubtedly shown in this engagement. As with the operating surgeon the first essential is skill and knowledge in the use of his instruments, so surely with the soldier who is a rifleman, the first essential is knowledge and skill in the use of the rifle. In that knowledge and skill the Boer, especially the hunting Boer, and probably those very Boers selected to meet Buller on the Tugela, were undoubtedly proficient. Are our soldiers, when not actually engaged in fighting the enemy, now getting the one thing necessary to give them that skill—that is, field firing with the rifle? The veld is wide, and opportunities of camp life ample. What qualities the Boers have which our soldiers do not at present possess must be taught our soldiers. Marksmanship is not a difficult art, and may be learned, and nowhere more easily than on the South African veld. What opportunity, for instance, have the reservists recently rushed out had to acquire any skill with the rifle? Many of them have been for seven years working as artisans or labourers, without firing a shot. It is obvious that they must have some opportunity of acquiring the requisite skill.

TROOPSHIPS.

On Saturday I had an opportunity of visiting the *Avoca*, one of the transports sailing from Southampton with troops for South Africa. The arrangements on board struck me as admirable. The *Avoca* is one of the British India Company's ships, and principally intended for the conveyance of passengers. Her deck accommodation is fairly large, and I was interested to note that the authorities had wisely portioned off one half of the upper deck—which is usually reserved for first-class passengers—for the use of the men. On this deck it will be possible for the men during the voyage to take exercise, to drill, and generally to keep themselves usefully employed from a service point of view. What is known as poke drill, that is, pointing with the empty rifle, can at any rate be practised on board this and all other troopships. The voyage under these conditions should be found beneficial to officers and men both in health, and, in some slight measure, in necessary discipline.

NETLEY.

From the *Avoca* I ran down to Netley, where the P.M.O., Lieutenant-Colonel Charlton, received me. I visited various wards of the hospital, and saw among other patients men who had recently come home in the *Jelunga*. The papers had stated that these men were some of the wounded from the seat of war in South Africa, but I found that only one of the *Jelunga's* passengers was actually a wounded man, and he was not at Netley. Of the others I saw some of the privates, and among them found two or three men who had developed rupture and had been invalided home, the others were principally medical cases. One of the men I spoke to had been with the camp at the Orange River; they all spoke well of the treatment they had received at the front, on the railway journey down, and on board the transports, and they certainly are extremely comfortable and in good quarters at Netley.

SENDING HOME THE WOUNDED.

With regard to the disposal of the sick and wounded, a letter was written to the *Times* of December 13th by Sir Henry Howarth, inquiring why the sick and wounded are being sent home.

The Cape of Good Hope and Natal are, he says, two of the most famous sanatoria in the world. ..... This being so, what possible justification can there be for sending home shiploads of sick and wounded men, who have to face the very real discomforts of a sea voyage, to cross the Bay of Biscay at this season, to arrive in England in the middle of winter, and perhaps to be landed, as the other day, in rain and fog?

To this Surgeon-General Hamilton (R.P.), lately P.M.O. in South Africa, replied as follows:

The climate at the Cape at this season is very hot and dry, that of Natal hot and damp—neither of them ideal places for sick and wounded men. No doubt the "karroo," or elevated tableland, is a suitable climate for cases of tuberculosis, but the accommodation, food, and attendance are so vile, that all good done by the climate is counterbalanced by the discomforts.... From a military point of view it is absolutely necessary to send home all cases of sick and wounded not likely to be fit to rejoin their corps within a reasonable time. The chief base hospital is at Wynberg, a suburb of Capetown, about nine miles distant by rail. The regular hospital there can only accommodate about fifty sick, but the barracks close by have been taken over as a hospital, and can hold about 500 sick and wounded. These barracks are really only huts, and the accommodation, especially as regards the subsidiary buildings, is not at all ideal for hospital purposes. Tents at this time of the year are very hot. It is, therefore, most necessary to send home every case of wound or sickness not likely soon to be fit for duty, to make way for the fresh sick and wounded being sent down daily from the front.

Surgeon-General Hamilton's answer appears to be conclusive. No doubt the cases sent home will be those so severely wounded as to preclude any prospect of their again taking part in the campaign, and it is only natural that a man thus situated should desire to be near his friends. At the present time and with the modern appliances in the shape of hospital ships there is no reason why a man should suffer any hardship whatever during the voyage; in fact, the modern ocean steamer makes a much more comfortable hospital than tents or huts during the hot summer in South Africa.

FIELD RATIONS.

A correspondent has asked as to the field rations for our troops. "The health of the troops," he says, "in future depends in a great measure on it. It is desirable that it should be given to the profession in full detail." The ration is given as Appendix VII of the medical arrangements published for the information of the Field Force in South Africa, and is as follows:

RATIONS (DAILY SCALE).

FIELD SERVICE.

The rations for the troops will be as follows:

Meat.—One lb. fresh, salt, or preserved meat. Maconochie's ration = a ration of meat. When the supply of cattle is abundant, the ration of 1 lb. fresh meat during active operations may be increased by G. O. C. to 1½ lb.

Bread.—One lb. and a quarter fresh bread or 1 lb. biscuit, or 1 lb. flour or meal.

Groceries.—One-third of an oz. of coffee and ½ oz. tea, or double ration of either; 2 ozs. sugar, ½ oz. salt, ⅛ oz. of pepper; ½ oz. chocolate or cocoa when given in lieu of tea or coffee.

Lime Juice.—One tenth of a gill with ½ oz. sugar when fresh vegetables are not issued, or when medical officer thinks necessary.

Vegetables.—One oz. compressed or ½ lb. potatoes or other fresh vegetables, or 2 ozs. split peas, or ½ lb. onions, or 2 oz. rice.

Spirits.—Half a gill when notified in general orders.

Tobacco.—Not exceeding 1 lb. per man per month from Army Service Corps on repayment; price to be fixed by G. O.

Light.—Hospitals as required; guards horse picquets, officer's offices 1 candle per lantern authorised.

Fuel.—One lb. wood or coal, not to be issued when it can be obtained by the troops on the march. This is the maximum ration, and will be only issued when available. Cow dung is a substitute on emergency.

The scale of daily rations for civilian subordinates will be as follows:
(*a*) White conductors same as European soldiers.
(*b*) Native employees, including drivers and leaders.
1 lb. meal, biscuit, or bread.
1 lb. fresh or preserved meat.
2 oz. sugar.
1 oz. coffee or ½ oz. tea.
½ oz. salt.

The following scale of equivalents which are to be considered as alternatives:

Meal, Biscuit, Bread } 1 lb. = 1½ lb. mealie flour or mealie meal.
Meat, 1 lb. = 1½ lb. mealie flour or mealie meal where there is not a sufficiency of meat.

In all other matters not mentioned in the above the Allowance Regulations will be followed for equivalents, or in special articles not therein named G. O. C. will decide them.

While this will be adhered to as closely as circumstances will allow, it is quite probable that the exigencies of the campaign may bring about a considerable modification from time to time. It all depends upon the commissariat, together with the resources of the country in which the soldier finds himself. During a campaign in which I served there was considerable variety in the ration. We began with tinned meat, cattle were then captured from the enemy, and for the rest of the campaign fresh meat and milk were always forthcoming; then, again, for a week or two the neighbourhood of mealie fields enabled an unlimited quantity of fresh mealies to be substituted for much of the daily ration. It is well, therefore, to bear in mind that the ration must vary according to circumstances, sometimes with advantage to the soldier and sometimes with disadvantage.

Civil Surgeons.

There have been countless applications for employment as civil surgeons with the forces in South Africa, and the Director-General of the Army Medical Department stated a week or two ago that he then had 400 names on his list. The surgeons serving in this capacity are attached to the Army Medical Department, and are styled simply "Surgeon." Their uniforms consist of plain khaki tunic, breeches, and puttees, and is in appearance almost exactly that of the combatant officers; they enjoy the rank and privileges, though not the title, of "Captain." Each one has a servant and a horse found him, and receives pay at the rate of £1 a day; he is engaged for twelve months, the department retaining a right to terminate his services at any time on the payment of two months' pay. His camp equipment is simple but complete; it consists of a canvas stretcher, cork mattress, with a blanket fixed on in the shape of a bag and a waterproof covering, which may be used or thrown aside as required, which, like the blanket, is also attached to the mattress. He also has a readily portable table, a small camp chair, and a tin case containing cup, plate, teapot, etc. These things are purchased by the surgeon, and then an advance of £40 out of his pay is made at the time of joining to enable him to meet the necessary outlay.

The completeness, thoughtfulness, and care with which the whole of the medical arrangements are being supervised have already been evidenced in the field, and cannot fail to be recognised at the close of the campaign.

Boer Ambulance.

The Boer forces, we are informed, have an ambulance which is under the superintence of Captain Bleksley. Captain Bleksley has been in the employ of the Transvaal Government for some time as sanitary inspector in Johannesburg, and is well known to the writer. The ambulance arrangements of the Boers are of the most primitive description, but this is more the fault of the Boer commanders than of the ambulance department, who are probably but very poorly found in resources.

THE ROYAL ARMY MEDICAL CORPS AT MAGERSFONTEIN AND THE TUGELA.

Magersfontein.

In a message sent on December 12th from the battlefield in front of Magersfontein, Reuter's correspondent wrote:

The ambulance service was magnificently organised, and the bravery of the surgeons while attending to the wounded in the firing line is the subject of the highest admiration among our men

The correspondent of the same agency at Orange River, after announcing the arrival of two hospital trains with wounded from the action wrote:

Many acts of heroism are recorded. An officer of the Army Medical Corps attended the sick in the firing line until he was killed.

Happily it would seem that the statement that the officer was killed was shown by the official casualty lists to be incorrect. The medical officer attached to the Black Watch (2nd Batt. Royal Highlanders), which suffered so heavily at the outset, losing 45 killed and 184 wounded, besides missing, was Lieutenant H. E. M. Douglas, who is returned in the casualty list as wounded. The *Times* correspondent, telegraphing with regard to the same battle says:

The work of the medical staff was beyond praise. Their promptness in relieving and removing the wounded under hot fire was extraordinary, though the doctors were ultimately compelled to forego attending the wounded near the trenches, as many men who might otherwise have been saved were shot while being attended to, the enemy's fire being always drawn to those points.

The correspondent of the *Daily Telegraph* telegraphed:

The greatest bravery was shown by the officers and men of the Royal Army Medical Corps in dressing the injuries of the wounded and in bringing them in under a heavy fire. Cartenson, attached to the Seaforth Highlanders, went into action with the regiment early in the morning, and dressed the wounds of several men in the fighting line, and brought others to the rear.

When the ambulance was brought up about noon, the Boers would not allow it to come nearer than 500 yards.

Ensor, however, went on alone within 300 yards of the enemy and brought back a wounded man, although a heavy fire was directed on him by the Boers.

Captain Probyn, attached to the Gordon Highlanders, walked erect up and down the firing line attending to the wounded officers and men under a hail of bullets.

All the doctors and stretcher-bearers, indeed, showed the greatest coolness.

There is evidently some error in names in this despatch. The medical officers attached to the other components of the Highland Brigade according to the official list are: 2nd Battalion Seaforth Highlanders, Major G. E. Moffett; 1st Battalion Highland Light Infantry, Lieutenant T. C. MacKenzie; 1st Battalion Argyll and Sutherland Highlanders, Captain J. E. Carter. The medical officer of the 1st Battalion Gordon Highlanders which advanced to the relief of the Highlanders Brigade after the surprise is Captain P. J. Probyn, who entered the service in 1896.

Lieutenant Ensor was originally attached for duty to No. 3 General Hospital as officer in charge of the *x*-ray apparatus. Lieutenants Douglas, Ensor, and Mackenzie only received their commissions last July, after passing through the Army Medical School at Netley. Major C. H. Burtchaell, who is reported to have been taken prisoner, was Secretary to the Principal Medical Officer of the First Division, that which includes the Guards, and officer in medical charge of the staff.

Reuter's agent telegraphing from the Orange River says:

The military hospital here is in a healthy position to the south of the camp. The wounded have nothing but praise for the treatment which they received at the hands of the medical department on the battlefield.

The Tugela.

Captain M. L. Hughes, who is reported killed in General Buller's disastrous action at the Tugela, was attached to the staff of the Principal Medical Officer of the force in South Africa as special sanitary expert. His death is a severe loss to the service and to the force in Natal. The 14th and 66th Batteries Royal Field Artillery, which had to abandon guns in this action, formed part of the field artillery of the 1st Infantry Division, and the medical officer was Lieutenant E. T. Inkson, who received his commission last July. The medical officer of the 1st Battalion Royal Inniskilling Fusiliers, which had ten casualties among the officers, is Major John Henderson Brannigan, who is probably the officer of the R.A.M.C. returned as slightly wounded. He entered the service in 1885.

THE RED CROSS TRAIN.

The contract for the construction of a special hospital train for the Central British Red Cross Committee was signed on October 18th, and the work which in ordinary times would have occupied eight months, has been finished in ten weeks. It was at first intended that the train should be composed of ten carriages; but as the railways are single lines of narrow gauge, with severe gradients, it was found necessary to limit the number to seven. The train consists of seven bogie corridor carriages, each about 36 feet in length and 8 feet in width, the passage through the centre being continuous. The

first carriage is divided into three compartments for linen and other stores, for two invalid officers and for two nurses respectively. The second carriage is also divided into a compartment for two medical officers, a dining room, and a surgery. The third, fourth, fifth, and sixth carriages are each constructed to carry eighteen invalids and four hospital orderlies. Owing the limited space the beds have been necessarily placed in three tiers. The difficulty of placing a helpless patient sideways on a bed closed on all sides but one from a gangway 2 feet 6 inches in width, in which there is only room for one bearer at the head of the stretcher, and one at the foot has been met by an arrangement of pulleys in the roof, which enables each bed with a patient on it to be raised to the proper level by one man, whilst the hands of the two bearers are thus left free to guide and fix it in position. Each carriage is provided with a stove, a lavatory, and a closet, and necessary storing lockers. The seventh carriage contains the kitchen and pantry, including berths for two cooks, and a compartment between for the guard. Cooking appliances, cisterns containing cold water storage, two large filters, a refrigerator, and everything necessary for 97 persons are provided; besides fitted cupboards, and drawers for linen clothing, surgical and medical stores, cutlery, glass, crockery, provisions, etc., two lockers have been placed in the roof of each carriage for linen, etc. The whole train is light and airy, and the enamelled white ironwork and fittings and the bright draperies produce a cheerful effect. As the train may have to be loaded in places remote from buildings, and exposed to sun, rain, and dust, an awning has been provided suspended to to hooks over the carriage doors and supported by telescopic iron posts. Under this shelter invalids can be transferred from stretchers to the beds they will occupy in the train.

Towards the cost of the train the Borough of Windsor contributed £6,100 and Princess Christian added £650, the balance of a Red Cross fund invested in her name after the Soudan Campaign of 1885. In deference to the wish expressed by the royal borough, the train will bear in the centre panel on each side of every carriage, a conspicuous Red Cross on a white ground, encircled with the words, "Princess Christian Hospital Train." In sockets at the head of the train are two flags, the Union Jack and the Red Cross in accordance with Article VII of the Convention of Geneva. Sir John Furley, under whose supervision the train has been built, will accompany it to South Africa early next month.

THE AMERICAN HOSPITAL SHIP.

THE alterations in the *Maine*, the ship lent by the Atlantic Transport Company to serve as a hospital ship, have been completed and the necessary funds for the alteration have been provided through the exertions of a committee of American residents in this country.

The ship has four large wards and one small isolation ward, providing accommodation altogether for 218 patients, on two decks. The bedsteads, which are of enamelled iron, are arranged in rows, head to foot, with narrow gangways between. Each bed has a spring mattress, a horse-hair mattress, and the ordinary furniture of a hospital bed, including a movable bed table. An operating room has been fitted up on the saloon deck, and is provided with an enamelled iron operating table with plate-glass top, instrument cupboards, sterilisers, etc., and also an *x*-ray installation, for which a Wimshurst influence machine has been fitted, The medical officer in charge is Surgeon-Lieutenant-Colonel Hensman; with this exception the whole of the staff of the ship are Americans. The medical men are Dr. G. E. Dodge and Dr. H. H. Hodman of New York, and Dr. C. H. Weber of Philadelphia. Miss M. E. Hibbard, the Superintendent of the Nursing, has five nurses under her, and Major Cabell, M.D., of the United States army will be in command of five non-commissioned officers.

On December 16th the Duke of Connaught visited the vessel, which was lying in the West India Dock, and presented a Union Jack to the ship in the name of the Queen. The ceremony concluded by the hoisting of the Union Jack at the mainmast, the Stars and Stripes at the mizzen, and the Red Cross at the foremast.

PREPARATIONS AT THE HOME HOSPITALS AND CONVALESCENT HOMES.

The Seamen's Hospital Society has arranged that a number of beds in the Society's branch hospital in the Royal Victoria and Albert Docks shall be placed at the disposal of the War Office for the reception of sick and wounded soldiers who, on their arrival at the Albert Docks from South Africa, may not be fit to at once travel further.

The Committee of Management of the Royal London Ophthalmic Hospital have offered to place a ward at the disposal of the War Office for the soldiers and sailors whose eyes may be injured in the war.

The London County Council has given permission to a committee of medical men and others residing in the neighbourhood of Hampstead to use Golder's Hill House as a temporary convalescent home for soldiers invalided from the Transvaal.

At Bath a local Committee has arranged for a certain number of beds at the Convalescent Home, Combe Down, for soldiers of the territorial regiments of the Western Counties, and of the Royal Artillery, Royal Engineers, and Cavalry within that area. It is proposed to increase the accommodation if necessary.

Lord Carrington has suggested that many more convalescent homes should be organised under military management, and has offered to lend a house near High Wycombe for the purpose.

Messrs. Maple and Co. have offered to provide 30 beds at the firm's convalescent home at Harpenden until the end of 1900, and will meet all expenses.

The Homes of Rest for Disabled Soldiers and Sailors received on December 15th a cheque for £3,000 from the Mansion House Fund.

THE SEVENTH DIVISION.

THE Principal Medical Officer of the Seventh Division, which will be under the command of Major-General Tucker, C.B., is Lieutenant-Colonel J. A. Gormley, M.D., R.A.M.C. He entered the service in 1874, and served during the operations in the Malay Peninsula in 1875-76 (medal with clasp). During the Afghan war of 1878-80, he was in medical charge of the 51st Light Infantry, and took part with the expeditions against the Mohmunds, and into the Hissarik Valley (medal). He served in the Boer war of 1881, and with the Nile Expedition in 1884-85 (medal with clasp and Khedive's star). During the operations in South Africa under Sir Frederick Carrington, in 1896, he was Principal Medical Officer, and for his services at that time was mentioned in despatches, and promoted to be Brigade-Surgeon-Lieutenant-Colonel.

The medical officer appointed to the Staff of the Division is Major F. J. Morgan, R.A.M.C., who entered the service in 1887. He has been medical officer at the Tower of London since 1897.

MEDICAL ARRANGEMENTS FOR THE AUXILIARY FORCES.

IT is not anticipated that any serious difficulty will be encountered in making the necessary medical arrangements for the Yeomanry and Volunteers who are to serve in South Africa. In the case of the Volunteers, as the force will be attached to regiments already provided with regimental medical officers, with existing brigade bearer companies and field hospitals, no medical help will be required. The Yeomanry Brigade should have no difficulty, as there are sufficient medical officers belonging to the service to supply assistance to the brigade, and the only regret will be that the brigade to be raised is not 6,000 in place of 3,000.

The Militia Medical Staff Corps will, it is believed, be adequate to meet all present needs.

The vital question is how to provide for any future force. There are 34 brigades of volunteers. Of this number, 30 are returned as having bearer companies. We believe that the authorities would act wisely if they had these bearers inspected, and ascertained how many would volunteer. A school for 200 or 300 bearers might be started, either in Aldershot or London. We believe that there is no doubt that the Volunteer Ambulance School of Instruction could supply officers and non-commissioned officers for a staff of instruction should this be necessary. A step in the direction of utilising the services of Volunteer bearers has already been taken, the Secretary of State for War having sanctioned the services of members of the Welsh Border Brigade Volunteer Bearer Company for employment. We learn that 37 non-commissioned officers and men have accepted, and will probably be sent to Netley and Aldershot to act as hospital orderlies, which they will no doubt do thoroughly well as they are reported to be in a high state of efficiency. At the late brigade camp the Senior Medical Officer, Lieutenant-Colonel P. Giles, F.R.C.S., was able to parade for Colonel Duke, R.A.M.C., the Principal Medical Officer of the North-West District, not only a complete bearer company, but a trained section of regimental stretcher bearers from each of the six regiments in camp.

LITERARY NOTES.

With reference to the *Medical Directory for 1900*, we have received the following letter:

May we ask for a small space in your columns to inform your readers that, owing to a disastrous fire which took place at our printers on the 9th inst., whereby the type, specially cast for the work, was destroyed, the issuing of this work must unfortunately be delayed till early in February? Relying, under these unavoidable circumstances, on the forbearance of our subscribers, and thanking you for your courtesy, we are, Sir, your obedient servants, J. and A. Churchill.

With the end of the year Professor W. von Zehender retires from the editorship of the *Klinische Monatsblätter für Augenheilkunde*, which he founded in 1862, and has directed ever since. In a touching letter of farewell to his readers, Professor von Zehender introduces Professor Th. Axenfeld, of Rostock, as his successor.

The last issue of the *Zeitschrift für klinische Medicin* is a "Jubilee number" in honour of the twenty-fifth anniversary of Professor Wilhelm Ebstein's appointment to his chair. It contains a number of valuable contributions from pupils of the distinguished professor, a portrait of whom adds to the attractions of the number.

The *Hospital* has issued a "Christmas Appeal Supplement," which deals with the great charities. In addition to stories about hospitals and their inmates, the needs of the several institutions are set forth in the words of the authorities in the advertising columns. It is suggested that the number may thus be a useful guide at this season to charitable persons who are anxious to give not only well but wisely. Two well-executed presentation plates of Her Majesty as the Queen Mother and the Queen Empress are given with the number.

The *Boston Medical and Surgical Journal* quotes a letter written by Dr. Elisha Barrett, who was a brother professor of Dr. Oliver Wendell Holmes at the Hanover Medical School. It gives an interesting glimpse of the "Autocrat" at the beginning of his professional career. Bartlett writes to a correspondent, under date September 8th, 1839, as follows:

Dr. Holmes you know something of. As a teacher there is no doubt of his success, although he will not show himself during this his first course. He has his anatomy—some of it at least—to study as he goes on, and he has not yet got the whole hang of the lecture room; he does not give himself his whole swing. His attainments in medical science are extensive and accurate, and his intellectual endowments are extraordinary. His mind is quick as lightning and sharp as a razor. His conversational powers are absolutely wonderful. His most striking mental peculiarities consist in a power of comprehensive and philosophical generalisation on all subjects, and in a fecundity of illustration that is inexhaustible. His talk at table is all spontaneous, unpremeditated, and he pours himself forth, words and thoughts, in a perfect torrent. His wit and humour are quite lost in the prodigal exuberance of his thoughts and language.

The qualities that were later to give Holmes his unique place in literature were thus early clearly displayed in his conversation.

Unwin's Chap Book for 1899-1900 contains a report of an interview with Mr. Faux, "the Censor of the Strand," as he has been called, or in plain prose, the manager of Messrs. W. H. Smith and Son's Circulating Library. Among other things touched upon is the possibility of such a library being an agency for the distribution of disease as well as books. Mr. Faux says he has always recognised that library books may be insanitary, and he makes the following statement, which may be reassuring to such of our readers as get their supplies of literature for family reading from this "universal provider" of literature:

No volume comes into this house from fever-stricken hands, but if we know (and we take some care to learn) the fact, it is forthwith destroyed. I am as particular about that as I can possibly be. There is, I believe, no danger whatever of such a disease as small pox being propagated through any of our books.

One would like to know, however, whether Mr. Faux includes tuberculosis among the diseases that may be diffused by books. Tuberculous patients are great novel readers, and the deadly bacillus may lurk among the pages of a book, into which it may easily find its way from the patient's mouth.

University of Bologna.—The Italian Parliament has voted a sum of 1,300,000 lire for the erection of new buildings in the University of Bologna. The work will be begun next spring.

Therapeutic Research.—According to the *Philadelphia Medical Journal* it is proposed to organise a National Therapeutic Association in the United States for the purpose of conducting investigations on the action of drugs and new remedies from a medical, chemical, and pharmaceutical point of view.

THE BELFAST MEDICAL SCHOOL.

[From a Correspondent.]

The father of the medical faculty of the Queen's College, Professor Hodges, M.D., died last week at the ripe age of 84. He had been a professor since the establishment of the College, and continued in work until a few weeks before his death. He was a man of great capacity and universally respected.

The late professor held the dual offices of Professor in Agriculture and Lecturer on Medical Jurisprudence, but the former office had been for some time in abeyance. There are in the Queen's College four lectureships in the medical faculty, namely, Pathology, Ophthalmology, Medical Jurisprudence, and Sanitary Science. A fifth lectureship, Tropical Diseases, is in contemplation. With the exception of Pathology, for which a very small and inadequate endowment has been provided out of the College funds, these lectureships are quite unendowed, the lecturers simply receiving the class fees. It is evident that this a very unsatisfactory state of affairs. Pathology is a subject of great and ever-increasing importance and fully deserves recognition as a properly endowed fellowship. Ophthalmology is one of the most exact and scientific departments of surgery, and following Continental and American precedents a similar claim might well be made for it. Successive Governments have shown a regrettable parsimoniousness in their dealings with the Queen's Colleges, yet it is known that the Government connection has checked the flow of private benevolence.

The case of the Cork College, recently referred to by a correspondent, is even worse than that of Belfast. It appears that in the year 1898-99 the fourth year students in medicine numbered only 6, against 32 third year students, the explanation being that owing to want of proper training in pathology and other subjects, the fourth and fifth year students are compelled to go elsewhere for the concluding portion of their curriculum.

Much dissatisfaction exists in Belfast at the inadequate representation of the Northern Medical School on the various Examining Boards of the Royal University. The most flagrant case is that of the final examination for M.B., B.Ch., and M.A.O. degrees. Belfast sends up more than half the candidates for this examination—that is, more than Dublin, Cork, and Galway put together—yet upon a Board of twelve examiners only two are from the Belfast Medical School. Dublin, which sends forward about 20 per cent. of candidates, has no fewer than eight examiners. It is idle to contend that this is a just or reasonable arrangement. It can hardly be doubted that candidates examined by their own teachers enjoy a substantial advantage over other candidates.

BRITISH CONGRESS ON TUBERCULOSIS.

Preliminary Meeting.

A large and influential meeting to take the preliminary steps to organise this Congress was held in the Gray's Inn Hall, London, on December 18th.

The Earl of Derby, who was in the chair, said that the time had now arrived when the question of preparing for the British Congress on Tuberculosis to be held in 1901 must go forward. He was glad to think that His Royal Highness the Prince of Wales had graciously consented to preside, and to open the Congress in person. He remarked that the great enemy to be combated was ignorance, the remedies for which, as for the disease which so frequently sprang from it, were light and air—the light of science, and the fresh air of public opinion.

The Duke of Northumberland, K.G., said that he welcomed the proposed Congress, for the subject was one of the most vital interest to the well-being of this country, and indeed, to all mankind. He concluded by moving the following resolution:

In view of the fact that tuberculosis, although a preventable disease, still devastates health and destroys lives in all parts of the world, this meeting, consisting of representatives of medical, veterinary, and sanitary science, and also principal officials of municipal and county authorities, is unanimously of opinion that it is desirable to hold a National Congress on Tuberculosis in the spring of 1901, to which representatives from India and all dependencies of the empire should be invited, and, in addition, honoured guests from other countries.

Sir SAMUEL WILKS, Bart., in seconding the resolution, said that one of the objects of the Association was to appeal to the public for sanatoria where patients might be cured of tuberculosis. The facts in regard to the disease were accepted with perfect unanimity by the medical profession in every civilised country, and it seemed desirable that they should all meet together and discuss the matter with common accord and with some common means of action.

The resolution was carried unanimously.

The ATTORNEY-GENERAL proposed the following resolution:

That this meeting has learnt with very great pleasure that His Royal Highness the Prince of Wales has graciously consented to preside over the proposed Congress and to open it in person, and desires to convey to His Royal Highness the appreciation of all present of this expression of his sympathy and support.

He said it was a subject in which men of science might join together to see how by the combined effect of research and knowledge the spread of this disease might be prevented.

The Right Hon. LORD STRATHCONA, Agent-General for Canada, in seconding the resolution, said that a successful commencement had been made in the open-air treatment of consumption in Canada, and there was now a sanatorium in the North-western portion of Ontario.

The resolution was carried unanimously.

Lord LOCH said the proposed Congress was one of the most important works with which to commence the new century, and he moved:

That this meeting heartily approves of the steps already taken by the National Association for the Prevention of Consumption to initiate the undertaking, and earnestly invites the co-operation of representative bodies interested in the public health in carrying out the necessary organisation.

Dr. ANDREW (President of the Royal College of Physicians, Edinburgh), who seconded, said that Edinburgh had been fully alive for some time to its responsibility in this connection. The medical profession and the municipal and parochial authorities hailed with pleasure the proposal to hold the Congress.

The resolution was carried unanimously.

Earl SPENCER, who said in every undertaking it was necessary to have the sinews of war, and to make the Congress a success there must be liberal subscriptions, moved:

That this meeting is of opinion that steps should be at once taken to obtain subscriptions, and to open a Congress fund.

Dr. J. W. MOORE (President of the Royal College of Physicians, Dublin), in seconding the resolution, said that they had not been idle in the sister isle. Since the movement was started in 1896 at the meeting of the British Medical Association at Carlisle, the public in Ireland had been educated as to the dangers, and the means of obviating the dangers, of tuberculosis.

The resolution was carried unanimously.

Lord TEMPLETOWN moved:

That those present at this meeting be *ipso facto* members of the General Committee. That the names mentioned in the attached list form the Organising Council, with power to add to their number. That the Earl of Derby be President of the said Council, that Sir William Broadbent be Chairman, and Mr. Malcolm Morris be appointed Secretary-General.

Mr. A. L. LEON, J.P. (Chairman of the Public Health Committee of the London County Council) seconded the resolution, which was carried unanimously.

The following is the list of the Organising Council:

Right Honourable Lord Strathcona (Agent-General for Canada), Sir James Blyth, Bart., Sir William Broadbent, Bart. Sir George Brown, C.B., Sir John Brunner, M.P., Sir Ernest Clarke, Sir J. Crichton-Browne, M.D., Sir Edward Hulse, Bart., Sir Henry Littlejohn (Edinburgh), Sir Herbert Maxwell, Bart., Professor Clifford Allbutt (Cambridge), Professor Corfield, Professor Delépine, Professor McFadyean, Professor Sims Woodhead (Cambridge), Colonel MacLeod (Netley), Colonel Montefiore, Dr. Burton-Fanning, Dr Henry Green, Dr. Grimshaw (Registrar General of Ireland), Dr. Heron, Dr. Hillier, Dr. Constantine Holman, Dr. MacFadyean (Jenner Institute), Dr. Hector Mackenzie, Dr. Moore (Dublin), Mr. Shirley Murphy, Dr. Niven (Manchester), Dr. Isambard Owen, Dr. R. W. Philip, Dr. StClair Thomson, Dr. Roberts Thomson, (Bournemouth), Dr. Dawson Williams, Dr. Theodore Williams, Dr. Newsholme (Brighton), Mr. James Pollard (Edinburgh), Mr. Rube, Mr. Swithinbank.

Sir WILLIAM BROADBENT, Bart., in proposing a vote of thanks to the Chairman said that what particularly had to be done was to try to remove the terrible apathy which existed in the public mind in regard to the measures necessary for the prevention of tuberculosis. The public must be brought to agree to the carrying out of the necessary precautions, and the object of the Congress was to impel and excite public opinion in this direction.

Sir J. CRICHTON-BROWNE, in seconding the resolution, compared the medical profession to the intelligence department of the army, and after a sympathetic reference to the severe losses incurred by our forces in South Africa, drew attention to the fact that 60,000 human beings perish every year from tuberculosis in this country, and that there are always with us 200,000 persons more or less maimed and crippled by the tubercle bacillus.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at 429, Strand (corner of Agar Street), London, on Wednesday, the 17th day of January next, at 2 o'clock in the afternoon.

December, 1899. FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 27th, 1899, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

SOUTH-WESTERN BRANCH.—The winter intermediate meeting will be held on Tuesday, January 16th, 1900, at the Athenæum, George Street, Plymouth, at 3 P.M. The Honorary Secretary will be glad to hear from members wishing to read papers or show cases or specimens, that an agenda paper may be issued. Paper already promised: Dr. Gordon (Exeter): On the Policy of the Profession.—H. W. WEBBER, M.S., Honorary Secretary, 4, Woodland Terrace, Plymouth.

METROPOLITAN COUNTIES BRANCH.

A SPECIAL general meeting of the Branch was held at the Museum of Practical Geology, Jermyn Street, S.W. (by kind permission of the Director), on Tuesday, December 19th, at 5 o'clock, Mr. BRYANT, President of the Branch, in the chair. There were present 32 members and one visitor. After the minutes of the previous meeting had been confirmed, letters of apology for non-attendance were read.

Attendance on Soldiers' and Sailors' Families.—A communication from the General Secretary was read, requesting the co-operation of members of the Branch in rendering gratuitous attendance on the families of sailors and soldiers on active service in South Africa.

Election of Members.—Two members were elected.

The Midwives Question.

The following recommendation from the Council of the Branch in reference to the letter sent to the Branch by the East York and North Lincoln Branch, was moved by Dr. WASHBOURN, and seconded by Dr. MORTON:

(1) That, whilst this Council is ready to oppose the illegal certification of midwives, it is ready to consider any Bill sanctioned by the British Medical Association, and the General Medical Council, by which, while protecting all existing rights of medical practitioners, licences to practise can be granted to midwives, after examination, who have been declared to be competent to attend cases of natural labour, and are bound under penalties to send for qualified medical assistance in cases of a different kind.

Dr. W. S. A. GRIFFITH proposed the following amendment:

That this Branch, realising that the abolition of midwives is impossible, is of opinion that all women practising as midwives should be placed under proper supervision by medical practitioners, and is prepared to support legislation for this purpose. This Branch is also of opinion that such supervision necessitates (1) a system of registration; (2) a system of training in monthly nursing and in elementary midwifery properly certified by medical practitioners; (3) a system of supervision so organised as to ensure a medical practitioner being summoned in all complicated cases, and safeguards against improper practice by the midwives.

In deference to the protest of Mr. ANDERSON, who claimed priority for Mr. Tomlin's amendment, for which notice had been given, Dr. GRIFFITH then temporarily withdrew his amendment. Mr. ANDERSON then proceeded to move the following amendment in Mr. TOMLIN'S name, as he was unavoidably absent:

That this meeting concurs with the East York and North Lincoln Branch of this Association in regarding the certification of midwives and opticians by registered practitioners as contrary to, and tending to defeat the objects of, the Medical Acts; the sanction of such certification by the General Medical Council in the case of midwives as illegal; and any Bill to legalise such certification and register midwives as a repeal of the Medical Acts in that particular, contrary to the public interest.

The CHAIRMAN having ruled that "and of opticians" and that all the words beginning at "the sanction" to the end were out of order,

Mr. ANDERSON then addressed the meeting on the first section of his amendment. Before doing so he protested against the ruling of the chair, in which he was supported by Dr. MACNAUGHTON JONES, Mr. GEORGE BROWN, and Dr. HUGH WOODS.

Mr. ATWOOD THORNE seconded the amendment, which was discussed by Mr. GEORGE BROWN and Dr. HUGH WOODS.

The amendment was then put to the meeting and lost.

Dr. GRIFFITH'S amendment was then proposed and seconded by Dr. ACLAND.

Dr. HEYWOOD SMITH and Dr. DUTTON having spoken, Dr. HERON then suggested the omission of the last three clauses, which was agreed to by the proposer and seconder.

The amendment, which then read thus,

That this Branch, realising that the abolition of midwives is impossible, is of opinion that all women practising as midwives should be placed under proper supervision by medical practitioners, and is prepared to support legislation for this purpose,

was put to the meeting and carried, and afterwards, on being put to the meeting as a substantive motion, was again carried.

Dr. WASHBOURN then moved the second recommendation of the Council, which was as follows:

With respect to the illegal certification of opticians, this Branch has no jurisdiction, but would strongly urge the General Medical Council to consider any well-substantiated charge which might be brought against a registered medical practitioner for furthering any such object.

Mr. GEORGE EASTES seconded the motion.

Mr. ANDERSON suggested that the words "no jurisdiction, but" should be omitted, which was agreed to; and on putting it to the meeting it was carried.

The meeting then adjourned.

STAFFORDSHIRE BRANCH.

THE first general meeting of the session was held at Stoke-on-Trent on November 30th, Dr. J. B. SPENCE, President, in the chair. Sixteen members were present.

Confirmation of Minutes.—The minutes of the last general meeting were approved and signed.

Votes of Condolence.—Votes of condolence were passed with the families of Dr. S. Johnson, of Stoke, and Mr. Charles S. Edwards, of Tunstall, who were members of the Branch.

New Members.—The following were unanimously elected members of the Branch: F. Cholmeley, F.R.C.S.Eng., Wolverhampton; Harold S. Crapper, M.R.C.S., L.R.C.P., L.D.S., Hanley; George H. Williams, L.R.C.P., L.R.C.S., Tunstall.

Medical Reform.—A letter was read from the Honorary Secretaries of the East York and North Lincoln Branch and Hull Medical Society enclosing a report of a special meeting of the members of the medical profession residing in that neighbourhood, summoned for the purpose of discussing the proposed legislation for midwives and other questions of medical reform. It was decided that the questions referred to in the letter be left in the hands of the representative on the Parliamentary Bills Committee.

Febrile Chlorosis.—Dr. PETGRAVE JOHNSON read a paper on febrile chlorosis.

He read notes and showed the chart of a case of chlorosis with pyrexia of 100° to 102° F. continuing for a fortnight. Nothing could be found to account for the rise of temperature other than chlorosis. He drew attention to the observations of French writers, who have published cases of continued remittent fever in chlorosis. They described it as a continued pyrexia of long duration directly connected with the chlorotic condition, influenced by the treatment applied to the disease, and falling in proportion to improvement, finally disappearing on recovery.

These cases Dr. Johnson considered extremely uncommon. He described as much more common in chlorosis rises of temperature of from 99° to 100.8° F. of two or three days' duration, probably caused by slight complications, though frequently none can be found. He thought chlorosis might be analogous to Graves's disease in which febrile attacks are not uncommon.

Fracture of Radius, Ulna, and Humerus.—Dr. HIND read a paper on a case of fracture of radius, ulna, and humerus of the right arm.

The patient was a lad who had ten weeks after the accident loss of sensation and the formation of blebs on the thumb and first, second, and third fingers of the hand, extending down the dorsal aspect of the phalanges to the base of the metacarpal bone in the case of the thumb and index finger, and down to the ungual phalanx in the second and third fingers. The points to determine were: (1) What nerve was implicated; (2) where was the nerve implicated, seeing there was fracture of forearm and humerus. Dr. Hind, in spite of the fact that the distribution of the blebs did not correspond with the usual distribution of the median nerve to the back of the hand, decided to cut down on the median nerve over the seat of fracture in the forearm. In this position the nerve was found bound down to the fragments and compressed by cicatricial adhesions. The nerve was carefully freed and the wound closed. The trophic lesions on the hand healed in four days, and the incision was well in a week.

The question arose, Have nerves any trophic influence? Latterly this function was denied by physiologists; but evidence of the kind demonstrated in the foregoing cases would seem to point to the influence of nerves on nutrition.

Exhibits.—Dr. HIND showed: (1) Breasts removed from a young woman, aged 23, containing multiple adenomata. The right heart had a very large growth and other smaller ones. (2) Renal Calculus from a man, aged 28, removed by incision, symptoms being pain only, neither pus nor blood being present. (3) Renal Calculus moulded to calyces. Recovery retarded by violent hæmorrhage both from bladder and wound, which was stopped only after turpentine had been given in 15-minim doses every four hours. (4) Gall Stone passed by patient suffering from advanced cirrhosis with ascites.—Mr. SPANTON showed: (1) A large Gall Bladder removed by laparotomy from a gentlemen, aged 67, for complete intestinal obstruction. The patient's symptoms were entirely relieved, but his strength failed, and he died a few days afterwards. A *post mortem* examination showed that the wound in the ileum was perfectly healed, and there was no peritonitis. The gall bladder contained several other stones, and was adherent to the duodenum into which the first calculus had passed. (2) A large calculus removed from the urethra weighing 365 grs. The patient, aged 46 years of age, had noticed a small swelling only seven weeks before, after a history of passing gravel for some time, but never had any obstruction. The calculus was encysted in a bladder-like sac.—Mr. BOLDERO showed a Gall Stone which had been passed *per anum*.—Dr. HUGHES showed a Fœtus and Placenta, with membranes intact, which had been expelled *en masse*, and which showed the position assumed *in utero*.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

A MEETING of this Branch was held on December 14th, Mr. BENNETT MAY, President, in the chair.

Alteration of Subscription.—The following resolution was passed:

That in future the annual subscription to the Branch be 5s., to cover all expenses, including the Pathological and Clinical Section.

Communications.—Dr. KAUFFMANN read a paper on Gastro-intestinal Self-intoxication as a Factor in Nervous Diseases.—Mr. MORRISON read a paper on Excision of the Cæcum for Ileo-cæcal Cancer.

British Congress on Tuberculosis.—Dr. Rickards, Mr. Barling, and Dr. E. H. Snell were appointed to attend a preliminary meeting.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

Departure of the Royal Society's Malaria Commission for Sierra Leone.—Proposed Legislation for the Prevention of Tuberculosis from the Milk Supply.

DR. STEPHENS and Dr. Christophers, the members of the Royal Society's Commission for the investigation of malaria, who returned recently from Central Africa, have sailed again from Liverpool in order to carry out investigations into malaria in Sierra Leone. They will thus be working in the same locality as the members of the Liverpool expedition which is investigating the connection between malaria and mosquitos, although they will act in complete independence of the latter. The Commission sailed by the ss. *Batanga*, and received a hearty send-off from Professor Boyce and others representing the medical school, of which Dr. Christophers is a distinguished former student.

The City Council intends to promote a Bill in Parliament next session providing, among other things, for additional powers for the prevention of tuberculosis from infected milk. The Bill imposes a penalty not exceeding £10 on anyone knowingly selling or allowing to be sold milk taken from any cow suffering from tuberculosis, and a penalty not exceeding £5 on anyone failing to isolate a cow suffering from tuberculosis on his becoming aware of that fact. It also imposes compulsory notification of tuberculosis on dairymen, and enables the medical officer or any person authorised by him to take samples of milk for bacteriological analysis, such power to be exercised within the city, and also outside the city on the order of a local justice of the peace. It also gives power to the medical officer or his agents to inspect cows, and to require them to be milked if suspected of being tuberculous. It also provides that the Corporation may obtain a magistrate's order prohibiting any dairyman outside the city from selling milk in the city if the medical officer is of opinion that tuberculosis is likely to be caused by consumption of milk supplied from that dairy; but an order from a local justice authorising the inspection of such dairy must first be obtained. The powers sought for dealing with the milk supply from outside the city will be of great value. Of recent years the regulation of cowsheds within the city has been so effectual that the milk yielded by cows kept in the city has been much less contaminated than the milk from cows kept in the rural districts beyond the control of the city inspectors. In this way the country milk supply largely neutralises the efforts of the city inspectors, and the town dairymen are handicapped by their competitors in the country, who are bound by less stringent regulations.

CORRESPONDENCE.

THE REMOVAL OF THE WOUNDED: MORPHINE INJECTIONS.

SIR,—The utility of morphine injections in saving suffering during the removal of wounded men seems so obvious that you may think it unnecessary to insert this letter, but some years ago I was a good deal struck by the account given me by my friend, Professor Binz, of Bonn, of the use which he made of subcutaneous injections in the Franco-German war while engaged in superintending the removal of the wounded. He went about armed with a bottle of morphine solution and a hypodermic syringe, and before a man was removed he gave him a subcutaneous injection, which put the man to sleep, prevented any pain during removal, and lessened shock, so that the patient was in a better condition for operation when he arrived at the hospital in the rear. It sometimes happens that measures of treatment which are perfectly obvious may occasionally, under the stress of circumstances, slip from an operator's mind, and I think it worth while to trouble you with this letter on the bare possibility of preventing pain from such cause—I am, etc.,

Stratford Place, W., Dec. 14th. T. LAUDER BRUNTON.

ATTEMPTED AMALGAMATION OF DEFENCE SOCIETIES.

SIR,—The publication in the BRITISH MEDICAL JOURNAL by the Council of the Medical Protection Society of the fact that recent attempts to effect amalgamation of the two defence societies have again failed will cause some disappointment to those members of both societies who think amalgamation desirable, and who perhaps do not realise the difficulties which exist.

There is no need to attribute this failure to ill-will on either side; the failure is due to the fact that no one has yet been able to devise a scheme which will satisfy the legitimate requirements of those who are responsible for safeguarding the interests of each Society; and neither Society, it appears to me, should feel offended if proposals made by it prove not to be acceptable to the other so long as their proposals have received adequate consideration.

The offer of arbitration is the subject of the letter to our Council published by Dr. Hugh Woods, and received the fullest consideration by the executive officers, and finally by the Council. From this letter we inferred that the Council of the Medical Protection Society was prepared to leave everything to what may rightly be called the "chances" of arbitration, that there was no one point considered by them to be of such importance to the interests of their society that they wished to reserve it from these chances.

Our Council held a different view, and was not prepared to risk every point which was considered crucial and of the greatest importance to the welfare of our Society to such uncertain chances, and decided that they were unable to accept the proposal.

If you will be so good as to publish this statement, I think it may help to allay the irritation which seems to be inseparably attached to collective negotiations on this subject, and serve to convince the members of both societies that the wisest course under the circumstances is for each to develop to the best of its power its resources for the benefit of its members, and for each to continue in friendly rivalry endeavouring to excel the other in its efforts for the good of the profession, until at some future time, perhaps, the only practicable solution, as it appears to me, takes place—namely, that one Society, acting on the belief that it was to the interest of the profession to do so, winds up its affairs and merges into the other.

Each Society is too independent and successful at the present time for this to be likely to occur; in the meantime, let us regard each other collectively as we do individually with the consideration and good feeling which we deserve for the valuable work we are doing willingly and gratuitously for our professional brethren, and which is known as medical defence. —I am, etc.,

WALTER S. A. GRIFFITH,
Dec. 18th. President of the Medical Defence Union.

THE HOSPITALS AND THE WAR FUNDS.

SIR,—I have much pleasure in complying with your wish that I should state my experience in regard to a statement you have received to the effect that certain hospitals have received no contributions from the public owing to the Transvaal funds. It can readily be understood that the war and all connected with it is the one predominant object in the public mind at the moment. It is only natural, therefore, that everybody should think first of all of the war funds, of the widows and orphans, and of the wounded and disabled soldiers and sailors, as well as of the wives and families left behind to the care of the nation. I do not myself believe, however, that these circumstances will have any material effect upon the resources of the home charities. My confidence is based upon the knowledge that the special interest excited by the war in this country has temporarily affected everything, including the business of the country, and I know from inquiries I made recently in the United States that the same thing happened there at the outbreak of the war with Spain. Within three months, however, people got accustomed to the war, and were so enabled to resume

their ordinary avocations and to attend to their ordinary duties with renewed energy and conscientiousness. No doubt events will shape themselves in England as they did in the United States.

Your inquiry, however, raises another and a very important question, having regard to the adequate administration of our hospitals in the metropolis and elsewhere. I am glad to think and to say from my knowledge of the men that there are certainly not more than six hospitals, if so many, which would venture to urge within two months of the outbreak of war that they were receiving no contributions from the public owing to the war funds. Such an excuse condemns the source from which it originates. A well-administered voluntary hospital so organises its system of raising money that the money comes in throughout the whole year, with the exception perhaps of a few of the summer months when contributions necessarily fall off as the people are away from home. Each voluntary charity should have a double harvest during each period of twelve months: the first is to be reaped before Easter; the second becomes ripe with the commencement of October, and should be safely garnered within a week of Christmas Day. If any hospital is, therefore, in want of funds to a large extent at the end of the month of November, it follows that that hospital is not administered with sufficient energy and intelligence, so far as its financial arrangements are concerned. So confident am I of this that I make bold to say I could tell you which of all the London hospitals would be likely to make an excuse of the kind you mention. I am grateful to know that the administration of the voluntary hospitals of London has so materially improved, thanks to the energy and devotion of many gentlemen of great intelligence, that there are certainly not more than six London hospitals, if so many, taking large and small together, which would not reject with scorn any such excuse for a deficiency in their exchequer in the month of November in any year.

The fact of it is the raising of money at a reasonable cost for reputable institutions like our hospitals must be conducted upon business lines by business men with the aid of trained assistants of experience. The average of administration throughout the whole of our charities in this country to-day is so high that the public are being educated more and more each year to a knowledge of what they have a right to expect in regard to the business management of such institutions. There are still a class of officials who believe and practise the false doctrine that it is essential to make a piteous appeal that funds are needed, and to back up that appeal by harrowing statements of enormous deficiencies which the state of the institution's finances do not justify, and which would not be passed by the chartered accountants who audit the accounts. I know one hospital which for years issued practically the same appeal with almost the same figures, such figures being necessarily wide of the mark when the accounts of the particular institution were referred to. Such methods in these days lead to financial disaster—and I for one rejoice that such should be the case. To be successful in raising money there must be a sense of what is right strongly impressed upon those who are responsible for the issue of such appeals, and this sense makes any document of the kind truthful on the face of it and forcible, because it is conceived from the point of view which the late Mr. Spurgeon insisted upon with results which were simply magnificent from a pecuniary point of view. To successfully raise money for a hospital or for any other reputable charity, it is essential that the appeals issued on its behalf shall avoid exaggeration. They must further exclude harrowing appeals and misleading figures, whilst they contain plain statements of actual facts. Those facts should be written from the point of view of the particular requirements of the moment, and should be accompanied by a statement that providing so much money is forthcoming so much work will be undertaken and successfully carried through. I find that the most liberal of givers have come to recognise that it is an insult to their intelligence to receive certain appeals issued by people who, with the best intentions, are out of place when they are permitted to have charge of the management of the financial arrangements and appeal literature of a great charity. This fact has been generally recognised by those London hospitals and important charities which are conducted with the greatest ability and success. I hope, therefore, that the British Medical Journal, which has such influence with the profession, will press the lesson which experience teaches, and that by its aid we may be within sight of the time when no single hospital of importance shall have any one but a trained and capable expert at the head of its financial and business administration.—I am, etc.,

Porchester Square, W., Dec. 13th. HENRY C. BURDETT.

THE SOCIETY OF APOTHECARIES OF LONDON.

SIR,—Your correspondent Mr. William Horrocks speaks of himself as an Associate of the Society of Apothecaries. The *Year Book* of the Society for 1898-99 lies before me, and in it I can find no mention of Associates. I have been on the yeomanry of the Society since 1892, and have not yet heard of Associates. I do not find Mr. Horrocks's name in the *Year Book* under any year corresponding to the date he gives. There is, I believe, no difficulty in obtaining *Year Books:* I receive one annually. There is an ancient method of forming executive bodies simply by seniority, the senior filling each vacancy. Such would appear to be the method in our Society. I am also a member of one of the Inns of Court. These bodies have a reputation to which no medical body in the world can approach, and yet the government of each Inn is in the Treasurer and the Masters of the Bench, who are not elected at all, but who simply co-opt whom they will and when they wish. Similar is the method of election in my College at Oxford, now 550 years old. Who can deny that societies which without any incorporation have held together for five centuries are not of greater importance in the study of the strength of institutions than our General Medical Council, now about its fortieth year, and as yet unable to repress quack dentists, let alone unregistered practitioners? We are told on all sides that these are the days of democratic rule, and that everybody must be elected by the vote of the majority. Yet the late Master of Balliol said that the real test of the strength of an institution was not its amount of work done, but the length of years it endured.

Sir, we hear much of reforms, of the one portal and what not. Would it not be wise to look at the great profession that in all men's eyes ranks with, and many eyes above our own, I mean the law? A few years ago the Judicature Act swept over it with unforeseen results, one of which was the disappearance of the ancient order of the coif, the *servientes ad legem* or sergeants. Quite recently the Lord Chief Justice of England, speaking from the bench, said that there was much to be said for the revival of the order. Could any greater disaster have occurred than the disappearance of the numerous inns of chancery? which were indeed analogous to the halls dependent on colleges in the older universities. If for nothing more than the pleasure of belonging to the honourable society of ..... inn many a medical man might well devote the small sum required and the few nights occupied by keeping of law terms. He would at once gain a broader outlook on society and mankind than our profession seems able to give. We look at individuals. The law looks on men as they behave to each other and in communities.

I have wandered far from my subject, the Society of Apothecaries. I have digressed on other ancient bodies to show that torpid as our Society may be it is not dead. Of its uses Londoners may say more than Yorkshiremen, for it is one of the old City companies. It possesses power in virtue of an Act passed early in this century greater in some respects than those of the General Medical Council. It is the one body which is able to admit within its ranks men not members of the medical profession, and thereby to gain a wider and more humane outlook than the rest. I use the word in the sense of that noble dict of Terence: *Homo sum, nihil humani a me alienum puto.*—I am, etc.,

December 11th. O. R.

THE STRANGERS' GALLERY AT THE GENERAL MEDICAL COUNCIL.

SIR,—I have on occasions paid a visit to the gallery of the General Medical Council, and listened with interest to their debates on many questions affecting the welfare of the medical profession, and have been astonished at the scant

courtesy extended by the officials—under the advice no doubt of the Council—to medical men. On the commencement of the proceedings each day an official of the Council hands a copy of the Agenda paper to each of the reporters, but when I politely asked for a copy I was told it was confidential, and I could not have a copy. I want to ask by what standing order of the Council—as they are very fond of quoting standing orders there—a copy is refused to members of the profession, while a reporter, or ladies and gentlemen interested in promoting midwives legislation, are presented with a copy without asking for it? In my opinion the distinction drawn between members of our profession and the lay public is positively childish and absurd. According to this rule it is a misfortune to belong to the medical profession, rather than a blessing; that those who supply the funds, and are necessarily more interested in the proceedings of the Council, should be thus treated is beyond my comprehension. Mr. Horsley and Mr. Brown, I believe, spoke in favour of supplying the profession in the gallery with a copy of the proceedings, but I suppose they will require to agitate until they educate the Council into granting what I contend should never have been refused.—I am, etc.,

Blandford Street, W., Dec. 6th. JNO. POLLOCK SIMPSON.

THE CONCILIATION BOARD AND MEDICAL AID ASSOCIATIONS.

SIR,—When in May last the General Medical Council pronounced a pious opinion about scandalous advertising you allowed me to utter a protest in the columns of the BRITISH MEDICAL JOURNAL, whereupon I was assured by one member of the Council that the Council had declared advertising to be infamous conduct, while another wrote to me that expressing the opinion was but a preliminary warning that the November session would declare this same offence to be professionally infamous. This shows that one member of the Council actually did not know what he had assisted the Council to do, while the other could not forecast what the Council would do. For November has come and gone, and the Council has failed to do the only thing it can legally and logically do, namely, declare advertising and canvassing infamous conduct. At the present moment advertising receives pious condemnation from the General Medical Council, but only in relation to medical aid associations. Mark the logic and fairness: "You may not lend yourself to these practices if you are a medical aid association doctor, though we have nothing to say on this subject if you are not so connected."

Once more let me urge our Association to have no hand or part in this Conciliation Board until its scope is defined. First, let the friendly societies agree with the contention that they have no right to own and carry on a medical aid association, and then we will talk to them about a Conciliation Board to regulate the ethics of their relation to the medical profession. The special pleading of Dr. Glover should be ignored. The suggested possession of information will not blind your readers, for they have ample "information," often gleaned at first hand and by hard experience, and they have long ago formulated their views on this question. I am assuredly right in asserting that no material fragment of information has come to light that was not embodied years ago in my original complaints of this cancer eating into the vitals of the profession of medicine. The researches of the Committee of the General Medical Council have succeeded in doing one thing, and, as far as I can make out, one thing only, and that is in confusing a very simple problem.—I am, etc.,

Leamington, Dec. 11th. LESLIE PHILLIPS.

MEDICINE AND PATHOLOGY.

SIR,—Since in his letter on the above subject in the BRITISH MEDICAL JOURNAL of October 9th Dr. Herringham has referred to my *Manual of General Pathology*, I trust that you will permit me to reply to him.

The proposition that Dr. Herringham puts forward, shortly expressed, is that pathology is "a special bit of medicine," and therefore should be taught where it is allowed that medicine generally should be taught, namely, in hospitals. Granted the premiss I will allow that the conclusion is reasonable enough. But though I feel that pathology in all its branches will best be taught at hospitals I am convinced that the premiss is unsound. I do not believe that general pathology is only a "special bit" of medicine, and I think Dr. Herringham misses the whole point of the remark which he takes from my book that "the scope of general pathology is to correlate symptoms with structural changes, and trace the connection between them." To my mind it is just in that effort to trace the intricate relations between symptoms and structural change (a function that Dr. Herringham has rightly refrained from including in the "every-day work" of a clinical physician) that the problems of general pathology lie.

To take one small part of the example I have given elsewhere, to which Dr. Herringham objects. In the case of pleurisy the symptom—pain in the side—and the structural change—the inflammatory changes in the pleura—are correlated, and the fact that inflammation of the pleura leads to pain in the side is the property of medicine to use in any way it thinks fit. But the chain of events lying between the stimulation of afferent nerve endings in the pleura and the sensation of the pain in the side is eminently a subject for consideration by general pathology, whether the information on the point which pathology will some day give turns out to be suitable for adoption by medicine or not. It is the duty of pathology, in other words, to unravel the processes of disease quite irrespective of whether the results it obtains can be utilised by medicine or not. I will grant that no physician ever goes over a case of dilated heart without giving to his students the explanation which I have used in my book as an example of the kind of subject with which general pathology concerns itself. But surely that is quite consistent with his having incorporated a useful piece of knowledge from another branch of science to help his own. Are we to say that bacteriology is a special bit of brewing because the brewer now has to consider strains of yeasts, pure cultures, and so on, in his trade? And are we to say that pathology is a special bit of physic simply because a large part of pathology has been of use to and has been incorporated in medicine?

Nor do I consider the example I gave to show the scope of general pathology as its "peculiar property." Pathology has its "peculiar properties," but any information it has obtained and has proved sufficiently is at the disposal of anybody who wishes to use it—physician, brewer, physiologist, or physicist. Thus the whole question of diphtheria antitoxin therapeutics has passed beyond the domain of pathology to which it once belonged exclusively into the domain of medicine. On the other hand, the whole question of tuberculin made an unjustifiable raid into medicine; it had not been properly and fully worked out in the land of general pathology and had to retire thither discomfited. Probably it will in some form or other again invade medicine and this time successfully. But in the meantime the diphtheria antitoxin question interests the physician but not the pathologist, the tuberculin question interests the pathologist but not the physician.

It follows from what I have said that I cannot agree with Dr. Herringham that "a clinical physician is always a pathologist." The clinical physician is obliged to know a great deal of pathology for the proper exercise of his art, as the surgeon must know a great deal of anatomy for the exercise of surgery; but the physician is no more of necessity a pathologist than the surgeon is of necessity an anatomist. The whole casts of mind in the four cases are different. To the physician and surgeon pathology and anatomy are means to an end; to the true pathologist and true anatomist the subjects they profess are the ends in themselves. It is for this reason and not because of "lack of time" that pathology should be superintended and taught by a professed pathologist and not by a practising physician.

And now comes a point in Dr. Herringham's letter with which I cordially agree. He insists upon a close relationship between clinician and pathologist. Owing to the fact that the pathologist tends to pursue pathological investigations without any utilitarian motive, it follows that there is always a danger that pathology may be led into regions which are purely abstract and, to the practical man, visionary. Against this danger, contact with practising physicians and living patients is a salutary restraining influence. It will no doubt be an advantage to know whether exudation through the inflamed vessel wall takes place by purely mechanical means

or as the result of an active secretion, but after all there are other and more pressing questions to be solved, questions which mean differences in the bills of mortality. Pressing questions are more likely to be brought under the pathologist's notice if he works in a hospital. Nevertheless apparently useless fragments of more or less abstract knowledge are not to be despised. Who could have expected that an abnormal tartaric acid crystal would have served as the cradle of modern bacteriology?

This brings me, Sir, to the point in your article which called forth Dr. Herringham's letter and my own. Is general pathology an academic subject? Strictly considered I believe the writer of your article is justified in saying that it is. Under these conditions, the laboratories for general pathology in the new London University might be situated anywhere. But, practically, I believe that the professors will do more immediately useful work if their laboratories are in direct connection with hospitals. This, indeed, is the position you have yourself taken up.

Two words of warning are necessary. First, the old idea, which even now is but slowly dying, that a pathologist is a man who is "doing some pathology" while awaiting election to the clinical staff of a hospital, must be entirely given up. Secondly, the professors of pathology in the new London University must be freed as far as possible from routine hospital work by giving them a sufficient number of competent assistants. Otherwise, research in pathology will simply be crowded out.—I am, etc.,

Westminster Hospital, Dec. 4th. W. S. Lazarus-Barlow.

ADIPOSIS DOLOROSA.

Sir,—Owing to the great kindness of Dr. Sharkey, I am able to give the following additional particulars about the case recorded in the British Medical Journal of December 2nd, 1899. The patient withheld from us at Guy's that she had been under Dr. Sharkey, nor did we learn it from any one of several people to whom we wrote.

She was admitted into St. Thomas's Hospital under Dr. Sharkey in 1892 and 1897. On the first occasion diet did not influence her weight, but it decreased almost 5 stone during eight months' massage for half an hour twice daily; directly however the massage was left off the weight increased rapidly.

On her second admission, she weighed 19 st. 6½ lbs. Under thyroid treatment this fell to 17 st. 5½ lbs., but massage for seven weeks hardly affected the weight, although under massage combined with thyroid feeding she lost 2 st. 11½ lbs. in four and a half months, the total loss in nine months being 5 st. When decrease in weight occurred, the mental symptoms improved.

These new facts are of great interest, for at Guy's we found that neither proteid diet alone, nor thyroid treatment alone, had any effect on the weight; we did not try massage at Guy's, and as it was employed so long at St. Thomas's she can hardly then have had the considerable pain and tenderness of which she complained at Guy's. She was 19 st. 6½ lbs. on her second admission to St. Thomas's, and her mental condition was bad. As when she came to Guy's a year after leaving St. Thomas's for the second time her symptoms were again very marked, it is clear that the benefit she received is not permanent.

So few cases of adiposis dolorosa have been recorded that the boundaries of the disease are not yet known, and it can only be a matter of opinion whether the apparent late appearance of pain and tenderness, together with temporary improvement under prolonged massage should exclude this patient from this disease, but at any rate such a case must be closely allied to it, and must be borne in mind when considering it. Dr. Sharkey himself regarded the patient as an example of "functional nervous disease with obesity."—I am, etc.,

Harley Street, W., Dec. 14th. W. Hale White.

WHOLESALE PRESCRIPTIONS.

Sir,—With reference to your editorial comment and the subsequent correspondence in the British Medical Journal of December 16th concerning the prescription of small packets of drugs which are supplied ostensibly for the medical profession, but really are readily obtainable by the general public, I think some discrimination should be used with regard to such manufacturers. It must not be imagined that all the wholesale houses are sinners in this respect. I have at the moment in my mind one large London firm whose policy it has been to avoid this procedure by studiously putting up their preparations only in bottles of one gross, with just a bare indication on the label of the name and strength of the drug. I obtained some of the labels which they use for their goods, and was agreeably surprised to find these labels worded in Latin, and containing no information thereon which could by any chance be of service to a patient should he accidentally be able to procure an original bottle.

This is a point worthy of the consideration of the profession, as it is a well-known fact which has already been commented upon in various directions, that the medical attendant on being called to a house to see a patient invariably finds a goodly array of bottles containing compressed tablets, etc., which have been procured direct from a chemist in their original bottles with plain labels and full indications as to therapeutic properties, etc.

It may not be generally known to the profession that one of the causes of the popularity of the compressed tablet may be traced to the publication at the end of various sixpenny handbooks of some twenty or thirty pages of Everybody's Medical Guide. One of these books lies before me as I write. It is called *Everybody's Pocket Cyclopædia*, 665th thousand, 1894. In a footnote at the opening chapter of the Medical Guide is the following: "Throughout the Guide where possible the medicines recommended are the tabloids of compressed drugs, as in this form there is greater accuracy of dose and less liability of mistake. They are easily administered and uniform in purity."

I first came across this book some three years back, and ever since have carefully avoided writing a single prescription for the goods manufactured by the firm whose preparations are puffed in this medium.—I am, etc.,

December 19th. B. Dubius, M.D.

MEDICAL ATTENDANCE ON THE WIVES AND FAMILIES OF SOLDIERS AND SAILORS ON ACTIVE SERVICE IN SOUTH AFRICA.

Sir,—A circular has during this week been issued, signed by the President and Secretaries of the East Anglian Branch, inviting members of the Branch to offer gratuitous medical attendance to any necessitous cases referred to them by the local officials of the Soldiers' and Sailors' Families Association, and enclosing a postcard to be signed and returned to Dr. Beverley by those willing to give such attendance. On this card the word "widows" has been inadvertently printed instead of "wives." Will you allow me through your columns to notify this error, and to say that the replies received will be taken as if the word "wives" had been inserted, unless a notification to the contrary is sent to Dr. Beverley? I exceedingly regret the mistake for which I am personally responsible.—I am, etc.,

Edgar G. Barnes, M.D.,

Eye, Suffolk, Dec. 19th. General Secretary, East Anglian Branch.

The eleventh annual report of the Queen Victoria's Jubilee Institute for Nurses (Scottish Branch) has just been issued. During the year ending October 31st, 1899, sixteen candidates entered the training home for the required month of probation before receiving hospital training. Of these one failed. Thirty-four probationers who had received hospital training entered the home for six months' district training. Of these one failed in health. Eight of these had received their two years' general hospital training by arrangement of the Institute. Thirty-three nurses completed their full training as Queen's nurses in Edinburgh, an increase of five over the previous year. On October 31st last the Scottish Council was responsible for forty-seven nurses and probationers. During the year three nurses and one probationer died and eighteen nurses resigned. Ten new branches were affiliated. There were now 187 Queen's Nurses in Scotland working under 103 associations. In Edinburgh and Leith 81,638 visits had been paid. The Home is to be extended to provide a dining-room, store-room, etc., at a cost of about £600. The ordinary expenditure for the year was £3,184. The Pension Fund for Queen's Nurses amounts to £1,129 4s. 1d.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty :—JOHN C. ROWAN, M.B., Surgeon, to the *Pembroke*, December 11th; ARTHUR R. H. SKEY, M.B., Surgeon, to the *Excellent*, December 20th; PERCY H. BANNISTER, M.B., Surgeon, lent to the *Medea*, December 20th.

ARMY MEDICAL SERVICE.

DR. JOHN ALEXANDER MACMUNN, M.D., late Physician and Surgeon of the Royal Hospital, Chelsea, died on the 14th instant at St Leonards-on-Sea, aged 72. He entered the service as Assistant-Surgeon, October 13th, 1853, and was made Surgeon, November 16th, 1860. After serving for some time as Deputy-Surgeon to Chelsea Hospital, he was appointed Physician and Surgeon there from November 4th, 1868, and continued in this post until June, 1896, when he was succeeded by Dr Ligertwood, the present occupant. Dr. MacMunn served in the Eastern campaign in 1854-55, and was at the siege of Sebastopol, receiving the medal with clasp and the Turkish medal.

ROYAL ARMY MEDICAL CORPS.

THE following is substituted for that which appeared in the *London Gazette* of December 5th : Major R. N. BUIST, M.B., from half pay, to be Major, with precedence next below Major R. Holyoake, *vice* E. W. Gray, killed in action, November 11th. [The announcement now corrected referred to Major Gray as "deceased," instead of "killed in action."]

The undermentioned officers, from the Seconded List, to be Captains dated December 1st : Captain G. S. MCLOUGHLIN, M.B., D.S.O., *vice* W. Hallaran, promoted; Captain J. D. FERGUSON, D.S.O., *vice* T. Birt, promoted.

The undermentioned Surgeons-on-Probation are appointed Lieutenants, December 4th : FREDERICK H. MERRY, M.B., HENRY C. R. HIME, M.B., CHARLES C. CUMMING, M.B., WILFRED M. MCLOUGHLIN, JAMES A. HARTIGNAN, M.B., JAMES F. MARTIN, M.B., EDMOND MCDONNELL, M.B., CHARLES S. SMITH, M.B., ARTHUR H. SAFFORD, ANGUS J. M. CUDDON-FLETCHER, ARTHUR F. CARLYON, JAMES M. BUIST, M.B., ROBERT L. DAVIS, CHARLES S. CATO, CHARLES R. EVANS, WILLIAM C. CROLY.

MILITIA MEDICAL STAFF CORPS

SURGEON-LIEUTENANT-COLONEL W. COLLINGRIDGE, M.D., resigns his commission, retaining his rank and uniform, December 20th.

THE VOLUNTEERS.

SURGEON-CAPTAINS J. H. WATHEN and D. S. DAVIES, M.D., 1st Gloucestershire Artillery, are promoted to be Surgeon-Majors, December 20th.

The under-mentioned Surgeon-Lieutenants are promoted to be Surgeon-Captains, dated December 20th : R. O. ADAMSON, M.B., 1st Lanarkshire Engineers : M. A. COOKE, 2nd Volunteer Battalion the Gloucestershire Regiment ; J. CANTLIE, M.B., 7th Middlesex (London Scottish) Rifles.

Lieutenant G. F. MORLEY, 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment, resigns his commission, and is appointed Surgeon-Lieutenant, December 20th.

Mr. JAMES W. MACMULLEN is appointed Surgeon-Lieutenant in the 1st Herefordshire Rifles, December 20th.

Mr. HUGH B. T. MORGAN, M.B., is appointed Surgeon-Lieutenant in the 1st London Rifles, December 20th.

Surgeon-Major C. BOYCE, M.D., 1st Volunteer Battalion the Queen's Own (Royal West Kent Regiment) is promoted to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Sussex Volunteer Infantry Brigade, December 20th.

VOLUNTEER MEDICAL STAFF CORPS.

QUARTERMASTER AND HON. CAPTAIN G. ROBERTSON has resigned his commission, December 20th ; he retains his rank and uniform.

SICK LEAVE FOR INDIA.

THE Secretary of State for War has approved of the period of leave out of India granted to executive officers of the R.A.M.C. on medical certificate during a tour of service being allowed to count towards the completion of such tour up to a maximum of twelve months.

THE ARMY MEDICAL RESERVE.

M.A., M.D., writes in reply to "A. M. R." with reference to the complaint regarding the employment of civil surgeons in preference to the Army Medical Reserve : Let me ask your correspondent (1) whether he is prepared to give his whole time up to the duties ? (2) Is he available at short notice for service anywhere in the United Kingdom ? If so, and he is under 40 years of age and accepts pay at the rate of £270, he would doubtless have been employed under late advertisements. As a matter of fact, Army Medical Reserve officers are employed whenever their partial services—all they usually have to offer—can be utilised. But it is because their services are strictly partial and local that the appointment of a special class of civilian surgeons, now complained of, has been rendered necessary.

*** We presume that the Army Medical Reserve officers, being volunteers, will now have to accompany such of their corps as may go on foreign service. We fear this will prove a serious matter to many medical men and involve much personal sacrifice.

RECALL TO SERVICE.

A CORRESPONDENT calls attention to the uncertainty of the position of the retired pay medical officers who have responded to the invitation to volunteer for service at home. Reference to the Royal Pay Warrant does not certainly enlighten us much ; but as it is now practically certain that every available man will have to be recalled, the Article in the Warrant will be put in practical operation, and any vagueness soon cleared up. We would advise that comment should be withheld until that happens.

PLAGUE DUTY.

A CORRESPONDENT states that he was ordered on plague duty, and to the inspiriting task of "corpse inspection," and found himself acting with the special plague doctors, who were granted a conveyance allowance. He applied for the same, but was refused on the ground that it was not necessary, he being an Indian medical officer.

*** If necessary in one case, why not in the other ? These paltry economies will in the end prove disastrous.

MEDICO-LEGAL.

PROFESSIONAL SECRECY.

COUNTRY PRACTITIONER asks the following question : A domestic servant consults a doctor, who finds that she has syphilis. He urges upon her the necessity of temporarily leaving her situation to place herself under treatment, pointing out the danger that may arise to other members of the household. She declines to take this course, declaring that she believes that she will soon get well, and that there is no fear for anybody else.

T. asks the following questions : 1. A glassblower presents himself to me for treatment, suffering from a hard chancre of the lip, presumably contracted in the execution of his duty. Am I legally justified, without the patient's consent, but in the interests of his fellow workmen, in communicating the intelligence to the manager of the works ?

2. If proofs were forthcoming that the patient did become infected in the execution of his duty, would he possess a legal right to claim damages from his employers ?

*** The obligation to keep secret information respecting diseases from which persons who consult us are suffering is not without its limits, and has been rudely set aside by the requirements of the Notification Act. We believe that where a person is suffering from an infectious or contagious disease, and refuses to take the precautions necessary to prevent its spread, the medical man in attendance is justified, after giving notice of his intention to the patient, in warning those persons who are in danger, and we believe that such conduct would be generally upheld, provided the practitioner acted with due consideration. It is more than probable that where the patient found the doctor determined to take this line there would be no further opposition to his proposals. It does not appear that legal proceedings could be successfully maintained by the patient against the medical man if such a warning were given, provided, of course, that the latter could prove his diagnosis to be correct. The communication would also, we consider, be held to be privileged. With reference to T.'s second question, it would appear, from a case recently decided in the Court of Appeal, that the workman would not be entitled to claim damages, as his injury is not caused by an "accident" within the meaning of the Workmen's Compensation Act.

THE DUTY OF SENDING INFORMATION TO A CORONER.

WE are informed that at the meeting of the Council of the Coroners' Society for England and Wales, held on December 5th at the Law Institute, the following motion was unanimously adopted : "That it is the opinion of the Council that in cases of death from violence or from any unnatural cause it is a common law duty imposed upon the medical practitioner in attendance, among others, to report to the coroner."

At an inquest held at Tottenham on November 16th the Coroner committed himself to various statements on this subject, not always, it would appear from the report before us, couched in the most courteous terms. This led the North Tottenham Medical Society to look into the matter. A communication was addressed to the Registrar-General, and Dr. George P. Chappel, the Honorary Secretary, has favoured us with a copy of the following letter received in reply :

[Copy.]

General Register Office,
Somerset House, London.
November 29th, 1899.

Sir,—I am directed by the Registrar-General to acknowledge the receipt of your letter of the 27th inst., and in reply to inform you that the *only* legal obligation of registered medical practitioners with reference to medical certificates is to give to the best of their knowledge and belief a certificate of the cause of death of any patient attended by them during his or her last illness. I am to point out that, so far as the Registrar-General is aware, medical practitioners are under *no obligation to report cases to the coroner*, although it is open to them to take such a course if they are so minded. Nevertheless in such cases if the coroner decides not to hold an inquest the medical practitioner would not be relieved from the obligation to give a medical certificate of the cause of death to the best of his knowledge and belief.

I am, Sir, your obedient servant,
(Signed) NOEL A. HUMPHREY,
Chief Clerk.

Mr. E. H. Crusha,
Registrar, Tottenham.

COUNTY COURT PROCEEDINGS.

DOUBTFUL must of course pay the costs of the adjournment, as it was procured at the request of his agent. He cannot charge any fee or travelling expenses for his attendance at the county court. If the "agent" is not a solicitor or barrister, the judge may refuse to hear him.

OBITUARY.

Sir RICHARD THORNE, K.C.B., M.D., F.R.C.S., F.R.S.,

Principal Medical Officer to the Local Government Board of England.

We have to announce with deep regret, a regret which will be shared by all who knew him, the death on December 18th, of Sir Richard Thorne, the distinguished Principal Medical Officer to the Local Government Board of England. His death was most unexpected. He had suffered occasionally some inconvenience from varicose veins in the legs, and a few days before his death phlebitis occurred, but though confined to bed he was still able to transact much of his official business. On the morning of his death he was suddenly seized with alarming symptoms, and though he rallied, a second attack ended fatally.



Richard Thorne was born in Leamington, where his father was a banker, on October 13th, 1841. He was first of all sent to school at Nieuwied, in Rhenish Prussia, but at the age of 14 was transferred to France, where he first spent a year in obtaining a mastery of the language in a private school which produced several distinguished men, including the Monods, and M. Waddington, late French Ambassador in England. He then attended the *cours de troisième* in the Lycée St. Louis, Paris, in which he gained two first prizes, one of which was for natural history. The command which he then obtained over French, the language of diplomacy, stood him in good stead in after-years.

On returning to England he went to Mill Hill School, from which he matriculated at the London University. He became a student at St. Bartholomew's Hospital, and after passing through the usual curriculum took the degree of M.B. with first-class honours in Medicine and Obstetric Medicine at the London University in 1866. He was appointed a casualty officer to St. Bartholomew's Hospital and demonstrator of microscopical anatomy in the medical school. At first he gave attention to psychology, but at a later date he held the appointment of Physician to the Royal Hospital for Diseases of the Chest and to the London Fever Hospital. He had already begun to turn his attention to subjects which afterwards occupied his life, and was employed as Supernumerary Inspector, for what was then the Medical Department of the Privy Council, under Sir John Simon in conducting inquiries into outbreaks of epidemic disease. His investigations of several outbreaks of typhoid fever were conducted with such ability that he was appointed to the permanent inspector's staff towards the close of 1870, and from that time threw in his lot with that department of State Medicine in which he rose to occupy the first place.

It would be impossible to enumerate all the valuable reports which he presented from time to time, but mention must be made of two. Among his earlier reports was one on the historic epidemic among persons drinking water of the Caterham Waterworks. This was published in 1879, and was a most valuable contribution to the establishment of the theory that enteric fever may be distributed by water supplies. The other was the elaborate report on the Use and Influence of Hospitals for Infectious Diseases, which forms the greater part of a volume issued in 1882 by the medical officer of the Local Government Board. This report, which extends to 300 pages, and is illustrated by plans and maps was in fact a treatise upon the various aspects of the subject with which it dealt. It was the result of prolonged inquiry during the years 1880-81 which involved the inspection of seventy hospitals in use by urban, rural, and port sanitary authorities. It demonstrated the advantages of such hospitals both to the individual sufferer from infectious disease and to the community within which he dwells, and indicated the conditions of construction and administration which should be followed in establishing such hospitals. The value of the report was at once appreciated by the medical profession and by the public, and it was necessary to reprint the volume in 1884. In 1892 Thorne Thorne succeeded Sir George Buchanan as Principal Medical Officer to the Local Government Board, and since then he has directed the work of the department with remarkable tact and ability. It is an office by no means easy to fill. The duties are to direct the various branches of work caried out by the two Assistant Medical Officers, by 11 permanent Medical Inspectors, and by temporary Medical Inspectors who may be employed from time to time; the general direction of the staff connected with the National Vaccine Establishment is also one of the duties of the Principal Medical Officer, but his chief function is to advise the Local Government Board on all matters in which medical or public health considerations arise in connection with work other than Poor Law; that is, in almost all other departments of the Board. To do this he has to keep himself informed respecting all conditions which, whether at home or abroad, tend to foster epidemics in a way likely to affect the health of this country, or to interfere with the interests of British shipping and commence in any part of the world.

Soon after his appointment the approach of cholera to this country produced a serious emergency, which was met with courage and success. Under the direction of Sir Richard Thorne and Sir Walter Foster, M.P., at that time Parliamentary Secretary to the Local Government Board, a systematic inspection of all ports was undertaken, and the Principal Medical Officer drew up regulations for the inspection of passenger ships and passengers from infected countries, which, while they interfered to a minimum extent with commercial intercourse, proved to be entirely effectual in preventing an epidemic in this country. The very fact that certain cases were introduced without the occurrence of an epidemic was the most convincing proof of the adequacy of the precautions enforced.

A very important part of Thorne Thorne's life-work opened to him in 1884, when he was deputed, at the request of the

Secretary of State for Foreign Affairs, to attend an International Conference as to cholera, then being held at Paris, and he has since from to time represented the Foreign and Colonial Offices at a series of International Conferences on the Continent on subjects which affect, though often indirectly, the health of the country or of its commercial marine. He was present at the Conferences in 1892, 1893, 1894, and 1897. His influence with his colleagues representing the British and Indian Governments at these Conferences and with the representatives of foreign countries steadily grew, and the terms of the Venice Convention were very largely determined under his guidance. It was here that his early education in France and his ready command of the French language gave him an influence which might not otherwise have been accorded to his knowledge and experience. In the debates at this Conference points were often raised by foreign representatives with which it was necessary to deal on the spur of the moment, and this duty always devolved upon Thorne Thorne, who discharged it with his accustomed courtesy and precision. It is satisfactory to know that his conspicuous services in this respect were recognised by the Government, and that in a report made by a Special Committee in 1898 a special increase of salary was recommended and the recommendation was accepted. In this connection he was appointed Her Majesty's Plenipotentiary to sign the Convention of Dresden in 1893, Paris in 1894, and Venice in 1897, and the photograph which we reproduce shows him wearing the diplomatic uniform on one of these occasions. In 1897 he was made a Knight Commander of the Bath, having held the Commandership for some years previously.

Sir Richard Thorne will be sorely missed at the General Medical Council, where he succeeded Sir John Simon in 1895 as a Crown nominee. The marked influence which he speedily exercised was no doubt enhanced by his high official position at the Local Government Board, but it was far more largely due to a quality of mind alike attractive and rare. He may truly be said to have belonged to no party upon the Council, but, whilst no enemy of the order of things that exists, to have been ever ready to assist and welcome any reform which commended itself to his sound judgment. Thus, when the question of making the Penal Cases Committee—which up to that time had been a permanent Committee—subject to annual election, he was ready with voice and vote to effect the reform. Again, when the Council had passed a resolution which threw difficulties in the way of members obtaining access to the documents of the Council, it was Sir Richard Thorne who at the next session moved and carried a resolution which rescinded the previous one, and made the documents available under reasonable restrictions for their safe preservation.

No member of the Council took a more serious view of his responsibilities, no member attended more conscientiously to the work which lay before him, whether in Committees or at the general sessions, and no member approached the subject in hand with a mind more open to conviction. A somewhat frequent speaker at the meetings he was very jealous of the time of the Council, and the few emphatic, brief, and pithy sentences to which he gave utterance commanded attention, and invariably formed an indispensable contribution to the debate. If he thought that things were going amiss he was readily stirred to a moderate indignation, and, if his criticism was strong, it was never such as to wound. Indeed, he was the most generous of opponents, who, whilst he would not abate one jot from his position until he was convinced, was ever ready to hear and to weigh all that told against his views, and, if beaten, to accept the decision, and cordially to work with the majority. For whilst he was emphatic and formed positive opinions, he had no belief in his own infallibility; and it is pathetic that on the very day of his death the report of the Public Health Committee, upon which he had as Chairman spent much time and care, was issued to the members of the Council with an invitation that in the interval between this and the next meeting they should communicate to him any criticisms for its amendment which might occur to them upon this his own subject. It was characteristic of him that he had the strongest objection to addressing the Council unless he was fully prepared and master of all that related to the point. Thus, when asked on the spur of the moment to second a resolution or an amendment, he would often answer, "Yes, I think I quite agree with you, but I should like a little time to think it over." Then, perhaps, after some discussion had taken place, he would speak emphatically in favour of that to which he had hesitated to commit himself at first glance. His precise and accurate mind demanded data, and he was not always ready to accept the conclusions of others without hearing the grounds upon which they had arrived at them; hence his attitude with regard to the report of the Education Committee, which asked the Council to resign all thought of raising the standard of preliminary education without fully setting out why this should be done; every member of the Council will remember how he scornfully characterised the old standard as one for "little boys." He was a hard-working member of various committees, and as Chairman of the Midwives Bills Committee conducted a troublesome negotiation with the promoters of the original Bill with tact and success. Much of such useful work shows for but little when done, but he was not one to seek to render prominent his own share in it; he was content if useful work was accomplished. Such a man is invaluable upon any public body; whether one happens to agree with him or not on any specific question his views command respect and his influence, of the most legitimate kind, is strongly felt at every turn; and such an individuality is indeed hard to replace. The General Medical Council can ill spare one who was a good man of business, took a practical common-sense view of things, wasted no time, and was able to give fearless and emphatic expression to adverse opinions without causing offence. Even those who most frequently found themselves in disagreement with him will none the less feel the loss they have sustained

Sir Richard Thorne became a Fellow of the Royal College of Physicians in 1875, and in 1891 he delivered the Milroy Lectures, which appeared in our columns at the time, and were subsequently published in a volume entitled *Diphtheria, its Natural History and Prevention*, which gave an admirable review of the position of the subject at that time, both from the points of view of the pathology and the prevention of the disease. Sir Richard Thorne was also a Fellow of the Royal Society, and he received the honorary degrees of LL.D. from the University of Edinburgh, and of D.Sc. from the Royal University of Ireland; the Royal College of Surgeons of Ireland also conferred on him its honorary Fellowship. He began to lecture on hygiene at St. Bartholomew's Hospital Medical School in 1879, and when a lectureship on Public Health was instituted in 1891, he was formally appointed lecturer.

Sir Richard Thorne filled the high office to which he had been advanced with singular success and ability. It was sometimes said of him, half grudgingly, that he was a good official. He would himself have accepted the description as no mean praise. Accurate and painstaking, yet free from pedantry; firm in his own opinion, but courteous in word and manner, he belonged to the very best type of British permanent official—a body of men of whom it has been said that they are the real rulers of the country. But it would be the very opposite of the truth to say that he ever sank his profession in the official. On the contrary, his eager mind took the keenest interest in the advance of medicine and in the growth of the science of bacteriology, which has so largely influenced the department of medicine to which his life was devoted. He knew, too, how to make his profession respected, and was rightly a stickler for due recognition of the value of professional services by the Government.

He was a man who formed his opinions with care, and held to them strongly, but it was characteristic of him that his mind was always open to a new fact. Unmoved by the most ingenious furbishing up of old arguments, he at once became alert when a new fact turned up, and those who saw much of him will vividly recall the attitude and the tone of voice with which he would say, "Well, if that is true, it will make a difference; the whole question must be considered again." He was the consistent foe of hasty generalisation from an isolated observation, and was always striving to bring facts into order and see their relations to each other.

We are indebted to Sir William Turner, President of the General Medical Council, for the following note on Sir Richard Thorne's work as a member of that Council

The lamentable death of Sir Richard Thorne has suddenly withdrawn from the General Medical Council one of its most highly valued members, and has deprived the Crown and the people of their trusted and responsible medical adviser in questions affecting the public health. Sir Richard Thorne sat on the General Medical Council as one of the Crown representatives. He was appointed in May, 1895, in succession to Sir John Simon, and from his official position in the Local Government Board, and his knowledge and experience in sanitary administration, he was at once chosen by the Council to act as the Chairman of the Public Health Committee. He threw himself into the work of the Committee with characteristic energy, and under his leading several reports were produced which were accepted by the Council as their guides in the matters to which they referred. So late as December 5th a report was presented on the interpretations which have been put on the Regulations of the Council bearing on the course of study for the Diploma of Public Health, and important recommendations were made on the mode in which the period of special study might be spent, subsequent to the candidate having obtained the qualifications entitling him to be placed on the *Medical Register*.

Sir Richard Thorne's interest in the work of the Council was not, however, limited to matters bearing on the public health and the regulations for obtaining a diploma in that subject. He was an active member of the Committee appointed to consider the Midwives Bills, which of late years have been introduced into the House of Commons, and his opinions, on the lines which it was desirable that legislation should take, had great weight with the Council. He was also a strenuous advocate for raising the standard of the preliminary examination to be passed before students could be admitted to medical study and the *Students' Register*, and one of his latest speeches in the Council was on this subject. He advised the President of the Council on the steps to be taken to bring before the proper department of the Government the subject of death certification, with the view of obtaining amended legislation, and one of his last acts, as he lay on his bed of sickness, was to communicate with the President on this matter. The President feels that he has lost by the death of Sir Richard Thorne a warm friend and a counsellor who, from his long training in a public office, could wisely advise in those matters relating to the public welfare in which the Council has to confer with the Government of the day. The Council has had removed from it a member, strongly impressed with a sense of public duty, and endowed with a well-balanced mind, which he brought to bear on the business of the Council in no warrior or partisan spirit, but with a strong conviction to do what was just to both the public and the medical profession.

Professor W. H. Corfield writes: I have not recovered from the shock with which I heard of the death of Thorne Thorne, whom I have known for over 25 years, when I am called upon to write a few words about him. When I met him a month ago at a friend's house, I thought that he was looking better than I had seen him looking for years past, and I little thought that I should see his genial face no more! I will leave his colleagues to speak of the way in which their beloved "chief" managed his department, but I, as an outsider, can speak of the effect that was produced in Europe by the fact of that department having such a man at the head of it, a man who was not only a prince among hygienists, but who could express his ideas in French as well as in English, and who could therefore enforce the English views on quarantine, etc., at foreign conferences and congresses, with the result that those views have now been very generally adopted throughout Europe. I suppose that there is no English hygienist whose name is better known throughout Europe than that of Thorne Thorne, or whose opinion is better respected. As a man he had a charming personality; he was amiable without being too much so; he formed very definite opinions and held to them with tenacity, but he was willing to hear the other side of a question, and was always open to conviction. He was an excellent speaker, and has left a vacancy not only among his friends but in society which it will be difficult to fill.

The Balneological Congress will hold its twenty-first meeting at Frankfort-on-the-Main, March 8th to 13th.

JOHN F. HODGES, M.D., F.C.S., J.P.

Professor Hodges, the last representative of the original professorial staff of the Queen's College, Belfast, passed away upon December 13th at the ripe age of 84 years. He was born in 1815 at Downpatrick, and belonged to a well-known family of county Down. He studied at the Royal College of Surgeons of Ireland and at Trinity College, Dublin. He also studied at Glasgow, where he became a Licentiate of the Faculty of Physicians and Surgeons. Returning to his native country, he began practice at Newcastle, but soon removed to Downpatrick. He began to interest himself in the subject of agriculture and with the view of studying agricultural chemistry he went to Germany and studied under von Liebig, with whom he formed an intimate friendship. About this time he took the M.D. degree of the University of Giessen. Returning to Ireland he became instrumental in the foundation of the Chemico-Agricultural Society of Ulster in the year 1845. This organisation is the oldest but one of its kind in the United Kingdom. Not long afterwards Dr. Hodges became the editor of the *Irish Agriculturalist*, a weekly journal which was published in Belfast.

He went to reside in Belfast in 1844, and a year or two later he was appointed Lecturer in Chemistry in the old Belfast College, in succession to the late Dr. Andrews, F.R.S., who had been appointed Professor of Chemistry in the newly-founded Queen's College. On the Government endowing a Chair of Agricultural Chemistry in Queen's College, Dr. Hodges was appointed its first occupant, as well as Lecturer in Medical Jurisprudence. In the year 1868 the Queen's University conferred upon him in recognition of his services the honorary degree of M.D. His work as a chemist and agriculturist was well known both in this country and abroad, and almost every European country had conferred honorary distinctions upon him. Amongst his writings may be mentioned *First Steps in Chemistry*, *The Structure and Physiology of the Animals of the Farm*, *Lessons in Chemistry for Farmers and Teachers*. He was one of the founders of the Royal College of Chemistry, London. He was for a long time Government Analyst, and gave evidence in many famous criminal trials. He was also Public Analyst for five counties, as well as for the city of Belfast.

Professor Hodges enjoyed in a high degree the regard and esteem of his colleagues on the staff of the Queen's College, of the medical profession, and of the general public of the North of Ireland, and his demise will be sincerely regretted.

Deaths in the Profession Abroad.—Among the members of the profession in foreign countries who have recently died are Dr. Piechaud, Physician to the French Senate; Dr. Georg Krukenberg, Professor of Gynæcology in the University of Bonn, aged 43; Dr. Dominik Ritter von Hauschka, sometime Professor in the old Joseph Medico-Chirurgical Academy, aged 84; and Dr. Johann Mitvalsky, *Privat-docent* of Ophthalmology in the Czech University of Prague, aged 38.

Medical Congress in Copenhagen.—The Third Scandinavian Congress of Internal Medicine will be held in Copenhagen in July, 1900. The principal subject on the programme is Serumtherapy. The discussion will be introduced by Professor Sarensen (Copenhagen), Dr. Aaser (Christiania), and Dr. Hellstroem (Stockholm).

Sanatoria for the Poor.—The foundation stone of a sanatorium for German consumptives of slender means was recently laid at Davos. A similar establishment for Russians has been erected at Jalta. It will be supported by voluntary contributions. Princess Maria Barjatinski is at the head of the organising committee.

The annual meeting of the constituents of the Metropolitan Sunday Fund was held at the Mansion House on December 13th, under the presidency of the Lord Mayor. The annual report stated that the total amount collected during the year ending October, 1899, was £53,504, while the average receipts since the establishment of the Fund had been £37,394. It was arranged that June 24th should be Hospital Sunday for the year 1900. The Lord Mayor, in bringing the meeting to a close, stated that a legacy of £1,090 was in course of being paid to the Fund by the executors of the late Mr. King, of Tisbury, Wilts.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,905 births and 4,820 deaths were registered during the week ending Saturday last, December 16th. The annual rate of mortality in these towns, which had been 18.9 and 20.8 per 1,000 in the two preceding weeks, further rose to 22.0 last week. The rates in the several towns ranged from 9.6 in Huddersfield, 14.0 in Birkenhead, 14.7 in Derby, and 15.8 in West Ham, to 25.7 in Preston, 26.5 in Liverpool, 27.5 in Plymouth, and 30.3 in Portsmouth. In the thirty-two provincial towns the mean death-rate was 20.8 per 1,000, being 3.0 below the rate recorded in London, which was 23.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.3 per 1,000; in London the death-rate was equal to 2.1 per 1,000, while it averaged 2.4 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.9 in Leicester, 4.0 in Sheffield, 4.2 in Hull, and 5.8 in Preston. Measles caused a death-rate of 1.1 in Halifax, in Bradford, and in Hull, 1.2 in Liverpool, 1.4 in Sheffield, 1.8 in Birkenhead, 2.0 in Swansea, and 3.1 in Preston; scarlet fever of 1.1 Bradford; and whooping-cough of 1.0 in Leicester, 1.2 in Blackburn, and 1.4 in Norwich and in Salford. The mortality from "fever" and from diarrhœa showed no marked excess in any of the large towns. The 124 deaths from diphtheria in the thirty-three towns included 55 in London, 16 in Leeds, 11 in Sheffield, 8 in Portsmouth, 5 in Leicester, and 5 in Liverpool. Twelve fatal cases of small-pox were registered last week in Hull, and 1 in London, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday last December 16th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,578, to 3,290 at the end of the four preceding weeks, had further fallen to 3,084 on Saturday last; 180 new cases were admitted during the week, against 293, 294, and 277 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, December 16th, 939 births and 657 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 20.5 and 20.0 per 1,000 in the two preceding weeks, had increased again to 21.5 last week, but was 0.5 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.2 in Edinburgh and 18.1 in Leith to 32.5 in Greenock, and 35.5 in Perth. The zymotic death-rate in these towns averaged 2.7 per 1,000, the highest rates being recorded in Greenock and Perth. The 312 deaths registered in Glasgow included 14 from measles, 3 from scarlet fever, 2 from diphtheria, 9 from whooping-cough, 4 from "fever," and 5 from diarrhœa. Two fatal cases of scarlet fever and 2 of "fever" were recorded in Edinburgh; 3 of measles, 3 of whooping-cough, and 4 of diarrhœa in Dundee; 5 of diarrhœa in Aberdeen; 6 of measles in Paisley, and 8 in Greenock; and 2 of scarlet fever and 3 of whooping-cough in Perth.

THE PREVENTION OF PULMONARY TUBERCULOSIS.

THE Medical Officer of Health for Norwich has issued a card for distribution in the following terms:

PRECAUTIONS FOR CONSUMPTIVE PERSONS.

Consumption is a catchable disease. It is most commonly caught by inhaling infected spittle which has been allowed to become dry, and float about the room as dust.

Do not spit except into special vessels, the contents of which are to be destroyed by burning before they become dry. If this simple precaution be taken, there is practically no danger of infection. The breath of consumptive persons is not directly infectious.

The following suggestions will be found useful, both to a sufferer and to his friends:

1. Spittle (indoors) should be received into small paper bags or pieces of paper, which should be afterwards *burned*.

2. Spittle out-of-doors should be received into a suitable bottle, which should be afterwards washed out with *boiling water*; or into a small paper handkerchief, which should be afterwards *burnt*.

3. If ordinary handkerchiefs are ever used to spit into they should be *put into boiling water before they have time to become dry*; or into a solution of a disinfectant, as directed by the doctor.

4. *Wet* cleansing of rooms, particularly of bedrooms occupied by sick persons, should be substituted for "dusting" and sweeping.

5. *Sunlight*, good food, and *fresh air* are the best remedies for the disease. Every patient should, if possible, sleep in a bedroom by himself, and should sleep with the bedroom window *open*, a screen being arranged, if necessary, to prevent direct draught; stretched coarse flannel may be used to free incoming town air from dust, smuts, etc. The patient need not fear going out-of-doors in any weather if warmly clad.

N.B.—The patient *himself* is the *greatest gainer* by the above precautions, as his recovery is retarded and frequently prevented by renewed infection derived from his own expectoration.

6. Persons in good health have no reason to fear the infection of consumption. Overfatigue, intemperance, bad air, dusty occupations, and dirty, ill-ventilated, and badly (sun) lighted rooms favour it.

We are not sure that the first sentence of Paragraph 6 is altogether a safe statement. It rather tends to neutralise the good effect produced by the other recommendations, and its accuracy is not quite beyond [dis-

FEE FOR EXAMINATION OF PAUPER LUNATICS.

DELTA.—A medical officer is not entitled to any fee for visiting and reporting to the guardians as to the mental condition of any pauper lunatic, but if he examines any such patient at the request of a magistrate and certifies the case as being fit for an asylum, or the reverse, he is then entitled to a special fee for so doing. This is usually one guinea, but it rests with the magistrate to fix the amount if this cannot be otherwise settled.

EXTRA FEE FOR CASE OF MIDWIFERY NOT ATTENDED.

JUSTITIA writes: I lately had an order from the Board of Guardians to attend a case of labour which, however, was completed without my being sent for, and I never saw the case. Should I be justified in demanding payment?

*** We should recommend our correspondent not to make any charge for this case, he not having given any attendance whatever, which would be indicated by the patient's name not having appeared in the weekly return of patients attended by him and furnished for the information and guidance of the Board of Guardians.

ESTIMATE OF CLAIM FOR SUPERANNUATION UNDER ACT, 1898.

L.R.C.P.L. etc., writes to ask by what method the annuity due to him as a retired Poor-law medical officer should be estimated, and whether he ought to make application for the same, his resignation of office held for thirty-one years having been accepted by the guardians?

*** The claim for superannuation should be estimated on the average amount of salary and extra fees received during the five years ending on the quarter day which immediately precedes the day on which the officer ceases to hold office. All fees paid for fractures and dislocations, midwifery, and operations, can be reckoned, also fees for quarterly visits to pauper lunatics. Fees paid for certification of lunatics sent to an asylum cannot be reckoned, as this certification is not the duty of any Poor-law medical officer, nor can any fees earned as public vaccinator be reckoned, but if any cases are vaccinated by a Poor-law officer in his capacity as such (or may happen during an epidemic of small-pox), such fees could be reckoned as emoluments of his office. The five years average remuneration should be multiplied by the aggregated number of completed years which the officer has served (whether in one union or more, and whether continuous or not), and this divided by sixty will give the annual sum he can claim as superannuation under the Act of 1896. Our correspondent should inform the clerk to the guardians that he claims superannuation under the Act.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

SECOND EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following have passed this examination in the subject noted:—

Pharmaceutical Chemistry.—E. D. Anderson, Pemb.; H. M. Aviss, Down; J. R. Beale, Cla.; A. R. Brailey, Down; A. D Brunwin, Trin.; A. S. Burgess, Cai.; H. C. Cameron, Joh.; M. A. Cassidy, Cla.; R. P. Cockin, Cai.; A. W. D. Coventon, Trin.; W. J. Cumberlidge, Christ's; G. E. Davidson, B.A., Cai.; H. S. Dickson, Christ's; L. Dukes, Trin.; W. G. P. Ellis, M.A., Cath.; H. H. J. Fawcett, Trin.; C. F. Fothergill, Emm.; E. Garnsey, Cai.; W. Hastings Christ's; G. L. Hodgkin, Trin.; D. Humphrey, Sid. Suss.; H. B. Jackson, Cla.; F. A Juler, Trin.; J. Lambert, Down; J. C. Lawton-Roberts, Cla.; E. Lloyd, Emm.; K. Lucas, Trin.; G. H. K. Macalister, Joh.; J. T Macnab, Christ's; M. McPherson, Cla.; S. A. Owen, Trin.; C. E. Palmer, Cai.; P. R. Parkinson, Cai.; C. F. Parry, B.A., Cai.; C. W. Ponder, Emm.; E. S. Scott, B.A., Pemb.; E. Slack, B.A. Pemb.; W. H. Smyth, Emm.; W. H. Thresher, B.A., Cai.; H. C. Turner, Emm.; G. T. Western, B.A., Pemb.; J. D. C. White, M.A., Trin., R. E. Whitting, King's; F. Worthington, Joh.; E. A. Wright, B.A., H. Selw.; S. L. O. Young, B.A., Christ's.

Human Anatomy and Physiology.—L. E. H. R. Barker, B.A., Cai; E. A. A. Beck, B.A., Cla.; A. S. Bradley, B.A., Cai.; A. R. Brailey, Down.; P. J. Burgess, M.A., Sid. Suss.; C. Burrows, B.A., Emm.; N. C. Carver, B.A., King's; R. B. Coare, B.A., King's; G. H Colt, Sid. Suss.; C. R. Crowther, B.A., Joh.; W. H. Dickinson, B.A., Trin.; S. Dodd, B.A., Cai.; T. L. Drapes, Sid. Suss.; G. G. Ellett, B.A., Cath.; A F. Elliott, B.A., Emm.; E. A. Ellis, Down.; H. R. Fisher, B.A., Emm.; G. D. Franklin, B.A., King's; J. D. H. Freshwater, B.A., Trin.; J. H. Fuge, M.A., H. Selw.; E. Gardner, B.A., Cai.; F. W. Goyder, B.A., Joh.; C. H. Gregory, B.A., Emm.; W. L Harnett, B.A., Joh.; A. G. Harvey, B.A., Joh.; G P. Hawker, B.A., Cai.; H. D. Hoffmann, B.A., Trin.; D. Holroyde, B.A., Trin.; W W. Holtzmann, B.A., Christ's; L. B. Hopper, B.A., Cai.; H. M. Joseph, Trin.; F. I. M. Jupe, B.A., Down.; F S. Kidd, B.A., Trin.; H. D. Ledward, B.A., Trin.; H. B. McCaskie, B.A., Cai.; O. May, Joh.; C. W. P. Moffatt, Cla.; W. M. Mollison, King's; W. V. Neish, B.A., Emm.; C. L. Nedwill, B.A., Trin.; F. D. Nicholson, B.A., King's; J. E. Payne, B.A., Pet.; H. Rischbieth, B.A., Trin; H J. Robinson, B.A., Joh.; W. T. Scott, B.A., Cla.; H. J. Shone, B.A., Emm.; J E. Spicer, B.A., Trin.; H. Statham, B.A., Christ's; S. J. Steward, Down.; G. E. StG. Stockwell, B.A., King's; W. M. Strong, M.A., Trin.; W. B. Swete-Evans, B.A., Cla.; A. W. Wakefield, Cla; H. Wales, B.A., Sid. Suss.; E. Ward, B.A., Cla.; G. H. L. Whale, B.A., Jes.; F. Whitaker, B.A., Trin.; A. G. E. Wilcock, Cai.; J. H. F. Wilgress, B.A., H. Selw; A. F. R. Wollaston, B.A., King's.

FIRST EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following have passed this examination in the subjects noted:

Elementary Biology.—H. B. Atkinson, Trin.; L. J. Austin Sid. Suss.; A. L. Baly, Emm.; D. W. A. Bull, Cai.; G. H. U. Corbett, King's;

R. A. Cullen, Cla.; G. B. Davis, B.A., Corp. Chr.; N. C. Fletcher, Queen's; R. E. French, King's; L. G. H. Furber, Cai.; J. R. C. Greenlees, Joh.; C. R. F. Hall, B.A., Trin.; O. Heath, Trin.; S. A. Henry, Trin.; R. F. V. Hodge, Emm.; W. R. Honeyburne, B.A., Pet.; Q. S. Keat, Joh.; A. A. H. Lawrence, Emm.; H. Maclean, Cai.; J. B. Mennell, Pemb.; A. H. Miller, Trin.; S. B. Pope, Christ's; W. H. H. Rayner, Trin.; W. H. Robinson, Down.; E. W Sheaf, Down.; F. Shingleton-Smith, King's.; G. C. E. Simpson, Joh.; C. Stanley-Clarke, Cai.; B. H. Stewart, B.A., Jes.; F. J. Thornton, Cai.; W. S. Tresawna, Sid. Suss.; F. B. Treves, Cai.; C. Tylor, Cai.; C. H. W. Weekes, Trin.; A Wilkin, King's; R. G. Williams, B.A., Cai.; W. H. Woodburn, Christ's; F. P. Young, Christ's; R. F. Young, Christ's.

Chemistry and Physics.—L. J. Austin, Sid. Suss; I. G. Back, Trin. H.; D. K. D. Bain, B.A., Trin.; S. Barradell-Smith, Joh.; J. D. Barris, Cai.; E. Beaton, Cai.; H. A. Browning, Joh.; G. H. U. Corbett, King's; G. L. Cox, Christ's; R G. Elwell, B.A., Trin.; N. C. Fletcher, Queens'; R. E. French, King's; W. B. Grandage, Cla.; H. T. Gray, Trin.; R. E. G. Gray, Pemb.; R. F. V. Hodge, Emm.; G. Holroyd, Christ's; C. L. Isaac, B.A., Joh.; Q. S. Keat, Joh.; B. T. Lang, Trin.; C. S. Lee, Cai.; J. McIntyre, King's; S. M. Mackenzie, Trin; E. H. Mayhew, Emm.; J. B. Mennell, Pemb.; A. H. Miller, Trin.; A. R. Moore, Cai.; G. W. de P. Nicholson, B.A., Jes.; F. W. M. Palmer, B.A., Jes.; D. W. Roy, Sid. Suss.; R. B. S. Sewell, Christ's; E. W. Sheaf, Down; G. C. E. Simpson, Joh.; C. Strickland, Cai.; F. J. Thornton, Cai.; W. S. Tresawna, Sid. Suss.; B. Wallis, Trin.; W. H. Williams, Cai.; W. P. Williams, Down; J. L. Wood, Trin.; L. Worrall, B.A., Christ's; F. P. Young, Christ's.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following have passed the examination in the subject noted:

Surgery and Midwifery.—W. H. W. Attlee, B.A., Joh.; F. G. Bowen, B.A., Cai.; G. Browse, M.A., Cla.; F. E. Brunner, B.A., Cai.; T. Burfield, B.A., Emm.; E. R. Clarke, B.A.; Joh.; A. H. Davies, B.A., Cai.; A. B. Dunne, B.A., Queen's; W. M. Fletcher, M.A., Trin.; H. S. Gabb, B.A., Down.; C. H. Glenn, B.A., Pemb.; J. A. Glover, B.A., Joh.; E. V. Gostling, B.A., Cai.; O. F. F. Grünbaum, B.A., Trin.; A. C. Hill, M.A., Trin.; T. E. Holmes, B.A., Cai.; A. C. Ingram, B.A., Joh.; A W. Izard, B.A., Trin.; G. S. Keeling, B.A., Cai.; C. Killick, B.A., Trin.; W. B. Knobel, B.A., Trin.; G. O. Lambert, B.A., Joh.; J. W. Malim, B.A., Christ's; L. J. Paton, B.A., Cai.; F. C. Shrubsall, M.A., Cla.; W. C. P. Smith, B.A., Down.; H. H. Stiff, Cai.; W. J. Susmann, Cai.; T. S. Taylor, B.A., King's; E. D. Telford, B.A., Cai.; H. A. Upward, B.A., Christ's; A. Whitmore, B.A., Cai.; T. Wood, B.A., Cai.; W. H. O. Woods, B.A., H. Selw.; R. T. Worthington, B.A., Trin.

UNIVERSITY OF LONDON.

B.S. EXAMINATION.—The following candidates have satisfied the Examiners:

First Division.—T. R. H. Bucknall, M.D., University College; Adeline Mary Roberts, London School of Medicine and Royal Free Hospital; Mabel Geraldine Stevenson, Royal Free Hospital; W. B. L. Trotter, M.D., University College; Jane Holland Turnbull, Royal Free Hospital: P. Turner, B.Sc., Guy's Hospital.

Second Division.—W. M. Anderson, London Hospital; H. R. Andrews, M.D., London Hospital; A. H. Carter, Guy's Hospital; Maud Mary Chadburn, M.D., London School of Medicine and Royal Free Hospital; J. F. Dobson, Yorkshire College and General Infirmary, Leeds; W. Ferris, St. Mary's Hospital; C. T. Hilton, Guy's Hospital; J. Howell, Guy's Hospital; Mary Muriel Griffin Iles, Royal Free Hospital; Louisa Martindale, Royal Free Hospital; G. N. Meachen, Guy's Hospital; Ethilda Budgett M. Meakin, Royal Free Hospital; Christine Mary Murrell, Royal Free Hospital; Ettie Sayer, Royal Free Hospital; C. A. Sprawson, King's College; Mary Ariel Stewart, London School of Medicine and Royal Free Hospital; W. G. Stewart, Guy's Hospital; R. G. Strange, St. Thomas's Hospital; Ethel Miller Vernon, Royal Free Hospital; Eliza Turner Watts, London School of Medicine and Royal Free Hospital.

UNIVERSITY COLLEGE, CARDIFF.

Department of Public Health.—The Council of the College, appreciating the special opportunities available at Cardiff, has determined to establish a Department of Public Health in connection with its medical school. The following arrangements have been already made, and it is hoped that the courses of instruction will begin early in the new year. Dr. Edward Walford (Medical Officer of Health, Cardiff Urban and Port Districts), and Dr. William Williams (Medical Officer of Health, County of Glamorgan), have kindly consented to give instruction in Public Health and Out-door Sanitary Work. Dr. William G. Savage (Bacteriologist to the Glamorgan County Council and the Cardiff Corporation) has been appointed Lecturer in Bacteriology at the College, and the joint Committee of the Glamorgan County Council and the Cardiff Corporation has placed their Public Health Laboratory at the disposal of the College for teaching purposes. The Council is applying for recognition for the courses of instruction given by these gentlemen, and it is hoped when this is obtained that candidates for the Diploma in Public Health will be able to take their six months' practical instruction with Dr. Savage in the County and Borough Laboratory, and their out-door sanitary work with Dr. Walford in the borough of Cardiff, or with Dr. Williams in the county of Glamorgan. It is also intended in connection with the department to arrange a course of instruction for candidates preparing for the examinations of the Sanitary Institute and the Sanitary Inspectors' Examination Board.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.

Admission of Fellows.—After having passed the requisite examinations the following gentlemen were, at a meeting held on December 15th, admitted Fellows of the College: H. Bennett, M.B., C.M.Edin., Captain I.M.S.; C. W. Booker, M.R.C.S.Eng.; J. Clark, M.D.Edin.; W. H. Cooke, M.R.C.S.Eng.; C. W. Dean, L.R.C.S.E.; W. Evans, M.R.C.S.Eng.; A. J. Martineau, M.R.C.S.Eng.; A. G. Park, M.D.Glasg.; D. R. Rowlands, M.B., C.M Glasg.; R. B. Stamford, M.R.C.S.Eng.; J. Whitton, L.R.C.S.E.

Prize Essay.—The prize of 100 guineas for an original unpublished essay on a subject in any branch of Surgery, or in Anatomy, Physiology, Therapeutics, or Pathology, bearing on Surgery, open to all Fellows and Licentiates of the College other than Members of the President's Council, was awarded from amongst the competitors to Dr. Arthur Logan Turner, F.R.C.S.E., Edinburgh, the title of whose essay was Racial Characteristics of the Frontal Sinuses.

Bathgate Medal.—The Gold Medal presented to the College by Colonel William Lorimer Bathgate, in memory of his late father, Mr. William McPhune Bathgate, F.R.C.S.E., Lecturer on Materia Medica in the Extra-Academical School, was awarded after the usual written examination in Materia Medica to Mr. David Mitchell.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN Ordinary Council was held on December 14th, 1899; Mr. H. G. Howse, Vice-President, in the chair.

Dental Schools.—The Victoria Dental Hospital, Manchester, was recognised for instruction in Mechanical Dentistry; University College, Sheffield, was added to the list of recognised dental schools.

Members' Gown.—A report upon this matter by the Committee for General Purposes was adopted. The gown may be worn on all ceremonial occasions, and is obtainable from Messrs. Ede and Son of Chancery Lane, London.

Court of Examiners.—The three vacancies were filled in by the reappointment of Mr. William Anderson and Mr. Page, and by the election of Mr. Bernard Pitts in place of Mr. Edmund Owen, who did not seek re-election.

The Meeting of Fellows and Members.—The following answers were returned to the four resolutions adopted at the meeting of Fellows and Members on November 16th, 1899: Resolution (1): That the Council are of opinion that there are no sufficient grounds for altering the decision at which they arrived on July 13th last, respecting the introduction into the supplementary charter of some provision for the representation of Members upon the Council. Resolution (2) was referred to the Discipline Committee. Resolution (3): That the principles adopted by the Council respecting the registration of midwives were fully set forth in the Report of the Council laid before the meeting of Fellows and Members in 1898, these principles being the same as those adopted by the General Medical Council. Resolution (4) was referred for consideration to the General Purposes Committee.

Alteration of the Charter.—Mr. Harrison, as Chairman of the Centenary Committee, stated that the Home Secretary had received instructions to make the necessary alterations in regard to the Charter.

General Medical Council.—The following letters from this body were referred to the Committee of Management for consideration and report: (1) A letter stating "that the Council, having regard to the fact that it is contrary to the interest of the public to have two competing Examining Boards sitting in London, strongly recommend the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Apothecaries' Society of London, to combine for the purpose of holding qualifying examinations conjointly." (2) A letter of December 6th from Sir William Turner, President of the General Medical Council, stating that that Council adhere to their Regulation of June 7th, 1899, respecting the registration of medical and dental students, and inviting the College to again take matter into consideration.

Proposed Cartwright Prize.—A report was received from the Vice-Presidents stating that a proposed transfer could not be accepted by the Council under the existing deed of trust, and recommending that the present trustee might apply to the Charity Commissioners, so as to make the trust amenable to certain conditions, after which it might be accepted.

MEDICAL NEWS.

THE Princess Christian will open a new wing of the Warneford Hospital, Leamington, early next month.

THE UNIVERSITY OF ST. PETERSBURG.—By a recent Ministerial decree, M. Sergejevich, whose unpopularity with the students is said to have been one of the chief causes of the disturbances that have occurred among them, has been relieved of his functions as Rector of the University of St. Petersburg. He has been succeeded by Professor Holmstein, who is credited with liberal tendencies.

THE SANITARY INSTITUTE.—At the examination in practical sanitary science, held by the Sanitary Institute on December 1st and 2nd, 9 candidates presented themselves, but none passed. At the examination for inspectors of nuisances, held on the same dates, 80 candidates presented themselves, of whom 48 were certified—as regards their sanitary knowledge—competent to discharge the duties of inspectors of nuisances under the Public Health Act, 1875. At the examination for inspectors of meat and other foods, on December 8th and 9th, 13 candidates presented themselves, to 9 of whom certificates were granted.

AN X-RAY CLUB.—Dr. J. J. Ridge of Enfield informs us that an *x*-ray club has been founded at Enfield by six medical men in conjunction with a representative of the Cottage Hospital Committee. These gentlemen have purchased for 21 guineas a newly-introduced portable Roentgen ray apparatus, manufactured by Messrs. Parsons and Eachus, electrical engineers, Queen Victoria Street, E.C. The rules arrange that the apparatus is to be kept at the Cottage Hospital, and

may either be used there or be taken away for use at a patient's house, the sum of one shilling being paid for one day's use, two shillings for the second day (consecutive), three shillings for the third, and so on. The Committee of the Cottage Hospital will pay at the same rate if the apparatus is used for a patient in the hospital. The size of the case, which is of polished oak, is—height, 13 inches; length, 12 inches; and width, 7 inches: its weight, 27 lbs.; and it contains an 8-inch spark coil, contact breaker, commutator, fluorescent screen (8 inch by 6 inch), Crookes's focus tube and holder, which simply slides out of the case, condenser, and fluoroscope. It is said to be exceedingly simple to use.

Royal Institution.—The following are the lecture arrangements at the Royal Institution before Easter: Mr. C. Vernon Boys, six Christmas lectures (specially adapted for young people) on Fluids in Motion and at Rest; Professor E. Ray Lankester, twelve lectures on the Structure and Classification of Fishes; Dr. W. H. R. Rivers, three lectures on the Senses of Primitive Man; Professor H. H. Turner, three lectures on Modern Astronomy; Dr. Charles Waldstein, three lectures on Recent Excavations at Argive Heræum (in Greece); three lectures by Sir Hubert H. Parry; Mr. W. L. Courtney, three lectures on the Idea of Tragedy in Ancient and Modern Drama; the Right Hon. Lord Rayleigh, six lectures on Polarised Light. The Friday evening meetings will begin on January 19th, when a discourse will be given by the Right Hon. Lord Rayleigh, on Flight; succeeding discourses will probably be given by the Hon. C. A. Parsons, Professor J. Reynolds Green, Mr. H. Warington Smyth, Professor J. H. Poynting, Major Ronald Ross, Professor Frank Clowes, Sir Benjamin Stone, M.P., Professor J. Arthur Thomson, Sir A. Noble, Professor Dewar, and others.

MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN.—Dental Surgeon. Applications to the Honorary Secretary, 77 and 79, Grosvenor Street, S.W., by January 2nd, 1900.

BRISTOL ROYAL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House-Surgeon. Salary, £100 per annum, with room and attendance. Applications, endorsed "House-surgeon," to the Secretary by January 2nd, 1900.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Surgeon. Unmarried in each case. Salary for the former, £90 per annum, rising to £100 and the latter £50. Board, etc., provided. Applications to the Secretary by November 29th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by January 9th, 1900.

CITY DISPENSARY, 46, Watling Street, E.C.—Physician. Must be F. or M.R.C.P.Lond. Applications to the Secretary by January 13th, 1900.

DERBYSHIRE ROYAL INFIRMARY.—Resident House-Physician. Appointment for twelve months, with possibility of extension. Salary, £80 per annum, with apartments and board. Applications to the Secretary by January 5th, 1900.

DORCHESTER: DORSET COUNTY HOSPITAL.—House Surgeon. Salary, £100 per annum, with board and residence. Applications to the Chairman of the Committee by December 28th.

DUBLIN: CITY OF DUBLIN HOSPITAL.—Vacancy on the Surgical Staff. Applications to the Honorary Secretary, Medical Board, by January 5th, 1900.

DUBLIN: NATIONAL HOSPITAL FOR CONSUMPTION FOR IRELAND.—Resident Medical Officer and Registrar. Salary, £100 per annum, with apartments, board, etc. Applications to the Honorary Secretary, 5, Leinster Street, Dublin, by December 30th.

EDINBURGH: UNIVERSITY OF.—(1) Examiner in Materia Medica; (2) Two Examiners in Clinical Surgery. Appointments for four years. Salary of the former £75 per annum and the latter £50 each per annum. Applications to the Secretary, University Court, by December 30th.

GLASGOW DISTRICT ASYLUM, Gartloch.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, apartments, etc. Applications, marked "Assistant Medical Officer," to be sent to the Secretary, 33, Cochrane Street, Glasgow, by December 30th.

GLOUCESTER GENERAL INFIRMARY AND EYE INSTITUTION.—Assistant House-Surgeon. Appointment for six months, subject to re-election. Remuneration at the rate of £30 per annum with board, residence, and washing. Applications to the Secretary by December 26th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Assistant Anæsthetist. Appointment for six months, but eligible for re-election. Honorarium at the rate of 10 guineas per annum. Applications to the Secretary by January 15th, 1900.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident House Physicians. Appointment for six months. Honorarium, £25. Applications to the Secretary by December 29th.

HOSPITAL FOR WOMEN, Soho Square, W.—Assistant-Surgeon, must be F.R.C.S.Eng. Applications to the Secretary by January 3rd, 1900.

KENSINGTON UNION.—Second Assistant Medical Officer to the Workhouse and Infirmary must not exceed 28 years of age. Salary, £80 per annum, with apartments, board, and washing. Applications on forms provided to the Clerk to the Guardians, Marloes Road, Kensington, W., by December 29th.

LEEDS: GENERAL INFIRMARY.—Resident Surgical Officer. Salary, £100 per annum, with board, residence and washing. Applications to the Secretary of the Faculty by December 23rd. [This vacancy was by mistake printed as "Resident Medical Officer" last week.]

LEICESTER INFIRMARY.—House-Physician. Salary, £100 per annum, with board, apartments, and washing. Applications to the Secretary, 24, Friar Lane, Leicester, by January 1st, 1900.

LEWES DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Honorary Secretary, 211, High Street, Lewes, December 30th.

LONDON HOSPITAL, Whitechapel, E.—Dental Surgeon. Applications to the House Governor by January 6th, 1900.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Senior House-Physician. Junior House-Physician is applicant, and if appointed there will be a vacancy as Junior. Salary, as Senior £100 per annum, as Junior £50, with board and apartments. Applications to the secretary by January 3rd, 1900.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon; unmarried. Salary, £120 per annum, with furnished apartments, etc. Applications to the Secretary.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—(1) Resident Medical Officer. Appointment for twelve months. Honorarium £100. (2) Assistant Resident Medical Officer. Appointment for six months. Honorarium at the rate of £60 per annum. Applications to the secretary by January 6th 1900.

PLAISTOW: ST. MARY'S CHILDREN'S HOSPITAL.—Senior Resident Medical Officer. Appointment for one year. Salary, £80 per annum, with residence, board, and washing. Applications to the Secretary by January 4th 1900.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer for 1901. Applications to the Registrar by January 5th, 1900

ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street, W.—Resident Medical Officer. Salary, 100 guineas per annum, with annual increase of 10 guineas to maximum of 120 guineas, with furnished apartments, etc. Applications to the Secretary by January 2nd, 19.0.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physiology. Applications to the Dean by January 2nd, 1900.

SALOP COUNTY COUNCIL.—County Medical Officer of Health. Salary, £750 per annum. Applications to the Clerk, Shirehall, Salop, by December 27th.

SEAMEN'S HOSPITAL SOCIETY.—Senior House Surgeon for the Branch Hospital, Royal Victoria and Albert Docks. Salary, £75 per annum with board and residence, and £25 additional if certain clinical work is performed satisfactorily. Applications to the Secretary, Greenwich, by December 27th.

STIRLING DISTRICT ASYLUM, Larbert.—Junior Assistant Medical Officer. Salary, £100, with board, etc. Application to the Medical Superintendent.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £50 a year, with board lodging, and washing and £6 in lieu of stimulants. Applications to the House Committee by December 27th.

YORK.—Medical Officer of Health of the City. Salary, £400 per annum. Must devote his whole time to the duties. Applications, endorsed "Medical Officer of Health," to the Town Clerk, Guildhall, York, by January 4th, 1900.

MEDICAL APPOINTMENTS.

COLLIER, James, M.D., M.R.C.P., B.Sc., appointed Medical Registrar to the National Hospital, Queen Square, W.C., *vice* A. J. Whiting, M.D., resigned.

COLVILLE, Neil, M.B.Toronto, appointed Clinical Assistant to the Chelsea Hospital for Women.

GIBBES, Lewes, M.R.C.S., L.R.C.P., appointed Clinical Assistant to the Hospital for Diseases of the Skin, Blackfriars.

HAYES, G. Constable, F.R.C.S.Eng., appointed Assistant Ophthalmic and Aural Surgeon to the Leeds General Infirmary.

HILL, A. A., L.R.C.P., L.R.C.S.Edin., appointed Certifying Factory Surgeon for Tunstall and District, *vice* C. S. Edwards, L.R.C.P., L.R.C.S.Edin.

LITTLEJOHN, T. H., M.R., C.M., D.P.H.Edin., appointed Medical Officer of Health to the Rochdale Urban District Council, *vice* N. Wade, M.R.C.S., L.R.C.P.Lond., resigned.

MACCALLAN, A. Ferguson, M.B., B.C.Cantab., F.R.C.S.Eng., appointed Junior House-Surgeon at the Royal London Ophthalmic Hospital.

OWEN, R. Jeffreys, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health for the Llandovery Town Council.

PARSONS, Walter Brock, M.R.C.S., L.R.C.P.Lond. appointed Resident Medical Officer to the North-West London Hospital, Kentish Town Road.

RUSSELL, Charles H., M.R.C.S., L.R.C.P., D.P.H.Lond., appointed Medical Officer of Health for Great Yarmouth, *vice* John Fately, M.D.Durh., resigned.

UNDERHILL, S.V. H., L.R.C.P., M.R.C.S., appointed House-Surgeon to the Suffolk General Hospital.

QUEEN CHARLOTTE'S HOSPITAL, Marylebone, N.W.—The following appointments have been made in the Medical staff:

Consulting Physician—Dr. William Chapman Grigg.

Physicians to In-patients—Dr. William Rivers Pollock, Dr. William J. Gow.

Physician (Non-Obstetric)—Dr. W. P. Herringham.

Physicians to Out-Patients. Thomas Watts Eden, M.D.Edin., M.R.C.P.Lond.; Chas. Hubert Roberts, M.D., M.R.C.P.Lond.; Arthur Francis Stabb, M.B., B.C.Camb., M.R.C.P.Lond., M.R.C.S.Eng.

Ophthalmic Surgeon—Sydney Stephenson, M.B., C.M.Edin., F.R.C.S.Edin.

Dental Surgeon—Frank Morley, M.R.C.S.Eng., L.R.C.P.Lond., L.D.S.Eng.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

STEPHENS.—At Capetown, South Africa, the wife of H. W. Stephens, M.R.C.S., of a son.

MARRIAGES.

KINGSFORD—BASSETT.—December 14th, at Winterbourne, Houghton, Dorset, by the Rev. H. Tilney Bassett, Rector of the parish and brother of the bride, Bertram Harold Kingsford, M.B.Lond., of Woking, youngest son of the late Henry Baldock Kingsford, to Minorel Bouchier Tilney Bassett, third daughter of the late Rev. Francis Tilney Bassett, Vicar of Pulverton, Somerset, and Prebendary of Wells, and Mrs. Bassett, of Weston-super-Mare.

MARTIN—DICKSON.—On December 14th, at Ormond Quay Presbyterian Church, Dublin, by Rev. Alex. Hall, M.A., Drogheda, Robert M. Martin, of 5, Ulster Terrace, Stillorgan Park, co. Dublin, son of J. R. Martin, J.P., Helensburgh, N.B., and to E. Winifred Dickson, M.D., F.R.C.S.I., second daughter of the Right Honourable Thos. A. Dickson, Drogheda.

WEDMORE—KERSEY.—On December 6th, at the Minster, Warminster, by the Rev. E. W. Legge, M.A., Curate of the parish, Charles Ernest Wedmore, M.A., M.B.Cantab., M.R.C.S., son of the late Thomas Wedmore, J.P., of Druid Stoke, near Bristol, to Caroline, daughter of the late Frederick Kersey, of Romsey, Hants.

DEATHS.

BOYLE.—On December 2nd, at Hasslemere, Chelmsford Road, Leytonstone, Robert Boyle, L.R.C.S., L.R.C.P., L.F.P.S., aged 45 years.

BREDIN.—On December 4th, at Little Sutton, Cheshire, Howard Albert Bredin, M.D., aged 38 years.

BRODIE.—At 5, Woodside Place, Glasgow, on December 16th, John Ewan Brodie, M.D., Brigade Surgeon C.V.I.B., and S.M.O., Clyde Defences.

FLINT.—On December 13th, Frederick Sayer Flint, L.R.C.S., L.R.C.P., at Orford, Suffolk, aged 31. Australian papers please copy.

FROST.—On December 13th, at 30, Ladbroke Grove, W., Charles Maynard Frost, F.R.C.S. (formerly of Ladbrook Square), aged 85.

THORNE.—On December 18th, at his London residence, Sir Richard Thorne Thorne, K.C.B., F.R.S., F.R.C.P., aged 68, of Inverness Terrace and Fairlawn, St. John's, Woking, Principal Medical Officer of the Local Government Board. Friends will kindly accept this the only intimation. No flowers.

WARING.—On December 12th, at his residence 8, Eaton Road, Hove, Dr. Francis John Arthur Waring, Retired Surgeon R.N. Deeply mourned.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 2. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F., 2.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.* Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p. Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1. Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Opthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 3; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 3; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-Therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

DR. TOM TAYLOR (Guilford Street, W.C.) desires to know where "gyrol" can be obtained.

CORNWALL asks for references to books dealing with the medical and surgical treatment of diseases of the thyroid gland.

*** Pick's *Surgery* (London: Longmans, Green, and Co., 1899, 25s.) gives a good account of the surgery of the thyroid. Other references: BRITISH MEDICAL JOURNAL, 1899, vol. i, pp. 577 and 649 (Dr. Murray's lectures); *Annals of Surgery*, 1896, p. 99 (Kocher's cases); *Chirurgie du Cou*, by F. Terrier (Paris: Felix Alcan, 1898. F.4).

HOME FOR INEBRIATE.

M.D. asks for advice that would enable him to get the son of an old member of our profession into an institution or private family where the expenses would not exceed 15s. or £1 a week. The age of the patient is 27. He is well educated, has enjoyed good health from his birth, has agreeable and cleanly habits, but has lately shown a fondness for intoxicants.

TOUTING FOR PATIENTS.

DELTA inquires whether there is anything unprofessional in being medical officer to a society that adopts the following procedure to procure members. Canvassers go round to poor people, and endeavour to induce them to insure their lives in the society. Whether successful or not they then ask if they would like to join the society for sick benefits. If they agree, they are given their choice of three medical men to attend them. The name of each of these is written, not printed, on a card. Is this "touting" where no particular man is recommended?

*** Our correspondent cannot be recommended to accept such an office. This society would appear to "tout" for three medical men instead of one.

FEES TO MONTHLY NURSES.

ETHICUS complains of a custom which he believes prevails in many districts for the practitioner to pay a fee (usually 2s. 6d.) to the nurse at a confinement if the child is born before he reaches the house. He says that the consequence of this is that some nurses put every obstacle in the way of a doctor being fetched in time, and that any practitioner who stands out against the custom has the whole body of midwives arrayed against him. He wishes to know whether this is honourable conduct, and if so, whether any means can be found to stop such practices.

*** The custom seems to us a most foolish one if it has the effect which our correspondent describes, but the medical profession have the matter entirely in their own hands and surely should be strong enough to stop it. We are of opinion that all payments by medical practitioners to midwives and monthly nurses are objectionable and should be discountenanced.

INCOME TAX.

M. writes: I returned my income under Schedule E upon the average of three years, namely, 1896-7-8, but the surveyor of taxes now tells me that this is irregular, and that "the officers of the public body or corporation are chargeable under Schedule E upon the profits of the year of assessment, and not upon the average of three years."

*** The Income Tax Repayment Agency, of 6, Chichester Road, Paddington, informs us that assessments under Schedule E are made not upon the three years' average but upon the year's salary. They lay stress upon the word "salary," because fees or other emoluments may be estimated on the profits of the preceding year, or on the average of the three years preceding. They further call attention to the fact that all official deductions and all expenses incurred in the performance of the duties of the office are allowable deductions. They undertake to advise in each case as to those deductions on receiving full particulars.

SURGICAL INSTRUMENT MAKERS AND COMMISSIONS.

T. L. C. asks: What is the proper course to adopt when a surgical instrument maker sends the medical man who has sent a patient to him for an appliance a cheque as commission, stating such is his usual practice? The patient paid the usual price given in the price list, and the commission, therefore, our correspondent says, comes from the tradesman. He goes on to say (1) Should the doctor return the cheque to the tradesman, who will pocket it with a smile, and think what fools professional men are; or (2) shall he keep it; or (3) shall he give it to his patient, telling him the facts? He adds finally that he inclines to the third of these courses.

*** We regret that our correspondent should have any doubt as to the proper course of procedure, which is to return the cheque expressing his sense of the impropriety of the offer. If he keeps it for his own benefit he is soiling his own honour; if he keeps it and hands it on to his patient, his conscience may be clear but his conduct in the tradesman's eyes will be exactly the same as if he had kept it himself, and he will have injured his profession nearly as much at if he had kept it himself. A gentleman ought not to mind being thought a fool because he is particular as to the sources of the money he accepts.

ANSWERS.

F.—No action at law could be taken, but our correspondent might communicate the facts to the Medical Defence Union, 4, Trafalgar Square, W.C.

G. H. P.—We must refer our correspondent to the notice issued by the General Medical Council in accordance with its resolution of November 25th, 1897. It is impossible to say what view the Council might take if the case were brought to its notice. Our correspondent might communicate with the Medical Defence Union, 4, Trafalgar Square, W.C., or the London and Counties Medical Protection Society, 12, New Court, Lincoln's Inn, W.C.

QUERCUS.—Recent atlases of skin diseases are: *Atlas of the Diseases of the Skin*, by Dr H. R. Crocker, in 16 parts (Edinburgh: Young J. Pentland; 21s. each part); *Pictorial Atlas of Skin Diseases and Syphilitic Affections*, edited by J. J. Pringle, M.B., F.R.C.P., in 12 parts (London: Rebman, Limited, 10s. 6d. each part). (2) The microscopical anatomy of new growths may be studied in Sims Woodhead's *Practical Pathology* (Edinburgh: Pentland; 25s; third edition; good coloured drawings); Ziegler, translated by D. MacAlister, *Textbook of Pathological Anatomy*, Part I, General (London: Macmillan; 2nd edition; 12s. 6d.).

PHYSICAL STANDARD FOR THE NAVY.

PATERFAMILIAS.—Candidates for entry as naval cadets must be in good health, and free from any physical defect of body, impediment of speech, defect of sight or hearing, and in all respects well developed and active in proportion to their age. As regards sight, normal vision of each eye, separately tested by Snellen's types, is requisite, as also freedom from colour blindness. Further information as to physical standard necessary may be obtained from the Secretary to the Admiralty, Whitehall, London.

ASSISTANTS' DUTIES AND OBLIGATIONS.

BEGINNER.—It is not possible to lay down any rule as to the distance a principal can reasonably expect an assistant to walk when engaged in his service, but it is to be hoped that no principal would expect his assistant to walk further than he is accustomed to walk himself. In the absence of a bond an assistant would be expected to give a reasonable notice on terminating his engagement. At law a reasonable notice is considered to be one reckoned according to the time at which periodic payments of salary become due. Thus, if an assistant is paid monthly he must give a month's notice, if quarterly then a quarter's notice.

THE PISTOJA GOUT POWDER.

W. H. C.—Sir Willoughby Wade, who now resides at Florence, has been good enough to supply the following particulars: The label on the packet of this powder states that it is "based on gentian and Indian wood." From this fact, and an examination of a sample, it is probable that it is a variant of the "Portland gout powder" from which it differs in containing guaiacum, one of the synonyms of which is "lignum indicum." A. J. L. Jourdan, in his *Pharmacopée Universelle* (J. B. Baillière, Paris and London, 1828) gives the following formula of the Portland powder: Gentian root, round birthwort root (*Aristolochia rotunda*), ground pine root (*Teucrium chamæpitys*), the tops of germander (*Teucrium chamædrys*), and of the lesser centaury (*crithræa centaurium*) of each equal parts to be ground *separately* to a fine powder and mixed; dose 3ss. He gives of this three variants, one of which omits the gentian and puts in guaiacum. The pistoja powder is probably the last with the gentian restored. None of these powders is a panacea for gout. To my knowledge, a patient who was on one occasion much benefited by the pistoja powder recurred to it some two years afterwards without the slightest benefit. The cases in which a *mélange* of this kind may be useful are, as might be guessed from the quality of each constituent, those in which there is atony of the intestinal canal and stomach, and perhaps also in other cases when there is marked asthenia. There is no reason to suppose that the pistoja is superior to the Portland powder. The best way to take this is to add to it a sufficiency of water to make it into a paste, and so take it an hour before breakfast, for three or four weeks or longer according to the effects.

NOTES, LETTERS, Etc.

A CORRECTION.

DR. JAMES EDMUNDS (Manchester Square, W.) writes to point out a slip which occurred in a review published in the BRITISH MEDICAL JOURNAL of December 16th, in which it was stated that the term "dextrose" included cane sugar. As he points out, cane sugar and dextrose are quite different substances. Cane sugar under hydrolysis breaks up, yielding dextrose and lævulose. He sends the following interesting quotation from Mr. A. H. Allen's work on *Organic Analysis:* "The sugar contained in diabetic urine is commonly assumed to be identical with the dextro-glucose present in grapes, and produced, together with lævulose, by the inversion of cane sugar. The subject requires further investigation by competent observers, who will require to determine the total sugar by some process more certain than those commonly used for the purpose, comparing the results so obtained with those yielded by the optical method. In ordinary cases, however, the polarimeter can be trusted to give excellent comparative, if not rigidly accurate, results, provided the proportion of sugar is not too small. For the detection or determination of the traces of sugar supposed to be present in healthy urine, the optical method is useless, since urine ordinarily contains traces of various substances, other than sugar, which are more or less optically active." In conclusion, Dr. Edmunds writes: "As to the devolution of examinations of urine to 'nurses and others,' the profession will quite endorse the reviewer's condemnation. Nor can one see the object of multiplying small manuals of this kind which contain no original matter."

DEFECTIVE SYSTEM OF REMOVAL OF DUST AND HOUSE REFUSE IN LONDON.

BRIGADE-SURGEON-LIEUTENANT-COLONEL C. W. MACRURY, I.M.S. (retired), writes: The offensive condition of the London streets after a week or two of dry weather, and the ludicrous attempts of some vestries to mitigate the nuisances arising therefrom by sprinkling homœopathic quantities of powder over the side gratings are, I fear, inevitable, as it is hopeless to expect that our streets can ever be kept as clean and sweet as those of Paris and other Continental cities, no matter what steps are taken to flush them, so long as the present number of horses and dogs are kept up. The system of removal of dust and house refuse is unworthy of the largest and richest city in the world. The dust is carried in open baskets filled to overflowing on men's heads from the dustbins in the area or back yard, through the kitchen or other apartment to the dust cart in the street, from which the baker, butcher, greengrocer, or milkman may at the same time be entering the house for the purpose of delivering his share of the family food supply. The bread, meat, and vegetables are generally distributed in open baskets, or boxes, and are consequently liable to contamination by dust. The dust carts are heaped up high with refuse, and not always covered to keep their contents from dropping in the streets or being blown about. The dustman's filthy basket might with advantage be replaced by a galvanised bucket with a well-fitting lid, and the cart should be low so as not to require a ladder in filling it, and should be divided into compartments with separate covers, so that one being full it could be immediately closed, thus to a certain extent minimising the nuisance.

The public might be educated by health officers, male and female, to the importance of tradesmen delivering articles of food intended for human consumption covered in such a manner as to exclude dust and flies.

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Mr. J. T. Abbott, London; Alpha; Dr. W. E. Alderson, Newcastle-on-Tyne; E. G. E. Arnold, M.B., London. B Mr. A. Baldwin, London; Mr. V. Benoist, London; Mr. C. S. Buck, Mountsorrel; Mr. J. Battersby, Glasgow; Messrs. Burgoyne, Burbidges, and Co., London; Dr. T. L. Brunton, London; Dr. R. E. Burges, Chester; Mr. J. P. Bush, Clifton; Messrs. Bailliere, Tindall, and Cox London; Dr. R. J. M. Buchanan, Liverpool; Messrs. Burroughs, Wellcome, and Co., London; J. H. Bailey, M.B., Manchester; Mr. G. H. Broadbent, Manchester; B. Dubius, M.D.; Dr. A. H. Boyle, Brighton F. M. Blumer, M.B., Stafford; Mr. F. Bramwell, London British Balneological and Climatological Society, Secretary of, London. C Dr. W. L. Christie, Bedminster; Mr. W. G. Copestake, Derby; W. Colquhoun, M.B., Glasgow; Dr. G. P. Chappel, Tottenham; W. W. Cheyne, M.B., London; Correspondent; Mr E. W. Challen, Brighton; Dr J. W. Cousins, Southsea; Messrs. J. and A. Churchill, London; L. Cobbett, M.B., Cambridge; Civil Surgeon; Mr. A. H. Cheatle, London; Cyclops. D A. F. Dixon, M.B., Cardiff; Doubtful; Mr. F. Dess, London; Mr. G. F. Darker, London; Dilemma; Dr A. Duke, Cheltenham. E Mr. J. M. Evans, Llandrindod Wells; Dr. G. H. Edington, Glasgow; Dr. J. Edmunds, London; Dr. F. Edge, Wolverhampton; Mr. F. Elvy, Eastbourne. F Sir J. Furley, London; Fairplay. G Mr. J. Grimshaw, Garstang; Mr. C. G. Grant, London; Sir W. R. Gowers, London; Dr. W. H. Goldie, London; Dr. J. S. Giordet, Mentone. H H. T. T; Messrs. J. Hopkins and Co., London; Dr. W. Hattigan, Hong Kong; Dr. J. Haddon, Denholm; J. B. Hall, M.B., Hall; Mr. H. Rider Haggard, Ditchingham; Mr. A. F. Heald, Cambridge. I Dr H. W. Irvine, Belfast; Inquirer. J Dr. H. M. Jones, London. L Leeds and West Riding Medico-Chirurgical Society, Secretary of, Leeds. M Mr. V. Matthews, London; Member; Dr. W. Millington, Manchester; Mr. F. Marsh, Birmingham; J. F. D. Macara, M.B. Darness M.B., M.A.; Mr. S. P. Matthews, Crawley; M.D.Glas; Mr. S. W. Maclwaine, Redhill; Dr. A. Mitchell, London; Dr. W. P. May, Helouan; M.D.; "Medical Standard" Editor of, Chicago; Manchester Pathological Society, Secretary of, Manchester; A. B. Mitchell, M.B., Belfast; A. M. Martin, M.B., Newcastle-on-Tyne. N G. P. Newbolt, M.B., Liverpool; Nottingham Medico-Chirurgical Society, Secretary of Nottingham. O Observer. P Mr. G. Pim, Dublin; Mr. H. H. Preston, Manchester; Messrs. Parke, Davis, and Co., London; Dr. C. Porter, Sockport; Dr. F. L. Phillips Leamington; Mr C. H. Passman, Leamington. R Dr H. B. Robinson, London; Dr. A. Ransome Bournemouth; Dr. G. D. Robinson, London; Dr. R. E. Rentoul, Liverpool; R.A.M.C.; Rustions. Mr. J. Robertson, Edinburgh. S Mr. J. Smale, Darlington; Somerset; Mr. S. S. Stephens, Brussels; Mr. J. Spurr, Lyme Regis. T T. L. C.; Dr. N. Thard, London. V Dr. L. Vivanco, London; Verax; Viridis. W Dr. W. H. White, London; Mr. C. H. Whiteford, Plymouth; Mr. W. R. Williams, Clifton; H. J. Walker, M.B., Montevideo; Mr J. Walsh, Mortarstown; Dr. J. P. Wills, Bexhill-on-Sea; Dr. T. J. Wood, Bradford; A. Wauchope, M.B., Glasgow. Messrs. C. Yarrow and Co., London.

BOOKS, ETC., RECEIVED.

American Pocket Medical Dictionary. Edited by W. A. N. Dorland, A.M., M.D. London: Rebman, Limited. 1899. 10s.

Minor Surgery and Bandaging. By H. E. Wharton, M.D. Fourth Edition. London: Rebman, Limited. 1899. 14s.

The Pathology and Treatment of Sexual Impotence. By V. G. Vecki, M.D. From the Author's Second German Edition. London: Rebman, Limited. 1899. 12s.

Practical Hints on the Analysis of Water and Sewage. By S. Barwise, M.D., D.P.H. London: Rebman, Limited. 1899. 2s. 6d.

Diseases of the Eye. By G. E. de Schweinitz, A.M., M.D. Third Edition. London: Rebman, Limited. 1899. 21s.

An American Text-Book of Surgery. By W. W. Keen, M.D., LL.D., and J. W. White, M.D., Ph.D. Third Edition. In Two Volumes. London: Rebman, Limited. 1899. 42s.

Psychopathia Sexualis, with special reference to Antipathic Sexual Instinct. By Dr. R. v. Krafft-Ebing. English Translation of the Tenth German Edition. London: Rebman, Limited. 1899. 21s.

Surgical Anatomy. By J. B. Deaver, M.D. In Three Volumes. Vol. I. London: Rebman Limited. 1899. 30s.

The Mind of the Nation. By M. R. P. Dorman, M.A., M.D. London: Kegan Paul, Trench, Trübner, and Co. 1900. 12s.

*** In forwarding books the publishers are requested to state the selling price

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

THE HARVEIAN LECTURES
ON THE
SURGICAL TREATMENT OF TUBERCULOUS DISEASES.

By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S.,
Professor of Surgery in King's College, etc.

Lecture III.

Genito-urinary Tuberculosis.

[The lecturer began by referring to various general considerations on the subject of genito-urinary tuberculosis, pointing out that the disease may affect almost all the organs in that system, and may begin in some cases in the urinary system and in others in the genital system, and may be either primary or secondary. As regards the relative frequency with which the two sets of organs are affected, Guyon found in 264 cases that the genital system alone was affected in 41, the urinary system alone in 88, and both together in 135. Where the disease is secondary to deposits elsewhere, most usually deposits in the lungs or in bones and joints, the urinary system is proportionally more frequently affected than in cases of primary origin. Reference was made also to the discussion as to the mode in which the affection spreads over the systems, the two views being the "descending" view, according to which the disease begins in the kidneys and spreads downwards to the genital organs; and the "ascending" view, according to which it begins in the genital organs and spreads upwards to the kidneys.

The probability is that both of these are at times correct. In cases arising secondarily to tuberculosis elsewhere the disease very frequently begins in the kidneys, and may thus readily spread down to the bladder and prostate, and so on to the genital system. On the other hand, in primary cases the disease frequently begins in males in the epididymis, and from thence spreads upwards to the urinary system. It is also possible that the bacilli may be deposited in more than one place at the same time, or in one part shortly after another, there being no actual continuity of infection from one organ to the other.

Various predisposing causes have been mentioned, the chief as regards the bladder, prostate, and genital system being gonorrhœa; indeed, some authorities have assumed that the bacilli enter through the urethra, but this seems to be very doubtful. Schuchardt, as a matter of fact, found tubercle bacilli present in some cases of gonorrhœa; in one he noticed that as the acute symptoms subsided chronic catarrh of the urethra followed, and in the discharge the gonococci had almost completely disappeared, while tubercle bacilli remained; and as the result of his observations he concludes that we should admit a new form of primary disease of the mucous membrane—namely, a superficial tuberculous catarrh. Apart, however, from these observations, tuberculosis of the urethra appears to be very rare, although it does sometimes occur at the upper part secondary to the disease of the prostate, and also to tuberculous cystitis. The lecturer then went on to the consideration of tuberculous epididymitis.]

Tuberculous Epididymitis.

Of the male genital organs the epididymis seems to be that most frequently affected with tuberculosis, and as the disease rarely remains localised to the epididymis for any length of time, it is not always easy to be certain in cases seen at a late period whether it has originated in the epididymis or in the prostate or some other part. In adults, however, the probability is that in the majority of cases the disease commences in the epididymis. In many cases the lesions are bilateral. Bardenheuer, indeed, has found that in almost all the cases the lesions are or ultimately become bilateral.

The bacilli may reach the affected organ in various ways. Some assert that they may come from the urethra, but this seems to me to be very doubtful. They are probably most frequently deposited from the blood, or come by the lymphatic vessels, or they descend along the vas or by lymphatic vessels from the urinary system, or they may spread from the peritoneum. The latter mode of infection is specially observed in infants, and it is apparently not so rare as one would at first sight imagine. In these infants one not infrequently finds the mesenteric glands enlarged, and the disease extending to the peritoneum, following down the vaginal process, and ultimately invading the testicle and epididymis. Under these circumstances the tunica vaginalis is first attacked, and the testicle is more often the seat of the disease than the epididymis.

In the epididymis and testicle we may have an acute tuberculosis which occurs in connection with general acute tuberculosis, and to which it is not necessary to refer, or we may have a local disease limited in the first instance to these organs. Of the local disease there are two forms, the one a local acute tuberculosis which generally begins in the testicle, and the other the ordinary or more chronic form, which usually commences in the epididymis. The acute form generally begins with the deposit of tubercles in the intertubular tissue of the testicle, and subsequently spreads to the epididymis, and the process goes on rapidly, and leads to destruction of the testicle. In the other and common form which commences in the epididymis, there has been much discussion as to the tissue in which the tubercles are first deposited, some holding that they first appear in the connective tissue outside the vas, and others that they commence in the interior of the duct. Probably the truth is that both forms of origin occur, that in some cases the disease begins in connection with the blood and lymphatic vessels outside the duct; while in others, and probably most frequently, it commences inside it. In connection with the latter view it will be remembered that tubercle bacilli have been demonstrated in the semen and the apparently healthy testicles of phthisical men, so that their presence in the interior of the duct, and the commencement of the disease in that situation in secondary cases especially, is highly probable. Growing in the interior of the duct, they set up, in the first instance, a catarrh with accumulation of epithelium in the lumen. These cells soon undergo caseation, and the duct becomes distended with caseous material; its wall at the same time becomes affected, and tubercles spread into the surrounding tissues. In some cases the process comes to a stop, and the caseous material is either absorbed or encapsuled, or calcareous salts are deposited in it. Very often, however, the mass breaks down and suppurates, and abscesses burst through the skin.

Much discussion has also arisen as to the part of the epididymis which is first affected. Bardenheuer maintains that the disease commences in the globus minor, owing to the stagnation of the secretion containing bacilli at the point where the vas leaves the epididymis, and where it has a more or less abrupt bend and is tortuous. The weight of evidence, however, is in favour of its commencement in the globus major. Wherever it begins, it quickly spreads over the whole of the epididymis, and before very long extends into the testicle itself, and also along the course of the vas. It is only in the early stage that the disease is confined entirely to the epididymis. Spreading into the testicle, the tubercles are first found in the corpus Highmori, usually in the intertubular tissue, and subsequently isolated tubercles can be found in the testicle. In the case of the vas it may spread along the interior of the tube, but in my own experience the tubercles are more frequently found in the lymphatic vessels in the wall of the vas and in the tissue around it. Spreading along the vas deferens, the vesiculæ seminales soon become involved, and ultimately the prostate; indeed, in some cases, the two latter structures may be affected without any detectable disease of the vas deferens itself.

[As to the symptoms, the lecturer pointed out that from the point of view of treatment one may divide the cases: (1) Into those of acute tuberculosis of the testicle and epididymis, which is comparatively rare, the disease beginning quite acutely, presenting the characters of an acute epididymitis in the first instance, frequently resulting in abscess within a very few weeks, the abscess being sometimes in the interior of the testicle. In a few of these cases the testicle alone has been found affected, the epididymis being at first free, and in these the local symptoms and pain are very acute. (2) The ordinary subacute or chronic tuberculous epididymitis which may be met with in various stages, and which may or may not be accompanied with abscesses or sinuses. The lecturer proceeded to examine the chief characteristic symptoms of tuber-

culous epididymitis, and then went on to consider the treatment.]

Treatment.

The treatment of tuberculous epididymitis, like that of other tuberculous lesions, must be considered under two categories, namely, non-operative and operative. It is certainly the case that a considerable number of cases of tuberculous epididymitis become quiescent either without suppuration or after suppuration has occurred, and the thickening may after a time almost entirely disappear. It is extremely difficult, however, to say in any given case whether it is likely to become quiescent or not. In the acute rapidly breaking-down forms, especially those affecting the testicle, one may feel pretty confident that they will not become quiescent; but in the more chronic cases where the swelling has been found more or less accidentally in the first instance, where it is firm, and where there is but little pain, one can never be quite certain. Some of these cases gradually improve under general treatment, while others, which at first may have seemed to be progressing favourably, break down and suppurate. In all of them, however, there is a tendency for the disease to spread to other parts of the genito-urinary system, or to the other side, even where the primary disease is improving. In fact, in the great majority of cases, when the patients come under notice the vesiculæ seminales, or at least the vesiculæ on the affected side, can generally be felt to be enlarged and nodular, and the disease tends to spread to the prostate, and thence to the urinary system.

Non-operative treatment may be employed either when the case when first seen is very chronic, with a strong tendency to recovery, or when other parts of the genito-urinary system are already seriously affected. It consists essentially in placing the patient under good hygienic conditions, in efficient support to the testicle and in the avoidance of injury. As regards drugs, benefit may be obtained from cod-liver oil, guaiacol, iodoform, etc. In addition to support to the testicle, compression and the application of ointments of mercury or iodide of potassium are frequently employed, but the former is to my mind a very doubtful measure, and as regards the latter I cannot say that I have seen any beneficial effect. If there is much pain or tenderness belladonna ointment is sometimes of use. In cases where the disease is evidently advancing, injections of various materials into the epididymis have been advocated, those most frequently employed being the iodoform emulsion so much used in tuberculous cases, and chloride of zinc, on the principle introduced by Lannelongue in the treatment of joint disease; these methods, however, do not appear to do any good, and the latter especially causes much pain.

The operative treatment may be either partial or radical; the former consisting of scraping and epididymectomy, and the latter of castration. Epididymectomy may, however, in some cases, especially when performed early, be classed as a radical and not a partial operation.

Some French surgeons more especially have advocated the employment of scraping or ignipuncture, and the former is useful in some cases where neither epididymectomy nor castration are advisable or permitted. Such are cases where there is suppuration or where abscesses or sinuses are present and where castration is not advisable or not acceded to by the patient. It has also been advocated at an early stage as a substitute for epididymectomy or castration, but I should not recommend it at that period. As I have already said in speaking of glands, one can only remove with a sharp spoon the soft breaking down tuberculous material; the tubercles situated in the firmer tissue beyond escape; and I can see no advantage in scraping out the epididymis at an early stage over the cleaner and more satisfactory operation of epididymectomy. If scraping is employed, a free incision should be made so as to expose the parts completely, and then, starting from the point where the abscess has originated, the cheesy mass in the epididymis should be thoroughly cleared out and portions of the wall around should be clipped away. It is well afterwards to sponge the surface with undiluted carbolic acid and then to pack the wound with iodoform gauze or cyanide gauze sprinkled with iodoform till granulation has taken place.

As regards the operative treatment for use in ordinary cases, two methods are at our disposal, namely, castration and epididymectomy. I need not say anything about the mode of performing castration, but as epididymectomy is not generally known, I may describe that operation, and I shall describe the method employed by Bardenheuer, who was the first to advocate it.

The operator stands on the affected side, grasps the testicle and turns it outwards so that the epididymis looks towards the operator. An incision should then be made over the testicle, and as I think that the vas deferens should always be removed as high as possible, I should advise that the incision commence over the external abdominal ring, and extend downwards to the lower edge of the testicle. If an abscess is present which has caused adhesion of the skin, or if there is a sinus in the skin, the incision must diverge on each side of the affected skin so as to include it in the parts removed. The various tissues are then divided till the cord above and the testicle and epididymis below are exposed. The next step in the operation is to separate the epididymis from the testicle. These structures are only organically connected together by the globus major, the body being free, and the globus minor being simply attached by fibrous tissue. In separating them, therefore, one begins at the body and the globus minor. Without much trouble a blunt instrument can be very soon insinuated between the body of the testicle, unless in advanced cases where marked adhesion has taken place between the two. The globus minor is then removed by detaching it from the tunica albuginea, and when the body and the globus minor have been thus detached, one can raise them up and so ascertain the conditions and relations of the globus major. At this stage care must be taken to avoid division of the vessels which enter and supply the testicle. These are present on the deeper surface of the epididymis as it lies in the position indicated, that is to say, they enter the testicle chiefly on the inner side of the epididymis. On that side, therefore, the substance of the cord should be pushed off from the epididymis with the handle of the knife, after incising the tunica vaginalis. On the other side the incision is made through the tunica albuginea, close to the margin of the testicle, and then the connection between the globus major and the hilum is divided, and in this way the epididymis is separated from the testicle and remains attached to the vas. If it is found that the hilum at the point of detachment is not perfectly healthy, one may cut into it and remove portions of the tissue, taking care as far as possible to keep to the outer side. Indeed, further slices of the testicle itself may be taken away if it is found that marked disease is present. The vas deferens is then freed from the other structures of the cord and followed up to the external ring, and it is pulled down through the external ring as far as possible and divided as high up as possible. After tying the bleeding points the incision in the testicle is closed by two or three catgut sutures and the wound sewn up. It is not necessary to suture the tunica vaginalis. Usually, if the surface of the testicle and the tunica vaginalis are rinsed out with sublimate solution, no subsequent hydrocele occurs. It is very important to see that all bleeding points are stopped, otherwise the scrotum may become very much distended with blood and healing thus much delayed. If there is much oozing, it is well to put in a drainage tube at the lower part for from twenty-four to forty-eight hours so as to allow the blood to escape.

We may now discuss the relative advantages and disadvantages of these two operations and the cases for which they are severally suitable.

1. *Castration.*

If one regards the affected part alone, this is certainly the most effectual operation, especially if combined with section of the vas as high up as possible; and were it not for the objections to be presently mentioned, it is the operation which one would advocate in preference to any other. In some cases, indeed, it is necessary, while in others, in spite of the objections, it is advisable. It is necessary, for example, in cases of acute tuberculosis of the testicle and epididymitis at an early period as the only possibility of checking the disease, and it is also necessary in cases where the pain is great, and more especially where it is due to suppuration of the substance of the testicle. It is advisable in some of the advanced cases where there is much suppuration, and where the patient's health is giving way as a consequence, even

although disease may be also present in the vesiculæ seminales and the prostate.

On the other hand, castration in cases of tuberculous epididymitis is a very serious operation, and one not lightly to be undertaken. If one could be sure that the removal of one testicle alone would arrest the disease, or at any rate that the possibility of the other becoming attacked was extremely slight, then undoubtedly castration would be the best procedure at an early stage of the disease; but unfortunately this is not the case. Even quite at an early period the trouble spreads along the cord and affects the vesiculæ seminales, or at least the vesicle on the affected side, and in many cases the epididymis on the other side becomes sooner or later attacked. The proportion of cases in which both sides are affected is variously given by different writers, but in my experience the majority of the cases are ultimately bilateral. The affection of the second epididymitis may occur soon after that of the first, or it may be delayed for a long time. In a case which I had last summer, an interval of seven years had elapsed from the time when I had removed the first testicle before the second became affected. It is this tendency to disease of the second testicle which renders the operation of castration such a very serious one, and for the following reasons: In the first place, if one testicle has been already removed the patient becomes extremely discouraged when he finds that the disease reappears on the other side; he is very apt to blame the surgeon, as if he were at fault, and is by no means ready to submit to a further operation. Besides, as one cannot assure him in the first instance that the disease will not reappear on the other side, indeed as one ought to tell the patient of the possibility of the other side becoming diseased before performing castration, it is by no means easy to persuade him to have the operation done at an early period in the course of the disease at the only time indeed when the operation gives a fair prospect of complete recovery. There can be no doubt that the loss of both testicles exercises a very deleterious effect on the patient, more especially as the disease has previously produced great mental depression and anxiety. In young patients this effect is not so marked as in those who are getting up in years, but in them the result is often that they lose interest in their affairs, become less acute men of business, become lazy, irritable, and morose, and in some cases may actually become demented, or maniacal. Indeed, in these cases of double castration for tuberculous testicles a very considerable proportion have ultimately committed suicide. Some attribute this mental disturbance entirely to the psychical effect of the loss of the testicle and the fear of consequent sterility, and surgeons have tried to deceive the patients by introducing artificial substitutes, such as celluloid, silk, etc. Apart, however, from the fact that healing does not always occur over these materials, and that they not infrequently have had to be removed subsequently, the fact that a patient could in this way be deceived would almost imply that his mental calibre had already been impaired. These attempts have not met with much success, and have been now practically given up.

Apart however from the generative function of the testicles it is now generally admitted that they have another and most important action, and that by means of their internal secretion they exert a very great influence on the well-being of the patient, and it is to the loss of this internal secretion that the bad effects of double castration are mainly due. There is ample evidence that where the vasa are blocked as the result of inflammation, or where they are removed and thus the generative functions are abolished, the testicles do not as a rule waste, nor are those serious effects to which we have referred produced.

A further question has been raised, namely, whether after the removal of both testicles the patients do not more readily succumb to the attacks of the tubercle bacillus as well as of other organisms than where they are present, and experiments which have been performed on dogs seem to support this view, dogs which have been previously repeatedly injected with testicular fluid resisting inoculation with tubercle bacilli, while others not so prepared have succumbed.

2. *Epididymectomy.*

These objections to castration are to a great extent met by the operation of epididymectomy. In the first place, one must bear in mind that the generative function of the testicle is at once destroyed by the disease, and thus the patient is placed in no worse condition by the removal of the epididymis and vas as regards that point than if no operation were performed. At the same time, with epididymectomy the testicle is left and the internal secretion remains. Hence the great difficulty as regards early operation is removed, and the patient is more likely to consent to this operation at an early period, when it may be of benefit in arresting the disease than if castration were proposed. And even if the disease, does appear on the other side subsequently, a similar operation is more readily acceded to. Besides, if one is only going to remove the epididymis, one need not delay the operation because some cases get well without operation; for what you propose to do does not place the patient in a worse condition than he is in at present, while, on the other hand, it may, when performed sufficiently early, be the means of arresting the spread of the disease.

As regards the results of epididymectomy, the majority of the wounds heal without any trouble. In some cases, more especially where the disease is advanced, a fistula is left, and if this is the case one may, after a time, scrape out the fistula, and not infrequently, on scraping out such a fistula, one finds only a small cheesy patch, after the evacuation of which the wound heals. As regards function, it is found that after the removal of the diseased epididymis the patient, who has generally been in a depressed state before, recovers his tone, while the sexual functions, which were previously in abeyance, return, and may even be increased. Again, epididymectomy is of use where the vesiculæ are affected, for the disease in the vesiculæ, and even in the prostate, frequently comes to a standstill. I have indeed seen the same after unilateral castration, so that disease of the vesiculæ seminales is not really an absolute contraindication to epididymectomy. It is probable that, when the flow along the duct carrying bacilli with it, and the lymph flow are arrested as the result of the operation, a considerable stimulus to the extension of the disease in the vesiculæ and in the prostate is removed; and, further, we must bear in mind the influence which the removal of the vasa in other cases seems to exercise on the prostate.

Various objections may be urged against the operation of epididymectomy, of which the following are the chief. (1) The operation is often only partial, because tubercles and tubercle bacilli may be present in the testicle itself; this is no doubt true in many cases, unless the operation be performed at quite an early period, but I have already pointed out that partial operations are sometimes very effective, especially where the tubercles left behind are isolated and not in masses. Besides, the operation cuts off the communication between the testicle and the rest of the genito-urinary system, and even if recurrence takes place in the testicle, it can be treated locally by scraping out sinuses and so forth. (2) It has been pointed out that one may find on cutting down that the testicle is badly diseased, and that castration is necessary after all; granted that this may be the case, the condition is no worse than if we cut down with the intention of performing castration in the first instance, and we have on the other hand the satisfaction of knowing that we are not needlessly sacrificing an important organ. (3) It is urged that the vascular supply to the testicle may be interfered with, and that that organ may subsequently necrose; this has certainly happened in some cases, either where sufficient care has not been taken to avoid injury to the vessels entering the testicle, or where the disease of the testicle itself has been so extensive that it has been necessary to take away the greater part of that organ. In the latter case it is of course doubtful whether castration was not the proper procedure in the first instance. (4) Bardenheuer himself thinks that recurrence on the other side is perhaps more frequent after epididymectomy than after castration, and he further states that the secondary disease may be more acute than the primary. That, however, does not seem to be the general experience: besides, if it were so, and castration were necessary on the other side, the patient would still be left with one testicle, whereas in double castration both are taken away.

From these various considerations it seems to me that the operation of epididymectomy is well worthy of more consider-

ation than it has yet received in this country, but like other procedures it must be employed with judgment, and is by no means applicable to every case. It is distinctly contra-indicated where the whole of the body of the testicle is diseased; where there is a deposit in the centre of the testicle; where there are advanced lesions of the vesiculæ and prostate, especially with suppuration; where the urinary system is invaded; and where the patient is suffering from advanced phthisis. In these two latter cases castration or scraping are the better operative procedures if operation is necessary at all.

Tuberculosis of the Prostate.

[After detailing the general symptoms of tuberculosis of the prostate, the lecturer went on to describe the course which abscesses followed, and the treatment of the disease.]

The abscesses which form in connection with tuberculous prostate not uncommonly burst into the urethra, leaving a ragged ulceration which does not readily heal, and through which urine makes its way into the interior of the prostate. In other cases, where they are situated more towards the back of the organ, the abscesses may perforate into the rectum; infection then occurs in the abscess cavity which leads to further extension of the suppuration and an opening into the urethra as well, so that a recto-urethral fistula is very apt to be established in these cases. Again, the abscess may make its way down to the perineum, and may ultimately burst there, leaving sinuses which lead up towards the prostate. This condition of suppuration in connection with tuberculosis of the prostate is a very serious one, and one which it is very difficult to treat with satisfaction; and therefore the progress of a case of tuberculosis of the prostate must be very carefully watched, and should symptoms of suppuration occur surgical intervention should be at once adopted.

Treatment.

The treatment of tuberculous disease of the prostate resolves itself into palliative and operative treatment. The palliative treatment consists in rest, good hygiene, the avoidance of sexual excitement, the employment of antiseptic injections *per urethram*, the administration of antiseptics by the mouth, which pass out with the urine, the use of morphine and belladonna suppositories, and so forth. So long as there are no signs of breaking down and no marked increase in the prostatic trouble, the case should be watched without operation. In France some surgeons recommend that if the disease is progressive, injections of iodoform in glycerine or ether, or injections of chloride of zinc, should be employed, and various operations have been elaborated with the view of carrying out these injections. In employing chloride of zinc, for instance, some surgeons open the urethra in the membranous part, and then push a needle attached to a syringe containing chloride of zinc into the substance of the prostate. Others, again, introduce a needle through the rectum, but this is very apt to be followed by sepsis. Some have even done a suprapubic cystotomy.

This injection method is, however, a most uncertain and unsatisfactory one, and it cannot be at all recommended. Certainly it is not so satisfactory as to lead one to perform any of the operations above-mentioned with the view of carrying it out. Practically surgical intervention limits itself to cases where suppuration is occurring, and in these instances it should be carried out early with the view of evacuating the pus before the abscess opens into the urethra or into the rectum. For this purpose the best way of reaching the prostate is probably by means of a transverse or curved incision with the convexity forwards just in front of the anus. This is deepened, the urethra pushed forward, its situation being indicated by a sound, and the rectum pushed backwards, and as it is deepened the levator ani is divided.

Usually where an abscess of any size is present one finds after getting through the levator ani that the finger passes into a large cavity containing the pus, and from thence one can follow out the cavity into the prostate. Having opened the abscess, it should be scraped out, care being taken, of course, not to scrape through the wall of the urethra or of the bladder, and having evacuated it as thoroughly as possible the cavity should be packed with iodoform gauze. This operation should be done even in cases where pus is escaping into the urethra, because without it the patient is almost certain not to get well. Where however the abscess has already burst into the rectum, it is well to avoid an operation of this kind, for the result would be very apt to be a rectal fistula. In these latter cases it is better to dilate the anus and attempt to enlarge the opening into the rectum and scrape out the cheesy deposit through that opening, and in those cases the wound may heal.

In the after-treatment a catheter should be tied in for a week or ten days, and if there has already been a communication between the urethra and the abscess cavity, the patient should be taught to pass a soft catheter for himself until the wound has healed. Healing usually occurs fairly satisfactorily in these cases where all the cheesy material has been removed. A sinus may, however, remain for a long time, or it may be necessary to open up the wound again, but in most cases the result is fairly satisfactorily.

Tuberculosis of the Bladder.

[After referring to tuberculous disease of the vesiculæ seminalis, the lecturer went on to consider the question of tuberculosis of the bladder. He pointed out that although usually secondary, it did occasionally occur primarily, being more frequent in males than in females and affecting by preference young adults. The tubercles are deposited in the superficial layers of the mucous membrane, and may be numerous, and lead to superficial ulcers. They are most common about the apex of the trigone, but the condition may extend over the whole of the bladder. The bladder is very much diminished in capacity, the walls being thickened partly as the result of hypertrophy of the muscular fibres, and partly as the result of chronic inflammation. After discussing the symptoms of the disease, the following remarks were made with regard to treatment:]

Treatment.

The treatment may be either medical or surgical. Unfortunately, by neither method can we with any certainty bring about a cure, but, nevertheless, much may be done to relieve the patient's distress. Medically, good hygiene, country or seaside air, etc., are of the first importance, and light exercise is also advisable. In acute cases relief may be obtained by warm saline baths, mustard to the hypogastric region, warm water injections into the rectum, etc. The food should be light and easily digestible, and consist essentially of large quantities of milk. Cod liver oil should be given in large doses, and benefit may also be obtained from the use of arsenic, creosote, opium, and belladonna for the pain, etc. These means are, however, often ineffectual, and local measures are frequently adopted, more especially washing out the bladder so as to get rid of the pus and mucus, and injecting various substances either to relieve the pain, such as weak cocaine or opium, or antiseptic substances, with the view of trying to interfere with the growth of the bacteria. Warm boracic lotion, about from 3 to 4 per cent., is one of the most suitable fluids for washing out the bladder. Iodoform and glycerine are often injected into the bladder and left in, but the results are disappointing. Iodoform and vaseline, about 6 drachms of a 5 per cent. mixture, has been strongly advocated by some French surgeons. Injections of nitrate of silver, which are of use in other forms of cystitis, almost always do harm. The instillation of weak sublimate solution (1 in 1,000 to 1 in 5,000) has been employed, and is much praised by some. Cocaine and opium injected into the bladder are very transient in their effects, and must be very carefully used, as they are apt to be absorbed. Benzoic acid taken internally helps to keep the urine sweet. Pills of iodoform in ½-grain to 1-grain doses, tincture of buchu, triticum repens, etc., may be employed. Attempts have also been made to increase the capacity of the bladder by gradual distension with fluid, and this subject has been referred to by Mr. Battle only as recently as in the *Lancet* of December 9th.

Coming now to the more strictly surgical treatment, it must be admitted that it is by no means always efficacious; nevertheless, in many cases marked relief is afforded to the patient, while in some the disease apparently subsides. This is more especially the case in those instances where tuberculosis of the bladder is the primary disease. Even where a cure is not obtained, the relief afforded to the great sufferings of the patient amply compensate him for the operation.

The operative interferences consist in opening the bladder

and draining it, in attempting to remove the tuberculous ulcerations, or in applying antiseptic substances to them. My own opinion is that the essential benefit which follows operative treatment is the result of the drainage of the bladder which is thus placed at rest. In two cases in which I did nothing else marked improvement resulted—quite as marked as in cases where attempts have been made to get rid of the ulceration or to destroy the bacilli. Nevertheless, I think that, although the essential point is rest to the bladder, it is well, if one can, to try to improve the ulcerated condition. In some cases where the ulcers are quite small, the piece of mucous membrane and the ulcer may be pinched up and snipped off, any bleeding being stopped by the electric cautery. In other cases where the ulcer is large an attempt may be made to scrape away the surface by a sharp spoon; this of course is difficult, seeing that there is no firm background against which to scrape. A background may be provided by a bag in the rectum, or in some cases where the ulcer is low down by the finger in the rectum; but in any case scraping the ulcer cannot be very satisfactory. After scraping it as well as one can, it is well to touch the surface of the ulcer with the point of an electric cautery. Having scraped and cauterised the ulcers, some iodoform should be rubbed into the surface, and then the bladder should be left open and drained. This is best done by introducing an indiarubber tube into the bladder above the pubes, and carrying the other end into a basin of antiseptic solution. Care should be taken that the tube does not go too far into the bladder; if it touches the posterior wall of the trigone it is apt to give rise to great spasm, and thus make the patient worse instead of better. In most cases it suffices to have the end of the drainage tube simply projecting into the bladder, and to prevent it shifting its place it is well to take a stitch through the tube, the wall of the bladder, and the skin, which can be afterwards removed when one wishes to remove the tube. The skin should be stitched up around the tube, so as if possible not to permit any leakage, and the tube should be large enough to thoroughly fit the hole which has been made into the bladder. The wall of the bladder above the ureters may project forwards and touch the anterior wall at the lower part, so as to leave a cavity in which urine collects, and which the patient passes *per urethram*. Under such circumstances of course the rest to the bladder is insufficient. This may be avoided to some extent by raising the foot of the bed very considerably so as to take the weight of the intestines off the upper part of the bladder, but in some cases it may be necessary to put in a longer tube. The tube should be left in for from four to five days, and then should be taken out, washed, and reintroduced. It is well to wash out the bladder twice a day through the tube with weak boracic lotion at the temperature of the body, and some introduce from time to time a little iodoform and glycerine emulsion; the latter is not, however, of any great consequence. The drainage of the bladder should, in my opinion, be kept up till, as far as one can judge, the cystitis has completely subsided; I believe that it should be continued for at least six weeks, and I have continued it for as long as six months in one case. Some French surgeons close the bladder at once without drainage, being content with excising and cauterising the ulcers. This I have never attempted, and I very much doubt if it is likely to be so satisfactory as thorough drainage of the bladder and complete rest to the organ.

Along with the local treatment, the general health should be attended to. Large quantities of milk should be given, and also large quantities of cod-liver oil, good hygienic conditions, and the other palliative measures already alluded to in speaking of the medical treatment.

As to the results of treatment, my own experience in 5 cases has been complete cure in 1 case and relief in the other 4. In 1, about six months after the first operation, the left kidney was found to be enlarged and tuberculous, and was removed, the result being marked improvement of the patient and almost complete cessation of symptoms for two or three years. At the end of that time, however, he returned with increased symptoms again. In the other cases, the patients left my care very much relieved but still with some pus in the urine, and with a certain amount of frequency and slight pain. More extensive statistics seem to show that about 80 per cent. of the cases are much relieved by the operation and about 20 per cent. are apparently cured.

Tuberculosis of the Kidney.

[The lecturer pointed out that this also may be primary or secondary. It is not uncommonly unilateral in the early stage, but there is a considerable tendency for the second kidney to be attacked. The disease also almost always affects the ureter. After discussing the symptoms of tuberculous kidney and the diagnosis of the disease, the author made the following remarks with regard to treatment.]

I need not go into the medical treatment of tuberculous kidney, and indeed I have but little time to refer to the surgical treatment. Of late years the application of surgery in the treatment of renal tuberculosis has become more and more frequent, but we are still far from having attained to any clear ideas as to the best surgical procedure, nor can we always obtain a good result. The surgical procedures which may be adopted are:

1. Incision into the kidney or nephrotomy, or nephrotomy followed by drainage of the kidney through a lumbar incision with the view especially of enabling the more rapid escape of the decomposing pus, and also preventing infection of the urinary passages.
2. Nephrotomy accompanied by scraping out of as much as possible of the tuberculous material.
3. Nephrectomy often accompanied by the removal of a portion or the whole of the ureter as well.
4. Partial nephrectomy in which only the diseased portions of the kidney are taken away.

Before proceeding to surgical measures one must try to ascertain the following points: (1) Whether the disease is really situated in the kidney; (2) which kidney is affected; (3) whether the kidney is the only one of the genito-urinary organs which is diseased; (4) to what extent the disease in the kidney has gone; and (5) whether the disease is unilateral or whether the opposite kidney is also affected.

With regard to nephrotomy, which was the operation almost solely employed at first, it consists in making an incision down to the kidney in the lumbar region, opening the pelvis, and attempting to establish a permanent opening through which the pus and urine may escape. This operation is, however, only slightly curative; in a certain number of cases no doubt the kidneys do shrink up and the disease becomes quiescent, and the fistula may ultimately be allowed to heal; but in the majority of cases the disease goes on, and but little benefit results. By these means it is very difficult to prevent pus escaping down to the bladder, and thus one object of the operation, namely, that of preventing the spread of the infection, is defeated, while this difficulty is further increased by the constant tendency of the opening to contract; and, further, in cases where the opening remains patent the patient ultimately finds that this constant escape of urine in the loin is a source of great trouble to him. Nephrotomy is, however, indicated where the general state of the patient is so bad as not to permit of any more prolonged operation, and where, on the other hand, the progressiveness of the trouble necessitates immediate intervention. It is also necessary where there are perinephritic abscesses, and also where one is not certain that the other kidney is healthy. In most cases, however, it must be looked on as a preliminary operation, with the view of getting rid of the fever and generally bad condition of the patient, and after a time the question of nephrectomy as a curative procedure must be considered.

Nephrectomy.

In order to justify nephrectomy one must be pretty sure that the other kidney is intact, and also that the bladder is free from disease. These are points which it is by no means always easy to be certain of. The condition of the bladder may no doubt be made out by cystoscopic examination, and the condition of the other kidney might also be ascertained at the same time if there was much pus coming from it. But very often the urine discharged from the second kidney, although it is diseased, does not contain enough pus to enable one to make a certain diagnosis by a cystoscopic examination. In the female, no doubt, one can pretty easily catheterise the ureters, and so examine the urine from

each kidney separately; and before performing nephrectomy it would be well to do this. In the male the procedure is so difficult that I doubt if, even in the most expert hands, complete reliance may be placed on the result. Other ways in in which the condition of the other kidney may be ascertained have been adopted. For example, some surgeons advocate that before performing nephrectomy an incision should be made into the abdomen in the middle line in front, and both kidneys examined by palpation. This is, however, a very uncertain method.

On the one hand, no doubt, if one finds that a kidney is nodular and knobby, with all the other symptoms of tuberculous kidney, one may safely say that it is tuberculous, but it does not always follow that because a kidney is smooth and of normal size that it is not tuberculous. Again, where one finds that a kidney is distinctly enlarged one is apt to look on that along with the other signs of tuberculosis as an indication that that is the affected kidney; but it has happened more than once that the kidney on the side where tuberculosis was suspected has been small or normal in size, while that on the other side was markedly enlarged, and subsequent examination has shown that the small one was the tuberculous one, while the large one was simply a healthy one undergoing compensatory hypertrophy. Hence palpation through the abdomen is in reality of very little use, and only adds to the complications and risks of the operation. More important than palpation through the abdomen is the proposal to cut down on each kidney; in the first place, to cut down on the kidney which is supposed to be diseased, and to ascertain without opening the kidney whether the conditions are such as to render nephrectomy advisable; if this is the case to temporarily stitch up the wound, turn the patient over on the other side, and expose the other kidney, which should then be turned out, and, if necessary, incised with the view of making sure as to its healthy condition. The objections to this procedure are that it of course means extra shock, which cannot always be borne by a patient with tuberculosis of the kidney; and further, even with incision into the kidney one cannot be quite sure that there may not be early tuberculosis at some part. Nevertheless this procedure is the one which it is probably best to adopt if by no other method of examination one can come to any definite conclusion as to the healthy condition of the second kidney. In some cases, however, the matter must be left to chance; and where the patient is suffering very severely, and one kidney is hopelessly disorganised, one must allow him to take his chance as regard the condition of the other kidney, for if the one kidney is hopelessly destroyed, one must assume that he has been living with the other kidney, and that unless there is any reflex suppression of urine as the result of the operation, he can still go on living with the other kidney after the removal of the first, and with a better chance of recovery when the debilitating disease on the one side has been removed.

The chief indications for nephrectomy are the unilateral character of the lesion, the absence of lesions in other organs, definite symptoms of tubercuIosis, and sometimes the occurrence of severe hæmaturia. The contraindications are where the general state of the patient is very grave, where there is tuberculosis of the second kidney, or where there is tuberculosis elsewhere. There is no doubt that of all the procedures adopted for tuberculous kidney nephrectomy gives the best results. At the same time one may occasionally have a disastrous result where there is disease on the other side. Nephrectomy also may be performed either as a primary operation or secondarily to nephrotomy. The operation is no doubt most simple and most likely to be beneficial where it is a primary operation, but in some cases, as has been before remarked, the condition of the patient is so bad in the first instance that nephrotomy is all that can be done, and then when the patient's condition has improved the question of nephrectomy has to be considered. In these cases, where the kidney is removed secondarily, one generally finds that the adhesions have very much increased in number, so much so that the operation is prolonged, accompanied with considerable loss of blood and much shock, and there is also a risk of damaging the vessels which have been displaced by the contraction of the fibrous tissue. In some cases, indeed, the best plan is to remove the kidney piecemeal rather than to attempt to take it out as a whole, but where it can be removed as a whole it should be done. Under such circumstances the capsule is separated till the hilum is reached; a pair of forceps are then applied over the hilum, and the kidney broken up and removed in pieces; finally, the hilum is examined carefully and the vessels tied.

In all cases in which the kidney is removed one must remove more or less of the ureter, and if necessary the whole of the ureter should be removed, and this can be readily done by an incision running downwards in the lines of the operation for tying the common iliac artery. As regards the operative procedures, where there is no perirenal abscess, and not much adhesion of the kidney, the oblique lumbar incision is perhaps the best; but in advanced cases especially after a previous nephrotomy, I prefer Terrier's method.

Of late good results have been obtained in some cases by a partial nephrectomy, especially in the early stage, the diseased portions of the kidney being removed, and the rest left behind. Several cases of this kind are chronicled in Mr. Henry Morris's lectures on *Diseases of the Kidneys*. The portions involved in the disease are scraped and clipped away, and the remainder of the kidney is tightly stitched up. In a considerable number of cases, however, the removal of the rest of the kidney has subsequently been necessary. This partial operation may also be combined with nephrotomy in cases where, on cutting down on the kidney, nephrotomy is found to be the desirable operation. Any bosses on the surface should be cut into and all the material scraped out, and if the kidney is fairly loose and can be taken out of the wound, one can pretty thoroughly clear out the tuberculous material. These cavities should then be packed, a drainage tube introduced into the pelvis and the wound closed. Some indeed stitch up the kidney after such operations without any drainage, but the other is probably the better procedure.

As a matter of fact, owing to the uncertainty as to the exact state of matters, when one cuts down on a tuberculous kidney, one must do so with an open mind, prepared to do one of the various operations which we have referred to; either to remove the whole kidney, to remove portions of it, or to be content with a nephrotomy combined or not with scraping. But on the whole, where the other kidney is healthy, the best results are obtained by nephrectomy.

LECTURES
ON
PHARMACY AND THE BRITISH PHARMACOPŒIA.

Delivered before the Society of Apothecaries of London, December 5th, 1899.

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Lecture III.

The Pharmacopœia in its Relation to Pharmacists.

Influence on Prescribing and Dispensing.

Master, Wardens, and Gentlemen,—If I had some hesitation about my first two lectures on the subject of the *Pharmacopœia*, I have more about this, in which I have to deal with much that relates to practical work. In the construction of the *Pharmacopœia* it was all very well to have in our minds ideals of what would be desired by students and medical men, but our labour has been in vain if we have produced a useless, an unworkable *Pharmacopœia*. In this last lecture, in which I propose to deal with the part important to those engaged in the preparation of pharmacopœial substances, data are wanting to show whether, on the whole, we have succeeded or failed. In the first place, of course, we have to look to the influence of the *Pharmacopœia* on prescribing and on dispensing; to inquire whether it facilitates either or both.

For this purpose we must consider the alterations introduced into the *Pharmacopœia*. Now alterations in the volumes are to be found on every page, in nearly every line, but for the purposes of this lecture, it is convenient to consider them in the way in which they are given in the prefatory pages, as alterations in

the names of preparations, alterations concerning strengths, and alterations concerning the composition of different galenical preparations. We have to inquire whether these alterations are, as a whole, calculated to assist or obstruct; whether, in fact, they are of much, of any assistance, or whether they are really to be looked upon as needless and unwarrantable by both pharmacists and prescribers.

Alterations in Nomenclature.

In the first place, with regard to alterations in the names, it is perfectly obvious that changes of name may affect the degree to which the *Pharmacopœia* is employed by the practitioner, and on the degree to which it is employed by the medical man depends, on the whole, the influence it will have upon the work of the pharmacist. Unless its drugs are prescribed and prescribed fairly frequently, very much of the work of the pharmacist will degenerate into mere barter of proprietary preparations. In the *Pharmacopœia* is a list, a page and a half long, of articles and preparations the names of which have been altered. I have gone through this list carefully because I thought it appeared rather long, and this list I found could be cut down for practical purposes to only ten names. I may as well read those only which I consider essential. A good many changes consist of minor alterations in spelling where a letter has been substituted for a diphthong, as *e* for *œ*. This change of spelling is of no matter; so long as the patient gets his drug, the change of orthography is scarcely worthy of mention. It may be important from a pedantic point of view, but it will have no influence on the practical use of the *Pharmacopœia*. Argenti et potassii nitras in the *British Pharmacopœia* 1885 becomes argenti nitras mitigatus in the *British Pharmacopœia of 1898*. This is merely a more correct way of indicating that in this preparation the activity of silver nitrate is reduced, and that potassium nitrate is added as a diluent.

The next is perhaps more important. Ergotinum has now become extractum ergotæ, and this is of the greater importance owing to the change of injectio ergotini hypodermica to injectio ergotæ hypodermica. It seemed rather absurd to retain a special name for a substance that could only be defined as a purified extract, for which no definite composition could be given. The name ergotin appeared to suggest that the substance was an active principle, instead of being a mixture. Is there any inconvenience in this change of name? I think not, because most medical men in obstetric practice carry the drug with them, or if, being pressed for time, the case being urgent, they write to a chemist for it, they will use abbreviations, thus: Inj. ergot. hypoderm. Whether the doctor is thinking of ergotin or of the extract of ergot is a matter of no importance; the chemist knows thoroughly well what is wanted.

Then with regard to lini farina and lini semina, which are changed to linum contusum and linum, practitioners rarely use any of these names; they employ the English equivalents. The linimentum iodi is now altered to liquor iodi fortis; probably nobody, not even the most energetic of medical students in his first year, uses the linimentum iodi as a liniment; the preparation is a strong solution of iodine which is painted on, and not employed with friction; hence the name liniment was misleading.

Then with regard to liquor plumbi subacetatis, to which fortis has been added, this is really an academical distinction, and merely emphasises that the *British Pharmacopœia* has a strong and a weak solution. The next, pilula asafetidæ composita, is now changed to pilula galbani composita, and this change has been effected partly because many older practitioners have been in the habit of employing the latter name, partly because "asafetida" suggests unpleasant ideas, and partly because galbanum is present.

To employ the term cascara sagrada in place of rhamnus purshiani cortex is, I think, an improvement, inasmuch as cascara sagrada is the name applied to the official preparations, and there is no advantage in laying undue stress upon the botanical source.

The change from tabellæ nitroglycerini to tabellæ trinitrini was made with some hesitation. It must be remembered that the *Pharmacopœia* is indebted to Mr. Martindale for the formula by which the tabellæ were compounded. It was felt desirable to alter the proportion of the ingredients, to give more chocolate in each tablet. It was found in practice that patients suffering from angina pectoris are often in the habit of breaking the tablets, and of taking a half or a third of the pharmacopœial dose; it was thought this division could be more readily effected with larger tablets. Since the original proportions were altered it was obviously desirable to change the official name, and the recent introduction of the solution of trinitrin suggested an easy way out of the difficulty.

Now, apart from these alterations of name, I think it will be found that the remaining changes are of very small moment—that they consist, for instance, in strivings after accuracy, in the substitution of the term "hydrochloride" for what used to be "hydrochlorate"; the addition of a suffix, as in aloinum and pepsinum; in some instances the omission of a word or of a single letter, as the ferri arsenias, which becomes ferri arsenas. These changes are not likely to interfere with the use of any of these preparations by the prescriber.

Alterations in Strength.

It will be found that the Committee of Revision have been careful to alter the strengths in accordance with the other alterations introduced. The primary idea, as I have already indicated in the first two lectures, was to facilitate the use of the *Pharmacopœia* by the student and prescriber by altering and simplifying the doses. To carry this idea into effect changes in strength were necessary. I will not weary you by going over the whole list of drugs of which the strength has been altered; but to take infusions as an example, it will be found that the infusions of chirata, of ergot, of rhubarb, and of serpentary are now made of double their former strength. The dose of these infusions has been reduced, so that it is now "half to one ounce" instead of from "one to two ounces."

The spirits of cajuput, cinnamon, juniper, lavender, nutmeg, peppermint, and rosemary are now directed to be made of five times their former strength. Here again the dose has been reduced; to obtain uniformity a convenient dose had to be fixed. The spirit of chloroform is so commonly employed that any change of its dose would give endless trouble. We tried, therefore, to harmonise the doses that did not matter very much with those that did matter a great deal. Doses of half to one drachm are now reduced to five to twenty minims, and accordingly the strength must be correspondingly increased. With some preparations this explanation is not entirely true; it does not give the whole reason of the change. For instance, aqua chloroformi is now made half its former strength. The strength was previously determined by the degree of solubility of chloroform at the ordinary temperature; hence the amount of chloroform that dissolved would obviously vary with conditions outside the control of the pharmacists. Some patients complained greatly of the burning taste of aqua chloroformi when it was used merely as a solvent, while others complained of unpleasant eructations or after-taste. All these objections are to a great extent met by the present alteration.

The strength of some of the extracts—for example, the alcoholic extract of belladonna and the extract of nux vomica—has been changed very materially. The alcoholic extract of belladonna is now one-third its former strength, the extract of nux vomica is two-thirds its former strength. Both these are standardised preparations, and the first is now brought to be a 1 per cent. preparation, the second is a 5 per cent. preparation. It was thought advisable to make these changes in order to obtain something that would favour the future use of the decimal system. It must be remembered that in producing this *Pharmacopœia* we were looking forward to the time when prescriptions should be written on the decimal system, when we shall be in harmony with the practice abroad, and when our practitioners shall find no difficulty in a foreign country in prescribing in accordance with a foreign *Pharmacopœia*.

The hypodermic injections of apomorphine and morphine have been reduced to half their former strength, and the change has been made to facilitate their employment. The Committee were informed that these solutions are rarely employed at the present time, that practitioners are much more in the habit of using little compressed tablets. These can be dissolved in an unmeasured quantity of water, which therefore contains the dose required regardless of the exact number of minims injected. If the hypodermic injections were to

retain a place in the *Pharmacopœia*, it was certainly desirable, from the point of view of safety, to increase the dose and degree of dilution.

[Dr. Tirard then referred at some length to the changes in liquor epispasticus, in the phosphorus pill, in the compound soap pill, and in many of the tinctures.]

The alterations of strengths of the tinctures were influenced by the desire to render the doses more uniform. The most important alteration, of course, is the change in the tincture of strophanthus, the strength of which is one-half of that formerly ordered, while the dose is made the same as that of digitalis. Another important change, the results of which require to be watched carefully, is that in the compound tincture of chloroform and morphine. It has been represented that this is a very serious matter, since we are now using four times the previous quantity of morphine hydrochloride. I am not quite sure that this is distinctly dangerous. An ordinary 10-minim dose only contains $\frac{1}{17}$ gr. of morphine hydrochloride. I have so often been told by practitioners that they use neither the official preparation nor chlorodyne, that I have made very many inquiries as to what becomes of all the chlorodyne that is manufactured, and, I think, I have at last run it to earth at sea. In the revision of the medical scale of passenger ships it was found that chlorodyne was considered an important drug; it was used not so much by the medical men on passenger ships or in the mercantile service, as by the captains, who are said to be in the habit of using chlorodyne rather lavishly on emergencies.

Since chlorodyne has been employed somewhat recklessly—poured out in a spoon or a cup—and since it is distinctly dangerous to allow a drug containing morphine to be used in this way, the pharmacopœial preparation has been introduced, and an attempt has been made to safeguard its employment by insisting on the use of a special poison bottle, with a red label to indicate poison, and with careful directions as to the mode of administration.

Alterations in Composition.

I am afraid that, speaking in this Hall, I may lose some respect by saying that I really do not care very much about the alterations in composition. It is a matter of comparative indifference to me how pills are made up so long as they contain the active ingredients required by the prescriber. On looking at the list of preparations of which the composition has been changed, I find that the pill of aloes and iron, of aloes and myrrh, the compound asafetida pill, the compound calomel pill, the compound rhubarb pill, and many others, have been altered. This list is disquieting until it is realised that it only affects the excipient; it is merely a substitution of syrup of glucose for glycerine, treacle, or confection of roses.

With the hypodermic injections which find a place in the list, the alteration is merely the use of distilled water in place of camphor water. I do not think the dispenser or prescriber troubles much about that. It is a question for pharamacist whether the liniment of ammonia is to remain as before, or whether we are to employ almond oil instead of some of the olive oil; or whether in the liniment of soap we are to use soft soap instead of hard soap.

[Dr. Tirard then referred in detail to the alterations in the composition of various plasters, extracts, liquors, lotions, mixtures, powders, tinctures, aud ointments, and he showed that the majority of the changes were desired by pharmacists, and were immaterial to medical men.]

Conclusions.

Towards the close of these lectures, we have to look back, and consider the results of all the changes that have been made in the *British Pharmacopœia*. How do they affect the chemist, the dispenser, the manufacturer? Are they dangerous? Do they furnish any directions that are impracticable? Are they merely troublesome worries, free from danger but devoid of advantage? I do not think there is much danger, except possibly with the compound tincture of chloroform and morphine, or with the tincture of nux vomica. The alterations of dose have been made by the same people who made the alterations of strength; and these have been made side by side, so that if the strength has been altered or modified the dose has been modified, and *vice versâ*. The result is the same so far as the activity of the drug is concerned, but the drug is more readily employed since the dose is more easily remembered. Within this Hall I have no right to speak of what is practicable and what is impracticable. New processes, and new standards have been introduced, but I do not think that these processes and standards need lead to any permanent difficulty, since they result from advice given by various manufacturing chemists and others, daily engaged in working with pharmacopœial processes. I have reason to believe that in the preparation of standardised liquid extract of belladonna, some inconvenience has been experienced from the production of definite physiological results when the pharmacopœial instructions were implicitly followed. I am disposed to think that any such undesirable results must be met by some alteration in the apparatus, which shall tend to check the diffusion of the dust of belladonna in the atmosphere.

In a work like the *Pharmacopœia*, intended for daily use, every alteration must be troublesome. It is inevitable that it should be so. I have great sympathy with the chemist who, in criticising the *Pharmacopœia*, protested against the numerous changes; he had had to work with four different *Pharmacopœias* during his life, and with a certain number of *Addi ions to the Pharmacopœia*. I have had to teach with three *Pharmacopœias*, and I know that any changes for a time produce some uncertainty and inconvenience. On the whole, however, I believe that the changes that have been made in this last *Pharmacopœia* are in the direction of simplification, they are favourable to the increased use of pharmacopœial preparations, and this means increased employment of chemists by increased prescribing of pharmacopœial drugs. It also means the diminished use of proprietary preparations.

To turn next to the question: How has the *Pharmacopœia* been received by chemists, individually or collectively? An ingenious chemist lately defined it as "a manual of inartistic, injudicious, inconvenient, injurious, and incongruous innovations." This individual criticism happily has not been echoed by the many. To look at the matter more seriously, how has the *Pharmacopœia* been welcomed?

The *Pharmacopœias* of various dates have had different characteristic names assigned to them, such as a physician's, or a student's, or a teacher's *Pharmacopœia*. The present volume was called a "wholesale druggist's pharmacopœia" at a meeting of the Pharmaceutical Conference at Belfast, and it was even complained that another Irish grievance had arisen, that the Irish pharmacists had not been consulted, that the Irish had had no opportunity of expressing their views. As a matter of fact the *Pharmacopœia* Committee included two representatives from Ireland, Dr. Atthill and Professor Tichborne. It is true however that the Pharmaceutical Society of Great Britain rendered invaluable assistance at every stage of the work, and therefore the Pharmaceutical Society of Ireland may have had some grounds for feeling hurt.

Everybody who has looked into the volume is now ready to suggest improvements and changes, but the whole point comes to this: Would these improvements, these changes, be generally acceptable? To say that everybody can alter the *Pharmacopœia* is merely to indicate the widespread interest taken in it; but where so many are concerned there is obviously need of a central controlling body, a central committee, which shall be perfectly unbiassed, and the result of whose deliberations shall be to effect a compromise between contending views. The work of a committee, especially with a book like the *Pharmacopœia*, is to discount any tendency to render the volume either a druggist's, a student's, or a physician's *Pharmacopœia*. There is always the possibility that in the advice received one or other of these elements may predominate. The endeavour of the committee is to smooth away these differences and to produce a work which will not satisfy everybody, because that is proverbially impossible, but will be equally fair to all, and should thus satisfy the majority.

One word more as to why the compilation of the *Pharmacopœia* is in the hands of medical men. This you will remember forms a never-ending source of complaint in certain journals, although the duty of compilation is by Act of Parliament entrusted to the General Medical Council. The well-intentioned efforts of the Pharmacopœia Committee are continually being hampered by such remarks as this: "What is required is that every one competent to take part in the

work of revision should be allowed an opportunity of expressing his opinion before the book is published and before the official formulæ and processes are rendered unalterable for the time being." Just think, gentlemen, of trying to harmonise the opinions of everyone who thinks himself competent to give an opinion on the subject! And to quote further from the same article: "There appears to be a growing feeling amongst pharmacists that unless such recognition is forthcoming they ought to decline to have anything to do with future revisions of the *Pharmacopœia*, and if in addition they proceed to prove by deeds rather than words that they alone are competent to deal with a certain section of the work it may be that long before another new *Pharmacopœia* is called for pharmacy will have attained its proper position in the matter."

If we consider the way in which trade interests are affected by the *Pharmacopœia*, if we consider that the volume deals with things bought and sold, it is impossible not to realise the risks of trade competition, of trade influence, and the constant danger of introducing a standard which might create a monopoly. I would ask you whether, with this in view, it is not better that the compilation should be in the hands of those whose motives cannot be assailed, that the final responsibility should rest with those whose interests are not at stake?

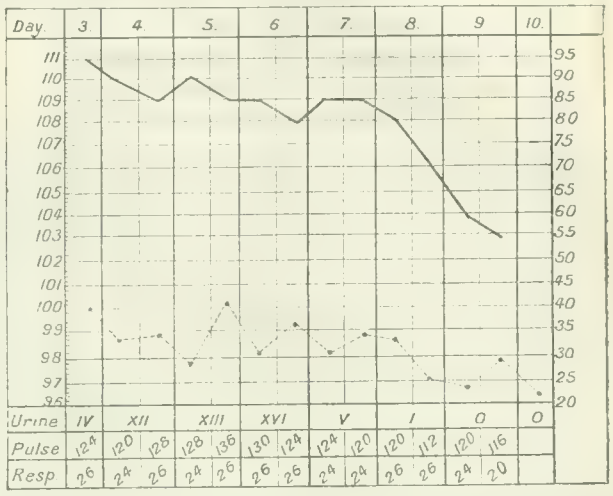
THE ESSENTIAL TOXIC SYMPTOMS OF DIPHTHERIA.

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In the widest sense the total symptoms of an acute microbic disease may be regarded as the outcome of specific intoxication; but the directly toxic element in the complex morbid condition is generally masked by secondarily-induced phenomena. Among the latter there stands out the train of symptoms accompanying pyrexia—no doubt itself toxic in origin. In light of this consideration diphtheria appears to be a suitable disease for analysis since, in addition to the fact that data are available on the experimental side, there is at its acme a frequent absence of febrile symptoms.

It is obvious that fatal cases, in which the toxic symptoms are extreme, afford the best material for observation, care being taken to exclude a large proportion in which the issue has been wholly or in part determined by such adventitious factors as laryngeal obstruction, hæmorrhage, or pneumonia. Between the residual cases thus selected a notable resemblance will be found to exist. Briefly, for a time the only symptoms present are those ascribable to sore throat and fever, the first specific signs being undue pallor, moderate compressibility of the pulse, and lassitude. The significance of the latter signs is such that they frequently suggest the examination of the pharynx in children too young to complain of sore throat. There is little further change in the case until three or four days have passed. Then the pallor becomes increasingly intense and the pulse more compressible, but the pyrexia less. Later the pulse is irregular, the urine diminishes in quantity, and the extremities tend to become cold. Frequently there is oppressive pain referred to the cardiac region or epigastrium. Towards the end the surface of the body is blanched and cold, the temperature is subnormal, and the radial pulse disappears. Other symptoms are jactitation and dimness of vision. The patient's mind remains clear until the end.

Some years ago I was struck by the resemblance between the above symptoms and those which accompany fatal hæmorrhage in cases of enteric fever, the inference being that a common cause existed, namely, a fall in blood pressure. Dr. Brodie[1] has shown that an injection of diphtheria toxin produces in cats a rapid fall in blood pressure followed by a slower recovery. This depression Dr. Brodie traces to relaxation of the blood vessels. In fatal cases it is accompanied by a fall in temperature. As a result of hearing Dr. Brodie lecture on these researches it occurred to me that blood-pressure records obtained by means of a sphygmometer in cases of diphtheria might prove instructive. For this purpose I employed the pocket form of the Hill-Barnard instrument. In the result, successive observations in the same case are accepted as accurate, although, owing to all the patients being children, certain considerations suggest a higher absolute pressure than that registered. Six cases ending in death, and twenty in recovery, have been studied. The results obtained in the former cases, which are at present alone under consideration, prove sufficiently consistent to permit the selection of a type, variations from which can be subsequently noted.



Morning and Evening Chart of Case.—In the uppermost transverse column is shown the duration of the disease in days. In similar columns below are given the urine in ounces, the pulse-rate, and the number of respirations. The thinner line in the body of the chart indicates the temperature in accordance with the Fahrenheit scale on the left, and the thicker one the blood pressure in mm. of mercury as shown by the figures on the right.

History of a Case.

K. M., aged 3 years, was admitted on the afternoon of the fourth day of an attack of diphtheria. She was a well-nourished child, with an excellent past history. Although somewhat pale she was bright and intelligent. The vital organs were healthy. Typical membrane (from which the medium bacillus was cultivated) covered both tonsils, and extended on the left side over a small part of the soft palate. The cervical lymphatic glands on the same side were slightly inflamed. There was no discharge from the nose. The patient's temperature was 100 F. The respirations numbered 26, and the pulse 124, the latter being slightly compressible. Half an ounce of chlorine solution internally was ordered every four hours, the pharynx being syringed at similar intervals with a saturated solution of boracic acid. The diet consisted of 4 ounces of milk given two-hourly, with 1 drachm of whisky added. At 11.30 P.M. 15,000 units of antitoxin were injected. On the following day—the fifth of the attack—there was little change in the case beyond increased swelling of the neck, and the appearance of a very faint trace of albumen in the urine. It may be noted here that the albumen increased in subsequent specimens, until—in the last obtainable—the proportion was about 30 per cent. On the sixth day the general condition remained unchanged. Late in the evening a second dose of 21,000 units of antitoxin was given, as the membrane persisted and the cervical inflammation was increasing. On the seventh day it was reported that the patient had been sick during the night, when the pulse was weaker for a time. The whisky was now doubled, as it was difficult to give the patient her full quantity of milk. Fragments of membrane were washed away each time the pharynx was syringed. Towards evening the extremities were cold. On the ninth day much of the membrane had disappeared, the remainder being diffluent. The pulse was more compressible. Sickness beginning in the night continued, and the patient was ordered whisky and water only by mouth, enemata of over-zyminised milk being given. The difficulty in keeping the patient warm increased, and the skin was of a waxen hue. On the tenth day champagne replaced the whisky, and zyminised meat suppositaries the enemata. The pulse was slightly irregular. On the eleventh day the sickness was persistent, the urine almost suppressed, and the pulse progressively weaker and more irregular in force and rhythm. On the twelfth day the child had passed a very restless night, tossing about in her cot. The radial pulse was difficult to count. No urine was passed. On the thirteenth day the child was throwing herself about so that it was difficult to keep her covered. From time to time she gave the peculiar cry which, in the case of older patients, is accounted for by distressing cardiac pain. Although she was apathetic her mind remained unclouded. Finally the radial pulse disappeared, and death occurred shortly after midnight.

Remarks.—The striking fall in the blood pressure will be followed on the chart. A point not mentioned, but also shown, is the fairly consistent fall in temperature. The slight rise on the fifth day is explained by an inflammatory reaction at the seat of the first injection of antitoxin. The progressive diminution in the urine is noteworthy, as it is seldom possible to measure the urine throughout the course of a fatal case.

In all six cases the fall in blood pressure was slight at the outset, but it suddenly became more marked, and was then maintained until the end. In the two most severe cases this

final drop only occupied forty-eight hours. On the other hand it was, in one case, prolonged to six days.

One significant fact may be added. The symptoms which have been suggested as essentially toxic were in some degree a constant feature, and their incidence and subsequent intensity bore an evident relation to the fall in blood pressure.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, November 4th, 1899, p. 1282.

THE TREATMENT OF DIPHTHERIA.*

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IN the year 1891 a new era in the treatment of diphtheria was introduced by a remarkable series of investigations published by Professor Behring, now of Marburg University. Although, as Behring remarks, all the essential points in the antitoxin treatment of diphtheria had been by that time fully worked out in the laboratory, the subject did not at first attract very much attention. It was not until 1894, when the acquisition of serum from large animals, particularly horses, permitted the extension of the methods discovered in the pathological laboratory to the treatment of human beings that general interest was aroused. The treatment rapidly spread, and by the commencement of 1895 was on its trial throughout the whole civilised world. In the five years that have since elapsed the diminution in the hospital mortality of diphtheria has been nothing short of marvellous to all but the few who had made themselves acquainted with the thorough and unimpeachable experimental basis on which the new treatment had been established. The records of hospital experience have in this instance been in complete accord with the conclusions of the laboratory. In private practice also, in Australia at least, antitoxin has been very widely used with very gratifying results in the reduction of the mortality from this disease. Nevertheless, its use is not yet universal, and it is every now and then our sad experience to see children admitted into hospital dying from diphtheria, to whom an injection of serum has never been administered, although they have been under medical treatment. In England this appears to be the case to a larger extent. One reads with astonishment [1] that the reduction of the diphtheria mortality in London is almost entirely confined to cases treated in hospital, and that it appears very doubtful whether antitoxin is much used in general practice. Though the contrary statement is true in these colonies, I believe that the remedy, even by practitioners of repute, is not always administered in sufficient doses. In mild and early cases a small dose of 600 to 1,000 units is sufficient, but in advanced and desperate conditions many practitioners are satisfied with injecting 1,000 or 1,500 units, when 4,000, 6,000, or even 8,000 or more units are really needed. The treatment of diphtheria appears to be, therefore, still a proper subject for discussion, and I shall endeavour in the first place to lay before you as briefly as possible the facts on which my opinions are based.

The records of the Brisbane Children's Hospital have been very carefully kept for the past ten years, and the majority of the diphtheria cases during that time have come under my personal observation. I am, therefore, in a position to guarantee the similarity and continuity of the statistical material.

During the preantitoxin period of five and a half years the diagnosis was based solely on clinical observation. Doubtless a few cases not really diphtherial were included, and these would make the mortality appear lower than it really was. I do not think they made much difference in the totals.

The antitoxin period is divided into five sections, of which the results of the two first have been already published.[2] In them we have included no cases but such as were verified by bacteriological examination. The new treatment being on its trial, such a course seemed advisable. During the next two sections we have included only cases which were verified bacteriologically, or which on clinical grounds could be recognised as diphtheria beyond any reasonable doubt. In the last period we have had to rely on clinical evidence alone,[3] but this has been interpreted with great strictness, much greater than in the preantitoxin period. In the absence of bacteriological examination the diagnosis of early and mild cases must often be doubtful, but in the severer cases, including the laryngeal cases, I am convinced that no appreciable fallacy has been introduced. All cases of possibly catarrhal laryngitis have been excluded.

The first division of the antitoxin period may be regarded as to some extent transitional. We used a serum of unknown but certainly very low antitoxin strength, of which 23 c.cm. was usually injected. In the second division the same serum was mainly used in doses up to 100 c.cm., and much better results were obtained. Since then we have used a serum of known antitoxin strength, and severe cases have usually received 4,000 units. Latterly, we have increased this dose in some cases to 6,000, 8,000, or even 12,000 units, and we believe that the lowered mortality of the last division is partly attributable to this increase.

The following table gives the total mortality for both preantitoxin and antitoxin periods:

Cases of Diphtheria treated in the Children's Hospital, Brisbane.

Preantitoxin Period.	Admissions.	Deaths.	Mortality.
			Per Cent.
July, 1889, to June, 1891 (2 years)	73	34	46.6
July, 1891, to June, 1893 (2 years)	114	48	42.1
July, 1893, to January, 1895 (18 months)	116	46	39.7
Total	303	128	42.2

Antitoxin Period.	Admissions.	Deaths.	Mortality.
			Per Cent.
Small doses:			
January, 1895, to November, 1895 (11 months)...	40	10	25.0
Large doses:			
November, 1895, to September, 1896 (10 months)	43	5	11.6
September, 1896, to December, 1897 (15 months)	83	8	9.8
January to December, 1898 (12 months)	45	7	15.6
January to August, 1899 (8 months)	106	10	9.4
Total	317	40	12.6

In presenting these statistics, I must not omit to acknowledge my indebtedness to the hospital residents, L. N. Ashworth, M.B., B.S.Melb., T. E. Green, M.B., B.S.Melb., Hugh Bell, F.R.C.S.Eng., and P. Dixon, M.B. Ch.M.Sydney, to whose assiduous care the good results are greatly attributable, and but for whose careful records I should be unable to write the present paper.

Although the whole number of cases is small as compared with other statistics that have been published, they have the advantage of having been treated in the same institution and under the same personal observation. Their lesson appears clear enough, but it is necessary, in order to exclude any possible doubt, to consider objections that have been raised by various critics to other similar statistics.

It has been objected that the introduction of a new treatment is accompanied by greater attention to the cases, and more care on the part of the residents and nursing staff. As far as our hospital is concerned, I can testify that the greatest possible pains were taken over these cases during the preantitoxin period. It will be shown presently that nearly half of the cases were so severe as to necessitate intubation or tracheotomy, and, allowing for this, the results obtained compared favourably with other institutions at the same date.

Again it has been urged that the introduction of bacteriological methods of diagnosis has led to the inclusion of mild cases which would not formerly have been recognised as diphtheria, and so caused an apparent reduction of mortality. This certainly does not apply to our present figures. Cases not recognisable clinically as diphtheria, but in which diphtheria bacilli are present, have occurred with us very rarely: we have only record of three such cases (which came

* Read in the Section of Medicine of the Intercolonial Medical Congress, held in Brisbane.

under observation in 1897), and these cases have been omitted from our statistics.

Lastly, it is asserted that the type of the disease has changed, and that as a whole it is of a milder character than formerly. For this assertion there is no foundation, in fact it is a pure assumption, which can be satisfactorily met. Some observers have attempted to meet it by classifying their cases as mild, severe, very severe, and so on. This is hardly satisfactory, as the classification depends too much on the individual opinion of the observer. There is, I think, a better way. All are agreed that diphtheria affecting the larynx is a serious disease. By including all cases with a distinct laryngeal stridor[1] it is possible to draw a sharp objective line including a large proportion of the cases, which may be known as laryngeal cases. These cases are always serious, and among them the mortality used to be very high. It has now been reduced more than two-thirds, as is shown by the following table:

Laryngeal Cases.

Preantitoxin Period.	Cases.	Deaths.	Mortality.
			Per Cent.
July, 1891, to January, 1895*	147	87	59.2
Antitoxin Period.			
Small doses:			
January, 1895, to November, 1895	22	9	40.9
Large doses:			
November, 1895, to September, 1896	30	4	13.3
September, 1896, to December, 1897	37	7	18.0
January to December, 1898	20	6	30.0
January to August, 1899	68	7	10.3
Total	177	33	18.6

* Record incomplete before July, 1891.

In the preantitoxin period very few cases recovered without operative interference, only about 1 case out of 12. Now, although we never fail to intubate a laryngeal case as soon as it appears necessary, nearly half the cases recover without interference. No doubt with earlier treatment the proportion would be larger, for many of the hospital caases require operative interference immediately or very soon after admission.

Laryngeal Cases.

Preantitoxin Period.	Cases.	Recovered without Operation.	Proportion.
			Per Cent.
July, 1891, to January, 1895	147	12	8.4
Antitoxin Period.			
Small doses:			
January, 1895, to November, 1895	22	3	13.6
Large doses:			
November, 1895, to September, 1896	30	12	40.0
September, 1896, to December, 1897	37	12	32.2
January to December, 1898	20	8	40.0
January to August, 1899	68	33	48.5
Total	177	68	38.4

Operative interference is still necessary in more than one half of the hospital cases. In private practice it should be much less frequently necessary. But even in hospital cases requiring operation the mortality has been reduced from nearly two-thirds to about one-fourth of the cases operated on.

I regard the total results obtained in these laryngeal cases as of the greatest value, inasmuch as they deal with a sharply-defined group of cases of a very grave form of diphtheria, and are not liable to erroneous diagnosis in any appreciable proportion so long as cases of possible catarrhal laryngitis are excluded, as we have been careful to do. They are furthermore fairly comparable with the hospital returns of laryngeal cases in other parts of the world, which the total admissions are not, for these are affected by the proportion of mild tonsillar cases admitted. The total results may be conveniently stated as follows:—Of 100 cases of diphtheria with affection of the larynx treated in the hospital in the preantitoxin period, 8 recovered without operative interference, 33 recovered after either intubation or tracheotomy, and 59 died. Of 100 similar cases treated with antitoxin in sufficiently large doses, as many as 40 now recover without operative interference, another 45 after operation, and only 15 die.

Operation Cases (Intubation or Tracheotomy or Both.)

Preantitoxin Period.	Operation Cases.	Deaths.	Mortality.
			Per Cent.
July, 1889, to June, 1891 (2 years)	42	28	66.7
July, 1891, to June, 1893 (2 years)	60	41	68.3
July, 1893, to January, 1895 (18 months	64	40	62.5
Total	166	109	65.7
Antitoxin Period.			
Small doses:			
January, 1895, to November, 1895 (11 months)...	19	9	47.4
Large doses:			
November, 1895, to September, 1896 (10 months)	18	4	22.2
September, 1896, to December, 1897 (15 months)	25	7	28.0
January to December, 1898 (12 months)	12	4	33.3
January to August, 1899 (8 months)	35	7	20.0
Total	109	31	28.4

The next table shows the difference in the mortality of all the diphtheria cases admitted under the old and new methods of treatment at each year of life.

Mortality of all Cases of Diphtheria at each Year of Life before and after the Introduction of Antitoxin.

Age Last Birthday.	Preantitoxin Period.			Antitoxin Period.		
	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.
			Per Cent.			Per Cent.
Under 1 year...	11	9	81.8	7	2	28.6
1 year	44	32	72.7	35	10	28.6
2 years ...	56	37	48.2	48	10	20.8
3 ,, ...	44	49	43.1	44	6	13.6
4 ,, ...	53	14	26.4	47	3	6.0
5 ,, ...	38	9	23.7	54	4	7.4
6 ,, ...	23	10	38.5	42	4	8.2
7 ,, ...	16	5	38.5	19	1	8.2
8 ,, ...	6	1	16.7	8	—	0.0
9 ,, ...	7	—	16.7	6	—	0.0
10 ,, ...	—	—	16.7	5	—	0.0
11 ,, ...	1	1	16.7	2	—	0.0
12 ,, ...	3	—	16.7	—	—	0.0
13 ,, ...	1	1	16.7	—	—	0.0
Total ...	303	128	42.2	317	40	12.6

The decrease in mortality is striking at all ages, and is particularly well marked during the first two years of life, which had under old methods of treatment such a fearful death-rate.

To these statistics I might add others equally convincing from Australia, from America, from France, from Germany, from England. If hospital records can prove anything, the controversy regarding the efficacy of antitoxin in the treatment of diphtheria may be regarded as closed. But it yet remains to consider in what way the remedy should be used to obtain the best possible results in reducing the mortality of the disease. It will clear the way to the understanding of this problem if we consider it very briefly from the standpoint of recent pathology.

Diphtheria is known to be caused by a bacillus which secretes a powerful toxin. The local irritation produces a fibrinous exudation which forms the diphtheritic membrane, and the diphtheria bacilli are confined to this membrane and the fluid discharged from it. The inflammatory processes have a tendency to spread locally, especially into the air passages. In this way the toxic organism may reach the lungs, but it does not invade the other organs of

the body, which contain no more than a few stray individuals, of no practical importance, who may happen to be washed there by the blood current. Apart from the mechanical obstruction of the breathing all the danger of the disease results from the absorption of diphtheria toxin from the local focus of disease. The antitoxin contained in the serum derived from artificially-immunised horses has no direct effect on the diphtheria bacilli, but neutralises the toxin produced by them. This it does by some form of chemical action, neutralising the toxin in a test tube in strictly equivalent proportions, the two behaving in this respect exactly like an acid and an alkali. As a matter of experience it is found that when their toxin is thus neutralised the diphtheria bacilli in the local lesions become harmless; they are dealt with by the tissues as ordinary saprophytic bacteria, and the case so treated makes a speedy recovery to the normal condition. When mixed in a test tube the proportion of antitoxin required to neutralise many times the lethal dose of toxin is very small. When the two are injected into an animal simultaneously or with only a short interval, the proportion is somewhat larger, but still remains small; for antitoxin and toxin behave to each other in the blood stream as they do in the test tube. But if a multiple of the lethal dose of toxin be injected twenty-four hours or more before the antitoxin, the proportion of the latter required to save life becomes enormously increased, and a thousandfold the dose sufficient in the former instance may be now inadequate. The explanation of this is that the toxin is no longer wholly contained in the blood stream. It has entered into some kind of combination with those tissue cells which it particularly affects. In the case of tetanus, for example, a minute dose of antitoxin may be sufficient if injected simultaneously, while the largest possible dose may be insufficient when the toxin has attached itself to the substance of the cerebro-spinal motor cells. That it does so attach itself is shown by the fact that if the toxin is mixed with an emulsion of cerebro-spinal tissue in sufficient proportion before injection, it becomes harmless. In tetanus, the combination once formed is unfortunately very stable, but in the case of the diphtheria toxin it appears that by maintaining a very high degree of antitoxin strength in the blood, the toxin may be neutralised even after it has fixed itself in the tissues. But to do this, very large doses are necessary, and the longer the interval allowed before their use, the larger must they be.

Applying these considerations to practice, we should, in the first place, inject our remedy as early as possible, as soon as we have made our diagnosis, and frequently in doubtful cases before a positive diagnosis is possible. In very early cases an ordinary dose of 600 or 1,000 units is quite enough. The course of the disease is rapidly arrested and convalescence is speedy and complete. But it is quite different with cases of long duration, presenting extensive membrane, extending, it may be, into the nose or larynx, or in cases showing symptoms of toxæmia. In these, the patient, in spite of appearances in some cases, is in a condition of imminent peril. The toxin is already fixed in his tissues, and death from implication of the central nervous system, heart, or kidneys will very likely occur. We may now be too late to avert the fatal result, but fortunately we may often do so by using very large and, if necessary, repeated doses. In a really bad case of this description I should administer from 6,000 units at once, and perhaps inject an additional 2,000 or 3,000 units or more within the next twenty-four or forty-eight hours. No time must be lost in producing a high degree of antitoxin strength in the patient's blood. According to my experience, about twenty-four or sometimes forty-eight hours elapse before improvement begins; it is then often rapid. The antitoxin appears to require this time to produce its effect, and in cases which die within twenty-four or forty-eight hours of administration the largest doses sometimes do not appear to have any effect. Notwithstanding this, the good effects of large doses in advanced cases have been well illustrated in our experience. During the first eleven months of antitoxin treatment our dosage was too small, and the mortality only showed a reduction of 17 per cent.; but, by using much larger doses, we immediately obtained a further reduction of 13 per cent., and this has been well maintained since. The following two cases will serve to illustrate recovery from grave toxæmia:

M. D., aged 4 years, admitted on the fifth day of illness. Membranous patches on tonsils and pharynx. Breathing with stridor and recession, colour dusky, 5,000 units injected. Intubation soon after admission. That evening, though breathing was easy, the child had a bad colour, lips were pale and dusky, pulse rapid and weak, and she was very restless. These symptoms pointed to grave toxæmia, and 3,000 additional units were injected. Prognosis unfavourable.

Second day, no improvement. Tube coughed up once, and replaced. *Râles* and rhonchi in chest.

Third day, condition still very grave. Urine with one-sixth albumen; 4,000 units injected. Tube was coughed up, and she had several attacks of dyspnœa, which were not relieved by reintubation. After a severe attack with cyanosis, Dr. Dixon performed tracheotomy, and extracted a large cast of membrane from the trachea. After operation pulse was extremely weak.

Fourth day, slight improvement, gradually leading to convalescence. The total amount of antitoxin administered was 12,000 units.

E. C., aged 6 years, admitted on the eighth day of illness. Membranous patches on tonsils and pharynx. Breathing with stridor and recession; 6,000 units injected.

Second day, breathing worse. Intubated; during operation coughed up a large piece of membrane. Another 3,000 units injected. Pulse poor. Urine scanty: 2 ounces since admission, one-third albumen. Ordered pilocarpin 1.20 gr. and hot-air bath, which caused free perspiration.

Third day, urine 3 ounces, about one-quarter albumen. Hot-air bath repeated. Another 3 000 units injected. Pulse still poor.

Fourth day, urine 3 ounces, one-sixth albumen. Hot-air bath repeated. Seems brighter. Intubation tube removed.

Fifth day, better. Perspiring freely. Urine 5 ounces, trace albumen. From this point steady improvement to convalescence. In all 12,000 units were administered.

There is much to be learnt from an analysis of the fatal cases. In 1897, 1898, and 1899 we have had 25 deaths; of these, 16 occurred within forty-eight hours, and 8 within twenty-four hours of admission. They may be classified according to the main cause of death as follows:

Primary toxæmia	6 cases
Bronchial membrane (in two cases combined with pneumonia)	4 ,,
Pneumonia	9 ,,
Secondary toxæmia (with scanty urine or suppression)	5 ,,
Accidental asphyxia (from coughing out tracheotomy tube during night)	1 ,,
Total	25 cases

The first two headings caused 10 deaths, all of which occurred within forty-eight hours of admission. One, an infant of 18 months, was admitted on the third day of illness. At this age the disease runs an exceptionally rapid course. Two were admitted on the fourth, the remainder on the fifth to seventh day of illness. In all the cases under this heading the disease was apparently too far advanced on admission to be combated. They died as most cases used to die before the antitoxin treatment was introduced.

Pneumonia was responsible for 9 deaths, of which 7 occurred within forty-eight hours. Since the introduction of the new treatment this cause of death has come into much greater prominence; for while the antitoxin will neutralise the diphtheria poison, it has no effect on this complication, which is due to a secondary infection. In two cases examined by me this was found to be due to the pneumococcus, but other observers have found the streptococcus pyogenes to be frequently the excitant cause. Two of these cases, both children aged 2 years, were admitted according to the parents' statements, on the second day of illness. If the statements were correct, they show that even early treatment of the diphtheria by antitoxin will not always prevent a fatal issue from pneumonia. Clinically these cases may be recognised by their extremely rapid shallow breathing, with high temperature and rapid failing pulse. Physical signs are sometimes to be elicited. Several cases were verified *post mortem*. I have seen cases complicated with well-marked pneumonia recover, but it has more often proved fatal.

Under secondary toxæmia I have included a very important class of cases which I have observed before the introduction of serum treatment, but which has assumed a higher relative importance lately. They are nearly always cases of long duration on admission. The earliest was admitted on the fourth day of illness, but this is exceptional, one on the fifth, the remainder had been ill a week or more. They have had extensive areas of membrane in nearly every instance. Some have at first appeared to be doing well, but after several days' treatment, the urine is observed to be scanty and loaded with albumen; sometimes there is complete anuria. At the same time the child develops a painfully-marked restlessness, is totally sleepless, but retains consciousness to the end, while the pulse fades away and often becomes imperceptible at the wrist for many hours before death. These are often classified

as cases of heart failure, but they are not properly regarded as cases of simple heart failure.

That the condition of the kidneys is an important factor in the result I have no doubt; but they are not cases of uræmia in the usual acceptance of this term. Convulsions I have never observed, and coma is absent, being replaced by an exactly opposite condition. I have never seen a case in which these symptoms had developed recover under any form of treatment; but of late I have endeavoured to anticipate their occurrence in cases with scanty albuminous urine by the injection of pilocarpin (gr. $\frac{1}{20}$) and hot-air baths, as in the case of E. C. given above. I believe nasal cases are particularly liable to develop these symptoms, and such cases ought to receive a large initial dose of antitoxin, although their condition at the time may not appear serious.

If we classify our cases since the commencement of the antitoxin period according to the day of the illness on which antitoxin was first administered, we obtain the following:

	Cases.	Deaths.	Mortality.
Treatment commenced on 1st day	7	—	
,, ,, 2nd ,, ...	39	2	
,, ,, 3rd ,, ...	50	6	
,, ,, 4th ,, ...	51	4	
Total ...	147	12	8.2 per cent.
,, ,, 5th ,, or later ...	131	22	16.8 ,,
Cases of uncertain duration...	39	6	15.4 ,,

The two cases fatal from pneumonia, although antitoxin was administered on the second day of illness, have already been mentioned. Of the six deaths among those admitted on the third day, one occurred during the first period of antitoxin treatment when the doses administered were too small. Of the remaining five, four died from pneumonia; the last case was an infant of 18 months, admitted moribund from toxæmia on the third day of illness, and has been already alluded to. It is the only case we have seen since 1895 in which death occurred from uncomplicated diphtheria treated with antitoxin during the first three days of the disease.

These results emphasise the importance of early treatment. Every medical practitioner ought to have a supply of diphtheria serum and a suitable syringe at hand. In the large towns there is no difficulty in obtaining a supply, and it is easy to keep a few bottles of the liquid serum and to replace them as needed. The liquid preparation is the easiest for use, and may be kept for six months or more without losing its efficacy. Practitioners in the bush townships should keep a supply of the dried serum, which can probably be relied on to retain its strength unimpaired for years. It is absurd that a practitioner several days' journey from the metropolis, meeting with a case of diphtheria, should have to telegraph for antitoxin. This is too often not of any use to him by the time he gets it.

All other forms of treatment are of very minor importance. Routine applications to the throat have been altogether abandoned in the Children's Hospital. We only use them when the membrane is sloughy and offensive. It has been argued on theoretical grounds that as antitoxin only neutralises the poison, something should be done to kill the bacilli. But I have found by bacteriological examination that in the majority of cases the bacilli disappear within a few weeks without any local treatment; and in those cases in which they persisted longer I have been unable to hasten their disappearance by such treatment. Local applications are, in nine cases out of ten, unnecessary; and unnecessary treatment is bad treatment. When, however, there is much nasal discharge, gentle syringing with salt and water (a teaspoonful to a pint) is advisable. Internal medication has also been abandoned as a routine measure. When the pulse is showing signs of failure, we have given digitalis, strychnine, and alcohol in moderate doses, and these may be of some service. When the urine is very scanty and albuminous, I have lately administered pilocarpin hypodermically (the dose should not exceed gr. $\frac{1}{20}$), followed by a hot-air bath, administered by covering the child with a cradle and blankets, under which the moist hot air of a spirit lamp flame is conducted through a bent metal tube. In cases dying from bronchial membrane or pneumonia, inhalation of oxygen gas is of value in relieving distress and promoting euthanasia. I have not seen it save life.

To sum up the whole matter, the treatment of diphtheria consists in the administration of antitoxin early and in sufficient dose. A trustworthy preparation of known antitoxin strength should be employed. There need be no fear of administering an overdose; the only objection to giving an unnecessarily large dose is its cost. To give too little for this reason is a very poor economy. The saving in the number of doctor's visits, not to mention funeral expenses, much more than covers the cost of the serum. In the case of poor patients I have been accustomed to explain the danger of the disease, and have never found them object to the expense of the remedy. Those who cannot afford this are suitable cases for hospital treatment. I would certainly decline to take any responsibility, or to continue to attend a case, if the treatment were objected to, and I hope other practitioners would do likewise. I would appeal particularly to those engaged in club practice, who are more bound to their patients, to explain to them the need for immediate injection of serum or immediate removal to hospital. Too many patients of this kind have been brought to us too late.

We may say that if patients and medical men did their duty, the former in calling assistance early, the latter in applying the remedy early and in sufficient dose, the death-rate from diphtheria might be reduced to a small fraction of what it is at present, although it has been materially lowered in this colony of late years. Indeed, with the necessary qualifications, we may say no child ought to die of diphtheria. There are no doubt some cases complicated by pneumonia at a very early stage, some others at a distance from medical aid, some few in which the diagnosis in the early stages is extremely obscure. Cases sometimes occur of laryngeal diphtheria without any visible membrane, and these are sometimes very hard to distinguish from catarrhal laryngitis. In cases of doubt a full dose of antitoxin should be given. Sometimes an attack of diphtheria becomes engrafted on a previous catarrh or tonsillitis, and is then very likely to be overlooked in the early stages. But these are all rare exceptions, for the most part death from this disease is avoidable and ought to be prevented.

NOTES AND REFERENCES.

[1] Goodall, BRITISH MEDICAL JOURNAL, 1899, vol. i, p. 107. [2] *Intercolonial Medical Journal*, October, 1896. The figures given of the preantitoxin period contain a few unimportant errors which are here corrected. [3] Owing to pressure of other work, I ceased making these examinations, but I hope they will be soon resumed by the hospital residents, for which purpose a laboratory is being fitted up. [4] Cases showing merely hoarseness, croupy cough, or even visible membrane in the epiglottis are excluded. It is always possible to distinguish laryngeal stridor from pharyngeal stertorous breathing.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A CASE OF MALIGNANT PUSTULE: NECROPSY, WITH BACTERIOLOGICAL INVESTIGATIONS.

ON June 4th I was called to see a girl, aged 17, said to be suffering from œdema of the glottis. I found her moribund, and presenting symptoms which suggested the possibility of anthrax—namely, a pustule at the angle of the mouth, swelling and redness of the cheek, general cyanosis and insensibility which was of very rapid onset. The pustule was atypical.

The history was as follows: Eight days previously the patient spent the day in the country at a village C.; three days later she developed a pustule, rapidly became worse, and died within five days of the appearance of the local lesion. She did not dress meat, handle hides or wool, and had nothing to do with animals.

A *post-mortem* examination was made thirteen hours after death, when the pustule appeared more typical; it was black in the centre, about the size of a threepenny piece, but had

no vesicles surrounding it. Inside the cheek were many small purulent points like small ulcers. The right side of the heart contained much *ante-mortem* clot, as also did the pulmonary artery. The lungs had many petechiæ scattered over their surface, and several points of pus. There was no pneumonia. The pleural cavity contained a small amount of fluid. The liver and spleen were congested, normal in size, and not friable. The intestines were in many places thickly sprinkled with jelly-like bodies containing pigment, and the peritoneum showed many small hæmorrhages. The other viscera were normal. Microscopic examination did not reveal bacilli in the pustule or any of the organs. Potato cultures were made from the clot in the pulmonary artery, and incubated at 27° C. for twenty-four hours. Sufficient growth occurred to enable a confirmatory diagnosis of anthrax to be made microscopically. These specimens were in every respect quite typical.

Inquiry was then made at the village C., when it was discovered that no fewer than five animals had died under somewhat suspicious circumstances two days before the girl's visit. She had walked through a yard where some dead meat had been thrown to a dog, and immediately afterwards had picked off some dirt from her heel. A dealer in carcasses had purchased the animals in question to sell for fowls' food and dogs' meat; a visit was paid to his "stable," which was freshly cleaned and quicklimed. Some lime was scraped away, and a small piece of red hair taken for investigation, as also were many specimens of mould, grass, etc., from each place where it was ascertained that the patient had been.

The result of subsequent examination was negative in the case of each specimen except the hair; from this latter numbers of bacilli of different kinds were grown upon potato and blood serum, and after going through five selected inoculations a fairly pure culture was obtained on blood serum at 34° C., presenting the usual microscopic appearance of anthrax bacilli and their spores. A one-twelfth oil immersion lens was used, showing the typical encapsuled bacilli, sporing without bulging, square-ended, and answering to the known micrometric standard, namely, 1 to 1½ microns in breadth, 3 to 10 in length.

I have to thank Dr. John Wallace for his assistance in this investigation, and for his help in the microscopic work.

In conclusion, there are three points in this case which appear worthy of notice: First, the rarity of reported cases of malignant pustule in women who have nothing to do with animals, skins, or wools; secondly, the possibility of such cases being easily overlooked; thirdly, the great difficulty of detecting anthrax among stock before an epidemic occurs, as in this instance a large number of animals have died of variously-named diseases at or near C., but the authorities know of no case of splenic fever in that district.

Weston-super-Mare. GEORGE H. TEMPLE, M.B.

A CASE OF MEMBRANOUS CONJUNCTIVITIS TREATED BY ANTIDIPHTHERIAL SERUM.

ON July 18th an infant, aged 8 months, was brought to me suffering from an affection of the eyes. An examination disclosed that the palpebral conjunctivæ of the eyes were covered with a whitish membrane, which could be detached entire. The membrane was opaque, and of considerable consistency. The conjunctivæ did not bleed on removal of the membranes, but they were œdematous, and their vascularity much increased. There was no sore throat, and no history of diphtheria. The temperature was 101°. No secondary enlargements of glands could be made out. No treatment was applied beyond irrigating the conjunctivæ with a weak antiseptic solution. On the evening of the same day the membranes had reformed. I detached them, and forwarded one in a sterilised tube to Mason College, Birmingham, for bacteriological examination. The report thereon stated the presence of the diphtheria bacillus. Next day I visited the child, and found that the membranes had completely reformed. The parents declined any local interference. I notified the case as one of diphtheria. On the following morning, July 20th the parents, having meanwhile consented, I injected 6 c.cm. of antidiphtheritic serum, and again removed the membranes. Temperature 100.8°. On July 21st the membranes were less opaque, and more friable. Temperature 100.6°. I again injected 6 c.cm. of the serum. Next morning there was simply a trace of membrane which became more marked towards evening, when I again injected 5 c.cm. of the serum. The temperature was normal. Next day there was a slight trace, and on the following day, July 24th, the eyes were clear. No recurrence has since been observed, and, with the exception of marked anæmia, there were no sequelæ.

Clinically, the case might have been regarded as a simple croupous conjunctivitis. The surfaces of the conjunctivæ after detachment of the membranes did not present the characteristic bleeding points usually found after detachment of diphtheritic membrane. The temperature and discovery of diphtheria bacilli, and the rapid disappearance under the serum treatment would point to the case having been one of true diphtheria. The ocular conjunctivæ were never involved. A case occurred in this practice some years ago, presenting much the same appearance, which was regarded as diphtheritic, and in the absence of serum treatment led to the destruction of the eye.

Old Hill, Staffs. A. D. MCQUEEN, M.B.

PIPERAZIN IN GOUT.

IN the spring of 1896 I published in the BRITISH MEDICAL JOURNAL a striking case of a gouty patient of mine who had attacks of acute gout every year or oftener whom I advised to take piperazin, and who to the time of his death some years after never had another attack of acute gout. Since then I have had other most striking experiences, for instance:

One of the most ubiquitous, active, and tireless men in Harrogate at this day is a gentlemen well over 60, who owes his vigour and health to his habit of taking piperazin. I found him three years ago a great invalid, with a man in attendance upon him throughout every night relieving his wife and daughter who took day duty. About ten months ago I was called to see him, and found him in bed with gout in both feet. He observed my chagrin, and quickly told me it was his own fault—that he had been very well and very busy lately, and had neglected his piperazin.

Harrogate is justly famous as a resort of the gouty; its famous sulphur baths are unequalled. With these baths and the daily unloading of the colon by our sulphur water few cases fail to get complete relief during an ordinary visit; but in the worst cases, where the health is badly broken, or where the patient can spare only a week or ten days, the addition of piperazin to the treatment is invaluable.

In every instance where I come across a gouty patient I never lose the opportunity of impressing him with two facts, namely, that as long as he lives he will daily generate gout products which will undermine his health if allowed to remain in his system, and that piperazin is a sure solvent of these products. The expense and the trouble of taking it are its only drawbacks, but I impress on the gouty that it is as necessary for them as their daily bread.

Harrogate. WILLIAM FEARNLEY, M.D.

POISONING BY THE APPLICATION OF GLYCERINE OF BELLADONNA.

SEEING two cases of poisoning by the application of belladonna plaster, reported in the BRITISH MEDICAL JOURNAL of April 8th and May 27th, I thought the following case, where toxic symptoms set in a few hours after the application of glycerine of belladonna, may prove interesting. A woman was delivered of a stillborn infant, and, as she complained of pain and tenderness in both breasts a few days after delivery, I ordered an application of glycerine of belladonna. This was applied in the morning, and I was summoned the same evening with a report that she was dangerously ill. The news rather surprised me, for I had left her in the morning apparently well. When I saw her, I found her delirious with hallucinations; there was difficulty in swallowing, and her pupils were widely dilated. There was a free application of the glycerine of belladonna on the breasts. I stopped the application, had her breasts thoroughly washed, and gave her a hypodermic injection of liq. strychninæ. She recovered slowly, and it was some days before her vision was perfect.

Rajamah, Ceylon. H. P. JOSEPH.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL ISLE OF WIGHT COUNTY HOSPITAL.

A CASE OF INTERSTITIAL MYOMA OF THE UTERUS.*

(By Thomas Alph. Buck, M.B.Lond., Surgeon to the Hospital.)

Mrs. ——, aged 30, for rather more than a year had suffered from uterine hæmorrhage, very irregular, but very profuse, associated with much watery discharge between the attacks of hæmorrhage. Shortly before Christmas she had noticed an abdominal swelling. She consulted her doctor, who said she was four months advanced in pregnancy. Since this time she had assumed she was pregnant, but still had frequent hæmorrhages.

On May 21st, in the early morning, she felt a desire to pass urine, but was not able to do so. Pain came on in the vulva, and got worse and worse, until towards evening she could hardly be kept in bed; the pain was only in the lower abdomen, not in the back. She had come to the Isle of Wight from the centre of Hampshire on a visit to some friends, who, thinking she was in labour, sent for a medical man, who, seeing her for the first time, administered chloroform and examined her, finding a large mass presenting in the vagina, just within the vulva, but no signs of pregnancy. The uterus was enlarged nearly up to the umbilicus, and was continuous with the firm mass completely distending the vagina. No trace of os or cervix uteri could be made out, the upper limit of the presenting part being continuous with the vaginal wall all round. A catheter drew off a gallon of urine, with immediate relief of pain, but without alteration in the physical signs. She was admitted to the Royal Isle of Wight County Hospital under Mr. Buck, when the following condition was noted:

A pale, anæmic woman, indeed quite blanched, tongue furred white, frequently sick; mammæ flaccid. Has a loud systolic murmur at base of heart. A hard round swelling rises directly from the pubes to within an inch of the umbilicus, with a corona of resonance. *Per vaginam:* A solid, elastic, vaguely lobulated mass completely distends the vagina to just within the vulva; this prevents her passing fæces or urine without artificial aid.

Under anæsthesia the attachment of the presenting part could only be reached by insertion of the hand. There was no semblance of a pedicle, but the growth was traced as springing from the upper part of the vagina all round by its whole circumference; no aperture or trace of os or cervix to be felt. On tearing through the mucous membrane at its junction with the vaginal wall as high up as possible, and stripping the tumour all round, it soon became obvious that one was working inside the uterus, the contraction of the muscular fibres being very distinct, cramping and impeding manipulation. One was also sensible that the procedure was one of enucleation over the whole of the interior of the uterus, and became increasingly difficult the further one proceeded, on account of the muscular contraction, the most difficult of all being the detachment of the extreme upper zone when all had been separated except an area the size of a crown piece. When completely enucleated the tumour had to be vigorously delivered with forceps and and powerful vulsella. On account of the frequent rests, changing hands, etc., from fatigue, the operation took over two hours. The patient died from shock the same evening, about three hours after the operation.

The tumour was a dense myoma, in shape and size like a vegetable marrow, 9 inches in length and 12 inches in circumference, of the same diameter from end to end—that is, there was no narrowing at either end; as near as possible it was half in the vagina and half in the uterus.

One can imagine that such a growth must have commenced at or near the submucous surface of fundus uteri, then have grown equally in all directions, gradually effacing the uterine cavity, and so pushing its mucous membrane before it as to be the investment of the vaginal portion of the tumour when the patient came under observation.

* Read at a Meeting of the Isle of Wight District of the Southern Branch.

REPORTS OF SOCIETIES.

EPIDEMIOLOGICAL SOCIETY.

Franklin Parsons, M.D., President, in the Chair.

Friday, December 15th, 1899.

PRECAUTIONS AGAINST PLAGUE AND CHOLERA AT TOR AND SUEZ.

A paper by Dr. Armand Ruffer, upon the measures taken at Tor and Suez against ships coming from the Red Sea and the Far East, was, in the unavoidable absence of the author, read by the Secretary. After sketching the present state of the sanitary service in Egypt, the author described the measures taken to prevent ships coming from the Red Sea and Far East from carrying plague and cholera into Egypt and Europe. These measures varied according as the ships carried pilgrims or ordinary passengers. No pilgrims were allowed to land in Egypt until they had undergone a period of observation at Tor. The ships which conveyed the pilgrims were shockingly overcrowded and insanitary; but the few Austrian steamers were, on account of the Government regulations, exceptions to the rule. Tor was described as admirably suited for a quarantine station. During the last few years the Egyptian Government had built landing stages, laid on water, etc. A bacteriological laboratory and a *post-mortem* room were in process of construction. After landing, the pilgrims took their luggage to the disinfecting station, and waited in sheds until their turn came to enter the camp. The regulations were different according as the pilgrimage was "clean" or "infected"—that is, whether cases of plague or cholera had occurred or not. The Turkish authorities decided whether a pilgrimage was "clean" or "infected," but little confidence was placed in their decision. If the pilgrimage had been declared "clean," the pilgrims were kept only a few days under observation, and nothing was done in the way of disinfection in accordance with the decrees of the Convention of Venice. If however there were plague or cholera in the pilgrimage quarantines of twelve or fifteen days respectively were enforced, the period counting after disinfection had been carried out. After disinfection of luggage and bathing of pilgrims, they were taken to the quarantine camp, where they were examined daily by a medical man, and those who showed disease were removed to the hospital. With reference to plague, the measures now taken appeared to be sufficient to prevent the disease being conveyed by the pilgrims but the case was quite different with regard to cholera inasmuch as the bacilli might remain in the intestinal contents for a longer period than that of the quarantine. For ships not carrying pilgrims the quarantine station was at Moses' Wells, and vessels arriving from a cholera-infected port were subjected to the following regulations: If the vessel were healthy it was kept under observation until five days had elapsed since leaving the infected port. If the vessel were suspected the regulations varied according to the period after leaving the port. If the ship were infected the sick were landed at Moses' Wells and all the dirty linen on board was disinfected, as was also the part of the ship in which the sick had been. The vessel was kept at Moses' Wells until after the fifth day from that of the last attack. In regard to the plague the following regulations were in force: Healthy ships must complete ten days after leaving the infected port before they were considered out of quarantine, and all dirty linen was disinfected. Infected ships were kept at Moses' Wells for ten days after the last attack, the sick were isolated in hospitals, and thorough disinfection of the ship was carried out. The disinfection of the ships as ordered by the Convention of Venice was not easy to carry out, the passengers would not trouble to give up their soiled linen, and the disinfection of the ship was often a farce. The measures which were undertaken were inadequate to prevent ships carrying persons in the incubating period of cholera and plague to go through the canal to Europe. As far as the pilgrims were concerned the regulations appeared to be adequate in reference to plague. The measures for passengers entering Egypt were also fairly satis-

factory, but those for suspected and infected ships passing through the canal in quarantine or detained for disinfection were for the most part useless.

THE PLAGUE AT OPORTO.

DR. SHADWELL considered plague a particularly mysterious disorder, and he thought the facts of the Oporto outbreak bore out that opinion. After describing this town and giving some vital statistics and other details, he went on to discuss the origin of the outbreak, illustrating his remarks with a spot map. The earliest cases that had been traced occurred at the beginning of June last. There was no evidence that the disease had existed previously for an indefinite time, as alleged by some persons. on the contrary, he thought that Dr. Jorge, to whose knowledge and devotion he paid a high tribute, had fixed the commencement with approximate accuracy. The earliest victims were Spanish dock labourers living in a narrow and filthy street near the river side. The symptoms were fever, prostration, delirium, and bubonic swellings in the axilla or groin. The first case of all was a man employed in a salt-fish warehouse. He was said to have been engaged in unloading a vessel with grain from India, but on investigation the story melted away. He was not so employed, there was no grain from India, and no ship at all from any infected port. The trade of Oporto was with London, Hamburg, Rotterdam, and Havre, and goods from any infected place could not be shipped there until they had lain for three months in some clean, intermediate port. The difficulty with regard to importation, therefore, was that the infection should have passed over so many ports in constant and direct communication with the Eastern plague centres, or very much nearer to them than Oporto, and should have picked out a small port having no connection with them at all. He agreed with Dr. Jorge in calling it a "flagrant etiological absurdity." Passing on to the spread of the disease, he traced the connection between the earliest cases, and showed that the infection was conveyed by personal contact. In one case a father, sleeping in a plague-infected house during the week, but going home to a suburb on Sunday, carried the infection home, and his two little girls caught it, though he had no illness himself. The first score or so of cases were of an epidemic character, but after this cases began to appear scattered about in an irregular fashion, and at considerable distances. There was very little evidence suggesting dissemination by animals. The most striking fact was the comparative immunity, during this phase of the outbreak, of the principal slum area of the town, which was close to and connected with the original seat, and in which poverty, overcrowding, and dirt chiefly abounded. He thought the facts very puzzling. The total number of cases up to the end of November was 277, with 97 deaths. The monthly distributions were June, 17; July, 10; August, 36; September, 57; October, 95; November, 62. This indicated a tendency to decline, which was further maintained at the present time.

THE CONTROL OF PLAGUE BY THE MEDICAL INSPECTION OF RAILWAY PASSENGERS.

Dr. J. SPENCER LOW, late medical officer on plague duty in India, read a paper on Some Preventive Measures Adopted in the Presidency of Madras during the late Epidemic Prevalence of Plague in India. The principal measures adopted by the Government of Madras were: (1) Isolation of plague cases in special plague hospitals; (2) the segregation of "contacts" in camps; (3) the evacuation and disinfection of infected houses; (4) medical inspection and detention for observation of travellers by road and rail; (5) the passport system; (6) inoculation by Haffkine's prophylactic; (7) the prosecution of measures of sanitary reform. Each of these measures was described in detail and their relative values discussed. Various methods adopted by the natives to evade the precautionary measures were related and the means employed to meet such evasions.

Some figures were given showing that 225,000 passengers were medically inspected between August, 1898, and July, 1899, at Jalarpet Junction at which Dr. Low was stationed. Out of this large number 11,500 or 5.11 per cent. were detained either as suspects or owing to the filthiness of their clothing being regarded as a source of danger or for various other reasons. Only 66 cases of plague developed among the 11,500 persons detained, a percentage of only 0.37 of the detained passengers, or 0.03 per cent. of the total. These figures were all the more remarkable, since Jalarpet was a junction through which trains passed from Bangalore and from the Kolar Goldfields to Madras. At both of the above mentioned places plague raged severely during 1898 and 1899. Incidentally some facts as to identification through marks (Bertillon's method) upon inoculation certification were given, and the use and abuse of such certificates by the natives was discussed.

The paper concluded with the hope that as a result of the labours of the Plague Commission the Indian Government might be induced to place the organisation of the public health service in India upon a proper footing. The need for trained sanitarians was great, and the appointment of health officers with adequate remuneration deserved the earnest con- of the Government.

The reading of the papers was followed by a discussion, in which Drs. BRUCE LOW, CLEMOW, SIMPSON, BULSTRODE, and the PRESIDENT joined.

MIDLAND MEDICAL SOCIETY.

E. RICKARDS, M.A., M.B., F.R.C.P., President, in the Chair.

Wednesday, December 6th, 1899.

CASES.

Mr. ARTHUR LOXTED showed a man and a woman, who were both the subjects of Lupus Erythematosus of the scalp. In the one case there was a history of three years' and in the other of ten weeks' duration. The cases illustrated the different appearances of the somewhat uncommon disease in its early and in its later stages.

SPECIMENS.

Dr. PURSLOW showed a Uterus removed by a Vaginal Hysterectomy for chronic metritis.

The patient, who was the mother of two children, had suffered since her last confinement five years previously from menorrhagia, severe pelvic pain and purulent discharge. She had been under treatment for two years, and as all the methods tried, including curetting, had failed to give relief, and her health was steadily deteriorating, vaginal hysterectomy was proposed and was readily agreed to by the patient. The uterus after removal weighed 5¾ oz., its walls were thickened, and a histological examination, made by Dr. Stanley, showed that the enlargement was entirely due to chronic inflammatory changes in the walls. The left ovary was found to be cystic and was removed. The right ovary and tube were not removed. Although only three months have elapsed since the operation the patient expresses herself as feeling much stronger than before, and has been free from pain and hæmorrhage.

Dr. Purslow also showed a Fibro-cystic Tumour of the posterior lip of cervix uteri, the size of two fists, which he had removed by operation.

PAPER.

Mr. W. WATKINS-PITCHFORE read a paper on the Clinical Aspects of Plague.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

W. H. HORROCKS, M.B., F.R.C.S., President, in the Chair.

Tuesday, December 5th, 1899.

TUBERCULOSIS IN ITS RELATION TO PUBLIC HEALTH.

DR. CROWLEY introduced a discussion on this subject by reading a paper on the sanatorium treatment of phthisis. He laid stress on treatment in a sanatorium as distinguished from "fresh air" and other methods, in that it was a mental as well as a physical remedy; and he urged the importance of strict discipline in regulating and controlling every detail of the patient's life. Very satisfactory sanatoria could be made in most parts of the kingdom, provided that the air was pure and free from soot, the soil well drained, that the building was sheltered from the prevailing winds, and that there was a fair amount of sunshine. All cases were suitable for treatment, those in the early stages naturally yielding the most satisfactory results. A large proportion of cases were curable for the time being, the cure being maintained only if suitable habits of life were observed after the patient's return home. Finally, it was urged that the co-operation of the whole medical profession must be secured in order that sanatorium treatment should be a success.

Dr. ARNOLD EVANS read a paper on Tuberculosis, its Prevalence and Prevention. The preventive measures recommended were: (1) That persons suffering from phthisis be isolated in sanatoria, and their houses and furniture disinfected. That sputum and other discharges be not allowed to become dry, and so get diffused in the atmosphere. (2) That all dairies and cowsheds should be registered. That cows with indurated udders should be notified to the sanitary authority, and their milk not mixed with that of healthy cows. That the carcasses

of slaughtered animals should be inspected by a competent person. That, till preventive measures were taken, all milk should be sterilised.

Dr. METCALFE urged the importance of early diagnosis, in order that treatment might be satisfactory.

Dr. MAJOR thought that public opinion was not yet ripe for compulsory notification, but suggested that some system of voluntary notification be adopted.

Dr. BELL said that the introduction of sanatoria was sure to be associated with a great deal of quackery. He threw doubt on the accuracy of statistics from institutions conducted for the profit of the superintendent. He advocated the compulsory notification of phthisis.

Dr. RABAGLIATI advocated the prevention of phthisis by inculcating into the minds of the public the importance of fresh air, exercise, and diet. He thought that public bodies might do much good by insisting that the living rooms of all new houses should have an adequate cubic space.

Dr. EURICH alluded to the prevalence of porcine tuberculosis, and remarked that the liver and tonsils were the organs chiefly affected.

Drs. GOYDER, S. JOHNSTONE, LODGE, and HORROCKS made further remarks; and Drs. CROWLEY and EVANS replied.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

W. ROBINSON, M.D., F.R.C.S., President, in the Chair.

Thursday, December 14th, 1899.

DR. LIMONT showed the following examples of Skin Diseases: (1) Three cases of Lichen exhibiting various stages of the disease; diagnosis and treatment were discussed; (2) Extraordinary Bromide Rash in a man who had been taking drachm doses of the mixed bromides every day; the case exhibited bullæ, ulcers, and marked pigmentation; preventive treatment by arsenic, and intestinal antiseptics in the form of salol, β naphthol, and salicylates was considered; (3) Morphœa, a boy showing patch over left side of chest and also a long band from the anterior superior spine of ilium, down inner side of thigh and front of leg and foot to great toe, producing deformity simulating talipes varus; (4) two cases of Lupus Erythematosus, the first showing typical raised patches in an exaggerated form, the second doubtful, and probably a part of a general seborrhœa.

MITRAL AND TRICUSPID INCOMPETENCE.

Dr. W. J. PENFOLD read a paper based upon recent observations made upon a series of hearts from patients who had died in the Northumberland County Asylum. For testing the orifices *post mortem* he had used a nozzle introduced through the aorta and pulmonary artery respectively, and connected by a hose to an ordinary tap, the perfect or imperfect closure of the auriculo-ventricular valves being viewed through the opened auricles.

LIGHT SENSE AND COLOUR SENSE.

Dr. A. S. PERCIVAL read a read in which he divided visual acuity into form sense, light sense, and colour sense. He discussed the value of an estimation of light difference and light minimum, and of accurately estimating and recording colour sense. For this purpose he exhibited and explained the use of Chibret's photoptometer and chromatoptometer and the pocket colour test devised by himself.

ANENCEPHALOUS FŒTUS.

Dr. J. G. MODLIN exhibited a specimen in illustration of his remarks on Spina Bifida, on account of its showing an absence of the upper cervical laminæ.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At a meeting held on December 14th Dr. GRANT ANDREW showed:

(1) A patient from whom the entire penis, scrotum, and testicles had been removed for Epithelioma of the Penis; (2) a patient from whom a Papilloma was removed from the tongue, the specimen showing features suggesting carcinomatous change; (3) the specimen, with a cast of a large Fibrous Epulis removed from the upper jaw.

Dr. Andrew gave a full account of the course of the disease in each case, and described the operations for the removal of the growths. Dr. D. MCGILLIVRAY (who referred the case of papilloma of the tongue to Dr. Andrew for treatment) remarked that he had been consulted, not on account of the condition of the tongue, but on account of a purpuric eruption and œdema of the legs. Dr. JOHN STEWART referred to the difficulty in cases of simple papillomata and other tumours of deciding when the simple character of the tumour took on the malignant type. Dr. T. W. JENKINS pointed out the importance of the purpuric eruption and œdema of the limbs, and suggested the probability of some connection between the lowered state of the body generally and the malignant disease.

Dr. ROWAN demonstrated a case of Traumatic Aniridia.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—At a meeting held on December 7th, 1899, Dr. FREDERICK BAGSHAWE (St. Leonards) in the chair, Dr. CECIL LATTER (Folkestone) read a paper entitled the Duties of Medical Men in the Public Life of Health Resorts. He said he had chosen the subject because he had recently been elected a member of the Folkestone Town Council. He held that the existence of a medical officer of health in a district did not render unnecessary a doctor on the Council; on the contrary, the doctor could give a most valuable aid to his colleagues by virtue of his more intimate association with his fellow-councillors. He considered that no health resort should be without a doctor on its council, and that if possible the doctor should be the delegate of his brethren. Dr. SYMES THOMPSON pointed out that a medical man, however engrossing his occupation, was not exonerated from the duties of citizenship. Dr. BAGSHAWE (St. Leonards) considered that medical men should, when needed, take up responsibilities of citizenship by becoming members of the town council. The doctor's knowledge in sanitary matters would specially fit him to serve on the sanitary committee, where he could forward the work of a zealous M.O.H.; but, further, he could render help in securing and maintaining a good water supply. The Roads Committee, as well as the parks, gardens, and general means of recreation should occupy his attention. He would be in touch with both householders and lodging-house keepers, and could speak to their needs and to their powers of bearing taxation, and would know when to uphold economy of administration. A medical man was specially called upon to enter upon public life if he did so with the active concurrence of his professional brethren. Dr. ERNEST SNAPE was strongly in favour of doctors taking a more active and personal part in local affairs. Dr. LEONARD WILLIAMS and Dr. WARD HUMPHREYS also took part in the discussion, and Dr. LATTER replied.—Dr. LEON (Sidmouth) read a paper on Sidmouth as a Winter Health Resort. He said Sidmouth deserved more notice on account of its advantages of situation and climate, and because it possessed a very complete set of baths, fitted up for Nauheim baths, also hot and cold fresh and salt water immersion, douche, Aix, massage, and other baths. The cases which did best were: (1) Cases for Nauheim treatment, and those which derived most benefit were cases of early valvular disease after acute rheumatism, cases of heart neuritis, cases of heart dilatation (not fatty), cases of combined cardiac disease with renal failure; (2) in chest disease, cases of early phthisis, asthmatics; (3) renal cases; (4) in nervous diseases: insomnia, neurasthenia; (5) convalescence from various disorders. Cases which were not suited to the climate were: (1) Cases of simple anæmia; (2) cases of hepatic congestion; (3) cases with a tendency to hæmorrhage, for example, menorrhagia. Dr. A. P. LUFF said he could bear testimony to the soft air of Sidmouth, as well as to the excellence of its baths. On account of the high relative humidity of the air he doubted whether the locality was suitable for cases of articular gout and rheumatism, and he would like to hear Dr. Leon's opinion of the effect of the Sidmouth climate on such cases. Dr. LEONARD WILLIAMS and Dr. SYMES THOMPSON also discussed the paper. In reply, Dr. LEON agreed with Dr. Williams that cases of Bright's disease were rare amongst the residents in the Sidmouth valley. He argued that the humid climate tended to induce free skin action, and so was indicated in advanced condition of gouty kidney disease, chronic gouty arthritic conditions were well treated by local douches.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on December 6th, Dr. H. MICHIE, President, in the chair, Mr. R. C. CHICKEN showed (1) patient after ligature of the common carotid; (2) patient after ligature of the femoral artery in Scarpa's triangle for popliteal aneurysm.

The sac of the aneurysm was dissected out. Subsequently some paralysis developed in the leg, owing to the peroneal nerve becoming involved in subcutaneous scar tissue. A dissection of the nerve was made, and it was freed from the cicatricial tissue which had bound it down and destroyed its conductivity. The patient, when shown at the meeting, had

quite recovered from the paralysis, as a result of the operation and subsequent massage and electrical treatment.

—Mr. A. R. ANDERSON read a paper on the treatment of tetanus with antitoxin. The paper, which was based on three cases occurring in the author's own practice, gave an exhaustive survey of the disease and the present attitude of the profession in respect of this treatment, together with the author's comments on the effects observed in the three cases in which he had used it.—A short paper was read by Dr. BOLTON on the treatment of scarlet fever without isolation. Anointing the patient all over with oil of eucalyptus was advocated; in this way, it was stated that the danger of infection being conveyed was reduced to a minimum, and the duration of the peeling process much shortened.

KIDDERMINSTER MEDICAL SOCIETY.—At a meeting on December 15th, Mr. J. LIONEL STRETTON (President) who was in the chair, showed (1) a girl, aged 16, who four years previously had fallen on the edge of a desk, and sustained a wound on the right eye.

At the time of the accident she was concussed, and had been subject to severe headaches and "turns," in which she partially lost consciousness, ever since. There was a scar visible over the right eye. Mr. Stretton removed a disc of bone an inch and a-half above the scar, the dura mater was found to be adherent to the bone, about half an inch outside the scar, and a sharp projection of bone was found pointing inwards, and pressing on the dura mater; this was removed with a raspatory; the patient made a good recovery, and had had no return of the symptoms.

The President also showed a boy upon whom he had operated for the radical cure of hernia a month previously; there was no return of the hernia; no truss worn.—Dr. EVANS showed a man whom he had treated for fractured patella eighteen months previously by drawing the fragments together with thick silver wire; the wire had been a constant source of irritation, and had recently been removed; there was, as shown by a skiagraph, firm fibrous union.—Mr. J. P. RACE showed a girl, aged 18 years, who was admitted to the infirmary with the left thigh flexed and painful.

There was no tuberculous history, and no evidence of hip disease. The thigh was straightened by means of an extension; a few days later great pain was complained of in the left lumbar region. This was followed by the appearance of a brawny swelling, accompanied with great tenderness over the second lumbar vertebra; an incision was made in the swelling, and an abscess cavity found; no dead or carious bone could be detected. The cavity closed with the exception of a discharging sinus, which still remained. The patient had gained nearly a stone in weight.

—A discussion on medical organisation was opened by the PRESIDENT.

WIGAN MEDICAL SOCIETY.—At a meeting on December 14th, Mr. LUTHER COOKE (President), in the chair, Dr. BARR (Liverpool) read a paper on the treatment of typhoid fever. A discussion followed, in which the PRESIDENT, Messrs. GRAHAM, REES, BLAIR, and the HONORARY SECRETARY took part.—A cordial vote of thanks was accorded to Dr. Barr.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—At a meeting held on December 18th the following gentlemen were elected to hold office during the first session: *President:* Sir William Dalby. *Vice-Presidents:* Dr. Urban Pritchard, Dr. Thomas Barr, Mr. George Field. *Treasurer:* Mr. A. E. Cumberbatch. *Librarian:* Mr. E. Cresswell Baber. *Secretaries:* Mr. Charles A. Ballance, Mr. Arthur H. Cheatle *Council:* Mr. Victor Horsley, Mr. T. Mark Hovell, Dr. Edward Law, Dr. P. McBride, Dr. William Milligan, Dr. A. W. Sandford. The meetings will take place at the Medical Society's Rooms, Chandos Street, on the first Monday in the months of February, March, and May, at 4.30 P.M.

OXFORD MEDICAL SOCIETY.—At a meeting on December 8th, Mr. SYMONDS (President) in the chair, Mr. FARMER showed a man, aged 44, in whom he had excised the tongue by Sedillot's method for epithelioma on the under surface invading the frenum, and adherent to the lower jaw. He also showed a case which he had operated on for abscess of the lung, probably resulting from the bursting of a localised empyema into the lung tissue.

A man, aged 48, had an attack of pneumonia in July; three or four weeks later there was evidence of pus in the right chest, proved by aspirations. The eighth rib was resected for 2 inches, and the cavity drained, fœtid pus and gangrenous lung tissue being evacuated. The discharge continuing very offensive iodine baths were given with marked benefit, and the patient made a good recovery. It was noted that there had been some fœtid purulent expectoration the day before operation.

Dr. BROOKS and Dr. COLLIER stated their opinion that this was not a case of primary lung abscess, but of secondary infection of the lung from a localised empyema. Mr. Farmer also showed a boy who had suffered severe laceration of the left arm from a mill-wheel accident.

In addition to fracture of the surgical neck of the humerus, there was a lacerated wound of the upper and inner surface of the arm, which laid completely bare the axillary vessels and nerves. There was also a laceration of the wrist exposing the flexor tendons and the median nerve, together with a lesser wound on the dorsal aspect. The injuries were so severe as to suggest amputation, but by careful adjustment and suturing a very good result was obtained, with only slight muscular wasting.

—Dr. TURRELL read notes on the use of antistreptococcus serum in a case of puerperal septicæmia.

The disease ran a course of three weeks, resulting originally from the careless management by a nurse of a slight perineal laceration. He used in all, 20 injections of 10 c.cm. of serum (British Institute), and noted a fall of temperature through 2° F. after each injection. After 15 injections the serum seemed to lose effect, and then quinine was found beneficial. The highest temperature throughout was 105.4° F. No bad effects were noted.

Dr. WHITELOCK had used this serum in two very severe cases reported at the British Medical Association at Portsmouth. On the whole he was favourably impressed with the serum in puerperal cases, and he specially noted its soothing effect on the patient. A discussion followed in which several members took part.—A Roentgen ray demonstration was given after the adjournment of the meeting.

FOLKESTONE MEDICAL SOCIETY.—A meeting was held on December 1st at the house of Dr. HAGGAN EWART. Ten members were present. The consideration of a letter relating to midwives was deferred. The members generally agreed to attend the wives and families of reservists now at the seat of war free of charge.—Mr. LININGTON read a paper on a few points in surgery. He dealt first with the question of anæsthetics, and considered that chloroform should only be used when ether was contraindicated. Gas followed by ether was the ideal anæsthetic. Dealing next with shock he advised a preliminary nutrient and stimulating enema and a hypodermic injection of strychnine in severe operation cases, also keeping the patient warm. Intravenous transfusion was of little use, although it might keep the patient alive for a short time. Rectal injections were more useful. With regard to antiseptics he doubted the wisdom of aseptic surgery in general practice and advocated antiseptic methods. A discussion followed.

REVIEWS.

SOME RECENT WORKS ON HYGIENE.

DR. NEWSHOLME'S work[1] in its earlier shape has long been recognised as an indispensable guide to the study of vital statistics. The present edition, which has been almost entirely rewritten, will fulfil its purpose even more completely, and will maintain and advance the already high reputation of the author. A glance at the table of contents will show the comprehensive character of the information here afforded and the variety of subjects dealt with—all of them important, not only from the professional point of view, but also from that of the statesman and the man of general culture. The author very wisely does not waste time in arguing the case in favour of statistical method; he contents himself at the outset with a simple statement of its value and applicability, and urges with truth that the ignorant or unscrupulous abuse of figures does not discredit their legitimate use. Statistics, in short, are a powerful instrument of research, and, like other powerful instruments, are capable of doing much mischief if not employed with skill and honesty of purpose. The book itself is as good an argument as can be found for the value of genuine statistical reasoning, and not the least of its merits is the care with which the fallacies induced by a faulty employment of perfectly trustworthy data are pointed out and provided against. The space at our disposal will not allow us to comment on the work in the detail which its merits deserve; we may however mention, as points of more than ordinary interest, the reasons given in favour of a quinquennial census; the account of the alleged phenomenon of rural depopulation; and the emphatic opinion expressed by the author, in which most authorities will agree, as to the

[1] *The Elements of Vital Statistics.* By Arthur Newsholme, M.D., F.R.C.P. Third edition. London: Swan Sonnenschein and Co. 1899. (Demy 8vo, p. 366, with many diagrams and tables, 7s. 6d.)

need and feasibility of the compulsory registration of disabling sickness. There is an admirable chapter on small-pox and the vaccination question, in which the chief fallacies of which the opponents of vaccination have been guilty are ably exposed. This section would have been still more useful if Dr. Newsholme had been able to incorporate the results of recent legislation. With regard to the comparison instituted by Dr. Collins and Mr. Picton between the alleged alteration in age-incidence of influenza and small-pox respectively, the case is even stronger than is represented by Dr. Newsholme, for it is not only "highly probable" (as he says) but absolutely certain that an entirely different system of registration of causes of death prevailed in 1847-8 from that adopted in 1890 (see Dr. Farr in Registrar-General's Annual Report for 1847, p. xxix). The influenza figures of the former period include nearly all the cases in which influenza was returned, either as a primary or secondary cause of death, whereas those of the latter comprise only those cases in which influenza was returned as a primary cause. A further point in favour of Dr. Newsholme's contention is that the supposed age-incidence of influenza in 1890 has been proved by subsequent experience to be exceptional. There is little doubt that the value of the influenza returns for that year was largely affected by imperfect diagnosis. On page 3 the second figure in the first horizontal line should be 10 instead of 0. On page 6, P in one place should be written P′. There is also an obvious printer's error in the quotation at the bottom of page 60; but slips of this kind appear to be neither numerous nor important. In conclusion it may be said that the amount and variety of the information given are marvellous for a work of this size. It can be confidently recommended not only to those who have already entered or are preparing to enter the Public Health Service, but also to everyone who for social, political, or philanthropic purposes wishes to gain a clear insight into the methods and results of the "science of numbers as applied to the life-history of communities and nations."

Dr. Leon Gautier presents us with an able attempt at a scientific classification of infectious diseases, based on our modern knowledge of bacteriology.[2] The first chapter deals with polymorphic infections (staphylococci, streptococci, pneumococci, etc.). In the second chapter the group constituted by enteric fever, epidemic cerebro-spinal meningitis, Malta fever, yellow fever, cholera, plague, intermittent fever, etc., is discussed. In Chapter III eruptive fevers, whooping cough, and diphtheria are considered; in Chapter IV the pandemic diseases, influenza and dengue; in Chapter V venereal diseases; in Chapter VI diathetic diseases, such as tuberculosis and leprosy; in Chapter VII microbic diseases of extra-human origin, as tetanus, hydrophobia, charbon; and in the last chapter infectious diseases, such as actinomycosis and malaria caused by micro-organisms other than bacteria. Although there is little that is entirely novel either in the statements or conclusions of the author, the facts are clearly stated, and the book forms a useful summary of our present knowledge of the affinities and relationships of the infectious diseases.

The first portion of the large work by Liebe, Jacobsohn, and Meyer[3] was noticed in the British Medical Journal for May 13th, 1899 (p. 1165), as being an encyclopædic account of the special hospitals and institutions of Germany. The second portion is devoted to the construction, statistics, and administration of general hospitals. Various forms of hospital are illustrated, and it would seem that the tendency in Germany is to distribute the wards as isolated buildings over a large area of ground rather than to combine them on the corridor or even the pavilion plan. There are some 2,700 general hospitals in the German Empire receiving annually about 900,000 patients. The second volume (or rather that portion which has reached us) treats of special provision for workmen in cases of illness, of accident, of invalidism, and in old age. Supplementary chapters follow as to special arrangements for miners and domestic servants. The provision necessary for prisoners, for scholars, and for orphans is next considered. In the section on school hygiene we notice a just tribute to the services rendered to this branch of science by Dr. Clement Dukes of Rugby; and included in the list of 48 schools and orphanages, the medical equipment of which as regards doctors, infirmaries, and isolation rooms is given, we find Rugby School and Eton College, though we doubt the correctness of the information that the latter has an *Anstaltarzt im Hause*. An account of the rise and progress of the "auxiliary schools" (*Hilfschülen*) in Germany is given which is interesting in relation to recent legislation for the education of defective children in this country. It appears that Halle and Dresden were the first towns in Germany to start classes for special instruction in 1863 and 1867 respectively. The system has consequently had over thirty years' trial, and the fact that the number of "auxiliary schools" has of late years considerably increased (from 30 in 1894 to 53 in 1898) is the best evidence of its success. It is stated that altogether about 6,000 pupils are at the present time being taught in special schools or classes, but it is estimated that there are in Germany no fewer than 60,000 weak-minded or feebly-gifted children, The section on provision in sickness for the destitute comprises a sketch of the various systems of medical relief in vogue in the various European countries, including a reference to the English Poor Law. The medical services in the different States composing the German empire are described in some detail; and it is properly pointed out that the district medical officers who look after the poor may do much to protect by hygienic precautions the general health of the community. The medical service of the army is considered under two sections—that required in time of peace and that required in time of war. The share of voluntary associations in supplementing the regular medical equipment comes in for discussion. We have said enough to show that in the volumes before us there exists a rich mine of information on medical organisation generally, and though of course primarily applicable to Germany, it has also interest for other countries.

Mr. Copnall's work[4] is divided into three parts, of which the first comprises the text of all the unrepealed statutes since 1790, explained and illustrated by notes and cross-references. Part II contains the official reports and memoranda, while Part III furnishes a digest of decided cases. As a book of reference it leaves nothing to be desired, inasmuch as it contains all the statute law and an epitome of all the case law or upon the subject with which it deals. It could not, however, be recommended to anyone who, as a mere beginner wishing to study the subject, was on the look-out for a readable textbook. In this respect it resembles many other legal works; nevertheless, Mr. Copnall has presented his subject in an exceedingly useful form. Thus, the arrangement of the statutes in order of date is, perhaps, the best way of overcoming what is always a great difficulty to a student of the laws of public health—laws which, albeit of recent development, are in a state of chaos. Much of this confusion is due to the fact that of the many statutes which have been passed from time to time, some are "adoptive," while others have been repealed and re-enacted in the Public Health and Local Government Acts. It would, however, be more convenient to the reader if Mr. Copnall had confined the arrangement in order of date to enactments of a statutory nature, appending to such statutes all orders and regulations made by the Local Government Board in respect of them. Thus to the Contagious Diseases (Animals) Act, 1898 (on p. 74) might have been subjoined the Dairies, Cowsheds, and Milkshops Order of 1885, which is printed on p. 81. The digest of decided cases in Part III contains an abstract of all important cases, and references to many others of general interest. Its usefulness is greatly augmented by the fact that mention is made of all the reports in which the case may be found, a boon which will be appreciated by those who have no access to a complete legal library. That this digest is up to date is proved by the fact that it contains a note of R. *v.* Davey and Warwick *v.* Graham, both of which were decided in the course of 1899. We are glad to find at the end of the book an exceedingly good index, without which a work of this kind would be far from complete.

[2] *Essai de Groupement Nosographique des Maladies Infectieuses de l'Homme.* Par Dr. Leon Gautier. Geneva and Bale: Georg and Co. 1899. (Demy 8vo, pp. 96. F.2.)

[3] *Handbuch der Krankenversorgung und Krankenpflege.* [Manual of Provision for the Sick and of Sick-Nursing.] Herausgegeben von Dr. Georg Liebe, Dr. Paul Jacobsohn, Dr. George Meyer. First vol., sect. 2, part II, and second vol., sect. 2, part I. Berlin: August Hirschwald. 1899. (Roy. 8vo, pp. 480. First vol. complete, M.20. Second vol., sec. 2, part I, M.9).

[4] *The Law relating to Infectious Diseases and Hospitals.* By H. H. Copnall, Solicitor, Deputy Clerk, and Clerk of Committees of the Wilts County Council. London: Haddon, Best and Co. (Demy 8vo, pp. 296. 7s. 6d.)

The second edition of Professor PERCY FRANKLAND'S excellent little book was reviewed in these pages in 1895. The fact that a fourth edition[5] has been called for is sufficient proof that the General Literature Committee of the Society for Promoting Christian Knowledge was well advised in selecting the subject of micro-organisms for the Romance of Science Series, notwithstanding the petty opposition of a coterie of peculiar people. The wonders of the minute bacterial life which surrounds us on every hand are well displayed in plain language. The knowledge that these microscopical plants play so essential a part in the economy of Nature is well calculated to promote right thinking and doing. It is unnecessary in this place to insist on the bacterial foes individuals and nations have to deal with, although there is a tendency in some quarters to march backwards. To medical men—who have had neither time nor opportunities to make themselves acquainted with the lowly forms of cellular activity—this simple and unvarnished tale can be strongly recommended. The interesting facts in connection with symbiosis, for instance, should be sufficient to impress the dullest. It is often asked, Of what use is bacteriology? Apart from the pursuit of scientific inquiry for its own sake, the far-reaching practical and financial results involved in everyday bacteriology can be gathered from Dr. Frankland's lucid chapters on the useful micro-organisms and on bacteriology and agriculture, for agriculture is the backbone of this country—a stern fact of which the nation will some day be rudely reminded.

Whatever the title *Architectural Hygiene*[6] may signify—and we own to having entertained no clear idea until the contents of the small volume were studied—the object of the authors has been to provide an elementary textbook on the construction of buildings in accordance with the principles of sanitary science and of architecture. The material is primarily intended for the architect, and the greater part of the contents of the book have already appeared in the students' column of the *Builder*, but the work has also been written to appeal to a wider audience, embracing "surveyors, engineers, medical officers of health, sanitary inspectors, plumbers, and students generally." In its treatment of the sanitary construction of dwellings the book does not differ in any material respect from many other elementary textbooks which deal with the same subject, but there is in addition some useful information upon the planning of houses and hospitals, with many drawings of such plans, together with specimens of surveys and reports, all of which will be useful to the student. The book is, on the whole, well written and accurate, but the authors are not always happy when they deal with the few chemical, biological, and physical facts introduced into the text. They have, however, succeeded in avoiding anything in the nature of a serious error.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

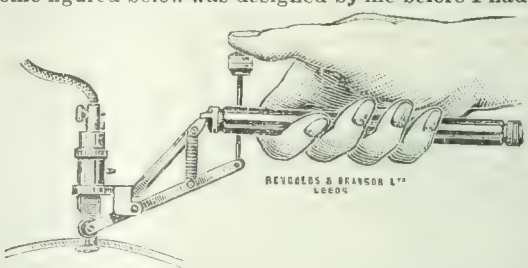
MEDICINAL AND DIETETIC PREPARATIONS.

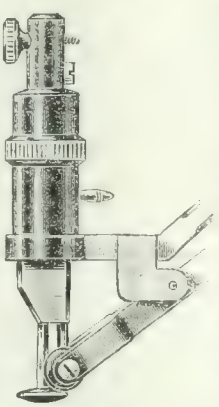
Fluorescine Tabloids for Ophthalmic Work.—We have received from Messrs. Burroughs, Wellcome and Co. some sample tubes containing discs of fluorescine, each containing $\frac{1}{1000}$ gr. They are easily soluble and very compact, and will form a useful addition to the pocket case. Probably for use in the consulting room most surgeons will prefer the ordinary solution, as it is quite stable and extremely easy to use. When, however, one wishes to carry it about, the danger of breaking a bottle containing such a very staining reagent is a serious drawback, and for this purpose the discs are superior.

Infant and Invalid Food.—The Infant and Invalid Food Company, of 54, City Road, have submitted to us a sample of their "I. and I. Food" for examination. The food consists of a finely ground flour composed of different cereals, which have been prepared and cooked by a special process, together with a small amount of a wholesome vegetable product rich in fat. The fat present amounted to 4.23 per cent., and this fact may be regarded as a distinctive feature. The claims made in so far as the composition of the article is concerned are substantiated by our analysis. The value of the preparation as an article of food for infants and invalids is a matter which must largely be determined by experience. The combination of constituents possesses the merit of ingenuity, and the food is well worthy of trial. The composition of the article should, as in all cases of this kind, be guaranteed by independent scientific examination at intervals.

MEDICAL AND SURGICAL APPLIANCES.

A New Cranial Osteotome Worked by an Electric Motor.—Mr. F. W. ROBINSON, M.D.Aberd., F.R.C.S.Eng. (Honorary Surgeon to the Huddersfield Infirmary) writes: The cranial osteotome figured below was designed by me before I had read





of Cryer's instrument, which also embodies the principle of the drill. Apart, however, from this, it possesses so many features of its own that I venture to think it deserves separate notice. The drill, guard, and button are much the same as in Cryer's instrument; the depth of the drill, however, is carefully regulated so as just to engage the skull at its thickest part. In making experiments with drills of various kinds I found those possessing smooth surfaces gave much the best results. Drills with parallel, straight, or curved cutting blades were apt to get clogged with the soft tissues and ceased to cut. The triangular bayonet-shaped drill was therefore chosen. The distinctive parts of the instrument are those designed to obviate friction and maintain steadiness. These results are obtained by the general shape of the instrument and also by the pair of wheels carried on a movable axle. When in action these wheels run on the outer surface of the skull, the button lying on its inner surface, whilst the drill is applied to the bone between. In addition to this the axle is made self-regulating by means of the spring. When the button attached to the lever is pressed it raises the axle with the wheels as high as may be necessary to expose sufficient of the drill to apply to the edge of the bone. Once the drill has made its groove in the bone, and the wheels rest upon the surface of the skull, the spring action renders the axle adaptable to the varying thicknesses of the bone, so that at all times a minimum portion of drill is exposed, and the button is kept closely applied to the inner surface of the skull. In this way the dura mater is protected from injurious pressure. The spindle carrying the drill is hollow, and a tube from an irrigator attached to its side conveys an antiseptic lotion to its interior. By this means the drill is kept cool when in action. The instrument has been made for me by Reynolds and Branson, Limited, Leeds.

THE Hungarian Minister of the Interior has issued an order that ritual circumcision is to be performed under medical supervision, and with proper antiseptic precautions.

[5] *Our Secret Friends and Foes.* By Percy Faraday Frankland, Ph.D., B.Sc.Lond., F.R.S. Fourth Edition. London: Society for Promoting Christian Knowledge. 1899. (Small post 8vo, pp. 265; 54 illustrations. 3s.)

[6] *Architectural Hygiene.* By Bannister F. Fletcher, A.R.I.B.A., and H. Phillips Fletcher, A.R.I.B.A. London: *The Builder* Office. 1899. (Crown 8vo, pp. 276, 58.)

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION

List of Presentations of Books, etc.

Presented by the Authors:

Clowes and Houston. Second Report to the London County Council on the Bacteriological Treatment of Crude Sewage. 1899.
Gould and Pyle. Compend of Diseases of the Eye. 1899.
MacLeod (J. M. H.). Beitrag zur Kenntnis des Baues der normalen Hornzellen, mit besonderer Berücksichtigung der ernstschen Keratingranula. 1899.
——— On the Development of the Human Epidermis and its Appendages. 1898.
Pyne (A. A.). Medical Register of Ontario. 1898.
Spencer (Major D. P.). A Record of Indian Fevers. 1899.

Presented by the Director-General, I.M.S.:

Scientific Memoirs by Medical Officers of the Army in India. Vols. x and xi. 1897-98.

Presented by T. A. Ellwood, Esq., M.R.C.S., Harringay:

Yearbook of Pharmacy. 1888 to complete series.

Presented by Colonel E. Fairland, Gravesend:

Harvey. Exercitationes Anatomicæ. 1671.

Presented by Messrs. Simpkin Marshall Co.:

Braithwaite. Retrospect of Medicine. Vol. cxix. 1899.

Presented by J. J. Stack, L.R.C.P.:

Hunter (J.). Venereal Diseases. 1786.
Hunter (Wm.). Two Introductory Lectures. 1784.

Presented by the Executors of the late C. Swaby Smith, Esq., M.R.C.S.:

Twenty-three volumes of the New Sydenham Society's publications.

Presented by R. H. Wellington, Esq., M.R.C.S., Balham:

Andral. Pathological Anatomy. Two vols. 1831.

Presented by the Editor of the British Medical Journal:

Baginsky. Handbuch der Schulhygiene. 1 Bd. 1898.
Bruce (J. Mitchell). Materia Medica. 1899.
Bryant (T.). Villous Growths and Common Affections of the Rectum. 1899.
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Schenk (F.). Physiologische Characteristik der Zelle. 1899.
Symes (W. L.). The Feeding of Infants. 1899.
Thomson (StClair). Cerebro-spinal Fluid and its Escape from the Nose. 1899.
Twentieth Century Practice of Medicine. Vols. 16, 17. 1899.
Veit. Handbuch der Gynäkologie. 3, 2. 1899.
Walker (N.). Introduction to Dermatology. 1899.
Williamson (R. T.). Syphilitic Diseases of Brain and Spinal Cord. 1899 (and other volumes).

Transactions and Reports have been received from the following bodies:

Actuarial Congress. 1898.
American Association of Obstetricians and Gynecologists. 11. 1898.
American Climatological Association. Vols. 2, 3, 7.
American Laryngological Association. 20. 1898.
American Pediatric Society. 10. 1898.
Boston City Hospital Reports. 1899.
Commissioners in Lunacy. 53rd. 1899.
Dermatological Society of Great Britain and Ireland. 5. 1899.
Glasgow Hospital Reports. Vol. 1. 1898.
London County Council. Asylums Committee Report. 1899.
New York State Board of Health Report. 2 vols. 1898.
New York State Medical Association. 15. 1898.
Public Health Reports. Marine Hospital Service, U.S.A. 13. 1897.
Sanitary Commissioner with the Government of India. 1897.
Yearbook of the United States Department of Agriculture. 1897-8.

Books Needed to Complete Series:

The Librarian will be glad to receive any of the following volumes which are needed to complete series in the Library:

American Climatological Transactions. Vols. 1, 4, 5, 6.
American Dermatological Association Transactions. Vols. 5, 7, 8, and 11.
American Journal of the Medical Sciences. New series, vols. 4, 5, 1842-43; vols. 14, 15, 1847-48; vols. 18-30, 1850; vol. 33, 1857; vol. 46, 1864-65; vol. 59; or any parts of these vols.
American Journal of Ophthalmology. Vols. 1-9.
American Laryngological Association. Transactions. Vols. 1-6, 8, 9.
American Otological Society. Transactions. Vol. 3, part 2, 1883.
Annals of Surgery. Vols. 1-11; 13-16; and 26-27.
Archives Générales de Médecine. 1831-39 inclusive; 1846-1855 inclusive; 1857-64 inclusive; 1871; and April, 1899.
Archives of Ophthalmology. Vols. 1-3, 6, 7, 14-21.
Archives of Otology. Vols. 1-7, and 20, 21, 22.
Asylum Journal of Mental Science. Vol. 1, 1854, and Title vol. 2.
Bentley and Trimen. Atlas of Medicinal Plants.
British Journal of Dermatology. Vol. 2, part 3.
Caledonian Medical Journal. Vol. 1 prior to 1894.
Centralblatt für Augenheilkunde. Hirschberg. 1891, January-July, 1892, January, September, and May, 1897.
——— für Bakteriologie. Bound volumes prior to 1899.
——— für klinische Medicin. 1880-1883; all 1888, 1891, No. 26 1892, No. 17.
——— für medicinischen Wissenschaften. Vols. 1-22.
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Edinburgh Medical and Surgical Journal. Vols. 67-82. 1847-1855.
Edinburgh Obstetrical Society. Transactions. Vol. 5.
Fothergill. Midwifery.
Glasgow Medical Journal. 1833-1853. Nos. 2, 5, 9, 10, 12, 13. 1856-1858. And No. 4, vol. 2, 1870.
——— Pathological Society. Transactions. Vols. 1 and 2.
Gray's Anatomy.
Guy's Hospital Report. Vol. 46. 1889.
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Hare. Therapeutics. Vols. 3-4.
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Larrey (J.). Mémoires de Chirurgie Militaire et Campagnes. Tomes 3, 4, 5. 1812-17.
Neurologisches Centralblatt. No. 21. 1898.
Ophthalmic Review, January, 1882.
Pan-American Congress. Part 2, Transactions, 1893.
Provincial Medical and Surgical Journal. 1840. Being the first 52 numbers before October 2nd, 1841.
Recueil d'Ophtalmologie. 1891, Jan.-June; 1892, Dec.
Registrar-General's Annual Summary of Weekly Returns. 1866-73, 1876, 1880, 1887.
Revue Générale d'Ophtalmologie. Prior to 1888, and 1891-92.
Salter (H. H.). On Asthma. 1860.
Semaine Médicale. Prior to 1890, and title and index to year 1892.
Society for Study of Inebriety. Transactions, No. 53, 1897.
South African Medical Journal. February, April, 1895. And Titles for vols. 3 and 4.
Starling Physiology.
University College Hospital Reports. Before 1877 and 1892-93.
Virchow's Archiv. Any vols. prior to 151.
Wiener klinische Wochenschrift. Nos. 5 and 6. 1889. Titles 1892 and 1888.
Willcock. Laws of the Medical Profession. 1836.

Applications for duplicates from medical societies forming libraries may be addressed to the Librarian, 429, Strand.

THE PREVENTION OF TUBERCULOSIS.

Leeds Consumptive Sanatorium.

By the amalgamation of two committees in Leeds having the same object, a strong Committee has been formed for the purpose of establishing a consumptive sanatorium. Sir James Kitson, Bart., has been elected President, and Professor Trevelyan and the Rev. J. J. Bynner Honorary Secretaries. At a meeting held in Leeds some time ago it was stated that Professor Trevelyan and Dr. Woodcock had visited some sanatoria abroad, and had arrived at the conclusion that the minimum cost in this country would be about £200 a bed. Dr. Cameron, medical officer of health, stated that the average annual number of deaths in the city from tuberculosis was 900, of which two-thirds were cases of pulmonary consumption. Two Committees were appointed—a House Committee upon which Dr. Churton will serve, and a Site and Buildings Committee, on which Dr. Cameron, Dr. Wardrop Griffith, and Dr. Moore will serve.

Carlisle.

Under the auspices of the Cumberland Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis, a lecture on The Prevention and Cure of Consumption was recently delivered in the City Hall, Carlisle, by Dr. T. S. F. Caverhill, of Edinburgh. The Mayor of Carlisle, Mr. A. Ling, presided, and there was a fair attendance.

The lecturer drew attention to the alarmingly high mortality from consumption principally amongst artisans, where every fourth death between the ages of 15 and 60 was due to it. As regards prevention he described the steps which ought to be taken by all, and especially by the sanitary authorities to whom the care of the public health was now committed. The next step which was now demanded in the public interest was the addition of consumption to the list of notifiable diseases. Dr. Caverhill afterwards explained over 70 limelight views of most of the European sanatoria. The lecturer favoured a system which, with high feeding, makes provision by hill climbing for the exercise of the patient as having a greater "conditioning" effect than the system of almost complete rest. At Bridge of Weir, Renfrewshire, where there is an exceptionally high rainfall, the sanatorium treatment of consumption has been carried out on these lines. Although patients were admitted in all three stages of the disease, 22 per cent. were absolutely cured, while 65 per cent. have been

able to return to work with every appearance of good health, with an average gain in weight of from 1½st. to 3st.

UNITED STATES.

An Illinois Society for the Prevention of Tuberculosis has recently been formed.

The California State Board of Health has decided not to impose a quarantine against the consumptives of other States. It has, however, adopted a resolution recommending that in all State institutions inmates afflicted with tuberculosis be separated from the others.

In a recent issue of the New York *Medical Record* Dr. Alfred Meyer maintains that the establishment of the Massachusetts State Hospital for Consumptive and Tuberculous Patients marks an era in the fight against the disease in the United States—not because of the additional number of invalid poor thereby provided for, but because it recognises for the first time, distinctly and unequivocally, the principle of State aid for this class of people, and opens up a promising vista of imitators in all the States of the Union.

The hospital is situated at Rutland, near Worcester, the site being the exact geographical centre of the State; it has an elevation of 1,160 feet above the sea level, and is sheltered by a hill to the north, which is about 100 feet higher. The grounds cover an area of about 200 acres. The wards are arranged like the spokes of a wheel, all leading at their northern end to a long corridor which connects them all, forming, as it were, the rim or tyre of the wheel. At their southern end they are provided with a large glass-covered solarium, and outside this with a broad verandah having three different exposures, and giving excellent opportunity for the out-door rest cure. All corners are rounded, and the corridor has no stairs, but follows the natural grade, both of which details, says Dr. Meyer, prevent the accumulation of dust. Patients (or their counties) pay 5 dollars (£1) per week, and have their choice of the two visiting physicians who represent respectively orthodox and homœopathic medicine. Each of these has a resident house-physician, and there is besides a medical superintendent.

The general routine of the establishment is very much on the order of other similar institutions. Each patient is furnished with a notebook in which he enters the number of hours spent out of doors daily, and condition of sleep, bowels, and appetite. In addition each patient is encouraged to buy his own clinical thermometer and to keep a record of his temperature. Every patient is furnished with a sanitary pasteboard sputum cup for indoor use, and these together with the expectoration are burned daily; when away from the institution he expectorates into pieces of Japanese paper, which he puts into a self-closing rubber pouch (old-fashioned tobacco pouch) carried in the pocket. Napkins of Japanese paper are used at the table and are burned after use. Three hearty meals and three light ones are served daily.

The outdoor life of the patients during the winter has been encouraged by permitting the hardier ones to fell dead timber on the State lands adjoining the institution, and to burn this at three winter camps built by the patients themselves. There is no special provision for hydrotherapy, cabinet treatment, or the employment of the Roentgen rays for diagnostic purposes. By the system of ventilation in vogue, which is under the supervision of trained nurses, the patients are soon accustomed to sleep with windows wide open on the leeward side all night; and, as a matter of fact, the temperature of the wards day and night has seldom been above 40° F. all the winter. There are no male nurses. In the daytime there is one female nurse assigned to each ward and adjacent private rooms, being one attendant for about thirty-two patients. At night there is one nurse each for the entire male and female services respectively, a total of about ninety patients each. This number is admitted to be insufficient, but economy is pleaded in excuse. Patients who are able will be employed to do light work, grading and gardening. There is no special amusement hall, but there is a small library, one of the inmates acting as librarian, and once a week there is an entertainment in the way of music, lecture, or a reading by volunteers from different parts of the State. Cases in which the prognosis was sufficiently favourable to secure their admission are discharged if they do not show improvement within four or six weeks, the improvement being gauged by the weight, temperature, dyspnœa, cough, expectoration, and general strength.

In the first six months of the existence of the hospital 224 patients had already availed themselves of its benefits, a very large number of whom had been improved by an average stay of four months only.

NEW SOUTH WALES.

In some respects the colonies move faster than the Mother Country, and there should be no hesitation in adopting institutions which they have proved to be of value. There are many potent arguments in favour of the institution of a Board of Health in this country, such as many of the newer States possess. The Board of Health of New South Wales has taken an important step in issuing suggestions for the prevention of consumption (tuberculosis) in the form of an official notice or poster which can be displayed for the information of every member of the community.

The notice shows graphically the enormous excess of the mortality from consumption over that from typhoid fever, diphtheria, and scarlet fever in New South Wales during the years 1888 to 1897. The proportion is represented by 8.69 for consumption as against 2.92 for typhoid fever, 2.54 for diphtheria and 0.75 for scarlet fever. Then follows useful information under the headings: Consumption is Infectious; Consumption is Preventable; Directions to Consumptives; and Cleansing and Disinfection. Under the first heading prominence is given to the fact that every case of consumption is caused by infection received from some previous case which may have occurred either in man or in one of the lower animals. The modes of infection from man and from animals are briefly but clearly stated, and the chief causes of predisposition are mentioned.

The section on prevention commences with the words, "Consumption is preventable; for it is catching only in ways which can easily be prevented in part by the sufferer and in part by the care of those living with him." These precautions are stated to consist in the destruction of phlegm, the cooking of milk and meat, the due provision of fresh air, and the separation of consumptives where the necessary precautions cannot be otherwise carried out.

The directions to consumptives wisely commence with the statement that recovery from consumption is not uncommon—a statement which, by giving hope to the sufferer, serves to counteract the depressing effect of the general enumeration of the dangers of the disease. The main hygienic requirements for the patient, especially with regard to fresh air, are followed by detailed instructions as to the reception and disposal of the sputa and the danger of indiscriminate expectoration. Cleanliness and disinfection are shown to be additional safeguards which are required with regard to the room, the linen, and the evacuations of the patient. The notice concludes with the pith of the whole scheme of preventive measures. "Scrupulous cleanliness in person and surroundings helps the consumptive to overcome his disease and prevents those associated with him from taking harm." The notice is an excellent example of the way in which a central authority may educate the people in health matters, and the president of the Board of Health of New South Wales may be congratulated on its production.

ITALY.

A second meeting of delegates from fifty-five local committees of the Lega Nazionale contro la Tuberculosi has been held at Rome under the presidency of Professor Guido Baccelli, Minister of Public Instruction. More than 200 delegates, deputies, senators, physicians, sanitarians, etc., were present. Professor Zeri, the Secretary of the League, having read the minutes of the previous meeting, Professor Baccelli said the movement had been so warmly supported by the medical profession throughout Italy that its success was now assured. Professor de Giovanni next submitted for consideration the two important questions connected with sanatoria—ways and means, and the model to be followed in their construction. In regard to the former point, he expressed the opinion that the funds should be provided by local rates, unions of two or more neighbouring towns being formed for the purpose when necessary. As regards construction, he said that while the essential requirements for the proper carrying out of the open-air treatment must be kept in sight, luxury would be quite out of place. Signor Lucca announced that a sanatorium was about to be established in the province of Novara, where as yet there was no branch of the League. He thought the best type of sanatorium was a small group of wooden huts, the number of which could be increased as more accommodation was called for. The discussion was continued by Professor Maragliano and others. A paper urging the compulsory notification of tuberculosis was read by Dr. Simonetta, whose views were strongly opposed by Professor Queirolo, who said he should be sorry to see the war against tuberculosis degenerate into a war against the tuberculous. Drs. Mazzoni and Bianchetti spoke in the same sense. Professor Perroncito said compulsory notification must come, but the time was not yet. Professor de Giovanni also declared himself opposed to Dr. Simonetta's proposal, and finally, at the suggestion of Professor Queirolo, the meeting almost unanimously passed to the order of the day.

THE Victoria Hospital for Incurable Diseases, Dundee, was opened for the reception of patients on December 7th. Ten patients have been admitted, and the Committee are ready to receive application for the other vacancies. A fund of £50,000 was raised as a Jubilee memorial.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1899.

Subscriptions to the Association for 1899 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 30TH, 1899.

THE PRINCE OF WALES'S HOSPITAL FUND.

The reports presented to the meeting of the General Council of the Prince of Wales's Hospital Fund for London, abstracts of which will be found elsewhere, will be read with interest. We can only offer a few brief remarks on these reports, which indeed are not sufficiently marked in character to justify any very confident opinions, either on the general success of the Fund or on its administration.

As to its general success, we must recollect that its stated objects are (1) to provide an annual income for "the hospitals" of the metropolis of £100,000 or more, and (2) to raise this income from a class which previously did not contribute to the support of these charities. The report shows a total income for the present year—up to December 19th—of £47,600 (not to weary the reader with odd figures), nearly £6,400 being income on investments, and therefore secure. There are some satisfactory features about this general result, one of which is the great economy with which the machinery is worked, the expenses being under £1,500; and another is that the receipts are about £9,000 more than last year. The Prince of Wales truly remarked that "the expenditure having been less and the income more, we can consider it a very satisfactory result." So no doubt it is, but yet all the friends of the Fund (and the British Medical Journal claims to be one of its warmest) were wishing for the more rapid progress of an effort in itself so admirable. The Council hoped last year to have £50,000 now to distribute. Of course the war is invoked to account for a cessation of special appeals, but this cause did not come into operation till October, less than a quarter of the year ending December 19th. If we allow that, but for this, the increase of income would have been more by a quarter, a most liberal allowance, that would still leave the result less than the anticipation by several thousand pounds. For the sum to be distributed is only £42,000, or £8,000 less, while the hypothetical addition to the income would have been only £4,500. There is, however, another encouraging feature in the report—namely, that the newly-constituted "League of Mercy" is credited with £1,000 contributed to the general fund, and the Distribution Committee expect that this league will "in due time greatly benefit the Fund." There are some features in this league which are, to our minds, somewhat objectionable, but it may in course of time much develop the very sound principle of local collection, which would do so much to promote the second object of the Fund's constitution—that is, to raise small subscriptions from persons and households who do not now contribute anything.

In the above connection we may note that "much of the increase" of income over last year "is due to the munificent donations of Mrs. Brydges Willyams and others." Now such munificent donors are nearly always supporters of their local hospitals; and, although of course they are not excluded from the purview of the Fund, it was mainly the more humble classes whom it was proposed to reach.

If we are to sum up the general conclusions to be drawn from this report we should say that some, though very slow, progress has been made towards the realisation of the first of the above objects, but that there is no evidence that the second has been promoted to any appreciable extent.

Turning now to the question of the administration of the Fund, as shown in the report of its Distribution Committee, we are sensible of the difficulty of pronouncing any opinion on details the reasons of which are unknown to us. We are sure, however, that the public and the authorities of the hospitals will repose the utmost confidence in the decisions of a committee presided over by Lord Lister, and we believe that the system of visitation by subcommittees is universally approved, the only criticism which we have heard upon it being that it would be well if the visitations were more thorough, the inquiry extended to systems of government and constitutions, and if it were possible for the same persons to visit the various chief hospitals so as to be in a position to compare institutions which are in many respects so similar. One paragraph in the report of the Distribution Committee will be received with universal satisfaction, that which states that 45 beds now unoccupied will be brought into use next year, and that when this is accomplished the operation of the Fund will have added 287 beds to the number previously in use.

With the details of distribution we profess ourselves not qualified to deal. Many of them surprise us—for example, when we find the City of London Chest Hospital receiving £1,500 a year, while University College Hospital receives only £1,400, and Charing Cross, King's College, and Middlesex £1,000 each—the same allowance as is made to the Tottenham Hospital, with an added donation of £500. No doubt at both the first and the last of these institutions there are additional beds to open, but the public services and importance of the great general hospitals seem so out of proportion to those of others, that the reader can hardly fail to be struck with a sense of surprise. But we have no desire even to insinuate a doubt that there are good reasons for these, as well as for other items in the list of donations which have struck us with some surprise at first. No doubt a freer command of money would have enabled the Committee to distribute a slice of solid pudding to some institutions which as it is have to be satisfied with empty praise.

Not the least merit of the report is that the Committee is not afraid to point out defects, and even to disallow the claims of some institutions to the title of hospital at all.

THE CAUSE OF DEATH FROM INDUSTRIAL ELECTRICAL CURRENTS.

Two deaths have occurred recently from industrial electrical currents—one in Middlesbrough and the other in Bradford. This, combined with the publication of a paper by Dr. R. H. Cunningham,[1] makes the present time opportune for reviewing the subject of death by electric shock. The subject is one that has been experimentally dealt with by Tatum, Jones, Bleile, T. Oliver and R. A Bolam, and by D'Arsonval. It was the opinion of D'Arsonval that an electric current caused death in one of two ways: (*a*) Directly by a disruptive action of the current upon the tissues, death by such being absolute and final; (*b*) reflexly or indirectly through nerve centres, in which case the apparently moribund individual can be restored by artificial respiration, provided it be begun immediately after the accident.

Nearly all authorities indicate that in the higher animals the lethal effect of both the continuous and alternate currents is due to the action upon the heart. This is the opinion of Cunningham, as it is too of Prevost and Battelli. Admitting that death is due to cardiac arrest under these circumstances, there is some difference of opinion as to whether it is due to molecular changes in the myocardium caused by the current, or to inability on the part of the heart to overcome the peripheral resistance consequent upon arterial constriction. A current of comparatively speaking low tension power may cause death. It is largely a matter of the mode of application. In the recent case in Bradford a man was killed by a voltage of 225. Standing in damp boots on earth into which there had been a leakage, he had touched with his perspiring hand an electric lamp. It is not always a question of voltage, for while 2,500 volts have been recovered from, the low pressure of 225 volts in this instance proved fatal. Death is said to have been instantaneous. In Cunningham's experiments, as in those published by Jones, Oliver, and Bolam, there was an instantaneous extinction of the circulation, and when the heart was exposed it was observed that both ventricles had ceased to beat, although the auricular appendages were beating rapidly. The heart may cease beating and yet respiration continue. Young, well nourished, and hardy dogs withstand a slightly greater current than older and ill-nourished animals. A current of 0.25 ampère for one second may cause the heart of a dog to stop beating, while 0.45 ampère passed for a longer time may have little effect on the heart of another dog. Cunningham has carried his experiments further than most of his predecessors. Applying electrodes to the surface of the exposed brain and the spinal cord in animals, he found that the mode of death was by asphyxia and therefore different from that which resulted when the current entered the body in such a way that the heart was traversed by some of the lines of the current. In the latter manner, when the current is strong, death is instantaneous. The heart muscle is immediately paralysed. There occurs what is known as *delirium cordis* or the "fibrillary contraction" described by McWilliam, and from which it is seldom that a heart spontaneously recovers. It is thus that death occurs in nearly all instances by contact with industrial electrical currents. Just as after electrocution an animal may breathe, so, too, may an artisan injured at his work, for his respiratory centre will continue to act for a brief period after the shock, and would probably go on doing so if only blood could reach it from the disabled heart. Cunningham alludes to sixteen men who recovered after electric shock. He states that consciousness was not immediately lost, and that the men had experienced a sensation of tremendous pressure across the chest. One man, shortly after regaining consciousness, vomited. Death, according to this observer, occurs in one of two ways—from the heart or by asphyxia. The cardiac mode is the more frequent. Cunningham is of opinion that either mode of electrical death is not instantaneous, for there are no currents of such intensity among the industrial varieties of electrial currents that workmen are likely to be exposed to. This opinion is scarcely supported by other observers.

Doubtless workmen are daily receiving even considerable electrical shocks which may incapacitate only for a brief period, but it is unlikely that recovery would take place if a current of from 1 to 8 ampères were passed through the heart. Besides, as we have seen, it is not always a question of the amount of current. Once a severe shock has been received and the blood pressure has fallen to zero the right heart keeps filling with blood and becomes overdistended, just the condition in fact which unfits it for resuming its co-ordinated contractions.

D'Arsonval and those who have followed him while recommending artificial respiration as the best means for facilitating the outflow of blood from the right heart, acknowledge that it is not always followed by a starting of the systemic circulation. If death from electric shock was always asphyxial recovery would be more frequent. Cunningham suggests a novel method of resuscitation—the injection of defibrinated blood into the carotid artery and the removal of some of the excess of blood in the right heart by the external jugular vein. Regular and rhythmical respiration, we are told, was induced in animals, and the heart exhibited co-ordinated beats. Owing to the unexpectedness of the death occurring from industrial electrical currents it is quite clear, even were it feasible, that the means of resuscitation recommended by Cunningham from the elaborate apparatus required could find little or no place in the ordinary treatment of apparent death by electric shock. Artificial respiration, although not always successful, remains therefore for the present the only means at our command to restore workmen apparently killed by electric shock.

[1] R. H. Cunningham, M.D., Columbia University, New York, *New York Medical Journal*, vol. lxx, 1899.

THE DECREASE IN VENEREAL DISEASES IN THE INDIAN ARMY.

THE recent announcement of a continued decrease in the amount of venereal disease in the Indian Army during 1898 is so satisfactory that it will be worth while to examine the means by which it has been brought about. The terrible admission rates of 522 per 1,000 in 1895 and 511 in 1896 were followed by a slight decrease to 486 in 1897. These high rates did not fail to attract attention, and steps were taken with a view to decreasing this largely preventable scourge.

The measure adopted was to bring venereal diseases under the clause of the Cantonment Act which dealt with other infectious diseases, such as cholera and small-pox; and although such a solution of the difficulty can hardly be regarded as completely satisfactory, yet it has been found possible to accomplish something even by such imperfect means; sufficient indeed, let us hope, to encourage the authorities to adopt more thorough methods for reducing the unnecessary wastage from preventable disease in our small army, which is now being subjected to so great a strain, and is so nobly meeting it. Under the rule referred to on information reaching the cantonment medical officer that there is a case of any of the infectious diseases which fall under the provisions of the Act in the cantonment, he is authorised to give notice to the patient that he or she shall attend the hospital for examination, and if the diagnosis be confirmed the patient must either remain in hospital or leave the cantonment within forty-eight hours. When, therefore, any soldier comes into hospital with any venereal complaint an endeavour is made to find out where he contracted it, and if from a prostitute of the cantonment bazaar she is brought under the rule, and either admitted to the cantonment hospital or compelled to leave the area under military control. A most important supplementary measure is the putting the city bazaars out of bounds, unless men are armed with a pass, and a careful watch that this rule is enforced is kept by the cantonment police, which consists partly of soldiers.

These rules are found to work fairly well in many cases, although it is very difficult to prevent diseased women from loitering just outside one or other of the more open margins of the cantonment areas, where they cannot be interfered with, so that it cannot be altogether relied on. They have, however, undoubtedly done something to lessen the amount of venereal diseases in India, and appear to work fairly smoothly, although they fail completely under certain special conditions, as in the case of some of the hill sanatoria, where the cantonment area may be small and surrounded by extensive forests, which are not under the control of the military authorities, and in which it is impossible to prevent the terribly diseased hill women from congregating. It was such a station as this which had the highest venereal rate in the last published returns, and in these cases further powers are necessary to render it impossible that to send soldiers to the hills in the hot weather and rains may be more deleterious to their health than otherwise.

Although, then, something has been accomplished, more remains to be done if this reproach and danger is to be removed from the Indian army, as the strenuous efforts which have been made to remove or lessen temptation by providing recreation rooms and other such measures, valuable as they are, cannot alone be trusted by us any more than by other military nations.

There is another measure by means of which the admission-rate can be reduced, and which we venture to think has had some effect in reducing the figures from 486 per mille in 1897 to 363 in 1898, and that is more efficient treatment. We had occasion some eighteen months ago to call attention to the fact that in very many instances soldiers were only treated for syphilis as long as there was some outward sign of the disease, and that no regular and long-continued constitutional treatment with mercury was carried out. After the secondary symptoms had disappeared temporarily, and the man was discharged from hospital, only too often no further medicine was taken until the disease broke out again, probably in a more virulent form. This was largely owing to the difficulty under the army regulations in continuing treatment after a man had been discharged from hospital, while he could not be kept indefinitely from his duties after all symptoms of disease had disappeared. It is true that in some cases mercurial injections were continued after the soldier left hospital, but this, we believe, was the exception rather than the rule. It is obvious that under such conditions the same men were repeatedly being admitted for relapses of the disease, and in this way the admission-rate per mille was greatly swollen.

The lengthy correspondence which ensued on this subject in our columns showed that widespread interest had been aroused, and we have since that time by frequent inquiries learnt that the regular and systematic treatment of syphilis, in the Indian army more especially, has recently been greatly extended, and must have played some part in reducing the number of admissions for this form of venereal disease. For example, in one of the hill stations referred to as being greatly affected by the constitutional disease, we have been informed that no fewer that eighty men were being treated with mercurial injections at one time. However regrettable it may be from the point of view of the failure of preventive measures that so large a number should require treatment, yet this must have prevented many relapses of the disease, and so have lessened the admission-rate. If we are right in thinking that the decrease is partly due to prolonged and more systematic treatment, as well as to preventive measures, it may be regarded with still greater satisfaction as indicating an advance all along the line, and we shall not be surprised if, when the full figures are published, it is found that the improvement has been proportionately more marked in the figures representing the number of days spent in hospital and in the numbers invalided or discharged on account of venereal diseases.

CONSULTING SURGEONS WITH THE ARMY IN SOUTH AFRICA.

We learn that four additional consulting surgeons have been appointed: Sir William Stokes, Surgeon-in-Ordinary to the Queen in Ireland, and Surgeon to the Meath Hospital, Dublin; Mr. Watson Cheyne, M.B., F.R.C.S., F.R.S., Surgeon to King's College Hospital, and Professor of Surgery in King's College, London; Mr. G. L. Cheatle, F.R.C.S., Assistant Surgeon to King's College Hospital, and Teacher of Practical Surgery in King's College; and Mr. Kendal Franks, F.R.C.S.I., late Senior Surgeon to the Adelaide Hospital in Dublin, and Surgeon in Ordinary to the Lord Lieutenant of Ireland, who was for some time before the war resident at Johannesburg. We understand that Sir William Stokes will sail for the Cape on December 30th and that Mr. Cheyne and Mr. Cheatle will start at an early date.

MEDICAL ATTENDANCE ON THE FAMILIES OF SOLDIERS AND SAILORS ON ACTIVE SERVICE.

DR. MICHAEL BEVERLEY, Honorary Secretary, informs us that 250 members of the East Anglian Branch have sent in their names as willing to attend the wives and families of soldiers and sailors on active service in South Africa. We also learn that over 200 members of the South Eastern Branch have sent in their names to Mr. Verrall as willing to render the same service, and that the members of the Londonderry and North of Ireland Branch are willing to make similar arrangements.

COOKERY FOR THE WOUNDED.

LETTERS, with which we heartily sympathise, have appeared in a daily contemporary, urging the importance of good cooking for our sick and wounded in South Africa. We may be certain such an important matter has received due attention in our military hospitals at the seat of war, which all reports agree in representing as models of organisation and efficiency. Sections of the men of the Royal Army Medical Corps are as carefully trained in kitchen as in ambulance and wards duties, and the military cooks in the base hospitals will be supplemented by civil aid if necessary. Some of the correspondents display not unnatural confusion as to the range of cooking possible in military hospitals in the field. The hospitals in the front or fighting line, called field hospitals, are "non-dieted," and can only afford cooking of a limited kind; no hospital diets are drawn, but the field ration accompanies the sick to hospital, where it is manipulated to the best advantage possible; it is supplemented by extras requiring little cooking. The hospitals on the lines of communication, to which the wounded are quickly transferred, may or may not be dieted, according to the exigencies of the military situation. The base or general hospitals are of course fully dieted; and we learn of that at Wynberg, near Capetown, that it is not only supplied with every necessary, but almost with every luxury, generously given by residents and aid societies on the spot. So far as we have yet learnt, whatever shortcomings the war may have brought to light they have not been in the medical service. This testifies to the general soundness of its organisation, notwithstanding its sadly undermanned condition.

HOSPITALS AND THE WAR.

THE *Charity Record*, in its annual review of charitable bequests and donations in 1899, states that up to the commencement of the war large donations to hospitals were fairly frequent, but in the last few months they have ceased. It adds, with regard to charities in general, that the last two months have been disappointing from a financial point of view, and expresses the opinion that this is due to the various funds raised on behalf of the sufferers from the war. Our contemporary expresses the fervent hope that the supporters of metropolitan hospitals and charities "will not allow them to suffer any longer by reason of the war funds, but that those of them who have responded so liberally and so patriotically to the appeal on behalf of our soldiers will consider this an extra effort, and maintain their contributions to home charities. This is all the more matter for regret, seeing that as a direct result of the war the resources of our charities will be more severely taxed than in the piping times of peace." We published last week an interesting letter from Sir Henry Burdett, giving a very different view of the situation, and it is to be wished that his opinion may turn out to be correct. Some little hesitation, however, may perhaps legitimately be felt, when we learn that the Prince of Wales's Hospital Fund for London, in the organisation of which Sir Henry Burdett has taken so important a share, has thought it advisable since the war began to discontinue its efforts to raise the total of the fund for this year to £50,000. The fountain of charity in this country appears to be almost inexhaustible, but we have always felt some difficulty in accepting the doctrine that special appeals for emergencies always succeed in tapping new reservoirs, and do not in part divert the golden stream.

THE CAMBRIDGE APPOINTMENTS ASSOCIATION.

A NEW organisation, to be called the Cambridge Appointments Association, has been formed. At the public meeting in the Senate House at Cambridge, at which it was founded, it was compared by Sir John Gorst to an honest broker between the youthful talent annually turned out by the University of Cambridge and the managers of businesses who could employ that talent usefully in the practical world, and by the Master of Trinity, to a solid bridge between the two bodies, the lords paramount of labour on the one side, and the young expectant paragons on the other. To quit metaphor it may be described as an association formed of representatives of the colleges of Cambridge and of persons actively employed in businesses and professions with the object of bringing to the notice of employers young graduates of the University in search of employment, and at the same time keeping graduates informed of vacancies which they would be competent to fill. The Vice-Chancellor, in opening the meeting to which we have referred, said that the University from one point of view might be regarded as a large manufacturing concern. Every year in June it turned out a number of students with trained capacity, and willing to work if work could only be found for them. Most of them were wise enough to choose their profession beforehand. They meant to be clergymen, doctors, lawyers, or civil servants. Yet even they in many cases required some assistance to guide them to the particular places they wished to occupy, while there was another not inconsiderable class who had not been so wise. They found themselves stranded at the end of their third or fourth year, though many of them were men of considerable capacity and well fitted for practical work. That there is a demand for these men is the belief of those who have taken part in the founding of this Association, and there is good reason to expect that it will succeed in doing much good work. It will collect information, not only as to particular appointments actually vacant, but as to the nature of the secondary qualifications required for certain classes of appointments, so that those undergraduates who may think of seeking work in any given direction may make the necessary preparations. With regard to private appointments in business houses or elsewhere, the Association will endeavour to secure the co-operation of employers, to obtain the necessary information as to the special requirements for such appointments, and, upon the notification of a vacancy, will bring to the notice of the employer the names of suitable candidates. A Board of Management has been formed. It consists at present chiefly of Cambridge dons, but contains some other names, and it is proposed to strengthen it as opportunity offers by the addition of representatives of commerce and the professions outside Cambridge. The co-operation of the London Chamber of Commerce has already been secured. The Association will consist of members who pay a guinea a year, and past or present members of the University who as associates will pay 5s. a year. It will publish a periodical, the *Appointments Gazette*, the first number of which is before us. It contains some account of the objects of the Association, an article on openings in China, another on the Indian Civil Service competition, some reviews, and notices and advertisements of vacancies, including a long list of vacant medical appointments. Further information can be obtained from the Secretary, Mr. W. A. J. Archbold, M.A., 73, Trumpington Street, Cambridge.

DR. FARQUHARSON ON CREMATION.

The lecture which Dr. Farquharson lately delivered in Aberdeen on the subject of cremation was, as might be expected, most interesting and suggestive in character. Knowing his subject thoroughly, both as a prominent member of the Cremation Society and also as having sat upon the Select Committee of the House of Commons, he was able to marshal an army of facts and figures, both as to the evils and defects of the present system of graveyard burial and as to the advantages, from a sanitary and economic point of view, of cremation, which seem to have commended themselves to his audience as making a strong case in favour of cremation. Taking as examples of evils produced by the present system the case of bodies dead from small-pox and cholera, he pointed out that the microbes which were responsible for the fatal result still survived in the tissues of the dead body, and that as they were proved to languish and die in brisk air and sunshine, and to love darkness rather than light because their deeds were evil, they were placed by interment in the most favourable circumstances for transferring their unwholesome attentions to other victims. Dr. Farquharson expressed the opinion that with soil through which to disseminate, and water with which to percolate, and air which scattered the microbes widely in various directions, the mysterious way in which epidemics sometimes arose was not to be wondered at. Far from it being the fact that infection fled from the body with the vital spark, bacilli ran riot within the cold inanimate frame until they got an opportunity of seeking a colonising ground elsewhere, and in the action of fire alone was there a swift, safe, and easy remedy against this subtle and widespread means of transmission of infectious disease. Dealing with the sentimental objection to cremation, Dr. Farquharson fully admitted the value as well as the charm of sentiment, which was as a silver thread through the commonplace fabric of many a dreary life, and invested some of our social customs with a fragrant aroma grateful to the sense if not always to the senses, but he showed that if we penetrate below the surface, we find, as Sir H. Thompson had shown, that within the body laid to its last rest, all was bustle and activity. Chemical changes were going on, microbic life was becoming fruitful and multiplying fast, and the processes of decay involved conditions of mutilation and disfigurement which would fill us with horror and disgust if we could see the changes brought about by the process of dissolution. The system of pit burials as carried on in Glasgow and other places was next described, and the lecturer thought that in view of the facts disclosed under this heading, he might claim a unanimous vote in favour of cremation from the inmates of any workhouse in the kingdom. Although not having the fear of "heckling" before his eyes, Dr. Farquharson thought well to discuss the objections to cremation, foremost among which he rightly placed, as we think, the medico-legal difficulty that murder might be encouraged by the poisoner laying the flattering unction to his soul that, if his crime was not discovered while the victim was above ground, combustion of the remains would remove the chief link in the chain of evidence against him. To this objection against the general use of cremation we have not as yet seen what appears to be a valid reply. We know, of course, that the Cremation Society requires two independent certificates from medical men which are carefully considered by its medical advisers, and in case of doubt either cremation is refused, or portions of the liver and kidneys are carefully preserved, but the mere statement of these precautions, which are at present voluntary, but which the Select Committee recommended should be made compulsory in the case of all bodies cremated, shows the force of this objection to cremation. The case made out on sanitary grounds for the cremation of bodies dying of small-pox, cholera, or the plague is overwhelming.

FALMOUTH AS A WINTER HEALTH RESORT.

Sir Joseph Fayrer, Bart., M.D., has addressed a letter to the Mayor of Falmouth, in which he says: "My opinion of the value of Falmouth as a winter resort has been confirmed by experience subsequent to that which I recorded in 1896.[1] I spent last winter here with equal advantage to that which I derived from it in 1895-1896, and now, in my third winter, I am more than ever sensible of the benefits it is capable of conferring on those who fear the rigours of an English winter." After some animadversions on the samples of climate which London provides, Sir Joseph Fayrer says that Falmouth is comparatively so mild that until kept at home one day by a southerly gale he had been out to sea four or five miles from land almost daily, and adds that this would hardly be possible anywhere else on our coasts at this season. "The equability and mildness of the climate," he continues, "make Falmouth a most valuable winter residence for those who do not wish to leave England at that season, indeed, in some respects make it superior to the Riviera or other Continental winter resorts, for Falmouth has not their extremes of temperature. It is needless to speak of the scenery and other topographical advantages which, with the climate, give Falmouth pre-eminence. It is to be regretted, however, that they are not better known and appreciated. The capabilities and possibilities are great were they only developed, and were something done to improve the town, its streets and foreshore, and in the way of providing amusement or entertainment for visitors. A little display of energy and enterprise on the part of influential, well-to-do inhabitants who really have the interests of their beautiful old town and neighbourhood at heart would do much in enabling Falmouth to assert its own claims on the consideration of those seeking change and recreation of mind as well as body, and escape from the rigours of the winter in other parts of our islands." Sir Joseph Fayrer then recalls that in a letter he wrote to the late Mayor he alluded to the then recent enteric fever scare, which, he continues, "was, I venture to think, exaggerated, and has done infinite and undeserved harm to the place, and will continue to do so long after the cause has passed away. I ventured then to point out that on the two all-important subjects of water supply and drainage there should be no room for suspicion as to their integrity; and that if any defects existed, as seemed to be implied, they should at any cost be remedied, a proceeding which, though it might involve considerable expenditure, would be quite feasible. I would urge this on your consideration. Let the radical measures be publicly made known; by so doing the effects of the recent scare will pass away. There really is such excellent material to work upon, such well-founded hope as to results, and such prospective advantages for our health-seeking countrymen that it is well worth while to undertake a work which will be beneficial to so many. In short, I believe that if Falmouth be given the chance of thus developing itself, it will do so to the fullest extent. You know that I have no motive in advocating the claims of Falmouth but the desire that others should receive the advantages which still seem to be so little known and understood."

SMALL-POX AT HULL.

Since our last note on the subject the epidemic of small-pox at Hull has continued to increase, as then seemed very probable. It is true that the provision of the new Evans-Fraser Hospital, and the approaching disestablishment of the old Garrison Hospital, which is believed to have contributed to the spread of the infection, gave good ground for believing that the authorities would be much better prepared than they had previously been to cope with the epidemic. But experience teaches that when once small-

[1] British Medical Journal, August 29th, 1896, p. 489.

pox gets a firm grip of a large and migratory population, as so much of that at Hull is, and when also it succeeds in holding its own throughout the summer, autumn generally gives it increased energy. This has been the case at Hull, as is shown by the following monthly record of cases admitted into the hospital since the beginning of the outbreak: March, 9; April, 17; May, 26; June, 45; July, 38; August, 49; September, 48; October, 115; November, 262; December (to the 19th), 143; total, 752. The number of cases in the Evans Fraser Hospital at the date of the last report was 233, and in the Garrison Hospital 7. We have no information as to whether the number 752 represents the whole of the cases notified or not; but the difference, if any, is probably very small; so that we have here another illustration of the enormous difficulty of dealing with an outbreak of small-pox, occurring under such conditions as those at Hull, even with fairly effective means of isolation, and in a population in which infant vaccination has been as well maintained as it has been throughout the country generally, the cause of the difficulty is not far to seek. The vaccination statistics, so far as fatality is concerned, have not materially altered from those we gave in our last note. They are as follows: General case mortality, 15·8; fatality of vaccinated cases, 9·7; of those showing no evidence of vaccination from marks, 50·0. It is very desirable that the Hull sanitary authority should publish these figures as widely as possible, and still more so if they would throw them into age groups, so as to show, as we have no doubt they would do, the great lesson which the Hull epidemic, like all others, teaches, of the need of promoting not only infant vaccination but revaccination at the ordinary school-leaving age. We observe that at the last meeting of the Hull Sanitary Committee the chairman attributed the control of the epidemic mainly, if not entirely, to the vaccination and revaccination which had been effected in Hull. But he regretted that instead of some 70,000 or 80,000, which is the number estimated to have been operated on, and which, we imagine, represents principally revaccinations, double the number had not been protected. Nothing would so much further the laudable effort which the Hull authorities are making to promote vaccination as the publication of the vaccination statistics of the epidemic in the form we have suggested. If vaccination has the protective value that its supporters assert, the wider the proofs of the fact are published the better.

PRESENTATION TO SIR JOHN SIBBALD.

ON Friday, December 22nd, in the Royal College of Physicians at Edinburgh, Sir John Sibbald, formerly one of the Commissioners in Lunacy for Scotland, was, by a number of his friends, presented with his portrait done by Sir George Reid, the President of the Royal Scottish Academy. The Master of Polwarth, Chairman of the Board of Lunacy for Scotland, presided, and among those present were Sir William Turner, President of the General Medical Council; Dr. James Andrews, President of the Royal College of Physicians of Edinburgh; Dr. James Dunsmure, President of the Royal College of Surgeons of Edinburgh; Sir Arthur Mitchell, Sir Charles Logan, Sir John Cheyne, Sir John Batty Tuke, Professor Chiene, Dr. Yellowlees, Gartnavel Asylum, Glasgow; Dr. Clouston, Royal Edinburgh Asylum; Dr. John Macpherson and Mr. John Cowan, W.S., Commissioners in Lunacy for Scotland; Colonel McHardy, of the Scotch Prison Board; Drs. Joseph Bell, Peel Ritchie, R. W. Philip and Councillor Pollard of the City Public Health Department. The Chairman gave a sketch of the high services which Sir John Sibbald had rendered to lunacy affairs. Dr. Yellowlees made the presentation, and said he had known Sibbald as a student at the University of Edinburgh forty years ago, had been with him at the Edinburgh Royal Asylum, and later saw much of him as a Lunacy Commissioner. The most cordial relations had always existed between superintendents and the Board of Lunacy. These had been a most important factor in making the Scottish lunacy system what it was to-day, and in that respect Sir John had more than sustained the traditions of the Board. The presentation of the portrait was a definite testimony of their high appreciation of his public work, and a very inadequate expression of their personal regard. Sir John Sibbald replied, and referred to the vast improvement effected during the past half-century in the treatment of the insane. In this matter Scotland stood second to none. Dr. Clouston next presented a set of silver flower bowls to Lady Sibbald. Sir John replied on behalf of his wife, and a vote of thanks to the Chairman closed the meeting. We are asked to say that some of Sir John Sibbald's medical friends are considerably annoyed because they first heard of the presentation in the columns of the daily press when it had become an accomplished fact, and they were thus prevented from joining, as they would most gladly have done.

ANTENATAL PATHOLOGY.

DR. J. W. BALLANTYNE has been appointed by the Edinburgh University Court University Lecturer on Antenatal Pathology and Teratology, and authorised to deliver in the University a course of four lectures on this subject, the course to be given on consecutive Fridays, commencing in February next, and to be open without fee to all members of the University and practitioners of medicine. The appointment is for one year. It will be remembered that Dr. Ballantyne gave a course of lectures on antenatal pathology last spring, but we learn that the new course will deal with a different part of the subject, and will be concerned solely with its practical aspects. The first lecture will deal with antenatal pathology in medical practice, general and special; in the second types of fœtal diseases and of embryonic malformations will be considered; the third will be devoted to antenatal diagnosis; and the fourth to antenatal treatment.

MR. CADGE OF NORWICH.

WE are glad to be able to contradict the announcement of the death of Mr. William Cadge of Norwich. The incorrect statement first appeared in the *Times*, but has been copied into other papers, and has caused much grief to Mr. Cadge's many friends. Mr. Cadge has suffered from influenza with pulmonary complications, and his condition was such as to cause his medical attendants to feel the gravest apprehensions. We are glad to learn that on Tuesday he was so far better that there are reasonable grounds to expect his recovery.

HOLIDAYS FOR IRISH DISPENSARY DOCTORS.

WE have lately reported the resistance of many Irish Boards of Guardians to the new rule, which provides that the dispensary doctors shall have four weeks' holidays in each year. The Local Government Board has just addressed a letter to the Cahirciveen Guardians, in which the Commissioners "acknowledge the receipt of the resolution adopted . . . to the effect that the annual vacation of the medical officers in the union shall not exceed two weeks, and the Local Government Board desire to point out that this resolution is *ultra vires* and inoperative." We are glad to have this authoritative declaration, and in spite of the threats which are made regarding it, we do not think it is likely to be varied.

A STATE LABORATORY AND ITS WORK.

IT may be remembered that about a year ago we mentioned that the Legislature of the State of Vermont had passed an Act for the foundation of a laboratory for the chemical and bacteriological examination of water supplies, milk, and all food products, and the examination of cases or suspected cases of various infectious disease. The laboratory was opened on January 1st, 1899, and has

since done a great deal of good work under the direction of Dr. J. H. Linsley. An interesting development of the work of the laboratory was the holding last July of a school of instruction for health officers. The school, which is believed to be the first of its kind in the United States, was conducted for five consecutive days. Papers were read by well-known sanitary authorities from the large cities, by members of the State Board of Health, and by other professional men. The subjects considered were numerous, and included the following topics: The relation of the public health laboratory to the citizen; the powers and responsibilities of health officers and the Local Board of Health; public water supplies and sewerage; sanitary plumbing and house drainage; the relation of animal diseases to public health; schoolhouse sanitation and inspection of school children; isolation of infectious diseases; the prevention of diphtheria and tuberculosis; disinfection, disinfectants, and quarantine; adulterations and dangers of milk; the menace of the pig-pen in country towns; water supplies and the significance of constituents as reported in the chemical and bacterial analysis; and a discussion of the Widal test for typhoid fever. Daily demonstrations were held at the laboratory for the purpose of familiarising, as much as possible, members of Health Boards and others with the nature of the technical work done in public health laboratories. Working models of systems of correct and faulty plumbing were used; disinfecting apparatus, filters, etc., were shown and demonstrated. The sessions were free to all persons interested in the subject of public hygiene, and no fees of any sort were imposed. There was an attendance of 89 officers of health, representing as many municipalities, and, as there are only about 240 towns in the State, the number present was thought to be very satisfactory, especially when the rural nature of the country is considered. It is now proposed to hold these schools of instruction annually hereafter. Moreover, the Vermont State Board of Health is about to publish a periodical devoted to the subject of public sanitation, the first issue to appear in January next (1900). This journal will be furnished to all officers of health gratis, and its object is to promote interest in and the efficiency of public health work throughout the State. We trust this very laudable object may be fulfilled.

THE AMERICAN MEDICAL EXPEDITION TO THE PHILIPPINES.

At a recent meeting of the Johns Hopkins Medical Society, a report of which appears in the *Philadelphia Medical Journal*, Drs. Simon Flexner and L. F. Barker gave an account of their trip to the Philippines. Dr. Flexner describes the hospitals in Manila, which consist of a general hospital and a special leper hospital under the direction of the civil government, and three reserve hospitals under military supervision. In addition to these there are the regimental hospitals, which are now used virtually as detention camps, and the hospital ship *Relief*. He described their laboratory, which had been fitted up with an equipment taken out from the Johns Hopkins Hospital, and briefly reported on some of his work on tropical dysentery, which is the most frequent cause of death among the American soldiers. His work is as yet not completed, but an organism has been isolated which he thinks may prove to be the causative factor in the disease. Dr. Barker describes the general surroundings and conditions of the islands. He thought that the climate had been very much maligned, as it is not subject to the extremes which mark that of the United States. The extremes of temperature recorded in Manila are only 66° and 91°, but the excessive moisture and the constancy of this high temperature make it rather trying. A man may go to bed early in the evening when the temperature is about 90°, and awake in the middle of the night or in the morning to find that there has been a drop of only 2° or 3°. Dr. Barker made special reference to the work of Colonel Burns, Surgeon, United States Army, in stamping out small-pox in Manila. Small-pox prevails in Manila as measles does in the United States, and almost all the natives bear the marks of its ravages. Soon after his arrival Colonel Burns began to vaccinate and revaccinate the soldiers, and, securing the services of a dozen Filipino physicians, started to work upon the natives. It was impossible to depend upon imported vaccine virus, and, not having a supply of calves at hand, he started a vaccination farm of his own, using the only available animals—the caribou or water buffalo. The disease was soon got completely under control.

"CONTRACT PRACTICE."

The *Occidental Medical Times* of San Francisco has recently uttered a very strong protest against the growth of contract practice in the State of California. It seems that the profession there has not only to deal with the ordinary clubs and societies for treating the artisan class for a small annual payment, but that there has been a growth of "hospitals," which are established neither for educational purposes nor for charity, where patients are taken in for moderate terms, and the medical staff are paid by salaries. Our contemporary goes on to say: "The physicians and surgeons attached to these institutions know full well that the rules and regulations of the fee bill adopted by themselves and their societies demand from 500 dols. to 1,000 dols. for many capital operations, and yet these same surgeons perform oftentimes two or three such operations a day for a pitiful sum of 150 dols. or less a month, and in most cases absolutely nothing, and yet they cannot see the injustice or folly of their way. A little while ago one of these institutions issued a circular offering various societies a physician, surgeon, nurse, medicines, board, washing, and everything necessary for life for 12 dols. a week, without a blush. Bank presidents, men of means, wealth, and influence, graciously accept the privileges of these hospitals and physicians because they pay monthly the sum of 1 dol. Is this not a shame, and does it elevate the physician in the estimation of the public? These institutions are not intended for charitable purposes; they cater to classes who in most instances are financially well off, but who would go to any extreme rather than pay a physician." The medical profession have these matters entirely in their own hands, but it is very much to be feared that they will never be sufficiently united to be able to oppose the schemes by which the profession is being robbed of its liberty and reduced to servitude.

THE MEDICAL PROFESSION IN FRANCE.

The *Progrès Medical* gives the following statistics of the medical profession in France during the last twenty years. The number of Doctors of Medicine, which was 10,743 in 1876 and 11,995 in 1886, was 12,407 in 1896. On the other hand the *officiers de santé*, who numbered 3,633 in 1876, had fallen to 2,794 in 1886, and to 1,605 in 1896. As this grade of practitioner has been abolished by recent legislation, those holding the local licence to practise which it conferred will die out within a limited time. Pharmacists increased from 6,232 in 1876 to 8,100 in 1886, and 8,910 in 1896. Of midwives there were in 1876 12,847; in 1886, 13,639; in 1896, 13,065. Taking doctors and *officiers de santé* together we get an official total of 14,012 civilian practitioners in France for a population of about 37,000,000, so that they outnumber the midwives by about a thousand. Making allowance for the fact that a certain number of doctors do not practise it may be said that there are in France as many medical practitioners as midwives. Pharmacists are less numerous by about one-third; but if the grocers who sell drugs were counted with them the number would be notably increased. In 1899 the state of things is still worse. The profession in France in short is con-

tronted with a serious situation, for the supply will exceed he demand. Translated into terms of political economy his simply spells bankruptcy at no distant date.

THE METHOD OF SHERLOCK HOLMES IN MEDICINE.

Dr. G. W. Balfour recently expounded the method of Zadig to the York Medical Society. The method is practically identical with that of "Sherlock Holmes," the prototype of whom, it is well known, is a distinguished Edinburgh surgeon. Professor Van Duyse, of Ghent, appears to have found the method useful, and in opening the Ophthalmological Clinic of the University of that city not long ago he gave his hearers some illustrations of its application. A lady came to him complaining of intense pain in one eye, when he at once said to her, "Madam, you keep birds. Four days ago you cleaned out their cage; since then your eye has been bad." The patient was astounded at this instantaneous diagnosis which seemed to her almost miraculous. But the thing was very simple. A husk of grain had become implanted in the cornea; the lady had evidently blown into the seed glass, and a husk thus set floating about had struck her in the eye. The cornea showed a greyish halo at the site of the lesion, and was somewhat puffy at the edge; vascular reaction was beginning to show itself on the neighbouring part of the ocular conjunctiva, and clinical experience had taught the observer that four days was about the time necessary to produce this state of things. In another case the patient was a nursemaid, aged from 16 to 17, who came with a little boy, aged from 12 to 14 months, in her arms. She was suffering from trachoma, which had become acutely inflamed and was suppurating. Dr. Van Duyse at once forbade her to carry the child, and she promised to obey. When she returned two days later, however, the surgeon on seeing her frowned, and said in a severe tone, "In spite of my prohibition you have been carrying the child. I shall be obliged to let your master and mistress know what is the matter with you." The girl stoutly denied that she had been carrying the child, but Dr. Van Duyse insisted that hardly twenty minutes before she had been carrying it on her right arm, and had handed it over to someone else at the door. The girl, amazed at the almost supernatural insight of the surgeon, confessed her transgression. Here, too, there was nothing more occult than a recent telltale trickle of urine running obliquely from right to left across the girl's apron. The art of observation may be cultivated by attention to such apparent trifles; and as confidence in the doctor is the most potent of adjuvants, the method of Sherlock Holmes is a powerful aid to success in treatment. But it requires to be cultivated with patience and used with discretion, for an error is apt to cover the seer with ridicule, a misfortune which some of its most distinguished exponents have not always escaped.

THE TOXIC PRINCIPLES OF THE TUBERCLE BACILLUS

The serum treatment of tuberculosis has not as yet attained to any very marked success, although many investigations have been and are being made to discover an efficient antitoxin. The febrile reaction which makes Koch's tuberculin so valuable a diagnostic agent in cattle, points to its unsuitability for treatment. Maragliano, Babes, Behring, and others endeavoured to prepare an antituberculous serum by injecting horses for a long period either with tuberculin alone or with a combination of tuberculin and virulent tubercle cultures. But a serum which counteracts the fever-producing properties of tuberculin does not necessarily exert a beneficial influence upon all the phases of the disease in man. Dr. E. A. de Schweinitz, chief of the Biochemic Division, Bureau of Animal Industry of the United States Department of Agriculture, records in the annual report for 1898 a series of investigations on this subject. He obtained a serum from horses by injecting them with a liquid extract of bacilli attenuated by cultivation for several generations upon artificial media. The active principle from antituberculous serum has been isolated in the form of a white powder allied to the soluble ferments, such as trypsin. The theory adopted of the action of antitoxic serums is that they contain in solution one or more soluble ferments which are able to digest and destroy in the animal body the toxic products that the germ forms, and that these ferments are probably secreted by the leucocytes or other cells acting under the stimulation of the toxins first elaborated by the germ of the disease. The bacillus tuberculosis produces at least three classes of poisons—a necrotic acid, a fever-producing substance, and one that acts as a direct poison. Hence the difficulty in treating tuberculosis. Kühne and de Schweinitz succeeded in obtaining, from specially prepared artificial cultures, a substance corresponding to a nucleo-albumin which they believe is probably the fever-producing principle, and after many fruitless attempts the latter investigator, with the co-operation of Dr. Dorsat, isolated the agent which is accountable for the coagulation-necrosis of tissue produced by the tubercle bacillus. This substance is a crystalline fatty acid, with a formula closely corresponding to that of teraconic acid. When dissolved in water and injected into guinea-pigs, it produces necrosis of the tissues into which the material was introduced. The experiments suggested the idea that this acid, evidently a secretion of the bacillus, was one of its most powerful weapons; that by its action upon the tissues the cells were first destroyed so that they could subsequently be utilised by the bacillus as food. It seems reasonable to suppose from further experiments that the necrotic acid is a fever-reducing principle, and that the albuminoid body is the chief fever-producing principle, and that the reason why tuberculin does not react continuously is to be traced to their presence at the same time. The more knowledge we obtain regarding the poisons produced by toxic germs the greater becomes the probability of combating their effects, and the investigations referred to above form a valuable contribution to knowledge in this direction.

A MEDICAL STRIKE IN PRUSSIA.

A medical strike is reported from Lüben in Silesia. All the doctors of the sick benefit society of the district have sent in their resignations, to take effect on January 1st, 1900, the reason being the miserable rate of pay. This is 2s. a year for each member, and out of it has to be paid the cost of travelling, including not only the doctor's journey, but that of the patient to him. Only the balance after these disbursements is paid to the doctor. The medical men ask for 3s., which certainly does not seem excessive.

THE STUDY OF TROPICAL DISEASES IN GERMANY.

In the Budget of the German Empire for 1900 there appears for the first time a subsidy for the Institute of Tropical Hygiene which it is proposed to establish in Hamburg. The empire will contribute £1,025 yearly to the maintenance of the Institute, which is to be opened on October 1st, 1900.

The annual dinner of the Laryngological Society of London will take place after the general meeting on January 5th, at 8 P.M., at the Café Royal, Regent Street; the President, Dr. de Havilland Hall, in the chair.

The funeral of Sir Richard Thorne took place on December 21st, in St. John's Churchyard, Woking. Among the representatives of the Local Government Board present were Mr. S. B. Provis, C.B. (Permanent Secretary), Dr. Arnold Royle, C.B. (Medical Inspector), Dr. Sweeting and Dr. Parsons (Assistant Medical Officers), Mr. Gordon Smith (Architect). Among those present were Sir Dyce Duckworth, Sir Hugh Owen, Dr. Gilbart Smith, and Dr. Whitelegge (Home Office).

THE WAR IN SOUTH AFRICA.

SURGICAL NOTES FROM THE ORANGE RIVER.

By G. H. Makins, F.R.C.S.,
Consulting Surgeon with the Field Force in South Africa.

We are indebted to Mr. Makins for the following interesting letter:

Orange River, December 3rd, 1899.

The Wounded from the Modder River.

A short note from the seat of war may be of interest to your readers. After a three days' stay at Capetown, during which opportunity occurred of seeing the patients in the base hospital at Wynberg, brought from Natal, Surgeon-General Wilson kindly brought me up to this field hospital, and during an eight days' stay some 600 wounded men have passed through the hands of the R.A.M.C. here. An immense amount of work has been done by these field hospitals, under Majors Murray, Birch, Coutts, and Knaggs; in one night alone 300 patients arrived from the fight at Modder River. These hospitals are really acting for the present as stationary hospitals, since all the wounded have received their "first-aid" dressing and been passed through the field hospitals at the immediate front. The work is performed under some difficulties, as it is very hot and dusty on the veld. Yesterday, for instance, the thermometer registered 115° F. in some of the tents. Fortunately the patients are able to be removed every few days to the base by means of two excellent hospital trains which have been improvised from the ordinary railway stock by the R.A.M.C. The fact that the journey from here to the base hospital at Wynberg takes 28 hours emphasises the difficulties due to the immense length of the line of communication.

Bullet Wounds.

Your readers are no doubt by this time in possession of some information as to the cases at present at Wynberg, so I shall confine myself to a short account of what I have seen in this camp. I may say at once that the immense majority of the wounds have been inflicted by the Mauser or Lee-Metford bullets, and a small proportion by Martini bullets and large projectiles. I shall refer to the wounds by the small calibre bullets only.

The Mauser and Lee-Metford.

A wounded Boer referred to the Lee-Metford as a "gentlemanly bullet," and this remark is equally applicable to the Mauser. The wounds made by them are small, clean, and little disposed to suppurate, and the tendency to suppuration is no doubt decreased by the excellent physical condition of the patients and the healthiness of the district. Shock as a sign has been conspicuous by its absence even in the most serious cases, and gives little or no aid in the diagnosis of visceral injury. Retained bullets are comparatively uncommon, no doubt on account of the fact that most of the men have been wounded in rapid advances. The bullets met with have been little deformed, unless they have struck stones before entering, and I have seen no single instance which would suggest the use of either flattened or so-called explosive bullets among the wounded here. The only large exit wounds have been one or two opposite comminuted fractures.

Wounds of Vessels.

Wounds of the soft parts are, as a rule, simple tracks, with but little difference between the aperture of entry and exit; such wounds heal in a few days with no surrounding induration or œdema. In cases where vessels of any size are implicated, especially in such regions as beneath the deltoid, gluteus maximus, or the two layers of the calf, considerable deep hæmorrhages often occur and are rapidly absorbed, but free hæmorrhage from the wound itself is rare.

Wounds of great vessels naturally have not come under our observation in any number, but one patient died in a few seconds soon after admission with sudden swelling of the belly; another had a swelling, some dulness, and a thrill over the area of the innominate artery; and one case of fractured femur had apparently an injury to the femoral vein. This may, I think, be considered a very small proportion out of the total number of cases.

Wounds of Nerves.

Wounds of individual nerves will, I think, be a great feature of the campaign. Wounds of the median, ulnar, musculospiral alone, or in various combinations, are common; I have seen two isolated injuries to the great sciatic, and one of the spinal accessory nerve. In some cases the evidence is in favour of complete section, in others diminution of power combined with great hyperæsthesia suggests contusion or partial laceration.

Fractures and Wounds of Joints.

Fractures are for the most part transverse, or the bones are tunnelled with a simple track. Comminution in the series seen here is distinctly rare, either in the flat or long bones, and certainly a large number of the wounds have been inflicted well within the 1,000 yards range.

Joint perforations, especially of the knee, are fairly common. The cases left us too soon to form any opinion as to their permanent results, but everything pointed to these concurring with those to be seen at Wynberg, where little functional or structural alteration is to be observed.

Wounds of the Head.

The proportion of wounds of the head is small; some fractures with much bursting at the wound of exit have been met with; naturally many may have been left on the field, and I think only some three or four have come down here. Many extraordinary cases will no doubt be recorded; thus, for example, entry in the median line below the chin, perforation of the floor of the mouth, and tongue, the alveolar process of the superior maxilla, traverse of the floor of the orbit, injury to the back of the globe, perforation of the anterior fossa, and escape through the frontal bone at the margin of the hairy scalp. The patient thus wounded left here on the fourth day without any symptoms. Several others of a similar but slightly less complicated nature have been seen.

Wounds of the Neck.

Wounds of the neck have been very common, but we have seen none implicating the great vessels excepting the one already referred to. A number of wounds of the posterior triangle with mixed nerve injuries are, however, under treatment.

The small bullet effects the most complete transverse section of the spinal cord. No fewer than 10 cases of paraplegia have come down from the front, usually complete, symmetrical, and with total absence of patellar reflex. Time only will show how complete these injuries are, but one from Belmont died here on the fourth day, the remainder from Modder River have gone down to Wynberg.

Perforating Wounds of the Chest.

Perforating wounds of the chest have been numerous, producing remarkably slight symptoms. Hæmoptysis, slight in degree, persisting one to three days, occurs in one-third of the cases; a few have signs of blood in the pleura, and a few have cellular emphysema. The only constant sign is a want of respiratory mobility on the injured side and some diminution of breath sounds.

Wounds of the Abdomen.

I have seen fourteen wounds of the abdomen; of these, ten have exhibited no serious symptoms, and will probably all get well. The pulses have not risen above 80, and the only signs have been some local tenderness, rigidity, and deficient mobility of the belly; all came here on the third day after the injury; slight vomiting occurred in some of them before arrival. In two cases the injury probably implicated the kidney, and in one the liver, but in all three the hæmorrhage must have been very slight.

Abdominal Sections.

In four instances peritoneal infection had already occurred, three of the patients being Boers, and one an English officer. The latter had suffered an injury to the cæcum; abdominal section was done on the third day, and he is doing well at the end of the week, but still with a discharging wound; abdominal section was also done for a partly intraperitoneal, partly retroperitoneal, injury to ascending colon; retrocolic extravasation and emphysema had already occurred. The wound was found and the affected area drained; the patient is still living (eighth day), but will certainly succumb to sepsis from the

large foul cavity in his loin. The remaining two were cases of injury to the small intestine. One was too ill for operation. The second was opened, and three perforations in the jejunum were discovered and sutured. Purulent inflammation had, however, already spread as low as the pelvis, and the patient died the day following the operation. All that can be said from this experience is that no patient should be operated upon from the mere fact of apparent traverse of the belly by a Mauser or Lee-Metford bullet. It is possible that if the patients could have been seen sooner operation might have been earlier decided upon in the four cases who were so treated; but the great number of wounded at the front rendered this an impossibility.

Operations at the Field Hospitals.

Operations at the field hospitals have been very few in number; I think, at the most, six amputations have gone down to Wynberg, and there can be little doubt that such operations will be comparatively infrequent in this series of cases. The cases, as a whole, started remarkably well. There has been no serious wound infection up to the present—a great tribute to the care with which the dressings have been applied in the hospitals and on the field by the hard-worked officers of the R.A.M.C. In this camp, during the last week, on several occasions the officers were up all night, or went to bed at 12, to rise at 4 A.M. The heat during the day has been very great, 108° to 115° F. in the bell tents in the afternoons of the last few days.

From Our Special Correspondent in Capetown.

December 6th, 1899.

ARRIVAL OF LORD METHUEN'S WOUNDED.

Since the series of battles north of the Orange River, a very large number of wounded have come down, and the R.A.M.C. has plenty of work on its hands. I can confirm my previous remarks that it is rising to the occasion most creditably. No. 1 General Hospital has now 574 beds occupied. No. 2 Hospital has been established, as I mentioned was to be the case, on adjoining ground at Wynberg. It has about 100 beds in occupation. Almost all the cases are surgical, and the distinction between the medical and surgical divisions in No. 1 has, so far as the class of case is concerned, been practically abolished.

Wounds of the Lower Extremity.

Wounds of the extremities—especially the upper part of the lower extremity—continue to be much in evidence, and the vast majority of injuries are from rifle bullets. The few shell cases appear merely to be from small fragments, and are of a very unimportant nature. One new feature is appearing in the cases from the First Division—a considerable proportion of compound fractures of the thigh, due, no doubt, to a certain number of the Free Staters who are operating in the North using rifles other than the Mauser. These fractures have not done as well as one would have liked, though perhaps quite as well as could have been expected. Several have had to be followed by amputation, and were septic on arrival, and death has been the result of a somewhat large proportion. The rule appears to be to send the compound fractures to the base, in preference to amputating in the field or at the stationary hospitals. The former would have been manifestly impossible, in view of the rapid movements of Lord Methuen's force.

Abdominal Wounds.

Except as regards these compound fractures, and that despair of military surgery, the perforating abdominal wound, the results continue to be remarkably good. One case of the latter class I saw, however, which is doing admirably. A Mauser bullet had entered on the left side just above the pelvic brim, and had emerged on the opposite side by way of a hole in the ileum itself. It had evidently perforated the posterior wall of the bladder, and established a communication between that viscus and the rectum, for the man was, and still is, passing all his urine *per rectum*. Very little extravasation could have taken place before the securing of the fistulous communication, although the patient had pretty severe peritonitis. This has now subsided, and the patient is doing splendidly. Mr. Treves saw him, and advised that no operation should be undertaken.

Head Injuries.

The head injuries have done, on the whole, very well. I saw one very successful case. The bullet had entered the cranium near the middle line, and had splintered the bone in a depressed gutter down along the course of the upper part of the Rolandic fissure One of the civilian surgeons trephined, and removed a large number of spicules and small plates of bone. The patient had typical Jacksonian convulsions before operation and for two days later, but for four days these have ceased; his temperature has gone down to normal, and he is doing very well. He is somewhat dull, but has never been aphasic. Another patient who was trephined in the occipital region has done very well, no symptoms remaining except some photophobia.

Wound of the Spine.

Another case presents some features of interest. A bullet had entered almost exactly in the mid-spinal line at the level of the sixth cervical vertebra, and had travelled downwards, the man being lying down at the time, and lodged at the level of the seventh dorsal, whence it was removed. The lower extremities are paralysed, there is overflow dribbling from the bladder, and total anæsthesia as high as the fifth rib, with a zone of hyperæsthesia above. This zone is now about two fingers breadth, and the hyperæsthesia is not nearly so intense as before. When the case first came in the hyperæsthetic tract was very much wider; no expansion of the anæsthesia has so occurred; no depression can be discovered. He is being treated expectantly, with an idea of possibly doing a laminectomy later.

The Red Cross.

The Red Cross people are doing good work, a continuous supply of comforts finding their way to the hospitals. Colonel Young has left for the north. Several local societies have been established under his control, and at the intermediate stations some of them are doing good work in supplying a few extras to the men in transit. The Relief Committee for men has engaged the services of a paid medical officer, Dr. Duthie. The Women and Children's Committee still gets on very well with voluntary medical aid.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

VI.

The African Summer.

The summer is now well advanced in South Africa and several despatches complain of the intense heat. The two most trying months—January and February—have yet to come. It is during the summer, especially the later summer months, that typhoid fever and dysentery are most rife in all South African towns. Sir George White's report of December 18th will therefore cause little surprise to anyone acquainted with the country. He says they have in Ladysmith 65 men "seriously afflicted by enteric fever and dysentery"; but this is not a very large proportion in a garrison of 9,000. It is no greater than usually obtains at this time of the year among the miners along the line of reef at Johannesburg. The sanitary system in both cases is probably principally to blame. The latrine and pail systems are, when accompanied by a free and thorough use of dry earth, theoretically perfect, but in practice a certain amount of nuisance and sickness invariably appear to arise in connection with them during the hot summer months. The garrison at Ladysmith is not confined within particularly narrow limits, and in all probability their sanitary arrangements are about as good now as they would be in times of peace. At the same time, it must be borne in mind that the majority of our troops are at the most susceptible age, and that newcomers to the country always appear more liable to attack than older residents. It will be interesting to learn what proportion, if any, of the men affected with typhoid were injected with antityphoid serum.

The Wounded.

The wounded in Ladysmith are reported by Sir G. White to be all doing well, while we are informed that of the men wounded in Lord Methuen's various engagements no fewer than a third have already recovered. This is cheering news to friends of the wounded, and the interesting letters from your correspondent at Capetown further show how very

quickly and completely many of the Mauser bullet wounds heal.

The Sick and Wounded being sent Home.

A letter from Mr. George Stoker, questioning the wisdom of sending sick and wounded soldiers home, appeared in the *Times* of December 22nd. Mr. Stoker has shown great practical interest in this question, and was the chief organiser of the Portland Field Hospital, which sailed for South Africa on December 13th, under charge of a staff appointed by the War Office. It will be remembered that the War Office made their acceptance of the hospital conditional on its being put entirely on a military footing and under military control. Mr. Stoker says the difficulties to treatment in South Africa appear to be classified under three heads:

1, Climate; 2, Accommodation; 3, Sentiment.

1. As for climate, I speak with a large experience of the treatment of the sick and wounded in war in various climates, and I venture to say that the climate of the uplands of South Africa, whether in Natal, the Transvaal, the Orange Free State, or the old Colony, is all that can be desired. The Ulundi wounded were treated in Ladysmith, and did splendidly.

2. Accommodation.—This is surely a matter of arrangement, and in such a climate nothing can be better than a properly equipped marquee hospital, better—I venture to think—than any improvised buildings, which are seldom convenient and hardly ever sanitary; better far than Netley Hospital, where, at this season especially, there is little choice between foul air and freezing!

3. Sentiment.—I think this consideration should not be allowed to interfere in preventing the best being done for the sick and wounded.

In conclusion, let us not forget the great pain and discomfort to sick and wounded that long transport entails, and anything that helps to avoid this must be an advantage.

Unfortunately the uplands of South Africa are at present more in the hands of the Boers than of ourselves, although no doubt Estcourt and Maritzburg in Natal, and, say, Beaufort West in the Karoo, might be used for field hospitals. But the fact is, as I pointed out in a former letter, there is ample demand in the present war for accommodation both in South Africa and in England. Probably only the severe cases, with no prospect of recovery during the present campaign, will be sent home, and their desire would naturally be to be near their friends.

Mr. Stoker's reference to Netley is, I think, hardly fair. The hospital is beautifully situated and appointed; the wards are lofty, airy, and well warmed. For the convalescents there is a reading room, long covered glass corridors, and magnificent grounds. The British soldier need not complain if he never finds himself in worse quarters than Netley Hospital.

THE SEVENTH DIVISION.

The following is the medical staff of the Seventh Division for South Africa and of officers detailed to Bearer Companies and Field Hospitals:

Staff.

Principal Medical Officer	Lieut.-Col. J. A. Gormley, M.D.
Medical Officer	Major F. J. Morgan

Seventh Infantry Division.

*Officers, Royal Army Medical Corps, established for Regimental Units.**

14th Brigade:	
2nd Battalion Norfolk Regiment ...	Major S. Hickson.
2nd Battalion Lincolnshire Regiment	Major A. A. Sutton.
1st Battalion King's Own Scottish Borderers	Lieutenant A. M. MacLaughlin.
2nd Battalion Hampshire Regiment	Lieutenant F. H. Merry.
15th Brigade:	
2nd Battalion Cheshire Regiment ...	Major W. H. Pinches.
1st Battalion East Lancashire Regiment	Major H. T. Baylor.
2nd Battalion South Wales Borderers	Lieutenant C. S. Smith.
2nd Battalion North Staffordshire Regiment	Lieutenant C. R. Evans.
Divisional Troops:	
Brigade Division Staff, Royal Field Artillery (83rd, 84th, and 85th Batteries)	Lieut. A. J. M. Cuddon-Fletcher.
Regimental Staff, Divisional Engineers (9th Company, Royal Engineers)	Lieutenant R. L. Davies.

Officers of the Royal Army Medical Corps detailed to Bearer Companies and Field Hospitals.

A.—*Bearer Companies.*

No. 7 Bearer Company (14th Brigade)	Major C. E. Faunce. Captain C. E. G. Stalkartt. Lieutenant J. A. Hartigan.
No. 19 Bearer Company (15th Brigade)	Major L. R. Colledge. Lieutenant R. E. G. Phillips. Lieutenant W. C. Croly.

B.—*Field Hospitals.*

2nd Cavalry Brigade Field Hospital (14th Brigade)	Major D. F. Franklin. Major H. A. Cummins. Lieutenant A. H. Safford. Civil Surgeon R. W. Collum.
5th Divisional Field Hospital (15th Brigade)	Major G. Wilson. Major T. G. Lavie. Lieutenant J. M. Buist. Civil Surgeon W. L. Hatch.
4th Divisional Field Hospital (Divisional Troops), 7th Division ...	Major R. H. S. Sawyer. Major G. Raymond. Lieutenant J. F. Martin. Civil Surgeon J. A. Barnes.

*The following unit, to which a Medical Officer is allotted in War Establishments, will not have one detailed in the present instance: Divisional Supply Column. The General Officer concerned will make the necessary arrangements for its medical charge.

THE LATE CAPTAIN LOUIS HUGHES.

The District Corps Orders by Surgeon-General T. F. O'Dwyer, A.M.S., Commanding Royal Army Medical Corps, Aldershot District, for December 18th, contained the following:—

"The Surgeon-General Commanding announces to the corps with the deepest regret the death in action at Colenso of Captain M. L. Hughes, while employed on the staff of General Sir Redvers Buller. Captain Hughes was well known at Aldershot, where he filled the post of Assistant Sanitary Officer for the last two years; and where his zeal and scientific attainments were of advantage to the Army generally and contributed to raise the character and position of the corps in public estimation. The officers will wear the usual mourning for one month from this date."

Colonel Hughes, C.B., C.M.G., of Guildford, has received a telegram from General Sir Redvers Buller with reference to the death of his son, Captain Matthew Louis Hughes, at the battle of Colenso. General Buller adds, "We had all grown so fond of him."

PREPARATIONS AT HOME.

The Sick and Wounded Officers.

We understand that a committee for the working of a Sick and Wounded Officers' Surgical and Medical Aid Fund is in course of formation under the presidency of the Duke of Abercorn, K.G. We understand that the purpose of the fund is to assist sick and wounded officers who, on return from South Africa, may stand in need of special or prolonged treatment. It is intended that careful inquiry should be made as to the pecuniary needs of such officers, and a number of leading physicians and surgeons in London and the provinces have joined the Duke of Abercorn's preliminary committee. We believe that a meeting of the committee to consider the exact nature of the help needed, and the mode in which it should be rendered, will be held at an early date.

Home Hospitals and Convalescent Homes.

The committee of the Passmore Edwards Convalescent Home for Members of Friendly Societies at Herne Bay has offered to the War Office the use of 20 beds in the institution for the occupation of soldiers who are invalided home from South Africa. The only condition attached to the offer is that the men chosen must be members of friendly societies in accordance with the trust deed of the institution.

A large detached building capable of holding some 80 beds has been taken at Windsor as a convalescent home. This establishment is to be called the "South African Convalescent Home" for wounded and invalided soldiers and sailors. From this it is proposed to pass them on to the other branch of the home at Westgate-on-Sea. It is proposed also to establish another branch of the home at the Isle of Wight, overlooking the Solent, for the use of officers exclusively, and to be called the "Convalescent Club," where both paying and non-paying patients will be received.

Lord Dartmouth has arranged to receive 6 convalescent soldiers from the war at his country house in Staffordshire. He appeals to others to find temporary homes for convalescent soldiers, and is trying to organise a scheme with this object.

The Alexandra Hotel, Woodhall Spa, Lincolnshire, has been offered for the use of invalid soldiers up to April 30th.

Soldiers invalided home will be able, by the kindness of the Bath Corporation, to take the waters free of charge, and will be comfortably housed while they are undergoing the cure.

The Liverpool Royal Infirmary has informed the Director-General, A.M.S., that 12 beds will be held at the disposal for sick and wounded soldiers from South Africa who may belong to the Liverpool district. The Royal Devon and Exeter Hospital has made a similar offer of 20 beds.

Colonial Offers.

At Melbourne, connected with the vigorous proceedings for the despatch of the new Victorian Force to South Africa, and owing to the numbers of doctors and nurses who are volunteering, the Government is considering the organisation of a small hospital corps. The citizens of Perth West

Australia, are about to send 20 nurses to attend our wounded soldiers at the Cape.

TRANSFERS AND APPOINTMENTS.

From Aldershot Majors T. Day and Tuckey and Lieutenant Stammers have left for duty at the Cape. Surgeon-Lieutenant Mudge, Militia Medical Staff Corps, has taken over the charge of Women and Children, Marlborough Lines, in succession to Captain Kelly, R.A.M.C., who takes charge of the Cavalry Brigade. A large number of civilian surgeons are now attached to the Cambridge Hospital pending employment in South Africa. A party of 170 reservists of Section D have joined the depot Royal Army Medical Corps. Major Hallaran, R.A.M.C., embarked in the *Castrian* : a contingent of the Royal Army Medical Corps in the *Jelunga* : in the *Gaika* 5 officers (Majors Pike, Geddes, and Fayle, Captain Chambers, Lieutenant Rattray), 1 warrant officer, and 57 men of the Royal Army Medical Corps.

Lieutenant-Colonel Gubbins, R.A.M.C., the Principal Medical Officer of the Sixth Division, left Southampton in the *Dunottar Castle* on December 23rd.

The medical units of the 14th and 15th Brigades of the Seventh Division being mobilised at Aldershot are as follows : 14th Brigade, No. 10 Bearer Company, R.A.M.C., and No. 12 Field Hospital, R.A.M.C. (Woolwich) ; 15th Brigade, No. 14 Field Hospital (Dublin) ; Divisional Troops, No. 13 Field Hospital, R.A.M.C. (Edinburgh).

Instructions have been given to the various militia battalions embodied to select men in the proportion of two per company for special training as stretcher bearers. These men are to go to Aldershot for the course, which is to be given at the depôt, Royal Army Medical Corps.

The *Norman* with No. 6 Bearer Company of the R.A.M.C. on board arrived at Capetown on December 19th.

The P. and O. steamer *Nubia*, Transport No. 4, has been detained at Durban, and will be fitted up as a hospital ship.

MEDICAL ARRANGEMENTS AFTER THE TUGELA ACTION.

A Reuter's telegram from Capetown states that Sir William MacCormac had said that all concerned with treating the wounded after the action at the Tugela deserve the fullest praise. Trains full of wounded left the field at 2 in the afternoon for Estcourt, and others followed promptly. Eight hundred wounded passed through the hospital at Chieveley, and the field was cleared of wounded by 5 o'clock on the evening of the battle. The Volunteer Ambulance Corps did splendid work, and the Field Hospital completely and promptly met a great emergency. It appears that many were taken on to Pietermaritzburg, and some straight to the hospital ship at Durban which was to convey them to Capetown. In commenting on this, a correspondent who is honoured by the largest print of the *Times* says : "It is satisfactory to record such a splendid performance. At a time when criticisms of everything and everybody are flying about, the admirable organisation of the Medical Department, and the perfect smoothness of its working deserve the fullest recognition. It is usually that part of an army which breaks down first, and is least adequate ; in the present campaign it has so far proved entirely equal to all requirements."

AUXILIARY BASE HOSPITAL AT PIETERSMARITZBURG.

We learn that Lieutenant-Colonel F. W. L. Hodder, M.B., a retired officer of the Royal Army Medical Corps resident at Durban, who placed his services at the disposal of the Principal Medical Officer, has been appointed to the charge of the Auxiliary Base Hospital at Pietermaritzburg. A staff of civil medical men and nurses, male and female, and a detachment of the R.A.M.C. non-commissioned officers and men have been attached to this hospital, into which the Natal Volunteers of various corps will be received, as well as soldiers of the regular forces. The splendid loyalty and courage of the Colonial volunteers, many of whom left their homes within an hour's notice, has excited the admiration of their comrades in the regular army. They are described as a grand force, but have unfortunately suffered severely from wounds and hardships.

LITERARY NOTES.

THERE is a legend that the heart of the great Napoleon having been left unprotected after the *post-mortem* examination was devoured by rats, and that the doctors replaced the missing organ with a substitute taken from a sheep. A correspondent of the *Philadelphia Medical Journal*, however, quotes the following passage from Campbell's *Foreign Magazine*, vol. v, 1844, in which a different account of the matter is given :

When Bonaparte died, it is well known that his heart was extracted with the design of being preserved. The physician who had charge of it deposited it in a silver basin, in water, and retired to rest. He felt so nervously anxious as the custodian of such a deposit, that though he reclined he did not sleep. While lying thus awake he heard first a rustling noise, then a plunge among the water in the basin, and then the sound of an object falling with a rebound on the floor. Dr. A—— sprang from his bed, and the cause of the intrusion on his repose was soon explained —it was an enormous rat dragging the heart to its hole. A few moments more and that which before had been too vast in its ambition to be satisfied with the sovereignty of Continental Europe would have been found even in a more degrading position than the dust of Cæsar stopping a beer barrel—it would have been devoured as the supper of a rat.

Dr. Barclay Smith of Cambridge has called our attention to the fact that Joubert and Kruger—names of ill omen to us at the present moment—may both be found in medical literature. Laurence Joubert's span of life extended from 1529 to 1583. There is a grim coincidence in the fact that one of his works is a treatise on gunshot wounds, and another deals with the treatment of wounds. He also wrote on plague, quartan fever, paralysis, popular errors in regard to medicine, and was a reformer of French spelling. Joubert entered the University of Montpellier at the age of 21, and lodged with one of the professors named Rondelet. Rondelet was so struck with Joubert's zeal and assiduity that he offered him one of his daughters in marriage. Rondelet had two daughters ; the elder one was very fat, while the younger one had a most becoming figure. It was the elder one that Rondelet suggested should become Joubert's wife. Joubert, however, was not so eager to accept this proposal as he might have been. He refused her. He had cast loving eyes upon the younger one, though he had not sufficient courage to make his feelings known. No marriage resulted, "because," as M. Astruc, the historian, remarks, "The elder daughter did not please Joubert, while Joubert soon realised that he did not please the younger." Bartholdus Kruger was the author of a treatise on anatomy entitled *Anatomicus Curiosus θεοδίδακτος. Hoc est Methodus Secundi Cadavera Hippocratica Democritæa*, which was published at Brunswick in 1700. Several "Krügers" also figure in catalogues of old medical writers. One of these, Johann Gottlieb, was the author of a treatise on a subject connected with firearms, *De nonnullis ad motum globuli e sclopeto explosi pertinentibus*, printed at Halle, 1737. Another, Ephraim, wrote an essay, *De usu peregrinationis medico* (1757), in which his namesake of the Transvaal may perhaps find comfort if he has to bid farewell to Pretoria.

PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

A MEETING of the General Council of the above fund was held on December 21st at Marlborough House to consider the amounts to be distributed this year. The PRESIDENT (H.R.H. the Prince of Wales) was in the chair.

FINANCIAL STATEMENT.

The Honorary Treasurer, Lord ROTHSCHILD, presented the following statement as to the financial position of the fund up to December 19th.

	£	s.	d.
Annual subscriptions	25,009	0	1
Donations and undefined contributions	13,680	0	2
Annual grant from the trustees of the London Parochial Charities for the Maintenance of Convalescent Hospitals	1,000	0	0
Contribution from the League of Mercy	1,000	0	0
Income from investments	6,391	18	5
Sums given by donors to be invested	66	1	2
Subscriptions paid in advance for 1899	1	5	0
Making the total receipts	47,808	4	10
Deduct expenditure to date	1,547	11	5
Leaves a net amount up to the present of	46,260	13	5
The balance of funds from last year is	171,332	10	3
Making a grand total of	217,593	3	8
These total funds are held as follows :			
Bank of England	2,816	5	11
Other banks and newspaper	209	5	0
Investments	214,400	19	2
Amount returnable by Inland Revenue in respect of income tax deducted from income on investments	106	13	7
	£217,593	3	8

Lord Rothschild pointed out that about £9,000 more had been received this year, the expenditure, which amounted to £1,547 11s. 5d., was less, although there had been added this year the cost of a collector, and of a large amount of statistical work, including an analysis of the funds held by the whole of the hospitals visited.

H.R.H. THE PRESIDENT : The expenditure having been less and the income more I think we can consider it a very satisfactory result.

REPORT OF THE EXECUTIVE COMMITTEE.

This report recommended the distribution of £42,000 to 82 institutions. Of this sum £41,000 is allotted to hospitals, £1,000 to convalescent institutions, against £32,500 distributed

last year among 59 institutions. Much of the increase in the fund was due to the munificent donations of Mrs. Brydges Willyams and others. The Committee had decided that efforts should be made to distribute £50,000 during the current year. It was, however, resolved in October to discontinue further appeals in consequence of the organisation of the war funds. The number of convalescent homes applying was 30, the number participating 14; the number of hospitals applying was 87, of these 6 were ruled out as being outside the limit of 7 miles from Charing Cross or as not being hospitals. It was decided that neither dispensaries nor homes for the dying could be considered, while institutions for incurables could only be considered as far as they dealt with curable cases also; 81 hospitals were referred to the Visiting Committee as against 58 last year, and conferences were held with the representatives of four hospitals contemplating rebuilding; 287 beds hitherto closed for the want of means will now be re-opened through the action of the Fund and many other improvements carried out. Much remains to be done. The question of the hospital accommodation required in the various districts had not been neglected and the increased requirements of North and South London had been practically dealt with to a partial extent. The Committee expressed the opinion that the steps likely to be taken to abolish the heavy rating under which hospitals of the metropolis suffered would receive the support of the Fund.

The Hospitals Distribution Committee.

The report of this Committee, of which Lord Lister is President, stated that the hospitals concerned had been again visited by subcommittees consisting of medical men of wide experience and laymen who take special interest in hospital management. Defects had been pointed out, and their remedy had been powerfully promoted by making the grants from the Fund conditional upon the carrying out of the measures recommended. The suggestions had been almost invariably received in a most friendly spirit. It was anticipated that the League of Mercy would in time greatly benefit the Fund, but the Committee could at present only advise the employment of £1,000 from that source, this being the amount which had been actually paid in when this year's distribution was arranged. It was recommended that the additional £9,500 now at the disposal of the Fund be employed partly in the way of donations and partly as annual grants necessary for the purpose of opening closed wards. It had been arranged that 45 beds now unoccupied should be brought into use next year; these added to those thrown open during the last two years give 287 as the number made available to the poor of the metropolis by the agency of the Fund.

THE BIRMINGHAM AND DISTRICT MEDICAL PRACTITIONERS' UNION.

This Union has been formed during the last few months with the following objects:

(*a*) To provide an effective organisation for the purpose of dealing with all matters affecting the interests of general practitioners.

(*b*) To promote union and good-fellowship amongst neighbouring practitioners.

(*c*) To endeavour to establish, as far as possible, an improved scale of fees.

(*d*) To discourage advertising of every kind, and other unfair and unprofessional competition.

(*e*) To promote more satisfactory relations between the different branches of the profession.

(*f*) To consider and take action upon all legislative proposals calculated to affect the interests of general practitioners.

(*g*) To endeavour to obtain increased representation for general practitioners on the General Medical Council and other public bodies.

(*h*) To endeavour to remedy, as far as possible, the abuses of hospitals and dispensaries.

(*i*) To establish a medical club house, with such accommodation as may be considered desirable for the purposes of the Union.

(*j*) To provide facilities for the collection of members' accounts.

(*k*) To oppose any attempt on the part of public bodies to exploit the services of any member of the profession to the detriment of the others.

The area included is that known as "Greater Birmingham," extending on all sides to some five miles from the centre of the city, and it has been divided into fourteen medical wards. The members in each ward are invited to elect representatives who form a central council which conducts the actual business of the Union. We are informed that nearly 200 members have been enrolled, including men in every grade of general practice, and it is hoped that when the organisation is completed the support of all practitioners within the area who have at heart the welfare of their profession may be obtained. The Honorary Secretaries desire it to be understood that the Union is in no way antagonistic to the British Medical Association, but rather complementary to it. The Union seeks to provide an organisation by which local general practitioners can take effective combined action on matters peculiarly affecting their interests, and will concern itself only with medico-political and medico-ethical matters.

The officers for the year 1899-1900 are as follows:

President, Dr. Parkes; *Vice-Presidents*, Dr. Leech and Dr. Newton; *Honorary Treasurer*, Dr. Line.

Members of Council: Drs. Langley Browne (Chairman), Adamson, Bark, Chadwick, Hollingshead, Irvine, Morris, Hill-Norris, Oakes, Pooler, Simms, Weston, Whitcombe, Wilkes.

The *Honorary Secretaries*, from whom further information can be obtained, are: Dr. Kirby, 106, Hagley Road, Corresponding Secretary; Dr. Neal, 499, Coventry Road, Organising Secretary; Dr. Robertson, 117, Soho Hill, General Secretary.

REMUNERATION OF MEDICAL WITNESSES IN CRIMINAL CASES.

We are glad to see that this subject continues to attract attention in the general press. The following article appears in a recent issue of the *Birmingham Daily Gazette:*

Medical and other journals are calling attention once more to a very important subject affecting doctors who attend the law courts as witnesses. Their fee for services rendered to the State is one guinea per day. It is a very poor doctor who does not lose heavily by the transaction. Of course every good citizen must expect to make sacrifices for the good of the State; but the sacrifice falls very hardly upon the medical profession, for they must abandon and dislocate their work for the day, and, as they are frequently involved in law cases, and are necessary witnesses as experts, the call upon them comes the more frequently than it does upon most other citizens. Then their evidence is important, not seldom wholly final and conclusive, and their value cannot therefore be justly appraised at the guinea which they would earn in a ten-minutes' consultation or in an hour's visits to patients. The late Home Secretary, Mr. Asquith, fully admitted the grievance, but neither he nor the present Secretary of State cares to move in the matter. A well-known doctor in Birmingham writes to us: "The medical profession is placed in a position occupied by no other body of men in the country with reference to their liability to be called as witnesses in courts of law, and it is only right that a proper provision should be made for their payment when performing such public duties." It appears that things are ordered differently and better in Scotland and in Ireland. The arrangement in Scotland, a correspondent of the *Morning Post* says, is that a doctor summoned as a witness on behalf of the Crown receives two guineas a day, with one day added in, so that he gets four guineas for one day, six for two days, and so on. In Ireland the instructions given by the Attorney-General to the Crown solicitors are that when a medical witness is summoned to attend at sessions in the town in which he resides a fee of one guinea is to be paid. If he is detained in Court more than three hours he earns an additional fee of the same amount. When he is summoned to attend from any other town, two guineas a day with travelling and hotel expenses are allowed. Why should not English doctors be treated as well as their Scotch and Irish brethren?

THE NEW VACCINATION ACT IN OPERATION.

The Lymph of the National Vaccine Establishment.

Dr. F. J. Hart writes: Referring to "A. V. P.'s" letter in the British Medical Journal of November 11th, I should like to say that I have used Dr. Renner's calf lymph for at least ten years, and have been generally very successful with it, each insertion almost invariably producing a vesicle. The only exception to this success was during some very hot weather two or three years ago, when I had several failures, but lymph sent from the same source was afterwards successful.

Unsuccessful Vaccination.

H.—There is no fee allowable for the unsuccessful vaccination of a child, however frequently it may be repeated. One or two suggestions, however, may be of value:

(1) Use the tube as soon after receipt as possible.

(2) Empty it of its contents as completely as possible. Some public vaccinators believe they have obtained better results when they have shaken the tube as in shaking down the index of a clinical thermometer, this probably dislodging some of the granular material which adheres to the sides of the tube, to an increasing degree if the tube is kept long before using.

(3) If there should be failure, try vaccinating the other arm, as there appears to be a local insusceptibility established, even where the lymph has not had any apparent effect, and vaccinating on the same spot in many cases will result in a second failure. The question arises as to whether this local insusceptibility is the result of an absorption of the toxins from a sterile vaccinal culture.

(4) If a second failure occurs, wait before making the third insertion, postponing for a couple of months on account of temporary insusceptibility, at the end of which time a successful result will probably be obtained.

(5) Of course the all-important question is that of the lymph as it is supplied to the public vaccinators. The demand for the Government lymph has much exceeded anticipation: the staff must necessarily have

worked under the greatest difficulty when the collection, preparation, and distribution have been conducted respectively at Lamb's Conduit Street, the Jenner Institute, and Cannon Row. In Cologne and elsewhere arrangements are more compact, and difficulties minimised. Would that combined representations to the central authorities could secure more satisfactory conditions, and a more compact administration.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

PORTUGAL.

DURING the week ending December 17th only 1 death from plague occurred at Oporto, and as no cases have been reported since it would really seem as though the outbreak was on the verge of disappearing altogether. Goods from parts of Portugal south of and including Lisbon are now admitted into Spain, and free *pratique* is given at Gibraltar to vessels from that region which can show a clean bill of health. The total number of cases since the outbreak is 282, of which 104 have ended fatally.

INDIA.

The good news received by telegrams from India some three weeks ago does not seem to be borne out by what we have learned subsequently as to the state of Bombay itself. There seems some decline in the plague returns for the Bombay Presidency generally, but in the city of Bombay the number of plague cases is steadily increasing. During the week ending December 19th, the deaths from all causes rose to 246, a large number being due to plague. Plague is therefore again epidemic in Bombay, and there seems a probability of the continuance of the recurrence. In other parts of India more favourable reports in regard to the prevalence of plague are to hand, and in Calcutta, although no real improvement is recorded, owing to the evident improbability of the disease becoming epidemic, the sanitary staff specially employed for plague duty is to be reduced.

Plague seems to be following the course it followed during the last three years. At the present moment many other diseases are prevalent, if not actually epidemic, in Bombay. Cholera is rife, and measles, small-pox, diarrhœa, and respiratory ailments claim a larger number of victims than usual. The marked increase in "lung" diseases is not without suspicion. Pneumonic plague is so insidious, and resembles so closely ordinary pneumonia, that it behoves the authorities to keep a sharp eye on cases returned as pneumonia or phthisis.

MAURITIUS.

During the week ending December 14th 23 fresh cases of plague occurred in the island, and 21 deaths from the disease, while in the week ending December 21st there were 22 fresh cases and 14 deaths.

SOUTH AMERICA.

The reported outbreak in South America at the town of Santos seems fortunately to have subsided; at any rate there have been no reports concerning plague, either official or unofficial, from Santos for some four weeks.

NEW CALEDONIA.

A report received, *via* Sydney, N.S.W., states that plague has reached Noumed, the capital of the French colony of New Caledonia. The telegram, dated December 25th, has it that 12 natives have already succumbed to plague. The disease is reported to be spreading, and 4 Europeans have been attacked. The first idea was that plague was introduced in jute bags from Calcutta, but subsequently it has been ascribed to the filthy habits of the Kanakas. It is impossible to accept either of these statements; jute bags may have been imported, but it has been shown by Hankin that plague germs do not live long in goods on board ship, and it is not known that the Kanakas, by their over-sea connection with Honolulu, could have brought plague with them, for Honolulu is not plague-stricken. Jute bags, however, in common with other goods, may contain rats, and if the vessel touched at and shipped jute bags at Calcutta, it is quite possible that rats suffering from plague were carried on board at the same time. It is, however, impossible with the small amount of information before us to come to any definite conclusion. New Caledonia is so remote from any known plague-stricken town or district that it is difficult to see how, unless by the importation of goods harbouring rats, the disease could have reached it. New Caledonia is some 800 miles off the eastern coast of Queensland, and considerable alarm is caused by the presence of plague so near Australia.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at 429, Strand (corner of Agar Street), London, on Wednesday, the 17th day of January next, at 2 o'clock in the afternoon.

December, 1899. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH: COUNTIES OF ROXBURGH, BERWICK, SELKIRK, AND PEEBLES DISTRICT.—This District will meet in the Railway Hotel, Newtown, St. Boswell's, on Friday, January 26th, 1900, at 3.30 P.M., Dr. Blair, Chairman of the District, presiding. Members are requested to send notices of all cases to be shown or papers to be read at the earliest possible date to the Honorary Secretary, Dr. W. HALL CALVERT, Melrose, N.B.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District will be held at the Great Northern Central Hospital, Holloway Road, on Wednesday, January 10th, 1900, at 4.30 P.M. Dr. Morton will preside. Dr. Sutherland will read a paper on Cyclic Albuminuria and Associated Symptoms. Cases of interest will be shown by Mr. Macready, Dr. Clifford Beale, and other members of the staff of the hospital. The District Committee will meet at 4.15 P.M.—H. J. MACEVOY, Brondesbury, N.W., Honorary Secretary.

SOUTH-WESTERN BRANCH.—The winter intermediate meeting will be held on Tuesday, January 16th, 1900, at the Athenæum, George Street, Plymouth, at 3 P.M. The Honorary Secretary will be glad to hear from members wishing to read papers or show cases or specimens, that an agenda paper may be issued. Paper already promised: Dr. Gordon (Exeter): On the Policy of the Profession.—H. W. WEBBER, M.S., Honorary Secretary, 4, Woodland Terrace, Plymouth.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

AN ordinary general meeting of the Branch was held in Aberdeen on Wednesday, December 20th, the PRESIDENT, Dr. Farquharson, M.P. (Finzean) in the chair.

Minutes.—The minutes of last meeting were read and confirmed.

Ballot.—A ballot was held for the election of Fleet-Surgeon R. Gavin Brown, H.M.S. *Clyde*, and he was unanimously admitted a member of the Branch.

Presidential Address.—Dr. FARQUHARSON then delivered his presidential address, which dealt with questions relating to vaccination, registration of deaths, and the Royal Army Medical Corps. A very full discussion followed, which was taken part in by Professor MATTHEW HAY, Dr. WILSON (Huntly), Brigade-Surgeon-Lieutenant-Colonel MACONOCHIE, Dr. HUBERT WILLIAMSON, Dr. WESTLAND, Dr. THOMAS MILNE, and Dr. RIDDELL. A hearty vote of thanks was accorded to Dr. Farquharson for his excellent address, on the motion of the VICE-PRESIDENT, Dr. Wilson (Huntly).

HALIFAX (NOVA SCOTIA) BRANCH.

A MEETING of this Branch was held at Halifax on November 29th, Dr. KIRKPATRICK, the President, in the chair. About 20 members and several visitors were present.

Confirmation of Minutes.—The minutes of the last meeting were read and adopted.

The Prevention of Tuberculosis.—The report of Committee who were appointed to consider the advisability of holding a public meeting to promote the formation of a society for the Prevention of Tuberculosis was presented. The Committee advised

that a meeting be held after the new year. The report was adopted and a committee appointed to make arrangements for meeting; the committee to consist of Drs. Kirkpatrick, Jones, Sinclair, Silver, Cunningham, and Murray.

Communications.—Dr. M. A. B. Smith read an interesting paper on Pyrexia and its Treatment, which was discussed vigorously by Drs. Goodwin, D. A. Campbell, Jones, Curry, Murray, Cunningham, and Major Clement, R.A.M.C.—Dr. Goodwin read some notes on Surgical Work seen by him in the London hospitals.

CEYLON BRANCH.

A meeting of this Branch was held at Colombo on October 7th, Surgeon-Major Allan Perry, P.C.M.O., President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

New Member.—Mr. J. C. Nicholas, L.C.M.C., Ceylon, was elected a member of the British Medical Association and Branch.

Vote of Condolence.—A motion was unanimously agreed to expressing regret at the loss the Branch had sustained in the death of Dr. E. Gratiaen, Colonial Surgeon. The Secretary was instructed to convey to the relations of Dr. E. Gratiaen the sympathy and condolence of the members of the Branch.

Pharmacopœia Subcommittee.—The Secretary read a formal report of the Drug Subcommittee appointed in July, 1889, to inquire into the therapeutical value of certain drugs recommended by Dr. W. G. Vandort as worthy of inclusion in the Imperial *Pharmacopœia*. The President then proposed a vote of thanks to the members of the Drug Subcommittee, and wished their report be forwarded in its entirety to Professor Attfield, requesting him to give his views on the subject. It was also proposed that a letter of thanks be sent to Messrs. Neil S. Campbell and Co and the Colombo Apothecaries' Company, Colombo, for their services in connection with the preparation of the native drugs.

Paper.—The Secretary then read a paper on a New Method of Circumcision, by Dr. W. Wijesakera, M.R.C.S.Eng. A brief discussion ensued.

BRITISH GUIANA BRANCH.

The annual meeting of this Branch was held at the Public Hospital, Georgetown, on November 9th, Dr. F. H. Edmonds, President, in the chair. Ten members attended.

Statement of Accounts.—A statement of accounts duly audited was circulated, showing a credit in the bank of 93 dollars and 97 cents.

Alteration of By-laws.—Dr. W. S. Barnes proposed, and Dr. O. Dunscombe-Honiball seconded, that By-law 4 be altered so that "the President be eligible for re-election," and that in By-law 7 "future past Presidents be not permanent members of the Council," both of which were carried unanimously.—Dr. Dunscombe-Honiball proposed, seconded by Dr. Barnes, that By-law 18 be deleted, as he saw no necessity for it at present, it having been made at a time when it was necessary, but he considered at present its deletion might be advantageous, and there was no such by-law in the laws of the parent Association. This was also carried unanimously.

Yellow Fever and Mould.—A circular received from the Government *in re* yellow fever being conveyed by mould was circulated among the members.

Communications.—A paper on a Peculiar Case of Nervous Disease allied to Energic Stupor, was read by the Honorary Secretary (for Dr. Ozanne, who unfortunately was unable to be present). A cordial vote of thanks was passed to Dr. Ozanne for his interesting paper.—Dr. J. H. Conyers then exhibited the following specimens: (1) A large Elongated Gall Stone, which caused intestinal obstruction by impaction in the small intestine, the duodenum communicating with the gall bladder by a large rounded opening; (2) a similar looking Gall Stone which was found in a gall bladder by Dr. J. O'Dowd Egan; (3) a case of Intestinal Obstruction caused by peritoneal bands in connection with a splenic tumour (syphilitic?).—Dr. W. S. Barnes showed a case of Tubal Pregnancy for Dr. Egan.

Vote of Thanks to Honorary Secretary.—A vote of thanks, proposed by the President, was accorded to the Honorary Secretary for the work he had done during the year.

Election of Officers.—The following officers were elected for the ensuing year:—*President:* Dr. O. Dunscombe-Honiball. *Vice-Presidents:* Drs. W. S. Barnes and F. H. Edmonds. *Members of Council:* Drs. C. J. Gomes, J. E. A. Ferguson, W. Von Winckler, and J. De Freitas. *Honorary Secretary and Treasurer:* Dr. J. F. Scott Fowler.

CAPE OF GOOD HOPE BRANCH.

An ordinary meeting of this Branch was held on September 22nd; Dr. W. J. Dodds, President, in the chair.

Communications.—Mr. Rowan read notes of a case of extensive Fracture of the Skull in a boy, who lived a week after the injury; and subsequent speakers detailed some remarkable instances of native vitality after similar mishaps.—Mr. Sharp read notes of an interesting case of Diphtheria in a child, aged 23 months, who had taken 33,000 units of antitoxin in about fifteen days and had recovered. He thought that antitoxin was not generally used so boldly as it might be.—Mr. L. A. W. Beck related a case of Fibro-sarcoma removed by him from the Jaw, and showed the specimen, a large one. He dwelt upon the assistance he had derived from preliminary ligature of the common carotid in making the operation practically bloodless. After operating he had left a piece of tubing round the artery for twenty-four hours, so that it could have been immediately tightened had hæmorrhage supervened. The case made a rapid recovery.—Dr. A. H. Petersen read a paper on the Treatment of Uterine Myoma, reviewing the subject in a most interesting manner. He thought that resort to operation was too often indulged in. He also considered that ligature of the uterine arteries was an operative procedure with a future before it. An interesting discussion followed.

Unprofessional Advertising.—A proposition emanating from Dr. Darley-Hartley, condemning advertising, was referred to the Council for consideration.

The annual meeting was held at Capetown on October 27th, Dr. W. J. Dodds, President, in the chair. There were twenty-one members and visitors present.

New Members.—Captain Bailey, late R.A.M.C., and Dr. Leicester, of the New Somerset Hospital, were elected members.

Report of Council.—The financial statement and the council's report were duly read and adopted. The latter showed that the average attendance during the year had been 20, that 11 new members had been elected, 3 had resigned, and that the existing membership was 116.

Election of Officers.—The following were elected as officers for the ensuing year:—*President:* C. F. K. Murray, M.D. *Vice-President:* George Turner, M.B. *Treasurer:* Edith Pellat, L.S.A. *Secretaries:* D. J. Wood, M.B., and J. Paterson, M.B. *Council:* G. E. C. Anderson, M.D.; G. B. Silke, M.B.; C. C. Elliot, M.D., and M. Hewatt, M.D.

Local Medical Education.—The consideration of a report from a Committee appointed to consider the practicability of a certain measure of local medical education was deferred to a special meeting to be called at an early date.

Retiring President's Address.—The retiring President gave an interesting address on the progress in medical science during recent years, more especially in connection with public health, for which he was accorded a hearty vote of thanks.

CORRESPONDENCE.

THE NAVAL MEDICAL SERVICE.

Sir,—The British Medical Journal has rendered such devoted and successful service in the cause of the army medical officers, that I venture to hope that its sympathies and powerful help may also be extended to the more silent officers of the Naval Medical Service. Silence is traditional in the navy, and is cherished by the regulations; but it absolutely prevents any statement of grievances, since a disregard of the tradition is sure to bring trouble to the offender.

As the surgeons cannot, therefore, speak for themselves, will you allow me to point out some of the grievances of the Naval Medical Service? First, as regards rank. An officer of the Royal Army Medical Corps holds more or less the same rank

as officers of other branches of the service. A naval medical officer after his first eight years of service invariably holds rank inferior to that of an executive officer of his own age. On entry into the service he ranks as a lieutenant, and after twelve years' service, on promotion to the rank of staff-surgeon, he ranks with a lieutenant of only eight years' standing. Now the average age of a surgeon on joining is about 24 years, while that of a lieutenant is about 22 years on promotion; thus a staff-surgeon will be four years junior in the service to a lieutenant with whom he ranked on entry, who, moreover, is probably six years younger. This disparity increases in the senior ranks: a medical officer attains the relative rank of commander when he becomes fleet-surgeon after twenty years' service, while a lieutenant becomes a commander after less than thirteen years' service, and at the end of twenty years he has probably obtained further promotion. This injustice does not apply to the other learned branch of the service—namely, the university graduates who instruct the midshipmen, and who enter at about the same age as the surgeon, but obtain their steps in rank after eight and fifteen years instead of after twelve and twenty years respectively.

This disparity in rank is not compensated for by any greatly increased rate of pay. A surgeon on entry receives 1s. 6d. a day more than a lieutenant, but this officer can, by taking up gunnery or navigation, obtain more pay than the medical officer. In the army the pay of a medical officer on entry is nearly double that of a combatant officer of his own age, and corresponds with that of an officer in the scientific branches of the army.

The slowness of promotion is—under naval discipline—a real grievance. The friends and equals of his youth pass over a surgeon's head, and should a medical officer spend many years in the service he will probably be under the orders of, and dependent on the favour of, a captain who was just leaving the nursery when the surgeon obtained his qualifications.

In addition to the slowness of promotion, the rank of fleet-surgeon (relative to that of commander) does not carry with it privileges adding to personal comfort, such as a more spacious cabin and the right to employ a private servant. A fleet-surgeon's cabin is often no better than that of a newly-joined surgeon or of a junior lieutenant.

With regard to naval hospitals, we find that the principal medical officer has no power of punishing the men employed under him, although he is responsible for their good conduct. This naturally is a serious disadvantage in maintaining discipline. Again, the principal senior officer of every naval hospital abroad is either a dockyard admiral or a naval captain, who inspects the hospital weekly, and has the principal medical officer under his orders; finally, the Admiralty does not trust a medical officer to hold a medical survey without the superintendence of an executive officer as President, who may be the junior both in rank and age of the principal medical officer present.

The effect of these disadvantages has been to induce medical officers to leave the service after becoming entitled to a gratuity, or at any rate after twenty years' service, and if they are more widely known and appreciated, they will probably act in deterring men from joining the service; in fact, there has been already a falling off in the number of candidates at the recent examinations.—I am, etc.,

December 18th. VERAX.

THE PHYSICAL EXAMINATION OF CANDIDATES FOR THE PUBLIC SERVICES.

SIR,—As, in consequence of pressure on your space, I am severely limited in the length of my reply to Surgeon-General Cayley, as too, the original point of controversy between us, whether or no the Council of the Association should submit the resolution of its Medical Section on the above subject to the War Office, has been settled by the forwarding of the resolution to the proper authorities, I must be content with a very short and incomplete rejoinder to Surgeon-General Cayley's able and courteous letter, replying to only two of the points he raises, assuring him, however, at the same time, that if he cares to carry this very interesting and fruitful controversy into the columns of some service journal I shall be very pleased to follow him thither, if he will kindly send me a copy of the periodical in which his communication appears.

One very important question of fact, on which no controversy ought to be possible, is whether or no a proportional increase of weight and chest measurement is required by the Regulations of admission to the Service from candidates for commissions, concurrently with an increase in their height. Surgeon-General Cayley asserts that candidates above a certain height must have a higher minimum weight and chest girth than those below it. I reply that they need not, and that age, not height, governs the only Regulations on this subject. I moreover maintain that these Regulations act most unfairly by admitting, too frequently, the tall weed, and excluding the small healthy man.

Here is the list of physical equivalents inserted in the Army Regulations governing admission to the Royal Military College, Sandhurst, with a precedent note "that the correlation of age, height, weight, and chest-girth is equal or superior to that given in the following table:

Age last Birthday.	Height in Inches.	Weight in lbs.	Chest Girth. Inches.
16	63 = 5 feet 3 inches	115	32
17	63½ = 5 feet 3½ inches	120	32½
18	64 = 5 feet 4 inches	125	33
19	64 = 5 feet 4 inches	130	33
20	64 = 5 feet 4 inches	134	33
21	64 = 5 feet 4 inches	137	33½
22	64 = 5 feet 4 inches	139	34

Thus a boy of 18 years of age must have a minimal height of 5 ft. 4 inches, a minimal weight of 125 lbs., and a minimal chest girth of 33 inches. Yet if he possess the minimal weight and chest girth prescribed for his particular age, he may exceed the minimal height by as many inches as he pleases without fear of rejection. In the opposite direction of error, however, it demands of a youth of 22 years of age, and 5 ft. 4 inches in stature, a chest girth of 34 inches. Now according to Dr. Billings, of the United States army, among 16,196 Englishmen the average chest measurement of men varying from 18 to 45 years of age, with a height of from 63 to 65 inches, was only 32.6 inches. But our authorities demand of the young man of 22 who is only 5 ft. 4 inches high a chest girth which, according to Dr. Billings, is not found in men of from 5 ft. 7 inches to 5 ft. 9 inches in stature, whose average is only 33.8 inches. So that while short officers are required to possess a chest girth far above the average of that of men of their inches, tall officers, on the contrary, are admitted with a measurement either only equal to, or even inferior, to the average of men of their height. A palpable unfairness.

But to turn to more general considerations. In the British army a careful selection of the best material is possible, since so popular is the service that only 10 per cent. of those applying for commissions can obtain them. It would, then, appear a reasonable preliminary measure to select only the best physical material for admission to what must always remain an athletic profession. But no. We are told in opposition "that a general does not plan a campaign or win a battle by his biceps." True; but if by the word "biceps" we symbolise the sum of all the factors which make up physical fitness, we retort that a general may fail through the absence of his own biceps, as he certainly will in the absence of that of his officers and men. It is popular to cite Wolfe and Nelson (the latter of whom was, after all, perfectly healthy) as examples of sickly men who were successful leaders; while the much larger body of generals whose campaigns have proved unsuccessful through lack of physical ability to conduct or complete them is most conveniently ignored. I will only mention Cuesta at Talavera, Napoleon at Waterloo, Elphinstone at Cabul, Anson at Umballa, and Howe after the action of the First of June, although the list might be indefinitely extended.—I am, etc.,

Torquay, Nov. 14th. WILLIAM SYKES, M.D., F.S.A.

P.S.—Since writing this letter I am much gratified to see that the Secretary of State for War has announced his intention of directing an inquiry into the above subject. I only trust that he will extend it into the whole question of tests for admission into the commissioned ranks of the army, both educational and physical, and will take evidence outside the

ranks of the Royal Army Medical Corps, especially from such authorities as Dr. Clement Dukes, of Rugby, on the effect of the present regulations in procuring the best material from our Public Schools.

THE NATURE OF THE CANCEROUS PROCESS.

Sir,—I shall be obliged if you will allow me to point out that the "curious inconsistency" your reviewer thinks he has discovered in my article on cancer,[1] is a phantom of his own imagination which has no existence whatever in my work.

I believe that cancer is the outcome of hyperplasia, and not of inflammation. Your reviewer confuses these two fundamentally distinct processes together, and treats them as being one and the same; whereas my belief is that they are in every respect different and distinct. Inflammation is the outcome solely of extrinsic causes, whereas the causes which determine hyperplasia—in the sense in which I have used the term—are intrinsic. Moreover the two processes—inflammation and hyperplasia—are morphologically distinct. In a part where cancer is about to arise—such as the buccal cavity, the breast, or the uterus—the whole epithelial lining shows throughout signs of hyperplastic changes, although it is only at a given point that these eventually culminate in the formation of a cancerous tumour. These are the changes to which I have applied the term "precancerous," and I absolutely restrict it to such as these. Many persons have erroneously regarded these changes as inflammatory; but, as I have pointed out in my article, this is fatal to a proper understanding of the real nature of the cancerous process.—I am, etc.,

Clifton, Dec. 16th. W. Roger Williams.

*** Mr. Roger Williams is of course entitled to his own opinion, but he must recognise that everybody is not compelled to agree with him. All inflammatory processes, whether of connective tissue, as seen in the various forms of infective granulomata, or of epithelial structures as seen in catarrhal proliferation, are essentially hyperplastic. The line between an inflammatory hyperplasia and one that is not due to inflammation or chemotaxis, would be quite arbitrary and artificial, so far as its immediate results are concerned. The "precancerous" changes in the situation to which Mr. Roger Williams refers have all the common histological marks of inflammation; those affecting the tongue are rightly classed as forms of glossitis. The inflammatory process, in short, is in all cases attended with an inevitable hyperplasia of the stable elements of the less highly differentiated tissues, and to class the hyperplastic portion as outside the proper inflammatory portion is to raise a division which, even were it right as an abstract proposition, does not alter the fact that the sum of a process which is "inflammatory" in many cases precedes the onset of one that is carcinomatous. It is at times a matter of difficulty in the case of the breast, for example, to determine histologically whether the picture presented is that of a localised mastitis or the beginning of a carcinomatous formation; and so in some cases of glossitis, there is hardly more at present as a guide than the degree of depth and character of the epithelial downgrowth.

ATTEMPTED AMALGAMATION OF DEFENCE SOCIETIES.

Sir,—In his letter dated December 18th, and published in the British Medical Journal of December 23rd, Dr. Griffith, the President of the Medical Defence Union, says the failure to effect amalgamation of these two societies

> ..... is due to the fact that no one has yet been able to devise a scheme which will satisfy the legitimate requirements of those who are responsible for safeguarding the interests of each Society .....

Three attempts have been made, and have failed, to bring about this amalgamation. The first two attempts were undertaken on the initiative of the Medical Defence Union. It would be interesting to know from Dr. Griffith what "legitimate requirements" made known by the Medical Defence Union were not satisfied during those two attempts. Perhaps he will kindly tell us what these unsatisfied "legitimate requirements" were.

The third attempt at amalgamation was suggested by the Council of the Medical Protection Society, who, having in mind the failure of the two first attempts, proposed that every detail of the amalgamation should be left to an arbitrator skilled in such matters, and fully supplied by both societies with all necessary and special information. The Council of the Protection Society was and is convinced that what Dr. Griffith calls the "chances of arbitration" could exercise no detrimental effect upon the true interests of the amalgamated societies because those interests would be perfectly safeguarded by the governing body of the united societies. Interests involving, among other things, the safeguarding of some millions of pounds sterling are dealt with in this way every year in London.

The proposition that two strong and successful societies could not, when amalgamated, easily protect their own united interests is, to my mind, an oddity with a suggestion of the humorous about it which, in these sad times, is very welcome.

The Medical Protection Society has, at the very least, done its full share in helping on the amalgamation of these two societies. It has done this in deference to a wish to that effect expressed by many members of our profession who take an intelligent interest in medical defence, and many of whom are members of the Medical Defence Union.—I am, etc.,

G. A. Heron,
Treasurer and Chairman of Council of the London and Counties Medical Protection Society.

Harley Street, W., Dec. 20th.

OCEAN VOYAGES IN PULMONARY PHTHISIS.

Sir,—Dr. Thorowgood, in the British Medical Journal of November 11th, has called attention to the "remarkable benefit that many patients with tuberculous phthisis obtain from a sea voyage." His experience is but additional testimony to the fact that phthisis may be combated by almost any change involving fresh air, good feeding, and sufficient rest. A sea voyage has unfortunately many drawbacks. In bad weather rest is often impossible, while one has also to choose between close quarters below decks or damp ones above. At the equator sailing ships are often becalmed for some weeks, and then a moist shade temperature of anything between 80° and 90° must be endured, and is very exhausting. Moreover, after the Cape of Good Hope is passed, fog may be encountered for days, if ice is about, in any latitude south of 40 degrees.

Having to leave England because of lung trouble, I tried two months (February and March, 1893) on the Riviera, and the next winter went for a voyage round the world in a slow steamship, where comforts were greater than in the best sailing ship I could find. The Riviera did me more good in two months than the whole winter.

I believe from my experience that the most profitable part of a voyage round the world, as well as the pleasantest, is the portion spent on land, and Western Australia seems to me to have a more desirable summer climate by far than other parts of Australia or Southern New Zealand. It says much, I think, for Dr. Thorowgood's powers of selection that the patients he sent on sea voyages did so well.

Neither Switzerland, the Riviera, Egypt, the sea, or an English verandah, can justly claim patent right for the treatment of phthisis. Any of them may be statistically shown to be the best if the cases they treat are selected with sufficient care, and especially if their failures are quietly sent elsewhere.—I am, etc.,

Mentone. D. W. Samways, M.D., M.R.C.P.

OBITUARY.

RICHARD HENRY MEADE, F.R.C.S., J.P.,

Consulting Surgeon to the Bradford Royal Infirmary.

We regret to announce the death, in his 86th year, of Mr. Meade, which occurred at his residence, Mount Royd, Bradford, on the evening of December 23rd. The rapid failure of his health during the last three months had made it evident that his death could not long be delayed. His mental qualities remained to the last quite unimpaired. Mr. Meade was the son of the Rev. Richard Meade, of Princes Risboro, Buckinghamshire, and was born in 1814. He received his medical education at St. Bartholomew's Hospital, having previously served an apprenticeship at the Bedford Infirmary. Like his contemporary and lifelong friend Sir James Paget, he was a prizewinner in every class. He became M.R.C.S. in 1836 and Fellow by examination in 1845. Before settling

[1] *Twentieth Century Practice of Medicine*, vol. xvii.

in Bradford, he practised in London, where he held for three years a post of Lecturer at the Middlesex Hospital. In 1840, Mr. Meade succeeded to the practice of Dr. William Sharp, in Bradford, so that his connection with that town, in which he was a prominent figure, extended over fifty-nine years. For more than sixteen years he was Honorary Surgeon to the Bradford Infirmary, and for thirty-five years held the post of Surgeon to the Low Moor and Bowling Ironwork Companies. He had for many years a large consulting practice in the West Riding of Yorkshire, and was a skilled operator. Besides being an eminent surgeon, he was an entomologist of considerable repute. It was largely due to the great interest displayed by Mr. Meade that the Bradford Medical Society was started and made successful. He was one of its first members, and its president on several occasions. Mr. Meade also studied closely the social problems of the city, and was a magistrate for twenty years. Of fine presence, always kind and courteous in manner, he was beloved by all who knew him.

JAMES ADAMS, M.D.ABERD.,
Glasgow.

WE regret to have to record the death of Dr. James Adams, of Glasgow, who had reached the advanced age of 82 years, and was the senior Fellow of the Faculty of Physicians and Surgeons. He was a native of Edinburgh, where he was educated, and received his medical degree in 1841. His father was Dr. Alex. Adams, a well-known practitioner in his day, and his two brothers also belonged to the medical profession. He became L.R.C.S.Edin. in 1841, F.F.P.S.G. in 1846, and M.D.Aberd. in 1849. Dr. Adams did not practise in Edinburgh, though for a short time he was Assistant Demonstrator of Anatomy under Knox, and assistant to Sir William Ferguson. He settled in Glasgow in 1842, where he developed a large and successful practice, in which he was actively engaged till ten years ago, when he retired. In addition to his ordinary professional duties he acted for a time as one of the Examiners for the Faculty of Physicians and Surgeons; he had been President of the Glasgow Medico-Chirurgical Society, and also of the Glasgow Medical Mission Society, and Chairman of the Hunterian Society of Edinburgh. He contributed to medical literature, but also interested himself in many subjects beyond the medical horizon, particularly, in later years, the life and writings of Burns. He was a man of great personal charm, and, moreover, all through his busy life, enjoyed the respect and confidence of his medical brethren. His death severs another link with the past, and with those pioneers of microscopic and experimental work who have done so much to advance theoretical and practical medicine. His two sons have followed in their father's footsteps, and hold prominent positions in the profession in their native city.

ANOTHER prominent member of the profession in Glasgow, Dr. J. EWAN BRODIE, passed away last week. He had been subject for some time to bronchial attacks, but was able to attend to his professional duties until a week before his death. A fresh attack of illness was aggravated by the sudden frost snap, and after a few days he passed away. Dr. Brodie was born about fifty-eight years ago at Lochgilphead. He was educated at the University of Glasgow, and practised in that city for nearly forty years. A skilful practitioner and a bright and genial man, he was universally esteemed in his own profession and by a large circle of friends. He joined the Volunteer force at the beginning of that movement, and for many years had been Brigade-Surgeon, and at the time of his death was Senior Medical Officer of the Clyde Volunteer Infantry Brigade. His funeral was conducted with military honours, and there was a large turn out of officers and men of the various regiments with which he was associated to pay their last respects to his memory. Much sympathy is felt for the widow and daughter who mourn his loss.

AFTER an illness of only five or six days' duration, Dr. WARING, of Hove, Sussex, died of acute bronchitis on December 12th. By his death, Hove has lost one of its most popular inhabitants, and the profession one of its hard-working members. He studied medicine at Dublin; he became L.R.C.P.I. and L.M., and M.R.C.S.Eng. in 1868, and subsequently graduated M.D.Brux. in 1885. He commenced his professional career in the Royal Navy, and served nearly four years on the China and Japan station. Whilst acting as surgeon on a small gunboat he had an opportunity of going up most of the rivers which were inaccessible to the larger ships, and thus he saw much of both countries. He was at one time Surgeon at Haslar Hospital, at another at Plymouth Hospital, and at yet another at the Hospital Ship at Zanzibar. In 1880 Dr. Waring's health failed, and he left the navy, but subsequently recovered strength and settled at Hove, where he quickly acquired an extensive practice, and took a deep interest in local affairs. He was a member of the Council of the South-Eastern Branch of the British Medical Association, and Honorary Physician to the Police Seaside Home. Several of the convalescents at the home in September of last year presented him with a handsome marble clock. He was also Physician to the Police Orphanage, Admiralty Surgeon and Agent for the Hove District, and Honorary Secretary of the local Committee of the Hospital Reform Association. At the incorporation of Hove, in November, 1898, he was returned at the head of the poll for Morris Ward, and was subsequently elected an Alderman, and served on the Sanitary Committee. He was a staunch Conservative, and held several local posts in connection with that cause and the Primrose League. Altogether his career was one of wide usefulness and of great energy. He was unmarried.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ARMY MEDICAL SERVICE.

SURGEON-MAJOR-GENERAL A. F. BRADSHAW, C.B., is appointed Honorary Surgeon to the Queen, *vice* Surgeon-Major-General S. A. Lithgow, C.B., D.S.O., retired pay, deceased, December 23rd. Surgeon-Major-General Bradshaw entered the service as Assistant-Surgeon, May 21st, 1857; became Surgeon, May 17th, 1871; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, March 12th, 1882; Surgeon-Colonel, July 28th, 1886; and Surgeon-Major-General, March 10th, 1892. He retired on retired pay, March 10th, 1895. He served with the 2nd Battalion Rifle Brigade through the whole of its service in the suppression of the Indian mutiny, including the capture of Lucknow and numerous affairs during the Oude campaign (medal with clasp); with the Zhob Valley Expedition in 1884 as Principal Medical Officer (mentioned in despatches); and with the Hazara Expedition in 1891 as Principal Medical Officer (mentioned in despatches, C.B., and medal with clasp).

Surgeon-General A. H. FRASER is also appointed Honorary Surgeon to the Queen, *vice* Surgeon-General Sir C. A. Gordon, K.C.B., half pay, deceased, December 23rd. Surgeon-General Fraser's commissions are dated as follows: Assistant-Surgeon, February 21st, 1851; Surgeon, January 26th, 1858; Surgeon-Major, February 21st, 1871; Deputy Surgeon-General, September 18th, 1877; and Surgeon-General, October 14th, 1884. He went on retired pay, May 18th, 1887. He was in India during the mutiny in 1857-8, and was in medical charge of the Murree Depôt when the station was attacked on September 1st, 1857, and in medical charge of the troops employed in the operations of the three following days (medal). He was also in the Afghan war in 1880, being mentioned in despatches.

Surgeon-General JOHN OGILVY, M.D., died at Frimley, Surrey, on December 23rd, suddenly. His commissions were thus dated: Assistant-Surgeon, July 15th, 1853; Surgeon, July 8th, 1861; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, November 27th, 1879; Deputy Surgeon-General, August 2nd, 1880; and Honorary Surgeon-General, April 4th, 1883, when he was granted retired pay. He was with the 33rd Regiment throughout the Eastern Campaign of 1854-5, including the battles of Alma and Inkerman, the siege and fall of Sebastopol, and the assaults of the Redan on June 18th and September 8th. He had received the medal with three clasps and the Turkish medal.

INDIAN MEDICAL SERVICE.

CAPTAIN A. E. H. PINCH, Bengal Establishment, who entered the service January 29th, 1896, is tranferred to the half-pay list, from December 17th.

Lieutenant-Colonel W. H. GREGG, M.B., Bengal Establishment, has retired from the service, December 4th. He was appointed Assistant-Surgeon, October 1st, 1869, and became Brigade-Surgeon-Lieutenant-Colonel, June 20th, 1894. He was with the Lushai Expedition in 1871-2, and has the Frontier medal, with clasp.

Lieutenant-Colonel KASSICK LALL DUTT, M.D., Bengal Establishment, has also retired. His first appointment is dated March 30th, 1872; that of Brigade-Surgeon-Lieutenant-Colonel, April 1st, 1898.

The retirement from the service of Lieutenant-Colonel JAMES ARMSTRONG, Bengal Establishment, which has already been announced in these columns, has been approved by the Queen.

The promotion of Colonel DAVID SINCLAIR, C.S.I., Madras Establishment, to be Surgeon-General from October 11th, which has already been announced in the BRITISH MEDICAL JOURNAL, is gazetted.

The promotion of the following Captains to be Majors, dated October 11th, which also have already appeared in the BRITISH MEDICAL JOURNAL, have received the approval of the Queen:—Bengal: A. E. Roberts, D. M. Davidson, F. P. Maynard, J. C. Lamont, A. H. Nott, A. Coleman, W. W. White, M.D., D. T. Lane, M.D., R. C. Macwatt, W. H. E. Woodwright, W. J. Buchanan, J. K. Close, M.D. Madras: F. J. Dewes, J. O. Pinto, P. C. H. Strickland, T. W. Stewart. Bombay: J. L. T. Jones, W. E. Jennings.

Surgeon-Colonel GEORGE WILLIAM JAMESON, late Bengal Establishment,

died at Blackheath on November 14th, aged 64. He was appointed Assistant-Surgeon, January 20th, 1860, and Surgeon-Major twelve years later. He retired from the service, with the honorary rank of Brigade-Surgeon, April 4th, 1882. He had no war record in the *Army Lists*.

Brigade-Surgeon George William Jameson, late Bengal Establishment, died recently at Blackheath at the age of 64. He joined the department as Assistant-Surgeon, January 20th, 1860, and retired with the honorary rank of Brigade-Surgeon, April 4th, 1882.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.—Dr. S. Ruhemann has been appointed University Lecturer in Organic Chemistry. Mr. F. G. Parsons, F.R.C.S., has been appointed an Additional Examiner in Anatomy, Professor E. Ward an Additional Examiner in Surgery, and Dr. Isambard Owen an Additional Examiner in Medicine for the M.B. degree.

Recognised Medical School.—The University of St. Andrews (including the University College, Dundee) has been added to the list of recognised schools of medicine by the Medical Board.

Degrees.—At the congregation on December 14th the following were admitted to the degrees of M.B. and B.C.: J. A. H. Brincker, B.A., St. John's; C. D. Somers, M.A., Pembroke.

Third Examination for Medical and Surgical Degrees.—The following have passed this examination in the subject noted:—

Part II. Medicine, etc.—R. Ainsworth, B.A., Pemb.; W. L. Ascherson, Non.-Coll.; A. E. Bodington, M.A., Cai.; W. P. S. Branson, B.A., Trin.; J. W. E. Cole, B.A., Corp. Chr.; E. Cox, B.A., Cai.; S. W. Curl, B.A., Down; F. C. Eve, B.A., Emm.; A. T. Fraser, B.A., Cai.; A. C. Fry, M.A., Pemb.; T. Gillespie, B.A., Joh.; H. Glasier, M.A., Emm.; H. M. Harwood, B.A., Trin.; C. L. Hawkins, B.A., Emm.; E. W. Hedley, M.A., King's; G. H. Hunt, M.A., Cla.; O. Inchley, M.A., Joh.; A. Killick, B.A., Down; J. E. Linnell, B.A., H. Selw.; N. J. McCaskie, B.A., Cai.; A. E. Martin, B.A., Down.; W. H. Maxwell, B.A., Trin.; W. T. Mullings, B.A., Christ's; J. P. L. Mummery, B.A., Cai.; J. A. Nixon, B.A., Cai.; G. E. Orme, B.A., Cai.; S. V. Pearson, B.A., Emm.; J. C. A. Rigby, B.A., Cai.; R. N. Salaman, B.A., Trin. H.; R. E. Sedgwick, B.A., Cai.; F. Shuttlebotham, B.A., Trin.; J. F. Skrimshire, Joh.; F. T. Talbot, B.A., King's; E. Talbot, M.A., Trin.; R. S. Trevor, M.A., Cla.; B. R. B. Truman, B.A., Cai.; H. H. Wilson, B.A., Trin. H.; R. F. C. Ward, B.A., Joh.; D. P. Watson, B.A., Trin.; E. A. Wilson, B.A., Cai.; W. B. Minton, M.A., Cla.

UNIVERSITY OF LONDON.

M.S. Examination.—The following have satisfied the examiners: W. F. V. Bonney, M.D., Middlesex Hospital; W. S. Handley, M.D., Guy's Hospital; W. T. Milton, Guy's Hospital.

SOCIETY OF APOTHECARIES OF LONDON.

Pass List, December, 1899.—The following candidates passed in:

Surgery.—T. B. Haig (Section I), St. Bartholomew's Hospital; J. B. Hall (Section II), Leeds; T. E. Holman, Guy's Hospital; C. Johnson (Section I), Durham and London Hospital; G. G. Membery ((Section II), Toronto; O. H. Rogerson (Section II), Leeds; M. J. Ryan, St. Bartholomew's Hospital; O. C. Sibley, Middlesex Hospital; H. E. Weston ((Section I), St. George's Hospital.

Medicine.—G. H. Bedford (Section II), Guy's Hospital; W. F. C. Bennett (Section II), Sheffield; E. Grange, Edinburgh and London Hospital; K. Grube, Bonn; H. N. Horton (Section II), Middlesex Hospital; G. G. Membery (Section II), Toronto; O. H. Rogerson (Sections I and II), Leeds; G. H. Watson, St. Bartholomew's Hospital.

Forensic Medicine.—F. C. H. Dady, Bombay; F. Elias, London Hospital; E. Grange, Edinburgh and London Hospital; K. Grube, Bonn; O. H. Rogerson, Leeds; G. H. Watson, St. Bartholomew's Hospital.

Midwifery.—C. B. S. Amos, Royal Free Hospital; C. E. Brooks, Manchester; W. A. C. Cox, St. Mary's Hospital; W. D. French, University College Hospital; J. C. Furness, Glasgow and Charing Cross Hospital; G. R. Lucas, Edinburgh and Charing Cross Hospital; W. Roberts, University College Hospital; O. H. Rogerson, Leeds; C. V. Smith, University College Hospital; C. C. Worts, Guy's Hospital.

The diploma of the Society was granted to Messrs. G. H. Bedford, C. E. Brooks, F. Elias, J. B. Hall, G. G. Membery, O. H. Rogerson, O. C. Sibley, and C. C. Worts.

HOSPITAL AND DISPENSARY MANAGEMENT.

WONFORD HOUSE HOSPITAL FOR THE INSANE, NEAR EXETER.

The total number of cases under treatment at this institution during the year 1898 was 140. The total number admitted was 25, and the number of deaths and discharges was 31. There remained in the hospital at the end of the year 118. The record of recoveries was an exceptionally good one, the percentage, calculated on the number admitted, was 66.6, a ratio that has only once been exceeded in the history of this hospital, the average rate of recovery for the last 15 years standing at the very satisfactory figure of 46.7 per cent. Dr. Maury Deas reports the general health of the institution to have been satisfactory, and nothing more serious has been recorded than an attack of epidemic influenza. This, moreover, was confined to the female division, where 15 cases occurred. Of the 5 deaths 1 was due to cerebral tumour and hæmorrhage. The death-rate was only 4 per cent. The charitable side of the work of the hospital is not lost sight of by the Committee. Fifty-six cases were maintained at reduced ratios, and 3 were kept free of expense.

THE MONMOUTH ASYLUM.

This institution receives rate-supported patients chargeable to the counties of Monmouth, Brecon, and Radnor, as well as the borough of Newport. Of the 1,050 patients remaining on the books at the close of 1898, 65 were patients boarded therein from other counties. There were 239 admitted, and 201 discharged and died. The recovery rate was 31.4 per cent., and the death-rate 10.7 per cent., calculated upon the average number resident. The deaths were all due to ordinary causes. In this, as in most other asylums throughout the country, overcrowding and the proposed remedy for it holds an important place in the annual report, and Dr. Glendinning emphasises as the most important event of the year the erection of temporary buildings for 50 patients of both sexes, which, he says, will afford suitable and comfortable accommodation, and will be the means of relieving the present overcrowding. In this well-managed asylum, as in the great majority of our asylums, lectures are given by the medical officers to the nurses, male and female, and 22 passed the examination of the Medico-Psychological Association for proficiency in nursing.

CUMBERLAND AND WESTMORLAND ASYLUM.

The number of patients at the end of 1898 was higher by 29 than at the beginning of the year, and Dr. Farquharson, the new medical superintendent, reports that, with the exception of an outbreak of erysipelas, the health of the patients had been fairly good. A considerable number had been confined to bed in the infirmary wards, but a large proportion of them suffered from senile decay, still they cause considerable strain upon the staff, as they entail feeding and nursing carefully to avoid bedsores and other lesions consequent upon their low vitality. One patient who was not suspected of suicidal tendency committed suicide by cutting his throat. The average number of patients resident was 637. There were 180 admissions; 93 were discharged, with a recovery rate of 35 per cent.; and 58 patients died, with a death-rate of 9.1 per cent., calculated upon the daily average number of patients resident.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

ZYMOTIC DISEASE IN EDINBURGH.

The state of Edinburgh with reference to zymotic disease during the past three months merits a brief note of comment. Probably never in the history of the city have there been so few cases of disease, and never in the history of the City Hospital have there been so few cases under treatment at this season. During the period from September 30th till December 23rd only 502 cases have been intimated, and there have been only 44 deaths. In detail these are the figures:

	Intimations.	Deaths.
Typhoid fever	71	11
Diphtheria	84	7
Scarlet fever	306	12
Measles	41	2
Whooping-cough ...	—	10
Erysipelas	—	2

The two latter diseases are not notified.

There have been no cases of small-pox or typhus fever. But a yet more remarkable point is that in the week ending December 9th not a single death occurred from any zymotic disease whatsoever, a fact without precedent in the history of the city at this particular period of the year. Not only so, but in that particular week the notifications fell to 30, the smallest number in any one week in the period under review. In the preceding week, that ending on December 2nd, there were 40 notifications and only 1 death. These facts and figures are all the more noteworthy in that after an unusually hot summer there is generally a greater incidence of zymotic disease. Whence, then, the great immunity of Edinburgh? In many districts of Scotland there has been a great prevalence of enteric and scarlet fevers, with, in some localities, a high death-rate, during these three months in question. Referring again to the Edinburgh figures, the low mortality relatively to the intimated cases is to be noted, especially in diphtheria, scarlet fever, and measles.

INDIA AND THE COLONIES.

QUEENSLAND.

Lunacy.—The report of the Inspector of the Hospitals for the Insane for 1898 shows that the total number of patients brought under the official cognisance of the Inspector for the year was 1,800, and the average daily number resident in the asylums was 1,540. There were 293 patients admitted, being 43 more than the previous year; this increase is ascribed by Dr. Hogg to the after-effects of dengue and influenza. The discharges numbered 113, and the recovery-rate was 35.5 per cent., calculated upon the number admitted. There are 94 coloured aliens in the various institutions, and the question is raised as to whether it would not be cheaper and better to remove many of them to their own country, seeing that it costs the Government £25 a year to maintain each of them.

Presentation.—Dr. R. Brooks Popham, who is leaving England for South Africa, has been presented with a silver salver, with suitable inscription and a travelling flask "from a few poor but grateful patients, as a token of respect and in recognition of many acts of kindness."

MEDICAL NEWS.

THE Societa Freniatrica Italiana has nominated Dr. Ireland, Mavisbush House, Polton, as a corresponding member. This Society answers to the Medico-Psychological Association of Great Britain, and the President is Professor Tamburini, of Modena.

THE APPOINTMENT OF A VACCINATION OFFICER AT LEICESTER.—The Leicester Board of Guardians held a special meeting on December 22nd, and appointed Mr. Kyte out of six selected candidates who had signified that they would carry out the duties according to Act of Parliament as vaccination officer; 30 voted for Mr. Kyte, 1 against, and 4 were neutral.

PRESENTATION.—The members of the Liverpool Medical Institution are presenting Mr. W. Jones, who has been resident librarian to the institution for twenty one years, with a testimonial. A small Committee was formed in June, consisting of Drs. Robertson, Burton, Clarke, C.C., and Richardson, with Dr. Rentoul as Honorary Secretary and Treasurer. The proposal has been responded to by 225 of the 283 members, and it is expected that the presentation will amount to 200 guineas. Perhaps of more value to Mr. Jones will be the very appreciative letters which have accompanied the donations.

THE proposed Conference on Medical Organisation, the scope and object of which have been pretty fully explained in the prolonged correspondence which has taken place in our columns, is to be held during the first week in May either in Manchester or in London. It will last, we are informed, for two or possibly three days, and the last day will be devoted to the discussion of the best methods of organising the profession. Among other subjects suggested for discussion are Direct Representatives on the General Medical Council, Contract Practice, the Midwives Question, Medical Charities and the Representation of the Profession on their Management, Medical Education and especially the provision of one portal, and the Medical Acts and their Amendment. Further particulars can be obtained from Dr. S. Crawshaw, Honorary Secretary of the Conference Committee, Trafalgar Square, Ashton-under-Lyne.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERYSTWITH INFIRMARY.—House-Surgeon. Salary, £150 per annum, with usual residential allowances (stimulants excepted). Applications to the Secretary by January 20th, 1900.

ASHTON-UNDER-LYNE DISTRICT INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications, marked outside "Applications for the Office of House-Surgeon," to the Secretary by January 9th, 1900.

BELGRAVE HOSPITAL FOR CHILDREN.—Dental Surgeon. Applications to the Honorary Secretary, 77 and 79 Gloucester Street, S.W., by January 2nd, 1900.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by January 15th, 1900.

BRISTOL, CITY AND COUNTY OF.—Workhouse Medical Officer. Salary, £250 per annum, and allowance of £30 per annum for rent. Applications, on forms provided, to the Clerk to the Guardians, St. Peter's Hospital, Bristol, by January 10th, 1900.

BRISTOL ROYAL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House-Surgeon. Salary, £100 per annum, with room and attendance. Applications, endorsed "House-Surgeon," to the Secretary by January 2nd, 1900.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by January 9th, 1900.

CITY DISPENSARY, 46, Watling Street, E.C.—Physician. Must be F. or M.R.C.P. Lond. Applications to the Secretary by January 13th, 1900.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park.—Second House-Physician. Appointment for six months. Board and residence provided, and salary at the rate of £30 per annum. Applications to the Secretary by January 10th, 1900.

DERBYSHIRE ROYAL INFIRMARY.—Resident House-Physician. Appointment for twelve months, with possibility of extension. Salary, £80 per annum, with apartments and board. Applications to the Secretary by January 5th, 1900.

DUBLIN: CITY OF DUBLIN HOSPITAL.—Vacancy on the Surgical Staff. Applications to the Honorary Secretary, Medical Board, by January 5th, 1900.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Assistant Anæsthetist. Appointment for six months, but eligible for re-election. Honorarium at the rate of 10 guineas per annum. Applications to the Secretary by January 15th, 1900.

HITCHIN: THREE COUNTIES ASYLUM.—Second Assistant Medical Officer; unmarried and under 35 years of age. Salary commencing at £150 per annum, with board, apartments, etc. Applications to F. G. Butler, Clerk to the Visiting Committee, St. Neots, Hunts, by January 10th, 1900.

HOSPITAL FOR WOMEN, Soho Square, W.—Assistant-Surgeon, must be F.R.C.S.Eng. Applications to the Secretary by January 3rd, 1900.

LEICESTER INFIRMARY.—House-Physician. Salary, £100 per annum, with board, apartments, and washing. Applications to the Secretary, 24, Friar Lane, Leicester, by January 1st, 1900.

LONDON HOSPITAL, Whitechapel Road, E.—(1) Assistant Physician; must be M.R.C.P. Lond. (2) Dental Surgeon. Applications to the House-Governor by January 23th and January 6th, 1900, respectively.

MIDDLESEX HOSPITAL. (1) Director of the Cancer Research Laboratories. Salary, £100 per annum, with honorarium of £50 after second year of office. (2) Assistant Anæsthetist. Applications to the Secretary-Superintendent by January 10th and January 6th, 1900, respectively.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Senior House-Physician. Junior House-Physician is applicant, and if appointed there will be a vacancy as Junior. Salary, as Senior £100 per annum, as Junior £50, with board and apartments. Applications to the Secretary by January 3rd, 1900.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—(1) Resident Medical Officer. Appointment for twelve months. Honorarium £100. (2) Assistant Resident Medical Officer. Appointment for six months. Honorarium at the rate of £60 per annum. Applications to the Secretary by January 6th, 1900.

PLAISTOW: ST. MARY'S CHILDREN'S HOSPITAL.—Senior Resident Medical Officer. Appointment for one year. Salary, £80 per annum, with residence, board, and washing. Applications to the Secretary by January 4th, 1900.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer for 1901. Applications to the Registrar by January 5th, 1900.

ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street, W.—Resident Medical Officer. Salary, 100 guineas per annum, with annual increase of 10 guineas to maximum of 120 guineas, with furnished apartments, etc. Applications to the Secretary by January 2nd, 1900.

ST. MARY, ISLINGTON.—Medical Superintendent for the New Infirmary, Highgate; not less than 35 years of age. Salary, £530 per annum, with furnished residence etc. Applications, on forms provided, to be sent to the Clerk to the Guardians, St. John's Road, Upper Holloway, by January 8th, 1900.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physiology. Applications to the Dean by January 2nd, 1900.

SHEFFIELD ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications to the Medical Staff, under cover to the Secretary, by January 24th, 1900.

YORK.—Medical Officer of Health of the City. Salary, £400 per annum. Must devote his whole time to the duties. Applications, endorsed "Medical Officer of Health," to the Town Clerk, Guildhall, York, by January 4th, 1900.

MEDICAL APPOINTMENTS.

BAUMANN, E. P., M.B.Edin., M.R.C.S.Eng., appointed House-Surgeon to the Glasgow Maternity Hospital.

BENNETT, W. F. C., L.R.C.P.E., L.R.C.S.E., appointed Assistant House-Surgeon to the Rotherham Hospital and Dispensary, *vice* Arthur H. Gaddesden, M.R.C.S., L.R.C.P., resigned.

FLEMING, G., M.B., C.M., M.R.C.P.E., appointed Medical Officer to the Ombersley District of the Droitwich Union, *vice* G. Capel Hall, late Surgeon-Captain I.M.S., retired.

GOUGH, John Harley, F.R.C.S.Edin., L.R.C.P.Lond., appointed Honorary Physician to the Western Hospital for Consumption, Torquay, *vice* T. E. Lombe, M.D., appointed Consulting Physician.

HAYES, Reginald H., M.R.C.S., appointed Assistant Anæsthetist to the Royal Ear Hospital.

ROSE, George, M.B., C.M., D.P.H.Aberd., appointed Surgeon to the Royal Aberdeen Hospital for Sick Children, *vice* Robert John Garden, M.D., resigned.

SPURGIN, Wm. Hy., M.R.C.S.Eng., appointed Medical Officer to the Western Division of the Post Office, Newcastle-on-Tyne.

STURROCK, A. Corsar, M.A., M.D.Edin., appointed Resident Medical Officer to the Manchester Royal Infirmary.

WOOD, S. Stanley, L.R.C.P., M.R.C.S., appointed Medical Attendant at the Cambridge Borough Infectious Diseases Hospital.

ROYAL LONDON OPHTHALMIC HOSPITAL, CITY ROAD, E.C.—The following appointments have been made:
Curator—W. F. Lister, B.A., M.B., F.R.C.S.
Senior House-Surgeon—W. E. Smith, M.B., C.M.
Junior House-Surgeon—A. F. MacCallan, B.A., M.B., B.C., F.R.C.S., L.R.C.P.
Junior Out-patient Surgical Officer—F. A. C. Tyrrell, B.A., M.B., B.C., M.R.C.S., L.R.C.P.

DIARY FOR NEXT WEEK.

WEDNESDAY.

Obstetrical Society of London. 8 P.M.—Specimens will be shown by Drs. Eden, Macnaughton-Jones, John Phillips, and others. Paper—Dr. Herbert Spencer: Four Cases of Rupture of the Uterus successfully treated by Packing the Tear per Vaginam with Iodoform Gauze.

THURSDAY.

Roentgen Society, 20, Hanover Square, W., 8 P.M.—Mr. Chisholm Williams: The Interpretation of Skiagraphs.

Harveian Society of London. 8.30 P.M.—Clinical evening.

FRIDAY.

Laryngological Society of London, 20, Hanover Square, 4.30 P.M.—Annual general meeting. Lantern demonstrations of Normal and Pathological Preparations of the Nose and Throat will be given by Dr. Watson Williams and Dr. Jobson Horne. Cases will be shown by Sir Felix Semon, Mr. Waller Spencer, Dr. Fitzgerald Powell, Dr. Herbert Tilley, Mr. L. A. Laurence, Mr. Stephen Paget, Mr. Lake, and others.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BOKENHAM.—On December 25th, at 10, Devonshire Street, Portland Place, W. the wife of Thomas J. Bokenham, M.R.C.S., L.R.C.P., of a daughter.

BROWN.—On December 27th, at 6, Gibson Square, Islington, N., the wife of George Brown, M.R.C.S.Eng., of a son.

KIRKPATRICK.—At 1, Leeds Road, Attercliffe, Sheffield, on December 7th, the wife of Alex. Kirkpatrick, M.B., of a daughter.

MARRIAGES.

CLARKE—GRAY.—On December 21st, at St. John's Church, Dudley, by the Vicar, the Rev. E. H. L. Nootl, M.A., H. R. Stanhope Clarke, M.R.C.S., L.R.C.P., of 173, Dudley Road, Wolverhampton, elder son of Henry Barnes Clarke, of Malvern and Hanley Castle, to Maud Mary, third daughter of the late John Eaton Gray, of Tipton. No cards.

MAXWELL—JONAS.—At the Cathedral, Hong Kong, on December 16th, John Preston Maxwell, M.B., B.S.Lond., F.R.C.S., to Lilly E. Isaacson Jonas, Cordova, Burnt Ash Hill, Lee, S.E. (By telegram.)

DEATHS.

DALY.—On November 22nd, of acute Bright's disease while visiting at the residence of her brother, M. B. Cooper, in Garner, Iowa, U. S. America, Mrs. Athalia Cooper Daly, wife of Dr. W. H. Daly, of Pittsburgh, Pennsylvania, U. S. America.

HARTNELL.—On December 18th, at Dover, Ada, the wife of Edward Bush Hartnell, M.R.C.S., L.R.C.P., of 1, Eyecroft Street, Fulham.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 3. *Operations,*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophth almic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, as Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynecological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynecological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

Dr. A. DE WATTEVILLE (Welbeck Street) writes: A lady, holding a London certificate for massage, etc., speaking both French and English, has asked me whether there is any chance of finding some work to do in Cairo or Alexandria. As I do not feel competent to give an opinion, may I ask for information?

ACCIDENT CLUBS.

A CORRESPONDENT writes that he has been asked by the manager of some local cement works to contract to attend to accidents occurring at his works for the weekly payment of one penny for each man employed. He states that they number about 60, and he should like to know if the terms offered could be considered adequate.

*** The adequacy or otherwise of payment would depend on the average number of accidents occurring annually at these works. If accidents are at all frequent the terms quoted are very inadequate.

LOCAL INJECTION OF EUCAINE.

R. asks for facts as to the use of eucaine in operation cases. He wishes to remove a tumour from the breast, and wishes to know the manner, dose, etc., of the drug, its dangers, etc.

*** We may refer our correspondent to a paper on Eucaine as a Local Anæsthetic in the Surgery of the Throat, Nose, and Ear, by W. Jobson Horne, M.B., and M. Yearsley, F.R.C.S. (BRITISH MEDICAL JOURNAL, November 27th, 1897, page 1560), and also to the BRITISH MEDICAL JOURNAL, January 16th, 1897, page 134.

ANSWERS.

"DILEMMA."—(1) No. (2) Yes, subject to the risk of being misunderstood.

MEMBER B.M.A.—It is impossible to express a trustworthy opinion in reply to questions 1 and 2. As to question 3 it is not impossible that a patient might develop an attack of scarlet fever twenty-nine days after commencement of exposure to infection, but this is a different thing to the period of incubation. Second attacks of scarlet fever shortly after a first have been supposed to occur.

PREGNANCY IN UNMARRIED GIRLS.

"VIRIDIS" should inform his patient what is the matter with her, and persuade her either to tell her mother or to allow him to do so. If he cannot persuade her to do so, he must use his own judgment, and if he thinks that his silence would lead to greater harm than his speaking he must accept the risk to himself, and take the course that seems to him for the patient's good. From such a course, taken *bond fide*, he incurs very small risk.

BOOKS ON DIETETICS.

ENQUIRER."—In answer to our correspondent's question we would refer him to *Foods: Their Composition and Analysis*, by Alexander Wynter Blyth, fourth edition (London: Charles Griffin and Co., 1896, 21s.); *Foods*, by Edward Smith, eighth edition (London: Kegan Paul, Trench, Trübner, and Co., 1883, 5s.); and a *Treatise on Food and Dietetics*, by F. W. Pavy, second edition (London: J. and A. Churchill, 1875, 15s.). We know of no book which gives an analysis of the proprietary articles mentioned. We would refer our correspondent to the *Collected Contributions on Digestion and Diet*, by Sir William Roberts, second edition (London: Smith, Elder, and Co., 1897, 5s.).

NOTES, LETTERS, Etc.

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

SURGEON-MAJOR VALENTINE MATTHEWS, V.M.S.C., Honorary Secretary, Headquarters, London Company, V.M.S.C., 51, Calthorpe Street, W.C., writes: This fund is established to assist the families on or off the strength of non-commissioned officers and men of Royal Army Medical Corps on active service in South Africa. All moneys received will be handed over to the Royal Army Medical Corps Depôt Mobilisation Relief Fund, Aldershot, the Honorary Secretary of which will be glad to hear of any cases of distress needing immediate assistance, whether the husbands were mobilised at Aldershot or not.

	£	s.	d.
Amount already acknowledged	67	11	8
Bedale's School, Hayward's Heath	4	14	10
F. Lorimer Hart, M.D. ...	0	10	6
Mr. F. Godfrey	1	1	0
Subscribed and collected by London Companies, V.M.S.C.:			
No. 1 Company... ...	9	9	0
No. 2 Company... ...	14	15	1
No. 3 Company... ...	17	10	0
No. 4 Company... ...	35	15	9
No. 5 Company... ...	33	4	6
Band (2nd contribution)	2	17	2
Sergeant-Instructors ...	3	17	0
Per Surg.-Capt. Warwick	0	10	6
Per Quart.-Master-Serg. Walker	2	0	0
Per Staff-Serg. Beetham	2	2	0

THE OBLIGATION TO REPORT CASES OF LEAD POISONING.

DR. THOMAS FENTEM (Bakewell) writes: Until lately I held the same opinion as that which is expressed in the last sentence of the paragraph under the above heading in the BRITISH MEDICAL JOURNAL for December 2nd, page 1564, to wit: It is incumbent on medical practitioners, therefore, to report to the Home Office all cases of lead ..... poisoning ..... due to occupation." Recent experience has led me to change that opinion, and, in face of your paragraph, my experience may be of some interest. On December 5th, 1898, I notified to the Home Office a case of lead poisoning occurring in a painter, and as a result a packet of forms on which to notify cases in the future was sent to me

without comment. On March 22nd of the present year I notified a second case of lead poisoning in another painter, but no acknowledgment was made. In November last I had again occasion to notify a case of plumbism, and in that part of the form set aside for remarks I made inquiries as to where I ought to look for the fees due to me for the notification of these, and any future cases I might have to make. In reply I was asked for further information as to the previous cases which had apparently been lost sight of, and then was informed that none of the cases being notifiable no fees were due. It appears to me that persons suffering from lead poisoning can, for the purposes of the Act (Section XXIX of which you quote) be arranged under three heads, as follows: (1) Those employed wholly outside any factory or workshop; (2) those employed wholly inside any factory or workshop; (3) those employed partly inside and partly outside a factory or workshop. Cases coming under headings (1) and (2) give no trouble, but with heading 3—under which my cases fall—it is different. Who is to decide whether the plumbism was contracted during the time the person was employed in the workshop—when, I take it, the case would be notifiable—or during the period he was employed outside—when, I suppose, notification would not be necessary; and, still more, what is the position of the medical practitioner if he forms the opinion that the condition has been brought about by the influence acting both during the time his patient was employed inside a factory or workshop and also outside? It seems to me that he would be in a position analogous to that of the man who was described as having "the deep blue sea" as one of his boundaries.

*** In quoting from the Factory and Workshop Act, 1895, Section XXIX, it was stated in the BRITISH MEDICAL JOURNAL for December 2nd that any medical practitioner attending a patient whom he believes to be suffering from lead poisoning contracted in any factory or workshop, shall send to the Chief Inspector of Factories, at the Home Office, London, the name and full postal address of the patient, etc. At the present time, therefore, the only cases of plumbism notifiable are those occurring in occupations that come under the Factory and Workshop Acts. Evidently the Home Office does not see its way to make all cases of plumbism notifiable although for completeness of returns of industrial lead poisoning, it might be better if it did. If our correspondent could prove that the plumbism of the painters who consulted him was contracted in a workshop, and the onus of proof necessarily devolves upon him, he could claim the notification fee. By the term "workshops" is meant premises, room or place, not being a factory..... in which any manual labour is exercised by way of trade or for purposes of gain, or is incidental to.....(*a*) making of any article or part of article, (*b*) altering, repairing, ornamenting, or finishing of any article; (*c*) adapting for sale of article, and to which premises, room, etc., the employer of the persons working therein has the right of access or control. We would in addition draw the attention of our correspondent to the *Labour Gazette* for November, in which, p. 328, under Diseases of Occupations, supplied by Home Office, there occur under the heading of Paints and Colours, five cases of lead poisoning reported in males.

EARLY INSANITY IN WOMEN.

IN the report of a paper on Early Insanity in Women read by Miss A. Helen Boyle at a meeting of the South-Eastern Branch of the British Medical Association recently, the following sentence as published in the BRITISH MEDICAL JOURNAL of December 16th, "the opinion was expressed that the nerve symptoms were often dependent upon gross organic pelvic mischief," should read "were *not* often," etc.

HOLIDAYS OF SCOTTISH PAROCHIAL MEDICAL OFFICERS.

DR. JAS. F. D. MACARA, M.B., C.M. (Durness, Sutherlandshire, N.B.) writes: A movement having been set on foot, with the object of obtaining the gratuitous services of a paid medical substitute for Scottish parish medical officers in outlying districts in the Highlands and islands of Scotland during an annual holiday (such as has already been granted to dispensary medical officers in the remote districts of Ireland by the Local Government Board of Ireland), any medical officer concerned who desires to support a petition to the Local Government Board of Scotland for this object is requested to send in his name without delay.

ALL ABROAD!

A FACETIOUS evening contemporary advises anyone who may happen to find a specific for in England on active duty to secure him, as at present such gentlemen are as hard to find as needles in a bottle of hay. All are in South Africa or on their way thither. It also adds: "There is very good reason for believing that one military department in connection with the war has been most admirably managed—the medical one. It may be early to judge yet awhile, but so far there have been no grave blunders brought to light on that side."

BOER COMPLAINTS.

WE have received from some unknown correspondent in Holland a printed copy of what purports to be "a sworn declaration made before the First State Prosecutor by Mr. Philip Kock, nephew of the late General Kock." It is a most contemptible production, consisting of a set of whining complaints because the writer, who was taken prisoner after the fight at Elandslaagte, where "about 10,000 Englishmen with about 36 cannon.....obtained a victory over a small troop of about 850 men.....of which troop only about 400 men fought," did not get as much to eat as he thought good for him. He also complains that General Kock was placed for two days in a tent "among the common soldiers." The pamphlet, in its numerous misprints, some of which have been corrected with the pen, bears internal evidence that it was printed abroad, and it was undoubtedly posted in Holland, otherwise we might have supposed that its object was to bring the Boer into contempt.

A HIDING PLACE OF THE TUBERCLE BACILLUS.

M.D.GLAS. writes: Your article in the BRITISH MEDICAL JOURNAL of December 9th on Some Hiding Places of the Tubercle Bacillus tempts me to direct attention to what, in my opinion, must be a fertile source of infection. I was lately in the Glasgow district, and, whilst waiting at one of the railway stations, I saw amongst the various machines for extracting coppers from the unwary what was called a lung-testing appliance. I found a cup, attached to a tube, into which, after inserting your penny, you were requested to blow, and by the height a ball ascended in the tube you were supposed to ascertain the condition of your lungs. The side of the tube was graduated, each point having marginal notes as to the condition of the lungs, such as "Very weak," "Consumptive," "Medium," etc. I pictured to myself the poor consumptive straining his diseased lungs to blow the ball above the consumptive mark, in order to prove to himself that his lungs were sound, and the fascination such an instrument would have for him to try his chances from time to time. Irrespective of the extreme danger of such an effort to the consumptive, there is the greatest danger to those who come after him. Consumptives will be the chief customers. They must contaminate the cup, and so spread infection to any one foolish enough to indulge in a "blow."

THE UNIVERSITY OF LONDON.

DR. GEORGE BIRT (Stourbridge) writes: Does it not seem a dishonour to the University of London that it could not grant the degree of M.D. to Sir Richard Thorne, one of its most distinguished graduates and a double first-class honours man? But our Alma Mater shows neither fear, favour, nor affection.

PRIZE ESSAY ON EPILEPSY.

THE prize of 100 dollars for the best original contribution to the Pathology and Treatment of Epilepsy, offered last year by Dr. F. Peterson, President of the Board of Managers of the Craig Colony for Epileptics, New York, has not been awarded, none of the essays having fulfilled the necessary conditions. Dr. Peterson now offers a prize of 200 dollars for the year 1900. The manuscript, which should be sent to Dr. Peterson, 4, West Fiftieth Street, New York City, on or before September 1st, 1900, will be submitted to a Board of Adjudicators.

LETTERS, COMMUNICATIONS, ETC., have been received from:
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BOOKS, ETC., RECEIVED.

The Hygiene of Transmissible Diseases. By A. C. Abbott, M.D. London: Rebman, Limited. 1899. 14s.

A Text Book of the Practice of Medicine. By J. M. Anders, M.D., Ph.D., LL.D. Third Edition. In Two Volumes. London: Rebman, Limited. 1900. 36s.

A Text-Book of Diseases of the Nose and Throat. By D. B. Kyle, M.D. London: Rebman, Limited. 1899. 20s.

Nervous and Mental Diseases. By A. Church, M.D., and F. Peterson, M.D. London: Rebman, Limited. 1899. 28s.

L'Instinct Sexuel. Par C. Féré. Paris: Félix Alcan. 1899. F 4.

La Pratique des Accouchements Obstétrique Journalière. Par H. Varnier. Paris: G. Steinheil. 1900. F 26.

Kemp and Co.'s Prescribers' Pharmacopœia. Fourth Edition. London and Bombay: Kemp and Co. 1899.

Clinical Medicine. By J. S. Bury, M.D., F.R.C.P. Second Edition. London: C. Griffin and Co. 1899. 21s.

A System of Medicine. Edited by T. Clifford Allbutt, M.A., M.D., LL.D., etc. Vol. VIII. London: Macmillan and Co. 1899. 25s.

Studies in the Psychology of Sex. By Havelock Ellis. Vol. II. Watford: University Press. 1900.

The Dream: A Phantasy. By G. H. R. Dabbs, M.D. London: C. W. Deacon and Co. 1900. 1s.

Pye's Surgical Handicraft. Fourth Edition. Revised and edited by B. M. H. Rogers, B.A., M.D., B.Ch. Bristol: John Wright and Co. 1900. 10s. 6d.

Unwritten Laws and Ideals of Active Careers. Edited by E. H. Pitcairn. London: Smith, Elder, and Co. 1899. 7s. 6d.

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AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(1) Right Pleural Effusion in Heart Disease.

GIANNI (*Il Policlinico*, May 1st, 1899) describes an insidious, painless, non-febrile pleural effusion occurring on the right side of cardiopathic patients with considerable enlargement of the heart. He records 9 cases. The fluid had a specific gravity below 1015, slight amount of albumen, and fibrin not constantly present. The absence of pain, the apyrexia, the low specific gravity of the fluid are in favour of this class of effusion being a transudation rather than an inflammatory exudation. The unilateral character is due to the cause being unilateral—for example, a pulmonary infant, hepatic complications, or pressure on the azygos veins hindering the return of blood. The azygos vein, as it arches forward over the root of the right lung, is liable to be pulled down upon the bronchus when the heart is enlarged, and so have its calibre reduced by pressure against the root of the lung. This anatomical fact serves to explain why these unilateral hydrothoracic effusions should be more frequently observed on the right side in the subject of enlarged heart.

(2) A New Syndrome consecutive to Injury of the Spinal Cord.

C. L. URRIOLA (*Archiv. de Neurol.*, May, 1899), under the above title, describes a syndrome (group of symptoms) following a spinal injury—namely, a stab inflicted at a level between the seventh and eighth dorsal vertebræ in a woman aged 40. At the stab the woman fell on the ground with her lower limbs paralysed. On removing her to hospital there was scarcely any hæmorrhage. For three days after the bladder did not act, and at the end of this time a large amount of normal urine was drawn off. On the fifth day the bowel acted after a rectal injection, and after this day both bowel and bladder resumed their regular action. There was a complete flaccid paraplegia, and the lower limbs were cold, but preserved their natural volume and colour. The right lower limb was for a week completely anæsthetic below the hip-joint, but if a warm object was applied, say, to the right knee, a sensation of burning was referred to the left knee (allochiria). The left leg itself was acutely hyperæsthetic to touch and to warmth. At the beginning there was a spot in the back, three-finger's breadth below the wound, which was very sensitive to pressure; two weeks later this tender point had shifted, and was now present in the sacral region, 6 centimetres to the right of the mid-line. A peculiar phenomenon noted in the right leg for three months was that contact or pricking of the antero-external side of the calf or the dorsum of the foot produced a dorsalward movement of the foot and withdrawal of the leg with a shock (reflex action), while at the same time no pain or contact was felt. The patella reflex was absent on both sides, and the plantar was present only on the left side. During the slow recovery which followed the left leg was very tardy in regaining power of flexion and of extension, flexion being more speedily regained than extension, and movements at the hip returning sooner than at the foot and toes. On standing up with some assistance there was a trembling of the legs, more marked in the left. That in the right leg gradually diminished and disappeared, but that in the left persisted and increased, while contracture in the position of extension of all the segments also developed in this limb until it assumed a rigid equinus position. During the development of rigidity in the left leg, there was excess of knee-jerk, and ankle clonus limited to this foot only. The anæsthesia on the right side gradually disappeared; the thigh was the first to regain sensibility. Finally, the whole limb recovered its sensibility with the exception of a narrow area extending from the heel to the lower part of the popliteal space, where anæsthesia was always present. In the foot the anæsthesia persisted longest on the dorsum, especially in its external part. During the two years during which the patient was under observation, there was no trophic or vasomotor trouble, and no atrophy except the slight wasting which could be attributed to the long period of immobility to which the legs had been subject. The salient points in this case were (1) the flaccid paraplegia immediately following the wound; (2) the complete anæsthesia of the right leg below the level of the hip-joint, and the hyperæsthesia of the left leg; (3) the distinct and positive allochiria which could always be found during the first week; (4) the total loss of the deep reflexes during the first weeks, which, however, returned thereafter, and remained exaggerated, with presence of foot clonus, both of which persisted always on the left side, where the leg also developed spasticity and contracture, while the right leg returned to a normal motor condition; (5) the persistence of a narrow zone of anæsthesia in the right leg, which also had regained ultimately all its sensibility; and (6) the absence of any vasomotor or trophic disturbance in either of the affected limbs. A discussion of the facts considered in relation to the present views of spinal cord anatomy (Cajal) leads the author to conclude that there was in this case a severance of the spinal cord in the whole of its right half, and in the anterior moiety of its left half.

(3) Tracheal Tugging in Aortic Aneurysm.

A. FRAENKEL (*Deut. med. Woch.*, January 8th, 1899) discusses the value of the pulsation of the larynx and trachea to which Oliver directed attention. In this phenomenon a downward movement of the larynx and trachea occurs with each systole. Oliver recommends that the larynx should be lightly grasped by the thumb and forefinger while the patient's head is inclined markedly backwards. Cardarelli adopts the device of lightly pushing the larynx towards the left side in the absence of any backward inclination of the head. Sometimes mere inspection of the larynx from without will reveal the tugging. Fraenkel finds that Oliver's symptom is more easily recognised when the larynx is pushed slightly upwards by the finger and thumb grasping the lower part of the cricoid or thyroid cartilage. Subsequent observation showed that the symptom is most marked in cases of aneurysm of the hinder part of the arch. If it is present in aneurysm of the front part of the arch, the aneurysm must have become adherent to the tracheal wall. Fraenkel details such a case. A simply increased force of the carotid pulse, as in aortic regurgitation, cannot cause it. Possibly a mediastinal growth may produce it, but the growth must be specially placed so as to press the arch against the bronchus; or it must be situated between the under surface of the arch and the bronchus, or placed on one side of the trachea, and be adherent on the other to the convexity of the arch. Fraenkel has seen such a case give rise to tracheal tugging. He concludes that this tugging is almost a sure sign of certain forms of aneurysm of the aortic arch.

SURGERY.

(4) The Localisation [of Obscure Pain in the Side.

AT the recent meeting of the American Gynecological Society, Howard A. Kelly (*Phil. Med. Journ.*, June 3rd) read a paper on this subject. It was a contribution to the further use of the renal catheter as a diagnostic aid, with especial reference to those cases in which it was difficult to determine whether or not the kidney was at fault. If the usual catheterisation and an analysis of the urines thus obtained failed to localise the lesion, it was his practice to catheterise each ureter in turn; he then washed out the pelvis thoroughly, and injected a quantity of some bland liquid. By obstructing the catheter an artificial renal colic was produced, and the patient would at once tell if this were in the same place as the pain hitherto complained of. The method was invaluable in cases in which the pain was deep in the viscera, and in which the surgeon could only conjecture. Cases were cited illustrating the procedure. He had thus far been led into false conclusions, but thinks the method applicable only in vague cases. In discussing the paper Reynolds recognised the value of Kelly's procedure, but preferred a method of his own which he had used for some time. He made his patient drink large quantities of water for some time before the catheterisation, and when the kidney had begun to secrete freely he catheterised first on the side to which the pain was referred, obstructed the catheter, and produced artificial renal colic by dilatation with the patient's own

secretion, thus obviating necessity for the introduction of foreign material. If no identification of pain was produced, the other kidney was treated in the same manner, with often the discovery that the pain was a referred one, the condition existing in the kidney not complained of, the patient who had complained of a pain on the left side exclaiming upon production of a right renal colic that it was the same pain and in the same place as that she had felt before.

(5) The Treatment of Tuberculosis of the Testis.

Berger (*Bull. et Mém. de la Soc. de Chir.*, No. 14, 1899) sums up his views on the surgical treatment of tuberculous testis in the following conclusions: (1) In tuberculous disease of the testis castration is indicated when the morbid changes are progressive and are strictly limited to one lateral half of the genital apparatus. (2) Extension of the disease to the vas deferens and even to the vesicula seminalis does not constitute a contraindication to operative treatment. (3) Castration when performed for the removal of a tuberculous testis ought to be completed by extirpation of the whole of the vas deferens, even though this structure may be apparently free from disease. (4) If the vesicula seminalis be involved in the disease, this organ may be removed either by the groin or, better, by the perineum. (5) In all cases in which a tuberculous testis is one of the chief causes of general disturbance, of exhaustion, and of pain, even though they may be tuberculous lesions of other organs, the diseased testicle should be removed unless such operation be contraindicated by the condition of the patient. (6) Castration for tuberculous disease of the genital apparatus ought never to be performed on both sides.

(6) Treatment of Compound Fracture of the Leg.

Chandoye (*Rev. d'Orthop.*, May, 1899) describes the treatment carried out by Poncet in different forms of compound fracture of the bones of the leg. In cases in which the wound is small, and there is no protrusion of broken bone through the skin—when in fact the injury is a relatively slight one, Poncet would simply disinfect the external wound, apply an antiseptic dressing, and fix the injured limb firmly and securely on a splint. In such cases, however, it is necessary to watch the patient closely, and if infection be indicated by a rise of temperature, the surgeon, it is held, should not hesitate to lay open and disinfect the wound, and resect the ends of the fragments of bone. In a second category of cases in which there is extensive wounding of the skin and soft parts, and the skin is perforated by broken bone, Poncet would at once freely expose the seat of fracture in both the tibia and fibula, and resect the ends of the fragments. In cases of an infected wound after compound fracture, with general disturbance and a high temperature, secondary resection of the ends of the broken bones would, in Chandoye's opinion, be the most suitable means of preserving the limb and of saving the patient. In this class of cases the treatment here advocated is not invariably successful; but, it is pointed out, it is only by large exposure of the centres of infection, by free drainage, and by liberal resection of the ends of the broken bones that adequate disinfection can be practised. In cases in which this treatment has been successful there is often a considerable degree of osseous regeneration, as the inflamed periosteum acquires in consequence of this inflammation fresh vitality and more active osteogenetic properties.

(7) Pneumatosis Cystoides Intestinorum.

Hahn (*Berl. klin. Woch.*, 1899, No. 22) at the Free Association of Berlin Surgeons related the case of a drover, aged 35, who was very much reduced in health, and suffered from dilatation of the stomach, prolapse of the rectum, and continual constipation. Soft tumours could be felt near the umbilicus. A laparotomy was performed, and the coils of intestine were found beset with clusters of cysts, which varied between the size of a pea and that of a hazel-nut. These cysts could be burst by squeezing them, and a non-inflammable gas escaped. A few of them were excised. Convalescence was retarded by the slow healing of the wound. This affection is not rare amongst pigs, but only two cases have been previously reported in human beings. The same affection, occurring in the vagina, has been described as "emphysema bullosum." Eisenlohr cultivated bacteria from the cysts, which were anaërobic and gas-producing.

MIDWIFERY AND DISEASES OF WOMEN.

(8) Fatal Obstruction from Pelvic Hæmatocele.

Bérard (*Lyon Méd.*, April 9th, 1899) publishes an instructive case showing the more remote perils of tubal abortion. A patient was admitted into Poncet's wards with symptoms of abortion. The uterus seemed as large as at the third month. The curette was used; a few days later the temperature rose and a hæmatocele developed in Douglas's pouch. On incision over three pints of fœtid pus escaped. The temperature fell; the patient was convalescent when severe symptoms of intestinal obstruction set in. On making an abdominal incision coils of intestine were found closely adherent to the wall of the hæmatocele. The patient died on the next day. In this case there had been tubal abortion, the sac bursting into the peritoneal cavity during the application of the curette.

(9) Arsenical Poisoning per Vaginam.

Kockel (*Monats. f. Geb. u. Gyn.*, May, 1899) exhibited before the February meeting of the Leipzig Medical Society the genital tract, liver, and kidneys of a girl, aged 27, who had died clearly from poisoning, but the nature of the poison was not at first clear. The liver and kidney suggested by their appearance phosphorus; there were numerous petechiæ on the serous membranes. The mucous membrane of the vagina was much corroded and looked pale and stiff as though tanned. The intestinal mucosa was widely detached, the gastric cloudy. On analysis arsenic was detected in the liver and stomach, and taking also into consideration the appearances in the vagina, it was concluded that the poison had been introduced through that canal, probably with intent to produce abortion.

(10) Uterus Unicollis: Gestation in Rudimentary Cornu.

Zamschine (*Soc. Obstét. et Gynéc. de St. Pétersbourg*, sitting of January 18th, 1899) reports a case of abnormal gestation of a type of cases of which have been described by Luschka, Turner, Remfry, and Campbell Pope. Zamschine's patient was 25, and pregnant for the fourth time. Her last period occurred at the end of 1897. For several months she could feel the fœtal movements, but they ceased for three months, and then she was examined. Milk was found in the breasts. The uterus was displaced to the left, and could be felt connected with a tumour of the size of an adult head by a broad pedicle. The right round ligament could be defined running from the tumour into the groin. The tumour had grown smaller from absorption of its solid contents after the death of the fœtus. Abdominal section confirmed the diagnosis. The pedicle was of solid muscular tissue; after division its peritoneal coat was sewn over the raw surface. Recovery was speedy. There was calcareous deposit between the fœtal membranes and the wall of the sac which was the undeveloped right cornu of the uterus.

(11) The Pelvis in the Newborn Infant.

Bouchacourt and Brindeau (*France Médicale*, No. 20, p. 316, May 19th, 1899) have communicated to the Obstetrical Society of France some observations on the neonatal pelvis. They employed radiography, and got exact results especially as to the upper strait by keeping the plane of the brim parallel to the plate; the soft parts were left *in situ*. They found that the pelvic brim in the newborn has a very distinctly circular form, and that the different diameters oscillate round 40 mm. Sometimes the antero-posterior was greater than the maximum transverse by 1 or 2 mm. The shape of the cavity was obtained by filling it with mercury and radiographing it.

(12) Detachment of the Hymen During Labour.

Crouzat (*Rev. Obstét. Internat.*, No. 156, April 21st, 1899) reports a case of nearly complete detachment of the hymen in a primipara during labour. The membranes ruptured spontaneously and a very large quantity of liquor amnii escaped (hydramnios); soon after the labour terminated without interference in the expulsion of an asphyxiated

female infant which was resuscitated and lived for twenty-eight hours. In removing the placenta from the vagina, the midwife in charge noted that the hymen was detached above on the left side and inferiorly. The infant had a fused kidney situated obliquely in front of the spinal column; a well-marked groove separated the right from the left kidney in the fused mass; the right ureter was double at its origin. The author dwells on the coincidence of fused kidney and hydramnios.

(13) Rupture of a Broad Ligament Cyst.

P. EYNARD (*Marseille Méd.*, No. 10, p. 306, May 15th, 1899) describes how, in a case diagnosed as a cyst of the broad ligament, the patient just before she went under chloroform said that she felt a sharp pain and sensation of rupture in the lower part of the abdomen. Examination of the abdomen showed that the tumour had disappeared. When the abdominal incision was made it was found that the cyst had ruptured. It was removed, and the patient recovered.

THERAPEUTICS.

(14) Aspirin (Acetylsalicylic Acid).

WOHLGEMUTH (*Therap. Monat.*, May, 1899) suggests the use of aspirin in the treatment of acute rheumatism. Aspirin is obtained by the action of acetic acid anhydride on salicylic acid. Its chemical formula is as follows:

$$C_6H_4 < \begin{matrix} COOH \\ O\,CO\,CH_3 \end{matrix}$$

Aspirin forms white crystalline needles, which have a melting point of 135°. A 1 per cent. solution can be obtained with water at 37°. It is readily soluble in alcohol and ether. With ferric chloride it gives a blue colour. Experiments with an artificial gastric juice showed that aspirin was very soluble in an acid medium. After being left for two hours in an artificial gastric juice, there was only a slight trace of free salicylic acid, which was demonstrated by the ferric chloride test. In 2½ to 3 hours the reaction was only slightly increased. From 4 to 5 hours after the commencement of the experiment, the amount of free acid had considerably increased. In an alkaline gastric juice the separation of salicylic acid from aspirin took place much sooner. After only ½ hour a trace of free salicylic acid could be demonstrated, and after 2 hours the quantity of free acid was so great that a deep violet colour was produced on the addition of a small quantity of ferric chloride. This new drug has been studied clinically in 10 cases. In 2 cases of acute rheumatism, aspirin was given in a solution of 6.0 to 200.0. On account of its insolubility in water, 15.0 grams of spirits of wine were added. Case 1, aged 20, began to have swollen joints at the age of 3. Lately she had had severe attacks of joint rheumatism. Salicylic acid had been tried, and subsequently antipyrin. The swelling in the hand and knee continued. Salicylic acid was again ordered, but this time in the form of aspirin, 3 grams daily. The patient improved almost immediately. The swelling in his left hand was the last to disappear; considerable stiffness remained, which improved with massage and hot applications. There were no unpleasant stomach symptoms, whilst taking the alcoholic solution of aspirin. Case II, aged 21; fever and swelling of hand and knee. Aspirin 3 grams daily in dilute alcoholic solution. Pains at once relieved. After a few days the patient complained of pain in the stomach; this immediately subsided when the medicine was stopped. There was no loss of appetite or tinnitus. The pain in the stomach was no doubt due to the alcohol; the patient at the time disliked the strong smell of alcohol in the medicine. In the further experiments aspirin was given in the form of powder in doses of 1.0 gram; no pain in the stomach was noticed when the drug was given in this form. The remaining 8 cases were not true joint rheumatism; some had scarlet fever, others diphtheria or angina. The patients began to suffer from rheumatoid pains during the course of their illness. They took 1 gram of aspirin three times a day for a period of eight days without feeling any ill-effects. The action of aspirin on the rheumatic joint is identical with salicylic acid. Aspirin is to be preferred to sodium salicylate as the vehicle of salicylic acid, chiefly because of its non-irritating character when administered by the mouth. The drug must be given in powder, and not in a solution.

(15) Suprarenal Gland as a Hæmostatic.

A LITTLE more than a year ago Schäfer pointed out that the hæmostatic effect of suprarenal in epistaxis; during the last twelve months the extract has been used abroad to control the hæmorrhage in operations in the nose and pharynx. Grünbaum (*Journ. of Physiol.*, May 11th, 1899) suggests that cases of hæmatemesis might be benefitted by the administration of suprarenal extract, if the active principle were not absorbed sufficiently rapidly to cause a rise in blood pressure, in which case the hæmorrhage would not be controlled. The author made some observations on his own blood pressure before and after doses of pulverised suprarenal tabloids, the hæmostatic properties of which had been tested. An Oliver's sphygmodynamometer was used, which, although not correct absolutely, worked excellently as a comparative instrument. The doses taken were 10, 20, and 30 gr.; the blood pressure was taken every ten minutes for three hours after the dose; no cardiac stimulant vitiated the results of the experiments. In no case was there an appreciable increase in blood pressure, that is, an increase beyond that of experimental error, which is 4 mm. Hg. Another series of experiments was carried out on a woman who at one time had given the impression of being afflicted with Addison's disease. Her blood pressure was normally 118 mm. Hg. when taking imitation suprarenal tabloids; on her being given 30 real tabloids, representing 120 gr. of the fresh suprarenal gland daily, no rise in blood pressure occurred, although the treatment was continued for over a week. In one case a rise in blood pressure was found after the administration of suprarenal; it was in the case of a pregnant woman who had some pigmentation, vomiting, great muscular weakness, as shown by the ergograph, and a very low blood pressure. A rise from 75 mm. Hg. to 91 mm. Hg. was brought about by the administration of suprarenal tabloids, which was not maintained on the omission of the doses. The negative results as regards the alteration of blood pressure in normal individuals makes it probable that suprarenal extract is an ideal hæmostatic in cases of hæmorrhage from the walls of the alimentary canal or bladder.

(16) Transfusion and Air in Veins.

JULIAN Y GENELLA (*New York Med. Journ.*, May 27th, 1899) notes that the principal fear in transfusion is the introduction of air. He claims a method of triple ligature during the transfusion of saline solution, which, he maintains, must render such an accident impossible. The vein is first laid bare. Then the distal ligature is applied, and tied firmly at once. Half an inch higher a middle ligature is passed round the vein and left untied. Three-quarters of an inch above the middle ligature the surgeon next applies the proximal ligature, which is tied by a slip knot. A free incision is now made between the distal and middle ligature. The needle of the transfusing apparatus is introduced and passed, so that its point lies in the vein under the middle ligature. The fluid cannot pass upwards, as the proximal ligature is tied, so it flows out around the sides of the incision, washing out any air that could have entered the vein. Lastly, whilst the fluid is still running, the middle ligature is tied so as to grasp the needle, whilst the slip-knot of the distal ligature is loosened. The saline solution now enters the circulation freely.

(17) The Curability of Phthisis.

V. SCHRÖTTER (*Wien. klin. Woch.*, No. 23, 1899) reports two cases of advanced phthisis treated by the so-called hygienic-dietetic method, with the result that both made a complete recovery, that might be justly called satisfactory in every respect, since no recurrence of the symptoms ensued, though a period of fourteen years in one case and some nine years in the other has elapsed since the first signs became manifest. The author says he cannot strongly enough emphasise the fact, which was already pronounced by Skoda, that tuberculosis is curable, and this in all its stages; however, it is too frequently ignored, hence the great rate of mortality amongst tuberculous patients. V. Schrötter's experience with the hygienic-dietetic treatment employed in tuberculous patients without distinction of the stage

of the disease or any other points covers now a period of over fifteen years, hence he justly claims to speak with authority upon the subject in question. As regards the criteria which justify one in considering a given case as cured, the author mentions the following: (1) The general condition of the patient being greatly improved, and his bodily weight markedly increased. (2) The patient's capacity for performing his duties in connection with his occupation being completely restored. (3) The entire absence of morbid signs on the part of the lungs, larynx, etc. (4) The permanent absence of tubercle bacilli in the sputa. (5) On examination of the lungs, larynx, etc., scar tissue as the result of the healing process is detected. (6) Granted that the above signs are found to be constantly present on frequent examinations at longer intervals; and, lastly, (7) the primary and guiding point in the treatment of such cases is the early recognition of the disease and the early adoption of the suitable measures.

(18) Treatment of Chronic Eczema in Infants.

Neuberger-Nürnberg (*Arch. f. Derm. u. Syph.*, vol. xlvii, part 2, 1899) has treated 30 children, varying from 2 to 5 years of age, with small doses of arsenic. The treatment consisted in giving a child, 2 years of age and over, Fowler's solution ♏j, aqua distill. ♏j; this amount was given once a day after a meal, and continued for one or two weeks. The dose was increased in the third and fourth week to 2 or 3 drops. The amount given never exceeded 7 drops a day. In infants and children under 2 years of age, Fowler's solution 1.5, aqua distill. 3.5, was given, and the dose in these cases never exceeded 5 drops a day. The infants took the arsenic well. The author was satisfied with the results, but often there is no sign of improvement till fourteen days have elapsed.

PATHOLOGY.

(19) Cysticercus of the Heart.

Giordano (*Gazz. degli Osped.*, December 11th, 1898) records two cases of cysticercus of the heart, neither of which gave rise to any symptoms during life. The first was a man aged 22 who committed suicide. At the necropsy a cysticercus 2 cm. diameter was found in the anterior wall of the apex. On section a yellowish-white fluid exuded and a small cysticercus vesicle. No other cysticercus was observed in the body. The second case was that of a man aged 70 who died from diabetes. At the necropsy several cysts were found in the encephalon, in other viscera, and especially in the muscles. There were several cysts in the pia mater, a rather large one in the left internal capsule, in the optic thalamus, in the lenticular and caudate nuclei, and in the pons, three cysts in the interlobar septum of the left lung, and a small cyst on the anterior wall of the left ventricle. There were also cysts in the kidneys.

(20) Pathological Changes in the Nervous System in Artificial Pyrexia.

Ewing, of Columbia University, records the results of experiments on rabbits to determine the pathological changes associated with artificial elevation of temperature, to which the animals were subjected in a thermostat (*Archiv. f. Neurology and Psycho-Pathol.*, No. 3, 1898), to test the conclusions previously arrived at by Goldscheider and Flatau on changes in the spinal cord of artificially-heated rabbits, and to compare the lesions with those found in cases of sunstroke. Rabbits whose normal rectal temperature was first ascertained to be about 31·5° C. were placed in thermostats where they were subject to the influence of dry air in which the temperature ranged between 45° and 48°. The animal soon began to suffer from rapid breathing (polypnœa), and became rapidly prostrated, being generally unable to stand after about an hour or an hour and a-half. The reflexes were markedly hyperæsthetic, and the rectal temperature rose rapidly to from 42° to 45°. Some of the animals died of heat rigor with high rectal temperatures (for example, 44° and 45°); others were removed from the apparatus before this degree of pyrexia was reached, and allowed to breathe in an ordinary atmosphere till partially recovered. These were then killed and their brains and cords removed. The same was done with the rabbits who died of heat rigor, and the nervous tissues examined with Nissl's and other methods. (*a*) The lungs and the cerebro-spinal meninges were generally much congested, the other viscera were notably pale; (*b*) the blood was entirely fluid and dark, failing to clot after shedding; (*c*) in the medulla oblongata all the chromatic bodies of the nerve cells had disappeared, although some cells showed a faintly visible network or a few dark granules in the cytoplasm; large clear vacuoles were seen in some cells; the cell bodies looked waxy, staining light blue, their outlines were usually regular; the nucleoli was almost without exception diffusely stained dark blue. The nucleoli seemed surrounded by a few (2 to 5) dark granules, and the nuclear membrane was irregularly invisible; (*d*) in the spinal cord the chromatic bodies of the stichocromes had almost entirely disappeared, the cell bodies looked waxy and swollen, and stained of a diffuse light blue, their periphery being very pale; in many cells traces of the chromatic bodies could be detected either as fine granules scattered all over the cell, or arranged into a network, or the granules were decolorised and invisible; the dendrites showed an irregular network composed of granules, or occasionally a ragged spindle. The nuclei were very darkly stained, their position was usually central, and they resembled the nuclei of the bulbar cells; (*e*) in some rabbits the liver and kidneys were also microscopically studied, and it was found that the amphophilic network present in the cells of the liver and kidney of normal animals was partly or completely destroyed in a degree quite comparable to the changes in the nerve cells. A further set of experiments were now made to determine how far the nervous function of these animals could be restored by prompt resuscitation after exposure to high temperatures, and to ascertain the condition of the ganglion cells in the resuscitated animals. After exposure to hot air, the temperature of the oven being 48°, and the artificial (pyrexial) temperature of the rabbit being 43°, the animal was placed in a draught of ordinary atmosphere for fifteen minutes, when its polypnœa gradually disappeared, and its strength was noticed to return partially. It was replaced in the thermostat and reheated till the rectal temperature rose to 45°, when it was removed and bathed in water for ten minutes as death appeared imminent. The reflexes were after this found to be greatly exaggerated, "the slightest touch starting a violent general tremor with occasional spasms." After about two hours and a half from its removal from the oven, the rectal temperature now being 39°, it was killed. The examination of the central nervous system revealed the same changes as those noted in the previous experiments. In three other experiments the animals were allowed to live three or four hours after the last exposure to heat, but no distinct improvement of symptoms and no restitution of cell structure in the nervous system were noted. The cellular lesions were remarkably persistent, and corresponding to them there was the loss of functional capacity as indicated by the muscular weakness and by the persistent hyperæsthesia of the reflexes.

(21) Meat Poisoning caused by Bacillus Proteus Vulgaris.

S. Glücksmann (*Centralbl. f. Bakt.*, xxv, No. 20) reports that two persons who had eaten of some pickled and smoked pork were seized with symptoms of gastro-enteritis; one died. The animal had been diseased. Stomach, part of intestines, and some blood of the patient were submitted to examination, as were pieces of the suspected meat—the whole material being far from fresh. The bacillus coli communis was found in all, the bacillus proteus vulgaris only in the contents of the stomach and in the meat. Bouillon cultures of the latter were injected into mice, and proved very virulent, causing gastro-enteritis; injection into guinea-pigs resulted in emaciation only. The bacillus proteus vulgaris may (1) have been the direct cause of the pig's diseased condition; or (2) it may have alighted upon the meat after the animal's death. If the former, then a hitherto unrecognised disease would have to be assumed. In either case the treatment of the meat (pickling, etc.) was insufficient to render this bacillus innocuous. As the bacteria of putrefaction appear to find in diseased meat a specially favourable nidus, the careful examination of all meat should be insisted upon.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(22) Syphilitic Encephalopathy following Recent Infection.

THE cerebral implications of syphilis are usually believed to occur late and in the tertiary stage, though a few earlier cases are known. Mingazzini (*Monatsch. für Psychiatrie und Neurologie*, February, 1899) discusses this subject and gives records of cases. Isolated cases are recorded in Lancereaux; Heubner refers to 1 case with definite cerebral syphilis one month after infection; Fournier and Hutchinson mention cases between the first and second year. The shortest period known to Gowers is a case of cerebral syphilis six months after infection. Baudoin collected in Fournier's clinic 26 cases in which the encephalopathy declared itself three to eighteen months after the appearance of the primary sore. Rumpf mentions 40 cases, in 9 of which symptoms appeared in the first year; and Neumann gives several cases occurring in the first year, showing cranial nerve paralyses, ophthalmoplegia, aphasia, epilepsy, and optic neuritis. Pick mentions a man, aged 58, with secondary rash, headache, disturbance of sensibility of right half of face and of speech, and hypakousia developed six months after infection. Then followed right-side paralysis of the face, tongue, and extremities, dulness of trigeminal area, visual disturbances. Later there was increase of paralyses, coma, and death. Necropsy showed thrombotic softening (recent) in posterior part of right internal capsule, endarteritis obliterans in the area of the right Sylvian fossa, and gummatous meningitis of the ventral surface of the pons. Miliary neoplasms (gummata) were seen in the inner surface of the dura. Mingazzini's first case was a man, aged 50, a naval officer; no heredity, no alcoholism. History: Used to suffer from melancholic depression, and had once attempted suicide; had two separate attacks of delirium, with headache and nocturnal pollutions; a year after had attacks of depression mixed with exaltation; later, he contracted bronchitis. In July, 1896, he contracted syphilis and had a sore, which healed in a month without bad symptoms. In nine months there began pain in the bones and a swelling of one testicle. (Treatment all along with potassium iodide.) Headache appeared and continued to the thirteenth month; then rapid progress of disease, with ptosis (right eyelid), partial paralysis of face and tongue, occipital headache, and Romberg's symptom. Finally he became apathetic, developed optic neuritis, hemiplegia, inequality and stasis of pupils, and aphasia, and died fourteen months after the primary infection. Necropsy showed gumma of left testis, endarteritis obliterans in both vertebrals, the basilar, and left Sylvian artery, and at the posterior perforated space. There was partial thrombosis of these arteries, with corresponding multiple softenings. A large red softening involved the anterior and middle parts (head and body) of the caudate nucleus, affecting also the lenticular nucleus, internal capsule (pyramidal tract), and external capsule. Also dual adhesions of the right oculomotor nerve. It appears that cerebral and vascular disease may thus in predisposed subjects ensue rapidly, with grave sequelæ within the first year after infection.

[(23) The Pyrosis Cough.

PECHKRANZ (*Wien. med. Woch.*, April 8th, 1899) draws attention to the connection between cough and pyrosis. This form of cough has nothing to do with the "stomach cough," which is supposed to be produced reflexly by irritation of the gastric mucous membrane. For the production of the pyrosis cough it is necessary for the fluid to ascend at least into the pharynx if not actually into the mouth, and not to stop short in the œsophagus behind the sternum, as it frequently does in cases of heartburn. As the larynx is passed by the burning, generally acid, fluid, its most irritable spot, the interarytenoid space, is stimulated. The fit of coughing thus set up is generally extremely violent in character, though the individual coughs may not follow one another very rapidly. Pechkranz has observed a sufficient number of cases, including his own, to convince him that pyrosis cough is a common phnomenon in all gastric affections accompanied by hyperacidity, whether from hyperchlorhydria as in gastro-succorrhœa or gastric ulcer, or from fermentation as in carcinoma and gastric catarrh. He has not been able to find any reference to it in the textbooks.

(24) Facial Hemihypertrophy.

SABRAZES AND CABANNES (*Nouv. Iconogr. de la Salpêtrière*, No. 5, 1898), from a study of several cases and from studies of their pathogenesis, show that facial hemihypertrophy is most often congenital, rarely acquired. Though congenital it is not hereditary, nor is it accompanied by intellectual troubles, nor are there anomalies in the volumes of the brain or of the cranial nerves. Both the soft parts and the bones of the affected side equally share in the increase of volume. Explanations propounded—that is, to explain the hypertrophy so resulting from abnormalities of circulation (venous and lymphatic)—are not satisfactory. For the authors, this congenital hypertrophy is simply an anomaly by excess, which can result from fœtal and special anatomical conditions difficult to trace. The pathogeny of acquired facial hemihypertrophy is quite different. The study of 5 cases recorded in literature shows that it supervenes after traumatism, after a trigeminal neuralgia, an abscess, etc., and it occurs during youth —from 10 to 12 years of age. The tongue is always intact and does not share in the hypertrophy.

(25) Precocious Dentition.

JOUKOVSKY (*Rev. Mens. d. Mal. de l'Enf.*, vol. xvii, p. 107, March, 1899) records the case of a newborn female infant who showed at birth two well-developed lower central incisor teeth. The mother was healthy, and gave no family history of congenital teeth. This was her second child, and it is noteworthy that her first infant, who showed no signs of precocious dentition, was by another husband. In weight, the infant was above the normal, and the length was 50 cm. The teeth were normal in appearance save that one was inserted somewhat transversely in the jaw. There was no local alteration in the surrounding gum. On the fourth day of life the teeth began to trouble the mother in lactation. The examination of the infant's mouth showed ulcerations under the tongue, and swelling and redness of the gum. An abscess began to form, consequently the teeth were extracted. It required a distinct effort to remove them from their sockets; they were typical milk incisors of a white (not a yellow) colour.

SURGERY.

(26) The Surgery of Gall Stones.

KEHR, EILERS, AND LUCKE (*Langenbeck's Archiv*, vol. lviii, pt. 3) have prepared a very solid monograph of nearly 250 pages, founded on 197 operations by Kehr, being a continuation of that surgeon's article in Volkmann's *Vorträge*, where a long series was already recorded. Combining his results and selecting enough recent cases to make a useful series, he can report 202 operations within the last three years with a mortality of 32 (16 per cent.). In the 206 which he performed within six years previously 17 died (8 per cent.), but Kehr's recent operations were very frequently undertaken on grave cases, which he would not in earlier years have dared to touch; 1 out of 6 cases recently under treatment died. The 202 recent operations are divided thus: (1) Conservative operations on the gall bladder 68 with 3 deaths (1 where a nephrotomy was performed as well; 1 cerebral hæmorrhage; 1 collapse after a very long operation). (2) Cholecystectomy, 59 with 2 deaths (1 embolism of pulmonary artery, fifth week; 1 hæmorrhage from stump, sixth day). (3) Choledochotomy and drainage of hepatic duct, 32 with 4 deaths (1 pneumonia, third day; 1 a few days after operation, liver cirrhotic; 1 on the second day from embolism of the pulmonary artery and 1, where gastro-enterostomy as well as drainage of the hepatic duct was performed, died on the eighth day of hæmorrhage complicated with cholæmia). (4) Complex operations involving the stomach, intestine, and pancreas, 43 with 23 deaths. The patients' condition in all these cases was of necessity very unfavourable. Amongst the deaths were 8 cases of

cancer of the gall bladder and ducts, duodenum, liver or pancreas, 1 of perforating gastric ulcer excised at the operation, and 2 of suppurating kidneys. The whole subject is very completely analysed.

(27) Lingual Anthrax.

Rammstedt, of v. Bramann's clinic (*Münch. med. Woch.*, May 9th, 1899) first draws attention to the great rarity of anthrax lesions in the mouth, and he relates a case in a man, aged 28. The mouth could be opened only to a slight extent, and the tongue protruded surrounded by the swollen and bluish lips. On further inspection the back of the tongue, tonsils, and palate were also swollen. On the under surface of the tongue and about 1 cm. from its tip there was a deep, almost round, blackish-brown sloughing patch of about the size of a shilling. The glands in the neck and also the face were swollen. Pulse 100, temperature 39.2° C. There was cough and blood-stained expectoration. The rapid necrosis and œdematous infiltration of the face and neck at once suggested anthrax. The presence of the anthrax bacillus in the local lesion was fully proved, but none were found in the blood obtained by puncture of the tongue or in the expectoration. Ice was applied externally, morphine given internally, and mouth washes employed. Everything was held in readiness for tracheotomy owing to the great swelling of the parts. The infiltration soon began to subside, the slough separated, and the patient made a good recovery. The patient's condition appeared very serious at first not only on account of the swelling, but especially owing to the pulmonary symptoms. There were, however, no anthrax bacilli in the sputum, and the typical dyspnœa of pulmonary anthrax was absent. There was also the danger of intestinal anthrax frequently seen in anthrax of the mouth. The author then refers to the treatment of anthrax as adopted in Bramann's clinic. Excision of the local lesion is not practised. Since Müller reported 12 cases from this clinic in 1895 there have been 7 further, mostly severe cases. All the 19 cases recovered. Rammstedt also refers to the difficulty of excising the local lesion in his case of lingual anthrax. He maintains that experience has taught that in external anthrax the local gangrene tends to limit itself in a remarkable manner without direct surgical intervention.

(28) Formalin in Surgical Tuberculosis.

Hahn (*Centralbl. f. Chir.*, No. 24, 1899) has in the treatment of different forms of surgical tuberculosis used with much success a mixture of from 1 to 5 parts of formalin in 100 parts of glycerine. This he injects as a substitute for iodoform emulsion into abscesses connected with diseased joints and carious bone, and into the cavity of a tuberculous empyema. This local application is strongly recommended by the author in cases of articular tuberculosis in which arthrectomy and resection are not indicated, and it is held to be far superior with regard to its results than iodoform emulsion and other local agents hitherto used in tuberculous affections of bones and joints.

(29) Appendicitis Erroneously Diagnosed.

Morris, of New York (*N. Y. Med. Journ.*, April 8th, 1899), relates 7 instructive cases of erroneous diagnosis, where he operated under the impression that the symptoms signified acute or subacute appendicitis: (1) A woman, aged 30; old intestinal adhesions from typhoid fever a year previously; appendix normal. This case—and all the other 6—recovered. (2) A woman, aged 25; tuberculous peritonitis; appendix normal. (3) A man, aged 36; appendix found not inflamed but cancerous; it was resected with the cæcum; within five years Morris successfully resected four segments of intestine for recurrent cancer, and the patient is still living. (4) A woman, aged 34; normal appendix dragged in by inflamed Fallopian tube; this, as in the other cases, caused all the symptoms of appendicular colic. (5) Hysteria simulating appendicitis in a girl aged 17; symptoms disappeared after the exploratory operation, soon to be replaced by other evidences of hysteria. (6) A remarkable instance of lobar pneumonia with symptoms of peritonitis; the patient, a woman aged 45, gave a history of former attacks of pain in the right iliac fossa; as in case 4, the normal appendix was found adherent to the Fallopian tube by old inflammation. A few days later Morris was called in to a case of lobar pneumonia in a young man where there were abdominal symptoms, but here diagnosis was made correctly. (7) A boy, aged 10, convalescent from measles; the peritoneum was full of viscid lymph, but the appendix was healthy.

MIDWIFERY AND DISEASES OF WOMEN.

(30) Treatment of Endometritis by Drainage and Irrigation.

In the Section of Obstetrics and Diseases of Women of the American Medical Association (*Phil. Med. Journ.*, June 10th, 1899) Augustin H. Goelet presented a paper on this subject in which he declared that it was an error to regard every uterine discharge as evidence of endometritis and to treat such conditions by caustic and astringent applications which coagulate the discharge and defeat drainage by blocking the orifices of the glands. This and destructive curettage he designated unscientific. Hyperæmia with hypersecretion, often mistaken for endometritis, required no local application to the endometrium—in fact, was often converted into an endometritis by such treatment. The danger of inserting instruments into the uterus either for the purpose of diagnosis, treatment, or for operations, when there was a so-called catarrhal endocervicitis, was pointed out. He declared that the staphylococci, streptococci and gonococci were often found in the cervical secretion when it was most inoffensive in appearance, and that their presence or absence could only be determined by microscopic examination of the discharge. This method of examination should always be employed in these cases before the cavity above the internal os was invaded, either for the purpose of diagnosis, treatment, or operation within the uterus. In endometritis the disease was not confined to the surface, but had invaded the glandular structure beneath, and he believed the rational treatment was to free the orifices of the glands and drain them until the infective process was exhausted, at the same time employing repeated irrigation with some non-astringent non-irritating solution to remove the expelled secretion from the surface and prevent migration of infective germs. This might be accomplished by a carefully executed curettage done in a manner not to destroy the mucosa, but merely for the purpose of removing projecting granulations upon the surface or superfluous tissue that might be blocking the orifices of the glands and preventing the drainage. The dull curette with rigid shaft was sufficient, and the sharp curette should not be used upon the endometrium of the cavity in endometritis. It was both unnecessary and unwise to attempt to remove the entire mucous membrane, and caustic applications should not be used after curettage in these cases. They caused necrosis and atrophy of the mucous membrane, or agglutination of the sides of the cavity might result. He urged that curettage should only be regarded a preliminary step in the treatment and that more attention be given to the after-treatment, this to consist of persistent drainage and irrigation until all evidence of disease, as revealed by microscopic examination of the secretion and inspection of the cavity by means of the uterine endoscope, had been effaced. He also urged endoscopic examination of the cavity both before and after curettage, before to decide the actual necessity for it, and after to determine the completeness or incompleteness of the work. He exhibited a uterine endoscope with a small electric lamp placed at the extremity of the tube for direct illumination of the interior of the uterus after the plan of the Valentine urethroscope. A megaloscope was attached for bringing out more prominently the details of the surface.

(31) Pyelo-nephritis of Pregnancy.

Vinay and Cade (*L'Obstét.*, May 15th, 1899) have collected 9 clinical reports of this condition, 2 being unpublished. It is remarkable that not one patient died, though in several the temperature was over 104° for a time. Nor does the fœtus usually die. The pyelo-nephritis of pregnancy, which usually comes on about the fifth month, is remarkable for its very sudden onset. Violent lumbar pains are followed by free discharge of pus in the urine. The affection has undoubtedly been mistaken for cystitis, though diagnosis should not be difficult.

It is invariably the right kidney that is the seat of the disease, the urinary tract being weaker on the right side in this as in other affections. It is usually the right kidney that is affected in renal tuberculosis, and it is the right that is the more frequently movable. The causes of the pyelitis of pregnancy are compression of the ureter by the gravid uterus and infection, often traceable to the intestine. Rest and milk diet are specially indicated as treatment for this disorder. If labour comes on during the febrile stage, not only are antiseptic precautions specially required, but if the process of parturition promises to be long the forceps must be applied, for the patient is never in a condition to bear a prolonged first or second stage. After labour the disease tends to disappear steadily.

(32) Glycosuria Gravidarum et Puerperalis.

LEON LEDUC (*Thèse de Paris*, December, 1898) gives the record of an extensive series of investigations made on 29 women at various stages of pregnancy and of the puerperium to determine the question of physiological glycosuria. The methods used were (1) the saccharopolarimeter; (2) reduction method with copper salts (Fehling's and other solution); (3) fermentation test; and (4) test with phenyl-hydrazine osazone method of Fischer. The urine was treated with chloroform or with naphthol and placed in a cold chamber to prevent decomposition. Several hundreds of observations with quantitative estimations were made. The following serves as a typical type: A primipara, aged 24, 9 months pregnant (twins). Urine of February 5th, 1898, reduces Fehling's solution distinctly. Phenyl-hydrazine gives in ½ hour on the warm bath both glucosazone and lactosazone. On cooling, the former is precipitated and filtered off, and the lactosazone extracted from the filtrate. February 8th, with the same test and methods in 1½ hour both glucosazone and lactosazone are found. February 11th, labour pains at 8 A.M., but no labour. Urine drawn off by catheter 3 hours later, and lactose alone found in urine with phenyl-hydrazine test. February 15th, lactose in masses of needle-shaped crystals ("sea-urchin" masses), and glucose also in crystals, as well as crystals of intermediate type. February 16th, clear lactose in urine. February 18th, clear lactose. February 27th, labour at 10 A.M. (twins), and the next day the urine distinctly reduces Fehling's solution. Observations given of other cases also show that lactose is present in the urine and more abundantly than glucose. Leduc accepts (with Brücke, Pavy, and others, *contra* Maly, Seegen, von Jaksch, etc.) a physiological glycosuria, after taking coffee and certain fruits, which is less marked at night than in the day. Part of the glycosuria in women is from hepatic instability. In pregnancy the urine towards full term has more water, less solids (less phosphates, uric acid, urea, and creatinine than in the normal state). Glucose is absorbed by the mammary glandular tissue from the blood, and lactose is probably prepared synthetically in the gland cells. It is lactose which occurs to any notable extent in the urine of late pregnancy and of the puerperium, especially in women with full breasts and abundant milk. The lactose is reabsorbed from the breasts into the general circulation, and thus like a subcutaneous injection it finds its way to the kidneys and is eliminated in the urine. The general conclusions are as follows: (1) During pregnancy the reducing power of urine gets less in proportion as the solids of urine diminish towards full term; (2) lactosuria of pregnancy arises from women whose breasts have a large quantity of colostrum during pregnancy. Lactosuria coincides with or follows glycosuria; both are, however, slight, and both physiological at this stage; (3) in 60 per cent. of cases no sugar could be detected in the urine of pregnant women; (4) an intercurrent albuminuria does not decrease or increase the sugars; (5) after confinement, however, the reducing power of urine rapidly augments from lactosuria; (6) this lactosuria is associated with a fulness of milk in the breasts, and is at its maximum when the breasts are not relieved; (7) in cases of abortion or premature labour, or of death of the fœtus *in utero*, a slight lactosuria appears, but more slowly than after normal labour; it disappears with the flow of milk from the breasts; (8) lactosuria results from the absorption of lactose by the veins and lymphatics of the breast into the general circulation, and this is gradually eliminated by the kidneys. If the woman is deprived of her child, the lactose augments, and it may even be (as experimentally shown in the case of two bitches) then accompanied by glucose.

(33) Delivery in Prolapse of Uterus.

BERNHARD (*Centralbl. f. Gynäk.*, No. 25, 1899) reports the case of a woman, aged 27, under his observation in her third pregnancy and labour. The first labour (1894) was normal. In the second pregnancy (1895) the cervix began to protrude from the vagina at the third month. A dead, syphilitic fœtus was delivered at the fifth month, after which the uterus reduced itself spontaneously. In January, 1898, the patient consulted Bernhard; she was two months pregnant, and the prolapse had returned. The cervix, as big as a hen's egg, protruded at the vulva, and grew as gestation advanced. In July it hung between the thighs, forming a purple mass, with a deeply ulcerated external os. There was great local pain. The patient was kept in bed. The ulcer was washed with tincture of iodine, and dressed with carbolised lanolin plaster till it was healed. Labour began on August 1st, the prolapse receding for about an inch and a half at once. After very severe pains had lasted for ten hours the patient became much exhausted, and there was complete atony of the uterus. A few incisions were made into the cervix, the membranes were ruptured, and the forceps applied whilst the uterus was held steady above. A living child was delivered. Hæmorrhage then set in, the placenta was expressed, the entire uterus prolapsing at once and falling between the thighs. It was replaced and supported by a big iodoform gauze tampon. The prolapse has not recurred; involution proceeded rapidly after childbed. The patient now wears a pessary, and feels well.

THERAPEUTICS.

(34) Antipyrin Intoxication.

IN Leube's clinic (*Deut. med. Woch.*, No. 3, 1899) a variety of cases have occurred exhibiting the dangers in the administration of antipyrin. There was extreme collapse in 2 cases after a dose of 5.0 grams, in one case the collapse followed a 1-gram dose. Two patients suffering from arterio-sclerosis and angina died after 1.0 gram of antipyrin. A dose of 0.4 gram given three times a day in a case of whooping cough, and continued for three weeks, caused a sudden attack of convulsions and stupor, which was immediately checked when the drug was discontinued. Attacks of vomiting, and the appearance of rashes following antipyrin administration are well known. One curious case is reported in which rigors followed a dose of 1.0 gram given to a child, the temperature rose to 40° C. Graul describes the action of antipyrin on himself. He took a mixture of 1.0 gram of antipyrin, and 0.09 gram of caffeine and citric acid. Soon after swallowing the drug he felt a slight anginal pain. The hard palate became pale, and on the middle of his tongue a small, smooth, livid spot was seen. These symptoms disappeared after three days' treatment with silver nitrate. These symptoms were thought to have no relation to the migraine from which he was suffering at the time. A year later he took an ordinary dose of antipyrin for migraine; this was succeeded by general indisposition, stomatitis with vesicular formation, intense salivation, and a patchy, non-irritating skin eruption. In the summer of 1898 he had a similar attack after a small dose of antipyrin, but in addition to his usual symptoms his temperature rose, and the heart's action was increased in force.

(35) Treatment of Chronic Nephritis.

CARACCIOLO (*Gl'Incurabili*, f. 9 and 10, Ann. xiv) accepts Maragliano's view that the reintegration of diseased parts of the kidney is possible, if not anatomically at least functionally. This is especially true of partial chronic nephritis. Whilst not completely accepting the view of certain authors that you may have nephritis without albuminuria the author believes there is no certain correspondence between the amount of albumen and the renal disease. Mineral waters containing small quantities of salts are useful unless there is considerable polyuria, in which case the amount of fluid should be somewhat restricted. A moderate mixed diet is better than an absolute milk diet. As each individual

has his own peculiar needs in the amount of food necessary, it is important to determine by test meals what this is. The diet which is so consumed as to take no albumen from the tissues is that which will give the maximum repose to the kidneys. This is to be determined in each case by accurate comparison between the food ingested and the ejecta. Cold baths are prohibited, but the skin may be methodically hardened by moist friction (25.15° R.) on leaving the bed. As far as drugs are concerned, in addition to the usual remedies, the author speaks favourably of lactate of strontium (6 grains per diem) as tending to diminish the albuminuria.

(36) Isolation of Faucial Angina.

Rochemont (*Münch. med. Woch.*, March 7th, 1899) discusses the importance of isolation in this disease. He first refers to the difficulties in the diagnosis of diphtheria, even when supplemented by bacteriological examination. Even if diphtheria is excluded, the prognosis of faucial angina cannot always be looked upon as favourable, as it sometimes gives rise to severe illness. In a certain number of such cases albuminuria is noted, or even a severe nephritis. An exanthem, such as erythema, exudativum or nodosum, purpura or erysipelas, have been observed. Orchitis, oöphoritis, pleuro-pneumonia, paralysis, acute osteo-myelitis have also been recorded as complications. Pyæmia and septic manifestations have been described. Articular rheumatism has, however, most often been observed. Rochemont then refers to researches in which bacteria other than the diphtheria bacillus have been found as a cause of these angina. In 60 cases bacteriologically examined, the author found the staphylococcus in 32, the staphylococcus and streptococcus in 16, the staphylococcus and pneumococcus in 1, diplococci in 8, and diplococci and streptococci in 3. Rochemont refers to epidemics of faucial angina, and records an instance in the Altona Hospital in which the cases occurred in five wards leading from a single corridor. The epidemic was traced to one patient in hospital with articular rheumatism. Later he had a relapse and an angina. The patient in the next bed was attacked, and then 18 other patients, and eventually a further 19. The symptoms consisted of pains in the head and neck. The tonsils were simply reddened, swollen, or covered with exudation resembling diphtheria. Three times there supervened articular rheumatism, and once each of the following—nephritis, pericarditis, endocarditis, threatening heart failure. All cases of faucial angina admitted into the hospital, are placed in the infectious block.

(37) Naphthalan.

Merlin (*Wien med. Woch.*, November 5th, 1898) has used naphthalan in cases of venereal sores, phagedænic sores, ulcers of the leg and foot, gonorrheal epidymitis, acute and chronic eczemas, burns of the second and third degrees, impetigo contagiosa, etc. Phagedænic sores were much improved, the discharge lessening and healthy granulations springing up. Other venereal sores were not much improved. All cases of acute and chronic eczema were much benefited, and the sleeplessness caused by the irritation soon disappeared. The drug itself did not cause irritation. Cases of epidymitis were treated by strips of naphthalan plaster, from which the drug is said to be rapidly absorbed causing disappearance of inflammation in from eight to ten days. Burns of the first and second degree improved in the same way, and a rapid effect was caused on sycosis and impetigo contagiosa. The author concludes by recommending naphthalan as a valuable drug in dermatological practice. In syphilitic and venereal sores it is of less value.

PATHOLOGY.

(38) Spinal Cord Lesions in Tetanus.

Matthes (*Zeit. f. Nervenheilk.*, vol. xiii, p. 5 and 6) recalls the fact that last year Goldscheider and Flatau brought forward experimental evidence to prove that definite changes took place in the anterior cornua in tetanus. They showed that swelling of Nissl's corpuscles occurred with enlargement, and sometimes disappearance of the nucleolus, these observations were confirmed by two necropsies on the human subject. Westphal also found similar lesions. Matthes gives notes on two cases of tetanus in which he examined the spinal cord. In one of them the appearances differed from Golscheider's cases. Both were treated with Behring's serum. The cord of the first case was examined six hours after death, and that of the second four hours after death. In Case I there were extensive hæmorrhages in the lower dorsal region, chiefly implicating the right half of the cord. The grey substance was almost entirely destroyed. The posterior horns were less affected than the anterior. Small hæmorrhages were scattered in various parts of the cord. All the small blood vessels were enormously enlarged. In Case II there were no hæmorrhages. The brain was unaffected in both cases. In Case I the cord was hardened in 95 per cent. alcohol, and was cut either in paraffin or colloidin. In Case II the cord was treated first with formol, and afterwards kept for two days in alcohol. Sections were cut with the cord embedded in gum arabic or paraffin. The preparations were coloured with Nissl's methylene blue or else with thionin. Several of the anterior polar cells appeared normal, others showed swelling of the cell granules as described by Goldscheider. Some of Nissl's corpuscles showed a process of fine granular disintegration, affecting only the central part. The cells in general showed a diminution in the number of processes. The condition of the nucleoli varied considerably. Some were perfectly normal, whilst others appeared to have lost their rounded form and were darkly stained; this was specially noticeable in the cells showing the fine granular disintegration. Goldscheider has observed a similar distortion in the form of the nucleolus. The extensive hæmorrhages in Case I are believed by the author to be due to hyperæmia and not to the direct effect of the tetanus poison. It appears to be doubtful at present whether any specific changes due to the tetanus poison exist. Berger has described very similar lesion in cases of paralytic dementia. The almost negative result in the second case would, according to Goldscheider, point to the beneficial effect of the serum treatment. Matthes reserves his judgment for the present, and only wishes to point out the slight changes which he found in his cases.

(39) Hypernephromata.

F. Harbitz (*Norsk Mag. f. Laegevidensk.*, May, 1899) refers to the theory propounded by Grawitz in 1883 that certain tumours, up till then described as adenomata and lipomata of the kidneys, were really remnants of the suprarenal capsules which had wandered into the kidney. Grawitz thought that some of the malignant tumours of the kidney might originate in the same way, and it is with them that Harbitz specially deals, accepting for them the name proposed by Birch-Hirschfeld of "hypernephromata." He reports 22 cases of tumour growth of the kidneys and suprarenal capsules, of which 4 were instances of small benign tumours of the kidney, with the structure typical of the adrenal, discovered accidentally *post mortem*. They were situated either exclusively in the renal cortex or in the capsule as well; 8 were examples of malignant tumours of the kidney, arising probably in the suprarenal capsule; these were all taken from patients of more than 40 years of age, and generally from males—6 men to 2 women. These malignant hypernephromata were situated at the surface of the kidney or in small concavities there, they were clearly limited, had a yellowish colour, were rich in fat and blood vessels, had a marked tendency to retrogressive metamorphosis, had much pigment, and tended to invade the venous trunks. Microscopically they showed a homogenous structure, a stroma composed of vascularised connective tissue in columns, and a parenchyma formed of irregular masses of cells, often elongated, the cells being polygonal and translucent. These cells differ entirely from those of the renal epithelium.

(40) Death in Status Epilepticus.

Weber (*Wien. med. Woch.*, No. 4, 1899) finds that in most cases of death in the status epilepticus there are vascular lesions and extravasation of blood into the cortex and the medulla, with destruction of adjacent nerve elements. When these lesions occur in the medulla they are often the direct cause of death. In other cases they cause damage to the circulatory and respiratory systems, paresis of the limbs, and psychic disturbance, according to the positions in which they occur in the brain.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(41) Epilepsy and Asymmetry of Humeri. PIERCE CLARK of New York has recently written an instructive clinical article on Phocomelus of the Humerus in Epilepsy as a Stigma of Degeneration (*New York Medical Journal*, May 13th, 1899). He notes Bourneville's frequent allusions to asymmetry of the skull, face, etc., but that authority does not allude, it would appear, to anomalies of the long bones as accompanying epilepsy. Féré admits that shortening of the limbs is a stigma of epilepsy. Raymond and Janet, however, reported two years ago a case of shortening of the humerus as a degeneration stigma. As in Pierce Clark's two cases the patient was a girl about 19 years of age. There was almost complete asymmetry of the body. On the left side the distance from the acromion to the epicondyle was 28 cm., on the right 29. There was corresponding shortening of the lower extremities. Clark's first case occurred in a girl of poor physique; the side opposite the shortened humerus had been hemiplegic from infancy. She was subject to severe epileptic seizures, mostly confined to the left side. The right arm was in all respects normal except as to length; it measured 9 inches, the left being $3\frac{1}{2}$ inches longer. Clark's second patient was of good physique and well nourished. When about 2 years old swelling of the right knee occurred, and the tendo Achillis was divided a little later; after about a year the right leg was amputated above the knee. Tuberculosis evidently existed. The right arm became an object of attention at the time of the amputation, and the operator said that the limb had probably been paralysed once. The physician to the patient's family, however, said that this could not be the case. For nearly two years she had been subject to epileptic seizures, at first of the *grand mal* type, at long intervals, and later of the *petit mal* type and frequent. The right humerus measured $7\frac{1}{2}$ inches, the left exactly 1 foot. Pierce Clark notes that several anthropologists and physiologists have detected asymmetry of the humerus in normal subjects. Arnold found the right arm longest in 87 per cent. of persons whom he had measured. Rollet measuring 50 men and 50 women found but 2 cases of symmetry of the humeri, and 3 where the left humerus was the longer. In 75 per cent. of over 5,000 soldiers examined by Von Hasse the right humerus was the longer; the left was longer in 9 per cent. Thus there was symmetry in 16. Except in 1 subject the left humerus was the longer in left-handed people. Thus the relation of asymmetry of the humeri to epilepsy requires further investigation, but the three cases noted by Pierce Clark were clearly and intimately associated with that disease.

(42) Parkinson's Disease in the Young. E. WEILL (*Rev. Mens. d. Mal. de l'Enf.*, June, 1899) records a case of Parkinson's disease (or better of Parkinson's syndrome) in a girl, aged $10\frac{1}{2}$ years. She had varicella when 3 years old, and when $9\frac{1}{2}$ years old she got a severe fright. Fifteen days thereafter she suffered from violent cephalalgia, and had to go to bed; a fortnight later she could not speak without great effort, and three days later the right side was completely paralysed, and the next day the whole body was affected. She continued in this state for a month, when the movements began to reappear. The head is inclined slightly forward, the back is arched, the upper limbs half flexed, and there is a condition of recurring rhythmical oscillations, flexing the forearm on the arm and the fingers on the hand, absent during sleep. There are athetosic movements of the hands and feet, a generalised stiffness, an expressionless facies, and difficulty in walking. When the eyes are closed the patient has a tendency to fall backwards. Sensibility is nearly intact, but there is a continual feeling of heat. Intelligence is not impaired. When compared with typical cases of Parkinson's disease the present patient shows two or three abnormal symptoms, namely, the localisation of the athetosic movements in the extremities, the predominance of rigidity on the right side, and the existence of right-sided club-foot (equino-varus). The only difference between this case and a typical one of infantile hemiplegia consists in the appearance of Parkinsonian stiffness, instead of habitual contracture; but Weill is of opinion that this difference is not sufficient to separate the two conditions, and intermediate connecting links can be found. The cause must have been a diffused cerebral affection followed by diplegia, the lesion being possibly situated in the peduncle near the locus niger. Six cases are gathered from literature in which (as in this instance) the malady began under the age of 20.

(43) Congenital Hour-Glass Stomach. SIEVERS (*Berl. klin. Woch.*, April 10th, 1899) relates an interesting case in a woman, aged 38, who died from suppurative peritonitis due to a perforated gastric ulcer. At the necropsy the stomach was found to be divided into two almost equal parts. There was a tube-like communication between the two halves 2 cm. long and $2\frac{1}{2}$ cm. broad. The lumen of this tube was so small that only the little finger could be passed through it. In the pyloric half the stomach, and 1 cm. from the constriction, there was a perforated gastric ulcer with a diameter of 1 cm. No pathological change, either naked eye or microscopic, could be made out in the constricted part of the stomach. The diagnosis of an hour-glass stomach is very difficult. It has mostly been unexpectedly found at the necropsy. Inflation of the stomach might reveal it, but the one half might only be distended. Splashing sounds might continue after it had become impossible to withdraw any more fluid by the stomach tube. A certain diagnosis would be looked upon in many cases as an indication for surgical treatment, and more recently two such cases have been operated upon by Schmidt-Monard and Woelfler respectively. On the other hand, it is remarkable how the marked hour-glass stomach in this patient gave rise to no symptoms, as she was in good health for 26 years. In 13 out of 22 cases of congenital hour-glass stomach a gastric ulcer was found in the neighbourhood of the constriction.

(44) General Cancerous Infection Originating in the Stomach. G. REYNAUD (*Marseille Méd.*, No. 10, p. 296, May 15th, 1899) reports a case of cancer of the stomach in a man, aged 39, who had been taking alcohol and tobacco in excess. For four months he had suffered from slow and painful digestion, nausea, pyrosis, occasional vomiting, and constant constipation. His general state was very bad; he weighed 65 kilos, and had lost 4 kilos in twenty days. He gradually got worse; symptoms of pleurisy, of ascites, of anasarca, and cachexia appeared; and he died after an illness that had lasted at the most nine months. During this time there had been a complete absence of hæmorrhage, vomiting had been seldom, and anorexia had been late in appearing. Starting from the pylorus, the cancerous process, colloid in nature, had invaded not only the whole stomach, but had also spread to the great omentum, mesentery, intestinal coils, head of the pancreas, spleen, kidneys, vertebræ, liver, diaphragm, lungs, and pleural membranes. The pericardium and heart were intact; the cerebrum was normal in appearance, and the pelvic organs were free from the cancer. In this case it is necessary to regard the lymphatic route as the chief one in the dissemination of the cancerous process; perhaps the ascitic fluid had also served as a vehicle. It was noted that there was a curious anatomical condition of the two layers of the great omentum; instead of being fused they were entirely separate from each other, that is, permanence of a fœtal peculiarity.

SURGERY.

(45) The First-aid Package in Military Surgery. IN a paper on this subject read at the recent meeting of the American Medical Association at Chicago (*Phil. Med. Journ.*), N. Senn stated that two things were brought out clearly during the Russo-Turkish war—namely, the value of a first-aid antiseptic occlusive dressing in the prevention of wound infection, and the importance of immediate immobilisation of compound gunshot fractures. He suggested the following first-aid package for field use and emergency work: Two pieces of lintin, a form of compressed cotton, 4 inches wide and 16 inches long, sterilised and

folded twice lengthwise; a teaspoonful of boric salicylic powder in a small waxed aseptic envelope; between them a piece of sterile gauze 44 inches square, with two safety pins, folding to corresponding size with the lintin compress; all of these articles wrapped in tinfoil; two strigs of rubber adhesive plaster an inch wide and 8 inches long, the whole to be sewn in an impermeable canvas or linen cover. In using the package the power was to be applied to the wound, when the lintin was used as a compress, held in place by the strips of adhesive plaster, and the gauze bandage over it. If two wounds were to be dressed at the same time, as was usually the case in modern warfare, the contents of the package were equally divided and used, which could be done without materially impairing the efficiency of the dressing. The slight hæmorrhage in wounds inflicted by the small calibre bullet would soon saturate a part of the dressing, which by evaporation would soon convert the antiseptic powder and the cotton into a dry crust, the very best protection for the wound against infection. Many military surgeons had expressed themselves recently as being opposed to the employment of the first-aid package by anyone else except medical men. This position Senn thought would be found untenable during any great war, when the number of wounded would greatly exceed the working capacity of the limited number of surgeons. In summarising he emphasised the following conclusions: (1) First-aid packages are indispensable on the battlefield in modern warfare. (2) The first-aid dressing must be sufficiently compact and light to be carried in the skirt of the uniform, or on the inner surface of the cartridge or sword belt to be of no inconvenience to the soldier or in conflict with military regulations. (3) The Esmarch triangular bandage is of great value in the school of instruction, but in the first-aid package it is inferior to the gauze bandage. (4) The first-aid package must contain in a waxed aseptic envelope an antiseptic powder, such as borosalicylic powder, sterilised pins wrapped in tinfoil, and between this package and the outside impermeable cover, two strips of adhesive plaster an inch wide and eight inches long. (5) The first-aid dressing, must be applied as soon as possible after the receipt of the injury, a part of the field service which can be safely entrusted to competent hospital corps men. (6) The first-aid dressing, if employed behind the firing line, should be employed without the removal of the clothing over the injured part, and fastened to the surface of the skin with strips of rubber adhesive plaster, the bandage being applied over and not under the clothing. (7) The first-aid dressing must be dry and should remain so by dispensing with an impermeable cover over it, so as not to interfere with free evaporation of the wound secretion. (8) The first-aid dressing should not be disturbed unnecessarily, but any defects should be corrected at the first dressing-station.

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(46) Suture of Nerves.

Zitzke (*Inaugural Dissert.*, Greifswald, 1899) reports in full 20 cases of suture of nerves in Helferich's surgical practice. In some cases the suture was applied on the day of the injury, in others not till weeks later, or even in one case as long as a year from the infliction of the wound; five cases could not be traced. Out of the remaining 15, no fewer than 11 were reckoned as successful, the influence of the nerve being more or less completely restored. Complete cure in this sense was noted in 5, incomplete in 6. Thus though nerve suture is a justifiable and necessary operation, it does not always prove successful even in the best hands.

(47) Hernia Following Operation for Appendicitis.

Francis B. Harrington, of Boston, read a paper on this subject at the meeting of the American Surgical Association, recently held in Chicago (*Phil. Med. Journ.*, June). He made a personal examination of the condition of the abdominal wall in 236 cases of appendicitis, which had been operated upon at the Massachusetts General Hospital by various surgeons. They represented all varieties of the disease. The period which had elapsed since operation varied from 9 months to 9 years. No case was included which was operated upon since July 1897. Total number examined, 236; males, 190; females, 46; 27 true hernias in all—11½ per cent; 21 true hernias in males, 11 per cent.; 6 true hernias in females, 13⅓ per cent. Eighty-five wounds closed at the time of operation, 3 hernias, 3½ per cent.; 35 wounds partly closed at the time of operation, 11, hernias, 12½ per cent.; 63 wounds left entirely open at the time of operation, 13 hernias, 20 per cent. If with these cases of true hernia were included 10 cases of punctiform hernia, and 53 cases of more or less bulging in the scar which did not constitute hernia, the following percentage of weak scars was noted. In 85 closed wounds, 6 per cent.; in 88 partly closed wounds, 51 per cent., and in 63 open wounds, 62 per cent. Intermuscular spaces: An opening between muscles or tendons, or both, could be detected in the scars. In 85 closed at the time of the operation, 26 per cent.; in 88 partly closed at the time of operation, 83 per cent., and 63 open wounds, 87 per cent. General abdominal bulging: In 85 closed incisions, 7 per cent.; in 88 partly closed incisions, 45 per cent., and in 63 open incisions, 46 per cent. During the period in which these cases were operated upon, that is from 1888 to 1897, some of the muscles or tendons were cut at right angles to their fibres in the acute cases, and often in the cases which were tightly closed at the time of operation. The writer advocated the use of an enlarged McBurney incision in all acute cases, which would obviate the cutting transversely of any muscle or aponeurosis. Summarising his conclusions he said, hernia and bulging occurred frequently after operations for appendicitis, and resulted from the separation of muscles and other tissues in the scar. They were more common when drainage had been used. The muscular and tendinous tissues should not be transversely cut in any appendix operation unless it was unavoidable. As little drainage material as safety would permit should be used, and when necessary at all, the wound should be closed as far as possible with sutures, and the drainage removed early. If the wound could be closed immediately the tissues should be restored to their normal position by suturing each layer. Stout belts and trusses were of little value in preventing hernia, and might even do harm. The abdominal muscles from the earliest period possible after operation should be developed by appropriate muscular exercises. If hernia or marked bulging appeared, operation for cure was safe and satisfactory.

MIDWIFERY AND DISEASES OF WOMEN.

(48) The Angiotribe in Ovariotomy, etc.

Nicoll (*Amer. Gynec. and Obstet. Journal*, June, 1899) now uses for the division of the ovarian pedicle Tuffier's angiotribe, which crushes the tissues. He has employed it in two hysterectomies, and no hæmorrhage has followed, and has made use of it in a number of cases of removal of the appendages with absolutely perfect results. The angiotribe, he declares, saves time and causes much less pain than when the ligature is used. Chambers, in a discussion on Nicoll's experiences, stated that the angiotribe is valuable in cases where it is difficult to isolate the blood vessels, as in vaginal operations. But Chambers has come to the conclusion that when he can see the vessels he prefers ligatures, and he means to use them as before. He used the angiotribe in a case of removal of the tubes and ovaries and hysterorrhaphy. Secondary hæmorrhage followed, two hours after the operation, and but for immediate action the patient would not have been saved. The instrument, however, was in this case found to be faulty; the grooves in the blades were sharp instead of being blunt and well bevelled. Cleveland points out that a little stump of tissue must always be left projecting on the outside of the clamp; in this way another barrier against bleeding is formed. He has seen oozing follow in several cases in which this little stump has not been left.—Ratchinsky (*Revue de Gynéc. et de Chir. Abd.*, May-June, 1899) is induced, after experiment and observation, to treat the angiotribe with distrust. Hæmostasis by Tuffier's angiotribe is "quite possible," but in certain cases it is only temporary. In vaginal hysterectomy in particular, hæmorrhage is not rare after the application of the angiotribe, and then abdominal section is necessary. Doyen condemns the angiotribe. Stranch reports 5 cases of vaginal hysterectomy where he used that instrument. In 4, however, he also employed the ligature and the permanent application of pressure forceps, relying on the angiotribe alone

in the fifth case. Tuffier's own evidence is very gloomy; he analyses 27 vaginal hysterectomies where the angiotribe was relied on. In no fewer than 7 hæmorrhage occurred, necessitating in 3 cases the opening of the abdominal cavity. Ratchinsky used the angiotribe on the umbilical cord of two newborn children. In 1 case the result was good. In the second, oozing at the line of demarcation between the crushed and the untouched tissues occurred after two applications of the instrument, so that the ligature had at last to be applied. In short, Ratchinsky considers that the angiotribe is quite unreliable. Before the New York Obstetrical Society, Cleveland (*Amer. Gyn. and Obstet. Journ.*, June, 1899) claims to have proved its value and safety, but Grandin condemned it as an innovation which departs from well-established laws of surgery.

(49) Childbed and Inflamed Appendix.

FIEUX (*Comptes Rendus de la Soc. d'Obstét., etc., de Paris*, May, 1899) reports the delivery at the eighth month of a girl aged 19, subject to obstinate constipation. The child lived and was reared. On the twenty-seventh day violent pains in the right iliac region set in, and nine days later, after all the symptoms of inflamed appendix had appeared, Fieux operated and resected the inflamed structure. The patient made a good recovery. On the sixth and eighth days there was a spontaneous action of the bowels, very unusual in this patient's experience. This case supports Pinard's opinion that appendicitis may exist as a complication of gestation in all its stages, pregnancy, labour, and childbed. Fieux notes Lepage's case, which resembled his own, as the symptoms appeared as late as the twenty-eighth day. He further dwells on the most important question in relation to this subject, Is the appendix infected from the genital tract? Vinay claimed to have proved this condition in 2 cases. But in 1 there was no rise of temperature for four days and no distinct evidence of uterine or perimetritic mischief. In the other there was also no fever, but there was much show from retained placental relics. The curette was applied on the thirty-fourth day. Not till a fortnight later did symptoms of inflamed appendix appear, and till they appeared there had been no rise of temperature. The patient, it transpired, had long been subject to pseudo-membranous colitis. Abrahams's 2 cases also show no evidence of uterine or tubo-ovarian infection. Fieux agrees with Abrahams's theory that the increased tendency to constipation during gestation causes an increased tendency to inflammation of the appendix. The mischief rarely if ever arises from the genital tract, save perhaps in cases where they are diseased.

(50) Puerperal Eclampsia and Visceral Changes.

FRIEBEN (*Monats. f. Geburtsh. u. Gynäk.*, May, 1899) recently demonstrated before a Hamburg society two livers from fatal cases of eclampsia. There were specks of blood under the serous coat, and in the deeper part of the parenchyma. The microscope showed that each speck represented an anæmic area and a hyperæmic area with necrotic patches. These liver changes, Frieben insists, were quite secondary, being due to the mechanical effects of the convulsions. In both cases acute parenchymatous nephritis was present. The alleged embolic deposits of placental cells in the liver were always secondary. Red marrow cells and liver cells have been known to become transferred from their natural seats in other diseases.

THERAPEUTICS.

(51) Treatment of Scarlet Fever.

IN the Section of Diseases of Children at the annual meeting of the American Medical Association (*Phil. Med. Journ.*, July 1st) B. Gilbert discussed this subject. He considered the main points in the treatment to be guarding against the spread of infection, controlling the hyperpyrexia, and combating the subsequent anæmia and other complications. Not only should the patient be isolated, but pet dogs and cats should be excluded, for they had more than once been known to carry the contagion. Anointing the skin with lard, vaseline, or lanolin would prove soothing and antipyretic, at the same time that it would very materially diminish the spread of the infection during the stage of desquamation. The clothing and bedding should be disinfected by boiling or by exposure to live steam. He objected to the use of the coal-tar antipyretics because of their depressing action on the heart. As the full bath was also often attended by considerable depression, it should not be used except when the fever was very high and there was very active delirium. The nervous excitement was best allayed by the administration of chloral hydrate. Opiates should be avoided because of the danger of nephritis in this disease. The patient's strength should be sustained by a generous liquid diet, and the anæmia controlled by doses of iron ammonia citrate. Quayle advocated the use of lithia water and the flushing out of the bowel with water in order to stimulate the renal function. Slagle said that cold water should be the chief therapeutic agent in scarlatina—cold drinks, cold enemas, and cold packs. Antipyretic drugs, quinine and iron should be avoided. Ewing also favoured an eliminative treatment with a view to washing out the toxins, and to this end he urged the patient to drink water freely, and also prescribed potassium acetate. Garrison could not share the general opinion regarding the inadvisability of prescribing acetanilid, for she had used this drug very freely during eight years, and had come to look upon it as her main reliance in the treatment of scarlet fever. The unpleasant effect that she had ever noted from its use was a diminution of the renal secretion, and this had been completely obviated by combining the acetanilid with soda bicarbonate. For controlling the fever cold water was useful, but the acetanilid accomplished the same purpose, and at the same time promoted to a greater degree the patient's feeling of wellbeing. Solomon said that acetanilid was useful for relieving the severe headache and the joint pains, but phenacetin was better where much muscular pain was complained of. If the pulse denoted high arterial tension he did not hesitate to prescribe antipyrin, and saw no harmful effects from it even in the youngest infants if given in doses of a quarter of a grain. It not only relieved the symptoms, but aided recovery by inducing a free action of the skin. He did not like baths because they frightened many children, and as cold applications contracted the cutaneous vessels he was afraid they would increase the tendency to internal congestion, particularly of the kidneys. To relieve such congestion he was in the habit of prescribing a decoction of scoparis, and also such chologogues as cascar and sodium phosphate.

(52) Sanguinal Krewel.

BANDELIER (*Therapeut. Monat.*, March, 1899) has treated cases of chlorosis, phthisis, and neurasthenia very successfully with "sanguinal Krewel," which is described as a physiological preparation of iron made from animal sources: blood salts, albumen, and small quantities of peptone are added. This combination makes the best possible vehicle for the absorption of iron and manganese. In 100 parts of sanguinal there are 46 per cent of natural blood salts, 10 per of chemically pure hæmoglobin, and 44 per cent. of muscle albumen. Observations by various authors with regard to the absorption of iron prove that unless it is in combination with some organic albuminoid compound complete assimilation does not take place. During the last year the author has tried the effect of sanguinal in cases of anæmia, chronic dyspepsia, and also in convalescence after severe illnesses. A large number of patients with commencing phthisis were treated, and creosote was added to sanguinal with excellent results. Sanguinal never caused any disturbance of the alimentary canal. Patients always like it. The appetite was greatly improved and the hæmoglobin markedly increased, The author says that this iron preparation is more certain in its action than any other.

(53) Thyroid Treatment of Juvenile Obesity.

IN the Section of Diseases of Children at the annual meeting of the American Medical Association (*Phil. Med. Journ.*, July 1st) I. N. Love (St. Louis) said that the profession was now beginning to learn what Brown-Séquard had long ago asserted, that is, that in the ductless glands lay the entire scheme of tissue-building. In 1897 Love had reported 3 cases of children varying in age from six to ten years and in weight from 106 to 160 pounds, whom he had treated by thyroid. Since then he had met with 3 more such cases. A case was cited in

which a boy had lost twenty-five pounds after a number of months of this treatment and had at the same time improved very decidedly in his physical development. Of course, attention to exercise, diet, and general hygiene had been an important aid. He had found that the most important adjuvant of the thyroid treatment was the administration of strychnine in doses of from $\frac{1}{150}$ to $\frac{1}{30}$ of a grain. It was most important to remember that the treatment of obesity in children should be begun early. He employed tablets of the thyroid extract ($2\frac{1}{2}$ and 5 grains respectively) and gave one tablet three times a day. The initial dose for an adult was usually 5 grains. A. C. Cotton said he had been treating three adult cases of obesity with thyroid extract and with fairly good result, but these patients had complained much of severe headache as soon as he had attempted to increase the dose to 10 grains three times a day. Love said that when the administration of thyroid extract was pushed too much there would be headache and sometimes cardiac depression. It was to combat the other that he had combined the thyroid extract with strychnine, and he had found this method exceedingly valuable.

(54) Antiseptics in Paediatric Practice.

In the Section of Diseases of Children at the annual meeting of the American Medical Association (*Phil. Med. Journ.*, July 1st) Gustavus M. Blech (Chicago) divided these agents in: (1) those acting on the respiratory tract; (2) those affecting the gastro-intestinal tract; (3) those influencing the urinary apparatus, and (4) those acting on the organism as a whole. Guaiacol carbonate, he said, was a nearly tasteless and non-irritating antiseptic of much service in cases of chronic bronchitis. Nasophen had been proved to be harmless, and antinosin in a 2.5 per cent. solution was non-irritating, and was a most useful disinfectant and detergent wash for the nasal passages. Eudoxin had proved in his hands a very valuable remedy in diarrhœa. It was split up by the action of the gastric juice, the nasophen passing on unaltered. In two cases of typhoid fever treated with eudoxin the stools had been rendered sterile in about three days. Slagle thought that there were only three internal antiseptics possessing much value, namely, calomel, sulphur, and soda sulphite. Cotton said he could not overcome his prejudice in favour of calomel as an intestinal antiseptic, but he had found eudoxin useful, and intended to give it a more extensive trial. He used guaiacol both locally and internally, and liked its action.

(55) Protargol in Nose and Throat Diseases.

Alexander (*Archiv f. Laryngol.*, Bd. IX, Heft 1, 1899) has tried protargol in affections of the nose, throat, and larynx. Chronic pharyngitis and atrophic rhinitis were benefitted after prolonged treatment. The best results were obtained in cases of empyema of the antrum with a 5 per cent solution. For pharyngeal and nasal affections a 1 per cent. solution was used. Good results were also obtained in cases of hay fever by painting the nasal mucous membrane with a $\frac{1}{2}$ per cent. solution. On the other hand, in acute cases of tonsillitis, pharyngitis, and laryngitis there was no apparent beneficial result.

PATHOLOGY.

(56) Results of Transverse Section of the Spinal Cord.

Schäfer (*Journ. of Physiol.*, March 18th, 1899) describes experiments on this subject. They were chiefly carried out on the monkey, a few on the cat. They consisted in attempts to establish lesions involving (1) hemisection, (2) section of dorsal cerebellar tract on one or both sides, (3) section of ventral cerebellar tract on one or both sides, (4) section of both dorsal and ventral cerebellar tract on one side. The physiological results of hemisection of the cord were as follows: Complete motor paralysis of all parts supplied with nerves below the section. The limb of the paralysed side was swollen and warm (vasomotor paralysis and lessened outflow of lymph), the skin was dry. Knee-jerk exaggerated. Sensation was not lost on the same side as the lesion, but it was at first dulled. After a few days unmistakable signs of feeling and localising even a slight touch, and this long before the motor paralysis had passed off. No sign of paralysis, either motor or sensory, on the side opposite to the hemisection. Purely voluntary movements are not recovered, although all the ordinary associated movements of the limbs are recovered. After three or four weeks it is difficult to detect any sort of paralysis, but the limb which has been paralysed is thinner than the other. If hemisections be made above the level of the eighth cervical nerve, the pupil on the same side is relatively contracted and remains so. The pupil reacts to light and shade in spite of its being persistently smaller than the other. Excitation of the motor cortex of the opposite cerebral hemisphere produces as a rule no movements in the limbs which have been paralysed, even if the associated movements have long returned. Lesions of the cerebellar tracts, either together or singly, produce no obvious symptoms. After hemisection the cells of Clarke's column below the lesion undergo chromatolysis, and eventually almost complete atrophy. The atrophy is equally complete if the lesion is confined to the dorsal and ventral cerebellar tracts. It is, therefore, to be inferred that Clarke's column gives origin not only to the dorsal cerebellar (tract of Flechsig), as shown by Mott, but also to the ventral cerebellar tract (tract of Gowers). Clarke's column has also an important relationship to the fibres of the pyramidal tract. After lesions involving these fibres, degenerated fibres are seen passing from the pyramidal tract (below the lesion) towards Clarke's column. No degenerated fibres are traceable from the pyramidal tract into the anterior horn or into any part of the grey matter other than the base of the posterior horn or Clarke's column.

(57) Complete Transposition of Viscera in Adult.

Koller (*Virchow's Archiv*, vol. clvi, Part 1, April 21st, 1899) describes a complete dissection of the trunk of a woman, aged 31, who was found dead in her bath several years ago. Much of her history was lost; thus it could not be ascertained if she were born a twin or if she were left-handed. She had been subject to epilepsy when a child, and later on had two attacks of pneumonia. She was also troubled with lateral curvature; the concavity lay to the left. The trunk, after careful injection of the veins and arteries when the transposition was detected at the necropsy, was preserved for some time in spirit, but has recently been dissected with great care, Koller publishing a full report. The case is an instance of "situs viscerum inversus totalis regularis." The right lung had two lobes, the left four; the heart lay to the right, the normal relations of its chambers and the vessels associated with them being reversed. The liver lay to the left, the spleen and stomach to the right; the sigmoid flexure passed to the right of the sacrum. Some of the organs showed infantile features; thus, the liver was very large, and the spleen shaped as in normal infancy. But the uterus and ovaries were normal.

(58) Leptothrix and Chronic Enteritis in Pernicious Anæmia.

Prospero Demateis records a case (*Gazz. degli Ospedali*, March 26th, 1899) of a patient who suffered from a slight but chronic intestinal catarrh. For a considerable time this was intermittent, the patient enjoying good health in the intervals. His surroundings were healthy, and his family history was excellent. The only previous illness had been typhoid fever and malaria several years before. The duration of the illness was eight years, and had begun with acute diarrhœa. This returned every year, more particularly in summer. On coming under observation the patient presented a lemon-yellow colour with a considerable degree of wasting. Examination of the blood showed great reduction in the number of red corpuscles, the white also being below the average. Microcytes and macrocytes were present together with nucleated red cells. The rouleaux formation was considerably reduced. The hæmoglobin was also reduced. The fæces showed enormous numbers of leptothrix. Clinically this case therefore seemed to be in the author's opinion one of progressive pernicious anæmia supervening in a case of chronic intestinal inflammation. The author does not maintain that the leptothrix was necessarily the cause of the enteritis, as it is quite probable that the infection by this organism was secondary, but caused certain chronic changes in the intestinal mucosa with subsequent absorption of toxic material.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(59) Pulse and Temperature in Epilepsy, Epileptic Vertigo, and Hystero-epilepsy.

Marchand (*Thèse de Paris*, 1899) gives a record of clinical studies on pulse and temperature in attacks of idiopathic epilepsy, epileptic vertigo, and hystero-epilepsy, based on 300 cases at St. Anne's Asylum. Immediately at the close of an attack the patient is placed on a couch and covered to prevent chilling of the body, and the temperature and pulse taken at short intervals (all temperatures are taken in the rectum with verified standard thermometers read *in situ*, and the pulse-rates taken at intervals of five minutes). The general conclusions are as follows: (1) The rise of temperature is readily noticed 10 minutes after a fit, and it attains its maximum in 20 minutes. This maximum elevation lasts only 10 minutes. (2) The epileptic attack causes an elevation of internal body temperature of 0.5 C., and lasting on an average 40 minutes. (3) Attacks of epileptic vertigo cause a less marked, but still noticeable, rise of temperature. (4) Regarding epileptiform attacks, those of general paralysis of the insane cause a decided elevation of temperature comparable to that of true epilepsy. (5) There is in general no relation between the maximum of temperature and the age of the patient, and in the same patient different attacks may cause various temperatures. (6) The pulse rises about 31 beats above the normal in a fit, but 50 minutes after the fit it has fallen to normal. The maximum pulse-rate is 16 minutes after the attack, and this rate is maintained for 5 minutes. (7) Both pulse and temperature return to the normal steadily or with only slight oscillations. (8) In epileptic vertigo the pulse also rises in proportion to the intensity of the attack. (9) In relation to age the same condition as in (5) *supra* holds good. (10) The increase of temperature in epileptic vertigo is 0.3° C.; it lasts altogether about 40 minutes. The maximum point is attained in 15 minutes after the attack, and it persists for 13 minutes, thereafter gradually descending to normal. (11) Hystero-epilepsy increases the temperature by 0.4°, the rise of temperature lasts 35 minutes, and there is a ratio between the length of the attack and elevation of temperature. In two-thirds of the cases the temperature is at its maximum at the beginning of the period of "attitudes passionelles;" in other cases it continues to rise for about 43 minutes. The duration of maximum temperature is 8 minutes, and the fall of temperature thereafter is gradual. (12) The pulse in hystero-epilepsy rises 57 beats, the acceleration lasts 24 minutes, the maximum frequency being at the onset of the attack (epileptoid period), and this maximum rate lasts for 4 minutes; it then subsides, not steadily, but irregularly and with decided oscillations. (13) There is no relation between the duration of an attack and the maximum acceleration of the pulse. On the whole the pulse disturbances are much more marked than the temperature changes in hystero-epilepsy.

(60) Acute Dermato-Myositis.

Neubauer of Unverricht's clinic (*Centralbl. f. inn. Med.*, March 25th, 1899) says that diseases of a septic origin must be excluded from dermato-myositis. If Unverricht's views in regard to the disease are followed, there are some 30 cases on record. Neubauer relates a severe case in a girl aged 17. The illness began suddenly two days before admission with fever, headache, and pain in the right leg. The leg was found to be swollen and very tender, and the skin was stretched. The left thigh was also swollen. There was no evidence of endocarditis. The next day the urine contained albumen and casts. A few days later the lumbar region was œdematous, and the intercostal spaces were also distinctly painful on pressure. Roseolous patches appeared on the upper part of the thighs; the spleen could not be felt. Widal's test was negative. The flexor surface of the right arm became subsequently involved, and also the sterno-mastoid muscles. Later in the course of the disease there was sweating and sleeplessness; 400 c.cm. of somewhat turbid and blood-stained fluid was drawn off from the left chest. Later the pleural effusion became absorbed, the albumen and casts disappeared from the urine, and the patient made a good recovery. The diagnosis lay between thrombosis of the inferior cava and dermato-myositis. Trichiniasis, polyneuritis, and typhoidal myostitis were easily excluded. The characteristic sweating, sleeplessness, and œdema over the painful back muscles soon appeared. The fever was partly of the continued and partly of the remittent type. The chief symptoms were due to the affection of the muscles, skin, and subcutaneous tissue. The pulmonary and renal complications were very marked. A genuine nephritis has only been recorded in 3 cases. The etiology is obscure, but it would appear to be an infective disease. In well-marked dermato-myositis the diagnosis is easy. The prognosis is rendered uncertain by the possible involvement of the respiratory and deglutition muscles. The treatment is mostly symptomatic.

(61) Jaundice after Chloroform Anæsthesia.

Jaundice after chloroform is said to be exceedingly rare (Dennis in *System of Surgery*, *sub voce* Anæsthesia); and Murchinson (*Diseases of the Liver*) states that after careful examination he has not been able to find a record of a case. J. N. Brainerd (*University Med. Magazine*, May, 1899), of Michigan, reports 2 cases. (1) A plump, healthy girl of 16, operated on for hare-lip. In two or three days she developed jaundice, and a week after the operation she was "as yellow as a lemon." The jaundice could only be attributed to the chloroform used. (2) A patient operated on for appendicitis (November 20th, 1898). Jaundice followed after the operation, and was marked in five days. The edge of the wound united by first intention, and the stitches were removed at the end of the first week. Later a local slough formed and was discharged. This jaundice also could only be attributed to the chloroform used in the operation.

(62) Mitral Stenosis with Infantilism.

M. J. Lacomme (*Loire Méd.*, vol. xviii, p. 63, March 15th, 1899) records the case of a woman, aged 24, of middle height, with two slight genua valga, and chlorotic in appearance. She had suffered from no serious disease such as rheumatism, or chorea, or fever. She began to menstruate at 16 but the flow had been scanty. She quickly becomes breathless. She had mucous patches on the vulva and syphilitic pigmentation on the neck. There was no anæmic *bruit* but a presystolic murmur was heard over the apex. The mammæ were rudimentary; the external genital organs resembled those in the infant, there being little hair over the mons, and the labia majora little developed, nearly glabrous, and gaping so as to allow the labia minora and prepuce of the clitoris to be seen; the uterus was infantile in type. It was considered that the mitral stenosis dated back to before birth. As to its cause, fœtal endocarditis was considered as unlikely; it was thought that it could scarcely be regarded as a localisation of an attenuated tuberculosis, as there was neither a family history nor any other manifestations of it; it was therefore ascribed to an arrest of development, to a congenital aphasia. The infantilism of the genital organs and the mitral malformation are looked upon by Lacomme as lesions of the same order, simultaneous and not resulting the one from the other, due to an arrest of development. A similar association had been noted by Giraudeau in the male.

SURGERY.

(63) Patulous Meckel's Diverticulum: Operation.

Morian (*Langenbeck's Archiv*, vol. lviii, Part 2, 1899) reports a case of a completely patulous ductus cephalo-mesentericus cured by operation. A male infant appeared at birth to be free from any malformation excepting an umbilical hernia. When the part was being cleaned on the fourth day, a red sausage-shaped structure was observed, whence flatus and a little yellow fæces escaped. Motions were freely passed by the rectum. By the third week the child became emaciated. The protruding structure was about an inch long, clearly covered with intestinal mucous membrane, and about as thick as a man's thumb. It lay curved spirally on the protruding navel. At its point was a depression into which a probe could be passed 2½ inches obliquely backwards and upwards. The projection

remained unaltered in size for a month. The operation was performed when the infant was 5 weeks old. On making an incision in the middle line, over the umbilicus, some fluid escaped from the peritoneal cavity. Then the projecting body was seen to run on to the small intestine, as a tube of the thickness of a lead pencil; it widened funnel-like up to its insertion on the intestine opposite the mesentery. It bore no mesenteric fold itself. This Meckel's diverticulum, as it was clearly seen to be, was treated like a vermiform appendix. It was first ligatured near the gut, then divided by Paquelin's cautery. Its serous coat was pushed inwards to the level of the gut and then sewn over. The operator next excised the umbilical sac. The ligamentum teres alone required ligature, as did the urachus below; this fœtal relic was filled with a whitish material. The abdominal wall was lastly closed in layers. Recovery was rapid. Three weeks later the child was thriving. A table of 32 cases of completely open Meckel's diverticulum, and 7, where it formed a blind sac, is given by Morian, who appends a full bibliography. The mortality in cases treated surgically many years ago is, as might be expected, high. But all the reported operations for complete patency of the diverticulum undertaken since 1883 were successful. The methods of treatment were—by ligature, 1; cauterisation followed by resection, 1; resection as in Morian's case, 9. One recent case was treated successfully by pressure with strapping.

(64) Resection of Superior Ganglion of the Cervical Sympathetic for Epilepsy.

Deschamps (*Gaz. Méd. Belge*, No. 22, 1899) reports two cases in which the superior cervical ganglion was extirpated with the object of curing epilepsy. One of the patients was a microcephalic child on whom bilateral craniectomy had been previously performed with temporary success. The second case was one of a boy aged 15 years, who suffered from severe and frequently repeated attacks, apparently of traumatic origin. The immediate results of operative interference in these cases seems to have been very satisfactory, but in each instance the interval between the dates of operation and of the last report is too brief to allow of any sure conclusions. In one case this interval had lasted thirteen days, and, in the other case, only eight days had elapsed since the operation. The author states that the operation is a difficult and dangerous one, and that in exposing the ganglion it is advisable to divide the tissues very carefully in order to avoid injury to the carotid artery, the internal jugular vein, and the vagus.

(65) The Prevention of Post-operative Thrombosis in the Veins of the Lower Extremities.

Lennander (*Centralbl. f. Chir.*, No. 19, 1899) directs attention to the occasional occurrence after certain operations on the abdomen, such as laparotomy, resection of the appendix, and the radical cure of hernia, of thrombosis of the superficial and it may be of also the deep veins of the lower limb, which thrombosis is frequently observed in the trunk of the femoral vein, and may extend into the external iliac vein. This complication, which, when it occurs, usually presents itself in the second or third week after an operation which in other respects has, as a rule, been most successful, cannot fail to cause anxiety on account of the risks of embolism of the pulmonary artery, and of pulmonary infarction, and necessitates an unduly prolonged confinement of the patient in bed. The author holds that this thrombosis is not in most cases the result of infection, but that it is due either to retardation of the circulation in the veins of the lower extremities, or to local changes in the walls of these vessels. With the object of preventing this serious complication, the author makes it a rule in his surgical practice, after every operation on the abdomen and for hernia, to elevate the lower end of the patient's bed. If the organs of the patient be absolutely or relatively healthy, the elevation need not exceed 4 inches, but should be increased for exhausted and anæmic patients and those already affected with varicose veins. In a case of an anæmic patient suffering also from weak heart and varicose veins, or of one who has been previously affected with thrombosis in the lower extremity, the end of the bed is raised on wooden blocks each about 20 inches in height. The elevation if in this degree disagreeable to the patient, should be commenced at 4 or 6 inches, and afterwards be gradually increased. If, after the operation, the blood tension be low, and the heart's action weak or irregular, the author would endeavour to increase the force of the circulation, and to strengthen the heart by subcutaneous infusion of salt solution, and by suitable tonic and stimulating medication. Much importance is attached to high elevation of the foot of the bed, and such treatment is strongly advocated, not only in surgical practice, but also in cases—such, for instance, as enteric fever, chronic enterocolitis, and chronic peritonitis—in which an anæmic condition, general exhaustion, and a morbid state of the blood, may favour the development of venous thrombosis of the lower extremity.

(66) Nephrectomy versus Nephrotomy.

At the meeting of the American Surgical Association recently held in Chicago (*Phil. Med. Journ.*) Joseph Ransohoff (Cincinnati) read a paper on this subject. He said that nephrotomy *per se* was an operation nearly devoid of danger. When performed on a healthy kidney, as for stone, the mortality was less than 5 per cent. When performed for suppurative diseases the mortality rose. He had tabulated records of 78 nephrotomies for pyonephrosis, exclusive of tuberculosis, published within the last three years from various clinics. Of these 78 nephrotomies, 17 were followed by death, a mortality of 21.8 per cent. In the hands of some surgeons the mortality had been very large; 4 out of 5 cases were fatal in the Vienna clinic. Out of 6 cases of nephrotomies at the Roosevelt Hospital, 3 died. On the other hand, Israel lost only 1 out of 8, and Thornton 1 out of 12. From the same sources he had tabulated 37 primary nephrectomies with 9 deaths, giving a mortality of 24.3 per cent., and 17 secondary nephrectomies with 7 recoveries and 10 deaths, a mortality of 58.8 per cent. The advantages of nephrotomy for pyonephrosis were obvious: First, it was an operation readily tolerated even in patients greatly reduced by fever. Secondly, it permitted the surgeon to determine the condition of the opposite kidney. Thirdly, by it the saving of even a small amount of functionating kidney tissue might throw the balance in favour of recovery. In dealing surgically with a pyonephrotic kidney, statistics could guide the operator only in a general way in the choice betweeen nephrectomy and nephrotomy. Nephrotomy was indicated in pyonephrosis, first, when the condition of the opposite kidney could not be ascertained, secondly, when the reduced condition of the patient would not permit the major operation if this were indicated. The nephrotomy was then but the preliminary step, to be followed by nephrectomy as speedily as possible. Thirdly, when the operation revealed the pressure of considerable kidney tissue, and an approach to the normal on the part of the pelvis and proximal portion of the ureter. Here a latter ureteroplasty might avert the need of nephrectomy. Fourthly, when there was evidence of suspicion of disease in the other kidney. Primary nephrectomy was indicated, first, when there was a sound second kidney; secondly, when inspection of the exposed kidney showed many or large pouches that could not be successfully drained; thirdly, when there was little kidney tissue left; fourth, when an examination of the pelvis and proximal portion of the ureter mode it reasonably certain that a return to the normal could not take place; fifth, in paranephritic and perinephritic suppurations where the kidney acted as a valve impeding successful drainage (Israel).

MIDWIFERY AND DISEASES OF WOMEN.

(67) Does the Removal of the Ovaries Exert a Beneficial Influence on the Subsequent Progress of Malignant Disease?

In a paper with this title, read in the Section of Obstetrics at the recent annual meeting of the American Medical Association (*Phil. Med. Journ.*), E. E. Montgomery, of Philadelphia, discussed the value of oöphorectomy in the treatment of malignant disease of the mammary gland, and the theory that the presence of the ovaries exerted an inhibitory influence on the development of such disease. If the patient was liable to the genesis of cancer when inhibition was partially removed, would she not be much more subject to its ravages when inhibition was entirely

destroyed? This theory logically would contraindicate rather than render advisable the removal of the ovaries for malignant disease. The ovaries might exert an influence upon the circulation in the vicinity of the reproductive organs through the vasomotor system, and a careful consideration of the subject forced him to the conclusion that the apparent relief was afforded through the vasomotor system. Further experience is required to demonstrate not curability but sufficient palliation and delay in the processes of disease to compensate the patient for the discomfort of the additional operation. Such an operation would only be of service if done during reproductive activity. In discussion, F. H. Wiggin said he believed that trauma played an important part in the etiology of cancer, and that soon it would be proved to be an infectious disease. A common error was the belief that cancer would not develop until after menopause. Patients should know that the period of danger was between the ages of 40 and 50 years. All menstrual irregularities should be considered as an indication for local examination. He condemned microscopic examination long before the time of operation, as the rapidity of the growth was increased. Goldspohn thought that Emmett's operation of trachelorrhaphy was not sufficient, as only the superficial tissue was removed, and that amputation of the cervix by Schroeder's method was the best. Ries thought that it was a mistake to consider that laceration of the cervix is the causing factor in carcinoma. He agreed with Montgomery that removal of the ovaries was useless in cancer of the breast. It was folly to think of doing oöphorectomy on everything, from corns to headache. Bonifield thought laceration of the cervix predisposed to cancer by prolonged congestion and irritation. Mitchell thought cancer rarely occurred in women who had not borne children or been the victims of abortion. He noted the rapid increase in the frequency of cancer. Gilliam did not think the family physician was competent to determine the presence of cancer, and that each should be submitted to the expert for diagnosis. He thought it was not laceration but the traumatism that was the etiologic factor. He did not think that micro-organisms were responsible for cancer. Careful study of injuries of the cervix produced by childbirth should be made. Every case of atypical hæmorrhage should be investigated. Microscopic examination of scrapings or a fragment tissue could be done in fifteen minutes, or while the patient was under anæsthesia. He had abandoned the raidical operation with extirpation of the glands as being impracticable, too difficult, and dangerous, and without good results. Uterine bougies should be inserted to aid in doing more thorough work. He considered the analogy between cancer of the breast and the uterus was an erroneous one. Montgomery thought cancer of the body occurred in 10 per cent. rather than only in 2 per cent., as usually stated in textbooks of cases of cancer of the uterus. Intrauterine examination also should be practised in doubtful instances, the uterus dilated, the finger introduced, and the cavity explored. Infection of the wound was often due to a secondary infection, and every precaution should be taken to avoid such infection.

(68) Parturition during Paraplegia.

Mercier (*Bull. de la Soc. Obstét. de Paris*, May 18th, 1899) notes that Bar has already written a monograph of great value on Uterine Cancer in Pregnancy and Parturition (1886), and that Amand Routh's Parturition during Paraplegia (*Trans. Obstet. Soc.*, vol. xxxix, 1897) is the most recent essay on another grave complication. Mercier reports a case where the two were combined. The patient was 40. In the summer of 1898, during her third pregnancy, cancer developed in the left breast. At the end of December paraplegic symptoms set in. On January 14th labour began early, at about term, and the patient was delivered spontaneously of a living child (weight over 7½ lbs.) at 10 P.M. The presentation was vertex, first position. During the pains the patient frequently dragged herself to the end of the bed, but could not lie down again without great difficulty. The puerperium was normal, but the patient could never leave her bed again. Any attempt to sit upright or partially upright caused intense pain, so that she could not suckle her child. On March 2nd she was admitted into hospital. There was evidence of secondary malignant disease of the liver and of the vertebral column. Death occurred three weeks later.

(69) Rokitansky's Tumour; Malignant Obstruction.

Czempin (*Centralbl. f. Gynäk.*, No. 21, 1899) demonstrated at the April meeting of the Berlin Obstetrical Society a specimen of what appeared to be the racemose tumour described by Rokitansky and Lawson Tait. The clinical history was long; the patient was a girl, aged 25, subject to profuse uterine discharge. Four years ago the ovaries were removed with the uterus by the vaginal operation. As the appendages were drawn down, hundreds of minute grape-like cysts came away. Czempin ranks the disease as racemose cystoadenoma of both ovaries. Shortly after the operation recurrence took place in the vaginal scar. The secondary deposit resembled, microscopically, the first, and, like the first, showed psammomatous changes in the minute cysts. Ultimately ascites set in, and more recently an operation was performed for intestinal obstruction. Diffuse carcinoma of the peritoneum was detected.

(70) Kidney Disease and Puerperal Eclampsia.

Paul Bar (*Bulletin de la Soc. Obst. de Paris*, May 18th, 1899) relates a fatal case in a girl, aged 19. At the age of 5 she had scarlatina, but appears to have enjoyed good health ever afterwards till she became pregnant for the first time. She continued well until an attack of severe headache occurred in the sixth month, followed by violent epigastric pain. Convulsions set in after vomiting. Next day she expelled, in hospital, a macerated fœtus weighing under 2 lbs. The placenta was full of old caseous foci. The patient was bled and put on suitable diet; but the fits continued, and she died on the fourth day. The left kidney had undergone complete cystic degeneration: it was very small and light. On the contrary, the right kidney was greatly hypertrophied, with marked dilatation of its pelvis and calices. There was universal tubal nephritis. Thus the patient had lived apparently in good health with only one kidney in function, and that kidney had evidently been diseased for some time. He ranks the case with Schramm's series, where pregnancy occurred in women after nephrectomy (*Berl. klin. Woch.*, 1896, No. 6).

THERAPEUTICS.

(71) Cacodylic Acid.

Cacodylic acid, an organic arsenical compound, has lately been occupying the attention of Continental investigators as a substitute for the usual preparations of arsenic. As far back as 1760 Cadet, Demonstrator of Chemistry in the Jardin du Roi, obtained an oily liquid from the distillation of a mixture of potassium acetate and arsenious acid. The chemistry of this body, known as "liqueur fumante de Cadet," was subsequently worked out by Bunsen (1837-1843), who showed that its chief constituent was cacodyl oxide. Cacodylic acid, $As(CH_3)_2OOH$, containing the basic radical cacodyl, $As(CH_3)_2$, or dimethyl arsenine, is a crystalline compound, soluble in water, odourless, and containing 54.4 per cent. of metallic arsenic, equivalent to 71.4 per cent. of arsenic oxide. The name cacodyl was suggested by Berzelius on account of the extremely offensive odour of Cadet's liquid. Bunsen considered the cacodyl compounds were non-toxic, but Lebahn, Rabuteau, and others, on the strength of laboratory experiments, do not agree with him on that point (Gijselman in *Wien. klin. Woch.*, No. 14, 1899). Some twenty years ago Jochheim tried cacodylic acid in the treatment of disease, but he gave it up owing to the unpleasant garlic smell it communicated to the breath, sweat, and urine, as did also Renzmore recently on account of the sleeplessness, dryness of the mouth, loss of appetite, and eructations it produced. Gautier (*Bull. de l'Acad. de Méd.*, No. 23, June 6th, 1899) contributed a paper on the therapeutic uses of the compound. Some five years previously he suggested its emploment as a substitute for liquor arsenicalis to Danlos of the Saint Louis Hospital, who treated a number of skin cases with it (Soc. de Derm., Paris, June, 1896). This observer again reports favourably on its use, chiefly in old obstinate cases of psoriasis,

but he admits that cacodylic acid is not more successful in this disease *quâ* cure than other remedies. Moreover, when given by the mouth it gave rise to an alliaceous odour of the breath, and with large doses he has observed colic and exfoliative dermatitis. Most of these drawbacks were obviated by administering the remedy in the form of hypodermic injections. Gijselman (*loc. supra cit.*) found both hypodermic and intramuscular injections of cacodylate of soda very useful in acute or recent psoriasis, but of little avail in old cases. Gautier (*loc. supra cit.*) himself records good results in malaria and anæmia, but he particularly insists on the value of cacodylic acid in phthisis. He gives the details of the case of a relative, a young lady, who had been under the care of Professors Potain and Debove. She had derived no benefit from a sojourn in the South of France and creosote injections. As her condition was serious, and moreover as liquor arsenicalis did not suit her, Gautier decided to try hypodermic injections of cacodylate of soda, for the preparation of which he gives the following directions: Saturate completely 5 grams of cacodylic acid with carbonate of soda; add 0.08 gram of hydrochlorate of cocaine, and 5 drops of an alcoholic solution of creosote (creosote dissolved in 8 grams of alcohol). The creosote is added merely as a preservative. Make up to 100 c.cm. with boiled distilled water. One c.cm. of this solution, equivalent to 5 centigrams of cacodylic acid, was injected daily for a week at a time, with intervals of 10 days' rest. From June, 1898, to May, 1899, the patient's weight increased from 51 to 69 kilos; the evening temperature gradually fell; and the pulse became less frequent. There was marked improvement in the physical signs at the end of the treatment. These favourable results in phthisis are to some extent confirmed by Roustan of Cannes; but the cases treated by Burlureau were not, on the whole, encouraging. The truth is the foregoing reports with regard to phthisis are premature. More extended and systematic observation is required before any definite opinion can be formed as to the usefulness or otherwise of cacodylic acid in pulmonary tuberculosis; at this stage of the inquiry it would not be right to raise hopes which further experience may prove to be delusive. It must be pointed out, too, in this place, that the good effects of cacodylic acid are somewhat discounted by the fact that, in addition to the injections, fresh air and abundant food were important factors in the treatment of Dr. Gautier's case. These two factors may have had more to do with the improvement observed than the exhibition of the organic arsenical compound.

(72) Sanose.

BISENTHAL (*Therapeut. Monat.*, May, 1899) gives further details with regard to the manner in which sanose may be utilised as a food. Sanose should never be added to boiling liquids or shaken up with any fluid whatever until it is first prepared with cold, or better lukewarm, water or milk; the mixture must be carefully stirred until it forms a thin broth. This prepared broth is now added to the food or drink as the case may be, and the whole is raised to boiling point. Sanose can be mixed with bread or biscuit, and as much as 5 to 20 per cent. can be added to bread without producing any unpleasant taste. It is important to increase the amount of salt when baking the bread. The rolls of bread sold in Berlin contain 3 grams of sanose in each, and the biscuits contain 2 grams. The amount of albumen contained in four sanose rolls and three biscuits equals 18 grams: this would be practically equivalent to a pound of meat. The bread and biscuits are being extensively used now, they have no unpleasant taste. During the process of baking, the casein and albumose undergo no appreciable chemical change. The presence of casein was demonstrated in a biscuit weighing 27.5 grams, and containing 3 grams of sanose. It was first broken up into small pieces, and then a solution of caustic soda poured over it, the mixture was stirred for half an hour, and then filtered. On the addition of acetic acid to the filtrate a thick, cheesy precipitate was formed, which is characteristic of casein. The detection of albumose is more difficult. A biscuit containing $2\frac{1}{2}$ grams of sanose was treated in the same way as the preceding. On treating the filtrate with the biuret test there was a very slight reaction. If, however, 10 c.cm. of the filtrate is first evaporated, and afterwards placed in a test tube with one-fourth part of concentrated caustic soda solution, to which 2 drops of copper sulphate have been added, the characteristic violet colour is seen.

(73) Treatment of Trachoma by Cupric Electrolysis.

IN the Section of Ophthalmology at the annual meeting of the American Medical Association (*Phil. Med. Journ.*, June 24th), G. F. Keiper, of La Fayette, Indiana, referred to a number of experiments performed to prove that substances could be made to penetrate the tissues by means of the electric current. He proposed applying this to the treatment of trachoma. The method suggested was based on the following experiment. Take a carbon electrode attached to the negative pole of the battery, and a pure copper needle attached to the positive pole, and introducing the needle into a piece of meat turn on the current. On cutting the meat open the region around the needle will be found of a green colour, and chemical examination shows this to be due to the copper oxychloride which has been formed. As this substance has a decided germicidal action, it is relied upon to destroy the trachoma granules when the copper pole is applied to the conjunctiva. In the discussion Huitzinga considered that if we believed trachoma to be the result of a specific infection then this treatment deserved more than a passing notice. He believed that such a current would penetrate the conjunctiva and destroy or neutralise the cause of trachoma, but it would not reach the disease if it were very deeply imbedded. He said that the distance between the anode and the cathode should never be less than five inches, because the amount of chlorin ions between the two poles must be sufficient to meet any demands that may be made upon them. Howe thought the treatment would probably be painful, and he doubted the ability to introduce medicines into the tissue in this way, since his attempts to produce the characteristic starch-iodin reaction had always failed.

(74) Treatment of Lupus Erythematosus.

WHITEHOUSE (*New York Med. Journ.*, February 4th, 1899) reports a case of lupus erythematosus in a woman aged 52 years, cured by the internal administration of iodoform in the form of a pill taken at meals. For three weeks there was no effect, but afterwards rapid improvement took place, and the case was cured after three months' treatment. The case was a severe one of three years' duration. Reichel, at the Sixth Dermatological Congress at Strassburg, recorded the cure of four cases of lupus erythematosus by the internal use of quinine during from fifteen days to three months. Hebra (*Wien. med. Woch.*, December 24th, 1898) recommends the following lotion to be used frequently as a compress: Alcohol, ether, spirit. menthæ piperitæ aa.

PATHOLOGY.

(75) Immunity in Tuberculosis.

BRUSCHETTINI (*Rif. Med.*, April 26th, 1899) recognising the difficulty of getting good cultures of tubercle bacillus, adopted the plan of injecting animals with an emulsion containing many bacilli, then, after fifteen to twenty days, when the injected animal had died, parts of the tuberculously infected organs were removed directly from the abdomen and thorax, and beaten in a mortar with distilled water. The liquid thus obtained was very rich in bacilli, and yet found quite innocuous when injected. The author injected 2 c.cm. and afterwards 4 c.cm. into himself without any bad effects. In many cases immunity was reached in the guinea-pig and rabbit, although these results were not constant, still they were sufficiently encouraging to induce the author to continue his researches in the same line.

(76) Congenital Absence of Shoulder and Arm Muscles.

GEIPEL (*Münch med. Woch.*, March 7th, 1899) relates the case of a child 10 years of age, who showed an extraordinary absence of the shoulder and arm muscles on both sides. The muscles involved were the deltoids, supraspinati and infraspinati, serratus magnus, pectoralis major, biceps, triceps and brachialis anticus. The only other abnormality was talipes equinus affecting the right foot. The child was intelligent and good tempered. The family history was good. The child was able to write with difficulty when the pencil was grasped with both hands.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(77) Neurasthenia.

AT the Annual Congress of Alienists and Neurologists, held at Marseilles (April, 1899), Bedon gave an account of special studies and inquiries made by him on 200 cases of neurasthenia (*Arch. de Neurol.*, May, 1899), the results of which are as follows: (1) In 44 cases there was no appreciable morbid heredity; in these cases the neurasthenia appeared late (at the age of 30 to 40 years), and in most cases it was of mild form. In cases with a morbid heredity the onset of the neurasthenia was precocious; in 45 cases it appeared before the age of 20 years. In cases with an apoplectic heredity it appeared quite late. (2) On a basis of hereditary or acquired predisposition, occasional causes are potent to bring about neurasthenia. Professional overwork thus acts in bringing it about in 53 cases, disappointment in 27 cases, sexual excesses in 17, influenza in 17, business worry in 19, and alcoholism in 3 cases. Finally, in 19 cases no cause could be ascertained. In all cases the intensity of the proximate determining cause was inversely proportional to the hereditary predisposition. (3) Of the 200 neurasthenics 51 were single and 149 married. Of the latter 42 had no issue, a proportion of 28.18 per cent., which is a little below the average. The remaining 147 married neurasthenics had 152 children, who could be classed as follows: 1 superior and 32 normal children, 24 died of eclampsia, 20 with physical ailments (5 with arthritism, 4 in feeble health, 3 with infantile paralysis, 2 tuberculous, 2 chlorotic, 2 scrofulous, 1 obese, and 1 acropathic), 87 with psychical blemishes (35 bizarre or impulsive, 15 hysterical, 7 neurasthenic, 5 idiots, 4 melancholics, 3 dipsomaniacs, 2 stammerers, and 1 vagabond). This list of offspring clearly shows that neurasthenia in a parent is a starting point for various kinds of degeneracy, physical and mental, in the children. Neurasthenia is, like arthritism, a dyscrasia associated with town life, and unless strengthened by the admixture of fresh (rural) healthy blood tends to bring the family or stock to an end by producing sterility.

(78) Nasal Disease and Headache.

HAJEK (*Wien. med. Presse*, March 12th, 1899) states that headache is frequently caused by disease of the nose or its sinuses, though in some cases it may be only one of several causes. Excluding necrosis and tumours, which may cause frightful headache if they attack the base of the skulll, nasal affections which may give rise to headache may be divided into acute and chronic affections of the sinuses, and certain hypertrophies of the mucous membrane. Generally an acute empyema of a sinus will produce a neuralgic headache, a chronic empyema a more diffuse and ill-defined pain. In this rule are not included chronic catarrh of the frontal sinus, where the pain may be constant, and located exactly around the sinus. (1) In acute empyema of the maxillary antrum there is often infraorbital and supraorbital neuralgia. Though, however, acute empyema of the antrum is much more frequent than acute empyema of the frontal sinus, supraorbital neuralgia is much commoner than infraorbital; in other words, acute sinusitis of the maxillary antrum often gives rise to exclusively supraorbital pain. In these acute cases the pain is generally remittent, being worst at midday, but may be completely intermittent. In the author's experience typical intermittent post-influenzal neuralgia belongs to this class, and invariably depends, not on neuritis, but on acute sinusitis. (2) In chronic empyema, headache may be completely absent. When present, there is a feeling of oppression and weight usually situated over the forehead, no matter which sinus is affected, rarely over the occiput. Often the headache arises only after certain definite stimuli such as alcohol, tobacco, and food, and is accompanied by general congestive symptoms such as tachycardia and excitement. As regards hemicrania, Hajek has never seen cure result from treating a sinus affection, though temporary improvement may follow, as it may after removing hypertrophied mucous membrane. (3) Only one form of chronic hypertrophy of the mucous membrane gives rise with certainty to a chronic headache, which can be cured by removing the cause. This is when the simultaneous presence of a hypertrophied middle turbinate bone and a spur on the septum have exerted pressure in the upper part of the nose for years. It is possible that chronic diffuse hypertrophy may cause certain ill-defined headaches, but in these cases, more than in any other, before connecting the headache with the nasal affection, it is necessary to exclude chronic nephritis and other causes.

(79) Xyphoid Rheumatism.

HIRTZ AND ROUSTAN draw attention to a condition which hitherto has not attracted much notice (*Journ. de Méd.*, April 10th, 1899)—namely a rheumatic inflammation of the sterno-xyphoid articulation. This may in some instances escape diagnosis from the fact that no other articulation may be affected. There may be considerable dyspnœa from hampered movements and severe epigastric pain. Pressure over the lower part of the sternum is accompanied by pain, and in some cases, should the stomach become distended as by flatulent dyspepsia, there may be considerable suffering, which it is not surprising to hear is referred to the stomach itself. Examination of the part may show some swelling over the xyphoid cartilage. Prognosis in these cases is good in the event of a correct diagnosis being made. The treatment recommended by the authors is the application of a counter-irritant, preferably a blister, accompanied by general anti-rheumatic treatment such as salicylates.

(80) Fatal Hepatic Colic.

CHAUFFARD records (*Journ. de Méd.*, April 10th, 1899) a case of sudden death from hepatic colic. The patient was a woman, aged 55, who had repeatedly suffered from not only hepatic but renal colic. One evening she was attacked by sudden severe hepatic pain, with vomiting and rapid jaundice. The least pressure in the region of the gall bladder was accompanied by excruciating pain. The pulse was small and feeble, averaging 68. There were marked rigors. Morphine was injected, but with practically no result. The pain was so intense that the patient lost control over herself, and was with difficulty prevented from jumping out of the window. Hot fomentations seemed to reduce the severity of the pain, but the patient suddenly died. The writer draws attention to the extreme rarity of fatal results from biliary colic.

SURGERY.

(81) Resection of nearly Two Metres of Small Intestine, and its Effect on Digestion.

CARL SCHLATTER (*Correspondenz. Blatt. f. Schw. Aerzte*, 1899, July 15th) publishes the following case: An Italian, aged 23, was stabbed in the hypogastrium at 7 P.M. on October 9th, 1898. He fell to the ground with intestine protruding from the wound, but with assistance walked some 300 m. to his home, where a provisional dressing was applied; he was brought in an ambulance to the Zurich clinic at 3 A.M. on October 10th. About 2 m. of small intestine, the greater part deep blue or black in colour, with quite dull serosa, was found protruding from the right hypogastrium: there was no collapse. Under ether (4 A.M.), when the skin and edges of the wound had been disinfected, it was found that the prolapsed intestine, jammed fast in the wound, was already partially necrotic; reposition was out of the question, and the only hope lay in total resection. Enough intestine was carefully drawn out to allow this to be done in sound tissue (Wölfler's compressors on each end, Péan's forceps closing the intermediate part, and successively securing the mesentery as it was rapidly divided along its intestinal insertion from the first division of the bowel to the sound tissue at the other end; union of the defect in the mesentery after the forceps had been replaced by ligatures by separate silk sutures and of the bowel by three tiers); the wound was then enlarged 5 by 5 cm. to permit reposition, and it was found that the constricting ring was formed by the slit in the skin, which was only 1.5 cm., and lay 3 finger's breadths above and parallel to Poupart's ligament; on the peritoneal side the wound was much larger. As there was

no effusion of blood into the peritoneum or sign of any opening into the bowel, the abdominal wound was closed by suture in tiers. The resected gut was 192 cm. in length, unstretched, and was entirely from the ileum. Except for an attack of urticaria (5th to 10th day p.o.) there was hardly any reaction. On November 3rd the patient was feeling quite well on full diet, and weighed 64 kilos; on December 7th he was discharged weighing 75 kilos, looking well, with a good appetite, and almost daily stool. Careful observation of the assimilation of albuminoids and fat were carried out for 9 days; the patient was left entirely free in his choice of the kind and amount of the ordinary food of the hospital, and consumed a surprising quantity of nitrogenous and fatty matter. The loss of nitrogen was on the average 10.47 per cent. about the extreme normal loss, but the loss of fat was increased, being on the average 13.91 per cent., with variations from 9.47 to 20.26 per cent. In Fantino's patient, from whom 310 cm. of ileum were removed when he was 60 years old, the loss of nitrogen was on the average 29 per cent., that of fat as much as 23 per cent., varing from 17.2 to 34.3, but in spite of deficient assimilation wasting was avoided by over-feeding. Dreesmann collected 26 cases (including his own patient) of resection of more than 1 m. of the small intestine; 17 survived the operation, 5 of whom suffered from digestive troubles; in all the other 12 the digestive functions were uninjured, but in 10 the resected intestine measured less than 2 m. There have been only 6 cases of the resection of more than 2 m. of the lesser bowel: 205 cm. (Köberlé), 208 cm. (Kocher), 215 cm. ileum (Dreesmann), 234 cm. ileum (Shephard), 310 cm. ileum (Fantino), and the most extensive 330 cm. of small intestine (Ruggi) in a boy of 8 for circumscribed peritonitis, and only two of these patients escaped with the digestive function unimpaired, namely, the first (205 cm.), and the last (330 cm.). Dreesmann concluded that resections of less than 2 m. could be borne with impunity when there were no complications, but only young people could support a loss of a greater length without the digestion being impaired.

(82) Ligature of the Internal Iliac Artery. Baudet and Kendirdjy (*Gaz. des Hôpitaux*, April 1st, 1899) have issued an instructive monograph on the great extension of this operation. Once it was all but limited to gluteal aneurysm, but now it is practised, as this essay shows, as a remedy for prostatic hypertrophy in certain cases of teleangiectasic sarcoma and in inoperable uterine tumours. It is also undertaken, and here with assured success, as prophylactic against hæmorrhage in the course of certain pelvic operations, such as abdominal panhysterectomy and in abdomino-perineal excision of the cancerous rectum. Bier and Meyer seem to have had remarkable experience in prostatic cases; each lost 1 out of 3; a second in Meyer's experience suffered from grave complications. Both Bier's successful cases, and Meyer's third, a completely successful case, were very rapidly restored to comfort. Micturition became normal within a day or two; the prostrate underwent perfect involution. In the fatal case under Bier, which died on the fourth day, the previously enlarged lobe had already, it was found, become reduced to a size less than its unaffected fellow. Yet Bier does not think ligature of the internal iliac a justifiable operation for enlarged prostate. The statistics of ligature of that artery for gluteal aneurysm (first performed by Stevens in 1812) are as follows: 30 reported cases: 16 recoveries, 12 deaths, 2 unrecorded results. The 12 deaths were due to—peritonitis, 3 cases; secondary hæmorrhage, 5; sloughy abscess, 1; traumatic delirium, 1; suppression of urine, 1; unexplained, 1.

(83) Prostatectomy. Syms (*Annals of Surgery*, March, 1899) is opposed to suprapubic prostatectomy as performed according to the methods of McGill and Fuller, and holds that perineal prostatectomy combined with suprapubic cystotomy and perineal drainage is the best plan of surgical treatment that has hitherto been practised. It is, he states, simple of performance, and is based upon very proper surgical principles, for the floor of the bladder is not wounded, the perineum is cut in the middle line by a single incision so that the least possible time is consumed and the smallest amount of hæmorrhage is encountered. The drainage of the bladder is in the line of gravitation, and the space from which the prostate is removed is not in immediate communication with the cavity of the bladder, and has perfect and direct drainage, while the urethra is not permanently damaged. The author, however, suggests a still further modification in the operation of prostatectomy and suggests that the bladder should not be opened above the pubes, but that this viscus should be exposed by a short incision in the median line of the anterior abdominal wall, and then be pushed downwards towards the perineum by the operator's fingers. His experience has led him to believe that suprapubic cystotomy as a means of drainage is a very undesirable procedure, and that it is not well tolerated in a great many cases by old men. Infection of the loose areolar tissue in the prevesical space is very apt to occur, giving rise to a new source of danger to the patient from general sepsis and also materially prolonging the period of convalescence. Much stress is laid on the early performance of prostatectomy, the high rate of mortality from this operation being attributed to the fact that it is often performed at too late a stage of prostatic disease to afford the operator and his patient the best possible chance. Too often, it is asserted, the patient subjected to this operation has reached the stage when not only the bladder is badly inflamed, but also the ureters and kidneys have been involved by the effects of urinary obstruction and of infection from the morbidly affected bladder and urine.

MIDWIFERY AND DISEASES OF WOMEN.

(84) Eclampsia Treated by Saline Infusion. Allen (*Amer. Jour. of Obst.*, May, 1899) reports 3 cases treated by this method. Case I, a secundipara, aged 23, had been in convulsions seventeen hours when first seen, and had had about twenty-five attacks. When brought into hospital she was comatose. Under chloroform the cervix was incised to the vaginal vault, internal podalic version was done, and the child was extracted—time, seven minutes. Free hæmorrhage from uterus and from cervical incision: tamponnade of uterus and vagina with sterile cotton pledgets. As soon as possible an injection of saline solution was made into the cellular tissue under the mammary glands; 1,000 c.cm. were used, strength 6 grams to one litre. Nine hours after delivery a second injection of 1,400 c.cm. was given. On the following day the tampon was removed, the uterus was washed out with sterile salt solution, and 1,400 c.cm. injected subcutaneously. On the third day 1,400 c.cm. were injected, making 5,200 c.cm. in three days. After each injection the change for the better was marked. Medicinal treatment was used also, mostly eliminative. The patient was discharged perfectly well on the twenty-first day. The child was practically dead when born, and all efforts failed to resuscitate it. Case II. A primipara, aged 18, was seen after having had five convulsions. Delivery was effected under chloroform in the same way as in Case I, and occupied eight minutes. Half an hour after delivery 600 c.cm. of sterile salt solution were injected under the mammary gland, and 1,200 c.cm. six hours later. On each of the two following days 1,400 c.cm. were injected, making 4,600 in all. The patient was well on the twenty-third day except for a breast abscess caused by the needle. The child was born asphyxiated but was revived, and is now living and healthy. Case III, a primipara, aged 18, had had four convulsions before admision to hospital. Under chloroform the cervix was dilated with the fingers, forceps applied, and delivery completed. Pulse immediately after delivery 130. Twenty minutes later 1,100 c.cm. salt solution were injected; fifteen minutes after injection, pulse 104; thirty minutes after injection, 97. One hour and a quarter after labour a convulsion occurred; the cephalic vein was opened, and 656 c.cm. of very black and thick blood allowed to flow out: at the same time 700 c.cm. salt solution were injected; pulse 98. Six hours after labour another convulsion; vein opened again and 192 c.cm. of blood drawn. Morphine, ½ gr. hypodermically; chloral hydrate 40 gr., and potassium bromide 60 gr., *per rectum*. After this no more convulsions occurred, and the patient was quiet; there were no more indications for salt injections

and the patient was discharged on the nineteentn day, perfectly well. The child was asphyxiated, but revived after a time, and seemed in fairly good condition. About two hours after delivery a convulsion occurred, resembling very closely those of the mother. The ligature was removed from the cord, and 2 ounces of blood allowed to flow; 6 drachms of salt solution were injected under the skin, after which it did well, until, five hours later, the convulsions returned, occurring every ten minutes. Three ounces of salt solution were injected into the rectum, and the child put into a continuous warm bath, but it gradually became worse, and died nine hours after birth. The author gives the following excellent summary of the treatment of eclampsia: *Pre-eclamptic stage.*—Purge the bowels, stimulate the skin by warm baths twice a day; use a milk and water diet and give sedatives. Examine urine quantitatively for urea: if the quantity is insufficient, stimulate and keep the patient under close observation. If there is no improvement, induce premature delivery. *Eclamptic stage.*—Give morphine hypodermically at once, and inject into the rectum 40 gr. chloral hydrate and 60 gr. potassium bromide. As soon as possible put the patient under chloroform, and complete delivery; this usually necessitates forceps or version, more often the latter. Use force if necessary. The disease cannot be treated till the cause is removed. After delivery do not stimulate the uterus to contract, but let it remain relaxed, and bleed until the patient's symptoms show that she has had enough. If sufficient hæmorrhage does not occur, open a vein. As soon after delivery as possible, inject sterilised salt solution subcutaneously; as much as 700 c.cm. can be injected under each mamma. Continue this at intervals for two or three days. Stimulate elimination; for the bowels the best is croton oil—2 drops in 2 drachms of olive oil. As soon as the patient rouses sufficiently, give drachm doses of Epsom salts every hour. The salt solution usually acts wonderfully in stimulating the kidneys; but, if necessary, use dry and wet cups, with a half-ounce of infusion of digitalis every four hours. The diet is exclusively milk. To stimulate the skin, the hot-air bath or the wet pack is used. Tonics during convalescence.

(85) Hydatid Mole in a Virgin: Membranous Dysmenorrhœa.

BOCK (*Bull. de la Soc. Belge de Gyn. et d'Obst.*, vol. x, No. 3, 1899) relates the case of a child, aged 12½ years, living well cared for, and under conditions which rendered her virginity above suspicion. Two months after her twelfth birthday the first period occurred. Clots were passed, without pain. At the second period there was pain, and a clot was passed. This clot was covered with a white membrane, forming a perfect cast of the uterus. On microscopical examination the cast proved to be endometrium, with uterine glands and ciliated epithelium. Thus already the child suffered from membranous dysmenorrhœa. The phenomenon was repeated at the third period. The fourth was extremely painful. There was slight show for three days, then a typical hydatid mole was expelled. Its base measured over three-quarters of an inch. It was made up of vesicles arranged like rows of beads; each vesicle was full of a transparent serosity, its wall was made up of loose fibro-cellular tissue with many veins. The vesicles varied in size, the smallest were of the dimensions of a pin's head, the largest as big as a pea. The next period, and all that have succeeded, have been normal; the child has been watched ever since the expulsion of the mole four years ago. BOCK suspects some relation between the membranous dysmenorrhœa and the mole. A piece of the diseased endometrium or menstrual decidua may have remained behind and undergone a pseudo-placental change. JACOBS has already asserted that the hydatidiform mole may develop independently of gestation, and BOCK's case, in his opinion, proves that theory. KEIFFER suspects that there may be more than one variety of hydatidiform mole.

(86) Removal of Seven Uterine Fibroids with Preservation of the Uterus.

BLANC (*Loire Médicale*, Ann. 18, 83, April 15th, 1899) has operated on a woman 35 years of age who had been married for eight years, but had never been pregnant; she suffered from pains in the abdomen and from menorrhagia and pressure symptoms (constipation, dysuria, etc.); and examination revealed a tumour reaching as high as the umbilicus. The cervix was pushed forwards against the symphysis pubis, but the body of the uterus was lost in the mass of the growth. The patient was anæsthetised with ether and the abdomen opened. Seven uterine fibroids were found; one as large as an infant's head was attached to the middle line of the uterus; on each side of it, but also on the fundus uteri, was another smaller one; none of these had a pedicle. Three smaller ones (size of an egg) were discovered in the vesico-uterine pouch, these were pediculated and freely moveable. The seventh tumour was found impacted in the pelvis. All these growths were easily enucleated without opening into the cavity of the uterus at all, the operation lasting 50 minutes. Recovery was good, and three weeks later the patient left the hospital with a complete disappearance of all pressure symptoms. It is now two years since the operation, and the patient continues well and quite able for the very heavy work which she has to do.

(87) Abortion in Scleroderma.

LENOBLE (*Bull. et Mém. de la Soc. Anat. de Paris*, March, 1899) has issued a very complete report of a woman, aged 39, subject to sclerodermia since 1891. In August, 1894, she was delivered at term of a healthy female child, now living. Yet already the skin disease was advanced and muscular contractions were marked in the extremities, the thighs could not be abducted. A year or two later she again became pregnant and aborted in the middle of the second month. In December, 1896, the third pregnancy began; movements were felt during the following April. They ceased in July, 1897, after a violent attack of diarrhœa. DOLÉRIS and LENOBLE henceforth had this patient under observation. The sclerodemia was very marked, but she could still walk. On the evening of August 5th labour pains set in and the membranes ruptured spontaneously, and at two the next morning the child, which presented at the breech, was delivered without instruments, the placenta following. Hot water injections and the tampon were required to check sharp *post-partum* hæmorrhage. The fœtus weighed a little over 3 lbs. and was much macerated. The placenta weighed 12 ozs. It was very carefully examined and LENOBLE and DURANTE concluded from the appearances that it was the seat of true sclerodermia. Similar lesions were detected in the fœtal viscera. The placental disease quite accounted for the premature labour in the third pregnancy and probably for the abortion as well. It is remarkable that though the mother was so much crippled by sclerodermia, and must have been subject to visceral lesions, she nevertheless carried the child to the seventh month and then expelled it spontaneously. The breasts secreted colostrum at the date of labour. The genito-urinary tract had clearly not became involved in the constitutional disease.

THERAPEUTICS.

(88) Acetanilid as a Substitute for many Proprietary Drugs and Mixtures.

IN the Section of Materia Medica and Therapeutics of the American Medical Association (*Med. News*, June 10th) Louis F. BISHOP read a paper on this subject. For a long time he had prescribed acetanilid in combination with drugs as seemed to him adapted to in the condition to be met. Acetanilid is not soluble, but is readily suspended in syrupy mixtures, so that it can be combined with ammonia in any of its forms, salicylic acid, nux vomica, digitalis, codein, creosote, potassium bromide, or indeed almost any drug, and a prescription obtained that can be much more accurately adapted to the case in hand than any of the ready-made combinations. The foundation of most of the coal-tar product combinations is acetanilid, which has been combined with bicarbonate of soda, caffein, carbonate of ammonia, etc. The combination may be chemical or mechanical, it matters little which, as it is practically broken up in the body into the acetanilid radicals and the other constituents. It is much more professional and scientific to write for the mixture than to be slaves to a proprietary combination. Perhaps the most generally useful combination of acetanilid when used as an analgesic is the migraine tablet. This is the equivalent of several of the most widely-used secret mixtures that are sold under a specific name. It consists

of 2 grains of acetanilid and half a grain each of caffein citrate and monobromate of camphor. A useful combination that can be prescribed in capsule is acetanilid and quinine, 1 grain of the former and 2 of the latter. This makes a good adjuvant to other treatment in cases of coryza. In rheumatic conditions, and those in which there is a suspicion of intestinal fermentation, acetanilid and salol make a good combination in capsule. For disturbances of circulation and neuroses attending the menopause, 2 grains of acetanilid and 15 grains of bromide of sodium are efficient when combined in a drachm of simple elixir. When repeated sufficiently often in this form, it acts as an efficient hypnotic. Acetanilid is a useful addition to mixtures for the relief of acute indigestion attended by flatulence and great distress immediately after meals. As a substitute for iodoform and a host of antiseptic dusting powders, acetanilid has been found most efficacious, especially when combined with boric acid.

(89) Baths in Tabes Dorsalis.

Gräupner (*St. Petersb. med. Woch.*, No. 19, 1899) recommends baths in the treatment of tabes dorsalis. The bath probably acts not only on the circulatory system, but also by some action on the excitability of the nervous system brought about by stimulation of the skin. He remarks that paralysis of the bladder, when occurring in tabes, is certainly diminished during a course of baths. The "cure" is said to be "functional," lasting only a certain period, after which the bath must be resumed. The best class of cases for this treatment includes men and women between 30 and 40 years of age, with not much objective disturbance of sensation, but with decided ataxy and acute attacks of pain. Under this treatment paræsthesia disappears, and the general nutrition and strength are increased. In a few weeks the ataxy, which Gräupner thinks partly of functional origin, is said to disappear.

(90) Treatment of Patients after Abdominal Section.

C. L. Bonifield, of Cincinnati (Annual Meeting Amer. Med. Assoc.) considers spartein sulphate of decided value as an immediate stimulant to the heart after abdominal section, while digitalin may be used for a more lasting effect. He said the physiological action of alcohol was so nearly identical with that of ether and chloroform that its utility was to be doubted when the system was saturated with one of these agents. Calomel was the most generally satisfactory purgative. He thought the rectal tube was of little value for the relief of gaseous distension. Morphine constipated the bowels, checked elimination, and almost always produced more or less nausea. In its place he used codein phosphate and chloral hydrate by the rectum for the relief of pain. To relieve the intolerable pain he employed the rectal injection of normal salt solution, a half pint being given every two to six hours. A half ounce of very hot water by the mouth might be allowed every hour after the first four. Bonifield considered that any surgeon who did a capital operation owed it to his patient, his profession, and himself to see that everything possible was done to secure recovery. For this reason, only when it was absolutely unavoidable, should an abdominal section be done in the country and the after-treatment left to a practitioner inexperienced in this work.

(91) Orthoform in Skin Diseases.

Brocq (*Ann. de Derm. et de Syph.*, April, 1899) reports unfavourably on the use of orthoform as an analgesic and antipruritic. He has tried it in the form of two ointments, one containing a twentieth part of orthoform mixed with lanolin and vaseline, and another with the addition of a fifth part of zinc oxide. He used these in simple pruritus and pruritus with eczema or lichen, the orthoform being applied to one side and a similar ointment without the orthoform on the other side as a test between the two. The orthoform seemed to have some beneficial action at first in uncomplicated pruritus, but when used for a long time an artificial eruption followed. In pruritic eczema it was not well borne. He concludes that, owing to its toxic action, its use is not advisable in such cases.

(92) Holocaine in Ophthalmology.

Hasket (*Arch of Ophthal.*, vol. xxviii, No. 1, 1899) believes that holocaine is superior to cocaine in ophthalmic surgery. He concludes thus: (1) Holocaine does not cause mydriasis, and therefore does not cause increased tension. (2) It does not affect accommodation. (3) It causes deeper anæsthesia of the iris than cocaine. (4) It often proves efficient in cases of painful inflammation, where cocaine fails. (5) It produces no toxic effects unless injected subcutaneously or swallowed. (6) It has no effect on the corneal epithelium. Cocaine, on the other hand, has the advantage of reducing the tendency to hæmorrhage. Hasket has also used holocaine as a form of treatment for corneal ulcers, and thinks it has a great therapeutic value in such cases.

(93) Poisoning by Resorcin.

Schwalbe (*Der Kinderarzt*, May 5th, 1899) reports a case of poisoning by resorcin. A girl, aged 5 years, was ordered an intestinal irrigation of 100 grams of a ½ per cent. solution of resorcin for gastro-enteritis. By mistake, 200 grams were used (1 gram of resorcin). A few minutes afterwards the child became pale, with clammy perspiration, retraction of the head, and muscular stiffness. She soon became unconscious, and pulseless in fifteen minutes. Medical aid was at once obtained, and ether administered subcutaneously; the colon was washed out with sulphate of soda solution. After ten minutes, consciousness was regained, and the pulse returned. Stimulant treatment was continued, and the child gradually recovered, but was very weak. The urine was dark green and albuminous. In the course of a week symptoms disappeared, and convalescence was established. This case shows the danger of entrusting the carrying out of intestinal irrigation to nurses and parents, and also that children are very susceptible to cardiac depressant antipyretics and disinfectants.

PATHOLOGY.

(94) Diverticulitis.

Magaigne and Blanc (*Bull. et. Mém. Soc. Anat de Paris*, vi, s. 1, May, 1899) point out that Meckel's diverticulum, when present, is likely to set up a series of accidents and morbid processes: it may lead to intestinal occlusion by the formation of a band or knot, or may cause an umbilical fistula, or produce an adenoid growth at the navel. It may also, however, be the seat of inflammatory changes, and in this respect resembles the appendix vermiformis: there may be slight parietal diverticulitis, or circumscribed peridiverticular peritonitis, or, in the most severe form, gangrenous diverticulitis with general peritonitis. Two cases are reported. In one there was chronic inflammation of the diverticulum in association with cancer of the sigmoid flexure, characterised by folliculitis, and perifollicultis, and lymphangitis, just as in appendicitis. The second case was that of a man with all the symptoms of subacute appendicitis; the diverticulum was found to be inflamed, thickened, and surrounded by false membrane, and in the wall was a piece of a fish bone. In this case the inflammation affected specially the glandular layer. The chain of events is evidently first infection of the mucosa (folliculitis and perifolliculitis), then invasion of the submucous adenoid tissue (lymphangitis).

(95) Effect of Destruction of the Labyrinth on Hearing.

Max Kamm (*Klin. Vort. aus dem Gebiete der Otologie, etc.*, Bd. iii, Heft. 3, 1899) has investigated the results of extirpation of the labyrinth, and comes to the conclusion that Ewald's experiments on the subject gave erroneous conclusions. Ewald stated that after removal of the labyrinth in pigeons certain sounds could be heard under certain circumstances. The author's conclusions are as follows: (1) After destruction of both cochleæ in pigeons there is a partial ability to hear; (2) after extirpation of the whole labyrinth no capability of hearing remains; (3) the auditory reaction in Ewald's experiments depended on irritation of the sensory nerves of other peripheral organs; (4) it is physiologically possible that in human beings some hearing may remain after destruction of the cochlea only; (5) clinical observation makes it probable that total deafness follows necrosis of the labyrinth; (6) cases which appear to contradict this are probably due partly to some remains of the labyrinth being left in a functional condition and partly to defective observation.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(96) Peripheral Gouty Neuritis.
K. Grube (*Wien. med. Woch.*, June 17th, 1899) points out that in sciatica of gouty origin the affection is rarely confined to the sciatic nerve alone; more frequently the crural nerve is simultaneously involved, and under certain circumstances the obturator nerve is also found diseased. The author endeavours to frame a clinical picture of this form of neuritis, and mentions in the first instance (1) acute pains in the parts attacked; these pains both appear and disappear spontaneously; (2) great pain on pressure; (3) the muscles supplied by the nerves thus involved are usually in a state of atrophy, though of a mild type; (4) the response to the electric current is obviously diminished; (5) the knee-jerks are either entirely absent or greatly reduced; (6) the well-known signs of paræsthesia and anæsthesia are almost regularly present. In conclusion the author remarks that neuritis of the brachial plexus as the result of a uric acid diathesis is even more frequently observed than that of the sciatic nerve—a fact to which attention had been chiefly called by English writers. He relates an interesting instance of that kind of neuritis. His patient was a woman, aged 43, in whom only gout, of which she had several attacks previously, could be assigned as the cause of her malady, since all other probable causes, as alcohol, syphilis, irregular or injurious mode of life, etc., could be excluded with certainty. On admission, the patient complained of vehement pains in the arm appearing both spontaneously and on pressure. The voluntary use of the affected arm was almost entirely lost; indeed, functions like vomiting or similar occupations become absolutely impossible. The hand was cold to the touch, its skin presented a shiny, livid appearance, and some of its muscles were markedly atrophied. In addition the patient suffered from paræsthesia, numbness, formications, and a psoriatic skin eruption, which is not an uncommon concomitant of gout, especially of old standing. As regards the treatment of such cases, besides the anti-gout remedies the author has found beneficial the application of the constant current combined with the use of hot baths. To this mode of treatment the author is inclined to attribute the rapid alleviation of the pains and the great improvement in the patient's comfort. It must be, however, borne in mind that the course of this affection is usually a very insidious one; indeed, several years may elapse before complete recovery ensues; hence great perseverance both on the part of the medical attendant and the patient is needed.

(97) The Antecedents of General Paralytics.
M. Arnand (*Arch. de Neurol.*, March, 1899) dealt with this subject at the meeting of the Société Médico-Psychologique of Paris, January 29th, 1899. (For an abstract based on the studies of other observers, namely, Ball, Régis, Brechet, and Wahl, *vide* Epitome, No. 209, of March 25th, 1899, in which note erratum, lines 5 and 6, "percentage" for "parentage"). Studying the hereditary antecedents of 60 general paralytics, Arnand finds in 18 cases ancestral maladies of an insane (vesanic) or neuropathic character. Acquired syphilis may also be frequent in adult general paralytics, who are thus able in turn to transmit to their offspring, not only a cerebral or nervous diathesis, which might entail on them grave nervous disorder; but actual hereditary syphilis also. Instead of regarding general paralytics *en bloc*, it was found necessary to divide them into separate groups according to their hereditary antecedents. Among the offspring of paralytics some of the children are, as is well known, quite sane, and others have been idiots. Joffroy, in the discussion which followed, stated that he had personally observed 10 cases of adult general paralysis, where the parents had suffered from the same malady; such cases indicated a manifest inherited diathesis towards the disease, quite apart from syphilis or syphilitic taint. It was observed by Christian that in the case of children supposed to be begotten of a general paralytic father, there was this difficulty, namely, that as sexual impotence was an early symptom of this malady, it would effectually lessen, if it did not altogether prevent, the chances of such a father begetting children, and it was probable that children reputed to be born of such a father might not be his own. The cases, however, that point clearly to the fact of general paralytics being begotten by fathers afflicted with the same, go far to show that such a "diathesis" might be transmitted before the period of complete sexual impotence comes on.

(98) Plantar Aponeuritis.
Bovis, of Reims, describes some unusual forms of plantar aponeuritis (*Union Méd. du Nord-Est*, 1899). In some cases the condition forms a complication of influenza which seems capable of producing inflammatory lesions of so very many connective structures, joints, and vessels. In the cases under consideration there was severe pain in the plantar fascia very similar to that which occurs in gonorrhœal rheumatism, and accompanied by some swelling. The most affected portion of the plantar fascia is the middle, or possibly slightly posterior. Palpation of the sole is accompanied by marked pain, and demonstrates the existence of tumefaction. There may be one or two points showing considerable and definite hardness. There is no redness of the skin, but occasionally there may be some œdema. This may be met with in either acute or subacute influenza. This affection disappears in the course of some weeks, and as a rule without any other complication.

(99) A Urinary Symptom in Neurasthenia.
Sépet, at the Congress of Alienists and Neurologists held at Marseilles April, 1899, gave an account of 3 cases present a group of interesting urinary symptoms in neurasthenia (*Arch. de Neurol.*, June, 1899). In the 3 cases of grave neurasthenia recorded there existed polyuria with augmentation of the specific gravity of the urine, a considerable excretion of urea, and especially of phosphoric acid in the urine. The polyuria was constant; it was not like the intense polyuria observed in hysterics and in certain degenerates; the quantity of urine passed rarely exceeded 2 litres, but it remained steadily at above the normal quantity, oscillating between 1,750 and 2,000 c.cm. During the periods of amelioration of the nervous condition the quantity fell to 1,500 c.cm. or less, rising instantly to a larger amount at the least return of symptoms. The amounts of urea and of phosphates, as determined quantitatively by the hypobromide and the uranium tests, were correspondingly augmented, and hence the density of the urine was also increased. The increase of phosphates in the urine was more marked than the increase of urea in all 3 cases.

SURGERY.

(100) Treatment of Abscess of the Brain.
Collins (*American Journal of the Medical Sciences*, April), in a critical summary of recent literature on the treatment of abscess of the brain, states that the mortality rate of this disease, though not so high at the present time as it was several years ago, has not fallen as it should have done. The decrease in the mortality-rate is attributed not so much to recent advance in the surgical treatment of developed cerebral abscess as to a more prompt and improved treatment of certain diseases of the ear and nose which are the most frequent primary causes of intracranial suppuration. The clinical reports on the surgical treatment of cerebral abscess during the past year show, according to the author, a deplorable mortality. This is attributed to failure to recognise the existence of cerebral abscess before it has produced either septic complications or profound exhaustion. The mortality-rate of the disease will, it is held, drop just in proportion to the readiness of recognition on the part of the physician, and to his promptness in directing the surgeon to seek for it, even though there be no exact localising symptoms. Delay in operating until the appearance of unequivocal localising symptoms, or recourse merely to opening of the mastoid when it may be reasonably assumed that cerebral abscess exists, is a far greater injustice to the patient than his subjection to an exploratory trephining of the cranium.

(101) Intubation in Private Practice.

E. SCHLESINGER (*Münch. med. Woch.*, April 4th, 1899) gives statistics showing the frequency with which intubation is performed in hospitals. Records of intubation in private practice are rare. The author discusses whether constant skilled supervision such as can be had hardly anywhere but in a hospital, is absolutely essential in intubation. It may be necessary to remove the tube as quickly as possible, or on the other hand, to reintroduce it. The blocking of the tube may take place gradually by the accumulation of tenacious mucus, or rapidly by a piece of detached membrane. In the former case there is time to communicate with the practitioner. Cases of rapid death have been attributed to the latter, but the author thinks that there are other factors at work here. If the tube is attached to the cheek by means of a piece of thread the nurse, or even the unskilled attendant, can withdraw the tube if the symptoms necessitating such a measure have previously been explained. The reintroduction of the tube is a more pressing matter. The shorter tubes, such as suggested by Bayeux, are less likely to be coughed out. Often the coughing out of the tube furnishes evidence that the swelling has abated. On the other hand, urgent dyspnœa may return. The author says that this also may partially subside by the time the practitioner arrives, as the excitement, which has considerably aggravated the dyspnœa, becomes less. The inhalation of steam or a drink of hot milk may diminish the dyspnœa. Precautions must be taken to prevent the child pulling out the tube by means of the thread. The author gives details of 4 cases illustrating the difficulties which may arise in intubation in private practice. All the cases recovered. The serum treatment is a *sine quâ non* of intubation. Intubation must not be delayed until the last moment, yet the laryngeal stenosis may disappear under the serum treatment alone. It is necessary to remain with the child for fifteen minutes or so after the tube has been put in, to see that the breathing is satisfactory. The doctor's address at different times of the day is left in case any urgency should arise. The tube should not be left in longer than necessary. It can be pulled out by the attendant shortly before the morning visit, when the doctor is known to be within call. The author contends that a case of intubation does not really require more supervision than one of tracheotomy.

(102) Fistula of Urachus.

SANTUCCI (*Settimana Medica*, January 17th, 1899) reports the case of a child aged 3, who, in the place of a regular umbilical cicatrix, presented a small palish red swelling containing at the summit a minute opening. From this after much pain and independently of micturition, came forth two or three drops of a clear fluid of acid reaction, and having the appearance of urine. These attacks occurred frequently in the twenty-four hours. Micturition was not painful and the urethra was normal. A probe entered 2 or 3 cm., but did not reach the bladder. As soon as the cord came off after birth a few drops of urine were noticed to exude at the navel, but never any pus. Laparotomy was performed in August, 1897, and the urachus dissected out down to the bladder and removed. Perfect recovery ensued. From this and other cases it is clear that fistulæ may arise from permeability of the urachus. They may open externally shortly after birth, with or without impediment to the emission of urine. Fistula of the urachus may come on in adult life as the result of retention of urine or suppurative cystitis. The radical treatment is laparotomy and excision of the urachus, but this is contraindicated if there is severe cystitis or pyelitis.

(103) Reindeer Tendon for Sutures and Ligatures.

SNEGUIREFF (*Centralbl. f. Chir.*, No. 24, 1899) recommends the use of tendinous fibres from the ligamentum nuchæ of the reindeer as a material for absorbable sutures and ligatures. The fibres as used by the author are obtained by simple division of a fresh ligament, and are kept straight and untwisted. This material, it is stated, can be thoroughly sterilised with remarkable ease by successive immersion in juniper oil, ether, or alcohol, sublimate solution, and sterile salt solution. The sutures and ligatures thus produced can be readily manipulated, and the knots, when they are tied, are strong and reliable. This material is not so speedily absorbed as catgut, which is regarded as a decided advantage. The author has been convinced as to the thorough safety and efficiency of this form of absorbable suture material by the results of its application in 83 gynæcological laparotomies.

(104) Galactocele in the Male.

KIRMISSON (*Progrès Médical*, July 15th, 1899) was consulted by a boy, aged 14, who had a fluctuating tumour in the left breast. It developed after a blow received at football, and a blood cyst was suspected. On puncture a white liquid escaped, and proved on examination to be milk. The cyst was thus a true galactocele.

MIDWIFERY AND DISEASES OF WOMEN.

(105) Puerperal Tetanus treated by Subdural Injection.

V. LEYDEN (*Berl. klin. Woch.*, 1899, No. 29) reported to the Charité Medical Society the following case, which he considered should inspire greater confidence and hope in the curative effects of the injection of antitoxin into the dura mater. The wife of a cabinet-maker, aged 29, on June 2nd, fell down the cellar stairs, and, being in the third month of pregnancy, aborted the next day. On June 13th signs of tetanus appeared (pains in the neck on swallowing), showing an incubation of 10 days, and therefore foreshadowing a serious case, the mortality of cases with incubation periods of from 1 to 8 days being 91 per cent.; from 8 to 14, 80 per cent.; and over 14 days only 52 per cent. On June 19th the patient was admitted into the Charité Hospital, and received a subdural injection of 10 c.cm., equivalent to 1 gram, of Behring's solid serum, and also, subcutaneously, 2 grams Tizzoni's serum, equivalent to 1 gram of Behring's, the available quantity of which was limited. She also had 0.1 gram of morphine subcutaneously, and 2.5 grams of chloral *per os* in the first twenty-four hours. The symptoms, nevertheless, were unusually severe, and the prognosis most unfavourable. The convulsions were extremely powerful, and were brought on by the slightest touch; trismus was complete, and there was marked dyspnœa, especially during the spasms; the pulse was 124, and there was evening pyrexia. She could swallow but little, and was given in clysters a litre of milk and two eggs, with sherry. On June 20th she was given another subcutaneous injection of 3 grams of Tizzoni's serum with the same medicines and nourishment; on the 21st two subdural injections of ¾ gram of Behring's serum; and on the 23rd, the tenth day, a subcutaneous injection of 2 grams Behring. The subdural injections were well borne, but the temperature rose from 37.7° to 39.8° C. on the first occasion, and from 37.8° to 39.1° on the second. The second subdural injection caused the patient much pain; she cried bitterly, and had a prolonged spasm. The first improvement appeared on the ninth day in slight relief of the trismus, convulsive dyspnœa, but the tetanic spasms passed into the lower extremities, and were very severe and painful, though, of course, less dangerous than the trismus and thoracic spasms. Profuse perspiration was a marked symptom of the case, even when receiving from 1 to 1.5 litre of milk by the stomach, and 1 litre by the rectum, her urine did amount to 300 grams. Altogether the woman received 9 grams of antitoxin, 4 of Behring's serum and 5 Tizzoni's, nearly twice the supposed curative dose, and half of it in the dural sac. On the seventeenth day of the disease she was in good spirits, and in a satisfactory condition, though the trismus had not entirely disappeared, with a pulse of 108 to 120, and taking the above nourishment. In 1897 Jacob published a case from v. Leyden's clinic successfully treated by subcutaneous injections of antitoxin, but the incubation had been fourteen days, and the symptoms were not nearly so severe; and it was in a fatal case of puerperal tetanus of his published by Heyse in 1893 that the presence of the bacillus was first established.

(106) Influenza complicating Uterine Disease and Pregnancy.

AMEISS (*Amer. Jour. of Obst.*, April, 1899) believes that serious inflammatory complications of the female pelvic organs are often found in cases of influenza infection. Menorrhagia and metrorrhagia are of frequent occurrence, and even sal-

pingitis and pelvic peritonitis are occasionally met with. He relates the case of a girl of 17, in good general health, who was attacked with influenza affecting the respiratory organs and developing into pneumonia. When taken ill menstruation was due, but was delayed two days; on its appearance it developed into a hæmorrhage which resisted all treatment for five weeks, until the chest symptoms subsided. On examination the hypogastric and iliac regions were swollen; the uterus was painful on vaginal examination, the right tube was enlarged to the size of a small finger, and felt soft and doughy; and the left tube seemed embedded in a diffuse semi-solid inflammatory exudate. Three weeks after the subsidence of the chest symptoms all uterine and tubal inflammation had disappeared, the local examination giving an entirely normal condition. The author observes that women are most liable to uterine and pelvic complications when the attack occurs at the time of menstruation. Influenza also predisposes to abortion when occurring in a pregnant woman, and the accident is then usually accompanied by excessive loss of blood. Müller reported 157 cases of influenza in women; 21 of these occurred during pregnancy, and 17 of them aborted. This is, however, a larger proportion than that given by other authors. Ameiss has met with a case of abortion due to influenza, and gives the notes. When influenza attacks a woman about to be confined the labour frequently proves a tedious one, with considerable inertia. Excessively bloody and offensive lochia may continue for weeks beyond the normal duration, probably due to subinvolution. Lactation is often diminished and sometimes checked. When influenza attacks a patient shortly after labour, the onset may be strongly suggestive of puerperal sepsis. In cases of chronic uterine disease the supervention of an intercurrent attack of influenza nearly always leads to acute exacerbation of the local affection, whilst tumours both benign and malignant are liable to increase in size and to undergo degenerative changes.

(107) Entozoa in the Uterus.

E. M. Simons (*Centralbl. f. Gynäk.*, No. 26, July 1st, 1899) noticed in examining a woman, aged 42½, and suffering from rupture of the perineum and tear of the cervix, that the secretion from the uterus had a peculiar aromatic odour, and that the erosion had a very pale livid colour. On the vaginal portion was seen an oxyuris vermicularis, about 1½ cm. in length, and from the cervical canal another smaller one was extracted. There was neither vulvitis nor colpitis in this case, but possibly the endometritis which existed might be ascribed to the parasite. The patient had long suffered from rectal irritation.

(108) Lipoma of Uterus.

Brünings (*Monats. f. Geburts. u. Gynäk.*, May, 1899) removed a tumour of the size of a child's head from the anterior wall of the uterus of a woman, aged 55. On section, its cut surface appeared bright yellow and soft, a little fluid exuded, and was found full of fat globules. Brünings made out that the tumour was by origin a myoma. He detected every stage of fatty degeneration of plain muscle cells, as well as areas of pure adipose tissue and of perfect muscular fibres. This change was also noted by Amann, who denied that the fat had simply infiltrated the tumour. The growth was therefore a lipomyoma of the uterus. Brünings has not found in medical literature any record of a case of this kind.

(109) Hæmorrhage from Vagina of Infant: New Growth.

Waldstein (*Monats. f. Geburts. u. Gynäk.*, May, 1899) reports a case in Schauta's wards. The patient was 18 months of age, and had been subject for five months to intermittent hæmorrhage from the vagina. The blood was found to arise from a tumour of the size of a cherry attached to the lower third of the posterior vaginal wall by a broad pedicle. The tissues around the attachment of the pedicle were freely excised, leaving a very vascular raw surface, which was closed by sutures placed closely together. The tumour was of the type known to pathologists by the formidable term "perithelioma or hæmangiosarcoma peritheliale," which has been observed before in the ovary, but not in the vagina.

(110) Malposition of Left Kidney and Uterus Unicornis.

Frank (*Centralbl. f. Gynäk.*, No. 20, p. 596, May 20th, 1899) records the case of a woman, aged 30, who had had eight normal confinements. She had for three years suffered from pain in the lower part of the abdomen, especially on the left side, very marked on locomotion and during coitus. The uterus was found retroverted, and to the right, and could not quite be replaced; while to the left side and in front of the sacro-iliac joint was a resistant lobulated tumour larger than the fist. Laparotomy was performed, when it was discovered that the left-sided tumour was the kidney displaced and rotated so that its concave border was directed upwards and outwards. The peritoneum over it was divided, the organ was rotated into its normal relation to the axis, and drawn up to a higher level in the abdomen where it was fixed with sutures. The left tube, ovary, broad and round ligaments were wanting. The uterus unicornis was anteflexed, and fixed to the anterior abdominal wall. Recovery was complete.

THERAPEUTICS.

(111) The Effect of Baths, Massage, and Exercises on the Blood Pressure.

Edgecombe and Bain have concluded a series of experiments on this subject (*Journ. of Physiol.*, vol. xxiv, No. 1). The instrument used was Oliver's hæmadynamometer. The maximum and mean arterial pressures, and the venous pressure, were recorded; the maximum pressure, as taken by the instrument, being the amount of pressure in millimetres hg. required to just prevent the passage of blood along the artery; the mean pressure being the reading taken when the indicator gives its maximum excursion; and the venous pressure being the amount of pressure requisite to just prevent the passage of blood along the vein. For arterial pressure the radial artery was employed; for venous pressure the veins of the forearm or back of the hand. The readings were taken in the same posture throughout each series of observations, with due precautions to eliminate the effects of gravity. Eleven subjects were experimented on, their ages ranging from 20 to 60; they included marked examples of both low and high arterial pressure. (1) The following baths were used: (*a*) Cold, warm, and hot immersion baths of plain water, Turkish bath, Russian bath, Sitz bath; (*b*) the needle bath, hot and cold, the alternating douche, the spinal douche; (*c*) The saline-sulphur baths of Harrogate, the artificial Nauheim baths, still and aërated. (2) Massage: (*a*) Dry massage, with and without massage of the abdomen; (*b*) wet massage (Aix douche and Vichy douche). 3. Exercise: Resisted movements, dumb-bell exercises, cycling. Conclusions: (1) Cold immersion baths of plain water raise the arterial pressures, maximum and mean, and lower the venous pressure; after reaction the arterial pressure falls and the venous rises. The results may be attributed mainly to changes in peripheral resistance. (2) Percussion added to cold increases the rise in arterial pressure. In addition to increased peripheral resistance there is probably an increase in the output of the heart. (3) Hot immersion baths of plain water lower the arterial pressures, and both absolutely and relatively lower the venous pressure, to an extent roughly proportionate to the increase of temperature. The percentage-fall in venous pressure is greater than the percentage-fall in arterial pressure; and the changes are best explained as due in the first place to peripheral arteriolar dilatation, and in the second place to increased capacity of the vascular system resulting from that dilatation. (4) The Turkish baths lower the arterial and venous pressure to a greater extent than the preceding, though the fall in venous pressure is proportionately not so great as that in arterial pressure. The pulse-rate is greatly increased. Associated with peripheral vascular dilatation there is probably a diminished output of the heart, which would explain the greater fall of arterial pressure. (5) Saline baths at warm temperatures lower the arterial pressure to a greater extent than plain water baths at the same temperatures; the venous pressure is raised relatively to the fall in arterial pressure. When the saline material is increased or when effervescence is added (Nauheim bath), a further lowering of arterial pressure takes place, while the venous pressure becomes absolutely raised. (6) C

massage lowers arterial and raises venous pressure. When the abdomen is massaged a general rise in blood pressure occurs. This is due to the dispersal of blood accumulated in the splanchnic area into the systemic circulation. (7) The Aix douche lowers arterial and raises venous pressure to a greater extent than dry massage. The Vichy douche raises arterial pressure. This is probably due to the fact that a needle spray is used and the patient is in the recumbent posture, and consequently abdominal massage is more efficiently performed. (8) The effect of exercise on the blood pressure depends on the severity of the work performed.

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(112) Fango Treatment.

DAVIDSOHN (*Therap. Monats.*, June, 1899) gives his experiences of the Fango cure in Berlin. This cure has been carried out for years past in the Italian mud baths, and particularly at Battaglia. Fango differs in its method of preparation from ordinary medicated muds. It is not mixed with warm water to form a pasty consistency, but is allowed to absorb the water by being placed in large tanks constructed for the purpose. The practical importance of this method of preparing the mineral mud is that it retains its curative qualities for an indefinite time, and can be exported ready for use. When it is desired to produce general diaphoresis in addition to the local mud application, the entire body is enveloped in blankets, whilst the Fango mud is applied locally. It is possible to have a local Fango application with or without covering the entire body. In cases where the hand or foot is to be treated, the patient has merely to plunge the part into a vessel filled with hot Fango (40° to 55° C.). By preference, the pot containing the mud should be made of indiarubber in order to obviate the rapid cooling; the vessel should in addition be placed in a bath of hot water having a temperature 2° higher than the Fango itself. When the Fango has to be applied to other parts of the body, it should be wrapped up in blankets so that the heat is not allowed to evaporate. The time occupied by the treatment varies from ½ to 1½ hour. After removal of the mud, the part must be washed with lukewarm water followed by a douche. The patient must rest for a short time after the completion of the treatment. The action of the mud resembles that of a hot plaster. The author has treated 10,000 cases with Fango; he has never witnessed any unpleasant effects. The treatment is chiefly indicated in certain joint diseases, especially rheumatism, gonorrhœa, and gout; it is also of great benefit in arthritis deformans and muscular rheumatism, neuritis, neuralgia, sciatica, etc. Cases of pleuritic exudation have also been successfully treated. In chlorosis the treatment has sometimes had marked success.

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(113) Bromide of Camphor in Epilepsy.

LOUIS HASLÉ (*Thèse de Paris*, 1899) gives an account of careful clinical observations made with this drug in the treatment of epileptics at Bicêtre. Monobromide of camphor has not been hitherto employed in epilepsy systematically or with constant success. It has given variable success in delirium tremens, genito-urinary trouble, and particularly blenorrhagia with painful erections (Bourneville), and in retention of urine from hypertrophy of the prostate, and spermatorrhœa. Haslé, after carefully selecting a number of cases of epilepsy from the abundant material at Bicêtre, obtained the following very constant results: (1) As regards epilepsy proper (*haut mal*), the action of bromide of camphor was doubtful, and was less effectual than the mixed bromides of potassium and sodium and ammonium. (2) In attacks of *petit mal*, and in all cases of epileptic vertigo, however, its effect was incontestable; it at first diminished the frequency of the vertiginous attack, and finally made them disappear altogether. The condition to be observed in prescribing was to begin with moderate doses, made gradually progressive, and lasting for a sufficient time. Owing to its disagreeable odour it is best taken in capsules of 20 centigrammes, or dragees of 10 centigrammes, beginning with 2 capsules per diem, and augmenting by 2 capsules the second week, etc., till 8 capsules per diem are taken, then as gradually diminishing the dose till 2 capsules per diem are reached and maintained for some time.

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(114) Naphthalin Poisoning.

ZANGERLE (*Therap. Monats.*, February, 1899) met with a case of naphthalin poisoning in his clinic at Marburg. A boy, age 12, came home one evening with symptoms which closely resembled alcoholic poisoning. The father was certainly of opinion that his child was "drunk." The patient was semi-conscious, his gait resembled that of a drunken man, he was unable to answer questions. The history of the case showed that no alcohol had been taken, but that a school friend had given him two "bonbons," which subsequently proved to be the cause of his illness. An emetic was given by the parents, which acted promptly. The next morning the author was called to see the boy, who appeared to be in a drowsy condition, but was quite conscious; there was no vomiting, and the appetite had partly returned. The pulse was regular and full, the reflexes were lively, and there was no sign of paralysis or incontinence of urine, also no discoloration of urine. The vomiting had so successfully cleared the child's stomach, that it was thought unnecessary to give any medicine. The drowsy condition continued during the next four days, and then complete recovery took place. Another boy had taken one "bonbon," and had suffered from very similar symptoms, only in a less severe form. The offending sugar plums were called "naphthalin camphor tablets;" they were white in appearance resembling lumps of sugar. They were sold as moth destroyers. In the textbooks naphthalin is spoken of as a harmless drug occasionally causing pain in the epigastrium and eczema. The tablets were handed over to Professor Meyer to analyse. He found that each tablet contained 2 grams of pure naphthalin; there was no phenol or camphor present. Experiments on animals showed that naphthalin produced inco-ordination and partial paralysis when given to frogs; the reflexes were not lost. A rabbit weighing 2 kilos. was given from 4 to 5 grams in water; nothing particular happened until 25 hours had elapsed, when the animal suddenly died from paralysis of the nerve centres; the pulse continued to beat for a short time after respiration had ceased. A cat swallowed 4 grams of naphthalin in emulsion form. In an hour and a-half the hind limbs became ataxic, and swaying movements of the entire body were noticed, even when the animal was at rest. Attacks of sneezing set in, evidently brought on by nasal irritation; the animal made repeated attempts to remove the source of irritation by rubbing his nose. In two hours' time the inco-ordination had become more marked, and slight twitching movements were noticed in the facial muscles. Saliva flowed freely from the mouth. After four hours vomiting occurred. The cat died during the night. No pathological lesions were found. A few cases of naphthalin poisoning have been reported.

PATHOLOGY.

(115) Primary Malignant Tumours of the Suprarenal Glands.

OTTO RAMSAY, from a study of 67 cases of primary malignant tumour of the suprarenal gland (*Johns Hopkins Hosp. Bull.*, January-February-March, 1899), comes to the following conclusions: (1) While malignant tumours of the suprarenal gland are rare, they should be considered as one of the factors to be eliminated in the presence of an abdominal tumour; (2) they are more common in the male sex; (3) in some cases the symptoms are well marked, in others not so well; (4) rapid loss of strength, debility, emaciation, digestive disturbances, and abdominal pain, are the most prominent symptoms; (5) skin changes are rather the exception than the rule; (6) they run a rapid course, the duration being shorter than normal compared with growths in other organs; (7) diagnosis is difficult in all and impossible in many; (8) Differential diagnosis must be made from other suprarenal diseases, renal tumours, hepatic tumours, diseased retroperitoneal glands, and from cysts and new growths of the pancreas; (9) the prognosis is always serious, even after a successful operation, from the frequency with which both glands are found involved, and the tendency to early metastases; (10) operation gives the only hope of relief, and has been successful in two cases; (11) the chief difficulties of operation are friability of the tumour, hæmorrhage, and adhesions.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(116) Male Hysteria.

Ch. Vallon and J. Rogues de Fursac (*Arch. de Neurol.*, June, 1899) give in detail particulars of a case of male hysteria occurring in a patient free of hereditary antecedents, but presenting the "stigmata" of this disease. The case is that of a man, aged 53, of good physique, and robust. His father was given up to habits of intemperance, and died at the age of 79 of a disease of the bladder; while his mother, after enjoying good health, died at the age of 75 of an attack of apoplexy. The grandparents on both sides had been long-lived (over 75 years). An elder brother of he had died young, aged 4, and a young sister had died of paralysis at the age of 14. Another sister (living) suffers from migraine. The patient has had three male children, the eldest of whom died at 17 (cause unknown), and the second at 4½ years of meningitis. During childhood he had been free of convulsions or other serious illness. He attended school, and was an average scholar. He then joined the army, and rose to be an officer in Algiers, where he suffered from cholera and typhus. He married afterwards, and spent in extravagance his wife's large fortune, and was imprisoned for debt. In 1877 he contracted a syphilitic chancre (diagnosed as such by Ricord); secondary eruptions and, later, pustules developed on the face; was improved by vigorous antisyphilitic treatment. In 1882 a fresh eruption appeared on the face, and after its cure he joined a regiment abroad at Tonquin, but owing to irregularity and failure in discipline was allowed to leave the army. He became a tobacco merchant at Saïgon, and made 15,000 francs, returned home and obtained a sum from the Minister of War, and settled to the life of an auctioneer. In 1885, while announcing articles for sales in auction he suddenly lost his speech, and could only emit a raucous and inarticulate scream. The previous day he had been in good health, with no symptoms of threatening illness. This mutism lasted fifty-five days, and then ceased abruptly, when he began to talk correctly and properly. During his attack of mutism he understood clearly all that was said, and could write and read perfectly, though unable to utter a word. He now joined his wife, from whom he had long been separated, and a boy was born to them at the close of 1888. Two years later he secretly withdrew a sum of 12,000 francs, and lost it on the race-course. In February, 1890, after fifteen years of a life of debauchery and sexual excesses, he was struck with blindness. The previous day he had felt excessively fatigued from sexual excess, but was free from any special ocular trouble. On now consulting two physicians he was taken for a malingerer. The blindness persisted for thirty-eight days; it was complete, and he could not distinguish day and night; it then disappeared suddenly, and he was now able to see clearly with both eyes. Eight days later he began to be a little deaf in the left ear, and this one-sided deafness still persists. He continued on his travels (Cochin-China and back), and did various things to get employment. In December, 1894, while about to arrive at Monte Carlo, he was suddenly taken with an attack of mutism, exactly as in 1885. (For some days previous to this he had indulged in sexual excesses, and had vague fears and presentiments of threatening loss of speech and sight). He also feared the effects of the winter's cold. The attack of mutism lasted two months, and then ceased as abruptly as did the first attack. It was not accompanied by deafness, nor by any paralysis nor word-blindness. As soon as he was cured he returned to Paris, procured a large sum of money by counterfeiting his wife's signature, was arrested and tried, and let off with a light punishment. In 1895 he obtained a situation as cashier, embezzled a large sum of money, and was tried and condemned to suffer imprisonment for one year, execution being according to the Béranger law postponed for a time. During this interval he was at first indifferent; he then drew his quarterly monthly allowances twice, and proceeded to gamble and lose the same on the race-course. Later he became nervous, excitable, and lost self-control, and asked to be imprisoned to prevent his killing his wife and committing suicide or murder. He was transferred to an asylum suffering now from acute melancholia with suicidal tendencies and sitiophobia. Here after a while he had a third attack of mutism, preceded by slight stammering. Fourteen weeks after there was a sudden recovery of speech, followed by an abundant epistaxis. The knee-jerks were exaggerated, there was rachialgia, with zones and patches of analgesia and of hyperalgesia irregularly distributed about the arms and shoulder. The visual field was notably contracted on both sides. The left ear was deaf, and there was an anæsthesia of the corresponding external ear and its meatus. Taste and smell were normal. Intelligence and memory were normal, except for a complete blank as regards all events during the first two months of his detention at the asylum. He now continued to be industrious and useful, helped in office work, and after being in the asylum six months was discharged cured of his attack of melancholia, and in his right mind, though still presenting stigmata of hysteria, and with a complete lacuna in his mind of events during the early two months of his sojourn in the asylum.

(117) Delirium Cordis.

Feige (*Therap. Monate.*, February, 1899) records the case of a man, aged 30, who came to him on January 28th, complaining of shortness of breath. He had been suddenly attacked with acute dyspnœa, which continued up to the time when the author saw him. The patient's face was cyanotic, the respiration 40, and the pulse 200 per minute. On examination, the left side of the heart was found to be enormously enlarged, and a loud systolic murmur was heard all over the cardiac area. The patient was a delicate-looking man, and the author is of opinion that sexual excess was the chief cause of his dilated heart. He had had previous attacks of dyspnœa when a boy, so that it is possible he may have had some forms of congenital heart disease. Feige ordered digitalis and rest in bed. The next day there was no improvement. A morphine injection was given. On January 30th chloral hydrate was tried, and another morphine injection, but this had no effect on the distressing symptoms. The patient was obliged to sit up in bed day and night; his face remained cyanotic, and the lungs showed signs of commencing œdema. After a consultation it was resolved to try digitalis once more. In addition the constant current was applied over the cardiac area three times a day. The anode was placed over the situation of the vagus in the neck, whilst the kathode was applied over the cardiac area. The current was continued for half an hour at a time. The next day, after a quarter of an hour's galvanism, the patient suddenly felt much better, his face became a natural colour, and the dyspnœa entirely vanished. The pulse dropped to 80. The left ventricle had slightly diminished in size. It is possible that the galvanism had a beneficial effect in this particular case The patient gradually improved. After seven months the author examined the heart again, and found that the upper border reached to the third intercostal space. The right border extended to the left edge of the sternum, and the apex beat was in the fifth space of the nipple line. The first sound was absent over the cardiac area, but was heard in the second right intercostal space. The second sound was loud and slapping. Any unusual exertion brought on an attack of dyspnœa, but not so severe as the one described.

SURGERY.

(118) The Great Omentum the Surgeon's Friend.

Milian (*Gaz. des Höp.*, July 1st, 1899) has prepared a valuable essay on the Defensive Mobility of the Great Omentum based on experiment and observation. He shows that it is movable, that it is a net to catch foreign bodies, and that it appears to make for wounds and perforations in order to adhere to them. The omentum does not contain smooth or striped muscle, and its mobility is therefore due to some agency not accurately determined. It may signify contraction of its protoplasm, or it may be passive through peristaltic movements in the intestine. There is a

kind of intelligence about this movement, just as in the activity of leucocytes, which absorb microbes or fly from them according to the virulence of the latter. This "chemiotaxis" is "active" when it causes the omentum to spread out, an effect which can be produced by the application of sterile broth cultures and cultures of non-virulent microbes. On the other hand, caustics and virulent cultures cause retraction ("passive chemiotaxis") of the omentum in its upper part, near the stomach, and far from the dependent portions of the abdomen where noxious products tend to accumulate. The active process sets the lower part of the omentum in motion towards any region where infection reigns. Milian finds that the omentum regularly sweeps the abdominal cavity, and is constantly so engaged. He observed that it regularly took up grains of carmine as well as organic matter. The former are eliminated, as are organic bodies, which also undergo a kind of digestion by its leucocytes. The tendency of the omentum to adhere to wounds and perforations and to get into a hernial sac is well known. Excepting that it may cause strangulation, it is the surgeon's friend. According to Cornil and Carnot, it is thanks to the omentum that aseptic surgical wounds of the ureter, bile ducts, etc., can be left to heal without sutures, for that serous fold walls in the wound. Lastly, thanks to omental adhesions, the "abdominal past" of any subject can be learnt when the peritoneal cavity is opened, for they bear witness to former irritations, and to extinct inflammatory processes.

(119) Operations on Diabetic Patients.

Noble (*Amer. Journ. Obstet.*, February, 1899) reports 3 cases of operation on diabetic patients, 2 of whom recovered. The first patient was 50. A sample of her urine was by mistake confused with some urine from another case, which in consequence was supposed to be diabetic. The operation was amputation of the breast for cancer; it was done some years ago, but was radical as then understood. The axillary glands were dissected out and the axilla drained. Afterwards it was found that the urine contained sugar. The operation on the other patient, not diabetic, was therefore undertaken, though before the error was detected it had been considered unjustifiable. In the diabetic case the axilla suppurated, but the patient recovered. The second patient was 50; her appendages had been removed, and in the course of a few years a ventral hernia developed. Glycosuria was detected; the patient was therefore put on special diet and treated to full doses of codein and strychnine. When the excretion of sugar had greatly diminished the hernia was repaired by operation. Three years later the urine, after prolonged medication, was found quite free from sugar. The third patient, like the others, was a multipara aged 50. She had been subject to diabetes for some years. She was passing, when examined by Noble, rather less than the usual amount of urine; the specific gravity was 1026, the proportion of sugar 2½ per cent. The treatment and medication were conducted just as in the second case, and the sugar greatly diminished. The patient was in good general health, but worried with a complete procidentia. Noble thought that a complicated plastic operation would involve risk. He simply performed a vaginal hysterectomy, bringing the stumps of the appendages into the vagina, so that, if they sloughed, the peritoneum would not be compromised. An anterior colpotomy was also performed. On the fourth day the amount of urine and percentage of sugar suddenly increased, and the patient died of diabetic coma on the sixth day.

(120) Wound of the Heart.

J. O. Rush (*Therapeutic Gazette*, July 15th) says that on August 11th, 1897, he was hurriedly called to see a coloured man, 45 years old, 6 ft. high, and weighing about 185 lbs., who had been stabbed some thirty or forty minutes before his arrival. At every heart beat there gushed from a small wound directly below the left nipple, between the fifth and sixth ribs, a wave of blood. There was another wound, 10 inches long, extending from the angle of the eleventh rib downward and forward towards the linea alba, and through the external oblique and transversalis muscles. On passing the index finger into the small wound lying over the heart, a cut could be distinctly felt in the wall of this viscus, apparently entering the right ventricle. The external bleeding was checked, and the patient was stimulated with strychnine and nitroglycerine hypodermically. While the long wound was being sutured the patient regained consciousness; he called him by name, and gave an intelligent account of the conditions which led up to the assault made upon him. He lived for about two and a-half hours after receiving his wound. The necropsy showed that the diagnosis as to the position of the heart wound was correct, and that it was large enough to admit the little finger.

(121) Hydatid Cyst of Parotid Gland.

Morestin (*Bull. et Mém. de la Soc. Anat. de Paris*, February, 1899) operated on a woman, aged 66, who had noticed for over fifteen months a tumour below the right ear. It felt like an ordinary "mixed" parotid tumour, and was painless. But after a considerable amount of handling for diagnostic purposes the tumour suddenly increased in size, and became very tender. The skin grew red, and for the first time fluctuation was detected. Suppurative parotitis was suspected, added to the new growth already detected. Morestin operated, making an incision from the lobule of the ear to the angle of the jaw. After some œdematous parotid tissue had been divided, a grooved sound was plunged into the fluctuating portion of the swelling. A quantity of slightly turbid fluid escaped. The puncture was enlarged, then a hydatid membrane was discovered and extracted. The cavity was washed out with carbolised water and closed without drainage. The wound healed rapidly. This appears to be the fifth case of hydatid disease of the parotid gland recorded. The remainder were were reported by Vieusse, Pfister, Salzer, and Piéchaud. Vieusse's patient was an Arab of Oran, Desprès was doubtful about the diagnosis. Piéchaud's case occurred in a child aged 7.

MIDWIFERY AND DISEASES OF WOMEN.

(122) Primary Cancer of Fallopian Tube.

Danel (*Thèse de Lille*, 1899) has written a monograph of much interest on this disease, once thought to be non-existent, though now over 30 authentic cases, and several more probably authentic, have been published. He adds another which is very characteristic. The patient was a married woman, aged 45; her one child was 25 years of age, and she was still regular. For eight months she had been subject to debility and a sense of weight in the lower limbs. Serous fluid came away at each period. At the date of the operation the patient simply looked pale and directed no attention to the pelvic organs. As no lesion could be detected elsewhere a pelvic exploration was made, and a fixed mass detected in the left fornix and Douglas's pouch. Delassas of Lille operated; he found a sausage-shaped mass to the left of and behind the uterus; it was adherent to other structures, but he succeeded in removing it. Unfortunately the left cornu was clearly infected. The left tube formed a large cyst containing a pint of lemon-coloured fluid, and exuberant papillary masses grew from its walls. They were found to consist of undoubtedly epitheliomatous growth. The right tube at the operation seemed healthy, but the patient died within a few months from rapid recurrence involving the remaining tube.

(123) Delivery of the After-Coming Head.

Stahl (*Amer. Journ. of Obstet.*, April, 1899) had a case of breech delivery with retention of the after-coming head, due to hydrocephalus. To deliver he employed a new method of craniotomy, as follows: With scissors he severed the trunk as near as possible to the labia, and disarticulated the vertebræ. No fluid escaped from the vertebral canal. While decapitating he made a cuff of the skin of the neck to cover the vertebra resected higher up. The head at this time was transverse in the superior straight, with face to the right. Little difficulty was experienced in rolling the head round, so that the face was to the left with the vertex presenting, and the sagittal suture in the transverse diameter of the superior straight. He then perforated the vertex with long blunt-pointed curved scissors; there was a gush of a considerable quantity of serous fluid. Withdrawing the scissors he inserted the finger to break up the brain tissue, and soon had no difficulty in delivering the collapsed head by slight pressure from above, aided by

simple twisting of the bones of the vault upon themselves, at the same time making traction by means of the index finger within, enforced by that of the other fingers without the calvarium. No hæmorrhage followed, and careful inspection showed no lacerations or abrasions. The time occupied from the beginning of the extraction to the completion of the delivery of the placenta was 15 minutes. The puerperium was uneventful. The author claims that this method is easier, safer, and less tedious than other plans of diminishing the size of the hydrocephalic head. The methods of tapping and drawing off the fluid with a catheter are slow and unreliable; procedures involving breaking up the base of the skull are subject to the risk of traumatism, such as rupture of the uterus, lacerations, and perforations of the uterus and vagina from slipping of instruments and tears from spiculæ of bone, hæmorrhages, and pressure inflammations leading to sepsis, necrosis, and fistulæ. He considers that it is much easier to deal with the fore-coming head than with the after-coming head, as recommended by Donald and Strassmann.

(124) Lactation by Albuminuric Mothers.

Budin and Chavane (*Rev. Obstét. Internat.*, June 11th, 1899) conclude, from the statistics of the Charité, the Maternité, and the Clinique Tarnier, that women who have had albuminuria in pregnancy may nevertheless nurse their infants, and that even when they have been eclamptic. Often the albuminuria has rapidly disappeared and nursing has gone on uninterruptedly. When the albuminuria persists—which is exceptional—lactation may still be continued, and the ultimate recovery of the mother is not thereby hindered. When the mother has not enough milk, she may have recourse to a mixed diet. Of course strict supervision is always needed.

(125) Dermoid of Mesentery easily Enucleable.

Marie, Berthier, and Milian (*Bull. et Mém. de la Soc. Anat. de Paris*, March, 1899) report a clinical and pathological case of interest to the surgeon, though no operation was performed. A woman, aged 56, was admitted, in March, 1898, into the Hotel Dieu for anasarca and albuminuria. These symptoms disappeared after a course of milk diet and diuretics. A few months later swelling occurred in the submaxillary lymphatics; in three weeks they became as big as an egg. Then, on examining the abdomen, M. Aud'houi, the physician, discovered a tumour of the size of a fœtal head, movable, independent of the uterus, and apparently developed in the right ovary. No clinical history, beyond what was already known, could be obtained. Malignant ovarian tumour, with infection of the glands as far as the neck, was suspected, but the surgeons called in consultation admitted no causal relation between the tumour and the large swellings under the jaw. Operation was, it would seem, refused, and the patient died last September of an intercurrent affection not specified. At the necropsy the submaxillary lymphatics were found tuberculous and caseous. The abdominal tumour was found between the layers of the mesentery. It was freely movable in all directions and unadherent except posteriorly, where there was a loose adhesion to the parietes. There was no ascites. The tumour was a true dermoid cyst weighing over 3 lbs. 4 ozs. Part, which was solid, consisted of white fibre undergoing hyaline degeneration. The cystic portion contained a greasy fluid, on the surface of which floated free oil and a mass like tow, which proved to be hair. Teeth, bone, and cartilage were absent.

THERAPEUTICS.

(126) A New Method of Anæsthesia.

J. Geppert, Bonn (*Deut. med. Woch.*, 1899, No. 27, 28, and 29) describes, with illustrations, an apparatus already successfully used in some 400 cases (in 230 by himself) which automatically delivers air containing a large and known percentage of chloroform into a mask or the open mouth of the patient, a scale in degrees of 0.25 c.cm. attached to a tap indicating the exact amount of chloroform delivered per minute. The mixture is concentrated; a small quantity is required, and free respiration is a condition for its use. A gasometer is filled with air; a weighted glass rod suspended from the top of the upper cylinder of the gasometer descends *pari passu* with it, and plunges into a glass tube containing chloroform, the overflow of which passes into a receiver in a bath at 90° to 100° C., and is immediately vaporised. The chloroform vapour is led into the discharge pipe of the gasometer, and the mixture of air and chloroform is led to a convenient spot by fixed gas piping, and thence by a rubber connection to the operation table. The proportion of chloroform vapour to air (0.4 to 0.5: 1 litre) depends on the relative diameters of the cylinder and glass rod, and also upon the chloroform in the tube being pure, or as Geppert employs it (mixed with ether (2 to 1 by volume, by weight 300 grams chloroform to 70 grams ether). Condensation does not then occur above 10° C. The instillation of the surgical clinic at Bonn is large enough for at least six administrations of from one to two hours, the service to the operation room is 15 metres, where it ends in three supply taps. It is kept always ready for use. Smaller apparatus have been made, including a portable one for use in the wards. A dose less than 1.2 c.cm. per minute causes no unpleasant sensations, but given without preparation that amount is distressing, and 2.2 c.m. is unbearable; with preparation the dose may be gradually increased. Geppert recommends that for quiet anæsthesia, free from danger, the supply of chloroform should be continuous, but only just sufficient for the case; and that it should not be interrupted unless the pulse falls below 60, or be poor in character, or the respiration become slow or superficial. The mask employed may be covered with fine wire gauze instead of flannel. Before it is applied the regulating tap is opened to allow the air in the conducting pipes to escape; the tap is then closed, and the mask applied in the usual way, taking care that the stream of chloroform vapour will fall below the nose, so as to mix with the air entering the lungs. Regulation is entirely by the tap, not by withdrawing the mask. A beginning is made by gradually opening the valve, till at the end of about one minute the indicator reaches 1.2 c.cm. per minute, when a pause is made for a couple of minutes; the indicator is then turned to 1.45 c.cm., and a pause again made, and so on, the increase being made more gradually as 2.2 c.cm. is approached. Women are narcotised generally at 1.70 c.cm. or 1.95 c.cm., men somewhat later. If narcosis seems at any point nearly established, the supply of chloroform is not increased. It is particularly desirable to use as little as possible, and as much as 2.2 c.cm. per minute has seldom been required for women. Men require more; alcoholics have taken as much as 3.70; 4.2 has never been reached, but the longer Geppert has practised this method the more rarely has he had to use large doses. When narcosis has been established the dosage that has been reached must be continued for one or more minutes, particularly if the chloroform is not administered in the operation room. In any case one commences in the operation room with the same dose (after flushing the conducting tube). In the first part of the operation the same dose is required, or if there be reaction to the knife, a little more; but after a few minutes it may be gradually reduced to about 1.2 c.cm., or somewhat higher, in men, somewhat lower in women. With this stage smooth water is reached. The pulse rises above 72, respiration is frequent, the corneal reflex generally present; pupils not dilated and sensible to light. Should the latter dilate or the pulse slow, the tap may be cautiously closed. Should reaction set in it may be opened one or two degrees (0.25 or 0.50 c.cm.); in the later stages short intermissions of from 15 to 30 seconds may be made. It is often necessary, especially in operations on the face and neck, during the narcosis to replace the mask by a knee-tube, the end of which can be passed into the mouth, and such a tube may be used for anæsthesia through a tracheal cannula, or in the case of very nervous women who fear the mask. The average amount of chloroform vapour required in the first hour was 30 to 40 c.cm., and for a two-hour operation 40 to 60 c.cm., with half as much ether in each case.

(127) Nature and Treatment of Streptococcal Infections.

Von Lingelsheim (*Arch. Internat. de Pharmacodynamie et de Thérapie*, vol. vi, Fasc. 1 and 2, 1899, pp. 33-84), in an elaborate paper on the subject, gives the details and results of his experiments in Behring's laboratory in Marburg.

In this place only his conclusion can be referred to—namely, that the treatment of streptococcal infections by means of serum injections has been far from yielding any very practical results. He is inclined to expect better things from the local injections as suggested by Denys, who obtained good results by injecting the serum in the immediate neighbourhood of the infected focus.

(128) Increase of Weight in Infants Fed Artificially.

AT the annual meeting of the American Pediatric Society held in June (*Philadelphia Med. Journ.*, June 27th), Henry Koplik, of New York, said that during the past nine years he had conducted in connection with his dispensary clinic a laboratory for the artificial feeding of infants, and for the purposes of the present study infants below the age of 9 months were observed, and as many collected as would remain under observation for a protracted period. He had studied first infants fed from birth, or nearly so, with a modified cow's milk; secondly, infants fed with breast and cow's milk. The modified milk supplied to these infants was in all cases the same, being composed of cow's milk diluted with equal parts of distilled water, and 6 per cent. of sugar of milk added. Infants below 3 months received 3 ozs. of this mixture; above this age an ounce is added for every month until 8 ozs. are reached, when full whole milk is administered. The infants were systematically weighed. In some of the older children who did not prosper on this Heubner-Hofman mixture he increased the amount of fat. His patients were all taken from an outpatient service in the slums. He gave tables to show the gain in weight of these 25 cases, adding that it was quite safe to predict that an infant, if it had the breast only once or twice in the course of the twenty-four hours would thrive on the bottle much better than on the bottle alone, and he was convinced that it was inadvisable to deprive the infant of the mother's breast no matter how scanty the secretion in the breast might be. It was very difficult to decide how much cow's milk should be given such infants, because it was impracticable to measure the amount of milk secreted by the breast in question, but an observant mother and a physician would soon find out how much additional milk to give. In the discussion Rotch thought that while this work was very interesting it was not all scientific, and that one could not make a test of any method of feeding upon cases of an ambulatory nature, for he could not tell what they were getting when away from his observation. Morse also considered the work without scientific value, because while it recorded the gains of a certain small number of infants fed on a certain mixture, it did not report the number or condition of those who did not thrive under the same circumstances. Wentworth called attention to the fact that analyses had shown that when the mother's milk became scanty it was very apt to be a poor milk, and stated that if Koplik recommended any breast milk as better than artificial feeding alone he would have to take issue with him on that point. Chapin thought that clinical experience seemed to show that even though the albuminoids were high and the fats low, still it was better to give the baby that milk, together with the substitute feeding, rather than to cut it off entirely.

(129) Analeptics of the Respiration.

IMPLUS (*Arch. Internat. de Pharmacodynamie et de Thérapie*, vol. vi, Fas. 1 and 2, 1899, pp. 149-169), struck by the small attention directed to respiratory tonics (analeptics), and the great services they might render in intoxications, many pulmonary affections, and above all in cardiac complaints, investigated experimentally with caffeine, camphor, oxycamphor, strychnine, ammonium acetate, ammonium sulphate, etc. He concludes there is no drug which may be considered as a true analeptic of the respiration.

PATHOLOGY.

(130) Placental Transmissions of Tubercle.

AUCHÉ AND CHAMBRELENT (*Arch. de Méd. Exper. et d'Anat. Path.*, xi, p. 521, July, 1899) have carefully weeded out the doubtful cases of congenital tuberculosis, rejecting all those in which there was no microscopic demonstration of Koch's bacillus, and no positive inoculation experiments done under aseptic precautions. The result is a series of 12 cases without histological tuberculous lesions in the fœtus, and another series of 7 cases in which such lesions were found. To the latter series these writers add a personal observation, bringing the total up to 20. It was the case of a woman of 40, a 4-para far advanced in pulmonary phthisis. Spontaneous premature labour came on between the fifth and sixth month, and five days later the woman died. At the necropsy, in addition to the pulmonary changes, there were found tuberculous processes in the liver, spleen, intestine, mesenteric glands, and kidneys. Microscopically, bacilli were demonstrated in the above-named organs but not in the ovaries, tubes, or uterus. The infant, a female, lived in the *couveuse* for twenty-six days, gradually losing weight all the time. At the necropsy, advanced tuberculosis of the liver and spleen was found both macroscopically and microscopically, and in the kidneys and lungs much less marked tuberculous changes were apparent. It was noteworthy that there was tuberculous endocarditis in the right ventricle. The aortic and bronchial glands, and those at the hilum of the liver, were also tuberculous. The placenta was tuberculous, and many bacilli were found in it, but these were not in such enormous numbers as in the fœtal liver and spleen; animals inoculated with fragments of the fœtal organs, and with pieces of the placenta, and with the blood from the umbilical cord all developed tuberculous lesions. The rarity of such cases of congenital tuberculosis is ascribed to the fact that the bacilli are rarely in the blood stream, and it is noteworthy that in most of the recorded cases the maternal tubercle has been generalised. From the enormous number of tubercle bacilli found in the fœtal organs, it is evident that the fœtal tissues are not at all a bad soil for their growth, a fact which militates strongly against Baumgarten's theory of latent tuberculosis. Tuberculosis has not yet been demonstrated in any fœtus younger than five months.

(131) Four Cases of Monstrosity in the same Family.

HÉSTLE (*Virginia Med. Semi-Monthly*, June 23rd, 1899) narrates the extraordinary history of a mulatto woman, well formed and healthy, as was also her husband, who gave birth to four male infants (the results of the first, fourth, fifth, and sixth pregnancies) in all of whom the hands and feet were attached immediately to the body (phocomelous?), and all wanting the external ear. Her female infants were normal, and are still alive. There was a maternal impression (fright from an opossum) in each of the pregnancies which ended in the birth of a monstrosity.

(132) The Pathology of Appendicitis.

CHARLES DE KLECKI (*Ann. de l'Institut Pasteur*, vol. xiii, No. 6, June 25th, 1899, p. 480) in this paper gives the results of his observations with regard to the virulence of the bacillus coli in experimental appendicitis. He reviews the various opinions which are held as to the etiology of non-specific appendicitis, and insists on the obscurity which reigns as regards its pathology. The "closed cavity" theory is founded partly in the clinical and necropsy work of Dieulafoy, and partly, especially as regards proliferation and increased virulence of the bacillus coli, on De Klecki's experimental investigations (*Ann. de l'Institut. Pasteur*, September, 1895) of the pathology of peritonitis of intestinal origin, in which he showed that there was increased virulence of B. coli in a strangulated non-perforated loop of intestine. This increased virulence occurred actually inside the loop, before the bacillus reached the peritoneal cavity. As to the experimental appendicitis induced in rabbits (experiments performed in 1897), De Klecki found that increased virulence of the B. coli and appendicitis could occur without occlusion of the cavity of the appendix; also that suppurative appendicitis could occur as a result of nutritional changes in the appendicular parietes, and this without an increased virulence of the B. coli contained in the pus. This brings out the importance of the "least resistance" factor in the development of appendicitis, especially the non-specific kind, in which infection is always secondary. Far from bringing forward a new general theory, the author considers that the pathology varies in different cases.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(133) "Chorea Variabile" of Brissaud.

A. Couvelaire and O. Crouzon (*Revue Neurologique*, June 1st, 1899) describes 3 cases of this rare and interesting affection first recorded by Brissaud in 1876 (*Rev. Neurolog.*, No. 14, 1896), under the name of "*chorée variable des dégénérés*." This new type, which should be called polymorphic and variable chorea of degenerates, was characterised by the multiplicity and variety of movements, by remissions and variability in time of occurrence, and by the presence of "stigmata" of degeneration in the patients. The present record includes 3 cases, occurring at Bicêtre, and presenting certain analogies with the chorea described by Brissaud. Case I. Boy, aged 16. Mother rheumatic, suffers from cardiac disease, and is of highly nervous temperament. Father healthy. Patient is the last of fifteen children, of whom ten had died when young of convulsions and meningitis. At the age of 10 patient was suddenly affected with choreic movements like those he now suffers from, was treated at the Salpêtrière, and improved considerably. A second attack came on (the present one), and presented the following features: Special psychical condition: he could not learn anything, and pretended that his schoolmaster ill-treated him. At night he had visual hallucinations, and saw the schoolmaster standing by his bed. He had at times marked palpitation. The heart was perhaps a little hypertrophied. The choreic movements were very violent, and his aspect was silly and degraded. He had attacks of *petit mal* (giddiness with shock—labyrinthine vertigo). The pupils are normal, and the reflexes and skin sensibility unaltered. Temperature normal, average pulse equal 96. After several weeks' treatment he was discharged cured. (The above is an example of *chorée variable* of an epileptic degenerate.) Case III. Boy aged 10½ years. Grandparents, uncles, and aunts healthy. Father healthy. Mother suffered from dysmenorrhœa, and just before and during her first pregnancy contracted typhoid fever. From the third month to the sixth month of pregnancy she suffered from severe chorea, limited to the left side, and without articular phenomena. The patient was the third child (at this and subsequent pregnancies the mother suffered severely from palpitation, and from the effects of an acute articular rheumatism, contracted during her sixth pregnancy). The patient (boy) went to school and got on well till the age of 5 years, when he had an attack of migraine, with "fortification" hallucinations, and after this his intelligence seemed less bright. The following year there appeared general choreic movements of great intensity, and he became very awkward in his movements and often fell down. After rest and treatment in bed for two months he was discharged recovered. In 1898 he had another attack, with less marked disturbances of movement. They appeared only during meals. In April, 1899, the attacks reappeared, and on the eighth day articular pains supervened in the neck, knees, and fingers of the left hand. The patient grew pale and sallow, complained of pains in his limbs and abdomen, and the affected joints were swollen and tender. There were rapid lateral movements of the head to right and left. All movements ceased during sleep. The temperature was slightly febrile, 100.7°. There was a systolic prolonged cardiac murmur. The urine was free from albumen. On treatment with salicylate of soda and bromides the general condition and the pyrexia improved, and the choreic movements became fewer. (This is an example of Sydenham's chorea, recrudescent, hereditary.)

(134) Is Sorrel (Rumex Acetosa) Poisonous?

L. Lewin (*Deut. med. Woch.*, 1899, xxx) denies that there is any sufficient reason for giving sorrel a bad name. Eichhorst (*ibid* No. 28) assumes not only that the plant is poisonous, but that it caused a fatal acute nephritis. According to the mother's statement a boy after a long play in a meadow was attacked by abdominal pain and repeated vomiting due to sorrel he had eaten; on the very next day his face was swollen and his urine contained 12.5 per mille of albumen, secondary symptoms supervened, loss of consciousness and clonic muscular convulsions, and he died after nine days' illness. Eichhorst quotes from Suckling a report of two boys who were ill after eating sorrel stalks. One was ill for a few days; the other supplemented the sorrel with a lot of plumcake, and next morning on waking drank, for no known reason, the soapy water (120 grams, say 4 ounces) of unknown concentration out of his soap dish. He was found unconscious a few minutes afterwards; could not for a long time be induced to vomit, and died at noon without convulsions. The necropsy was negative. Sorrel was found in the intestines, but it is not stated that no other plants were. It has been alleged, without proof, that the North American rumex verticillatus is poisonous and some of poisoning by rumex acetosa including the above, have been published as alleged cases. The published reports (two) of the loss of sheep from rumex acetosa and a horse from rumex acetosella (with the seeds) do not justify more than a suspicion of toxicity; moreover, the syndromata in the horse were totally different from those in the sheep. Now if in any of the other reports, doubtful as they are, phenomena similar to those in Eichhorst's case had appeared, that is, nephritis or hæmorrhagic nephritis followed by secondary symptoms developed as tardily, it might be said that in all these cases we had to do with noxious matter, not merely the oxalate of potash in the sorrel (CA. 0.75 per cent.), but some other poison. There is no such agreement, and until positive proof has been obtained by experiment upon animals with various parts of the different varieties of rumex, which all contain oxalate of potash and are used for food or flavour, it cannot be admitted that sorrel can produce such a complex of primary and secondary symptoms or be properly called poisonous. If Eichhorst had read in Lewin's *Handbook of Toxicology*, 1897, p. 364, the discussion of sorrel poisoning, or the article by Kobert on a report similar to his own, we might never have seen the latter.

SURGERY.

(135) Extensive Injuries of Chest and Abdomen.

Abbe (*Annals of Surgery*, April, 1899) in December last reported to the New York Surgical Society a case of perforating wound of the liver, kidney, diaphragm, and pleura. The patient, whilst riding a bicycle, was struck by the shaft of a rapidly-moving waggon, which first penetrated the right arm, separating the biceps and vessels from the humerus, and then forced its way into the chest, breaking the tenth rib, tore through the diaphragm and liver, and finally caught the right kidney against the spine, and cut its upper third almost completely from the lower two-thirds. After an interval of seven hours the author resected the fractured portion of rib, removed from the pleural cavity about a quart of effused blood mixed with bile and also, it was thought, with urine, and then explored the abdominal cavity with his hand passed through the wound in the diaphragm. A tight iodoform gauze packing was then begun through the pleural wound, beginning at the kidney, and continued up through the liver and chest wall, where the former had been torn away. This packing was brought up through the diaphragm and out of the wound in the wall of the chest. The patient remained in a critical condition for a month from the date of injury, during which time the liver seemed to discharge almost the whole of its bile, mixed with the urine from the injured kidney, through the wound. Subsequently the patient made a speedy recovery, and at the end of six months had nearly regained his normal health. The same number of the *Annals* contains another remarkable case of recovery after serious injury to the chest. At a recent meeting of the Philadelphia Academy of Surgery R. N. Downs presented a man who had been stabbed in three places on the left side of the chest. The upper wound was situated in the posterior axillary line in the eighth interspace, on a line with the nipple. On digital exploration through this opening it was found that both pleura and lung had been wounded. The lower wound, from which a piece of omentum protruded, was situated 2 inches to the right of and 6 inches below the upper wound. The third wound was small, and did not involve the pleura. As the

abdomen was distended Le Conte, who took charge of the case, performed median laparotomy. The abdominal cavity contained a large quantity of blood, which after careful searching was found to have come from the left side of the chest through a rent of considerable extent in the diaphragm. As the patient's condition became very alarming the abdominal incision was enclosed and, together with the open wounds in the chest, covered by a large antiseptic dressing. The bleeding rapidly diminished in the course of the first eight hours, and had almost ceased on the third day. From this time the progress towards complete recovery was retarded merely by a mild attack of pleurisy developed ten days after the date of operation.

(136) Resection of Genito-crural Nerve for Neuralgia Spermatica.

DONATH AND HÜLTL (*Wien. klin. Woch.*, March 16th, 1899) report the case of a man, aged 23, who, on account of constant and unbearable ilio-scrotal neuralgia, wished to have the testis removed. The pain had begun four years before, after an attack of gonorrhœa, and epidydimitis on the left side, and had continued ever since in spite of the most varied treatment, sleep and any settled occupation being greatly interfered with. Against castration, first recommended by Sir Astley Cooper as a last resource in such cases, the great objections are: (1) the depressing psychical effect; (2) the neuralgia is not always cured by it. The authors, therefore, decided to resect the genito-crural nerve, which appeared to be the one involved. Nélaton stated, and the recent experiments of Obolinsky on animals have confirmed the possibility, that section of the external spermatic nerve may be followed by atrophy of the testis, but even if this should happen the patient would be no worse off than if the testis had been removed. The operation was performed by Hültl. A curved incision was employed 5½ inches long, beginning at the 11th rib, descending vertically, then turning inwards two fingers' breadth from the anterior superior spine of the ilium, and ending the same distance above Poupart's ligament. After dividing all the layers of the abdominal wall except the peritoneum, the last-named structure was separated until the common iliac artery was exposed. The genital and the crural branches of the nerve were then easily recognised, and about 2½ inches of each were resected. The wound was closed, and healed by first intention. Any other extraperitoneal method of reaching the common iliac artery, such as Pirogoff's, would be equally applicable. Nothing abnormal could be found in the resected nerves. After the operation the pain ceased completely for about two months, but then returned, though in a much milder form, so that the patient's health and comfort were much improved. It is still doubtful whether the site of neuralgia testis is in the peripheral nerves or in the spinal cord. The partial return of the pain in this case points to a central origin. If, as Romberg, Erb, and others state, it is of sympathetic origin, the testes and spermatic cords being supplied by the spermatic and hæmorrhoidal plexus, the operation could not have affected them.

(137) Adeno-Sarcoma of Mamma.

J. PALANCAR (*Siglo Medico*, Madrid, No. 46, June 25th, 1899) records a case of adeno-sarcoma in the left breast of a woman, aged 46, which had been present for sixteen years. The breast had attained gigantic proportions, having a vertical diameter of 35 c.cm., a transverse of 38 c.cm., and a maximum circumference of 101 c.cm. It was quite movable, the skin was not ulcerated, there was no glandular invasion, there were no pains, and the patient's general health was good. The other mamma was normal. The diagnosis of adeno-sarcoma was built up from these facts, from the patient's age, and from the absence of any hereditary history of cancer. The tumour was successfully removed; but there was much vascularity, no less than forty vessels requiring ligature during the process. It weighed 8 kilos.

(138) Luxation of Semilunar Bone.

BERGER (*Bull. et Mem. de la Soc. de Chir.*, July 11th, 1899) describes a case of luxation or, as it may be called, enucleation of the semilunar bone. The diagnosis of the nature of the injury was confirmed by a radiographic examination. In this case, as in one previously recorded by the author, the same typical deformity was presented, consisting of a swelling over the inferior radio-ulnar joint and beneath the flexor tendons. There was in both instances a clenched position of the hand, and the fingers could not be fully extended. The patients were unable to effect complete flexion of the fingers. In both cases Berger could make out loss of cutaneous sensibility in the sphere of innervation of the ulnar nerve. It is thought that luxation of the semilunar bone is probably due to extreme and violent stretching of the anterior ligament of the wrist-joint, caused by forcible extension of the hand. In this injury extirpation of the displaced semilunar bone is the only treatment.

MIDWIFERY AND DISEASES OF WOMEN.

(139) Operative Interference in Labour with Deformity of the Pelvis.

N. CHARLES (*Rev. Obstét. Internat.*, No. 160, June 1st, 1899) insists upon the necessity for tolerance in operative obstetrics as in everything else, for the same good results may be obtained by different methods. There is a moral contract between the obstetrician and the woman under his care, who asks to be delivered with the least possible risk. If the obstetrician consider it necessary in the interests of the infant to have recourse to an operation more dangerous to the mother than the ordinary means—for example, Cæsarean section or symphysiotomy—it is well for him as far as is practicable to obtain the consent of the principal interested party. In choosing the plan to be adopted it is necessary to take into account the life and health of the mother, which, from the social, economical, and sentimental standpoints, are equivalent to at least three full-term fœtuses. The different modes of extraction of the fœtus (forceps, version, etc.) at full term or before (induction of premature labour) give under certain circumstances very satisfactory results, better than those obtained by symphysiotomy or the Cæsarean section. If it be considered that a favourable result for the infant cannot be hoped for, recourse may be had to the Cæsarean section or symphysiotomy; if it be necessary, we must think only of the woman and reduce the size of the child, living or dead. At the present time symphysiotomy gives better results than Cæsarean section, but both require the same skill, antiseptic precautions, favourable surroundings, and intelligent assistance.

(140) Treatment of Pelvic Inflammations through the Vagina.

W. RICE PRYOR (*Virginia Med. Semi-Monthly*, November 11th, 1898) is of opinion that in weighing the vaginal against the abdominal operation in pelvic inflammation the greater the degree of suppuration the less the indication for cœliotomy. For instance, in an old case of bilateral suppuration with repeated recurrences of peritonitis, or a case of diffuse suppuration, the indication is for either an evacuative operation through the vagina or else a vaginal ablation. Whenever there are more pockets than one he tries to enter all, and pack each with gauze, for if small ones are overlooked they break into the drainage space. The vaginal evacuation will remove the most critical case from the emergency class, and place her in the class where an elective radical operation can be done. Pryor thinks it would be well if this could be done with all intra-abdominal suppurations—those of appendicial origin, for instance. The vaginal operation is the only one which admits of the retention of the ovaries, and consequently the preservation of menstruation when there are bilateral pus foci.

(141) Vaginal Fixation of Uterus: Rupture in Subsequent Labour.

FRICKHANGER (*Centralbl. f. Gynäk.*, No. 24, 1899) writes of a 6-para, aged 30, admitted into the Munich Maternity on January 6th. The first three labours had been normal. In 1895 vaginal fixation of the uterus was performed for displacement. In 1897, at the fourth labour, turning was found necessary; the child was dead. There was no note of the fifth labour. On admission in January last the os lay high, and was as large as a florin. The fœtal head was very hard to reach. The bladder bulged backwards close to the os. Early next morning the head was not well engaged in the pelvis, though the os was fully dilated; the heart sounds had ceased. As the forcep scould not be applied, turn-

ing was practised. A thick ring was encountered, apparently in the middle of the uterine cavity, and it was found difficult to pass the hand through it so as to reach the head. The legs were at length brought down, and the child delivered; it was asphyxiated, but revived after artificial respiration. The placenta soon followed, and the uterus contracted well. In the evening symptoms of peritonitis set in, and death occurred at the end of the fifth day. There was diffuse purulent hæmorrhagic peritonitis traced to a rupture of the vagina and posterior part of the cervix. Frickhanger concludes that on account of the vaginal fixation the anterior lip of the os could take no share in its dilatation, so that there was an unusual strain on the posterior lip and neighbouring part of the vagina.

(142) Vicarious Menstruation from the Ear.

Lermoyez (*Progrès Médical*, July 15th, 1899) reports a case where a young girl who had never menstruated began, three years before observation, to bleed from the right ear regularly every month. The flow was preceded by headache and general lassitude; the blood was clear and non-coagulable. About two years later the normal menstrual flow began, and was steadily replacing the periodical hæmorrhages from the ear, which now miss one or two periods. The membrana tympani of the right ear was free from any trace of perforation. The right auditory meatus was very vascular, and its cutaneous vessels evidently dilated. There were no general symptoms of hysteria, so usual in vicarious menstruation, but the right tympanum and the meatus were abnormally insensitive, whilst there was a certain degree of auditory anæsthesia on the same side, conditions associated with hysteria.

(143) Malignancy of Vaginal Polypus.

Witebsky (*Monats. f. Geburts. u. Gynäk.*, May, 1899) exhibited last March, before the Frankfort Medical Society, a little girl, aged 6, upon whom he had operated three times for the removal of a vaginal tumour; yet on microscopical examination the growth appeared still to be not a sarcoma but a simple mucous polypus.

(144) Etiology of the Vomiting of Pregnancy.

Barth (*Norsk Mag. f. Laegevidensk.*, lx, 788, June, 1899) gives full clinical details of 2 cases of uncontrollable vomiting of pregnancy in which it was found necessary to induce abortion to save the mother's life. In both cases there was the history of preceding miscarriages, and in both there was constriction at the internal os uteri as shown by the existence of a marked groove on the laminaria tent which was used to induce the abortion. There had been severe endometritis, and there was rigidity of the vaginal portion of the cervix. In one there was a well-marked erosion on the cervix, in the other the indication of the beginning of one. Morphine, bromide of ammonium, and oxalate of cerium had been tried, but with no good result, and the application of cocaine on iodoform gauze to the cervix thrice daily was also without effect. Barth believes that the vomiting is due to a neurosis of the sympathetic system, and points out how densely the sympathetic fibres and ganglia surround the os uteri internum. There was marked ptyalism with viscid mucus, a circumstance which also pointed to the involvement of the sympathetic.

THERAPEUTICS.

(145) Infant Feeding with Cream Mixtures.

O. Reinach (*Münch. med. Woch.*, 1899, No. 29), reviewing the clinical effects of the artificial feeding of infants, concludes that little progress has been made in artificial feeding; the general infant mortality has not much improved. A great number of the digestive ailments of infants are undoubtedly due to the ingestion of excessive quantities of cow milk casein; processes such as that of Backhaus to provide a more easily digested casein have not been widely adopted, and, apart from insufficient guarantee of purity and sterilisation in wholesale manufacture, most of such processes allow of too little individualisation for the sickly children. A rational infant's food should be usable for the weakest baby, should allow the widest modification as to the proportions of albumen, fat, and carbohydrates. Bieder declared that, given blameless arrangements in other respects, the essential faults of cow's milk could be eliminated by diminishing the amount of cow's milk casein to 1 per cent. of the lacteal food. This 1 per cent. casein with 2.5 fat and 5.0 milk sugar can be obtained by mixing 130 c.cm. of cream with 390 of water and 18 grams of milk sugar. This is the first of Biedert's cream mixtures, which run:

No.	Cream	Water	Milk Sugar	Cow's Milk	Casein	Fat	Sugar
1	⅛ litre	⅜ litre	18 g.	—	1.0 %	2.5 %	5 %
2	,,	,,	,,	⅒ litre	1.4 %	2.6 %	,,
3	,,	,,	,,	⅛ litre	1.5 %	2.6 %	,,
4	,,	,,	,,	¼ ,,	1.8 %	2.8	,,
5	,,	,,	,,	⅓ ,,	2.1 %	3.0 %	,,
—	—	½ litre	12 g.	½ ,,	2.3 %	2.4 %	,,

The cream is estimated as containing 3.4 per cent. albumen, 10 per cent. fat, and 5 per cent. sugar. The milk 3.5 per cent. albumen, 3.6 per cent. fat, and 5 per cent. sugar. This table is merely a sketch; some infants cannot stand more than 1 per cent. of fat, but the number of such is small, and otherwise the importance of the fat is very great; it renders the albumen more digestible, and has more effect in increasing a child's weight than any other food. It is a great advantage that in these cream mixtures, that the cream can be set for each case, and the greatest care taken in mixing; moreover, they are cheaper than the other sorts of artificial food. In simple acute dyspepsia due to overfeeding, to the use of undiluted cow's milk, or to too early farinaceous feeding, dilution of the milk, reduction of the total amount given, or its entire omission for eight or ten hours, will often be of service, without resorting to cream mixtures, and even at the beginning of acute dyspepsia a dose of calomel and the use of very diluted milk, with perhaps a change in the source from which it is obtained, will generally be sufficient. Subacute and chronic dyspepsia, especially that with obstipation, and chronic enteritis with slimy stools, alkaline or faintly acid, are the most hopeful field for cream mixtures. Success will depend on individualisation as regards the quantity; with very young children, Reinach uses a mixture weaker than Biedert's first. In children over 5 months with chronic slimy enteritis, acorn coffee may be added to the cream instead of water; a little rice or maize meal (Mellin's food) will promote the digestion of the cream in subacute forms. Even if the child's weight does not increase for a week on a few spoonfuls of cream and skim milk, it will not starve. Only a normal stool authorises a larger quantity of milk. Bieger reckoned as the minimum quantity to be safe and even increase the weight per kilo. of body weight in the first month, albumen 2.3, fat 4.3, and carbohydrates 6.6 grams. Acute watery diarrhœa contraindicates cream; six times diluted milk then gives good results. Moreover, after primary success with cream mixture there may be arrest in weight, and copious fatty stools and general deterioration, the absorption of fat being seriously disturbed; very diluted cow's milk (1 : 3 or 4) may then be given, or one of the peptonised preparations may be used.

(146) Orthoform.

From their experiments with orthoform (methylic ether of p.-amido-m-oxybenzoic acid) in the Laboratory of Therapeutics of Lyons, Guinard and Soulière (*Arch. Internat. de Pharmac. et de Thérap.*, vol. vi, Fasc. 1 and 2, 1899, pp. 1-31) conclude that its local effects on sensation and motion are but slight, and cannot be compared with those obtained by means of the usual local anæsthetics. The effects of orthoform are analgesic in the true sense of that word, rather than anæsthetic. Orthoform in solution is readily absorbed by the stomach and intestines. When merely suspended and introduced into the stomach it is acted on by the hydrochloric acid of the gastric juice (hence a hydrochlorate is formed), becomes soluble, and is absorbed. Injected under the skin and into the peritoneum, it is rapidly absorbed. When applied in the form of powder to wounds, only a small proportion is dissolved by the fluid present. When absorbed, orthoform is a remarkable nerve depressant. This

occurs in all animals (dogs, rabbits, frogs); the depression is preceded by a stage of excitation (spasms, etc.). The depressant effects in this case are of central origin, whereas most of the peripheral modifications require the direct contact of the drug with the terminal elements. Under the influence of orthoform arterial pressure is lowered; the action of the heart is greatly accelerated; the respiratory movements are also more rapid. There is increased glandular secretion, notably of the saliva and tears, which are coloured yellow. In dogs large doses introduced into the stomach very soon lead to vomiting; but nausea and vomiting are also observed when orthoform is injected subcutaneously or intraperitoneally. Its safety when used as a local analgesic is due to the fact that it is but slowly absorbed; moreover, it is readily eliminated in moderate doses. Although in certain doses it is toxic for dogs and rabbits, in practice (used locally) it may be considered as non-toxic. (The drawbacks of orthoform have been pointed out in the EPITOME (BRITISH MEDICAL JOURNAL, par. 375, vol. i, 1899.)

(147) Ichthyol in Phthisis.

WERTHEIMHER (*Münch. med. Woch.*, June 13th, 1899) strongly recommends ichthyol internally for phthisis. After taking it for eight to ten days, or in advanced cases perhaps later, cough and expectoration diminish, the temperature becomes and remains normal, the appetite slowly but quite steadily improves, and the patients gain in weight. The last effect is almost constant and is what the patients themselves notice most. The author has given it to all his phthisical patients for the last two years, and his experience agrees with that of Moritz Kohn, who proved the permanence of the improvement by following up his cases for two years. Those who employ ichthyol will find that the necessity for morphine and atropine become rarer and rarer. It is best given mixed wite equal parts of distilled water, of which one to two drops should be given in a liqueur glass of water three times a day after meals. The dose is gradually increased up to ten drops three times a day. Epigastric weight or pain is a sign that the maximum dose for the individual has been exceeded. Larger doses, such as 3 grams, which have been employed especially by French authorities, have no advantages over those employed by Wertheimher.

(148) Acute Iodine Poisoning.

FRANZ (*Wien. klin. Woch.*, No. 23, 1899) reports a fatal case of iodine poisoning. The patient, a man aged 70, suffered from arterio-sclerosis, chronic interstitial nephritis, and hypertrophy of the left ventricle. Ten years before he contracted severe syphilis. On December 3rd and 4th he was given 15 grains of sodium iodide. This was followed by iodism and iodine acne. On the same day appeared sub-conjunctival petechiæ, swelling of the mucous membrane of the nose and throat, dyspnœa and swelling of both testicles. On December 7th the nares ulcerated; the urine contained albumen, hyaline and granular casts. No iodine was found in the urine. On December 10th there occurred inflammatory infiltrations in the skin of the face and trunk; a phagedænic ulcer formed on the lower lip; the skin of the trunk and extremities was covered with small abscesses and vesicles containing turbid yellowish-green serum. This condition was followed by double hydrothorax, pulmonary œdema, and death. At the necropsy the following changes were found: pemphigus of the skin and mucous membrane of the œsophagus, chronic interstitial nephritis, hypertrophy and dilatation of the heart, serofibrinous pericarditis, double hydrothorax, œdema of brain and lungs, chronic perisplenitis, and commencing cirrhosis of the liver. The explanation of the case is that owing to the diseased state of the kidneys the iodine was not eliminated, and the amount retained was sufficient so cause death in such a broken-down subject.

(149) Treatment of Perforations of Membrana Tympani.

PETTESOHN (*Berl. klin. Woch.*, April 17th, 1899) advocates Okuneff's method of closing perforations of the membrana tympani by means of trichloracetic acid. The acid is applied on cotton wool wound round an aural probe, and the edges of the perforation touched. The action is said to be due to the destruction of redundant pavement epithelium which lies heaped up along the edges of old perforations, and which hinders the extension of the more highly organised tissues behind it.

PATHOLOGY.

(150) The Influence of Syphilis on Tuberculosis.

MONTEVERDI (*Gazz. degli Osped.*, July 30th, 1899) reports the case of a healthy young man who showed early signs of phthisis in March, 1893. The signs were limited the left apex. Bacilli were found in the sputa, hæmoptysis and high fever occurred, and the patient got rapidly worse. At the end of April a syphilitic roseola appeared, and on careful examination a small indurated scar was found on the penis. All the signs and symptoms of phthisis steadily improved after the appearance of the syphilitic roseola, and did not recur, and the patient is now in good health. The author also quotes two other cases where syphilis appeared to have a beneficial influence on the tuberculous process possibly by inducing fibroid changes and partly by interaction of the two toxins.

(151) Cardio-thoracic Malformations.

M. E. APERT (*France Méd.*, May 26th, 1899) showed at a recent meeting of the Société Médicale des Hôpitaux in Paris, a man, aged 44, with a peculiar malformation of the thoracic wall. At the level of the hypochondrium on each side there was a funnel-shaped depression 6 to 8 cm. in diameter and 2 to 3 cm. in depth. Between the depressions the sternum projected, showing a twist, so that its left border had become anterior. The ribs at this level exhibited neither fractures nor dislocations, but instead of the normal convexity had a concavity forwards. The condition had nothing to do with rickets. The deformity was present at birth, as was also a cardiac anomaly consisting in a loud murmur due to stenosis of the pulmonary orifice. Apert thinks that both the malformations were due to intrauterine compression; the thoracic depressions exactly corresponded to the position of the elbows of the fœtus *in utero*. There had probably been absence of the liquor amnii, although there could not be obtained any further history than that this man had been born prematurely at the seventh month.

(152) Congenital Displacement of the Scapula.

J. E. VIRDEN, (*Pediatrics*, vol. vii, p. 351, April, 1899) has met with a case of congenital displacement of the scapula of the left side in an otherwise well-developed girl, aged 10½ years. There was a lump between the neck and the point of the shoulder, which proved to be the upper portion of the scapula, raised one inch above the right one, but with the lower angle nearer the spine than the upper. The left scapula was smaller than the right, but the neck of it was larger; the left clavicle was straighter, and about an inch shorter than the right. All the muscles of the left arm and shoulder were smaller than those of the right. No cause was known.

(153) Congenital Absence of Both Fibulæ.

MAZZITELLI (*Archiv. di Ortoped.*, Ann. 15, f. 5, 98) has collected 120 cases of this rare anomaly. Analysing these figures, the absence was bilateral in 37.7 per cent. and unilateral in 62.3 per cent; of the bilateral cases, 25.6 per cent. showed complete absence, 6.4 per cent. partial; both in the complete and partial unilateral absence the defect was more often met with in the right than the left side, and males were more affected than females. The leg is usually atrophied and more or less shortened, and presents a sharp curvature at the junction of the middle and lower third. The food is frequently in a position of valgus or equino-valgus. Absence of one or more phalanges is a very frequent association. The author reports a case of bilateral abscess of both fibulæ, with congenital abnormalities of the feet and hands, in a child, aged 6 years. Photographs and radiographs are given, illustrating the appearance of the child. There was no history of deformity in the family. The mothers had two severe frights during the pregnancy, and there was a fairly strong alcoholic history in the paternal and maternal relatives. As to the etiology, the author, in the light of the history of alcoholism and allied psycopathies in the child's relatives, is inclined to refer the observed deficiencies to some obscure lesions of the nervous system.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(154) Infectious Jaundice.

Fringuet (*Presse Médicale*, July 5th, 1899) records an outbreak of jaundice affecting seven children. These children were not of the same village, but all attended the same school, where they all had their lessons in the same room. None of the patients was severely ill, and some of them were so slightly affected that no medical advice was sought. The illness commenced with feebleness, loss of appetite, digestive disturbance, sometimes nausea and vomiting, epistaxis. Constipation was noted in the three cases observed by Fringuet. The jaundice was not deep; it appeared four or five days after the commencement of the illness, and disappeared eight to ten days after the commencement of convalescence. The liver was enlarged, sometimes tender to pressure. The spleen appeared to be larger than it normally should be, but this enlargement did not persist during convalescence. There was diminished frequency of the pulse; in one case, at one time, it was only 55 in the minute, and was still only 58 when the urine had regained the usual colour, and gave no Gmelin's reaction. Convalescence was good in all cases, and there was no relapse. The pathology and exact etiology remain doubtful. A new well had been sunk in the garden of the schoolhouse, but it appears that the children had not yet taken any water from this well. It may be noted that not more than thirty pupils attended the school in question, so that the percentage of the children affected was really a considerable one.

(155) Partial Hyperidrosis.

Kaposi (*Wien. klin. Rundschau*, March 12th, 1899) showed the following case before the Vienna *k. k. Gesellschaft der Aerzte*. A boy, aged 16, had from his earliest childhood perspired at the tip of the nose. The area involved steadily increased until, when he was 8 years old, the lips, ears, chin, nose, neck, the flexor and extensor surfaces of the upper extremities to the wrist, and the anterior and posterior surfaces of the thorax as low as the sixth rib were affected. In the last seven years the progress had been slower, the area of hyperidrosis now reaching a finger's breadth below the ribs. Any cold stimulus, acting on the skin or mucous membranes, such as a draught of cold water, caused an outbreak of sweat, which did not begin simultaneously in the different parts, but followed a definite order. The tip of the nose was first affected, then the chin, forehead, submaxillary region, extensor surfaces of the arms, and lastly, their flexor surfaces. These sweating areas, small at first, would quickly enlarge, until almost the whole of the upper part of the body would be bathed in perspiration, the drops on the sternal region being often as big as hazel nuts. The scalp and back of the neck were normal. There was considerable cyanosis of the peripheral parts, such as the nose, ears, and finger tips. Warmth prevented the perspiration, which therefore ceased in summer or after active exercise. The effect of pilocarpin, which produced in him general sweating, was prevented in the arm if a ligature were first placed round it high up. Neither would the arm then react to the stimulus of cold. On removing the ligature the secretion of sweat was enormous, but this could be prevented by a dose of atropin. Nervous sweating depends on the action of secretory nerves, which occur mostly in the sensory roots of the spinal cord. A lesion of a mixed nerve can therefore cause, besides motor and sensory disturbances, abnormalities in the secretion of sweat. Such a lesion may be situated in a peripheral nerve, in the intervertebral ganglion, as in herpes zoster, in the spinal cord, or even in the brain, as in migraine. In this way the distribution of the hyperidrosis may be remarkable, as, for instance, in hemiplegia, when it may be strictly unilateral. The commonest form of local sweating is acrohyperidrosis seen on the hands and feet of those whose arterial tone is deficient, and who suffer from cold hands and blue noses. In this boy, owing to the distribution of the sweating and the way it was influenced by pilocarpin, Kaposi diagnosed a central lesion. Scoliosis was present, and this, in conjunction with the slow extension of the affection, seemed to point to hydromyelia of the upper cervical and thoracic cord.

(156) The Nervous Effects of Secondary Syphilis.

Fournier, in a clinical lecture (*Journ. de Méd.*, April 10th, 1899), points out some of the results of secondary syphilis, which are very important owing to the fact that they are difficult to diagnose in the absence of distinct history, and from the fact that they are much more frequent in women than in men. The first of these is headache, which the author divides into three degrees. In the first it is troublesome, but does not interfere with the ordinary avocations. In the second this pain simulates almost absolutely migraine. In the third the pain is so severe as to render any exertion or employment impossible. It is accompanied by vertigo, ringing in the ears, and in many cases there may be a profound melancholia. The pain may be constant or intermittent. In the first it is more severe towards the evening; in the second form it comes on every evening between 5 and 7. This form of headache may last for periods varying from several days to several months. The importance of being aware of this possible result of secondary syphilis is of course the fact that antisyphilitic treatment, more particularly mercurial, is followed by an astonishing relief of the symptoms. Another manifestation which the author describes is insomnia, which, like the last, is hardly ever met with except in women. In many instances this may be due to the pain already described, but in other cases there may be no headache or other symptom. The patient may pass several nights without sleeping. Lastly, a curious phenomenon met with in secondary syphilis is asthenia. Like the other two symptoms, it is almost confined to women. It may be so marked as to cause total inability to follow the ordinary avocations of life, and in extreme cases may give rise to utter prostration. There may be inability to stand or even to leave the bed. The heart beats are extremely feeble and the pulse almost imperceptible; the digestive system becomes markedly torpid. There is a dulness of perception affecting all the senses, and trophic functions are greatly in abeyance. The writer says that this symptom, though more common than the other two, is apparently more frequently misunderstood. Thus malignant disease, tubercle, different forms of anæmia, etc., have been diagnosed. Of all these tubercle seems to be the most frequent mistake on account of the sweating, wasting, and even slight pyrexia, but the absence of physical signs should prevent such an error in diagnosis. Antisyphilitic treatment is rapidly followed by satisfactory results. Less important perhaps than the symptoms just described is the occurrence of vague neuralgic pains which may affect the sciatic or different branches of the fifth nerve. When this last is the case it is generally the supraorbital branch. The writer, therefore, points out the importance of trying antisyphilitic treatment, more particularly preparations of mercury in many cases of anomalous neuralgic pain.

SURGERY.

(157) Primary Tuberculous Ulcer in the Pharynx.

Juffinger (*Wein. klin. Woch.*, No. 24, June 15th, 1899) reports an instance of this affection. The occurrence of ulcerative pharyngitis in laryngeal tuberculosis and in chronic phthisis, as the result of extension of the disease either from the epiglottis or larynx, is, on the whole, not uncommonly met with. Indeed, in many cases of advanced phthisis the implication of the pharynx in the tuberculous process forms one of the most distressing complications of the later stages of the disease, inasmuch as the ulcers are usually exceedingly sensitive to the touch, and thus render deglutition acutely painful, nay, in some cases, even impossible. However, the primary manifestation of tuberculous ulceration in the pharynx is extremely rare, and it appears that only a very limited number of cases have hitherto been recorded. The author's case is a young man aged 17, who on admission presented the following signs: the posterior wall of the pharynx is the seat of a deep ulceration measuring

about 3 c.cm. in diameter, and running upwards and downwards. Its edges are ill-defined, irregular, crenated and partly undermined, and its base is almost completely covered by a greyish-yellow membrane. On the removal of the latter, numerous noduli of a faintly reddish appearance became visible. The parietal pharyngeal boundaries are thickened, partly ulcerated, and present irregular excrescences; and between the latter isolated small ulcers are to be seen, which, with regard to their pathological appearance and character, absolutely resemble the larger ulcerations. In addition, the posterior margin of the septum in its entire long axis was also found to be thickened, its centre being occupied by a greyish-yellow-looking ulcer. As far as the history of the case is concerned, no positive signs pointing to hereditary predisposition were obtained, and it may also be added that no exact date is mentioned as to when the very first signs become manifest. However, so much seems to be certain, that there were no other symptoms of tuberculous mischief beyond those described; indeed, the repeated physical examinations of the chest revealed nothing abnormal, and the glands were found to be free. The subjective complaints consisted chiefly of great debility and gradual emaciation, combined with acute pain on deglutition, which radiated towards the left ear. It is interesting to note that upon the last-mentioned symptom the author lays great stress, from a diagnostic point of view. The clinical diagnosis had been subsequently verified by microscopical examinations of removed parts from the ulcers, which were proved to consist of pure lymphatic tissue containing among others typical giant-cells, so characteristic of tubercle; Koch's bacilli, however, the presence of which would have formed a valuable addition to diagnosis, were not detected. The treatment, which was adopted by the author for this case and which proved so far satisfactory, was confined in the first instance to improving the physical strength of the patient; secondly, the parts which were ulcerated or had already undergone necrosis were removed by means of the sharp spoon, and a local application of an 80 per cent. solution of lactic acid used.

(158) Suture of the Wounded Liver.

SUBBOTIC (*Centralbl. f. Chirurgie*, No. 28, 1899) reports two successful cases in Belgrade. The first patient was a coachman, aged 34, who received two stabs during a brawl. He was at once admitted into a hospital. The peritoneum was full of blood, and there was a wound in the right hypochondrium through which a finger could be passed into the abdominal cavity. This wound was enlarged, and an incision two-fifths of an inch long was discovered in the left lobe of the liver. This was sutured. There was a more serious wound in the left hypochondrium as far back as the axillary line, two fingers' breadth above the lower border of the ribs. A finger introduced into this wound could be passed through the pleural into the abdominal cavity, there being an incision in the diaphragm. A piece of omentum and a part of the stomach, as large as a fist, had prolapsed through the wound in the diaphragm. The rib next the wound was resected, and the diaphragmatic wound sutured from the pleural aspect, after reduction of the prolapsed structures. Subbotic also sutured a wound in the liver caused by a fall against a post.

(159) Excision of the Sympathetic in the Neck and Abdomen.

RUGGI (*Il Policlinico*, May 15th, 1899), with the idea that iridectomy is of little value in glaucoma due to irritation of the vasodilator nerves coming from the cervical sympathetic, has tried the effect of removing the superior cervical ganglion in 10 cases of glaucoma. In some of the cases the excision was unilateral, in others bilateral. In the majority of the cases the pain was speedily relieved, although after a time it reappeared, but in a less degree. As the cases were only operated upon in the early part of this year the final result of the operation is not known. The author has further directed his attention to the removal of the utero-ovarian sympathetic plexus of nerves in cases of uterine or ovarian disease, where in spite of oöphorectomy severe pelvic and ovarian pains still make life miserable. Of this class of case he records three examples where he performed laparotomy and excised the plexus of sympathetic nerves coming partly from the renal plexus, partly from the aortic, spermatic, and pampiniform plexuses. In all three cases the results were excellent and speedy as regards relief of pain, and the author thinks they will be lasting. In a fourth case of old peripyloric adhesions with great uterine tenderness (so that on vaginal examination the woman fainted), the author in the course of an operation for the pyloric adhesions excised part of the sympathetic; 24 hours later the uterus was explored without any pain or giving rise to any unpleasant symptom. It is also suggested that excision of part of the abdominal sympathetic might take the place of oöphorectomy in selected cases.

(160) Aneurysm in Congenital Syphilis.

HUTCHINSON (*Archiv. of Surgery*, vol. x, No. 37) describes the case of a lad aged 16 with an aneurysm of his temporal artery. The tumour was about the size of a hazel nut and pulsated freely. Its pulsations were stopped by pressure on the trunk below it. The skin over it was slightly reddened. The aneurysm had appeared after a blow on the head. An interesting point in the case was that the boy was the subject of inherited syphilis. He had suffered from symmetrical interstitial keratitis, and his upper incisor teeth showed broad notches. His forehead was a little suspicious, but otherwise his physiognomy showed no peculiarities. The teeth in this case were exceptional. They were not in the least dwarfed, being of good width, and the notches, although marked by deficiency of enamel, were not completed by breaking away of the dentine. The marks were however definitely crescentic, and there was no defect whatever of the lateral incisors. The lower incisors and the 10-year molars showed defects in their enamel suggestive of mercury in infancy. With regard to the family history, the elder sister had large broad notches in her central incisors; all her other teeth were good, except the 10 year molars. Her physiognomy showed nothing peculiar; she had never had keratitis or deafness. A younger brother belonging to the same family was healthy. The one sole indication of inherited syphilis in the girl was her notched teeth. She had never suffered from any special ailments. A sceptic as to the value of notched teeth as indicating syphilis might have fairly alleged that here was a case in which nothing corroborated the suspicion. This would have been a strong fact had the girl been seen alone, but her brother had similar teeth and had had a severe attack of keratitis. The elder of the two children had in this case suffered least.

MIDWIFERY AND DISEASES OF WOMEN.

(161) The Diagnosis and Treatment of Uterine Fibroids.

L. LANDAU (*Berl. klin. Woch.*, July 3rd, 1899) states that it is impossible to differentiate between the varieties of uterine myomata from the clinical symptoms, which, apart from those due to the pressure of large tumours, depend more on the position and direction of growth than on the size of the myoma. The dangers of myomata are usually underrated. Besides hæmorrhage, inflammatory and suppurative processes in the appendages or peritoneum are frequent complications. Again, apart from those rare instances where histologically benign myomata have caused death by dissemination, true sarcomatous, or if the primary tumour was an adenomyoma, carcinomatous degeneration has been observed not infrequently. Ascites may accompany simple tumours, and does not necessarily indicate malignancy. This malignant degeneration is especially apt to occur at the climacteric period. The good effect generally attributed to the menopause is seen only in exceptional cases. Too often the presence of the fibroid postpones the cessation of menstruation indefinitely, so that, metrorrhagia continuing, the operation has to be performed after all, but with less chance of success. Oöphorectomy has the same effect on fibroids as the natural menopause; it may succeed, but more often fails, and the dangers of this operation are little inferior to those of myomectomy. Palliative local treatment of the hæmorrhage by curetting the mucosa is often useless, and may be dangerous; dangerous because the uterine cavity is frequently so distorted by the tumours projecting into it that it may be difficult

or impossible to pass the curette and perforation is very probable: useless because so far from the hæmorrhage usually depending on hypertrophic endometritis, atrophy of the mucosa is the commoner condition. For the same reason Sneguireff's steam "vaporisation" is not to be recommended. The real explanation of the bleeding is, in Landau's opinion, to be found in the impossibility of a myomatous myometrium contracting equally and effectually. Considering these and other dangers a radical operation should be performed more often than is the rule, especially in women who have to earn their own living. However, in each case the question of operation must be decided on its merits. When an operation is decided on the methods are practically two: (1) Conservative myomectomy; (2) total hysteromyomectomy (panhysterectomy), both of which can be performed either *per vaginam* or by laparotomy. Vaginal myomectomy is indicated chiefly for solitary fibroids: larger tumours may require the abdominal operation. Abdominal myomectomy is especially suitable for fibroids which are producing serious complications during pregnancy. Hysterectomy should be reserved for cases where myomectomy is technically inadmissible. The vaginal method should be employed whenever possible and uteri containing even large tumours may be removed by Péan's vaginal *morcellement*, which, in the author's hands, has given excellent results. Abdominal hysterectomy should be the last resource. Panhysterectomy is preferable to supravaginal amputation, however the stump is treated, as it is free from the dangers of hæmorrhage and sepsis associated with the latter.

(162) Strangulated Hernia of Fallopian Tube.

Boudin (*Lyon Médical*, June 18th, 1899) reports this case, where the patient was 50 years old, and subject for 5 years to femoral hernia. It had not developed after any strain or violent muscular action. The rupture long remained reducible. The period was irregular, and often very painful. Ten days before operation the rupture became irreducible. The patient felt a little local pain but was free from any gastro-intestinal symptoms. Jaboulay operated, and found the sac quite empty, except that it contained the Fallopian tube strangulated at the neck. As has been noted in previous cases, the ovary was not in the hernia. Villard, when Boudin exhibited the resected tube, asked why, in all published cases of hernia of the tube, that structure had been resected, though presumably healthy in many instances. Boudin replied that in Jaboulay's case it was strangulated, and as the patient was past child-bearing, its removal did no harm.

(163) Pelzer's Method Employed by the Patient on Herself.

C. Jewitt (*Brooklyn Med. Journ.*, July, 1899) relates the case of a woman pregnant for the second time, and possessing some knowledge of gynæcological methods, who determined to bring her gestation to an end. She injected a few drachms of glycerine into her uterus, and on the next day the ovum was expelled. Within 24 hours after the injection she was seized with chills, and the temperature rose to 103° F. After the second day there were frequent vomiting and diarrhœa. On the third the teeth were covered with sordes, and a profuse hæmorrhage occurred from the nose, which was controlled only by plugging. The urine was from the first almost wholly suppressed, and was of a dark red colour, from the presence of hæmoglobin. Death occurred on the sixth day.

(164) Ligature of the Arterial Supply of the Uterus for Cancer.

T. Jonnesco (*Bull. et Mém. Soc. de Chir. de Bucharest*, December, 1898) showed a patient to the Surgical Society of Bucharest suffering from cancer of the cervix uteri. For a year she had been troubled with pain and reddish sanious discharge, and three months previously the cervix had been curetted with temporary benefit; but soon all the symptoms had returned. It was found that there was an ulcerative epithelioma which had nearly destroyed the whole of the vaginal portion. The vaginal fornices had disappeared, and the body of the uterus was increased in size. Laparotomy was performed; the utero-ovarian arteries on both sides were ligatured, so were the two round ligaments with their vessels, and a ligature *en masse* of the uterine vessels at the level of the insertion of the vagina upon the cervix was carried out. The two hypogastrics were also tied 2 c.cm. below their origin, and the small peritoneal wounds made to expose the arteries were closed. About a month had elapsed and the hæmorrhage had ceased, and the discharge (sanious) had greatly lessened. Of course the improvement would only be temporary, but the results were encouraging in cases of inoperable cancer.

THERAPEUTICS.

(165) Radiotherapy.

Leopold Freund, Vienna (*Wiener med. Presse*, 1899, No. 31), in an article to appear in the 3rd Edition of Anton Burn's *Therapeut. Lexicon*, discusses the therapeutic use of heat light, the Roentgen rays, and electrical currents. These physical forces are closely related, and there is much analogy in the successful results obtained by their use. D'Arsonval's treatment is by electric currents of very high tension, and alternating from 200,000 to 1,000,000 times a second. The current employed, though it will light an incandescent lamp, is quite harmless to the human body; applied to the skin or mucous membrane it induces an anæsthesia of from 2 to 15 minutes; it is found to have a beneficial effect on certain skin diseases. It has a marked influence on metabolism and cell-life; under its influence the quantity of oxygen absorbed, that of the CO_2 expired, and the amount of heat given off by the body is increased, and there is considerable loss of body weight. On the vasomotor nerves it causes dilatation and subsequent energetic contraction of the blood vessels, and diminution followed by increase in the blood pressure; the current has, moreover, an unmistakable and intensely deleterious effect upon micro-organisms and their toxines. Its direct use, by connecting the patient with the small solenoid, is indicated; for anæsthesia in slight operations, for superficial neuralgia, for eczema, impetigo, psoriasis, lupus vulgaris, acne, superficial ulcers of all sorts, and in particular for itching pruriginous affections; for trophic skin affections of nervous origin, and for blennorrhœal catarrh of the neck of the womb; for those diseases also which, according to Bouchard, arise from delayed metabolism (diabetes mellitus, gout, rheumatism, obesity, etc.), as well as for many functional neuroses. The current may be used indirectly either by auto-conduction, the patient being placed in a large solenoid but not in contact with the circulating electricity, or by condensation, the patient forming one armature of a condenser, upon a couch made of badly-conducting material, the under side of which is covered with tin plate (the second armature), with daily sittings of 3 to 10 minutes, or less if they cause dyspnœa or fatigue. This treatment is followed by a return of sleep, increase of strength and vital energy, improved appetite, regular menstruation, decrease of uric acid and increase of the urea discharged. The Roentgen rays, a mask of pasteboard covered with thin (0.5 mm.) sheet lead, is fitted to the body, and has apertures corresponding to the parts of the skin to be treated. Powerful inductors, great intensity of the primary and high tension of the secondary current, proper for illuminating purposes, are unsuitable in the therapeutic use of the rays. The vacuum tube is placed at 15 c.m. from the skin, so that the anticathode is opposite and parallel to the field of treatment. Daily sittings are given at first of five, afterwards of from ten to twenty, minutes; the distance of the tube may be gradually somewhat diminished. It is well to pause for two or three weeks after the first two sittings to avoid any excessive reaction due to idiosyncrasy. The effect of the rays on the skin is shown in relaxation of the deep vessels of the corium, with slight exudation in the epidermis and cutis, with consequent swelling of the hair papillæ and loosening of the hair: the molecular constitution of the cellular elements of affected parts is altered and resorption promoted. It is not yet decided whether the deleterious effect of the rays on micro-organisms in parasitic skin affections is direct or due to increased phagocytosis. The treatment is indicated in abnormal hairiness, and in all such skin diseases as are dependent on or protracted by the presence of hair, sycosis, favus, wounds in hairy parts, trichorrhexis nodosa, furunculosis, acne and lupus vulgaris or

erythematodes, chronic eczema, elephantiasis. The exposure of any part to the rays must be at once interrupted as soon as the skin becomes turgescent or bluish red or brown: for example, in sycosis and favus, after 7 to 13 sittings, conjunctivitis may be prevented by the use of the mask and by closing the eyes, or relieved by the usual astringents. Itching and erythema by borax and lanolin (15 per cent.). In lupus the treatment may be more severe, and slight dermatitis does not matter; cicatrisation is progressive, and closely resembles normal skin. To cure hypertrichosis permanently the treatment (three to five short successive sittings) must be repeated at intervals of four to eight weeks.

(166) The Absorption of Ichthyol through the Skin.

Cornelius Beck and von Fenyvessy (*Arch. Internat. de Pharmac. et de Thérap.*, Vol. vi. Fasc. 1 and 2, 1899, pp. 109-120) conclude, from experiments on dogs, that in them ichthyol is absorbed by the normal skin, shown by the increase in the sulphur present in the urine. Both the oxidised and non-oxidised sulphur take part in this increase in equal proportions. It could not be decided whether metabolism was influenced by ichthyol applied to the skin in the same way as Zuelzer and Helmers found in the case of man when ichthyol was given per os. The skin appears to be permeable to bodies which are equally soluble in water and in fat; such substances do not only affect the deeper layers of the skin, but may also lead to changes at a distance. The authors admit that, owing to the differences in the skin of dogs and man, their results can only be applied to man with reservation, but they consider their general conclusions apply to man as well. They could not ascertain whether the closely aggregated, well-developed hair follicles in dogs favoured or hindered the absorption of the drug (the paper is in German). That ichthyol given internally leads conversely to elimination of sulphur by the skin has been clinically observed by H. Radcliffe Crocker (*Dis. of Skin*, 2nd ed., p. 39).

(167) The Poisonous Properties of Heroin.

Harnack (*Münch. med. Woch.*, July 4th, 1899) has brought forward some facts which show that heroin is not so harmless as was formerly supposed. The author thinks that the use of heroin in practice has been premature; he has lately conducted some experiments on animals which do not agree with those published by Dreser. The author insists on the futility of comparing the results obtained by experiments on animals with those obtained on the human subject, particularly in the case of narcotics. Morphine, for instance, is much more poisonous for man than the lower animals. Codein is exactly the opposite in its action. It is impossible to judge of the true value of a narcotic merely from experiments on animals. Harnack's experiments agree with those of Dott and Stockman in ascribing to heroin a far greater depressant action on respiration than is seen in the case of morphine. Heroin is also a cardiac depressant, and in addition gives rise to muscular twitchings and convulsions; These observations are opposed to those of Dreser, who found complete muscular relaxation in his cases. In the first circular published by the Elberfelder Colour Factory in the spring of 1888, heroin was pronounced to be perfectly free from all the poisonous effects produced by morphine. The dose given was 0.005 to 0.02 gram three or four times daily. It was further announced that although heroin was considerably stronger in its effects than codein, its poisonous properties were not greater. These opinions were founded on Dreser's experiments. The maximum adult dose at present should not exceed 0.005 gram. It is safer not to exceed the amount until the drug has had a further trial. The dose for a child should be $\frac{1}{19}$ mg.

PATHOLOGY.

(168) Implantation of Embryonic Cells in Adult Animals.

A. Birch-Hirschfeld and Siegfried Garten (*Beiträge z. path. Anat. u. z. allg. Path.*, Bd. xxvi, Hft. 1, July, 1899, p. 132) have investigated the behaviour of embryonic tissues implanted in the bodies of adult animals—a subject closely associated with the question of the origin of neoplasms, and especially with that of deciduoma malignum. They have found that by means of the injection of finely-divided tissues of young embryos into the liver of adult animals—for example, goats, rabbits, hens, salamanders, frogs—it was sometimes possible to produce in these animals tumour-like new formations of cartilaginous tissue in the liver and lungs. In the case of the hen they also found that some weeks after the implantation of from 1 to 5-days-old embryos there were discovered in the liver tissue of an adenoid nature—epithelioid cells and pigment-like cells. The experiments were specially rich in results when a periodic irritation of the hepatic tissue was combined with the injections. The embryonal cells had, therefore, in these investigations undergone further differentiation in the tissues of other animals. But the growth of the embryonic tissue was only a transient affair, for after some weeks or months the tumour-like growths became encapsuled, retrogressive metamorphosis set in—such as calcification of the cartilage and disruption of its matrix—and finally sequestration and resorption took place through the instrumentality of the surrounding tissues. It is noteworthy that the injection into the liver—in the case of two rabbits—of pieces of kidney, cartilage, decidua, and eye pigment from almost full-time embryos produced no results save some necrosis and atrophy of the hepatic cells and isolated cicatrices in the liver substance. In the case of four salamanders which were injected with pieces of the larvæ, in one a longish piece of cartilage was found on the surface of the liver after forty-one days, while in the other three the results were negative.

(169) Pathological Anatomy of Alcoholic Delirium.

Karl Bonhoffer, of Breslau (*Monatsch. für Psychiatr. und Neurolog.*, April, 1899) gives detailed studies on 12 cases with full necropsies. The central nervous system (brain, cerebellum, and bulbo-spinal cord) was studied in all cases with the methods of staining by Nissl's methylene blue, and some were stained with Weigert's mitosis stain and Marchi's method. (1) Man, aged 40, workman, suffering from grave alcoholic delirium with elevation of temperature (pyrexia), acute mental confusion, and general prostration. There was no intercurrent illness. Necropsy two hours after death showed the following:—Enlarged heart with fatty degeneration of its muscle, liver showing fatty and cirrhotic changes, kidney with marked interstitial nephritis and contraction, with small blood extravasations in the pelvis of the ureter. Brain shows œdema of pia-arachnoid and a slight hæmorrhagic pachymeningitis. In the cortex of the central convolutions the great pyramidal cells are of indistinct contour with displaced nuclei. In the small pyramidal cells the nuclei are destroyed, and there is an increase of the small pericellular glia elements. The small nerve-cell bodies showed marked indistinctness and disintegration, and the nuclei which have survived are feebly stained. In the temporal lobe the cortex presents similar changes. Marchi's method shows no recent degeneration of medullated nerve fibres, but the blood vessels are surrounded by darkly-stained masses of fat globules, and of lymphoid cells with dark globules in them (extravasation). The blood vessels are injected, and full in the cortex and in the central grey substance. In the latter situation there are also perivascular masses of extravasated leucocytes, and in places there are minute hæmorrhages. Marchi's method reveals similar changes to those before mentioned with the same method. (2) Man, aged 36, postman. Clinical symptoms were neuralgia and headache, loss of sleep, delirium for three days, cardiac failure, and death in a state of collapse. Necropsy two hours after death revealed the following changes:—Cardiac lesions as in the previous case. Liver shows more advanced fatty change. Kidneys in a marked granular condition, and with adherent capsules. The pia-arachnoid slightly thickened, and with evidences of old leptomeningitis. The cerebral cortex is hyperæmic, and examination of the Rolandic, frontal, first temporal, and occipital cortex with Nissl's method shows cellular changes of the same kind as in Case 1. The pericellular glianuclei are in greater increase (10 to 12 being seen round a pyramidal cell). The same granulo-fatty perivascular globules and lymphoid cells are seen as before. There is intense congestion in the grey matter of the cerebellum, irregular chromatolysis of Purkinje's cells, and small blood extravasations.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(170) Pemphigus Neonatorum.

Luithlen (*Wien. klin. Woch.*, January 26th, 1899) states that pemphigus neonatorum, though having no connection with ordinary pemphigus, can be communicated to older children and adults, but in them is limited to a few vesicles, and seldom becomes a universal bullous eruption as it does in newly-born children. This difference between the disease in babies and in adults is due to the thick horny layer of the skin in the latter offering greater resistance to the penetration of micro-organisms. The organism which produces the disease is culturally indistinguishable from the staphylococcus pyogenes aureus, but when inoculated on the skin always produces a vesicle, never pus. Owing to this, Almquist has proposed to call it the micrococcus pemphigi neonatorum. Luithlen is doubtful whether the micro-organism is really distinct from the staphylococcus pyogenes aureus, and thinks that it is at any rate connected in some way with septic processes, since an outbreak of pemphigus neonatorum in a lying-in hospital commonly starts in a child born while the mother is suffering from sepsis. The vesicles are formed by the elevation of the horny layer from the stratum Malpighii. This superficial character partly explains why pemphigus neonatorum is relatively benign and easily cured, as compared with the genuine pemphigus of adults where the Malpighian layer is also involved. In discussing the differential diagnosis the writer states that in children a few days old the superficial bullæ may be so extensive and may burst so rapidly that the disease may be mistaken for a severe scald. In the vesicles of burns and scalds, however, the Malpighian layer is always affected. Pemphigus contagiosus would be a more suitable name than pemphigus neonatorum. The treatment consists in avoiding baths, and in applying a soothing ointment to the parts where the vesicles have burst, and an antiseptic dusting powder to the rest of the body.

(171) Addison's Disease and Lesions of the Adrenals.

Sergent and Bernard contribute an article (*Arch. de Méd.*, July, 1899) on what they call suprarenal inadequacy, in which they plead for a more extended view of the subject than the term "Addison's disease" usually signifies. Thus they show that in some instances the suprarenals have appeared intact on *post-mortem* examination. In others, again, there was a marked degree of destruction without the usual symptoms of Addison's disease. In other cases there seems to be congenital absence of these organs, which, however, they admit, may be due to the fact that accessory suprarenals exist in unusual positions in the abdomen. They also point to the fact that experimentation has not as yet produced the whole series of symptoms present in Addison's disease. They thus ask for a more extended signification for the term "adrenal disease," in order that it may embrace very many aberrant forms of disease which have always to a certain extent proved difficult to include under the head of Addison's disease. In this way the ordinary term "Addison's disease" would form part of a greater whole, instead of being itself a complete entity. There are some cases which run a very acute course, and under these circumstances pigmentation may be slightly marked or absent. There may be very striking symptoms, such as vomiting, epileptiform seizures, syncope, and coma, which, taken together, form a somewhat different arrangement of symptoms than we are accustomed to meet in an ordinary case of Addison's disease. Even in some cases there may be sudden death—an event to which the authors draw particular attention—for although some cases of typical Addison's disease end in this manner, there are cases in which patients apparently in good health and presenting nothing indicative of Addison's disease have died suddenly. On *post-mortem* examination extensive suprarenal disease has been found. Several such instances are on record, apparently without satisfactory explanation as to the cause. According to the writer's conception of the subject, these are cases where the suprarenals have undergone a certain degree of destruction, but a sufficient portion has remained in a functional condition, and subsequently the patient may not have presented any symptoms of Addison's disease; but suddenly, under certain conditions digestive or otherwise, the remaining portion of suprarenal suddenly becomes unable to carry on its function, and the result is death with great rapidity. The writers suggest some autotoxic condition as possibly accounting for the sudden overturning of the balance. Several cases are recorded in which the disease has run a very acute course, varying from a few days to three weeks. As already stated, it may not strike the observer in these cases that suprarenal disease is the cause. There may be violent vomiting, intense pain in the abdomen, utter prostration and collapse, with diarrhœa, subnormal temperature, thready pulse, subsultus, delirium. Many of these more acute cases are met with in young adults or in adolescence. In conclusion, the writers point out that if suprarenal disease is to be studied as a whole, we must include acute cases such as described, and there ceases to be any difficulty as to their relationship with what we call Addison's disease if it be remembered that the rapidity of destruction of the suprarenals is capable of causing any variation in the signs and symptoms. This brings the subject into line with analogous diseases in other organs. Thus Addison's disease, in the ordinary acceptation of the term, would be equivalent to hepatic cirrhosis, while acute destruction of the suprarenals would be analogous to acute yellow atrophy of the liver. Lastly, the writers point out the importance of not confounding such cases with poisoning.

(172) Eruption of Varicella confined to the Eyelids.

Sattler (*Columbus Medical Journal*, xxiii, p. 61, July 20th, 1899) describes the case of a little girl who was at first supposed to be suffering from gonorrhœal infection of the eye, and it happened that she had also vaginitis, which increased the probability of the supposition. There was tense and painful œdema of the upper lid of the right eye, and two distinct pustular eruptions about the size of a split pea were present at the lid margin. The largest near the inner canthus had ruptured. The swelling of the lid was so tense and the conjunctiva so chemotic that it was impossible to inspect the cornea. There was a small quantity of watery straw-coloured discharge. Numerous cases of chicken-pox had occurred in the neighbourhood, and two of the older children had an eruption resembling varicella. There were also the constitutional symptoms of chicken-pox. Bacteriological examination failed to discover the gonococcus, and the subsequent course and development of the case proved it to have been one of varicella with limitation of the eruption to the eyelids; on this account it was one of unusual severity. The child recovered with two cicatricial depressions at the lid margin.

SURGERY.

(173) Wounds of the Heart and Pericardium.

Loison (*Revue de Chirurgie*, January, February, June and July, 1899) has prepared a monograph of high importance on wounds of this class. The tables are drawn up with great care, and are well analysed. The first series of tables (*loc. cit.* January) include 23 cases of wound by needles or pins. Of these 9 recovered; in 2 of these 9 operative procedures failed, the pericardium being opened in one instance and the eye of the needle seen projecting from the surface of the right ventricle (Foy); in the other case the eye could be felt just under the skin, but when a skin incision was made, the needle was accidentally pushed in further and lost, yet the patient was well long after the accident (Macdougall). In 3 of the 9 recoveries the needle was extracted by slow rotatory movements, less rapid extraction should set up hæmorrhage; in 3 a skin incision was made over the point where one end of the needle could be felt. In 1, the last of the recoveries, the fifth rib was resected, the pericardium opened, and the pleura accidentally incised as well. The needle was seen running transversely into the right ventricle, but could not be extracted. Pneumothorax and pleural effusion followed, but the patient recovered (Stelzner). Loison

places Stelzner's case by itself, though, strictly speaking, it should be added to the two recoveries after failure to extract the needle. The fatal cases exhibited very varied symptoms, dependent on obvious causes. The second series (*loc. cit.* February) includes no fewer than 90 cases of wound by piercing and cutting instruments (knife 48 times, dagger 8, less frequently sword, bayonet, lance, knitting needle, awl, etc.); 79 of these cases ended fatally. Of the 11 recoveries operative measures were undertaken in all but 1, namely, incision and plugging of the pericardium, 3; incision and drainage of a secondary pyo-pericardium, 2; suture of the pericardium, 3; suture of heart and drainage of the pericardium, 1 (Behn, *Archiv f. klin. Chir.*, vol. lv, 1897, p. 315); and suture of the heart and of the pericardium. The 1 recovery without operation was murdered a year later; a cicatrix was found in the ventricle, and the pericardium adhered to the scar in the thoracic wall (Reifer). The third series includes 110 cases of injury from firearms (*loc. cit.*, June). Here the mortality, as might be expected, is very high, only 3 cases of which any after-history is given having recovered. In the first the heart was exposed by a charge of shot tearing open the thoracic wall. The wound was plugged with gauze (Körte). In the second, perhaps the most remarkable of all instances of recovery after injury of the heart, the patient was wounded in a duel. The fifth rib was fractured over the pericardium. It necrosed and was partially resected; later on the exposed pericardium was opened and let out much pus from its cavity (Langenbeck). In the third case a revolver bullet entered the fifth left intercostal space a little internal to the mammary line and passed out below the scapula. There was much external bleeding and yet no collapse. The pericardium, which had been torn open, was sutured and drained; the pleura was also drained. The aperture of exit, which exposed an unwounded spleen, was likewise sutured and drained (Riedel). All these 3 cases were, it would appear, wounds of the pericardium not of the heart. Loison's fourth and final series includes 54 cases of wound and rupture of the heart by contusion of the chest (*loc. cit.*, July). Three recovered, 2 of these without treatment, and 1 after opening of the pericardium to let out blood three weeks after a football accident (Mansell-Moullin). Loison concludes, after analysing the symptoms of wounds of the heart and pericardium, that they are not more uncertain than those of wounds of the peritoneum and certain abdominal viscera; that diagnosis is equally difficult and delicate in one case as in another, always requiring all the vigilance of the surgeon, and that prognosis is not always gloomy nor surgery always useless.

(174) Volvulus from Sequelæ of Appendicitis.

Souligoux (*Bull. et Mém. de la Soc. Anat. de Paris*, April, 1899) was consulted about a man aged 84, with intestinal obstruction for three days. The abdomen was tympanitic, the pulse small, the temperature subnormal, and the vomit stercoraceous. Nélaton's enterotomy was about to be performed when the patient died. The ileum was twisted on itself 2¼ inches above the ileo-cæcal valve. It also adhered firmly to the sigmoid flexure, which was held tightly against the pelvic brim to the right of the promontory by very dense bands. In the midst of the adherent coils of large and small intestine lay the vermiform appendix. That process was fixed to the free border of the adherent coil of ileum, which had rotated around it. The inflammation of the appendix was probably of very long standing.

(175) Acute Obstruction in Pyonephrosis.

Estrabaut (*Bull. et Mém. de la Soc. Anat. de Paris*, April, 1899) reports the case of a man, aged 53, admitted into hospital with vomiting, tympanites, and severe pain. Neither motions nor flatus had passed for three days. The pulse was 100, temperature 104°. A fortnight before admission he had felt violent pain in the right loin, followed a few days later by rigors. There was no resistance in the right iliac fossa, but there was dulness and swelling in the loin, whence pus escaped on puncture. Next day a lumbar incision was made, and nearly 2 pints of pus escaped from a large cavity in the right kidney. Several other pouches were found in that gland. The temperature fell, but intense dyspnœa followed and proved fatal. All the glandular tissue of the kidney had disappeared; the ureter was greatly dilated above a stricture in its canal. In the left loin was a large white kidney. Yet until a fortnight before operation no renal symptoms had been detected. The acute obstruction was solely due to reflex paralysis of the the intestine.

(176) Suprapubic and Perineal Cystotomy.

Dandridge (*Annals of Surgery*, July, 1899) discusses the relative advantages of the suprapubic and perineal routes in the various conditions for which the bladder must be opened. Of the two operations, unexpected difficulties may, the author thinks, more likely occur in the suprapubic than in the perineal method, and statistics show that the former is the more fatal in conditions of like gravity and severity. For purposes of drainage, perineal cystotomy presents advantages over the high operation, because (1) it drains more efficiently while the patient is in bed, and subjects him to less discomfort; (2) the perineal wound heals more promptly and with less leakage than the suprapubic, after the removal of the tube; (3) it is less likely to present any difficulty, and its performance takes less time; (4) it affords a better opportunity for permanently removing the cause of obstruction, and so securing confirmed relief without increasing in any way the danger; (5) it is less likely to interfere with the restoration of normal contraction, and is in itself a less dangerous way of opening the bladder. In cancer of the bladder, tuberculosis, and hæmorrhage, suprapubic cystotomy affords the greater advantage. In the treatment of vesical calculus experience would indicate, it is thought, that the high operation should be restricted to stones of most unusual size, to encysted stone, and to stones complicated by tumours, and to cases of some deformity, such as ankylosis of the hip. The perineal route, the author states, would seem to possess certain decided advantages in cases of prostatic hypertrophy demanding operation. It affords the best drainage, and secures an easy introduction for the catheter, if further needed, even where it was most difficult before. For the removal of a vesical tumour suprapubic cystotomy is always indicated.

MIDWIFERY AND DISEASES OF WOMEN.

(177) Three Abdominal Sections on the Same Patient in Five Years.

S. W. Pryor (*Virginia Med. Semi-Monthly*, p. 47, April 28th, 1899) gives details of the case of a woman, aged 31 years, who had a four and a half pounds pedunculated fibroid removed from the fundus uteri and the stump treated extraperitoneally. Recovery was complete. Nine months later she had a normal labour, and nineteen months after that another normal confinement. Two years after this occurrence she was again pregnant, but it was found that the vagina was blocked by a large tumour of which the greater part was situated above the brim of the pelvis. Cæsarean section was performed, the child removed alive, and the ovaries extirpated, but the tumour had to be left. Three months later the abdomen was opened again as the fibroid was growing rapidly, and the tumour and uterus were removed leaving only an inch of the cervix. During the removal of the growth a gangrenous adherent portion of large intestine had also to be taken away; the intestinal wound was closed with twelve Lembert sutures. The peritoneum was washed out with normal salt water several times and save for a burn on the toe from a hot brick the recovery was uninterrupted.

(178) Strangulation from Pedicle of Fallopian Tube.

Vasten (*La Gynécologie*, June 15th, 1899) shows once more, like many who have written before him, that serious after-results may follow operations on the pelvic organs long after convalescence. A woman, now 34 years old, underwent operation in June, 1895, for internal hæmorrhage. A ruptured gravid left tube was removed. The effused blood was not removed from the peritoneal cavity. Recovery was rapid. In October, 1896, the same patient again underwent operation, this time for symptoms of acute intestinal obstruction. On opening the peritoneum no adhesion to the parietes or cicatrix of the old incision could be discovered, nor were any coils of intestine adherent to each other. No trace of the old effu-

sion of blood remained. The stump of the left tube adhered firmly to the brim of the pelvis, forming a firm sheet behind, and below which a large coil of small intestine had become strangulated. It had pushed the remains of the left broad ligament upwards and forwards, making a thin sac. The sheet of tissue which formed the neck of the sac had to be divided before the intestine could be set free; it contained two silk ligatures quite intact. The intestine drawn out of the abnormal sac was so much damaged that over 28 inches were resected, with omentum. Murphy's button was used to unite the two ends of the alimentary canal after the resection. A gauze drain was then passed into the wound. For four days the patient vomited constantly, then recovery occurred. In 1898 the patient was safely delivered of a live child at term. Counting the tubal gestation, this pregnancy was her sixth; the first four were normal.

(179) Primary Cancer of the Fallopian Tube.

Friedenheim (*Berl. klin. Woch.*, June 19th, 1899) reports a case of primary true alveolar cancer of the tube. The patient was 35 years old, and had borne three children, the youngest four years ago. The period was regular every fourth week, the show rather free, lasting eight days. Nine months before the operation pains in the iliac regions, especially the left, set in, and leucorrhœal discharge was noted. There was also sacral pain. Then distinct loss of flesh occurred. On examination the uterus was found small and anteflexed. A solid mass as big as a fist was detected on the left side. The abdomen was very pendulous. Abdominal section was performed and the tumour removed with the left ovary. It proved to be a cancerous left Fallopian tube. The operation was done on February 23rd, 1898. On May 5th in that year, when she was last seen, firm deposit could be felt in the left parametrium. The patient was still in fair health. As in Veit's case, the patient was unusually young for primary cancer of the tube.

(180) Large Fibroid of the Broad Ligament: Panhysterectomy.

Delore (*Lyon Médical*, June 18th, 1899) reports the successful removal of a fibroid of the broad ligament weighing over 17½ lbs. The patient was 44 years old and had been subject for several months to sharp radiating pains in the right buttock and lower extremity. The tumour reached the umbilicus. The vagina was elongated and pushed to the left, the right fornix occupied by the tumour. As usual there was no history of menorrhagia. The ovarian vessels were secured on both sides and the tumour was dissected out of the broad ligament. Then an elastic ligature was passed round the pedicle which contained another fibroid; this was enucleated. Then the cervix was removed so that a "supravaginal hysterectomy" was turned into a "panhysterectomy." The big chasm in the broad ligament was plugged by Mikulicz's method. Poncet also drained through the vagina. A month later the patient was in excellent health.

(181) Labour Impeded by Tumours.

Benckiser (*Münchener med. Woch.*, July 11th, 1899) was called in to a case of locked head in twin labour, as it had been diagnosed. He found a hard myoma of the cervix in the pelvic cavity and the os dilated, the head of the child lay above it. As the myoma, which resembled a fœtal head, could not be reduced, perforation and the cranioclast were resorted to, not without great difficulty. The patient had borne fifteen children. There was at the time of this obstetrical operation fever and rigor; the fœtus appears to have been dead for some time. Severe pyæmic fever followed, the myoma sloughed and was spontaneously expelled, and the patient recovered. Tross, of Carlsruhe, operated in a severe case in February, 1899. The patient was a primipara, aged 26. The head presented in the first position, but the os, partly dilated, lay high up to the left; from it hung the membranes. In front of the cervix lay a hard, smooth tumour, filling the right half of the pelvic cavity, and reaching to the anterior superior spine of the right ilium. The child was living. The tumour, owing to its attachments, could not be reduced. No palliative or expectant treatment answered. Cæsarean section was therefore undertaken. Fritsch's fundal incision was made; the child was saved. The tumour was as big as a man's head. It was enucleated, but then Tross found that the uterus could not possibly be saved. A retroperitoneal hysterectomy was therefore performed. The patient recovered, though convalescence was retarded by gall stone colic and the passage of a biliary calculus.

THERAPEUTICS.

(182) Ichthalbin in Children's Diseases.

Homburger (*Therapeut. Monat.*, July, 1899) has administered this preparation in some diseases of childhood with great success. Sach and Vieth were the first to introduce the drug, and they found it answered well in the case of adults. Ichthalbin is formed by a combination of albumen with ichthyol, and thus resembles Gottlieb's tannalbin. The author began his observations in the winter of 1897-98 in Neumann's Poliklinik in Berlin. About 1,000 grams was administered to 60 children. The ages varied from ½ to 14 years. The drug was supplied by Knoll and Co. Amongst skin diseases eczema received most attention, and here the two most important symptoms from the point of view of treatment are (1) irritation; (2) exudation. Ichthalbin had no effect on the irritation. The exudation was, however, markedly affected by the internal administration of ichthalbin; it soon converted the weeping into the dry eczema. It was of great value in cases of eczema affecting the scalp and face, which are of such frequent occurrence in children. The drug does not cure the eczema without some local application in addition. On the other hand, in cases of chronic dry eczema in which local applications had been tried for some time without success, the internal administration of ichthalbin seemed to stimulate the skin, and on several occasions undoubtedly affected a cure. Cases of multiple abscesses in the skin were considerably benefited by ichthalbin, chiefly because of its powerful effect in increasing the appetite, and so improving the general nutrition. The increase of appetite was a most constant phenomenon, and in cases of convalescence from acute diseases the drug proved to be of great value. Cases of acute and subacute intestinal catarrh were not benefited by ichthalbin. Constipation was relieved, sometimes the fæces became softer and less offensive, the bowels certainly acted more regularly. In chronic catarrh of the bowels it had a beneficial effect, which, according to the author, is to be ascribed to the increase in general nutrition, rather than to any local effect on the intestine. Sach believes that the drug increases peristalsis and acts as a disinfectant. The dose for children in the first half-year is 0.05 to 0.1 gram three times a day. In the second half-year, 0.15 to 0.2 gram; during the second year the dose may be increased to 0.2 to 0.3 gram. The latter dose has its full effect in children from 10 to 12 years of age. Should this amount be insufficient, the dose can be increased in children over 3 years of age to 0.5 gram. The dose after 10 years of age may also be increased to 1.0 gram. Ichthalbin should be given before meals. It appears to have no poisonous properties. A child 5 months old was given 0.5 gram in mistake three times a day, without any effect. If the powder is mixed with equal parts of chocolate, the taste is entirely hidden. Ichthalbin chocolate tablets were also found useful.

(183) The Iodine Treatment of Syphilis.

Blum (Congress für Innere Med., 1897) has lately shown that iodine forms by its action on albumen a stable substitution compound, and that this action of iodine can always be shown to take place in the thyroid gland, after the administration of iodide of potassium; under this treatment an accumulation of an albuminous substance (iodoalbum) takes place in the thyroid gland. G. Zuelzer (*Archiv f. Dermatol. und Syphilis*, vols. xliii and xliv) of Zurich, in repeating these experiments on dogs, found that after administration of potassium iodide, organic iodide compounds could be demonstrated here and there in the body, although in very small quantities in proportion to the iodine accumulated in the thyroid gland. Potassium iodide may easily yield its iodine when acted on by oxidising agents; on the other hand in the case of iodalbacid (a stable combination of iodine with a proteid

nucleus, and containing 10 per cent. of iodine) much stronger oxidising agents are necessary to liberate free iodine. The animal body possesses a sufficiently strong oxidising power in the living cell, however, for this purpose. This is shown by the quantitative excretion of iodine in the form of potassium iodide after administration of iodalbacid, which can only be effected by oxidation and not by reduction. The relation between potassium iodide and iodalbacid is similar to that between pure glucose and starch; the latter never produces alimentary glycosuria, as it is only absorbed in proportion to its conversion into dextrose, no matter how great the dose. In the same way iodalbacid never produces so acute an excess of iodine, liberated in the tissues of the body, as potassium iodide. Iodalbacid is also practically not eliminated by the kidney, and hence during its sojourn in the body not only is its action (in liberating iodine in the tissues) slower and steadier, but its excretion from the system is slower. Hence its action is also more protracted. In numerous cases of syphilis and psoriasis in which potassium iodide produced slight or grave symptoms of iodine poisoning, the administration of iodalbacid was found to be quite free from such effects. The largest part of doses of potassium iodide administered in tertiary syphilis passed through the body too readily to affect the morbid tissues, for example, gummata. In all these respects iodalbacid is superior in its persistence. According to this view potassium iodide is indicated in cases in which the first rapid action of iodine is desired, for example, in florid tertiary eruptions; but in all cases in which a protracted iodine treatment is desired and where at the same time it was necessary that the total amount of iodine administered should be absorbed and iodism, that is, free and extensive liberation of iodine in the tissues, avoided, iodalbacid should be prescribed. Fifty cases of syphilis were treated on these principles with iodalbacid, half of these being at the Dermatological Hospital and Poliklinik at Breslau, and the other half from the private practice of Professor Neisser; in every case good results were noted. Where there was any disposition to iodism, iodalbacid alone could be used. When the dangerous and destructive symptoms of the tertiary stage had disappeared, it was essential that the treatment should be kept up, and for this purpose iodalbacid met all requirements. Three to five grains of the substance in capsules could be taken daily for the purpose.

(184) Urotropin in Urinary Diseases.

Ehrmann (*Wiener med. Presse*, June 18th, 1899) has employed urotropin with very satisfactory results. It is hexamethylentetramin formed from formaldehyde and ammonia. Given internally formaldehyde is found in the blood, and is then excreted in the urine. In 9 cases of periurethral abscess and cystitis after gonorrhœa, where the urine was alkaline and ammoniacal and contained gonococci, and where opening the abscess and washing out the bladder had failed to cure, urotropin in doses of $7\frac{1}{2}$ gr. three times a day brought about the desired result in three weeks. Five cases of bacteriuria following chronic gonorrhœa were cured permanently. In 1 case, in spite of urotropin, relapses constantly recurred. Here there was probably a small fistulous communication with the rectum. In chronic posterior urethritis, with cloudy urine, which so long resist deep injections and irrigation of the posterior urethra and bladder, urotropin acted excellently, the urine clearing on the third or fourth day after its administration. Its action appeared to be specially marked in posterior urethritis, so that after this was cured any remaining anterior urethritis could be easily removed by ordinary urethral injections. These observations are founded on 32 cases. Urotropin also acts well in tuberculous and typhoid cystitis. In the cystitis of enlarged prostate it lessens the need for vesical irrigation, so that, for instance, in a case where formerly they had been constantly employed, after urotropin they could be omitted for from two to three months. The writer thinks these observations show that urotropin is one of the few of the newer drugs which will retain a permanent place in therapeutics.

PATHOLOGY.

(185) Chemistry of Nerve-degeneration.

Mott and Barratt (*Journal of Physiol.*, vol. xxiv, No. 1) undertook some observations with the object of investigating more accurately the changes in chemical constitution of nerve tissue occurring in degeneration. The spinal cords from 2 cases of cerebral hemiplegia were selected in which cord degeneration occurred. Each cord was divided longitudinally into two halves along a mesial antero-posterior plane. These halves after drying were extracted with ether, and then the extracts and residues were dried separately and their combined weights compared with the original weights of the half cords. The extracts and residues were then fused with caustic soda, and the amount of phosphorus present determined. In the first cord the ethereal extract was found to be relatively increased on the side of the paralysis, but the percentage of phosphorus present was notably diminished. The percentage of phosphorus was in fact diminished on both sides, but chiefly on the paralysed side. The increase in ethereal extract on the affected side is attributable partly to fatty degeneration of proteid material (axis-cylinder) comparable to the fatty change occurring in muscle, and is partly relative, due to actual disappearance of the solid constituents of nerve tissue. On the paralysed side the ether extract was dark yellow, like melted butter, and crystallised scarcely at all; on the opposite side the ether extract was bright yellow, and yielded large crystals. In degeneration of nerve tissue protagon splits up into glycerophosphoric acid, stearic acid, and choline, and the stearic acid radical unites with the glycerine left behind to form a neutral fat. This is the generally accepted explanation, and is supported by the results just given. In the second cord, similar but less marked changes were found; this cord was complicated by the existence some time previously of a hemiplegic attack involving the opposite side. There was a diminution in the percentage of phosphorus present in the ethereal extract on the side of the paralysis, but not so marked as in the first case. The amount of fatty material present was increased on the paralysed side as in the previous case, but a still greater increase occurred on the opposite side, thus contrasting in this respect with the condition present in the first case, and presumably due to the preceding opposite hemiplegia; nevertheless, in spite of this, the percentage of phosphorus in the extract, as just mentioned, was diminished on this side, the difference, however, being less than in the first case. There was a diminution in the percentage of phosphorus in both half cords, greater on the paralysed side but not so marked as in the first cord. There was rather more than $\frac{1}{2}$ per cent. less water on the paralysed side. The appearance of the ethereal extract was the same on the two sides.

(186) Elephantiasis Congenita.

M. Mainzer (*Deut. med. Woch.*, xxv, p. 436, July 6th, 1899) puts on record a remarkable case of congenital elephantiasis which did not resemble the previously reported ones (being neither of the dropsical lymphangiectatic nor of the telangiectatic type), but which exactly simulated true adult acquired elephantiasis arabum. It was the case of a 4-year-old girl, the offspring of a normal pregnancy. The left upper extremity was enormously enlarged, and the thickening was especially marked in the forearm and hand. Both legs and the right foot showed the same hypertrophic change which the Roentgen rays demonstrated did not effect the bones of these parts. On the toes of the right foot were some grooves suggesting amniotic hands. The external genitals were also affected; the labia majora, the nymphæ, and the clitoris all showed the elephantiasic thickening, and between the posterior commissure and the anus was a reduplication of loose skin. The skin everywhere retained its normal colour and there were no traces of angiomata or fibromata. There was neither nephritis nor heart disease, and the thyroid gland felt normal. Mainzer regards the etiology of this case as quite obscure; there was an absence of all signs of erysipelas or lymphangitis in the mother during her pregnancy; there was no family history of elephantiasis, and there had not been either maternal œdema or albuminuria. The treatment recommended was systematic massage and elastic pressure brought to bear on the affected parts. It is to be regretted that no illustration of this unique case is given.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(187) Epileptic Seizures and Hemiplegia.
Touche has collected a considerable amount of information on the occurrence of epileptic seizures in hemiplegia (*Arch. Gén. de Méd.*, July, 1899). In the first place such seizures are not of frequent occurrence, being somewhat less than 8 per cent. They do not supervene immediately after the hemiplegia. The earliest date for their occurrence, according to the author's statistics, is three months and the latest four years. The attacks themselves are not frequent in those cases where they do occur. In one instance there were only four in the same number of years, in another three in the same number of months. In some instances there is only a record of one seizure in several years. The attack usually comes on without any apparent exciting cause, and the clinical appearances do not differ much from those characteristic of ordinary epilepsy. As a rule, there is an aura such as a sensation of numbness invading successively the different portions of the limbs, more particularly the upper. The convulsive movements predominate on the hemiplegic side, though the healthy side participates. This may be so marked in some cases that no one would suspect the presence of hemiplegia if only seeing the patient in the attack. Loss of consciousness is usually met with, but an initial cry is not uncommon. The fall may be more or less sudden. In some instances the patients may be sufficiently forewarned to enable them to sit down. On the other hand, the fall may be so sudden as to give rise to various accidents. The tongue is often bitten, and there may be incontinence of urine. As regards the hemiplegia itself, the cases sometimes present some curious features. Thus, in cases of right hemiplegia, with mental and speech defects, there seems to be a greater preponderance of epileptiform seizures. Those patients who are able to give full details of their condition insist on the slowness and progressive character of the hemiplegia. There are usually associated sensory symptoms. Thus, in general terms, the sensations are diminished on the hemiplegic side, though it does not go so far as complete abolition. The alteration of the different sensations may be unequal. In some cases pain sensation has been noticed as more effective than any other sensation. Retraction of the visual field seems to be a common feature, and auditory acuteness has also been noted as defective on the side involved. In two cases noted by the author there was an opportunity of examining the brain *post mortem* and in both, large areas of softening were discovered in the posterior portion of the brain, and the history of the majority of the cases supports the idea that the lesion is usually one of softening. From this it may be inferred that very many cases are syphilitic. To say that the occurrence of epileptiform phenomena in hemiplegia implies a cortical softening would be, the author thinks, premature, but still the fact remains that there has generally been anæsthesia as well as hemiplegia in those cases which have exhibited convulsive seizures.

(188) Danger Signals of the Pre-eclamptic State.
C. Jewett (*Brooklyn Med. Journ.*, xiii, p. 468, August, 1899) points out that eclampsia is conceded to be a preventable complication of pregnancy and labour, and that it is unknown in the practice of obstetricians of special training, although it is prevalent in general practice. It follows that its danger signals are not sufficiently appreciated by the general practitioner. The first indication of danger must be sought in the urine, for the nervous phenomena of the pre-eclamptic state imply a degree of intoxication which in the vast majority of cases must have been preceded for several days or weeks by faulty urinary excretion. The presence of albuminuria is undoubtedly of great value, but unfortunately too many physicians trust to it alone, and this is made worse by the fact that, as a rule, the examinations are made only at long intervals. With regard to the urea, the medical man may usually feel secure so long as the urea elimination is near the normal—400 or 500 grs. per diem—and special vigilance is demanded when there is a marked falling off in the quantity. But it is to be remembered that it is not alone an absolutely reliable guide. A most important and too frequently neglected element in the prognosis as relates to the pre-eclamptic state is the daily quantity of urine. If every gravida, says Jewett, were taught to measure the urine once or twice weekly during the later months of pregnancy, and duly impressed with the necessity of keeping it at or above three pints per diem, convulsions in childbed would be almost unknown. Personal experience leads him to believe that even in the presence of albuminuria and diminished urea excretion eclampsia will not occur so long as the volume of urine can be maintained at about 70 ounces in twenty-four hours. In the discussion which followed the reading of Jewett's paper before the Brooklyn Gynecological Society, Dr. Polak pointed out that it was difficult to make patients, especially women, drink enough water; and Skene emphasised the association of chlorosis and eclampsia.

(189) Idiopathic Cramp of the Tongue.
Personali (*Clinica Medica*, I. 1899) describes this condition as consisting of involuntary contractions of the tongue, which may be unilateral or bilateral, tonic or clonic. The contractions come on in paroxysms without any known anatomical lesion, and their etiology is obscure. Apart from hereditary nervous disease anæmia seems to be a fairly common cause; at least, a certain number of cases recover under treatment by iron. The disease is most common between the ages of 30 and 40, but may come on at all ages; women are slightly more liable than men. The attack comes on suddenly (rarely during sleep), and lasts a few hours, or even days and months. The sensibility, electrical reactions, and nutrition of the tongue remain unaltered. The pupils are often dilated, and there is an increase of the masseteric reflex and of the reflexes generally. Possibly the disease is due to irritation of the bulbar centre of the hypoglossal. The prognosis *quoad vitam* is good, but doubtful as far as the disease itself is concerned. In the treatment of the attack morphine or chloroform are the most useful drugs. In the intervals it is advisable to try antipyrin, zinc oxide, belladonna, etc.

(190) An Undescribed Pupil Phenomenon.
A. Westphal (*Neurol. Centralbl.*, February 15th, 1899) refers to the contraction of the pupil when the orbicularis palpebraram muscle is energetically contracted. It is necessary to ascertain beforehand that the pupil is not in a contracted state (myosis) before testing. On asking the patient to close the eyelids firmly, and at the same time forcibly keeping the eyelids from closing, the pupil is seen to contract in the normal eye. In the case of eyes, however, whose reaction to light is feeble or absent (as in the case of the Argyll-Robertson pupil), the contraction of the pupil referred to as associated with the energetic contraction of the eyelids is in abeyance. This phenomenon—namely, the failure of contraction in association with that of the orbicularis—is the new phenomenon of Westphal. It has been found by him in tabes, in cerebral syphilis, and in paralytics, but could not be obtained in healthy subjects.

SURGERY.

(191) Extensive Resection of Intestine.
Dreesmann (*Berl. klin. Woch.*, No. 16, 1899) operated for strangulated right femoral hernia on a single woman aged 37, small, thin, and sickly. He found much of the ileum strangulated, twisted, and gangrenous; the process of gangrene had extended far inwards beyond the hernia. He resected no fewer than 7 feet of ileum. The distal end, towards the colon, was closed: the proximal or upper end was grafted into the ascending colon. A small gauze drain was passed into the lower end of the wound. The patient recovered, and was seen three months later, and then seen again at the end of the same space of time. She had then lost only about 1¾ lb. weight. Dreesmann adds a good epitome of 26 cases where over 1 metre (39.3 inches) of intestine have been resected. Of the 26, the affection for which the operation was performed, was: volvulus 10 cases, strangulated hernia 7, inseparable adhesion to tumours 2, stenosis 2, intussusception 2, circumscribed peri-

tonitis 2, traumatism 1. No less than 9 of the 26 died immediately after the operation, 1 died four months after, and 16 recovered completely. In Dreesmann's case the strangulation seems to have existed but twenty hours before the operation, yet gangrene was already extensive. Under such circumstances the gut must always be searched before reduction.

(192) New Incision for the Exposure of the Bile Ducts.

BEVAN (*Annals of Surgery*, July, 1899) objects to the incisions generally employed for exposing the gall bladder, on the ground that these do not give room for extensive work unless they are made very long, and that when they are made very long they are apt to result in hernia. The incision introduced and recommended in this paper consists of a primary portion and two extensions. The primary part which can be employed for exploration or simple cholecystotomy is an *f*-shaped incision, from 3 to 4 inches in length, along or through the outer border of the rectus muscle. The extended portions formed by carrying on the curved extremities of the primary incision are added when required. These can be made from an inch to 3 inches in length, as the thickness of the abdominal wall, and the character of the operation demand. When complete this incision gives much freer access to the gall-bladder and the bile ducts than can be attained by any other form of incision. By a division of the rectus in part and of the external and internal oblique, and the transversalis muscles, the margins of the incision can be widely separated without tension.

(193) Foreign Bodies in the Vermiform Appendix.

MITCHELL (*Johns Hopkins Bulletin*, January, February, and March, 1899) records that of 1,400 cases of appendicitis collected from various sources in the last ten years, 7 per cent. had true foreign bodies, and not including fæcal concretion which were present in 315 cases. Of 250 cases of appendicitis in Johns Hopkins Hospital (ten years), only one foreign body, namely, a segment of a tapeworm, was found. Osler in ten years' experience at Montreal found foreign bodies twice, namely, (1) 5 apple pips, and (2) 8 snipe shot. The most common foreign bodies are gall stones, round worms, spicules of bones, bristles, and pins. Mitchell collected 28 cases of pins found in the appendix, 19 being males and 9 females. The resulting appendicitis was of a very variable type: in a few cases the symptoms were those of mild and chronic appendicitis with recurrent attacks and long-continued pain, and finally abscess. In the majority, however, rapid perforation and abscess formation followed the initial symptoms. Mitchell further points out that light foreign bodies like grape seeds and cherry stones, popularly assigned as the cause of appendicitis, are in reality exceptional, and that their frequency has been over-estimated owing to lack of careful discrimination from fæcal concretions, which are the most commonly occurring bodies in this situation.

(194) Fracture of Os Pubis: Sloughing of Bladder: Recovery.

BOUDIN (*Lyon Médical*, July 9th, 1899) reports a case of fracture of the os pubis in a man aged 45. Hæmaturia and retention of urine followed. The catheter could not be introduced into the bladder. Jaboulay made the incision for suprapubic lithotomy, and discovered an extra-peritoneal laceration of the bladder. A phlegmon developed in the curve of Retzius: it was therefore drained and in a few days a large membranous mass escaped, apparently the fundus of the bladder. When the patient improved in health, Jaboulay endeavoured to re-establish the functions of the urethra by an external urethrotomy. It was then found that a sound, passed through the incision, could not be retained in the bladder; in fact there seemed to be no vesical cavity. The perineal incision was simply left open. After a short time the fistula which developed at the site of the suprapubic incision closed spontaneously. The perineal wound became, on the other hand, a fistulous tract, but the patient was able, when exhibited before a society, to hold his urine for an hour. There seemed to be a vesical cavity, the torn edges of the bladder having closed in.

(195) Primary Tuberculosis of the Iris.

KRUCH (*Gazz. Med. Lombarda*, March 6th, 1899) reports 3 cases of primary tubercle of the iris, all in young subjects (7, 12, and 13 years). Tubercle of the iris may exceptionally occur as the result of infection from external injury. As a rule, however, it is secondary to tuberculous disease elsewhere, but may be a primary manifestation of tubercle. In either case it is more common in the first half of life. It may be acute or chronic; primary cases usually have a more rapid course than secondary. In rare cases, spontaneous cure may take place, the tubercle being absorbed. The duration varies from a few months to years. In chronic cases the symptoms are not unlike those of any other new growth of the iris. As regards treatment, enucleation is the only satisfactory thing to do. As to the differential diagnosis, in the absence of other signs of tubercle, the course of the disease and the situation of the nodules at the periphery of the iris rather than at the pupillary border is in favour of tubercle.

MIDWIFERY AND DISEASES OF WOMEN.

(196) Hysterectomy for Spontaneous Rupture of Uterus.

THOMSON AND SCHWARTZ (*Centralbl. f. Gynäk.*, No. 28, 1899) have published an important obstetrical and pathological report on spontaneous rupture of the uterus. It includes an original case, where, as the patient was almost moribund, Thomson was compelled to operate in a small and very dirty room in the patient's cottage, near Odessa. She was a 6-para, aged 38, with a wide pelvis, and only once had the forceps been used in her previous labours. Her general health was good. Labour pains set in one morning at term; the membranes ruptured at 4 P.M.; by the evening the os admitted two fingers, and breech presentation was diagnosed by the local doctor. In the night strong pains set in, and at 4 A.M. one very sharp pain was felt; it seemed to extend over the whole abdomen. Collapse and complete cessation of uterine contraction followed. Thomson could feel the fundus a little below the umbilicus; it contracted occasionally under pressure. The fœtal head lay in the epigastrium. The breech still lay in the uterus and the os was fully dilated, but delivery by the natural passage was found impracticable. The patient was very pale and almost pulseless. The abdomen was freely opened in the middle line. A quantity of blood and a large male child, recently dead, were removed from the peritoneum. There was a long rent in the posterior wall of the uterus near the cervix, extending into the left broad ligament and vagina. The entire hand could be passed into that canal from the peritoneal aspect of the rent. An elastic ligature was passed round the cervix and broad ligaments; supravaginal hysterectomy was then performed and the cervix fixed in the lower angle of the wound with two sutures. Iodoform gauze was also passed into the lower part of the laceration, which still remained, as it involved the upper part of the vagina. The gauze was pushed upwards till one end lay outside the uterine stump in the lower angle of the abdominal wound. The latter was closed. The operation took eight minutes. The patient was placed in bed, then saline solution infused. She soon rallied. Great quantities of fœtid discharge escaped from the vagina and abdominal wound, and this free drainage evidently saved the patient, though she lay with her clothes soaked in it for want of proper nursing. Diarrhœa, cystitis, and plugging of a vein in the left leg followed, but the patient ultimately recovered. The uterine muscular tissue showed signs of degeneration.

(197) Hour-glass Contraction of Membranes in the First Stage of Labour.

TUCKER (*Amer. Gyn. and Obstet. Journ.*, July, 1899) reports and tabulates 5 cases of this condition observed in 3,000 consecutive confinements, of which 50 were abortions, and 350 more or less premature labours. The apparent pregnancy, therefore, might be regarded as 5 in 400 or 1 in 80, if we consider only the premature labours, but if we assume that this phenomenon may occur at term under favouring circumstances, the frequency must be changed to 5 in 3,000, or 1 in 600. Tucker's 5 cases are carefully tabulated. It is significant that in 4 of those 5 the obstetrician fell

into the usual error—a wrong diagnosis of second stage being made at the time of the first examination; in reality the first stage did not end till several hours later. The ages of the 5 patients ranged from 20 to 41 years. Six factors were uniformly present in all the 5 cases, and without the existence of all six in every case the phenomenon, in Tucker's opinion, could not have been produced. These factors are: (1) Partially-opened cervix. Labour must begin and the cervix must be more or less dilated before "constriction of the membranes" can be established. (2) Resistance of the cervix. Unless it offers resistance owing to rigidity or thickness, a constriction of the entire bag of waters into two smaller bags cannot be made. (3) Non-engagement of the presenting part. In all 5 cases the presenting part, though different in every case, failed for some reason to fit into the pelvic brim tightly enough to prevent liquor amnii from passing freely down into that part of the bag of waters which lay at first in front of the presenting part, and which protruded later through the cervix and became the vaginal bag. (4) Separation of the chorion. Unless the chorion becomes detached from the lower uterine zone, extension of the membranes through the cervix to form the vaginal bag could not take place, even if all the other conditions were favourable. (5) Tough membranes. Unless the membranes are strong enough to resist rupture in spite of uterine contractions of considerable severity until the vagina is completely filled by a bag of waters "hour-glass constriction of the membranes" cannot be established. (6) Uterine contractions. Labour must have advanced far enough to have partly dilated the cervix, and some separation of the chorion from around the internal os must have taken place before the pains begin to be effectual in forming the vaginal bag. Then the uterus acts at each pain like a bulb syringe in forcing the liquor amnii through the cervix into the vaginal bag, which increases in size with every pain.

(198) Difficult Diagnosis of Abdominal Tumours in Women.

Brohl (*Centralbl. f. Gynäk.*, No. 30, 1899) relates three cases of some interest as showing the difficulty of diagnosis of many abdominal tumours and allied affections in women. A patient of his, subject to marked kyphoscoliosis, had a swelling below the liver. Diagnosis was very guarded; liver, kidney, or ovarian tumour were suspected. At the operation the swelling was found to be a hydronephrosis. In the next case diagnosis was yet more uncertain even until the operation had been half finished. A woman had a cystic swelling as big as a hen's egg in the right groin. On puncture the contents proved to be serous. Cyst of the round ligament was diagnosed. At the operation that ligament was found running on the posterior aspect of the cyst. At length, on carefully examining the interior of the cyst, a very narrow opening was detected communicating with the peritoneum; the cyst, in fact, being a hernial sac after all. The third patient, a girl of 20, complained of constant pain in the abdomen, always referred to a point to the left of the umbilicus and above it. Palpation under an anæsthetic did not assist diagnosis. The pain was so severe that the patient begged for an exploratory operation. When this was performed, the pelvic organs were found normal, and nothing morbid was detected in the abdomen except the vermiform appendix, which was blocked by two fæcal calculi. The fact of the pain being to the left of the umbilicus and above it, and not as usual to the right and below, seems to have misled the medical attendant, who did not take disease of the vermiform appendix into consideration. In none of the three cases, let it be noted, did the disease originate in the genital tract.

(199) Futility of Hysterectomy for Cancer.

Terrier (*Gazette des Hôpitaux*, July 22nd, 1899) draws a gloomy picture of this operation, as far as immunity from recurrence is concerned. If the cancerous uterus is to be removed, the abdominal is better than the vaginal method. Out of 9 abdominal hysterectomies by Terrier 6 recovered and 3 died. He admits that astonishingly good temporary results follow hysterectomies where thedisease is so advanced that recurrence must be almost immediate. He himself has not only removed the uterus, but also resected the vagina, dissected away pelvic glands, and cleared away all that was suspicious; complicated operative manœuvres only practicable through the abdomen. Great temporary relief ensued, but early recurrence invariably occurred. He has never succeeded in curing the patient thoroughly, however extensively he was able to clear away suspicious tissue. He feels certain that the alleged permanent cures reported by others were errors of diagnosis, clinical and pathological.

THERAPEUTICS.

(200) Therapeutic Experiments with the Roentgen Rays in Infectious Processes.

H. Rieder (*Münch. med. Woch.*, 1899, No. 29) says that in spite of the proved bactericidal action of the Roentgen rays upon cultures it was not to be hoped that such illuminations would benefit the acute processes due to intravenous injection. Even with regard to subcutaneous infection his experiments on mice, rabbits, and guinea-pigs with anthrax streptococcic and staphylococcic infection proved negative. In regard to chronic infections, tuberculosis is well suited for experiment, it has been well studied, it is easily inoculated, and its inoculation in guinea-pigs causes a more or less protracted illness. Lortet and Genued obtained positive results in 1896, and in 1898 Mühsam, of Berlin, published more extended experiments, showing that the results to be obtained were good in cutaneous and subcutaneous infections, but not so good in intraperitoneal infection or in that of the knee-joint; local tuberculosis at the seat of infection could always be influenced and diminished, but the general disease was not to be cured or even arrested. Rieder has lately conducted a series of 48 experiments with results differing but little from Mühsam's; the local tuberculosis was restrained and in many cases the general infection was delayed, but the animals died nevertheless, and often sooner than the controlling ones. Moreover, the illumination had an evident and very unfavourable influence upon vitality. Special experiments were made to elucidate this, and he found that the temporal and gradual appearance of dermatitis varies greatly in animals (as in man), but that guinea-pigs and rabbits after one protracted illumination (2 hours) or after several short ones, repeated every day, in about 3 weeks, or more rarely in from 8 to 14 days, suffered from dermatitis and great loss of hair. Bloody suffusion was seen on the tongue and web of frogs 8 to 10 days after exposure to the rays. As to whether the decided wasting seen in the exposed animals was due to inanition or other causes, there seemed to be reason to suppose that the rays caused a chemical transformation of albumen in the system and the formation of toxic wasting products. As regards the effects of the rays on tuberculous processes in man, Kümmell, Schiff, Gocht, and others report their beneficial effect on lupus; here and there recurrence took place to be promptly cured by a short exposure—only a colourless white cicatrix was left. The author's own experience confirms this report, but to avoid serious dermatitis recommends plenty of time and the observance of certain precautions; exposures of from 5 to 10 minutes at a distance of at least 20 cm., and with a primary current not exceeding 2 ampères in strength. The treatment of pulmonary tuberculosis by the Roentgen rays has not been extensively tried, and the results, especially from France, are very contradictory. The author found that with an exposure of 10 minutes, at a distance of 40 to 50 cm. and a primary current of 1 to 2 ampères, caused no dermatitis (70 sittings in one case within 3 months), but the results were not at all satisfactory, the tuberculous process could not be arrested, much less cured.

(201) Diet in Liver Disease.

Emil Schwarz (*Centralbl. f. d. ges. Therapie*, August, 1899) inquires how far in disease of the liver the food can be selected so that the system shall suffer as little as possible from the loss in hepatic activity, and also whether the progress of the disease may be directly influenced by the patient's mode of life. The influences exerted by the liver upon albuminous, starchy, and fatty foods, and upon the final products of nitrogenous metabolism and digestion, are not independent processes, but are the final results—all

can at present understand of a complicated process taking place in the liver cell. In every parenchymatous lesion all these influences suffer simultaneously, if not equally, but it is only the most severe cases of acute disease, with rapid destruction of the parenchyma (acute yellow atrophy, phosphorus poisoning), that lead to intoxication, with the end products of metabolism or digestion. In chronic disease metabolism suffers little till the final stages. The increase of ammonia in the urine depends, not on hepatic insufficiency, but on the abnormal quantity of the acids in the system, due to deranged digestion. Schwarz sees no reason in the condition of the parenchyma to diminish either nitrogenous or amylaceous food, nor, unless there be lack of bile in the bowel (any form of jaundice), the amount of fat. But the digestive tract is involved by catarrhal processes, due primarily to the deleterious ingesta which cause the hepatic disease (for example, alcohol) and secondarily to the disturbed circulation which often even in early stages leads to hæmorrhage, œsophageal, gastric, or intestinal; resorption is delayed by the portal congestion—the surface available for it is reduced by shortening of the intestine (to as much as one half) and atrophy owing to periphlebitis of the portal system and chronic, peritonitis and stagnation of ingesta leads to increasing autointoxication. Everything indicates that the food should be capable of rapid conversion into an absorbable condition, should be highly nutritious in small quantity, and should leave little refuse after digestion, and Schwarz recommends that in every case with serious hepatic symptoms a trial at all events should be made with a rigid milk diet. Even serious degenerative processes are not necessarily progressive, and by excluding further injury, permanent improvement may be obtained. Abstinence from alcohol must be a primary condition in any case capable improvement, and as recent work has proved the influence of caffein upon the glycogen in the liver, tea and coffee are to be avoided.

(202) Tuberculous Peritonitis Treated by Injections of Iodine.

STEFANILI AND FABOZZI (*Suppl. al Policlin.*, An. v, No. 11, 1899) record the case of a child aged 13 admitted with ascites. The liver was not materially enlarged, and the spleen could not be felt. The heart was normal and urine healthy. There was a history of typhoid fever a year earlier. One sister had scrofulous cervical glands, otherwise the family history was good. Tuberculous peritonitis was diagnosed. On admission the child weighed 37 kilog. and the abdomen measured 78 c.cm. A solution of iodine, 1 gram, potassium iodide, 2 grams, and water, 50 grams, was made, and half a syringeful injected into the genital region; as this caused no inconvenience a whole syringeful was next injected daily for the first ten days and then every other day. The treatment was begun on March 19th. At the beginning of April some of the fluid was withdrawn and examined bacteriologically, culture preparations were made, and experiments on guinea-pigs instituted. No tubercle was found. At the end of May the child weighed 27 kilog., and the abdominal circumference had decreased to 61 c.cm. No fluid could be detected in the abdomen, and the child was discharged from the hospital cured.

(203) The Treatment and Prophylaxis of Gonorrhœa.

KOPP, (*Münch. med. Woch.*, 1899, No. 31-32) reviewing recent drugs and methods used in the treatment of gonorrhœa, reports unfavourably of argentamin and argonin. Largin seems worth a trial. Some of the newer preparations of silver fulfil certain indications better than nitrate, but no great difference can be traced in the results. Protargol and itrol (and also oxycyanate of mercury) cause less irritation than $Ag.NO_3$. We have no specific in any drug, and an abortive cure is just as rare with the new drugs as with the old. Nevertheless the endeavour to obtain the bactericidal action of drugs in the deeper tissues by prolonged injections from large syringes (15 to 20 c.cm.) in the earliest possible stage of infection, as exactly formulated by Neisser, must be recognised as sound in principle. That posterior urethritis and other complications should not be, as many believe, so frequent as formerly may be due to the rigid regimen and hygiene enforced in test cases. Janet's irrigation has failed as an abortive treatment in outpatients at all events; in posterior urethritis and chronic gonorrhœa it has given satisfactory results, in the former with a weak solution of Ag. NO_3 (0.2 to 0.5 in 1,000), in the latter where there are no cocci $KMNO_4$ is sufficient. As regards prophylaxis, in addition to what may be done by moral and religious influence, young people before going out into the world should be instructed as to the prevalence and contagious nature of venereal disease and encouraged if infected to put themselves under medical care immediately. Frank has proved that gonorrhœal infection may be surely avoided without pain by the instillation of a 20 per cent. protargol-glycerin solution into the fossa navicularis after cohabitation; a 2 per cent. nitrate of silver solution is recommended by Neisser and others, but is not painless. As gonorrhœa may and does lead to long years of serious illness in perfectly innocent persons the general use of such a preventive is surely warranted.

(204) Tetanus Traumaticus Cured by Injection of Brain Emulsion.

A. KROKIEWICS, Cracow (*Wien. klin. Woch.*, 1899, No. 28), who has already published two successful cases of the above, reports a third in a countryman, aged 35, tetanus following a leech bite. All symptoms of a traumatic tetanus fully developed on the tenth day, and unrelieved by narcotics, when an emulsion of an entire rabbit's brain was injected. The spastic convulsions were presently much relieved. Two other such injections given afterwards; no abscesses. Patient discharged cured in about three weeks.

PATHOLOGY.

(205) Pathology of Congenital Syphilis.

HECKER (*Deut. Archiv f. klin. Med.*, vol. lxi, pp. 1 and 2) has made a careful study of the relation between the pathology of congenital syphilis and the normal anatomy of the fœtus and newborn infant. It is a remarkable fact that a disease having a definite clinical picture should have no characteristic features *post mortem*. The author made notes on no fewer than 100 *post-mortem* examinations of congenital syphilis. The most noteworthy results of his investigation may be summarised as follows:—The liver is always enlarged in the mature and immature fœtus suffering from syphilis, whereas in children who have lived for a short time this enlargement is often absent. In the cell accumulations of diffuse and miliary syphiloma of the liver certain cell groups are to be differentiated; the cells either resemble proliferating epithelium, or else they approximate to newly-formed blood cells. Both these varieties are seen in the normal fœtal liver; they disappear, however, either shortly before or after birth. This proliferation of epithelium is increased in syphilis. The liver is the chief blood-forming organ during fœtal life; the young nucleated blood cells originate from the endothelium of the walls of the capillaries; they are more numerous in the efferent than in the afferent blood vessels. The vessels of the portal system in the fœtus are peculiarly rich in cells of an "adenoid lymphoid" character, which begin to resemble the adult variety at birth. The kidneys in the syphilitic fœtus are considerably enlarged; after birth they diminish in weight. The kidney changes in congenital syphilis are constant; they consist chiefly in an infiltration of the cortical blood vessels, which after some time cause atrophy and degeneration of the epithelium of the urinary tubules and glomeruli. The kidney shares to a slight extent in the elaboration of the fœtal blood. The syphilitic splenic tumour is constant in the fœtus. The usual pathological lesion is a small celled infiltration of the large and medium-sized blood vessels. The fœtal pancreas shows an increase of weight in the syphilitic subject. The thickened coats of the umbilical vessels without infiltration is no sign of syphilis. The umbilical vessels in congenital syphilis often show specific changes, and their recognition during life would help in diagnosis. In syphilitic disease of the thymus, in addition to the formation of abscesses, the connective tissue septa become thickened, causing compression of the lobules. Wegner's syphilitic bone disease is not always present, but the condition is never seen in non-syphilitic infants. Clinically the syphilitic infant has almost always some disturbance of the functions of the kidney.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(206) Joint Affections in Syringomyelia.

P. Preobrajensky, at the meeting of the Moscow Society of Neuropathology (*Arch. de Neurol.*, April, 1899), gave an account of 2 cases, with demonstration of anatomical specimens illustrating the above conditions. Case I. A woman aged 55, whose father suffered from scoliosis and nervousness. She had a paresis of the right arm since infancy. Thirty years ago she had whitlows on the fingers of the left hand to the number of a dozen, especially on the thumb, index, and middle fingers, and at the same time there appeared an ulceration in the sole of the left foot. A month after there came on a painful swelling of the left knee-joint. Present state: Slight dulness of sensibility at the left knee, and inequality of the pupils with loss of the light reflex. There is cypho-scoliosis of the spine, the concavity to the left. In the upper limb muscles on both sides are atrophied, and show a notable diminution of the tendon reflexes. The left knee is swollen and deformed and ulcerated on its external surface, and there is backward luxation of the leg on making movements of flexion at the knee. There are no splinters, but only a simple crepitus in the joint during movement. The right knee jerk is increased. There is a perforating ulcer at the base of the left great toe. The patient died of pyæmia, and the necropsy revealed the following changes: In the spinal cord there is a large central cavity extending from bulb to lumbar enlargement; this which in certain parts assumes such dimensions that the cord substance itself is reduced to a thin pedicle. The head of the humerus presents numerous osseous growths of a yellow colour and slightly transparent. The two condyles of the left femur are much wasted, especially in the articulating parts. The articular surface of the fibula is deprived of cartilage and slightly wasted. Case II. A man, aged 47, antecedents unknown, was received into hospital in a semi-comatose condition, the temperature being 38.6° C. There is external strabismus of the left eye, with paralysis of the lower half of the face on the same side. The muscles of the left hand (thenar and hypothenar eminences) and left forearm are atrophied. The left shoulder-joint is swollen and its movements are limited. The necropsy in this case revealed tuberculous lepto-meningitis and gliomatosis of the spinal cord, with a central cavity in the parts below the cervical enlargement. The head of the femur presented osseous growths (excrescences) still more marked than in the first case.

(207) Peripheral Paralysis of the Hypoglossal Nerve.

Aug. Hoffmann (*Neurol. Centralbl.*, February 1st, 1899) relates a case occurring in a girl, aged 17, who was also the subject of old disease of the middle ear. She had often suffered from inflammation of the glands in the neck, and four months before she was first seen she had a severe attack, after which the glands did not completely subside. Three months later she noticed that the left half of the tongue was smaller than the right. There was then some difficulty in speaking and chewing. When she first came under observation the left half of the tongue was small, thin, and wrinkled. There was no disturbance of sensation and no interference with taste; there was no paralysis of the palate or larynx. The right side of the tongue reacted normally to the electric current, but on the left side the reaction was sluggish, with a preponderance of the anodal closing contraction. The glands in the neck were still enlarged but they subsequently became smaller. There was no evidence of disease of the vertebræ. No real improvement was recorded after prolonged electrical treatment. The reaction of degeneration showed that either the trunk or the roots of the hypoglossal nerve were affected. There was, however, no reason to suspect either acute or chronic disease in the centre. Cases have been reported in which large swellings of the glands of the neck have been the cause of lingual hemiatrophy. As the glandular enlargement was slight in this case, Hoffmann thinks that the inflammation must have spread to the nerve rather than that there was any pressure on the hypoglossal nerve itself. In Erb's case there was an angina along with slight swelling of the glands. It was strange how so considerable a wasting of half the tongue should interfere so little with its movements.

(208) Hysterical Skin Affections.

Rasch (*Derm. Centralbl.*, August, 1899, No. 11, p. 322) records a case of factitious, vesicular, bullous, and gangrenous dermatitis, occurring in a young female servant, aged 18, with hysterical stigmata. She was under observation either as an out-patient or in-patient at the Copenhagen Communal Hospital, from October, 1895, to October, 1898, but it was only in March, 1898, that the fraud was exposed by the patient confessing she had herself produced the original bullous eruption by means of cantharides plaster. An interesting point in the patient's family history was the fact that her father's brother and her mother's sister had suffered from mental disease. There was no sign of congenital syphilis, though the mother's history of eight confinements, two children only surviving, and abortions, pointed that way. Some of the old lesions presented keloidal scarring. The author points out that the factitious nature of these eruptions are but too frequently erroneously attributed to a purely vaso-motor and tropho-neurotic origin. He gives some instances of published cases which were subsequently shown to have been self-induced. Rasch also refers to the view of the Salpêtrière School that gangrenous ulceration of the skin may occur as a symptom of hysteria, and points out that from the published accounts of such cases with which he is acquainted, an artificial origin cannot be excluded with certainty.

(209) Kernig's Sign in Meningitis.

This subject is dealt with in the editorial article in *La Riforma Medica*, July 28th, 1899. In 1884 Kernig found that in patients suffering from meningitis there was great difficulty in extending the leg when told to get out of bed, the thigh remaining flexed at right angles to the pelvis. This condition according to the author was almost constantly found in affections of the pia mater, and not in healthy subjects or in other diseases, so that it becomes of value in the differential diagnosis. When the patient is lying in bed this flexion completely disappears. Kernig's observations were founded on 15 cases of affection of the pia mater, in 8 of which the diagnosis was confirmed *post-mortem*. Firis, of Copenhagen, confirmed the existence of Kernig's sign in 53 out of 60 cases, and other observers have also noticed its presence. No very satisfactory explanation of the sign has been offered.

SURGERY.

(210) Fish Bones and Abdominal Actinomycosis.

Mixter (*Boston Med. and Surg. Journ.*, July 6th, 1899) operated on a man, aged 60, with a small mass just above the umbilicus. He opened it, suspecting that it was an ordinary abscess in the abdominal walls. The pus seemed peculiar, and was found to be actinomycotic. He therefore excised the whole mass, taking out the umbilicus and portions of the rectus muscle down to the peritoneum, where he came across an intestinal adhesion. He excised some of the omentum, and had to suture the intestine. As much of the parietes was unavoidably excised a hernia necessarily resulted, but with no serious results, the patient on whom the operation was done five years since being now quite well. In the excised mass two fish bones were discovered; they had evidently entered the parietes from the intestine. The swelling was thus, in Mixter's opinion, originally homologous to the "skewer abscesses" seen in dogs that bolt pieces of skewer with their meat. Mixter holds that the actinomycosis was a secondary infection, not present in the fish bones when eaten. The parasite was probably swallowed later, and entered the abscess from the intestine. Mixter further reports a case of actinomycosis of the neck, which he removed from a man last September, under the impression that it was a tuberculous abscess. It was examined and found to be actinomycotic. Mixter dissected freely, and

six months later nothing but a healthy scar marked the site of the operation.—J. H. Wright (*ibid.*) has observed several cases of actinomycosis in Boston recently. In two the disease was superficial and localised, so that it was successfully extirpated.

(211) Papilloma of Choroid Plexus in a Child.

Brüchanow (*Prag. med. Woch.*, November 24th, 1898) after referring to the great rarity of undoubtedly primary neoplasms with epithelial proliferation affecting the brain relates the details of a case of papilloma of the choroid plexus of the left lateral ventricle in a boy 2½ years of age. At birth the head showed no departure from the normal; when 3 months old the infant had a feverish attack, and thereafter developed the symptoms of chronic hydrocephalus internus. At the necropsy there was found some chronic tubercle of the peribronchial glands, left lung, and pleura, along with anæmia of the other viscera; but the most interesting changes were in the cranial cavity. The sutures were widely open and the cerebral convolutions flattened, as were also the great ganglia. In the cella media of the left left cerebral hemisphere was a tumour two inches in diameter attached to the choroid plexus of the ventricle of that side. Through the presence of this growth the posterior horn of the ventricle was converted into a cavity nearly three inches in diameter; the third and fourth ventricles were also distended. Microscopic examination showed that the tumour was an epithelium-covered papillary outgrowth from the choroid plexus. It was really a true hyperplasia of the plexus.

(212) Relative Frequency of Varicocele on the Right and Left Side.

Vedora (*Il Policlinico*, March 15th, 1899) has carefully examined this question from the anatomical point of view, and finds that the left internal spermatic vein is congenitally devoid of valves that are functionally efficient, with a frequency 26 per cent. times greater than the right spermatic. When the left pampiniform plexus is affected with primary varicocele the corresponding spermatic vein is usually devoid of valves. The author therefore concludes that one of the predisposing factors in the development of varicocele consists in the absence of efficient valves in the lumen of the spermatic veins. The minor frequency of right varicocele is due to the almost constant presence of efficient valves at the point where the right spermatic vein debouches into the inferior cava.

(213) Prostatectomy.

Pousson (*Bull. et Mém. de la Soc. de Chir.*, July 18th) reports 14 cases of prostatectomy performed for the cure of cystitis and other troubles due to enlarged prostate. In 3 of these cases the operation had a fatal result, death being attributed to the advanced age and the debility of the patients, and to long-standing pathological changes in the urinary organs. Of the patients who survived 3 only regained the power of completely emptying the bladder. This favourable result was obtained in subjects who were relatively young, whose dysuric troubles had not lasted very long, and in whom the bladder had not been much affected by the results of infection. In the remaining 8 cases the author's intervention had resulted only in disappearance of the symptoms of acute cystitis, in an improved condition of the urine, and in the facilities afforded of warding off infection by enabling the patients to empty the bladder, and to modify the whole of the vesical mucous membrane by antiseptic injections.

(214) Foreign Body in the Pleura.

Severeano (*Bull. et Mém. Soc. de Chir. de Bucarest*, December, 1898) describes the case of a man, aged 23, whose left pleural cavity had been opened nine years previously for pleurisy. It had been washed out by means of an india-rubber tube, and this had slipped into the cavity and been left there. From that time pus had been discharged now and again from a small orifice near the old cicatrix, in the eighth intercostal space. The symptoms of chronic pleurisy were present. Resection of the ninth left rib was performed, when a large quantity of pus escaped from the pleural cavity, and Severeano succeeded with a pair of Richelot's forceps in extracting a well-preserved piece of indiarubber tubing 10 cm. long and 9 mm. in diameter. Complete cure resulted.

(215) Large Ischiatic Hernia.

Girou (*Arch. Prov. de Chir.*, No. 10, 1898) adds to medical literature one more case of this rare form of rupture. It occurred in a hard-worked woman, aged 55, who had borne eight children, and appeared after a violent fall in the sitting posture when she was 40. Only two-thirds of the hernia, which was very bulky, could be reduced.

(216) Strangulated Hernia of Appendix: no Appendicitis.

Boudin (*Lyon Méd.*, June 18th, 1899) publishes a case from the surgical wards of Jaboulay. A woman, aged 40, had, six years previously, noticed a right femoral hernia after a violent effort. Four days before admission, as she was carrying a pail of water, she felt a sudden attack of pain in the hernia and had to take to her bed. There was no vomiting nor did she suffer from any other symptoms of strangulation or of inflammation. The local pain nearly disappeared. But the hernia increased in size. Jaboulay found an extremely thickened sac containing fibrinous masses and the vermiform appendix acutely strangulated at the neck, which was very narrow. On division of the sac the appendix was set free and excised. Its cavity was quite occluded at the side of stricture. Boudin could not detect a trace of appendicitis; there was hardly ever any exudation on its serous coat. This fact, he notes, does not support Dieulafoy's theory of the origin of inflammation of the appendix.

(217) Subcutaneous Angio-lipoma of the Trunk.

Danel, M. L. (*Journ. d. Sc. Méd. de Lille*, t. ii, 1899, p. 5, July 1) describes a congenital tumour in a child of 6½ years, situated in the left lumbar region on the posterior two thirds of the iliac crest. It was as large as a child's hand, quite painless, non-pulsating, and gave the sensation of fluctuation; the skin covering was movable and quite healthy, and showed no appreciable vascularity. It was doubtful whether it was a cystic lymphangioma or a vascular angioma. As it was increasing in size it was removed, an operation quite easy of performance. It was then found to be a typical cavernous angioma in which was an admixture of lipomatous tissue. Danel thinks it was an erectile tumour in process of lipomatous change rather than a lipoma becoming telangiectatic and cavernous.

MIDWIFERY AND DISEASES OF WOMEN.

(218) Pedunculated Fibroma of Clitoris.

Boursier (*Rev. Mens. de Gynéc., etc., de Bordeaux*, May, 1899) removed a tumour of this kind in January, 1899. The patient was 40 years old, and had borne four children. The last was born 5½ years ago. Shortly afterwards she consulted Boursier for a swelling at the end of the clitoris. This swelling was round, firm, and as big as a green pea. Its mucous coat was healthy. Operation was not recommended. After a time the tumour, as it slowly enlarged, gave trouble in various ways. At length it was found, on examination, to have attained the size of a small walnut, flattened laterally through compression from the surrounding parts. It was no longer sessile, as at first, but was attached to the clitoris by a very thin pedicle, about an inch long. The tumour was solid and hard. It was sensitive to the touch, especially at one point. It did not cause dysuria. The operation was performed under cocaine. The pedicle was seized between the blades (guarded by india-rubber) of a Richelot's forceps, then divided. Though so narrow, it contained two little arteries which were twisted. The mucous membrane was closed over the raw surface of the stump with a few silkworm-gut sutures. It is noted that their removal on the eighth day caused considerable pain. The tumour was made up of white fibre, with a few plain muscle-cells and very few blood vessels. Boursier turns attention to Lambert's essay on non-malignant tumours of the clitoris (*Rev. de Chir.*, 1898, p. 429). He collected 37 cases, of which only 6 were cystic, 3 were bony or cartilaginous. The remaining 28 were probably all fibromata, thus Boursier's case is the twenty-ninth.

(219) Tetanus following Attempted Abortion.

Turenne (*Ann. de Gynéc. et d'Obstét.*, June, 1899), of Monte Video, reports that last January a young midwife pupil consulted him for stiffness and pain in the temporo-maxillary joint. Trismus was suspected, but there was no breach of surface anywhere except slight herpes of the lip. He then believed that the stiffness might be rheumatic. Next day, however, several bad attacks of tetanus occurred. The patient then confessed that seven days previously she had submitted to an operation intended to provoke abortion, as she suspected that she was a month pregnant. On further inquiry, the "operation" consisted in the introduction of a sound taken off a shelf, and an intrauterine injection followed without any antiseptic precaution. Doubtless the tetanus bacillus was then introduced. There was unfortunately no antitetanus serum at hand. The patient at the end of the second day had a general tetanic spasm, followed by several others; she died within forty-eight hours of the first appearance of trismus. The patient lived near some large and very foul stables, but the manner of administering the intrauterine injection was quite sufficient to account for the tetanus. The incubation period was short, as is the rule in a very acute attack of the disease.

(220) Hypertrophy of Anterior Vaginal Column: Pseudo-hermaphroditism.

De Sinéty (*Rev. de Gynéc. et de Chir. Abdom.*, March-April, 1899) reports a remarkable deformity in a married woman aged 21; it was apparently detected by a medical man in infancy. The patient had borne a child a year before she came under De Sinéty's observation, and there was no dyspareunia. At the orifice of the vulva a pinkish fleshy structure, resembling a small penis, projected for half an inch. On parting the labia it was seen to consist of the anterior median mucous fold of the vagina, greatly hypertrophied, so that the lower limits of this vaginal "column" or "tubercle" bulged for over an inch downwards. Though the prolapsed part lay external to the vulva permanently as in procidentia, it retained its pale pink tint, whilst the labia were deeply pigmented. There was no prolapse of the rest of the anterior vaginal wall, no cystocele or uterine displacement. The posterior vaginal column was also hypertrophied, though to a less degree. The condition described by De Sinéty may be more frequent than is supposed, since it may easily be taken for an enlarged clitoris or a prolapse of the anterior vaginal wall.

(221) Intestinal Obstruction Eleven Years after Ovariotomy.

Leopold (*Münch. med. Woch.*, July 11th, 1899) reports the case of a woman, aged 36, admitted into hospital, with severe abdominal pains on February 26th. She had undergone ovariotomy in the same hospital on July 12th, 1888. A large multilocular tumour of the right ovary was removed. The pedicle was very broad and was ligatured in four segments. The patient remained in excellent health till February 24th, 1899, two days before admission. Cutting pains and vomiting set in. On palpation hæmatocele or notation of a tumour in the lower part of the abdomen was suspected, but the vomiting continued, and an operation was performed on March 6th. There was a stout cord, made up of old adhesion and passing from the right cornu of the uterus to the pelvic brim. It was three-quarters of an inch large. A loop of small intestine about 8 inches in length had slipped under this bridge-like cord, and was strangulated and full of flatus. The cord was secured by transfixion and divided; the intestine was liberated, but it was found that the gaseous contents did not pass along beyond the cæcum. On examining that part of the alimentary canal it was seen to be adherent to the right cornu and shrunken stump of the pedicle, and twisted once on its long axis. This second source of obstruction being rectified, a rubber tube attached to a funnel was introduced into the rectum and a great quantity of water injected, whilst the air in the intestine above the cæcum was pressed downwards. Air, then the injected fluid, then thin stools came away in abundance; the abdomen was lastly closed. The patient recovered.

THERAPEUTICS.

(222) The Effects of Cocaine on the Spinal Cord.

Bier (*Deut. Zeit. f. Chir.*, vol. li, pp. 3 and 4) has made experiments to ascertain whether it would be possible to use local anæsthetics for major operations by injecting the fluid directly on the spinal cord. The operation was commenced by making a lumbal puncture, and preventing the escape of the cerebro-spinal fluid by pressing the finger against the needle. The requisite amount of cocaine was then injected with a Pravaz syringe, which fitted accurately on to the hollow needle. The needle with the syringe attached was left in position for two minutes, so that the cocaine should not escape through the puncture in the membrane into the surrounding tissues. The operation was performed painlessly with Schleich's infiltration anæsthesia. The method was tried in 6 cases. The dose used was 0,005 to 0,015 of a ½ to 1 per cent. solution. The ages of four of the patients ranged between 11 and 17; the other 2 were 30 and 34 respectively. In the first case 3 c.cm. were injected at once but in the others only 1 c.cm. was injected; if after a few minutes the amount was found to be insufficient, 1 c.cm. was subsequently added. In all the cases there was complete analgesia over the lower half of the body; in one case the entire body and head became analgesic. The sense of touch was impaired but not entirely lost. There was complete anæsthesia soon after the injection. In most of the cases unpleasant after-effects were noticed—2 suffered from repeated attacks of vomiting and severe headache for several days, in 3 cases there was slight headache; 1 patient had no after-effects. The author wished to test the efficacy of the injection on himself. The experiment was unfortunately not successful, as the syringe did not exactly fit the cannula, the cerebro-spinal fluid escaped, and the greater part of the cocaine never entered the spinal canal. No anæsthesia occurred. An experiment on Dr. Hildebrand was most instructive. The needle puncture, made with the help of Schleich's anæsthesia, was painless. After the injection of ½ c.cm. of a 1 per cent. cocaine solution a warm sensation was experienced in both legs. Anæsthesia of the legs occurred seven minutes after the injection, and in a short time its upper level had reached as high as the nipple. The loss of all painful impressions was complete. The sense of touch was not affected. After 45 minutes the susceptibility to pain began to return. The pulse-rate before the experiment was 75 per minute, and during the period of analgesia it varied between 72 and 75. The knee-jerks remained normal. Hildebrand and also the author felt perfectly well directly after the experiment; they ate a good dinner and smoked several cigars. The next day, however, the author suffered from severe headache and giddiness; he also had a small pulse. These symptoms were relieved by the horizontal position. He remained in bed for nine days, and at the end of this time felt perfectly well. Hildebrand had a severe headache and vomited; he felt unwell for three or four days. The spots where analgesia had been tested on the previous day were covered with small hæmorrhages, and felt painful. The author thinks that the unpleasant after-effects would probably be greatly diminished if the patient remained in bed directly after the injection. The method can be recommended for operations on the lower extremity in those cases where a general anæsthetic is contraindicated. The chief precaution to be observed is to prevent the escape of cerebro-spinal fluid; this appears to be alone sufficient to cause the unpleasant sequelæ which the author himself experienced.

(223) Endermol in Scabies.

Wolters (*Therap. Monats.*, August, 1898) has used endermol (nicotine salicylate) in 63 cases of scabies. In no case were more than six applications required. A 1 per cent. ointment was used; if used in stronger proportions toxic effects were produced. It has the advantages of being free from odour and of not staining the linen.

(224) Tannaform in Skin Diseases.

Ehrmann (*Wien. med. Blätter*, No. 46, 1898) has used tannaform in the treatment of cases of disturbance of secretion of the skin—hyperidrosis, eczema, and balanitis. The drug was used as a powder mixed with talc (1 in 4 or 5) for cases of hyperidrosis and balanitis. For

eczema a 25 per cent. ointment was employed made with lanolin and simple ointment. In the intertrigo of children a 5 per cent. ointment was efficacious. The best results were obtained in cases of eczema resulting from occupation, and the author has treated 132 of such cases with good results. The ointment was applied on linen, and changed night and morning. Tannaform may also be used as a dusting powder for small wounds and burns.

(225) Potassium Permanganate in Psoriasis.

Rasch (*Hospitalstidende*. No. 41, 1898) has used a 2 per cent. solution of potassium permanganate in 14 cases of psoriasis. In some cases the disease disappeared in two or three weeks; in other cases little or no effect was produced. The drug was painted on the spots twice a day.

(226) "Black Penis" due to Antipyrin.

Fournier (*Ann. de Derm. et de Syph.*, April, 1899) reports on three cases of a remarkable eruption caused by antipyrin. This eruption consists of dark blotches in the skin of the penis, sometimes accompanied by œdema. In one case the eruption appeared four and a-half hours after the first dose was taken. The patients were alarmed, thinking that gangrene of the penis was going to follow.

(227) Naphthalin Poisoning.

Evers (*Berl. klin. Woch.*, 1884, p. 593) records the case of some chronic illness with loss of appetite, headache, and eczema over both legs, which was proved to be due to naphthalin poisoning. In this case the drug was used as moth powder, and was sprinkled over some bedding. The symptoms subsided directly the patient was removed from this particular room, but reappeared when the same apartment was reinhabited. No other cause for the illness could be discovered. Evers had the naphthalin examined, and no impurity was detected. A case of typhoid is reported in which naphthalin was administered by Götze (*Berl. klin. Woch.*, 42, 1884). The patient was given 6.0 grams during the first three days; after this the dose was increased to 7.0 grams. On the evening of the sixth day the patient began to be restless, and on the following evening he was delirious. The next day the patient was drowsy, the respiration was laboured and irregular. Lips and face cyanotic. Slight twitching in all the muscles of the body. Pulse regular, 92 per minute. The temperature had fallen to normal. The urine was dark-brown, and after standing for some time became black. When naphthalin was discontinued, the symptoms vanished in four days.—Fronmüller (*Memorabilien*, 1883, v, 257) saw 3 cases in which poisonous symptoms had followed the application of naphthalin on wounds. The symptoms began with a sudden onset of fever, headache, and loss of appetite. In 2 cases the mind remained clear, but in 1 there was temporary mania with incontinence of urine and fæces. Albumen appeared in the urine in 2 cases. All these symptoms rapidly disappeared when naphthalin was discontinued.

(228) Mutase.

E. Koch (*Centralbl. f. inn. Med.*, June 10th, 1899) has made an experimental inquiry as to the value of this new food. It contain 60 per cent. albumen, water 10 per cent., non-nitrogenous extractives 20 per cent., and salts 10 per cent., and is entirely of vegetable origin. Physically it is a yellowish powder of a somewhat indefinite taste. Experiments show that it is very easily and completely assimilated. Clinical experience proves it to be a perfectly unirritating and very nourishing food in all cases where digestion is enfeebled, as in gastric affections and pulmonary tuberculosis.

PATHOLOGY.

(229) Posterior Spinal Lesions in General Paralysis.

E. Auband (*Thèse de Paris*, 1898), taking up the much debated question of the relationship of tabes to general paralysis, is of opinion that in most of the cases of tabetiform spinal affections occurring in the course of general paralysis one finds spinal lesions which properly belong to general paralysis. The careful clinical and microscopic examination of 4 cases is minutely recorded: (1) The lesions of the posterior spinal columns in general paralysis are distinguished from those of tabes by four kinds of characteristics. The first of the essential characters is the variation of the lesions from one stage of the affection to another. The lesions occupy in part the well-known locality of exogenous fibres; afterwards, and without transition, they are limited to a band of endogenous fibres. (2) The lesions are particularly diffuse. The degenerated fibres do not constitute a well-defined bundle; they are scattered and interlace with neighbouring bundles. (3) The relative or absolute integrity of the posterior roots and of Lissauer's zone is a constant fact. This appears a physiological paradox, since it coexists with a very marked degeneration of a field which almost corresponds to the external tracts of Pierret. (4) A final characteristic of spinal general paralysis is the thickening and nuclear infiltration of the meninges and vascular sheaths. These lesions of the posterior columns are accompanied by alterations of cells of the grey matter, which are themselves scattered irregularly, and are more conspicuous in some segments than in others. The cellular lesion is the primary one. It follows from these observations that, even when clinical symptoms pointing to tabes have for long existed and have been succeeded by general paralysis, it is not certain that these two maladies have coexisted or succeeded one another, and only a microscopic examination can settle this point.

(230) The Cells of the Brain Cortex in Eclampsia.

Auglade and Poux, at the Congress of Alienists and Neurologists held at Marseilles, April, 1899, gave an account of the pathological changes produced in the cells of the cerebral cortex in eclampsia (*Arch. de Neurol.*, June, 1899). A woman suffering from eclampsia had a series of attacks (thirty in two days), after which she succumbed. Specimens of cerebral cortex were taken at the necropsy, and prepared by various methods, including that of Nissl, and the following changes were noted: (1) Alteration of the pyramidal cells, with the presence around them of abnormal cellular elements. The alterations of the pyramidal cells were of two kinds—namely, a disappearance of the chromatic granules of Nissl—corresponding evidently to an exhaustion of the cell—and a marked deformation or distortion of the cell. (2) The small cellular elements in increased number, and immediately surrounding the pyramidal cells were rounded in form and deeply coloured. They showed nothing abnormal here except their number (they are said to have been observed in chronic chorea also, and the symptoms attributed to them). (3) Besides these there were other cells, round or oval in appearance more voluminous and less strongly stained, and possessed of distinct outline, and with granular contents. One, or perhaps two, large grains represent the nucleus of these cells. They also surround and lie against the pyramidal cells, and seem to occupy the space once occupied by dying or dead pyramidal cells. These cells are only found in the cortex of those dying of epileptic attacks; and it is a question whether they are leucocytes which have emigrated from the vessels, or whether they are enlarged "protoplasmic glia cells" of the type described by Andriezen. Lugaro seems to incline to the latter view.

(231) Peritoneal Affection resembling Tuberculosis caused by the Eggs of Tapeworms.

Helbing (*Berl. klin. Woch.*, 1899, No. 32) in the Free Association of Berlin Surgeons, demonstrated specimens from a piece of omentum which Israel had removed from a patient during an operation for perityphlitis. For several reasons the presence of tuberculous disease had been suspected. Sections of the omentum showed that in the fatty tissue there was an interstitial growth of granulation tissue containing many giant cells. Instead of tubercle bacilli globular bodies with radially striated capsule were demonstrated by carbo-fuchsin staining. These could be recognised as the ova of tapeworms, which had doubtless gained admission into the peritoneal cavity through the perforated vermiform appendix. Miura of Tokio has given a short account of an analogous case.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(232) Dicrotism of the Pulse and Heart.
Bassi, in a paper on this subject (*Atti della R. Accadem. Lucchese di Scienze*, vol. xxvii, and private communication June, 1899) makes the following remarks: As regards dicrotism of the pulse, the author in the first place notices that frequently there is no correspondence between tactile dicrotism and that shown in a tracing, inasmuch as exploration by the finger may show a second arterial beat in every cardiac systole, though at the same time in the corresponding tracing there is no characteristic wave. From this it may be gathered that dicrotism as noted by the finger has a more extensive significance than that hitherto assigned to it by clinicians, since it is possible in tracings to ascertain a true wave, but more especially is this indicated by a break in the ascending branch of the sphygmograph, or in other words an interruption causing a "plateau," which occupies the apex, or which may even be located towards the middle of the descending branch. The author approaches this question of dicrotism from the point of view of tactile impression, though keeping in mind at the same time the corresponding graphic tracing. In a short space of time he was enabled to gather together a large number of sphygmographs, which he was enabled to classify in a systematic and simple manner. This investigation enabled the author to correct to a large extent many of the older ideas on the subject of dicrotism, all his observations being controlled by tracings. Thus, he distinguishes five kinds of dicrotic pulse: (1) The atheromatous dicrotic pulse, of which there are four subvarieties; (2) the interrupted atheromatous dicrotism, of which there seems to be one variety only; (3) the anæmic dicrotic pulse—three varieties; (4) the febrile dicrotic pulse; (5) the bigeminal dicrotic pulse. This investigation has brought to light many interesting facts of practical value. Thus, some forms of sphygmographic tracings which we previously considered as indicating atheroma of the arteries, are shown to occur in young persons with perfectly healthy vessels; also that the anæmic pulse may apparently differ in different persons, that quickness is often the most marked feature of the anæmic pulse, and that this pulse, contrary to what has generally been taught, shows but slight dicrotism in a tracing, and hardly any on palpation. True dicrotism, the author finds, is best observed in three forms of disease—enteric fever, malaria, and puerperal peritonitis. It is also shown that dicrotism may be present in the radial artery on one side and absent from the other. In cases of aortic regurgitation dicrotism is much more marked in the femoral than in the radial. The author has also made an extensive study of the cardiac impulse under the same conditions. He finds that dicrotism is sometimes very marked in cases of mitral stenosis, amounting to polidicrotism; while, on the other hand, it sometimes happens that there is a somewhat similar appearance in the tracing of the radial artery in some cases like that met with in aortic incompetence. From this it may be seen that dicrotism in very many circumstances cannot be explained in the same way.

(233) The Albuminoid Bodies of the Thyroid Gland.
Oswald (Hoppe-Seyler's *Zeitschr. f. physiol. Chemie*, vol. xxvii, parts 1 and 2) has endeavoured to ascertain the relationship between the albuminoid bodies present in the thyroid gland and the colloid substance described by anatomists as being present in the thyroid. The author found by experiment that thyreoglobulin is the most active body in the thyroid gland; it contains all the iodine, and the amount of iodine increases *pari passu* with the increased colloid material, it therefore follows that thyreoglobulin is contained in the colloid material. It was necessary further to ascertain whether the second proteid body (nucleoproteid) was also contained in the colloid substance. A pig's thyroid was hardened in 70 per cent. of alcohol; the colloid material was mechanically isolated and examined for phosphorus. A positive result was obtained; the colloid substance therefore contains also nucleoproteid. The author states that the colloid substance is the active secretion of the thyroid gland, and that it was made up of thyreoglobulin and nucleoproteid. The thyroid resembles the active glands in internal organs in the manner in which its secretion is conveyed to the blood stream by the lymphatics, the only difference is that the thyroid discharges its contents directly into the lymph channels instead of the more usual method of first passing through the excretory ducts. There is, therefore, no reason for supposing that the influence which the thyroid exercises on the general metabolism is merely conditioned by the metabolism taking place in the gland itself. Experiments were undertaken to show the influence which thyreoglobulin and nucleoproteid exercised upon general metabolism. The results showed that in the case of dogs the excretion of nitrogen was considerably increased when thyreoglobulin was given, whereas nucleoproteid had no effect upon the output of nitrogen.

(234) The Great-toe Reflex in Epilepsy.
J. Babinski (*Soc. de Neurol. de Paris*, July 6th, 1899) records further observations on this new diagnostic sign. In a previous publication of the same author (referred to in Epitome par. 493, British Medical Journal, June 3rd, 1899) mention was made of a case of Jacksonian epilepsy where this phenomenon could be evoked immediately after the attack on the convulsed side, while in the intervals free of attacks the plantar-reflex was normal (*Semaine Médicale*, No. 4, 1898). The present case is that of a patient suffering from intracranial tumour, and subject to attacks of generalised convulsions, with loss of consciousness and incontinence of urine and fæces in addition to loss of the anal reflex. In this case the great toe reflex of Babinski was observed on both sides, while the tendon-reflexes remained unaltered. In a quarter of an hour after the beginning of an attack, the patient having now regained consciousness, the anal reflex reappeared, and the cutaneous plantar reflex was normal. Babinski has also observed in cases of idiopathic epilepsy the occurrence of the great-toe phenomenon during and just after an attack, and lasting for a short time only. The sign is sometimes unilateral and sometimes bilateral. It is in some cases accompanied by exaggeration of the tendon-reflexes, and by epileptoid trepidation of the foot and abolition of the anal reflex. In hysteria, during the attacks as well as at intervals between attacks, the great-toe phenomenon is constantly absent. The diagnostic value of the sign is thus undoubted. In the discussion which followed the reading of this paper Gilles de la Tourette added that this sign would be a valuable differential sign in diagnosing between hysteria and epilepsy in addition to the differences found in the urine in these two classes of patients.

(235) Primary Hæmorrhagic Effusions into Pleuræ and Peritoneum.
Cheesman and Ely (*Amer. Journ. of the Med. Sc.*, cxviii, p. 162, August, 1899) report the case of a woman, 47 years of age, suffering from oppression of breathing without pain or cough, and with the right side of the chest full of fluid. Aspiration proved the fluid to be blood. She had a uterine fibroid causing menorrhagia. The hæmorrhagic effusion recurred in the left pleural cavity, which was also tapped. It then took the form of peritoneal blood-stained effusion, and on over forty occasions the abdomen had to be tapped and the fluid removed. Finally at the menopause the effusions ceased along with the menstruation. Cancer, tubercle, and pleurisy and peritonitis were excluded, and the authors are driven to the conclusion that the case was one of primary hæmorrhagic effusion, which constituted the sole morbid entity.

SURGERY.

(236) Treatment of Phlebitis of the Saphenous Vein by Resection.
Morestin (*Bull. et Mém. de la Soc. Anat. de Paris*, March, 1899) publishes a case in which he resected with good results a thrombosed portion of the external saphena, measuring over 8 inches in length. The author holds with

Quénu, Schwartz, and others, that in a large number of cases of phlebitis operative intervention is justifiable. Resection, it is held, is especially indicated in inflammation of superficial veins, when the whole of the thrombosed portion of vein can be removed, the patient is set free from the risks of any embolic complication. Moreover, cure is established in the course of a few days—an important consideration, as the ordinary treatment by rest necessitates a confinement that may last over weeks. Again, the thrombosed segment of vein may become the starting point of other infections, either in adjacent or remote veins. Finally, when the inflammatory attack has ceased, there is a persistence of the elements of relapse in a more or less remote future. There can be no doubt, the author holds, that by removing the whole of the affected segment of vein, the patient, in this respect, can be placed in the most favourable conditions.

(237) Enlarged Prostate.

Bottini (*Clin. Mod.*, An. v, n. 25) says that enlarged prostate is not so common as is usually taught; a very fair proportion of cases of dysuria in old people are due to simple atony of the detrusor urinæ, and are even associated with atrophied prostate. The symptoms of prostatic disease may be divided into three stages. At the beginning the chief symptom is increased frequency of urination, the total quantity of urine remaining the same. This, in the author's opinion, is a compensatory phenomenon, owing to greater effort on the part of the detrusor. At this stage coitus is apt to be accompanied by an unusual discomfort, and the semen is sometimes streaked with blood. In the next stage a polyuria sets in, and urgent need of micturition. Semen flows rather than is ejaculated out of the meatus in coitus, and blood is never seen. Dyspepsia from absorption of retained urine and subicteric changes in the skin are liable to appear. At this stage, too, hæmorrhoids may occur. The supposed advantages of drinking large quantities of alkaline or other waters are strongly decried by the author both in the cure of enlarged prostate or of calculus.

(238) Corneal Infection of a Serpiginous Type.

Petit (*Ann. d'Oculist.*, March, 1899) has studied two cases which were characterised clinically by superficial ulceration of the cornea developing serpiginously and accompanied with hypopyon, but without much inflammatory reaction on the part of the iris, synechiæ being absent. The course of this keratitis is painless, unlike the serpiginous ulcer due to the pneumococcus, and its course is more benign; but a leucoma is left which notably affects vision. In both cases there was atresia of the lachrymal passages. The ulceration apparently is due to the proliferation in the superficial layers of the cornea of a bacillus similar to the diplobacillus of subacute conjunctivitis, but differing in its charactures of culture and of vitality. It does not stain with Gram, is cultivated on the ordinary media, liquefies gelatine, and coagulated beef serum; it is not pathogenic for animals. The bacillus and its cultures are figured, and contrasted with those of the diplobacillus of subacute conjunctivitis.

(239) The Appendix in the Quiescent Period.

Lanz (*Correspondenzbl f. Schweiz. Aerzte*, June 15th, 1899) states that an appendix externally to all appearance normal, internally may have undergone such important changes that the life of its possessor is in constant danger. Hence it should be the rule to remove every appendix, whether externally normal or not, when the symptoms have justified an operation. The following case supports this view: A young girl was brought to the author with a history of having had seven attacks of typhlitis, three of which were severe with high fever and vomiting. On July 31st, when the resistance in the right iliac fossa had disappeared, the abdomen was opened, and, though there were no adhesions and the cæcum and appendix appeared to be perfectly healthy, the appendix was removed. When slit open, two strictures were found, one of which consisted of a cicatricial thickening of the whole thickness of the walls, the other of a circular granulating ulcer of the mucosa. There was no enterolith. Eighteen months later the patient was well and there had been no return of the former troubles.

(240) Non-Traumatic Jacksonian Epilepsy Successfully Treated by Trephining.

Vincent (*Arch. Prov. de Chir.*, July, 1899) reports a case of severe Jacksonian epilepsy in a man, aged 56, in which trephining and resection of a sclerosed portion of dura mater resulted in complete relief, which has now persisted twelve months from the date of operation. The convulsive attacks, which on two occasions caused much anxiety, first appeared in the winter of 1896 soon after an attack of influenza. When the patient was first seen by the author in May of last year, these attacks were very frequent, as many as thirty having been observed in one day. The frequent association of aphasia with these attacks and other symptoms indicated as the probable seat of the cerebral lesion, the foot of the third frontal convolution on the left side. The signal symptom was presented by the flexor muscles of the fingers. The nature of the intracranial lesion could not be made out before the operation, as there was no history of injury, and the patient before his attack of influenza had been free from both hereditary and acquired disease. On exposure of the dura mater over the anterior and inferior extremity of the fissure of Rolando, this membrane was found to be thickened, and, after its manner, the other membranes were seen to be swollen and œdematous, and the corresponding portion of the surface of the brain was much congested. The thickened portion of dura mater was removed. The patient made a speedy and good recovery, and since the performance of the operation in the spring of 1898 has not only been free from any recurrence of the convulsive attacks, but has improved much in general health and regained the full use of his mental functions, which before the operation had been slightly impaired.

(241) Strangulated Hernia in Ileo-cæcal Fossa.

Riese (*Centralbl. f. Chir.*, July 8th, 1899) reports a distinct case of this rare form of hernia. A man, aged 32, had noticed a right inguinal hernia for six months. Then, when lifting a weight, he was seized with severe colicky pains above the external rupture; vomiting set in and for thirty-six hours before operation it was fæcal and continuous. Riese found the inguinal canal free. After moderate inflation of the colon a sharply defined swelling, tympanitic on percussion, was found on the median side of the cæcum. On opening the peritoneal cavity and pushing aside the greater part of the small intestine a deep lying coil of ileum was found strangulated in the ileo-cæcal fossa. It was easily drawn out; then it became evident that it had slipped into the ileo-cæcal fossa, which was as big as a pigeon's egg; much smaller than in Aschoff's case (*Berliner Klinik*, October, 1896), also successful. The border of the fossa, which was the neck of the sac, was sharp. The cæcum and appendix were normal, the mesentery rather long. The patient made a speedy recovery.

(242) Wounds of the Eye from Chestnut Prickles.

Deschamps (*Ann. d'Oculist.*, April, 1899) has seen in the autumn cases in which the labourers employed to knock down chestnuts have been struck in the eye by the falling chestnuts and the little spines being brittle have remained in the cornea, their bases as a rule being flush with its surface. The points may penetrate into the anterior chamber, and even prick the iris if they have entered the periphery of the cornea. Sometimes their length exceeds 1.5 mm. They occasion immediate sharp pain, photophobia, and lachrymation. Very often they lead to grave infection of the cornea, with perforation, even in the absence of any lachrymal obstruction or disease of the lids or eyes, in fact in quite healthy subjects; so that Deschamps thinks that the prickles are septic. In some cases, however, their presence in the cornea has been tolerated for months. For locating these bodies he finds Zehender's binocular lens, made by Western of Rostock, of great service, and the illumination should consist of convergent rays concentrated by a large convex lens. The prickles are difficult to seize even with the finest forceps; Bowman's needle entered obliquely is useful. It is better to withdraw those

which do not penetrate the cornea into anterior chamber before those which do, for if the latter be removed first the aqueous may escape and the cornea become flaccid. To disinfect the path of the prickle after removal he makes use a fine tattooing needle, which he rotates in the wound like a gimlet, thus scraping it, while the groove of the needle allows the antiseptic to find its way down into the wound. The galvano-cautery may also be called for.

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(243) Volvulus of Ileum from Bands after Appendicitis.

Sacquépée (*Bull. et Mém. de la Soc. Anat. de Paris*, February, 1899) relates this case, where the patient was 41. In April, September, and December, 1898, he had several attacks of colicky pain; appendicitis was diagnosed. Very severe obstructive symptoms occurred on and after January 10th. For about ten days purgatives brought away a little motion and gas, then constipation was complete. For ten days this condition continued; the patient never vomited, nor was feverish, but grew very thin. On January 31st Robert operated. The great omentum was found adherent to the right iliac fossa; there was much adhesive peritonitis, making coils of intestine into a large packet. The sigmoid flexure was normal. The vermiform appendix was very thick. It ran astride the end of the ileum, to which it adhered firmly. It was detached and resected. Then a careful attempt was made to free the adherent coils of ileum adjacent to the cæcum; but in separating a dense band the ileum was torn. The patient was so exhausted that it was not thought safe to make an anastomosis betwen the ileum and the colon. The opening in the ileum was simply fixed to the abdominal wound. The patient died on the eighth day. Two abscesses had developed just below the opened portion of the ileum. At the necropsy the adherent mass of small intestine was found bound by bands, some very dense, all traced to the region of the vermiform appendix.

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(244) Suppurative Appendicitis and Hernia after Operation.

Woolsey (*Medical Record*, April 1st, 1899) after dwelling on the dangers and necessity for operation in this affection emphasises the following facts: (1) In operations for inflamed appendix when pus is present the first consideration is the life of the patient, and the second the avoidance of disagreeable sequelæ, of which ventral hernia is the most common and hence the most serious. (2) Post-operative ventral hernia may be larely avoided in spite of the necessary use of drainage. McBurney's intermuscular or muscle-splitting incision should be practised; it avoids the division of nerves beyond obviating mechanical and cicatricial weakening of the wound. The wound again, in order to avoid hernia, must be closed as much as possible by sutures. Provisional or secondary sutures are then passed into the part left open for drainage. On the other hand, instead of these provisional sutures, the gauze drain may be removed early, so as to allow the walls of the cavity occupied by the gauze to fall together before they have become so firm and rigid as to remain apart, leaving the cavity to fill up by granulation. Woolsey, after pushing the gauze through the nearly closed wound, wraps round the portion passing through the wound a piece of rubber tissue. This prevents the gauze from sticking to the edge of the wound, and thus allows it to be removed on the second day without any dangerous traction on structures beginning to heal. By this method complete and firm union of the wound has been obtained in, on an average, fifteen days and a half, and in all cases within twenty-one days. To this end the appendix should be removed if possible. The relative frequency of hernia following suppurating cases and drainage is a strong argument for early operation in appendicitis. It is also in Woolsey's opinion an answer to the charge that surgeons are too eager to operate for appendicitis, a charge not infrequently made by physicians, who would defer operation until the chance of success is diminished and the danger of post-operative hernia increased.

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(245) Excision of Cancerous Cæcum.

Monod (*Bull. et Mém. de la Soc. de Chir. de Paris*, June 21st, 1899) operated, a week before the report of the case, on a woman aged 38 subject to abdominal pains for a year. A large mass lay to the right of the uterus, and there was much emaciation. Hence cancer of the ovary was diagnosed by Hayem, Monod, and Arron. Monod operated and found a large cancerous tumour into which the ileum entered, and out of which the colon issued. Between them, inside the tumour, was a putrid mass of broken-down cæcum and tumour. The intestine was divided on each side of the tumour, the cut ends of the gut closed by suture, and union between the ileum and colon effected by lateral anastomosis. The abdomen had been opened by a median incision. The patient was doing well, and the bowels opened spontaneously on the second day.

MIDWIFERY AND DISEASES OF WOMEN.

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(246) Primary Cancer of the Female Urethra.

Schramm (*Arch. f. Gynäk.*, vol. lviii, Part 3, 1899) operated on a woman, aged 56, who had been four times pregnant, always aborting at the fourth month. Two years before operation she noted a swelling as big as a pea at the meatus. Latterly it had grown larger and caused dysuria. Schramm found a horny, tuberous growth as big as a large walnut, occupying the entire urethra. The catheter could not be passed, and there was enlargement of the inguinal glands, The tumour and the greater part of the urethra was freely excised close to the sphincter vesicæ. The thermo-cautery was freely used, and the cut edge of the mucous membrane sutured to the tissues around. A catheter was retained in the urethra, and the vagina packed with iodoform gauze. The infected inguinal glands were excised. A large bedsore developed on the sacrum at the end of the first week; the patient was very cachectic. The urethral sutures were removed on the fifth day. At the end of the fourth week the patient could retain her urine. Recurrence occurred, and the tumour at the end of six months was larger than at the operation. It was destroyed with the cautery. No trace of the patient could be obtained after the second operation, when her general health was bad. The first growth was not a carbuncle that had undergone malignant degeneration, but a typical and very horny epithelioma of the entire mucosa, invading the muscular tissue of the urethra. Notwithstanding the extensive secondary local growth, the patient was still able to hold her water when the cautery was applied.

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(247) Simultaneous Ruptured Tubal Gestation and Strangulated Umbilical Hernia.

Tixier (*Lyon Méd.*, July 23rd, 1899) reports an operation for strangulated umbilical hernia, correctly diagnosed. The patient, aged 32, was seized with violent abdominal pains four days before the catamenia were due; it is not stated that they had ceased previously. An umbilical hernia of old standing enlarged and became the seat of sharp colicky pains. On the second day, when the patient was in an unfavourable condition, the operation was performed. The umbilical sac was incised, its neck opened up, and its contents, omentum, reduced. As this was being done the patient fainted. Tixier suspected omental hæmorrhage, and made a long incision below the umbilicus. The peritoneum was full of blood. Then he suspected extrauterine pregnancy, pulled the uterus out of the wound, and at once detected free arterial hæmorrhage from a cyst in the left tube. It contained an ovum as big as a nut. After removal of the sac and of numerous clots the pelvis was drained with gauze. The patient died of sepsis three days later.

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(248) Unruptured Hymen in Labour.

Sztencel (*Wien. med. Presse*, July 2nd, 1899) was called in to the labour of a primipara, aged 23, who made much of labour pains, which were found to indicate nothing abnormal. The vertex was found on bimanual abdominal palpation to present in the second position, the child was clearly living. On attempting digital exploration of the vagina the introitus appeared completely closed by a thick septum. The vulva being inspected the septum proved to be the hymen, absolutely without a trace of rupture. With some difficulty the tip of the forefinger was introduced into a minute orifice in the anterior part of the membrane and then the presentation could be detected by touching the os,

which was fully dilated. This exploration widened the orifice considerably, and the bistoury was used to make it conveniently wide for delivery. Sztencel found that the inferior part of the hymeneal fold was as firm and as thick as dura mater, whilst the superior part or vaginal aspect was of the consistence of shagreen. The hymen was annular rather than semilunar, there being a distinct portion lining the anterior part of the introitus near the urinary meatus. The hymeneal orifice was not quite in the median line. Complete coitus could never have occurred, but as has often happened, some semen had managed to enter the vagina through the minute orifice. The labour ended naturally. Thus this case was an instance of an unbroken hymen discovered at labour before the stage was reached when its presence would have at least caused great pain and would probably have delayed the delivery of the head.

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(248) Strangulation Twelve Years after Hysteropexy:

Segond (*Gaz. Hebdom. de Med. et de Chir.*, April 27th, 1899) showed at a recent meeting of a medical society a specimen from a woman on whom abdominal hysteropexy had been performed twelve years previously. Acute obstruction set in, abdominal section was performed, and the uterus was found movable to a certain extent, but still fixed to the anterior abdominal wall by four fibrous bands like the teeth of a comb. The intestine had become strangulated between two of these bands. Jacobs reported a somewhat similar case in 1895. Bouilly performed a vaginal hysterectomy on a patient who had undergone abdominal hysteropexy two years previously. The second operation proved very difficult; on drawing down the uterus liberated from its broad ligaments the abdominal wall followed it, and a fibrous cord as thick as a man's little finger had to be divided with scissors before the fundus could be extracted. Segond twice encountered similar difficulty in vaginal hysterectomy on a subject who had already undergone uterine fixation. In one instance the fundus could not be rotated forwards and out of the vaginal wound till a broad band, at first taken for the fundus of the bladder, had been separated by the finger nail.

THERAPEUTICS.

(250) Nutrition by the Rectum Exclusively.

Rost (*Berl. klin. Woch.*, 1899, Nos. 30 and 31) states that, under Professor Ewald in the Augusta Hospital, systematic and exclusive nourishment by the rectum has given most satisfactory results in acute gastric ulcers and their sequelæ; after a few days of absolute repose hæmorrhage and pain ceased, and peritoneal irritation, foreboding perforation, disappeared. Hunger was slight or willingly borne; thirst was relieved by washing out the mouth or sucking ice, without swallowing any water; when thirst was unbearable clysters of normal salt solution were given; occasionally the treatment had to be continued more than six days—once for four weeks and once for fourteen days, in each case with the happiest results. The selection of cases with hæmorrhage and imminent perforation must be most careful, as the question of surgical interference must be decided once for all. Every case of simple gastric ulcer admitted to the clinic is now submitted to six days of gastric repose, and patients, even in obstinate long-standing cases, have been free from pain on the third day. Narcotics are not required—an important point, as morphine often provokes vomiting. The method has proved beneficial in uncomplicated ulcers, mucous erosions, and irritation due to the scars of healed ulcers, and of much service in the differential diagnosis from such of neurotic cases with similar syndromata—nervous vomiting, gastralgia, gastro-succorrhœa—as also in a case of atony and dilatation after typhus abdominalis, and in two cases of profuse diarrhœa, referred to intestinal tuberculosis, in which long weeks of special treatment had only brought transient improvement. The details of rectal nutrition are discussed by v. Leube in v. Leyden's *Handbuch der Ernahrungs-Therapie*. Rost says all patients must be kept in bed; one hour after a cleansing clyster in the morning the first nutrient enema—milk 200 c.cm., yolk of one egg, a little salt, some farina and red wine—is given, and two others during the day, in all about 800 c.cm. daily. A soft tube of vulcanised rubber must be used and the injection forced by gentle pressure as high up the rectum as possible, the patient being in the lateral position.

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(251) Citrophen.

Heldingsfeld (*Allgem. med. Central.-Zeitung*, No. 65, August, 1899, p. 779), who has previously published his results with citrophen (*Deut. med. Zeit.*, 1895, No. 91), gives in tabular form his further experience of the compound in 36 cases of various diseases. He found it especially useful in rheumatism of joints and muscles (no case of acute rheumatism mentioned in the table). A few doses of 0.5 grams (say gr.vii to gr.viii) are usually sufficient, amounting altogether as a rule to a total of 8 to 10 grams. It was not so effective in pyrexia, but it was useful in some cases of neuralgia which were not of organic origin in influenza, especially as regards the severe headache; in acute tonsillitis. The author has never observed any ill-effects from its use, either toxic or cardiac.

PATHOLOGY.

(252) Acute Disseminated Myelitis.

Fürstner, of Strassburg (*Neurol. Centralbl.*, February 15th, 1899) contributes clinical and pathological details as to a case of acute disseminated myelitis, concerning the pathology of which very little has hitherto been known. The case is that of a girl, aged 16, who was ailing for 15 days, and was admitted to hospital on May 27th. She was then seen to be very weak in all her limbs, and in three or four days there was paralysis of both arms and legs. The pupils were unequal, the right pupil being much larger than the left. There was a flaccid paralysis of the lower extremities, and the patellar reflexes were much diminished. The upper limbs also exhibited a certain amount of paralysis, but less than that of the lower limbs. The electrical reactions were normal; there was no reaction of degeneration. There was anæsthesia of the lower limbs and of the right arm. The facial muscles were unaffected. The patient suffered from retention of urine. She gradually got worse, and at the end of a week became cyanotic, the temperature rose high, and symptoms of facial, pharyngeal (bulbar) paralysis supervened, together with rigidity of the neck. She died the following day (June 6th). The diagnosis had been at first doubtful, and inclined to hysteria, but after a while it was regarded as pointing to meningitis, and finally to acute myelitis. The necropsy revealed the following conditions: (1) Foci and patches of broncho-pneumonia in both lungs; (2) a turbid yellowish fluid was present in the cranial cavity; (3) The spinal cord felt very much softened; cultures made from the spinal cord showed pneumococci; (4) there were foci of myelitis scattered throughout the spinal cord, and exhibiting varying degrees of development; (5) the vessels of the cord showed accumulations of round cells in their lymphatic sheaths; (6) granular cells were found situated among the degenerating or destroyed nerve fibres, and pneumococci were also present in and around the disease foci; (7) the presence of these micro-organisms served to establish the infectious origin and nature of this form of myelitis.

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(253) Frontal Encephalocele.

Bouchacourt (*Prog. Méd.*, No. 25, June 24th, 1899) showed, at a meeting of the Obstetrical Society of Paris, a specimen with radiographs illustrating glabellar encephalocele. The encephalocele projected in the form of a proboscis in a full-time fœtus, which showed no other anomaly. This "cranial spina bifida" had evidently prevented the union of the nasal processes, and had produced, secondarily, abnormal separation of the orbital cavities and bifidity of the nose. Median hare-lip without cleft palate might be regarded as having a similar origin. The child died when 29 days old from gastro-intestinal troubles, and at the necropsy it was found that the frontal lobes passed into the encephalocele, but had no connection with a fleshy mass protruding from the left nostril.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(254) Mycotic Infection of the Nervous Centres.

J. Roux and J. Pairot (*Presse Méd.*, February 23rd, 1898) report an interesting case, followed by a necropsy, of a woman, aged 41, who was admitted to hospital suffering from paresis of the lower extremities and other symptoms. She was married, had had one miscarriage and one child, which died in infancy. She had been of intemperate habits for several years. Fifteen days before admission the patient caught cold during menstruation, and felt very much fatigued. The following day she had a slight attack of sore throat, and tingling and stabbing pains in the lower limbs, and felt so weak as to be unable to stand. On admission locomotion was found to be feeble and the gait staggering, the patient falling if unsupported. There was no inco-ordination. The reflexes were lost and tactile sense disturbed, the patient responding very slowly and localising very poorly. Two days later she could not stand at all, but could still move her limbs while in bed. Sensation was now abolished in the feet and legs, but the subjective pains and tingling were still present. There was no muscular atrophy, no fever, no disturbance of the heart or respiration, and the urine was normal. The paralysis continued to increase, and eventually involved the sphincters (bowels and bladder). The day following this the arms were paralysed, this being the twentieth day of the illness. The mental condition had hitherto remained clear, but on the twenty-first day the patient became delirious, and suffered from hallucinations of sight, and complained of a sense of anguish aroused on viewing any large open space. Cardiac symptoms (tachycardiac) and bulbar involvement now followed, and on the twenty-fourth day the patient died. The necropsy revealed the following conditions:—The dura mater of the spinal cord was covered by a number of little glistening bodies containing a clear substance, while the surface of the cord itself appeared nodular and contracted here and there as if constricted in rings by the pia mater. Microscopical examination gave the following results:—In the pial septa penetrating into the substance of the cord were found numbers of micro-organisms of very unequal lengths, varying from the length of a tubercle bacillus to that of long filaments following all the flexions of the pia mater. These long filaments were formed of chains of individuals of uniform calibre placed end to end with a clear space between. These elongated filaments were found in the substance of the spinal cord in its lumbar portion, and were especially abundant along the neighbourhood of blood vessels. Similar growths, but in lesser numbers, were found in the cerebellum and in the bile. The brain and medulla were noted to be of increased consistency. The brain substance on sectioning and staining with methylene blue showed a number of small granules staining deeply with the dye. These did not appear to stain with Gram's method, and it was doubtful if they were micro-organisms. In no part of the central nervous system were these appearances suggestive of inflammation, or of diapedesis of leucocytes. The authors conclude that the parasite was a fungus belonging to the group streptothricaceæ. (No cultures were made of the organism.) The symptoms, it is pointed out, which the patient suffered from resembled closely those of Landry's acute ascending paralysis; and, in the absence of microscopic evidences of inflammation, it is contended that the growth of the parasitic filaments acted mainly mechanically in destroying the action of the bulbo-spinal nerve centres. The occurrence of delirium and of hallucinations was, however, probably to be attributed to some toxic (or mechanically irritating?) action of these fungi on the cortical centres, and it is suggested that their entrance into the system was effected by penetration of the mucous membrane during the sore throat she contracted while menstruating.

(255) Spontaneous Gangrene in Children.

Zuppinger (*Wien. klin. Woch.*, No. 13, 1899) reports the case of a girl, aged 5 years, who, after an attack of croupous pneumonia, developed multiple gangrene. It began with pain in the right great toe two nights after the crisis. The next day the whole of the right foot up to the malleoli was swollen and cyanotic, and within an hour the left foot as far as the middle of the leg, the right knee, the right elbow, a large portion of the skin over the left scapula, and a still larger portion over the lower dorsal region became affected in the same way. Most of the foci of local asphyxia disappeared within a fortnight, but the whole thickness of the anterior part of the left foot became gangrenous and necessitated amputation, the right great toe sloughed off, the right second toe lost its distal phalanx, and the skin over the lower dorsal region sloughed, leaving a large granulating wound. Pulsation in both femorals was present, but only in the right popliteal artery. No cardiac lesion was found. After removal of the first metatarsal and internal cuneiform bones, which were necrosed, from the right foot, and performing a Pirogoff's amputation on the left, the child recovered completely. At the operation, the larger veins and the anterior tibial artery were found to be thrombosed. Spontaneous gangrene after croupous pneumonia is extremely rare, and the author could find no other case occurring in childhood. In adults and children it is most common after typhoid fever, but has been reported also after typhus. After influenza a considerable number of cases have been observed in adults, but none in children. At least 3 cases are known which occurred in children after measles. Isolated cases have also been seen after scarlatina, cholera, varicella, and scurvy-rickets. Some of these cases may have been examples of gangrene in Raynaud's disease, which differs from ordinary gangrene in that the lumen of all the vessels except the arterioles and capillaries remains patent. It is certain, however, that the large majority of cases of spontaneous gangrene in children after acute infective diseases depend on arterial thrombosis, as in the author's case.

(256) Contusive Pneumonia.

Aieroli (*Gl'Incurabili*, An. 14, F. 15-16) discusses the occurrence of pneumonia as the result of contusions of the thorax and abdomen. That there really exists a causal relation between the two he thinks sufficiently established by the record of published cases. Nor does he think it necessary to invoke the agency of specific germs as efficient secondary causes; the injury is sufficient to cause pneumonia, and possibly acts by producing vaso-constrictor disturbances due to peripheral contusion acting reflexly on the lung.

SURGERY.

(257) The Surgical Treatment of Non-Malignant Diseases of the Stomach.

Petersen (*Deut. med. Woch.*, June 15th and 22nd, 1899) publishes the results of all the operations for non-malignant gastric affections, amounting to 76, which have been performed in Czerny's clinic in Heidelberg. Fifty were for simple ulcers and their sequelæ. Pyloric stenosis with great motor deficiency accompanied by emaciation and a permanent diminution of the quantity of urine is an absolute indication for operative interference. When internal treatment fails, (1) severe atonic motor deficiency, (2) profuse hæmorrhages, and (3) severe gastralgia with uncontrollable vomiting, whether depending on recent ulceration, cicatrices of ulcers, perigastritis, or adhesions, also demand surgical treatment. The same is true of many of the complications of cholelithiasis, such as pyloric or duodenal obstruction and adhesions, and also of the results of drinking caustic fluids and of the rare tuberculous stricture. From the point of view of mortality, the cases can be divided into two periods: 32 before September, 1895, with 7 deaths (22 per cent.), and 44 after that date, with only 1 death (2.3 per cent.). This great improvement is to be explained by (1) the operation having been performed earlier, when the patients were in better condition; (2) greater experience in the choice of cases, and especially the substitution wherever possible of gastro-enterostomy or pyloroplasty for excision and resection; (3) improved technique, especially the use of Murphy's button, which has reduced the time required for the operation from $\frac{3}{4}$ to $\frac{1}{4}$ hour, allowed the patients to be fed by the mouth directly after the

operation, lessened the chance of subsequent pneumonia, and abolished the danger of the formation of a "spur." The permanence of the results in pyloric stenosis depend chiefly on the kind of operation. Thus gastro-enterostomy (generally posterior) gave the best results. 25 out of 37 cases being completely and finally cured, while occasionally after pyloroplasty, gastro-enterostomy had to be performed later for recurrence of the symptoms. Circular resection of the pylorus and excision of the ulcer were the least satisfactory both as regards the immediate and remote results. It appears that tetany, when of gastric origin, can be cured by a suitable operation. Some of the operations for hæmatemesis were of special interest. In three, where the hæmorrhage was parenchymatous (? due to vicarious menstruation) surgery failed entirely. In one other, with typical symptoms of gastric ulcer, gastro-enterostomy *plus* partial excision of the ulcer arrested the hæmorrhage at once, and a similar result was obtained in another by gastro-enterostomy alone. If this last operation should prove to be the rule, it would be a great advance in treatment, as one of the chief arguments against operating for hæmatemesis is the frequent difficulty in finding and the time lost in searching for the bleeding point. Of great interest is the effect of gastro-enterostomy on the gastric function: (1) Dilatation diminishes at first rapidly, then slowly, though the stomach is seldom reduced to its original size. (2) The motor function is, as a rule, completely restored. (3) The percentage of HCl in the gastric secretion sinks after the operation. Thus, if previously there was hyperchlorhydria, HCl is still found after the operation, but, if originally normal or deficient, afterwards it almost always disappears permanently. However, neither the absence of HCl, nor the frequent regurgitation of bile, gives rise to any abnormal clinical symptoms. (4) Lactic acid disappears. The frequency with which surgery should intervene in non-malignant gastric affections depends largely on the actual danger to life of simple ulcers, and this point is as yet unsettled. However this may be, many gastric disorders remain rebellious to internal treatment, and as the danger from the operation is steadily diminishing, surgery will doubtless take a more important position in their treatment.

(258) Suture of the Heart for Penetrating Wounds.

MINNI (*Giorn. Internazion. del Scienze Med.*, January 15th, 1899) has found, after a careful study of statistics, that only 19 per cent. of the cases of penetrating wounds of the heart are immediately fatal. Operation in these cases gives the best possible hope of saving life provided no time be lost in undertaking it. He mentions 8 cases treated by suture, and gives the details concerning one of them which occurred in his own practice. In Farina's case the wound, which was situated at the apex of the right ventricle, was 7 mm. ($\frac{1}{3}$ inch) long. It was immediately sutured. The patient died on the sixth day, from pneumonia. In Rehn's case the situation of the wound was similar; it was half an inch long. The operation of suture was performed 24 hours after the infliction of the wound. The pericardium and pleura were drained. The patient recovered. In Cappelen's case the wound was at the apex of the left ventricle, $\frac{3}{4}$ inch in length. The left coronary artery was wounded. Primary union took place, but the patient died of pericarditis on the second day. In Parozzani's first case the situation and size of the wound was the same as in Cappelen's. After 12 hours the wound was sutured, primary union took place, and the patient recovered. In Parozzani's second case the wound was in the same situation, but only half an inch long. The operation was performed within a few hours. There was primary union, but the patient died of collapse on the second day. In the author's case the wound was 1 inch long, involving the anterior wall of the left ventricle, a little below the transverse sulcus, and a little to the outer side of the longitudinal sulcus. The patient was operated upon almost immediately, but he died before the suture was completed. In Giordano's case the wound involved the edge of the left ventricle, and was three quarters of an inch in length. After two hours had elapsed the heart and pericardium were sutured, and the pleura was drained. Death occurred on the 20th day, from septic pleurisy. In Parlavecchio's case the wound was V-shaped; each arm of the V measured $1\frac{1}{4}$ inch. The heart was sutured, and complete recovery took place.

(259) Cerebral Abscess following on Orbital Phlegmon.

SZULISLAWSKI (*Klin. Monats. f. Augen.*, August, 1899) reports the case of a workman who was struck below the left eye with a shovel (January 22nd). When examined two days later a contused wound with ragged edges was found in the inner part of the lower lid, and a probe could be passed to a depth of 47 mm. There was abundant purulent discharge, but no bare bone could be felt, nor splinters nor foreign body. Eye prominent and its movements limited, especially up and in; marked conjunctival chemosis; conjunctiva slightly torn, but rest of eye intact; media and fundus normal; vision $\frac{6}{12}$, of right $\frac{6}{6}$. On irrigating wound fluid escaped by nose. For the next fortnight there was a free purulent discharge. February 9th. A minute piece of bone was removed from the wound, after which suppuration quickly stopped and the wound healed up. February 14th. Severe headache during the night; temperature raised; aperient ordered. February 15th. Headache less, temperature down. Fundus oculi normal. From now on there was no fever, but patient got very weak, with moderate headache; pulse 70, regular and full. February 17th. Vomited twice. February 21st. Vertigo during last two days. Patient was now removed by his father from the hospital, but died on February 25th. Twelve days later exhumation and inquest. The eye was intact; the bony wall of orbit was intact and covered with normal periosteum. Brain membranes smooth and shining, and showed no trace of inflammation. Pial and iris engorged, but their contents and of the sinus normal. In left frontal lobe an abscess, the size of one's fist, existed, communicating with the lateral ventricle on the one hand, and almost reaching the pial membrane on the other. No other changes elsewhere. The author regards it as a case of metastatic abscess following on the orbital trouble.

(260) Post-Anæsthesic Paralyses.

MALLY (*Rev. de Chir.*, July, 1899) has been led by an analysis of 34 cases of paralyses following the administration of an anæsthetic to the conclusion that such neuroses are very rarely, if ever, caused by any toxic action of the anæsthetic agent. Among the paralytic phenomena reported as consecutive to anæsthesia, there are two groups—those of hysterical and reflex paralyses—that have no correlation at all with this condition. Paralyses of central origin, and due to cerebral hæmorrhage, are rare results in which anæsthesia has apparently provoked a vascular rupture in a purely mechanical way. Peripheral paralyses are frequent complications of anæsthesia. These are usually caused by compression. The action of the anæsthetic plays but a very indirect part in their production by favouring involuntary and accidental compression of the trunks or branches of the brachial plexus. It is impossible, the author holds, to attribute these forms of paralyses to any toxic or depressing action of the anæsthetic.

MIDWIFERY AND DISEASES OF WOMEN.

(261) Cysto-hysteropexy for Cystocele.

LAROYENNE (*Gaz des Hôp.*, September 5th, 1899) has devised a new operation for advanced vaginal prolapse of the bladder. He declares that after it has been performed all the general discomfort and the painful micturition to which patients with this disease are subject disappear entirely. It consists in fixing the uterus to the parietes, as in abdominal hysteropexy, and then fixing the bladder to the anterior aspect of the suspended uterus, obliterating the vesico-uterine pouch. The cervical canal is dilated with Hegar's instrument. Then a stout, blunt sound is introduced into the uterine cavity, so that the uterus may be thoroughly raised without fear of perforation of the fundus. A suprapubic median incision is made and two or three sutures passed through the aponeurosis and peritoneum and the anterior wall of the uterus. Laroyenne uses a special needle eyed at the point. The sutures being tied, the operator passes his left forefinger into the bladder, the urethra having been also dilated like the cervix. The same

needle is used, being passed through the serous and muscular coats of the postero-superior aspect of the bladder and the anterior wall of the uterus, and then threaded with catgut. Two such sutures are passed and tied. The operator's finger in the bladder can detect if the needle be passed too deeply so as to include the mucous membrane or enter the vesical cavity. In the earlier stage of the operation it is best for the assistant to hold up the uterus with the sound. Then the bladder is fixed to the parietes by two sutures placed below those uniting the uterus to the anterior abdominal wall, and, as before, passed through peritoneum and fascia only. Lastly, the skin wound in the parietes is closed by a continuous catgut suture. In some cases a posterior colporrhaphy is further required to make firm the perineum.

(262) Congenital Diastasis of the Symphysis Pubis.

SCHAUTA (*Centralbl. f. Gynäk.*, xxiii, 1047, August 26th, 1899) showed at a meeting of the Vienna Obstetrico-gynæcological Society a pregnant woman whose symphysis pubis gaped to the extent of 2 cms., and necessitated the wearing of a retentive apparatus. It was believed to be congenital, but it was most remarkable that it was not accompanied by ectopia vesicæ. In this respect it was unique. The patient had had one former pregnancy which had gone to the full term; the labour was easy, quick, and almost painless; the child was alive, and the puerperium was free from fever. The ends of the bones at the diastasis were rounded; there was no scar and no history of trauma, and, in answer to a question, Schauta said there was no reason to think that there had been tuberculosis of the joint.

(263) Transplantation of Ovaries.

J. F. MCCONE (*Amer. Journ. Obstet.*, xl, 214, August, 1899) makes a preliminary report of experiments on the transplantation of the ovaries. Thirty animals were employed. The first series demonstrated that pregnancy could occur where there was no contact between the ovaries and the Fallopian tubes; in a rabbit the left ovary was removed, and the right tube was ligated; ten months later a young rabbit was born, and a necropsy of the mother animal showed occlusion of the right tube and patency of the left, with the presence of a large and functionating right ovary. In the second series of experiments it was found that ovaries grafted from one part of an animal (rabbit) to another part of the same animal continue to grow, to functionate, and pregnancy can and does occur. The ovary was either sewed simply to the mesentery or broad ligament (serous surface to serous surface), or a pocket was formed in the peritoneum or broad ligament and the raw surface of the ovary grafted into it. A large white female rabbit was castrated; the ovaries of another rabbit were grafted into it, one on to the broad ligament, the other on to the omentum; four months later the animal gave birth to five well-formed offspring. In the third series the ovaries of a bitch were implanted in a castrated rabbit, and three and a-half months later the animal was killed and examined, when it was found that the uterus and Fallopian tubes were healthy, and that the ovaries had continued to functionate, as was shown by the presence of healthy maturing Graafian follicles. The deposit of abdominal and pelvic fat was not excessive. McCone holds that his experiments show that conservatism of healthy ovarian tissue, even on the opposite side, from a patent tube should be followed out, and that successfully planted ovarian tissue prevents post-castration atrophy of tubes and uterus. "The grafting of animal ovaries may be used in the human species to prevent the atrophy and post-castration nervous symptoms."

(264) Occipito-Posterior Presentations.

FRY (*Amer. Journ. of Obst.*, August, 1899) points out than when an occipito-posterior position cannot be manually corrected, and when the delivery cannot be readily effected by forceps, the most common practice is forcible extraction with the forceps, and that this results in a high fœtal mortality, as well as in frequent injuries to the soft parts of the mother. If the amniotic fluid has not been evacuated too long, if the uterine walls are not too firmly applied to the fœtus, and if the head has not come down too far into the pelvic cavity, podalic version offers a fair chance of success. But if this be tried when the above conditions are reversed, version is liable to lead to maternal death from shock or uterine rupture. Fry, therefore, advocates that when the fœtus is dead craniotomy should replace forcible extraction. Failure to detect the heart sounds must not be accepted as a sign of the death of the child, as it is often difficult to hear them in occipito-posterior positions; but the hand must be inserted into the uterus (under complete anæsthesia), and the presence or absence of pulsations in the funis be determined. If the child is living, symphysiotomy should be adopted, as giving the child the best chance, and adding but little to the maternal risks.

THERAPEUTICS.

(265) Infusion and its Value in General Practice.

GEORGII (*Münch. med. Woch.*, 1899, Nos. 27, 28), who has used subcutaneous infusion of salt solution in many cases, urges its value and practicability not only in hæmorrhage, but in various other morbid conditions. Intravenous injection is too difficult to be generally adopted in general practice, and is not free from danger; but it is time that practitioners should cease to have any fear of a proceeding which, except for the size of the hollow needle, differs but little from hypodermic injection with a Pravaz syringe, requires no special apparatus and no assistant, and with reasonable antiseptic care is quite free from danger. Its effect is just the same, if not so immediate, as intravenous infusion, and the delay is hardly greater than the time necessary for preparations and introducing the cannula into the vein. It is indicated by acute anæmia, especially in the third stage of labour, but also as a prophylactic in placenta prævia, when it renders narcosis and turning easier, and the unavoidable exposure to cold during that operation less dangerous; in acute internal hæmorrhage from injury to liver or spleen, or from gastric or duodenal ulcers; in the hæmorrhage of typhoid, and that due to the abortion or rupture of tubal pregnancy. In such cases intravenous infusion has been feared lest the restoration of blood pressure should cause renewed bleeding or overtax a morbid myocardium, but the absorption from the cellular tissue is a slower process, and if no other powerful stimulant be given the salt solution may be injected in quantities of 100 c.cm. to 200 c.cm., at intervals of from 10 to 15 minutes. It is indicated also in all gynæcological and surgical operations on patients who have lost much blood, if further bleeding may be expected, and especially so if arrest of hæmorrhage is an essential point in such operation. Its use in recent cholera epidemics is well known in restoring the circulation, supplying warmth, and preventing the drying up of the tissues. In acute and chronic diarrhœa, in the gastro-enteritis acutissima of adults, and the cholera nostras of children, Georgii has found it of great benefit. In marasmus due to chronic intestinal trouble he recommends the addition of 3 per cent. of sugar to the normal salt solution. In cases of intoxication—for example, from strychnine—CO, CO_2, chlorate of potash, mine and illuminating gas, boric acid, iodoform, nitro-benzol or carbolic acid, it dilutes the poison in the blood, and promotes elimination, but depletory venesection should precede it, and so also in uræmia and puerperal eclampsia. In phosphorous poisoning turpentine water may be added to the solution. Other means should not be neglected—a low position of the head, hot cloths and bottles and drinks, perhaps artificial respiration; an injection of camphor in ether is a useful preliminary. Abscesses cannot be invariably avoided, and gangrene from over-extension of the anæmic skin has been met with, but no accident dangerous to life, or to be compared with the benefit to be derived. For children and small injections a syringe of 50 c.cm. to 100 c.cm. will suffice; otherwise a hollow needle, enough indiarubber tube to give a fall of 5 feet to 7 feet, a glass funnel or irrigator, salt, and boiled or distilled water at 40° C. The injections may be made below the clavicle, under the skin of the abdomen, or outer side of the thighs. The back is unsuitable, as turning the patient over is inconvenient.

(266) Action of X Rays on the Skin.

LAMBIN (*Monats. f. prak. Derm.*, No. 10, 1899) has investigated the action of

x rays on both healthy and diseased skin, and comes to the following conclusions: (1) The action is beneficial in cases of lupus, chronic eczema, destruction of hairs growing on moles, and occasionally in cases of acne, lupus erythematosus, favus, psoriasis, elephantiasis, hypertrichosis, and freckles. (2) On the other hand the following accidents may result from the use of the x rays: Dermatitis of varying severity, sometimes followed by abscess and necrosis, alopecia, pigmentation, and desiccation of the epidermis.

(267) Hypodermic Feeding with Yolk of Egg in Anæmic Children.

Muggia of Turin (*Rev. Mens. des Mal. de l'Enfance*, May, 1899) has for some time treated children suffering from anæmia and athrepsia by the hypodermic injection of a preparation of yolk of egg. Freshly-laid hen's eggs are taken and carefully washed before opening. The yolks are received into a sterile glass vessel, and are weighed and then mixed with a third of their weight of physiological salt solution. The mixture is then thoroughly stirred up with a glass rod, and filtered through aseptic absorbent gauze. The liquid thus obtained is of a bright yellow colour and of homogeneous consistency, and can be used for hypodermic injection. It is well to begin with an injection of about 1 c.cm. made into the buttocks or the lumbar region, and provided asepsis is strictly observed throughout there is no local or general inflammatory reaction. The region of injection should be slightly massaged. The quantity of hypodermic injection is gradually increased till a limit of 10 c.cm. per injection is reached. The duration of treatment varies according to each case, but in any case not less than 100 c.cm. (20 injections of at least 5 c.cm. per dose) should be administered. According to Muggia's observations it appears that both the body-weight of the children and the percentage of hæmoglobin in the blood increase in the case of athrepsic infants. The number of red corpuscles also rises, and this occurs much more readily than if lecithin were administered in the same way.

(268) Injections of Piperazin in Gouty Tophi.

Giofredi (*Gazz. degli Osped.*, August 20th, 1899) reports the case of a man suffering from gout with the presence of a gouty concretion in the tendon sheath of the peroneus longus. The general symptoms (lumbar and big-toe pains, uric acid, gravel, etc.) were considerably relieved by the prolonged administration of piperazin, but no improvement took place in gouty mass in the sheath of the tendon. An injection of 0.05 gram of piperazin in ½ c.cm. of water was then made into the substance of the tophus—some rather severe pain of a burning character followed, but was soon relieved by the application of ice. On the second day a slight diminution in the size of the concretion was noted. In all ten injections of the same strength were given, by which time the mass had entirely disappeared. In the later injections the skin was sprayed with ether before the injections were made. The author thinks it possible that gouty trouble in the joints might be relieved by careful antiseptic intra-articular injections of piperazin of a weaker strength.

(269) Protargol in Gonorrhœa.

Nosotti (*Gazz. Medic. Lombarda*, August 7th, 1899) speaks well of protargol in the treatment of gonorrhœa at all stages. The solutions used varied from ½ per cent. in the early days to 2 per cent. in the later stages. No ill-effects were noticed, no epididymitis or other secondary inflammation. It was much more satisfactory as an injection than permanganate of potash. It was found very useful in the vulvo-vaginitis of children. Protargol causes a free elimination of epithelial and pus cells and of gonococci from the urethral mucous membrane.

PATHOLOGY.

(270) Inoculation of Animals with Syphilis.

Two recent writers claim to have successfully inoculated animals with syphilis. These results, if not conclusive, are of interest. Van Neissen (*Wien. med. Woch.*, Nos. 11 to 14, 1899), from material obtained from condylomata and from the blood of syphilitic patients, claims to have cultivated a bacillus on agar and bouillon. This bacillus resembles sometimes that described by Lustgarten, and in some instances reacts to the same differential stains. Van Neissen inoculated four apes, one dog, one rabbit, and three guinea-pigs, and states that the course of disease in the inoculated animals was the same as that of human syphilis. There was a slight reaction, an eruption of sores on the skin, with a tendency to spontaneous healing, and affections of the lymphatic and nervous systems. On the other hand, the author failed to obtain culture reproduction of the contagium. The photographs given of the sores do not appear to be conclusive, and we may add that these sores were diagnosed as impetigo by another observer. Another paper on the same subject is by Adrian (*Archiv f. Derm. und Syph.*, February, 1899), who experimented on guinea-pigs, dogs, and pigs. In the two former animals the results were negative, but in pigs signs appeared similar to human syphilis both clinically and microscopically. Scrapings from a hard chancre inoculated into the abraded skin of the pig caused an eruption similar to a maculo-papular syphilide both clinically and histologically.

(271) Functions of the Suprarenal Capsules.

Boinet (*Marseille Méd.*, xxxvi, 513, September 1st, 1899) has experimented on rats to determine the functions of the suprarenal capsules. In 59 of them the capsules were removed completely and simultaneously, and most of them died within a month afterwards, but 1 lived for 50 days, 1 for 63 days, 1 for 163, and 1 for 198 days. At the necropsies there was no indication found of regeneration of the capsules. Round the kidneys three or four small reddish organs were found, resembling in their structure the cortex of the suprarenal; these may be looked upon as accessory capsules, and their presence may explain the unusually long period which some of the rats survived after complete decapsulisation. During life the animals showed all the symptoms of autocurarisation described by Langlois and Abelous; their movements became slow and limited, walking was impossible, respiration was slow, painful, and difficult; sensibility to pain was lessened, and the rectal temperature fell. The morbid lesions found were mostly of the nature of congestion of the spleen, lungs, kidneys, and nervous centres; the left ventricle was always retracted in systole; in six rats the thyroid body was hypertrophied, and in eleven the thymus was also enlarged. The spleen seems to functionate vicariously in these decapsulated animals, for its removal brings death very quickly; further, if splenectomy be performed simultaneously with the double decapsulisation, a fatal issue follows in ten days at the most, both in old rats and also in young ones, in whom the thymus, by enlarging, exercises a compensatory action. A cubic centimetre of the muscular extract of a doubly decapsulated rat was injected into a healthy one, and it died in forty-eight hours with internal congestions and hæmorrhages; the same quantity of visceral extract (from liver, kidneys, and heart) of another doubly decapsulated rat injected into a normal one caused all the symptoms of autocurarisation and death in twenty-four hours.

(272) The Protective Action of the Lungs.

Cafiero (*Gazz. degli Oped.*, August 13th, 1899) has carried out a series of experiments upon dogs with a view to examining the protective action of the lungs in experimental poisoning by various drugs. The substances used by the author were butyric acid, arsenite of potash, atropin, and curare. In each case it was found that a larger dose of the poison was required to cause death when it had to pass through the pulmonary circulation, thus proving the protective action of the lungs. Experiments were made with a view of finding out wherein this protective action lay. Apparently it was not due to any pulmonary juice, for when the poisons were mixed with pulmonary juice their toxicity was increased rather than decreased. Inhalations of oxygen did not diminish the toxicity, proving that the protective action of the lungs was not merely an affair of oxygenation. The author believes that it is due to the essential vital respiratory function of the lungs, and the protection is lost when the pulmonary tissue is dead. Experiments were devised to prove this, namely, by passing the poison through living non-respiring lungs and the lungs that were actively functioning and comparing the results.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(273) Laughter in Disease.

J. M. Raulin (*Thèse de Paris*, 1899, No. 662) has collected a great number of observations on smiling and laughter in various morbid conditions. In paralysis of both facial nerves Duchenne has remarked that the patient seems to "laugh behind a mask." Although the mask remains immobile, a change of colour may accompany the sentiment of joy. In progressive myotrophy of children there may be a peculiar laugh; it may be a kind of "risus sardonicus," produced by the action of the buccinator and risorius muscles without the aid of the other muscles which play a part in the movements of normal laughter. In bulbar paralysis it is exceptional to have the zygomatici majores affected to an appreciable degree. In this affection, when the patient begins to laugh he may not be able to stop, the mouth remaining open (like that of an ancient comic mask) perhaps until the patient himself approximates his lips with his fingers. In disseminated sclerosis the laugh may be a spasmodic one, lasting several minutes; Oppenheim has even seen it so prolonged as to cause cyanosis of the face and give rise to a fear of asphyxia. Both laughter and crying in this disease may occur without sufficient reason, but crying less often than laughter. During the laughter Parinaud noticed that the pupils might either remain unaltered, or, on the contrary, become extremely dilated (even in patients with myosis). In icterus gravis, in spite of great prostration, a smile on the patient's face is not rarely observed. The true "sardonic laugh" occurs in tetanus. In mental affections unnatural laughter is often a prominent symptom. The two sides of the face during laughter may have different expressions; and this may be observed in epileptic cases, in senile dementia, and in general paralysis, especially when the dementia is rapid. Fits of spasmodic laughter occur in hemiplegic patients; such a fit is the exaggerated expression of a feeling of gaiety. In pseudo-bulbar paralysis the uncontrollable spasmodic laughter contrasts with the ordinarily immobile visage, and may be very disagreeable to the patient himself. On this account the patient may endeavour to avoid everything which he thinks likely to induce laughter, for such laughter is most exhausting. An illustration given by Raulin shows characteristic spasmodic laughter in a man with double athetosis. Raulin narrates the case of a girl, aged 18, with an hysterical laugh of four months' duration. The laughter commenced after the inhalation of chloroform for some slight operation. Whilst under the influence of the chloroform the patient aughed and talked with the attendants, and on waking up the spirit of gaiety and laughter persisted, just as if it were the result of hypnotic suggestion. The girl was easily cured (as far as the laughter was concerned) by being hypnotised and told to forget her inclination to laugh. Hysterical glosso-labial hemispasm can produce a peculiar one-sided grinning expression, similar to that of a grotesque mask in the church of Santa Maria Formosa at Venice. Raulin describes a variety of methods of producing an artificial smiling or laughing by hypnotic suggestion. Some good portraits exhibit well the grotesque expression of laughter which may occur in maniacal cases. Raulin points out that laughter, like yawning, may have a physiological reason. It promotes respiration, etc., and may supervene with a wholesome revulsive action after a state of fear, during which there has been deficient respiratory movement, together with a tendency to vaso-constriction.

(274) Pneumonia: Its Rarer Results and Complications.

Sello (*Zeits. f. k. Med.*, xxxvi) finds that among 750 cases of fibrinous pneumonia treated at the Urban Hospital in Berlin in 1890-97 abscess resulted in 11 (1.5 per cent.), 7 of which recovered after getting rid of the pus by expectoration, or external opening (at an empyema operation). The expectoration did not always contain elastic fibres or parenchyma, but invariably became purulent and green or brownish (hæmatoidin crystals). There were only 3 cases (0.4 per cent.) of gangrene, 2 fatal, their expectoration being of a peculiar chocolate colour, or resembling prune juice. Induration indicated by persistence of fever and dulness, and gradual retraction of the affected side of the chest occurred in 16 cases (2.1 per cent.), 5 being fatal. These symptoms must not be set down to tuberculosis; when tuberculous processes succeed a pneumonia, tuberculous foci have always been pre-existent. The most frequent complication was pleurisy, serous in 65 (8.7 per cent.), and purulent in 34 (4.5 per cent.) cases. There were, as a rule, no bacteria in the serous effusion, but such were found in all but 2 of 26 purulent effusions examined, namely, pneumococci, alone in 15, with streptococci in 4; staphylococci in 2; streptococci in 2; and both staphylococci and streptococci in one instance. Of the 34 empyemata 14 were fatal; the pus was spontaneously absorbed in 2; necropsies disclosed purulent mediastinitis in 3, pericarditis in 7 cases. Blood cultures (Littmann's method) gave negative results in 36 cases (7 of which were fatal), and positive in 12 cases (10 fatal); in one of the others the pneumococci in the blood led to metastatic abscesses in other organs. There were 6 cases of endocarditis, 6 of nephritis, and 5 of meningitis, all fatal and all due to the diplococcus pneumoniæ as proved by microscope and by culture. [In another case of meningitis a catarrhal pneumonia was revealed by the necropsy.] The report concludes with 3 cases of hemiplegia during pneumonia, 2 probably due to embolism, and the other to a thrombosis.—Baduel, of Florence (*Rif. Med.*, 1899, No. 15) found the diplococcus in the blood of 55 out of 57 cases of pneumonia, and that it was most virulent in the acute stage of the disease. Its presence is not to be considered particularly dangerous, but explains the localisations wherever the bacterium may find a favourable field; it may do so in the blood itself, and cause a diplococcic septicæmia of unfavourable prognosis. Baduel found the diplococcus in empyema (3 cases) in primary endocarditis and pericarditis, in nephritis and peritonitis, and in 3 cases of angina. A lobular pneumonia, tardy in resolution, was followed by suppuration of the hand and elbow joints due to the diplococcus, and diplococcic septicæmia suddenly supervened on an otitis media, and was fatal.

(275) Tumours of the Corpus Callosum.

Schuffer (*Rivis. Sperim. di Freniatria*, vol. xxviii, f. 2) has collected 25 cases of tumour of the corpus callosum—8 in women and 17 in men. Most of the cases occurred after 40; the mean duration was under one year. Headache failed in 11 cases; vomiting was absent in 15 cases; optic neuritis was observed in 10 cases, absent in 7, not looked for in the others. The mental state was always changed, generally in the direction of weakness of intellect and memory, somnolence, etc. Convulsions occurred in 11 cases; disturbances of sensibility were rare. The mental changes appear to be much more constant in tumours of the corpus callosum than in tumours of other parts of the brain. The fact that some cases of congenital absence of corpus callosum are not mentally deficient is explained by the presence of compensatory commisural fibres. When there are no definite localising symptoms, in the presence of increasing failure of intelligence, one ought to think of tumour of the corpus callosum. The author attempts to draw up some criteria as aids to the diagnosis of the exact site of the tumour in the corpus callosum, whether anterior, median, or posterior.

SURGERY.

(276) Simultaneous Fracture of Both Clavicles.

Pluyette (*Bull. et Mém. de la Soc. de Chir.*, No. 22, 1899) publishes a case of bilateral fracture of the clavicle, an injury which in its symptoms and consequences differs from the much more frequent fracture of one bone. In a report on this communication Guinard states that simultaneous fracture of both clavicles cannot be regarded as a very rare injury. He has collected forty recorded instances, and imagines that many cases have not been published. This double fracture occurs but very seldom in children and women, and is met with in a large majority of cases in adult males. It is

generally the result of severe injury, and produced indirectly by forcible transverse compression of the upper part of the thorax. There is usually much displacement and overriding of the fragments. The shoulders are much depressed and projected forwards, and the scapula on each side is very prominent. The patient is rendered absolutely helpless, as the use of both upper limbs is lost. A frequent and important symptom is dyspnœa, which is very probably due in part to the pressure of the two upper limbs, the whole weight of which is brought to bear on the thorax, and in part to the loss of resistance in those portions of the upper extremity to which some of the inspiratory muscles are attached. The injury is not a very fatal one, as only a single death has been recorded. In his remarks on the treatment of bilateral fracture of the clavicle, Pluyette holds that the extensive overriding of the fragments, the helplessness of the patient, and the tendency to non-union, indicate in many cases exposure of the seat of injury and the application of an osseous suture. Such treatment would, it is held, be indicated also by severe dyspnœa, as it is only by fixing the ends of the broken bones together that the weakened inspiratory muscles can regain fixity of their attachments. In the case reported in this paper such treatment was practised with success, the left clavicle having been exposed, resected, and sutured on the eleventh day from the date of operation, and the opposite bone similarly treated four weeks after the first operation. Guinard, however, is opposed to such treatment on the grounds that non-union of the fragments after bilateral fracture is really not a very frequent result, and that in the majority of cases the injury is a very severe and complicated one.

(277) Prostatic Ischuria.

Bottini (*La Clin. Mod.*, Nos. 10, 11, 16, 17, 25, 1899) publishes a series of lectures on the above subject. He divides the musculature of the prostate into an adventitia and an intima. The first, made up of striped muscular fibres derived from the muscularis urethralis transversalis, and acting as a voluntary sphincter with which to interrupt the flow of urine; and the second made up of smooth fibres arranged in a circular fashion round the neck of the bladder, and acting also as a sphincter. The incision of this sphincter in any part serves, according to the author, to open up the way for the emission of urine. The point of selection is in the hollow just in front of the prominent prostatic hypertrophy. By incising the sound tissue rather than the hypertrophied portion the sphincter is more easily reached. Large prostates, if the enlargement is uniform, do not cause retention; partial enlargement is much more likely to induce ischuria. Histologically, Bottini divides prostatic enlargements into fibrous, which are rare; glandular and mixed or adeno-fibrous, which is the commonest. He reviews the various cutting operations, internal and external, for example, Maisonneuve's and Mercier's prostatotomy, and also the later operations of prostatectomy as advocated by Mayo Robson and others. All these varieties of cutting operations are, in the author's opinion, full of risk, and not by any means uniformly successful. Ligature of the internal iliac arteries has been tried, but with such results as not to inspire any confidence. Castration and vasectomy, which is only a concealed castration, are not to be recommended since the successes are not sufficiently great to warrant the mutilation. The best mode of operation is one devised by the author, and the description of which he reserves for the next lecture.

(278) The Use of Gloves in Surgical Operations.

Schloffer (*Archiv f. klin. Chir.*, Bd. lix, Heft 1) advocates the use of gloves in the performance of operations which do not demand much manual dexterity or delicate manipulation, and holds that such accessories are likely to be especially beneficial in the practice of surgeons who are unable through constant experience in antiseptic or aseptic methods, or through the absence of skilled assistance to ensure absolute safety from infection. By the use of suitable and thoroughly disinfected gloves the operator may, in the first place, protect his hands when working on infected structures, against virulent pyogenic agents, and, in the second place, may prevent the transmission to a clean wound of any infective organisms that in spite of a vigorous cleansing still remain on his fingers. The author reports favourably of the use in Wölfler's clinic of thin leather gloves carefully disinfected at first by hot water, and afterwards by prolonged immersion in a 5 per cent. solution of lysol. The wearing of gloves, however beneficial such practice may be found, should not lead to any carelessness in disinfecting the skin of the hands, as it may be necessary in the course of an operation to work with the bare hand. It is stated that the use of operating gloves in Wölfler's practice has been attended with much success, and by a complete absence of those occasional failures that are met with after operations performed with careful observance of ordinary antiseptic or aseptic details.

(279) The Surgical Treatment of Typhoid Perforation.

Armstrong (Reprint from the *Montreal Medical Journal*, February, 1899) has operated ten times for typhoid perforation of the intestine, with but one recovery. Special reference is made to three important points in these cases. In all of them the operation had been too long delayed, as, on opening the abdomen, gas and fæcal matter escaped, and it was quite evident that a very considerable portion of the peritoneal cavity had been infected. The grave prognosis presented by general septic peritonitis is rendered still more serious by the other unfavourable conditions always existing in the third and fourth week of typhoid fever. Notwithstanding the poor reparative power of the author's patients, the sutured perforation of the intestine in every case healed readily, and in a short time. At the necropsies performed on these patients, the portion of intestine involved was distended with water and air, and in no instance was any leakage observed. The great lack of reparative power in these patients was shown by the failure of union in the abdominal incision. In one man who lived forty-five days after the operation no union occurred, and when the stitches were removed the edges of the incision fell apart. In the case of another patient the union of the edges of the external incision was very imperfect, although not a drop of pus formed.

(280) Tetany after Partial Thyroidectomy.

Schilling (*Münch. med. Woch.*, February 21st, 1899) relates a case in a lad, aged 16, in whom the left and middle lobes of the thyroid gland were removed owing to pressure symptoms. Four months later the patient had well-marked attacks of tetany. On the first day there were three attacks, and on the second two slighter attacks. Then there was an interval of five days, when there were two slight attacks on each of two successive days. After this there were no further attacks. There was no other discoverable cause of the tetany in this case except the partial thyroidectomy. A swelling in the degenerate part of the thyroid gland left behind was noted a few days before the appearance of the tetany, and the author thinks that this fact strengthens the view that the tetany was of thyroid origin. Schilling has been able to find the records of three cases in which tetany followed a partial extirpation of the thyroid gland, but in one of these pregnancy, itself also a possible cause of tetany, was present in addition. The author then discusses the causation of tetany. According to Strümpell, the most common cause is an intoxication, and hence tetany may follow the infective diseases, or occur in chronic gastric or intestinal diseases, etc.

MIDWIFERY AND DISEASES OF WOMEN.

(281) Uterus Bicornis Bicollis: Normal Labours.

Halban (*Archiv f. Gynäk.*, vol. lix, Part 1, 1899) reports a case where the patient was 24. She had menstruated regularly since 14, and had borne a child at term, breech presentation, about a year before she was under Halban's observation in Schauta's clinic. In the sixth week of the second pregnancy the patient came under von Erlach for hæmorrhages, and he found the vagina divided by a septum. There was a right and a left cervix. The right was of normal size and eroded, the left small. There were also two distinctly separate bodies, the right larger than the left. The right uterus was dilated

and scraped, the vaginal septum divided. Frequent hæmorrhages followed. Pains set in at the end of the seventh month. On palpation there was clearly a pregnant uterus, and on its right side the right half uterus, which had been scraped out, could be clearly distinguished. The left round ligament could be felt drawn up and very tense, and a sharp cord descended from the cleft between the right and the pregnant left uterus. This was no doubt the vesico-rectal ligament, which always exists when the uterus is cleft. The cervix was remarkable; it bore three openings, which puzzled the attendants. The middle aperture was the largest, and two fingers could easily be passed into it, coming immediately into contact with the membranes and the presenting fœtal cranium. A much smaller orifice lay to the left, separated by a thick septum; it also led to the membranes, and it was found that the finger could be passed from the middle to the left opening. The middle was separated from the right opening by a stout crescentic fold, apparently the free lower border of the septum between each cervix distended and pushed to the right by the pressure of the fœtal skull in the left half uterus. Thus the apparent right os was semilunar. The reason for a septum dividing the left os into two was not clear. The child was delivered spontaneously through the middle opening. On the tenth day the parts were carefully explored, and then the mystery of the three orifices was cleared. Only a right and a left os remained, and a new complication presented itself—the right os was lacerated, and had all the appearances of a normal os in the puerperium, whilst the left os was small; yet the fœtus had developed in the left half uterus. On digital examination, however, it was found that the fœtal head had torn through the septum, dividing each cervical canal, and had been delivered through the right os. The crescentic fold was, indeed, the septum, but the middle orifice noted at labour was not the left os, but the greater part of the right os lying to the left of the torn septum which the descending head pushed to the right. No second decidua came away from the right half uterus. This case shows that normal labour may occur in a case of extremely modified development of the uterus; that the non-gravid half may be freely handled without causing the discharge of the fœtus from the other half; and, lastly, that the septum, even when so complete as in uterus bicornis bicollis, may give way in labour above the os, so that the fœtus is delivered through the opposite os.

(282) Uterus Bipartitus Unicollis: Normal Labours.

Blondel (*La Gynécologie*, August 15th, 1899) made an examiuation of a married woman, aged 25, with symptoms of endometritis, and detected a very distinct arrest of development which had previously passed unnoticed. The period began late—at 16—and was somewhat irregular and profuse. The patient married at 18, and complete coitus proved very difficult; at length she became pregnant, and was delivered at the seventh month of a live child spontaneously in Dr. Ribemont-Dessaignes's clinic. The child died in two days. The patient became pregnant almost directly, and was taken with labour pains a little before term, and the child was born in a cab before she could reach hospital. Then free leucorrhœa, menorrhagia, and dysmenorrhœa and lumbar pains set in. Blondel detected retroflexion and left perimetritis. The vagina showed a cicatricial crest along the line of its anterior and posterior columns. Blondel believes that a complete septum existed before the first labour. The cervix was œdematous, but anatomically healthy. The sound passed inwards for 2½ inches to the right, but on retraction it could be passed about 2¾ inches to the left. There were, in fact, two uterine cavities each with a narrow os internum opening into a common cervical canal; but the fundus was not cleft as in uterus bicornis unicollis. The curette was applied to both uterine cavities. The cicatricial crests in the vagina were trimmed away, as they caused dyspareunia and the perineum, being torn, was repaired. The signs of pelvic inflammation disappeared.

(283) Maternal Impressions.

H. F. Lewis (*Amer. Journ. Obst.*, xl, 84, July, 1899) argues against the psychic influence in the production of monstrosities. If true the theory of maternal impressions ought to explain every case, but thousands of monstrosities are born without any history of an impression, and there are many cases of impression not followed by the birth of a monster. If it were true it ought to be possible to classify monstrosities in species and genera according as they were due to certain causal impressions such as from dogs, cats, and elephants. Internal anomalies about which the mother did not even know, such as congenital diaphragmatic hernia, bifid uterus, etc., could not be explained in this way. It is not conceivable that a mental influence could remove a part of the fœtus already formed, neither could it add anything. The strongest blow dealt to the theory comes from the results of the artificial production of monstrosities by experiment. All malformations and monstrosities can be explained by purely physical and mechanical causes, entirely remote from psychic influence, so that there is never any reason to invoke the mysterious or the supernatural to explain natural phenomena.

(284) Causes of Sterility.

Lefèvre (*La Gynécologie*, August, 1899) dwells on certain complex causes of sterility. A woman may be barren owing to a single definite pathological condition. Very frequently, however, it is quite otherwise. In 84 cases of sterility observed by Doléris and Lefèvre, several pathological conditions, none of themselves sufficient to prevent conception, were detected in combination in 66. This group of factors together effective in maintaining sterility consists of catarrah of the cervix, conical cervix, stenosis of the os externum, acute anteflexion, and free prolapse of the posterior vaginal wall. Hence treatment should be directed to all these complications, else failure will be certain. The endocervicitis will require the curette, or if the mucosa show intractable changes, amputation of the cervix, after Schröder's method. That operation is also required when the cervix is conical or stenosed, so as to furnish the patient with an os externum wide enough to admit semen. Acute anteflexion is best met by frequent dilatation. If it tend to return a stem pessary a colporrhaphy in front of the cervix will be required, whilst posterior colpocele will demand retrocervical colporrhaphy; 49 of the 66 cases were treated on these principles. In 8 the treatment clearly failed. In 10 pregnancy has not yet occurred, but either the after-history was too short or there were other factors present accounting for sterility, such as impending menopause (2), uterine fibroid (2), great obesity (1), etc. There remained 24 cases where success was evident, 19 patients having borne 1 child, 3 patients 2 children, and 2 patients 3 children after treatment.

(285) Blood Examination in Gynæcology.

W. R. Griess (*Amer. Journ. Obst.*, xl, 226, August, 1899) emphasises the value of a leucocyte count in certain gynæcological affections. A leucocytosis of 10,000 per cubic millimetre or more in a woman with pelvic pain, after all acute symptoms have subsided, is (eliminating diseased conditions of the blood and of other organs by examination and history) strongly indicative of suppuration of some of the pelvic organs. In the diagnosis between typhoid fever and pus tubes leucocytosis determines that it is the latter.

THERAPEUTICS.

(286) "Constitutional Iodism," Thyroidism, and Graves's Disease.

Jaunin (*Rev. Méd. de la Suisse Rom.*, May 20th, 1899) refers to the series of symptoms long known to Geneva physicians as "constitutional iodism." These are quite distinct from those of acute poisoning with iodine, and from those due to its excretion by the skin and mucous membranes. They are most often seen in countries where goitre is endemic during the treatment of this disease, and consist in rapid emaciation, prostration, tremors, palpitations, tachycardia, shortness of breath, dry cough, sweats, insomnia, and intense nervous excitement. This condition generally occurs in cases where very small doses of iodine are being given, and its appearance is said to coincide with the beginning of the shrinking of the goitre. The fact that it lasts often long after the supposed cause, the administration of iodine, has been removed, and that the symptoms resemble those of the latent form of Graves's disease without exoph-

thalmos led Trousseau to deny the existence of constitutional iodism, which he supposed was really latent Graves's disease aggravated by iodine. The symptoms certainly resemble very closely those known as thyroidism, and seen after taking preparations of thyroid gland. Till now the symptoms of the reported cases of constitutional iodism, with one exception, resembled latent exophthalmic goître. Several of the author's cases, however, were, but for the etiology, typical cases of Graves's disease. (1) A girl, aged 16½, very emaciated, pale and tremulous; marked exophthalmos and diffuse thyroid hypertrophy; pulse 142. The goître had existed since infancy, but the above symptoms had come on only two months before while undergoing a secret "cure" for her goître, consisting in inunction of ointment and medicine internally. The girl had been in bed several weeks, and her case had been diagnosed as acute phthisis. With 75 gr. a day of phosphate of soda followed by a course of steel, recovery from the symptoms of Graves's disease was complete in less than two months. (2) A woman, aged 56, had had a large colloid goître for thirty years, and was treated by two injections of 2 grams of iodoform emulsion. Directly afterwards symptoms of latent Graves's disease set in, and seven months later exophthalmos was present. With phosphate of soda all these symptoms gradually disappeared. (3) A woman, aged 31, was being treated for goître by local injections of iodoform, when rapid emaciation, weakness, anæmia, vertigo, nervous excitement, tremors, night sweats, cough, etc., raised the suspicion of phthisis. However, as the injections became less frequent the general state improved, and she soon recovered completely. (4) A woman, aged 52, who had long been goîtrous, was treated for pleurisy by painting with iodine tincture externally, and iodides internally. After three weeks the pleurisy improved, but all the symptoms of Graves's disease, including temporary exophthalmos, set in. The supposed cause being removed and phosphate of sodium being given, recovery followed. (5) A woman, aged 52, with diffuse goître, had been treated for a varicose ulcer and phlebitis with airol and iodide of lead ointment. Marked symptoms of latent exophthalmic goître followed. A history was given of having had the same trouble on several occasions after treating the goître with iodine ointment. The patient improved for a time, but died suddenly in a cardiac crisis two months later. From an etiological point of view these cases might be classified as iodism; from a clinical standpoint as exophthalmic goître, latent or typical. The author suggests the word "iodo-thyroidism" as expressing these two facts, and believes the thyroid element must be sharply distinguished in this form of iodism. He does not enter into the possible part played by Baumann's thyroidine in these cases, as it is still uncertain whether it is the only active substance secreted by the thyroid gland.

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(287) The Role of Iron in Forming Blood. A. HOFMANN of Halle (*Münch. med. Woch.*, 1899, No. 29), whose experiments have already proved the absorption and excretion of iron in the small intestine in man, and also in animals its excretion by the colon, thus confirming the results arrived at by Macallum, Hall, and others, in continuing his investigation as to the mode of action of the metal, has experimented on 98 rabbits, comparatively on some made anæmic by blood-letting, and others normally healthy, and in either case with and without the administration of iron. Particular attention was paid to the bone marrow, spleen, and lymphatic glands as specially concerned in blood formation; but liver, kidneys, and small and large intestine were also examined; the blood corpuscles were counted, and the hæmoglobin estimated, etc., and various preparations of iron and hæmoglobin tested as regards qualitative and quantitative absorption. He found that all forms of iron were absorbed in the duodenum, and entered the circulation in transport cells combined with albuminous matter in a combination which had no toxic action. It could be so demonstrated in large quantities in the spleen, liver, and especially in the bone marrow, where crowds of these iron-laden cells were present, in the tardy blood stream, in the parenchyma itself and in the network of vessels within it. This organ alone exhibited after blood-letting a corresponding regenerative activity, an active hyperplasia of its parenchyma. The restoration of the red corpuscles was more rapid, the bone marrow richer in its contents after the administration of iron, while the spleen and lymphatic glands showed no difference. Iron given without blood-letting caused some increase of the red cells circulating, and of the fat, but not of cell formation in the bone marrow. The restoration of the hæmoglobin was not so complete, there was no apparent increase in the colouring matter of the blood from the use of iron. In fact iron has a stimulating action on the physiological activity of the bone marrow, and accelerates the ripening and entrance into the circulation of the young cells therein produced as anuclear erythrocytes. Special preparations of iron are unnecessary, of hæmoglobin irrational; the action of iron depends entirely on the quantity of metal absorbed. The action of iron on the bone marrow throws some light on the nature of chlorosis. It seems probable that this affection consists in a diminished capability of production, either temporary, and occurring at the age of puberty, or congenital and more or less lifelong, leading to hypoplasia of the blood-forming organ, the bone marrow, which in severe cases is associated with a hypoplasia of the blood-conveying parts described by Virchow, even of the sexual organs. This weakness of the blood-forming apparatus betrays itself in the depreciated production of erythrocytes, morbidly altered in form and contents of hæmoglobin. This is the only theory as to the nature of chlorosis consistent with the specific action of iron, and is supported by the beneficial effect of venesection in this affection as being a stimulant to the blood-forming bone marrow.

PATHOLOGY.

(288) Diphtheritic Leucocytosis. ANTONIO MARIOTTINI (*Pediatria*, Naples, VII, 248, August, 1899) has made researches on the blood of 26 patients suffering from diphtheria; their age varied from 5½ months to 8 years; 24 of them had the fibrinous form and 2 only had the phlegmonous, and they all recovered although several were very seriously ill. The observations were always made in the evening at the same hour, and always from three to four hours after the injections, when these were being given. In all the cases leucocytosis was present in greater or less degree, and without relation to the temperature and age of the patient; neither was it possible to discover a constant relation between the intensity of the morbid process and the leucocytosis. The leucocytosis, however, increased with the increase of the malady, and only began to decrease after the complete absorption of the exudate. The injection of anti-diphtheritic serum caused an increase in the leucocytosis. The observation of the progressive diminution of the leucocytosis, along with clinical phenomena, may be used in making a favourable prognosis.

(289) Phocomelous Fœtus. STOUFFS (*Ann. de Chir. et d'Orthopéd.*, xii, 209, July, 1899) describes a full-time infant which had lived some hours and which showed double harelip and cleft palate and a phocomelous condition of the four extremities. It was a male, and measured 28 cm. in length, and weighed 1,500 grams. The upper limbs consisted each of a hand articulated directly to the shoulder and with three digits only. The lower limbs similarly consisted of feet united to the trunk by the heels; there were five toes, but the fourth and fifth were webbed. The Roentgen rays showed that the humerus, radius, ulna, and carpal bones were replaced by a single bone.

(290) Gonococcæmia. OWING to the comparative rarity with which the gonococcus has been found in the blood, Panichi (*Settimana Med.* August 26th, 1899) thinks it worth while to record two cases of gonorrhœal rheumatism in which good cultures of gonococcus were obtained from the blood. In each case the gonorrhœa was of old standing and the urethral discharge contained numerous gonococci. The most important conditions for success in seeking for gonococci in the blood are to have good nutritive media (the author used agar and human serum) and to collect the blood at the time of microbic invasion, later on it seems difficult to get cultures. Gonococci were not found directly in the blood either extra-cellularly or intra-cellularly.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(291) Traumatism and Tabes.

Donadieu-Lavit contributes an article on the relationship between traumatism and tabes (*Arch. Prov. de Méd.*, March, 1899), in which he points out the importance of treatment. He quotes the following case under his care: A man, aged 43, given to alcoholism, and who was also syphilitic, began to complain of "rheumatic" pains. Subsequently the diagnosis of tabes was made. The following year he fell, breaking both tibia and fibula on the right side. The fracture was compound. The bones were kept at absolute rest in a plaster case for three months. After removal it was found that, although muscular movements were good, there was marked inco-ordination. On being raised up he was found to have absolute inability to stand; thus, compared with his gait before the accident, it was found that his condition was a good deal worse. Anæsthesia was very marked in the fractured limb, especially in the neighbourhood of the callus. There was marked loss of sensation and of position, and also some wasting of the muscles in the gluteal region of the right side. The knee-jerks were lost on both sides, with absolute absence of plantar reflex on the right. Lightning pains were much more marked on the right side, and there was also some hard œdema resembling elephantiasis, with arthropathic changes of the tibio-tarsal articulation. The author proceeds to show that an accident of this kind in tabes may therefore considerably precipitate many of the symptoms. And furthermore, in this case there were certain psychical symptoms which have occasionally been noticed—namely, marked fear of walking or movement of any kind. The practical lesson taught by this case and others is that tabetics should exercise the greatest care to prevent accidents. Should such a contingency arise, the fractured limb should be submitted to passive movements at the earliest possible date, and the patient should not be kept in bed longer than can be avoided. Massage and as much exercise as possible should be prescribed. So soon as a fracture has united the writer suggests recourse to Fraenkel's gymnastic movements and cycling with an attendant on a "sociable."

(292) Hæmorrhagic Nephritis as a Manifestation of a General Infection.

Holst, P. E. (*Norsk. Mag. f. Lægevid.*, lx., 825, July, 1899) puts on record three cases of acute hæmorrhagic nephritis, in which the nephritis was the expression of an otherwise more or less latent infection of the blood. The first case was found to be one of generalised streptococcic infection only when the *post-mortem* room was reached; streptococci were found in the blood, liver, kidneys, and spleen. The illness had lasted for about eight months, and had all the appearances of a hæmorrhagic nephritis; except in the last few weeks it had been quite afrebile in character. The second case had also an afebrile development; there were the symptoms of nephritis, and also the signs of a recent endocarditis. In the blood during life the staphylococcus albus was found, and it gave a culture like that got from the vegetations on the mitral valves at death. The third case left the hospital uncured; it was that of a patient who had for a long time suffered from a compensated valvular lesion, and who suddenly developed the symptoms of acute nephritis. On several occasions the urine showed masses of micrococci, and cultures always gave the staphylococcus albus. Holst, from the study of these three cases, thinks that general infection often wears the mask, so to say, of acute hæmorrhagic nephritis. The nephritis is the expression of a blood infection, of a latent pyæmia or septopyæmia. The transitory hæmorrhagic exacerbations that are often seen in the course of a chronic nephritis are, perhaps, also due in not a few instances to a temporary infection of the blood. In this sense there may be a recurrent hæmorrhagic nephritis, in the same way that we speak of a recurrent endocarditis.

(293) Urticaria produced by Odours.

Joal records some curious cases (*Journ. de Méd.*, July 10th, 1899) in which certain odours had the power of producing attacks of urticaria. One was the case of a man who sought employment in a liquorice factory, but who was immediately attacked with urticaria on being exposed to the odours of the various ingredients in the manufacture of this article. In another instance iodoform was the exciting cause, and in the same person a similar effect was produced by sulphide of carbon. The perfumes of various plants would invariably produce urticaria in a third patient. Some few instances have been collected by the author from medical literature, showing that urticaria may be produced by inhaling the odours of linseed, as, for instance, in making a linseed poultice. In some cases the urticaria was associated with asthmatic seizures and in other instances, again, high fever accompanied the urticarial condition.

(294) Recovery from Syphilitic Hydrocephalus.

Audeoud (*Rev. Méd. de la Suisse Rom.*, January 20th, 1899) adopts Astros's division of syphilitic hereditary hydrocephalus into (1) cases where the hydrocephalus is the only sign of congenital disease; (2) cases where it follows on specific cerebral symptoms produced by a thickened ependyma. It is of importance to know that the eruption and other symptoms of congenital syphilis may appear some weeks before, simultaneously with, or some time after the hydrocephalus. In the last case the hydrocephalus is the first symptom of hereditary syphilis, and its presence is therefore a sufficient reason for not allowing the child to be suckled by anyone but the mother. In other cases outward signs of syphilis are permanently absent. The disease may run an acute, subacute, or chronic course, but in any case death is the usual termination. Of 170 cases collected by E. Fournier, 5 were improved, and 6 cured by specific treatment. The rest died. In Audeoud's case the mother contracted syphilis before marriage. She was properly treated, and this, combined with a healthy husband, enabled her to carry the child to term. When three weeks old the boy had "snuffles," with mucous patches and a macular eruption. These disappeared under mercury and iodides. At four months of age the parents noticed that the baby seemed less intelligent, and that its head began to increase in size. A month later the head was markedly brachycephalic and hydrocephalic, there was slight nystagmus, and the corneæ were partly covered by the lower lids. After specific treatconsisting of Gibert's syrup internally, had been continued for 3½ months, the hydrocephalus had greatly diminished, and within the year it had disappeared. The author thinks there can be no doubt as to the correctness of the diagnosis. There was probably some hyperostosis as well, but neither this nor pachymengitis could have accounted for the symptoms.

SURGERY.

(295) Stricture of Ileum after Taxis.

Mollard and Bernay (*Lyon Méd.*, April 2nd, 1899) report an interesting case, where a patient, a farm woman, aged 44, was admitted into hospital suffering from intestinal obstruction. The abdomen was distended, and peristaltic movements of the small intestine were plainly visible at one point below the umbilicus. Six months before admission a right femoral hernia, which she had observed for some years, became strangulated. The taxis was performed successfully, but not till some eighty hours after the onset of the usual symptoms of acute obstruction. For a fortnight the relief was complete, then painful peristaltic movements of the intestine began. When admitted they were very frequent and intolerable. Jaboulay operated, making the usual median incision below the umbilicus. At once four loops of intestine were exposed. They were firmly united, crosswise, by old adhesions. A very tough band, and some softer, more recent adhesions were divided by the finger and by scissors. The raw surfaces of the coils of gut were covered by serosserous sutures. Three of the coils consisted of healthy intestine. The fourth had softened coats, which tore open on separation of the adhesions. The forefinger, introduced into the intestinal canal, detected moderate dilatation above the rent, and distinct stricture

below it; the tip of the finger could not be passed into the stricture. Jaboulay at once operated as in pyloroplasty. A longitudinal incision was made over the stricture; this was opened up and united transversely. A sero-serous suture was passed over the first to cover it in. The intestinal canal was then seen to be permeable. The gut being reduced the abdominal incision was closed. A fortnight later a carbuncle appeared in the buttock; a stitch-abscess developed in the abdominal wound. There was no glycosuria. Three weeks later the patient began to get well, and at the end of ten days she had gained 6 lbs. 10 ozs. She was discharged from hospital six weeks after the operation in good health, but with occasional pain in umbilical region about one hour after meals. No doubt the inner walls of one coil had sloughed after taxis, yet, being protected by lymph and adhesions, the peritoneum had not become infected. Taxis, after protracted symptoms of strangulation, is not usually followed by bad ulterior results when colon-bacillus infection or perforation of sloughy intestine does not occur soon after the reduction of the gut. The authors quote a few reports of stricture of the intestine after taxis. Intestinal stenosis is best diagnosed by (1) loud borborygmi, and (2) localised peristalsis, indicating dilatation and hypertrophy of the muscular cord of the gut just above the obstacle.

(296) Deep-Seated Œsophageal Diverticula.

LANDAUER (*Centralbl. f. inn. Med.*, April 22nd, 1899) relates a case in a man aged 51 who had suffered from symptoms for the past eleven years. When a stomach tube was passed down the œsophagus 200 c.cm. of clear fluid was evacuated. It had a faintly acid reaction, and contained lactic acid, but no sugar or peptone. It did not digest albumen. After a test meal of bread and water 200 c.cm. of fluid was withdrawn by the tube introduced to a distance of 36 cm. from the teeth. At 42 cm. from the teeth an obstruction was encountered. After some manipulation it was found possible to pass the sound into the stomach. A second tube was readily passed into the stomach when the first was left in position. If a funnel was attached to each tube and a solution of eosin and methylene blue respectively run it, it was possible to withdraw the unmixed fluids. If the second tube which was passed into the stomach was provided with perforations in its lower half, it was found that the fluid passed into the diverticulum did not escape into the stomach. This would have been the case if there had been a general dilatation of the œsophagus and not a diverticulum. The opening into the diverticulum must have been small, as a second tube could not be passed through it. A Roentgen photograph taken with thin leaden sounds *in situ* gave more exact information as to the situation of the diverticulum. The author says that there are only 4 cases on record which closely resemble the above. Deep-seated diverticula give the same symptoms as the spindle-shaped diverticulum or congenital malformations. The diagnosis cannot be made solely from the symptoms and the impossibility of passing the tube into the stomach. Three of the 4 cases of deep-seated diverticula occurred in men. The etiology is not clear. It is probable that the diverticula contain contractile elements. No death has as yet been assigned to these deep-seated diverticula. The treatment is symptomatic, and consists of washing out the diverticulum.

(297) Traumatic Pancreatic Cyst: Peritonitis after Tapping.

VAN DER LAAN (*Journ. Amer. Med. Assoc.*, July 8th, 1899) was consulted about a boy aged 9, who received a blow in the epigastrium from a sledge. Severe shock, nausea, and vomiting followed, without evidence of hæmorrhage. Four months later an epigastric tumour could be detected; it lay somewhat to the left, the stomach resonance above it, the tympanitic colon below. The tumour was smooth and tense, and fluctuation was evident. It was punctured with a hypodermic syringe, and in the fluid thus obtained the amylolytic ferment of the pancreas was detected. Three hours later, vomiting and great pain set in and the tumour disappeared. The temperature rose to 102°. The abdominal cavity was opened, not a trace of the cyst-wall could be discovered, and the peritoneum was washed out with a saline solution. The stomach was wounded, the wound at once closed by suture, and a piece of omentum fixed over it to ensure against the danger of perforation. Three weeks later the cyst filled again. The old incision was opened up. An incision was made through the gastrocolic ligament; the cyst-wall, drawn up to the surface, was tapped, and finally sewn to the edges of the abdominal incision. A double rubber tube was introduced into the cyst. An enormous amount of fluid escaped for several days. The pancreatic ferment greatly irritated the skin. Mutton tallow, applied to the integument when still warm, gave better protection than lard, vaseline, and other ointment. One tube was removed in five days, the second at the end of three weeks, after gradual shortening. At the end of six weeks the fistulous track had completely closed, and the boy was discharged well. The peril of tapping, even with every precaution, is manifest in this case. Van der Laan notes that his case is the first instance of traumatic pancreatic cyst in a child.

(298) Artificial Larynx.

GLUCK (*Berl. klin. Woch.*, March 6th, 1899) has devised a new form of artificial larynx for use after complete extirpation of the organ for carcinoma. The apparatus consists of a tube passing from the tracheal opening into the nose where it is connected with a small olive placed in the nostril. This olive contains a reed for phonation. The other end of the olive is connected to a rubber tube passed backwards to the lower end of the uvula. The air from the tracheal opening passes up the reed in the nasal cavity, where it is broken up into sound waves, which pass on through the second tube into the mouth and pharynx. Here they can be manipulated in the ordinary way of articulation. The results are said to be good, the patient speaking clearly and with a good voice.

(299) The Surgery of Typhoid Fever.

SACQUÉPÉE (*Bull. et Mém. de la Soc. Anat. de Paris*, May, 1899) reports a fatal case of abdominal section after perforation in typhoid fever. The patient was a soldier, aged 23; the fever seemed to be running a mild course, yet, contrary to the rule in respect to this complication, perforation occurred as early as the eighth day. In the evening the patient felt a sudden pain in the right gland, it spread all over the abdomen in the course of the night and there was much nausea, no vomiting, but a constant desire to make water though the bladder was found to be empty. The temperature was 102° at midnight. Fourteen hours after the onset of the symptoms the abdomen was tympanitic and tender, especially in the right iliac fossa. The facial appearance was very unsatisfactory. Ferrier at once operated, making an incision as for appendicitis. A quantity of purulent fluid without any special odour escaped. Over three feet of small intestine were drawn out and reduced and a minute perforation detected. This was sewn over with silkworm gut. The peritoneum was freely flushed with sterilised water. The patient died a few minutes after the operation. At the necropsy numerous ulcers of Peyer's patches were found in the lower part of the ileum, mostly minute and tending to extend to the serous coat rather than to spread over the mucosa. The perforation lay about 29 inches from the ileo-cæcal valve, unusually high up, as it is generally found within the lower 20 inches of the ileum. The sutures held well and no other perforation existed. The operation had been performed within fifteen hours of the onset of the symptoms, much earlier than in some successful cases, but there was already much fluid in the peritoneal cavity.

MIDWIFERY AND DISEASES OF WOMEN.

(300) Spondylolisthesis: Symphysiotomy.

WHITRIDGE WILLIAMS (*Amer. Journ. Obstet.*, August, 1899) contributes a new case of this pelvic deformity to medical literature. It was diagnosed during life. The patient was a negress, aged 22, and 4 feet 10 inches in height. She applied to a hospital in the ninth month of pregnancy, which she stated was her first, though the cervix was deeply torn on both sides. Naegele pelvis was at first suspected, owing to the presence of evident asymmetrical pelvic deformity. On pelvic examination the lower part of the sacrum was palpable and was concave in both directions. What appeared to be the promontory was readily reached, and attention was immediately arrested by the sharp angle which it formed with the rest of the sacrum. The

finger was then passed over the anterior surface of the sacrum, and instead of coming in contact with its promontory was arrested by a structure which overhung it, and formed a triangular space in front of it. On further examination it was found that this structure was the body of the fifth lumbar vertebra which had been so displaced downwards as to cover completely the anterior surface of the first sacral vertebra, its lower margin being opposite the articulation between the first and second sacral vertebræ. On passing the finger further upward the bodies of the fifth and fourth lumbar vertebræ could be palpated. A spondylolisthetic pelvis was suspected, and diagnosis assured by sweeping the finger along the linea innominata, when it came in contact with the displaced last lumbar vertebra instead of continuing on the promontory of the sacrum. As the promontory was covered by the last lumbar vertebra, the oblique congugate could not be measured, but the distance from the upper margin of the last lumbar vertebra to the lower margin of the symphysis pubis was 9.5 cm. ($3\frac{3}{4}$ inches). The pelvic outlet was somewhat contracted. Then a history was obtained of injury to the right hip when the patient was 13, followed by rheumatic pains in the hips and knees. The right hip ever afterwards remained higher than the left. Symphysiotomy was performed, and the child saved. The abdominal wound partly yielded on the seventh day, when the patient died suddenly with symptoms of pulmonary embolism. The entire space between the bladder and symphysis was converted into a large pus cavity. The pelvis was careful examined, and marked spondylolisthesis discovered. Whitridge Williams describes the pelvic deformity at length, and his essay is adorned with instructive illustrations.

(301) Pelvic Exudation Treated by Pressure.

Halban (*Centralbl. f. Gynäk.*, No. 35, 1899) reports 35 cases of treatment of various chronic pelvic affections by continuous pressure, in Schauta's wards. Since reading notes of the series, before a society. Halban has issued a more complete report with tables (*Monats. f. Gebürst u. Gynäk.*, August, 1899). Freund's method is adopted, but with an important modification. Instead of passing into the vagina, a condom filled with small shot, Schauta introduces a colpeurynter into that canal, and then pours quicksilver slowly into the instrument. The process of filling is less uncomfortable than when shot is employed, and a greater weight can be used with safety. Counter-pressure is afforded (as in Freund's practice) by a bag containing from 2 to 3 lbs. of small shot placed on the hypogastrium. This treatment was tried in cases of parametritis and perimetritis, including old cicatricial deposits, and in retro-displacements from bands. The pressure was applied usually in several sittings. Success, however, was not constant, but the cases of retroversion from bands seem to answer best, and as there is not necessarily any deposit, they bear long-continued pressure without any danger of complications. In the discussion on Halban's notes (*Centralbl., loc. cit.*) Fabricius admitted, on the experience of 4 cases of old parametritis, that the pressure treatment is uncertain; 1 recovered, the exudation disappearing; 1 could not tolerate the pressure, and 2 were made worse, the temperature rising. Extensive parametric exudations, he found, invariably included purulent foci, so that pressure treatment would only do them harm.

(302) Ovarian Cyst Infected by Typhoid Bacillus.

Wallgren (*Archiv f. Gynäk.*, vol. lix, Part 1, 1899) publishes a typical case where a bacteriological examination was made of the contents of the tumour. Werth, Sudeck, and Pitha have published the only other authentic cases. Wallgren's patient was 39 years old. A small tumour was noticed in the hypogastrium in 1893. It grew slowly, and gave little inconvenience till an attack of fever in the summer of 1897. Since then the patient never felt well; the tumour became tender, and there were frequent rigors and attacks of feverishness. Ovariotomy was performed in September, 1898. There was a parietal adhesion of limited extent, but in separating it the cyst ruptured, and some cystic fluid mixed with pus escaped. The pedicle was secured without difficulty. After a slight pulmonary complication and high pulse and temperature the patient recovered. The cyst was dermoid, its fluid contents were purulent, and contained the Eberth bacillus, which were readily cultured.

(303) Ulcers of Vulva and Vagina in Typhoid.

Lartigan (*Boston Med. and Surg. Journ.*, September 7th, 1899) relates 2 cases, both in young girls, with severe typhoid fever. The first patient was 16. Two weeks before admission into hospital she was taken ill with headache, pains in the back, and fever. A few days later the left side of the vulva became painful, especially during micturition; ulceration was then detected. In hospital characteristic typhoid fever was detected. About ten or twelve very small superficial round or oval ulcers were seen on the cutaneous and mucous surfaces of the labia majora and minora, and just within the vaginal orifice. The margins were clean cut and the bases covered with a thin layer of yellow purulent material. The ulcers varied in diameter from 1 cm. (0.39 inch) down to 3 mm. ($\frac{1}{10}$ inch). They involved only the superficial layers of the skin. No vaginal or urethral discharge could be detected. Lartigan made cultures from the ulcers. They contained growths of typhoid bacillus. The Widal reaction was positive. The ulcers healed in about three days, while the fever was still in active progress. Three weeks later, when the temperature had been normal for four days, two cultures taken from the urine a week previously were examined and the typhoid organism was isolated from one of the specimens. The patient recovered. The second patient was 20 years old. Early in the third week, when all the symptoms of grave typhoid fever were present, nine or ten small superficial ulcers were detected on the vulva. They resembled in every particular those observed in the former case. This patient died.

THERAPEUTICS.

(304) Rectal Injections of Fowler's Solution and of Cacodylate of Sodium.

Renaut (*Bull. de l'Acad. de Méd.*, No. 22, 1899) calls attention to the great value of the rectal method of administering arsenic: 2 to 4 grams of Fowler's solution is diluted with 56 gr. of distilled water. Of this, 5 c.cm. can be injected into the rectum three times a day, and in this way the patient receives and absorbs daily a grain of liq. arsenicalis, equivalent to 1 cg., or about $\frac{1}{2}$ gr. of arsenious acid, a dose which would not be tolerated by the stomach, and the treatment can be continued for months if certain precautions are observed. As the injections occasionally set up diarrhœa it is well to add a few drops of laudanum to the solution. As a rule the author gives two injections of 5 c.cm. each a day for six days, three injections a day for the following six days, interrupts the treatment for three, five, or six days, according to the case, and then begins over again. Any irritant effects on the intestine, rectum, and bladder are very exceptional, but if present can always be avoided by substituting cacodylate of sodium for Fowler's solution. This compound has the formula $As(CH_3)_2O_2Na$, cacodylic acid being derived from dimethyl-arsenic or cacodyle ($As_2(CH_3)_4$) by oxidation. It contains 46.87 per cent. of metallic arsenic, is very soluble in water and very stable, so that its solutions can be sterilised by boiling. As it is absolutely unirritating, it is very convenient for hypodermic injections, which can be given safely in doses of 0.050 to 0.075 mg. a day, and are no more painful than those of plain water. In most cases Renaut prefers rectal injections, given in exactly the same way as those of Fowler's solution, since the patient can carry out the treatment himself. As the cacodylate is much less toxic than Fowler's solution still more arsenic can be introduced with the former than the latter, the solutions recommended being 0.25 to 0.40 gram of cacodylate of sodium to 200 grams of distilled water, of which 5 c.cm. are given at a time. Real intolerance for the cacodylate has not been observed. An important action of arsenic is to fix on the tissues of the nervous system, which in consequence become less irritable, and to diminish the tissue waste produced by nervous over-stimulation. Hence its value, not only in neurasthenia, chronic chorea, and to aid the action of bromides in epilepsy, but in tuberculosis, diabetes mellitus, Graves's

disease, cancer of the stomach, and leucocythæmia. (1) Tuberculosis.—Rectal injections of sodium cacodylate combined with fresh air, full diet, and rest, give splendid results in the so-called pre-tuberculous stage, characterised by excessive processes of oxidation; in declared phthisis, they have no specific action, but with hygienic measures give probably better results than any other treatment; (2) in diabetes mellitus arsenic acts probably directly on the fourth ventricle, as it has been proved that an animal which has received a strong injection of arsenic becomes, if at all, very slightly diabetic if the diabetic puncture is performed; clinically the cacodylate injections, even more than those of Fowler's solution, reduced the sugar, even in advanced cases, to a surprising degree; (3) in exophthalmic goitre good results were obtained; (4) in cancer of the stomach, combined with treatment of the dyspepsia, cacodylate injections arrested for a time the emaciation and the feeling of weakness; (5) in leucocythemia the treatment had a remarkable effect. In one advanced case with enormous spleen and albuminuria, with only 600,000 red corpuscles in a cubic millimetre, and a proportion of white corpuscles to red of 1 to 4, treatment with arsenical injections from November 30th to April 10th raised the red corpuscles to 3,200,000 per cubic millimetre, and altered the proportion of leucocytes to 1 to 18. The spleen was steadily diminishing, the strength returning, and on May 16th the man resumed his employment. The author knows of no recorded case so nearly cured. However, the effect of the arsenic may have been deceptive, since the formation of leucocytes was not arrested by the arsenic, but only the rapid destruction of red corpuscles. The treatment is also recommended for severe anæmia.

(305) Serum Treatment of Syphilis.

VYEVIOROVSKI (*Russian Archiv. of Path. Clin. Med. and Bact.*, vol. vii, 1899) gives his results of the treatment of syphilis with the serum of syphilitic patients. In the first place, he is of opinion that bleeding syphilitic patients does no harm. He takes 1½ gr. of blood for each pound in weight. His conclusions are: (1) That serum obtained from patients after the disappearance of secondary symptoms and also serum from patients with gummata, administered to patients with early syphilis, increases the percentage of hæmoglobin, the number of red corpuscles, and the metamorphosis of the white corpuscles, as shown by the diminution of the young and matured corpuscles, and the increase of those past maturity. These changes in the blood take place before any external signs are noted. (2) Only the serum of syphilitic patients shows this action on the blood of syphilitics, the serum of healthy people having no such action. This action is quite independent of treatment, since it is the same with the serum of patients untreated. (3) The action is stronger when the serum is given during full secondary symptoms than when given before these appear. (4) The action is the same whether serum of patients with secondary or gummatous manifestations, treated or untreated, is used. (5) The author thinks the action of the serum stronger than that of mercury. In 8 cases out of 16 the symptoms entirely disappeared from the use of the serum alone.

(306) Artificial Serum in Toxic Dermatitis.

CALLARI (*Rif. Med.*, August 14th-22nd, 1899), on the supposition that many skin diseases are of toxic or antitoxic origin, has been trying the effects of large injections of artificial serum. Eight different kinds of serum were tried, varying from a simple chloride of sodium (10 to 20 grs.) and bicarbonate of soda (5 grs.), solution (aq. 1000 grs.) to a combination of this with such drugs as sod. arsen. and ergotin. The site of election for the injection was the interscapular region. The treatment was tried in psoriasis (10 cases), eczema (8 cases), pruritus (5 cases), lichen (4 cases), sarcoma (3 cases), lupus (4 cases), scrofulodermia (1 case), mycosis fungoides (2 cases), carcinoma (1 case), and a few other cases, making a total of 44 in all. To these were added 16 cases of burns, in which the same treatment was practised. The results were negative in mycosis, pemphigus (a deterioration occurred here), ichthyosis, sarcoma, and carcinoma. Absorption of the serum as a rule, occurred in two hours; sometimes a good deal of pain was set up by the injections, and on two occasions abscesses were observed. The quantity of fluid injected varied from 25 grams—1,500 grams in the 24 hours. The temperature generally went up after the injections. In psoriasis the redness first lessened, the desquamation increased, passing on to a furfuraceous character and finally disappearing, the pruritus speedily disappeared, an average of 23 injections was given comprising 4,925 grams of artificial serum. In eczema the weeping was at first increased, but cure occurred with an average of 34 injections and 4,637 grams. The results in burns were not encouraging, inasmuch as 7 out of 16 died, but they were mostly very severe burns.

(307) Treatment of Alopecia Areata by Chemical Rays.

JERSILD (*Ann. de Derm. et de Syph.*, January, 1899) has employed the method of Finsen of treating lupus by concentrated chemical rays in cases of alopecia areata. The main points are: (1) The bactericidal action of light and the penetrating power of this action as shown by Finsen in the treatment of lupus. (2) The favourable action of light on the growth of hair; in many of Finsen's cases new hair grew round the lupus patches during the treatment. (3) The provocation of local irritation. The treatment lasted from one to four weeks with from four to forty-eight sittings of one hour each. In all cases the growth of hair was very rapid. The hairs were firm and non-pigmented. In one case the hair appeared after one month's treatment.

PATHOLOGY.

(308) Ulcerative Stomatitis.

GUEZZETTI (*Archiv. per le Scienze Med.*, v. 23, No. 1) as the result of a careful examination of three cases of ulcerative stomatitis believes that it is closely allied to noma. Bacteriologically the most constant features were the presence of spirilla and a bacillus having the closest resemblance to that found in noma. The author practised injections of the discharge from a case of ulcerative stomatities upon his own lip, but found that the spirilla speedily disappeared, whilst the associated streptococci flourished freely. The author believes that in mild cases of ulcerative stomatitis, spirilla are absent and their presence is an indication of the gravity of the case. Frühwald's bacillus was not found by the author in his cases, so that it can hardly be the cause of the disease.

(309) Ouabain.

GIANTURCO (*Riv. Med. della Regia Marina*, August, 1899), having had the opportunity of examining a considerable quantity of the roots of acocanthera ouabaio (the plant from which the Somalis prepare their arrow poison), has made a series of chemical researches on the properties of the alkaloid ouabäin. The alkaloid, obtained by precipitation with lead acetate from a watery solution, crystallises in cubes flattened at the base and of a mother-of-pearl appearance. It is only slightly soluble in cold water, easily soluble in alcohol (at 85°) and in boiling water, insoluble in chloroform, ether, or absolute alcohol. Its elementary composition is represented by the formula $C_{30}H_{46}O_{12}$, with 7 H_2O water of crystallisation, which somewhat resembles that of strophanthin. It is one of the glucosides, and when acted on by dilute acids splits up into rhamnose ($C_6H_{12}O_5$) and a resin not yet studied.

(310) The Bacillus of Leprosy.

CARRASQUILLA (reprint of communication to Nat. Acad. of Med. of Bogotà, 1899) reports that he has succeeded in cultivating the lepra bacillus in human blood serum. Two forms were observed: (1) long and slender bacilli, (2) short and almost elliptical in shape. The author concludes that the bacillus obtained by him is Hansen's bacillus, because (1) it resists decoloration by 30 per cent. nitric acid; (2) there was no reason to believe that any other organism was introduced when the tubes were inoculated; (3) the filtered fluid from the cultures when injected into horses produced the same reaction as serum from lepers' blood; (4) the serum of horses subjected to injections of culture filtrates produces the same reactions in lepers as the serum from horses infected with serum of lepers' blood; (5) the bacillus stains in the same way as Hansen's bacillus. Carrasquilla hopes to succeed in inoculating animals with the cultured bacillus, and so prove his point.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(311) The Causes of Immunity against Tuberculosis in High Altitudes.

Mitchell and Crouch (*Journ. of Path. and Bact.*, May, 1899) working at Denver at an altitude of 5,290 feet, found experimentally: (1) That the tubercle bacillus, as expectorated on a sandy soil, is still virulent after thirty-five hours' exposure to the direct rays of the sun. Koch, working (presumably) with pure cultures of the bacillus, found that it was killed in a few minutes to several hours, according to the thickness of the layer in which it was exposed. (2) That such sputum on a sandy soil has lost but little of its virulence after twenty hours' exposure. (3) That if the exposure extends beyond twenty to thirty-five hours the virulence is gradually diminished, and finally lost. They therefore conclude that Koch's statement has given sanitarians a false sense of security, and that as a fact the sputum as expectorated by consumptives at such an altitude as Denver has ample time to become desiccated and blown in the atmosphere before it has been robbed of its virulence. Now since there unquestionably exists a great degree of immunity against tuberculosis in this region and at this altitude, another explanation than the disinfecting action of the sun through a rarified atmosphere must be sought for, and is probably to be found in the effects of the climate on the vital forces of the individual: (1) The absolute and relative moisture in the atmosphere is low, and this together with the lessened atmospheric pressure and almost constant winds greatly facilitates evaporation. This abstraction of moisture takes place very rapidly from the pulmonary alveoli, and though these could scarcely become too dry to serve as a nidus for the tubercle bacillus, the constant evaporation must produce unfavourable conditions for its development. The absence of moisture acts also beneficially on the organism as a whole. Thus the sensation of temperature is measured not by the ordinary but by the wet-bulb thermometer. For instance, the air thermometer may register the same at Denver as at the sea level at Washington, but the heat actually felt by those in the former place may be 32° F. or more less than is felt by those in the latter. As a result the heat at an altitude is not enervating. (2) The lessened atmospheric pressure at altitudes causes a dilatation of the cutaneous and mucous capillaries. The pulmonary capillaries are dilated, and the blood stream through them is slowed, so that it can better give battle to the invaders; the thorax is expanded, and there is an increased frequency of respiration to compensate for the diminished amount of oxygen in the rarified air. The heart's action is also increased for the same reason. The body warmth is continuously lost in large quantities, and to replace it, other things being equal, the appetite improves, metabolism is more rapid and complete, and the need for nourishment greater. The evaporation increases the specific gravity of the blood, and in a given quantity the number of red corpuscles and the percentage of hæmoglobin are said to be increased. Indeed the same factors which tend to the healing or retarding of cases of phthisis which seek out high altitudes, account for the immunity to phthisis of those who live there.

(312) Typhoid Fever and Appendicitis.

Moizard draws attention (*Journ. de Méd.*, July 10th, 1899) to the difficulties which one may encounter in the diagnosis of some cases of typhoid from appendicitis. He records the case of a child aged 12 admitted under his own care, and who had been suddenly attacked ten days before with severe pain in the right iliac fossa, intense pyrexia, and repeated vomiting. During the first few days the pain was localised to MacBurney's point so precisely that appendicitis was considered as the correct diagnosis; but the high temperature, the general condition not being as proportionately bad as one would expect, with such severe symptoms, and further, the slight amount of abdominal resistance, were all points to cause to hesitate in making such a diagnosis. A week after the onset of the symptoms the appearance of a typical rose rash pointed to the case being one of typhoid. The further history of this case was curious in that there was a very rapid subsidence of all the symptoms. The patient made an uninterrupted recovery. The author quotes another case from his own experience. The patient was a boy aged 13, who, similar to the last instance, was suddenly attacked with vomiting and abdominal pain accompanied by high fever. Here again there was pain most intensely felt in MacBurney's point. In this instance the diagnosis of appendicitis was made notwithstanding the very slight amount of abdominal resistance. In the course of a very few days the diagnosis of enteric fever had to be substituted. The author quotes cases more or less indefinitely described by other writers where in all probability the diagnosis between these two conditions was enormous. The importance of making up one's mind in such cases is obvious, as unfortunately operative procedure may be called in. The points of difference are described by the author to be: (1) Degree of pyrexia not usually met with in appendicitis; (2) the much less marked abdominal resistance in cases of typhoid as compared with the very obvious alteration of the abdomen to palpation in cases of appendicitis; (3) difference in facial expression. Unfortunately it seems to be in such cases that serum diagnosis is most likely to fail, for, owing to the curiously rapid onset of the disease, there seems to be no reaction obtainable in a very short time. As to treatment, the writer suggests the application of ice, a rigidly fluid diet, and the non-administration of opium as likely to mask the symptoms. Belladonna, on the other hand, seems to be beneficial.

(313) So-called Recurrent Facial Palsy.

Bernhardt (*Neurolog. Centralbl.*, February, 1899) gives an elaborate clinical and statistical study on the above subject based on a total of 484 observations, 9 of the cases being observed personally. The following conclusions are reached: (1) Recurrent facial paralysis occurs in 7 per cent. of all cases, and is more frequently found in males than females, and generally between 20 and 50 years of age. (2) The recurrence may take place as soon as some weeks or as late as some years after the first attack. A third attack may supervene about a year after the second attack, but sometimes this interval may be five to seven years. (3) The side first attacked is not necessarily implicated in the second attack; it may be the opposite side; and generally there is not more than one recurrence. (4) As regards electrical contractility of the facial muscles on the affected side it is more marked in a second than in a first attack, and with due regard to (3) above. (5) In 10 per cent. of recurrent cases there is an etiological factor in the shape of chronic middle-ear disease, of syphilis in 6 per cent., of diabetes in 5 per cent., and of a hereditary or nervous predisposition in 13 per cent., as ascertained from a total of 484 observations. (6) The hypothesis of Despagne, Philipp, etc., on the predisposing influence of malformation of the cranial and facial bones in determining recurrence is not regarded as sufficiently established. (7) The *rôle* of infectious and toxin agencies is probable, though not demonstrated to a certainty. (8) The etiological relations existing between facial paralysis and affections of structures adjacent to the facial nerve cast a certain amount of doubt on the (supposed) existence of an immunity conferred by a first attack of facial paralysis. (9) In 66 per cent. of the cases one could not ascertain the etiology (determining cause) of the recurrence.

SURGERY.

(314) Extirpation of the Rectum and Sigmoid Flexure for Cancer.

Karl Schuchardt (*Deut. med. Woch.*, August 24th, 1899), from his experience in dealing with uterine cancer by a para-vaginal incision instead of by Hochenegg's adaptation of Kraske's operation, which not only involves damage to bones and ligaments, but is more dangerous to life and longer in healing, was led to give up the preliminary sacral operation as soon as he had found in the method put forward by Kocher in 1874—posterior longitudinal incision with amputation of the coccyx—a satisfactory means of

getting at any cancer of the rectum and lower part of the sigmoid flexure, with the related lymphatics, at all capable of extirpation. The typical procedure he has gradually developed is as follows: In annular cancers, and whenever there is any doubt about emptying the bowel, he performs a left lumbar colotomy some weeks before the extirpation. For the latter he has a special table on which the patient is secured in a modified Trendelenburg position, with the legs drawn up and the sacrum brought well forward. An incision is made from the margin of the anus to the middle third of the sacrum, the coccyx exposed and amputated with a Gigli saw, and a tampon is placed in this wound. The superficial incision is then carried forwards round the anus and the latter stitched up by a continued suture of thick silk. About 2 or 3 fingers' breadths on either side of the rectum he then, by means of strong curved needles, passes a deep ligature of thick catgut, which is securely knotted, and the tissues between these ligatures and the bowel are then divided. By repetition of this process the rectum is, step by step, rapidly separated from its lateral muscular attachments with hardly any loss of blood. Without the use of much force the bowel can then be detached from the hollow of the sacrum, any hæmorrhage so caused being arrested by a tampon. When the gut has been freed behind and on both sides, its detachment from the vagina or from the prostate and bladder in front is, in uncomplicated cases, easy, and few vessels require control. At this stage the nature of the case is laid bare, and if necessary the peritoneum may be opened with perfect confidence. The great advantage of this method is that the parasacral tissue, as far as, or even beyond, the promontory, containing the infected lymphatics is completely removed undetached from the rectum. When the disease extends to the lower part of the sigmoid flexure, by drawing the free part of the bowel forwards the mesentery of the sigmoid is put on the stretch, a catgut ligature is passed through it as near the bone as possible and knotted, the secured part of the mesentery divided, setting an additional portion of bowel free, and this process is repeated until the new growth is sufficiently mobilised, and the bowel can be drawn down far enough to be secured to the skin. The extent to which this can be carried depends on the length of the S, but Schuchardt has been able to amputate 30 after liberating 40 cm.

(315) Treatment of Varicocele.

Annequin (*Arch. de Méd. et de Pharm. Militaires*, September, 1899), discussing the treatment of varicocele from the point of view of a military surgeon, states that the existence of this affection does not indicate an operation unless the patient complains of pain and discomfort. If the use of a suspensory bandage affords but little relief and fails to arrest the increase of the swelling, and, moreover, if the varicocele interferes with marching and other exertions of military duty, it would become necessary to apply surgical treatment. The author advocates extensive bilateral resection of the scrotum, hæmorrhage being controlled during the operation by the use of a special clamp. This operation affords complete and permanent suspension of the testes, and does not, like the ordinary methods, endanger the vas deferens and the blood vessels of the cord, and involve the risk of serious and it maybe fatal phlebitis. Exposure and resection of the spermatic veins the author would reserve for cases of relapse after resection of the scrotum, and also for extreme cases of varicocele complicated by advanced morbid changes of the walls of the spermatic vessels, and well-marked atony of dartos and cremaster.

(316) Why does Laparotomy Cure Tuberculous Peritonitis?

Arcangeli (*Il Policlinico*, September 1st, 1899) can find no satisfactory answer to the question in any of the usual explanations put forward; he therefore suggests a theory of his own, based on the assumption that the action which follows laparotomy is very much the same as that which would follow the injection of some active immunising substance. In these cases the immunising substance is supposed to lie in the serous exudation. With this idea the author has tried injections (2 c.cm. and more) of pleural effusions in cases of tuberculous pleurisy and of ascitic fluid in tuberculous peritonitis. The results have clearly shown that some curative power lies therein. The older the effusion the better the result. This immunising and curative property must be attributed to dead bacilli (modified by the organism) contained in the caseous masses. On this theory laparotomy acts by causing absorption of the peritoneal fluid and of substances contained in old tubercles, in this way immunising the patient. In one of the cases, where the injections of serous fluid were tried, a fresh focus of disease (a right pleurisy) followed. The fact that better results followed in old than in recent cases agrees well with the slow rate at which vaccine substances are usually formed. Further experiments are being made with the object of purifying the serous effusion used as injection.

(317) Rapid Disappearance of Adenoids:

Chauveau (*France Méd.*, xlvi, 545, September 1st, 1899) describes 3 cases of rapid disappearance of adenoid vegetations. In the first a child, 9 years of age, had the clinical features of pharyngeal adenoids, and the growths were present and of medium size; operation was to have been performed the ensuing week, but had to be postponed owing to a sharp attack of influenza; a month later an examination revealed that there were no longer adenoids large enough to require operative treatment. The second case was similar; in it the child, aged 11 years, could not be operated on at the time for family reasons; in a fortnight influenza supervened, and two months later, when he was brought for operation, examination revealed no adenoids large enough to be appreciable. In the third case also, aged 13 years, an attack of influenza was followed by the complete disappearance of the adenoids. There was nothing in any of these cases to indicate the occurrence of local inflammation. Chauveau points out that it is well known that inflammations, infectious or not, sometimes modify profoundly morbid tissues, as is seen in the effect of erysipelas on cancer of the breast, and it has been noted that great hypertrophy of the tonsils has disappeared after a scarlet fever throat. It will, therefore, be well, before proceeding to the operation for adenoids after the incidence of an infectious fever, to re-examine the naso-pharynx.

(318) Pseudo-gonococcus on the Conjunctiva.

Krukenberg (*Klin. Monats. f. Augen.*, April, 1899) has met with a case of mild conjunctivitis, without chemosis, in the secretions from which he found cocci, having morphologically the character of the gonococcus, and like it occurring within as well as without the leucocytes, and taking a deep stain when treated by Gram's method. In places the cocci were grouped in tetrads, and in twos and threes. Pure cultures were made on the same media as the gonococcus grows on, the sole difference being that the pseudo-gonococcus grows freely on animal blood serum. It can also bear a longer exposure at a higher temperature than the gonococcus. Further, when injected into the peritoneal cavity of guinea-pigs and white mice, it had a virulent effect. But further research is required before it can be definitely asserted to be distinct from the gonococcus and from the meningococcus; this latter has just been found by Fränkel, occurring intracellularly, in three cases of pseudo-membranous conjunctivitis, but Krukenburg thinks its characters as described by Fränkel are not the same as the pseudo-gonococcus he has met with.

MIDWIFERY AND DISEASES OF WOMEN.

(319) Eclampsia and Suckling.

Pierre and Chavane (*L'Obstétrique*, July 15th, 1899) discussed, at a recent meeting of the Société Obstétrique de Paris, a subject already much debated by authorities. Should a woman, who has recovered from albuminuria or eclampsia during pregnancy or labour suckle a child? Dumas, on clinical evidence, saw no objection to suckling provided that the albuminuria ceased after labour. Gamulin, in 1896, observed a large series of patients with albuminuria in the Baudelocque clinic, and found that they could suckle, and that their infants gained weight after the normal standard. The mother's enjoyed all the physiological

advantages of suckling. Gamulin saw no evil symptoms even when the albumen persisted in the puerperium, and the patient was still under milk diet, but no cases in his series were traced after discharge from hospital. Budin and Chavane have watched cases at La Charité, La Maternité, and the Clinique Tarnier. At La Charité all the patients suckled, even those with albuminuria, and no evil results were observed either in the mothers or children. At La Maternité the same practice was observed with good results. The cases were, as much as possible, traced after discharge, but only four, it would appear, were watched in a satisfactory manner for several months. In all the four, however, there was albuminuria in the mother when discharged. In all the four cases the children as well as the mother did well. Budin and Chavane noted that in none of the cases under observation was there any evidence of pre-existing Bright's disease. His patients were never allowed to suckle till the eclampsia had ceased. Maygrier and H. de Rothschild also considered that it was very important, in respect to the question of suckling, to distinguish in every individual case between the albuminuria of pregnancy and albuminuria accompanied with all the local and general symptoms of acute or chronic nephritis.

(320) Metritis Dissecans.

Dachxevich (*Vratch*, No. 6; 1899, *La Gynécologie*, August 15th) has collected 29 cases; 6 died, a mortality of 18 per cent. In all, the course of the disease was irregular, and there were symptoms of infection. In all, either a fragment of the uterus was expelled, or else it was found after death loose in the uterine cavity. The period of elimination of the fragment varied from eight to seventeen days. The author considers that the disease is partial sloughing of the uterus from obliteration of its vessels by bacteria. He adds 6 new unpublished cases of metritis dissecans. In the first 2 a bacteriological examination was made for the first time in the history of the disease; in both instances the vessels in the mucosa and adjacent muscular tissue, cast off in the course of the disease, were found obliterated by colonies of streptococci. Case I.—2-para, aged 22, quite healthy. Free leucorrhœa set in during second pregnancy; this he believes to have caused auto-infection. Delivery normal, labour six hours; much fever in puerperium, reaching 104.5° in second week; putrid lochia with bubbles; slow involution. On the sixteenth day, a large mass as big as the palm of a hand came away. Then the temperature fell, and recovery began in earnest. Ergot, tonics, antiseptic douches, and injections of antistreptococcic serum were employed. Case II.—Primipara, aged 20, feeble; flat pelvis, hydramnion, premature delivery in ninth lunar month; labour forty minutes; rupture of perineum, perineorrhaphy; very severe fever in puerperium; pulse hardly palpable at times save in large arteries; fœtid lochia; large fragment of uterine tissue discharged on twenty-fourth day. Case III.—Primipara, aged 20. Endometritis, rupture of perineum at labour, perineorrhaphy. Fever for twenty-six days after delivery, fœtid, turbid lochia. Uterine tissue discharged on twenty-fourth day; speedy recovery. Case IV.—3-para, endometritis, delivery in ninth lunar month. Embryotomy, decapitation, evisceration, expression of placenta; uterus washed out. Fever for a month; broncho-pneumonia developed on fifth day. Fragment of uterine tissue discharged on seventeenth day. After the twenty-sixth day the fever ceased and recovery began. In all Dachxevich's cases there was severe fever.

(321) Pregnancy in Rudimentary Horn of Uterus Unicornis.

Manierre (*Amer. Gynec. and Obstet. Journal*, September, 1899) successfully operated in a case of this kind, where the left cornu was continuous with the cervix, whilst the right was connected with the cervix by a short, thin pedicle, and contained a fœtus. The patient was twenty-three; married a year and a half. About six months before coming under observation she seems to have miscarried six weeks after the last period. For four months the period had again ceased, and for two weeks she had noticed a swelling in the right iliac region, which was painful, and rapidly increased in size. It was oval and very movable, the uterus seemed crowded to the left and a little enlarged, the cervix was softened, the areolæ of the nipples darkened. Owing to the extreme mobility of the tumour and its rapid growth the diagnosis of cornual pregnancy was excluded. Ovarian cyst and twisted pedicle seemed more likely. At the operation a cyst-like tumour, with large vessels on its surface, was exposed and tapped; a few ounces of fluid escaped, and the sac burst during an attempt at delivery. Placental tissue and a female fœtus 6½ inches long escaped. The cyst was the pregnant rudimentary cornu; its pedicle was tied off in three sections, and its stump buried under the peritoneum. The left cornu was enlarged to about the size of a six weeks' pregnancy, and during the next few days it discharged shreds of membrane. The tube and ovary were found attached to the pregnant rudimentary cornu; the ovary contained a corpus luteum, large, but quite pale. The products of conception on the maternal side, the endometrium of the cornu, etc., were, as usual, far more perfectly developed than in a tubal pregnancy. The patient recovered speedily.

(322) Fibroid Uterus used to Close a Hernia.

Stratz (*Centralbl. f. Gynäk.*, No. 27, 1899) reports a case of hernia of the abdominal wound following removal of a left pyosalpinx eight years previously. Metrorrhagia had also developed. The right appendages were diseased, and the uterus was considerably enlarged and very irregular in form. Stratz opened the outer border of the sac. There were adherent coils of intestine, separated with some difficulty; the sac itself was then excised. The uterus was covered with adherent gut, which was detached from it. As the uterus was fixed to the right, the right appendages were removed. The uterus, now movable, had a very raw, bleeding surface. Stratz thought it best to make use of this surface as a stop-gap to close the hernia, thereby at the same time obviating the danger of fresh intestinal adhesions to the uterus. The edges of the peritoneum, the recti, aponeuroses, and skin, were united in layers to the serous coat of the uterus drawn forwards for the purpose. This operation was done in June, 1898. For six months the scar remained strong, but in consequence of the removal of both appendages rapid involution of the uterus occurred, an undesirable sequel in this case, as the scar was dragged backwards and downwards by the diminishing uterus. By March, 1899, the uterus had become senile in proportions; the patient was then about 47 years old. A hernia, as large as that which he had repaired, developed above the old scar, which was attached by a long cord to the retracted uterus.

THERAPEUTICS.

(323) Quinine and the Malaria Parasite.

Lomonaco and Panichi (*Centralbl. f. d. med. Wissensch.*, August 19th, 1899, No. 33, pp. 561, with four figures) have studied by direct microscopical observation the effects of quinine on the blood of malarial patients (quartan type), who had not been treated with quinine. In the case of the early form of the parasite, when a drop of an isotonic (0.9 NaCl) and at same time isoviscous (2 per cent. gum) solution was passed under the cover slip, the red corpuscles at once became mobile, collided with one another, and became altered in shape. One corpuscle, which moved least, and therefore retained its shape best, was specially studied. The intracorpuscular parasite displayed active amœboid movements, throwing out pseudopodia, and becoming more slender. This lasted only for a few seconds, when the parasite assumed an elliptical shape, with its pigment granules arranged peripherally. This resting stage did not continue long, for movements soon became apparent, and could still be made out some hours later. If, however, instead of the aforesaid solution, a drop of a watery quinine solution (1 in 1,500) was added, contraction of the parasite occurred, accompanied by tremulous movements of the pseudopodia, with central arrangement of the pigment granules. At the end of a quarter of an hour the parasite recovered its shape and movements (pseudopodia), the pigment becoming arranged peripherally. In the slightly more developed phase, when about two-fifths of the red corpuscles are occupied by the parasite, quinine gave rise to the following phenomena: the parasite contracted,

drew in its pseudopodia, and became more or less spherical. The granules, situated chiefly at the periphery, took on active movements. Gradually the parasite became quite spherical, and all the pigment granules peripheral. Once more did the latter take on active movements; the parasite appeared more refractile, and gradually worked its way out of the corpuscle, to the margin of which it remained attached. This phenomenon is independent of the currents in the fluid, indeed it may occur in a direction contrary to these. When the currents were marked the red corpuscle was carried along with the parasite glued to it. Later the corpuscle lost its red colour, becoming ghost-like; and the parasite, now free and retaining its shape, exhibited active movements of its peripherally-placed granules. The decolorisation of the normal red corpuscles did not occur when a few drops of 0.9 per cent. salt solution were added to the quinine solution; but the parasite-containing corpuscles did. In isotonic and isoviscous salt solution, with or without quinine, the parasites in a late stage of development exhibited active movements, but never worked their way out of the corpuscles. Marchiafava and Celli (*Arch. per le Sci. Med.*, vol. x., p. 193) have noted, without laying much stress on the point, that after the exhibition of quinine most of the parasites were motionless, and a few were observed in the act of leaving the corpuscle. Lomonaco and Panichi conclude from further experiments that the diapedesis of the parasite depended on the latter's vitality, that it is an activity phenomenon. As the red blood corpuscle is necessary for the life of the parasite, the action of quinine can be very simply explained—namely, quinine, by driving the parasite out of its element, places it under conditions unfavourable and destructive to its development. A practical point as to treatment therefore follows. Quinine should not be given in the febrile stage of the disease, but during the non-febrile intervals, when the early forms of the parasite are present in the blood in greatest number.

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(324) Pilocarpin in the Treatment of Retinal Detachment.

MORANO (*Suppl. al Policinico*, An. v, N. 42) records two cases of detachment of the retina in which benefit accrued from the use of injections of nitrate of pilocarpin. In the first case the cause of the detachment was a high degree of myopia. The detachment took place in the upper internal quadrant of the retina. One centigramme of the nitrate was injected in a 2 per cent. solution, the eye bound up, and the patient kept in bed in a dark room. Six injections were given altogether on alternate days, when some episcleral injection and conjunctivitis came on, and it was deemed advisable to stop the pilocarpin. After twenty-six days considerable improvement was noted in the vision. The other case was due to rheumatic choroiditis, and after a month's treatment the detachment had completely disappeared, and ophthalmoscopically the appearance of the fundus was normal. The author does not claim curative effects for the pilocarpin treatment in every case, but seeing the usually bad prognosis of the disease, he believes pilocarpin injections hold out a better prospect of cure than any other form of medical treatment.

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(325) Aspirin.

WITTHAUER (*Die Heilkunde*, April, 1899) calls attention to the great advantages possessed by aspirin over other preparations of salicylic acid. It is formed by the action of acetic anhydride on salicylic acid, and has the formula $C_6H_4\begin{matrix}COOH\\OCOCH_3\end{matrix}$ and occurs as white crystalline needles. It is soluble in water at 98.6° F. to the extent of 1 per cent. Ferric chloride does not give the usual colour reaction with it. In dilute alkalies it is readily soluble, and splits up into its components—salicylic and acetic acid. In the stomach, therefore, it is practically unchanged, while in the intestine nascent salicylic acid is separated. Through this property it can be given without deranging the stomach, even to patients who have shown absolute intolerance to salicylate of sodium. Ringing in the ears is hardly ever observed with aspirin. It is best given in doses of 15 grs. mixed with 45 grs. of pounded sugar in a spoonful of water, and as much as 75 grs. can be taken in twenty-four hours. Its taste is much less unpleasant than salicylate of sodium. The clinical results in all diseases where salicylates are indicated are at least equal, and sometimes superior, to those obtained by salicylate of sodium. In gout its superiority is certain.—Wohlgemuth (*Therapeut. Monats.*, May, 1899) likewise prefers aspirin to salicylate of sodium owing to its not producing anorexia, gastric disturbances, or noises in the ears.

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(326) Has the Bladder any Power of Absorption?

BARBIANI (*Rif. Med.*, August 11th, 1899) has carried out a series of experiments on dogs and rabbits with relation to the above subject. On alternate days for an hour at a time he washed the bladder out with solutions of boric acid, phenol, sublimate, salicylic acid, antipyrin, quinine, cocaine, atropine, strychnine and iodide of potassium. After the first washing no absorption could be detected except in the case of iodide of potassium (very slight). In subsequent washings absorption took place, and the greater the number of washings the more marked the absorption. This absorption occurred without any alteration in the minute structure of the vesicle epithelium (except in the case of the phenol and sublimate solutions where slight changes in the superficial layer of the epithelium were noticed). The absorptive power was not increased by keeping a catheter in permanence in the bladder.

PATHOLOGY.

(327) Micro-organisms of the Mouth of the Newborn.

GIUSEPPE CAMPO (*Pediatria*, Naples, vii., 229, August, 1899) has carried out a series of researches on the micro-organisms of the mouth of the newborn in order to ascertain (1) if the mouth at the moment of birth is free from germs; (2) the development of germs along with the establishment of the primary functions of life; and (3) the isolation of them and their pathogenic action. Reference is made to the work of Vignal, Biondi, Sanarelli, Freund, and Kreibohm, and the methods used are described. The contents of the mouth were taken at the moment of birth (the head of the infant being still on the perineum), four hours later when respiration had been going on, and twenty-four hours later when lactation had been commenced. Ten infants were examined at these three times, and twenty-one others were examined at one or other of the times named. Campo concludes that the mouth is sterile at the time of birth, for out of twenty-one cases in which the buccal contents were examined at the moment of birth, in six no germs were found; the fifteen cases in which organisms were found do not in his opinion invalidate the conclusion, for in some of these the contents were collected by the midwife in attendance, and in others it may be that germs gained entrance from the maternal vagina during labour. The effect of respiration was that the mouth immediately lost its asepticity, and sixteen observations made about four hours after birth demonstrated that the ordinary bacteria of the air find in the mouth a suitable soil, and multiply with great rapidity; they were the bacillus mesentericus vulgatus, the bacterium termo, and the bacillus ulna. The first effect of lactation was found to be a diminution in the number of germs, possibly due to the mother's milk washing them downwards into the gastro-intestinal tract; but its second effect seemed to be to increase the number of the kinds of germs met with. This effect Campo thinks is the result not of new varieties being introduced in the milk, for the milk direct from the breast is sterile, but of a power conferred by the milk upon the buccal contents of growing new kinds of germs. The organisms found were in order of frequency; the bacillus mesentericus vulgatus, the bacterium termo, the bacillus ulna, subtilis, leptothrix, and lineola (?), and three non-identified germs, to which the names of bacillus *x*, and coccus *y* and *z*, have been given. It was further discovered that none of these micro-organisms had any pathogenic properties, for intra-peritoneal injections of cultures of them into guinea-pigs did not produce any phenomena indicating virulence, save a slight diminution of the body weight. The characters of the non-identified germs and their cultures are fully described; bacillus *x* and coccus *z* caused passing loss in weight.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

[(328) Hydrops Hypostrophos.
H. Schlesinger, of Vienna (*Münch. med. Woch*, August 29th, 1899), in discussing acute angioneurotic œdema, objects to the term "acute circumscribed œdema of the skin" employed by Quincke. The skin is not the only part of the body affected (in some cases), and owing to the striking tendency to recurrence of this very variable disorder he has introduced the term "hydrops hypostrophos." The affection is not one of inflammatory nature, but is not always painless. Generally there is no association with organic disease of the kidneys, or with disease of the heart and large vessels, or with any permanent structural change of the parts affected. The skin over the œdematous area is mostly pale, seldom (as a result of extravasation) bluish-red or reddish. Different parts of the body may be simultaneously affected. Recurrence is often noticed with a certain regularity of intervals. In the case of women the attacks may bear a distinct relation to the menstrual periods and pregnancy. The affection not rarely follows an unimportant psychical or bodily injury, but occurs also without them, especially in neurotic individuals. It often suddenly vanishes, to reappear after a longer or shorter interval, even after years. In advanced age the affection seems to be rarer. It occasionally occurs in different members of the same family, and in such cases the part affected need not be the same. Occasionally, owing to recurrent œdema, an affected part may come to present a slight structural change in the free intervals. In regard to treatment there are no distinct rules to be laid down. Schlesinger considers that some cases of intermittent effusion into joints are really instances of "hydrops hypostrophos articulorum." Fuchs has already pointed out the connection of acute recurrent œdema of the eyelids with the present affection, as described by Quincke. Fuchs says the swollen eyelids are generally paler, seldom redder than the rest of the skin, and the œdema appears suddenly, and disappears just as quickly, usually after a few hours, but occasionally only after one or two days; with the attacks there may often be a slight feverish tendency or feeling of being unwell. Lipschitz had a case in which periodical œdema of the eyelid occurred for months and in which the attacks were afterwards associated with "pseudo-croup" (acute swelling of the larynx) and once with acute œdematous swellings on the trunk. Maude says that the temporary attacks of œdema in Graves's disease occur especially on the eyelids and face. Fuchs has suggested that the rare cases of acute recurrent exophthalmos are due to retrobulbar œdema. Schlesinger thinks that "nervous coryza" in some cases is likewise a form of hydrops hypostrophos. In these cases acute swelling of the nasal mucous membrane occurs suddenly after some peculiar (often psychical) stimulus; the nasal passages are closed; a serous material is copiously secreted for some minutes or hours, and then this peculiar secretion ceases suddenly without becoming purulent; recurrence is often periodical; the attacks not rarely occur solely or are more marked at the menstrual periods; occasionally they occur in association with acute swellings in other parts of the body. Amongst his examples of family tendency to hydrops hypostrophos Schlesinger has noted the case of a girl, about 20 years old, who had attacks of œdema of the hands which occurred at the same time of day and lasted about an hour. This went on for weeks, but occasionally instead of the œdema of the hands there was an attack of nervous coryza with much sneezing. Later on swellings of the skin and nervous coryza occurred simultaneously. In the same group of hydrops hypostrophos Schlesinger would class certain cases of acute œdematous swelling which, without any previous local disease, may affect the pharynx, tonsils, larynx, or tongue. Such cases have been described as angioneurotic or acute recurrent œdema of the pharynx or larynx. In a case of Cuntz the lips were enormously swollen, in Bachmann's case the gums were affected; the soft palate or uvula may be attacked; in Landgraf's case the swelling involved only one half of the tongue. Œdema of the glottis may occur alone. The diagnosis should not be made too hastily, but the absence of renal trouble or previous local disease, the recurrence of the symptoms, and the presence of temporary local œdema or vasomotor disturbance in other parts of the body, are strong points. Some cases of nervous asthma may belong to the same class. Schlesinger suggests the possibility that some cases of intermittent vomiting and nervous diarrhœa may be examples of "hydrops hypostrophos gastro-intestinalis." Attacks of nervous diarrhœa may occur, without any dietetic error, from mental excitement, may resist styptic remedies, may recur periodically at certain hours, and may cease from psychical causes. One of Schlesinger's patients was affected simultaneously with an acute œdematous swelling and with an attack of nervous diarrhœa, which, like the visible affection, manifested a particular tendency to recur. In Millard's case an acute œdema got better suddenly on the onset of severe diarrhœa. Albert says he has noticed a tendency to acute swelling of "ganglia" on the tendon sheaths in women during menstrual periods, but Schlesinger narrates a case which suggests the existence of a true "hydrops hypostrophos tendo-vaginarum." Schlesinger further discusses the possibility of similar attacks affecting the kidneys, the parotid gland, etc. Headache, vertigo, a feeling of fatigue and feverishness may accompany attacks resembling hydrops hypostrophos. This affection may likewise in some way be related to urticaria.

(329) Typhoid Fever and Heart Disease. Mossé (*Thèse de Lyon*, 1899) draws attention to typhoid fever as occurring in the subjects of cardiac lesions, a point which does not seem to be sufficiently dealt with, though of great practical importance. Notwithstanding what one might suppose *a priori*, it does not appear that the prognosis is necessarily rendered much graver by the existence of cardiac lesion in subjects with typhoid fever. Nor, on the other hand, has the writer found that there was any recrudescence of endocarditis. In 15 cases under his own observation there was only 1 death, and that was due to the cardiac complication. In these cases he recommends the employment of the cold bath treatment, together with the administration of caffeine and quinine.

SURGERY.

(330) Splenectomy for Primary Hypertrophy. Janz (*Beiträge zur klin. Chirurg.*, vol. xxiii, Pt. 2, 1899) believes, like Spanton and Greig Smith, that operations on leucocythæmic spleens are unjustifiable. It is otherwise with pseudo-leukæmic spleen (idiopathic hypertrophy, anæmia splenica, primary splenomegaly, or simple hypertrophy). Janz gives past results of splenectomy for this disease as 33 with 19 deaths according to Ceci (1894), 19 with 11 deaths according to Orecchia (1894), 1 successful, reported by Lennander in 1895, and lastly the case which he relates which lived for over two months after splenectomy. In this last case the operator was Kümmell of Hamburg. The patient was a sickly woman aged 58. She suffered, when applying for hospital relief, from sharp pains in the left lumbar and hypochondriac region of several months' duration. She was emaciated; a swelling of the size of a child's head was detected in the left side of the abdomen; it was clearly splenic. The temperature was 103°; there were no enlarged lymphatic glands to be found, and the increase of colourless corpuscles was but trifling; those detected were all polynuclear. Hæmoglobin was diminished. Medical treatment proving useless, Kümmell operated, making a Langenbuch's incision on the left side, over 5 inches long, and then from the middle of the first incision he made a second backwards, nearly 6 inches long. The spleen was then drawn out with ease and without avoidable dragging. A few adhesions required separation; the vessels of the hilum were then tied, and lastly, a few glands as large as beans removed from the neighbourhood of the splenic vessels. The abdominal wound was sutured in layers. Very little blood was lost, and the pulse remained good all through and after the operation. The spleen measured $8\frac{1}{2}$ by $5\frac{1}{2}$ by $2\frac{3}{4}$ inches, and was simply hyperplastic.

The temperature fell to subnormal a few hours later; the patient was then much benefited by an intravenous injection of salt solution. For about six weeks she felt distinctly better, the appetite improved, and the proportion of hæmoglobin in the blood distinctly increased. The abdominal wound healed well. Then the inguinal glands enlarged, the strength began to fail, œdema began in the feet, and soon became general; even the tongue swelled considerably. The patient died delirious on the sixty-sixth day after operation. There was general enlargement of the lymphatics, the condition now distinguished as pseudo-leukæmia glandularis being present. The yellow marrow had almost replaced the red in one femur, which was removed for examination.

(331) Abdominal Section for Peritonitis due to Lumbricus.

Katsurada (*Sei-i-Kwai Med. Journ.*, April 30th, 1899) reports 3 cases of the emigration of an ascaris lumbricoides from the gastro-intestinal canal. The first patient was an old man, who died with hepatic abscess unoperated upon; a round worm had passed into the bile duct and caused suppuration. The second patient was a girl, aged 14, with purulent peritonitis. Tuberculous disease was suspected, but no tubercle bacilli were found. Abdominal section was performed; no perforation was detected, and a great quantity of purulent fluid removed. The patient died on the second day. Between the spleen and the under surface of the diaphragm was a large round worm enclosed in an irregular cavity partly filled with dirty green pus and partly traversed by newly-formed fibrinous tissue. No trace of any perforation of the stomach or intestines could be detected, but there were three round worms in the gastro-intestinal canal. There was no hepatic abscess nor dilatation or obstruction of the ducts. In a third almost exactly similar case no operation was done. The patient was 42, and died of peritonitis, apparently due to a pelvic tumour of several years' growth. The peritoneum was found full of purulent fluid and fœtid gas. A round worm lay in a purulent collection between the liver and the diaphragm. There was general dissemination of tubercle, and five round worms lay in the small intestine. No perforation of the intestinal wall could be traced. The peritonitis set up by a lumbricus, or at least associated with the presence of that parasite in the peritoneal cavity, is clearly very severe, and in both cases the worm was out of reach of the operator's eyes and hands.

(332) Imperforate Anus.

Delanglade (*Gaz. des Hôpitaux*, June 13th, 1899) strongly condems the use of the trocar for an infant with imperforate anus. He describes a case where a surgeon used that instrument after waiting till the fourth day, when the abdomen was distended and the infant vomited, refusing the breast. A great quantity of meconium escaped and the child took the breast. Next day, however, nothing passed by the anus and this condition was allowed to go on for three weeks. The child was practically moribund, vomiting fæcal matter incessantly. There was also a large right ischio-rectal abscess discharging by the anus. Delanglade, on account of the suppuration below, did an inguinal colotomy, meaning to operate by the anal way when the neighbouring parts were healthy. On making the incision a mass of distended coils of intestine bulged out and gave great trouble; they were covered with grey inflammatory deposit. Reduction was impossible, so about three-quarters of an inch of large intestine was incised. Then gas and fæces escaped in great quantities. The edges of the incision in the gut were now secured to the parietes as in ordinary colotomy. Delanglade did not feel quite sure that it was the sigmoid flexure that was drawn down and opened. The infant remained in a state of shock for several hours, but next day it was much better; all vomiting ceased and it suckled well. The ischio-rectal abscess was opened. On the sixth day the ligatures of the colotomy wound were removed; the abscess had healed. Unfortunately the infant died two months later, apparently from bronchitis. Delanglade notes that this case shows that no time should be lost when this condition is detected, and that the trocar is an antiquated abomination which often misses the blind end of the large intestine and never at the best establishes a free passage at the lower end of the alimentary canal. That part of the intestine must be reached by a perineal incision and opened, its cut edges being sutured to the anal ring after the meconium has escaped. The success attending colotomy in this case when acute peritonitis was already present shows that an infant will tolerate abdominal operations under desperate circumstances.

(333) Cataract Extraction in the Dog.

Haltenhoff (*Soc. Méd. de Genève; Ann. d'Oculist.*, February, 1899) has operated on a dog, 10 years old, with senile cataract. He recommends ether anæsthesia in preference to chloroform, and the animal must be fully under its influence. In this case 150 c.c. of ether were used before obtaining abolition of the reflexes. The relative volume of the lens to the eye is as 1 to 10.2 in the dog, whereas in man it is only as 1 to 24; hence, although the cornea is larger proportionately than in man, there is greater difficulty in extracting the lens. The smallness of the palpebral opening is also a hindrance in manipulating the instruments. Haltenhoff made a superior corneal flap and removed a piece of iris, with much bleeding into the anterior chamber, but the lens would not yield to ordinary pressure on the cornea. The wound was enlarged with scissors, and finally a curette passed behind the lens brought it away. Some vitreous, very dense, appeared in the wound. The lids were sutured and bandage applied and protected by a prolongation from the wire muzzle. The cornea became very hazy; nine days later the vitreous between the lips of the wound was excised under cocaine.

(334) Infectious Phlebitis and Heredity.

Roussel (*Loire Méd.*, July 15th, 1899) puts on record the following 3 cases, with the suggestion that they show a family and hereditary predisposition to infectious phlebitis: The first was that of a woman, 51 years of age, who in her seventh confinement had phlebitis of the left leg, which kept her three months in bed; the same occurrence marked the eighth confinement, and since then she had, as the consequence of a fall, developed phlebitis of the right leg. The second case was that of a daughter of the first patient, who in her second labour gave birth to a dead child and suffered from puerperal septicæmia, pulmonary and renal infarcts, and phlebitis of the left leg; she recovered. The third case was another daughter of the first patient, the offspring of one of the confinements that had been complicated by phlebitis; on the seventeenth day of an attack of typhoid fever (following scarlet fever) she also developed phlebitis of the left leg; she, too, recovered.

MIDWIFERY AND DISEASES OF WOMEN.

(335) Vaginal Hysterectomy: Fatal Appendicitis.

Doléris (*La Gynéc.*, August, 1899) performed vaginal hysterectomy on a sickly woman, aged 50, who had been twice pregnant many years previously. For a year, the period still continuing, almost constant uterine hæmorrhage had been observed, followed by ill-localised hypogastric pains, sometimes colicky in nature. The real significance of these pains was overlooked; there was cachexia and purulent discharge, which in part arose from the contracted and inflamed vagina; the uterus was bulky, and on scraping tissue, apparently malignant, was removed. The appendages did not seem diseased, and were, in fact, found healthy at the operation. For Doléris removed the uterus, not without difficulty, as it contained myomata, and *morcellement* was needed. These interstitial growths were probably the cause of the discharge. The endometrium was greyish, degenerate in parts, but there was no evidence of cancer. The patient did badly from the second day; the temperature never fell to normal, the pulse was very rapid, and vomiting followed any attempts to feed by the mouth. Death occurred at the end of the sixth day. At the necropsy the small intestines on the right side of the abdomen were found glued together by soft purulent exudation. The vermiform appendix was detected in the midst of an abscess cavity, bounded by the adherent intestine. That appendage was ulcerated; a perforation lay near its extremity. The

intestinal disease was probably old; it seemed to be independent of the pelvic disorder.

(336) Interstitial Gestation: Fatal Rupture.

Charles Smith of Des Moines (New York *Med. Rec.*, September 9th, 1899) was called up at midnight to see a patient in a state of collapse. She was 24 years old, and married one year. Menstruation had been regular until the past two months, since which time she had seen no show, nor had there been any discharge of any kind from the vagina. On the previous night the patient went to a ball, danced all night and ate a hearty supper. Next day she worked hard washing, baking and scrubbing, and then walked nearly a mile, when she was taken with abdominal pain and became faint. This soon passed away, and she walked home. Several stools were passed in the evening; defæcation was painful. The abdomen was tympanitic and tender, pains as in threatened abortion occurred. The uterus was about double the normal size, with a soft, flabby cervix, the cervix not dilated. The pains were suspected by Smith to be due to indigestion. Shortly after he left the patient went to the closet, screamed, and became faint; other attacks followed; at length attended with convulsions, after which she became more conscious and died. The peritoneum contained three quarts of blood, mostly fluid. The uterus was extensively lacerated posteriorly, and just to the right of the median line. The tubes, ovaries, and ligaments were perfectly normal, except that the right tube and ovary were drawn a little higher by the greater development of the uterus on that side. A ruptured amniotic sac was found containing chorionic villi, which had no connection with the uterine cavity where, on the other hand, a decidua was found. The cervix contained a mucous plug. The tissue around the rent in the interstitial sac showed advanced fatty degeneration.

(337) Intrauterine Taken for Extrauterine Pregnancy.

Damas and Armand (*L'Obstét.*, July 15th, 1899) relate the case of a woman, aged 38, who had passed through three normal pregnancies. Five years after the third the period ceased and she felt that she was pregnant, but not as in previous pregnancies. There was much pain with lassitude and emaciation. Damas and Armand examined her in the fourth month, when she was larger at that stage than in her three earlier pregnancies. The bladder seemed to rise just above the pubis. A tumour, smooth and apparently cystic, reached to the umbilicus and was much deflected to the right. Extrauterine pregnancy was suspected and an exploratory operation performed. The tumour consisted of a hydramniotic uterus mounted on a very much elongated cervix from which it was separated by a deep groove. Hence it seems as though pedunculated. The bladder rose high above the pubes, it was thick-walled from disease and its fundus had been mistaken for the fundus of an empty uterus, with a normal and but slightly distended bladder below it. The abdominal wound was closed, and pregnancy went on to term, labour was normal. Budin believes that the cervix had previously undergone hypertrophic elongation.

(338) Uterus Didelphys: Pregnancy.

Lorenz (*Centralbl. f. Gynäk.*, No. 35, 1899) reports a case under his observation before the patient became gravid. She was 28 when she consulted him for profuse hæmorrhage from the socket of a tooth; then she became anæmic, and desired him to examine her, as she was sterile, though married several years. He discovered a double vagina with a deficiency in the septum near the cervices: for there were two distinctly separate cervices, each about as big as a normal multiparous cervix. The sound entered the right for a little under 2 inches and the left for a little over 2 inches. The walls of the uteri seemed rather soft. The ovaries could be detected; the uteri sloped obliquely downwards towards each other, and were quite unconnected. Menstruation was regular and painless, and it appears that both vaginæ served for coitus. Some time afterwards the patient became pregnant for the first time. Lorenz, when examining her in the twenty-eighth week, noted that the left uterus was pregnant and of the normal size at that stage; it was strongly deflected to the left. The right uterus was as large as a fist. The patient was delivered at term of a well-developed healthy female child, which was reared. Involution of the two uteri was normal. The mother suckled her child; still, hæmorrhage resembling menstruation occurred on the eighth week after labour. Lorenz examined and found that the blood came from the right or multiparous uterus.

THERAPEUTICS.

(339) Treatment of Tokelau Ringworm.

Tribondeau (*Arch. de Méd. Navale et Coloniale*, July, 1899, No. 7, p. 5) contributes a paper on tokelau as it occurs in the French possessions of the Eastern Pacific. The disease was imported into Tahiti in 1871 by natives of the Gilbert Islands "recruited" (the antipodean way of putting is perhaps more honest, namely, "black-birded") to work on the Atimdono plantation. In 1872, 125 of the 400 immigrants suffered from tokelau. The disease soon spread to the Tahitians. All kinds of remedies were tried, but without avail. In 1889, however, a native Tahitian, Ariié, went to the Paris Exhibition, and as he suffered from the complaint, took the opportunity of getting advice upon it, and attended one of the hospitals. Various things were ordered, but made little or no impression, until a chrysophanic acid ointment was tried, which effectually cured the disease. Ariié, on his return, communicated the prescription to a Papeete (capital of Tahiti) chemist. The ointment very rapidly stopped the spread of the disease. Tribondeau thinks there are not now more than about fifty tokelau sufferers. The author recommends the following treatment: (1) A hot bath, with soft soap; (2) A good rubbing down of affected parts with pumice stone; (3) If only a few lesions, tinct. iodi painted on, and repeated for a few days. If many lesions and large areas are involved, an ointment containing chrysophanic acid, in the proportion of 2 to 30 of lard, applied at bedtime, and repeated for several days. The same ointment can be applied to the scalp, after soaping, and removal of scales with small comb; in men, the hair should be cut close. For the face, chrysophanic acid in traumatism is more suitable than the ointment, on account of dry erythema and conjunctivitis, thus: Chrysophanic acid, gutta-percha aa 10 grams, chloroform, 80 grams (roughly 10 per cent.); the application to be painted on. It is also useful for hands and feet. The paper contains many interesting clinical, microscopical, etc., details, and is illustrated by several figures.—Bernal (*loc. supra cit.*, August, 1899, No. 8, p. 134) in some notes on the New Hebrides also refers to tokelau, which is very prevalent there. He considers tinct. iodi, Helmerich's ointment, etc., do not cure the disease. Bernal does not appear to know of chrysophanic acid, which Tribondeau looks upon as practically a specific.

(340) Peronin, a New Local Anæsthetic for the Eye.

Quaita (*Settimana Med.*, October 7th, 1899) has tried the effect of 5 per cent. solution of peronin (chlorhydrate of benzolic ether of morphine) as a local anæsthetic in the eyes of thirty healthy adults. At first it causes a pretty severe burning sensation, which, however, soon passes off, and is followed in three or four minutes by well-marked anæsthesia, lasting for nine or ten minutes. Peronin has no action on the diameter or mobility of the pupil, nor on the accommodation, visual acuity, or eye tension. The corneal epithelium was never affected nor infiltrated, as may happen after cocaine. The great disadvantage of peronin as an ophthalmic anæsthetic is that it causes rather intense vascular injection with lachrymatous and serous chemosis. The author suggests that it may be more useful than cocaine in enucleation or evisceration of the globe, as it produces a deeper anæsthesia, and the increased vascularity does not matter in this case.

(341) Arsenic as a Preventive against Thyroidism.

M. L. Mabille (*Les Nouveaux Remèdes*, No. 9, 1899) has made a number of clinical observations which seem to demonstrate the value of arsenic for the above purpose. He recounts the use of arsenic to counteract the tachycardia following overdoses of the preparations of thyroid gland. Oxygenation of the blood and oxidation of tissues, which are so greatly increased by the administration of thyroid extract, or of iodothyrin, are considerably diminished by arsenic.

Animals treated with iodothyrin, with consequent acceleration of pulse, show a decided diminution of the pulse-rate after administration of arsenic in the form of Fowler's solution. In animals not so treated with the arsenic there were present tachycardia, trembling and general bodily excitement, anorexia and loss of bodily weight, all of which could be counteracted by arsenic. The following case is also mentioned: A goitrous patient who was undergoing treatment began with 2 grains of the thyroid gland taken internally, and this was gradually increased till (on and after the tenth day) she was taking 10½ grains of the substance. At this time intolerance of the drug was developed. She suffered from violent palpitation, rapid pulse, trembling and vague feelings of distress, whereupon she was put upon Fowler's solution. Beginning with 2 minims of the solution per dose, this was increased to 12 minims, and the administration of the thyroid substance which had been temporarily withheld was now resumed. She now continued to take thyroid to the extent of 12 grains per diem, and without any of the disagreeable results before experienced. The symptoms of thyroidism disappeared, and her further treatment was not attended with loss of weight or emaciation.

(342) Mercuriol in Syphilis.

AHMAN (*Arch. f. Derm. und Syph.* vol. xlviii, April, 1899) reports on the treatment of 30 patients with mercuriol, a new preparation of mercury. Mercuriol is a preparation in which the mercury is reduced to very fine particles, and is free from the objection of aggregating into large masses, which applies to other forms of mercury used for external medication. The method is based on the fact that mercury easily amalgamates with aluminium or magnesium, from which it can be separated by the addition of water, forming a hydrate. Mercuriol contains from 40 to 80 per cent. of metallic mercury in fine amorphous particles. When exposed to warmth, air and humidity, the aluminium and magnesium are oxidised, and mercury set free. The mercury in mercuriol is easily set free. The results of treatment by mercuriol are said to be satisfactory. Mercury was found in the urine in all the 30 cases. The method used was that of Welander, where the drug is put in a woollen bag worn next the skin. The mercury is said to be vaporised and inhaled by the lungs. Five grams of mercuriol were used daily for the first 5 or 10 days: afterwards every second day. The duration of treatment varied from 30 to 40 days. The author thinks this method better and more cleanly than inunction.

(343) Extractum Radicis Tang-kui as an Emmenagogue.

A. MUELLER (*Münch. med. Woch.*, June 13th, 1899) states that this drug, under various names, has been popular in China in amenorrhœa and dysmenorrhœa for 4,500 years. Merck of Darmstadt has now introduced it to commerce under the name of "eumenol." The author has employed it in several cases, and finds that it acted well in all uterine affections of inflammatory origin, and hastened the onset of the period if overdue. Where the menstrual discharge was scanty and watery, it became darker and more profuse, and when altogether absent it generally reappeared. It relieves the pains of dysmenorrhœa, especially those occurring before the onset of the period. In only two of his patients did it fail completely, one of whom had climacteric troubles, the other parametritis. Though all his cases were simultaneously treated by other means when necessary, such as hydrotherapeutics, massage, and iron, the author believes the eumenol to have been a distinct element in the improvement, and considers it to be a good tonic which has a special action on menstruation. It is not poisonous, and is not an abortifacient. The usual dose is a teaspoonful of the extract three times a day; larger doses may cause headache.

(344) The Galvano-cautery in Acne.

BLOEBAUM (*Deut. med. Zeit.*, No. 52, 1898) advises the galvano-cautery in cases of acne. Infiltration anæsthesia is produced, and a cautery needle, similar to that employed in epilation, is introduced to a depth of about 2 mm.

PATHOLOGY.

(345) Bernhardt's Neuritic Spinal Muscular Atrophy.

E. SIEMERLING (*Arch. f. Psych.*, 1899, p. 105) contributes a complete history with report of the pathological changes in a case of this interesting and rare form of muscular atrophy. The case is that of a young man, aged 20, without any neurotic family history. During infancy he seemed to develop normally until the age of 5, when the small muscles of the lower extremities began to show signs of atrophy, and two years later the hands began to suffer from similar changes also. The atrophy progressed slowly and at the age of 13 the patient was quite unable to walk. Shortly after he developed hypochondriasis. Recent examination showed the patient to be a young man of fair intelligence and suffering from extreme atrophy of the muscles of all four extremities. The pupils reacted sluggishly to light, but the fundus as examined by the ophthalmoscope showed no changes. There was complete paralysis of the lower limbs and a less degree of paralysis in the upper. There was some permanent contracture at the right knee. No talipes could be observed. The knee-jerks were absent. There was loss of muscular contractility for both galvanic and faradic currents. Mentally the patient suffered from depression of spirits and hypochondriacal delusions. He died in a state of collapse. The necropsy and the microscopical examination of the nervous system revealed the following conditions: (*a*) There was degeneration of the posterior and lateral columns, especially in the thoracic and lumbar region. (*b*) The posterior roots appeared normal in their extraspinal part and to some slight extent within the spinal cord substance. There were, however, scattered degenerations of the intra-spinal sensory fibres distributed to the posterior cornu and to Clarke's column. (*c*) The nerve cells in the latter area and in the anterior cornua were degenerated and atrophied, and this atrophy could also be traced in the anterior roots of the spinal cord. (*d*) As regards distribution of degenerations, the posterior columns were most affected in the lower thoracic region, and in the columns of Burdach—postero-external column—the degeneration grew steadily less in passing towards the upper cervical region. (*e*) The central part of Goll's column showed degeneration in the cervical and upper thoracic regions. (*f*) The antero-lateral columns—of Gowers and Löwenthal—and the posterior parts of the lateral columns were degenerated in the lumbar and lower thoracic regions, diminishing thence gradually upwards. (*g*) The nerve cells of the cerebral region seemed to show no degenerations. (*h*) Various peripheral nerves—great sciatic, crural, saphenous, peroneal, brachial, radial, median, and ulnar—were examined and found to exhibit marked degeneration. (*i*) Finally, the muscles of the lower extremities were examined and found to be in a state of atrophy and fatty degeneration, the gastrocnemius muscle showing advanced fatty change. After a critical digest of the various theories propounded, and a careful review of the know facts of the present case, Siemerling concludes that the disease is of intraspinal origin, and that the spinal nerves are affected primarily within the cord. A peripheral origin of the degenerative changes is, however, not excluded.

(346) Penetration of Bacteria into Eggs.

BUCCO (*Rif. Med.*, October 3rd, 4th, 5th, and 6th, 1899), as the result of a series of experiments on this point, finds that many pathogenic bacteria, for example, staphylococcus pyogenes, Loeffler's bacillus, etc., penetrate within the egg boiled at 100°, and are arrested either at the albumen, or even in some cases (proteus vulg., b. indicus, b. diphth.), reaches as far as the yolk. Eggs cooked at 134° resist much longer. It was also found that many bacteria are able to penetrate the raw egg. The B. subtilis was not able to enter either the raw or cooked egg. The B. diphth., although able to enter the egg cooked at 100°, cannot penetrate the raw egg. The typhoid bacillus was able to enter the egg in twelve hours, and kept its vitality for four or five days. Seeing the kind of material and the places in which eggs are stored, these researches showing that eggs offer no insuperable barrier to the entrance of microbes have some importance from the sanitary point of view, and form an additional argument for greater cleanliness in the storage of these valuable articles of diet.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(347) Roentgen Rays in the Diagnosis of Diseases of the Heart and Aorta.

SCHUSTER (*Therap. Monats.*, August, 1899) has employed the *x* rays extensively in his practice at Nauheim, in addition to the usual methods of percussion, auscultation, and palpation. Various inferences may be drawn from the character of the shadow produced by the heart; and also from the relationship between the latter and shadows due to other causes (vertebral column, sternum, diaphragm, ribs). For instance, it is demonstrable that the heart does not rest on the diaphragm, but that it is exclusively supported by the large blood vessels. Under normal conditions a free space exists between the heart and diaphragm during inspiration. Benedict, who was the first to call attention to this fact, observed further that when the heart became enlarged this interspace was obliterated, and that when adhesions existed between the diaphragm and pericardium, the former could not move independently of the heart. It is important sometimes to ascertain exactly the position of the heart; for instance, in cases of transposition of the viscera, and displacements of the heart caused by fluid or growths. It is also useful sometimes to know whether the enlargement of the heart has occurred in the horizontal or vertical direction. The extent of the shadow gives the proportionate size of the heart, but it does not always give the exact cardiac dimensions; "the heart is not as large as its shadow;" it was found that the further the plate was removed from the tubes the more nearly did the shadow coincide with the actual size of the heart. It is only by comparing, with the help of certain fixed points, the relationship between the various shadows caused by the heart and the structures in the immediate neighbourhood that the real size of the heart can be ascertained. The author goes on to describe some of these fixed points: the nipple, for instance, can be made prominent by attaching a penny to the skin. The spinal column and sternum give the most prominent shadows. Normally the right side of the heart extends one-third from mid-sternum, whereas the left side extends two-thirds from the same point. The increase in size of the heart cannot be measured in centimetres, but it can be readily seen in the photograph. Several photographs are given illustrating the points mentioned above. In emphysema the determination of the size of the heart by the *x* rays is of great diagnostic value. The cardiac movements can be observed: it is often possible by this means to ascertain the strength of the cardiac muscle. In addition to the knowledge we gain concerning the position, size, and movement of the heart, the rays can also detect abnormalities of the large blood vessels, such as persistence of the ductus arteriosus, sclerotic changes in the coronary arteries. The diagnosis of commencing aneurysmal dilatation has been facilitated by the employment of Roentgen rays. The author says it is possible to estimate the seat and size of the dilatation. Slight dilatations occurring in the arch of the aorta are not uncommon. They are often seen in cases of aortic insufficiency. In this condition the heart's action is increased, the blood is propelled with increased force into the aorta, and this, combined with the loss of elasticity in the wall of the artery, causes local weakness and bulging. The pulsations of the aorta are much more marked in these cases than in true aneurysms.

(348) Hereditary Cerebellar Ataxy.

G. ROSSOLINO presented an account, with clinical demonstration, of 3 cases of this malady, at the Society of Neuropathology and Psychiatry of Moscow (*Arch. de Neurol.*, March, 1899). The patients were two brothers and a sister, children of an alcoholic father. No other example of ataxy or strabismus was found in the family. The children were (apart from the malady above mentioned) otherwise well. (*a*) Olga, girl, aged 29, born at full term; was slow in growth and of mediocre intelligence, and not very ready in her movement. At 22, she received a severe injury in the right knee, after which there developed weakness in this leg, and uncertain and somewhat swaying gait. Later there was trembling and awkwardness of the arms, and after some months diplopia. The handwriting is irregular and tremulous; she cannot balance herself or walk. There is a marked muscular development of the lower limbs, a feeling of lassitude in the legs, with excess of patellar reflex. There is paresis of the right superior oblique muscles. (*b*) Michel, boy, aged 25. Metastatic since the age of 14. Was ill with a febrile affection lasting two months at the age of 18, after which his gait became uncertain. Later there was awkwardness of the arm movements. At 19 an external strabismus, which had before that existed only to a slight degree, became pronounced, accompanied at the same time by diplopia. Intelligence always mediocre. There is paresis of the right internal rectus in both eyes; handwriting slightly ataxic. Feet arched; balancing and walk impossible; much reeling. Considerable development of muscles of leg, with weakness and lassitude, and excess of knee-jerks and slight foot clonus. He also suffers from migraine. (*c*) The third case presents phenomena like the second, and in addition the lower facial muscles are subject to choreiform clonic spasms of short duration. The hypertrophy of the leg muscles includes here also the buttock muscles. He suffers also from migraine and squint (paralysis of right internal rectus). Rossolino calls attention to the ocular muscles being affected on the right side in all three cases; to the true (and not pseudo) hypertrophy of the muscle (hyper-function), probably compensatory towards maintaining equilibrium. In the discussion which followed, Kojewnikow recalled the observation of Pelizaeus on disseminated sclerosis of families, which seemed to belong to the same category as regards heredity as these cases. He looked upon the disease as an arrest of development starting from the cerebellum to the spinal cord or to the motor region, and still of obscure nature.

(349) Paralyses in Whooping-Cough.

P. HORVENO (*Thèse de Paris*, 1899) records the results of a careful inquiry into this condition. Paralyses in whooping-cough are rare; they affect especially children below the age of 5 years, and show themselves only in serious cases. They may be divided into three classes: (1) paralyses of cerebral origin, which are the most frequent, occurring in 37 out of 46 cases of paralysis. These may assume the form of coma or of apoplexy (Cazin), or be of the simple hemiplegic type (Rilliet and Barthez, Henoch), or may be complicated with Jacksonian epilepsy (J. Simon), or with facial paralysis (Neurath), or with athetosis (West, Rolleston). A cerebral paralysis from neoplasm is rare, and alternate hemiplegia has been observed occasionally (Jake, Leroux). Certain patients may suffer from aphasia in its various forms, for example, the simple inability to give utterance to words (aphemia of Bastian), or there may be verbal blindness, or aphasia and hemiplegia combined (West, Guthrie). Finally, in some cases the organs of special sense are affected, and hemianopsia or even blindness are met with. (2) Paralysis of bulbar origin: The form assumed by these may be very variable. Sometimes there is a simple paraplegia, sometimes the clinical picture is such as to resemble that of Friedreich's disease or of disseminated sclerosis. (3) Paralyses of peripheral origin: A few such cases are known, for example, a case recorded by Surnay as suffering from pseudo-tabes, and one recorded by Möbius as generalised polyneuritis. The pathogenesis of paralytic "accidents" in whooping-cough may be traced to two general sets of causes, that is, infection on the one hand and effort on the other.

SURGERY.

(350) Intracapsular Nephrectomy for Pyelonephrosis.

CARLIER (*Gaz. Hebdom. de Méd. et de Chir.*, April 6th, 1899) operated on a man who had suffered from several attacks of gonorrhœa, followed by the appearance of pus in his urine. Stricture was then suspected, and the left kidney was found enlarged and tender. Nephrotomy was performed and about a pint of pus escaped; then an internal urethrotomy was practised. These measures gave temporary benefit; but a renal fistula remained, causing much inconvenience; an attempt to resect it failed. The patient

returned to work as a waggoner, but at the end of a year and a half he began to emaciate. Carlier found an hour-glass-shaped abscess occupying the left iliac fossa and left side of the scrotum. The pus had no doubt developed in the fatty capsule of the kidney, then had passed into the iliac fossa and thence into the inguinal canal. The right kidney was found by the methylene-blue test to be functioning. The abscess was opened and nephrectomy performed. The kidney was detected quite small, yet surrounded by an enormously thickened capsule made up of tough tissues which grated under the scalpel. Removal of this diseased capsule was simply impossible. Carlier therefore acted on Ollier's principle. He grasped the capsule and incised it. The kidney was then enucleated with ease. It was of the size of a hen's egg, and contained three purulent cavities surrounded by tissue undergoing fatty degeneration. The patient made an uninterrupted recovery.

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(351) Traumatic Jejunal Fistula.

CUSHING (*Johns Hopkins Hosp. Bull.*, July, 1899) relates a case where the patient was a man aged 28. Ten years previously he received a razor wound in the abdomen which completely severed the intestine in one place and opened it in two others. He recovered, but an intestinal fistula developed and great emaciation ensued through the free escape of ingesta. Though a man of large frame, he weighed only 93 pounds. His abdomen and thighs were covered with an acute, brilliant dermatitis, due to the discharge from the fistula, which lay in the median line below the umbilicus. To the right of the fistula, in the scar of the razor-wound which extended almost across the abdomen, was a large ventral hernia. From the fistula, through which a rosette of mucous membrane usually protruded, issued jets of an acrid fluid frequently bile-stained. The patient's mind was affected by chronic starvation and he had frequent epileptiform convulsions. He was put in a continuous bath and fed with nutrient enemata. Attempts to feed through the fistula were unsuccessful. The condition of the skin under water cleared up rapidly and he began to gain in weight through the rectal feeding. Then the fistula was closed by a resection of the jejunum and end-to-end suture over a Halsted inflated rubber cylinder. Adherent coils of intestine were freed from the ventral hernia, with difficulty another resection had to be performed. The abdominal wall was closed without drainage after excision of that part of the parietes involved in the hernia. This operation was performed by Halsted. Convalescence was uninterrupted. The patient's weight increased in two months from 93 pounds to 178½ pounds.

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(352) Congenital Sacral Tumour.

KIDERLEN (*Deutsche Zeit. f. Chir.*, June, 1899) has prepared an exhaustive monograph on congenital sacral tumour, especially the presacral type. He tabulates 122 presacral cases: 10 in stillborn premature children, 8 in stillborn 9 months'children, 20 in infants dying spontaneously within a year, 4 in patients dying spontaneously (that is, unoperated upon and not from the tumour), 1 of these cases was 40 years old, and 2 in patients who seem to have died of the tumour unoperated upon. There remain the cases submitted to operation: 9 were treated by puncture, 4 of these died—all infants—of the rest the eldest was under 3 years and in none did the cure seem permanent; 69 cases underwent extirpation—9 died of the operation. In one fatal case the rectum sloughed and perforation occurred on the eleventh day, in another death occurred from carbolic poisoning on the second day, and in another pelvic peritonitis followed the operation, the patient living for three months. The valuable tables include a new case added by Kinderlen. The patient was a woman, aged 24, who had been under treatment for osteomyelitis. The left buttock steadily became greatly swollen and the skin of the perineum tense. A tumour which was congenital and rapidly increased in size, its upper limits could not be reached from the rectum, the vagina was elongated, the uterus and bladder displaced above the pubis, the rectum forwards, and to the right. Schede, of Bonn, operated. On deep puncture a turbid brown fluid, without fæcal odour, escaped, and then, the patient being placed in lithotomy position an incision was made over the prominence of the tumour, and after five pints of fluid came away a big cystic cavity was exposed, and it was found to be separate from the rectum. It was enucleated and a counterincision made between the vagina and anus at the posterior extremity of the left labium. The cavity was plugged. The patient recovered in nine weeks. The tumour was a unilocular "enterocystome" connected with a cystic dermoid mass.

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(353) Resection of Cervical Sympathetic in the Treatment of Glaucoma.

JONNESCO (*Wien. klin. Woch.*, May 4th, 1899) has excised the superior sympathetic ganglion in the neck nine times for glaucoma. The cases consisted of one acute glaucoma, one chronic irritable glaucoma, three chronic irritable absolute glaucoma, and three simple chronic glaucoma. The results were: (1) Immediate and permanent lessening of tension in all, very marked in three; (2) noticeable or extreme contraction of the pupil, which remained permanently even when iridectomy had been performed; (3) disappearance of headache, preorbital or otherwise; (4) disappearance of the attacks in irritable glaucoma; (5) marked and continuous improvement in vision in all cases where there were no previous signs of complete atrophy of the optic disc. This improvement took place so rapidly and continued so long in the two cases of simple glaucoma and in one of the cases of chronic irritable glaucoma as to be astonishing. In the two cases of chronic irritable absolute glaucoma it was not observed. Other permanent results of resection of the sympathetic are retraction of the globe, lowering of the upper eyelid, and narrowing of the palpebral fissure. The therapeutic results are due to the lowering of the intraocular tension. The superior cervical ganglion is the most suitable part of the sympathetic to resect, since all the sympathetic ocular nerves have to pass it before reaching the eye. The incision is made along the anterior border of the sterno-mastoid, and the bilateral operation can be completed in fifteen minutes. Immediately after the operation congestion of the eyes, nose, and face is observed, with lachrymation, running at the nose, and a heavy feeling in the head, which symptoms all disappear in a few days. The best results are obtained in cases without inflammatory or irritative symptoms, but, as the operation is without danger, it should be tried in all cases (except hæmorrhagic), as even in absolute glaucoma it generally relieves the violent pain, and may succeed where iridectomy has failed. In one case, complicated by Graves's disease, the latter was cured, and vision greatly and permanently improved by the operation.

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(354) Sciatic Scoliosis.

DENUCE (*Rev. d'Orthop.*, September, 1899) holds that idiopathic sciatica is never complicated by true and fixed scoliosis. Sciatica pure and simple, like any other painful affection of the lower limb, leads the patient to relieve the pain by inclining the trunk to the opposite side, the pelvis on the affected side being depressed in order to preserve the equilibrium. Such abnormal positions, however, are not permanent, and as they can be readily redressed do not constitute true scoliosis. According to the author, the coexistence of a more or less fixed deviation of the lumbar portion of the spine and a lateral inclination of the pelvis, with sciatica, would indicate that the nervous trouble is a symptomatic one, and probably due to sacro-coxalgia.

MIDWIFERY AND DISEASES OF WOMEN.

(355) Uterus Duplex Separatus in a Multipara.

OKER-BLOM (*Centralbl. f. Gynäk.*, No. 35, 1899) observed this rare condition in a peasant woman aged 34. She consulted him on account of repeated abortion. She had been married when 26, and pregnant eight times. In three pregnancies the child was on the left side, according to the patient's distinct account; in at least four out of the five remaining gestations the right uterus was the seat of pregnancy. All the three left pregnancies ended in miscarriage;

the first pregnancy, side doubtful, ended at term, the child being yet alive; two of the distinct right pregnancies ended at term, in both cases the child was alive and one was reared. Oker-Blom examined the patient, and found that the vagina was single, and that no vaginal portion of the uterine cervix existed. There was a right and left os separated by about ¾-inch of the vagina. The right os admitted the tip of the finger, the sound passed nearly 3 inches to the right, defining a pear-shaped right uterus with ovary and tube. The left os was small, the sound passed about 2 inches to the left; the left uterus had a body firm and round as on the right side, but more horn-shaped, running into the tube. The left ovary was detected. The bodies of the uteri were apparently only united by the short bridge of vaginal tissue between each os. Some authorities would class this case as uterus didelphys with normal vagina. Menstruation was regular; Oker-Blom noted that it occurred simultaneously in each uterus. He curetted the uteri, and she became pregnant again; he examined and found that, as she herself stated, gestation was on the left side. The child was alive, but it was apparently discharged prematurely a few months later, some time after the cessation of all movements.

(356) Fibroma of the Mesentery.

Vucic (*Liecnicki Viestnik*, 1899, No. 5) removed a tumour of this rare kind from a pregnant woman, aged 38. The tumour had been observed a year previously after a miscarriage. It grew quickly during the last half year. The period had ceased for four months. There was pain during defæcation, and latterly dyspnœa. The abdomen was distended by a hard, freely movable tumour, apparently bearing a pedicle near its pelvic limits. The uterus was as in the third month of pregnancy, and did not move when the tumour was drawn upwards. Omental fibroma was diagnosed. The tumour was found at the operation very intimately connected with the gut as well as with the mesentery. The adhesions could not be separated, so 13½ inches of small intestine were resected, and the tumour was then enucleated from the mesenteric folds. The severed intestine was united with Murphy's button. There was severe peritonitis for several days. The button was passed on the thirteenth, and the patient recovered without aborting.

(357) Fracture of Fœtal Femora: Cord round Thighs.

Green (*Monats. f. Geburt. u. Gyn.*, September, 1899) recently exhibited before the Berlin Obstetrical Society a fœtus with fracture of the right and left thigh bones. The mother suffered no injury at labour, which was near the end of the eighth month. The face presented, first position, and the child died a few minutes after birth. The umbilical cord was 13½ inches long; it ran from the navel to the right thigh, then to the left, and thence back to the right. There were deep grooves in the skin where the cord had been twisted. Green thinks that the cord had fixed the thighs for some time, and thus limited the movements of the hip-joints, so that they had become stiffened. During the expulsion of the fœtus the femora could not be sufficiently extended, and so they were both fractured.

(358) Twins with Syringo-myelocele.

Wright (*Canadian Pract. and Rev.*, April, 1899) observed this condition in male twins with separate membranes and placenta. Each was a breech presentation. In both hydrocephalus and spina bifida in the lower dorsal region existed. One weighed 5 lbs., and died, without making flesh, in ten days. The second weighed over 5 lbs., and grew distinctly, living to three months and nineteen days. In both the hydrocephalus and spina bifida increased rapidly, and death was due to rupture of the sac. The bladder and bowels acted naturally, but there were convulsive movements and paralysis of the lower extremities. The mother had borne five children previously, the other labours had been normal.

(359) Non-ecbolic Hæmostatic Remedies.

Bossi (*Rif. Med.*, July 8th, 9th, and 10th, 1899) complains of the abuse of ergot as a uterine hæmostatic on account of its ecbolic properties. Hydrastis canadensis, hamamelis virginica, stipticin, and antifibrin, each in their degree act as uterine hæmostatics without having any ecbolic action. When metrorrhagia occurs in the course of pregnancy, and it seems feasible to avoid interruption of the pregnancy, the author has found a mixture of ext. fl. hydrast. can., fl. ext. hamamelis, tinct. piscidia erythr., fl. ext. viburn., and liq. opii the most useful. When abortion seems inevitable he recommends a mixture of hydrastis, hamamelis, and stipticin. At the same time quinine should be given. Sugar in doses of 50 to 200 grams dissolved in 150 to 500 grams of water is also spoken of as a valuable adjunct.

(360) Cæsarean Section in Puerperal Eclampsia.

Hillmann (*Monats. f. Geburts. u Gynäk.*, August, 1899) reports a fortieth case, in a primipara near term, aged 23. There had been eight fits, the os was undilated, and the case was complicated by pulmonary œdema. The child was delivered through an ordinary median incision in the uterus; it was a large, fully developed male, quite dead. The placenta, over a pound in weight, was divided in half by the incision. No fits followed the operation, but the patient was in great danger for days, owing to the pulmonary complication: fortunately there was never any sign of peritonitis, obstruction, or gastro-intestinal irritation, indeed the bowels acted spontaneously on the second day. Hillmann carefully tabulates the 40 cases of Cæsarean section in puerperal eclampsia; the series includes 5 operations where the body of the uterus was amputated (Porro's operation). In the majority the fits ceased at the operation, but recurred in 7, one of Zweifel's having 30 fits after being removed from the operating table, yet she ultimately recovered. Of the 2 that died after recurrent fits 1 sank on the thirteenth day from miliary tuberculosis, and one, who only suffered from one mild fit ten hours after Cæsarean section, died of œdema of the lung a week later. Of the 40 mothers 21 died, but 1 of these was opened immediately after death, and the child saved, and 1 was moribund at the operation. Nineteen mothers recovered. Of the 41 children, 18, including the sole pair of twins in the series, were lost and 23 lived.

THERAPEUTICS.

(361) The Serum Treatment of Pneumonia.

Antonio Fanoni (*N. Y. Med. Journ.*, August 26th) reports 6 cases of pneumonia treated with Pane's antipneumonic serum. The serum is prepared in two strengths—No. 1 is mild and No. 2 is more concentrated and stronger. The first is used in the milder cases and early in the disease, while the second is reserved for the more severe types of pneumonia. In the most malignant cases the dose should be doubled or even trebled. Fanoni was surprised at the results which he obtained in some of his own cases, for they were in several instances of a most desperate character. The best site for the injection is along the posterior axillary line. The injection is given twice a day, say at 8 A.M. and 9 A.M., and again between 8 P.M. and 10 P.M. The usual dose is 10 c.cm. at each injection. The syringe used may be a large hypodermic, and it is well to sterilise the instrument before each injection by washing in a 4 per cent. solution of carbolic acid. The skin must also be disinfected by means of a solution of bichloride of mercury ($HgCl_2$, 1, H_2O, 1,000, and HCl. 10), applied on a piece of absorbent cotton. It is best to make the first injection in the posterior axillary line, between the eleventh and twelfth ribs, so as to leave a sufficient space for later injections. The puncture is covered by a thin layer of cotton soaked in the bichloride solution. The patient is then placed upon the side where the injection was made, and remains in that posture for about ten minutes so as not to displace the cotton. By these means the occurrence of suppuration is avoided. The injections should be used regularly, both in the morning and in the evening while the fever exceeds 104° F. If the fever subsides and there are no asthenic symptoms, the injections may be suspended, but if the temperature rises again, they may be resumed. When the fever remains under 104° F., and there are other severe general symptoms, it will be necessary to continue the use of the serum until the patient's condition begins to

improve. Where the serum is used all other medication must be omitted, and only hygienic measures should be employed. The daily diet should comprise a litre and a half or two litres of milk, and one or two cups of broth, with the yolk of an egg. In addition, the patient may be given some alcohol and water. De Renzi gives 30 grams of alcohol in 500 of water on the first day, 35 on the second, and so on, until 60 or 70 grams in twenty-four hours are reached. The last dose is never exceeded. Fanoni has never given this stimulant unless the necessity for such a measure was very apparent. Since 1898 he has used the serum in 6 cases of pneumonia in his private practice, and has obtained a remarkable series of successes. Clinical details of these are given. The quantity of serum used in these cases was from a minimum of 20 c.cm. to a maximum of 120 c.cm. In some of them only the serum No. 1 was used, in others only the No. 2, while in still others both strengths were given. The resolution in these cases was as follows: First case, eighth day, by lysis; second case, sixth day, by lysis; third case, tenth day, by lysis; fourth case, seventh day, by crisis; fifth case, seventh day, by lysis; sixth case, sixth day, by lysis. Fanoni's experience has led him to the following conclusions: (1) That Pane's antipneumonic serum is the rational remedy in pneumonia, as it constitutes the specific treatment, just as Behring's antitoxin does in diphtheria. (2) That injections with this serum are not painful, are simple to administer, and do not produce any general or local reaction. (3) That serum over five months old is no longer active, and produces no results, although it does no harm; after it is four months old it begins to lose strength, and the amount given after this time should be increased in proportion as the date of the preparation of the remedy is removed from the date of administering up to the fifth month. (4) That the serum will not do harm, even if given in doses of 100 to 150 c.cm. in twenty-four hours. (5) That the serum in all the cases under Fanoni's observation has shown wonderful efficacy, not only in producing rapid improvement of the general condition, but in hastening resolution in case it is given early in the disease. The writer adds that in any lobar pneumonia, especially if the prognosis is grave, it is the duty of the physician to use this serum, and if he fails to do so there is no excuse for such an act, except ignorance of the work that has been done in the field of the serum-therapy of pneumonia.

(362) Management of the Critical Stage of Acute Diseases.

IN a clinical lecture, O. Rosenbach (*Berliner Klinik.*, No. 134, August, 1899) insists on the importance of the study of the crisis in acute diseases, a study he considers has been neglected since the clinical thermometer was introduced by Traube. In enteric fever the author recommends a small dose of phenacetin or antipyrin from time to time, commencing with 0.25 gram (say gr. iv) and not going beyond a maximum of 0.5 gram (say gr. viii), about four to six hours before the expected rise of temperature, previously ascertained by a two-hourly use of the thermometer. Marked fall of the temperature will be observed to follow, which, according to the author, will be a sure guide to the intensity of the disease. Further on, Rosenbach points out that even where the temperature is kept down by antipyretics the course of the disease is not rendered more favourable, indeed is at times prejudiced. At the commencement of an illness he considers small doses of quinine act in a tonic manner. He is opposed to the frequent and indiscriminate exhibition of alcohol and stimulants, especially in the early period of pyrexial disease; they find their place later on in inanition from malnutrition, and when there is a sudden considerable elevation of temperature associated with asthenia. Digitalis in medium doses is also useful as a protoplasm tonic in pyrexia. As to the rapidity of the pulse, 100 beats or a little over persisting for some time, when the heart sounds are normal, need give rise to no anxiety, if at the same time the extremities are warm and the arteries soft. In conclusion, he considers it is wrong systematically to combat the feverish symptoms at any price, especially as regards the temperature. He insists on the importance of expectant treatment, using expectant in the proper sense of that term, and not as equivalent to doing nothing (nihilism). Also, *primo non nocere* and "treat the patient, not the disease."

(363) Acoin, a new Local Anæsthetic.

RANDOLPH (*Ophthalmic Record*, August, 1899) has made use of this drug, first described in the *Therapeutische Monatsheft* for January by Trolldenier. He finds that in solutions of 1 in 100 and 1 in 300 it produces satisfactory anæsthesia in an unirritated eye in about the same length of time as cocaine; when there was much congestion it failed. It has a more stinging effect when first instilled than cocaine. It does not damage the corneal epithelium, and has no effect upon accommodation, size of pupil, or tension. It prevents the growth of staphylococcus pyogenes albus. Randolph has removed foreign bodies and a pterygium under its influence, and opened tarsal cysts. Acoin is a white powder, fairly soluble in water; it is derived from guanin, and related to caffein and theobromin.

(364) Treatment of Lupus by X Rays.

THURSTON HOLLAND (*Archives of the Roentgen Ray*, May, 1899) gives an account of the treatment of 2 cases of tuberculous dramatitis by the *x* rays. The first case of eleven years' standing occurred in a girl. The dorsum of the foot was affected with tuberculous ulceration of the skin, and had resisted treatment by scraping and caustics. The second case was one of lupus of the face and neck of five years' duration in a boy; this had also resisted the normal treatment. During two months 19 exposures were given to the first case, and 17 to the second. The exposures lasted 15 minutes. A Newton's tube was used with a ten-inch coil, and the platinum kept red hot. Both cases quickly improved, and were healed when seen several months afterwards. The photographs taken before and after treatment appear to be conclusive. In each case *x* ray dermatitis occurred, causing loss of the nails in the first and circumscribed alopecia in the second case. This, however, was only temporary, both hair and nails soon growing again.

PATHOLOGY.

(365) Phlebitis Obliterans of the Hepatic Veins.

CHIARI (*Beiträge zur pathol. Anat. und zur allgem. Pathol.*, Bd. xxvi, Heft 1) considers this a disease *sui generis*, and believes that it is dependent on syphilis. There have been only 7 cases on record, to which Chiari adds 3. The following are the notes of two cases: (1) A woman, aged 29, was admitted to hospital in November, 1894, suffering from pain and a feeling of tension in the hepatic region. This was followed by attacks of belching and vomiting. There were swelling of the abdomen and some insomnia. A previous history of venereal disease (gonorrhœa) could be obtained, but not of syphilis. She suffered from ascites and from œdema of the lungs, and died in this condition. The necropsy showed a slightly enlarged and fatty liver, with marked thickening of the main branches of the hepatic veins, their mouths into the inferior vena cava being so contracted that only a probe could be inserted. In addition the lumen was encroached upon by recent thrombi. The lungs were œdematous, and showed numerous hæmorrhagic infarcts scattered throughout their substance. Microscopic examination showed endo-phlebitis with irregular thickening of the intima, in places this amounting to obliteration of the lumen. (2) The other case was that of a woman, aged 59, who had had syphilis and bore six children, five of whom died young. The woman suffered from an enlarged liver and from ascites, and died in a state of collapse. At the necropsy, 3½ litres of bloody ascitic fluid was found in the peritoneal cavity. The liver was enlarged, and there was thickening and obliteration of many of the hepatic veins. Recent thrombi were found in these vessels, and secondary hæmorrhagic infarcts were present in the lungs, spleen, heart, etc. Pressure of the diaphragm upwards by the accumulation of the ascitic fluid is believed by Chiari to have led to pulmonary œdema. From the history of this and other recorded cases, and from careful microscopical investigation, Chiari gives strong reasons both for affirming the distinctive characteristic of this disease as a phlebitis obliterans of the great hepatic veins, and as a morbid condition secondary to acquired syphilis.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(366) Unusual Cases of Myxœdema.

Sydney Kuh reports (*Journ. of Nerv. and Ment. Dis.*, September, 1899) two unusual cases of myxœdema. Both patients were males, the one being 51 and the other 52 years old. They presented a number of the classical symptoms of myxœdema, such as weak and low pulse, subnormal temperature, dry, cold, and scaly skin, atrophy of the thyroid gland, and loss of sexual power. In both cases the myxœdematous condition of the skin was of an unusual character. In the first it was found in the cervical region only in the neighbourhood of an old scar. The skin region thus affected was unusually firm in consistency. It would disappear with the treatment adopted in thyroid administration, and would promptly reappear if treatment was discontinued. In the second case there were present myœdematous conditions, at first of the eyelids—which disappeared—and then of the cervical region. The latter repeatedly disappeared and returned during treatment. This case was also unusual, in that it presented a decided mental disturbance in the form of many delusions of a hypochondriacal nature, and with marked signs of mental weakness. At one time this patient suffered from acute mental excitement, with hallucinations of an unpleasant character; and the attack was followed by a complete prostration, with loss of energy. The first patient was treated with desiccated thyroids, which he continues to use up to this time. He has been well for about four years. In the second case iodothyrin was used, and apparently with less disagreeable effects than the powdered gland. He, too, has had no recurrence of symptoms. In the discussion which followed this communication, J. B. Herrick stated that the deleterious effects observed in some patients were mainly due to contamination from impurities or toxic products in the gland preparations, and that the nearer approach was made to pure iodothyrin the nearer perfection was the effect of the drug. The early search for the myxœdematous infiltration in the supraclavicular region was a diagnostic help of importance in determining early cases. The appearance and disappearance of such a swelling, before treatment commenced, indicated probably that the thyroid had an intermittent function. Kuh pointed out that among the chief toxic effects were gastro-intestinal disturbance, diarrhœa, anorexia, and increased frequency of the pulse. When these appeared the dose should be reduced at once. The best results cannot be obtained by small doses but by remaining just below the toxic stage until such symptoms, as the above, disappeared. Unless the patients can be closely watched they should be kept in bed while full doses of the drug were being administered.

(367) Dyspeptic Asthma.

Landi (*Clinica Med.*, An. 5, N. 24) publishes a clinical lecture on attacks of asthma due to dyspepsia. The most typical cases occur in children usually of neurotic inheritance. To suppose that they are due to auto-intoxication is the most easy assumption, but the ptomaines and toxins hitherto isolated for the most part act differently upon the heart—slacken it instead of accelerating. Probably there is an increased bulbar receptivitiy in these cases, and reflexes are more easily exciting than usual. Acetonuria is not infrequently present. Strong evidence of the dyspeptic nature of the attacks is afforded by the cases in which the exhibition of purgatives or emetics gives prompt and immediate relief. Moreover, there are generally signs of dyspepsia—for example, furred tongue, foul breath, nausea, and vomiting. Treatment should be directed accordingly.

(368) Apoplectiform Neuritis.

Raymond in a clinical lecture (*Journ. de Méd.*, August 10th, 1899) gives this title to certain forms of neuritis which seem to come on suddenly. He relates the case of a man, aged 42, who in lifting a heavy weight slipped and made a sudden effort to maintain his balance. He felt at the same time a severe pain in the left thigh. For some days afterwards the limb was swollen and somewhat cold. Later when the pain had subsided he noticed a certain degree of powerlessness with dragging of the toe on walking. An examination showed paralysis of the extensor muscles with some atrophy. There was considerable pain along the course of the great sciatic in putting the limb in the fully extended position. There were also painful points corresponding to the point of emergence of the nerve from the pelvis and over its popliteal situation. The evidence was in favour of a neuritis. The pathogenesis of this form of neuritis is peculiar. It seems to come on under the influence of violent effort, but is not necessarily due to any hæmorrhage and the title given above is not meant to suggest more than the sudden onset. The author states however that occasionally hæmorrhage actually does take place, especially as the result of violence. The prognosis in these cases seems to be fairly good, though occasionally recovery is prolonged.

(369) Meningeal Affections in Children.

Haushalter reported at the meeting of the Société de Médecine of Nancy (June 1st, 1899) two interesting cases with clinical and *post-mortem* observations. (1) An infant, aged 10 months, admitted to hospital for convulsions dating three days previously, died some hours after admission with a rectal temperature of 41.5° C. There were convulsive attacks, and in the intervals between the attacks there were generalised spasmodic symptoms. The necropsy revealed a suppurative condition of the membranes of the left hemisphere of the brain due to pneumococci; the right hemisphere was the seat of a subdural hæmorrhage, part of which was liquid, and consisted of recently effused blood. The absence of a history of recent cranial injury left in doubt the cause of this condition in the right hemisphere. (2) An infant, aged 10 months, attacked apparently with gastro-enteritis, exhibited in addition to the characteristic convulsive crises a respiratory (asphyxial) convulsion, and uttered screams, became cyanosed, and suffered from convulsive movements of the eyeballs. The attacks would last two to three hours, and would recur several times during the day. The intensity of the attacks increased, and after suffering for nearly six months it was admitted to hospital, where it died six hours after admission. The necropsy showed the following changes: A thrombosis of the superior longitudinal sinus, and small disseminated thrombi in the veins of the pia mater. There was an intense general congestion of the pia-arachnoid membranes.

SUGERRY.

(370) Sterilisation of the Hands.

Freeman (*Annals of Surgery*, October, 1899) has been led by his own experiments and those of others on the best methods of sterilising the hands to the assumption that the following proportions are approximately correct: (1) None of the methods of sterilising the hands can be absolutely depended upon; (2) under circumstances where it seems desirable to do so, much may be accomplished by sweating the hands in a hot-air oven, by wearing rubber gloves for some time prior to an operation, or by immersing the gloved hands in hot water. Mere prolonged soaking in very hot water, although not so effective as dry, hot air, must have some favourable effect. It is difficult to understand, however, how the sweating method can dispose of all the micro-organisms beneath the nails. The procedure will hardly be extensively employed owing to its inconvenience. (3) Excessive brushing beneath the nails seems merely to stir up the bacteria when carried beyond a certain point; very little can be accomplished by this means; (4) at present the only really reliable means of rendering the hands aseptic is to incase them in intact sterilised rubber gloves; cotton gloves, although they soon become contaminated by exudations from the skin, may do some good, especially if often changed, by filtering out the bacteria, as it were, and by preventing their entrance into wounds.

(371) "Anæmia Necrosis" of the Intestine.

Kocher (*Deut. med. Woch.*, September 14th, 1899) calls attention to a hitherto

unsuspected danger that may attend operations on the gastro-intestinal canal, namely, necrosis of the intestinal mucous membrane due to disturbance of the circulation in the mesenteric vessels. The case was one of diffuse carcinomatous disease of the stomach in a woman, aged 44. The operation was performed some six or seven months after the appearance of the first symptoms. On opening the abdomen the stomach was found to be adherent to the spleen and to the transverse colon. As the growth stopped abruptly at the duodenum and œsophagus it was resolved to remove the stomach and the adherent part of colon *en masse*. Between forceps the proximal end of the duodenum and 12 cm. of transverse colon were excised. On raising the detached portion of the latter its meso-colon was found to be adherent to the pancreas. Some difficulty was experienced in detaching it, and several vessels had to be ligatured. The separation of the stomach from the spleen was effected in like manner. The duodenum was then stitched to the œsophagus, and the divided ends of the colon were united. The operation lasted three hours. Next day diarrhœa set in which lasted three days, and on the fourth the patient died with a temperature of 102.2° F., and signs of peritonitis. On *post-mortem* examinations the wounds were found to be healthy, and had no peritonitis about them, but the coils of intestine which occupied the pelvis were inflamed and covered with fibrinous deposit. On opening the inflamed portion of gut, which was situated 6 feet above the ileo-cæcal valve, an extensive necrosis of the mucous membrane was discovered, the peritonitic portions corresponding to the necrosed areas. No thrombosis of, or injury to, any of the mesenteric vessels could be discovered. The lungs were healthy. The opinion arrived at was that the necrosis was due to a temporary but sufficiently long interruption to the circulation in the vessels of the lower ileum caused by traction and manipulation during the operation. This opinion is supported by some experiments of Cohnheim's, who found that even a temporary arrest of the circulation in the mesenteric veins (of guinea-pigs) profoundly affected the corresponding portion of intestine. The rise in temperature which is not infrequently seen after operations on the gastro-intestinal canal is sometimes attributed to small areas of pneumonia due to infection from the necrosed mucous membrane edges of the wounds. The above case, however, indicates another possible cause. It also accounts for the diarrhœa which is sometimes seen after operations on the intestines. The moral Kocher draws is: First to make the opening in the abdominal wall large enough to avoid pressure on the vessels of the organs which are pulled out for examination or operation; secondly, to manipulate the mesenteric vessels as little as possible; and lastly, in isolating the field of operation from the rest of the abdomen not to apply too great a pressure with gauze pads, etc.

(372) Hæmorrhagic Pulmonary Infarct after Radical Cure of Reducible Hernia.

Bayer (*Centralbl. f. Chir.*, No. 7, 1899) and Dzirne (*ib.*, No. 15) report 3 cases of this grave complication, one ending fatally. Bayer's patient was a workman aged 22. Chloroform was given, and a free funicular left inguinal hernial sac, as big as the finger of a glove, exposed. The neck was transfixed and ligatured, the sac excised, and the canal closed with silken sutures. The right inguinal canal was open, without containing a sac. It was closed by suture. The temperature rose on the second day; on the third free hæmoptysis occurred, and the physical signs of localised hæmorrhage soon developed. The wounds healed by first intention; the patient recovered. Dzirne's first case ended fatally. It occurred in a man aged 63, subject for eight years to a right scrotal hernia. The operation was undertaken with every precaution. The stump of the sac was fixed to the aponeurosis of the external oblique at the level of the inner ring, after the special manœuvre of Kocher, and the canal sewn up. Silk was exclusively used and no sutures, except those fixing the stump, were sunken. In separating the plexus from the sac, three small veins were torn and tied. The temperature rose on the evening of operation, cough set in next morning; within a few days all the symptoms of pulmonary infarct developed. Hæmoptysis was marked. The patient died on the tenth day. Dzirne's second patient was 50. A right inguinal hernia had developed after a strain three years previously. It had become large, distending the scrotum. Kocher's operation, as in the previous case, was performed. As the sac was detached before being drawn through the incision made through the external oblique at the level of the internal ring; some veins in the pampiniform plexus were divided first, it is distinctly stated, and tied afterwards. Then the sac was excised, and after being drawn through the internal oblique and the stump fixed to the aponeurosis. The inguinal canal was closed with continuous catgut, the wound with deep silk. The temperature rose in the evening, cough set in next day; hæmorrhagic infarct was detected in the right lung, with free expectoration of greenish sputum. On the third day the cough was almost incessant, and hæmoptysis occurred. On the ninth day the sutures were removed, the wound appeared to have healed by first intention. But it grew red, and on the eleventh day half a drachm of pus and two pieces of catgut came away. The pulmonary symptoms had subsided, and the wound henceforward healed well.

(373) Intestinal Exclusion.

Le Dentu (*Rev. de Gynéc. et de Chir. Abdom.*, January-February, 1899) publishes a summary of this operation, suggested by Salzer, of Utrecht, in 1891, and since practised by von Eiselsberg and a few others. Exclusion of the intestine consists in separating a loop of gut by complete division above and below, closing its two cut ends and uniting, by enterorrhaphy, the cut ends of the intestine above and below the divided loop. Under certain conditions intestinal exclusion is better than the making of an artificial anus. The steps of the operation differ in the practice of the few surgeons who have adopted it. The first step, after division of the isolated loop with the precautions necessary in all intestinal surgery, is the union of the divided ends of the intestine above and below the loop. This union may be end-to-end (termino-terminal) or else termino-lateral; the first is to be preferred, as it only requires one line of sutures, and is quite practicable when the two ends are of about the same calibre. Termino-lateral union is necessary when the ends are of different calibre, and necessitates the separate suture of one divided end after the other end has been sewn into an opening just above the former. The special feature in intestinal exclusion is the next step, the treatment of the excluded coil. Von Eiselsberg and others suture both ends of that coil to the skin. The ends may be fixed together or separately in the median or in a lateral incision, according to circumstances. This method allows of the free escape of any morbid material in the loop. Some operators sew only the distal or the proximal end of the loop to the external wound, the other end being closed and sunk in the abdominal cavity. In some cases both ends have been closed, and an opening made in the middle of the loop, or advantage taken of a pre-existing fistula. Certain operators sink the loop entirely, either suturing the two ends first or else uniting the two ends so as to make a ring of the loop. The latter is the better, and requires only one line of suture, just as in ordinary end-to-end anastomosis. Altogether it is far safer to fix both ends to the skin if possible, or, if impracticable, to fix one end so that the canal of the loop opens on the surface. The operation is usually performed on the large intestine, but von Eiselsberg has "excluded" over a yard of ileum, and in another case 20 inches of ileum, with the cæcum, the ascending and half the transverse colon. As to results, Naratsch has operated 15 times with 1 death, von Eiselsberg 12 times with 2 deaths. In both the 2 fatal cases there was acute obstruction. For that condition intestinal exclusion is not suited. It may answer well in certain cases of tumour of the intestine, in damage to intestine from inflammatory changes, and, above all, in pyo-stercoral and neoplastic fistula.

MIDWIFERY AND DISEASES OF WOMEN.

(374) Treatment of Adherent Retroflexion of the Uterus.

Stocker (*Correspond. f. Schweiz. Aerzte*, May 15th, 1899) confines himself in this paper to a consideration of the treatment of peritoneal adhesions leading

to retroflexion of the uterus. This form of retroflexion seldom improves with time, and generally becomes aggravated until the patient's life is a misery. Parametric adhesions, on the other hand, as a rule cause much less trouble, and in course of time the uterus regains much of its mobility. Until recently treatment could be only palliative, and consisted in a course of baths, hot injections, glycerine and ichthyol tampons, and iodides internally. Schultze's method of separating adhesions from the rectum, the patient being deeply under an anæsthetic, though it often gives good results, frequently fails, and may cause internal hæmorrhage or serious injuries, such as rupture of intestine. Massage may be successful, but often requires months or years. The greatest advances in treatment have taken place since cutting operations were undertaken for retroflexion. The adhesions can be divided either by laparotomy or colpotomy. The former is preferable in all cases where very tough adhesions or adhesions to intestines are suspected. Otherwise colpotomy is applicable and should be chosen. Many surgeons advocate anterior colpotomy. The author prefers posterior, because (1) under certain conditions, such as when an ovary is tightly adherent to the bottom of Douglas's pouch, anterior colpotomy would fail in its object; (2) the separation of adhesions is easier, because the posterior incision leads directly to their site. The only difficulty in the operation is when Douglas's pouch is partly atrophied. The uterus once freed and in its normal position, steps must be taken to keep it there. (*a*) If laparotomy has been performed, this can be secured either by ventrifixation or by shortening the round ligaments from the abdominal side. The author has always used the first method, but considers the second rational. (*b*) Those who perform anterior colpotomy for the separation of the adhesions employ vaginal fixation, fastening the uterus to the anterior wall of the vagina or to the bladder. Many cases of bad complications during subsequent pregnancies have been reported after this operation. (*c*) Stocker strongly recommends that Alexander's operation of shortening the round ligaments should be performed after posterior colpotomy and separation of adhesions, since he knows of no cases of disturbance of subsequent labour, though he has done 102 Alexander's operations, and has performed the combined operation for adherent retroflexion five times, with excellent after-results.

(375) Asphyxia in the Newborn.

Krapp (*Prager med. Woch.*, No. 17, 1899) believes that many infants are sacrificed through unsystematic and unskilful attempts at artificial respiration. For the slighter forms of asphyxia he advises the postponement of ligature of the cord, the removal of inspired mucus by the tracheal catheter and rhythmical traction on the tongue. This last manœuvre is very efficacious. Should respiration not commence spontaneously the cord should be tied and the skin stimulated. In deep asphyxia the cord should be tied at once and artificial respiration induced as quickly as possible. Schultze's swinging is the best method. In the meantime, as there is immediate and distant danger from chill, the child should be placed from time to time in a warm bath and the tongue drawn out rhythmically to test reflex irritability of the respiratory centre, and if that be growing feeble the skin must be stimulated and artificial respiration carefully persevered in. When anæmia is associated with asphyxia, as in hæmorrhage from laceration of the umbilical vessels at a velamentous insertion of the cord, saline solution should be injected subcutaneously.

(376) Hydrorrhœa Gravidarum.

Van der Hoeven (*Monats. f. Geburts. u. Gyn.*, September, 1899) relates 3 cases under his own observation. The first patient was aged 23, and a primipara. In the third month the uterus had risen unusually high. By the fifth it had reached nearly two fingers' breadth above the umbilicus, when suddenly over a pint and a half of clear yellow fluid escaped at stool. The uterus was found to have receded one finger's breadth below the umbilicus. Afterwards small quantities of fluid came away daily. In the seventh month the patient was feverish for two evenings; on the next day she was delivered of a living, well-developed child. The puerperium was normal. The second patient was aged 41, and in her twelfth pregnancy. Early in the eighth month a quantity of fluid escaped at night, and several free discharges occurred afterwards. At the end of four weeks a healthy living child was born, and the patient did well. In neither case was there any *post-partum* hæmorrhage. The third patient was 25, and in her second pregnancy. During the sixth month a watery discharge occurred, and recurred every three weeks until a living child was born at term. In all cases the fluid was of neutral reaction, and with a specific gravity of about 1002; there was not a trace of albumen, urea, or urates. The triple phosphate of calcium was the only salt in solution. The specific gravity of liquor amnii was 1007 to 1011, and it contained albumen, uric acid, etc. The fœtal membranes and placenta were cerefully examined, but no positive conclusions could be drawn from the appearances which were detected.

(377) Influence of Maternal Inebriety on the Offspring.

W. C. Sullivan (*Journ. of Ment. Sc.*, xlv., 489, July, 1899) has investigated the history of the offspring of chronic drunkards (women) in the Liverpool prison, and has tried to eliminate the cases in which the alcoholism was complicated by other degenerative factors. Among the many interesting points which the inquiry brought out were the following: The death-rate among the infants of the inebriate mothers was nearly two and a half times that amongst the infants of sober women of the same stock. In the alcoholic family there is a decrease of vitality in the successive children; for instance, in one family the three first-born children were healthy, the fourth was of defective intelligence, the fifth was an epileptic idiot, the sixth was deadborn, and the seventh pregnancy ended in an abortion. There was a sensibly higher death-rate in cases where the maternal inebriety was developed at an early period. Sober paternity had little influence, and in face of maternal drunkenness might be almost neglected as far as the vitality of the offspring is concerned. Conception in drunkenness had a distinct influence, as was shown by the fact that in the seven cases in which the condition was noted, in six the children died in convulsions in the first months of life, and in the seventh case the infant was stillborn. On the other hand, imprisonment during pregnancy, if the imprisonment began early in the pregnancy and lasted nearly all the time, seemed to diminish the evil effects; but the difficulties in drawing conclusions regarding this point were great. Of the children of drunken mothers that survived beyond their infancy, 4.1 per cent. (a very high percentage) became epileptic (9 out of 219). These results show the danger to the community of the female drunkard.

THERAPEUTICS.

(378) Thyreoglobulin.

Oswald (*Münch. med. Woch.*, 1899, xxxiii) points out that while it is now hardly contested that the functional activity of the thyroid gland is indispensable for the health of the body, and while the effects of transplantation of the gland or the ingestion of gland substance shows that that activity depends on material contained and manufactured in the gland itself, we know neither the nature of the function itself nor the way in which it works. Iodothyrin has been supposed to be the bearer of the specific qualities of the gland, but is not as such present in the gland. Baumann obtained it in considerable quantities from the albuminous matter of the gland and suggested its existence therein as thyro-iodoglobulin or thyro-iodalbumin. Oswald has endeavoured to isolate and ascertain the qualities of the iodine constituent of the thyroid in the original form it has in the gland. All matter containing iodine can be extracted by the normal salt solution, and all such matter is albuminous, for the dealbuminised extract is free from iodine. From the extract can be isolated two albuminous substances, different in composition, properties, and effects. Half saturation with ammonium sulphate precipitates a body resembling globulin, but again precipitated from salt solution by acetic acid, and soluble in excess, this body called thyreoglobulin contains 1.6 per cent. of iodine. By completely saturating the filtrate from the first precipitate a second albuminoid is precipitated free from iodine, but containing phosphorus; it is in small quantity com-

pared with the thyreoglobulin and is a nucleoproteid. No other albuminoid is contained in the extract. The thyreoglobulin constitutes about 10 per cent. of the gland (both wet). The dealbuminised extract is non-effective. The thyreoglobulin was found to have the same influence on the excretion of nitrogen in animals in metabolic equilibrium, as the entire gland. The nucleoproteid had no such effect, and Oswald concludes that the iodine compound thyreoglobulin is the absolute and only bearer of the specific influence of the thyroid gland on metabolism. His view is confirmed by its action in two cases of myxœdema. He obtained from thyreoglobulin a product resembling iodothyrin, but containing 14.3 instead of 9.3 per cent. of iodine.

(379) The Treatment of Excessive Sweating.

Weber (*Journ. des Prat.*, March 11th; *Therap. Gaz.*, August 15th) points out that in certain conditions where there is localised sweating or hyperhydrosis, that is, is chiefly a neurotic condition, it is to be treated usually by the administration of bromides, antispasmodics, and, more important than all, cold douches, which will improve the nutrition of the nerves and vessels in the affected. Of course, where alcohol, tobacco, cocaine, or other narcotics are used to excess, these must be withdrawn. In the sweating which accompanies general disease, such as the various fevers, the following treatment may be instituted: Agaric 45 grs; extract of opium 7 grs. Make into 40 pills and take two or three at night. In other cases pills of agaracin, in the dose of one-tenth to one-fourth grain, may be given. In other instances tribastic phosphate of lime in the dose of one drachm is useful. In others again camphoric acid in the dose of 20 to 40 grs. given in powder, in capsules, in konseal, or dissolved in brandy or whiskey. The other remedies which are not to be forgotten in this condition for obstinate cases are ergot, picrotoxin, and sulphonal. Locally lotions of tannin 1 per cent., alum 10 per cent., may be applied, or a powder may be put up for internal use as follows: Pulverised talc 3 ozs.; salicylic acid 20 grs. Local sweating of the feet or hands may be controlled by applying three times a day the following: Borax ½ oz.; salicylic acid ½ oz.; boric acid 1 drachm; glycerine, diluted alcohol, of each 2 ozs. In cases of fœtid sweating of the feet the following may be used: Pulverised talc, subnitrate of bismuth, of each 1½ oz.; permanganate of potassium ½ gr.; salicylate of sodium 30 grs. Apply over the feet and dust between the toes, or powdered alum 45 parts; salicylate acid 5 parts. The profuse sweating which occurs at the crisis in such diseases as pneumonia should not be interfered with. Only when the sweating becomes more or less chronic should it be arrested.

(380) Paraform in Warts.

Meuse (*Dermatol. Centralbl.*, April, 1899) recommends paraform in the treatment of warts and also of papular syphilides. It is said to be especially useful in palmar psoriasis. Its action extends deeply into the skin. The preparation advised is—paraform 8 parts, collodion 27 parts; to be painted on thrice daily. The epidermis generally peels off after two or three days.

(381) Treatment of Chorea by Massive Doses of Arsenic.

Del Pozo (*Thèse de Paris*; *Therap. Gazette*, August 15th) records 30 cases of chorea treated by massive doses of arsenic. He considers that these massive doses are far superior to treatment by antipyrin as it is commonly employed, and states that there are two ways in which arsenic may be administered—namely, in small doses very gradually increased, and in large massive doses rapidly increased up to the point of intolerance, or, in other words, until the gastro-intestinal canal of the patient rebels, as manifested by vomiting and diarrhœa. As soon as these symptoms are developed the dose is cut down day by day until one is obtained which the patient can bear. He asserts that such treatment usually produces cure within nine days, and that accident from this method is rarely met with. Four cases of arsenical neuritis are reported. Arsenical fever is rare; sometimes arsenical pigmentation occurs, but this speedily passes away as soon as the drug is stopped.

(382) Subcutaneous Injections of Chaulmoogra Oil in Leprosy.

Tourtoulis Bey, of Cairo (*Annales de Derm. et de Syph.*, July, 1899) relates the case of a Copt, a native of Upper Egypt, in whom the leprous macules appeared some three months after an attack of fever (evidently leprous fever) at the age of 15. There was no leprosy in the family history, but there were lepers in his native village. He first came under observation at the age of 35, when he presented a characteristically leprous appearance. The patient was put on 30 to 50 drops of chaulmoogra oil in milk three times a day by the mouth, with some improvement of symptoms, but the oil had to be given up on account of the nausea and vomiting it gave rise to. Fresh lepromata appeared, following febrile attacks. The oil was again tried, by mouth in capsules this time, but given up for same reason as before. This was in 1890. The patient returned to his village, but as the disease made rapid progress he again visited Cairo in 1894 for treatment. Tourtoulis then decided to try subcutaneous injections of the chaulmoogra. Tubes containing 5 grams of the sterilised oil were prepared in Paris. The improvement was marked after 50 injections. In May, 20 further injections of 5 grams each, followed by 25 during June, 15 in July, and 28 in August, in all during 1895, 193 injections; 106 in 1896, 87 in 1897, 50 in 1898, when the patient refused to have any more, as he considered himself cured. Tourtoulis persuaded the patient to submit to 33 more injections in 1899 (first five months), so that altogether in six years he was injected 584 times, amounting to a total of 2,720 grams of chaulmoogra oil. The injections were made on the outer sides of the upper and lower limbs, with a long needle introduced subcutaneously. They gave rise to but slight pain. With the usual antiseptic precautions, Tourtoulis never saw abscesses follow. The author does not wish to conclude from this single case that chaulmoogra subcutaneously will cure leprosy, as there is always the possibility of spontaneous retrogression of lepromata to be borne in mind. In the discussion on Tourtoulis's remarks (Soc. de Derm. et de Syph., Paris, July 13th, 1899) Hallopeau pointed out that Jeanselme and he had injected chaulmoogra into the buttocks, namely, 10 c.cm. a week, but in one case there was a severe outbreak of nodules, and this led them to give up this mode of treatment. Du Castel is trying the subcutaneous method at Saint Louis.

PATHOLOGY.

(383) Exception to Colles's Law.

Neuhaus (*Monatsh. f. prakt. Derm.*, vol. xxviii, No. 12, 1899) describes the following case of exception to Colles's law. The father had syphilis, which cleared up after six weeks' inunction treatment. Seven months after infection he had secondary symptoms. Five months later the mother gave birth to a child with marked hereditary syphilis. No intercourse had taken place during this time, but soon afterwards coitus was followed by a primary sore on the labium, followed by secondaries. The symptoms cleared up under mercury. The author had no doubt that this was a case of infection of a mother who had previously borne a syphilitic child.

(384) The Influence of Anæsthetics on Renal Permeability.

Galeazzi and Grillo (*Il Policlinico*, September 15th, 1899) have made experiments on this by trying the method of Achard and Castaigne, which consists in the administration of methylene blue and its subsequent detection in the urine. The authors first tested the value of the method in healthy subjects. They found that the colour began to appear after thirty to forty minutes, and reached its maximum in three or four hours, finally disappearing in fifty to sixty hours. The urine was collected by catheter. It was found that general anæsthetics—ether and $CHCl_3$—diminished the permeability of the kidney, as shown by a retardation in the elimination of the methylene blue. Chloroform has a more marked effect in this respect than ether. Probably this retarded elimination of methylene blue is indicative of an associated imperfect elimination of toxic substances.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(385) Iodipin as a Test for the Functional Activity of the Stomach.

Winkler and Stein (*Centralbl. f. inn. Med.*, August 19th, 1899) have investigated the decomposition of fats in the intestines by using iodipin, which is a combination of iodine with oil of sesamum. Winternitz has shown that normal gastric juice does not set the iodine free from this preparation, even when in contact with it for some time, but that pancreatic juice and bile liberate it readily. Hence it is very suitable for determining whether the motor function of the stomach is sound, and the bile and pancreatic juice are active. Winternitz and Frese found that, after a dose of iodipin, iodine appeared in the urine normally 20 minutes later. Instead of looking for iodine in the urine the authors gave a teaspoon of iodipin a short time after a light breakfast to 46 normal and diseased individuals, and then tested their saliva with starch-paper every quarter of an hour. These experiments prove that, with normal stomachs, (1) the time which elapses before fat is passed on into the intestine, as shown by the appearance of iodine in the saliva, varies between a quarter and three-quarters of an hour; and (2) if its appearance is delayed for more than an hour, there is probably some disturbance of the gastric function. This was true of a case of gastroptosis, with well-marked dilatation; and of one case of carcinoma of the stomach, where it was four hours before the reaction appeared. The rapidity with which iodipin is normally passed on into the intestine is the probable reason why it escapes the action of the gastric ferment discovered by Cash and Ogata, and which is able to split up 1 to 2 per cent. of the fat introduced. These results, which place the maximum limit of time during which fat may normally remain in the stomach at an hour, agree with those obtained by Sievers and Ewald, who gave salol, and then tested for salicylic acid in the urine. With Fleischer's iodoform method fifty-five to sixty-five minutes usually elapse before the reaction is obtained, and with Sahli's glutoid method as much as four to six hours. This great discrepancy is probably due to the fact that Fleischer gave the iodoform during, and not some time after, meals; and that nearly three hours are required before the glutoid capsules dissolve even in the pancreatic juice. Iodipin, apart from its uses as a test, is, as an iodine preparation, also therapeutically active.

(386) The Heart of Athletes.

Williams (*Boston Med. and Surg. Journ.*, September 7th, 1899) read a paper at the American Climatological Association on the effects of violent and prolonged muscular exercise upon the heart. His address consisted of a summary of several observations which he had made on long-distance runners. Careful records were kept of the weight, pulse, respiration, temperature, urine, and size of the heart before and after racing. The significance of heart murmurs heard in the second left intercostal space was discussed at some length. The author said that all general statements with regard to the effects of exercise upon the heart are fallacious; every heart and every form of exercise should receive special attention. The mitral valve and the left ventricle show most evidence of strain. One of the runners presented some interesting features. After running five miles his temperature was 98°, pulse 100, and respiration 32; there was in addition a faint trace of albumen, and a sphygmographic tracing showed that the pulse was at high tension. After a twenty-five-mile race the temperature was lowered 4.9° and he had lost 4½ lbs. in weight. The urine contained ⅛ per cent. of albumen and also numerous casts; the pulse was one of low tension. The runners who took the first and second prizes during the races had no murmurs, whilst in all the others definite cardiac murmurs could be heard. The obvious conclusion to be drawn from this observation is that the greater the muscular rigor the less is the liability to murmur.

(387) Apyrexia in Tuberculosis.

Mircoli (*Gazz. degli Osped.*, September 24th, 1899) draws attention to the fact that tuberculosis may be apyretic. Many tuberculous animals never have any rise of temperature if the dose of tubercle injected has been small and the progress chronic. Indeed, in many tuberculous subjects the temperature is somewhat lower than normal. But the level is one which is very easily raised; the slightest exertion, emotion, or accidental disturbance suffices in some cases. Very frequently, too, the rectal temperature is disproportionately higher than the axillary in phthisics. The author explains the facts on the ground that whilst the proteins of tubercle bacilli raise the temperature the toxins lower it. In the apyretic cases probably the toxins overpower the proteins. The sweating of phthisis is in relation to the tuberculous toxin itself, inasmuch as Maragliano found that with ethereal extract of toxin sweating could be induced in healthy persons.

(388) Psychosis Polyneuritica.

S. Soukhanoff and N. Orloff, at the Moscow Society of Neuro-pathology and Psychiatry, gave an account showing that important mental troubles, especially of memory, are associated with polyneuritis (*Arch. de Neurol.*, May, 1899). Case 1, man, aged 60, with occasional glycosuria. In the autumn of 1897 he had a febrile illness, followed by amnesia and errors of memory. On examination (November, 1898) there was a certain general feebleness. The knee-jerks were diminished, the soles of the feet œdematous, and the peripheral nerves were slightly painful to touch. The troubles of memory still persisted, and included a want of recollection of the past twenty years of his life. There was no other mental change, and no progress of symptoms. Case 11, man, aged 52, of chronic alcoholic habits. In June, 1897, he seemed to become very irritable, and at the same time there appeared an œdema of the feet. Later there supervened pains in the legs, and amnesia, and though the drinking habits were stopped there was an increase of general weakness. In January, 1899, there was loss of the knee-jerks, atrophic paresis of the lower limbs, enfeeblement of memory and amnesia for present and recent events. The third case was complicated with syphilis, which left its exact nature rather doubtful. Case IV, man, aged 45, a confirmed alcoholic. In the autumn of 1892 he had amnesia, an enfeeblement of memory, pains in the lower limbs, and incontinence of urine. In November, 1892, appeared symptoms of peripheral neuritis and general mental and bodily prostration, somnolence, and fever. These symptoms progressed, and the patient died in February, 1893. The necropsy showed, in addition to signs of parenchymatous polyneuritis, foci of extensive softening in the cortex of the right frontal and temporal lobe, and in the adjacent white substance. (The authors remark that Wernicke had also shown the presence of polyneuritic symptoms side by side with those of cortical encephalitis.) They conclude that the evolution of the disease is very variable, according to the variety of etiological conditions present; that old age gives an unfavourable prognosis; and that the presence of tuberculosis generally forebodes a rapid and fatal issue.

SURGERY.

(389) The Surgical Treatment of Pulsating Exophthalmos.

Bodon (*Deut. Zeitsch. f. Chirurg.*, vol. li, pp. 5 and 6) relates two cases successfully treated by ligaturing the common carotid. Traumatic pulsating exophthalmos is due to the fact that the internal carotid ruptures into the cavernous sinus. As a result of this rupture the sinus becomes distended with blood. The increased pressure prevents the return of blood in the superior ophthalmic vein, and consequently stasis occurs. Symptoms of obstruction in the vein show themselves sooner or later according to the size of the rupture. The lids become swollen, the conjunctiva ecchymosed; there is œdema of the fundus oculi, with enlargement and tortuosity of the retinal vessels, and proptosis of the eyeball. Owing to the obstruction the blood finds its way into the facial and inferior ophthalmic veins. The pulsation of the eyeball is synchronous with the heart beat. A systolic murmur is heard in the neighbourhood of the orbit. The patient complains of blowing noises, severe headache, and

loss of sight. The pulsation of the eyeball and headache disappear when the carotid is compressed. Traumatic exophthalmos is sometimes present on both sides; in this case the symptoms are not due to an aneurysmal dilatation on both sides, but to the increase of pressure on the one side being communicated to the opposite cavernous sinus through the sinus circularis The treatment at first should consist in ordering the patient to keep in bed and administering narcotics and cold applications to the head. With complete rest a thrombus may possibly form, and close the opening between the artery and vein. The previous treatment by acupuncture, electropuncture, the injection of various agents causing coagula ion of the blood, have now only a historic interest. Digital compression is unsatisfactory; this treatment causes considerable pain, and it is impossible to apply the pressure so as to exclude the vagus and sympathetic. The ligature of the common carotid is the most rational form of treatment. The author describes two cases in which the carotid was ligatured on both sides. In one case the headache and pulsation still continued, and it was only after Dollinger had resected a portion of the ophthalmic vein that these symptoms disappeared. An examination of the literature of this subject shows that 58 cases have been reported in which the carotid was ligatured on one side. Ligature of both carotids has only been performed in 6 cases. The mortality in these cases has been high; sepsis claims by far the largest proportion of the victims. Very few died from the immediate effects of the operation. The prognosis should certainly be more favourable in these days of antiseptic treatment. It is important not to allow too long a time to elapse between the ligature of the two carotids. In some cases the sight in the opposite eye had failed before the operation. In Dollinger's case two months were allowed to elapse. Dollinger is determined to treat his next case of pulsating exophthalmos by first tying the ophthalmic vein; he believes that this would probably be sufficient to cause thrombosis in the cavernous sinus without resorting to the more serious operation of ligaturing the carotid.

(390) Siphon Puncture in Abdominal Operations.

Lauenstein (*Centralbl. f. Chir.*, No. 23, 1899) describes a combined method of puncture and siphon action, which he has found very useful in operations on ovarian cysts and distended gall bladder. This method consists in the connection with the penetrating cannula of a long elastic tube filled with sterilised or aseptic fluid, which is allowed to flow away, and thus to establish a siphon action at the moment that the cannula enters the cyst. By this method the surgeon may prevent a discharge of the contents of the cyst into the peritoneal cavity, and also avoid dragging the ovarian tumour through the external wound, during which act air often enters into the abdomen. Much importance is attached to the application of this method to operations on the gall bladder, as it is very necessary to prevent discharge into the abdominal cavity not only of any purulent contents, but also of clear and normal bile, which the author has found by frequent bacteriological investigation may contain both the bacterium coli and streptococci. Siphon puncture has also been found serviceable in certain operations on the stomach, in the course of which it becomes necessary to remove rapidly and safely a quantity of retained fluid from this organ.

(391) Sterilisation of Catheters and Bougies.

Nicoll (*Annals of Surgery*, June, 1899) publishes the results of an extensive investigation on the best means of sterilising the various forms of bougie and catheter now in use. The metal bougie and the soft red rubber composition, or Jacques's catheter, may be readily and certainly rendered sterile for an indefinite number of times either by boiling, or by washing and immersion in sufficiently powerful antiseptic solutions, and this without suffering change. With regard to the sterilisation of all forms of gum-elastic or varnished catheter, the author points out that while there are various methods which are not, when repeated, destructive of the instrument, and which, with regard to asepsis, offer a reasonable degree of security, there is no method which is entirely reliable. Formol vapour, which has lately been extolled as a means of sterilising catheters and bougies, is here asserted to be an unreliable agent for this purpose. The author has been led by the results of these observations to formulate certain rules for application in practice. He would avoid, as far as possible, the employment of catheters, and when a hollow instrument must be employed, would use a red rubber or Jacques's catheter in preference to a gum-elastic or metal one. When compelled by the nature of the case to fall back on gum-elastic catheters, he would, if the urine be very septic, destroy the instruments he has employed. If the urine be not very purulent or offensive, he would subject the catheter after use to external washing with soap and water, afterwards dip it in some antiseptic solution, and finally steam the interior of the instrument. Such treatment, however, is very destructive, and only those catheters that survive can be retained for further use.

(392) Suppuration in Delto-Pectoral Groove.

Morestin (*Bull. et Mém. de la Soc. Anat. de Paris*, May, 1899) after an anatomical note on the gland (Sappey) or glands (Aubry) which are sometimes (1 in 16 subjects examined by Morestin) found in the groove between the deltoid and pectoralis major muscles, relates a case of adenitis and suppuration of one of these glands. The patient was a coalheaver, aged 20. Some abrasions on his right hand suppurated. The forearm and part of the upper arm became tender, then as the tenderness subsided a painful swelling developed just in front of the right axilla. Morestin found on examination that it was entirely outside the axilla and its anterior border. It clearly lay over the groove between the pectoralis and deltoid. The redness and swelling extended towards the clavicle. There was a distinct tender gland in the subclavian fossa and another in the axilla. The patient felt rather ill, as usual in adenitis; there was no evidence of tubercle, and the sore fingers at once explained the origin of the abscess. On opening the abscess much pus escaped, and its cavity was found to lie between the two muscles. Recovery was rapid, as was expected.

MIDWIFERY AND DISEASES OF WOMEN.

(393) Is Eclampsia due to Infection?

Abuladse (*Monats. f. Geburts. u. Gyn.*, September, 1899) after studying 59 cases of eclampsia in the Imperial Maternity at Kieff, is inclined to doubt Stroganoff's theory that the disease is infectious. The latter authority certainly based his doctrine on 1,500 collected cases. But the chief fact brought forward to support it was the frequent admission of two or three more cases of eclampsia after the admission of a first case, when previously no cases had been admitted into the same maternity for months. Such evidence is never trustworthy. On the other hand, Abuladse watched all his 59 cases himself; he had recorded the presence of several eclamptic patients in the same ward at the same time, but all of them—and, indeed, nearly every case in the whole series—already had marked symptoms when admitted; that is to say, they at least had headache, nausea, vertigo, vomiting, disordered vision, œdema, albuminuria, and renal casts. Still more convincing is the fact that not a single lying-in woman in any of the wards into which one or several of the cases of eclampsia were admitted contracted this disease, which in fact cannot be contracted. Abuladse insists that eclampsia is a primary disease of the kidneys due solely to auto infection of the patient by the accumulation of waste products in the maternal and fœtal blood. It is essentially a disease of pregnancy, not of parturition, and it always tends to interrupt gestation.

(394) Posterior Rotation of Occiput in Vertex Presentation.

Stricker Coles (*Amer. Journ. Obstet.*, September, 1899) has issued a valuable paper of statistics on 30 cases of posterior rotation out of 925 vertex presentations observed in 975 labours in the Jefferson Maternity, Philadelphia. He is inclined to except 2 cases where delivery was accomplished by high forceps, the head was high up in the right oblique diameter, with the occiput behind, and as the forceps was applied to the sides of the head, anterior rotation could not take

place. The percentage of anterior rotation of the occiput when it was behind, in these cases, is very difficult to estimate, as many of the cases were not seen until rotation was already complete. The most common factor producing posterior rotation was incomplete flexion as the head passed down through the pelvis; the occipital end being the largest and passing through the smallest part of the pelvis, seems to meet with greater resistance; the sinciput becoming the most dependent portion would tend to rotate posteriorly. Three cases were converted into anterior position and labour proceeded normally. This was done by increasing flexion and grasping the head between the thumb and fingers, placing the patient on the side towards which the occiput pointed, or in the knee-chest position, and by external manipulation at the same time the head was rotated anteriorly, the patient then placed on her back, and labour allowed to proceed normally. In 5, after the above manœuvre, the forceps was needed. In 15 the head was delivered in the occipito-posterior position with forceps. Version was performed once. In 6 delivery took place without interference with the occiput lying posterior; in 4 of the 6 the mothers were multiparæ "with very poor pelvic floor," due to previous lacerations, and in 2 the mother was a primipara with large pelvis and the child was not above the average. The perineum was torn in 12 cases, the pelvic floor in 6, and the cervix in 5. All the mothers made good recoveries; 2 had slight *post-partum* hæmorrhage, in 3 there was elevation of temperature. Two children were lost. One had been dead for some time; the second, delivered with forceps, was badly asphyxiated was revived but died an hour and hour later.

(395) Abdominal Operation for Disease of Appendages.

HARTMANN (*Comptes Rendus de la Soc. d'Obstét. de Gynéc. et de Pédiatrie*, July, 1899) has removed the uterus entire with the appendages in 40 cases of chronic inflammatory disease of the ovary and tube, 14 non-suppurative, 26 suppurative, pus escaping during the operation. Only 1 patient died; in that case Hartmann had a new assistant who, horrified at seeing the operator burst a large abscess cavity, immediately tried to sponge away the pus. In so doing he displaced the compresses placed around the parts for the protection of the peritoneal cavity. Some coils of intestine were infected with the pus, and fatal peritonitis ensued. The after-results, according to this report, were far inferior to those following simple amputation of diseased appendages or the complete operation through the vagina, but the exact dates of the first and last of the series are not published. Out of the 39 that recovered from the operation there was 1 case of stercoral fistula; all the remainder recovered completely, and were never troubled with pains, discharge, or obstruction. The vaginal cicatrix was always soft, nor was there any lateral induration. Segond, in discussing Hartmann's operation, said he greatly preferred the vaginal route. Experience had shown that it was not more difficult, and above all it left no abdominal cicatrix.

(396) Influenza-Bronchitis in Pregnancy.

LAMBINON (*Journ. d' Accouchements*, Liége, October 15th, 1899) reports two cases of this grave complication, which, since the first outbreak of influenza, has been regularly observed in the Liége maternities every winter. A 2-para, aged 26, was delivered easily at term in March. For a week she had suffered from a severe attack of influenza-bronchitis, and on account of the high temperature a gram (15 gr.) of quinine had been given daily. Cynoglossum was administered in pills, and after delivery the uterus was washed out daily with sublimate solution. The temperature did not rise over 101° during the puerperium, and the patient was up and well on the tenth day. The child weighed 7 lbs. at birth, and measured 19½ inches in length; it was sickly, and on the ninth day œdema of the right hand occurred, death following one day later. The second patient was a 6-para aged 35. She was admitted into hospital in the eighth month suffering from influenza-bronchitis. Senega and strophanthus were prescribed. Delivery soon set in, and after five hours of labour a male child was born; it weighed 6 lbs. and measured 18 inches. The uterus was treated as in the first case; the maximum temperature was 100.5° The mother recovered speedily. The child was reared with ease. On the twelfth day, however, he had hardly gained 2 lbs. Lambinon notes some recent statistics of influenza in pregnancy and the puerperium. Of the older obstetricians, Jacquemier declared in 1837 that influenza was no more dangerous to pregnant women than to anybody else; but the type of the disease was different in those days, and Cazeaux observed a fair number of abortions in the course of influenza, whether from the poison of the disease or through the violent fits of coughing which it set up.

(397) Operation on Umbilical Hernia in Newborn Child.

WALRAVENS (*Centralbl. f. Gynäk.*, No. 39, 1899) reported before the Belgian Society of Surgery an operation for irreducible congenital umbilical hernia in a well-developed newborn child. The redundant integument was cut away, and the sac opened. The contents, small intestine and transverse colon, were reduced. Above and to the right a lobe of the liver adhered to the sac, a little within its neck; this adhesion was set free, and much bloody serum escaped from the sac. The peritoneum, and also the recti, were united with catgut, the muscles were easily brought together without tension. The infant died on the second day, without any marked symptoms. This bad result was clearly due, in great part at least, to previous peritonitis rather than to the operation. Walravens urges early operative interference in such cases, and a radical procedure is alone of any benefit. He found at the fundus of the sac a big pouch, no doubt puzzling to a surgeon already harassed by the difficulties inevitable in a herniotomy. This pouch represents the site of a thick layer of Whartonian jelly in the walls of the sac, and it had deliquesced. The sac was remarkably vascular on its inner aspect.

THERAPEUTICS.

(398) The Relative Value of White and Dark Meat in Sick Diet.

OFFER AND ROSENQUIST (*Berl. klin. Woch.*, 1899, Nos. 43 and 44) record investigations on the basis of which they consider that there is no fundamental reason to draw a distinction between the use of white and dark meat in gout and kidney diseases. Senator (*ibid.*, No. 45), while acknowledging the value of their researches as regards the amount of nitrogenous extractive matter contained in various white and dark meats, and admitting that when alluding to the deleterious effects of dark meats and game in gout and kidney disease most writers perhaps refer rather to the nitrogenous than to the non-nitrogenous extractive matter they contain, points out that the authors quoted by Offer and Rosenquist in support of their erroneous view speak of extractive matter generally, and that in one of the passages quoted he himself, after mentioning certain nitrogenous, expressly mentions "other extractive matters." Offer and Rosenquist have neglected to estimate the non-azotised extractive matters, which, as regards beef and veal, are the most important forms of dark and white meat, J. König has shown to be as 0.46 : 0.07 per cent. Moreover, no account has been taken of the fact that the meat is generally consumed cooked, and not in the raw state in which it was examined in these experiments, and cooking alters its composition and the amount of extractives it contains. König gives this amount as follows: Beef: roast, 0.72; boiled, 0.40 per cent., compared with only 0.03 per cent. in roast veal; or estimated to water, free residue roast beef 1.59, and roast veal 0.09 per cent. The received opinion that the paler sorts of meat, and especially the flesh of younger animals, is poorer in extractive matter, a view quite lately adopted by Rubner and Minkowski, is therefore not disproved. Thirdly, the difference between various meats depends on more than the amount of nitrogenous extractive matter they contain. Some are more digestible than others, and there is a fundamental difference in the total amount of nitrogen, which is considerably more in beef, game, and ham than in veal, mutton, and most kinds of fish. The uric acid and other elements of albuminous metabolism in the urine are increased by increase of the quantity of nitrogen in the meat ingested. Apart from any equality in the nitrogenous extractive matter contained in different kinds of meat, there are fundamental differences between them which we know, and probably others, and there is no reason to abandon the opinion,

founded on continued practical experience, that to gouty and nephritic patients, white meats are the less injurious.

(399) Ethyl Chloride as a General Anæsthetic.

WIESNER (*Wien. med. Woch.*, July 8th, 1899), as a result of 400 cases of ethyl chloride anæsthesia in von Hacker's clinic at Innsbruck finds that the method has many advantages: (1) Complete anæsthesia is induced in from a half to two minutes, according to the age of the patient and the amount of alcohol he is used to drink; (2) a stage of excitement is observed only in alcoholic subjects; (3) symptoms of heart failure or of disturbed respiration are never seen, and the tongue has no tendency to fall backwards; (4) consciousness returns directly the mask is removed from the face, and unpleasant sequelæ, such as headache or vomiting, are extremely rare. Though most suitable for short operations, ethyl chloride has been employed of late successfully in operations lasting as long as fifty minutes. It is especially valuable in cases with serious circulatory troubles, fatty degeneration of the heart, and respiratory diseases, where it is inadvisable to give chloroform or ether, and in shock or after copious hæmorrhage. When anæsthesia is complete the pupil and corneal reflexes usually persist, and the patient will occasionally even answer questions, though he remembers nothing of the conversation afterwards. Complete muscular relaxation is never induced, and this unfits ethyl chloride for all cases where this is desired. Another disadvantage in long operations is that patients may wake up in the middle. The anæsthetic seems to be very suitable for rendering first aid to the wounded in battle.

(400) Spontaneous Recurrent Epistaxis.

MARCEL NATIER (*Extrait de "La Parole,"* No. 8, 1899) protests against the attitude of those who in certain cases prefer not to treat habitual epistaxis on the ground that the hæmorrhage has some kind of safety-valve action. The surgical rule to arrest the hæmorrhage as quickly as possible applies to the nose as well as to the limbs, with very few exceptions. Even in a subject with atheromatous vessels the bleeding can be stopped without any bad consequences. The author's cases show that recurrent epistaxis is usually unilateral. Unless stopped it may continue indefinitely, and one patient, a woman, had suffered with it for forty years. The attacks may occur every day, though more often at longer intervals. The woman mentioned above was free from them only during her two pregnancies. The quantity of blood lost varies greatly, but in two cases was frequently sufficient to cause syncope and loss of consciousness. As regards the remote causes, one patient had arterio-sclerosis, another could not drink red wine without an attack, and another, though naturally industrious, could make no mental effort. Besides these, in all of Natier's cases a local lesion could be found. In the atheromatous patient, who had been bleeding on and off for seventeen days, and in whom fresh hæmorrhage occurred each time the plugs were removed, an examination of the nares showed that a branch of the spheno-palatine artery had ruptured about the middle of the septum at a level with the vomer. This case, though exceptional, shows the urgent necessity of examining all cases of obstinate epistaxis with the speculum. The usual site for the hæmorrhage is on the cartilaginous septum about 2 cm. from its free margin and above the floor of the nose, where there is generally found a varicose condition of the veins, which may be covered with small punctiform ulcers. Chiari found the hæmorrhage to arise from the turbinate bones in only 20 out of 190 cases. The symptoms produced by the constantly-recurring loss of blood consist in failure of vision, neurasthenia, anæmia, general weakness, loss of memory, vertigo, etc. When the local cause remains undiscovered a diagnosis of phthisis, and still more often of heart disease, is not uncommon. Though in the treatment of an attack of recurrent epistaxis, direct pressure on the septum, irrigations of very hot water, or plugging the nares, will probably arrest the hæmorrhage, they leave the actual cause untouched. For a radical cure it is necessary to convert the friable ulcerated mucous membrane into cicatricial tissue by the galvano-cautery, or, failing this, with silver nitrate or chromic acid. Frequently a single application will arrest finally nasal hæmorrhage which has lasted intermittently for years, and rendered the patient's life miserable and useless.

(401) Syphilis Rebellious to Specific Treatment.

FOURNIER (*Ann. de Derm. et de Syph.*, July, 1899) showed to the Paris Société de Dermatologie, a woman who two years and a half previously had contracted syphilis from her husband. During the whole of that period she had suffered from severe syphilitic symptoms, notwithstanding the most varied treatment—mercury, iodide, iron, etc. He also referred to a similarly obstinate case in a man. The mercury in both was used in every possible way—by mouth, by inunction, and by intramuscular injection. An interesting feature about both was the fact that the woman had had forty calomel injections, and the man no fewer than 120 without any curative effect up to date, demonstrating most clearly how little foundation there was in the dogmatic statements put forward by some observers that syphilis could not resist calomel injection. In the case of the woman, her mother had died of phthisis and her father from absinthe, facts which might to some extent explain the want of success; but Fournier added that he had come across similarly obstinate cases in which there was no such history, and which could not be explained. He had obtained a certain amount of benefit from serum injections, and this was confirmed by Du Castel in the discussion.

PATHOLOGY.

(402) Action of Streptococci and their Toxin upon various Organs.

HOMÉN (Ziegler's *Beiträge z. path. Anat.*, Bd. xxv, Hft. i), with the assistance of former pupils, has conducted experiments upon 900 rabbits in the Pathological Institute at Helsingfors. His own work is most important clinically, as throwing light upon the pathogenesis of certain progressive nervous diseases, such as ascending neuritis and tetanus Streptococci injected into a nerve trunk confined themselves, but a few centimetres higher up, to the lymph channels of the fasciculi affected, and chiefly to the larger spaces on the inner side of the perineurium, whence they gradually and sometimes in large numbers advanced along the endoneural continuations of the perineal sheath towards the centre of the nerve. In their further ascent to the spinal cord they chose the posterior rather than the anterior roots. Within twenty hours after injection they were to be found in the subarachnoid space round the posterior roots, whence they were rapidly disseminated through the intermeningeal spaces of the whole cord, and even into those of the brain. The substance of the cord was afterwards attacked, by way of the posterior septum and posterior roots, so that changes appeared in the posterior horns and columns. The changes were the same whether the bacteria or their toxins were injected: the nerve degenerated, and degenerative inflammatory and sclerotic processes took place in the spinal cord.—Bjorkstén describes a deterioration of the general condition, sometimes amounting to toxin cachexia, which results from repeated injections. The bacteria and their toxins cause degeneration of the liver cells, accompanied by inflammatory processes, which extending from the ductus choledochus may ultimately lead to marked and considerable sclerosis round the bile ducts.—Silfast finds that the lungs have great power of resistance against streptococci, a power which is greatly diminished when the whole body, or even half the thorax, is exposed to cold, or the lungs to the inhalation of anything mechanically detrimental.—Tallquist finds that generally the microscopic alterations are far more extended than the macroscopic. In muscular tissue the bacteria perish in a few days; in the pericardium and the valves they can continue to live, and thence be the origin of fresh colonies in the myocardium. Their destructive action on the cardiac muscle is followed by inflammatory reaction. There is no constant proportion between their parenchymatous and interstitial effects; the latter particularly affect the wall of the left ventricle, the septum, and papillary muscles. Toxin injections occasionally cause fatty degeneration of the heart. The streptococci and the toxins excite myocarditis with formation of callosities.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(403) Medical Use of the "X" Rays.

FREUND, in a paper read before the Verein zur Verbreitung naturwissenschaftlicher Kentnisse in Wien (xxix year, Heft 6, 1899) refers to the uses of the *x* rays in medicine. Among other points touched upon the following are of interest. The chronic tumour-like swelling of the foot (*accroissement* of the French), which interferes greatly with the walking powers of the soldier, and which arises from slight traumatisms, such as the sudden striking of the foot by the rifle butt, etc., had been looked upon as due to an inflammatory condition of the soft parts, tendons, joints, etc. The *x* rays have shown that it is really caused by a fracture of one of the metatarsal bones, so that instead of applying massage and gymnastics the foot is put up in plaster and rapidly gets well with rest. Further, its application in cases of accidents, malingering, life insurance, etc., must not be lost sight of. Incidentally the work of Kienböck in von Schrötter's clinic on the lungs and their morbid conditions — pneumonia, tuberculosis, the movements of the diaphragm, pleural effusions, etc., is mentioned. As to the heart the changes after hard cycling, and in the Schott treatment, have been observed. Capsules containing bismuth, which does not allow the rays to pass through with a covering not attacked by the stomach and intestines, have been used to trace the course of the alimentary canal, to reveal constrictions, changes of position. Then the *x* rays may lead to the discovery of gall stones, calculi of kidneys and bladder, tumours, hydatids. Von Ziemssen, improving on the method of direct examination by means of the screen, clothes the patient in a closely-fitting covering impregnated with a fluorescent compound. In this way the position and movements of the viscera can be comfortably observed. With regard to the radiography of the pelvis Freund has found that placing the patient in the Trendelenburg position was a great improvement, as in that case the rays are not hindered by the vascular intestinal coils, etc., which fall towards the diaphragm. As a further application of this Schiff empties the limbs of blood by means of the elastic band, and has also found this procedure of value in treating skin affections. In the anatomical study of the circulatory system excellent results are obtained by injecting the body with a mercurial salt, the smallest vessels showing up owing to the presence of a compound non-penetrable to the rays. The physiology of voice and of speech can also be intimately studied by means of the Roentgen apparatus. In the diagnosis of death the contours of the ribs, diaphragm, and heart are more sharply defined than in the living body. The good results obtained by Freund and Schiff in destroying hairy moles, superfluous hairs, etc., are then referred to. Further the rays are also of value in the examination of drugs, foods, etc., and in gynæcology.

(404) Gangrene of the Extremities in Pneumonia.

BERTHIER draws attention (*Thèse de Paris*, 1899) to a somewhat unusual condition observed in some cases of pneumonia—gangrene of the fingers and toes. Gangrene of the extremities, as observed in pneumonia, does not differ symptomatically from that met with in other diseases. It is most usually after the subsidence of the disease, when pyrexia has abated, and when perhaps the patient may to all appearances be doing well, that this complication sets in. The first indication is severe pain coming on possibly between the third and tenth day after the crisis. The patient notices the onset with such suddenness that he may look to see if the affected part has been struck. Sometimes the pain comes on gradually with itching and burning. This is followed by loss of heat, dark coloration, and subsequently gangrene more or less marked. Pain may then disappear, the dark-coloured gangrenous portions become limited, and a line of demarcation appears. As a rule, the fingers and toes only are affected, but in exceptional cases it may extend to the arm and leg. It is generally of the dry form. The author points out that, on the one hand, it is curious that gangrene should be such an unusual sequela of pneumonia, considering its relative frequency in other acute febrile diseases, and also that other complications, such as pericarditis, suppurative otitis media, arthritis, and many other lesions of that nature appear to be more common. The gangrenous fingers or toes separate spontaneously; on other occasions they call for surgical interference.

(405) The Injection of Fluids and Air into the Stomach from the Upper part of the Œsophagus.

G. KRÖNIG (*Deut. med. Woch.*, 1899, No. 44), some time ago recommended that in carcinomatous and cicatricial changes, and still more in recent corrosion of the œsophagus, the use of the sound should be preceded by an injection of 20-30 c.cm. of warm olive oil by means of a soft Nelaton catheter, about 15 cm. long, the eye of which reached to about the limit between the first and second upper fourths of the œsophagus, after which the tube can be passed into the stomach without danger or pain. Finding that the oil so injected passed contracted points with a certain ease and without any act of swallowing on the part of the patient and finding that watery fluids also passed into the stomach, he proceeded to inject air for diagnostic inflation of the stomach from the same height, and not until fifteen months later learned that Fürbringer (*ibid.*, 1899, No. 40) had practised this method for nine years. It is an undoubted advantage both to the patient and the physician to avoid passing the sound into the stomach. Choking, struggles, and befouling, etc., the well-known disagreeable results so commonly arising from the use of the sound, especially for the first time, are reduced to a minimum when the end of the instrument remains in the upper part of the gullet. It is quite the exception for him to have to pass it beyond the cardia even when, being without the necessary assistance, he inflates the stomach from his own mouth. Krönig now employs this method for introducing food, especially in strictures, that the sound cannot pass without difficulty and danger, and attaches much importance to its mechanical effect in keeping open or even dilating the passage. A preparatory injection of oil may be made to precede the food. The proceeding is so simple and causes so little distress that the patient after a few days can introduce the catheter himself, and, with a view to its gentle mechanical effect, it may be commenced as soon as he perceives any difficulty in swallowing.

SURGERY.

(406) Total Resection of the Bladder.

MODLINSKI (*Centralbl. f. Chir.*, No. 27, 1899) in a communication to the German Surgical Society, states that the feasibility of total resection of the bladder has been proved both by experiments on animals and by a series of operations on the living human subject. Up to the present time this operation had been practised on 12 patients—on seven males with four deaths, and on 5 women with two deaths. The author has performed the operation in two cases, one of which proved fatal, whilst the other had very good results. Extirpation of the bladder, it is held, is indicated by the following conditions: (1) When a less serious operation has been followed by early relapse, or the bladder wall is extensively involved in the growth of the tumour, even though this be of a benign nature, as, for instance, a papilloma, a myoma, or a cyst; in such cases the prognosis of the operation may be regarded as favourable. (2) In cases of malignant and more or less extensive growths, especially those that are situated in the region of the urethral orifices, and have not spread beyond the limits of the bladder and attached neighbouring organs and tissues; the prospects of operative treatment in such cases, however, are not good. (3) When the bladder is involved in a morbid growth which has spread to it from the uterus. The pain and trouble caused by such a condition as this can be relieved by nothing short of simultaneous removal of both organs. The bladder is best removed in the male by the sacral incision, such as is made for removal of cancer of the rectum; in the female by a suprapubic incision or through the vagina. In the female the ureters may be made to discharge the urine into the vagina.

In males a reservoir for the urine may be made by detaching the lower part of the rectum and closing its upper divided extremity, the lower end of the upper segment of gut being fixed to the margins of the external wound.

(407) Resection of the Liver.

KEEN (*Annals of Surgery*, September) who has already published two instances of successful removal of hepatic tumour, reports a third case of resection of the liver for a new growth far larger than either of the other two, and with a similarly successful issue. The patient—a man aged 50 years—had suffered for three months from a dull pain in the abdomen felt at first just below the umbilicus, and after a time in the epigastrium. When seen by the author at the end of this period he was weak and emaciated, and on abdominal palpation a hard, firm, movable mass as large as a full-sized hand could be felt in the epigastric region. An exploratory laparotomy in the median line made it certain that this mass was formed by the left lobe of the liver, which contained a number of large nodules, found on subsequent microscopical examination to be of carcinomatous nature. The author then proceeded to remove the entire left lobe, and with it the whole of the disease. The enlarged lobe was severed from the rest of the liver by means of the Paquelin cautery. The hæmorrhage was not very severe, except when the cautery divided some of the larger veins. Each of these veins, when opened, was at once compressed by the finger and afterwards secured by a catgut ligature. Five ligatures were thus applied. A part of the raw surface left on removal of the left lobe was closed by folding the edge of the liver upon itself, like an amputation flap, and the remaining part was covered by a packing of iodoform gauze. The patient made a speedy recovery from the effects of the operation, and at the date of this report, made after an interval of about three weeks, was able to leave his bed. The absence of any pedicle in this case and the very broad base of the diseased portion of liver precluded the use of an elastic ligature, a procedure which, in the author's opinion, is advisable only in exceptional cases. To this paper is appended a table of 76 cases of resection of the liver for hepatic tumours, showing a mortality from this operation of 14.9 per cent. The same number of the *Annals of Surgery* contains another paper on the Surgical Treatment of Neoplasms of the Liver, by Thompson of Galveston, who reports a case of removal of a large growth occupying contiguous parts of the right and left lobes, and covered by the suspensory ligament. This growth was cut away with curved scissors after provisional control of hæmorrhage by long needles and an elastic ligature, and the raw surface was sutured to the margins of the abdominal wound. The patient, a female aged 30, made a fair recovery after prolonged treatment. Healing, it is stated, was eventually satisfactory, but resulted in a wide separation of the recti muscles and an incipient abdominal hernia. The removed growth was found to be a typical gumma.

(408) Extirpation of Urachus for Urachal Fistula.

MONOD (*Bull. et Mém. de la Soc. de Chir. de Paris*, July 11th, 1899) performed this operation in a case of congenital urachal fistula in a lad aged 10. The usual proceeding is to dissect up the fistula, close the urachus below it, and then to sink the urachus in the abdominal wall, which is carefully closed. In this case the segment of urachus below the fistula was so short that the ordinary operation would have drawn the top of the bladder into the midst of the parietes. Monod dissected up the vesical end of the urachus and excised it with a small piece of vesical wall around it, very much as Ill, of Newark, U.S., operated in a case of urachal cyst closely related to the bladder; the loss of substance being closed by a triple layer of catgut. Then the parietes were closed over the seat of operation without drainage. The peritoneum, and then the recti, were united with catgut; lastly, the integument was sutured with horsehair. It is specially advisable to avoid hernia after operations on the urachus, as its special disadvantages may be associated with dysuria or urinary fistula.

(409) Extirpation of the Spleen.

BURTZ (*Deut med. Woch.*, 1899, November 2nd) attributes the improved mortality after this operation not only to better technique and asepsis, but also to recent limitations in its field. After laceration the prognosis is relatively good. Riegner, Spendel, Ballance, Krabbel, and Trendelenburg have all operated successfully for ruptured spleen. In malignant tumours and in wandering spleen operation is indicated, but the prognosis, especially when the tumour is very large, is not so good. Extensive adhesions and leukæmia of the spleen contraindicate. In the former case the surface bleeding can hardly be arrested by tampon; in the latter the vessels of the pedicle are always big, but their walls are brittle and easily torn, the ligature cuts into the walls, and the patient succumbs to secondary hæmorrhage. Spanton gives the statistics of 25 cases of leukæmic spleen; 24 of the 25 cases died. Burtz himself had a fatal case in 1897, from which he removed a tumour of 6 5 lbs., the patient dying ten hours after the operation under symptoms of acute anæmia and shock. Leukæmia must be considered to contraindicate operation until modern surgery has learnt some better way of preventing secondary hæmorrhage than a ligature that cuts through the tissues.

(410) Suprapubic Cystotomy for Cancer Repeated Thrice.

MIXTER (*Boston Med. and Surg. Journal*, April 20th, 1899) recently exhibited before an American medical society a patient on whom he had performed suprapubic cystotomy three times in four years for malignant disease of the base of the bladder. In the interval between the operations the patient was perfectly comfortable, and able to remain in command as captain of a coasting vessel. He had, however, a large cystic tumour in the left side of the abdomen which contained blood and some cells. On the other hand, some cells were found in the bladder, which did not look like ordinary vesical epithelium, but there were no large villous bodies such as were found before the third cystotomy. In short, there was no positive evidence of recurrence in the bladder, though the abdominal tumour was too certainly a breaking-down malignant mass.

(411) Lymphatic Tumours and Eosinophilia.

WIDAL AND LAISNÉ (*Progrès Méd.*, July 15th, 1899) state that a large tumour developed on the neck of a woman, aged 39, after a violent emotion. It disappeared under the influence of arsenic and a residence by the sea. Once more the tumour reappeared after shock; it developed in the supraclavicular region, and was followed by symptoms of mediastinal growth, ending fatally. Tumours of the type known as Trousseau's *adénie* were found in the neck and mediastinum, and there were two small adenomata in the lung. Widal had noted during the patient's life that eosinophile corpuscles abounded in the blood in great abundance. This phenomenon was most marked in the earlier stage of the disease; it steadily diminished, and disappeared before death. Achard, in a discussion on this case, observed that eosinophilia had been seen associated with lympho-adenoma and lympho-sarcoma. In some of these cases the eosinophile corpuscles were found in the tumours, but not in the blood.

MIDWIFERY AND DISEASES OF WOMEN.

(412) Stypticin in Uterine Hæmorrhage.

ABEGG (*Centralbl. f. Gynäk.*, No. 44, 1899) quotes Billroth's saying, "Medicine will become surgical," and dwells on the fact that the great surgeon's prophecy has been fulfilled. The innovation is greatly abused, and Abegg refers to the grave charges which Priestley, Stratz, and Kleinwächter bring against some gynæcologists whose first thought on seeing a case is "What operation is necessary?" Uterine fibroids are often removed on insufficient grounds. Above all, some of these operators practise extirpation of the uterus for relatively trifling hæmorrhages not due to malignant disease. Ergot and hydrastinum hydrochloricum often prove insufficient to stop the hæmorrhage, but stypticin, as first used by Freund, of Frankfort, seems even preferable when bleeding is manageable by drugs alone. It does not cause nausea or vomiting like ergot. It seems useless in threatened abortion, and is purely a palliative in cases of bleeding fibroid or fibroid polypus, but

it is very serviceable in menorrhagia at puberty and habitual menorrhagia in adult life. In metrorrhagia during the puerperium stypticin is of greater value, whilst it is especially efficacious in uterine hæmorrhages during the menopause. Notes on this drug have already appeared in the Epitome (Gottschalk, vol. i, 1896, 31, Marfori, i, 1898, 134, and Bakofen, *ibid.*, 366). Its correct chemical title is cotarnine hydrochloride, and Marfori uses that term. Abegg gives ¼ gr. twice or three times daily.

(413) Hydramnion: Dystocia; Placental Disease.

Chambrelent and Fieux (*Bull. et Mém. de la Soc. de Gynéc., etc., de Bordeaux*, May-June, 1899) report a case in which, as usual in hydramnion, the abdomen had increased in size more rapidly than in normal pregnancy. The patient was in her fourth pregnancy; the first ended at term seven years before; since then she had aborted twice. Chambrelent was called in when she was in labour at term. The os was slow in dilating. Hydramnion was diagnosed. Next day much liquor amnii escaped. The abdomen at once became smaller and the os at the same time dilated speedily. On an attempt to raise the fœtal head a quantity of fluid escaped; the fœtal heart sounds could not be heard and the forceps was applied. More fluid escaped, making the total amount as much as 17 pints. The head was extracted with ease but there was great difficulty with the trunk. The child was dead, but maceration was only beginning; it was much bigger than a normal fœtus at term, owing to general œdema and to ascites, which had caused the difficulty in delivery. Half an hour later, as the afterbirth remained undelivered, Chambrelent passed his hand into the uterus and felt a spherical tumour as large as a potato, which made him suspect a second child. It was perfectly loose, and so was the placenta, of which it formed a part. It was pedunculated, the pedicle being a membranous and vascular band connected with the side of the placenta; it looked like a spleen on section, and proved to be a pure myxoma.

(414) Inversion of Uterus Reduced by Douche.

Donald (*Amer. Gynec. and Obstet. Journ.*, October, 1899) assisted at the delivery of a primipara, aged 23. For six hours labour had gone on well, then progressive pains ceased for two hours. The os was moderately well-dilated, the membranes protruded, and the presentation was left occipito-anterior. The forceps was applied under chloroform, and the child delivered with care. But sharp flooding followed, and the placenta was therefore delivered quickly by the combined method, though the traction on the cord was of the lightest character. This failed to stop the bleeding; the hot douche was prepared, and on examining, the fundus was detected projecting freely through the soft and flabby os. The fundus was pushed above the os, then the nozzle of the douche introduced into the os; an assistant held the douche bag at a height of eight feet. The combined force of the nozzle and the stream of water quickly completed the reduction of the inverted uterus. There was no further difficulty, all hæmorrhage ceased, and the patient made a good recovery. Donald considers that in a case of inversion seen early, before the fundus has descended too far through the os, the douche seems to be an ideal treatment.

(415) Pains due to Ovarian Calculus.

Coe (*Amer. Gynec. and Obstet. Journ.*, August, 1899) writes of a patient, aged 41, recently married for the second time, and childless. She had suffered from an attack of peritonitis nearly a year before operation, and a second six months after the first. The first attack was diagnosed as appendicitis; the patient suffered from more or less constant pain in the hypogastrium, chiefly to the left. The most marked symptom, however, was intractable sciatica on the left side. A calculous concretion was found in the ovary, which was removed and exhibited by Coe before the New York Obstetrical Society. It is not stated in the report whether the ovary was inflamed or cystic.

THERAPEUTICS.

(416) Therapeutic Efficacy of Heroin.

Max Einhorn (*Philadelphia Med. Journ.*, October 28th) gives his experience of heroin. Heroin represents a morphine in which the two hydroxyl groups are replaced by acetal radicals. The formula for morphine is $C_{17}H_{19}NO_3$, while that of heroin is $C_{17}H_{17}\begin{matrix}OOC.CH_3\\OOC.CH_3\end{matrix}NO$. Heroin is thus a diacetic-acid-ester of morphine. H. Dreser found that the sedative effect upon respiration was more pronounced in heroin than in morphine or codein. At the same time, after the administration of heroin, the number of respirations grows less, and the inspiration is lengthened in its duration, thus increasing the amount of inhaled air. Dreser further stated that the sedative effect of heroin is very marked, 0.005 to 0.01 of the drug being very efficient against cough. More recently Floret, Georg, Strube, Morris Manges, W. Freudenthal, Julius Weiss, B. Turnauer, Charles J. Lang, and H. Leo and H. Eulenburg have highly recommended this remedy. Eulenburg and Weiss also tried heroin hydrochloride, which is readily soluble in water, and in this respect presents some advantages over the ordinary heroin, which is insoluble. The medicinal properties were identical in both preparations. Einhorn has used the remedy since January 1st, 1899, either in powder form or tablets, or heroin hydrochloride in solutions, giving 5 mg. (1/12 gr.) twice daily. The formula prescribed was: R, Heroin, 0.005; sacch. alb., 0.3; ft. pulv., No. xiv; Sig.: one powder twice daily. Or: R, Heroin mur., 0.075; aq. dest., 60.0; Sig.: one teaspoonful twice daily. In three out of four cases of pulmonary tuberculosis a constant improvement (alleviation of the cough) was obtained, while in one case, after acting beneficially at first, the drug lost its effect in 14 days. In five of seven cases of asthma its action was good; it diminished the dyspnœa and alleviated the cough, although in two of them the administration of potassium iodide in conjunction with the heroin was necessary. In two other cases no improvement was apparently obtained. In two cases of chronic bronchitis improvement occurred in one instance, and no results in the other. In three cases of cardiac lesions and slight dyspnœa amelioration occurred in two, while in a third no effect was noted. In two cases of cancer (one of the cardia and one of the stomach) the pains were greatly alleviated. In a case of hyperæsthesia of the stomach and chronic bronchitis the remedy acted well, but produced constipation; and in two cases of gastralgia (one from duodenal ulcer, the other from gastric catarrh), decided amelioration took place. In a case of tabes dorsalis the existing gastralgia and enteralgia were much relieved. Einhorn concludes, from his observations that in heroin we possess a very valuable therapeutic agent. It principally allays coughs and eases respiration, but it has also general analgesic properties, which render it of benefit in most painful affections. Except slight dizziness and occasionally dryness in the throat, which he noted but rarely, he has never seen any unpleasant symptoms even from a prolonged use of heroin.

(417) Treatment of Gonorrhœa and Urethritis.

Barrieu (*Thèse de Paris*, December 7th, 1898) reports 12 cases of gonorrhœa treated by injections of iodoform oil (10 grams of porphyrised iodoform to 60 grams of oil of sweet almonds, with 3 drops of essence of peppermint). The injections were given thrice daily. The author says the injections cause no pain or inflammation, and no consecutive lesion of the urethra; they can be used at the onset of the disease, and a cure is effected in a fortnight at the outside.—J. Thomas (*Thèse de Paris*, June 21st, 1899) reports 5 cases of acute urethritis treated by washing out with protargol; 7 cases of chronic urethritis with gonococci, and 12 cases of chronic urethritis without gonococci treated by instillations of protargol; 6 cases of chronic tuberculous urethritis treated by instillation of picric acid, and 4 cases of gonorrhœal cystitis treated by instillations of protargol. From a critical study of these cases he concludes that in the treatment of acute gonorrhœal urethritis neither injections of protargol, nor injections of picric acid give better results than those of permanganate of potassium. Picric acid in particular caused such active hypersecretion that its use had to be given up. In chronic gonorrhœal urethritis protargol in instillations of 5 per cent. gives results almost

as satisfactory as those obtained with nitrate of silver. Protargol has the following advantages over the nitrate of silver: The instillations are absolutely painless, they do not cause the reappearance of the acute stage of gonorrhœa, they can be repeated daily, and thus cure is more rapidly brought about. In chronic tuberbulous urethritis protargol gave indifferent results, and picric acid effected improvement but not cure.—Cavart (*Thèse de Paris*, July 21st, 1899) passes in review all the principal methods of treatment that have been adopted in acute gonorrhœal urethritis. He says the balsamic drugs (cubebs, copaiba, sandalwood) still hold their ground. Of the antiseptics that have been tried permanganate of potassium is the best; it is very superior to the organic salts of silver and to acrol. Washing out is better than injection, which is not without danger when done by the patient himself. Abortive treatment has a very limited applicability. —A. Pigot (*Thèse de Paris*, March 11th, 1899) reports 32 cases of gonorrhœal orchitis treated by the internal administration of salicylate of sodium with very good results. No other treatment, according to him, is so useful in orchitis, at least in the cases of orchi-epididymitis where pain is intense, and where the spermatic cord and the tunica vaginalis are only slightly involved. It is less successful when the cord shares in the inflammation, and when there is much effusion into the tunica vaginalis. In the former case inunction of mercury and belladonna over the cord is useful.

(418) Internal Medication for Lupus.

A. Philippson (*Dermatolog. Zeitschr.*, 1899, p. 289) says he has used the following internal medication in cases of lupus vulgaris with good results. He gives fluoride of sodium in pills, in doses of 1 decigram three times a day; the pills are taken in a little milk after meals. Philippson himself took one day 60 cg. of fluoride of sodium without experiencing any ill-effects beyond nausea. He also tried on himself the effect of subcutaneous injections of 1 to 3 cg. He afterwards injected 1 cg. into the substance of the thigh; this gave rise to very painful infiltration, which was followed by a slightly depressed cicatrix. Philippson concludes from his experience that fluoride of sodium, given internally, has a curative influence on lupus. But the disturbing effect of the drug on the stomach is such that the necessary dose (1 dcg. t. d.) cannot be continued till cure is complete. He therefore recommends the use of para-fluoro-benzoate of soda in dose of 50 cg. thrice daily. There has not yet been a case of perfect cure, but the treatment does not aggravate the disease, and seems to deserve a further trial.

(419) Xeroform.

Nuguera (*Deutsche militärarztliche Zeitschr.*, Part 5, 1899) claims excellent results in the treatment of wounds from xeroform which he used in a base hospital in Cuba during the war. The wounds were first freely irrigated with a 1 in 1,000 sublimate solution, then a fine layer of xeroform powder was strewed over the skin, and the whole covered in with sublimate gauze and carbolised wool. Sutures were applied in sabre wounds without loss of substance. The dressings were not changed till they were soaked through. The wounds healed remarkably well; even bad gashes closed in two or three weeks. The secretion from the wound was completely taken up by the powder and sterilised. Most of the cases thus treated were not admitted into hospital till from one till three days after the wound was received. Xeroform, according to Nuguera, is valuable as a primary application when less portable antiseptics are not at hand, since it destroys the sepsis in dirt and discharge around the wound.

PATHOLOGY.

(420) The Micro-organism of Scarlet Fever.

W. J. Class (*Chicago Med. Record.*, May, 1899) refers to the unsatisfactory results of the investigation of Klein, of Crajkowski, and of other careful observers, in isolating a specific micro-organism of scarlet fever, and concludes that the fault lay with the culture media employed. After various failures he has at least succeeded in finding a medium on which he has been able almost invariably to obtain, both from the scales of the epidermis and from the throats of scarlatinal patients, an organism which presents characteristic features both in its morphology and its mode of growth, and which he believes to be the specific germ of scarlet fever. fever. It is a diplococcus resembling (as ordinarily seen on slides made from fresh cultures) a large gonococcus. In specimens that have been but slightly stained a transverse line is noticed running through each half of the diplococcus, and giving it the appearance of a tetrad. The size of the diplococcus varies, but the cocci are always considerably larger than those of ordinary pus (streptococci or staphylococci pyogenes). Lancet-shaped forms, such as are found in the pneumococci, are never met with, but chains (streptococci) forms, and occasionally single cocci, are rarely observed. They have no capsule and show no spores. Specimens from pure cultures can be stained by carbol-fuchsin, aqueous solution of methylene blue, Bismark brown, and Pitfield's flagella stain. They are decolorised by Gram's method, but less readily than the gonococcus. The larger-sized cocci stain more deeply than the smaller ones. The successful culture medium consists of glycerine agar, to which is added about 5 per cent. by weight of black garden earth, previously sterilised by discontinuous heating. The epidermic scales removed from a patient by a sterilised platinum loop are placed on this culture medium, and the tubes put in the incubator for from two to seven days, at a temperature of about 35° C. In about two days (more or less) small whitish-gray semi-transparent colonies appear. The organism does not grow on agar-agar, glycerine-agar, gelatine, bouillon, or potato. The germs were obtained from the scales and from the throats of 30 patients suffering from typical scarlatina. Inoculations on animals gave negative results.

(421) Diffuse Gonococcal Peritonitis.

Muscatello (*Il Policlinico*, August 15th, 1899) reports the case of a woman, aged 48, admitted into hospital March 16th, 1899, with a history of gonorrhœa acquired twenty-five years previously, and persisting more or less since with periods of quiescence and of exacerbation. For the last twenty days after the Carnival, and without any definite cause, the patient had suffered severe pains in the pubic and right iliac region, fever, etc. On examination *per vaginam* pyosalpinx with parametritis was diagnosed, and the pus was let out *per vaginam* on March 19th. Three hours after the operation great restlessness and pain in the hypogastric region was observed, severe collapse, cold sweats (P. 130, R. 40), and vomiting. March 20th the collapse continued, no tympanites. March 21st laparotomy was performed, and a considerable quantity of yellow, inodorous, seropurulent fluid let out. The intestines were distended and non-adherent. Part of the distended ileum was drawn into the upper part of the wound, and opened so as to let out some of its contents. The patient never rallied, and died very shortly. No *post-mortem* examination was allowed. Bacteriological examination of the pus in the pyosalpinx and in the peritoneal cavity showed the presence of gonococci. Cushing (*Bull. Johns Hopkins Hosp.*, 1899, p. 75) describes two cases of acute diffuse peritonitis in women, in which gonococci were found in the fluid. The author concludes as follows: (1) The gonococcus is capable of causing a specific infectious disease, namely, gonorrhœa, and also other less specific pathological conditions. (2) There is experimental proof that in certain animals the gonococcus can set up acute alterations in the peritoneum analogous to acute inflammation of serous membranes in man, but differing in their tendency to rapid and spontaneous healing. (3) Hitherto there has been wanting conclusive proof that, in the peritonitis due to gonorrhœa in women, the gonococcus was solely or chiefly concerned; the inflammations were regarded as mixed or chemical. (4) The cases reported by the author offer convincing proof of the existence of a diffuse peritonitis caused by the gonococcus. (5) It has been shown that gonorrhœal infection may extend to the peritoneum during pregnancy; the same may occur during menstruation. (6) Such ascending forms of gonorrhœa usually remain localised in the pelvis, and rarely require surgical aid. (7) A general involvement of the peritoneum is either rare or unrecognised, and may depend on a specially receptive condition of the peritoneum or on the virulence of the organism.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(422) Effects of Athletics on the Heart and Circulation.

A. STENGEL (*Amer. Journ. of Med. Sciences*, November) discusses this subject in a paper containing the results of six years' observations made upon the student athletes of Pennsylvania University. He gives a series of charts illustrating cardiac conditions before and after athletic exertions. These demonstrate the fact that the "untrained" cardiac dilatation and murmurs (most probably cardio-pulmonary) are very generally developed after severe muscular efforts. In those "trained" and "seasoned" they do not occur. As regards the remote effects, several instances are cited showing marked ventricular hypertrophy, with oppression and dyspnœa occurring early after the cessation of active exercise; and the author has met with many cases of cardiac muscular disorders in middle and later life apparently due to the "remote consequences of over-exertion in early manhood." Allbutt (*System of Med.*, vol. v, p. 849) suggests that in the after-effects of athletics the mean blood pressure increases as a consequence of the withdrawal of the reducing influence of exercise. Stengel believes that the blood pressure is increased "from the cardiac hypertrophy, if for no other reason." He finds overdistension frequent in athletic contests, and hypertrophy and overaction as a result of continued athletics. The obvious conclusions are—a thorough discouragement of long cycle journeys or holiday over-exertion to those not in regular training, the necessity for medical supervision during the "athletic period of life," and a gradual, not sudden, discontinuance of the severer muscular efforts and exercises.

(423) Presystolic Murmur in Aortic Insufficiency.

GOLBI (*Gazz. degli Osped.*, October 1st, 1899) reports two cases of aortic disease in which, in addition to the usual murmurs of aortic regurgitation, a presystolic murmur existed. In the first case a *post-mortem* examination was made, and although was plenty of evidence of aortic disease, there was no mitral stenosis, and in neither of the cases were there concomitant signs of mital stenosis—for example, accentuated or reduplicated second pulmonary sound, hypertrophied right ventricle, or impeded pulmonary circulation. The best way to differentiate a presystolic murmur due to mitral stenosis from one due to aortic regurgitation is to observe the direction of conduction. The aortic presystolic murmur is not conducted downwards, but rather upwards, and is heard best in the fourth intercostal space. The presystolic murmur of mitral stenosis, on the other hand, is heard best at the apex.

(424) Hereditary Albuminuria.

THIS subject has been investigated by Fieux, who has made some interesting observations on the occurrence of albuminuria in children (*Journ. de Méd.*, July 25th, 1899). It would seem that the children of mothers suffering from eclampsia or chronic albuminuria may show this condition from birth, and the author has been able to demonstrate actual lesions in the kidneys *post mortem*. In 10 children whose mothers were non-albuminuric 1 only showed traces of albumin, while in 4 whose mothers were eclamptic 3 showed albuminuria, while the mother of the fourth was only very slightly affected. From these cases and many others of the same nature it would seem that albuminuria may be transmitted from the mother to the child, and that this condition in the child may be prolonged considerably over early infantile life, and probably prepares the way for future attacks of serious nephritis in the course of the ordinary diseases of childhood, such as scarlatina, mumps, etc. In the same article Talamon is quoted as holding that a great number of cases of Bright's disease without obvious cause may probably be due to maternal origin. This would explain the occurrence of albuminuria in several children in one family, of which cases have not been infrequently recorded. The same writer suggests that many cases of so-called albuminuria may be hereditary. The importance of the subject is great, and should a mother be known to suffer from albuminuria, the children should be carefully examined, and every effort made to prevent the occurrence of scarlet fever or other febrile disorders, as the risk of nephritic complications would, according to the author, be greatly increased.

(425) Family Goitre.

AT a meeting of the Berlin Medical Society on October 18th, Holländer exhibited a mother and four daughters, all sufferers from the diffuse hyperplasic form of goitre, without any affection of the central nervous system. The moher's affection dated from her twelfth year, when she was living in Mecklenburg, a locality where there is no goitre; it may have been due to carrying heavy weights. She has for many years lived in Berlin, has six daughters and one son; all the daughters were attacked three or four years before menstruating with goitre in the same way; were rather anæmic and nervous, but otherwise healthy. Spontaneous cure took place as regards mother and two daughters; and the tumour has begun to diminish in a third under the use of iodide of potash ointment, to the curative effect of which Holländer attached importance. He had tried preparations of thyroid for a month without benefit in the only case that he had treated, and abandoned it as symptoms of thyroidism came on. Ewald had found thyroid preparations very beneficial, and that when arsenic was given at the same time there was no thyroidism.

SURGERY.

(426) Malignant Disease of Prostate.

WOLFF (*Deut. Zeits. f. Chir.*, vol. liii, parts 1 and 2, September, 1899) has issued a good monograph on this subject, with copious references. Cancer predominates after 50; only 15 per cent. of collected cases occurred in men between 30 and 50; under 30 it is almost unknown; 30 per cent. occurred between 60 and 70, and about 25 per cent. between 70 and 80. One case was noted in a man over 80. In aged subjects it is often overlooked during life, and is frequently developed in a prostate long enlarged. Cancer of the prostate usually interferes with micturition after the manner of hypertrophy, but in several cases it obstructed not the urethra but the rectum, and in others it obstructed neither. By the time, however, that these local symptoms have developed, the surgeon's attention is often diverted to the metastases which very often invade the osseous system. In other cases pain in the prostatic region sets in early, the cancer obstructing the ducts so that the glands swell with secretion. The cancerous prostate increases steadily and rapidly, often one lobe, sometimes all enlarged at once. It feels hard and minutely tuberous when smooth hypertrophy has usually preceded malignant degeneration. Bimanual abdomino-rectal exploration under anæsthetics is always necessary for diagnosis. The cystoscope shows nothing, save when the surface of the middle lobe is cancerous. The tuberosities felt from the rectum are masses of cancerous glandular tissue, and on pressure their secretion, purulent and often bloody, is sometimes voided. One important clinical symptom is pain on catheterism, the walls of the prostatic urethra being hard and inelastic, the patient cannot retain the instrument, and after a time no catheter can be passed. Sometimes the retained catheter gives temporary relief, allowing of the escape of prostatic secretion. Metastases rapidly develop, first in the bladder and vesiculæ seminales, then in the pelvic lymphatics (*carcinose prostato-pelvienne diffuse*, Guyon) finally all over the skeleton (ostitis carcinomatosa von Recklinghausen). The diagnosis of cancer of the prostate is very bad, particularly as it is hard to recognise early. Symptomatic therapeutics must perforce suffice, but if early diagnosed prostatectomy may benefit. Czerny's and one of Stein's cases survived the operation for some time, Küster removed the bladder as well as the prostate, the patient died of broncho-pneumonia on the fifth day. Sarcoma of the prostate may occur in an infant, 2 cases have been recorded in children under 1 year, 3 in boys under 10, 3 in youths between 10 and 20, and 3 in men between 20 and 30. It has also been met with in elderly and aged men. Sarcoma grows with great rapidity, causing retention of urine, and sometimes intestinal obstruc-

tion. Spanton and Schönborn both attempted unsuccessfully to remove a sarcomatous prostate; the hæmorrhage was hard to stop. Socin successfully enucleated an encapsuled sarcoma of the right prostatic lobe.—Schalek (*Prager med. Woch.*, November 2nd, 1899) reports a case under the care of Bayer, of Prague, in January. A boy, aged 3 years and 3 months, was admitted into hospital six weeks after a hypogastric swelling had been noticed. It was painful from the first, and accompanied by retention of urine for two days, then incontinence of urine followed and persisted. The patient became distinctly emaciated. The tumour filled the hypogastrium, reaching to both iliac fossæ and upwards to the umbilicus. The lower part was very firm, the upper tense and fluctuating. The catheter could only be passed with great difficulty, then much urine came away, and the fluctuating upper part of the tumour disappeared. The lower part was now distinguished as a tuberous mass on each side of the posterior and lower portion of the bladder, and seemed fixed in the pelvis. The bladder bulged backwards against the anterior rectal wall. The inguinal glands were enlarged. Bayer made a median incision from the umbilicus to the symphysis and a transverse from the lower end of the first to the right and left anterior superior iliac spines. The peritoneum, hitherto not divided by the incisions, was now separated from the fundus of the bladder and then the tumour was exposed behind the bladder; it was as big as a fist and looked liked a myoma or sarcoma. The ureters were dissected up for an inch or so, then it was found impossible to free them, so the right was clamped and divided; the left was divided and a catheter introduced to allow urine to escape during the rest of the operation, nothing less than removal of the bladder was practicable as the tumour adhered firmly to it behind and completely surrounded the neck. The neck of the bladder was divided with a Paquelin cautery. The ends of the ureters were transplanted into the rectum. The subperitoneal cavity left behind was plugged with gauze and the abdominal wound closed. The patient did well for a day or so, passing urine from the rectum with fæces, but the temperature rose and acute bronchitis carried off the patient in five days. The tumour was a mixed sarcoma partly myxomatous. The attachment of the left ureter to the rectum had partly given way, the connective tissue and peritoneum near the big cavity were sloughy, there was retroperitoneal phlegmon and diffuse suppurative peritonitis. There was also suppuration of the right ureter and kidney.

(427) Sensation in Transplanted Skin-flaps. STRANSKY (*Wien. klin. Woch.*, Nos. 32 and 33, 1899) has investigated sensation in skin grafts after recent or older operations: (1) The sensation of pain is to be separated from tactile sensation and from the sensation of temperature. (2) Sensation in transplanted skin-flaps begins at the margin, the tactile being first distinguishable and the sensation for pain and temperature developing later. (3) With large skin-flaps certain areas may remain permanently or for a long time more or less anæsthetic, which fact probably depends on a varying nutrition of different parts of the graft during the process of healing. (4) The specific mechanism of sensation is probably transferred ready-made with the flap, and the nerve end-organs (Meissner's and Merkel's tactile bodies) in the graft join the nerves which penetrate into it from the underlying tissue, and continue their former function. This applies more especially to tactile sensation, which nearly always corresponds to the conditions obtaining in the part from which the flap was taken, and not at all to those obtaining in the part to which it is transferred. This rule could not be distinguished clearly in the case of the sensation of pain.

(428) Gastro-Intestinal Anastomosis as a Palliative Measure.

ROUTIER (*Bull et Mém de la Soc. de Chir. de Paris*, June 28th, 1899) approves of resection of part of the cancerous stomach when there is a fair prospect of extirpating all the cancer that exists, but when this is impracticable he advocates gastro-intestinal anastomosis as a palliative. In one patient whom he exhibited, he had performed this operation forty days previously. At the date of the operation this patient, aged 33, was extremely emaciated, weighing only a little over five stone. She had been fed by nutrient enemata for several weeks, and was much debilitated by several attacks of hæmatemesis. Routier operated so as to prevent her dying of hunger. He found a very large malignant tumour involving the entire stomach save a part of the greater curve. The pylorus and the neighbouring structures were matted together in the cancerous deposit. Routier rapidly made the anastomosis between the stomach and the small intestine, making use of a Murphy's button. Sickness ceased at once, the patient felt comfortable, and when exhibited had gained over thirteen pounds. Routier held that, in a case like this, gastro-intestinal anastomosis restored the patient to relative health for a time; hence it did not deserve to be rejected entirely. Tuffier agreed with him that this operation was a palliative measure necessary in inoperable gastric cancer.

MIDWIFERY AND DISEASES OF WOMEN

(429) Primary Tuberculosis of the Ovaries. LOEFFLER (*Wien. med. Woch.*, August 26th, 1899) states that even now opinions differ very widely as to the frequency of ovarian tuberculosis. Cornil denying its occurrence and Wolff rating it at 60 per cent. of all cases of urogenital tuberculosis. However, all are agreed as to the extreme rarity of primary tuberculous oöphoritis; indeed, Loeffler has found only one genuine case, that of Franqué. A woman, aged 40, had a tumour the size of a fist to the left of Douglas's pouch. Besides this nothing pathological was found in the lungs or elsewhere. At the operation the outer end of the Fallopian tube was found to be thickened and adherent to the enlarged ovary. Microscopically, typical tubercle and tubercle bacilli were found in the ovary. They were also present on the serous surface and in the subserous cellular tissue round the outer end of the Fallopian tube, and also in the thickened mesosalpinx. Loeffler now reports another case where tuberculosis of the ovaries was most probably primary. A girl, aged 19, had been treated for tuberculous peritonitis. *Post mortem* a large quantity of fibrino-purulent exudation was present in the peritoneal cavity, the peritoneum was covered with grey miliary tubercles and the intestinal coils were matted together by recent adhesions. The genital organs were of an infantile type, and, except for the ovaries, healthy. Both ovaries contained caseating nodules of tubercle. There were a few calcified subpleural lymphatic glands containing tubercle bacilli, and on the surface of the liver there was a caseous tuberculous nodule. All the other organs, including the lungs, Fallopian tubes and intestines, were healthy. The reasons for supposing the primary focus to have been in the ovaries were that the peritonitis was evidently more recent than the other lesions, of which the ovarian were the most marked. Cohnheim thought that most cases of tuberculosis of the female genital organs were secondary to tuberculous peritonitis, but the opposite is probably the truth. For though in nearly all published cases of tuberculosis of the genitalia there has been tuberculous peritonitis, among all the cases of the latter disease on which a necropsy was made in the hospital at Brünn the writer found but fifteen with tuberculous genital organs. That in Loeffler's case the tuberculosis of the ovaries was the primary lesion was supported also by the fact that the virus had spread from these through the lymphatics, and had implicated the liver and subpleural glands on its way to the thoracic duct. Since the girl was a virgin the primary disease must have had a hæmatogenous origin. Franqué believed that in his case the virus must have entered some catarrhal lesion of the vagina or uterus and been conducted to the ovary by the lymphatics, since if it had passed directly through the genital canal the peritoneum would have been involved before the ovary. The husband in this case was tuberculous.

(430) Old Extrauterine Pregnancy Involving the Bladder.

HUE (*Bull. et Mém. de la Soc. de Chir.*, No. 26, 1899) puts on record two cases of old extrauterine pregnancy in each of which the fœtus had passed into the bladder. It has been proposed by different authorities to treat cases of this kind (which seem to be rare if the number of published reports be considered) by one or other of three methods—lapar-

otomy, vaginal cystotomy, urethral section. The two cases here reported at length were treated successfully by suprapubic cystotomy. In one of these instances a previous attempt had been made without success to establish the diagnosis, and to relieve the bladder by incision and dilatation of the urethra. In both cases the author at first made the diagnosis of vesical calculus developed around a large foreign body. The actual state of things in either instance was first revealed in the course of the operation for the supposed stone. The author states that if he ever again has to choose a way of reaching the bladder occupied by a fœtus enclosed within calculous incrustation, he would not hesitate to perform the high operation, which in his two operations afforded good light, absolute security, and full facilities for thorough cleansing. In both cases, notwithstanding the altered condition of the pelvic peritoneum, which was thickened and presented several adhesions, the author succeeded without much difficulty in elevating the *cul-de-sac* of the bladder, and in obtaining sufficient access to the vesical cavity. The abdominal cavity was avoided, a point of much importance in cases of this kind, in which it is found necessary to open and cleanse an infected cloaca.

(431) Value of Atmokausis Uteri.

FLATAU (*Monats. f. Geburts. u. Gynäk.*, September, 1899) does not speak enthusiastically of the steam cautery. He has carefully investigated the instrument and the changes which boiling steam effects on the tissues. Especially important is his opinion that when the atmocautery is at work in a patient's uterus it does not discharge boiling steam at all, but simply spurts out very minute drops of water at a considerably lower temperature. Atmokausis cannot be applied long enough at one sitting to ensure destruction of bacteria. Its efficacy also depends greatly on the consistence of the uterus, the size of the uterine cavity, and the nature of any uterine hæmorrhage present. It answers best in interstitial endometritis, in the so called preclimacteric hæmorrhages, and in inoperable cancer of the cervix. Atmokausis cannot be depended upon to destroy the whole endometrium after the fashion of many caustics. The method is inapplicable when perimetritis or parametritis is present, even if chronic, nor should it be attempted in sepsis after abortion until the uterus has been entirely cleared of the products of conception. Its use in myoma is very questionable, nor is it easy to understand how it can act as a prophylactic against cancer. Flatau concludes by stating emphatically that atmokausis can never take the place of the curette, though it may be useful in conjunction with that instrument.

(432) Purulent Metritis in a Nullipara.

PETROFF (*Vratch* No 28, 1899) describes a very unusual case of pyæmia arising from primary suppurative disease of the uterus. The patient was a nullipara, aged 41. She was suddenly seized with violent pains in the right side of the abdomen, then for eleven days the symptoms of pyæmia prevailed, with enlarged spleen, enlarged liver, jaundice, and pulmonary infection. Death occurred without the seat of origin of the disease being determined. At the necropsy, small abscesses were found in the lungs and liver, originating in suppurative inflammation of the genital tract. The body of the uterus was little affected, but the cervix was big and full of abscesses; the mucous membrane of its canal and of the adjacent part of the vagina was very much tumefied, and the uterine, vaginal, and iliac veins inflamed. Purulent collections were formed in the left tube and ovary, and in the adjacent parametrium. The infected tissues afforded abundant cultures of a bacterium which was either the pyobacterium of Fischer or else the bacterium coli commune, which closely resembles it.

THERAPEUTICS.

(433) Treatment of Diabetic Steatorrhœa with Pancreas Preparations.

MASUYAMA of Japan and SCHILD (*Zeitschr. f. diät. und phys. Therapie*, 1899, vol. iii, p. 481) give a valuable study. Temporary steatorrhœa is fairly frequent in diabetes, whereas the long-continued form is rare. The occurrence of chronic steatorrhœa points to gross changes in the pancreas, especially when the absence of jaundice excludes disturbances in the secretion of bile. Experiments on animals by many observers (Minkowski, Abelmann, Sandmeyer Vaughan Harley, etc.) show that removal of the pancreas, or complete occlusion of the pancreatic duct, gives rise to a great diminution in absorption of fat, whereas the splitting up of fats seems to be only secondarily affected. Observations in human pathology are somewhat confirmatory. The experiments by Abelmann and Minkowski on animals speak in favour of the therapeutic use of pancreas feeding. The observations on men are as yet insufficient, but improvement in the steatorrhœa seems to have been noted after treatment with calf pancreas (Fles and Langdon-Down) and with pancreatin (Friedreich and Oser). Von Noorden recorded the first quantitative observation. The amount of fat consumed by the patient during the period of observation varied from 200 to 250 grams per diem. Without medicine the fat passed into the fæces amounted to 159 grams per diem, and to 154 grams when pancreatic tablets were used. When, however, 125 grams per diem of fresh pancreas were administered, the loss of fat with the fæces only reached 39 grams per diem. Von Noorden also found that in a diabetic man, aged 50, the steatorrhœa disappeared when he consumed 50 grams of the scrapings of calf pancreas several times a day. No obvious effect had been obtained in this case from the use of various pancreatin preparations. The authors now record the case of a diabetic man, aged 52, under von Noorden's care, who was naturally thin and had lost in weight during the last years. The urine (1830 grams) on the first day contained 75.42 grams of sugar, and showed no other abnormality. The fæces were fatty. The nature of the pancreatic disease could not be ascertained. By exclusion of carbohydrates from the diet the total sugar in the urine was reduced to 10 grams in the day, and the patient gained 1·7 kilo in weight. Later on a temporary complete disappearance of sugar from the urine was obtained by limitation of the albuminous food. Four experiments on the absorption of fatty foods are reported in this case. In the first experiment when no pancreas was given, it was found that only 36.9 per cent (instead of the normal 90 to 95 per cent.) of the ingested fat was absorbed. In the second experiment, lasting three days, 100 grams of scraped pig's pancreas were given in addition to the diet (allowance being made for the fat contained in the pancreas) of the first experiment; and the absorption of fat was estimated at 63·58 per cent. A third experiment showed that the absorption of fat without the dietetic aid of pancreas was 37.25 per cent. (a very similar result to that of the first experiment). In the fourth experiment pancreatic juice was used instead of pancreatic scrapings (which the patient had got to dislike); the juice was pressed out of the pancreas under high pressure, and 100 to 125 grams were administered per diem. Under this treatment 45.51 per cent. of the ingested fat was found to be absorbed. Pancreatic substance seems therefore to have greater value than pancreatic juice for the treatment of steatorrhœa in diabetic patients. It is doubtful whether pancreatin tablets, etc., though very convenient to take, have a similar real therapeutic value. The whole question is of great importance in the treatment of diabetics, because even when they can make thoroughly good use of albuminous food they can hardly be fed on albuminous food alone without the aid of fat.

(434) Vanadium in the Treatment of Tubercle.

ATTENTION has been drawn lately to the therapeutic properties of vanadium in anæmia, chronic rheumatism, diabetes, and neurasthenia. Anceau has just published the results of a series of observations on the use of this drug (*Thèse de Paris*, 1899), especially in regard to the treatment of tubercle. In this disease vanadium seems to act as a powerful tonic to the appetite and digestive functions. It would seem, however, that the effects of vanadium are only very slight when the pulmonary lesion manifests itself by profound constitutional changes. On the other hand, should the case be one of slight tuberculous affection, especially in the early stages, vanadium seems to be of very great use. The appetite is stimulated in such a manner that the patient is able to take abundance of nourishment, and, what is more important, digestive

power is considerably increased. Its method of administration is important. The best method seems to be to exhibit the drug from three to five days at a time, allowing a similar interval to elapse before repeating its administration. Vanadium seems to act like arsenic and iron, but appears to be considerably more efficacious in its action than either of these substances, as it seems to have 20,000 times more oxidising power than iron, and considerably more than arsenic. The best form is vanadiate of soda, and the writer recommends 2 mg. daily by the mouth, and $\frac{1}{10}$ mg. as a subcutaneous injection.

(435) Potassium Iodide in the Treatment of Acne.

F. J. LEVISEUR (New York *Medical Record*, November 11th) claims successful results for this treatment when applied to old-standing cases of acne which are not cured by ordinary methods. Iodic acne is a superficial dermatitis together with formation of minute abscesses in the cutis, the result of the disorganisation of small blood vessels at special points, through the iodine circulating in the blood. Hence the KI is given to cause a reaction in and around the acne lesions, resembling that occurring in lupus nodules after the injection of tuberculin. Five-grain doses are given three times a day. Milk is the best vehicle, as the alkali and albuminates of the milk neutralise a considerable quantity of the iodine. When the acne tumours show redness and swelling, and are painful on pressure, the KI is stopped and mild sulphur and ichthyol unguents used. After seven days the KI is again administered, and upon the appearance of reactionary signs it is again changed and the usual local treatments adopted. The urine should always be tested for iodine elimination. It can be done simply. Two thirds of urine, one-third starch solution, are mixed together. A drop of HNO_3 is allowed to run down inside the tube, and a streak of blue or violet appears. This reliably demonstrates one part of KI in 6,000.

(436) The Treatment of Yellow Fever by Potassium Bitartrate and Salol.

EDWARD F. NUNEZ, of Santiago, Cuba (*Phil. Med. Journ.*, November 11th) says that since the present outbreak of yellow fever, while on duty at the United Army General Hospital, and later at the Yellow Fever Hospital, he had adopted a line of treatment which has given most satisfactory results. The treatment is based on the antiseptic plan, and its efficiency appears to be in direct relation with the promptness of its administration. Having in view, he says, the infectious character of this disease, and considering that the stomach is the organ primarily invaded and affected by the pathogenic micro-organism, whatever it may be, it is evident that a therapeutic agent capable of destroying it, or at least attenuating the virulence of its toxin, would certainly bring the disease to a favourable termination. One of the principal advantages claimed for this treatment is that it can be administered without disturbing the stomach and without ever giving rise, so far as experience goes, to disagreeable after-effects if judiciously carried out. Nunez begins the treatment by giving the patient a dose of calomel, followed by a saline purgative, generally Epsom salts, and immediately after he commences the use of a solution of potassium bitartrate and fresh lime juice, and the salicylate of phenol or salol, the latter preferably in tablets, every two, three, four, or six hours, according to indications. With the cream of tartar the urine is rendered alkaline, and the renal function is stimulated by its diuretic properties. The local action of this agent on the stomach is no less important since it is pleasant and soothing, quenches the intense thirst, relieves the nausea and vomiting, and, by its laxative properties, ensures free movement of the bowels. With salol a twofold action is obtained: first, the antisepsis of the intestinal tract; and, secondly, the reduction of the temperature by its antithermic properties. The drug is well borne, not only by the stomach, but also by the kidneys, and apparently tends to reduce the amount of albumen in the urine. No alcoholic drinks or nourishment are allowed during the first stage of the disease. The epigastralgia and rachialgia are treated exclusively by counter-irritation with sinapisms. During the second stage the salol and cream of tartar, accompanied by large quantities of diluent drinks, especially warm water to which a few drops of lime juice have been added, is to be continued until defervescence takes place.

PATHOLOGY.

(437) Status Epilepticus.

L. W. WEBER (*Wien. med. Woch.*, 1899, p. 157) has published a contribution to the study of the conditions found in the nervous system in patients who have died of severe epilepsy. The account is based on a series of necropsies with microscopical examinations carried out by him during the years 1895-99 in the Asylum of Uchtspringe. Important changes were found, both in the blood vessels and in the nerve cells of the central nervous system. The most constant lesions were those found in the blood vessels, which were found to be markedly dilated and filled with blood in the brain, cord, and medulla. In places there were hæmorrhagic infarctions, with hyaline degeneration of the walls of the capillaries. In many cases there were extravasations of red blood corpuscles into the pericellular and perivascular lymph spaces. In many of these situations the extravasated red corpuscles had undergone degenerative changes—decolorisation, etc. The ganglion cells were in some instances seen to be destroyed. The nerve cells of the spinal cord showed advanced pigmentary changes—fuscous degeneration. The vascular lesions were of the same type in the spinal cord as in the brain. Weber holds that these vascular dilatations and degenerative changes are secondary changes due to the circulation of some toxin of endogenous origin. The transitory pareses and losses of function—sensorial, muscular, etc.—he attributes to minute vascular lesions, such as hæmorrhages, local hyaline degeneration and infarctions, etc., destroying small limited areas—miliary softening. When the lesions involve and include the "vital" centres and tracts in the medulla death is the invariable result, but it appears that in the status epilepticus itself an acute cerebral toxæmia is the immediate condition preceding death. The indications point to venesection and saline infusion as the appropriate method of treatment in cases where death is threatened from a succession of fits.

(438) Congenital Eventration.

A. BERTINO (*Ann. di Obstet. e Ginecol.*, xxi, p. 735, September, 1899) puts on record a case of congenital eventration which in several respects differs from ordinary abdominal herniations and from exomphalos. It was a male fœtus of about eight and a-half months' intrauterine life, which had been normally born and which was normally formed save for the abdomen. An opening existed in the right half of the anterior abdominal wall, about the level of the umbilicus, through which a packet of abdominal viscera projected with no membranous covering. The infant soon succumbed, it being impossible to operate on it with any chance of saving life. The opening in the abdominal wall was nearly circular, and had a diameter of 4 cm.; it was separated from the normally closed umbilical ring by a tract of normally constituted abdominal wall. The herniated mass consisted of three lobes: an upper, made up of the lower end of the œsophagus, the stomach, and the first part of the duodenum; a middle, constituted of small intestines adhering together by pseudo-membranes; and a lower, made up of cæcum, ascending colon, enormously distended transverse colon, and the descending colon as far down as the sigmoid flexure. The umbilical vein passed in the superficial part of the abdominal wall skirting the margin of the opening through which it entered and went to the liver, where it had its normal distribution. The spleen was situated at a lower level than usual, and rather to the right side of the abdominal cavity; its lower pole was adherent to the intestinal coils at the hernial opening. The umbilical cord had a normal appearance, and contained the usual three vessels. The author points out that the eventration must have occurred at a later period in intrauterine life than that of the closure of the anterior abdominal walls, and that it cannot be explained by the theory of arrest of development. It is also to be noted that the viscera were not contained in any sac, and that the opening in the abdominal wall was not in the middle line, and did not affect the umbilical ring.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(439) The Diagnosis of Tumours of the Head of the Pancreas.

Zoja (*Il Policlinico*, August 1st, 1899), in an attempt to arrive at certain clinical criteria for the elucidation of the above subject, is driven to the conclusion that as far as primary carcinoma of the head of the pancreas is concerned there is no proper or constant symptomatology; the symptoms vary so much according to the position and extension of the tumour. The cases may be divided into three chief types: (1) where the tumour takes a postero inferior direction, causing compression of the vena cava, implicating the right suprarenal capsule and the retroperitoneal glands; (2) where it takes an upward direction, causing symptoms of occluded bile duct or of pyloric stenosis; (3) and (perhaps the most common) where development takes place to the right, giving rise to occluded bile or pancreatic ducts. A complete knowledge of the effects likely to be produced by the occlusion of these ducts is important. As regards individual symptoms, jaundice is by no means constant. The condition of the gall bladder affords no certain criterion. The changes which occur in the liver are either due to metastatic growths or to the effects of prolonged occlusion of bile ducts. Tumour may be felt; it depends on the situation, etc. Pain is not a constant symptom; melæna or hæmatemesis is a fairly common termination. The author never observed glycosuria in his cases, and attaches no importance to the search for indican. There is an extensive bibliography.

(440) Dermatomyositis.

H Oppenheim (*Berl. klin. Woch.*, September 11th, 1899) records the case of a boy, aged 8, who had enjoyed good health till September, 1898. He then began to complain of pains in the back and limbs, which led to increasing difficulty of movement. Soon afterwards a redness was noticed in the face (especially eyelids and cheeks) and hands; swellings also appeared in the same parts and elsewhere. The boy complained of pain in the throat on swallowing, suffered from sweatings, and was occasionally decidedly feverish. In June, 1899, after the illness had lasted about eight months, the pathological condition observed in the musculature, skin, mucous membranes, and subcutaneous tissues may be given as follows: Movements in the vertebral column and the lifting up of the arms are painful, with the result that the attitude shows a characteristic stiffness, which induced one of the doctors to diagnose spondylitis. There is a paresis and atrophy in certain muscles, most obvious in the deltoids and flexors of the forearms (where the electrical irritability is diminished without qualitative change in the reaction). Similar changes, but less marked, are present in the muscles of the back and in the adductor muscles of the thighs. The muscles seem harder than they should be, and are tender to the touch. Both voluntary contractions and those induced by electricity are painful. The changes in the skin, mucous membranes, and subcutaneous tissues are already beginning to be less marked than they were. The erysipelas-like redness on the face is best shown about the eyelids. The upper lids are slightly œdematous. Over the metacarpo phalangeal and inter-phalangeal joints pale, atrophic spots of skin are observed which were left there after disappearance of local swelling. Similar spots are found on certain parts of the trunk and upper arms. The skin of the ears is bluish-red, and the inside of the mouth appears abnormally flushed. The cervical and cubital glands are enlarged and tender. The tendon reflexes are natural or slightly increased. Nothing abnormal can be detected in the heart, spleen, or other internal organs. Oppenheim regards the case as belonging to the class called by Unverricht "dermatomyositis." There was no gastro-intestinal affection or illness in the family to awaken a suspicion of trichinosis, and no evidence of ossification exists to suggest the diagnosis of commencing myositis ossificans. A piece of the deltoid muscle was removed for microscopic examination and showed well marked round cell infiltration. In another patient, a schoolmaster, aged about 50, the illness commenced after a course of Kneipp treatment. There were sore throat, stomatitis, and violent pains in nearly all the skeletal muscles. The œdema was greatest in the face and on the backs of the hands. Ulcers appeared on the hands and on the mucous membranes of the mouth, cheeks, and probably also the larynx; there was likewise troublesome conjunctivitis. This case, Oppenheim points out, might have been termed "dermato mucoso myositis." The swelling and atrophy of the muscles reached a high degree. Occasionally there were attacks of fever and there were likewise bronchitic symptoms. The illness lasted half a year, and under diaphoretic treatment at first and later on massage and electricity, great improvement took place. Then the pulse became frequent and afterwards intermittent; the patient became delirious and died. It is uncertain whether the fatal cardiac symptoms were due to the myositic process attacking the heart, or were the result of the general exhaustion, etc., caused by the illness.

(441) Cortical Blindness.

R. Gaupp (*Monatschr. für Psychiatr. und Neurology*, vol. v, No. 1, 1899) records the case of a man, 64 years of age, who had suffered for some time from left homonymous hemianopsia. A few weeks later he had a severe mental "shock," which was followed within a few days by bilateral hemianopsia. There were no apoplectiform seizures. The sensation to light was very imperfect, and cortical blindness (to objects and to written or printed words) was complete. The pupils, however, reacted to light. There was no disturbance in speech, utterance, or in ocular movements. There was considerable mental disturbance and confusion, with retrograde amnesia lasting several weeks. A paresis of the right side of the body with cutaneous paræsthesia were noticed. In the further course of the illness an acute intestinal trouble supervened, in the course of which the mental disturbance became much worse. After a time improvement occurred, the mental condition became clearer, and a small central field of vision was restored. A number of cases of complete cortical blindness, with ultimate restoration of a small central field, are on record. The blindness in some cases was permanent, but in no case had the central field been so small as in the present. Gaupp points out that in many cases of bilateral hemianopsia the disturbance of vision had occurred without an apoplectic "attack," and had taken several days for its complete development. Failure of memory (amnesia) had been noticed as a frequent symptom, and in some cases a loss of typographical sense was an important symptom. Usually the impairment in the space sense (sense of orientation) accompanied the impairment of memory. The former, however, was a very complex condition, and was not necessarily dependent on or proportional to the impairment of cortical vision. In the present case the cortical blindness was very nearly complete, and yet the sense of position and of orientation was well preserved.

SURGERY.

(442) Surgical Operations in Hysteria.

M Sander (*Deut. med. Woch.*, 1899, No. 36) records the case of a hysterical man, aged 23, with neuropathic family history. In December, 1894, about two months after commencing his military service, he began to suffer from attacks of abdominal pain, meteorism, and unconsciousness, with epileptiform movements. The pulse, when observed in May, 1895, was found to vary in the course of twenty-four hours between 60 and 100; alternate diarrhœa and constipation. In November, 1896, the patient was in the Frankfort Hospital with variable abdominal symptoms and occasional evening fever. He was supposed to have appendicitis, and a laparotomy was performed. The vermiform appendix was found slightly injected and removed. Soon after the operation there were again attacks of meteorism and pain, with evening fever (to 101.6° F.). Improvement followed in December, 1896, but there was an attack of eructation, salivation, grinding of the teeth, and twitchings of the limbs. In January, 1897, there was again meteorism, with abdominal pain (chiefly in the umbilical

region) and occasional vomiting. Sometimes there was fever, and on one day itching of the whole body. There was generally constipation, and blood and mucus were noted in the motions. On account of a suspicion of intestinal obstruction a second laparotomy was performed on January 14th, 1897. On January 29th the patient jumped through the window and ran about barefoot in the snow, so that he had to be removed to the lunatic asylum. In the asylum amongst other troubles he had much vomiting, and in consequence lost strength, but suddenly on February 19th, 1897, he began to improve in every way, although a certain tendency to vomit persisted. Not long after leaving the asylum he was reported to have (apparently, not seriously) attempted suicide. A second case reported by Sander is that of a hysterical woman, aged 24, whose father had been addicted to alcohol. She had had a hysterical trouble in the right hip-joint, a factitious erythema, etc., before she suffered from abdominal pain, vomiting and apparent fever in 1895. At different times gastric ulcer, appendicitis, and peritonitis were considered. From September, 1897, to September, 1898, laparotomy was performed on four occasions with negative results. She was then transferred to the lunatic asylum, where her psychical condition commenced to improve. There was a certain amount of right-sided anæsthesia. In this case Sander draws attention to the want of correspondence between the pulse and the apparent fever. Such a condition makes it probable, he thinks, that the fever is simulated.

(443) Hysterical Ileus.

H. SCHLOFFER (*Beiträge zur klin. Chir.* 1899, vol. xxiv, p. 392) reports some cases of what was formerly called "spastic ileus," etc. Rosenstein noticed fæcal vomiting in a healthy-looking boy, aged 9, following attacks resembling hystero-epilepsy. The fæcal masses which were vomited on one occasion were coloured blue by some henna, which had been administered in the form of an enema. Under bromide treatment the boy recovered after several months. In this case it was remarkable that frequently fæces were passed by the anus whilst fæcal vomiting was going on. Cherchevsky has given the case of a nervous man, aged 42, considered to be suffering from a spastic neurosis of the bowel; during one such attack a formed piece of fæces, 8 centimetres long, was vomited. In Murphy's case the patient was a man, aged 40, who had previously suffered from attacks of lead colic; a laparotomy was performed on account of persistent constipation and signs of intestinal obstruction. A piece of intestine, 8 inches long, was found contracted like a solid cord, and during the operation was seen to relax. Three hours afterwards there was a motion. Leube observed fæcal vomiting in a girl, aged 19, and a hard cord could be felt in the abdomen along the whole colon from the cæcum to the sigmoid flexure. This could no longer be felt twenty-four hours later on, but ten days afterwards a similar attack occurred. Schloffer suggests that in some cases an intestinal paralysis (with or without fæcal accumulation) rather than a spasmodic condition might give rise to the symptoms of obstruction. Sandoz has noted a cases of tabes dorsalis where hiccough and ileus lasted during days, and then disappeared after free action of the bowels. Heidenhain thinks that worms, etc., may cause reflex spasm of the intestines, and thus give rise to symptoms of intestinal obstruction. In one case a laparotomy was performed, but no obstruction could be found. A round worm, however, could be felt in the small intestine (which was otherwise empty and collapsed or contracted). Several doses of morphine were given, and the bowels acted three and a half days after the laparotomy. Voisin records that a hysterical girl twice recovered from the symptoms of intestinal obstruction under antispasmodic and purgative treatment, but died during a third attack, and the necropsy pointed to mere spasm of the bowel. According to Hoorweg, a woman, aged 26, who had already had severe hysterical attacks, suffered from fæcal vomiting, anæsthesia, psychical disturbance, etc. On washing out the stomach in the morning, remains of the evening meal were found, and in the evening the stomach often contained fæcal masses. Cousot and Treves have likewise published cases of fæcal vomiting. Slajmer performed a laparotomy in the case of an anæmic hysterical woman, aged 26, with fæcal vomiting and symptoms of intestinal obstruction. Nothing abnormal was found except that a portion of the small intestine was firmly contracted. This contracted portion became relaxed during the operation. Next day the bowels acted. Similar intestinal symptoms later on could often be relieved by simple antihysterical treatment. A married woman, aged 28, who had previously had hysterical symptoms, as well as hæmoptysis and hæmaturia, without definite signs of organic disease in the lungs or urinary organs, was operated on account of fæcal vomiting. The results of the laparotomy were negative, but portions of the small intestine were found firmly contracted. The patient, however, was given to understand that the operation had been successful. Five days later the bowels acted after enemata, and the patient recovered. Wölfler operated on a woman, aged 31, with fæcal vomiting and symptoms of chronic intestinal obstruction. The small intestine was found to be closely contracted at certain spots between portions containing scybalous masses. A few days after the laparotomy normal motions occurred, but the patient still had often to employ laxative drugs. Later on a fæcal fistula formed in the laparotomy scar; this was cured by operative means, but recurred afterwards. Hysterical patients, as Senator points out, might, like insane patients, swallow fæcal masses before vomiting them; and Mikulicz has recorded the case of a woman, aged 51, who had been operated on five times before she was detected placing fæces in her mouth. This detection saved her from a sixth operation. In a case of J. D. Bryant four laparotomies were performed, the last because a communication between stomach and colon was suspected. The patient, a young hysterical woman, was afterwards discovered to have placed fæces and material for enemata in her mouth in order to pretend to vomit them. Schloffer thinks that in some genuine cases an active antiperistal is accounts for the fæcal vomiting. The vomiting of formed fæces suggests, according to his views, that the symptoms are not due to mechanical obstruction or intestinal paralysis, but that they are of functional nature.

(444) Rupture of Spleen.

F. TRENDELENBURG records (*Deut. med. Woch.*, No. 40, October 5th, 1899) 6 cases of rupture of the spleen, with two recoveries after operation. In 4 cases there was rupture of the spleen alone; in 1 case there was rupture of the left lobe of the liver also; in 1 case there were ruptures of left kidney and right lobe of liver. Three patients had been run over; in 5 patients the spleen was normal, in 1 much enlarged; in this the force used was small and localised. Edler found in 73 cases of rupture of the spleen pathological process present in 23 per cent. Probably the majority of cases of severe rupture of the spleen die in the first hour. In 44 cases collected by Edler death was immediate in 12, and within half an hour in 9. The diagnosis is based upon: History of injury. After injury the patient may be able to walk or drive for half an hour or even more. Then there is a feeling of acute pain in splenic region, and a sense of extreme weakness. On examining the body the splenic region is tender, dull on percussion, and rigid. There is pain on deep inspiration, the breathing is short and jerky, and a fracture of the ribs may be suspected. Pain spreads over the abdomen; abdominal distension and rigidity become apparent, especially in the upper left quadrant of the abdomen. Symptoms of hæmorrhage now develop rapidly, pallor, extreme anxiety, thirst; small, frequent pulse, and vesical tenesmus. The chance of success lies in early operation.

MIDWIFERY AND DISEASES OF WOMEN.

(445) Pregnancy in a Uterus Bilocularis: Anencephalic Fœtus.

P. L. GARDINI (*Ann. di Ostet. e. Ginec.*, xxi, p 705, September) describes a case of pregnancy in a septate or biocular uterus, with a double vagina. The patient was the daughter of parents who did not show any malformation, but her mother had had by a former husband (who was the brother of the present husband), a male infant affected with spina bifida and meningocele in the lumbar region of the back. The patient, who was born as a face presentation, had suffered from no special diseases during

childhood, and since the age of 15 had menstruated regularly, if somewhat copiously. She was married in May, 1897, and became pregnant in August; but about the middle of October she aborted, and it was then discovered that the uterus was bilocular, and that the gestation had been in the right half. She became pregnant again in January, 1898, and in the middle of March her medical attendant diagnosed pregnancy in the right half of the double uterus in process of abortion. With the fingers he extracted the membranes, but found no embryo. Nevertheless the sympathetic phenomena of pregnancy persisted, and in April it was found that there was a three months' gestation in the left half of the uterus. The pregnancy went on normally to nearly the full time, it being noted that the uterus was distinctly directed obliquely to the left side of the abdomen, especially in its upper part, and that it was developed rather in an elongated fashion, its transverse measurements being small. There was a double vaginal orifice, the two openings being due to the presence of a septum running from the anterior to the posterior wall; the vaginal canal also was double in its whole extent, and the right half was narrower than the left. In labour the feet of the fœtus came down the right vagina, while the nates appeared in the left canal. The septum was partly torn, and had to be clamped to prevent bleeding. After labour was completed some hours were allowed to elapse, and then the remains of the septum were excised. Puerperium nearly normal; fœtus anencephalic.

(446) Intrauterine Epidemic Cerebro-Spinal Meningitis.

R. B. H. Gradwohl (*Philadelphia Med. Journ.*, September 2nd, 1899), reports what is probably a unique case of the transmission of epidemic cerebro spinal meningitis from mother to fœtus. The mother was a woman, aged 31, seven months' pregnant, who two days before coming into hospital had begun to suffer from pain in the left ear. Some drug had been injected into the ear by a medical man but without relief, and she soon became comatose. No fœtal heart sounds could be heard, and the fœtus could easily be pushed from side to side. Vaginal examination revealed a soft undilated os. Respirations were somewhat laborious, and the pulse was rapid (120) and weak; temperature 102° F., pupils unequal, Kernig's sign present. The head was drawn back, there was hyperæsthesia and photophobia, and on touching the spine or back of the neck the patient would come out of her coma for a moment or two and mutter deliriously. *Tache cérébrale* was manifest, and there was instability of the pupil. She died undelivered, and at the necropsy the kidneys showed acute parenchymatous nephritis, and inside the cranium was a typical meningitis (an abundant purulent exudation was scattered here and there over the entire meningeal surface, especially at the base), while the same condition was found upon the cord. A 7 months' fœtus was removed from the uterus, and in it there was an exact counterpart of the condition of the maternal meninges, with perhaps more of a sero purulent exudation than a purely purulent one. Bacteriological examination of fluid from both the maternal and fœtal meninges revealed the presence of the diplococcus intracellularis meningitidis. The same micro organism was also separated in pure culture from the left ear of the mother. Dogs inoculated with cultures from the maternal and fœtal meninges died in convulsions. The case was one of an epidemic of 34 described by Gradwohl in detail in the July number of the *Philadelphia Monthly Medical Journal*. The only reported case at all resembling it is one put on record by Herwerden of sporadic meningitis in mother and fœtus.

(447) Hydramnion Mistaken for Extra-uterine Pregnancy.

Damas and Armand (*Centralbl. f. Gynäk.*, No. 44, 1899) have published an instructive case of error of diagnosis. A patient underwent abdominal section for symptoms suggesting extrauterine pregnancy. Gestation had advanced to the fourth month. When the abdominal cavity was opened a gravid uterus was exposed, and it was seen to be abnormally large for the corresponding stage of pregnancy, owing to hydramnion. It was soft, and showed no contractile movements, and seemed to be attached by a pedicle, the soft uterine tissue below the distended amnion, to its cervix. Owing to chronic cystitis the walls of the bladder were thickened, so that it had been taken for the uterus when the patient was examined before operation.

THERAPEUTICS.

(448) Intubation in Private Practice.

Trumpp (*Münch. med. Woch.*, 1899, No. 44) in a communication to the 71st Congress of Naturalists and Physicians, that serumtherapy has greatly diminished the percentage of operations in cases of laryngeal diphtheria (60 per cent. escaping in the United States); that under seremtherapy even the most serious symptoms of stenosis may rapidly disappear, and that very often the question is merely one of tiding the patient over a momentary danger of suffocation. In Germany, O'Dwyer's bloodless intubation is now preferred to tracheotomy, at all events in hospital practice, and with successful results amounting to 70 per cent. on the average, and in the clinics of v. Baginsky and Escherich to even more than 90 per cent. of all cases. The author had conducted an international investigation in order to ascertain the extent to which intubation has been employed in private practice and the results so obtained; the conditions under which it has been adopted, and the measures recommended by those practising it to obviate as far as possible the acknowledged inconveniences of the operation. He has received answers from 84 European and American physicians, 55 of whom have altogether performed 5,468 intubations in private with an average of recoveries of 35.6 per cent. before seropathy was generally adopted and of 81.98 per cent. since. Auto-extubation has not been uncommon, and 10 such cases proved fatal; choking of the tube was rare, but was twice fatal, and in 1 case death was due to sudden suffocation after the extraction of the tube. Continuous observation of the patient by the operator himself or by a deputy experienced in intubation was a *sine quâ non* with 15 of the respondents, and required conditionally by 6 others, but 43 consider that the supervision of trained nurses, or, when necessary, of intelligent lacs, may suffice. Trumpp concludes from the collected material that even in private practice intubation may in many cases be substituted for tracheotomy, and may sometimes, with the observance of certain precautionary measures, be adopted without provision for continuous attendance of the physician. In the discussion Escherich declared that the field for intubation in private practice was not limited to diphtheria—the continued presence of a physician was desirable, but not, if transference into hospital was declined and operation necessary, an indispensable condition. Unfortunate accidents were, of course, possible, but happened in hospital practice also. Here Trumpp had done a great service in proving that such unfortunate accidents after intubation were by no means so common as had been believed and as might be theoretically expected.

(449) Glutol.

This is the name given to a substance produced by the action of formaldehyde on gelatine in aqueous solution. A. Henry has made a careful study (*Thèse de Lyon*, 1899) of its antiseptic properties. The method of preparation is as follows: 500 grams of gelatine are dissolved in a sufficient quantity of water. 25 grams of pure formaldehyde are added; the whole mass is dried in an atmosphere charged with vapours of formaldehyde, and reduced to powder. The substance must be kept in a dry place. Glucol is used in the form of a powder obtained by scraping the mass. It is of a grey colour, odourless, and tasteless, and acts by continuous liberation of formaldehyde produced by the cells of the tissues with which it comes in contact; and it would appear that only tissues which are still vital have this power, and that formaldehyde is not set free by contact with dead tissue. On this account formaldehyde would seem to be of use in the case of wounds, ulcers, etc., where there is little tendency to cicatrisation from any cause whatever; thus, chronic varicose conditions, diabetic sores, trophic lesions such as occur in certain nervous diseases, are cases where it is indicated. It is also useful in venereal sores, syphilitic or otherwise; the chronic suppurative foci of tubercle and deep burns. In short, in those cases where iodoform has up to the present proved of greatest service, glutol may be employed, and the advantages which it presents are the continued liberation

of an antiseptic principle which is much greater than that of iodoform. The absence of toxic or irritant properties, of odour, are further important points in its favour.

(450) Inoculation against the Plague.

GALEOTTI (*Lo Sperim.*, An. 53, f. 3) believes the only treatment of any value in plague either as preventive (and chiefly that) or as curative is inoculation. He thinks the method proposed by Professor Lustig and himself (that is, the use of a nucleoproteid extract of plague bacilli) is superior to Haffkine's, because in the first place the substance is purer and freer from admixture with other toxic substances which produce an intense reaction, hurtful to the organisms and useless *quâ* immunity. Haffkine's fluid has a very low toxic and immunising power easily changed by heating, which is not the case with the nucleoproteid. Moreover the latter can be easily preserved in the dry state and can be accurately dosed. A few experiments have been tried on man with the nucleoproteid, and it has been found perfectly innocuous in proper doses.

(451) Antitoxin Treatment of Diphtheria.

THE results obtained from the use of antitoxin in diphtheria, as published in the February *Bulletin* of the Department of Health, city of Chicago, are summarised as follows in the *American Journal of the Medical Sciences*, 1899, p. 86: From October 5th, 1895 (the date of the first administration of antitoxin by the Department), to February 28th, 1899, a period of nearly three and a half years, a total of 6,342 reported cases of diphtheria were visited by the departmental inspectors. Of this number 4,311 were bacteriologically verified as true diphtheria, and 4,076 were treated with antitoxin, the remaining 235 either refusing antitoxin treatment or being treated by other physicians, the results not being known. The results show 3.795 recoveries out of the 4,076 cases treated by the Department. There were 276 deaths, and 5 cases were still under treatment at the close of February, 1899. The figures of recoveries, 3,795, and of deaths, 276, give a mortality rate of 6.77 per cent. in 4,071 cases of bacteriologically verified diphtheria treated with antitoxin. The further analysis of the 4,071 cases of diphtheria is of interest. In 355 cases treated on the first day of the disease there was only one death, a mortality of only 0.28 per cent.; in 1,018 cases first treated on the second day of the disease there were 17 deaths, a mortality of 1.67 per cent.; in 1,509 cases first treated on the third day of the disease there were 57 deaths, a mortality of 3.77 per cent.; in 720 cases first treated on the fourth day of the disease there were 82 deaths, a mortality of 11.39 per cent.; and in 469 cases first treated later than the fourth day there were 119 deaths, a mortality of 25.37 per cent. These statistics show conclusively the advisability of giving the antitoxin as early as possible. It is added that the death-rate of 6.77 per cent. from diphtheria during the past three years, since antitoxin has been used, shows a decline of 43 per cent. as compared with that for the previous three years, when other methods of treatment were in vogue.

(452) Aspirin.

FLOECKINGER (*Med. News*, November 18th) records experiments upon guinea-pigs, shewing that aspirin is rapidly absorbed from the intestine, but not from the stomach. Aspirin (acetyl-salicylic acid) occurs as white crystalline needles, and is soluble in weak alkalies. In guinea-pigs the lethal dose is 23 grains per kilo. Death occurs from cardiac paralysis. After administration there was an increase in the pulse-rate at first, followed by a slowing of the pulse and a reduction in blood pressure. Cheyne-Stokes breathing supervened. After death there was hyperæmia of the abdominal organs and kidneys, and the urine contained albumen. Floeckinger took 75 grains himself without toxic effects, except violent headache and tinnitus. A second dose of 60 grains, an hour afterwards, produced increased pulse, reduced temperature, and flashes of light before the eyes. The tinnitus and headache persisted for sixteen hours, and then subsided under the occurrence of profuse sweats. Aspirin presents several advantages over salicylic acid. It does not irritate the stomach. There is no cardiac depression. In ordinary doses there is no tinnitus nor headache. Its use can be prolonged, as the appetite is not impaired. The dose is 15 grains, three times daily, and is best prescribed in wafers or sachets. For acute and chronic rheumatism, polyarthritis, and pleurisy it has given excellent results, but it is ineffective in neuralgias and pleurodynia.

PATHOLOGY.

(453) The Bacterium of Eclampsia.

LEVNIOVITSCH (*Centralbl. f. Gynäk.*, No. 46, 1899), working in Phenomenoff's Maternity, finds that there is a definite germ in the blood in eclampsia. He found it constantly in 44 cases of puerperal convulsions. They appeared as large, round, and oval cocci, very automobile. The oval were the larger. He ranks these germs as planococci. In 28 cases the blood was added to broth, gelatine, and agar, and in 25 of the samples the cultures were identical. The cocci grew best on nutritive media consisting of placental tissue. The cocci, when cultured, were of different shape, and bore flagella. They were sometimes found in the blood before the first fit; indeed they were detected in several patients, not in the present series, who had no convulsions, but suffered from headache, vomiting, and œdema. They were invariably most abundant during the fit, and in about two days after the last fit they steadily diminished in number. At the same time, an involution form of the coccus appeared, the centre not taking the aniline stain. Pure cultures acted pathologically on guinea-pigs. Within a month they died of acute anæmia caused by hæmorrhagic endometritis. Subcutaneous injection of pure cultures in non-gravid rabbits frequently set up tetanic spasms of short duration in different sets of muscles. Occasionally the cocci were detected in the blood of the infants of eclamptic mothers; in two infants fits occurred.

(454) Absorption of the Aqueous in the Human Eye.

BENOIT AND NUEL (Société Belge d'Ophtalmologie, April, 1899) have injected Chinese ink into the vitreous of two eyes, the one in a child of 5, the other in a man aged 56, a few hours previous to exenteration of the orbit for sarcoma of that region, but not implicating the eye. The anterior chamber very quickly became black. Sections were made and treated with chlorine water, which, while not affecting the ink, decolorises the brown pigment of iris, etc. The ink penetrates into the iris through crypts in the anterior surface, and forms a thick layer near its posterior surface. The crypts lie near the pupillary margin and at the root of the iris. There is no sign of the posterior surface of iris being penetrated. The particles of ink impregnate the vessels in the ciliary body; but are not found in the retina, optic nerve, or choroid. They also penetrate into the cavernous tissue at the sclero-corneal angle, and surround but do not enter the canal of Schlemm. The authors conclude that the iris is the part principally concerned in the elimination of the aqueous. Venneman contests this, finding that fluorescin, which is perfectly dialysable, takes much longer than the ink to traverse the same route, and he will not admit the existence of lymphatic spaces in the iris.

(455) Degeneration of Medullated Nerve Fibres.

G. MÖNCKEBERG AND A. BETHE (*Archiv f. mikroskop. Anat.*, Bd. liv, 1899, p. 135) described some results obtained by some of the newer and more refined methods of nerve technique, which promise to throw light on the earliest degenerative changes occurring in nerves. The normal axis cylinders of medullated nerves are shown to consist—in vertebrates—of individual fibrils, sharply defined and lying in a homogeneous peri-fibrillar substance. The fibrils are of sensibly uniform diameter, and have no thickenings at the nodes of Ranvier, as older drawings indicate. The sheath of Schwann sends down processes at the nodes of Ranvier—constricting bands—which interrupt the myelin sheath at the nodes. The first pathological changes observed in the nerve seem to occur in the fibrils of the axis cylinder. The staining reaction of the fibrils is altered at first, and shortly after the fibrils themselves begin to swell and to coalesce into granular bodies. These granular bodies are of large size; later they break up or disintegrate into smaller particles, which are eventually absorbed. The homogeneous peri-fibrillar substance also exhibits at an early stage fine granular changes.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(456) The Serum Diagnosis of Typhoid.
Brancati (*Gazz. degli Osped. e delle Clin.*, November 12th, 1899), as the result of a critical and clinical examination of Widal's test, concludes that it is due to some special reaction which the Eberth bacilli undergo in the presence of typhoid serum. Of the various methods of using the test the instantaneous is the best. Agglutination occurs most markedly with blood serum, with the serum of blisters, with milk and tears; less markedly with serous fluids and urine and still less with aqueous humour, œdematous fluid, and bile; it fails with saliva. The agglutinating substance has its origin in the blood and is probably of an albuminoid character and associated with globulin or fibrinogen. It is found in very meagre quantities in the organs which are the seat of typhoid infection (mesenteric glands, liver, and spleen). The relation which exists between the intensity of the reaction and the gravity of the disease may furnish up to a certain point an important element in the prognosis. The author looks upon Widal's test as one of the best known means of diagnosis in typhoid and one which seldom fails.

(457) The Tuberculin Test.
E. O. Otis (reprint from *Transactions of American Cumatological Association*, 1899) has made observations on the use of tuberculin for diagnostic purposes extending over 111 cases, originally undertaken in an ambulatory clinic for the purpose of arriving at a conclusion as to the proportion of cases of cervical adenitis that were tuberculous. While making these investigations he embraced the opportunity to test all the cases which for any reason suggested tuberculosis, as well as several cases of syphilis and a variety of other cases. His results of last year were published in the *Medical News* of July, 1898. In the total number of 56 cases of cervical adenitis taken without selection, there were 33 reactions, 6 slight reactions, and 2 doubtful ones. Throwing out the slight and doubtful ones, 1 has 58 8 per cent; including them, 73.2 per cent., or an average of 66 per cent., which would indicate the proportion of cases of cervical adenitis that were tuberculous, so far as an inference can be drawn from 56 cases and dependence can be placed upon the tuberculin test; but of course a large number of cases and other methods of investigation must corroborate or disprove these deductions. As to the dose, there is much diversity of opinion. Some assert that they obtain satisfactory results with very small doses, as Grassett, with 2 to $\frac{5}{10}$ mg. for an adult, and Graffie, $\frac{2}{10}$ mg. for infants. The majority, however, use larger doses, from $\frac{1}{2}$ to 10 mg. and occasionally 20. A. C. Klebs regards 20 mg. as the maximum dose which can be injected safely, but he would not begin the test with this dose. It is not unlikely, Otis thinks, that this difference of opinion regarding the dose is largely due to the difference in the strength of the preparations used. He has never used over 12 mg. of Koch's tuberculin, generally from 5 to 10 mg. for an adult, and from $\frac{1}{2}$ to 3 mg. for children. At the Massachusetts General Hospital in Boston 7 mg. is the usual dose. Otis summarises his conclusions as follows, subject to modification by further experience: (1) The tuberculin test indicates early tuberculosis by a general reaction in the majority of cases before it can be detected by other methods, the *x*-ray excepted. (2) The dose to accomplish this is from 5 to 10 mg. of Koch's original tuberculin. (3) No injurious results occur from the use of tuberculin in these doses. (4) Proved tuberculosis in a more or less advanced stage may fail to give a general reaction with doses of 10 or 12 mg. (5) Syphilis gives a reaction in an undetermined proportion of cases. (6) A non-tuberculous person may give a general reaction with a dose above the maximum used in the test. (7) The reaction may be delayed from six to twenty-four hours. And as rules to be observed in making the test:—(1) Always use the same tuberculin and of a standard strength. (2) Use aseptic precautions in giving the injection. (3) Make the injections deep into the muscles. (4) Keep a two-hourly, three-hourly, or four-hourly chart of the temperature if possible, beginning twenty-four hours before the injection. (5) Allow several days to elapse before repeating the test. (6) In early cases depend upon the general reaction; in later cases, if the general reaction is wanting, carefully look for the local.

(458) Ambulatory Automatism.
E. Bergman (*Neurol. Centralbl.*, September 1st, 1899) records an interesting case of ambulatory automatism, which is important also from its medico-legal aspect. A Jewish lad aged 14 had epileptic attacks at the age of 1 year. The attacks subsequently disappeared, but at the age of 4 it was observed that the child showed a tendency to conceal himself from time to time. At the age of 7 he developed a marked disposition to run away from home, at first remaining out for one or two nights, and, later, keeping away for longer intervals. At the age of 9 he left home and was absent for a year. It was ascertained that his conduct while thus away from home was good, and friendly towards those with whom he associated himself, or to whom he turned for support and assistance. At the age of 7 he had lost his younger brother, to whom he was tenderly attached, and after this the patient seemed troubled with constant thoughts of his deceased brother. He often fancied he saw resemblances to his brother in other boys. He now showed a tendency to visit churchyards, and on one occasion he attempted to disinter his brother's corpse. Occasionally during his wanderings he suffered from hallucinations of sight, seeing at times his father, brother, or a favourite dog. Inquiry into his antecedents showed that the patient's father had died insane. His grandfather had suffered and died of some obscure nervous disorder, and of the patient's thirteen brothers and sisters several had died of convulsions or cramps, and only six were living. There were no stigmata of hysteria in the patient, and he was intelligent, fluent in speech, and could speak and write two languages. When questioned he could give no reason for his running away from home except that he experienced an impulse which he could not resist. The memory of such "absences" was apparently good, but occasionally it was lost. The present case is almost unique, owing to the coexistence of hallucinations, which are exceedingly rare in cases of this kind. Its medico-legal aspects have a practical bearing in relation to such conditions as vagrancy and wandering at large, temporary mental aberration, and the committal of crimes by epileptics when wandering about in states of ambulatory automatism.

SURGERY.

(459) Hair Ball removed from Stomach.
Schopf (*Wien. klin. Woch.*, November 16th, 1899) has compiled a good series of 16 cases of tricho-bezoar, or hair ball in the human stomach, including 8 cases of removal by operation, all successful. In 1 case only the incision was lumbar; 1 of the 8, unpublished hitherto, was in his own practice. The patient was a tall, sickly girl of 12, subject for a year to dyspepsia and vomiting, especially after taking sweets. A sausage-shaped tumour was detected in the epigastrium, freely movable and tender; no area of splenic dulness could be detected. On opening the abdomen, the swelling was seen to consist of the stomach, which was easily brought out of the wound. A 3-inch incision was made between the greater and lesser curvature and then a large hair ball extracted; it bore a kind of tail $\frac{3}{8}$ inch thick and over 15 inches in length, which was carefully drawn out of the pylorus and duodenum. Three layers of sutures were applied to close the coats of the stomach. The abdominal incision was likewise closed in three layers, after Link's principle in Bassini's radical operation for hernia, where deep sutures are applied and are withdrawn after healing of the wound. Aceton-celluloid was spread over the sutures to form a film. Notwithstanding these precautions, Schopf admits that the abdominal wound suppurated. The patient began to grow stronger than she had ever been before the operation. The hair ball formed a perfect cast of the stomach; it weighed when dry about 5 ozs. It was made up of felted hair, some very long and auburn, like the child's hair, and some short, coarse

black hairs not exceeding an inch in length, and mostly matted together close to the fundus of the stomach. The father of the patient afterwards admitted that ever since she was 5 years old he had frequently been obliged to punish her for nibbling her own hair. The short black hairs corresponded to the fur of a dog with whom she often played.

(460) Cure of Urachal Fistula.

MONOD (*Gaz. des Hôpitaux*, October 31st, 1899) operated on a boy, aged 10, with a urinary umbilical fistula due to persistence of the urachal canal. He operated on Delagénière's principle, by which the abdominal wall in the middle line is restored to its normal condition and hernia averted. The fistula and the cicatricial tissue around it were circumscribed by a double elliptical incision, then through an incision in the middle line the urachus was dissected away. Its termination was not treated as a stump, but was excised with a small portion of the tissue of the bladder around it. The wound in the bladder was then turned in and closed. This liberated the bladder, and prevented all chance of a urinary fistula. The recti muscles were freely exposed by opening of their sheaths, and their borders united by suture, the anterior and posterior sheaths being also sutured. Thus perfect healing of the abdominal wound was ensured. The cure proved complete.

(461) Operative Treatment of Movable Kidney.

DEAVER (*Annals of Surgery*, June, 1899) is opposed to the practice of freeing a movable kidney by sutures which, he states, may result in urinary infiltration and suppuration. He prefers a method suggested to him by Senn, of anchoring the kidney by gauze packing. The movable organ having been exposed by a vertical incision in the loin, and freed by dissection of its fatty capsule, is surrounded by strips of antiseptic gauze. Two long pieces of gauze are passed around the kidney, one beneath each pole, and then more gauze is gently packed around and over the organ. Over the gauze packing the first or long strips of gauze are tied, and a large pad is placed upon the anterior abdominal wall over the site of the kidney. After an interval of a week or ten days the gauze is removed, and the bed of the kidney and the surface of the organ will be found to be studded with healthy granulation. The wound is gently repacked after irrigation with sterilised water or some antiseptic solution. Healing is generally completed in from four to five weeks. The author has performed this operation with most satisfactory results on a number of patients, most of whom he has kept under frequent observation.

(462) Duodenoplasty for Ulcer.

JABOULAY (*Lyon Médical*, July 2nd, 1899) operated with success on a man aged 45. He had chronic otorrhœa, and pus, it appears, escaped down the pharynx from the Eustachian tube. Dyspeptic symptoms set in, and in the summer of 1898 nearly 2 pints of blood were passed from the bowel. At the same time he felt a fixed epigastric pain, aggravated three or four hours after meals. Vomiting never occurred, and the stomach was not dilated. In February, 1899, another attack of bleeding from the bowel occurred. There were also pains in the iliac fossæ, but nothing could be felt there on palpation. In spite of diet the epigastric pains increased. Jaboulay made an incision above the umbilicus, and found the first part of the duodenum hidden under the liver and indurated close to the second part. This induration, on the anterior aspect of the bowel, was a large cicatrix, which had contracted so as to diminish the calibre of the duodenum. Yet there had been no vomiting. Morestin made his incision as in Mikulicz's pyloroplasty. He made an incision, about 1½ inch long, in the long axis of the intestine, through the cicatricial tissue. Then he sutured, as in pyloroplasty, so as to make it run in the short axis of the gut. Two layers of silk suture were used, the deeper through all layers of the intestine, the superficial being sero serous. After three days' fasting (except serum enemata) the patient was carefully fed by the mouth. At the end of a fortnight he was doing well. Morestin prefers duodenoplasty to gastro-enterostomy. The latter operation would, in his case, have left the unhealthy scar untouched. Hæmorrhage or perforation might have occurred even if the communication between the stomach and the intestine beyond the scar had been successfully established.

(463) Resection of Pudic Nerves in Dysuria.

ROCHET (*Gaz. des Hôpitaux*, vol. xxxi, 1899) has resected the perineal branch of the internal pudic nerves in certain cases of painful chronic urethro-cystitis. He finds that the operation may entirely effect its object in cases when even cystotomy has failed to cure the dysuria and pain which is apt to return when the wound closes.

MIDWIFERY AND DISEASES OF WOMEN.

(464) Vaporisatio Uteri.

SCHLUTIUS (*Wien. med. Presse*, October 15th, 1899) has employed steam in the treatment of uterine hæmorrhage—a treatment first introduced by Snegiojoff in 1886—in about 50 cases. That the method is not more generally used is probably due to the unavoidable scalds inflicted when an imperfect apparatus is used, and even the author's pattern is capable of improvement. The apparatus consists essentially of a metal uterine catheter, having a return tube by which the steam can escape from the uterine cavity. It is important that this tube should have large lateral openings, or it is liable to become blocked by clots or shreds of tissue. The part which remains in contact with the cervix and internal os should be covered with some non-conducting substance. This metal tube is connected by india-rubber tubing to a small boiler furnished with a stopcock. If necessary the cervix must be dilated, but not so much that it does not surround the catheter with its cervical guard. The portio vaginalis should be protected by iodoform gauze packing and the vagina by a vulcanite speculum. An assistant is necessary to look after the instrument, observe the temperature of the steam, etc., but an anæsthetic is superfluous. The degree of action of steam at an average temperature of 110° C. (the temperature fell during the operation from 115° C. to 105°) is proportional to the time during which it is allowed to act. Thus with half a minute's application the brown-coloured zone of scalded mucosa extends for ½ mm., with one minute's for 1 mm., with one minute and a half's 1½ mm., and with two minutes' 2 mm. towards the muscular layers. The uterine cavity becomes filled as far as the internal os with coagulated albumin, but the cervix should show no, or but slight, changes. The Fallopian tubes are unaffected, proving that no steam penetrates through the ostium uterinum tubæ. As the steam enters the uterus it expands it slightly, so that all the folds of the mucous membrane are obliterated and every part is uniformly cauterised. The author has never produced unintentional obliteration of the cervix or uterine cavity, as reported by Dührssen and others, nor has he observed symptoms of pelveo-peritoneal irritation, or of perimetritis or parametritis, except in one case, where violent pain and slight vomiting and collapse followed and continued for fourteen hours. The operation is always followed three to fourteen days later by a pale red, usually inodorous, discharge, and in the second week by extrusion of fragments of the scalded mucosa. Excellent results were obtained in cases with fœtid discharge, cervical catarrh, and hæmorrhage due to chronic, hyperplastic gonorrhœal, or hæmorrhagic endometritis. In putrid abortions the factor rapidly disappears. In 7 cases of fibroid tumours the steam not only arrested the hæmorrhage, but caused considerable atrophy of the tumours. After removal of cervical or uterine polypi vaporisation prevents recurrence. As a hæmostatic in inoperable uterine cancer Schlutius has used steam in 1 case only; it temporarily arrested the hæmorrhage and fœtor, but seemed to hasten death by disintegration of the tumour. For hæmorrhage without morbid changes (hæmorrhagic diathesis) the method is specially indicated, as it causes thrombosis in the bleeding vessels, while curetting the mucous membrane only reopens them. Near the climacteric period it is often advisable to produce an artificial menopause by allowing steam at 105° to 115° to act for one and a-half to two minutes; the cavity of the uterus being finally obliterated by adhesions. To avoid this in younger women steam at 105° should not be applied for longer than half to one minute, or superheated

steam at 115° to 120° for longer than a quarter to half minute; if this fails to cure menorrhagia permanently it can be repeated. Besides being a safe hæmostatic and caustic, steam is a good disinfectant and deodoriser, and destroys gonococci in uterine gonorrhœa.

(465) Artificial Urethra in the Treatment of Urethral Cancer.

Goldberg (*Centralbl. f. Gynäk.*, No. 44, 1899) reports fully the after-history of an operation which he reported over three years ago (*ibid.*, 1896, p 514). The patient, aged 39, suffered from cancer of the urethra. The urethra and the sphincter vesicæ were excised, and an artificial urethra formed by a plastic operation above the symphysis. Quite recently the patient died with double pyelo-nephritis due to ascending infection of the urinary tract. For thirteen months after the operation she remained free from recurrence. For three months the artificial urethra functioned well with the aid of a catheter; then during the next five months urine could be passed without instrumental aid, and all the time complete continence of urine was ensured by aid of a binder and a glycerine plug over the artificial orifice. At the end of the five months there was complete retention due to clot and thick urinary deposit. The bladder became greatly distended, and urine began to escape from the vagina. It was found that the vaginal cicatrix of the old operation wound had yielded at one point; the new fistula thus developed was dilated with a sound and clot came away; then the artificial urethra could be catheterised, so that it clearly had been blocked with clot, not obliterated. But urine continued to escape through the vaginal cicatrix; the artificial urethra closed entirely, and, as double pyelo-nephritis was already evident, no further operative measures were possible. The patient died with uræmic symptoms.

(466) Periodical Hæmorrhage from Fallopian Tubes.

Jivopistzeff (*Meditz. Obozrenie*, June, 1899) publishes a case where this condition was observed in the stump of a tube fixed in an abdominal cicatrix. The patient was 31, and four years previously had undergone an operation for cyst of the left ovary and pelvic peritonitis following labour. Dysmenorrhœa set in, and for that she sought hospital relief. There was a bad hernia of the abdominal cicatrix, and a pyriform tumour, fluctuating and attached to the uterus, lay in the left side of the pelvis. The abdomen was once more opened and a large left hæmato-salpinx removed; but it adhered closely to neighbouring structures, so that part of its base near the uterus had to be left behind, fixed in the lower border of the abdominal wound. The next period was normal, and blood and mucus issued from the stump; the same thing was observed a month later, when the stump was reduced to a fistulous track. The author believes that he hæmorrhage from the tubes was not, strictly speaking, menstrual, but due to hyperæmia of the remains of the tubal mucosa caused by the stimulus of menstruation.

(467) Physometra or Tympania Uteri.

Gradenwitz (*Centralbl. f. Gynäk.*, No. 43, 1899) attended a case where the patient was a 4-para, aged 30, in the ninth month. The fœtal movements had ceased for ten days; she felt chilly, pains had come on, but after several hours no waters escaped. There was no further history of anything abnormal either in this or in previous pregnancies. The cervix was expanded, the os completely dilated, no membranes presented. The shoulder presented, with prolapse of the left arm and cord. Tympanitic distension of the uterus was evident; the temperature was over 104°, the pulse 140. The dead fœtus was easily extracted under chloroform. Immediately after its delivery some fœtid air and lochia escaped. Ten minutes later the placenta was expressed, as there was atony. Ergot was injected, and the uterus washed out with a 3 per cent. carbolic solution. Ice was applied to the abdomen. The patient died of suppurative peritonitis at the end of a week, with abscess in the lower lobe of the right lung, acute hæmorrhagic nephritis, and diphtherial puerperal endometritis. There were nine bad rigors in the puerperium, and as streptococci were detected in abundance in the vaginal and urethral secretion, 10 grams of Marmorek's antistreptococcus serum were injected six times. The fœtus was not in an advanced stage of decomposition, but great quantities of the bacterium coli were found in its stomach, from which fact Gradenwitz concluded that the waters had probably leaked away ten days before labour, that the bacterium then entered the membranes from the vulva and perineum, and that the fœtus swallowed some of the remaining liquor amnii, and thus the bacterium poisoned it, and gases were liberated and filled the uterine cavity.

(468) Normal Pregnancy in a Case of Paralysis from Cancer of Vertebræ.

Mercier (*L'Obstétrique*, July 15th, 1899) reports the case of a patient, aged 40, who was admitted into hospital for sudden difficulty in walking. Towards the end of pregnancy, when turning round sharply, she felt something crack in the lumbar region, and ever afterwards had to lie down and keep her room. She was, however, delivered at term of a child weighing $7\frac{3}{4}$ lbs. She could suckle, but had to wean her child because she could not sit down to nurse it properly. She was placed on a special couch, and had remained there for four months. A primary cancer of the left breast was detected; there was tactile paralysis of the lower extremities; the least attempt at movement caused intense pain. The liver as well as the spine was the seat of secondary cancer. This case confirms the theory, already illustrated by a previously recorded case, that involution and lactation are not influenced by compression of the medulla.

THERAPEUTICS.

(469) Home Treatment of Consumption.

At a meeting of the Johns Hopkins Hospital Medical Society on November 20th (*Phil. Med. Journ.*, November 25th), W. Osler read a paper on this subject. He prefaced his remarks with the statement that in 95 per cent. of the cases seen by physicians the patients were unable to afford treatment away from their homes. Arrest or cure of tuberculosis was a question entirely of nutrition, and of the measures by which the general nutrition of the body might be encouraged. The first and most important was fresh air. The quality of fresh air in large cities might not be very good, but it was the best that a large proportion of their patients could get to breathe, and it was a great deal better than the atmosphere of the overheated, ill-ventilated rooms in which many of them lived. He gave the following directions: Take the almanack and count off the hours of sunshine. In the winter cut off two hours in the morning and one hour in the evening, and for the rest of the day the patient must be out of doors. If there was no possible arrangement for life out of doors, the patient must be put in a room with southern exposure, and the bed moved in the sunshine, with the windows wide open. If there was a balcony or verandah with a good outlook towards the south, it should be arranged for the patient; if not, a shelter could be put up in the yard at a very moderate cost. On a well-padded lounge, covered with a couple of thicknesses of blankets, the patient sat or reclined all day. Only on blusterous, stormy, or very rainy days was the patient to remain in the house. No degree of cold was a contraindication. This continuous open-air life at rest was the most powerful influence we possessed to-day against the fever of tuberculosis. Secondly they must consider the diet. In any long series of cases the patients who did well were those who took plenty of food. Each case might be dealt with separately, but as large a quantity of food as possible should be given, even, when possible, insisting on overfeeding or stuffing. For some time he had been urging patients to accustom themselves to take raw eggs, beginning with one three times a day, and increasing it until they could take twenty to twenty-four a day. If broken into a cup and sprinkled with a little pepper and salt, the egg could be readily swallowed without breaking the yolk.

(470) Treatment of Enuresis Diurna.

H. J. Vetlesen (*Christiana Laegevidenskaben*, October) in a paper on this subject read before the Norwegian Medical Society in April, 1899, emphasised his confidence in belladonna and opium (combined in two of the former to one of the latter) as giving very satisfactory results. In support of this, he quoted 7 cases from his own practice which yielded quickly to this treatment. He gives the drugs in powder form, in doses according to age, but finds no need for

prolonged administration. Additionally he deduced from his cases some factors in the etiology of the disease. In only 1 case did nocturnal incontinence accompany the diurna. Four patients were under 5 years (3 boys, 1 girl), 1 boy was 11 years and a girl 15½ years; in the remaining case neither sex nor age are mentioned. The two elder patients had no knowledge of having passed water until the dampness of their clothes communicated it to them. The symptoms of the 15½ years girl followed immediately upon a mental shock, and there was a neurotic history, although no previous occurrence of incontinence. From this case, and from the absence of other causative condition in the cases quoted, Vetlesen considers the etiology to be one of derangement of bladder innervation. Nicolaysen (*Norsk Mag.*, No. 10, 1896) found various bacteria in the urine of 50 per cent. of his patients, and attributes such as causing enuresis, but the author does not agree with this, as he has invariably found the urine sweet, clear, of normal specific gravity, and an absence of albumen or sugar. That incontinence "diurna et nocturna" is often hereditary, and found in several children of the same family, and also may follow a "psychological insult"—namely, an unheeded call for urination—strengthens the theory set forth. The opium was first given as an adjuvant in opposing the toxicity of large doses of belladonna, but its marked and rapid effect in assisting the latter to improve the sphincteral and vesical "tone" led to its constant use.

(471) Treatment of Epistaxis.

AT a meeting of the Boston Society for Medical Improvement held on November 6th (*Phil. Med. Journ.*, November 25th), Frederick C. Cobb read a paper on epistaxis. He said that epistaxis would be regarded as a symptom of a local or a general disease, and treatment must be directed accordingly to local or constitutional conditions. The local lesions concerned might be said to be in the order of frequency: (1) Deviation of the nasal septum whereby crusts and scabs formed on the cartilaginous portion, and, being removed by the patient, gave rise to ulcerations; (2) fracture of the septum or nasal bones or trauma due to nasal operations; new growths of the nostril, especially angiomata and angio sarcomata. The constitutional diseases leading to epistaxis in the order of frequency were any form of disease of the kidneys resulting in increased arterial tension, plethora, and anæmia, and syphilis, phthisis, and alcoholism. Severe arterial hæmorrhage without local lesions should always lead to examination of the general condition, and especially of the kidneys. The prognosis depended upon the possibility of treating the cause. Local lesions where they caused irritation and ulceration could be controlled, but general conditions should also be treated. All forms of epistaxis should be treated by location and cauterisation of the bleeding point on the septum with the aid of a strong reflected light and a nasal speculum. In order to find the bleeding point the hæmorrhage should at first be controlled by a pledget of cotton soaked in a 10 per cent. solution of cocaine. The bleeding point, after carefully wiping out the nostril, should be cauterised with chromic acid or the galvano cautery point heated to a dull red. If cocaine failed to stop the hæmorrhage suprarenal capsule in a 10 per cent. solution might be used in the same manner, followed as before by cauterisation. If no bleeding point could be found, and if the hæmorrhage persisted, pack the nostril by means of antiseptic gauze, introduced by a pair of long forceps along the floor of the nose as far as the posterior nares, laid strip on strip until the nostril is occluded. Posterior plugs drawn up into the posterior nares were to be deprecated on account of the danger to the ear as well as the discomfort caused by them.

PATHOLOGY.

(472) Pathology of Paralysis Agitans.

FRAENKEL AND PHILIP (*Deut. Zeit. f. Nerven.*, Bd. iv, 1899, Hft. 5 and 6) publish two communications on the subject, which record new facts of clinical and pathological importance. A woman, aged 60, had begun to develop symptoms of paralysis agitans two years and a half previously, the symptoms being typical, except for a slight patellar clonus. There were evidences also of renal disease. She died, and a necropsy, which was made four hours after death, revealed the following conditions: The spinal cord seemed normal to the naked eye. Microscopical sections stained by various methods failed to show alterations in nerve cells or nerve fibres, with the exception of excessive pigmentation in some of the anterior corneal multipolar cells of the cord. There was no accumulation of neuroglia cells around the nerve cells. No changes were met with in the medulla oblongata. Pronounced changes were met with in the cortex at the top of the Rolandic area (paracentral region)—namely, an excessive chromophilia of the colourless (achromatic) substance, so that the protoplasmic processes could be traced readily to their tertiary branches. Sometimes even the axis cylinders took on the stain, and were rather distinctly visible. The neuroglia cells were present in collections around the large nerve cells in clumps of four or five. No absolutely normal cells were found. Philip thinks, from the above, that the idea of primary changes in the spinal cord as the basis of the pathology of paralysis agitans cannot be sustained, and that the changes begin rather in the cerebral cortex, which is the primary seat of the disease. Fraenkel gives the results of observations and measurements made on the skin with the aid of callipers. These show that a thickening of the skin of the face occurs in paralysis agitans, and is a cause (if not the cause) of facial immobility and want of expression. In one case these were more marked on the right side than on the left, and the skin of the right side was found to be 2 mm. thicker than on the left side. In another case where the symptoms were more marked on the left side there was an increase of thickness of the skin—in comparison with the opposite side—amounting to 5 mm. The skin all over the body was abnormally thickened in paralysis agitans. This condition may in some cases be so extreme as to make it impossible to produce a crease or fold of the skin. Another method was to take the circumference of both limbs, which gave confirmatory results. Fraenkel looks upon the subjective skin phenomena—namely, sensations of heat and tingling, etc., as paræsthesia due to changes taking place in the texture of the skin itself, and believes that the vasomotor symptoms are also produced locally. He inclines to the view that changes affecting the muscles, such as rigidity, are also of first importance, but believes that these are distinct and separate from nervous lesions, which may be, and are in some cases of paralysis agitans, entirely wanting.

(473) Peripheral Nerve Lesions in Tuberculosis.

RUDOLF SCHMIDT brings to a conclusion the results of extensive researches published regarding the alterations of the peripheral nerves in pulmonary tuberculosis (*Wien. klin. Woch.*, Nos 27, 28, and 29, 1899). His general conclusions may be summarised as follows: (1) The morbid changes in the peripheral nerves may be classed under two headings, namely, local changes of mechanical and toxic nature, and dependent on the proximity of the affected nerves to the focus of infection, and diffuse changes of toxic origin. This may be noted in the case of nerves of the brachial plexus, intercostal nerves, the recurrent laryngeal nerve, etc. (2) Disturbances from toxic substances may be of more diffuse character—though due to local action (proximity to the focus of disease). (3) Among the actual local symptoms produced may be included phenomena of unilateral pain, due to pressure on elements of the brachial plexus, or the special phenomena of acroparæsthesia—often attributable to involvement of the ulnar nerve; both these sets of conditions may occur in the early forms of pulmonary tuberculosis. Tuberculosis, especially in young persons, must be borne in mind as one of the causes of acroparæsthesia. (4) There is a symptomatic acroparæsthesia which occurs in phthisical patients, especially in males, and is frequently associated with acute catarrhal lung troubles (bronchitis, influenzal bronchopneumonia, etc.). It is characterised by its unilaterality, occurring on the same side as the affected lung apex. Nerve trunks issuing from the brachial plexus may in such cases be tender and painful to pressure, and the symptoms may exhibit a parallelism with those of progressive pulmonary destruction which may be concomitantly indicated by night sweats, febrile elevation of evening temperature, etc. (hectic symptoms).

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(474) The Chemical Diagnosis of Gastric Diseases.

Vaughan Harley (reprint from the *Practitioner*, October, 1899) thinks that chemical methods in the diagnosis of gastric affections have been greatly neglected in England, although the stomach tube and an analysis of the gastric contents are frequently indispensible. The only contra-indication is recent hæmatemesis. Since the stomach reacts differently to differently stimuli standard meals must be employed. In analysing the contents Ewald's, which consists of two cups of weak tea and two slices of dry toast taken an hour before the contents of the stomach are removed, gives the best results. For the investigation of the motor power of the stomach Leube's meal, consisting of ½ lb. of freshly-minced meat and a little bread taken while fasting, is the most satisfactory. Four, five, to seven hours afterwards the tube is passed, and any remains of the meal are noted. Normally there should be no residue after five or six hours. When there is increased gastric irritability, and consequently increased motility, the stomach may be empty between the third and fourth hour, but with lessened motility a residue may be found even sixteen hours after the meal without any pyloric stenosis. The motor power may also be investigated by giving salol and testing the urine every ten minutes with perchloride of iron until a red colour appears. This occurs normally in about one hour, but in a case of deficient motility may be delayed for four or five hours. It is an obviously inconvenient method. After having analysed the contents and tested the motor power, the size and position of the stomach should be determined by permission after distending it with gas, either by blowing down a stomach tube or by giving half a drachm of tartaric acid and followed directly by the same quantity of bicarbonate of sodium. This is preferable to the other numerous methods, including gastro-diaphany. (1) The total acidity and the free HCl are increased in gastric ulcer, digestion being usually quicker than normal. (2) Acid dyspepsia may be divided into cases where (*a*) the excess of acid is due to HCl (hyperchlorhydria), and (*b*) where it is due to increase of the volatile acids. These latter cases are those which benefit the most by bismuth and sodium carbonate taken some time after meals. On the other hand, in hyperchlorhydria, unless the cause is removed by dieting (plain food with no pepper, mustard, or spices, and but little table salt), bismuth and prussic acid mask the symptoms, while fermentation increases and at once dilatation supervenes. Hyperchlorhydria is usually accompanied by increased motor power; its chief symptom is pain, coming on three or four hours after food, and relieved at once by taking more. (*c*) Another form of hyperacidity is gastrosuccorrhœa, where, though fasting, the stomach may contain a considerable amount. It is generally due to worry, and may be intermittent or constant. (3) In malignant disease a deficiency or absence of free HCl may help the diagnosis in a doubtful case, though there may be a complete absence of it in other conditions also, such as neurotic dyspepsia. Mucus and lactic acid are increased. (4) All cases of gastric trouble usually described as functional, now come under the head of neurotic dyspepsia. In this HCl is absent or diminished, the volatile acids are increased, often enormously, the digestive power is delayed or totally absent, the motility is diminished, dilatation is usually and gastroptosis nearly always present. In an uncomplicated case mucus is not increased. The ordinary signs of neurasthenia, though commonly, are not always present. Analysis in these case is of the utmost importance; for instance, in one of the author's cases a diagnosis of gastrosuccorrhœa would have been made from the symptoms, but in reality HCl was entirely absent. Treatment is largely hygienic. Internal faradism is most useful, though Weir Mitchell's treatment also is essential in bad cases. NaCl should be withheld as much as possible. The diet should be dry, and liquids taken only as hot water an hour before or three hours after meals, the chief of which should be in the middle of the day. Of drugs strychnine and arsenic are the most useful, though opium is occasionally necessary. When HCl is deficient sodium bicarbonate may be given an hour before meals. Regulation of the bowels is a necessity. (5) Since the introduction of the stomach tube most cases of what used to be called gastric catarrh are now placed among the neuroses. Genuine gastric catarrh almost always depends on some irritant, such as alcohol, tobacco, or spices. The gastric contents resemble those found in ordinary neurotic dyspepsia, though mucus is always present, generally in excess.

(475) Geophagia.

Baccarani (*Gazz. degli Osped.*, October 1st, 1899) records three cases of earth eating. The first was in a young man, aged 21, who from childhood had been in the habit of eating dust and earth; the second in a girl of 17, who had been in the habit of doing the same thing since birth. In each of these two cases there was an enlargement of the liver and spleen, a backward intellectual condition, diarrhœa alterrating with constipation, vague abdominal pains, anæmia, etc. The third patient was a girl, aged 10, whose habit it was to eat charcoal on every possible opportunity. In this case the habit seemed inherited, as the father was a charcoal eater. The habit is probably a cause of the dyspeptic disturbances which frequently arise, and the fact that the charcoal eater displayed many of the signs and symptoms of the earth eater seems to weaken the theory that they are due to parasites or germs taken in with the earth, as these would not be so likely to be included in charcoal dust.

(476) Aneurysm of Aorta in a Child.

B. Rogers (*Pediatrics*, viii, 158, August 15th, 1899) records the case of a girl, aged 10 years, with a good family history, very anæmic, and with a loud, rough, systolic murmur all over the cardiac area, and loudest over the pulmonary region. The heart's apex was displaced 1 inch outwards, and a distinct fremitus could be felt. The progress of the case differed from that of ulcerative endocarditis. The temperature was constantly raised, and the murmur increased in loudness. The urine was normal. The child died suddenly of cardiac failure. At the *post mortem* the pericardium was found to contain some fluid with flakes of recent lymph in it; the left ventricle was greatly hypertrophied, and the aortic valves glued together with large vegetations; about half an inch above the right side of the anterior semilunar valve of the aorta was a rugged hole, the opening of a small aneurysm. The aneurysm was about the size of a cob nut, but appeared to be partially filled with clot. The other organs were healthy. The case is interesting on account of the rarity of aneurysms in children. It was not in the position of the obliterated ductus arteriosus.

SURGERY.

(477) Femoral Hernia: Lymphangioma of Ileum in Sac.

Hoppegarten (*Deut. Zeit. f. Chir.*, February, 1899) operated in May, 1897, on a woman aged 45, who had symptoms of strangulated femoral epiplocele. She seems to have suffered from right femoral hernia for twelve years, and wore a truss. Four days before admission she was seized with severe abdominal pains, and neither flatus nor fæces passed. The hernia was painful, and had become for the first time irreducible. No vomiting had occurred, and the temperature was low. The abdomen was much distended. The hernia was as big as a hen's egg and dull on percussion; on that account and because of the absence of vomiting, omental hernia was very reasonably diagnosed. On opening the sac a little serum escaped, then a solid mass was found 2 inches by 1½ in measurement, and resembling in appearance a small cystic ovary. It was covered with visceral peritoneum and was pedunculated, its pedicle passing into the abdomen. On widening the neck of the sac and pulling on the tumour a coil of intestine followed. The pedicle ran on to the gut immediately opposite the mesenteric attachment, covering an area of three-quarters of an inch in diameter. It was excised with a little of the adjacent intestine. The intestinal wound was united transversely

with Czerny-Lembert sutures, as in Heineke-Mikulicz's pyloroplasty. The gut was reduced and the sac excised. On the day of operation a free action of the bowels took place and the wound healed well. A hernial protrusion remained. Eleven months later the patient was examined again. No tumour could be felt. The growth was a lymphangioma full of cysts from the size of a millet seed to that of a cherry stone.

(478) Traumatic Rupture of the Colon.

Makins (*Annals of Surgery*, August, 1899) publishes an elaborate and instructive analysis of 21 cases of rupture of the intestine, treated in St. Thomas's Hospital in the course of the past ten years. This series of cases contains two instances of rupture of the ascending colon under the author's care which were successfully treated by laparotomy. In the first case the injured bowel was exposed and sutured seven hours after the receipt of injury, and in the second, which did not come under the author's observation until the thirty-fourth day after a severe contusion of the abdomen, a large swelling on the right side extending from just below the costal margin to Poupart's ligament was laid open, and exit given to pus mixed with small quantities of fæcal matter. In this case the original injury of the colon, the author thinks, could not have amounted to actual perforation, but was due rather to such severe contusion that sloughing subsequently took place. The following practical suggestions are made with regard to the diagnosis of intestinal rupture. Such diagnoses however must, it is pointed out, be made in the great majority of cases by the method of exclusion, and then, in view of the necessity of prompt action, often needs the confirmatory evidence of an abdominal section. The history of the case may aid the surgeon as to the actual nature of the violence, which was probably such as to affect a strictly localised area, and as to the exact spot upon which the violence was exerted. The latter point may be further evidenced by external marks of injury and the localisation of the causative violence. The author holds that blows over the abdomen above the level of the umbilicus are very unlikely to cause a rupture of the intestine except in the rare instances in which the violence has been so directed as to compress the gut directly against the spinal column. General symptoms, such as shock, pain, and vomiting, combined with local signs such as localised tenderness, early rigidity and immobility of the abdominal parietes, and the presence of fixed areas of dulness, either small, as possibly indicating the locality of the injury, or large and fixed, as indicating collapse of the bowel but not the presence of free fluid, will be of aid. Spinal signs pathognomonic of intestinal injury, such as cellular emphysame, localising the injury to the uncovered portions of the duodenum or colon, or possibly free gas in the peritoneal cavity may be present. The presence of these signs with a pulse rising beyond 100 will be indications for an abdominal exploration.

(479) Botryomycosis in Man.

Delore (*Lyon Méd.*, July 16th, 1899) reports a case of this rare affection. The patient was a peasant woman, aged 54, with a tumour on the hand, as usual in botryomycosis. It lay, attached by a short pedicle, to the ulnar border of the hand, close to the little finger; in appearance it looked like a small strawberry. It had no epidermic covering. It began six months before observation as a wart which frequently bled; then it grew steadily and bled more and more, so that the patient applied for hospital relief. The botryomyces was difficult to find. Dor prepared some specimens in association with Delore's case, in order to demonstrate the different appearances of streptococcus, actinomyces, and botryomyces. The parasite in question probably invades a sudoriparous gland first, the tumour beginning as an active proliferation of sudoriparous glandular tissue, at first subepidermic. The free development of vessels in the tumour is always marked. There were never any general symptoms in man, but the tumour in all recorded cases was removed early, the patient being alarmed at the bleeding.

(480) X-Ray Detection of Renal Calculi.

Abbe (*Annals of Surgery*, August, 1899) reports 2 cases in which he was able to detect small renal calculi by means of the Roentgen rays. In this surgeon's experience with radiography, success in connection with renal calculi has hitherto been limited to these two cases. He had attributed many previous failures to the prevalent idea that to take an *x*-ray picture of a renal calculus is generally impracticable; but he now realises that his want of success was due to the fact that no case of real calculus of the kidney had presented itself to him. It is asserted that the presence of renal calculi has been demonstrated by radiography in 27 published cases in which confirmatory evidence was afterwards afforded by surgical operation. It is probable, the author remarks, that in most persons of spare habit and in young subjects a stone in the kidney can be found with reasonable certainty.

MIDWIFERY AND DISEASES OF WOMEN.

(481) Abdominal Pregnancy: Successful Operation.

Van Hassel (*Bull. de la Soc. Belge de Gynéc. et d'Obstét.*, vol. x, No. 5, 1899) operated recently on a severe case of this kind. The patient was 32, thin, anæmic, nervous, and stupid, so that a precise clinical history was difficult to obtain. She had been married when 18, but had never been pregnant. Five months before operation she complained of severe abdominal pains, which had been felt intermittently for about a year, since when she had steadily become emaciated. A sanious discharge had continued for a few weeks. Behind the pubes rose a small tumour with an irregular surface. It pressed down into Douglas's pouch. When Van Hassel saw it, it had increased. The uterus, quite separate, was pushed to the right; the tumour was fixed. No reliable evidence about menstruation or discharge of a decidua could be obtained. Douglas's pouch was opened and a quantity of syrup-like blood escaped at once. On passing a finger into the incision, it could be determined that the peritoneum and not a cyst wall had been incised. A placenta could be felt adherent to the intestines. At the first attempt to detach it such severe bleeding occurred that an iodoform gauze tampon had to be applied at once, and was replaced from time to time till all fear of hæmorrhage had passed away. Then the abdomen was opened. A mass of adherent intestine, descending colon, sigmoid flexure, and ileum was exposed; at its upper part a thin deposit of lymph was seen; on breaking through it the placenta and a macerated fœtus over 4 inches long were discovered. The uterus, ovaries, and tubes were found quite free from the mass. Some more syrupy blood escaped from the space made by the mass of adhesions. The fœtus was then dissected piecemeal and with much difficulty from intimate intestinal adhesions. The serous coat of the descending colon and of some coils of small intestine had to be sutured. The voluminous placenta was left alone. The operator managed to marsupialise the edges of the pouch, which was drained through the abdominal wall with gauze; it was frequently washed out, through the old vaginal incision, with boracic solution. The placenta came away in pieces below. When cicatrisation seemed complete above, the remains of the placenta were removed through the lower end of the abdominal wound, The patient soon regained her strength.

(482) Incontinence of Urine from Dilated Female Urethra.

Ries (*Amer. Gynec. and Obstet. Journ.*, November, 1899) reports the case of a woman, aged 38, who had suffered from complete incontinence of urine ever since marriage. The genital tract was normal, but the forefinger could be introduced into the urethra. It transpired that connection took place in the urethra owing to a remarkable malformation in the husband due to an injury. Ries determined, in order to prevent the recurrence of the incontinence after the patient returned to her husband, to perform a plastic operation, which would get the urethra out of the way, by placing the meatus externus at a point where it would be less exposed. The urethra was to be twisted (after Pousson's method), and fixed forwards. A silkworm-gut suture was first passed into the coats of the urethra as a guide for twisting later on. Then an incision was made completely round the meatus, and continued posteriorly into a vertical incision 2 inches long up the median line of

the anterior vaginal wall. Then two vaginal flaps were dissected back; this exposed the urethra, which was then cleared all round for an inch and a half. Next, a transverse incision was made in the mucosa of the vestibule, a little behind the clitoris, a knife being then pushed under the mucosa between the transverse incision and the incision around the meatus. Under this bridge of mucous membrane the urethra was drawn down, twisted 180°, and sutured to the edges of the incision behind the clitoris. The vaginal flaps were shortened sufficiently to constrict the urethra a little when sutured. A thin elastic catheter was introduced, but it caused irritation, so was removed on the same day. The patient was made to urinate at first every hour, then every two hours, and so on. About a month later the patient could go about and hold her water for six hours in the daytime, and slept all night without wetting her bed. Micturition is accomplished without delay or difficulty, and the patient has not to press on the bladder. In a discussion which followed the reading of this case, Ries declared that although the meatus was displaced so much forwards the stream of urine did not wet the patient. Ries refers to several varieties of this operation recently introduced.

(483) Capillary Angioma of Placenta.

Osterloh (*Centralbl. f. Gynäk.*, No. 40, 1899) observed this rare condition in a placenta delivered by a girl aged 18 at term and spontaneously. A vascular tumour lay on the border of the placenta; it was of the size of a small apple, and was invested with a smooth capsule, between which and the insertion of the cord ran several blood vessels. On section the tumour appeared dark red, and under the microscope it was found to be made up of engorged capillaries separated by a scanty stroma. About 38 cases of placental tumour had been reported, of which 11 were angiomata. Veit has reported two more vascular tumours in a Dutch medical paper.

(484) Sarcoma of Uterus.

Mixter (*Boston Med. and Surg. Journ.*, August 31st, 1899) reports a case of a married uniparous woman, aged 54, who in February, 1890, was operated on eleven times between that date and October, 1898, by six different surgeons. In 1890 the growth consisted of polypoid masses of a suspicious character; masses more and more pedunculated were repeatedly removed from the uterine and cervical canal and from the os. In February, 1898, the uterus was amputated low down on the cervix. In May, 1898, a polyp, which filled nearly the whole vagina, was removed; in August several sarcomatous masses as big as hen's eggs were shelled out of the vagina with hands and scissors. On October 25th a large, foul, sloughing mass was removed. The patient died a month later. The reports of the tumour tissue removed after each operation seem to prove that the disease was malignant degeneration of a mucous and adenoid polyp. Ultimately it appeared as a typical sarcoma. Mackay (*ibid.*) reports a case of myxosarcoma of the uterus in a married woman aged 63; the vault of the vagina was involved, and palliative treatment alone possible.—Davenport (*ibid.*) publishes a case resembling Mixter's in some respects. He removed a fibroid polypus from a married woman of about 43 in October, 1893. He afterwards operated for removal of similar polypi several times. But in November, 1896, symptoms of ruptured ovarian cyst set in. Davenport operated, removing both ovaries, which were the seat of cystic tumours. The question of removal of the uterus as well was discussed, but as there was no apparent tumour in that organ, and the removal of the cysts had taken over an hour, it was thought best to leave it. In May, 1898, hysterectomy was performed by the vagino-abdominal method. Nine months after the operation the patient was in perfect health. The myxosarcoma had started in the fundus.

(485) Vesical Calculus around a Catheter.

Albert (*Centralbl. f. Gynäk.*, No. 46, 1899) states that a girl aged 22 gave birth to a child and suffered for long afterwards from retention of urine, so that she required catheterism. Her father, a shoemaker, was accustomed to pass the instrument. At length incontinence of urine and fœtid discharge set in, and there was much pain. Examined one year and a half after the labour, a swelling of the size of two fists was detected above the symphysis. On bimanual palpation, a calculus of the size of a hen's egg could be felt; it distinctly tailed off into the urethra. A skiagraph was then taken, the stone was clearly seen, and from it ran an S-shaped shadow, as thick as a lead pencil and evidently at least 7½ inches long. Vaginal lithotomy was performed, and the stone removed with forceps. It had formed around the end of a gum catheter nearly 1 foot in length; how the instrument had been allowed to slip in did not transpire. The incision was sutured; it healed by the first intention.

THERAPEUTICS.

(486) Treatment of Myocarditis.

Martin Mendelsohn (reprint from *Deutsche Praxis*, No. 17, 1899) believes that whatever the cause of myocarditis, be it diphtheria or other infectious diseases, alcohol, phosphorus, or syphilis, the clinical symptoms are always those of a weak heart, and require the same treatment; in any case they depend on an inability of the heart to meet the demands made upon it. Thus, supposing the demands to be excessive, they may produce symptoms of myocarditis in a heart previously healthy. In slight cases the symptoms occur only when unusual bodily or mental exertion has been made. In the later stages they are permanent. The physical signs vary, but generally consist in hypertrophy of the left ventricle, with accentuated sounds if compensation is present, or in dilatation with weak sounds if it is not. In the treatment all excessive bodily or mental exertion must be avoided, as well as the habitual use of coffee, tea, and tobacco. Oertel's treatment, which consists in systematically increasing the power of the heart by exercises, and reducing corpulency by restricting the fluid drink, acts well in obese but otherwise healthy patients; but since it is impossible to eat much without drinking is not suitable for debilitated patients, where, especially at the beginning of the complaint, absolute rest in bed is the chief remedy, and restores compensation. Later, each patient must aim at keeping his heart exercised by bodily and mental work while avoiding overexertion. Other important factors are life in an even temperature and pure air, regulation of the bowels, and frequent, though small, meals. Acute attacks of vertigo, palpitation, dyspnœa, and cyanosis are best treated with ether and caffeine. In chronic cases drugs must be given with caution, and digitalis should be reserved for those where compensation fails; in others caffeine, convallaria majalis, adonis vernalis, sodium nitrite or potassium nitrite may be tried. Occasionally ergot acts well by its tonic action on the muscles of the smaller vessels.

(487) Mercurial Ointment in Erysipelas.

Dematteis (*Gazz. degli Osped. e delle Clin.*, October 1st, 1899) publishes a short summary of 8 cases of erysipelas treated by mercurial ointment either alone or diluted with vaseline. The results were so successful that the author urges a larger trial of this mode of treatment. He found it of value not only in the more or less stationary cases, but in those where the disease had a tendency to spread in other parts; even in gangrenous erysipelas it controls the extension of the disease. Probably these results are due to the bactericidal action of the mercury.

(488) Hæmostatic Use of Gelatine.

Nichols (*New York Med. News*, December 2nd, 1899) used gelatine successfully in a "bleeder." The patient was a dairyman, aged 24, who wounded his wrist and forearm with broken glass. Free hæmorrhage continued for seven days; then great masses of clot, retained by the dressings, were found in the wounds, infiltrating muscle and tendon, whilst serious attacks of bleeding came on frequently, saturating the dressings and clothes and greatly reducing the patient. In view of recent results reported from the use of gelatine in hæmophilia, a bacteriological culture tube of sterile 10 per cent. gelatine was melted and poured into the wound; after suturing some new incisions which had been made on the suspicion that a deep vessel had been wounded and retracted, iodoform gauze was packed in and the wound dressed. A drachm of the fluid extract of ergot was given twice daily. No more bleeding occurred: the pain disappeared and the patient became comfortable. The wound was dressed in

two days and looked healthy: the ecchymotic tissue had undergone liquefaction necrosis, and had been absorbed into the dressings, leaving a clean ulcerated surface. It was again dressed with gelatine and the ergot continued for two days. From then the wounds followed the course of healthy, uninfected granulating ulcers, which were entirely healed in five weeks, being dressed in the ordinary manner without gelatine. The divided muscles and nerves seem to have united perfectly, the motion and sensation of the fingers being practically unimpaired.

PATHOLOGY.

(489) Syndrome of Landry. Its Pathology and Bacteriology.

Paul Courmont and Bonne of Lyons record in great detail a case of the above (*Arch. de Neurolog.*, November, 1899), inquiring into the question as to whether a poliomyelitis or a polyneuritis is the exclusive cause of the paralysis, and giving the results of a very full histological and bacteriological examination. A man aged 28 was brought to hospital (April 7th, 1898) completely paralysed. He had been helpless in bed for three days and was visited by his neighbours. He had difficulties of phonation, and could speak with difficulty and in a feeble and muffled voice. He could, however, give information that his illness commenced suddenly on April 4th with sudden paresis of the lower limbs, whereupon he took to bed and soon became quite paraplegic. He became feverish, had headache (*céphalée*), but no backache (rachialgia). The paresis spread upwards and involved the upper limbs, and later the larynx; a day later speech was very difficult and painful. There were no subjective sensory troubles. No history of his antecedents could be obtained, but patient had had good health before the present attack, and this was subsequently confirmed by the testimony of the parents. He is of good physique, robust, with flushed, feverish, sweating face. Both upper and lower limbs are completely paralysed and flaccid without contracture. The scapulo-humeral and trunk muscles seem paretic. Respiration is rapid (30 per minute) and difficult. The diaphragm appears paretic and the thorax expands but feebly; there is infrasternal retraction and supraclavicular depression during inspiration. The facial muscles appear unaffected, the eyelids are mobile, the lips tremble slightly, the tongue can with difficulty be moved or protruded. Speech is very difficult, deglutition is possible, but is awkward. The pupils are unequal; the left is dilated. Cutaneous sensibility appears generally diminished. The knee-jerks are absent, as well as the cremasteric and abdominal reflexes; the plantar reflex is preserved. There is no muscular atrophy, and no vasomotor changes, except a very marked congestion of the face, with abundant sweat. The sphincters are relaxed, and urine and fæces pass involuntarily. There is no œdema or albuminuria. The mental faculties are preserved; the patient understands what he is told, and makes efforts to reply. There is a "striking contrast between this intellectual lucidity and the complete immobility of his limbs and of most of his muscles." Temperature 39° C.; pulse 120, rapid, strong, and bounding; nothing abnormal about the heart or lungs. The following day he grew worse; there was total aphonia and an attack of vomiting, respiration grew more difficult and the pulse more feeble, a sweat broke out over the body; the temperature rose to 40.9°, and he died at night. Necropsy (April 10th) revealed the following: Marked œdema of the pia arachnoid, with much dilated cerebral ventricles; the spinal canal was distended by clear fluid, which squirted in a jet on incising the dura; there were no apparent lesions of the spinal pia-arachnoid. Sections of the cerebrum, cerebellum, and spinal cord showed no macroscopic lesions. The viscera were normal except for a congestion at the bases of the lungs. Sections of the cord and bulb prepared by Nissl's method showed advanced changes in the anterior cornual cells (lumbar region). The cells showed all degrees of exhaustion and chromatolysis, and of chromatophilia and contraction. In some of the cells the Nissl's corpuscles seemed massed into blocks. Other cells showed marked hyaline and vitreous degeneration, or various degrees of vacuolation, or rupture of processes and displacement of nuclei. Marked changes likewise occurred in the cervical enlargement, and to a greater degree in the bulb about the hypoglossal nuclei. Moderate changes were found in the vagus nucleus, and to a less extent in the nucleus ambiguus. The vessels and meninges showed no lesions except for small occasional groups of round cells around a few vessels. Marchi's method showed a few degenerated fibres in the cervical (and lumbar) regions, close to the grey matter, as well as within the anterior cornua, and along the track of the anterior root fibres within the cord. The cortex (Rolandic area) showed no lesions, nervous or vascular. The peripheral nerves (median, sciatic, external popliteal) showed not a single degenerated fibre with Pal's and with Marchi's methods. The kidneys showed a diffused desquamatic glomerular nephritis, and a number of granulo-hyaline casts within the tubules, but these were not constant. Bacteriological examinations were made of the blood during life, and of the nervous tissue and cerebro spinal fluid after death. The former gave absolutely negative results. Cultures from the nerve tissue gave a mixed growth of cocci, of undetermined bacilli, and of diplococci analogous to pneumococci and colouring with Gram's method. The cerebro-spinal fluid gave rise only to pure cultures of the diplococci just mentioned. Grown in bouillon they showed no capsules with Gram's stain. In its prolonged viability in bouillon, and in its mode of growth on solid media (agar-gelatine) the micro-organism differed from the pneumococcus, and from the meningococcus of Weichselbaum, and resembled somewhat the streptococcus pyogenes. The authors regard it as the specific agent, and look upon the other microbes (obtained from the nerve tissue) as probably due to cadaveric infection.

(490) Ozæna.

De Timani (*Il Polinico*, August 15th, 1899) has isolated a large number of microbes from the nasal contents of persons affected with ozæna, and has examined their pathogenic effect in animals. Most of the germs found—for example, Fraenkel's diplococcus, streptococci, and pyogenic staphylococci—may be found in normal nasal mucus. Encapsulated and bacilli were also found. All were devoid of pathogenic action, whether inoculated together or separately, and gave rise to no specific disease in the nasal cavities of healthy animals. Probably in ozæna there is some primary anatomical lesion which favours the growth of the various germs found in the normal nasal mucus.

(491) Pathological Anatomy of Optic-nerve Atrophy.

A. Elsching has studied microscopically the pathological changes in the fundus oculi which constitute optic neuritis (*Wien. klin. Woch.*, 1889, No. 11, p. 275) in two cases, one of tabes and one of disseminated sclerosis. In the latter he states that the atrophy is the result of a peculiar "interstitial inflammation" occurring here and there in spots and small patches in the optic nerve. This results in the increased formation of connective tissue at the spots where the interstitial inflammation is giving rise to destruction of nerve sheaths and nerve fibres. The process he considers as identical with that which, when it occurs in the central nervous organs, gives rise to sclerotic changes. In the tabetic case Elsching found a complete (primary) atrophy of the ganglion cell layer of the retina, of the nerve fibres, and a diminution in volume of the entire optic nerve in cross section, with an increase of the neuroglia tissue in the intraocular portion of the nerve (optic papilla), and in the remaining parts of the optic nerve he found a partial disappearance of nerve fibres. Some thickening and sclerosis of the walls of blood vessels were also present. The anatomical changes were most marked in the retinal end (papilla) of the nerve and diminished apparently in intensity towards the region of the optic tracts. From these considerations it would appear that the optic atrophy in tabes resembles the degeneration of the other sensory neurons of the spinal ganglia (posterior roots), the degeneration starting from the nerve cell bodies and spreading centripetally towards the spinal cord. There is no evidence in favour of regarding it as a neuritis due to pressure or vascular congestion.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(492) Subphrenic Abscess.

Prescott Le Breton (*Buffalo Med. Jour.*, lv, p. 255, November, 1899) points out that subphrenic abscess resembles appendicitis, in that whereas it used to be recognised only at necropsy it is now diagnosed clinically. It is always a complication secondary to traumatism or disease elsewhere. All the abdominal organs, even the pancreas, have been known when inflamed to have caused subphrenic abscess. The most frequent cause, however, is rupture of a gastric or duodenal ulcer; second in frequency is appendicitis, and other causes are abscess of the kidney, perinephritis, cholecystitis, traumatism to abdomen, rupture of typhoid ulcers of the intestine, echinococcus cyst of liver, pelvic abscess, pneumonia of lower lobe of right lung, and empyema perforating the diaphragm. It is most often on the right side in the male from appendicitis and duodenal ulcer occurring more frequently in that sex, while it is more often left sided in the female from frequency of gastric ulcers in women. In from one-third to one-half of the cases the subphrenic abscess contains gas from its communication with the gastro intestinal tract, the "pneumothorax subphrenicus" of Leyden. Leucocytosis is regularly present. Pain over the lower ribs radiating to the shoulder is a frequent symptom, and is sometimes accompanied by singultus. There is a dome-shaped area of dulness corresponding to the convexity of the diaphragm, rising as high as the sixth rib in the axilla; in empyema, on the other hand, the line of dulness is concave upwards. Aspirated pus containing the bacillus coli communis indicates that the source of the pus is below the diaphragm. From an abscess of the liver it is very difficult to diagnose subphrenic abscess; but the latter lifts the diaphragm more than it depresses the liver, while abscess of the liver causes chiefly downward displacement of that organ. Prognosis is fair when surgical intervention is early and thorough. The treatment is similar to that for empyema, and consists in resection of a part of the eighth, ninth, or tenth ribs in the middle axillary line, incision of the diaphragm, evacuation of purulent contents, and drainage through one or two tubes.

(493) Narcolepsy.

John MacCormac, of Belfast, records (*Brain*, Autumn, 1899) an interesting case. As classical cases of narcolepsy are rare, the following one is worthy of record, especially since a definite "exciting cause" seems to have existed. The case is that of a woman, aged 27, a weaver by trade, admitted to the Victoria Hospital for Women, Belfast, with the following history: Parents, brothers, and sisters healthy. Patient had good health until four years ago, when she had ten teeth extracted at one sitting, and without an anæsthetic. Immediately after that day she would feel unusually sleepy in the evenings, and soon afterwards she began to sleep at her work, this sleep lasting from 3 to 10 minutes at a time, or longer, till awakened. She felt quite unable to overcome these "attacks" of sleep, which came on without warning. Between the attacks of sleep she felt quite clear, but complained of being easily tired. As many as twelve to fourteen attacks of sleeping were often observed per diem. She also had peculiar sensations of lightness in the head, and of sensations passing along the scalp from front to back. These eventually vanished. On examination in hospital she appeared healthy, but lethargic, both mentally and physically. She had a sad and dull expression, putty features, and walked with a slight stoop. She was put on light, nutritious diet, and given phosphate of iron, sulphate of quinine, tincture of nux vomica, and nitro-glycerine. Moderate exercise and plenty of fresh air were enjoined. After a while she began steadily to improve, and during the six months, October, 1898, to March, 1899, the sleeping attacks had decreased from about twelve or more a day to one, and sometimes there was perfect freedom from them for one or two days. She looked brighter, and had a more natural expression. May, 1899: The patient has not attended hospital for some weeks, and the sleeping attacks have become more frequent again. June, 1899: Much improved again. Besides the medicinal and dietetic treatment above used, the patient has had galvanism applied (to the head) three or four times a week, a current of 1 milliampère being allowed to flow through the head from before back for three minutes at a time. No symptoms pointing to hysteria or epilepsy were present, and the attacks of sleep resembled "natural sleep," the face remaining unaltered in colour, the sleep lasting several minutes, and the patient being quite easily awakened into complete consciousness.

(494) Emphysema.

Banti (*Clinica Moderna*, ann. n. 33), says that ordinary vesicular emphysema is never a primary disease. That it is not caused merely by unusual strain is shown by the fact that trumpeters on the Alps at high levels do not develop emphysema. Some predisposing cause (for example, heredity, or an attack of pneumonia weakening the resistance and nutrition of the lung) must be present. As regards the various theories as to the mode of production of emphysema, the author believes that of the two chief theories, namely, the inspiratory and the expiratory, neither is sufficient of itself to explain the production of emphysema. He therefore combines the two, and supposes that emphysema is due to forced inspiration followed by forced expiration acting on a lung already weakened either by hereditary predisposition or some fault in nutrition, as, for example, atheroma of the pulmonary artery.

(495) Early Syphilitic Nephritis.

Allaria (*Clinica Moderna*, An. v, N. 24) maintains that nephritis of syphilitic origin may occur in the secondary stage of syphilis. Such cases are distinguished clinically by the presence of anasarca, severe albuminuria (with presence of albumoses?), and cure under mercury and iodide treatment. The nephritis is partly parenchymatous, such as one gets in other infectious diseases, and partly interstitial, this last being due to the specific poison. The author describes a case of secondary syphilitic nephritis diagnosed as such during life, and presenting the above-named features when examined anatomically. Tertiary syphilitic nephritis has a more chronic course in the majority of cases, and the albuminuria is not so marked.

(496) A New Test for Hydrochloric Acid in the Gastric Contents.

Siringo (*Rif. Med.*, July 4th, 1899) publishes a preliminary communication on the value of salts of nitrohydroxylamin in the detection of free hydrochloric acid in the stomach contents. These salts in the presence of the acid are decomposed with the development of an almost theoretical quantity of nitrogen dioxide, from the estimate of which the amount of free HCl may be inferred. The weak organic acids (acetic, lactic, etc.) in dilute solutions have no action on the substance in question; nor are some salts of nitrohydroxylamin decomposed by acid phosphates.

SURGERY.

(497) Volvulus of Sigmoid: Operation: Recovery.

Rontier (*Bull. et Mém. de la Soc. de Chir. de Paris*, March 21st, 1899) operated on a woman, aged 47, suffering from acute obstruction of about five days' duration. The most marked symptom was extreme tympanitic distension. The temperature was subnormal, pulse 100. On opening the abdomen in the middle line above the umbilicus, a coil of large intestine as big in diameter as the patient's thigh presented; it ran vertically, and was deflected a little towards the right. The transverse colon and cæcum were also much distended, as were several coils of small intestine. The incision had to be prolonged to the pubes. Then, on following the presenting coil down to the pelvis, a structure like a sharp ring was reached. This represented a torsion of the sigmoid flexure from left to right. The ring was the edge of the mesentery of the intestine. Being unusually long, the mesentery had allowed of the volvulus, and as the intestine twisted round more and more and grew more and more dilated, the portion most dragged upon formed a constricting ring. The point of junction of the volvulus with the less distended colon above it lay just

below the left kidney. In beginning to reduce the volvulus, Rontier was greatly troubled by a soft mass which filled the left hypochondrium and proved to be the greater part of the small intestines which had slipped over the upper border of the twist in the sigmoid flexure, so at to lie in an abnormal space in the left and upper part of the peritoneal cavity. At length the volvulus was completely untwisted, air rushing into the rectum. On gentle pressure upon the sigmoid flatus escaped from the rectum with a loud noise, followed by abundance of liquid fæces. Two thick rubber tubes, placed side by side, were introduced into the rectum. Then saline solution (7 per cent.) was thrown into the bowel through one of the tubes. In this way an enormous quantity of intensely fœtid fæces came away. When the intestinal canal was almost empty, the gut was carefully reduced. There were no adhesions or peritoneal effusion; the intestine was much congested and its veins unusually dilated. The abdomen was closed. An enema of warm water was then given. More gas and fæces escaped, and free spontaneous purgation continued for several days. Recovery was rapid.

(498) Operation for Acute Appendicitis and Purulent Peritonitis.

Tixier (*Gaz. Hebdom. de Méd. et de Chir.*, April 27th) was called on to operate on an almost moribund patient with peritonitis arising from inflamed appendix. The peritoneal cavity was opened laterally, and a jet of pus escaped. The patient recovered. This fact and the proof of intraperitoneal suppuration would have seemed, in default of further evidence, to imply that the pus lay in a cavity cut off from the rest of the peritoneum by localised peritonitis. But Tixier found that there was no such localising agency. He carefully placed strands of gauze drain in every direction, in Douglas's pouch, under the liver, and also under the spleen, and found no visceral or parietal adhesions. Thus acute general purulent peritonitis following acute inflammation of the appendix need not make the surgeon despair.

(499) Hepatectomy: Cholecystectomy: Resection of Part of Stomach: Recovery.

Monks (*Boston Med. and Surg. Journ.*, April 6th, 1899) reports a bold operation performed on a woman, aged 36, suffering from carcinoma in the right hypochondriac region. An oblique incision was made below and parallel to the right costal border. The gall bladder was greatly distended; eighty-one gall stones were removed. Then it was found to bear a cancerous mass, extending to the anterior free border of the right lobe of the liver and the anterior wall of the stomach. The cystic duct was tied off, and a wedge-shaped piece of liver removed, the edges of the hepatic wound being united with catgut. The tumour was then free except for the part which involved the stomach. An incision encircling the growth and giving it a wide margin was made through the anterior wall of the stomach, and the whole mass, including the growth, the entire gall bladder, a piece of liver, and a large portion of the anterior wall of the stomach was removed. The wound in the stomach was stitched with a double row of Lembert sutures, so as to bring the edges together laterally; this involved less risk of stricture, and was on the principle of a pylorectomy. The abdominal wound was closed, but a gauze drain placed in it. There was not much shock, but the stomach was extremely irritable, and rejected everything, so that reliance had to be placed on nutrient enemata for weeks. Bile escaped from the wound for three weeks, and a sinus persisted eight weeks after the operation, when the patient was doing well. She has not been heard of since.

(500) Fibro-sarcoma of the Right Breast.

Duchamp (*Loire Méd.*, November 15th, 1898) reports a case of an enormous fibro-sarcoma of the right breast in a woman 24 years of age. Three years ago she noticed a swelling the size of a nut in the outer part of the breast. This remained stationary for nearly three years, but recently had grown with great rapidity. The axillary glands were not enlarged, and the left breast was normal. Since the appearance of the tumour the menstruation, previously regular, had become irregular and less in amount. The growth was removed without difficulty, for it was not adherent to the pectoral muscle. Histologically it was found to be a myxomatous fibro-sarcoma. Two years later the tumour returned in the wound cicatrix, and the patient, refusing operation, died in an advanced state of cancerous cachexia.

(501) Dropsy of Renal Capsule.

Kirmisson (*Progrès Méd.*, May 13th, 1899) operated on a girl, aged 12, with symptoms of left hydronephrosis. She suffered much pain, especially when riding in a carriage, so that renal calculus was suspected. On making the lumbar incision a pouch with an irregular surface was exposed. On emptying it the kidney was found deep down below it, and hardly dropsical at all. The fluid lay entirely between the kidney and its capsule.

(502) Tuberculous Strictures of Intestine.

Guinard (*Bull. et Mém. de la Soc. de Chir. de Paris*, March 28th, 1897) resected over 3½ feet of the ileum from a girl, aged 17. She was a tuberculous patient, and symptoms of intestinal obstruction had been observed from infancy. Four distinct strictures were included in the resected segment of small intestime. The fourth or lowest stricture was the tighest. It lay 2 inches above the ileo-cæcal valve. Above it the intestine lwas dilated, and at the same time thickened so as to look like the stomach; the circumference of the widest part of the dilatation was over a foot. All four strictures were caused by the cicatrices of old tuberculous ulcers. The patient was in a very satisfactory condition six days after the operation, when the resected intestine was exhibited.

MIDWIFERY AND DISEASES OF WOMEN.

(503) Premature Labour: Hæmatoma of Placenta.

Lepage (*Annales de Gynéc. et d'Obstet.*, November, 1899) delivered a 3-para who had passed through two labours at term. In the first the forceps was used; in the second two attacks of uterine hæmorrhage had occurred in the third and fourth month. Labour was spontaneous, the placenta was delivered with its uterine aspect forwards; it contained large fibrous tracts. The third pregnancy was reckoned from the last period, January 8th to 12th, 1899. It was normal till October and no albuminuria was noted. On October 1st slight hæmorrhage occurred, the pains were slow, the membranes were ruptured, and a few ounces of deep red liquor amnii escaped. Then a female child weighing 4½ lbs. was expelled, followed by a considerable amount of bloody fluid. Ten minutes later the placenta came away. Between the amnion and the chorion was a collection of yellowish fluid blood, traced to a bulky hæmatoma which occupied almost half the fœtal surface of the placenta; there was a small rent in the chorion occupied by a clot which ran into the middle of the hæmatoma. The placenta, almost circular, was about 6¼ inches in diameter, the hæmatoma about 5¾ by 4¾ inches broad, formed a fluctuating tumour, on the surface of which ran the placental vessels abnormally dilated. The placental tissue was pale and degenerate, indurated near the hæmatoma. The lesion was probably due to endometritis; it is of interest in association with the early hæmorrhages and previous placental disease. There were none of the indurated foci seen in the placenta in association with albuminuria. The hæmatoma seems to have brought on labour a little prematurely.

(504) Puerperal Eclampsia with Erythema Multiforme.

Vorhees (N. Y. *Med. Rec.*, October 7th 1899) reports the case of a primipara, aged 21; she had suffered from scarlatina when 7 years old. During pregnancy there was much nausea, but no vomiting. For three weeks before admission into the Sloane Maternity Hospital, New York, she had noticed œdema of the ankles; sight was unaffected. On the day of admission several violent convulsions set in for the first time, followed by coma, and delivery was effected at once. This task was very difficult, as the os was rigid, the cervix was torn, and small lateral and anterior and posterior incisions were made to prevent the laceration from extending into the interior uterine segment. The after-coming head gave trouble, and required forceps. The child weighed 4 lbs. 9 ozs., and was

iving. Very severe convulsions followed, and for several hours the mother was in extreme peril. At the end of thirty-six hours the fits ceased for good; several remedial measures were practised. On the seventh day a bulbous eruption appeared on the extremities in the night, and spread with remarkable rapidity; in a few days the trunk, face, mouth, gums, and tongue were invaded; the bullæ left ulcers when they burst; very few bullæ suppurated. The eruption was at its height on the fourth day; the temperature was 102°, the pulse 124. One gland only was enlarged; that was on the nape of the neck; the scalp had been involved. A few days later the temperature rose to 102.4°. Milk diet, purgatives, and salicylate of sodium were prescribed. At length the disease disappeared after a few relapses, during which the bullæ appeared smaller and smaller. The ulcers often discharged freely an acrid serous fluid. At the end of a month the patient was well. This erythema multiforme in a bullous form is very rare, and Vorhees cannot find a case reported as associated with childbed. During the early and moist stage an ointment of zinc oxide, starch, and salicylic acid was prescribed; during the dry stage a powder of stearate of zinc. Chlorate of potash was used for a mouth wash.

(505) Perforation of Parietes by Suppurating Dermoid.

Polienoff (*Journ. d'Obstét. et de Gynæc. russ. Pétersbourg*, February, 1899) reports a case of dermoid ovarian tumour which inflamed and adhered to the abdominal walls; suppuration followed, and a fistulous track developed through which the contents of the cyst discharged itself. Ultimately the cyst fell itself protruded, till it became freely inverted, hanging like a bag on the surface of the abdomen. The tumour was successfully removed. It contained a well-formed nail attached to a rudimentary digit, a condition previously unrecorded.

(506) Mesenteric Cyst in Women.

Schramm (*Centralbl. f. Gynäk.*, No. 43, 1899) publishes another instance of abdominal tumour in a female subject, which was diagnosed as either an ovarian cyst or an encysted dropsy. The patient was 48. The distension of the abdomen at first suggested late pregnancy; neither ovary could be detected on palpation, and the tumour seemed immovable. The descending colon described a wide arch over the surface of the growth, which was enucleated from between the layers of the mesocolon. The left appendages were removed, being damaged by advanced inflammation; the ovary was also as large as a plum. Recovery was rapid. The cyst was unilocular, and contained thirteen and a half pints of a perfectly clear serous fluid. The inner lining was endothelial.

(507) Lipoma of Labium.

Twombly (*Boston Med. and Surg. Journ.*, October 12th, 1899) notes that, whilst fibroma of the labium are not rare, only about 24 cases of true fatty tumour have been recorded. The patient, in his own case, was a white woman, aged 40. She had noticed for two years a swelling in the right labium, at first hard and as big as a bean. In a year it had grown as large as a walnut, and then she noticed that it began to be pedunculated. This caused obvious inconvenience. There was no abnormality about the genitals; the hymen was intact. The tumour was over 6 inches long and about 5½ in circumference, its pedicle over 1 inch long and over 1 inch thick. It was soft, feeling like an ordinary fatty tumour, and the skin invested it as in an ordinary fibroma. An oval incision was made in the labium at the base of the pedicle, which was then excised. Five vessels were tied with chromicised catgut, and the wound was closed with a buried continuous suture of the same material. Healing was rapid. In this case the fatty tumour grew far more rapidly than usual; in some cases the growth has advanced slowly for nine, ten, or even seventeen years. The average age for lipoma of the labium is 35, the youngest patient was 18. In 1 case the patient attempted to cut off the tumour with a razor and nearly died of hæmorrhage.

(508) Pregnancy and Advanced Cancer of Breast.

Mercier (*Centralbl. f. Gynäk.*, No. 44, 1899) publishes notes of a patient, aged 40, with cancer of the breast. She became pregnant for the fourth time, and the malignant disease advanced with great speed. Metastases occurred in the liver and vertebral column, and paraplegia followed, but the patient was spontaneously delivered of a healthy child. Milk was freely secreted, but on account of the violent pains in the back suckling was impossible, and the patient died shortly after the puerperium.

(509) Suppuration of Appendages Traced to Gonorrhœa.

Bovée (*Amer. Journ. Obstet.*, October, 1899) publishes a case with a clear history. Two suppurating tubes, and the ovaries, one suppurating, were removed three months after marriage from a young woman whose husband had several times contracted gonorrhœa, eight months before marriage on the last occasion. It is noteworthy that there was much pain around the vermiform appendix during the week before operation. It was found much enlarged and distended, and adherent to the right tube and anterior rectal wall; it was removed and all the suturing done with catgut. On careful inquiry it appeared that the patient did not complain of any pain previous to her last period. Then, contrary to her habit, severe pains set in without delay of show, which was freer than usual. After this period she suffered constantly from severe pelvic pain, and had occasionally to keep to her bed. Then large masses were detected on each side of the uterus, with excessive tenderness in the region of the cæcum. Bovée notes these symptoms as in a number of cases of gonorrhœal infection it seemed to date from a menstrual period, and he believes that the exfoliation of the epithelium at this time furnishes an excellent opportunity for the propagation of the gonococcus and extension of its invasion.

THERAPEUTICS.

(510) Treatment of Pernicious Anæmia.

E. Grawitz (*Veröffentlichen der Hufelandischen Gesellschaft*, Berlin, 1899, p. 15), after discussing what is meant by progressive pernicious anæmia (for which he suggests the term "Biermer's anæmia" as more suitable), draws attention to the very variable factors in the etiology of the condition to which attention must be paid when one treats it. No sudden cure of such an essentially chronic affection must be hoped for. As possible etiological factors of the disease (excluding the special pernicious anæmias of childhood), Grawitz includes various chronic disorders of the alimentary canal and digestive system, the influence of pregnancy, chronic hæmorrhages, syphilis (this may produce chronic changes in the bone marrow, and the changes produced by other bone diseases, such as chronic osteomyelitis and sarcoma, may likewise lead to a condition of progressive anæmia), various unfavourable factors in the patient's ordinary life (bad diet, stuffy rooms, over-fatigue, mental troubles, shocks, etc.), chronic poisoning (chronic effects of small quantities of carbon monoxide in the air), the effects of intestinal parasites (bothriocephalus and ankylostoma), which may persist after the removal of the parasites themselves. The supposed microbes found in the blood of some patients may be explained as accidental microbes or as contractile bodies derived from the blood cells. Grawitz thinks the prognosis is especially bad in pernicious anæmia which has developed in old syphilitic cases. In the treatment of the affection the probable etiological factors in each case must be considered. When the patients are apparently improved the danger of a relapse must always be borne in mind. Such patients are no more to be regarded as "cured" than are diabetic patients when, by careful dieting, their urine becomes free from sugar. In nearly all cases rest in bed is the first and most important requisite at the commencement of the treatment. The digestive system must be seen to, and constipation treated. When much indican is found in the urine, intestinal antiseptics may be useful. Stomachics and articles of diet which stimulate the appetite may be serviceable. The results of all this treatment must be estimated by regular examination of the body weight. The general nutrition and digestion of the patients should be cared for before medicines are given which have a direct action on the blood. Treatment in suit-

able sanatoria is as much required as it is for diabetes, obesity, etc. At the commencement of treatment an obvious improvement in the quality of the blood must not be expected. There may at first be a decrease of red corpuscles in the blood, in spite of obvious improvement in the patient's general condition, and in spite of increased appetite and disappearance of retinal hæmorrhages. Possibly with the improved diet the fluid part of the blood is increased, so that at first the blood may be more watery and the percentage of blood cells diminished. Iron is at first contraindicated. Arsenic is generally considered the most valuable medicine, but the doses must be only gradually increased. Quinine is often of use and may be given together with the arsenic. Iodide seems not to be of as great use as one would suppose when the affection is grounded on old syphilis, but Grawitz does not say that iodides may not now and then exercise a beneficial effect. Inhalations of oxygen have been employed by Köster. Bone marrow and preparations of bone marrow seem not to have yielded good results. When improvement sets in careful massage and exercises can be employed, and eventually a heavier diet must be given. When collapse threatens transfusion may be of temporary value.

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(511) Antidote to Carbolic Acid.

ADAMS (*New York Med. Journ.*, November 25th) says alcohol when applied to tissues prevents the destruction of such parts by carbolic acid. One of the drawbacks in the use of carbolic acid has been its caustic effects when in strong solutions. If carbolic acid is one of the best of our bactericides in the 1 in 20 solutions, could not infinitely better results be obtained by taking strong solutions, or even the pure crystals, in combination with the alcohol? The writer gives several cases illustrating such treatment, and the results appear to be those of extremely rapid and thorough cures. For instance: Female, aged 17, erysipelas of the left hand. Pure carbolic acid was painted over the hand, which was afterwards bathed in alcohol. The application was continued for three days, and then reported "cured." Similar cases of cellulitis, ulcers, wounds, and gonorrhœal vaginitis yielded equally rapidly. An attempt to apply this treatment to poisoning was made. A patient was brought to the hospital at 10.25 A.M., and between that time and 1.45 P.M., 42 ounces of alcohol were administered. No shock nor signs of alcoholism followed, and in fourteen days recovery had occurred. Unfortunately, neither the amount of carbolic acid taken, nor the "time elapsed" is mentioned. The pure carbolic acid is first applied and allowed to remain on for 30 seconds, or until the surface turns white, when alcohol is freely poured over the part. No definite evidence is adduced as to the value of alcohol in cases of poisoning, but in tedious and slow infective inflammations, if not in all wounds and varieties of cellulitis, the treatment seems well worth extended use.

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(512) Chloride of Gold and Sodium as a Tonic.

BREWER AND HABHEGGER (*Journ. of Amer. Med. Assoc.*, November 25th, 1899) have made some observations which confirm Brewer's experience that the chloride of gold and sodium had, in properly selected cases, the power of increasing the percentage of hæmoglobin and the number of red blood corpuscles, and stimulating renal elimination. He also advised its use in secondary anæmia, chronic interstitial inflammations, and syphilis in debilitated subjects. Brewer and Hebhegger claim moderately good results in 4 cases of chlorosis, there being slight improvement in the blood record, and, in the only case in which the urine was examined, some increase in elimination. Seven cases of secondary anæmia, after syphilis, fever, etc., showed extraordinary results in hæmogenesis. One patient was a barman, aged 38, very anæmic, languid, and subject to diarrhœa after syphilis. He complained of neuralgia in the extremities and palpitations; pernicious anæmia was suspected. Arsenic, iron, and cathartics proved of moderate benefit. Then he was put on chloride of gold and sodium in solution, at first in doses of $\frac{1}{20}$ gr., the dose being increased in a fortnight to $\frac{1}{10}$ gr. A speedy improvement in the general health and condition of the blood followed, the red cells increased five times and a-half in number, the hæmoglobin from 16 to 60 per cent., the total urinary solids and urea likewise augmented. As might be expected, the salt was of little or no benefit in cases of secondary anæmia due to chronic nephritis with advanced complications, to discharging empyema, and to chronic tuberculosis.

PATHOLOGY.

(513) Streptococci and Scarlet Fever.

NOTWITHSTANDING the large number of researches on this subject there is still doubt as to the exact nature of the organism of scarlet fever. Courtois has carried out a long series of investigations (*Thèse de Paris*, 1899) which go to support the opinion that the organism in question is a streptococcus closely analogous to that of erysipelas. The writer finds this streptococcus in the urine of scarlet fever cases a condition not met with in other urines. This is especially the case in those urines containing albumen, which would go to show that the passage of the streptococcus through the kidney is productive of albuminuria, though at the same time the organism has been found in urines showing no trace of albumen. In 97 urines from scarlet fever cases albumen was present in 42. Of these 42 cases streptococci were present in 30, or 71 per cent., while in non-albuminous urines streptococcus was present in 27 per cent. After death streptococcus may be found in the blood, especially that taken from the heart. There seems to be a certain difference between the streptococci found in the blood and that found in the urine of scarlet fever cases. The author is however of opinion that the organism is the same, but that it has undergone certain modifications in passing through the kidney to appear in the urine. The organism is extremely toxic for rabbits. While it seems to possess the character peculiar to itself, there is great difficulty in differentiating it from the streptococcus P. and the streptococcus of erysipelas. Courtois has made some observations with a view to serumtherapeusis, but his results so far as animals are concerned are not yet definite.

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(514) Leucocytosis in Whooping-cough.

CIMA has made a series of observations on the condition of the blood in whooping-cough (*Pediatria*, No. 9, 1899). He finds that leucocytosis is present in uncomplicated whooping-cough in children, and in which the white cells reach about thrice the normal average, the number increasing and decreasing with the course and decline of the disease. There is increase in the number of white cells in babies and children affected with broncho-pulmonary complications or other morbid conditions such as marked anæmia, rickets, etc. The author is unable to say with certainty what the source of these increased white cells may be, as there is no evidence that there is any special change in the lymphatic glands, but he is of opinion that possibly a certain amount of inflammation of the tracheo-bronchial lymphatics may have something to do with the presence of leucocytosis. In doubtful cases of whooping-cough in children apparently well, the examination of the blood would probably have a considerable amount importance in establishing the diagnosis of whooping-cough with greater certainty, as such cases may prove a source of danger long before the characteristics of the cough are manifest.

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(515) Congenital Fracture of Femur.

GREEN (*Centralbl. f. Gynäk.*, xxiii p. 987, August 12th, 1899) describes a slightly premature female infant with congenital fractures of both femora. The mother had suffered from no accident in the latter part of pregnancy. The infant lived for a few minutes; it had presented in the normal way. The umbilical cord was only 35 cm. long and it passed from the umbilicus to the right thigh, then to the lower part of the left leg, and then to the left thigh where it had produced a furrow 2 cm. deep. No special manipulation occurred during or after the birth. There was diminished mobility of both hip-joints. Green thinks that the convolutions of the cord kept the limb fixed in one position, and so diminished the mobility of the hip-joints, and that during the passage of the child through the pelvis the somewhat rigidly-fixed limbs could not adapt themselves and so were fractured.

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